



FCC RADIO TEST REPORT

FCC ID : UDX-60093010
Equipment : 4x4 Wi-Fi 6 Access Point with External Antennas
Brand Name : CISCO
Model Name : MR46E-HW
Applicant : Cisco Systems
170 West Tasman Drive, San Jose, CA 95134 USA
Manufacturer : Cisco Systems
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 Sep. 23, 2019. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications 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 report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.


Approved by: Cliff Chang

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
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TEL : 886-3-656-9065
FAX : 886-3-656-9085
Report Template No.: CB-A10_10 Ver1.0



Summary of Test Result

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

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Sam Chen

Report Producer: Wendy Pan

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	1, 2, 4TX
2.4-2.4835GHz	802.11ax HEW20	20	1, 2, 4TX
2.4-2.4835GHz	802.11ax HEW20-BF	20	1, 2, 4TX
2.4-2.4835GHz	802.11n HT40	40	1, 2, 4TX
2.4-2.4835GHz	802.11n HT40-BF	40	1, 2, 4TX
2.4-2.4835GHz	802.11ax HEW40	40	1, 2, 4TX
2.4-2.4835GHz	802.11ax HEW40-BF	40	1, 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.
- ♦ Nss-Min is the minimum number of spatial streams.
- ♦ Nant is the number of outputs. e.g., 2(2,3) means have 2 outputs for port 2 and port 3. 2 means have 2 outputs for port 1 and port 2.

**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	Omni antenna	RP-TNC	
4	Cisco	MA-ANT-3-D6	Omni-directional 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

2TX Correlated Composite Gain(dBi) for Radio 1 and Radio 2						
Set	Antenn Gain (dBi)		Cable Loss (dB)		True Gain (dBi)	
	2.4GHz	5GHz	2.4GHz	5GHz	2.4GHz	5GHz
1	4.00	3.30	0.41	0.66	3.59	2.64
3	2.97	4.43	0.41	0.66	2.56	3.77
4	5.29	4.85	0.41	0.66	4.88	4.19
5	11.03	10.04	0.41	0.66	10.62	9.38
6	14.28	14.08	0.41	0.66	13.87	13.42
Set	2TX Directional gain (dBi) for Radio 2					
2	8.05					

4TX Correlated Composite Gain(dBi) for Radio 1 and Radio 2						
Set	Antenn Gain (dBi)		Cable Loss (dB)		True Gain (dBi)	
	2.4GHz	5GHz	2.4GHz	5GHz	2.4GHz	5GHz
1	7.80	7.90	0.41	0.61	7.39	7.29
3	7.50	8.30	0.41	0.61	7.09	7.69
4	7.24	7.94	0.41	0.61	6.83	7.33
5	13.59	12.31	0.41	0.61	13.18	11.70
6	17.17	17.06	0.41	0.61	16.76	16.45
Set	4TX Directional gain (dBi) for Radio 2					
2	11.11					

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 higher gain antennas Set 1 for 2.4GHz, Set 2 for 5GHz were tested.

<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) $\geq 1/T$
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) $\geq 1/T$
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) $\geq 1/T$
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) $\geq 1/T$
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) $\geq 1/T$
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) $\geq 1/T$
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.

1.1.5 Table for DDR information

EUT No.	Brand Name	Model No.	Main source	Second source
1	Hynix	H5AN8G6NAFR-UHC	V	-
2	Micron	MT40A512M16LY-075:E	-	V



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

1.3 Testing Location Information

Testing Location				
☐	HWA YA	ADD : No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)	TEL : 886-3-327-3456	FAX : 886-3-327-0973
☒	JHUBEI	ADD : No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C.	TEL : 886-3-656-9065	FAX : 886-3-656-9085

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH03-CB	Serway Li	24.6~25°C / 65~69%	Jul. 18, 2019 ~ Aug. 13, 2019
Radiated<1GHz	03CH05-CB	KJ Chang	22~24°C / 50~60%	Jul. 06, 2019 ~ Sep. 23, 2019
Radiated>1GHz	03CH01-CB	Eason Chen	27.1~28.3°C / 62~66%	Jul. 03, 2019 ~ Jul. 30, 2019
AC Conduction	CO01-CB	Peter Wu	23.3~24°C / 63~64%	Jul. 09, 2019 ~ Jul. 10, 2019

Test site Designation No. TW0006 with FCC.

Test site registered number IC 4086D with Industry Canada.

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 Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	2.0 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	4.3 dB	Confidence levels of 95%
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%



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
Operating Mode	Normal Link
	There are two modes of EUT, one is EUT (Radio 1 + Radio 2 + Radio 3: 2.4GHz + Radio 4) mode, the other is EUT (Radio 1 + Radio 2 + Radio 3: 5GHz + Radio 4) mode. EUT (Radio 1 + Radio 2 + Radio 3: 2.4GHz + Radio 4) mode has been evaluated to be the worst case. So the measurement will follow this same test configuration.
1	EUT 1 (Radio 1 + Radio 2 + Radio 3: 2.4GHz + Radio 4) + Adapter 1 + Set 6
2	EUT 1 (Radio 1 + Radio 2 + Radio 3: 2.4GHz + Radio 4) + Adapter 2 + Set 6
For operating mode 1 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

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	EUT 1 in Z axis (Radio 1 + Radio 2 + Radio 3: 2.4GHz + Radio 4) + Adapter 1 + Set 6
2	EUT 1 in X axis (Radio 1 + Radio 2 + Radio 3: 2.4GHz + Radio 4) + Adapter 1 + Set 6
Mode 2 has been evaluated to be the worst case between Mode 1~2, thus measurement for Mode 3 will follow this same test mode.	
3	EUT 1 in X axis (Radio 1 + Radio 2 + Radio 3: 5GHz + Radio 4) + Adapter 1 + Set 6
Mode 2 has been evaluated to be the worst case among Mode 1~3, thus measurement for Mode 4~6 will follow this same test mode.	
4	EUT 1 in X axis (Radio 1 + Radio 2 + Radio 3: 2.4GHz + Radio 4) + Adapter 2 + Set 6
5	EUT 1 in X axis (Radio 1 + Radio 2 + Radio 3: 2.4GHz + Radio 4) + PoE 1 + Set 6
6	EUT 1 in X axis (Radio 1 + Radio 2 + Radio 3: 2.4GHz + Radio 4) + PoE 2 + Set 6
7	EUT 1 in X axis (Radio 1 + Radio 2 + Radio 3: 2.4GHz + Radio 4) + PoE 3 + Set 6
Mode 5 has been evaluated to be the worst case between Mode 1~7, thus measurement for Mode 8 will follow this same test mode.	
8	EUT 2 in X axis (Radio 1 + Radio 2 + Radio 3: 2.4GHz + Radio 4) + PoE 1 + Set 6
For operating mode 5 was the worst case and it was record in this test report.	



Operating Mode > 1GHz	CTX
The EUT 1 was performed at X axis and Z axis, the worst case was found as below. So the measurement will follow this same test configuration. The antenna 3, 4 were performed at Y axis and Z axis, the worst case were 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
1	EUT 1: 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 1: Radio 1 (WLAN 2.4GHz) + Radio 2 (WLAN 5GHz) + Radio 4 (Bluetooth)
Refer to Sporton Test Report No.: FA960317 for Co-location RF Exposure Evaluation.	

Note1: For AC power-line conducted emissions and Emissions in Restricted Frequency Bands <1GHz, 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
PoE 3	PHIHONG	POEA30U-1ATE

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
B	2.5G LAN PC	DELL	T3400	N/A
C	2.4G NB	DELL	E6430	N/A
D	5G NB	DELL	E6430	N/A
E	Scan Radio (2.4G or 5G) NB	DELL	E6430	N/A

For Radiated (below 1GHz):

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	2.5G LAN PC	DELL	OPTIPLEX 380	N/A
B	2.4G NB	DELL	E4300	N/A
C	5G NB	DELL	E4300	N/A
D	Scan Radio (2.4G or 5G) NB	DELL	E4300	N/A
E	PoE 1	CISCO	MA-INJ-5	N/A

For Radiated (above 1GHz) and RF Conducted:

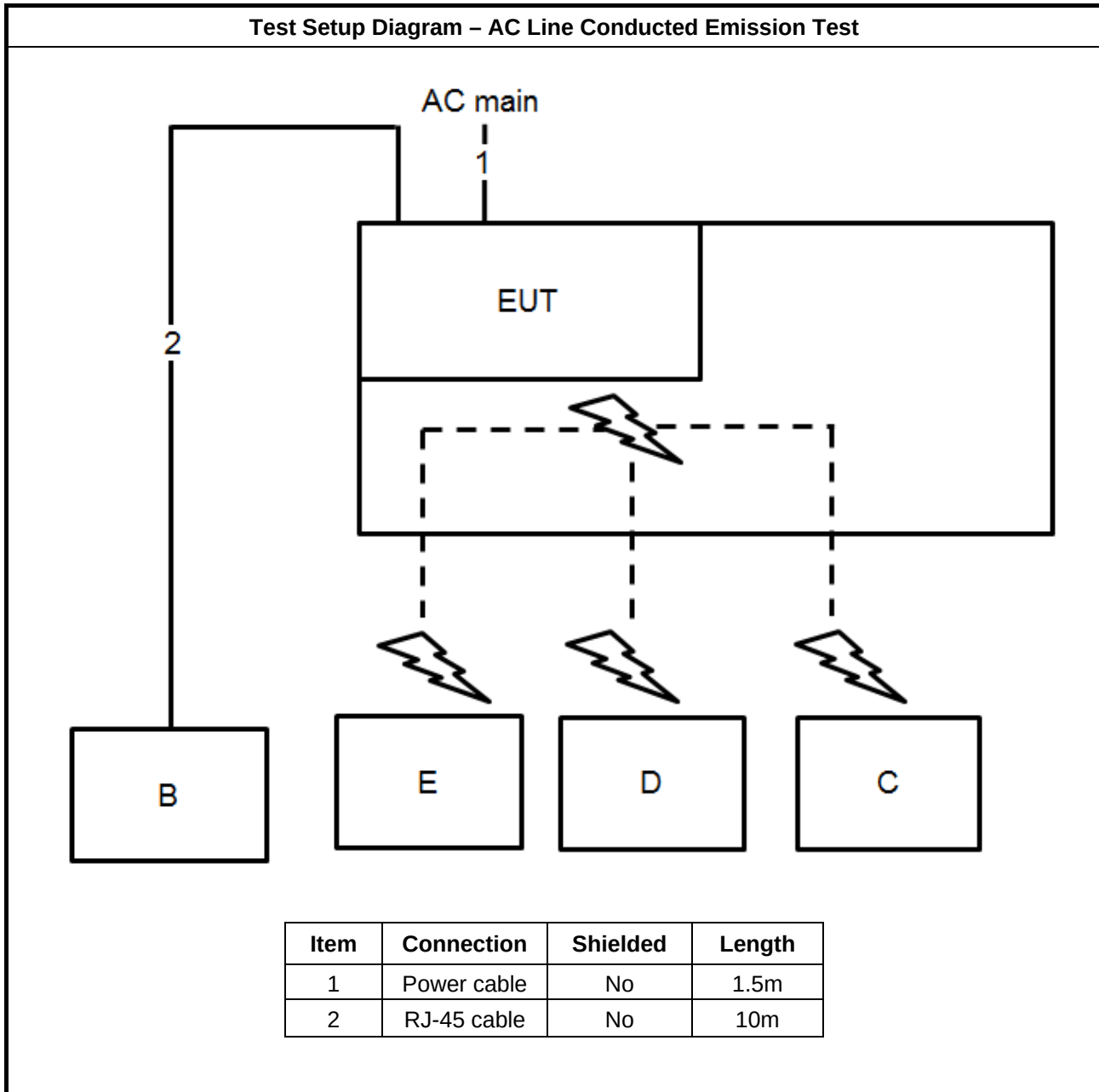
<For Non-beamforming mode>

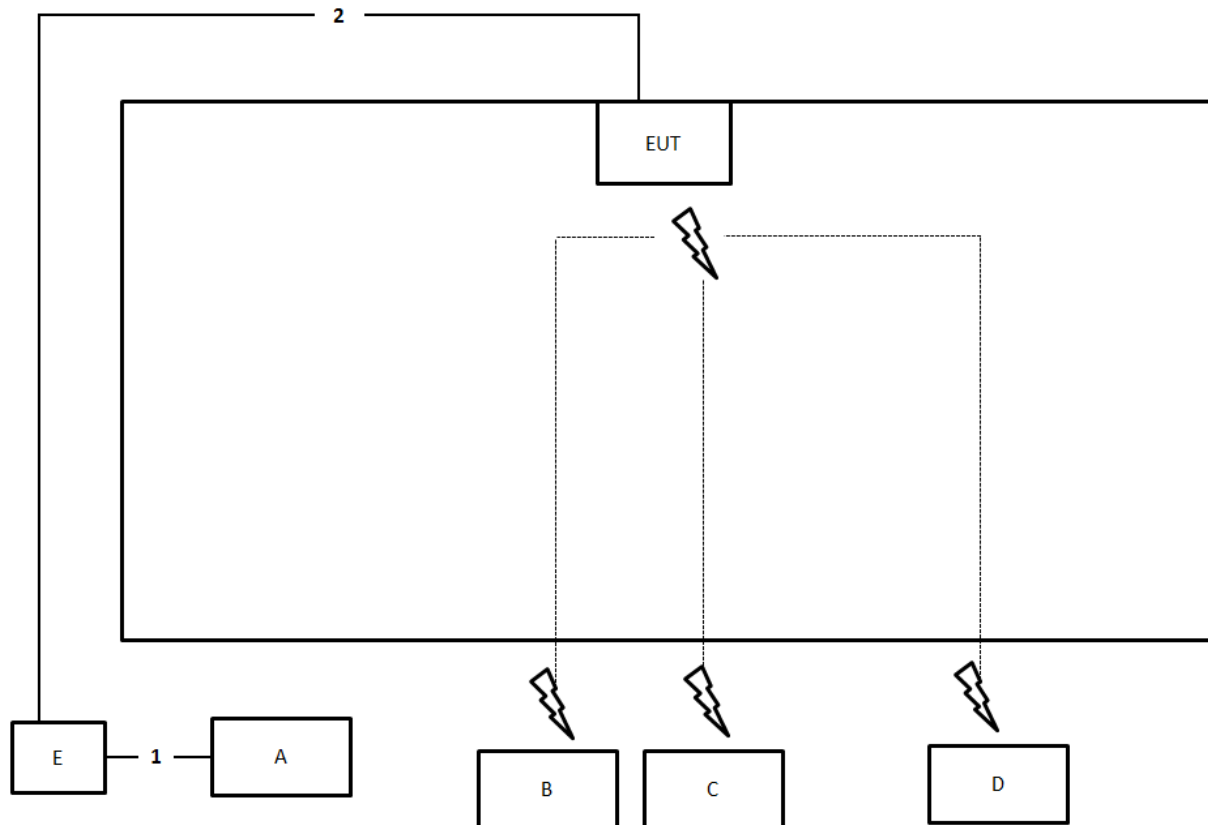
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A

<For Beamforming mode>

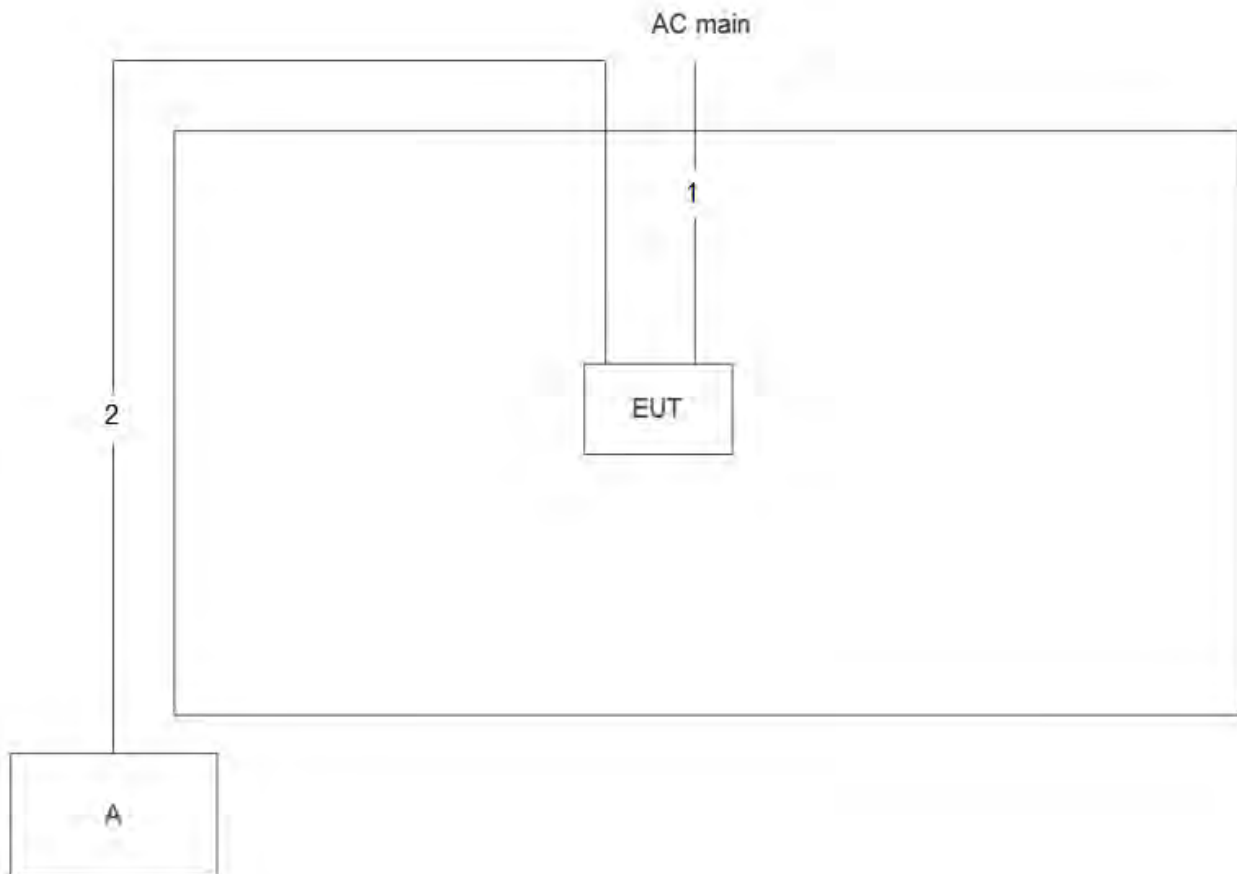
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A
B	Notebook	DELL	E4300	N/A
C	RX Device	CISCO	MR46E-HW	UDX-60093010

2.6 Test Setup Diagram

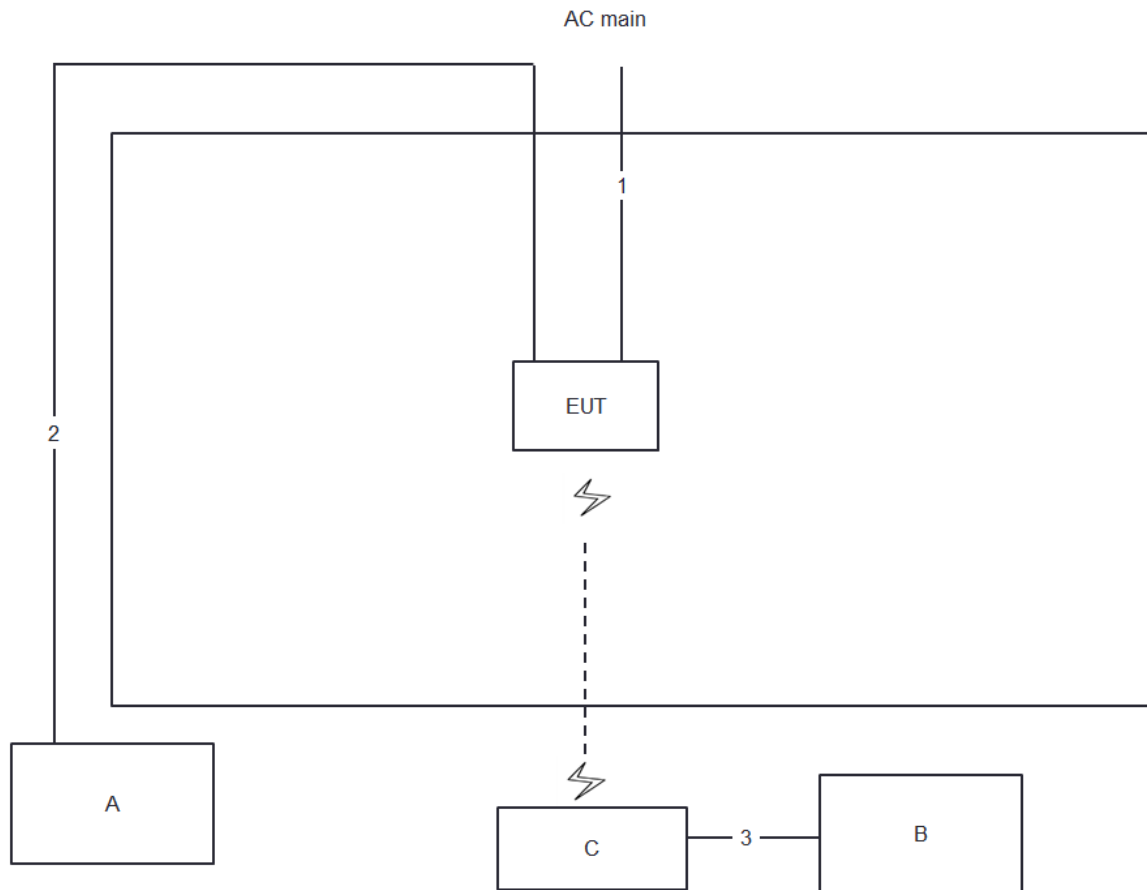


Test Setup Diagram - Radiated Test < 1GHz


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

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.

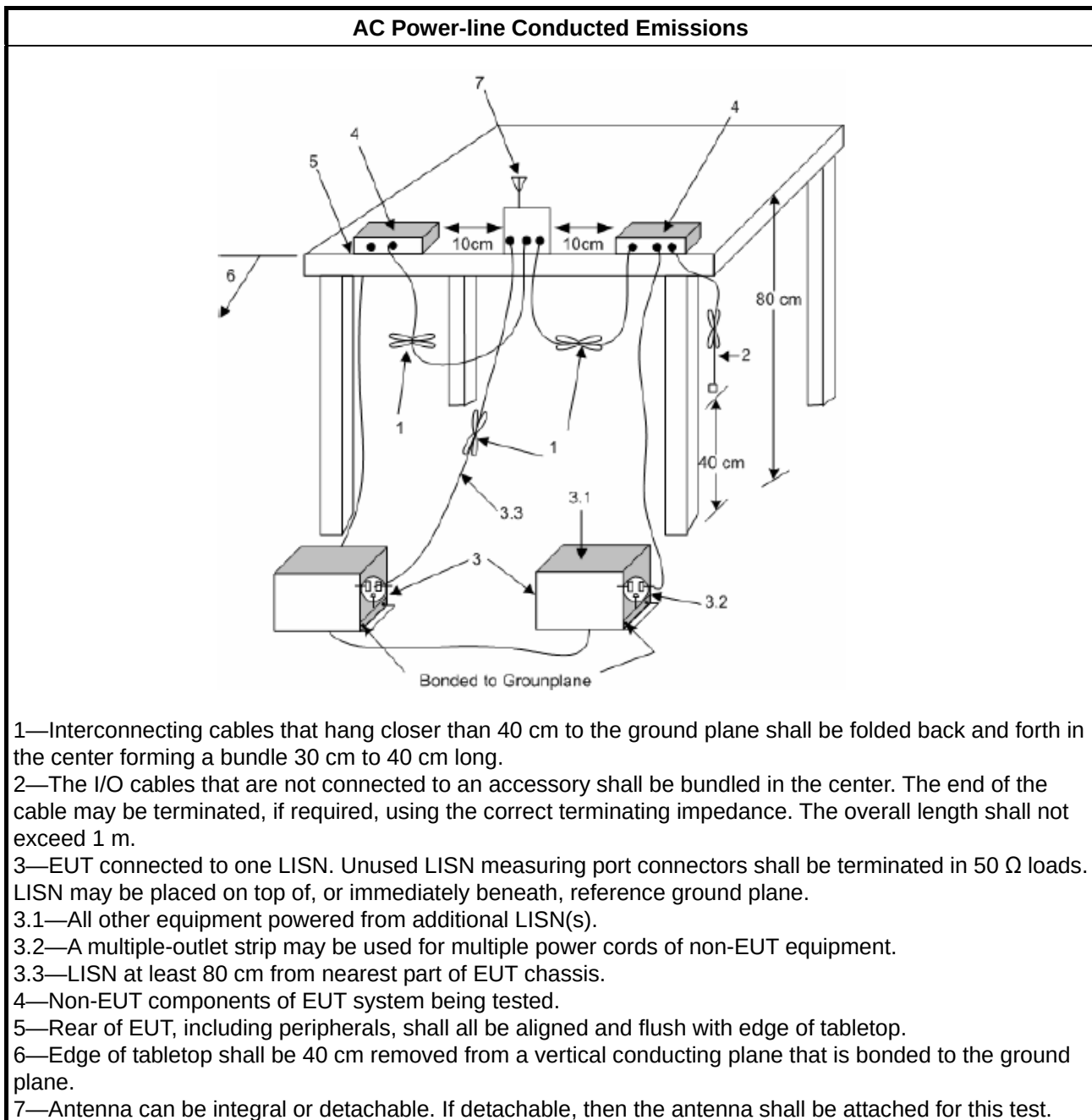
3.1.2 Measuring Instruments

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



3.1.5 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 $\geq$ 500 kHz.

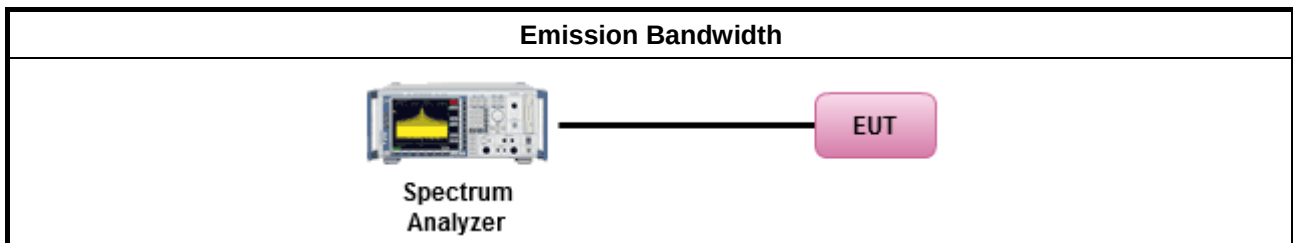
3.2.2 Measuring Instruments

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



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.	

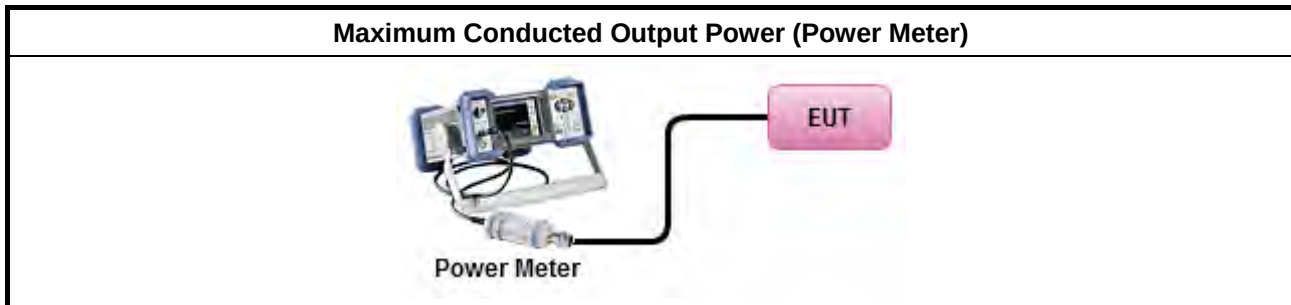
3.3.2 Measuring Instruments

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: $P_{total} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$	

3.3.4 Test Setup



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

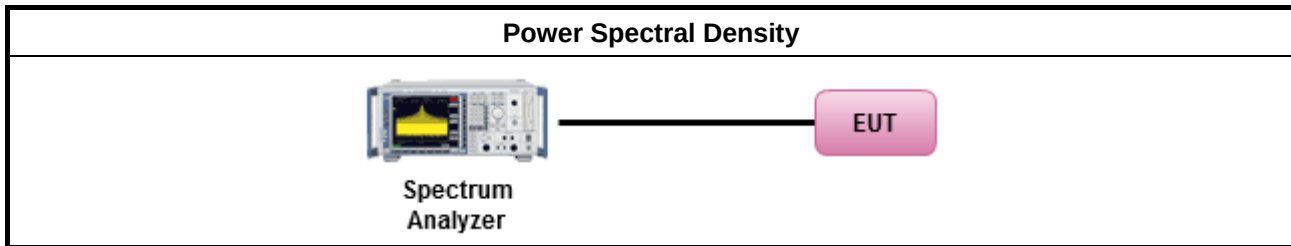
Refer a test equipment and calibration data table in this test report.

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 $\geq 98\%$ or external video / power trigger]
☐ Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.3 Method AVGPS-1.
☐ Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.5 Method AVGPS-2.
☐ Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.7 Method AVGPS-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 AVGPS-1A. (alternative).
☐ Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.6 Method AVGPS-2A. (alternative)
☐ Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.8 Method AVGPS-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



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.	

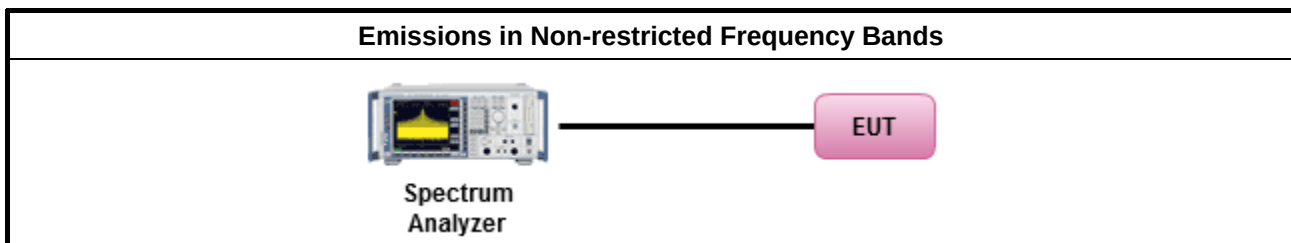
3.5.2 Measuring Instruments

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



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

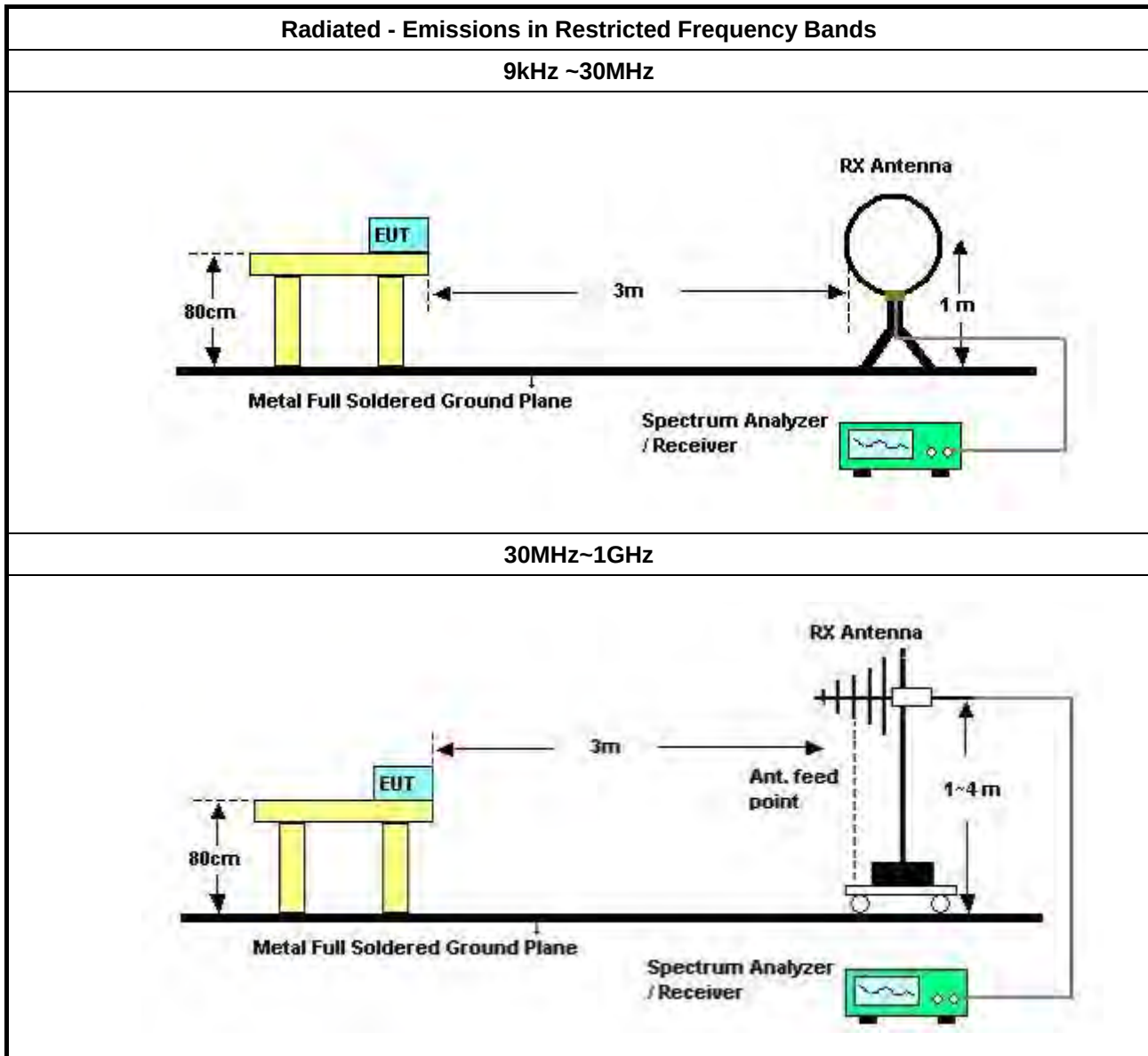
Refer a test equipment and calibration data table in this test report.

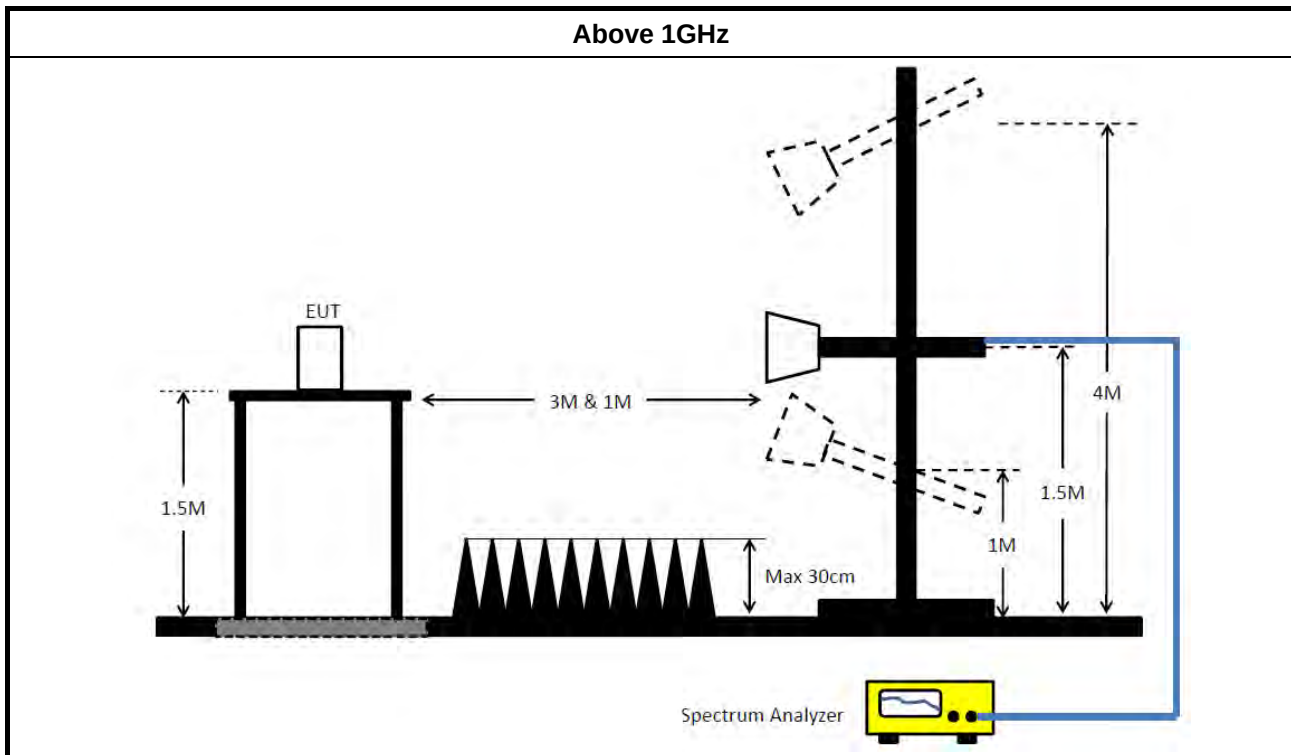


3.6.3 Test Procedures

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 $\geq 98\%$).
☐	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 $\geq 1/T$).
☐	Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW $\geq 1/T$, 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





3.6.5 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = 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 10 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	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.45GHz	Jan. 28, 2019	Jan. 29, 2020	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz~100MHz	Dec. 24, 2018	Dec. 23, 2019	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Jan. 11, 2019	Jan. 10, 2020	Conduction (CO01-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
Bilog Antenna with 6dB Attenuator	TESE & EMCI	CBL 6112D & N-6-06	35236 & AT-N0610	30MHz ~ 2GHz	Mar. 28, 2019	Mar. 27, 2020	Radiation (03CH05-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 29, 2019	Mar. 28, 2020	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC330N	980331	20MHz ~ 3GHz	May 02, 2019	May 01, 2020	Radiation (03CH05-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Jan. 31, 2019	Jan. 30, 2020	Radiation (03CH05-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	May 15, 2019	May 14, 2020	Radiation (03CH05-CB)
RF Cable-low	Woken	RG402	LOW Cable-04+23	30MHz~1GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH05-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-H G	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)
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)
Spectrum analyzer	R&S	FSV40	101028	9kHz~40GHz	Oct. 30, 2018	Oct. 29, 2019	Conducted (TH03-CB)



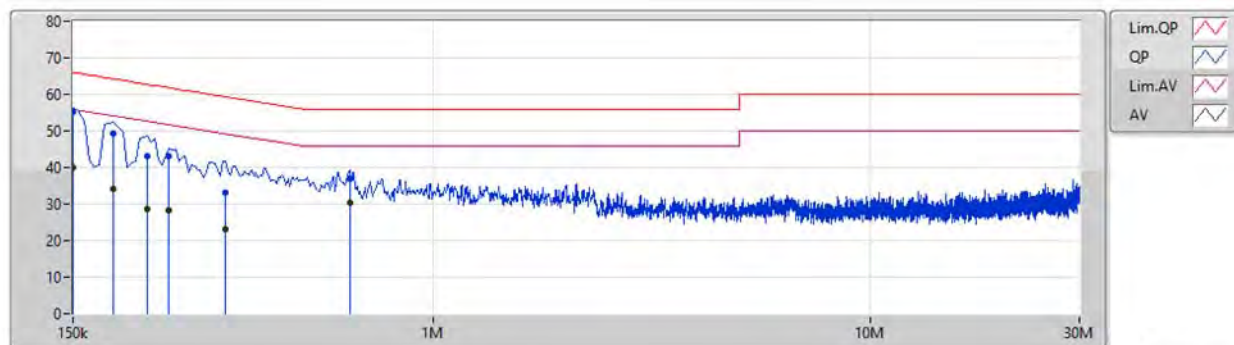
Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-11	1 GHz – 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-12	1 GHz – 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (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)

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

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

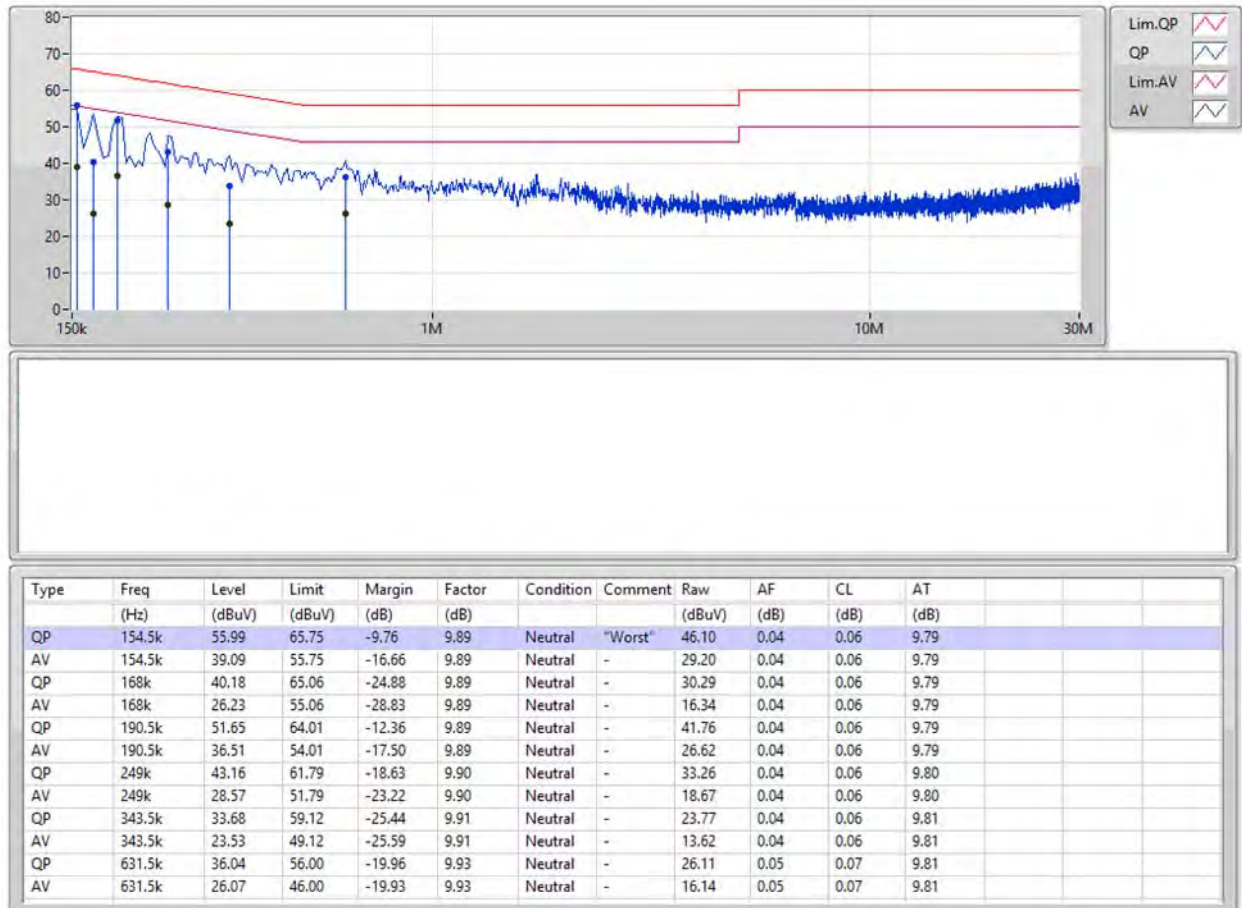
Test Mode	Mode 1	Frequency Range	0.15 MHz to 30 MHz
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Line



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor	Condition	Comment	Raw (dBuV)	AF (dB)	CL (dB)	AT (dB)			
QP	150k	55.22	66.00	-10.78	9.90	Line	"Worst"	45.32	0.05	0.06	9.79			
AV	150k	39.85	56.00	-16.15	9.90	Line	-	29.95	0.05	0.06	9.79			
QP	186k	49.28	64.20	-14.92	9.91	Line	-	39.37	0.06	0.06	9.79			
AV	186k	34.16	54.20	-20.04	9.91	Line	-	24.25	0.06	0.06	9.79			
QP	222k	43.27	62.75	-19.48	9.91	Line	-	33.36	0.06	0.06	9.79			
AV	222k	28.51	52.75	-24.24	9.91	Line	-	18.60	0.06	0.06	9.79			
QP	249k	43.26	61.79	-18.53	9.92	Line	-	33.34	0.06	0.06	9.80			
AV	249k	28.37	51.79	-23.42	9.92	Line	-	18.45	0.06	0.06	9.80			
QP	334.5k	33.06	59.35	-26.29	9.92	Line	-	23.14	0.06	0.06	9.80			
AV	334.5k	23.02	49.35	-26.33	9.92	Line	-	13.10	0.06	0.06	9.80			
QP	645k	37.06	56.00	-18.94	9.97	Line	-	27.09	0.07	0.08	9.82			
AV	645k	30.35	46.00	-15.65	9.97	Line	-	20.38	0.07	0.08	9.82			

Neutral



**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;

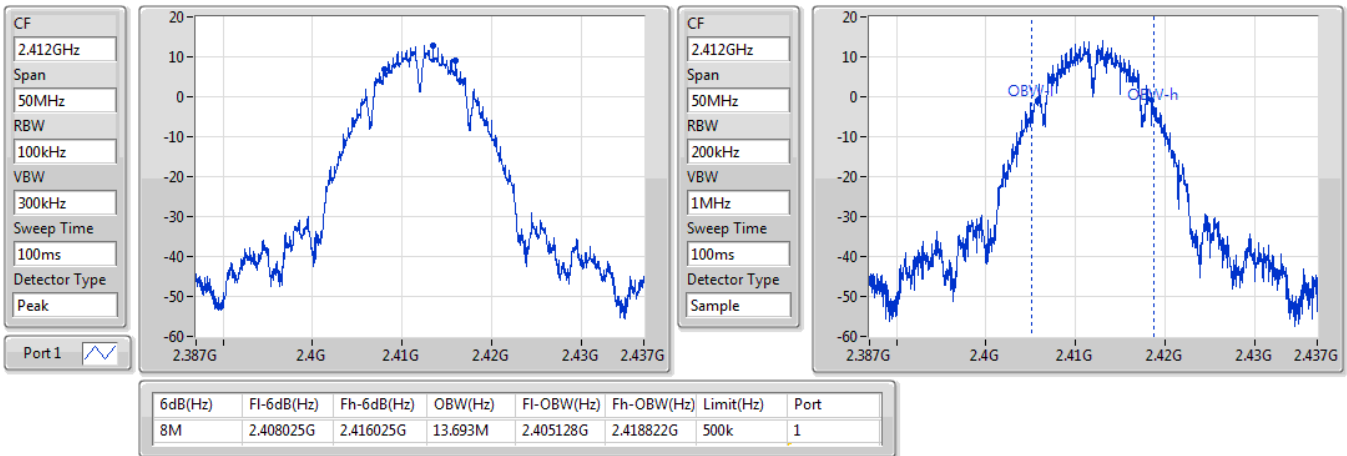
Result

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

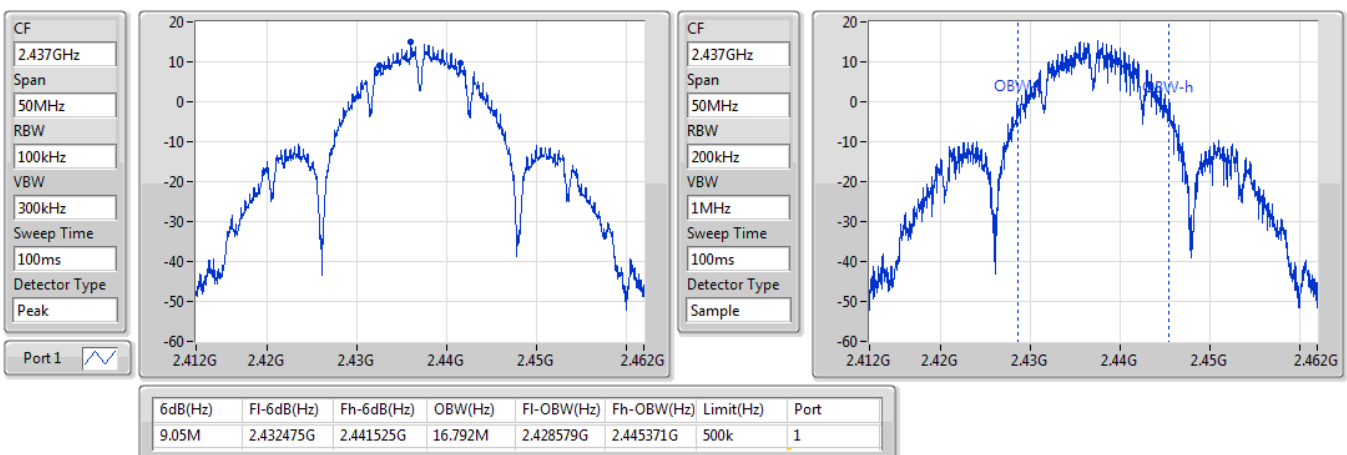
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

802.11b_Nss1,(1Mbps)_1TX
EBW
2412MHz

09/07/2019

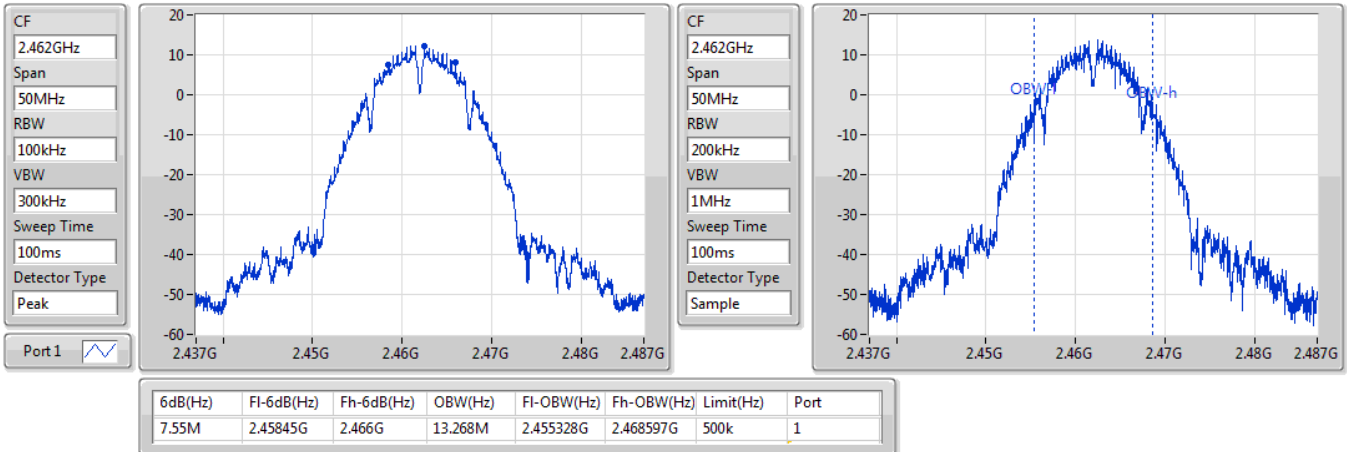

802.11b_Nss1,(1Mbps)_1TX
EBW
2437MHz

09/07/2019

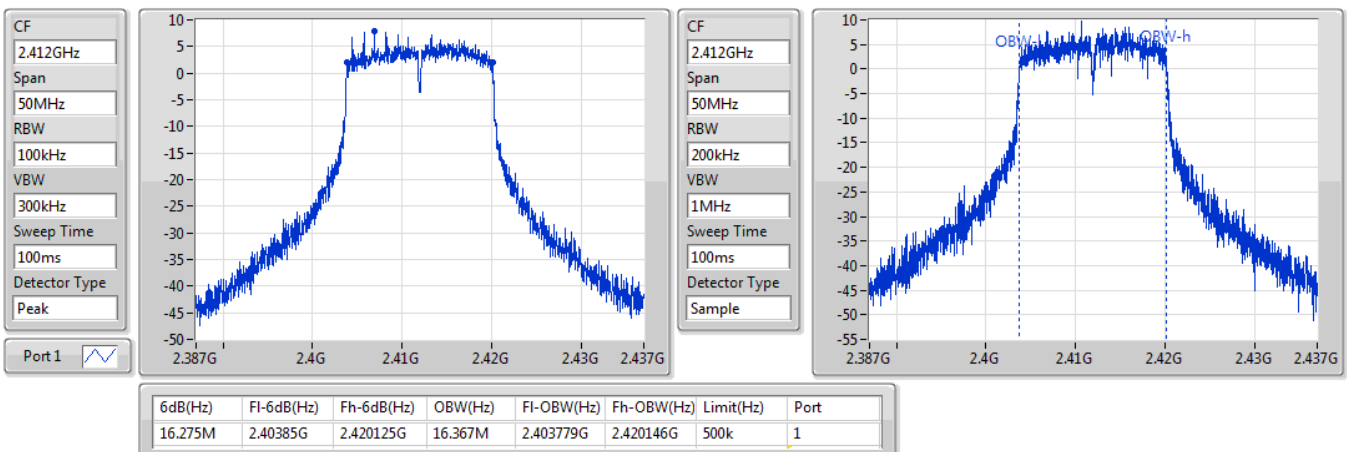


802.11b_Nss1,(1Mbps)_1TX
EBW
2462MHz

09/07/2019

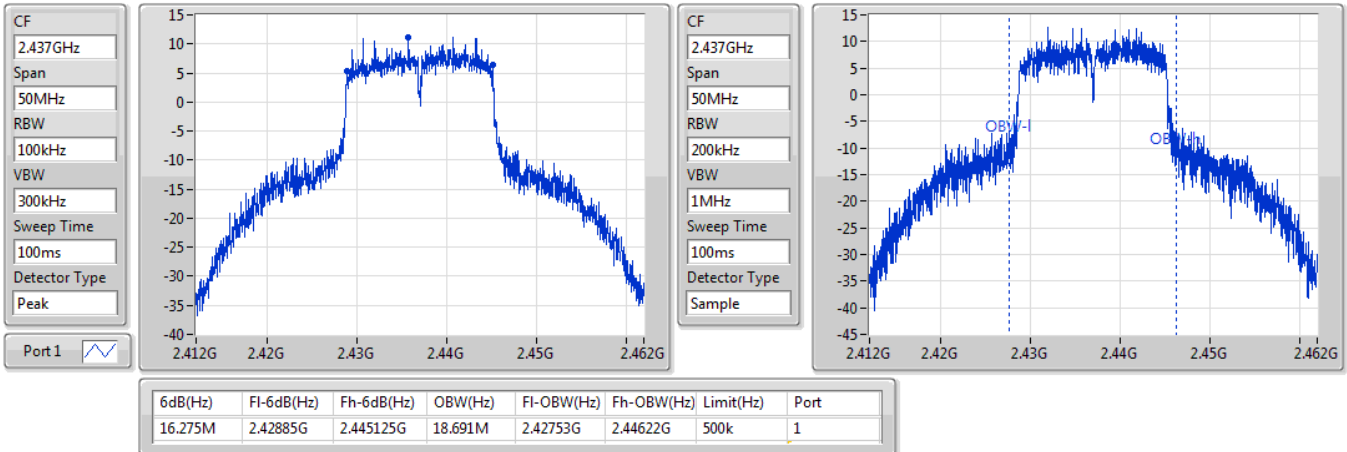

802.11g_Nss1,(6Mbps)_1TX
EBW
2412MHz

09/07/2019

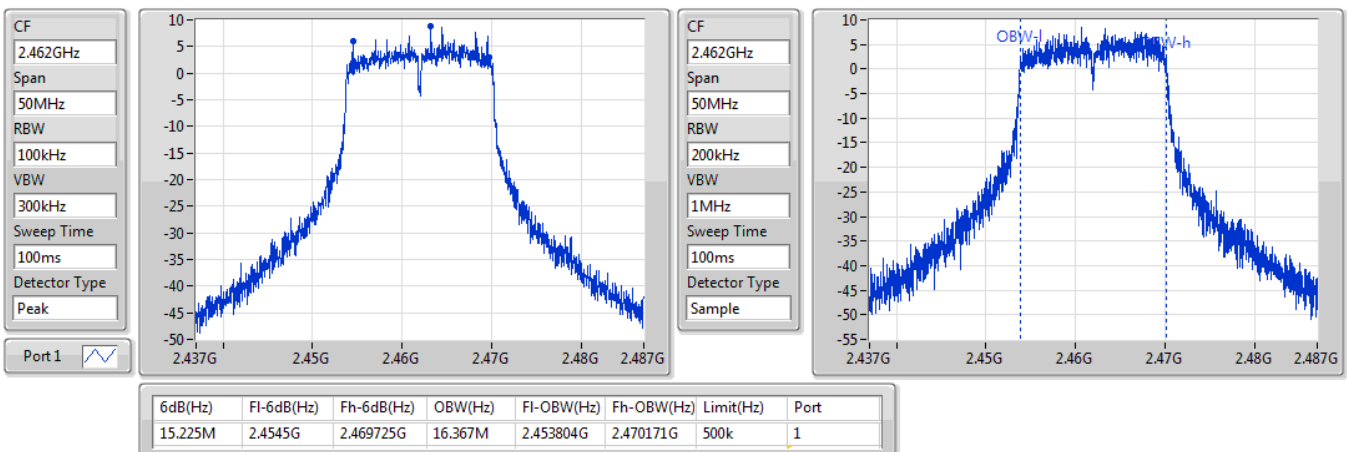


802.11g_Nss1,(6Mbps)_1TX
EBW
2437MHz

09/07/2019

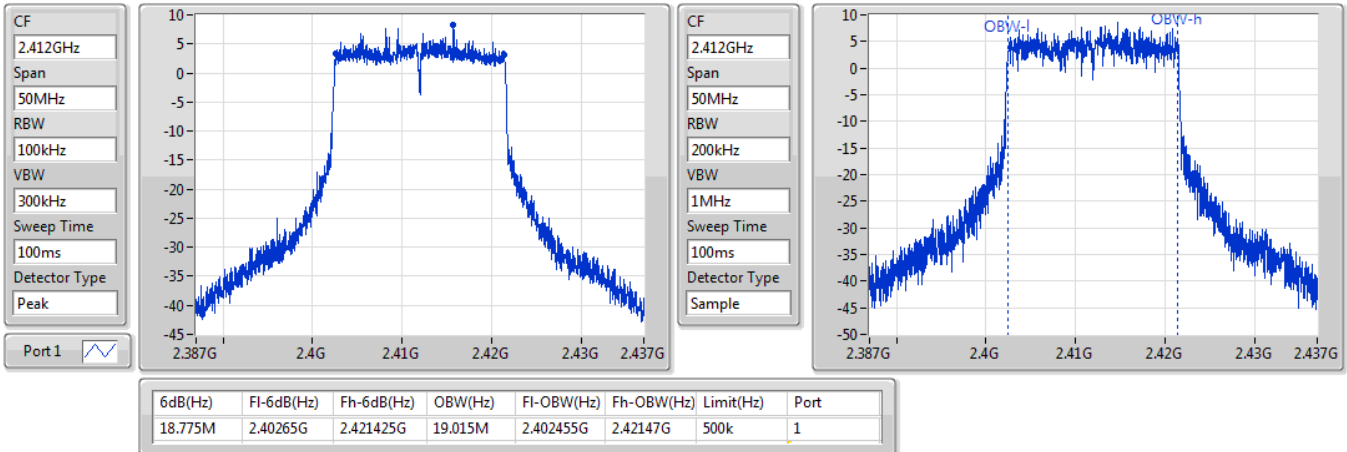

802.11g_Nss1,(6Mbps)_1TX
EBW
2462MHz

09/07/2019

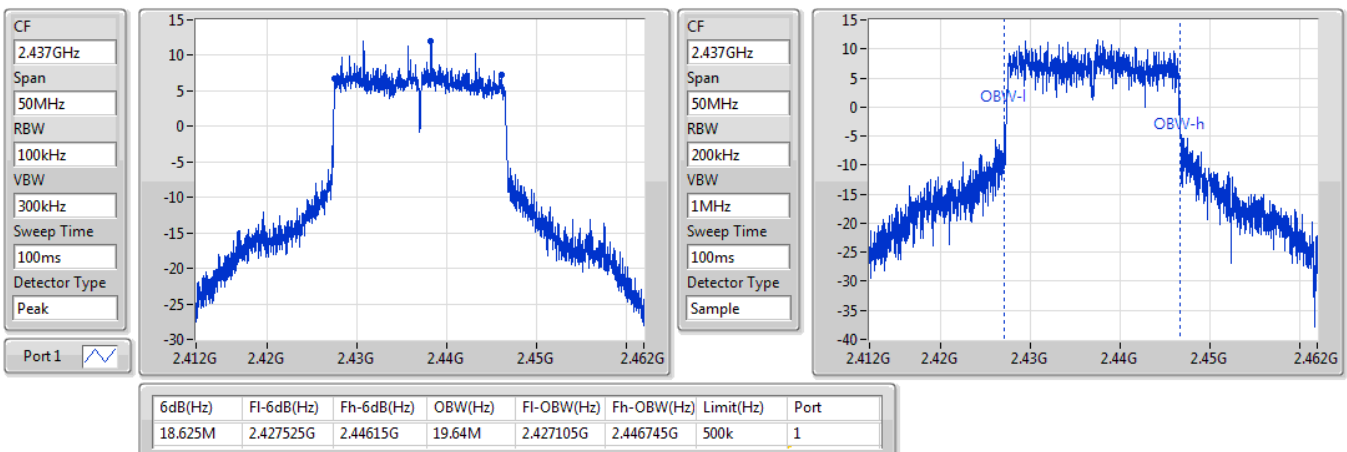


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
2412MHz

09/07/2019

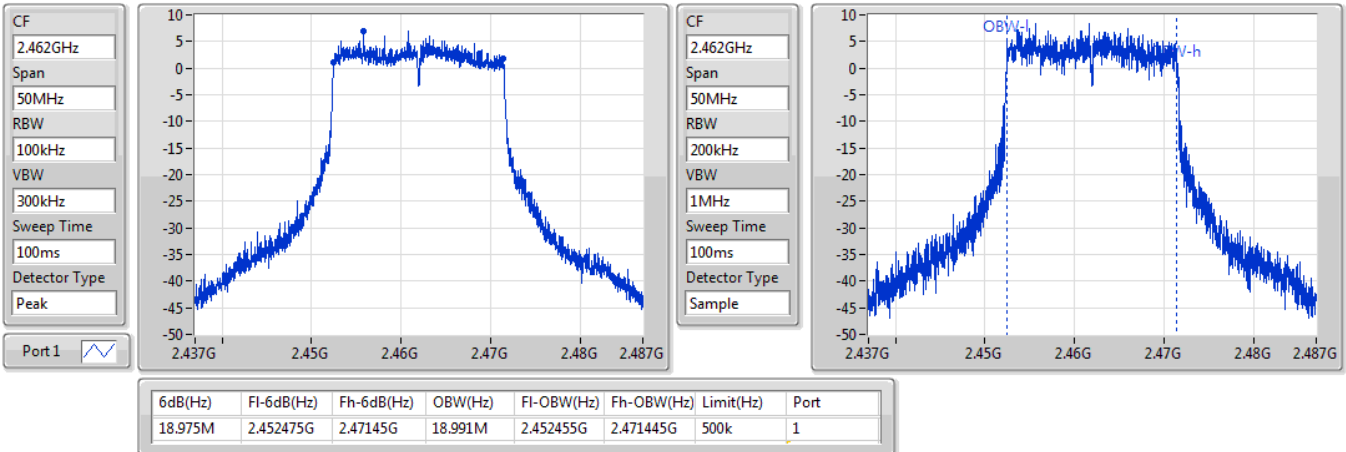

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
2437MHz

09/07/2019

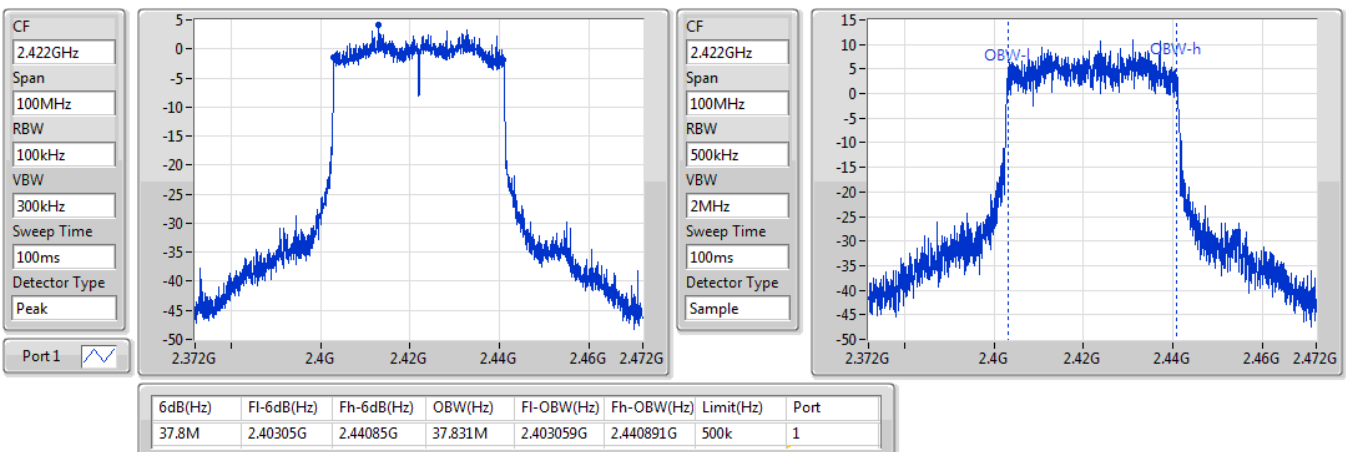


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
2462MHz

09/07/2019

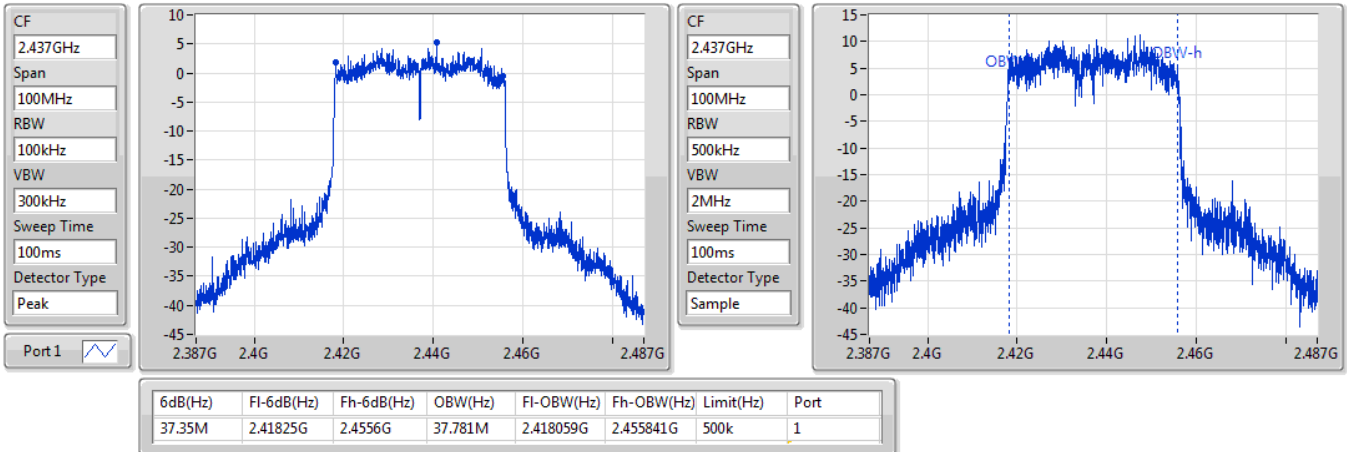

802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
2422MHz

09/07/2019

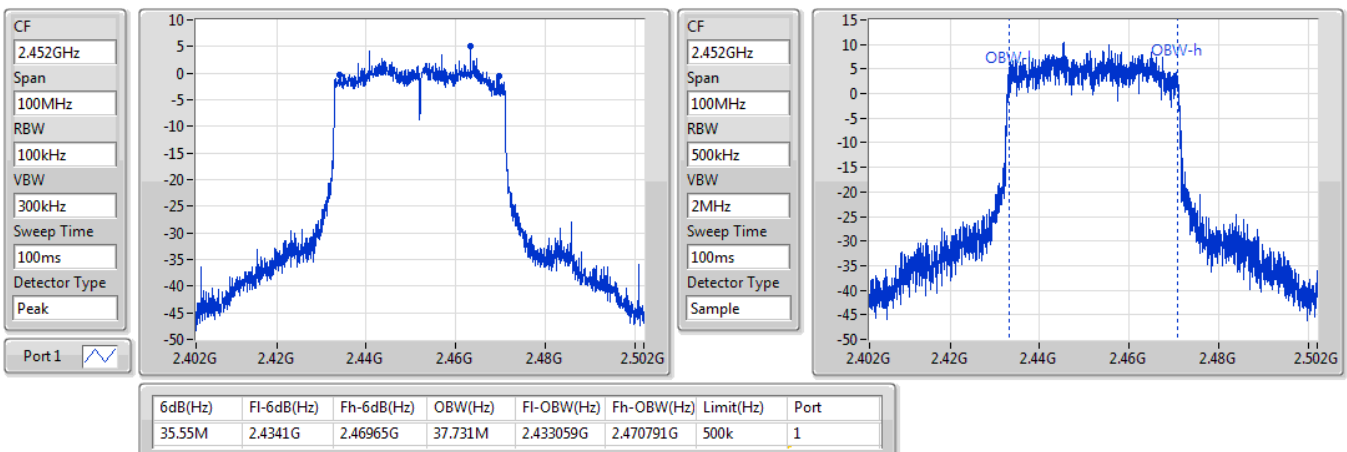


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
2437MHz

09/07/2019


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
2452MHz

09/07/2019



**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;

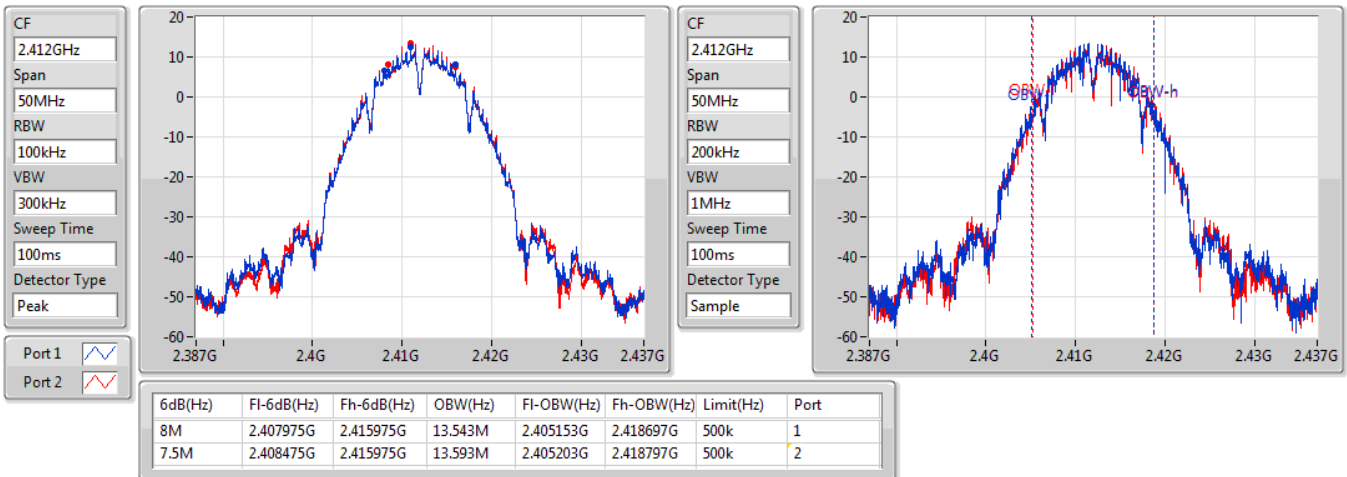
Result

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

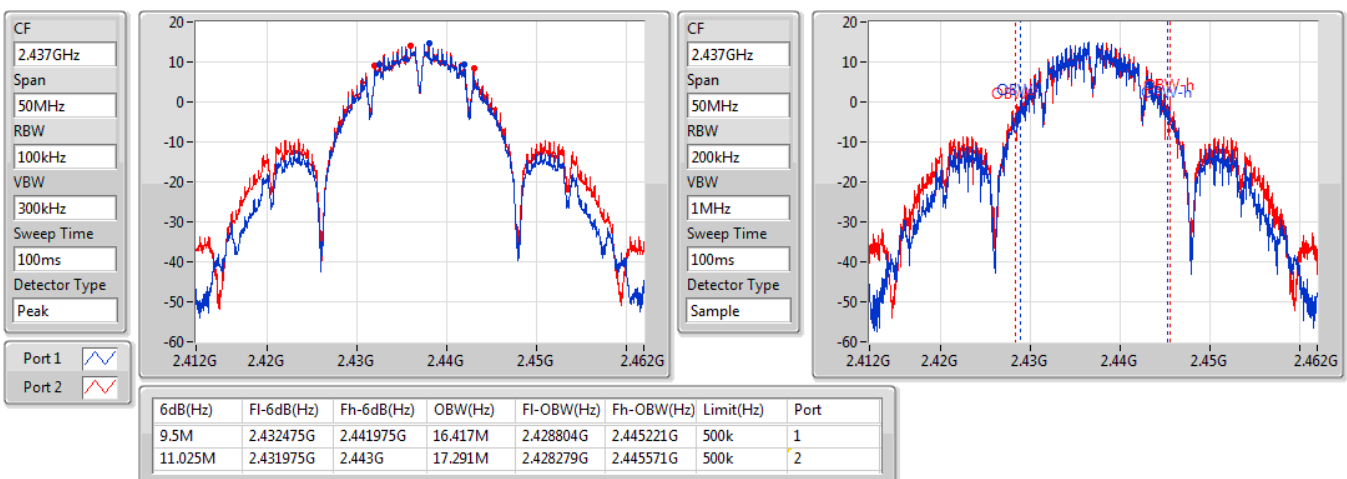
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

802.11b_Nss1,(1Mbps)_2TX
EBW
2412MHz

08/07/2019

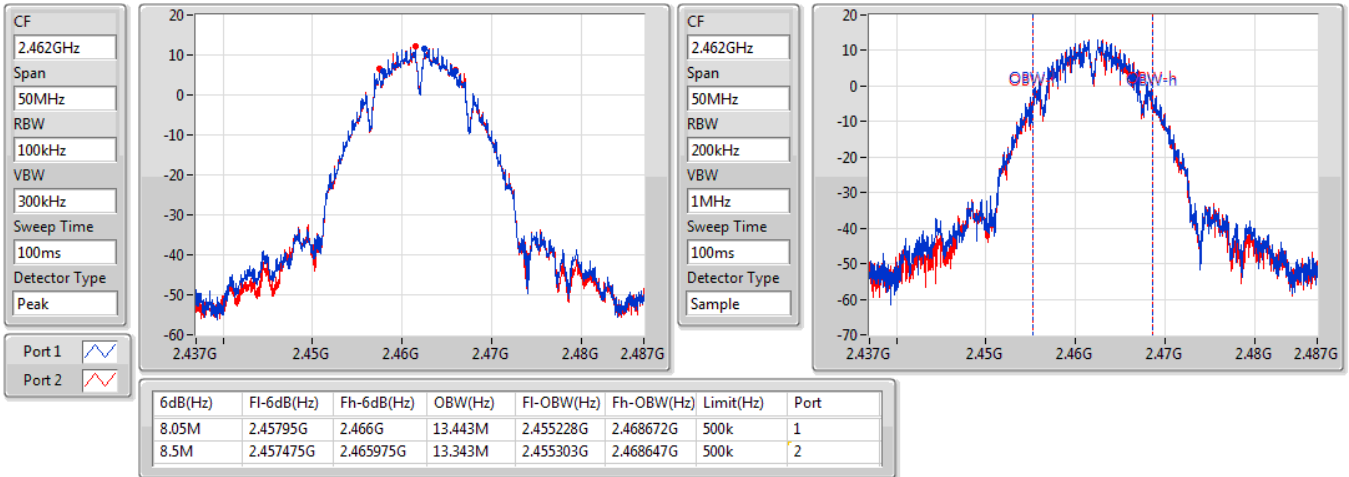

802.11b_Nss1,(1Mbps)_2TX
EBW
2437MHz

08/07/2019

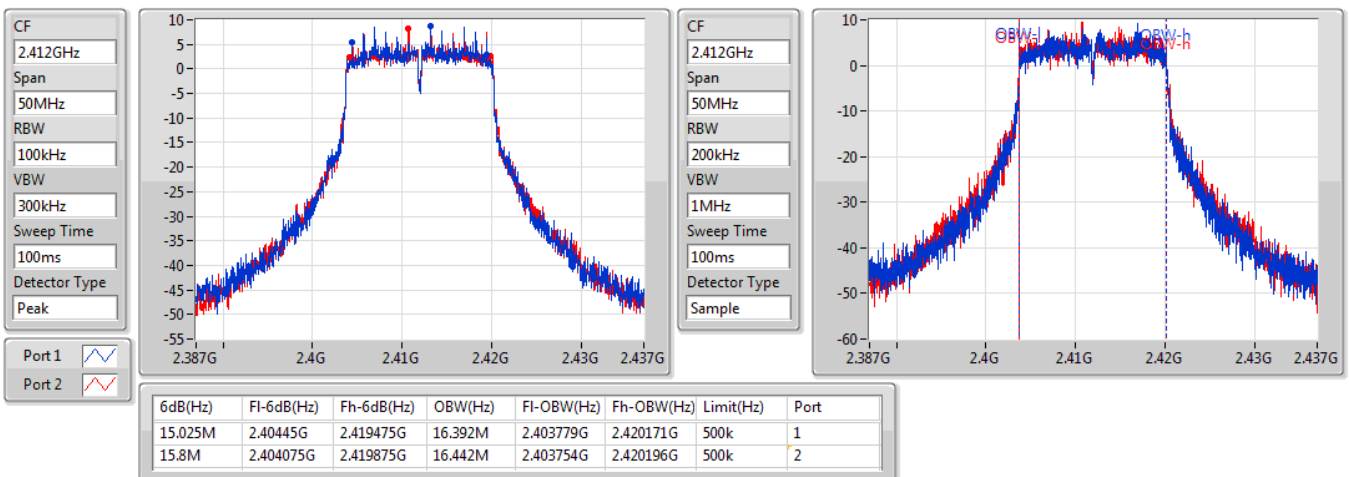


802.11b_Nss1,(1Mbps)_2TX
EBW
2462MHz

08/07/2019

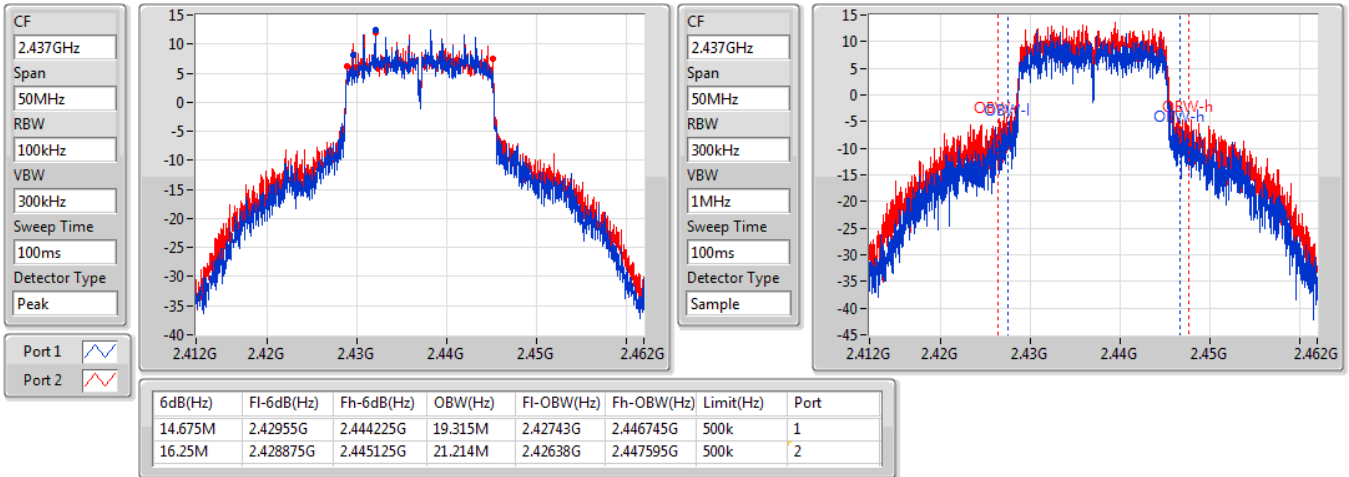

802.11g_Nss1,(6Mbps)_2TX
EBW
2412MHz

08/07/2019

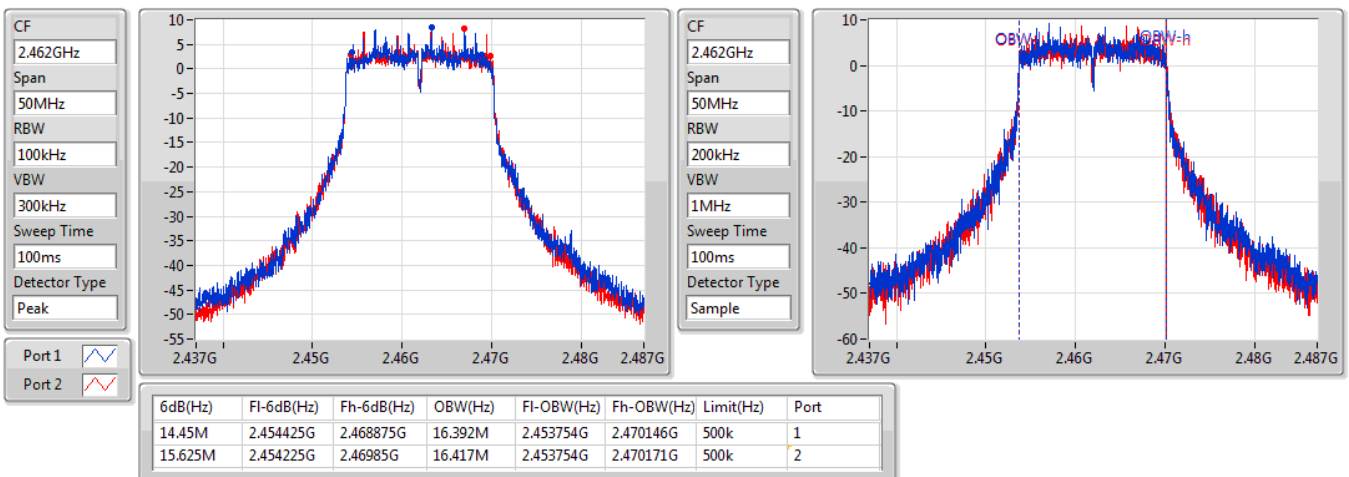


802.11g_Nss1,(6Mbps)_2TX
EBW
2437MHz

08/07/2019

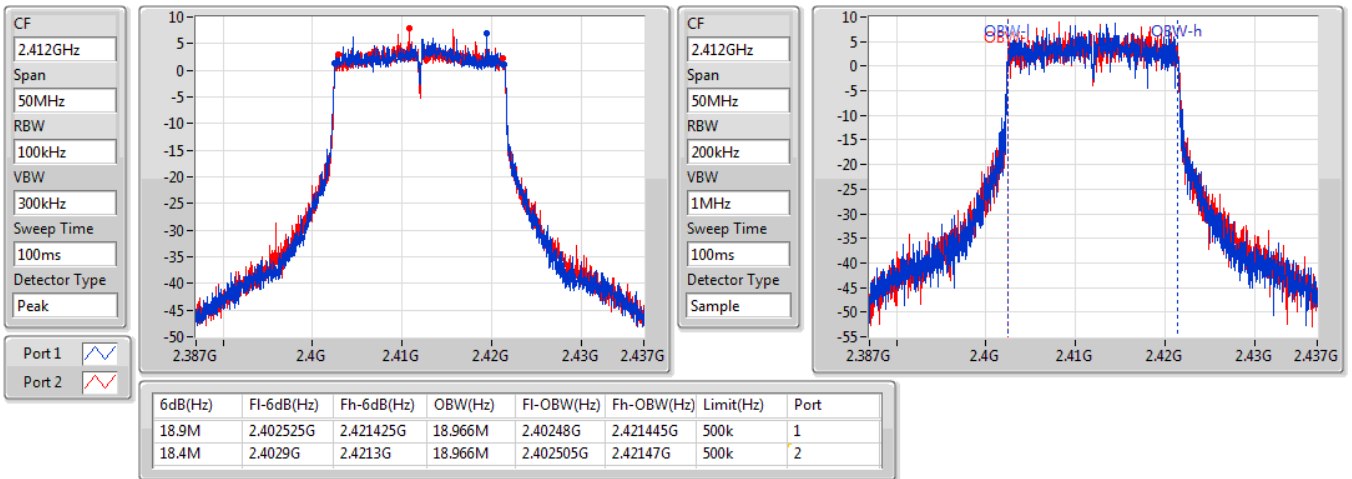

802.11g_Nss1,(6Mbps)_2TX
EBW
2462MHz

08/07/2019

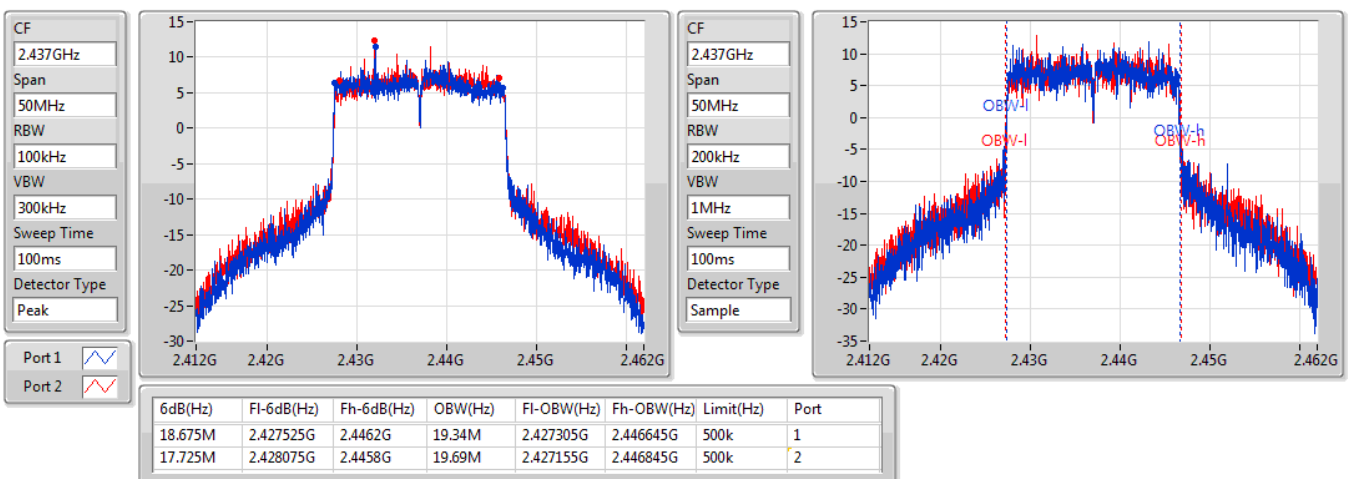


802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
2412MHz

08/07/2019

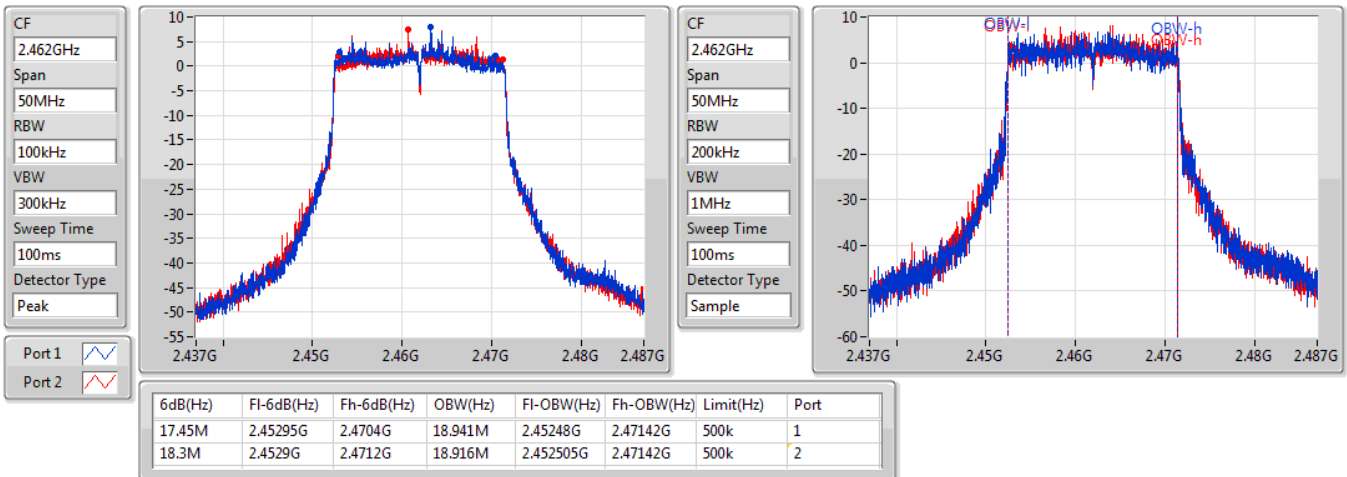

802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
2437MHz

08/07/2019

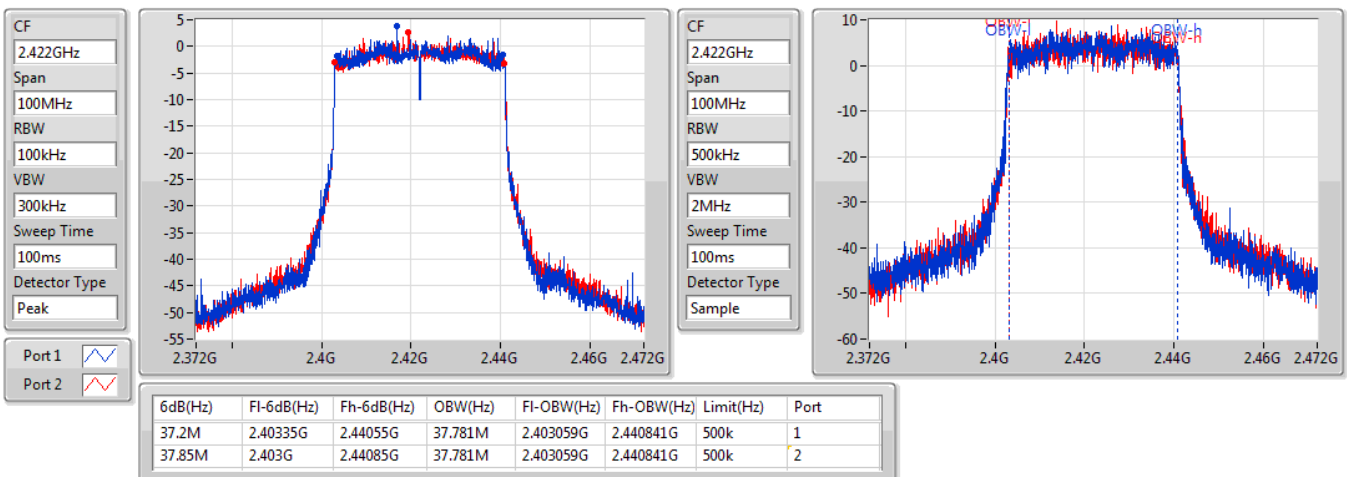


802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
2462MHz

08/07/2019

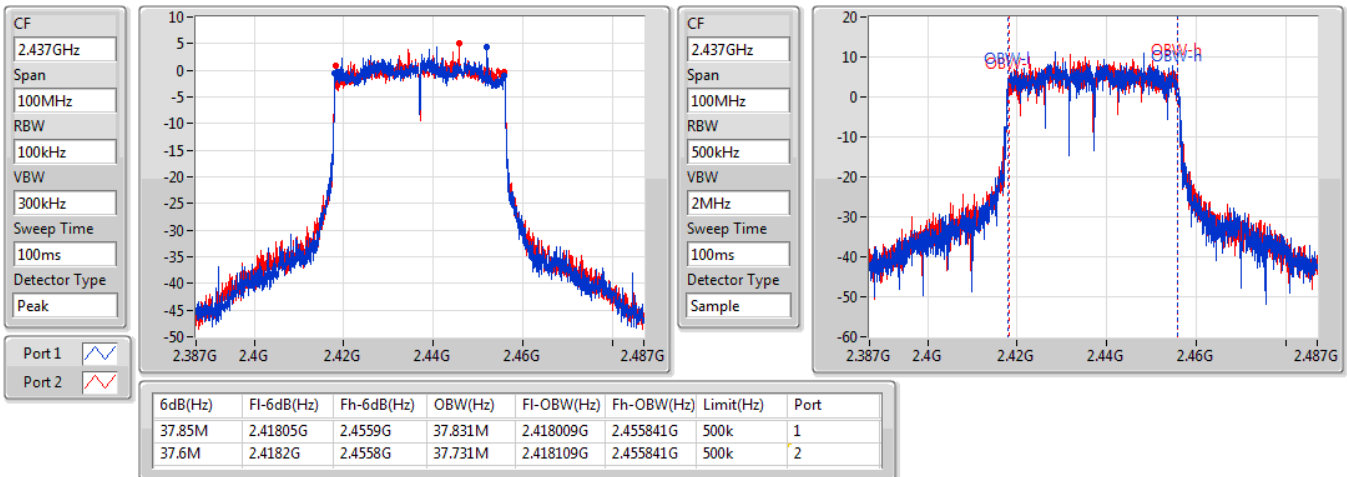

802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
2422MHz

08/07/2019

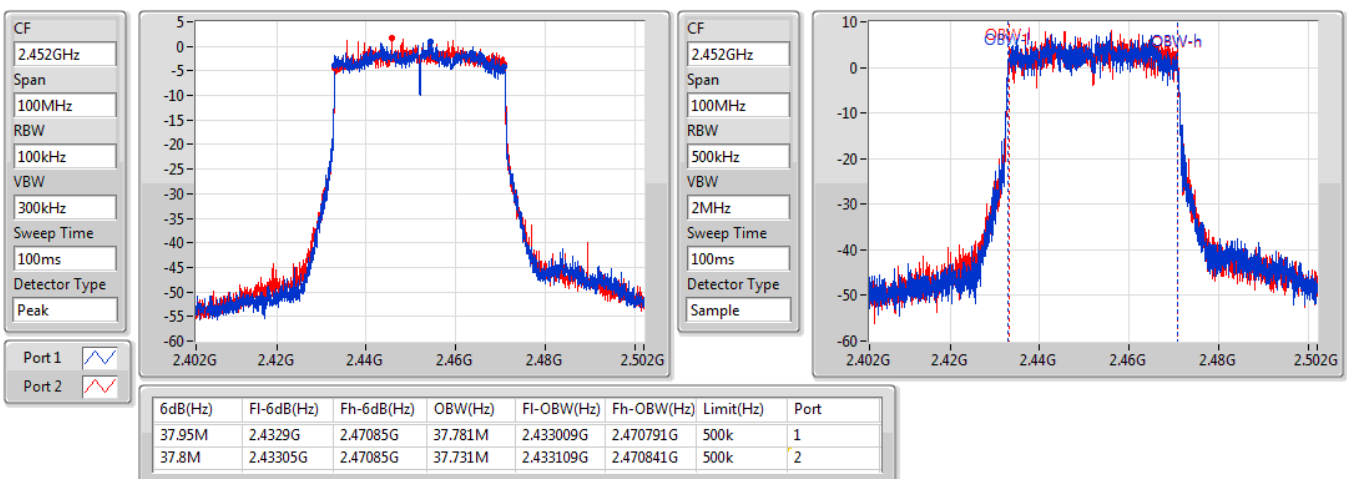


802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
2437MHz

08/07/2019


802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
2452MHz

08/07/2019



**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;

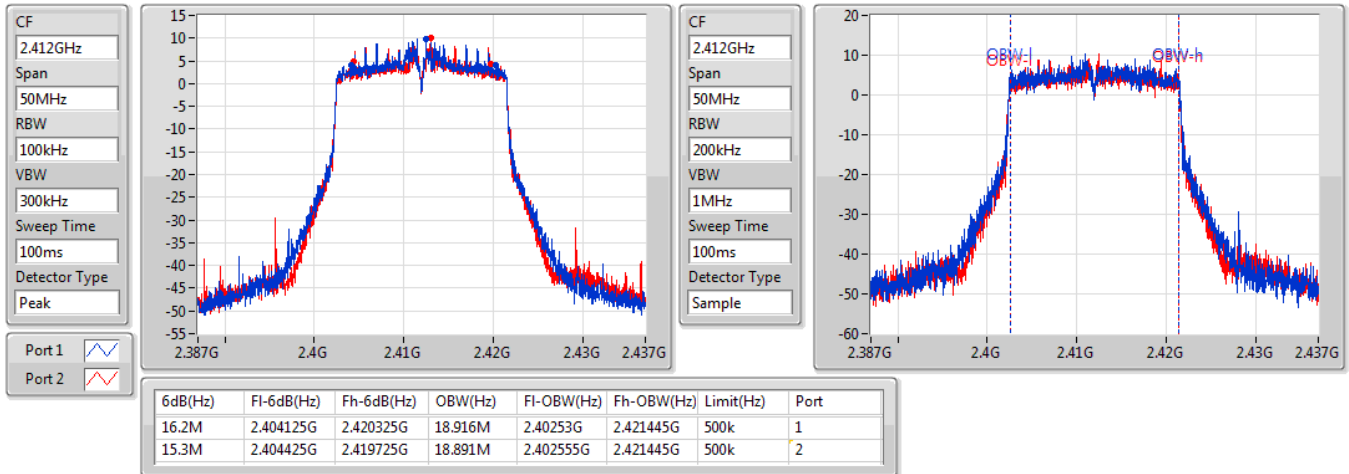
Result

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

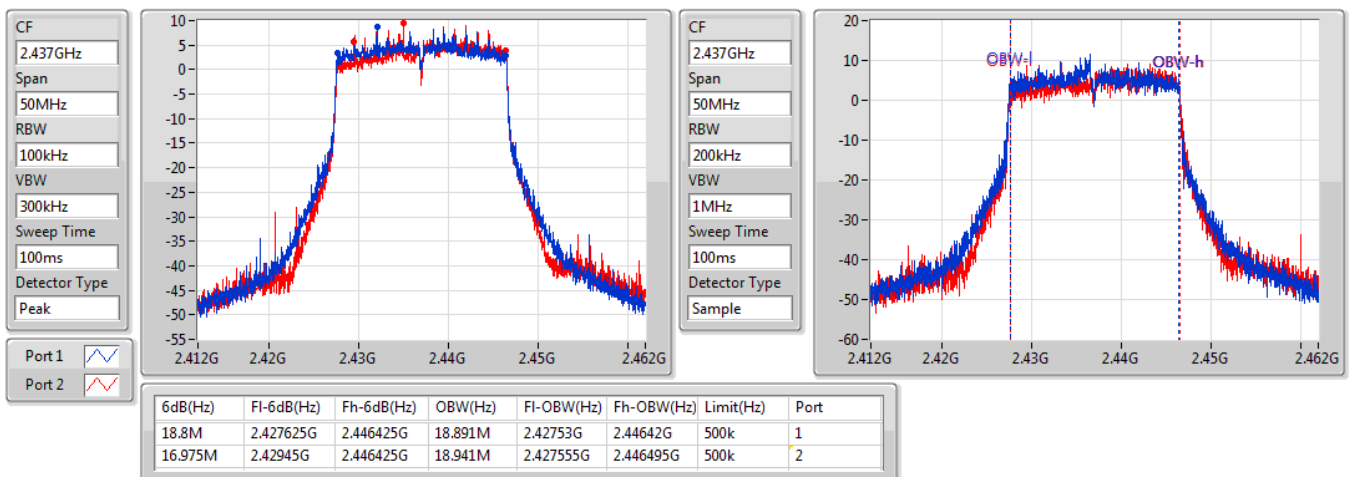
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

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

09/07/2019

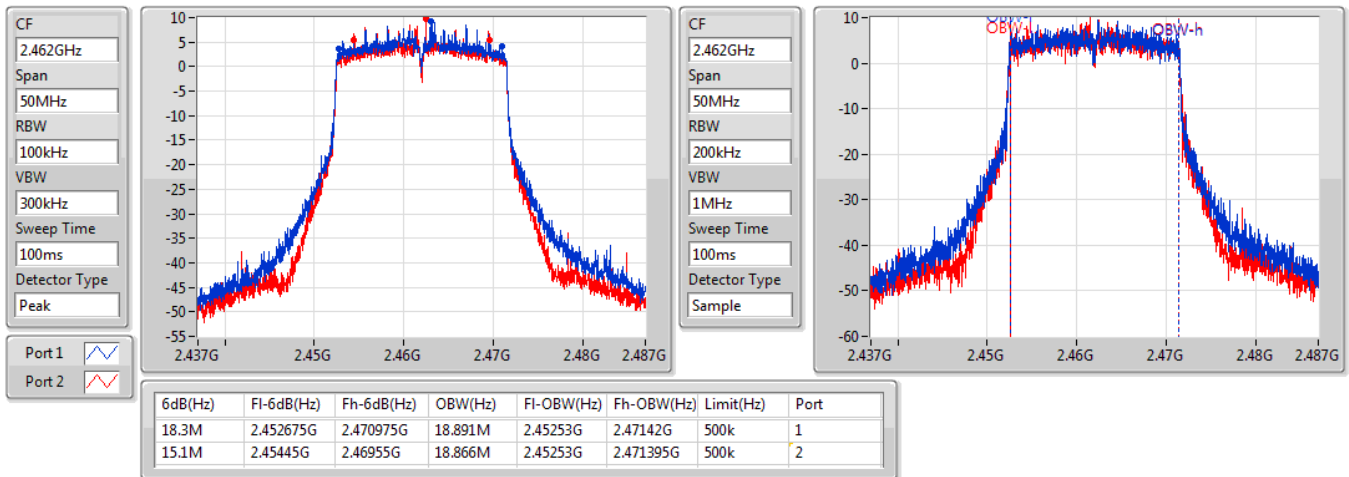

**802.11ax HEW20-BF_Nss1,(MCS0)_2TX
2437MHz**
EBW

09/07/2019

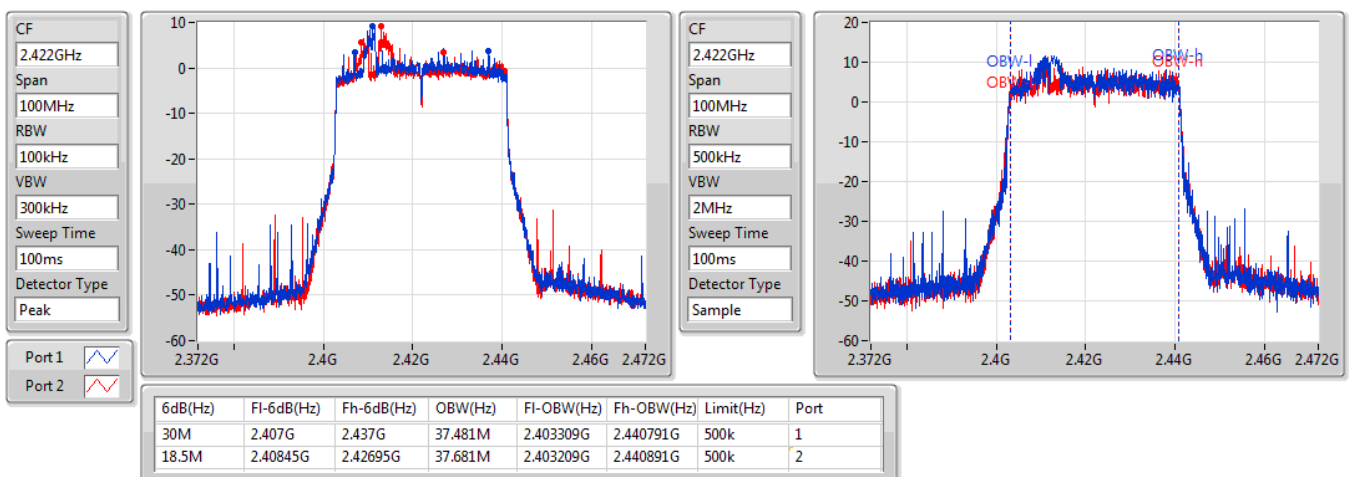


**802.11ax HEW20-BF_Nss1,(MCS0)_2TX
2462MHz**
EBW

09/07/2019

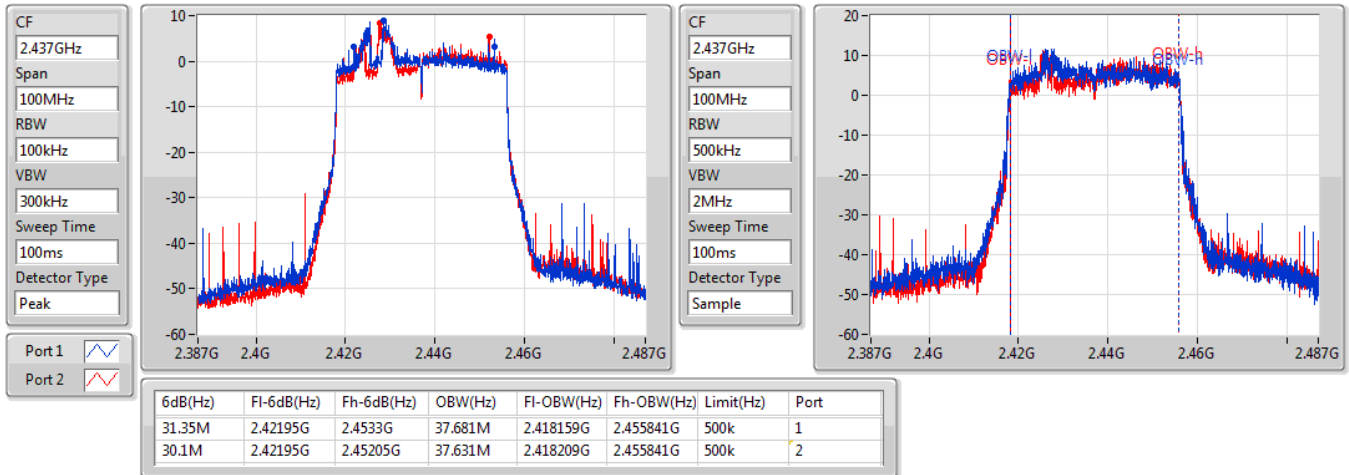

**802.11ax HEW40-BF_Nss1,(MCS0)_2TX
2422MHz**
EBW

09/07/2019

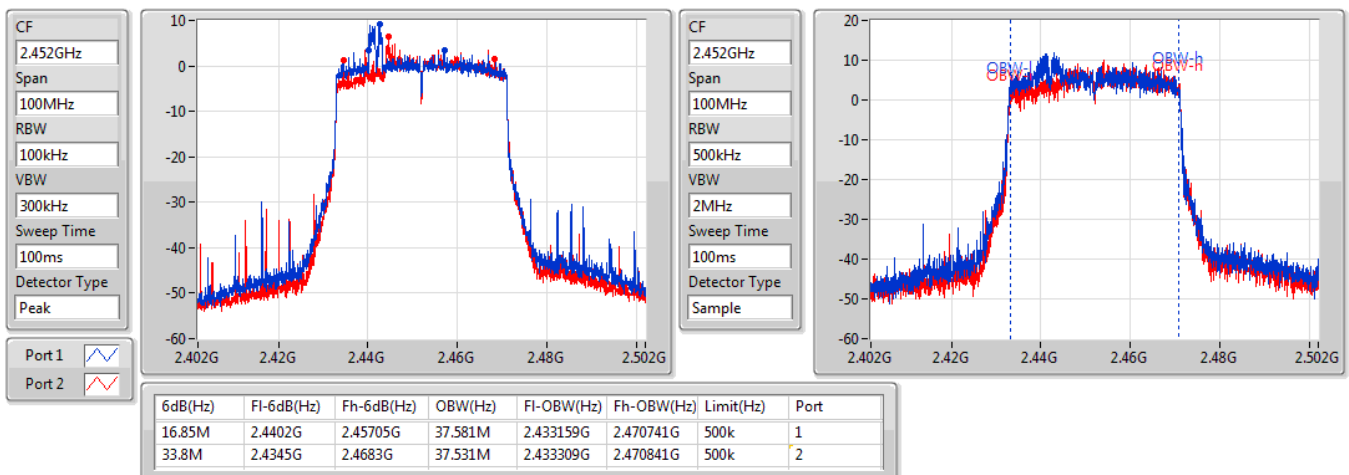


**802.11ax HEW40-BF_Nss1,(MCS0)_2TX
2437MHz**
EBW

09/07/2019


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

09/07/2019



**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;

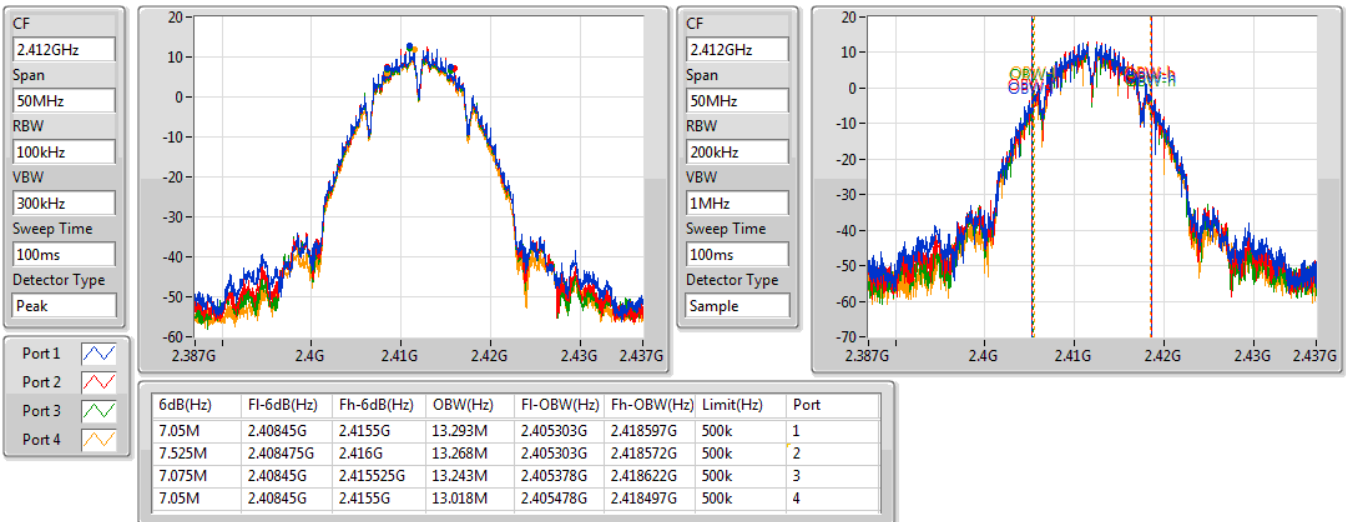
Result

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

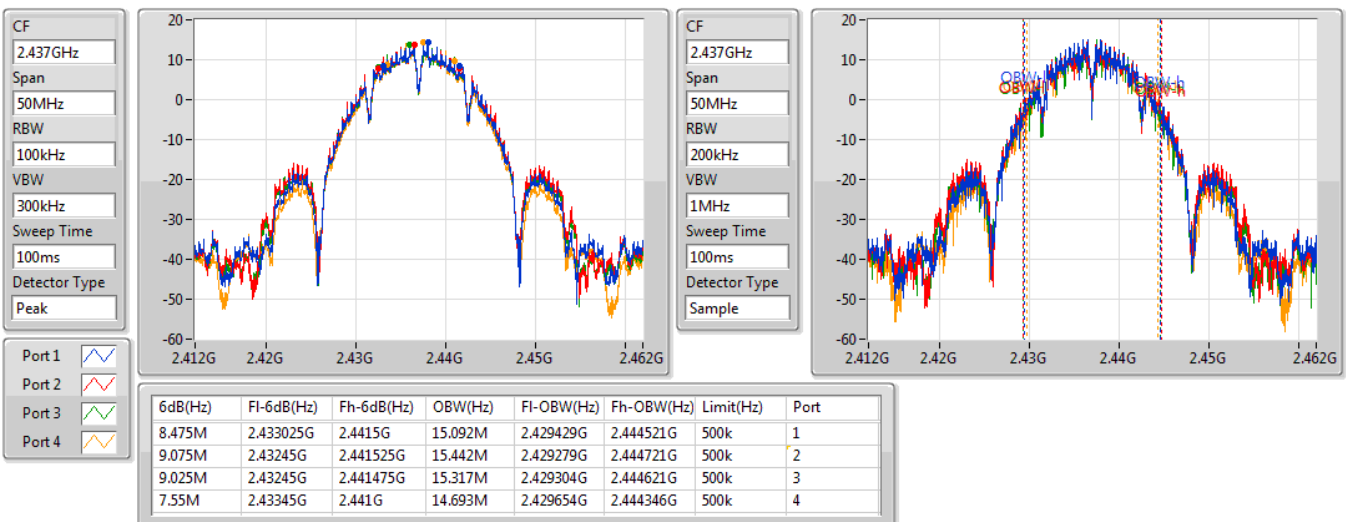
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

802.11b_Nss1,(1Mbps)_4TX
EBW
2412MHz

08/07/2019

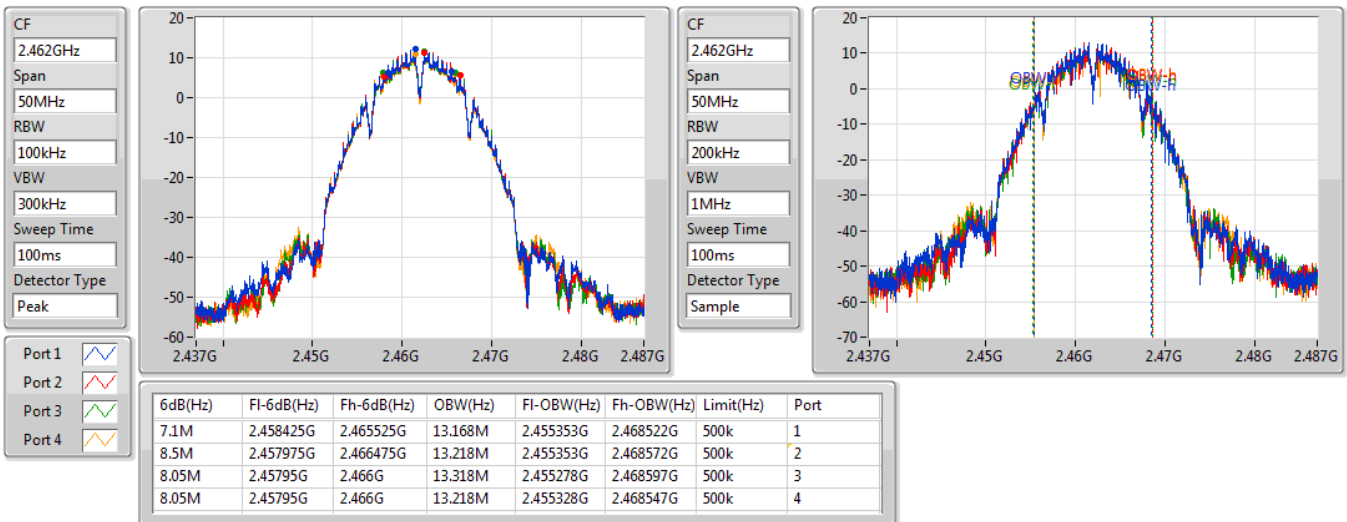

802.11b_Nss1,(1Mbps)_4TX
EBW
2437MHz

08/07/2019

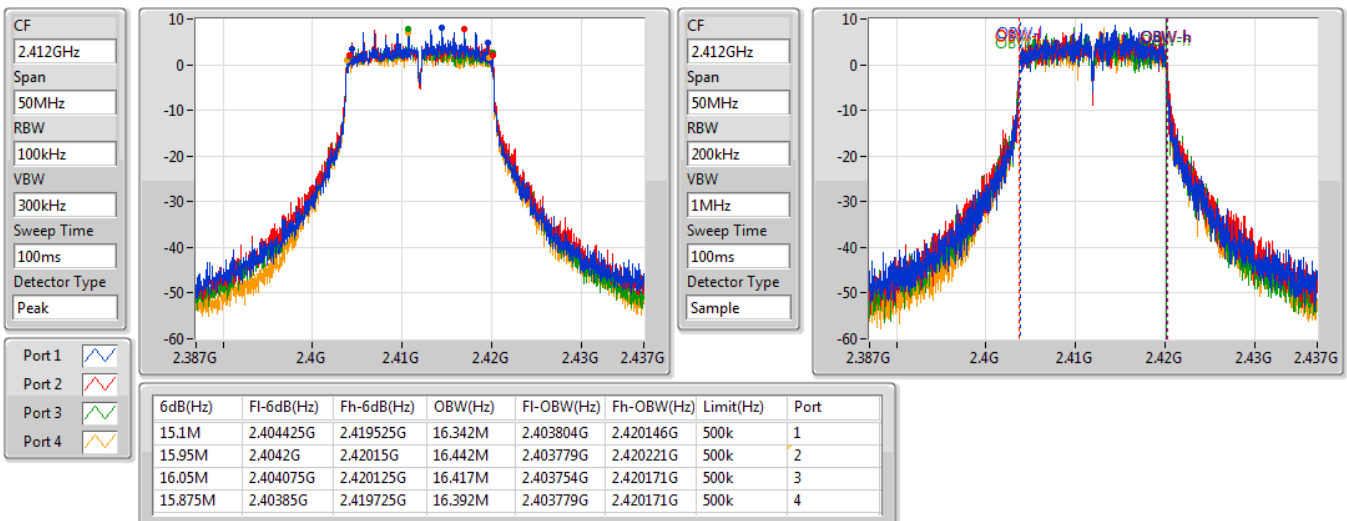


802.11b_Nss1,(1Mbps)_4TX
EBW
2462MHz

08/07/2019

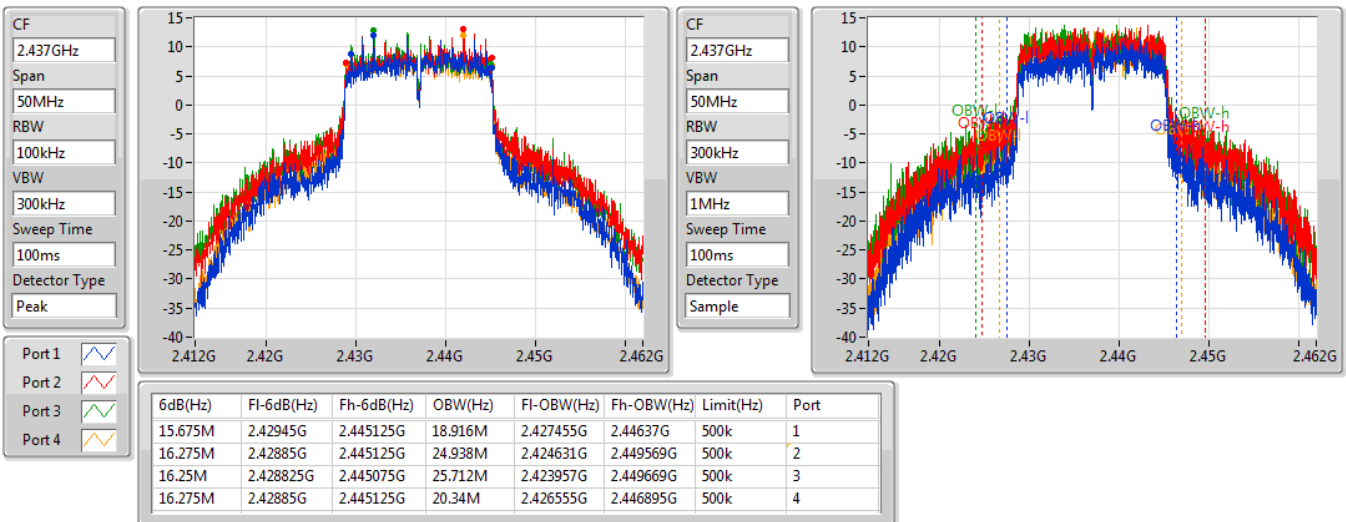

802.11g_Nss1,(6Mbps)_4TX
EBW
2412MHz

08/07/2019

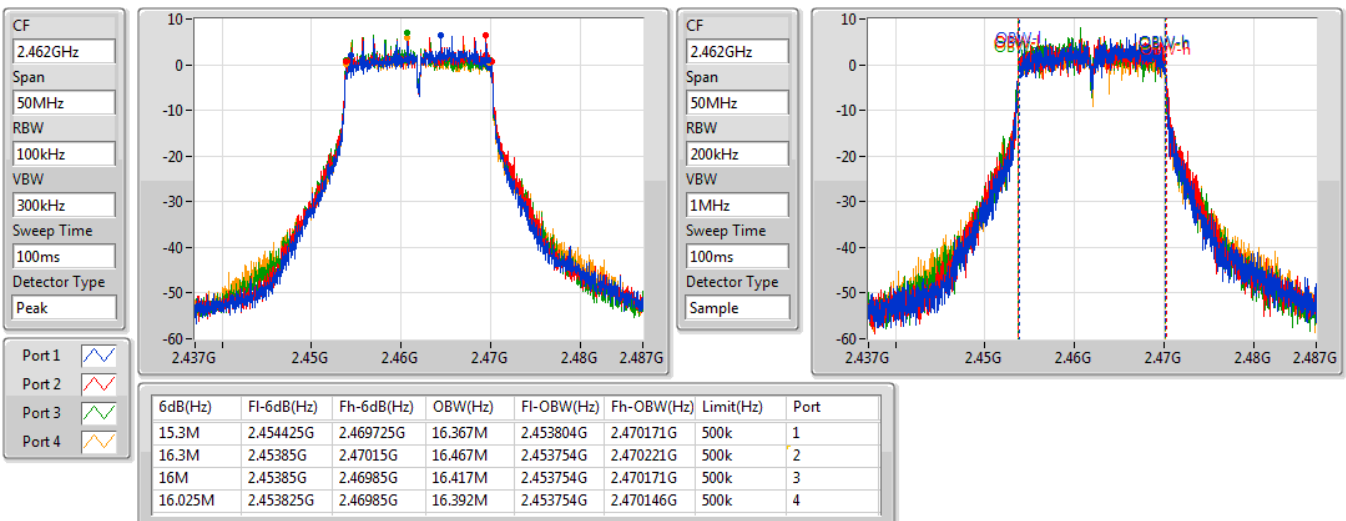


802.11g_Nss1,(6Mbps)_4TX
EBW
2437MHz

08/07/2019

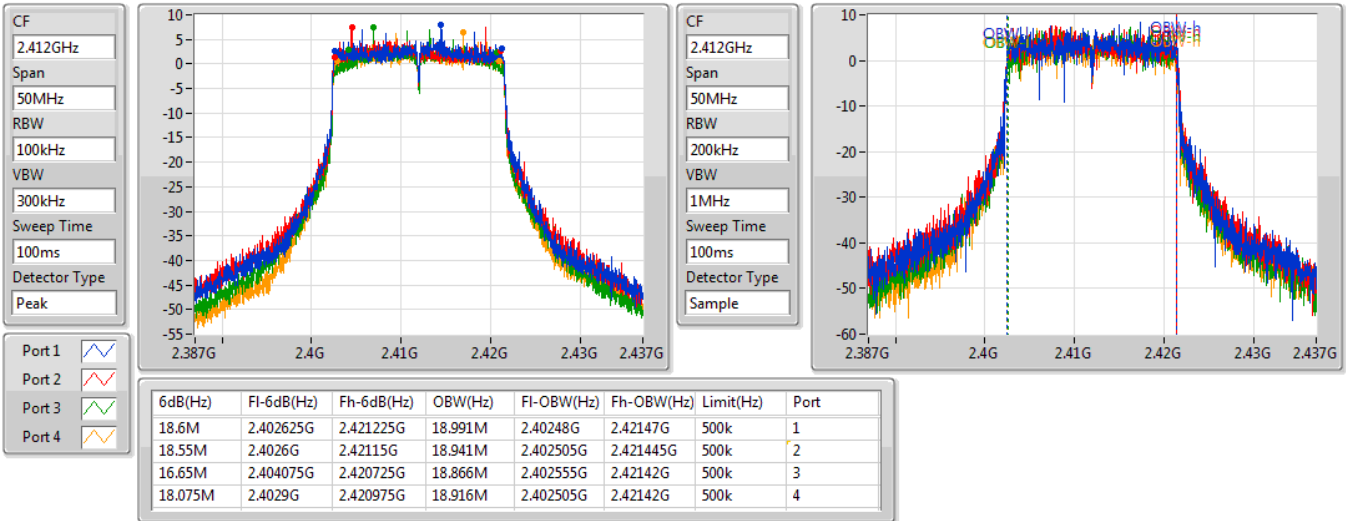

802.11g_Nss1,(6Mbps)_4TX
EBW
2462MHz

08/07/2019

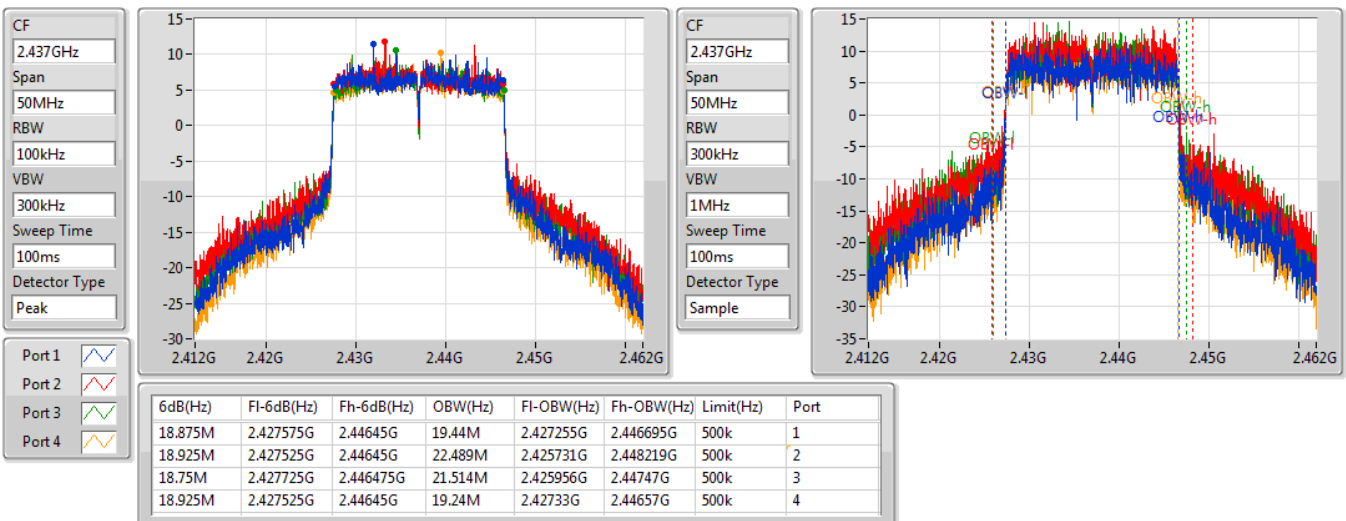


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
2412MHz

08/07/2019

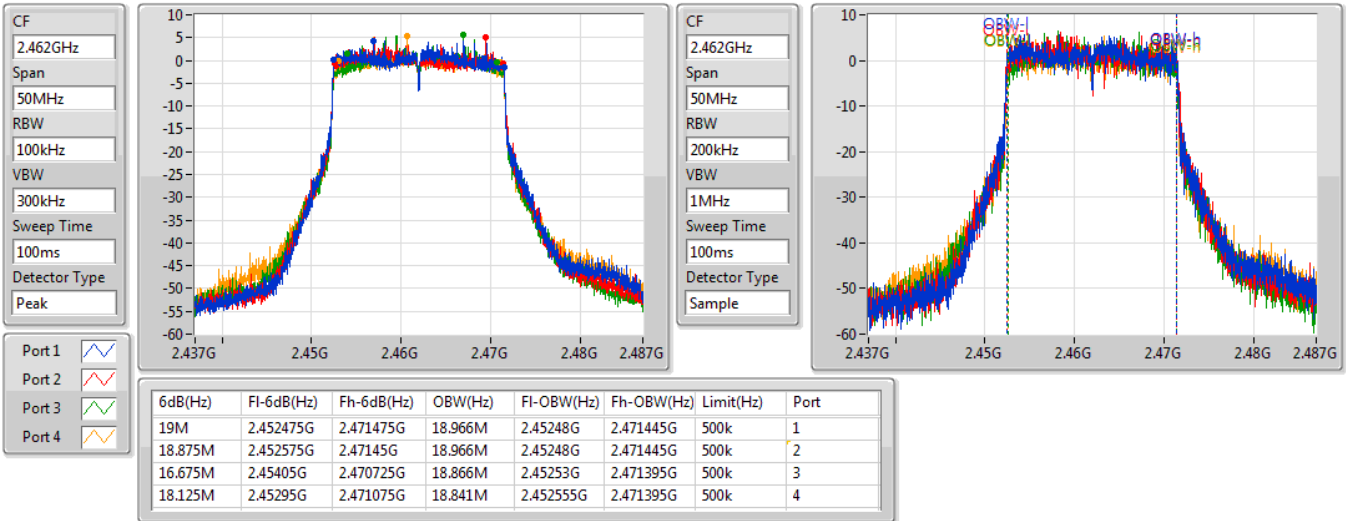

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
2437MHz

08/07/2019

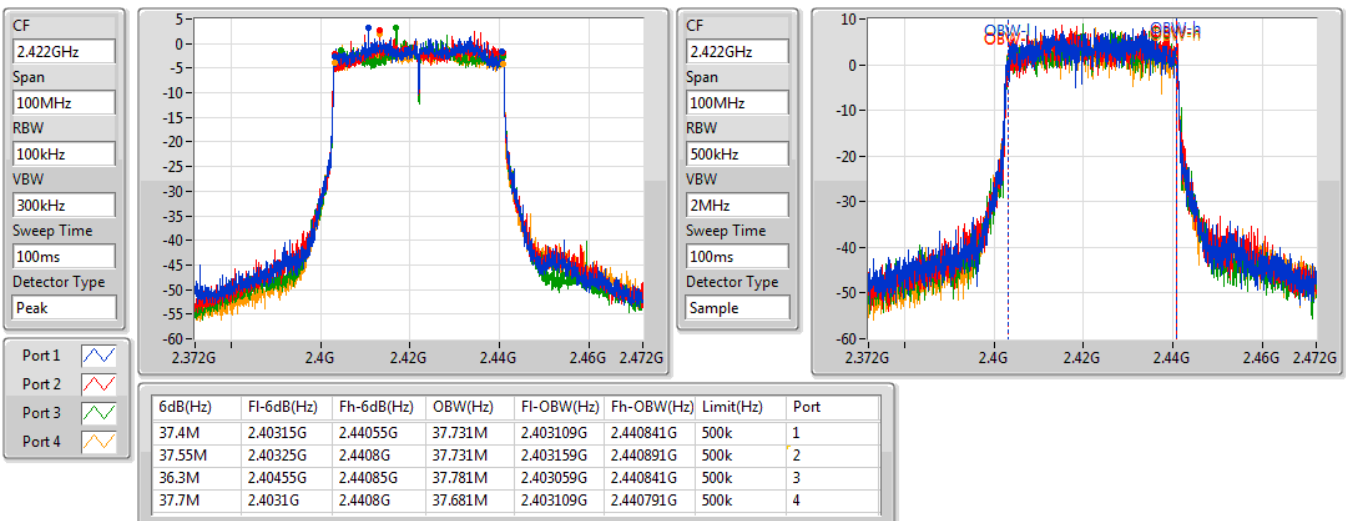


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
2462MHz

08/07/2019

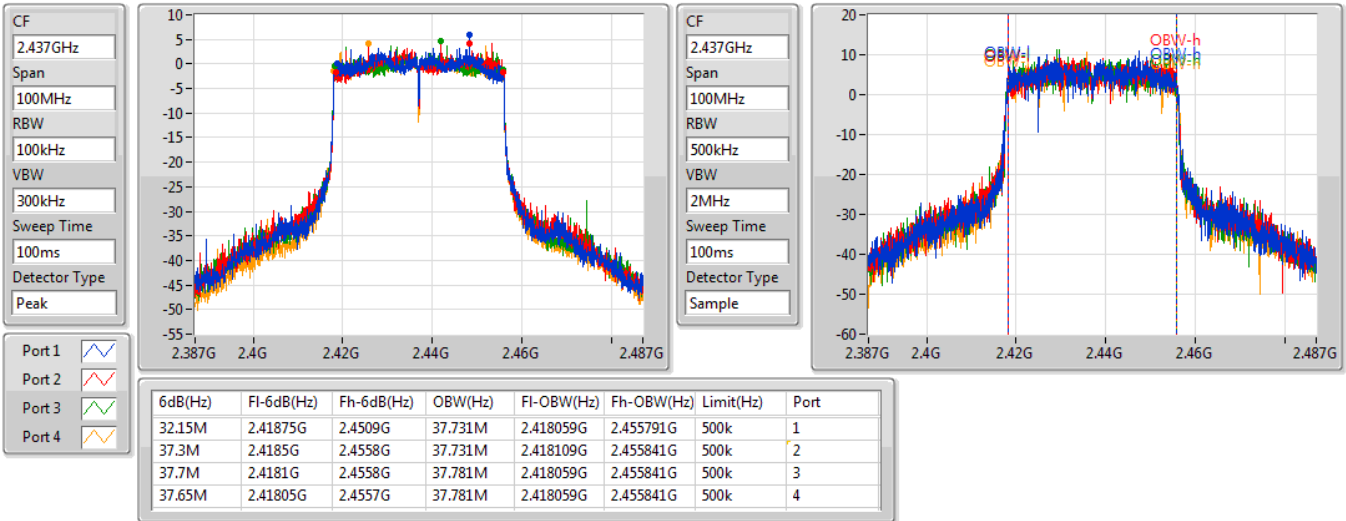

802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
2422MHz

08/07/2019

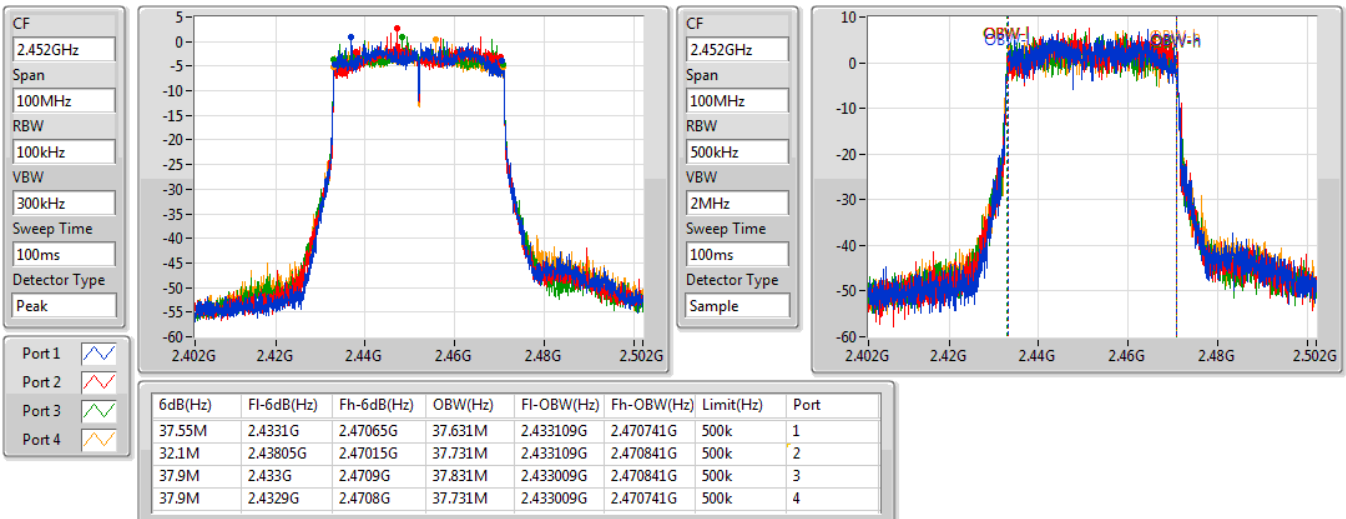


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
2437MHz

08/07/2019


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
2452MHz

08/07/2019



**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;

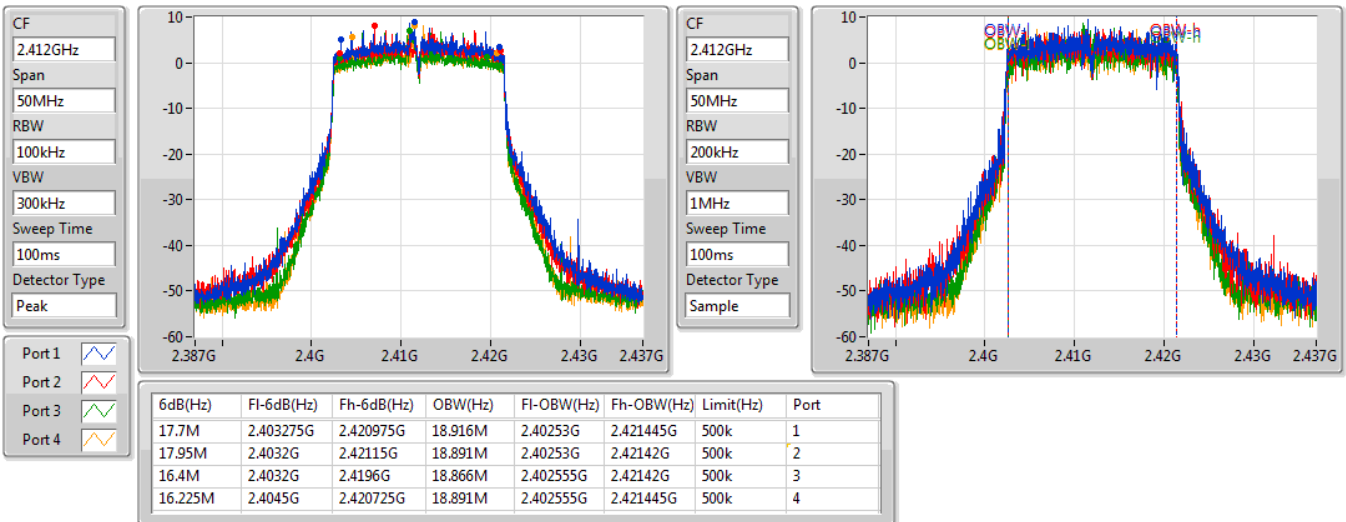
Result

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

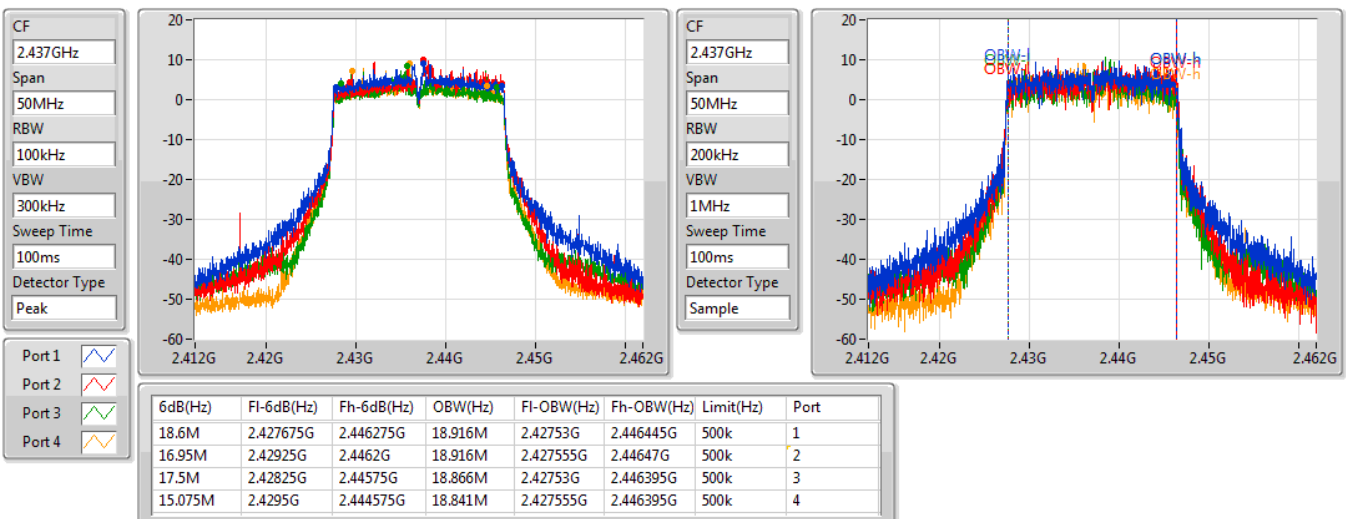
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
2412MHz

09/07/2019

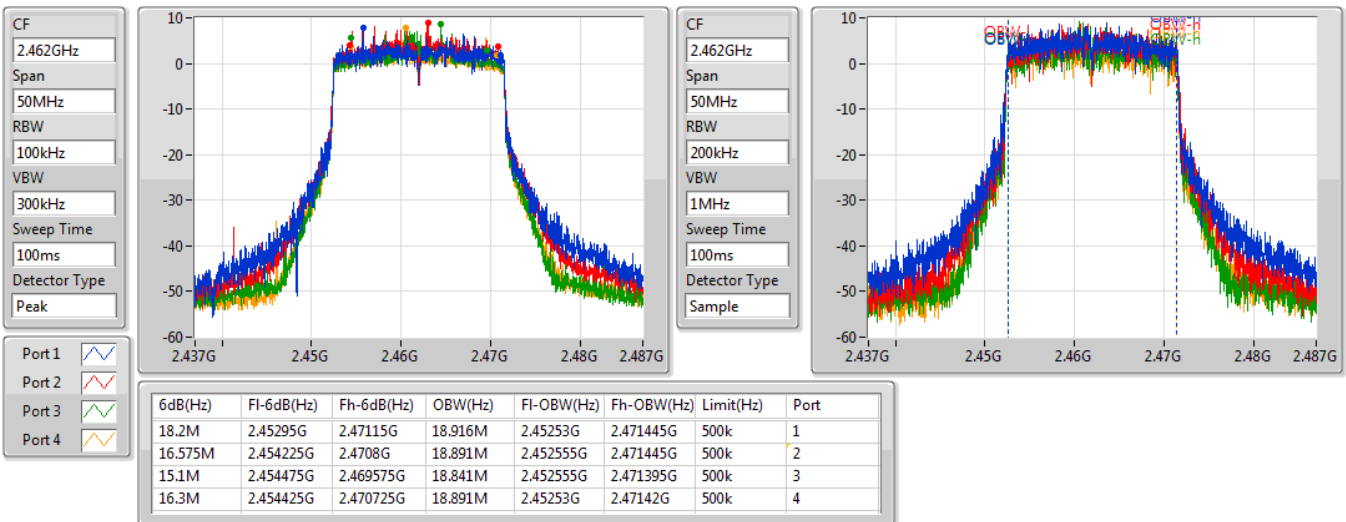

802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
2437MHz

09/07/2019

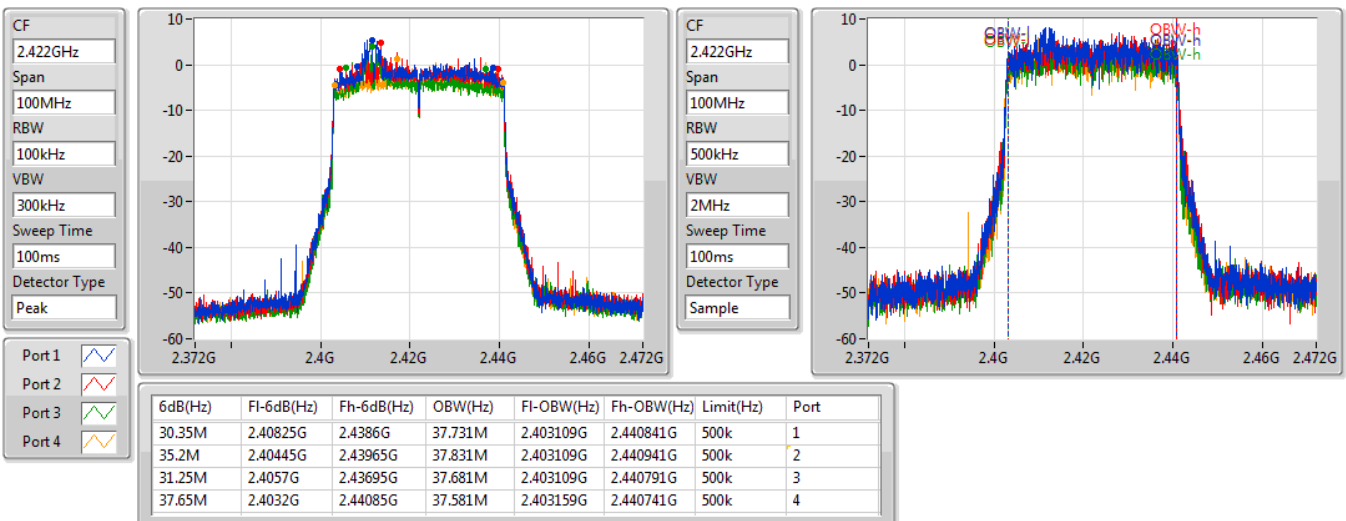


802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
2462MHz

09/07/2019

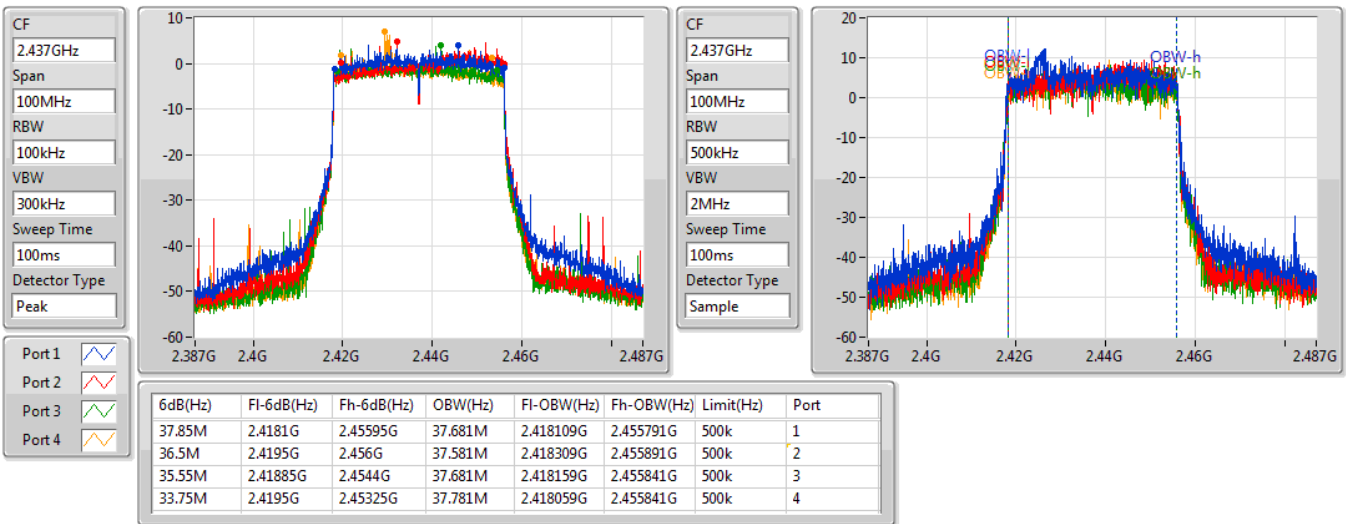

802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
2422MHz

09/07/2019

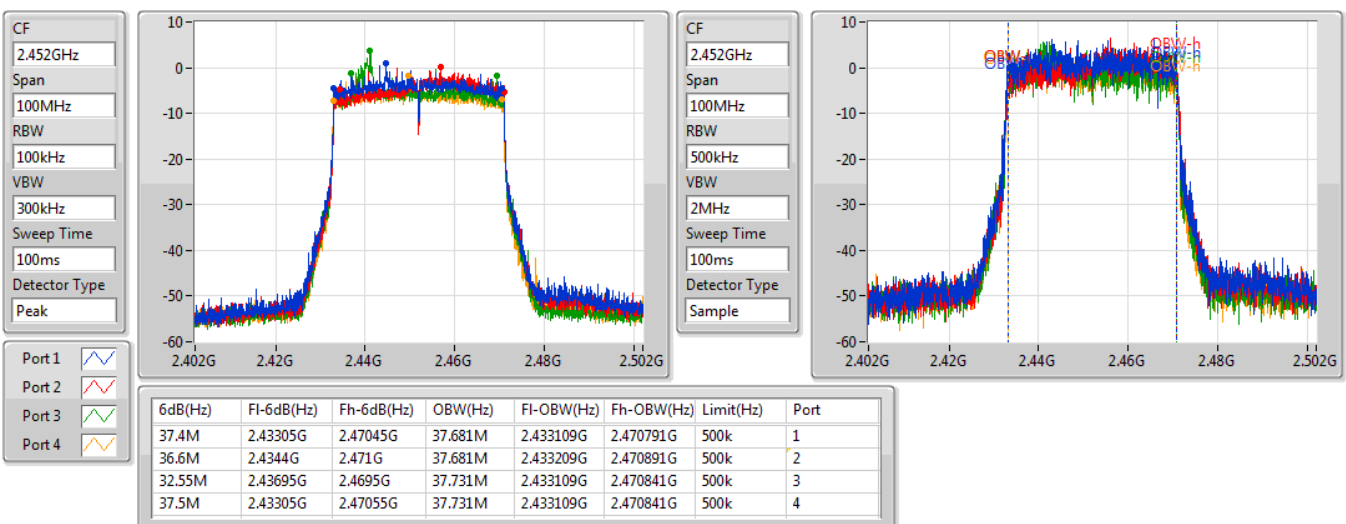


802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
2437MHz

09/07/2019


802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
2452MHz

09/07/2019



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;

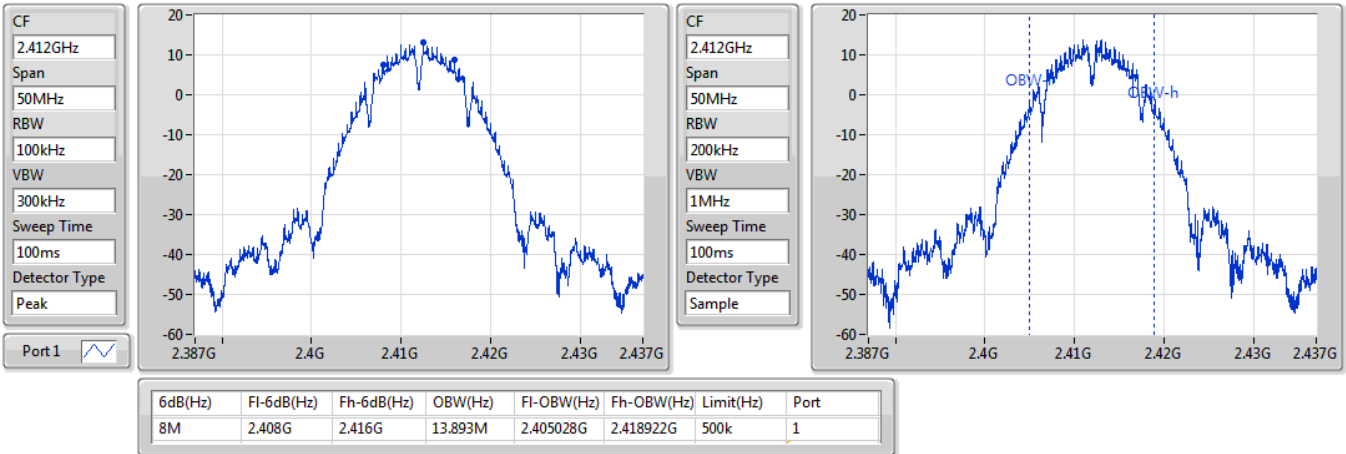
Result

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

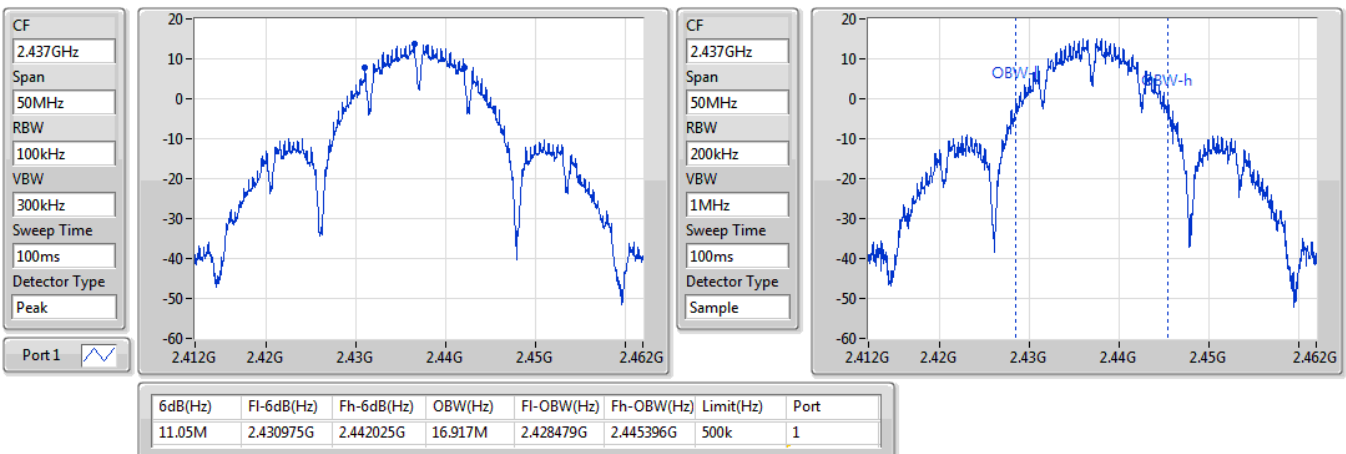
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

802.11b_Nss1,(1Mbps)_1TX
EBW
2412MHz

19/07/2019

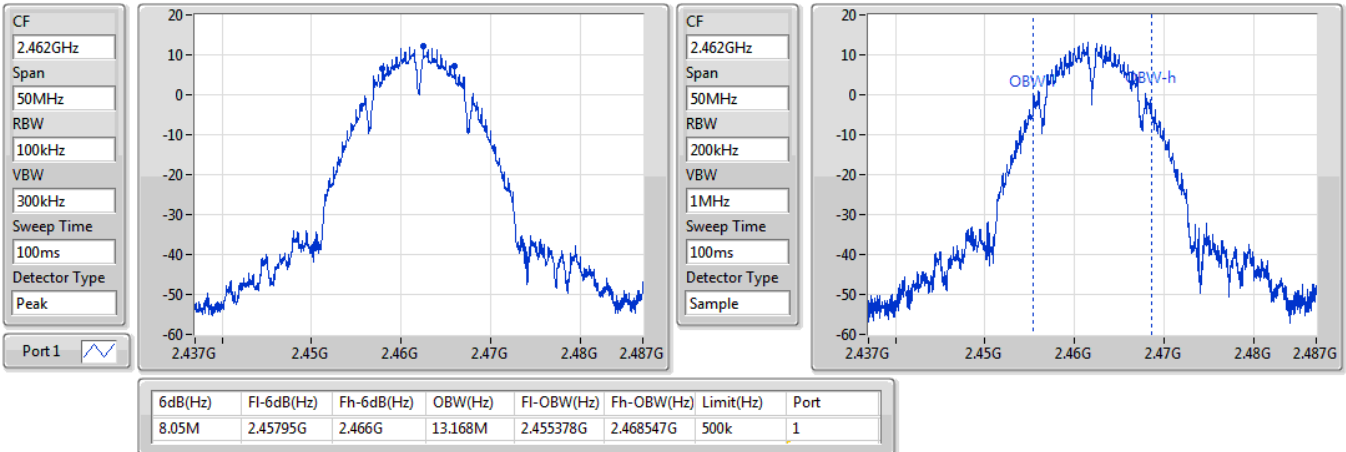

802.11b_Nss1,(1Mbps)_1TX
EBW
2437MHz

19/07/2019

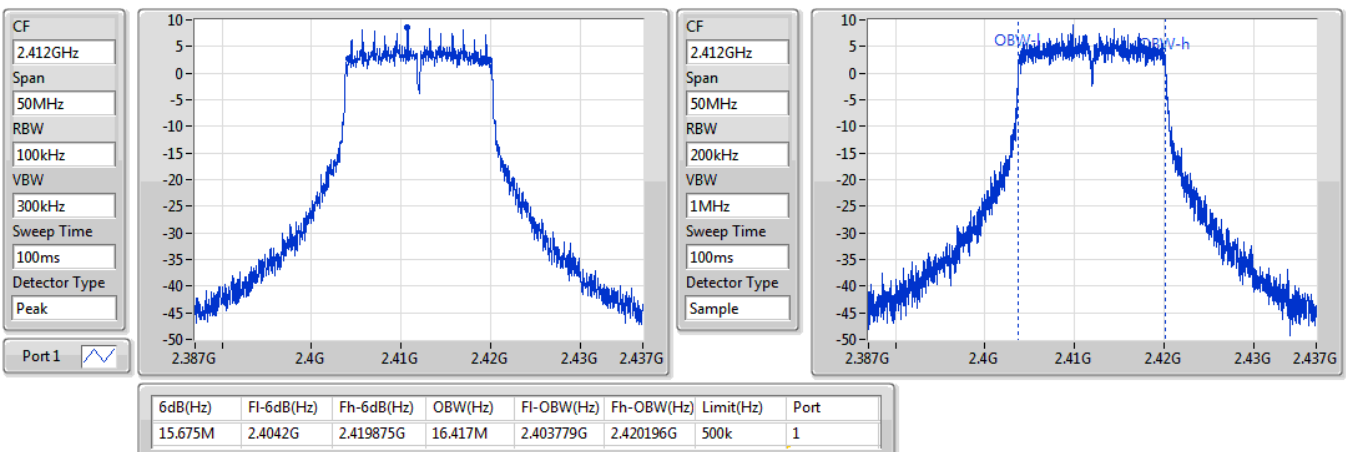


802.11b_Nss1,(1Mbps)_1TX
EBW
2462MHz

19/07/2019

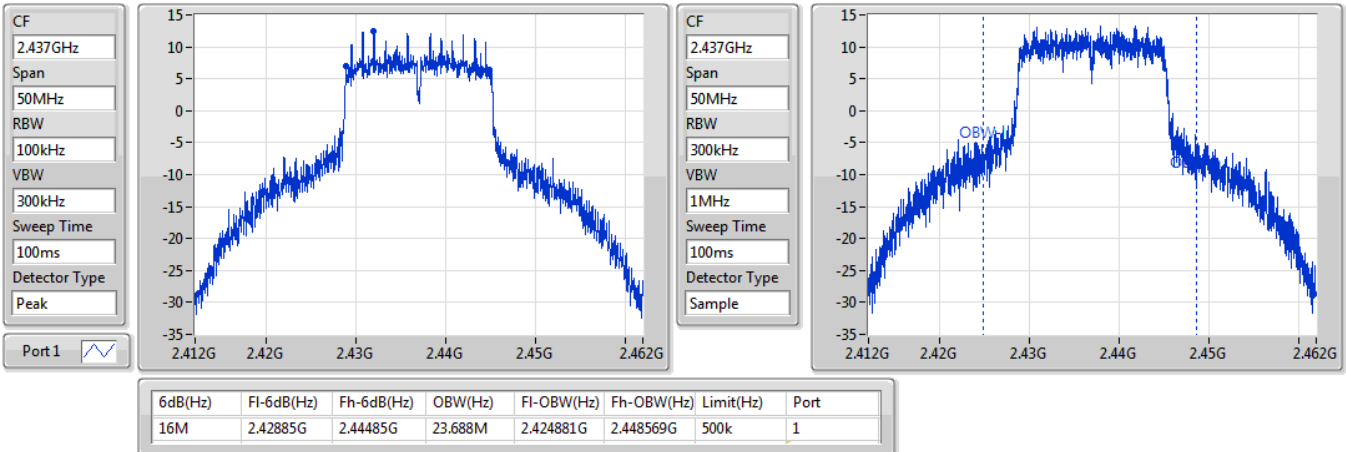

802.11g_Nss1,(6Mbps)_1TX
EBW
2412MHz

19/07/2019

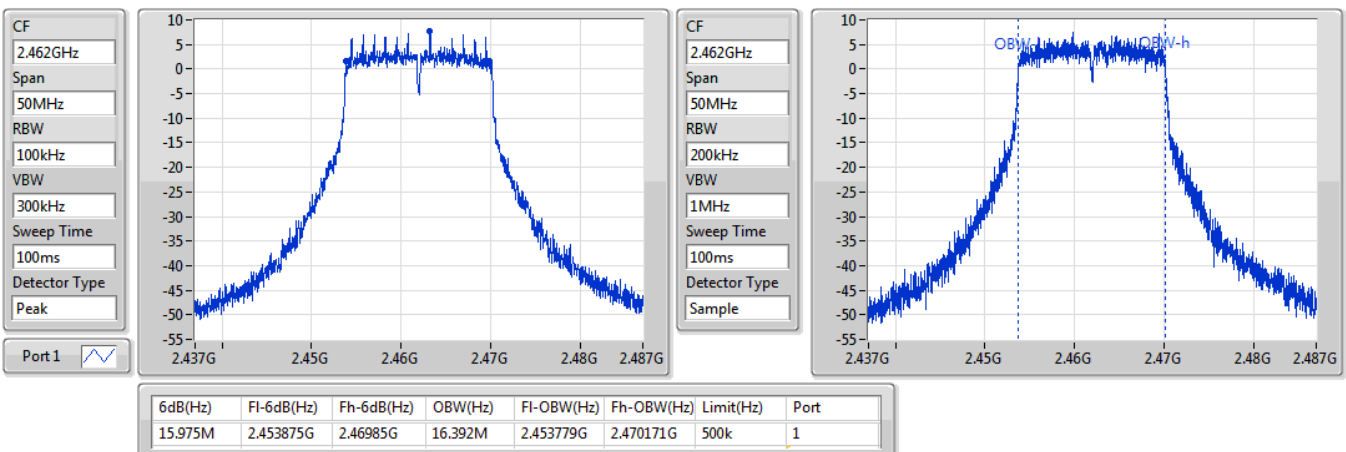


802.11g_Nss1,(6Mbps)_1TX
EBW
2437MHz

19/07/2019

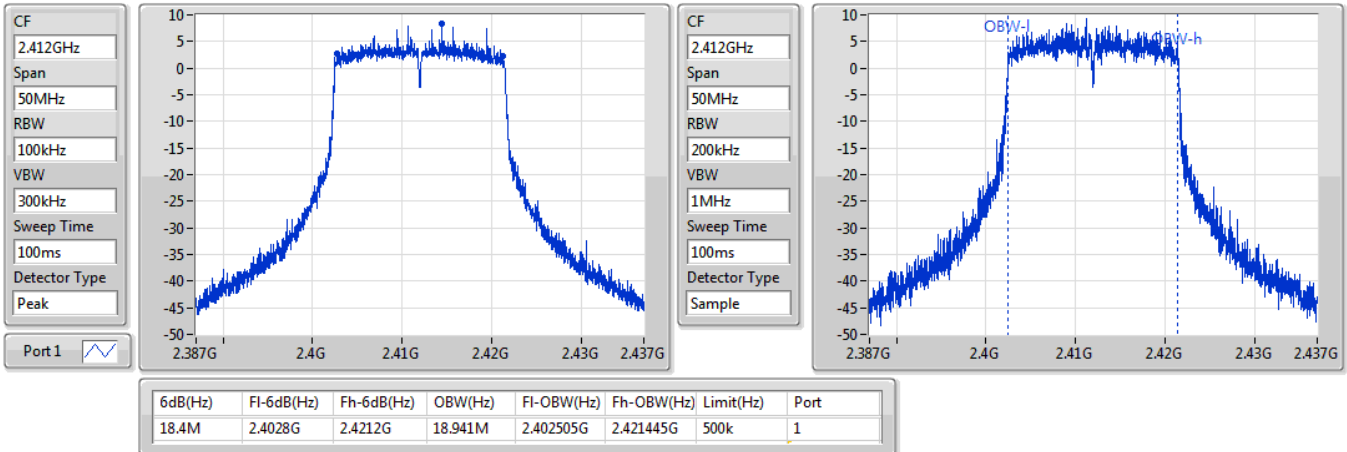

802.11g_Nss1,(6Mbps)_1TX
EBW
2462MHz

19/07/2019

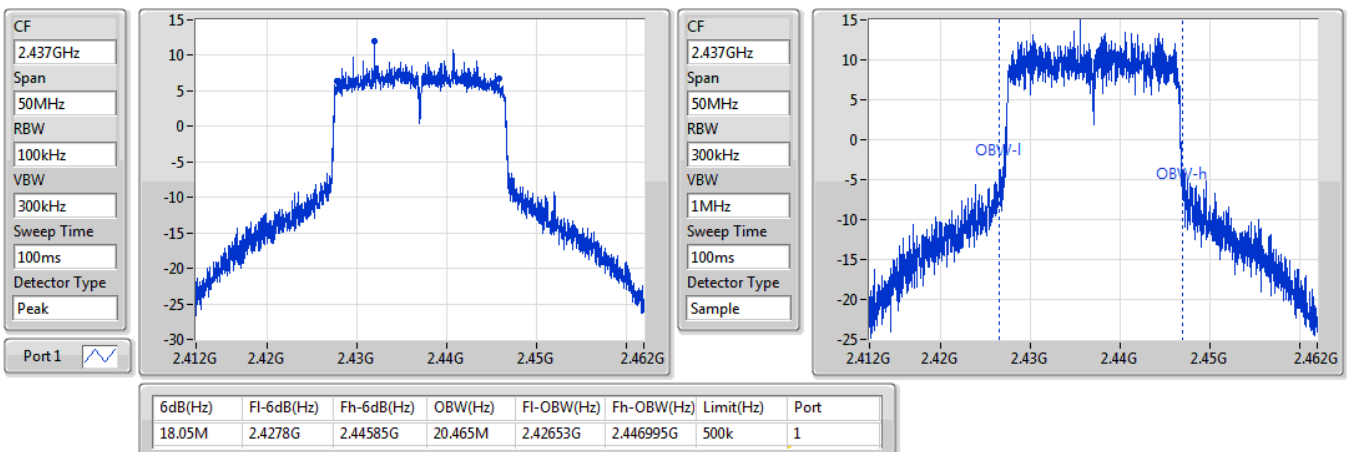


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
2412MHz

19/07/2019

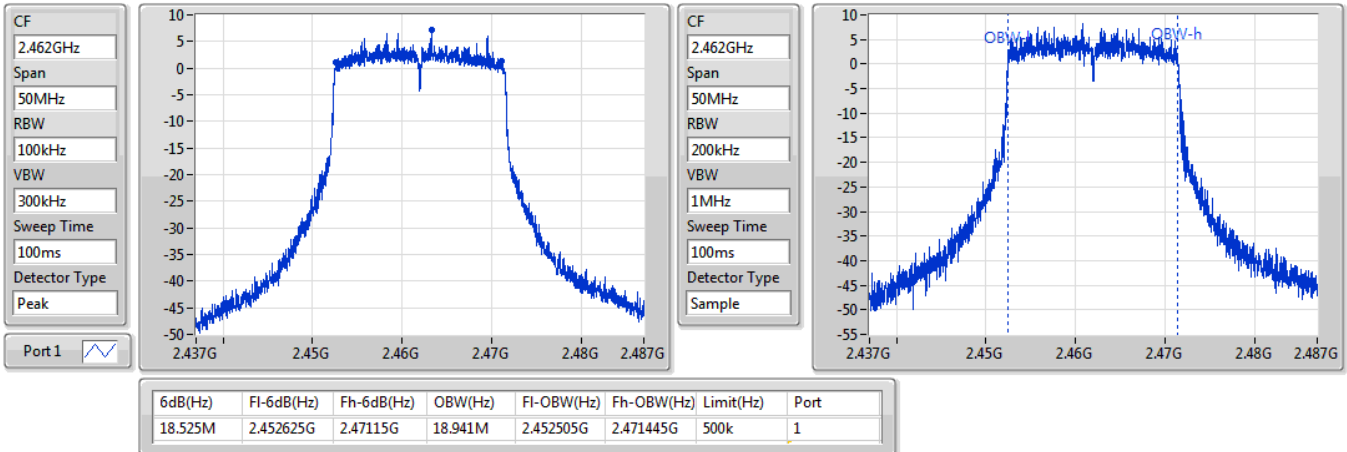

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
2437MHz

19/07/2019

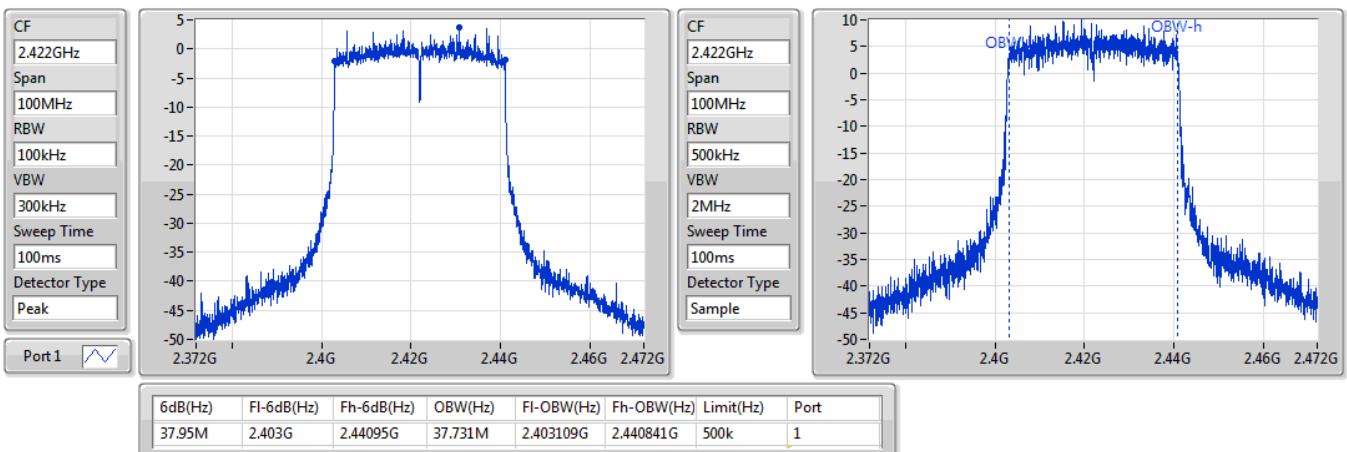


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
2462MHz

19/07/2019

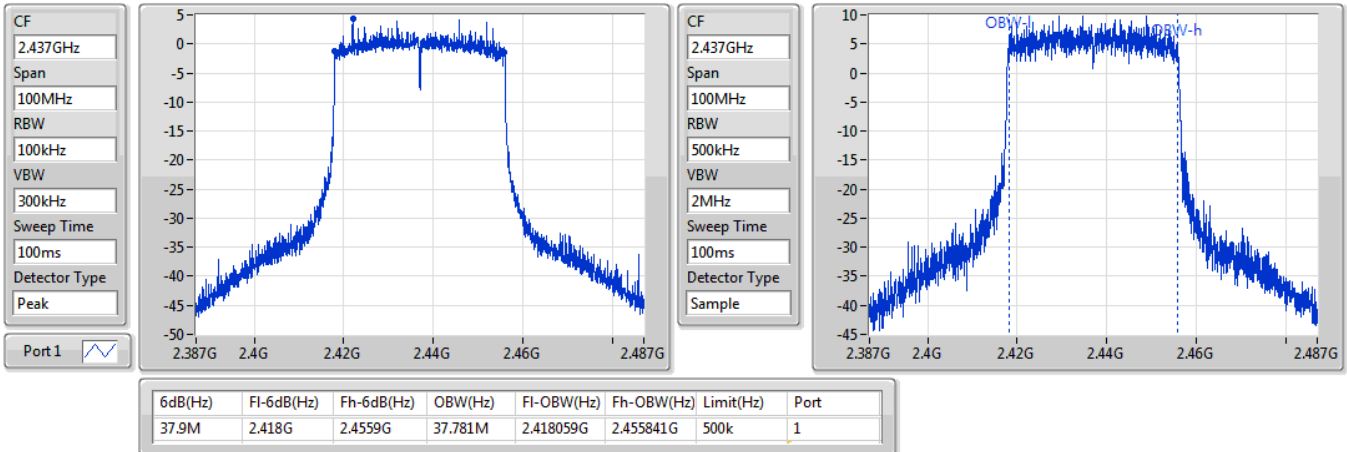

802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
2422MHz

19/07/2019

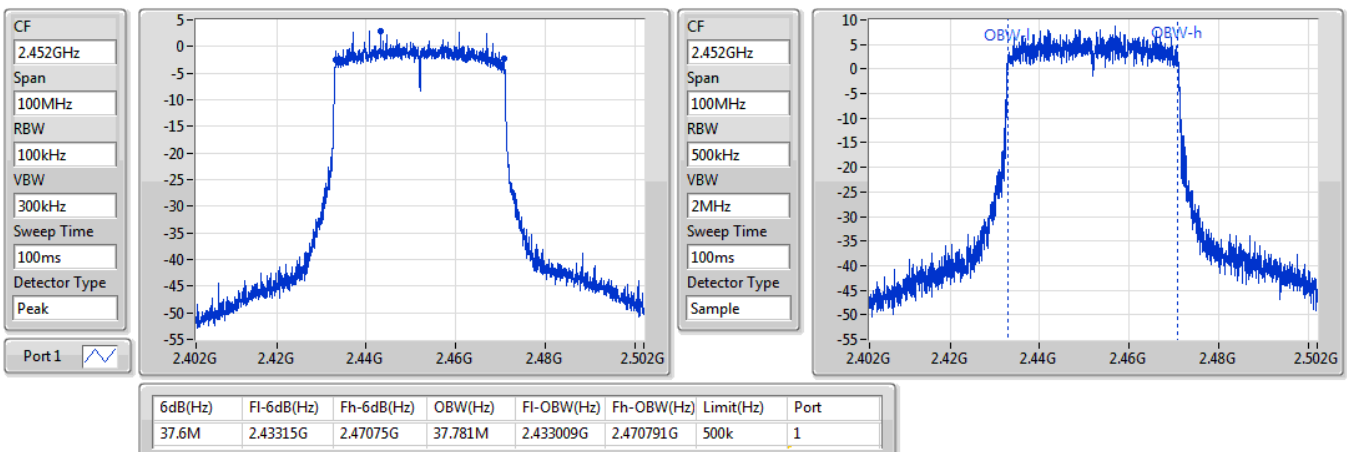


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
2437MHz

19/07/2019


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
2452MHz

19/07/2019



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;

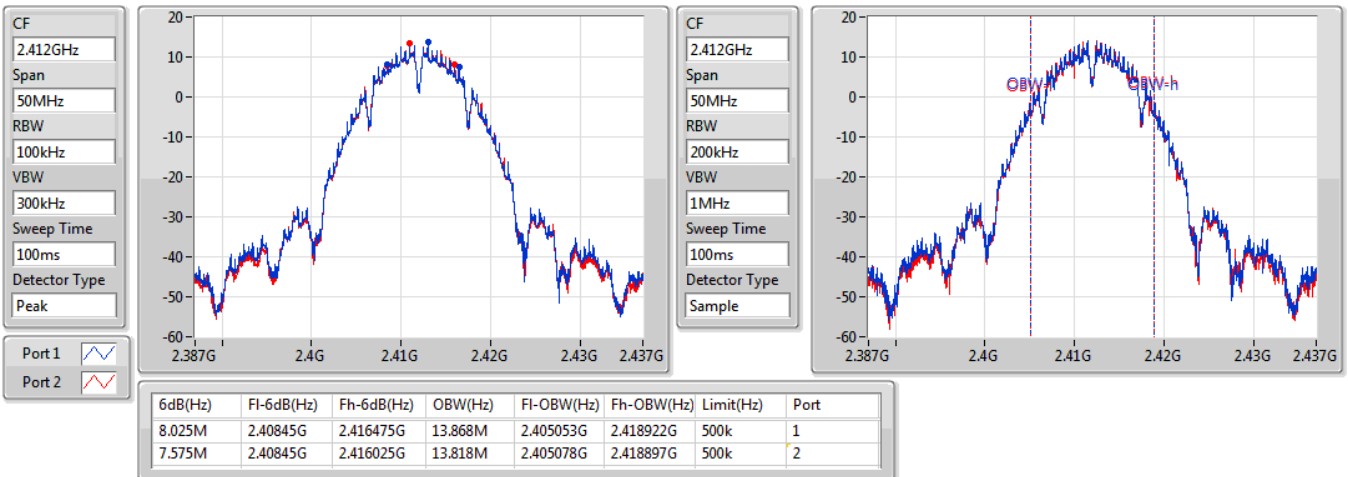
Result

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

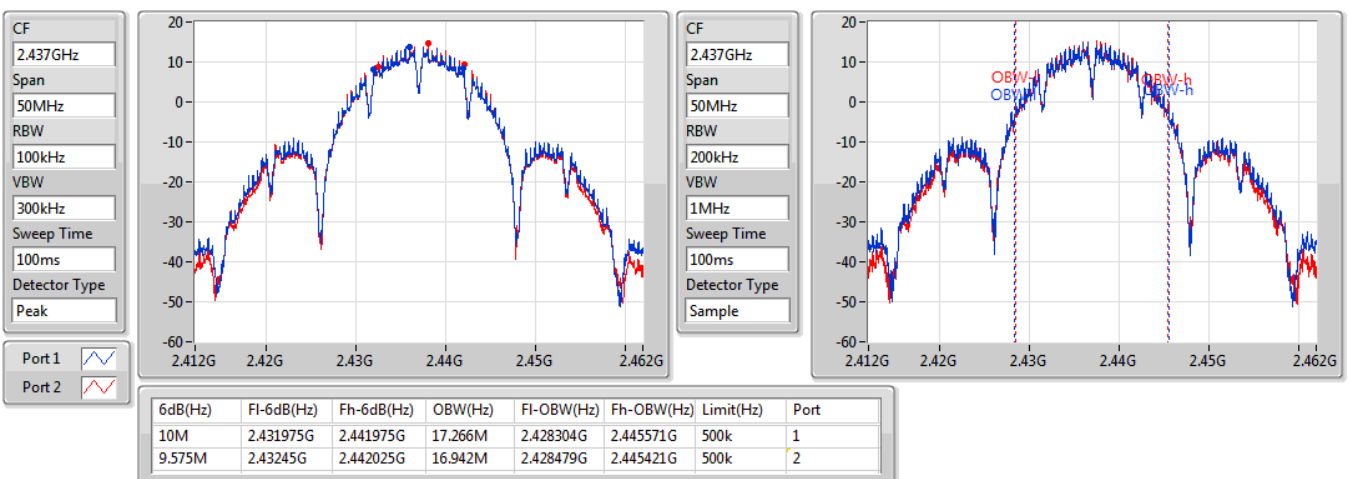
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

802.11b_Nss1,(1Mbps)_2TX
EBW
2412MHz

19/07/2019

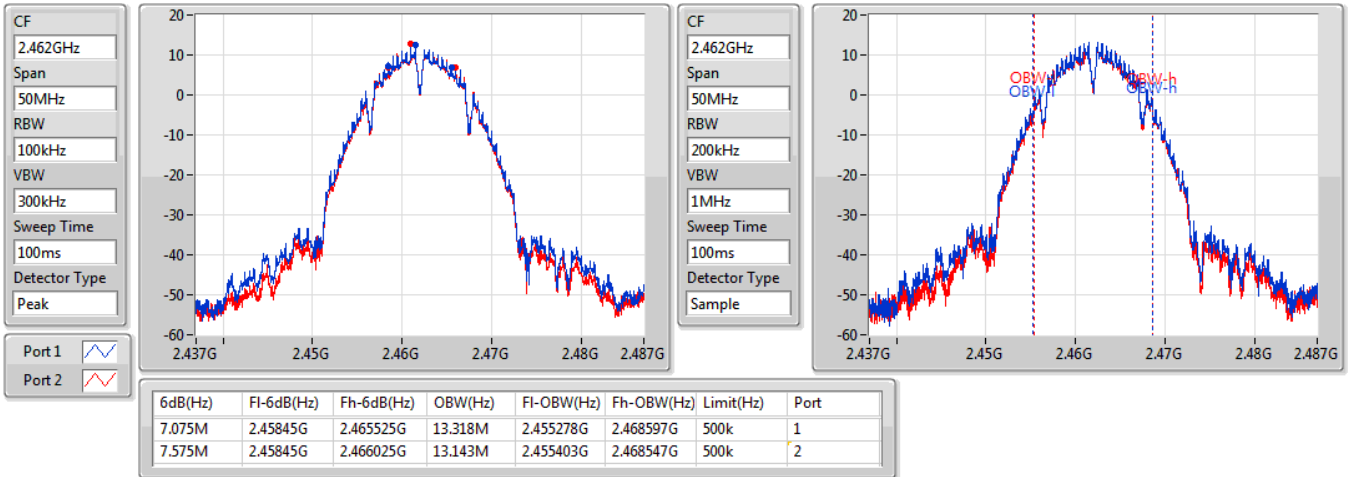

802.11b_Nss1,(1Mbps)_2TX
EBW
2437MHz

19/07/2019

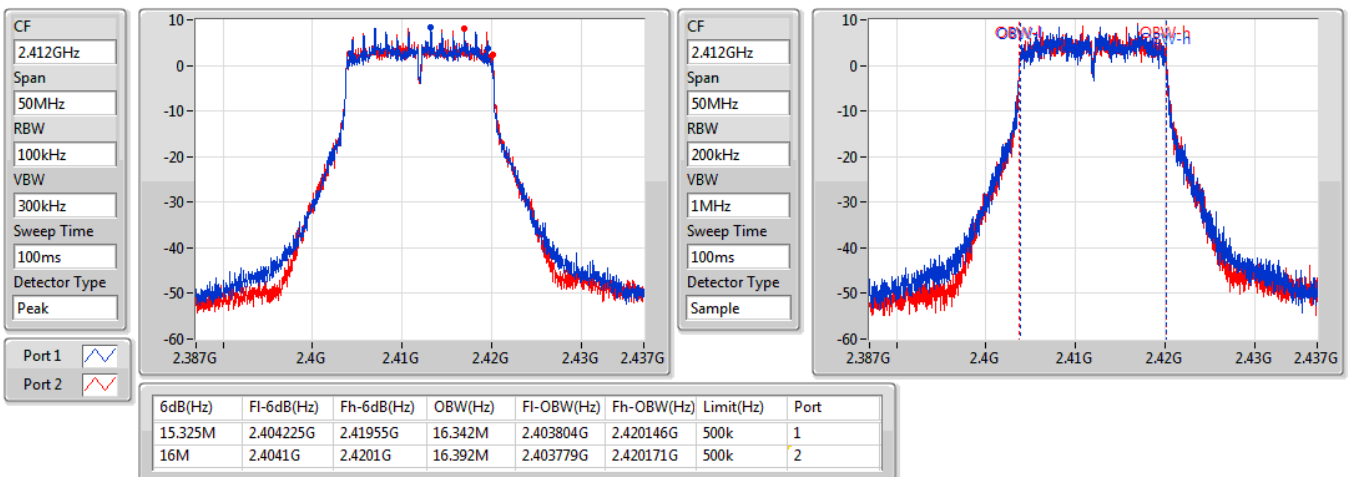


802.11b_Nss1,(1Mbps)_2TX
EBW
2462MHz

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802.11g_Nss1,(6Mbps)_2TX
EBW
2412MHz

19/07/2019

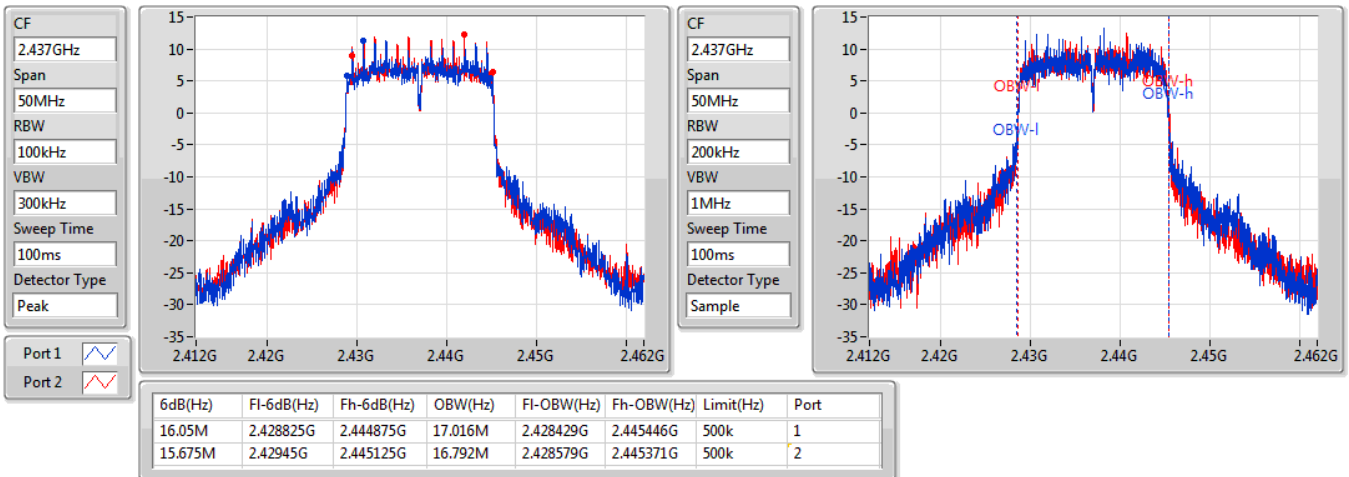


802.11g_Nss1,(6Mbps)_2TX

EBW

2437MHz

19/07/2019

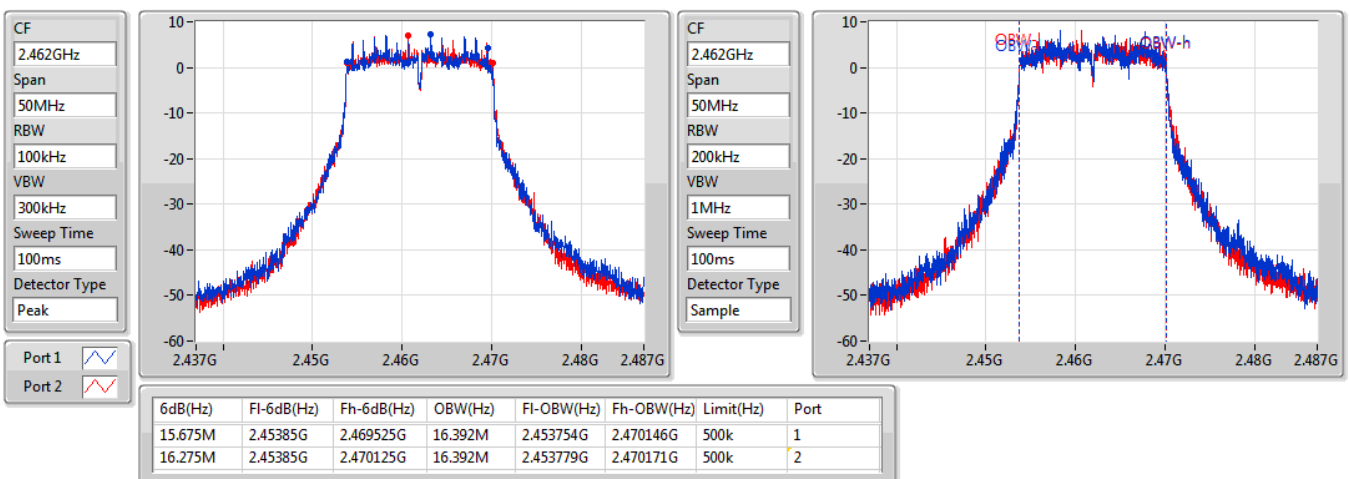


802.11g_Nss1,(6Mbps)_2TX

EBW

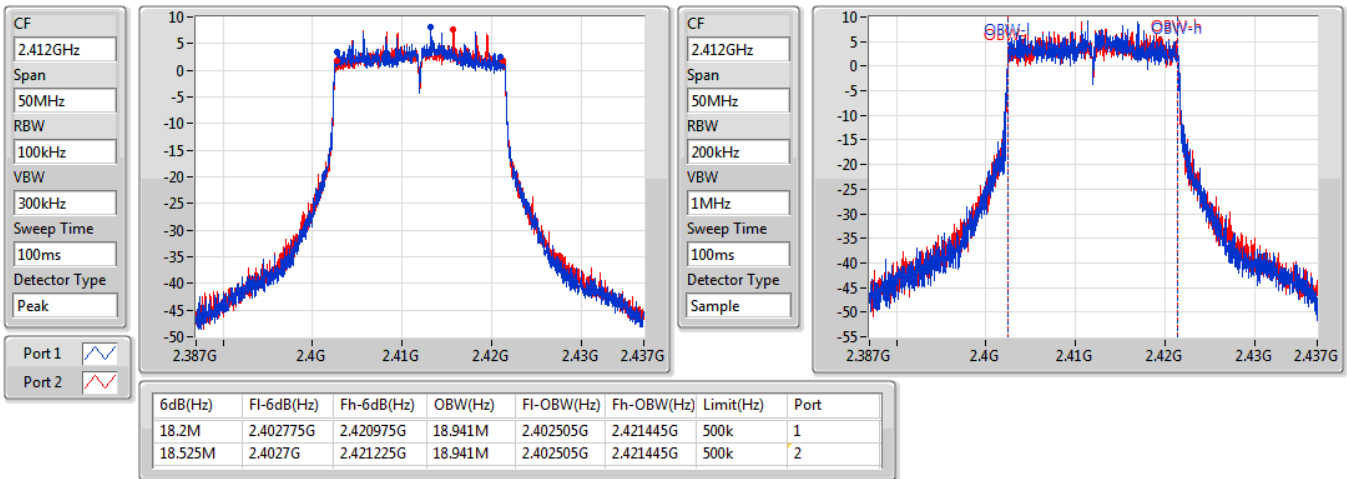
2462MHz

19/07/2019

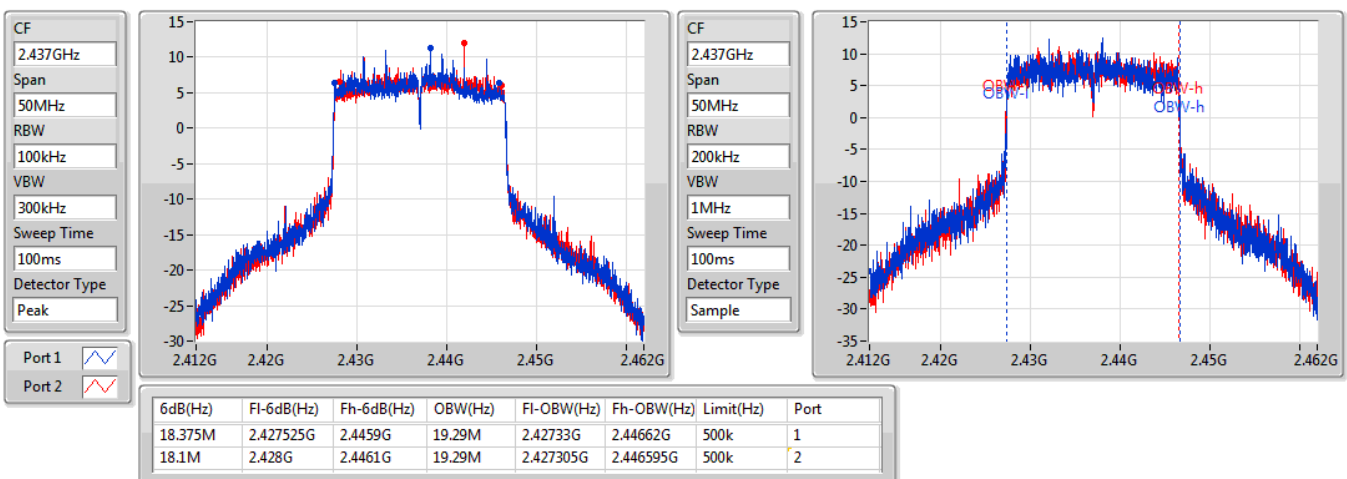


802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
2412MHz

19/07/2019

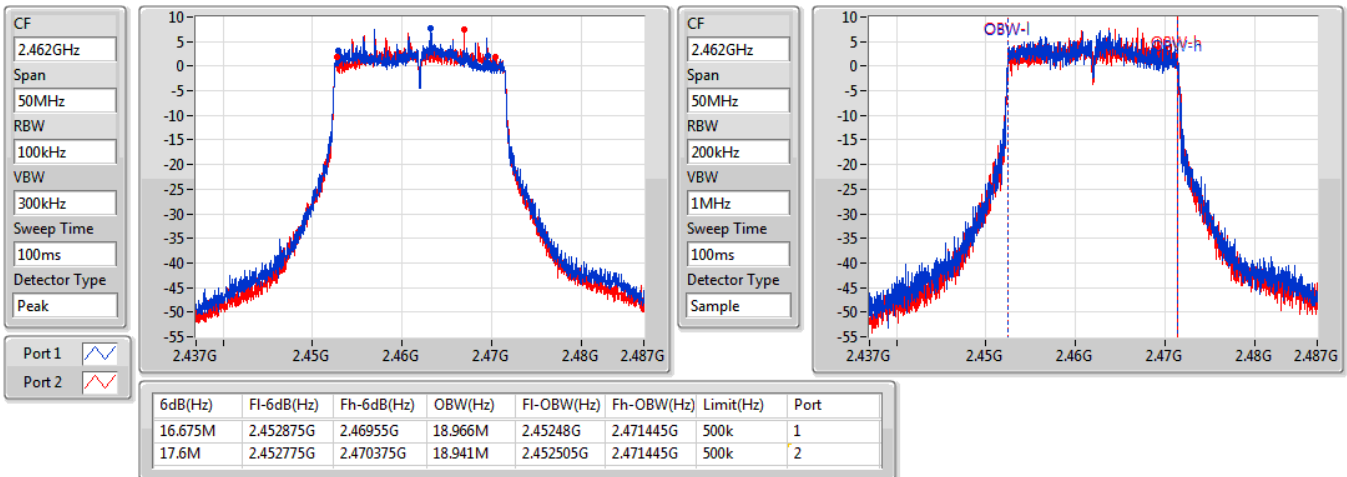

802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
2437MHz

19/07/2019

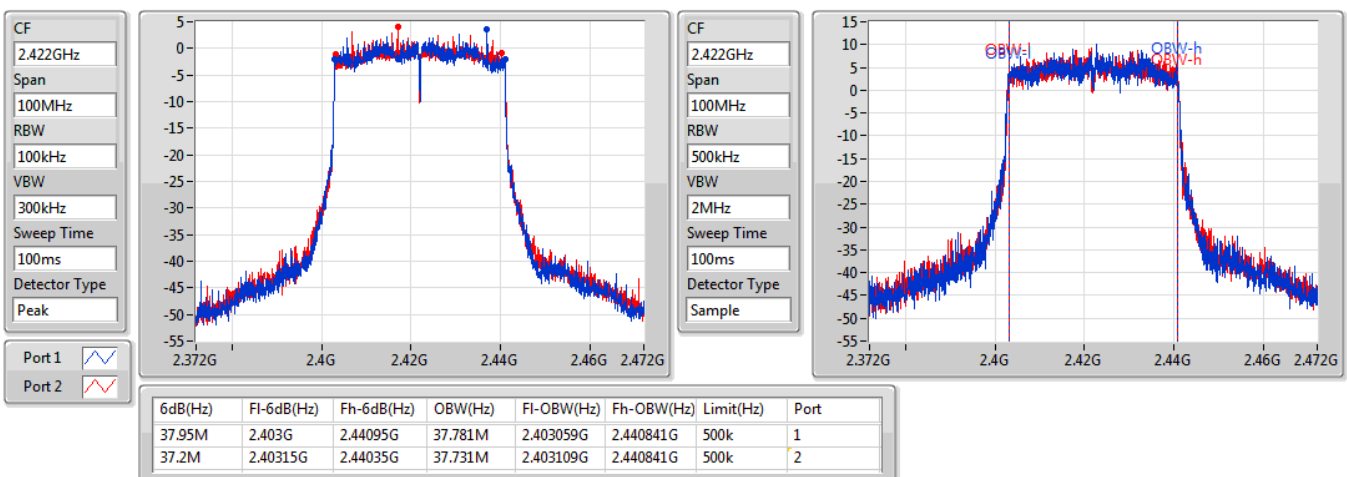


802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
2462MHz

19/07/2019

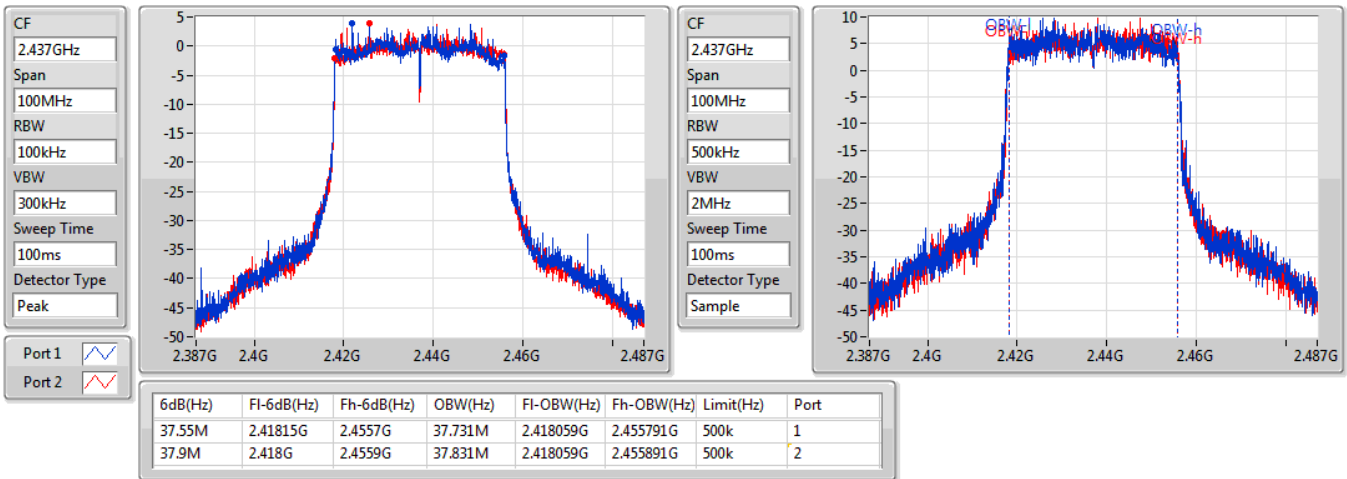

802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
2422MHz

19/07/2019

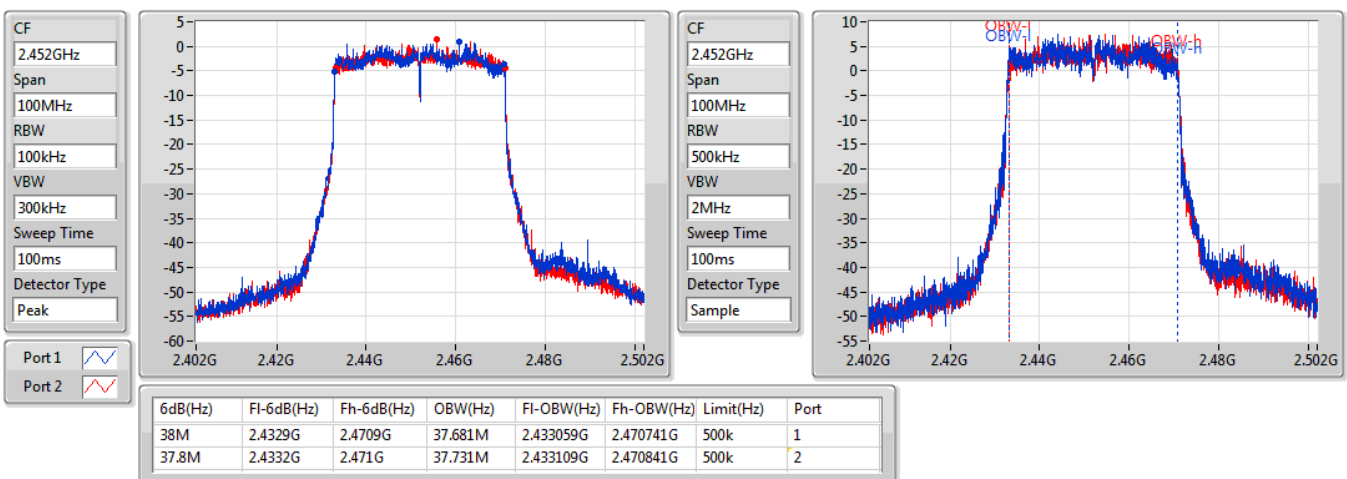


802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
2437MHz

19/07/2019


802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
2452MHz

19/07/2019



**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;

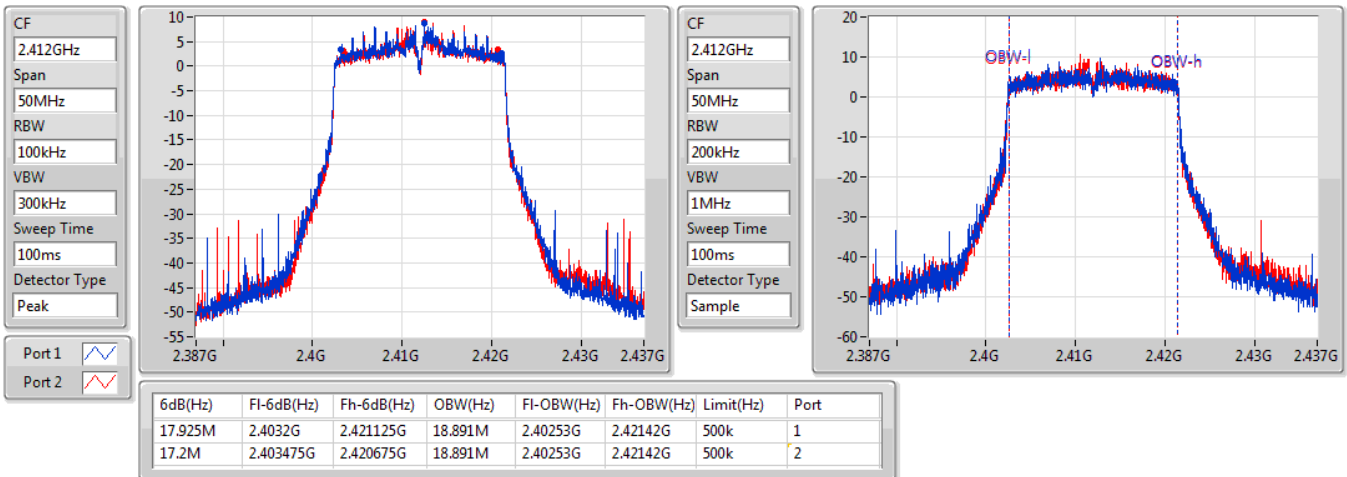
Result

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

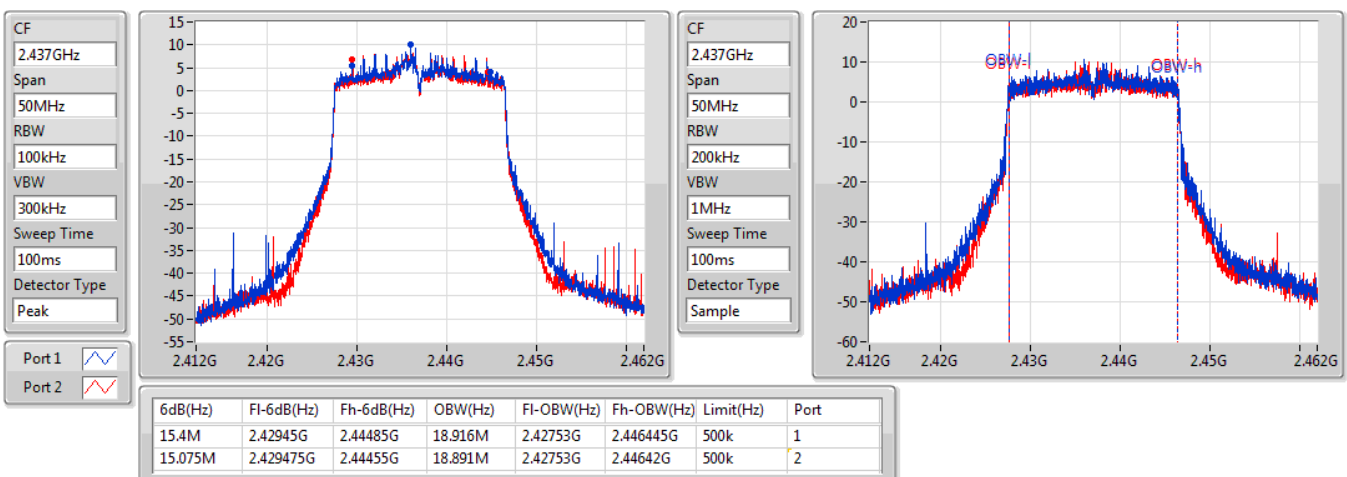
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

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

19/07/2019

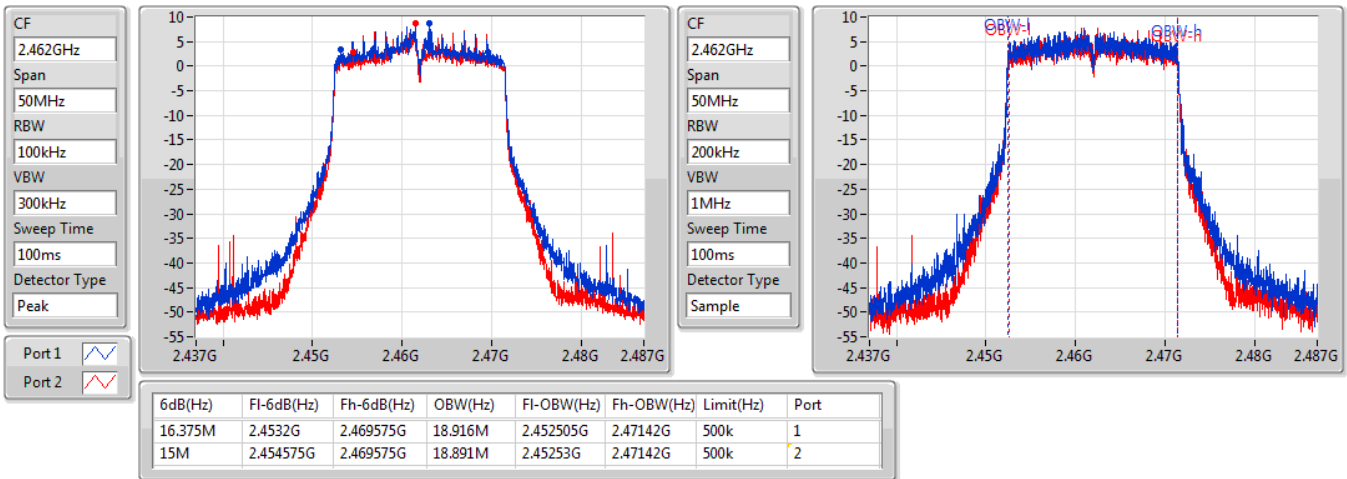

802.11ax HEW20-BF_Nss1,(MCS0)_2TX
EBW
2437MHz

19/07/2019

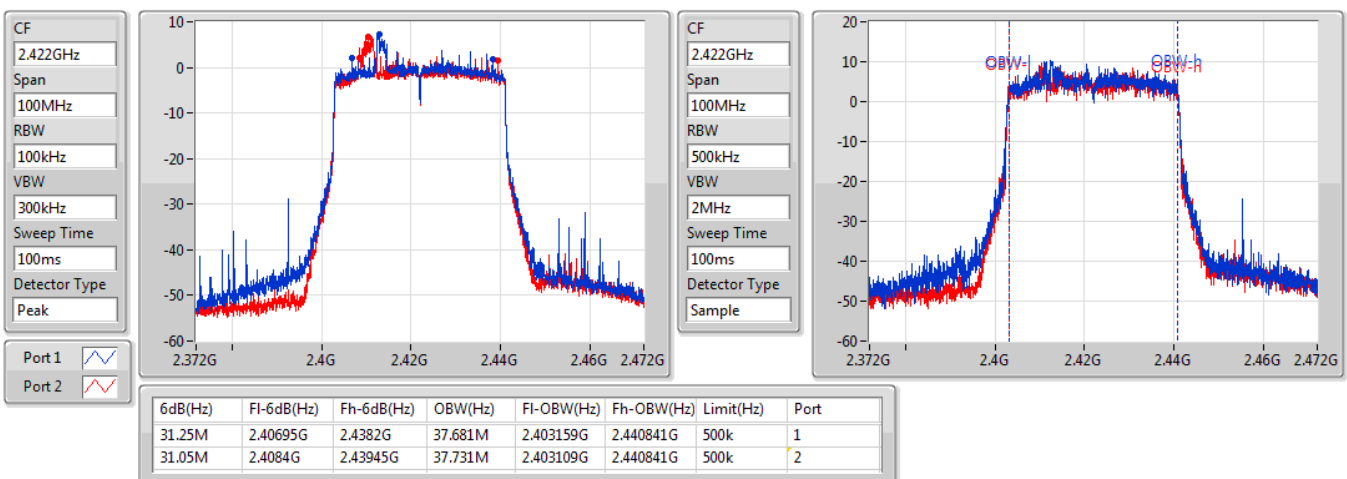


802.11ax HEW20-BF_Nss1,(MCS0)_2TX
EBW
2462MHz

19/07/2019

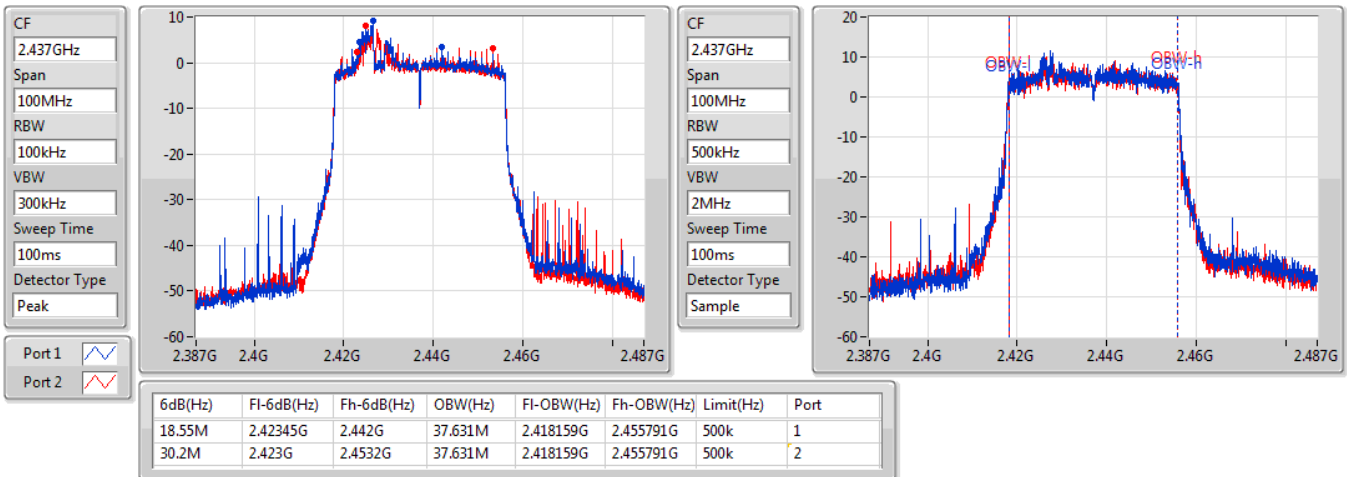

802.11ax HEW40-BF_Nss1,(MCS0)_2TX
EBW
2422MHz

19/07/2019

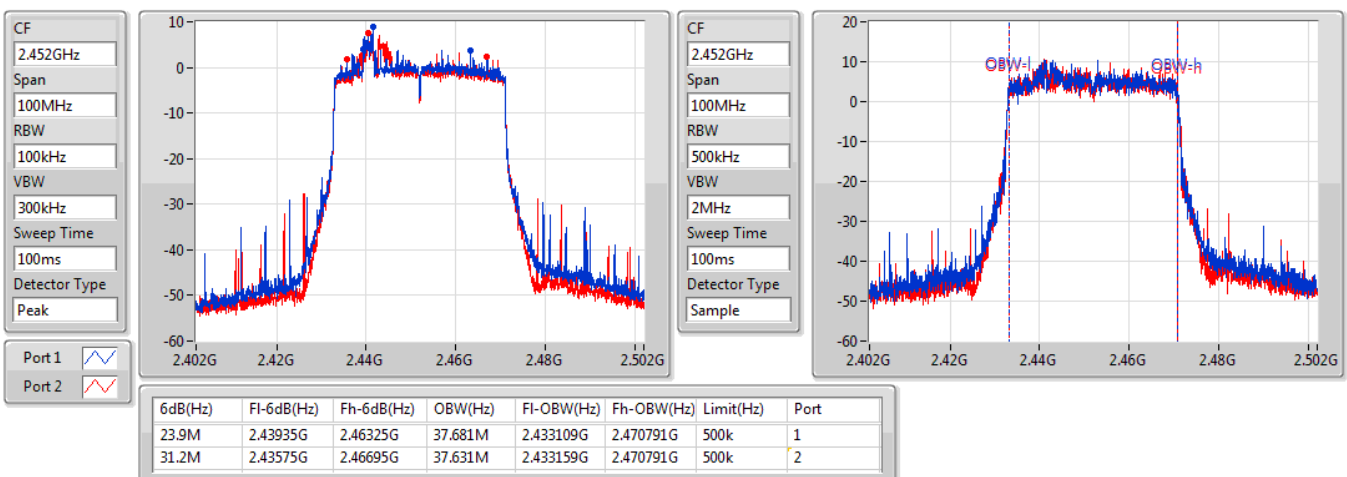


802.11ax HEW40-BF_Nss1,(MCS0)_2TX
EBW
2437MHz

19/07/2019


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

19/07/2019



**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;

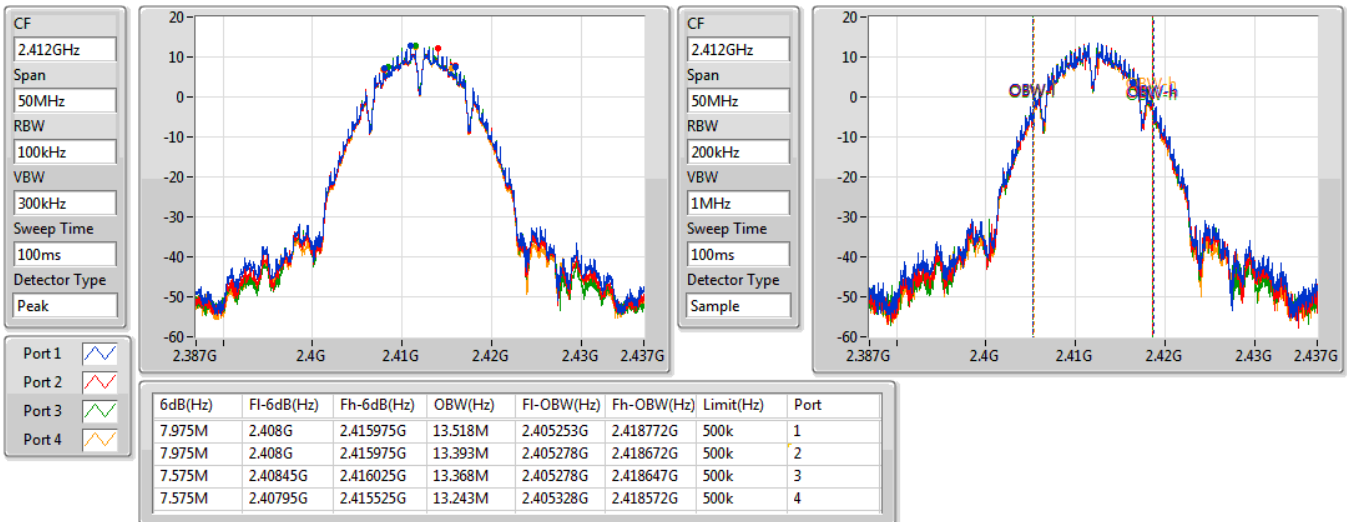
Result

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

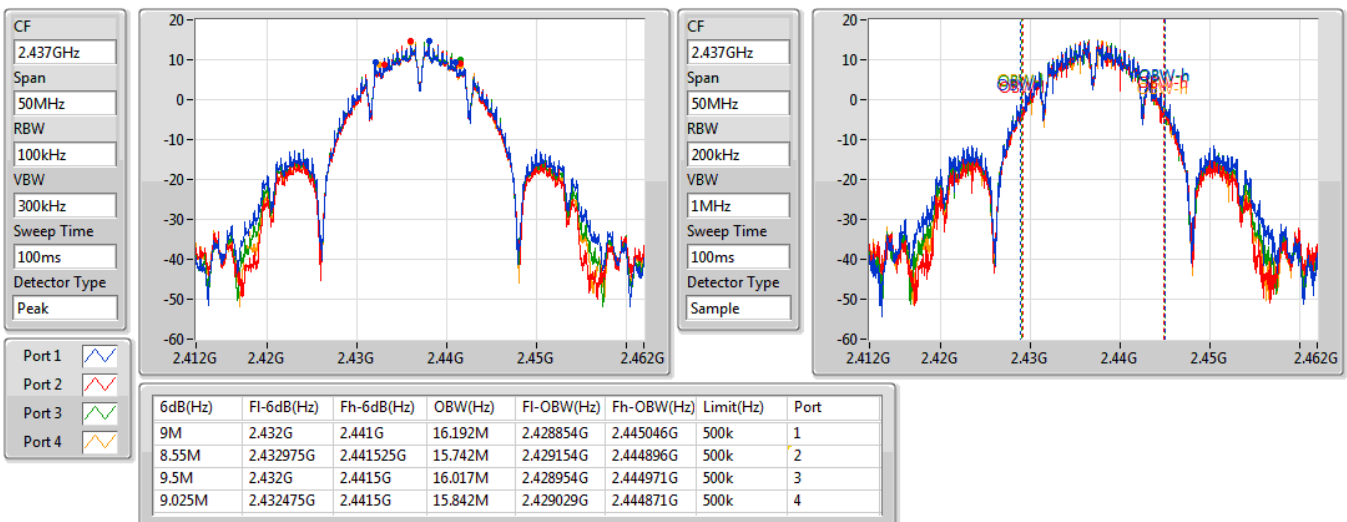
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

802.11b_Nss1,(1Mbps)_4TX
EBW
2412MHz

19/07/2019

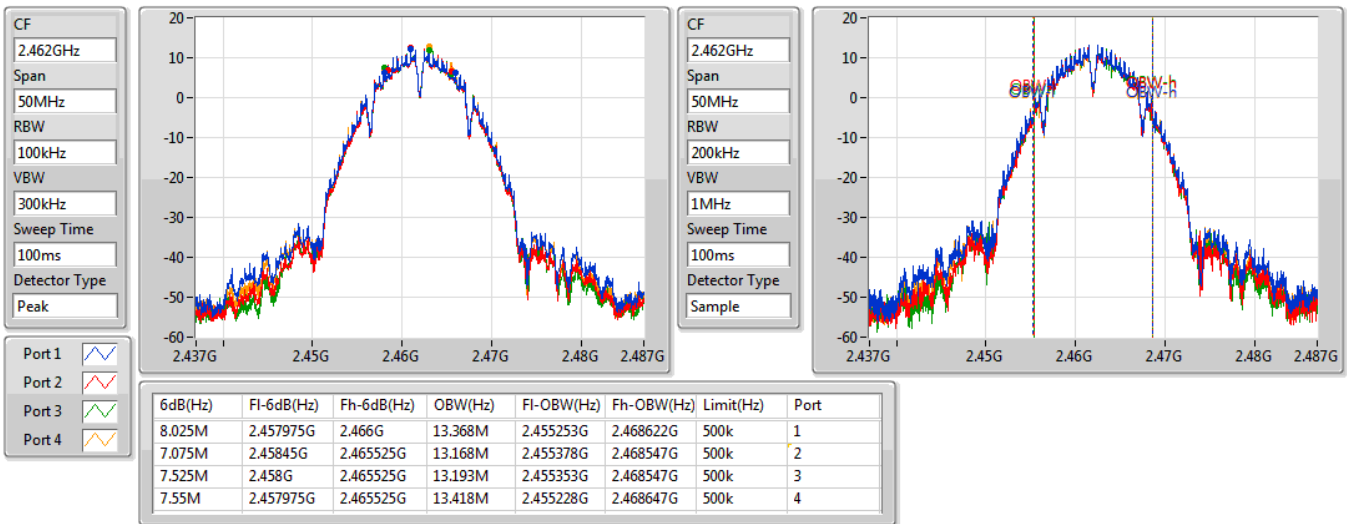

802.11b_Nss1,(1Mbps)_4TX
EBW
2437MHz

19/07/2019

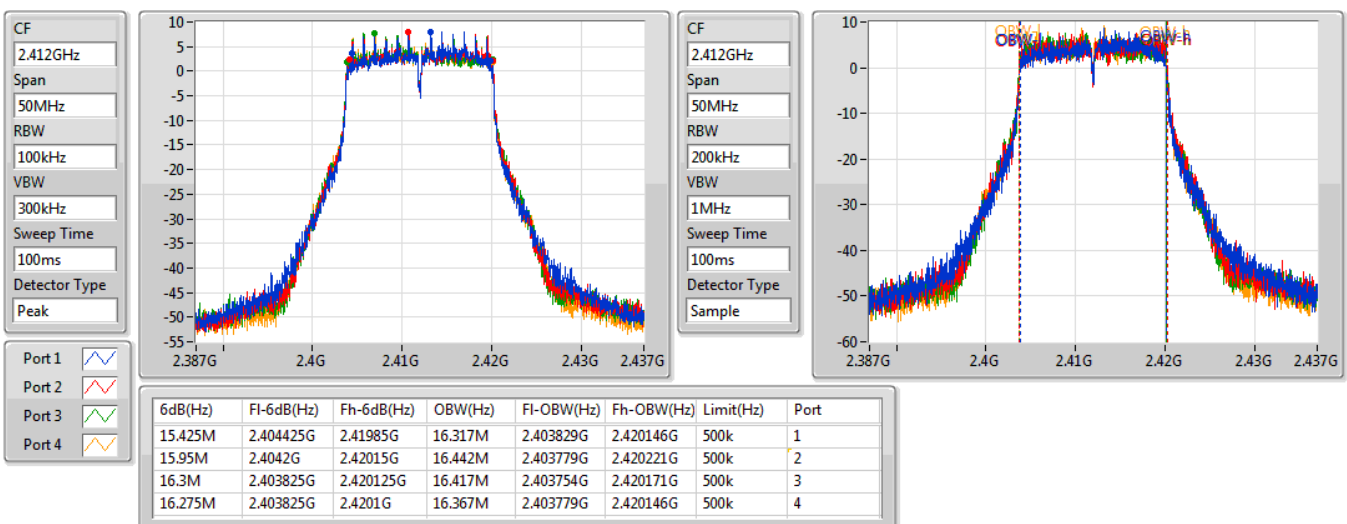


802.11b_Nss1,(1Mbps)_4TX
EBW
2462MHz

19/07/2019

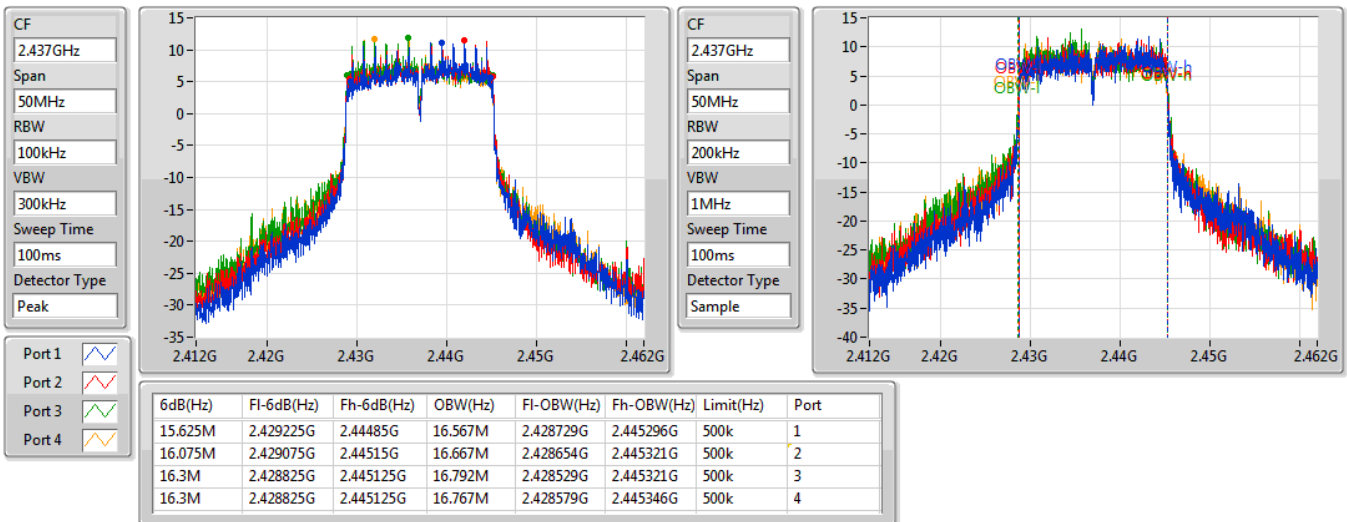

802.11g_Nss1,(6Mbps)_4TX
EBW
2412MHz

19/07/2019

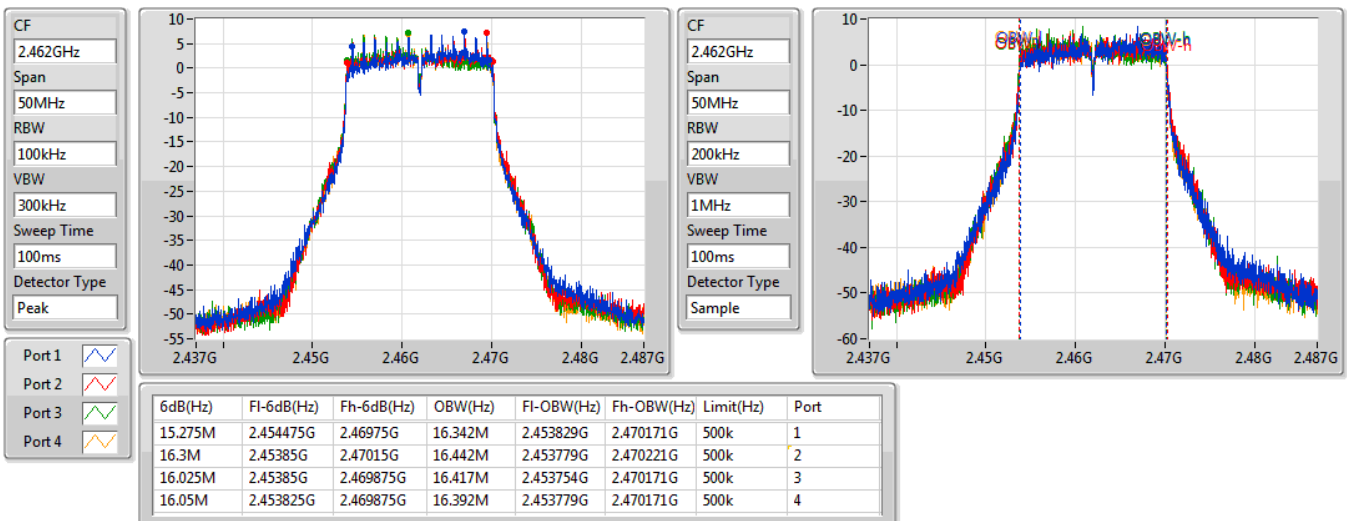


802.11g_Nss1,(6Mbps)_4TX
EBW
2437MHz

19/07/2019


802.11g_Nss1,(6Mbps)_4TX
EBW
2462MHz

19/07/2019

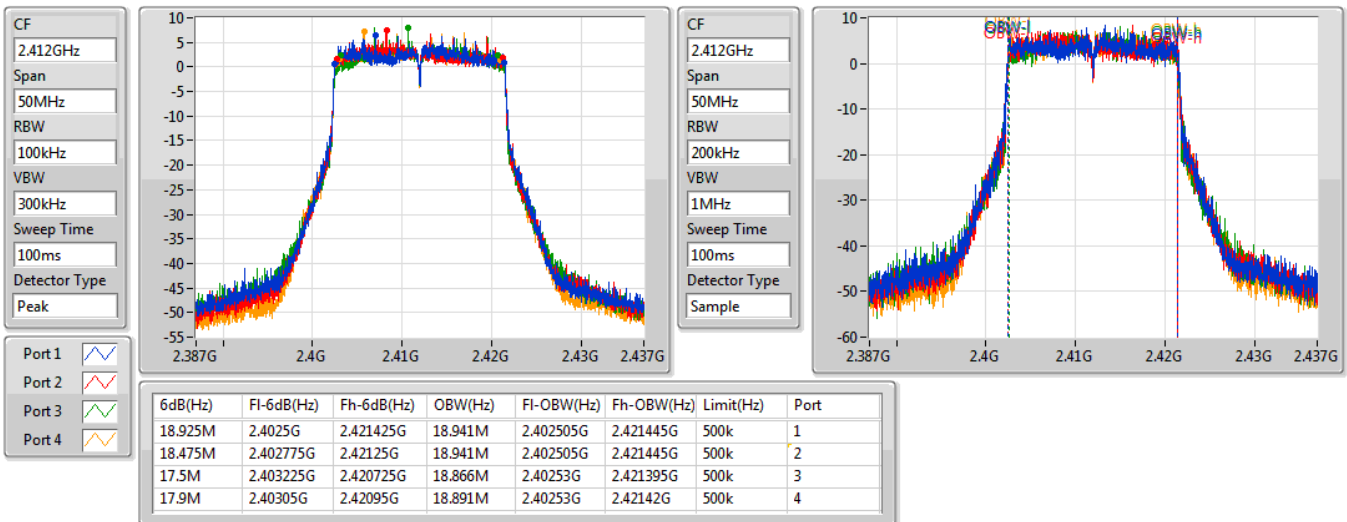


802.11ax HEW20_Nss1,(MCS0)_4TX

EBW

2412MHz

19/07/2019

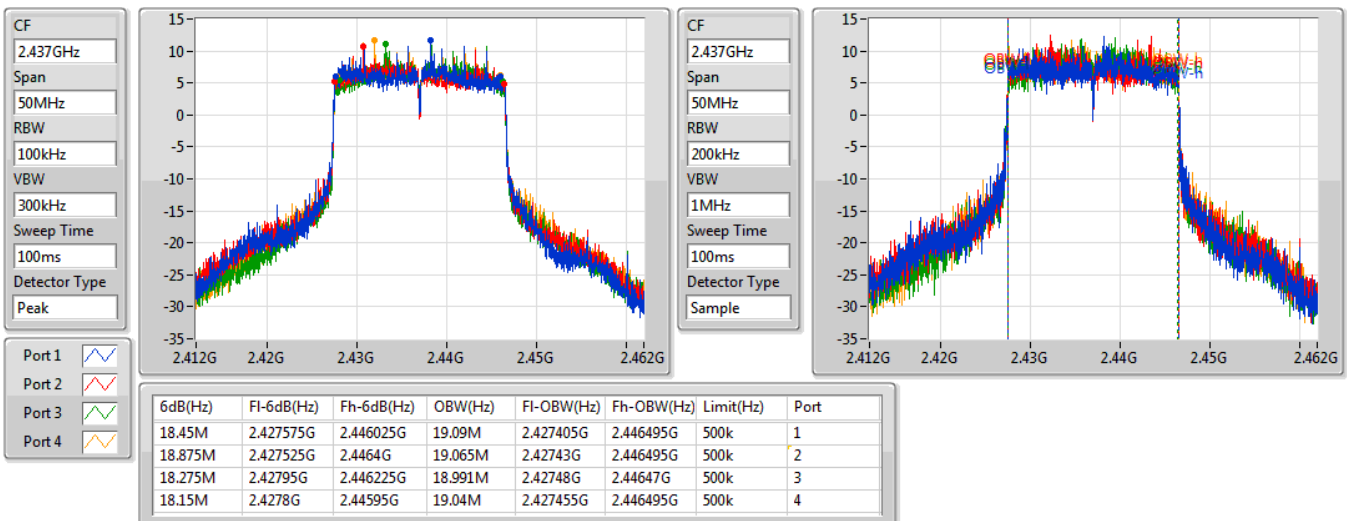


802.11ax HEW20_Nss1,(MCS0)_4TX

EBW

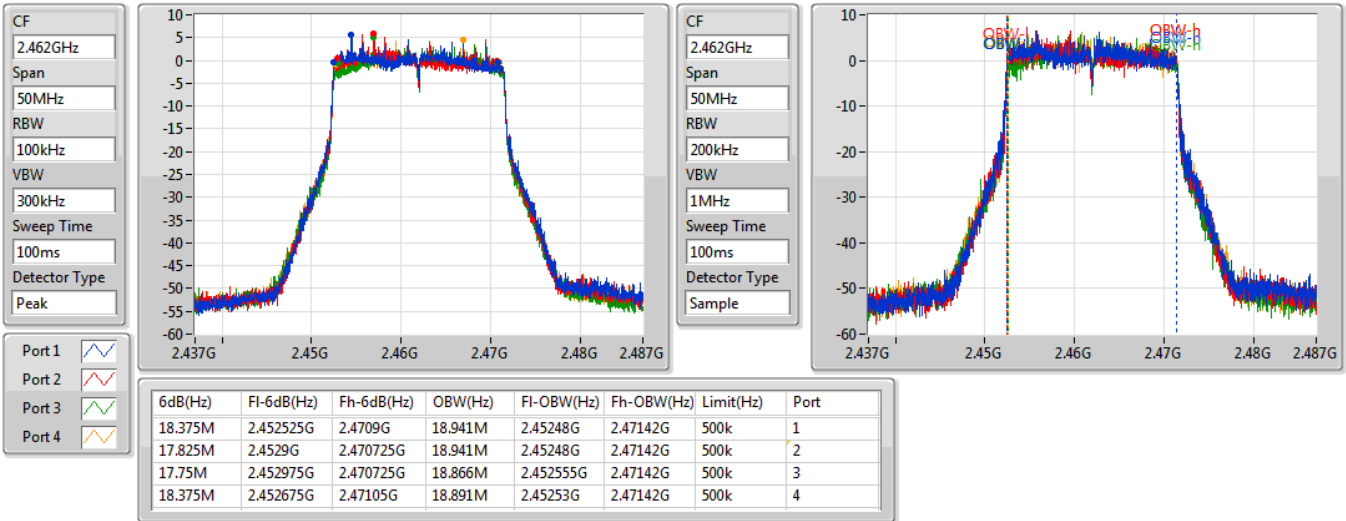
2437MHz

19/07/2019

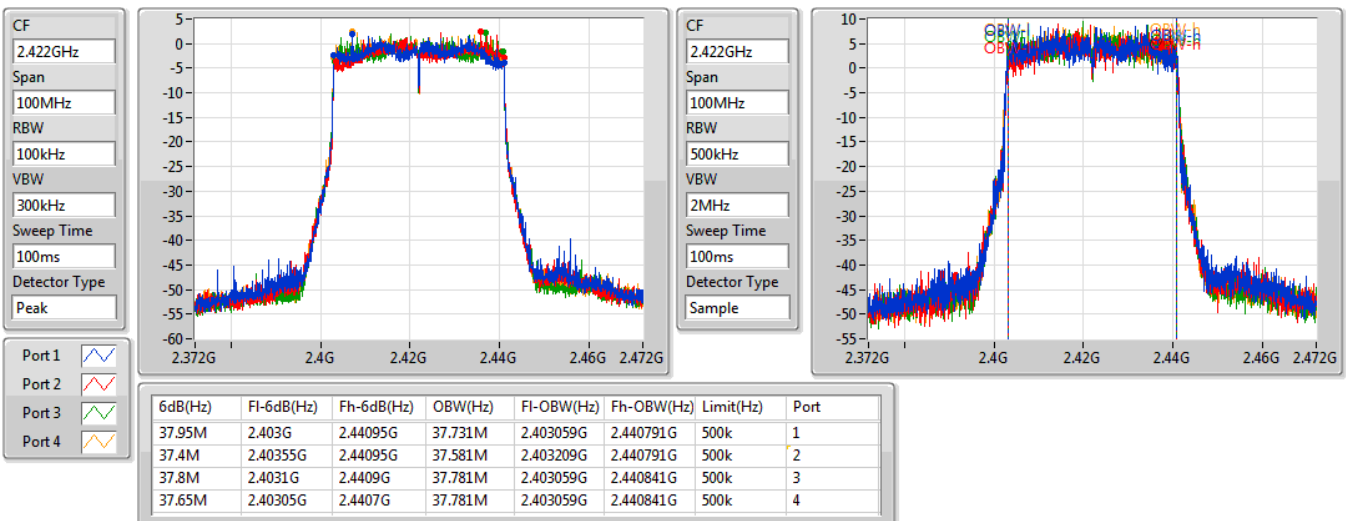


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
2462MHz

19/07/2019


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
2422MHz

19/07/2019

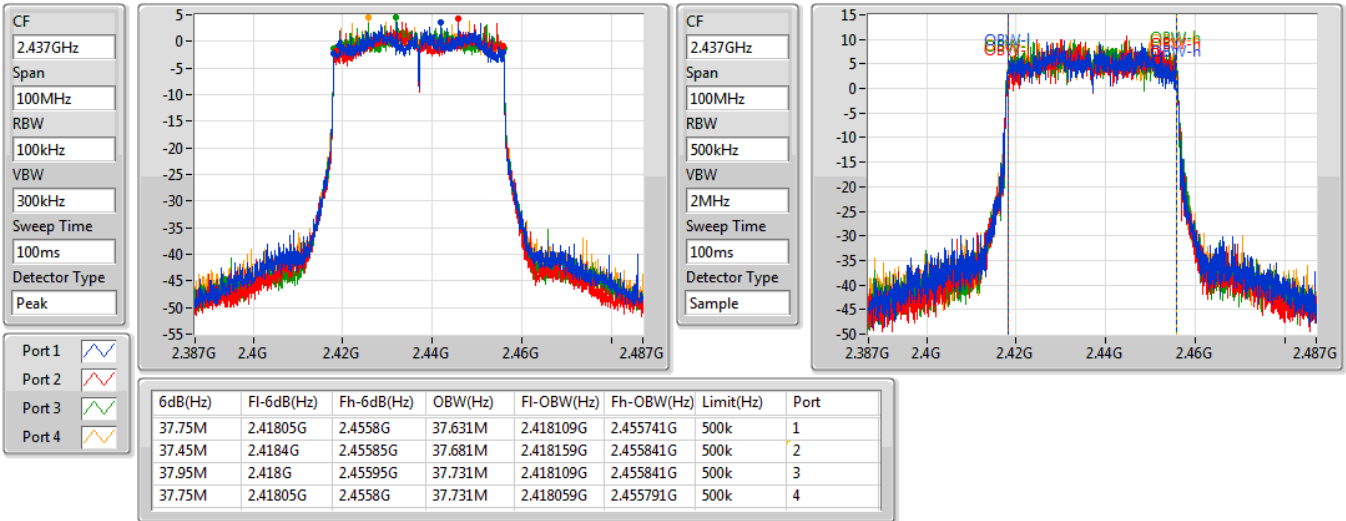


802.11ax HEW40_Nss1,(MCS0)_4TX

EBW

2437MHz

19/07/2019

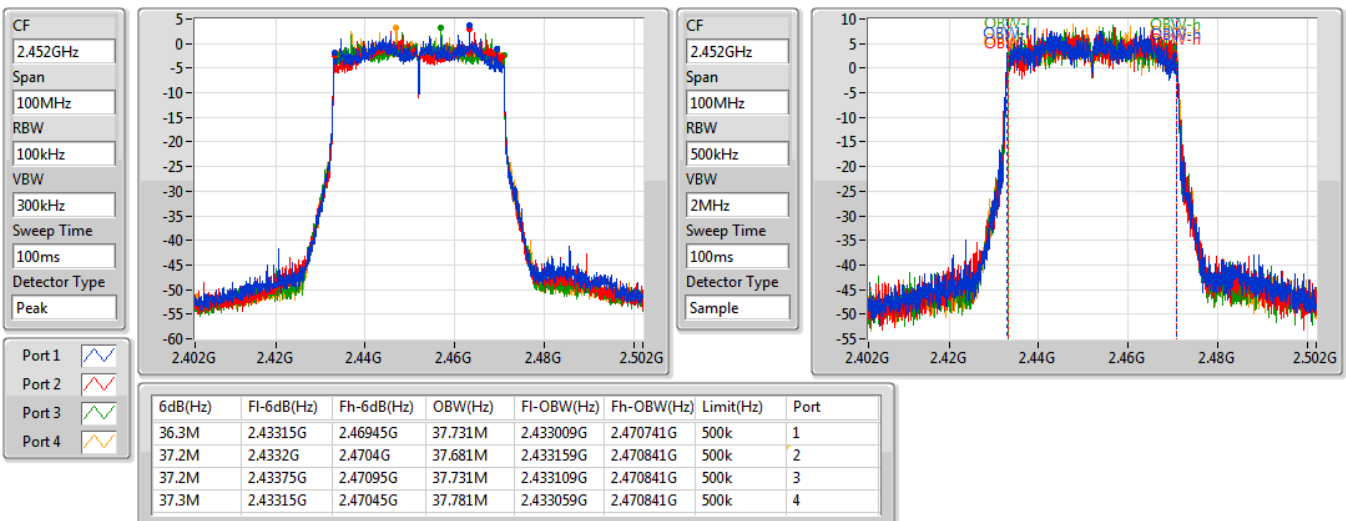


802.11ax HEW40_Nss1,(MCS0)_4TX

EBW

2452MHz

19/07/2019



**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;

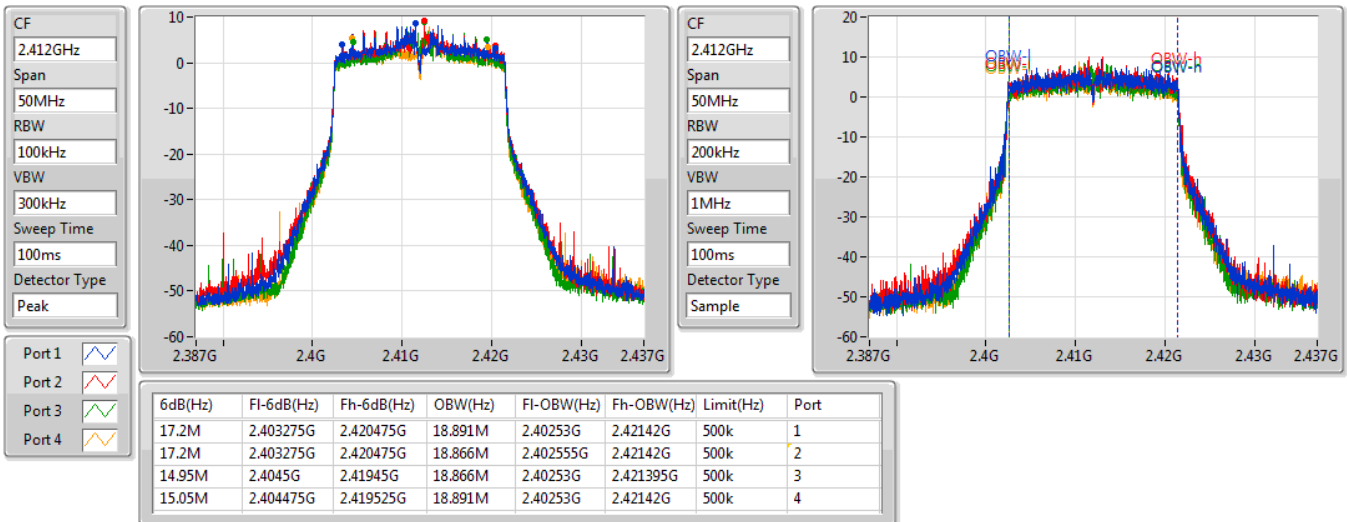
Result

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

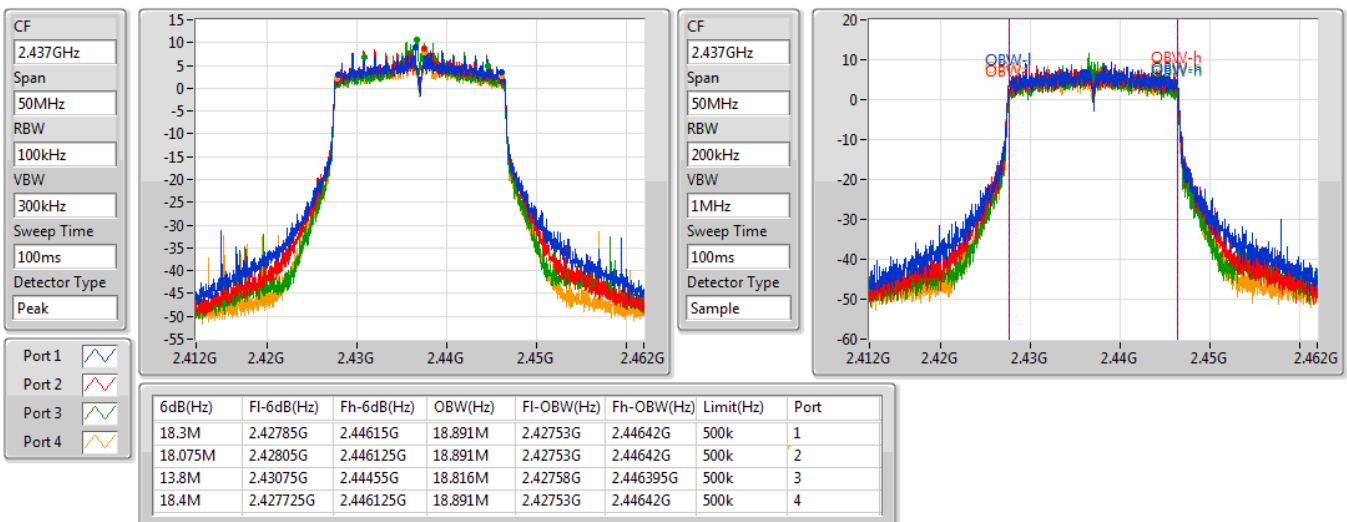
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
2412MHz

19/07/2019

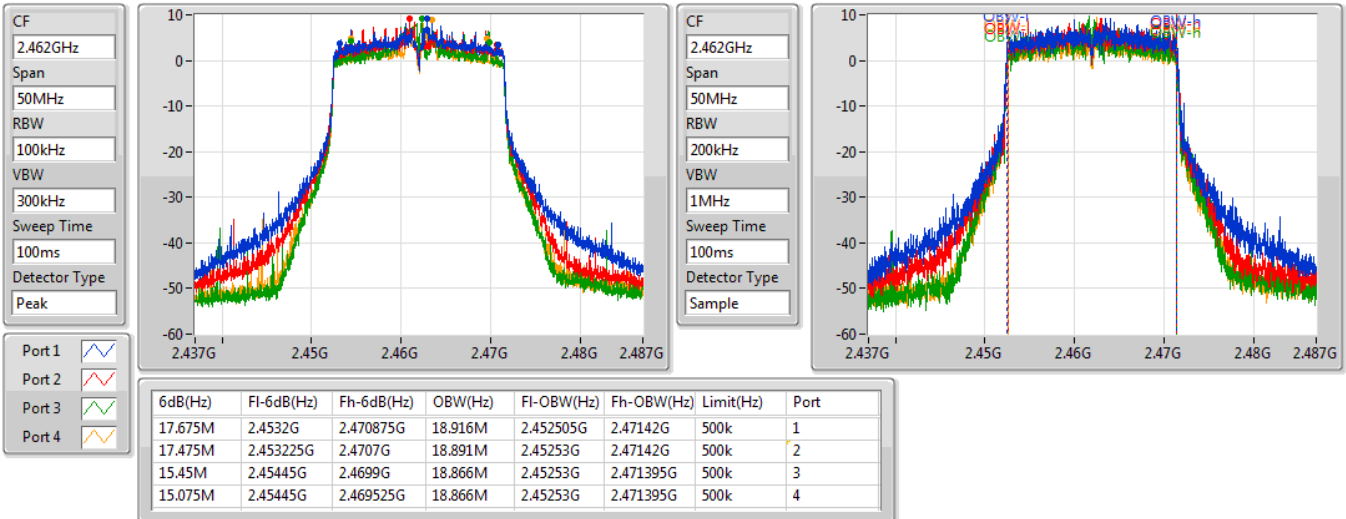

802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
2437MHz

19/07/2019

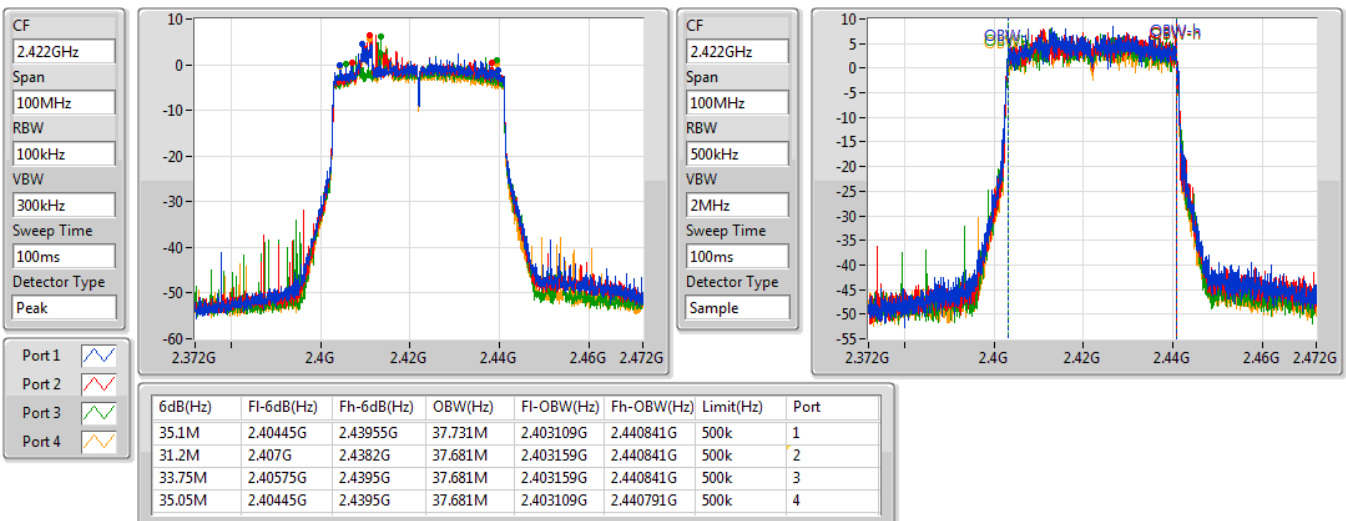


802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
2462MHz

19/07/2019

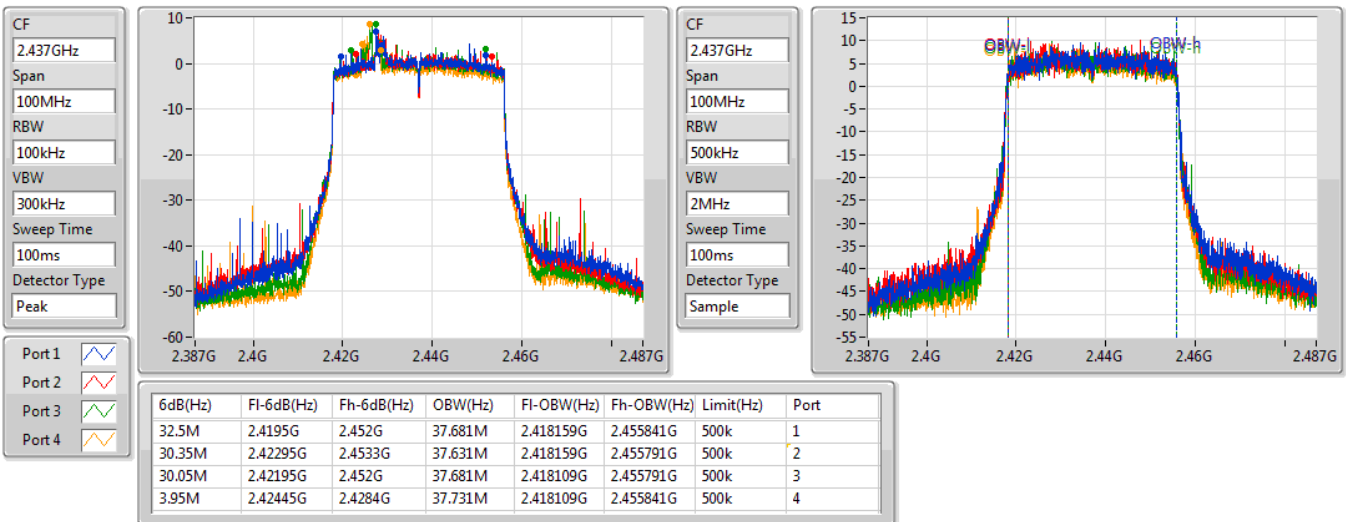

802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
2422MHz

19/07/2019

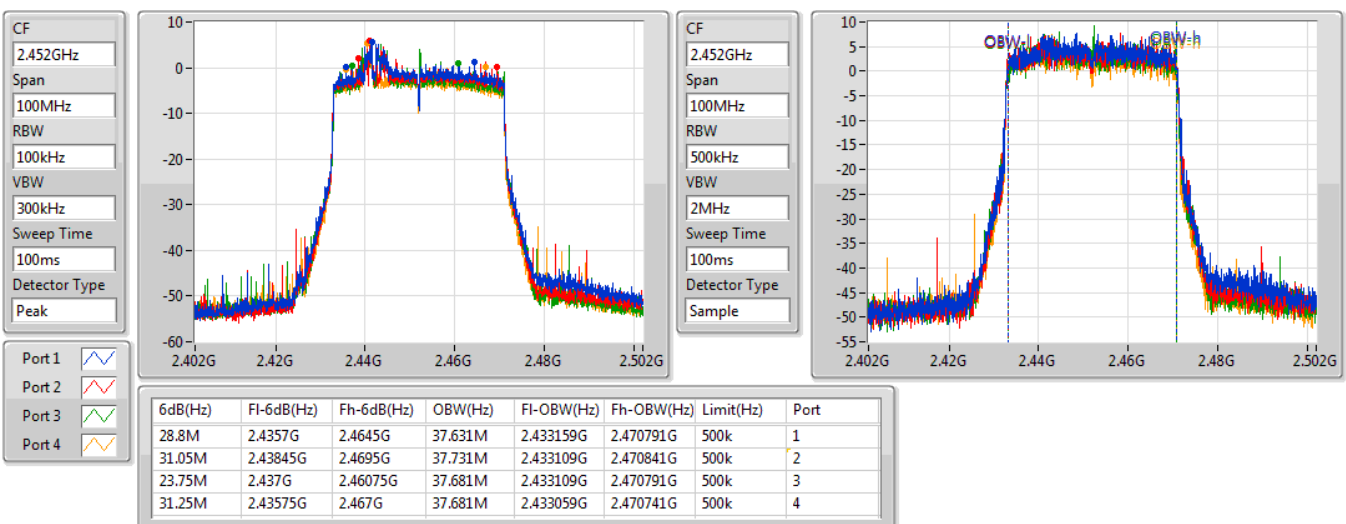


802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
2437MHz

19/07/2019


802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
2452MHz

19/07/2019



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

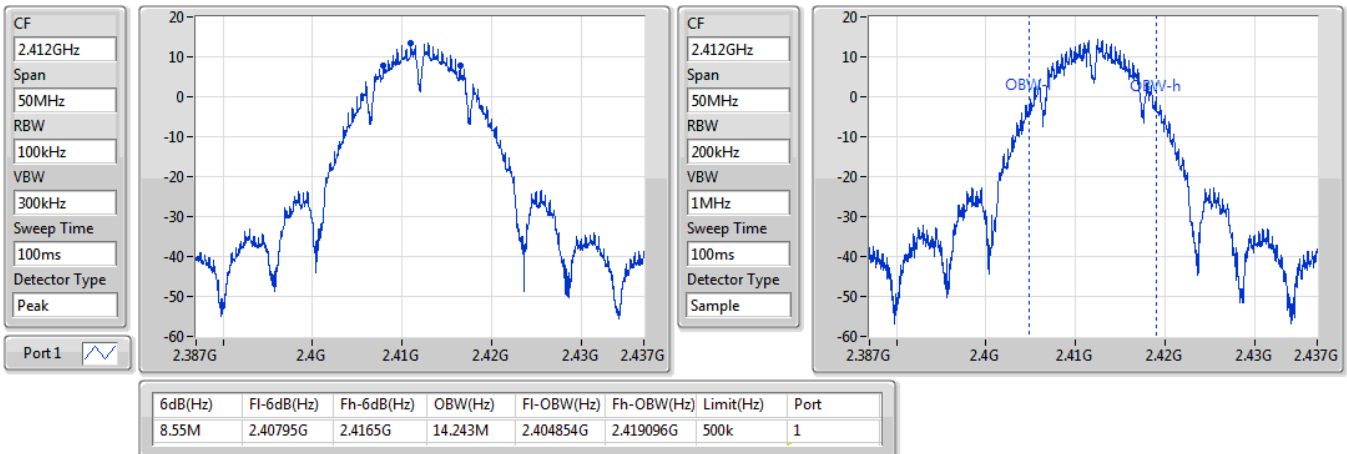
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

802.11b_Nss1,(1Mbps)_1TX

EBW

2412MHz

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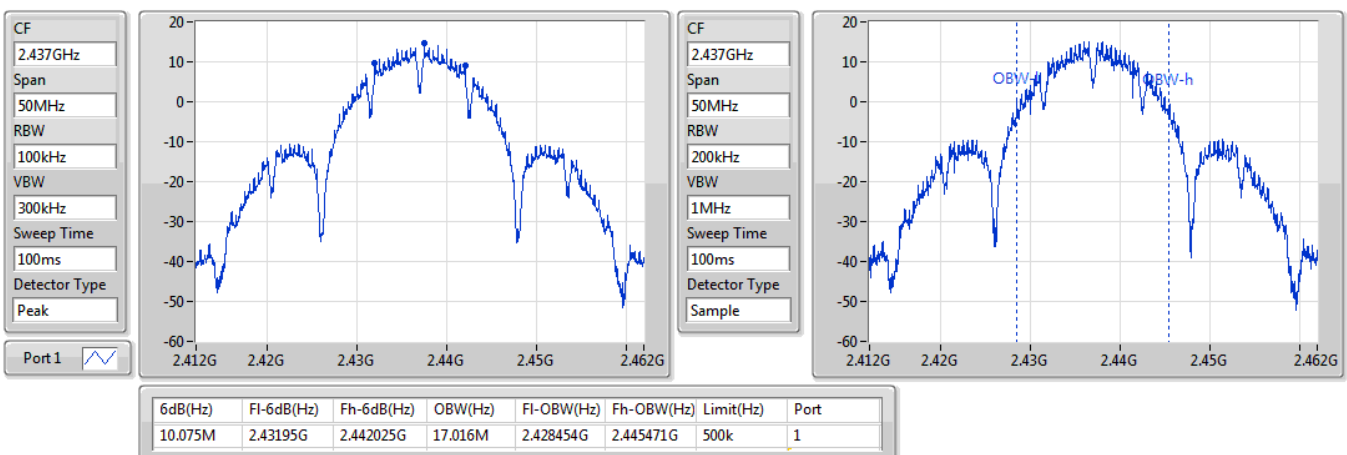


802.11b_Nss1,(1Mbps)_1TX

EBW

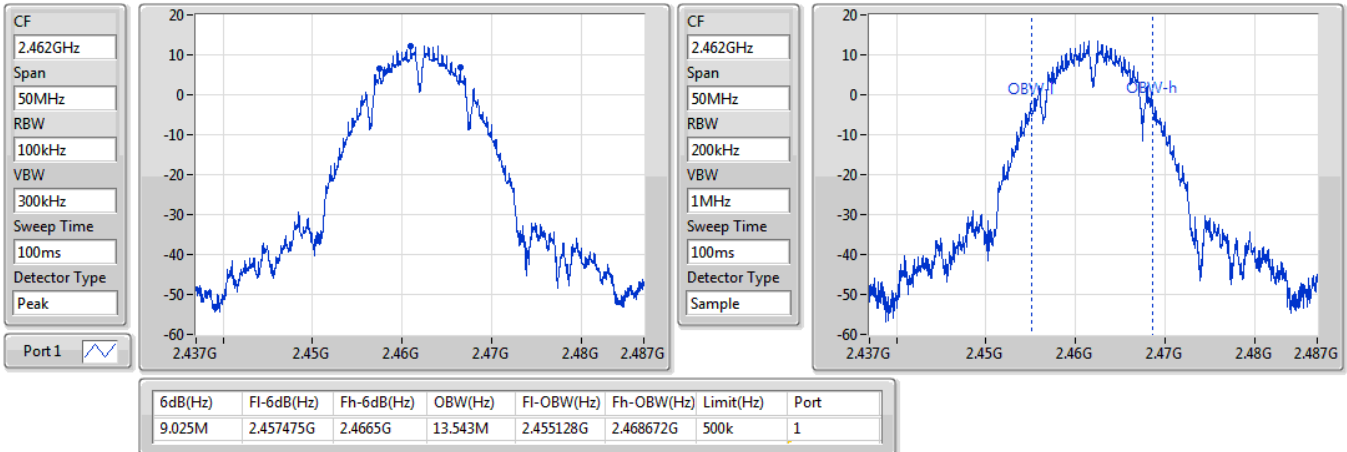
2437MHz

19/07/2019

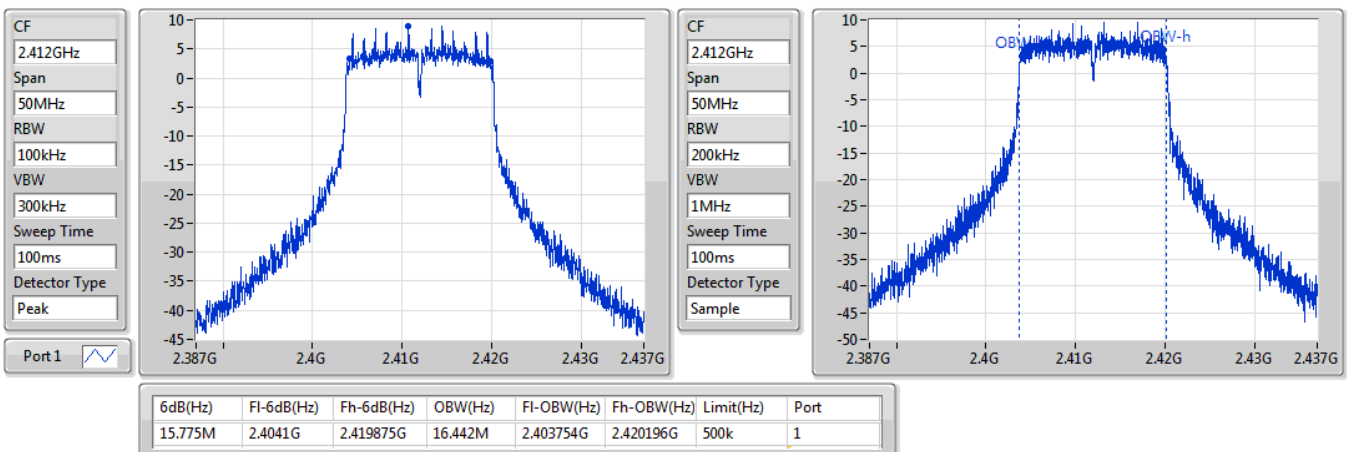


802.11b_Nss1,(1Mbps)_1TX
EBW
2462MHz

19/07/2019


802.11g_Nss1,(6Mbps)_1TX
EBW
2412MHz

19/07/2019

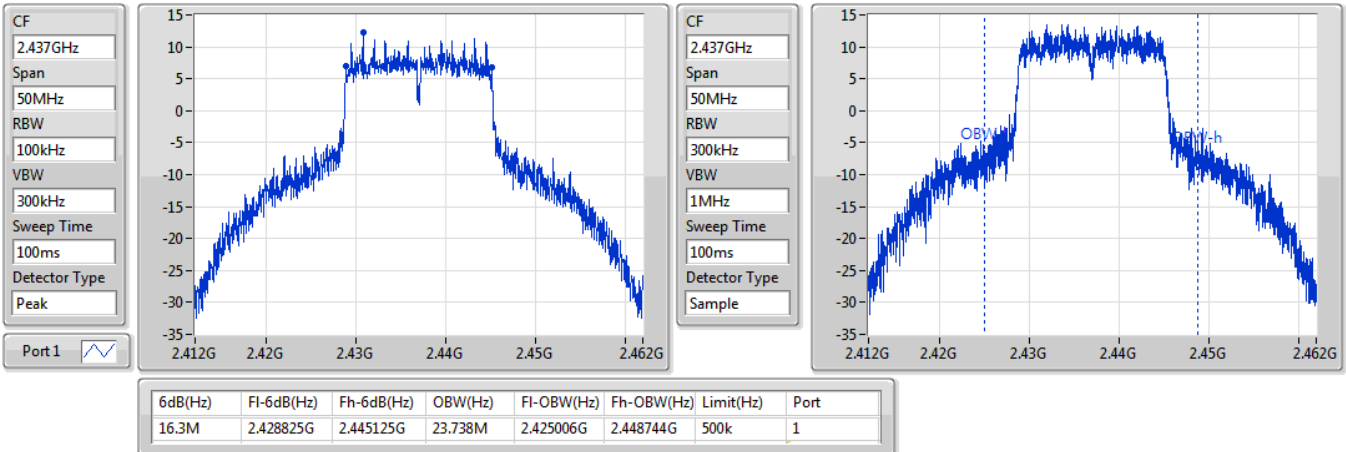


802.11g_Nss1,(6Mbps)_1TX

EBW

2437MHz

19/07/2019

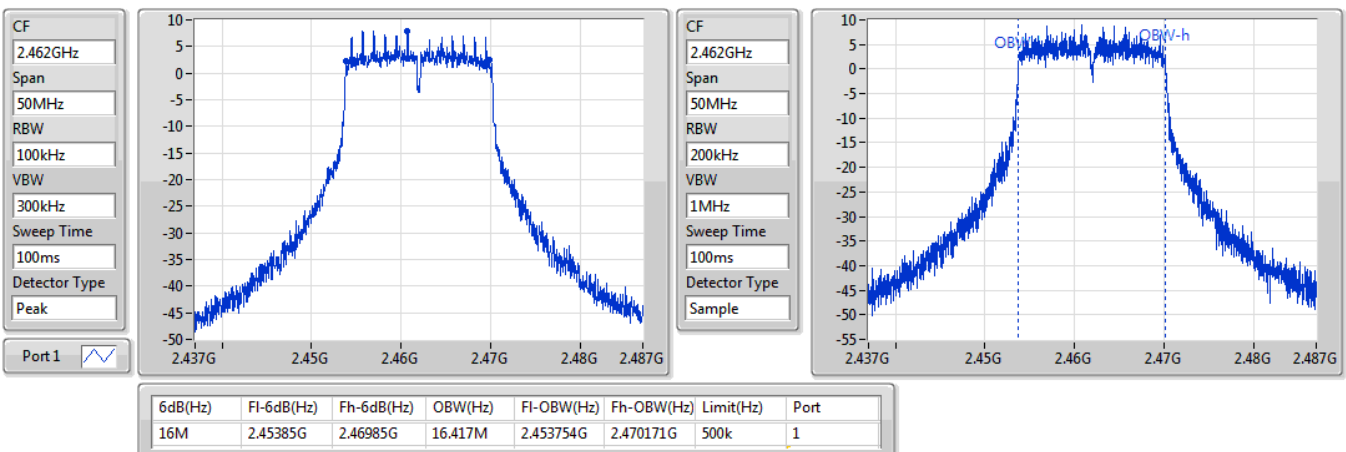


802.11g_Nss1,(6Mbps)_1TX

EBW

2462MHz

19/07/2019

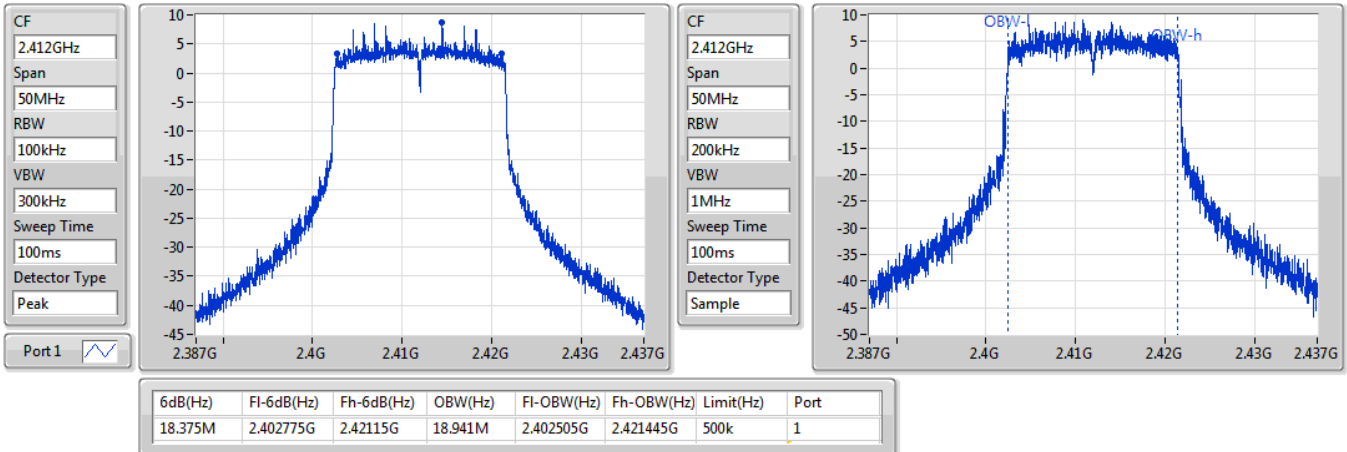


802.11ax HEW20_Nss1,(MCS0)_1TX

EBW

2412MHz

19/07/2019

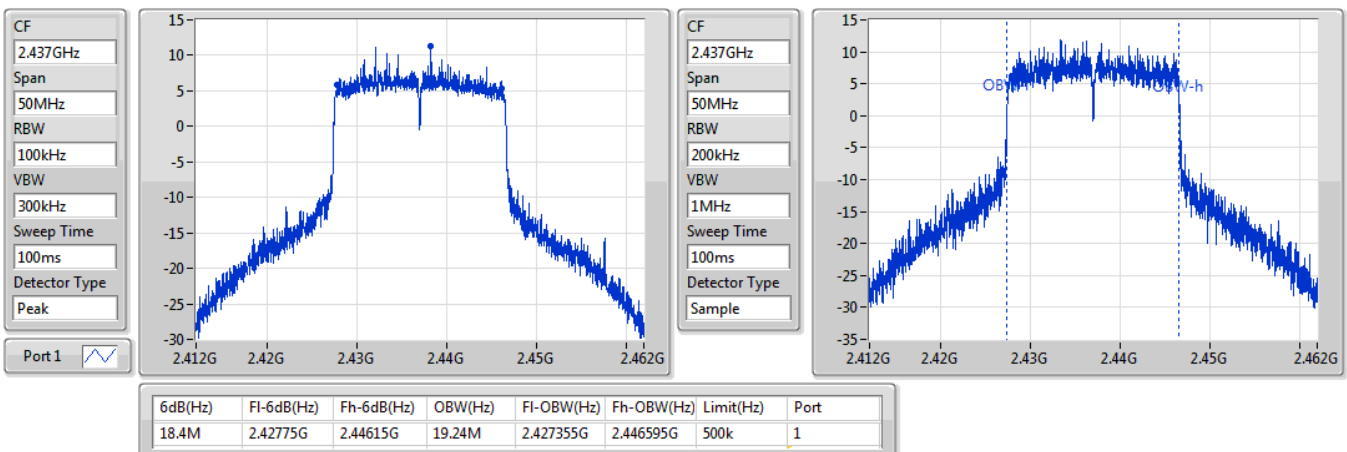


802.11ax HEW20_Nss1,(MCS0)_1TX

EBW

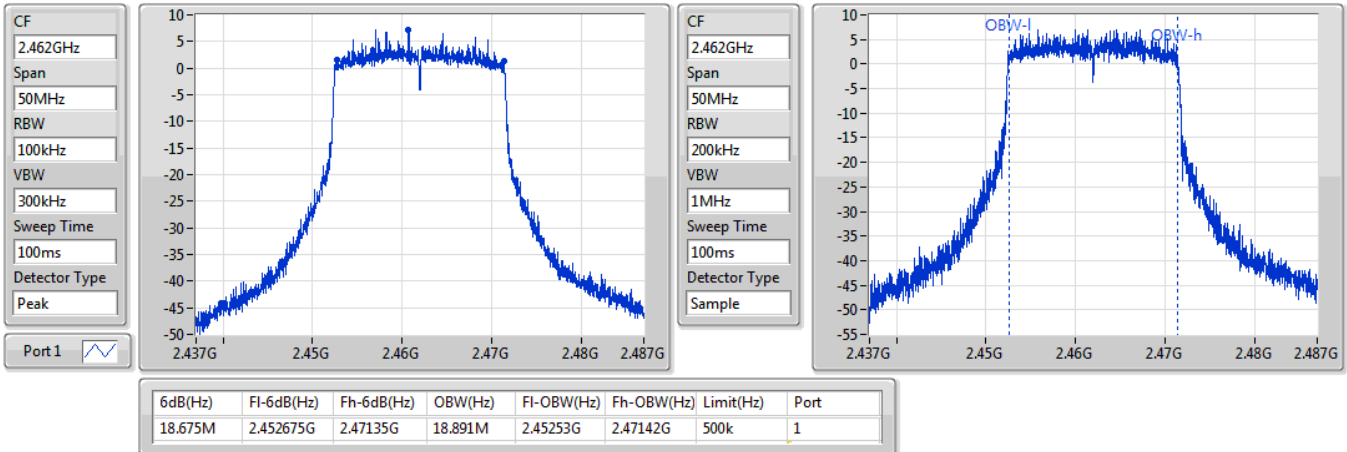
2437MHz

19/07/2019

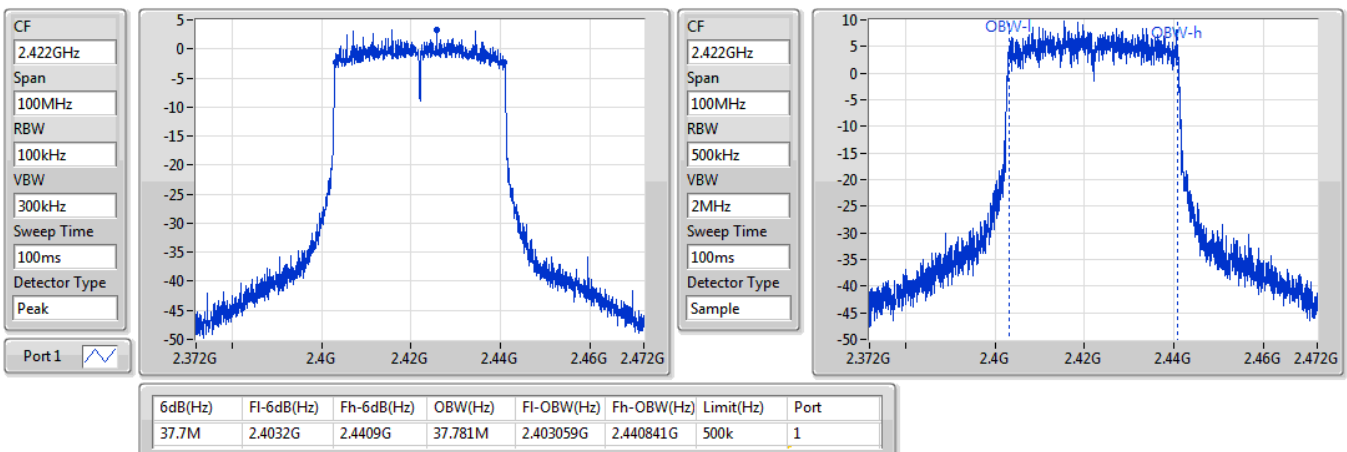


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
2462MHz

19/07/2019

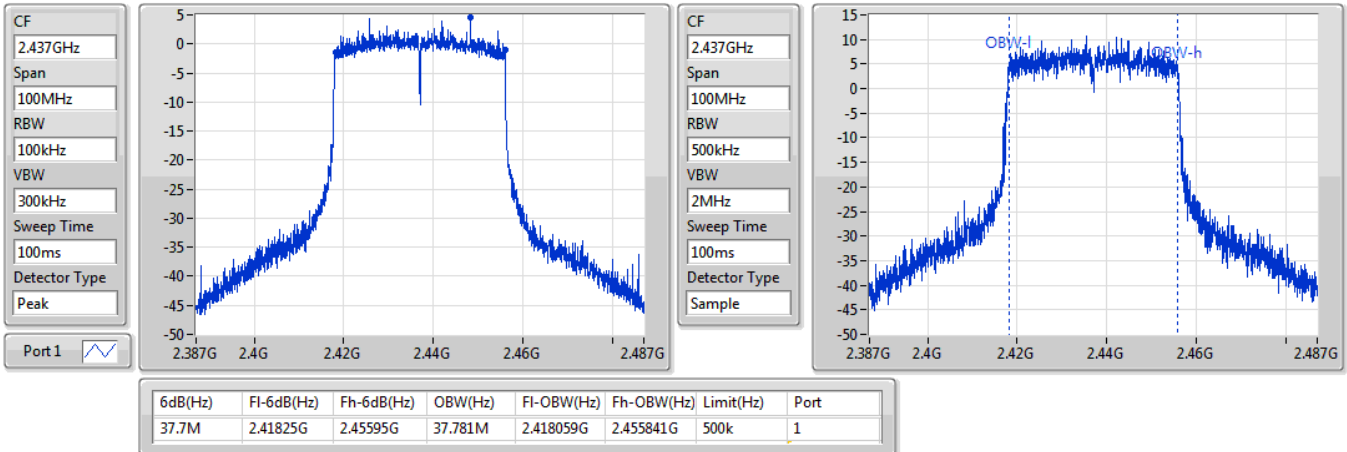

802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
2422MHz

19/07/2019

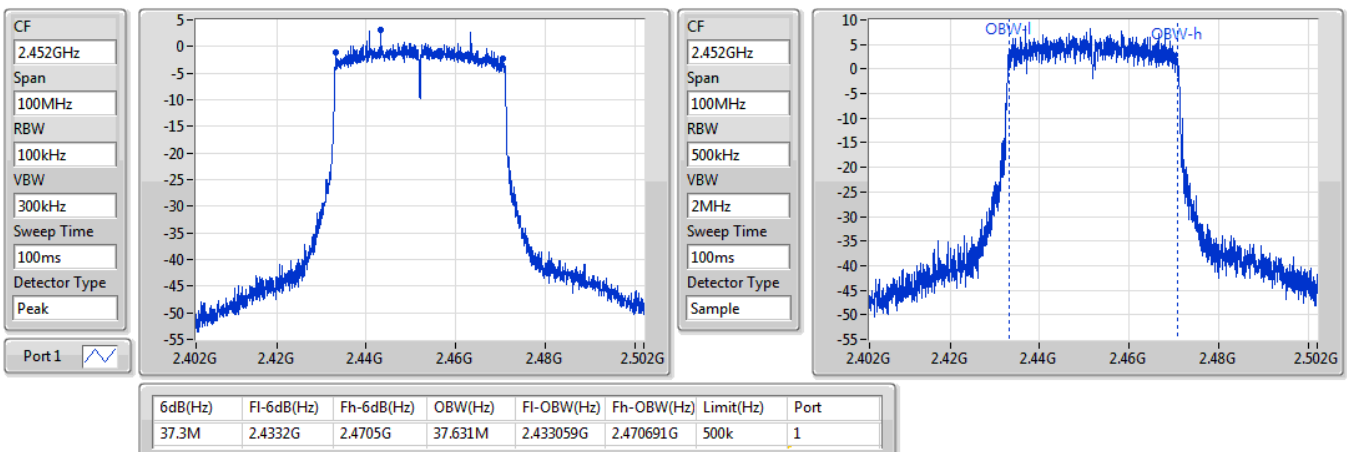


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
2437MHz

19/07/2019


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
2452MHz

19/07/2019



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;

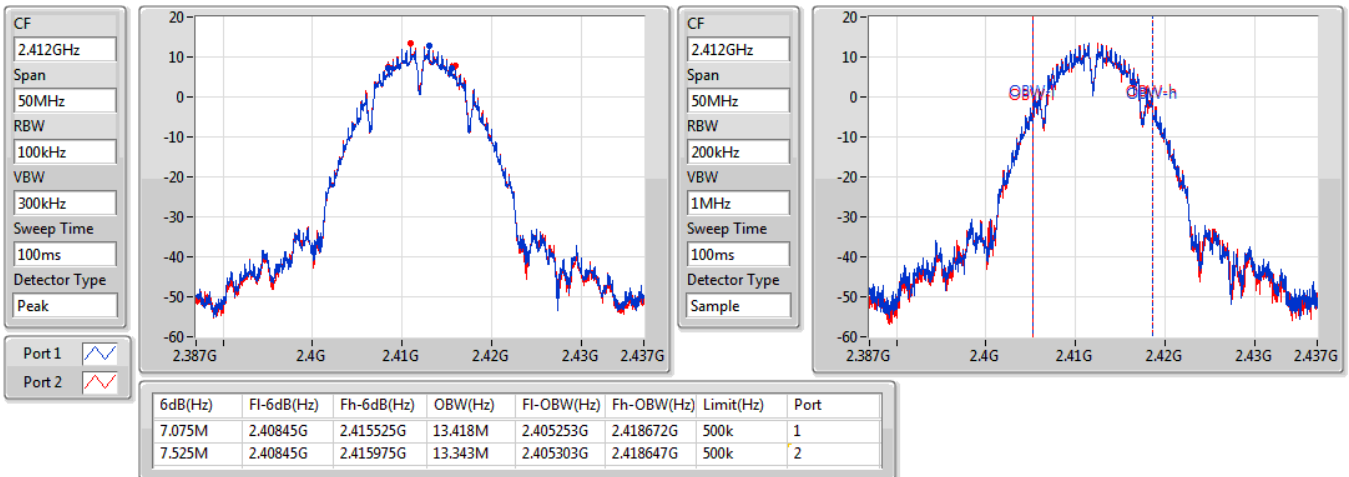
Result

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

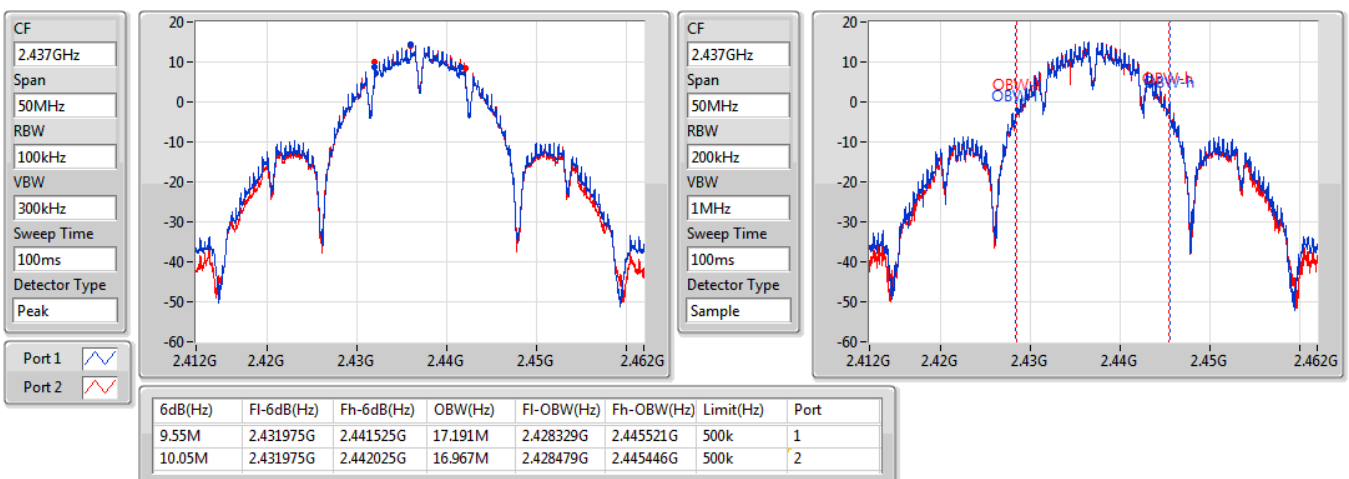
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

802.11b_Nss1,(1Mbps)_2TX
EBW
2412MHz

19/07/2019

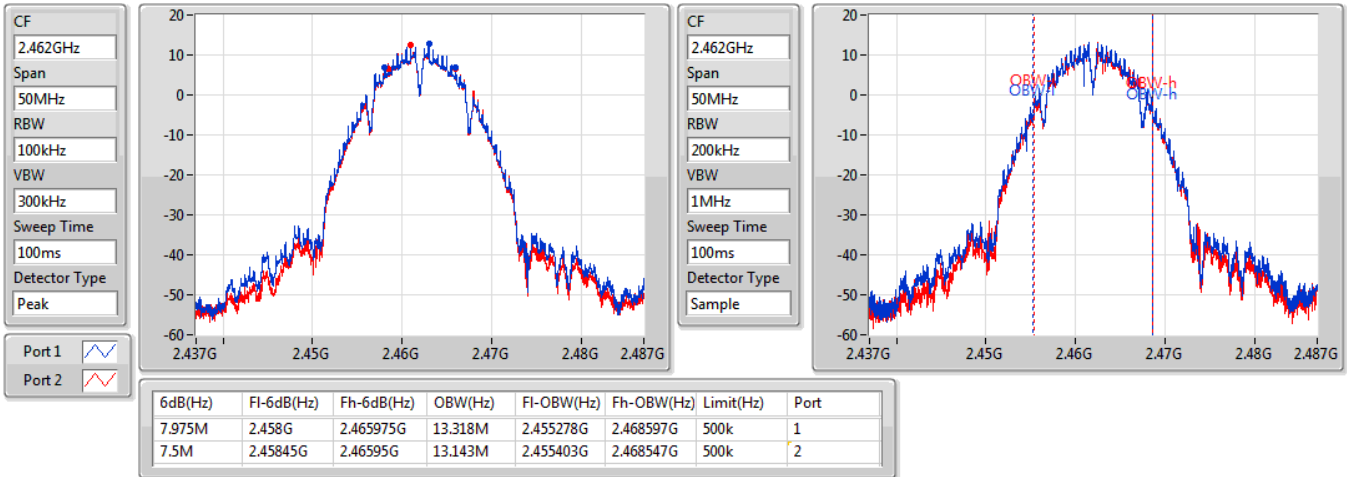

802.11b_Nss1,(1Mbps)_2TX
EBW
2437MHz

19/07/2019

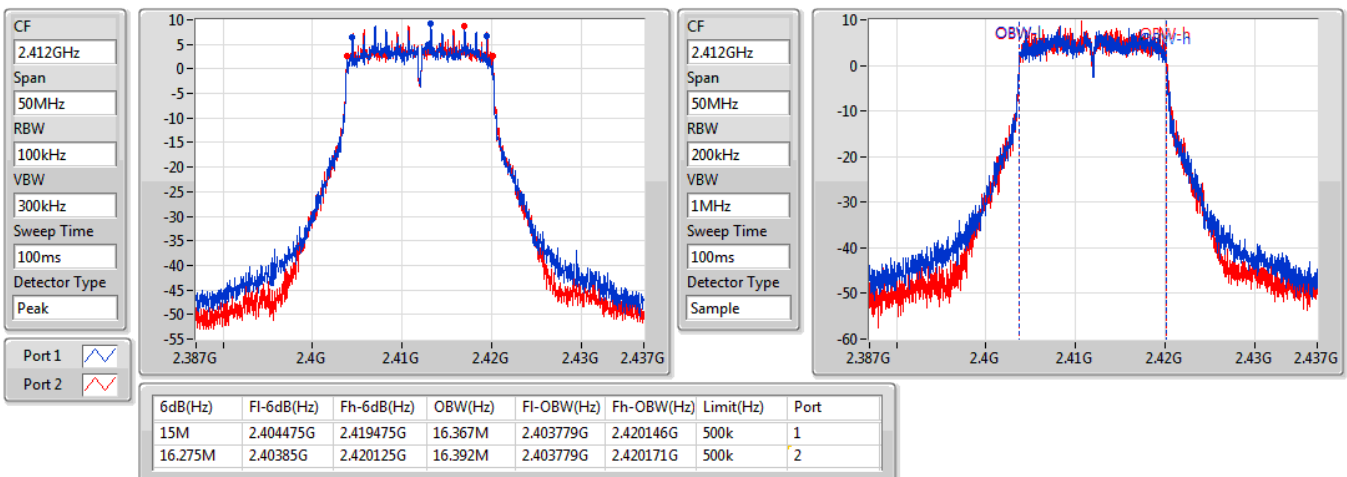


802.11b_Nss1,(1Mbps)_2TX
EBW
2462MHz

19/07/2019

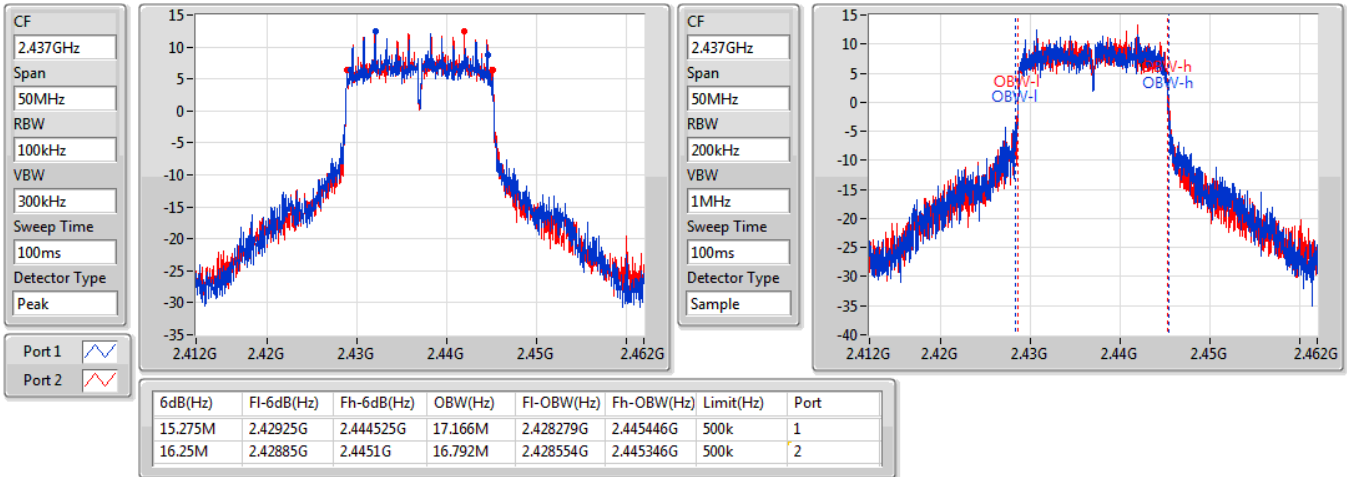

802.11g_Nss1,(6Mbps)_2TX
EBW
2412MHz

19/07/2019

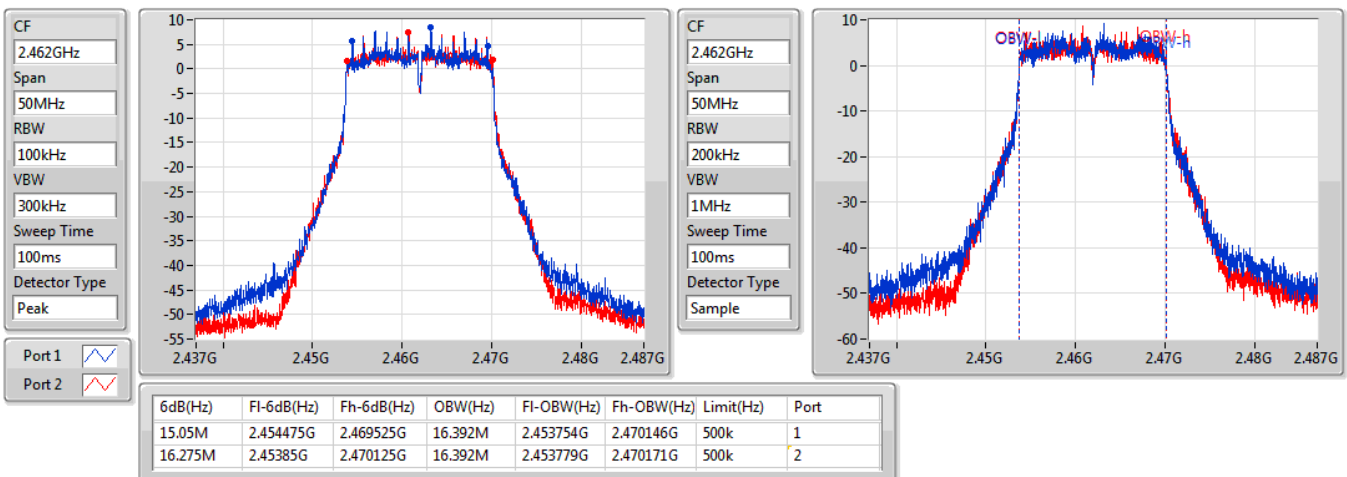


802.11g_Nss1,(6Mbps)_2TX
EBW
2437MHz

19/07/2019

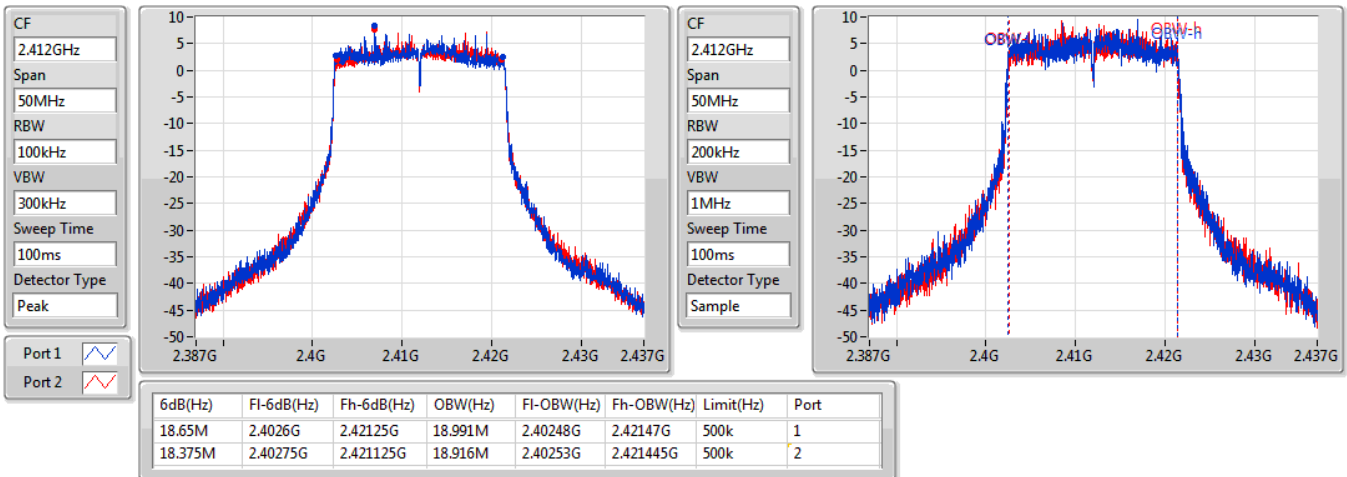

802.11g_Nss1,(6Mbps)_2TX
EBW
2462MHz

19/07/2019

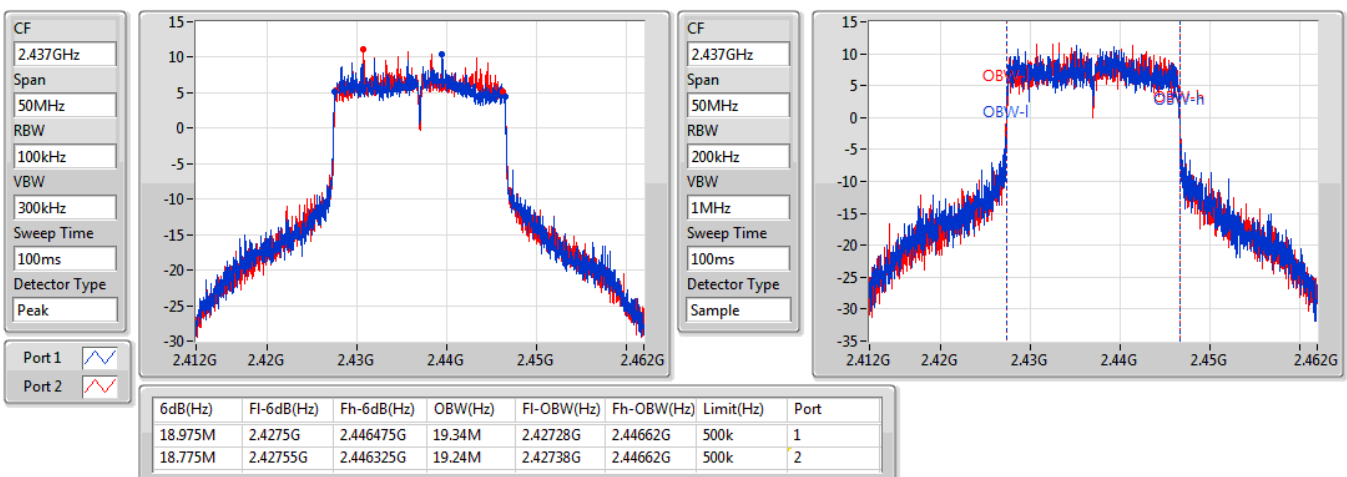


802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
2412MHz

19/07/2019

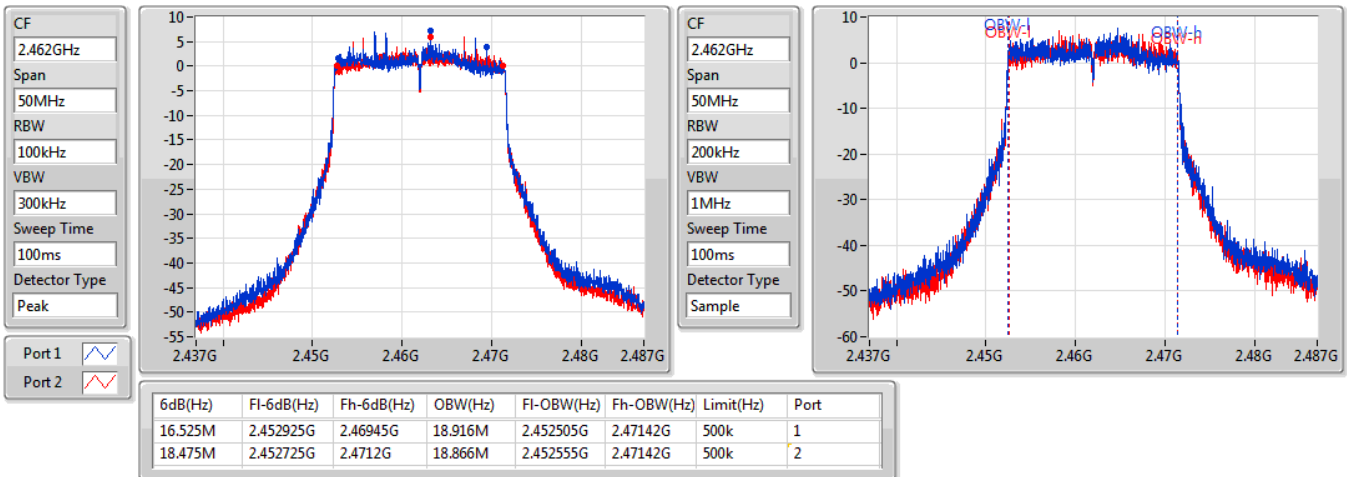

802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
2437MHz

19/07/2019

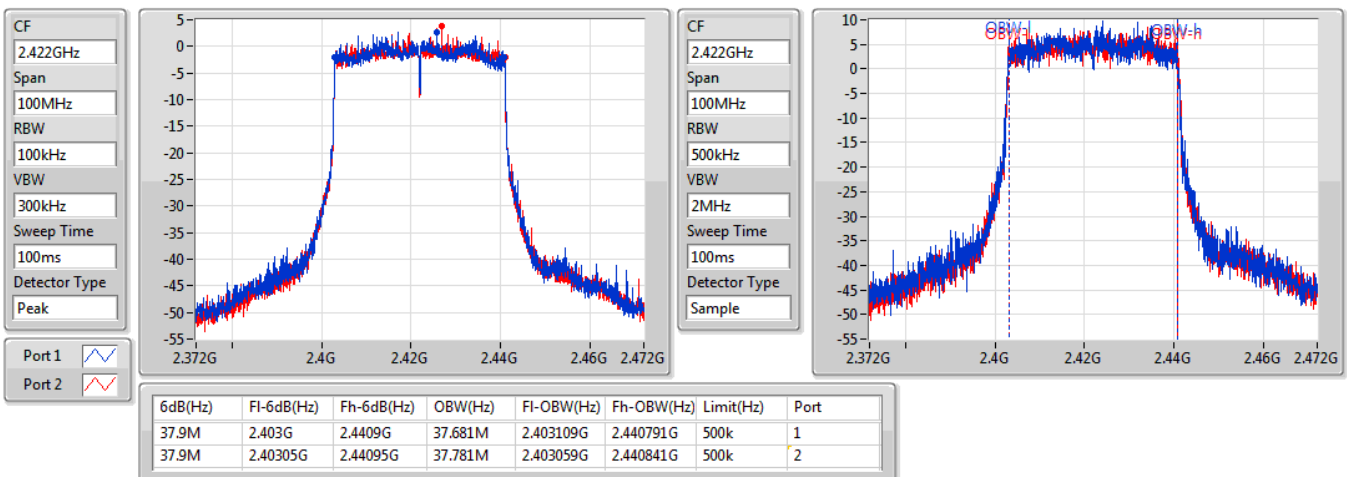


802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
2462MHz

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802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
2422MHz

19/07/2019

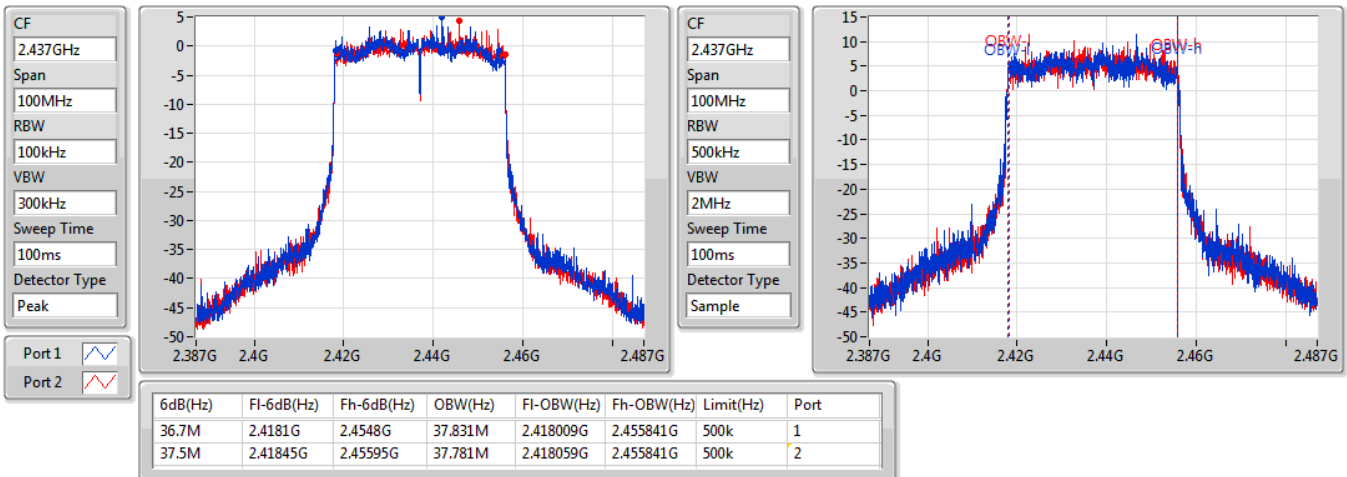


802.11ax HEW40_Nss1,(MCS0)_2TX

EBW

2437MHz

19/07/2019

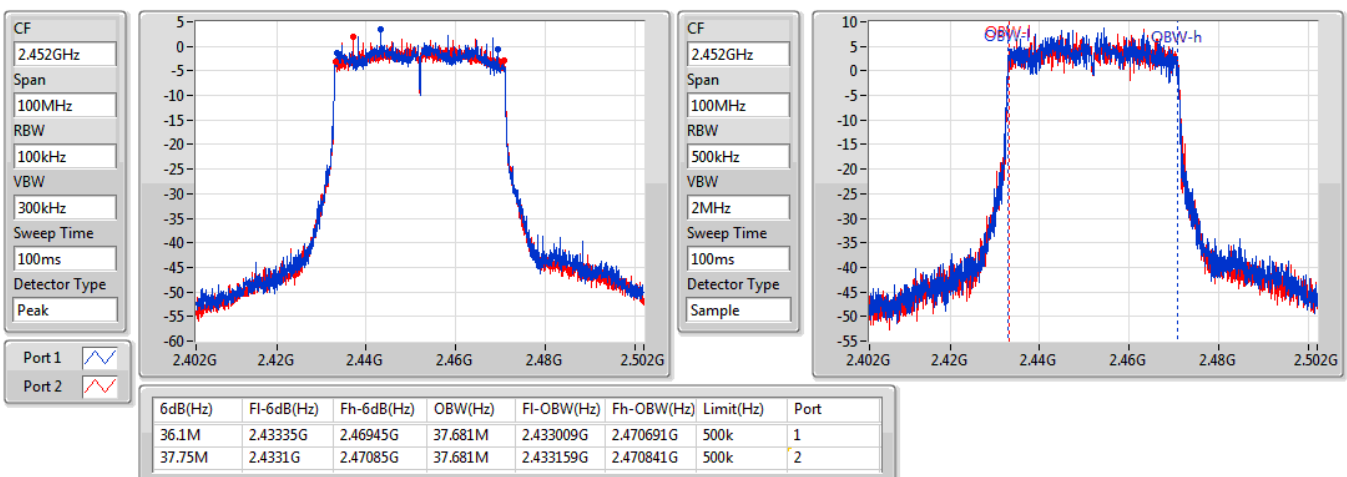


802.11ax HEW40_Nss1,(MCS0)_2TX

EBW

2452MHz

19/07/2019



**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;

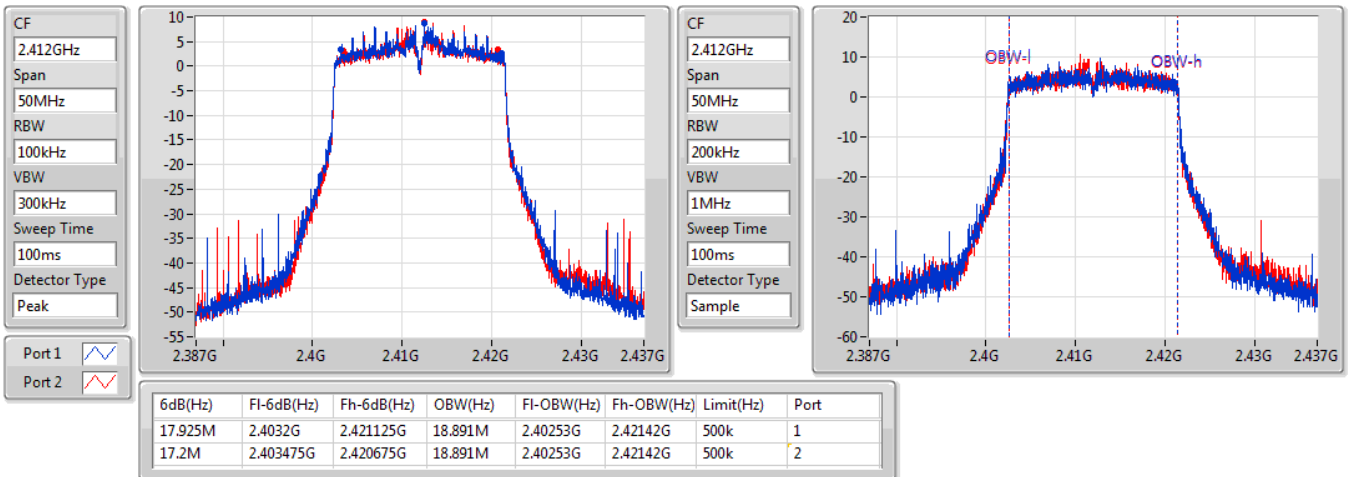
Result

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

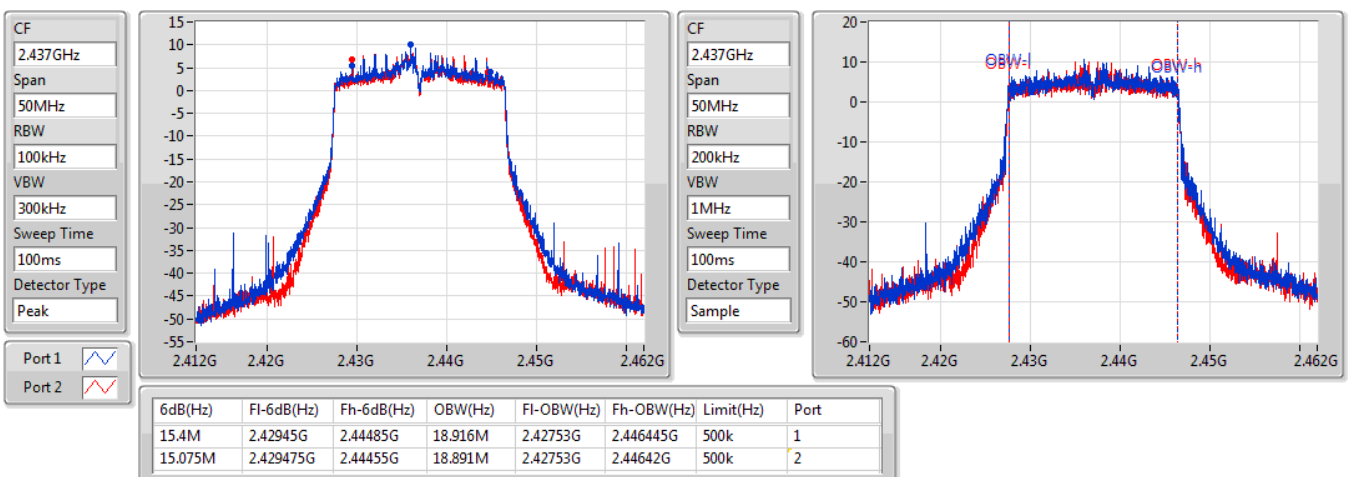
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

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

19/07/2019

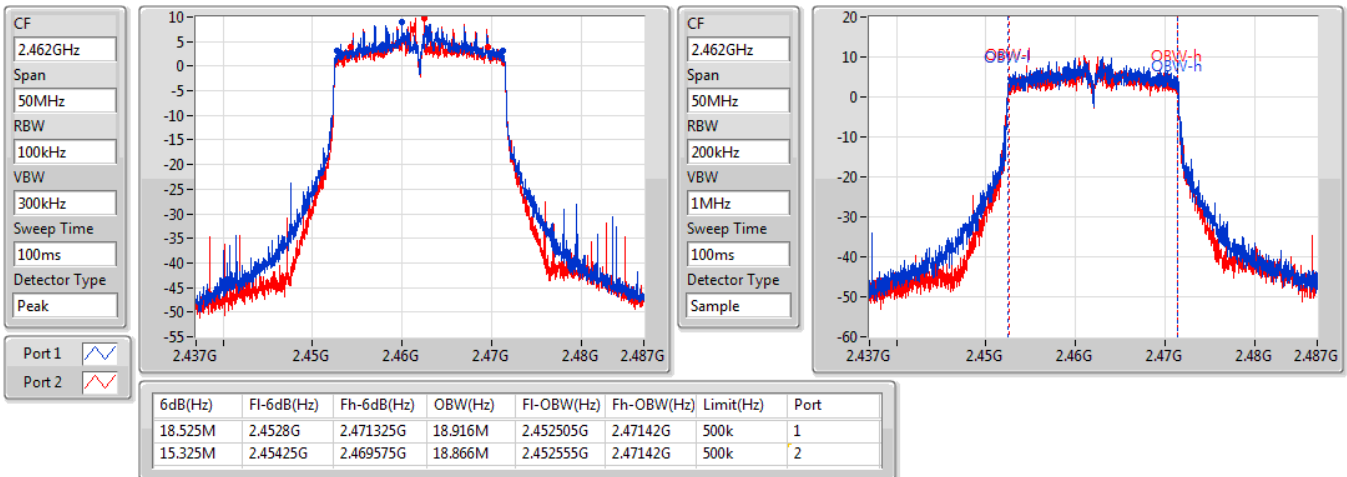

802.11ax HEW20-BF_Nss1,(MCS0)_2TX
EBW
2437MHz

19/07/2019

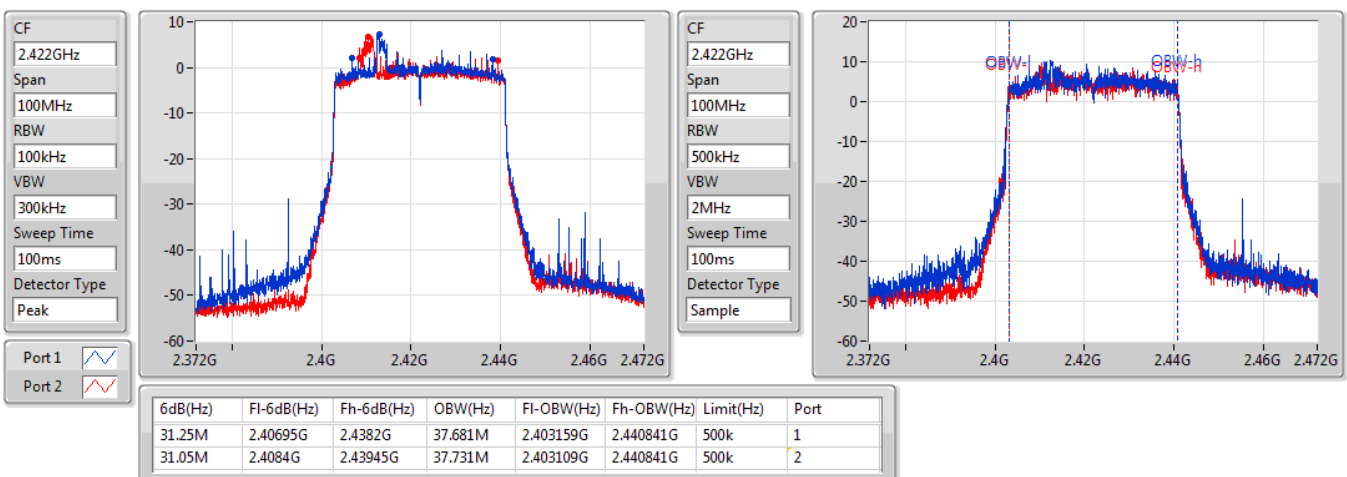


802.11ax HEW20-BF_Nss1,(MCS0)_2TX
EBW
2462MHz

19/07/2019

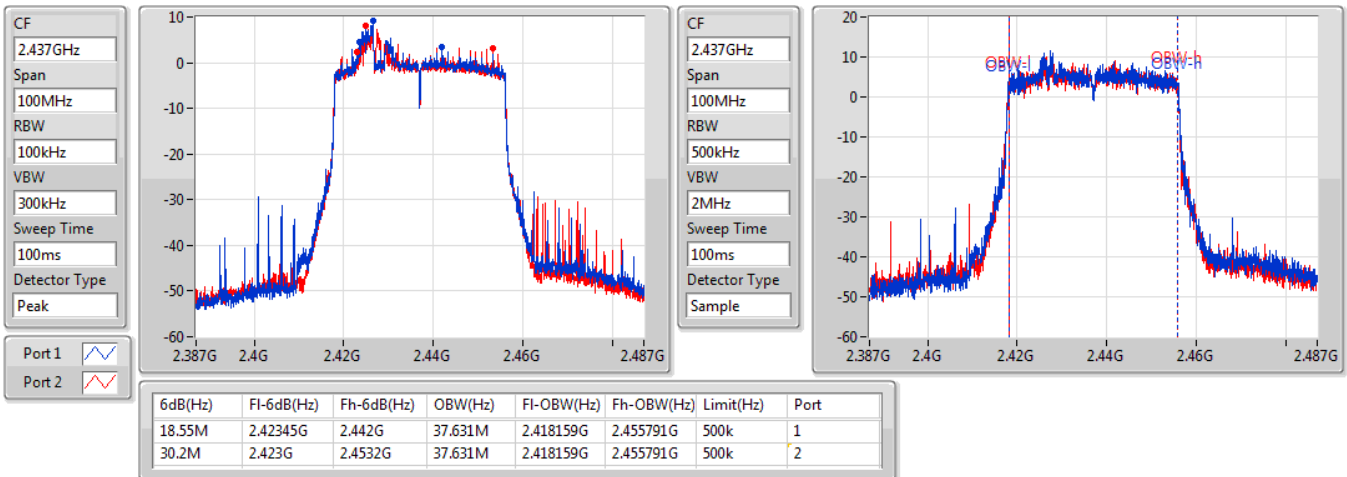

802.11ax HEW40-BF_Nss1,(MCS0)_2TX
EBW
2422MHz

19/07/2019

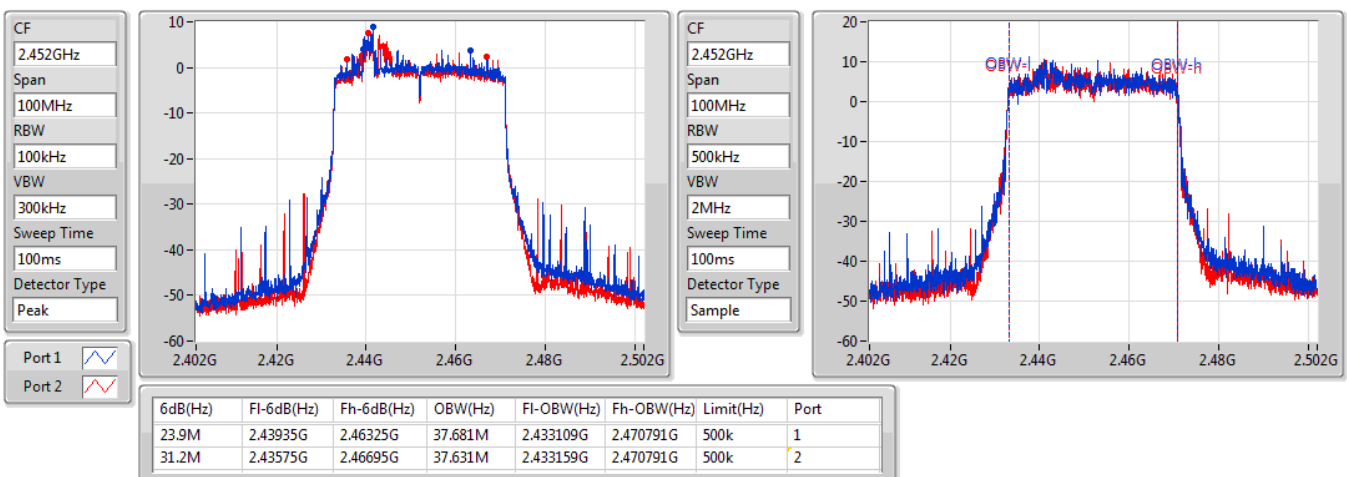


802.11ax HEW40-BF_Nss1,(MCS0)_2TX
EBW
2437MHz

19/07/2019


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

19/07/2019



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;

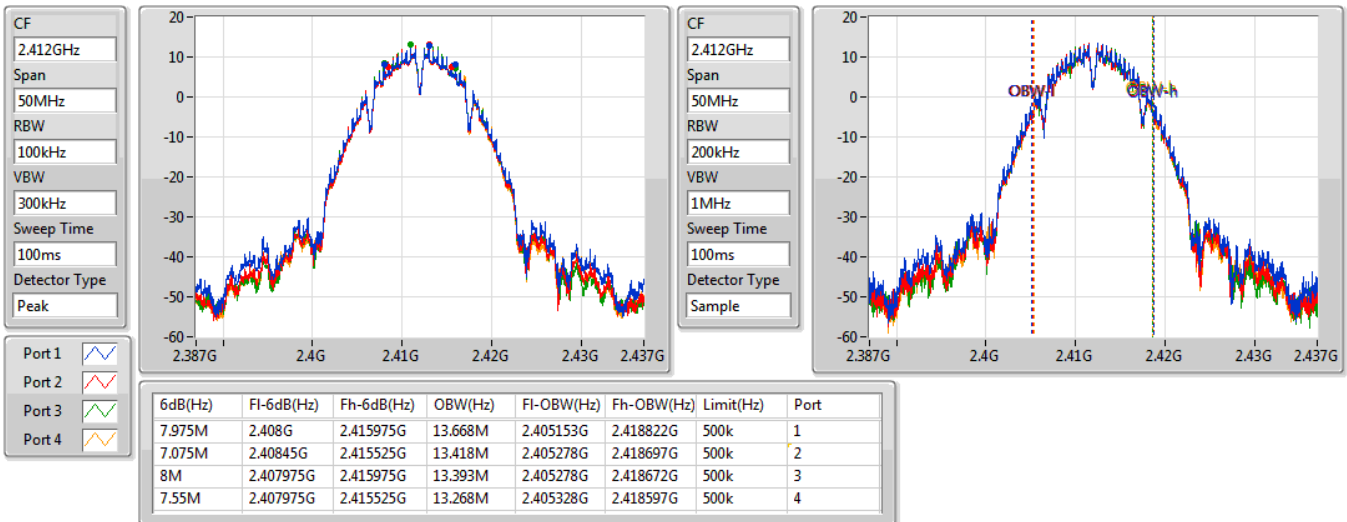
Result

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

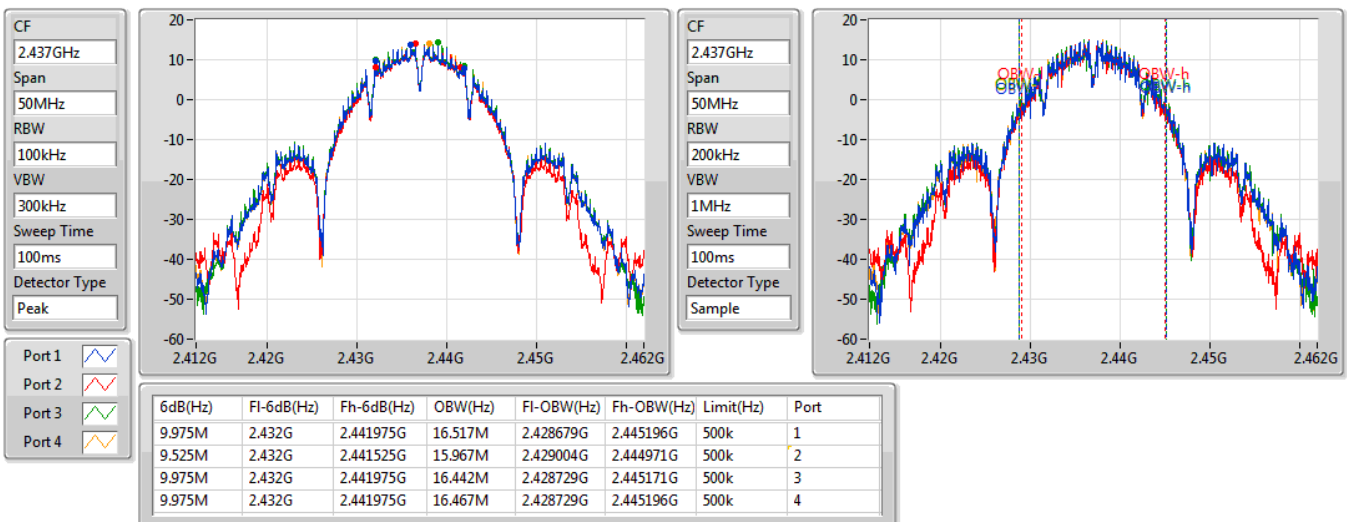
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

802.11b_Nss1,(1Mbps)_4TX
EBW
2412MHz

19/07/2019

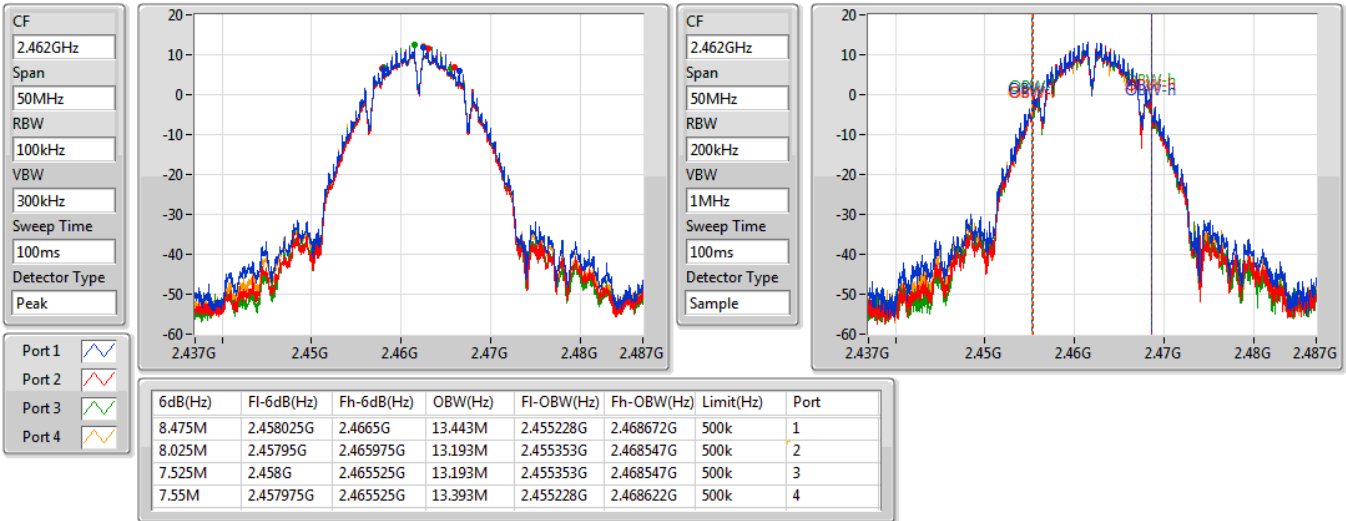

802.11b_Nss1,(1Mbps)_4TX
EBW
2437MHz

19/07/2019

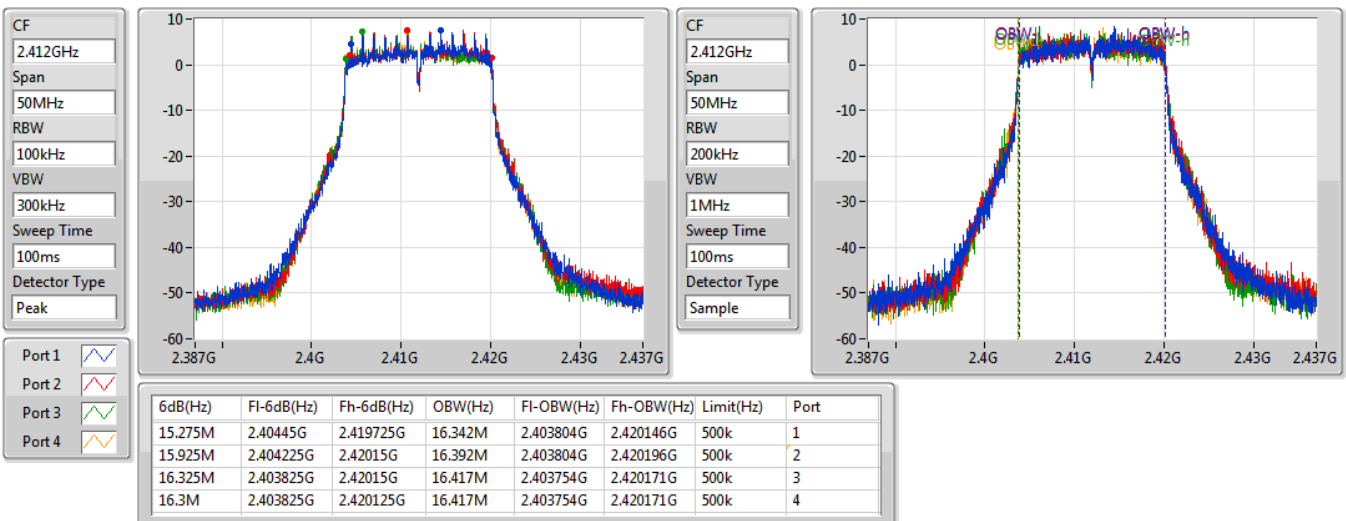


802.11b_Nss1,(1Mbps)_4TX
EBW
2462MHz

19/07/2019

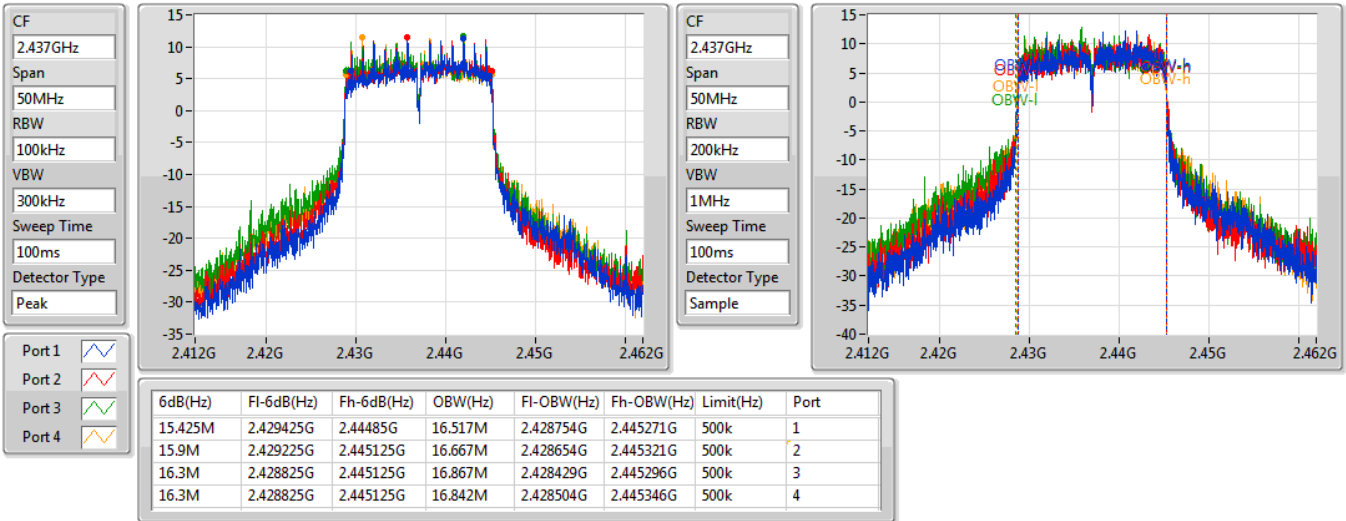

802.11g_Nss1,(6Mbps)_4TX
EBW
2412MHz

19/07/2019

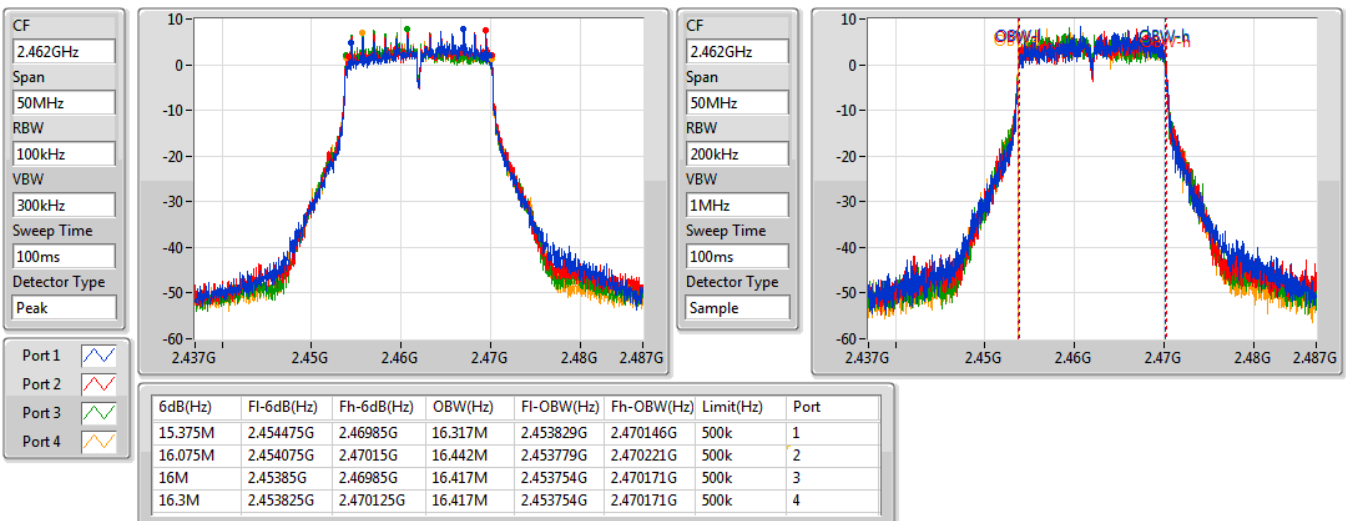


802.11g_Nss1,(6Mbps)_4TX
EBW
2437MHz

19/07/2019

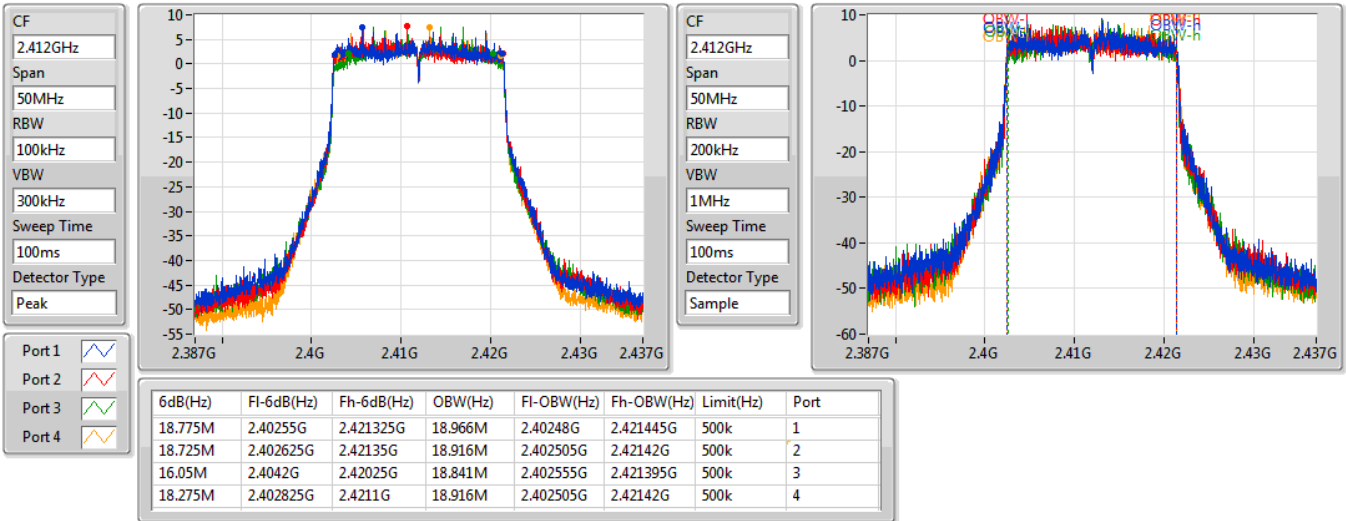

802.11g_Nss1,(6Mbps)_4TX
EBW
2462MHz

19/07/2019

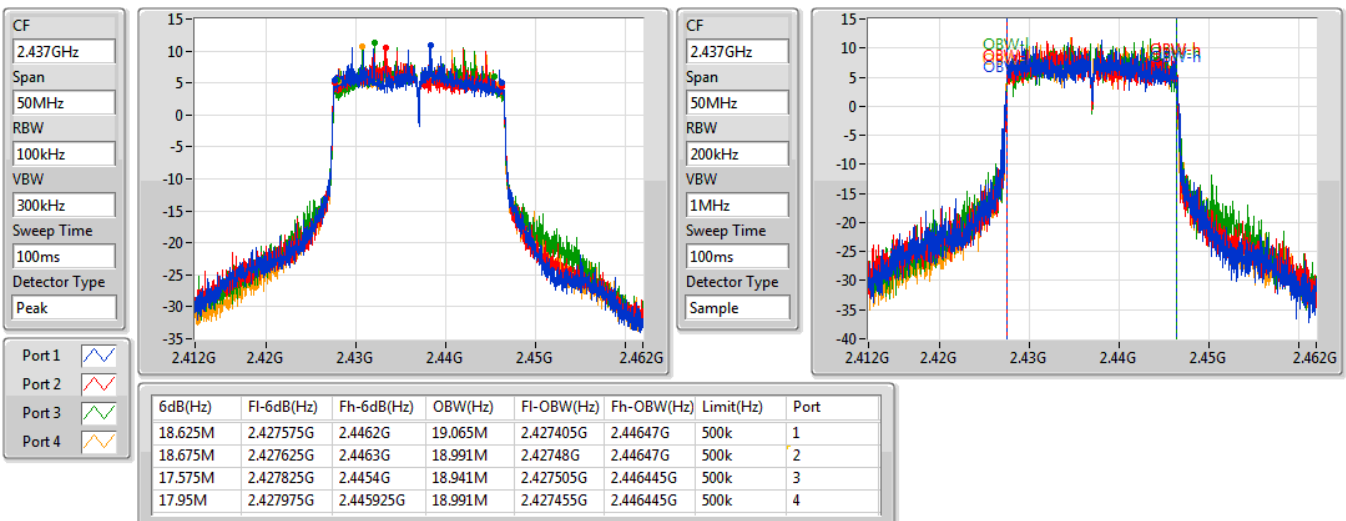


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
2412MHz

19/07/2019

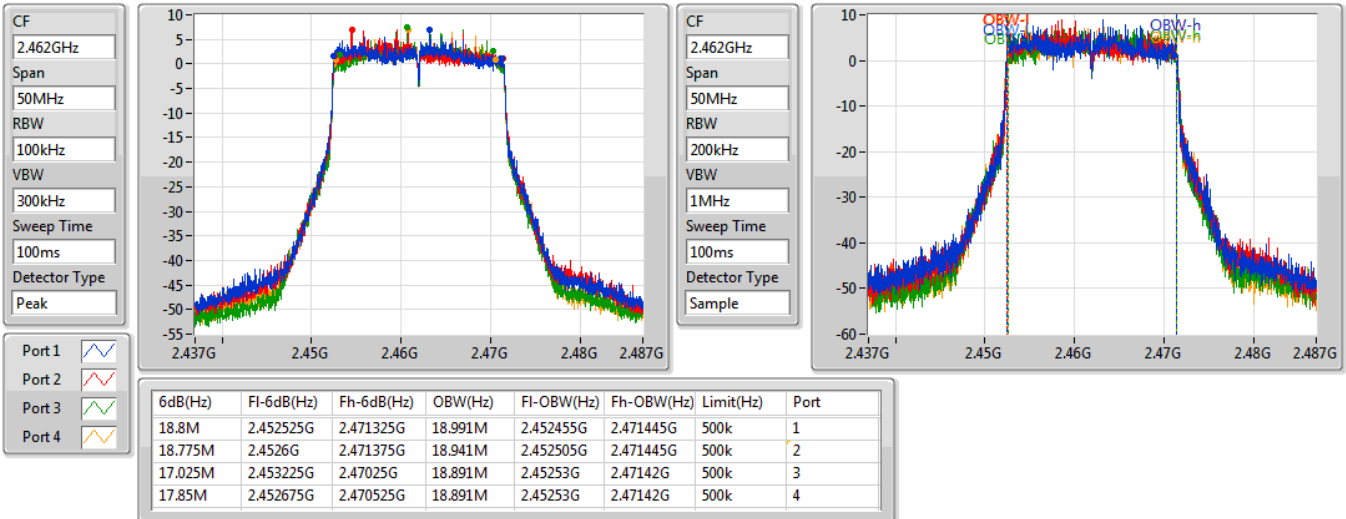

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
2437MHz

19/07/2019

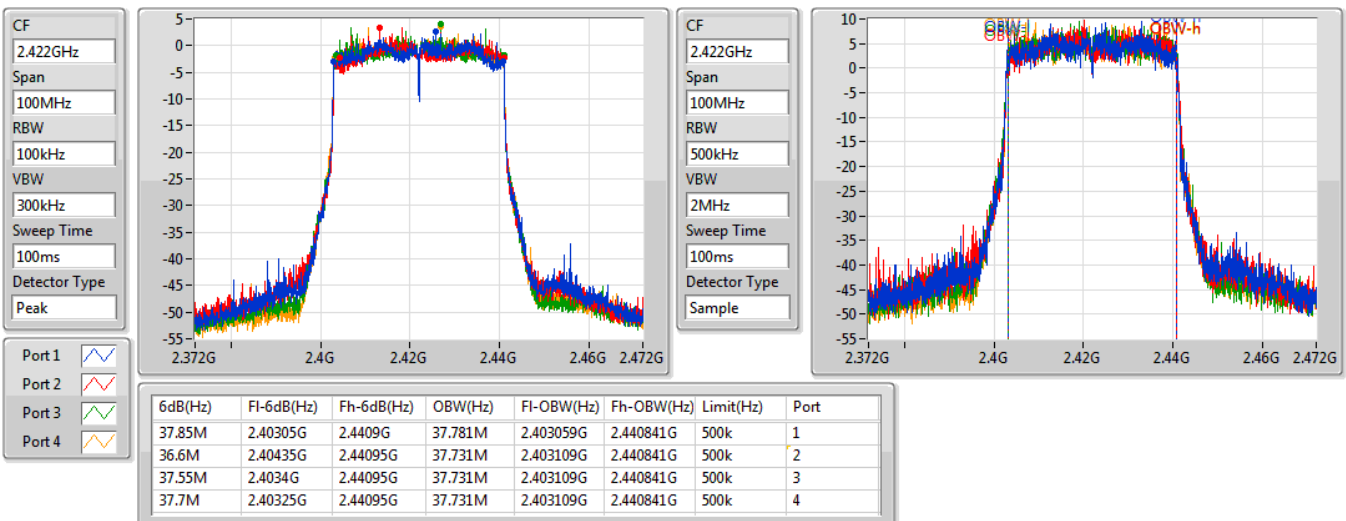


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
2462MHz

19/07/2019

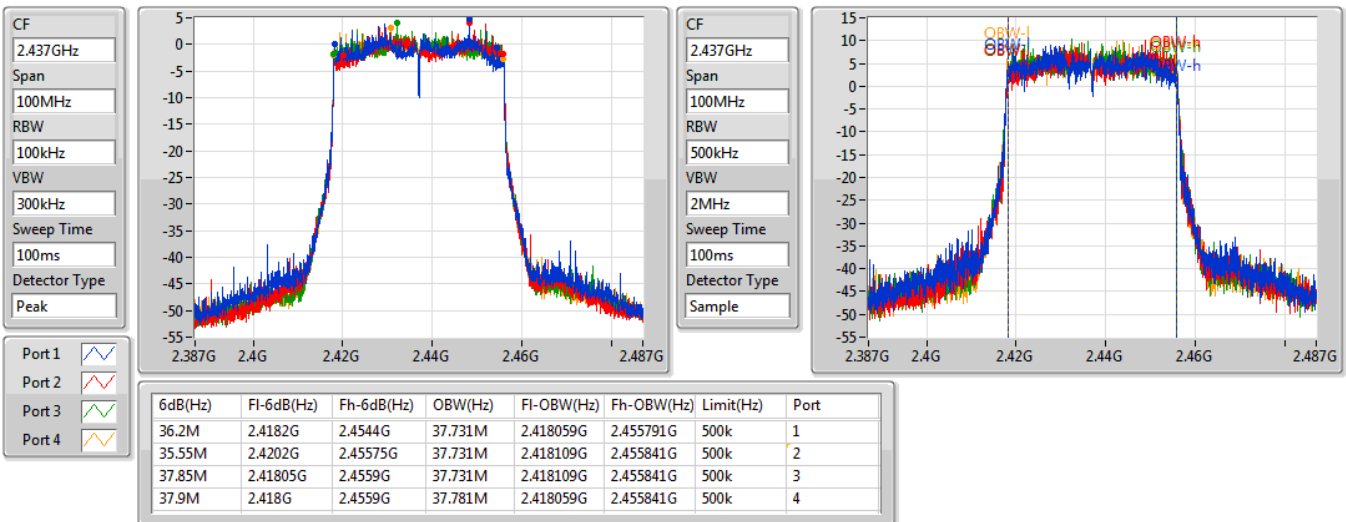

802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
2422MHz

19/07/2019

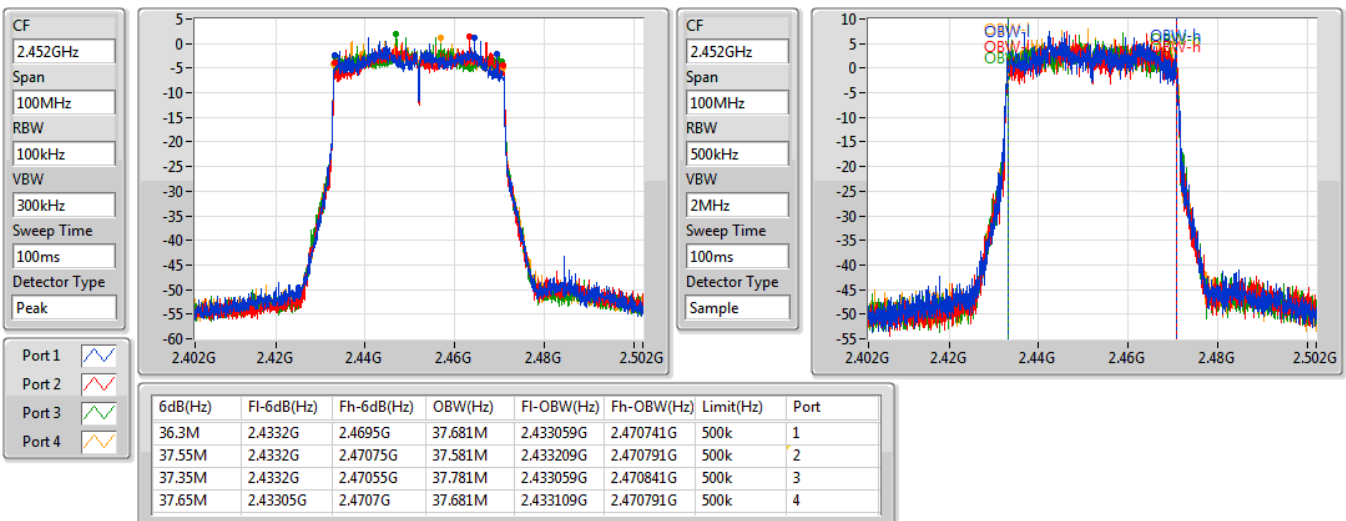


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
2437MHz

19/07/2019


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
2452MHz

19/07/2019



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	18.941M	18M9D1D	13.8M	18.816M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	33.85M	37.731M	37M7D1D	20.75M	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;

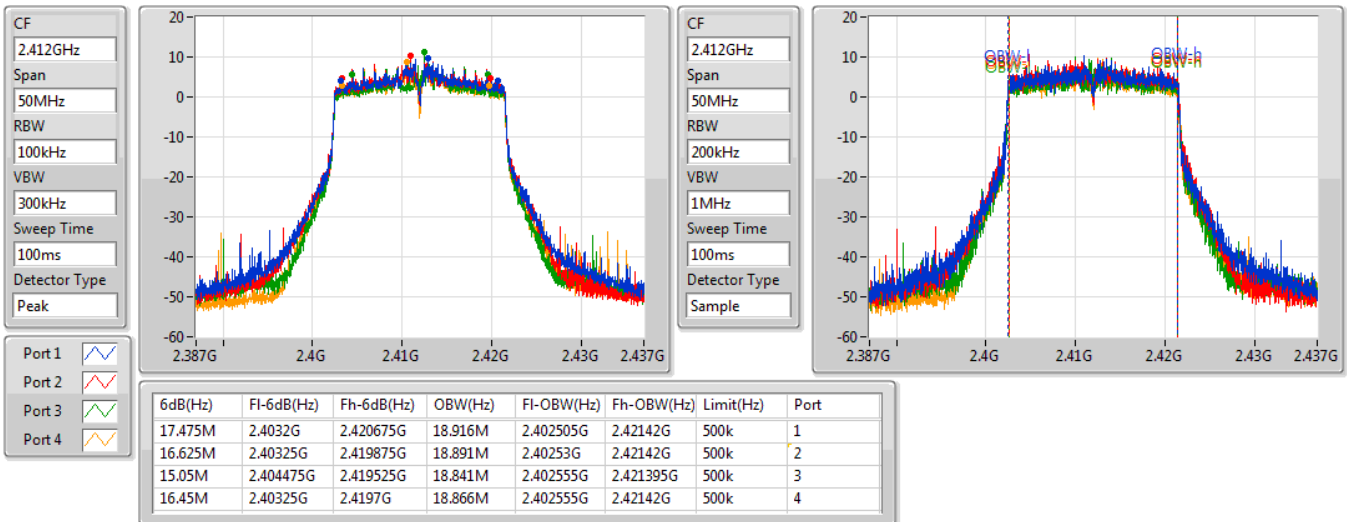
Result

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	17.475M	18.916M	16.625M	18.891M	15.05M	18.841M	16.45M	18.866M
2437MHz	Pass	500k	18.3M	18.891M	18.075M	18.891M	13.8M	18.816M	18.4M	18.891M
2462MHz	Pass	500k	16.3M	18.916M	16.375M	18.891M	15.175M	18.941M	15.025M	18.866M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	500k	24.85M	37.581M	30.05M	37.631M	30.05M	37.581M	27.5M	37.681M
2437MHz	Pass	500k	24.25M	37.631M	32.55M	37.631M	33.85M	37.631M	20.75M	37.681M
2452MHz	Pass	500k	28.8M	37.631M	31.05M	37.731M	23.75M	37.681M	31.25M	37.681M

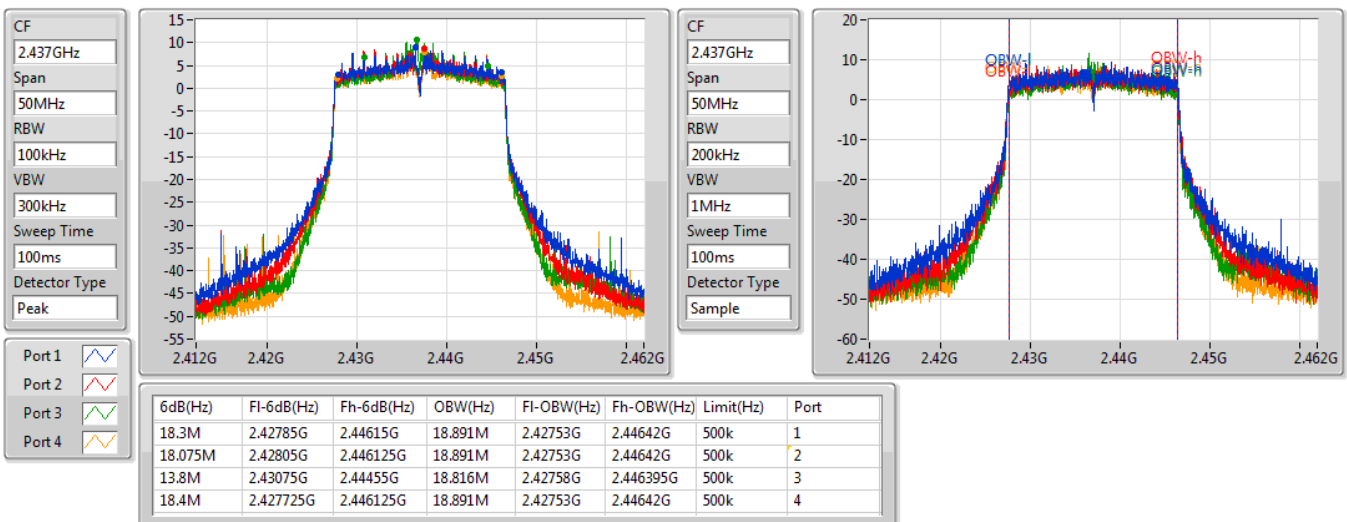
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
2412MHz

19/07/2019

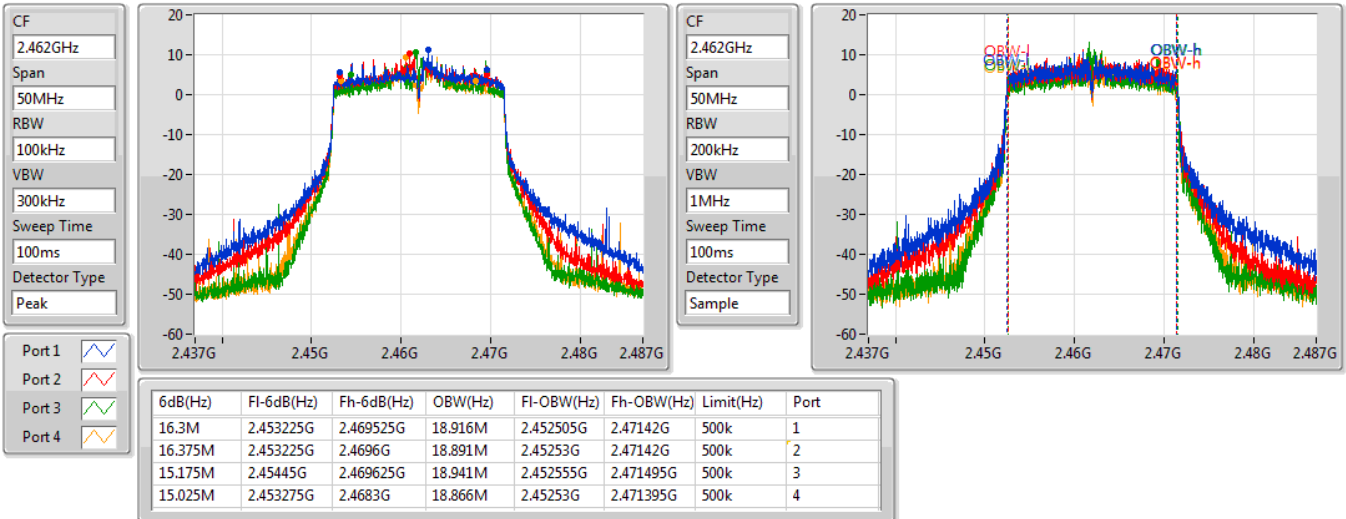

802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
2437MHz

19/07/2019

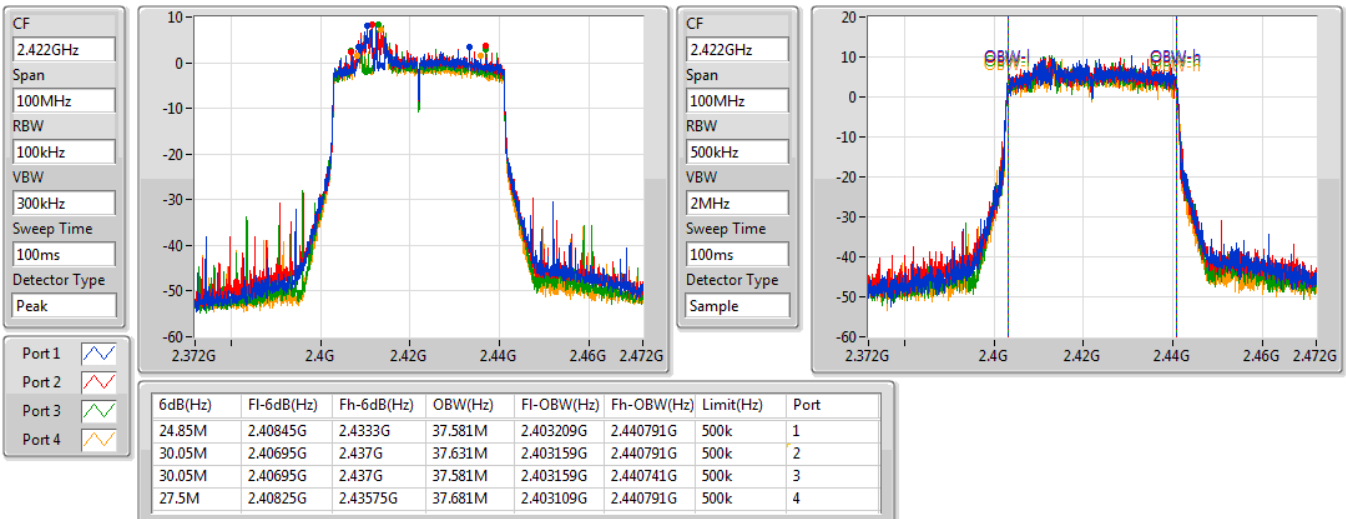


802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
2462MHz

19/07/2019

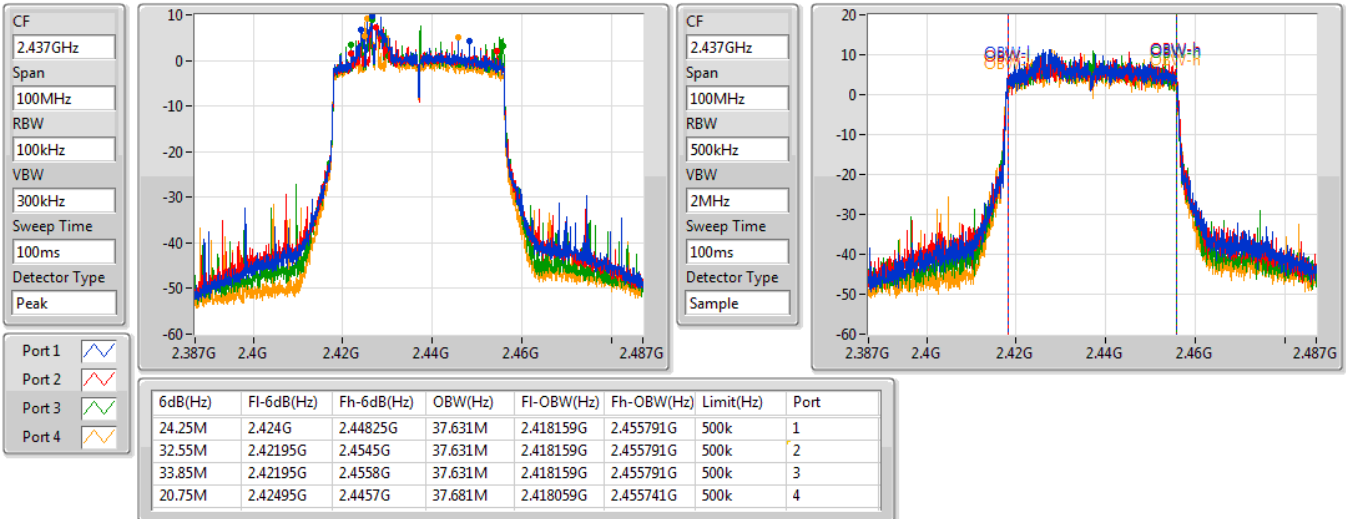

802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
2422MHz

19/07/2019

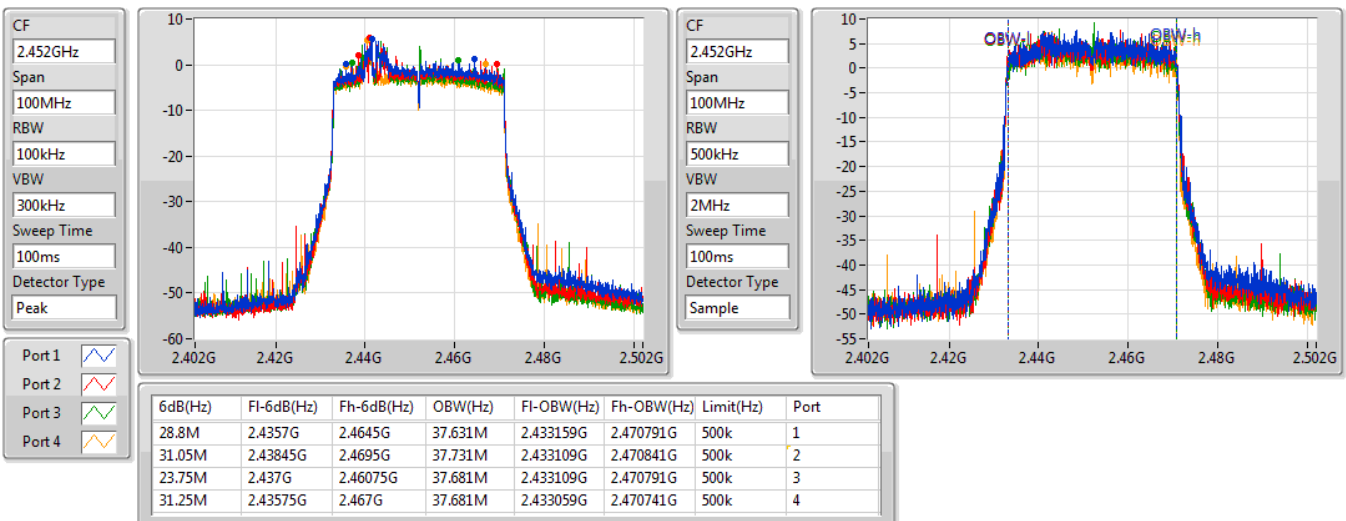


802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
2437MHz

19/07/2019


802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
2452MHz

19/07/2019



**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	9.025M	16.517M	16M5G1D	7.55M	13.743M
802.11g_Nss1,(6Mbps)_1TX	16M	20.115M	20M1D1D	15.75M	16.417M
802.11ax HEW20_Nss1,(MCS0)_1TX	18.575M	19.265M	19M3D1D	18.525M	18.891M
802.11ax HEW40_Nss1,(MCS0)_1TX	38M	37.831M	37M8D1D	37.7M	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)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	7.55M	13.818M
2437MHz	Pass	500k	9.025M	16.517M
2462MHz	Pass	500k	7.975M	13.743M
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	15.75M	16.417M
2437MHz	Pass	500k	15.775M	20.115M
2462MHz	Pass	500k	16M	16.442M
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-
2412MHz	Pass	500k	18.575M	18.891M
2437MHz	Pass	500k	18.525M	19.265M
2462MHz	Pass	500k	18.55M	18.891M
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-	-	-
2422MHz	Pass	500k	37.85M	37.731M
2437MHz	Pass	500k	37.7M	37.681M
2452MHz	Pass	500k	38M	37.831M

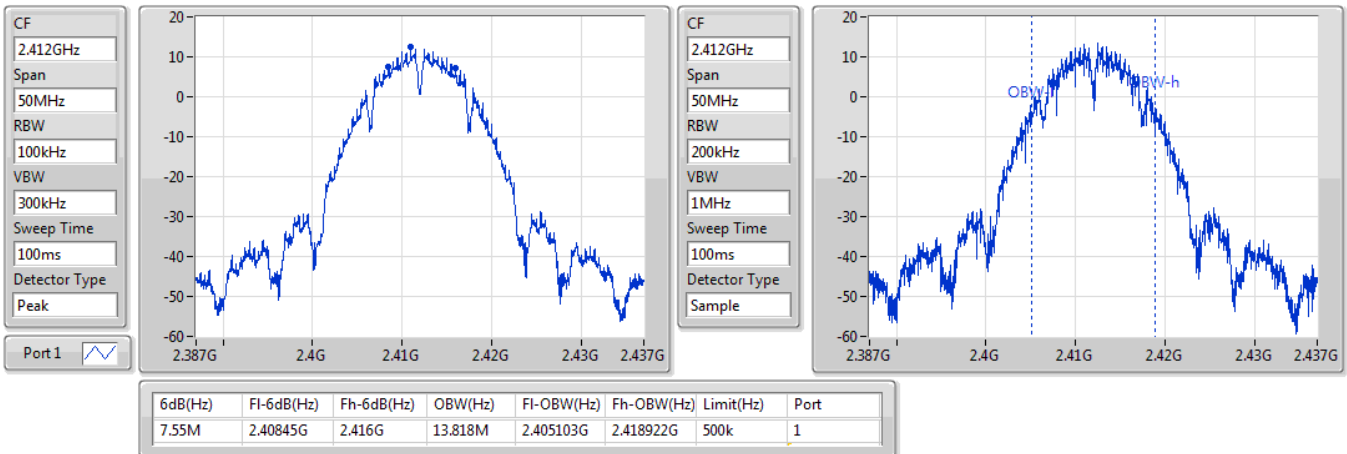
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

802.11b_Nss1,(1Mbps)_1TX

EBW

2412MHz

09/07/2019

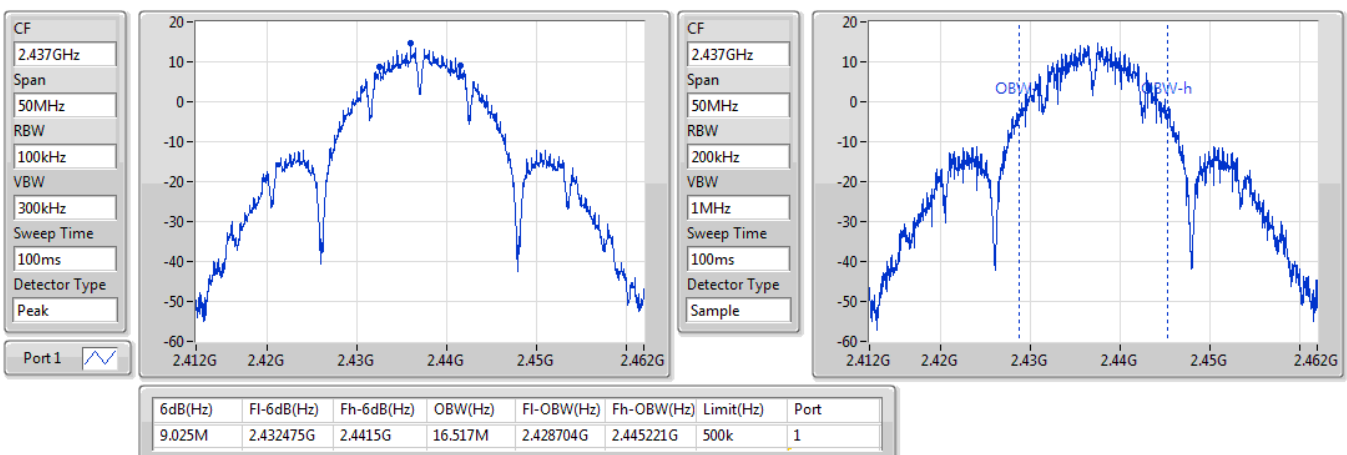


802.11b_Nss1,(1Mbps)_1TX

EBW

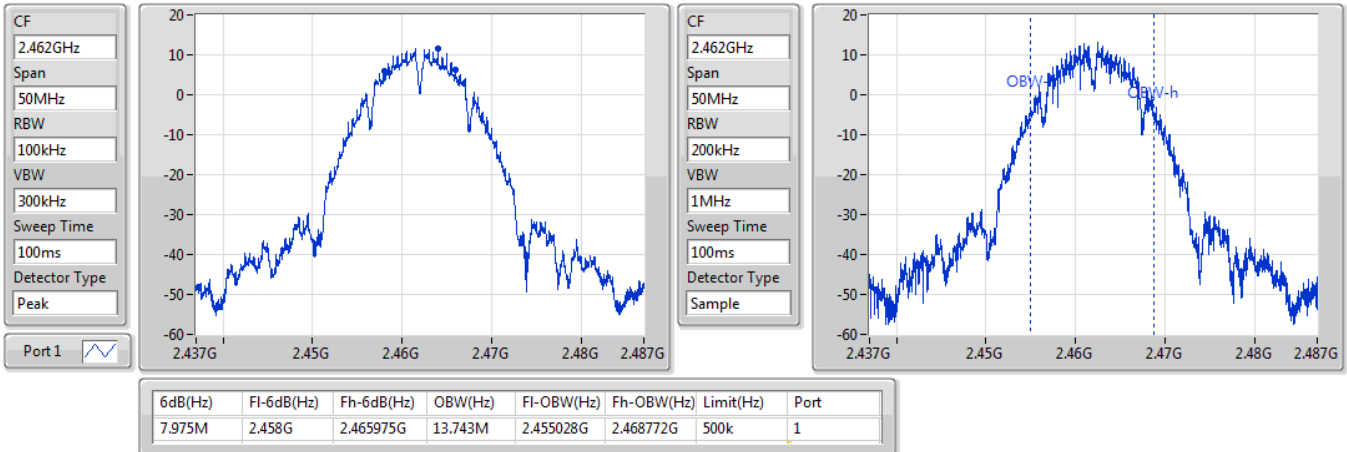
2437MHz

09/07/2019

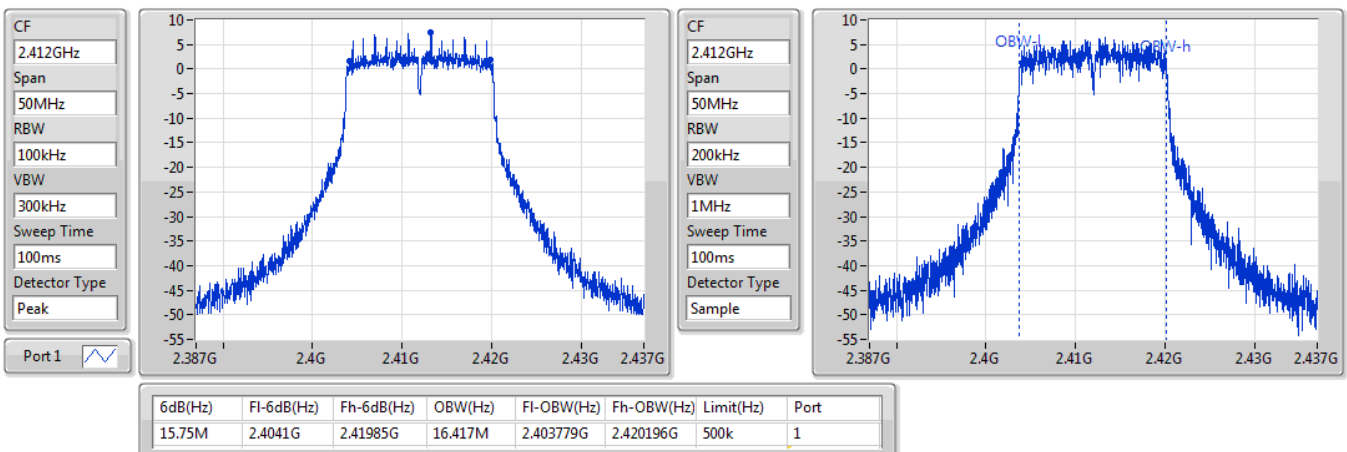


802.11b_Nss1,(1Mbps)_1TX
EBW
2462MHz

09/07/2019


802.11g_Nss1,(6Mbps)_1TX
EBW
2412MHz

09/07/2019

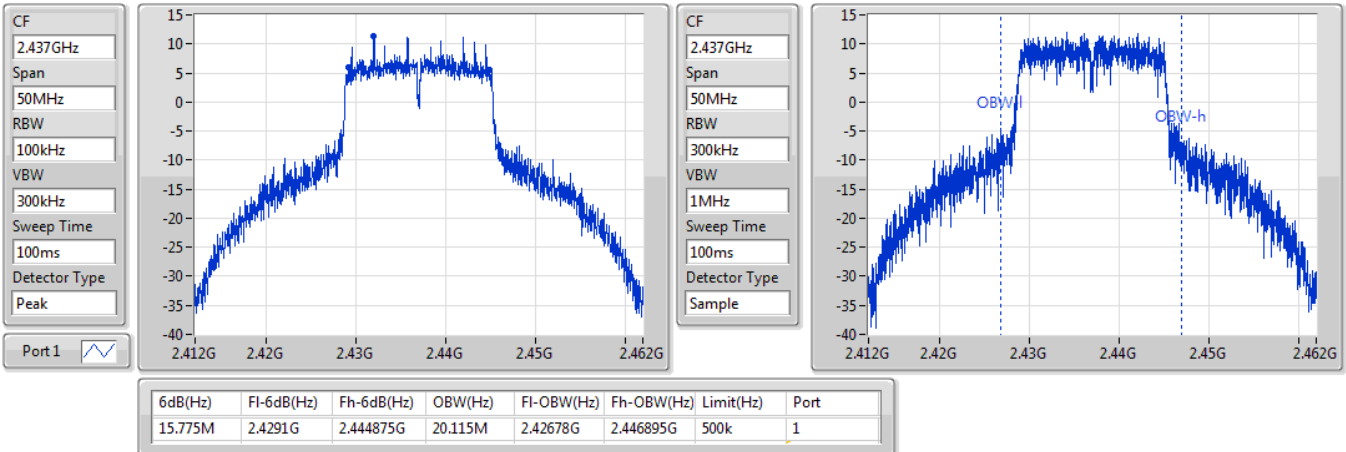


802.11g_Nss1,(6Mbps)_1TX

EBW

2437MHz

09/07/2019

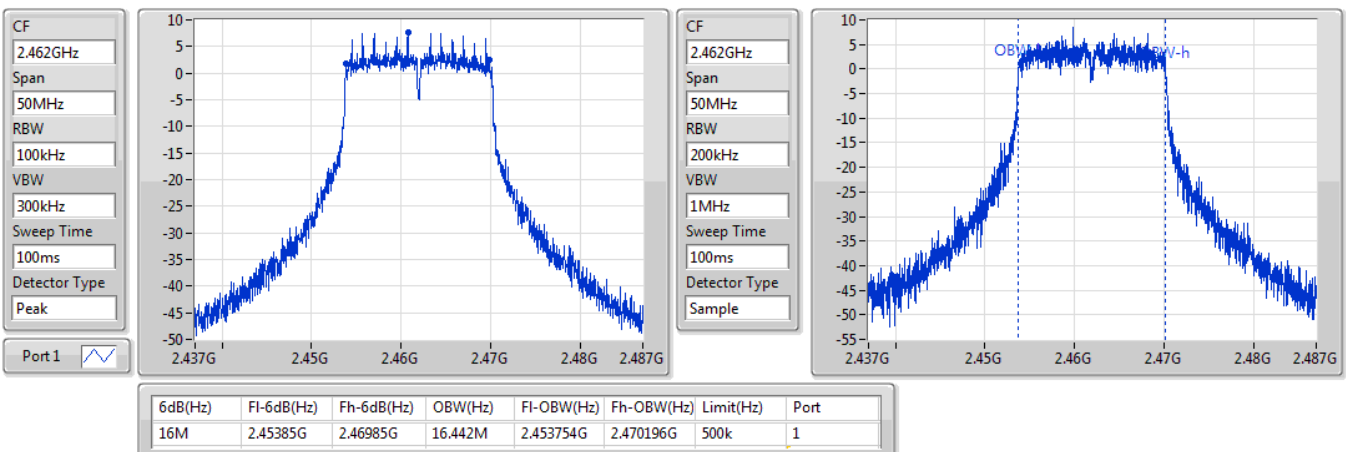


802.11g_Nss1,(6Mbps)_1TX

EBW

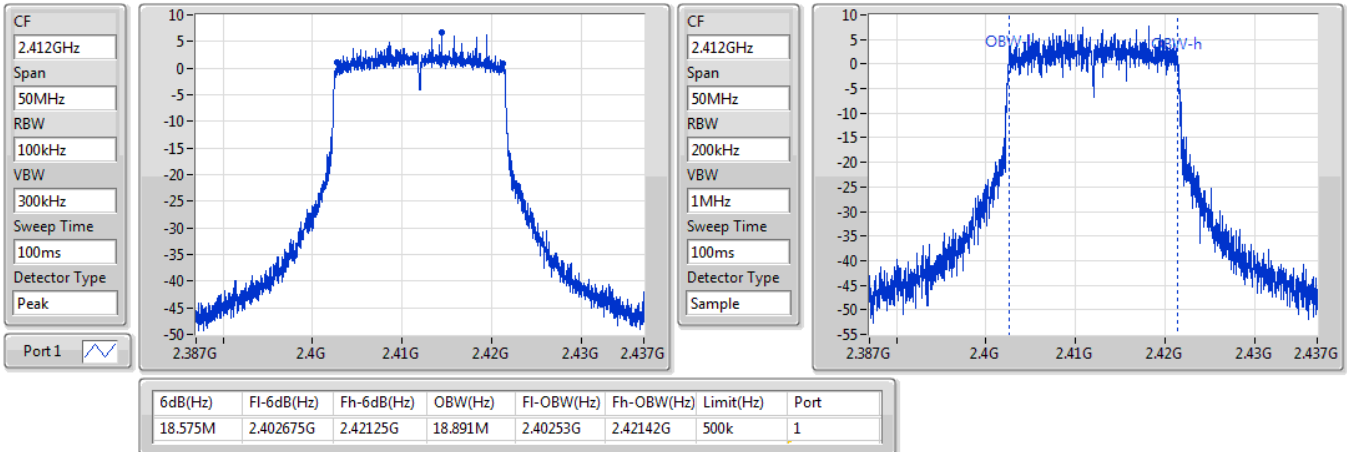
2462MHz

09/07/2019

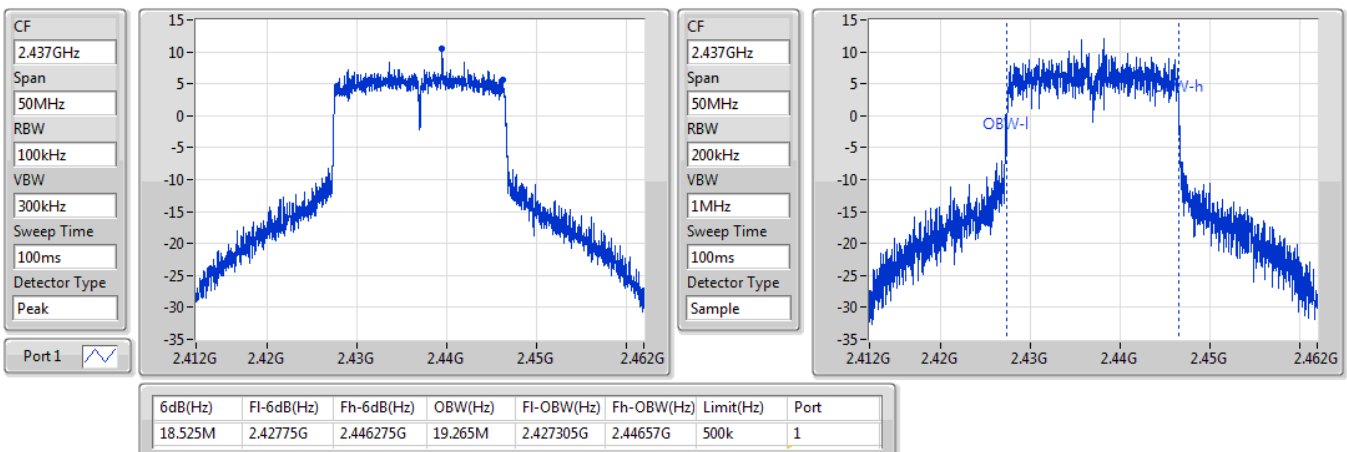


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
2412MHz

09/07/2019

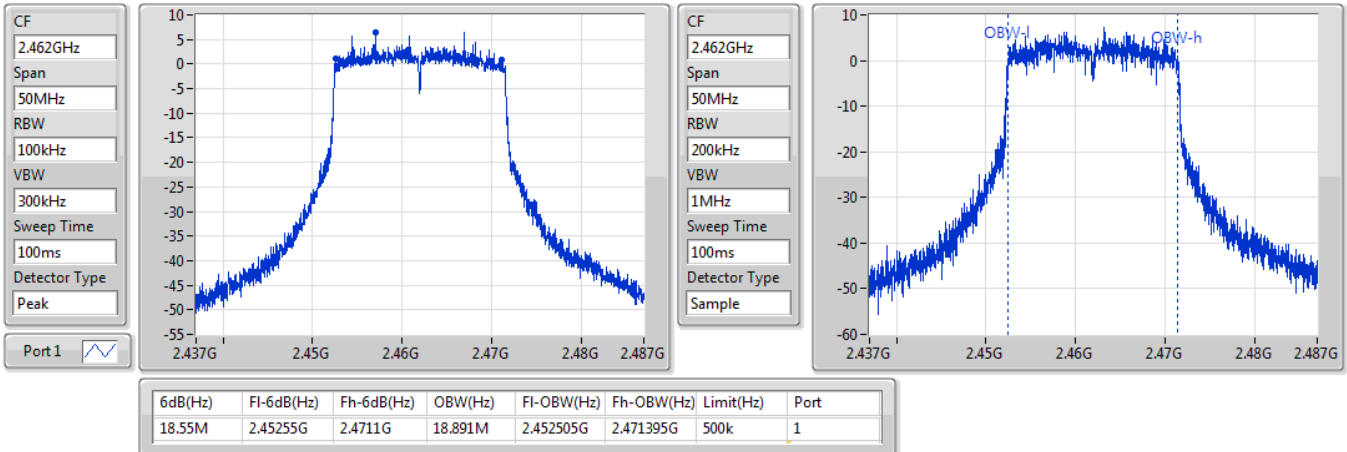

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
2437MHz

09/07/2019

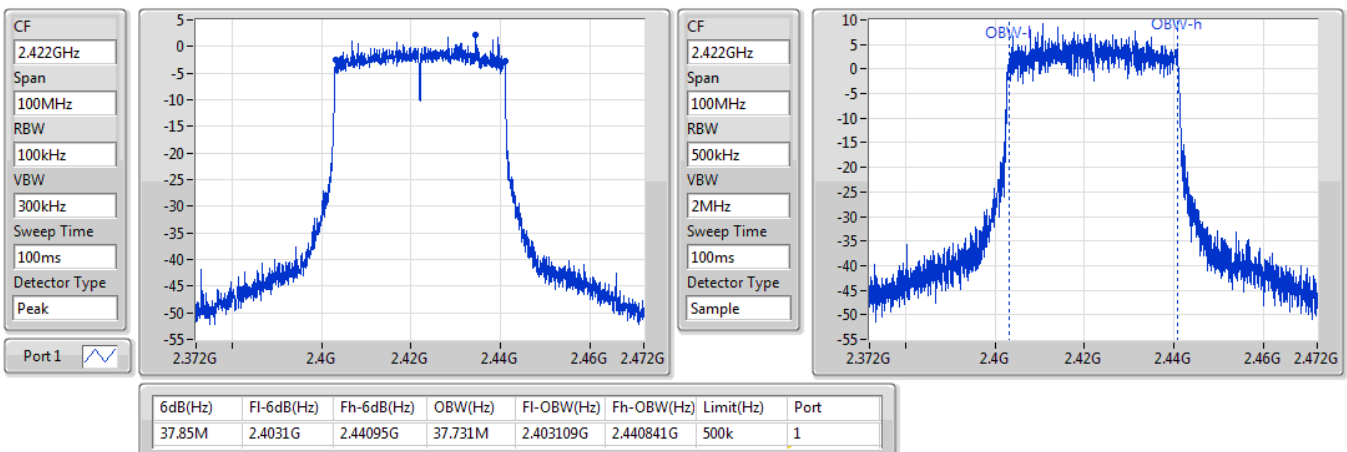


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
2462MHz

09/07/2019


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
2422MHz

09/07/2019

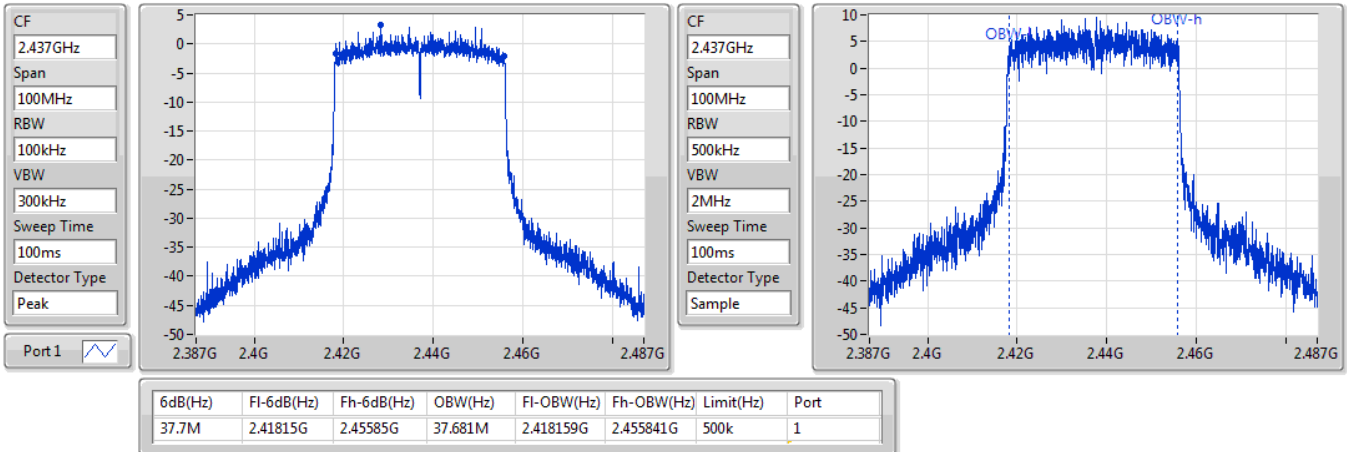


802.11ax HEW40_Nss1,(MCS0)_1TX

EBW

2437MHz

09/07/2019

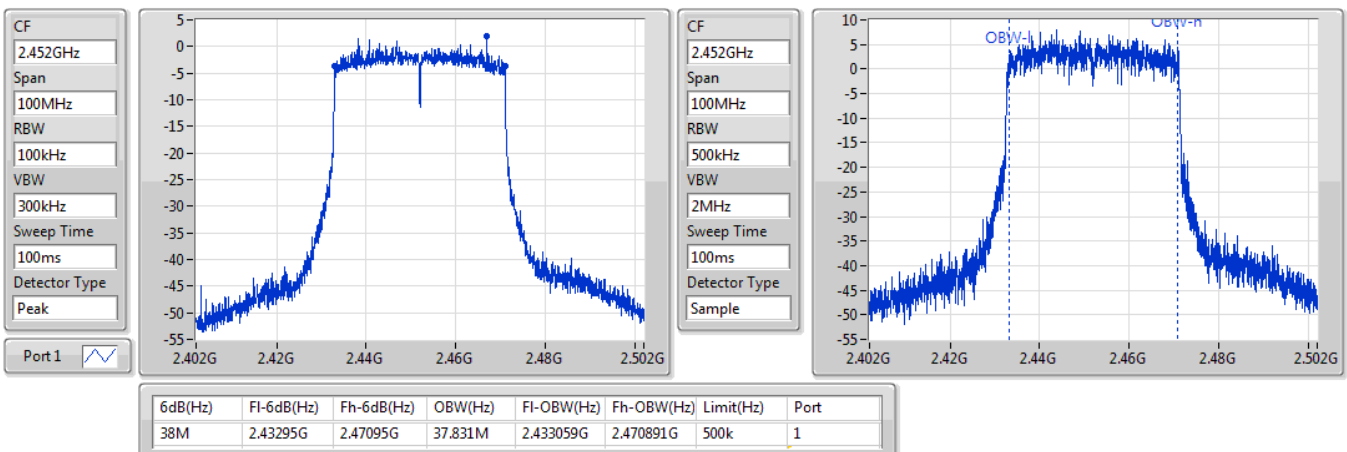


802.11ax HEW40_Nss1,(MCS0)_1TX

EBW

2452MHz

09/07/2019



**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	10.025M	17.441M	17M4G1D	7.525M	13.293M
802.11g_Nss1,(6Mbps)_2TX	16.3M	20.815M	20M8D1D	14.975M	16.392M
802.11ax HEW20_Nss1,(MCS0)_2TX	18.85M	19.215M	19M2D1D	17.8M	18.916M
802.11ax HEW40_Nss1,(MCS0)_2TX	38.15M	37.781M	37M8D1D	37.45M	37.581M

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

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

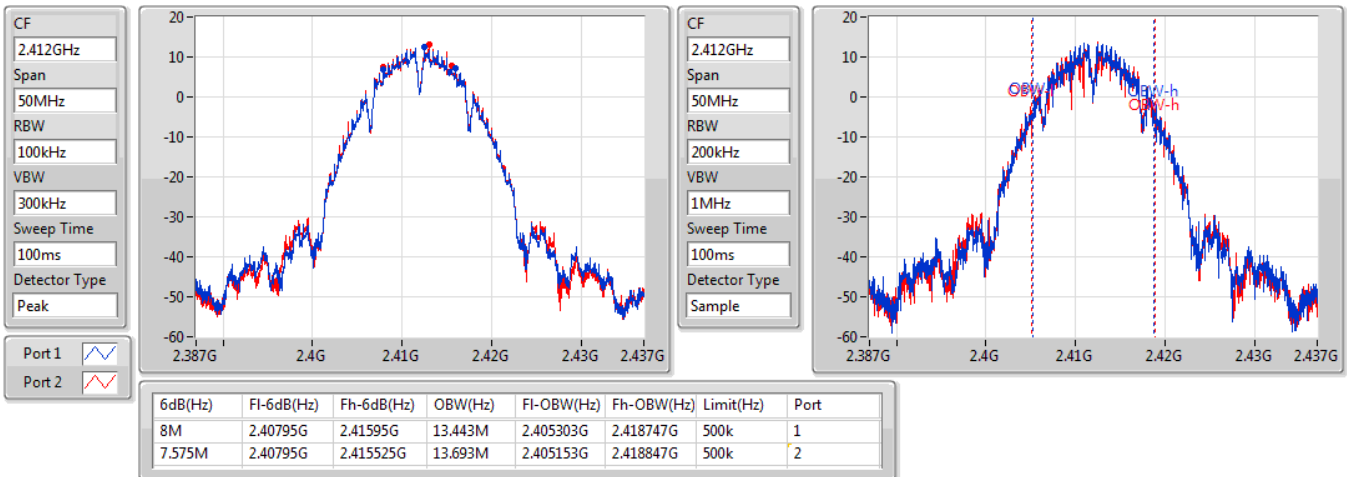
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	8M	13.443M	7.575M	13.693M
2437MHz	Pass	500k	10.025M	16.367M	9.975M	17.441M
2462MHz	Pass	500k	8.025M	13.293M	7.525M	13.318M
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	15.3M	16.392M	16.3M	16.442M
2437MHz	Pass	500k	14.975M	19.615M	15.925M	20.815M
2462MHz	Pass	500k	15.075M	16.392M	16.025M	16.442M
802.11ax HEW20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	18.675M	18.966M	17.8M	18.916M
2437MHz	Pass	500k	18.85M	19.14M	18.1M	19.215M
2462MHz	Pass	500k	18.3M	19.015M	17.925M	18.941M
802.11ax HEW40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	500k	37.85M	37.731M	37.7M	37.581M
2437MHz	Pass	500k	37.75M	37.731M	37.45M	37.681M
2452MHz	Pass	500k	38.15M	37.781M	37.5M	37.731M

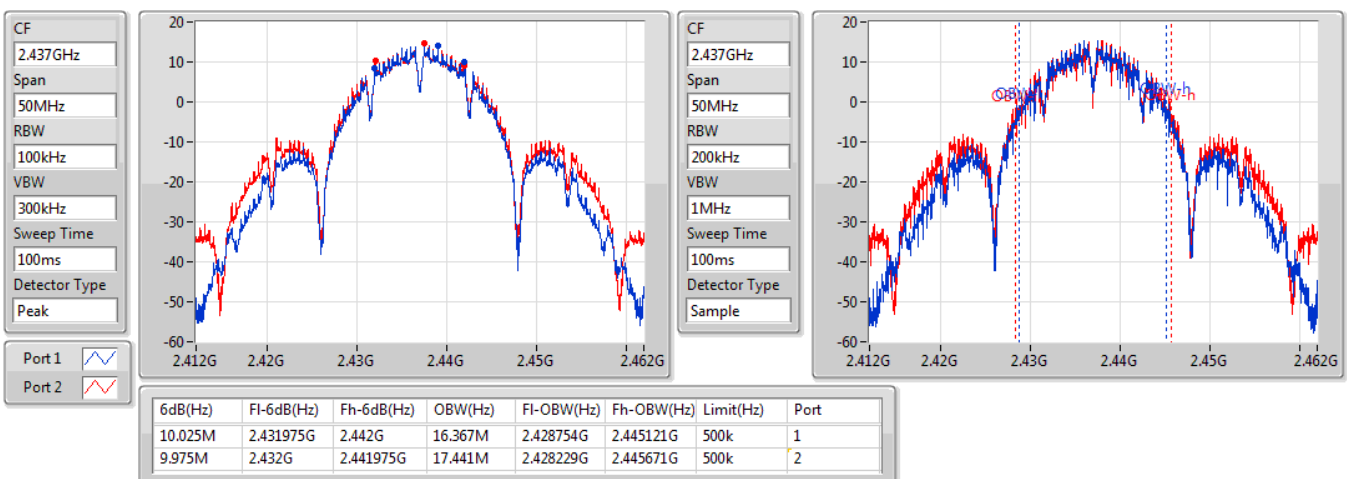
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

802.11b_Nss1,(1Mbps)_2TX
EBW
2412MHz

08/07/2019

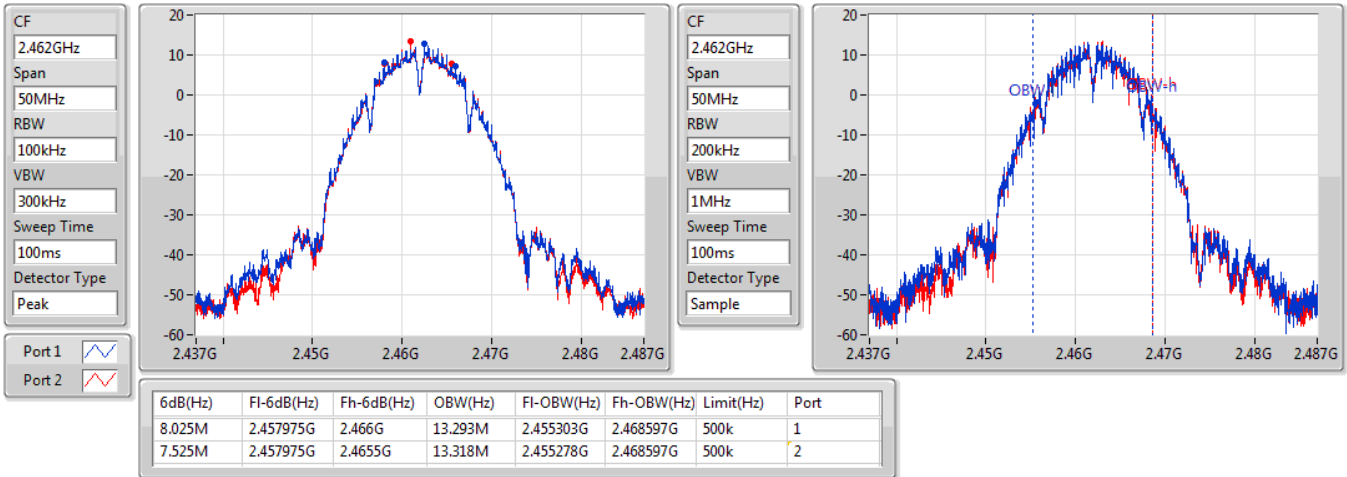

802.11b_Nss1,(1Mbps)_2TX
EBW
2437MHz

08/07/2019

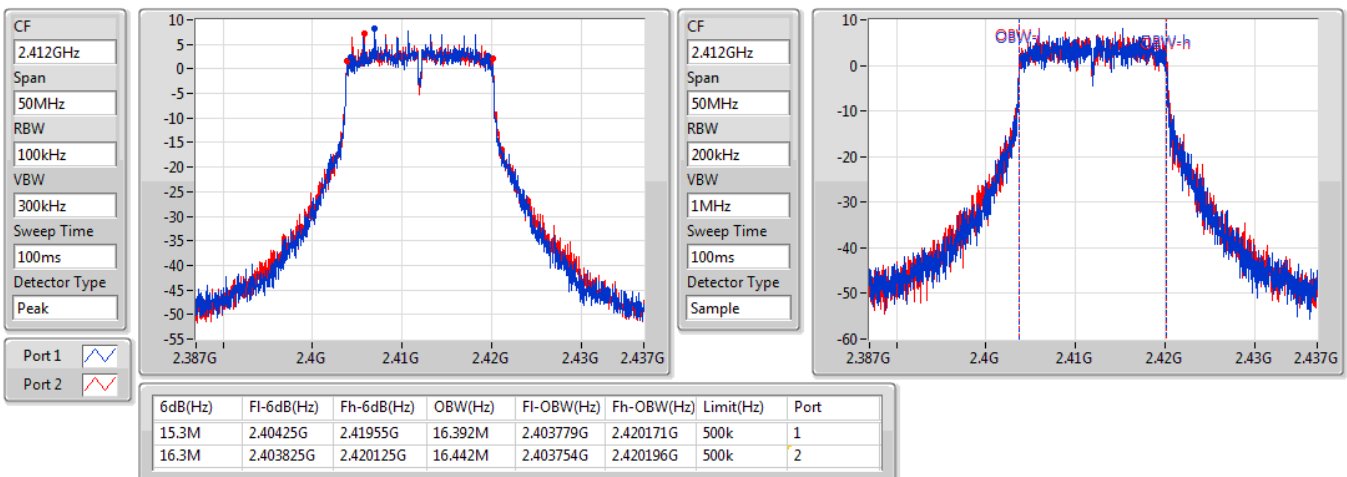


802.11b_Nss1,(1Mbps)_2TX
EBW
2462MHz

08/07/2019

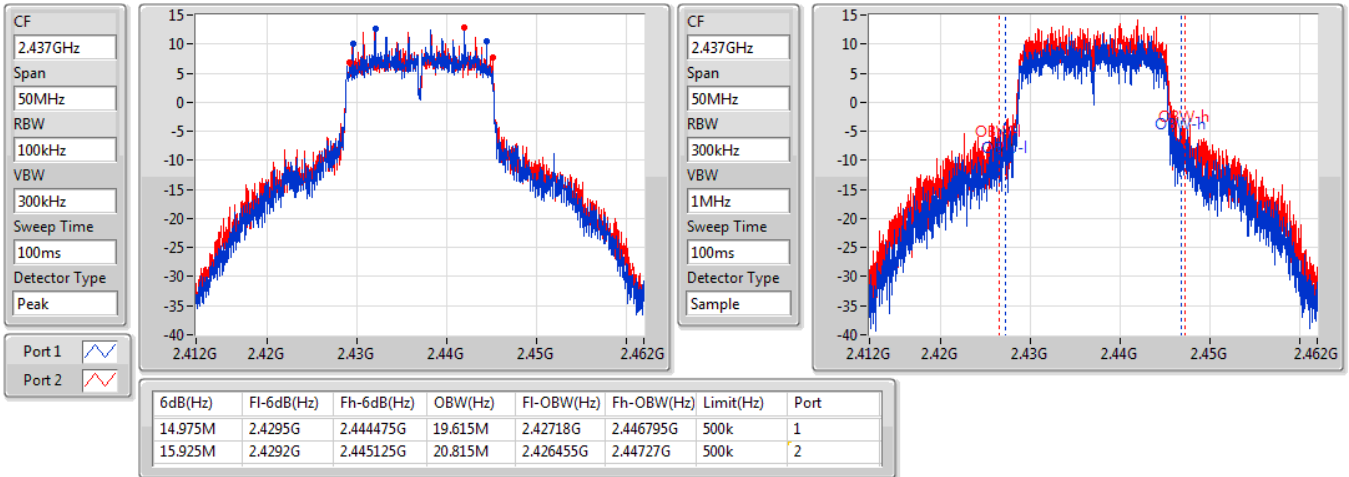

802.11g_Nss1,(6Mbps)_2TX
EBW
2412MHz

08/07/2019

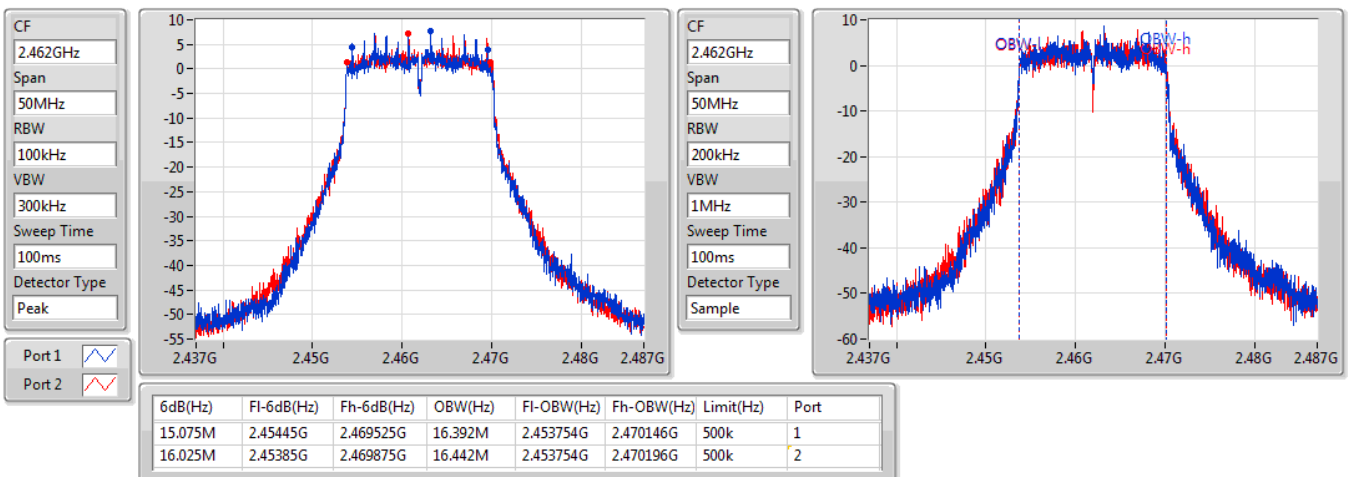


802.11g_Nss1,(6Mbps)_2TX
EBW
2437MHz

08/07/2019


802.11g_Nss1,(6Mbps)_2TX
EBW
2462MHz

08/07/2019

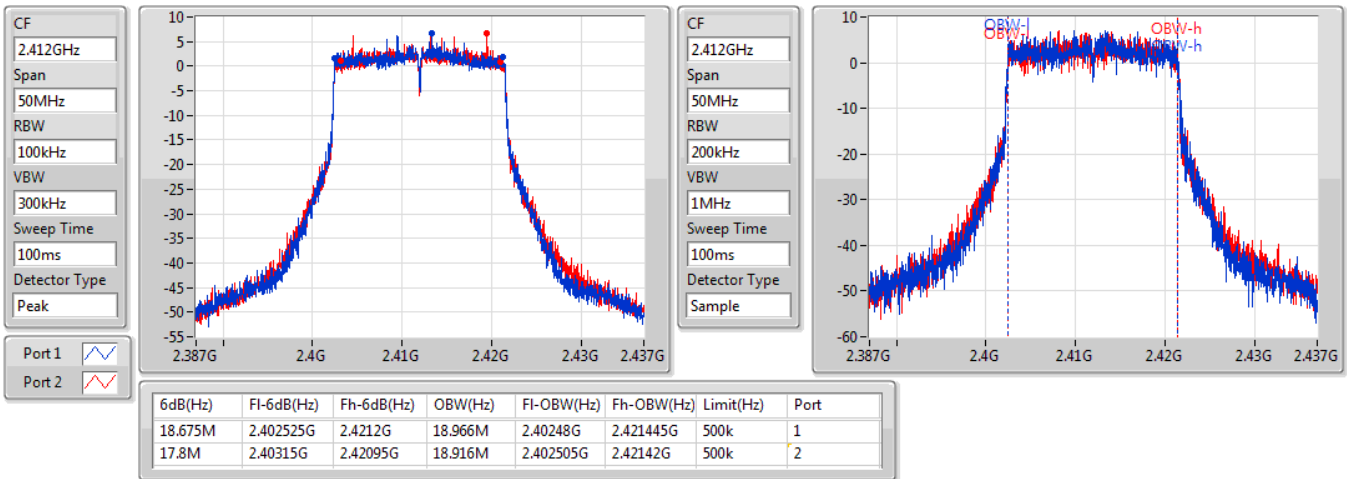


802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

2412MHz

08/07/2019

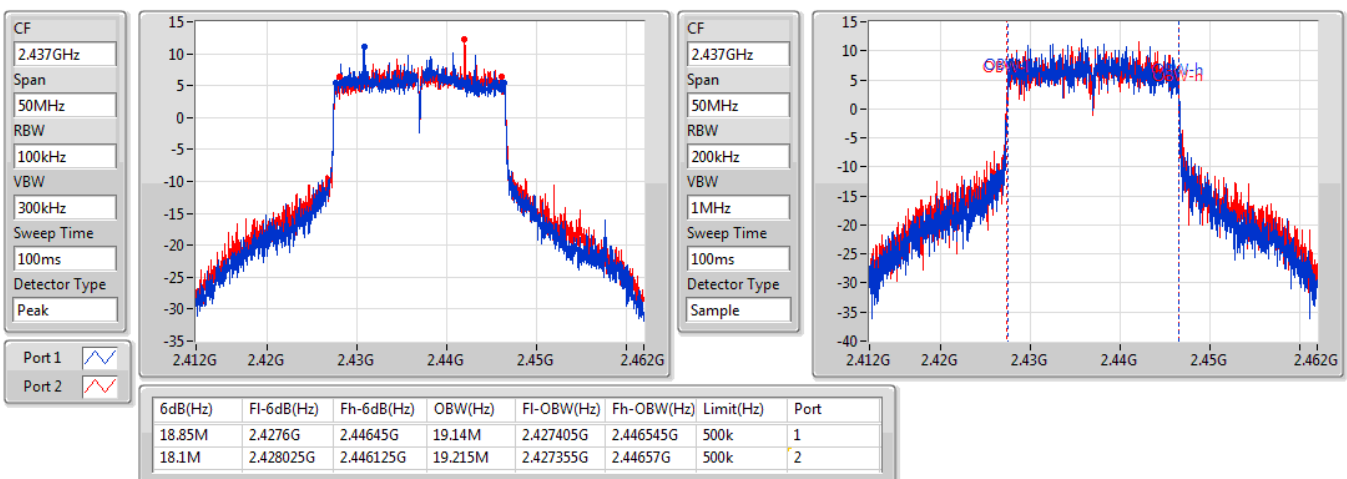


802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

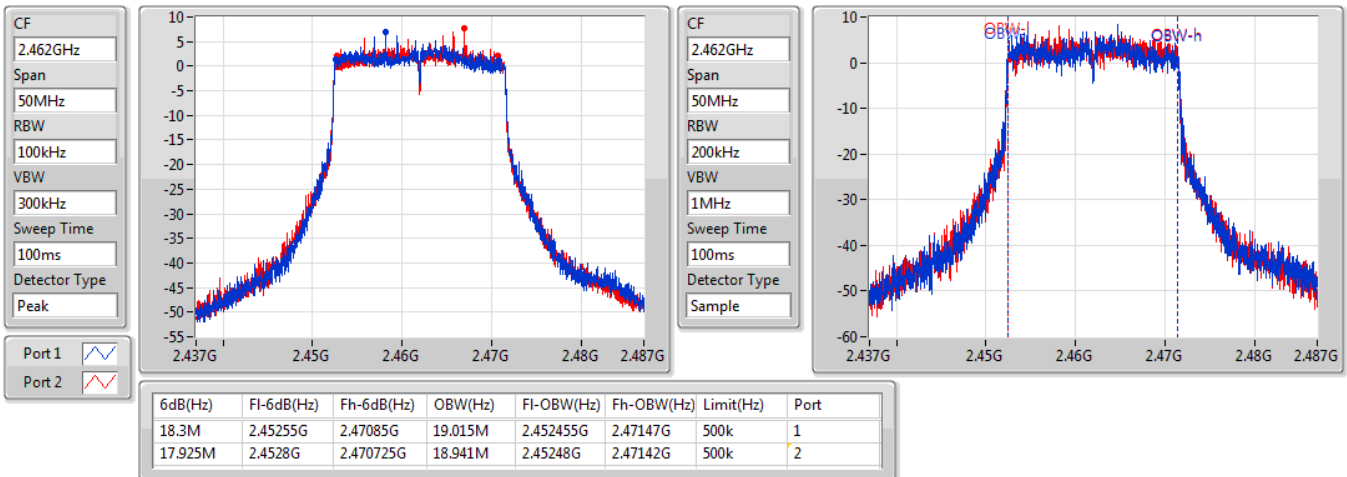
2437MHz

08/07/2019

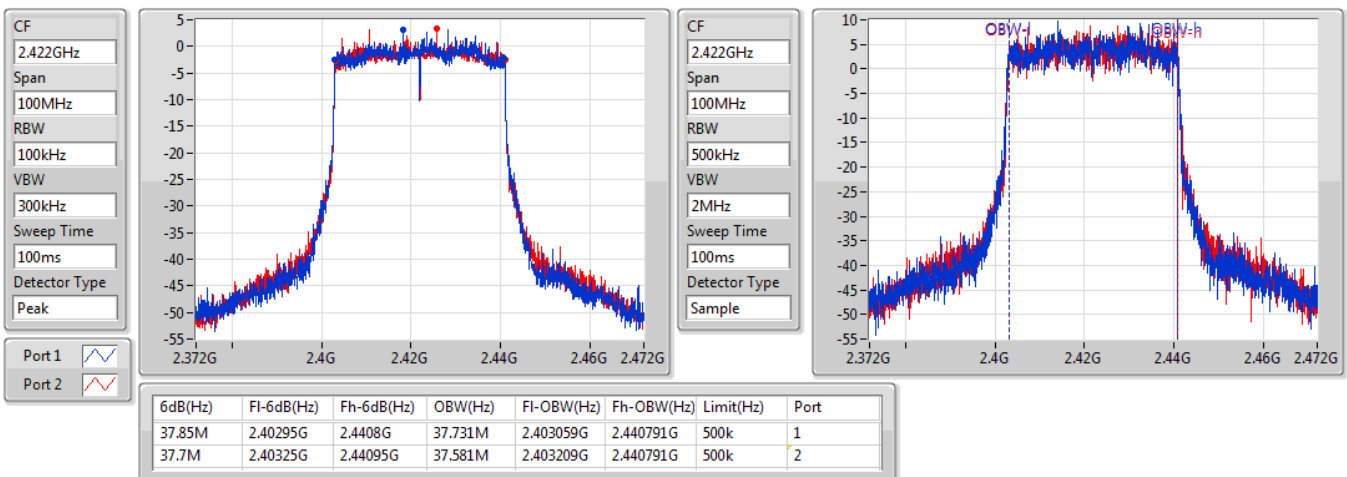


802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
2462MHz

08/07/2019

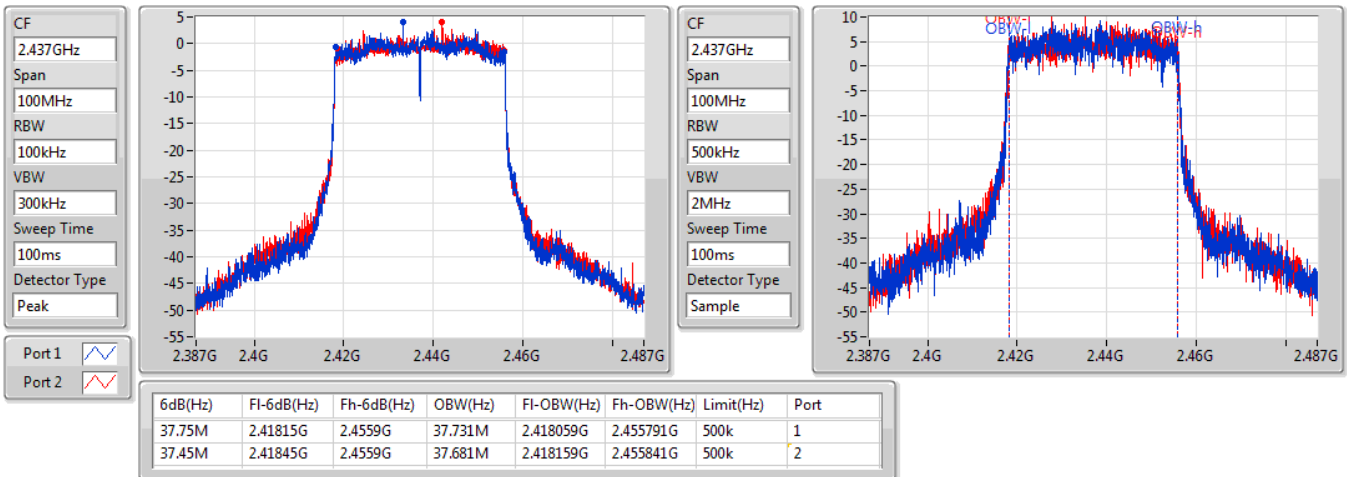

802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
2422MHz

08/07/2019

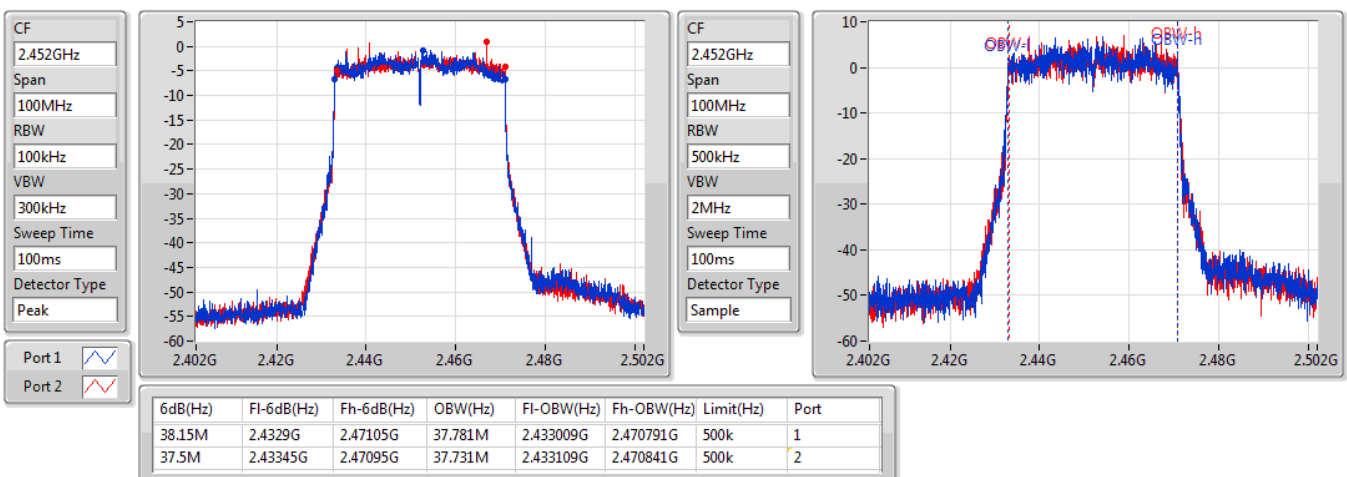


802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
2437MHz

08/07/2019


802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
2452MHz

08/07/2019



**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	17.5M	18.916M	18M9D1D	13.875M	18.866M
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	37.35M	37.831M	37M8D1D	3.05M	37.581M

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

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

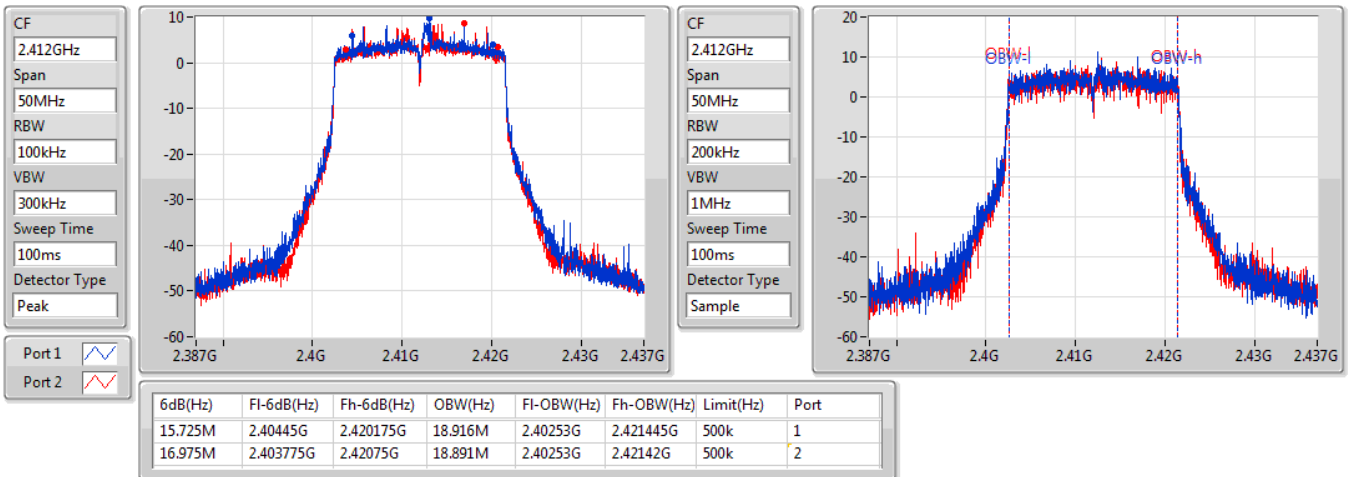
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	15.725M	18.916M	16.975M	18.891M
2437MHz	Pass	500k	17.5M	18.891M	16.925M	18.866M
2462MHz	Pass	500k	17.5M	18.891M	13.875M	18.866M
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	500k	3.05M	37.581M	5.65M	37.831M
2437MHz	Pass	500k	17.2M	37.631M	37.35M	37.581M
2452MHz	Pass	500k	32.55M	37.681M	37.2M	37.681M

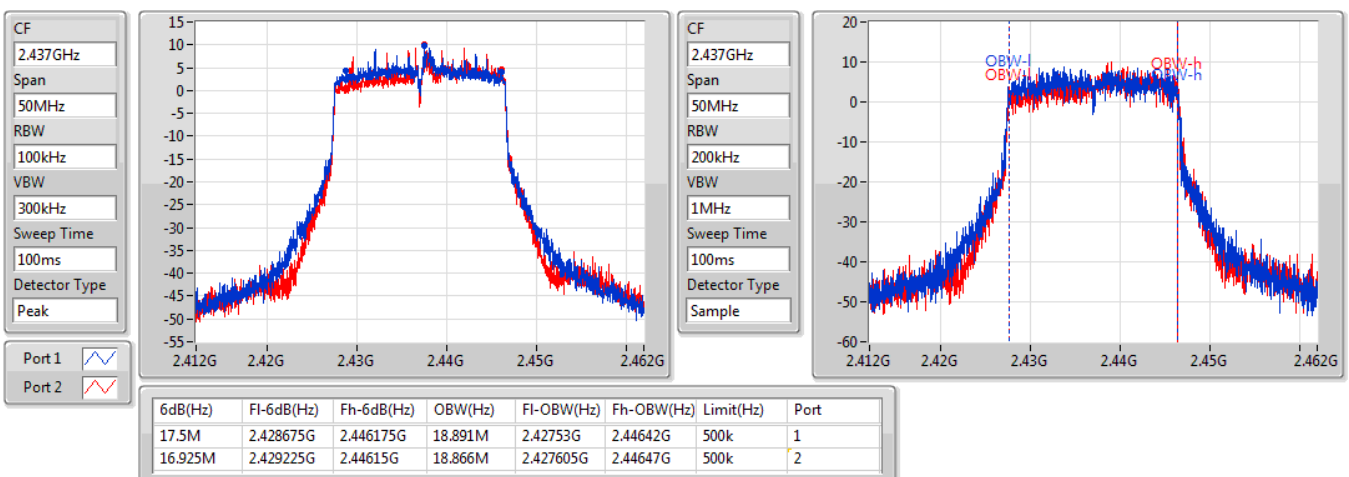
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

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

09/07/2019

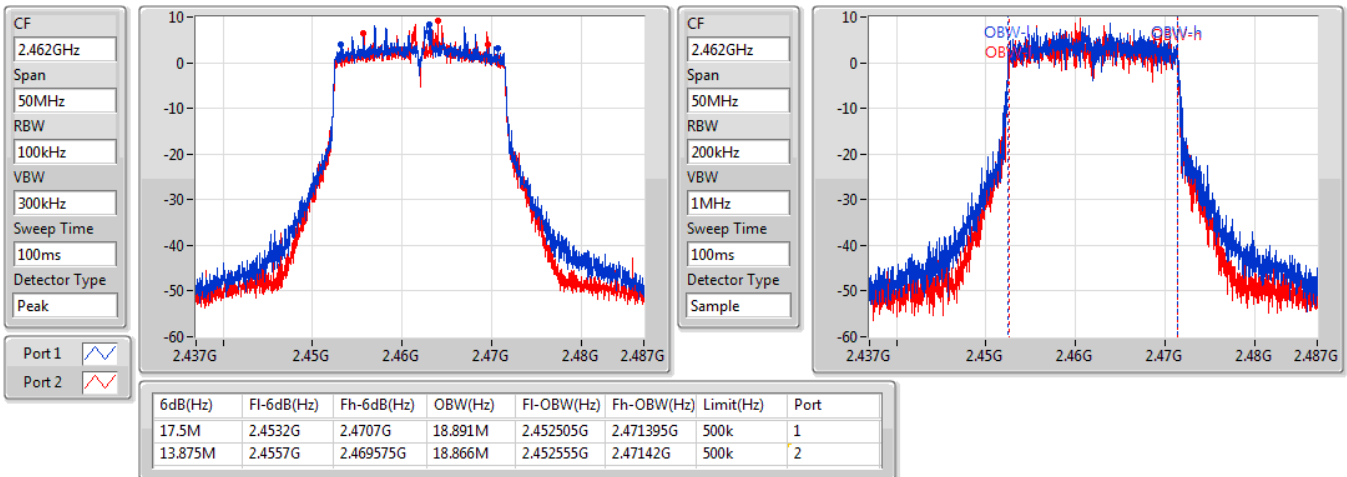

802.11ax HEW20-BF_Nss1,(MCS0)_2TX
EBW
2437MHz

09/07/2019

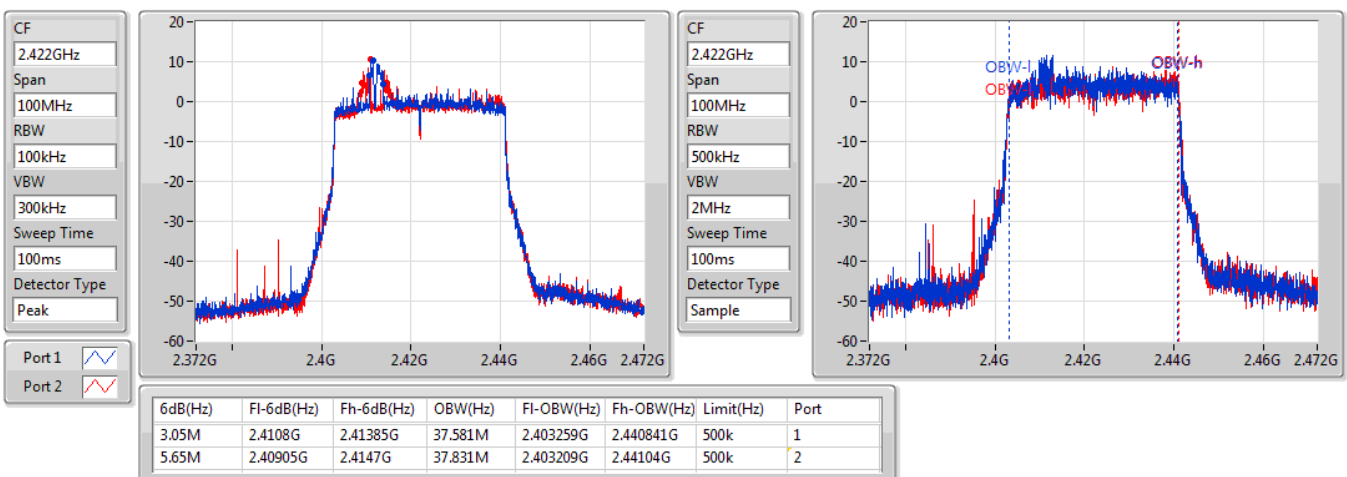


802.11ax HEW20-BF_Nss1,(MCS0)_2TX
EBW
2462MHz

09/07/2019

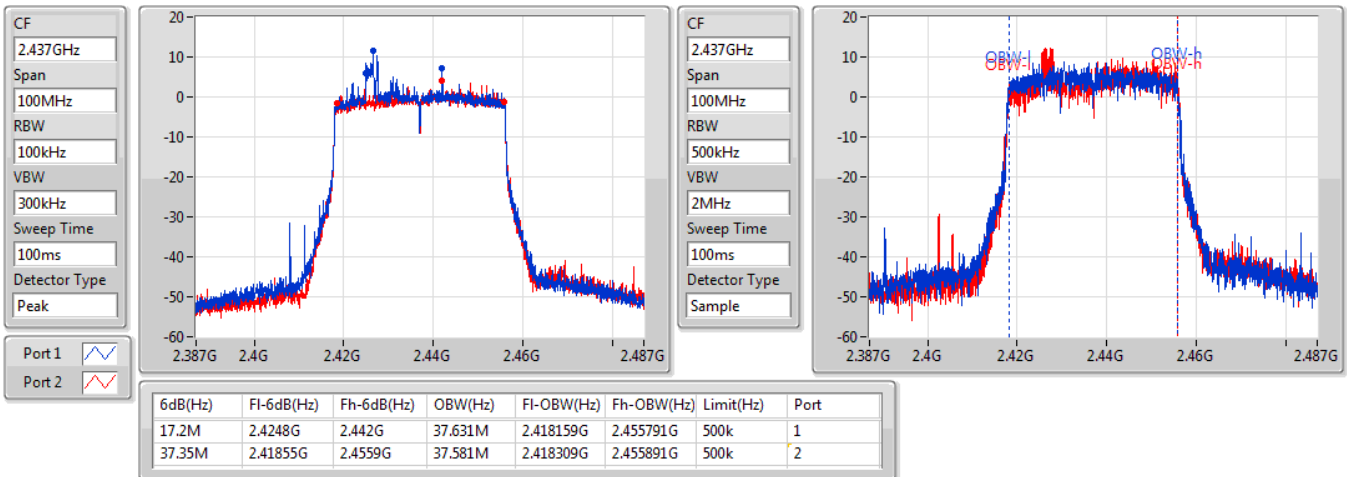

802.11ax HEW40-BF_Nss1,(MCS0)_2TX
EBW
2422MHz

09/07/2019

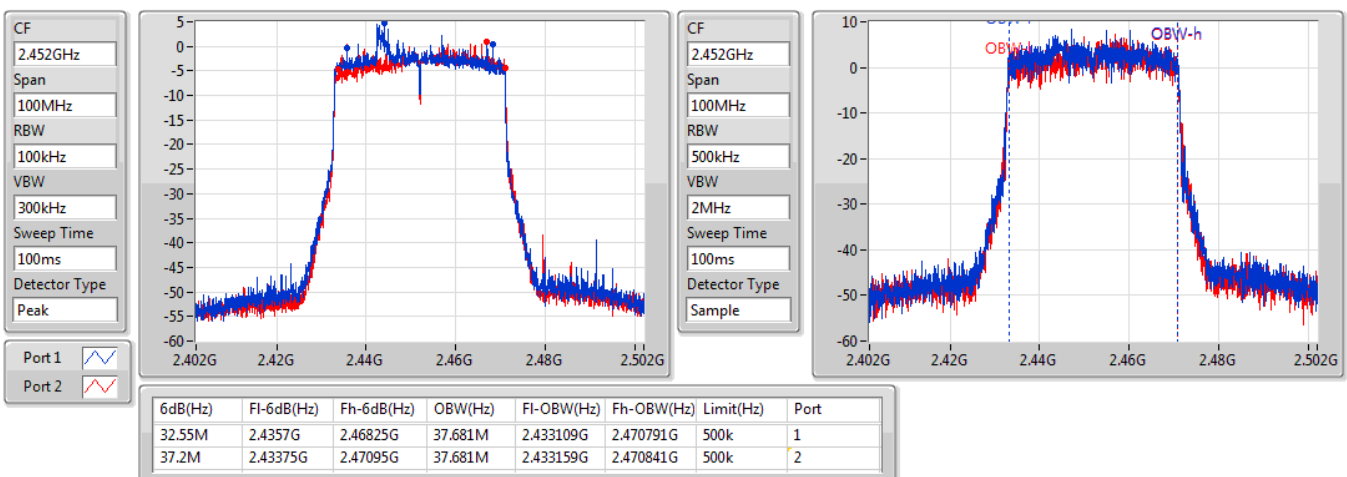


802.11ax HEW40-BF_Nss1,(MCS0)_2TX
EBW
2437MHz

09/07/2019


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

09/07/2019



**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	15.217M	15M2G1D	7.05M	13.118M
802.11g_Nss1,(6Mbps)_4TX	16.3M	17.466M	17M5D1D	15.05M	16.342M
802.11ax HEW20_Nss1,(MCS0)_4TX	18.9M	19.165M	19M2D1D	17.475M	18.866M
802.11ax HEW40_Nss1,(MCS0)_4TX	37.95M	37.831M	37M8D1D	33.85M	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;

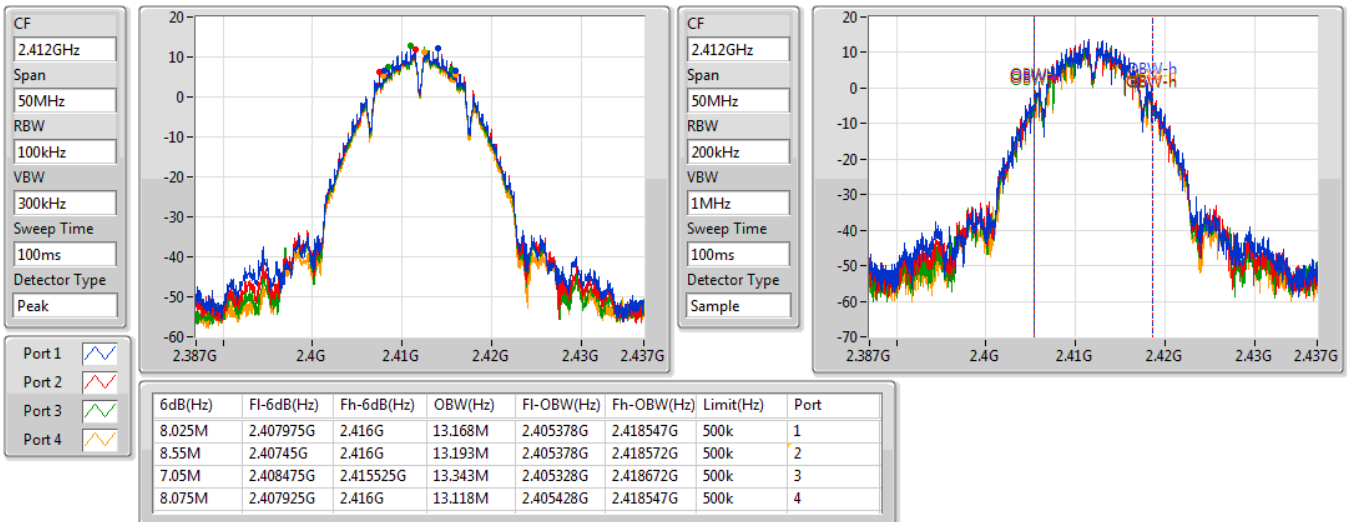
Result

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	8.025M	13.168M	8.55M	13.193M	7.05M	13.343M	8.075M	13.118M
2437MHz	Pass	500k	9.025M	15.017M	9.575M	15.217M	9.975M	15.217M	9.025M	14.693M
2462MHz	Pass	500k	7.05M	13.193M	8M	13.218M	8.075M	13.393M	7.55M	13.218M
802.11g_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	15.3M	16.342M	15.925M	16.442M	16.3M	16.442M	16.25M	16.417M
2437MHz	Pass	500k	15.05M	16.642M	15.625M	17.241M	15.875M	17.466M	16.275M	16.617M
2462MHz	Pass	500k	15.325M	16.342M	16.275M	16.467M	16.025M	16.442M	16.3M	16.417M
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	18.9M	19.015M	18.7M	18.966M	18.85M	18.866M	17.7M	18.866M
2437MHz	Pass	500k	18.9M	19.14M	18.7M	19.165M	17.475M	19.065M	18.8M	19.04M
2462MHz	Pass	500k	18.85M	18.966M	18.25M	18.966M	17.8M	18.891M	17.925M	18.866M
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	500k	37.15M	37.731M	37.7M	37.631M	37.95M	37.831M	37.7M	37.631M
2437MHz	Pass	500k	36.1M	37.731M	36.95M	37.631M	37.55M	37.681M	37.75M	37.831M
2452MHz	Pass	500k	33.85M	37.631M	37.75M	37.631M	37.8M	37.781M	37.95M	37.831M

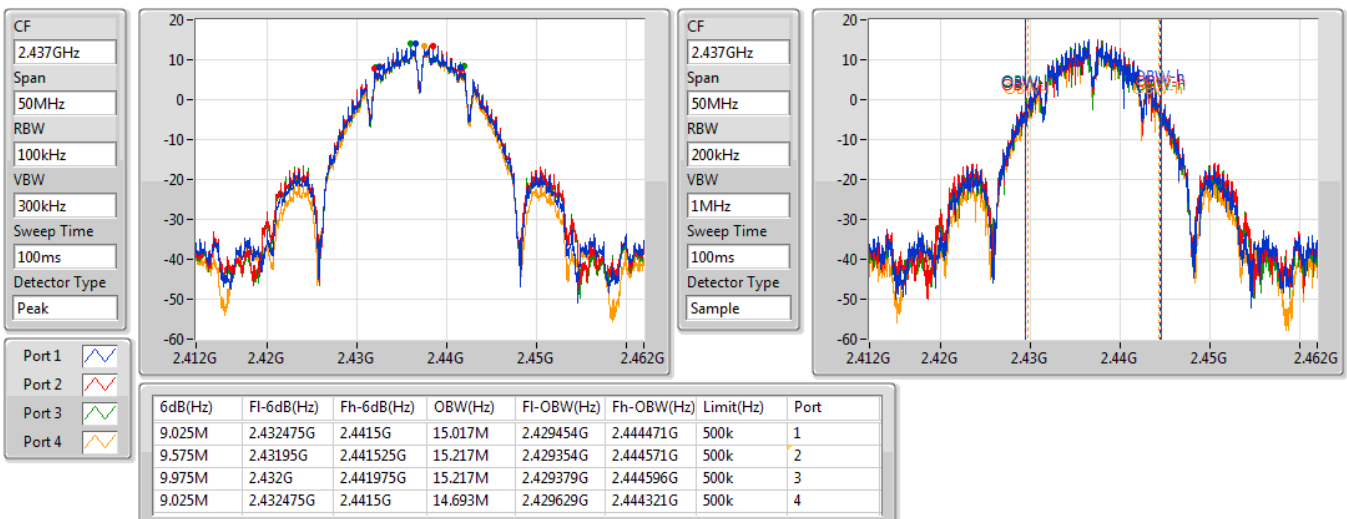
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

802.11b_Nss1,(1Mbps)_4TX
EBW
2412MHz

08/07/2019

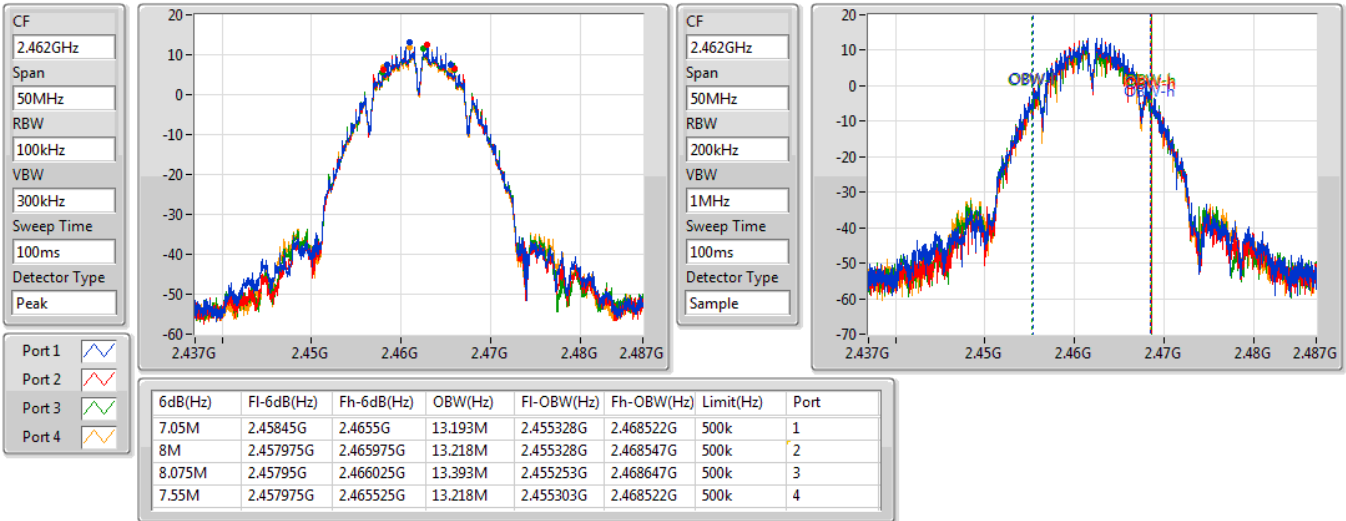

802.11b_Nss1,(1Mbps)_4TX
EBW
2437MHz

08/07/2019

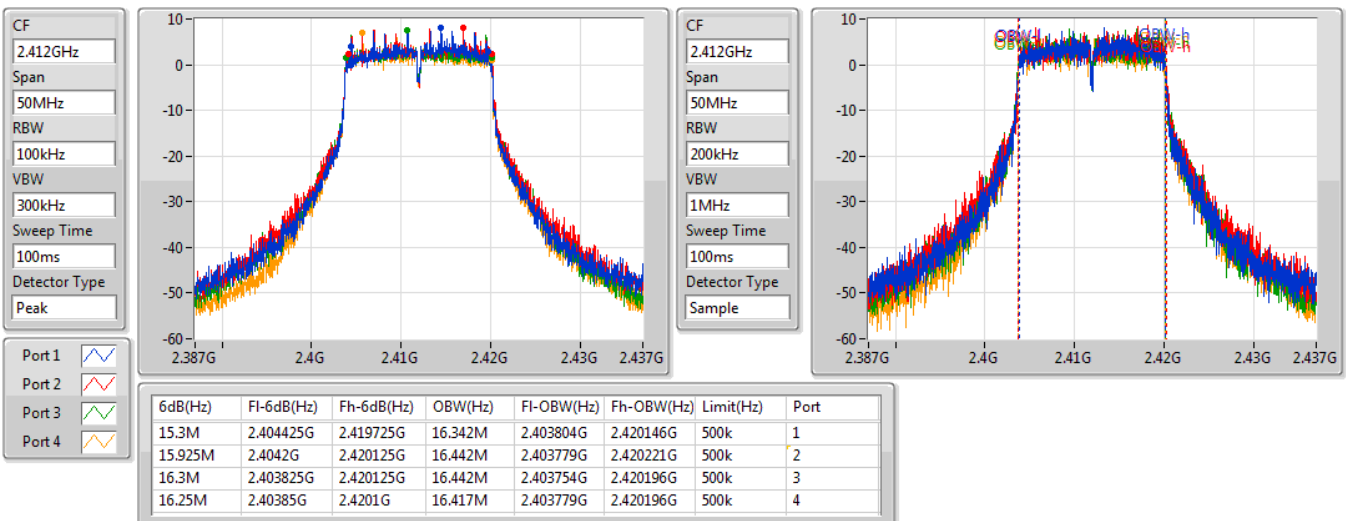


802.11b_Nss1,(1Mbps)_4TX
EBW
2462MHz

08/07/2019

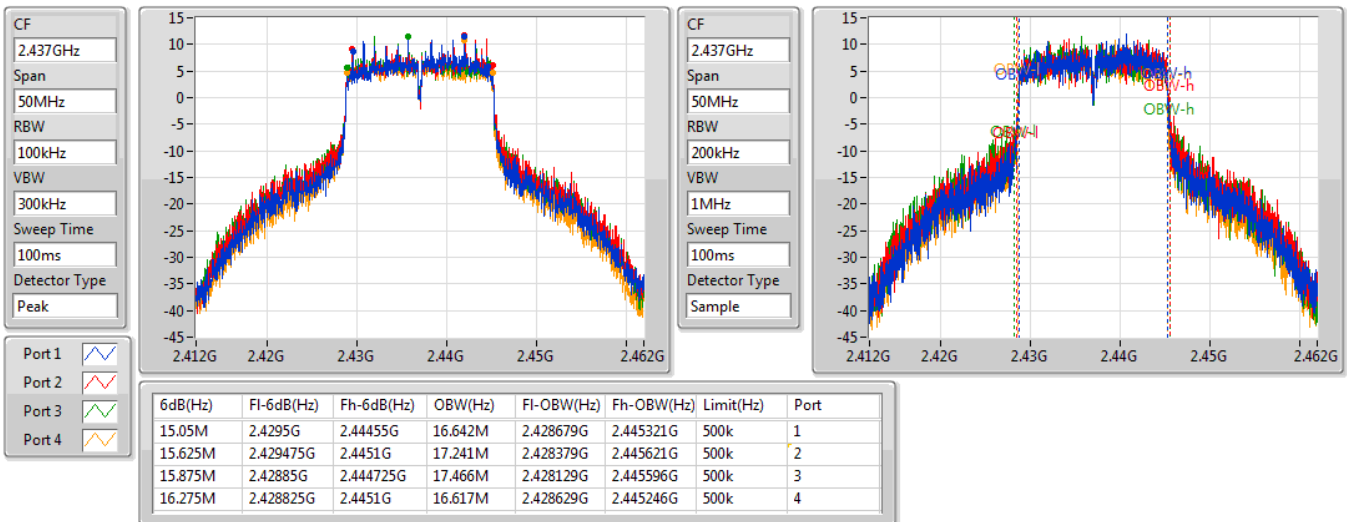

802.11g_Nss1,(6Mbps)_4TX
EBW
2412MHz

08/07/2019

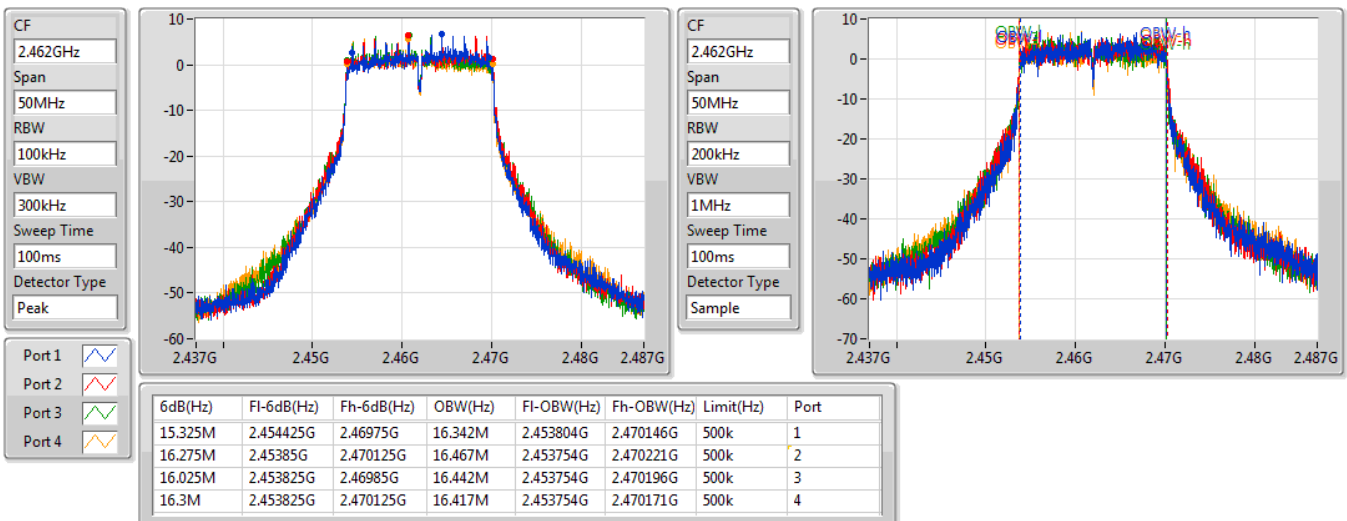


802.11g_Nss1,(6Mbps)_4TX
EBW
2437MHz

08/07/2019

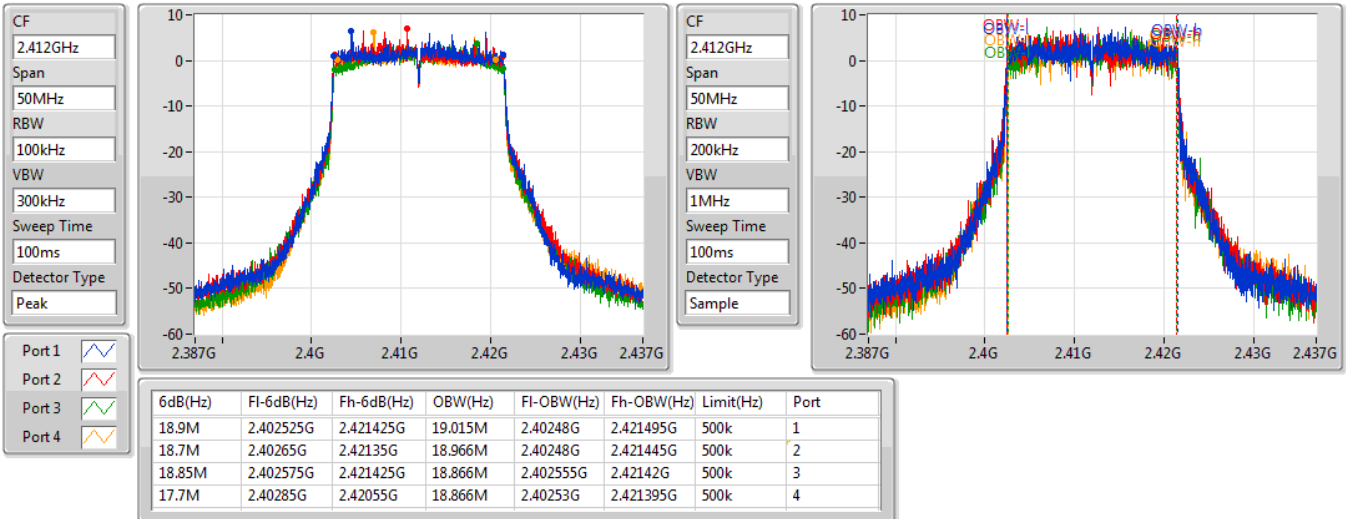

802.11g_Nss1,(6Mbps)_4TX
EBW
2462MHz

08/07/2019

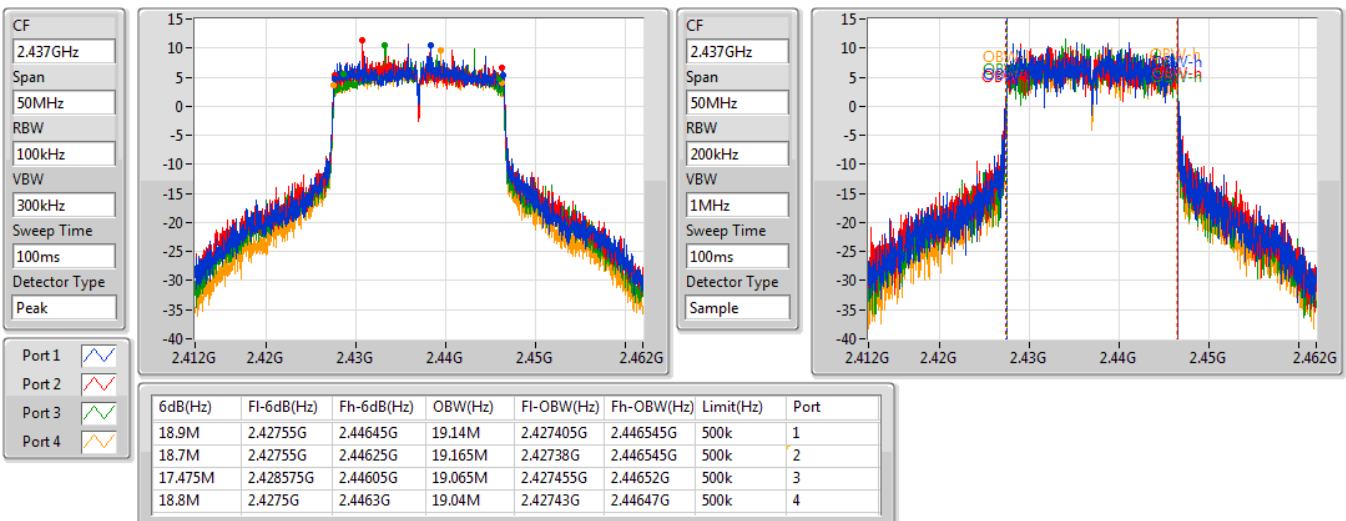


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
2412MHz

08/07/2019

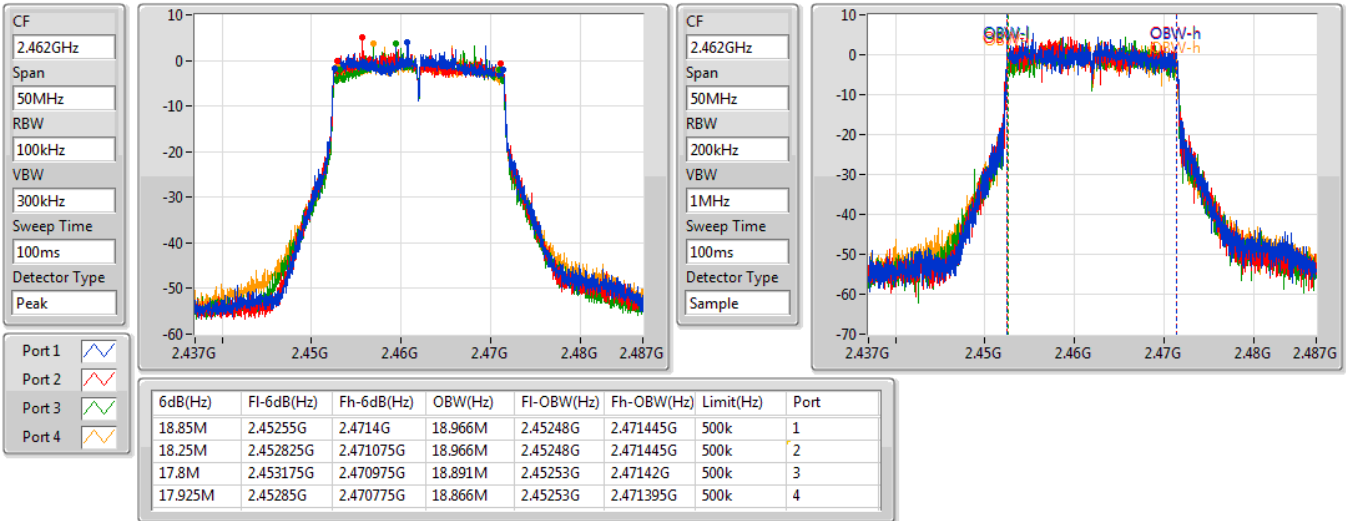

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
2437MHz

08/07/2019

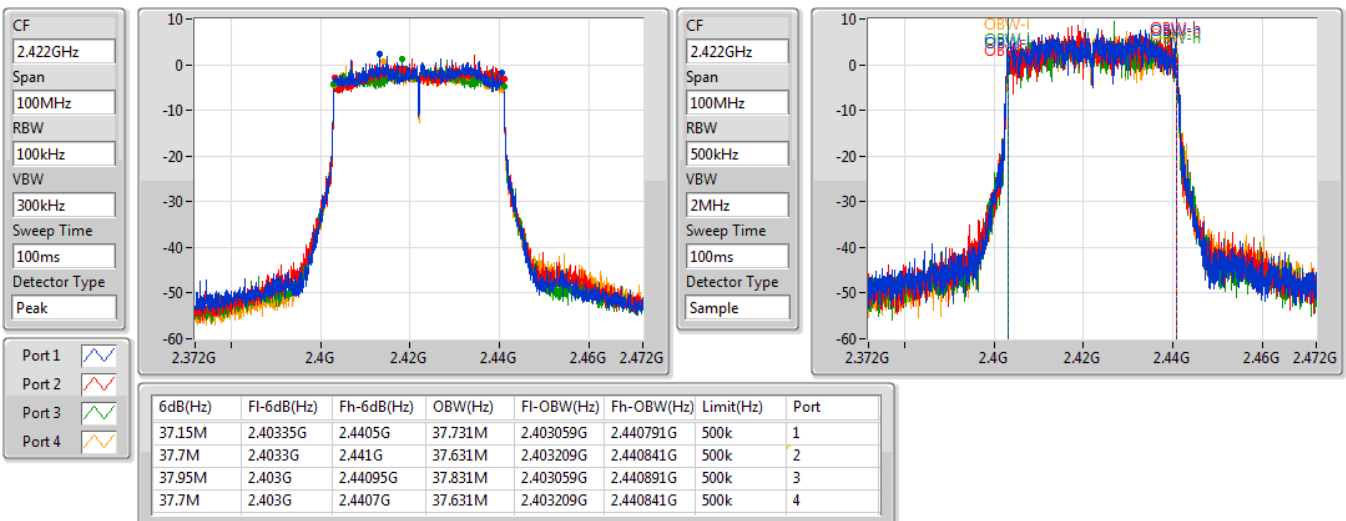


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
2462MHz

08/07/2019


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
2422MHz

08/07/2019

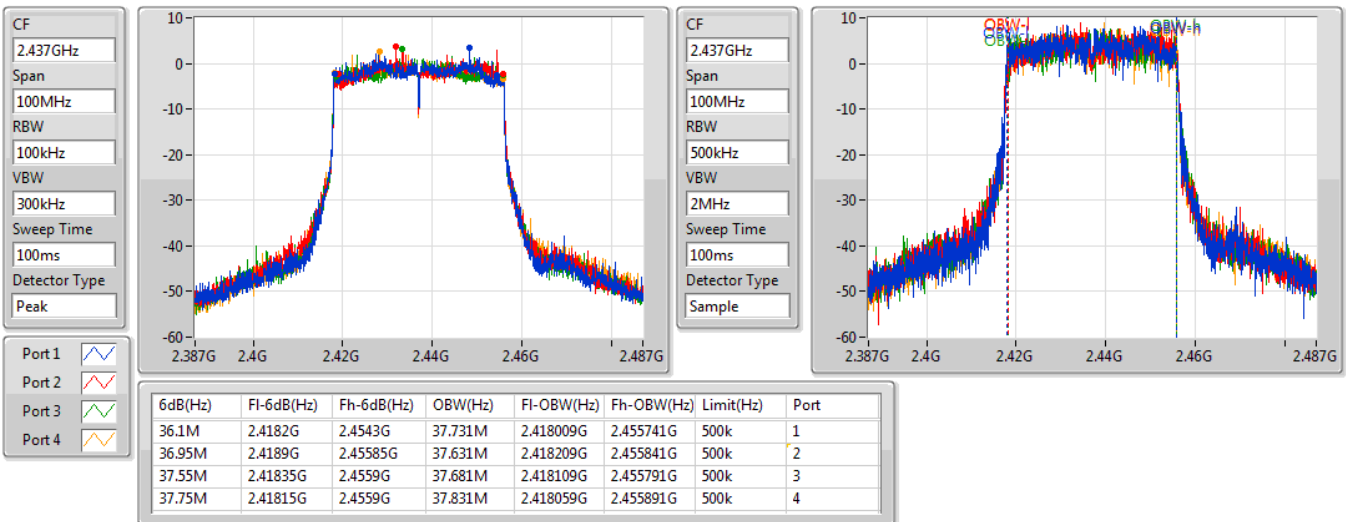


802.11ax HEW40_Nss1,(MCS0)_4TX

EBW

2437MHz

08/07/2019

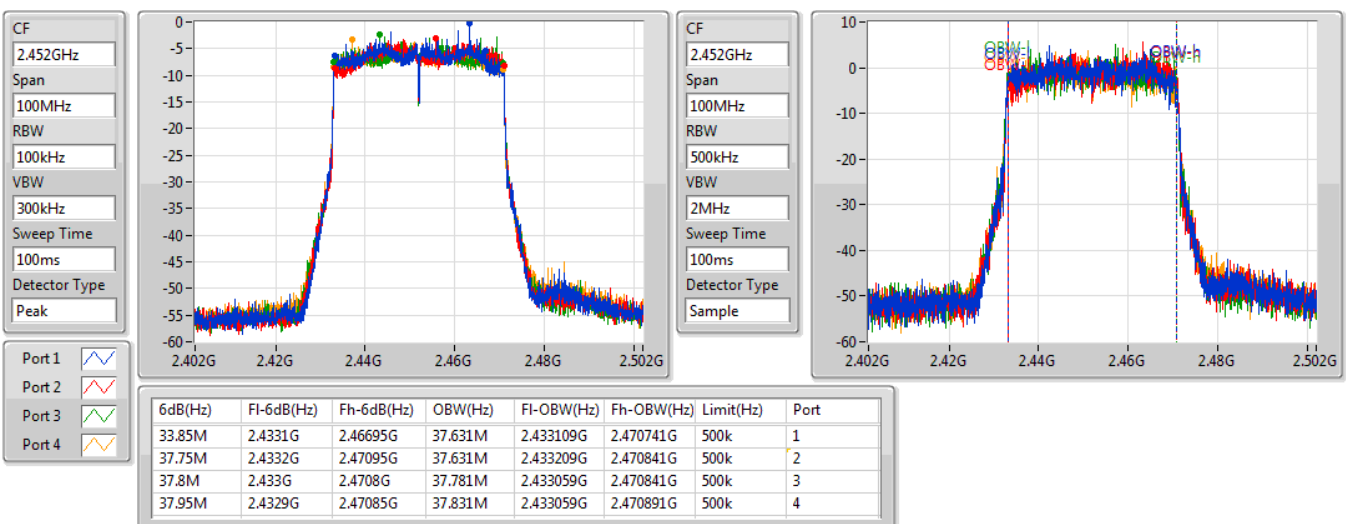


802.11ax HEW40_Nss1,(MCS0)_4TX

EBW

2452MHz

08/07/2019



**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	19.05M	18.916M	18M9D1D	15.05M	18.816M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	37.4M	37.831M	37M8D1D	27.55M	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)
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	17.925M	18.916M	18.375M	18.916M	16.4M	18.816M	15.125M	18.866M
2437MHz	Pass	500k	18.675M	18.916M	18.175M	18.891M	16.65M	18.866M	15.05M	18.891M
2462MHz	Pass	500k	19.05M	18.891M	18.05M	18.866M	15.225M	18.841M	16.275M	18.891M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	500k	37.4M	37.681M	36.25M	37.781M	32.6M	37.731M	36.1M	37.631M
2437MHz	Pass	500k	28.85M	37.681M	33.6M	37.831M	32.55M	37.681M	37.15M	37.581M
2452MHz	Pass	500k	37.35M	37.631M	27.55M	37.681M	34.95M	37.731M	36.6M	37.681M

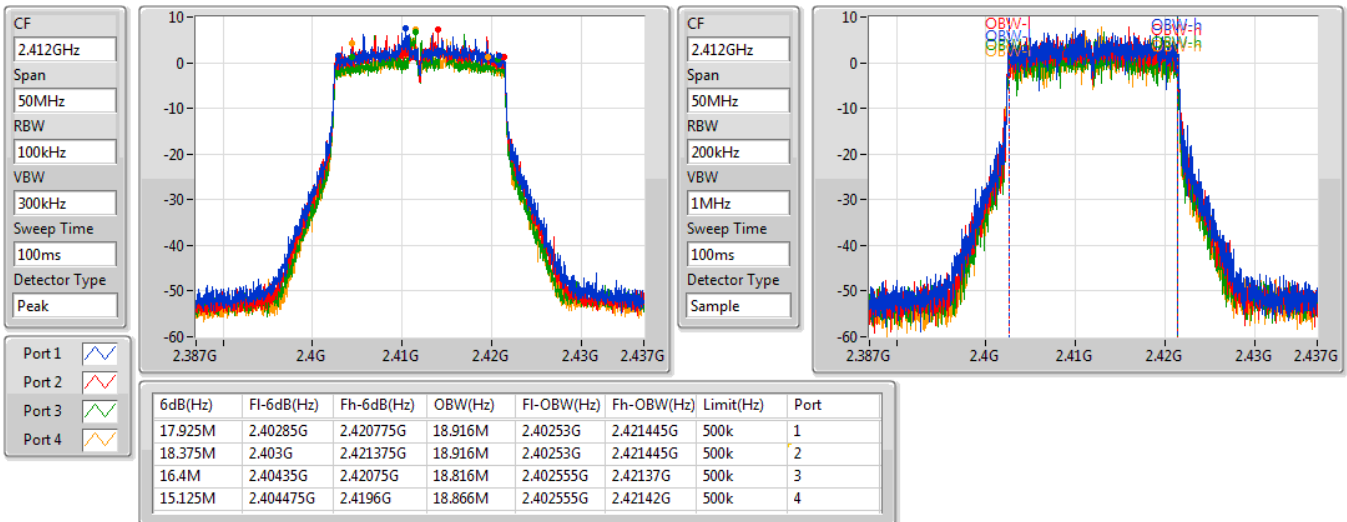
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

802.11ax HEW20-BF_Nss1,(MCS0)_4TX

EBW

2412MHz

09/07/2019

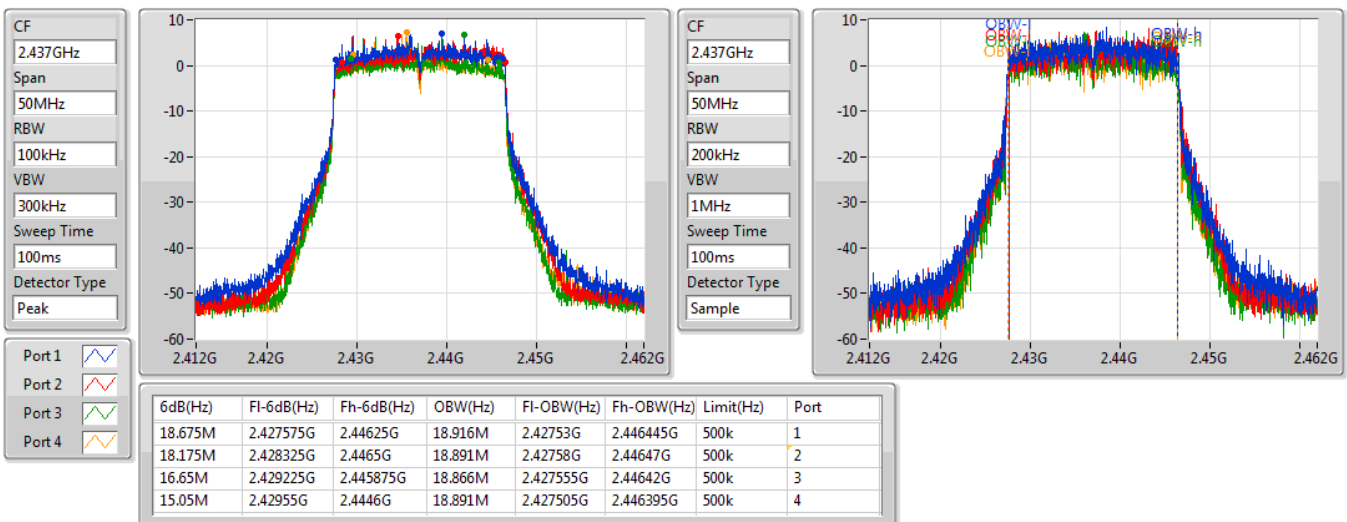


802.11ax HEW20-BF_Nss1,(MCS0)_4TX

EBW

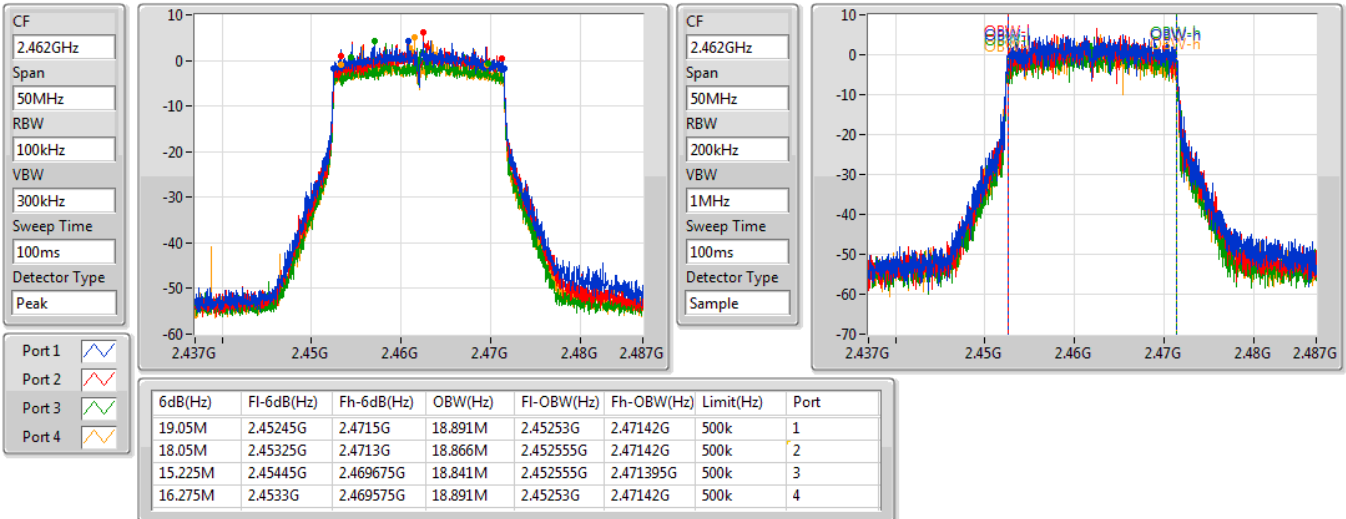
2437MHz

09/07/2019

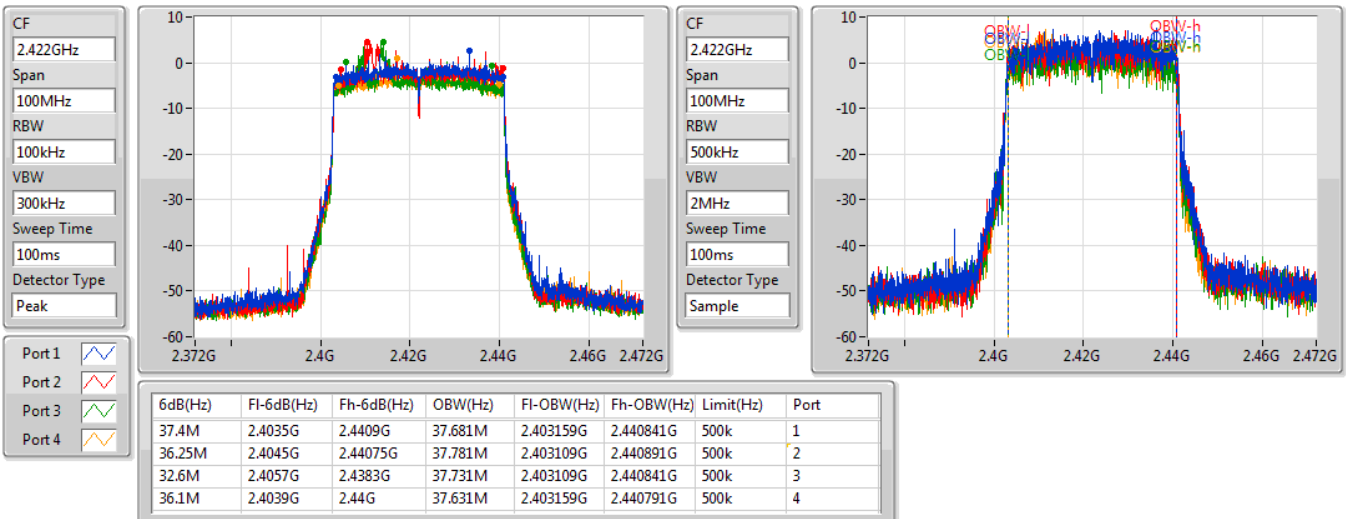


802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
2462MHz

09/07/2019

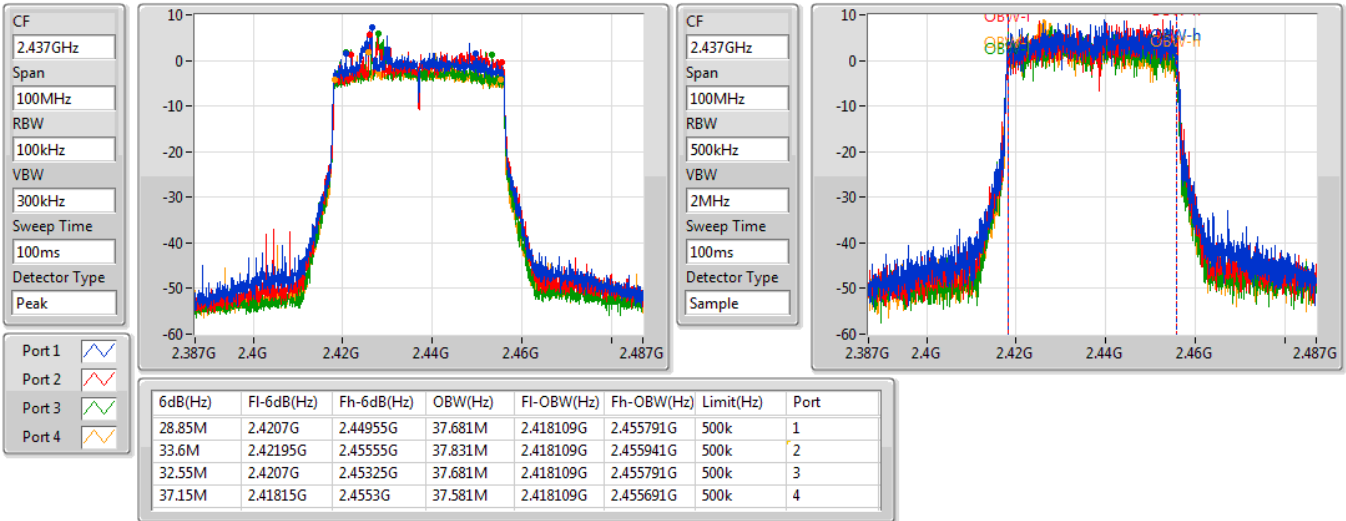

802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
2422MHz

09/07/2019

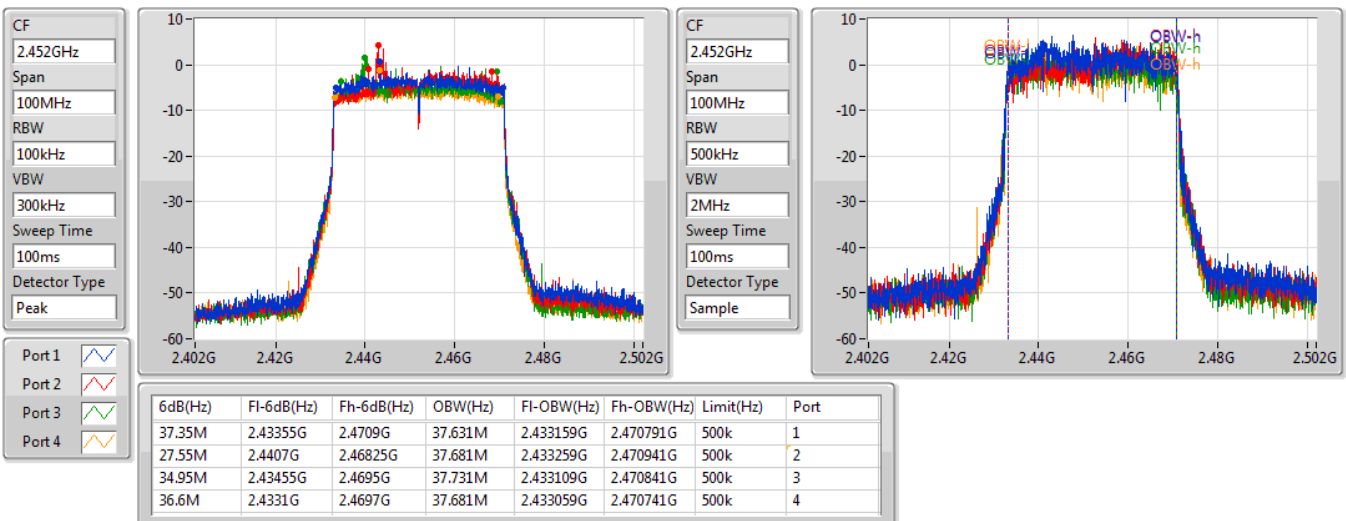


802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
2437MHz

09/07/2019


802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
2452MHz

09/07/2019



**Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX	9.525M	15.567M	15M6G1D	7.05M	13.243M
802.11g_Nss1,(6Mbps)_1TX	15.1M	19.79M	19M8D1D	15.025M	16.367M
802.11ax HEW20_Nss1,(MCS0)_1TX	18.775M	19.115M	19M1D1D	18.05M	18.941M
802.11ax HEW40_Nss1,(MCS0)_1TX	37.95M	37.781M	37M8D1D	36.95M	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;

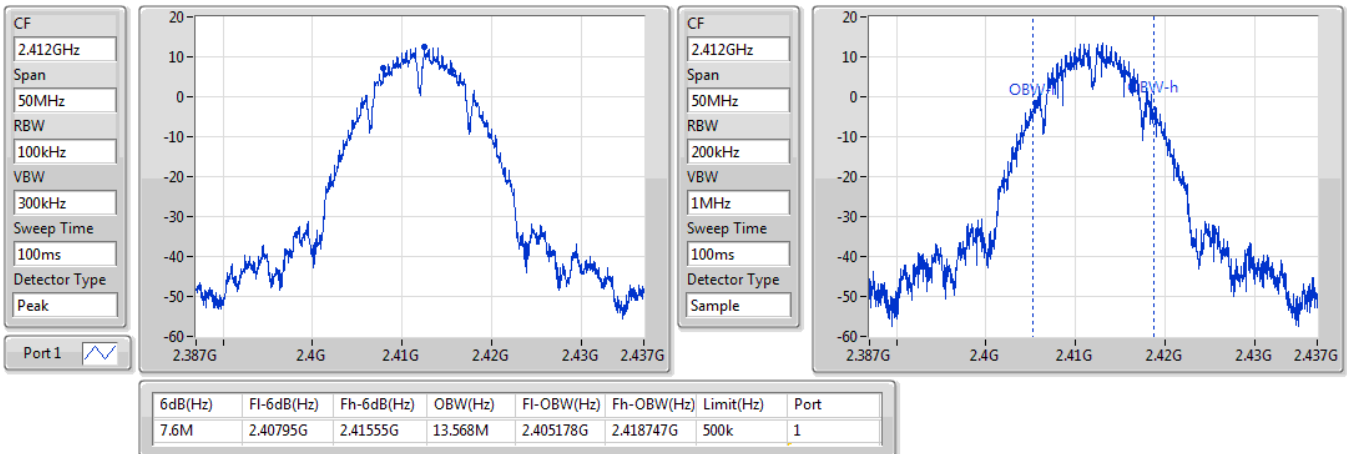
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	7.6M	13.568M
2437MHz	Pass	500k	9.525M	15.567M
2462MHz	Pass	500k	7.05M	13.243M
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	15.025M	16.367M
2437MHz	Pass	500k	15.075M	19.79M
2462MHz	Pass	500k	15.1M	16.367M
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-
2412MHz	Pass	500k	18.05M	18.941M
2437MHz	Pass	500k	18.225M	19.115M
2462MHz	Pass	500k	18.775M	18.941M
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-	-	-
2422MHz	Pass	500k	37.95M	37.681M
2437MHz	Pass	500k	37.9M	37.731M
2452MHz	Pass	500k	36.95M	37.781M

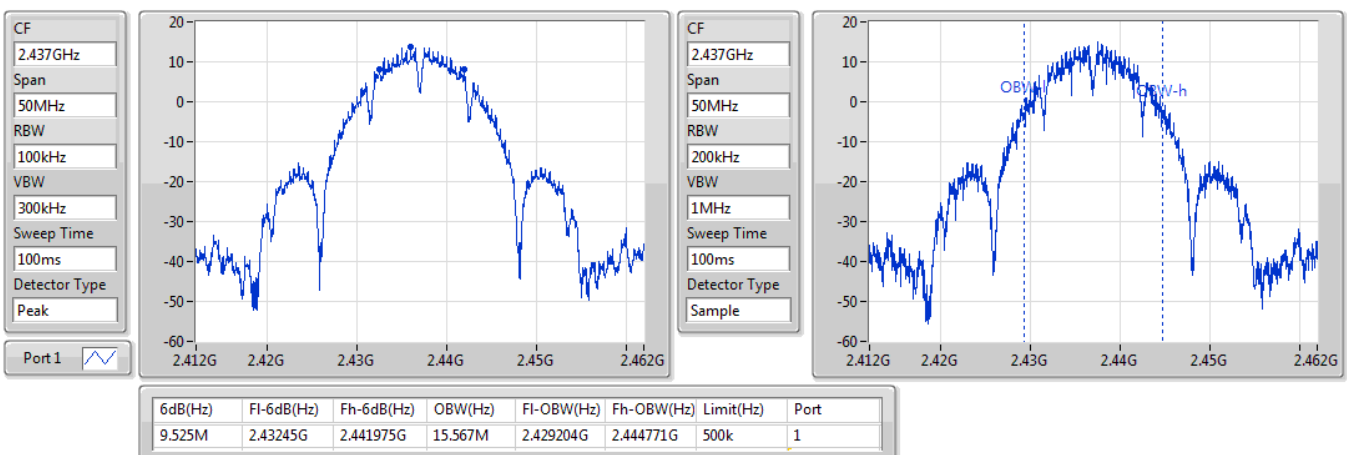
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

802.11b_Nss1,(1Mbps)_1TX
EBW
2412MHz

08/07/2019

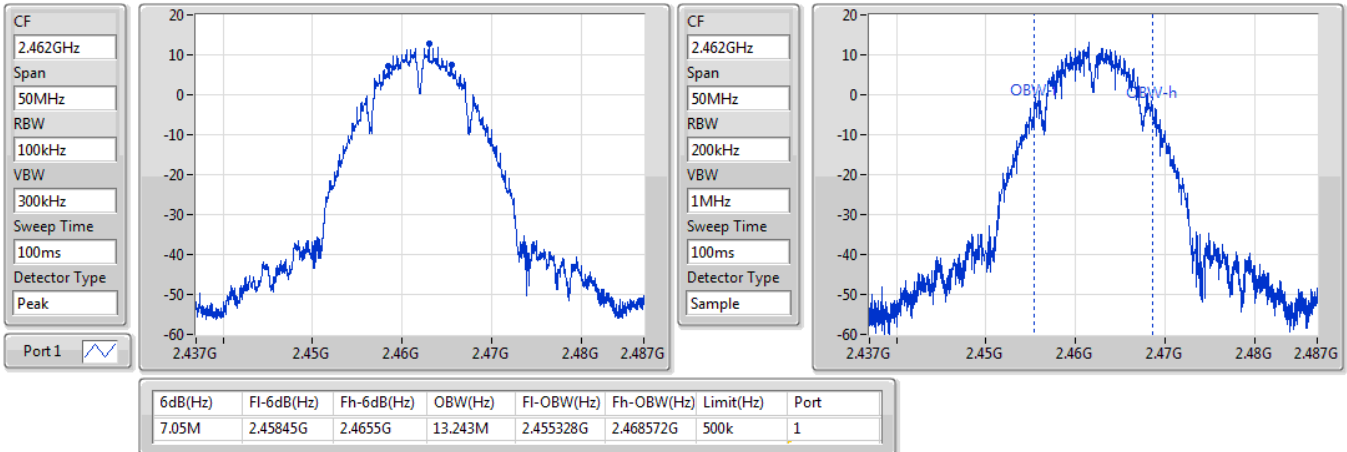

802.11b_Nss1,(1Mbps)_1TX
EBW
2437MHz

08/07/2019

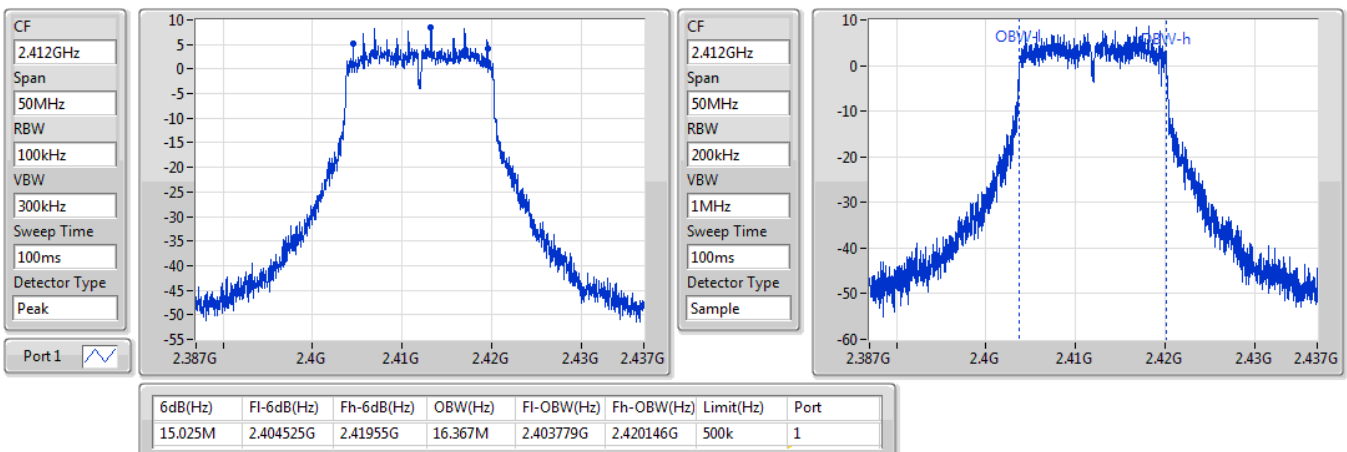


802.11b_Nss1,(1Mbps)_1TX
EBW
2462MHz

08/07/2019

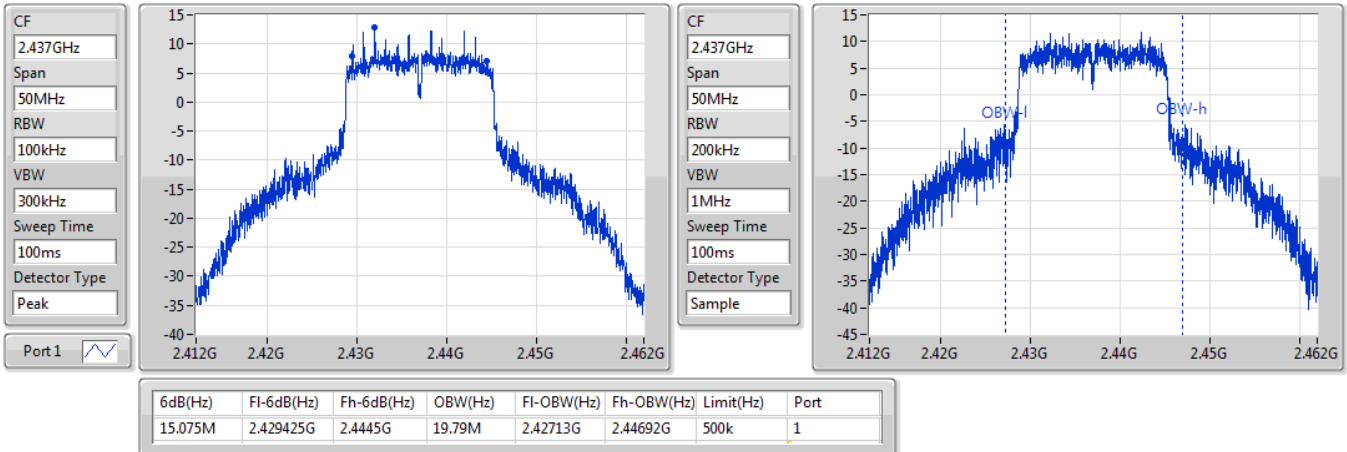

802.11g_Nss1,(6Mbps)_1TX
EBW
2412MHz

08/07/2019

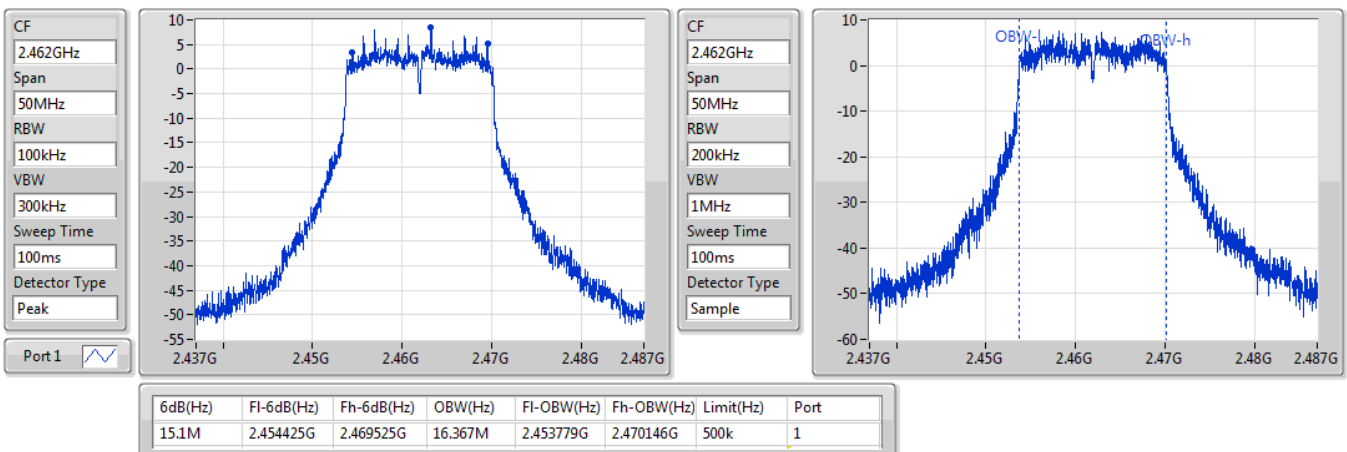


802.11g_Nss1,(6Mbps)_1TX
EBW
2437MHz

08/07/2019

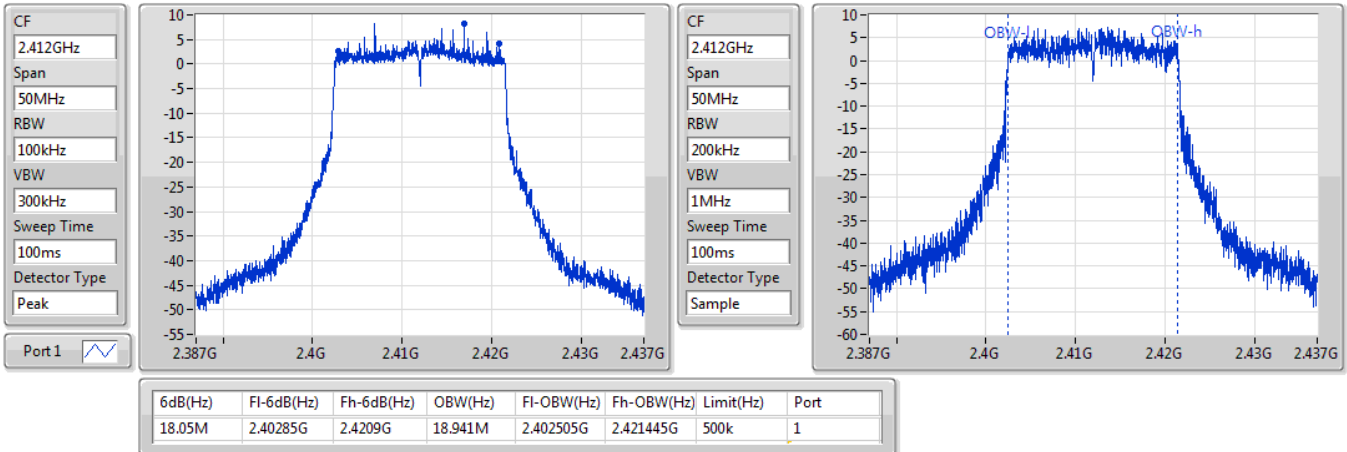

802.11g_Nss1,(6Mbps)_1TX
EBW
2462MHz

08/07/2019

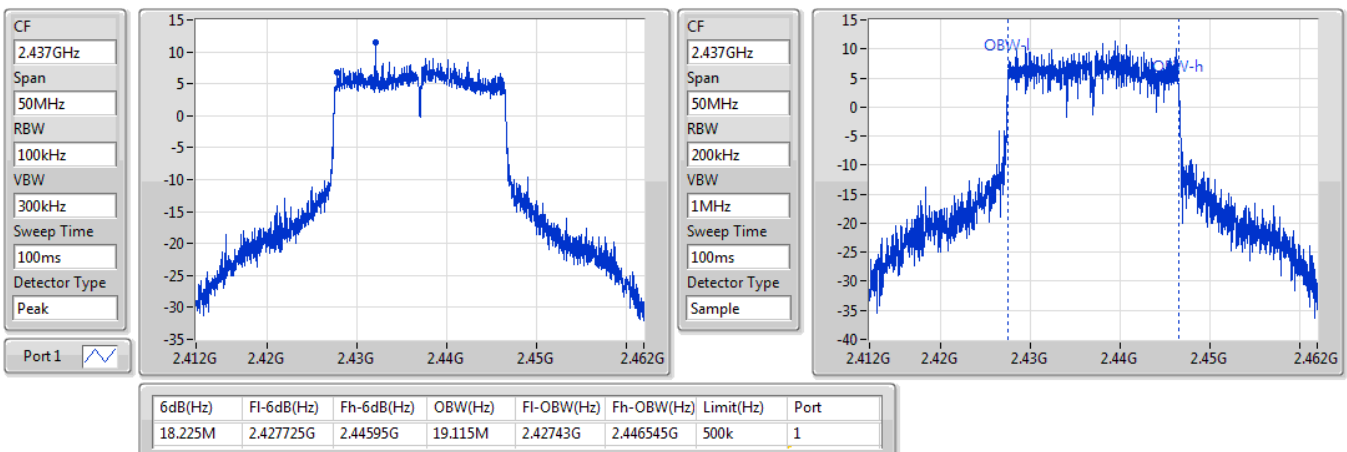


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
2412MHz

08/07/2019

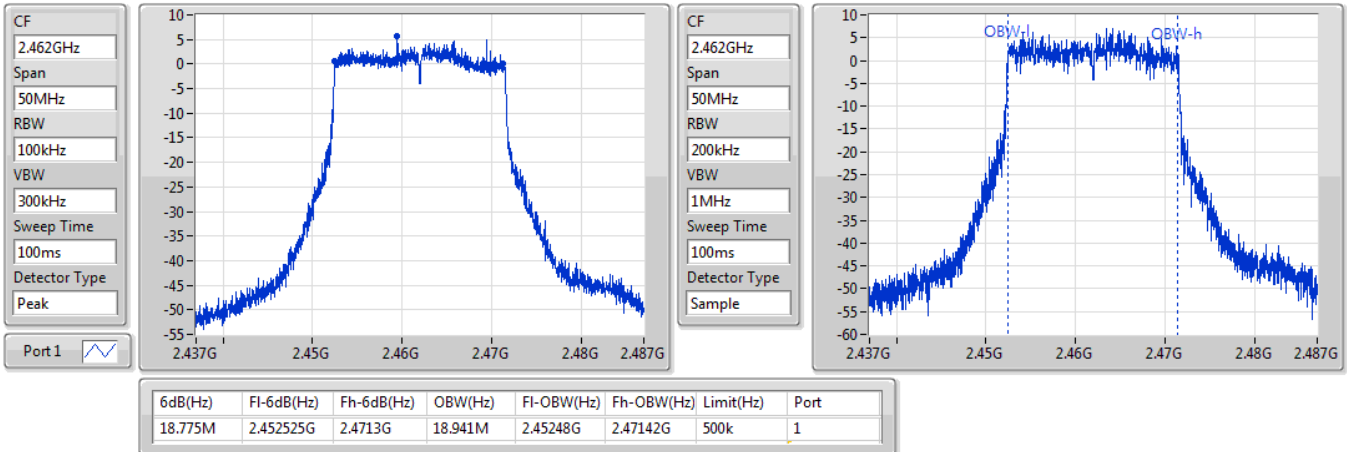

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
2437MHz

08/07/2019

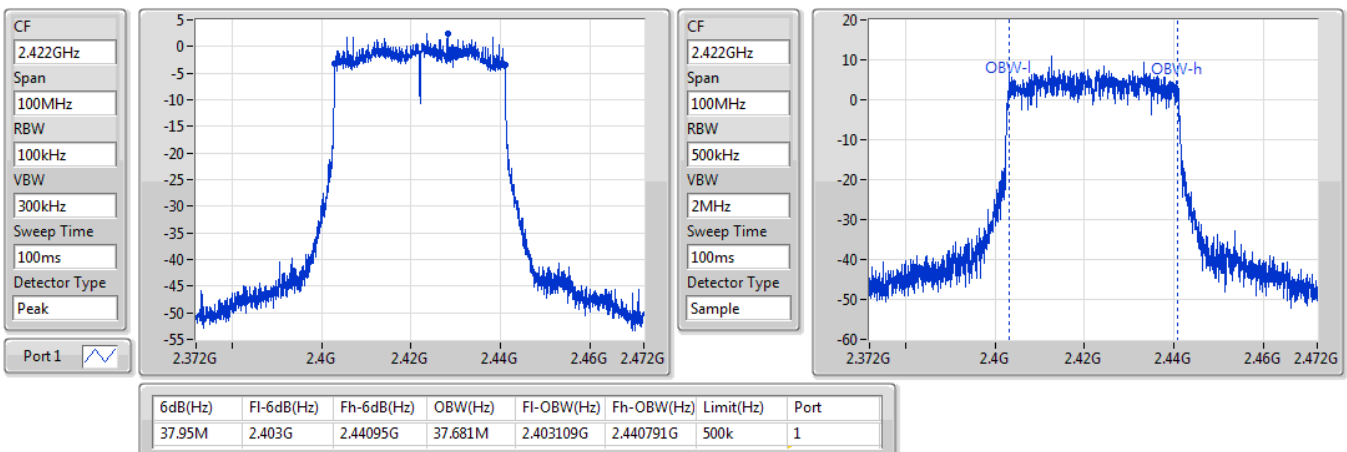


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
2462MHz

08/07/2019

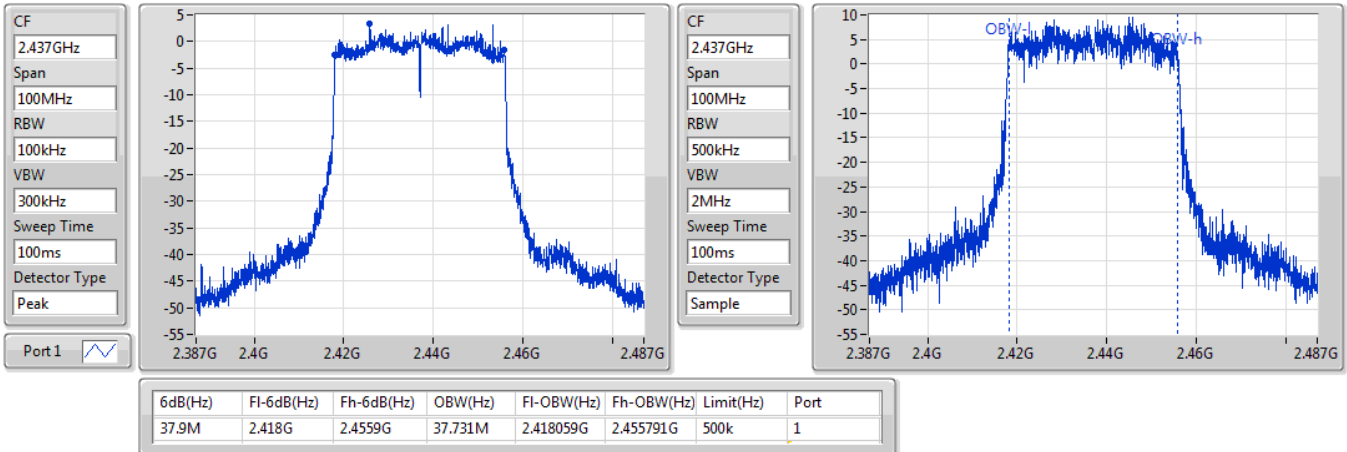

802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
2422MHz

08/07/2019

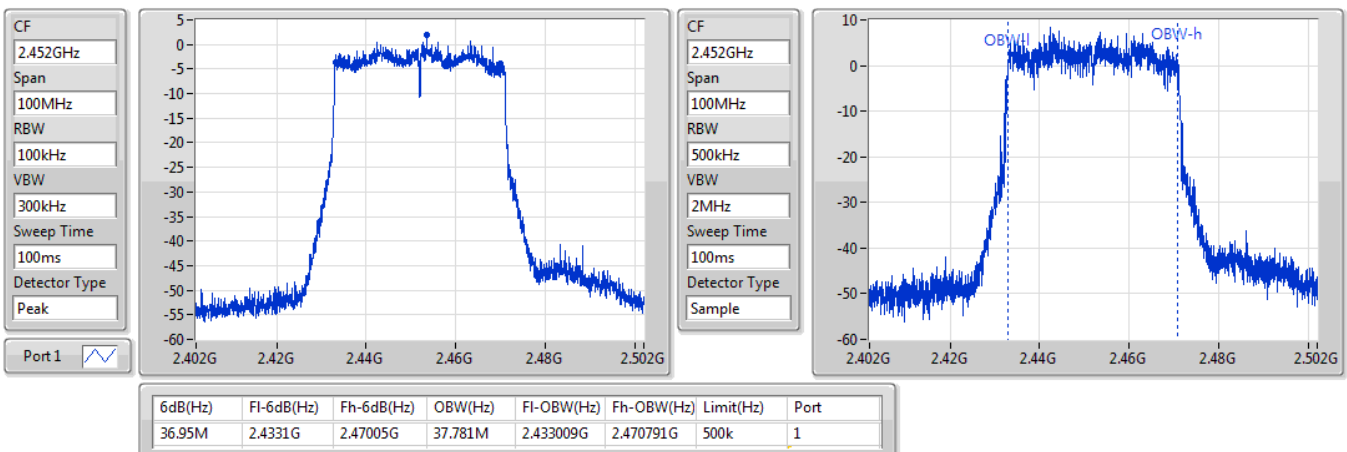


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
2437MHz

08/07/2019


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
2452MHz

08/07/2019



**Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.11b_Nss1,(1Mbps)_2TX	9.05M	14.593M	14M6G1D	7.55M	13.043M
802.11g_Nss1,(6Mbps)_2TX	16.025M	18.091M	18M1D1D	15M	16.367M
802.11ax HEW20_Nss1,(MCS0)_2TX	18.7M	19.065M	19M1D1D	16.125M	18.916M
802.11ax HEW40_Nss1,(MCS0)_2TX	37.9M	37.831M	37M8D1D	37.5M	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;

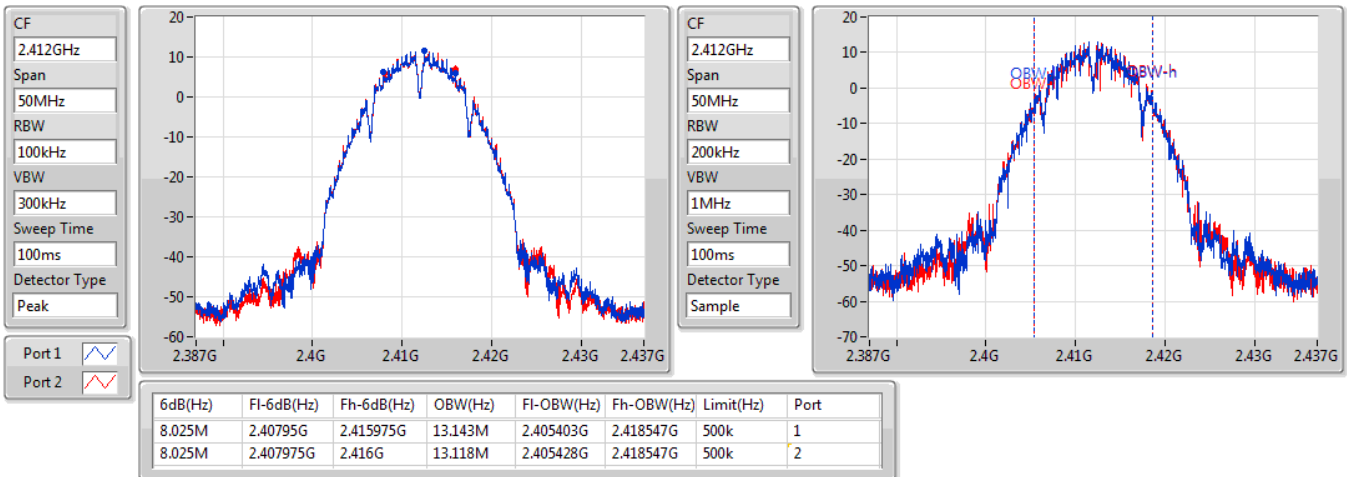
Result

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	8.025M	13.143M	8.025M	13.118M
2437MHz	Pass	500k	7.575M	14.193M	9.05M	14.593M
2462MHz	Pass	500k	8.025M	13.043M	7.55M	13.093M
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	15.1M	16.367M	15.575M	16.392M
2437MHz	Pass	500k	15M	17.016M	16.025M	18.091M
2462MHz	Pass	500k	15.1M	16.367M	15.9M	16.417M
802.11ax HEW20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	18.6M	18.966M	18.2M	18.916M
2437MHz	Pass	500k	18.7M	19.065M	17.325M	19.065M
2462MHz	Pass	500k	16.125M	18.941M	17.5M	18.916M
802.11ax HEW40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	500k	37.5M	37.831M	37.9M	37.781M
2437MHz	Pass	500k	37.6M	37.731M	37.7M	37.781M
2452MHz	Pass	500k	37.9M	37.731M	37.7M	37.731M

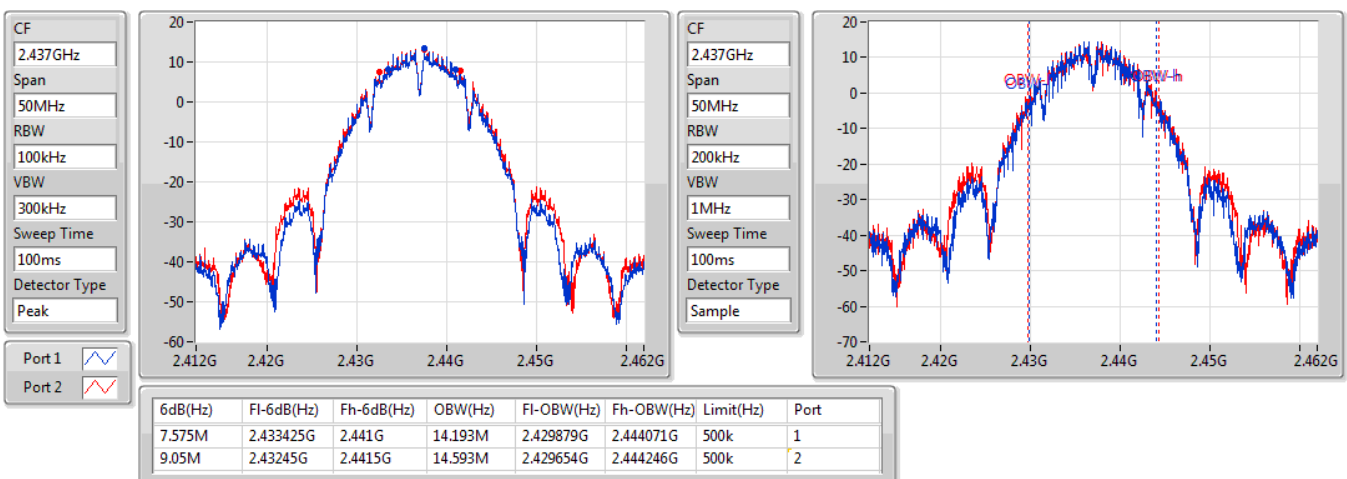
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

802.11b_Nss1,(1Mbps)_2TX
EBW
2412MHz

08/07/2019

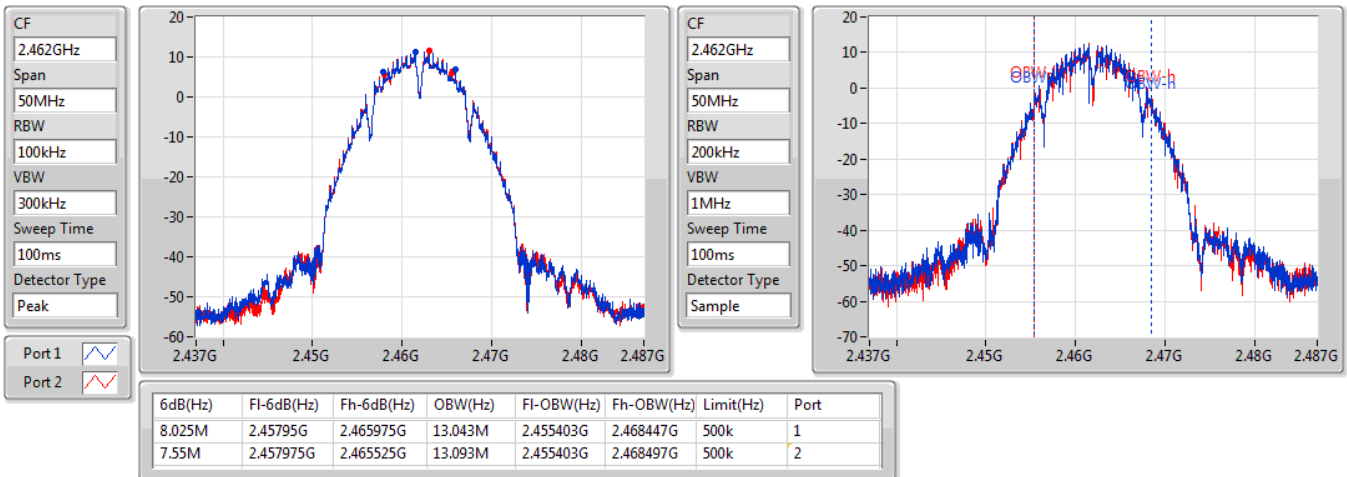

802.11b_Nss1,(1Mbps)_2TX
EBW
2437MHz

08/07/2019

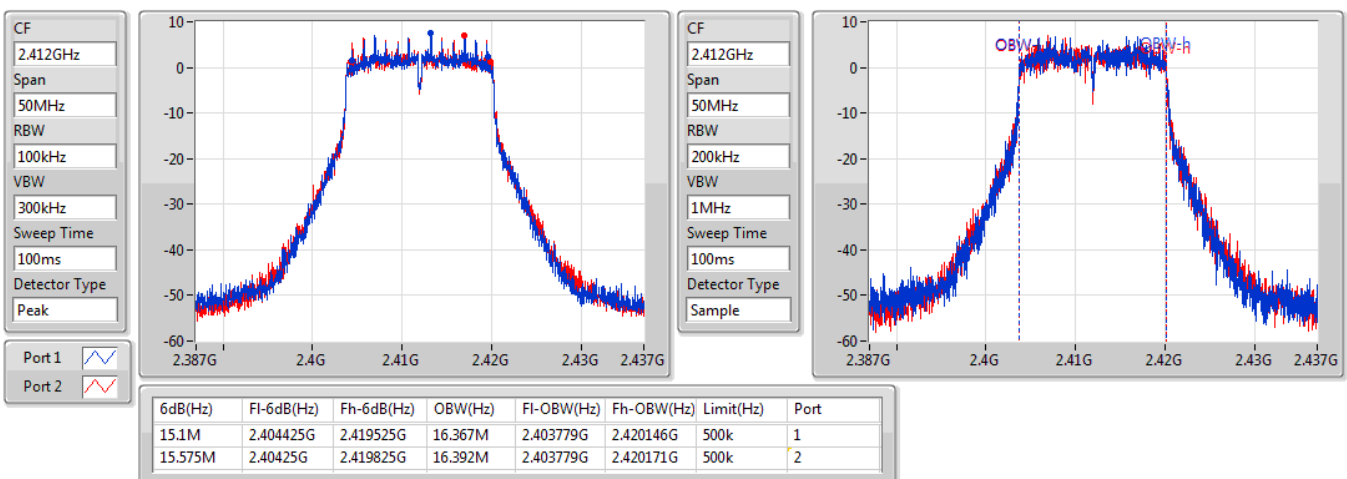


802.11b_Nss1,(1Mbps)_2TX
EBW
2462MHz

08/07/2019

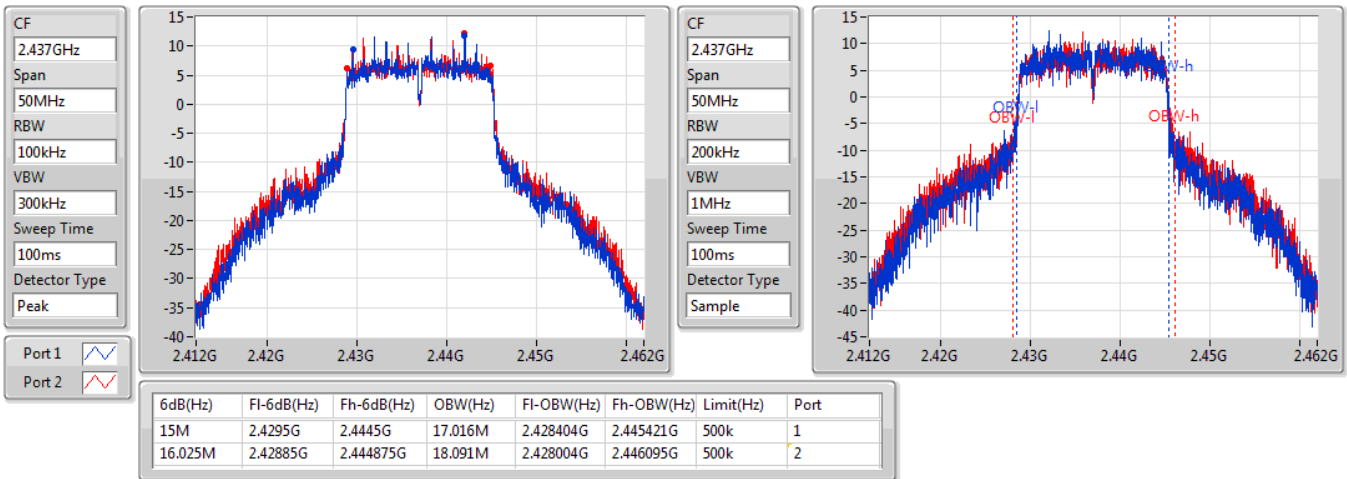

802.11g_Nss1,(6Mbps)_2TX
EBW
2412MHz

08/07/2019

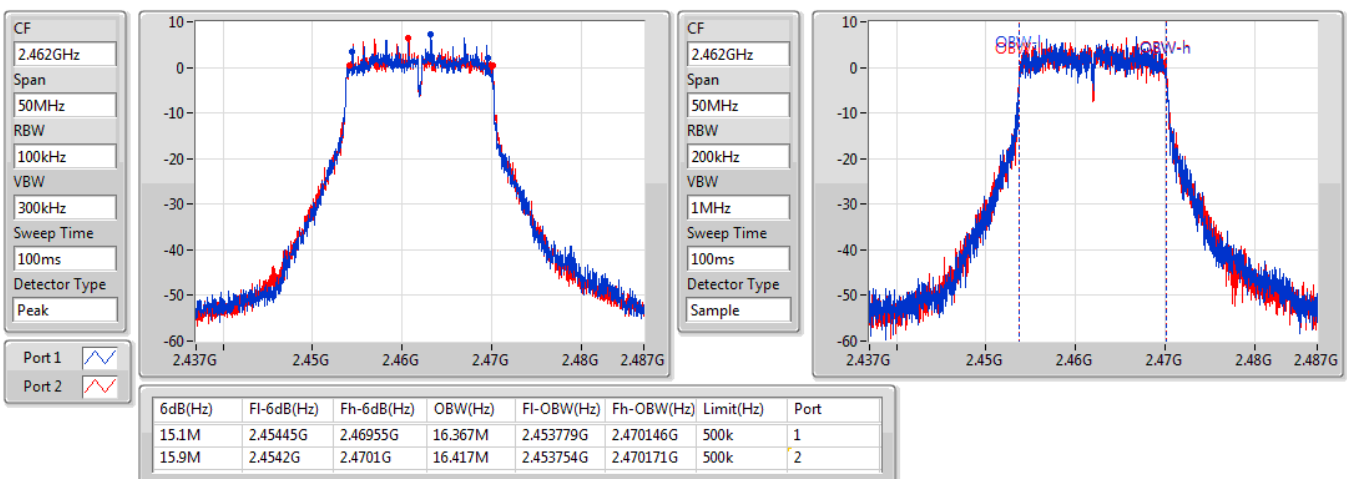


802.11g_Nss1,(6Mbps)_2TX
EBW
2437MHz

08/07/2019


802.11g_Nss1,(6Mbps)_2TX
EBW
2462MHz

08/07/2019

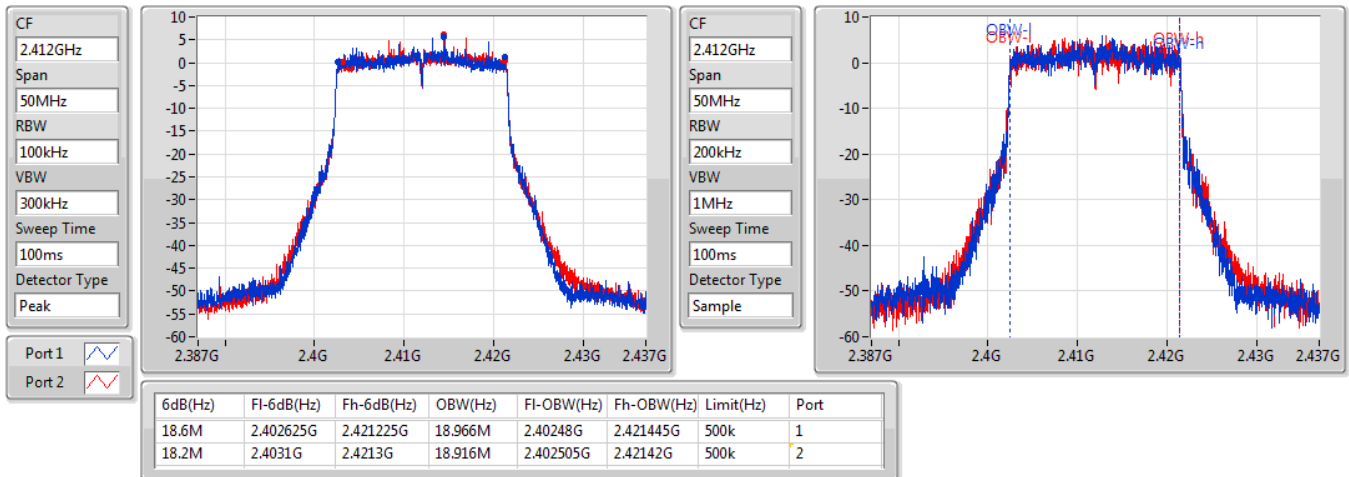


802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

2412MHz

08/07/2019

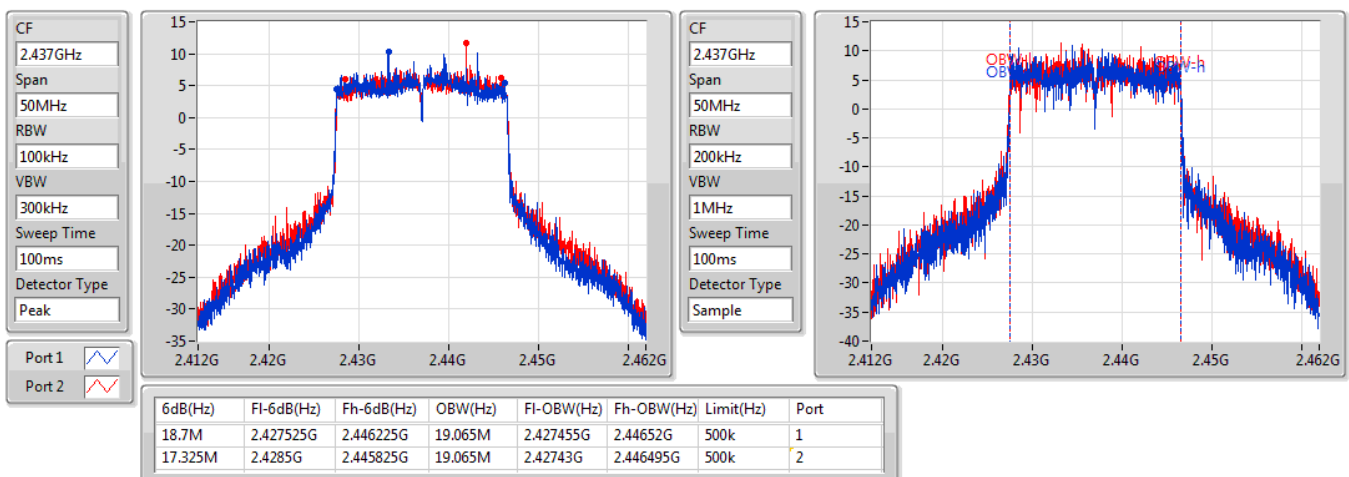


802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

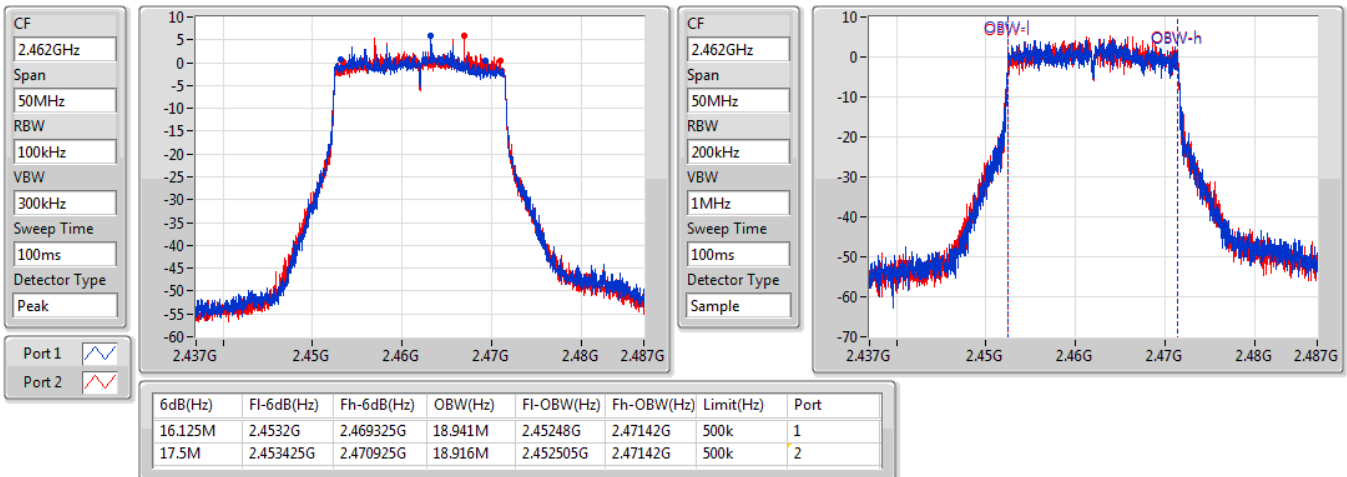
2437MHz

08/07/2019

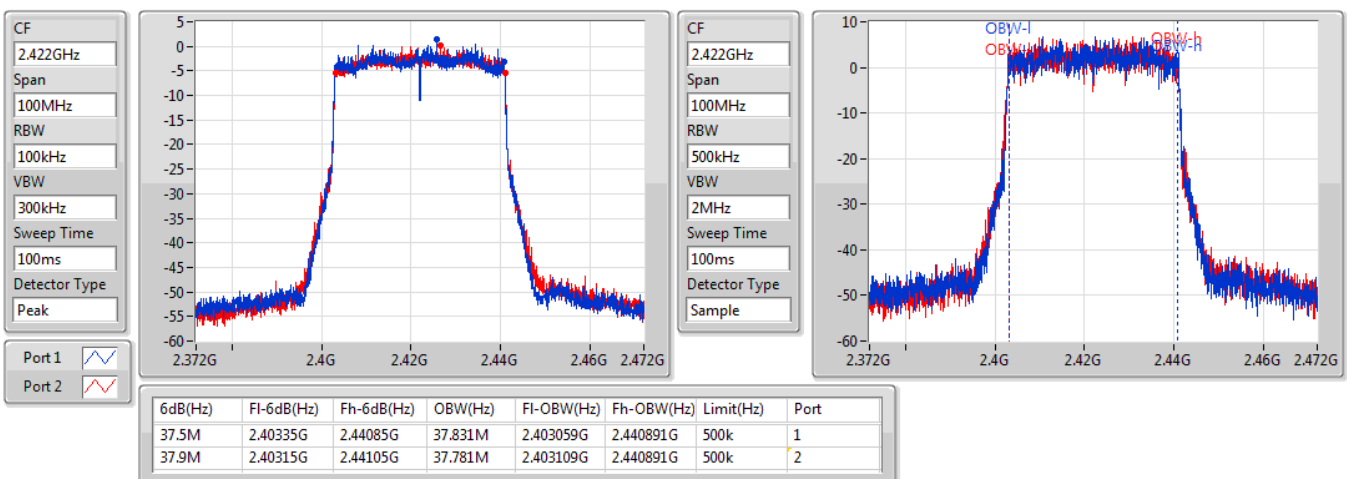


802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
2462MHz

08/07/2019

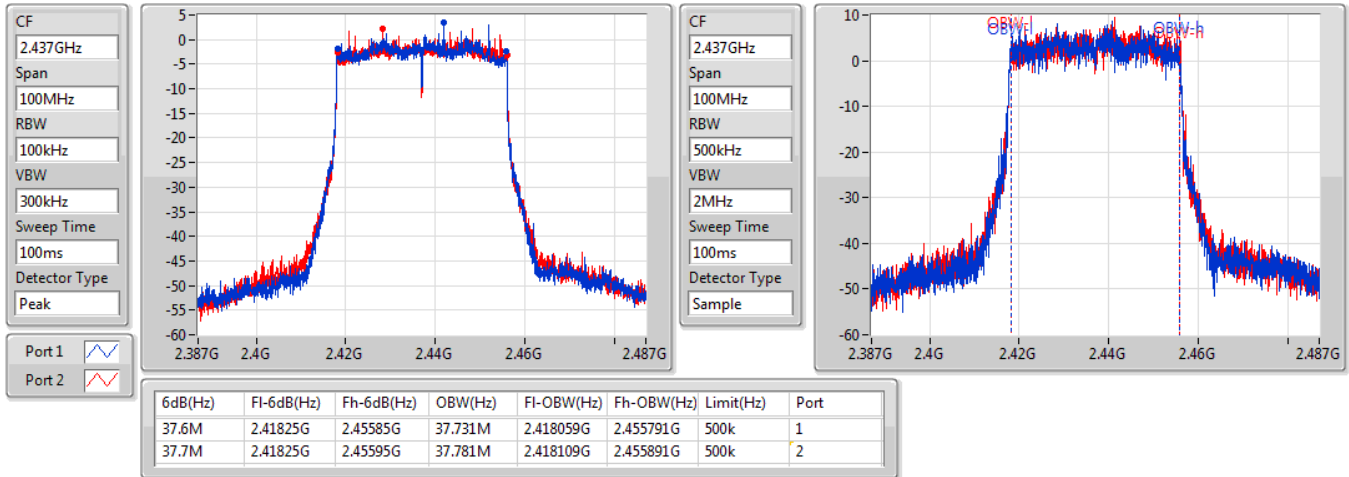

802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
2422MHz

08/07/2019

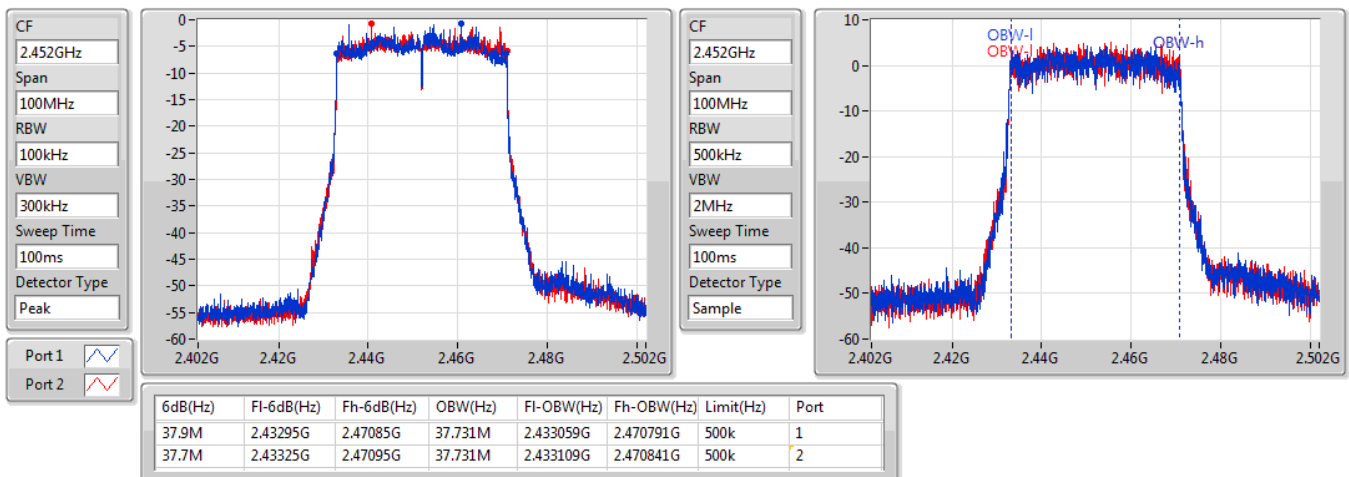


802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
2437MHz

08/07/2019


802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
2452MHz

08/07/2019



**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	18.675M	18.891M	18M9D1D	13.75M	18.841M
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	37.75M	37.831M	37M8D1D	27.55M	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;

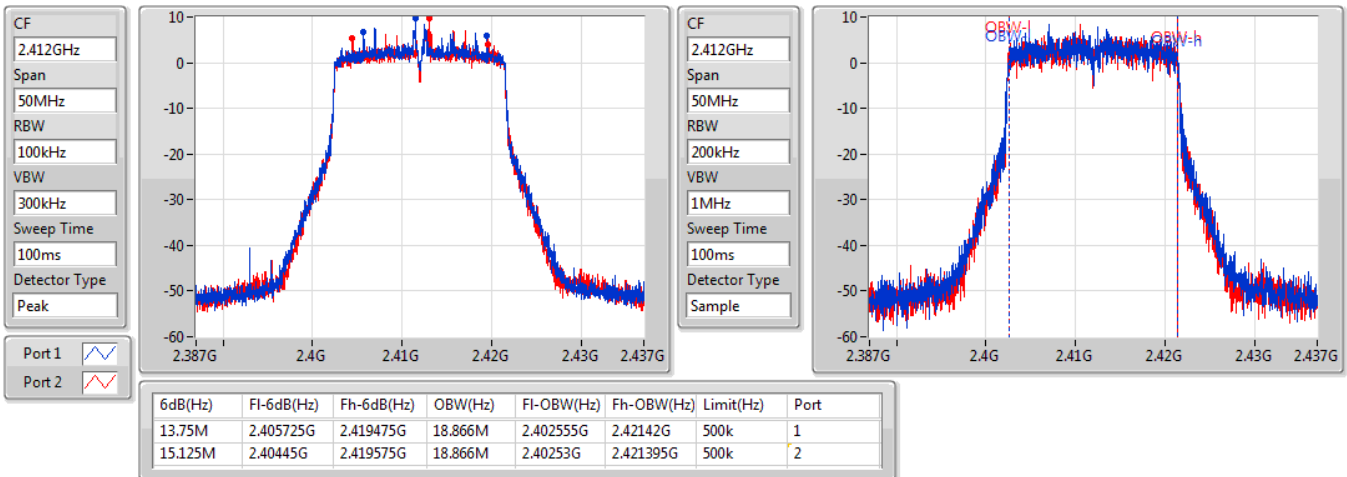
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	13.75M	18.866M	15.125M	18.866M
2437MHz	Pass	500k	18.675M	18.866M	18.525M	18.841M
2462MHz	Pass	500k	18.225M	18.891M	17.625M	18.866M
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	500k	37.75M	37.581M	32.55M	37.831M
2437MHz	Pass	500k	37.55M	37.731M	33.5M	37.631M
2452MHz	Pass	500k	37.05M	37.631M	27.55M	37.681M

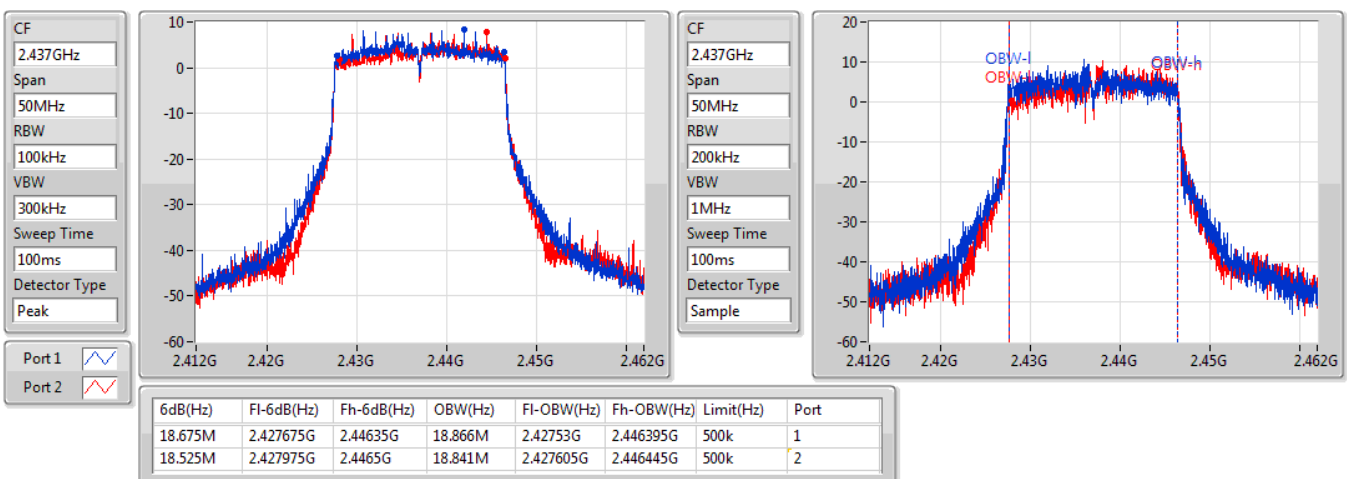
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

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

09/07/2019

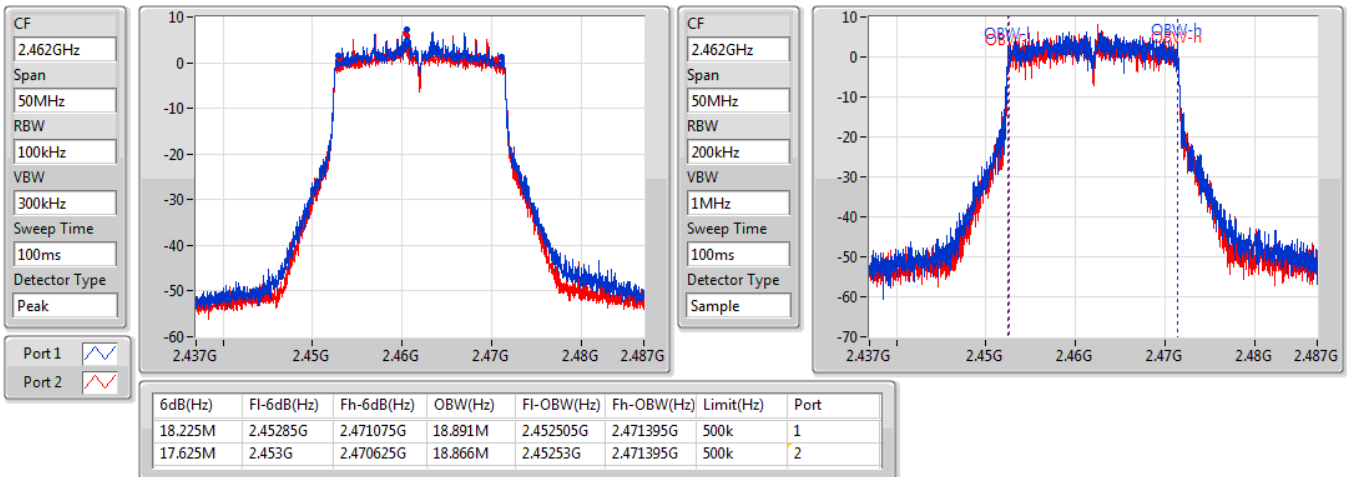

802.11ax HEW20-BF_Nss1,(MCS0)_2TX
EBW
2437MHz

09/07/2019

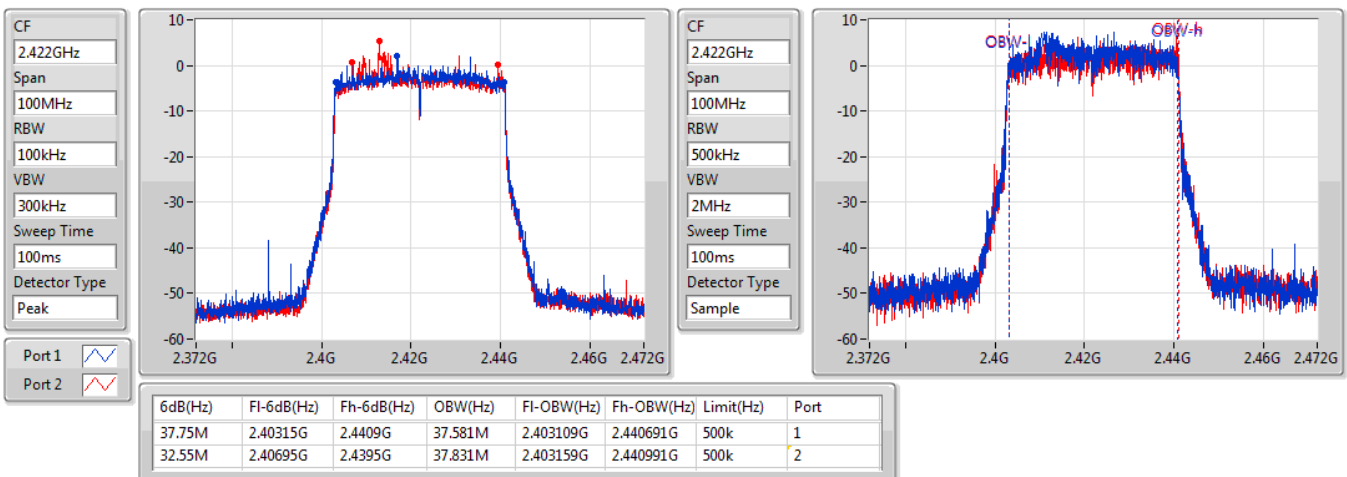


802.11ax HEW20-BF_Nss1,(MCS0)_2TX
EBW
2462MHz

09/07/2019

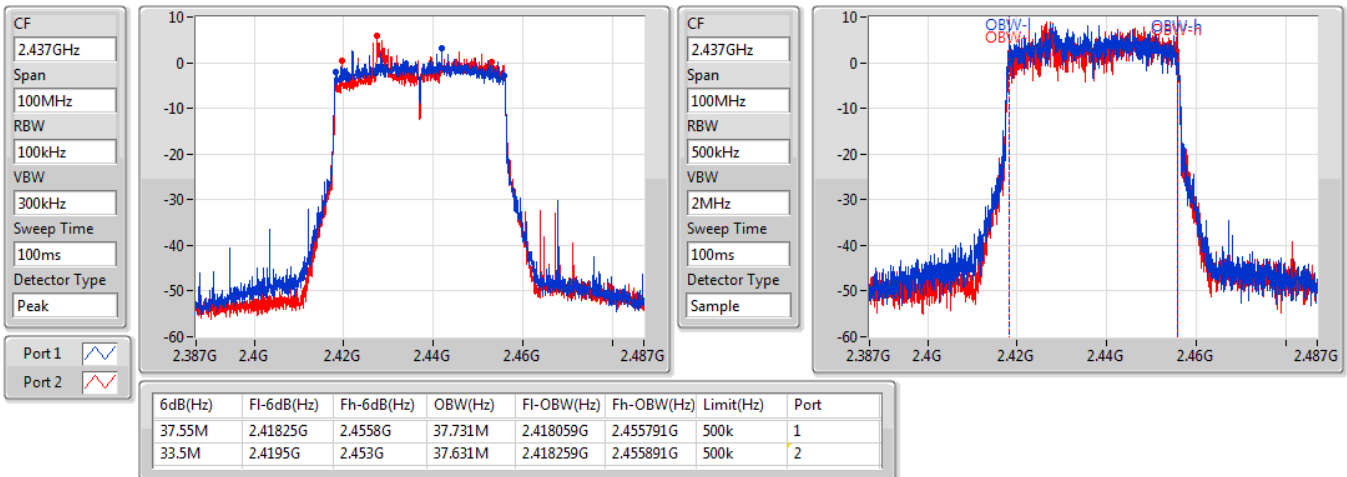

802.11ax HEW40-BF_Nss1,(MCS0)_2TX
EBW
2422MHz

09/07/2019

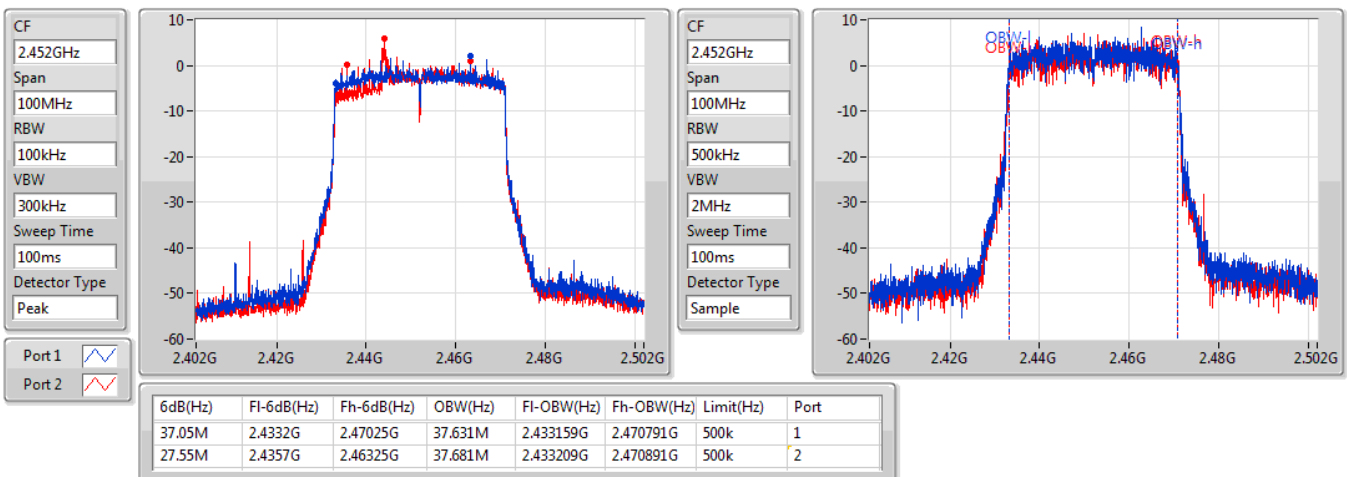


802.11ax HEW40-BF_Nss1,(MCS0)_2TX
EBW
2437MHz

09/07/2019


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

09/07/2019



**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	7.975M	13.118M	13M1G1D	7M	12.844M
802.11g_Nss1,(6Mbps)_4TX	16.3M	16.442M	16M4D1D	15.325M	16.342M
802.11ax HEW20_Nss1,(MCS0)_4TX	18.875M	18.991M	19M0D1D	16.45M	18.841M
802.11ax HEW40_Nss1,(MCS0)_4TX	38M	37.781M	37M8D1D	34.45M	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;

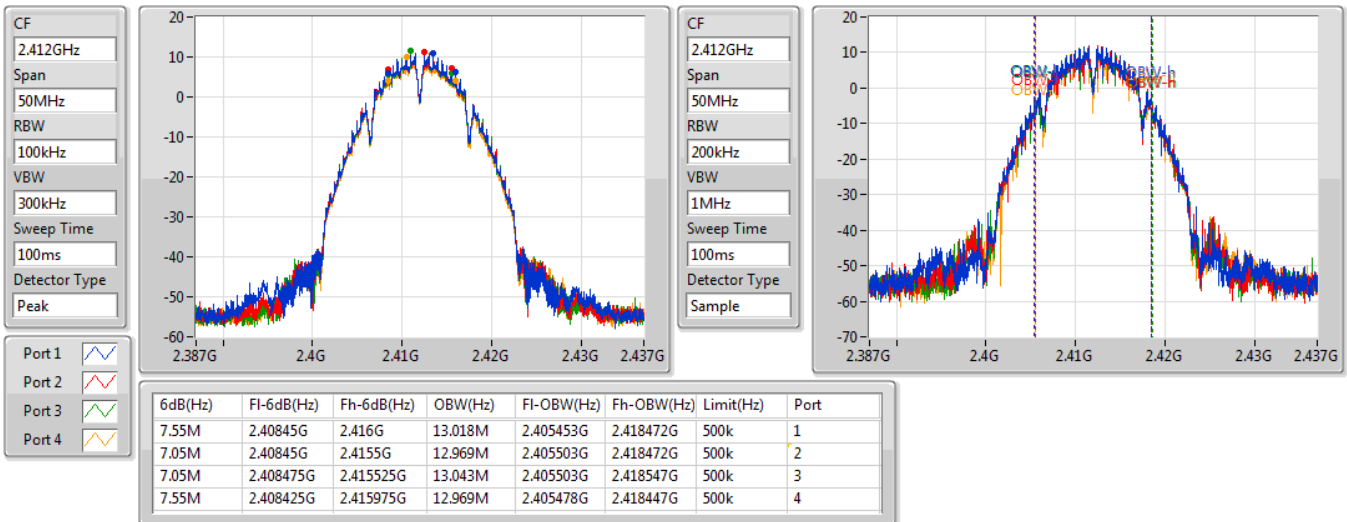
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	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	7.55M	13.018M	7.05M	12.969M	7.05M	13.043M	7.55M	12.969M
2437MHz	Pass	500k	7.125M	12.844M	7M	12.994M	7.575M	12.994M	7.975M	12.994M
2462MHz	Pass	500k	7.575M	13.018M	7.95M	13.018M	7.075M	13.118M	7.55M	13.118M
802.11g_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	15.5M	16.342M	16.05M	16.417M	16.3M	16.442M	16.025M	16.392M
2437MHz	Pass	500k	15.325M	16.342M	15.9M	16.442M	16.3M	16.442M	16.025M	16.417M
2462MHz	Pass	500k	15.35M	16.342M	16.05M	16.442M	16.025M	16.417M	16.3M	16.417M
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	18.725M	18.966M	18.175M	18.966M	16.775M	18.841M	18.75M	18.891M
2437MHz	Pass	500k	18.625M	18.991M	18.8M	18.966M	16.45M	18.866M	17.85M	18.916M
2462MHz	Pass	500k	18.475M	18.941M	18.875M	18.941M	16.95M	18.841M	17.675M	18.891M
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	500k	37.75M	37.681M	37.5M	37.681M	36.95M	37.731M	37.45M	37.781M
2437MHz	Pass	500k	34.45M	37.681M	36.05M	37.731M	37.55M	37.781M	37.4M	37.731M
2452MHz	Pass	500k	35.05M	37.781M	37.55M	37.731M	37.6M	37.731M	38M	37.781M

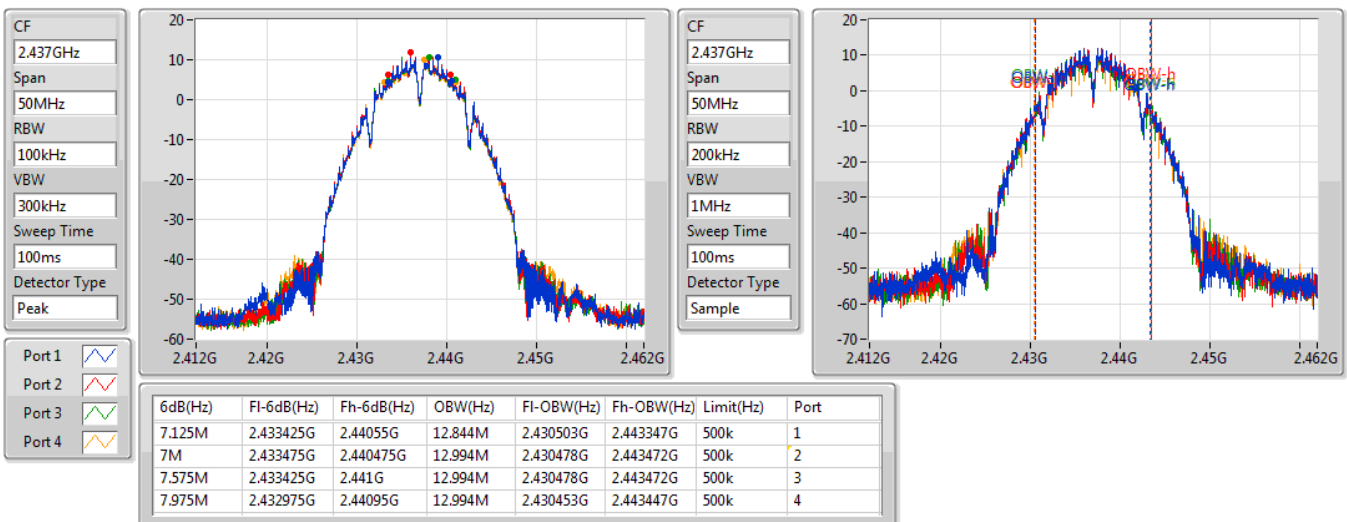
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

802.11b_Nss1,(1Mbps)_4TX
EBW
2412MHz

08/07/2019

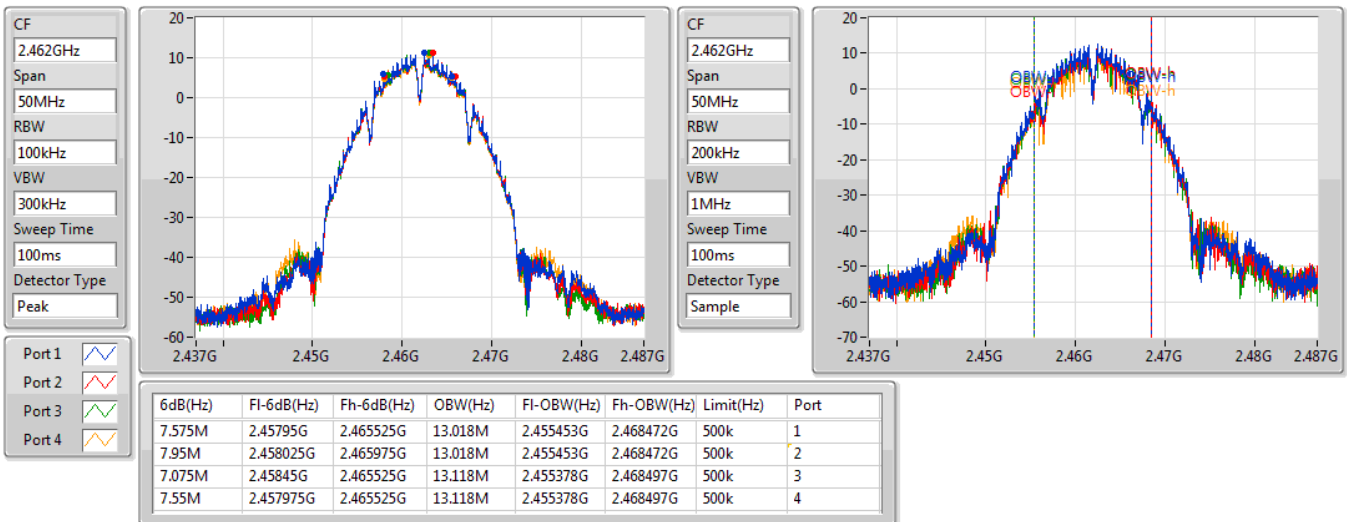

802.11b_Nss1,(1Mbps)_4TX
EBW
2437MHz

08/07/2019

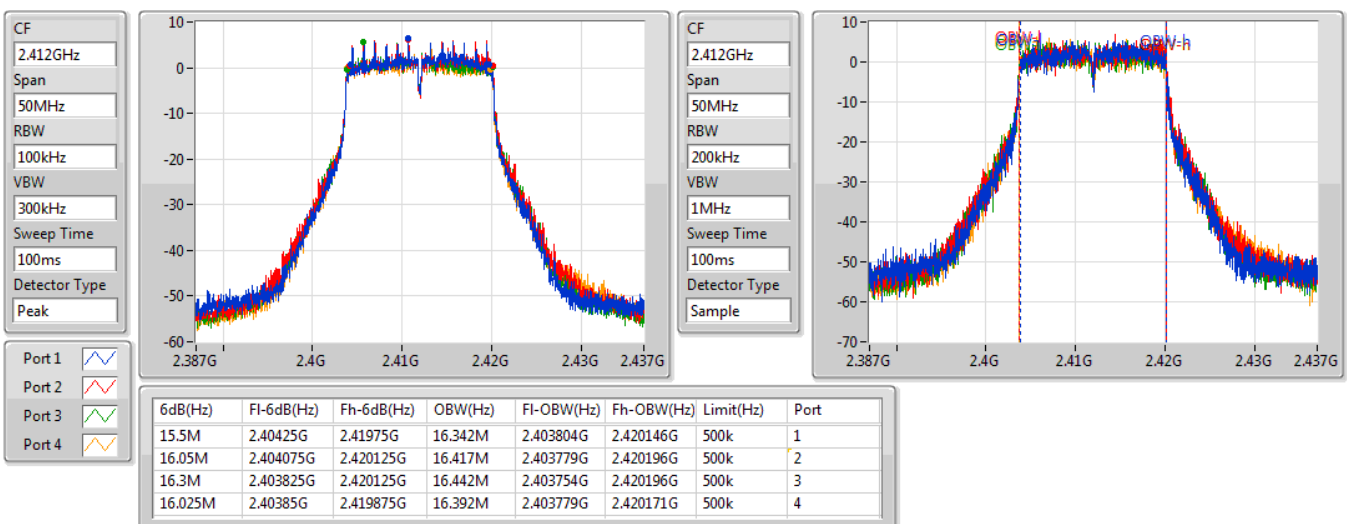


802.11b_Nss1,(1Mbps)_4TX
EBW
2462MHz

08/07/2019


802.11g_Nss1,(6Mbps)_4TX
EBW
2412MHz

08/07/2019

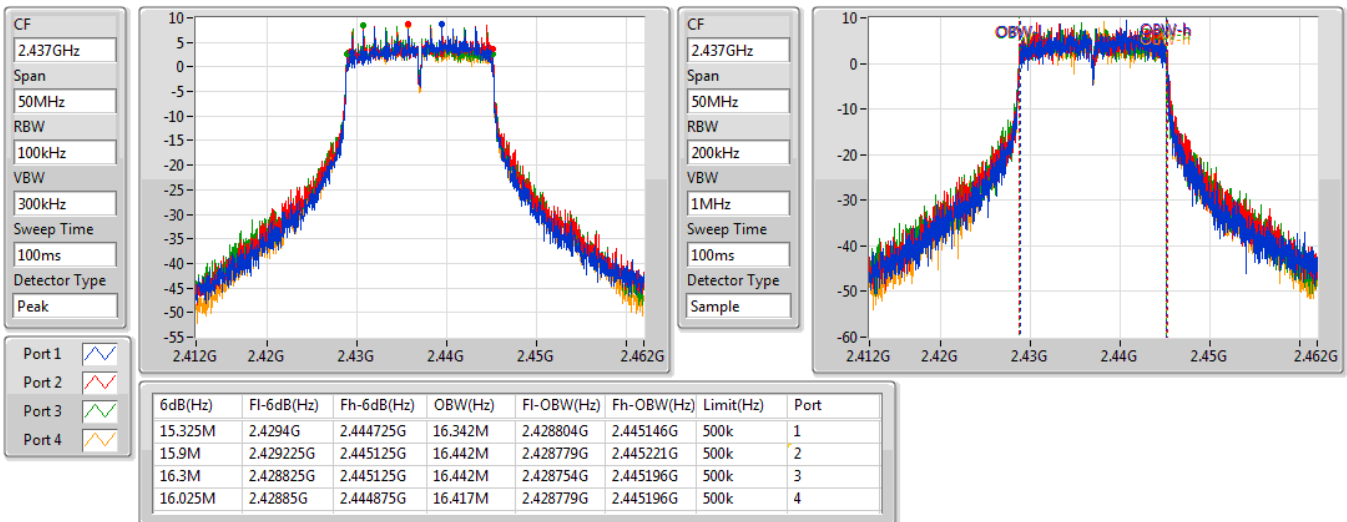


802.11g_Nss1,(6Mbps)_4TX

EBW

2437MHz

08/07/2019

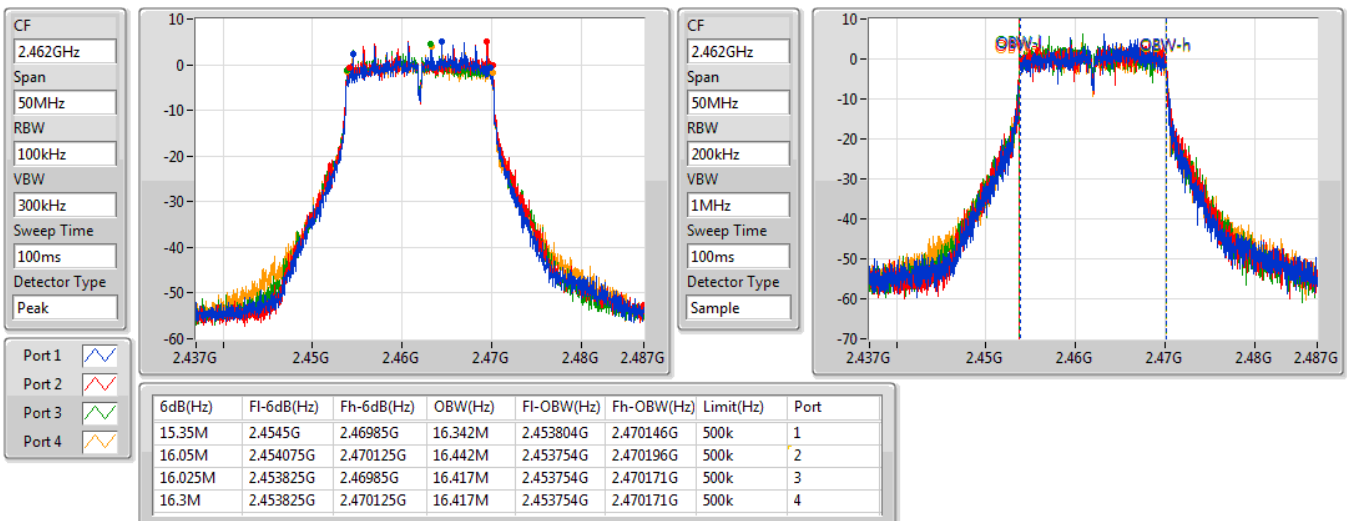


802.11g_Nss1,(6Mbps)_4TX

EBW

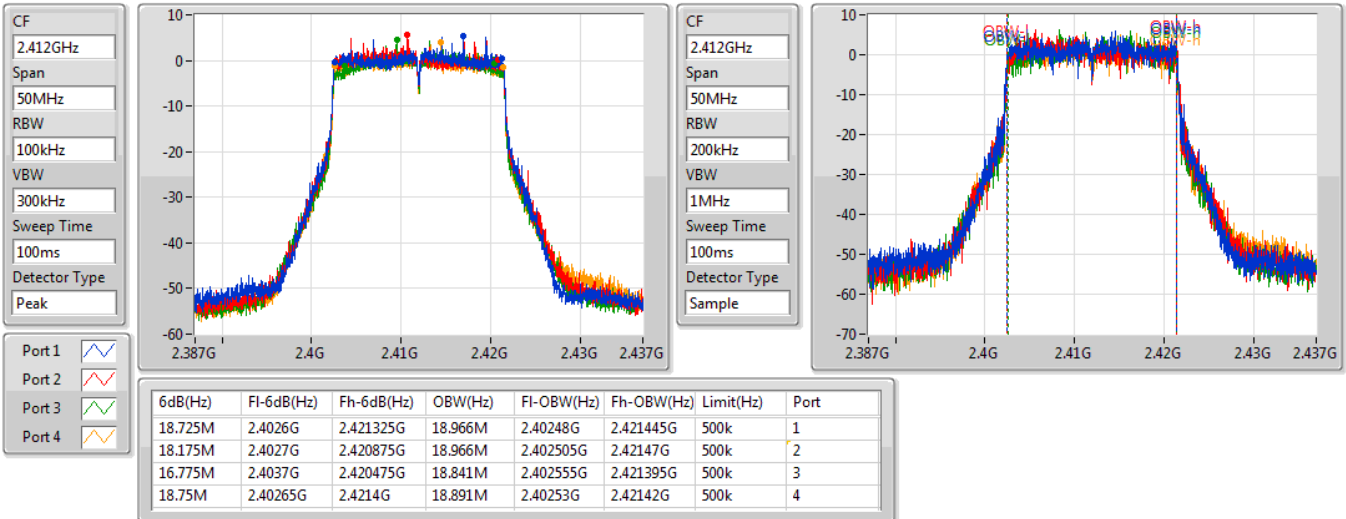
2462MHz

08/07/2019

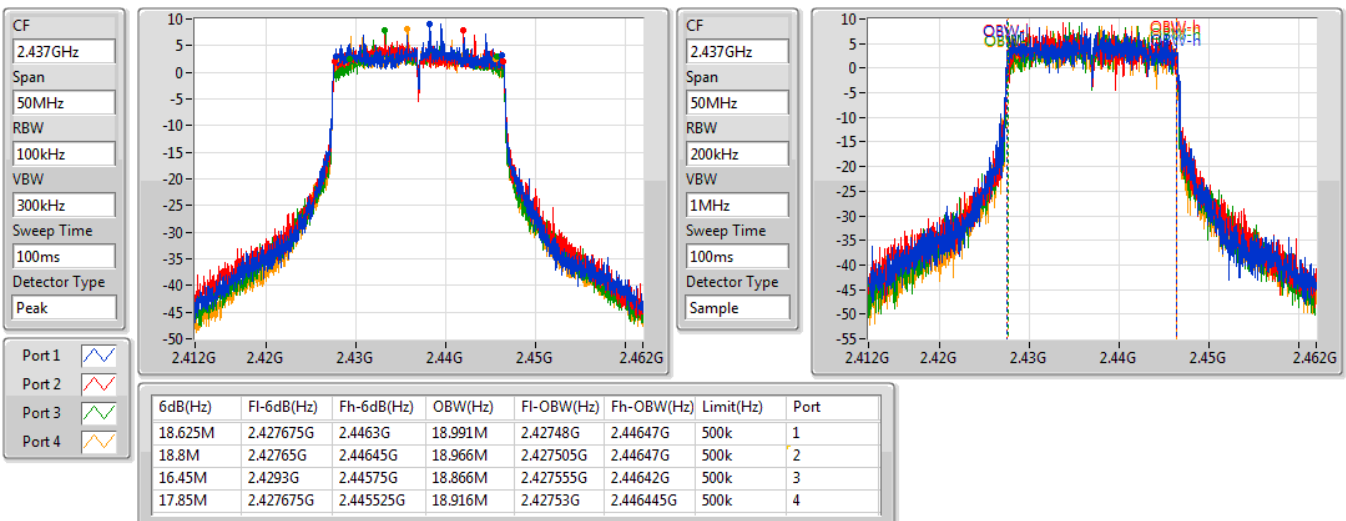


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
2412MHz

08/07/2019

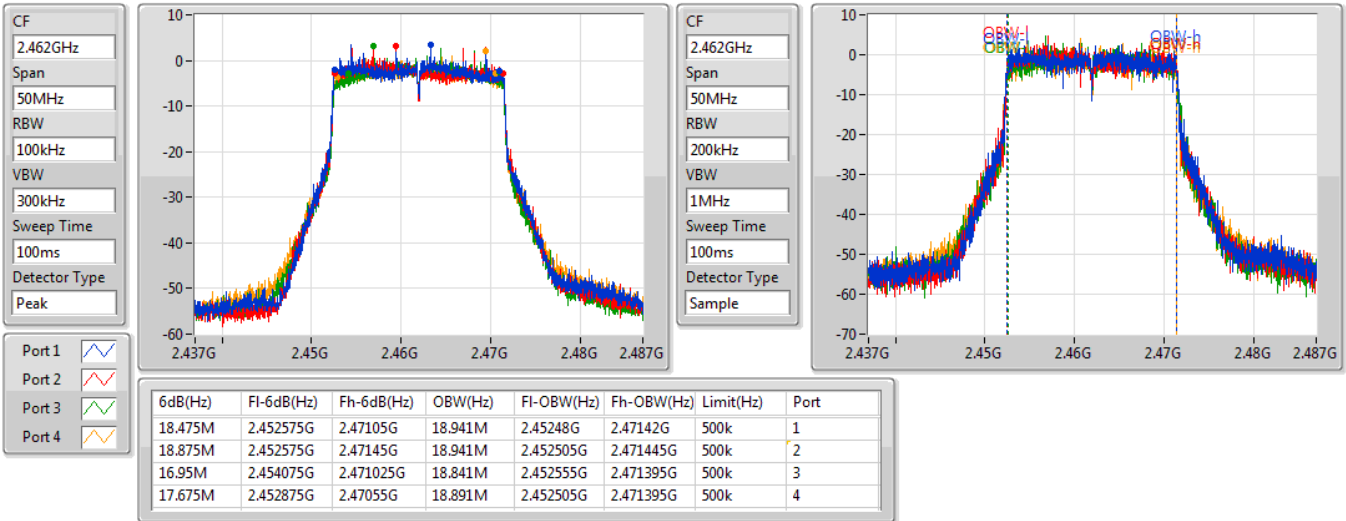

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
2437MHz

08/07/2019

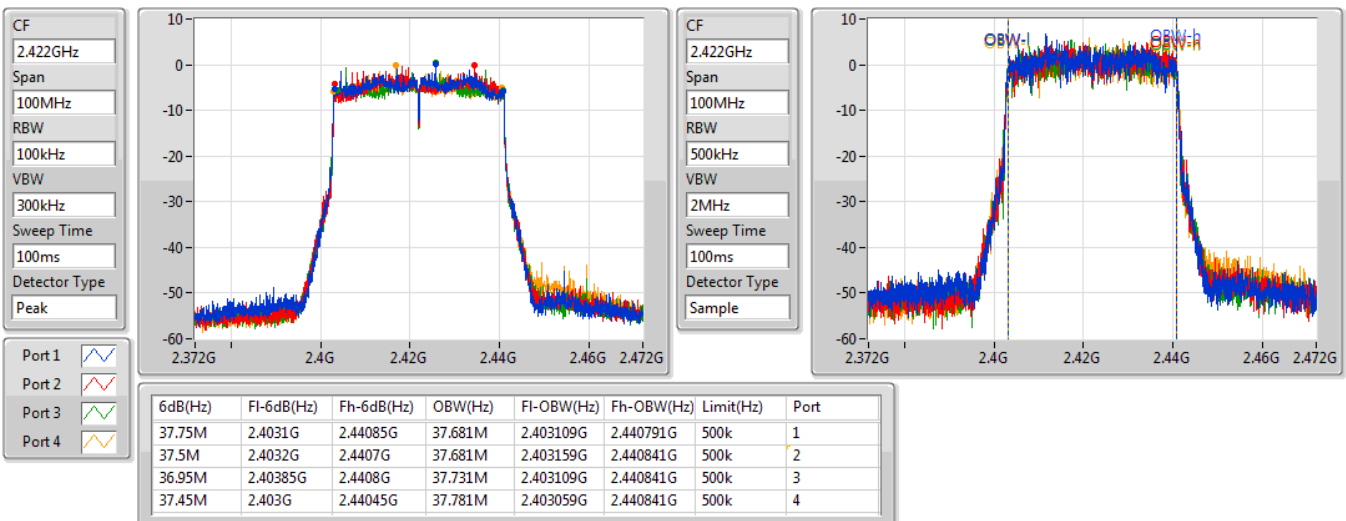


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
2462MHz

08/07/2019


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
2422MHz

08/07/2019

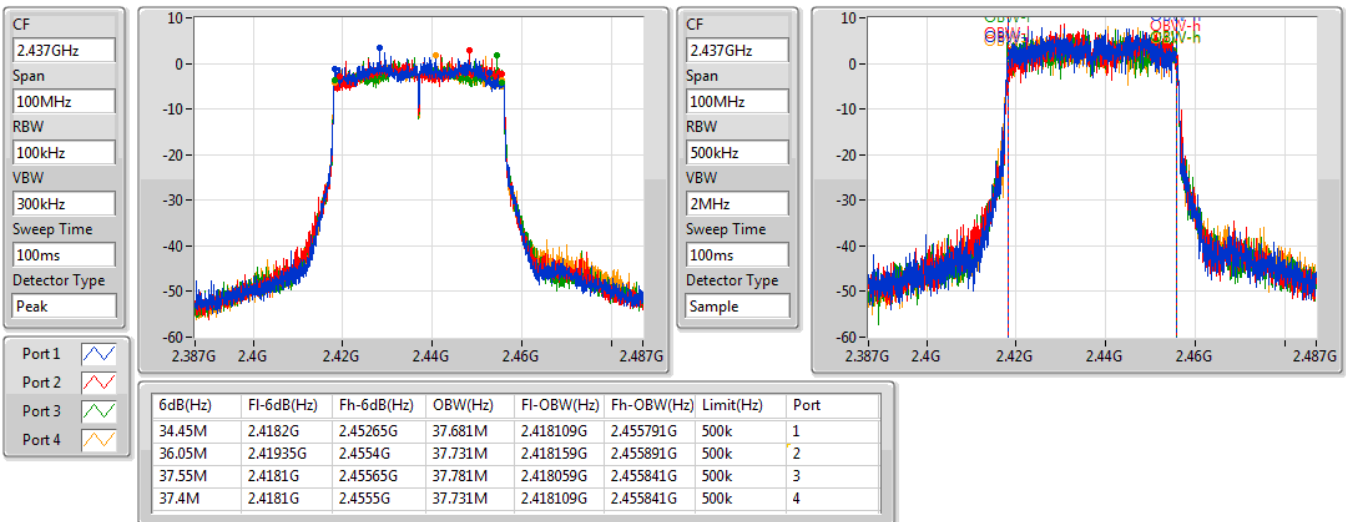


802.11ax HEW40_Nss1,(MCS0)_4TX

EBW

2437MHz

08/07/2019

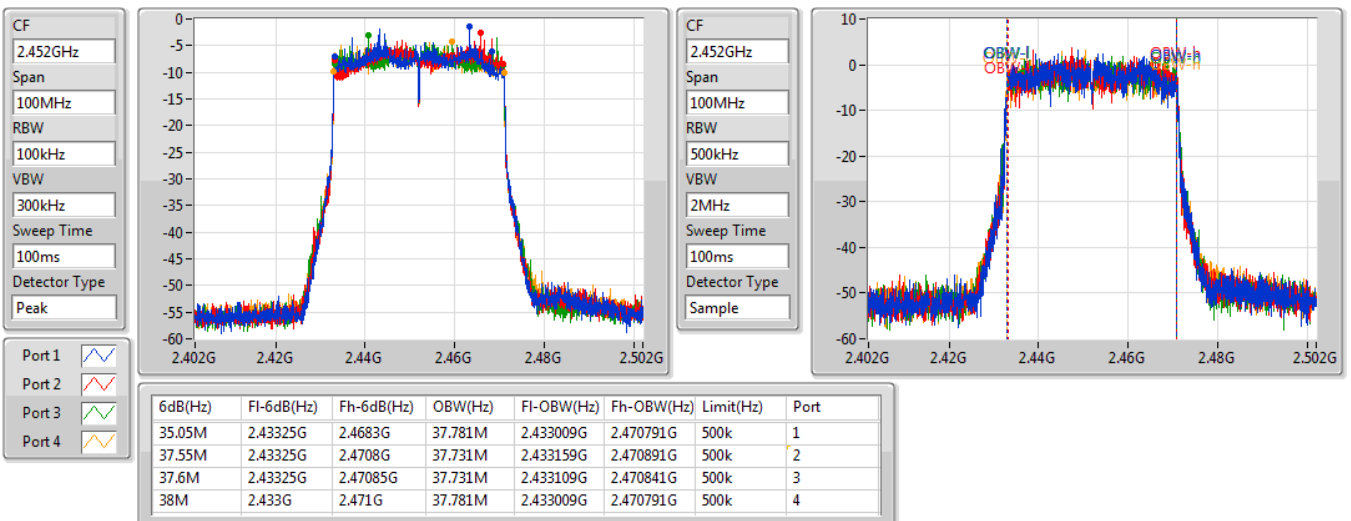


802.11ax HEW40_Nss1,(MCS0)_4TX

EBW

2452MHz

08/07/2019



**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	18.675M	18.916M	18M9D1D	14.95M	18.866M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	37.9M	37.781M	37M8D1D	23.75M	37.531M

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;

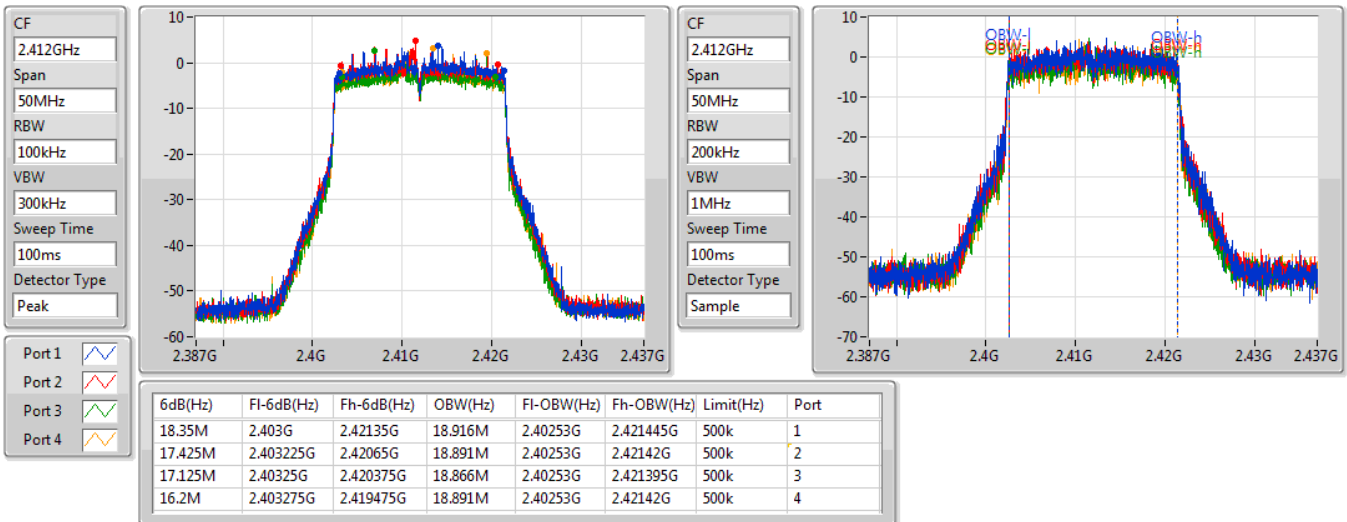
Result

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	18.35M	18.916M	17.425M	18.891M	17.125M	18.866M	16.2M	18.891M
2437MHz	Pass	500k	18.675M	18.866M	17.75M	18.891M	14.95M	18.866M	17.925M	18.891M
2462MHz	Pass	500k	18.325M	18.916M	18.125M	18.916M	16.425M	18.891M	18.125M	18.891M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	500k	37.6M	37.731M	36.45M	37.781M	33.8M	37.681M	37.45M	37.531M
2437MHz	Pass	500k	30M	37.681M	35M	37.781M	37.9M	37.681M	26.25M	37.781M
2452MHz	Pass	500k	30.1M	37.731M	31.5M	37.631M	37.85M	37.731M	23.75M	37.631M

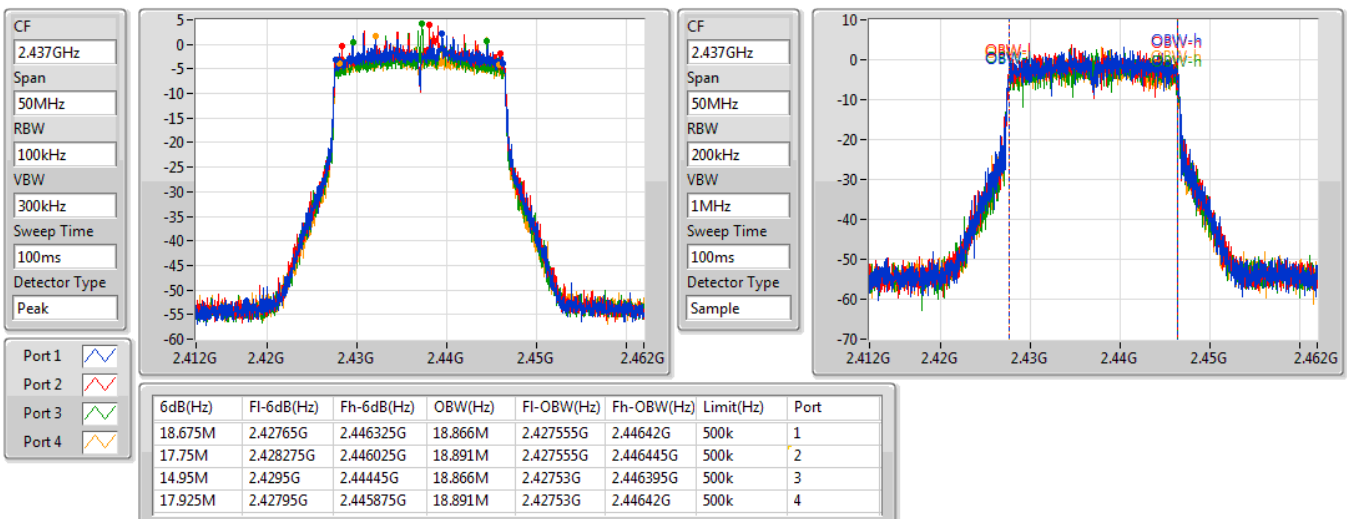
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
2412MHz

09/07/2019

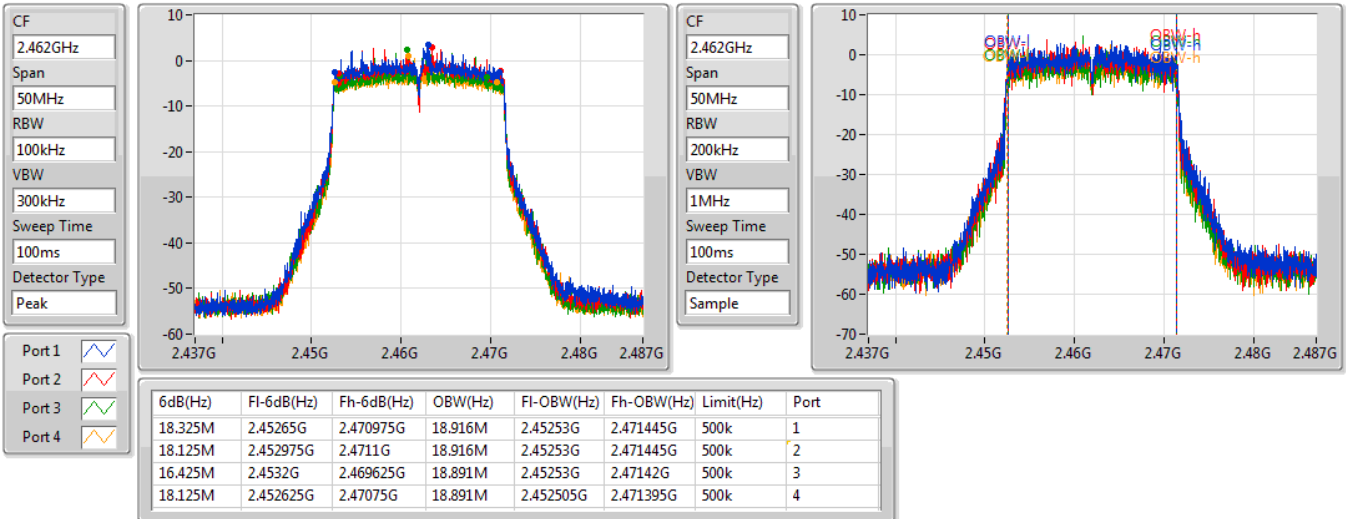

802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
2437MHz

09/07/2019

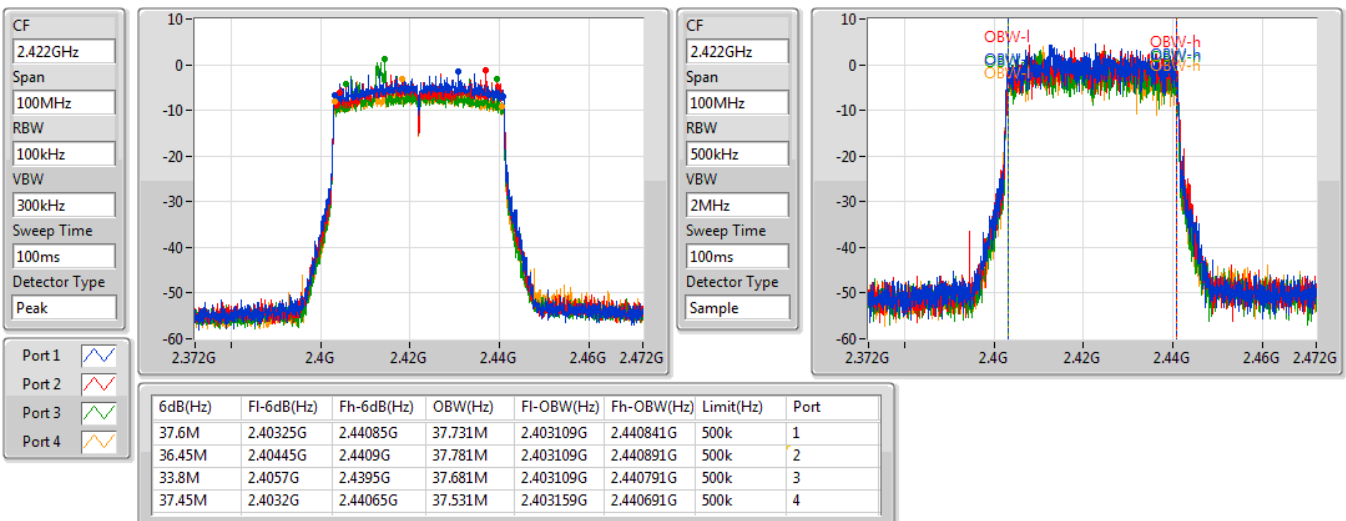


802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
2462MHz

09/07/2019

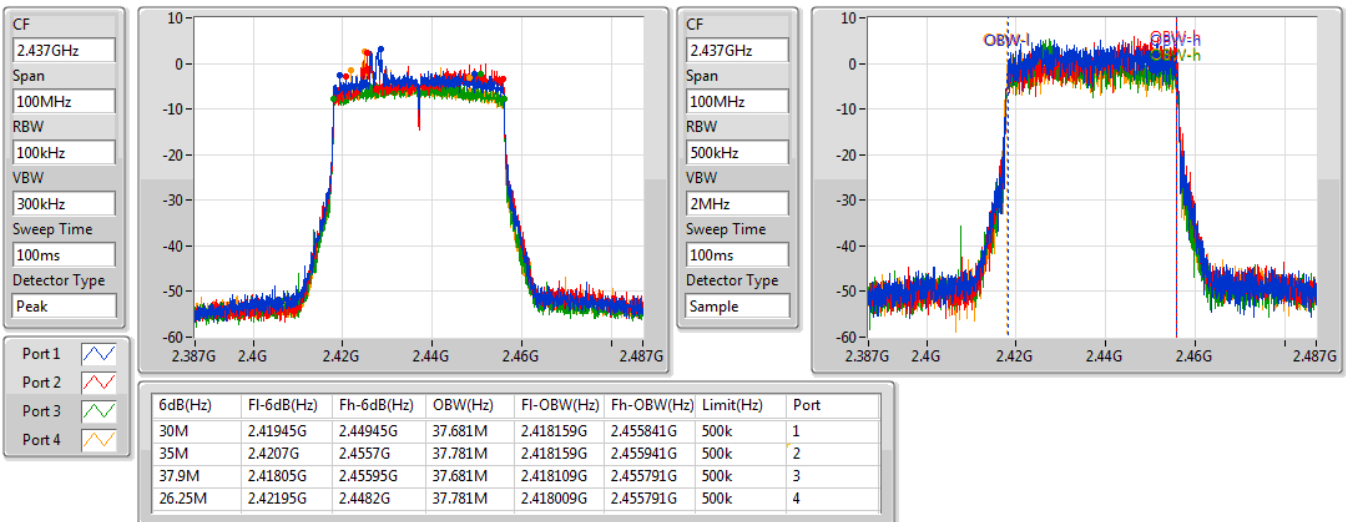

802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
2422MHz

09/07/2019

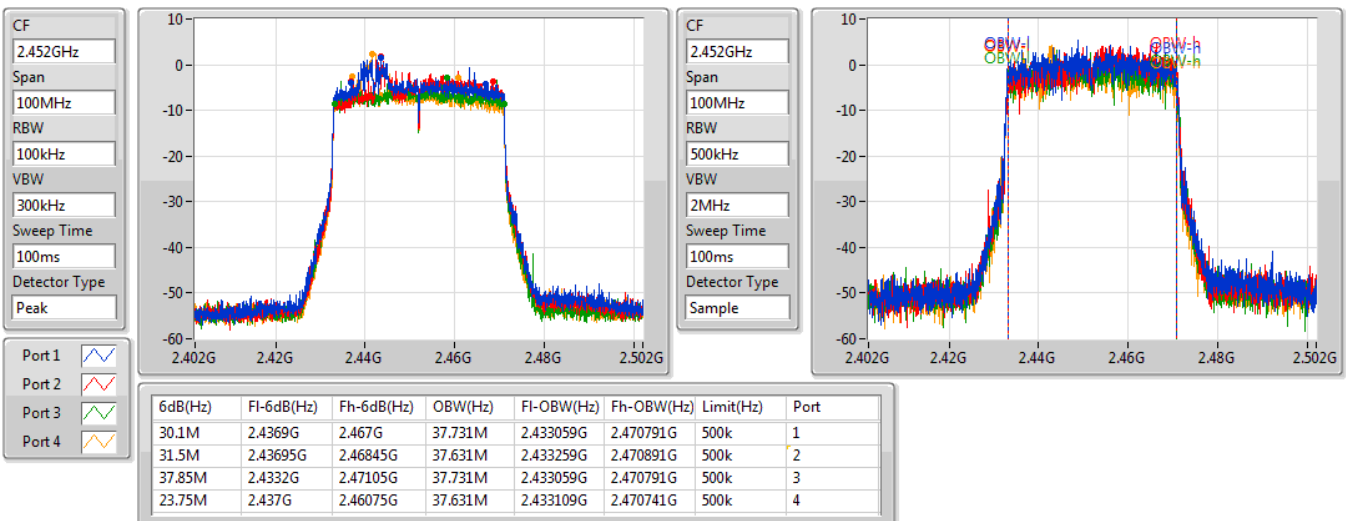


802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
2437MHz

09/07/2019


802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
2452MHz

09/07/2019





Average Power / Antenna Set 1

Appendix C.1

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	23.63	0.23067
802.11g_Nss1,(6Mbps)_1TX	22.58	0.18113
802.11ax HEW20_Nss1,(MCS0)_1TX	22.29	0.16943
802.11ax HEW40_Nss1,(MCS0)_1TX	19.77	0.09484

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	2.79	21.66	21.66	30.00
2417MHz	Pass	2.79	22.01	22.01	30.00
2437MHz	Pass	2.79	23.63	23.63	30.00
2457MHz	Pass	2.79	21.06	21.06	30.00
2462MHz	Pass	2.79	21.16	21.16	30.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	2.79	19.09	19.09	30.00
2417MHz	Pass	2.79	20.09	20.09	30.00
2437MHz	Pass	2.79	22.58	22.58	30.00
2457MHz	Pass	2.79	19.92	19.92	30.00
2462MHz	Pass	2.79	18.86	18.86	30.00
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-	-
2412MHz	Pass	2.79	19.12	19.12	30.00
2417MHz	Pass	2.79	20.20	20.20	30.00
2437MHz	Pass	2.79	22.29	22.29	30.00
2457MHz	Pass	2.79	20.12	20.12	30.00
2462MHz	Pass	2.79	18.75	18.75	30.00
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-	-	-	-
2422MHz	Pass	2.79	18.67	18.67	30.00
2437MHz	Pass	2.79	19.77	19.77	30.00
2452MHz	Pass	2.79	18.73	18.73	30.00

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

**Summary**

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_2TX	26.48	0.44463
802.11g_Nss1,(6Mbps)_2TX	25.81	0.38107
802.11ax HEW20_Nss1,(MCS0)_2TX	25.47	0.35237
802.11ax HEW40_Nss1,(MCS0)_2TX	21.89	0.15453

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	3.39	20.98	21.14	24.07	30.00
2437MHz	Pass	3.39	23.36	23.57	26.48	30.00
2462MHz	Pass	3.39	20.58	20.72	23.66	30.00
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	3.39	18.63	18.67	21.66	30.00
2417MHz	Pass	3.39	19.06	19.12	22.10	30.00
2437MHz	Pass	3.39	22.73	22.87	25.81	30.00
2457MHz	Pass	3.39	19.04	19.21	22.14	30.00
2462MHz	Pass	3.39	18.17	18.29	21.24	30.00
802.11ax HEW20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	3.39	18.80	18.72	21.77	30.00
2417MHz	Pass	3.39	20.03	20.17	23.11	30.00
2437MHz	Pass	3.39	22.37	22.55	25.47	30.00
2457MHz	Pass	3.39	19.11	19.18	22.16	30.00
2462MHz	Pass	3.39	17.69	17.98	20.85	30.00
802.11ax HEW40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	3.39	17.78	17.70	20.75	30.00
2437MHz	Pass	3.39	18.82	18.93	21.89	30.00
2452MHz	Pass	3.39	16.57	16.73	19.66	30.00

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

**Summary**

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	21.76	0.14997
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	21.13	0.12972

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	3.59	18.28	18.28	21.29	30.00
2437MHz	Pass	3.59	19.13	18.33	21.76	30.00
2462MHz	Pass	3.59	18.31	18.21	21.27	30.00
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	3.59	17.98	17.92	20.96	30.00
2437MHz	Pass	3.59	18.51	17.69	21.13	30.00
2452MHz	Pass	3.59	17.85	17.83	20.85	30.00

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



Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_4TX	28.42	0.69502
802.11g_Nss1,(6Mbps)_4TX	28.50	0.70795
802.11ax HEW20_Nss1,(MCS0)_4TX	28.51	0.70958
802.11ax HEW40_Nss1,(MCS0)_4TX	24.92	0.31046

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	3.39	20.62	20.56	20.34	19.66	26.33	30.00
2437MHz	Pass	3.39	22.51	22.63	22.40	22.03	28.42	30.00
2462MHz	Pass	3.39	20.27	20.13	19.88	19.68	26.02	30.00
802.11g_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	3.39	18.19	18.37	17.91	17.41	24.01	30.00
2417MHz	Pass	3.39	19.22	19.28	18.89	18.44	24.99	30.00
2437MHz	Pass	3.39	22.17	22.78	22.79	22.14	28.50	30.00
2457MHz	Pass	3.39	18.67	18.67	18.67	18.15	24.57	30.00
2462MHz	Pass	3.39	16.81	16.84	16.64	16.06	22.62	30.00
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	3.39	18.50	18.46	17.81	17.46	24.10	30.00
2417MHz	Pass	3.39	19.42	19.40	18.81	18.38	25.04	30.00
2437MHz	Pass	3.39	22.31	22.87	22.62	22.14	28.51	30.00
2457MHz	Pass	3.39	20.42	20.47	19.90	19.65	26.14	30.00
2462MHz	Pass	3.39	16.41	16.40	16.01	15.64	22.15	30.00
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
2422MHz	Pass	3.39	17.40	17.32	16.69	16.50	23.02	30.00
2437MHz	Pass	3.39	18.97	19.15	18.88	18.57	24.92	30.00
2447MHz	Pass	3.39	17.99	18.08	17.70	17.40	23.82	30.00
2452MHz	Pass	3.39	15.74	15.87	15.76	15.28	21.69	30.00

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

**Summary**

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	24.21	0.26363
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	23.41	0.21928

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	7.39	17.72	17.96	16.14	16.26	23.12	28.61
2437MHz	Pass	7.39	18.51	19.05	17.45	17.55	24.21	28.61
2462MHz	Pass	7.39	17.60	18.18	16.59	16.27	23.25	28.61
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
2422MHz	Pass	7.39	15.97	15.08	13.73	14.01	20.81	28.61
2427MHz	Pass	7.39	16.20	15.84	14.75	14.22	21.35	28.61
2437MHz	Pass	7.39	18.36	17.84	16.42	16.65	23.41	28.61
2447MHz	Pass	7.39	17.26	17.02	15.19	15.33	22.32	28.61
2452MHz	Pass	7.39	14.15	13.14	13.17	12.12	19.22	28.61

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

**Summary**

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	24.01	0.25177
802.11g_Nss1,(6Mbps)_1TX	22.93	0.19634
802.11ax HEW20_Nss1,(MCS0)_1TX	22.56	0.18030
802.11ax HEW40_Nss1,(MCS0)_1TX	18.95	0.07852

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	3.89	21.71	21.71	30.00
2417MHz	Pass	3.89	22.22	22.22	30.00
2437MHz	Pass	3.89	24.01	24.01	30.00
2457MHz	Pass	3.89	21.43	21.43	30.00
2462MHz	Pass	3.89	21.01	21.01	30.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	3.89	19.16	19.16	30.00
2417MHz	Pass	3.89	19.90	19.90	30.00
2437MHz	Pass	3.89	22.93	22.93	30.00
2457MHz	Pass	3.89	19.72	19.72	30.00
2462MHz	Pass	3.89	18.22	18.22	30.00
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-	-
2412MHz	Pass	3.89	18.88	18.88	30.00
2417MHz	Pass	3.89	19.74	19.74	30.00
2437MHz	Pass	3.89	22.56	22.56	30.00
2457MHz	Pass	3.89	19.00	19.00	30.00
2462MHz	Pass	3.89	18.08	18.08	30.00
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-	-	-	-
2422MHz	Pass	3.89	18.44	18.44	30.00
2437MHz	Pass	3.89	18.95	18.95	30.00
2452MHz	Pass	3.89	17.46	17.46	30.00

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

**Summary**

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_2TX	27.07	0.50933
802.11g_Nss1,(6Mbps)_2TX	25.41	0.34754
802.11ax HEW20_Nss1,(MCS0)_2TX	25.03	0.31842
802.11ax HEW40_Nss1,(MCS0)_2TX	21.59	0.14421

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	4.49	22.07	22.12	25.11	30.00
2437MHz	Pass	4.49	23.96	24.16	27.07	30.00
2457MHz	Pass	4.49	21.42	21.46	24.45	30.00
2462MHz	Pass	4.49	21.04	20.89	23.98	30.00
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	4.49	18.65	18.86	21.77	30.00
2417MHz	Pass	4.49	19.50	19.75	22.64	30.00
2437MHz	Pass	4.49	22.24	22.55	25.41	30.00
2457MHz	Pass	4.49	18.69	18.74	21.73	30.00
2462MHz	Pass	4.49	17.77	17.88	20.84	30.00
802.11ax HEW20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	4.49	18.41	18.61	21.52	30.00
2417MHz	Pass	4.49	18.88	19.03	21.97	30.00
2437MHz	Pass	4.49	21.97	22.06	25.03	30.00
2457MHz	Pass	4.49	19.55	19.51	22.54	30.00
2462MHz	Pass	4.49	17.64	17.59	20.63	30.00
802.11ax HEW40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	4.49	17.91	18.03	20.98	30.00
2437MHz	Pass	4.49	18.53	18.63	21.59	30.00
2452MHz	Pass	4.49	16.67	16.50	19.60	30.00

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

**Summary**

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	21.73	0.14894
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	20.78	0.11967

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	2.56	18.65	18.47	21.57	30.00
2437MHz	Pass	2.56	18.96	18.47	21.73	30.00
2457MHz	Pass	2.56	18.93	18.25	21.61	30.00
2462MHz	Pass	2.56	19.09	18.29	21.72	30.00
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	2.56	17.81	17.42	20.63	30.00
2437MHz	Pass	2.56	17.90	17.64	20.78	30.00
2452MHz	Pass	2.56	17.95	17.42	20.70	30.00

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



Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_4TX	29.92	0.98175
802.11g_Nss1,(6Mbps)_4TX	28.28	0.67298
802.11ax HEW20_Nss1,(MCS0)_4TX	28.16	0.65464
802.11ax HEW40_Nss1,(MCS0)_4TX	24.77	0.29992

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	4.49	21.54	21.57	21.59	21.56	27.59	30.00
2437MHz	Pass	4.49	23.76	23.65	24.19	23.97	29.92	30.00
2462MHz	Pass	4.49	21.07	20.91	21.02	21.00	27.02	30.00
802.11g_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	4.49	18.65	18.79	18.95	18.85	24.83	30.00
2417MHz	Pass	4.49	19.46	19.70	19.86	19.60	25.68	30.00
2437MHz	Pass	4.49	21.86	22.14	22.57	22.42	28.28	30.00
2457MHz	Pass	4.49	18.69	18.87	18.86	18.77	24.82	30.00
2462MHz	Pass	4.49	17.75	17.86	17.88	17.77	23.84	30.00
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	4.49	18.48	18.31	18.42	18.47	24.44	30.00
2417MHz	Pass	4.49	19.42	19.37	19.34	19.38	25.40	30.00
2437MHz	Pass	4.49	21.87	22.17	22.31	22.18	28.16	30.00
2457MHz	Pass	4.49	19.42	19.52	19.44	19.56	25.51	30.00
2462MHz	Pass	4.49	16.10	15.88	15.98	16.03	22.02	30.00
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
2422MHz	Pass	4.49	17.42	17.35	17.43	17.63	23.48	30.00
2437MHz	Pass	4.49	18.49	18.51	18.96	19.00	24.77	30.00
2452MHz	Pass	4.49	16.75	16.5	16.35	16.62	22.58	30.00

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

**Summary**

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	24.91	0.30974
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	23.97	0.24946

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	7.09	18.15	18.22	16.87	16.90	23.60	28.91
2437MHz	Pass	7.09	19.52	19.41	18.39	18.07	24.91	28.91
2462MHz	Pass	7.09	18.55	18.43	17.34	17.12	23.93	28.91
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
2422MHz	Pass	7.09	17.05	16.94	16.71	16.04	22.72	28.91
2437MHz	Pass	7.09	18.36	18.18	18.04	17.13	23.97	28.91
2452MHz	Pass	7.09	16.42	16.10	15.81	15.02	21.89	28.91

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

**Summary**

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	24.01	0.25177
802.11g_Nss1,(6Mbps)_1TX	22.93	0.19634
802.11ax HEW20_Nss1,(MCS0)_1TX	21.89	0.15453
802.11ax HEW40_Nss1,(MCS0)_1TX	18.95	0.07852

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	1.89	22.58	22.58	30.00
2437MHz	Pass	1.89	24.01	24.01	30.00
2457MHz	Pass	1.89	22.04	22.04	30.00
2462MHz	Pass	1.89	21.57	21.57	30.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	1.89	19.65	19.65	30.00
2417MHz	Pass	1.89	19.90	19.90	30.00
2437MHz	Pass	1.89	22.93	22.93	30.00
2457MHz	Pass	1.89	19.72	19.72	30.00
2462MHz	Pass	1.89	18.81	18.81	30.00
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-	-
2412MHz	Pass	1.89	19.31	19.31	30.00
2437MHz	Pass	1.89	21.89	21.89	30.00
2457MHz	Pass	1.89	19.54	19.54	30.00
2462MHz	Pass	1.89	18.08	18.08	30.00
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-	-	-	-
2422MHz	Pass	1.89	18.44	18.44	30.00
2437MHz	Pass	1.89	18.95	18.95	30.00
2452MHz	Pass	1.89	17.46	17.46	30.00

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