Testing Laboratory 3787

RADIO TEST REPORT

FCC ID	:	UDX-60093011
Equipment	:	4x4 Wi-Fi 6 Access Point with External Antennas
Brand Name	:	Cisco
Model Name	:	MR46E-HW
Applicant	:	Cisco Systems, Inc. 170 West Tasman Drive, San Jose, CA 95134 USA
Manufacturer	:	Cisco Systems, Inc. 170 West Tasman Drive, San Jose, CA 95134 USA
Standard	:	47 CFR FCC Part 15.247

The product was received on Jun. 20, 2019, and testing was started from Jul. 03, 2019 and completed on Aug. 03, 2023. 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

Sporton International Inc. Hsinchu Laboratory
No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)

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History of this test report

Report No.	Version	Description	Issued Date
FR960317-14AB	01	Initial issue of report	Oct. 06, 2023

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	-
Note: Reference to Sporton Project No.: 960317				

Conformity Assessment Condition:
1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account. 2. The measurement uncertainty please refer to each test result in the chapter "Measurement Uncertainty".
Disclaimer:
The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

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), ax (HEW20)	2412-2462	1-11 [11]
2400-2483.5	n (HT40), ax (HEW40)	2422-2452	3-9 [7]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	802.11b	20	1, 2, 4TX
2.4-2.4835GHz	802.11g	20	1, 2, 4TX
2.4-2.4835GHz	802.11n HT20	20	1, 2, 4TX
2.4-2.4835GHz	802.11n HT20-BF	20	2, 4TX
2.4-2.4835GHz	802.11ax HEW20	20	1, 2, 4TX
2.4-2.4835GHz	802.11ax HEW20-BF	20	2, 4TX
2.4-2.4835GHz	802.11n HT40	40	1, 2, 4TX
2.4-2.4835GHz	802.11n HT40-BF	40	2, 4TX
2.4-2.4835GHz	802.11ax HEW40	40	1, 2, 4TX
2.4-2.4835GHz	802.11ax HEW40-BF	40	2, 4TX

Note:
- 11b mode uses a combination of DSSS-DBPSK, DQPSK, CCK modulation.
- 11g, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- HEW20, HEW40 use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

Set	Brand	Official Model Number	Antenna Type	Connector	Gain (dBi)
1	Cisco	MA-ANT-3-A6	Dipole antenna	RP-TNC	Note 1
2	Cisco	MA-ANT-3-B6	Dipole antenna	RP-TNC	
3	Cisco	MA-ANT-3-C6	Panel antenna	RP-TNC	
4	Cisco	MA-ANT-3-D6	Panel antenna	RP-TNC	
5	Cisco	MA-ANT-3-E6	Wide patch antenna	RP-TNC	
6	Cisco	MA-ANT-3-F6	Narrow patch antenna	RP-TNC	

Note1:

Radio 1 (2.4GHz)												
Set	Antenna Gain (dBi)				Cable Loss (dB)				True Gain (dBi)			
	Port 1	Port 2	Port 3	Port 4	Port 1	Port 2	Port 3	Port 4	Port 1	Port 2	Port 3	Port 4
1	3.80	3.80	3.80	3.80	1.01	0.41	0.41	1.00	2.79	3.39	3.39	2.80
2	3.00	3.00	3.00	3.00	1.01	0.41	0.41	1.00	1.99	2.59	2.59	2.00
3	4.90	4.90	4.90	4.90	1.01	0.41	0.41	1.00	3.89	4.49	4.49	3.90
4	2.90	2.90	2.90	2.90	1.01	0.41	0.41	1.00	1.89	2.49	2.49	1.90
5	7.00	7.00	7.00	7.00	1.01	0.41	0.41	1.00	5.99	6.59	6.59	6.00
6	11.20	11.20	11.20	11.20	1.01	0.41	0.41	1.00	10.19	10.79	10.79	10.20

Radio 2 (5GHz)												
Set	Antenna Gain (dBi)				Cable Loss (dB)				True Gain (dBi)			
	Port 1	Port 2	Port 3	Port 4	Port 1	Port 2	Port 3	Port 4	Port 1	Port 2	Port 3	Port 4
1	5.5	5.5	5.5	5.5	1.53	0.66	0.61	1.54	3.97	4.84	4.89	3.96
2	5.7	5.7	5.7	5.7	1.53	0.66	0.61	1.54	4.17	5.04	5.09	4.16
3	4.9	4.9	4.9	4.9	1.53	0.66	0.61	1.54	3.37	4.24	4.29	3.36
4	3.7	3.7	3.7	3.7	1.53	0.66	0.61	1.54	2.17	3.04	3.09	2.16
5	6.3	6.3	6.3	6.3	1.53	0.66	0.61	1.54	4.77	5.64	5.69	4.76
6	10.8	10.8	10.8	10.8	1.53	0.66	0.61	1.54	9.27	10.14	10.19	9.26

Radio 3 (2.4GHz + 5GHz)						
Set	Antenna Gain (dBi)		Cable Loss (dB)		True Gain (dBi)	
	Port 1		Port 1		Port 1	
	2.4GHz	5GHz	2.4GHz	5GHz	2.4GHz	5GHz
1	3.80	5.50	0.68	1.09	3.12	4.41
2	3.00	5.70	0.68	1.09	2.32	4.61
3	4.90	4.90	0.68	1.09	4.22	3.81
4	2.90	3.70	0.68	1.09	2.22	2.61
5	7.00	6.30	0.68	1.09	6.32	5.21
6	11.20	10.80	0.68	1.09	10.52	9.71

Radio 4 (Bluetooth)			
Set	Antenna Gain (dBi)	Cable Loss (dB)	True Gain (dBi)
	Port 1	Port 1	Port 1
1	3.80	0.56	3.24
2	3.00	0.56	2.44
3	4.90	0.56	4.34
4	2.90	0.56	2.34
5	7.00	0.56	6.44
6	11.20	0.56	10.64

Note2: The above information was declared by manufacturer.

Note3: The EUT has six set antennas.

The EUT has four radios, Radio 1 supports WLAN 2.4GHz (802.11b/g/n/ax mode), Radio 2 supports WLAN 5GHz (802.11a/n/ac/ax mode), Radio 3 supports WLAN 2.4GHz + 5GHz (scanning radio) and Radio 4 supports Bluetooth function.

Set 1 and Set 2 antennas are the same type antennas, only the highest gain antennas Set 1 for 2.4GHz, Set 2 for 5GHz were tested.

Note 4: 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	$DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{sts}}\left[\sum_{k=1}^{N_{ant}} g_{j,k}\right]^2}{N_{ANT}}\right]$
BF	$DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{sts}}\left[\sum_{k=1}^{N_{ant}} g_{j,k}\right]^2}{N_{ANT}}\right]$	$DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{sts}}\left[\sum_{k=1}^{N_{ant}} g_{j,k}\right]^2}{N_{ANT}}\right]$

Ex.

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

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 ;

Antenna Set 1

2.4G G1= 2.79 dBi ; G2= 3.39 dBi ; G3= 3.39 dBi ; G4= 2.8 dBi ;

4TX DG= 9.12dBi ;2TX DG= 6.11dBi

Antenna Set 2

5G G1= 4.17 dBi ; G2= 5.04 dBi ; G3= 5.09 dBi ; G4= 4.16 dBi ;

4TX DG= 10.65dBi ; 2TX DG= 7.63dBi

Antenna Set 3

2.4G G1= 3.89 dBi ; G2= 4.49 dBi ; G3= 4.49 dBi ; G4= 3.9 dBi ;

4TX DG= 10.22dBi ; 2TX DG= 7.21dBi

5G G1= 3.37 dBi ; G2= 4.24 dBi ; G3= 4.29 dBi ; G4= 3.36 dBi ;

4TX DG= 9.85dBi ; 2TX DG= 6.83dBi

Antenna Set 4

2.4G G1= 1.89 dBi ; G2= 2.49 dBi ; G3= 2.49 dBi ; G4= 1.9 dBi ;

4TX DG= 8.22dBi ; 2TX DG= 5.21dBi

5G G1= 2.17 dBi ; G2= 3.04 dBi ; G3= 3.09 dBi ; G4= 2.16 dBi ;

4TX DG= 8.65dBi ; 2TX DG= 5.63dBi

Antenna Set 5

2.4G G1= 5.99 dBi ; G2= 6.59 dBi ; G3= 6.59 dBi ; G4= 6 dBi ;

4TX DG= 12.32dBi ; 2TX DG= 9.31dBi

5G G1= 4.77 dBi ; G2= 5.64 dBi ; G3= 5.69 dBi ; G4= 4.76 dBi ;

4TX DG= 11.25dBi ; 2TX DG= 8.23dBi

Antenna Set 6

2.4G G1= 10.19 dBi ; G2= 10.79 dBi ; G3= 10.79 dBi ; G4= 10.2 dBi ;

4TX DG= 16.52dB i; 2TX DG= 13.51dBi

5G G1= 9.27 dBi ; G2= 10.14 dBi ; G3= 10.19 dBi ; G4= 9.26 dBi ;

4TX DG= 15.75dBi ; 2TX DG= 12.73dBi

<For Radio 1 (2.4GHz Functions) and Radio 2 (5GHz Functions)>

For 1TX/4RX:

Only Port 1 can be use as transmitting antenna

Port 1, Port 2, Port 3 and Port 4 can be used as receiving antennas.

Port 1, Port 2, Port 3 and Port 4 could receive simultaneously.

For 2TX/4RX:

Only Port 1 and Port 2 can be use as transmitting antenna

Port 1, Port 2, Port 3 and Port 4 can be used as receiving antennas.

Port 1, Port 2, Port 3 and Port 4 could receive simultaneously.

For 4TX/4RX:

Port 1, Port 2, Port 3 and Port 4 can be use as transmitting/receiving antenna

Port 1, Port 2, Port 3 and Port 4 could receive simultaneously.

<For Radio 3 / 2.4GHz + 5GHz Functions>

Only Port 1 can be used as receiving antennas.

<For Radio 4 / Bluetooth Functions>

Only Port 1 can be use as transmitting/receiving antenna.

1.1.3 Mode Test Duty Cycle

For Set 1, 5 and 6 antennas:
For 1T1S Mode:

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11b	0.714	1.46	650.625u	3k
802.11g	0.926	0.33	1.434m	1k
802.11ax HEW20	0.953	0.21	5.447m	300
802.11ax HEW40	0.965	0.15	5.448m	300

For 2T1S Mode:

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11b	0.755	1.22	650u	3k
802.11g	0.912	0.4	1.434m	1k
802.11ax HEW20	0.95	0.22	5.448m	300
802.11ax HEW20-BF	0.977	0.1	1.766m	1k
802.11ax HEW40	0.963	0.16	5.448m	300
802.11ax HEW40-BF	0.976	0.11	1.765m	1k

For 4T1S Mode:

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11b	0.755	1.22	650u	3k
802.11g	0.912	0.4	1.434m	1k
802.11ax HEW20	0.95	0.22	5.448m	300
802.11ax HEW20-BF	0.955	0.2	1.766m	1k
802.11ax HEW40	0.95	0.22	5.448m	300
802.11ax HEW40-BF	0.972	0.12	1.765m	1k

For Set 3 and 4 antennas:
For 1T1S Mode:

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11b	0.714	1.46	650.625u	3k
802.11g	0.926	0.33	1.434m	1k
802.11ax HEW20	0.953	0.21	5.447m	300
802.11ax HEW40	0.965	0.15	5.448m	300

For 2T1S Mode:

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11b	0.755	1.22	650u	3k
802.11g	0.912	0.4	1.434m	1k
802.11ax HEW20	0.95	0.22	5.448m	300
802.11ax HEW20-BF	0.926	0.33	1.765m	1k
802.11ax HEW40	0.95	0.22	5.448m	300
802.11ax HEW40-BF	0.975	0.11	1.766m	1k

For 4T1S Mode:

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11b	0.755	1.22	650u	3k
802.11g	0.912	0.4	1.434m	1k
802.11ax HEW20	0.95	0.22	5.448m	300
802.11ax HEW20-BF	0.976	0.11	1.766m	1k
802.11ax HEW40	0.95	0.22	5.448m	300
802.11ax HEW40-BF	0.974	0.11	1.765m	1k

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

1.1.4 EUT Operational Condition

EUT Power Type	From Power Adapter or PoE			
Beamforming Function	☒	With beamforming	☐	Without beamforming
	For 802.11n/ax in 2.4GHz and 802.11n/ac/ax in 5GHz.			
Function	☒	Point-to-multipoint	☐	Point-to-point
Test Software Version	For Non-beamforming: QSPR (v5.0-00186) For beamforming: Telnet (6.1.7601)			

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
- 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 (TAF: 3787)	ADD: No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.) 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	Serway Li	24.6~25 / 65~69	Jul. 18, 2019 ~ Aug. 13, 2019
	TH02-CB	Mason Chan	16.7~25 / 58~69	Jul. 26, 2023 ~ Aug. 03, 2023
Radiated<1GHz	03CH06-CB	Roy Mai	22.5~23.9 / 59~61	May 25, 2023 ~ May 26, 2023
Radiated>1GHz (For others channel)	03CH01-CB	Eason Chen	27.1~28.3 / 62~66	Jul. 03, 2019 ~ Jul. 30, 2019
Radiated>1GHz (For HEW40 / 2452MHz) non-TX BF 4T1S antenna set 1, 3, 6	03CH04-CB	Gordon Hung	22~23 / 55~58	May 09, 2023 ~ May 23, 2023
AC Conduction	CO01-CB	Gray Lee	22~23 / 65~66	Jun. 13, 2023

Note: The tested sample of the AC Conduction, Radiated below 1GHz, Radiated above 1GHz 2452MHz non-TX BF 4T1S antenna set 1, 3, 6, RF Conducted (revised directional gain) test item were received on Sep. 22, 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 before Jun. 01, 2020

Test Items	Uncertainty	Remark
Radiated Emission (1GHz ~ 18GHz)	4.3 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	5.1 dB	Confidence levels of 95%
Conducted Emission	2.4 dB	Confidence levels of 95%
Output Power Measurement	1.5 dB	Confidence levels of 95%
Power Density Measurement	2.4 dB	Confidence levels of 95%
Bandwidth Measurement	2%	Confidence levels of 95%

Test date before Jun. 01, 2023

Test Items	Uncertainty	Remark
Radiated Emission (9kHz ~ 30MHz)	3.4 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	5.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	5.2 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.7 dB	Confidence levels of 95%

Test date after May 31, 2023

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.4 dB	Confidence levels of 95%
Conducted Emission	3.1 dB	Confidence levels of 95%
Output Power Measurement	0.8 dB	Confidence levels of 95%
Power Density Measurement	3.1 dB	Confidence levels of 95%
Bandwidth Measurement	2.2%	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

For Set 1 antennas / 1TX:
For Conducted measurement and Band Edge Emission test:

Mode	PowerSetting
802.11b_Nss1,(1Mbps)_1TX	-
2412MHz	22
2417MHz	22.5
2437MHz	25
2457MHz	21.5
2462MHz	21.5
802.11g_Nss1,(6Mbps)_1TX	-
2412MHz	20
2417MHz	21
2437MHz	25
2457MHz	21
2462MHz	19.5
802.11ax HEW20_Nss1,(MCS0)_1TX	-
2412MHz	20
2417MHz	21
2437MHz	25
2457MHz	21
2462MHz	19.5
802.11ax HEW40_Nss1,(MCS0)_1TX	-
2422MHz	18.5
2437MHz	19.5
2452MHz	18.5

For Set 1 antennas / 2TX:
For Conducted measurement and Band Edge Emission test:

Mode	PowerSetting
802.11b_Nss1,(1Mbps)_2TX	-
2412MHz	21.5
2437MHz	23.5
2462MHz	21
802.11g_Nss1,(6Mbps)_2TX	-
2412MHz	19.5
2417MHz	20
2437MHz	23.5
2457MHz	20
2462MHz	19
802.11ax HEW20_Nss1,(MCS0)_2TX	-
2412MHz	19.5
2417MHz	21
2437MHz	23
2457MHz	20
2462MHz	18.5
802.11ax HEW40_Nss1,(MCS0)_2TX	-
2422MHz	17.5
2437MHz	18.5
2452MHz	16.5
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	-
2412MHz	25
2437MHz	25
2462MHz	25
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	-
2422MHz	25
2437MHz	25
2452MHz	25

For Set 1 antennas / 4TX:
For Conducted measurement and Band Edge Emission test:

Mode	PowerSetting
802.11b_Nss1,(1Mbps)_4TX	-
2412MHz	21
2437MHz	22.5
2462MHz	20.5
802.11g_Nss1,(6Mbps)_4TX	-
2412MHz	19
2417MHz	20
2437MHz	23.5
2457MHz	19.5
2462MHz	17.5
802.11ax HEW20_Nss1,(MCS0)_4TX	-
2412MHz	19
2417MHz	20
2437MHz	23
2457MHz	21
2462MHz	17
802.11ax HEW40_Nss1,(MCS0)_4TX	-
2422MHz	17
2437MHz	18.5
2447MHz	17.5
2452MHz	15.5
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-
2412MHz	24
2437MHz	25
2462MHz	24
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-
2422MHz	21
2427MHz	21
2437MHz	25
2447MHz	22
2452MHz	19

For Radiated Emission:

Mode	PowerSetting
802.11b_Nss1,(1Mbps)_4TX	-
2412MHz	23
2437MHz	25
2462MHz	25
802.11g_Nss1,(6Mbps)_4TX	-
2412MHz	25
2437MHz	25
2462MHz	25
802.11ax HEW20_Nss1,(MCS0)_4TX	-
2412MHz	25
2437MHz	25
2462MHz	25
802.11ax HEW40_Nss1,(MCS0)_4TX	-
2422MHz	25
2437MHz	25
2452MHz	25

For Set 3 antennas / 1TX:
For Conducted measurement and Band Edge Emission test:

Mode	PowerSetting
802.11b_Nss1,(1Mbps)_1TX	-
2412MHz	22
2417MHz	22.5
2437MHz	25
2457MHz	21.5
2462MHz	21
802.11g_Nss1,(6Mbps)_1TX	-
2412MHz	20
2417MHz	21
2437MHz	25
2457MHz	20.5
2462MHz	19
802.11ax HEW20_Nss1,(MCS0)_1TX	-
2412MHz	20
2417MHz	21
2437MHz	23.5
2457MHz	20
2462MHz	19
802.11ax HEW40_Nss1,(MCS0)_1TX	-
2422MHz	18.5
2437MHz	19
2452MHz	17.5

For Set 3 antennas / 2TX:
For Conducted measurement and Band Edge Emission test:

Mode	PowerSetting
802.11b_Nss1,(1Mbps)_2TX	-
2412MHz	22
2437MHz	24
2457MHz	21.5
2462MHz	21
802.11g_Nss1,(6Mbps)_2TX	-
2412MHz	19.5
2417MHz	20.5
2437MHz	23.5
2457MHz	19.5
2462MHz	18.5
802.11ax HEW20_Nss1,(MCS0)_2TX	-
2412MHz	19.5
2417MHz	20
2437MHz	23
2457MHz	20.5
2462MHz	18.5
802.11ax HEW40_Nss1,(MCS0)_2TX	-
2422MHz	18
2437MHz	18.5
2452MHz	16.5
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	-
2412MHz	25
2437MHz	25
2457MHz	25
2462MHz	25
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	-
2422MHz	25
2437MHz	25
2452MHz	25

For Set 3 antennas / 4TX:
For Conducted measurement and Band Edge Emission test:

Mode	PowerSetting
802.11b_Nss1,(1Mbps)_4TX	-
2412MHz	21.5
2437MHz	23.5
2462MHz	21
802.11g_Nss1,(6Mbps)_4TX	-
2412MHz	19.5
2417MHz	20.5
2437MHz	23
2457MHz	19.5
2462MHz	18.5
802.11ax HEW20_Nss1,(MCS0)_4TX	-
2412MHz	19.5
2417MHz	20.5
2437MHz	23
2457MHz	20.5
2462MHz	17
802.11ax HEW40_Nss1,(MCS0)_4TX	-
2422MHz	17.5
2437MHz	18.5
2452MHz	16.5
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-
2412MHz	24
2437MHz	25
2462MHz	24
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-
2422MHz	22
2437MHz	23
2452MHz	21

For Radiated Emission:

Mode	PowerSetting
802.11b_Nss1,(1Mbps)_4TX	-
2412MHz	23.5
2437MHz	25
2462MHz	25
802.11g_Nss1,(6Mbps)_4TX	-
2412MHz	25
2437MHz	25
2462MHz	25
802.11ax HEW20_Nss1,(MCS0)_4TX	-
2412MHz	25
2437MHz	25
2462MHz	25
802.11ax HEW40_Nss1,(MCS0)_4TX	-
2422MHz	25
2437MHz	25
2452MHz	25

For Set 4 antennas / 1TX:
For Conducted measurement and Band Edge Emission test:

Mode	PowerSetting
802.11b_Nss1,(1Mbps)_1TX	-
2412MHz	22.5
2437MHz	25
2457MHz	22
2462MHz	21.5
802.11g_Nss1,(6Mbps)_1TX	-
2412MHz	20.5
2417MHz	21
2437MHz	25
2457MHz	20.5
2462MHz	19.5
802.11ax HEW20_Nss1,(MCS0)_1TX	-
2412MHz	20.5
2437MHz	23
2457MHz	20.5
2462MHz	19
802.11ax HEW40_Nss1,(MCS0)_1TX	-
2422MHz	18.5
2437MHz	19
2452MHz	17.5

For Set 4 antennas / 2TX:
For Conducted measurement and Band Edge Emission test:

Mode	PowerSetting
802.11b_Nss1,(1Mbps)_2TX	-
2412MHz	21.5
2437MHz	24
2457MHz	21.5
2462MHz	21
802.11g_Nss1,(6Mbps)_2TX	-
2412MHz	20
2417MHz	21
2437MHz	23.5
2457MHz	20
2462MHz	19
802.11ax HEW20_Nss1,(MCS0)_2TX	-
2412MHz	20
2417MHz	20.5
2437MHz	23
2457MHz	21
2462MHz	18
802.11ax HEW40_Nss1,(MCS0)_2TX	-
2422MHz	18
2437MHz	18.5
2452MHz	17
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	-
2412MHz	25
2437MHz	25
2462MHz	25
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	-
2422MHz	25
2437MHz	25
2452MHz	25

For Set 4 antennas / 4TX:
For Conducted measurement and Band Edge Emission test:

Mode	PowerSetting
802.11b_Nss1,(1Mbps)_4TX	-
2412MHz	21.5
2437MHz	23.5
2462MHz	21
802.11g_Nss1,(6Mbps)_4TX	-
2412MHz	19
2417MHz	20.5
2437MHz	23
2457MHz	20.5
2462MHz	19
802.11ax HEW20_Nss1,(MCS0)_4TX	-
2412MHz	19.5
2417MHz	20.5
2437MHz	22.5
2457MHz	19.5
2462MHz	19
802.11ax HEW40_Nss1,(MCS0)_4TX	-
2422MHz	18
2437MHz	18
2452MHz	15.5
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-
2412MHz	25
2437MHz	25
2462MHz	25
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-
2422MHz	24
2437MHz	25
2452MHz	23

For Radiated Emission:

Mode	PowerSetting
802.11b_Nss1,(1Mbps)_4TX	-
2412MHz	25
2437MHz	25
2462MHz	25
802.11g_Nss1,(6Mbps)_4TX	-
2412MHz	25
2437MHz	25
2462MHz	25
802.11ax HEW20_Nss1,(MCS0)_4TX	-
2412MHz	25
2437MHz	25
2462MHz	25
802.11ax HEW40_Nss1,(MCS0)_4TX	-
2422MHz	25
2437MHz	25
2452MHz	25

For Set 5 antennas / 1TX:
For Conducted measurement and Band Edge Emission test:

Mode	PowerSetting
802.11b_Nss1,(1Mbps)_1TX	-
2412MHz	22
2417MHz	22
2437MHz	25
2457MHz	22
2462MHz	21.5
802.11g_Nss1,(6Mbps)_1TX	-
2412MHz	19.5
2417MHz	20.5
2437MHz	25
2457MHz	20.5
2462MHz	19.5
802.11ax HEW20_Nss1,(MCS0)_1TX	-
2412MHz	19.5
2417MHz	20.5
2437MHz	23
2457MHz	20
2462MHz	19
802.11ax HEW40_Nss1,(MCS0)_1TX	-
2422MHz	18
2437MHz	19
2452MHz	17.5

For Set 5 antennas / 2TX:
For Conducted measurement and Band Edge Emission test:

Mode	PowerSetting
802.11b_Nss1,(1Mbps)_2TX	-
2412MHz	21.5
2437MHz	23.5
2462MHz	21
802.11g_Nss1,(6Mbps)_2TX	-
2412MHz	19
2417MHz	20
2437MHz	23
2457MHz	19.5
2462MHz	18
802.11ax HEW20_Nss1,(MCS0)_2TX	-
2412MHz	18.5
2417MHz	20
2437MHz	22.5
2457MHz	19.5
2462MHz	18.5
802.11ax HEW40_Nss1,(MCS0)_2TX	-
2422MHz	17.5
2437MHz	18
2447MHz	16
2452MHz	15
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	-
2412MHz	25
2437MHz	25
2457MHz	25
2462MHz	21
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	-
2422MHz	25
2437MHz	25
2447MHz	20
2452MHz	19

For Set 5 antennas / 4TX:
For Conducted measurement and Band Edge Emission test:

Mode	PowerSetting
802.11b_Nss1,(1Mbps)_4TX	-
2412MHz	21
2437MHz	22.5
2462MHz	20.5
802.11g_Nss1,(6Mbps)_4TX	-
2412MHz	19
2417MHz	19.5
2437MHz	22
2457MHz	18.5
2462MHz	17.5
802.11ax HEW20_Nss1,(MCS0)_4TX	-
2412MHz	18
2417MHz	19.5
2437MHz	22
2457MHz	18.5
2462MHz	15.5
802.11ax HEW40_Nss1,(MCS0)_4TX	-
2422MHz	16.5
2427MHz	
2437MHz	17
2447MHz	13
2452MHz	12.5
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-
2412MHz	23
2437MHz	23
2457MHz	23
2462MHz	21
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-
2422MHz	21
2437MHz	22
2447MHz	20
2452MHz	19

For Radiated Emission:

Mode	PowerSetting
802.11b_Nss1,(1Mbps)_4TX	-
2412MHz	23.5
2437MHz	25
2462MHz	25
802.11g_Nss1,(6Mbps)_4TX	-
2412MHz	25
2437MHz	25
2462MHz	25
802.11ax HEW20_Nss1,(MCS0)_4TX	-
2412MHz	25
2437MHz	25
2462MHz	25
802.11ax HEW40_Nss1,(MCS0)_4TX	-
2422MHz	25
2437MHz	25
2452MHz	25

For Set 6 antennas / 1TX:
For Conducted measurement and Band Edge Emission test:

Mode	PowerSetting
802.11b_Nss1,(1Mbps)_1TX	-
2412MHz	21.5
2437MHz	23
2462MHz	20.5
802.11g_Nss1,(6Mbps)_1TX	-
2412MHz	19
2417MHz	20
2437MHz	23
2457MHz	19.5
2462MHz	18.5
802.11ax HEW20_Nss1,(MCS0)_1TX	-
2412MHz	19
2417MHz	20
2437MHz	22.5
2457MHz	19.5
2462MHz	18
802.11ax HEW40_Nss1,(MCS0)_1TX	-
2422MHz	17.5
2437MHz	18
2452MHz	16

For Set 6 antennas / 2TX:
For Conducted measurement and Band Edge Emission test:

Mode	PowerSetting
802.11b_Nss1,(1Mbps)_2TX	-
2412MHz	20.5
2437MHz	22
2457MHz	21
2462MHz	20
802.11g_Nss1,(6Mbps)_2TX	-
2412MHz	18
2417MHz	19
2437MHz	22.5
2457MHz	19
2462MHz	17.5
802.11ax HEW20_Nss1,(MCS0)_2TX	-
2412MHz	17.5
2417MHz	18.5
2437MHz	22
2457MHz	18.5
2462MHz	16.5
802.11ax HEW40_Nss1,(MCS0)_2TX	-
2422MHz	16
2437MHz	16.5
2452MHz	14
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	-
2412MHz	21
2417MHz	22
2437MHz	22
2457MHz	22
2462MHz	20
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	-
2422MHz	18
2437MHz	19
2452MHz	18

For Set 6 antennas / 4TX:
For Conducted measurement and Band Edge Emission test:

Mode	PowerSetting
802.11b_Nss1,(1Mbps)_4TX	-
2412MHz	19.5
2437MHz	19
2462MHz	19.5
802.11g_Nss1,(6Mbps)_4TX	-
2412MHz	17.5
2417MHz	18.5
2437MHz	19.5
2457MHz	18
2462MHz	16
802.11ax HEW20_Nss1,(MCS0)_4TX	-
2412MHz	17
2417MHz	17.5
2437MHz	19.5
2457MHz	17.5
2462MHz	14.5
802.11ax HEW40_Nss1,(MCS0)_4TX	-
2422MHz	14.5
2437MHz	16.5
2447MHz	12.5
2452MHz	11.5
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-
2412MHz	20
2417MHz	20
2437MHz	19
2457MHz	20
2462MHz	19
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-
2422MHz	18
2437MHz	19
2452MHz	18

For Radiated Emission:

Mode	PowerSetting
802.11b_Nss1,(1Mbps)_4TX	-
2412MHz	24.5
2437MHz	25
2462MHz	25
802.11g_Nss1,(6Mbps)_4TX	-
2412MHz	25
2437MHz	25
2462MHz	25
802.11ax HEW20_Nss1,(MCS0)_4TX	-
2412MHz	25
2437MHz	25
2462MHz	25
802.11ax HEW40_Nss1,(MCS0)_4TX	-
2422MHz	25
2437MHz	25
2452MHz	25

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
1	EUT (Radio 1 + Radio 2 + Radio 3: 2.4GHz + Radio 4) + Adapter 1 + Set 6
2	EUT (Radio 1 + Radio 2 + Radio 3: 5GHz + Radio 4) + Adapter 2 + Set 6
Mode 2 has been evaluated to be the worst case among Mode 1~2, thus measurement for Mode 3~5 will follow this same test mode.	
3	EUT (Radio 1 + Radio 2 + Radio 3: 5GHz + Radio 4) + Adapter 2 + Set 6
4	EUT (Radio 1 + Radio 2 + Radio 3: 5GHz + Radio 4) + PoE 1 + Set 6
5	EUT (Radio 1 + Radio 2 + Radio 3: 5GHz + Radio 4) + PoE 2 + Set 6
For operating mode 5 is the worst case and it was record in this test report.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	DTS Bandwidth Maximum Conducted Output Power Power Spectral Density Emissions in Non-restricted Frequency Bands
Test Condition	Conducted measurement at transmit chains
Test Mode	Refer to note
1	EUT (Radio 4) + Antenna Set 1
2	EUT (Radio 4) + Antenna Set 3
3	EUT (Radio 4) + Antenna Set 4
4	EUT (Radio 4) + Antenna Set 5
5	EUT (Radio 4) + Antenna Set 6

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
1. Aftering evaluating, EUT in X axis has been evaluated as the worst case. So the measurement will follow this same test configuration. 2. The EUT with antenna set 2, set 3 in Z axis, set 3 in Y axis, set 6 were performed the testing, EUT with antenna set 3 in Y axis has been evaluated as the worst case. So the measurement will follow this same test configuration. 3. The EUT with adapter 1~2 and PoE 1~2 were performed the testing, EUT with adapter 1 has been evaluated as the worst case. So the measurement will follow this same test configuration. 4. The radio 3 (2.4GHz/5GHz) of EUT were performed the testing, radio 3 (2.4GHz) of EUT has been evaluated as the worst case. So the measurement will follow this same test configuration.	
1	EUT in X axis (Radio 1 + Radio 2 + Radio 3: 2.4GHz + Radio 4) + Adapter 1 + Set 3 in Y axis

Operating Mode > 1GHz	CTX
After evaluating, the worst case axis was found as below. So the measurement will follow this same test configuration. For antenna set 3 and set 4: After evaluating, the worst case axis was found as below. So the measurement will follow this same test configuration. **Antenna Set 1:** For Radiated Emission: EUT in Z axis For Band Edge Emission: 1T1S and 2T1S Mode: EUT in X axis 4T1S Mode: EUT in Z axis **Antenna Set 3:** For Radiated Emission: EUT in Z axis + Antenna in Y axis For Band Edge Emission: EUT in X axis + Antenna in Z axis **Antenna Set 4:** For Radiated Emission: EUT in Z axis + Antenna in Y axis For Band Edge Emission: EUT in Z axis + Antenna in Y axis **Antenna Set 5:** For Radiated Emission: EUT in Z axis For Band Edge Emission: EUT in X axis **Antenna Set 6:** For Radiated Emission: EUT in Z axis For Band Edge Emission: EUT in X axis	
Test Mode	Refer to note

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Radiated Emission Co-location
Test Condition	Radiated measurement
Operating Mode	Normal Link
	The EUT was performed at X axis, Y axis and Z axis, the worst case was found as Emissions in Restricted Frequency Bands above 1GHz. So the measurement will follow this same test configuration.
1	EUT in X axis: Radio 1 (WLAN 2.4GHz) + Radio 2 (WLAN 5GHz)
Refer to Appendix G for Radiated Emission Co-location.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	EUT: Radio 1 (WLAN 2.4GHz) + Radio 2 (WLAN 5GHz) + Radio 4 (Bluetooth)
Refer to Sporton Test Report No.: FA960317-14 for Co-location RF Exposure Evaluation.	

Note1: For AC power-line conducted emissions, the higher gain antennas “Set 6 (Narrow patch antenna)” only was tested and recorded in the report.

Note2: The PoE below are for measurement only, would not be marketed.
PoE information as below:

Power	Brand	Model
PoE 1	CISCO	MA-INJ-5
PoE 2	CISCO	MA-INJ-4

Note3: Test Mode:

Test Mode								
Test Item	**802.11b/g**			**802.11ax HEW20/40**				
	1T1S	**2T1S**	**4T1S**	**CDD 1T1S**	**CDD 2T1S**	**CDD 4T1S**	**TxBF 2T1S**	**TxBF 4T1S**
Maximum Conducted Output Power	V	V	V	V	V	V	V	V
DTS Bandwidth	V	V	V	V	V	V	V	V
Power Spectral Density	V	V	V	V	V	V	V	V
Emissions in Non-restricted Frequency Bands	V	V	V	V	V	V	V	V
Radiated Emission	Cover by 4T1S Max setting	Cover by 4T1S Max setting	V	Cover by CDD 4T1S Max setting	Cover by CDD 4T1S Max setting	Max setting	Cover by CDD 4T1S Max setting	Cover by CDD 4T1S Max setting
Band Edge Emission	V	V	V	V	V	V	V	V

Note4:802.11ax modulation and bandwidth are similar for 802.11n mode for 20MHz / 40MHz, therefore investigated worst case to representative mode in test report.

2.3 EUT Operation during Test

For CTX Mode:

non-beamforming mode:

The EUT was programmed to be in continuously transmitting mode.

beamforming mode:

During the test, the following programs under WIN 7 were executed.

The program was executed as follows:

1. During the test, the EUT operation to normal function.
2. Executed command fixed test channel under Telnet (6.1.7601).
3. Executed "Lantest.exe" to link with the remote workstation to transmit and receive packet by RX Device and transmit duty cycle no less than 98%.

For Normal Link:

During the test, the EUT operation to normal function.

2.4 Accessories

Accessories				
Equipment Name	**Brand Name**	**Model Name**	**P/N**	**Rating**
Adapter 1	CISCO	KSAS0361200250HU	-	Input: 100-240V, 50/60Hz, 1.0A Output: 12V, 2.5A
Adapter 2	CISCO	MA-PWR-30W-US	640-39010-A	Input: 100-240V, 50-60Hz, 0.8A Max. Output: 12V, 2.5A 30W
Other				
Wall-mounted rack*1				

2.5 Support Equipment

For AC Conduction:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	2.5G LAN PC	DELL	T3400	N/A
B	2.4G NB	DELL	E6430	N/A
C	5G NB	DELL	E6430	N/A
D	Scan Radio (2.4G or 5G) NB	DELL	E6430	N/A
E	PoE 2	CISCO	MA-INJ-4	N/A

For Radiated (below 1GHz):

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	NB (LAN)	DELL	E6430	N/A
B	NB (WIFI 2.4G)	DELL	E6430	N/A
C	NB (WIFI 5G)	DELL	E6430	N/A
D	NB (WIFI Scan Radio 2.4G/5G)	DELL	E6430	N/A

For Radiated (above 1GHz) and RF Conducted:
<For Non-beamforming mode>

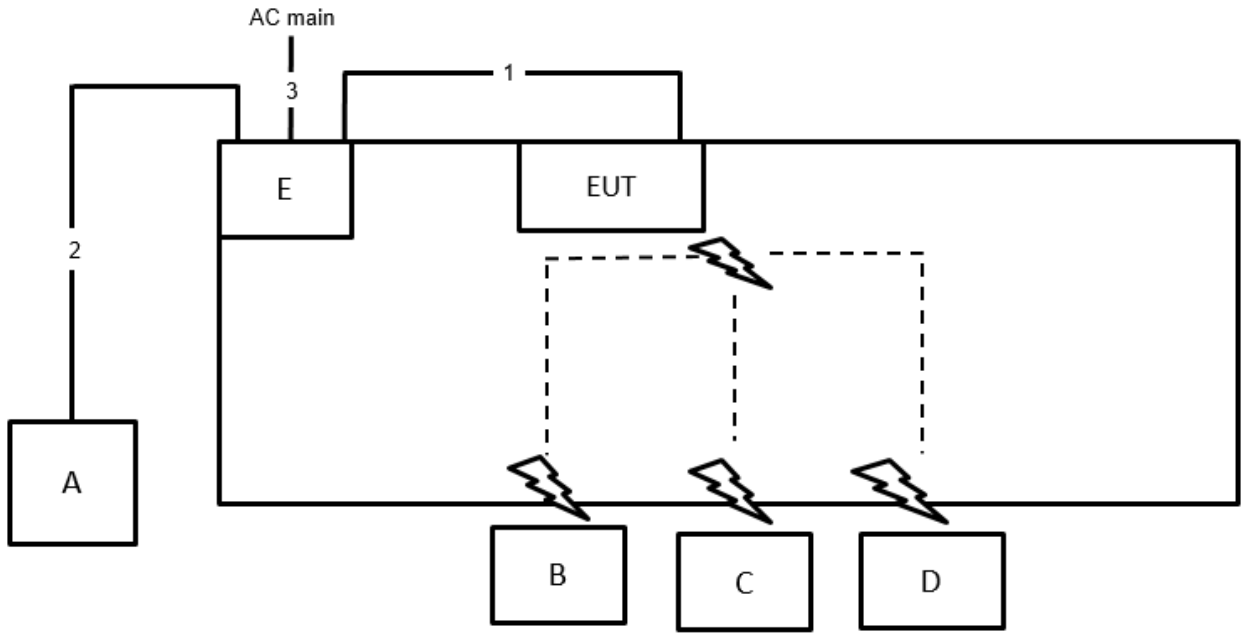
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	Notebook	DELL	E4300	N/A

<For Beamforming mode>

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	Notebook	DELL	E4300	N/A
B	Notebook	DELL	E4300	N/A
C	RX Device	CISCO	MR46E-HW	UDX-60093010

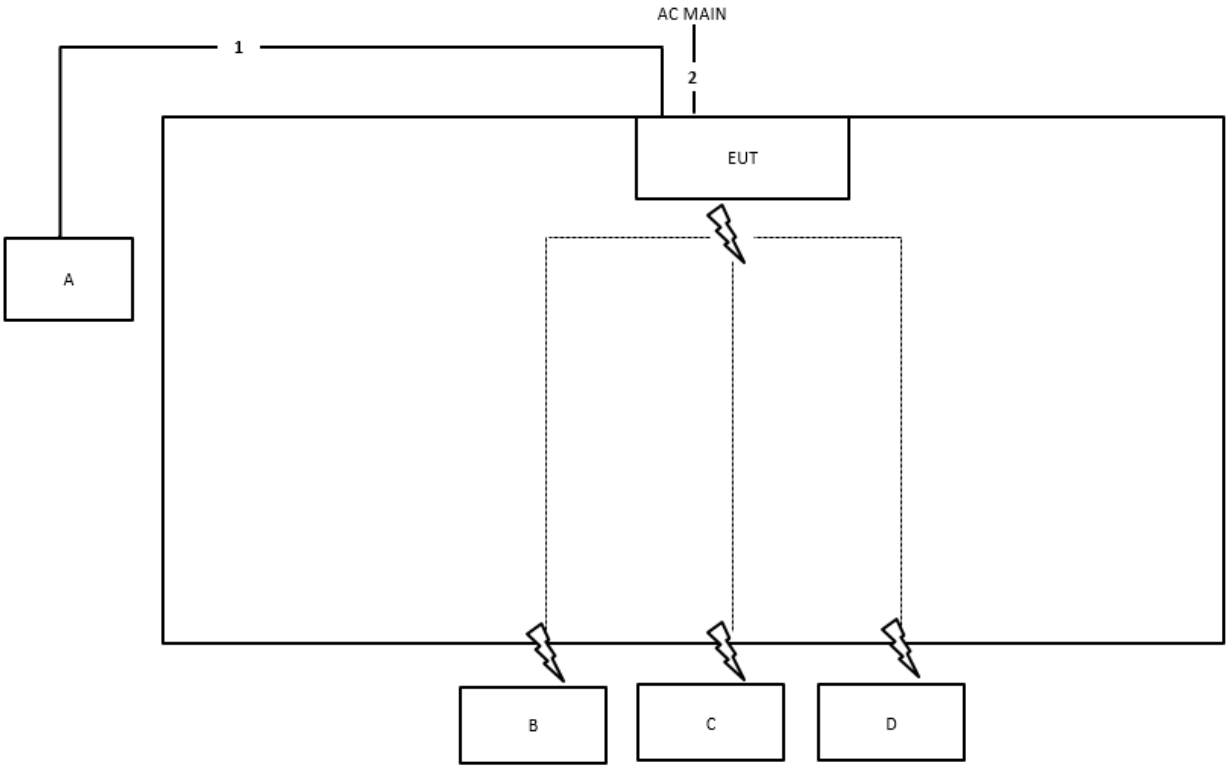
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



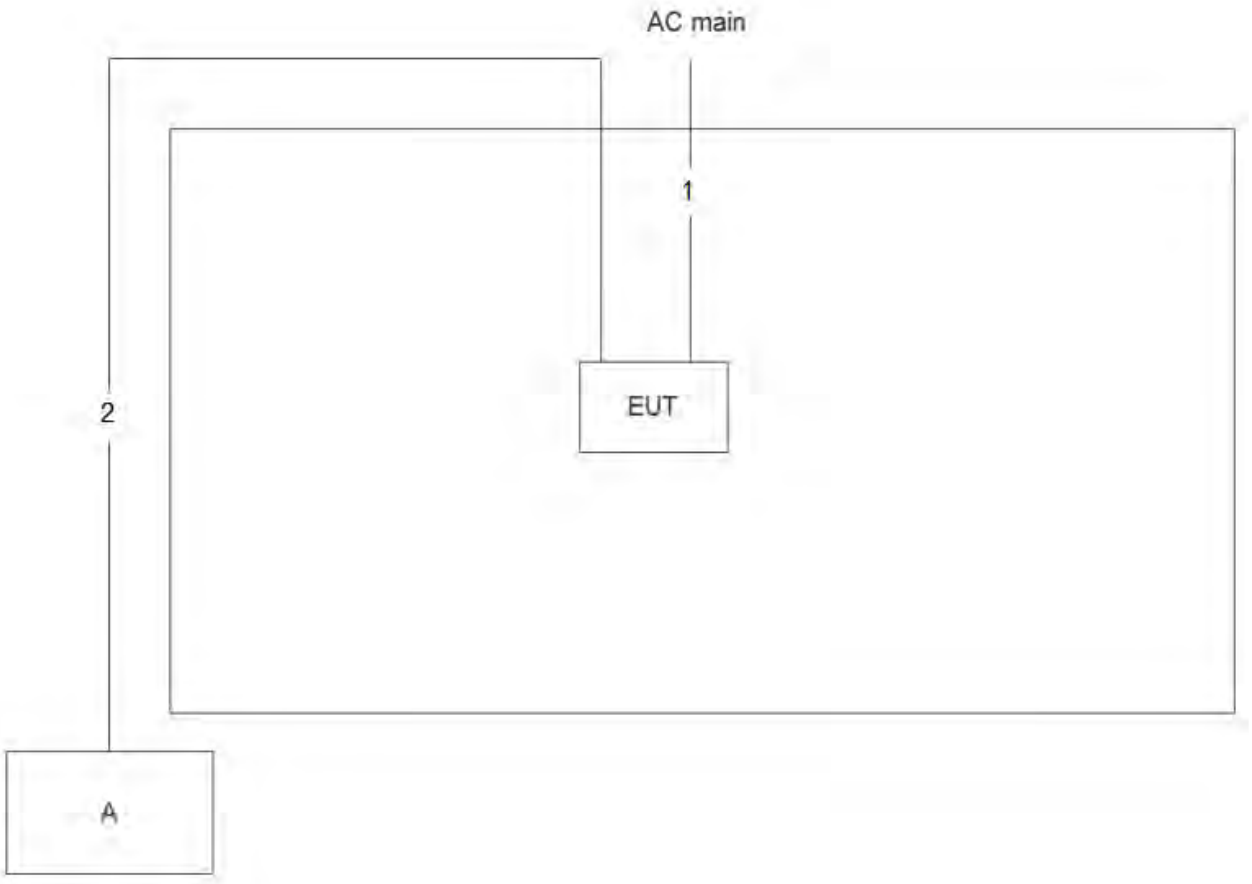
Item	Connection	Shielded	Length
1	RJ-45 cable	No	1.5m
2	RJ-45 cable	No	10m
3	Power cable	No	1.8m

Test Setup Diagram - Radiated Test < 1GHz



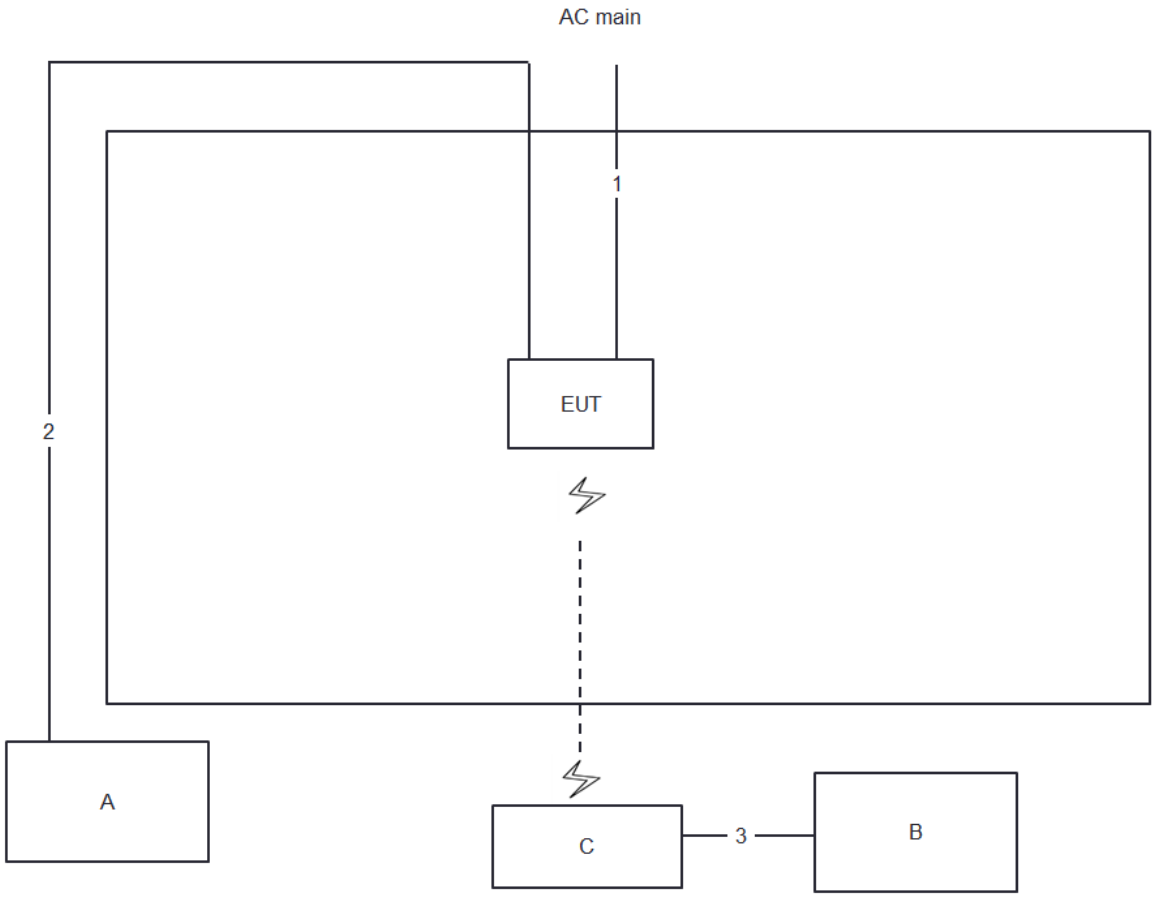
Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	Power cable	No	1.5m

Test Setup Diagram - Radiated Test > 1GHz / Non-beamforming mode



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

Test Setup Diagram - Radiated Test > 1GHz / Beamforming mode



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

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

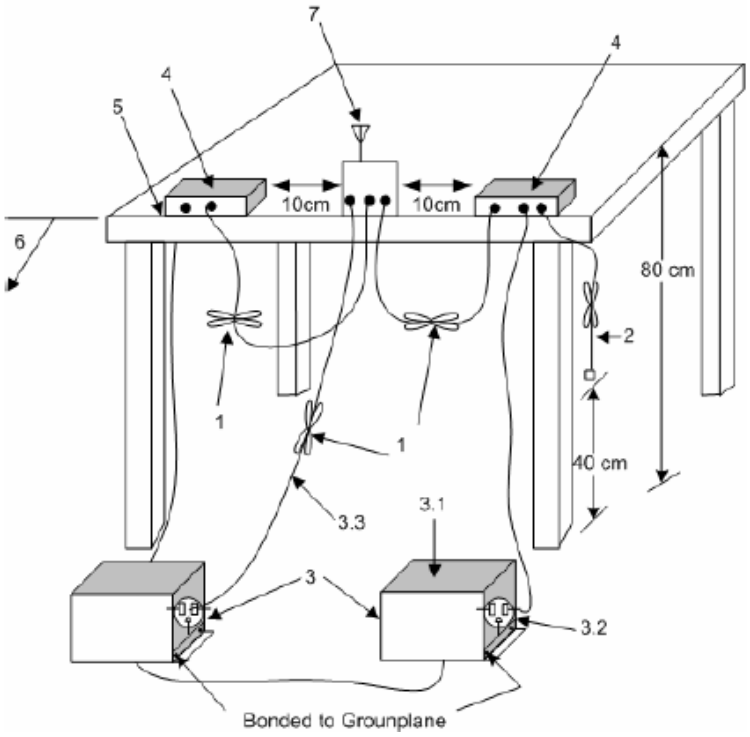
Refer a test equipment and calibration data table in this test report.

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.

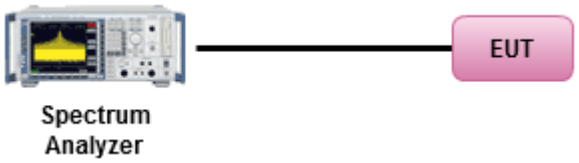
3.2.2 Measuring Instruments

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.

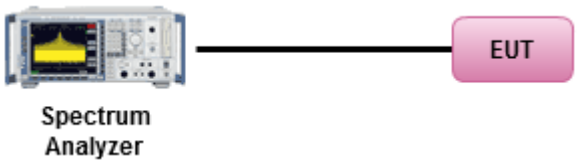
3.4.3 Test Procedures

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 11.10.2 Method PKPSD.
	[duty cycle ≥ 98% or external video / power trigger]
	☐ Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.3 Method AVGPSD-1.
	☐ Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.5 Method AVGPSD-2.
	☐ Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.7 Method AVGPSD-3.
	duty cycle < 98% and average over on/off periods with duty factor
	☐ Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.4 Method AVGPSD-1A. (alternative).
	☐ Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.6 Method AVGPSD-2A. (alternative)
	☐ Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.8 Method AVGPSD-3A. (alternative)
▪ 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

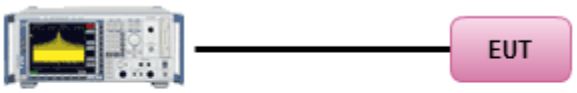
Refer a test equipment and calibration data table in this test report.

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



Spectrum Analyzer

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.

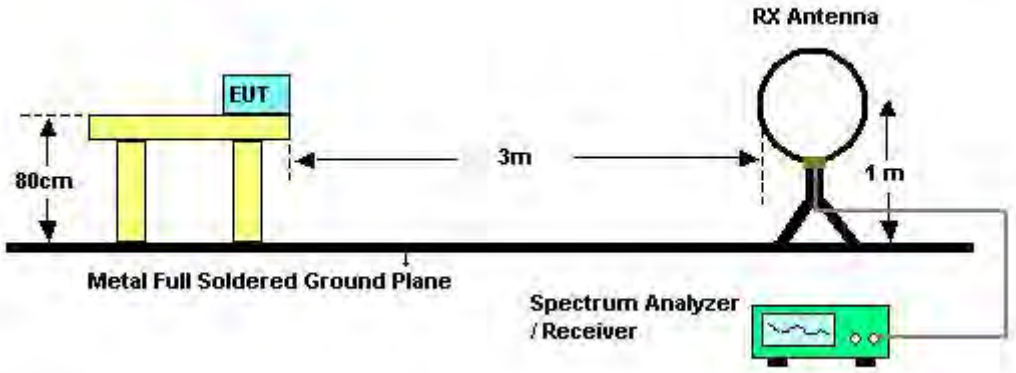
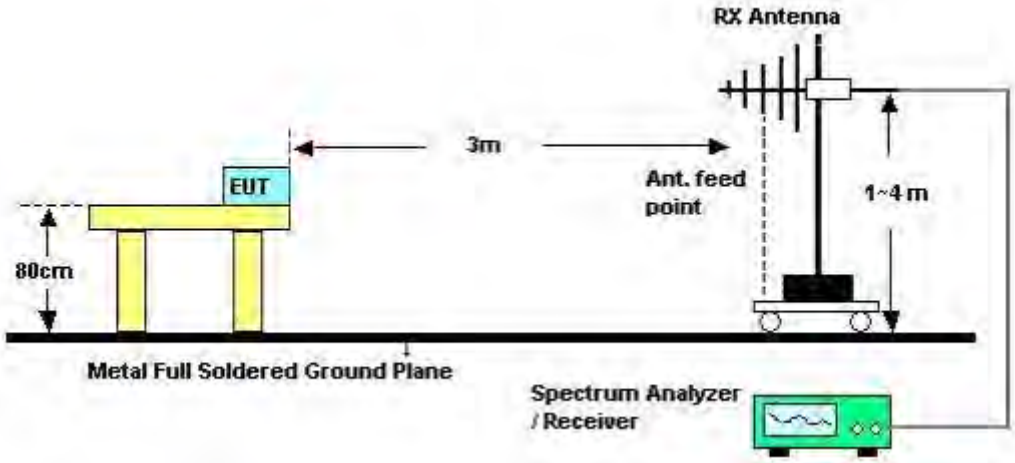
3.6.2 Measuring Instruments

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

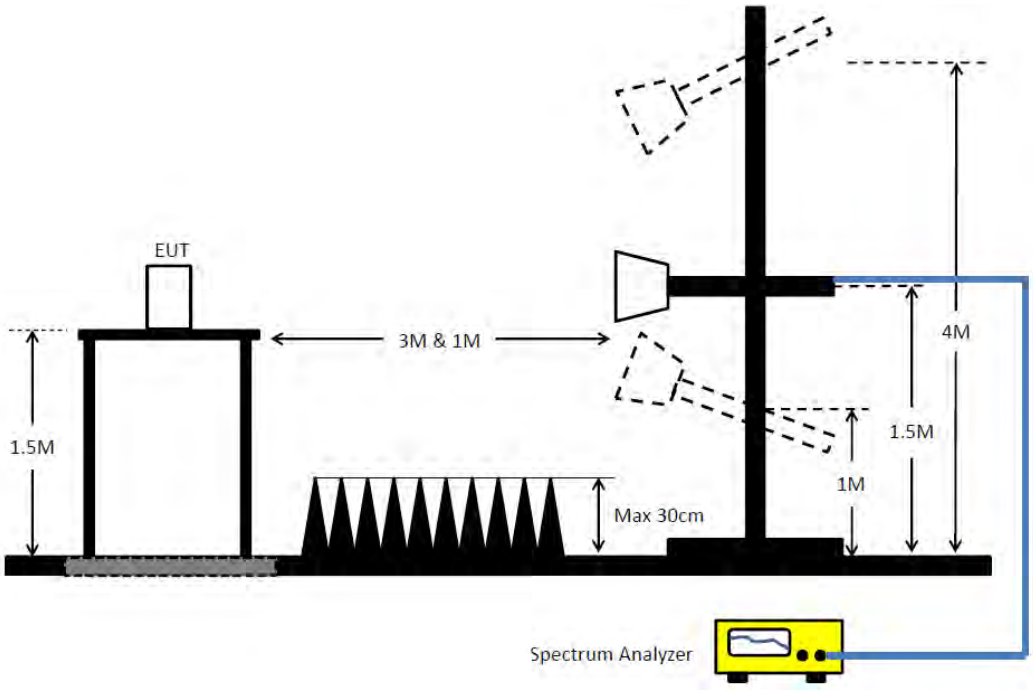
3.6.3 Test Procedures

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. 20, 2023	Feb. 19, 2024	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz~100MHz	Feb. 16, 2023	Feb. 15, 2024	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Apr. 27, 2023	Apr. 26, 2024	Conduction (CO01-CB)
Pulse Limiter	Rohde& Schwarz	ESH3-Z2	100430	9kHz ~ 30MHz	Feb. 09, 2023	Feb. 08, 2024	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	9kHz ~ 30MHz	Oct. 18, 2022	Oct. 17, 2023	Conduction (CO01-CB)
Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
Loop Antenna	Teseq	HLA 6120	31244	9kHz - 30 MHz	Mar. 23, 2023	Mar. 22, 2024	Radiation (03CH06-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH06-CB	30 MHz ~ 1 GHz	Aug. 04, 2022	Aug. 03. 2023	Radiation (03CH06-CB)
Bilog Antenna with 6 dB attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37878 & AT-N0606	20MHz ~ 2GHz	Jul. 31, 2022	Jul. 30, 2023	Radiation (03CH06-CB)
Pre-Amplifier	Agilent	310N	187290	0.1MHz ~ 1GHz	Nov. 04, 2022	Nov. 03, 2023	Radiation (03CH06-CB)
Spectrum analyzer	R&S	FSP40	100080	9kHz~40GHz	Dec. 21, 2022	Dec. 20, 2023	Radiation (03CH06-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	Jun. 17, 2022	Jun. 16, 2023	Radiation (03CH06-CB)
RF Cable-low	Woken	RG402	Low Cable-24+68	30MHz~1GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH06-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH06-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 13, 2018	Nov. 12, 2019	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jun. 27, 2019	Jun. 26, 2020	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 08, 2019	Jan. 07, 2020	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 03, 2019	Jul. 02, 2020	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Jan. 31, 2019	Jan. 30, 2020	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-16	1 GHz ~ 18 GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-16+17	1 GHz ~ 18 GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 27, 2018	Jul. 26, 2019	Radiation (03CH01-CB)

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 24, 2019	Jul. 23, 2020	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 27, 2018	Jul. 26, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 24, 2019	Jul. 23, 2020	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	03CH04-CB	1GHz ~18GHz 3m	Feb. 23, 2023	Feb. 22, 2024	Radiation (03CH04-CB)
Horn Antenna	ETS·Lindgren	3115	00143147	750MHz~18GHz	Oct. 12, 2022	Oct. 11, 2023	Radiation (03CH04-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 22, 2022	Aug. 21, 2023	Radiation (03CH04-CB)
Pre-Amplifier	Agilent	83017A	MY53270063	0.5GHz~26.5GHz	Jul. 01, 2022	Jun. 30, 2023	Radiation (03CH04-CB)
Pre-Amplifier	SGH	SGH184	20221107-3	18GHz ~ 40GHz	Nov. 16, 2022	Nov. 15, 2023	Radiation (03CH04-CB)
Spectrum Analyzer	R&S	FSP40	100142	9kHz~40GHz	Mar. 21, 2023	Mar. 20, 2024	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-21	1GHz - 18GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-21+67	1GHz - 18GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH04-CB)
High Cable	Woken	WCA0929M	40G#5+6	1GHz ~ 40 GHz	Dec. 07, 2022	Dec. 06, 2023	Radiation (03CH04-CB)
High Cable	Woken	WCA0929M	40G#5	1GHz ~ 40 GHz	Dec. 07, 2022	Dec. 06, 2023	Radiation (03CH04-CB)
High Cable	Woken	WCA0929M	40G#6	1GHz ~ 40 GHz	Dec. 07, 2022	Dec. 06, 2023	Radiation (03CH04-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH04-CB)
Spectrum analyzer	R&S	FSV40	101027	9kHz~40GHz	Aug. 15, 2022	Aug. 14, 2023	Conducted (TH02-CB)
Power Sensor	Anritsu	MA2411B	1126203	300MHz~40GHz	Oct. 17, 2022	Oct. 16, 2023	Conducted (TH02-CB)
Power Meter	Anritsu	ML2495A	1210004	300MHz~40GHz	Oct. 17, 2022	Oct. 16, 2023	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-01	1 GHz – 18 GHz	Oct. 03, 2022	Oct. 02, 2023	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-02	1 GHz – 18 GHz	Oct. 03, 2022	Oct. 02, 2023	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-03	1 GHz – 18 GHz	Oct. 03, 2022	Oct. 02, 2023	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-04	1 GHz – 18 GHz	Oct. 03, 2022	Oct. 02, 2023	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-05	1 GHz – 18 GHz	Oct. 03, 2022	Oct. 02, 2023	Conducted (TH02-CB)

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Switch	SPTCB	SP-SWI	SWI-02	1 GHz –26.5 GHz	Oct. 04, 2022	Oct. 03, 2023	Conducted (TH02-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conducted (TH02-CB)
Spectrum analyzer	R&S	FSV40	101028	9kHz~40GHz	Oct. 30, 2018	Oct. 29, 2019	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-11	1 GHz – 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-12	1 GHz – 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-13	1 GHz – 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-14	1 GHz – 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-15	1 GHz – 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH03-CB)
Power Sensor	Anritsu	MA2411B	1126203	300MHz~40GHz	Sep. 03, 2018	Sep. 02, 2019	Conducted (TH03-CB)
Power Meter	Anritsu	ML2495A	1210004	300MHz~40GHz	Sep. 03, 2018	Sep. 02, 2019	Conducted (TH03-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conducted (TH03-CB)

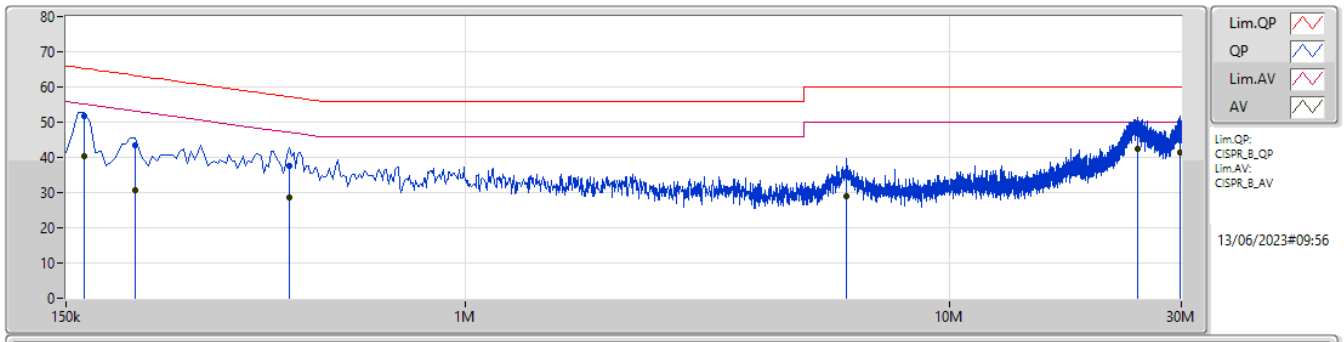
Note: Calibration Interval of instruments listed above is one year.

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

Summary

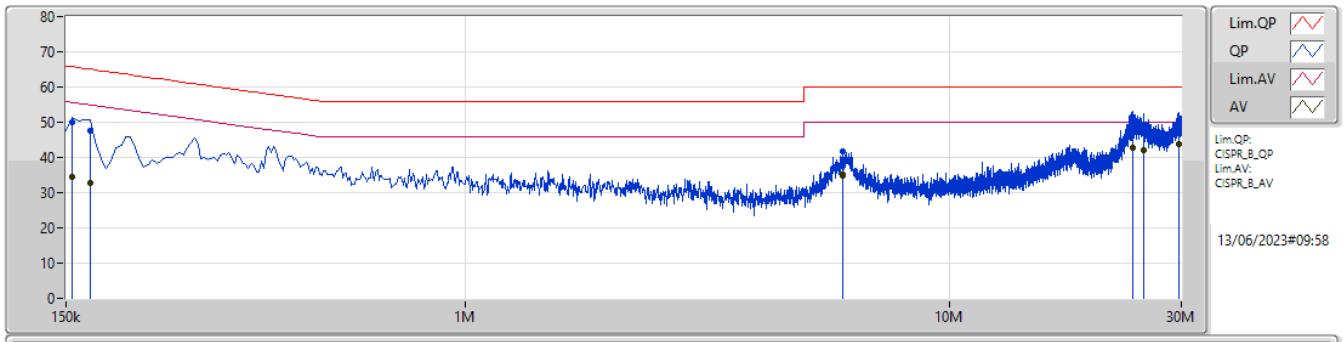
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 5	Pass	AV	29.634M	43.90	50.00	-6.10	Neutral

Mode 5



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	163.5k	51.64	65.27	-13.63	10.00	Line	-	41.64	0.09	0.04	9.87
AV	163.5k	40.22	55.27	-15.05	10.00	Line	-	30.22	0.09	0.04	9.87
QP	208.5k	43.46	63.27	-19.81	9.98	Line	-	33.48	0.08	0.04	9.86
AV	208.5k	30.55	53.27	-22.72	9.98	Line	-	20.57	0.08	0.04	9.86
QP	433.5k	37.48	57.19	-19.71	10.05	Line	-	27.43	0.09	0.06	9.90
AV	433.5k	28.79	47.19	-18.40	10.05	Line	-	18.74	0.09	0.06	9.90
QP	6.126M	35.79	60.00	-24.21	10.26	Line	-	25.53	0.21	0.13	9.92
AV	6.126M	28.99	50.00	-21.01	10.26	Line	-	18.73	0.21	0.13	9.92
QP	24.401M	48.31	60.00	-11.69	10.63	Line	-	37.68	0.31	0.27	10.05
AV	24.401M	42.35	50.00	-7.65	10.63	Line	"Worst"	31.72	0.31	0.27	10.05
QP	29.882M	48.29	60.00	-11.71	10.77	Line	-	37.52	0.33	0.34	10.10
AV	29.882M	41.39	50.00	-8.61	10.77	Line	-	30.62	0.33	0.34	10.10

Mode 5



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	154.5k	49.93	65.75	-15.82	9.98	Neutral	-	39.95	0.07	0.04	9.87
AV	154.5k	34.65	55.75	-21.10	9.98	Neutral	-	24.67	0.07	0.04	9.87
QP	168k	47.48	65.06	-17.58	9.98	Neutral	-	37.50	0.07	0.04	9.87
AV	168k	32.68	55.06	-22.38	9.98	Neutral	-	22.70	0.07	0.04	9.87
QP	6.018M	41.62	60.00	-18.38	10.22	Neutral	-	31.40	0.17	0.13	9.92
AV	6.018M	35.02	50.00	-14.98	10.22	Neutral	-	24.80	0.17	0.13	9.92
QP	6.018M	41.72	60.00	-18.28	10.22	Neutral	-	31.50	0.17	0.13	9.92
AV	6.018M	34.91	50.00	-15.09	10.22	Neutral	-	24.69	0.17	0.13	9.92
QP	23.829M	49.17	60.00	-10.83	10.65	Neutral	-	38.52	0.34	0.27	10.04
AV	23.829M	42.61	50.00	-7.39	10.65	Neutral	-	31.96	0.34	0.27	10.04
QP	25.134M	48.62	60.00	-11.38	10.68	Neutral	-	37.94	0.35	0.28	10.05
AV	25.134M	41.98	50.00	-8.02	10.68	Neutral	-	31.30	0.35	0.28	10.05
QP	29.634M	50.74	60.00	-9.26	10.85	Neutral	-	39.89	0.41	0.34	10.10
AV	29.634M	43.90	50.00	-6.10	10.85	Neutral	"Worst"	33.05	0.41	0.34	10.10

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	9.05M	16.792M	16M8G1D	7.55M	13.268M
802.11g_Nss1,(6Mbps)_1TX	16.275M	18.691M	18M7D1D	15.225M	16.367M
802.11ax HEW20_Nss1,(MCS0)_1TX	18.975M	19.64M	19M6D1D	18.625M	18.991M
802.11ax HEW40_Nss1,(MCS0)_1TX	37.8M	37.831M	37M8D1D	35.55M	37.731M

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

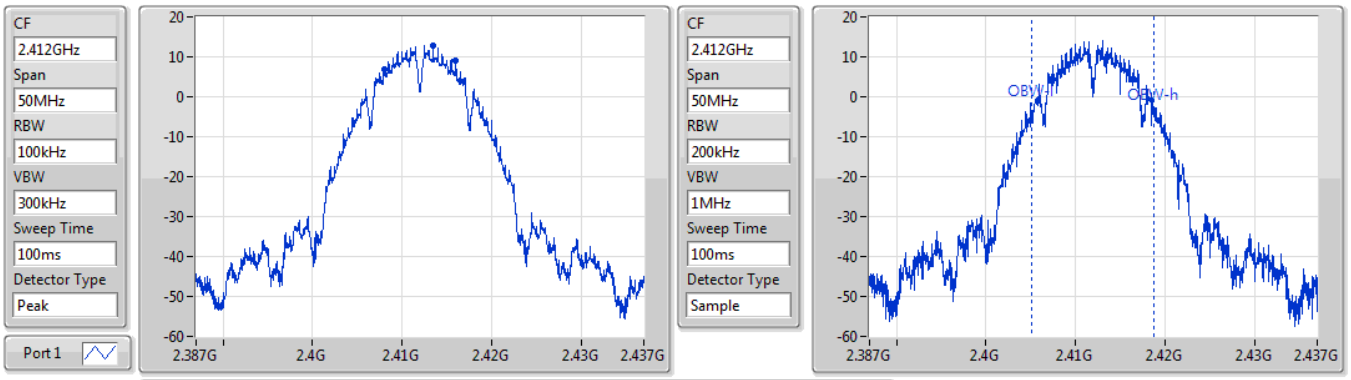
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	8M	13.693M
2437MHz	Pass	500k	9.05M	16.792M
2462MHz	Pass	500k	7.55M	13.268M
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	16.275M	16.367M
2437MHz	Pass	500k	16.275M	18.691M
2462MHz	Pass	500k	15.225M	16.367M
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-
2412MHz	Pass	500k	18.775M	19.015M
2437MHz	Pass	500k	18.625M	19.64M
2462MHz	Pass	500k	18.975M	18.991M
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-	-	-
2422MHz	Pass	500k	37.8M	37.831M
2437MHz	Pass	500k	37.35M	37.781M
2452MHz	Pass	500k	35.55M	37.731M

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

802.11b_Nss1,(1Mbps)_1TX EBW

2412MHz

09/07/2019

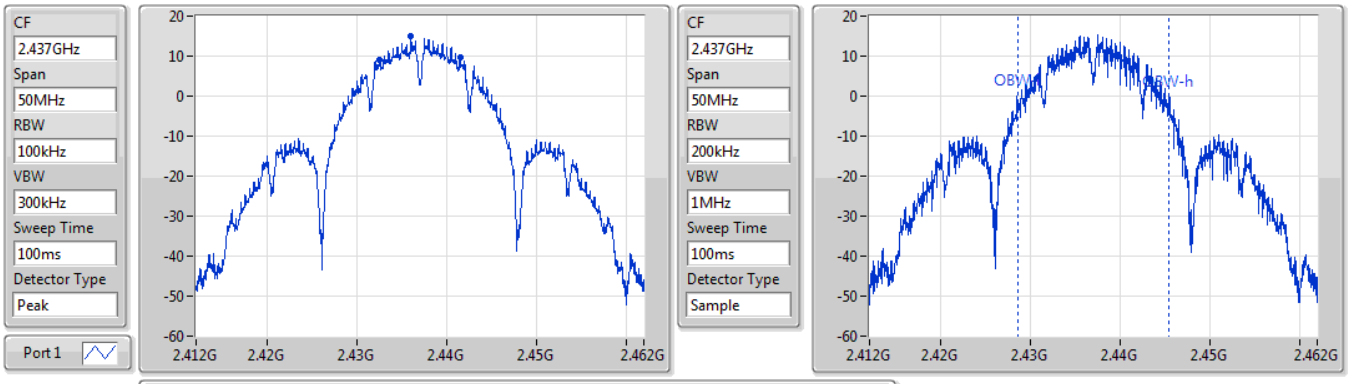


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8M	2.408025G	2.416025G	13.693M	2.405128G	2.418822G	500k	1

802.11b_Nss1,(1Mbps)_1TX EBW

2437MHz

09/07/2019

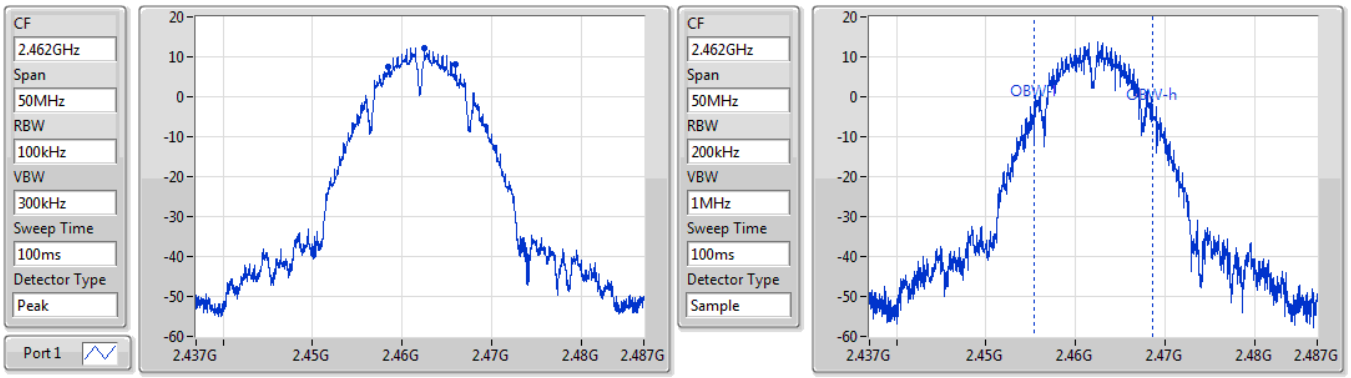


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
9.05M	2.432475G	2.441525G	16.792M	2.428579G	2.445371G	500k	1

802.11b_Nss1,(1Mbps)_1TX EBW

2462MHz

09/07/2019

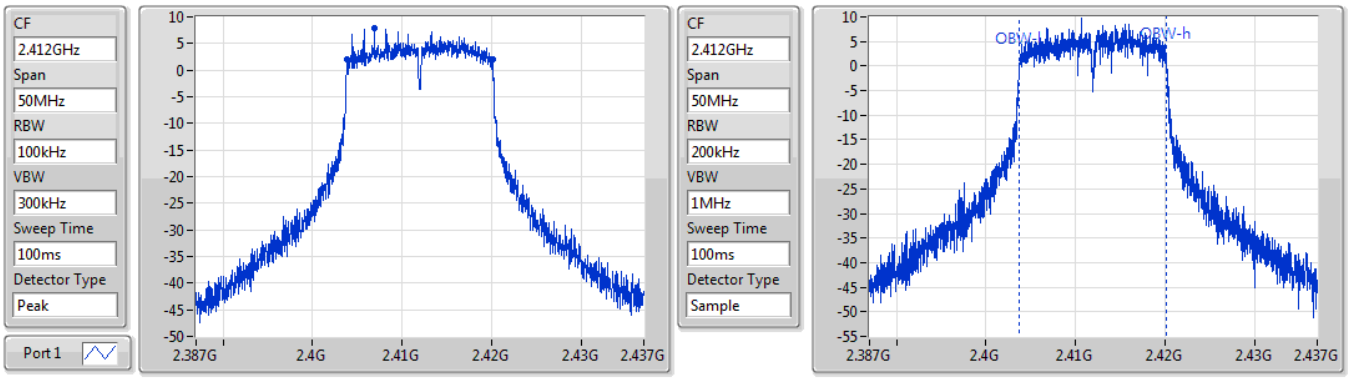


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
7.55M	2.45845G	2.466G	13.268M	2.455328G	2.468597G	500k	1

802.11g_Nss1,(6Mbps)_1TX EBW

2412MHz

09/07/2019

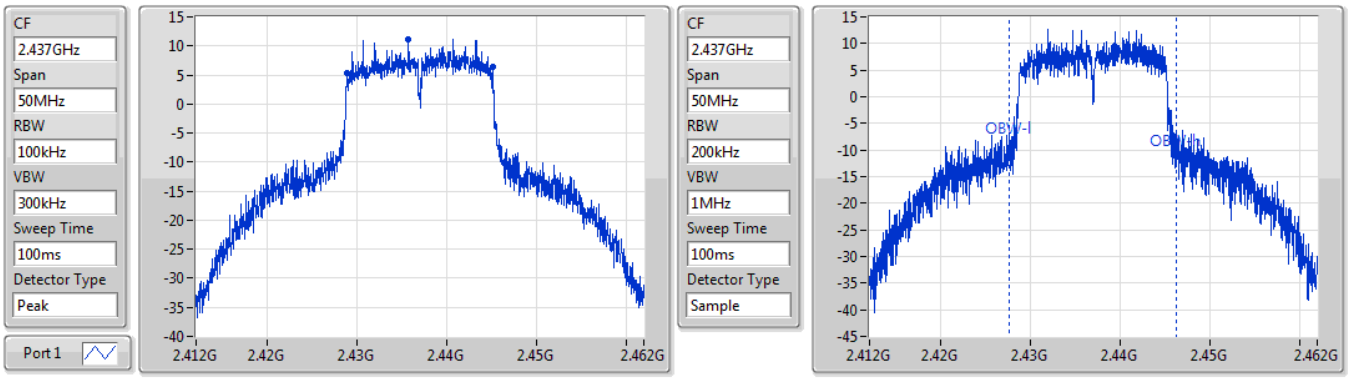


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.275M	2.40385G	2.420125G	16.367M	2.403779G	2.420146G	500k	1

802.11g_Nss1,(6Mbps)_1TX EBW

2437MHz

09/07/2019

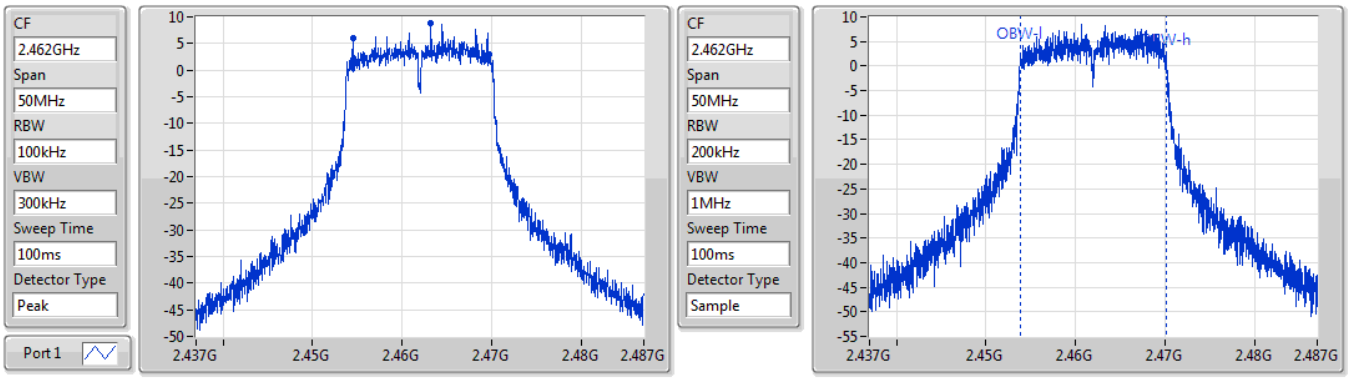


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.275M	2.42885G	2.445125G	18.691M	2.42753G	2.44622G	500k	1

802.11g_Nss1,(6Mbps)_1TX EBW

2462MHz

09/07/2019

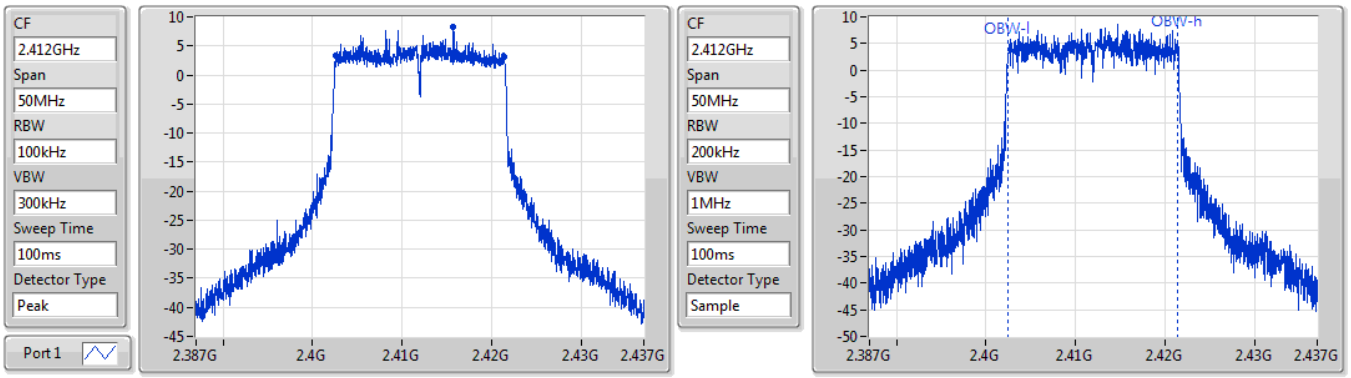


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.225M	2.4545G	2.469725G	16.367M	2.453804G	2.470171G	500k	1

802.11ax HEW20_Nss1,(MCS0)_1TX EBW

2412MHz

09/07/2019

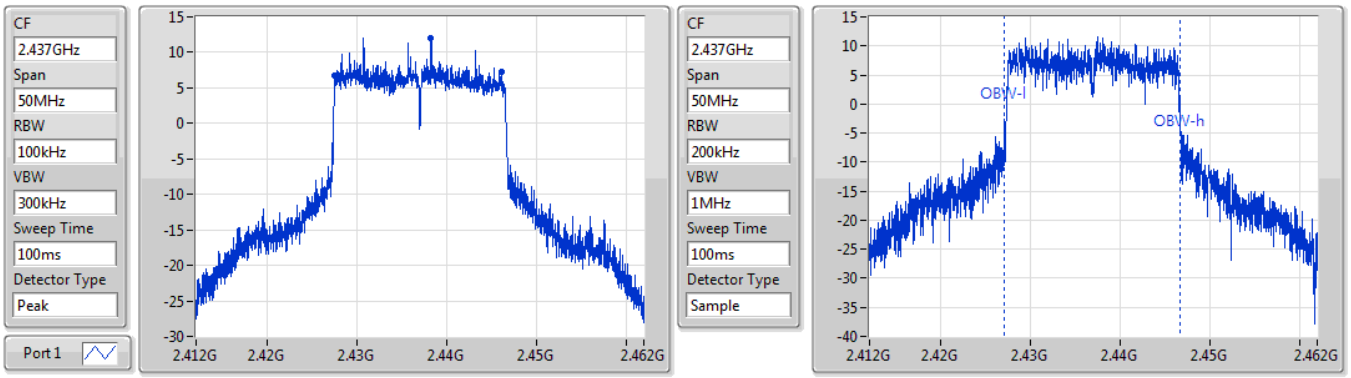


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.775M	2.40265G	2.421425G	19.015M	2.402455G	2.42147G	500k	1

802.11ax HEW20_Nss1,(MCS0)_1TX EBW

2437MHz

09/07/2019

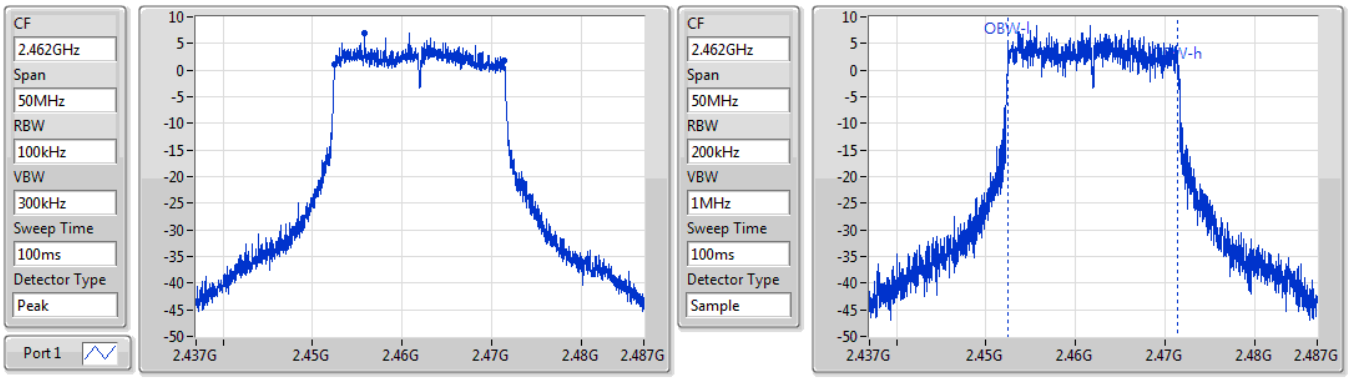


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.625M	2.427525G	2.44615G	19.64M	2.427105G	2.446745G	500k	1

802.11ax HEW20_Nss1,(MCS0)_1TX EBW

2462MHz

09/07/2019

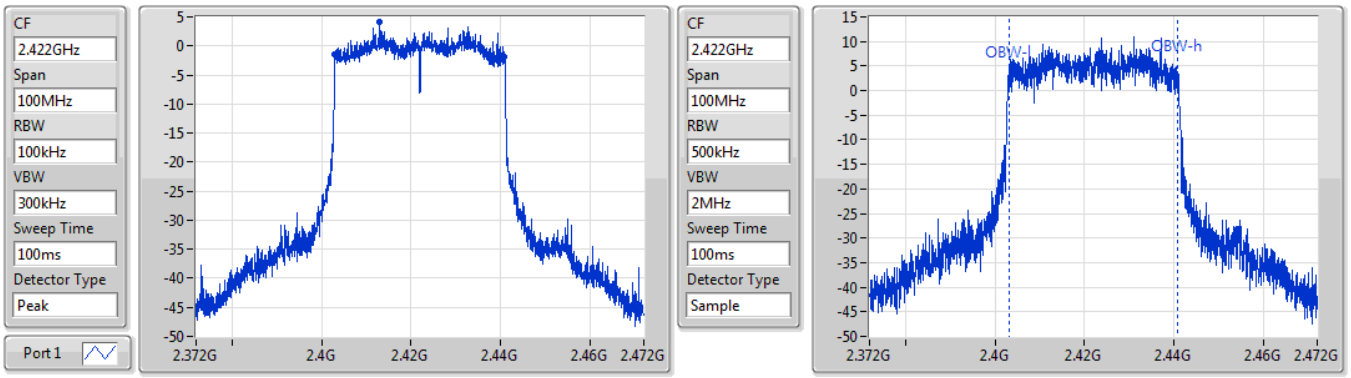


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.975M	2.452475G	2.47145G	18.991M	2.452455G	2.471445G	500k	1

802.11ax HEW40_Nss1,(MCS0)_1TX EBW

2422MHz

09/07/2019

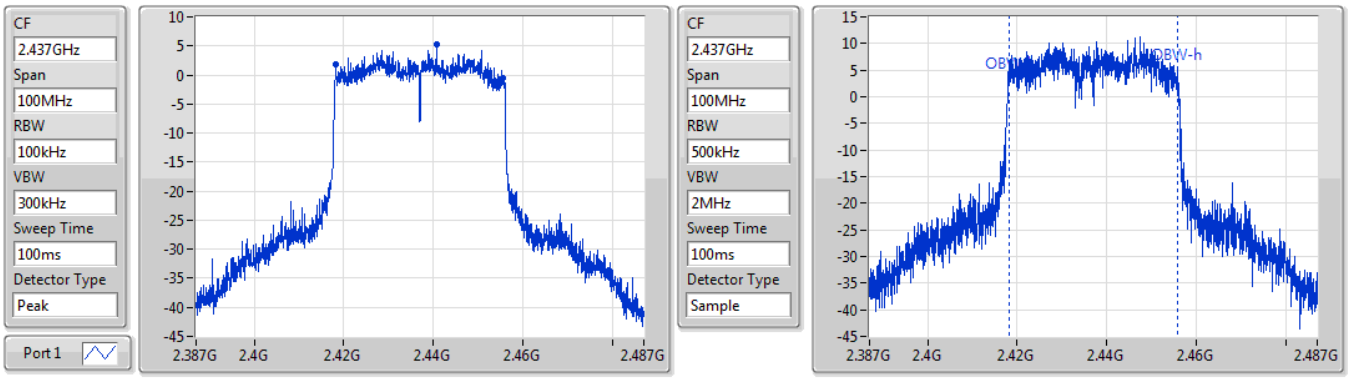


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
37.8M	2.40305G	2.44085G	37.831M	2.403059G	2.440891G	500k	1

802.11ax HEW40_Nss1,(MCS0)_1TX EBW

2437MHz

09/07/2019

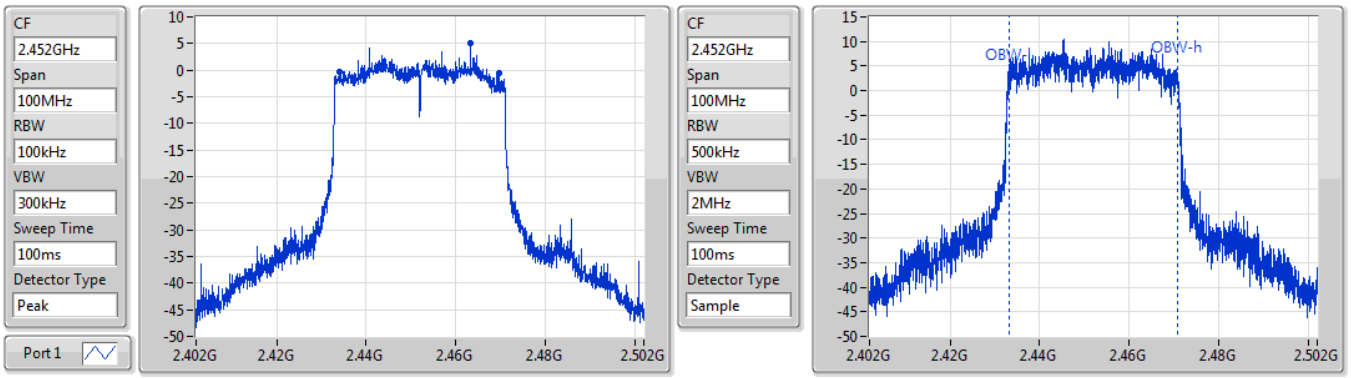


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
37.35M	2.41825G	2.4556G	37.781M	2.418059G	2.455841G	500k	1

802.11ax HEW40_Nss1,(MCS0)_1TX EBW

2452MHz

09/07/2019



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
35.55M	2.4341G	2.46965G	37.731M	2.433059G	2.470791G	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	11.025M	17.291M	17M3G1D	7.5M	13.343M
802.11g_Nss1,(6Mbps)_2TX	16.25M	21.214M	21M2D1D	14.45M	16.392M
802.11ax HEW20_Nss1,(MCS0)_2TX	18.9M	19.69M	19M7D1D	17.45M	18.916M
802.11ax HEW40_Nss1,(MCS0)_2TX	37.95M	37.831M	37M8D1D	37.2M	37.731M

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

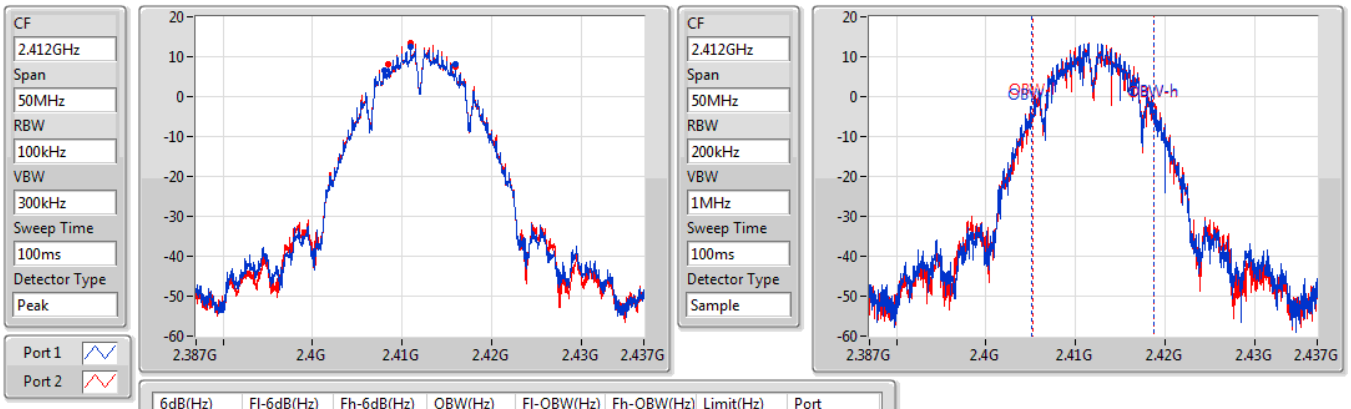
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	8M	13.543M	7.5M	13.593M
2437MHz	Pass	500k	9.5M	16.417M	11.025M	17.291M
2462MHz	Pass	500k	8.05M	13.443M	8.5M	13.343M
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	15.025M	16.392M	15.8M	16.442M
2437MHz	Pass	500k	14.675M	19.315M	16.25M	21.214M
2462MHz	Pass	500k	14.45M	16.392M	15.625M	16.417M
802.11ax HEW20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	18.9M	18.966M	18.4M	18.966M
2437MHz	Pass	500k	18.675M	19.34M	17.725M	19.69M
2462MHz	Pass	500k	17.45M	18.941M	18.3M	18.916M
802.11ax HEW40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	500k	37.2M	37.781M	37.85M	37.781M
2437MHz	Pass	500k	37.85M	37.831M	37.6M	37.731M
2452MHz	Pass	500k	37.95M	37.781M	37.8M	37.731M

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

802.11b_Nss1,(1Mbps)_2TX EBW

2412MHz

08/07/2019

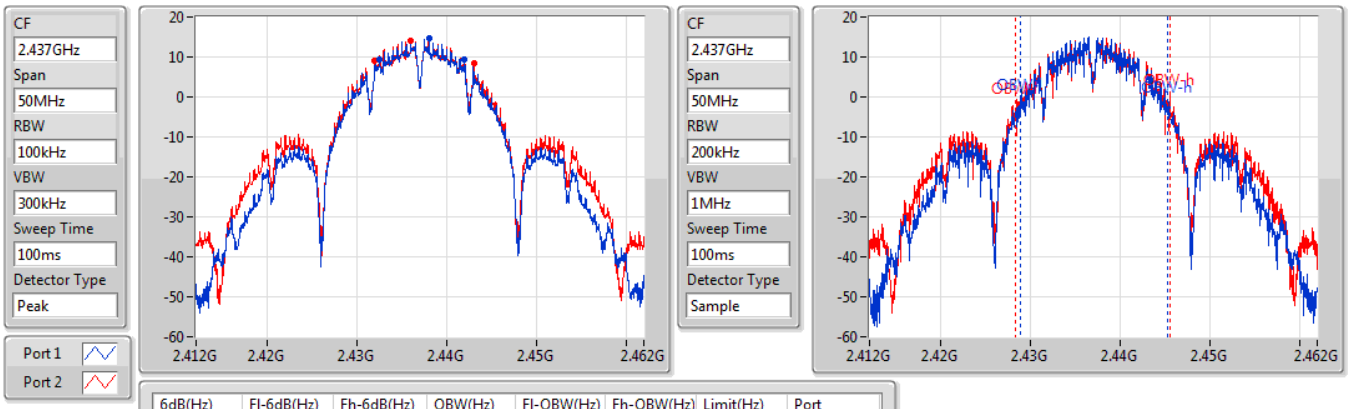


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8M	2.407975G	2.415975G	13.543M	2.405153G	2.418697G	500k	1
7.5M	2.408475G	2.415975G	13.593M	2.405203G	2.418797G	500k	2

802.11b_Nss1,(1Mbps)_2TX EBW

2437MHz

08/07/2019

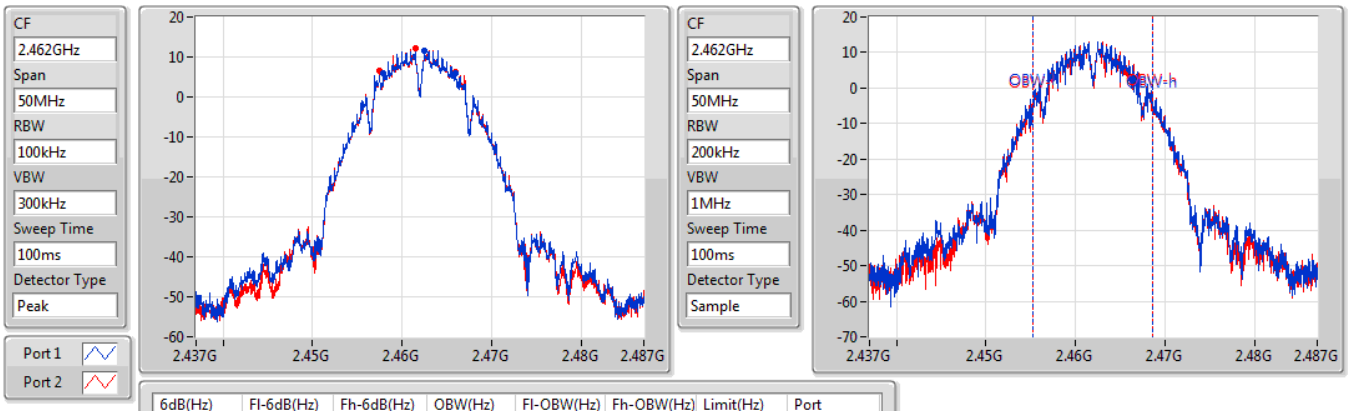


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
9.5M	2.432475G	2.441975G	16.417M	2.428804G	2.445221G	500k	1
11.025M	2.431975G	2.443G	17.291M	2.428279G	2.445571G	500k	2

802.11b_Nss1,(1Mbps)_2TX EBW

2462MHz

08/07/2019

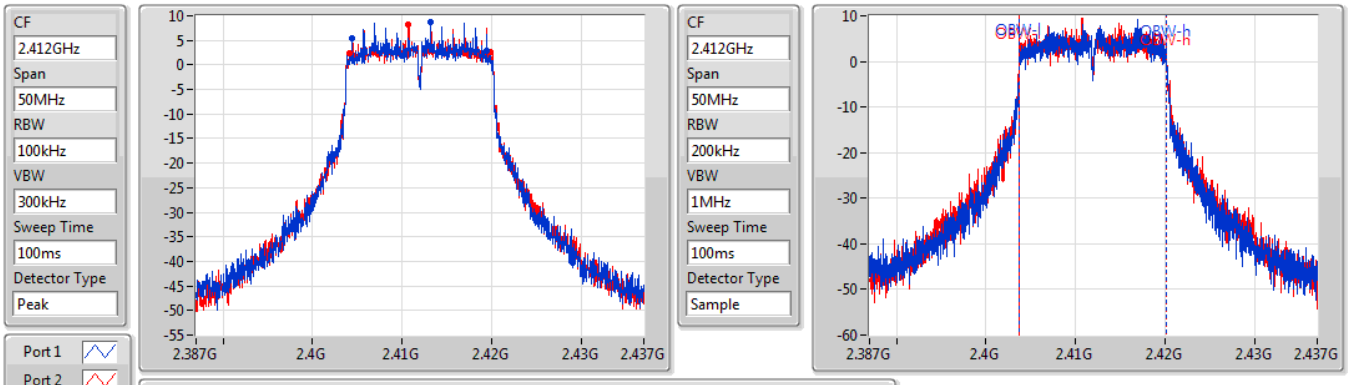


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8.05M	2.45795G	2.466G	13.443M	2.455228G	2.468672G	500k	1
8.5M	2.457475G	2.465975G	13.343M	2.455303G	2.468647G	500k	2

802.11g_Nss1,(6Mbps)_2TX EBW

2412MHz

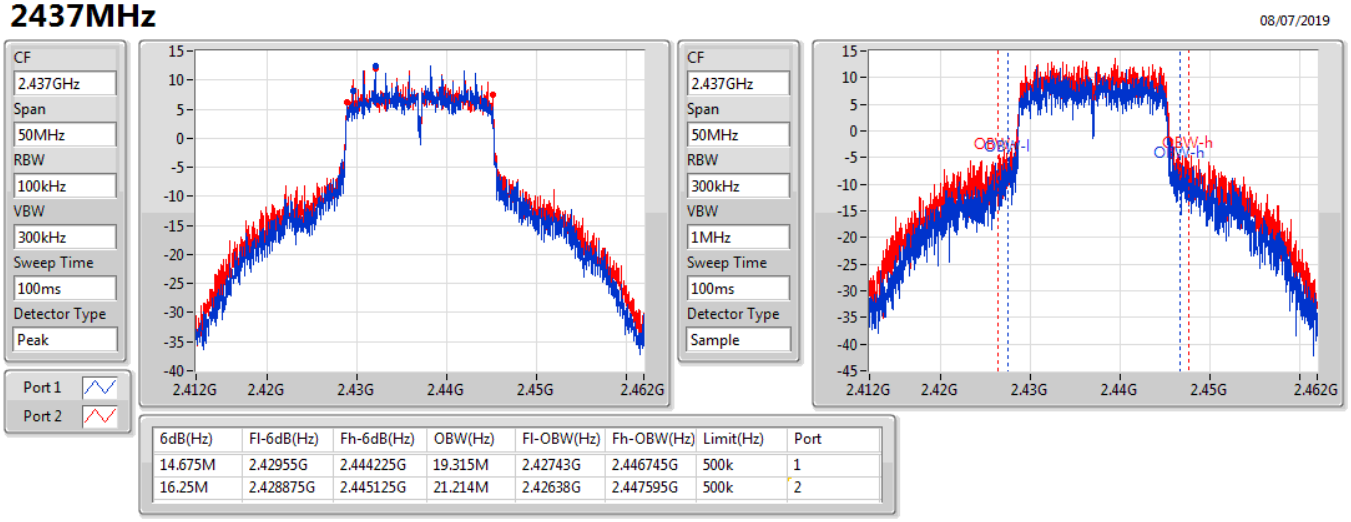
08/07/2019



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.025M	2.40445G	2.419475G	16.392M	2.403779G	2.420171G	500k	1
15.8M	2.404075G	2.419875G	16.442M	2.403754G	2.420196G	500k	2

802.11g_Nss1,(6Mbps)_2TX EBW

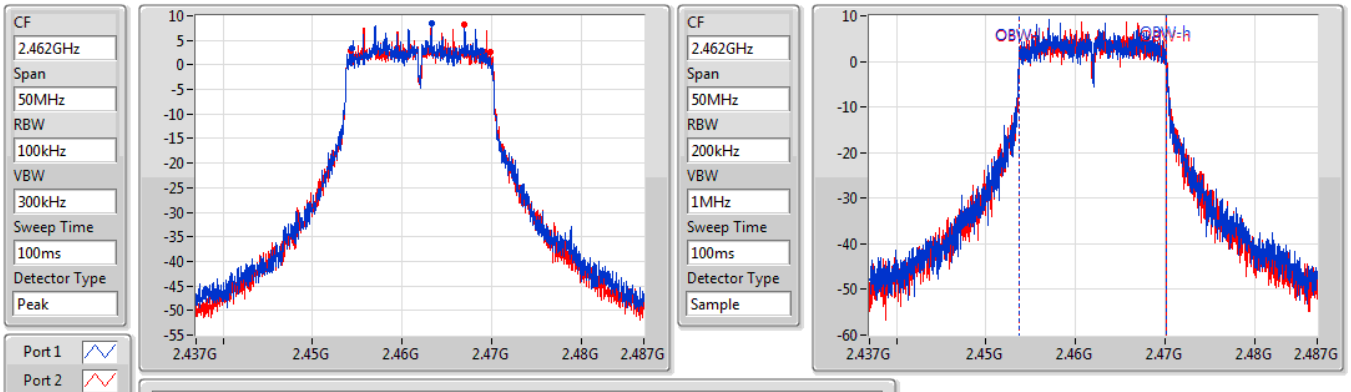
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
14.675M	2.42955G	2.444225G	19.315M	2.42743G	2.446745G	500k	1
16.25M	2.428875G	2.445125G	21.214M	2.42638G	2.447595G	500k	2

802.11g_Nss1,(6Mbps)_2TX EBW

2462MHz

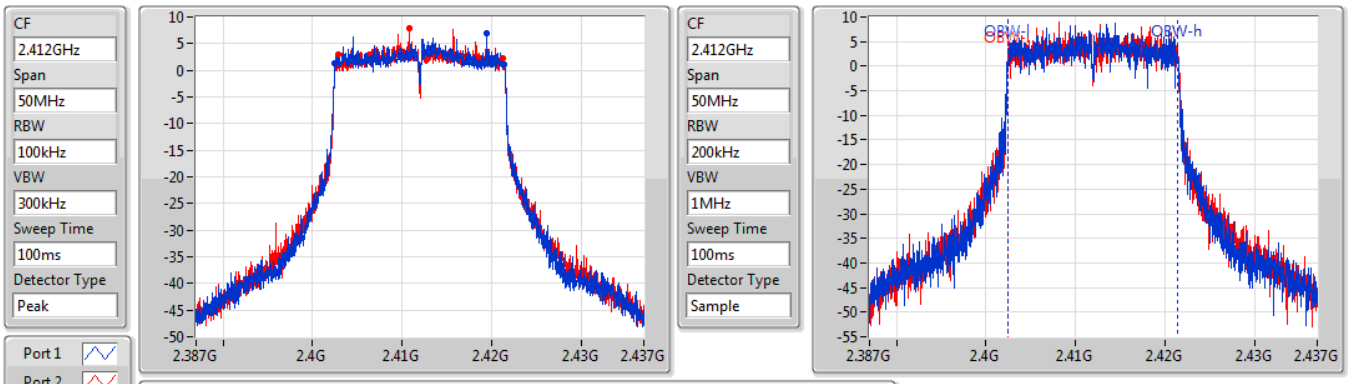


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
14.45M	2.454425G	2.468875G	16.392M	2.453754G	2.470146G	500k	1
15.625M	2.454225G	2.46985G	16.417M	2.453754G	2.470171G	500k	2

802.11ax HEW20_Nss1,(MCS0)_2TX EBW

2412MHz

08/07/2019

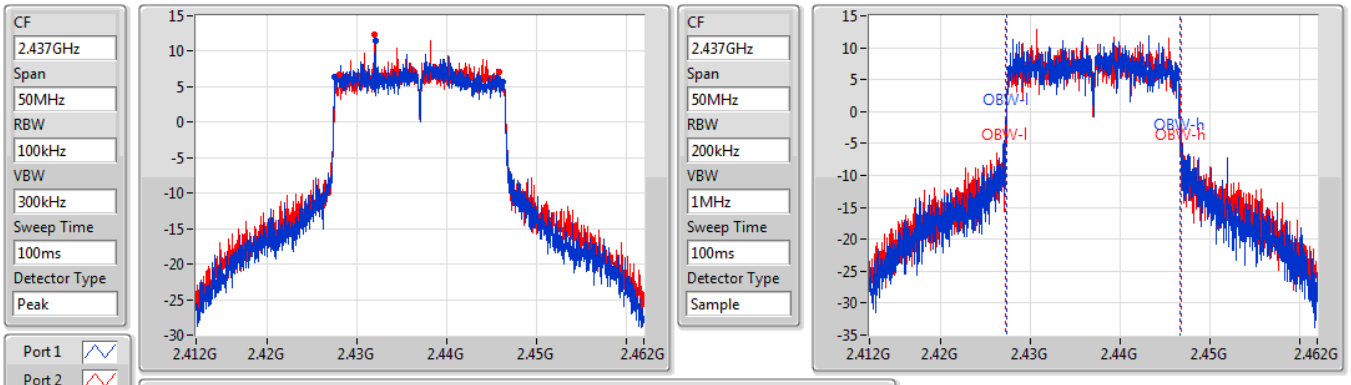


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.9M	2.402525G	2.421425G	18.966M	2.40248G	2.421445G	500k	1
18.4M	2.4029G	2.4213G	18.966M	2.402505G	2.42147G	500k	2

802.11ax HEW20_Nss1,(MCS0)_2TX EBW

2437MHz

08/07/2019



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.675M	2.427525G	2.4462G	19.34M	2.427305G	2.446645G	500k	1
17.725M	2.428075G	2.4458G	19.69M	2.427155G	2.446845G	500k	2

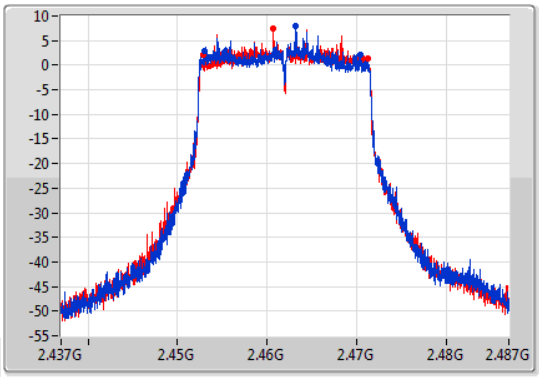
802.11ax HEW20_Nss1,(MCS0)_2TX EBW

2462MHz

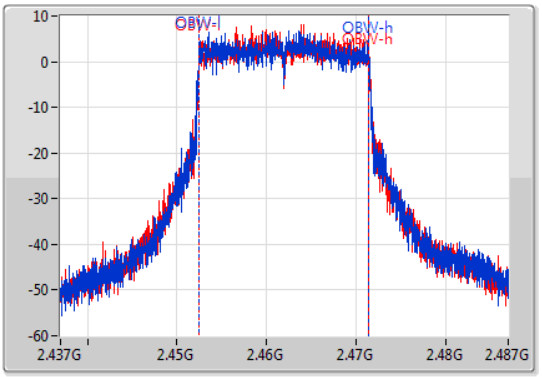
08/07/2019

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

Port 1
Port 2



CF	2.462GHz
Span	50MHz
RBW	200kHz
VBW	1MHz
Sweep Time	100ms
Detector Type	Sample



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.45M	2.45295G	2.4704G	18.941M	2.45248G	2.47142G	500k	1
18.3M	2.4529G	2.4712G	18.916M	2.452505G	2.47142G	500k	2

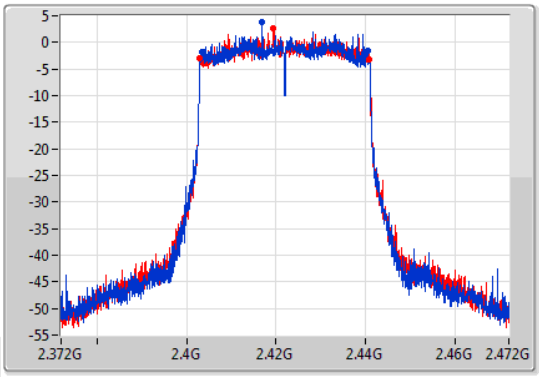
802.11ax HEW40_Nss1,(MCS0)_2TX EBW

2422MHz

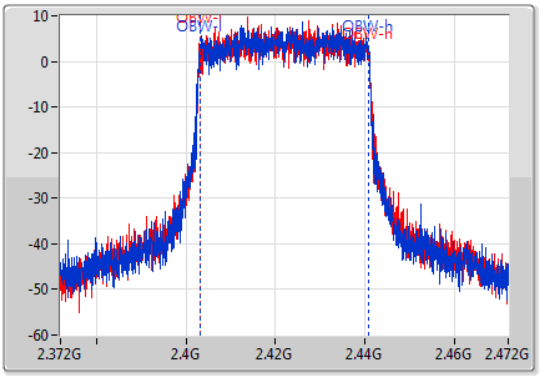
08/07/2019

CF	2.422GHz
Span	100MHz
RBW	100kHz
VBW	300kHz
Sweep Time	100ms
Detector Type	Peak

Port 1
Port 2



CF	2.422GHz
Span	100MHz
RBW	500kHz
VBW	2MHz
Sweep Time	100ms
Detector Type	Sample



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
37.2M	2.40335G	2.44055G	37.781M	2.403059G	2.440841G	500k	1
37.85M	2.403G	2.44085G	37.781M	2.403059G	2.440841G	500k	2

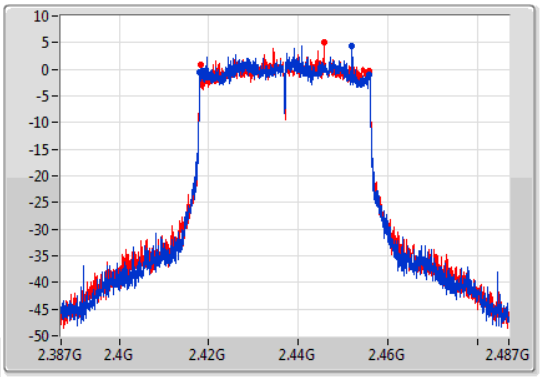
802.11ax HEW40_Nss1,(MCS0)_2TX EBW

2437MHz

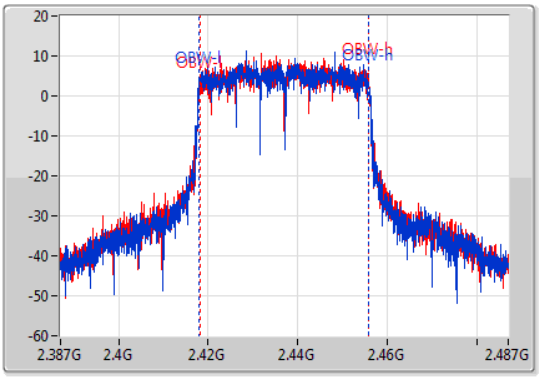
08/07/2019

CF	2.437GHz
Span	100MHz
RBW	100kHz
VBW	300kHz
Sweep Time	100ms
Detector Type	Peak

Port 1
Port 2



CF	2.437GHz
Span	100MHz
RBW	500kHz
VBW	2MHz
Sweep Time	100ms
Detector Type	Sample



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
37.85M	2.41805G	2.4559G	37.831M	2.418009G	2.455841G	500k	1
37.6M	2.4182G	2.4558G	37.731M	2.418109G	2.455841G	500k	2

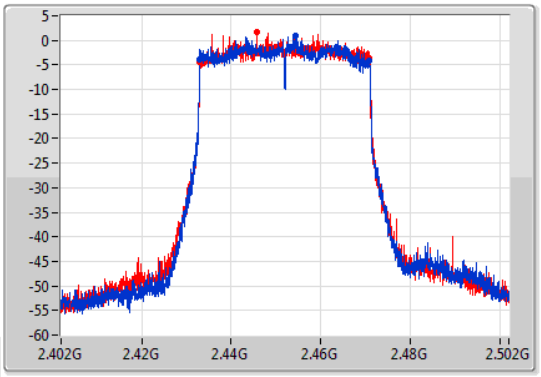
802.11ax HEW40_Nss1,(MCS0)_2TX EBW

2452MHz

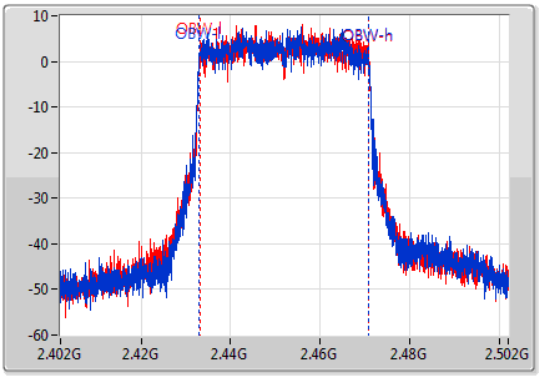
08/07/2019

CF	2.452GHz
Span	100MHz
RBW	100kHz
VBW	300kHz
Sweep Time	100ms
Detector Type	Peak

Port 1
Port 2



CF	2.452GHz
Span	100MHz
RBW	500kHz
VBW	2MHz
Sweep Time	100ms
Detector Type	Sample



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
37.95M	2.4329G	2.47085G	37.781M	2.433009G	2.470791G	500k	1
37.8M	2.43305G	2.47085G	37.731M	2.433109G	2.470841G	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-BF_Nss1,(MCS0)_2TX	18.8M	18.941M	18M9D1D	15.1M	18.866M
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	33.8M	37.681M	37M7D1D	16.85M	37.481M

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

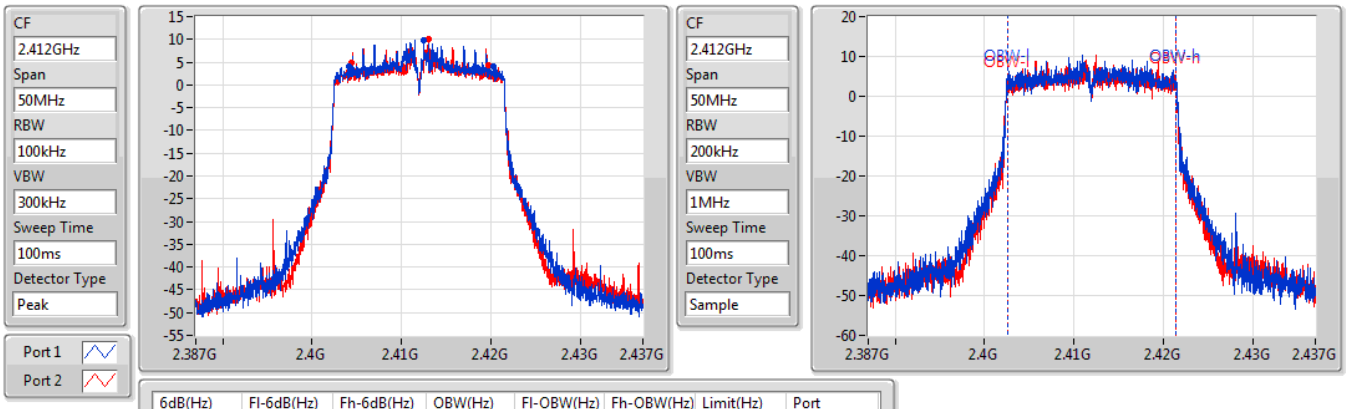
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	16.2M	18.916M	15.3M	18.891M
2437MHz	Pass	500k	18.8M	18.891M	16.975M	18.941M
2462MHz	Pass	500k	18.3M	18.891M	15.1M	18.866M
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	500k	30M	37.481M	18.5M	37.681M
2437MHz	Pass	500k	31.35M	37.681M	30.1M	37.631M
2452MHz	Pass	500k	16.85M	37.581M	33.8M	37.531M

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

802.11ax HEW20-BF_Nss1,(MCS0)_2TX
2412MHz

EBW

09/07/2019

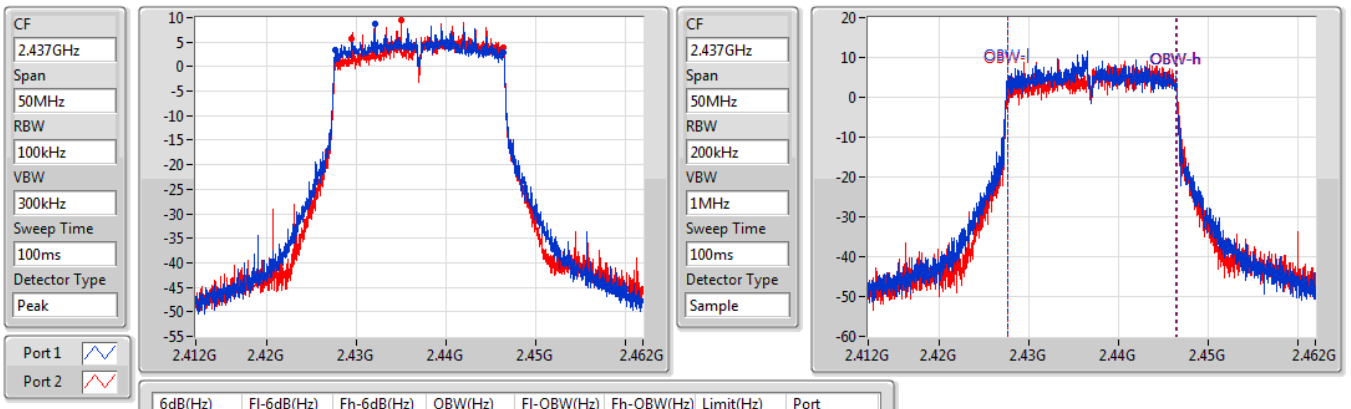


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.2M	2.404125G	2.420325G	18.916M	2.40253G	2.421445G	500k	1
15.3M	2.404425G	2.419725G	18.891M	2.402555G	2.421445G	500k	2

802.11ax HEW20-BF_Nss1,(MCS0)_2TX
2437MHz

EBW

09/07/2019

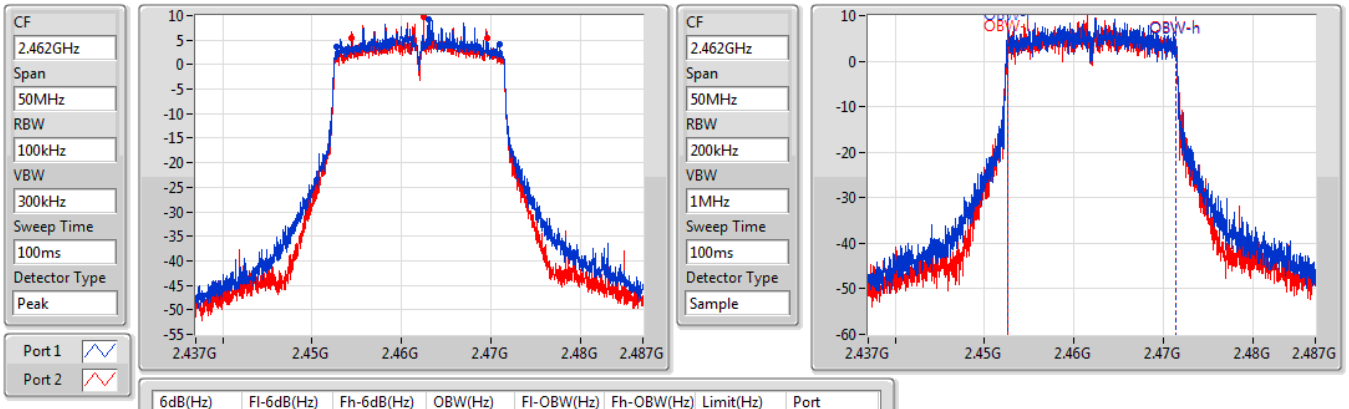


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.8M	2.427625G	2.446425G	18.891M	2.42753G	2.44642G	500k	1
16.975M	2.42945G	2.446425G	18.941M	2.427555G	2.446495G	500k	2

802.11ax HEW20-BF_Nss1,(MCS0)_2TX
2462MHz

EBW

09/07/2019

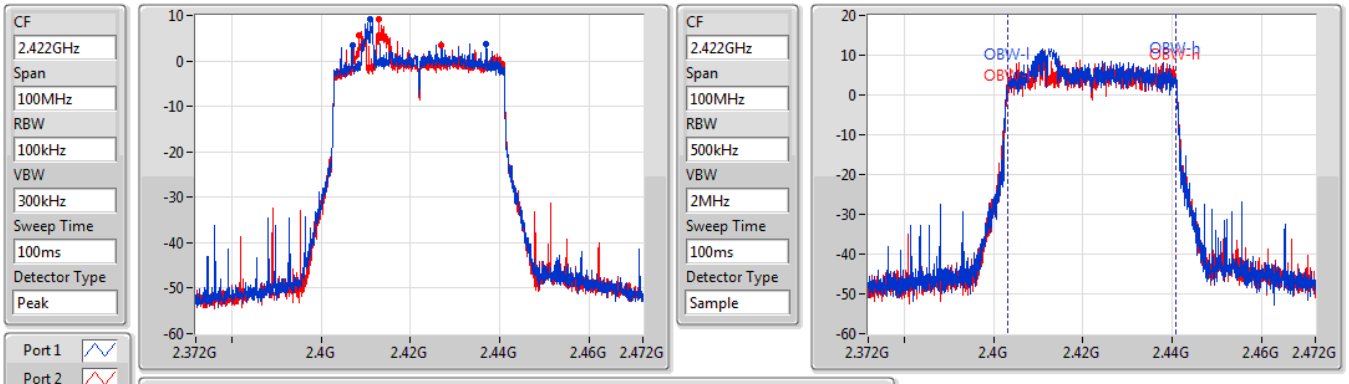


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.3M	2.452675G	2.470975G	18.891M	2.45253G	2.47142G	500k	1
15.1M	2.45445G	2.46955G	18.866M	2.45253G	2.471395G	500k	2

802.11ax HEW40-BF_Nss1,(MCS0)_2TX
2422MHz

EBW

09/07/2019

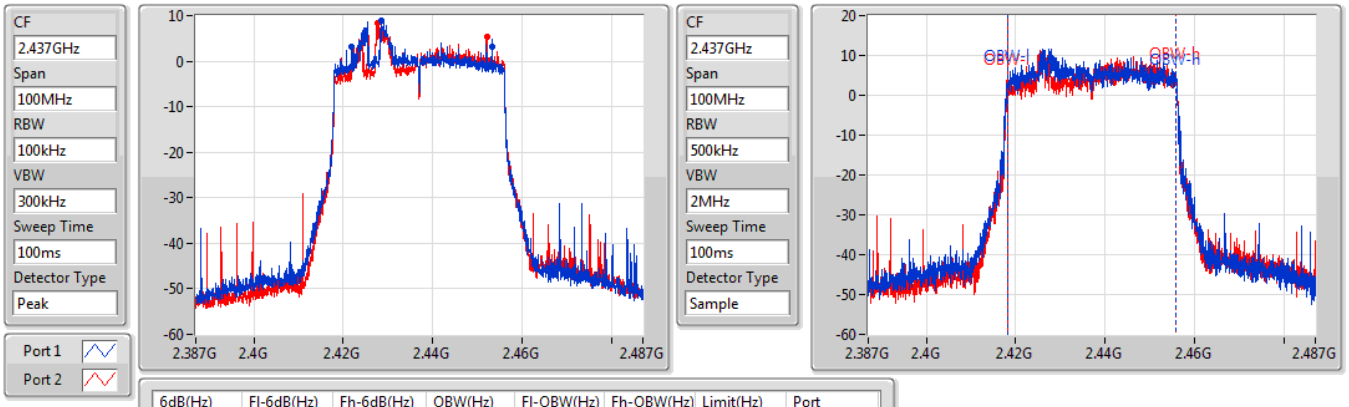


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
30M	2.407G	2.437G	37.481M	2.403309G	2.440791G	500k	1
18.5M	2.40845G	2.42695G	37.681M	2.403209G	2.440891G	500k	2

802.11ax HEW40-BF_Nss1,(MCS0)_2TX
2437MHz

EBW

09/07/2019

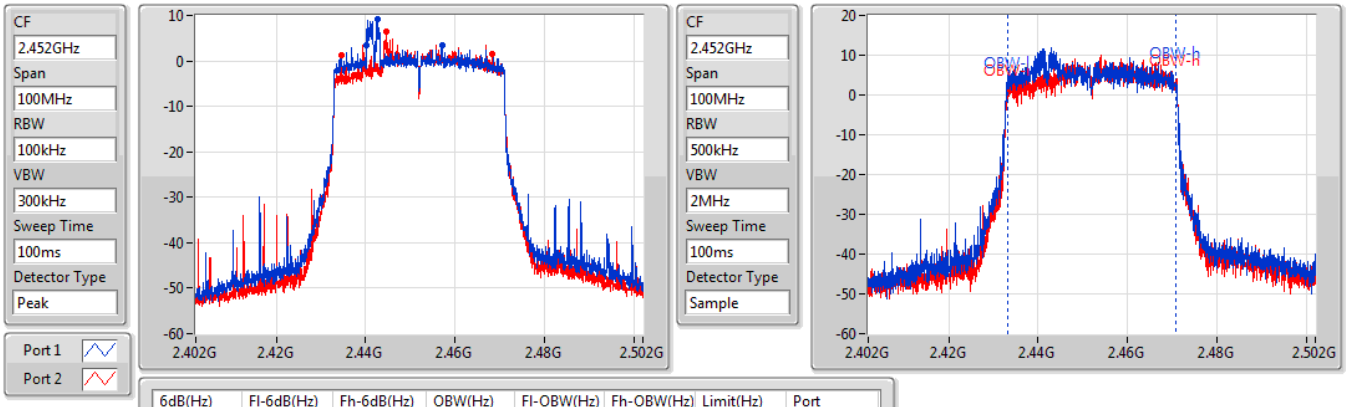


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
31.35M	2.42195G	2.4533G	37.681M	2.418159G	2.455841G	500k	1
30.1M	2.42195G	2.45205G	37.631M	2.418209G	2.455841G	500k	2

802.11ax HEW40-BF_Nss1,(MCS0)_2TX
2452MHz

EBW

09/07/2019



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.85M	2.4402G	2.45705G	37.581M	2.433159G	2.470741G	500k	1
33.8M	2.4345G	2.4683G	37.531M	2.433309G	2.470841G	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	9.075M	15.442M	15M4G1D	7.05M	13.018M
802.11g_Nss1,(6Mbps)_4TX	16.3M	25.712M	25M7D1D	15.1M	16.342M
802.11ax HEW20_Nss1,(MCS0)_4TX	19M	22.489M	22M5D1D	16.65M	18.841M
802.11ax HEW40_Nss1,(MCS0)_4TX	37.9M	37.831M	37M8D1D	32.1M	37.631M

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

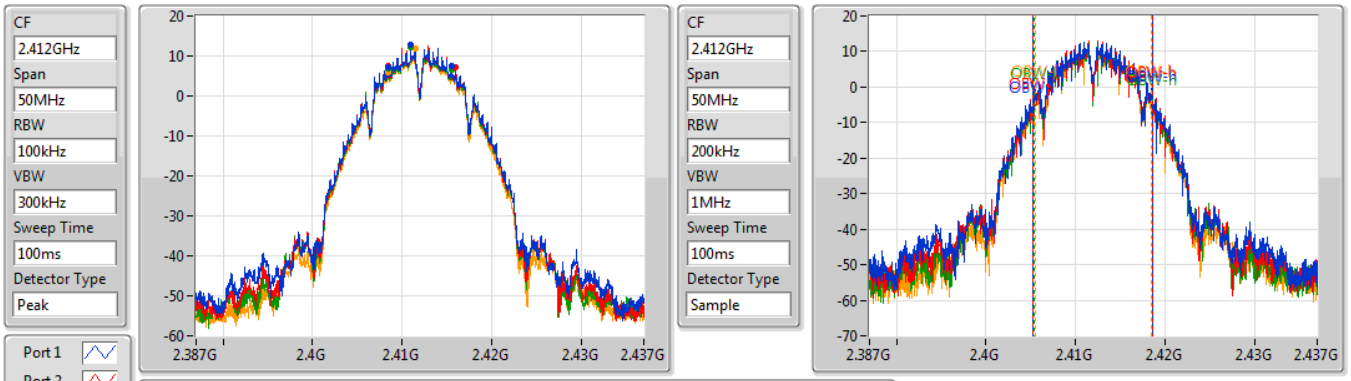
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11b_Nss1,(1Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	7.05M	13.293M	7.525M	13.268M	7.075M	13.243M	7.05M	13.018M
2437MHz	Pass	500k	8.475M	15.092M	9.075M	15.442M	9.025M	15.317M	7.55M	14.693M
2462MHz	Pass	500k	7.1M	13.168M	8.5M	13.218M	8.05M	13.318M	8.05M	13.218M
802.11g_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	15.1M	16.342M	15.95M	16.442M	16.05M	16.417M	15.875M	16.392M
2437MHz	Pass	500k	15.675M	18.916M	16.275M	24.938M	16.25M	25.712M	16.275M	20.34M
2462MHz	Pass	500k	15.3M	16.367M	16.3M	16.467M	16M	16.417M	16.025M	16.392M
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	18.6M	18.991M	18.55M	18.941M	16.65M	18.866M	18.075M	18.916M
2437MHz	Pass	500k	18.875M	19.44M	18.925M	22.489M	18.75M	21.514M	18.925M	19.24M
2462MHz	Pass	500k	19M	18.966M	18.875M	18.966M	16.675M	18.866M	18.125M	18.841M
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	500k	37.4M	37.731M	37.55M	37.731M	36.3M	37.781M	37.7M	37.681M
2437MHz	Pass	500k	32.15M	37.731M	37.3M	37.731M	37.7M	37.781M	37.65M	37.781M
2452MHz	Pass	500k	37.55M	37.631M	32.1M	37.731M	37.9M	37.831M	37.9M	37.731M

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

802.11b_Nss1,(1Mbps)_4TX EBW

2412MHz

08/07/2019

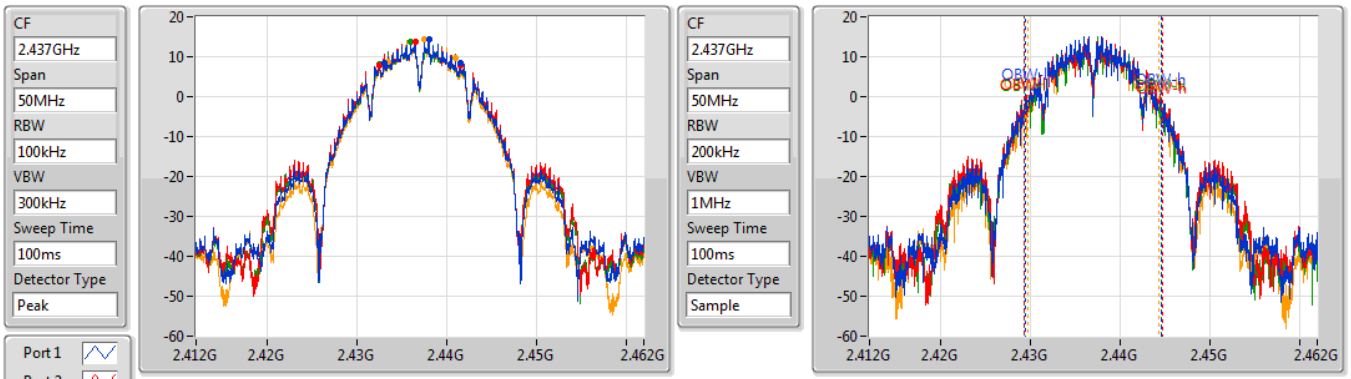


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
7.05M	2.40845G	2.4155G	13.293M	2.405303G	2.418597G	500k	1
7.525M	2.408475G	2.416G	13.268M	2.405303G	2.418572G	500k	2
7.075M	2.40845G	2.415525G	13.243M	2.405378G	2.418622G	500k	3
7.05M	2.40845G	2.4155G	13.018M	2.405478G	2.418497G	500k	4

802.11b_Nss1,(1Mbps)_4TX EBW

2437MHz

08/07/2019

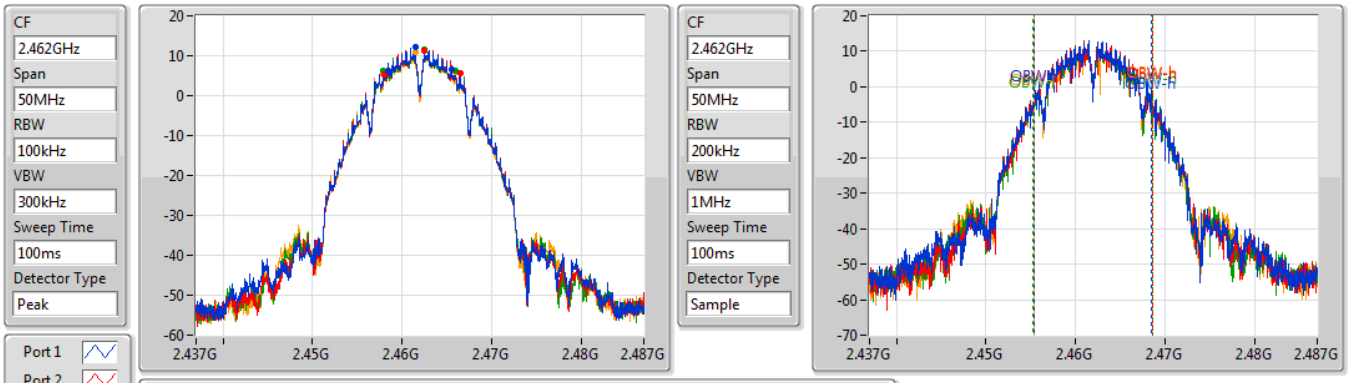


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8.475M	2.433025G	2.4415G	15.092M	2.429429G	2.444521G	500k	1
9.075M	2.43245G	2.441525G	15.442M	2.429279G	2.444721G	500k	2
9.025M	2.43245G	2.441475G	15.317M	2.429304G	2.444621G	500k	3
7.55M	2.43345G	2.441G	14.693M	2.429654G	2.443346G	500k	4

802.11b_Nss1,(1Mbps)_4TX EBW

2462MHz

08/07/2019

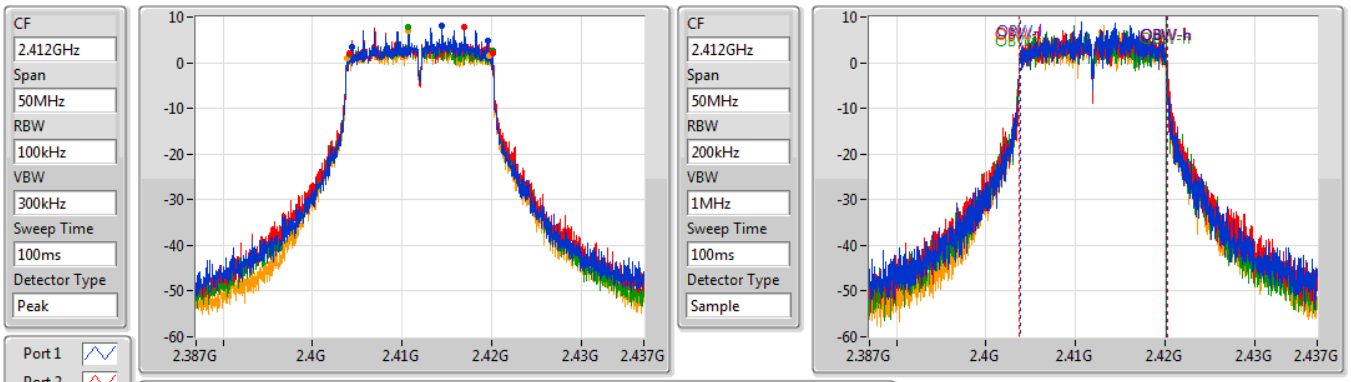


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
7.1M	2.458425G	2.465525G	13.168M	2.455353G	2.468522G	500k	1
8.5M	2.457975G	2.466475G	13.218M	2.455353G	2.468572G	500k	2
8.05M	2.45795G	2.466G	13.318M	2.455278G	2.468597G	500k	3
8.05M	2.45795G	2.466G	13.218M	2.455328G	2.468547G	500k	4

802.11g_Nss1,(6Mbps)_4TX EBW

2412MHz

08/07/2019

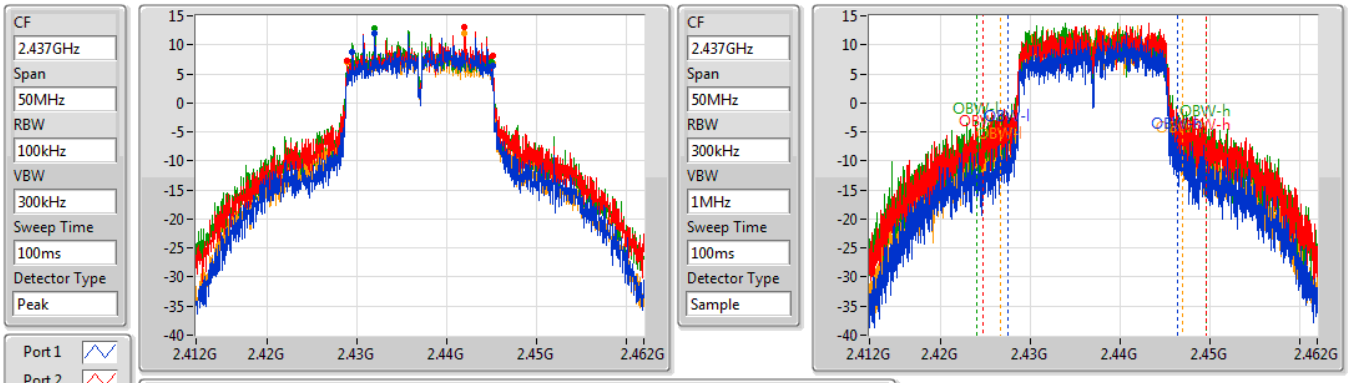


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.1M	2.404425G	2.419525G	16.342M	2.403804G	2.420146G	500k	1
15.95M	2.4042G	2.42015G	16.442M	2.403779G	2.420221G	500k	2
16.05M	2.404075G	2.420125G	16.417M	2.403754G	2.420171G	500k	3
15.875M	2.40385G	2.419725G	16.392M	2.403779G	2.420171G	500k	4

802.11g_Nss1,(6Mbps)_4TX EBW

2437MHz

08/07/2019

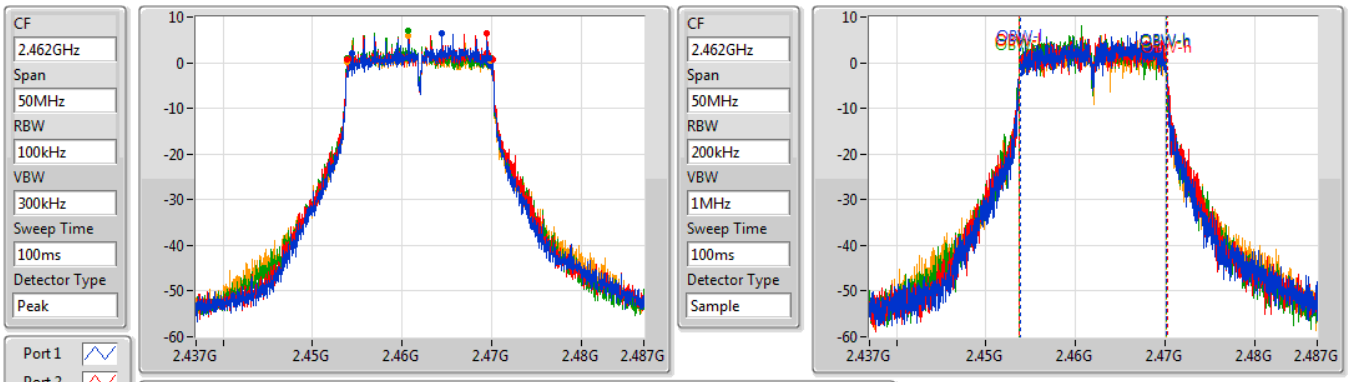


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.675M	2.42945G	2.445125G	18.916M	2.427455G	2.44637G	500k	1
16.275M	2.42885G	2.445125G	24.938M	2.424631G	2.449569G	500k	2
16.25M	2.428825G	2.445075G	25.712M	2.423957G	2.449669G	500k	3
16.275M	2.42885G	2.445125G	20.34M	2.426555G	2.446895G	500k	4

802.11g_Nss1,(6Mbps)_4TX EBW

2462MHz

08/07/2019



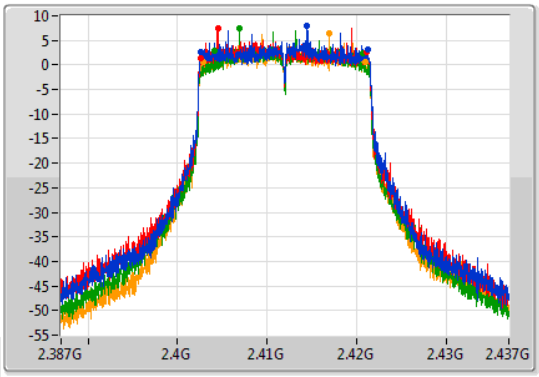
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.3M	2.454425G	2.469725G	16.367M	2.453804G	2.470171G	500k	1
16.3M	2.45385G	2.47015G	16.467M	2.453754G	2.470221G	500k	2
16M	2.45385G	2.46985G	16.417M	2.453754G	2.470171G	500k	3
16.025M	2.453825G	2.46985G	16.392M	2.453754G	2.470146G	500k	4

802.11ax HEW20_Nss1,(MCS0)_4TX EBW

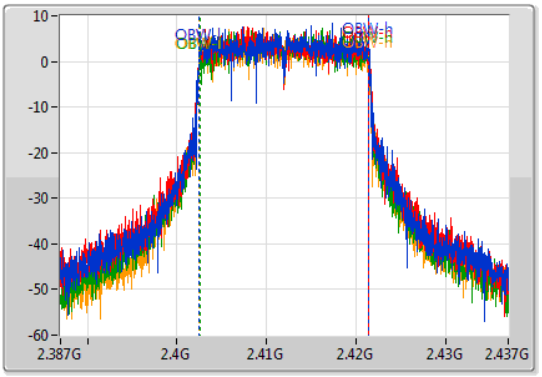
2412MHz

08/07/2019

CF	2.412GHz
Span	50MHz
RBW	100kHz
VBW	300kHz
Sweep Time	100ms
Detector Type	Peak



CF	2.412GHz
Span	50MHz
RBW	200kHz
VBW	1MHz
Sweep Time	100ms
Detector Type	Sample



Port 1
Port 2
Port 3
Port 4

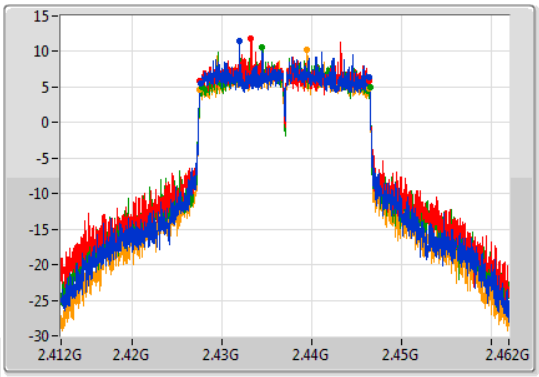
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.6M	2.402625G	2.421225G	18.991M	2.40248G	2.42147G	500k	1
18.55M	2.4026G	2.42115G	18.941M	2.402505G	2.421445G	500k	2
16.65M	2.404075G	2.420725G	18.866M	2.402555G	2.42142G	500k	3
18.075M	2.4029G	2.420975G	18.916M	2.402505G	2.42142G	500k	4

802.11ax HEW20_Nss1,(MCS0)_4TX EBW

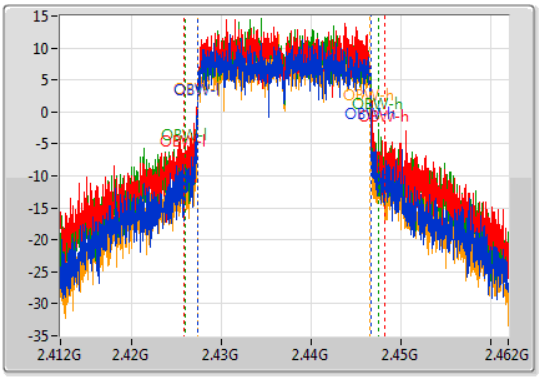
2437MHz

08/07/2019

CF	2.437GHz
Span	50MHz
RBW	100kHz
VBW	300kHz
Sweep Time	100ms
Detector Type	Peak



CF	2.437GHz
Span	50MHz
RBW	300kHz
VBW	1MHz
Sweep Time	100ms
Detector Type	Sample

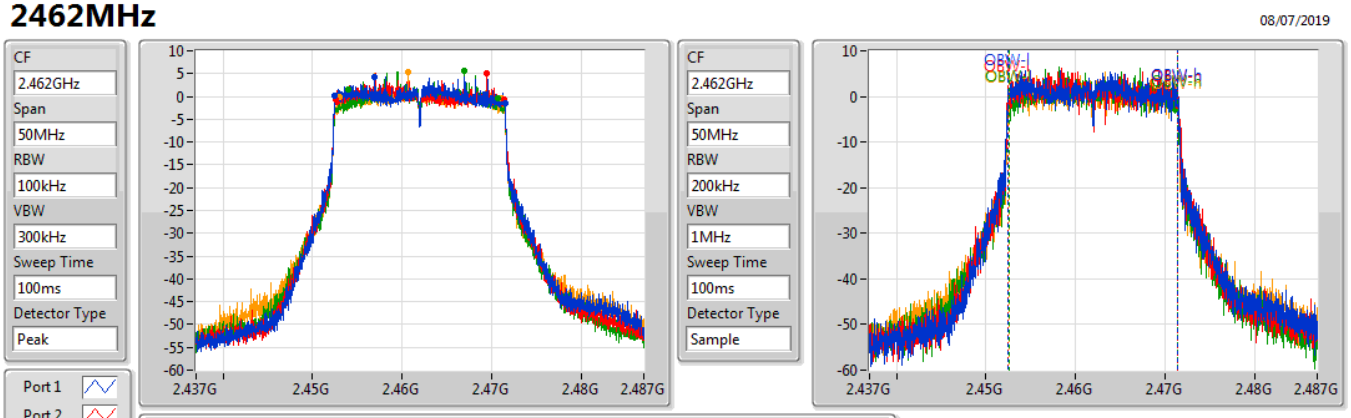


Port 1
Port 2
Port 3
Port 4

6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.875M	2.427575G	2.44645G	19.44M	2.427255G	2.446695G	500k	1
18.925M	2.427525G	2.44645G	22.489M	2.425731G	2.448219G	500k	2
18.75M	2.427725G	2.446475G	21.514M	2.425956G	2.44747G	500k	3
18.925M	2.427525G	2.44645G	19.24M	2.42733G	2.44657G	500k	4

802.11ax HEW20_Nss1,(MCS0)_4TX EBW

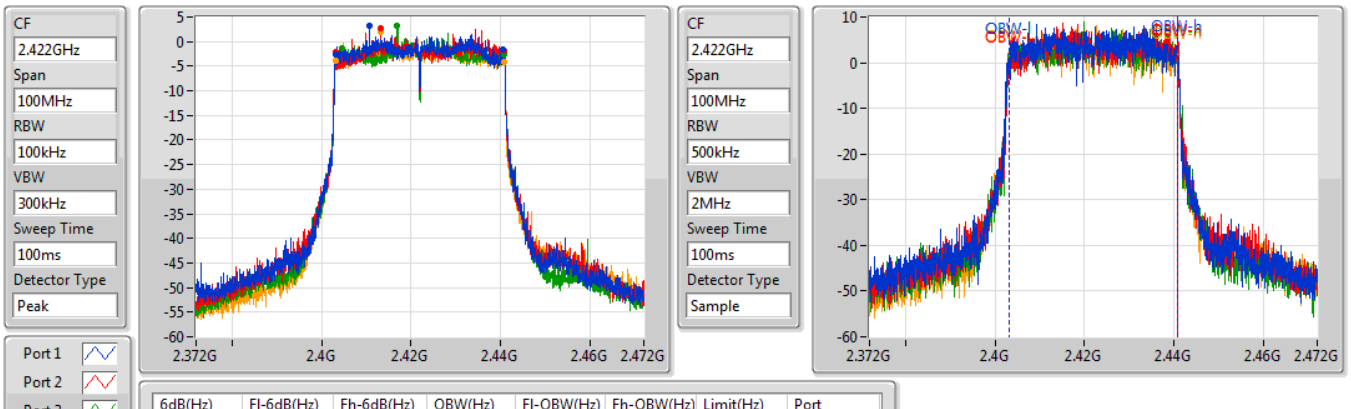
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
19M	2.452475G	2.471475G	18.966M	2.45248G	2.471445G	500k	1
18.875M	2.452575G	2.47145G	18.966M	2.45248G	2.471445G	500k	2
16.675M	2.45405G	2.470725G	18.866M	2.45253G	2.471395G	500k	3
18.125M	2.45295G	2.471075G	18.841M	2.452555G	2.471395G	500k	4

802.11ax HEW40_Nss1,(MCS0)_4TX EBW

2422MHz

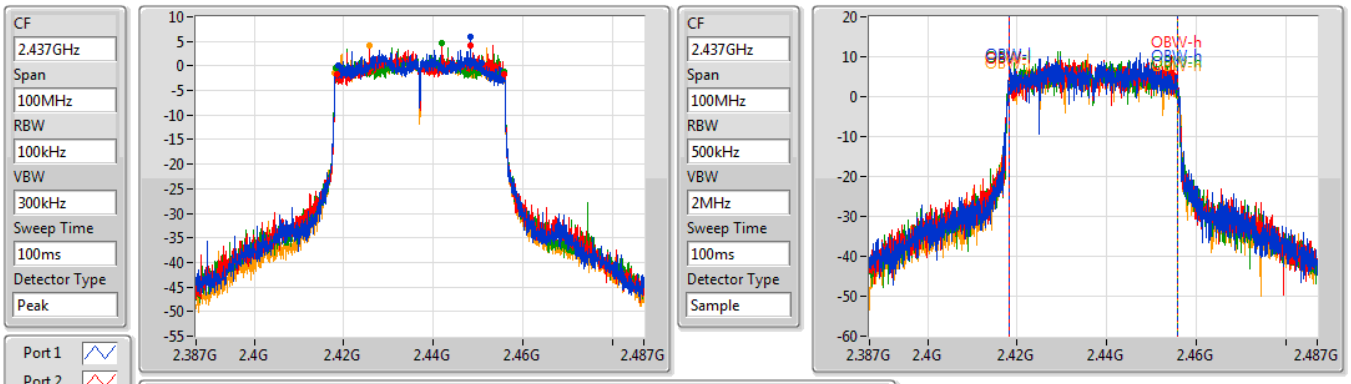


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
37.4M	2.40315G	2.44055G	37.731M	2.403109G	2.440841G	500k	1
37.55M	2.40325G	2.4408G	37.731M	2.403159G	2.440891G	500k	2
36.3M	2.40455G	2.44085G	37.781M	2.403059G	2.440841G	500k	3
37.7M	2.4031G	2.4408G	37.681M	2.403109G	2.440791G	500k	4

802.11ax HEW40_Nss1,(MCS0)_4TX EBW

2437MHz

08/07/2019

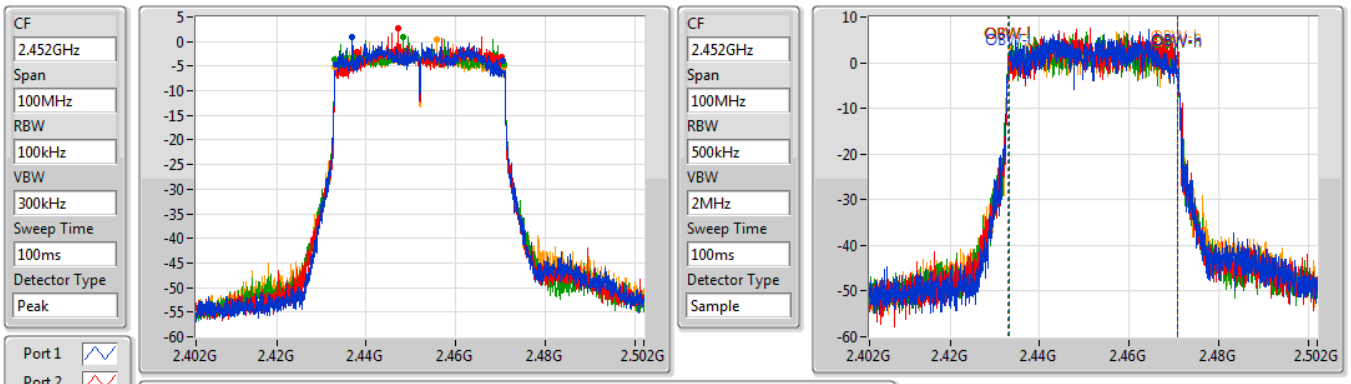


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
32.15M	2.41875G	2.4509G	37.731M	2.418059G	2.455791G	500k	1
37.3M	2.4185G	2.4558G	37.731M	2.418109G	2.455841G	500k	2
37.7M	2.4181G	2.4558G	37.781M	2.418059G	2.455841G	500k	3
37.65M	2.41805G	2.4557G	37.781M	2.418059G	2.455841G	500k	4

802.11ax HEW40_Nss1,(MCS0)_4TX EBW

2452MHz

08/07/2019



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
37.55M	2.4331G	2.47065G	37.631M	2.433109G	2.470741G	500k	1
32.1M	2.43805G	2.47015G	37.731M	2.433109G	2.470841G	500k	2
37.9M	2.433G	2.4709G	37.831M	2.433009G	2.470841G	500k	3
37.9M	2.4329G	2.4708G	37.731M	2.433009G	2.470741G	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-BF_Nss1,(MCS0)_4TX	18.6M	18.916M	18M9D1D	15.075M	18.841M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	37.85M	37.831M	37M8D1D	30.35M	37.581M

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

Result

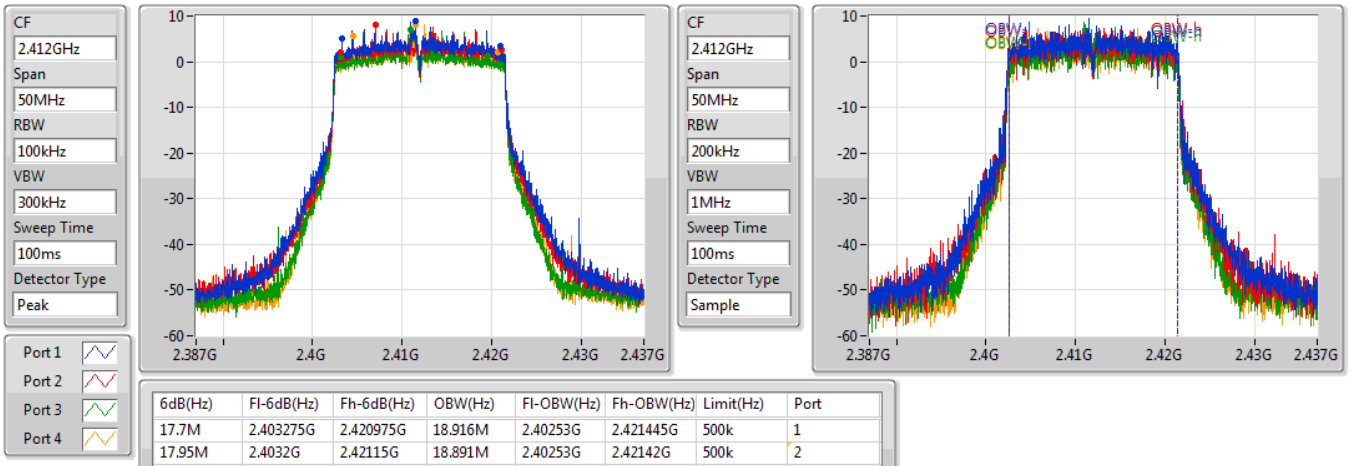
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	17.7M	18.916M	17.95M	18.891M	16.4M	18.866M	16.225M	18.891M
2437MHz	Pass	500k	18.6M	18.916M	16.95M	18.916M	17.5M	18.866M	15.075M	18.841M
2462MHz	Pass	500k	18.2M	18.916M	16.575M	18.891M	15.1M	18.841M	16.3M	18.891M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	500k	30.35M	37.731M	35.2M	37.831M	31.25M	37.681M	37.65M	37.581M
2437MHz	Pass	500k	37.85M	37.681M	36.5M	37.581M	35.55M	37.681M	33.75M	37.781M
2452MHz	Pass	500k	37.4M	37.681M	36.6M	37.681M	32.55M	37.731M	37.5M	37.731M

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

802.11ax HEW20-BF_Nss1,(MCS0)_4TX EBW

2412MHz

09/07/2019

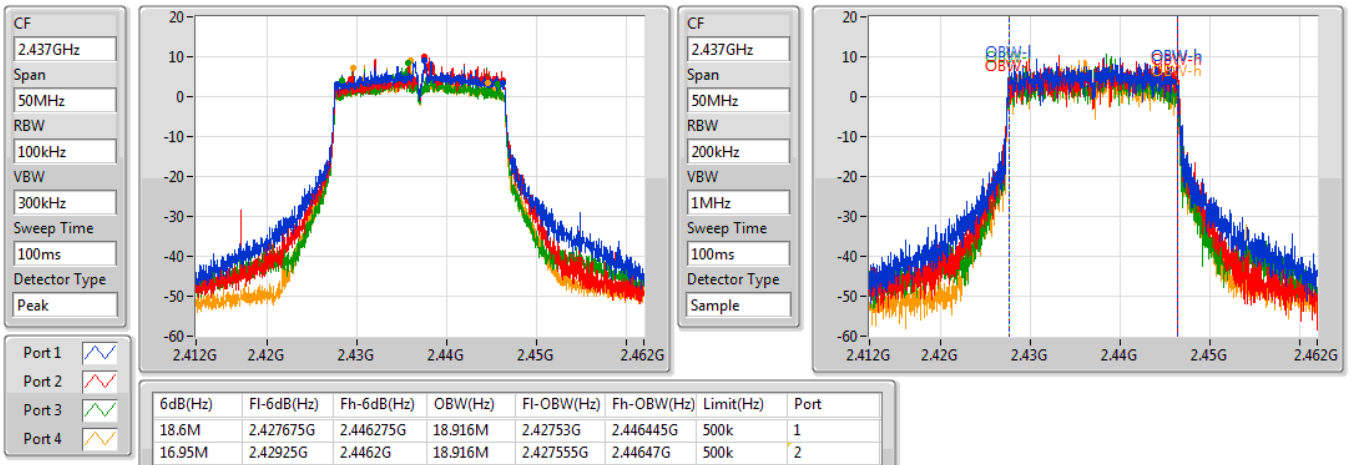


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.7M	2.403275G	2.420975G	18.916M	2.40253G	2.421445G	500k	1
17.95M	2.4032G	2.42115G	18.891M	2.40253G	2.42142G	500k	2
16.4M	2.4032G	2.4196G	18.866M	2.402555G	2.42142G	500k	3
16.225M	2.4045G	2.420725G	18.891M	2.402555G	2.421445G	500k	4

802.11ax HEW20-BF_Nss1,(MCS0)_4TX EBW

2437MHz

09/07/2019

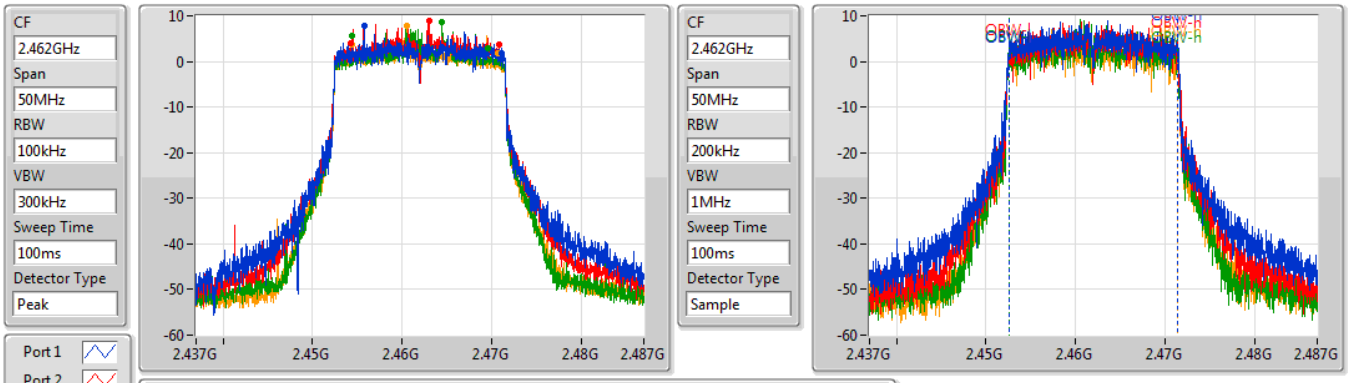


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.6M	2.427675G	2.446275G	18.916M	2.42753G	2.446445G	500k	1
16.95M	2.42925G	2.4462G	18.916M	2.427555G	2.44647G	500k	2
17.5M	2.42825G	2.44575G	18.866M	2.42753G	2.446395G	500k	3
15.075M	2.4295G	2.444575G	18.841M	2.427555G	2.446395G	500k	4

802.11ax HEW20-BF_Nss1,(MCS0)_4TX EBW

2462MHz

09/07/2019

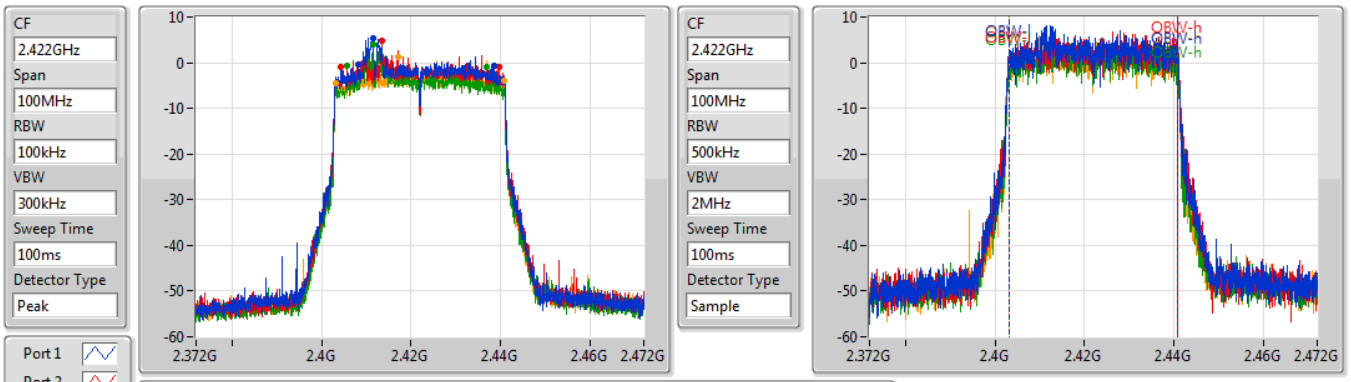


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.2M	2.45295G	2.47115G	18.916M	2.45253G	2.471445G	500k	1
16.575M	2.454225G	2.4708G	18.891M	2.452555G	2.471445G	500k	2
15.1M	2.454475G	2.469575G	18.841M	2.452555G	2.471395G	500k	3
16.3M	2.454425G	2.470725G	18.891M	2.45253G	2.47142G	500k	4

802.11ax HEW40-BF_Nss1,(MCS0)_4TX EBW

2422MHz

09/07/2019



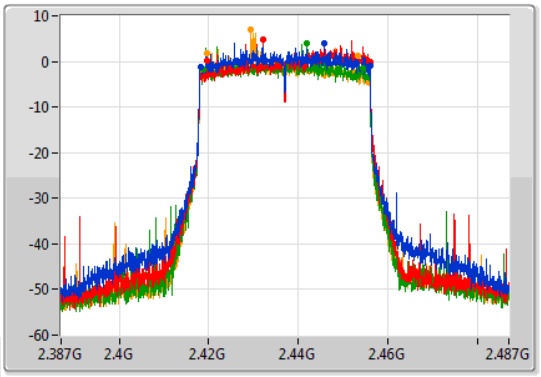
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
30.35M	2.40825G	2.4386G	37.731M	2.403109G	2.440841G	500k	1
35.2M	2.40445G	2.43965G	37.831M	2.403109G	2.440941G	500k	2
31.25M	2.4057G	2.43695G	37.681M	2.403109G	2.440791G	500k	3
37.65M	2.4032G	2.44085G	37.581M	2.403159G	2.440741G	500k	4

802.11ax HEW40-BF_Nss1,(MCS0)_4TX EBW

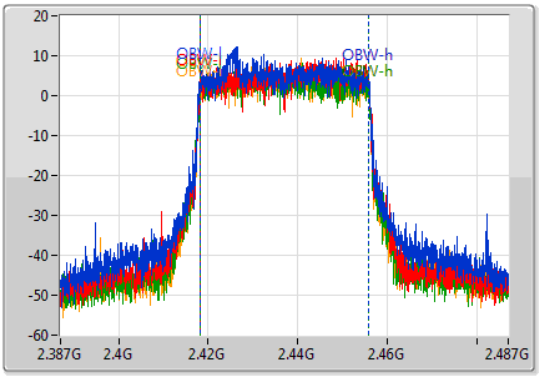
2437MHz

09/07/2019

CF	2.437GHz
Span	100MHz
RBW	100kHz
VBW	300kHz
Sweep Time	100ms
Detector Type	Peak



CF	2.437GHz
Span	100MHz
RBW	500kHz
VBW	2MHz
Sweep Time	100ms
Detector Type	Sample



Port 1
Port 2
Port 3
Port 4

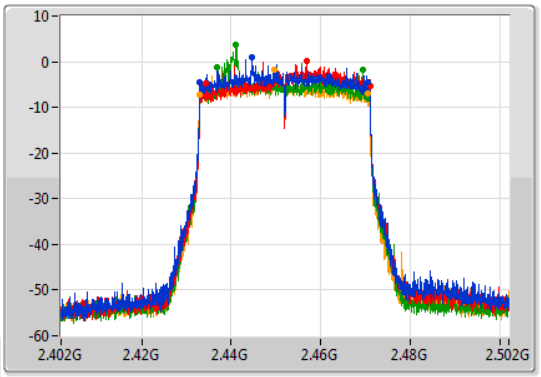
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
37.85M	2.4181G	2.45595G	37.681M	2.418109G	2.455791G	500k	1
36.5M	2.4195G	2.456G	37.581M	2.418309G	2.455891G	500k	2
35.55M	2.41885G	2.4544G	37.681M	2.418159G	2.455841G	500k	3
33.75M	2.4195G	2.45325G	37.781M	2.418059G	2.455841G	500k	4

802.11ax HEW40-BF_Nss1,(MCS0)_4TX EBW

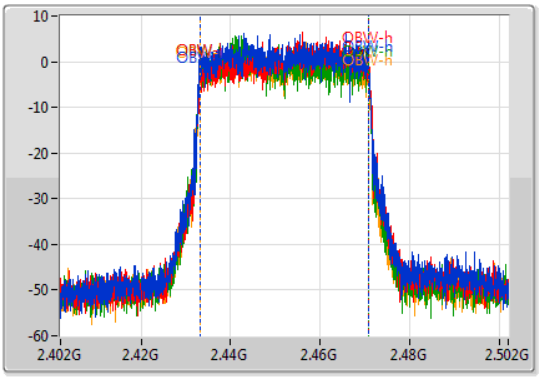
2452MHz

09/07/2019

CF	2.452GHz
Span	100MHz
RBW	100kHz
VBW	300kHz
Sweep Time	100ms
Detector Type	Peak



CF	2.452GHz
Span	100MHz
RBW	500kHz
VBW	2MHz
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
37.4M	2.43305G	2.47045G	37.681M	2.433109G	2.470791G	500k	1
36.6M	2.4344G	2.471G	37.681M	2.433209G	2.470891G	500k	2
32.55M	2.43695G	2.4695G	37.731M	2.433109G	2.470841G	500k	3
37.5M	2.43305G	2.47055G	37.731M	2.433109G	2.470841G	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	11.05M	16.917M	16M9G1D	8M	13.168M
802.11g_Nss1,(6Mbps)_1TX	16M	23.688M	23M7D1D	15.675M	16.392M
802.11ax HEW20_Nss1,(MCS0)_1TX	18.525M	20.465M	20M5D1D	18.05M	18.941M
802.11ax HEW40_Nss1,(MCS0)_1TX	37.95M	37.781M	37M8D1D	37.6M	37.731M

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

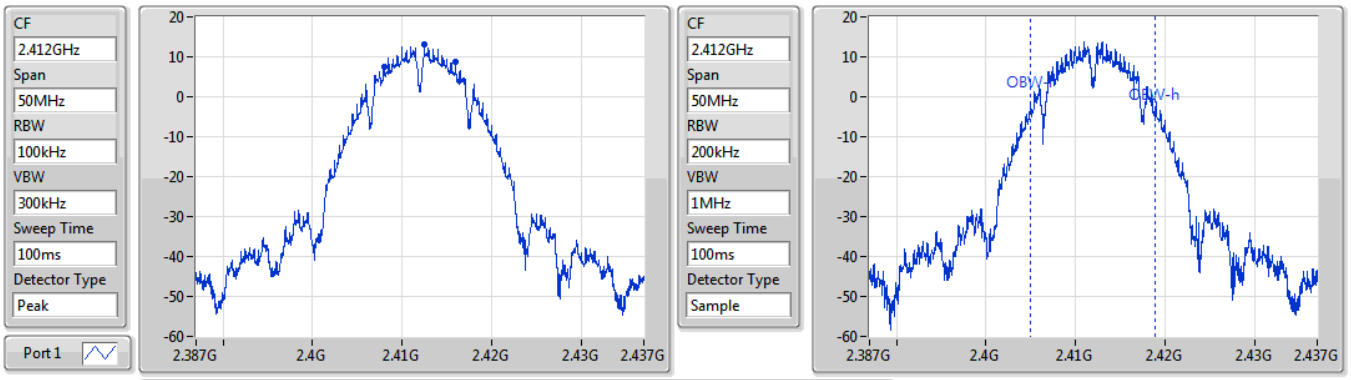
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	8M	13.893M
2437MHz	Pass	500k	11.05M	16.917M
2462MHz	Pass	500k	8.05M	13.168M
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	15.675M	16.417M
2437MHz	Pass	500k	16M	23.688M
2462MHz	Pass	500k	15.975M	16.392M
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-
2412MHz	Pass	500k	18.4M	18.941M
2437MHz	Pass	500k	18.05M	20.465M
2462MHz	Pass	500k	18.525M	18.941M
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-	-	-
2422MHz	Pass	500k	37.95M	37.731M
2437MHz	Pass	500k	37.9M	37.781M
2452MHz	Pass	500k	37.6M	37.781M

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

802.11b_Nss1,(1Mbps)_1TX EBW

2412MHz

19/07/2019

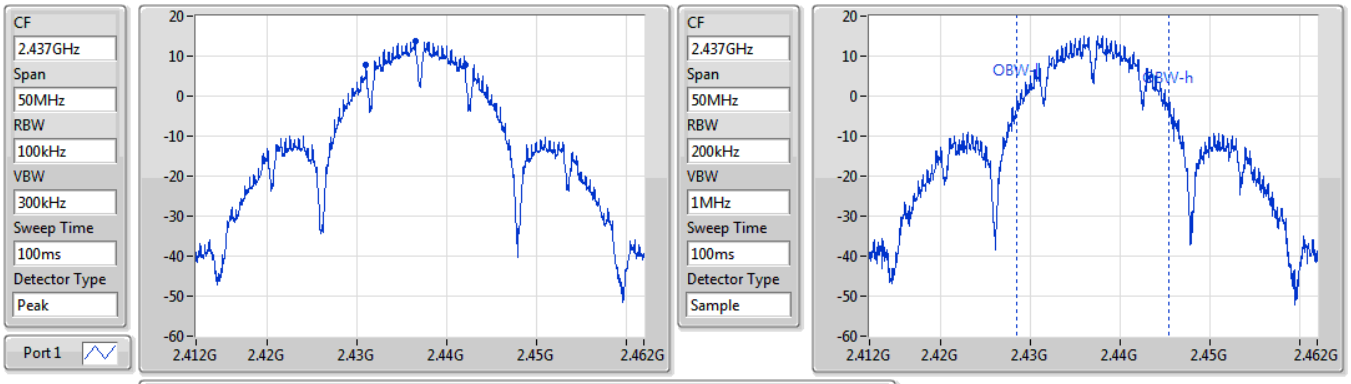


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8M	2.408G	2.416G	13.893M	2.405028G	2.418922G	500k	1

802.11b_Nss1,(1Mbps)_1TX EBW

2437MHz

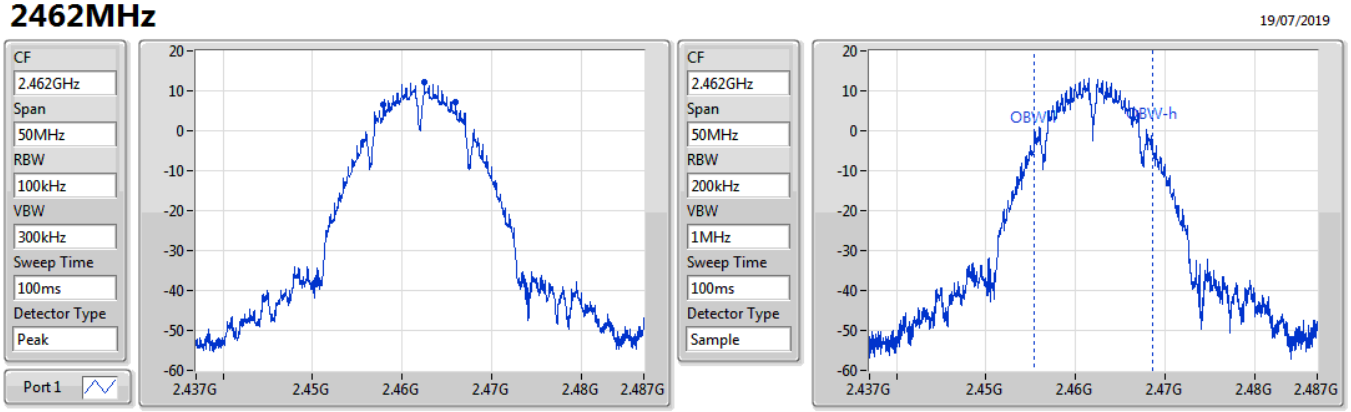
19/07/2019



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
11.05M	2.430975G	2.442025G	16.917M	2.428479G	2.445396G	500k	1

802.11b_Nss1,(1Mbps)_1TX EBW

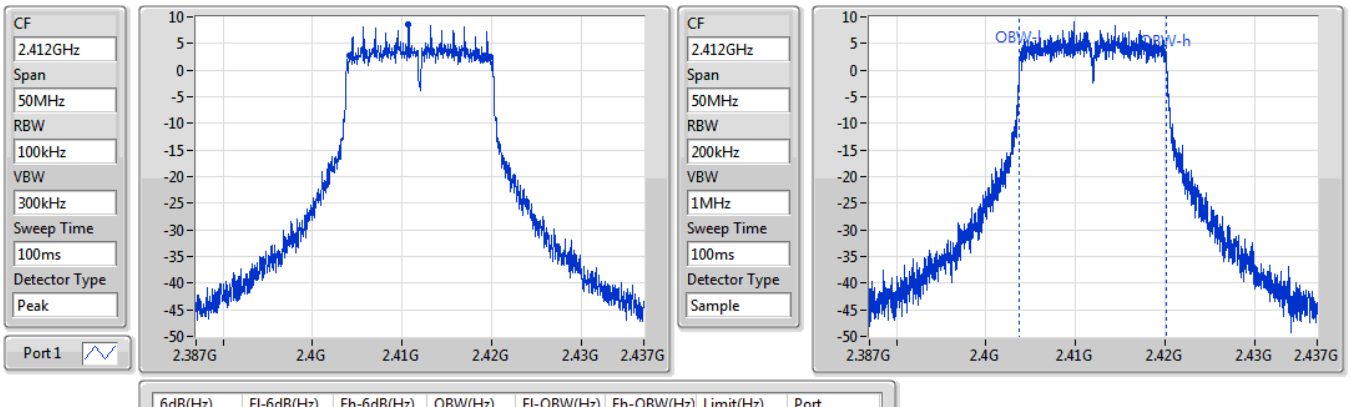
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8.05M	2.45795G	2.466G	13.168M	2.455378G	2.468547G	500k	1

802.11g_Nss1,(6Mbps)_1TX EBW

2412MHz

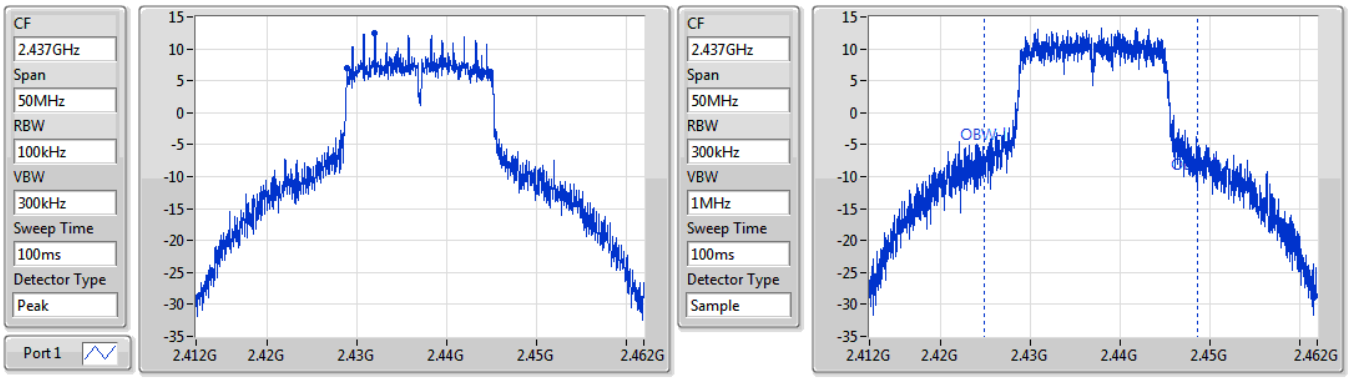


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.675M	2.4042G	2.419875G	16.417M	2.403779G	2.420196G	500k	1

802.11g_Nss1,(6Mbps)_1TX EBW

2437MHz

19/07/2019

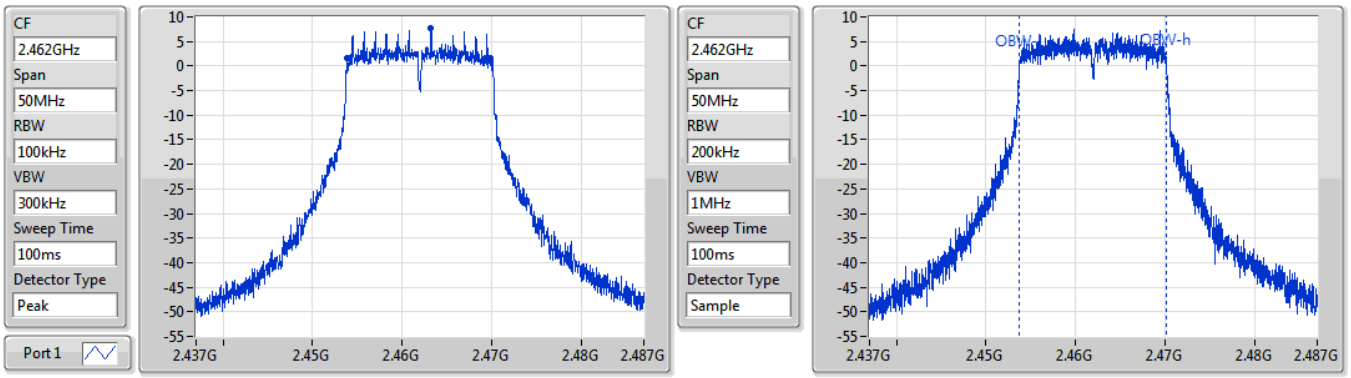


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16M	2.42885G	2.44485G	23.688M	2.424881G	2.448569G	500k	1

802.11g_Nss1,(6Mbps)_1TX EBW

2462MHz

19/07/2019

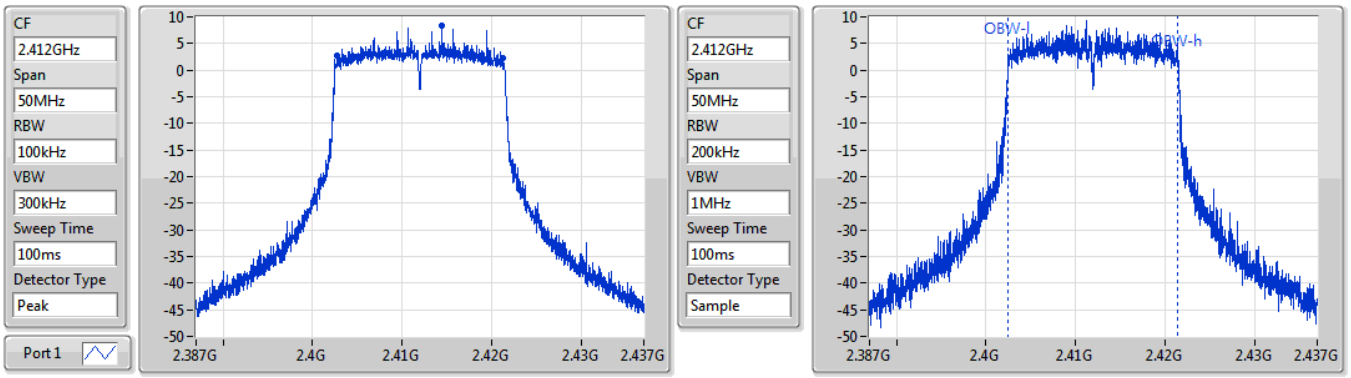


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.975M	2.453875G	2.46985G	16.392M	2.453779G	2.470171G	500k	1

802.11ax HEW20_Nss1,(MCS0)_1TX EBW

2412MHz

19/07/2019

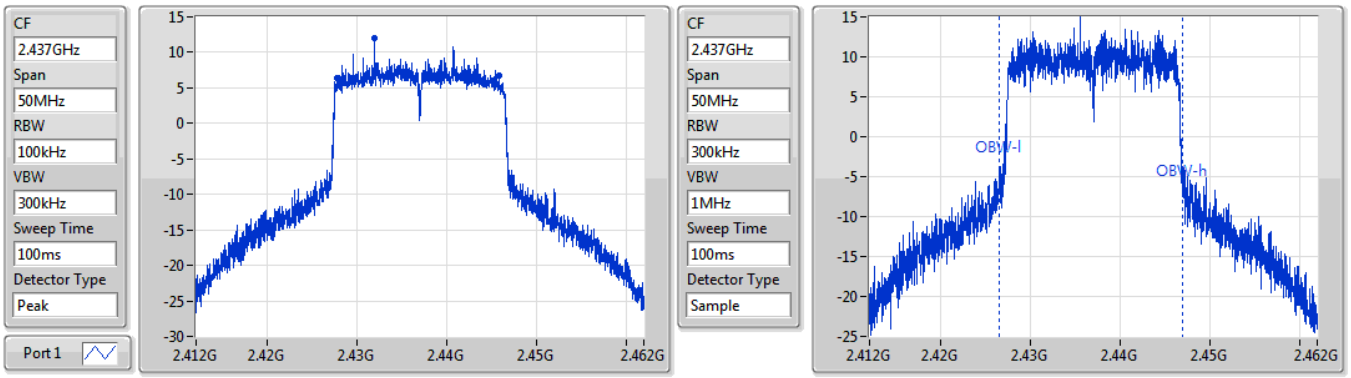


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.4M	2.4028G	2.4212G	18.941M	2.402505G	2.421445G	500k	1

802.11ax HEW20_Nss1,(MCS0)_1TX EBW

2437MHz

19/07/2019

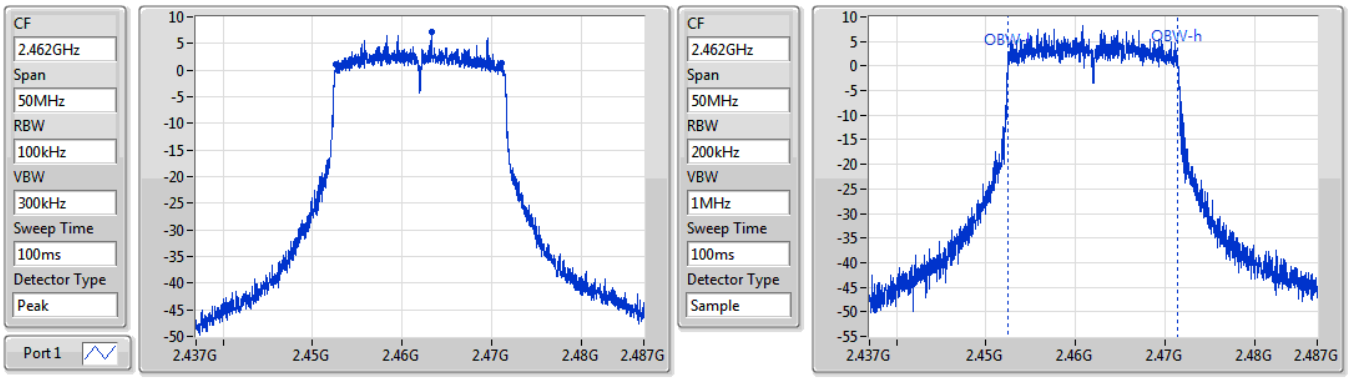


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.05M	2.4278G	2.44585G	20.465M	2.42653G	2.446995G	500k	1

802.11ax HEW20_Nss1,(MCS0)_1TX EBW

2462MHz

19/07/2019

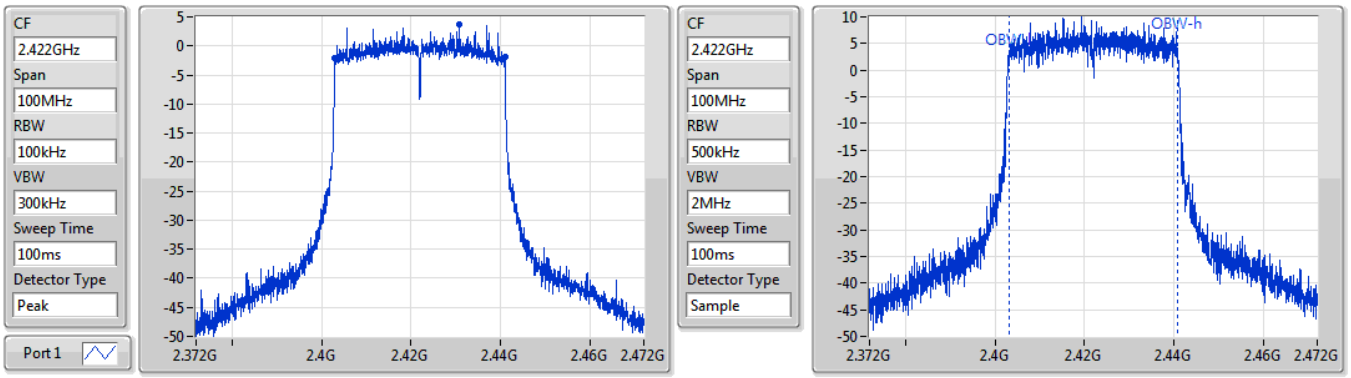


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.525M	2.452625G	2.47115G	18.941M	2.452505G	2.471445G	500k	1

802.11ax HEW40_Nss1,(MCS0)_1TX EBW

2422MHz

19/07/2019

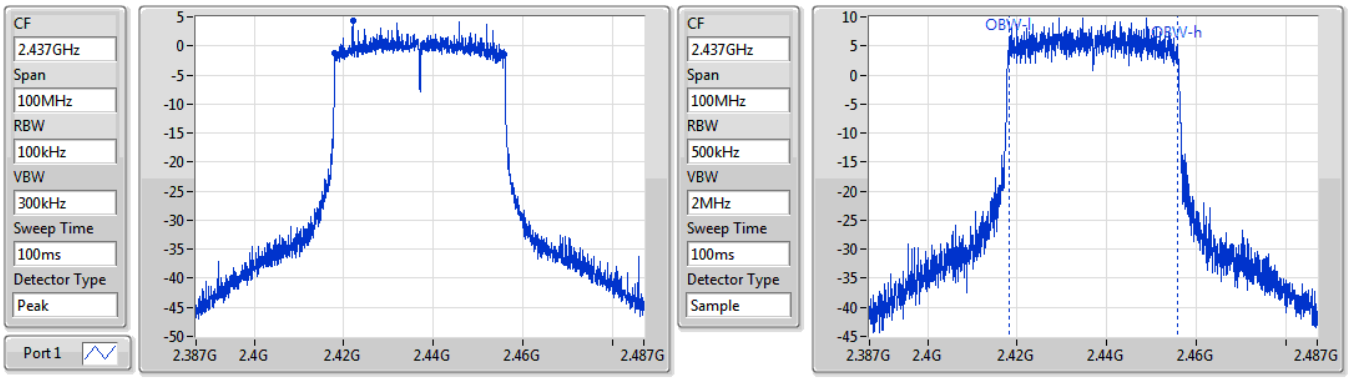


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
37.95M	2.403G	2.44095G	37.731M	2.403109G	2.440841G	500k	1

802.11ax HEW40_Nss1,(MCS0)_1TX EBW

2437MHz

19/07/2019

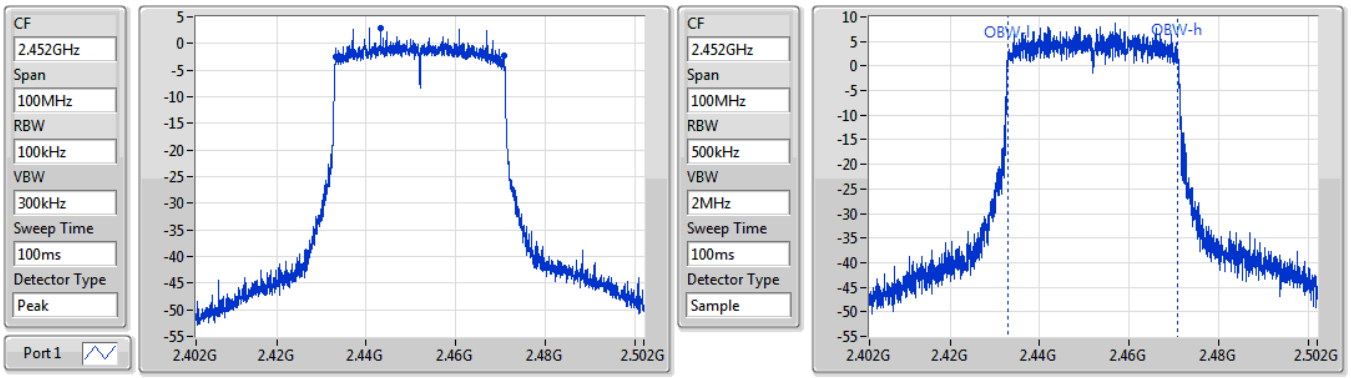


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
37.9M	2.418G	2.4559G	37.781M	2.418059G	2.455841G	500k	1

802.11ax HEW40_Nss1,(MCS0)_1TX EBW

2452MHz

19/07/2019



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
37.6M	2.43315G	2.47075G	37.781M	2.433009G	2.470791G	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	10M	17.266M	17M3G1D	7.075M	13.143M
802.11g_Nss1,(6Mbps)_2TX	16.275M	17.016M	17M0D1D	15.325M	16.342M
802.11ax HEW20_Nss1,(MCS0)_2TX	18.525M	19.29M	19M3D1D	16.675M	18.941M
802.11ax HEW40_Nss1,(MCS0)_2TX	38M	37.831M	37M8D1D	37.2M	37.681M

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

Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	8.025M	13.868M	7.575M	13.818M
2437MHz	Pass	500k	10M	17.266M	9.575M	16.942M
2462MHz	Pass	500k	7.075M	13.318M	7.575M	13.143M
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	15.325M	16.342M	16M	16.392M
2437MHz	Pass	500k	16.05M	17.016M	15.675M	16.792M
2457MHz						
2462MHz	Pass	500k	15.675M	16.392M	16.275M	16.392M
802.11ax HEW20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	18.2M	18.941M	18.525M	18.941M
2437MHz	Pass	500k	18.375M	19.29M	18.1M	19.29M
2462MHz	Pass	500k	16.675M	18.966M	17.6M	18.941M
802.11ax HEW40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	500k	37.95M	37.781M	37.2M	37.731M
2437MHz	Pass	500k	37.55M	37.731M	37.9M	37.831M
2452MHz	Pass	500k	38M	37.681M	37.8M	37.731M

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

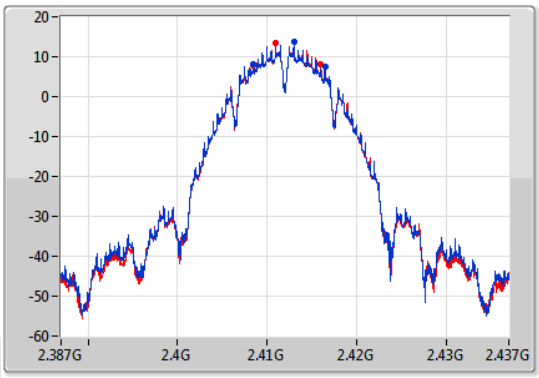
802.11b_Nss1,(1Mbps)_2TX EBW

2412MHz

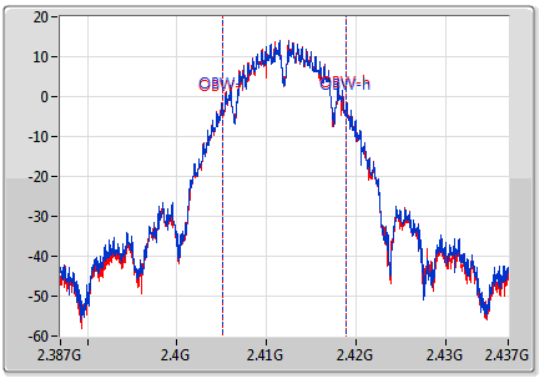
19/07/2019

CF	2.412GHz
Span	50MHz
RBW	100kHz
VBW	300kHz
Sweep Time	100ms
Detector Type	Peak

Port 1
Port 2



CF	2.412GHz
Span	50MHz
RBW	200kHz
VBW	1MHz
Sweep Time	100ms
Detector Type	Sample



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8.025M	2.40845G	2.416475G	13.868M	2.405053G	2.418922G	500k	1
7.575M	2.40845G	2.416025G	13.818M	2.405078G	2.418897G	500k	2

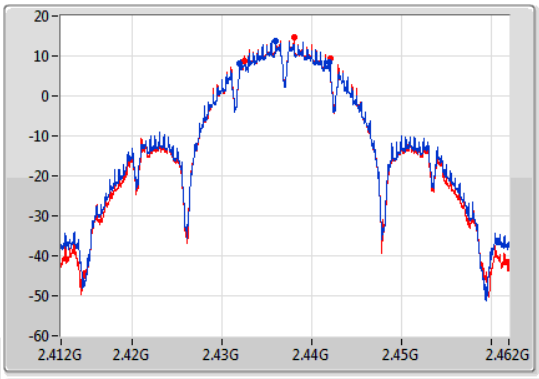
802.11b_Nss1,(1Mbps)_2TX EBW

2437MHz

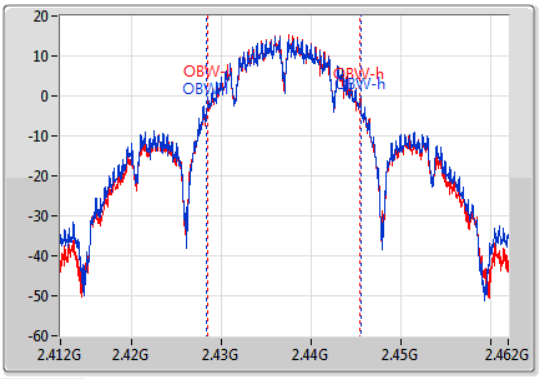
19/07/2019

CF	2.437GHz
Span	50MHz
RBW	100kHz
VBW	300kHz
Sweep Time	100ms
Detector Type	Peak

Port 1
Port 2



CF	2.437GHz
Span	50MHz
RBW	200kHz
VBW	1MHz
Sweep Time	100ms
Detector Type	Sample

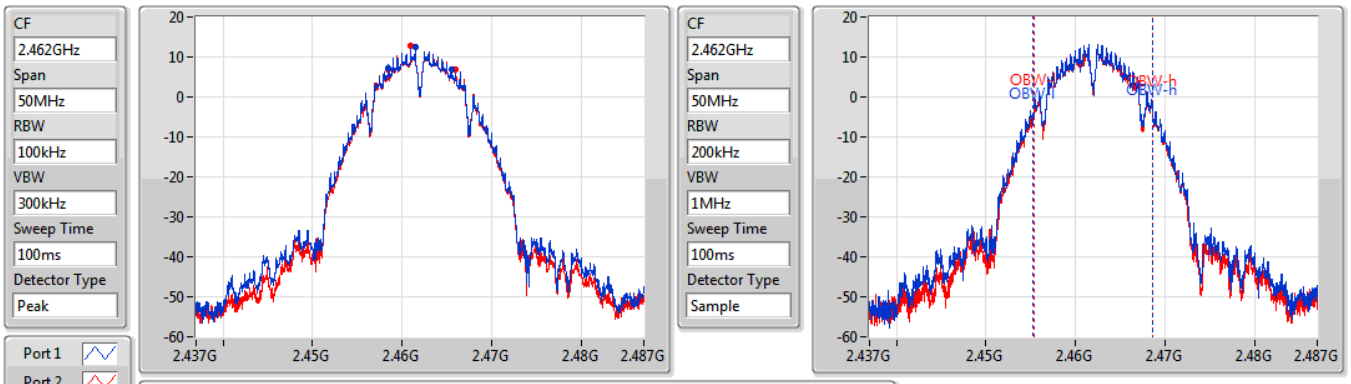


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
10M	2.431975G	2.441975G	17.266M	2.428304G	2.445571G	500k	1
9.575M	2.43245G	2.442025G	16.942M	2.428479G	2.445421G	500k	2

802.11b_Nss1,(1Mbps)_2TX EBW

2462MHz

19/07/2019

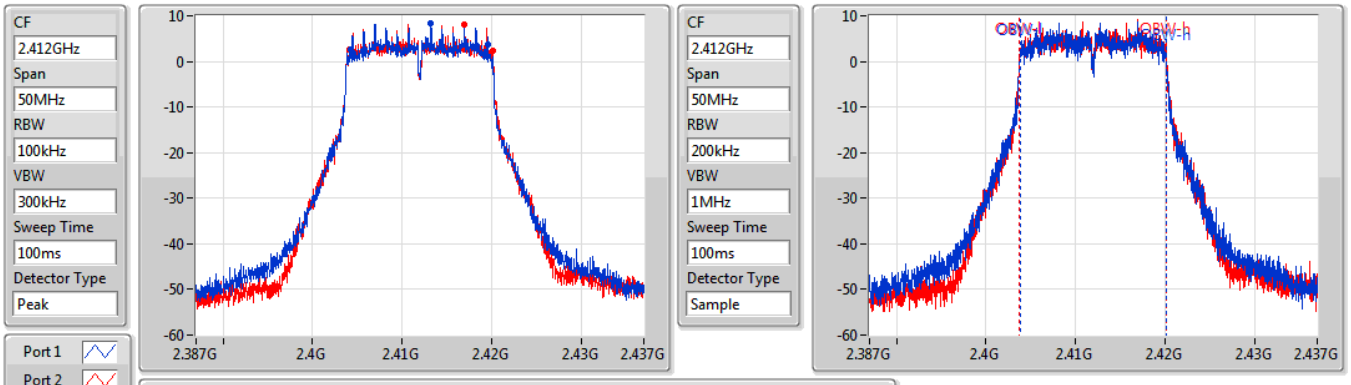


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
7.075M	2.45845G	2.465525G	13.318M	2.455278G	2.468597G	500k	1
7.575M	2.45845G	2.466025G	13.143M	2.455403G	2.468547G	500k	2

802.11g_Nss1,(6Mbps)_2TX EBW

2412MHz

19/07/2019

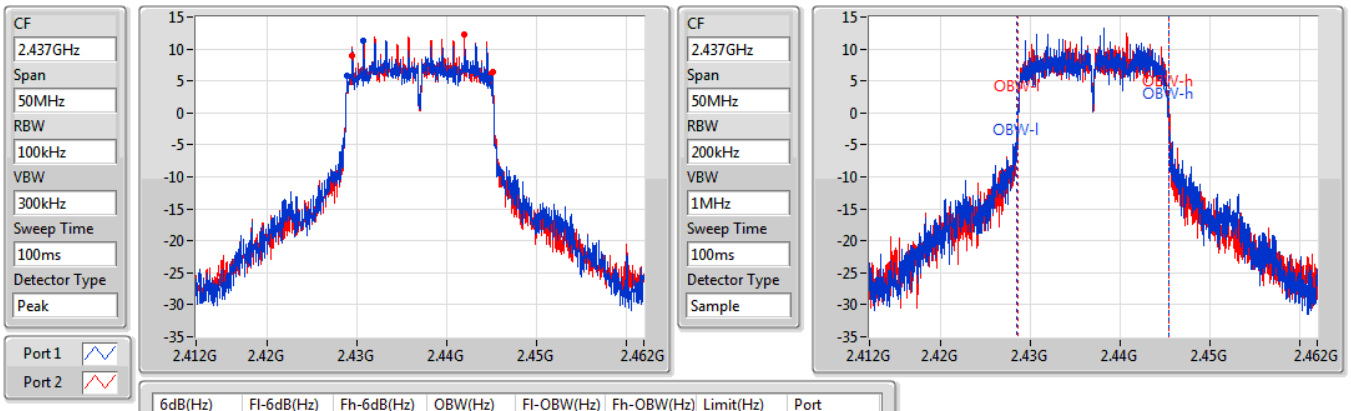


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.325M	2.404225G	2.41955G	16.342M	2.403804G	2.420146G	500k	1
16M	2.4041G	2.4201G	16.392M	2.403779G	2.420171G	500k	2

802.11g_Nss1,(6Mbps)_2TX EBW

2437MHz

19/07/2019

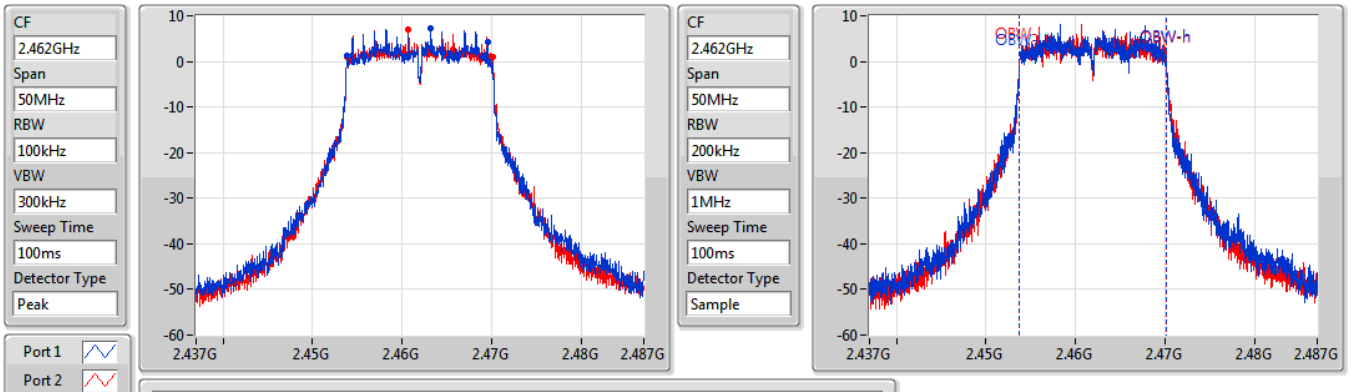


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.05M	2.428825G	2.444875G	17.016M	2.428429G	2.445446G	500k	1
15.675M	2.42945G	2.445125G	16.792M	2.428579G	2.445371G	500k	2

802.11g_Nss1,(6Mbps)_2TX EBW

2462MHz

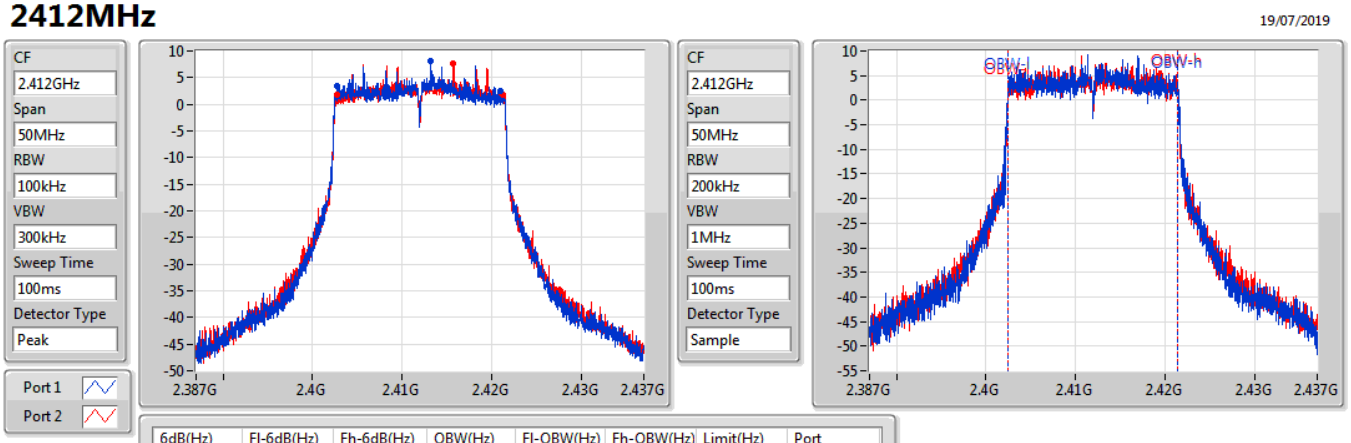
19/07/2019



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.675M	2.45385G	2.469525G	16.392M	2.453754G	2.470146G	500k	1
16.275M	2.45385G	2.470125G	16.392M	2.453779G	2.470171G	500k	2

802.11ax HEW20_Nss1,(MCS0)_2TX EBW

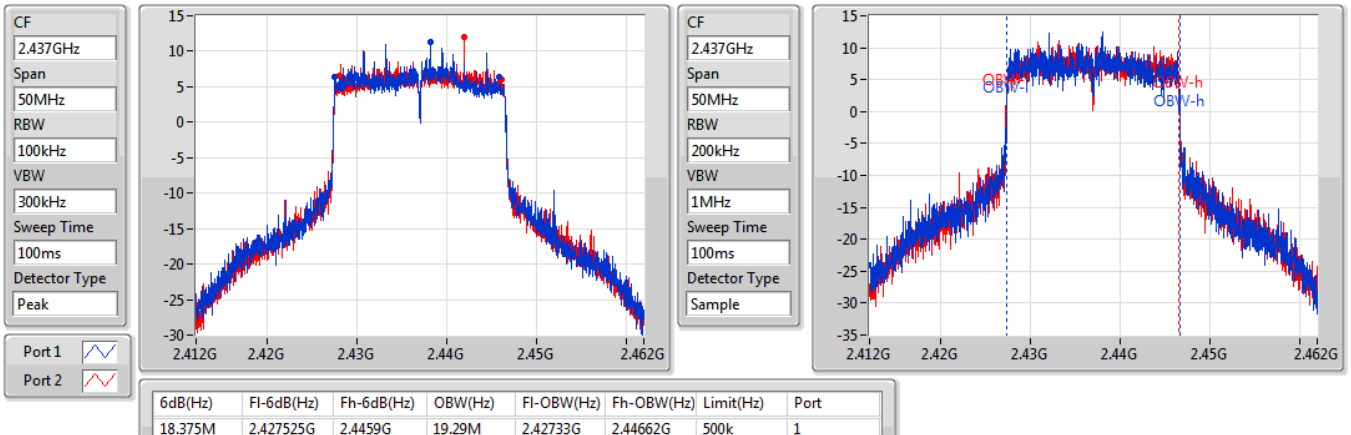
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.2M	2.402775G	2.420975G	18.941M	2.402505G	2.421445G	500k	1
18.525M	2.4027G	2.421225G	18.941M	2.402505G	2.421445G	500k	2

802.11ax HEW20_Nss1,(MCS0)_2TX EBW

2437MHz

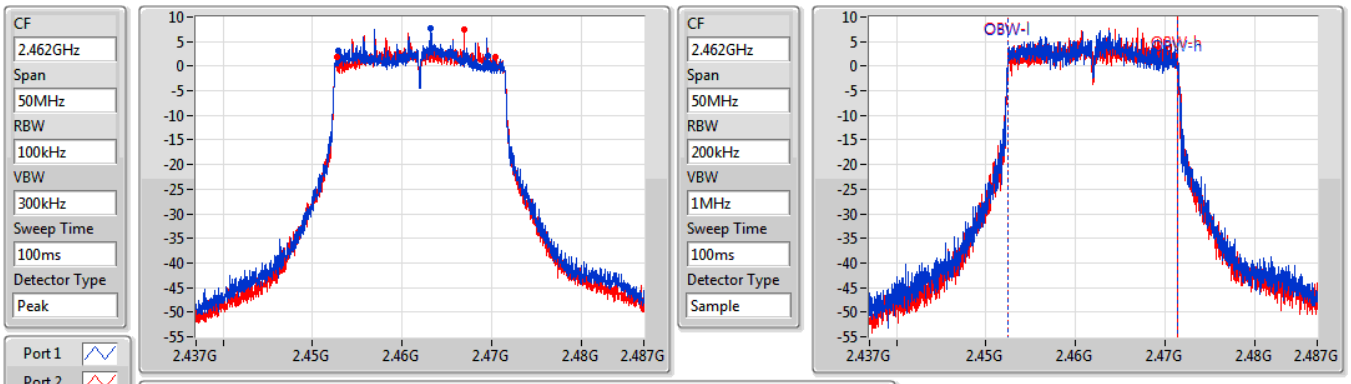


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.375M	2.427525G	2.4459G	19.29M	2.42733G	2.44662G	500k	1
18.1M	2.428G	2.4461G	19.29M	2.427305G	2.446595G	500k	2

802.11ax HEW20_Nss1,(MCS0)_2TX EBW

2462MHz

19/07/2019

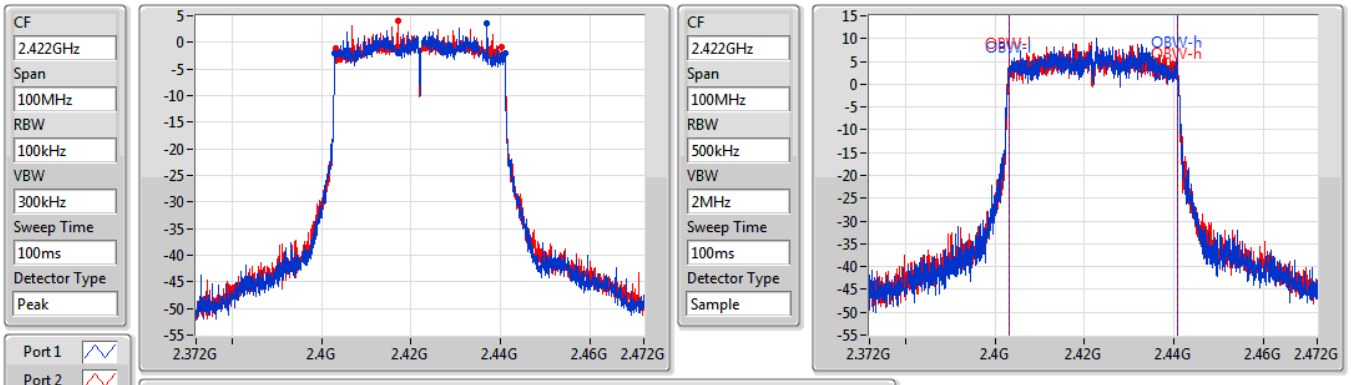


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.675M	2.452875G	2.46955G	18.966M	2.45248G	2.471445G	500k	1
17.6M	2.452775G	2.470375G	18.941M	2.452505G	2.471445G	500k	2

802.11ax HEW40_Nss1,(MCS0)_2TX EBW

2422MHz

19/07/2019



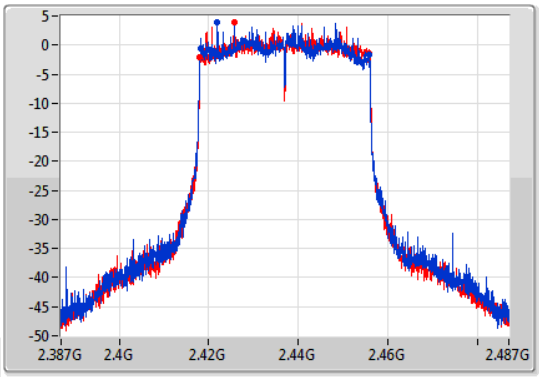
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
37.95M	2.403G	2.44095G	37.781M	2.403059G	2.440841G	500k	1
37.2M	2.40315G	2.44035G	37.731M	2.403109G	2.440841G	500k	2

802.11ax HEW40_Nss1,(MCS0)_2TX EBW

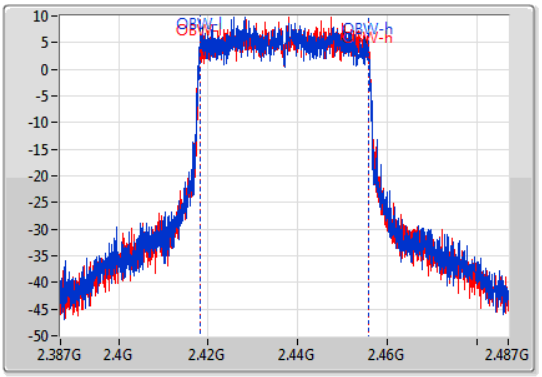
2437MHz

19/07/2019

CF	2.437GHz
Span	100MHz
RBW	100kHz
VBW	300kHz
Sweep Time	100ms
Detector Type	Peak



CF	2.437GHz
Span	100MHz
RBW	500kHz
VBW	2MHz
Sweep Time	100ms
Detector Type	Sample



Port 1
Port 2

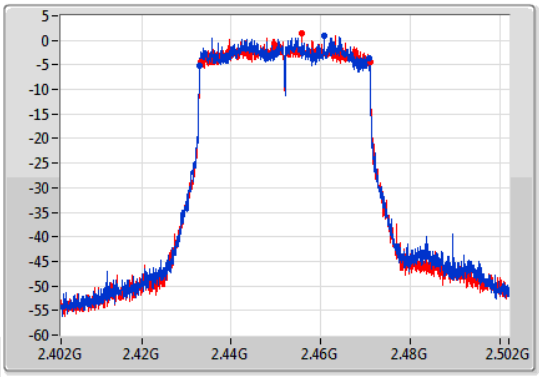
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
37.55M	2.41815G	2.4557G	37.731M	2.418059G	2.455791G	500k	1
37.9M	2.418G	2.4559G	37.831M	2.418059G	2.455891G	500k	2

802.11ax HEW40_Nss1,(MCS0)_2TX EBW

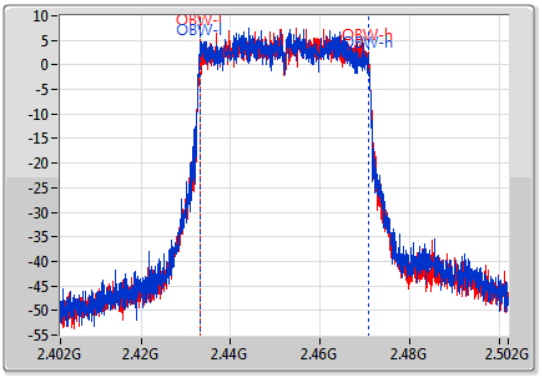
2452MHz

19/07/2019

CF	2.452GHz
Span	100MHz
RBW	100kHz
VBW	300kHz
Sweep Time	100ms
Detector Type	Peak



CF	2.452GHz
Span	100MHz
RBW	500kHz
VBW	2MHz
Sweep Time	100ms
Detector Type	Sample



Port 1
Port 2

6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
38M	2.4329G	2.4709G	37.681M	2.433059G	2.470741G	500k	1
37.8M	2.4332G	2.471G	37.731M	2.433109G	2.470841G	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-BF_Nss1,(MCS0)_2TX	17.925M	18.916M	18M9D1D	15M	18.891M
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	31.25M	37.731M	37M7D1D	18.55M	37.631M

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

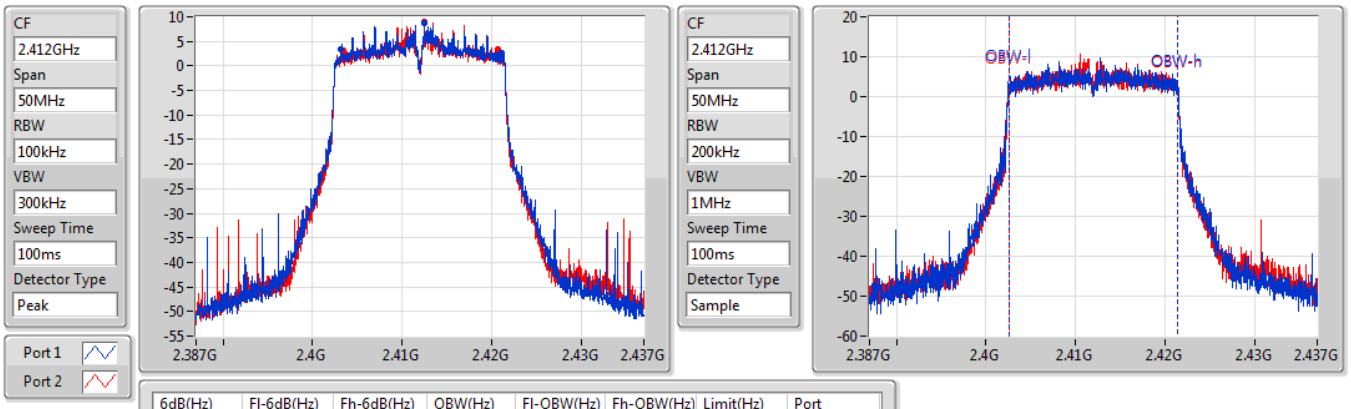
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	17.925M	18.891M	17.2M	18.891M
2437MHz	Pass	500k	15.4M	18.916M	15.075M	18.891M
2462MHz	Pass	500k	16.375M	18.916M	15M	18.891M
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	500k	31.25M	37.681M	31.05M	37.731M
2437MHz	Pass	500k	18.55M	37.631M	30.2M	37.631M
2452MHz	Pass	500k	23.9M	37.681M	31.2M	37.631M

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

802.11ax HEW20-BF_Nss1,(MCS0)_2TX EBW

2412MHz

19/07/2019

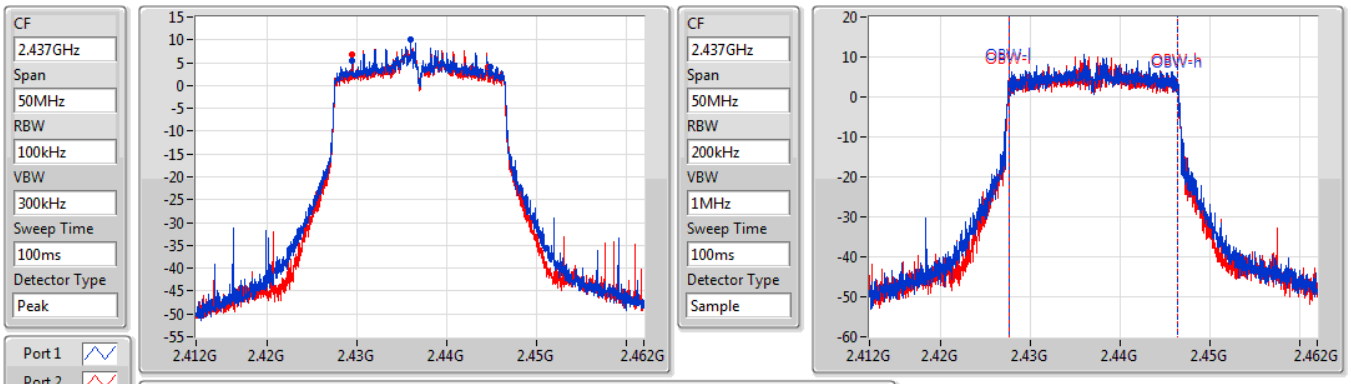


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.925M	2.4032G	2.421125G	18.891M	2.40253G	2.42142G	500k	1
17.2M	2.403475G	2.420675G	18.891M	2.40253G	2.42142G	500k	2

802.11ax HEW20-BF_Nss1,(MCS0)_2TX EBW

2437MHz

19/07/2019

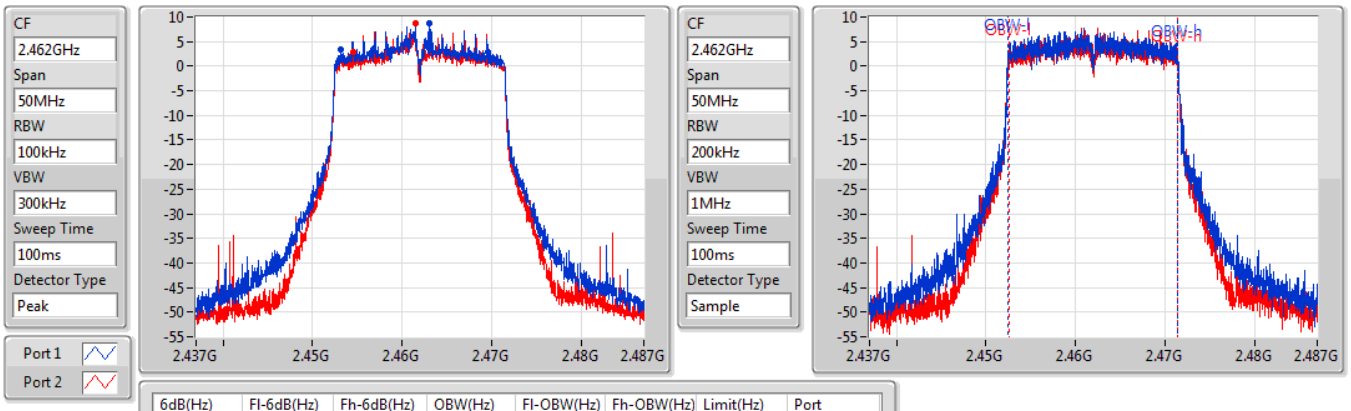


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.4M	2.42945G	2.44485G	18.916M	2.42753G	2.446445G	500k	1
15.075M	2.429475G	2.44455G	18.891M	2.42753G	2.44642G	500k	2

802.11ax HEW20-BF_Nss1,(MCS0)_2TX EBW

2462MHz

19/07/2019

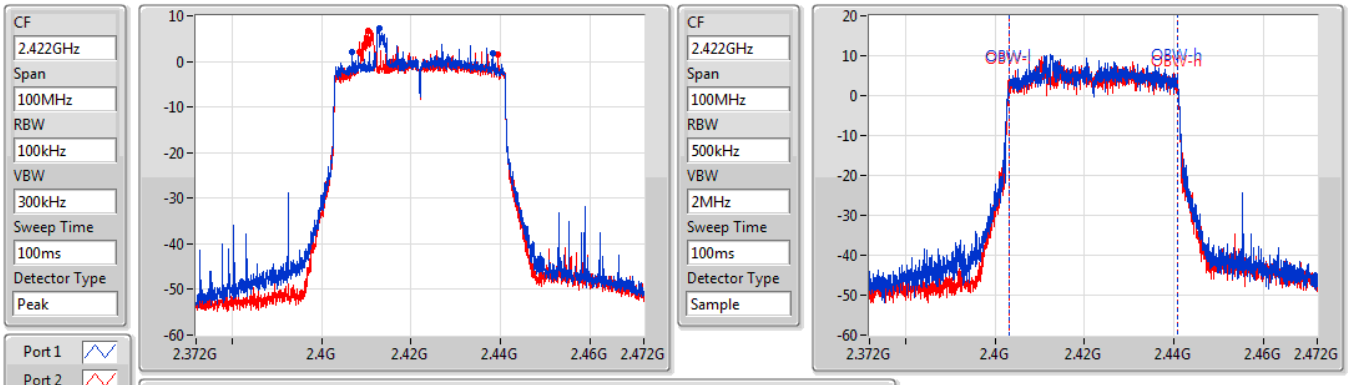


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.375M	2.4532G	2.469575G	18.916M	2.452505G	2.47142G	500k	1
15M	2.454575G	2.469575G	18.891M	2.45253G	2.47142G	500k	2

802.11ax HEW40-BF_Nss1,(MCS0)_2TX EBW

2422MHz

19/07/2019

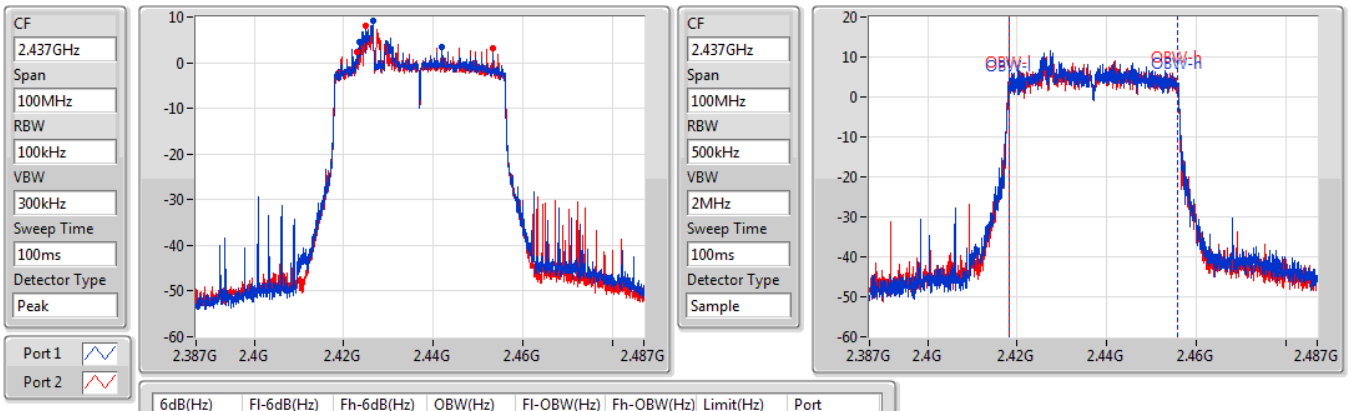


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
31.25M	2.40695G	2.4382G	37.681M	2.403159G	2.440841G	500k	1
31.05M	2.4084G	2.43945G	37.731M	2.403109G	2.440841G	500k	2

802.11ax HEW40-BF_Nss1,(MCS0)_2TX EBW

2437MHz

19/07/2019

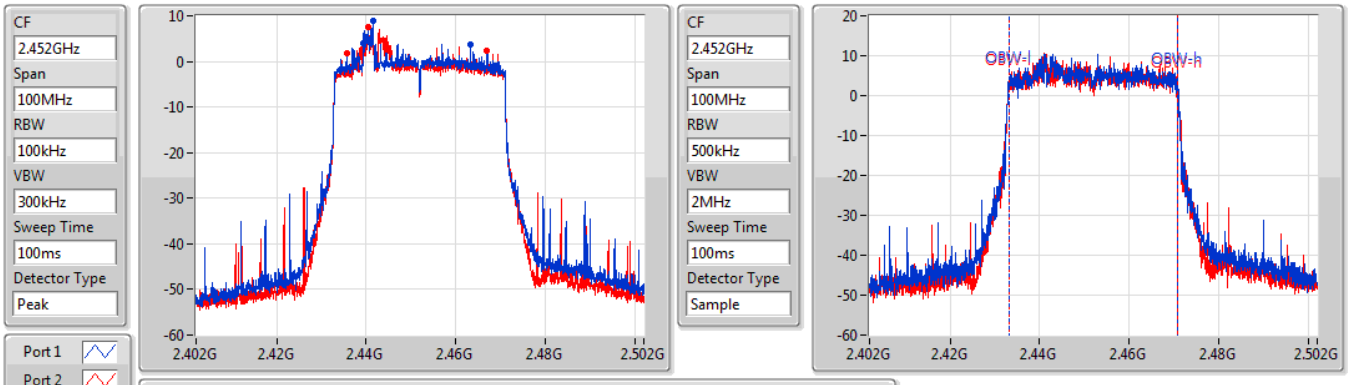


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.55M	2.42345G	2.442G	37.631M	2.418159G	2.455791G	500k	1
30.2M	2.423G	2.4532G	37.631M	2.418159G	2.455791G	500k	2

802.11ax HEW40-BF_Nss1,(MCS0)_2TX EBW

2452MHz

19/07/2019



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
23.9M	2.43935G	2.46325G	37.681M	2.433109G	2.470791G	500k	1
31.2M	2.43575G	2.46695G	37.631M	2.433159G	2.470791G	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	9.5M	16.192M	16M2G1D	7.075M	13.168M
802.11g_Nss1,(6Mbps)_4TX	16.3M	16.792M	16M8D1D	15.275M	16.317M
802.11ax HEW20_Nss1,(MCS0)_4TX	18.925M	19.09M	19M1D1D	17.5M	18.866M
802.11ax HEW40_Nss1,(MCS0)_4TX	37.95M	37.781M	37M8D1D	36.3M	37.581M

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

Result

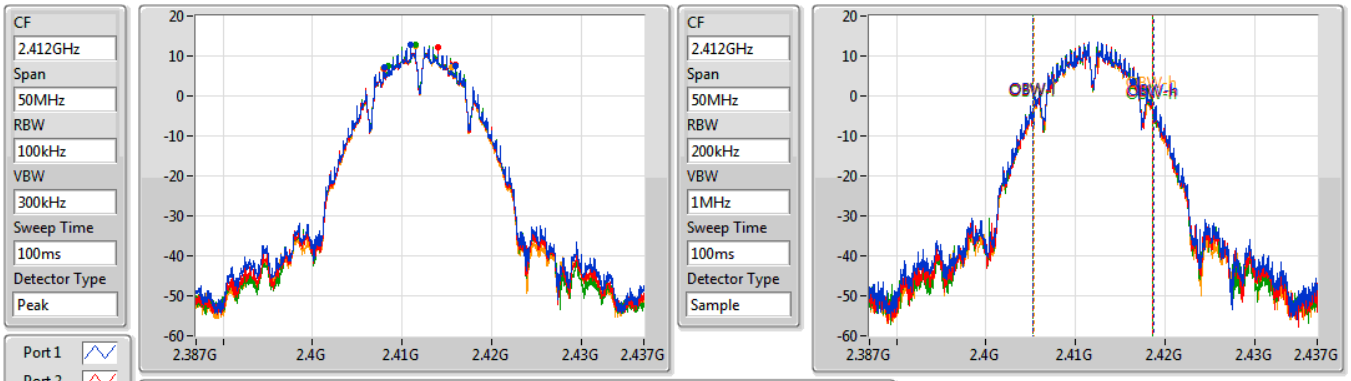
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11b_Nss1,(1Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	7.975M	13.518M	7.975M	13.393M	7.575M	13.368M	7.575M	13.243M
2437MHz	Pass	500k	9M	16.192M	8.55M	15.742M	9.5M	16.017M	9.025M	15.842M
2462MHz	Pass	500k	8.025M	13.368M	7.075M	13.168M	7.525M	13.193M	7.55M	13.418M
802.11g_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	15.425M	16.317M	15.95M	16.442M	16.3M	16.417M	16.275M	16.367M
2437MHz	Pass	500k	15.625M	16.567M	16.075M	16.667M	16.3M	16.792M	16.3M	16.767M
2462MHz	Pass	500k	15.275M	16.342M	16.3M	16.442M	16.025M	16.417M	16.05M	16.392M
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	18.925M	18.941M	18.475M	18.941M	17.5M	18.866M	17.9M	18.891M
2437MHz	Pass	500k	18.45M	19.09M	18.875M	19.065M	18.275M	18.991M	18.15M	19.04M
2462MHz	Pass	500k	18.375M	18.941M	17.825M	18.941M	17.75M	18.866M	18.375M	18.891M
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	500k	37.95M	37.731M	37.4M	37.581M	37.8M	37.781M	37.65M	37.781M
2437MHz	Pass	500k	37.75M	37.631M	37.45M	37.681M	37.95M	37.731M	37.75M	37.731M
2452MHz	Pass	500k	36.3M	37.731M	37.2M	37.681M	37.2M	37.731M	37.3M	37.781M

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

802.11b_Nss1,(1Mbps)_4TX EBW

2412MHz

19/07/2019

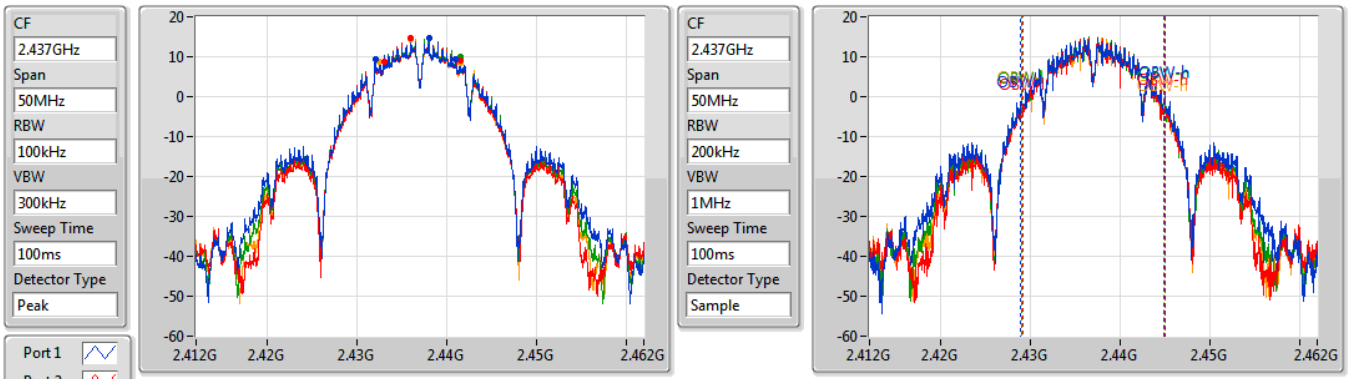


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
7.975M	2.408G	2.415975G	13.518M	2.405253G	2.418772G	500k	1
7.975M	2.408G	2.415975G	13.393M	2.405278G	2.418672G	500k	2
7.575M	2.40845G	2.416025G	13.368M	2.405278G	2.418647G	500k	3
7.575M	2.40795G	2.415525G	13.243M	2.405328G	2.418572G	500k	4

802.11b_Nss1,(1Mbps)_4TX EBW

2437MHz

19/07/2019

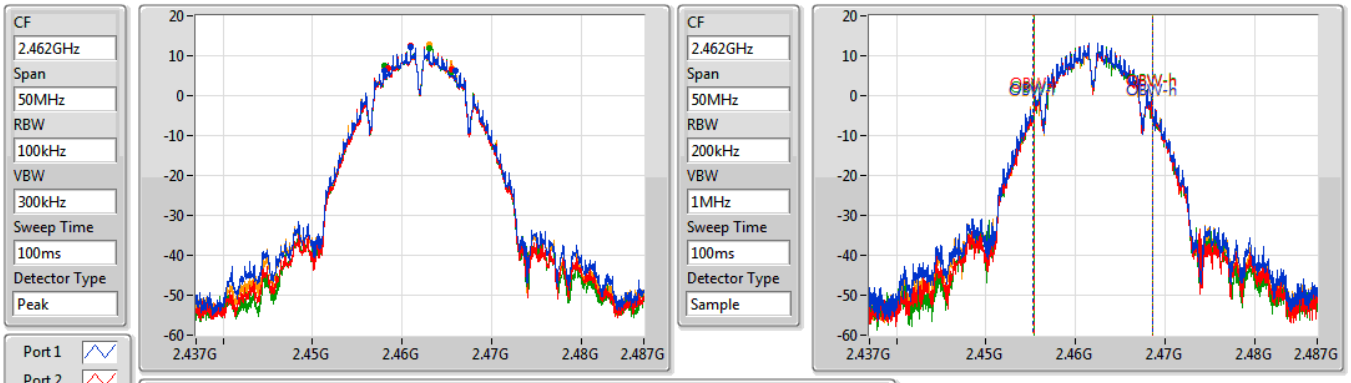


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
9M	2.432G	2.441G	16.192M	2.428854G	2.445046G	500k	1
8.55M	2.432975G	2.441525G	15.742M	2.429154G	2.444896G	500k	2
9.5M	2.432G	2.4415G	16.017M	2.428954G	2.444971G	500k	3
9.025M	2.432475G	2.4415G	15.842M	2.429029G	2.444871G	500k	4

802.11b_Nss1,(1Mbps)_4TX EBW

2462MHz

19/07/2019

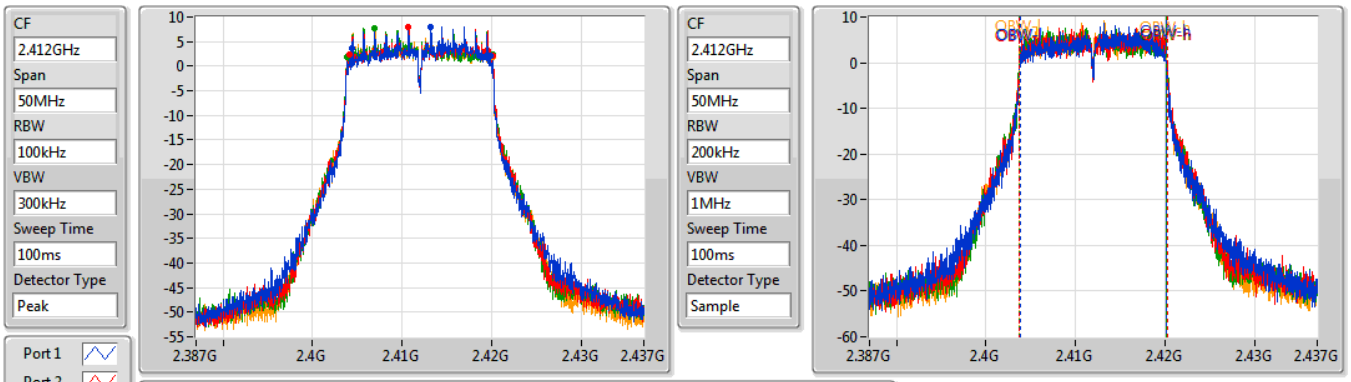


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8.025M	2.457975G	2.466G	13.368M	2.455253G	2.468622G	500k	1
7.075M	2.45845G	2.465525G	13.168M	2.455378G	2.468547G	500k	2
7.525M	2.458G	2.465525G	13.193M	2.455353G	2.468547G	500k	3
7.55M	2.457975G	2.465525G	13.418M	2.455228G	2.468647G	500k	4

802.11g_Nss1,(6Mbps)_4TX EBW

2412MHz

19/07/2019

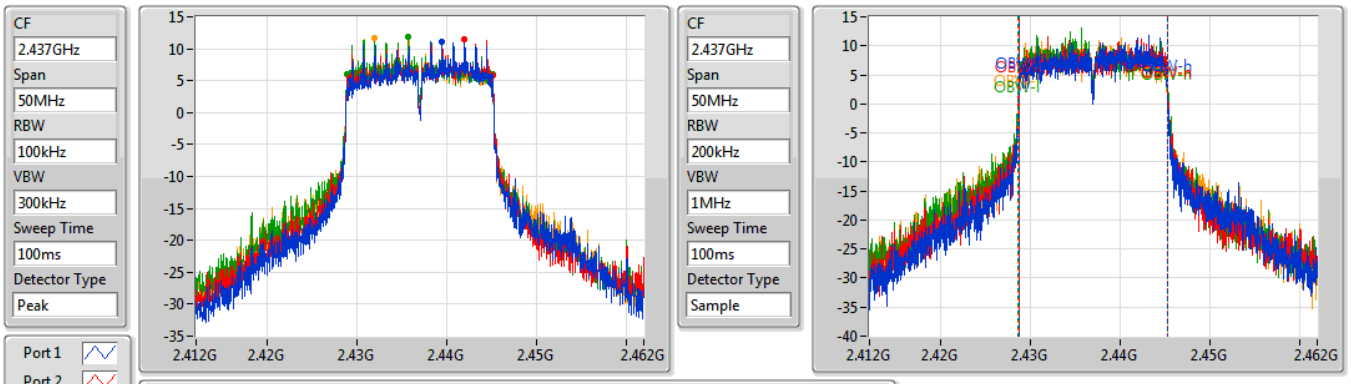


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.425M	2.404425G	2.41985G	16.317M	2.403829G	2.420146G	500k	1
15.95M	2.4042G	2.42015G	16.442M	2.403779G	2.420221G	500k	2
16.3M	2.403825G	2.420125G	16.417M	2.403754G	2.420171G	500k	3
16.275M	2.403825G	2.4201G	16.367M	2.403779G	2.420146G	500k	4

802.11g_Nss1,(6Mbps)_4TX EBW

2437MHz

19/07/2019

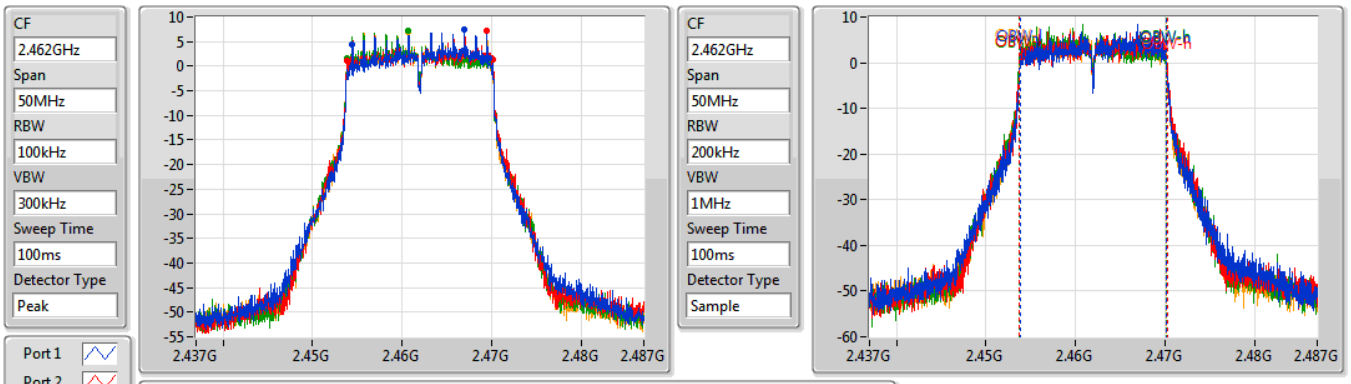


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.625M	2.429225G	2.44485G	16.567M	2.428729G	2.445296G	500k	1
16.075M	2.429075G	2.44515G	16.667M	2.428654G	2.445321G	500k	2
16.3M	2.428825G	2.445125G	16.792M	2.428529G	2.445321G	500k	3
16.3M	2.428825G	2.445125G	16.767M	2.428579G	2.445346G	500k	4

802.11g_Nss1,(6Mbps)_4TX EBW

2462MHz

19/07/2019

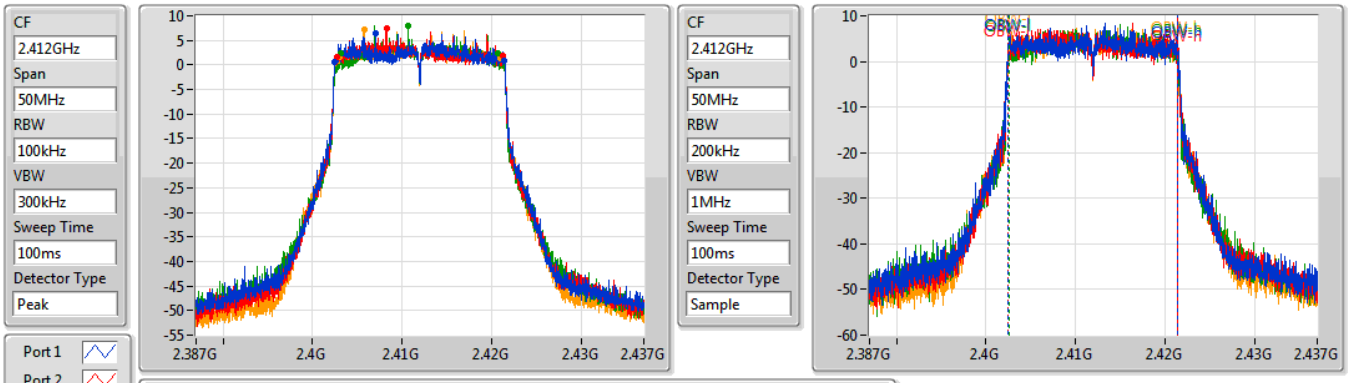


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.275M	2.454475G	2.46975G	16.342M	2.453829G	2.470171G	500k	1
16.3M	2.45385G	2.47015G	16.442M	2.453779G	2.470221G	500k	2
16.025M	2.45385G	2.469875G	16.417M	2.453754G	2.470171G	500k	3
16.05M	2.453825G	2.469875G	16.392M	2.453779G	2.470171G	500k	4

802.11ax HEW20_Nss1,(MCS0)_4TX EBW

2412MHz

19/07/2019

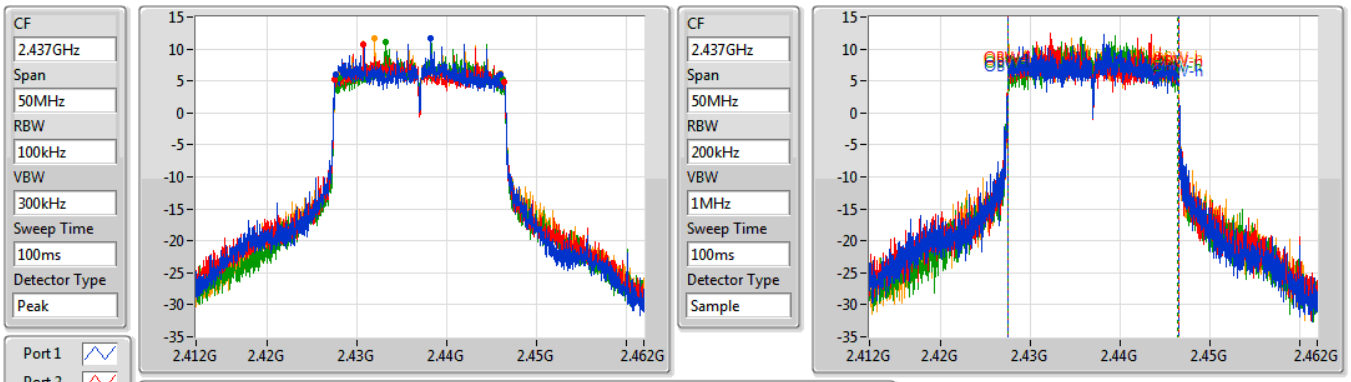


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.925M	2.4025G	2.421425G	18.941M	2.402505G	2.421445G	500k	1
18.475M	2.402775G	2.42125G	18.941M	2.402505G	2.421445G	500k	2
17.5M	2.403225G	2.420725G	18.866M	2.40253G	2.421395G	500k	3
17.9M	2.40305G	2.42095G	18.891M	2.40253G	2.42142G	500k	4

802.11ax HEW20_Nss1,(MCS0)_4TX EBW

2437MHz

19/07/2019



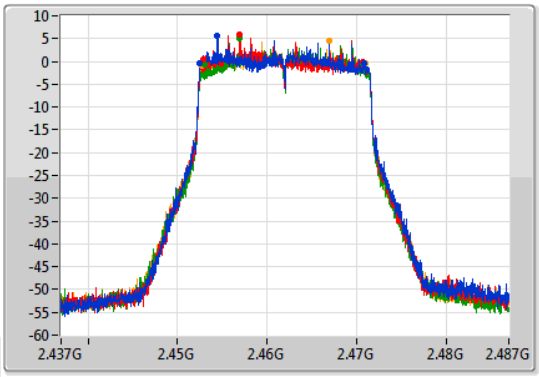
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.45M	2.427575G	2.446025G	19.09M	2.427405G	2.446495G	500k	1
18.875M	2.427525G	2.4464G	19.065M	2.42743G	2.446495G	500k	2
18.275M	2.42795G	2.446225G	18.991M	2.42748G	2.44647G	500k	3
18.15M	2.4278G	2.44595G	19.04M	2.427455G	2.446495G	500k	4

802.11ax HEW20_Nss1,(MCS0)_4TX EBW

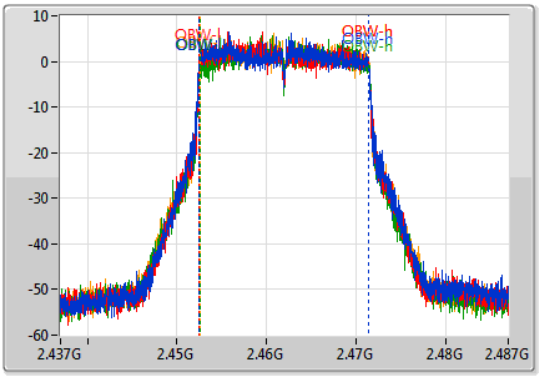
2462MHz

19/07/2019

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



CF	2.462GHz
Span	50MHz
RBW	200kHz
VBW	1MHz
Sweep Time	100ms
Detector Type	Sample



Port 1
Port 2
Port 3
Port 4

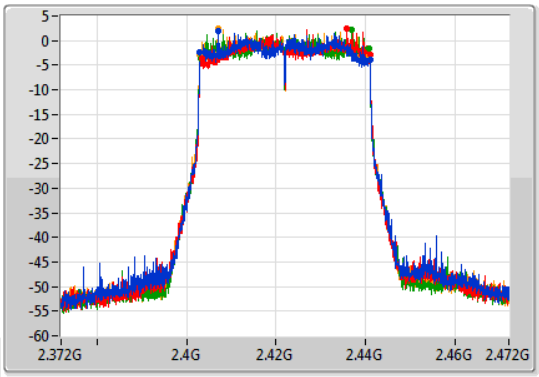
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.375M	2.452525G	2.4709G	18.941M	2.45248G	2.47142G	500k	1
17.825M	2.4529G	2.470725G	18.941M	2.45248G	2.47142G	500k	2
17.75M	2.452975G	2.470725G	18.866M	2.452555G	2.47142G	500k	3
18.375M	2.452675G	2.47105G	18.891M	2.45253G	2.47142G	500k	4

802.11ax HEW40_Nss1,(MCS0)_4TX EBW

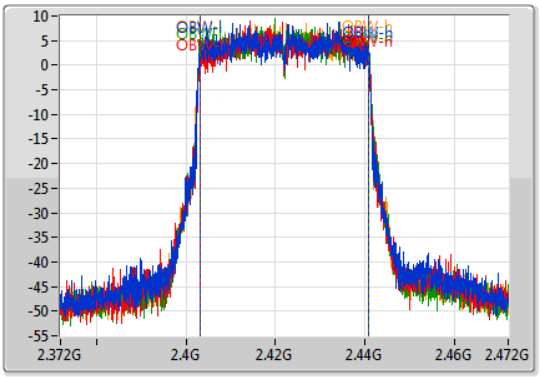
2422MHz

19/07/2019

CF	2.422GHz
Span	100MHz
RBW	100kHz
VBW	300kHz
Sweep Time	100ms
Detector Type	Peak



CF	2.422GHz
Span	100MHz
RBW	500kHz
VBW	2MHz
Sweep Time	100ms
Detector Type	Sample



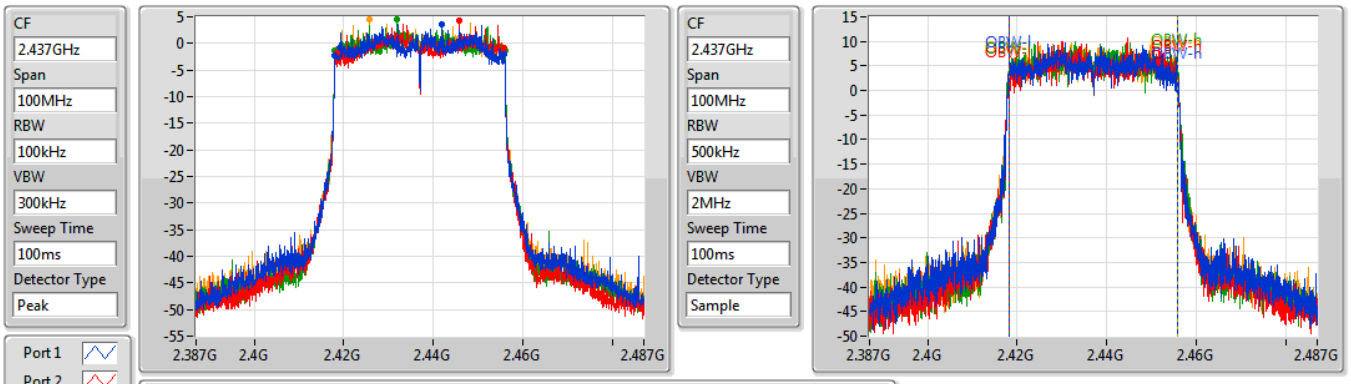
Port 1
Port 2
Port 3
Port 4

6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
37.95M	2.403G	2.44095G	37.731M	2.403059G	2.440791G	500k	1
37.4M	2.40355G	2.44095G	37.581M	2.403209G	2.440791G	500k	2
37.8M	2.4031G	2.4409G	37.781M	2.403059G	2.440841G	500k	3
37.65M	2.40305G	2.4407G	37.781M	2.403059G	2.440841G	500k	4

802.11ax HEW40_Nss1,(MCS0)_4TX EBW

2437MHz

19/07/2019

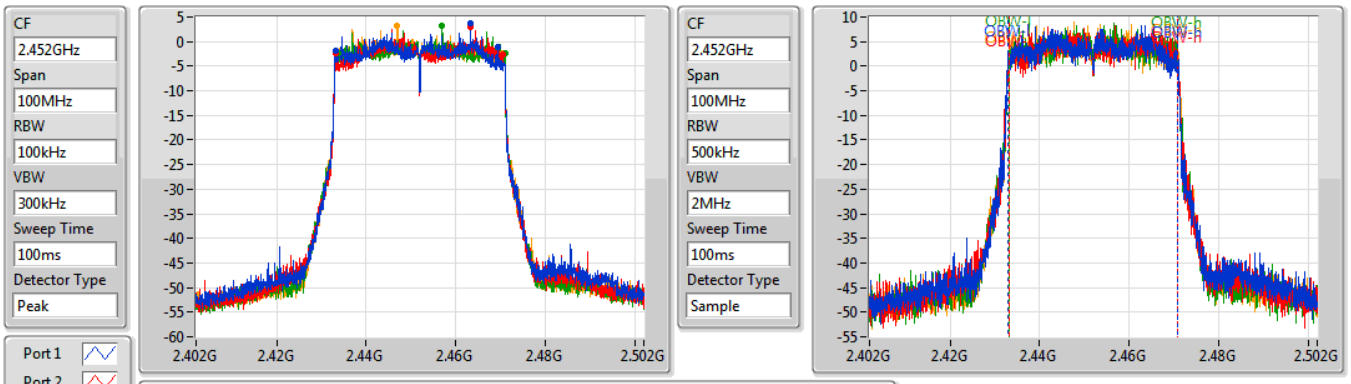


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
37.75M	2.41805G	2.4558G	37.631M	2.418109G	2.455741G	500k	1
37.45M	2.4184G	2.45585G	37.681M	2.418159G	2.455841G	500k	2
37.95M	2.418G	2.45595G	37.731M	2.418109G	2.455841G	500k	3
37.75M	2.41805G	2.4558G	37.731M	2.418059G	2.455791G	500k	4

802.11ax HEW40_Nss1,(MCS0)_4TX EBW

2452MHz

19/07/2019



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
36.3M	2.43315G	2.46945G	37.731M	2.433009G	2.470741G	500k	1
37.2M	2.4332G	2.4704G	37.681M	2.433159G	2.470841G	500k	2
37.2M	2.43375G	2.47095G	37.731M	2.433109G	2.470841G	500k	3
37.3M	2.43315G	2.47045G	37.781M	2.433059G	2.470841G	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-BF_Nss1,(MCS0)_4TX	18.4M	18.916M	18M9D1D	13.8M	18.816M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	35.1M	37.731M	37M7D1D	3.95M	37.631M

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

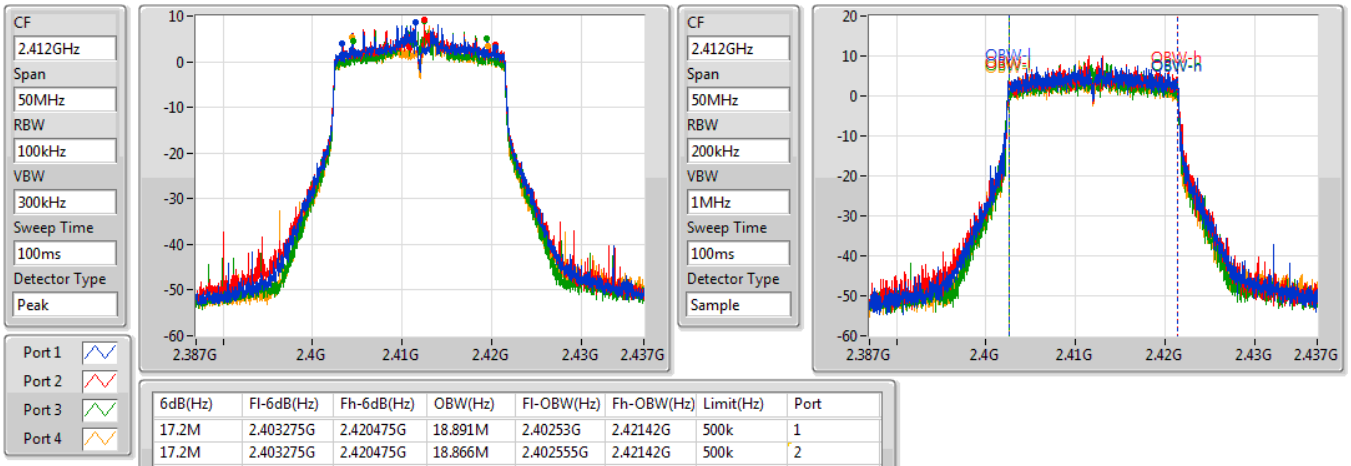
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	17.2M	18.891M	17.2M	18.866M	14.95M	18.866M	15.05M	18.891M
2437MHz	Pass	500k	18.3M	18.891M	18.075M	18.891M	13.8M	18.816M	18.4M	18.891M
2462MHz	Pass	500k	17.675M	18.916M	17.475M	18.891M	15.45M	18.866M	15.075M	18.866M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	500k	35.1M	37.731M	31.2M	37.681M	33.75M	37.681M	35.05M	37.681M
2437MHz	Pass	500k	32.5M	37.681M	30.35M	37.631M	30.05M	37.681M	3.95M	37.731M
2452MHz	Pass	500k	28.8M	37.631M	31.05M	37.731M	23.75M	37.681M	31.25M	37.681M

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

802.11ax HEW20-BF_Nss1,(MCS0)_4TX EBW

2412MHz

19/07/2019

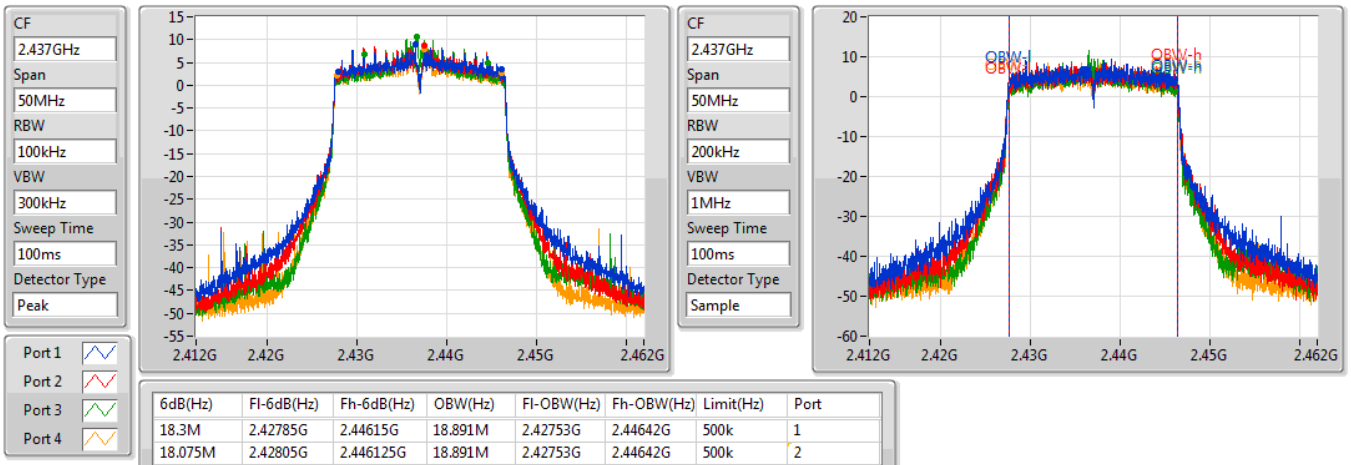


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.2M	2.403275G	2.420475G	18.891M	2.40253G	2.42142G	500k	1
17.2M	2.403275G	2.420475G	18.866M	2.402555G	2.42142G	500k	2
14.95M	2.4045G	2.41945G	18.866M	2.40253G	2.421395G	500k	3
15.05M	2.404475G	2.419525G	18.891M	2.40253G	2.42142G	500k	4

802.11ax HEW20-BF_Nss1,(MCS0)_4TX EBW

2437MHz

19/07/2019

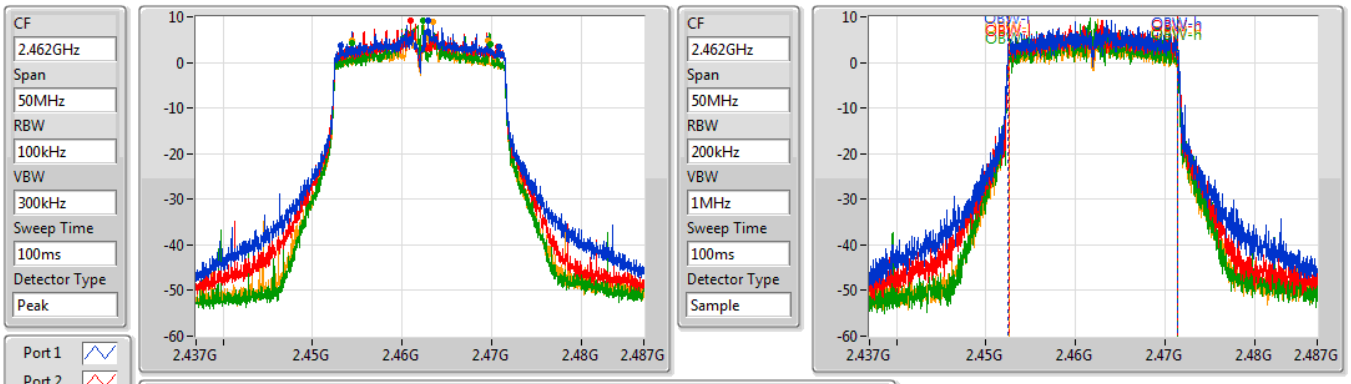


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.3M	2.42785G	2.44615G	18.891M	2.42753G	2.44642G	500k	1
18.075M	2.42805G	2.446125G	18.891M	2.42753G	2.44642G	500k	2
13.8M	2.43075G	2.44455G	18.816M	2.42758G	2.446395G	500k	3
18.4M	2.427725G	2.446125G	18.891M	2.42753G	2.44642G	500k	4

802.11ax HEW20-BF_Nss1,(MCS0)_4TX EBW

2462MHz

19/07/2019

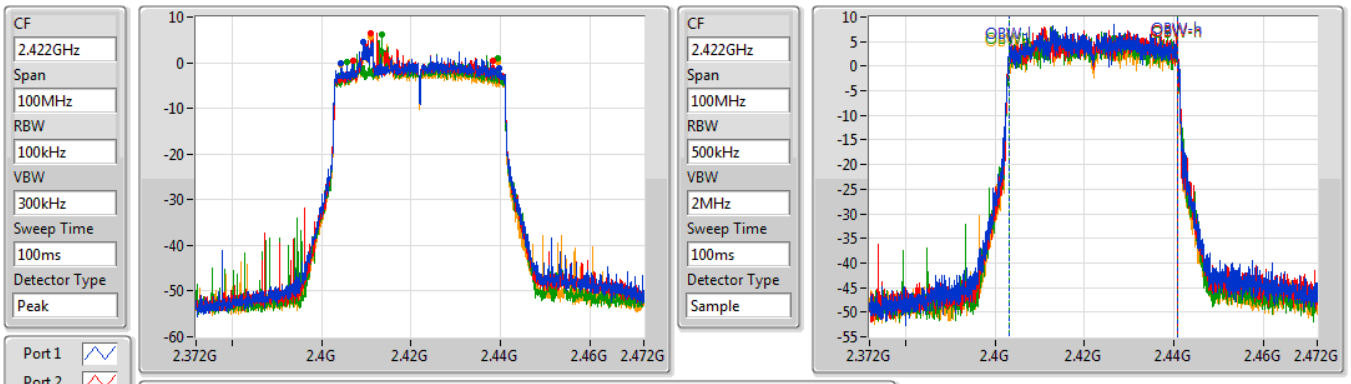


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.675M	2.4532G	2.470875G	18.916M	2.452505G	2.47142G	500k	1
17.475M	2.453225G	2.4707G	18.891M	2.45253G	2.47142G	500k	2
15.45M	2.45445G	2.4699G	18.866M	2.45253G	2.471395G	500k	3
15.075M	2.45445G	2.469525G	18.866M	2.45253G	2.471395G	500k	4

802.11ax HEW40-BF_Nss1,(MCS0)_4TX EBW

2422MHz

19/07/2019

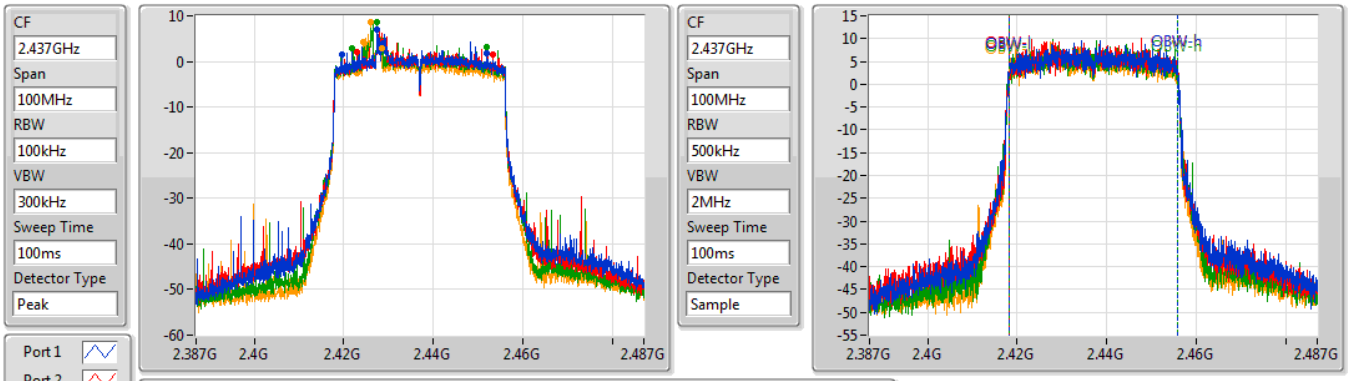


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
35.1M	2.40445G	2.43955G	37.731M	2.403109G	2.440841G	500k	1
31.2M	2.407G	2.4382G	37.681M	2.403159G	2.440841G	500k	2
33.75M	2.40575G	2.4395G	37.681M	2.403159G	2.440841G	500k	3
35.05M	2.40445G	2.4395G	37.681M	2.403109G	2.440791G	500k	4

802.11ax HEW40-BF_Nss1,(MCS0)_4TX EBW

2437MHz

19/07/2019

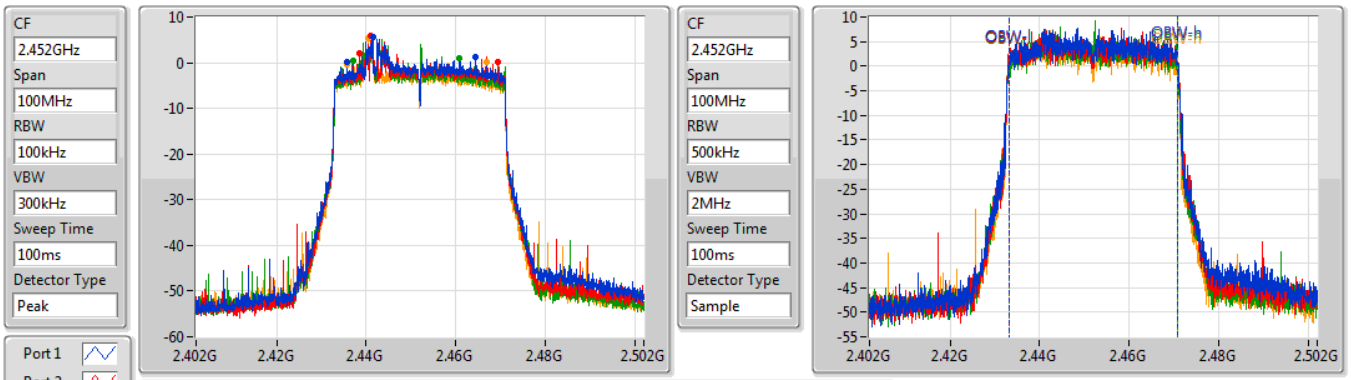


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
32.5M	2.4195G	2.452G	37.681M	2.418159G	2.455841G	500k	1
30.35M	2.42295G	2.4533G	37.631M	2.418159G	2.455791G	500k	2
30.05M	2.42195G	2.452G	37.681M	2.418109G	2.455791G	500k	3
3.95M	2.42445G	2.4284G	37.731M	2.418109G	2.455841G	500k	4

802.11ax HEW40-BF_Nss1,(MCS0)_4TX EBW

2452MHz

19/07/2019



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
28.8M	2.4357G	2.4645G	37.631M	2.433159G	2.470791G	500k	1
31.05M	2.43845G	2.4695G	37.731M	2.433109G	2.470841G	500k	2
23.75M	2.437G	2.46075G	37.681M	2.433109G	2.470791G	500k	3
31.25M	2.43575G	2.467G	37.681M	2.433059G	2.470741G	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	10.075M	17.016M	17M0G1D	8.55M	13.543M
802.11g_Nss1,(6Mbps)_1TX	16.3M	23.738M	23M7D1D	15.775M	16.417M
802.11ax HEW20_Nss1,(MCS0)_1TX	18.675M	19.24M	19M2D1D	18.375M	18.891M
802.11ax HEW40_Nss1,(MCS0)_1TX	37.7M	37.781M	37M8D1D	37.3M	37.631M

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

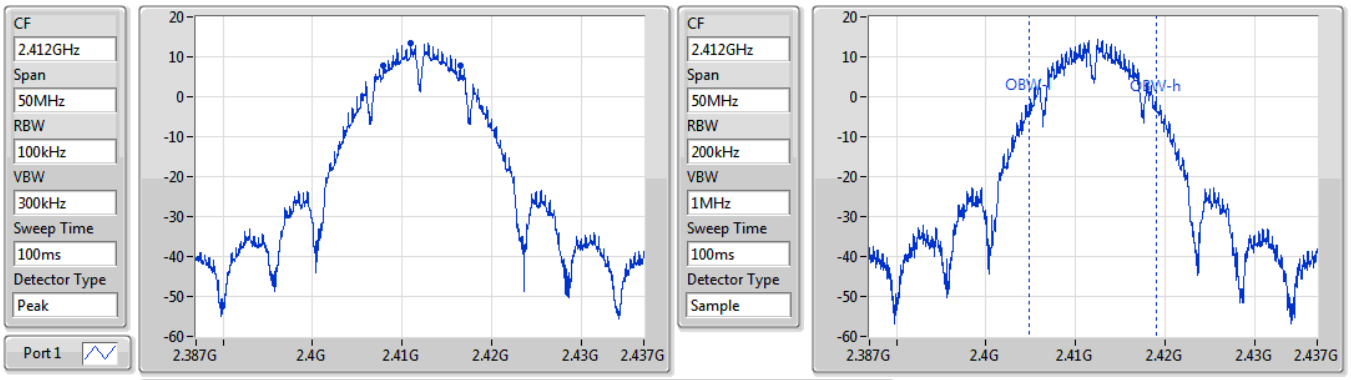
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	8.55M	14.243M
2437MHz	Pass	500k	10.075M	17.016M
2462MHz	Pass	500k	9.025M	13.543M
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	15.775M	16.442M
2437MHz	Pass	500k	16.3M	23.738M
2462MHz	Pass	500k	16M	16.417M
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-
2412MHz	Pass	500k	18.375M	18.941M
2437MHz	Pass	500k	18.4M	19.24M
2462MHz	Pass	500k	18.675M	18.891M
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-	-	-
2422MHz	Pass	500k	37.7M	37.781M
2437MHz	Pass	500k	37.7M	37.781M
2452MHz	Pass	500k	37.3M	37.631M

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

802.11b_Nss1,(1Mbps)_1TX EBW

2412MHz

19/07/2019

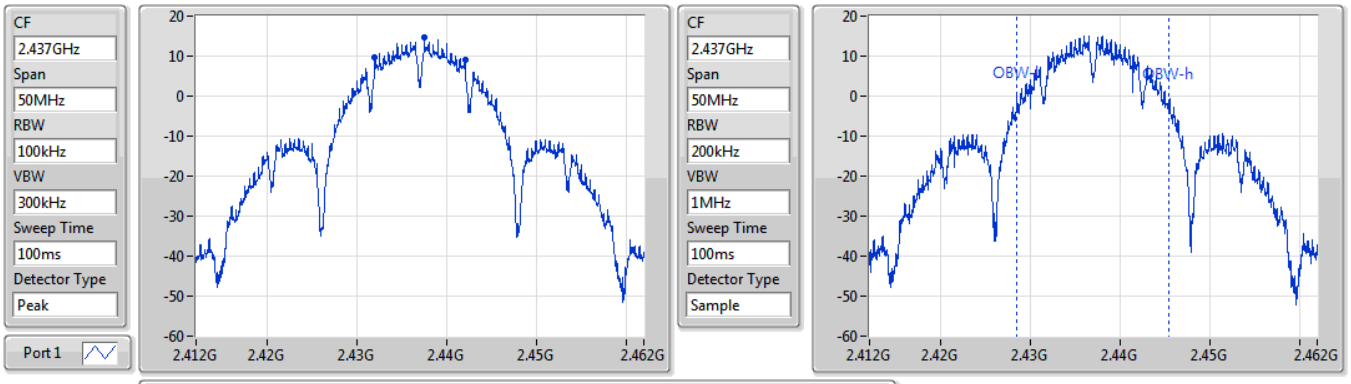


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8.55M	2.40795G	2.4165G	14.243M	2.404854G	2.419096G	500k	1

802.11b_Nss1,(1Mbps)_1TX EBW

2437MHz

19/07/2019

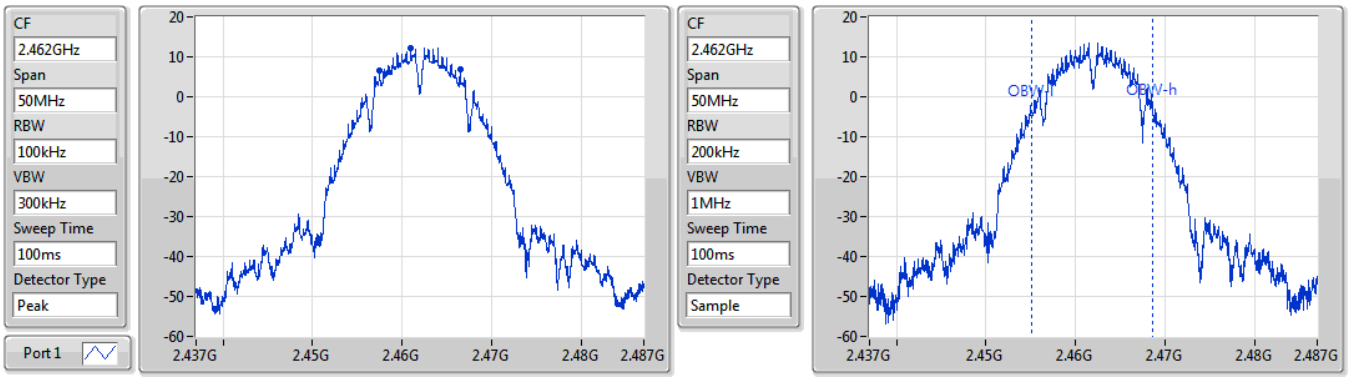


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
10.075M	2.43195G	2.442025G	17.016M	2.428454G	2.445471G	500k	1

802.11b_Nss1,(1Mbps)_1TX EBW

2462MHz

19/07/2019

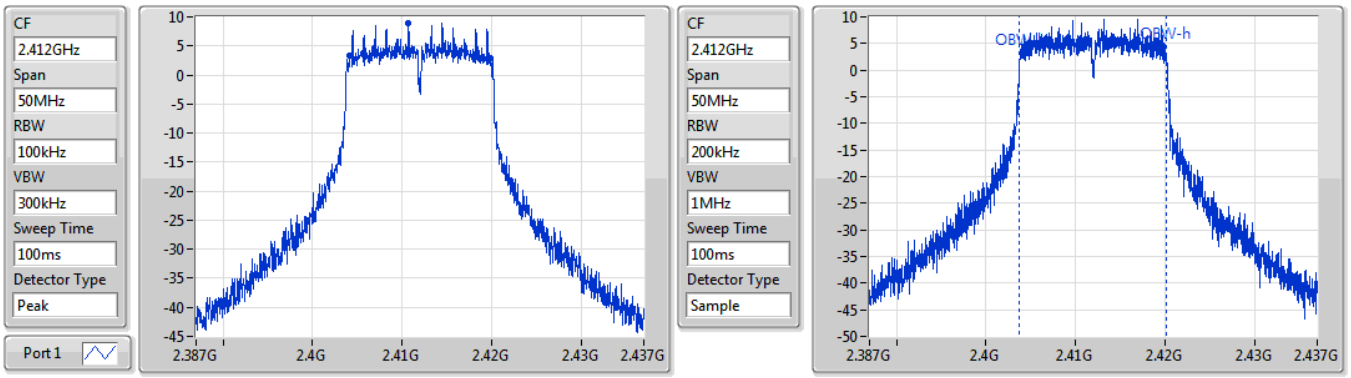


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
9.025M	2.457475G	2.4665G	13.543M	2.455128G	2.468672G	500k	1

802.11g_Nss1,(6Mbps)_1TX EBW

2412MHz

19/07/2019

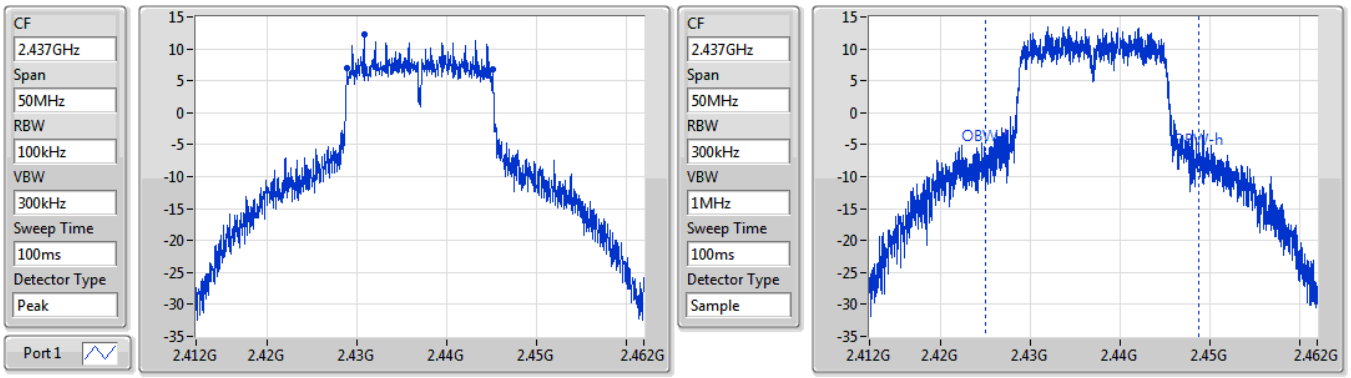


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.775M	2.4041G	2.419875G	16.442M	2.403754G	2.420196G	500k	1

802.11g_Nss1,(6Mbps)_1TX EBW

2437MHz

19/07/2019

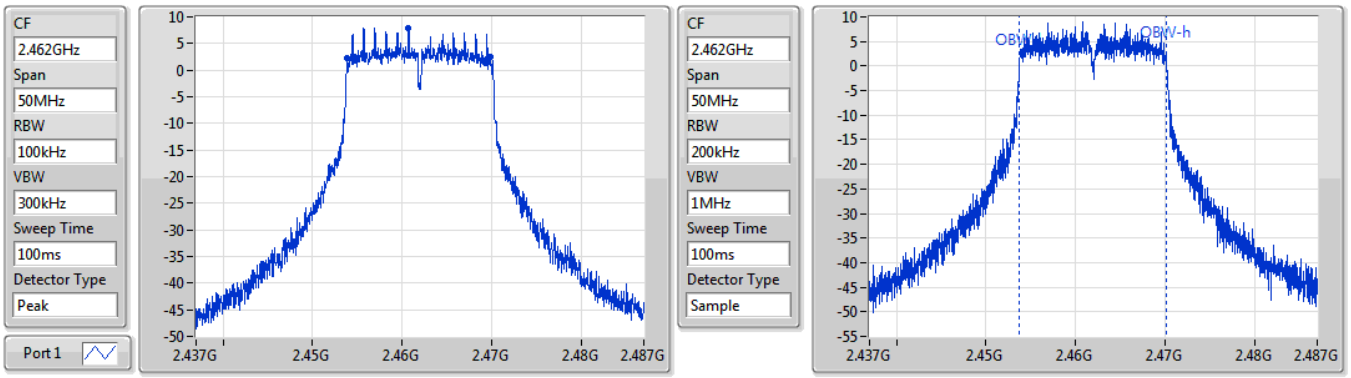


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.3M	2.428825G	2.445125G	23.738M	2.425006G	2.448744G	500k	1

802.11g_Nss1,(6Mbps)_1TX EBW

2462MHz

19/07/2019

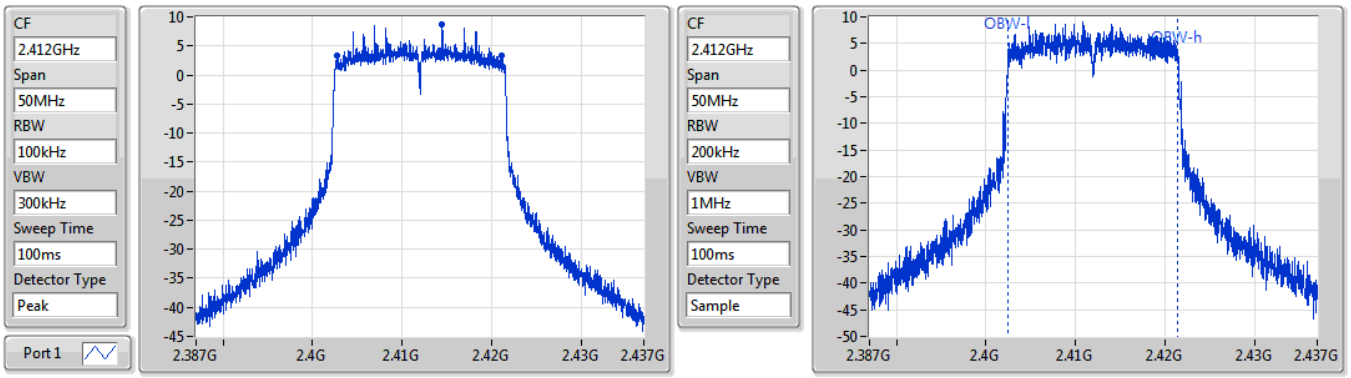


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16M	2.45385G	2.46985G	16.417M	2.453754G	2.470171G	500k	1

802.11ax HEW20_Nss1,(MCS0)_1TX EBW

2412MHz

19/07/2019

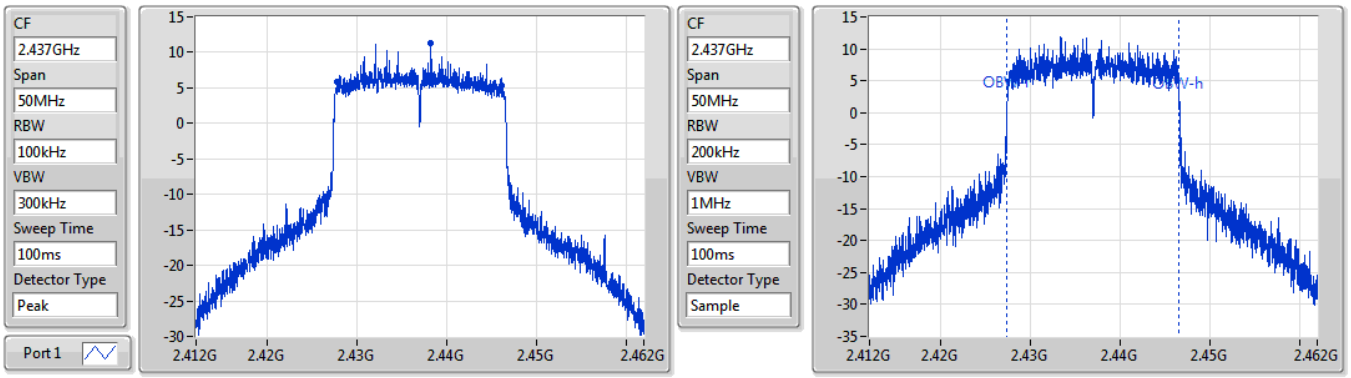


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.375M	2.402775G	2.42115G	18.941M	2.402505G	2.421445G	500k	1

802.11ax HEW20_Nss1,(MCS0)_1TX EBW

2437MHz

19/07/2019

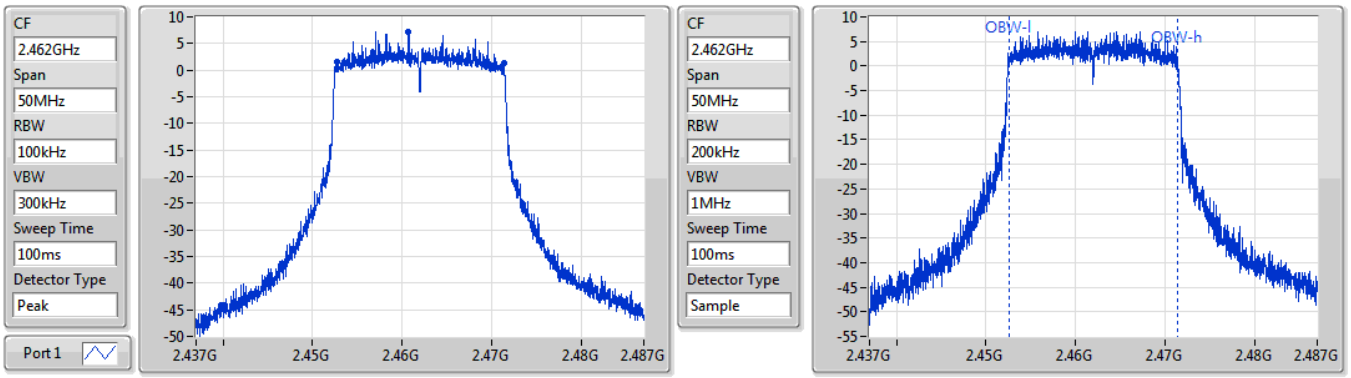


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.4M	2.42775G	2.44615G	19.24M	2.427355G	2.446595G	500k	1

802.11ax HEW20_Nss1,(MCS0)_1TX EBW

2462MHz

19/07/2019

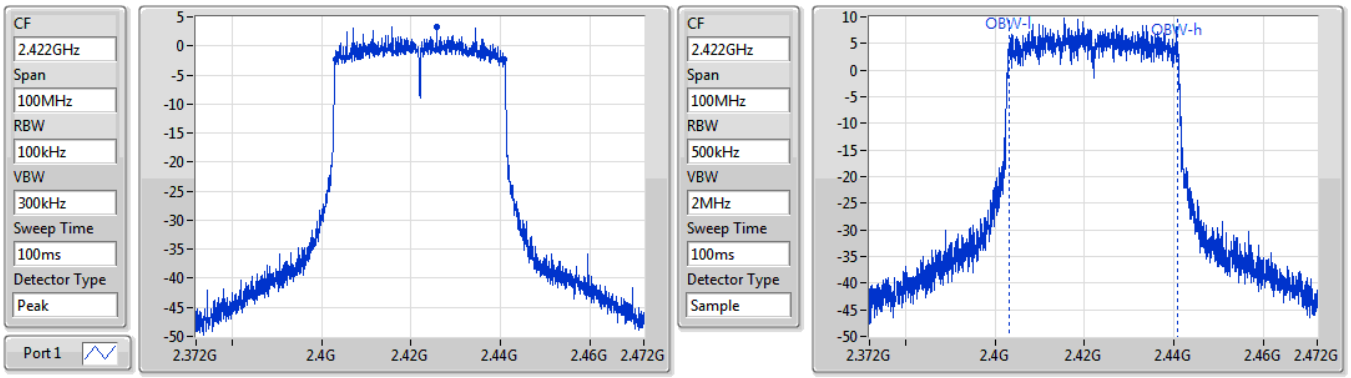


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.675M	2.452675G	2.47135G	18.891M	2.45253G	2.47142G	500k	1

802.11ax HEW40_Nss1,(MCS0)_1TX EBW

2422MHz

19/07/2019

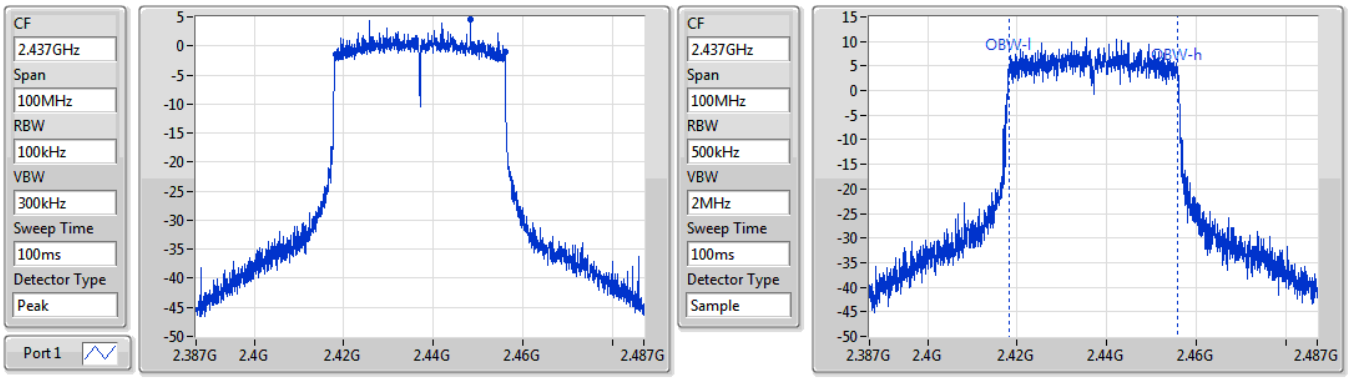


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
37.7M	2.4032G	2.4409G	37.781M	2.403059G	2.440841G	500k	1

802.11ax HEW40_Nss1,(MCS0)_1TX EBW

2437MHz

19/07/2019

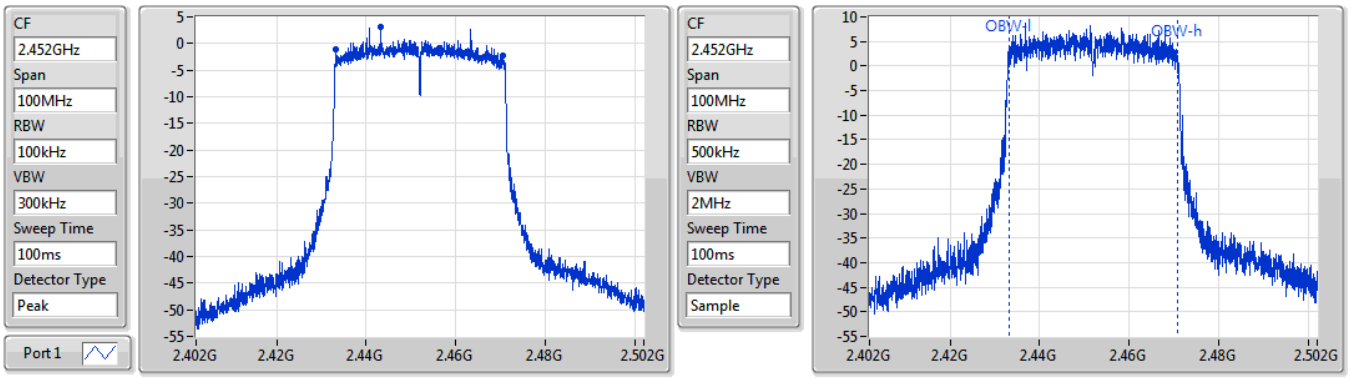


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
37.7M	2.41825G	2.45595G	37.781M	2.418059G	2.455841G	500k	1

802.11ax HEW40_Nss1,(MCS0)_1TX EBW

2452MHz

19/07/2019



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
37.3M	2.4332G	2.4705G	37.631M	2.433059G	2.470691G	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	10.05M	17.191M	17M2G1D	7.075M	13.143M
802.11g_Nss1,(6Mbps)_2TX	16.275M	17.166M	17M2D1D	15M	16.367M
802.11ax HEW20_Nss1,(MCS0)_2TX	18.975M	19.34M	19M3D1D	16.525M	18.866M
802.11ax HEW40_Nss1,(MCS0)_2TX	37.9M	37.831M	37M8D1D	36.1M	37.681M

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

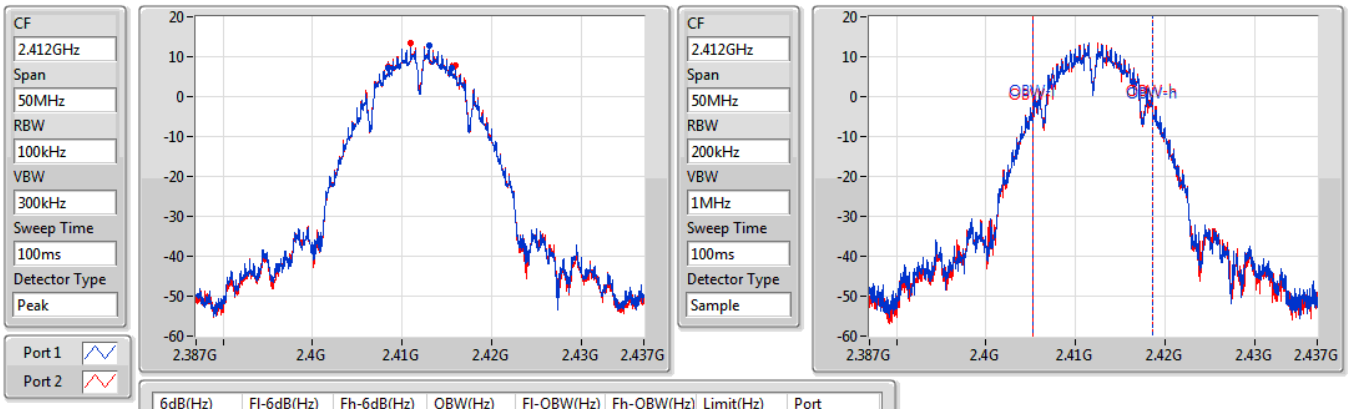
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	7.075M	13.418M	7.525M	13.343M
2437MHz	Pass	500k	9.55M	17.191M	10.05M	16.967M
2462MHz	Pass	500k	7.975M	13.318M	7.5M	13.143M
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	15M	16.367M	16.275M	16.392M
2437MHz	Pass	500k	15.275M	17.166M	16.25M	16.792M
2462MHz	Pass	500k	15.05M	16.392M	16.275M	16.392M
802.11ax HEW20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	18.65M	18.991M	18.375M	18.916M
2437MHz	Pass	500k	18.975M	19.34M	18.775M	19.24M
2462MHz	Pass	500k	16.525M	18.916M	18.475M	18.866M
802.11ax HEW40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	500k	37.9M	37.681M	37.9M	37.781M
2437MHz	Pass	500k	36.7M	37.831M	37.5M	37.781M
2452MHz	Pass	500k	36.1M	37.681M	37.75M	37.681M

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

802.11b_Nss1,(1Mbps)_2TX EBW

2412MHz

19/07/2019

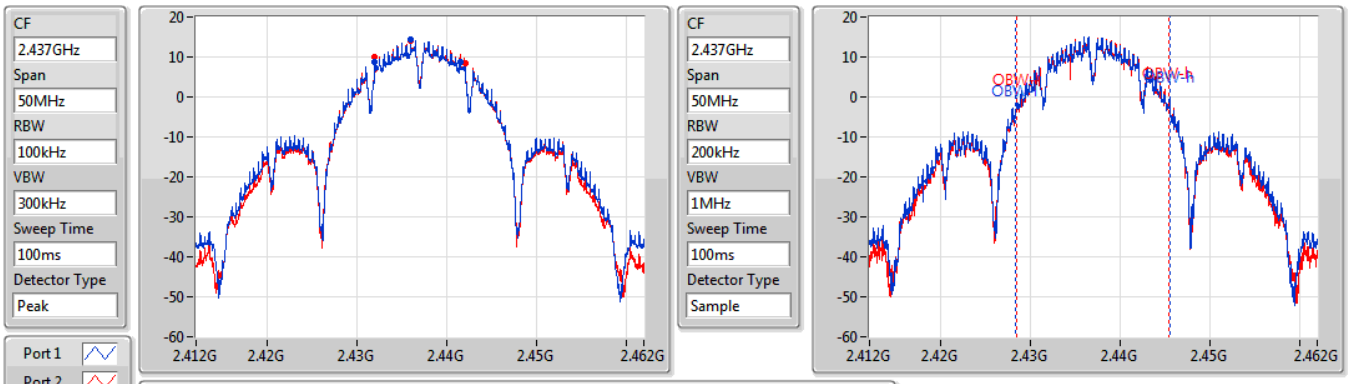


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
7.075M	2.40845G	2.415525G	13.418M	2.405253G	2.418672G	500k	1
7.525M	2.40845G	2.415975G	13.343M	2.405303G	2.418647G	500k	2

802.11b_Nss1,(1Mbps)_2TX EBW

2437MHz

19/07/2019

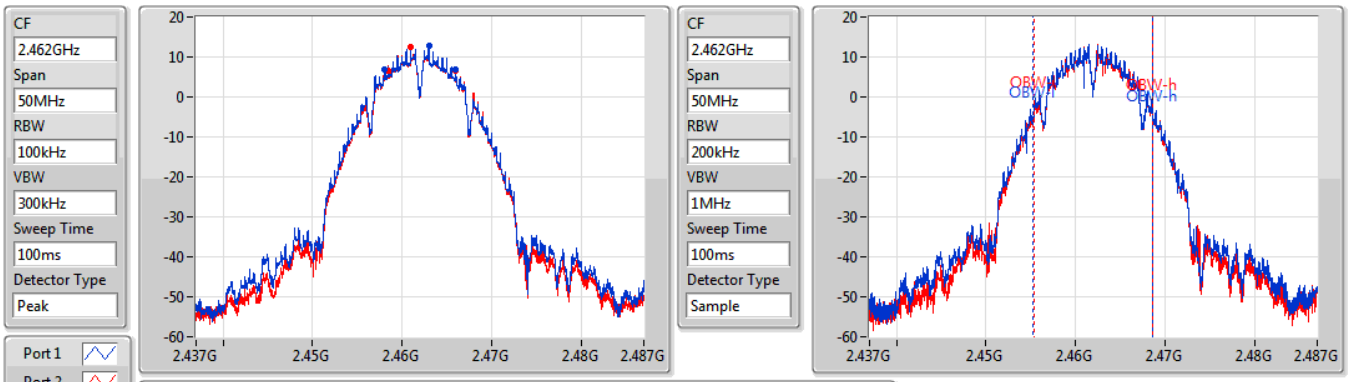


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
9.55M	2.431975G	2.441525G	17.191M	2.428329G	2.445521G	500k	1
10.05M	2.431975G	2.442025G	16.967M	2.428479G	2.445446G	500k	2

802.11b_Nss1,(1Mbps)_2TX EBW

2462MHz

19/07/2019

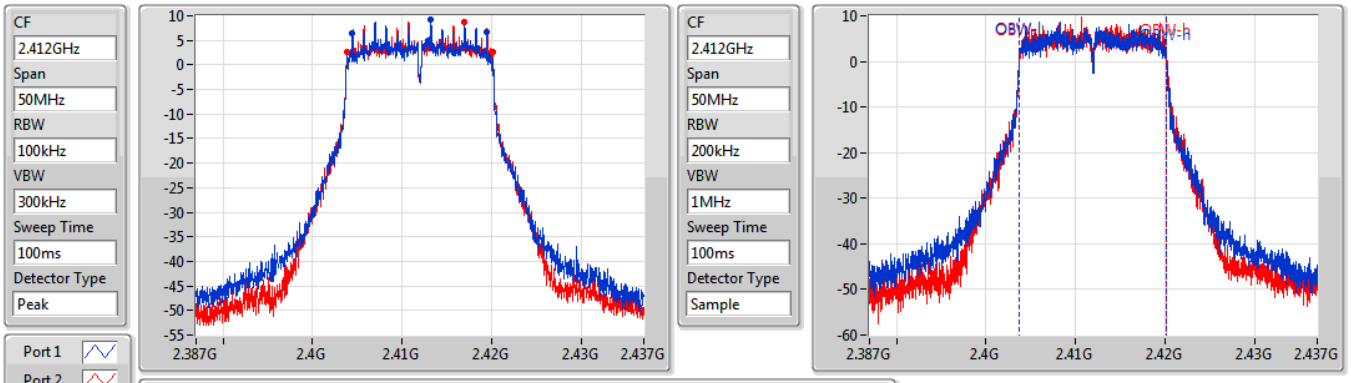


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
7.975M	2.458G	2.465975G	13.318M	2.455278G	2.468597G	500k	1
7.5M	2.45845G	2.46595G	13.143M	2.455403G	2.468547G	500k	2

802.11g_Nss1,(6Mbps)_2TX EBW

2412MHz

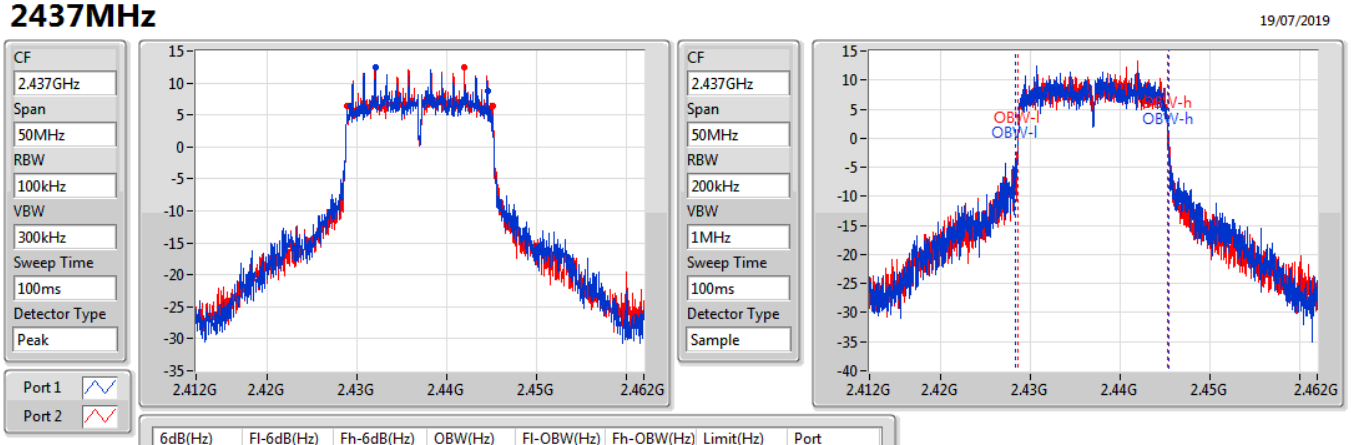
19/07/2019



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15M	2.404475G	2.419475G	16.367M	2.403779G	2.420146G	500k	1
16.275M	2.40385G	2.420125G	16.392M	2.403779G	2.420171G	500k	2

802.11g_Nss1,(6Mbps)_2TX EBW

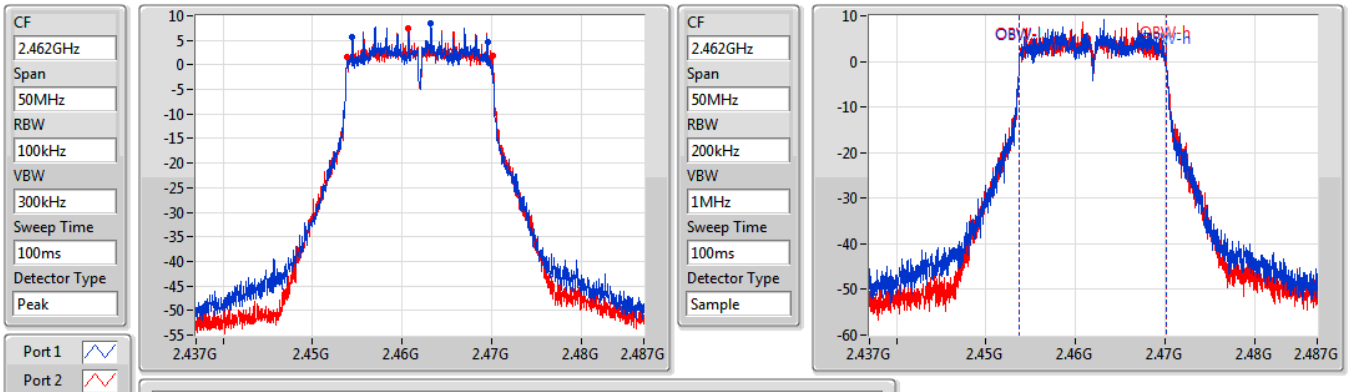
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.275M	2.42925G	2.444525G	17.166M	2.428279G	2.445446G	500k	1
16.25M	2.42885G	2.4451G	16.792M	2.428554G	2.445346G	500k	2

802.11g_Nss1,(6Mbps)_2TX EBW

2462MHz

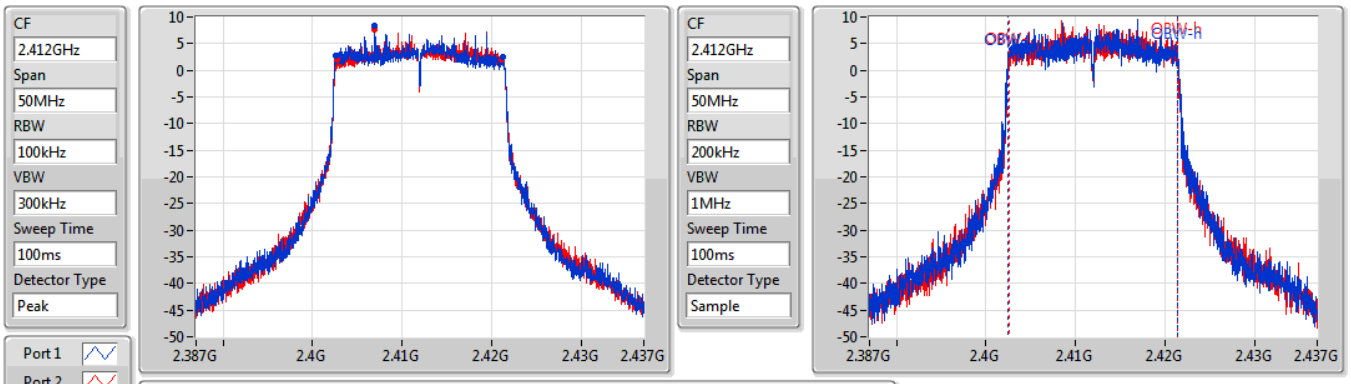


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.05M	2.454475G	2.469525G	16.392M	2.453754G	2.470146G	500k	1
16.275M	2.45385G	2.470125G	16.392M	2.453779G	2.470171G	500k	2

802.11ax HEW20_Nss1,(MCS0)_2TX EBW

2412MHz

19/07/2019

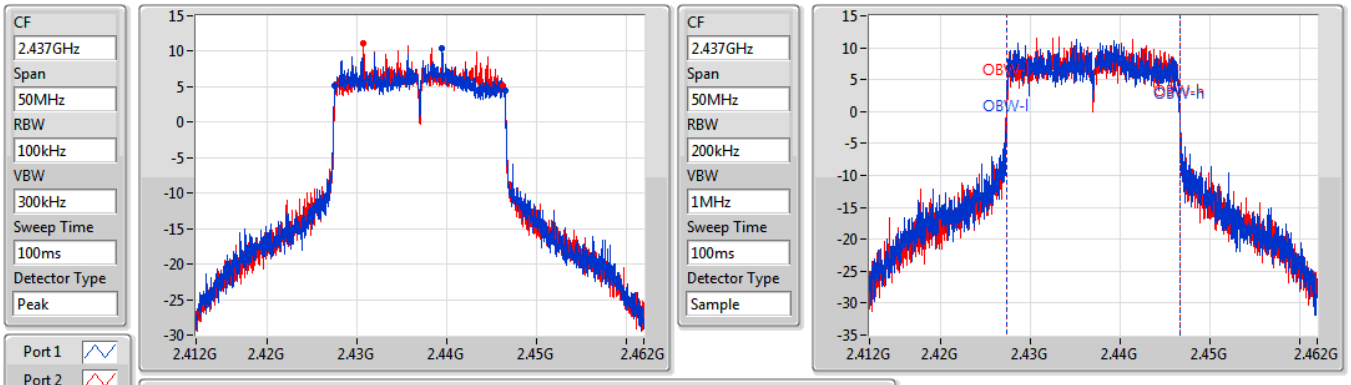


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.65M	2.4026G	2.42125G	18.991M	2.40248G	2.42147G	500k	1
18.375M	2.40275G	2.421125G	18.916M	2.40253G	2.421445G	500k	2

802.11ax HEW20_Nss1,(MCS0)_2TX EBW

2437MHz

19/07/2019

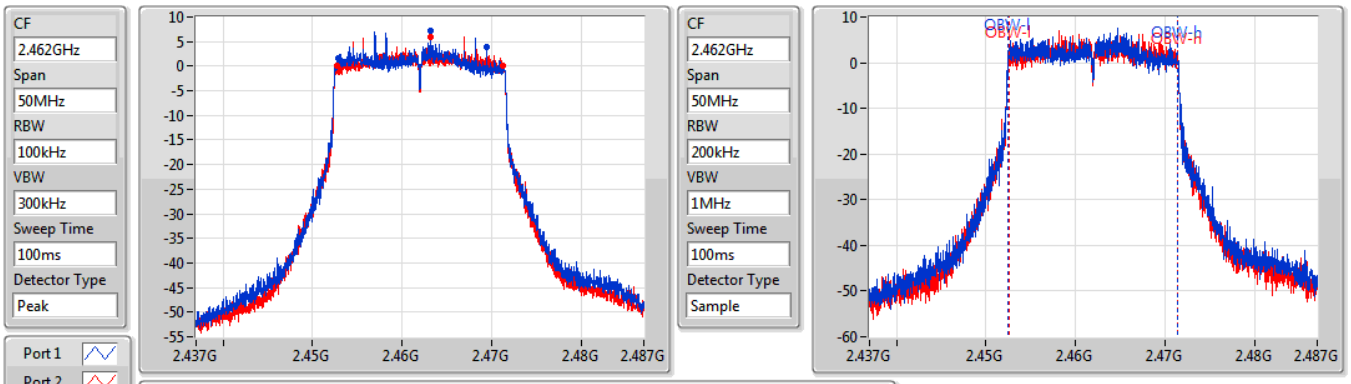


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.975M	2.4275G	2.446475G	19.34M	2.42728G	2.44662G	500k	1
18.775M	2.42755G	2.446325G	19.24M	2.42738G	2.44662G	500k	2

802.11ax HEW20_Nss1,(MCS0)_2TX EBW

2462MHz

19/07/2019

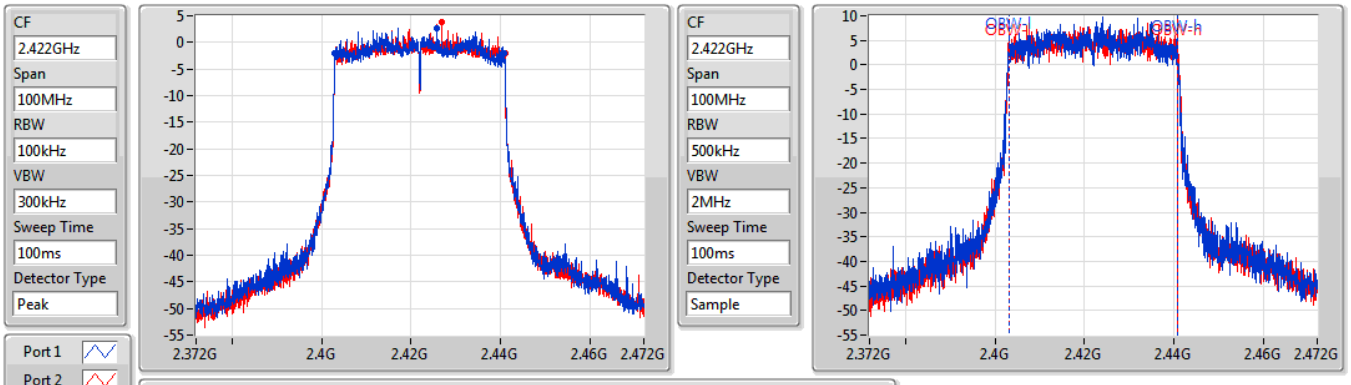


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.525M	2.452925G	2.46945G	18.916M	2.452505G	2.47142G	500k	1
18.475M	2.452725G	2.4712G	18.866M	2.452555G	2.47142G	500k	2

802.11ax HEW40_Nss1,(MCS0)_2TX EBW

2422MHz

19/07/2019

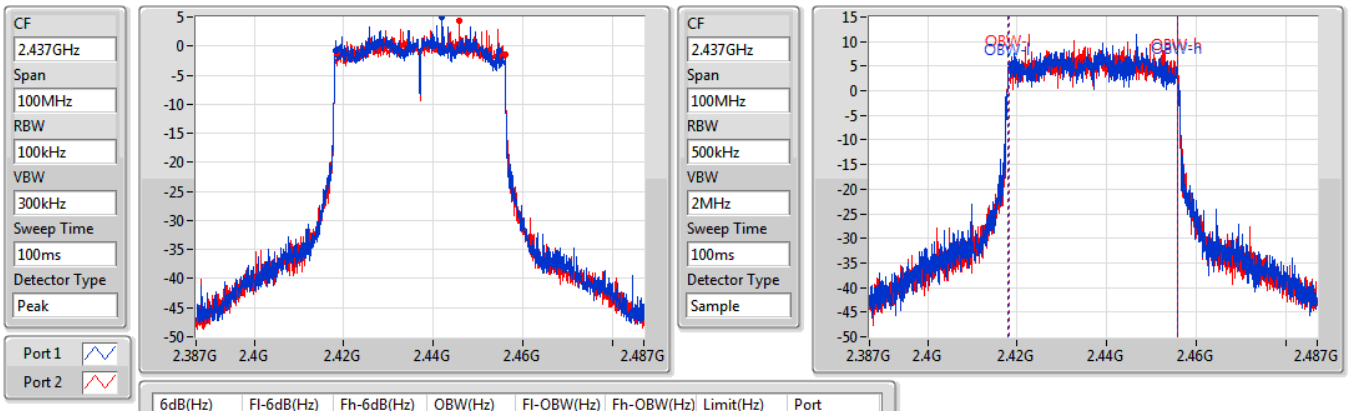


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
37.9M	2.403G	2.4409G	37.681M	2.403109G	2.440791G	500k	1
37.9M	2.40305G	2.44095G	37.781M	2.403059G	2.440841G	500k	2

802.11ax HEW40_Nss1,(MCS0)_2TX EBW

2437MHz

19/07/2019

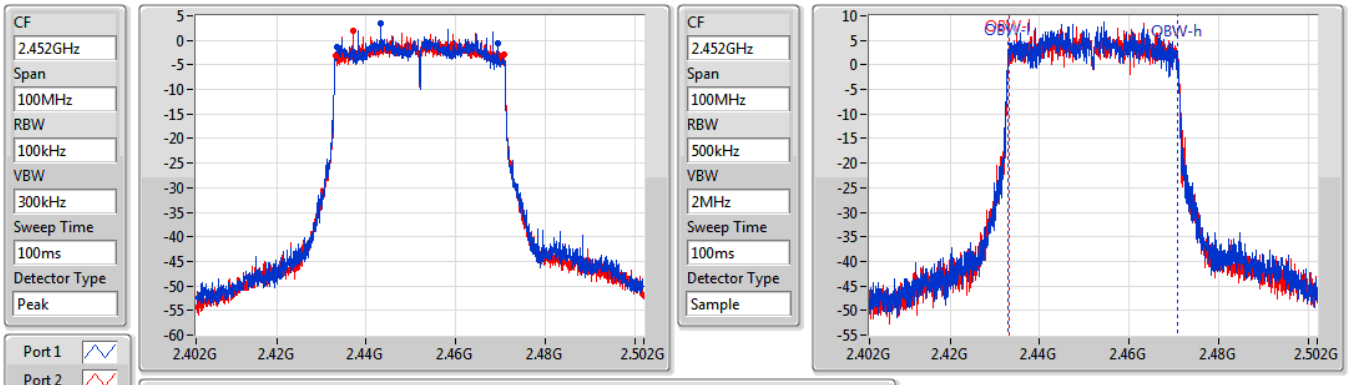


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
36.7M	2.4181G	2.4548G	37.831M	2.418009G	2.455841G	500k	1
37.5M	2.41845G	2.45595G	37.781M	2.418059G	2.455841G	500k	2

802.11ax HEW40_Nss1,(MCS0)_2TX EBW

2452MHz

19/07/2019



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
36.1M	2.43335G	2.46945G	37.681M	2.433009G	2.470691G	500k	1
37.75M	2.4331G	2.47085G	37.681M	2.433159G	2.470841G	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-BF_Nss1,(MCS0)_2TX	18.525M	18.916M	18M9D1D	15.075M	18.866M
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	31.25M	37.731M	37M7D1D	18.55M	37.631M

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-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	17.925M	18.891M	17.2M	18.891M
2437MHz	Pass	500k	15.4M	18.916M	15.075M	18.891M
2462MHz	Pass	500k	18.525M	18.916M	15.325M	18.866M
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	500k	31.25M	37.681M	31.05M	37.731M
2437MHz	Pass	500k	18.55M	37.631M	30.2M	37.631M
2452MHz	Pass	500k	23.9M	37.681M	31.2M	37.631M

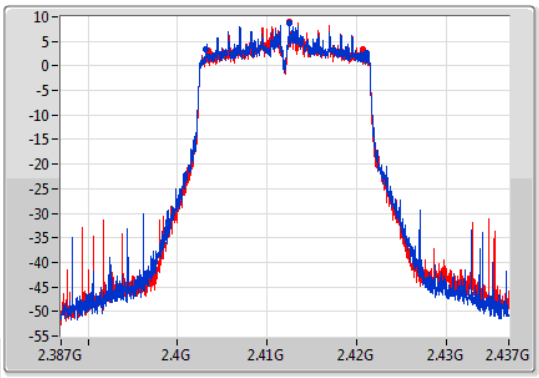
Port X-N dB = Port **X** 6dB down bandwidth; **Port X-OBW** = Port **X** 99% occupied bandwidth;

802.11ax HEW20-BF_Nss1,(MCS0)_2TX EBW

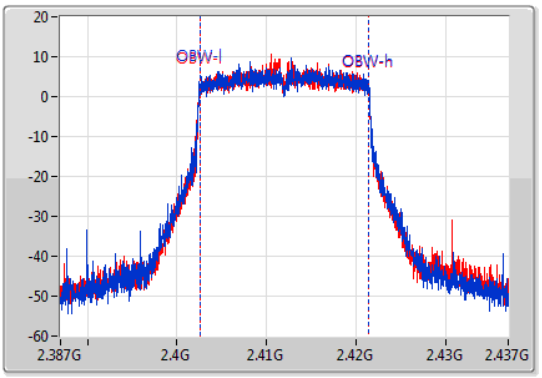
2412MHz

19/07/2019

CF	2.412GHz
Span	50MHz
RBW	100kHz
VBW	300kHz
Sweep Time	100ms
Detector Type	Peak



CF	2.412GHz
Span	50MHz
RBW	200kHz
VBW	1MHz
Sweep Time	100ms
Detector Type	Sample



Port 1
Port 2

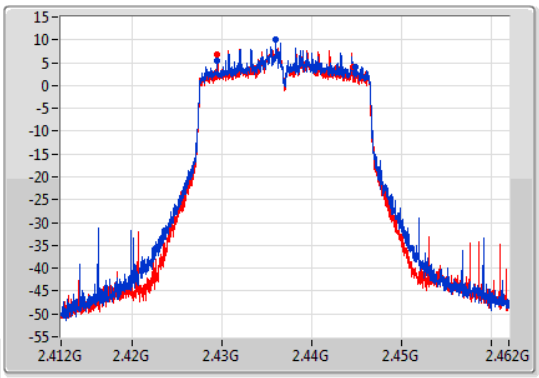
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.925M	2.4032G	2.421125G	18.891M	2.40253G	2.42142G	500k	1
17.2M	2.403475G	2.420675G	18.891M	2.40253G	2.42142G	500k	2

802.11ax HEW20-BF_Nss1,(MCS0)_2TX EBW

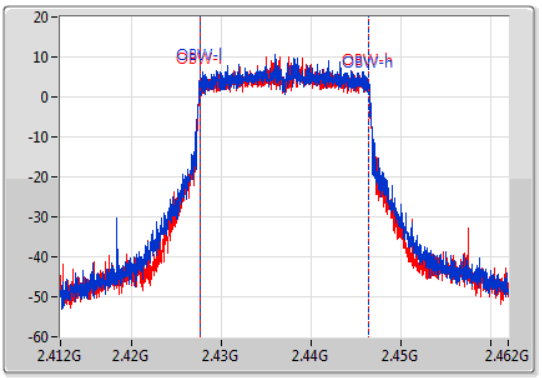
2437MHz

19/07/2019

CF	2.437GHz
Span	50MHz
RBW	100kHz
VBW	300kHz
Sweep Time	100ms
Detector Type	Peak



CF	2.437GHz
Span	50MHz
RBW	200kHz
VBW	1MHz
Sweep Time	100ms
Detector Type	Sample



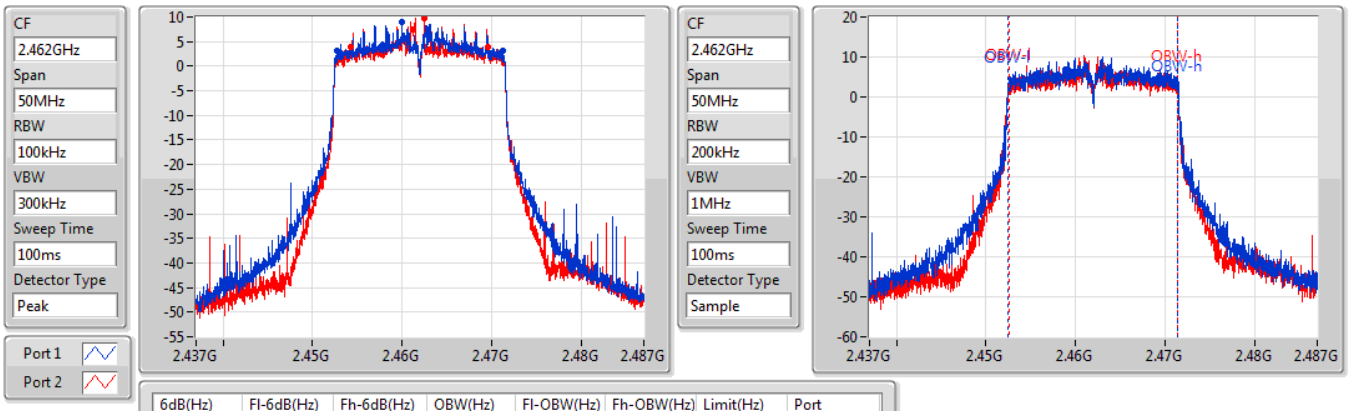
Port 1
Port 2

6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.4M	2.42945G	2.44485G	18.916M	2.42753G	2.446445G	500k	1
15.075M	2.429475G	2.44455G	18.891M	2.42753G	2.44642G	500k	2

802.11ax HEW20-BF_Nss1,(MCS0)_2TX EBW

2462MHz

19/07/2019

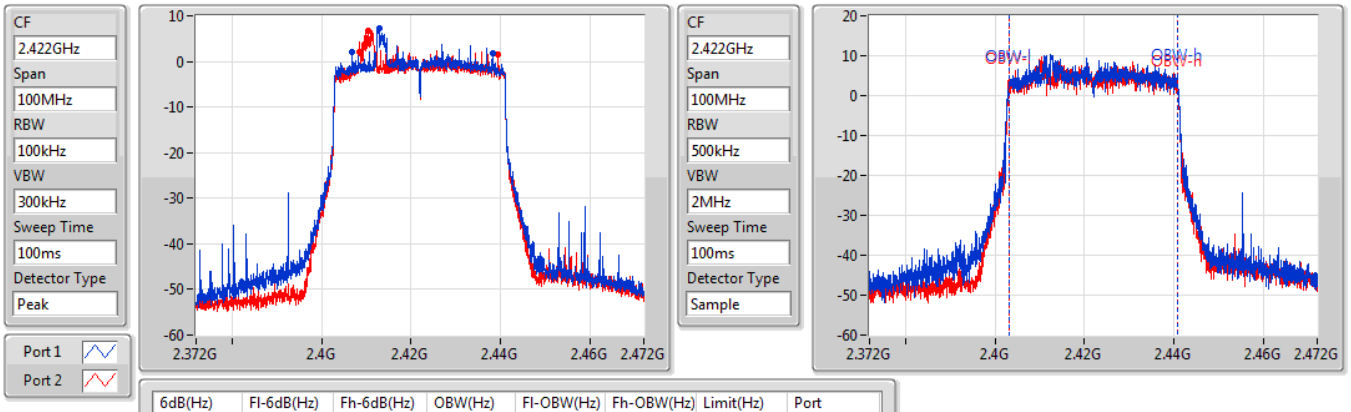


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.525M	2.4528G	2.471325G	18.916M	2.452505G	2.47142G	500k	1
15.325M	2.45425G	2.469575G	18.866M	2.452555G	2.47142G	500k	2

802.11ax HEW40-BF_Nss1,(MCS0)_2TX EBW

2422MHz

19/07/2019

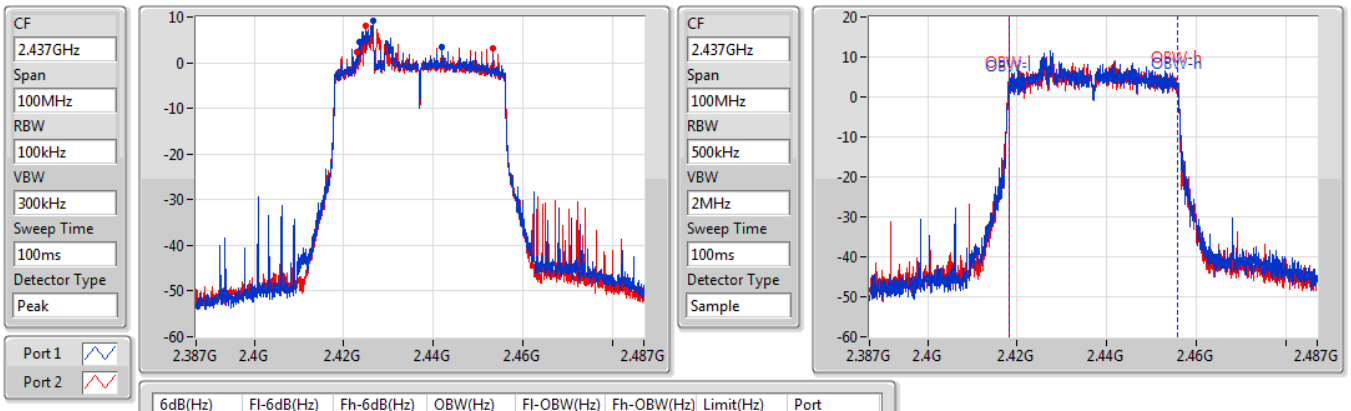


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
31.25M	2.40695G	2.4382G	37.681M	2.403159G	2.440841G	500k	1
31.05M	2.4084G	2.43945G	37.731M	2.403109G	2.440841G	500k	2

802.11ax HEW40-BF_Nss1,(MCS0)_2TX EBW

2437MHz

19/07/2019

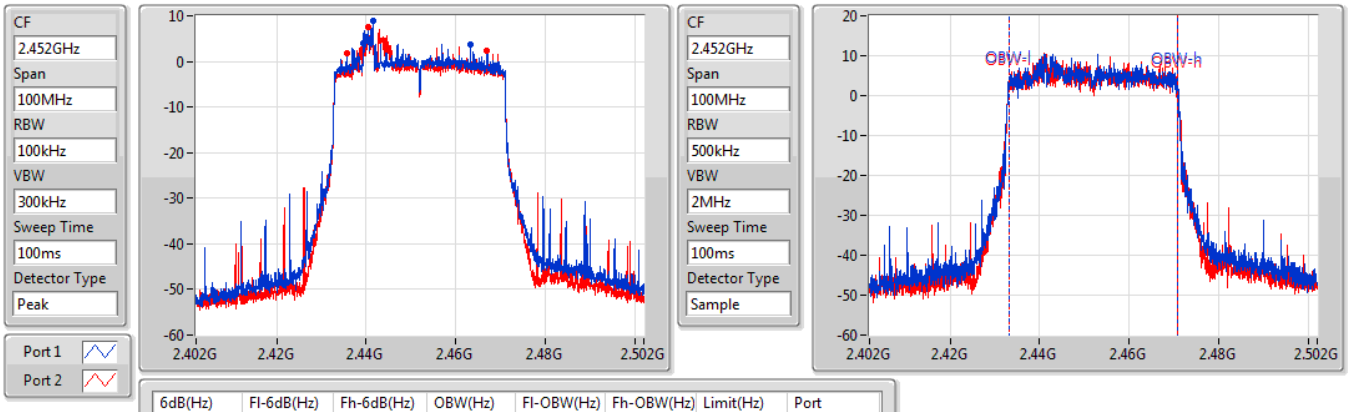


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.55M	2.42345G	2.442G	37.631M	2.418159G	2.455791G	500k	1
30.2M	2.423G	2.4532G	37.631M	2.418159G	2.455791G	500k	2

802.11ax HEW40-BF_Nss1,(MCS0)_2TX EBW

2452MHz

19/07/2019



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
23.9M	2.43935G	2.46325G	37.681M	2.433109G	2.470791G	500k	1
31.2M	2.43575G	2.46695G	37.631M	2.433159G	2.470791G	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	9.975M	16.517M	16M5G1D	7.075M	13.193M
802.11g_Nss1,(6Mbps)_4TX	16.325M	16.867M	16M9D1D	15.275M	16.317M
802.11ax HEW20_Nss1,(MCS0)_4TX	18.8M	19.065M	19M1D1D	16.05M	18.841M
802.11ax HEW40_Nss1,(MCS0)_4TX	37.9M	37.781M	37M8D1D	35.55M	37.581M

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

Result

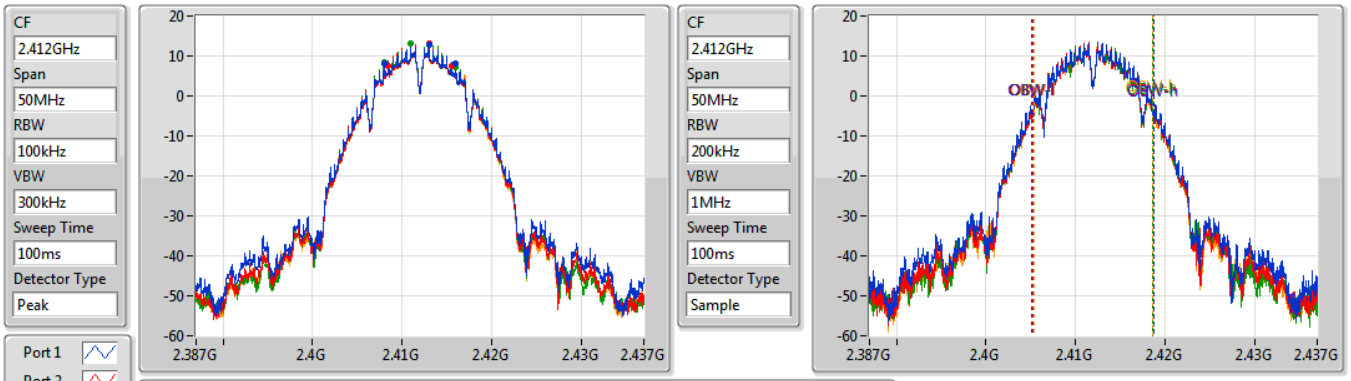
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11b_Nss1,(1Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	7.975M	13.668M	7.075M	13.418M	8M	13.393M	7.55M	13.268M
2437MHz	Pass	500k	9.975M	16.517M	9.525M	15.967M	9.975M	16.442M	9.975M	16.467M
2462MHz	Pass	500k	8.475M	13.443M	8.025M	13.193M	7.525M	13.193M	7.55M	13.393M
802.11g_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	15.275M	16.342M	15.925M	16.392M	16.325M	16.417M	16.3M	16.417M
2437MHz	Pass	500k	15.425M	16.517M	15.9M	16.667M	16.3M	16.867M	16.3M	16.842M
2462MHz	Pass	500k	15.375M	16.317M	16.075M	16.442M	16M	16.417M	16.3M	16.417M
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	18.775M	18.966M	18.725M	18.916M	16.05M	18.841M	18.275M	18.916M
2437MHz	Pass	500k	18.625M	19.065M	18.675M	18.991M	17.575M	18.941M	17.95M	18.991M
2462MHz	Pass	500k	18.8M	18.991M	18.775M	18.941M	17.025M	18.891M	17.85M	18.891M
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	500k	37.85M	37.781M	36.6M	37.731M	37.55M	37.731M	37.7M	37.731M
2437MHz	Pass	500k	36.2M	37.731M	35.55M	37.731M	37.85M	37.731M	37.9M	37.781M
2452MHz	Pass	500k	36.3M	37.681M	37.55M	37.581M	37.35M	37.781M	37.65M	37.681M

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

802.11b_Nss1,(1Mbps)_4TX EBW

2412MHz

19/07/2019

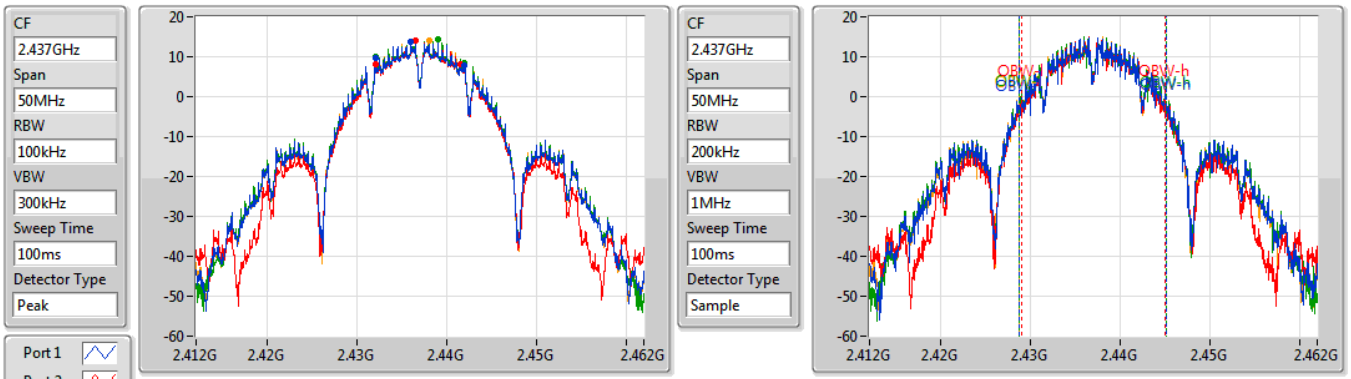


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
7.975M	2.408G	2.415975G	13.668M	2.405153G	2.418822G	500k	1
7.075M	2.40845G	2.415525G	13.418M	2.405278G	2.418697G	500k	2
8M	2.407975G	2.415975G	13.393M	2.405278G	2.418672G	500k	3
7.55M	2.407975G	2.415525G	13.268M	2.405328G	2.418597G	500k	4

802.11b_Nss1,(1Mbps)_4TX EBW

2437MHz

19/07/2019



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
9.975M	2.432G	2.441975G	16.517M	2.428679G	2.445196G	500k	1
9.525M	2.432G	2.441525G	15.967M	2.429004G	2.444971G	500k	2
9.975M	2.432G	2.441975G	16.442M	2.428729G	2.445171G	500k	3
9.975M	2.432G	2.441975G	16.467M	2.428729G	2.445196G	500k	4