FCC Test Report

FCC ID	:	**I8803891**
Equipment	:	**AXE5400 Tri-Band WiFi 6E Mesh System** **(Please refer to section 1.1.1 for more details)**
Model No.	:	**WSQ65** **(Please refer to section 1.1.1 for more details)**
Brand Name	:	**ZYXEL**
Applicant	:	**Zyxel Communications Corporation**
Address	:	**No.2 Industry East RD. IX, Hsinchu Science Park, Hsinchu 30075, Taiwan**
Standard	:	**47 CFR FCC Part 15.247**
Received Date	:	**Sep. 13, 2022**
Tested Date	:	**Sep. 23 ~ Oct. 25, 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
FR291302AC	Rev. 01	Initial issue	Dec. 02, 2022

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	AC Power Line Conducted Emission	[dBuV]: 0.168MHz 58.18 (Margin -6.90dB) - QP	Pass
15.247(d) 15.209	Unwanted Emissions	[dBuV/m at 3m]: 4824.00MHz 53.84 (Margin -0.16dB) - AV	Pass
15.247(b)(3)	Conducted Output Power	Max Power [dBm]: ***Non-beamforming mode*** 24.27 ***Beamforming mode*** 20.95	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 Product Details

The following models are provided to this EUT.

Product Name	Model	Description					
		DDR			Flash		
		Brand	Type	Size	Brand	Type	Size
AXE5400 Tri-Band WiFi 6E Mesh System	WSQ65	Kingston	D2516ECMDXGJD	512MB	MXIC	MX35UF1G24AD-Z4I	128MB
WiFi Mesh System	WSQ63						
Security Router	SCR 50AXE	ESMT	M15T8G16512A-DEBG2S	1024MB	Winbond	W25N02KWZEIR	256MB

Note 1: The variation of WSQ65 and WSQ63 is for strategy of marketing. The circuit of each model is identical. Model **WSQ65** was selected as a representative for the final test and only its data was recorded in this report.
Note 2:
CPU Model No: IPQ5018
2.4G Chip Model: IPQ5018
5G Chip Model: QCN6102
6G Chip Model: QCN6122

1.1.2 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

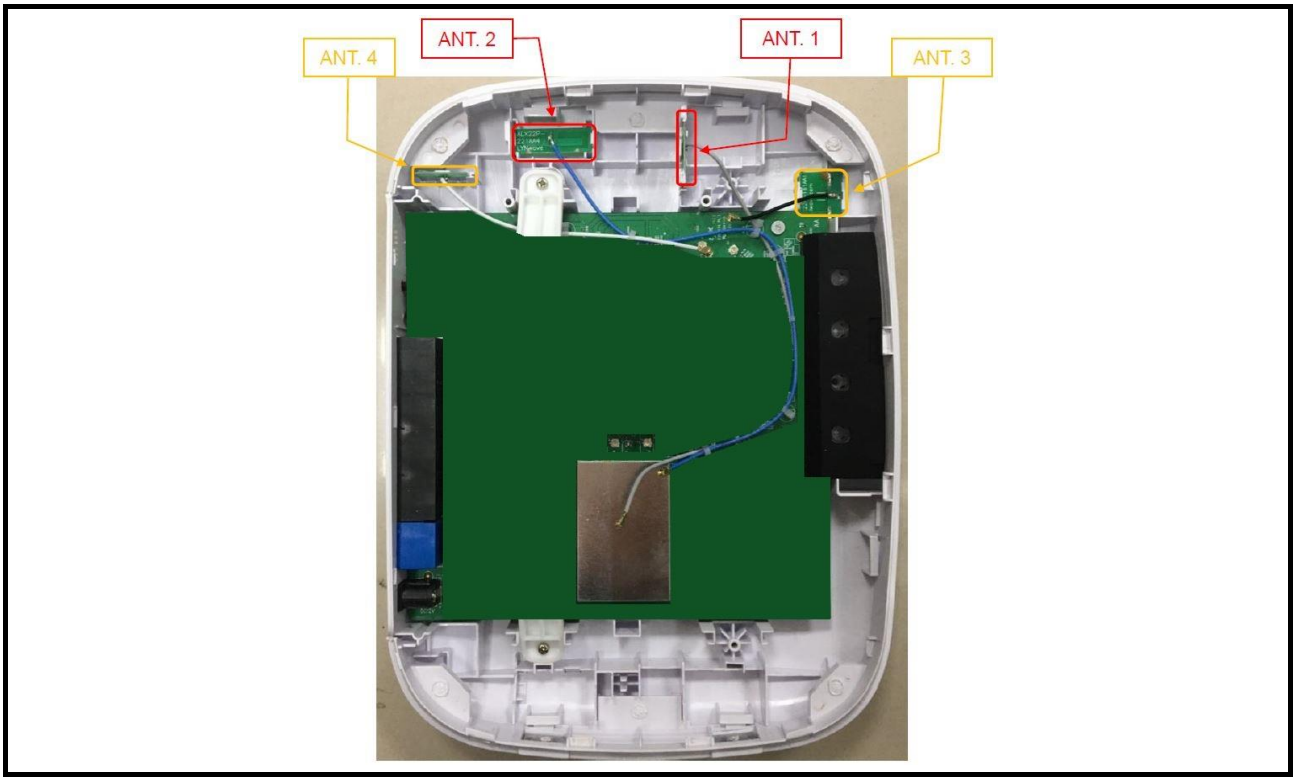
Note 1: RF output power specifies that Maximum Conducted (Average) Output Power.
Note 2: DBPSK, DQPSK, CCK modulation
BPSK, QPSK, 16QAM, 64QAM, 256QAM and 1024QAM modulation.
Note 3: 802.11n/ax supports beamforming function.

1.1.3 Antenna Details

Ant. No.	Brand	Model	Type	Connector	Operating Frequencies (MHz) / Gain (dBi)				
					2400~2483.5	5150~5250	5250~5350	5470~5725	5725~5850
1	LYNwave	ALX22P-221AA4-00	Dipole	MHF compatible	2	2.3	2.9	2.6	2
2	LYNwave	ALX22P-221AA4-01	Dipole	MHF compatible	2	2.8	3.2	2.9	2.5

Ant. No.	Brand	Model	Type	Connector	Operating Frequencies (MHz) / Gain (dBi)			
					5925~6425	6425~6525	6525~6875	6875~7125
3	LYNwave	ALX22P-161AA1-00	Dipole	MHF compatible	3	4.7	3.5	3.2
4	LYNwave	ALX22P-161AA2-00	Dipole	MHF compatible	3.5	3.3	3.4	3

1.1.4 Antenna Port Location



1.1.5 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	12Vdc from AC adapter

1.1.6 Accessories

Accessories		
No.	**Equipment**	**Description**
1	AC adapter	Brand: DVE Model: DSA-24PFS-12 FCA 120200 I/P: 100-240Vac, 50/60Hz, 0.8A O/P: 12V⎓2.0A, 24.0W Power Line: DC 1.5m non-shielded without core
2	Ethernet Cable	1.5m non-shielded without core

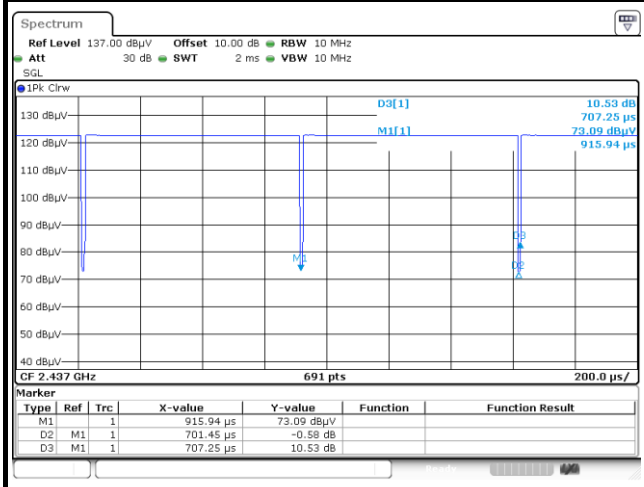
1.1.7 Channel List

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	---	---

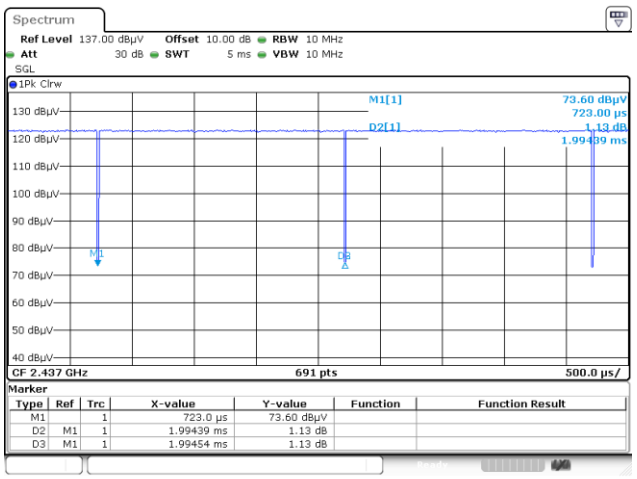
1.1.8 Test Tool and Duty Cycle

Test Tool	QSPR, V5.0.0-00197		
Duty Cycle and Duty Factor	Mode	Duty Cycle (%)	Duty Factor (dB)
	11b	99.18%	0.04
	11g	99.99%	0.00
	ax HE20	99.98%	0.00
	ax HE40	99.98%	0.00

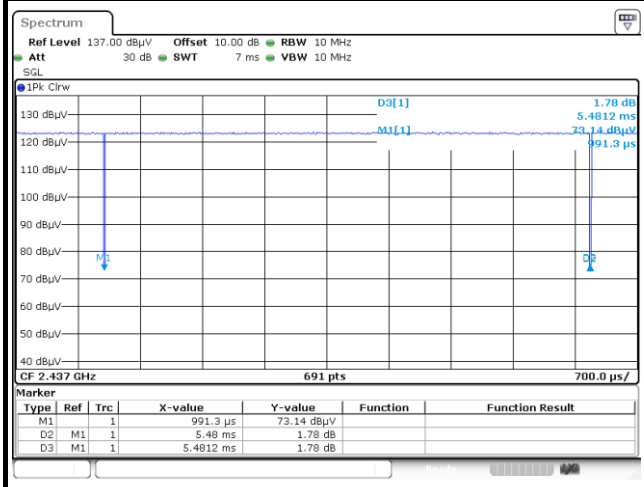
11b



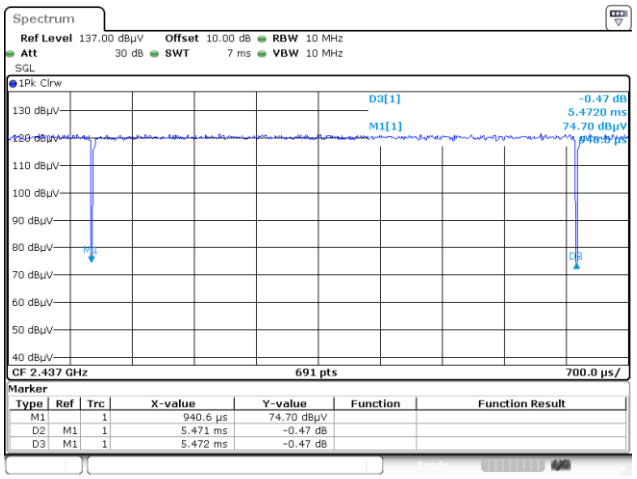
11g



ax HE20



ax HE40



1.1.9 Power Index of Test Tool

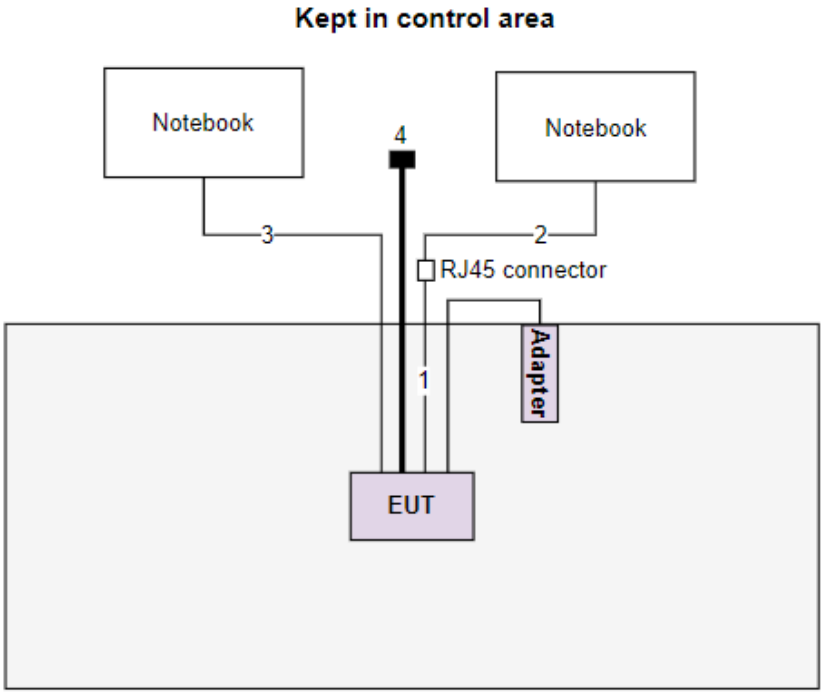
Modulation Mode	Test Frequency (MHz)	Power Index
11b	2412	19.5
11b	2437	21
11b	2462	21
11g	2412	18
11g	2437	21
11g	2462	18
ax HE20	2412	17
ax HE20	2437	21
ax HE20	2462	17
ax HE40	2422	15
ax HE40	2437	17
ax HE40	2452	15.5

1.2 Local Support Equipment List

Support Equipment List					
No.	**Equipment**	**Brand**	**Model**	**FCC ID**	**Remarks**
1	Notebook	DELL	Latitude E5470	DZSHVF2	---
2	Notebook	DELL	Latitude 5400	9TYCM33	---
3	RJ45 Load	ICC	RJ45 Load	---	---
4	RJ45 Connector	ICC	RJ45 Connector	---	---
5	RJ45 cable (x3)	ICC	RJ45-1.3m	---	---
6	RJ45 cable (x2)	ICC	RJ45-10m	---	---

1.3 Test Setup Chart

Test Setup Diagram



No.	Signal cable / Length (m)
1	Ethernet, 1.5m non-shielded.
2-3	RJ45, 10m non-shielded.
4	RJ45, 1.3m(x3) non-shielded with load.

1.4 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Tested Date	Oct. 11, 2022				
Instrument	**Brand**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Receiver	R&S	ESR3	101658	Feb. 16, 2022	Feb. 15, 2023
LISN	R&S	ENV216	101579	Apr. 21, 2022	Apr. 20, 2023
LISN (Support Unit)	SCHWARZBECK	NSLK 8127	8127667	Jan .07, 2022	Jan .06, 2023
RF Cable-CON	Woken	CFD200-NL	CFD200-NL-001	Oct. 19, 2021	Oct. 18, 2022
50 ohm terminal (Support Unit)	NA	50	04	May 10, 2022	May 09, 2023
Measurement Software	AUDIX	e3	6.120210k	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	Radiated Emission				
Test Site	966 chamber3 / (03CH03-WS)				
Tested Date	Sep. 23 ~ Sep. 29, 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	Jun. 28, 2022	Jun. 27, 2023
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. 16, 2022	Jul. 15, 2023
Preamplifier	EMC	EMC184045SE	980897	Aug. 01, 2022	Jul. 31, 2023
Preamplifier	EMC	EMC184045SE	980903	Jul. 16, 2022	Jul. 15, 2023
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. 23, 2022	Sep. 22, 2023
LF cable-3M	EMC	EMC8D-NM-NM-300 0	131103	Sep. 23, 2022	Sep. 22, 2023
LF cable-13M	EMC	EMC8D-NM-NM-130 00	131104	Sep. 23, 2022	Sep. 22, 2023
RF cable-3M	HUBER+SUHNER	SUCOFLEX104	MY22620/4	Sep. 23, 2022	Sep. 22, 2023
RF cable-8M	EMC	EMC104-SM-SM-80 00	181107	Sep. 23, 2022	Sep. 22, 2023
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. 20 ~ Oct. 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	11b	2437	1 Mbps	-
Unwanted Emissions ≤ 1GHz	11b	2437	1 Mbps	-
Unwanted Emissions >1GHz Conducted Output Power 6dB bandwidth Power spectral density	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	-
Beamforming mode				
Conducted Output Power	ax HE20 ax HE40	2412 / 2437 / 2462 2422 / 2437 / 2452	MCS 0 MCS 0	-

NOTE:
1. Two models (WSQ65 & SCR 50AXE) had been covered during the pretest and found that **model WSQ65** was the worst case and was selected for final testing.

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

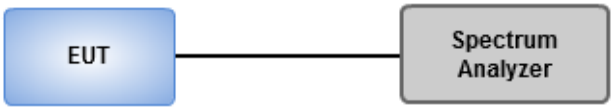
6dB Bandwidth

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	22~24°C / 64~67%	**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	22~24°C / 64~67%	**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.

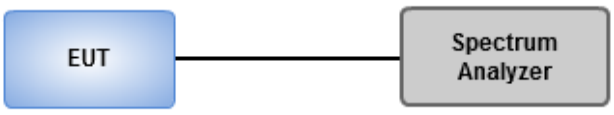
2 Set the sweep time to: ≥ 10 (number of measurement points in sweep) x (total on/off period of the transmitted signal).

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	22~24°C / 64~67%	**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

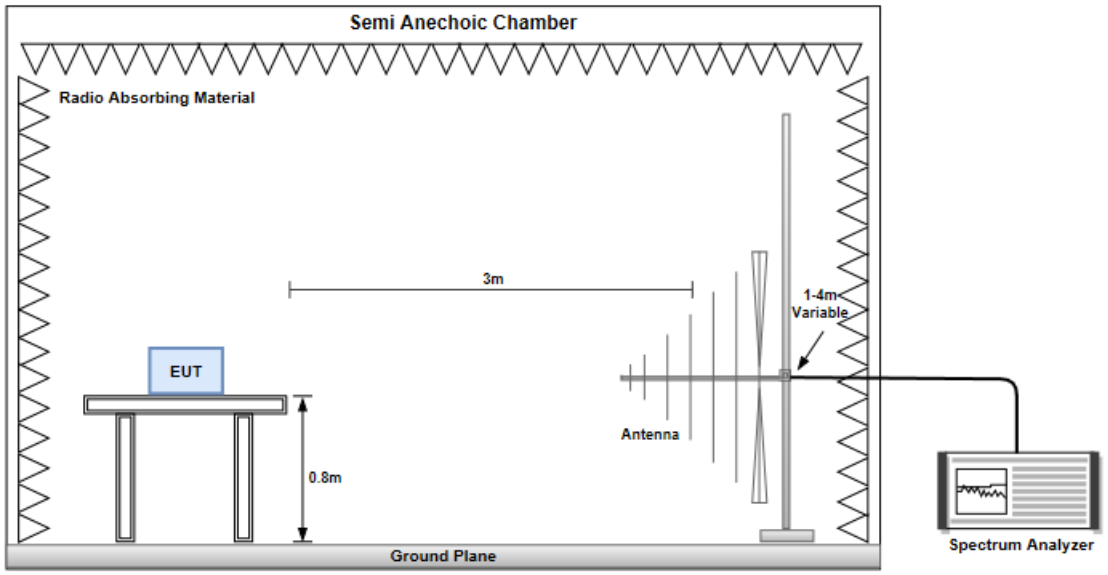
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission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

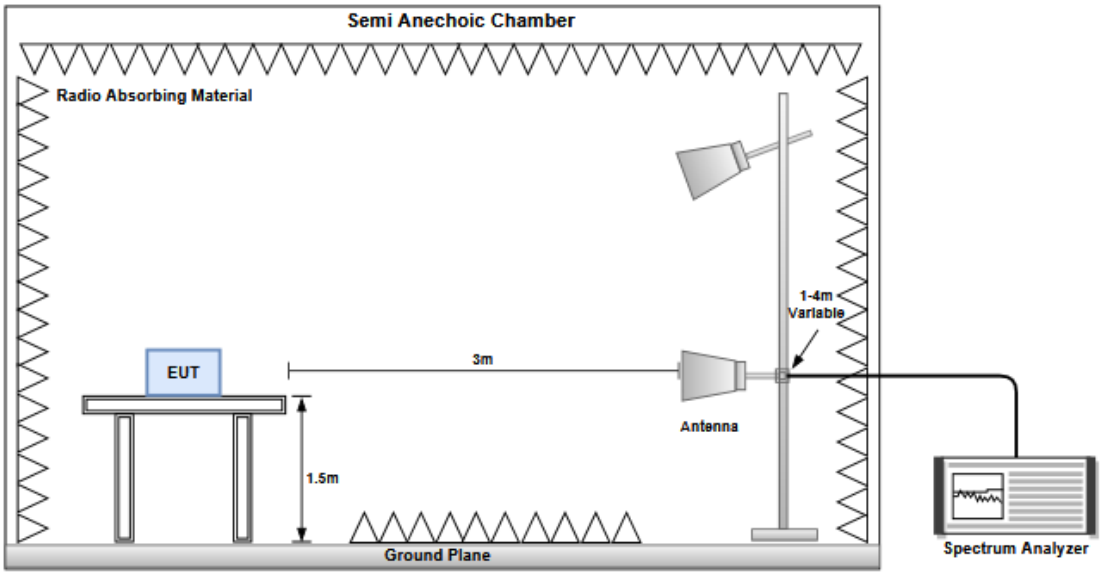
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above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

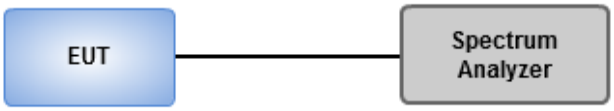
Reference level measurement

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	22~24°C / 64~67%	Tested By	Aska Huang

Refer to Appendix E.

3.6 AC Power Line Conducted Emissions

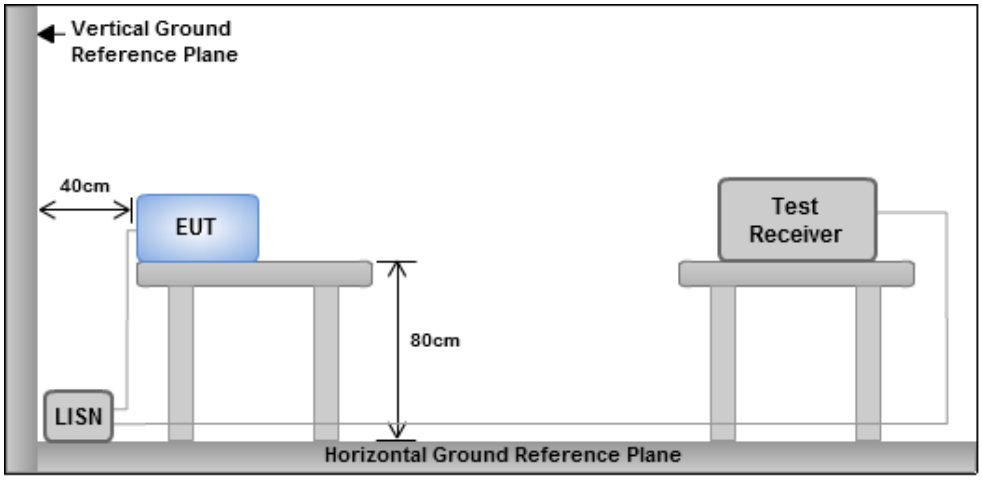
3.6.1 Limit of AC Power Line Conducted Emissions

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

Tel: 886-2-2601-1640

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

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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.

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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	8.05M	13.193M	13M2G1D	8.025M	12.919M
802.11g_Nss1,(6Mbps)_2TX	15.075M	16.492M	16M5D1D	13.775M	16.267M
802.11ax HEW20_Nss2,(MCS0)_2TX	15.05M	19.04M	19M0D1D	11.75M	18.766M
802.11ax HEW40_Nss2,(MCS0)_2TX	36.95M	37.681M	37M7D1D	32.5M	37.581M

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

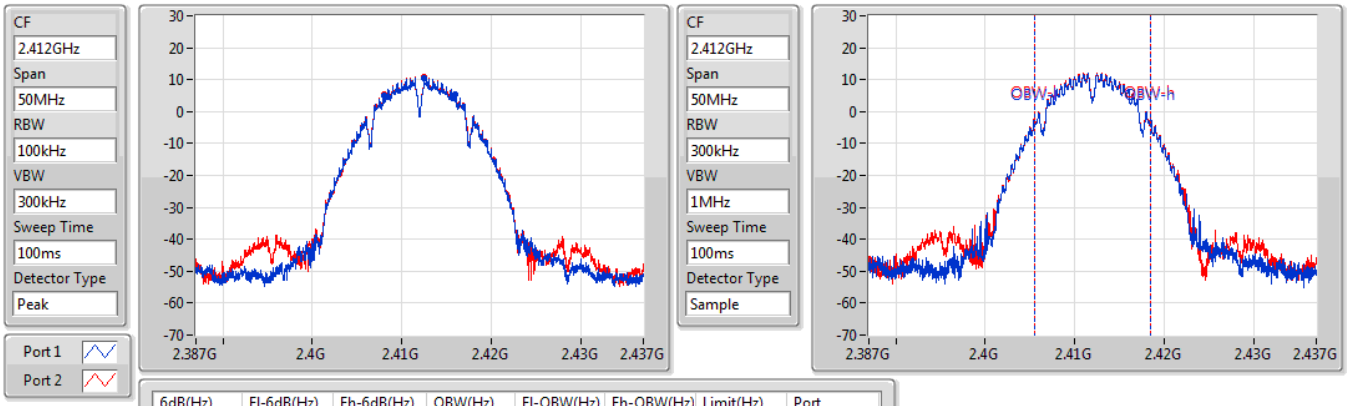
Result

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	8.05M	12.944M	8.05M	12.994M
2437MHz	Pass	500k	8.05M	13.043M	8.025M	13.193M
2462MHz	Pass	500k	8.025M	12.919M	8.05M	12.994M
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	15.025M	16.292M	15.075M	16.317M
2437MHz	Pass	500k	14.975M	16.367M	15.05M	16.492M
2462MHz	Pass	500k	13.775M	16.267M	13.825M	16.292M
802.11ax HEW20_Nss2,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	15M	18.816M	15.025M	18.816M
2437MHz	Pass	500k	14.925M	18.891M	13.725M	19.04M
2462MHz	Pass	500k	11.75M	18.766M	15.05M	18.816M
802.11ax HEW40_Nss2,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	500k	32.9M	37.631M	36.95M	37.681M
2437MHz	Pass	500k	32.5M	37.581M	36.1M	37.631M
2452MHz	Pass	500k	32.55M	37.581M	33.85M	37.681M

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

802.11b_Nss1,(1Mbps)_2TX EBW

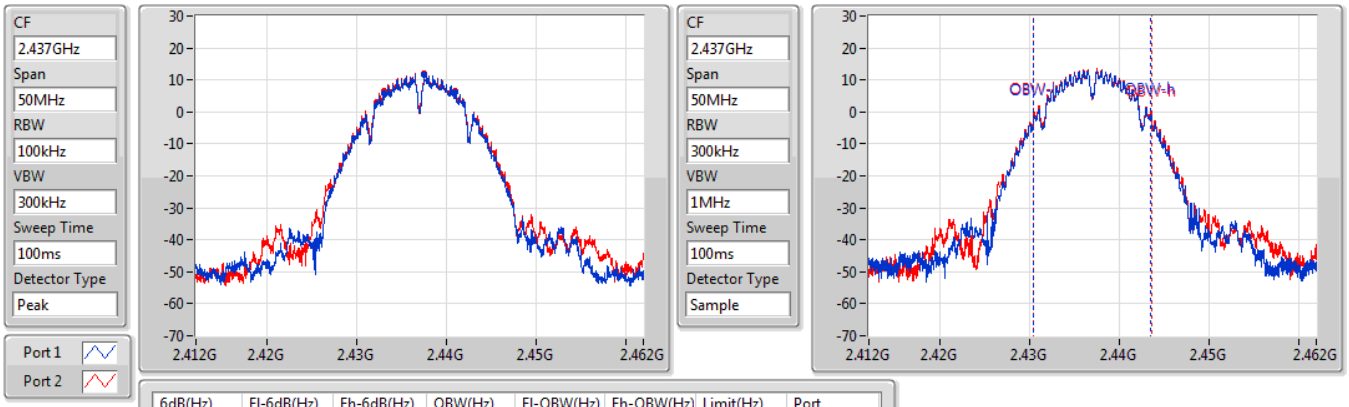
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8.05M	2.407975G	2.416025G	12.944M	2.405528G	2.418472G	500k	1
8.05M	2.407975G	2.416025G	12.994M	2.405503G	2.418497G	500k	2

802.11b_Nss1,(1Mbps)_2TX EBW

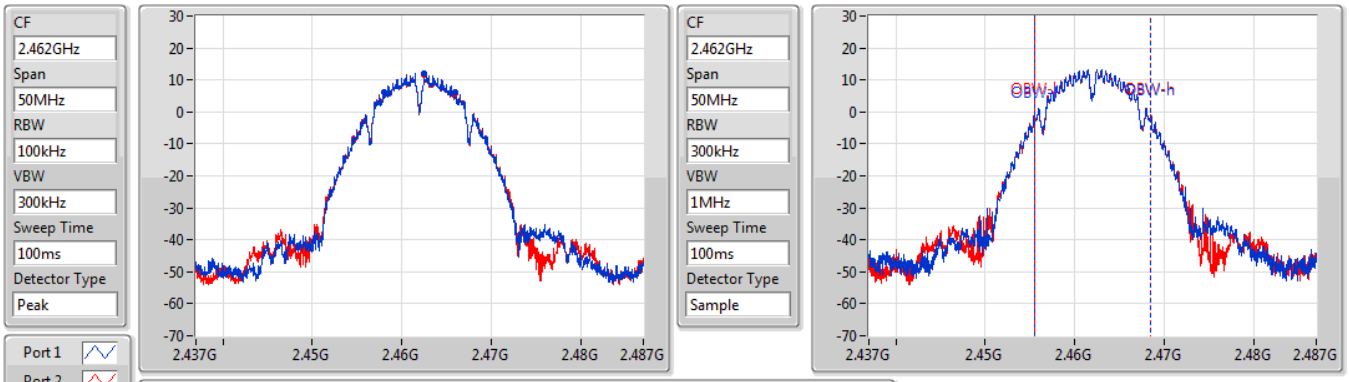
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8.05M	2.432975G	2.441025G	13.043M	2.430453G	2.443497G	500k	1
8.025M	2.432975G	2.441G	13.193M	2.430403G	2.443597G	500k	2

802.11b_Nss1,(1Mbps)_2TX EBW

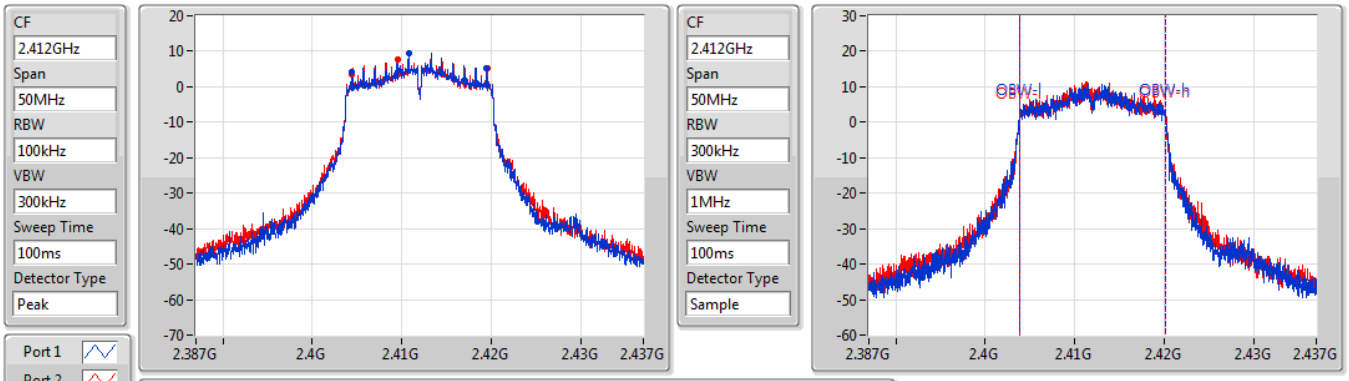
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8.025M	2.458G	2.466025G	12.919M	2.455528G	2.468447G	500k	1
8.05M	2.457975G	2.466025G	12.994M	2.455503G	2.468497G	500k	2

802.11g_Nss1,(6Mbps)_2TX EBW

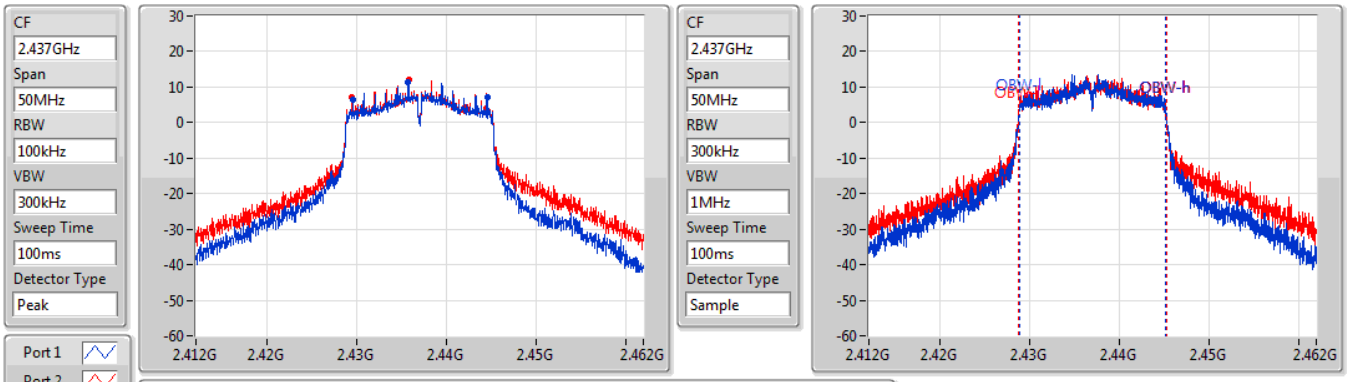
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.025M	2.404475G	2.4195G	16.292M	2.403854G	2.420146G	500k	1
15.075M	2.40445G	2.419525G	16.317M	2.403829G	2.420146G	500k	2

802.11g_Nss1,(6Mbps)_2TX EBW

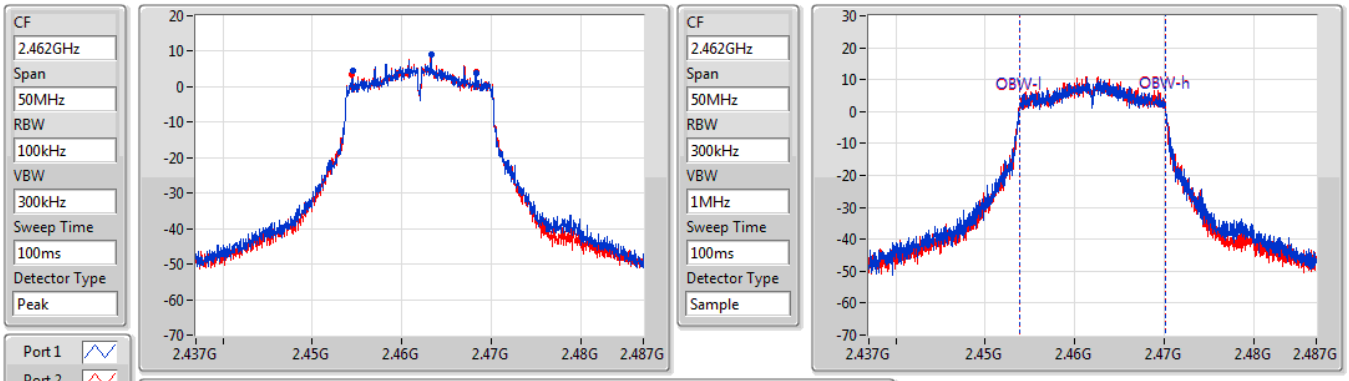
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
14.975M	2.42955G	2.444525G	16.367M	2.428804G	2.445171G	500k	1
15.05M	2.429475G	2.444525G	16.492M	2.428754G	2.445246G	500k	2

802.11g_Nss1,(6Mbps)_2TX EBW

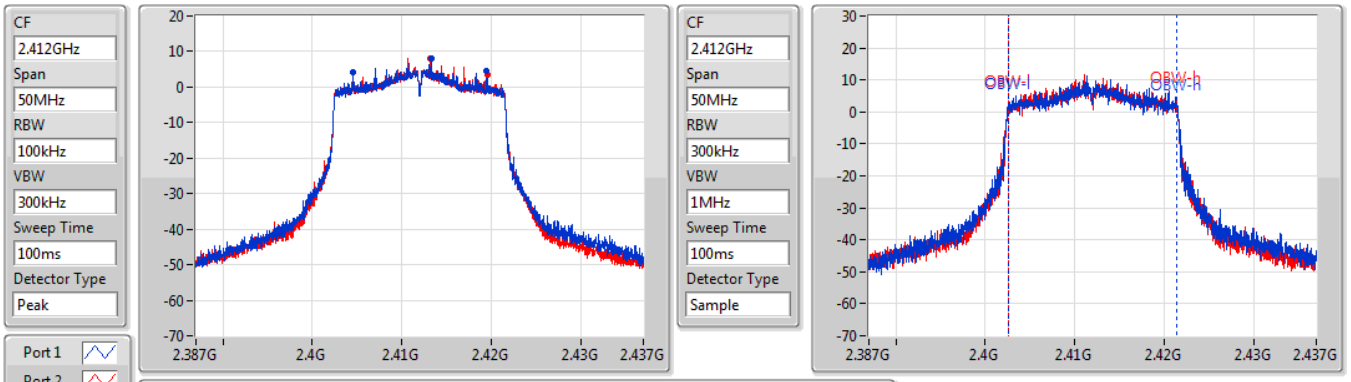
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
13.775M	2.454525G	2.4683G	16.267M	2.453854G	2.470121G	500k	1
13.825M	2.45445G	2.468275G	16.292M	2.453829G	2.470121G	500k	2

802.11ax HEW20_Nss2,(MCS0)_2TX EBW

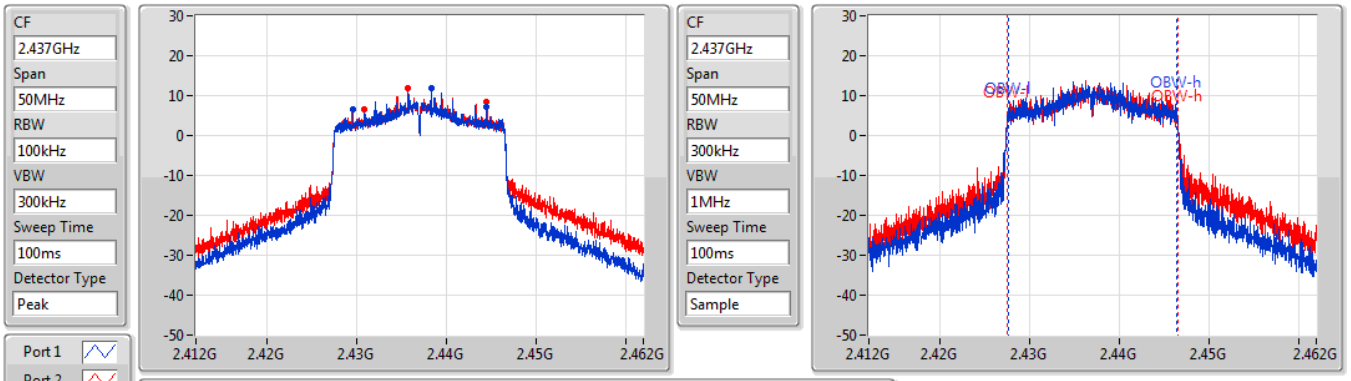
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15M	2.4045G	2.4195G	18.816M	2.402605G	2.42142G	500k	1
15.025M	2.4045G	2.419525G	18.816M	2.40258G	2.421395G	500k	2

802.11ax HEW20_Nss2,(MCS0)_2TX EBW

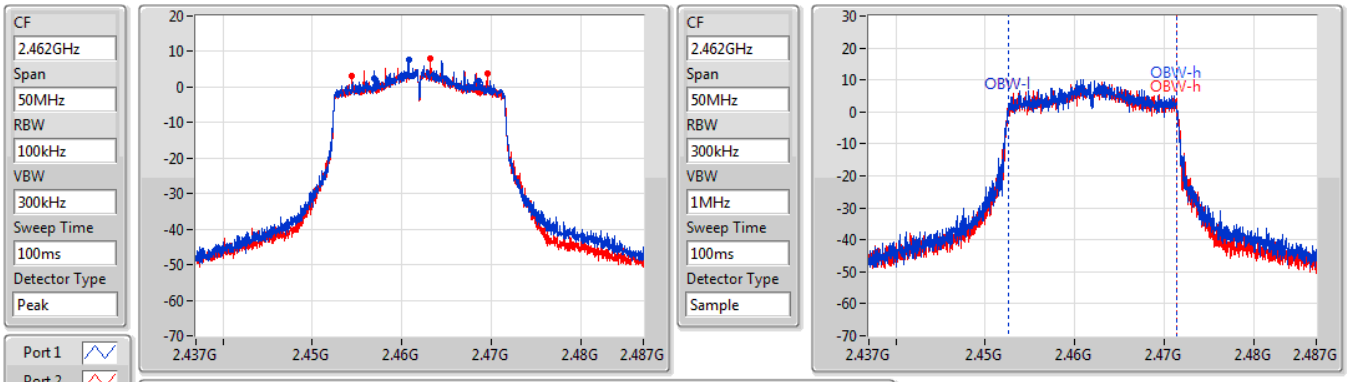
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
14.925M	2.42955G	2.444475G	18.891M	2.42753G	2.44642G	500k	1
13.725M	2.430775G	2.4445G	19.04M	2.42748G	2.44652G	500k	2

802.11ax HEW20_Nss2,(MCS0)_2TX EBW

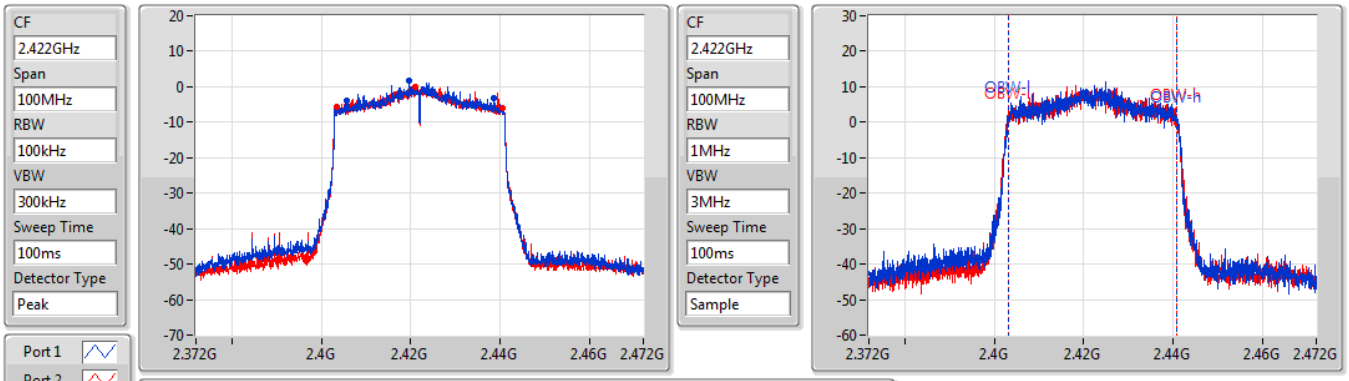
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
11.75M	2.456925G	2.468675G	18.766M	2.45263G	2.471395G	500k	1
15.05M	2.454475G	2.469525G	18.816M	2.45258G	2.471395G	500k	2

802.11ax HEW40_Nss2,(MCS0)_2TX EBW

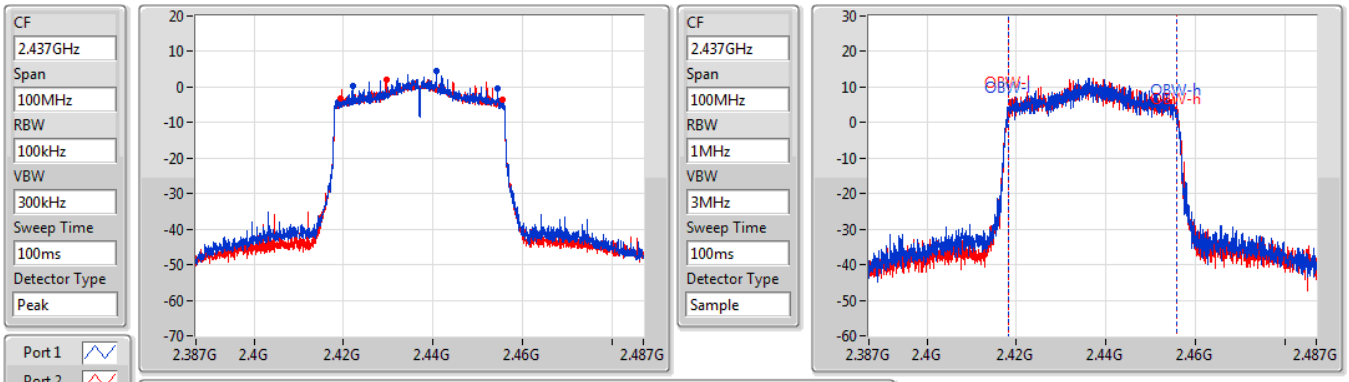
2422MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
32.9M	2.4058G	2.4387G	37.631M	2.403159G	2.440791G	500k	1
36.95M	2.4035G	2.44045G	37.681M	2.403109G	2.440791G	500k	2

802.11ax HEW40_Nss2,(MCS0)_2TX EBW

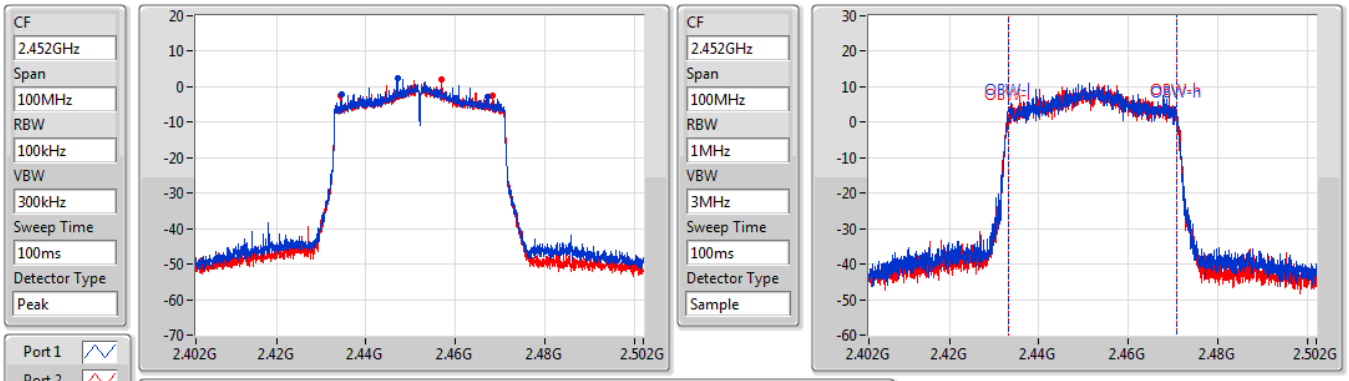
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
32.5M	2.422G	2.4545G	37.581M	2.418109G	2.455691G	500k	1
36.1M	2.4193G	2.4554G	37.631M	2.418159G	2.455791G	500k	2

802.11ax HEW40_Nss2,(MCS0)_2TX EBW

2452MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
32.55M	2.4345G	2.46705G	37.581M	2.433159G	2.470741G	500k	1
33.85M	2.43445G	2.4683G	37.681M	2.433159G	2.470841G	500k	2

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_2TX	24.27	0.26730
802.11g_Nss1,(6Mbps)_2TX	24.18	0.26182
802.11ax HEW20_Nss2,(MCS0)_2TX	23.96	0.24889
802.11ax HEW40_Nss2,(MCS0)_2TX	20.40	0.10965

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	2.00	20.19	20.17	23.19	30.00	25.19	36.00
2437MHz	Pass	2.00	21.44	21.08	24.27	30.00	26.27	36.00
2462MHz	Pass	2.00	21.19	21.22	24.22	30.00	26.22	36.00
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-
2412MHz	Pass	2.00	18.74	18.57	21.67	30.00	23.67	36.00
2437MHz	Pass	2.00	21.28	21.06	24.18	30.00	26.18	36.00
2462MHz	Pass	2.00	18.56	18.35	21.47	30.00	23.47	36.00
802.11ax HEW20_Nss2,(MCS0)_2TX	-	-	-	-	-	-	-	-
2412MHz	Pass	2.00	17.67	17.53	20.61	30.00	22.61	36.00
2437MHz	Pass	2.00	21.13	20.76	23.96	30.00	25.96	36.00
2462MHz	Pass	2.00	17.24	17.47	20.37	30.00	22.37	36.00
802.11ax HEW40_Nss2,(MCS0)_2TX	-	-	-	-	-	-	-	-
2422MHz	Pass	2.00	15.38	15.46	18.43	30.00	20.43	36.00
2437MHz	Pass	2.00	17.54	17.23	20.40	30.00	22.40	36.00
2452MHz	Pass	2.00	15.43	15.79	18.62	30.00	20.62	36.00

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

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11ax HEW20-BF_Nss2,(MCS0)_2TX	20.95	0.12445
802.11ax HEW40-BF_Nss2,(MCS0)_2TX	17.39	0.05483

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_Nss2,(MCS0)_2TX	-	-	-	-	-	-	-	-
2412MHz	Pass	2.00	14.66	14.52	17.60	30.00	19.60	36.00
2437MHz	Pass	2.00	18.12	17.75	20.95	30.00	22.95	36.00
2462MHz	Pass	2.00	14.23	14.46	17.36	30.00	19.36	36.00
802.11ax HEW40-BF_Nss2,(MCS0)_2TX	-	-	-	-	-	-	-	-
2422MHz	Pass	2.00	12.37	12.45	15.42	30.00	17.42	36.00
2437MHz	Pass	2.00	14.53	14.22	17.39	30.00	19.39	36.00
2452MHz	Pass	2.00	12.42	12.78	15.61	30.00	17.61	36.00

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

Cross-polarized antennas are applied for the device thus directional gain is gain of an individual antenna.

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_2TX	-1.62
802.11g_Nss1,(6Mbps)_2TX	-6.64
802.11ax HEW20_Nss2,(MCS0)_2TX	-9.00
802.11ax HEW40_Nss2,(MCS0)_2TX	-15.27

RBW = 3kHz;

Result

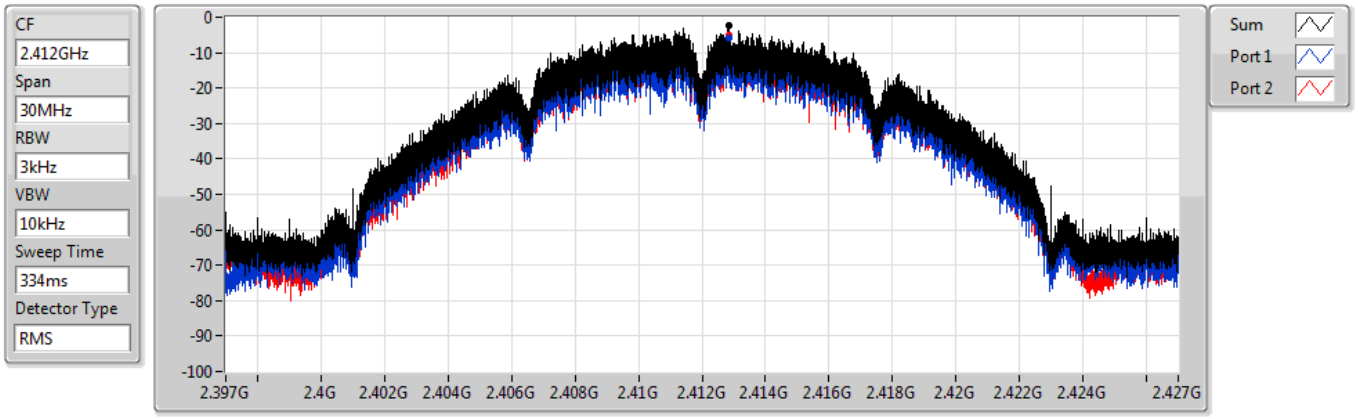
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	2.00	-5.73	-5.00	-2.34	8.00
2437MHz	Pass	2.00	-4.74	-4.08	-1.62	8.00
2462MHz	Pass	2.00	-6.23	-6.12	-3.32	8.00
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	2.00	-11.61	-10.63	-8.72	8.00
2437MHz	Pass	2.00	-9.32	-9.28	-6.64	8.00
2462MHz	Pass	2.00	-11.79	-11.53	-8.98	8.00
802.11ax HEW20_Nss2,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	2.00	-14.23	-14.59	-11.40	8.00
2437MHz	Pass	2.00	-11.54	-11.43	-9.00	8.00
2462MHz	Pass	2.00	-15.20	-14.78	-12.35	8.00
802.11ax HEW40_Nss2,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	2.00	-19.84	-19.80	-17.48	8.00
2437MHz	Pass	2.00	-18.07	-17.37	-15.27	8.00
2452MHz	Pass	2.00	-19.42	-19.49	-17.28	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;
RBW = 3kHz;

Cross-polarized antennas are applied for the device thus directional gain is gain of an individual antenna.

802.11b_Nss1,(1Mbps)_2TX PSD

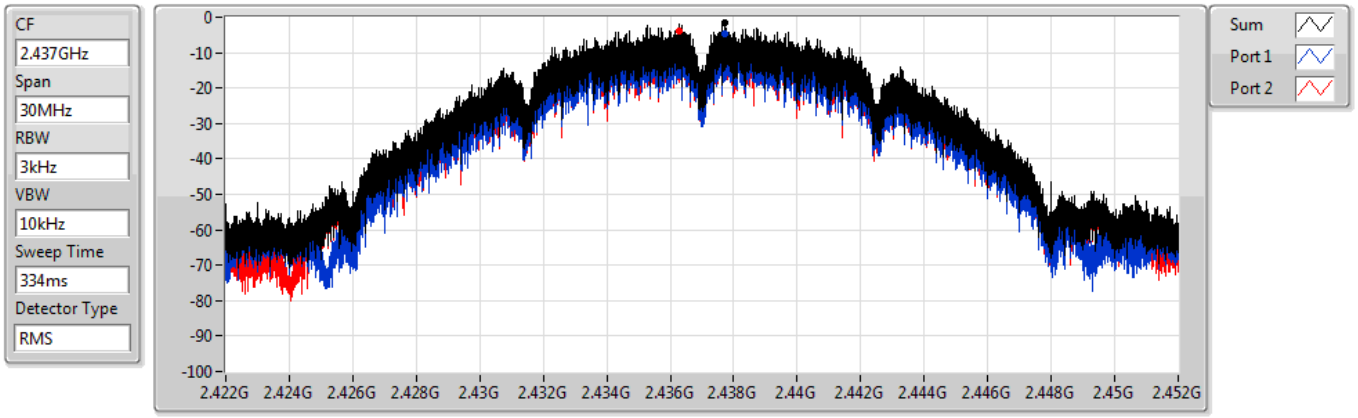
2412MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.34	-2.34	-5.73	-5.00

802.11b_Nss1,(1Mbps)_2TX PSD

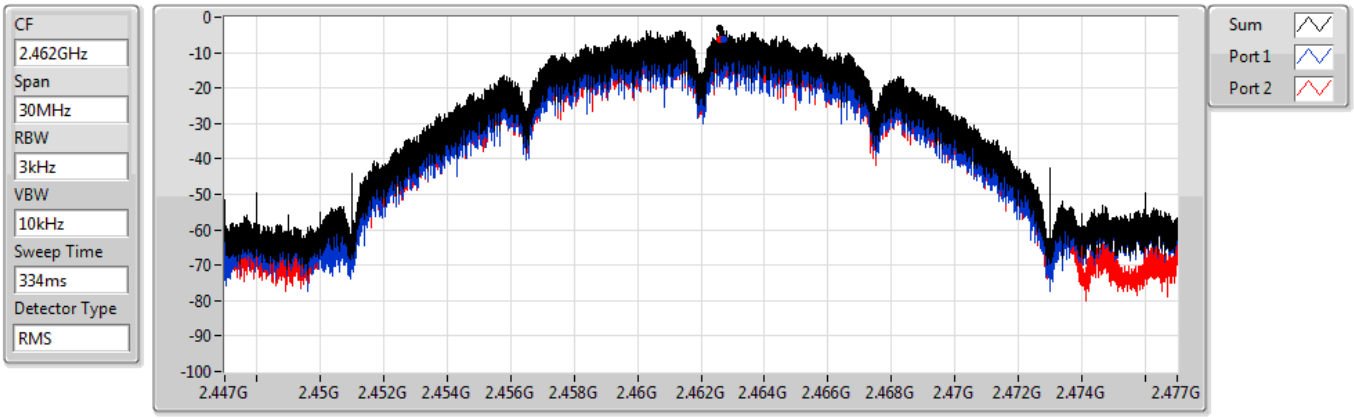
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.62	-1.62	-4.74	-4.08

802.11b_Nss1,(1Mbps)_2TX PSD

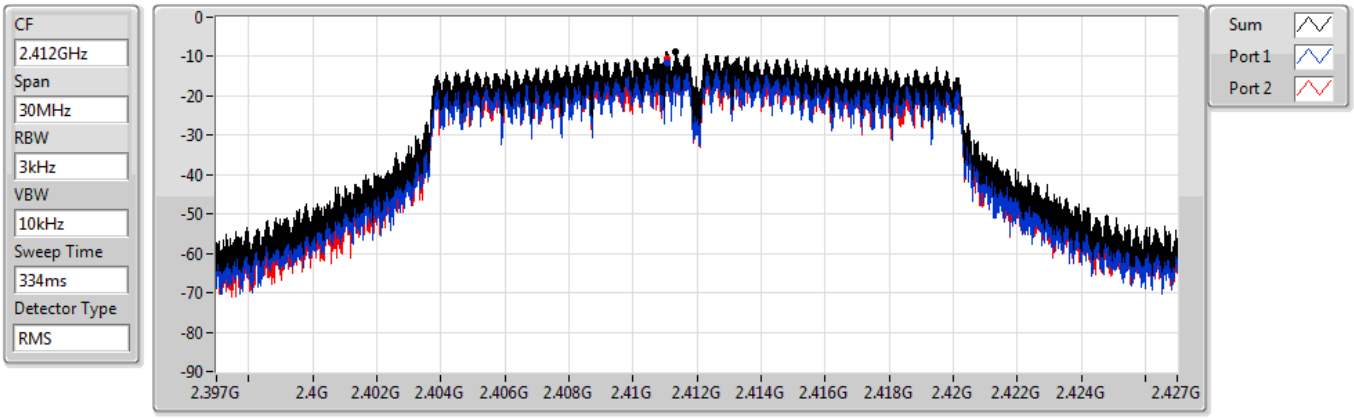
2462MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.32	-3.32	-6.23	-6.12

802.11g_Nss1,(6Mbps)_2TX PSD

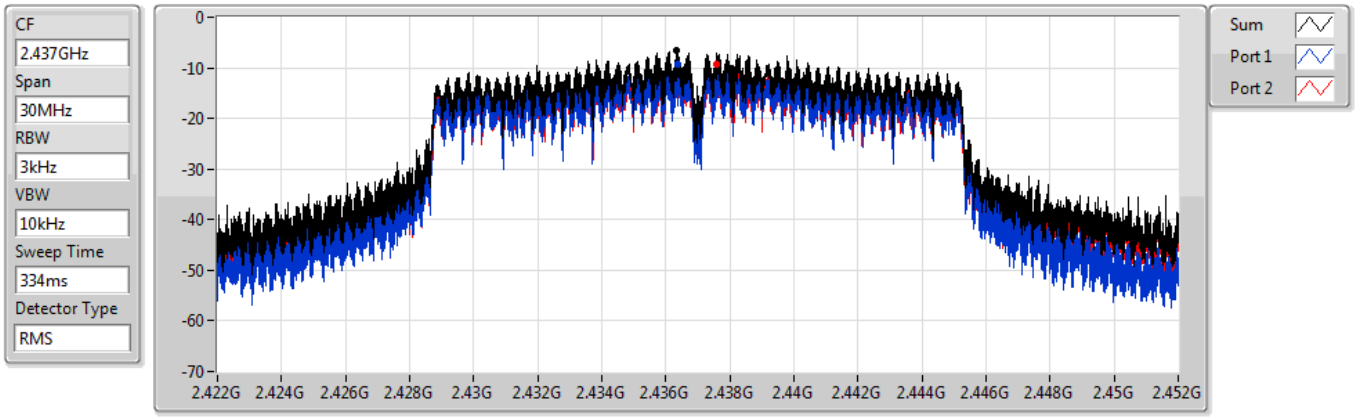
2412MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-8.72	-8.72	-11.61	-10.63

802.11g_Nss1,(6Mbps)_2TX PSD

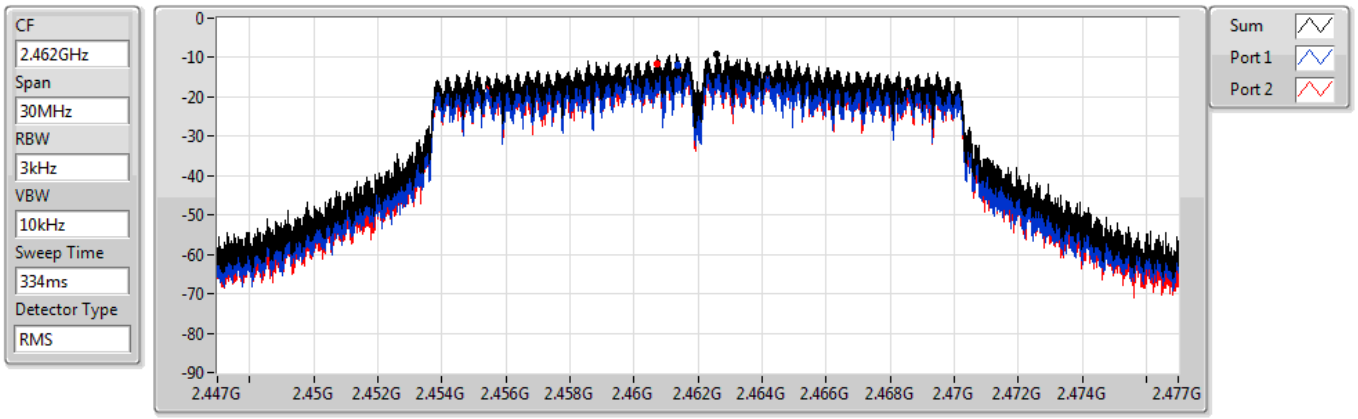
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-6.64	-6.64	-9.32	-9.28

802.11g_Nss1,(6Mbps)_2TX PSD

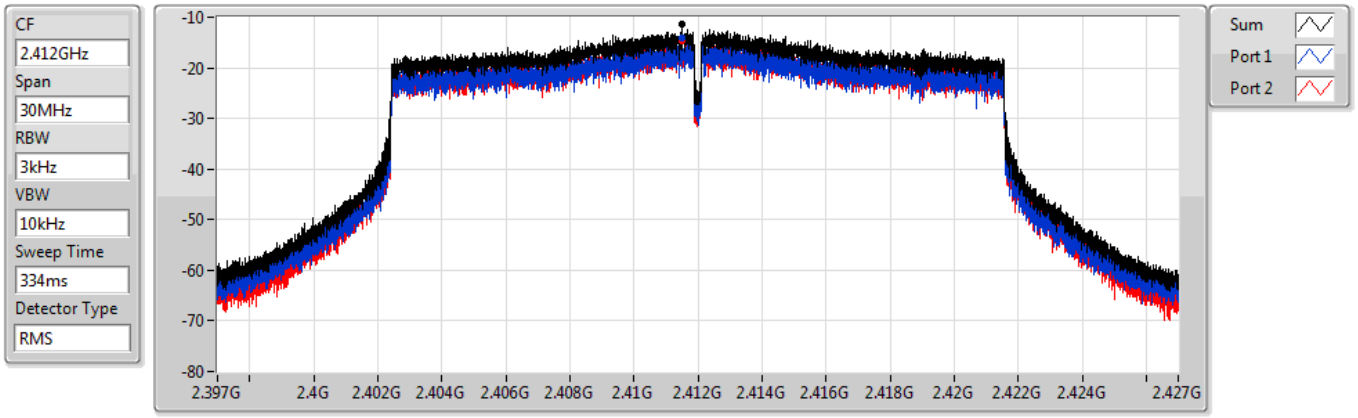
2462MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-8.98	-8.98	-11.79	-11.53

802.11ax HEW20_Nss2,(MCS0)_2TX PSD

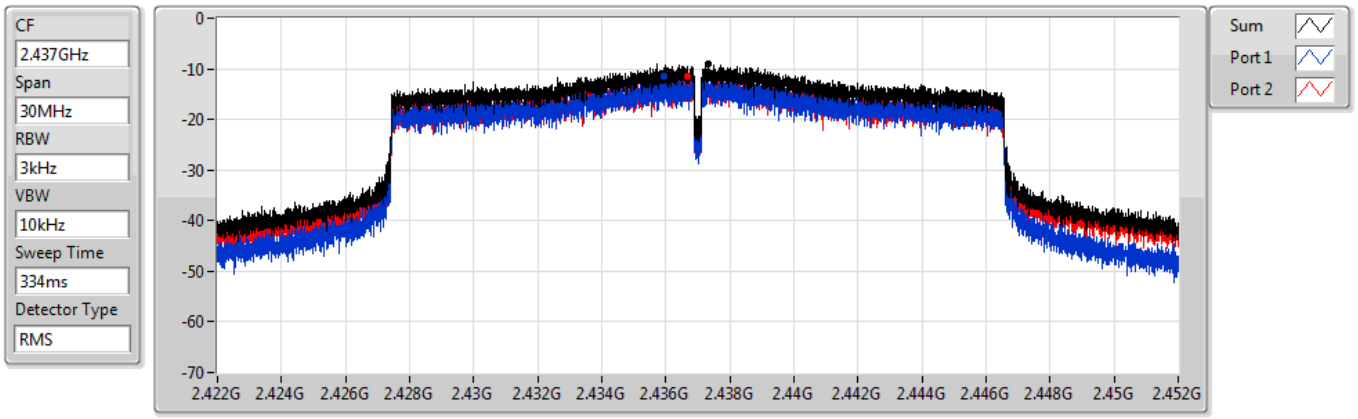
2412MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-11.40	-11.40	-14.23	-14.59

802.11ax HEW20_Nss2,(MCS0)_2TX PSD

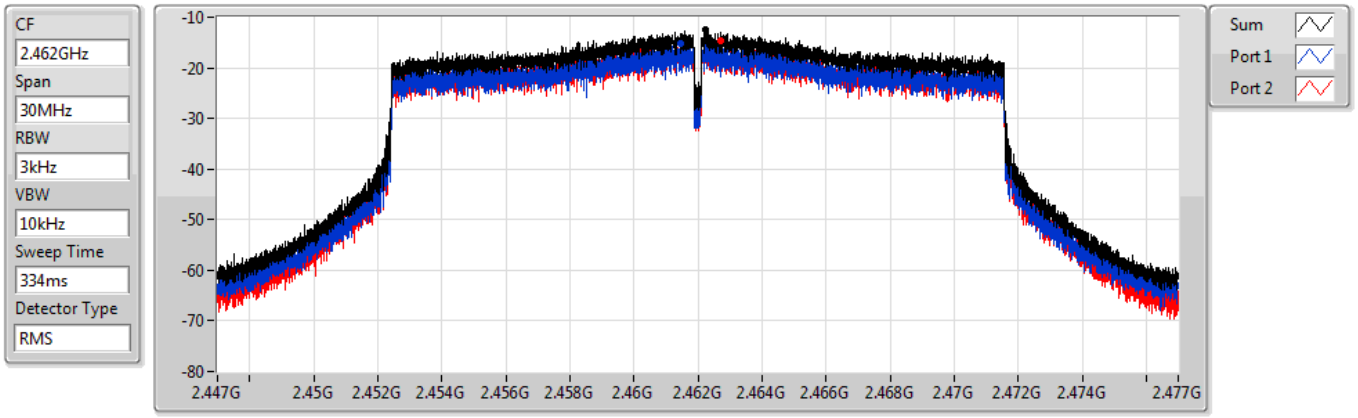
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-9.00	-9.00	-11.54	-11.43

802.11ax HEW20_Nss2,(MCS0)_2TX PSD

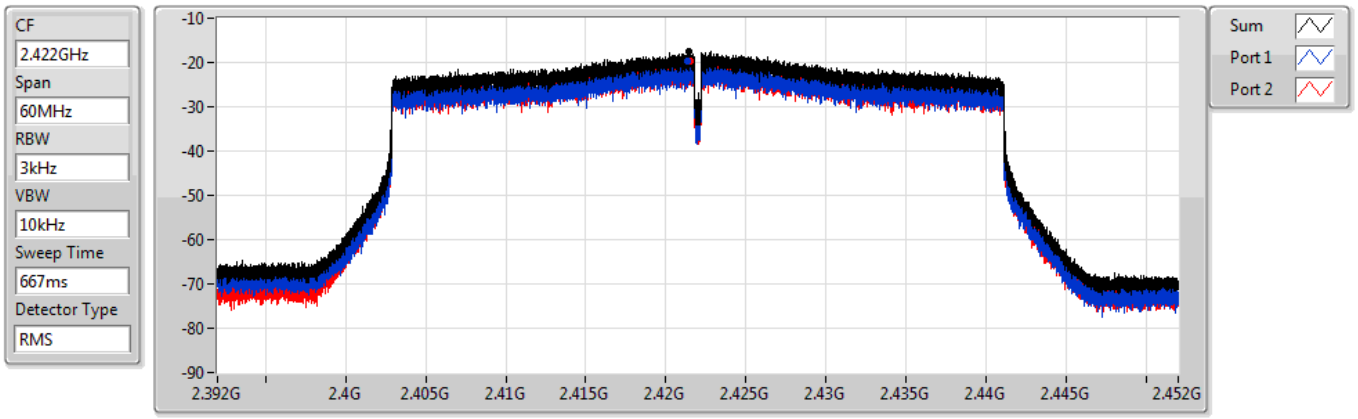
2462MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-12.35	-12.35	-15.20	-14.78

802.11ax HEW40_Nss2,(MCS0)_2TX PSD

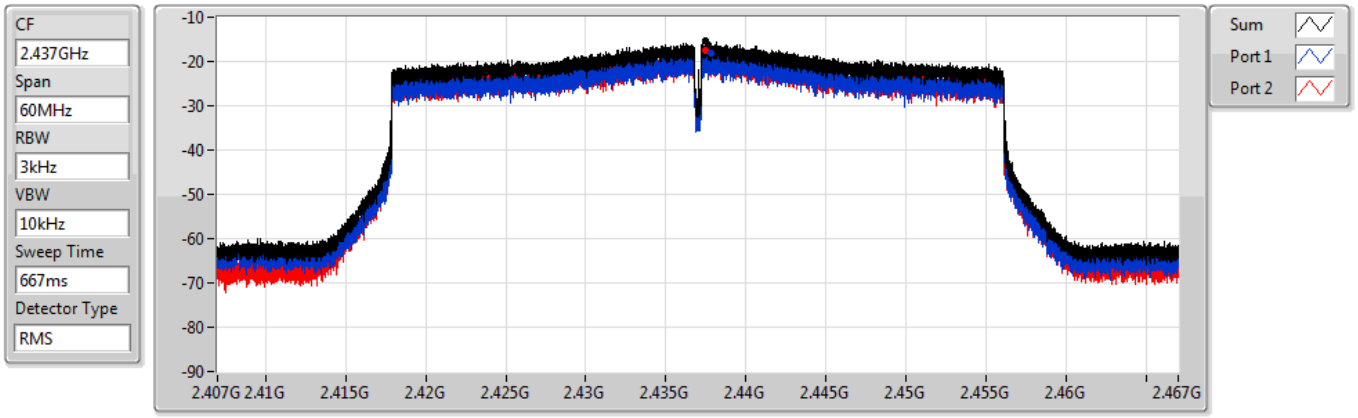
2422MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-17.48	-17.48	-19.84	-19.80

802.11ax HEW40_Nss2,(MCS0)_2TX PSD

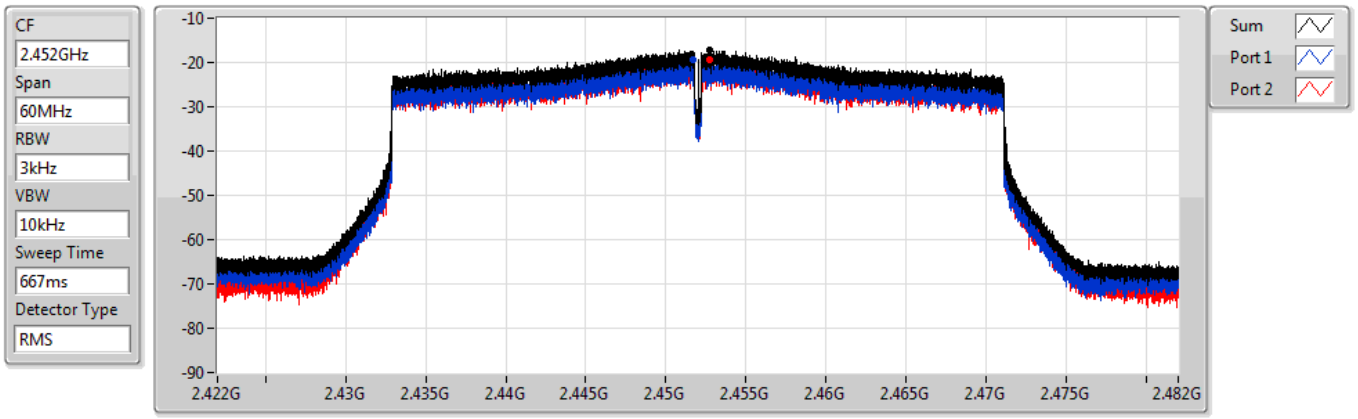
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-15.27	-15.27	-18.07	-17.37

802.11ax HEW40_Nss2,(MCS0)_2TX PSD

2452MHz

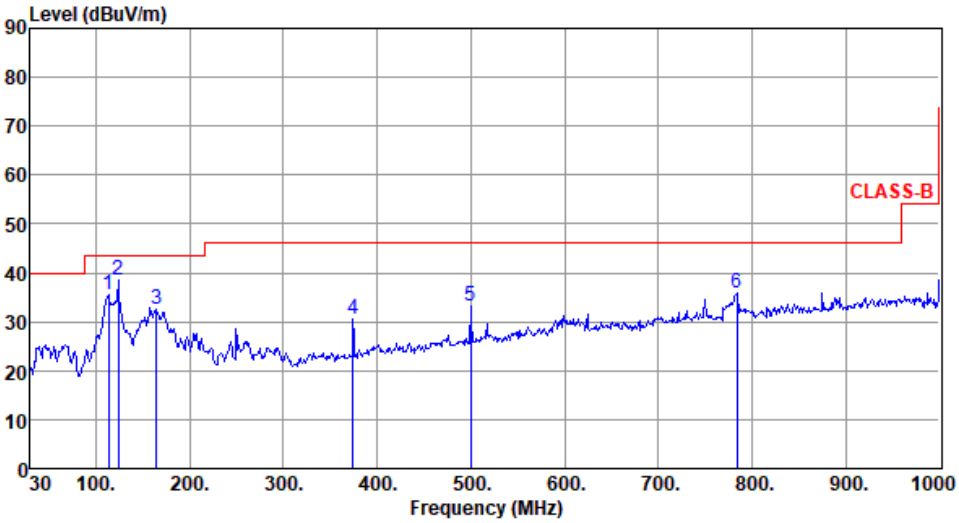


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-17.28	-17.28	-19.42	-19.49

Unwanted Emissions (Below 1GHz)

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

Test By :Roger Lu- Temperature(℃):26 Humidity(%):63

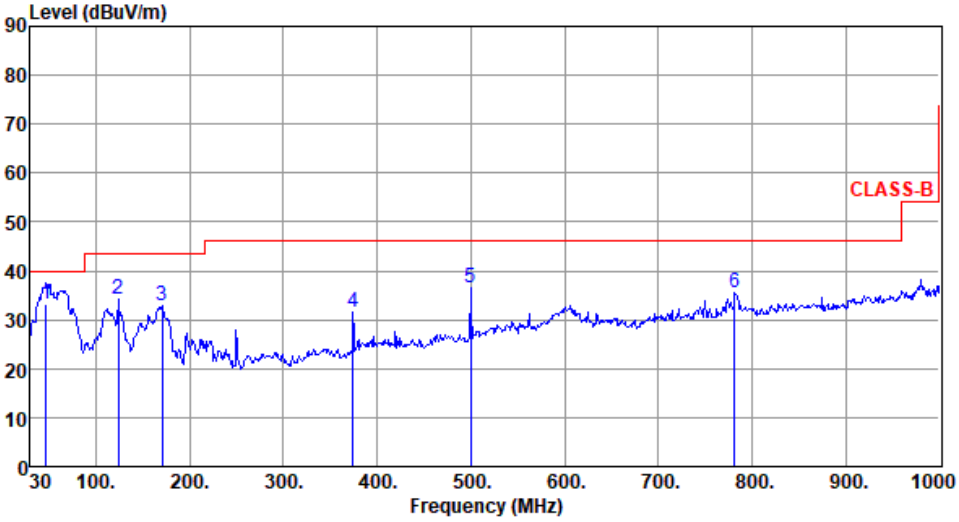


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	113.42	35.45	43.50	-8.05	47.19	-11.74	Peak	---	---
2	124.09	38.43	43.50	-5.07	49.35	-10.92	Peak	---	---
3	164.83	32.50	43.50	-11.00	41.18	-8.68	Peak	---	---
4	374.35	30.58	46.00	-15.42	36.42	-5.84	Peak	---	---
5	499.48	33.23	46.00	-12.77	35.72	-2.49	Peak	---	---
6	783.69	35.75	46.00	-10.25	31.78	3.97	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)**	2437
Polarization	Vertical		

Test By :Roger Lu- Temperature(℃):26 Humidity(%):63



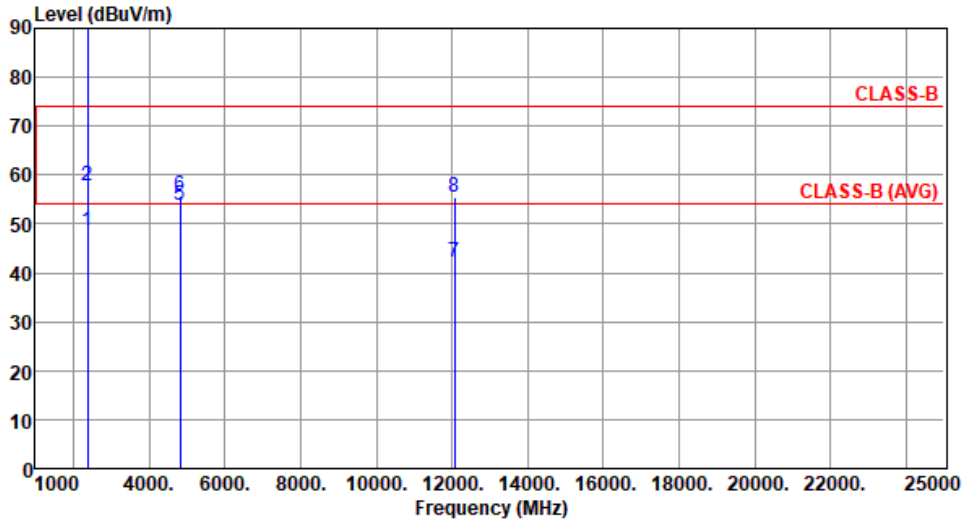
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	46.94	33.21	40.00	-6.79	41.72	-8.51	Peak	100	91
2	124.09	34.23	43.50	-9.27	45.15	-10.92	Peak	---	---
3	170.65	32.87	43.50	-10.63	41.97	-9.10	Peak	---	---
4	374.35	31.68	46.00	-14.32	37.52	-5.84	Peak	---	---
5	499.48	36.45	46.00	-9.55	38.94	-2.49	Peak	---	---
6	781.75	35.58	46.00	-10.42	31.66	3.92	Peak	---	---

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

Unwanted Emission (Above 1GHz) for 11b

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

Test By :Roger Lu- Temperature(℃):26 Humidity(%):62

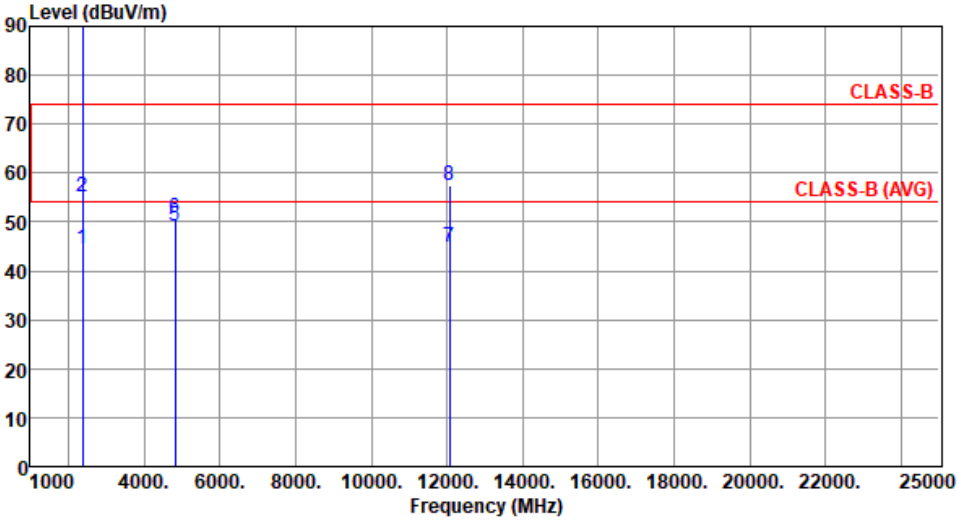


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1		2390.00	48.52	54.00	-5.48	52.45	-3.93	Average	205	188
2		2390.00	57.77	74.00	-16.23	61.70	-3.93	Peak	205	188
3	*	2412.00	110.00			114.02	-4.02	Average	245	183
4	*	2412.00	113.58			117.60	-4.02	Peak	245	183
5		4824.00	53.84	54.00	-0.16	54.17	-0.33	Average	134	7
6		4824.00	55.88	74.00	-18.12	56.21	-0.33	Peak	134	7
7		12060.00	42.18	54.00	-11.82	34.70	7.48	Average	100	125
8		12060.00	55.40	74.00	-18.60	47.92	7.48	Peak	100	125

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3:"*" is Peak / Average value of fundamental frequency

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

Test By :Roger Lu- Temperature(℃):26 Humidity(%):62

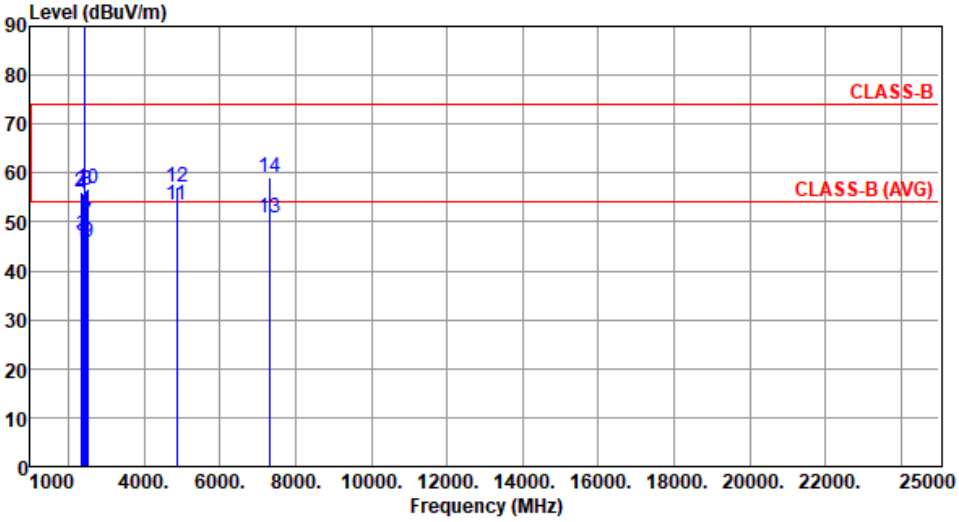


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1		2390.00	44.55	54.00	-9.45	48.48	-3.93	Average	194	91
2		2390.00	55.16	74.00	-18.84	59.09	-3.93	Peak	194	91
3	*	2412.00	108.76			112.78	-4.02	Average	212	89
4	*	2412.00	112.21			116.23	-4.02	Peak	212	89
5		4824.00	49.10	54.00	-4.90	49.43	-0.33	Average	100	89
6		4824.00	50.65	74.00	-23.35	50.98	-0.33	Peak	100	89
7		12060.00	44.77	54.00	-9.23	37.29	7.48	Average	173	285
8		12060.00	57.53	74.00	-16.47	50.05	7.48	Peak	173	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	11b	Test Freq. (MHz)	2437
Polarization	Horizontal		

Test By :Roger Lu- Temperature(℃):26 Humidity(%):62

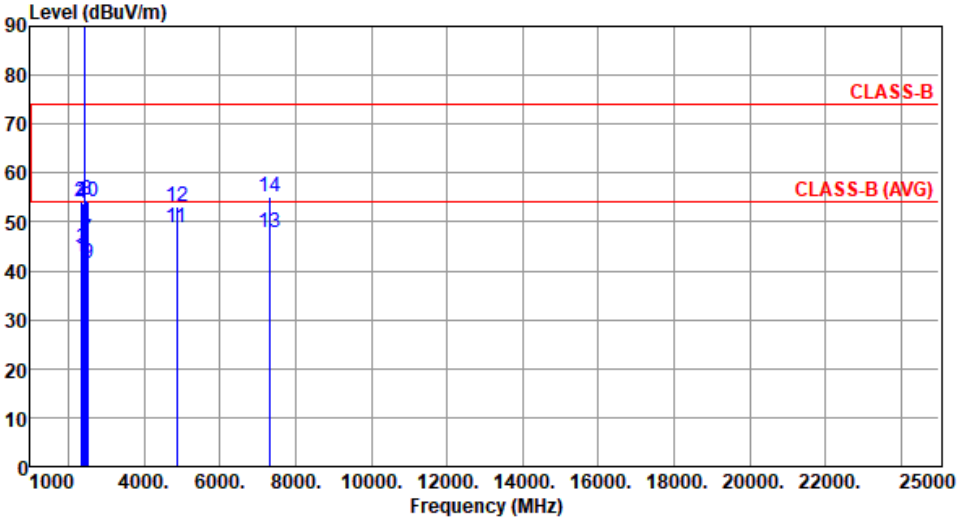


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1		2341.00	45.75	54.00	-8.25	49.55	-3.80	Average	231	190
2		2341.00	56.09	74.00	-17.91	59.89	-3.80	Peak	231	190
3		2390.00	47.12	54.00	-6.88	51.05	-3.93	Average	219	169
4		2390.00	55.78	74.00	-18.22	59.71	-3.93	Peak	219	169
5	*	2437.00	110.13			114.27	-4.14	Average	228	167
6	*	2437.00	113.58			117.72	-4.14	Peak	228	167
7		2483.50	49.86	54.00	-4.14	54.08	-4.22	Average	190	171
8		2483.50	56.45	74.00	-17.55	60.67	-4.22	Peak	190	171
9		2533.00	45.90	54.00	-8.10	50.14	-4.24	Average	182	190
10		2533.00	56.63	74.00	-17.37	60.87	-4.24	Peak	182	190
11		4874.00	53.61	54.00	-0.39	53.94	-0.33	Average	182	190
12		4874.00	57.05	74.00	-16.95	57.38	-0.33	Peak	182	190
13		7311.00	50.92	54.00	-3.08	45.10	5.82	Average	147	246
14		7311.00	58.95	74.00	-15.05	53.13	5.82	Peak	147	246

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 :Roger Lu- Temperature(℃):26 Humidity(%):62

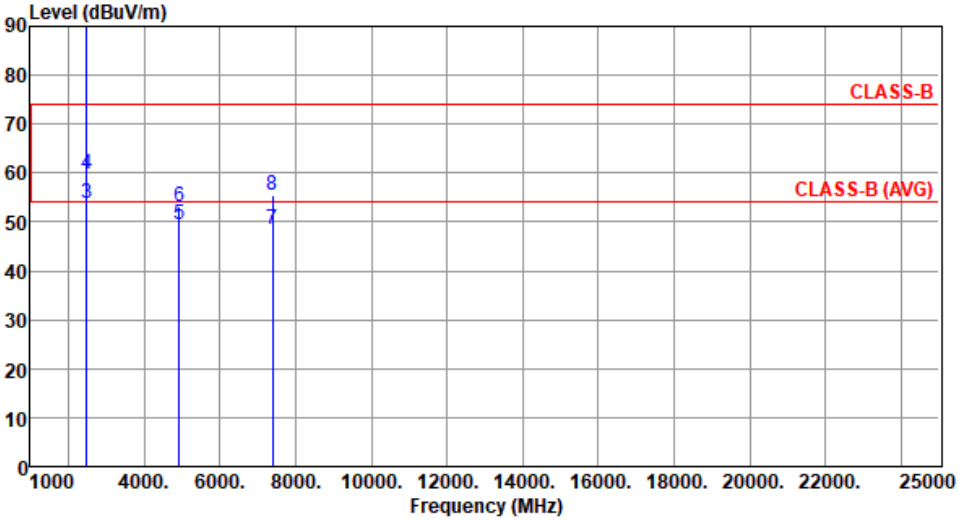


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1		2341.00	42.69	54.00	-11.31	46.49	-3.80	Average	194	203
2		2341.00	54.06	74.00	-19.94	57.86	-3.80	Peak	194	203
3		2390.00	44.54	54.00	-9.46	48.47	-3.93	Average	237	163
4		2390.00	53.87	74.00	-20.13	57.80	-3.93	Peak	237	163
5	*	2437.00	108.91			113.05	-4.14	Average	231	162
6	*	2437.00	112.45			116.59	-4.14	Peak	231	162
7		2483.50	46.40	54.00	-7.60	50.62	-4.22	Average	219	163
8		2483.50	54.36	74.00	-19.64	58.58	-4.22	Peak	219	163
9		2533.00	41.64	54.00	-12.36	45.88	-4.24	Average	180	168
10		2533.00	54.08	74.00	-19.92	58.32	-4.24	Peak	180	168
11		4874.00	48.82	54.00	-5.18	49.15	-0.33	Average	100	196
12		4874.00	53.11	74.00	-20.89	53.44	-0.33	Peak	100	196
13		7311.00	47.96	54.00	-6.04	42.14	5.82	Average	100	185
14		7311.00	55.09	74.00	-18.91	49.27	5.82	Peak	100	185

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 :Roger Lu- Temperature(℃):26 Humidity(%):62

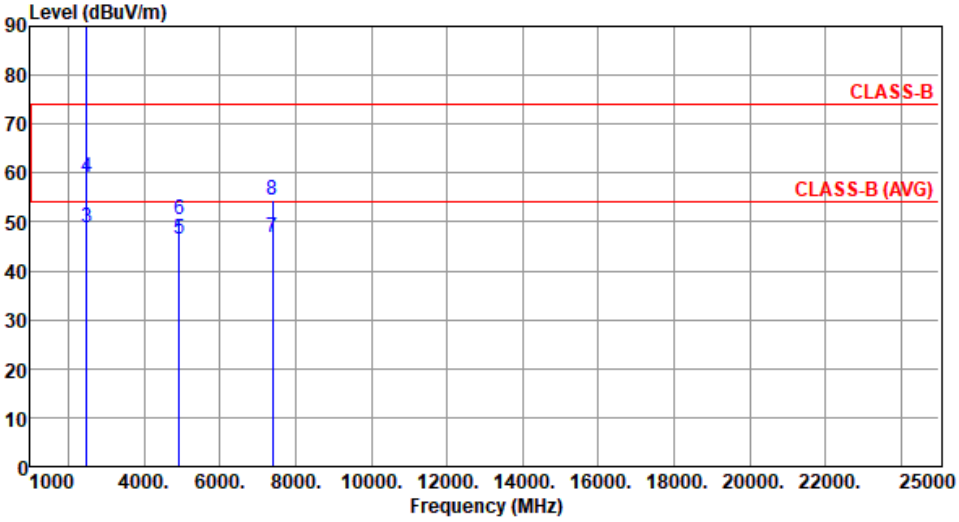


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	*	2462.00	110.06			114.26	-4.20	Average	206	170
2	*	2462.00	113.56			117.76	-4.20	Peak	206	170
3		2483.50	53.70	54.00	-0.30	57.92	-4.22	Average	185	171
4		2483.50	59.85	74.00	-14.15	64.07	-4.22	Peak	185	171
5		4924.00	49.44	54.00	-4.56	49.67	-0.23	Average	221	69
6		4924.00	53.04	74.00	-20.96	53.27	-0.23	Peak	221	69
7		7386.00	48.41	54.00	-5.59	42.79	5.62	Average	147	241
8		7386.00	55.45	74.00	-18.55	49.83	5.62	Peak	147	241

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 :Roger Lu- Temperature(℃):26 Humidity(%):62



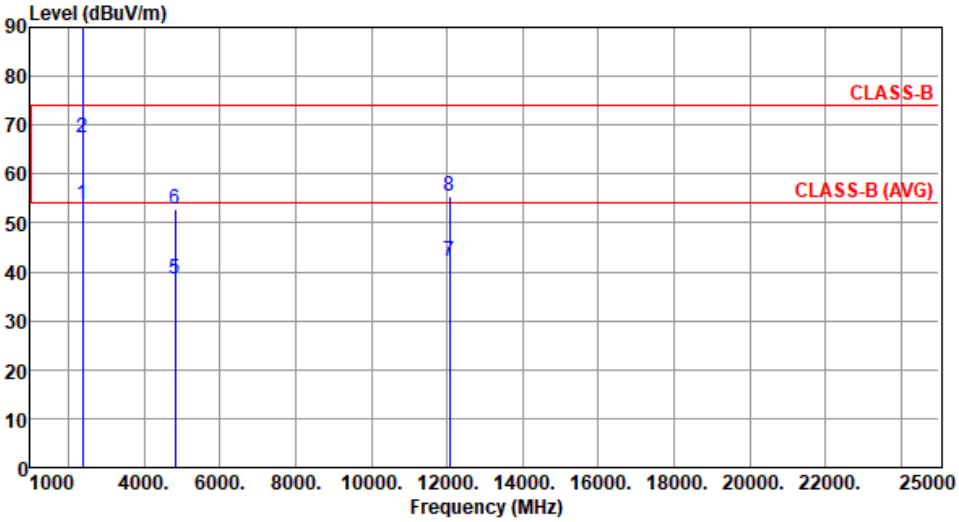
		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	*	2462.00	108.95			113.15	-4.20	Average	188	165
2	*	2462.00	112.54			116.74	-4.20	Peak	188	165
3		2483.50	48.92	54.00	-5.08	53.14	-4.22	Average	191	169
4		2483.50	59.01	74.00	-14.99	63.23	-4.22	Peak	191	169
5		4924.00	46.51	54.00	-7.49	46.74	-0.23	Average	100	206
6		4924.00	50.46	74.00	-23.54	50.69	-0.23	Peak	100	206
7		7386.00	46.71	54.00	-7.29	41.09	5.62	Average	232	131
8		7386.00	54.44	74.00	-19.56	48.82	5.62	Peak	232	131

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

Unwanted Emissions (Above 1GHz) for 11g

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

Test By :Roger Lu- Temperature(℃):26 Humidity(%):62

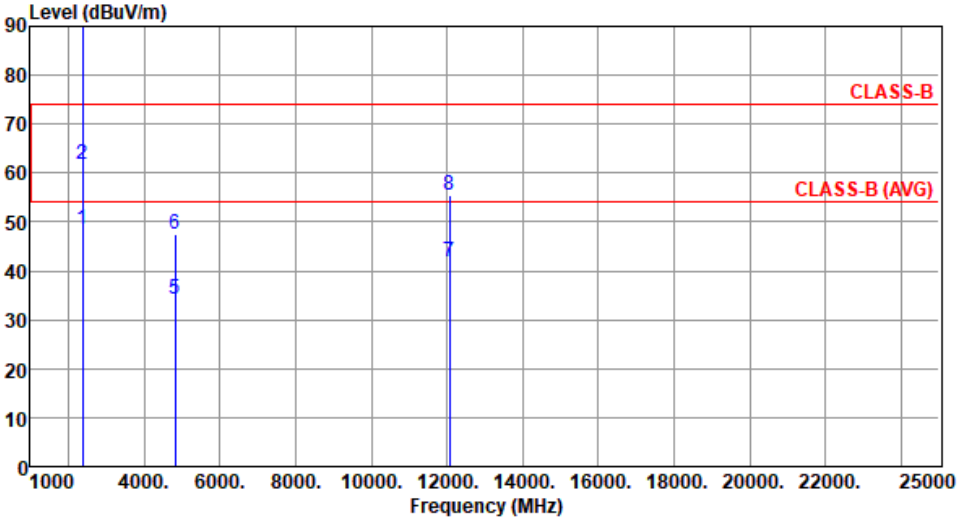


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1		2390.00	53.73	54.00	-0.27	57.66	-3.93	Average	170	178
2		2390.00	67.51	74.00	-6.49	71.44	-3.93	Peak	170	178
3	*	2412.00	107.08			111.10	-4.02	Average	196	191
4	*	2412.00	116.99			121.01	-4.02	Peak	196	191
5		4824.00	38.58	54.00	-15.42	38.91	-0.33	Average	139	9
6		4824.00	52.64	74.00	-21.36	52.97	-0.33	Peak	139	9
7		12060.00	42.04	54.00	-11.96	34.56	7.48	Average	100	50
8		12060.00	55.59	74.00	-18.41	48.11	7.48	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).
Note 3:"*" is Peak / Average value of fundamental frequency

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

Test By :Roger Lu- Temperature(℃):26 Humidity(%):62

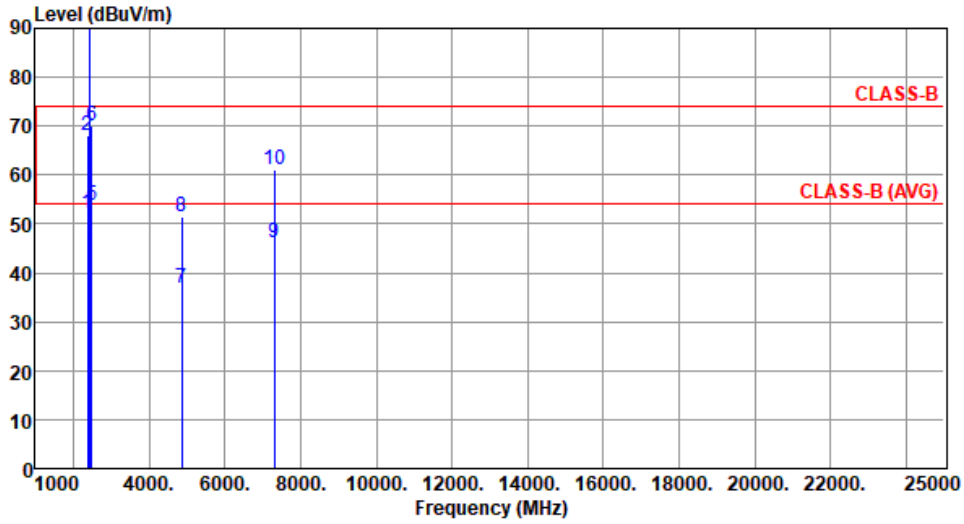


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1		2390.00	48.59	54.00	-5.41	52.52	-3.93	Average	264	89
2		2390.00	61.93	74.00	-12.07	65.86	-3.93	Peak	264	89
3	*	2412.00	103.80			107.82	-4.02	Average	239	94
4	*	2412.00	114.30			118.32	-4.02	Peak	239	94
5		4824.00	34.15	54.00	-19.85	34.48	-0.33	Average	148	208
6		4824.00	47.54	74.00	-26.46	47.87	-0.33	Peak	148	208
7		12060.00	41.94	54.00	-12.06	34.46	7.48	Average	100	162
8		12060.00	55.32	74.00	-18.68	47.84	7.48	Peak	100	162

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 :Roger Lu- Temperature(℃):26 Humidity(%):62

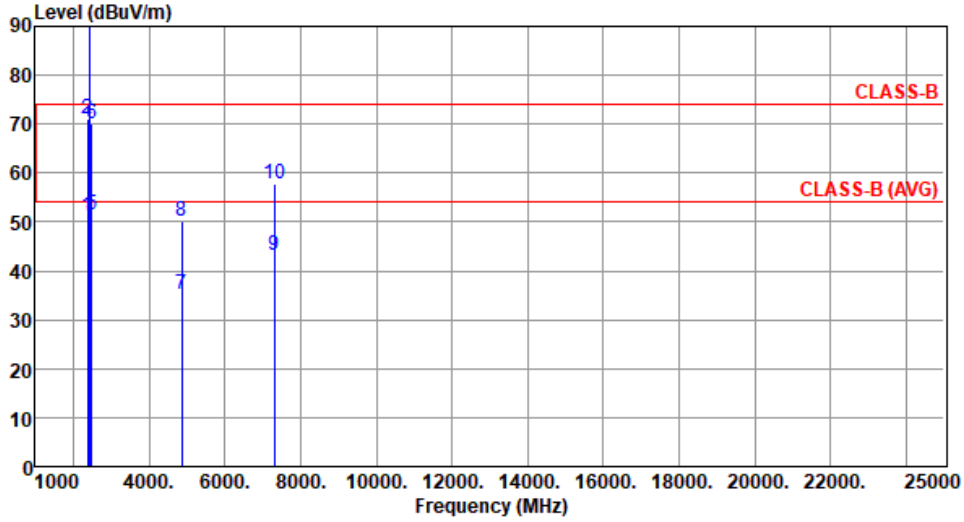


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1		2390.00	52.20	54.00	-1.80	56.13	-3.93	Average	249	185
2		2390.00	68.00	74.00	-6.00	71.93	-3.93	Peak	249	185
3	*	2437.00	109.71			113.85	-4.14	Average	264	182
4	*	2437.00	119.66			123.80	-4.14	Peak	264	182
5		2483.50	53.69	54.00	-0.31	57.91	-4.22	Average	264	182
6		2483.50	70.10	74.00	-3.90	74.32	-4.22	Peak	264	182
7		4874.00	36.73	54.00	-17.27	37.06	-0.33	Average	148	6
8		4874.00	51.60	74.00	-22.40	51.93	-0.33	Peak	148	6
9		7311.00	46.05	54.00	-7.95	40.23	5.82	Average	148	245
10		7311.00	61.07	74.00	-12.93	55.25	5.82	Peak	148	245

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 :Roger Lu- Temperature(℃):26 Humidity(%):62

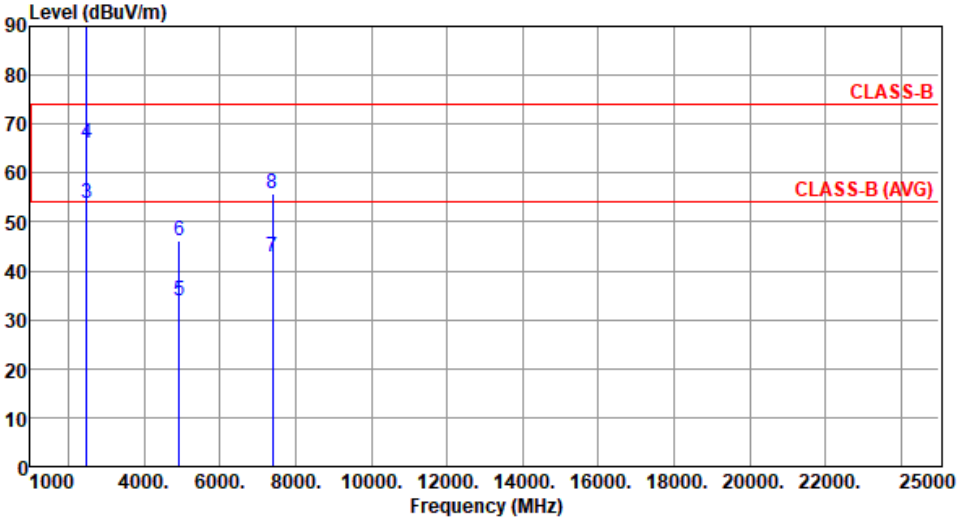


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1		2390.00	51.03	54.00	-2.97	54.96	-3.93	Average	240	92
2		2390.00	71.17	74.00	-2.83	75.10	-3.93	Peak	240	92
3	*	2437.00	106.88			111.02	-4.14	Average	218	90
4	*	2437.00	117.20			121.34	-4.14	Peak	218	90
5		2483.50	51.37	54.00	-2.63	55.59	-4.22	Average	181	168
6		2483.50	70.23	74.00	-3.77	74.45	-4.22	Peak	181	168
7		4874.00	35.29	54.00	-18.71	35.62	-0.33	Average	142	209
8		4874.00	50.05	74.00	-23.95	50.38	-0.33	Peak	142	209
9		7311.00	43.14	54.00	-10.86	37.32	5.82	Average	100	158
10		7311.00	57.67	74.00	-16.33	51.85	5.82	Peak	100	158

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 :Roger Lu- Temperature(℃):26 Humidity(%):62

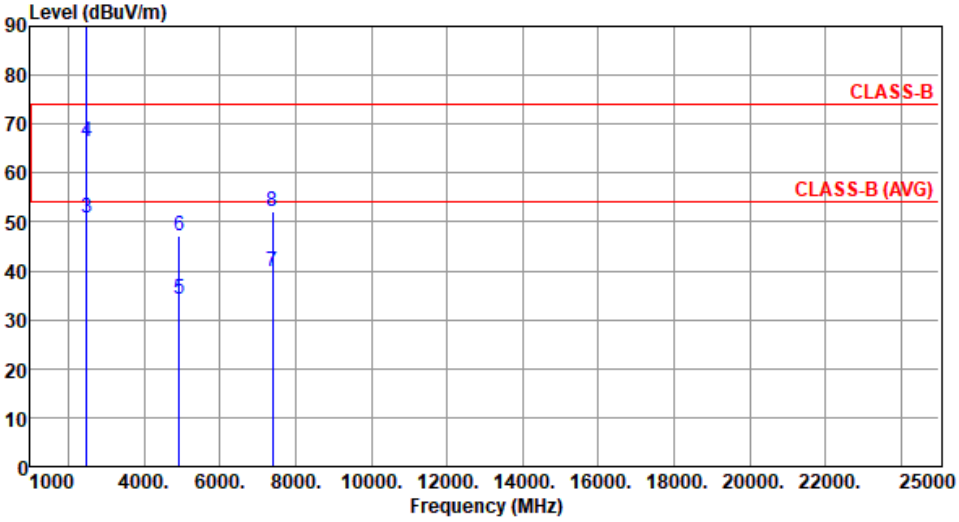


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	*	2462.00	106.54			110.74	-4.20	Average	186	190
2	*	2462.00	116.57			120.77	-4.20	Peak	186	190
3		2483.50	53.80	54.00	-0.20	58.02	-4.22	Average	186	190
4		2483.50	66.00	74.00	-8.00	70.22	-4.22	Peak	186	190
5		4924.00	33.82	54.00	-20.18	34.05	-0.23	Average	100	77
6		4924.00	46.14	74.00	-27.86	46.37	-0.23	Peak	100	77
7		7386.00	43.00	54.00	-11.00	37.38	5.62	Average	155	246
8		7386.00	55.93	74.00	-18.07	50.31	5.62	Peak	155	246

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 :Roger Lu- Temperature(℃):26 Humidity(%):62



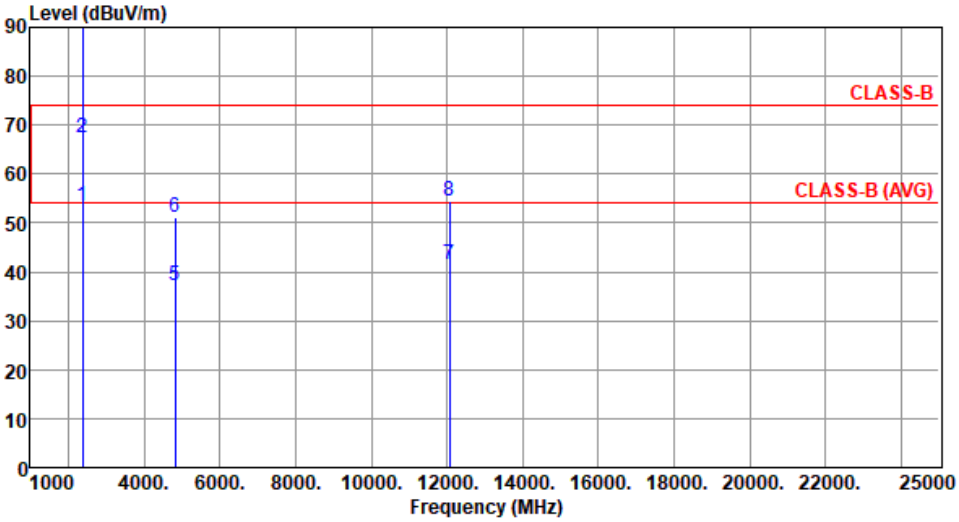
		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	*	2462.00	103.43			107.63	-4.20	Average	165	178
2	*	2462.00	113.69			117.89	-4.20	Peak	165	178
3		2483.50	50.81	54.00	-3.19	55.03	-4.22	Average	109	178
4		2483.50	66.49	74.00	-7.51	70.71	-4.22	Peak	109	178
5		4924.00	34.12	54.00	-19.88	34.35	-0.23	Average	172	216
6		4924.00	47.04	74.00	-26.96	47.27	-0.23	Peak	172	216
7		7386.00	39.73	54.00	-14.27	34.11	5.62	Average	100	133
8		7386.00	52.21	74.00	-21.79	46.59	5.62	Peak	100	133

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

Unwanted Emissions (Above 1GHz) for ax HE20

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

Test By :Roger Lu- Temperature(℃):26 Humidity(%):62

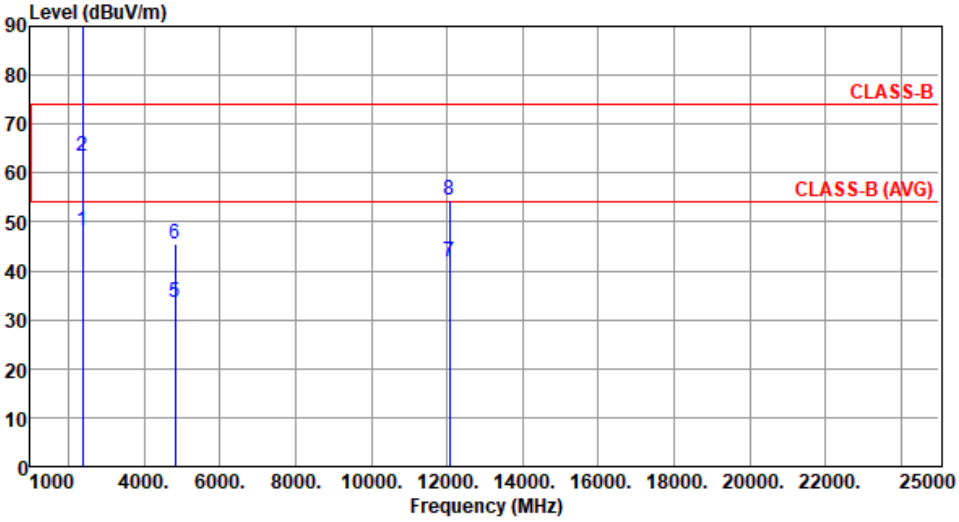


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1		2390.00	53.58	54.00	-0.42	57.51	-3.93	Average	229	196
2		2390.00	67.27	74.00	-6.73	71.20	-3.93	Peak	229	196
3	*	2412.00	102.91			106.93	-4.02	Average	229	196
4	*	2412.00	116.05			120.07	-4.02	Peak	229	196
5		4824.00	37.25	54.00	-16.75	37.58	-0.33	Average	143	10
6		4824.00	51.06	74.00	-22.94	51.39	-0.33	Peak	143	10
7		12060.00	41.62	54.00	-12.38	34.14	7.48	Average	100	188
8		12060.00	54.50	74.00	-19.50	47.02	7.48	Peak	100	188

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 :Roger Lu- Temperature(℃):26 Humidity(%):62

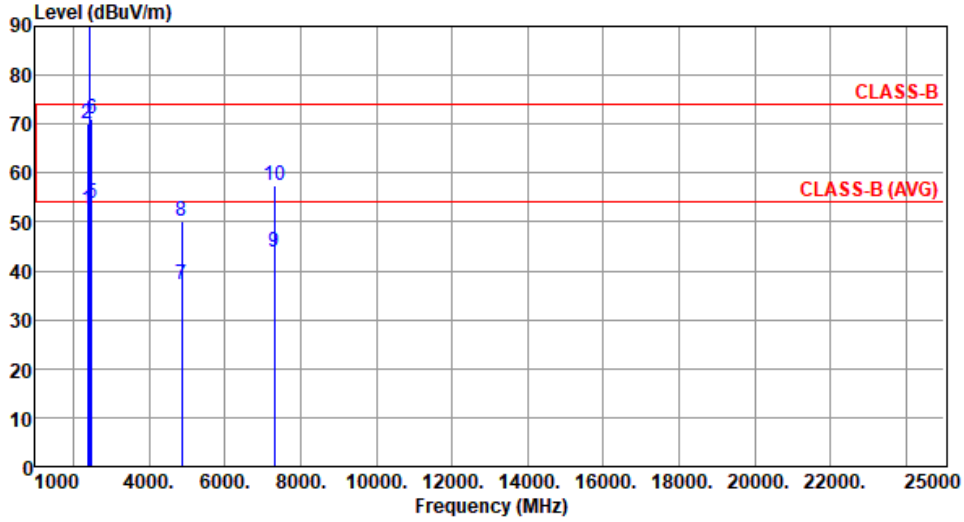


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1		2390.00	48.31	54.00	-5.69	52.24	-3.93	Average	268	105
2		2390.00	63.53	74.00	-10.47	67.46	-3.93	Peak	268	105
3	*	2412.00	100.10			104.12	-4.02	Average	100	105
4	*	2412.00	113.58			117.60	-4.02	Peak	100	105
5		4824.00	33.44	54.00	-20.56	33.77	-0.33	Average	100	53
6		4824.00	45.48	74.00	-28.52	45.81	-0.33	Peak	100	53
7		12060.00	41.91	54.00	-12.09	34.43	7.48	Average	100	126
8		12060.00	54.44	74.00	-19.56	46.96	7.48	Peak	100	126

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 :Roger Lu- Temperature(℃):26 Humidity(%):62

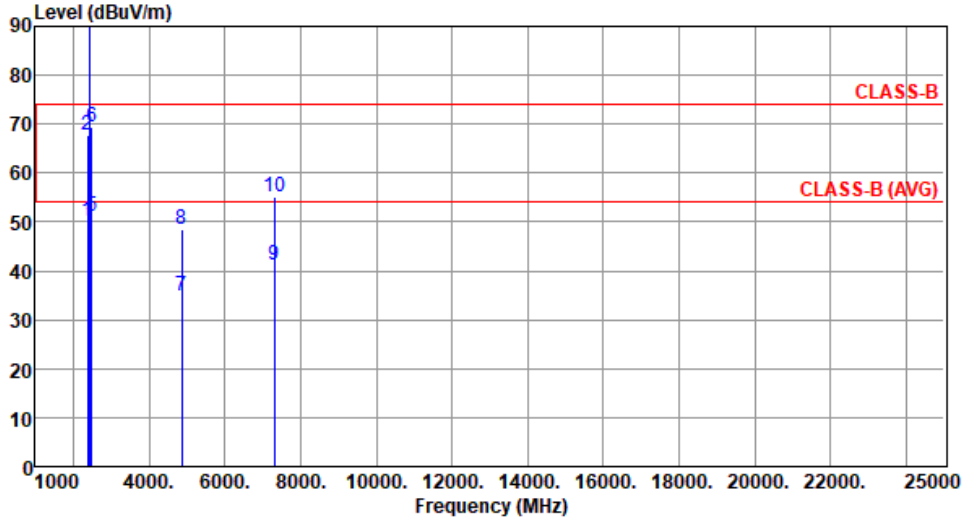


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1		2390.00	52.51	54.00	-1.49	56.44	-3.93	Average	223	197
2		2390.00	70.01	74.00	-3.99	73.94	-3.93	Peak	235	183
3	*	2437.00	106.96			111.10	-4.14	Average	235	195
4	*	2437.00	119.68			123.82	-4.14	Peak	235	195
5		2483.50	53.72	54.00	-0.28	57.94	-4.22	Average	235	193
6		2483.50	71.18	74.00	-2.82	75.40	-4.22	Peak	235	193
7		4874.00	37.17	54.00	-16.83	37.50	-0.33	Average	121	8
8		4874.00	50.28	74.00	-23.72	50.61	-0.33	Peak	121	8
9		7311.00	43.97	54.00	-10.03	38.15	5.82	Average	161	251
10		7311.00	57.45	74.00	-16.55	51.63	5.82	Peak	161	251

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 :Roger Lu- Temperature(℃):26 Humidity(%):62

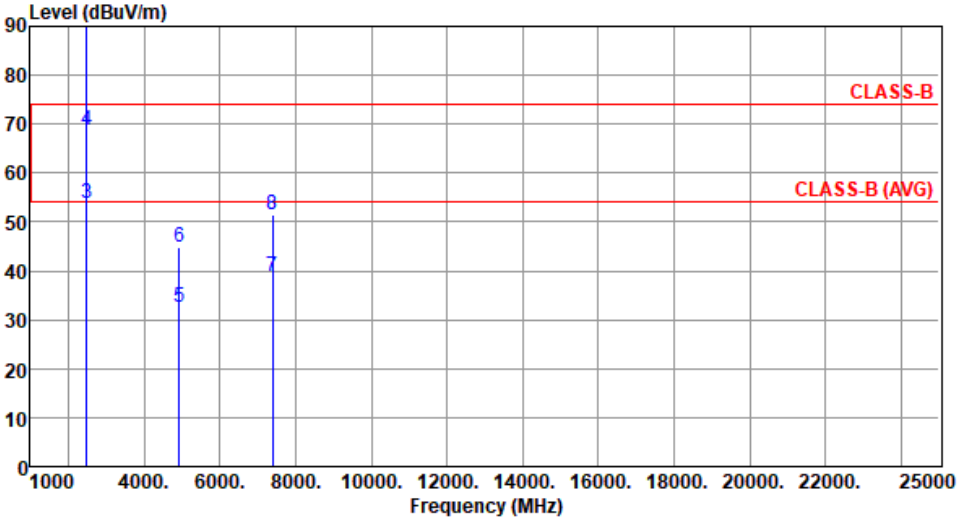


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1		2390.00	50.26	54.00	-3.74	54.19	-3.93	Average	100	104
2		2390.00	67.60	74.00	-6.40	71.53	-3.93	Peak	100	104
3	*	2437.00	102.88			107.02	-4.14	Average	110	106
4	*	2437.00	116.53			120.67	-4.14	Peak	110	106
5		2483.50	51.30	54.00	-2.70	55.52	-4.22	Average	177	163
6		2483.50	69.31	74.00	-4.69	73.53	-4.22	Peak	177	163
7		4874.00	34.86	54.00	-19.14	35.19	-0.33	Average	138	211
8		4874.00	48.42	74.00	-25.58	48.75	-0.33	Peak	138	211
9		7311.00	41.07	54.00	-12.93	35.25	5.82	Average	143	191
10		7311.00	55.00	74.00	-19.00	49.18	5.82	Peak	143	191

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 :Roger Lu- Temperature(℃):26 Humidity(%):62

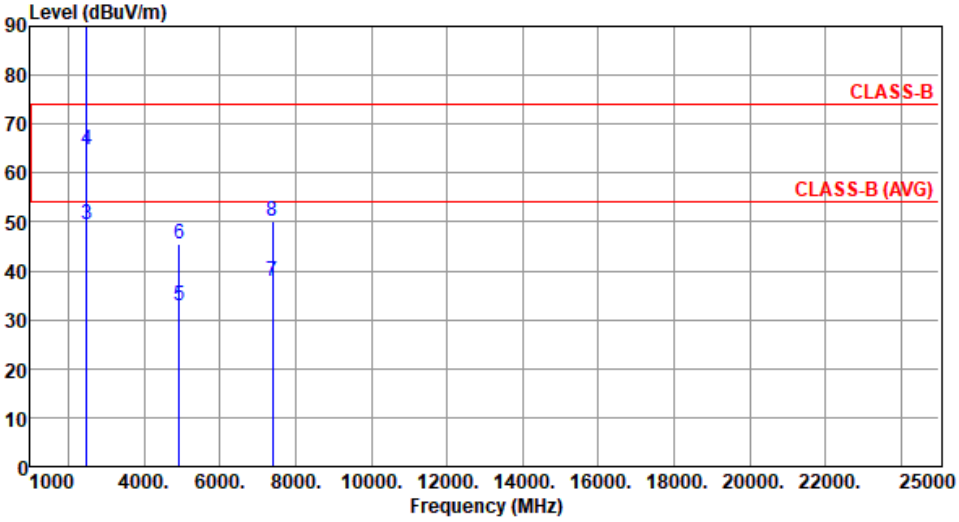


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	*	2462.00	103.28			107.48	-4.20	Average	236	193
2	*	2462.00	115.82			120.02	-4.20	Peak	236	193
3		2483.50	53.71	54.00	-0.29	57.93	-4.22	Average	236	193
4		2483.50	68.69	74.00	-5.31	72.91	-4.22	Peak	236	193
5		4924.00	32.69	54.00	-21.31	32.92	-0.23	Average	100	162
6		4924.00	44.92	74.00	-29.08	45.15	-0.23	Peak	100	162
7		7386.00	38.81	54.00	-15.19	33.19	5.62	Average	100	15
8		7386.00	51.64	74.00	-22.36	46.02	5.62	Peak	100	15

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 :Roger Lu- Temperature(℃):26 Humidity(%):62



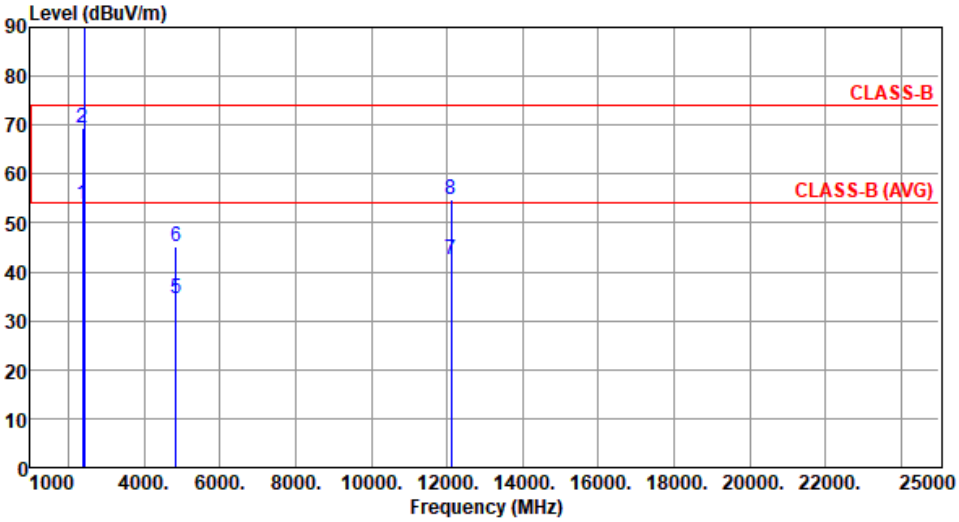
		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	*	2462.00	100.84			105.04	-4.20	Average	214	182
2	*	2462.00	114.48			118.68	-4.20	Peak	214	182
3		2483.50	49.62	54.00	-4.38	53.84	-4.22	Average	194	187
4		2483.50	64.83	74.00	-9.17	69.05	-4.22	Peak	194	187
5		4924.00	32.98	54.00	-21.02	33.21	-0.23	Average	100	209
6		4924.00	45.43	74.00	-28.57	45.66	-0.23	Peak	100	209
7		7386.00	37.96	54.00	-16.04	32.34	5.62	Average	100	145
8		7386.00	50.14	74.00	-23.86	44.52	5.62	Peak	100	145

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3:"*" is Peak / Average value of fundamental frequency

Unwanted Emissions (Above 1GHz) for ax HE40

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

Test By :Roger Lu- Temperature(℃):26 Humidity(%):62

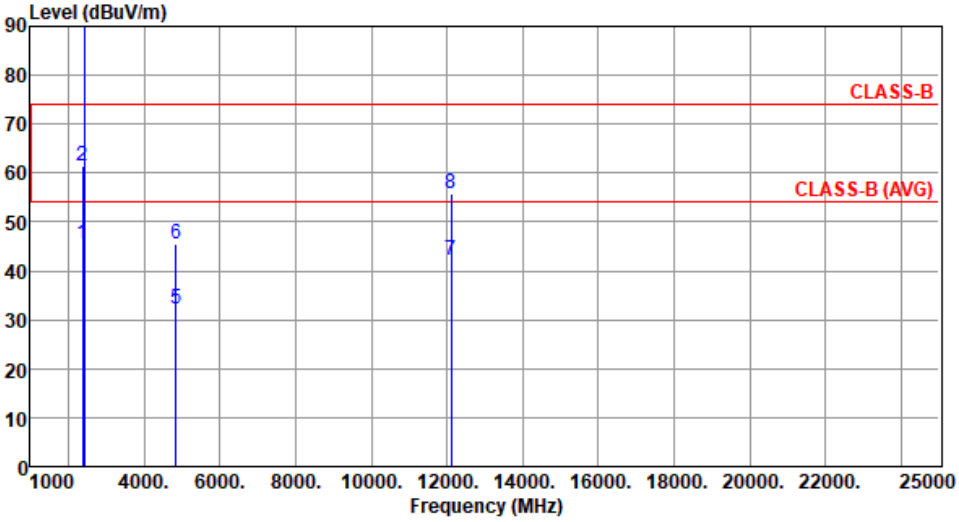


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1		2390.00	53.69	54.00	-0.31	57.62	-3.93	Average	242	193
2		2390.00	69.50	74.00	-4.50	73.43	-3.93	Peak	242	193
3	*	2422.00	100.24			104.30	-4.06	Average	242	193
4	*	2422.00	113.92			117.98	-4.06	Peak	242	193
5		4844.00	34.66	54.00	-19.34	34.95	-0.29	Average	100	162
6		4844.00	45.30	74.00	-28.70	45.59	-0.29	Peak	100	162
7		12110.00	42.39	54.00	-11.61	34.80	7.59	Average	100	12
8		12110.00	54.67	74.00	-19.33	47.08	7.59	Peak	100	12

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 :Roger Lu- Temperature(℃):26 Humidity(%):62

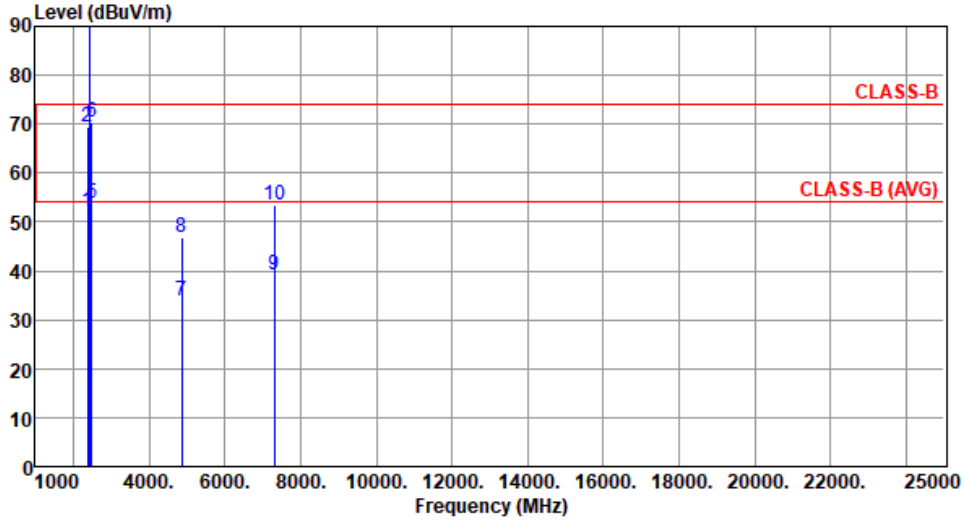


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1		2390.00	45.44	54.00	-8.56	49.37	-3.93	Average	105	143
2		2390.00	61.56	74.00	-12.44	65.49	-3.93	Peak	105	143
3	*	2422.00	95.12			99.18	-4.06	Average	103	199
4	*	2422.00	108.14			112.20	-4.06	Peak	103	199
5		4844.00	32.33	54.00	-21.67	32.62	-0.29	Average	100	18
6		4844.00	45.35	74.00	-28.65	45.64	-0.29	Peak	100	18
7		12110.00	42.03	54.00	-11.97	34.44	7.59	Average	100	58
8		12110.00	55.75	74.00	-18.25	48.16	7.59	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).
Note 3:"*" is Peak / Average value of fundamental frequency

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

Test By :Roger Lu- Temperature(℃):26 Humidity(%):62

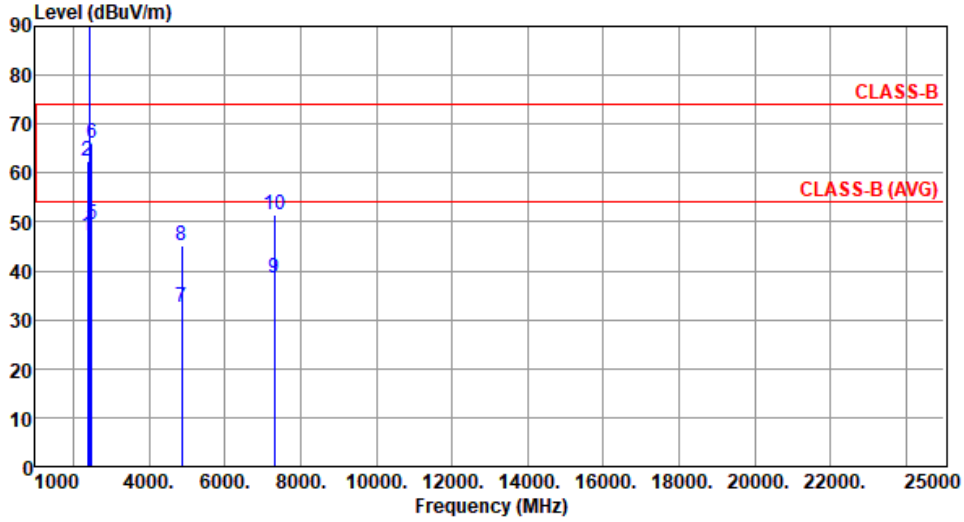


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1		2390.00	52.08	54.00	-1.92	56.01	-3.93	Average	248	192
2		2390.00	69.27	74.00	-4.73	73.20	-3.93	Peak	248	192
3	*	2437.00	103.18			107.32	-4.14	Average	248	192
4	*	2437.00	114.49			118.63	-4.14	Peak	248	192
5		2483.50	53.70	54.00	-0.30	57.92	-4.22	Average	248	192
6		2483.50	70.46	74.00	-3.54	74.68	-4.22	Peak	248	192
7		4874.00	33.85	54.00	-20.15	34.18	-0.33	Average	100	10
8		4874.00	46.87	74.00	-27.13	47.20	-0.33	Peak	100	10
9		7311.00	39.30	54.00	-14.70	33.48	5.82	Average	120	254
10		7311.00	53.30	74.00	-20.70	47.48	5.82	Peak	120	254

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 :Roger Lu- Temperature(℃):26 Humidity(%):62

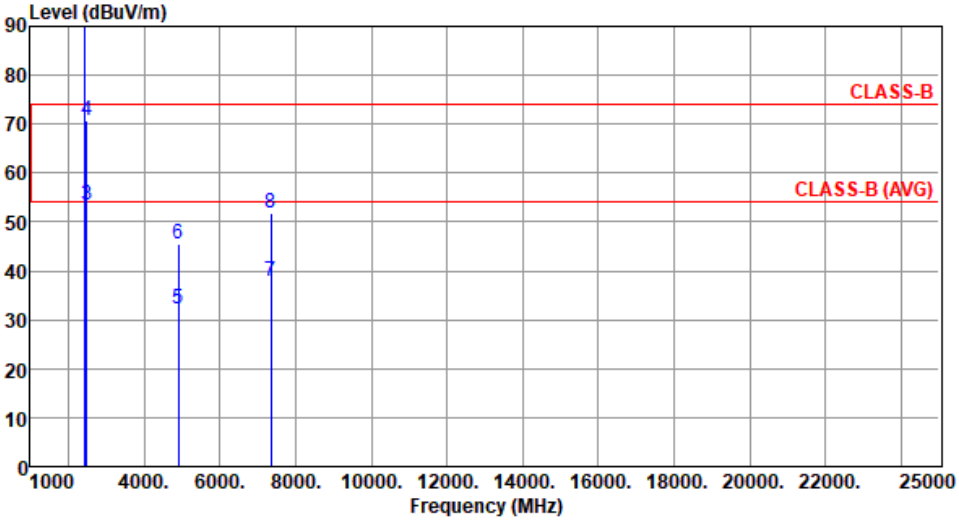


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1		2390.00	47.08	54.00	-6.92	51.01	-3.93	Average	100	5
2		2390.00	62.59	74.00	-11.41	66.52	-3.93	Peak	100	5
3	*	2437.00	98.01			102.15	-4.14	Average	211	185
4	*	2437.00	110.65			114.79	-4.14	Peak	211	185
5		2483.50	49.58	54.00	-4.42	53.80	-4.22	Average	193	185
6		2483.50	66.00	74.00	-8.00	70.22	-4.22	Peak	193	185
7		4874.00	32.69	54.00	-21.31	33.02	-0.33	Average	100	209
8		4874.00	45.03	74.00	-28.97	45.36	-0.33	Peak	100	209
9		7311.00	38.39	54.00	-15.61	32.57	5.82	Average	100	212
10		7311.00	51.47	74.00	-22.53	45.65	5.82	Peak	100	212

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 :Roger Lu- Temperature(℃):26 Humidity(%):62

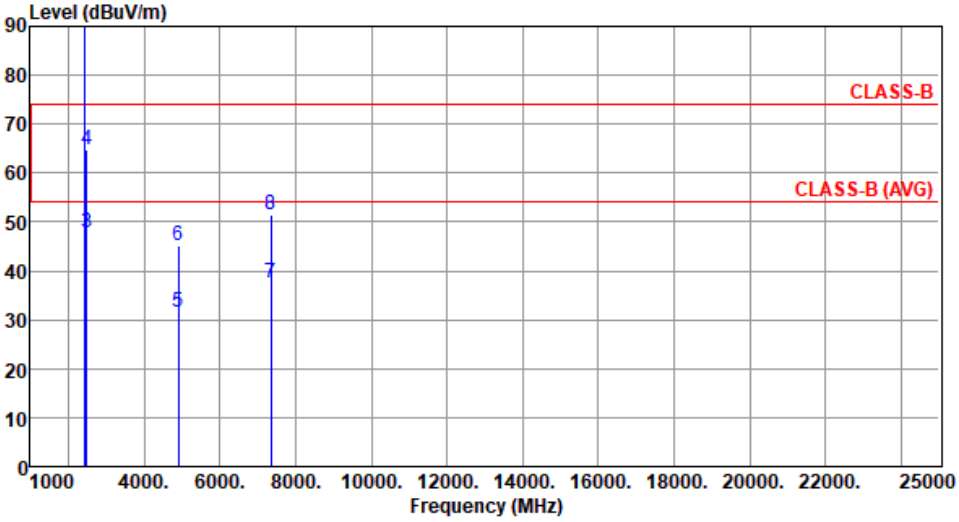


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	*	2452.00	100.79			104.99	-4.20	Average	225	194
2	*	2452.00	113.92			118.12	-4.20	Peak	225	194
3		2483.50	53.60	54.00	-0.40	57.82	-4.22	Average	225	194
4		2483.50	70.90	74.00	-3.10	75.12	-4.22	Peak	225	194
5		4904.00	32.11	54.00	-21.89	32.47	-0.36	Average	100	2
6		4904.00	45.53	74.00	-28.47	45.89	-0.36	Peak	100	2
7		7356.00	37.78	54.00	-16.22	32.14	5.64	Average	100	177
8		7356.00	51.75	74.00	-22.25	46.11	5.64	Peak	100	177

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 :Roger Lu- Temperature(℃):26 Humidity(%):62

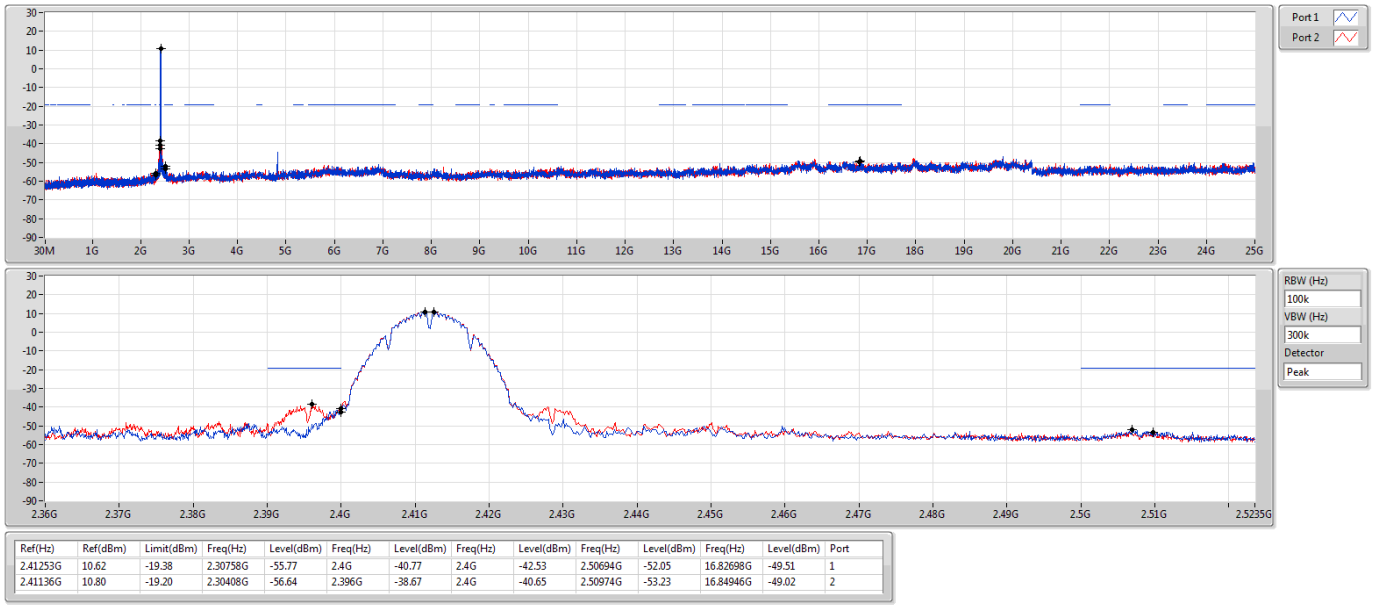


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	*	2452.00	95.68			99.88	-4.20	Average	197	173
2	*	2452.00	108.19			112.39	-4.20	Peak	197	173
3		2483.50	47.81	54.00	-6.19	52.03	-4.22	Average	197	173
4		2483.50	64.64	74.00	-9.36	68.86	-4.22	Peak	197	173
5		4904.00	31.57	54.00	-22.43	31.93	-0.36	Average	100	145
6		4904.00	45.26	74.00	-28.74	45.62	-0.36	Peak	100	145
7		7356.00	37.66	54.00	-16.34	32.02	5.64	Average	100	221
8		7356.00	51.52	74.00	-22.48	45.88	5.64	Peak	100	221

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

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

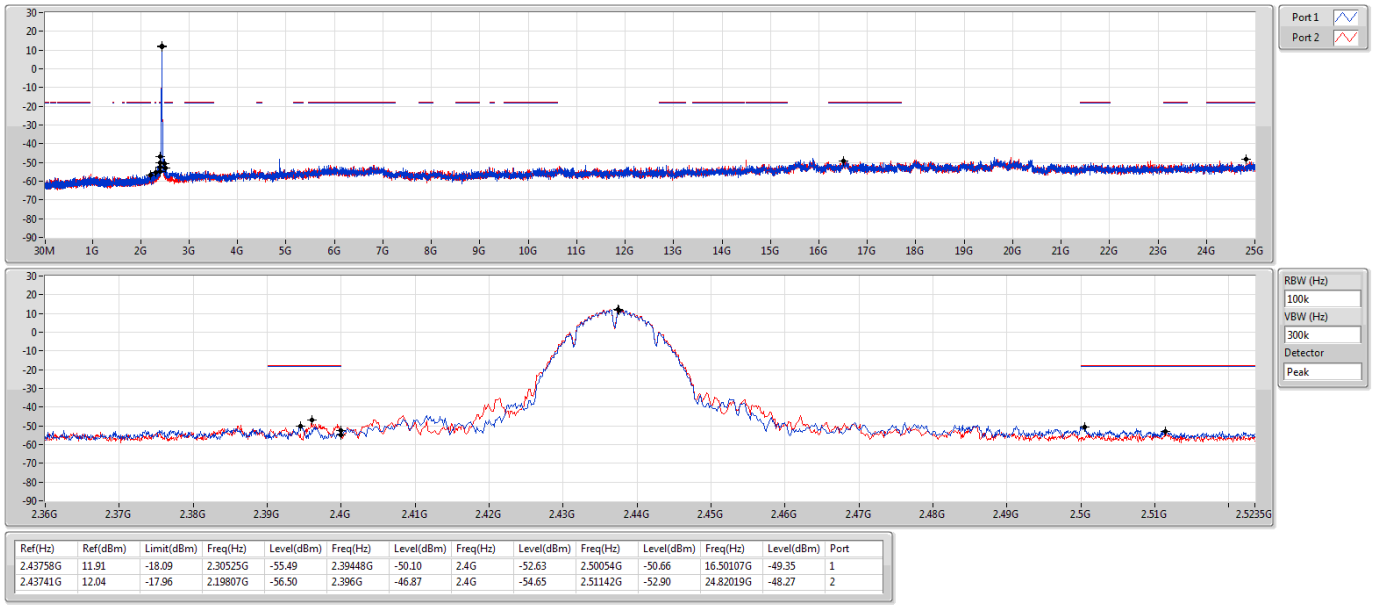
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.41253G	10.62	-19.38	2.30758G	-55.77	2.4G	-40.77	2.4G	-42.53	2.50694G	-52.05	16.82698G	-49.51	1
2.41136G	10.80	-19.20	2.30408G	-56.64	2.396G	-38.67	2.4G	-40.65	2.50974G	-53.23	16.84946G	-49.02	2

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

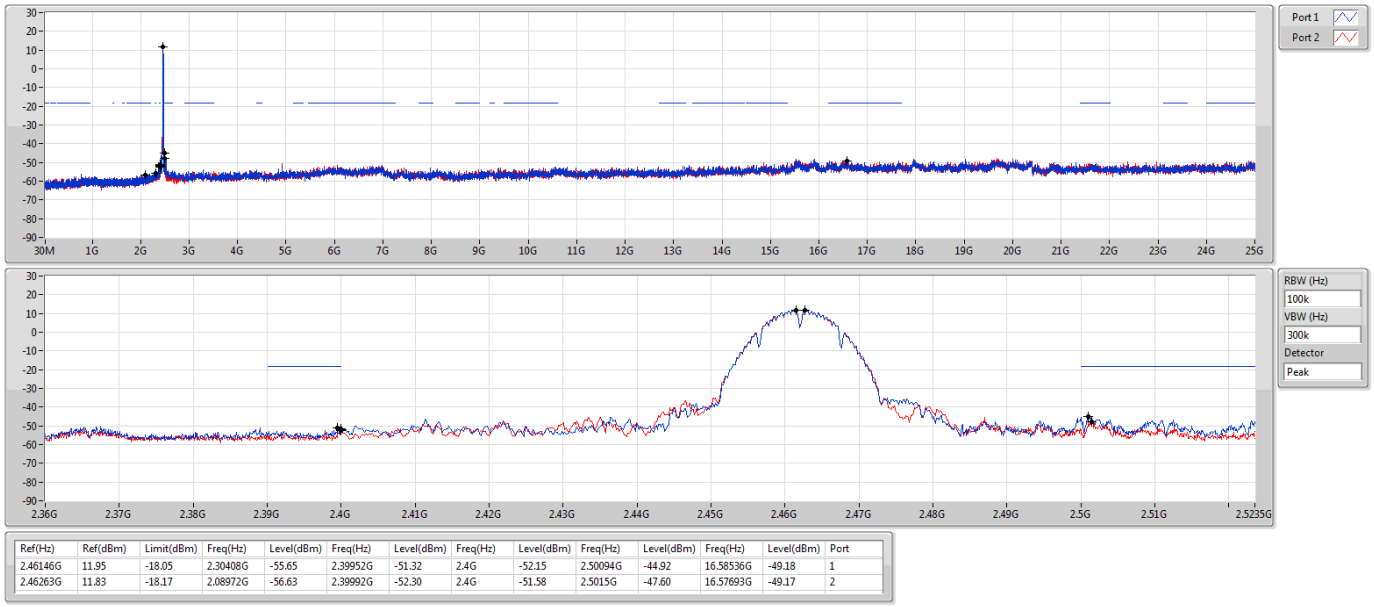
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43758G	11.91	-18.09	2.30525G	-55.49	2.39448G	-50.10	2.4G	-52.63	2.50054G	-50.66	16.50107G	-49.35	1
2.43741G	12.04	-17.96	2.19807G	-56.50	2.396G	-46.87	2.4G	-54.65	2.51142G	-52.90	24.82019G	-48.27	2

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

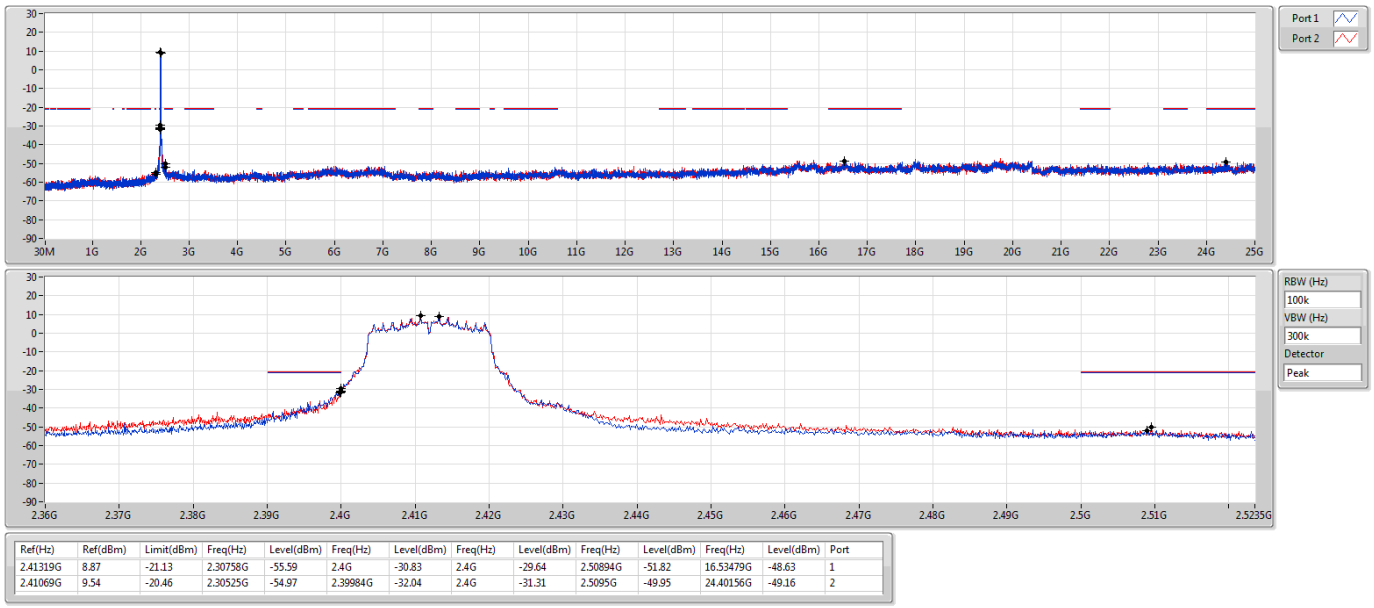
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.46146G	11.95	-18.05	2.30408G	-55.65	2.39952G	-51.32	2.4G	-52.15	2.50094G	-44.92	16.58536G	-49.18	1
2.46263G	11.83	-18.17	2.08972G	-56.63	2.39992G	-52.30	2.4G	-51.58	2.5015G	-47.60	16.57693G	-49.17	2

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

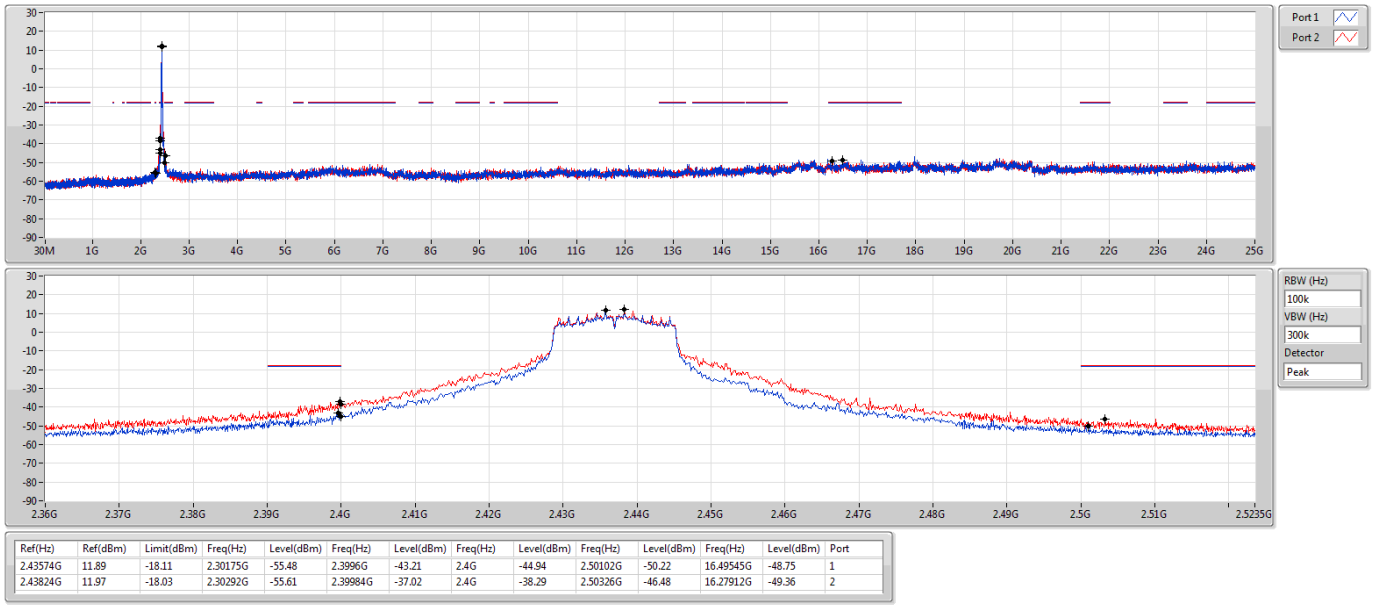
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.41319G	8.87	-21.13	2.30758G	-55.59	2.4G	-30.83	2.4G	-29.64	2.50894G	-51.82	16.53479G	-48.63	1
2.41069G	9.54	-20.46	2.30525G	-54.97	2.39984G	-32.04	2.4G	-31.31	2.5095G	-49.95	24.40156G	-49.16	2

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

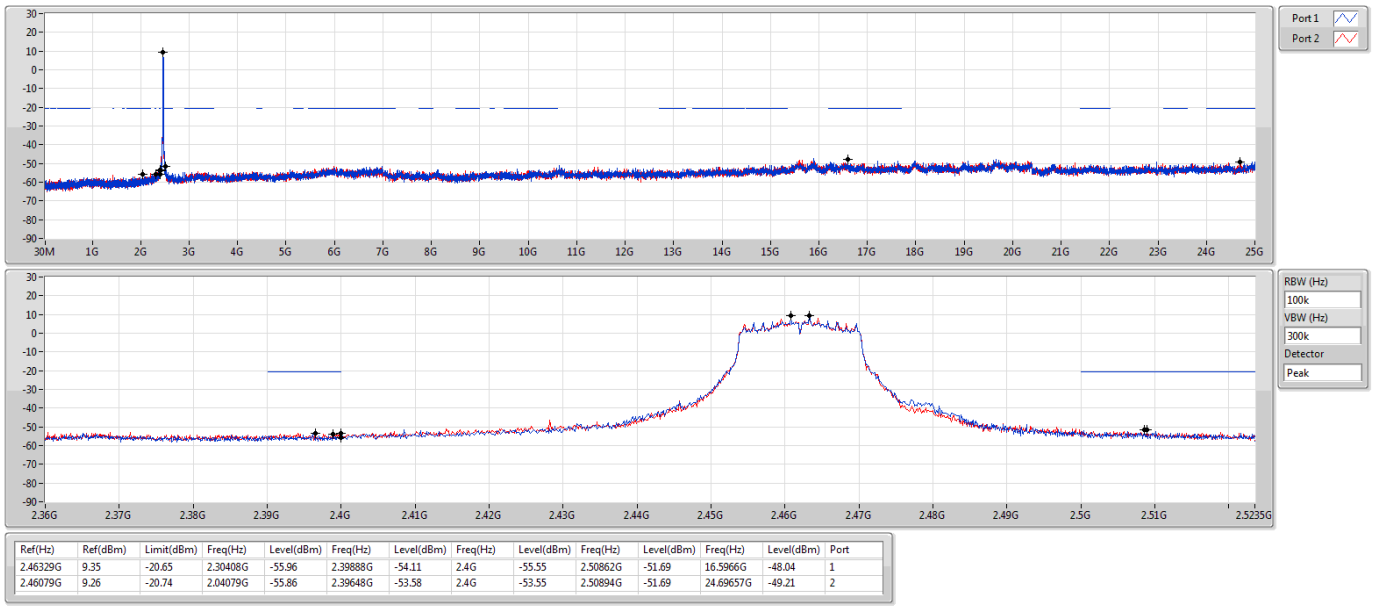
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43574G	11.89	-18.11	2.30175G	-55.48	2.3996G	-43.21	2.4G	-44.94	2.50102G	-50.22	16.49545G	-48.75	1
2.43824G	11.97	-18.03	2.30292G	-55.61	2.39984G	-37.02	2.4G	-38.29	2.50326G	-46.48	16.27912G	-49.36	2

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

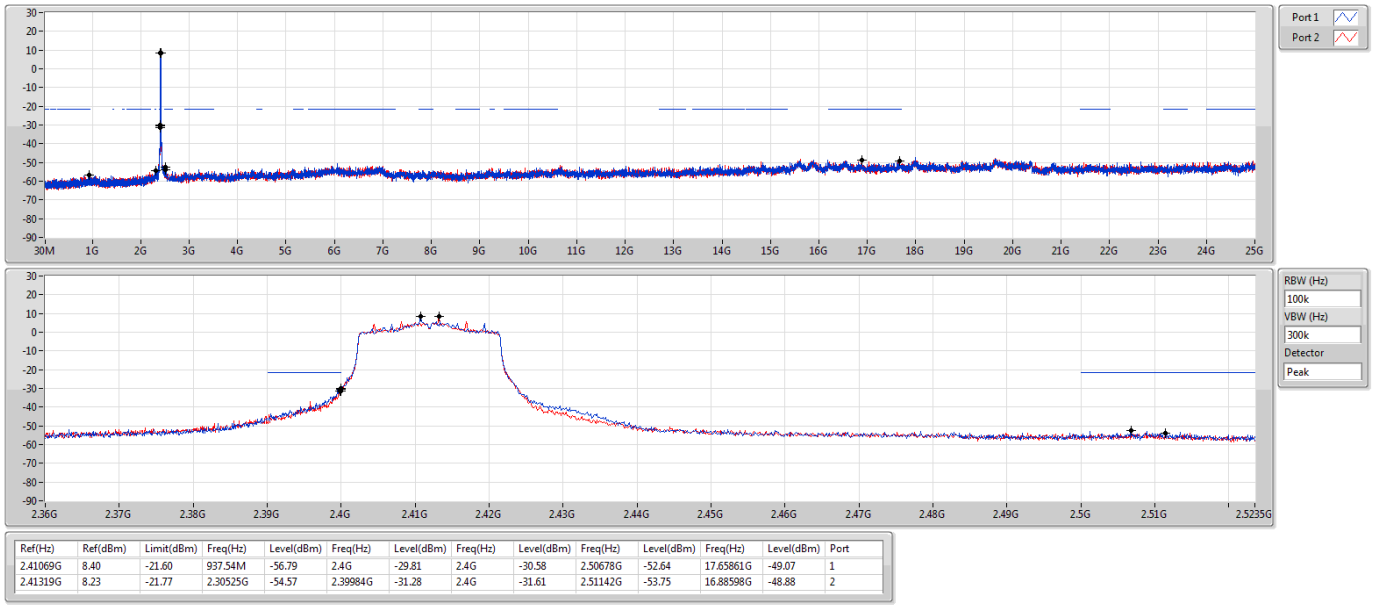
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.46329G	9.35	-20.65	2.30408G	-55.96	2.39888G	-54.11	2.4G	-55.55	2.50862G	-51.69	16.5966G	-48.04	1
2.46079G	9.26	-20.74	2.04079G	-55.86	2.39648G	-53.58	2.4G	-53.55	2.50894G	-51.69	24.69657G	-49.21	2

802.11ax HEW20_Nss2,(MCS0)_2TX **CSENdB**

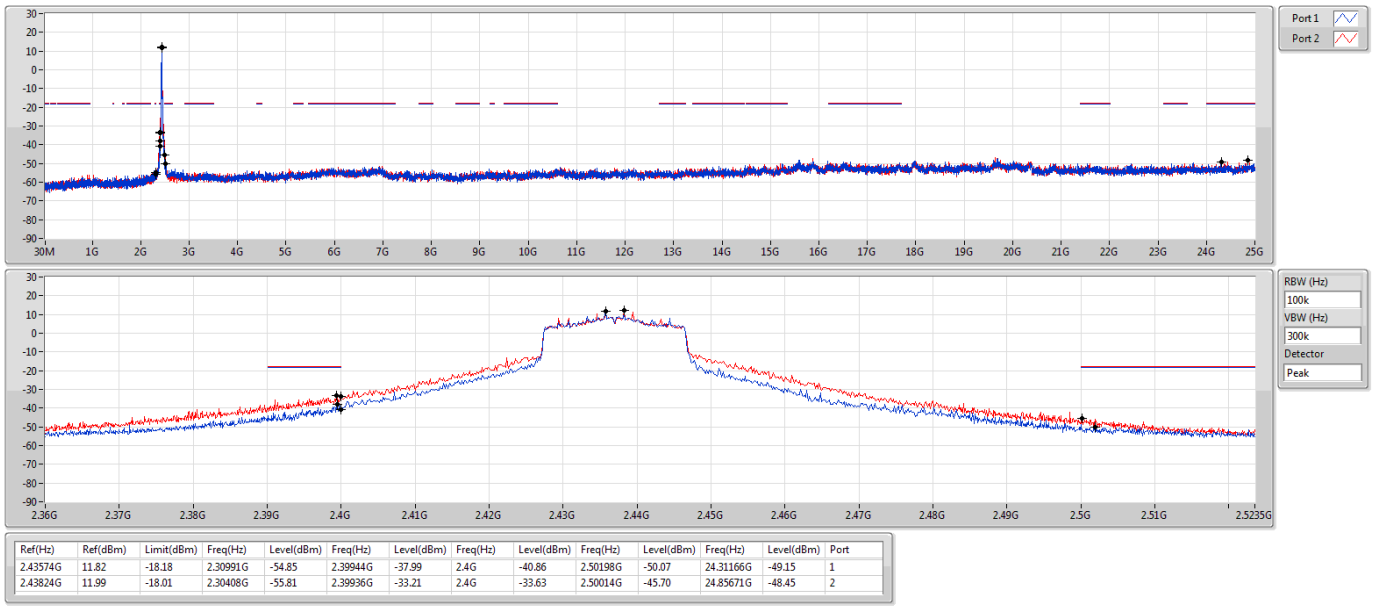
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.41069G	8.40	-21.60	937.54M	-56.79	2.4G	-29.81	2.4G	-30.58	2.50678G	-52.64	17.65861G	-49.07	1
2.41319G	8.23	-21.77	2.30525G	-54.57	2.39984G	-31.28	2.4G	-31.61	2.51142G	-53.75	16.88598G	-48.88	2

802.11ax HEW20_Nss2,(MCS0)_2TX **CSENdB**

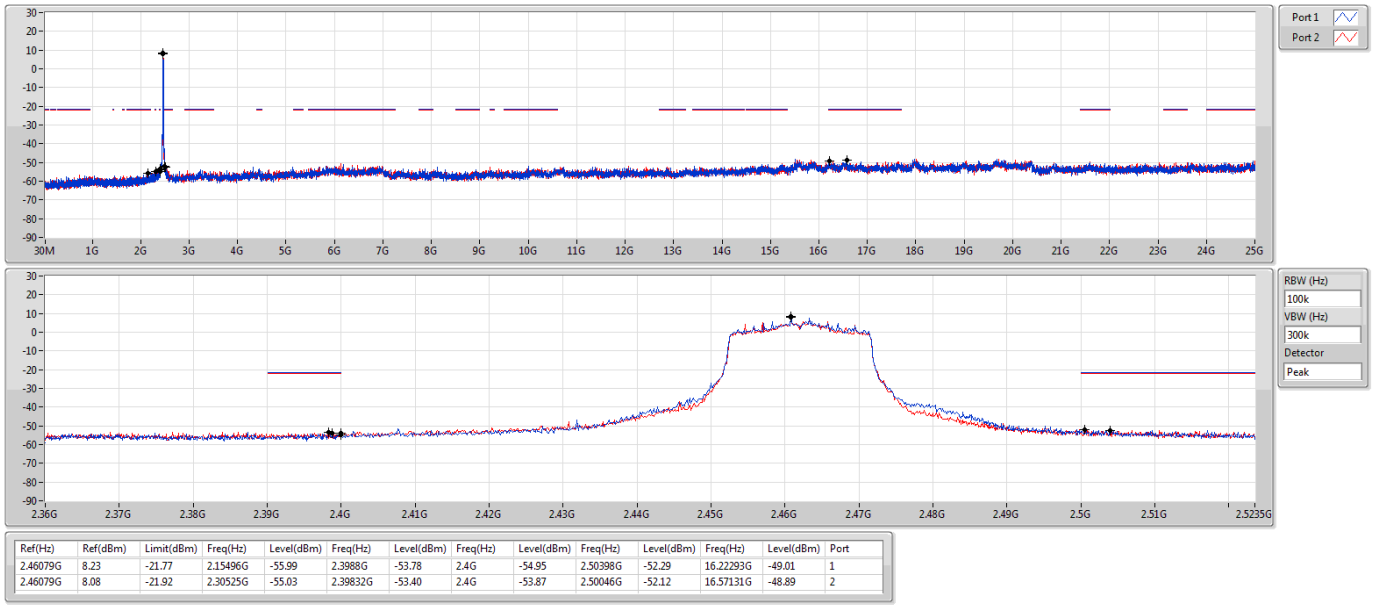
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43574G	11.82	-18.18	2.30991G	-54.85	2.39944G	-37.99	2.4G	-40.86	2.50198G	-50.07	24.31166G	-49.15	1
2.43824G	11.99	-18.01	2.30408G	-55.81	2.39936G	-33.21	2.4G	-33.63	2.50014G	-45.70	24.85671G	-48.45	2

802.11ax HEW20_Nss2,(MCS0)_2TX **CSENdB**

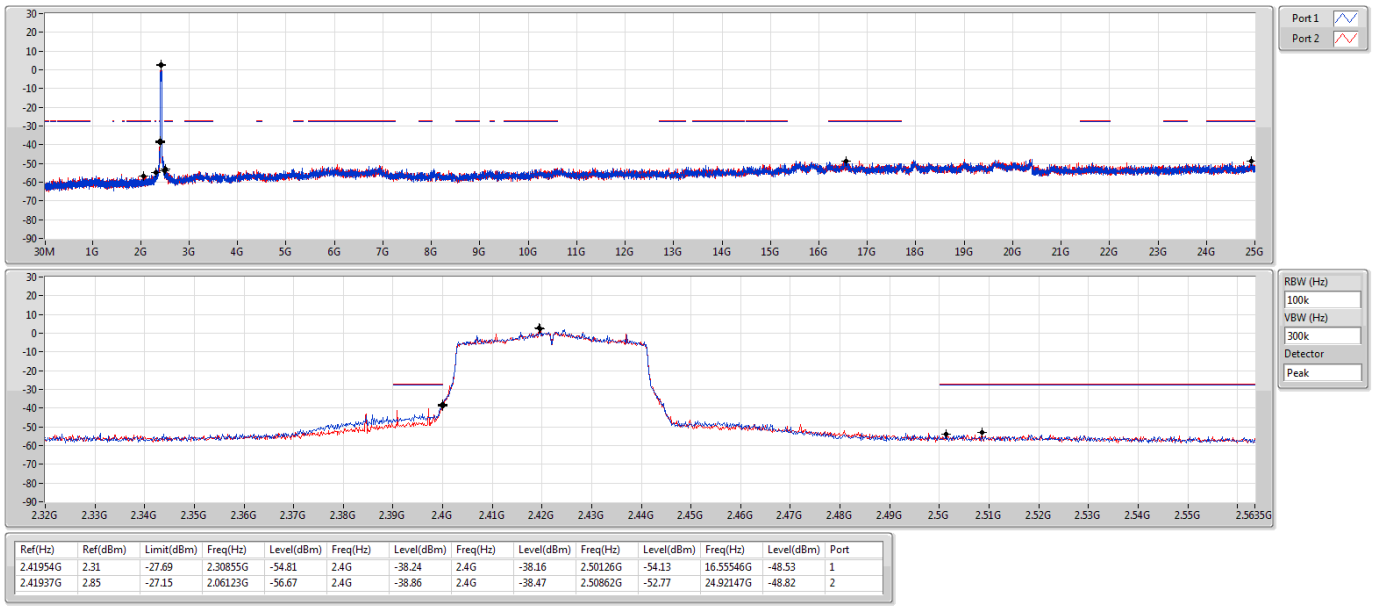
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.46079G	8.23	-21.77	2.15496G	-55.99	2.3988G	-53.78	2.4G	-54.95	2.50398G	-52.29	16.22293G	-49.01	1
2.46079G	8.08	-21.92	2.30525G	-55.03	2.39832G	-53.40	2.4G	-53.87	2.50046G	-52.12	16.57131G	-48.89	2

802.11ax HEW40_Nss2,(MCS0)_2TX **CSENdB**

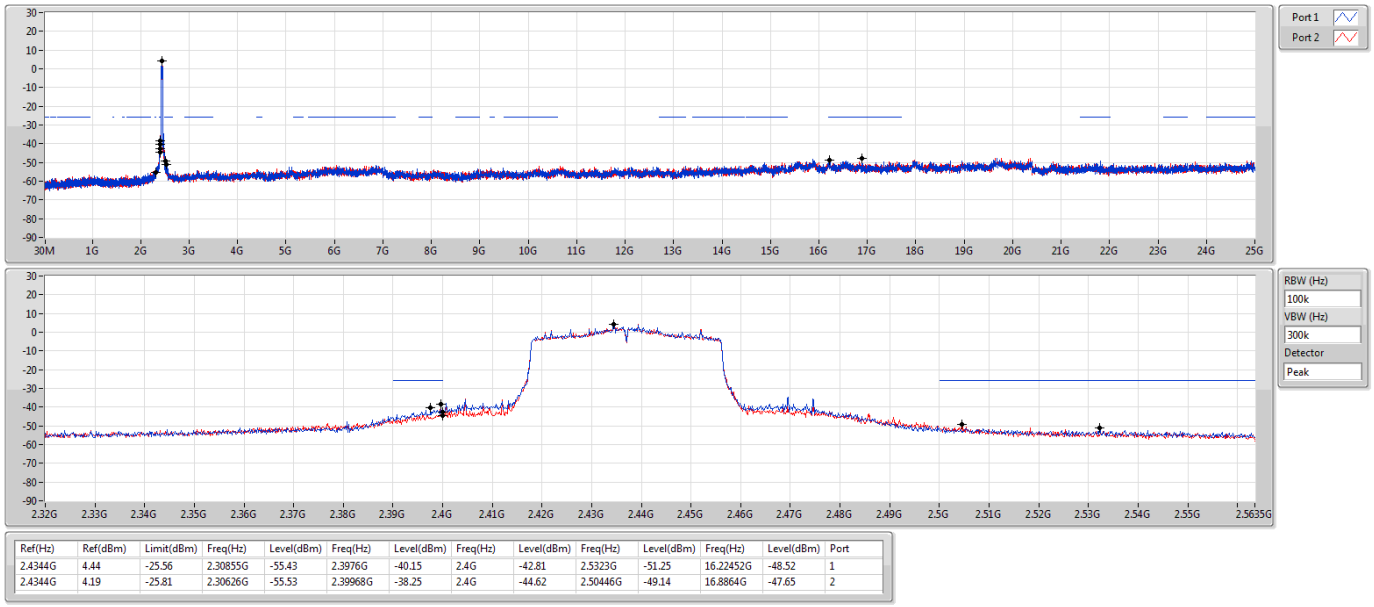
2422MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.41954G	2.31	-27.69	2.30855G	-54.81	2.4G	-38.24	2.4G	-38.16	2.50126G	-54.13	16.55546G	-48.53	1
2.41937G	2.85	-27.15	2.06123G	-56.67	2.4G	-38.86	2.4G	-38.47	2.50862G	-52.77	24.92147G	-48.82	2

802.11ax HEW40_Nss2,(MCS0)_2TX **CSENdB**

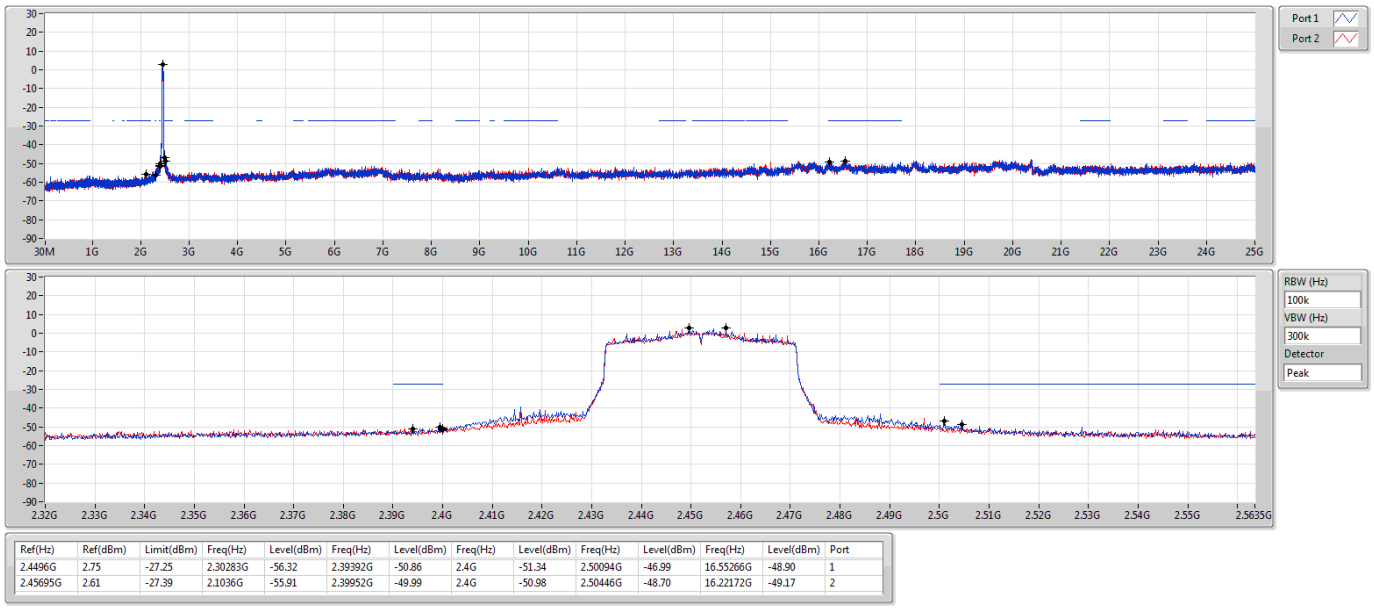
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.4344G	4.44	-25.56	2.30855G	-55.43	2.3976G	-40.15	2.4G	-42.81	2.5323G	-51.25	16.22452G	-48.52	1
2.4344G	4.19	-25.81	2.30626G	-55.53	2.39968G	-38.25	2.4G	-44.62	2.50446G	-49.14	16.8864G	-47.65	2

802.11ax HEW40_Nss2,(MCS0)_2TX **CSENdB**

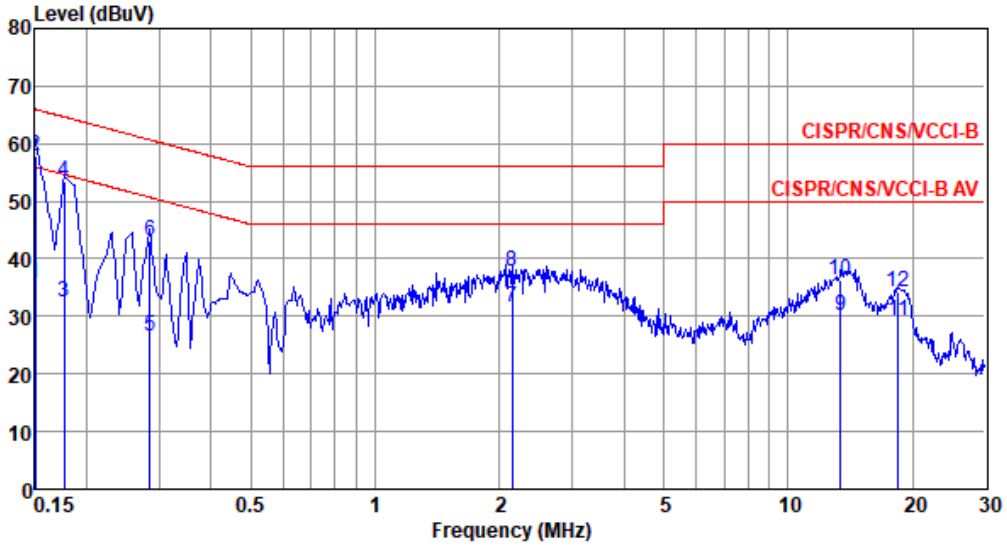
2452MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.4496G	2.75	-27.25	2.30283G	-56.32	2.39392G	-50.86	2.4G	-51.34	2.50094G	-46.99	16.55266G	-48.90	1
2.45695G	2.61	-27.39	2.1036G	-55.91	2.39952G	-49.99	2.4G	-50.98	2.50446G	-48.70	16.22172G	-49.17	2

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

Test by : Joe Liao Temperature: 21°C Humidity: 62%

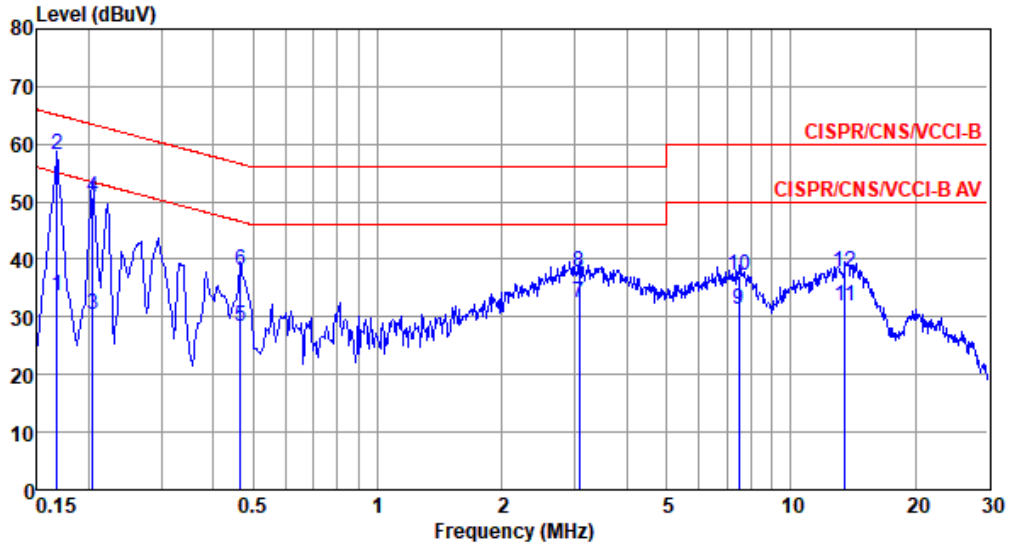


	Freq	Level	Limit Line	Over Limit	Read Level	Factor	Cable loss	Aux	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	dB	
1	0.150	35.61	56.00	-20.39	25.65	9.68	0.08	0.20	Average
2*	0.150	57.75	66.00	-8.25	47.79	9.68	0.08	0.20	QP
3	0.177	32.43	54.64	-22.21	22.46	9.68	0.08	0.21	Average
4	0.177	53.30	64.64	-11.34	43.33	9.68	0.08	0.21	QP
5	0.285	26.48	50.68	-24.20	16.44	9.67	0.08	0.29	Average
6	0.285	43.11	60.68	-17.57	33.07	9.67	0.08	0.29	QP
7	2.144	31.67	46.00	-14.33	21.39	9.69	0.20	0.39	Average
8	2.144	37.68	56.00	-18.32	27.40	9.69	0.20	0.39	QP
9	13.408	30.05	50.00	-19.95	19.28	9.74	0.53	0.50	Average
10	13.408	36.43	60.00	-23.57	25.66	9.74	0.53	0.50	QP
11	18.524	29.27	50.00	-20.73	18.30	9.73	0.63	0.61	Average
12	18.524	34.17	60.00	-25.83	23.20	9.73	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	11b	**Test Freq. (MHz)**	2437
Power Phase	Neutral		

Test by : Joe Liao Temperature: 21°C Humidity: 62%



	Freq	Level	Limit Line	Over Limit	Read Level	Factor	Cable loss	Aux	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	dB	
1	0.168	33.56	55.08	-21.52	23.70	9.61	0.08	0.17	Average
2*	0.168	58.18	65.08	-6.90	48.32	9.61	0.08	0.17	QP
3	0.204	30.41	53.45	-23.04	20.54	9.61	0.08	0.18	Average
4	0.204	50.75	63.45	-12.70	40.88	9.61	0.08	0.18	QP
5	0.466	28.33	46.58	-18.25	18.42	9.61	0.09	0.21	Average
6	0.466	38.07	56.58	-18.51	28.16	9.61	0.09	0.21	QP
7	3.074	32.48	46.00	-13.52	22.32	9.63	0.21	0.32	Average
8	3.074	37.65	56.00	-18.35	27.49	9.63	0.21	0.32	QP
9	7.486	31.15	50.00	-18.85	20.75	9.67	0.37	0.36	Average
10	7.486	37.28	60.00	-22.72	26.88	9.67	0.37	0.36	QP
11	13.551	31.94	50.00	-18.06	21.23	9.73	0.53	0.45	Average
12	13.551	37.66	60.00	-22.34	26.95	9.73	0.53	0.45	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).