Testing Laboratory 3787

RADIO TEST REPORT

FCC ID	:	QXO-AP5050
Equipment	:	Access Point
Brand Name	:	Extreme Networks
Model Name	:	AP5050D
Applicant	:	Extreme Networks, Inc. 2121 RDU Center Drive Morrisville North Carolina United States 27560
Manufacturer	:	Extreme Networks, Inc. 2121 RDU Center Drive Morrisville North Carolina United States 27560
Standard	:	47 CFR FCC Part 15.247

The product was received on May 16, 2022, and testing was started from May 30, 2022 and completed on Sep. 12, 2022. We, Sporton International Inc. Hsinchu Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. Hsinchu Laboratory, the test report shall not be reproduced except in full.

Approved by: Sam Chen

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Photographs of EUT v01

History of this test report

Report No.	Version	Description	Issued Date
FR251735AA	01	Initial issue of report	Oct. 31, 2022

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	-
3.1	15.207	AC Power-line Conducted Emissions	PASS	-
3.2	15.247(a)	DTS Bandwidth	PASS	-
3.3	15.247(b)	Maximum Conducted Output Power	PASS	-
3.4	15.247(e)	Power Spectral Density	PASS	-
3.5	15.247(d)	Emissions in Non-restricted Frequency Bands	PASS	-
3.6	15.247(d)	Emissions in Restricted Frequency Bands	PASS	-

Declaration of Conformity:

1. The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers. It's means measurement values may risk exceeding the limit of regulation standards, if measurement uncertainty is include in test results.
2. The measurement uncertainty please refer to report "Measurement Uncertainty".

Comments and Explanations:

1. The test configuration, test mode and test software were written in this test report are declared by the manufacturer.
2. 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.

Reviewed by: Sam Chen
Report Producer: Viola Huang

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
2400-2483.5	b, g, n (HT20), VHT20, ax (HEW20)	2412-2462	1-11 [11]

For Radio 1

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	11b	20	1, 2, 4
2.4-2.4835GHz	11g	20	1, 2, 4
2.4-2.4835GHz	802.11n HT20	20	1, 2, 4
2.4-2.4835GHz	802.11n HT20-BF	20	2, 4
2.4-2.4835GHz	VHT20	20	1, 2, 4
2.4-2.4835GHz	VHT20-BF	20	2, 4
2.4-2.4835GHz	802.11ax HEW20	20	1, 2, 4
2.4-2.4835GHz	802.11ax HEW20-BF	20	2, 4

For Scaning radio 1

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	11b	20	4
2.4-2.4835GHz	11g	20	4
2.4-2.4835GHz	802.11n HT20	20	4
2.4-2.4835GHz	VHT20	20	4
2.4-2.4835GHz	802.11ax HEW20	20	4

Note:
- 11b mode uses a combination of DSSS-DBPSK, DQPSK, CCK modulation.
- 11g, HT20 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- VHT20 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.
- HEW20 use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

Set	Ant.	Port					Brand Name	Model Name	Antenna Type	Connector	Gain (dBi)
		WLAN 2.4GHz (Radio 1) (Scanning Radio 1)	WLAN 5GHz (Radio 2)	WLAN 5GHz (Scanning Radio 1)	BT / IEEE802.15.4 (Radio 3)	GPS (Radio 4)					
1	1	1	-	-	-	-	WNC	95XEAJ15.G62	Patch	I-PEX	Note 1
	2	2	-	-	-	-	WNC	95XEAJ15.G62	Patch	I-PEX	
	3	3	-	-	-	-	WNC	95XEAJ15.G63	Patch	I-PEX	
	4	4	-	-	-	-	WNC	95XEAJ15.G63	Patch	I-PEX	
2	5	1	-	-	-	-	WNC	95XEAJ15.G64	Patch	I-PEX	
		2	-	-	-	-	WNC	95XEAJ15.G64	Patch	I-PEX	
	6	3	-	-	-	-	WNC	95XEAJ15.G65	Patch	I-PEX	
		4	-	-	-	-	WNC	95XEAJ15.G65	Patch	I-PEX	
3	7	-	1	-	-	-	WNC	95XEAJ15.G70	Patch	I-PEX	
	8	-	2	-	-	-	WNC	95XEAJ15.G70	Patch	I-PEX	
	9	-	3	-	-	-	WNC	95XEAJ15.G71	Patch	I-PEX	
	10	-	4	-	-	-	WNC	95XEAJ15.G71	Patch	I-PEX	
4	11	-	1	-	-	-	WNC	95XEAJ15.G67	Patch	I-PEX	
		-	2	-	-	-	WNC	95XEAJ15.G67	Patch	I-PEX	
	12	-	3	-	-	-	WNC	95XEAJ15.G68	Patch	I-PEX	
		-	4	-	-	-	WNC	95XEAJ15.G68	Patch	I-PEX	
5	13	-	-	1	-	-	WNC	95XEAJ15.G69	Patch	I-PEX	
		-	-	2	-	-	WNC	95XEAJ15.G69	Patch	I-PEX	
6	14	-	-	-	-	-	WNC	95XEAJ15.G72	Patch	I-PEX	
	15	-	-	-	-	-	WNC	95XEAJ15.G72	Patch	I-PEX	
	16	-	-	-	-	-	WNC	95XEAJ15.G73	Patch	I-PEX	
	17	-	-	-	-	-	WNC	95XEAJ15.G73	Patch	I-PEX	
7	18	-	-	-	-	-	WNC	95XEAJ15.G61	Patch	I-PEX	
		-	-	-	-	-	WNC	95XEAJ15.G61	Patch	I-PEX	
	19	-	-	-	-	-	WNC	95XEAJ15.G66	Patch	I-PEX	
		-	-	-	-	-	WNC	95XEAJ15.G66	Patch	I-PEX	
8	20	-	-	-	-	-	WNC	95XEAJ15.GA8	Patch	I-PEX	
		-	-	-	-	-	WNC	95XEAJ15.GA8	Patch	I-PEX	
9	21	-	-	-	1	-	WNC	95XEAJ15.G74	PCB	I-PEX	
10	22	-	-	-	-	1	WNC	95XEAJ15.G75	PCB	I-PEX	

Note 1:

Set	Ant.	Port	Antenna Gain (dBi)						Cable loss (dB)			Net Gain (dBi)		
			WLAN 2.4GHz (Radio 1)			WLAN 2.4GHz (Scanning Radio 1)			WLAN 2.4GHz (Radio 1) (Scanning Radio 1)			WLAN 2.4GHz (Radio 1) (Scanning Radio 1)		
			2412MHz	2442MHz	2472MHz	2412MHz	2442MHz	2472MHz	2412MHz	2442MHz	2472MHz	2412MHz	2442MHz	2472MHz
1	1	1	8.8	8.8	8.8	-	-	-	2.6	2.6	2.6	6.2	6.2	6.2
	2	2	8.8	8.8	8.8	-	-	-	3.0	3.0	3.0	5.8	5.8	5.8
	3	3	8.8	8.8	8.8	-	-	-	3.1	3.2	3.2	5.7	5.7	5.7
	4	4	8.8	8.8	8.8	-	-	-	4.3	4.3	4.4	4.5	4.5	4.4
2	5	1	6.2	6.2	6.2	6.2	6.2	6.2	2.6	2.6	2.6	3.6	3.6	3.6
		2	6.2	6.2	6.2	6.2	6.2	6.2	3.0	3.0	3.0	3.2	3.2	3.2
	6	3	6.2	6.2	6.2	6.2	6.2	6.2	4.0	4.0	4.0	2.2	2.2	2.2
		4	6.2	6.2	6.2	6.2	6.2	6.2	4.3	4.3	4.4	1.9	1.9	1.8

Set	Ant.	Port	Antenna Gain (dBi)								Cable loss (dB)								Net Gain (dBi)							
			WLAN 5GHz (Radio 2)				WLAN 5GHz (Scanning Radio 1)				WLAN 5GHz (Radio 2)				WLAN 5GHz (Scanning Radio 1)				WLAN 5GHz (Radio 2)				WLAN 5GHz (Scanning Radio 1)			
			UNII 1	UNII 2A	UNII 2C	UNII 3	UNII 1	UNII 2A	UNII 2C	UNII 3	UNII 1	UNII 2A	UNII 2C	UNII 3	UNII 1	UNII 2A	UNII 2C	UNII 3	UNII 1	UNII 2A	UNII 2C	UNII 3	UNII 1	UNII 2A	UNII 2C	UNII 3
3	7	1	7.5	8.0	8.1	8.0	-	-	-	-	4.7	4.7	5.1	5.7	-	-	-	-	2.8	3.3	3.0	2.3	-	-	-	-
	8	2	7.5	8.0	8.1	8.0	-	-	-	-	4.3	4.3	5.2	4.7	-	-	-	-	3.2	3.7	2.9	3.3	-	-	-	-
	9	3	7.5	8.0	8.1	8.0	-	-	-	-	4.7	4.7	5.0	4.9	-	-	-	-	2.8	3.3	3.1	3.1	-	-	-	-
	10	4	7.5	8.0	8.1	8.0	-	-	-	-	4.7	4.7	5.6	5.4	-	-	-	-	2.8	3.3	2.5	2.6	-	-	-	-
4	11	1	5.8	6.2	6.3	6.7	-	-	-	-	4.6	4.6	5.6	6.2	-	-	-	-	1.2	1.6	0.7	0.5	-	-	-	-
		2	5.8	6.2	6.3	6.7	-	-	-	-	5.8	5.8	6.2	6.4	-	-	-	-	0	0.4	0.1	0.3	-	-	-	-
	12	3	5.8	6.2	6.3	6.7	-	-	-	-	4.8	4.8	4.9	5.0	-	-	-	-	1.0	1.4	1.4	1.7	-	-	-	-
		4	5.8	6.2	6.3	6.7	-	-	-	-	4.7	4.7	5.5	5.4	-	-	-	-	1.1	1.5	0.8	1.3	-	-	-	-
5	13	1	-	-	-	-	5.8	6.2	6.3	6.7	-	-	-	-	3.9	3.9	3.7	3.5	-	-	-	-	1.9	2.3	2.6	3.2
		2	-	-	-	-	5.8	6.2	6.3	6.7	-	-	-	-	5.0	5.0	3.9	3.9	-	-	-	-	0.8	1.2	2.4	2.8

Set	Ant.	Antenna Gain (dBi)	
		BT / IEEE802.15.4 (Radio 3)	GPS (Radio 4)
9	21	2.7	-
10	22	-	3

Note 2: The EUT has ten sets of antennas.

Note 3:

The antenna set 1, set 3, set 6 are used for 3dB Beam width (azimuth/elevation)-Narrow Beam: 30/70 degree.

The antenna set 2, set 4, set 7 are used for 3dB Beam width (azimuth/elevation)-Wide Beam: 70/70 degree.

Note 4: The EUT doesn't enable the DFS and 6GHz band.

Note 5: The antenna set 6~8 is 6GHz's antenna. Thus, the set 6~8 function doesn't enable it at this time.

Note 6: Directional gain information.

Type	Maximum Output Power	Power Spectral Density
Non-BF	Directional gain = Max.gain + array gain. For power measurements on IEEE 802.11 devices Array Gain = 0 dB (i.e., no array gain) for N ANT ≤ 4	$Directional\ Gain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{sp}}\left[\sum_{k=1}^{N_{ant}} g_{j,k}\right]^2}{N_{ant}}\right]$
BF	$Directional\ Gain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{sp}}\left[\sum_{k=1}^{N_{ant}} g_{j,k}\right]^2}{N_{ant}}\right]$	$Directional\ Gain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{sp}}\left[\sum_{k=1}^{N_{ant}} g_{j,k}\right]^2}{N_{ant}}\right]$

Ex.

Directional Gain (NSS1) formula : $Directional\ Gain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{sp}}\left[\sum_{k=1}^{N_{ant}} g_{j,k}\right]^2}{N_{ant}}\right]$

NSS1(g1,1) = $10^{G1/20}$; NSS1(g1,2)= $10^{G2/20}$; NSS1(g1,2)= $10^{G3/20}$; NSS1(g1,2)= $10^{G4/20}$

gj,k =(Nss1(g1,1) + Nss1(g1,2) + Nss1(g1,3) + Nss1(g1,4))^2

DG = 10 log[(Nss1(g1,1) + Nss1(g1,2) + Nss1(g1,3) + Nss1(g1,4))^2 / N_{ANT}] => 10 log[($10^{G1/20}$ + $10^{G2/20}$ + $10^{G3/20}$ + $10^{G4/20}$)^2 / N_{ANT}]

Where ;

G1 = 10 ; G2 = 10 ; G3 = 10 ; G4 = 10 ;

Set 1 and Set 3 antenna narrow band 30 degree

2.4G G1 = 6.2 dBi; G2 = 5.8 dBi; G3 = 5.7 dBi; G4 = 4.5 dBi

2.4G 2T1S DG= 9.01 dBi; 2T2S DG= 6 dBi; 4T1S DG= 11.55 dBi; 4T4S DG= 5.55 dBi;

5G Band1 G1 = 2.8 dBi; G2 = 3.2 dBi; G3 = 2.8 dBi; G4 = 2.8 dBi

5G Band1 2T1S DG= 6.01 dBi; 2T2S DG= 3 dBi; 4T1S DG= 8.92 dBi; 4T4S DG= 2.90 dBi;

5G Band2 G1 = 3.3 dBi; G2 = 3.7 dBi; G3 = 3.3 dBi; G4 = 3.3

5G Band2 2T1S DG= 6.46 dBi; 2T2S DG= 3.46 dBi; 4T1S DG= 9.30 dBi; 4T4S DG= 3.28 dBi;

5G Band3 G1 = 3 dBi; G2 = 2.9 dBi; G3 = 3.1 dBi; G4 = 2.5

5G Band3 2T1S DG= 6.06 dBi; 2T2S DG= 3.06 dBi; 4T1S DG= 9.10 dBi; 4T4S DG= 3.08 dBi;

5G Band4 G1 = 2.3 dBi; G2 = 3.3 dBi; G3 = 3.1 dBi; G4 = 2.6

5G Band4 2T1S DG= 5.82 dBi; 2T2S DG= 2.83 dBi; 4T1S DG= 8.85 dBi; 4T4S DG= 2.84 dBi;

Set 2 and Set 4 antenna wide band 70 degree

2.4G G1 = 3.6 dBi; G2 = 3.2 dBi; G3 = 2.2 dBi; G4 = 1.9 dBi

2.4G 2T1S DG= 9.01 dBi; 2T2S DG= 6 dBi; 4T1S DG= 11.55 dBi; 4T4S DG= 5.55 dBi;

5G Band1 G1 = 1.2 dBi; G2 = 0 dBi; G3 = 1 dBi; G4 = 1.1 dBi

5G Band1 2T1S DG= 3.63 dBi; 2T2S DG= 0.64 dBi; 4T1S DG= 6.86 dBi; 4T4S DG= 0.85 dBi;

5G Band2 G1 = 1.6 dBi; G2 = 0.4 dBi; G3 = 1.4 dBi; G4 = 1.5 dBi

5G Band2 2T1S DG= 4.03 dBi; 2T2S DG= 1.04 dBi; 4T1S DG= 7.26 dBi; 4T4S DG= 1.25 dBi;

5G Band3 G1 = 0.7 dBi; G2 = 0.1 dBi; G3 = 1.4 dBi; G4 = 0.8 dBi

5G Band3 2T1S DG= 3.42 dBi; 2T2S DG= 0.41 dBi; 4T1S DG= 6.78 dBi; 4T4S DG= 0.77 dBi;

5G Band4 G1 = 0.5 dBi; G2 = 0.3 dBi; G3 = 1.7 dBi; G4 = 1.3 dBi

5G Band4 2T1S DG= 3.41 dBi; 2T2S DG= 0.40 dBi; 4T1S DG= 6.99 dBi; 4T4S DG= 0.99 dBi;

Set 5 antenna scanning radio

5G Band1 G1 = 1.9 dBi; G2 = 0.8 dBi

5G Band1 2T1S DG= 4.38 dBi; 2T2S DG= 1.38 dBi

5G Band2 G1 = 2.3 dBi; G2 = 1.2 dBi

5G Band2 2T1S DG= 4.78 dBi; 2T2S DG= 1.78 dBi

5G Band3 G1 = 2.6 dBi; G2 = 2.4 dBi

5G Band3 2T1S DG= 5.51 dBi; 2T2S DG= 2.50 dBi

5G Band4 G1 = 3.2 dBi; G2 = 2.8 dBi

5G Band4 2T1S DG= 6.01 dBi; 2T2S DG= 3.00 dBi

For Radio 1
For 2.4GHz:
For IEEE 802.11b/g/n/VHT/ax mode (1TX, 2TX, 4TX/4RX):
1TX
Only Port 1 can be use as transmitting antenna.
2TX
Port 1, Port 2 can be use as transmitting antenna.
Port 1, Port 2 could transmitting simultaneously.
4TX
Port 1, Port 2, Port 3 and Port 4 can be used as transmitting antenna.
Port 1, Port 2, Port 3 and Port 4 could transmit simultaneously.
4RX
Port 1, Port 2, Port 3, Port 4 can be used as receiving antennas.
Port 1, Port 2, Port 3, Port 4 could receive simultaneously.

For Scanning Radio 1
For 2.4GHz:
For IEEE 802.11b/g/n/VHT/ax mode (4TX/4RX):
Port 1, Port 2, Port 3 and Port 4 can be used as transmitting/receiving antenna.
Port 1, Port 2, Port 3 and Port 4 could transmit/receive simultaneously.
For 5GHz UNII 1, 3:
For IEEE 802.11a/n/ac/ax mode (2TX/2RX):
Port 1, Port 2 can be used as transmitting/receiving antenna.
Port 1, Port 2 could transmit/receive simultaneously.

For Radio 2
For 5GHz UNII 1, 3:
For IEEE 802.11a/n/ac/ax mode (1TX, 2TX, 4TX/4RX):
1TX
Only Port 1 can be use as transmitting antenna.
2TX
Port 1, Port 2 can be use as transmitting antenna.
Port 1, Port 2 could transmitting simultaneously.
4TX
Port 1, Port 2, Port 3 and Port 4 can be used as transmitting antenna.
Port 1, Port 2, Port 3 and Port 4 could transmit simultaneously.
4RX
Port 1, Port 2, Port 3, Port 4 can be used as receiving antennas.
Port 1, Port 2, Port 3, Port 4 could receive simultaneously.

For Radio 3
Bluetooth / IEEE802.15.4 (1TX):
Only Port 1 can be used as transmitting antenna.

For Radio 4
GPS (1RX):
Only Port 1 can be used as receiving antenna.

1.1.3 Mode Test Duty Cycle

For Radio 1
For Set 1 antenna with narrow beam 30 degree
1T1S

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11b	0.952	0.21	12.425m	100
802.11g	0.953	0.21	2.075m	1k
802.11ax HEW20	0.985	0.07	n/a (DC>=0.98)	n/a (DC>=0.98)

2T1S

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11b	0.952	0.21	12.42m	100
802.11g	0.954	0.2	2.075m	1k

2T2S

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11ax HEW20	0.968	0.14	782.5u	3k

4T1S

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11b	0.936	0.29	12.418m	100
802.11g	0.954	0.2	2.068m	1k
802.11ax HEW20	0.984	0.07	n/a (DC>=0.98)	n/a (DC>=0.98)

4T4S

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11ax HEW20	0.941	0.26	436.875u	3k

For Set 2 antenna with wide beam 70 degree
1T1S

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11b	0.952	0.21	12.425m	100
802.11g	0.952	0.21	2.075m	1k
802.11ax HEW20	0.985	0.07	n/a (DC>=0.98)	n/a (DC>=0.98)

2T1S

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11b	0.952	0.21	12.425m	100
802.11g	0.955	0.2	2.075m	1k

2T2S

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11ax HEW20	0.971	0.13	785u	3k

4T1S

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11b	0.936	0.29	12.418m	100
802.11g	0.954	0.2	2.068m	1k
802.11ax HEW20	0.984	0.07	n/a (DC>=0.98)	n/a (DC>=0.98)

4T4S

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11ax HEW20	0.941	0.26	436.875u	3k

Note:
- DC is Duty Cycle.
- DCF is Duty Cycle Factor.

1.1.4 EUT Operational Condition

EUT Power Type	From PoE			
Beamforming Function	☒	With beamforming	☐	Without beamforming
	The product has beamforming function for 11n/VHT/11ax in radio 1 2.4GHz, 11n/11ac/11ax in radio 2 5GHz.			
Function	☒	Point-to-multipoint	☐	Point-to-point
Test Software Version	Mtool (v3.2.1.5)			

Note: The above information was declared by manufacturer.

1.1.5 Table for EUT support function

Function
AP
Bridge
Mesh

Note1: For above table list, only AP mode was tested and recorded in this test.
Note2: The above information was declared by manufacturer.

1.1.6 Table for Radio function

Radio (R)	WLAN 2.4GHz	5GHz	Scanning radio (WLAN 2.4GHz 4TX / 5GHz 2TX)	Bluetooth / IEEE802.15.4	GPS
R1	V (AP, Bridge, Mesh)	-	V (AP, Bridge, Mesh for 2.4GHz, AP for 5GHz UNII 1, 3)	-	-
R2	-	V (AP for UNII 1, 3 / Bridge, Mesh for UNII 1, 3)	-	-	-
R3	-	-	-	V	-
R4	-	-	-	-	V

Note: The above information was declared by manufacturer.

1.2 Applicable Standards

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

- 47 CFR FCC Part 15.247
- ANSI C63.10-2013

The following reference test guidance is not within the scope of accreditation of TAF.

- FCC KDB 558074 D01 v05r02
- FCC KDB 662911 D01 v02r01
- FCC KDB 414788 D01 v01r01

1.3 Testing Location Information

Testing Location Information	
Test Lab.：Sporton International Inc. Hsinchu Laboratory	
Hsinchu	ADD: No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)
(TAF: 3787)	TEL: 886-3-656-9065 FAX: 886-3-656-9085
	Test site Designation No. TW3787 with FCC.
	Conformity Assessment Body Identifier (CABID) TW3787 with ISED.

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
RF Conducted	TH03-CB	Caster Chang	25.6~26.1 / 65~69	Jun. 06, 2022~Aug. 15, 2022
Radiated below 1GHz	10CH01-CB	Joe Chu	22~23 / 57~58	May 30, 2022~Sep. 12, 2022
Radiated above 1GHz	03CH01-CB	RJ Huang	24.1~26.1 / 60~65	May 31, 2022~Jul. 01, 2022
	03CH03-CB		23.7~25.1 / 66~68	
AC Conduction	CO01-CB	Allen Chung	23~24 / 56~57	May 30, 2022

1.4 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)

Test Date : After Mar. 10, 2022

Test Items	Uncertainty	Remark
Radiated Emission (9kHz ~ 30MHz)	5.0 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	4.9 dB	Confidence levels of 95%

Test Date : Before Nov. 04, 2022

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.4 dB	Confidence levels of 95%

Test Date : Before Jun. 01, 2022

Test Items	Uncertainty	Remark
Radiated Emission (1GHz ~ 18GHz)	4.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.2 dB	Confidence levels of 95%

Test Date : After May 31, 2022

Test Items	Uncertainty	Remark
Radiated Emission (1GHz ~ 18GHz)	5.2 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.7 dB	Confidence levels of 95%
Conducted Emission	3.2 dB	Confidence levels of 95%
Output Power Measurement	0.8 dB	Confidence levels of 95%
Power Density Measurement	3.2 dB	Confidence levels of 95%
Bandwidth Measurement	2.0 %	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

For Radio 1
For Set 1 antenna with narrow beam 30 degree
1T1S

Mode	Power Setting
802.11b_Nss1,(1Mbps)_1TX	-
2412MHz	89
2417MHz	93
2437MHz	99
2457MHz	90
2462MHz	88
802.11g_Nss1,(6Mbps)_1TX	-
2412MHz	79
2417MHz	84
2437MHz	93
2457MHz	83
2462MHz	80
802.11ax HEW20_Nss1,(MCS0)_1TX	-
2412MHz	77
2417MHz	83
2437MHz	90
2457MHz	83
2462MHz	80

2T1S

Mode	Power Setting
802.11b_Nss1,(1Mbps)_2TX	-
2412MHz	86
2417MHz	89
2437MHz	99
2457MHz	88
2462MHz	86
802.11g_Nss1,(6Mbps)_2TX	-
2412MHz	77
2417MHz	81
2437MHz	87
2457MHz	80
2462MHz	77

2T2S

Mode	Power Setting
802.11ax HEW20_Nss2,(MCS0)_2TX	-
2412MHz	74
2417MHz	80
2437MHz	84
2457MHz	80
2462MHz	78

4T1S

Mode	Power Setting
802.11b_Nss1,(1Mbps)_4TX	-
2412MHz	84
2417MHz	86
2437MHz	98
2457MHz	86
2462MHz	84
802.11g_Nss1,(6Mbps)_4TX	-
2412MHz	73
2417MHz	79
2437MHz	86
2457MHz	80
2462MHz	70
802.11ax HEW20_Nss1,(MCS0)_4TX	-
2412MHz	69
2417MHz	77
2437MHz	81
2457MHz	80
2462MHz	71
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-
2412MHz	69
2417MHz	76
2437MHz	72
2457MHz	75
2462MHz	71

4T4S

Mode	Power Setting
802.11ax HEW20_Nss4,(MCS0)_4TX	-
2412MHz	67
2417MHz	72
2437MHz	78
2457MHz	74
2462MHz	64

For Set 2 antenna with wide beam 70 degree

1T1S

Mode	Power Setting
802.11b_Nss1,(1Mbps)_1TX	-
2412MHz	94
2417MHz	97
2437MHz	102
2457MHz	94
2462MHz	89
802.11g_Nss1,(6Mbps)_1TX	-
2412MHz	83
2417MHz	87
2437MHz	97
2457MHz	87
2462MHz	80
802.11ax HEW20_Nss1,(MCS0)_1TX	-
2412MHz	82
2417MHz	87
2437MHz	95
2457MHz	84
2462MHz	78

2T1S

Mode	Power Setting
802.11b_Nss1,(1Mbps)_2TX	-
2412MHz	85
2417MHz	93
2437MHz	101
2457MHz	90
2462MHz	88
802.11g_Nss1,(6Mbps)_2TX	-
2412MHz	79
2417MHz	82
2437MHz	91
2457MHz	84
2462MHz	80

2T2S

Mode	Power Setting
802.11ax HEW20_Nss2,(MCS0)_2TX	-
2412MHz	77
2417MHz	83
2437MHz	88
2457MHz	82
2462MHz	76

4T1S

Mode	Power Setting
802.11b_Nss1,(1Mbps)_4TX	-
2412MHz	86
2417MHz	87
2437MHz	99
2457MHz	86
2462MHz	85
802.11g_Nss1,(6Mbps)_4TX	-
2412MHz	75
2417MHz	83
2437MHz	89
2457MHz	86
2462MHz	72
802.11ax HEW20_Nss1,(MCS0)_4TX	-
2412MHz	71
2417MHz	79
2437MHz	79
2457MHz	80
2462MHz	71
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-
2412MHz	71
2417MHz	79
2437MHz	79
2457MHz	80
2462MHz	71

For 4T4S

Mode	Power Setting
802.11ax HEW20_Nss4,(MCS0)_4TX	-
2412MHz	73
2417MHz	79
2437MHz	83
2457MHz	77
2462MHz	69

Note:
- Evaluated HEW20 mode only due to the similar modulation. The power setting of HT20/VHT20 mode are the same or lower than HEW20.
- The EUT supports beamforming and CDD modes, and the CDD mode is the worst case. Therefore, all test items are evaluated in the report. The beamforming mode only evaluates the output power.

2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral Test Voltage: 120Vac / 60Hz
Operating Mode	Normal Link(WLAN, GPS), CTX(Bluetooth, IEEE802.15.4)
1	R1 (2.4GHz+Set 1)+R2 (5GHz+Set 3)+R3 (BT)+R4 (GPS)+PoE 1
2	R1 (2.4GHz+Set 1)+R2 (5GHz+Set 3)+R3 (802.15.4)+R4 (GPS)+PoE 1
Mode 1 has been evaluated to be the worst case between Mode 1~2, thus measurement for Mode 3 will follow this same test mode.	
3	Scaning R1 (5GHz + Set 5)+R2 (5GHz+Set 3)+R3 (BT)+R4 (GPS)+PoE 1
4	R1 (2.4GHz+Set 2)+R2 (5GHz+Set 4)+R3 (BT)+R4 (GPS)+PoE 1
5	R1 (2.4GHz+Set 2)+R2 (5GHz+Set 4)+R3 (802.15.1)+R4 (GPS)+PoE 1
Mode 4 has been evaluated to be the worst case between Mode 4~5, thus measurement for Mode 6 will follow this same test mode.	
6	Scaning R1 (5GHz + Set 5)+R2 (5GHz+Set 4)+R3 (BT)+R4 (GPS)+PoE 1
For operating mode 4 is the worst case and it was record in this test report.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	DTS Bandwidth Power Spectral Density Maximum Conducted Output Power Emissions in Non-restricted Frequency Bands
Test Condition	Conducted measurement at transmit chains
1	Refer to note 1 for detail operating mode

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emissions in Restricted Frequency Bands
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	Normal Link(WLAN, GPS), CTX(Bluetooth, IEEE802.15.4)
	The EUT was performed at X axis, Y axis and Z axis position, and the worst case was found at Y axis. So the measurement will follow this same test configuration.
1	EUT in Y axis_R1 (2.4GHz+Set 1)+R2 (5GHz+Set 3)+R3 (BT)+R4 (GPS)+PoE 1
2	EUT in Y axis_R1 (2.4GHz+Set 1)+R2 (5GHz+Set 3)+R3 (802.15.4)+R4 (GPS)+PoE 1
3	EUT in Y axis_Scaning R1 (5GHz + Set 5)+R2 (5GHz+Set 3)+R3 (BT)+R4 (GPS)+PoE 1
4	EUT in Y axis_Scaning R1 (5GHz + Set 5)+R2 (5GHz+Set 3)+R3 (802.15.4)+R4 (GPS)+PoE 1
5	EUT in Y axis_R1 (2.4GHz+Set 2)+R2 (5GHz+Set 4)+R3 (BT)+R4 (GPS)+PoE 1
6	EUT in Y axis_R1 (2.4GHz+Set 2)+R2 (5GHz+Set 4)+R3 (802.15.4)+R4 (GPS)+PoE 1
7	EUT in Y axis_Scaning R1 (5GHz + Set 5)+R2 (5GHz+Set 4)+R3 (BT)+R4 (GPS)+PoE 1
8	EUT in Y axis_Scaning R1 (5GHz + Set 5)+R2 (5GHz+Set 4)+R3 (802.15.4)+R4 (GPS)+PoE 1
For operating mode 1 is the worst case and it was record in this test report.	

Operating Mode > 1GHz	CTX
	1. The EUT was performed at X axis, Y axis and Z axis position, and the worst case was found at Y axis. So the measurement will follow this same test configuration. 2. Refer to note 1 for detail operating mode
1	EUT in Y axis_Set 1 antenna with 30 degree_R1_1T1S
2	EUT in Y axis_Set 1 antenna with 30 degree_R1_2T1S_2T2S
3	EUT in Y axis_Set 1 antenna with 30 degree_R1_4T1S
4	EUT in Y axis_Set 1 antenna with 30 degree_R1_4T4S
5	EUT in Y axis_Set 2 antenna with 70 degree_R1_1T1S
6	EUT in Y axis_Set 2 antenna with 70 degree_R1_2T1S_2T2S
7	EUT in Y axis_Set 2 antenna with 70 degree_R1_4T1S
8	EUT in Y axis_Set 2 antenna with 70 degree_R1_4T4S

Note 1:Test Mode

Test Mode																
Test Item	802.11b					802.11g					802.11ax HEW20					
	1T1S	2T1S	2T2S	4T1S	4T4S	1T1S	2T1S	2T2S	4T1S	4T4S	1T1S	2T1S	2T2S	4T1S	TXBF 4T1S	4T4S
Maximum Conducted Output Power	V	V	-	V	-	V	V	-	V	-	V	Note 2	V	V	V	V
DTS Bandwidth	V	V	-	V	-	V	V	-	V	-	V	Note 2	V	V	-	V
Power Spectral Density	V	V	-	V	-	V	V	-	V	-	V	Note 2	V	V	-	V
Emissions in Non-restricted Frequency Bands	V	V	-	V	-	V	V	-	V	-	V	Note 2	V	V	-	V
Radiated Emission	V	V	-	V	-	V	V	-	V	-	V	Note 2	V	V	-	V
Band Edge Emission	V	V	-	V	-	V	V	-	V	-	V	Note 2	V	V	-	V

Note 1: 802.11ax HEW20 2T1S CDD mode was covered by 802.11ax HEW20 2T2S, due to

2T1S=MIN(2T2S, (2T2S-(10*LOG(2/1)-2T2S (worst case of PSD/BE/Harmonic) MARGIN))).

Note 2: Scanning Radio 1 (2.4GHz) was exempted from testing because they’re covered by Radio 1 (2.4GHz).

Note 3: The PoE is for measurement only, would not be marketed.

Their information as below:

Power	Brand	Model
PoE 1	Microsemi	PD-9501-10GC/AC
PoE 2	Microsemi	PD-9001GR/AT/AC

2.3 EUT Operation during Test

For CTX Mode:

The EUT was programmed to be in continuously transmitting mode.

For Normal Link Mode:

During the test, the EUT operation to normal function.

2.4 Accessories

Accessories
Bracket*1
Sealing Collar*2

2.5 Support Equipment

For AC Conduction and Radiated (below 1GHz):

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	PoE 1	Microsemi	PD-9501-10GC/AC	N/A
B	PD Load	JUNIPER	RXRB-MIB	N/A
C	5G LAN PC	DELL	T3400	N/A
D	2.5G LAN NB	DELL	E6430	N/A
E	WiFi (R2) 5G NB	DELL	E6430	N/A
F	WiFi (R1) 2.4G / 5G SCAN NB	DELL	E6430	N/A
G	GPS Simulator	WELNAVIGATE	GS-100	N/A

For Radiated (above 1GHz):

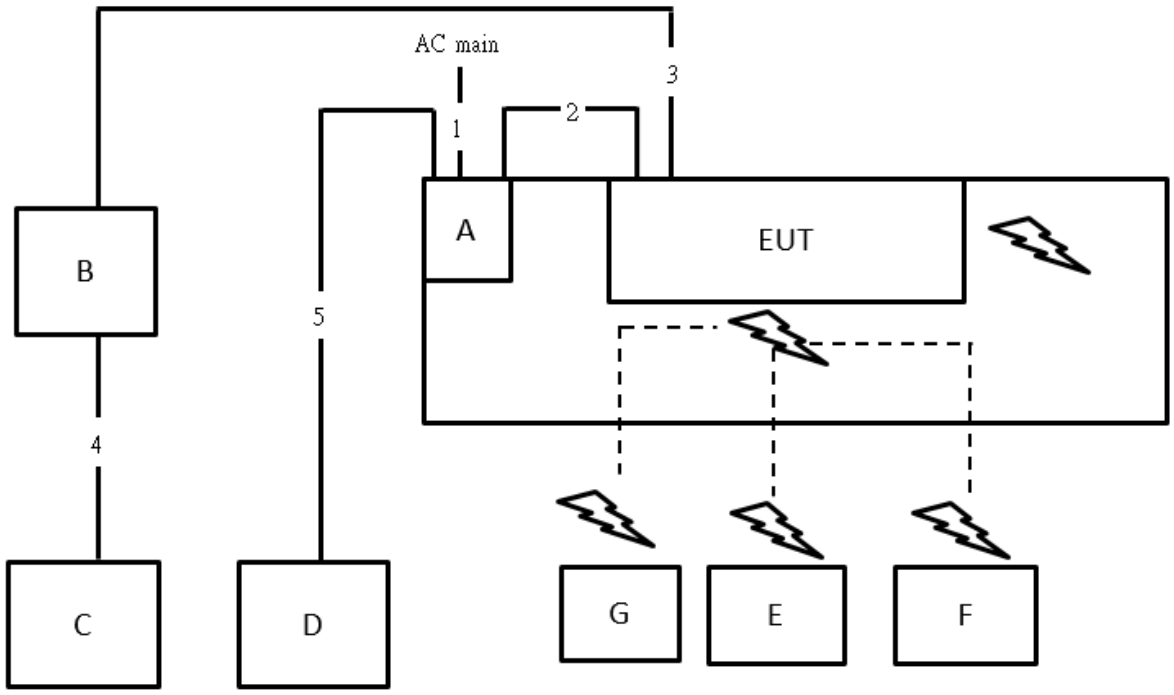
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	Notebook	DELL	E4300	N/A
B	PoE 1	Microsemi	PD-9501-10GC/AC	N/A

For RF Conducted:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	Notebook	DELL	E4300	N/A
B	PoE 2	Microsemi	PD-9001GR/AT/AC	N/A

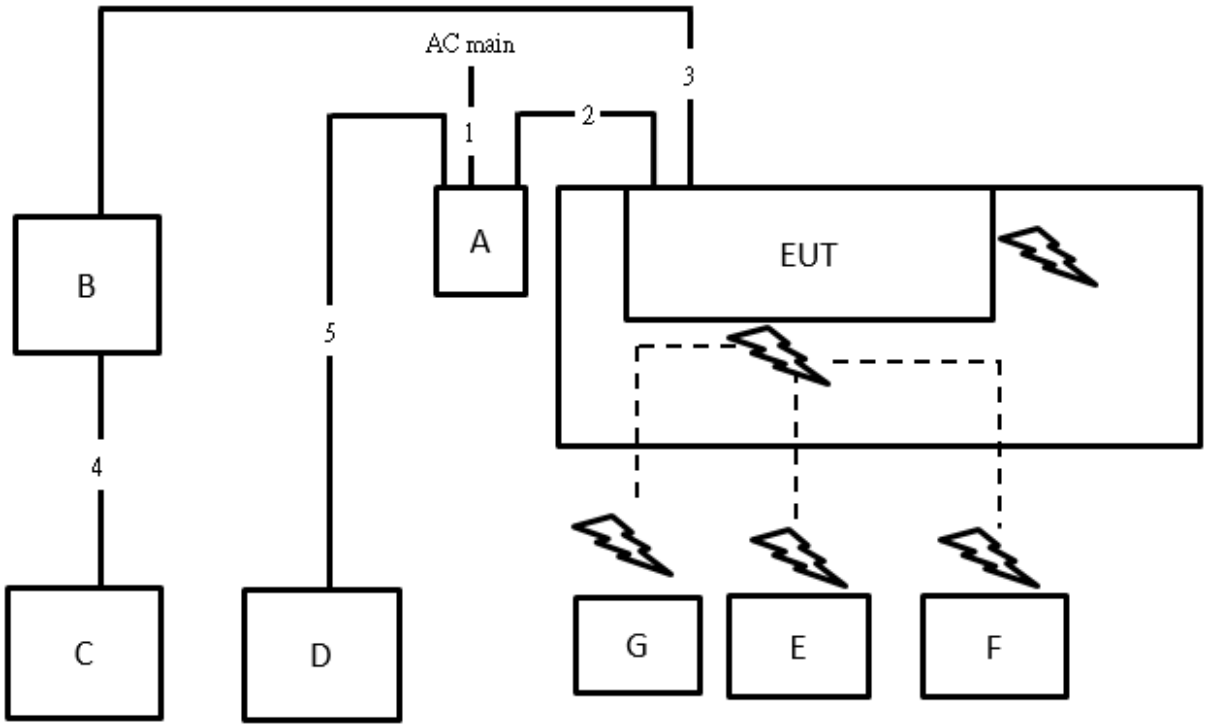
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



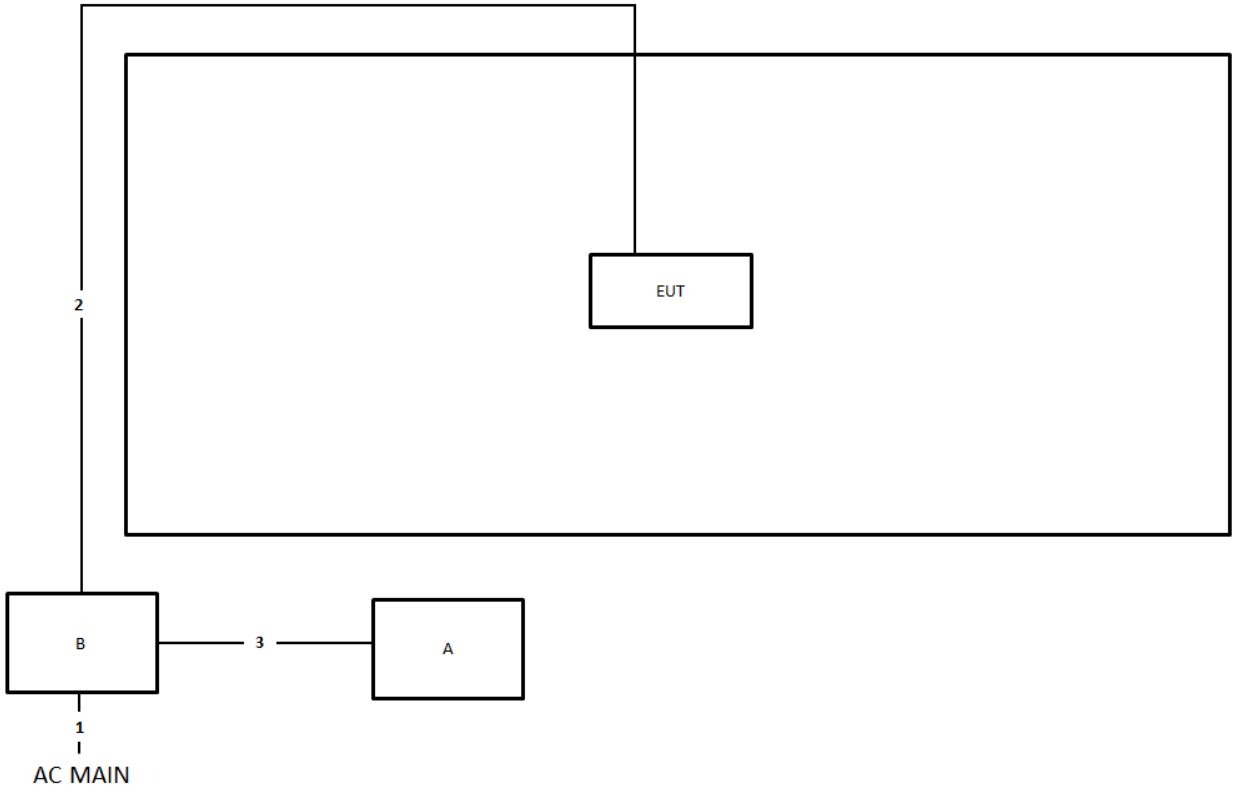
Item	Connection	Shielded	Length
1	Power cable	No	0.8m
2	RJ-45 cable	No	1.5m
3	RJ-45 cable	No	10m
4	RJ-45 cable	No	1.5m
5	RJ-45 cable	No	10m

Test Setup Diagram - Radiated Test < 1GHz



Item	Connection	Shielded	Length
1	Power cable	No	0.8m
2	RJ-45 cable	No	1.5m
3	RJ-45 cable	No	10m
4	RJ-45 cable	No	1.5m
5	RJ-45 cable	No	10m

Test Setup Diagram - Radiated Test > 1GHz



Item	Connection	Shielded	Length
1	Power cable	No	1.5m
2	RJ-45 cable	No	10m
3	RJ-45 cable	No	1.5m

3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line 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 Measuring Instruments

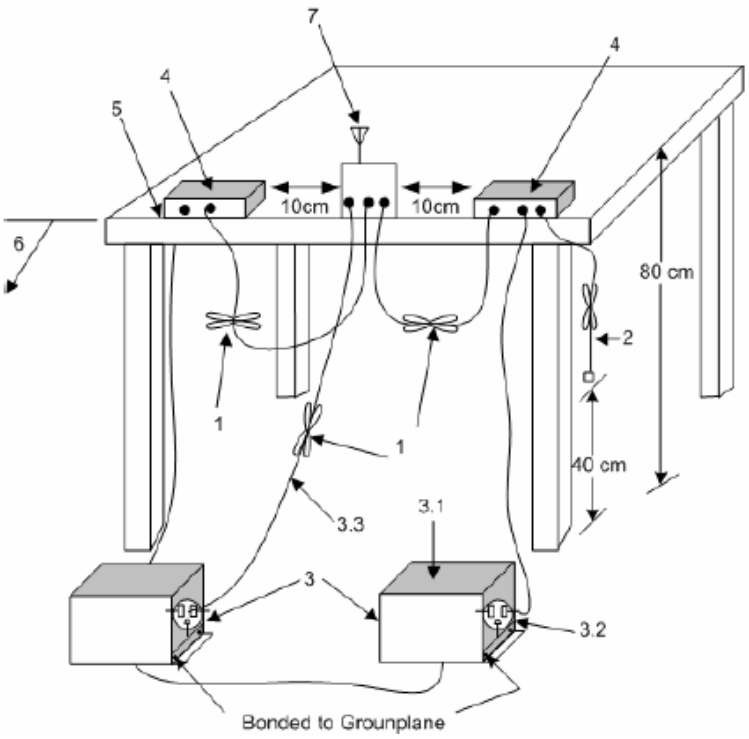
Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

Test Method
☒ Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

3.1.4 Test Setup

AC Power-line Conducted Emissions



1—Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 cm to 40 cm long.
2—The I/O cables that are not connected to an accessory shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
3—EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50 Ω loads. LISN may be placed on top of, or immediately beneath, reference ground plane.
3.1—All other equipment powered from additional LISN(s).
3.2—A multiple-outlet strip may be used for multiple power cords of non-EUT equipment.
3.3—LISN at least 80 cm from nearest part of EUT chassis.
4—Non-EUT components of EUT system being tested.
5—Rear of EUT, including peripherals, shall all be aligned and flush with edge of tabletop.
6—Edge of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.
7—Antenna can be integral or detachable. If detachable, then the antenna shall be attached for this test.

3.1.5 Measurement Results Calculation

The measured Level is calculated using:

a. Corrected Reading: LISN Factor (LISN) + Attenuator (AT/AUX) + Cable Loss (CL) + Read Level (Raw) = Level

b. Margin = -Limit + Level

3.1.6 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 DTS Bandwidth

3.2.1 6dB Bandwidth Limit

6dB Bandwidth Limit
Systems using digital modulation techniques:
▪ 6 dB bandwidth ≥ 500 kHz.

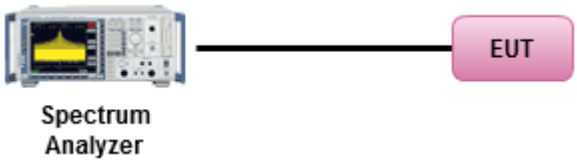
3.2.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.2.3 Test Procedures

Test Method	
▪ For the emission bandwidth shall be measured using one of the options below:	
	☒ Refer as FCC KDB 558074, clause 8.2 & C63.10 clause 11.8.1 Option 1 for 6 dB bandwidth measurement.
	☐ Refer as FCC KDB 558074, clause 8.2 & C63.10 clause 11.8.2 Option 2 for 6 dB bandwidth measurement.
	☐ Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.

3.2.4 Test Setup

Emission Bandwidth


3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit		
	▪ If $G_{TX} \leq 6$ dBi, then $P_{Out} \leq 30$ dBm (1 W)	
	▪ Point-to-multipoint systems (P2M): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)$ dBm	
	▪ Point-to-point systems (P2P): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm	
	▪ Smart antenna system (SAS):	
		- Single beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm
		- Overlap beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm
		- Aggregate power on all beams: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3 + 8$dB dBm
P_{Out} = maximum peak conducted output power or maximum conducted output power in dBm, **G_{TX}** = the maximum transmitting antenna directional gain in dBi.		

3.3.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.3.3 Test Procedures

Test Method	
▪ Maximum Peak Conducted Output Power	
	☐ Refer as FCC KDB 558074, clause 8.3.1.1 & C63.10 clause 11.9.1.1 (RBW ≥ EBW method).
	☐ Refer as FCC KDB 558074, clause 8.3.1.3 & C63.10 clause 11.9.1.3 (peak power meter).
▪ Maximum Conducted Output Power	
	[duty cycle ≥ 98% or external video / power trigger]
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.2 Method AVGSA-1.
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.3 Method AVGSA-1A. (alternative)
	duty cycle < 98% and average over on/off periods with duty factor
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.4 Method AVGSA-2.
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.5 Method AVGSA-2A (alternative)
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.6 Method AVGSA-3
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.7 Method AVGSA-3A (alternative)
	Measurement using a power meter (PM)
	☐ Refer as FCC KDB 558074, clause 8.3.2.3 & C63.10 clause 11.9.2.3.1 Method AVGPM (using an RF average power meter).
	☒ Refer as FCC KDB 558074, clause 8.3.2.3 & C63.10 clause 11.9.2.3.2 Method AVGPM-G (using an gate RF average power meter).
▪ For conducted measurement.	
	▪ If the EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.
	▪ If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \ldots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

3.3.4 Test Setup

Maximum Conducted Output Power (Power Meter)

3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

Power Spectral Density Limit
▪ Power Spectral Density (PSD) ≤ 8 dBm/3kHz

3.4.2 Measuring Instruments

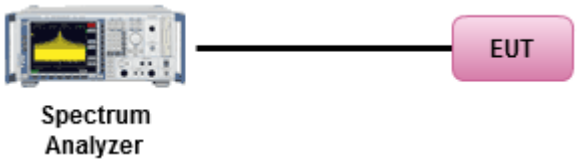
Refer a test equipment and calibration data table in this test report.

3.4.3 Test Procedures

Test Method		
▪ Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option).		
	☒ Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10 Method Max. PSD.	
▪ For conducted measurement.		
	▪ If The EUT supports multiple transmit chains using options given below:	
		☒ Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.
		☐ Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits,
		☐ Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.

3.4.4 Test Setup

Power Spectral Density



3.4.5 Test Result of Power Spectral Density

Refer as Appendix D

3.5 Emissions in Non-restricted Frequency Bands

3.5.1 Emissions in Non-restricted Frequency Bands Limit

Un-restricted Band Emissions Limit	
RF output power procedure	**Limit (dBc)**
Peak output power procedure	20
Average output power procedure	30

Note 1: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak PSD level.

Note 2: If the average output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the power in any 100 kHz outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum measured in-band average PSD level.

3.5.2 Measuring Instruments

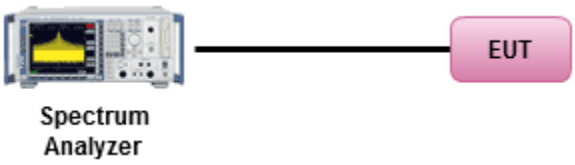
Refer a test equipment and calibration data table in this test report.

3.5.3 Test Procedures

Test Method
▪ Refer as FCC KDB 558074, clause 8.5 for unwanted emissions into non-restricted bands.

3.5.4 Test Setup

Emissions in Non-restricted Frequency Bands



3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix E

3.6 Emissions in Restricted Frequency Bands

3.6.1 Emissions in Restricted Frequency Bands Limit

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: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

Note 3: Using the distance of 1m during the test for above 18 GHz, and the test value to correct for the distance factor at 3m.

3.6.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

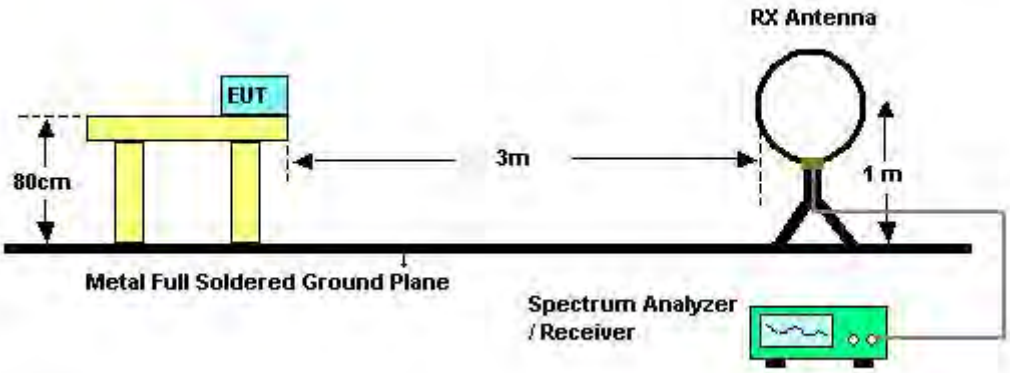
3.6.3 Test Procedures

Test Method			
▪ The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].			
▪ Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.			
▪ For the transmitter unwanted emissions shall be measured using following options below:			
	▪ Refer as FCC KDB 558074, clause 8.6 for unwanted emissions into restricted bands.		
		☐	Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.1(trace averaging for duty cycle ≥98%).
		☐	Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.2(trace averaging + duty factor).
		☒	Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.3(Reduced VBW≥1/T).
		☐	Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time.
		☐	Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions.
		☒	Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.4 measurement procedure peak limit.
▪ For the transmitter band-edge emissions shall be measured using following options below:			
	▪ Refer as FCC KDB 558074 clause 8.7 & C63.10 clause 11.13.1, When the performing peak or average radiated measurements, emissions within 2 MHz of the authorized band edge may be measured using the marker-delta method described below.		
	▪ Refer as FCC KDB 558074, clause 8.7 (ANSI C63.10, clause 6.10.6) for marker-delta method for band-edge measurements.		
	▪ Refer as FCC KDB 558074, clause 8.7 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).		
	▪ For conducted unwanted emissions into restricted bands (absolute emission limits). Devices with multiple transmit chains using options given below: (1) Measure and sum the spectra across the outputs or (2) Measure and add 10 log(N) dB		
	▪ For FCC KDB 662911 The methodology described here may overestimate array gain, thereby resulting in apparent failures to satisfy the out-of-band limits even if the device is actually compliant. In such cases, compliance may be demonstrated by performing radiated tests around the frequencies at which the apparent failures occurred.		

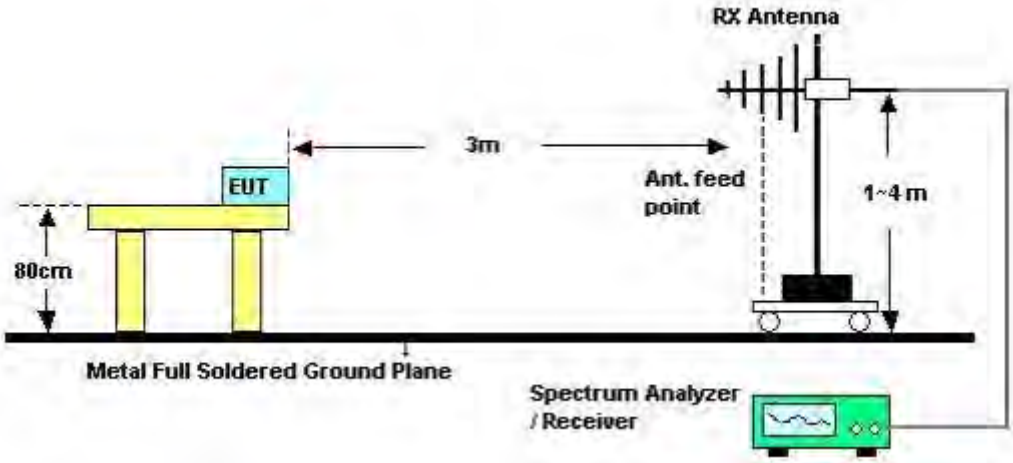
3.6.4 Test Setup

Radiated - Emissions in Restricted Frequency Bands

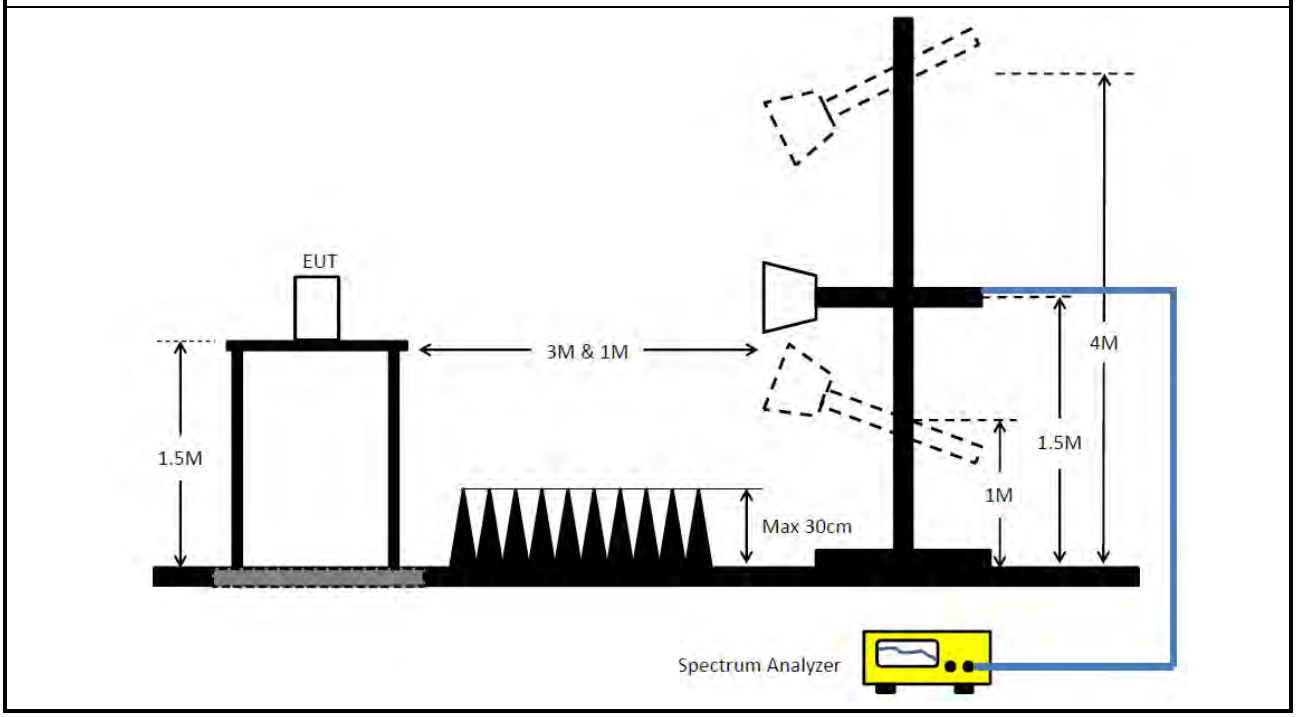
9kHz ~30MHz



30MHz~1GHz



Above 1GHz



3.6.5 Measurement Results Calculation

The measured Level is calculated using:
Corrected Reading: Antenna factor (AF) + Cable loss (CL) + Read level (Raw) - Preamp factor (PA)(if applicable) = Level.

3.6.6 Emissions in Restricted Frequency Bands (Below 30MHz)

There is a comparison data of both open-field test site and alternative test site - semi-Anechoic chamber according to KDB414788 Radiated Test Site, and the result came out very similar.
All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.
The radiated emissions were investigated from 9 kHz or the lowest frequency generated within the device, up to the 10th harmonic or 40 GHz, whichever is appropriate.

3.6.7 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix F

4 Test Equipment and Calibration Data

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.4GHz	Feb. 22, 2022	Feb. 21, 2023	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-1 6-2	04083	150kHz ~ 100MHz	Feb. 09, 2022	Feb. 08, 2023	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Apr. 12, 2022	Apr. 11, 2023	Conduction (CO01-CB)
Pulse Limiter	Rohde& Schwarz	ESH3-Z2	100430	9kHz ~ 30MHz	Feb. 10, 2022	Feb. 09, 2023	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	9kHz ~ 30MHz	May 18, 2022	May 17, 2023	Conduction (CO01-CB)
Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	May 14, 2022	May 13, 2023	Radiation (10CH01-CB)
10m Semi Anechoic Chamber NSA	TDK	SAC-10M	10CH01-CB	30MHz~1GHz 10m,3m	Jan. 27, 2022	Jan. 26, 2023	Radiation (10CH01-CB)
Amplifier	Agilent	8447D	2944A10783	9kHz ~ 1.3GHz	Mar. 11, 2022	Mar. 10, 2023	Radiation (10CH01-CB)
Amplifier	Agilent	8447D	2944A10784	9kHz ~ 1.3GHz	Mar. 11, 2022	Mar. 10, 2023	Radiation (10CH01-CB)
Low Cable	Woken	SUCOFLEX 104	low cable-01	25MHz ~ 1GHz	Oct. 19, 2021	Oct. 18, 2022	Radiation (10CH01-CB)
Low Cable	Woken	SUCOFLEX 104	low cable-02	25MHz ~ 1GHz	Oct. 19, 2021	Oct. 18, 2022	Radiation (10CH01-CB)
EMI Test Receiver	Rohde& Schwarz	ESCI	100186	9kHz ~ 3GHz	Jul. 12, 2021	Jul. 11, 2022	Radiation (10CH01-CB)
EMI Test Receiver	Rohde& Schwarz	ESCI	100186	9kHz ~ 3GHz	Jul. 11, 2022	Jul. 10, 2023	Radiation (10CH01-CB)
Spectrum Analyzer	Rohde& Schwarz	FSV30	101026	9kHz ~ 30GHz	Apr. 22, 2022	Apr. 21, 2023	Radiation (10CH01-CB)
Bilog Antenna with 6dB Attenuator	Chase & EMCI	CBL6111A &N-6-06	1543 &AT-N0609	30MHz ~ 1GHz	Jul. 01, 2021	Jun. 30, 2022	Radiation (10CH01-CB)
Bilog Antenna with 6dB Attenuator	Chase & EMCI	CBL6111A &N-6-06	1543 &AT-N0609	30MHz ~ 1GHz	Jun. 25, 2022	Jun. 24, 2023	Radiation (10CH01-CB)
Amplifier	EM	EM101	060703	10MHz ~ 1GHz	Oct. 20, 2021	Oct. 19, 2022	Radiation (10CH01-CB)
Low Cable	TITAN	T318E	low cable-03	30MHz ~ 1GHz	Jun. 17, 2022	Jun. 16, 2023	Radiation (10CH01-CB)
Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (10CH01-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH01-CB	1GHz ~18GHz 3m	May 06, 2022	May 05, 2023	Radiation (03CH01-CB)

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Horn Antenna	ETS-LINDGREN	3115	00075790	750MHz ~ 18GHz	Nov. 06, 2021	Nov. 05, 2022	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 05, 2021	Aug. 04, 2022	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02121	1GHz ~ 26.5GHz	May 19, 2022	May 18, 2023	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 13, 2021	Jul. 12, 2022	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	May 06, 2022	May 05, 2023	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-16	1 GHz ~ 18 GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-16+17	1 GHz ~ 18 GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH01-CB)
High Cable	Woken	WCA0929M	40G#5+7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH01-CB)
High Cable	Woken	WCA0929M	40G#5	1GHz ~ 40 GHz	Dec. 08, 2021	Dec. 07, 2022	Radiation (03CH01-CB)
High Cable	Woken	WCA0929M	40G#7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH01-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH01-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH03-CB	1GHz ~18GHz 3m	May 05, 2022	May 04, 2023	Radiation (03CH03-CB)
Horn Antenna	ETS·Lindgren	3115	6821	750MHz~18GHz	Jan. 21, 2022	Jan. 20, 2023	Radiation (03CH03-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 05, 2021	Aug. 04, 2022	Radiation (03CH03-CB)
Pre-Amplifier	Agilent	8449B	3008A02097	1GHz ~ 26.5GHz	Jul. 02, 2021	Jul. 01, 2022	Radiation (03CH03-CB)
Pre-Amplifier	Agilent	8449B	3008A02097	1GHz ~ 26.5GHz	Jul. 01, 2022	Jun. 30, 2023	Radiation (03CH03-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 13, 2021	Jul. 12, 2022	Radiation (03CH03-CB)
Signal Analyzer	R&S	FSV40	101904	9kHz ~ 40GHz	Apr. 26, 2022	Apr. 25, 2023	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-20+29	1GHz ~ 18GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-29	1GHz ~ 18GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH03-CB)
High Cable	Woken	WCA0929M	40G#5+7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH03-CB)
High Cable	Woken	WCA0929M	40G#5	1GHz ~ 40 GHz	Dec. 08, 2021	Dec. 07, 2022	Radiation (03CH03-CB)
High Cable	Woken	WCA0929M	40G#7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH03-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH03-CB)

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Spectrum analyzer	R&S	FSV40	101028	9kHz~40GHz	Jan. 07, 2022	Jan. 06, 2023	Conducted (TH03-CB)
Power Sensor	Anritsu	MA2411B	1726195	300MHz~40GHz	Aug. 22, 2021	Aug. 21, 2022	Conducted (TH03-CB)
Power Meter	Anritsu	ML2495A	1035008	300MHz~40GHz	Aug. 22, 2021	Aug. 21, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-11	1 GHz –18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-12	1 GHz –18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-13	1 GHz –18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-14	1 GHz –18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-15	1 GHz –18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
Switch	SPTCB	SP-SWI	SWI-03	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	SWI-03-P1	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	SWI-03-P2	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	SWI-03-P3	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	SWI-03-P4	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	SWI-03-P5	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH03-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conducted (TH03-CB)

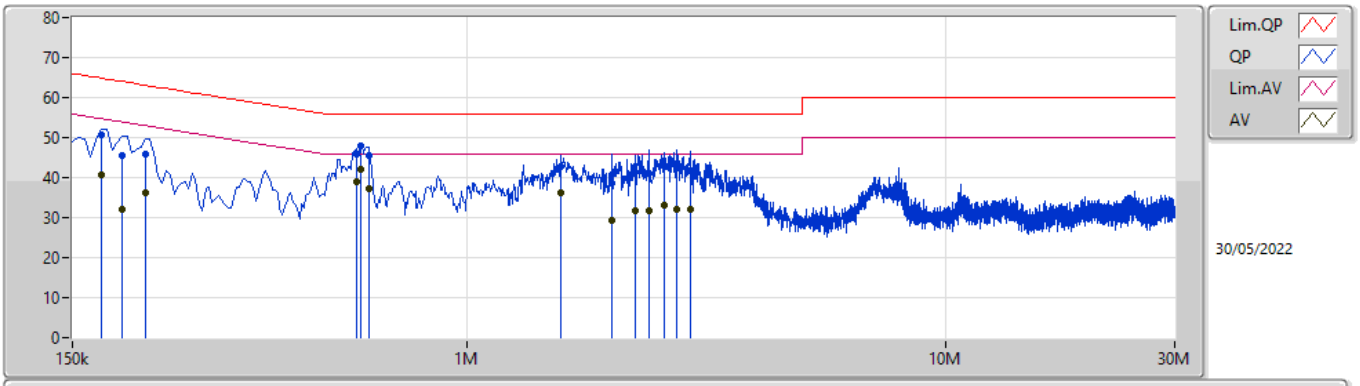
Note: Calibration Interval of instruments listed above is one year.

N.C.R. means Non-Calibration required.

Summary

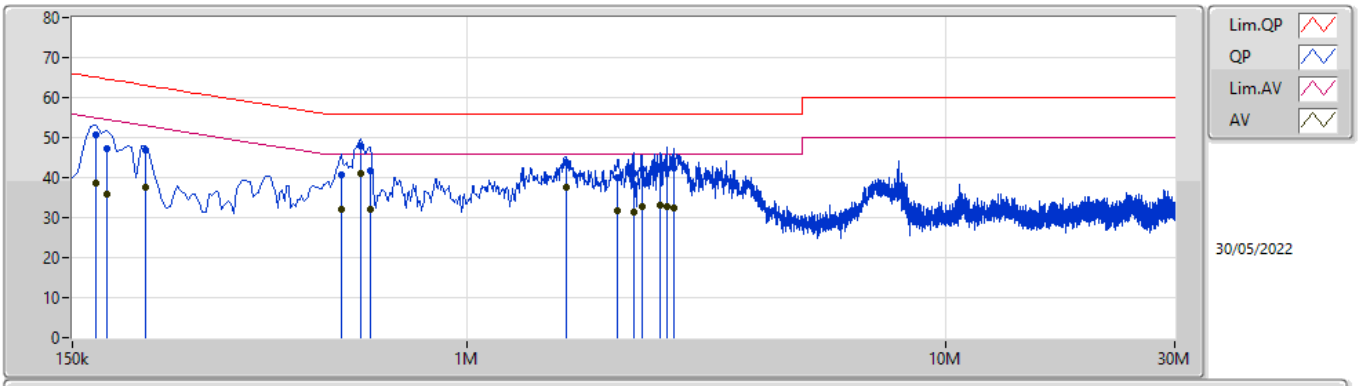
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 4	Pass	AV	600k	41.92	46.00	-4.08	Line

Mode 4



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	172.5k	50.66	64.83	-14.17	9.99	Line	-	40.67	0.06	0.04	9.89
AV	172.5k	40.65	54.83	-14.18	9.99	Line	-	30.66	0.06	0.04	9.89
QP	190.5k	45.51	64.01	-18.50	9.99	Line	-	35.52	0.06	0.04	9.89
AV	190.5k	32.07	54.01	-21.94	9.99	Line	-	22.08	0.06	0.04	9.89
QP	213k	45.96	63.09	-17.13	9.99	Line	-	35.97	0.06	0.04	9.89
AV	213k	36.37	53.09	-16.72	9.99	Line	-	26.38	0.06	0.04	9.89
QP	586.5k	45.96	56.00	-10.04	10.00	Line	-	35.96	0.06	0.05	9.89
AV	586.5k	39.04	46.00	-6.96	10.00	Line	-	29.04	0.06	0.05	9.89
QP	600k	48.10	56.00	-7.90	10.00	Line	-	38.10	0.06	0.05	9.89
AV	600k	41.92	46.00	-4.08	10.00	Line	"Worst"	31.92	0.06	0.05	9.89
QP	622.5k	45.52	56.00	-10.48	10.00	Line	-	35.52	0.06	0.05	9.89
AV	622.5k	37.09	46.00	-8.91	10.00	Line	-	27.09	0.06	0.05	9.89
QP	1.568M	42.87	56.00	-13.13	10.04	Line	-	32.83	0.08	0.07	9.89
AV	1.568M	36.11	46.00	-9.89	10.04	Line	-	26.07	0.08	0.07	9.89
QP	2.009M	38.68	56.00	-17.32	10.07	Line	-	28.61	0.09	0.09	9.89
AV	2.009M	29.36	46.00	-16.64	10.07	Line	-	19.29	0.09	0.09	9.89
QP	2.243M	41.48	56.00	-14.52	10.07	Line	-	31.41	0.09	0.09	9.89
AV	2.243M	31.66	46.00	-14.34	10.07	Line	-	21.59	0.09	0.09	9.89
QP	2.396M	41.08	56.00	-14.92	10.08	Line	-	31.00	0.10	0.09	9.89
AV	2.396M	31.86	46.00	-14.14	10.08	Line	-	21.78	0.10	0.09	9.89
QP	2.585M	42.76	56.00	-13.24	10.08	Line	-	32.68	0.10	0.09	9.89
AV	2.585M	33.21	46.00	-12.79	10.08	Line	-	23.13	0.10	0.09	9.89
QP	2.733M	42.40	56.00	-13.60	10.08	Line	-	32.32	0.10	0.09	9.89
AV	2.733M	32.11	46.00	-13.89	10.08	Line	-	22.03	0.10	0.09	9.89
QP	2.922M	41.57	56.00	-14.43	10.10	Line	-	31.47	0.11	0.10	9.89
AV	2.922M	32.06	46.00	-13.94	10.10	Line	-	21.96	0.11	0.10	9.89

Mode 4



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	168k	50.68	65.06	-14.38	10.00	Neutral	-	40.68	0.07	0.04	9.89
AV	168k	38.68	55.06	-16.38	10.00	Neutral	-	28.68	0.07	0.04	9.89
QP	177k	47.37	64.62	-17.25	10.00	Neutral	-	37.37	0.07	0.04	9.89
AV	177k	35.78	54.62	-18.84	10.00	Neutral	-	25.78	0.07	0.04	9.89
QP	213k	46.84	63.09	-16.25	10.00	Neutral	-	36.84	0.07	0.04	9.89
AV	213k	37.75	53.09	-15.34	10.00	Neutral	-	27.75	0.07	0.04	9.89
QP	546k	40.57	56.00	-15.43	10.01	Neutral	-	30.56	0.07	0.05	9.89
AV	546k	32.05	46.00	-13.95	10.01	Neutral	-	22.04	0.07	0.05	9.89
QP	600k	47.79	56.00	-8.21	10.01	Neutral	-	37.78	0.07	0.05	9.89
AV	600k	41.19	46.00	-4.81	10.01	Neutral	"Worst"	31.18	0.07	0.05	9.89
QP	627k	41.85	56.00	-14.15	10.01	Neutral	-	31.84	0.07	0.05	9.89
AV	627k	32.08	46.00	-13.92	10.01	Neutral	-	22.07	0.07	0.05	9.89
QP	1.608M	43.94	56.00	-12.06	10.05	Neutral	-	33.89	0.09	0.07	9.89
AV	1.608M	37.50	46.00	-8.50	10.05	Neutral	-	27.45	0.09	0.07	9.89
QP	2.063M	40.17	56.00	-15.83	10.08	Neutral	-	30.09	0.10	0.09	9.89
AV	2.063M	31.71	46.00	-14.29	10.08	Neutral	-	21.63	0.10	0.09	9.89
QP	2.225M	40.98	56.00	-15.02	10.08	Neutral	-	30.90	0.10	0.09	9.89
AV	2.225M	31.23	46.00	-14.77	10.08	Neutral	-	21.15	0.10	0.09	9.89
QP	2.315M	42.01	56.00	-13.99	10.09	Neutral	-	31.92	0.11	0.09	9.89
AV	2.315M	32.86	46.00	-13.14	10.09	Neutral	-	22.77	0.11	0.09	9.89
QP	2.531M	42.59	56.00	-13.41	10.09	Neutral	-	32.50	0.11	0.09	9.89
AV	2.531M	33.11	46.00	-12.89	10.09	Neutral	-	23.02	0.11	0.09	9.89
QP	2.612M	42.04	56.00	-13.96	10.09	Neutral	-	31.95	0.11	0.09	9.89
AV	2.612M	32.80	46.00	-13.20	10.09	Neutral	-	22.71	0.11	0.09	9.89
QP	2.702M	42.36	56.00	-13.64	10.09	Neutral	-	32.27	0.11	0.09	9.89
AV	2.702M	32.55	46.00	-13.45	10.09	Neutral	-	22.46	0.11	0.09	9.89

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX	8.525M	13.993M	14M0G1D	7M	11.844M
802.11g_Nss1,(6Mbps)_1TX	16.325M	23.113M	23M2D1D	16.3M	16.892M
802.11ax HEW20_Nss1,(MCS0)_1TX	18.925M	20.965M	21M0D1D	18.825M	19.04M

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

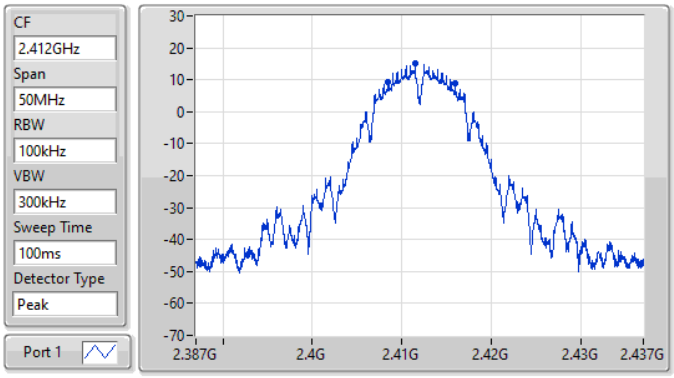
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	7.55M	11.844M
2437MHz	Pass	500k	8.525M	13.993M
2462MHz	Pass	500k	7M	11.869M
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	16.325M	16.967M
2437MHz	Pass	500k	16.3M	23.113M
2462MHz	Pass	500k	16.3M	16.892M
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-
2412MHz	Pass	500k	18.825M	19.04M
2437MHz	Pass	500k	18.825M	20.965M
2462MHz	Pass	500k	18.925M	19.04M

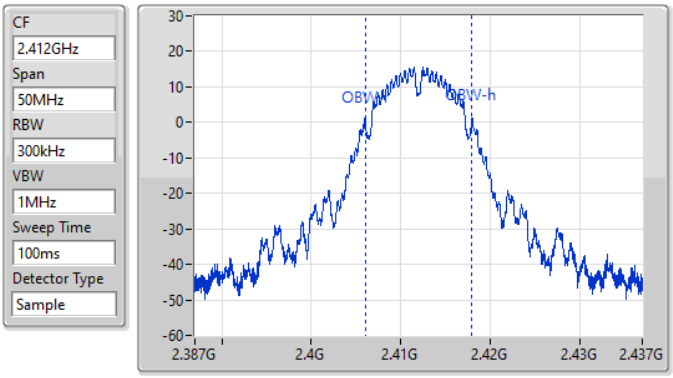
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

802.11b_Nss1,(1Mbps)_1TX EBW

2412MHz

09/07/2022



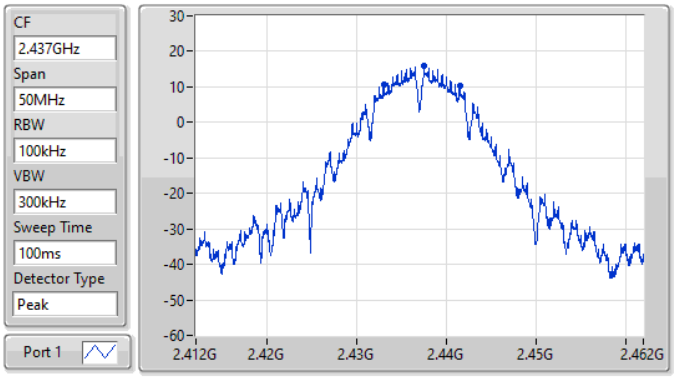


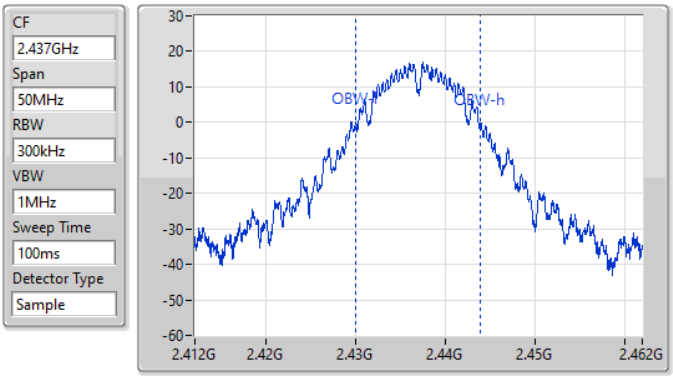
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
7.55M	2.40845G	2.416G	11.844M	2.406078G	2.417922G	500k	1

802.11b_Nss1,(1Mbps)_1TX EBW

2437MHz

09/07/2022



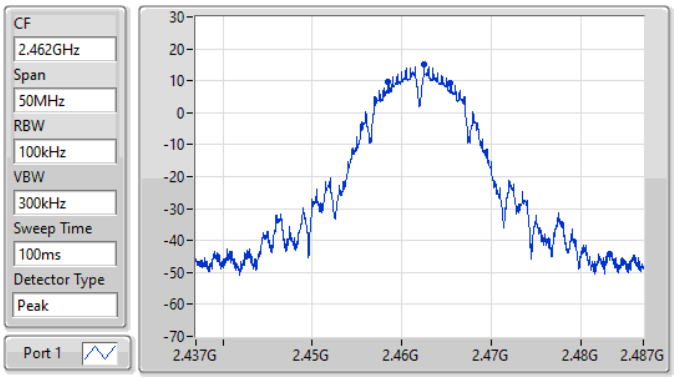


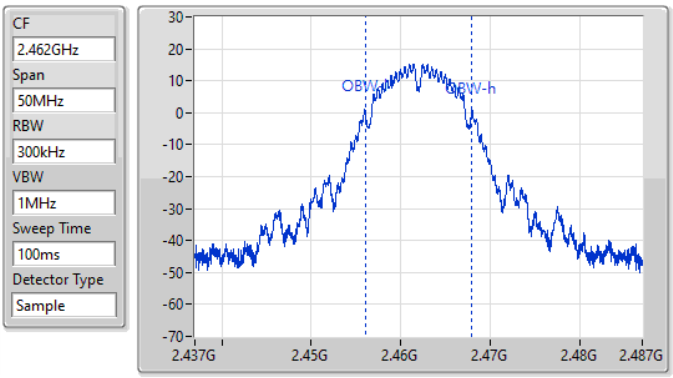
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8.525M	2.432975G	2.4415G	13.993M	2.429929G	2.443922G	500k	1

802.11b_Nss1,(1Mbps)_1TX EBW

2462MHz

09/07/2022



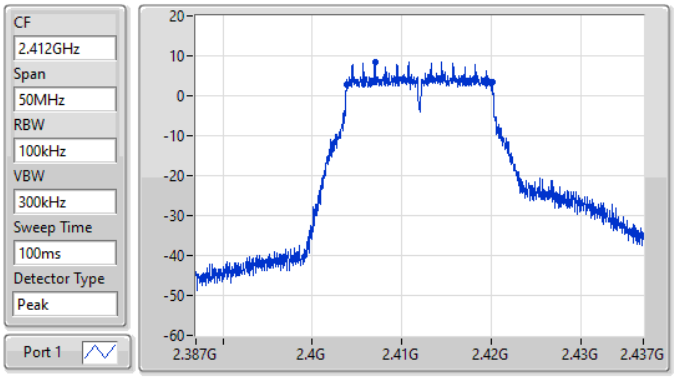


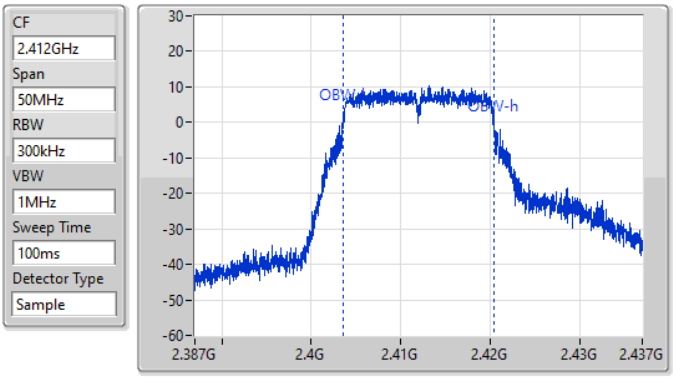
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
7M	2.458475G	2.465475G	11.869M	2.456053G	2.467922G	500k	1

802.11g_Nss1,(6Mbps)_1TX EBW

2412MHz

09/07/2022



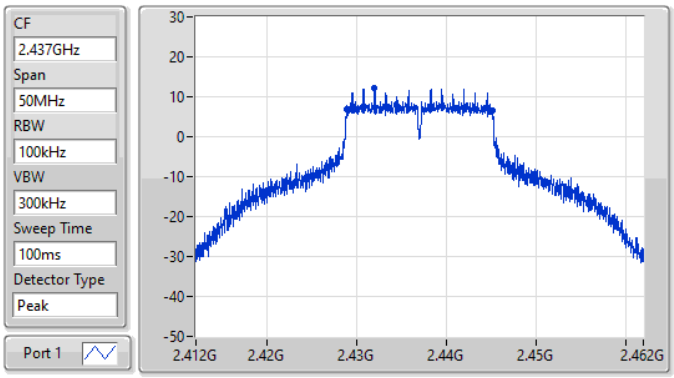


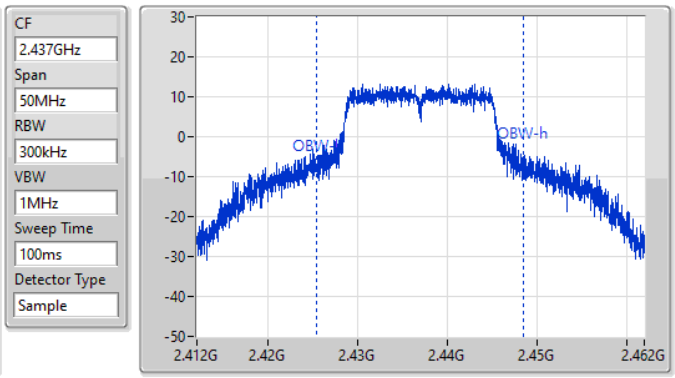
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.325M	2.403825G	2.42015G	16.967M	2.403529G	2.420496G	500k	1

802.11g_Nss1,(6Mbps)_1TX EBW

2437MHz

09/07/2022



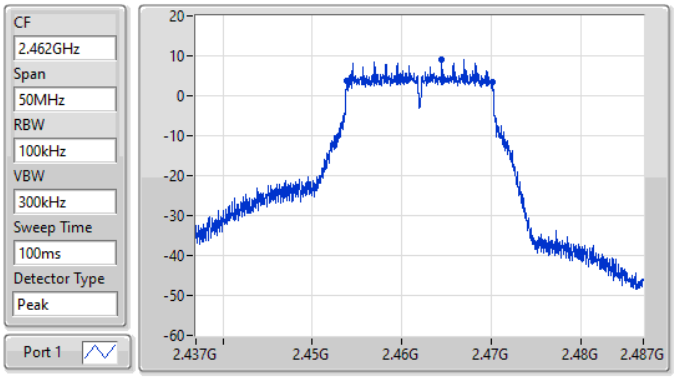


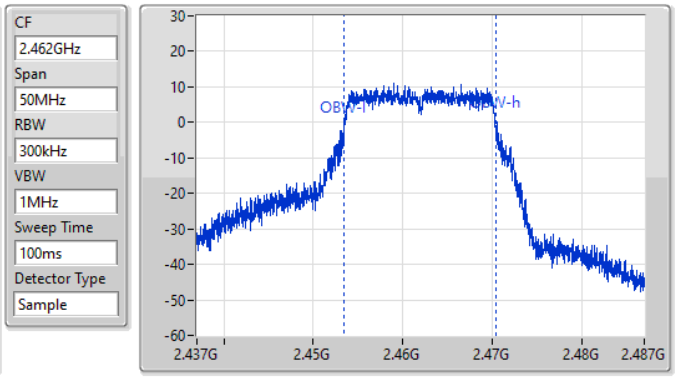
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.3M	2.42885G	2.44515G	23.113M	2.425356G	2.448469G	500k	1

802.11g_Nss1,(6Mbps)_1TX EBW

2462MHz

09/07/2022





6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.3M	2.45385G	2.47015G	16.892M	2.453479G	2.470371G	500k	1

802.11ax HEW20_Nss1,(MCS0)_1TX EBW

2412MHz

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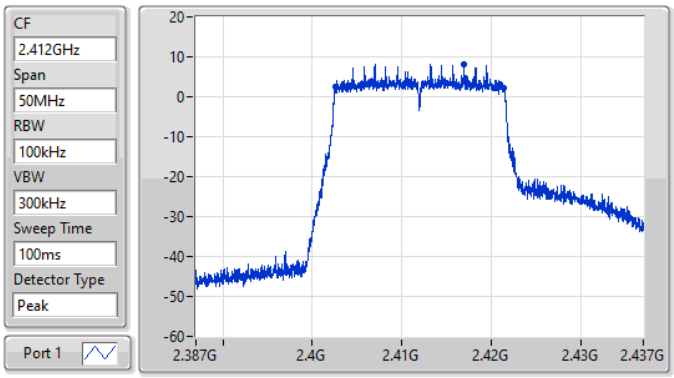
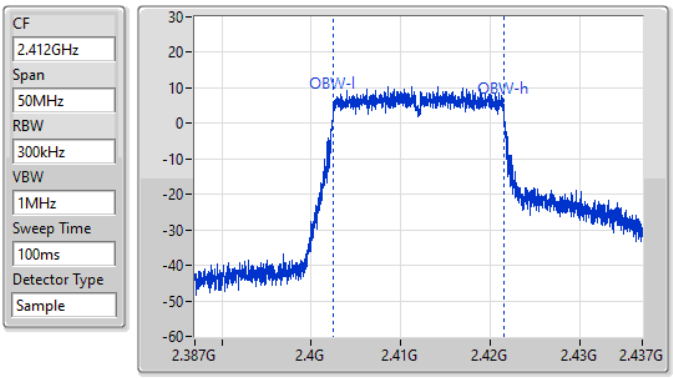


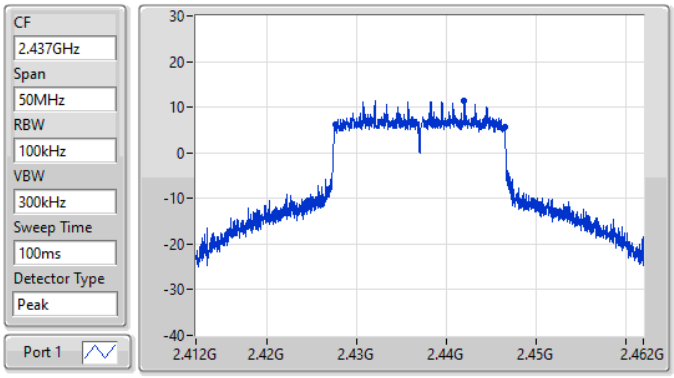


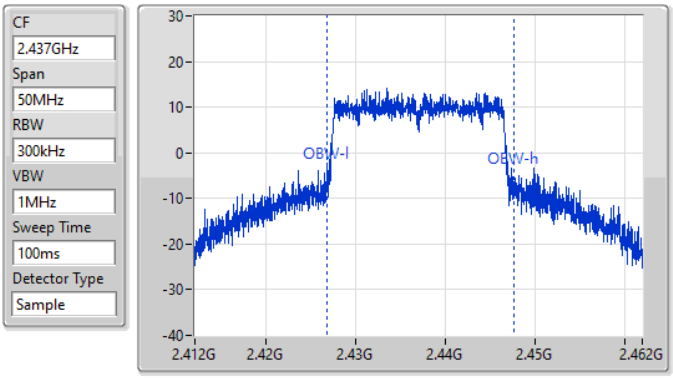
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.825M	2.402575G	2.4214G	19.04M	2.40248G	2.42152G	500k	1

802.11ax HEW20_Nss1,(MCS0)_1TX EBW

2437MHz

09/07/2022



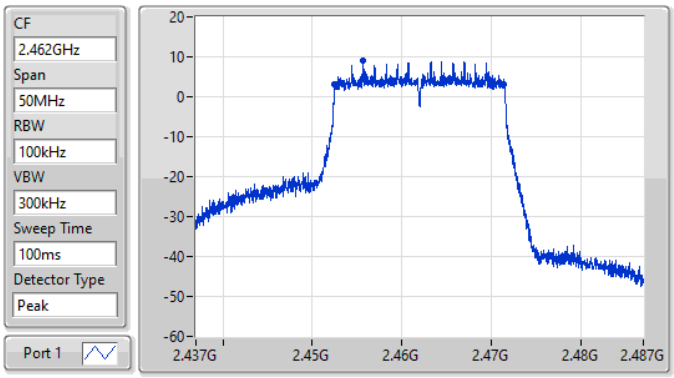


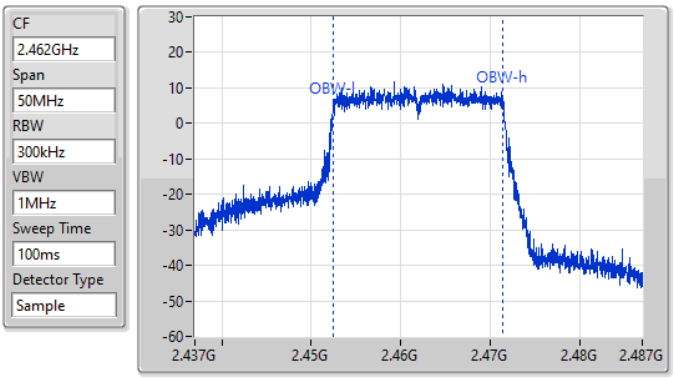
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.825M	2.42765G	2.446475G	20.965M	2.426705G	2.44767G	500k	1

802.11ax HEW20_Nss1,(MCS0)_1TX EBW

2462MHz

09/07/2022





6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.925M	2.452525G	2.47145G	19.04M	2.45243G	2.47147G	500k	1

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	9.025M	14.043M	14M0G1D	7.025M	11.219M
802.11g_Nss1,(6Mbps)_2TX	16.35M	18.191M	18M2D1D	16.325M	16.892M

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

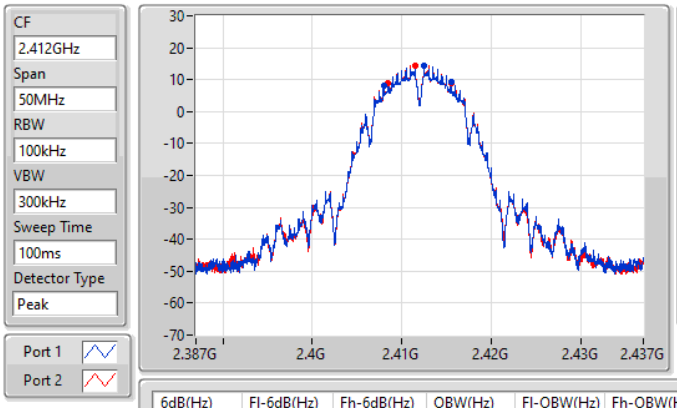
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	7.5M	11.219M	7.05M	11.244M
2437MHz	Pass	500k	9.025M	14.043M	8.5M	13.343M
2462MHz	Pass	500k	7.5M	11.594M	7.025M	11.369M
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	16.325M	16.992M	16.325M	16.892M
2437MHz	Pass	500k	16.325M	17.991M	16.35M	18.191M
2462MHz	Pass	500k	16.35M	16.942M	16.325M	16.942M

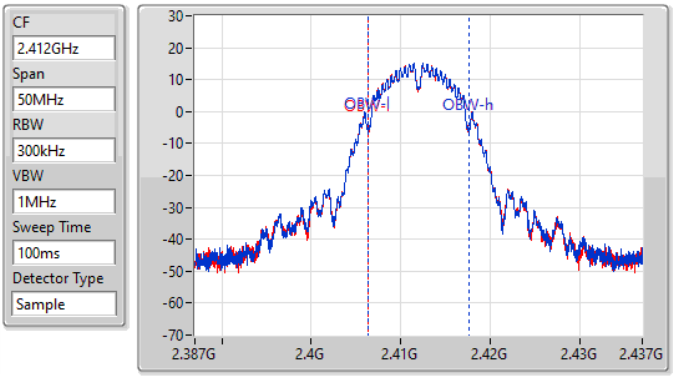
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

802.11b_Nss1,(1Mbps)_2TX EBW

2412MHz

09/07/2022



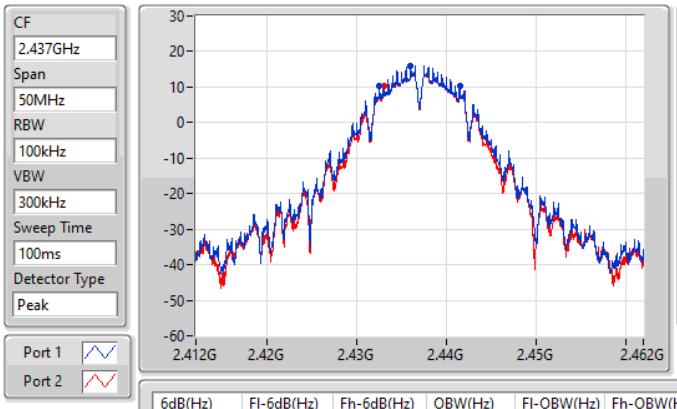


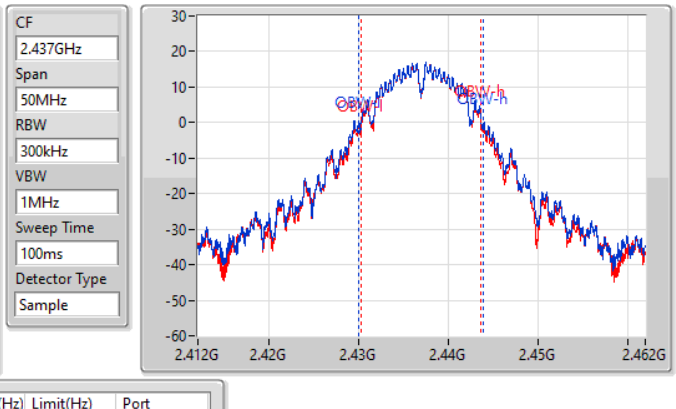
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
7.5M	2.408G	2.4155G	11.219M	2.406403G	2.417622G	500k	1
7.05M	2.408475G	2.415525G	11.244M	2.406378G	2.417622G	500k	2

802.11b_Nss1,(1Mbps)_2TX EBW

2437MHz

09/07/2022



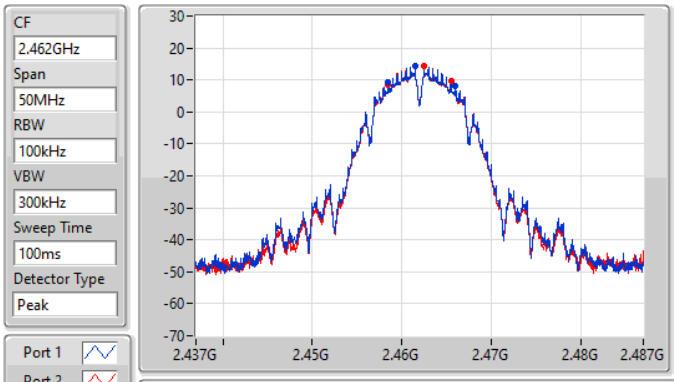


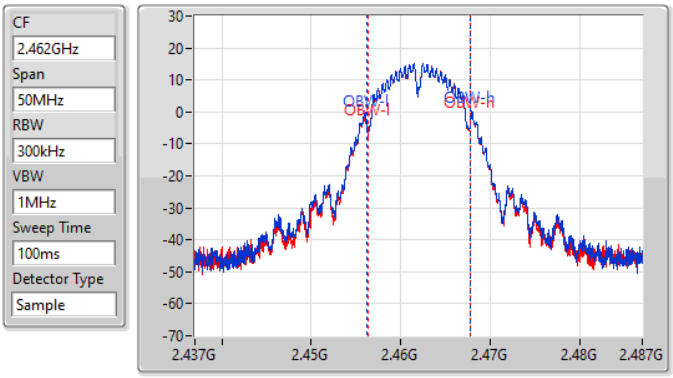
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
9.025M	2.432475G	2.4415G	14.043M	2.429904G	2.443947G	500k	1
8.5M	2.433G	2.4415G	13.343M	2.430253G	2.443597G	500k	2

802.11b_Nss1,(1Mbps)_2TX EBW

2462MHz

09/07/2022



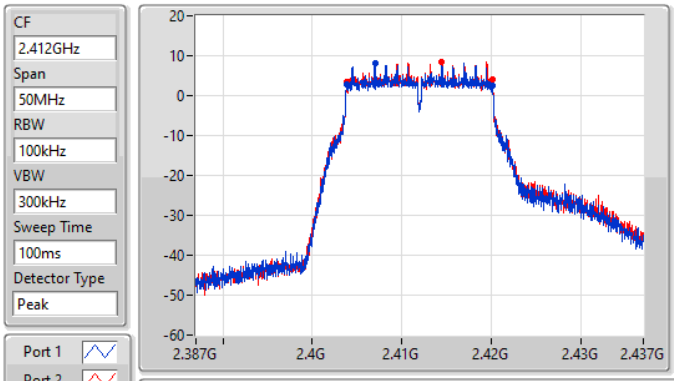


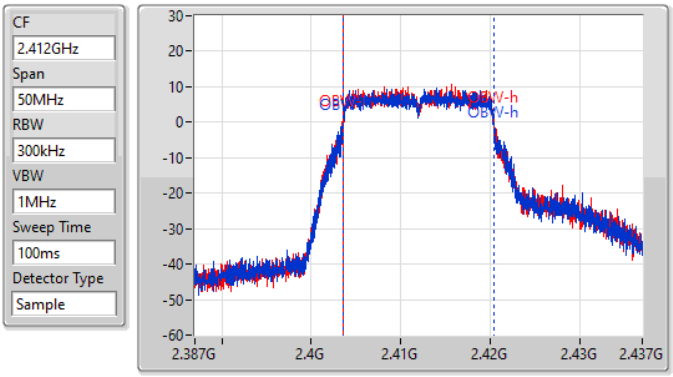
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
7.5M	2.458475G	2.465975G	11.594M	2.456203G	2.467797G	500k	1
7.025M	2.458475G	2.4655G	11.369M	2.456353G	2.467722G	500k	2

802.11g_Nss1,(6Mbps)_2TX EBW

2412MHz

09/07/2022



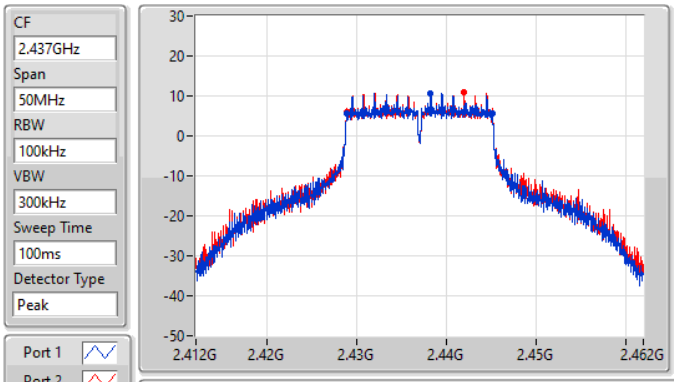


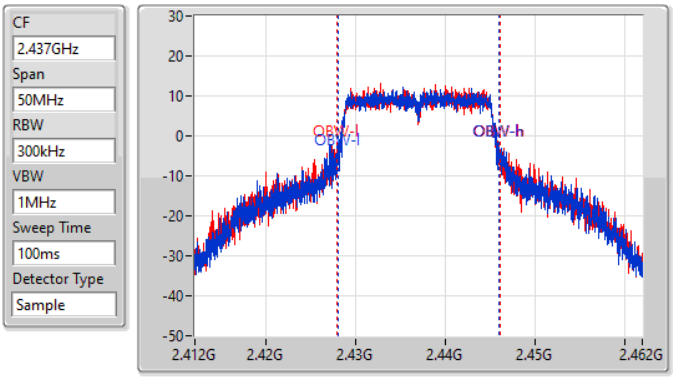
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.325M	2.403825G	2.42015G	16.992M	2.403504G	2.420496G	500k	1
16.325M	2.403825G	2.42015G	16.892M	2.403504G	2.420396G	500k	2

802.11g_Nss1,(6Mbps)_2TX EBW

2437MHz

09/07/2022



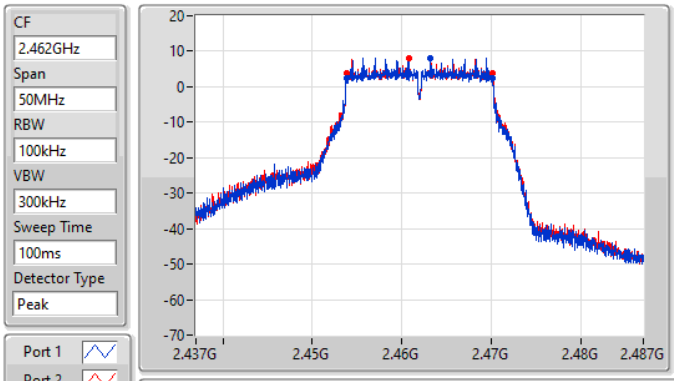


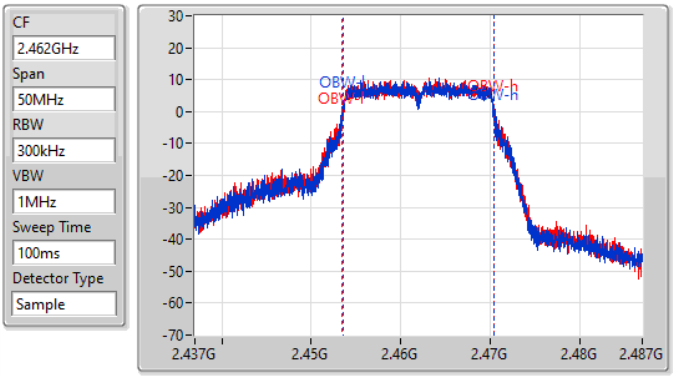
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.325M	2.428825G	2.44515G	17.991M	2.42798G	2.445971G	500k	1
16.35M	2.428825G	2.445175G	18.191M	2.42788G	2.44607G	500k	2

802.11g_Nss1,(6Mbps)_2TX EBW

2462MHz

09/07/2022





6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.35M	2.453825G	2.470175G	16.942M	2.453504G	2.470446G	500k	1
16.325M	2.453825G	2.47015G	16.942M	2.453479G	2.470421G	500k	2

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.11ax HEW20_Nss2,(MCS0)_2TX	18.95M	19.19M	19M2D1D	18.725M	19.04M

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

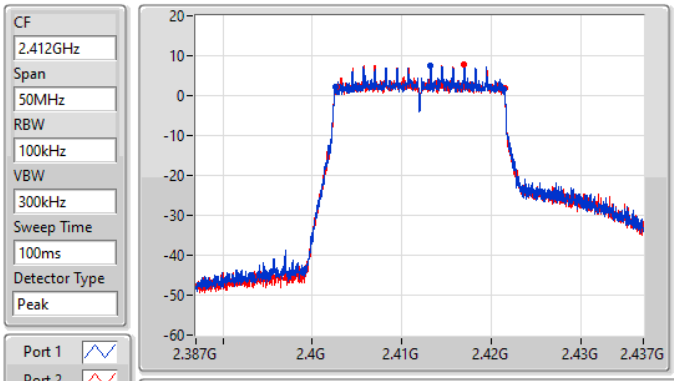
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11ax HEW20_Nss2,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	18.8M	19.09M	18.725M	19.04M
2437MHz	Pass	500k	18.95M	19.19M	18.925M	19.19M
2462MHz	Pass	500k	18.85M	19.065M	18.75M	19.09M

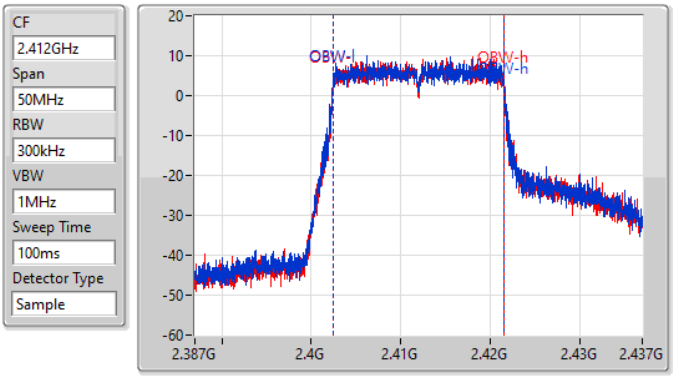
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

802.11ax HEW20_Nss2,(MCS0)_2TX EBW

2412MHz

09/07/2022





6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.8M	2.4026G	2.4214G	19.09M	2.402455G	2.421545G	500k	1
18.725M	2.40275G	2.421475G	19.04M	2.40248G	2.42152G	500k	2

802.11ax HEW20_Nss2,(MCS0)_2TX EBW

2437MHz

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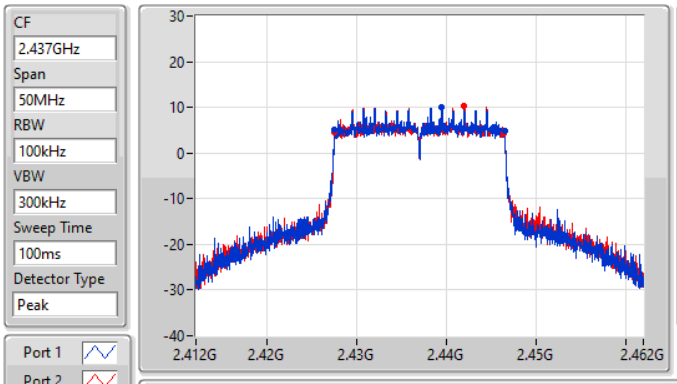
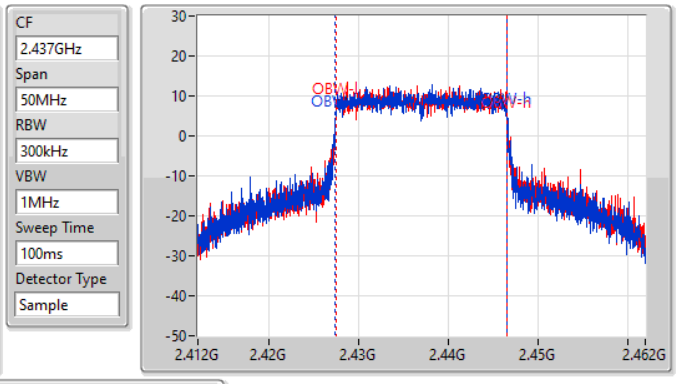


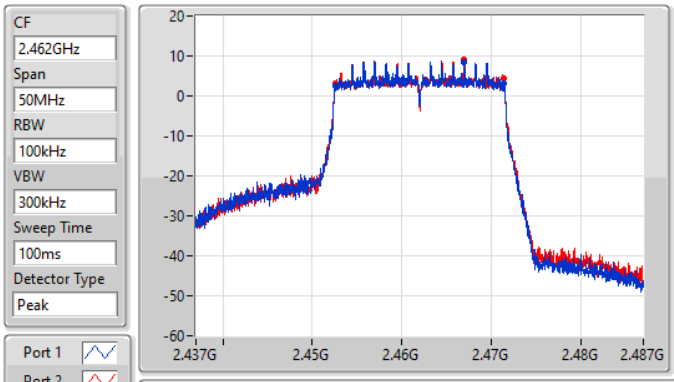


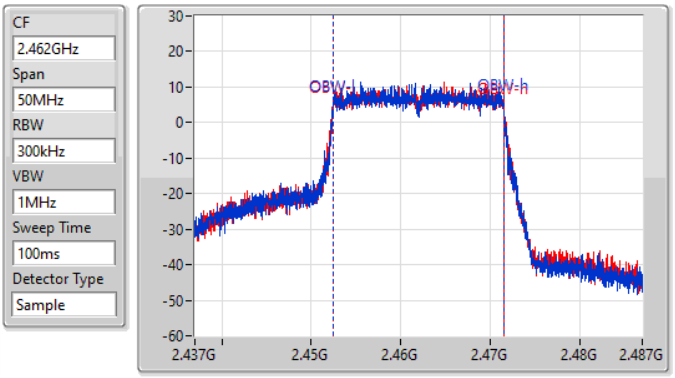
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.95M	2.427525G	2.446475G	19.19M	2.42738G	2.44657G	500k	1
18.925M	2.427525G	2.44645G	19.19M	2.427405G	2.446595G	500k	2

802.11ax HEW20_Nss2,(MCS0)_2TX EBW

2462MHz

09/07/2022





6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.85M	2.4526G	2.47145G	19.065M	2.45243G	2.471495G	500k	1
18.75M	2.45265G	2.4714G	19.09M	2.45243G	2.47152G	500k	2

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)_4TX	8.475M	13.718M	13M8G1D	6.975M	10.745M
802.11g_Nss1,(6Mbps)_4TX	16.35M	18.666M	18M7D1D	16.3M	16.842M
802.11ax HEW20_Nss1,(MCS0)_4TX	18.975M	19.265M	19M3D1D	18.55M	19.04M

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

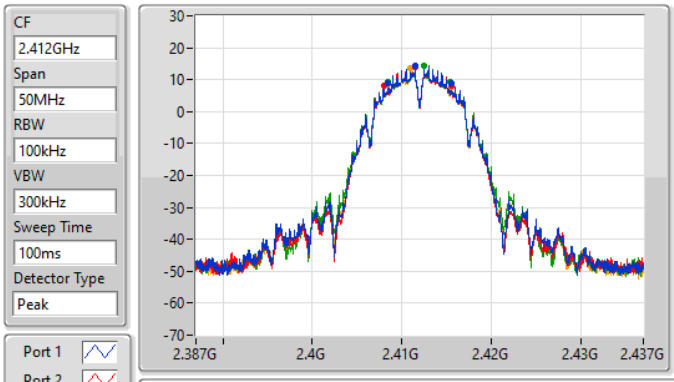
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11b_Nss1,(1Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	7.05M	10.895M	7.525M	10.745M	6.975M	11.494M	7.05M	11.169M
2437MHz	Pass	500k	7.05M	13.243M	7.025M	13.043M	7.05M	13.718M	8.475M	13.268M
2462MHz	Pass	500k	7.025M	11.219M	7.05M	11.044M	7.05M	11.644M	7.025M	11.269M
802.11g_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	16.3M	16.842M	16.3M	16.992M	16.325M	16.917M	16.35M	16.942M
2437MHz	Pass	500k	16.3M	17.641M	16.325M	17.541M	16.325M	18.666M	16.325M	18.016M
2462MHz	Pass	500k	16.3M	16.967M	16.325M	16.917M	16.3M	16.967M	16.325M	16.942M
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	18.975M	19.09M	18.775M	19.04M	18.8M	19.065M	18.725M	19.065M
2437MHz	Pass	500k	18.95M	19.115M	18.9M	19.14M	18.975M	19.265M	18.9M	19.14M
2462MHz	Pass	500k	18.8M	19.09M	18.55M	19.065M	18.825M	19.065M	18.875M	19.09M

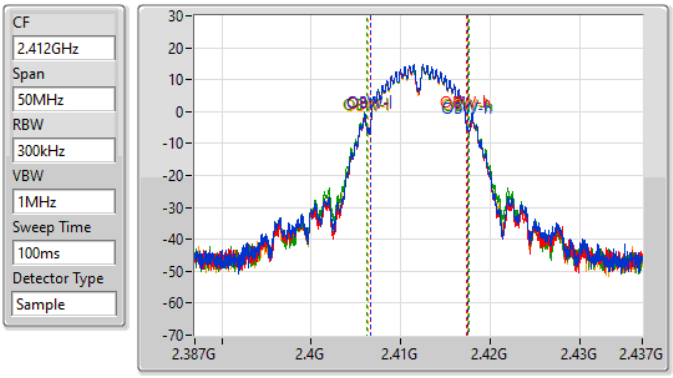
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

802.11b_Nss1,(1Mbps)_4TX EBW

2412MHz

09/07/2022



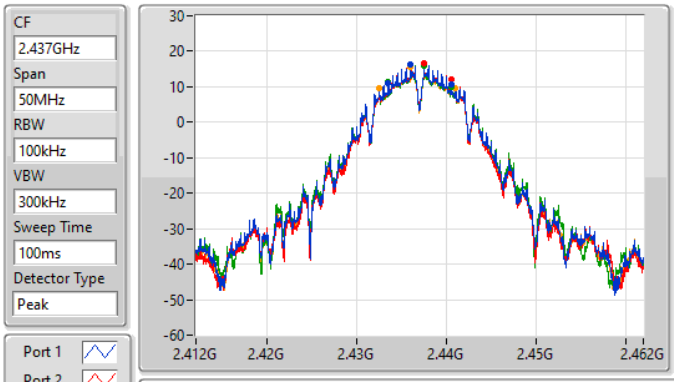


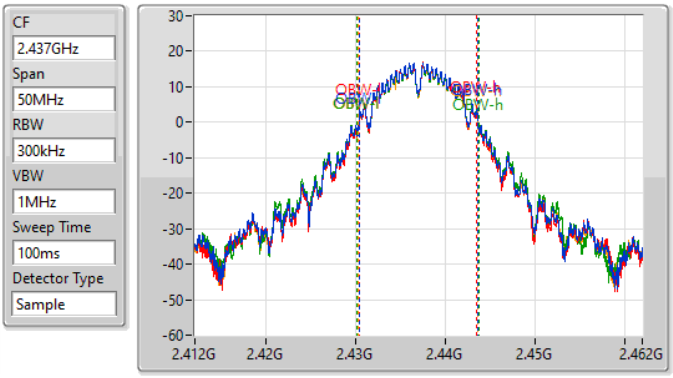
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
7.05M	2.408475G	2.415525G	10.895M	2.406578G	2.417472G	500k	1
7.525M	2.408G	2.415525G	10.745M	2.406603G	2.417347G	500k	2
6.975M	2.4085G	2.415475G	11.494M	2.406203G	2.417697G	500k	3
7.05M	2.408475G	2.415525G	11.169M	2.406353G	2.417522G	500k	4

802.11b_Nss1,(1Mbps)_4TX EBW

2437MHz

09/07/2022



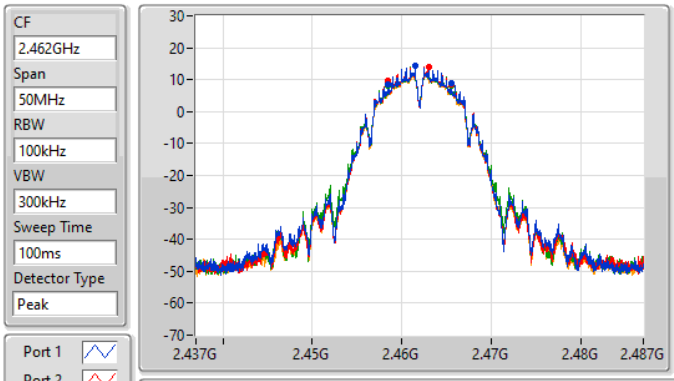


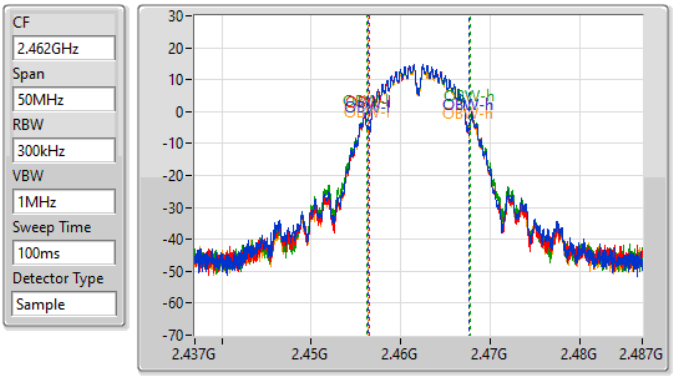
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
7.05M	2.433475G	2.440525G	13.243M	2.430328G	2.443572G	500k	1
7.025M	2.433475G	2.4405G	13.043M	2.430453G	2.443497G	500k	2
7.05M	2.433475G	2.440525G	13.718M	2.430053G	2.443772G	500k	3
8.475M	2.4325G	2.440975G	13.268M	2.430303G	2.443572G	500k	4

802.11b_Nss1,(1Mbps)_4TX EBW

2462MHz

09/07/2022



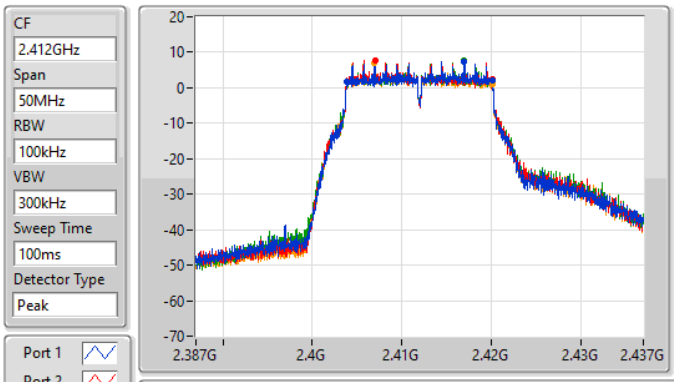


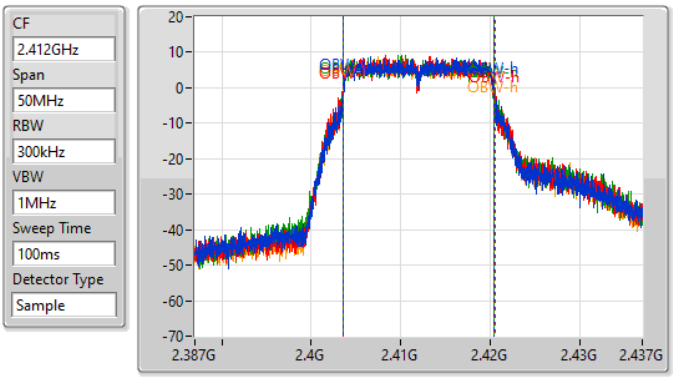
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
7.025M	2.4585G	2.465525G	11.219M	2.456353G	2.467572G	500k	1
7.05M	2.458475G	2.465525G	11.044M	2.456553G	2.467597G	500k	2
7.05M	2.458475G	2.465525G	11.644M	2.456178G	2.467822G	500k	3
7.025M	2.458475G	2.4655G	11.269M	2.456328G	2.467597G	500k	4

802.11g_Nss1,(6Mbps)_4TX EBW

2412MHz

09/07/2022



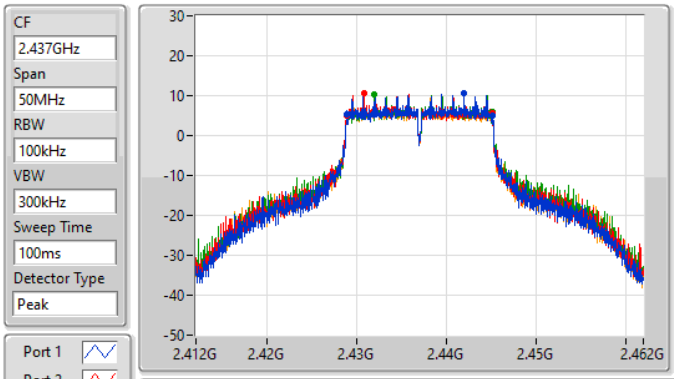


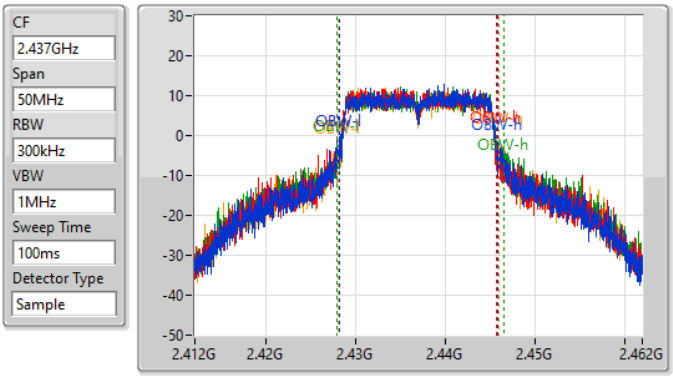
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.3M	2.40385G	2.42015G	16.842M	2.403604G	2.420446G	500k	1
16.3M	2.403825G	2.420125G	16.992M	2.403529G	2.420521G	500k	2
16.325M	2.403825G	2.42015G	16.917M	2.403579G	2.420496G	500k	3
16.35M	2.403825G	2.420175G	16.942M	2.403529G	2.420471G	500k	4

802.11g_Nss1,(6Mbps)_4TX EBW

2437MHz

09/07/2022





6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.3M	2.42885G	2.44515G	17.641M	2.428204G	2.445846G	500k	1
16.325M	2.428825G	2.44515G	17.541M	2.428129G	2.445671G	500k	2
16.325M	2.428825G	2.44515G	18.666M	2.42788G	2.446545G	500k	3
16.325M	2.428825G	2.44515G	18.016M	2.427955G	2.445971G	500k	4

802.11g_Nss1,(6Mbps)_4TX EBW

2462MHz

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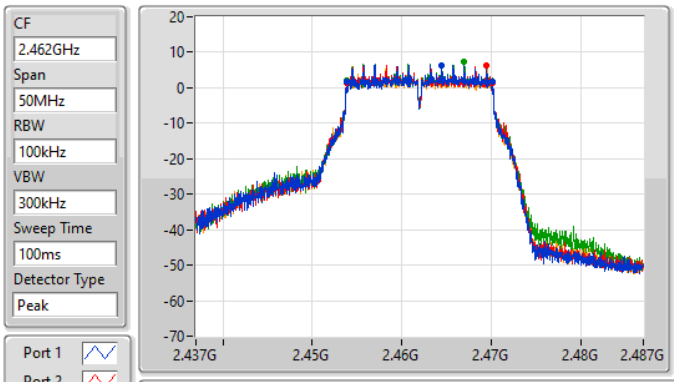

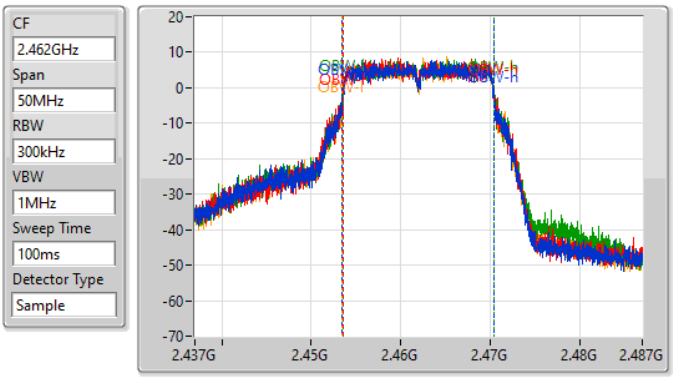

6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.3M	2.45385G	2.47015G	16.967M	2.453479G	2.470446G	500k	1
16.325M	2.453825G	2.47015G	16.917M	2.453504G	2.470421G	500k	2
16.3M	2.45385G	2.47015G	16.967M	2.453504G	2.470471G	500k	3
16.325M	2.453825G	2.47015G	16.942M	2.453479G	2.470421G	500k	4

802.11ax HEW20_Nss1,(MCS0)_4TX EBW

2412MHz

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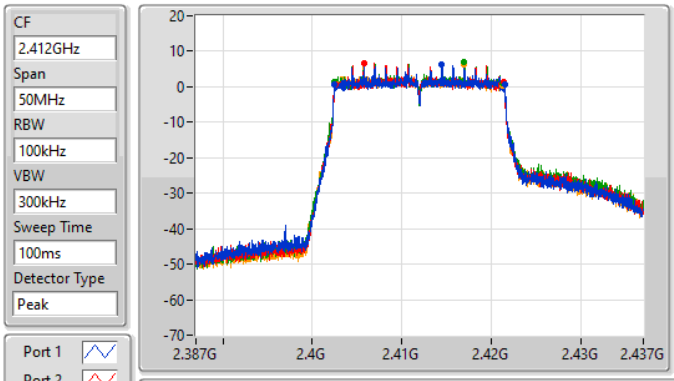

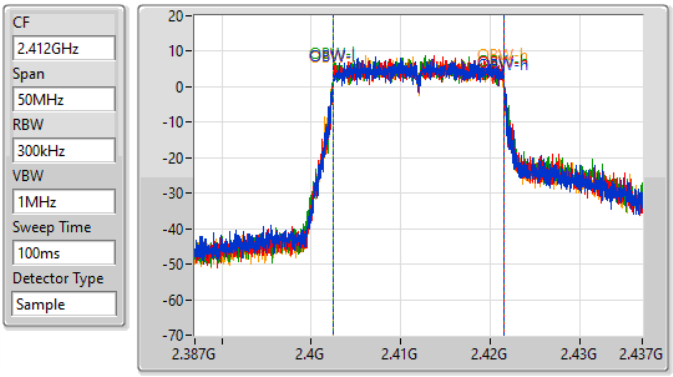

6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.975M	2.4025G	2.421475G	19.09M	2.402455G	2.421545G	500k	1
18.775M	2.402625G	2.4214G	19.04M	2.402505G	2.421545G	500k	2
18.8M	2.402525G	2.421325G	19.065M	2.402455G	2.42152G	500k	3
18.725M	2.402575G	2.4213G	19.065M	2.402455G	2.42152G	500k	4

802.11ax HEW20_Nss1,(MCS0)_4TX EBW

2437MHz

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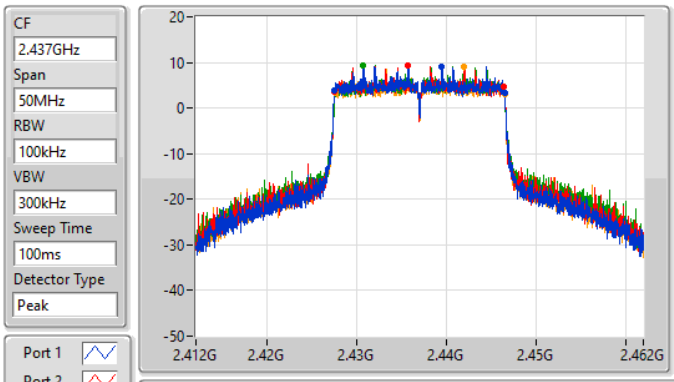

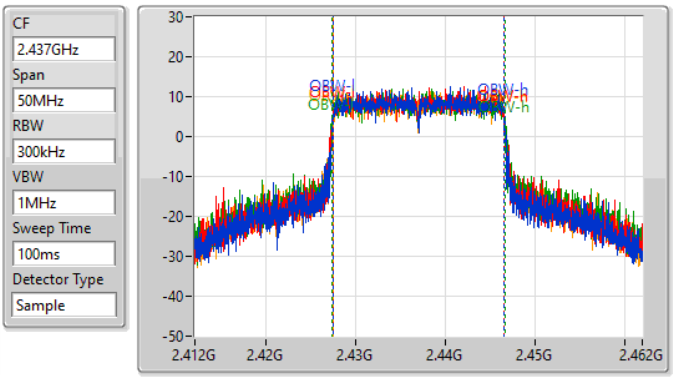

6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.95M	2.427525G	2.446475G	19.115M	2.42743G	2.446545G	500k	1
18.9M	2.427525G	2.446425G	19.14M	2.427405G	2.446545G	500k	2
18.975M	2.427525G	2.4465G	19.265M	2.427355G	2.44662G	500k	3
18.9M	2.427575G	2.446475G	19.14M	2.42743G	2.44657G	500k	4

802.11ax HEW20_Nss1,(MCS0)_4TX EBW

2462MHz

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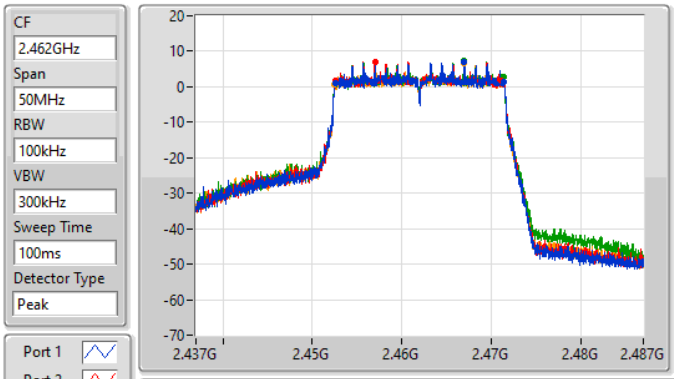

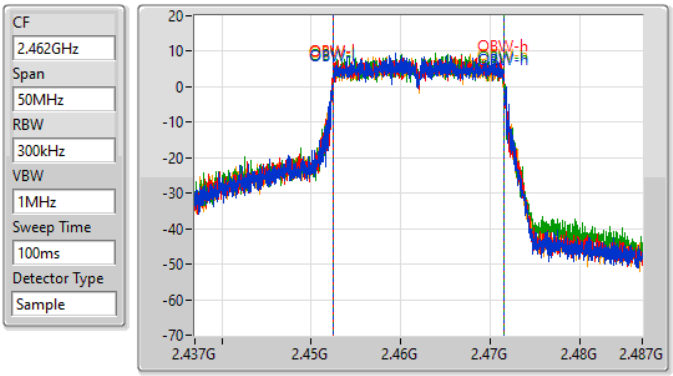

6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.8M	2.452625G	2.471425G	19.09M	2.45243G	2.47152G	500k	1
18.55M	2.452625G	2.471175G	19.065M	2.45243G	2.471495G	500k	2
18.825M	2.452625G	2.47145G	19.065M	2.45243G	2.471495G	500k	3
18.875M	2.452525G	2.4714G	19.09M	2.45243G	2.47152G	500k	4

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.11ax HEW20_Nss4,(MCS0)_4TX	18.9M	19.09M	19M1D1D	18.575M	19.015M

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)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ax HEW20_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	18.75M	19.065M	18.8M	19.015M	18.825M	19.04M	18.7M	19.065M
2437MHz	Pass	500k	18.9M	19.09M	18.9M	19.065M	18.825M	19.09M	18.825M	19.065M
2462MHz	Pass	500k	18.675M	19.04M	18.7M	19.04M	18.575M	19.04M	18.75M	19.065M

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

802.11ax HEW20_Nss4,(MCS0)_4TX EBW

2412MHz

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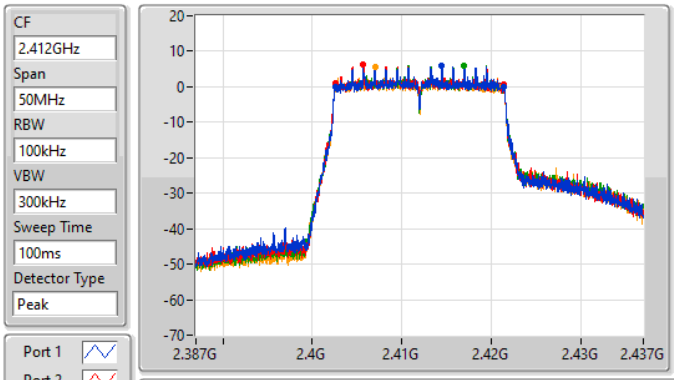
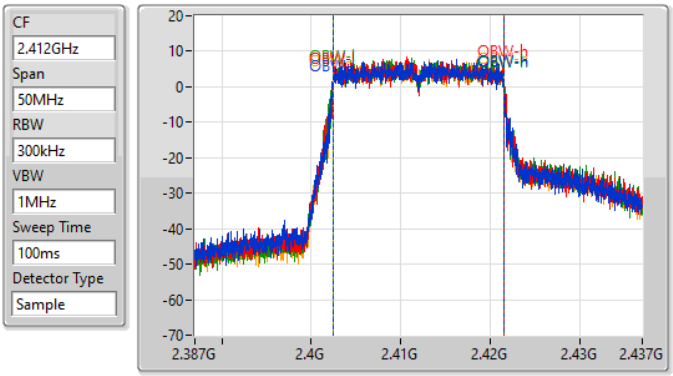


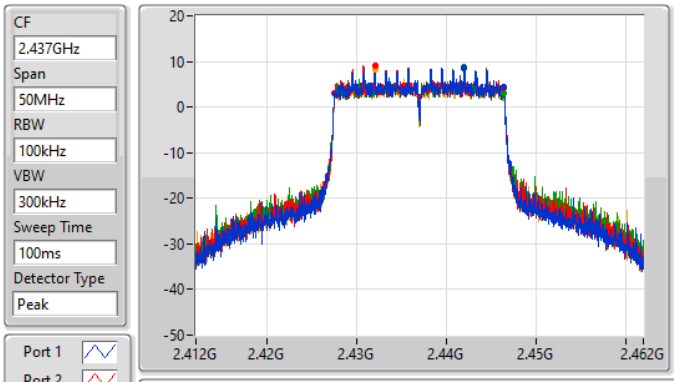


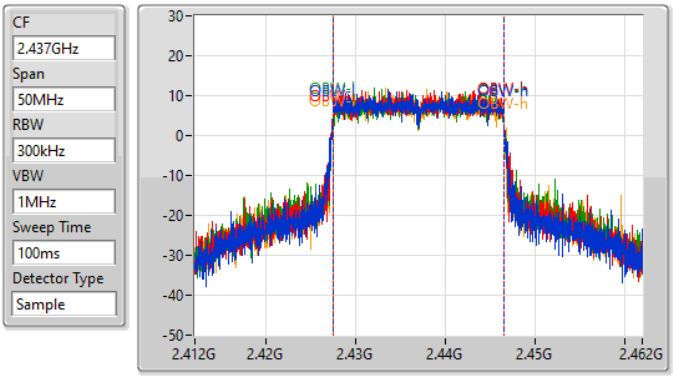
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.75M	2.402625G	2.421375G	19.065M	2.40243G	2.421495G	500k	1
18.8M	2.4026G	2.4214G	19.015M	2.40248G	2.421495G	500k	2
18.825M	2.4026G	2.421425G	19.04M	2.402455G	2.421495G	500k	3
18.7M	2.402575G	2.421275G	19.065M	2.402455G	2.42152G	500k	4

802.11ax HEW20_Nss4,(MCS0)_4TX EBW

2437MHz

09/07/2022



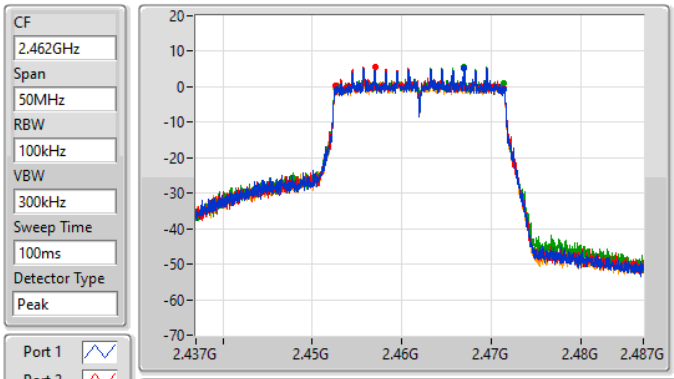


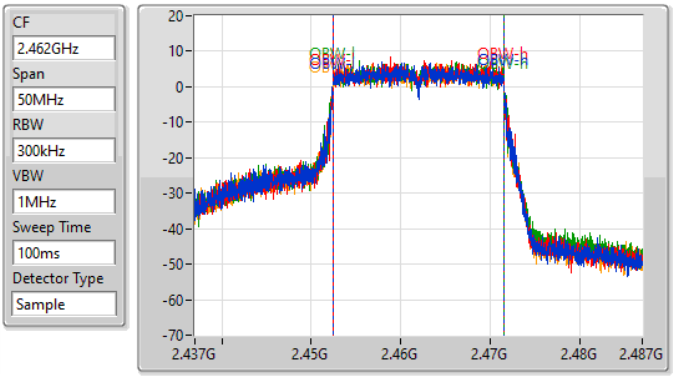
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.9M	2.42755G	2.44645G	19.09M	2.42743G	2.44652G	500k	1
18.9M	2.427525G	2.446425G	19.065M	2.427455G	2.44652G	500k	2
18.825M	2.42755G	2.446375G	19.09M	2.42743G	2.44652G	500k	3
18.825M	2.42755G	2.446375G	19.065M	2.427455G	2.44652G	500k	4

802.11ax HEW20_Nss4,(MCS0)_4TX EBW

2462MHz

09/07/2022





6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.675M	2.4527G	2.471375G	19.04M	2.452455G	2.471495G	500k	1
18.7M	2.45265G	2.47135G	19.04M	2.452455G	2.471495G	500k	2
18.575M	2.452775G	2.47135G	19.04M	2.452455G	2.471495G	500k	3
18.75M	2.452625G	2.471375G	19.065M	2.45243G	2.471495G	500k	4

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX	9.525M	15.992M	16M0G1D	7.05M	11.944M
802.11g_Nss1,(6Mbps)_1TX	16.325M	27.411M	27M5D1D	16.3M	16.942M
802.11ax HEW20_Nss1,(MCS0)_1TX	18.9M	27.661M	27M7D1D	18.625M	19.065M

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

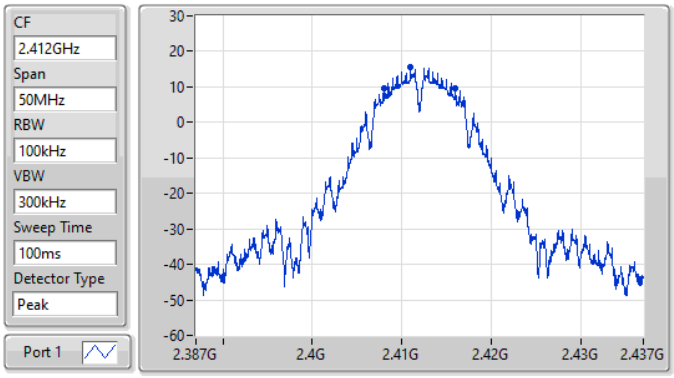
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	8M	12.319M
2437MHz	Pass	500k	9.525M	15.992M
2462MHz	Pass	500k	7.05M	11.944M
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	16.3M	16.942M
2437MHz	Pass	500k	16.325M	27.411M
2462MHz	Pass	500k	16.325M	16.942M
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-
2412MHz	Pass	500k	18.9M	19.065M
2437MHz	Pass	500k	18.625M	27.661M
2462MHz	Pass	500k	18.8M	19.09M

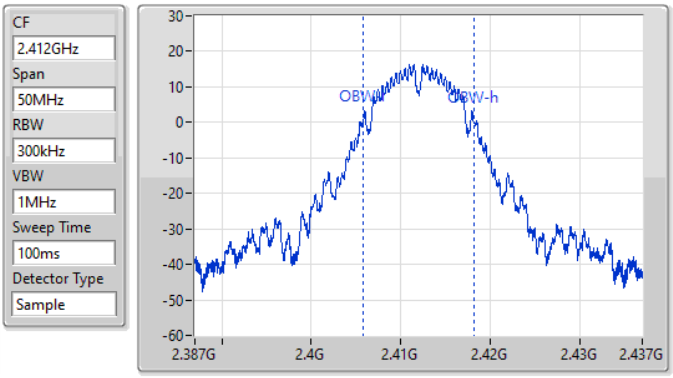
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

802.11b_Nss1,(1Mbps)_1TX EBW

2412MHz

11/07/2022



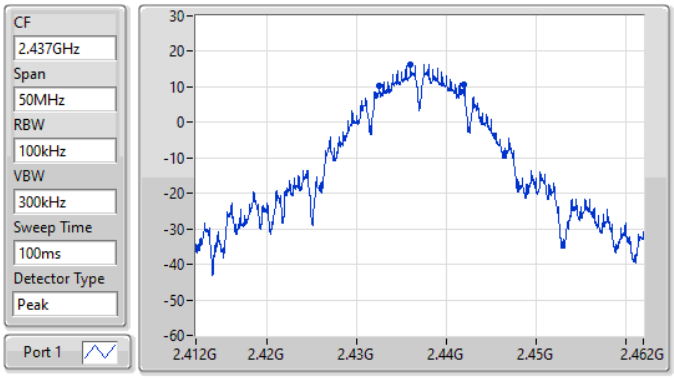


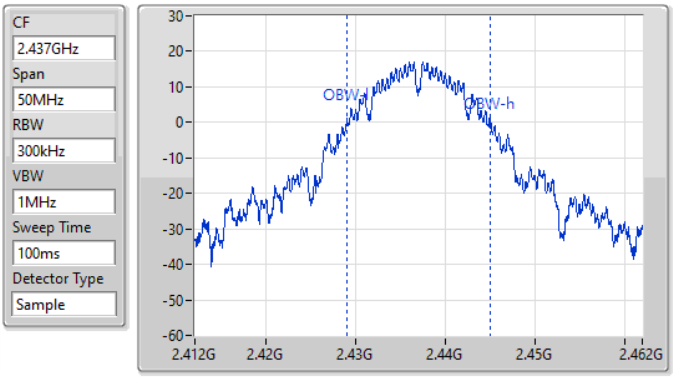
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8M	2.408G	2.416G	12.319M	2.405828G	2.418147G	500k	1

802.11b_Nss1,(1Mbps)_1TX EBW

2437MHz

11/07/2022



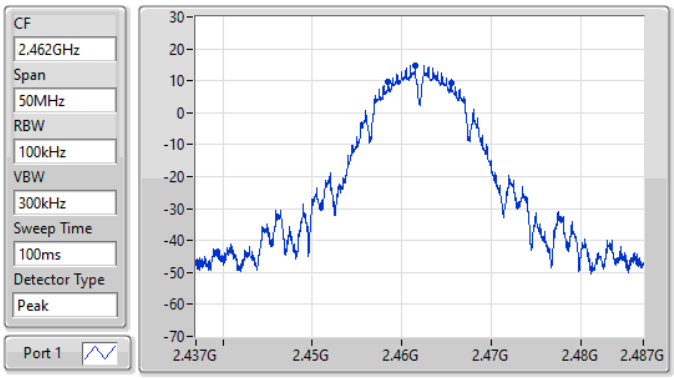


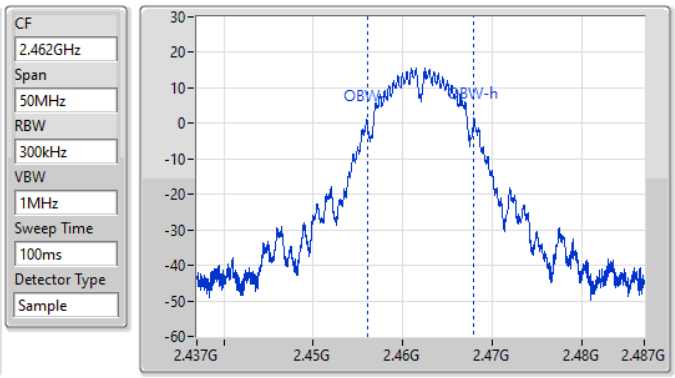
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
9.525M	2.432475G	2.442G	15.992M	2.429004G	2.444996G	500k	1

802.11b_Nss1,(1Mbps)_1TX EBW

2462MHz

11/07/2022



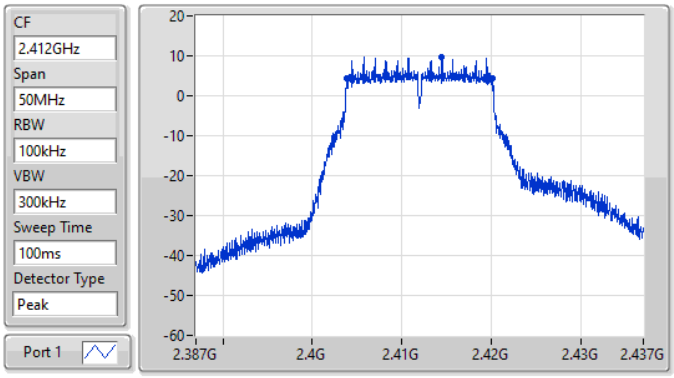


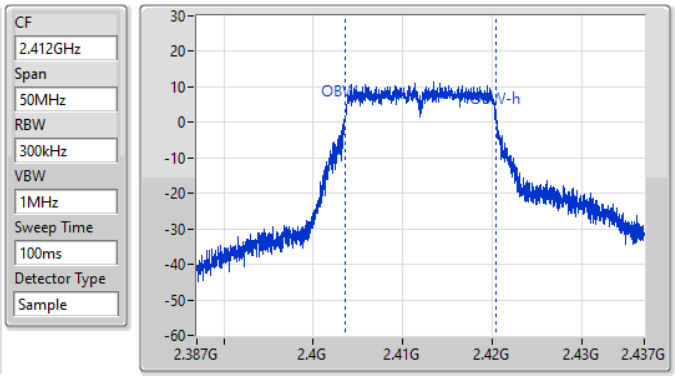
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
7.05M	2.458475G	2.465525G	11.944M	2.456028G	2.467972G	500k	1

802.11g_Nss1,(6Mbps)_1TX EBW

2412MHz

11/07/2022



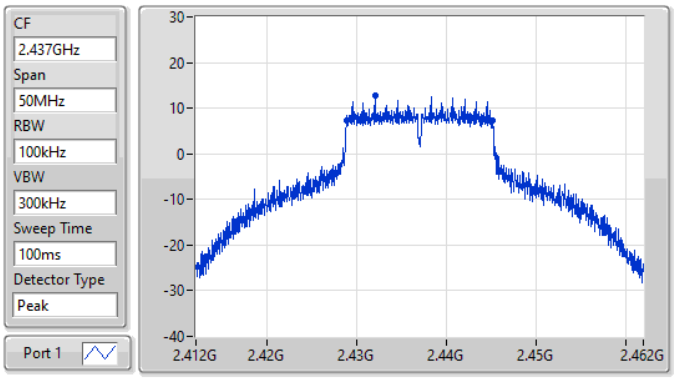


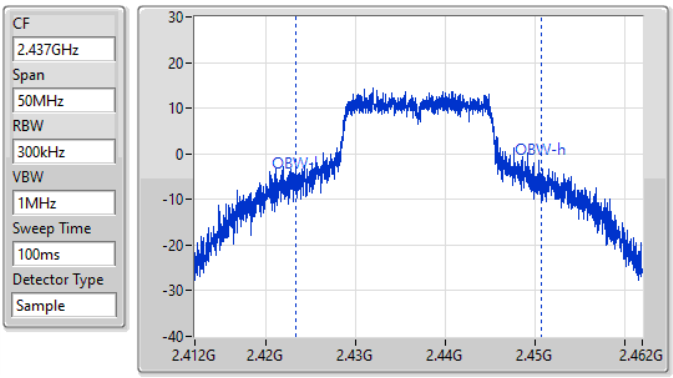
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.3M	2.40385G	2.42015G	16.942M	2.403529G	2.420471G	500k	1

802.11g_Nss1,(6Mbps)_1TX EBW

2437MHz

11/07/2022



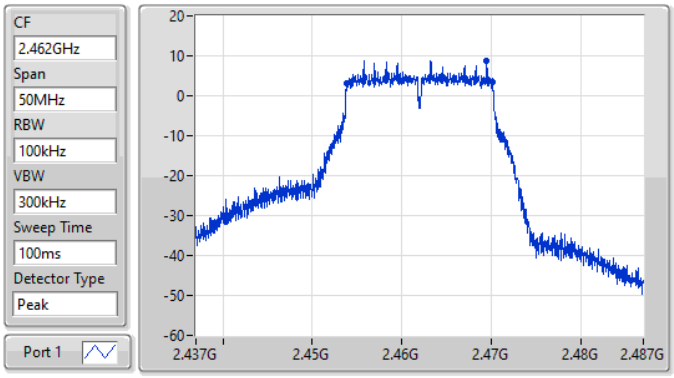


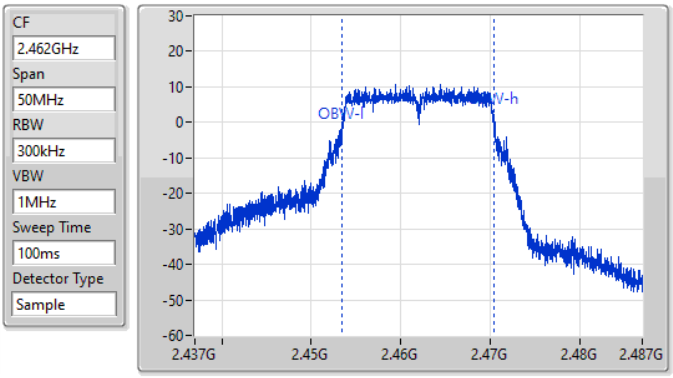
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.325M	2.428825G	2.44515G	27.411M	2.423257G	2.450668G	500k	1

802.11g_Nss1,(6Mbps)_1TX EBW

2462MHz

11/07/2022



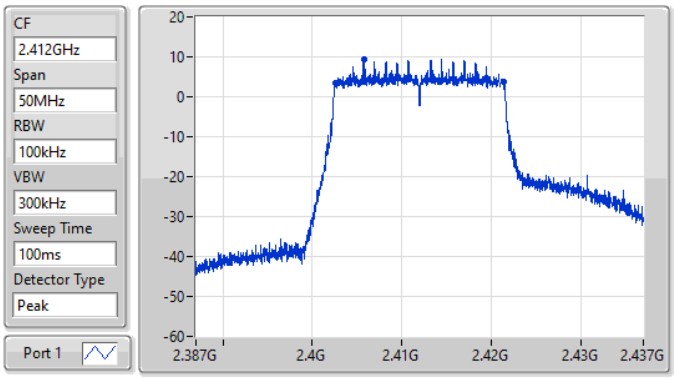


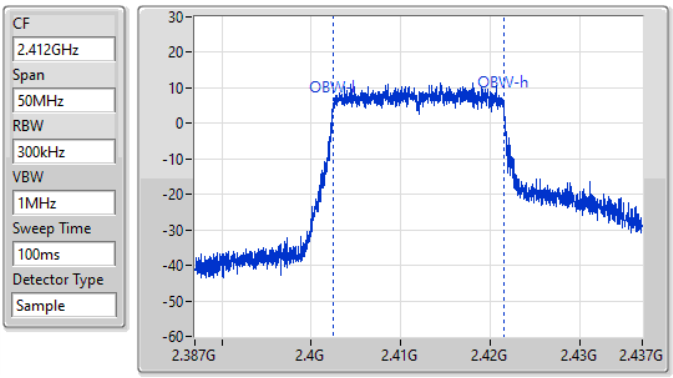
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.325M	2.453825G	2.47015G	16.942M	2.453454G	2.470396G	500k	1

802.11ax HEW20_Nss1,(MCS0)_1TX EBW

2412MHz

11/07/2022



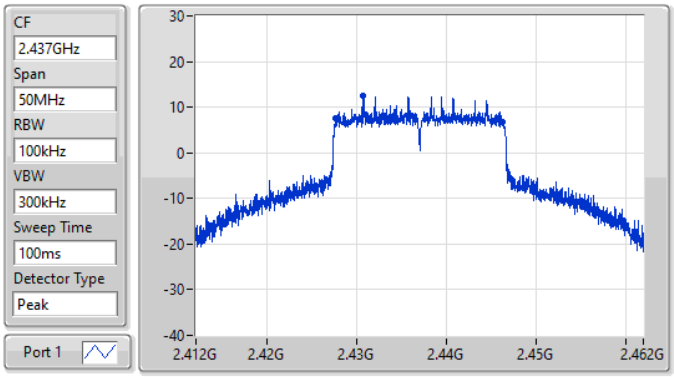


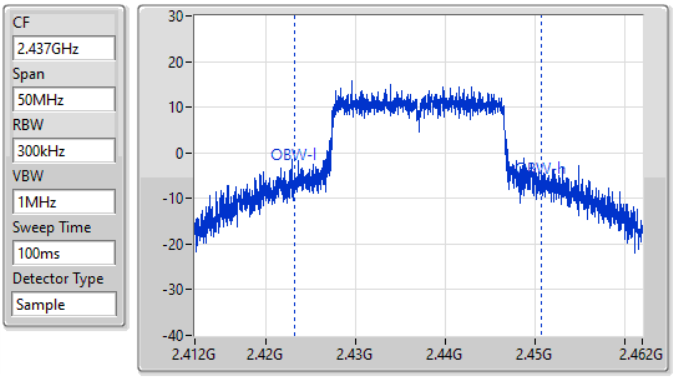
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.9M	2.40255G	2.42145G	19.065M	2.402455G	2.42152G	500k	1

802.11ax HEW20_Nss1,(MCS0)_1TX EBW

2437MHz

11/07/2022



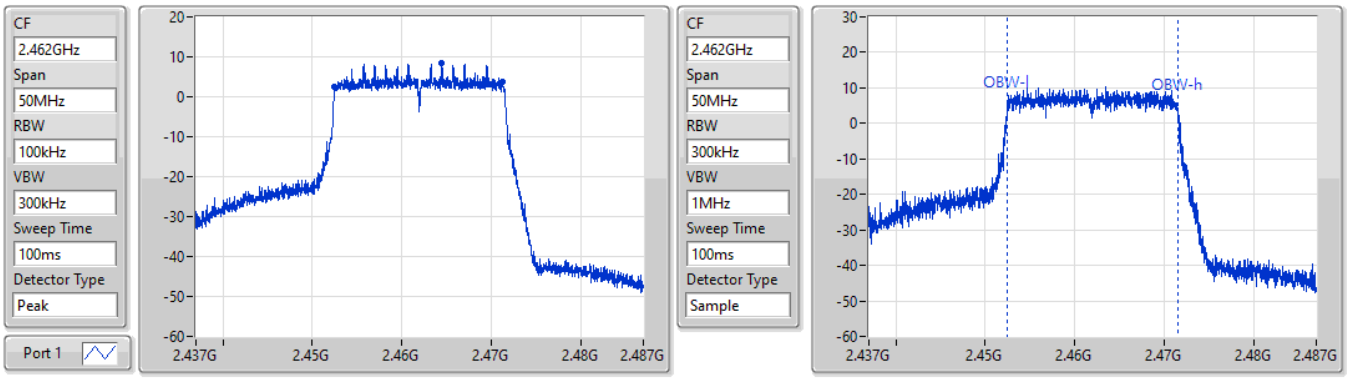


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.625M	2.4276G	2.446225G	27.661M	2.423107G	2.450768G	500k	1

802.11ax HEW20_Nss1,(MCS0)_1TX **EBW**

2462MHz

11/07/2022



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.8M	2.452525G	2.471325G	19.09M	2.45243G	2.47152G	500k	1

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	9.05M	15.542M	15M6G1D	7M	10.92M
802.11g_Nss1,(6Mbps)_2TX	16.35M	20.715M	20M8D1D	16.325M	16.917M

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

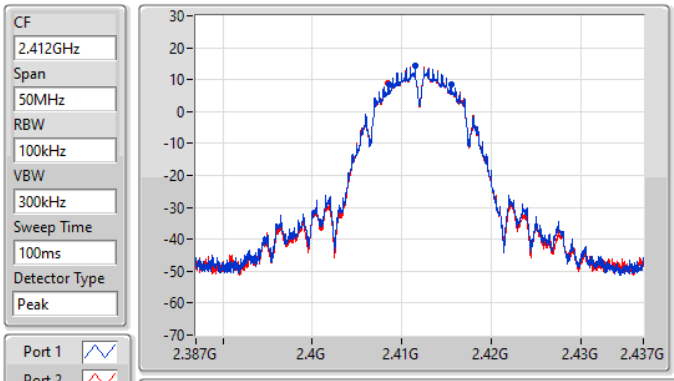
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	7M	11.019M	7.05M	10.92M
2437MHz	Pass	500k	9.05M	15.542M	7.025M	14.268M
2462MHz	Pass	500k	7.05M	11.819M	7.025M	11.769M
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	16.325M	16.942M	16.325M	16.917M
2437MHz	Pass	500k	16.35M	20.715M	16.325M	20.665M
2462MHz	Pass	500k	16.325M	16.992M	16.325M	16.992M

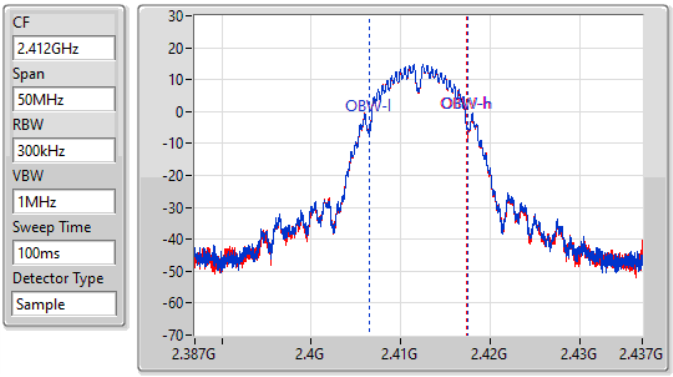
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

802.11b_Nss1,(1Mbps)_2TX EBW

2412MHz

11/07/2022



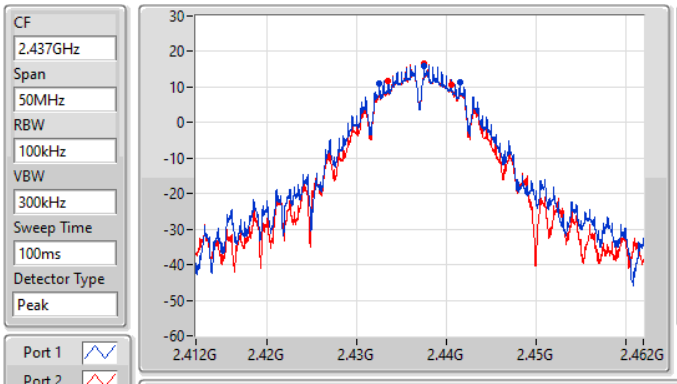


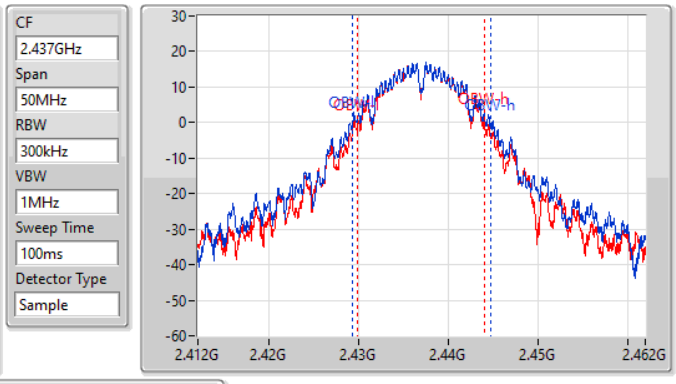
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
7M	2.408525G	2.415525G	11.019M	2.406528G	2.417547G	500k	1
7.05M	2.408475G	2.415525G	10.92M	2.406503G	2.417422G	500k	2

802.11b_Nss1,(1Mbps)_2TX EBW

2437MHz

11/07/2022



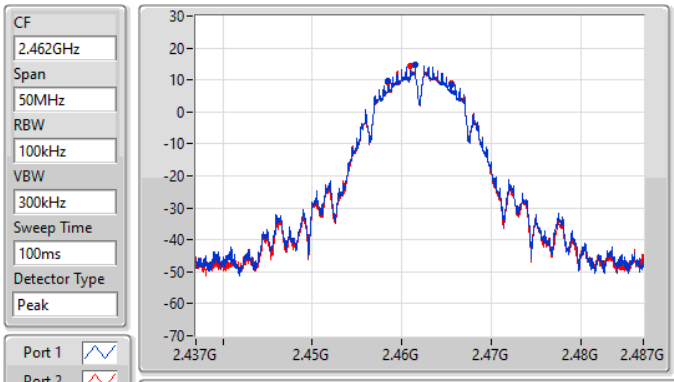


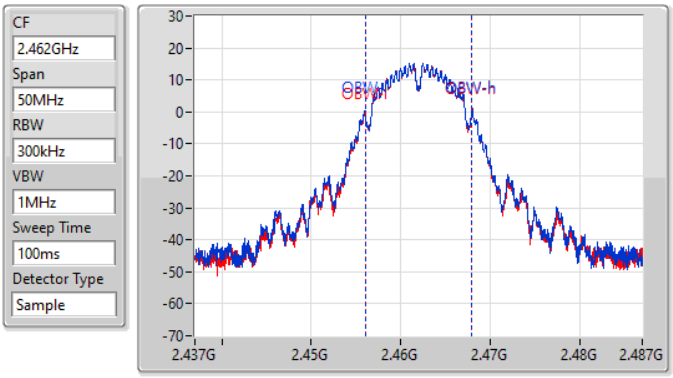
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
9.05M	2.432475G	2.441525G	15.542M	2.429254G	2.444796G	500k	1
7.025M	2.4335G	2.440525G	14.268M	2.429779G	2.444046G	500k	2

802.11b_Nss1,(1Mbps)_2TX EBW

2462MHz

11/07/2022



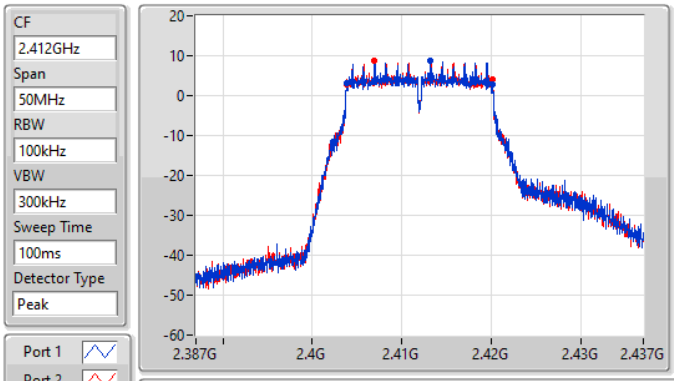


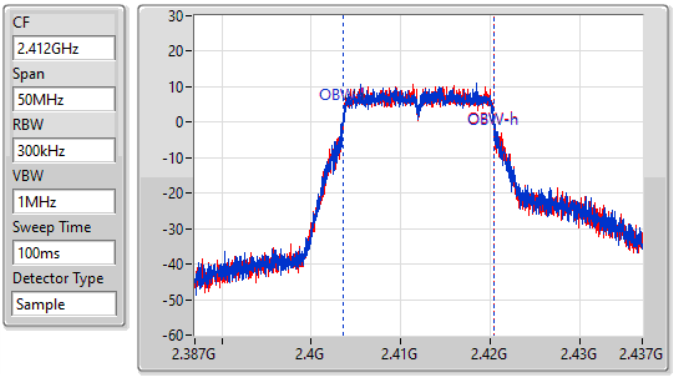
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
7.05M	2.458475G	2.465525G	11.819M	2.456078G	2.467897G	500k	1
7.025M	2.458475G	2.4655G	11.769M	2.456128G	2.467897G	500k	2

802.11g_Nss1,(6Mbps)_2TX EBW

2412MHz

11/07/2022



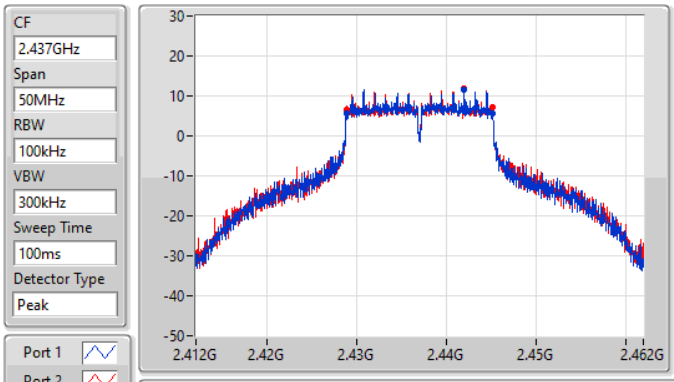


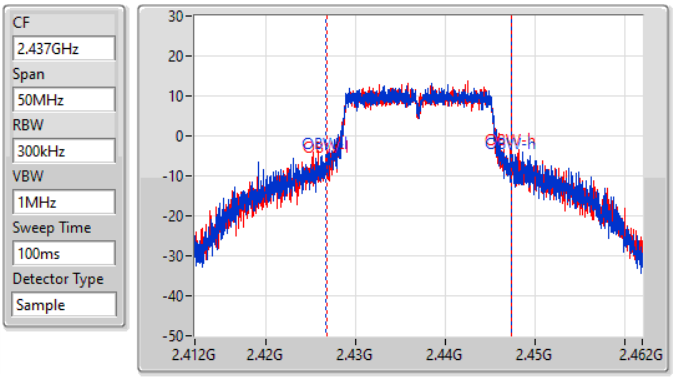
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.325M	2.403825G	2.42015G	16.942M	2.403554G	2.420496G	500k	1
16.325M	2.403825G	2.42015G	16.917M	2.403579G	2.420496G	500k	2

802.11g_Nss1,(6Mbps)_2TX EBW

2437MHz

11/07/2022



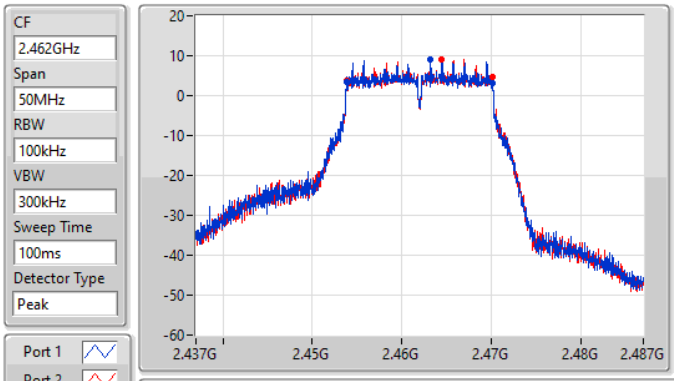


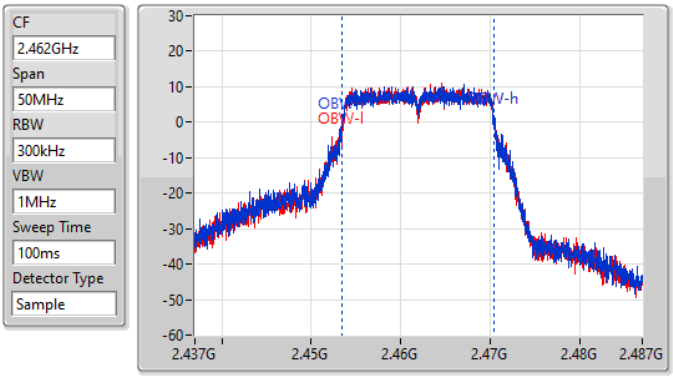
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.35M	2.428825G	2.445175G	20.715M	2.42668G	2.447395G	500k	1
16.325M	2.428825G	2.44515G	20.665M	2.42678G	2.447445G	500k	2

802.11g_Nss1,(6Mbps)_2TX EBW

2462MHz

11/07/2022





6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.325M	2.453825G	2.47015G	16.992M	2.453454G	2.470446G	500k	1
16.325M	2.453825G	2.47015G	16.992M	2.453454G	2.470446G	500k	2

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.11ax HEW20_Nss2,(MCS0)_2TX	18.95M	19.815M	19M9D1D	18.5M	19.04M

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

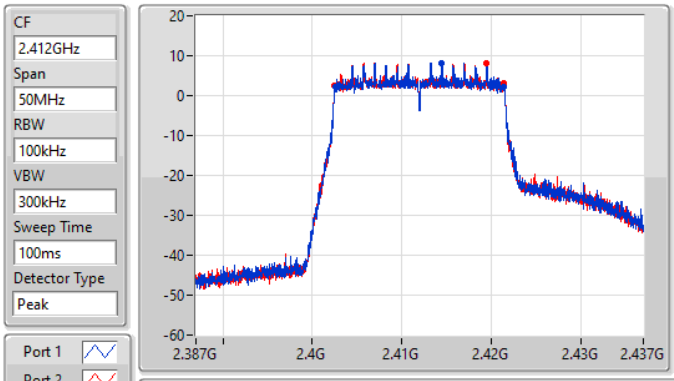
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11ax HEW20_Nss2,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	18.85M	19.04M	18.925M	19.04M
2437MHz	Pass	500k	18.95M	19.44M	18.925M	19.815M
2462MHz	Pass	500k	18.875M	19.065M	18.5M	19.09M

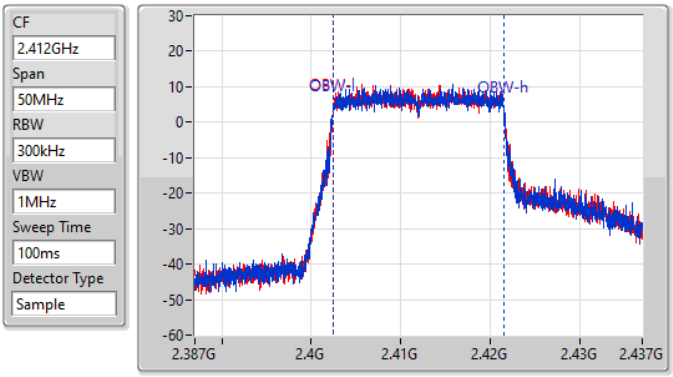
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

802.11ax HEW20_Nss2,(MCS0)_2TX EBW

2412MHz

09/07/2022



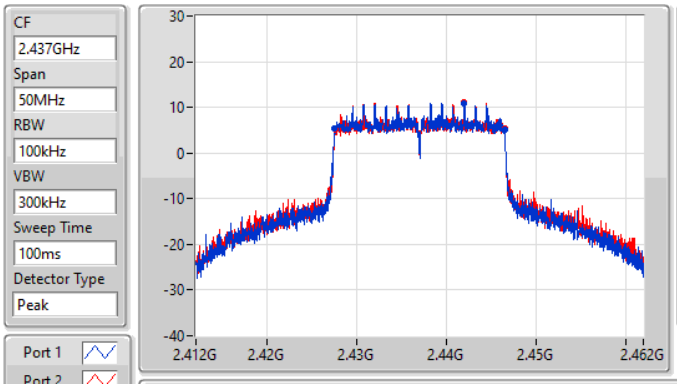


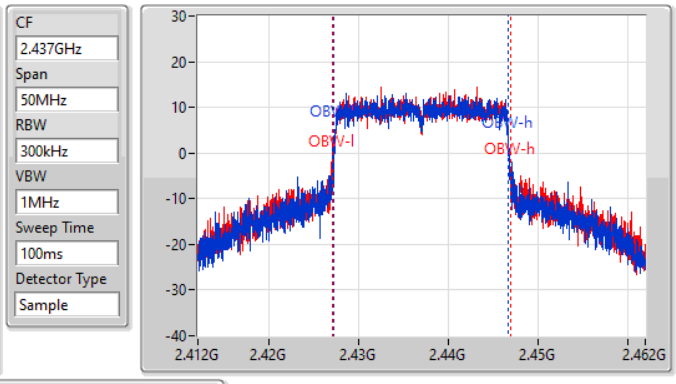
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.85M	2.40255G	2.4214G	19.04M	2.402455G	2.421495G	500k	1
18.925M	2.402525G	2.42145G	19.04M	2.40248G	2.42152G	500k	2

802.11ax HEW20_Nss2,(MCS0)_2TX EBW

2437MHz

09/07/2022



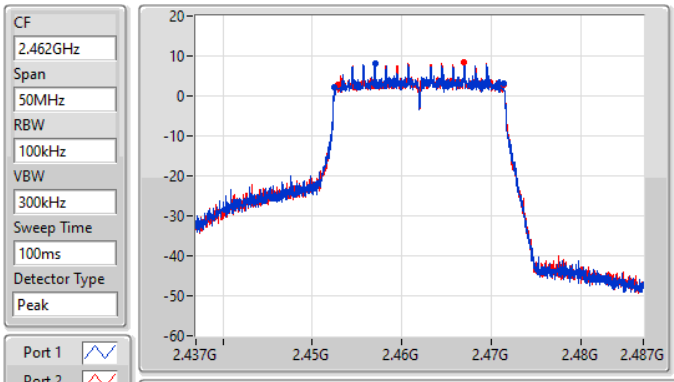


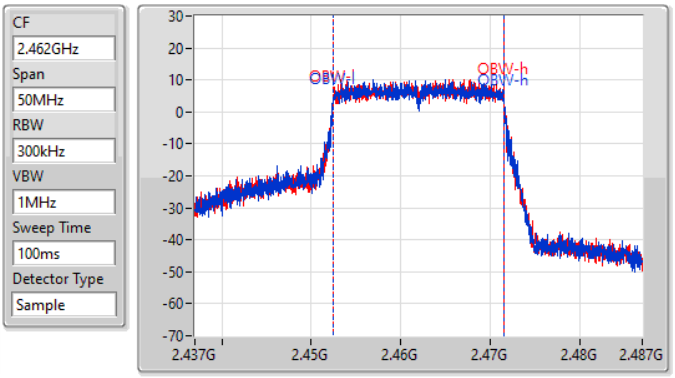
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.95M	2.427525G	2.446475G	19.44M	2.42723G	2.44667G	500k	1
18.925M	2.42755G	2.446475G	19.815M	2.427105G	2.44692G	500k	2

802.11ax HEW20_Nss2,(MCS0)_2TX EBW

2462MHz

09/07/2022





6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.875M	2.4525G	2.471375G	19.065M	2.45243G	2.471495G	500k	1
18.5M	2.4529G	2.4714G	19.09M	2.45243G	2.47152G	500k	2

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)_4TX	9.05M	14.743M	14M8G1D	7M	11.119M
802.11g_Nss1,(6Mbps)_4TX	16.35M	21.214M	21M3D1D	16.3M	16.842M
802.11ax HEW20_Nss1,(MCS0)_4TX	18.95M	19.115M	19M2D1D	18.725M	19.015M

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

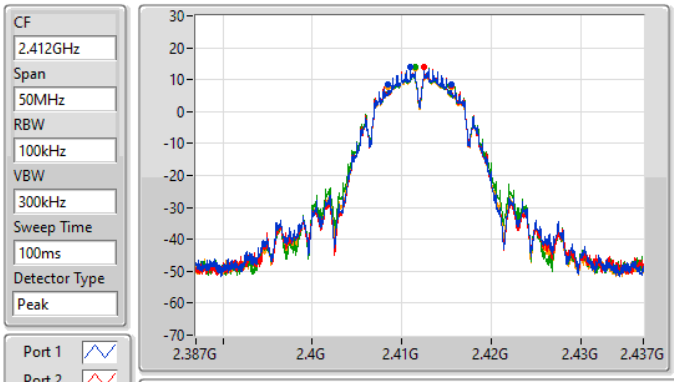
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11b_Nss1,(1Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	7.025M	11.244M	7.05M	11.119M	7M	11.819M	7.025M	11.519M
2437MHz	Pass	500k	8M	14.068M	8.525M	13.168M	9.05M	14.743M	7.55M	14.018M
2462MHz	Pass	500k	7.05M	11.369M	7.025M	11.294M	7M	11.769M	7.05M	11.494M
802.11g_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	16.3M	16.842M	16.325M	16.917M	16.325M	16.942M	16.325M	16.917M
2437MHz	Pass	500k	16.325M	18.541M	16.325M	19.265M	16.35M	21.214M	16.35M	19.415M
2462MHz	Pass	500k	16.325M	16.892M	16.325M	16.992M	16.3M	16.992M	16.325M	16.967M
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	18.8M	19.065M	18.85M	19.015M	18.8M	19.065M	18.85M	19.065M
2437MHz	Pass	500k	18.95M	19.115M	18.875M	19.09M	18.9M	19.115M	18.85M	19.09M
2462MHz	Pass	500k	18.875M	19.04M	18.725M	19.09M	18.725M	19.09M	18.875M	19.065M

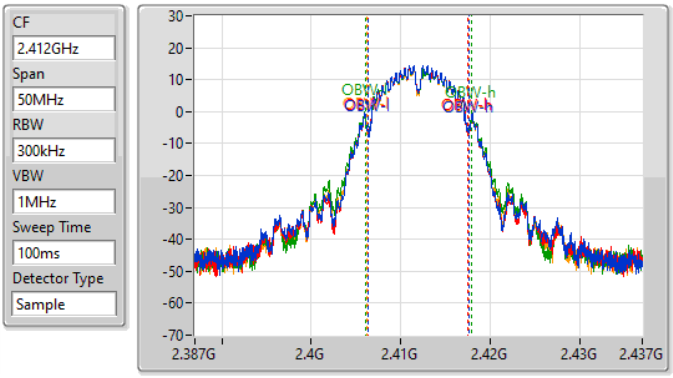
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

802.11b_Nss1,(1Mbps)_4TX EBW

2412MHz

11/07/2022



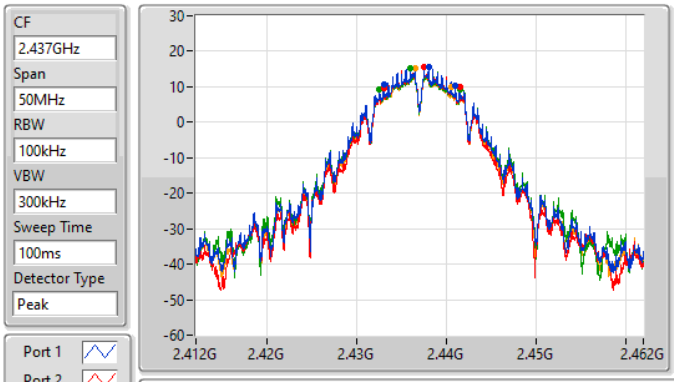


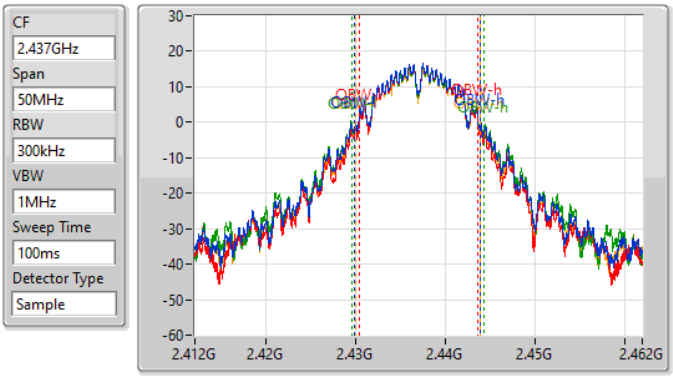
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
7.025M	2.408475G	2.4155G	11.244M	2.406378G	2.417622G	500k	1
7.05M	2.408475G	2.415525G	11.119M	2.406403G	2.417522G	500k	2
7M	2.408475G	2.415475G	11.819M	2.406053G	2.417872G	500k	3
7.025M	2.408475G	2.4155G	11.519M	2.406178G	2.417697G	500k	4

802.11b_Nss1,(1Mbps)_4TX EBW

2437MHz

11/07/2022



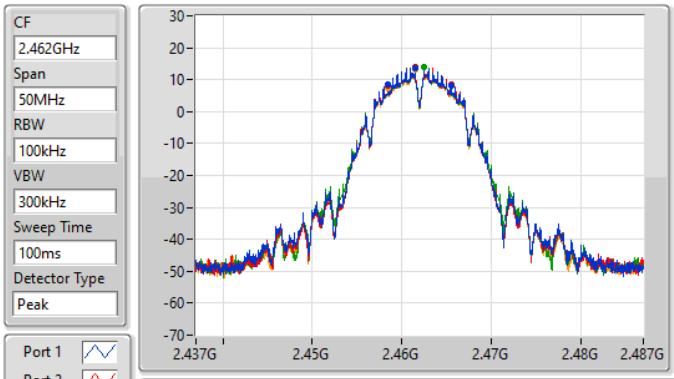


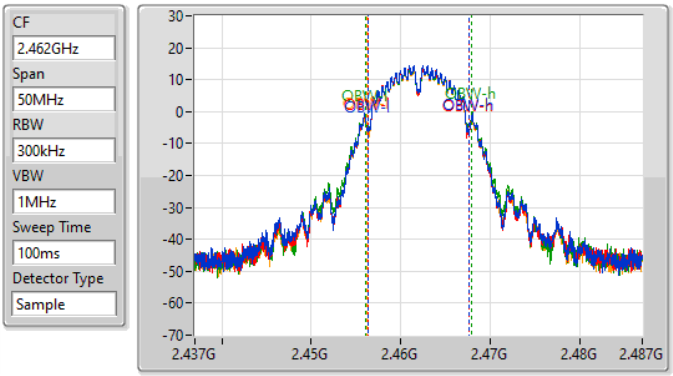
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8M	2.433G	2.441G	14.068M	2.429879G	2.443947G	500k	1
8.525M	2.432975G	2.4415G	13.168M	2.430378G	2.443547G	500k	2
9.05M	2.432475G	2.441525G	14.743M	2.429604G	2.444346G	500k	3
7.55M	2.432975G	2.440525G	14.018M	2.429904G	2.443922G	500k	4

802.11b_Nss1,(1Mbps)_4TX EBW

2462MHz

11/07/2022



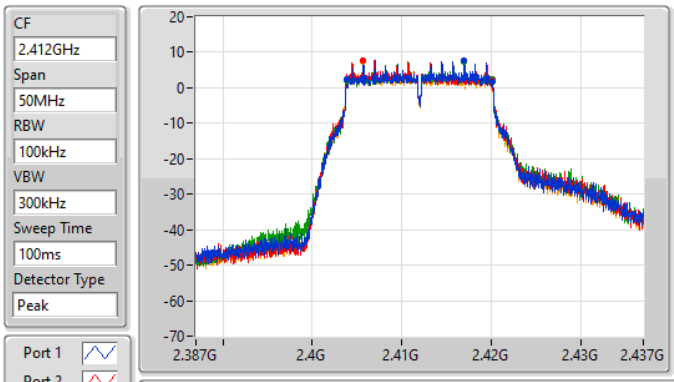


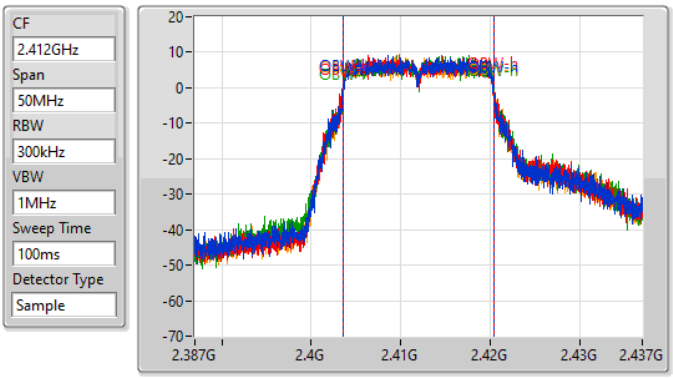
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
7.05M	2.458475G	2.465525G	11.369M	2.456328G	2.467697G	500k	1
7.025M	2.4585G	2.465525G	11.294M	2.456403G	2.467697G	500k	2
7M	2.4585G	2.4655G	11.769M	2.456103G	2.467872G	500k	3
7.05M	2.45845G	2.4655G	11.494M	2.456203G	2.467697G	500k	4

802.11g_Nss1,(6Mbps)_4TX EBW

2412MHz

11/07/2022



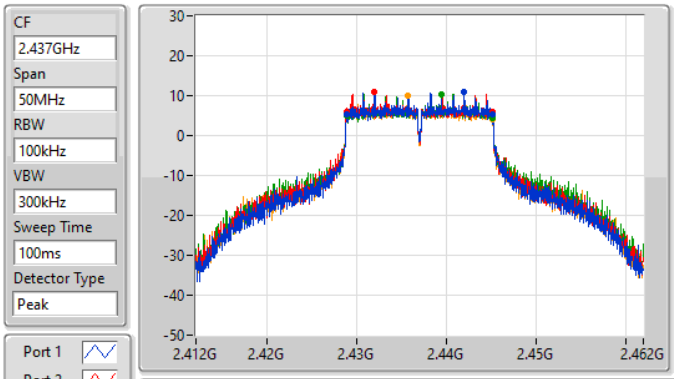


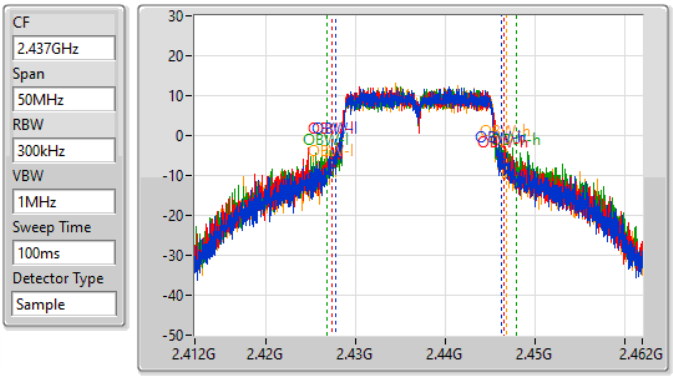
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.3M	2.40385G	2.42015G	16.842M	2.403579G	2.420421G	500k	1
16.325M	2.403825G	2.42015G	16.917M	2.403529G	2.420446G	500k	2
16.325M	2.403825G	2.42015G	16.942M	2.403554G	2.420496G	500k	3
16.325M	2.403825G	2.42015G	16.917M	2.403529G	2.420446G	500k	4

802.11g_Nss1,(6Mbps)_4TX EBW

2437MHz

11/07/2022



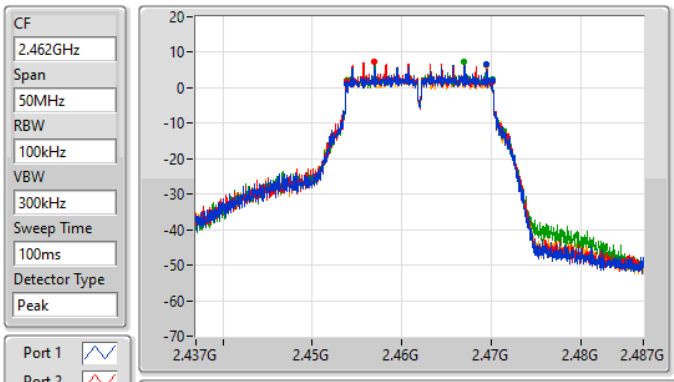


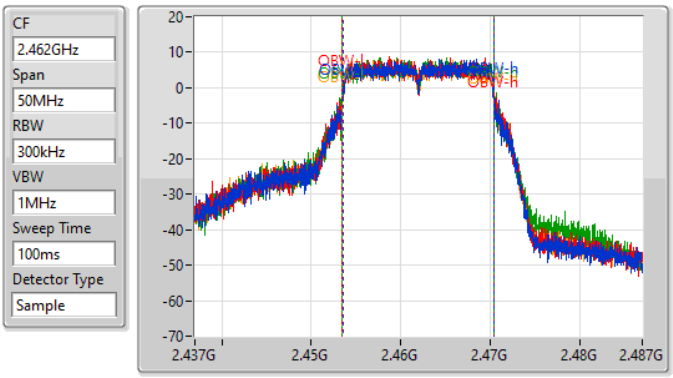
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.325M	2.428825G	2.44515G	18.541M	2.42773G	2.44627G	500k	1
16.325M	2.428825G	2.44515G	19.265M	2.427305G	2.44657G	500k	2
16.35M	2.428825G	2.445175G	21.214M	2.426755G	2.44797G	500k	3
16.35M	2.428825G	2.445175G	19.415M	2.42738G	2.446795G	500k	4

802.11g_Nss1,(6Mbps)_4TX EBW

2462MHz

11/07/2022



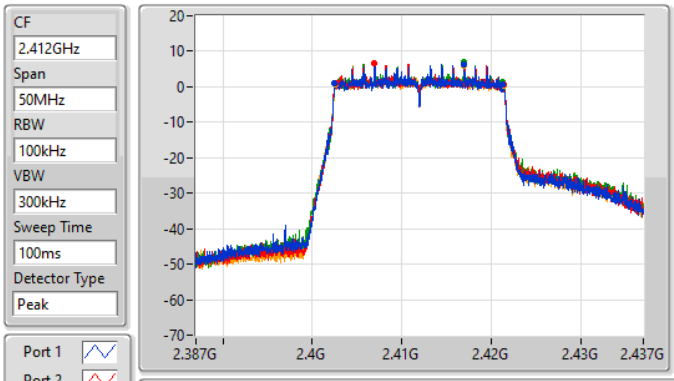


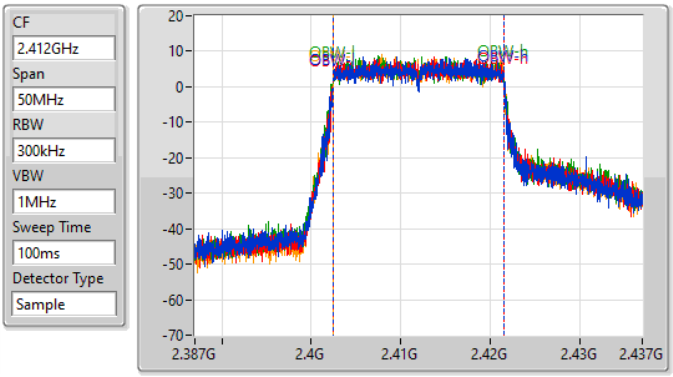
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.325M	2.453825G	2.47015G	16.892M	2.453504G	2.470396G	500k	1
16.325M	2.453825G	2.47015G	16.992M	2.453454G	2.470446G	500k	2
16.3M	2.45385G	2.47015G	16.992M	2.453454G	2.470446G	500k	3
16.325M	2.453825G	2.47015G	16.967M	2.453479G	2.470446G	500k	4

802.11ax HEW20_Nss1,(MCS0)_4TX EBW

2412MHz

11/07/2022



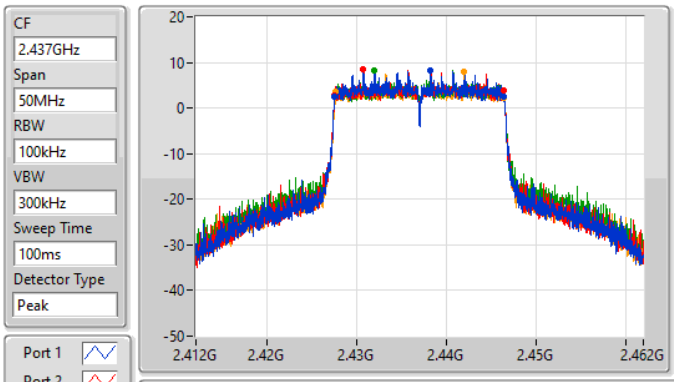


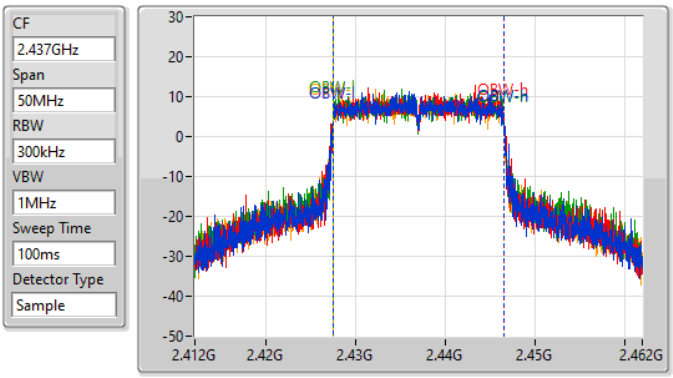
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.8M	2.402525G	2.421325G	19.065M	2.40248G	2.421545G	500k	1
18.85M	2.402575G	2.421425G	19.015M	2.40248G	2.421495G	500k	2
18.8M	2.402525G	2.421325G	19.065M	2.40243G	2.421495G	500k	3
18.85M	2.4026G	2.42145G	19.065M	2.402455G	2.42152G	500k	4

802.11ax HEW20_Nss1,(MCS0)_4TX EBW

2437MHz

11/07/2022



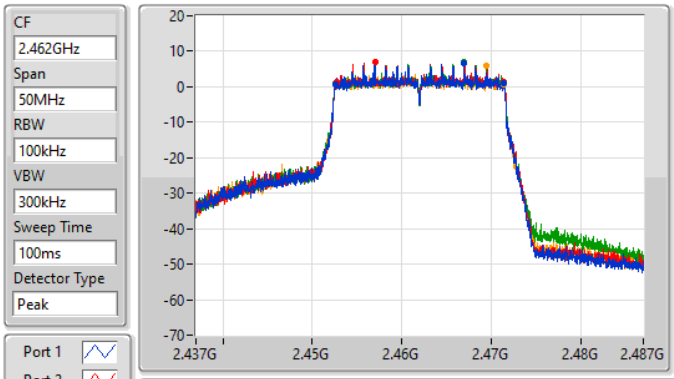


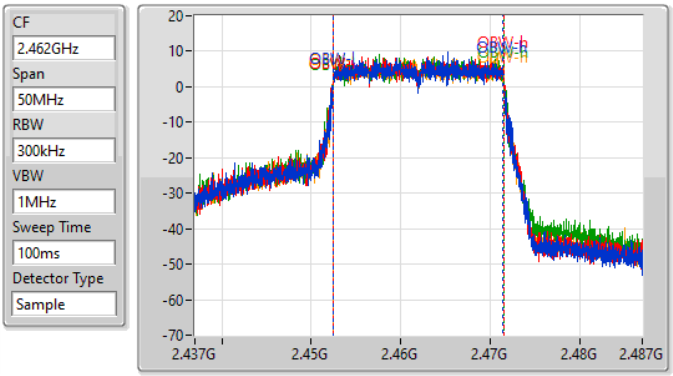
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.95M	2.427475G	2.446425G	19.115M	2.42743G	2.446545G	500k	1
18.875M	2.427525G	2.4464G	19.09M	2.42743G	2.44652G	500k	2
18.9M	2.4275G	2.4464G	19.115M	2.42743G	2.446545G	500k	3
18.85M	2.4276G	2.44645G	19.09M	2.42743G	2.44652G	500k	4

802.11ax HEW20_Nss1,(MCS0)_4TX EBW

2462MHz

11/07/2022





6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.875M	2.452575G	2.47145G	19.04M	2.45243G	2.47147G	500k	1
18.725M	2.452725G	2.47145G	19.09M	2.45243G	2.47152G	500k	2
18.725M	2.45255G	2.471275G	19.09M	2.45243G	2.47152G	500k	3
18.875M	2.45255G	2.471425G	19.065M	2.45243G	2.471495G	500k	4

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.11ax HEW20_Nss4,(MCS0)_4TX	18.95M	19.215M	19M3D1D	18.675M	19.04M

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

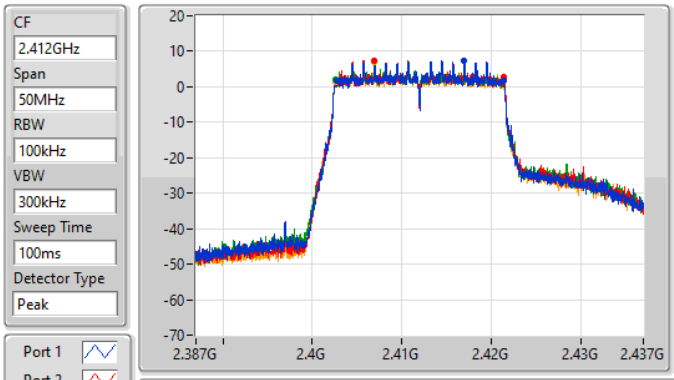
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ax HEW20_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	18.675M	19.065M	18.675M	19.04M	18.85M	19.09M	18.775M	19.065M
2437MHz	Pass	500k	18.95M	19.165M	18.725M	19.19M	18.725M	19.215M	18.925M	19.165M
2462MHz	Pass	500k	18.925M	19.065M	18.825M	19.065M	18.75M	19.065M	18.825M	19.04M

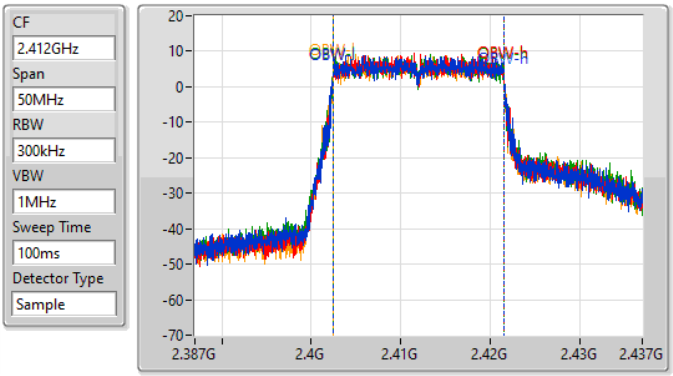
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

802.11ax HEW20_Nss4,(MCS0)_4TX EBW

2412MHz

11/07/2022



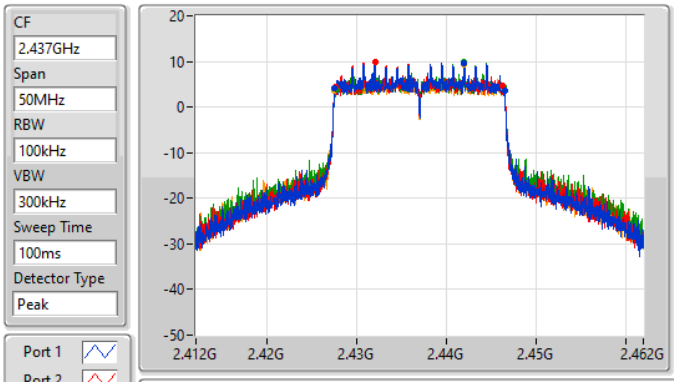


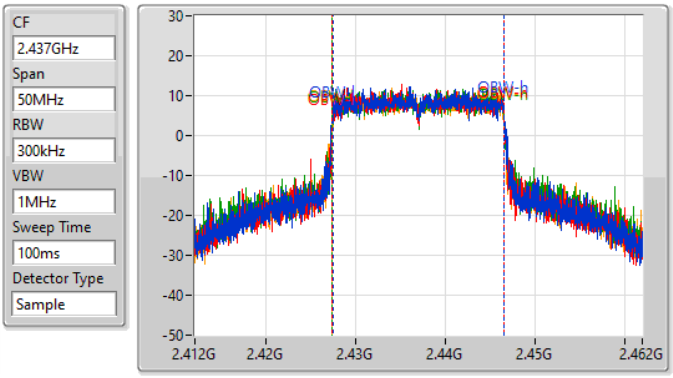
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.675M	2.4027G	2.421375G	19.065M	2.402455G	2.42152G	500k	1
18.675M	2.402675G	2.42135G	19.04M	2.402455G	2.421495G	500k	2
18.85M	2.402575G	2.421425G	19.09M	2.40243G	2.42152G	500k	3
18.775M	2.402575G	2.42135G	19.065M	2.40243G	2.421495G	500k	4

802.11ax HEW20_Nss4,(MCS0)_4TX EBW

2437MHz

11/07/2022





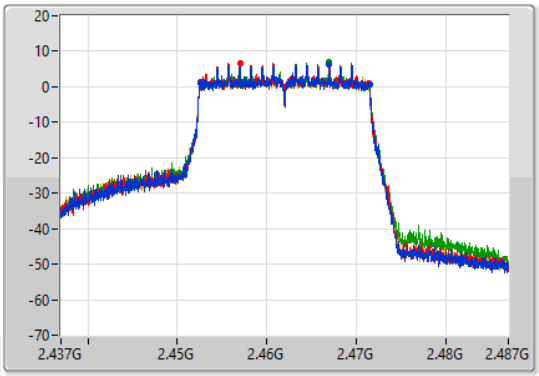
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.95M	2.427525G	2.446475G	19.165M	2.42743G	2.446595G	500k	1
18.725M	2.427575G	2.4463G	19.19M	2.42738G	2.44657G	500k	2
18.725M	2.4277G	2.446425G	19.215M	2.42738G	2.446595G	500k	3
18.925M	2.427525G	2.44645G	19.165M	2.42738G	2.446545G	500k	4

802.11ax HEW20_Nss4,(MCS0)_4TX EBW

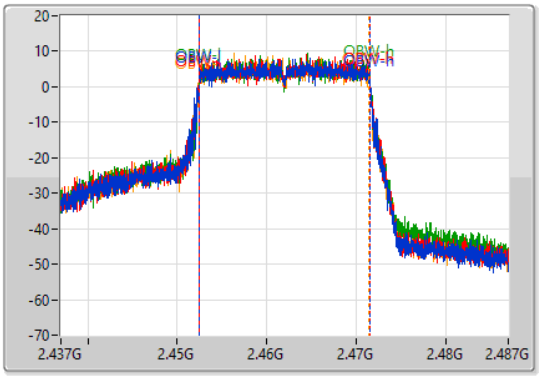
2462MHz

11/07/2022

CF 2.462GHz
Span 50MHz
RBW 100kHz
VBW 300kHz
Sweep Time 100ms
Detector Type Peak



CF 2.462GHz
Span 50MHz
RBW 300kHz
VBW 1MHz
Sweep Time 100ms
Detector Type Sample



Port 1
Port 2
Port 3
Port 4

6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.925M	2.45255G	2.471475G	19.065M	2.45243G	2.471495G	500k	1
18.825M	2.4526G	2.471425G	19.065M	2.45243G	2.471495G	500k	2
18.75M	2.452625G	2.471375G	19.065M	2.45243G	2.471495G	500k	3
18.825M	2.4526G	2.471425G	19.04M	2.45243G	2.47147G	500k	4

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	24.14	0.25942
802.11g_Nss1,(6Mbps)_1TX	22.66	0.18450
802.11ax HEW20_Nss1,(MCS0)_1TX	22.23	0.16711

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	6.20	22.57	22.57	29.80
2417MHz	Pass	6.20	23.19	23.19	29.80
2437MHz	Pass	6.20	24.14	24.14	29.80
2457MHz	Pass	6.20	22.63	22.63	29.80
2462MHz	Pass	6.20	22.25	22.25	29.80
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	6.20	19.24	19.24	29.80
2417MHz	Pass	6.20	20.36	20.36	29.80
2437MHz	Pass	6.20	22.66	22.66	29.80
2457MHz	Pass	6.20	20.16	20.16	29.80
2462MHz	Pass	6.20	19.55	19.55	29.80
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-	-
2412MHz	Pass	6.20	18.62	18.62	29.80
2417MHz	Pass	6.20	20.11	20.11	29.80
2437MHz	Pass	6.20	22.23	22.23	29.80
2457MHz	Pass	6.20	20.15	20.15	29.80
2462MHz	Pass	6.20	19.38	19.38	29.80

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

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_2TX	27.09	0.51168
802.11g_Nss1,(6Mbps)_2TX	24.55	0.28510

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	6.20	21.98	22.05	25.03	29.80
2417MHz	Pass	6.20	22.58	22.56	25.58	29.80
2437MHz	Pass	6.20	24.13	24.03	27.09	29.80
2457MHz	Pass	6.20	22.28	22.29	25.30	29.80
2462MHz	Pass	6.20	21.84	21.98	24.92	29.80
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	6.20	18.52	18.99	21.77	29.80
2417MHz	Pass	6.20	19.65	19.87	22.77	29.80
2437MHz	Pass	6.20	21.53	21.54	24.55	29.80
2457MHz	Pass	6.20	19.36	19.61	22.50	29.80
2462MHz	Pass	6.20	18.79	18.95	21.88	29.80

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

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11ax HEW20_Nss2,(MCS0)_2TX	24.02	0.25235

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11ax HEW20_Nss2,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	6.00	17.92	18.07	21.01	30.00
2417MHz	Pass	6.00	19.31	19.40	22.37	30.00
2437MHz	Pass	6.00	20.96	21.06	24.02	30.00
2457MHz	Pass	6.00	19.42	19.49	22.47	30.00
2462MHz	Pass	6.00	18.91	19.05	21.99	30.00

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

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_4TX	29.66	0.92470
802.11g_Nss1,(6Mbps)_4TX	27.14	0.51761
802.11ax HEW20_Nss1,(MCS0)_4TX	26.40	0.43652

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	6.20	21.58	21.56	21.43	21.23	27.47	29.80
2417MHz	Pass	6.20	21.91	21.93	21.71	21.43	27.77	29.80
2437MHz	Pass	6.20	23.87	23.87	23.52	23.26	29.66	29.80
2457MHz	Pass	6.20	21.94	21.92	21.90	21.55	27.85	29.80
2462MHz	Pass	6.20	21.67	21.74	21.57	21.08	27.54	29.80
802.11g_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	6.20	17.68	17.88	17.74	17.33	23.68	29.80
2417MHz	Pass	6.20	19.24	19.28	19.22	18.95	25.20	29.80
2437MHz	Pass	6.20	21.17	21.27	21.19	20.84	27.14	29.80
2457MHz	Pass	6.20	19.42	19.45	19.51	19.24	25.43	29.80
2462MHz	Pass	6.20	16.99	17.20	17.30	16.78	23.09	29.80
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	6.20	16.57	16.82	16.85	16.69	22.75	29.80
2417MHz	Pass	6.20	18.54	18.95	18.55	18.40	24.64	29.80
2437MHz	Pass	6.20	20.39	20.57	20.47	20.06	26.40	29.80
2457MHz	Pass	6.20	19.46	19.56	19.50	19.20	25.45	29.80
2462MHz	Pass	6.20	17.09	17.42	17.41	17.01	23.26	29.80

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

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	24.42	0.27669

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	11.55	16.57	16.82	16.85	16.69	22.75	24.45
2417MHz	Pass	11.55	18.40	18.67	18.48	18.03	24.42	24.45
2437MHz	Pass	11.55	18.32	18.55	18.49	18.24	24.42	24.45
2457MHz	Pass	11.55	18.14	18.35	18.43	17.85	24.22	24.45
2462MHz	Pass	11.55	17.09	17.42	17.41	17.01	23.26	24.45

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

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11ax HEW20_Nss4,(MCS0)_4TX	25.61	0.36392

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11ax HEW20_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	5.55	16.06	16.33	16.43	15.94	22.22	30.00
2417MHz	Pass	5.55	17.35	17.58	17.38	17.13	23.38	30.00
2437MHz	Pass	5.55	19.61	19.86	19.59	19.28	25.61	30.00
2457MHz	Pass	5.55	18.06	18.15	18.06	17.61	24.00	30.00
2462MHz	Pass	5.55	15.37	15.75	15.82	15.20	21.56	30.00

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

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	24.67	0.29309
802.11g_Nss1,(6Mbps)_1TX	22.45	0.17579
802.11ax HEW20_Nss1,(MCS0)_1TX	23.11	0.20464

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	3.60	23.37	23.37	30.00
2417MHz	Pass	3.60	23.90	23.90	30.00
2437MHz	Pass	3.60	24.67	24.67	30.00
2457MHz	Pass	3.60	23.27	23.27	30.00
2462MHz	Pass	3.60	22.59	22.59	30.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	3.60	20.12	20.12	30.00
2417MHz	Pass	3.60	21.00	21.00	30.00
2437MHz	Pass	3.60	22.45	22.45	30.00
2457MHz	Pass	3.60	21.11	21.11	30.00
2462MHz	Pass	3.60	19.48	19.48	30.00
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-	-
2412MHz	Pass	3.60	19.80	19.80	30.00
2417MHz	Pass	3.60	20.99	20.99	30.00
2437MHz	Pass	3.60	23.11	23.11	30.00
2457MHz	Pass	3.60	20.32	20.32	30.00
2462MHz	Pass	3.60	18.93	18.93	30.00

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

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_2TX	27.45	0.55590
802.11g_Nss1,(6Mbps)_2TX	25.20	0.33113

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	3.60	21.68	21.80	24.75	30.00
2417MHz	Pass	3.60	23.19	23.18	26.20	30.00
2437MHz	Pass	3.60	24.58	24.30	27.45	30.00
2457MHz	Pass	3.60	22.74	22.58	25.67	30.00
2462MHz	Pass	3.60	22.42	22.44	25.44	30.00
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	3.60	19.20	19.26	22.24	30.00
2417MHz	Pass	3.60	19.84	20.03	22.95	30.00
2437MHz	Pass	3.60	22.26	22.12	25.20	30.00
2457MHz	Pass	3.60	20.44	20.29	23.38	30.00
2462MHz	Pass	3.60	19.46	19.77	22.63	30.00

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

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11ax HEW20_Nss2,(MCS0)_2TX	24.77	0.29992

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11ax HEW20_Nss2,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	3.40	18.64	18.80	21.73	30.00
2417MHz	Pass	3.40	20.21	20.19	23.21	30.00
2437MHz	Pass	3.40	21.68	21.84	24.77	30.00
2457MHz	Pass	3.40	19.84	19.96	22.91	30.00
2462MHz	Pass	3.40	18.41	18.58	21.51	30.00

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

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_4TX	29.80	0.95499
802.11g_Nss1,(6Mbps)_4TX	27.64	0.58076
802.11ax HEW20_Nss1,(MCS0)_4TX	25.83	0.38282

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	3.60	21.77	21.83	21.69	21.45	27.71	30.00
2417MHz	Pass	3.60	22.07	22.08	21.78	21.61	27.91	30.00
2437MHz	Pass	3.60	24.10	23.89	23.64	23.47	29.80	30.00
2457MHz	Pass	3.60	21.91	21.85	21.91	21.54	27.83	30.00
2462MHz	Pass	3.60	21.83	21.82	21.58	21.33	27.67	30.00
802.11g_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	3.60	18.34	18.30	18.18	17.76	24.17	30.00
2417MHz	Pass	3.60	20.14	20.17	20.01	19.22	25.92	30.00
2437MHz	Pass	3.60	21.73	21.82	21.65	21.27	27.64	30.00
2457MHz	Pass	3.60	20.57	20.94	20.71	20.54	26.71	30.00
2462MHz	Pass	3.60	17.51	17.58	17.62	17.10	23.48	30.00
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	3.60	17.01	17.20	17.38	16.96	23.16	30.00
2417MHz	Pass	3.60	19.18	19.21	19.19	18.88	25.14	30.00
2437MHz	Pass	3.60	19.90	19.98	19.77	19.56	25.83	30.00
2457MHz	Pass	3.60	19.37	19.62	19.45	19.21	25.44	30.00
2462MHz	Pass	3.60	17.19	17.41	17.41	17.00	23.28	30.00

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

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	25.83	0.38282

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	8.75	17.01	17.2	17.38	16.96	23.16	27.25
2417MHz	Pass	8.75	19.18	19.21	19.19	18.88	25.14	27.25
2437MHz	Pass	8.75	19.9	19.98	19.77	19.56	25.83	27.25
2457MHz	Pass	8.75	19.37	19.62	19.45	19.21	25.44	27.25
2462MHz	Pass	8.75	17.19	17.41	17.41	17	23.28	27.25

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

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11ax HEW20_Nss4,(MCS0)_4TX	26.60	0.45709

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11ax HEW20_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	2.76	17.72	17.91	17.81	17.50	23.76	30.00
2417MHz	Pass	2.76	19.14	19.25	19.18	18.67	25.09	30.00
2437MHz	Pass	2.76	20.64	20.71	20.59	20.37	26.60	30.00
2457MHz	Pass	2.76	18.68	18.93	18.84	18.41	24.74	30.00
2462MHz	Pass	2.76	16.59	16.93	17.02	16.61	22.81	30.00

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

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_1TX	1.42
802.11g_Nss1,(6Mbps)_1TX	-2.85
802.11ax HEW20_Nss1,(MCS0)_1TX	-5.06

RBW = 3kHz;

Result

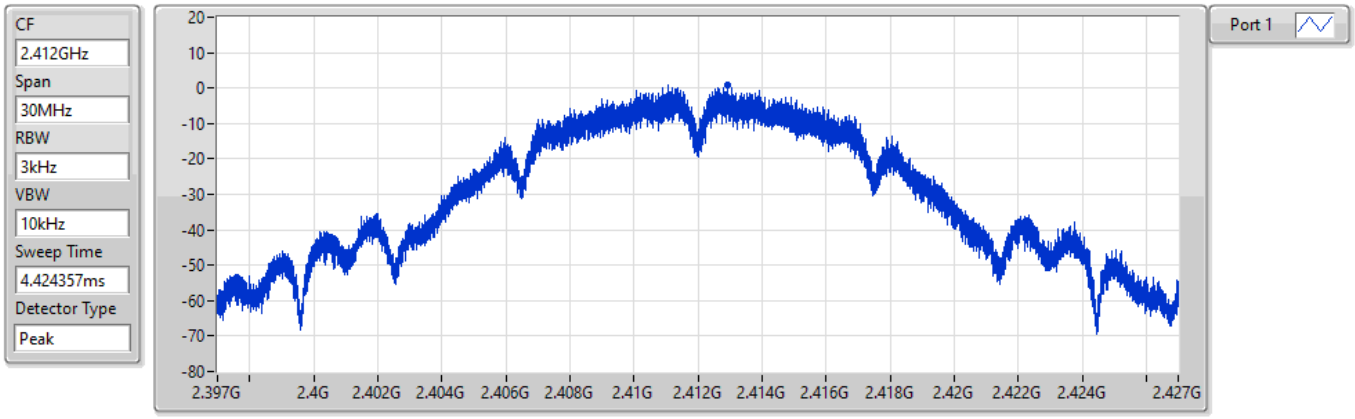
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	6.20	0.74	0.74	7.80
2437MHz	Pass	6.20	1.42	1.42	7.80
2462MHz	Pass	6.20	-0.24	-0.24	7.80
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	6.20	-6.50	-6.50	7.80
2437MHz	Pass	6.20	-2.85	-2.85	7.80
2462MHz	Pass	6.20	-5.92	-5.92	7.80
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-	-
2412MHz	Pass	6.20	-7.74	-7.74	7.80
2437MHz	Pass	6.20	-5.06	-5.06	7.80
2462MHz	Pass	6.20	-7.82	-7.82	7.80

DG = Directional Gain; RBW = 3kHz;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;

802.11b_Nss1,(1Mbps)_1TX PSD

2412MHz

09/07/2022

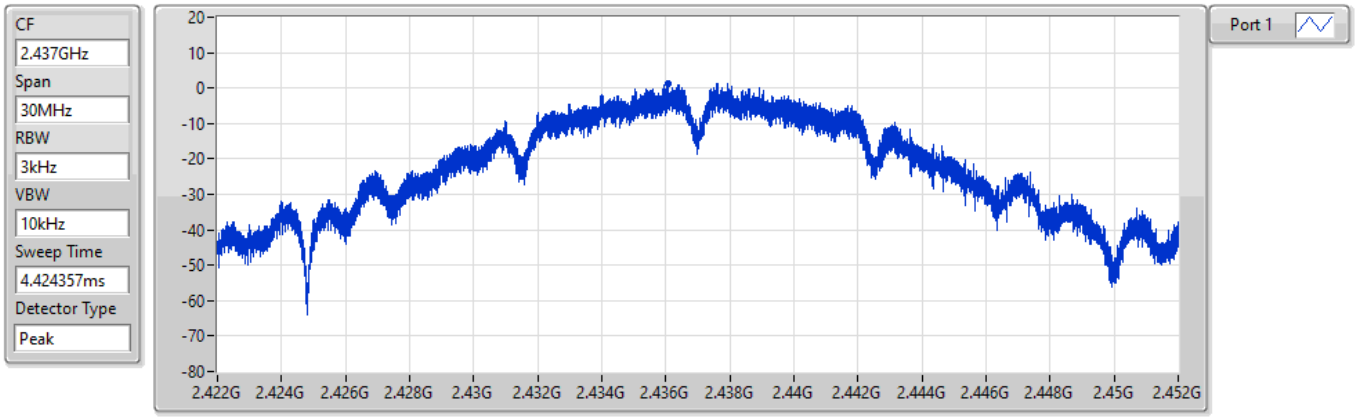


Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.74	0.74	0.74

802.11b_Nss1,(1Mbps)_1TX PSD

2437MHz

09/07/2022

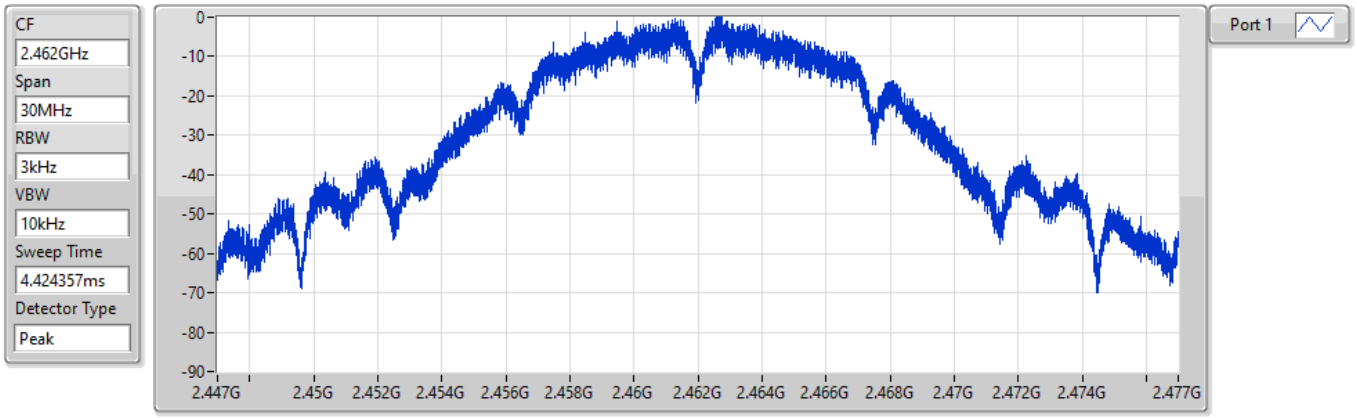


Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.42	1.42	1.42

802.11b_Nss1,(1Mbps)_1TX PSD

2462MHz

09/07/2022

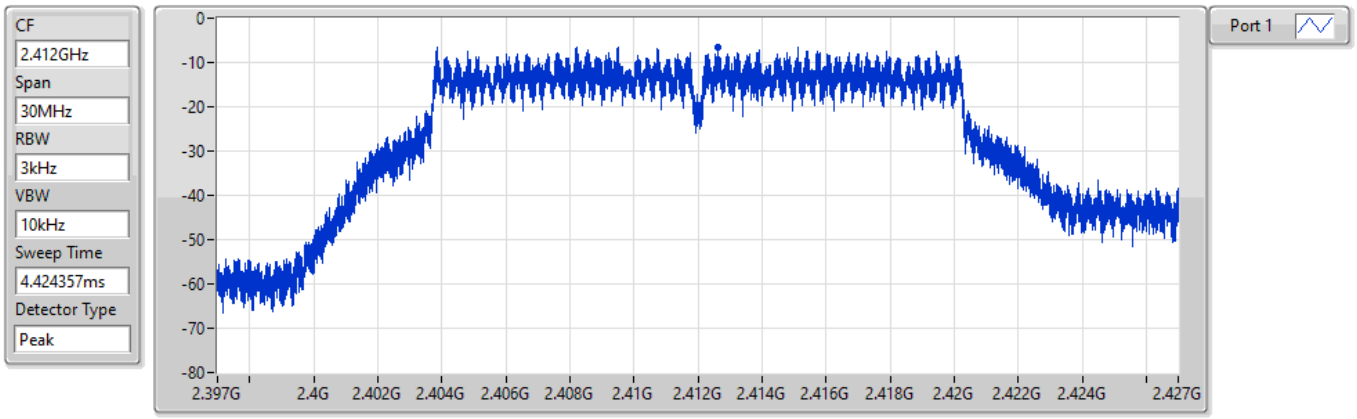


Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.24	-0.24	-0.24

802.11g_Nss1,(6Mbps)_1TX PSD

2412MHz

09/07/2022

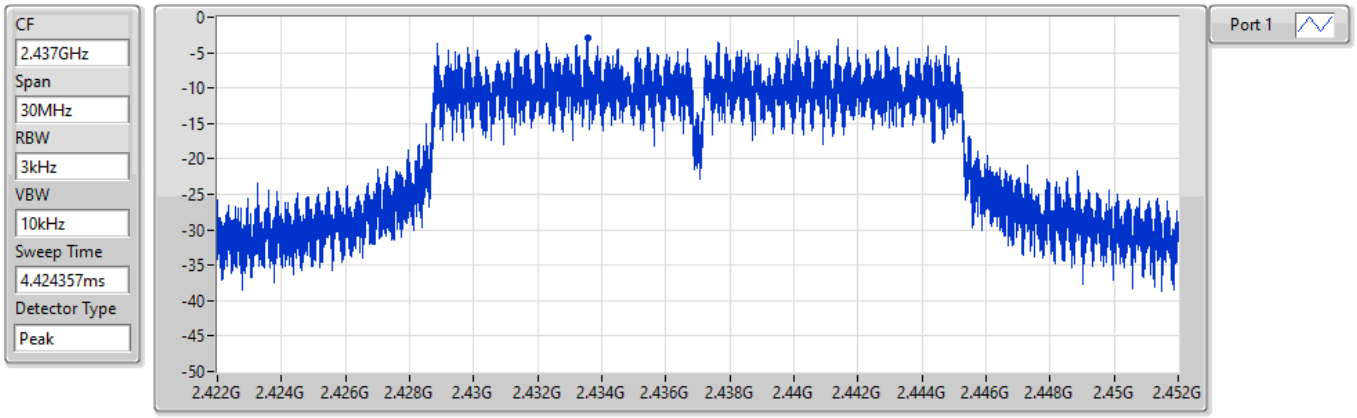


Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-6.50	-6.50	-6.50

802.11g_Nss1,(6Mbps)_1TX PSD

2437MHz

09/07/2022

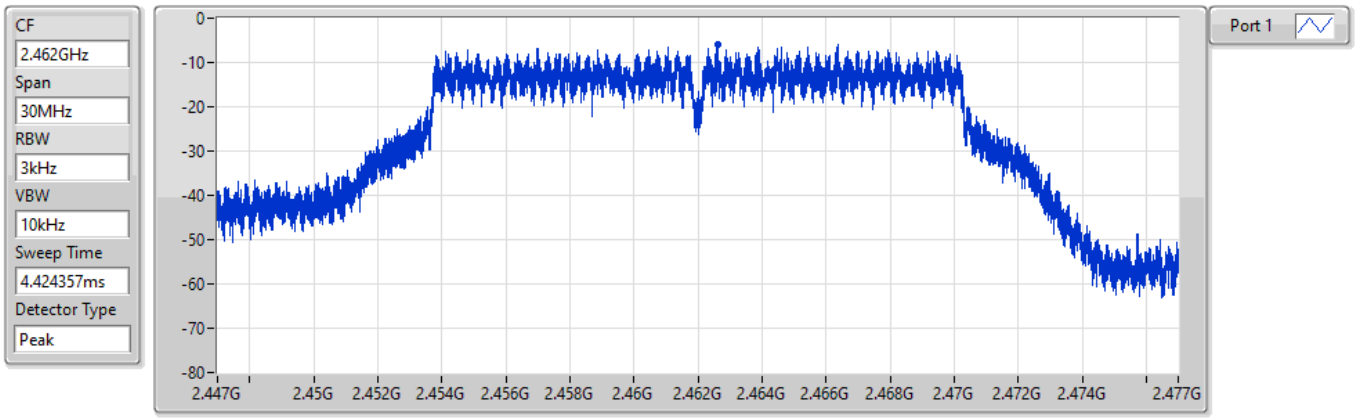


Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.85	-2.85	-2.85

802.11g_Nss1,(6Mbps)_1TX PSD

2462MHz

09/07/2022

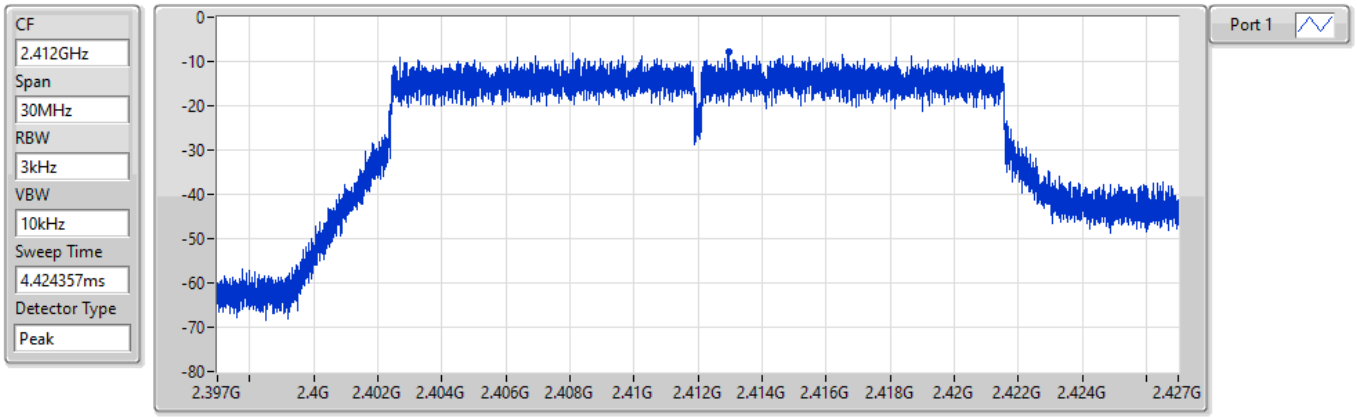


Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-5.92	-5.92	-5.92

802.11ax HEW20_Nss1,(MCS0)_1TX PSD

2412MHz

09/07/2022

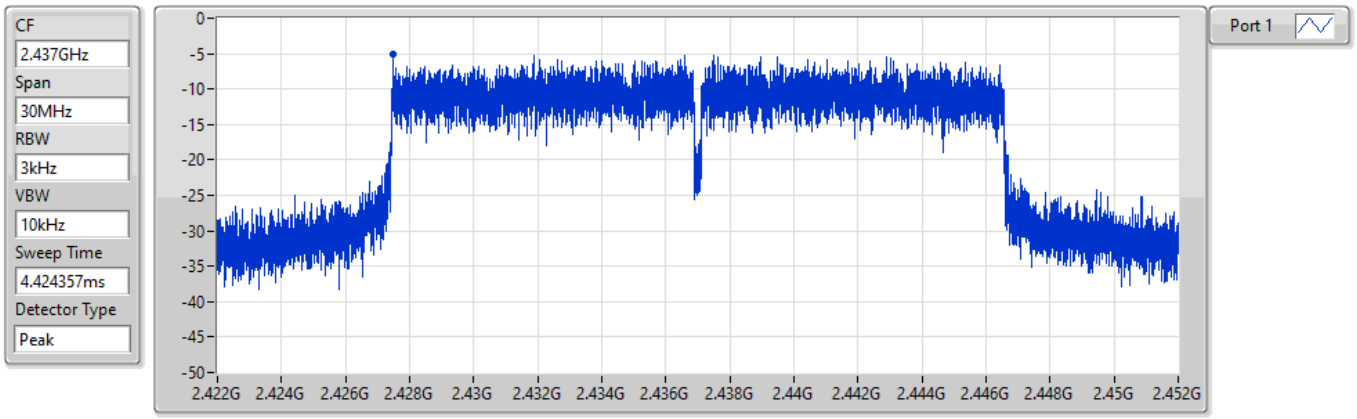


Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-7.74	-7.74	-7.74

802.11ax HEW20_Nss1,(MCS0)_1TX PSD

2437MHz

09/07/2022

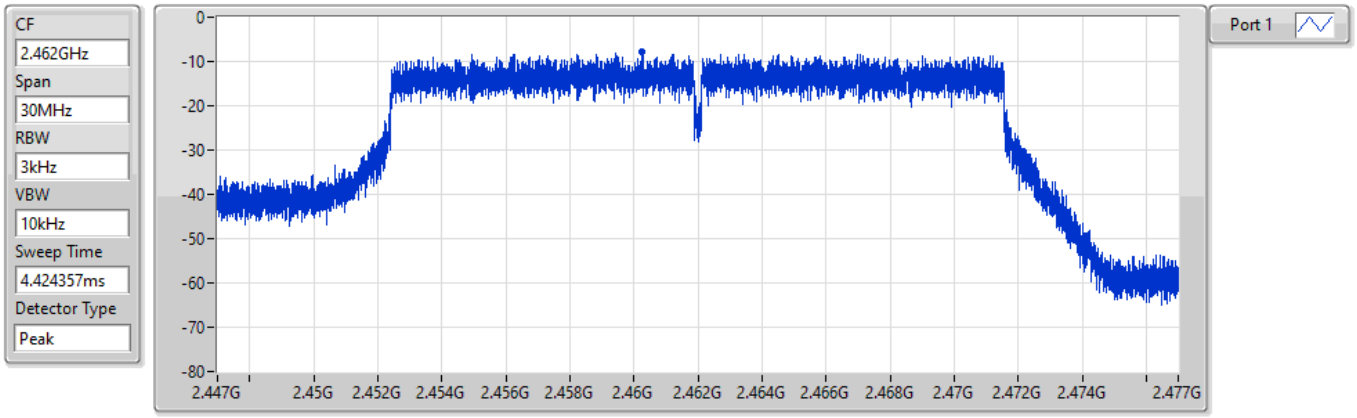


Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-5.06	-5.06	-5.06

802.11ax HEW20_Nss1,(MCS0)_1TX **PSD**

2462MHz

09/07/2022



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-7.82	-7.82	-7.82

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_2TX	3.43
802.11g_Nss1,(6Mbps)_2TX	-1.15

RBW = 3kHz;

Result

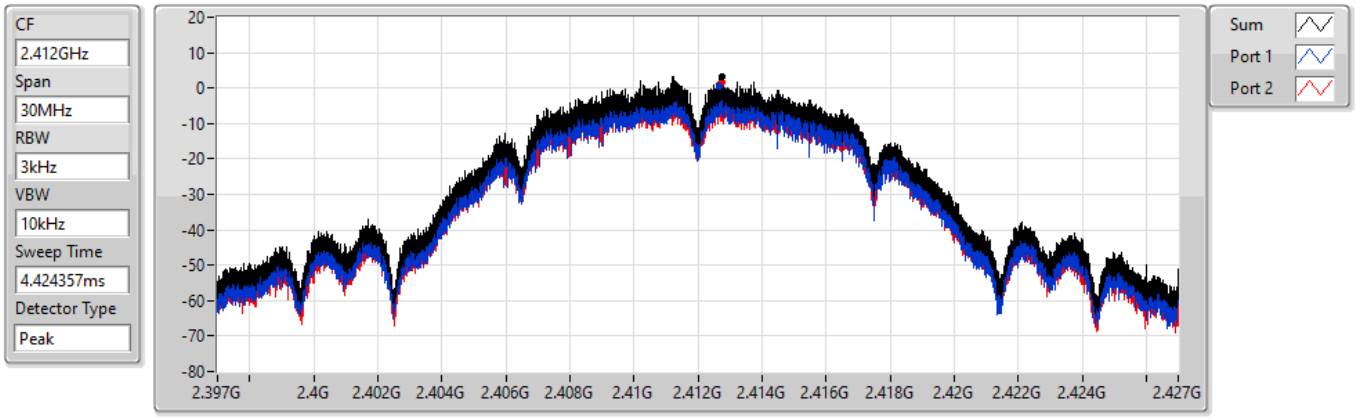
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	9.01	0.55	1.53	3.34	4.99
2437MHz	Pass	9.01	1.90	0.92	3.43	4.99
2462MHz	Pass	9.01	0.09	0.03	1.59	4.99
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	9.01	-7.21	-6.20	-4.84	4.99
2437MHz	Pass	9.01	-4.18	-3.66	-1.15	4.99
2462MHz	Pass	9.01	-6.53	-7.07	-4.82	4.99

DG = Directional Gain; RBW = 3kHz;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;

802.11b_Nss1,(1Mbps)_2TX PSD

2412MHz

09/07/2022

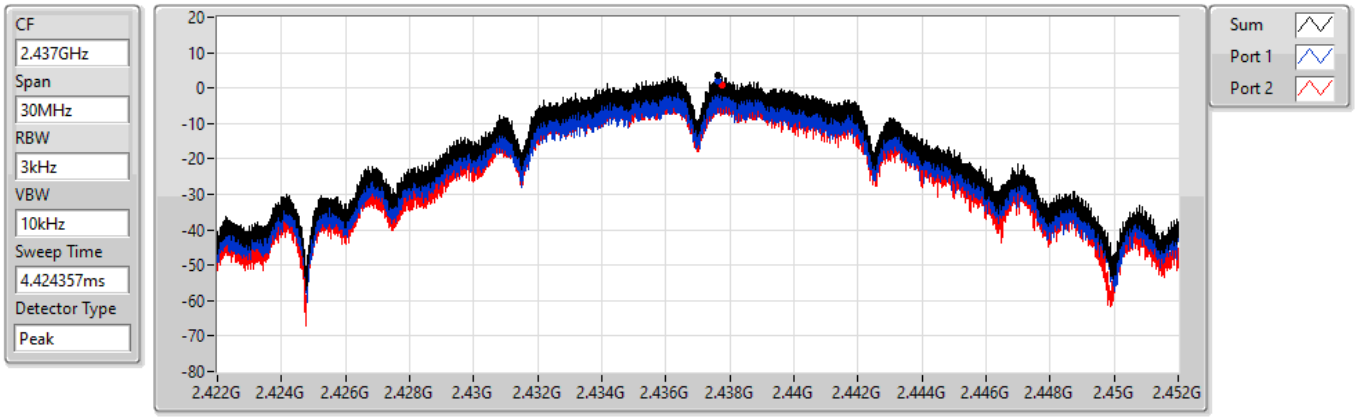


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.34	3.34	0.55	1.53

802.11b_Nss1,(1Mbps)_2TX PSD

2437MHz

09/07/2022

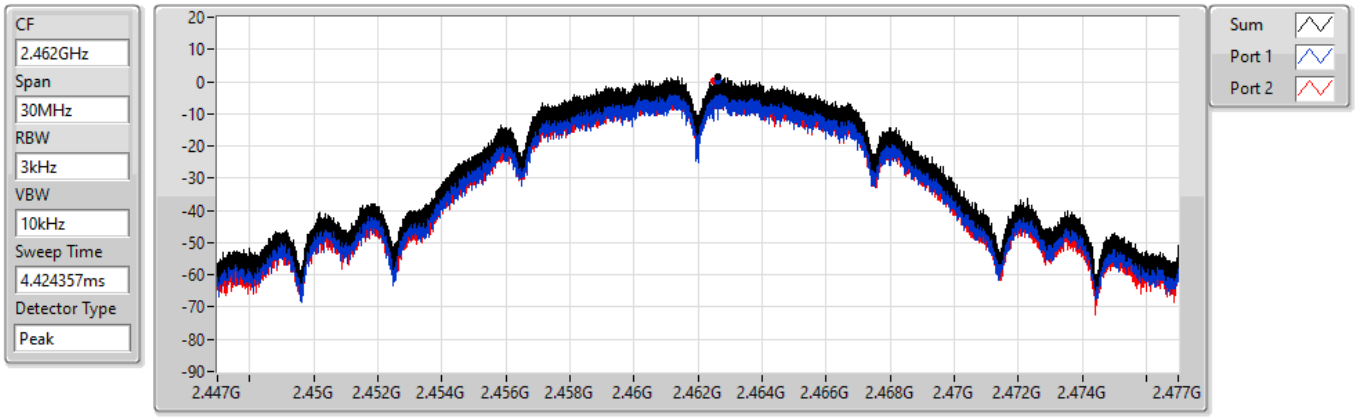


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.43	3.43	1.90	0.92

802.11b_Nss1,(1Mbps)_2TX PSD

2462MHz

09/07/2022

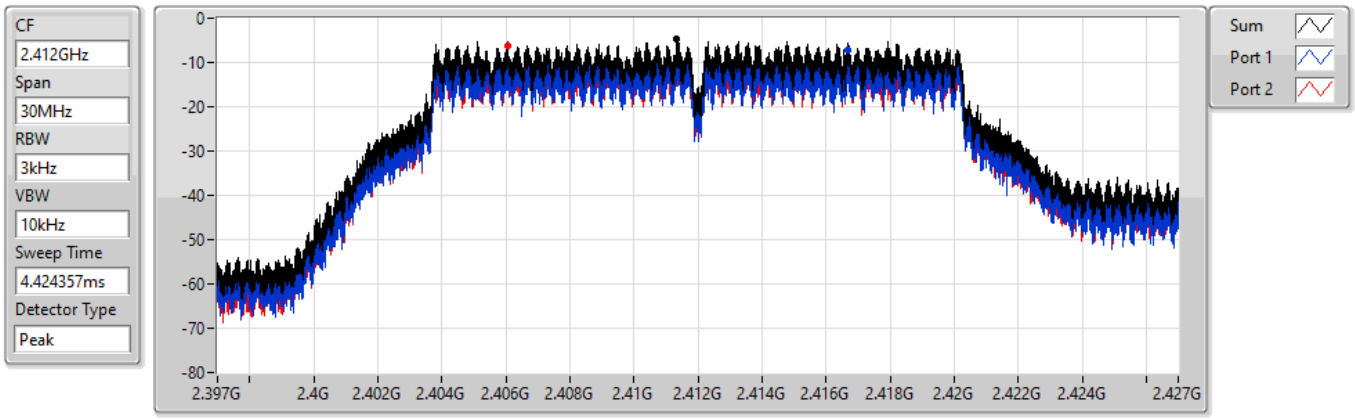


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.59	1.59	0.09	0.03

802.11g_Nss1,(6Mbps)_2TX PSD

2412MHz

09/07/2022

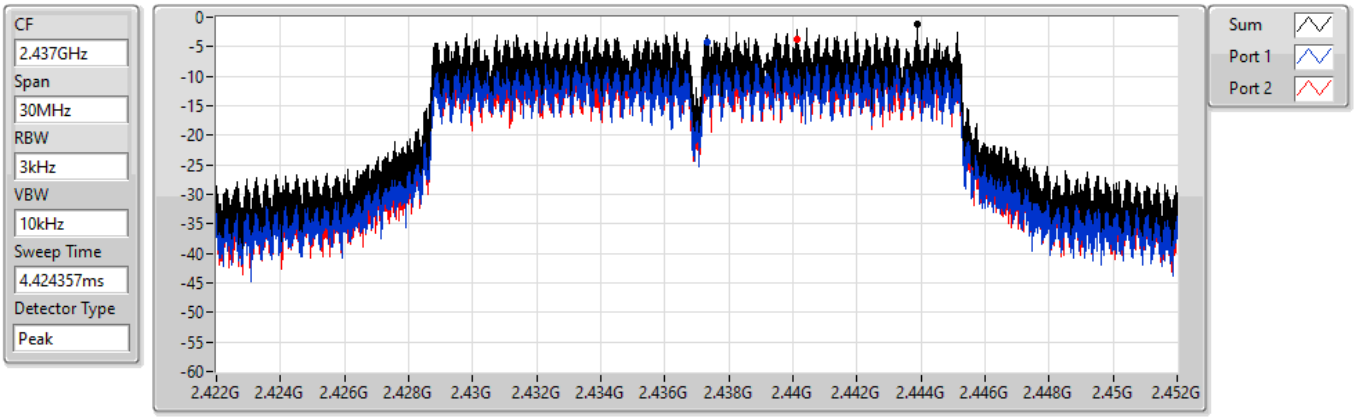


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.84	-4.84	-7.21	-6.20

802.11g_Nss1,(6Mbps)_2TX PSD

2437MHz

09/07/2022

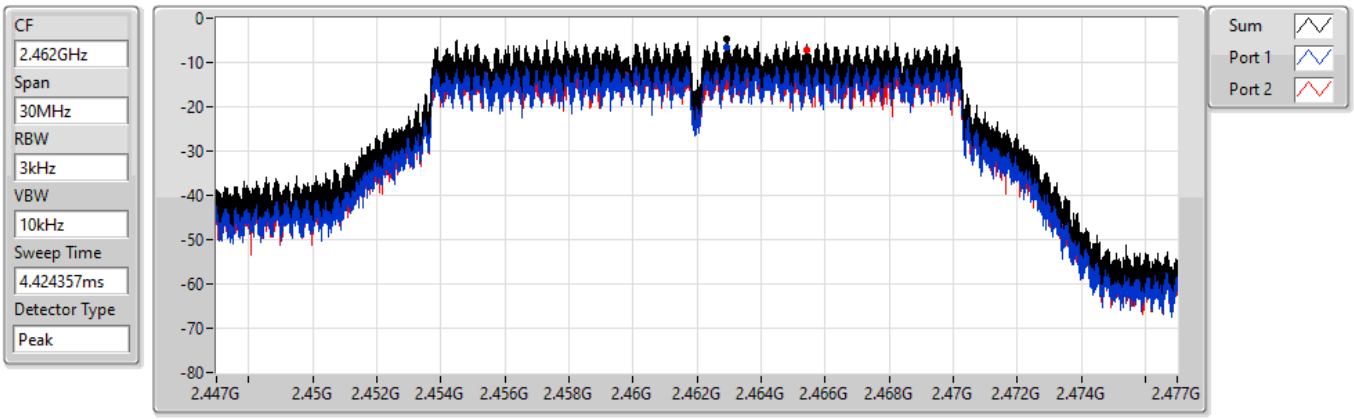


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.15	-1.15	-4.18	-3.66

802.11g_Nss1,(6Mbps)_2TX PSD

2462MHz

09/07/2022



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.82	-4.82	-6.53	-7.07

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11ax HEW20_Nss2,(MCS0)_2TX	-2.66

RBW = 3kHz;

Result

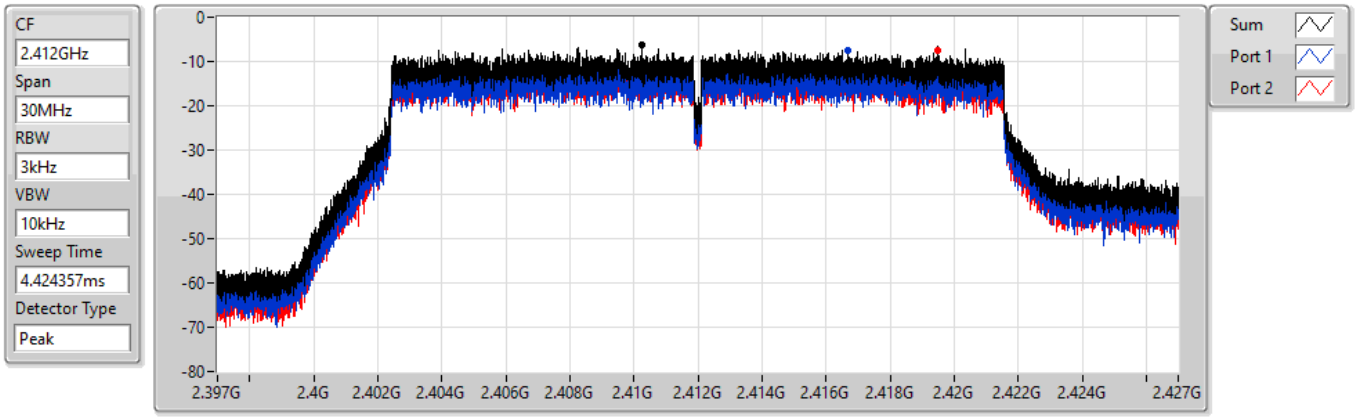
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11ax HEW20_Nss2,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	6.00	-7.64	-7.39	-6.26	8.00
2437MHz	Pass	6.00	-5.47	-5.56	-2.66	8.00
2462MHz	Pass	6.00	-7.11	-6.96	-4.64	8.00

DG = Directional Gain; RBW = 3kHz;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;

802.11ax HEW20_Nss2,(MCS0)_2TX PSD

2412MHz

09/07/2022

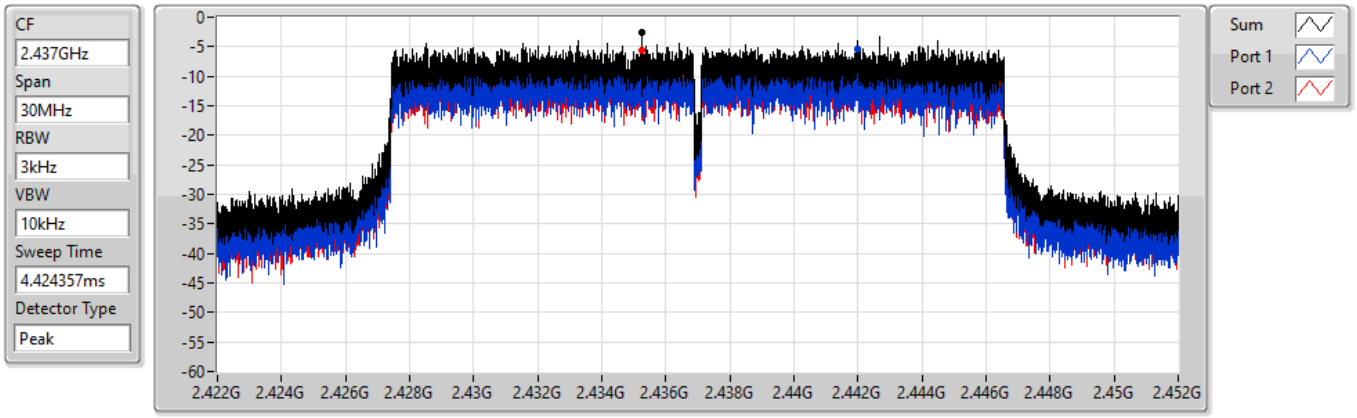


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-6.26	-6.26	-7.64	-7.39

802.11ax HEW20_Nss2,(MCS0)_2TX PSD

2437MHz

09/07/2022

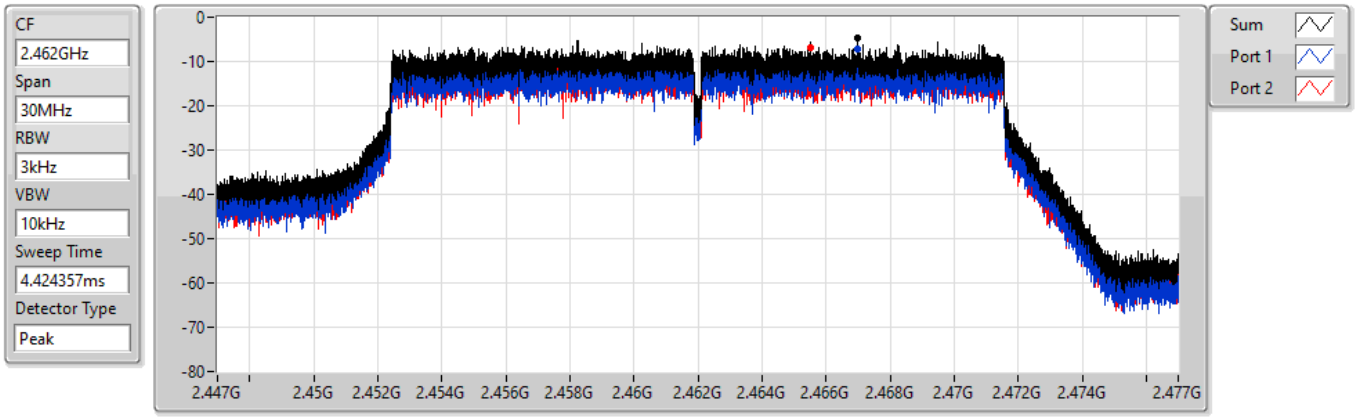


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.66	-2.66	-5.47	-5.56

802.11ax HEW20_Nss2,(MCS0)_2TX PSD

2462MHz

09/07/2022



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.64	-4.64	-7.11	-6.96

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_4TX	-1.17
802.11g_Nss1,(6Mbps)_4TX	0.23
802.11ax HEW20_Nss1,(MCS0)_4TX	-0.80

RBW = 3kHz;

Result

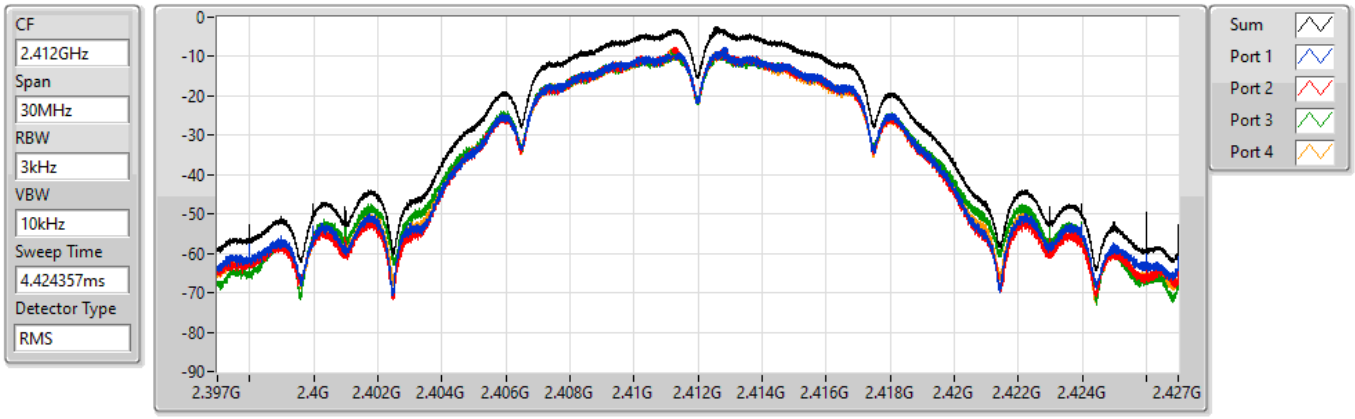
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	11.55	-8.59	-8.36	-8.82	-8.86	-3.04	2.45
2437MHz	Pass	11.55	-6.68	-6.36	-6.97	-7.02	-1.17	2.45
2462MHz	Pass	11.55	-8.38	-8.33	-8.10	-8.81	-3.02	2.45
802.11g_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	11.55	-8.26	-7.13	-8.17	-7.68	-3.36	2.45
2437MHz	Pass	11.55	-4.39	-2.79	-4.05	-4.83	0.23	2.45
2462MHz	Pass	11.55	-7.68	-8.02	-8.68	-8.59	-4.64	2.45
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	11.55	-8.35	-8.84	-9.15	-9.11	-4.98	2.45
2437MHz	Pass	11.55	-5.93	-5.91	-4.79	-6.56	-0.80	2.45
2462MHz	Pass	11.55	-9.01	-9.74	-8.23	-8.54	-4.39	2.45

DG = Directional Gain; RBW = 3kHz;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;

802.11b_Nss1,(1Mbps)_4TX PSD

2412MHz

09/07/2022

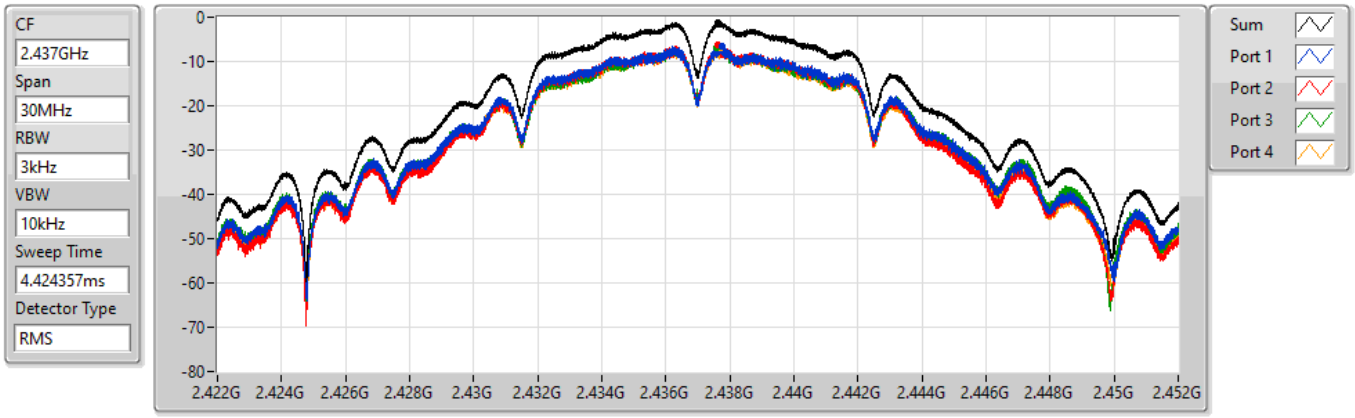


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.04	-3.04	-8.59	-8.36	-8.82	-8.86

802.11b_Nss1,(1Mbps)_4TX PSD

2437MHz

09/07/2022

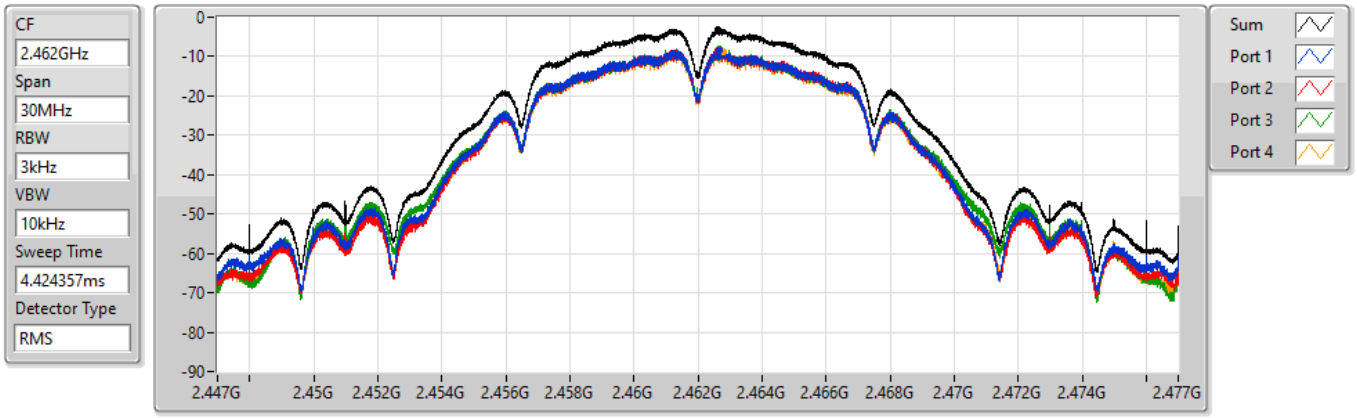


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.17	-1.17	-6.68	-6.36	-6.97	-7.02

802.11b_Nss1,(1Mbps)_4TX PSD

2462MHz

09/07/2022

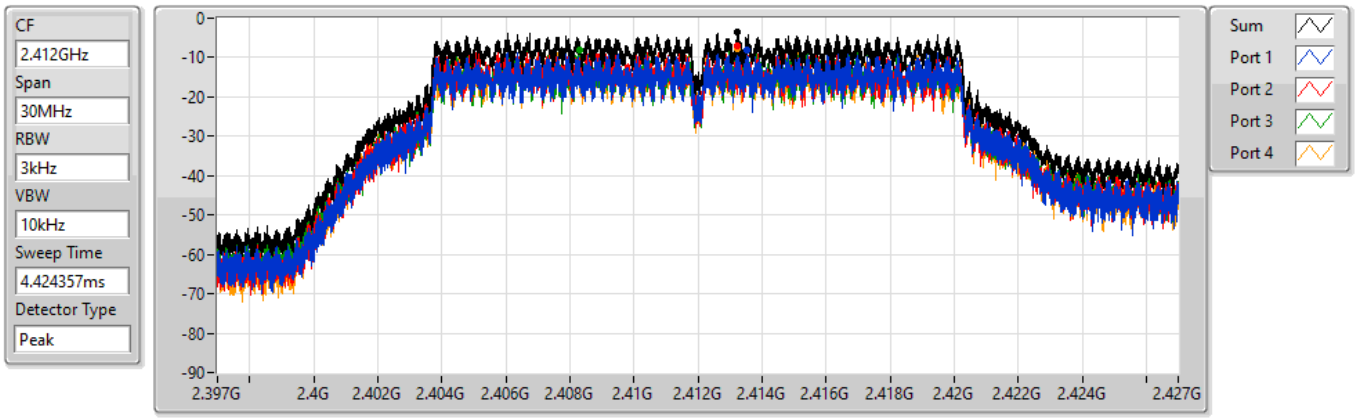


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.02	-3.02	-8.38	-8.33	-8.10	-8.81

802.11g_Nss1,(6Mbps)_4TX PSD

2412MHz

09/07/2022

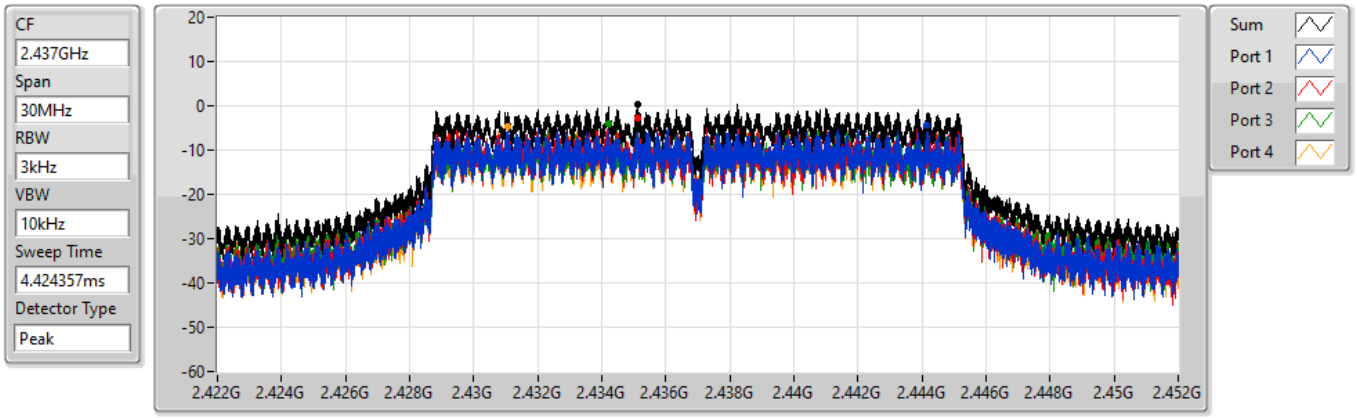


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.36	-3.36	-8.26	-7.13	-8.17	-7.68

802.11g_Nss1,(6Mbps)_4TX PSD

2437MHz

09/07/2022

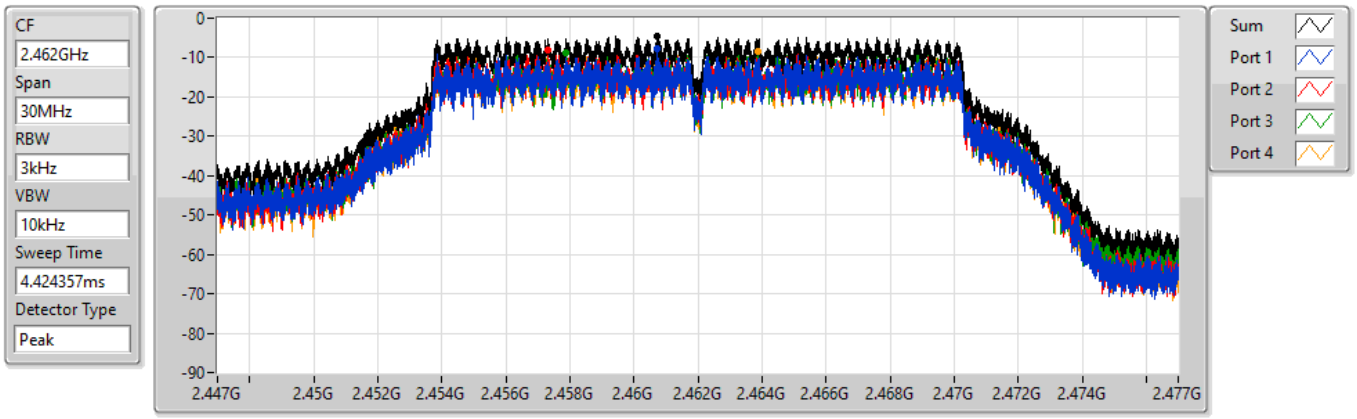


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.23	0.23	-4.39	-2.79	-4.05	-4.83

802.11g_Nss1,(6Mbps)_4TX PSD

2462MHz

09/07/2022

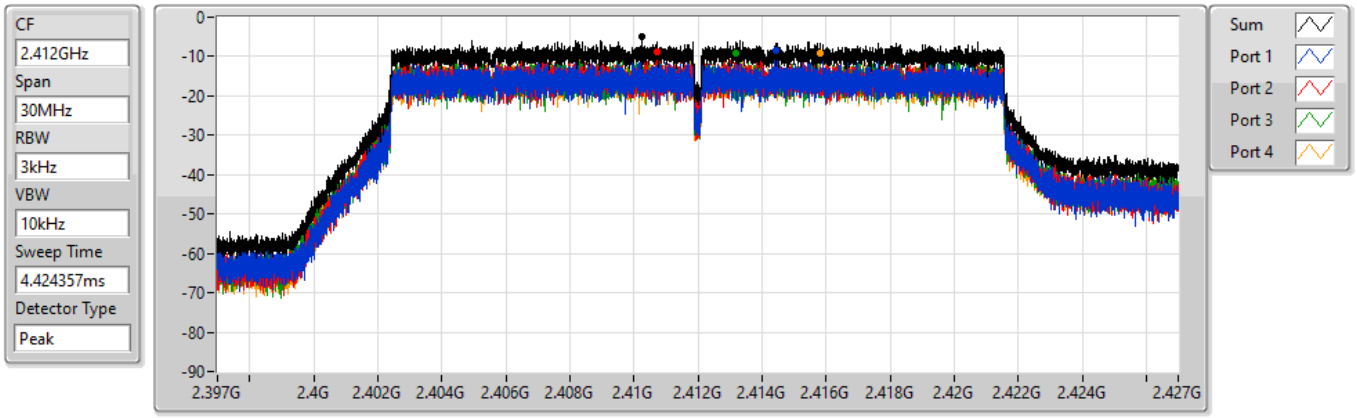


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.64	-4.64	-7.68	-8.02	-8.68	-8.59

802.11ax HEW20_Nss1,(MCS0)_4TX PSD

2412MHz

09/07/2022

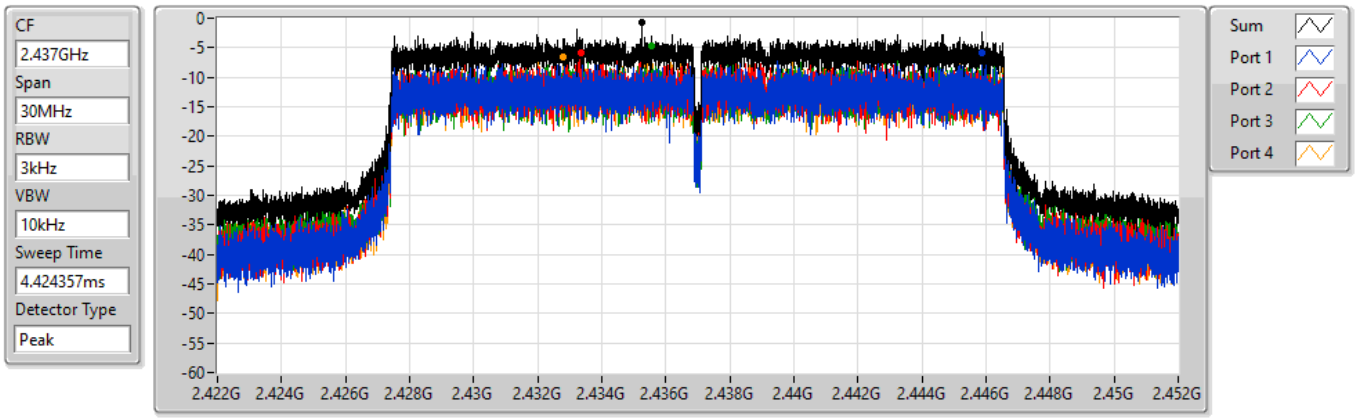


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.98	-4.98	-8.35	-8.84	-9.15	-9.11

802.11ax HEW20_Nss1,(MCS0)_4TX PSD

2437MHz

09/07/2022

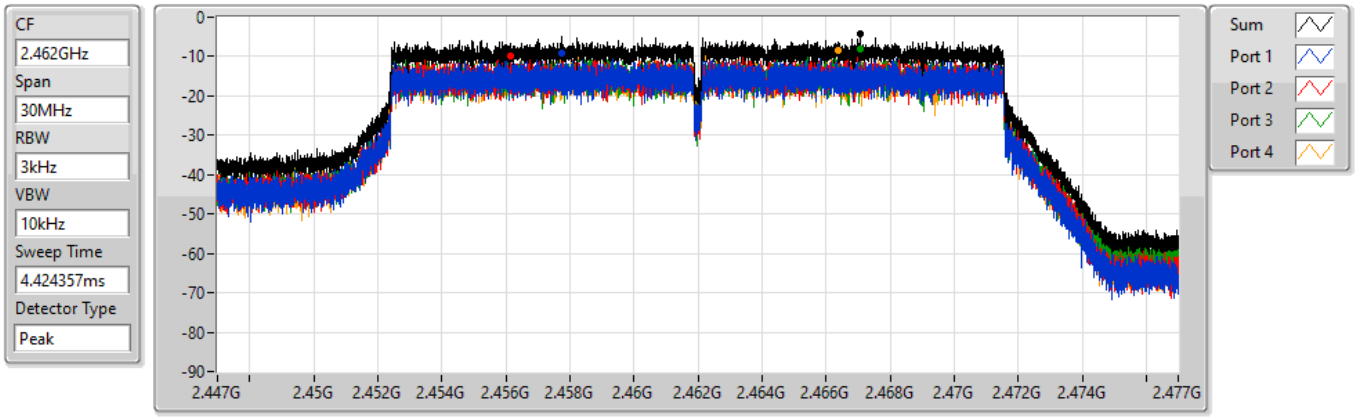


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.80	-0.80	-5.93	-5.91	-4.79	-6.56

802.11ax HEW20_Nss1,(MCS0)_4TX PSD

2462MHz

09/07/2022



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.39	-4.39	-9.01	-9.74	-8.23	-8.54

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11ax HEW20_Nss4,(MCS0)_4TX	-0.82

RBW = 3kHz;

Result

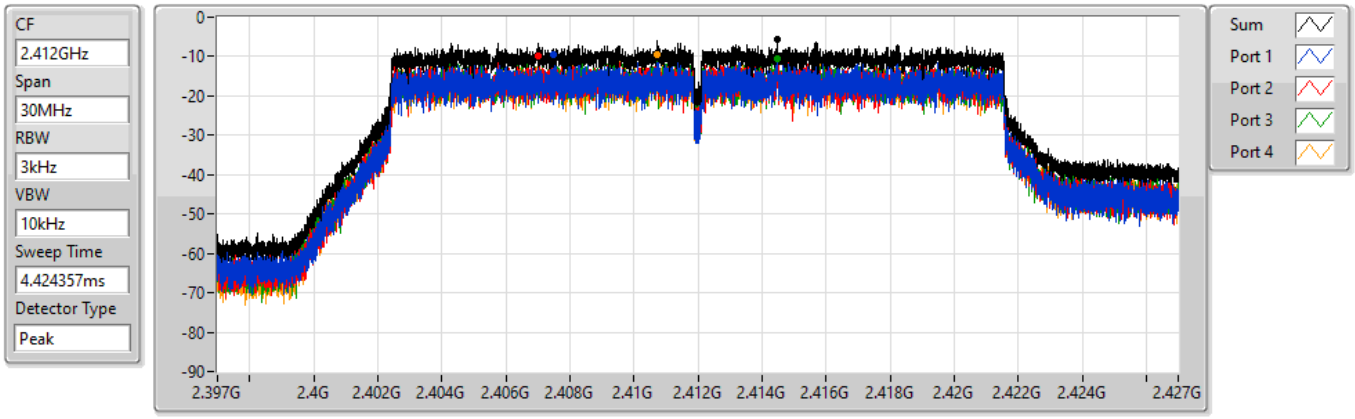
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11ax HEW20_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	5.55	-9.36	-9.85	-10.45	-9.45	-5.63	8.00
2437MHz	Pass	5.55	-5.59	-7.10	-7.17	-4.75	-0.82	8.00
2462MHz	Pass	5.55	-11.45	-9.69	-9.96	-10.23	-6.47	8.00

DG = Directional Gain; RBW = 3kHz;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;

802.11ax HEW20_Nss4,(MCS0)_4TX PSD

2412MHz

09/07/2022

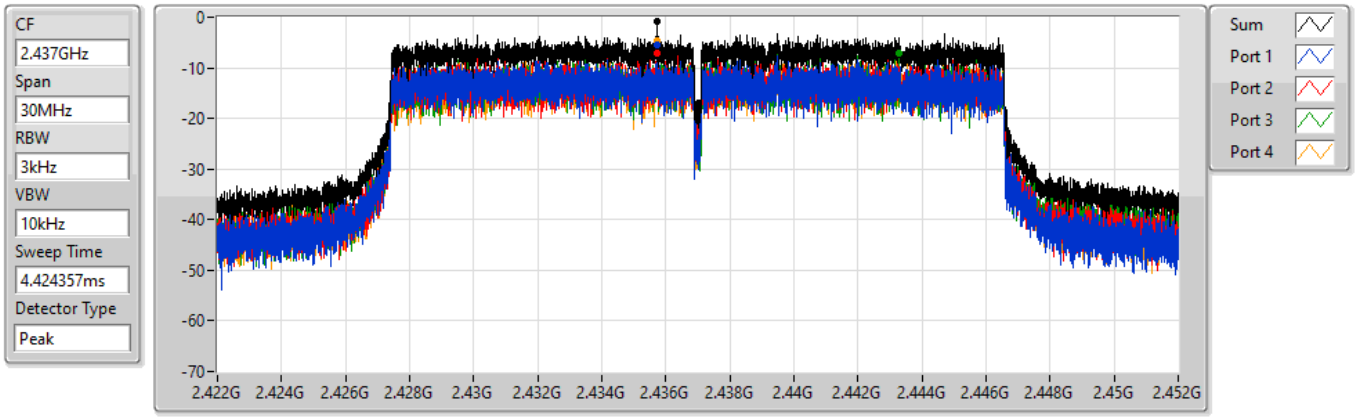


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-5.63	-5.63	-9.36	-9.85	-10.45	-9.45

802.11ax HEW20_Nss4,(MCS0)_4TX PSD

2437MHz

09/07/2022

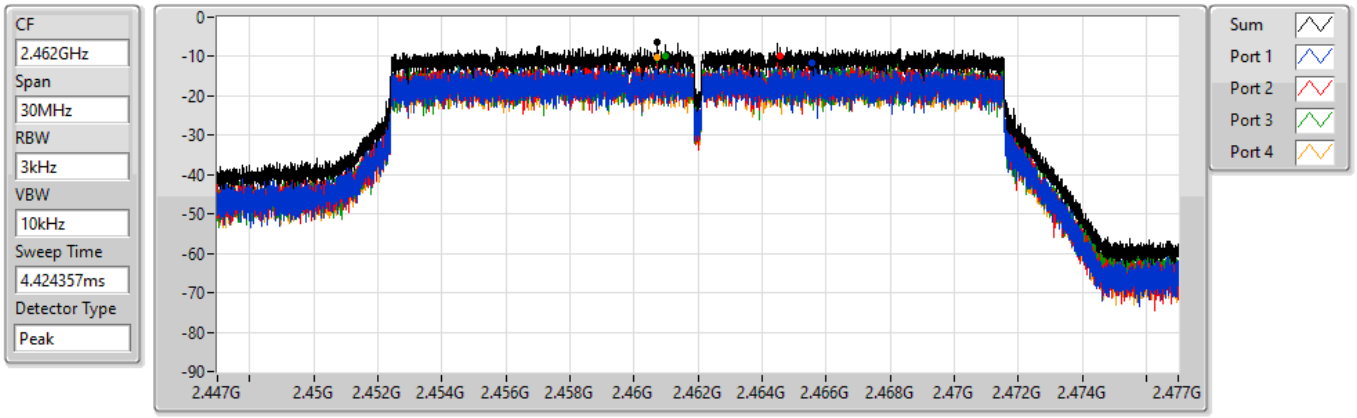


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.82	-0.82	-5.59	-7.10	-7.17	-4.75

802.11ax HEW20_Nss4,(MCS0)_4TX PSD

2462MHz

09/07/2022



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-6.47	-6.47	-11.45	-9.69	-9.96	-10.23

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_1TX	1.51
802.11g_Nss1,(6Mbps)_1TX	-2.78
802.11ax HEW20_Nss1,(MCS0)_1TX	-2.68

RBW = 3kHz;

Result

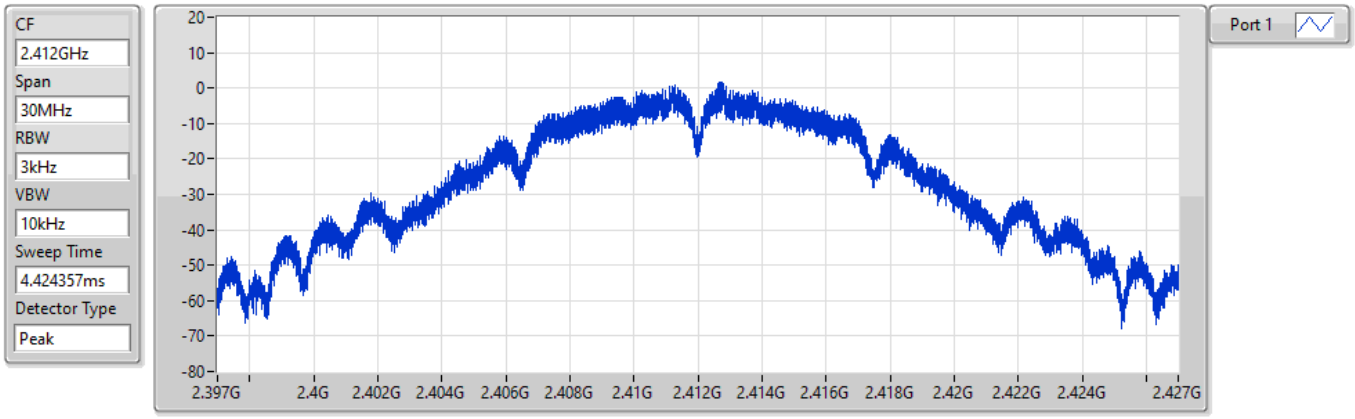
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	3.60	0.77	0.77	8.00
2437MHz	Pass	3.60	1.51	1.51	8.00
2462MHz	Pass	3.60	0.02	0.02	8.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	3.60	-4.48	-4.48	8.00
2437MHz	Pass	3.60	-2.78	-2.78	8.00
2462MHz	Pass	3.60	-5.49	-5.49	8.00
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-	-
2412MHz	Pass	3.60	-6.51	-6.51	8.00
2437MHz	Pass	3.60	-2.68	-2.68	8.00
2462MHz	Pass	3.60	-6.58	-6.58	8.00

DG = Directional Gain; RBW = 3kHz;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;

802.11b_Nss1,(1Mbps)_1TX PSD

2412MHz

11/07/2022

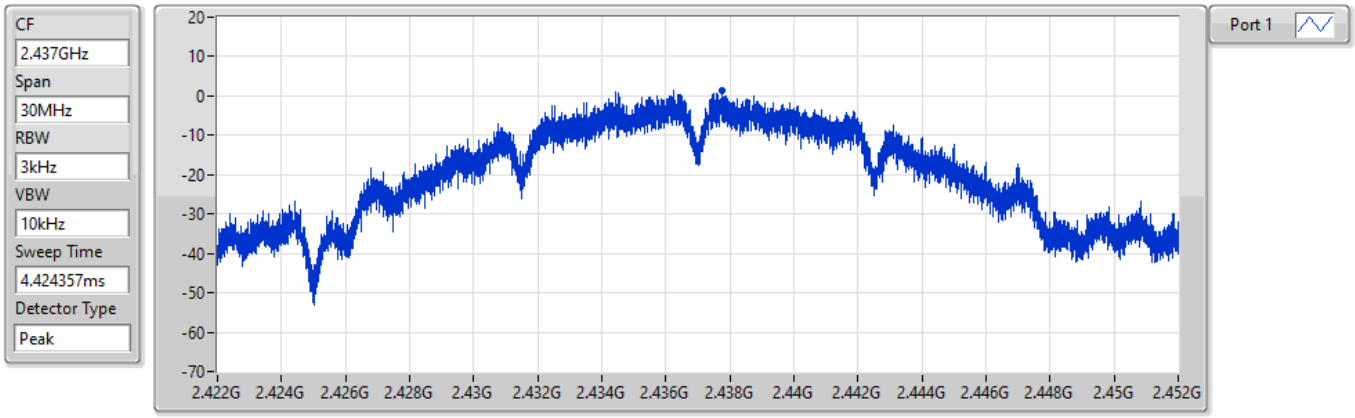


Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.77	0.77	0.77

802.11b_Nss1,(1Mbps)_1TX PSD

2437MHz

11/07/2022

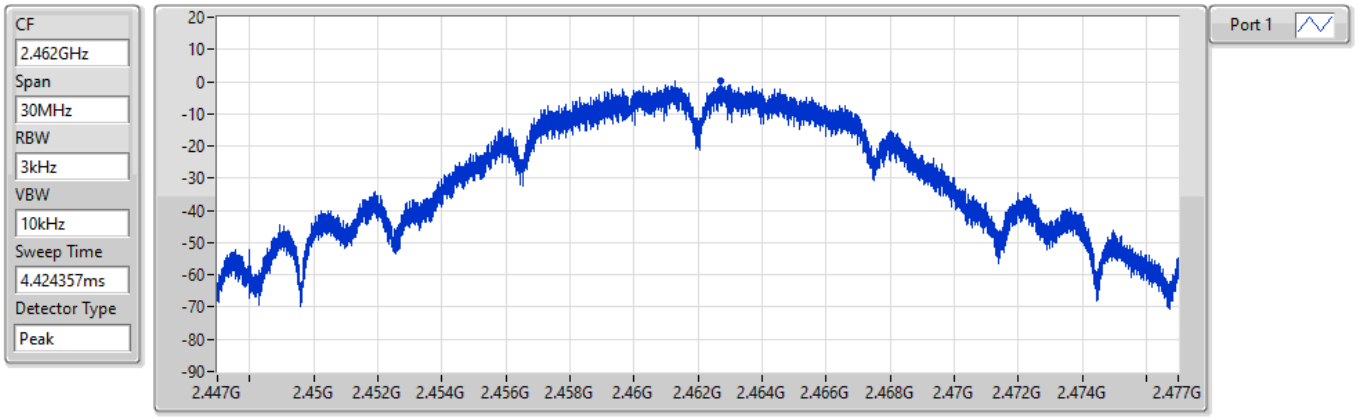


Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.51	1.51	1.51

802.11b_Nss1,(1Mbps)_1TX PSD

2462MHz

11/07/2022

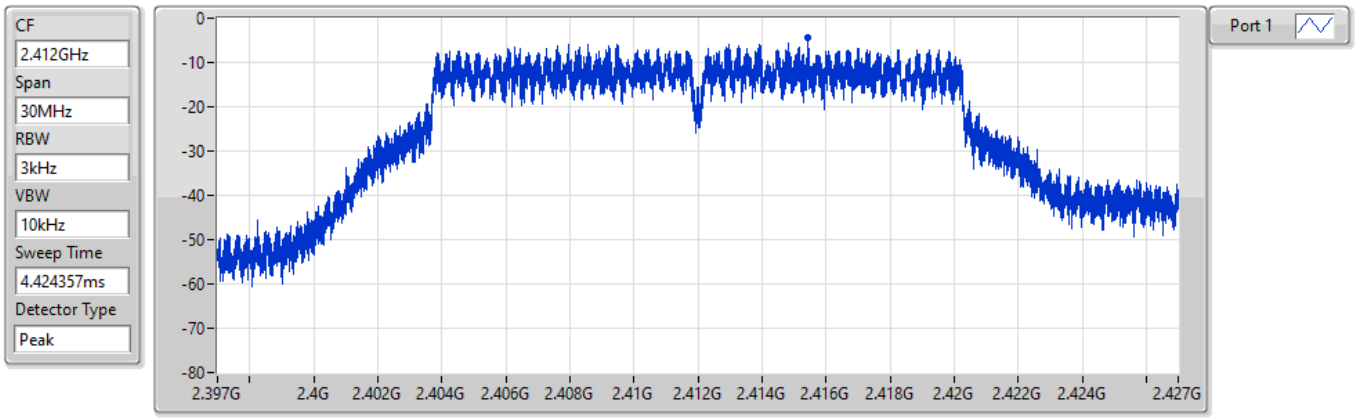


Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.02	0.02	0.02

802.11g_Nss1,(6Mbps)_1TX PSD

2412MHz

11/07/2022

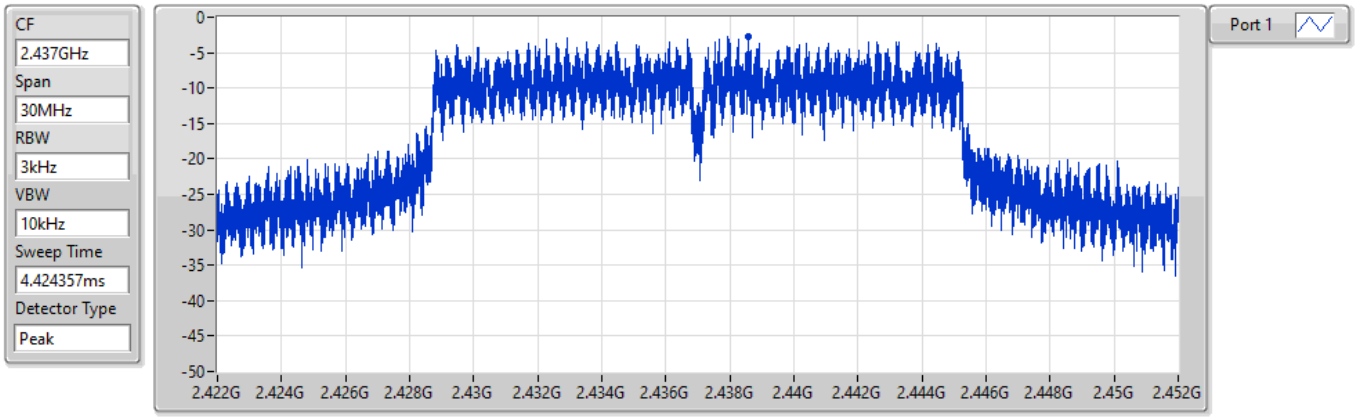


Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.48	-4.48	-4.48

802.11g_Nss1,(6Mbps)_1TX PSD

2437MHz

11/07/2022

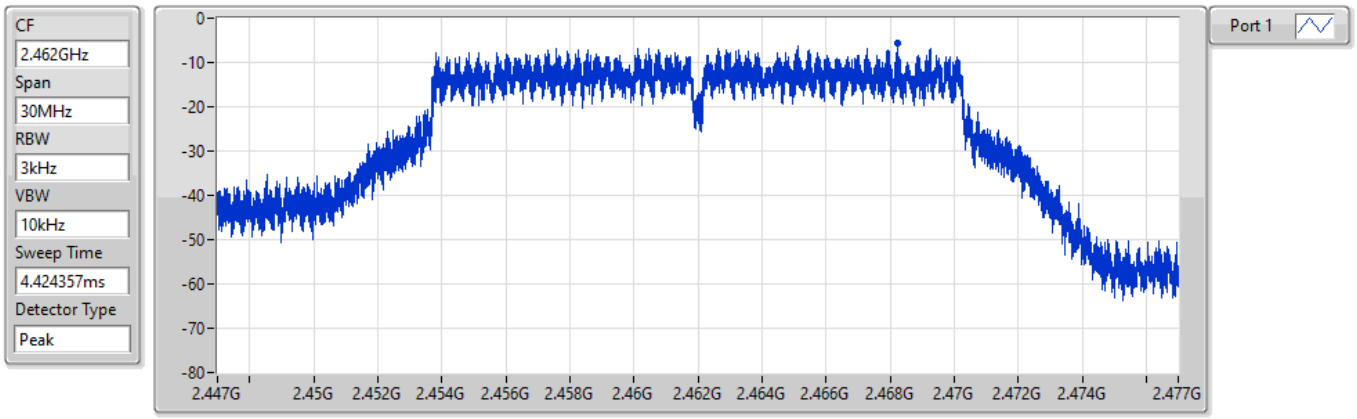


Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.78	-2.78	-2.78

802.11g_Nss1,(6Mbps)_1TX PSD

2462MHz

11/07/2022

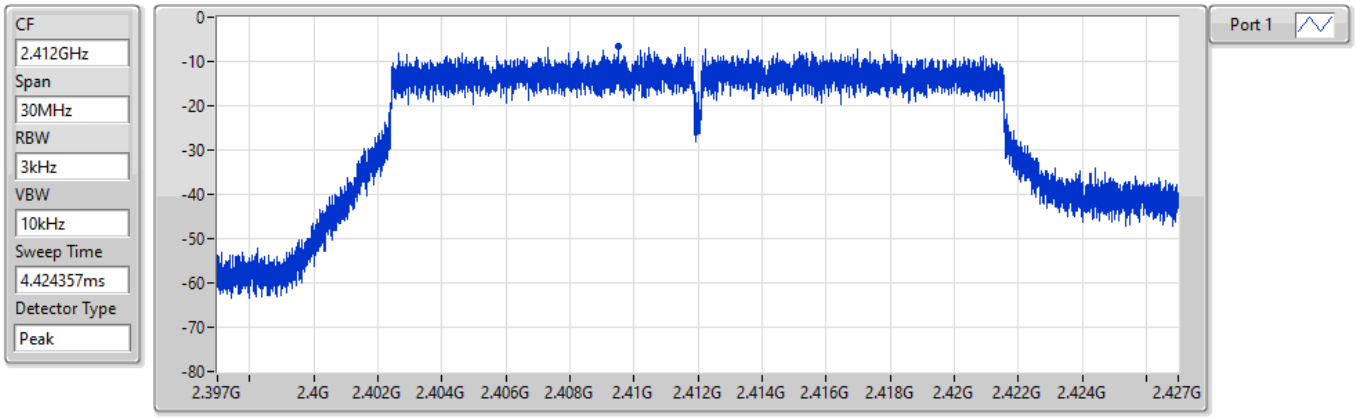


Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-5.49	-5.49	-5.49

802.11ax HEW20_Nss1,(MCS0)_1TX PSD

2412MHz

11/07/2022

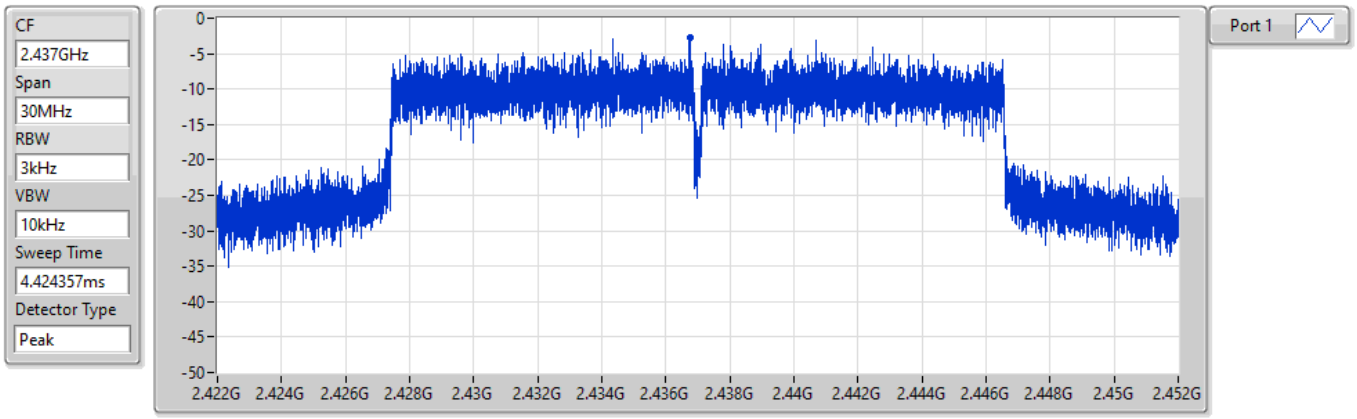


Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-6.51	-6.51	-6.51

802.11ax HEW20_Nss1,(MCS0)_1TX PSD

2437MHz

11/07/2022

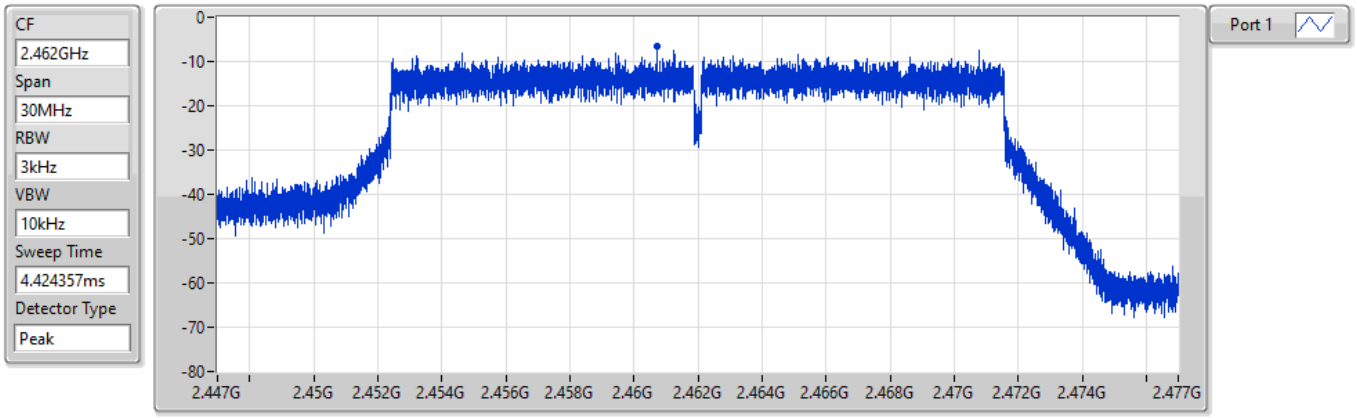


Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.68	-2.68	-2.68

802.11ax HEW20_Nss1,(MCS0)_1TX PSD

2462MHz

11/07/2022



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-6.58	-6.58	-6.58

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_2TX	3.48
802.11g_Nss1,(6Mbps)_2TX	-1.24

RBW = 3kHz;

Result

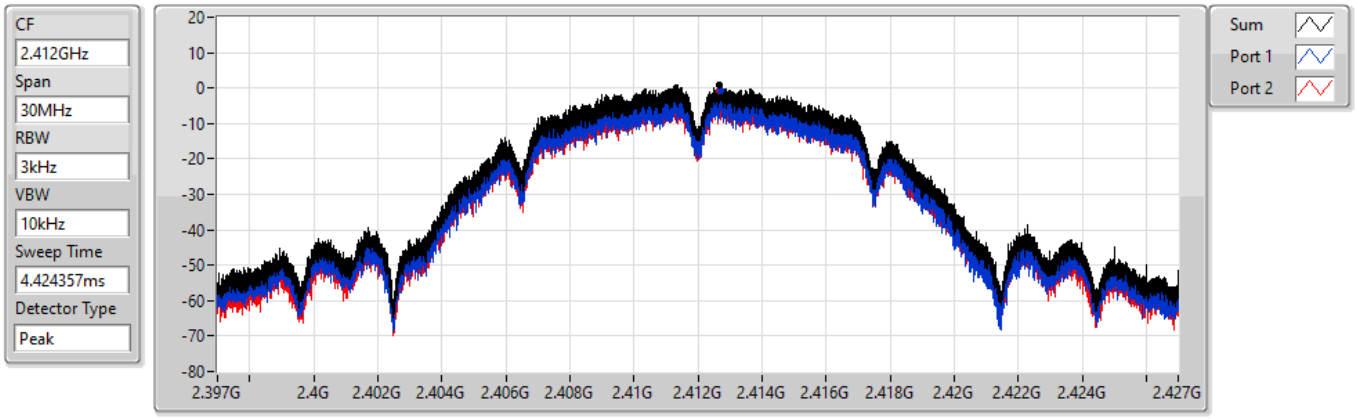
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	6.41	-0.88	-0.76	1.05	7.59
2437MHz	Pass	6.41	1.27	1.45	3.48	7.59
2462MHz	Pass	6.41	0.50	-0.47	1.89	7.59
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	6.41	-6.38	-5.98	-3.92	7.59
2437MHz	Pass	6.41	-2.06	-2.77	-1.24	7.59
2462MHz	Pass	6.41	-5.67	-6.34	-4.49	7.59

DG = Directional Gain; RBW = 3kHz;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;

802.11b_Nss1,(1Mbps)_2TX PSD

2412MHz

11/07/2022

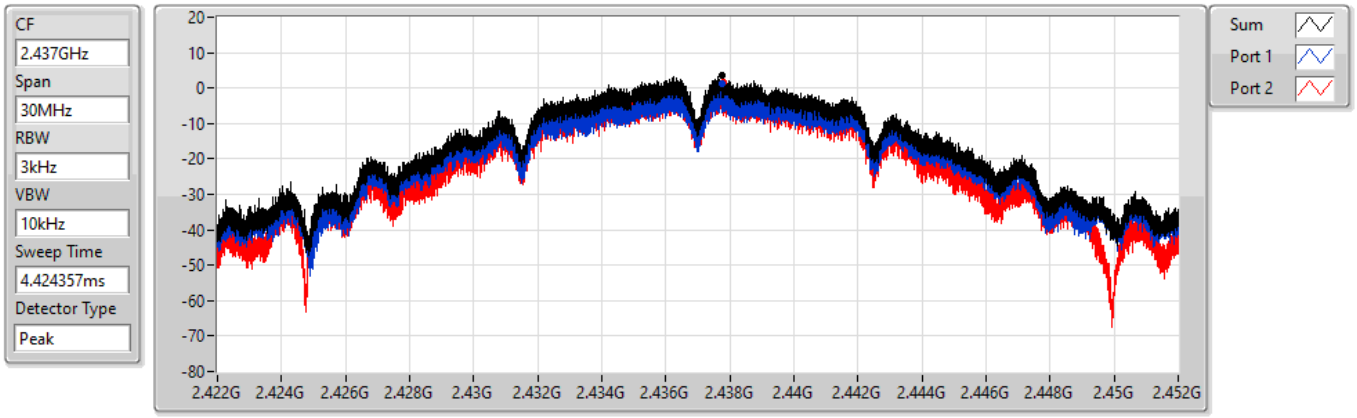


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.05	1.05	-0.88	-0.76

802.11b_Nss1,(1Mbps)_2TX PSD

2437MHz

11/07/2022

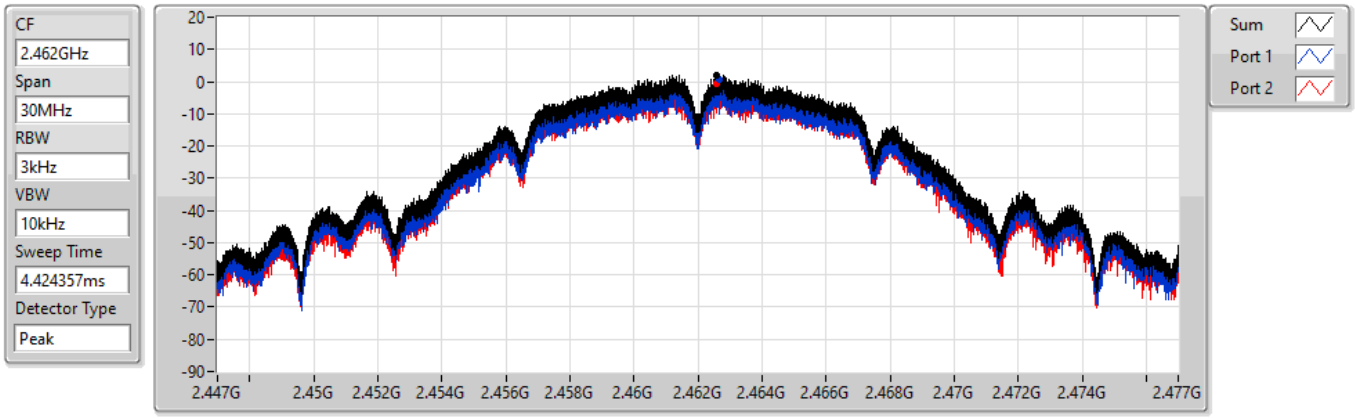


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.48	3.48	1.27	1.45

802.11b_Nss1,(1Mbps)_2TX PSD

2462MHz

11/07/2022

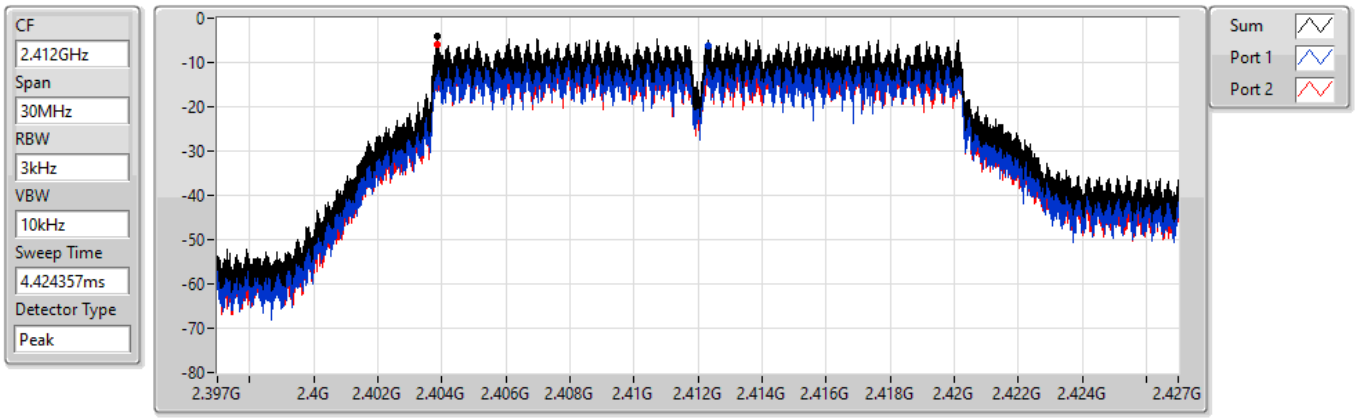


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.89	1.89	0.50	-0.47

802.11g_Nss1,(6Mbps)_2TX PSD

2412MHz

11/07/2022

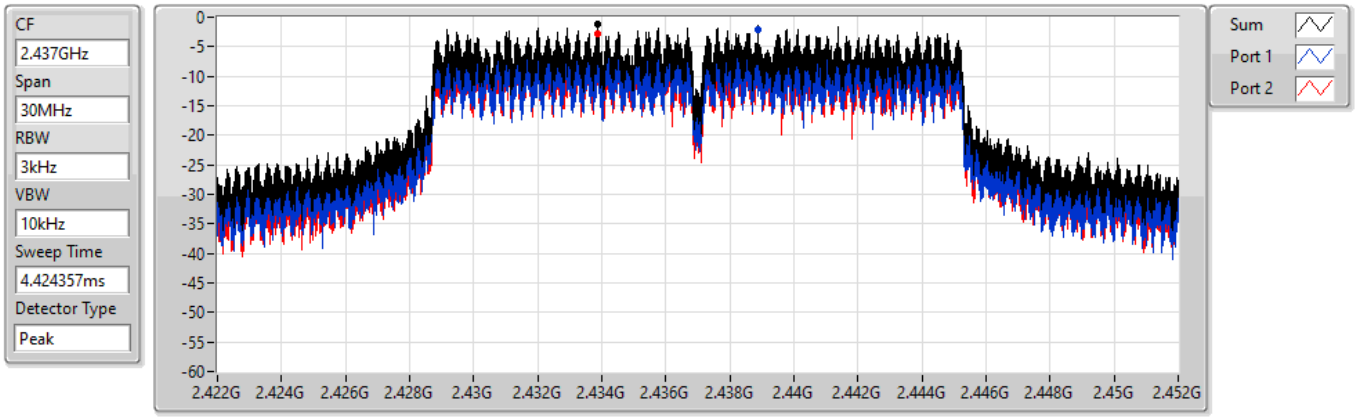


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.92	-3.92	-6.38	-5.98

802.11g_Nss1,(6Mbps)_2TX PSD

2437MHz

11/07/2022

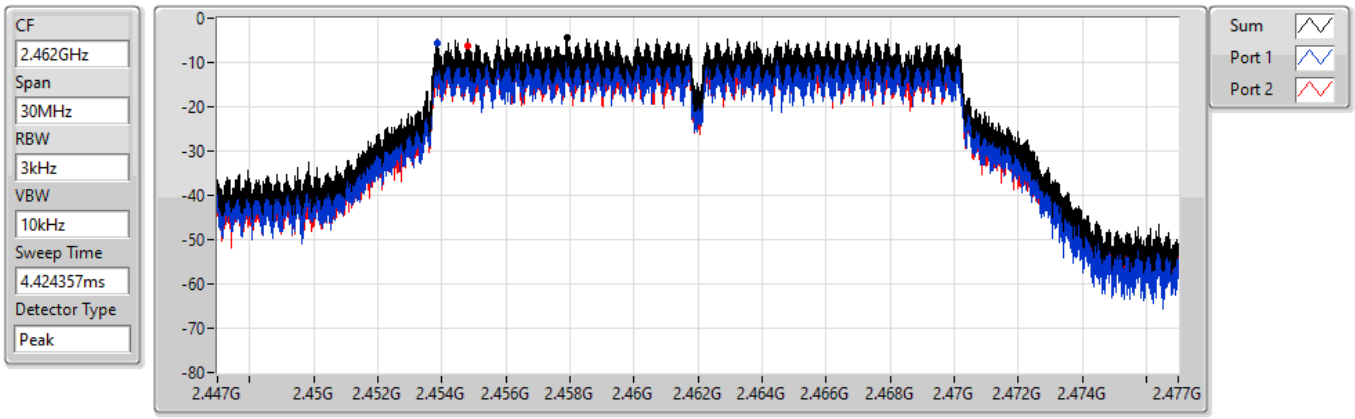


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.24	-1.24	-2.06	-2.77

802.11g_Nss1,(6Mbps)_2TX PSD

2462MHz

11/07/2022



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.49	-4.49	-5.67	-6.34

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11ax HEW20_Nss2,(MCS0)_2TX	-2.94

RBW = 3kHz;

Result

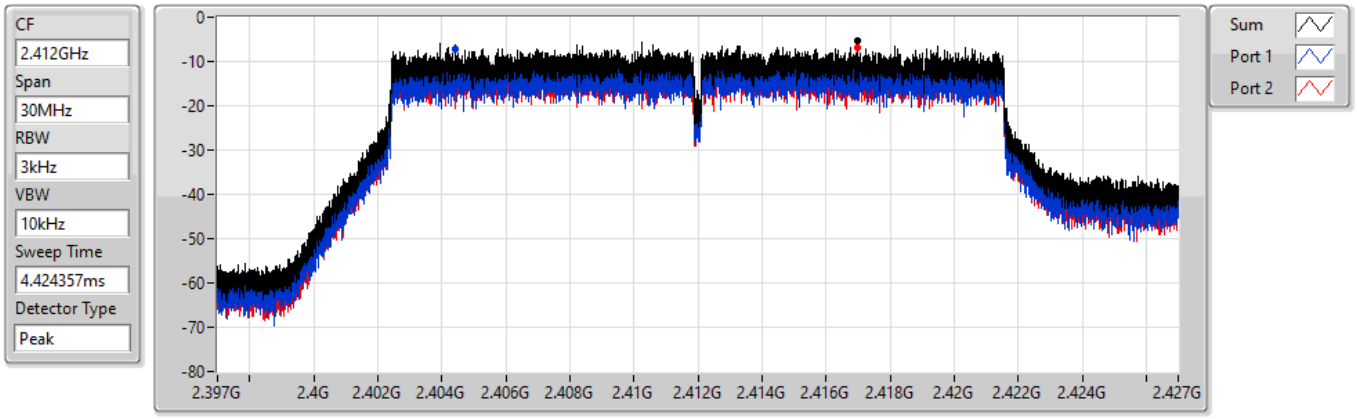
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11ax HEW20_Nss2,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	3.40	-7.21	-6.84	-5.46	8.00
2437MHz	Pass	3.40	-4.55	-4.52	-2.94	8.00
2462MHz	Pass	3.40	-6.60	-7.58	-4.48	8.00

DG = Directional Gain; RBW = 3kHz;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;

802.11ax HEW20_Nss2,(MCS0)_2TX PSD

2412MHz

09/07/2022

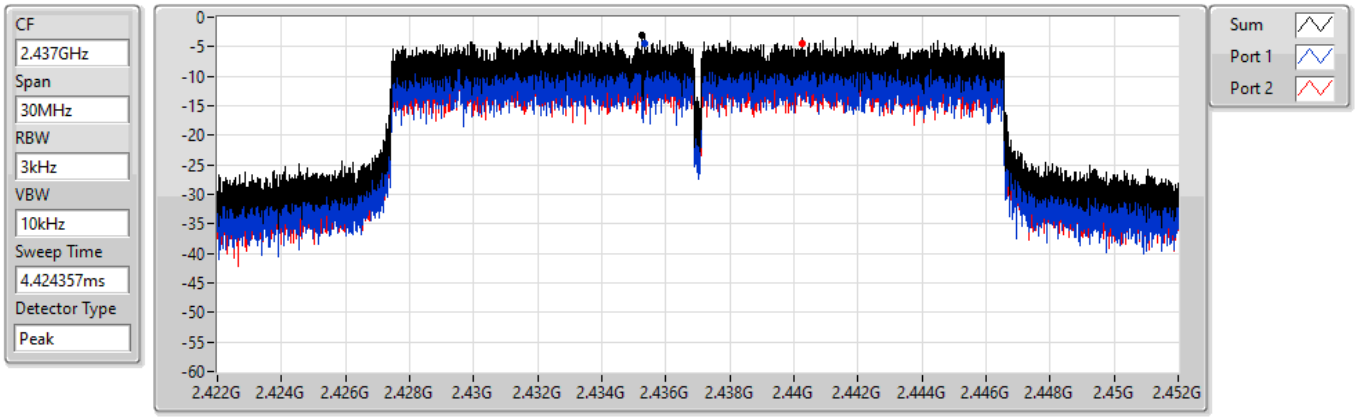


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-5.46	-5.46	-7.21	-6.84

802.11ax HEW20_Nss2,(MCS0)_2TX PSD

2437MHz

09/07/2022

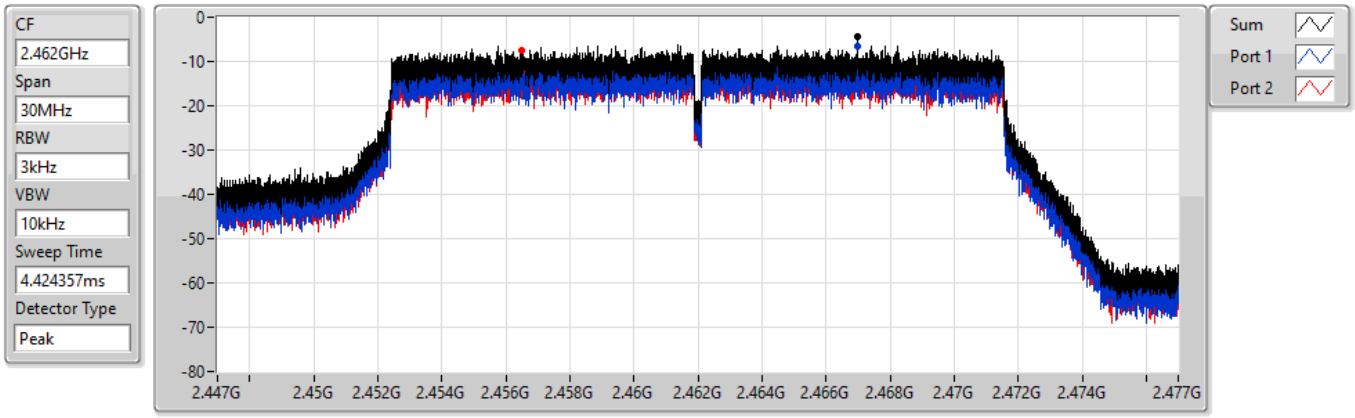


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.94	-2.94	-4.55	-4.52

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

2462MHz

09/07/2022



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.48	-4.48	-6.60	-7.58

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_4TX	4.72
802.11g_Nss1,(6Mbps)_4TX	-0.00
802.11ax HEW20_Nss1,(MCS0)_4TX	-2.56

RBW = 3kHz;

Result

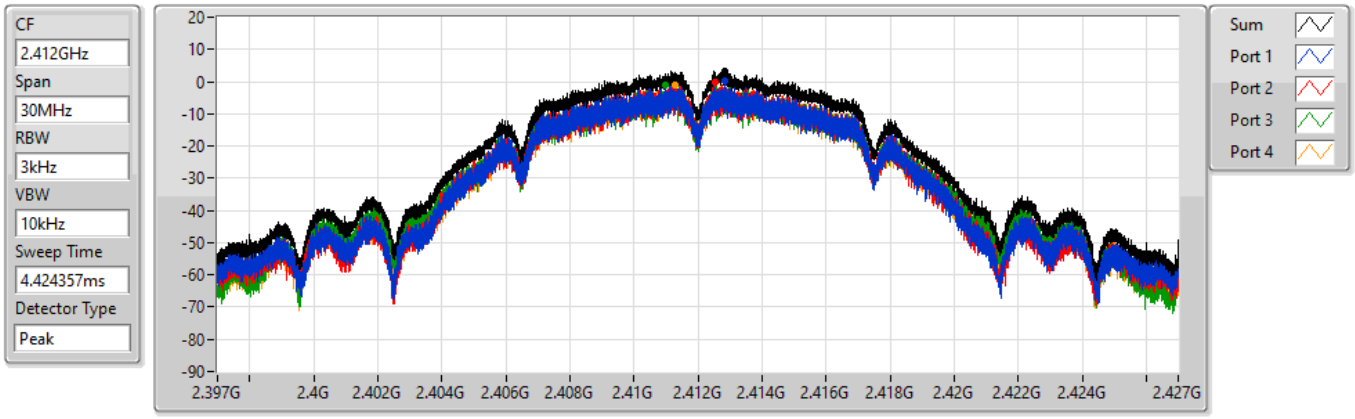
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	8.75	0.12	-0.41	-1.26	-0.84	3.44	5.25
2437MHz	Pass	8.75	1.82	0.85	0.49	-0.65	4.72	5.25
2462MHz	Pass	8.75	-1.50	0.04	0.55	-1.23	3.59	5.25
802.11g_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	8.75	-7.40	-6.93	-7.58	-7.06	-3.04	5.25
2437MHz	Pass	8.75	-3.41	-3.76	-4.10	-5.06	-0.00	5.25
2462MHz	Pass	8.75	-7.39	-8.03	-7.59	-8.25	-4.02	5.25
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	8.75	-9.67	-7.59	-9.30	-9.60	-4.42	5.25
2437MHz	Pass	8.75	-6.66	-7.06	-6.45	-7.60	-2.56	5.25
2462MHz	Pass	8.75	-8.84	-8.87	-7.20	-9.58	-5.45	5.25

DG = Directional Gain; RBW = 3kHz;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;

802.11b_Nss1,(1Mbps)_4TX PSD

2412MHz

11/07/2022

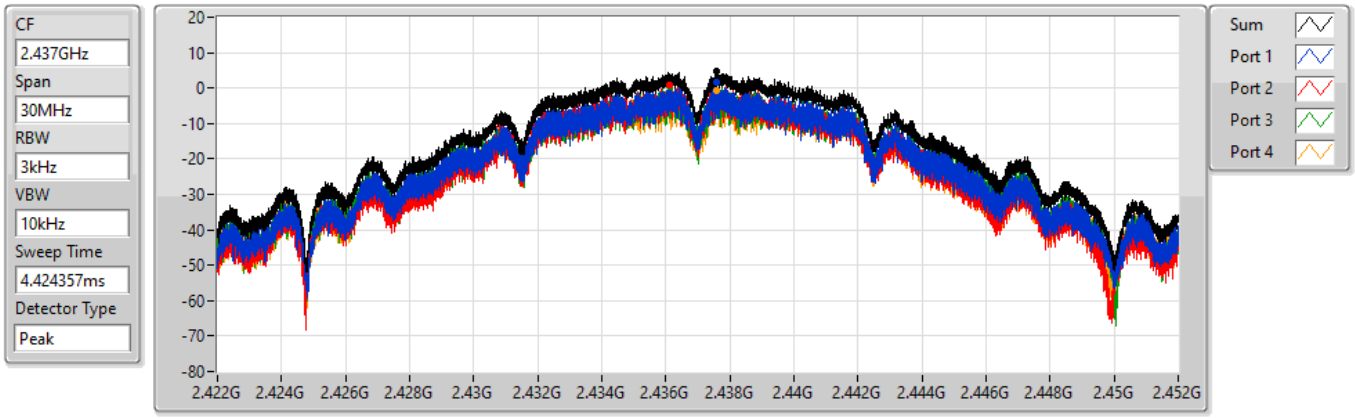


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.44	3.44	0.12	-0.41	-1.26	-0.84

802.11b_Nss1,(1Mbps)_4TX PSD

2437MHz

11/07/2022

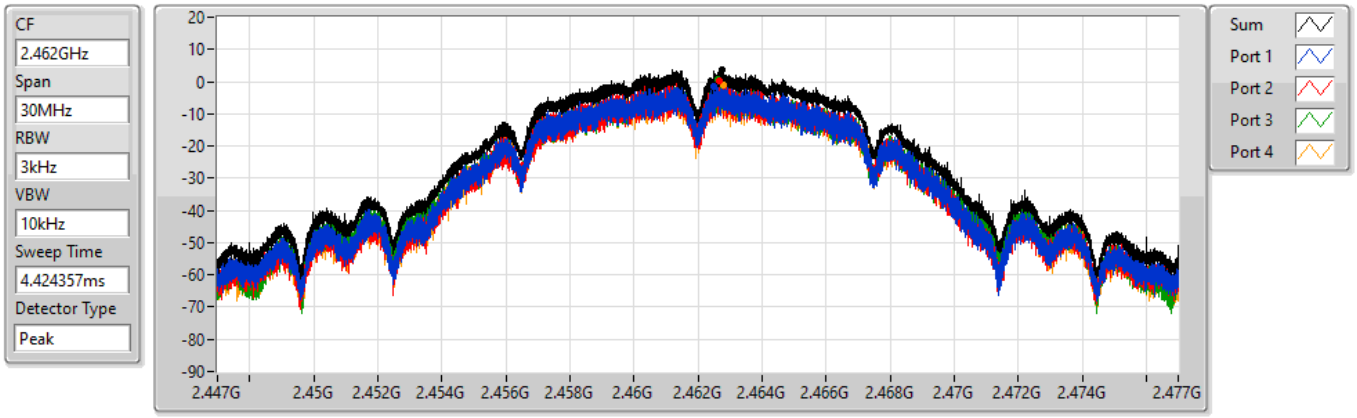


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.72	4.72	1.82	0.85	0.49	-0.65

802.11b_Nss1,(1Mbps)_4TX PSD

2462MHz

11/07/2022

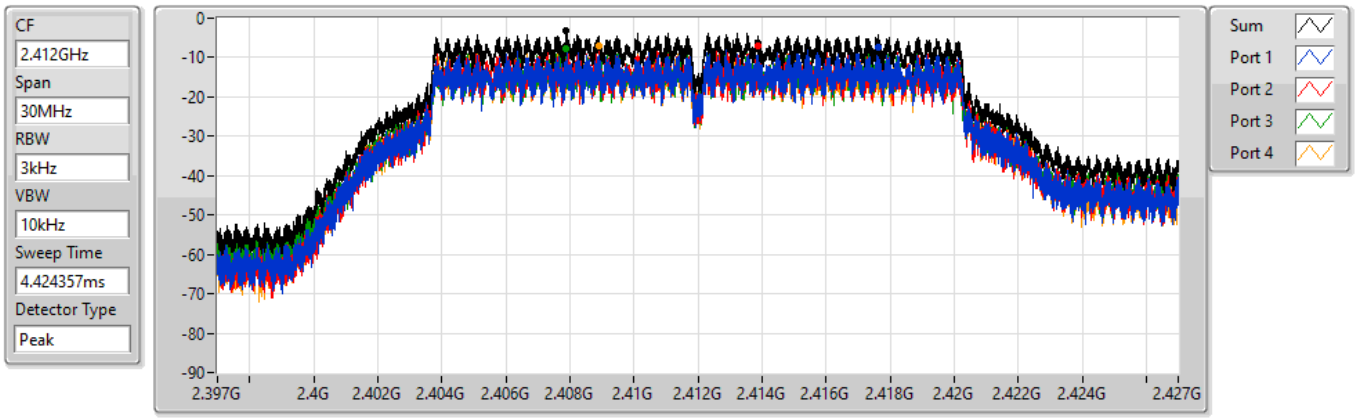


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.59	3.59	-1.50	0.04	0.55	-1.23

802.11g_Nss1,(6Mbps)_4TX PSD

2412MHz

11/07/2022

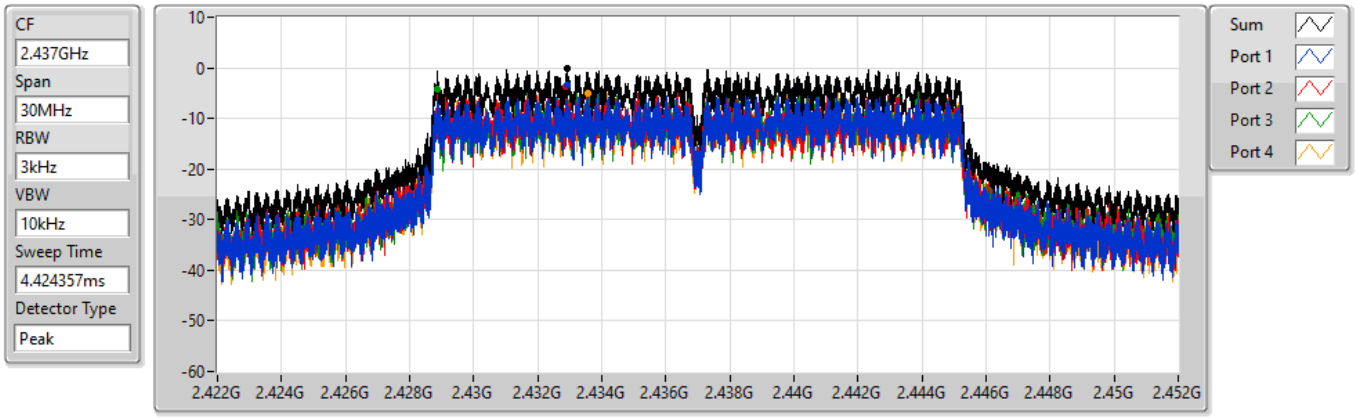


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.04	-3.04	-7.40	-6.93	-7.58	-7.06

802.11g_Nss1,(6Mbps)_4TX PSD

2437MHz

11/07/2022

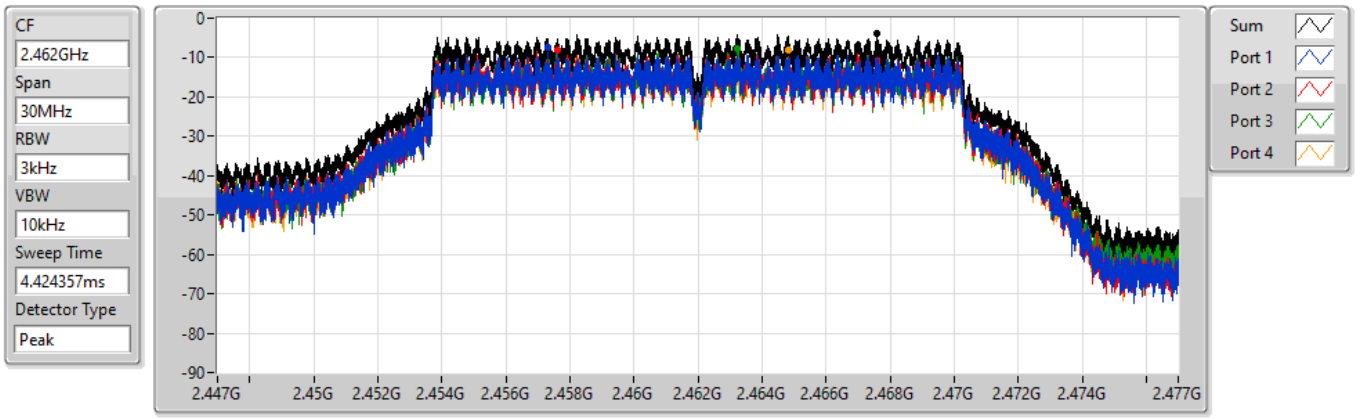


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.00	-0.00	-3.41	-3.76	-4.10	-5.06

802.11g_Nss1,(6Mbps)_4TX PSD

2462MHz

11/07/2022

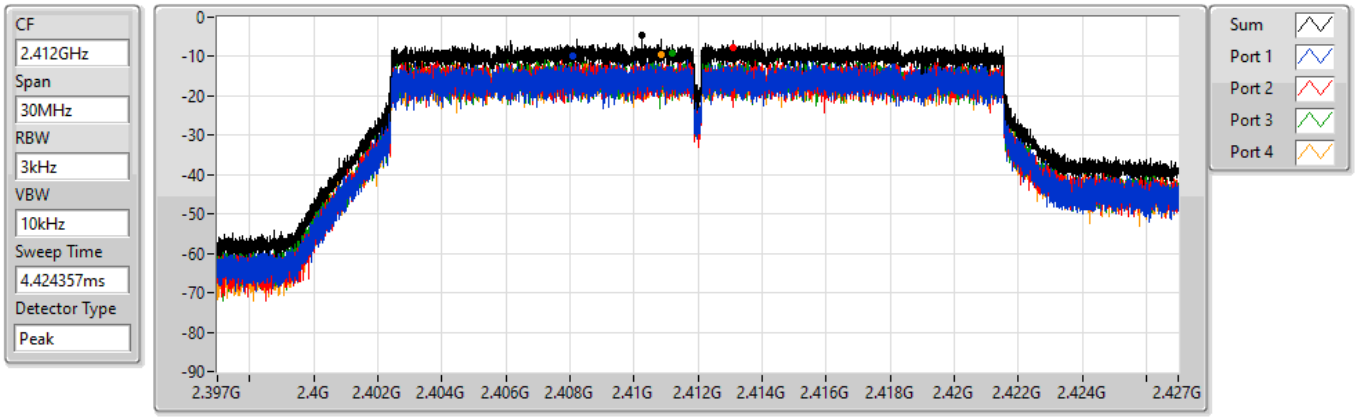


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.02	-4.02	-7.39	-8.03	-7.59	-8.25

802.11ax HEW20_Nss1,(MCS0)_4TX PSD

2412MHz

11/07/2022

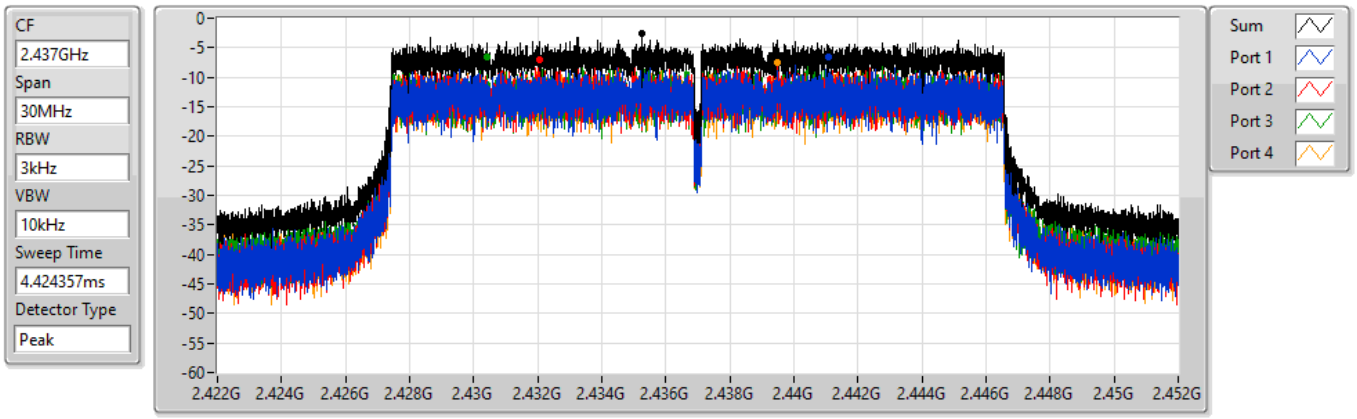


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.42	-4.42	-9.67	-7.59	-9.30	-9.60

802.11ax HEW20_Nss1,(MCS0)_4TX PSD

2437MHz

11/07/2022

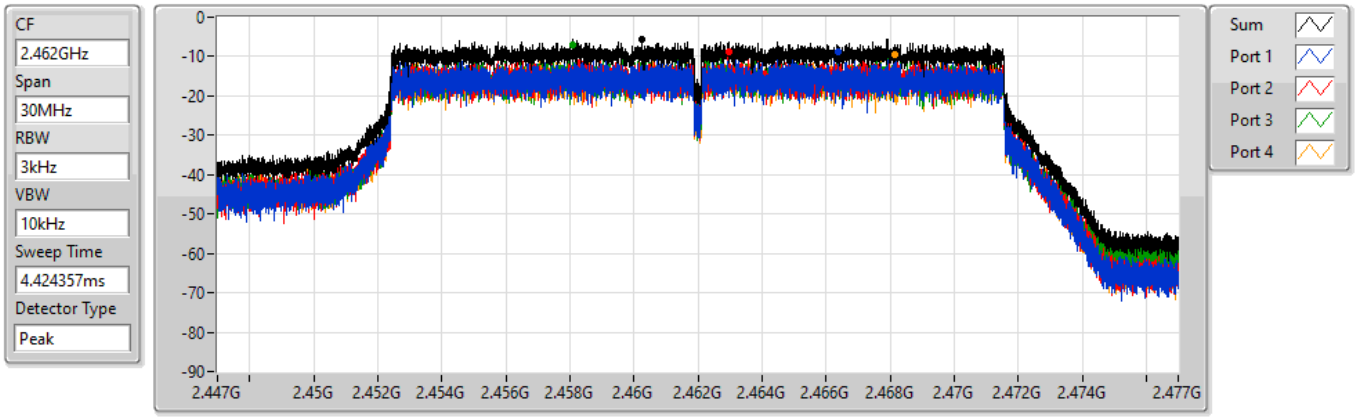


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.56	-2.56	-6.66	-7.06	-6.45	-7.60

802.11ax HEW20_Nss1,(MCS0)_4TX PSD

2462MHz

11/07/2022



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-5.45	-5.45	-8.84	-8.87	-7.20	-9.58

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11ax HEW20_Nss4,(MCS0)_4TX	-2.15

RBW = 3kHz;

Result

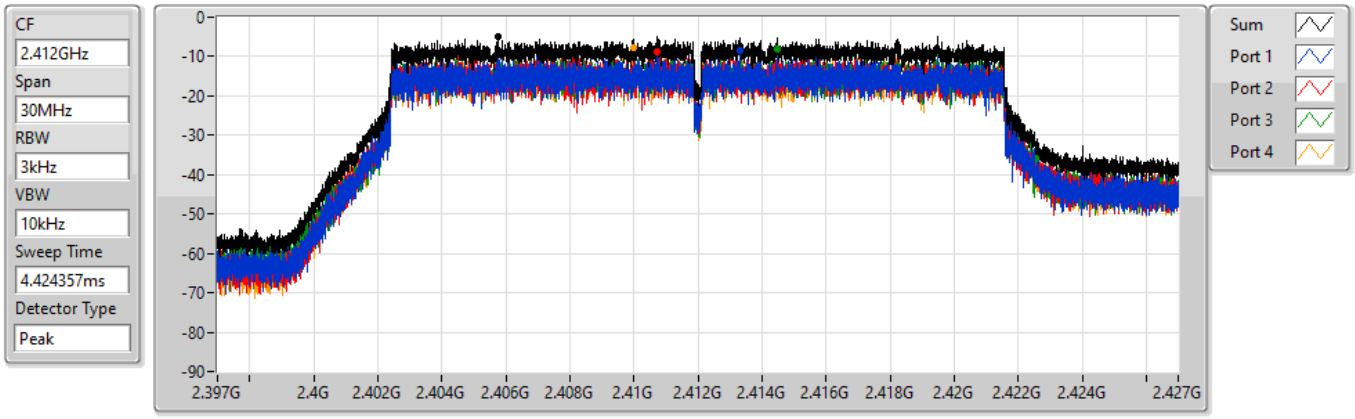
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11ax HEW20_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	2.76	-8.48	-8.77	-8.02	-7.58	-4.83	8.00
2437MHz	Pass	2.76	-6.86	-5.90	-5.22	-6.63	-2.15	8.00
2462MHz	Pass	2.76	-8.75	-9.65	-8.94	-9.90	-5.66	8.00

DG = Directional Gain; RBW = 3kHz;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;

802.11ax HEW20_Nss4,(MCS0)_4TX PSD

2412MHz

11/07/2022

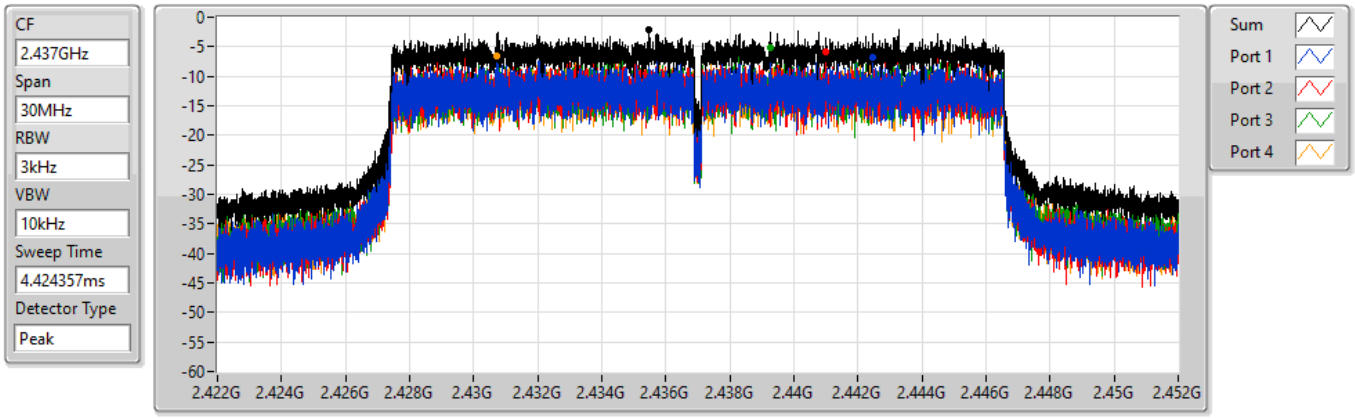


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.83	-4.83	-8.48	-8.77	-8.02	-7.58

802.11ax HEW20_Nss4,(MCS0)_4TX PSD

2437MHz

11/07/2022

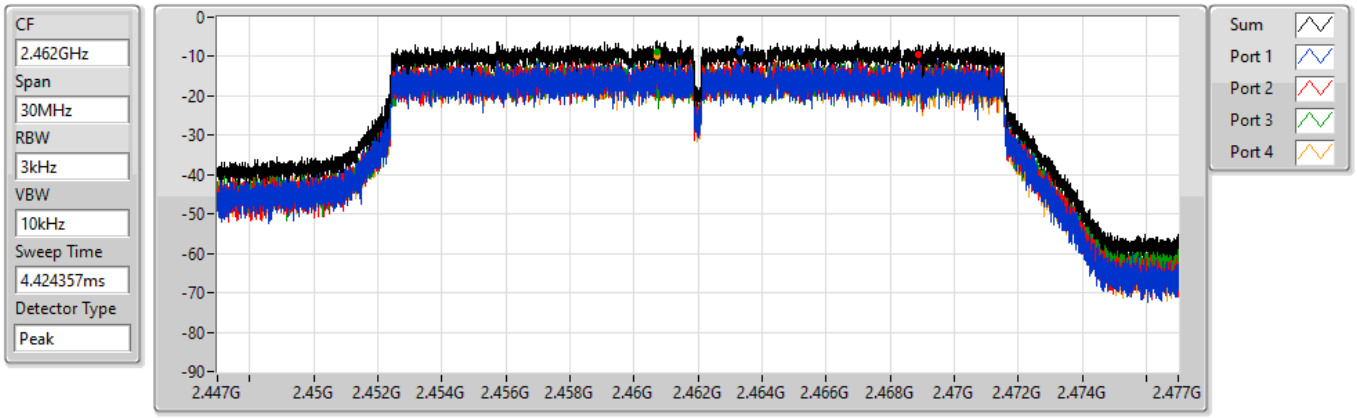


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.15	-2.15	-6.86	-5.90	-5.22	-6.63

802.11ax HEW20_Nss4,(MCS0)_4TX PSD

2462MHz

11/07/2022



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-5.66	-5.66	-8.75	-9.65	-8.94	-9.90

Summary

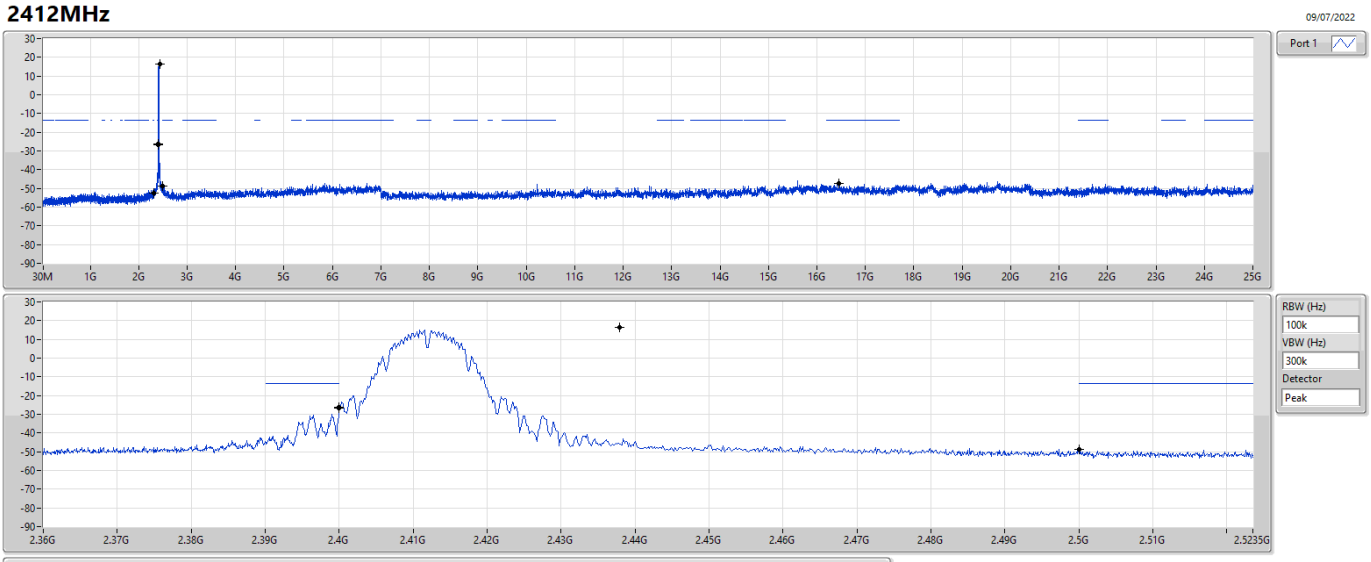
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX	Pass	2.43791G	16.23	-13.77	2.30408G	-52.44	2.4G	-26.36	2.4G	-26.65	2.50006G	-48.79	16.45612G	-47.39	1
802.11g_Nss1,(6Mbps)_1TX	Pass	2.44192G	12.20	-17.80	2.30059G	-49.98	2.4G	-33.68	2.4G	-29.98	2.50006G	-49.20	6.98509G	-46.92	1
802.11ax HEW20_Nss1,(MCS0)_1TX	Pass	2.44192G	11.63	-18.37	2.17011G	-51.39	2.4G	-34.52	2.4G	-32.48	2.50006G	-48.59	17.65299G	-46.63	1

Result

Mode	Result	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
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43791G	16.23	-13.77	2.30408G	-52.44	2.4G	-26.36	2.4G	-26.65	2.50006G	-48.79	16.45612G	-47.39	1
2437MHz	Pass	2.43791G	16.23	-13.77	2.30758G	-50.96	2.39952G	-41.79	2.4G	-43.99	2.50862G	-45.85	17.67547G	-46.56	1
2462MHz	Pass	2.43791G	16.23	-13.77	1.63071G	-51.20	2.39496G	-48.42	2.4G	-48.73	2.50014G	-46.64	6.27989G	-46.97	1
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.44192G	12.20	-17.80	2.30059G	-49.98	2.4G	-33.68	2.4G	-29.98	2.50006G	-49.20	6.98509G	-46.92	1
2437MHz	Pass	2.44192G	12.20	-17.80	2.30059G	-49.59	2.4G	-35.19	2.4G	-35.41	2.50398G	-46.17	6.65918G	-47.26	1
2462MHz	Pass	2.44192G	12.20	-17.80	895.6M	-51.72	2.39632G	-49.26	2.4G	-51.28	2.50006G	-46.68	5.78259G	-46.90	1
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.44192G	11.63	-18.37	2.17011G	-51.39	2.4G	-34.52	2.4G	-32.48	2.50006G	-48.59	17.65299G	-46.63	1
2437MHz	Pass	2.44192G	11.63	-18.37	2.30874G	-50.73	2.39632G	-34.31	2.4G	-34.02	2.50182G	-44.19	6.71256G	-47.08	1
2462MHz	Pass	2.44192G	11.63	-18.37	832.69M	-52.29	2.3928G	-49.26	2.4G	-51.64	2.50006G	-45.96	6.76032G	-47.10	1

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

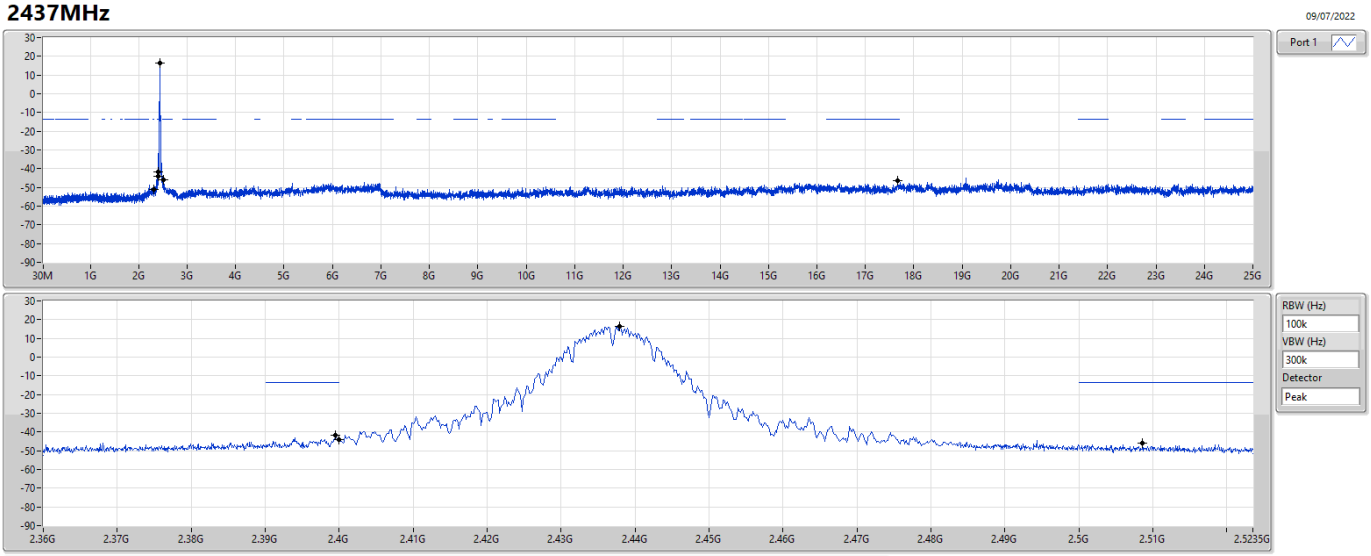
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43791G	16.23	-13.77	2.30408G	-52.44	2.4G	-26.36	2.4G	-26.65	2.50006G	-48.79	16.45612G	-47.39	1

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

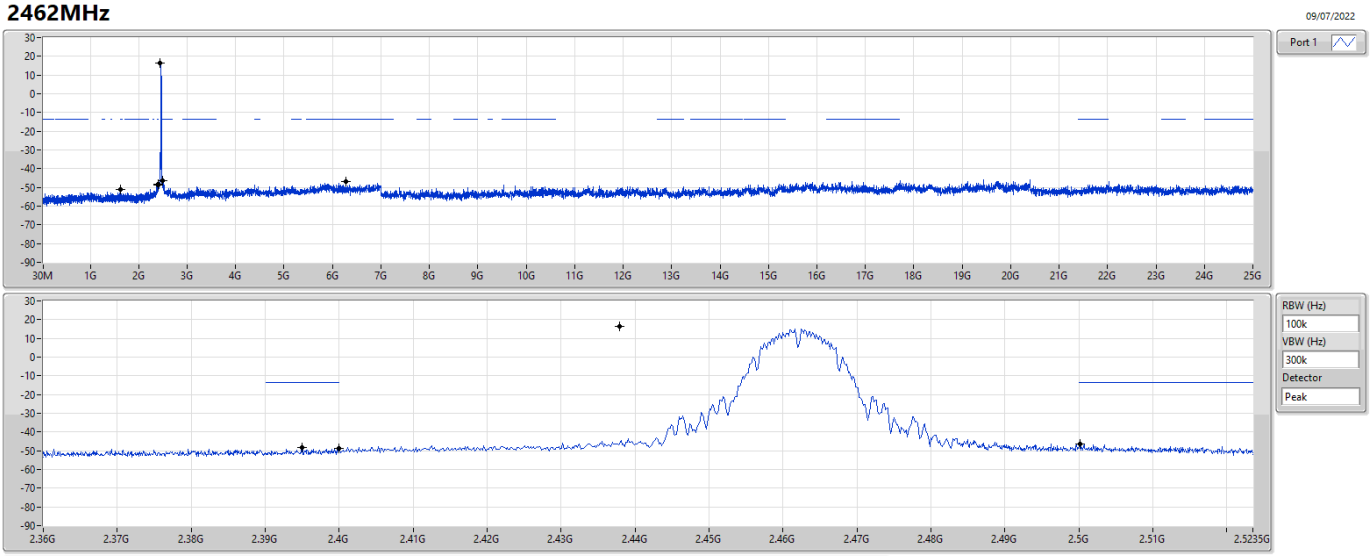
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43791G	16.23	-13.77	2.30758G	-50.96	2.39952G	-41.79	2.4G	-43.99	2.50862G	-45.85	17.67547G	-46.56	1

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

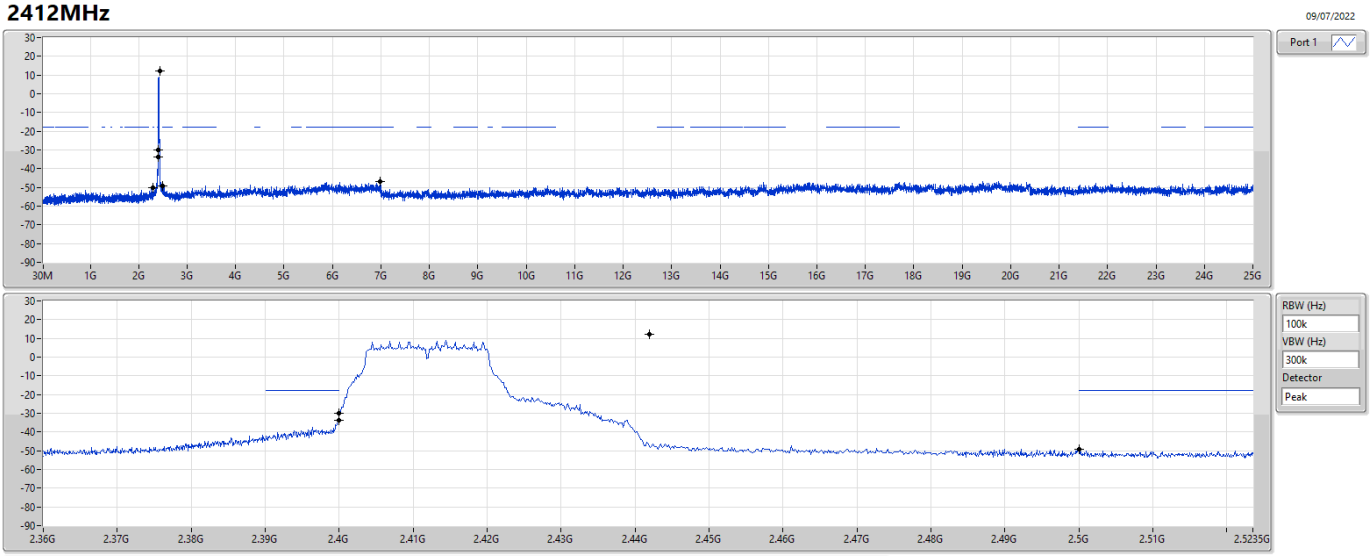
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43791G	16.23	-13.77	1.63071G	-51.20	2.39496G	-48.42	2.4G	-48.73	2.50014G	-46.64	6.27989G	-46.97	1

802.11g_Nss1,(6Mbps)_1TX **CSENdB**

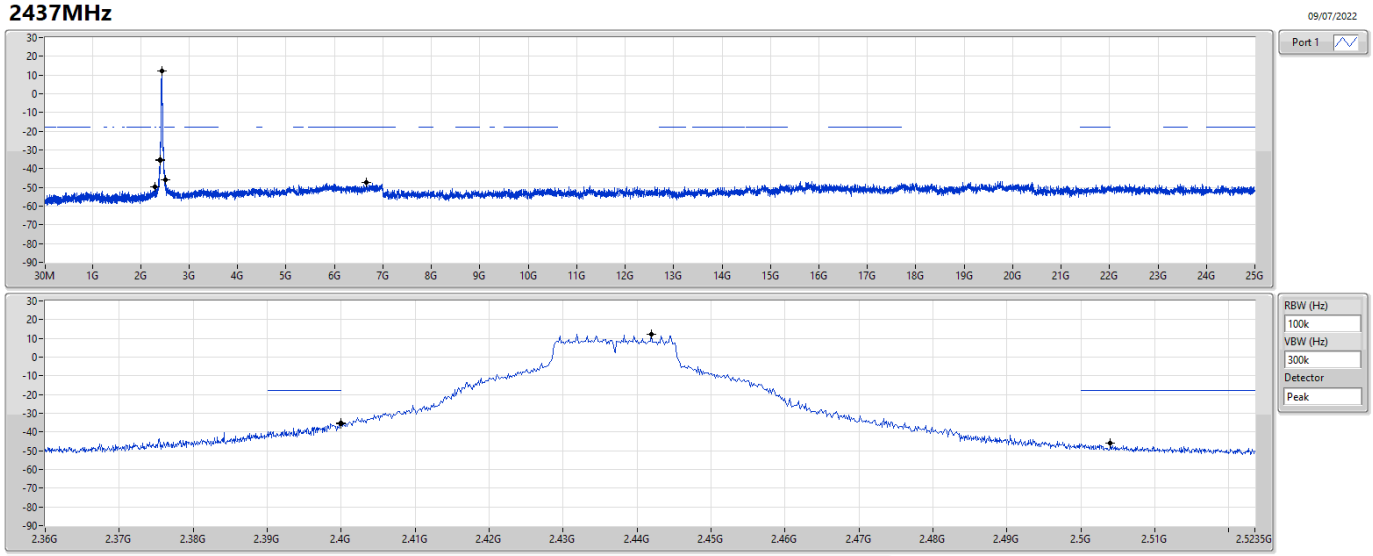
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44192G	12.20	-17.80	2.30059G	-49.98	2.4G	-33.68	2.4G	-29.98	2.50006G	-49.20	6.98509G	-46.92	1

802.11g_Nss1,(6Mbps)_1TX **CSENdB**

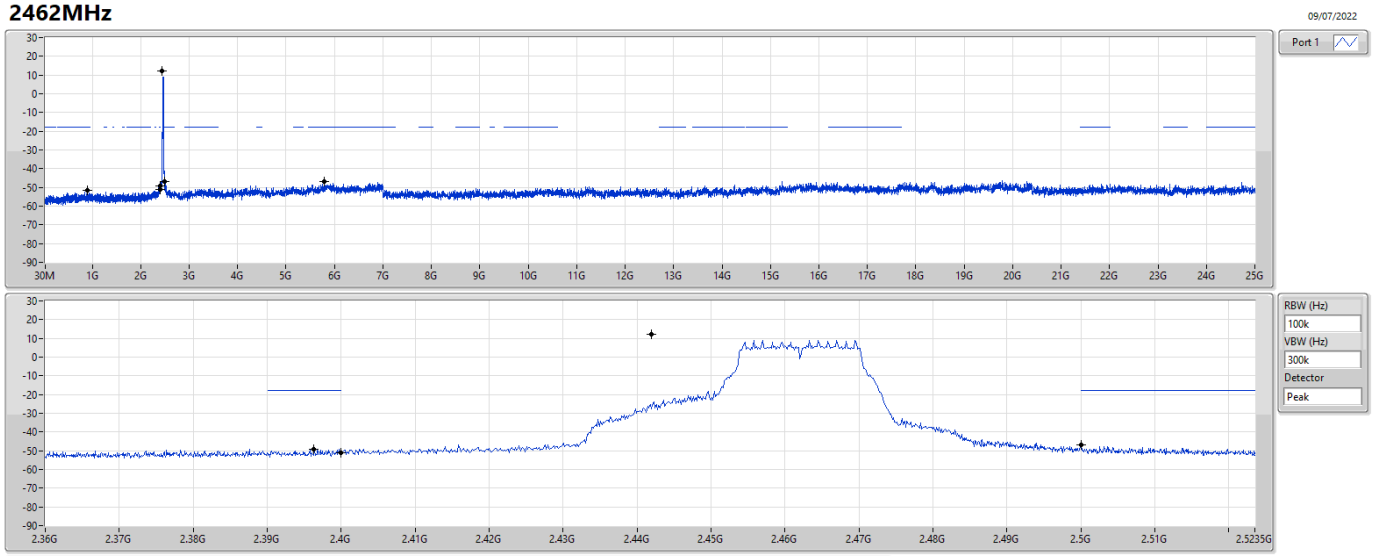
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44192G	12.20	-17.80	2.30059G	-49.59	2.4G	-35.19	2.4G	-35.41	2.50398G	-46.17	6.65918G	-47.26	1

802.11g_Nss1,(6Mbps)_1TX **CSENdB**

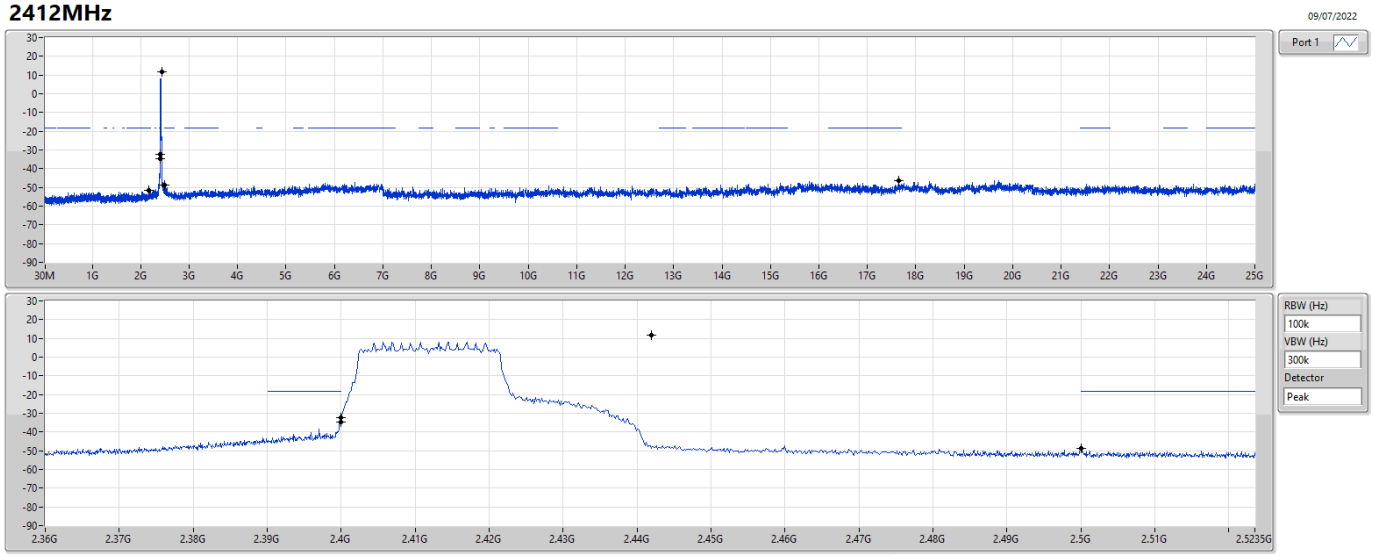
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44192G	12.20	-17.80	895.6M	-51.72	2.39632G	-49.26	2.4G	-51.28	2.50006G	-46.68	5.78259G	-46.90	1

802.11ax HEW20_Nss1,(MCS0)_1TX **CSENdB**

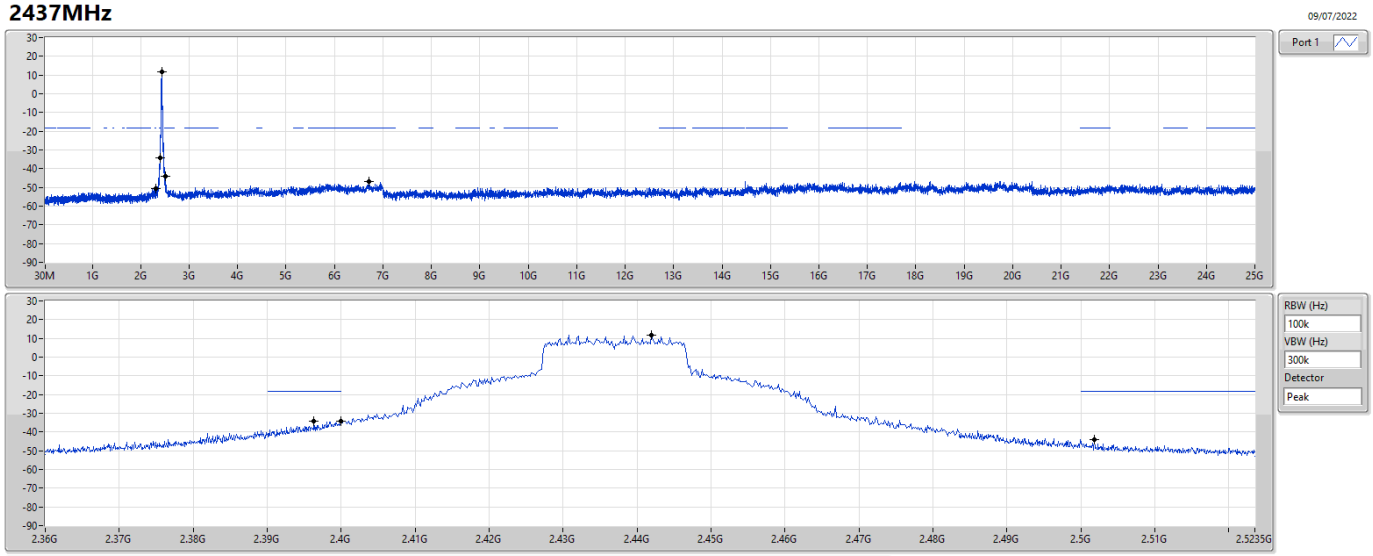
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44192G	11.63	-18.37	2.17011G	-51.39	2.4G	-34.52	2.4G	-32.48	2.50006G	-48.59	17.65299G	-46.63	1

802.11ax HEW20_Nss1,(MCS0)_1TX **CSENdB**

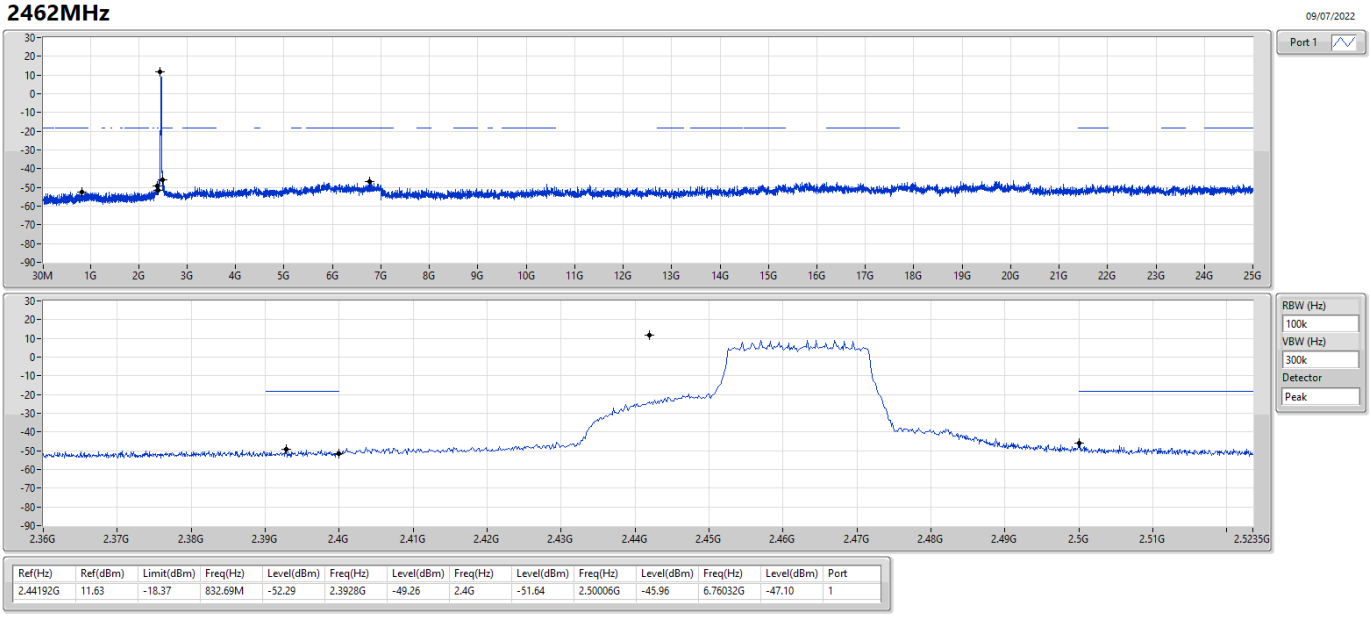
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44192G	11.63	-18.37	2.30874G	-50.73	2.39632G	-34.31	2.4G	-34.02	2.50182G	-44.19	6.71256G	-47.08	1

802.11ax HEW20_Nss1,(MCS0)_1TX **CSENdB**

2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44192G	11.63	-18.37	832.69M	-52.29	2.3928G	-49.26	2.4G	-51.64	2.50006G	-45.96	6.76032G	-47.10	1

Summary

Mode	Result	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
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_2TX	Pass	2.43741G	16.96	-13.04	2.30525G	-51.16	2.4G	-29.01	2.4G	-29.37	2.50006G	-47.80	6.52151G	-47.60	1
802.11g_Nss1,(6Mbps)_2TX	Pass	2.43824G	10.87	-19.13	2.14331G	-52.62	2.39992G	-34.16	2.4G	-30.87	2.50094G	-48.72	5.78821G	-46.98	2