FCC C2PC Test Report

FCC ID	:	**I8811AXAP24**
Equipment	:	**802.11ax (WiFi 6) Dual-Radio Unified Pro Access Point**
Model No.	:	**WAX630S**
Brand Name	:	**ZYXEL**
Applicant	:	**Zyxel Communications Corporation**
Address	:	**No.2 Industry East RD. IX, Hsinchu Science Park, Hsinchu 30075, Taiwan, R.O.C**
Standard	:	**47 CFR FCC Part 15.247**
Received Date	:	**Jul. 29, 2021**
Tested Date	:	**Oct. 12 ~ Oct. 27, 2021**

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 may be duplicated completely for legal use with the approval of the applicant. 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
FR172901AC	Rev. 01	Initial issue	Jan. 26, 2022

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	Conducted Emissions	[dBuV]: 0.474MHz 37.69 (Margin -8.76dB) - AV	Pass
15.247(d) 15.209	Radiated Emissions	[dBuV/m at 3m]: 2483.50MHz 53.65 (Margin -0.35dB) – AV	Pass
15.247(b)(3)	Maximum Output Power	Meet the requirement of limit	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

This is a Class II Permissive Change report (C2PC).

This report is issued as a supplementary report to original ICC report no. FR040603AC. The difference compared with original test report are as below

1. Changing antenna and product name
2. Adding one model name.
3. Reduced output power of 11g: 2462 MHz and 11ax HE40: 2422 / 2437 / 2452 MHz by software setting

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	ac (VHT20)	2412-2462	1-11 [11]	2	MCS 0-9
2400-2483.5	ac (VHT40)	2422-2452	3-9 [7]	2	MCS 0-9
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.	Brand	Model	Type	Connector	Antenna Gain (dBi)
1	Adant	WAX630S-ANT	PIFA	UFL	0.92
2	Adant	WAX630S-ANT	PIFA	UFL	0.92

1.1.3 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	12Vdc from adapter 30 ~ 57Vdc from PoE

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

1.1.4 Accessories

N/A

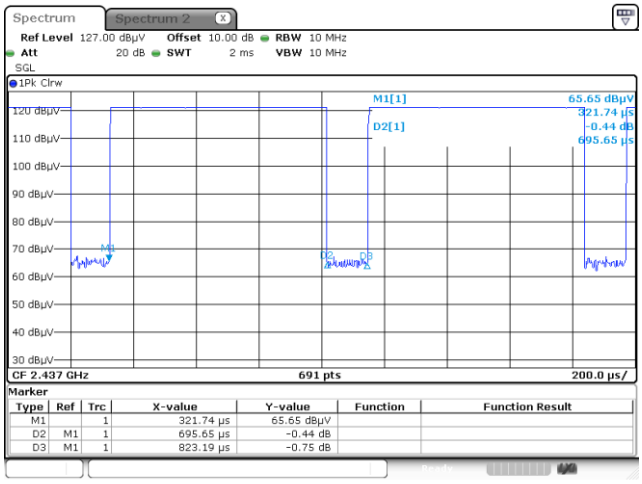
1.1.5 Channel List

Frequency band (MHz)		2400~2483.5	
802.11bg / n HT20 / ac VHT20 / ax HE20		802.11n HT40 / ac VHT40 / 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	---	---

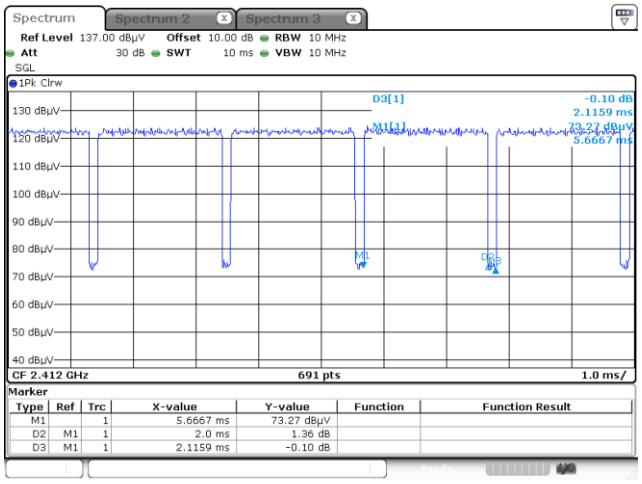
1.1.6 Test Tool and Duty Cycle

Test Tool	QSPR, Version: v5.0-00195		
Duty Cycle and Duty Factor	Mode	Duty Cycle (%)	Duty Factor (dB)
	11b	84.51%	0.73
	11g	94.52%	0.24
	ax (HE20)	86.23%	0.64
	ax (HE40)	81.94%	0.87

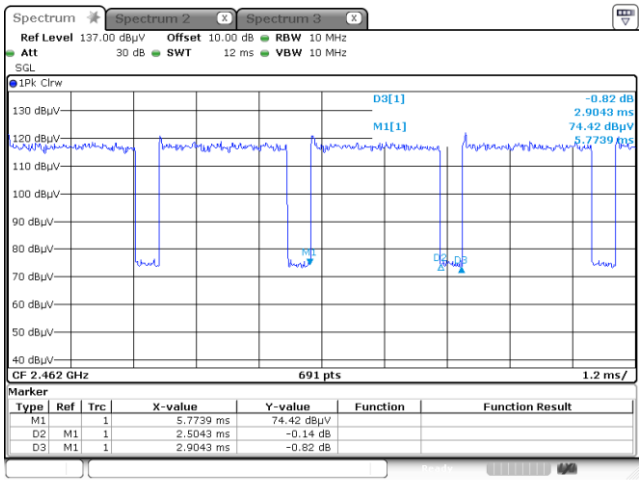
11b



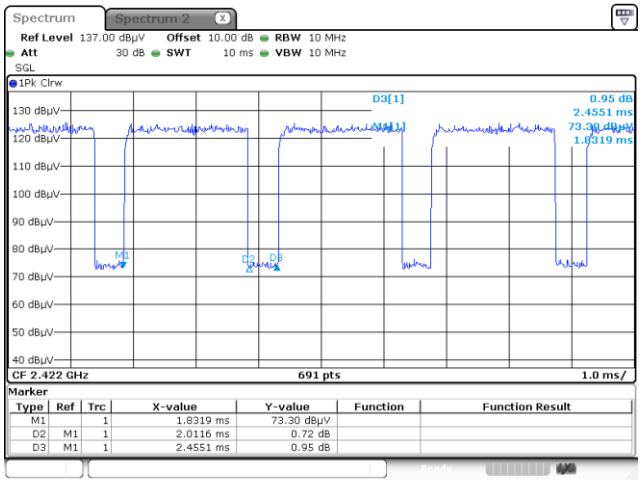
11g



ax (HE20)



ax (HE40)



1.1.7 Power Index of Test Tool

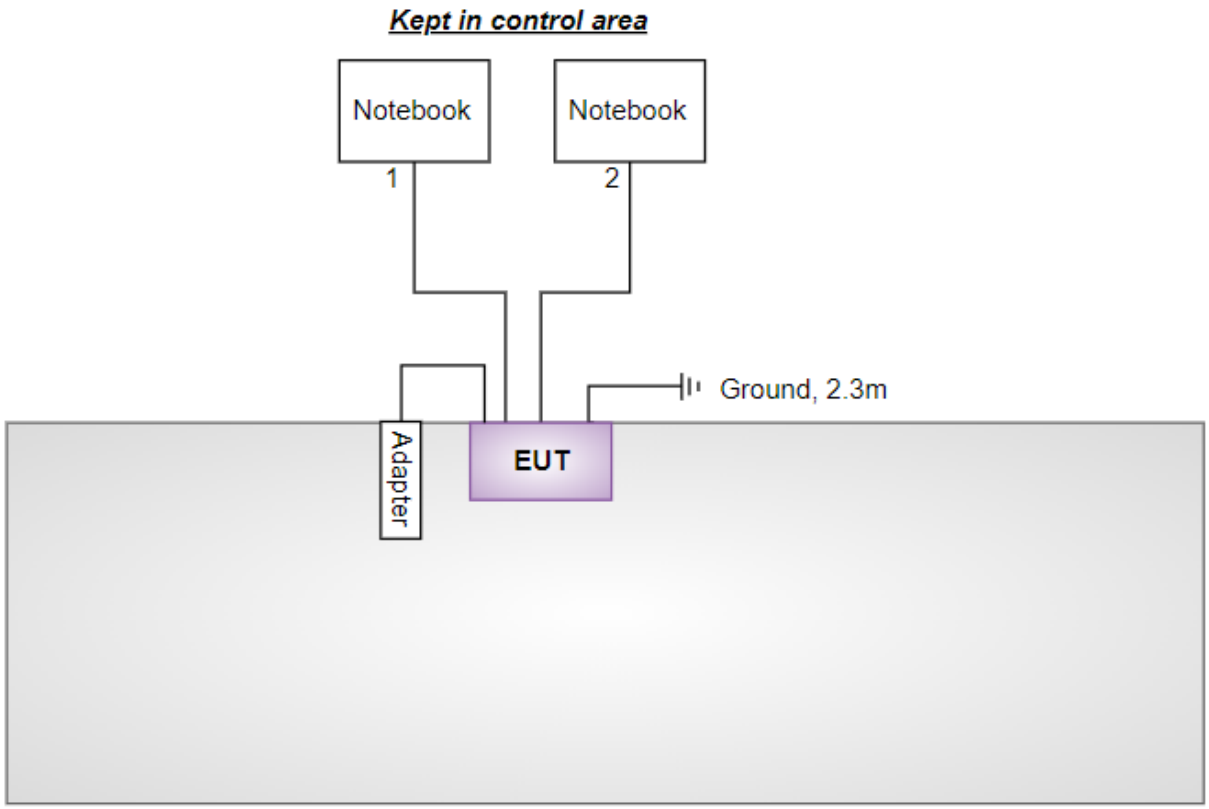
Modulation Mode	Test Frequency (MHz)	Power Index
11b	2412	20.5
11b	2437	20.5
11b	2462	19.5
11g	2412	19.5
11g	2437	20.5
11g	2462	18
ax (HE20)	2412	19.5
ax (HE20)	2437	24
ax (HE20)	2462	20
ax (HE40)	2422	15.5
ax (HE40)	2437	17
ax (HE40)	2452	14.5

1.2 Local Support Equipment List

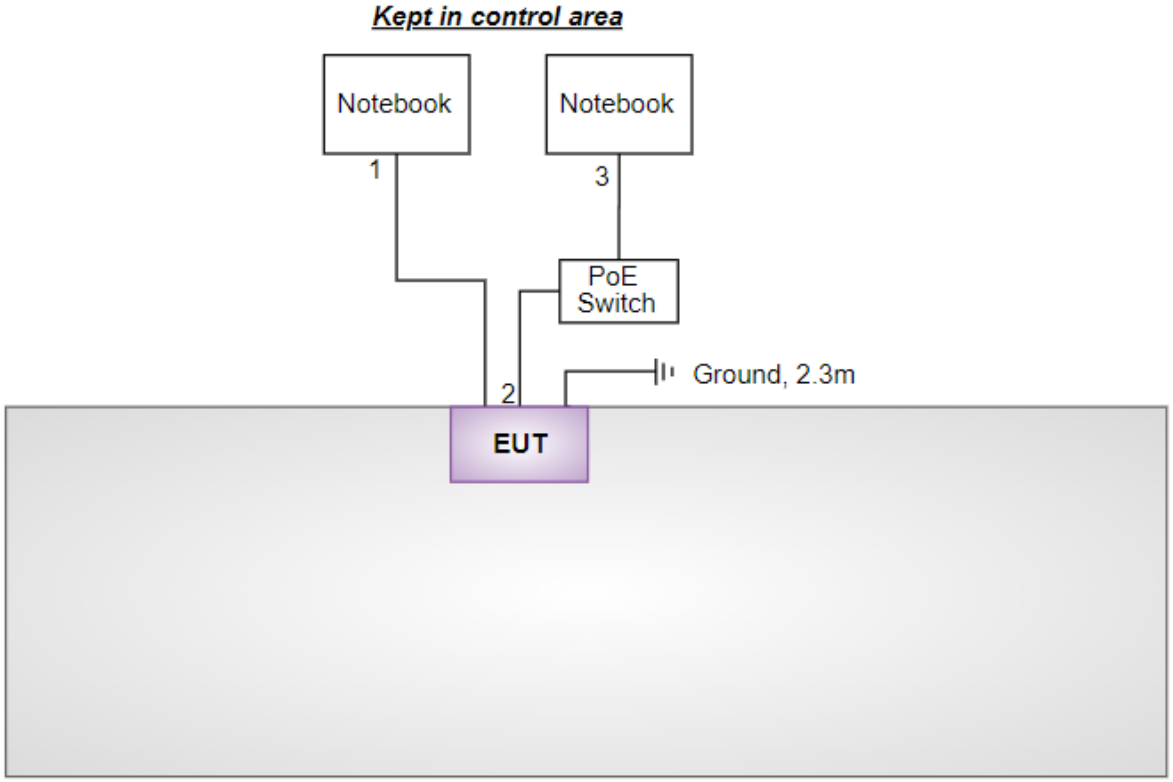
Support Equipment List (Adapter Mode)					
No.	**Equipment**	**Brand**	**Model**	**FCC ID**	**Remarks**
1	Notebook	DELL	Latitude E6430	DoC	---
2	Notebook	DELL	Latitude E5470	---	---
3	Adapter	APD	WB-18Q12R	---	Provided by applicant.

Support Equipment List (PoE Mode)					
No.	**Equipment**	**Brand**	**Model**	**FCC ID**	**Remarks**
1	Notebook	DELL	Latitude E6430	DoC	---
2	Notebook	DELL	Latitude E5470	DoC	
3	PoE Switch	YAMAHA	SWX2221P-10 NT	---	Provided by applicant.

1.3 Test Setup Chart

Test Setup Diagram (Adapter mode)


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

Test Setup Diagram (PoE mode)


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

1.4 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Tested Date	Oct. 25, 2021				
Instrument	**Brand**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Receiver	R&S	ESR3	101658	Feb. 08, 2021	Feb. 07, 2022
LISN	R&S	ENV216	101579	Mar. 17, 2021	Mar. 16, 2022
LISN (Support Unit)	SCHWARZBECK	Schwarzbeck 8127	8127-666	Dec. 29, 2020	Dec. 28, 2021
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	Oct. 12 ~ Oct. 14, 2021				
Instrument	**Brand**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Receiver	R&S	ESR3	101657	Mar. 12, 2021	Mar. 11, 2022
Spectrum Analyzer	R&S	FSV40	101499	Mar. 02, 2021	Mar. 01, 2022
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 17, 2020	Nov. 16, 2021
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. 22, 2020	Dec. 21, 2021
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Nov. 06, 2020	Nov. 05, 2021
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	Oct. 25 ~ Oct. 27, 2021				
Instrument	**Brand**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101063	Apr. 19, 2021	Apr. 18, 2022
Power Meter	Anritsu	ML2495A	1241002	Nov. 04, 2020	Nov. 03, 2021
Power Sensor	Anritsu	MA2411B	1207366	Nov. 04, 2020	Nov. 03, 2021
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
Radiated emission ≤ 1GHz	±3.96 dB
Radiated 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#: 10807A
- CAB identifier: TW2732

2.2 The Worst Test Modes and Channel Details

Non-beamforming mode				
Test item	**Modulation Mode**	**Test Frequency (MHz)**	**Data Rate (Mbps) / MCS**	**Test Configuration**
Conducted Emissions	11b	2412	1 Mbps	1, 2
Radiated Emissions ≤1GHz	11b	2412	1 Mbps	1, 2
Maximum Output Power	11g ax HE40	2462 2422 / 2437 / 2452	6 Mbps MCS 0	1
Radiated Emissions >1GHz 6dB bandwidth Power spectral density	11g ax HE40	2462 2422 / 2437 / 2452	6 Mbps MCS 0	1
Radiated Emissions >1GHz	11b 11g ax HE20 ax HE40	2412 / 2437 / 2462 2412 / 2437 / 2462 2412 / 2437 / 2462 2422 / 2437 / 2452	1 Mbps 6 Mbps MCS 0 MCS 0	1
Beamforming mode				
Maximum Output Power	ax HE40	2422 / 2437 / 2452	MCS 0	1

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. The EUT had been tested by following test configurations.
   1) Configuration 1: Adapter mode
   2) Configuration 2: POE mode

3 Transmitter Test Results

3.1 Conducted Emissions

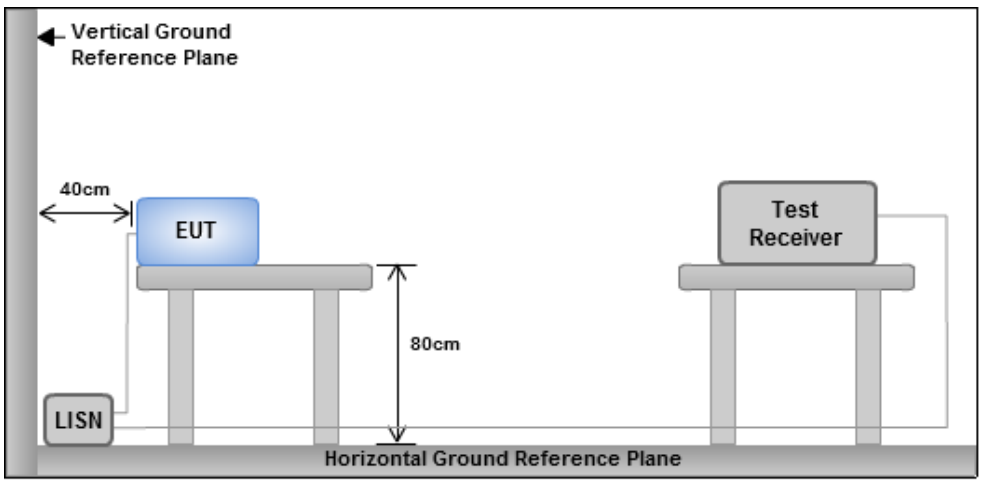
3.1.1 Limit of Conducted Emissions

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.		

3.1.2 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.

3.1.3 Test Setup



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

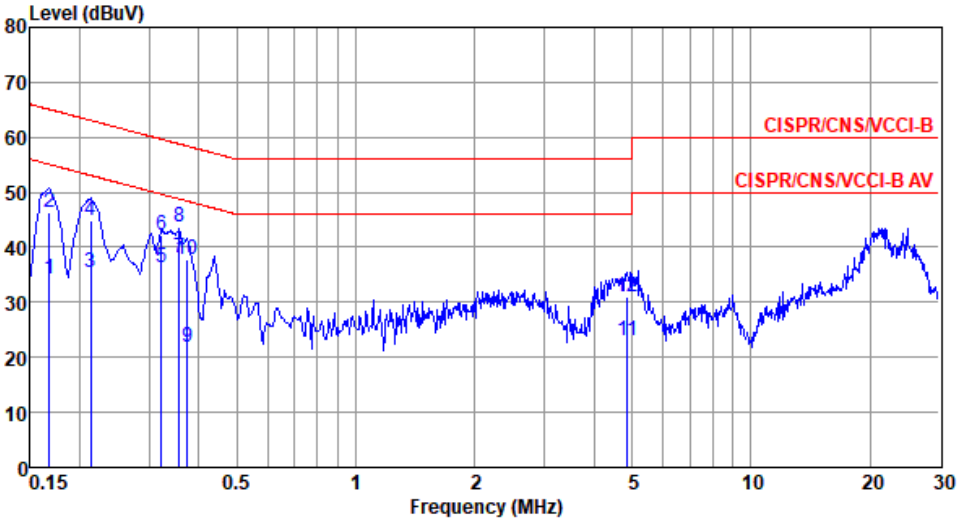
2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

Configuration 1: Adapter mode

3.1.4 Test Result of Conducted Emissions

Modulation	11b	Test Freq. (MHz)	2412
Power Phase	Line		

Test by : Joe Liao Temperature: 22°C Humidity: 63%

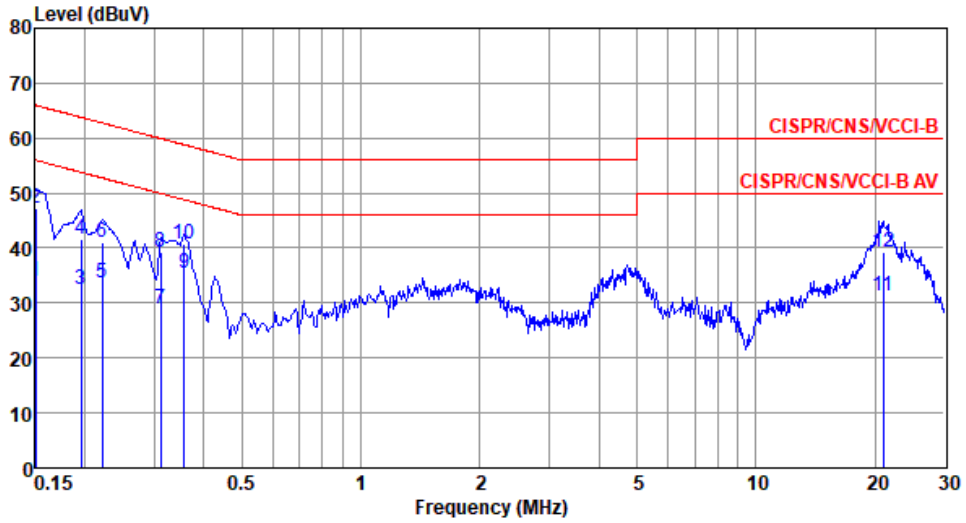


	Freq	Level	Limit Line	Over Limit	Read Level	Factor	Cable loss	Aux	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	dB	
1	0.168	34.13	55.08	-20.95	24.18	9.66	0.08	0.21	Average
2	0.168	46.33	65.08	-18.75	36.38	9.66	0.08	0.21	QP
3	0.213	35.43	53.10	-17.67	25.47	9.65	0.08	0.23	Average
4	0.213	44.99	63.10	-18.11	35.03	9.65	0.08	0.23	QP
5	0.322	36.20	49.66	-13.46	26.16	9.64	0.08	0.32	Average
6	0.322	42.34	59.66	-17.32	32.30	9.64	0.08	0.32	QP
7*	0.358	38.08	48.78	-10.70	28.02	9.64	0.08	0.34	Average
8	0.358	43.57	58.78	-15.21	33.51	9.64	0.08	0.34	QP
9	0.375	21.91	48.39	-26.48	11.84	9.64	0.08	0.35	Average
10	0.375	37.70	58.39	-20.69	27.63	9.64	0.08	0.35	QP
11	4.874	23.10	46.00	-22.90	12.74	9.68	0.26	0.42	Average
12	4.874	30.86	56.00	-25.14	20.50	9.68	0.26	0.42	QP

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

Modulation	11b	Test Freq. (MHz)	2412
Power Phase	Neutral		

Test by : Joe Liao Temperature: 22°C Humidity: 63%



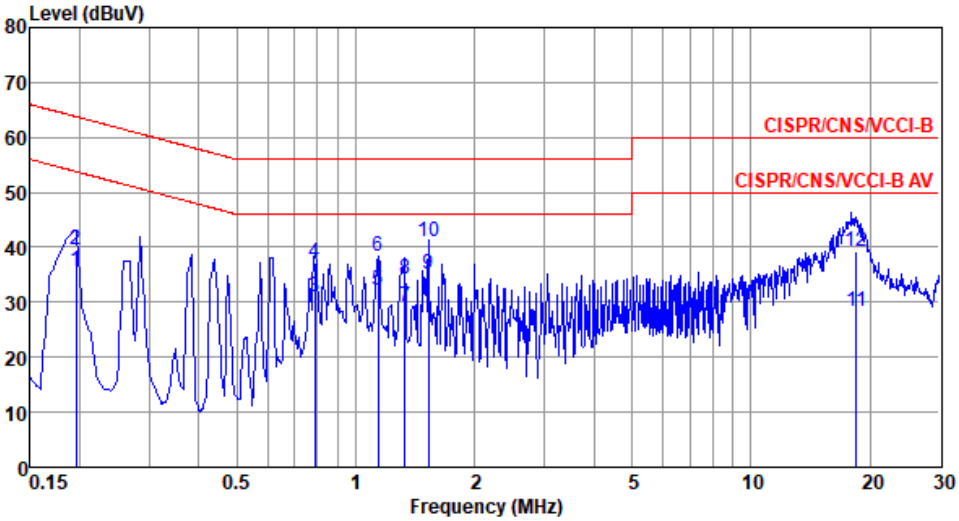
	Freq	Level	Limit Line	Over Limit	Read Level	Factor	Cable loss	Aux	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	dB	
1	0.150	34.09	56.00	-21.91	24.16	9.69	0.08	0.16	Average
2	0.150	47.17	66.00	-18.83	37.24	9.69	0.08	0.16	QP
3	0.195	32.60	53.80	-21.20	22.66	9.68	0.08	0.18	Average
4	0.195	41.63	63.80	-22.17	31.69	9.68	0.08	0.18	QP
5	0.222	33.71	52.74	-19.03	23.77	9.68	0.08	0.18	Average
6	0.222	40.92	62.74	-21.82	30.98	9.68	0.08	0.18	QP
7	0.312	28.89	49.93	-21.04	18.95	9.67	0.08	0.19	Average
8	0.312	39.24	59.93	-20.69	29.30	9.67	0.08	0.19	QP
9*	0.358	35.51	48.78	-13.27	25.57	9.67	0.08	0.19	Average
10	0.358	40.71	58.78	-18.07	30.77	9.67	0.08	0.19	QP
11	21.035	31.18	50.00	-18.82	20.20	9.84	0.67	0.47	Average
12	21.035	39.25	60.00	-20.75	28.27	9.84	0.67	0.47	QP

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

Configuration 2: POE mode

Modulation	11b	**Test Freq. (MHz)**	2412
Power Phase	Line		

Test by : Joe Liao Temperature: 22°C Humidity: 63%

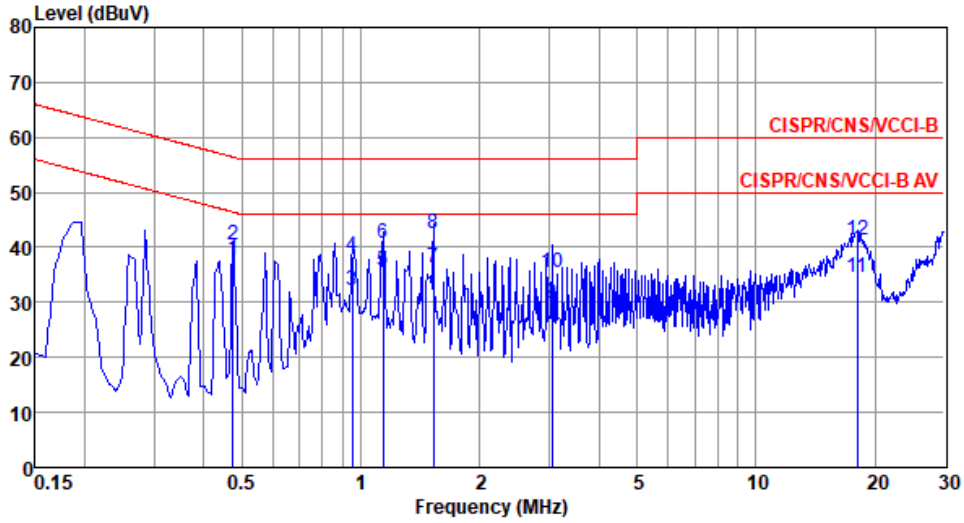


	Freq	Level	Limit Line	Over Limit	Read Level	Factor	Cable loss	Aux	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	dB	
1	0.195	35.79	53.80	-18.01	26.06	9.65	0.08	0.00	Average
2	0.195	39.47	63.80	-24.33	29.74	9.65	0.08	0.00	QP
3	0.788	30.98	46.00	-15.02	21.19	9.65	0.14	0.00	Average
4	0.788	37.19	56.00	-18.81	27.40	9.65	0.14	0.00	QP
5	1.141	32.19	46.00	-13.81	22.37	9.65	0.17	0.00	Average
6	1.141	38.48	56.00	-17.52	28.66	9.65	0.17	0.00	QP
7	1.331	29.22	46.00	-16.78	19.39	9.65	0.18	0.00	Average
8	1.331	34.15	56.00	-21.85	24.32	9.65	0.18	0.00	QP
9*	1.526	35.01	46.00	-10.99	25.17	9.66	0.18	0.00	Average
10	1.526	41.02	56.00	-14.98	31.18	9.66	0.18	0.00	QP
11	18.524	28.28	50.00	-21.72	17.97	9.68	0.63	0.00	Average
12	18.524	39.15	60.00	-20.85	28.84	9.68	0.63	0.00	QP

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

Modulation	11b	Test Freq. (MHz)	2412
Power Phase	Neutral		

Test by : Joe Liao Temperature: 22°C Humidity: 63%



	Freq	Level	Limit Line	Over Limit	Read Level	Factor	Cable loss	Aux	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	dB	
1*	0.474	37.69	46.45	-8.76	27.93	9.67	0.09	0.00	Average
2	0.474	40.35	56.45	-16.10	30.59	9.67	0.09	0.00	QP
3	0.953	32.32	46.00	-13.68	22.48	9.68	0.16	0.00	Average
4	0.953	38.35	56.00	-17.65	28.51	9.68	0.16	0.00	QP
5	1.141	35.69	46.00	-10.31	25.84	9.68	0.17	0.00	Average
6	1.141	40.59	56.00	-15.41	30.74	9.68	0.17	0.00	QP
7	1.526	36.28	46.00	-9.72	26.41	9.69	0.18	0.00	Average
8	1.526	42.38	56.00	-13.62	32.51	9.69	0.18	0.00	QP
9	3.041	29.74	46.00	-16.26	19.83	9.70	0.21	0.00	Average
10	3.041	35.35	56.00	-20.65	25.44	9.70	0.21	0.00	QP
11	18.039	34.40	50.00	-15.60	23.95	9.83	0.62	0.00	Average
12	18.039	41.42	60.00	-18.58	30.97	9.83	0.62	0.00	QP

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

3.2 6dB and Occupied Bandwidth

3.2.1 Limit of 6dB Bandwidth

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

3.2.2 Test Procedures

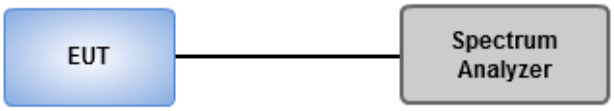
6dB Bandwidth

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.

3.2.3 Test Setup



3.2.4 Test Result of 6dB and Occupied Bandwidth

Ambient Condition	23°C / 63%	Tested By	Aska Huang

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.11g_Nss1,(6Mbps)_2TX	16.377M	16.353M	16M4D1D	16.304M	16.353M
802.11ax HEW40_Nss1,(MCS0)_2TX	37.971M	37.916M	37M9D1D	37.971M	37.627M

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;

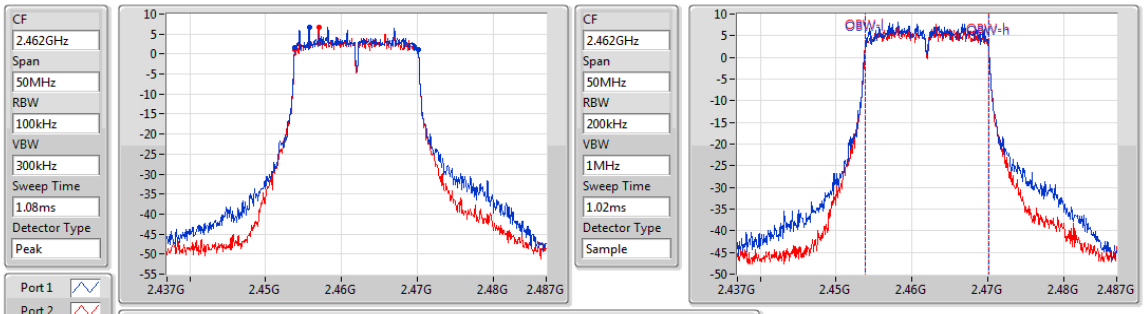
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2462MHz	Pass	500k	16.377M	16.353M	16.304M	16.353M
802.11ax HEW40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	500k	37.971M	37.771M	37.971M	37.627M
2437MHz	Pass	500k	37.971M	37.916M	37.971M	37.771M
2452MHz	Pass	500k	37.971M	37.771M	37.971M	37.771M

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

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

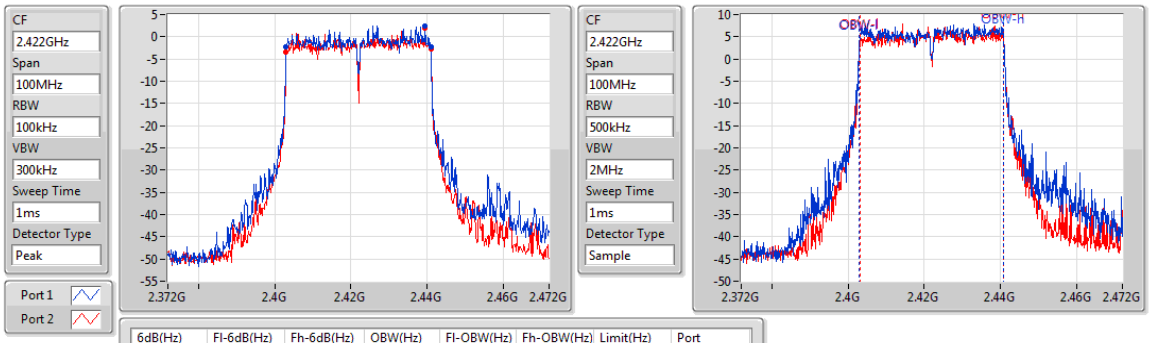
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.377M	2.453812G	2.470188G	16.353M	2.453823G	2.470177G	500k	1
16.304M	2.453812G	2.470116G	16.353M	2.453823G	2.470177G	500k	2

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

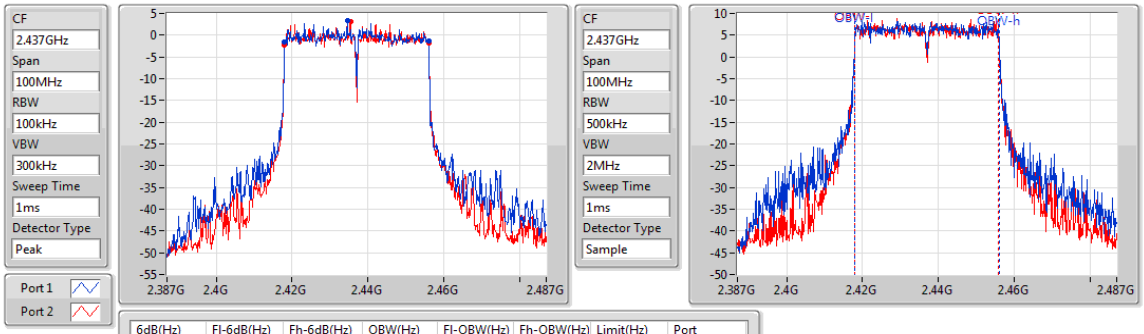
2422MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
37.971M	2.403014G	2.440986G	37.771M	2.403042G	2.440813G	500k	1
37.971M	2.403014G	2.440986G	37.627M	2.403187G	2.440813G	500k	2

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

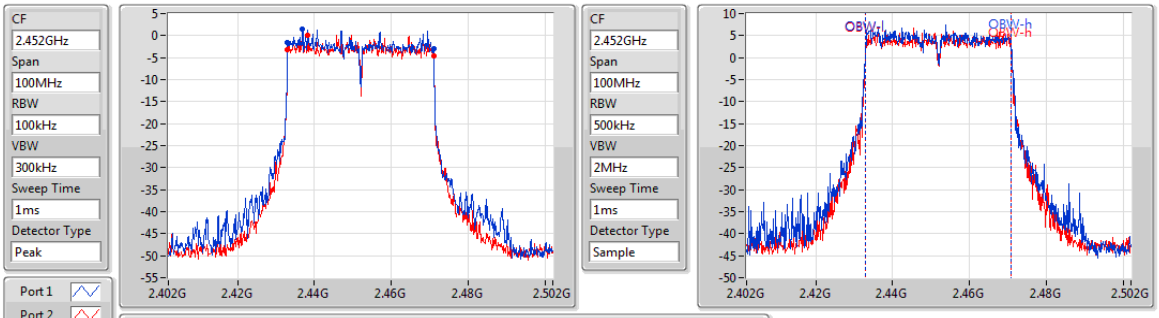
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
37.971M	2.418014G	2.455986G	37.916M	2.418042G	2.455958G	500k	1
37.971M	2.418014G	2.455986G	37.771M	2.418042G	2.455813G	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
37.971M	2.433014G	2.470986G	37.771M	2.433042G	2.470813G	500k	1
37.971M	2.433014G	2.470986G	37.771M	2.433042G	2.470813G	500k	2

3.3 RF Output Power

3.3.1 Limit of RF Output Power

Conducted power shall not exceed 1Watt.

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

3.3.2 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.

3.3.3 Test Setup

3.3.4 Test Result of Maximum Output Power

Ambient Condition	23°C / 63%	Tested By	Aska Huang

Non-beamforming mode

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11g_Nss1,(6Mbps)_2TX	21.35	0.13646
802.11ax HEW40_Nss1,(MCS0)_2TX	20.42	0.11015

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-
2462MHz	Pass	0.92	18.53	18.15	21.35	30.00	22.27	36.00
802.11ax HEW40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
2422MHz	Pass	0.92	17.43	16.59	20.04	30.00	20.96	36.00
2437MHz	Pass	0.92	17.53	17.29	20.42	30.00	21.34	36.00
2452MHz	Pass	0.92	15.76	15.03	18.42	30.00	19.34	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 HEW40-BF_Nss1,(MCS0)_2TX	17.41	0.05508

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
2422MHz	Pass	3.93	14.42	13.58	17.03	30.00	20.96	36.00
2437MHz	Pass	3.93	14.52	14.28	17.41	30.00	21.34	36.00
2452MHz	Pass	3.93	12.75	12.02	15.41	30.00	19.34	36.00

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

3.4 Power Spectral Density

3.4.1 Limit of Power Spectral Density

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

3.4.2 Test Procedures

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

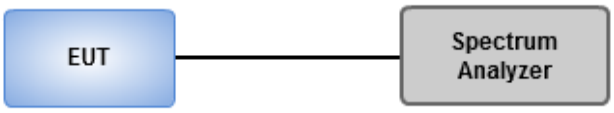
2 Sweep time = Auto

3 Employ trace averaging (rms) mode over a minimum of 100 traces

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

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

3.4.3 Test Setup



3.4.4 Test Result of Power Spectral Density

Ambient Condition	23°C / 63%	Tested By	Aska Huang

Summary

Mode	PD (dBm/30kHz)
2.4-2.4835GHz	-
802.11g_Nss1,(6Mbps)_2TX	-3.25
802.11ax HEW40_Nss1,(MCS0)_2TX	-8.15

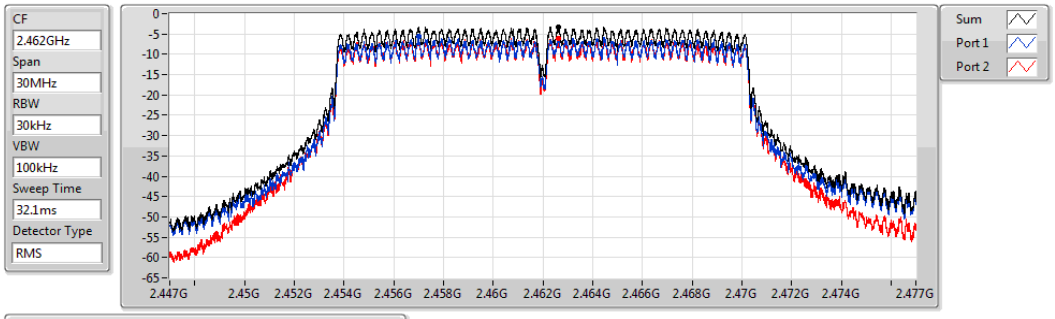
Result

Mode	Result	DG (dBi)	Port 1 (dBm/30kHz)	Port 2 (dBm/30kHz)	PD (dBm/30kHz)	PD Limit (dBm/3kHz)
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2462MHz	Pass	3.93	-5.60	-6.18	-3.25	8.00
802.11ax HEW40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	3.93	-11.17	-12.05	-8.82	8.00
2437MHz	Pass	3.93	-10.58	-11.09	-8.15	8.00
2452MHz	Pass	3.93	-12.00	-12.96	-9.69	8.00

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;

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

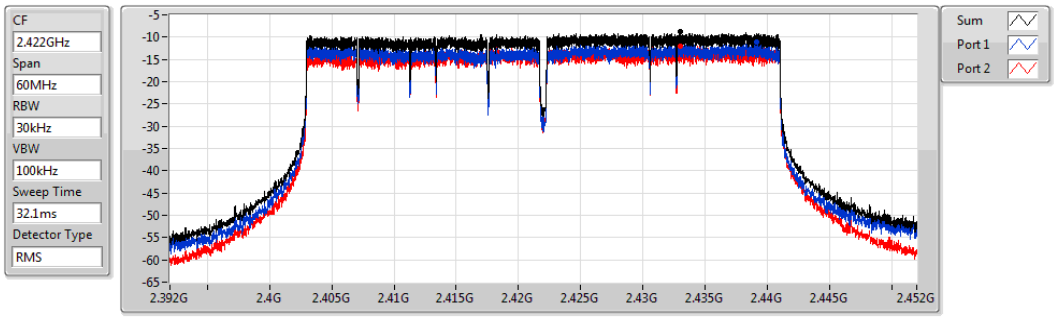
2462MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.25	-3.25	-5.60	-6.18

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

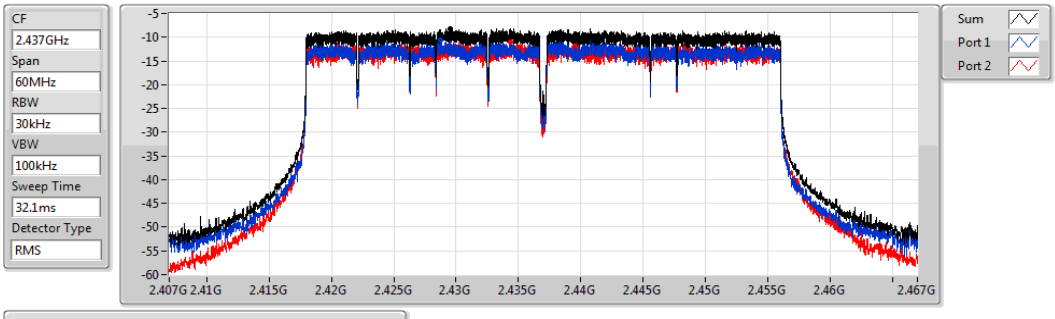
2422MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-8.82	-8.82	-11.17	-12.05

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

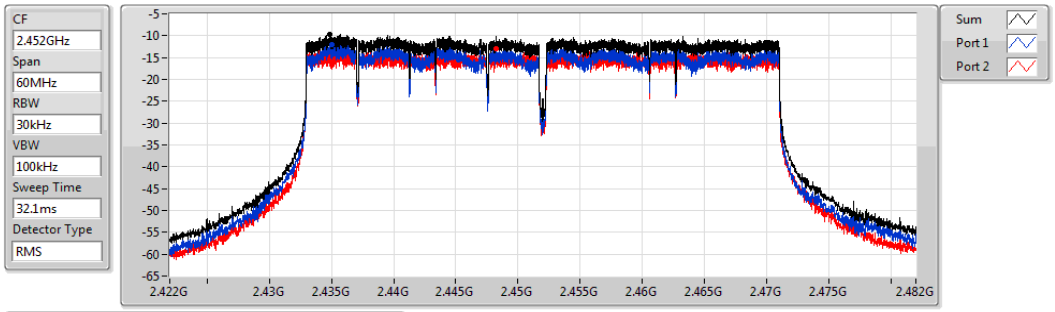
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-8.15	-8.15	-10.58	-11.09

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

2452MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-9.69	-9.69	-12.00	-12.96

3.5 Unwanted Emissions into Restricted Frequency Bands

3.5.1 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.

3.5.2 Test Procedures

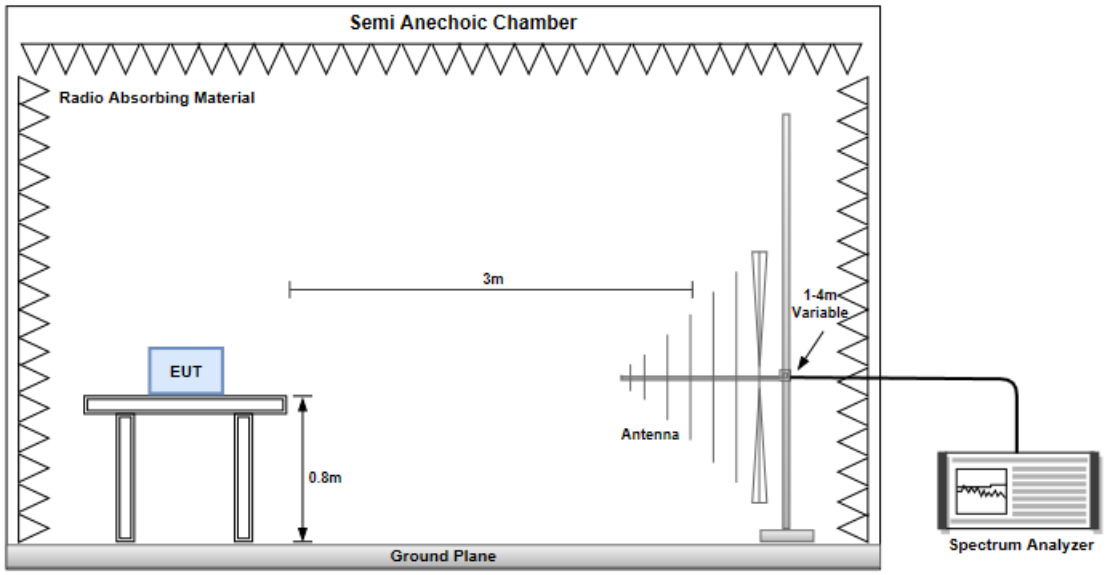
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission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

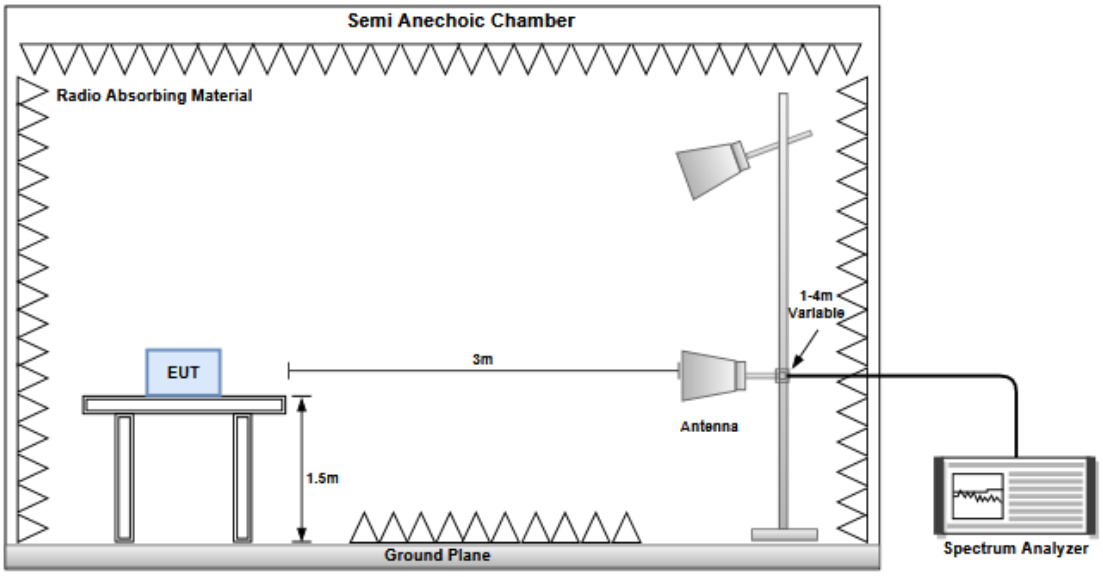
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above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

3.5.3 Test Setup

Radiated Emissions below 1 GHz



Radiated Emissions above 1 GHz

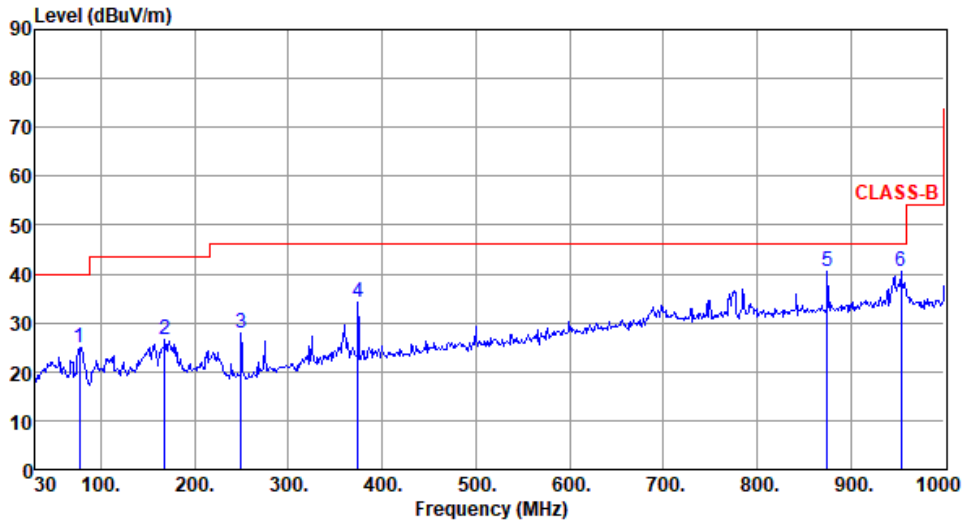


Configuration 1: Adapter mode

3.5.4 Transmitter Radiated Unwanted Emissions (Below 1GHz)

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

Test By :Brad Wu Temperature(℃):24 Humidity(%):68

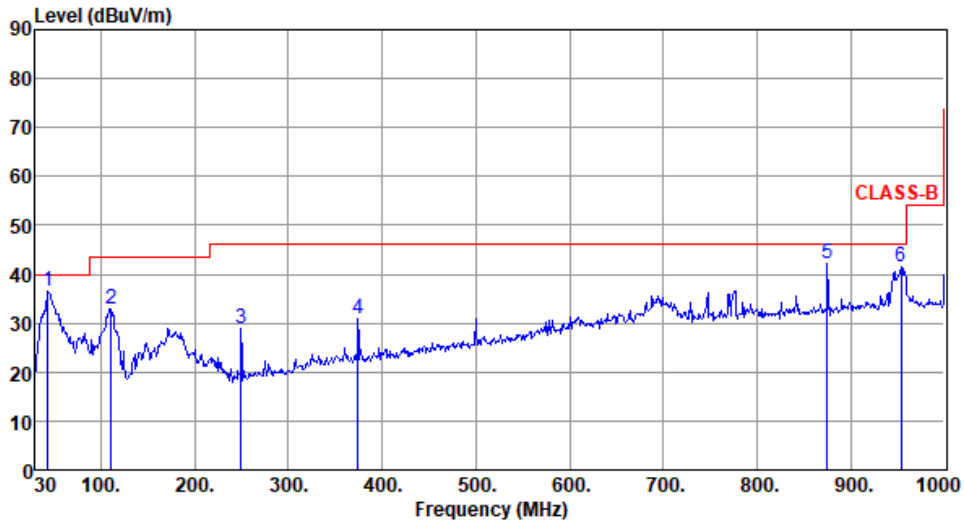


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	77.53	24.89	40.00	-15.11	37.63	-12.74	Peak	---	---
2	167.74	26.52	43.50	-16.98	35.36	-8.84	Peak	---	---
3	249.22	27.81	46.00	-18.19	37.61	-9.80	Peak	---	---
4	374.35	34.21	46.00	-11.79	40.42	-6.21	Peak	---	---
5	874.87	40.64	46.00	-5.36	36.15	4.49	Peak	---	---
6	953.44	40.49	46.00	-5.51	34.58	5.91	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	11b	Test Freq. (MHz)	2412
Polarization	Vertical		

Test By :Brad Wu Temperature(℃):24 Humidity(%):68



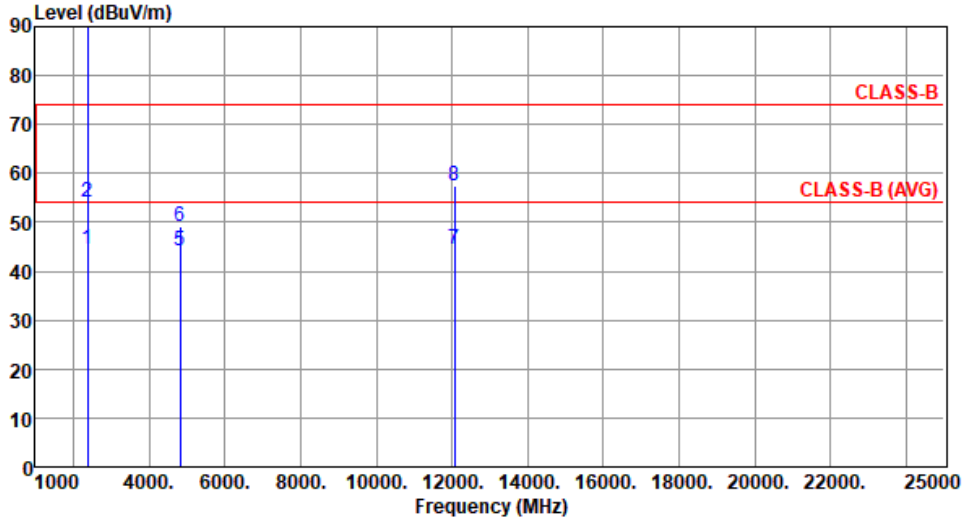
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	43.58	36.66	40.00	-3.34	45.65	-8.99	Peak	---	---
2	110.51	33.04	43.50	-10.46	44.89	-11.85	Peak	---	---
3	249.22	28.84	46.00	-17.16	38.64	-9.80	Peak	---	---
4	374.35	30.95	46.00	-15.05	37.16	-6.21	Peak	---	---
5	874.87	42.32	46.00	-3.68	37.83	4.49	Peak	---	---
6	953.44	41.39	46.00	-4.61	35.48	5.91	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.

3.5.5 Transmitter Radiated Unwanted Emissions (Above 1GHz) for 11b

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

Test By :Akun Chung Temperature(℃):23 Humidity(%):63

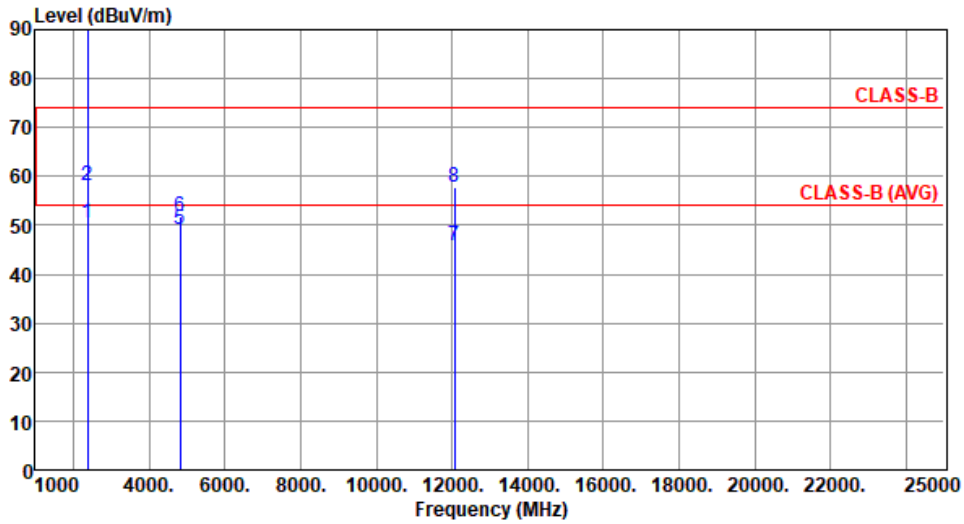


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1		2390.00	44.65	54.00	-9.35	46.24	-1.59	Average	331	25
2		2390.00	54.11	74.00	-19.89	55.70	-1.59	Peak	331	25
3	*	2412.00	107.25			108.89	-1.64	Average	331	25
4	*	2412.00	109.14			110.78	-1.64	Peak	331	25
5		4824.00	44.05	54.00	-9.95	38.83	5.22	Average	335	61
6		4824.00	49.21	74.00	-24.79	43.99	5.22	Peak	335	61
7		12060.00	44.36	54.00	-9.64	29.48	14.88	Average	100	200
8		12060.00	57.34	74.00	-16.66	42.46	14.88	Peak	100	200

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:"*" is Peak / Average value of fundamental frequency

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

Test By :Akun Chung Temperature(℃):23 Humidity(%):63

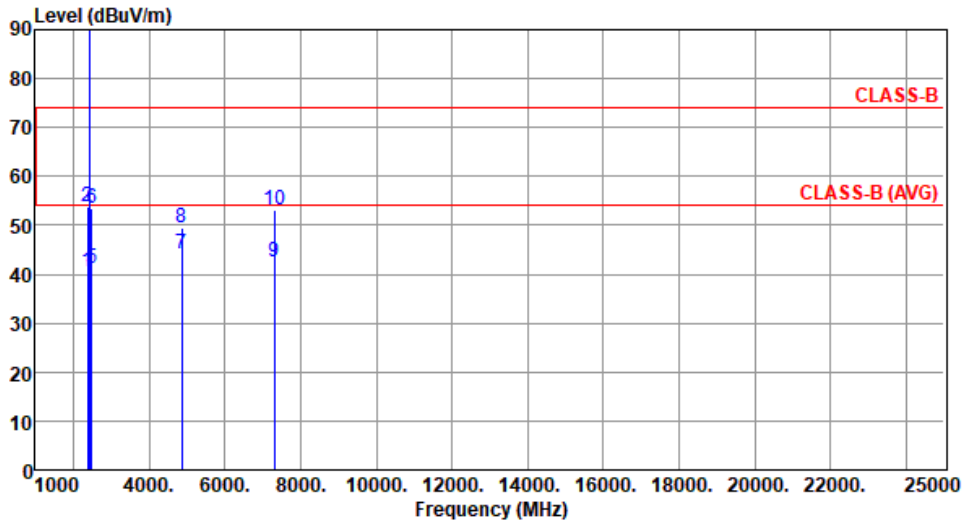


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1		2390.00	50.56	54.00	-3.44	52.15	-1.59	Average	348	3
2		2390.00	58.16	74.00	-15.84	59.75	-1.59	Peak	348	3
3	*	2412.00	111.78			113.42	-1.64	Average	348	3
4	*	2412.00	114.07			115.71	-1.64	Peak	348	3
5		4824.00	49.10	54.00	-4.90	43.88	5.22	Average	305	95
6		4824.00	51.92	74.00	-22.08	46.70	5.22	Peak	305	95
7		12060.00	45.86	54.00	-8.14	30.98	14.88	Average	100	320
8		12060.00	57.79	74.00	-16.21	42.91	14.88	Peak	100	320

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:"*" is Peak / Average value of fundamental frequency

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

Test By :Akun Chung Temperature(℃):23 Humidity(%):63

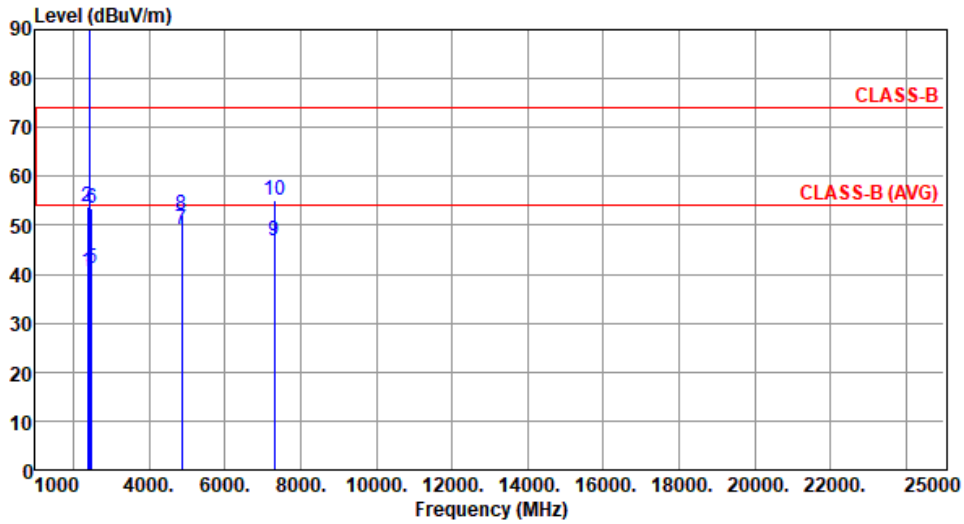


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1		2390.00	40.42	54.00	-13.58	42.01	-1.59	Average	330	21
2		2390.00	53.86	74.00	-20.14	55.45	-1.59	Peak	330	21
3	*	2437.00	108.12			109.83	-1.71	Average	330	21
4	*	2437.00	110.32			112.03	-1.71	Peak	330	21
5		2483.50	41.06	54.00	-12.94	42.87	-1.81	Average	330	21
6		2483.50	53.55	74.00	-20.45	55.36	-1.81	Peak	330	21
7		4874.00	44.26	54.00	-9.74	38.98	5.28	Average	336	57
8		4874.00	49.35	74.00	-24.65	44.07	5.28	Peak	336	57
9		7311.00	42.49	54.00	-11.51	31.74	10.75	Average	100	176
10		7311.00	53.16	74.00	-20.84	42.41	10.75	Peak	100	176

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:"*" is Peak / Average value of fundamental frequency

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

Test By :Akun Chung Temperature(℃):23 Humidity(%):63

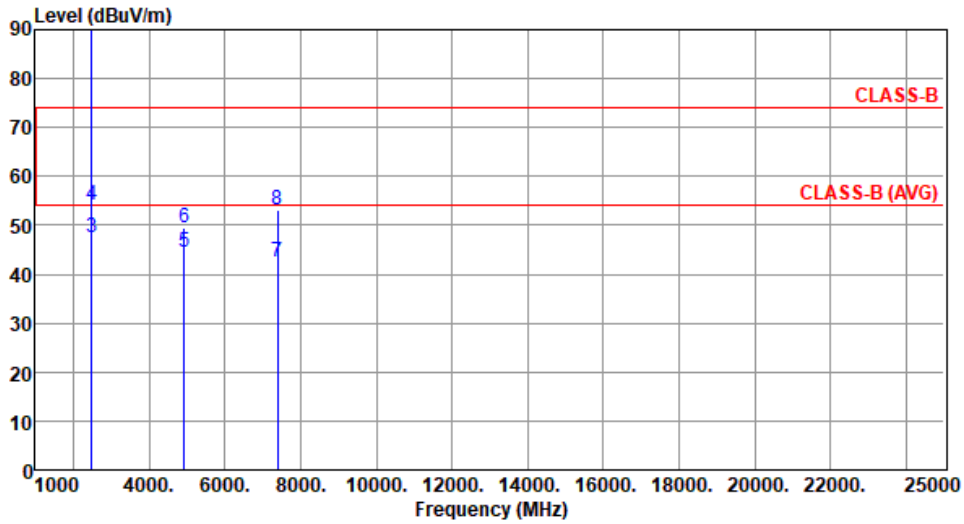


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1		2390.00	40.51	54.00	-13.49	42.10	-1.59	Average	298	6
2		2390.00	53.93	74.00	-20.07	55.52	-1.59	Peak	298	6
3	*	2437.00	112.21			113.92	-1.71	Average	298	6
4	*	2437.00	114.45			116.16	-1.71	Peak	298	6
5		2483.50	41.13	54.00	-12.87	42.94	-1.81	Average	298	6
6		2483.50	53.62	74.00	-20.38	55.43	-1.81	Peak	298	6
7		4874.00	49.19	54.00	-4.81	43.91	5.28	Average	252	106
8		4874.00	52.02	74.00	-21.98	46.74	5.28	Peak	252	106
9		7311.00	46.90	54.00	-7.10	36.15	10.75	Average	268	318
10		7311.00	55.22	74.00	-18.78	44.47	10.75	Peak	268	318

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:"*" is Peak / Average value of fundamental frequency

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

Test By :Akun Chung Temperature(℃):23 Humidity(%):63

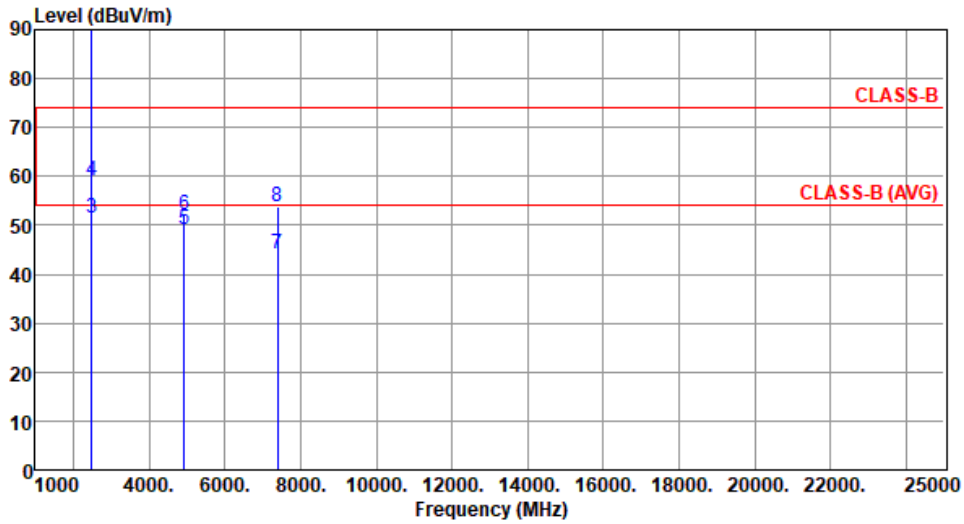


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	*	2462.00	107.65			109.41	-1.76	Average	328	26
2	*	2462.00	109.84			111.60	-1.76	Peak	328	26
3		2483.50	47.36	54.00	-6.64	49.17	-1.81	Average	328	26
4		2483.50	54.21	74.00	-19.79	56.02	-1.81	Peak	328	26
5		4924.00	44.38	54.00	-9.62	39.00	5.38	Average	335	61
6		4924.00	49.52	74.00	-24.48	44.14	5.38	Peak	335	61
7		7386.00	42.58	54.00	-11.42	32.13	10.45	Average	100	181
8		7386.00	53.24	74.00	-20.76	42.79	10.45	Peak	100	181

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:"*" is Peak / Average value of fundamental frequency

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

Test By :Akun Chung Temperature(℃):23 Humidity(%):63



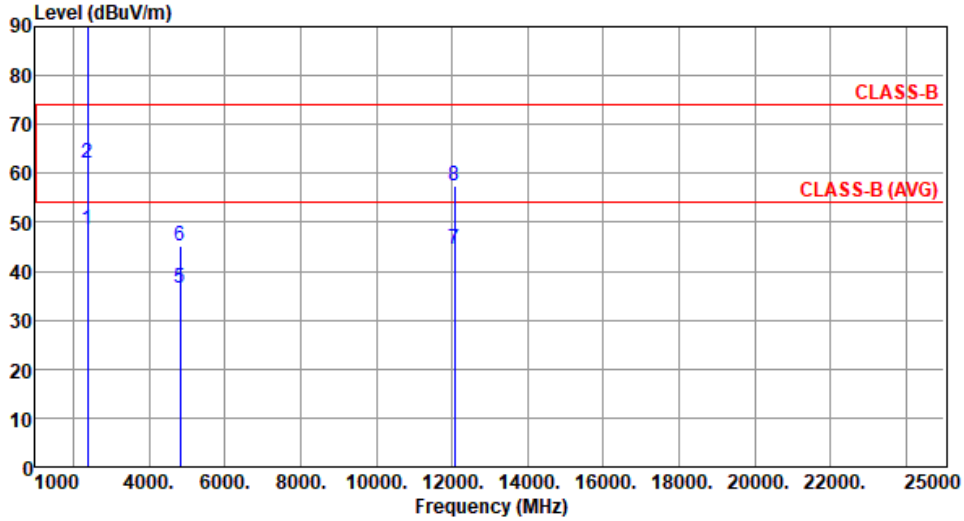
		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	*	2462.00	111.74			113.50	-1.76	Average	348	12
2	*	2462.00	114.25			116.01	-1.76	Peak	348	12
3		2483.50	51.54	54.00	-2.46	53.35	-1.81	Average	348	12
4		2483.50	59.10	74.00	-14.90	60.91	-1.81	Peak	348	12
5		4924.00	49.13	54.00	-4.87	43.75	5.38	Average	301	87
6		4924.00	52.15	74.00	-21.85	46.77	5.38	Peak	301	87
7		7386.00	44.14	54.00	-9.86	33.69	10.45	Average	289	315
8		7386.00	53.85	74.00	-20.15	43.40	10.45	Peak	289	315

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:"*" is Peak / Average value of fundamental frequency

3.5.6 Transmitter Radiated Unwanted Emissions (Above 1GHz) for 11g

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

Test By :Akun Chung Temperature(℃):23 Humidity(%):63

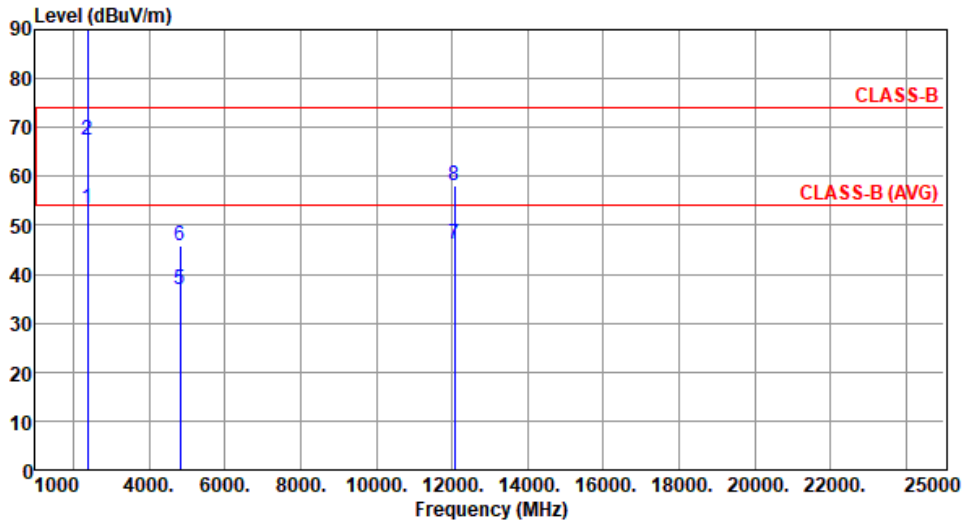


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1		2390.00	48.51	54.00	-5.49	50.10	-1.59	Average	325	19
2		2390.00	62.16	74.00	-11.84	63.75	-1.59	Peak	325	19
3	*	2412.00	100.84			102.48	-1.64	Average	325	19
4	*	2412.00	109.96			111.60	-1.64	Peak	325	19
5		4824.00	36.51	54.00	-17.49	31.29	5.22	Average	100	69
6		4824.00	45.32	74.00	-28.68	40.10	5.22	Peak	100	69
7		12060.00	44.39	54.00	-9.61	29.51	14.88	Average	100	208
8		12060.00	57.41	74.00	-16.59	42.53	14.88	Peak	100	208

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:"*" is Peak / Average value of fundamental frequency

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

Test By :Akun Chung Temperature(℃):23 Humidity(%):63

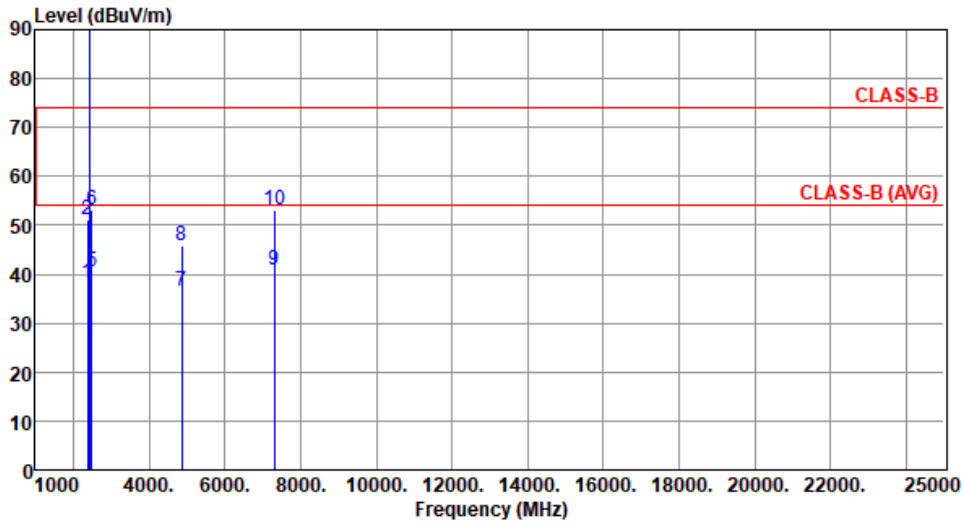


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1		2390.00	53.60	54.00	-0.40	55.19	-1.59	Average	317	93
2		2390.00	67.34	74.00	-6.66	68.93	-1.59	Peak	317	93
3	*	2412.00	105.97			107.61	-1.64	Average	348	5
4	*	2412.00	115.10			116.74	-1.64	Peak	348	5
5		4824.00	36.75	54.00	-17.25	31.53	5.22	Average	100	186
6		4824.00	45.81	74.00	-28.19	40.59	5.22	Peak	100	186
7		12060.00	46.04	54.00	-7.96	31.16	14.88	Average	100	305
8		12060.00	57.96	74.00	-16.04	43.08	14.88	Peak	100	305

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:"*" is Peak / Average value of fundamental frequency

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

Test By :Akun Chung Temperature(℃):23 Humidity(%):63

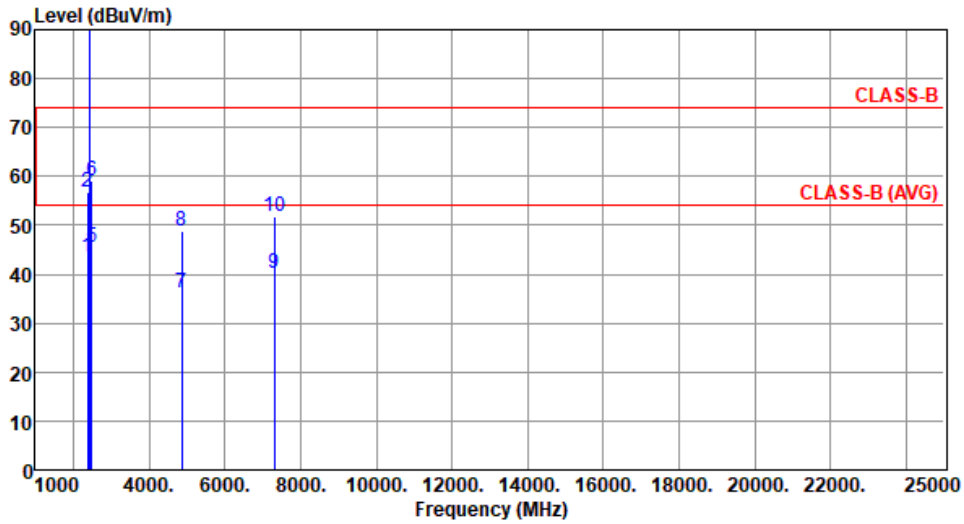


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1		2390.00	38.28	54.00	-15.72	39.87	-1.59	Average	331	16
2		2390.00	51.06	74.00	-22.94	52.65	-1.59	Peak	331	16
3	*	2437.00	101.48			103.19	-1.71	Average	331	16
4	*	2437.00	111.04			112.75	-1.71	Peak	331	16
5		2483.50	40.44	54.00	-13.56	42.25	-1.81	Average	331	16
6		2483.50	53.28	74.00	-20.72	55.09	-1.81	Peak	331	16
7		4874.00	36.55	54.00	-17.45	31.27	5.28	Average	100	54
8		4874.00	45.96	74.00	-28.04	40.68	5.28	Peak	100	54
9		7311.00	40.85	54.00	-13.15	30.10	10.75	Average	100	38
10		7311.00	53.06	74.00	-20.94	42.31	10.75	Peak	100	38

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:"*" is Peak / Average value of fundamental frequency

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

Test By :Akun Chung Temperature(℃):23 Humidity(%):63

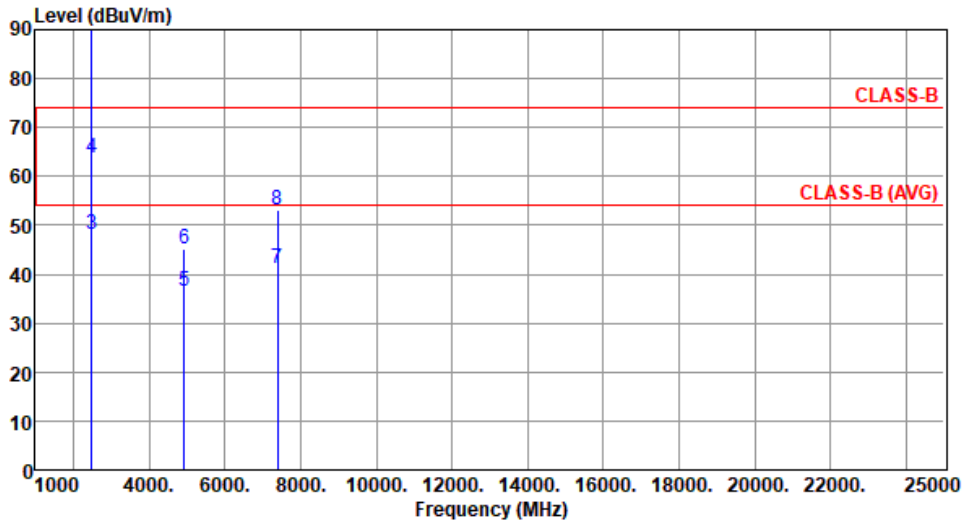


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1		2390.00	43.35	54.00	-10.65	44.94	-1.59	Average	330	7
2		2390.00	56.76	74.00	-17.24	58.35	-1.59	Peak	330	7
3	*	2437.00	106.67			108.38	-1.71	Average	338	10
4	*	2437.00	116.21			117.92	-1.71	Peak	338	10
5		2483.50	45.65	54.00	-8.35	47.46	-1.81	Average	325	10
6		2483.50	59.12	74.00	-14.88	60.93	-1.81	Peak	325	10
7		4874.00	36.30	54.00	-17.70	31.02	5.28	Average	256	114
8		4874.00	48.69	74.00	-25.31	43.41	5.28	Peak	256	114
9		7311.00	40.10	54.00	-13.90	29.35	10.75	Average	101	285
10		7311.00	51.88	74.00	-22.12	41.13	10.75	Peak	101	285

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:"*" is Peak / Average value of fundamental frequency

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

Test By :Akun Chung Temperature(℃):23 Humidity(%):63

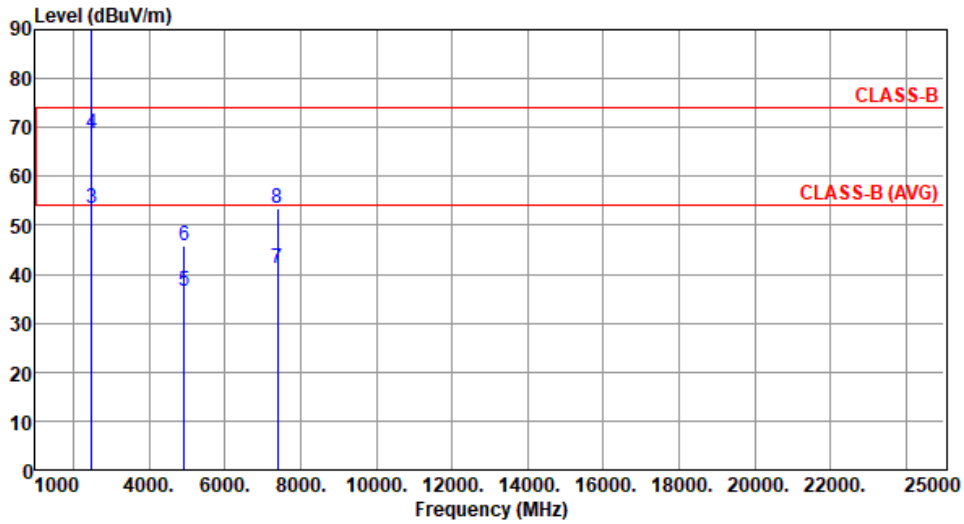


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	*	2462.00	99.85			101.61	-1.76	Average	336	11
2	*	2462.00	109.26			111.02	-1.76	Peak	336	11
3		2483.50	48.29	54.00	-5.71	50.10	-1.81	Average	336	11
4		2483.50	63.62	74.00	-10.38	65.43	-1.81	Peak	336	11
5		4924.00	36.42	54.00	-17.58	31.04	5.38	Average	100	64
6		4924.00	45.31	74.00	-28.69	39.93	5.38	Peak	100	64
7		7386.00	41.04	54.00	-12.96	30.59	10.45	Average	100	31
8		7386.00	53.14	74.00	-20.86	42.69	10.45	Peak	100	31

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:"*" is Peak / Average value of fundamental frequency

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

Test By :Akun Chung Temperature(℃):23 Humidity(%):63



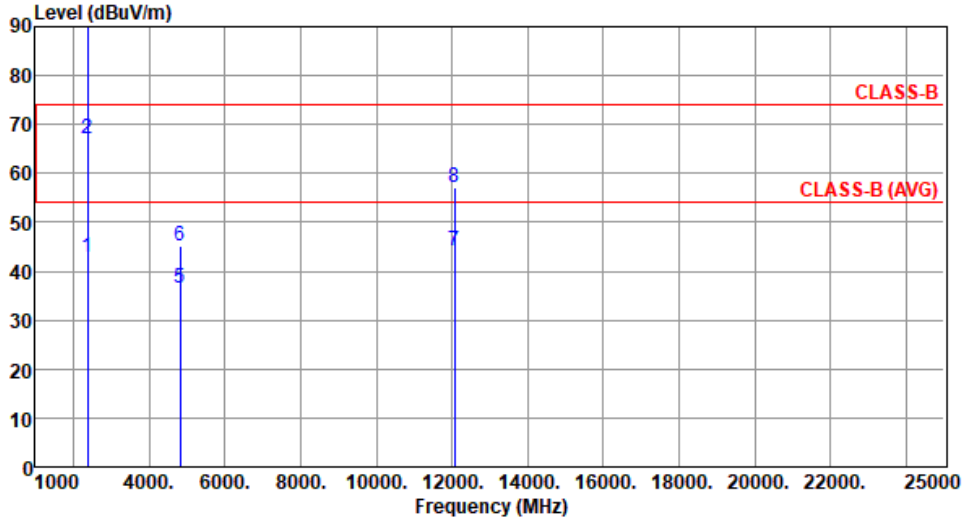
		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	*	2462.00	104.93			106.69	-1.76	Average	334	1
2	*	2462.00	114.54			116.30	-1.76	Peak	334	1
3		2483.50	53.55	54.00	-0.45	55.36	-1.81	Average	334	1
4		2483.50	68.70	74.00	-5.30	70.51	-1.81	Peak	334	1
5		4924.00	36.65	54.00	-17.35	31.27	5.38	Average	100	201
6		4924.00	45.88	74.00	-28.12	40.50	5.38	Peak	100	201
7		7386.00	41.26	54.00	-12.74	30.81	10.45	Average	100	52
8		7386.00	53.44	74.00	-20.56	42.99	10.45	Peak	100	52

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:"*" is Peak / Average value of fundamental frequency

3.5.7 Transmitter Radiated Unwanted Emissions (Above 1GHz) for ax HE20

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

Test By :Akun Chung Temperature(℃):23 Humidity(%):63

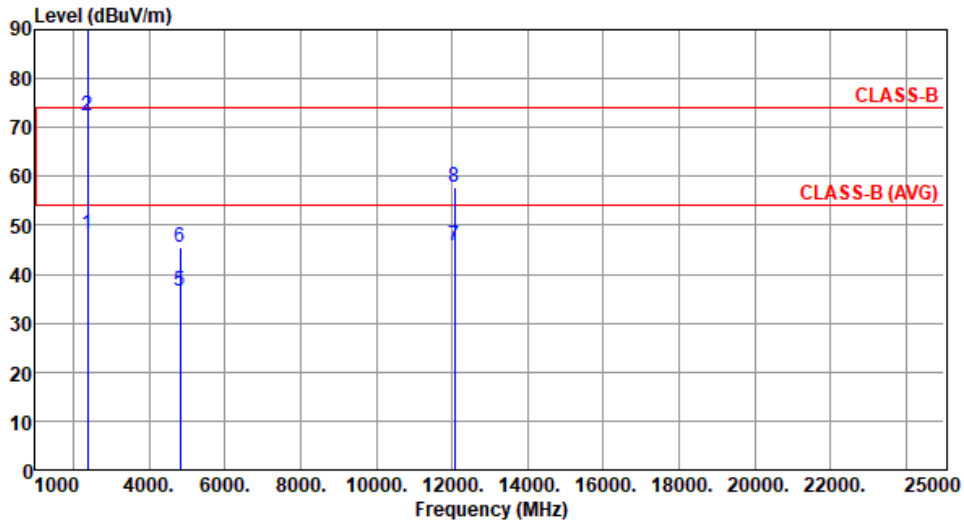


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1		2390.00	42.95	54.00	-11.05	44.54	-1.59	Average	321	26
2		2390.00	67.14	74.00	-6.86	68.73	-1.59	Peak	321	26
3	*	2412.00	96.82			98.46	-1.64	Average	321	26
4	*	2412.00	110.41			112.05	-1.64	Peak	321	26
5		4824.00	36.44	54.00	-17.56	31.22	5.22	Average	100	64
6		4824.00	45.26	74.00	-28.74	40.04	5.22	Peak	100	64
7		12060.00	44.28	54.00	-9.72	29.40	14.88	Average	100	204
8		12060.00	57.26	74.00	-16.74	42.38	14.88	Peak	100	204

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:"*" is Peak / Average value of fundamental frequency

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

Test By :Akun Chung Temperature(℃):23 Humidity(%):63

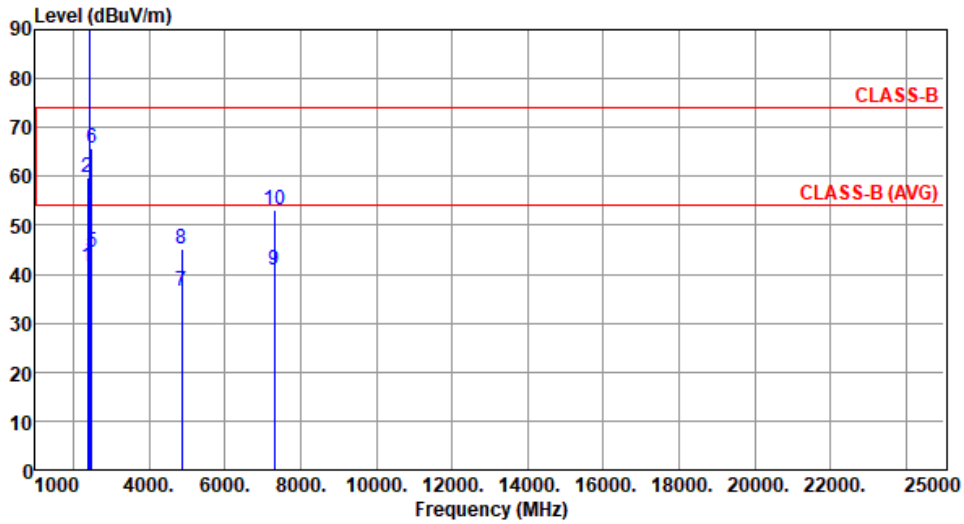


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1		2390.00	48.02	54.00	-5.98	49.61	-1.59	Average	316	354
2		2390.00	72.36	74.00	-1.64	73.95	-1.59	Peak	316	354
3	*	2412.00	101.88			103.52	-1.64	Average	316	354
4	*	2412.00	115.55			117.19	-1.64	Peak	316	354
5		4824.00	36.68	54.00	-17.32	31.46	5.22	Average	100	191
6		4824.00	45.62	74.00	-28.38	40.40	5.22	Peak	100	191
7		12060.00	45.92	54.00	-8.08	31.04	14.88	Average	100	311
8		12060.00	57.84	74.00	-16.16	42.96	14.88	Peak	100	311

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:"*" is Peak / Average value of fundamental frequency

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

Test By :Akun Chung Temperature(℃):23 Humidity(%):63

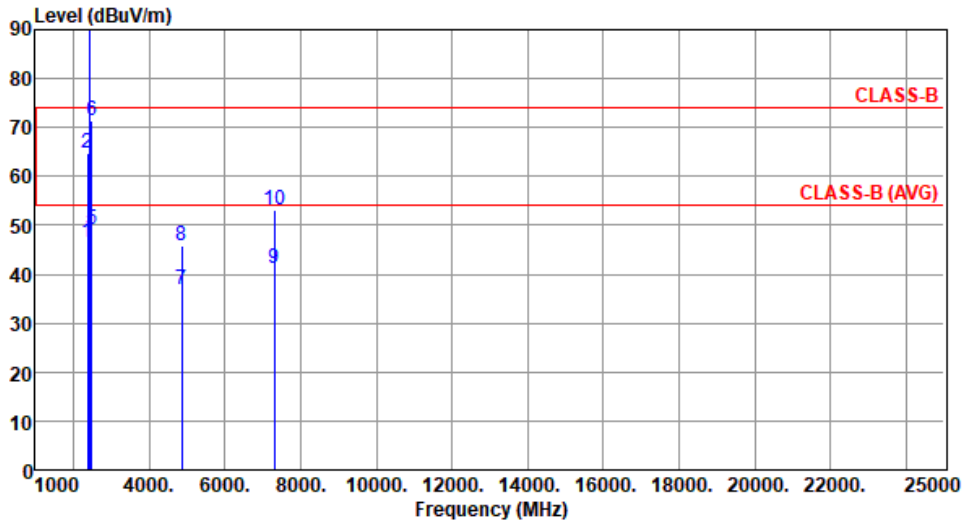


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1		2390.00	41.54	54.00	-12.46	43.13	-1.59	Average	326	15
2		2390.00	59.86	74.00	-14.14	61.45	-1.59	Peak	326	15
3	*	2437.00	100.41			102.12	-1.71	Average	326	15
4	*	2437.00	113.82			115.53	-1.71	Peak	326	15
5		2483.50	44.62	54.00	-9.38	46.43	-1.81	Average	326	15
6		2483.50	65.81	74.00	-8.19	67.62	-1.81	Peak	326	15
7		4874.00	36.45	54.00	-17.55	31.17	5.28	Average	100	62
8		4874.00	45.31	74.00	-28.69	40.03	5.28	Peak	100	62
9		7311.00	40.98	54.00	-13.02	30.23	10.75	Average	100	44
10		7311.00	53.16	74.00	-20.84	42.41	10.75	Peak	100	44

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:"*" is Peak / Average value of fundamental frequency

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

Test By :Akun Chung Temperature(℃):23 Humidity(%):63

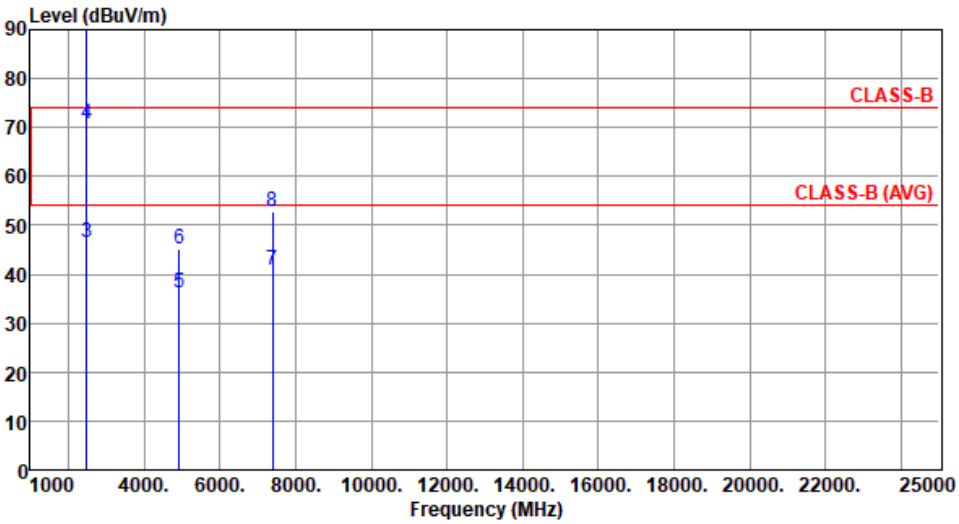


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1		2390.00	46.51	54.00	-7.49	48.10	-1.59	Average	299	16
2		2390.00	64.90	74.00	-9.10	66.49	-1.59	Peak	299	16
3	*	2437.00	105.38			107.09	-1.71	Average	299	16
4	*	2437.00	119.00			120.71	-1.71	Peak	299	16
5		2483.50	49.20	54.00	-4.80	51.01	-1.81	Average	299	291
6		2483.50	71.55	74.00	-2.45	73.36	-1.81	Peak	299	291
7		4874.00	36.75	54.00	-17.25	31.47	5.28	Average	100	191
8		4874.00	45.74	74.00	-28.26	40.46	5.28	Peak	100	191
9		7311.00	41.17	54.00	-12.83	30.42	10.75	Average	100	52
10		7311.00	53.21	74.00	-20.79	42.46	10.75	Peak	100	52

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:"*" is Peak / Average value of fundamental frequency

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

Test By :Akun Chung Temperature(℃):23 Humidity(%):63

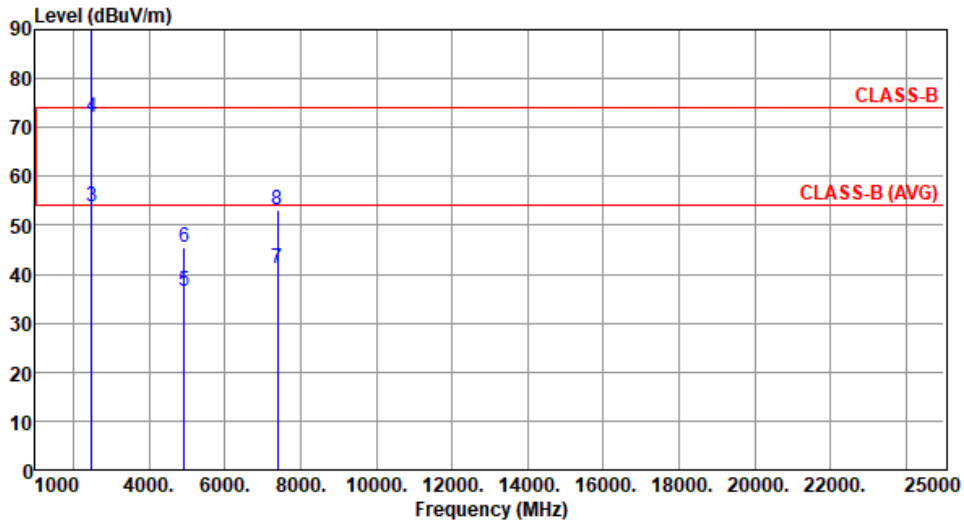


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	*	2462.00	97.36			99.12	-1.76	Average	329	16
2	*	2462.00	110.91			112.67	-1.76	Peak	329	16
3		2483.50	46.65	54.00	-7.35	48.46	-1.81	Average	329	16
4		2483.50	70.58	74.00	-3.42	72.39	-1.81	Peak	329	16
5		4924.00	36.21	54.00	-17.79	30.83	5.38	Average	100	59
6		4924.00	45.18	74.00	-28.82	39.80	5.38	Peak	100	59
7		7386.00	40.86	54.00	-13.14	30.41	10.45	Average	100	36
8		7386.00	52.95	74.00	-21.05	42.50	10.45	Peak	100	36

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:"*" is Peak / Average value of fundamental frequency

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

Test By :Akun Chung Temperature(℃):23 Humidity(%):63



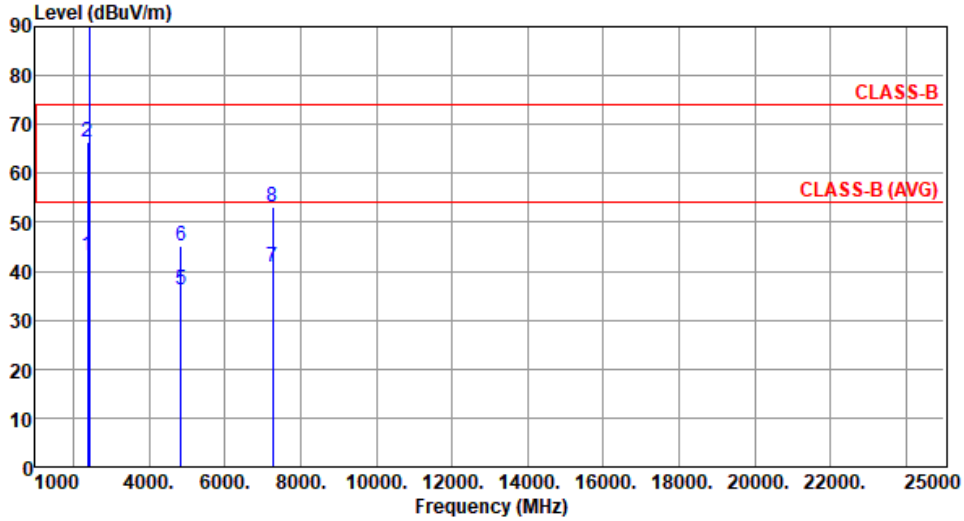
		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	*	2462.00	102.78			104.54	-1.76	Average	313	243
2	*	2462.00	115.73			117.49	-1.76	Peak	313	243
3		2483.50	53.65	54.00	-0.35	55.46	-1.81	Average	313	291
4		2483.50	72.04	74.00	-1.96	73.85	-1.81	Peak	313	291
5		4924.00	36.55	54.00	-17.45	31.17	5.38	Average	100	196
6		4924.00	45.51	74.00	-28.49	40.13	5.38	Peak	100	196
7		7386.00	41.12	54.00	-12.88	30.67	10.45	Average	100	48
8		7386.00	53.18	74.00	-20.82	42.73	10.45	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).
Note 3:"*" is Peak / Average value of fundamental frequency

3.5.8 Transmitter Radiated Unwanted Emissions (Above 1GHz) for ax HE40

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

Test By :Brad Wu Temperature(℃):23 Humidity(%):63

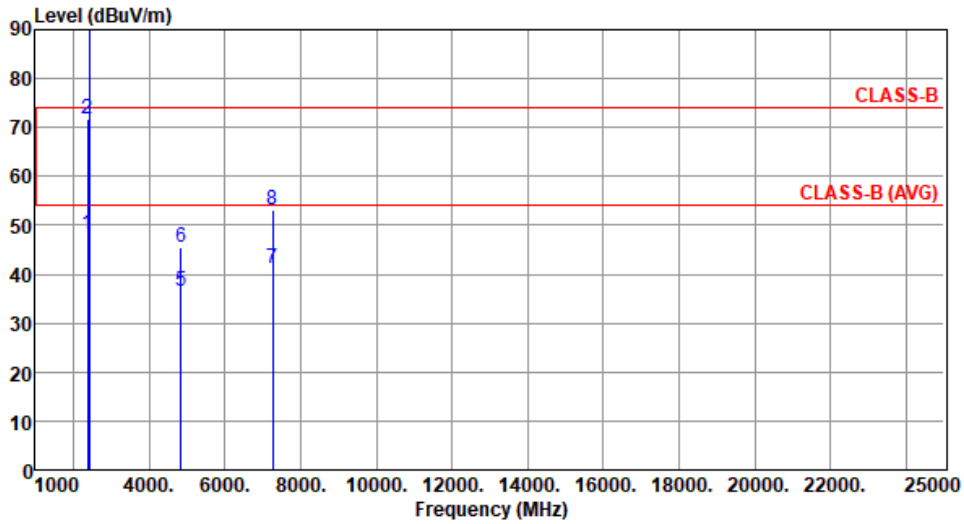


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1		2390.00	43.16	54.00	-10.84	44.75	-1.59	Average	324	16
2		2390.00	66.42	74.00	-7.58	68.01	-1.59	Peak	324	16
3	*	2422.00	95.38			97.05	-1.67	Average	324	16
4	*	2422.00	107.89			109.56	-1.67	Peak	324	16
5		4844.00	36.21	54.00	-17.79	30.97	5.24	Average	100	55
6		4844.00	45.14	74.00	-28.86	39.90	5.24	Peak	100	55
7		7266.00	40.85	54.00	-13.15	30.00	10.85	Average	100	51
8		7266.00	53.22	74.00	-20.78	42.37	10.85	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).
Note 3:"*" is Peak / Average value of fundamental frequency

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

Test By :Brad Wu Temperature(℃):23 Humidity(%):63

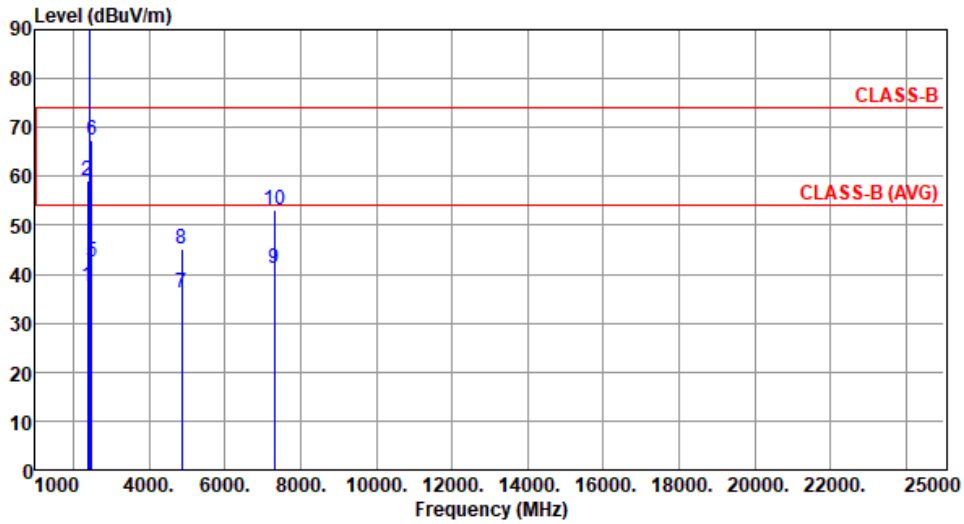


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1		2390.00	48.24	54.00	-5.76	49.83	-1.59	Average	294	10
2		2390.00	71.61	74.00	-2.39	73.20	-1.59	Peak	294	10
3	*	2422.00	100.50			102.17	-1.67	Average	294	10
4	*	2422.00	113.10			114.77	-1.67	Peak	294	10
5		4844.00	36.52	54.00	-17.48	31.28	5.24	Average	100	204
6		4844.00	45.51	74.00	-28.49	40.27	5.24	Peak	100	204
7		7266.00	41.24	54.00	-12.76	30.39	10.85	Average	100	91
8		7266.00	53.26	74.00	-20.74	42.41	10.85	Peak	100	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).
Note 3:"*" is Peak / Average value of fundamental frequency

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

Test By :Brad Wu Temperature(℃):23 Humidity(%):63

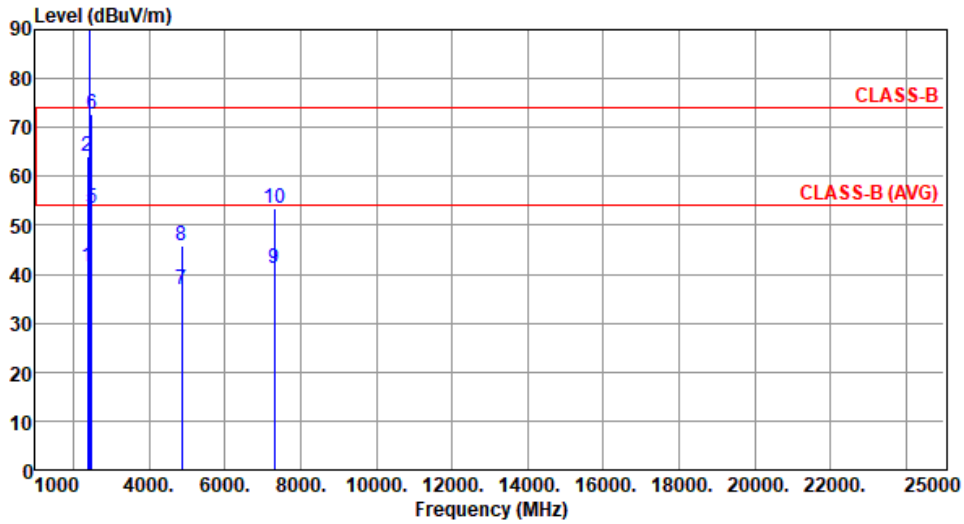


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1		2390.00	37.68	54.00	-16.32	39.27	-1.59	Average	321	14
2		2390.00	59.02	74.00	-14.98	60.61	-1.59	Peak	321	14
3	*	2437.00	95.65			97.36	-1.71	Average	321	14
4	*	2437.00	108.01			109.72	-1.71	Peak	321	14
5		2483.50	42.44	54.00	-11.56	44.25	-1.81	Average	321	14
6		2483.50	67.58	74.00	-6.42	69.39	-1.81	Peak	321	14
7		4874.00	36.32	54.00	-17.68	31.04	5.28	Average	100	55
8		4874.00	45.28	74.00	-28.72	40.00	5.28	Peak	100	55
9		7311.00	41.06	54.00	-12.94	30.31	10.75	Average	100	63
10		7311.00	53.24	74.00	-20.76	42.49	10.75	Peak	100	63

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:"*" is Peak / Average value of fundamental frequency

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

Test By :Brad Wu Temperature(℃):23 Humidity(%):63

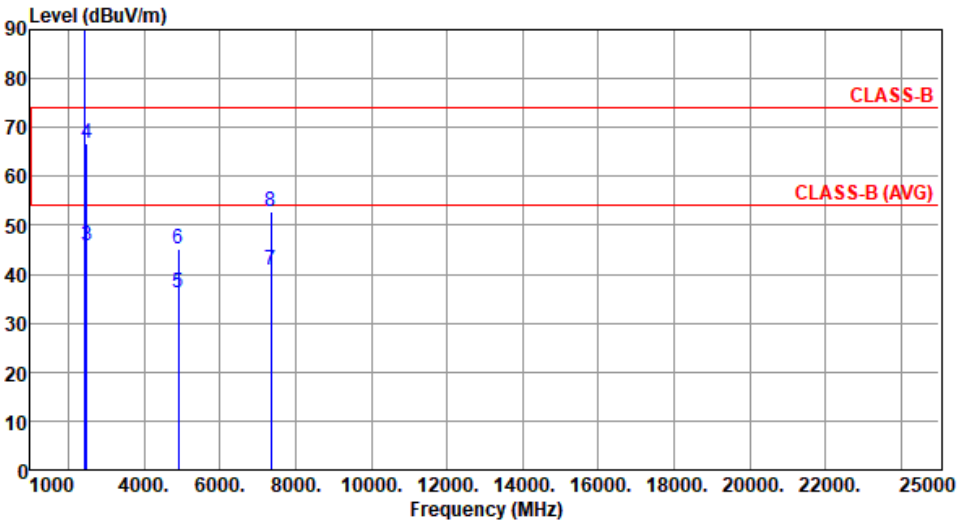


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1		2390.00	41.61	54.00	-12.39	43.20	-1.59	Average	295	9
2		2390.00	64.21	74.00	-9.79	65.80	-1.59	Peak	295	9
3	*	2437.00	100.72			102.43	-1.71	Average	295	9
4	*	2437.00	113.38			115.09	-1.71	Peak	295	9
5		2483.50	53.54	54.00	-0.46	55.35	-1.81	Average	295	9
6		2483.50	72.77	74.00	-1.23	74.58	-1.81	Peak	295	9
7		4874.00	36.82	54.00	-17.18	31.54	5.28	Average	100	185
8		4874.00	45.84	74.00	-28.16	40.56	5.28	Peak	100	185
9		7311.00	41.29	54.00	-12.71	30.54	10.75	Average	100	31
10		7311.00	53.46	74.00	-20.54	42.71	10.75	Peak	100	31

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:"*" is Peak / Average value of fundamental frequency

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

Test By :Brad Wu Temperature(℃):23 Humidity(%):63

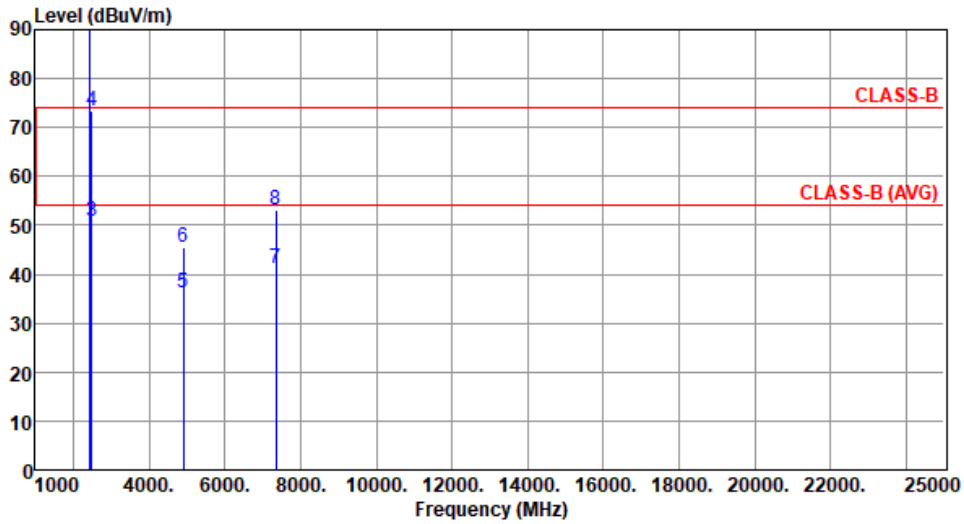


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	*	2452.00	93.53			95.27	-1.74	Average	338	33
2	*	2452.00	106.80			108.54	-1.74	Peak	338	33
3		2483.50	45.74	54.00	-8.26	47.55	-1.81	Average	338	33
4		2483.50	66.81	74.00	-7.19	68.62	-1.81	Peak	338	33
5		4904.00	36.35	54.00	-17.65	31.03	5.32	Average	100	44
6		4904.00	45.24	74.00	-28.76	39.92	5.32	Peak	100	44
7		7356.00	40.75	54.00	-13.25	30.03	10.72	Average	100	41
8		7356.00	52.81	74.00	-21.19	42.09	10.72	Peak	100	41

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:"*" is Peak / Average value of fundamental frequency

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

Test By :Brad Wu Temperature(℃):23 Humidity(%):63



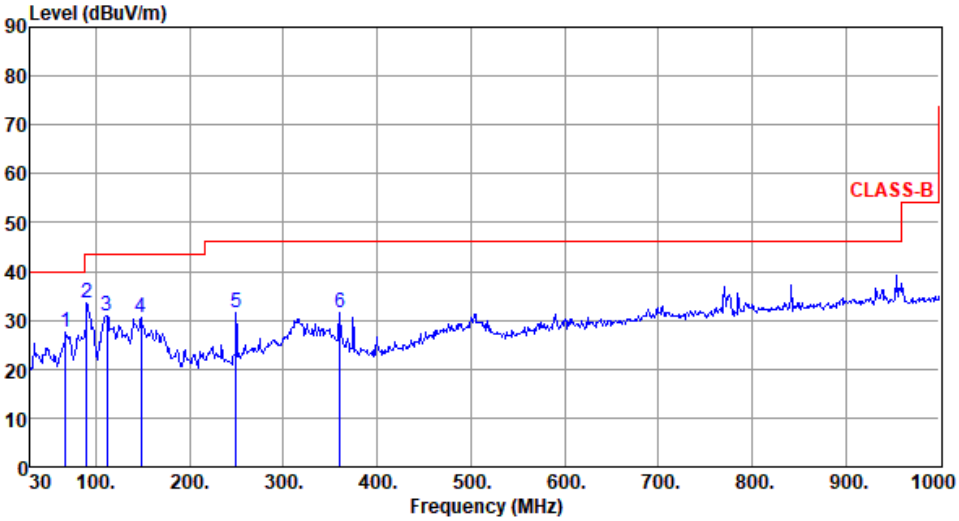
		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	*	2452.00	98.87			100.61	-1.74	Average	296	9
2	*	2452.00	111.56			113.30	-1.74	Peak	296	9
3		2483.50	50.80	54.00	-3.20	52.61	-1.81	Average	296	9
4		2483.50	73.52	74.00	-0.48	75.33	-1.81	Peak	296	9
5		4904.00	36.28	54.00	-17.72	30.96	5.32	Average	100	209
6		4904.00	45.34	74.00	-28.66	40.02	5.32	Peak	100	209
7		7356.00	41.22	54.00	-12.78	30.50	10.72	Average	100	56
8		7356.00	53.29	74.00	-20.71	42.57	10.72	Peak	100	56

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:"*" is Peak / Average value of fundamental frequency

Configuration 2: POE mode

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

Test By :Brad Wu Temperature(℃):24 Humidity(%):68

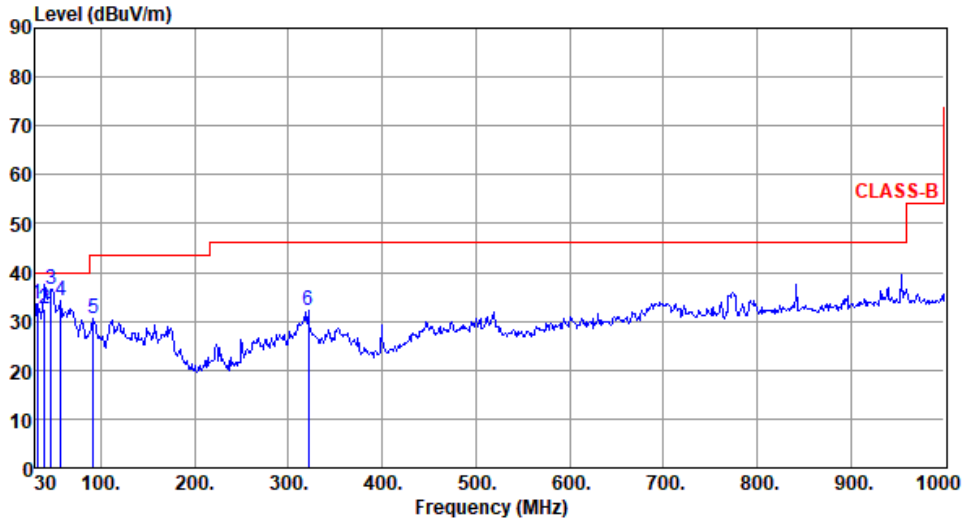


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	67.83	27.52	40.00	-12.48	37.88	-10.36	Peak	---	---
2	90.14	33.70	43.50	-9.80	48.42	-14.72	Peak	---	---
3	111.48	30.97	43.50	-12.53	42.66	-11.69	Peak	---	---
4	148.34	30.59	43.50	-12.91	39.26	-8.67	Peak	---	---
5	249.22	31.60	46.00	-14.40	41.40	-9.80	Peak	---	---
6	360.77	31.58	46.00	-14.42	38.21	-6.63	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	11b	Test Freq. (MHz)	2412
Polarization	Vertical		

Test By :Brad Wu Temperature(℃):24 Humidity(%):68



	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	31.94	33.68	40.00	-6.32	44.06	-10.38	Peak	---	---
2	39.70	32.41	40.00	-7.59	41.60	-9.19	QP	100	19
3	46.49	36.58	40.00	-3.42	45.39	-8.81	Peak	---	---
4	57.16	34.04	40.00	-5.96	43.41	-9.37	Peak	---	---
5	92.08	30.40	43.50	-13.10	45.08	-14.68	Peak	---	---
6	321.00	32.20	46.00	-13.80	39.69	-7.49	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.

3.6 Emissions in Non-Restricted Frequency Bands

3.6.1 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.

3.6.2 Test Procedures

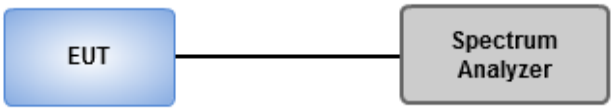
Reference level measurement

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

3.6.3 Test Setup

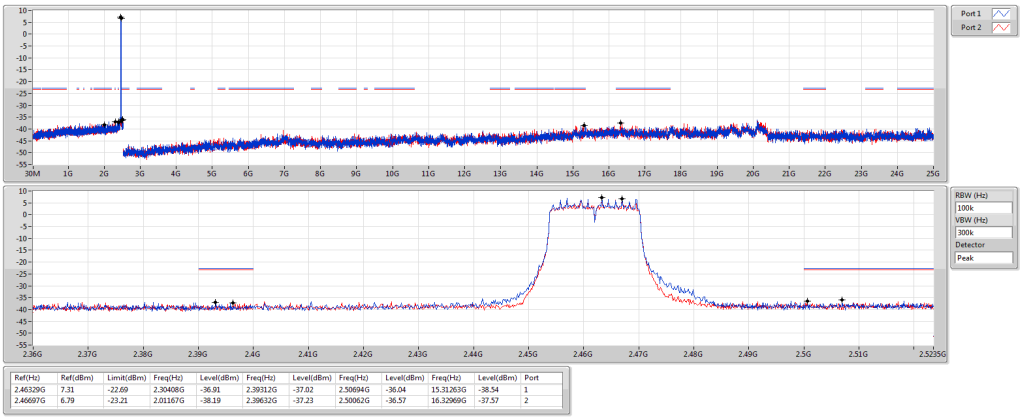


3.6.4 Unwanted Emissions into Non-Restricted Frequency Bands

Ambient Condition	23°C / 63%	Tested By	Aska Huang

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

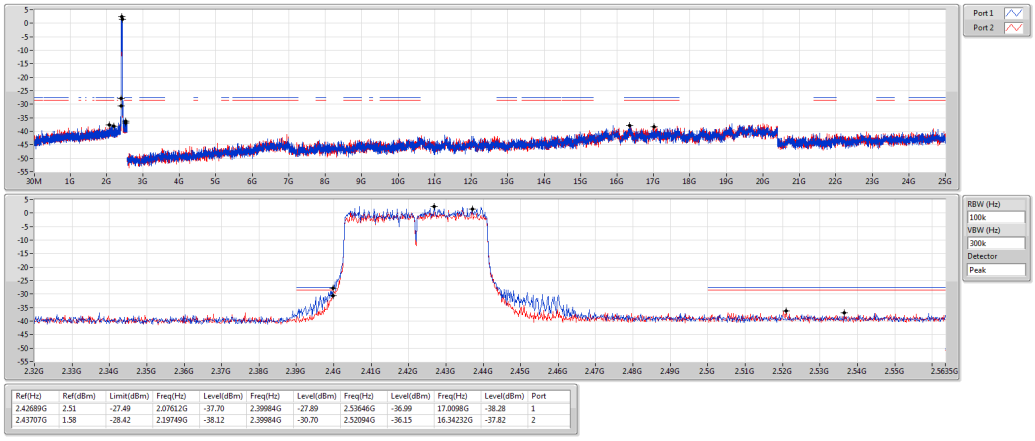
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.46329G	7.31	-22.69	2.30408G	-36.91	2.39312G	-37.02	2.50694G	-36.04	15.31263G	-38.54	1
2.46697G	6.79	-23.21	2.01167G	-38.19	2.39632G	-37.23	2.50062G	-36.57	16.32969G	-37.57	2

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

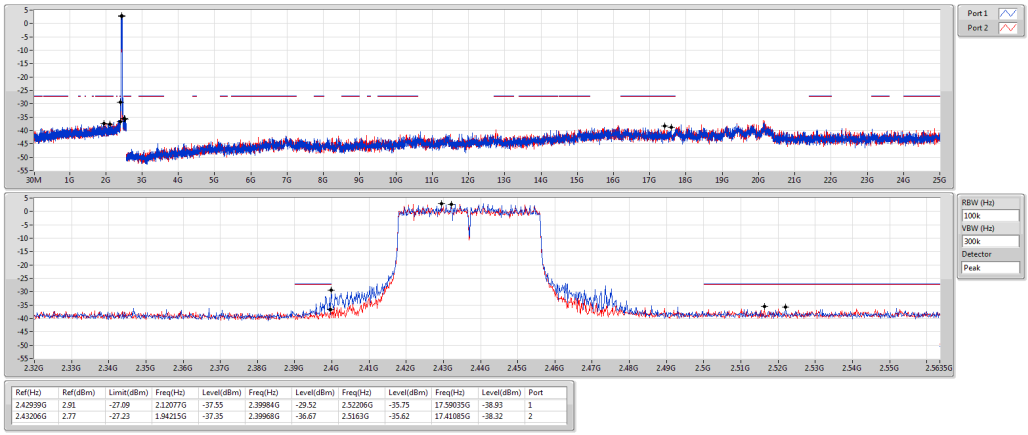
2422MHz



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	2.51	-27.49	2.07612G	-37.70	2.39984G	-27.89	2.53646G	-36.99	17.0098G	-38.28	1
2.43707G	1.58	-28.42	2.19749G	-38.12	2.39984G	-30.70	2.52094G	-36.15	16.34232G	-37.82	2

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

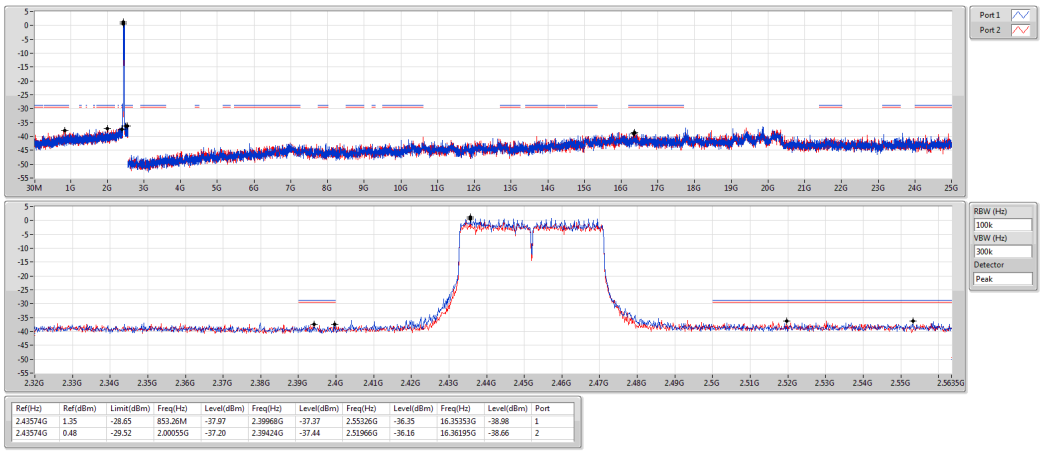
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.42939G	2.91	-27.09	2.12077G	-37.55	2.39984G	-29.52	2.52206G	-35.75	17.59035G	-38.93	1
2.43206G	2.77	-27.23	1.94215G	-37.35	2.39968G	-36.67	2.5163G	-35.62	17.41085G	-38.32	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
2.43574G	1.35	-28.65	853.26M	-37.97	2.39968G	-37.37	2.55326G	-36.35	16.35353G	-38.98	1
2.43574G	0.48	-29.52	2.00055G	-37.20	2.39424G	-37.44	2.51966G	-36.16	16.36195G	-38.66	2

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==