



RADIO TEST REPORT

FCC ID : QXO-AP5010U
Equipment : Access Point
Brand Name : Extreme Networks
Model Name : AP5010U
Applicant : Extreme Networks, Inc.
2121 RDU Center Drive Morrisville North Carolina
United States 27560
Manufacturer : Extreme Networks, Inc.
2121 RDU Center Drive Morrisville North Carolina
United States 27560
Standard : 47 CFR FCC Part 15.407

The product was received on Dec. 03, 2021, and testing was started from Dec. 11, 2021 and completed on May 21, 2022. We, Sporton International Inc. Hsinchu Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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

Approved by: Sam Chen

Sporton International Inc. Hsinchu Laboratory

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



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TEL : 886-3-656-9065
FAX : 886-3-656-9085
Report Template No.: CB-A12_5 Ver1.1



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	15.407(a)	Emission Bandwidth	PASS	-
3.3	15.407(a)	Maximum Equivalent Isotropically Radiated Power (E.I.R.P.)	PASS	-
3.4	15.407(a)	Peak Power Spectral Density (E.I.R.P.)	PASS	-
3.5	15.407(b)	Unwanted Emissions	PASS	-
3.6	15.407(d)	Contention-Based Protocol	PASS	-
3.7	15.407(g)	Frequency Stability	PASS	-

Declaration of Conformity:

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

Comments and Explanations:

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

Reviewed by: Sam Chen

Report Producer: Viola Huang



1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
5925-7125	ax (HEW20)	5955-7095	1-229 [58]
5925-7125	ax (HEW40)	5965-7085	3-227 [29]
5925-7125	ax (HEW80)	5985-7025	7-215 [14]
5925-7125	ax (HEW160)	6025-6985	15-207 [7]

For Radio 3

Band	Mode	BWch (MHz)	Nant
UNII 5-8	ax (HEW20)	20	1, 2, 4
UNII 5-8	ax (HEW20)-BF	20	2, 4
UNII 5-8	ax (HEW40)	40	1, 2, 4
UNII 5-8	ax (HEW40)-BF	40	2, 4
UNII 5-8	ax (HEW80)	80	1, 2, 4
UNII 5-8	ax (HEW80)-BF	80	2, 4
UNII 5-8	ax (HEW160)	160	1, 2, 4
UNII 5-8	ax (HEW160)-BF	160	2, 4

For Scanning radio 1

Band	Mode	BWch (MHz)	Nant
UNII 5-8	ax (HEW20)	20	2
UNII 5-8	ax (HEW40)	40	2
UNII 5-8	ax (HEW80)	80	2
UNII 5-8	ax (HEW160)	160	2

Note:

- HEW20, HEW40, HEW80 and HEW160 use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- BWch is the nominal channel bandwidth.
- The channel defined in the IEEE Standard P802.11ax™/D6.1.



1.1.2 Antenna Information

Ant.	Port						Brand Name	Model Name	Antenna Type	Connector	Gain (dBi)
	WLAN 2.4GHz (Radio 1) (Scanning Radio 1)	WLAN 5GHz (Radio 2)	WLAN 6E (Radio 3)	WLAN 5GHz / WLAN 6GHz (Scanning Radio 1)	BT / IEEE802.15.4 (Radio 4)	UWB (Radio 5)					
1	3	3	-	-	-	-	WNC	95XEAJ15.30	PIFA	I-PEX	Note 1
2	1	1	-	-	-	-	WNC	95XEAJ15.31	PIFA	I-PEX	
3	2	2	-	-	-	-	WNC	95XEAJ15.32	PIFA	I-PEX	
4	4	4	-	-	-	-	WNC	95XEAJ15.33	PIFA	I-PEX	
5	-	-	2	-	-	-	WNC	95XEAJ15.34	PIFA	I-PEX	
6	-	-	1	-	-	-	WNC	95XEAJ15.35	PIFA	I-PEX	
7	-	-	4	-	-	-	WNC	95XEAJ15.36	PIFA	I-PEX	
8	-	-	3	-	-	-	WNC	95XEAJ15.37	PIFA	I-PEX	
9	-	-	-	1	-	-	WNC	95XEAJ15.38	PIFA	I-PEX	
10	-	-	-	2	-	-	WNC	95XEAJ15.39	PIFA	I-PEX	
11	-	-	-	-	1	-	WNC	95XEAJ15.40	PIFA	I-PEX	
12	-	-	-	-	-	1	WNC	95XEAJ15.41	PIFA	I-PEX	

Note 1:

Table 1:

Ant.	Antenna Gain (dBi)									
	WLAN 2.4GHz (Radio 1) (Scanning Radio 1)	WLAN 5GHz (Radio 2)				WLAN 6E (Radio 3)	WLAN 5GHz (Scanning Radio 1)	WLAN 6GHz (Scanning Radio 1)	BT / IEEE802.15.4 (Radio 4)	UWB (Radio 5)
		UNII 1	UNII 2A	UNII 2C	UNII 3	UNII 5~UNII 8	UNII 1~UNII 3	UNII 5~UNII 8		
1	2.12	2.98	2.63	2.13	2.48	-	-	-	-	-
2	2.97	2.59	2.78	1.18	1.38	-	-	-	-	-
3	3.07	3.23	3.25	2.01	1.61	-	-	-	-	-
4	2.73	2.52	2.93	1.67	1.64	-	-	-	-	-
5	-	-	-	-	-	5.2	-	-	-	-
6	-	-	-	-	-	5.2	-	-	-	-
7	-	-	-	-	-	5.2	-	-	-	-
8	-	-	-	-	-	5.2	-	-	-	-
9	-	-	-	-	-	-	5.9	6.0	-	-
10	-	-	-	-	-	-	5.9	6.0	-	-
11	-	-	-	-	-	-	-	-	4.2	-
12	-	-	-	-	-	-	-	-	-	4.7



Ant.	Directional Gain (dBi)									
	WLAN 2.4GHz (Radio 1) (Scanning Radio 1)		WLAN 5GHz (Radio 2)							
	2T1S	2T2S	UNII 1		UNII 2A		UNII 2C		UNII 3	
			2T1S	2T2S	2T1S	2T2S	2T1S	2T2S	2T1S	2T2S
2	5.57	2.58	4.98	2.07	4.99	2.08	3.67	0.78	3.86	0.88
3										

Ant.	Directional Gain (dBi)														
	WLAN 2.4GHz (Radio 1) (Scanning Radio 1)			WLAN 5GHz (Radio 2)											
	4T1S	4T2S	4T4S	UNII 1			UNII 2A			UNII 2C			UNII 3		
				4T1S	4T2S	4T4S	4T1S	4T2S	4T4S	4T1S	4T2S	4T4S	4T1S	4T2S	4T4S
1															
2	7.68	4.68	1.72	6.37	3.37	0.60	6.09	3.25	0.35	6.00	3.00	0.08	6.27	3.27	0.29
3															
4															

Note 2: The EUT has twelve antennas.

Note 3: The above information (except gain of Radio 1 2.4GHz, Scanning Radio 1 2.4GHz, Radio 2) was declared by manufacturer.

Note 4: Radio 1 2.4GHz, Scanning Radio 1 2.4GHz, Radio 2: Maximum Directional Gain following KDB662911 D03.

The antenna report is provided in the operational description for this application.

Note 5: Scanning Radio 1 5GHz: Maximum Directional Gain following KDB662911 D01.

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

Note 7: Scanning Radio 1 5GHz: Directional gain information.

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

Ex.

Directional Gain (NSS1) formula :

$$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{ANT}} \left(\sum_{k=1}^{N_{ANT}} g_{j,k} \right)^2}{N_{ANT}} \right]$$

$$NSS1(g1,1) = 10^{G1/20} ; NSS1(g1,2) = 10^{G2/20} ; NSS1(g1,3) = 10^{G3/20} ; NSS1(g1,4) = 10^{G4/20}$$

$$g_{j,k} = (NSS1(g1,1) + NSS1(g1,2) + NSS1(g1,3) + NSS1(g1,4))^2$$

$$DG = 10 \log[(NSS1(g1,1) + NSS1(g1,2) + NSS1(g1,3) + NSS1(g1,4))^2 / N_{ANT}] \Rightarrow 10$$

$$\log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20} + 10^{G4/20})^2 / N_{ANT}]$$

Where ;

$$G1 = 5.9 ; G2 = 5.9$$

$$5 \text{ GHz U-NII-1 DG} = 8.91 \text{ dBi}$$

$$5 \text{ GHz U-NII-2A DG} = 8.91 \text{ dBi}$$

$$5 \text{ GHz U-NII-2C DG} = 8.91 \text{ dBi}$$

$$5 \text{ GHz U-NII-3 DG} = 8.91 \text{ dBi}$$

**For Radio 1****For 2.4GHz:****For IEEE 802.11b/g/n/VHT/ax mode (1TX/4RX):**

Only Port 1 can be use as transmitting antenna.

Port 1, Port 2 could transmit simultaneously.

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

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

For IEEE 802.11b/g/n/VHT/ax mode (2TX/4RX):

Port 1, Port 2 can be use as transmitting antenna.

Port 1, Port 2 could transmitting simultaneously.

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

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

For IEEE 802.11b/g/n/VHT/ax mode (4TX/4RX):

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

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

For Scanning Radio 1**For 2.4GHz:****For IEEE 802.11b/g/n/VHT/ax mode (4TX/4RX):**

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

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

For 5GHz UNII 1, 3:**For IEEE 802.11a/n/ac/ax mode (2TX/2RX):**

Port 1, Port 2 can be used as transmitting/receiving antenna.

Port 1, Port 2 could transmit/receive simultaneously.

For 6GHz UNII 5~8:**For IEEE 802.11ax mode (2TX/2RX):**

Port 1, Port 2 can be used as transmitting/receiving antenna.

Port 1, Port 2 could transmit/receive simultaneously.

For Radio 2**For 5GHz UNII 1, 3:****For IEEE 802.11a/n/ac/ax mode (1TX/4RX):**

Only Port 1 can be use as transmitting antenna.

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

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

For IEEE 802.11a/n/ac/ax mode (2TX/4RX):

Port 1, Port 2 can be use as transmitting antenna.

Port 1, Port 2 could transmitting simultaneously.

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

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

For IEEE 802.11a/n/ac/ax mode (4TX/4RX):

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

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

For Radio 3**For 6GHz UNII 5~8:****For IEEE 802.11ax mode (1TX/4RX):**

Only Port 1 can be use as transmitting antenna.

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

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

For IEEE 802.11ax mode (2TX/4RX):

Port 1, Port 2 can be use as transmitting antenna.

Port 1, Port 2 could transmitting simultaneously.

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

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

**For IEEE 802.11ax mode (4TX/4RX):**

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

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

For Radio 4**Bluetooth / IEEE802.15.4 (1TX):**

Only Port 1 can be used as transmitting antenna.

For Radio 5**UWB (1TX/1RX):**

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

1.1.3 Mode Test Duty Cycle**For Radio 3****Non beamforming mode****For 1T1S**

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ax HEW20	0.984	0.07	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ax HEW40	0.968	0.14	781.25u	3k
802.11ax HEW80	0.944	0.25	413.25u	3k
802.11ax HEW160	0.902	0.45	236.25u	10k

For 2T2S

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ax HEW20	0.967	0.15	787.5u	3k
802.11ax HEW40	0.942	0.26	433.75u	3k
802.11ax HEW80	0.897	0.47	243.438u	10k
802.11ax HEW160	0.853	0.69	162.5u	10k

For 4T1S

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ax HEW20	0.983	0.07	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ax HEW40	0.966	0.15	780.625u	3k
802.11ax HEW80	0.937	0.28	413.125u	3k
802.11ax HEW160	0.894	0.49	236.563u	10k

For 4T4S

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ax HEW20	0.942	0.26	448.438u	3k
802.11ax HEW40	0.905	0.43	271.563u	10k
802.11ax HEW80	0.864	0.63	176.25u	10k
802.11ax HEW160	0.829	0.81	135.625u	10k

**Beamforming mode****For 2T1S**

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ax HEW20-BF	0.952	0.21	2.926m	1k
802.11ax HEW40-BF	0.963	0.16	4.357m	300
802.11ax HEW80-BF	0.96	0.18	4.141m	300
802.11ax HEW160-BF	0.966	0.15	5.16m	300

For 4T1S

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ax HEW20-BF	0.958	0.19	2.926m	1k
802.11ax HEW40-BF	0.958	0.19	4.357m	300
802.11ax HEW80-BF	0.952	0.21	4.142m	300
802.11ax HEW160-BF	0.965	0.15	5.16m	300

For Scanning radio 1

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ax HEW20	0.968	0.14	788.75u	3k
802.11ax HEW40	0.944	0.25	434u	3k
802.11ax HEW80	0.903	0.44	243.5u	10k
802.11ax HEW160	0.847	0.72	162u	10k

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
	The product has beamforming function for 11n/VHT/11ax in radio 1 2.4GHz, 11n/11ac/11ax in radio 2 5GHz and 11ax 6E in radio 3.			
Device Type	☒	Indoor Access Point	☐	Subordinate
	☐	Indoor Client	☐	Standard Power Access Point
	☐	Dual Client	☐	Standard Client
	☐	Fixed Client		
Test Software Version	accessMTool_REL_3_2_1_5			
Software / Firmware Version for CBP	HiveOS 10.4r3 Nantucket_SoC build-271184-dbg			

Note: The above information was declared by manufacturer.

1.1.5 Table for EUT support function

Function
AP
Bridge
Mesh

Note: For above table list, only AP mode was tested and recorded in this test.

Note: The above information was declared by manufacturer.

1.1.6 Table for Radio function

Radio (R)	WLAN 2.4GHz	5GHz UNII 1, 3	Scanning radio (WLAN 2.4GHz 4TX / 5GHz UNII 1, 3 2TX / 6E UNII 5~8 2TX)	6E (UNII 5~8)	Bluetooth / IEEE802.15.4	UWB
R1	V (AP, Bridge, Mesh)	-	V (2.4GHz: AP, Bridge, Mesh/5GHz, 6E: AP)	-	-	-
R2	-	V AP for UNII 1, 3 Bridge, Mesh for UNII 1, 3	-	-	-	-
R3	-	-	-	V (AP)	-	-
R4	-	-	-	-	V	-
R5	-	-	-	-	-	V

Note: The above information was declared by manufacturer.

1.2 Applicable Standards

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

- ♦ 47 CFR FCC Part 15.407
- ♦ ANSI C63.10-2013
- ♦ FCC KDB 789033 D02 v02r01

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

- ♦ FCC KDB 987594 D02 v01r01
- ♦ FCC KDB 412172 D01 v01r01
- ♦ FCC KDB 414788 D01 v01r01

1.3 Testing Location Information

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

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
RF Conducted	TH02-CB	Jay Lo	20.3~21 / 59~61	Dec. 14, 2021~Apr. 23, 2022
Radiated below 1GHz	03CH05-CB	Stim Sung	24.4~25.5 / 55~58	Dec. 15, 2021~Dec. 16, 2021
Radiated above 1GHz	03CH01-CB	RJ Huang	23.5~24.4 / 56~59	Dec. 11, 2021~Apr. 28, 2022
	03CH04-CB		24.2~26.1 / 55~58	
	03CH02-CB		24.4~25.5 / 55~58	
	03CH06-CB		24.5~25.6 / 56~59	
AC Conduction	CO01-CB	Peter Wu	23~24 / 52~53	Dec. 22, 2021
RF Conducted (Contention-Based Protocol test)	DF02-CB	Jay Lo	21.7~23.1 / 66~70	For Radio 3: Mar. 31, 2022~May 21, 2022
				For Scanning radio 1: May 17, 2022



1.4 Measurement Uncertainty

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

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.4 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	4.2 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	5.5 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	4.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.2 dB	Confidence levels of 95%
Conducted Emission	2.5 dB	Confidence levels of 95%
Output Power Measurement	1.3 dB	Confidence levels of 95%
Power Density Measurement	2.5 dB	Confidence levels of 95%
Bandwidth Measurement	0.9%	Confidence levels of 95%



2 Test Configuration of EUT

2.1 Test Channel Mode

For Radio 3

Non beamforming mode

For 1T1S

Mode	Power Setting	PowerSetting (dBm)
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-
5955MHz	65	16.25
6175MHz	55	13.75
6415MHz	60	15
6435MHz	60	15
6475MHz	60	15
6515MHz	61	15.25
6535MHz	61	15.25
6695MHz	68	17
6855MHz	65	16.25
6875MHz Straddle 6.525-6.875GHz	66	16.5
6895MHz	66	16.5
6995MHz	58	14.5
7095MHz	58	14.5
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-
5965MHz	76	19
6165MHz	66	16.5
6405MHz	71	17.75
6445MHz	69	17.25
6485MHz	69	17.25
6525MHz Straddle 6.425-6.525GHz	70	17.5
6565MHz	71	17.75
6685MHz	77	19.25
6845MHz	77	19.25
6885MHz Straddle 6.525-6.875GHz	77	19.25
6925MHz	71	17.75
7005MHz	71	17.75
7085MHz	76	19
802.11ax HEW80_Nss1,(MCS0)_1TX	-	-
5985MHz	84	21
6145MHz	79	19.75
6385MHz	83	20.75
6465MHz	83	20.75



Mode	Power Setting	PowerSetting (dBm)
6545MHz Straddle 6.425-6.525GHz	85	21.25
6625MHz	85	21.25
6705MHz	85	21.25
6785MHz	86	21.5
6865MHz Straddle 6.525-6.875GHz	85	21.25
6945MHz	81	20.25
7025MHz	81	20.25
802.11ax HEW160_Nss1,(MCS0)_1TX	-	-
6025MHz	88	22
6185MHz	88	22
6345MHz	94	23.5
6505MHz Straddle 6.425-6.525GHz	96	24
6665MHz	99	24.75
6825MHz Straddle 6.525-6.875GHz	97	24.25
6985MHz	80	20

For 2T2S

Mode	Power Setting	PowerSetting (dBm)
802.11ax HEW20_Nss2,(MCS0)_2TX	-	-
5955MHz	52	13
6175MHz	48	12
6415MHz	48	12
6435MHz	47	11.75
6475MHz	46	11.5
6515MHz	43	10.75
6535MHz	44	11
6695MHz	42	10.5
6855MHz	53	13.25
6875MHz Straddle 6.525-6.875GHz	51	12.75
6895MHz	51	12.75
6995MHz	43	10.75
7095MHz	44	11
802.11ax HEW40_Nss2,(MCS0)_2TX	-	-
5965MHz	63	15.75
6165MHz	58	14.5
6405MHz	59	14.75
6445MHz	62	15.5
6485MHz	62	15.5
6525MHz Straddle 6.425-6.525GHz	62	15.5
6565MHz	62	15.5



Mode	Power Setting	PowerSetting (dBm)
6685MHz	62	15.5
6845MHz	61	15.25
6885MHz Straddle 6.525-6.875GHz	62	15.5
6925MHz	56	14
7005MHz	57	14.25
7085MHz	57	14.25
802.11ax HEW80_Nss2,(MCS0)_2TX	-	-
5985MHz	74	18.5
6145MHz	74	18.5
6385MHz	70	17.5
6465MHz	75	18.75
6545MHz Straddle 6.425-6.525GHz	76	19
6625MHz	73	18.25
6705MHz	73	18.25
6785MHz	73	18.25
6865MHz Straddle 6.525-6.875GHz	73	18.25
6945MHz	69	17.25
7025MHz	69	17.25
802.11ax HEW160_Nss2,(MCS0)_2TX	-	-
6025MHz	83	20.75
6185MHz	82	20.5
6345MHz	79	19.75
6505MHz Straddle 6.425-6.525GHz	86	21.5
6665MHz	85	21.25
6825MHz Straddle 6.525-6.875GHz	80	20
6985MHz	73	18.25

**For 4T1S**

Mode	Power Setting	PowerSetting (dBm)
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-
5955MHz	27	6.75
6175MHz	28	7
6415MHz	31	7.75
6435MHz	31	7.75
6475MHz	32	8
6515MHz	31	7.75
6535MHz	31	7.75
6695MHz	33	8.25
6855MHz	33	8.25
6875MHz Straddle 6.525-6.875GHz	32	8
6895MHz	31	7.75
6995MHz	23	5.75
7095MHz	27	6.75
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-
5965MHz	38	9.5
6165MHz	38	9.5
6405MHz	41	10.25
6445MHz	39	9.75
6485MHz	39	9.75
6525MHz Straddle 6.425-6.525GHz	39	9.75
6565MHz	41	10.25
6685MHz	41	10.25
6845MHz	42	10.5
6885MHz Straddle 6.525-6.875GHz	39	9.75
6925MHz	35	8.75
7005MHz	38	9.5
7085MHz	43	10.75
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-
5985MHz	49	12.25
6145MHz	49	12.25
6385MHz	50	12.5
6465MHz	52	13
6545MHz Straddle 6.425-6.525GHz	50	12.5
6625MHz	50	12.5
6705MHz	52	13
6785MHz	55	13.75
6865MHz Straddle 6.525-6.875GHz	52	13



Mode	Power Setting	PowerSetting (dBm)
6945MHz	51	12.75
7025MHz	54	13.5
802.11ax HEW160_Nss1,(MCS0)_4TX	-	-
6025MHz	58	14.5
6185MHz	61	15.25
6345MHz	60	15
6505MHz Straddle 6.425-6.525GHz	65	16.25
6665MHz	65	16.25
6825MHz Straddle 6.525-6.875GHz	63	15.75
6985MHz	63	15.75

For 4T4S

Mode	Power Setting	PowerSetting (dBm)
802.11ax HEW20_Nss4,(MCS0)_4TX	-	-
5955MHz	40	10
6175MHz	39	9.75
6415MHz	41	10.25
6435MHz	41	10.25
6475MHz	41	10.25
6515MHz	39	9.75
6535MHz	39	9.75
6695MHz	42	10.5
6855MHz	41	10.25
6875MHz Straddle 6.525-6.875GHz	41	10.25
6895MHz	41	10.25
6995MHz	35	8.75
7095MHz	38	9.5
802.11ax HEW40_Nss4,(MCS0)_4TX	-	-
5965MHz	48	12
6165MHz	51	12.75
6405MHz	49	12.25
6445MHz	50	12.5
6485MHz	49	12.25
6525MHz Straddle 6.425-6.525GHz	49	12.25
6565MHz	51	12.75
6685MHz	52	13
6845MHz	50	12.5
6885MHz Straddle 6.525-6.875GHz	53	13.25
6925MHz	46	11.5
7005MHz	47	11.75



Mode	Power Setting	PowerSetting (dBm)
7085MHz	48	12
802.11ax HEW80_Nss4,(MCS0)_4TX	-	-
5985MHz	62	15.5
6145MHz	59	14.75
6385MHz	60	15
6465MHz	58	14.5
6545MHz Straddle 6.425-6.525GHz	61	15.25
6625MHz	62	15.5
6705MHz	60	15
6785MHz	62	15.5
6865MHz Straddle 6.525-6.875GHz	63	15.75
6945MHz	59	14.75
7025MHz	59	14.75
802.11ax HEW160_Nss4,(MCS0)_4TX	-	-
6025MHz	66	16.5
6185MHz	66	16.5
6345MHz	68	17
6505MHz Straddle 6.425-6.525GHz	74	18.5
6665MHz	72	18
6825MHz Straddle 6.525-6.875GHz	69	17.25
6985MHz	69	17.25

**Beamforming mode
For 2T1S**

Mode	Power Setting	PowerSetting (dBm)
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	-	-
5955MHz	46	11.5
6175MHz	40	10
6415MHz	38	9.5
6435MHz	43	10.75
6475MHz	37	9.25
6515MHz	42	10.5
6535MHz	39	9.75
6695MHz	46	11.5
6855MHz	48	12
6875MHz Straddle 6.525-6.875GHz	44	11
6895MHz	46	11.5
6995MHz	26	6.5
7095MHz	39	9.75
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	-	-
5965MHz	52	13
6165MHz	49	12.25
6405MHz	59	14.75
6445MHz	52	13
6485MHz	57	14.25
6525MHz Straddle 6.425-6.525GHz	57	14.25
6565MHz	47	11.75
6685MHz	50	12.5
6845MHz	56	14
6885MHz Straddle 6.525-6.875GHz	56	14
6925MHz	46	11.5
7005MHz	41	10.25
7085MHz	49	12.25
802.11ax HEW80-BF_Nss1,(MCS0)_2TX	-	-
5985MHz	66	16.5
6145MHz	64	16
6385MHz	66	16.5
6465MHz	66	16.5
6545MHz Straddle 6.425-6.525GHz	69	17.25
6625MHz	68	17
6705MHz	67	16.75
6785MHz	65	16.25



RADIO TEST REPORT

Report No. : FR1N2902AC

Mode	Power Setting	PowerSetting (dBm)
6865MHz Straddle 6.525-6.875GHz	65	16.25
6945MHz	66	16.5
7025MHz	62	15.5
802.11ax HEW160-BF_Nss1,(MCS0)_2TX	-	-
6025MHz	82	20.5
6185MHz	80	20
6345MHz	80	20
6505MHz Straddle 6.425-6.525GHz	76	19
6665MHz	77	19.25
6825MHz Straddle 6.525-6.875GHz	73	18.25
6985MHz	75	18.75

**For 4T1S**

Mode	Power Setting	PowerSetting (dBm)
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-
5955MHz	29	7.25
6175MHz	28	7
6415MHz	23	5.75
6435MHz	26	6.5
6475MHz	31	7.75
6515MHz	27	6.75
6535MHz	23	5.75
6695MHz	32	8
6855MHz	28	7
6875MHz Straddle 6.525-6.875GHz	26	6.5
6895MHz	28	7
6995MHz	23	5.75
7095MHz	28	7
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-
5965MHz	32	8
6165MHz	39	9.75
6405MHz	37	9.25
6445MHz	37	9.25
6485MHz	37	9.25
6525MHz Straddle 6.425-6.525GHz	35	8.75
6565MHz	37	9.25
6685MHz	37	9.25
6845MHz	40	10
6885MHz Straddle 6.525-6.875GHz	35	8.75
6925MHz	35	8.75
7005MHz	35	8.75
7085MHz	27	6.75
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-
5985MHz	49	12.25
6145MHz	50	12.5
6385MHz	51	12.75
6465MHz	46	11.5
6545MHz Straddle 6.425-6.525GHz	52	13
6625MHz	50	12.5
6705MHz	42	10.5
6785MHz	47	11.75
6865MHz Straddle 6.525-6.875GHz	56	14



RADIO TEST REPORT

Report No. : FR1N2902AC

Mode	Power Setting	PowerSetting (dBm)
6945MHz	50	12.5
7025MHz	47	11.75
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-	-
6025MHz	57	14.25
6185MHz	63	15.75
6345MHz	62	15.5
6505MHz Straddle 6.425-6.525GHz	65	16.25
6665MHz	60	15
6825MHz Straddle 6.525-6.875GHz	64	16
6985MHz	61	15.25

**For Scanning radio 1**

Mode	Power Setting
802.11ax HEW20_Nss2,(MCS0)_2TX	-
5955MHz	38
6175MHz	38
6415MHz	38
6435MHz	37
6475MHz	37
6515MHz	38
6535MHz	38
6695MHz	37
6855MHz	38
6875MHz Straddle 6.525-6.875GHz	38
6895MHz	37
6995MHz	37
7095MHz	37
802.11ax HEW40_Nss2,(MCS0)_2TX	-
5965MHz	47
6165MHz	47
6405MHz	51
6445MHz	47
6485MHz	48
6525MHz Straddle 6.425-6.525GHz	48
6565MHz	48
6685MHz	49
6845MHz	49
6885MHz Straddle 6.525-6.875GHz	49
6925MHz	46
7005MHz	47
7085MHz	47
802.11ax HEW80_Nss2,(MCS0)_2TX	-
5985MHz	58
6145MHz	57
6385MHz	61
6465MHz	60
6545MHz Straddle 6.425-6.525GHz	60
6625MHz	61
6705MHz	61
6785MHz	59
6865MHz Straddle 6.525-6.875GHz	60



RADIO TEST REPORT

Report No. : FR1N2902AC

Mode	Power Setting
6945MHz	59
7025MHz	60
802.11ax HEW160_Nss2,(MCS0)_2TX	-
6025MHz	69
6185MHz	69
6345MHz	69
6505MHz Straddle 6.425-6.525GHz	72
6665MHz	70
6825MHz Straddle 6.525-6.875GHz	69
6985MHz	68

2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral Test Voltage: 120Vac / 60Hz
Operating Mode	Normal Link, CTX
1	Normal Link (R1: (2.4GHz) + R2 + R3) + CTX (R4: (Bluetooth)) + adapter
2	Normal Link (R1: (2.4GHz) + R2 + R3) + CTX (R4: (IEEE802.15.4)) + adapter
3	Normal Link (R1: (2.4GHz) + R2 + R3) + CTX (R5: (UWB)) + adapter
Mode 1 has been evaluated to be the worst case among Mode 1~3, thus measurement for Mode 4~Mode 5 will follow this same test mode.	
4	Normal Link (Scanning radio 1: (5GHz UNII 1, UNII 3) + R2 + R3) + CTX (R4: (Bluetooth)) + adapter
5	Normal Link (Scanning radio 1: (6GHz UNII 5~UNII 8) + R2 + R3) + CTX (R4: (Bluetooth)) + adapter
Mode 1 has been evaluated to be the worst case among Mode 1~5, thus measurement for Mode 6 will follow this same test mode.	
6	Normal Link (R1: (2.4GHz) + R2 + R3) + CTX (R4: (Bluetooth)) + PoE
For operating mode 6 is the worst case and it was record in this test report.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emission Bandwidth Contention Based Protocol Frequency Stability
Test Condition	Conducted measurement at transmit chains
1	Refer to note 1 for detail operating mode

The Worst Case Mode for Following Conformance Tests	
Tests Item	Maximum Equivalent Isotopically Radiated Power (E.I.R.P.)
Test Condition	Radiated measurement
	For 1T1S The EUT was performed at X axis, Y axis and Z axis position, and the worst case was found at Z axis. So the measurement will follow this same test configuration. For 2T1S, 2T2S, 4T1S, 4T4S The EUT was performed at X axis, Y axis and Z axis position, and the worst case was found at X axis. So the measurement will follow this same test configuration.
1	Radio 3_1T1S_EUT in Z axis
2	Radio 3_2T2S_EUT in X axis
3	Radio 3_4T1S_EUT in X axis
4	Radio 3_4T4S_EUT in X axis
5	Radio 3_2T1S_EUT in X axis
6	Radio 3_4T1S_EUT in X axis
Test Condition	Conducted measurement at transmit chains
7	Scanning radio 1_2T2S

The Worst Case Mode for Following Conformance Tests	
Tests Item	Peak Power Spectral Density (E.I.R.P.)
Test Condition	Radiated measurement
	The EUT was performed at X axis, Y axis and Z axis position, and the worst case was found at X axis. So the measurement will follow this same test configuration.
1	Radio 3_1T1S_EUT in X axis
2	Radio 3_2T2S_EUT in X axis
3	Radio 3_4T1S_EUT in X axis
4	Radio 3_4T4S_EUT in X axis
5	Radio 3_2T1S_EUT in X axis
6	Radio 3_4T1S_EUT in X axis
Test Condition	Conducted measurement at transmit chains
7	Scanning radio 1_2T2S

The Worst Case Mode for Following Conformance Tests	
Tests Item	Unwanted Emissions
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, CTX
1	EUT in Z axis-Normal Link (R1: (2.4GHz) + R2 + R3) + CTX (R4: (Bluetooth)) + adapter
2	EUT in Y axis-Normal Link (R1: (2.4GHz) + R2 + R3) + CTX (R4: (Bluetooth)) + adapter
3	EUT in X axis-Normal Link (R1: (2.4GHz) + R2 + R3) + CTX (R4: (Bluetooth)) + adapter
Mode 3 has been evaluated to be the worst case among Mode 1~3, thus measurement for Mode 4~5 will follow this same test mode.	
4	EUT in X axis-Normal Link (R1: (2.4GHz) + R2 + R3) + CTX (R4: (IEEE802.15.4)) + adapter
5	EUT in X axis-Normal Link (R1: (2.4GHz) + R2 + R3) + CTX (R5: (UWB)) + adapter
Mode 4 has been evaluated to be the worst case among Mode 1~5, thus measurement for Mode 6~7 will follow this same test mode.	
6	EUT in X axis-Normal Link (Scanning radio 1: (5GHz UNII 1, UNII 3) + R2 + R3) + CTX (R4: (IEEE802.15.4)) + adapter
7	EUT in X axis-Normal Link (Scanning radio 1: (6GHz UNII 5~UNII 8) + R2 + R3) + CTX (R4: (IEEE802.15.4)) + adapter
Mode 4 has been evaluated to be the worst case among Mode 1~7, thus measurement for Mode 8 will follow this same test mode.	
8	EUT in X axis-Normal Link (R1: (2.4GHz) + R2 + R3) + CTX (R4: (IEEE802.15.4)) + PoE
For operating mode 4 is the worst case and it was record in this test report.	

Operating Mode > 1GHz	CTX
	The EUT was performed at X axis, Y axis and Z axis and the worst case was found at X axis. So the measurement will follow this same test configuration.
1	Radio 3_1T1S_EUT in X axis
2	Radio 3_2T2S_EUT in X axis
3	Radio 3_4T1S_EUT in X axis
4	Radio 3_4T4S_EUT in X axis
5	Radio 3_2T1S_EUT in X axis
6	Radio 3_4T1S_EUT in X axis
7	Scanning radio 1_2T2S_EUT in X axis

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emission MASK
Test Condition	Conducted measurement at transmit chains
1	Refer to note 1 for detail operating mode

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	R1: (2.4GHz) + R2 + R3 + R4: (Bluetooth)
2	R1: (2.4GHz) + R2 + R3 + R4: (IEEE802.15.4)
3	R1: (2.4GHz) + R2 + R3 + R5: (UWB)
4	Scanning radio 1: (5GHz UNII 1, UNII 3) + R2 + R3 + R4: (Bluetooth)
5	Scanning radio 1: (5GHz UNII 1, UNII 3) + R2 + R3 + R4: (IEEE802.15.4)
6	Scanning radio 1: (5GHz UNII 1, UNII 3) + R2 + R3 + R5: (UWB)
7	Scanning radio 1: (6GHz UNII 5~UNII 8) + R2 + R3 + R4: (Bluetooth)
8	Scanning radio 1: (6GHz UNII 5~UNII 8) + R2 + R3 + R4: (IEEE802.15.4)
9	Scanning radio 1: (6GHz UNII 5~UNII 8) + R2 + R3 + R5: (UWB)
Refer to Sporton Test Report No.: FA1N2902 for Co-location RF Exposure Evaluation.	



Note 1: Test Mode

Test Item	Test Mode						
	802.11ax HEW20/40/80/160						
	1T1S	2T1S	2T2S	4T1S	4T4S	TXBF 2T1S	TXBF 4T1S
Emission Bandwidth	V	Note2	V	V	V	V	V
Contention Based Protocol	V						
Frequency Stability	-	-	-	V	-	-	-
Maximum Equivalent Isotropically Radiated Power (E.I.R.P.)	V	Note2	V	V	V	V	V
Peak Power Spectral Density (E.I.R.P.)	V	Note2	V	V	V	V	V
Radiated Emission	V	Note2	V	V	V	V	V
Band Edge Emission	V	Note2	V	V	V	V	V
Emission MASK	V	Note2	V	V	V	V	V

Note 2: 802.11ax HEW20/40/80/160 2T1S CDD mode was covered by 802.11ax HEW20/40/80/160 2T2S, due to
 $2T1S = \min(2T2S, (2T2S - (10 \cdot \log(2/1) - 2T2S \text{ (worst case of PSD/BE/Harmonic) MARGIN})))$.

Note 3: The PoE and adapter are for measurement only, would not be marketed.

Their information as below:

Power	Brand	Model
PoE	Microsemi	PD-9001-10GC/AC
Adapter	Powertron	PA1045-120HIB300



2.3 EUT Operation during Test

For CTX Mode:

non-beamforming mode:

The EUT was programmed to be in continuously transmitting mode.

beamforming mode:

For Conducted Mode:

The EUT was programmed to be in continuously transmitting mode.

For Radiated 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 DoS.
3. Executed "Lantest.exe" to link with the remote workstation to transmit and receive packet by WIFI Access Point and transmit duty cycle no less than 98%.

For Normal Link:

During the test, the EUT operation to normal function.

2.4 Accessories

Accessories
Bracket*1



2.5 Support Equipment

For AC Conduction:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	PoE	Microsemi	PD-9501-10GC/AC	N/A
B	PD Load	JUNIPER	RXRB-MIB	N/A
C	5G WAN PC	DELL	T3400	N/A
D	LAN NB	DELL	E6430	N/A
E	2.4G NB	DELL	E6430	N/A
F	5G NB	DELL	E6430	N/A
G	6E device	JUNIPER	RXRB-MIB	N/A
H	6E NB	DELL	E6430	N/A
I	Flash disk3.0	Transcend	JetFlash-700	N/A

For Radiated (below 1GHz):

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook(LAN NB)	DELL	E4300	N/A
B	Notebook(LAN NB)	DELL	E4300	N/A
C	Flash disk3.0	Silicon Power	B06	N/A
D	WIFI Access Point	Extreme Networks	AP5010U	N/A
E	Notebook(2.4G NB)	DELL	E4300	N/A
F	Notebook(5G NB)	DELL	E4300	N/A
G	Notebook(Client NB)	DELL	E4300	N/A
H	Adapter	Powertron	PA1045-120HIB300	N/A



**For Radiated (above 1GHz)
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	WIFI Access Point	Extreme Networks	AP5010U	N/A

RF Conducted (for other tests):

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	NB	DELL	E4300	N/A
B	Adapter	Powertron	PA1045-120HIB300	N/A

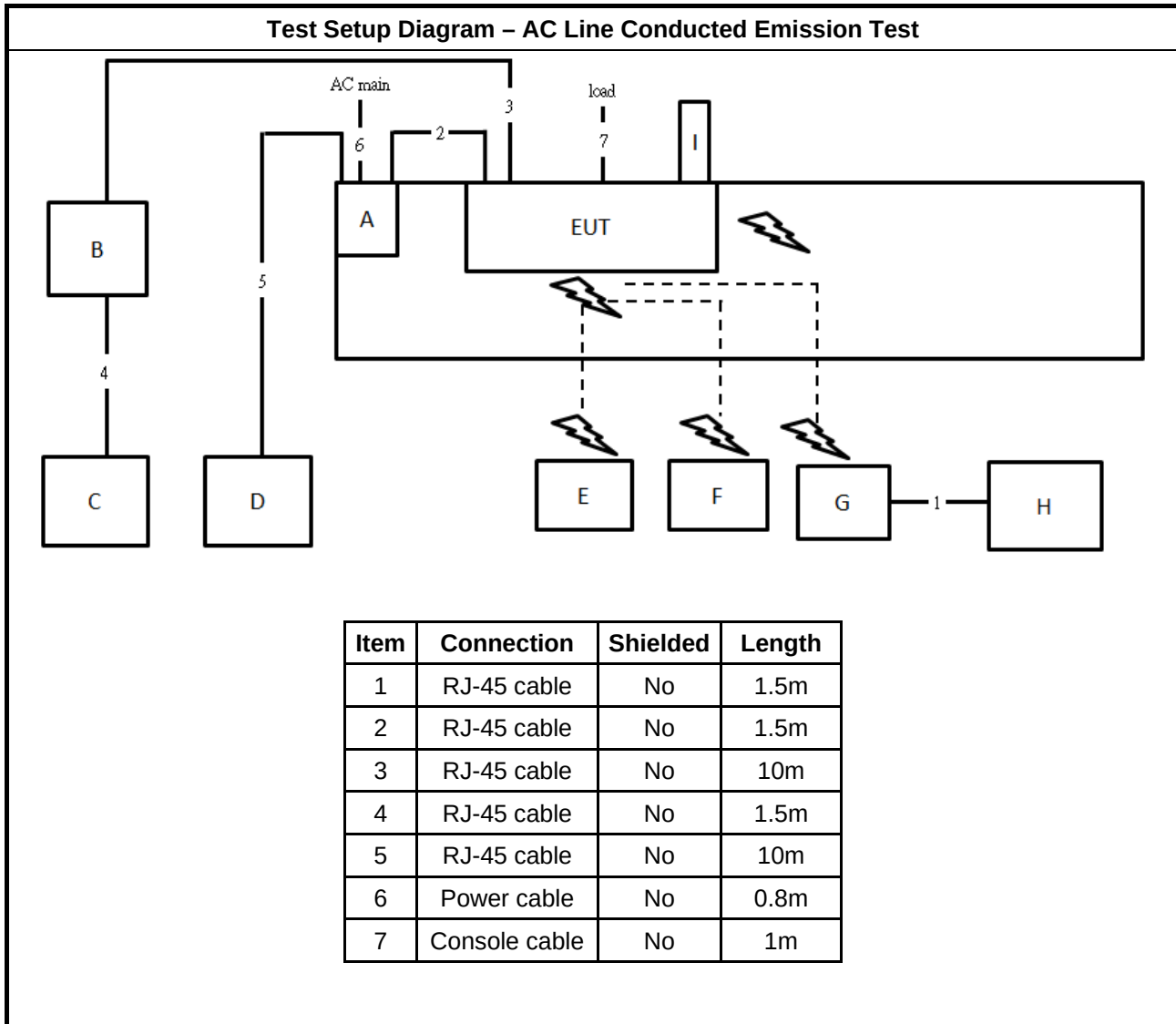
**RF Conducted (for contention based protocol test):
For Radio 3**

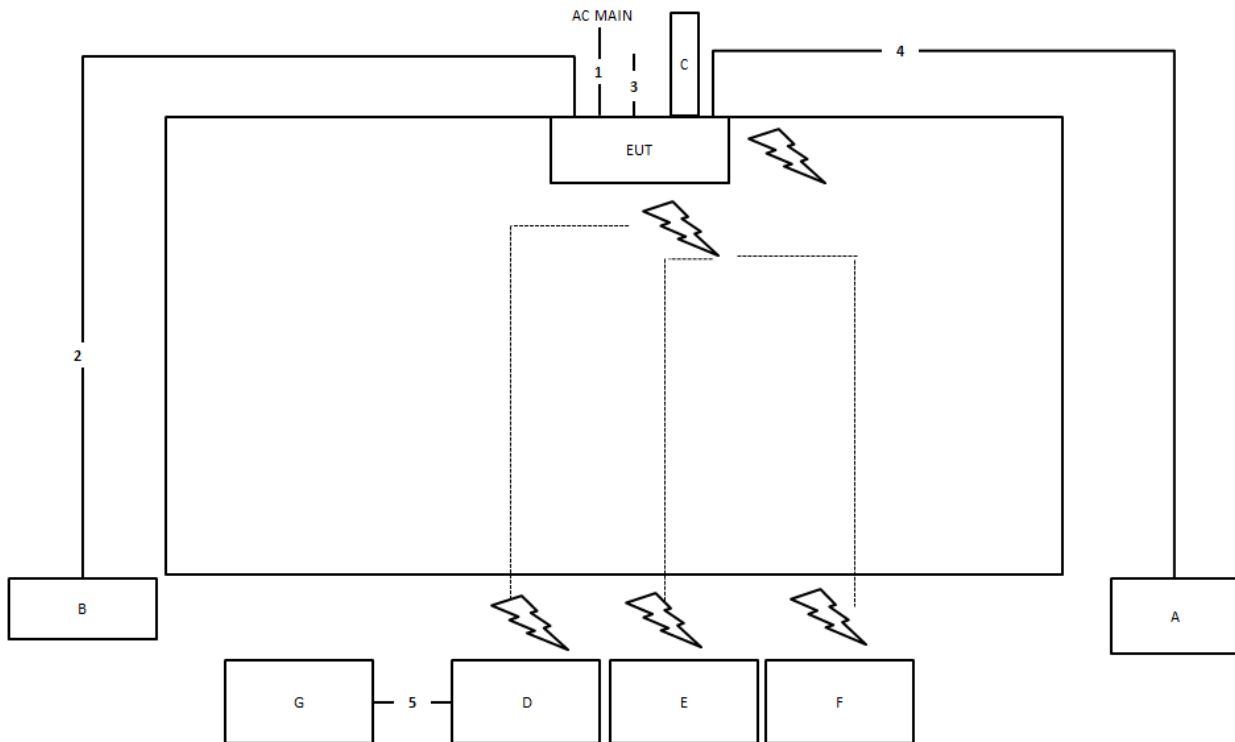
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A
B	Notebook	DELL	E4300	N/A
C	WLAN AP	BCM	BCM943684MCH6_S_P206	N/A
D	Adapter	Powertron	PA1045-120HIB300	N/A

For Scanning radio 1

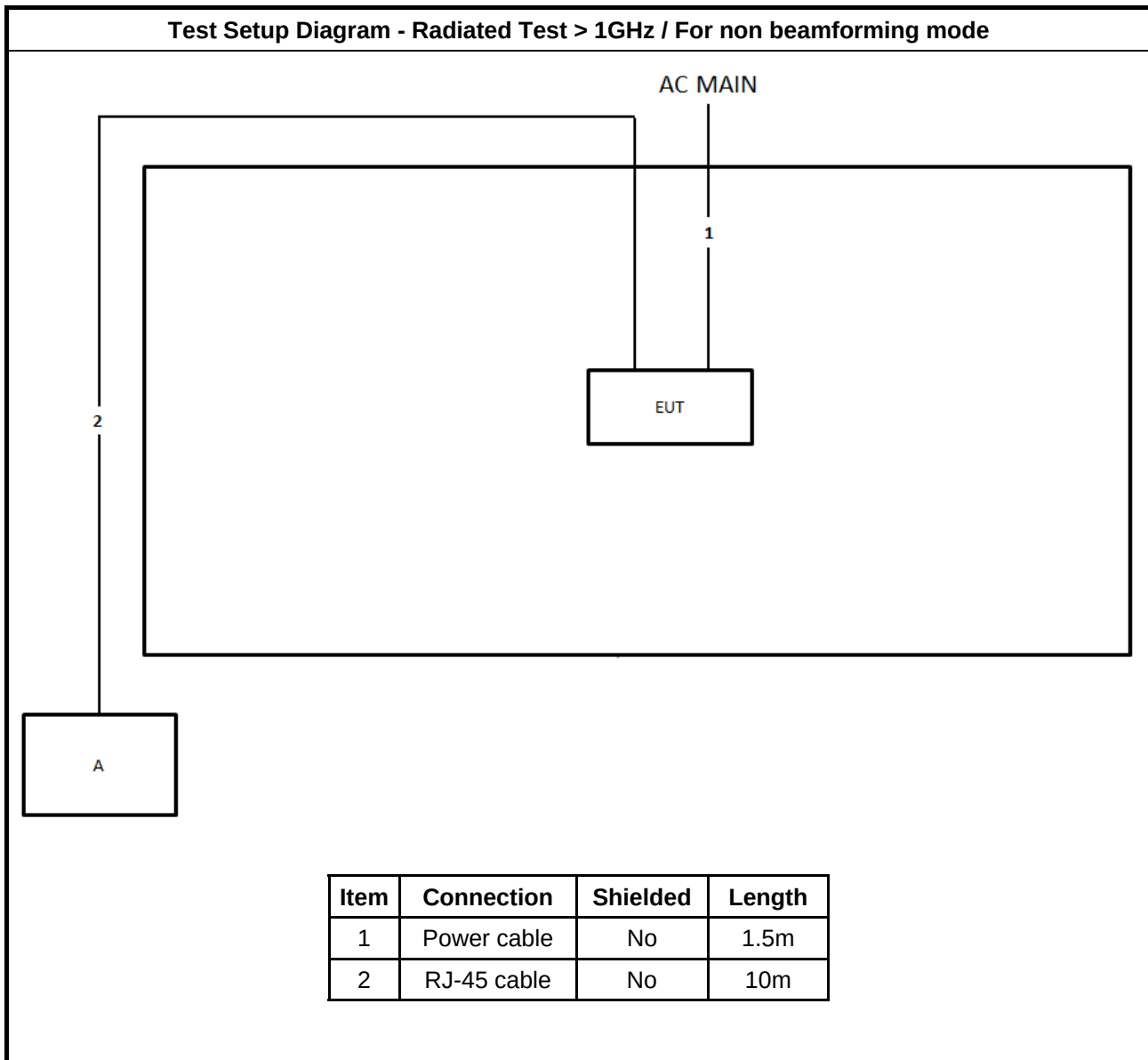
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A
B	Notebook	DELL	E4300	N/A
C	WLAN module	Intel	AX210NGW	N/A
D	Adapter	Powertron	PA1045-120HIB300	N/A

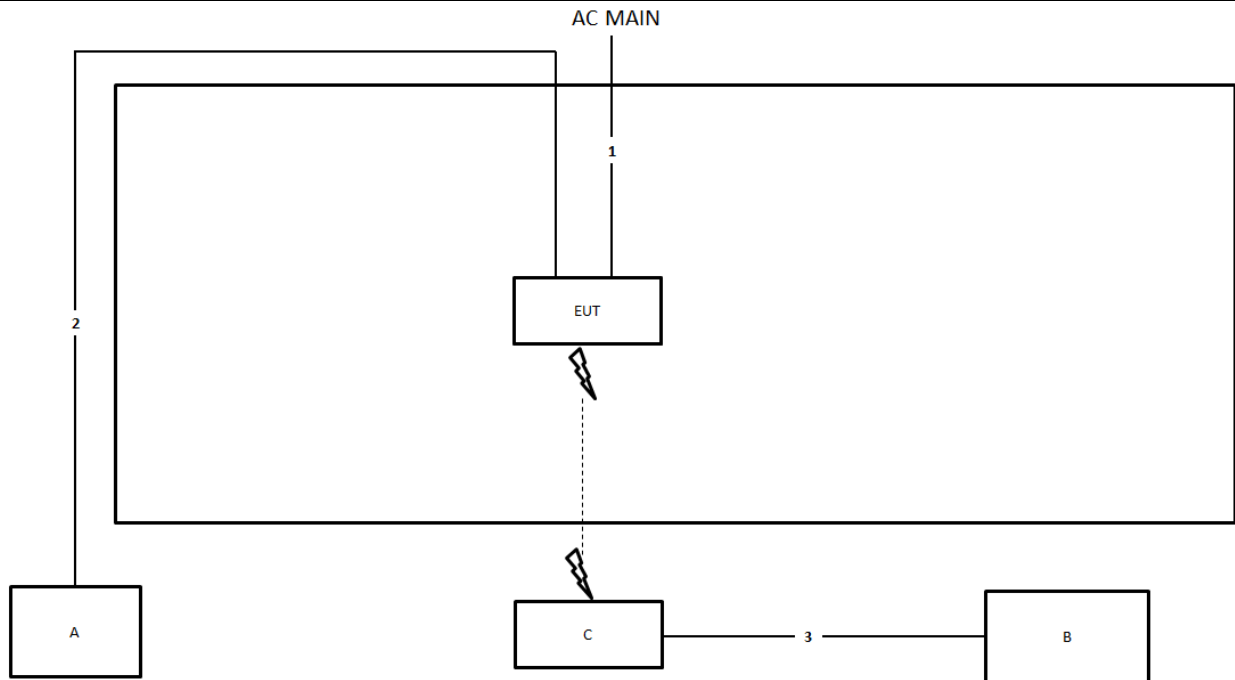
2.6 Test Setup Diagram



Test Setup Diagram - Radiated Test < 1GHz


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

Test Setup Diagram - Radiated Test > 1GHz / For non beamforming mode


Test Setup Diagram - Radiated Test > 1GHz / For 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.

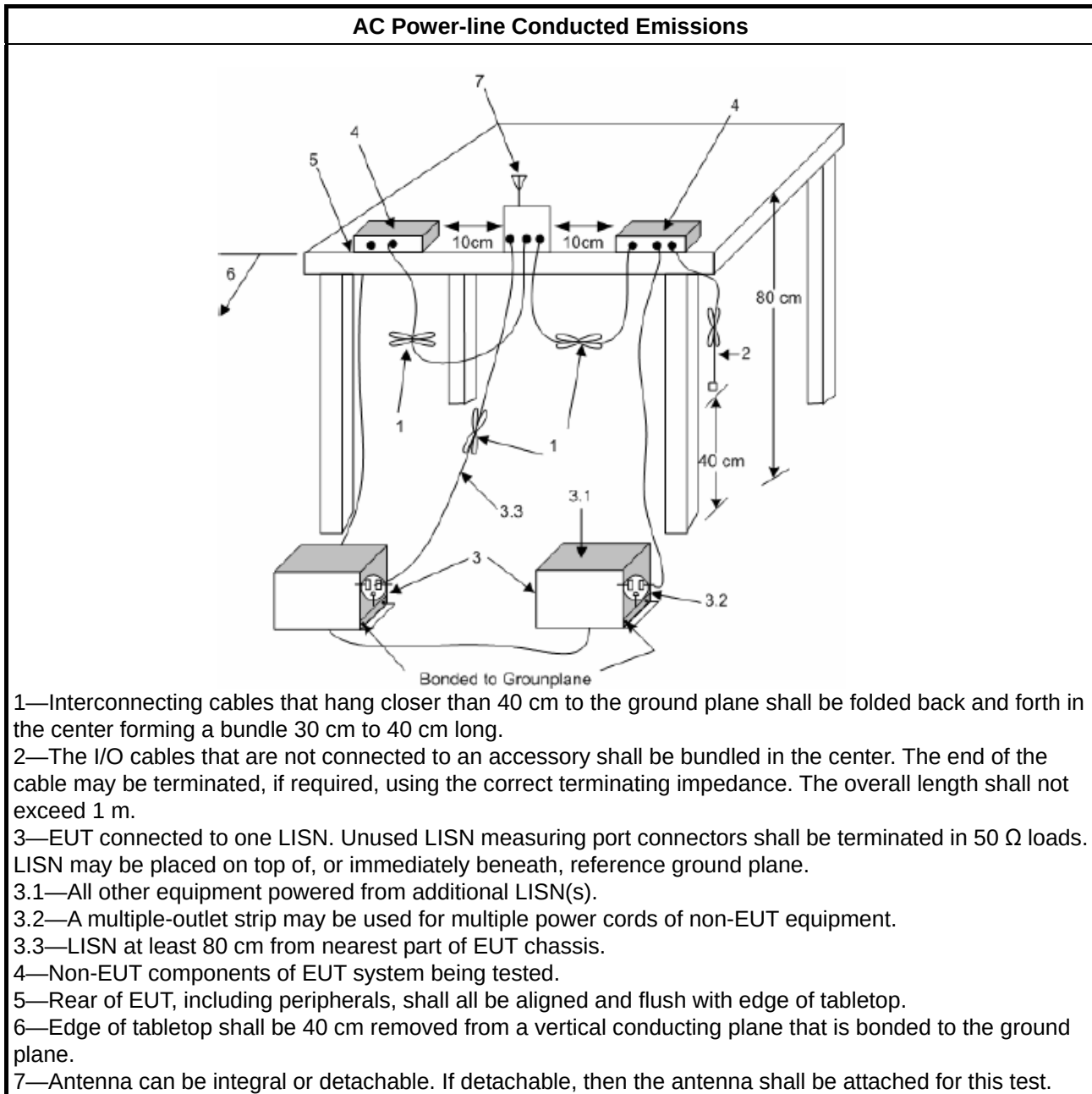
3.1.2 Measuring Instruments

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 Measurement Results Calculation

The measured Level is calculated using:

- Corrected Reading (dBuV) = LISN Factor + Cable Loss + Read Level = Level
- Margin = - Limit + (Read Level + LISN Factor + Cable Loss)

3.1.6 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 Emission Bandwidth

3.2.1 Emission Bandwidth Limit

Emission Bandwidth Limit	
UNII Devices	
☒	For the 5925-6425 GHz band, N/A
☒	For the 6425-6525 GHz band, N/A
☒	For the 6525-6875 GHz band, N/A
☒	For the 6875-7125 GHz band, N/A
RLAN Devices	
☐	For the 5925-6425 GHz band, N/A
☐	For the 6425-6525 GHz band, N/A
☐	For the 6525-6875 GHz band, N/A
☐	For the 6875-7125 GHz band, N/A

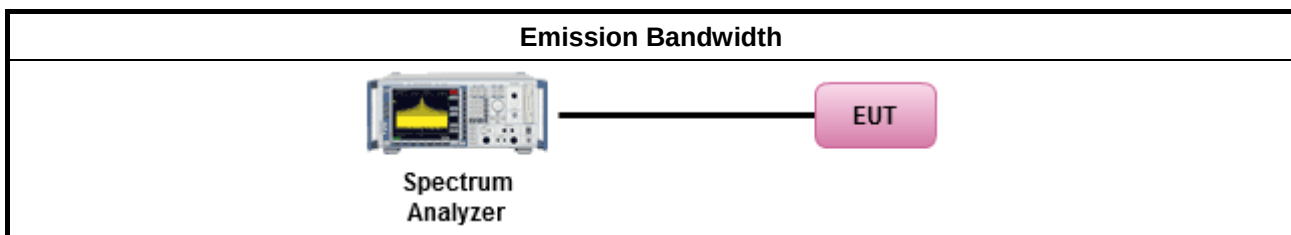
3.2.2 Measuring Instruments

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:	
☒	According to KDB 987594 D02 clause II.C, measurement procedure shall refer to FCC KDB 789033 D02, clause C for EBW and clause D for OBW measurement.
☐	Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.
☐	Refer as IC RSS-Gen, clause 4.6 for bandwidth testing.

3.2.4 Test Setup



3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B



3.3 Maximum Equivalent Isotropically Radiated Power (E.I.R.P.)

3.3.1 Maximum Equivalent Isotropically Radiated Power (E.I.R.P.) Limit

Maximum Equivalent Isotropically Radiated Power (E.I.R.P.) Limit	
UNII Devices	
☒ For the 5.925 ~ 6.425 GHz band:	
	■ For standard power access point and fixed client device : e.i.r.p < 36 dBm , For outdoor devices, the maximum e.i.r.p. at any elevation angle above 30 degrees not exceed 125 mW (21 dBm).
	■ For indoor access point : e.i.r.p < 30 dBm.
	■ For subordinate device control of an indoor access point : e.i.r.p < 30 dBm.
	■ For client device control of a standard power access point : e.i.r.p < 30 dBm.
	■ For client device control of an indoor access point : e.i.r.p < 24 dBm.
☒ For the 6.425 ~ 6.525 GHz band:	
	■ For indoor access point : e.i.r.p < 30 dBm.
	■ For client device control of an indoor access point : e.i.r.p < 24 dBm.
☒ For the 6.525 ~ 6.875 GHz band:	
	■ For standard power access point and fixed client device : e.i.r.p < 36 dBm , For outdoor devices, the maximum e.i.r.p. at any elevation angle above 30 degrees not exceed 125 mW (21 dBm).
	■ For indoor access point : e.i.r.p < 30 dBm.
	■ For subordinate device control of an indoor access point : e.i.r.p < 30 dBm.
	■ For client device control of a standard power access point : e.i.r.p < 30 dBm.
	■ For client device control of an indoor access point : e.i.r.p < 24 dBm.
☒ For the 6.875 ~ 7.125 GHz band:	
	■ For indoor access point : e.i.r.p < 30 dBm.
	■ For client device control of an indoor access point : e.i.r.p < 24 dBm.
RLAN Devices	
☐ For the 5.925 ~ 7.125 GHz band:	
	■ For RLAN devices(Indoor) other than client devices < 30 dBm / occupied bandwidth.
	■ For client devices(Indoor) < 24 dBm / occupied bandwidth.



3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method	
According to FCC KDB 987594 D02 clause II.E, the test measurement procedure shall refer to KDB 789033.	
Average over on/off periods with duty factor	
☒	Refer as FCC KDB 789033 D02, clause E Method SA-2 (spectral trace averaging). Spectrum analyzer setting: RBW/VBW : 1/3MHz ; Detector : RMS ; Trace mode : Average ; Sweep Count 100.
☐	Refer as FCC KDB 789033 D02, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
Wideband RF power meter and average over on/off periods with duty factor	
☒	Refer as FCC KDB 789033 D02, clause E Method PM-G (using an 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]) $EIRP_{total} = P_{total} + DG$	
☒ For radiated measurement.	
Refer as FCC KDB 789033 D02 clause II A.1.F "Antenna-port Conducted versus Radiated Testing"	
Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.	
Refer as FCC KDB 412172 D01 clause 2.2 for EIRP calculation.	

Note :

The test is the final test result, It includes antenna /cable loss factor & FSL factor.

The EIRP calculation refer to "KDB 412172 D01 Determining ERP and EIRP v01r01"

EIRP Formula :

$$EIRP(dBm) = PR(dBm) + LP(FSL \text{ factor})$$

where;

PR(dBm) : Power measurement level include antenna/cable loss

LP : Free Space Loss(dB)

PR Formula :

$$PR(dBm) = P \text{ Meas}(dBm) - GR(dBi) + LC(dB)$$

where;

P Meas(dBm) : Power measurement level

GR(dBi) : Gain of the receive(measurement) antenna (dBi)

LC(dB) : Measurement cable loss (dB)



LP(FSL factor) Formula :

$$LP(dB) = 20 \log F + 20 \log D - 27.54$$

where;

F(MHz) : EUT center frequency

D(m) : Measurement distance

For Example:

For Radio 3

Test mode Radio3 non TXBF HE20 4T1S 5955MHz EIRP measurement

PR Formula :

$$PR(dBm) = -37.23 - 10.49 + 4.48 = -43.24$$

LP(FSL factor) Formula :

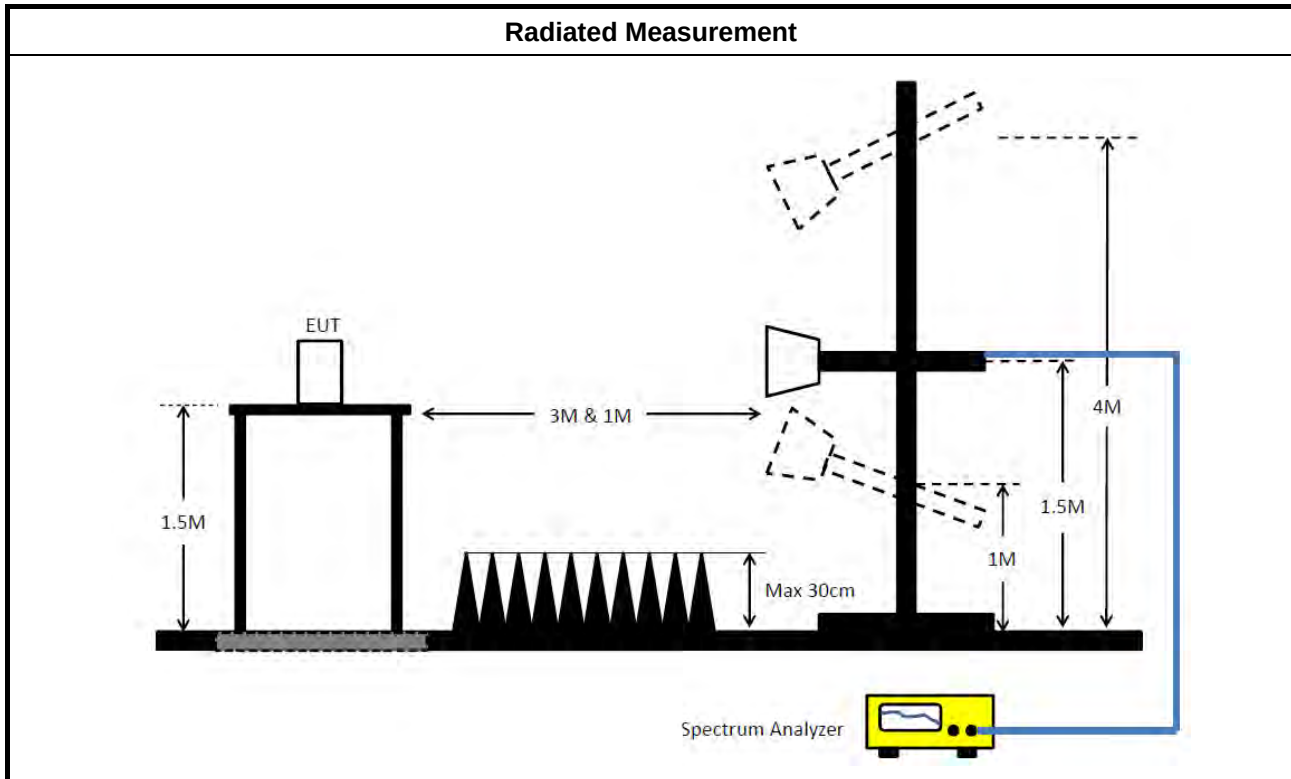
$$LP(dB) = 20 \log(5955) + 20 \log(3) - 27.5 = 57.54$$

EIRP Formula :

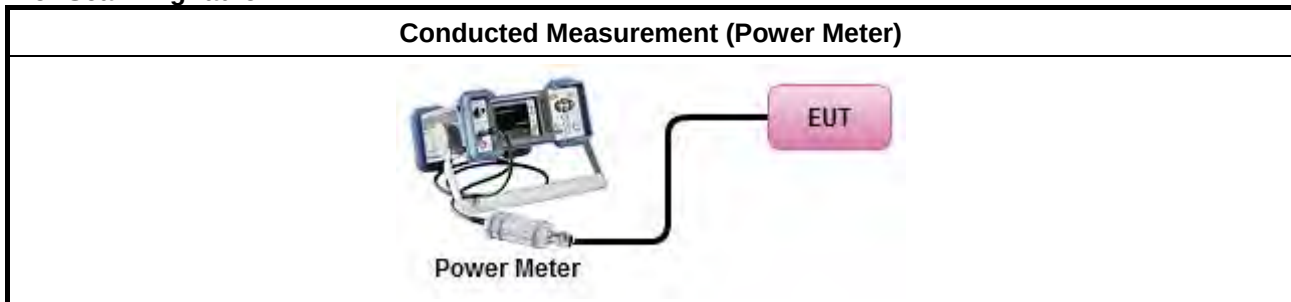
$$EIRP(dBm) = -42.24 + 57.54 = 14.30$$

3.3.4 Test Setup

For Radio 3



For Scanning radio 1



3.3.5 Test Result of Maximum Equivalent Isotopically Radiated Power (E.I.R.P)

Refer as Appendix C

3.4 Peak Power Spectral Density (E.I.R.P.)

3.4.1 Peak Power Spectral Density (E.I.R.P.) Limit

Peak Power Spectral Density (E.I.R.P.) Limit	
UNII Devices	
☒	For the 5.925 ~ 6.425 GHz band:
☐	For standard power access point and fixed client device : e.i.r.p PSD < 23 dBm/MHz.
☐	For indoor access point : e.i.r.p PSD < 5 dBm/MHz.
☐	For subordinate device control of an indoor access point : e.i.r.p PSD < 5 dBm/MHz.
☐	For client device control of a standard power access point : e.i.r.p PSD < 17 dBm/MHz.
☐	For client device control of an indoor access point : e.i.r.p PSD < -1 dBm/MHz.
☒	For the 6.425 ~ 6.525 GHz band:
☐	For indoor access point : e.i.r.p PSD < 5 dBm/MHz.
☐	For client device control of an indoor access point : e.i.r.p PSD < -1 dBm/MHz.
☒	For the 6.525 ~ 6.875 GHz band:
☐	For standard power access point and fixed client device : e.i.r.p PSD < 23 dBm/MHz.
☐	For indoor access point : e.i.r.p PSD < 5 dBm/MHz.
☐	For subordinate device control of an indoor access point : e.i.r.p PSD < 5 dBm/MHz.
☐	For client device control of a standard power access point : e.i.r.p PSD < 17 dBm/MHz.
☐	For client device control of an indoor access point : e.i.r.p PSD < -1 dBm/MHz.
☒	For the 6.875 ~ 7.125 GHz band:
☐	For indoor access point : e.i.r.p PSD < 5 dBm/MHz.
☐	For client device control of an indoor access point : e.i.r.p PSD < -1 dBm/MHz.
RLAN Devices	
☐	For the 5.925 ~ 7.125 GHz band:
☐	For RLAN devices(Indoor) other than client devices < 5 dBm / MHz.
☐	For client devices(Indoor) < -1 dBm / MHz.

3.4.2 Measuring Instruments

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



3.4.3 Test Procedures

Test Method	
According to KDB 987594 D02 clause II.F, the measurement procedure shall refer to KDB 789033. Peak power spectral density procedures that the same method as used to determine the conducted output power shall be used to determine the peak power spectral density and use the peak search function on the spectrum analyzer to find the peak of the spectrum. For the peak power spectral density shall be measured using below options:	
☐	Refer as FCC KDB 789033 D02, F)5) power spectral density can be measured using resolution bandwidths < 1 MHz provided that the results are integrated over 1 MHz bandwidth
[duty cycle ≥ 98% or external video / power trigger]	
☒	Refer as FCC KDB 789033 D02, clause E Method SA-1 (spectral trace averaging).
☐	Refer as FCC KDB 789033 D02, clause E Method SA-1 Alt. (RMS detection with slow sweep speed)
duty cycle < 98% and average over on/off periods with duty factor	
☒	Refer as FCC KDB 789033 D02, clause E Method SA-2 (spectral trace averaging).
☐	Refer as FCC KDB 789033 D02, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
☒	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.
If multiple transmit chains, EIRP PPSD calculation could be following as methods: $PPSD_{total} = PPSD_1 + PPSD_2 + \dots + PPSD_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = PPSD_{total} + DG$	
☒	For radiated measurement.
Refer as FCC KDB 789033 D02 clause II A.1.F "Antenna-port Conducted versus Radiated Testing"	
Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.	

**Test Method**

- Refer as FCC KDB 412172 D01 clause 2.2 for EIRP calculation.

Note :

The test is the final test result, It includes antenna /cable loss factor & FSL factor.

The EIRP PSD calculation refer to "KDB 412172 D01 Determining ERP and EIRP v01r01"

EIRP PSD Formula :

$$\text{EIRP PSD(dBm/MHz)} = \text{PR(dBm/MHz)} + \text{LP(FSL factor)}$$

where;

PR(dBm/MHz) : Power measurement level include antenna/cable loss

LP : Free Space Loss(dB)

PR Formula :

$$\text{PR(dBm/MHz)} = \text{P Meas(dBm/MHz)} - \text{GR(dBi)} + \text{LC(dB)}$$

where;

P Meas(dBm/MHz) : PSD measurement level

GR(dBi) : Gain of the receive(measurement) antenna (dBi)

LC(dB) : Measurement cable loss (dB)

LP(FSL factor) Formula :

$$\text{LP(dB)} = 20 \log F + 20 \log D - 27.54$$

where;

F(MHz) : EUT center frequency

D(m) : Measurement distance

For Example:

For Radio 3

Test mode Radio 3 non TXBF HE20 4T1S 5955MHz EIRP PSD measurement

PR Formula :

$$\text{PR(dBm/MHz)} = -46.85 - 10.50 + 4.48 = -52.87$$

LP(FSL factor) Formula :

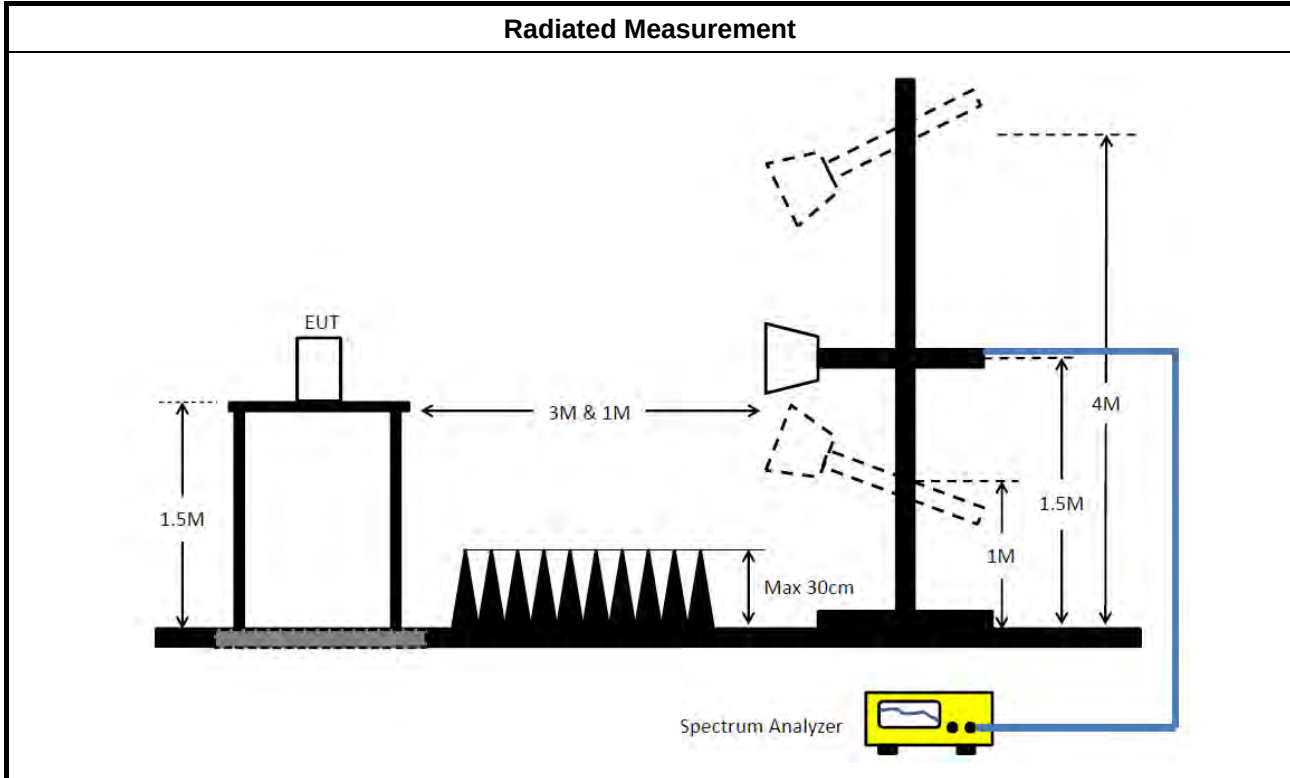
$$\text{LP(dB)} = 20 \log(5953.5) + 20 \log(3) - 27.5 = 57.54$$

EIRP PSD Formula

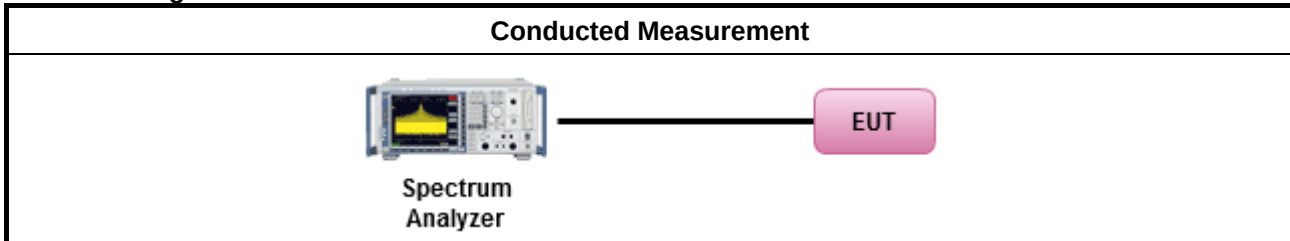
$$\text{EIRP PSD(dBm/MHz)} = -52.87 + 57.54 = 4.67$$

3.4.4 Test Setup

For Radio 3



For Scanning radio 1



3.4.5 Test Result of Peak Power Spectral Density (E.I.R.P.)

Refer as Appendix D



3.5 Unwanted Emissions

3.5.1 Transmitter Unwanted Emissions Limit

Unwanted emissions below 1 GHz and restricted band emissions above 1GHz 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).

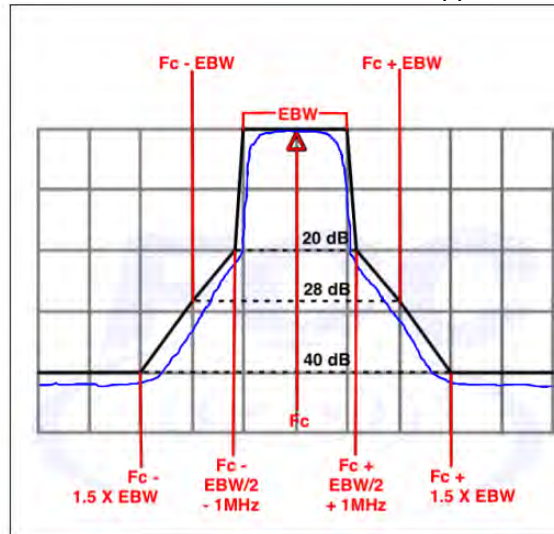
Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, 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($20 \times \log(\text{standard distance}/\text{test distance}) = 20\log(3/1) = 9.54\text{dB}$).
EX. Above 18GHz emission limit calculation (3m to 1m) = $54\text{dBuV/m at 3m} + 9.54\text{dB} = 63.54\text{dBuV/m at 1m}$.

Un-restricted band emissions above 1GHz Limit	
Frequency	Limit
Any outside the 5.945 – 7.125 GHz emission	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
	Note 1: Using the distance of 1m during the test for above 18 GHz, and the test value to correct for the distance factor at 3m($20 \times \log(\text{standard distance}/\text{test distance}) = 20\log(3/1) = 9.54\text{dB}$). EX. Above 18GHz emission limit calculation (3m to 1m) = $68.2\text{dBuV/m at 3m} + 9.54\text{dB} = 77.74\text{dBuV/m at 1m}$.
	Note 2:-27 dBm EIRP OOB is measured RMS which is a deviation from the current 15E rules for 5 GHz bands. In addition, 15.35(b) applies where the peak emissions must be limited to no more than 20 dB above the average limit.
Frequency	Emission MASK Limit

5.945 – 7.125 GHz

Power spectral density must be suppressed by 20 dB at 1 MHz outside of channel edge, by 28 dB at one channel bandwidth from the channel center, and by 40 dB at one- and one-half times the channel bandwidth away from channel center. At frequencies between one megahertz outside an unlicensed device's channel edge and one channel bandwidth from the center of the channel, the limits must be linearly interpolated between 20 dB and 28 dB suppression, and at frequencies between one and one- and one-half times an unlicensed device's channel bandwidth, the limits must be linearly interpolated between 28 dB and 40 dB suppression. Emissions removed from the channel center by more than one- and one-half times the channel bandwidth must be suppressed by at least 40 dB.





3.5.2 Measuring Instruments

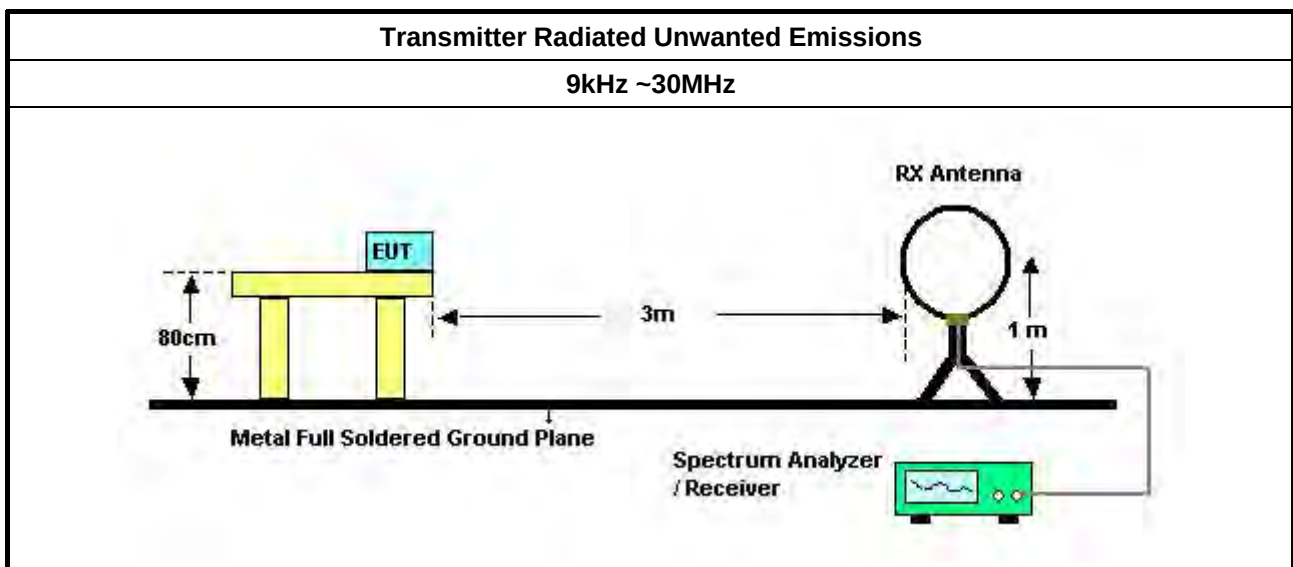
Refer a test equipment and calibration data table in this test report.

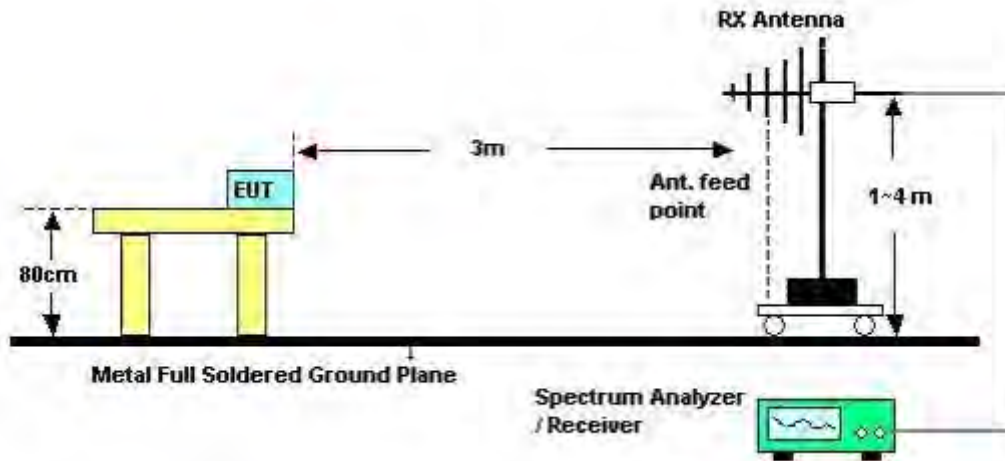
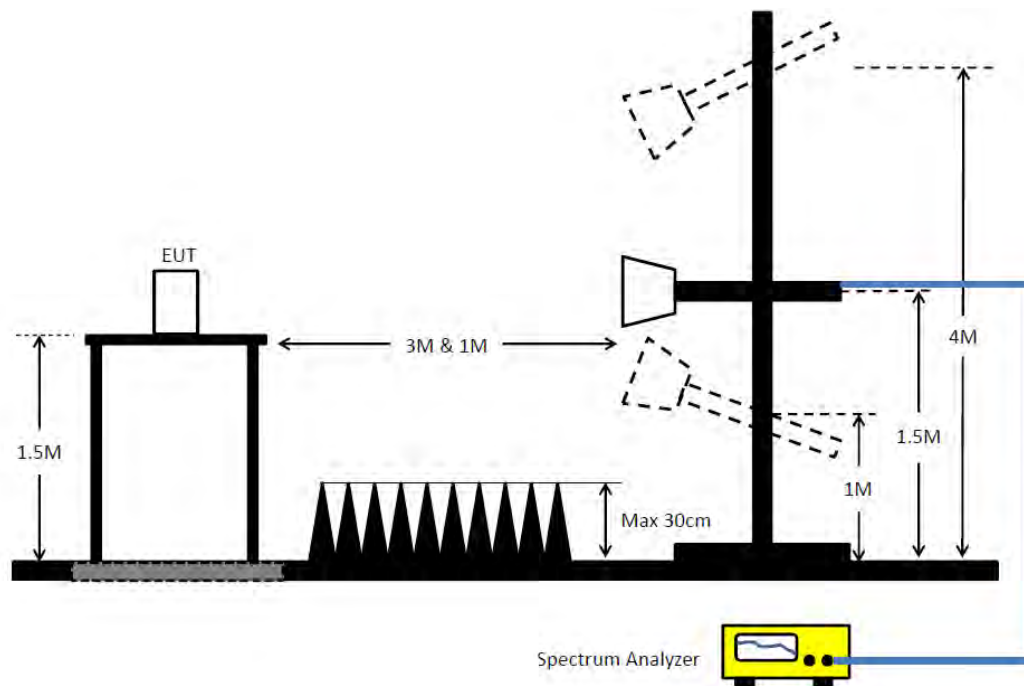
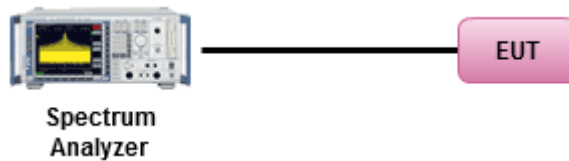
3.5.3 Test Procedures

Test Method	
According to KDB 987594 D02 II.G. the unwanted emission measurement procedure shall refer to KDB 789300(except emission MASK). 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. Measurements shall not be performed at a distance greater than 30 m for frequencies above 30 MHz, unless it can be further demonstrated that measurements at a distance of 30 m or less are impractical. 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).	
The average emission levels shall be measured in [duty cycle $\geq$ 98 or duty factor].	
For the transmitter unwanted emissions shall be measured using following options below:	
	Refer as FCC KDB 789033 D02, clause G)2) for unwanted emissions into non-restricted bands.
	Refer as FCC KDB 789033 D02, clause G)1) for unwanted emissions into restricted bands.
	☒ Refer as FCC KDB 789033 D02, G)6) Method AD (Trace Averaging). (For unrestricted band measurement)
	☐ Refer as FCC KDB 789033 D02, G)6) Method VB (Reduced VBW).
	☒ Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW $\geq$ 1/T, where T is pulse time.(For restricted band average measurement)
	☐ Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions.
	☒ Refer as FCC KDB 789033 D02, clause G)5) measurement procedure peak limit.
	☐ Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak limit.
Refer as FCC KDB 789033 D02, clause G)3)d)ii) for Band edge Integration measurements.	
For emission MASK shall be measured using following options below:	
	☒ Refer as FCC draft KDB 987594 D02, J) In-Band Emissions
For radiated measurement.	
	Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.
	Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.
	Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.
The any unwanted emissions level shall not exceed the fundamental emission level.	
All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.	

Test Method	
For conducted and cabinet radiation measurement, refer as FCC KDB 789033 D02, clause G)3).	
	For conducted unwanted emissions into non-restricted bands (relative emission limits). Devices with multiple transmit chains: Refer as FCC KDB 662911, when testing out-of-band and spurious emissions against relative emission limits, tests may be performed on each output individually without summing or adding 10 log(N) if the measurements are made relative to the in-band emissions on the individual outputs.
	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.

3.5.4 Test Setup



30MHz~1GHz

Above 1GHz

Emission MASK




3.5.5 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Antenna factor (AF) + Cable loss (CL) + Read level (Raw) - Preamp factor (PA)(if applicable)
= Level

3.5.6 Transmitter Unwanted Emissions (Below 30MHz)

There is a comparison data of both open-field test site and alternative test site - semi-Anechoic chamber according to KDB414788 Radiated Test Site, and the result came out very similar.

All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

The radiated emissions were investigated from 9 kHz or the lowest frequency generated within the device, up to the 10th harmonic or 40 GHz, whichever is appropriate.

3.5.7 Test Result of Transmitter Unwanted Emissions

Refer as Appendix E

3.6 Contention Based Protocol

3.6.1 Contention Based Protocol Limit

EUT can detect an AWGN signal with 90% (or better) level of certainty.

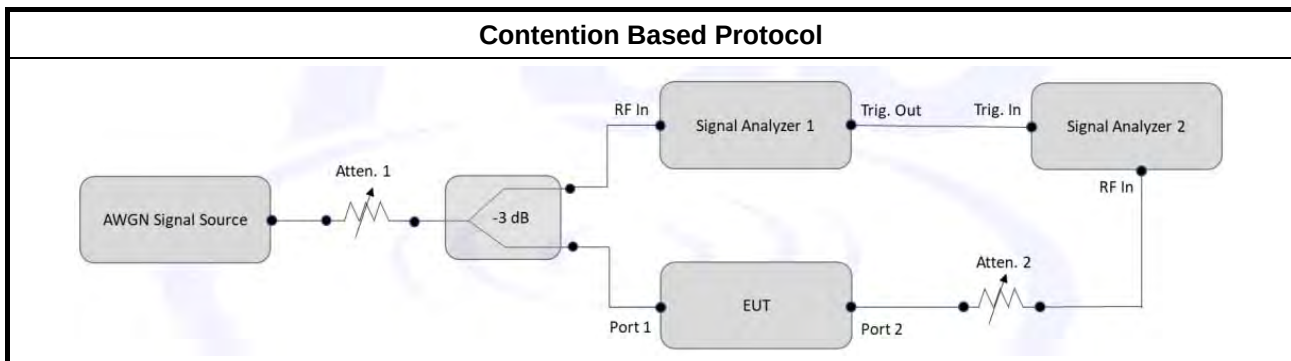
3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

Test Method	
■	For Contention Based Protocol shall be measured using following options below:
☒	Refer as FCC draft KDB 987594 D02, I) In-Band Emissions

3.6.4 Test Setup



3.6.5 Test Result of Contention Based Protocol

Refer as Appendix F

3.7 Frequency Stability

3.7.1 Frequency Stability Limit

Frequency Stability Limit	
	In-band emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

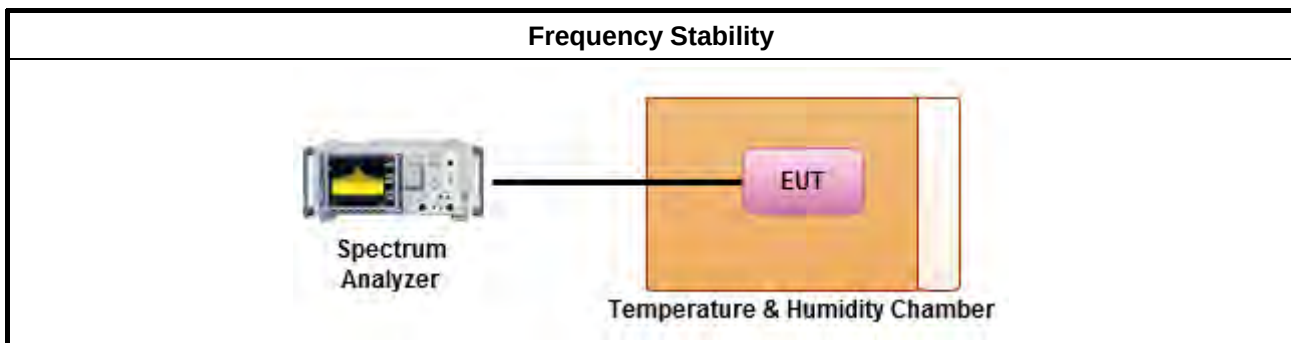
3.7.2 Measuring Instruments

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

3.7.3 Test Procedures

Test Method	
	Refer as ANSI C63.10, clause 6.8 for frequency stability tests
	Frequency stability with respect to ambient temperature
	Frequency stability when varying supply voltage
	Extreme temperature is -30°C~50°C.

3.7.4 Test Setup



3.7.5 Test Result of Frequency Stability

Refer as Appendix G



4 Test Equipment and Calibration Data

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.4GHz	Mar. 03, 2021	Mar. 02, 2022	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Jan. 06, 2021	Jan. 05, 2022	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Mar. 07, 2021	Mar. 06, 2022	Conduction (CO01-CB)
Pulse Limiter	Rohde& Schwarz	ESH3-Z2	100430	9kHz ~ 30MHz	Jan. 30, 2021	Jan. 29, 2022	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	9kHz ~ 30MHz	May 19, 2021	May 18, 2022	Conduction (CO01-CB)
Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Apr. 14, 2021	Apr. 13, 2022	Radiation (03CH05-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH05-CB	30 MHz ~ 1 GHz	Aug. 09, 2021	Aug. 08, 2022	Radiation (03CH05-CB)
Bilog Antenna with 6dB Attenuator	TESEQ & EMCI	CBL 6112D & N-6-06	35236 & AT-N0610	30MHz ~ 2GHz	Mar. 26, 2021	Mar. 25, 2022	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC330N	980331	20MHz ~ 3GHz	Apr. 27, 2021	Apr. 26, 2022	Radiation (03CH05-CB)
Signal Analyzer	R&S	FSV40	101903	9kHz ~ 40GHz	Mar. 22, 2021	Mar. 21, 2022	Radiation (03CH05-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	Jun. 21, 2021	Jun. 20, 2022	Radiation (03CH05-CB)
RF Cable-low	Woken	RG402	Low Cable-04+23	30MHz~1GHz	Oct. 13, 2021	Oct. 12, 2022	Radiation (03CH05-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH05-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH01-CB	1GHz ~18GHz 3m	May 07, 2021	May 06, 2022	Radiation (03CH01-CB)
Horn Antenna	ETS-LINDGR EN	3115	00075790	750MHz ~ 18GHz	Nov. 06, 2021	Nov. 05, 2022	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 05, 2021	Aug. 04, 2022	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02121	1GHz ~ 26.5GHz	May 20, 2021	May 19, 2022	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-H G	1864479	18GHz ~ 40GHz	Jul. 13, 2021	Jul. 12, 2022	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	May 03, 2021	May 02, 2022	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-16	1 GHz ~ 18 GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH01-CB)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-16+17	1 GHz ~ 18 GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 15, 2021	Jul. 14, 2022	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 15, 2021	Jul. 14, 2022	Radiation (03CH01-CB)
High Cable	Woken	WCA0929M	40G#5+7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH01-CB)
High Cable	Woken	WCA0929M	40G#5	1GHz ~ 40 GHz	Dec. 08, 2021	Dec. 07, 2022	Radiation (03CH01-CB)
High Cable	Woken	WCA0929M	40G#7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH01-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH01-CB)
3m Semi Anechoic Chamber VSWR	RIKEN	SAC-3M	03CH02-CB	1GHz ~18GHz 3m	Mar. 27, 2021	Mar. 26, 2022	Radiation (03CH02-CB)
3m Semi Anechoic Chamber VSWR	RIKEN	SAC-3M	03CH02-CB	1GHz ~18GHz	Mar. 26, 2022	Mar. 25, 2023	Radiation (03CH02-CB)
Horn Antenna	EMCO	3115	9610-4976	1GHz ~ 18GHz	May 04, 2021	May 03, 2022	Radiation (03CH02-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 05, 2021	Aug. 04, 2022	Radiation (03CH02-CB)
Pre-Amplifier	Agilent	83017A	MY39501305	1GHz ~ 26.5GHz	Jul. 12, 2021	Jul. 11, 2022	Radiation (03CH02-CB)
Pre-Amplifier	MITEQ	TTA1840-35-H G	1864479	18GHz ~ 40GHz	Jul. 13, 2021	Jul. 12, 2022	Radiation (03CH02-CB)
Spectrum analyzer	R&S	FSU	100015	9kHz~26GHz	Oct. 25, 2021	Oct. 24, 2022	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-18	1GHz ~ 18GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-18+19	1GHz ~ 18GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH02-CB)
High Cable	Woken	WCA0929M	40G#5+7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH02-CB)
High Cable	Woken	WCA0929M	40G#5	1GHz ~ 40 GHz	Dec. 08, 2021	Dec. 07, 2022	Radiation (03CH02-CB)
High Cable	Woken	WCA0929M	40G#7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH02-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH02-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH04-CB	1GHz ~18GHz 3m	Feb. 25, 2021	Feb. 24, 2022	Radiation (03CH04-CB)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH04-CB	1GHz ~18GHz 3m	Feb. 24, 2022	Feb. 23, 2023	Radiation (03CH04-CB)
Horn Antenna	ETS • Lindgren	3115	00143147	750MHz~18GHz	Oct. 25, 2021	Oct. 24, 2022	Radiation (03CH04-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 05, 2021	Aug. 04, 2022	Radiation (03CH04-CB)
Pre-Amplifier	Agilent	83017A	MY53270063	0.5GHz ~ 26.5GHz	Jul. 12, 2021	Jul. 11, 2022	Radiation (03CH04-CB)
Pre-Amplifier	MITEQ	TTA1840-35-H G	1864479	18GHz ~ 40GHz	Jul. 13, 2021	Jul. 12, 2022	Radiation (03CH04-CB)
Spectrum Analyzer	R&S	FSP40	100142	9kHz~40GHz	Feb. 19, 2021	Feb. 18, 2022	Radiation (03CH04-CB)
Spectrum Analyzer	R&S	FSP40	100019	9kHz ~ 40GHz	Jun. 04, 2021	Jun. 03, 2022	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-21	1GHz - 18GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-21+67	1GHz - 18GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH04-CB)
High Cable	Woken	WCA0929M	40G#5+7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH04-CB)
High Cable	Woken	WCA0929M	40G#5	1GHz ~ 40 GHz	Dec. 08, 2021	Dec. 07, 2022	Radiation (03CH04-CB)
High Cable	Woken	WCA0929M	40G#7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH04-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH04-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH06-CB	1GHz ~18GHz 3m	Oct. 01, 2021	Sep. 30, 2022	Radiation (03CH06-CB)
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA 9120D-1292	1GHz~18GHz	Aug. 04, 2021	Aug. 03, 2022	Radiation (03CH06-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 05, 2021	Aug. 04, 2022	Radiation (03CH06-CB)
Pre-Amplifier	Agilent	83017A	MY53270064	0.5GHz ~ 26.5GHz	May 06, 2021	May 05, 2022	Radiation (03CH06-CB)
Pre-Amplifier	MITEQ	TTA1840-35-H G	1864479	18GHz ~ 40GHz	Jul. 13, 2021	Jul. 12, 2022	Radiation (03CH06-CB)
Spectrum analyzer	R&S	FSP40	100080	9kHz~40GHz	Dec. 24, 2021	Dec. 23, 2022	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-05	1GHz~18GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-05+24	1GHz~18GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-67	1GHz~18GHz	Feb. 24, 2022	Feb. 23, 2023	Radiation (03CH06-CB)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-05+67	1GHz~18GHz	Feb. 24, 2022	Feb. 23, 2023	Radiation (03CH06-CB)
High Cable	Woken	WCA0929M	40G#5+7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH06-CB)
High Cable	Woken	WCA0929M	40G#5	1GHz ~ 40 GHz	Dec. 08, 2021	Dec. 07, 2022	Radiation (03CH06-CB)
High Cable	Woken	WCA0929M	40G#7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH06-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH06-CB)
Spectrum analyzer	R&S	FSV40	101027	9kHz~40GHz	Aug. 02, 2021	Aug. 01, 2022	Conducted (TH02-CB)
Temp. and Humidity Chamber	Ten Billion	TTH-C2SP	TBN-1010206	-20~150 degree	Mar. 03, 2021	Mar. 02, 2022	Conducted (TH02-CB)
Temp. and Humidity Chamber	Ten Billion	TTH-C2SP	TBN-1010206	-20~150 degree	Feb. 18, 2022	Feb. 17, 2023	Conducted (TH02-CB)
Power Sensor	Anritsu	MA2411B	1126203	300MHz~40GHz	Oct. 25, 2021	Oct. 24, 2022	Conducted (TH02-CB)
Power Meter	Anritsu	ML2495A	1210004	300MHz~40GHz	Oct. 25, 2021	Oct. 24, 2022	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-01	1 GHz – 18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-02	1 GHz – 18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-03	1 GHz – 18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-04	1 GHz – 18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-05	1 GHz – 18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH02-CB)
Switch	SPTCB	SP-SWI	SWI-02	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	SWI-02-P1	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	SWI-02-P2	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	SWI-02-P3	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	SWI-02-P4	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	SWI-02-P5	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH02-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conducted (TH02-CB)
Spectrum Analyzer	R&S	FSV40	101025	9kHz ~ 40GHz	Nov. 06, 2021	Nov. 05, 2022	Conducted (DF02-CB)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
VEKTOR SIGNAL GENERATOR	R&S	SMW200A	109426	100KHz- 7.5GHz	Dec. 28, 2021	Dec. 27, 2022	Conducted (DF02-CB)
RF Power Divider	STI	2 Way	DV-2way -07	1GHz ~ 8GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (DF02-CB)
RF Power Divider	STI	2 Way	DV-2way -08	1GHz ~ 8GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (DF02-CB)
RF Cable-high	Woken	RG402	High Cable-61	1 GHz – 18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (DF02-CB)
RF Cable-high	Woken	RG402	High Cable-62	1 GHz – 18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (DF02-CB)
RF Cable-high	Woken	RG402	High Cable-63	1 GHz – 18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (DF02-CB)
RF Cable-high	Woken	RG402	High Cable-66	1 GHz – 18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (DF02-CB)
100MS/s Digitizer	N.I	USB-5133	F65206	N/A	Nov. 25, 2021	Nov. 24, 2022	Conducted (DF02-CB)

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

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



Conducted Emissions at Powerline

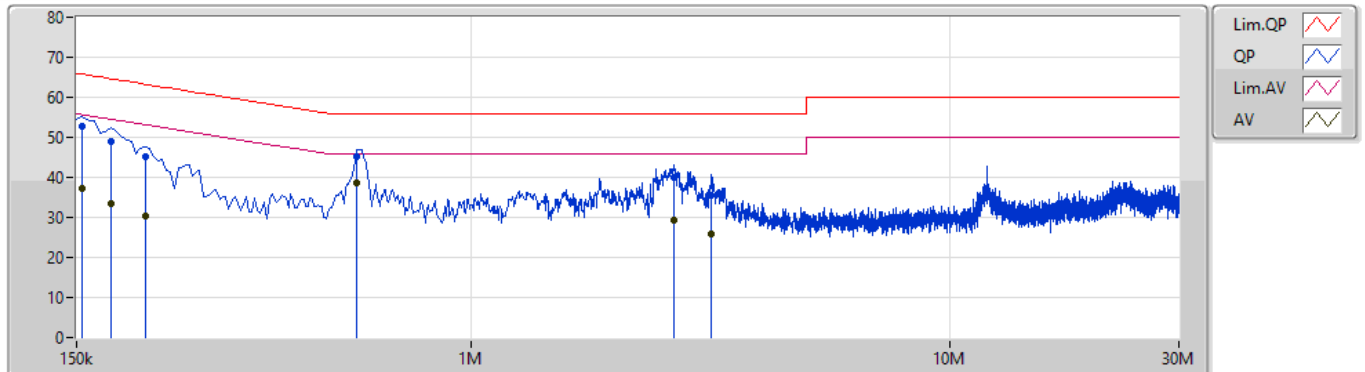
Appendix A

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 6	Pass	AV	591k	39.11	46.00	-6.89	Neutral

Mode 6

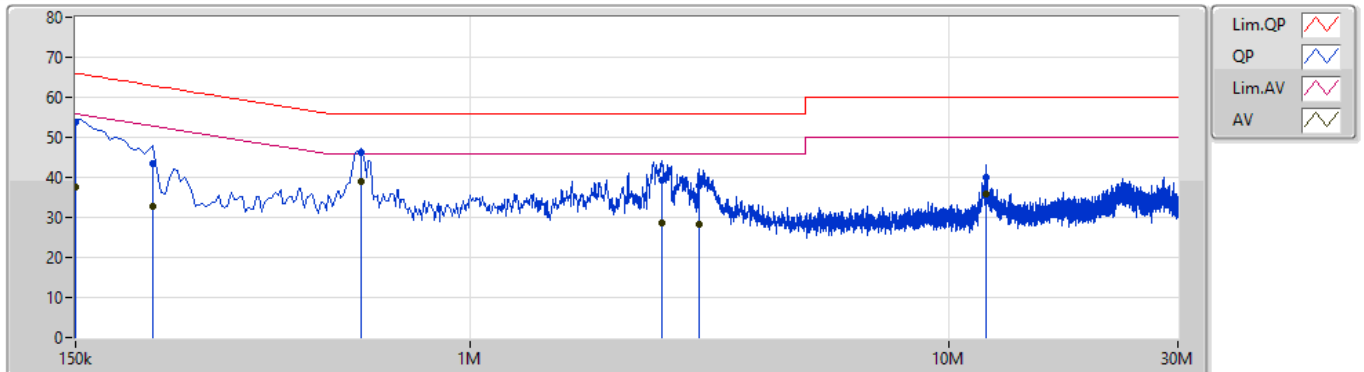
22/12/2021



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	154.5k	52.64	65.75	-13.11	9.89	Line	-	42.75	0.04	0.04	9.81			
AV	154.5k	37.39	55.75	-18.36	9.89	Line	-	27.50	0.04	0.04	9.81			
QP	177k	48.95	64.62	-15.67	9.89	Line	-	39.06	0.04	0.04	9.81			
AV	177k	33.46	54.62	-21.16	9.89	Line	-	23.57	0.04	0.04	9.81			
QP	208.5k	45.06	63.27	-18.21	9.89	Line	-	35.17	0.04	0.04	9.81			
AV	208.5k	30.47	53.27	-22.80	9.89	Line	-	20.58	0.04	0.04	9.81			
QP	577.5k	45.21	56.00	-10.79	9.91	Line	-	35.30	0.05	0.04	9.82			
AV	577.5k	38.62	46.00	-7.38	9.91	Line	"Worst"	28.71	0.05	0.04	9.82			
QP	2.652M	39.84	56.00	-16.16	10.04	Line	-	29.80	0.11	0.09	9.84			
AV	2.652M	29.17	46.00	-16.83	10.04	Line	-	19.13	0.11	0.09	9.84			
QP	3.17M	35.56	56.00	-20.44	10.07	Line	-	25.49	0.12	0.10	9.85			
AV	3.17M	25.78	46.00	-20.22	10.07	Line	-	15.71	0.12	0.10	9.85			

Mode 6

22/12/2021



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	150k	53.72	66.00	-12.28	9.88	Neutral	-	43.84	0.03	0.04	9.81			
AV	150k	37.42	56.00	-18.58	9.88	Neutral	-	27.54	0.03	0.04	9.81			
QP	217.5k	43.55	62.92	-19.37	9.88	Neutral	-	33.67	0.03	0.04	9.81			
AV	217.5k	32.80	52.92	-20.12	9.88	Neutral	-	22.92	0.03	0.04	9.81			
QP	591k	46.19	56.00	-9.81	9.90	Neutral	-	36.29	0.04	0.04	9.82			
AV	591k	39.11	46.00	-6.89	9.90	Neutral	"Worst"	29.21	0.04	0.04	9.82			
QP	2.513M	39.31	56.00	-16.69	10.01	Neutral	-	29.30	0.08	0.09	9.84			
AV	2.513M	28.51	46.00	-17.49	10.01	Neutral	-	18.50	0.08	0.09	9.84			
QP	2.999M	37.88	56.00	-18.12	10.04	Neutral	-	27.84	0.09	0.10	9.85			
AV	2.999M	28.33	46.00	-17.67	10.04	Neutral	-	18.29	0.09	0.10	9.85			
QP	11.936M	39.94	60.00	-20.06	10.28	Neutral	-	29.66	0.22	0.16	9.90			
AV	11.936M	35.72	50.00	-14.28	10.28	Neutral	-	25.44	0.22	0.16	9.90			

For Radio 3 / non beamforming mode / 1T1S

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.925-6.425GHz	-	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_1TX	24.6M	19.31M	19M3D1D	22.17M	19.19M
802.11ax HEW40_Nss1,(MCS0)_1TX	41.88M	38.141M	38M1D1D	41.46M	38.021M
802.11ax HEW80_Nss1,(MCS0)_1TX	89.4M	78.201M	78M2D1D	82.8M	77.961M
802.11ax HEW160_Nss1,(MCS0)_1TX	333.36M	184.708M	185MD1D	299.52M	160.96M
6.425-6.525GHz	-	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_1TX	25.17M	19.25M	19M2D1D	22.29M	19.22M
802.11ax HEW40_Nss1,(MCS0)_1TX	42.72M	38.201M	38M2D1D	41.46M	38.141M
802.11ax HEW80_Nss1,(MCS0)_1TX	84.12M	77.961M	78M0D1D	83.88M	77.961M
802.11ax HEW160_Nss1,(MCS0)_1TX	345.12M	192.384M	192MD1D	345.12M	192.384M
6.525-6.875GHz	-	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_1TX	26.49M	19.25M	19M2D1D	22.68M	19.25M
802.11ax HEW40_Nss1,(MCS0)_1TX	42M	38.141M	38M1D1D	41.64M	38.081M
802.11ax HEW80_Nss1,(MCS0)_1TX	120.6M	78.441M	78M4D1D	84.36M	78.201M
802.11ax HEW160_Nss1,(MCS0)_1TX	408M	270.105M	270MD1D	390.48M	260.27M
6.875-7.125GHz	-	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_1TX	26.82M	19.28M	19M3D1D	24.54M	19.22M
802.11ax HEW40_Nss1,(MCS0)_1TX	45.36M	38.261M	38M3D1D	41.58M	38.081M
802.11ax HEW80_Nss1,(MCS0)_1TX	112.32M	78.441M	78M4D1D	94.8M	78.441M
802.11ax HEW160_Nss1,(MCS0)_1TX	334.08M	214.453M	214MD1D	334.08M	214.453M

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
 Max-OBW = Maximum 99% occupied bandwidth;
 Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
 Min-OBW = Minimum 99% occupied bandwidth

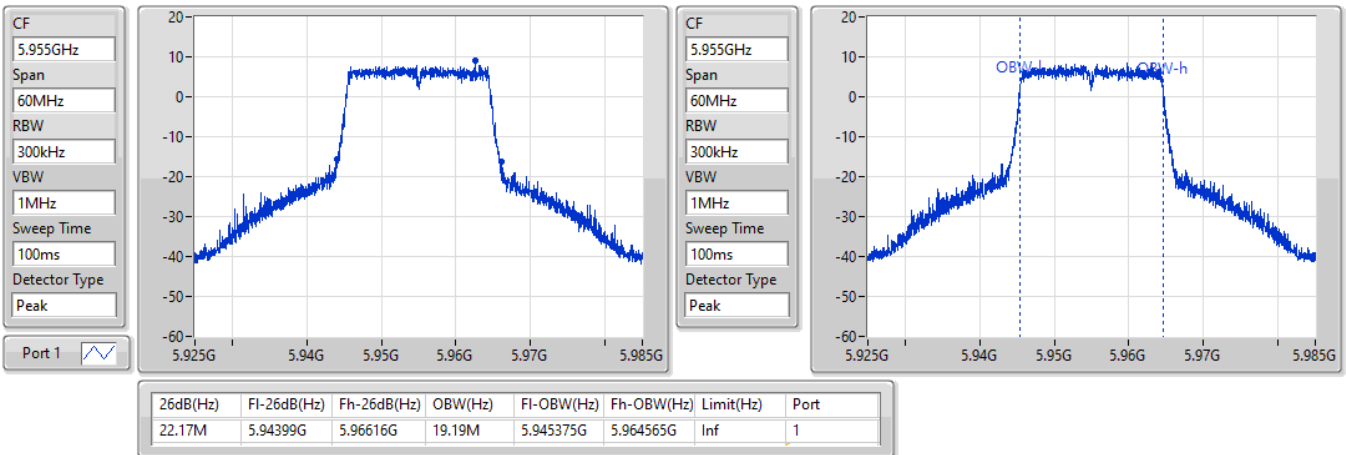
Result

Mode	Result	Limit (Hz)	Port 1-N dB	Port 1-OBW
			(Hz)	(Hz)
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-
5955MHz	Pass	Inf	22.17M	19.19M
6175MHz	Pass	Inf	22.23M	19.31M
6415MHz	Pass	Inf	24.6M	19.25M
6435MHz	Pass	Inf	22.29M	19.25M
6475MHz	Pass	Inf	25.17M	19.22M
6515MHz	Pass	Inf	23.25M	19.25M
6535MHz	Pass	Inf	26.49M	19.25M
6695MHz	Pass	Inf	26.46M	19.25M
6855MHz	Pass	Inf	22.68M	19.25M
6875MHz Straddle 6.525-6.875GHz	Pass	Inf	23.01M	19.25M
6895MHz	Pass	Inf	25.65M	19.22M
6995MHz	Pass	Inf	26.82M	19.22M
7095MHz	Pass	Inf	24.54M	19.28M
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-	-	-
5965MHz	Pass	Inf	41.58M	38.141M
6165MHz	Pass	Inf	41.88M	38.021M
6405MHz	Pass	Inf	41.46M	38.141M
6445MHz	Pass	Inf	42.72M	38.201M
6485MHz	Pass	Inf	41.46M	38.141M
6525MHz Straddle 6.425-6.525GHz	Pass	Inf	42.12M	38.141M
6565MHz	Pass	Inf	41.82M	38.081M
6685MHz	Pass	Inf	41.64M	38.141M
6845MHz	Pass	Inf	42M	38.141M
6885MHz Straddle 6.525-6.875GHz	Pass	Inf	41.82M	38.081M
6925MHz	Pass	Inf	42M	38.081M
7005MHz	Pass	Inf	41.58M	38.081M
7085MHz	Pass	Inf	45.36M	38.261M
802.11ax HEW80_Nss1,(MCS0)_1TX	-	-	-	-
5985MHz	Pass	Inf	89.4M	78.201M
6145MHz	Pass	Inf	82.8M	77.961M
6385MHz	Pass	Inf	83.04M	77.961M
6465MHz	Pass	Inf	83.88M	77.961M
6545MHz Straddle 6.425-6.525GHz	Pass	Inf	84.12M	77.961M
6625MHz	Pass	Inf	84.36M	78.201M
6705MHz	Pass	Inf	88.44M	78.201M
6785MHz	Pass	Inf	94.56M	78.441M
6865MHz Straddle 6.525-6.875GHz	Pass	Inf	120.6M	78.441M
6945MHz	Pass	Inf	112.32M	78.441M
7025MHz	Pass	Inf	94.8M	78.441M
802.11ax HEW160_Nss1,(MCS0)_1TX	-	-	-	-
6025MHz	Pass	Inf	299.52M	184.708M
6185MHz	Pass	Inf	306.72M	160.96M
6345MHz	Pass	Inf	333.36M	180.63M
6505MHz Straddle 6.425-6.525GHz	Pass	Inf	345.12M	192.384M
6665MHz	Pass	Inf	390.48M	260.27M
6825MHz Straddle 6.525-6.875GHz	Pass	Inf	408M	270.105M
6985MHz	Pass	Inf	334.08M	214.453M

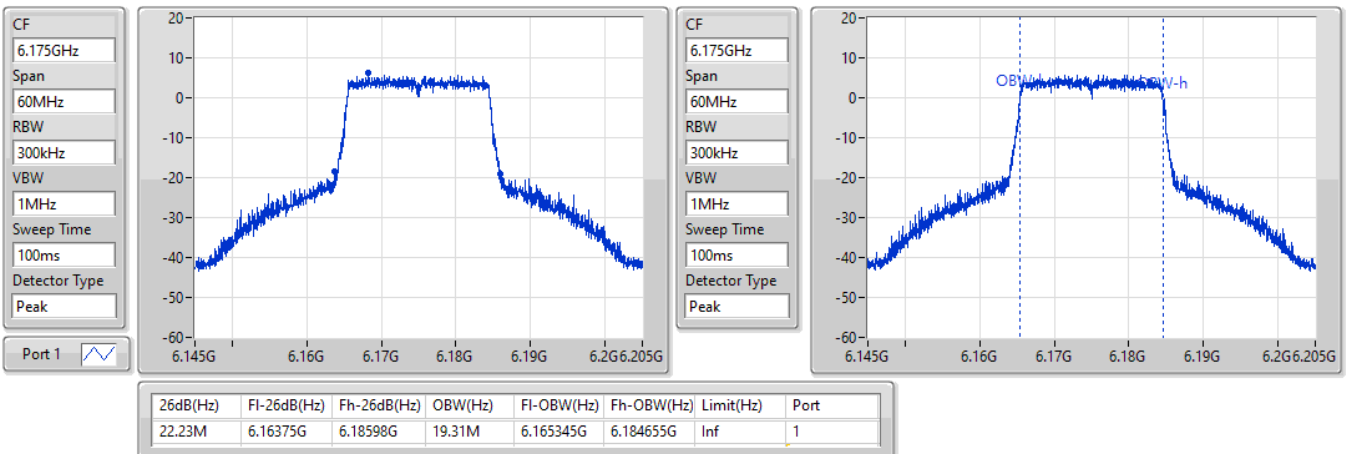
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5955MHz

03/01/2022

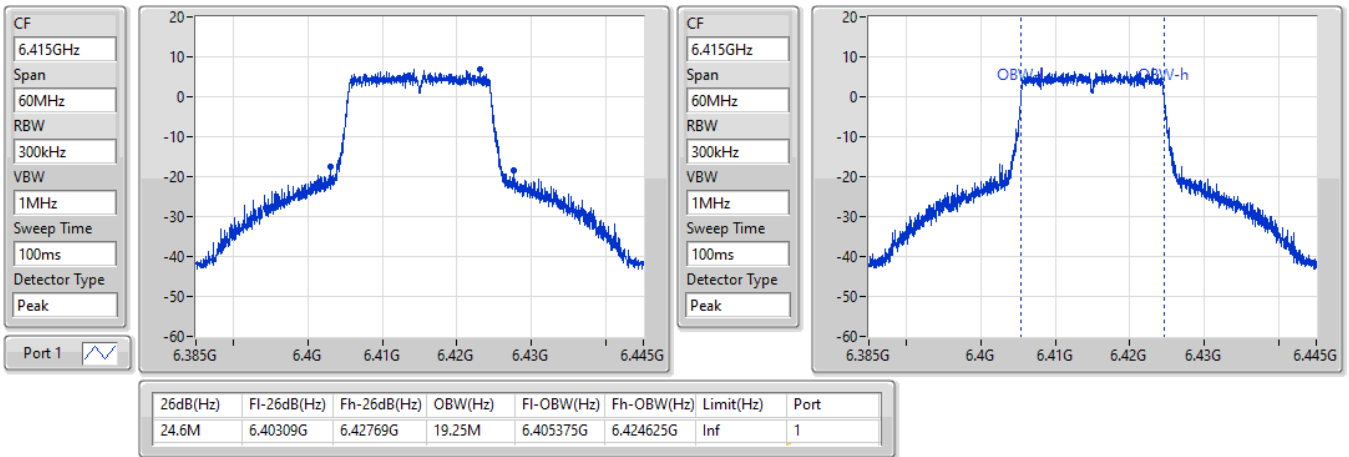

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
6175MHz

03/01/2022

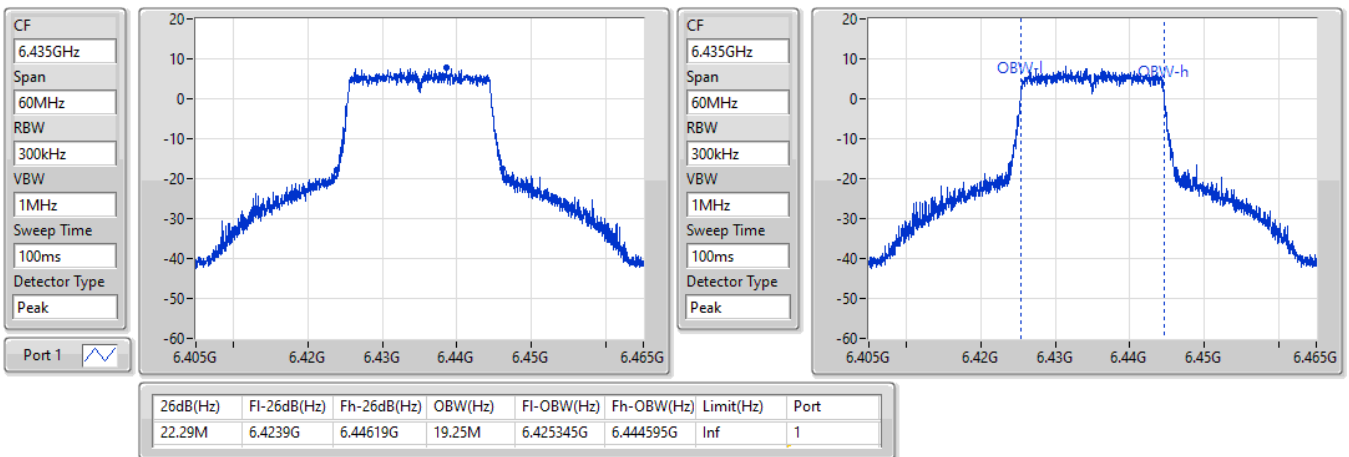


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
6415MHz

03/01/2022

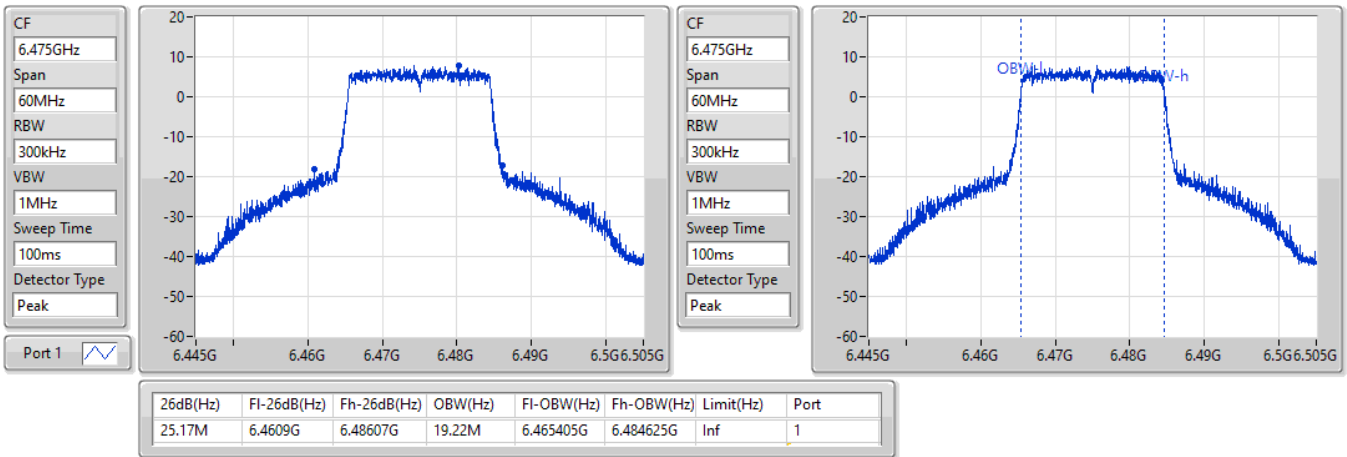

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
6435MHz

03/01/2022

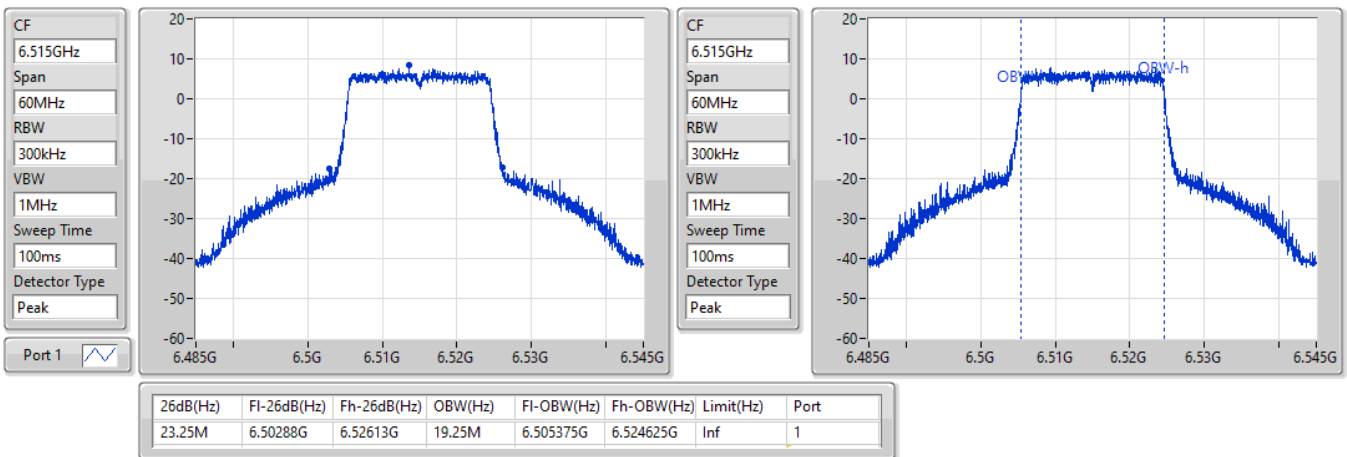


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
6475MHz

03/01/2022

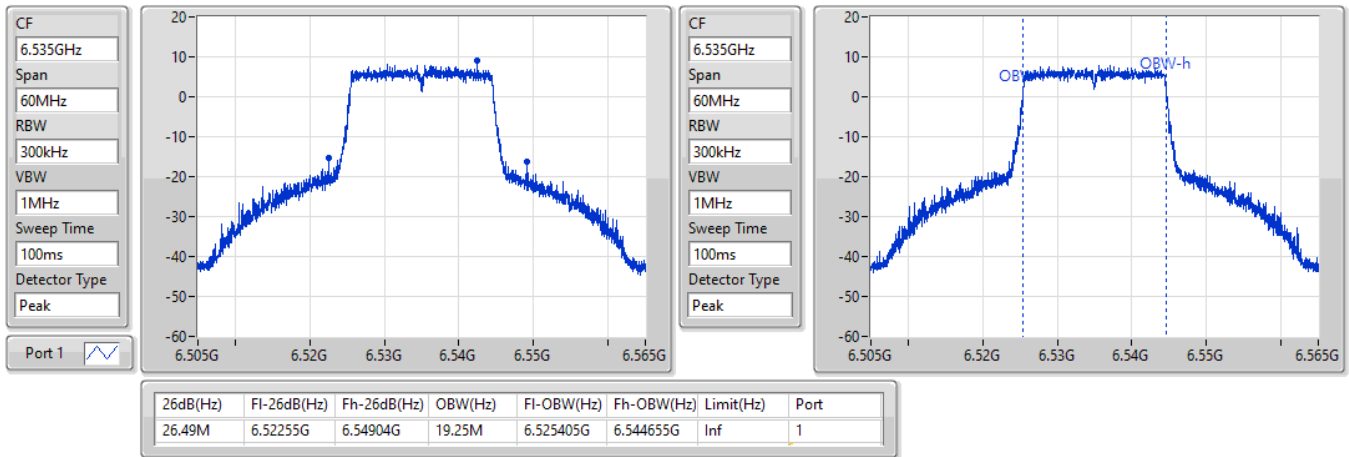

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
6515MHz

03/01/2022

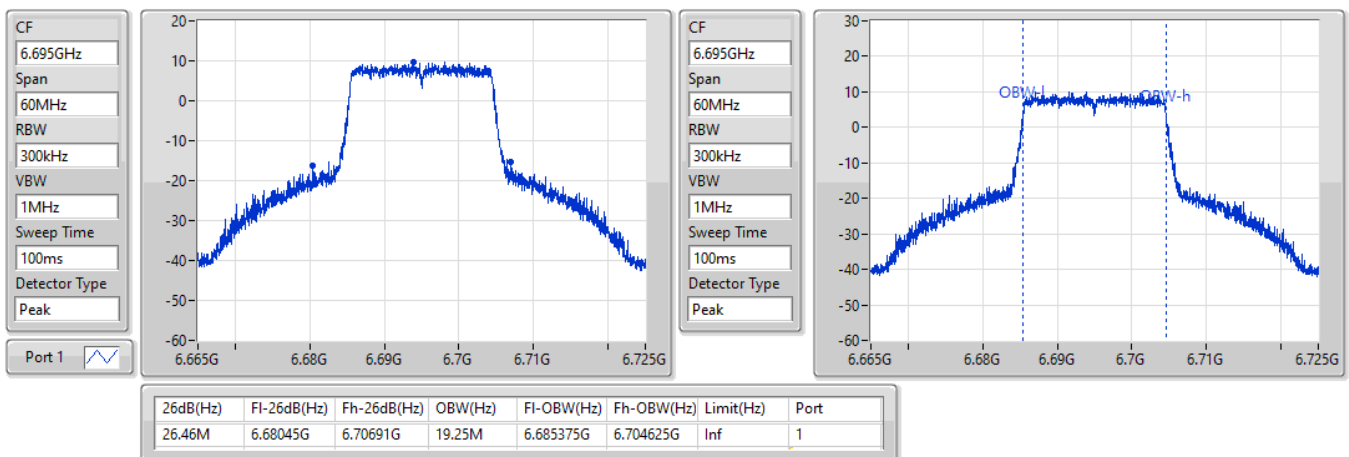


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
6535MHz

03/01/2022

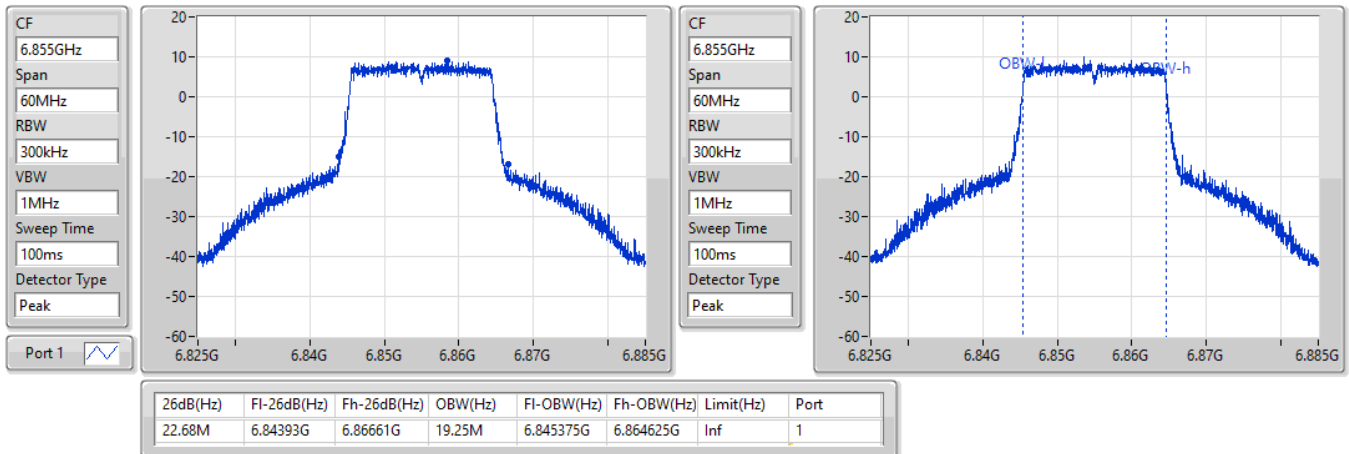

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
6695MHz

03/01/2022

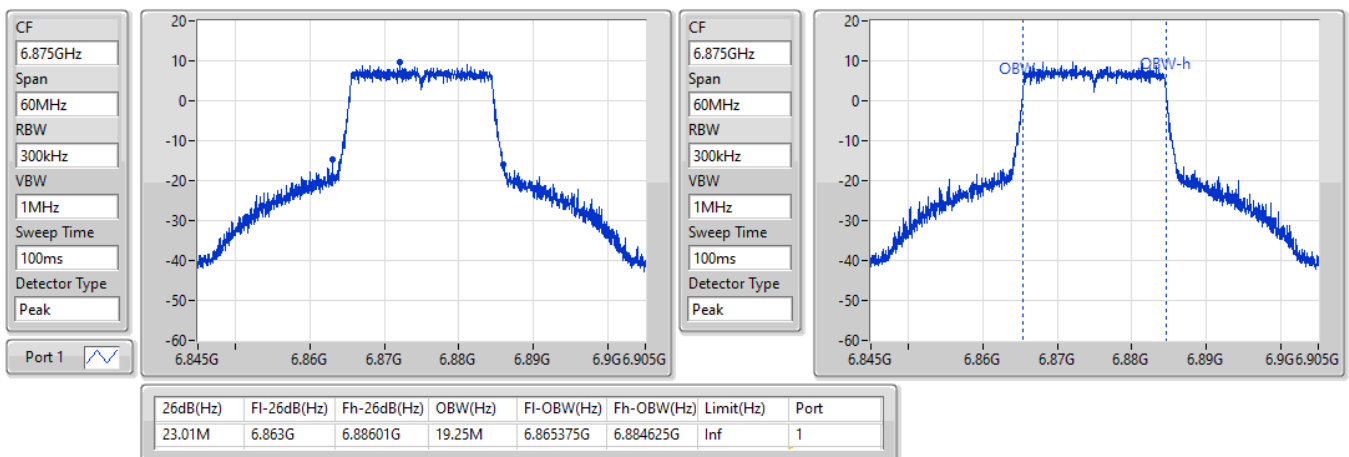


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EBW
6855MHz

03/01/2022

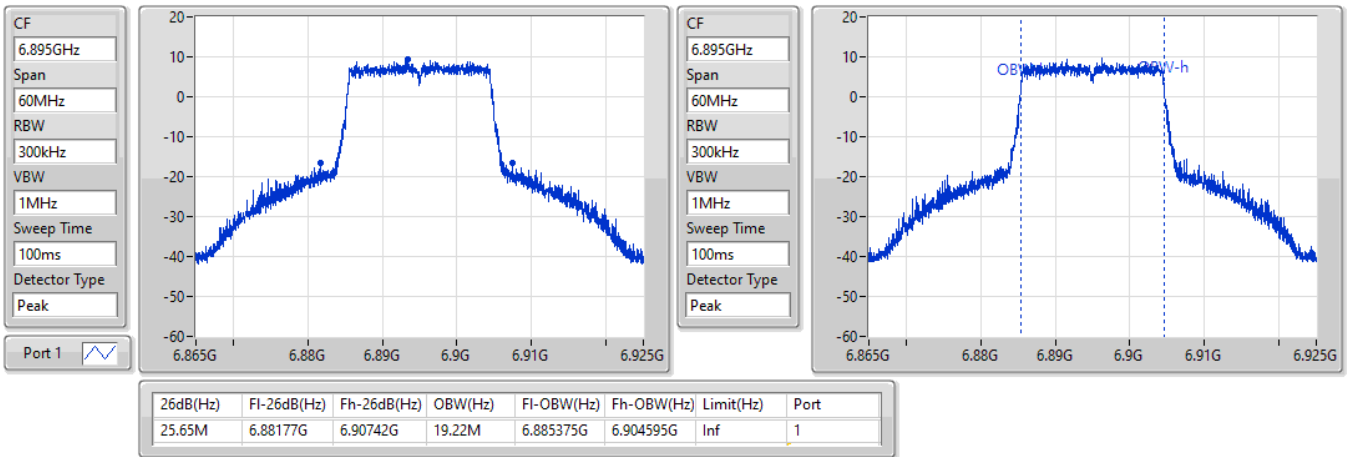

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
6875MHz Straddle 6.525-6.875GHz

03/01/2022

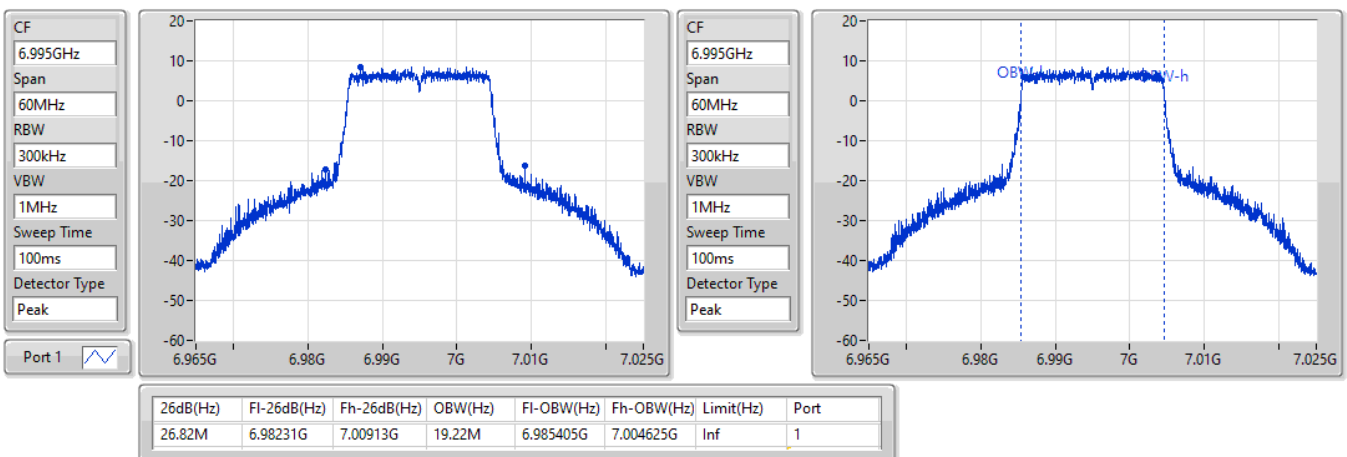


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
6895MHz

03/01/2022

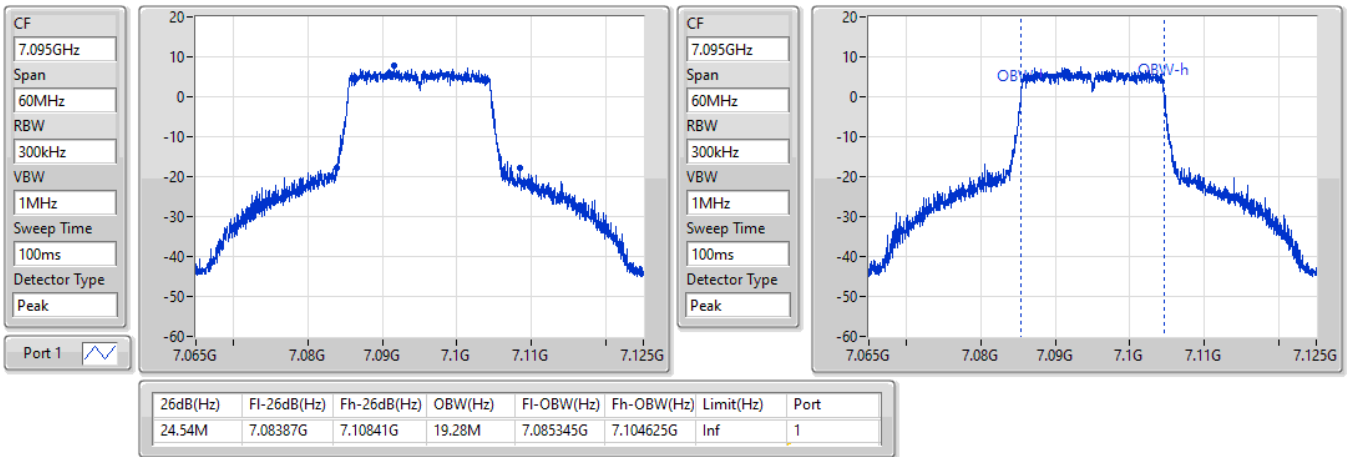

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
6995MHz

03/01/2022

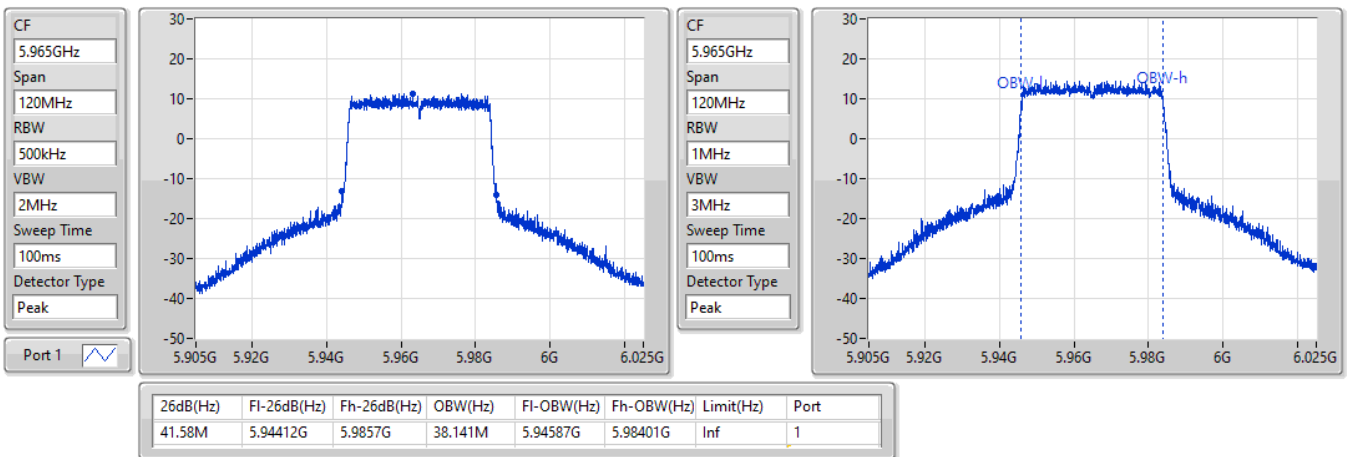


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
7095MHz

03/01/2022

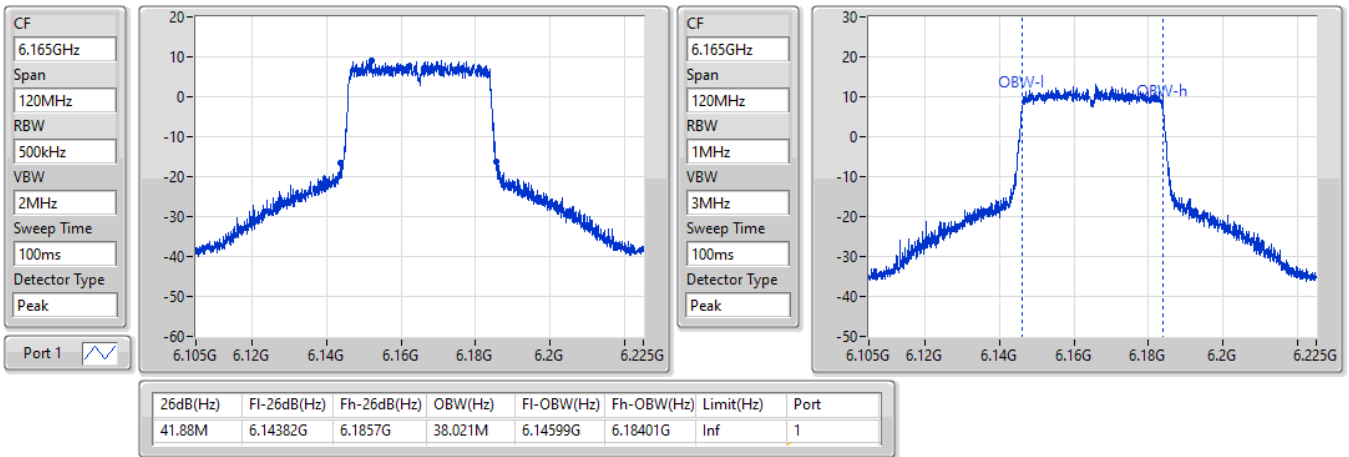

802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
5965MHz

03/01/2022

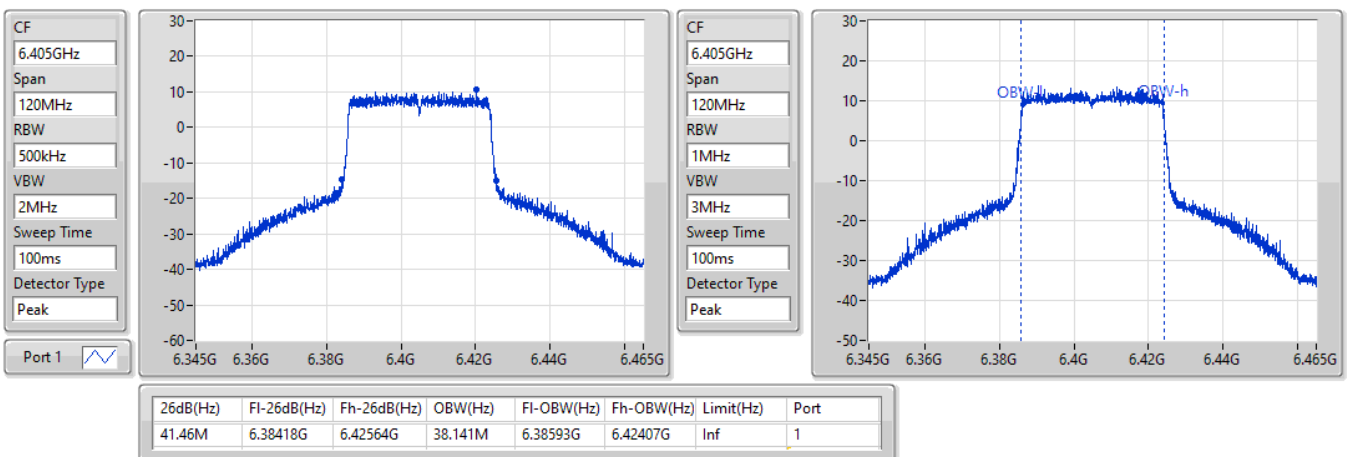


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
6165MHz

03/01/2022

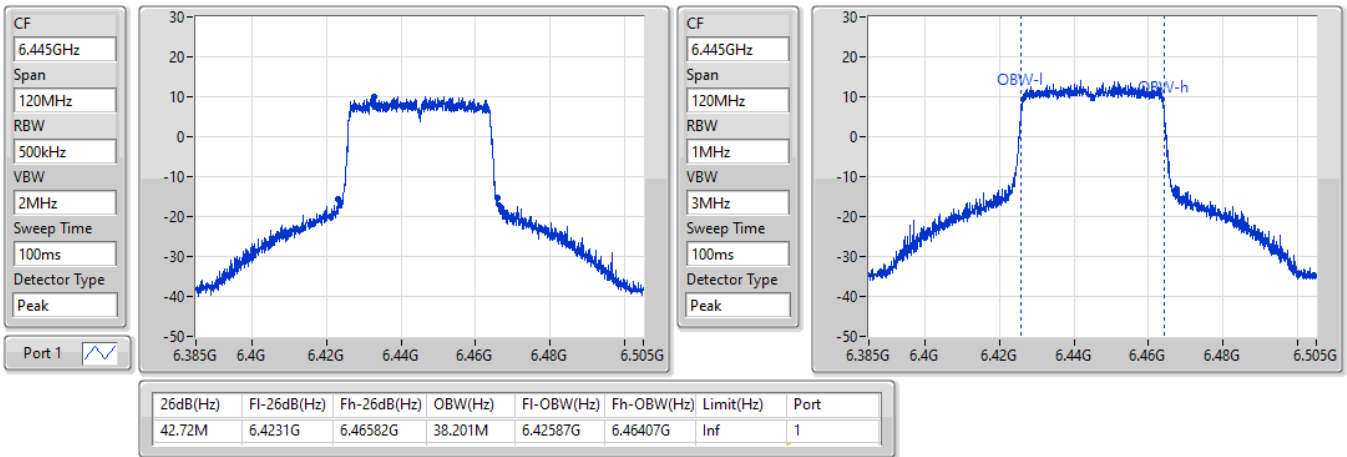

802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
6405MHz

03/01/2022

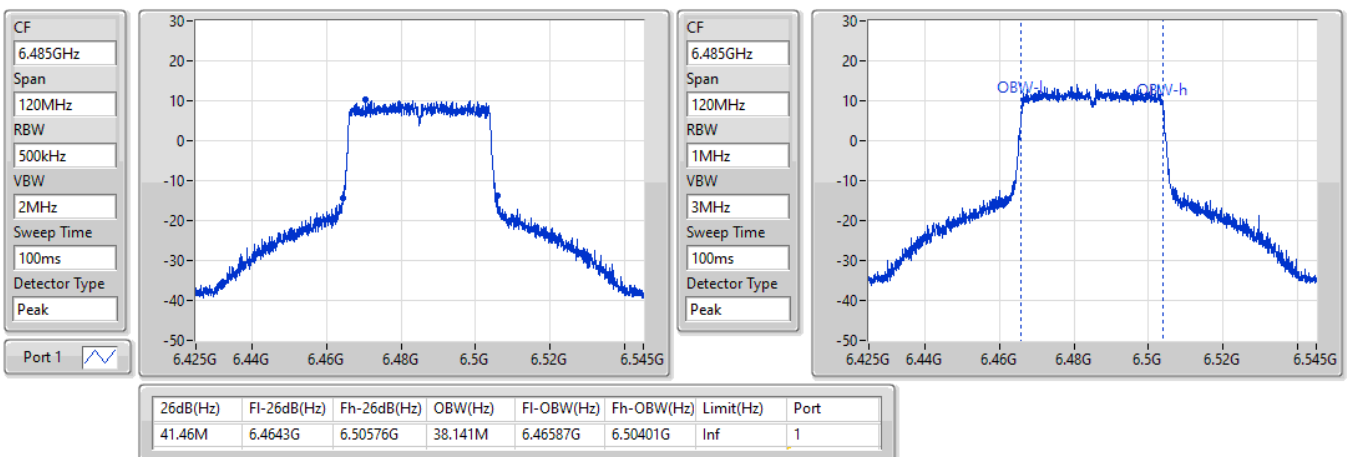


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
6445MHz

03/01/2022

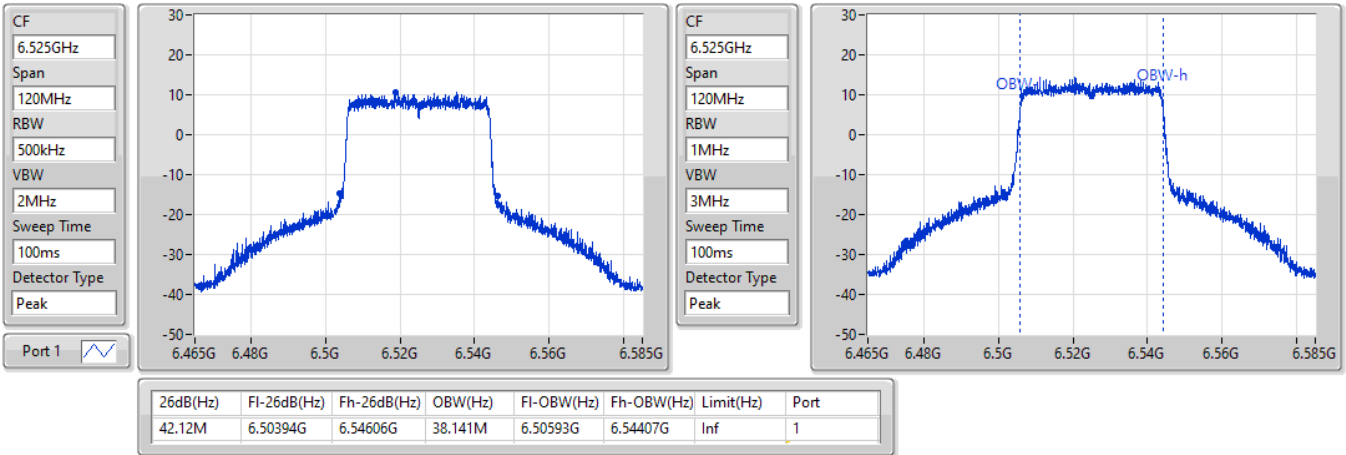

802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
6485MHz

03/01/2022

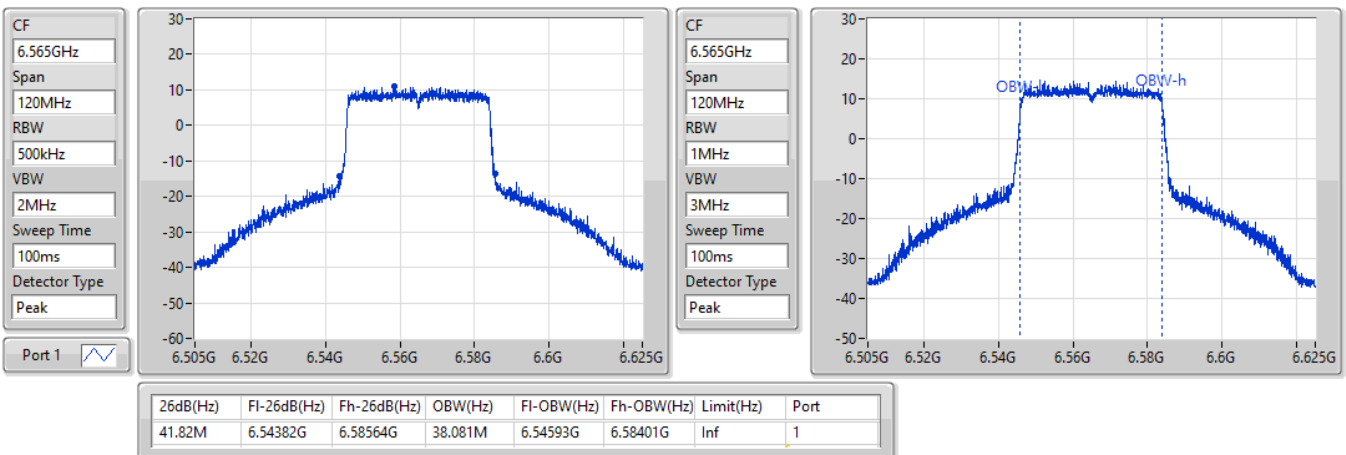


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
6525MHz Straddle 6.425-6.525GHz

03/01/2022

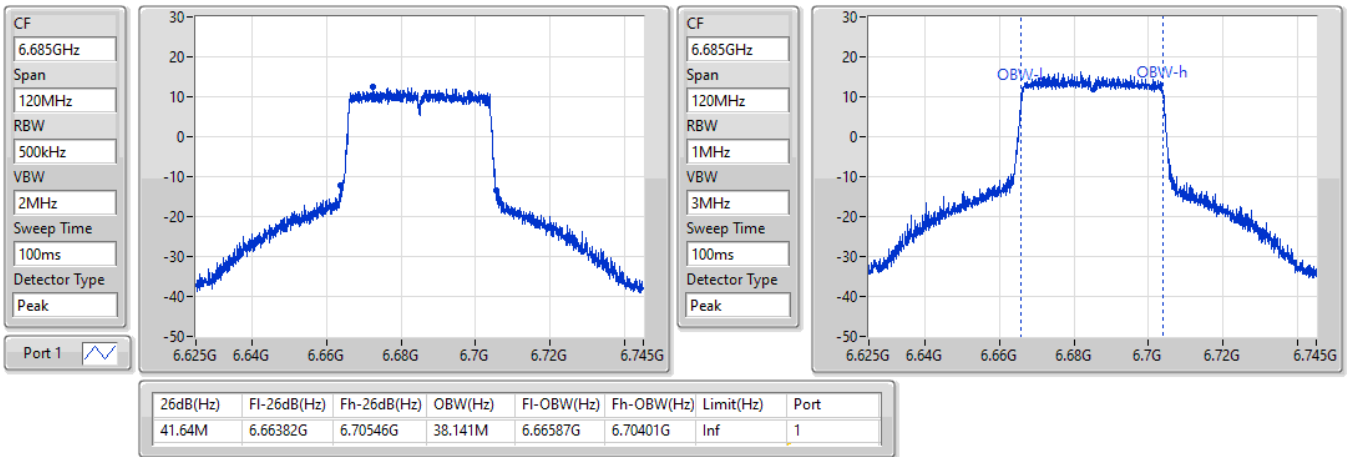

802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
6565MHz

03/01/2022

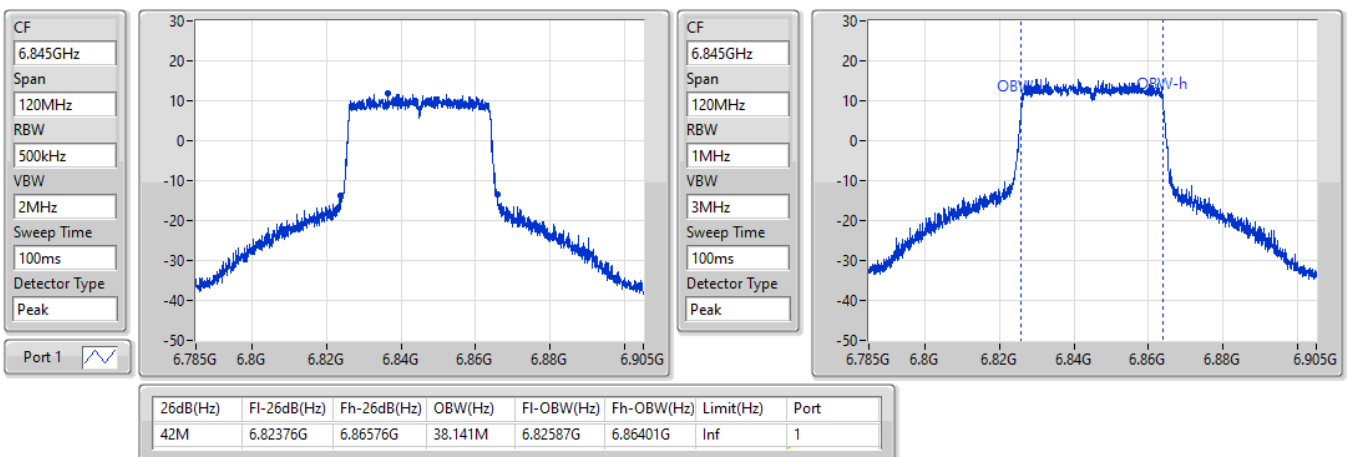


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
6685MHz

03/01/2022

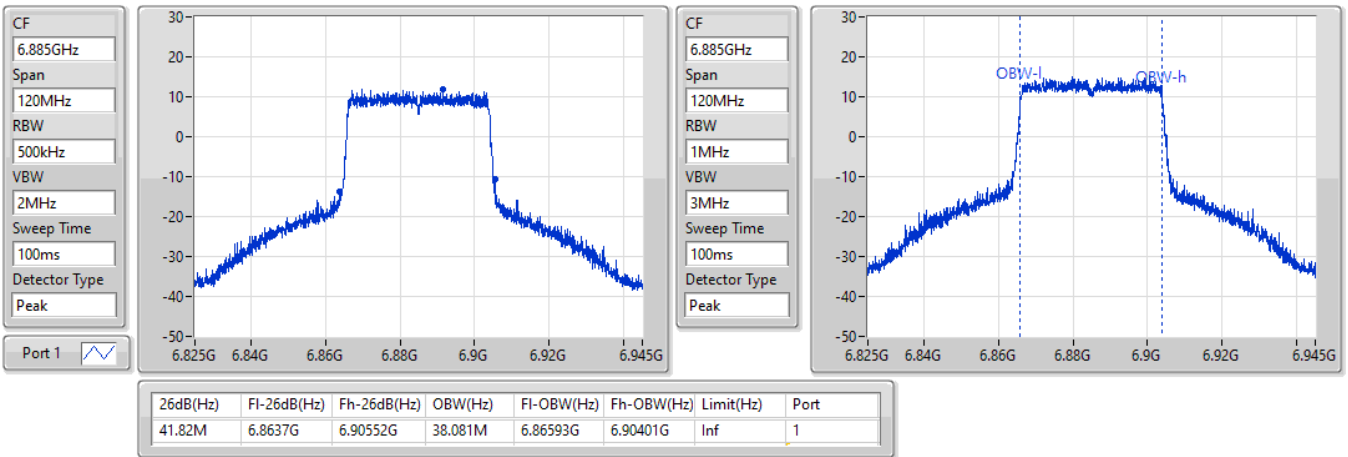

802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
6845MHz

03/01/2022

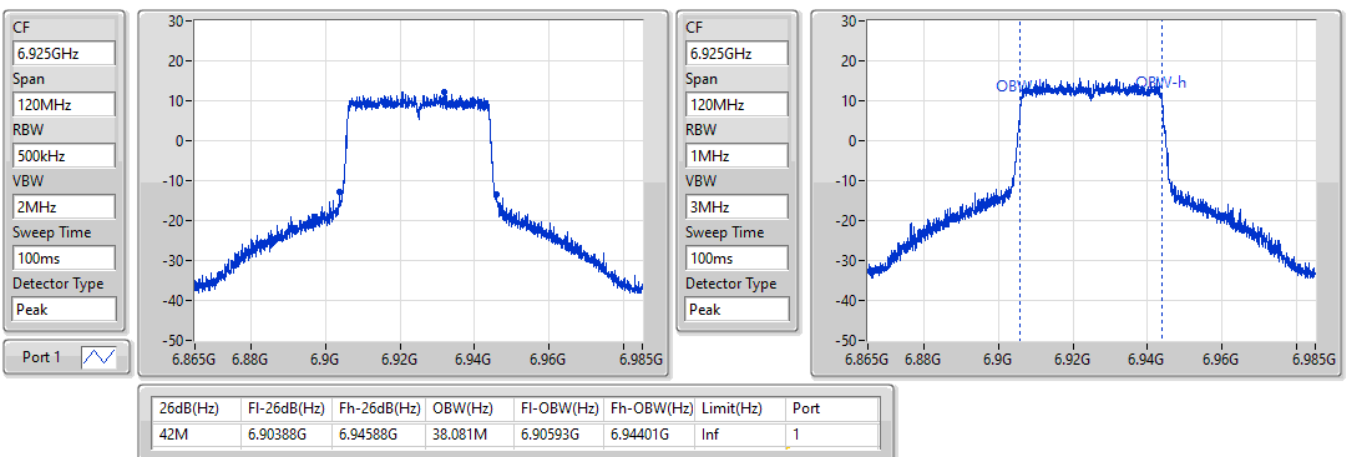


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
6885MHz Straddle 6.525-6.875GHz

03/01/2022

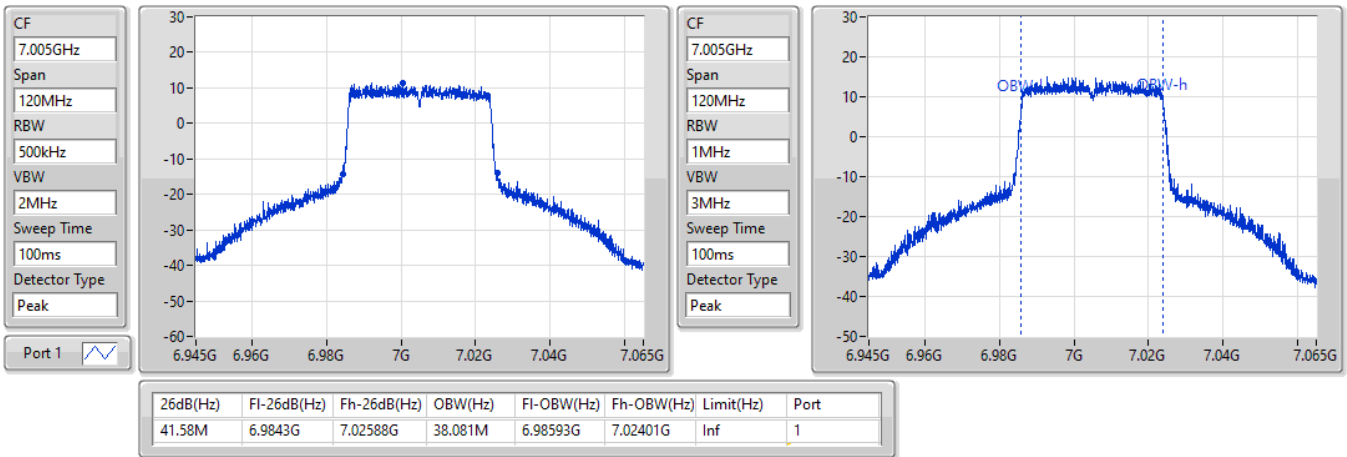

802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
6925MHz

03/01/2022

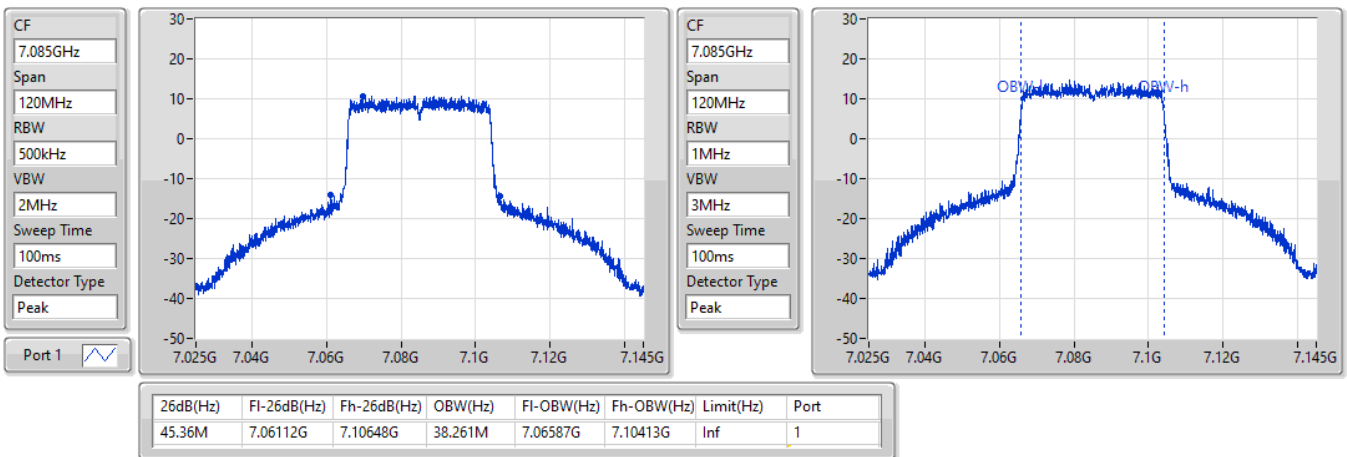


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
7005MHz

03/01/2022

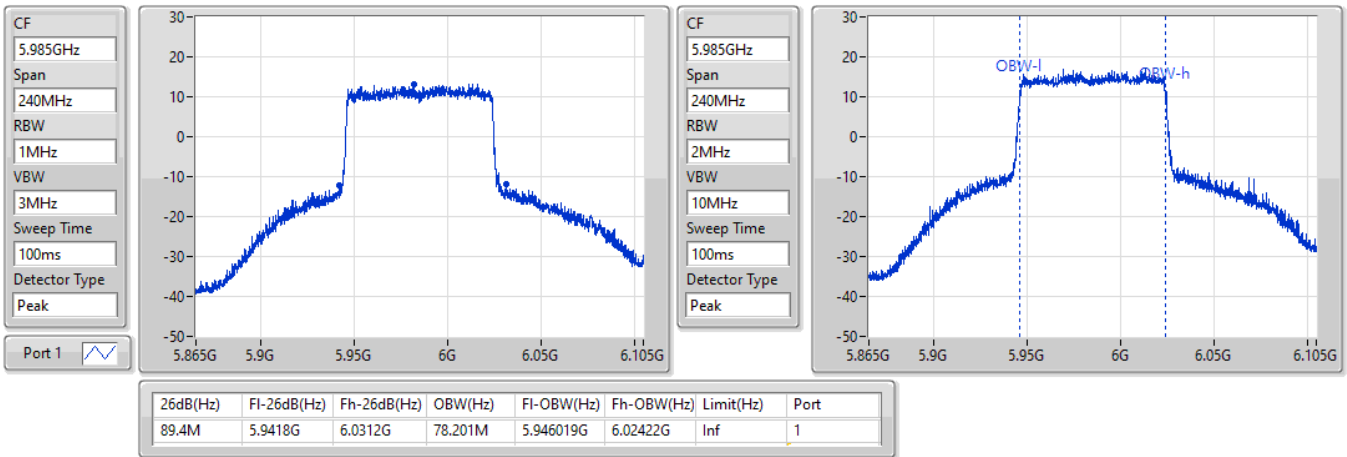

802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
7085MHz

03/01/2022

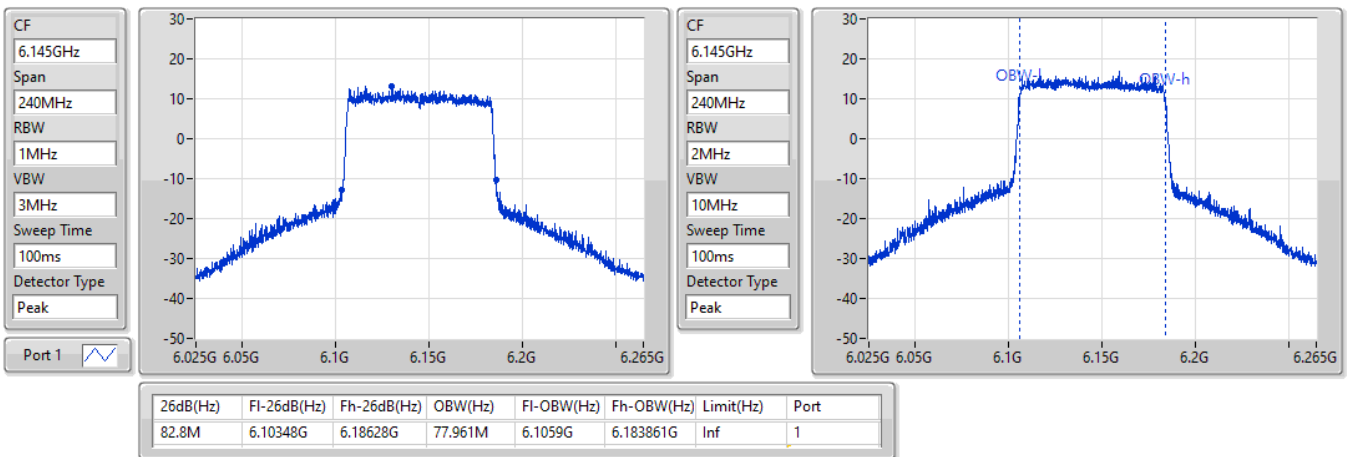


802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
5985MHz

03/01/2022

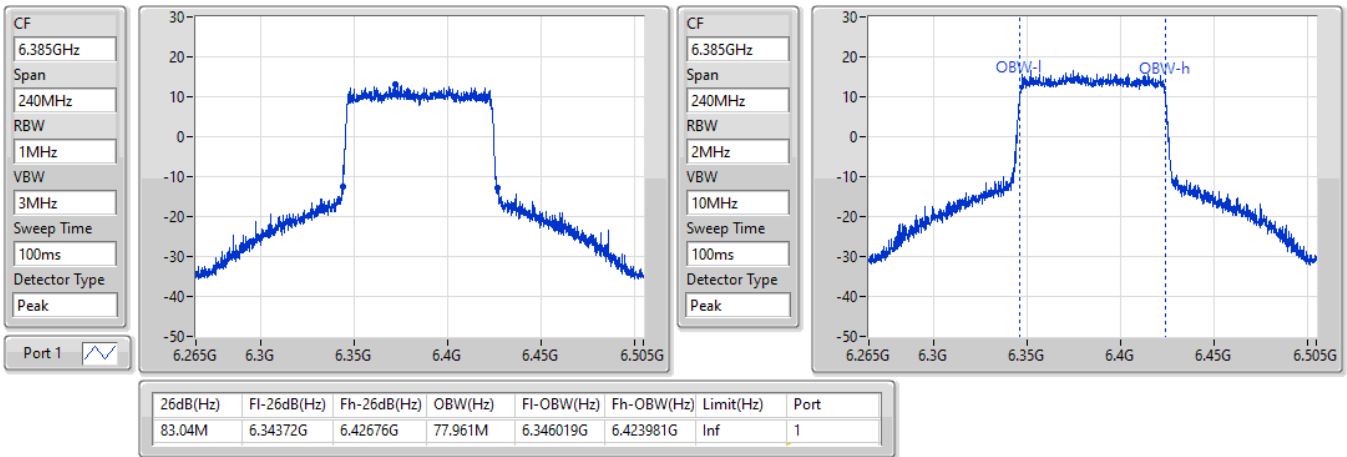

802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
6145MHz

03/01/2022

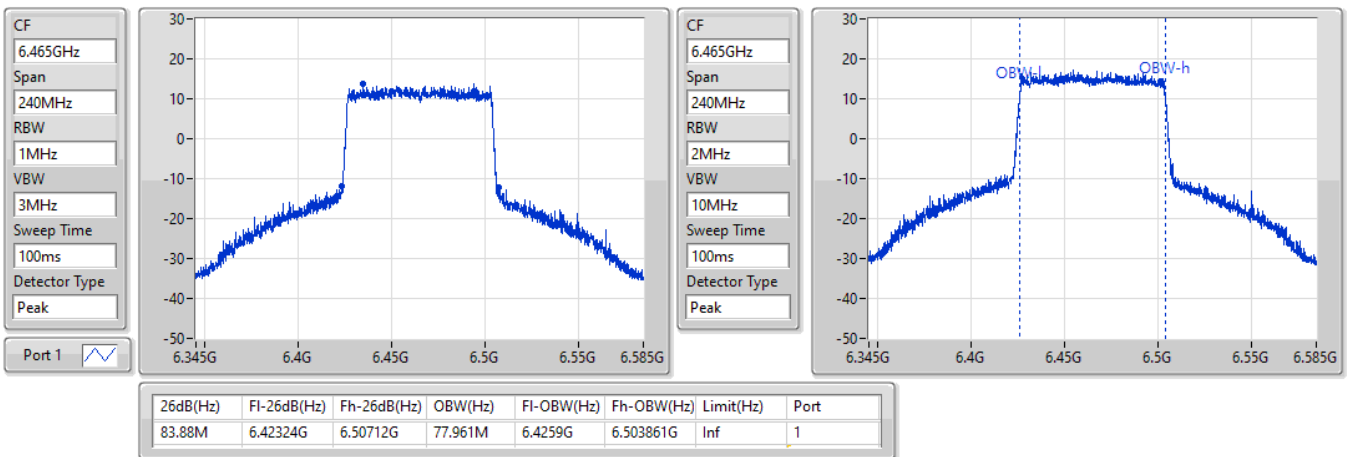


802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
6385MHz

03/01/2022

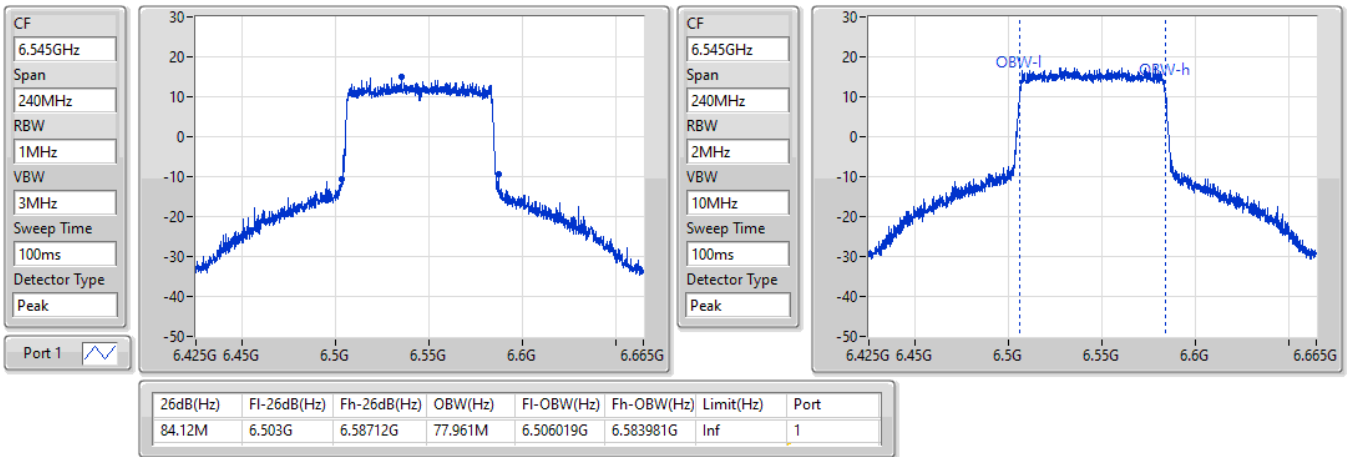

802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
6465MHz

03/01/2022

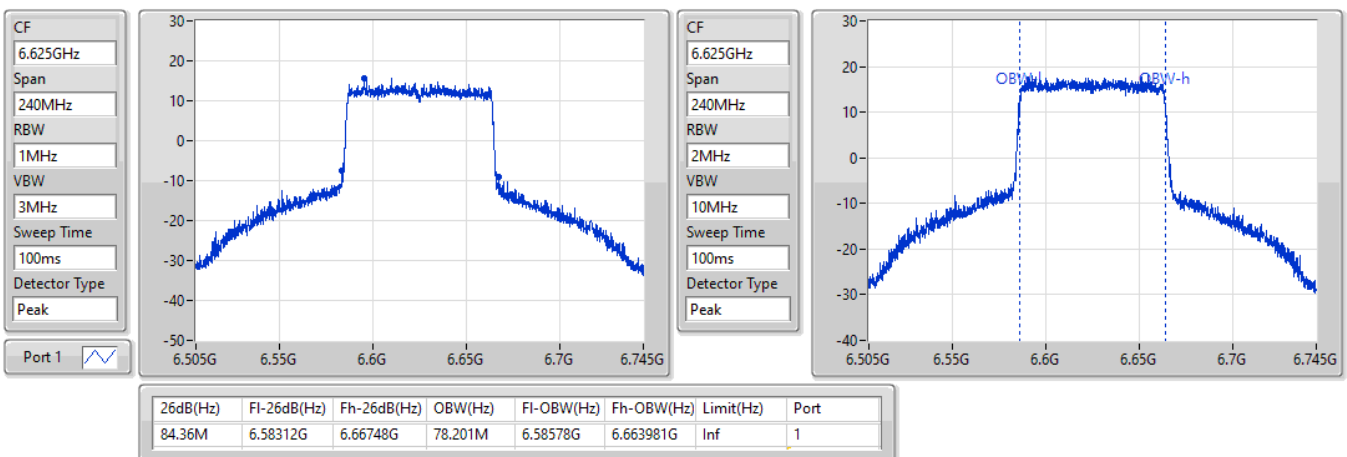


802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
6545MHz Straddle 6.425-6.525GHz

03/01/2022

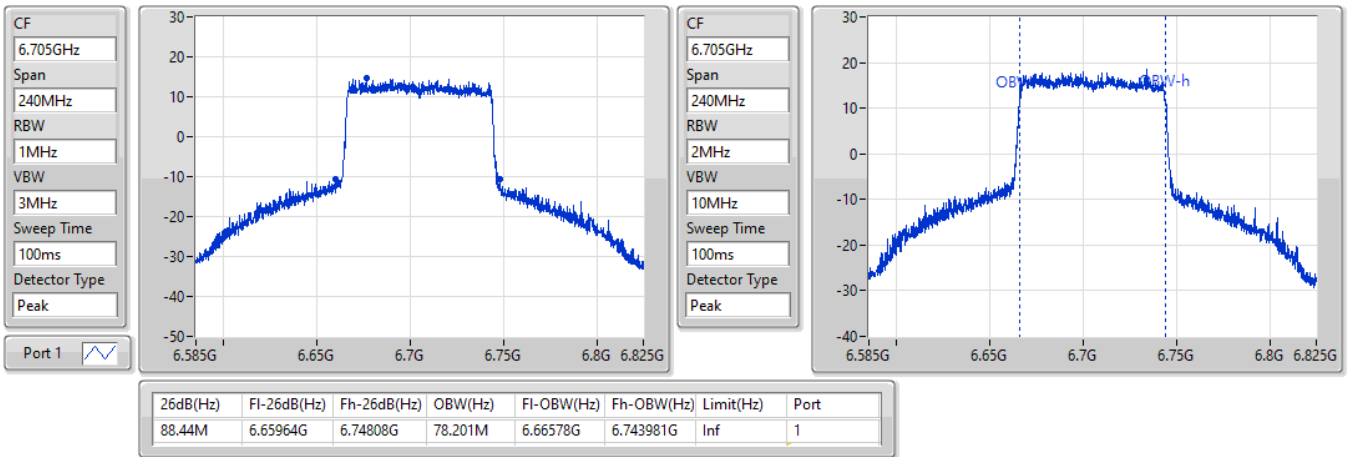

802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
6625MHz

03/01/2022

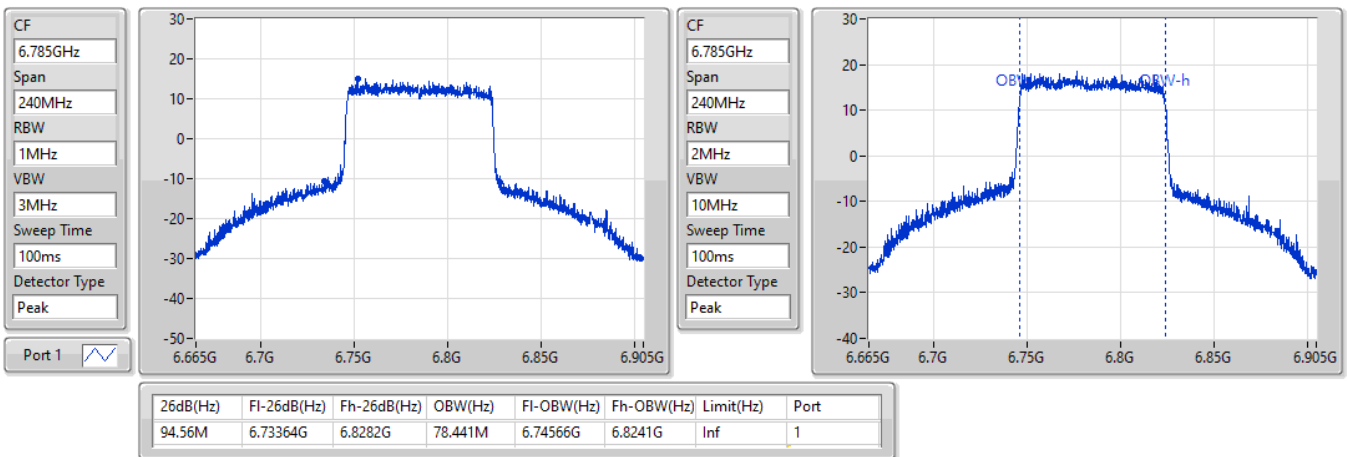


802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
6705MHz

03/01/2022

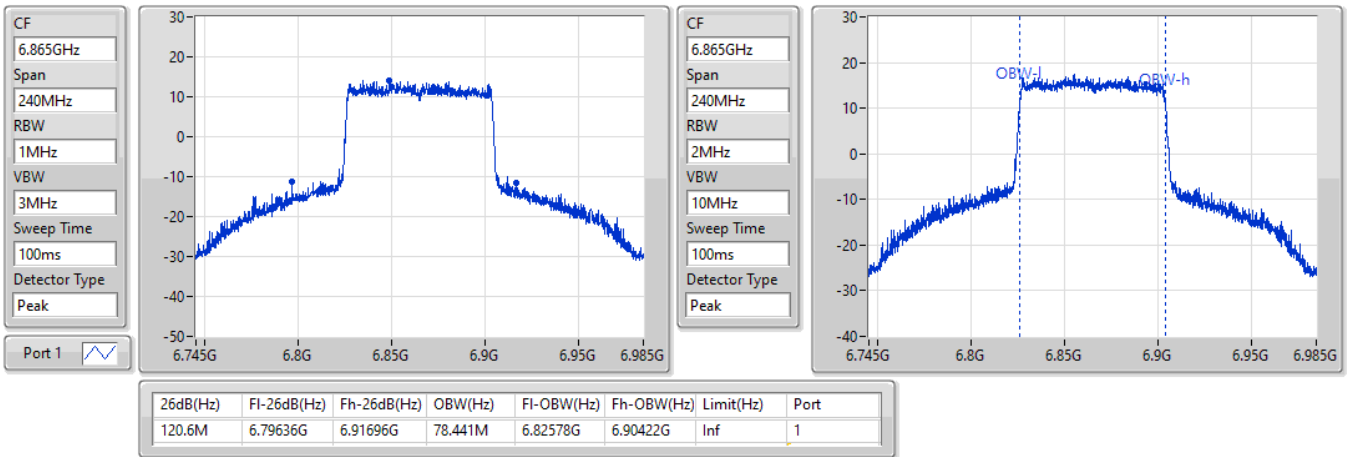

802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
6785MHz

03/01/2022

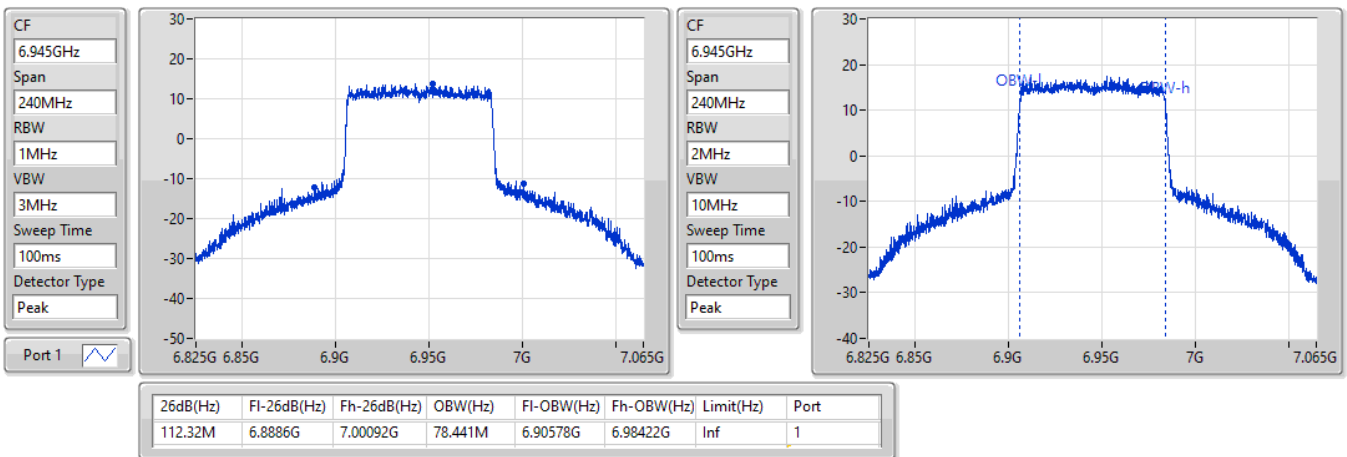


802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
6865MHz Straddle 6.525-6.875GHz

03/01/2022

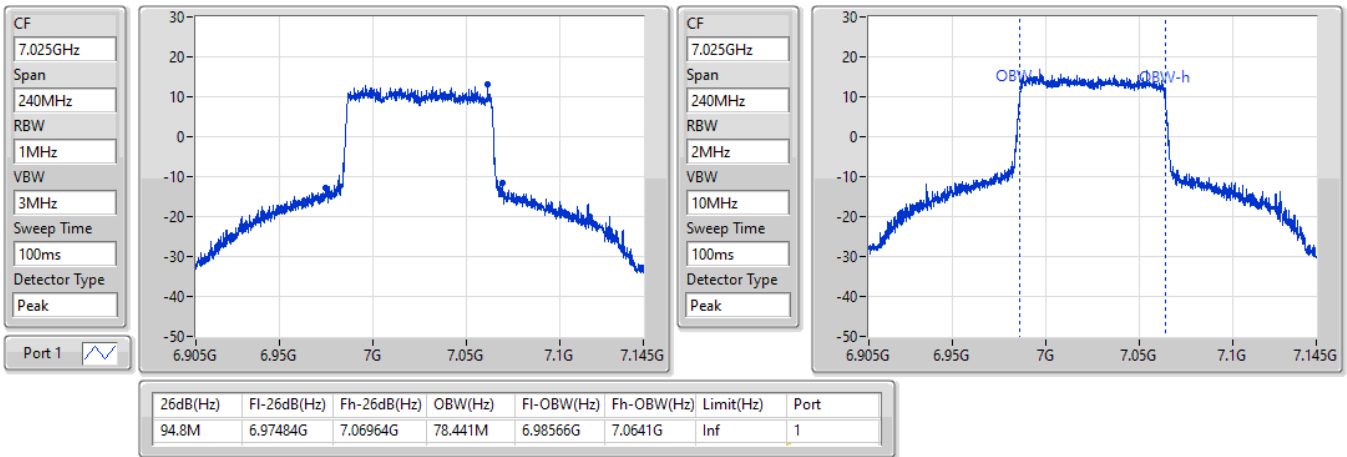

802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
6945MHz

03/01/2022

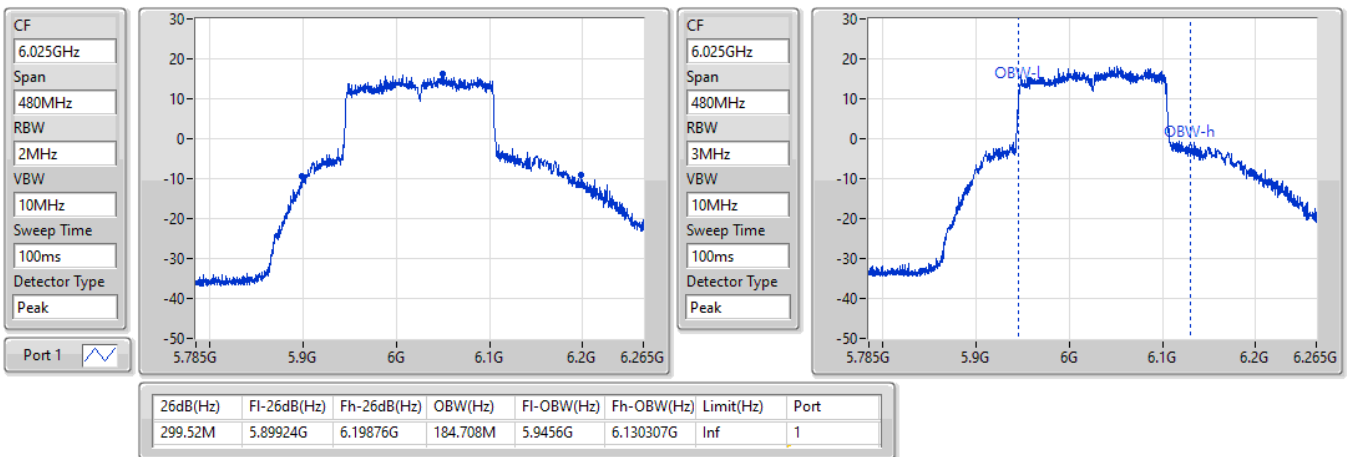


802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
7025MHz

03/01/2022

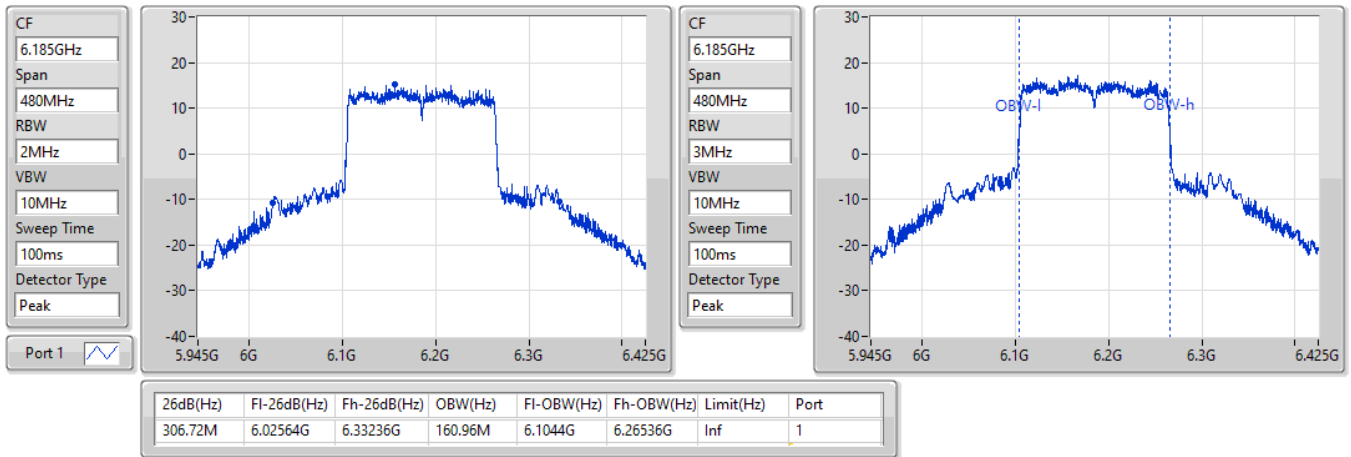

802.11ax HEW160_Nss1,(MCS0)_1TX
EBW
6025MHz

03/01/2022

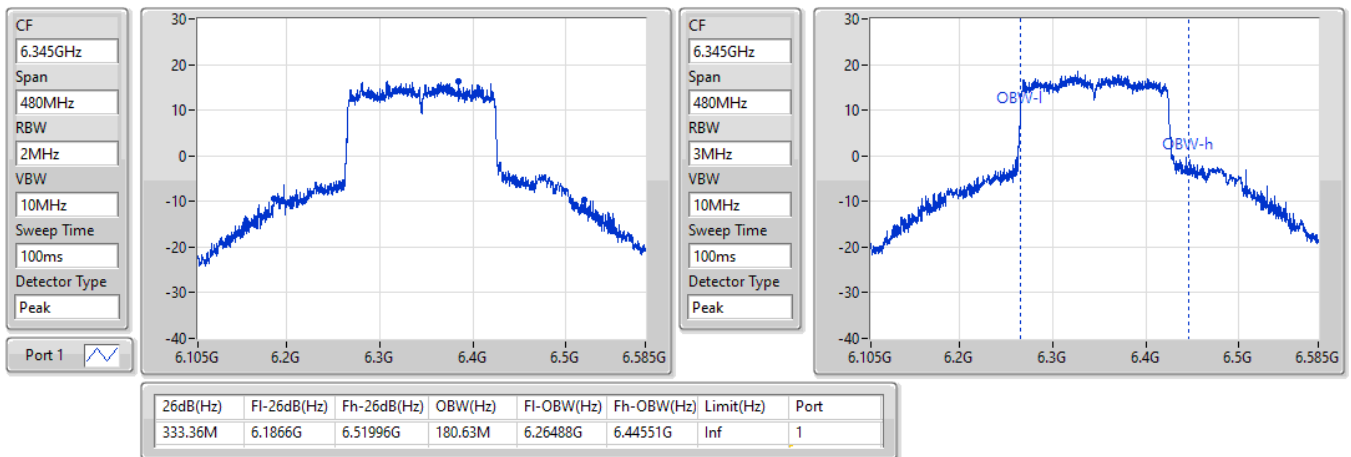


802.11ax HEW160_Nss1,(MCS0)_1TX
EBW
6185MHz

03/01/2022

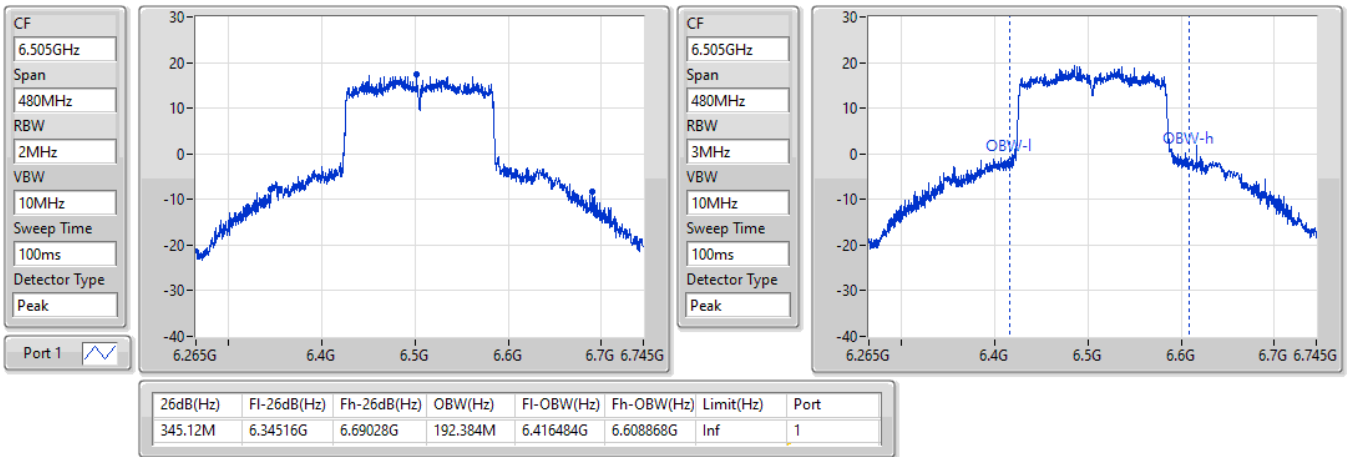

802.11ax HEW160_Nss1,(MCS0)_1TX
EBW
6345MHz

04/01/2022

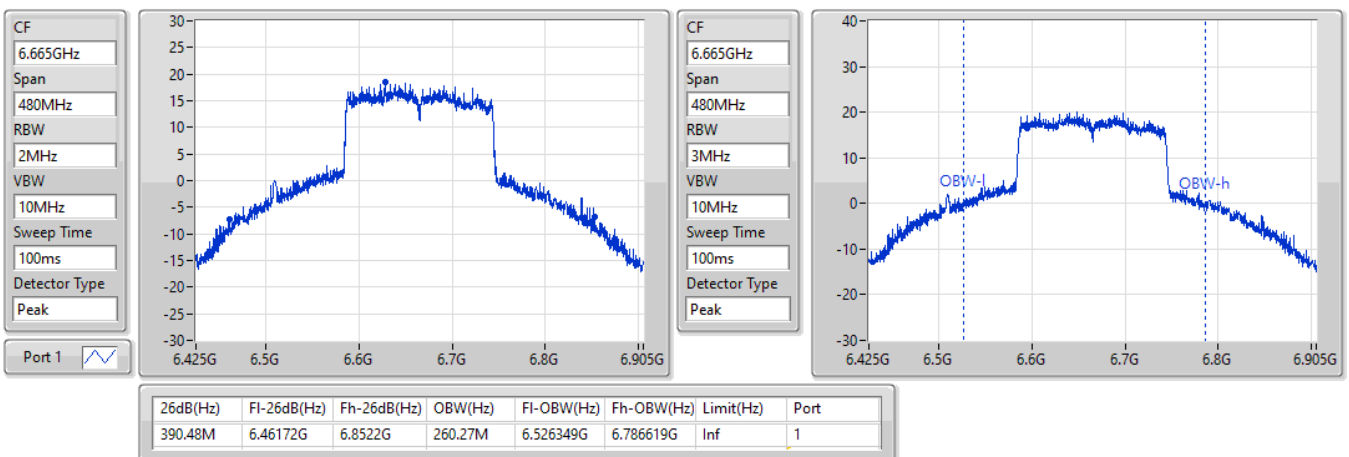


802.11ax HEW160_Nss1,(MCS0)_1TX
EBW
6505MHz Straddle 6.425-6.525GHz

04/01/2022

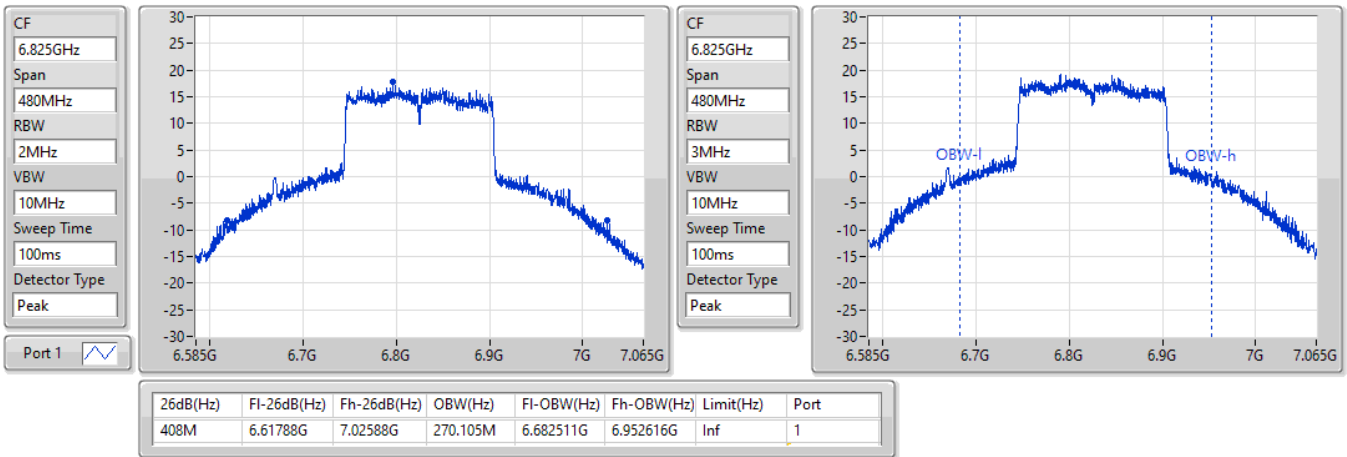

802.11ax HEW160_Nss1,(MCS0)_1TX
EBW
6665MHz

03/01/2022

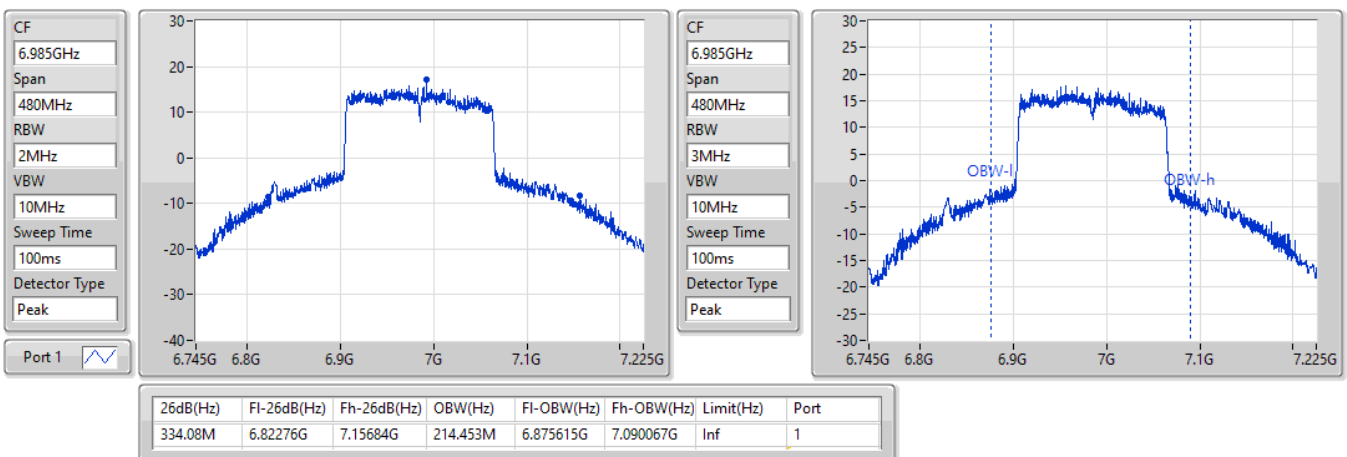


802.11ax HEW160_Nss1,(MCS0)_1TX
EBW
6825MHz Straddle 6.525-6.875GHz

03/01/2022


802.11ax HEW160_Nss1,(MCS0)_1TX
EBW
6985MHz

03/01/2022



For non beamforming mode / 2T2S

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.925-6.425GHz	-	-	-	-	-
802.11ax HEW20_Nss2,(MCS0)_2TX	27.12M	19.28M	19M3D1D	22.86M	19.19M
802.11ax HEW40_Nss2,(MCS0)_2TX	42.84M	38.201M	38M2D1D	42.18M	38.081M
802.11ax HEW80_Nss2,(MCS0)_2TX	83.16M	78.081M	78M1D1D	81.96M	77.841M
802.11ax HEW160_Nss2,(MCS0)_2TX	304.08M	158.561M	159MD1D	164.64M	157.121M
6.425-6.525GHz	-	-	-	-	-
802.11ax HEW20_Nss2,(MCS0)_2TX	26.82M	19.28M	19M3D1D	23.13M	19.19M
802.11ax HEW40_Nss2,(MCS0)_2TX	43.38M	38.201M	38M2D1D	42.48M	38.141M
802.11ax HEW80_Nss2,(MCS0)_2TX	87.24M	77.961M	78M0D1D	81.48M	77.841M
802.11ax HEW160_Nss2,(MCS0)_2TX	312M	159.28M	159MD1D	260.16M	158.321M
6.525-6.875GHz	-	-	-	-	-
802.11ax HEW20_Nss2,(MCS0)_2TX	28.47M	19.25M	19M2D1D	22.47M	19.22M
802.11ax HEW40_Nss2,(MCS0)_2TX	44.22M	38.201M	38M2D1D	42.42M	38.081M
802.11ax HEW80_Nss2,(MCS0)_2TX	82.92M	77.961M	78M0D1D	82.2M	77.841M
802.11ax HEW160_Nss2,(MCS0)_2TX	316.56M	159.76M	160MD1D	267.6M	158.801M
6.875-7.125GHz	-	-	-	-	-
802.11ax HEW20_Nss2,(MCS0)_2TX	24.72M	19.28M	19M3D1D	22.32M	19.19M
802.11ax HEW40_Nss2,(MCS0)_2TX	42.9M	38.201M	38M2D1D	42.54M	38.141M
802.11ax HEW80_Nss2,(MCS0)_2TX	82.32M	78.081M	78M1D1D	81.72M	77.961M
802.11ax HEW160_Nss2,(MCS0)_2TX	316.56M	159.52M	160MD1D	315.84M	159.04M

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Max-OBW = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Min-OBW = Minimum 99% occupied bandwidth

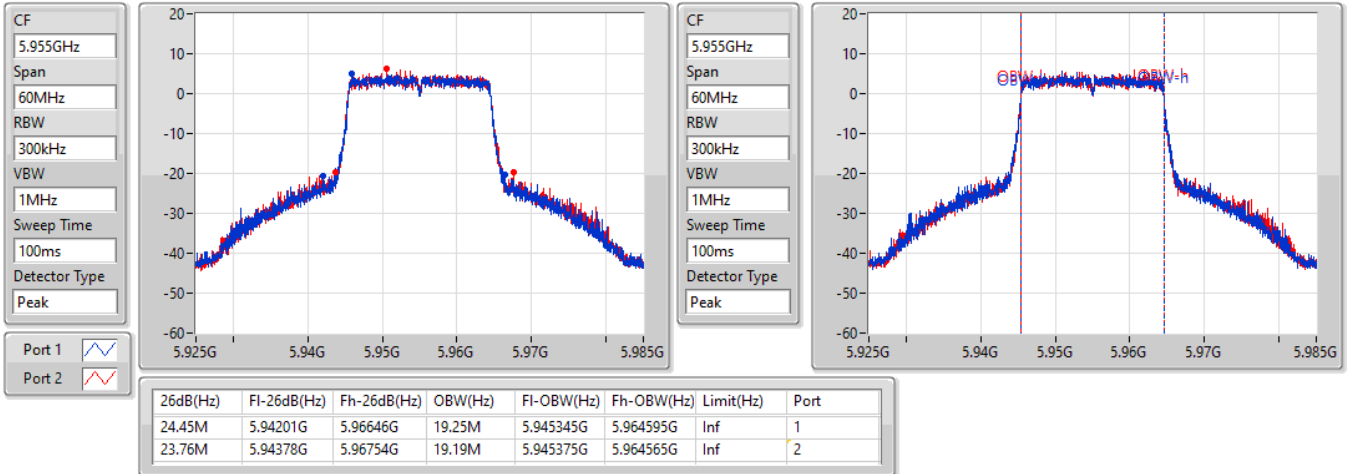
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11ax HEW20_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5955MHz	Pass	Inf	24.45M	19.25M	23.76M	19.19M
6175MHz	Pass	Inf	27.12M	19.25M	22.86M	19.22M
6415MHz	Pass	Inf	25.95M	19.28M	25.68M	19.25M
6435MHz	Pass	Inf	24.42M	19.28M	25.77M	19.25M
6475MHz	Pass	Inf	26.82M	19.28M	24.24M	19.19M
6515MHz	Pass	Inf	23.13M	19.22M	23.64M	19.28M
6535MHz	Pass	Inf	23.85M	19.22M	22.47M	19.22M
6695MHz	Pass	Inf	28.47M	19.25M	23.4M	19.25M
6855MHz	Pass	Inf	22.98M	19.25M	26.13M	19.25M
6875MHz Straddle 6.525-6.875GHz	Pass	Inf	24.12M	19.25M	23.7M	19.22M
6895MHz	Pass	Inf	24.72M	19.28M	22.44M	19.25M
6995MHz	Pass	Inf	24M	19.25M	22.32M	19.19M
7095MHz	Pass	Inf	23.22M	19.28M	23.58M	19.25M
802.11ax HEW40_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5965MHz	Pass	Inf	42.36M	38.141M	42.66M	38.081M
6165MHz	Pass	Inf	42.18M	38.141M	42.78M	38.141M
6405MHz	Pass	Inf	42.66M	38.141M	42.84M	38.201M
6445MHz	Pass	Inf	42.6M	38.201M	43.38M	38.201M
6485MHz	Pass	Inf	42.48M	38.141M	42.72M	38.201M
6525MHz Straddle 6.425-6.525GHz	Pass	Inf	42.72M	38.201M	43.08M	38.141M
6565MHz	Pass	Inf	42.72M	38.141M	44.22M	38.141M
6685MHz	Pass	Inf	43.5M	38.201M	42.84M	38.081M
6845MHz	Pass	Inf	42.42M	38.141M	42.84M	38.141M
6885MHz Straddle 6.525-6.875GHz	Pass	Inf	42.54M	38.201M	42.84M	38.201M
6925MHz	Pass	Inf	42.54M	38.141M	42.84M	38.141M
7005MHz	Pass	Inf	42.66M	38.141M	42.9M	38.141M
7085MHz	Pass	Inf	42.66M	38.201M	42.9M	38.141M
802.11ax HEW80_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5985MHz	Pass	Inf	82.44M	78.081M	81.96M	77.961M
6145MHz	Pass	Inf	83.16M	78.081M	82.68M	77.841M
6385MHz	Pass	Inf	82.2M	77.841M	82.8M	77.961M
6465MHz	Pass	Inf	82.92M	77.841M	82.68M	77.841M
6545MHz Straddle 6.425-6.525GHz	Pass	Inf	87.24M	77.841M	81.48M	77.961M
6625MHz	Pass	Inf	82.8M	77.841M	82.2M	77.961M
6705MHz	Pass	Inf	82.92M	77.961M	82.56M	77.841M
6785MHz	Pass	Inf	82.44M	77.841M	82.32M	77.961M
6865MHz Straddle 6.525-6.875GHz	Pass	Inf	82.68M	77.961M	82.68M	77.841M
6945MHz	Pass	Inf	82.2M	77.961M	81.72M	77.961M
7025MHz	Pass	Inf	82.32M	78.081M	82.08M	78.081M
802.11ax HEW160_Nss2,(MCS0)_2TX	-	-	-	-	-	-
6025MHz	Pass	Inf	215.04M	157.841M	209.52M	157.601M
6185MHz	Pass	Inf	304.08M	158.561M	302.4M	158.561M
6345MHz	Pass	Inf	165.6M	157.361M	164.64M	157.121M
6505MHz Straddle 6.425-6.525GHz	Pass	Inf	260.16M	158.321M	312M	159.28M
6665MHz	Pass	Inf	311.52M	159.76M	316.56M	159.76M
6825MHz Straddle 6.525-6.875GHz	Pass	Inf	310.8M	158.801M	267.6M	158.801M
6985MHz	Pass	Inf	315.84M	159.04M	316.56M	159.52M

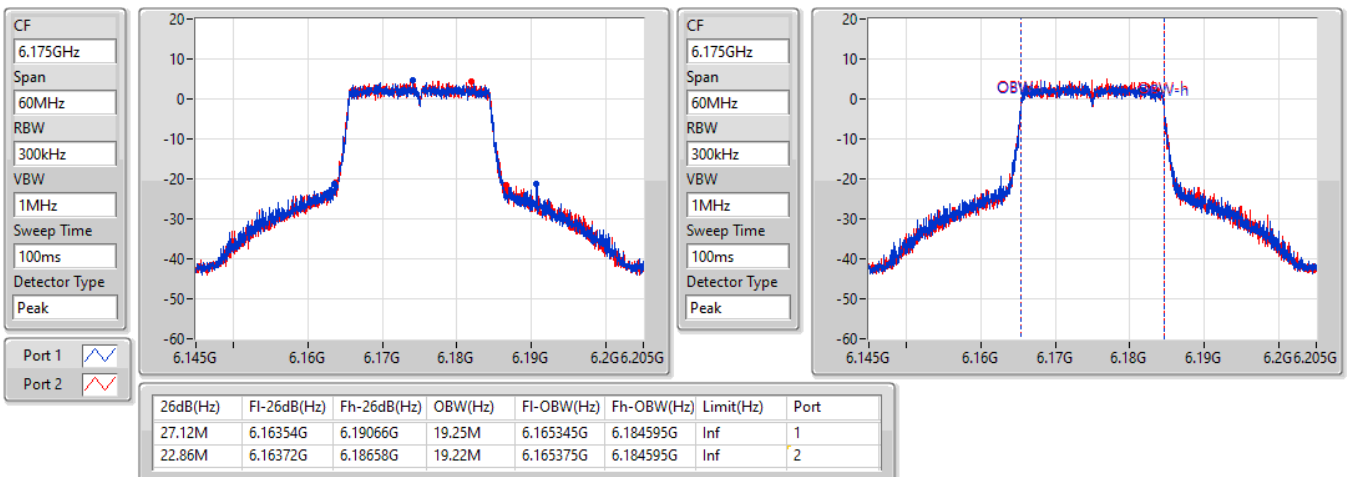
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
5955MHz

03/01/2022

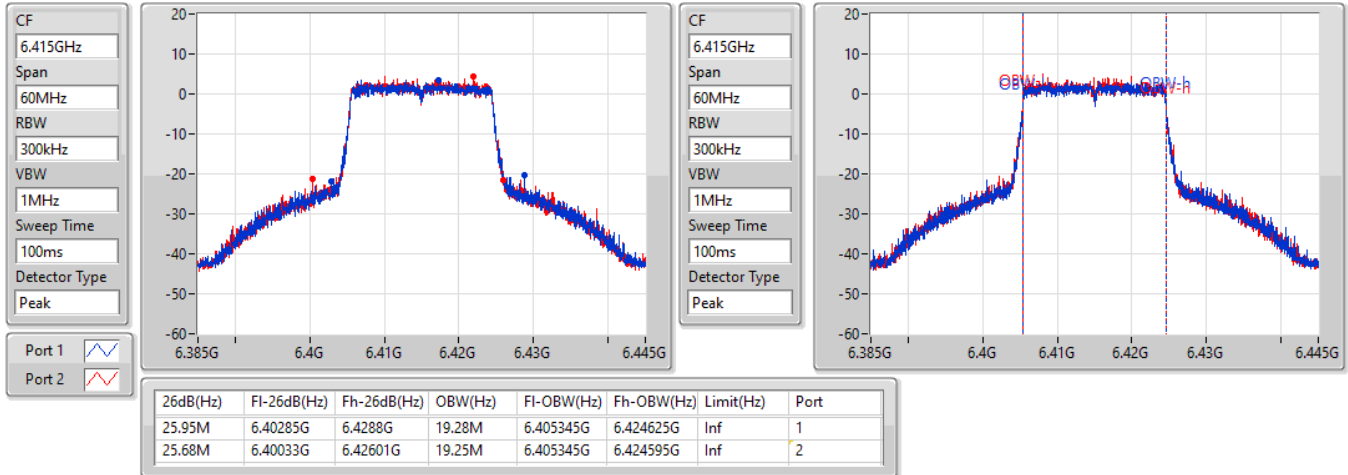

802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
6175MHz

03/01/2022

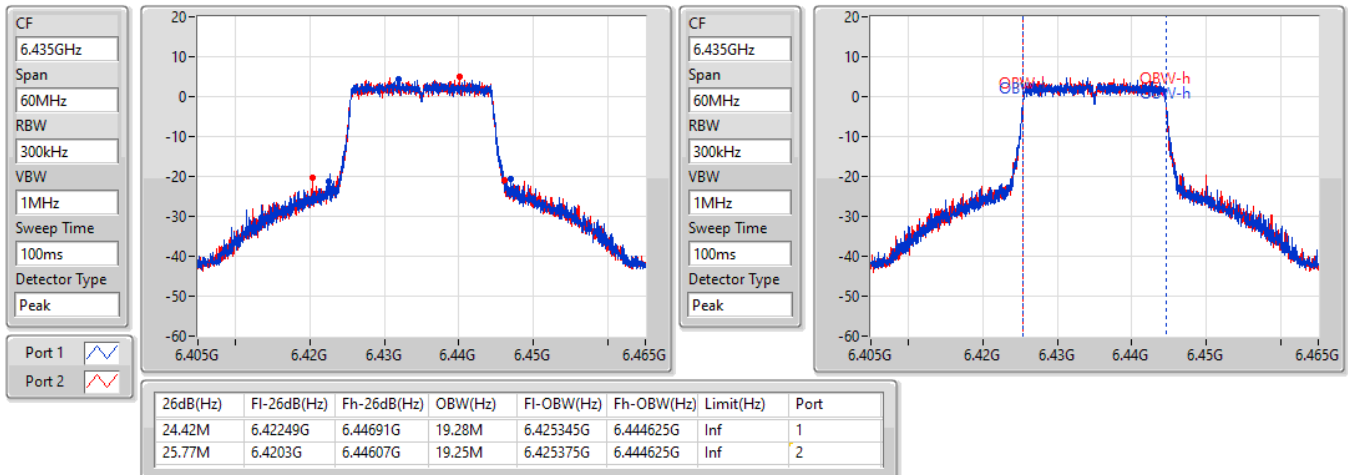


802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
6415MHz

03/01/2022

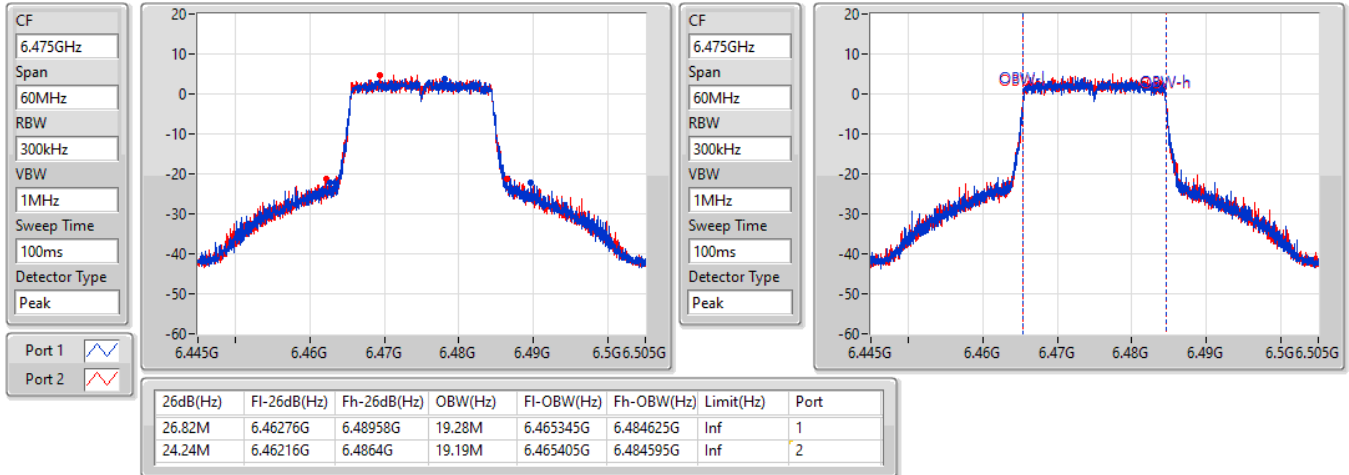

802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
6435MHz

03/01/2022

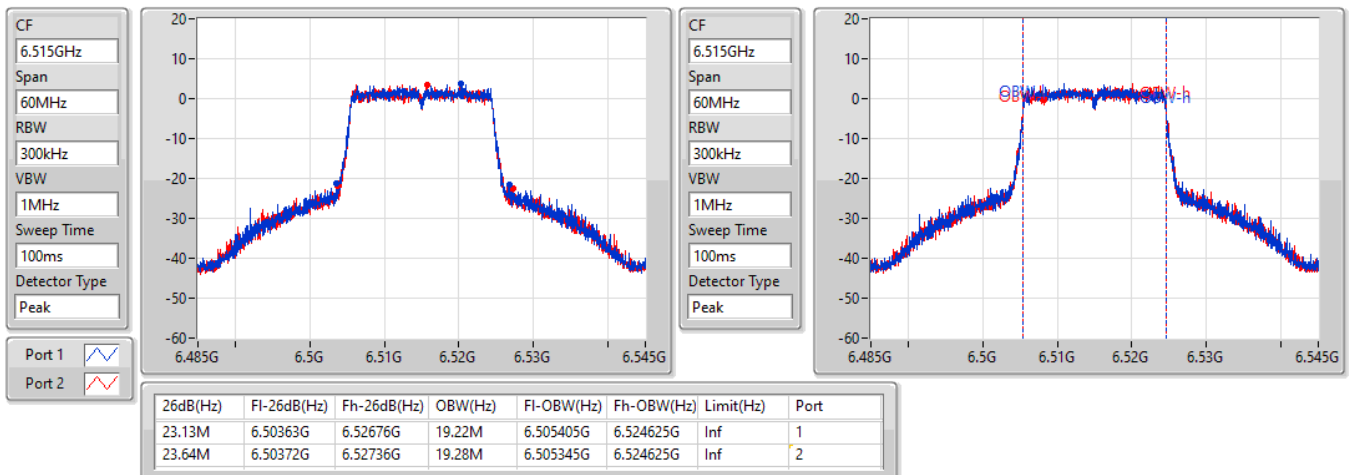


802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
6475MHz

03/01/2022

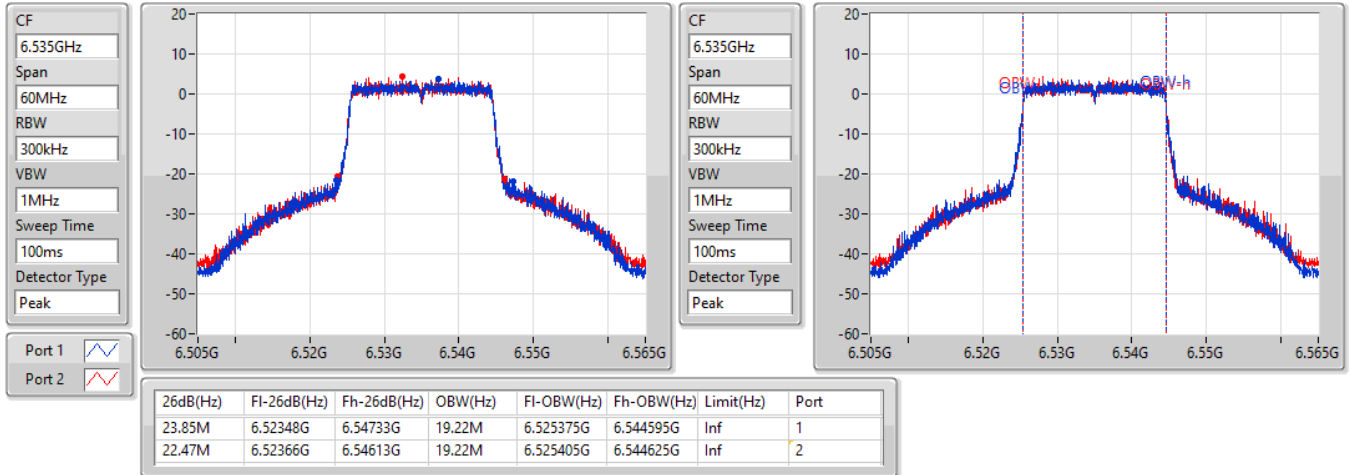

802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
6515MHz

03/01/2022

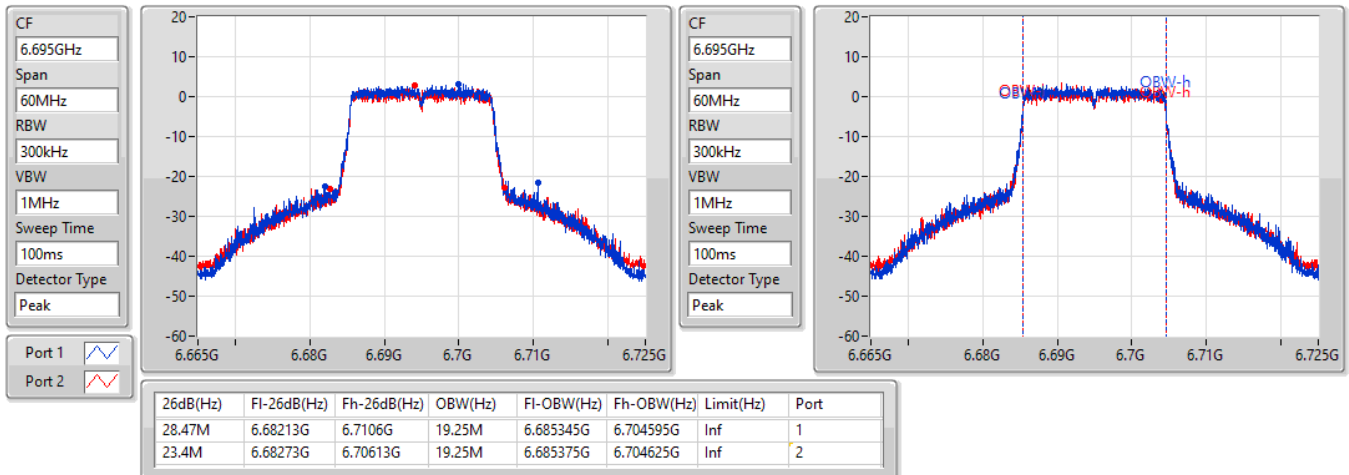


802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
6535MHz

03/01/2022

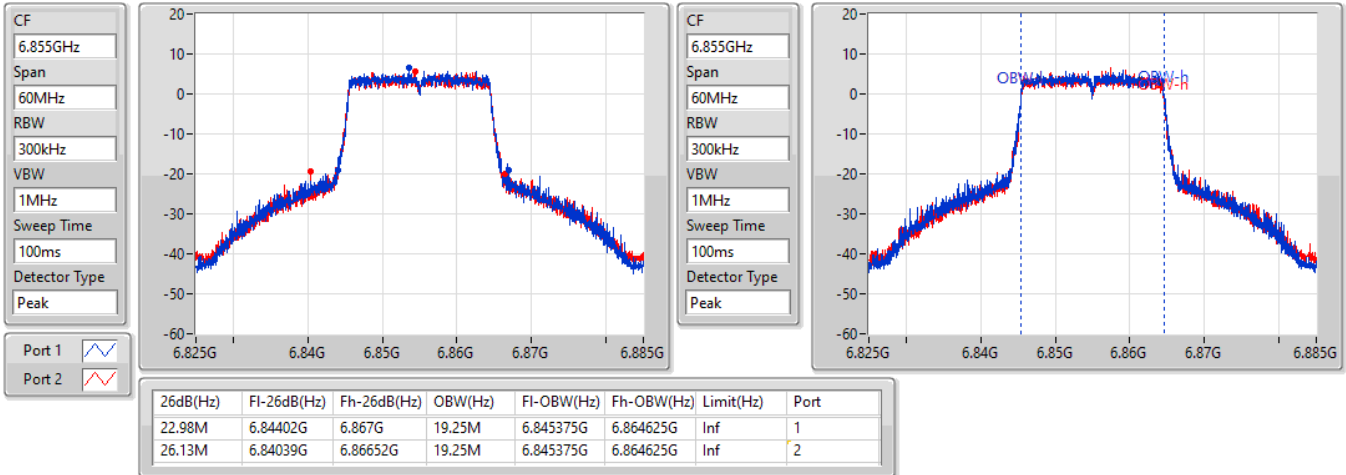

802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
6695MHz

03/01/2022

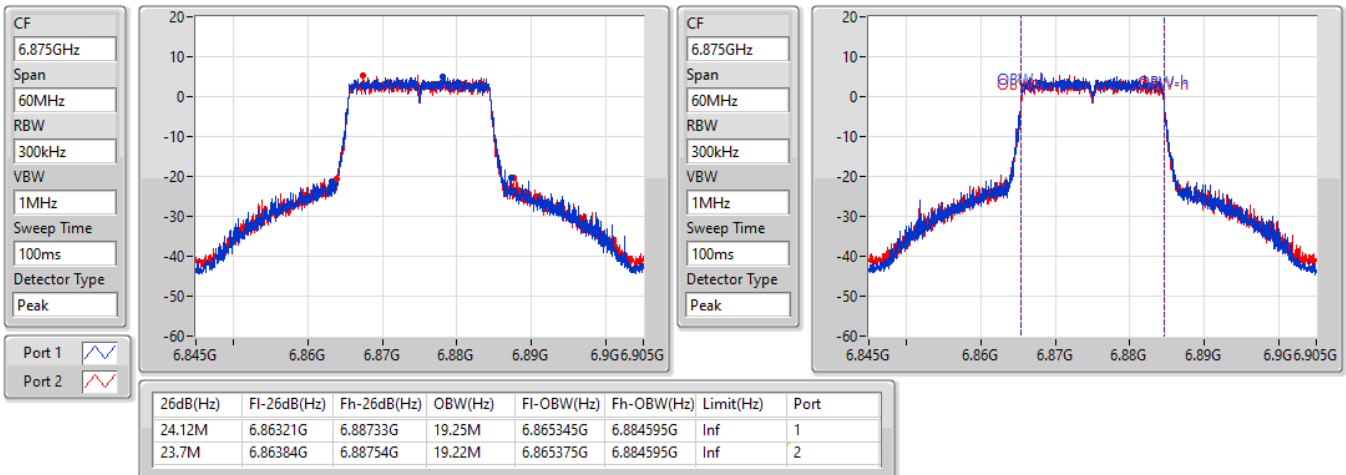


802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
6855MHz

03/01/2022

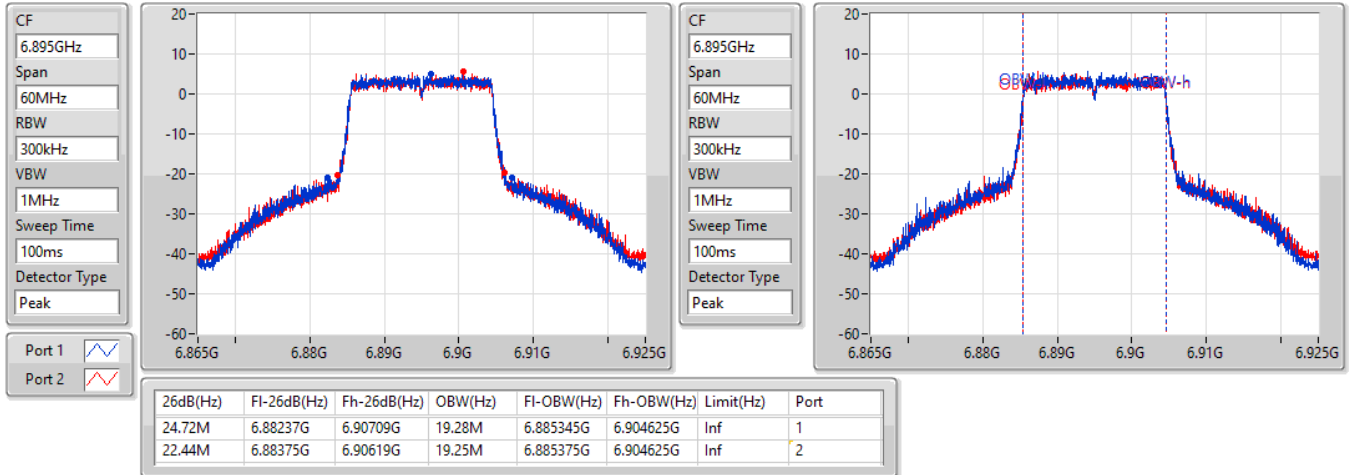

802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
6875MHz Straddle 6.525-6.875GHz

03/01/2022

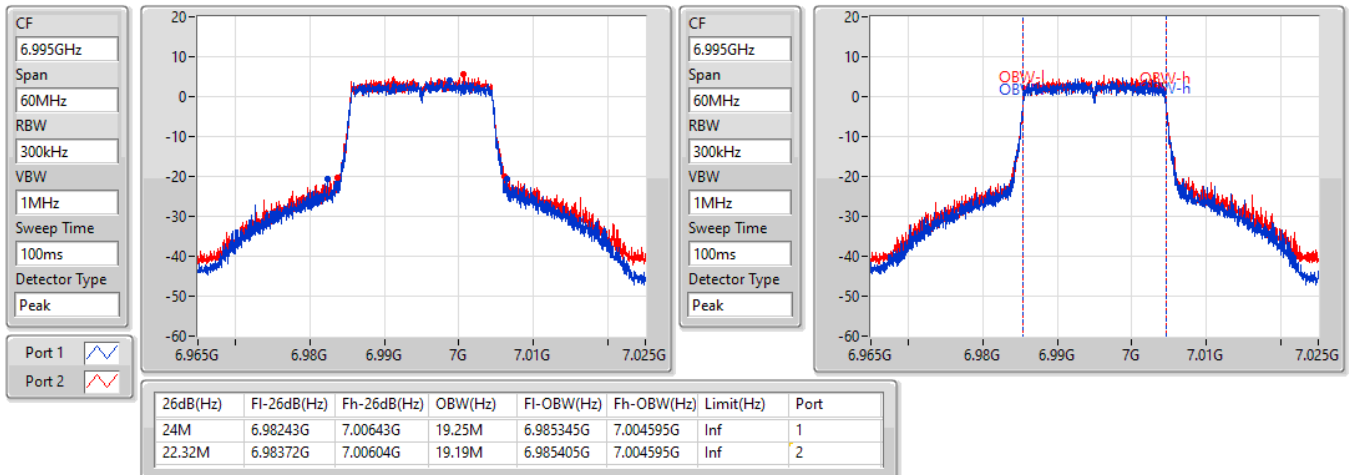


802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
6895MHz

03/01/2022

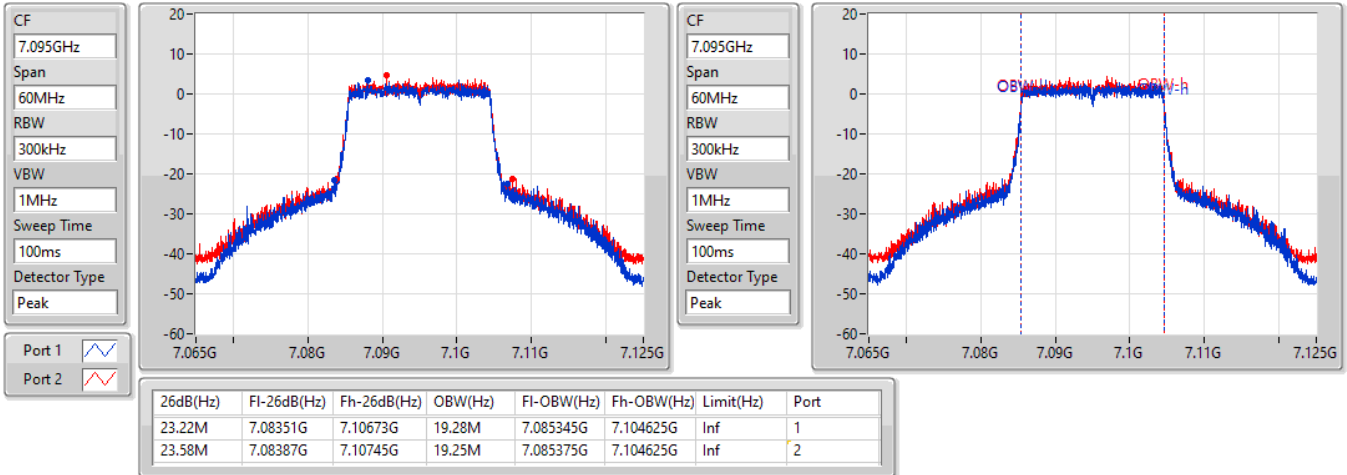

802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
6995MHz

03/01/2022

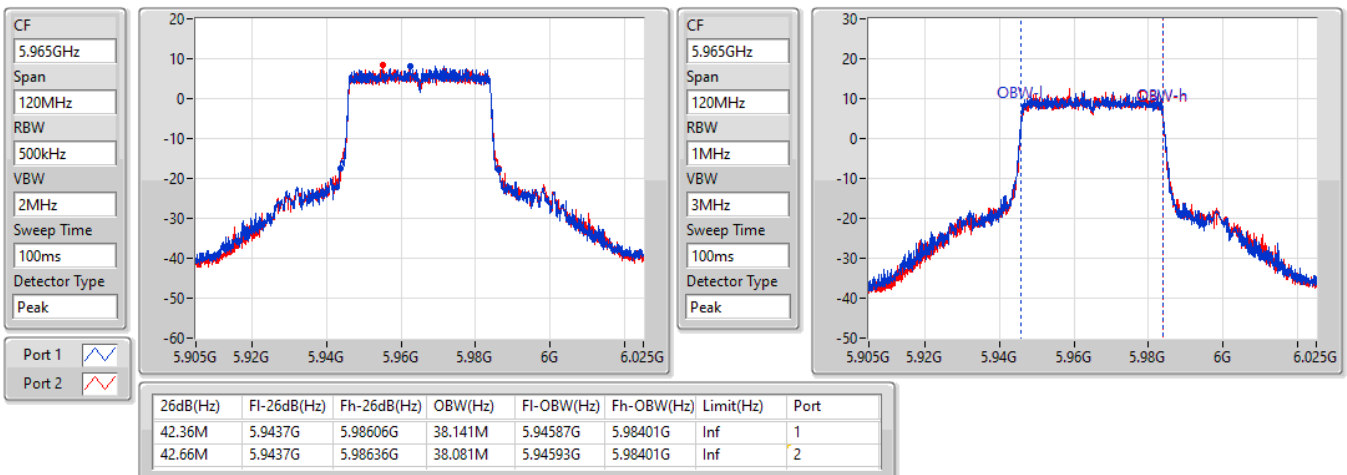


802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
7095MHz

03/01/2022

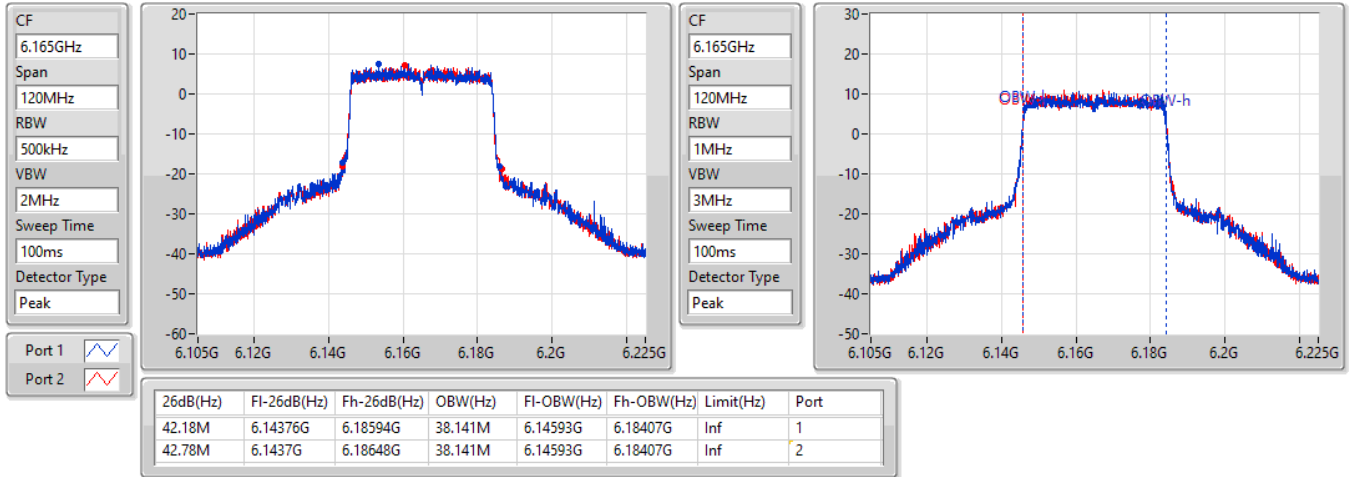

802.11ax HEW40_Nss2,(MCS0)_2TX
EBW
5965MHz

03/01/2022

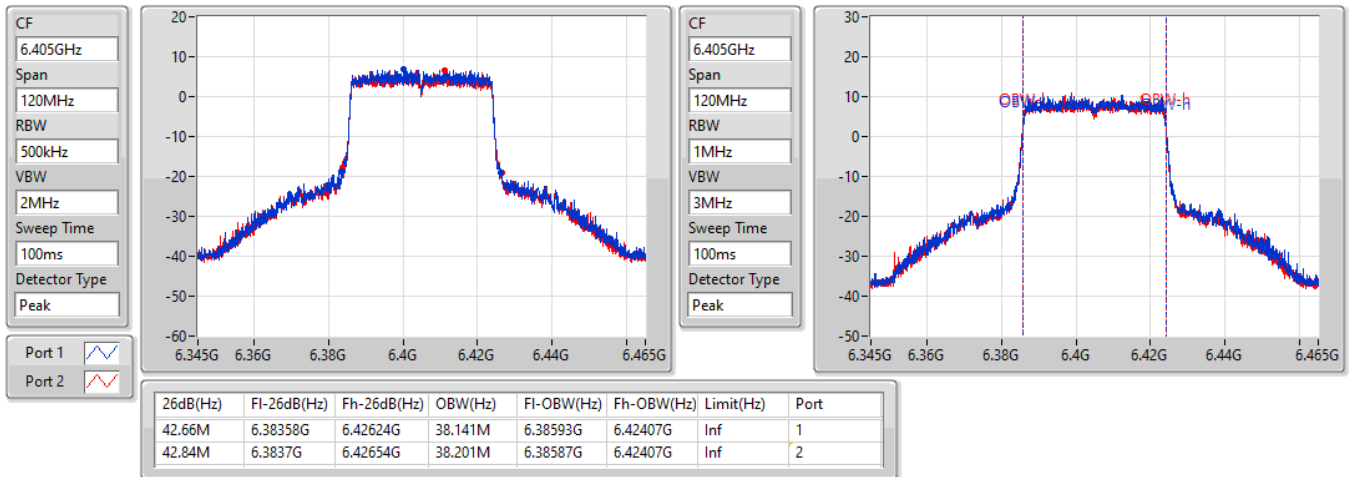


802.11ax HEW40_Nss2,(MCS0)_2TX
EBW
6165MHz

03/01/2022

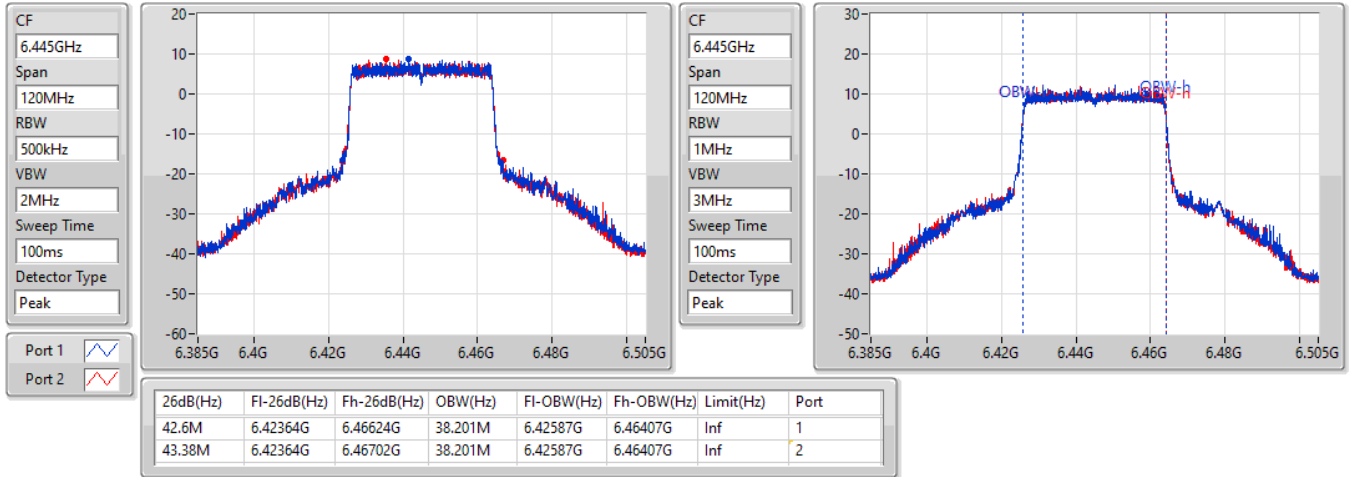

802.11ax HEW40_Nss2,(MCS0)_2TX
EBW
6405MHz

03/01/2022

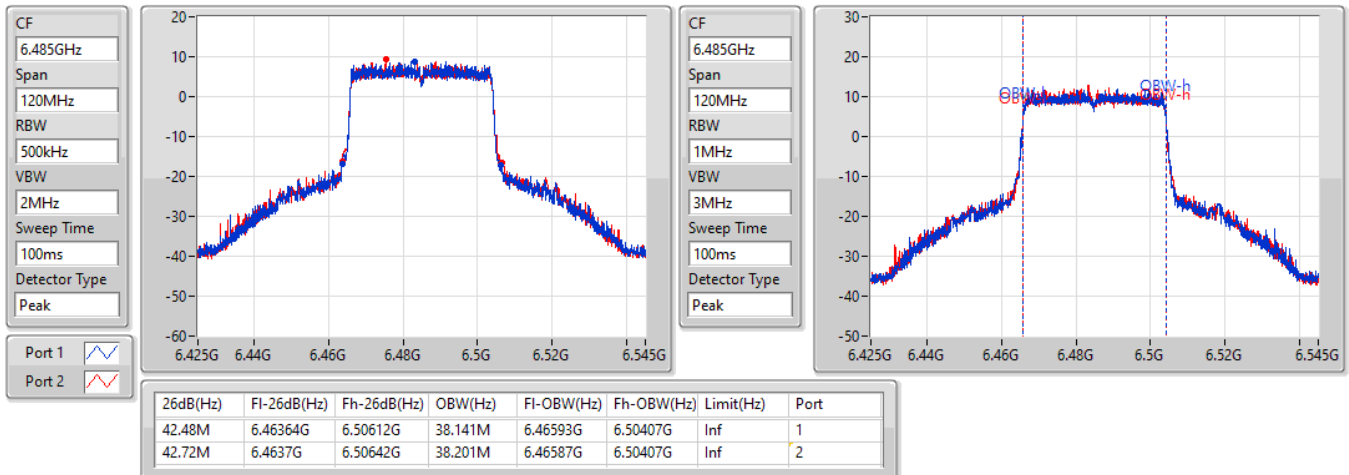


802.11ax HEW40_Nss2,(MCS0)_2TX
EBW
6445MHz

03/01/2022

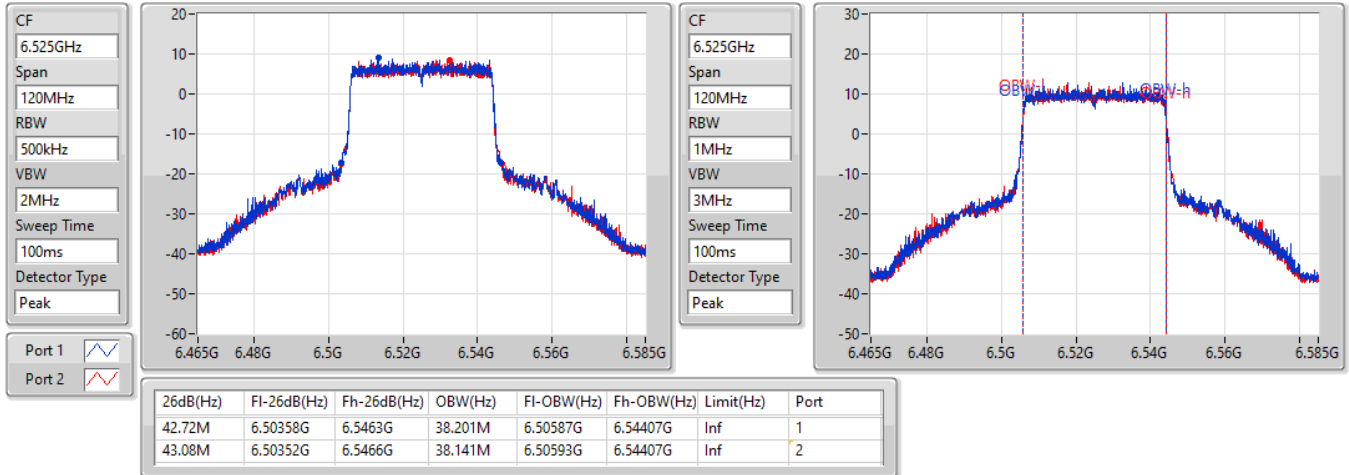

802.11ax HEW40_Nss2,(MCS0)_2TX
EBW
6485MHz

03/01/2022



802.11ax HEW40_Nss2,(MCS0)_2TX
EBW
6525MHz Straddle 6.425-6.525GHz

03/01/2022

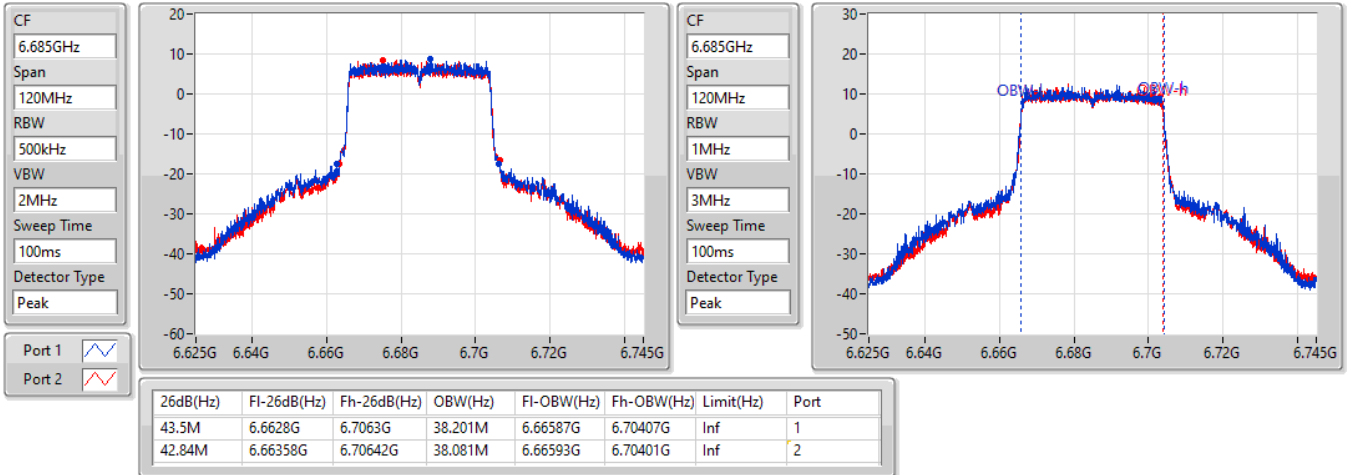

802.11ax HEW40_Nss2,(MCS0)_2TX
EBW
6565MHz

03/01/2022

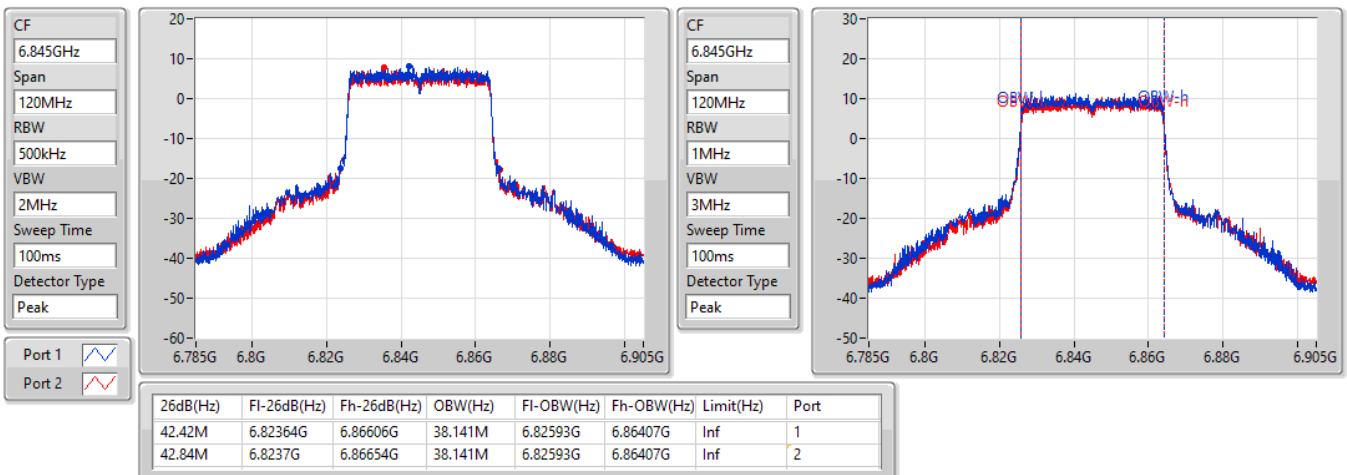


802.11ax HEW40_Nss2,(MCS0)_2TX
EBW
6685MHz

03/01/2022

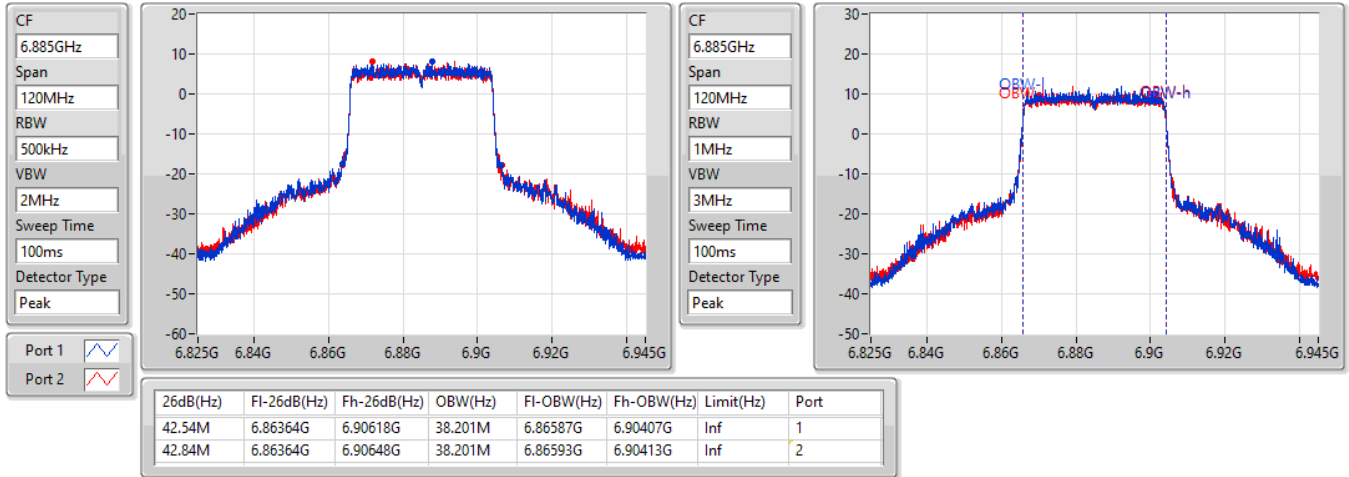

802.11ax HEW40_Nss2,(MCS0)_2TX
EBW
6845MHz

03/01/2022

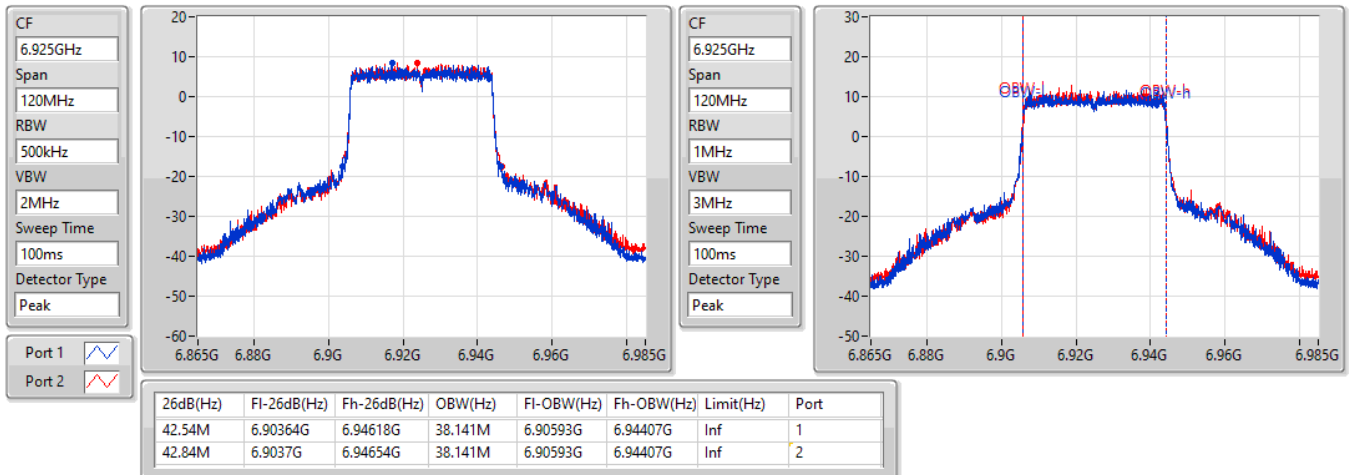


802.11ax HEW40_Nss2,(MCS0)_2TX
EBW
6885MHz Straddle 6.525-6.875GHz

03/01/2022

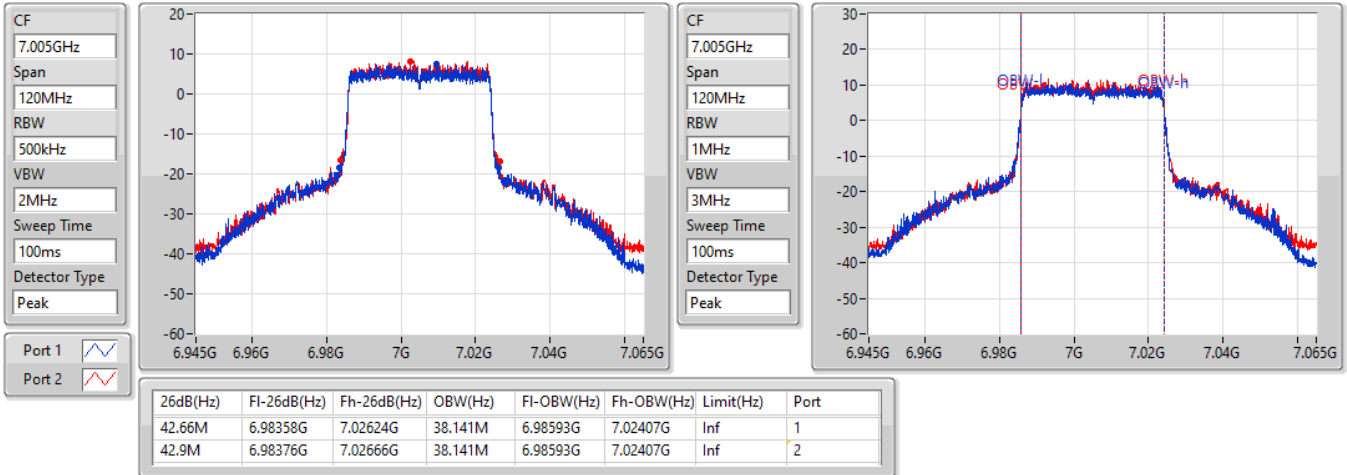

802.11ax HEW40_Nss2,(MCS0)_2TX
EBW
6925MHz

03/01/2022

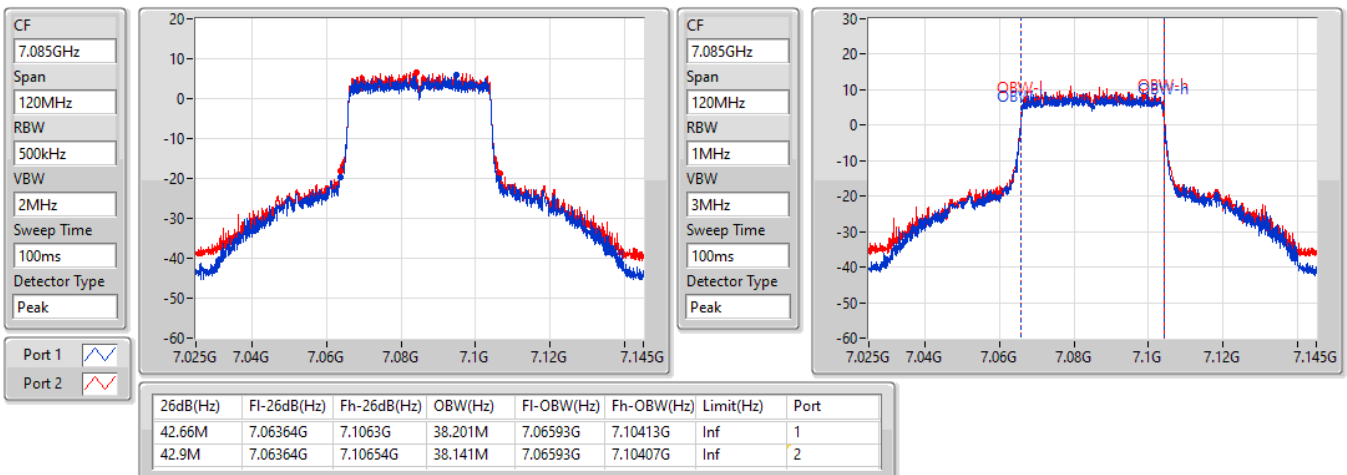


802.11ax HEW40_Nss2,(MCS0)_2TX
EBW
7005MHz

03/01/2022

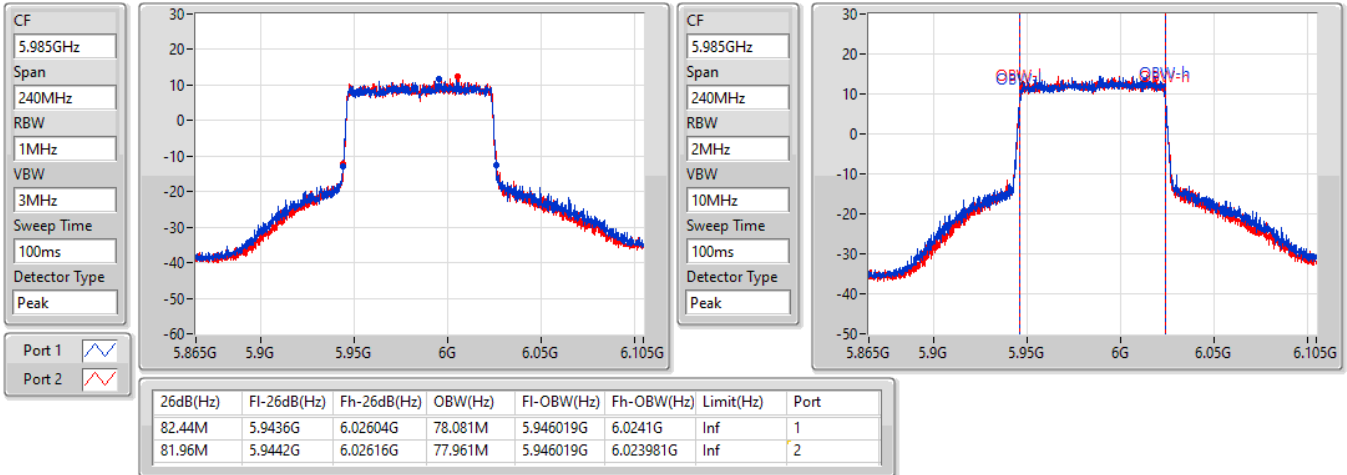

802.11ax HEW40_Nss2,(MCS0)_2TX
EBW
7085MHz

03/01/2022

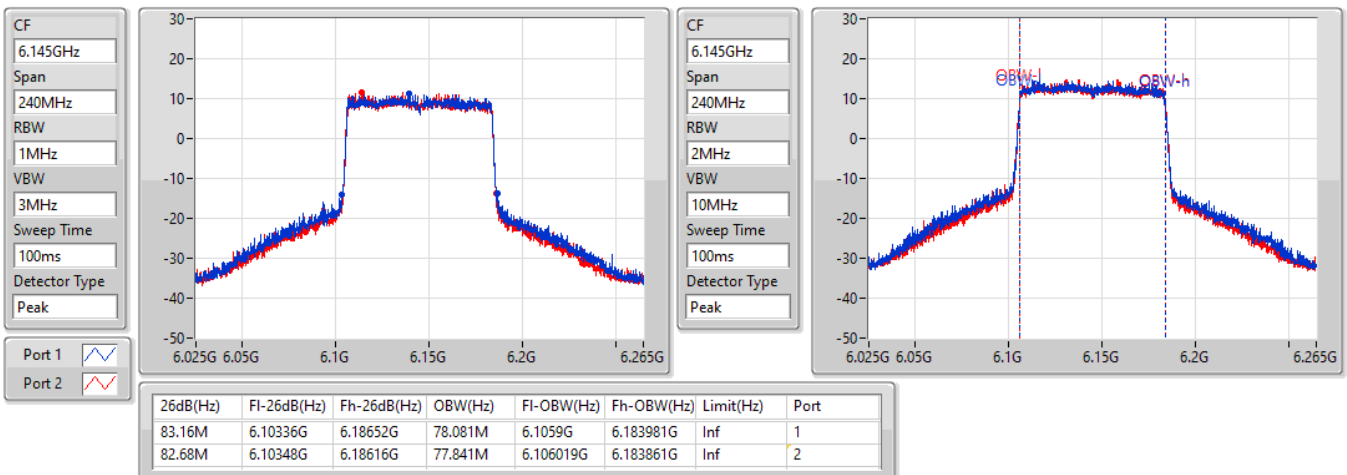


802.11ax HEW80_Nss2,(MCS0)_2TX
EBW
5985MHz

03/01/2022

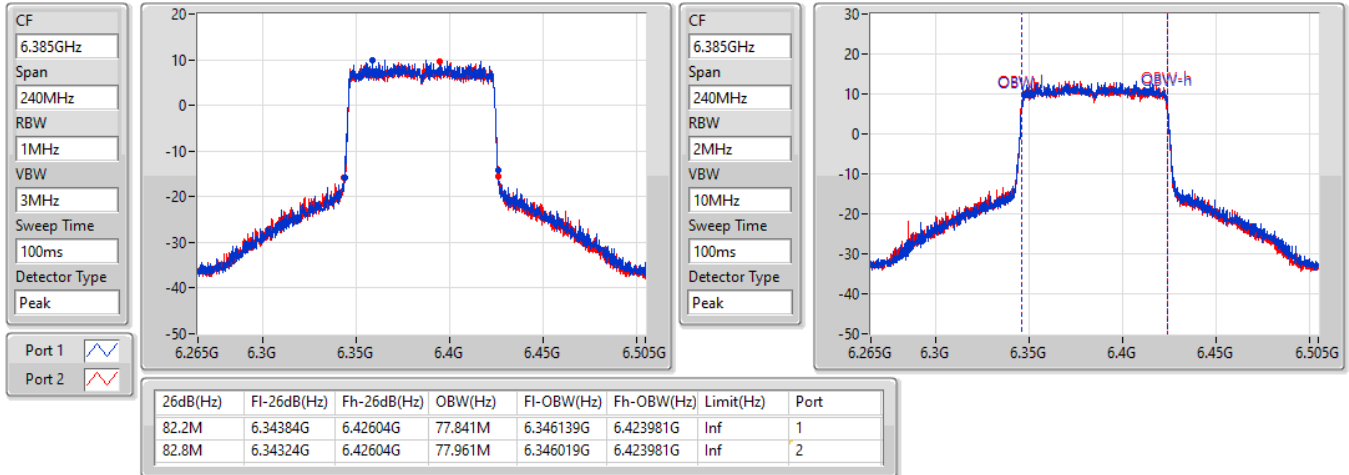

802.11ax HEW80_Nss2,(MCS0)_2TX
EBW
6145MHz

03/01/2022

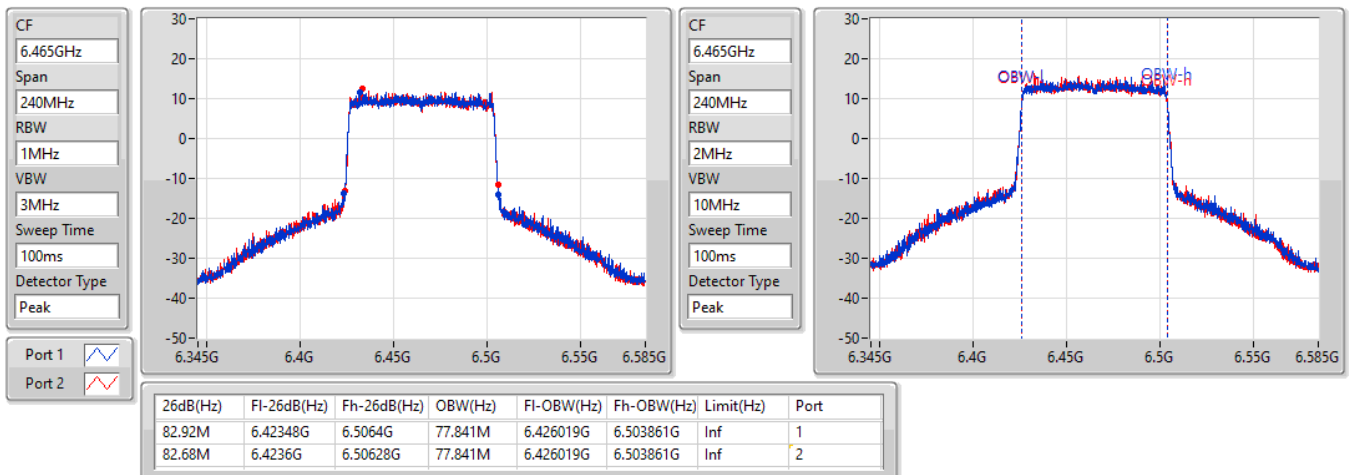


802.11ax HEW80_Nss2,(MCS0)_2TX
EBW
6385MHz

03/01/2022

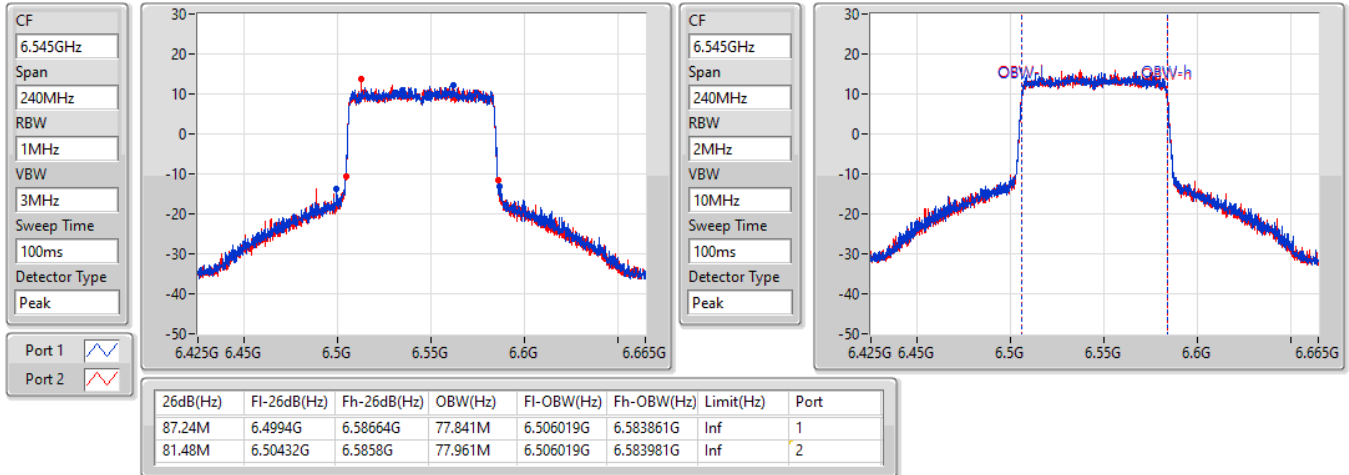

802.11ax HEW80_Nss2,(MCS0)_2TX
EBW
6465MHz

03/01/2022

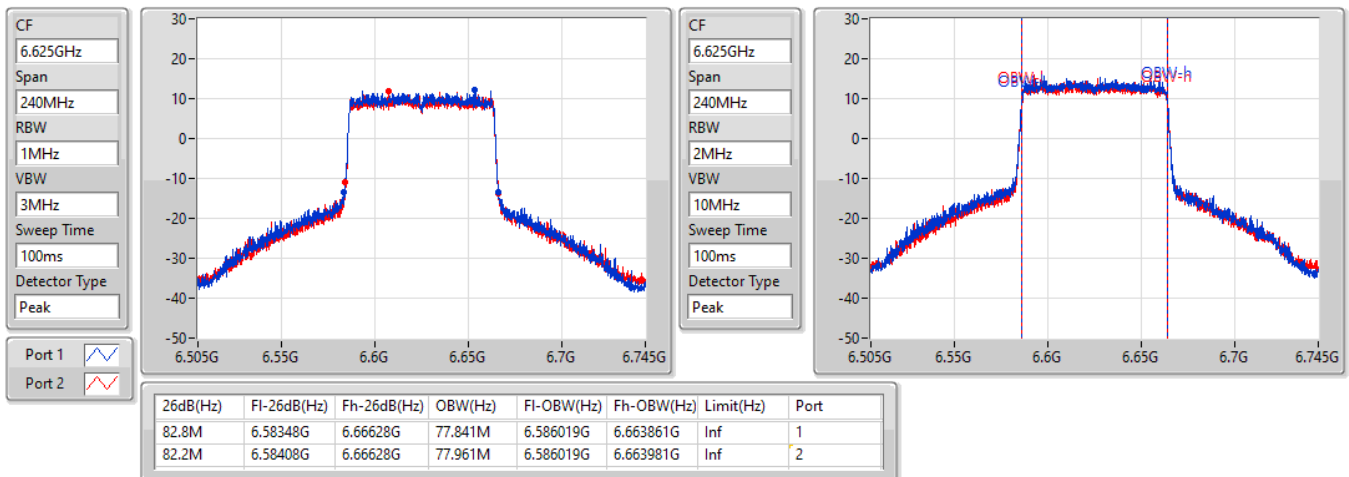


802.11ax HEW80_Nss2,(MCS0)_2TX
EBW
6545MHz Straddle 6.425-6.525GHz

03/01/2022


802.11ax HEW80_Nss2,(MCS0)_2TX
EBW
6625MHz

04/01/2022

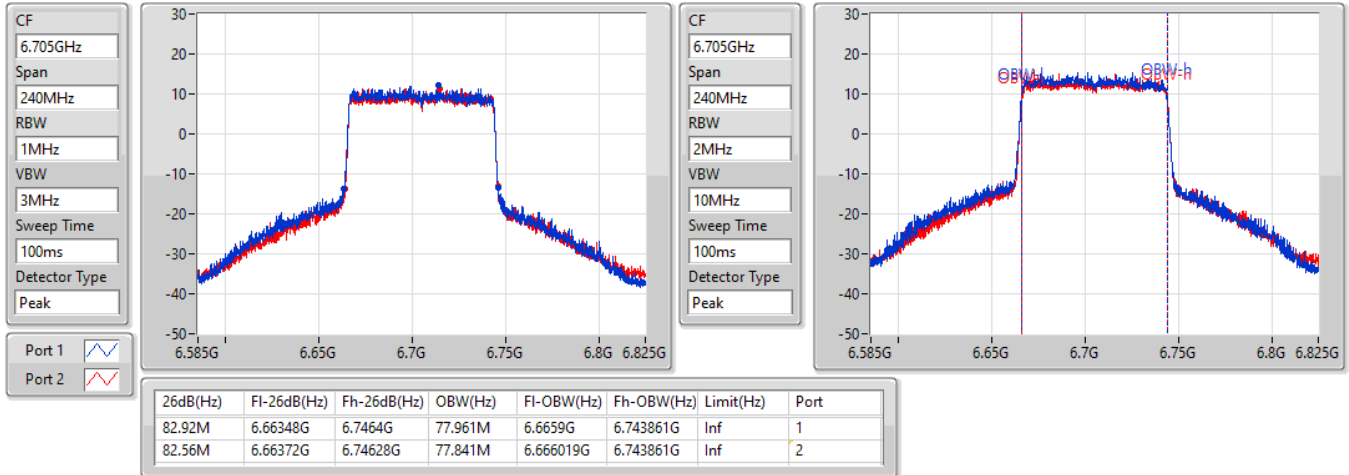


802.11ax HEW80_Nss2,(MCS0)_2TX

EBW

6705MHz

04/01/2022

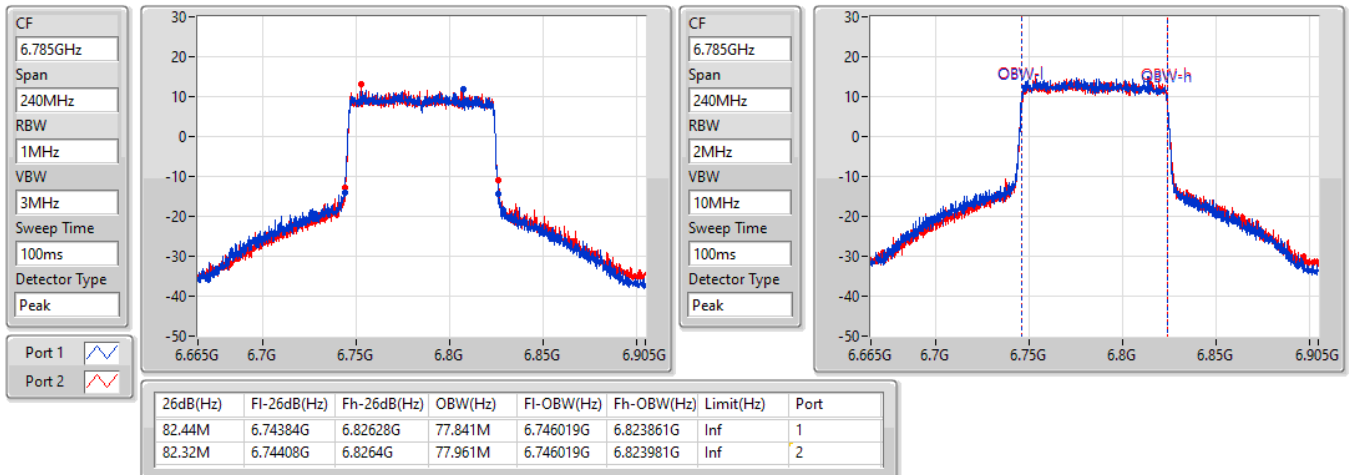


802.11ax HEW80_Nss2,(MCS0)_2TX

EBW

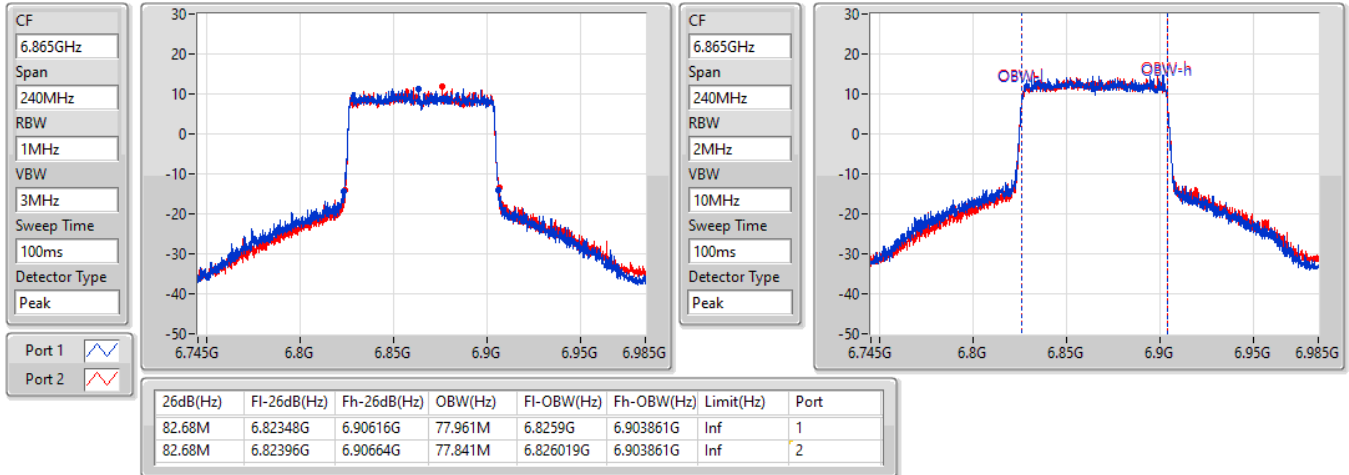
6785MHz

04/01/2022

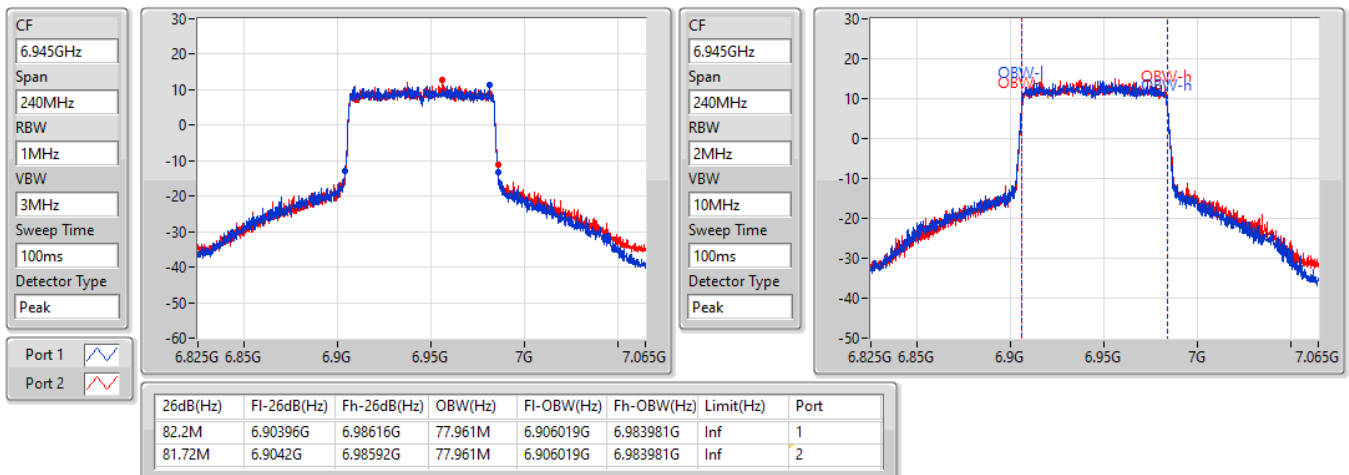


802.11ax HEW80_Nss2,(MCS0)_2TX
EBW
6865MHz Straddle 6.525-6.875GHz

04/01/2022


802.11ax HEW80_Nss2,(MCS0)_2TX
EBW
6945MHz

04/01/2022

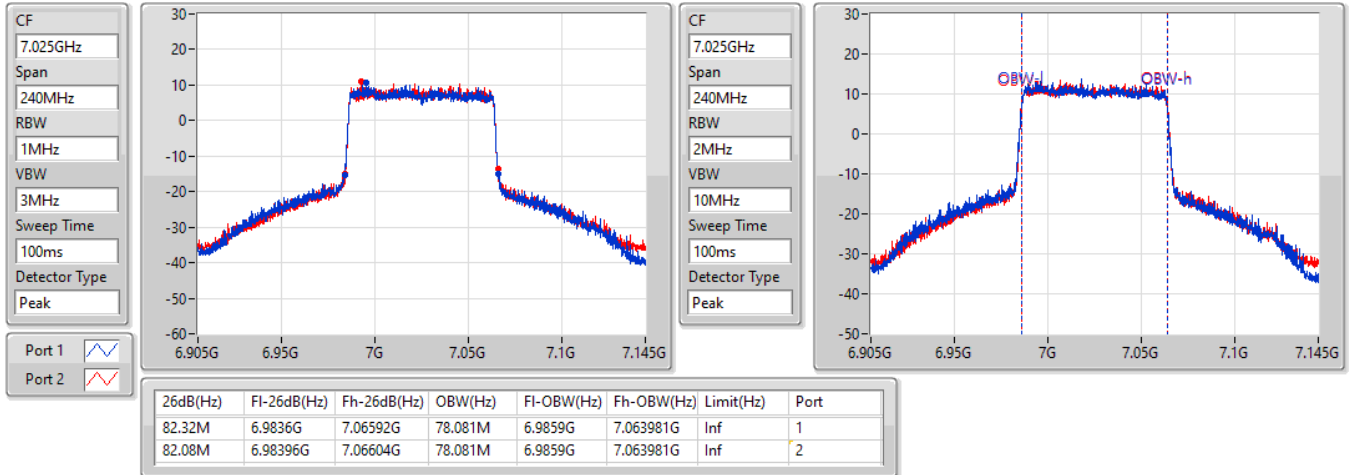


802.11ax HEW80_Nss2,(MCS0)_2TX

EBW

7025MHz

04/01/2022

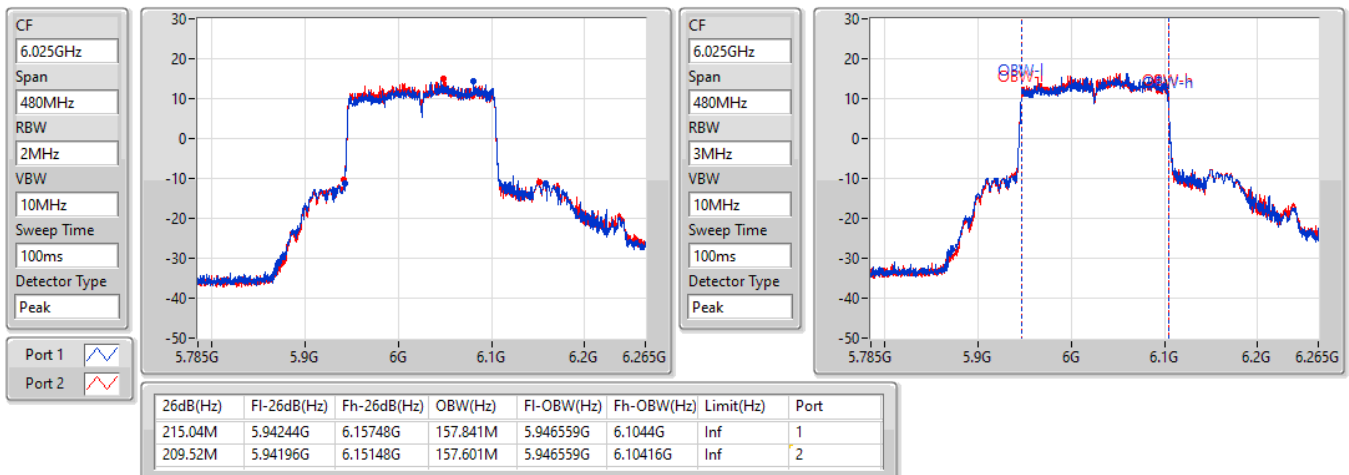


802.11ax HEW160_Nss2,(MCS0)_2TX

EBW

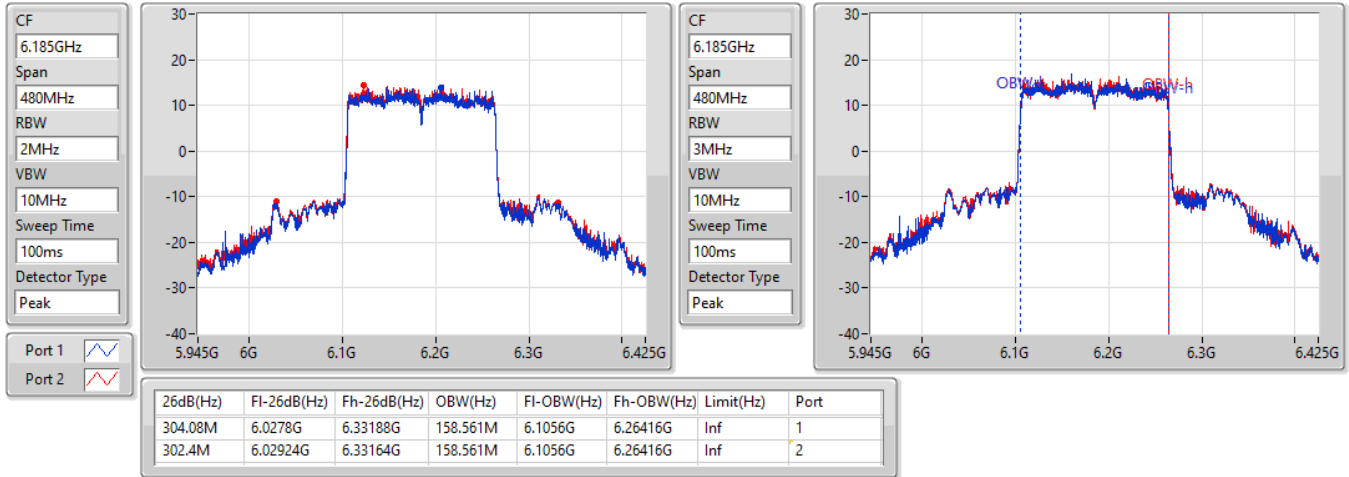
6025MHz

04/01/2022

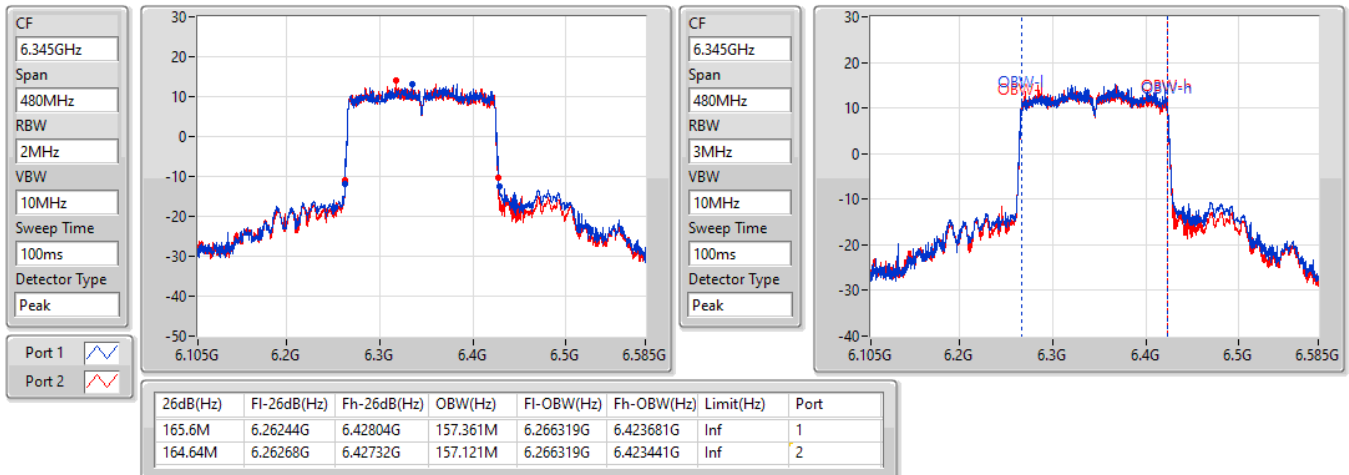


802.11ax HEW160_Nss2,(MCS0)_2TX
EBW
6185MHz

04/01/2022

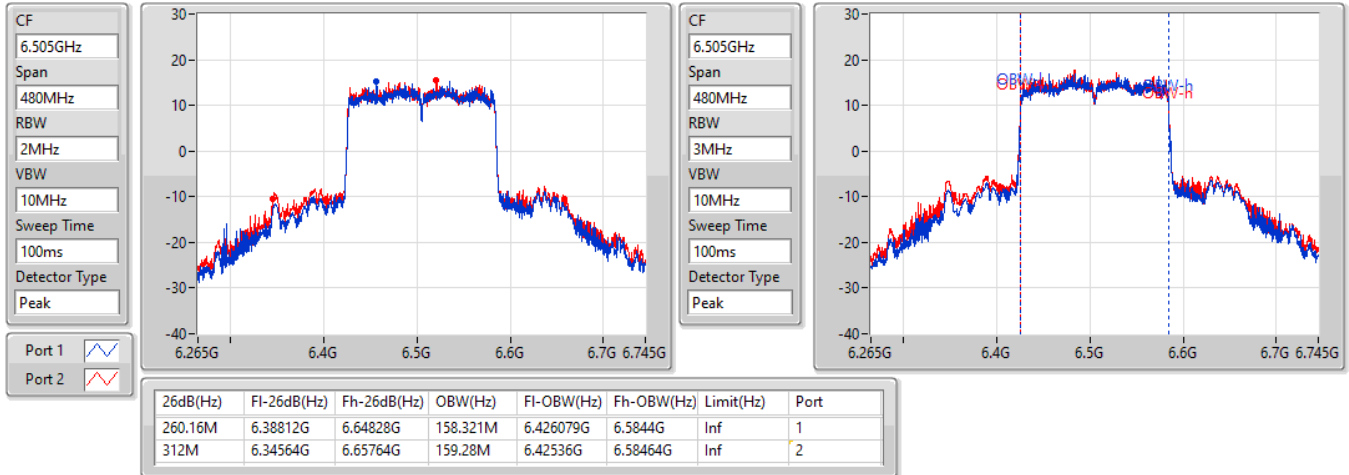

802.11ax HEW160_Nss2,(MCS0)_2TX
EBW
6345MHz

04/01/2022

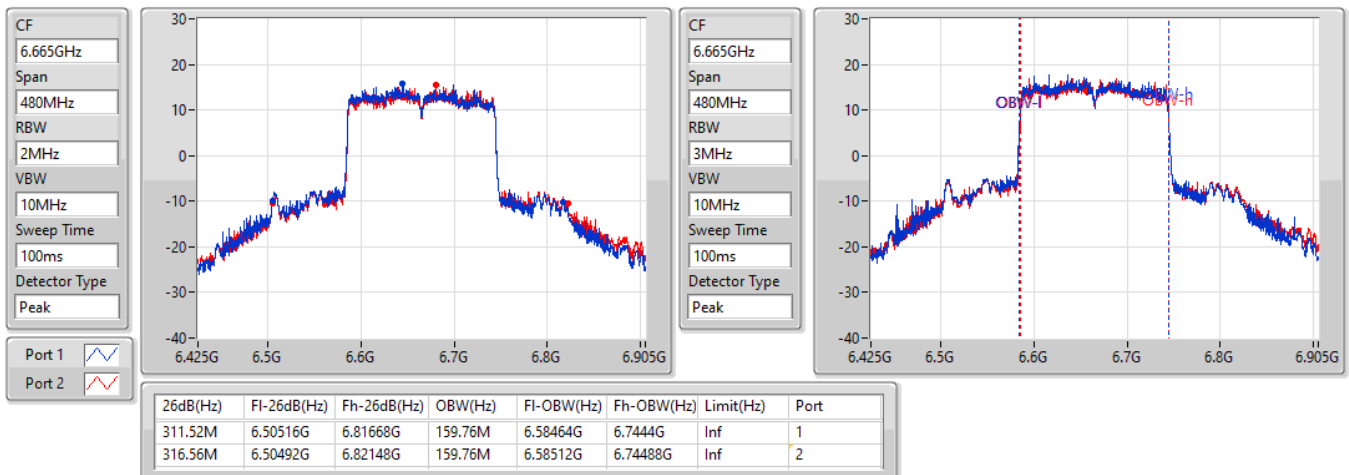


802.11ax HEW160_Nss2,(MCS0)_2TX
EBW
6505MHz Straddle 6.425-6.525GHz

04/01/2022

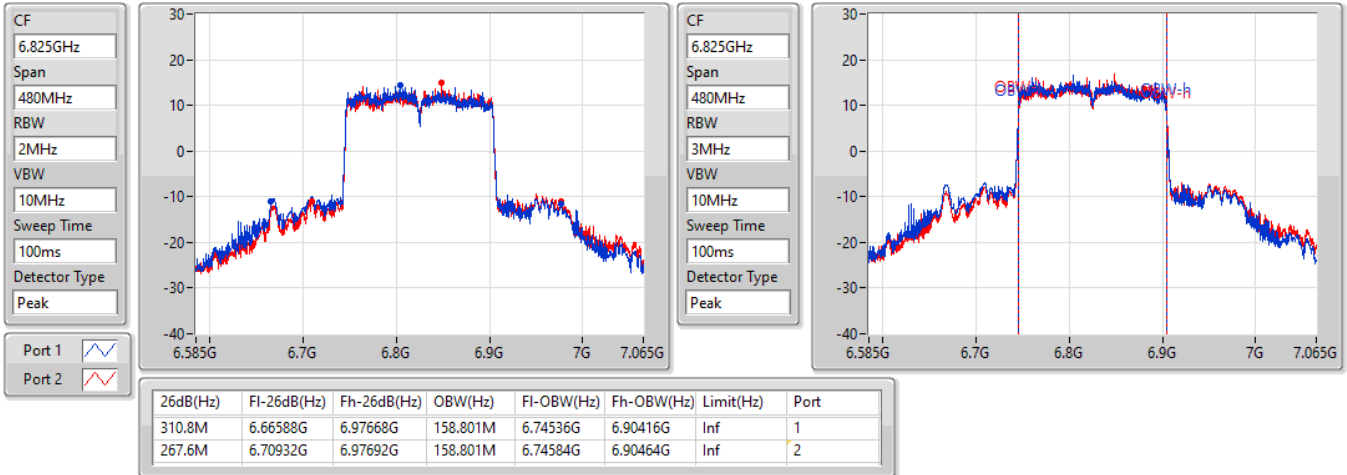

802.11ax HEW160_Nss2,(MCS0)_2TX
EBW
6665MHz

04/01/2022

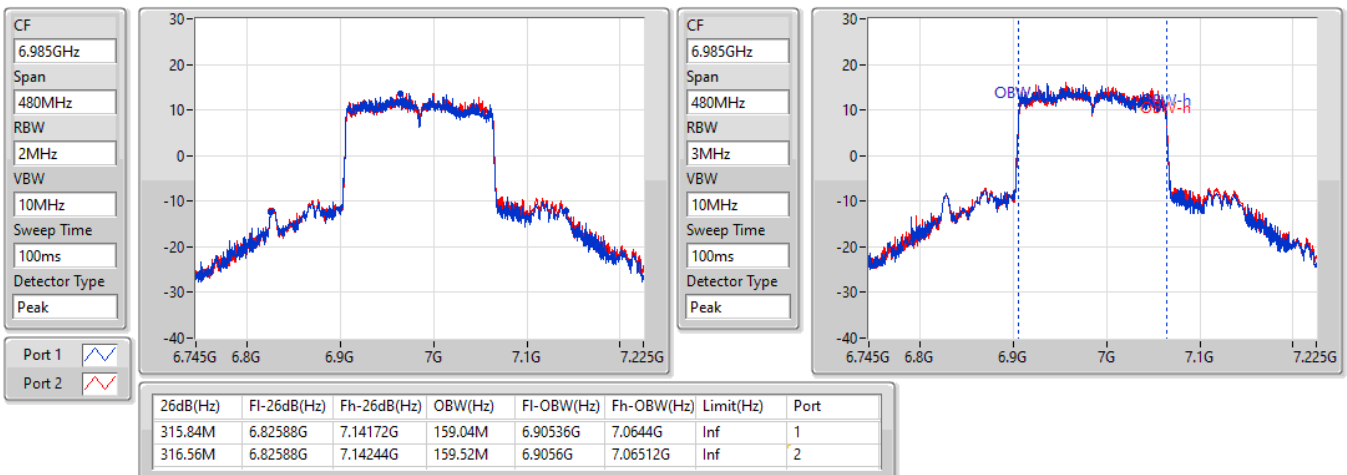


802.11ax HEW160_Nss2,(MCS0)_2TX
EBW
6825MHz Straddle 6.525-6.875GHz

04/01/2022


802.11ax HEW160_Nss2,(MCS0)_2TX
EBW
6985MHz

04/01/2022



For non beamforming mode / 4T1S

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.925-6.425GHz	-	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_4TX	28.23M	19.28M	19M3D1D	22.26M	19.19M
802.11ax HEW40_Nss1,(MCS0)_4TX	44.28M	38.201M	38M2D1D	41.76M	38.081M
802.11ax HEW80_Nss1,(MCS0)_4TX	92.16M	78.081M	78M1D1D	82.56M	77.841M
802.11ax HEW160_Nss1,(MCS0)_4TX	166.08M	158.081M	158MD1D	164.4M	156.642M
6.425-6.525GHz	-	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_4TX	26.91M	19.28M	19M3D1D	23.25M	19.19M
802.11ax HEW40_Nss1,(MCS0)_4TX	45.48M	38.201M	38M2D1D	41.16M	38.141M
802.11ax HEW80_Nss1,(MCS0)_4TX	85.2M	78.081M	78M1D1D	83.28M	77.841M
802.11ax HEW160_Nss1,(MCS0)_4TX	165.36M	156.882M	157MD1D	164.4M	156.642M
6.525-6.875GHz	-	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_4TX	27.54M	19.31M	19M3D1D	22.11M	19.19M
802.11ax HEW40_Nss1,(MCS0)_4TX	44.16M	38.261M	38M3D1D	41.28M	38.081M
802.11ax HEW80_Nss1,(MCS0)_4TX	86.52M	78.081M	78M1D1D	82.56M	77.961M
802.11ax HEW160_Nss1,(MCS0)_4TX	165.6M	157.121M	157MD1D	164.64M	156.642M
6.875-7.125GHz	-	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_4TX	27.03M	19.31M	19M3D1D	22.38M	19.22M
802.11ax HEW40_Nss1,(MCS0)_4TX	45.36M	38.261M	38M3D1D	41.58M	38.141M
802.11ax HEW80_Nss1,(MCS0)_4TX	85.68M	78.201M	78M2D1D	82.56M	77.841M
802.11ax HEW160_Nss1,(MCS0)_4TX	165.36M	156.882M	157MD1D	164.4M	156.402M

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Max-OBW = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Min-OBW = Minimum 99% occupied bandwidth

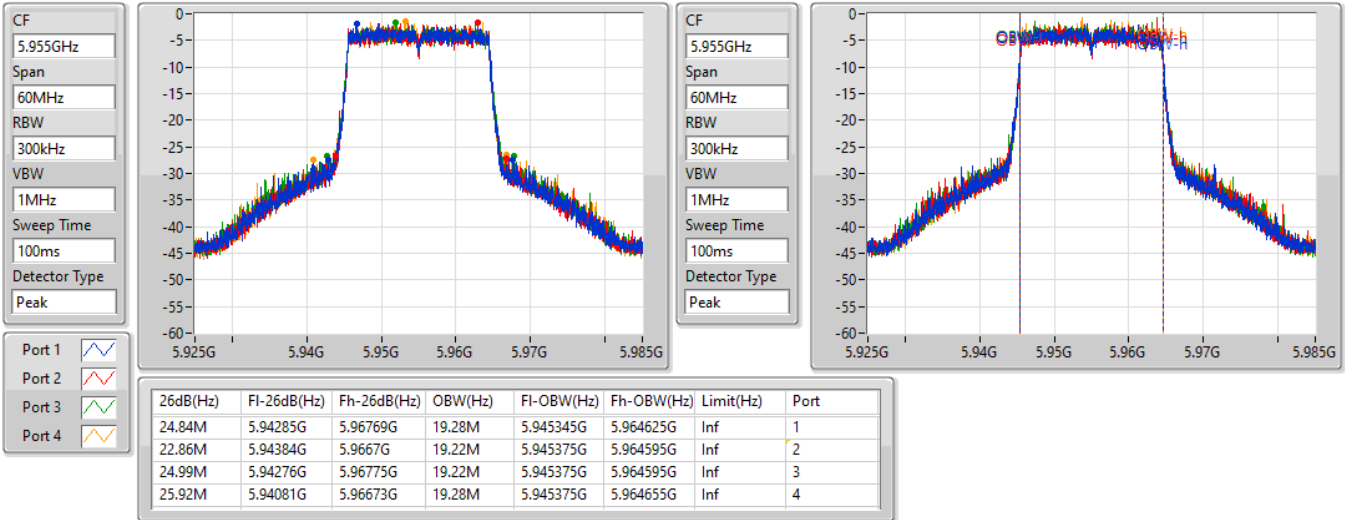
Result

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_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5955MHz	Pass	Inf	24.84M	19.28M	22.86M	19.22M	24.99M	19.22M	25.92M	19.28M
6175MHz	Pass	Inf	23.31M	19.25M	23.64M	19.22M	28.23M	19.25M	24.39M	19.19M
6415MHz	Pass	Inf	25.41M	19.19M	22.26M	19.28M	22.98M	19.28M	25.14M	19.28M
6435MHz	Pass	Inf	23.25M	19.28M	23.82M	19.22M	26.91M	19.28M	24.66M	19.22M
6475MHz	Pass	Inf	25.35M	19.19M	23.28M	19.25M	25.59M	19.28M	23.91M	19.25M
6515MHz	Pass	Inf	23.73M	19.25M	24.33M	19.28M	24.72M	19.28M	24.12M	19.22M
6535MHz	Pass	Inf	25.77M	19.25M	24M	19.25M	25.2M	19.31M	27.54M	19.22M
6695MHz	Pass	Inf	22.11M	19.28M	22.98M	19.25M	22.59M	19.28M	22.32M	19.19M
6855MHz	Pass	Inf	23.52M	19.22M	25.32M	19.22M	23.61M	19.31M	25.86M	19.25M
6875MHz Straddle 6.525-6.875GHz	Pass	Inf	24.84M	19.28M	22.74M	19.28M	24.51M	19.25M	23.55M	19.25M
6895MHz	Pass	Inf	22.38M	19.25M	23.7M	19.28M	24.6M	19.31M	24.03M	19.28M
6995MHz	Pass	Inf	25.56M	19.25M	27.03M	19.22M	23.01M	19.22M	23.61M	19.25M
7095MHz	Pass	Inf	24.57M	19.25M	22.56M	19.25M	23.55M	19.25M	26.13M	19.25M
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5965MHz	Pass	Inf	42.42M	38.141M	42.3M	38.201M	41.88M	38.201M	42.48M	38.201M
6165MHz	Pass	Inf	41.82M	38.201M	44.28M	38.081M	42.24M	38.201M	42.66M	38.081M
6405MHz	Pass	Inf	41.76M	38.081M	43.32M	38.141M	42.84M	38.141M	42.72M	38.081M
6445MHz	Pass	Inf	42.72M	38.141M	42.12M	38.141M	42.78M	38.141M	45.48M	38.201M
6485MHz	Pass	Inf	42.96M	38.201M	42.3M	38.141M	42.48M	38.201M	42.3M	38.201M
6525MHz Straddle 6.425-6.525GHz	Pass	Inf	42.9M	38.141M	41.16M	38.201M	43.26M	38.201M	43.98M	38.201M
6565MHz	Pass	Inf	41.58M	38.141M	43.08M	38.141M	41.28M	38.141M	42.06M	38.081M
6685MHz	Pass	Inf	43.44M	38.141M	42.36M	38.081M	44.1M	38.141M	41.46M	38.201M
6845MHz	Pass	Inf	42.3M	38.201M	42.18M	38.141M	41.82M	38.201M	42.6M	38.141M
6885MHz Straddle 6.525-6.875GHz	Pass	Inf	42.72M	38.141M	44.16M	38.261M	43.02M	38.141M	42.12M	38.141M
6925MHz	Pass	Inf	41.58M	38.201M	43.02M	38.261M	42.66M	38.201M	42.3M	38.141M
7005MHz	Pass	Inf	42.84M	38.141M	41.64M	38.141M	44.16M	38.141M	42.42M	38.261M
7085MHz	Pass	Inf	42.3M	38.201M	45.36M	38.141M	42.24M	38.201M	43.38M	38.201M
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5985MHz	Pass	Inf	84.6M	78.081M	82.56M	77.961M	83.04M	77.961M	84.48M	77.961M
6145MHz	Pass	Inf	85.8M	77.961M	83.04M	77.841M	92.16M	78.081M	85.08M	77.961M
6385MHz	Pass	Inf	84.36M	77.961M	84M	77.961M	84.24M	78.081M	83.52M	78.081M
6465MHz	Pass	Inf	83.52M	77.961M	84.96M	77.841M	83.76M	78.081M	84.6M	78.081M
6545MHz Straddle 6.425-6.525GHz	Pass	Inf	83.88M	78.081M	83.28M	77.961M	85.2M	77.961M	84.6M	78.081M
6625MHz	Pass	Inf	82.92M	78.081M	84.36M	77.961M	82.68M	78.081M	86.04M	77.961M
6705MHz	Pass	Inf	83.28M	77.961M	83.28M	77.961M	86.52M	78.081M	83.88M	77.961M
6785MHz	Pass	Inf	86.4M	78.081M	85.56M	77.961M	82.56M	77.961M	82.68M	78.081M
6865MHz Straddle 6.525-6.875GHz	Pass	Inf	83.88M	78.081M	82.8M	78.081M	84.6M	77.961M	83.64M	77.961M
6945MHz	Pass	Inf	85.56M	77.961M	82.68M	77.841M	82.56M	77.961M	83.52M	78.201M
7025MHz	Pass	Inf	83.64M	78.081M	85.44M	77.961M	83.52M	77.961M	85.68M	77.841M
802.11ax HEW160_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
6025MHz	Pass	Inf	165.84M	156.882M	165.12M	156.642M	164.4M	156.642M	165.12M	156.642M
6185MHz	Pass	Inf	165.36M	157.121M	166.08M	157.121M	164.88M	156.882M	164.88M	158.081M
6345MHz	Pass	Inf	165.6M	156.642M	165.12M	156.642M	164.64M	156.882M	165.36M	156.642M
6505MHz Straddle 6.425-6.525GHz	Pass	Inf	165.36M	156.642M	165.36M	156.882M	165.36M	156.642M	164.4M	156.642M
6665MHz	Pass	Inf	165.6M	156.882M	165.36M	156.882M	165.36M	156.642M	165.12M	156.882M
6825MHz Straddle 6.525-6.875GHz	Pass	Inf	165.36M	156.882M	165.6M	157.121M	164.64M	156.882M	165.6M	156.642M
6985MHz	Pass	Inf	165.36M	156.642M	165.36M	156.882M	164.88M	156.402M	164.4M	156.402M

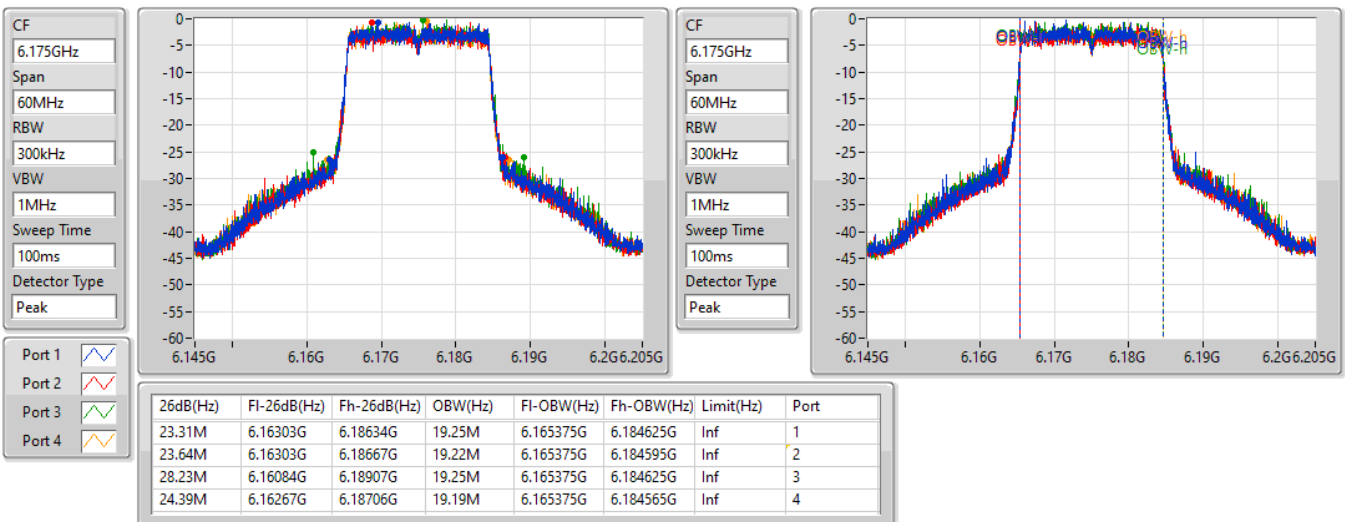
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5955MHz

04/01/2022

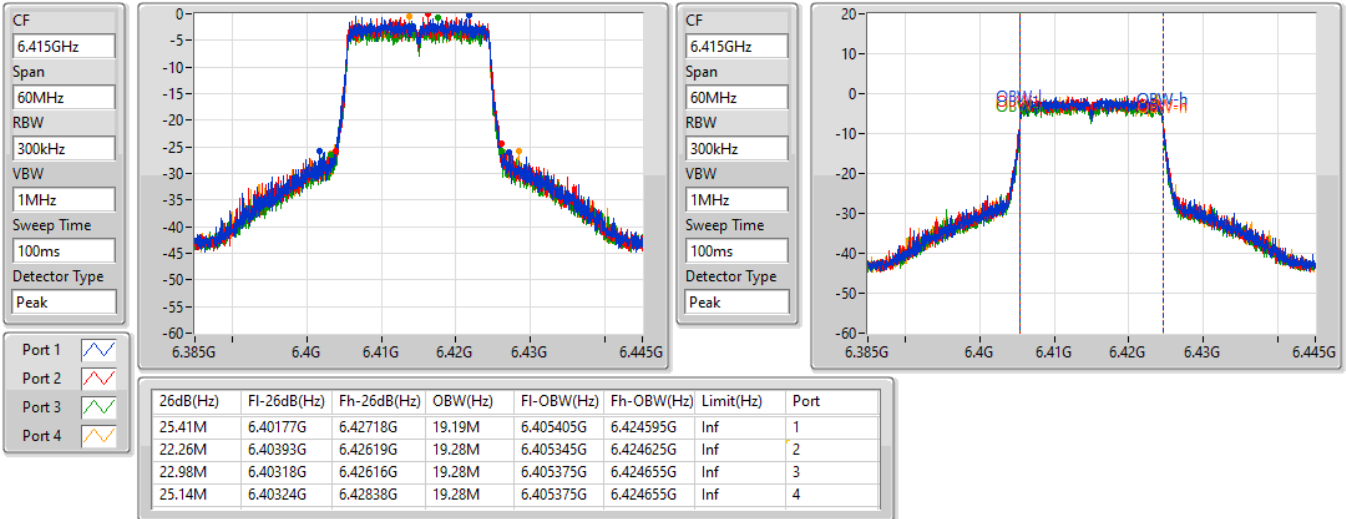

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
6175MHz

04/01/2022

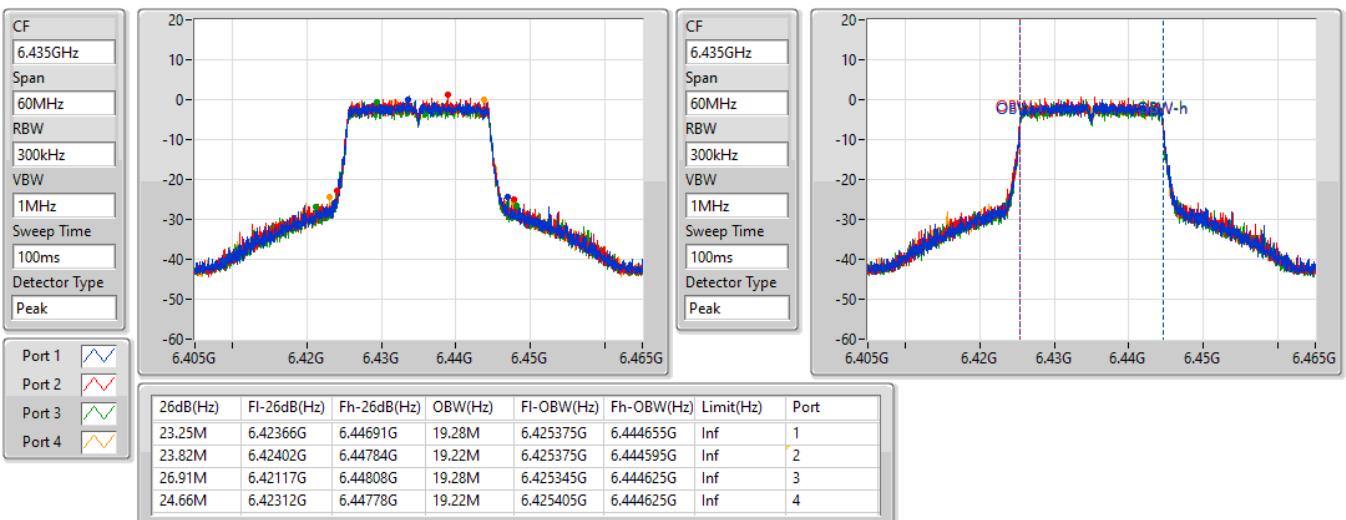


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
6415MHz

04/01/2022

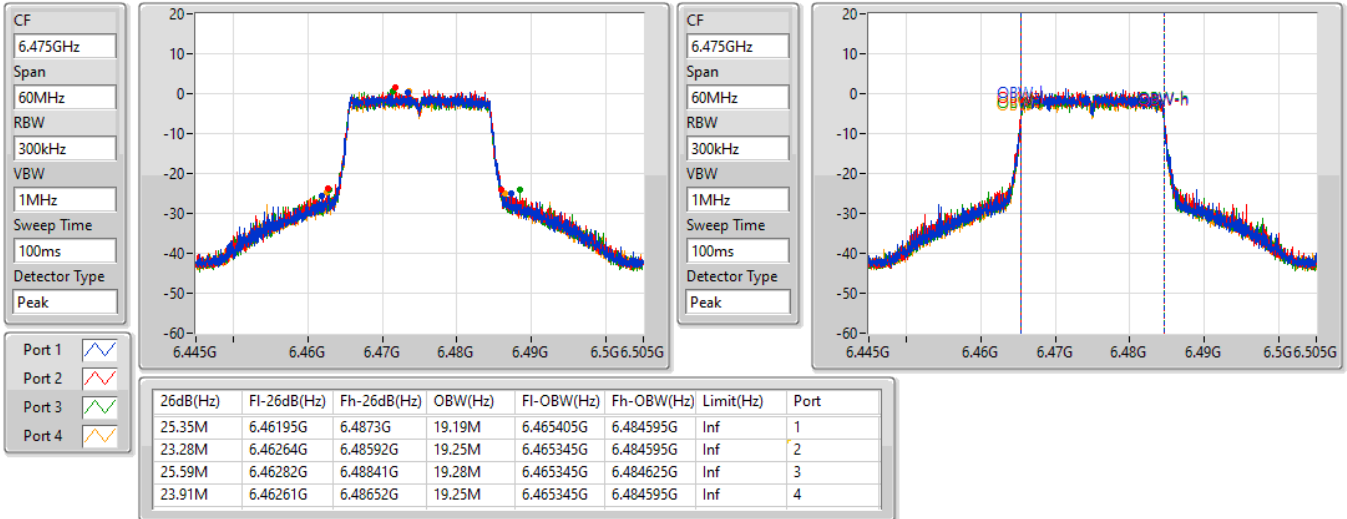

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
6435MHz

04/01/2022

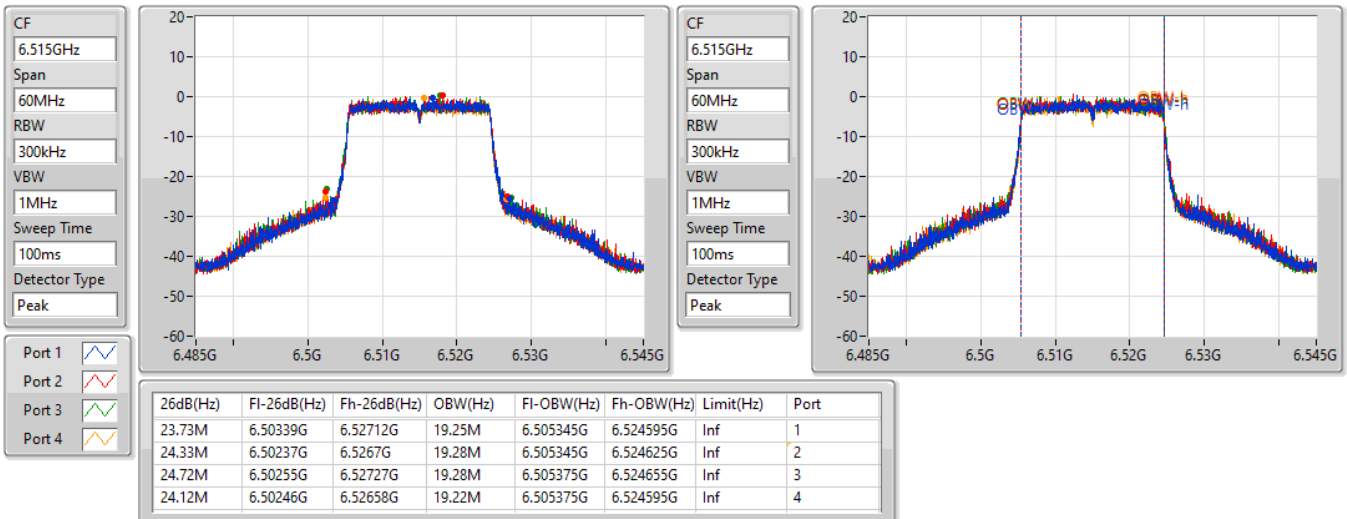


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EBW
6475MHz

04/01/2022

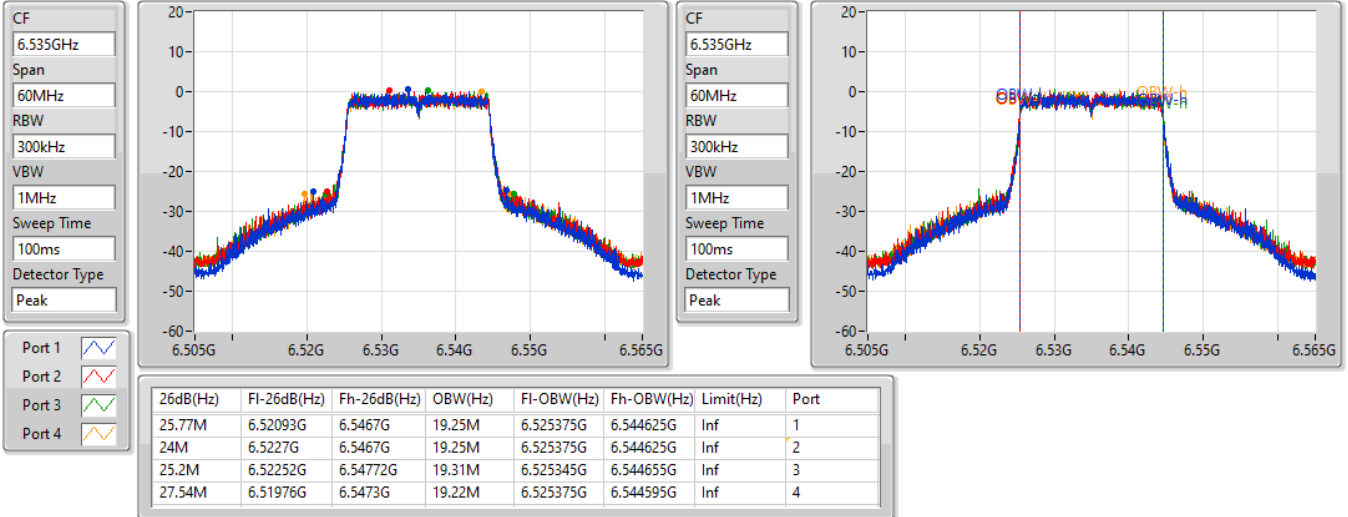

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EBW
6515MHz

04/01/2022

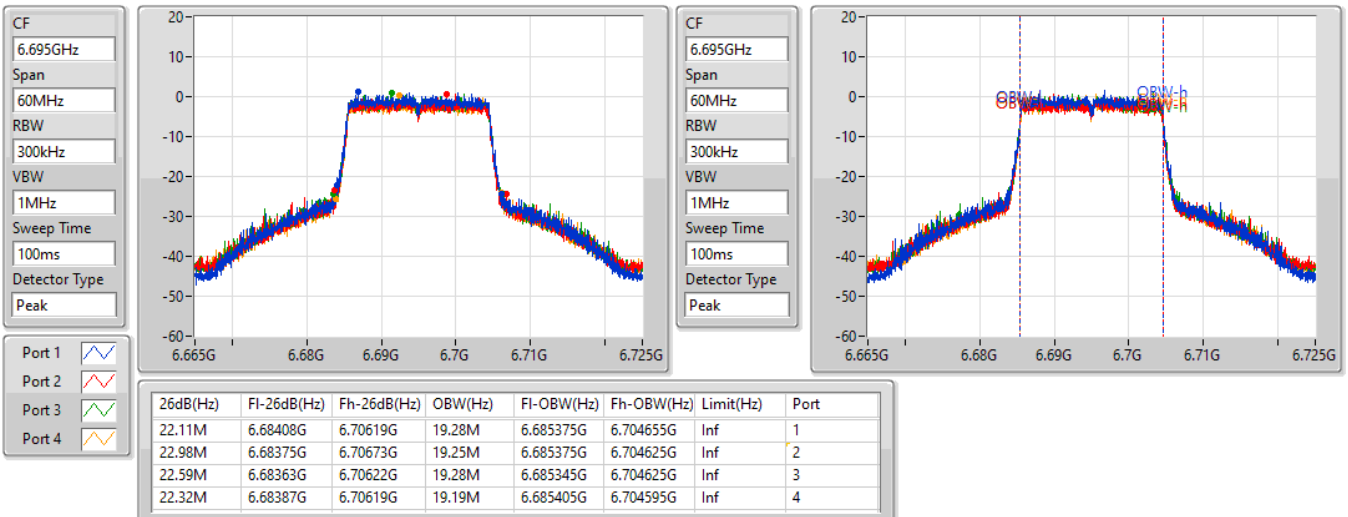


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
6535MHz

04/01/2022

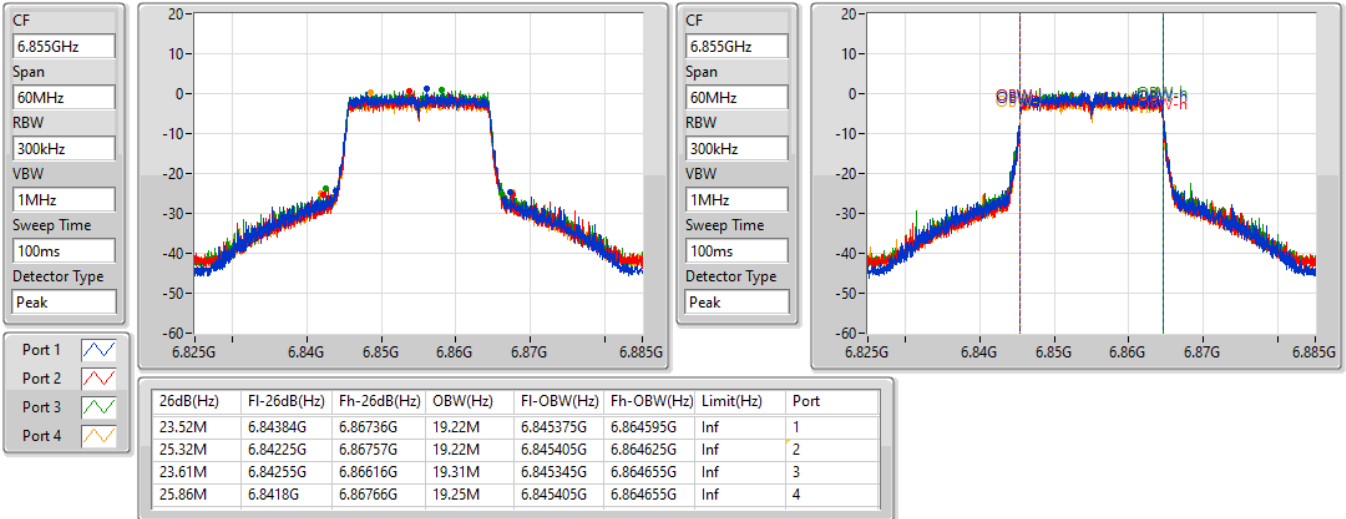

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EBW
6695MHz

04/01/2022

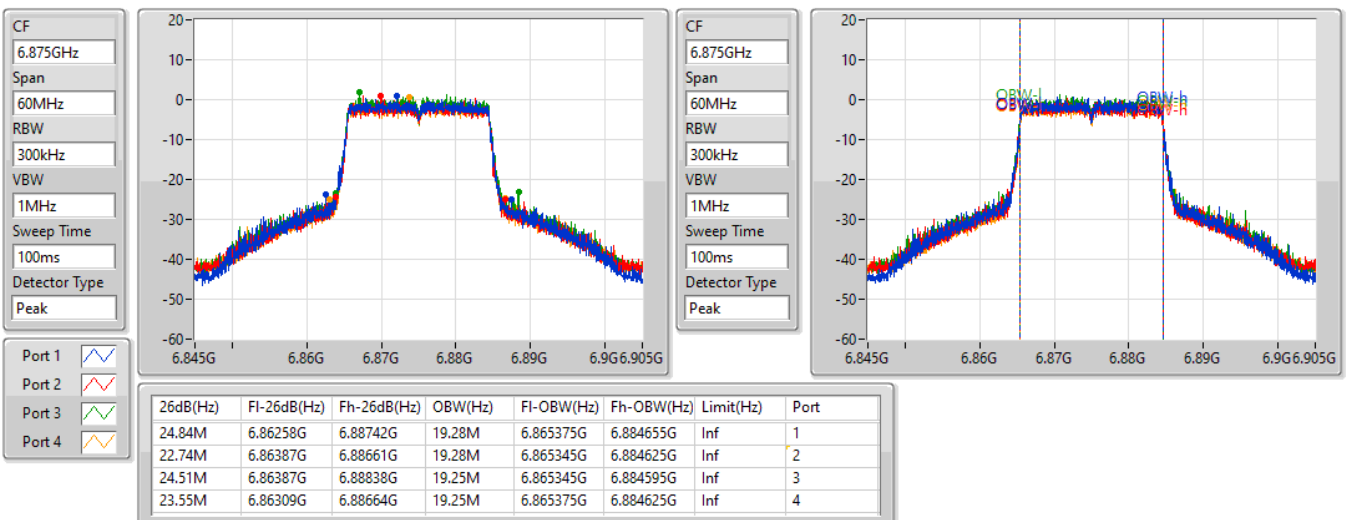


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EBW
6855MHz

04/01/2022

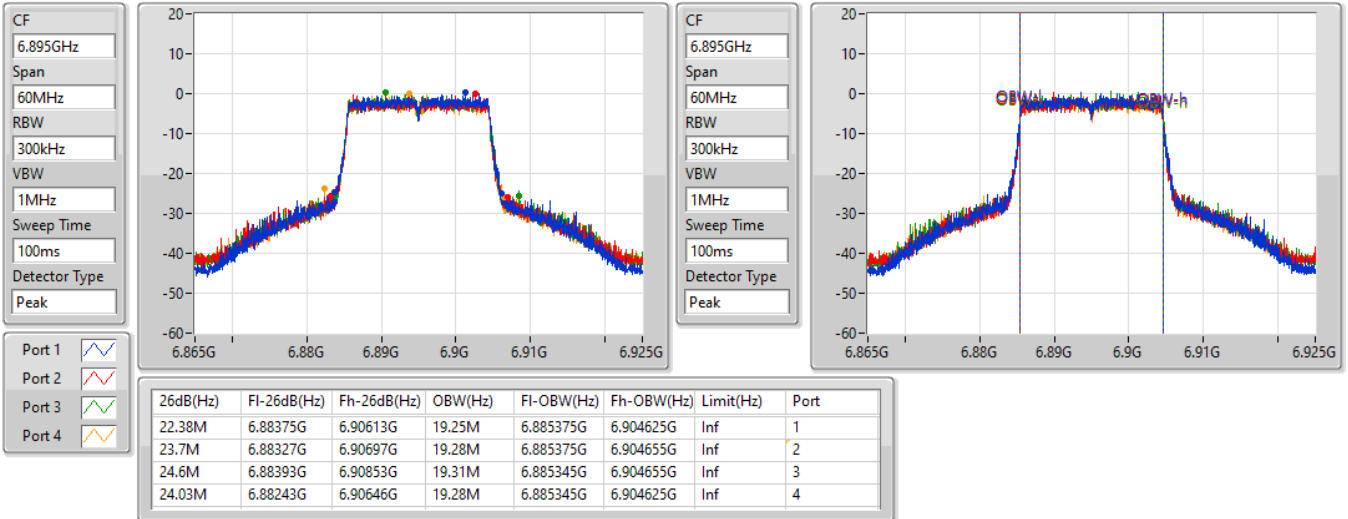

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
6875MHz Straddle 6.525-6.875GHz

04/01/2022

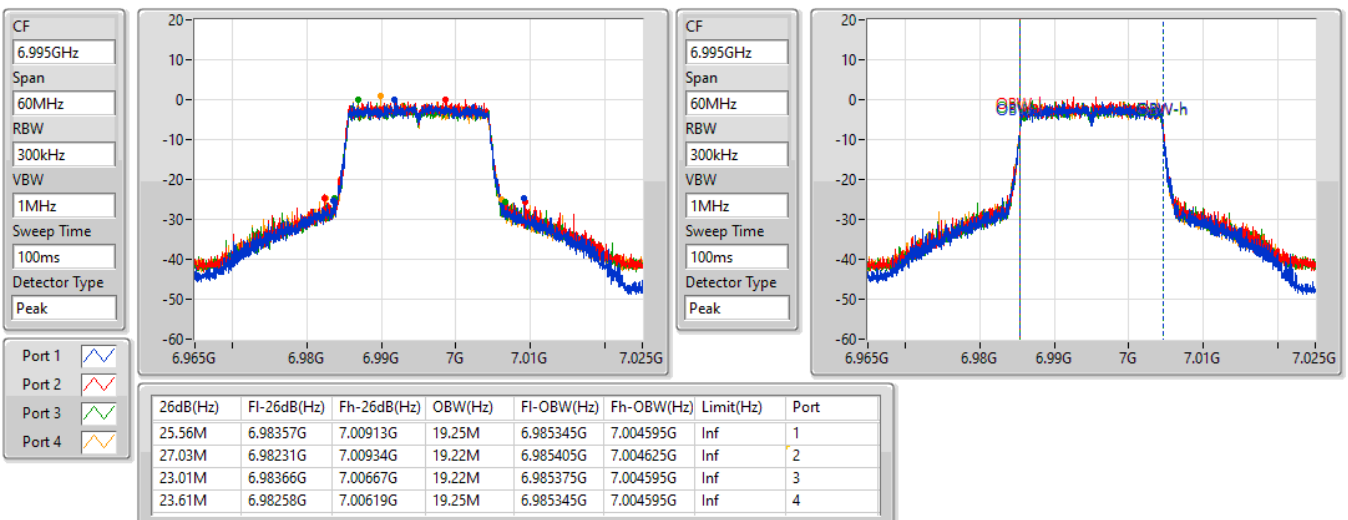


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
6895MHz

04/01/2022

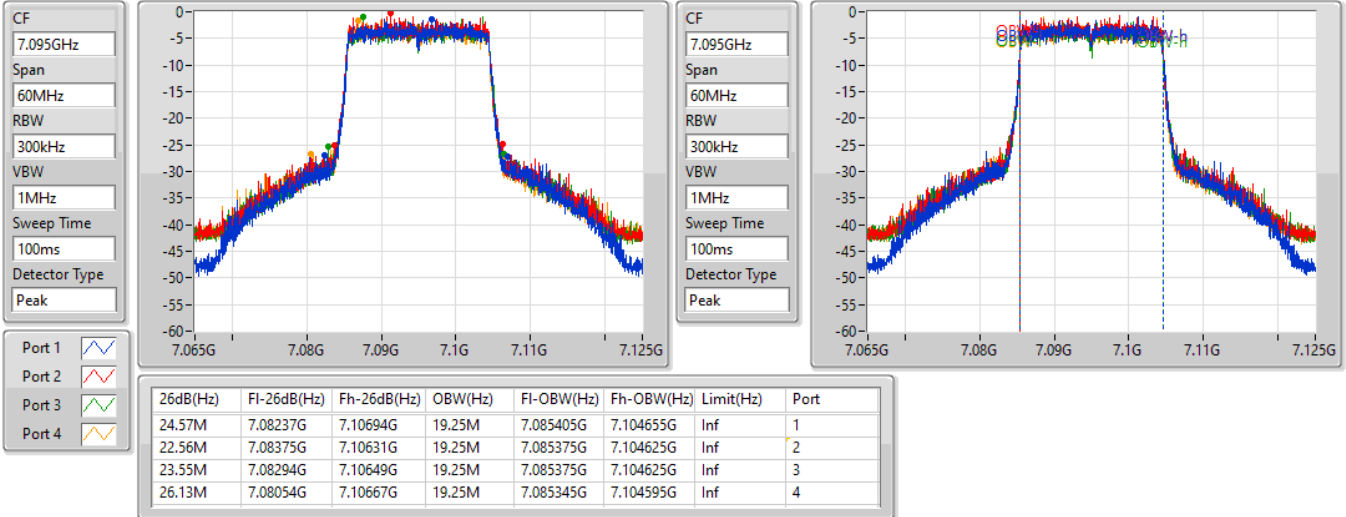

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
6995MHz

04/01/2022

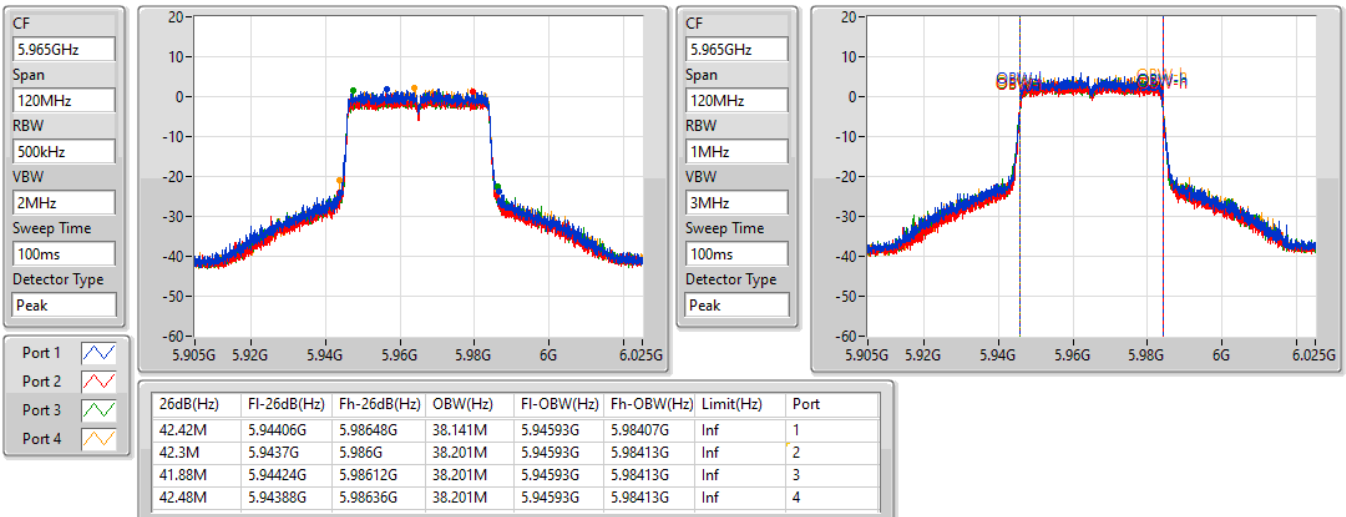


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
7095MHz

04/01/2022

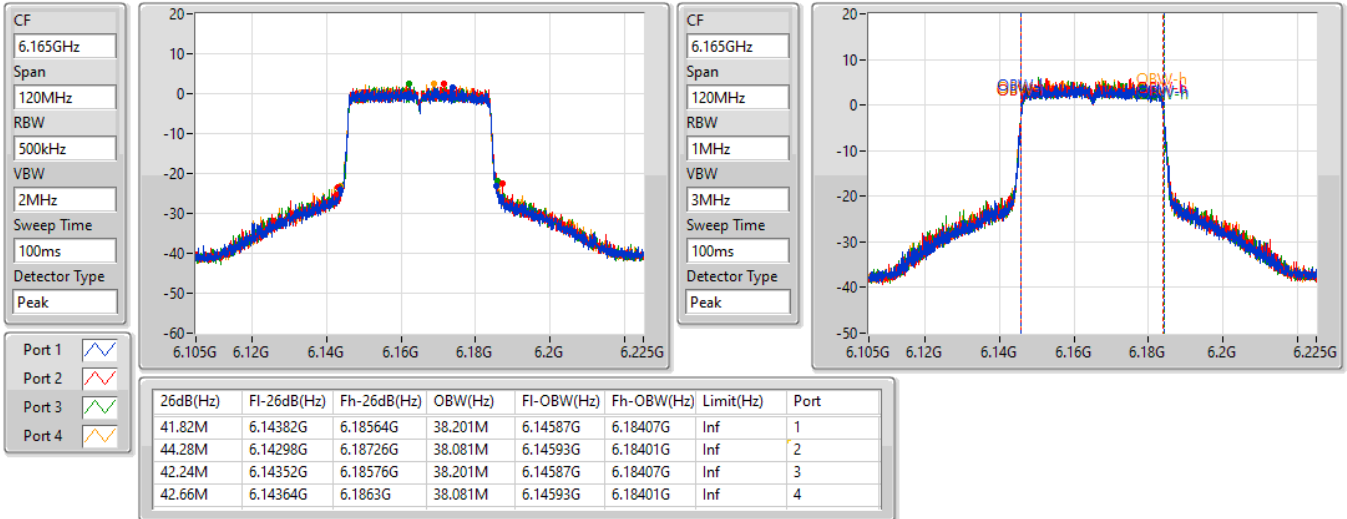

802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5965MHz

04/01/2022

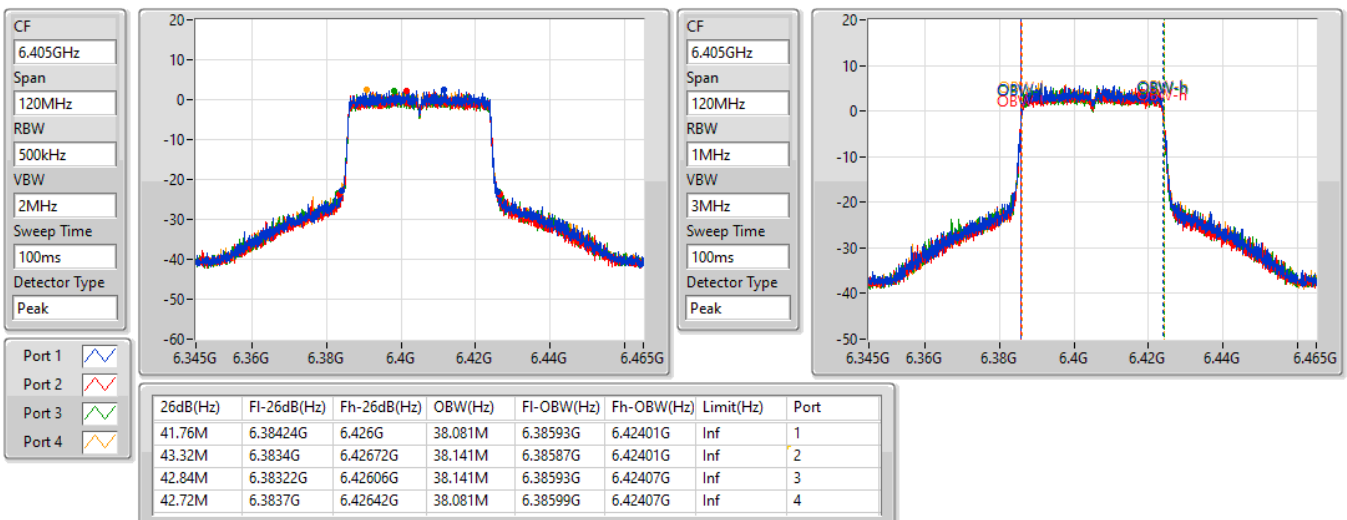


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
6165MHz

04/01/2022

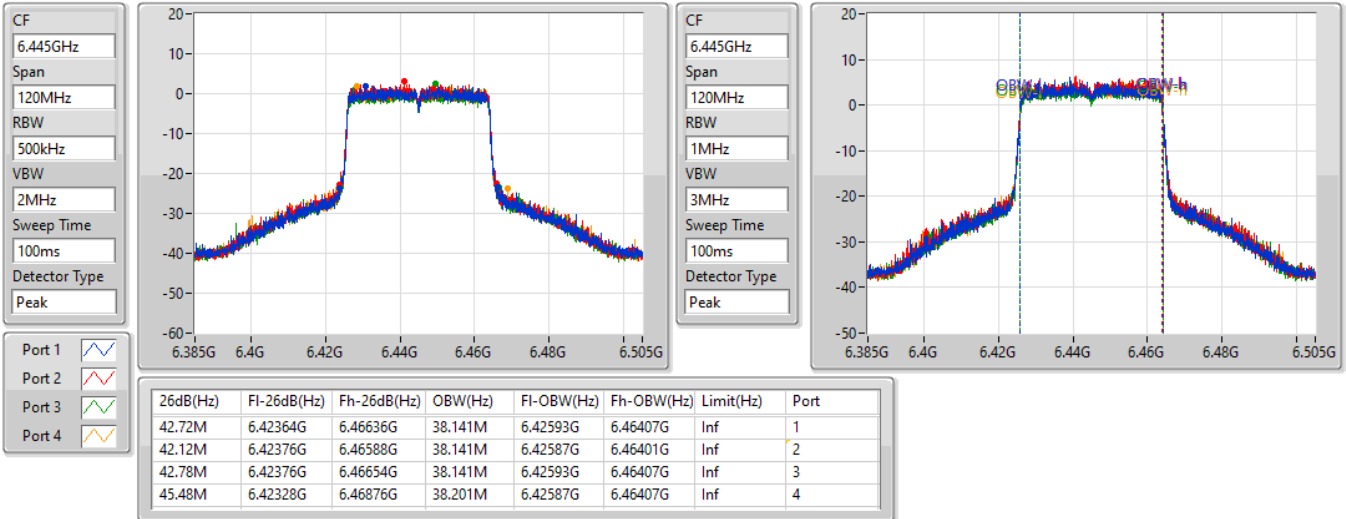

802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
6405MHz

04/01/2022



802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
6445MHz

04/01/2022

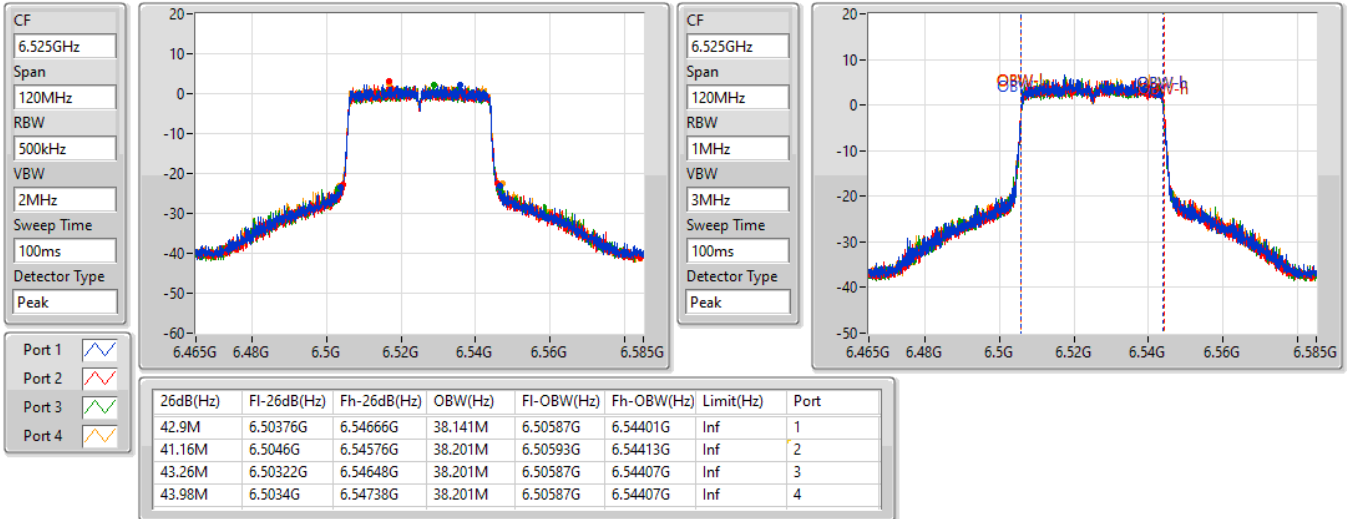

802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
6485MHz

04/01/2022

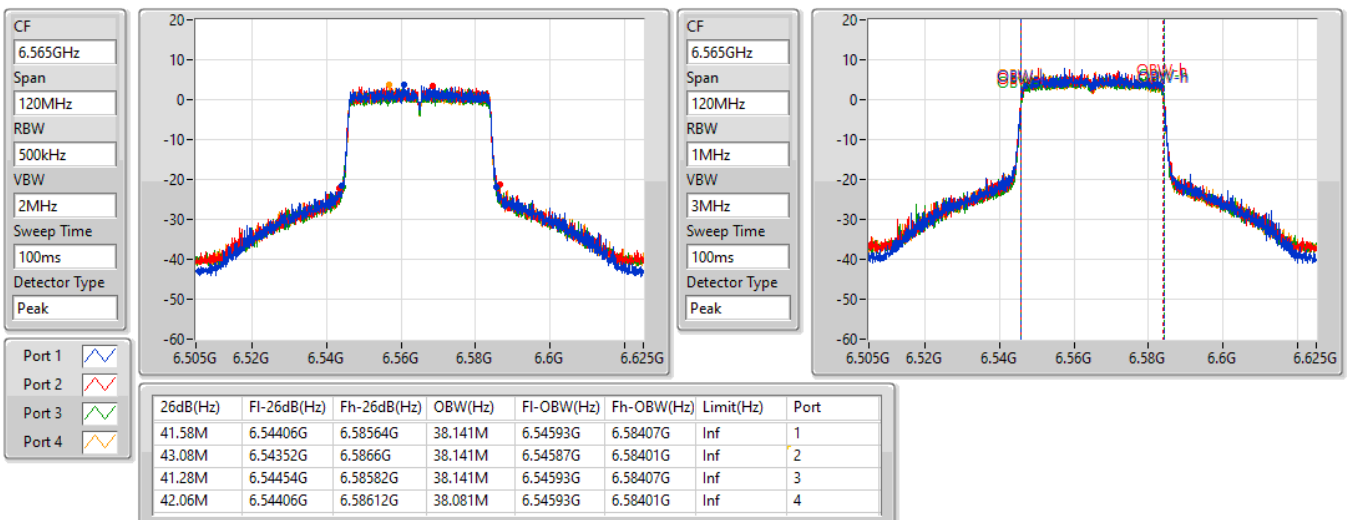


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
6525MHz Straddle 6.425-6.525GHz

04/01/2022

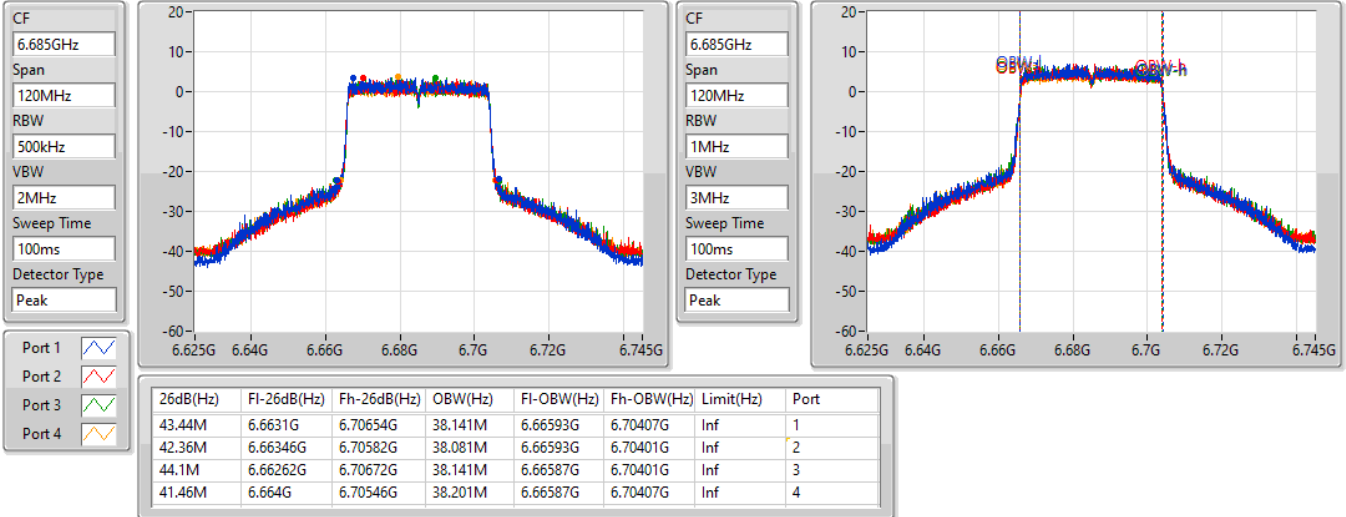

802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
6565MHz

04/01/2022

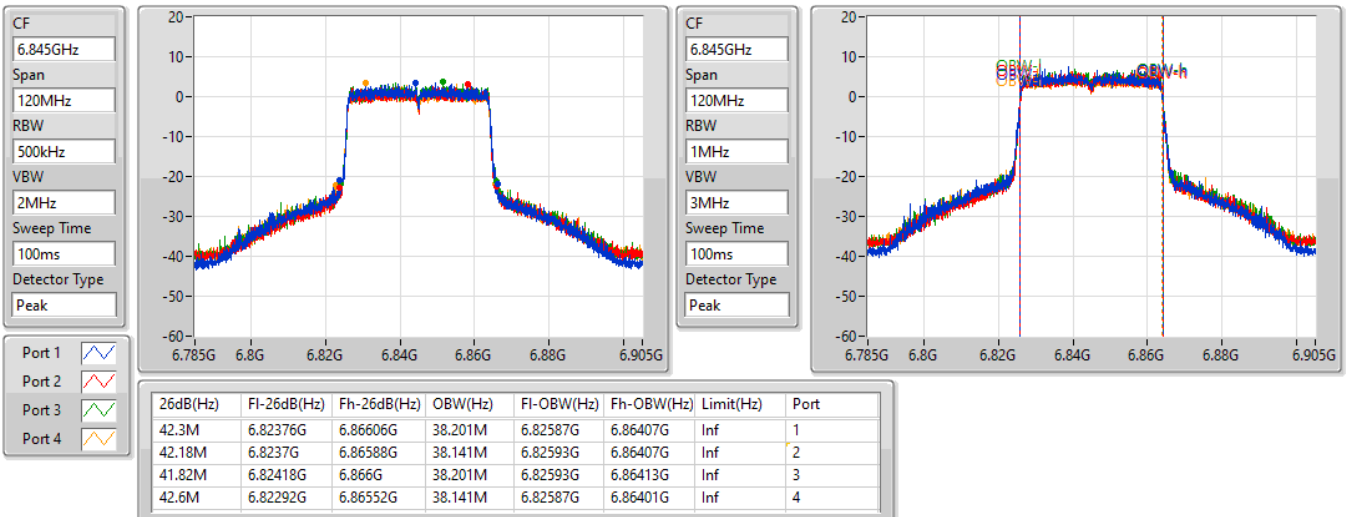


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
6685MHz

04/01/2022

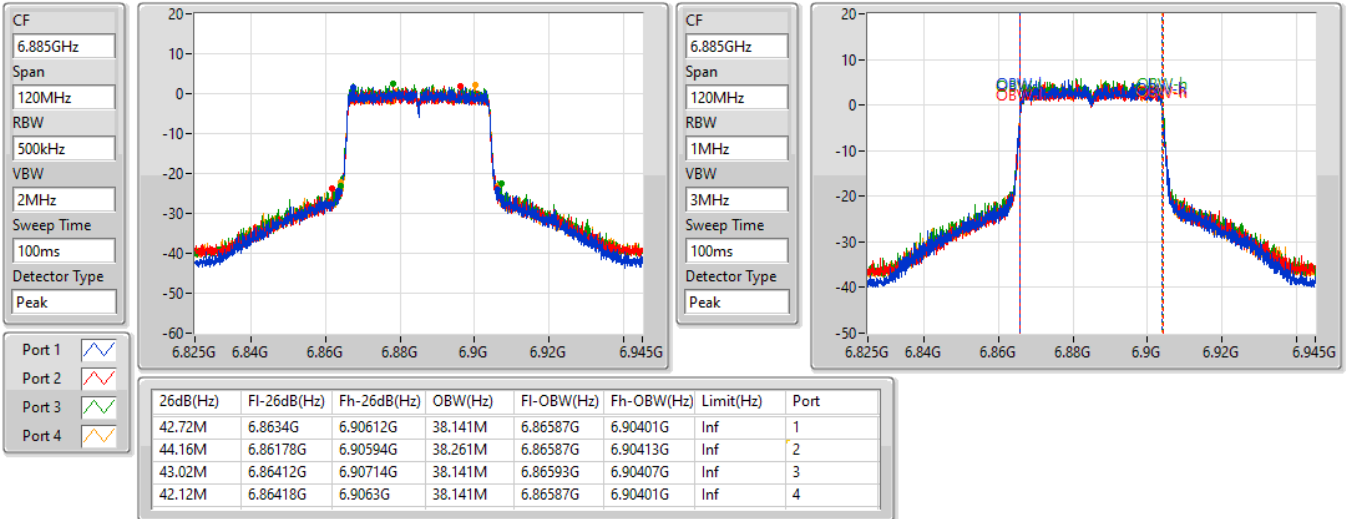

802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
6845MHz

04/01/2022



802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
6885MHz Straddle 6.525-6.875GHz

04/01/2022


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
6925MHz

04/01/2022

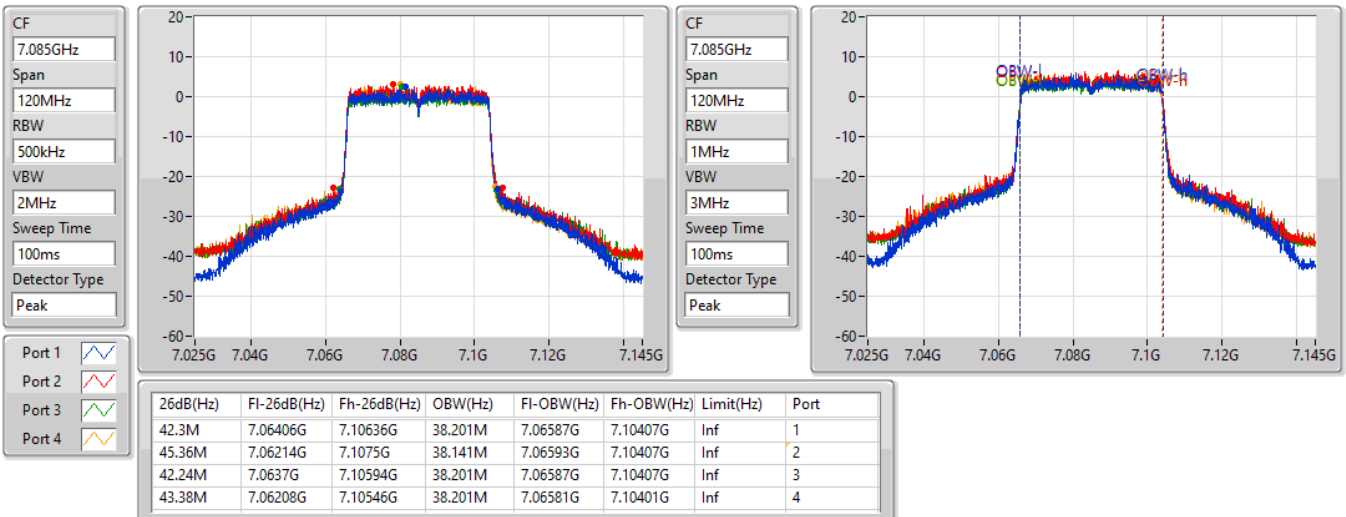


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
7005MHz

04/01/2022

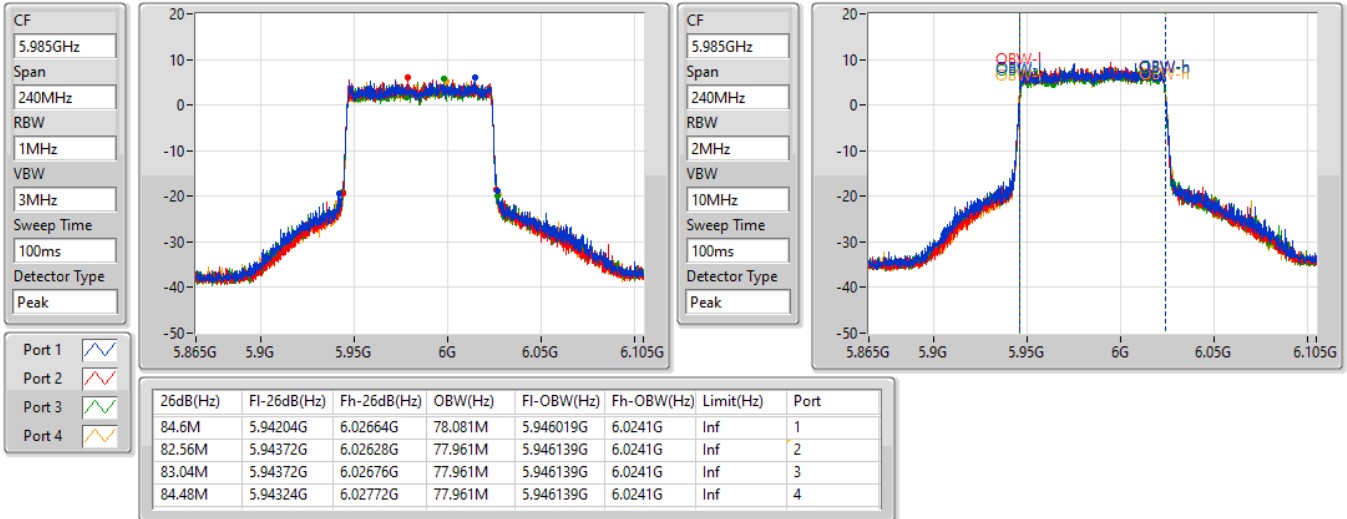

802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
7085MHz

04/01/2022

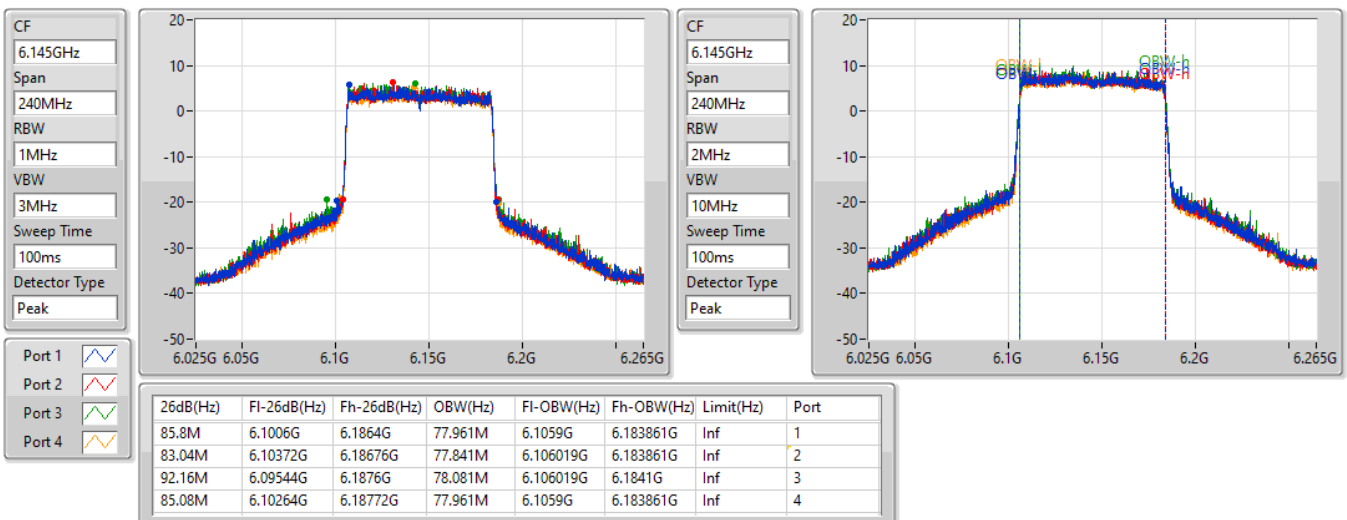


802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5985MHz

04/01/2022

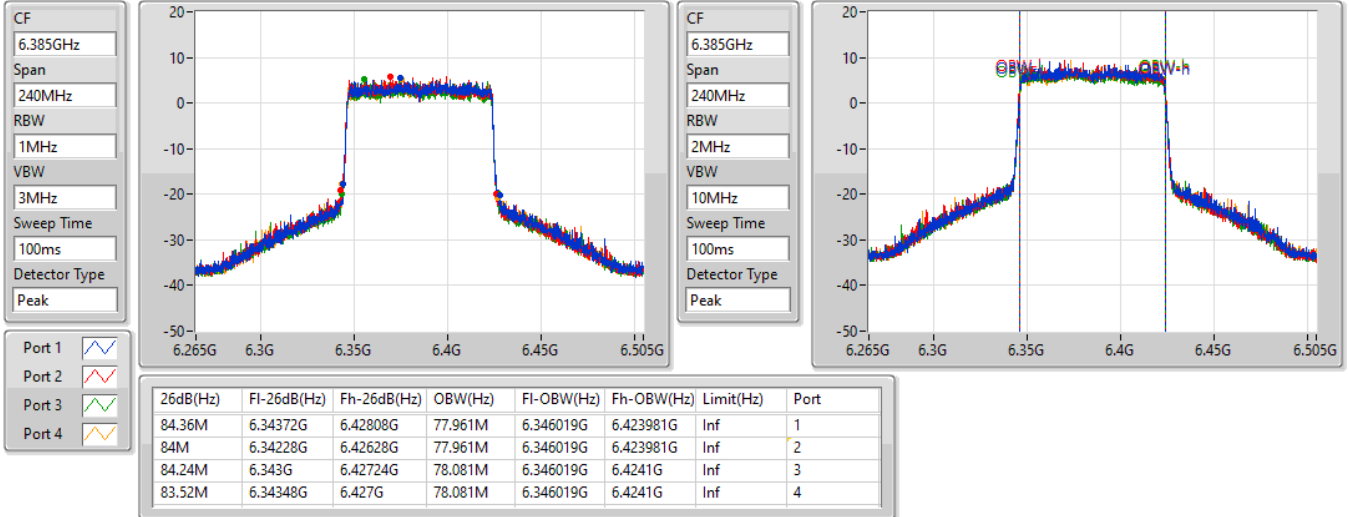

802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
6145MHz

04/01/2022

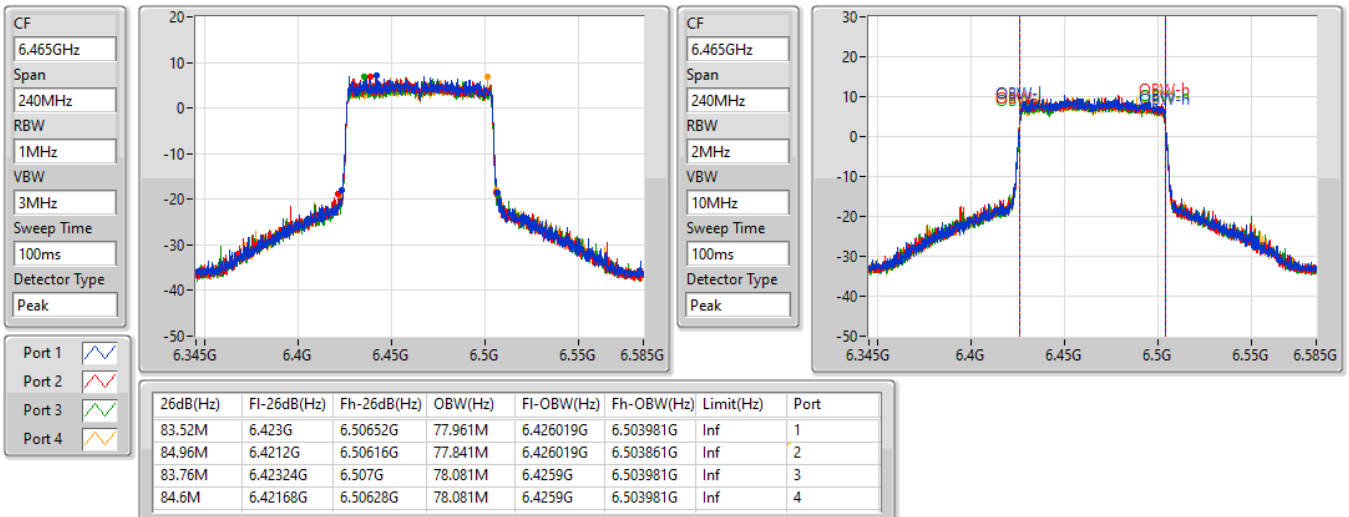


802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
6385MHz

04/01/2022

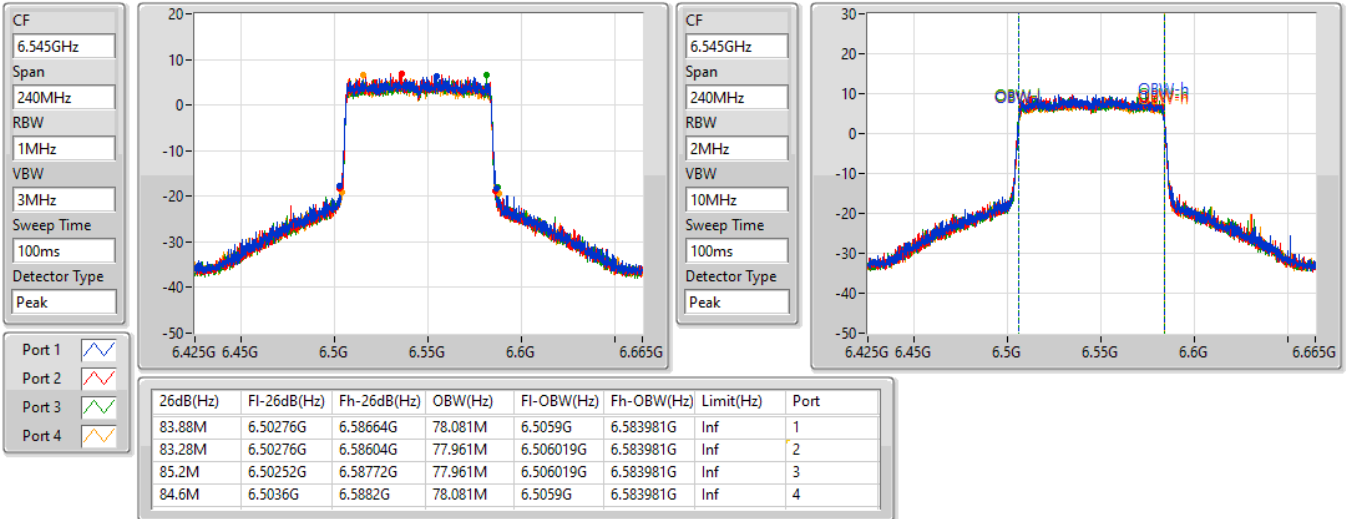

802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
6465MHz

04/01/2022

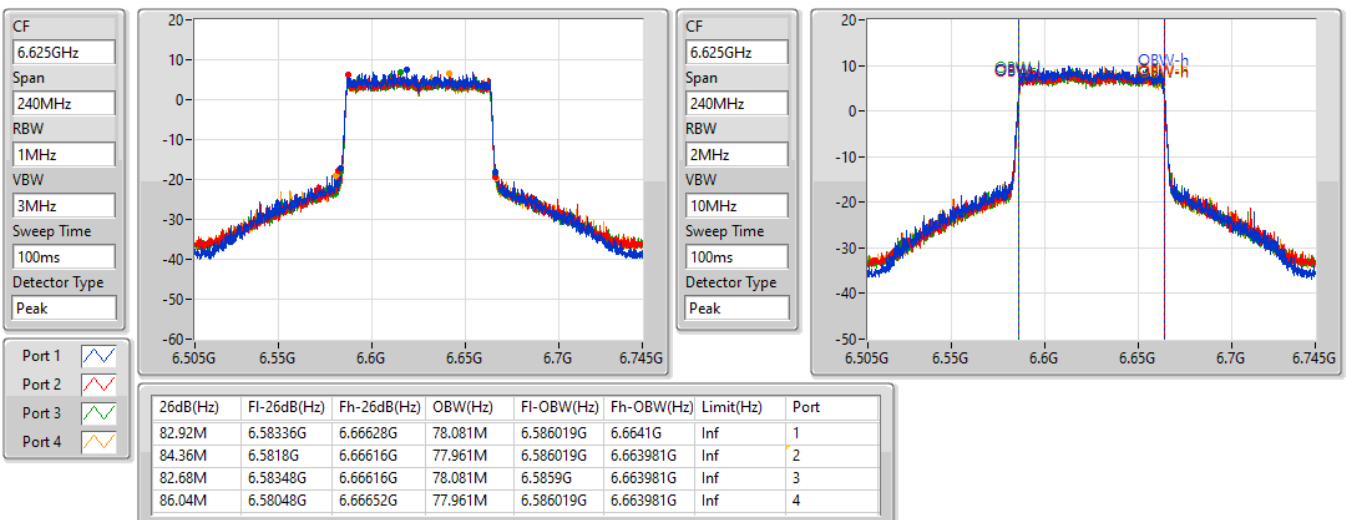


802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
6545MHz Straddle 6.425-6.525GHz

04/01/2022

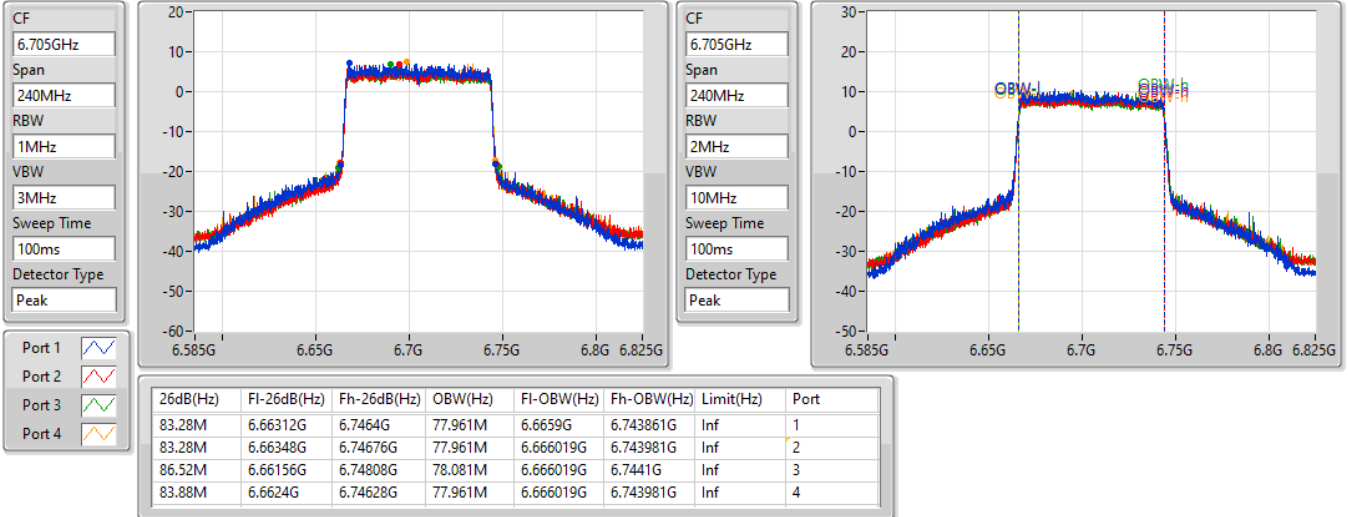

802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
6625MHz

04/01/2022

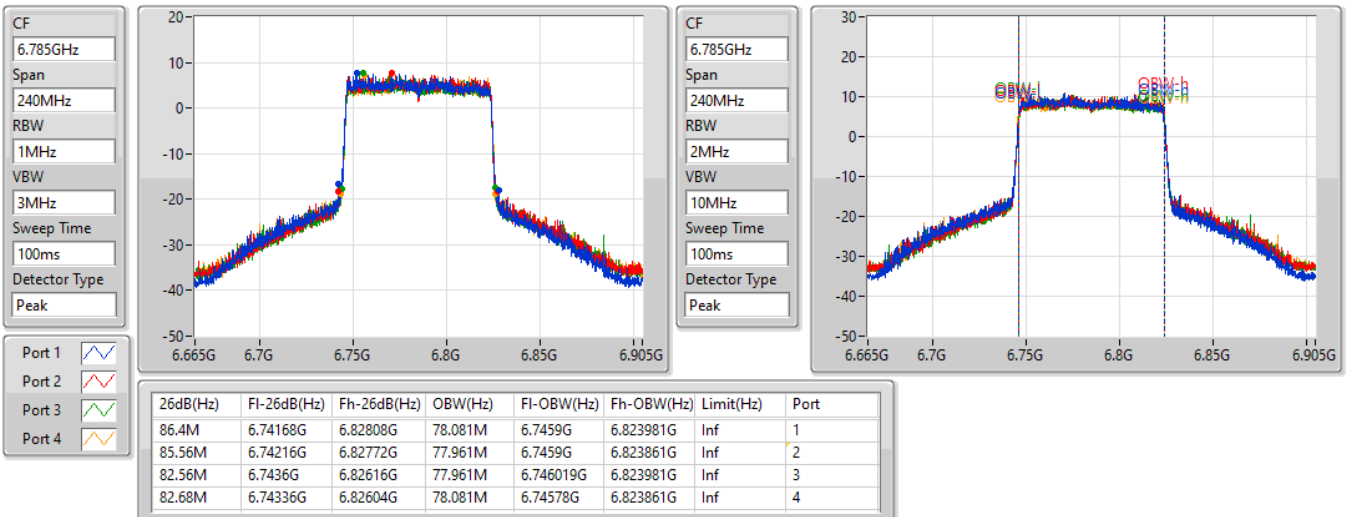


802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
6705MHz

04/01/2022

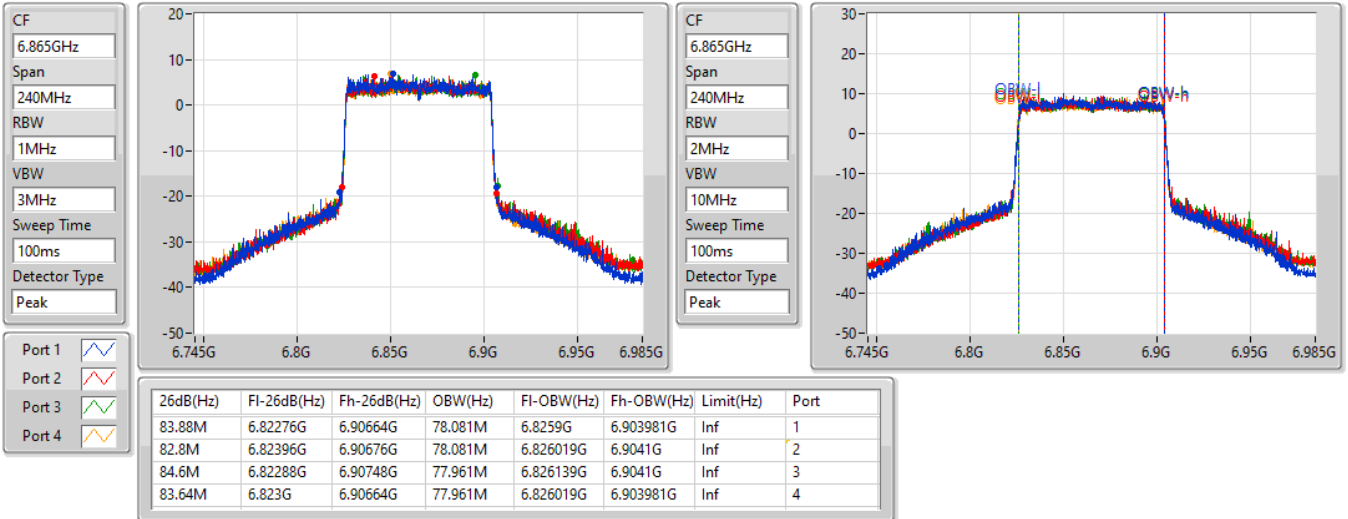

802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
6785MHz

04/01/2022

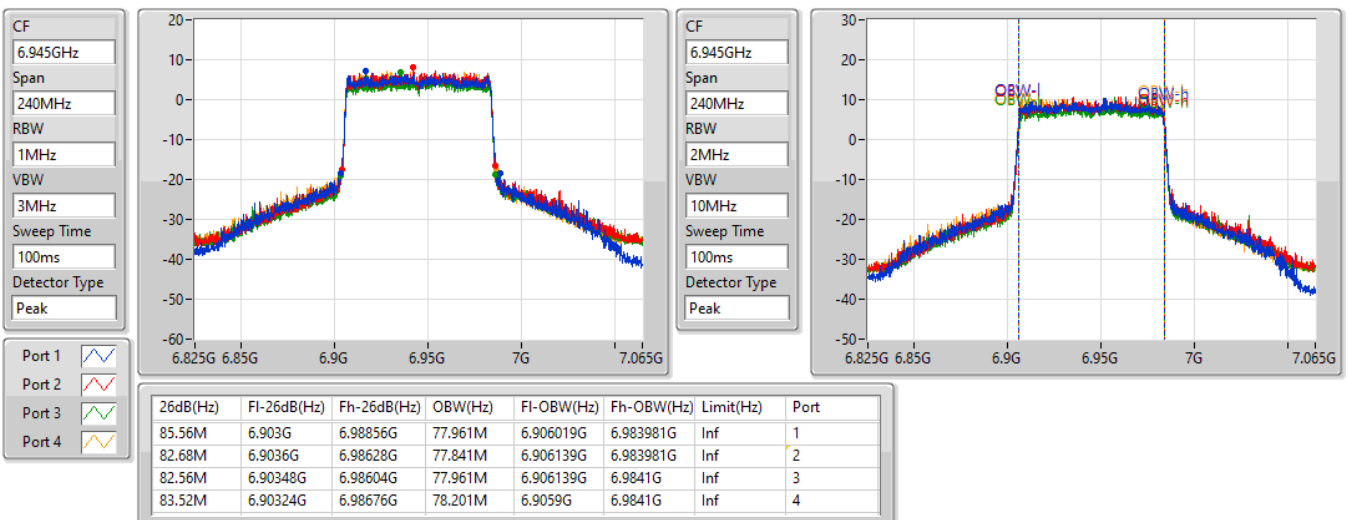


802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
6865MHz Straddle 6.525-6.875GHz

04/01/2022

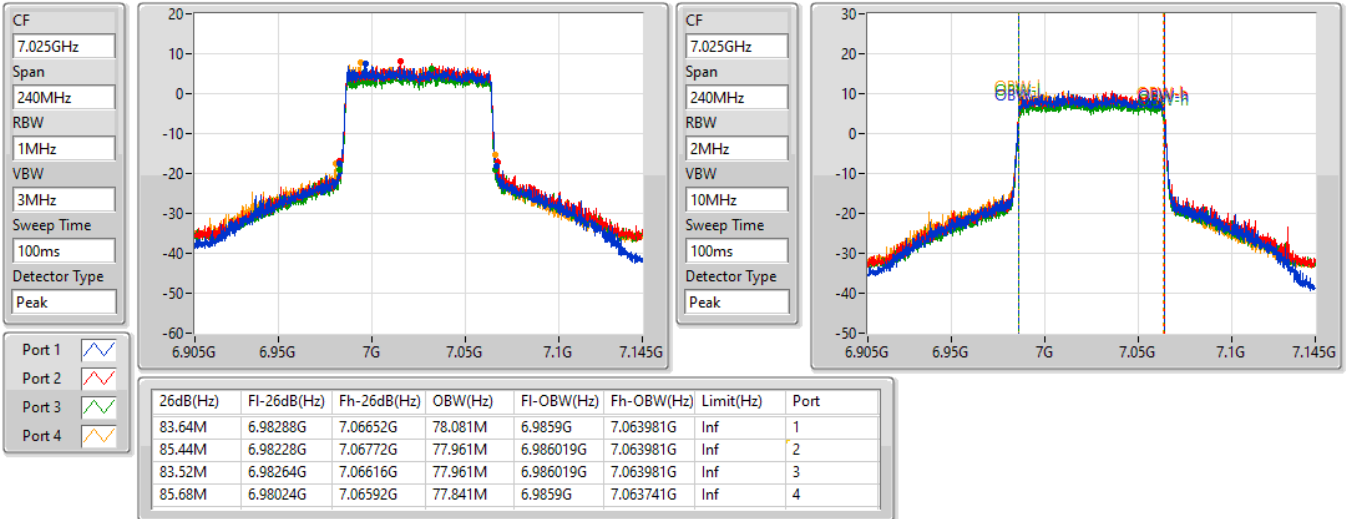

802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
6945MHz

04/01/2022

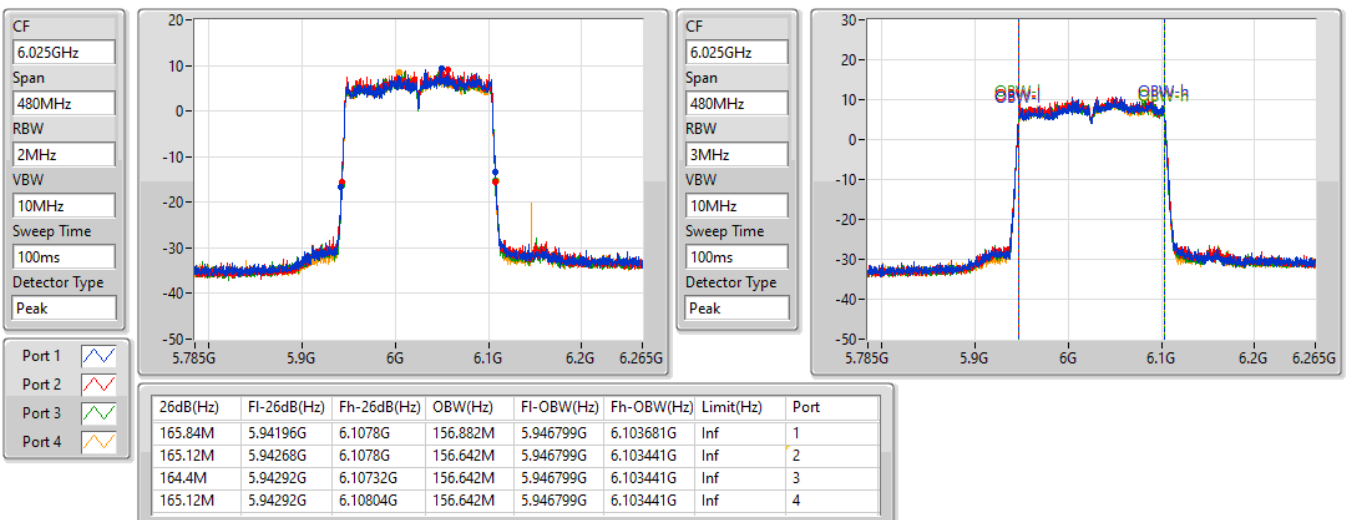


802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
7025MHz

04/01/2022

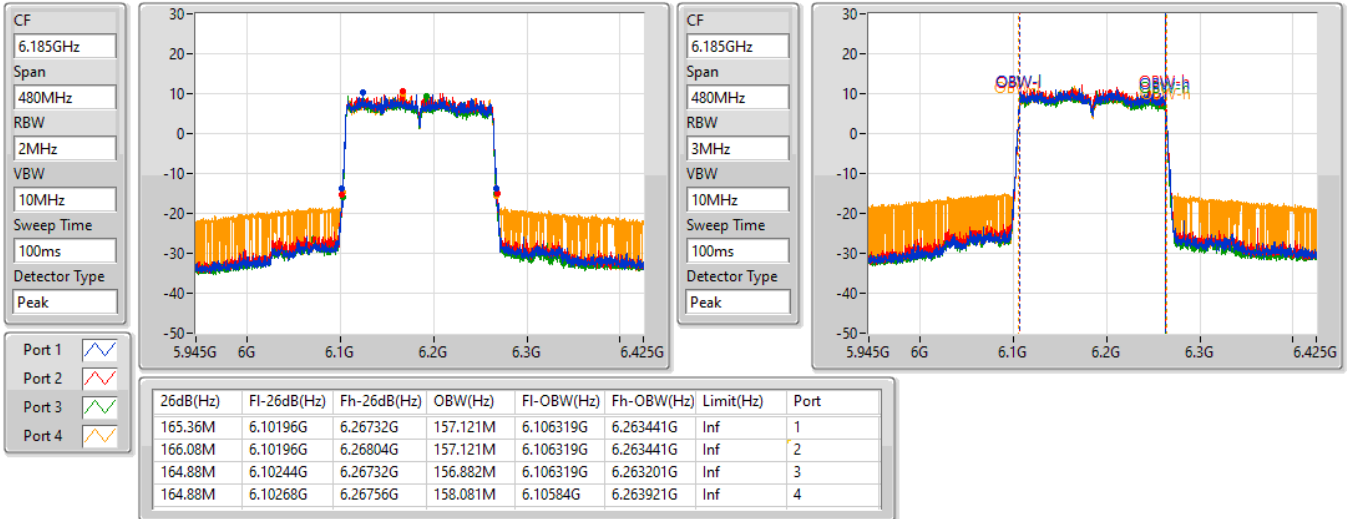

802.11ax HEW160_Nss1,(MCS0)_4TX
EBW
6025MHz

04/01/2022

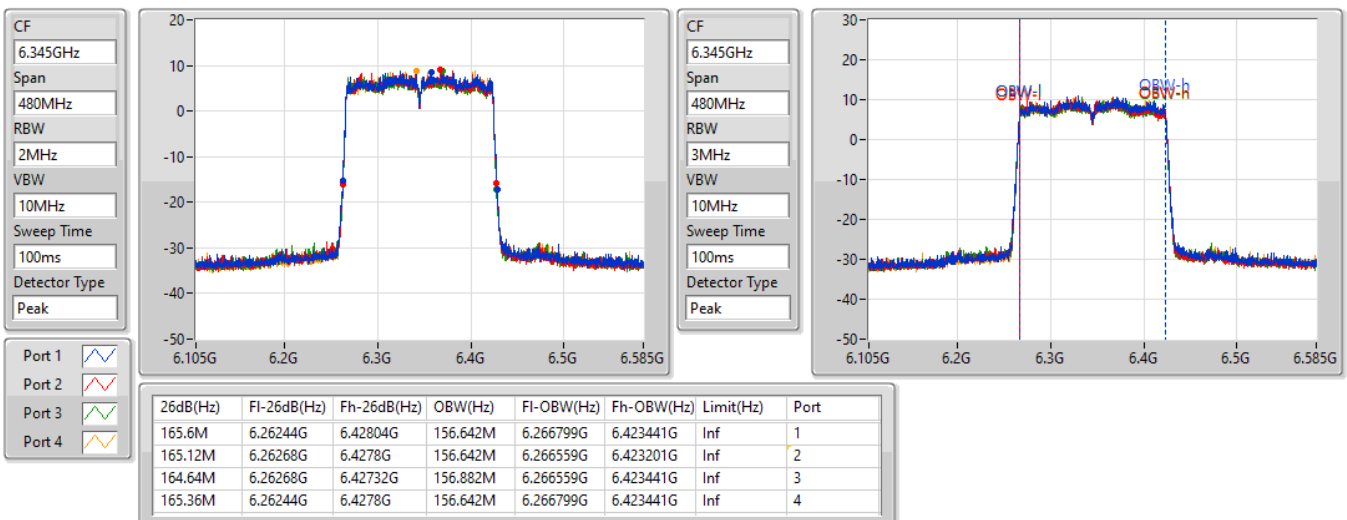


802.11ax HEW160_Nss1,(MCS0)_4TX
EBW
6185MHz

04/01/2022

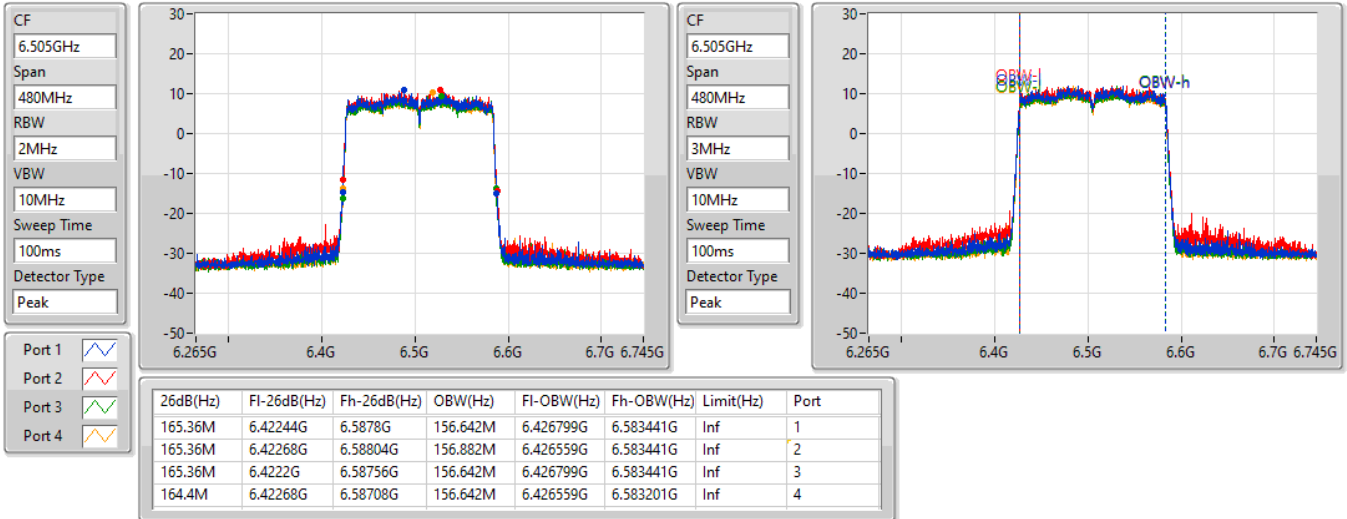

802.11ax HEW160_Nss1,(MCS0)_4TX
EBW
6345MHz

04/01/2022



802.11ax HEW160_Nss1,(MCS0)_4TX
EBW
6505MHz Straddle 6.425-6.525GHz

04/01/2022

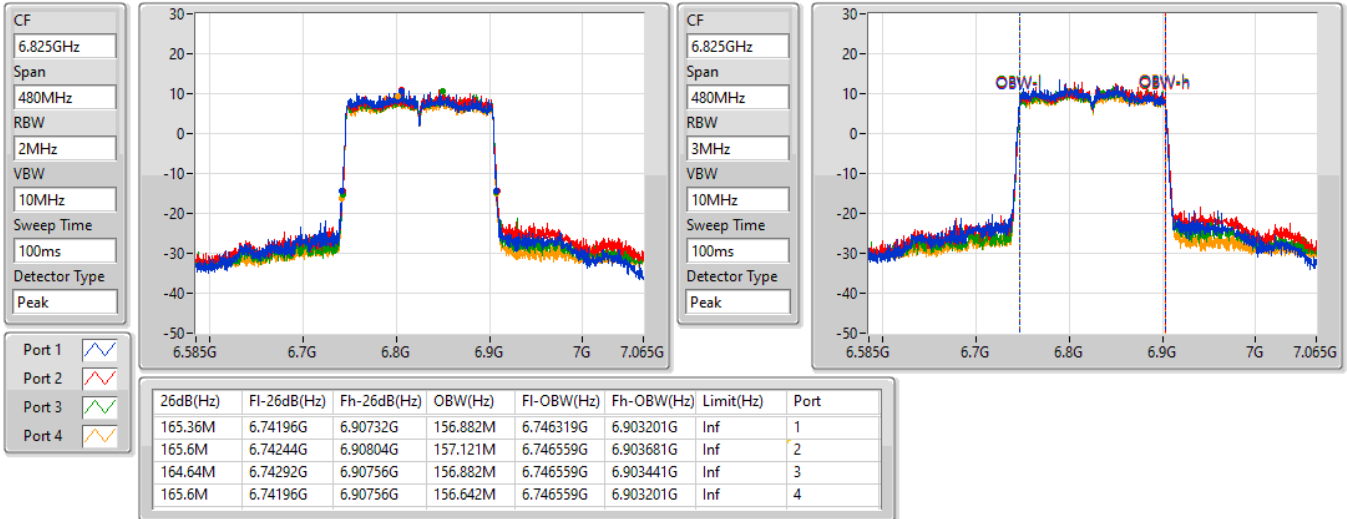

802.11ax HEW160_Nss1,(MCS0)_4TX
EBW
6665MHz

04/01/2022

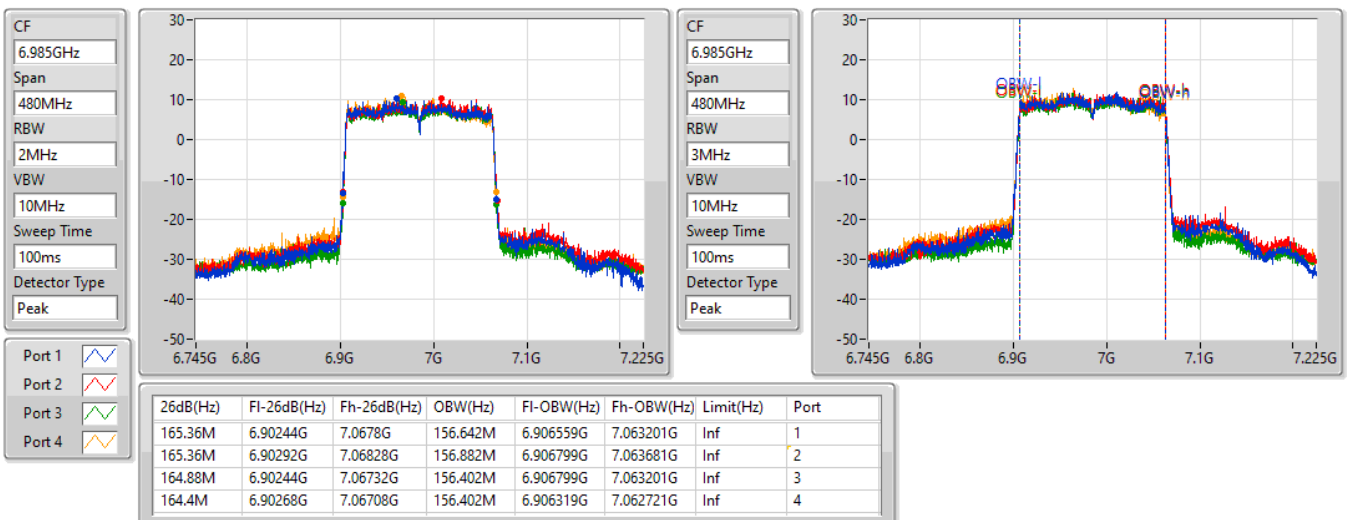


802.11ax HEW160_Nss1,(MCS0)_4TX
EBW
6825MHz Straddle 6.525-6.875GHz

04/01/2022


802.11ax HEW160_Nss1,(MCS0)_4TX
EBW
6985MHz

04/01/2022



For non beamforming mode / 4T4S

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.925-6.425GHz	-	-	-	-	-
802.11ax HEW20_Nss4,(MCS0)_4TX	28.86M	19.22M	19M2D1D	22.08M	19.16M
802.11ax HEW40_Nss4,(MCS0)_4TX	44.52M	38.261M	38M3D1D	42M	38.141M
802.11ax HEW80_Nss4,(MCS0)_4TX	90.36M	78.081M	78M1D1D	83.4M	77.841M
802.11ax HEW160_Nss4,(MCS0)_4TX	166.32M	157.841M	158MD1D	163.92M	156.642M
6.425-6.525GHz	-	-	-	-	-
802.11ax HEW20_Nss4,(MCS0)_4TX	30.84M	19.31M	19M3D1D	22.41M	19.19M
802.11ax HEW40_Nss4,(MCS0)_4TX	44.64M	38.141M	38M1D1D	41.7M	38.081M
802.11ax HEW80_Nss4,(MCS0)_4TX	86.16M	78.081M	78M1D1D	84.24M	77.841M
802.11ax HEW160_Nss4,(MCS0)_4TX	242.4M	157.361M	157MD1D	164.4M	156.642M
6.525-6.875GHz	-	-	-	-	-
802.11ax HEW20_Nss4,(MCS0)_4TX	28.74M	19.28M	19M3D1D	21.96M	19.19M
802.11ax HEW40_Nss4,(MCS0)_4TX	44.16M	38.201M	38M2D1D	41.7M	38.021M
802.11ax HEW80_Nss4,(MCS0)_4TX	85.56M	78.201M	78M2D1D	83.76M	77.841M
802.11ax HEW160_Nss4,(MCS0)_4TX	261.12M	158.081M	158MD1D	163.92M	157.121M
6.875-7.125GHz	-	-	-	-	-
802.11ax HEW20_Nss4,(MCS0)_4TX	28.44M	19.31M	19M3D1D	22.17M	19.19M
802.11ax HEW40_Nss4,(MCS0)_4TX	43.8M	38.201M	38M2D1D	41.94M	38.081M
802.11ax HEW80_Nss4,(MCS0)_4TX	88.8M	78.081M	78M1D1D	84.96M	77.961M
802.11ax HEW160_Nss4,(MCS0)_4TX	262.56M	157.841M	158MD1D	242.16M	157.121M

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Max-OBW = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Min-OBW = Minimum 99% occupied bandwidth

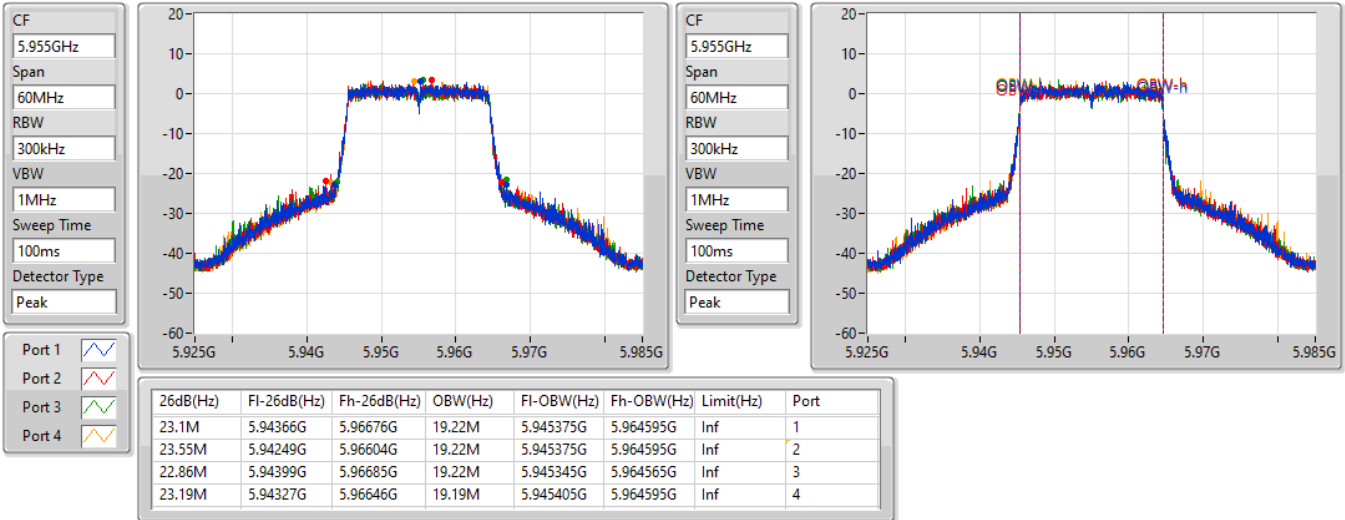
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ax HEW20_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5955MHz	Pass	Inf	23.1M	19.22M	23.55M	19.22M	22.86M	19.22M	23.19M	19.19M
6175MHz	Pass	Inf	23.01M	19.22M	22.08M	19.22M	23.97M	19.19M	23.28M	19.22M
6415MHz	Pass	Inf	22.71M	19.22M	22.44M	19.16M	28.86M	19.22M	25.17M	19.22M
6435MHz	Pass	Inf	24.15M	19.22M	23.34M	19.22M	26.31M	19.22M	22.56M	19.22M
6475MHz	Pass	Inf	22.41M	19.31M	27.96M	19.25M	22.86M	19.22M	24.9M	19.19M
6515MHz	Pass	Inf	23.16M	19.22M	30.84M	19.22M	24.66M	19.22M	22.59M	19.22M
6535MHz	Pass	Inf	23.04M	19.25M	28.05M	19.25M	24.48M	19.22M	22.32M	19.19M
6695MHz	Pass	Inf	23.46M	19.25M	28.74M	19.25M	23.25M	19.25M	25.71M	19.19M
6855MHz	Pass	Inf	23.46M	19.28M	23.1M	19.22M	27.33M	19.19M	23.04M	19.25M
6875MHz Straddle 6.525-6.875GHz	Pass	Inf	25.17M	19.28M	21.96M	19.25M	22.29M	19.22M	22.92M	19.19M
6895MHz	Pass	Inf	24.18M	19.31M	25.35M	19.28M	22.86M	19.25M	24.33M	19.19M
6995MHz	Pass	Inf	24.03M	19.19M	22.92M	19.22M	24.18M	19.25M	22.29M	19.19M
7095MHz	Pass	Inf	25.59M	19.28M	22.17M	19.22M	23.16M	19.28M	28.44M	19.22M
802.11ax HEW40_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5965MHz	Pass	Inf	42.48M	38.141M	42.24M	38.201M	42.54M	38.261M	42.48M	38.141M
6165MHz	Pass	Inf	43.92M	38.141M	42.66M	38.141M	42.42M	38.201M	42.42M	38.141M
6405MHz	Pass	Inf	42M	38.141M	42.18M	38.141M	42.78M	38.261M	44.52M	38.141M
6445MHz	Pass	Inf	44.22M	38.141M	41.7M	38.141M	42.72M	38.141M	44.52M	38.081M
6485MHz	Pass	Inf	44.04M	38.141M	41.7M	38.141M	42.42M	38.141M	42.6M	38.141M
6525MHz Straddle 6.425-6.525GHz	Pass	Inf	44.22M	38.141M	41.82M	38.141M	42.36M	38.141M	44.64M	38.141M
6565MHz	Pass	Inf	41.94M	38.201M	41.76M	38.141M	42.48M	38.141M	44.16M	38.021M
6685MHz	Pass	Inf	42.06M	38.141M	41.7M	38.081M	42.18M	38.141M	42.24M	38.141M
6845MHz	Pass	Inf	41.82M	38.201M	42.54M	38.141M	42.36M	38.141M	43.26M	38.141M
6885MHz Straddle 6.525-6.875GHz	Pass	Inf	42.54M	38.201M	42.18M	38.201M	42.66M	38.141M	42.24M	38.141M
6925MHz	Pass	Inf	42M	38.141M	42.42M	38.081M	42.24M	38.201M	43.8M	38.141M
7005MHz	Pass	Inf	42.78M	38.201M	43.5M	38.141M	41.94M	38.201M	42.12M	38.201M
7085MHz	Pass	Inf	42M	38.141M	43.26M	38.141M	42.36M	38.141M	43.2M	38.081M
802.11ax HEW80_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5985MHz	Pass	Inf	84.24M	77.961M	84.36M	77.961M	83.4M	77.961M	84.12M	77.841M
6145MHz	Pass	Inf	85.08M	77.841M	85.2M	77.961M	84.96M	77.961M	85.44M	77.841M
6385MHz	Pass	Inf	85.08M	77.961M	84M	78.081M	84.96M	78.081M	90.36M	77.961M
6465MHz	Pass	Inf	85.2M	77.841M	84.24M	78.081M	85.08M	78.081M	85.8M	77.961M
6545MHz Straddle 6.425-6.525GHz	Pass	Inf	85.2M	77.961M	85.32M	78.081M	84.48M	77.961M	86.16M	77.841M
6625MHz	Pass	Inf	84.96M	77.841M	84.36M	77.961M	84.96M	77.961M	85.44M	77.841M
6705MHz	Pass	Inf	85.08M	77.961M	83.76M	77.961M	85.2M	77.961M	85.2M	78.081M
6785MHz	Pass	Inf	85.08M	77.841M	84.12M	78.201M	84.12M	78.081M	84.24M	77.961M
6865MHz Straddle 6.525-6.875GHz	Pass	Inf	84.48M	78.081M	84.36M	77.961M	84.24M	77.961M	85.56M	78.081M
6945MHz	Pass	Inf	85.32M	77.961M	85.08M	78.081M	88.8M	78.081M	85.32M	78.081M
7025MHz	Pass	Inf	85.08M	78.081M	85.44M	78.081M	84.96M	77.961M	85.32M	77.961M
802.11ax HEW160_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
6025MHz	Pass	Inf	165.36M	156.882M	165.12M	156.642M	165.36M	156.642M	164.88M	156.642M
6185MHz	Pass	Inf	166.32M	157.121M	165.36M	157.121M	164.88M	156.882M	165.12M	157.841M
6345MHz	Pass	Inf	166.32M	156.882M	164.4M	156.882M	163.92M	156.642M	164.64M	156.882M
6505MHz Straddle 6.425-6.525GHz	Pass	Inf	215.76M	157.121M	242.4M	157.361M	164.4M	156.882M	165.12M	156.642M
6665MHz	Pass	Inf	241.2M	157.601M	261.12M	157.841M	164.16M	157.361M	163.92M	157.121M
6825MHz Straddle 6.525-6.875GHz	Pass	Inf	230.88M	157.841M	231.12M	158.081M	164.16M	157.361M	164.88M	157.121M
6985MHz	Pass	Inf	242.16M	157.841M	262.56M	157.841M	261.6M	157.121M	251.04M	157.361M

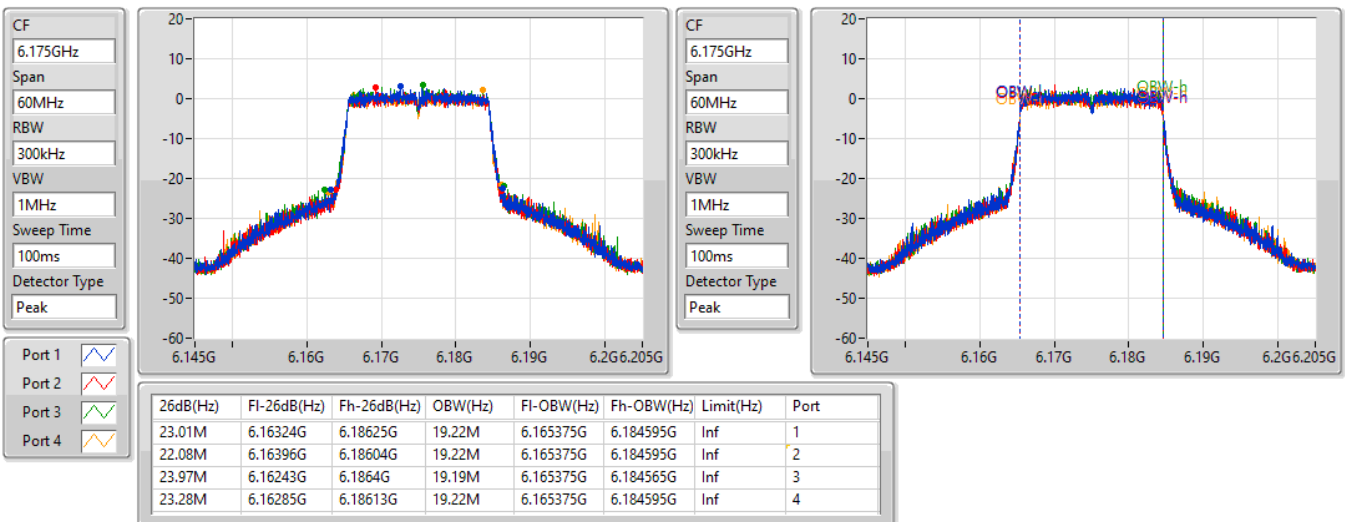
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
5955MHz

06/01/2022

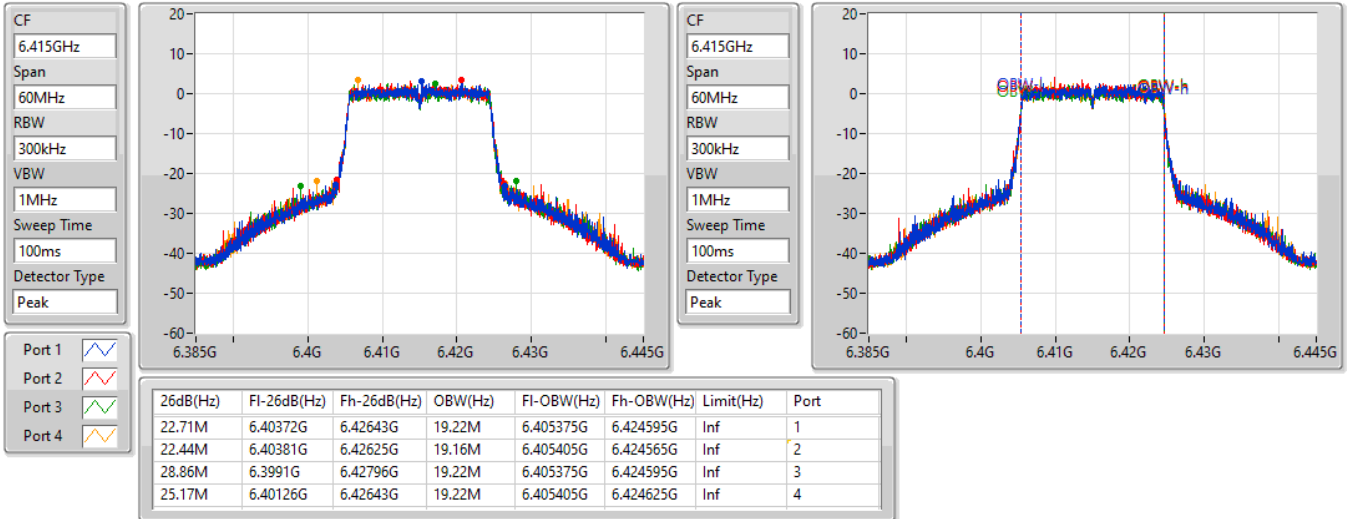

802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
6175MHz

06/01/2022

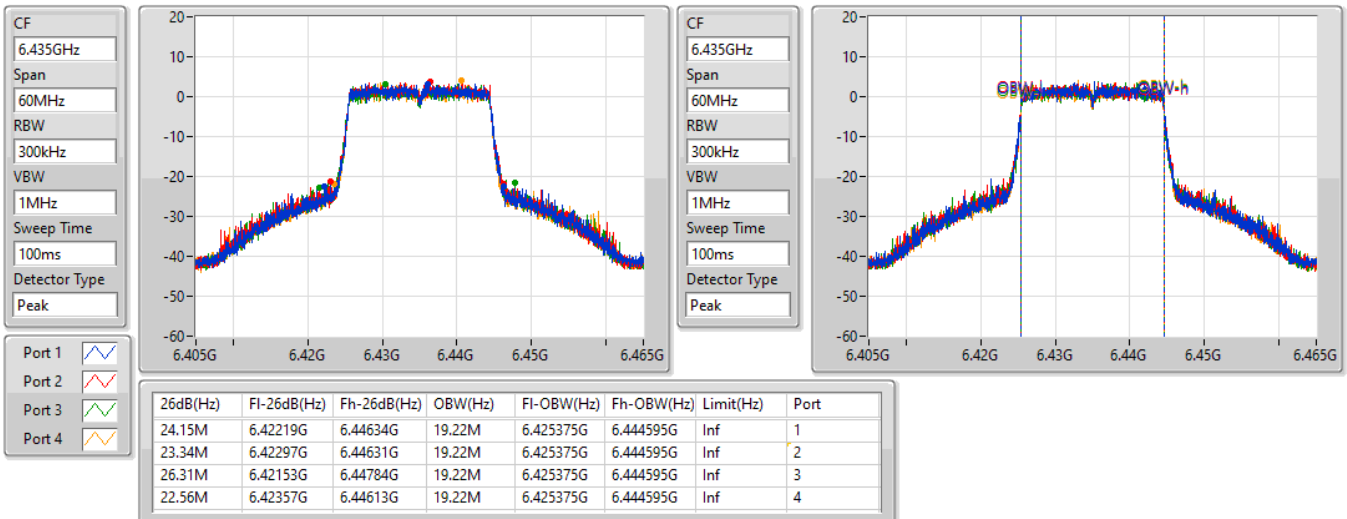


802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
6415MHz

06/01/2022

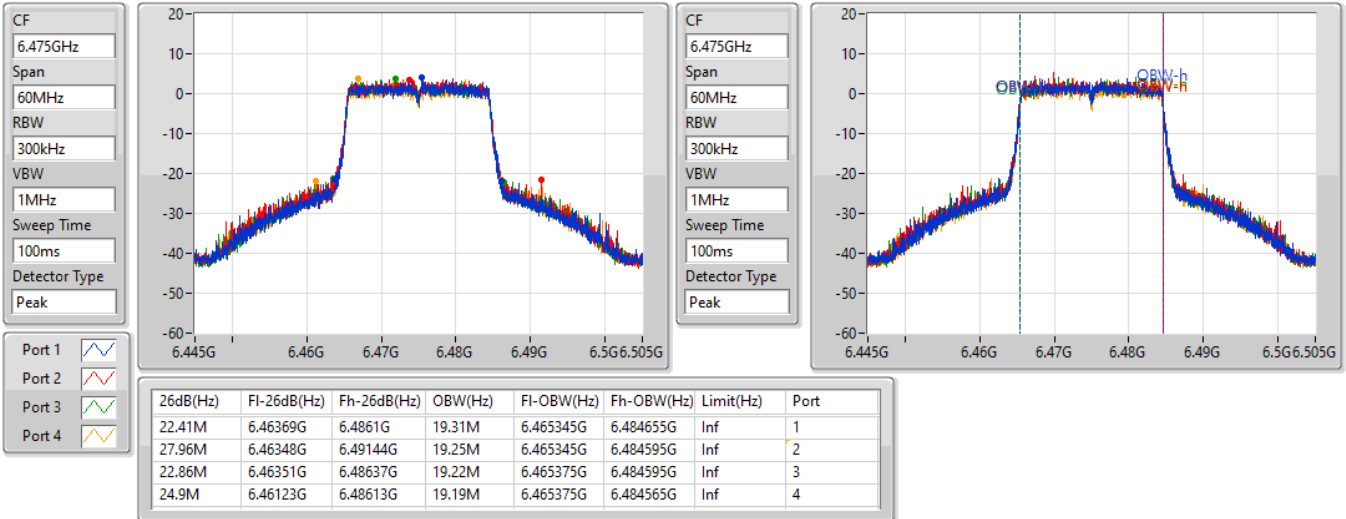

802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
6435MHz

06/01/2022

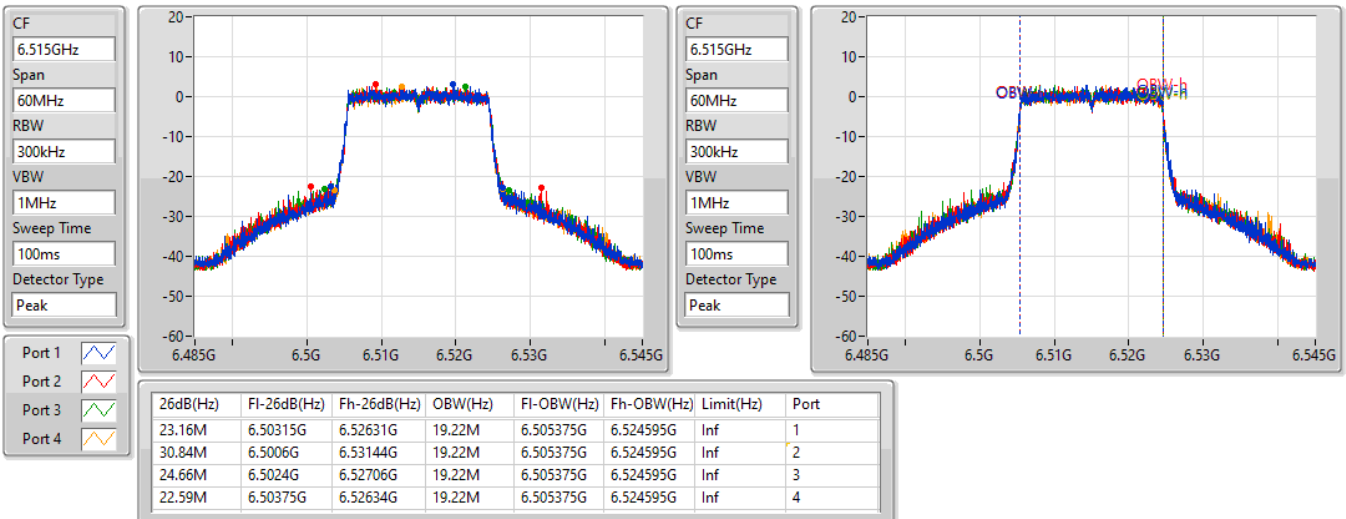


802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
6475MHz

06/01/2022

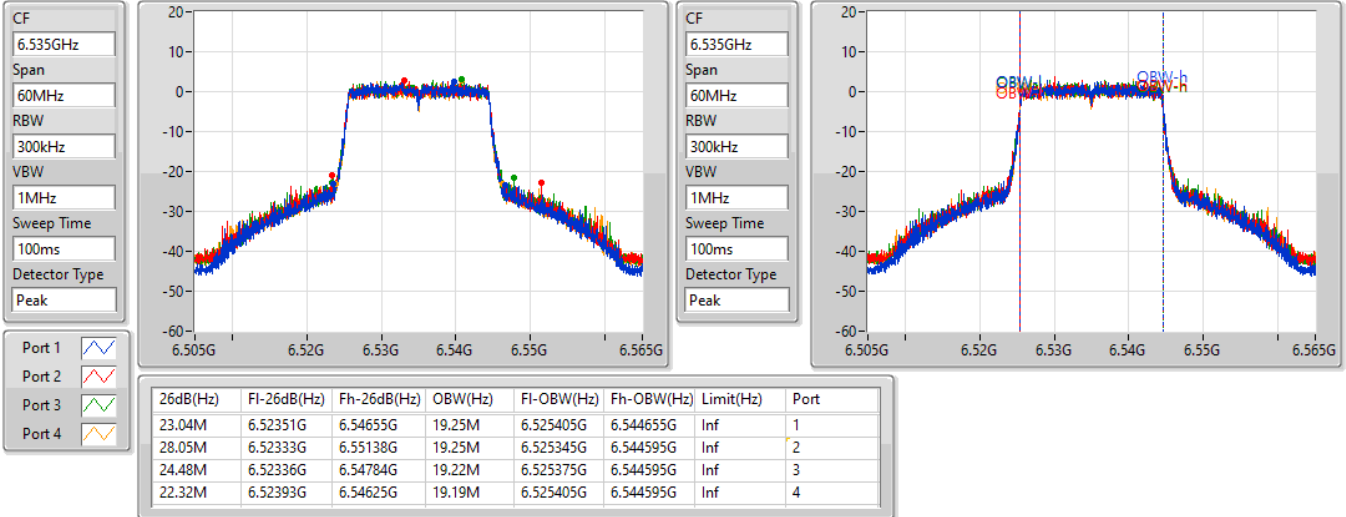

802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
6515MHz

06/01/2022

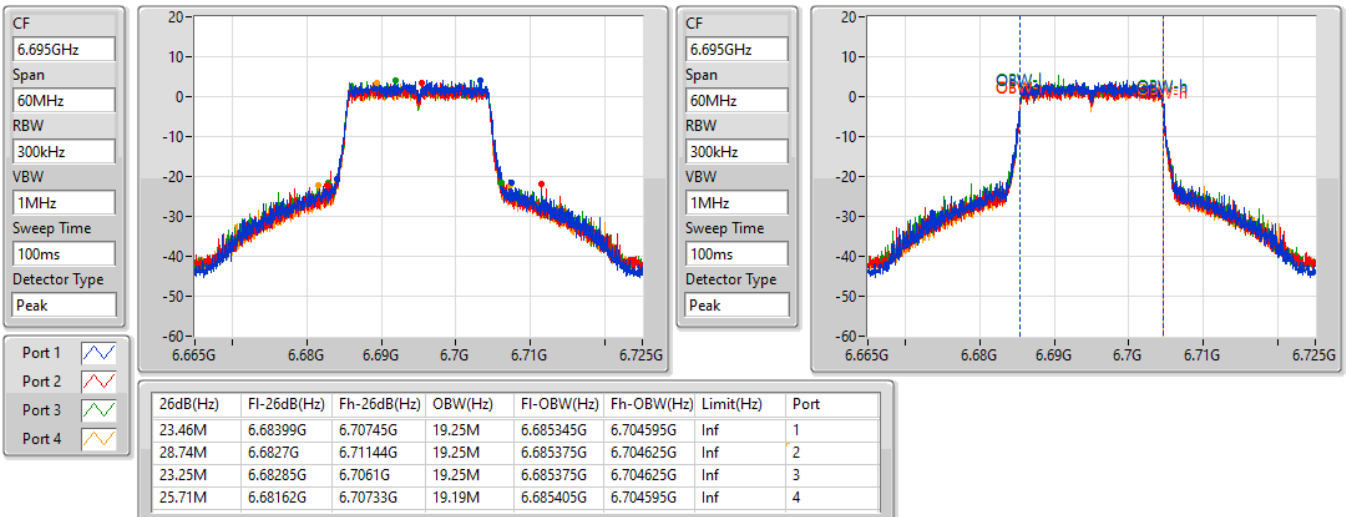


802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
6535MHz

06/01/2022

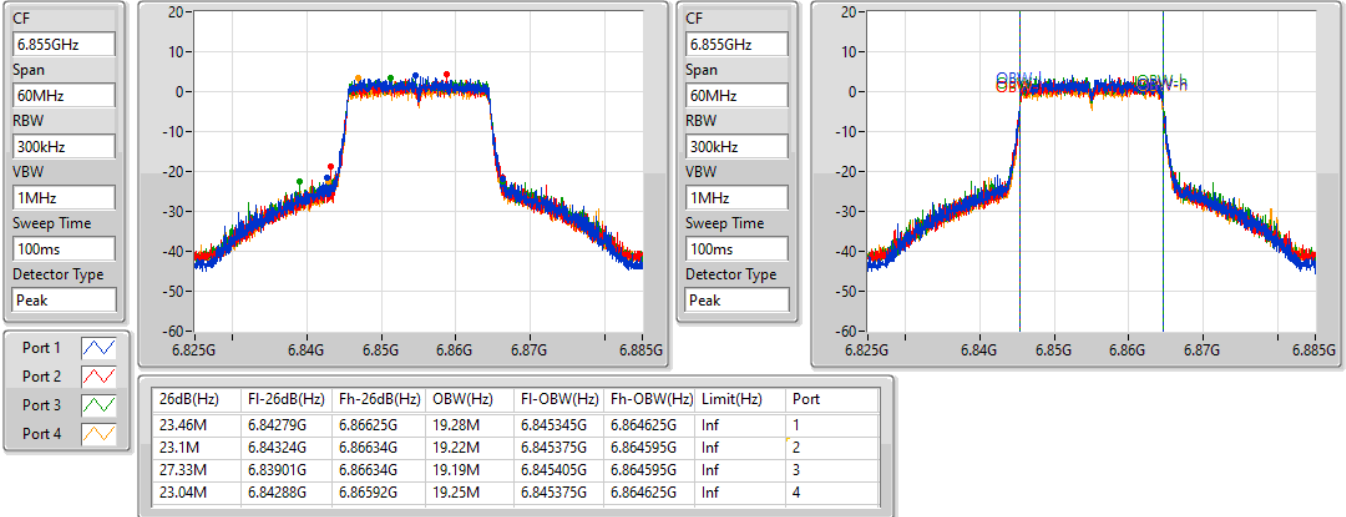

802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
6695MHz

06/01/2022

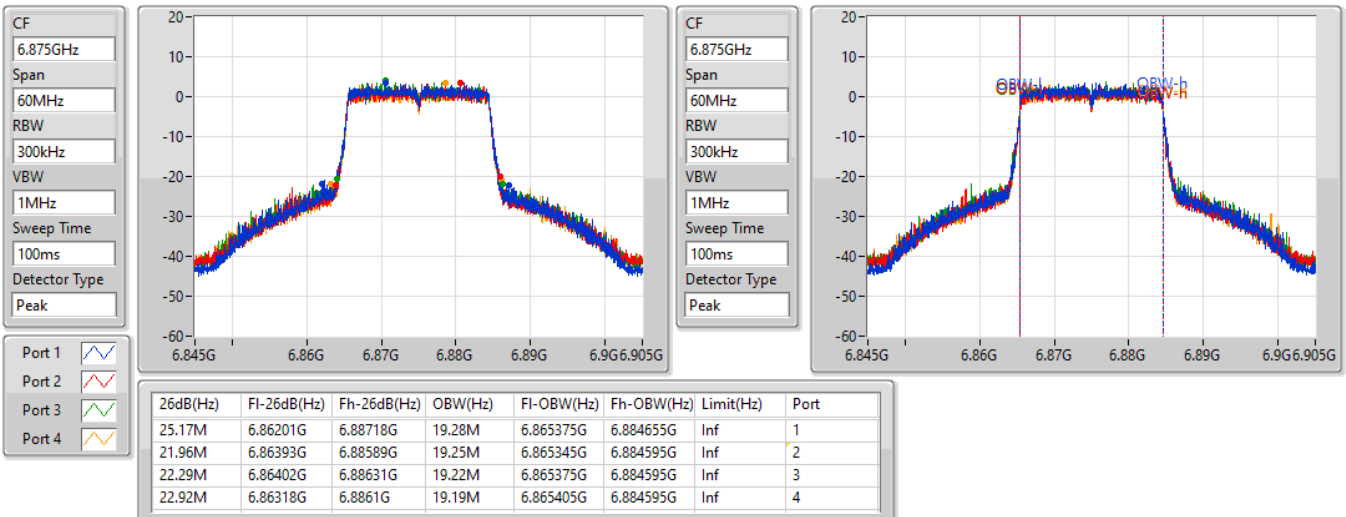


802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
6855MHz

06/01/2022

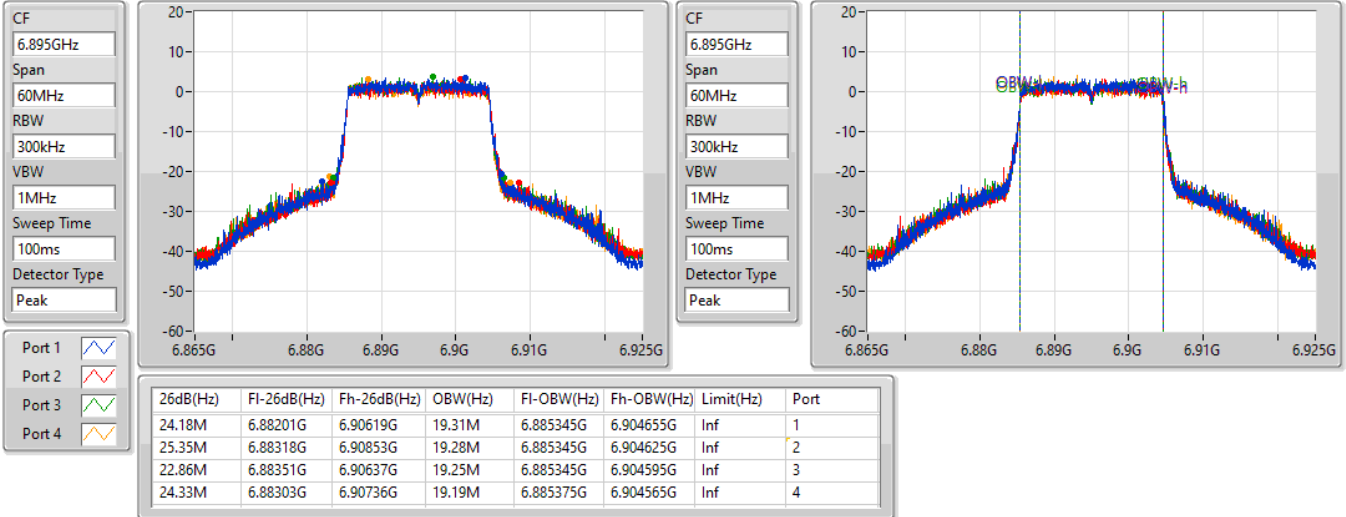

802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
6875MHz Straddle 6.525-6.875GHz

06/01/2022

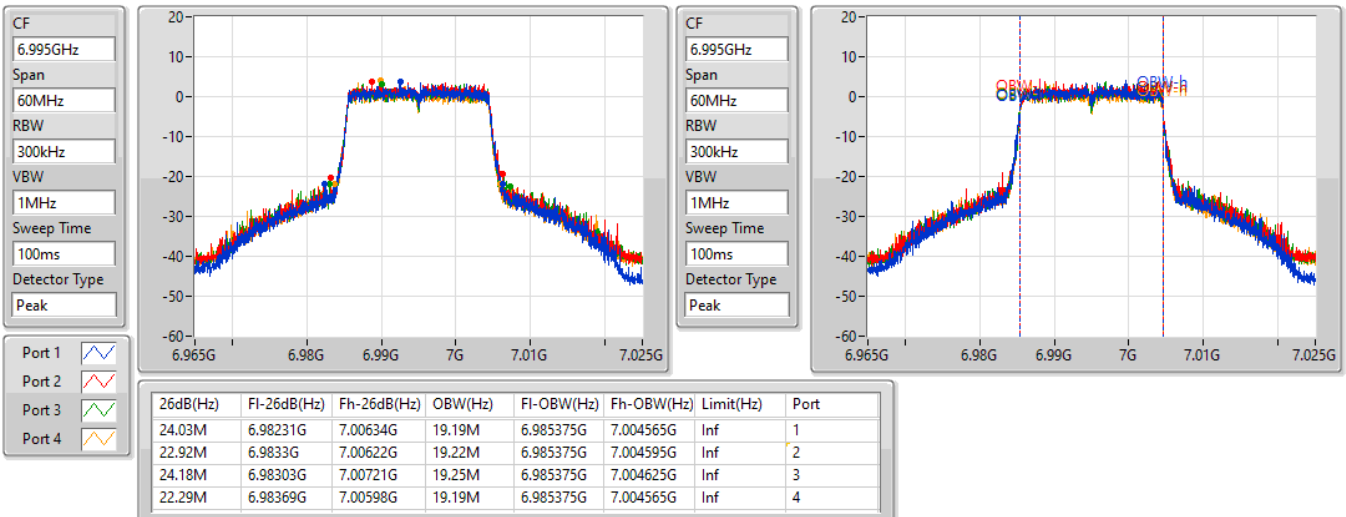


802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
6895MHz

06/01/2022

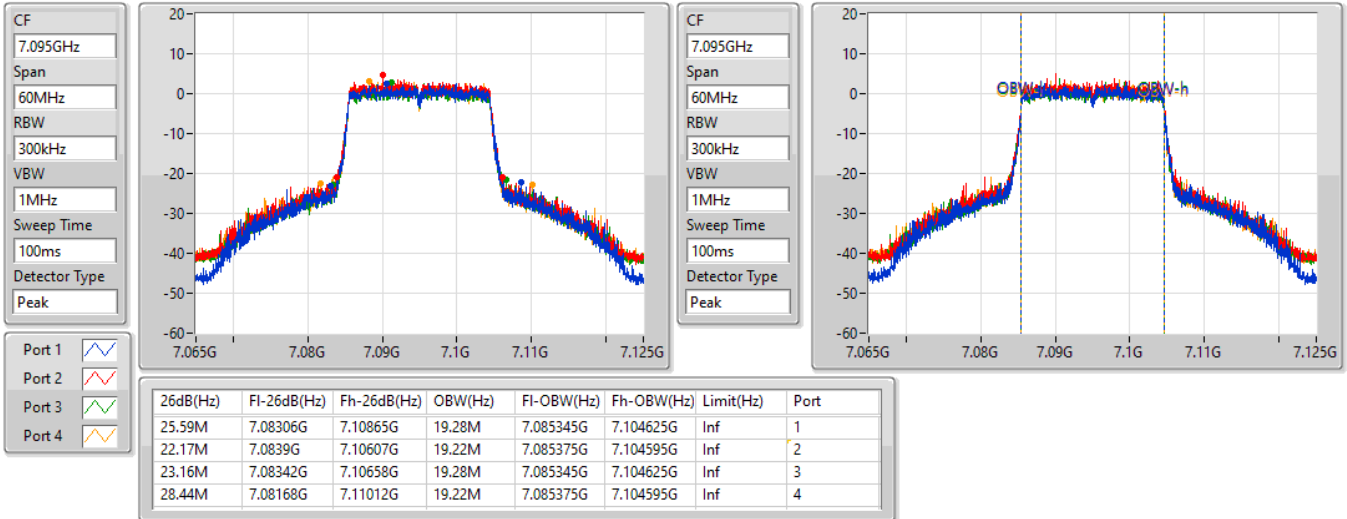

802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
6995MHz

06/01/2022

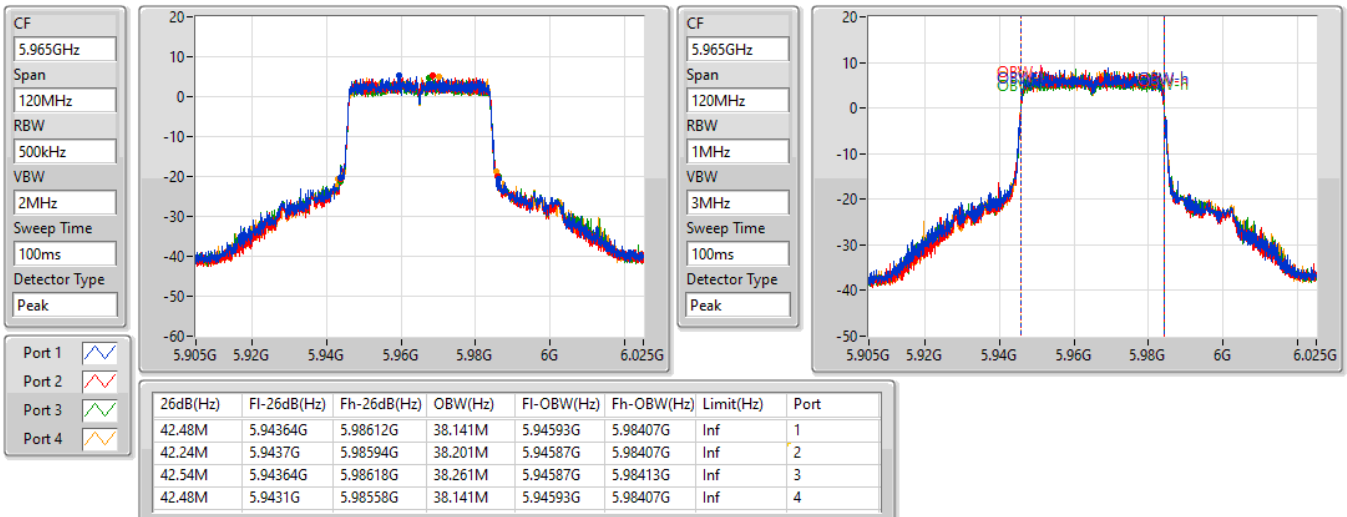


802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
7095MHz

06/01/2022


802.11ax HEW40_Nss4,(MCS0)_4TX
EBW
5965MHz

06/01/2022

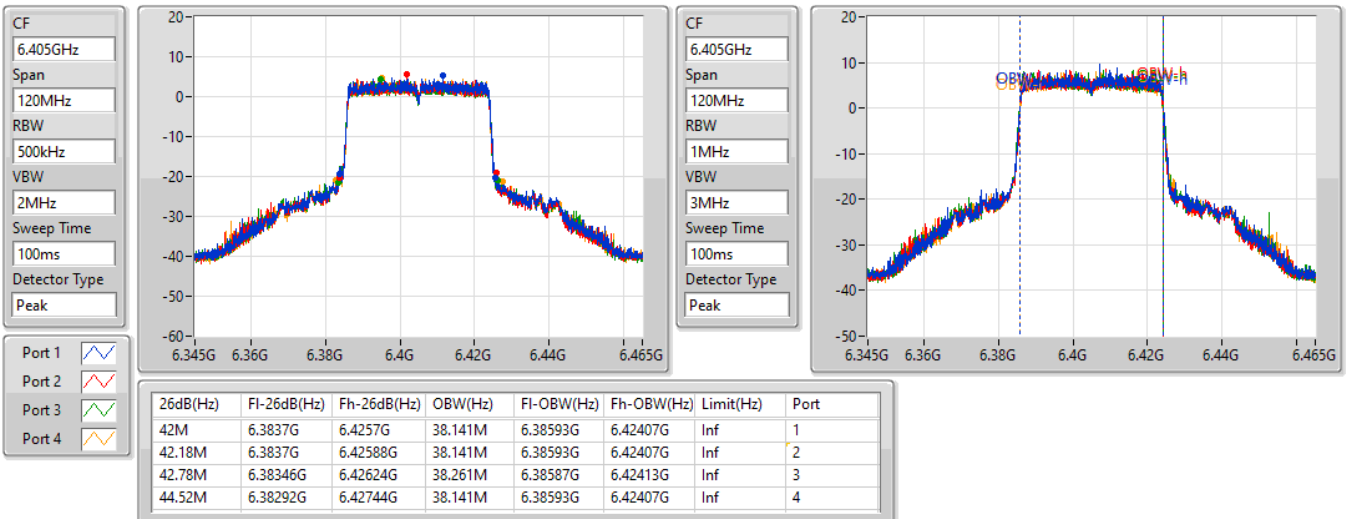


802.11ax HEW40_Nss4,(MCS0)_4TX
EBW
6165MHz

06/01/2022


802.11ax HEW40_Nss4,(MCS0)_4TX
EBW
6405MHz

06/01/2022

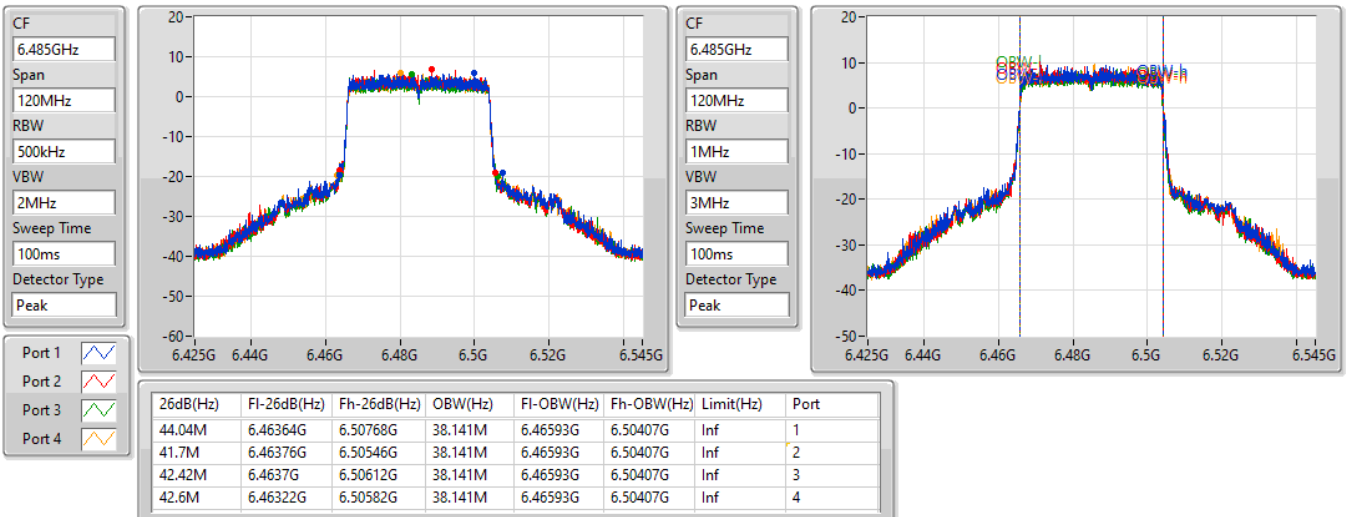


802.11ax HEW40_Nss4,(MCS0)_4TX
EBW
6445MHz

06/01/2022

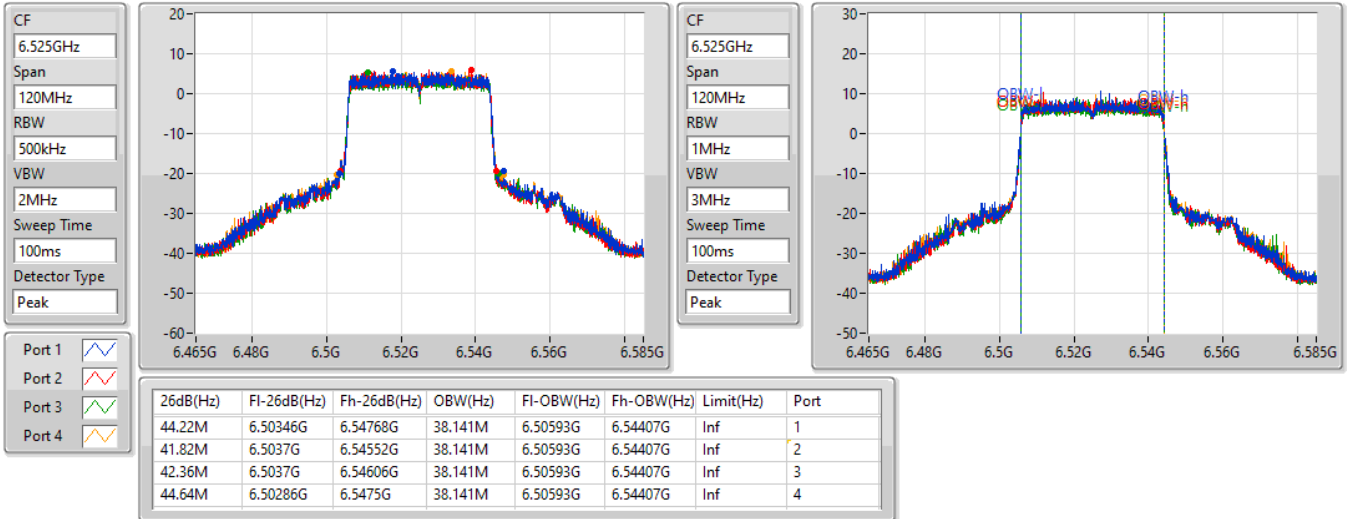

802.11ax HEW40_Nss4,(MCS0)_4TX
EBW
6485MHz

06/01/2022



802.11ax HEW40_Nss4,(MCS0)_4TX
EBW
6525MHz Straddle 6.425-6.525GHz

06/01/2022

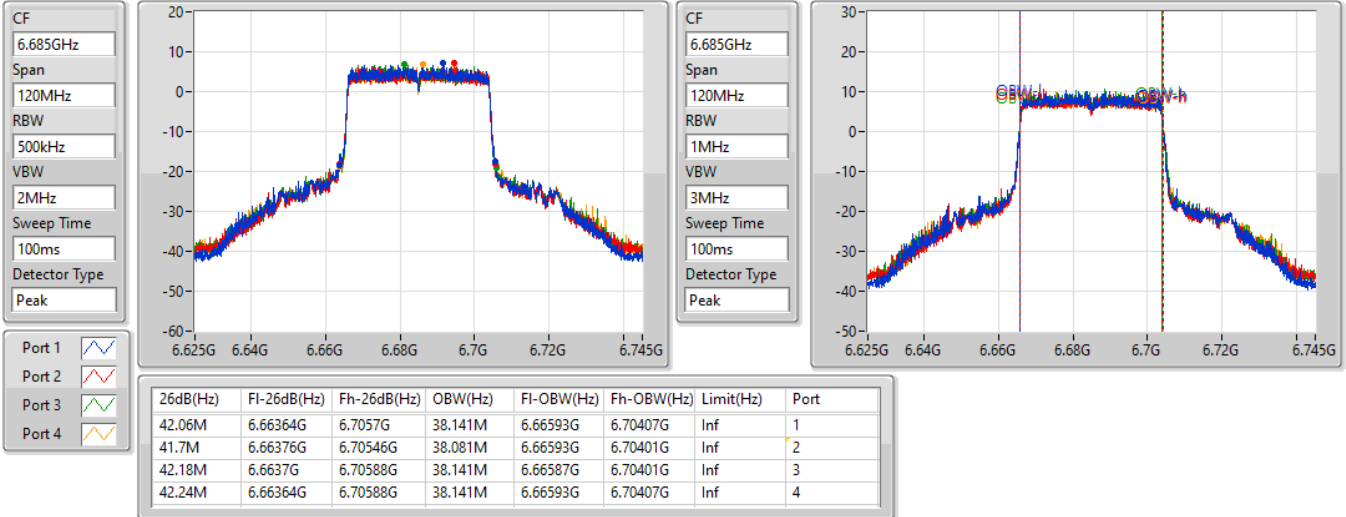

802.11ax HEW40_Nss4,(MCS0)_4TX
EBW
6565MHz

06/01/2022



802.11ax HEW40_Nss4,(MCS0)_4TX
EBW
6685MHz

06/01/2022

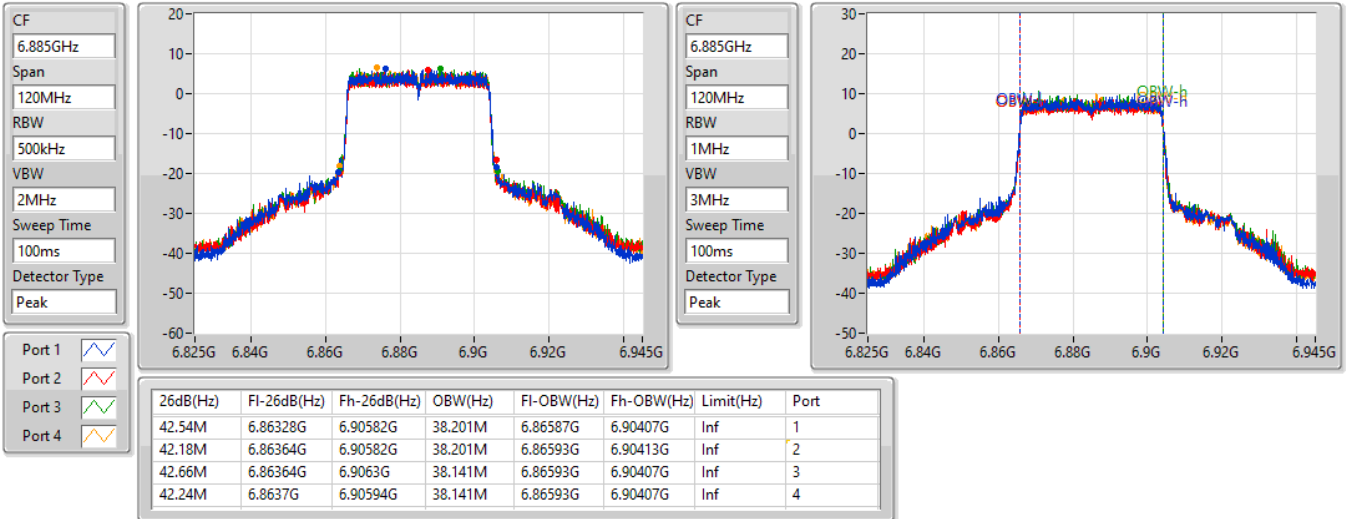

802.11ax HEW40_Nss4,(MCS0)_4TX
EBW
6845MHz

06/01/2022

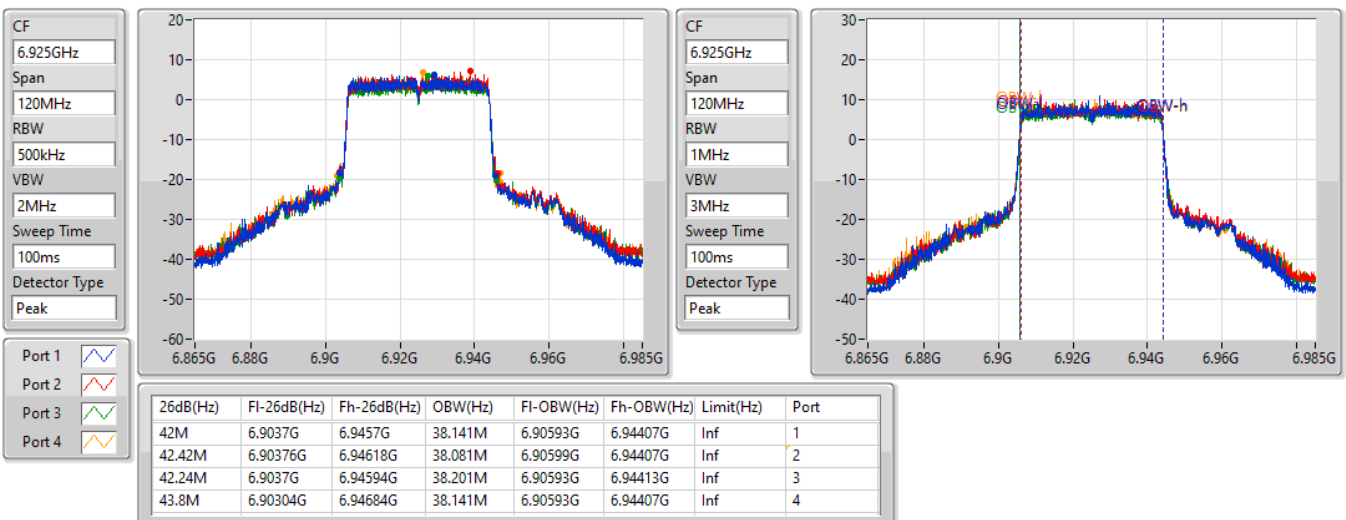


802.11ax HEW40_Nss4,(MCS0)_4TX
EBW
6885MHz Straddle 6.525-6.875GHz

06/01/2022

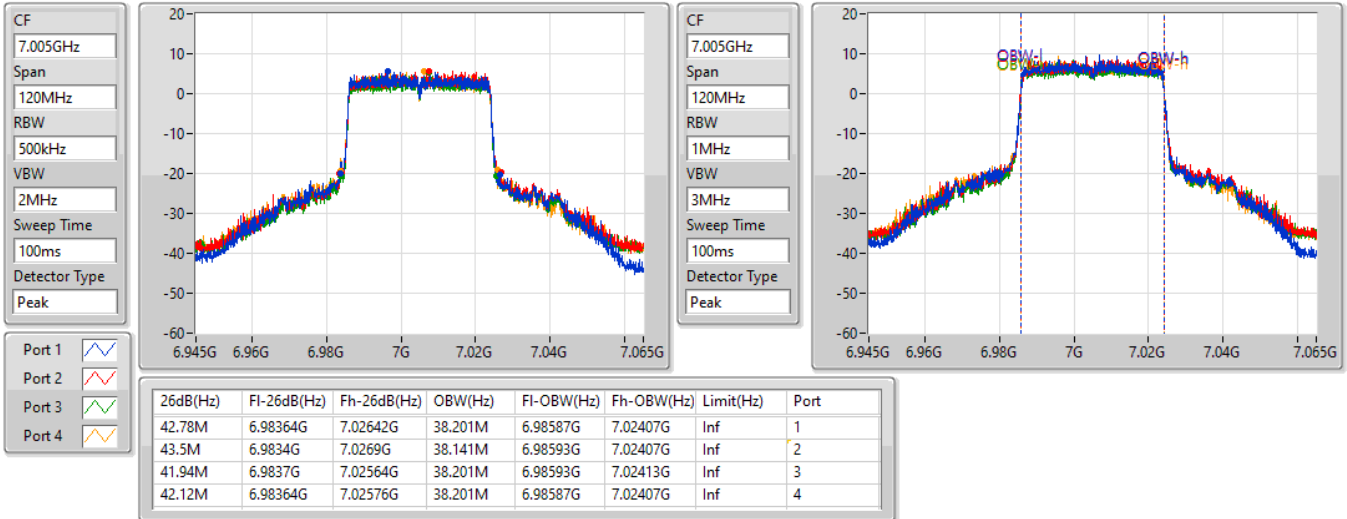

802.11ax HEW40_Nss4,(MCS0)_4TX
EBW
6925MHz

06/01/2022

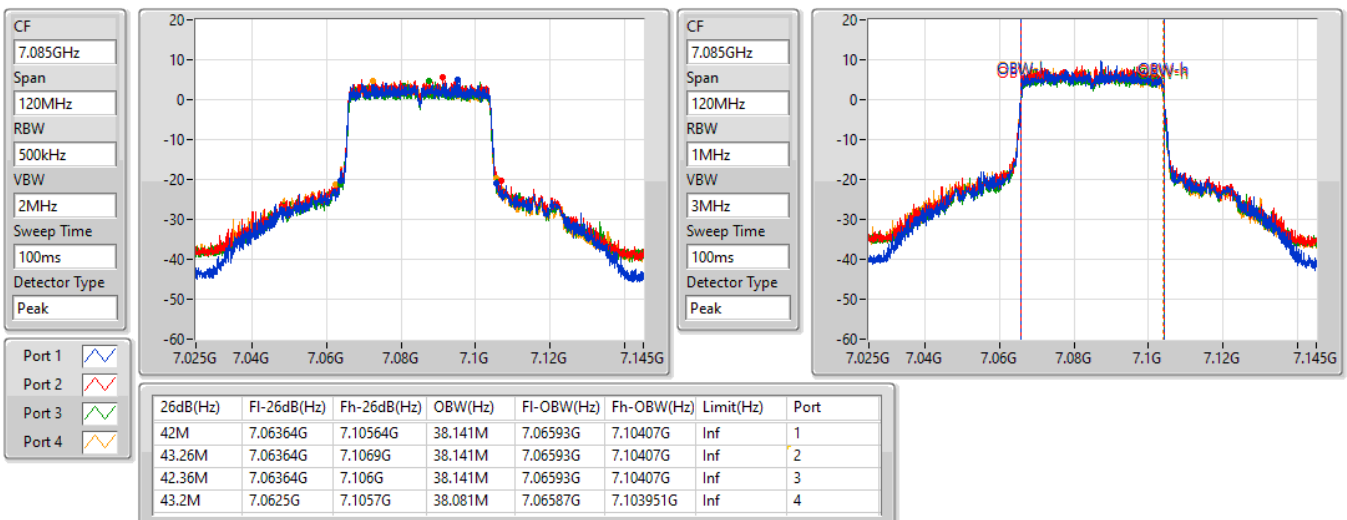


802.11ax HEW40_Nss4,(MCS0)_4TX
EBW
7005MHz

06/01/2022

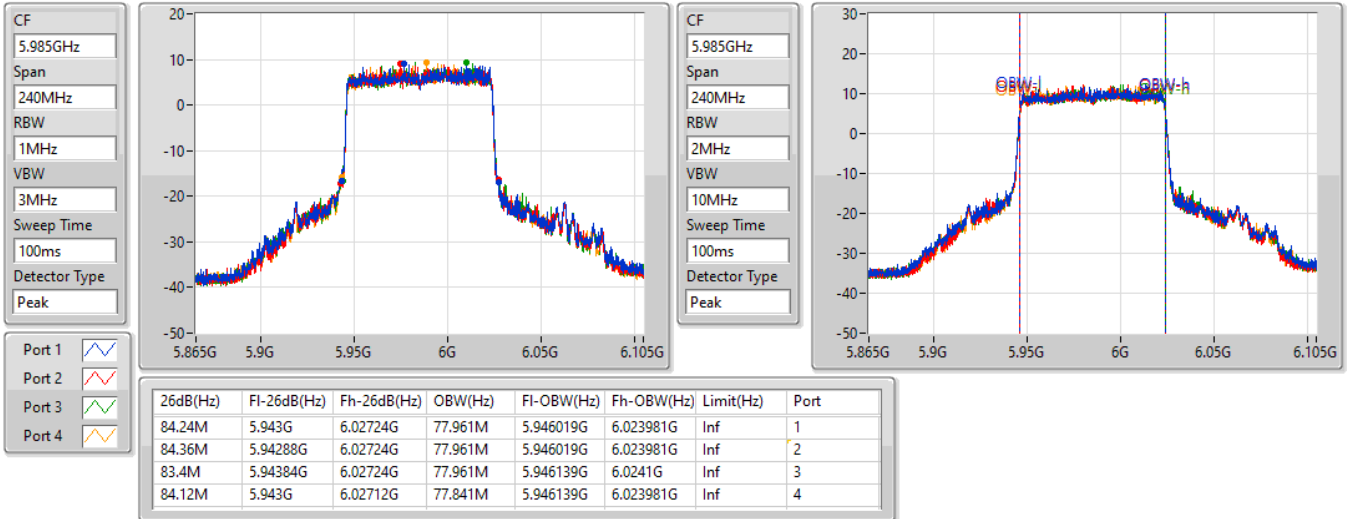

802.11ax HEW40_Nss4,(MCS0)_4TX
EBW
7085MHz

06/01/2022

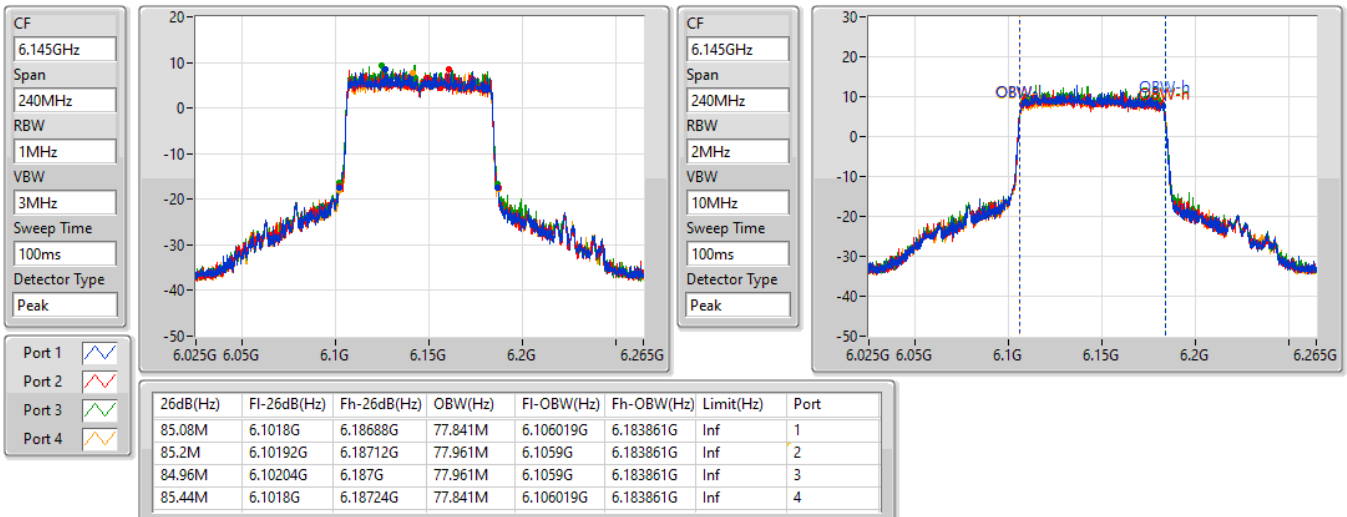


802.11ax HEW80_Nss4,(MCS0)_4TX
EBW
5985MHz

06/01/2022

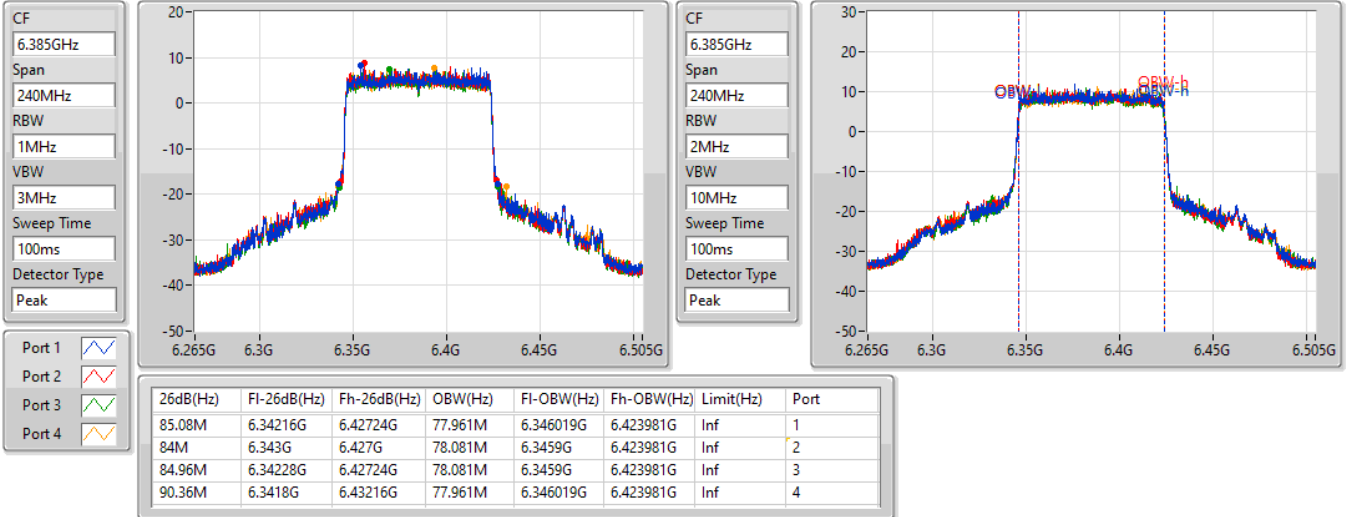

802.11ax HEW80_Nss4,(MCS0)_4TX
EBW
6145MHz

06/01/2022

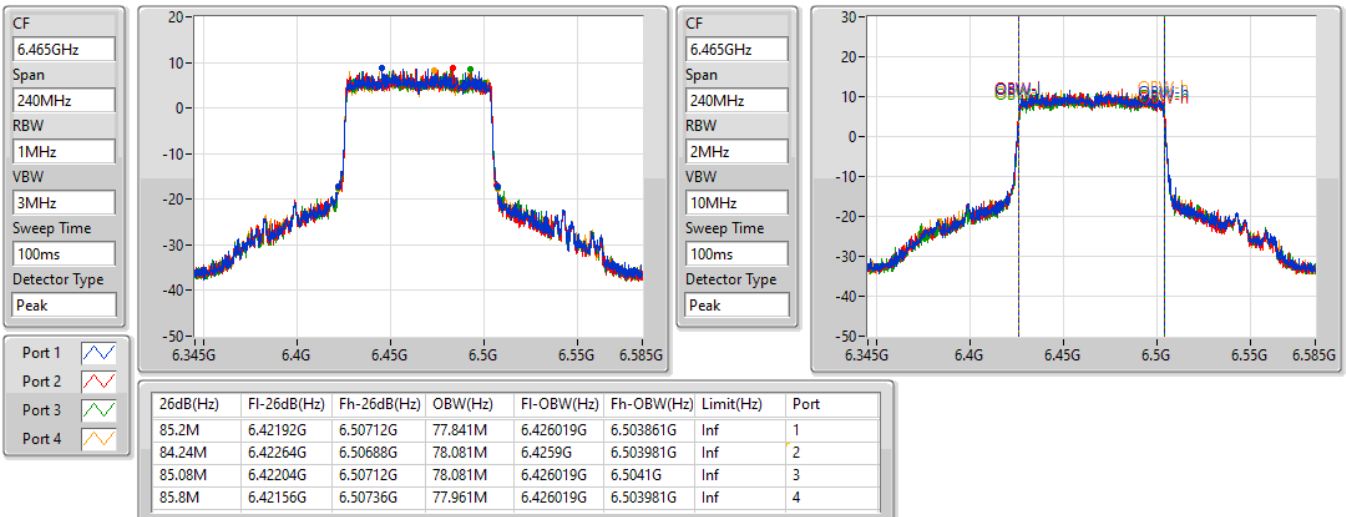


802.11ax HEW80_Nss4,(MCS0)_4TX
EBW
6385MHz

06/01/2022


802.11ax HEW80_Nss4,(MCS0)_4TX
EBW
6465MHz

06/01/2022

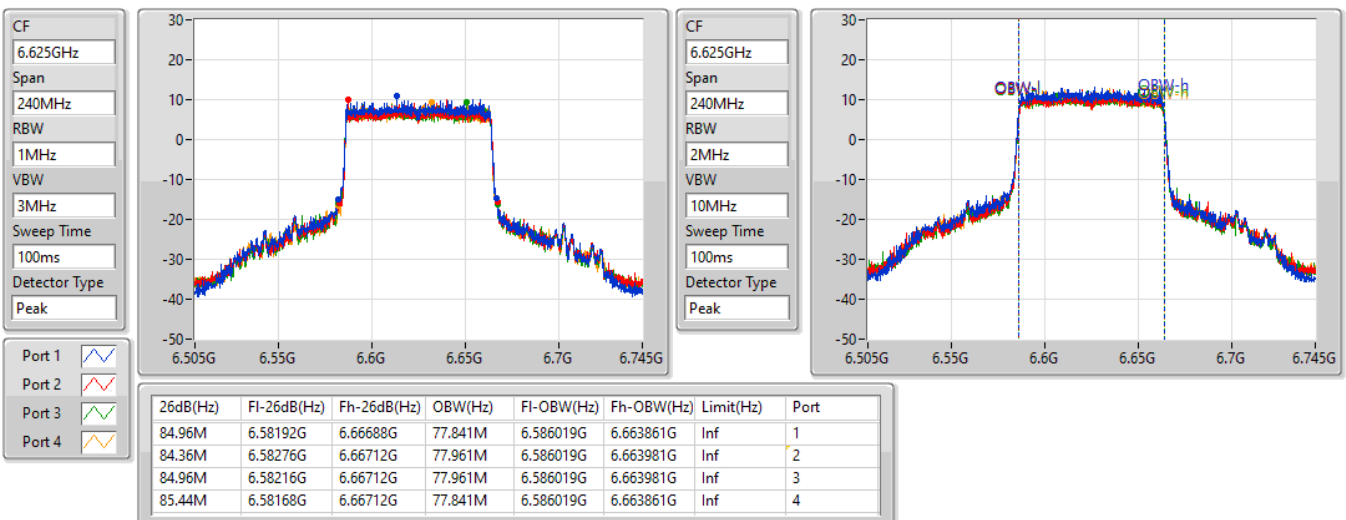


802.11ax HEW80_Nss4,(MCS0)_4TX
EBW
6545MHz Straddle 6.425-6.525GHz

06/01/2022

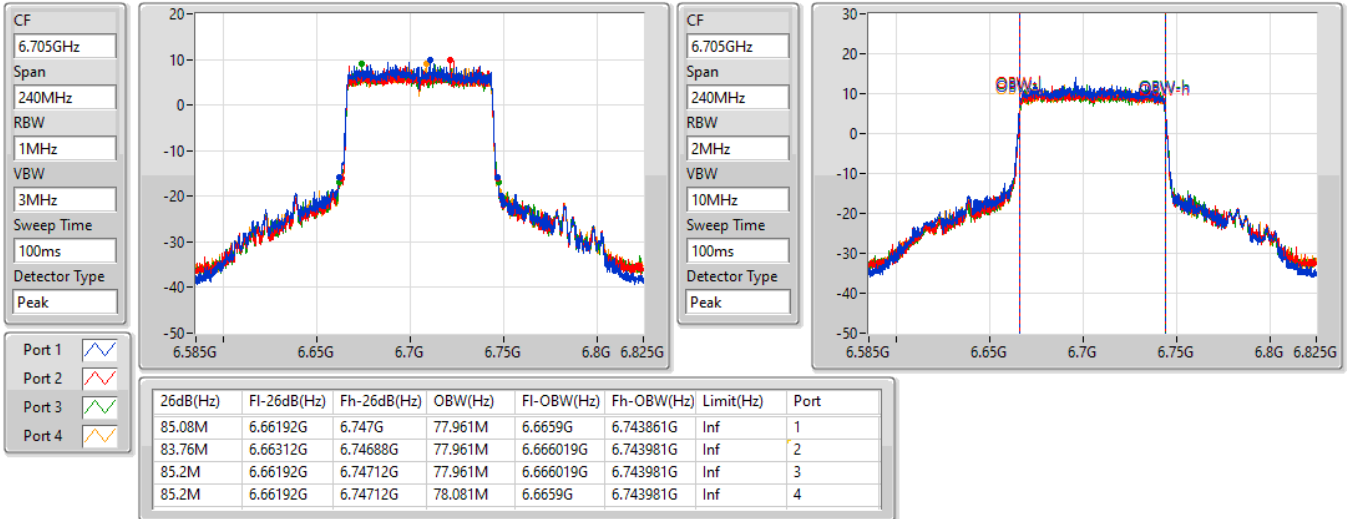

802.11ax HEW80_Nss4,(MCS0)_4TX
EBW
6625MHz

06/01/2022

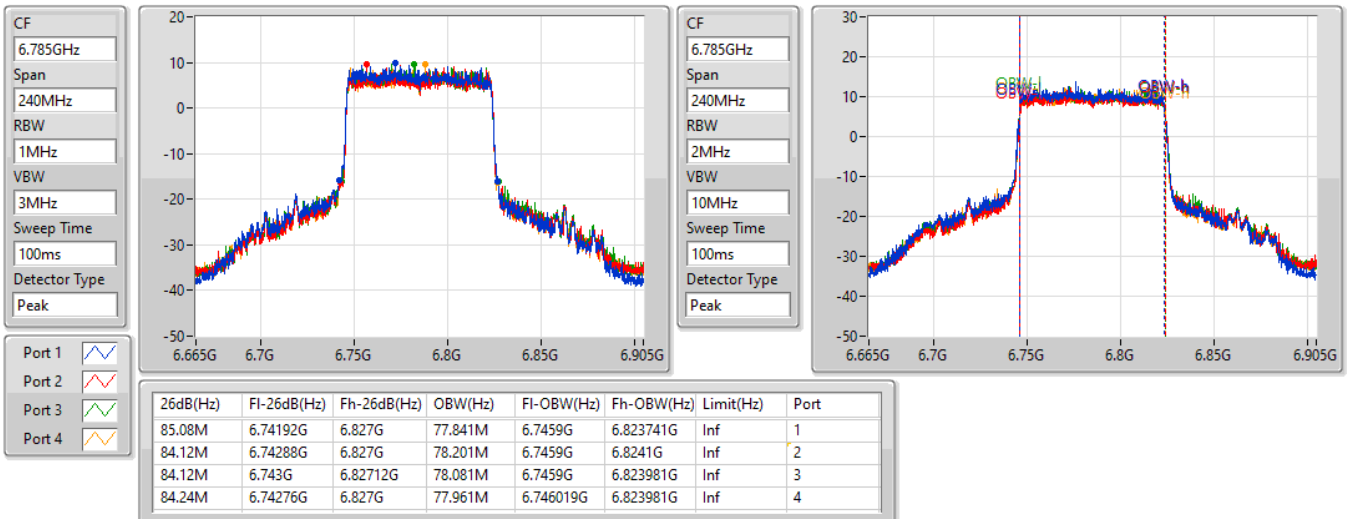


802.11ax HEW80_Nss4,(MCS0)_4TX
EBW
6705MHz

06/01/2022

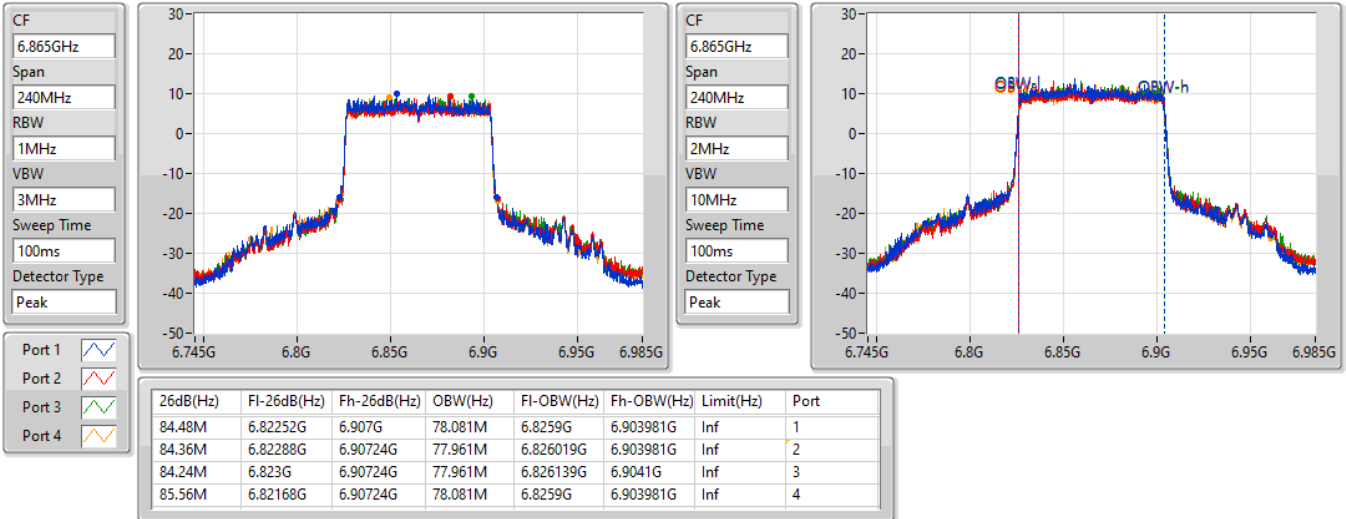

802.11ax HEW80_Nss4,(MCS0)_4TX
EBW
6785MHz

06/01/2022



802.11ax HEW80_Nss4,(MCS0)_4TX
EBW
6865MHz Straddle 6.525-6.875GHz

06/01/2022

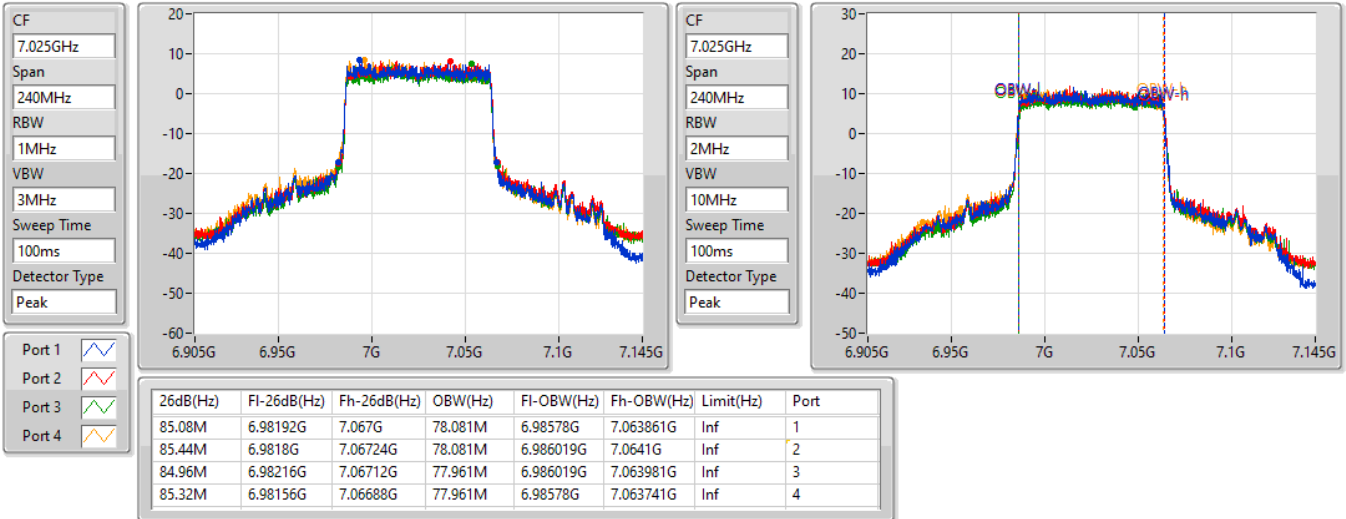

802.11ax HEW80_Nss4,(MCS0)_4TX
EBW
6945MHz

06/01/2022

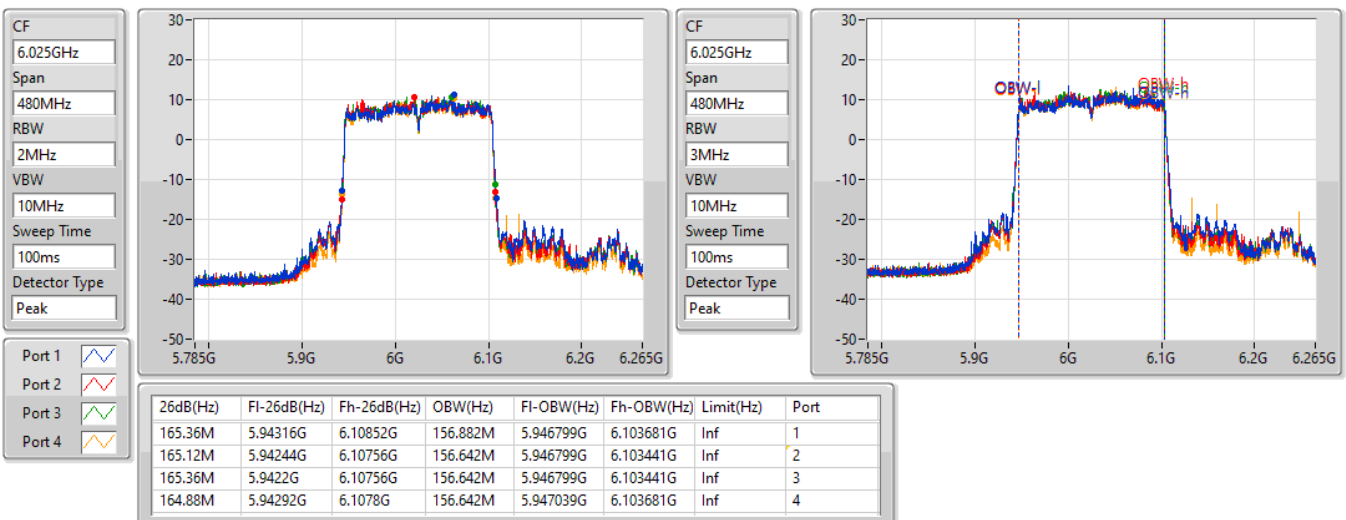


802.11ax HEW80_Nss4,(MCS0)_4TX
EBW
7025MHz

06/01/2022


802.11ax HEW160_Nss4,(MCS0)_4TX
EBW
6025MHz

06/01/2022

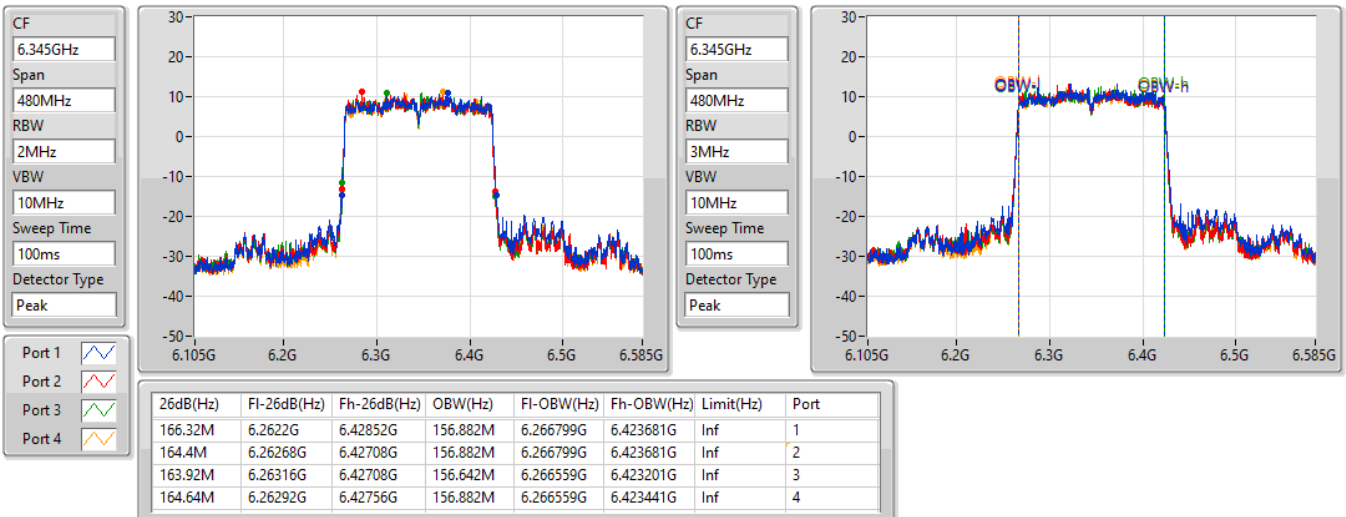


802.11ax HEW160_Nss4,(MCS0)_4TX
EBW
6185MHz

07/01/2022

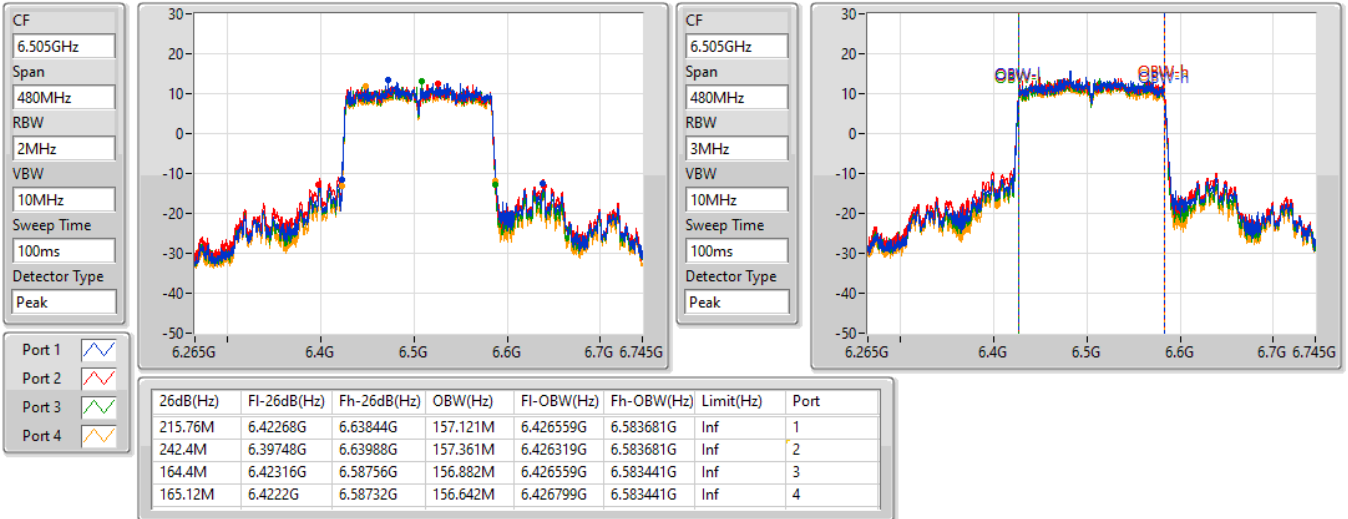

802.11ax HEW160_Nss4,(MCS0)_4TX
EBW
6345MHz

06/01/2022

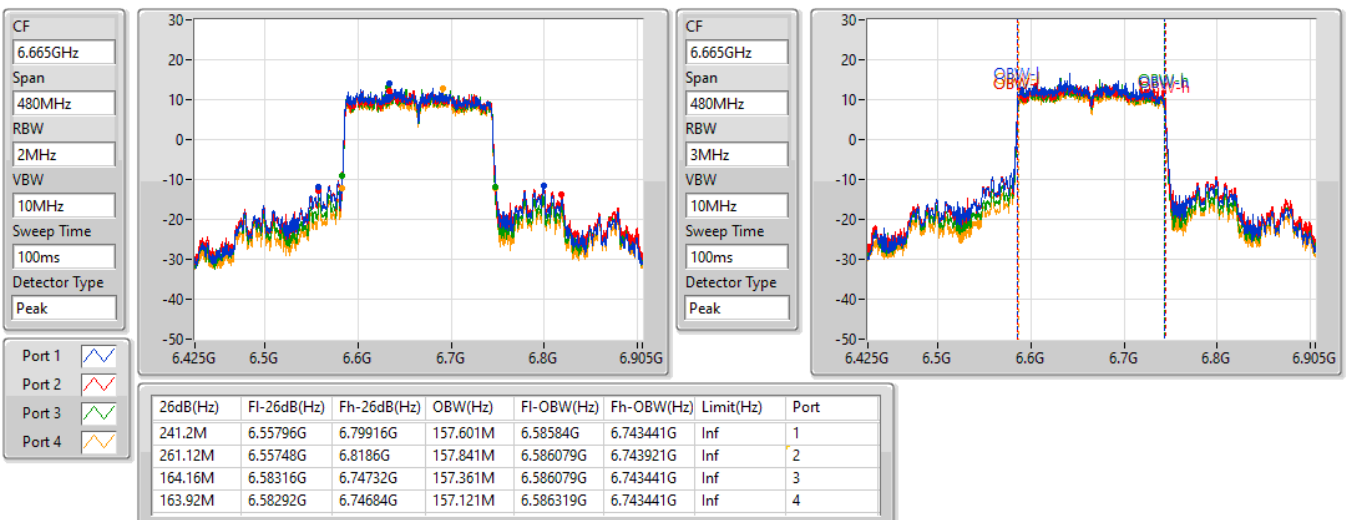


802.11ax HEW160_Nss4,(MCS0)_4TX
EBW
6505MHz Straddle 6.425-6.525GHz

07/01/2022

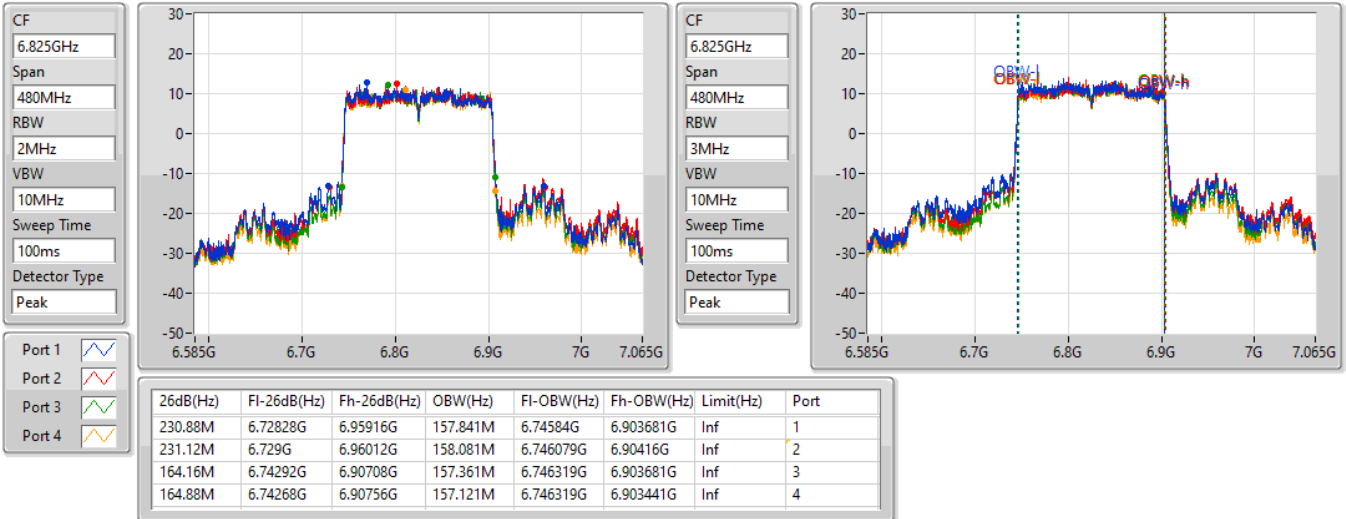

802.11ax HEW160_Nss4,(MCS0)_4TX
EBW
6665MHz

07/01/2022

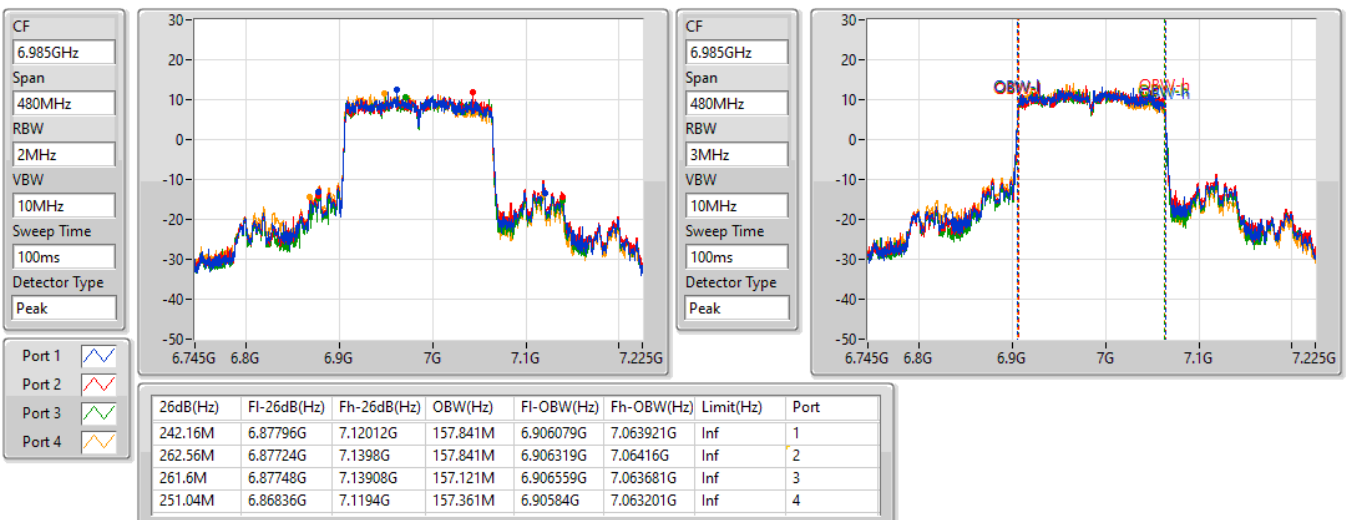


802.11ax HEW160_Nss4,(MCS0)_4TX
EBW
6825MHz Straddle 6.525-6.875GHz

07/01/2022


802.11ax HEW160_Nss4,(MCS0)_4TX
EBW
6985MHz

07/01/2022



For beamforming mode / 2T1S

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.925-6.425GHz	-	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	24.21M	19.28M	19M3D1D	22.17M	19.19M
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	44.22M	38.201M	38M2D1D	41.52M	38.081M
802.11ax HEW80-BF_Nss1,(MCS0)_2TX	87.36M	78.081M	78M1D1D	82.44M	77.961M
802.11ax HEW160-BF_Nss1,(MCS0)_2TX	237.84M	158.081M	158MD1D	166.32M	157.361M
6.425-6.525GHz	-	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	27.57M	19.28M	19M3D1D	23.25M	19.19M
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	44.58M	38.201M	38M2D1D	41.7M	38.141M
802.11ax HEW80-BF_Nss1,(MCS0)_2TX	86.4M	78.081M	78M1D1D	83.4M	77.961M
802.11ax HEW160-BF_Nss1,(MCS0)_2TX	166.32M	157.121M	157MD1D	165.6M	157.121M
6.525-6.875GHz	-	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	27.45M	19.28M	19M3D1D	22.53M	19.19M
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	43.56M	38.201M	38M2D1D	42.12M	38.141M
802.11ax HEW80-BF_Nss1,(MCS0)_2TX	86.28M	78.201M	78M2D1D	82.56M	78.081M
802.11ax HEW160-BF_Nss1,(MCS0)_2TX	169.44M	157.601M	158MD1D	165.36M	157.361M
6.875-7.125GHz	-	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	24.63M	19.28M	19M3D1D	22.26M	19.22M
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	43.8M	38.261M	38M3D1D	42.12M	38.141M
802.11ax HEW80-BF_Nss1,(MCS0)_2TX	85.44M	78.201M	78M2D1D	84.6M	77.841M
802.11ax HEW160-BF_Nss1,(MCS0)_2TX	230.64M	157.841M	158MD1D	223.2M	157.601M

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Max-OBW = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Min-OBW = Minimum 99% occupied bandwidth

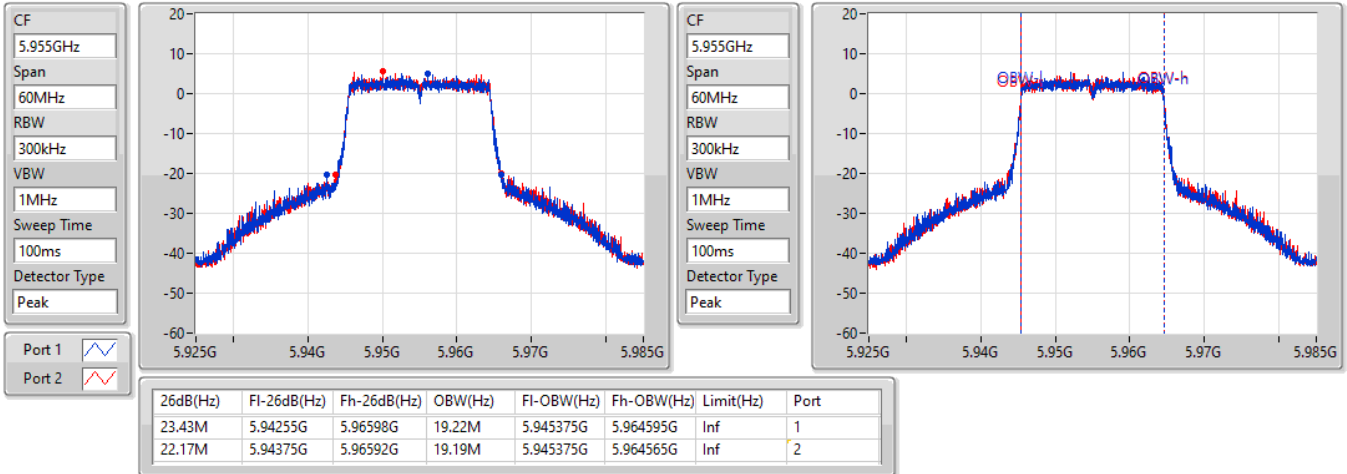
Result

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	-	-	-	-	-	-
5955MHz	Pass	Inf	23.43M	19.22M	22.17M	19.19M
6175MHz	Pass	Inf	22.17M	19.25M	23.46M	19.19M
6415MHz	Pass	Inf	24.21M	19.28M	22.98M	19.19M
6435MHz	Pass	Inf	23.94M	19.25M	24.36M	19.19M
6475MHz	Pass	Inf	23.49M	19.22M	23.25M	19.25M
6515MHz	Pass	Inf	27.57M	19.28M	25.02M	19.22M
6535MHz	Pass	Inf	27.06M	19.25M	23.64M	19.25M
6695MHz	Pass	Inf	25.56M	19.28M	25.38M	19.22M
6855MHz	Pass	Inf	26.67M	19.22M	22.77M	19.19M
6875MHz Straddle 6.525-6.875GHz	Pass	Inf	27.45M	19.25M	22.53M	19.28M
6895MHz	Pass	Inf	24.57M	19.22M	24.63M	19.28M
6995MHz	Pass	Inf	23.49M	19.28M	23.58M	19.25M
7095MHz	Pass	Inf	22.26M	19.25M	23.34M	19.25M
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5965MHz	Pass	Inf	41.88M	38.141M	42.54M	38.141M
6165MHz	Pass	Inf	41.52M	38.081M	43.68M	38.141M
6405MHz	Pass	Inf	43.56M	38.201M	44.22M	38.081M
6445MHz	Pass	Inf	44.58M	38.201M	43.5M	38.141M
6485MHz	Pass	Inf	42.96M	38.201M	42.24M	38.201M
6525MHz Straddle 6.425-6.525GHz	Pass	Inf	43.8M	38.141M	41.7M	38.201M
6565MHz	Pass	Inf	42.48M	38.201M	43.08M	38.141M
6685MHz	Pass	Inf	42.12M	38.141M	43.56M	38.141M
6845MHz	Pass	Inf	42.12M	38.141M	42.66M	38.141M
6885MHz Straddle 6.525-6.875GHz	Pass	Inf	43.44M	38.201M	43.08M	38.141M
6925MHz	Pass	Inf	43.8M	38.201M	43.14M	38.201M
7005MHz	Pass	Inf	43.44M	38.141M	42.12M	38.261M
7085MHz	Pass	Inf	42.42M	38.201M	43.62M	38.201M
802.11ax HEW80-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5985MHz	Pass	Inf	83.04M	78.081M	82.44M	78.081M
6145MHz	Pass	Inf	84.72M	78.081M	84.72M	77.961M
6385MHz	Pass	Inf	87.36M	77.961M	84.84M	77.961M
6465MHz	Pass	Inf	86.4M	78.081M	84.84M	77.961M
6545MHz Straddle 6.425-6.525GHz	Pass	Inf	85.8M	78.081M	83.4M	77.961M
6625MHz	Pass	Inf	85.32M	78.201M	86.28M	78.081M
6705MHz	Pass	Inf	84.72M	78.201M	82.56M	78.201M
6785MHz	Pass	Inf	84.48M	78.081M	84.48M	78.081M
6865MHz Straddle 6.525-6.875GHz	Pass	Inf	84.96M	78.081M	84.24M	78.081M
6945MHz	Pass	Inf	84.6M	77.961M	85.08M	77.841M
7025MHz	Pass	Inf	85.44M	78.081M	85.08M	78.201M
802.11ax HEW160-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
6025MHz	Pass	Inf	198.72M	157.601M	237.84M	157.601M
6185MHz	Pass	Inf	225.12M	158.081M	229.44M	158.081M
6345MHz	Pass	Inf	180.96M	157.361M	166.32M	157.361M
6505MHz Straddle 6.425-6.525GHz	Pass	Inf	165.6M	157.121M	166.32M	157.121M
6665MHz	Pass	Inf	168.72M	157.361M	169.44M	157.601M
6825MHz Straddle 6.525-6.875GHz	Pass	Inf	165.36M	157.601M	166.08M	157.601M
6985MHz	Pass	Inf	223.2M	157.601M	230.64M	157.841M

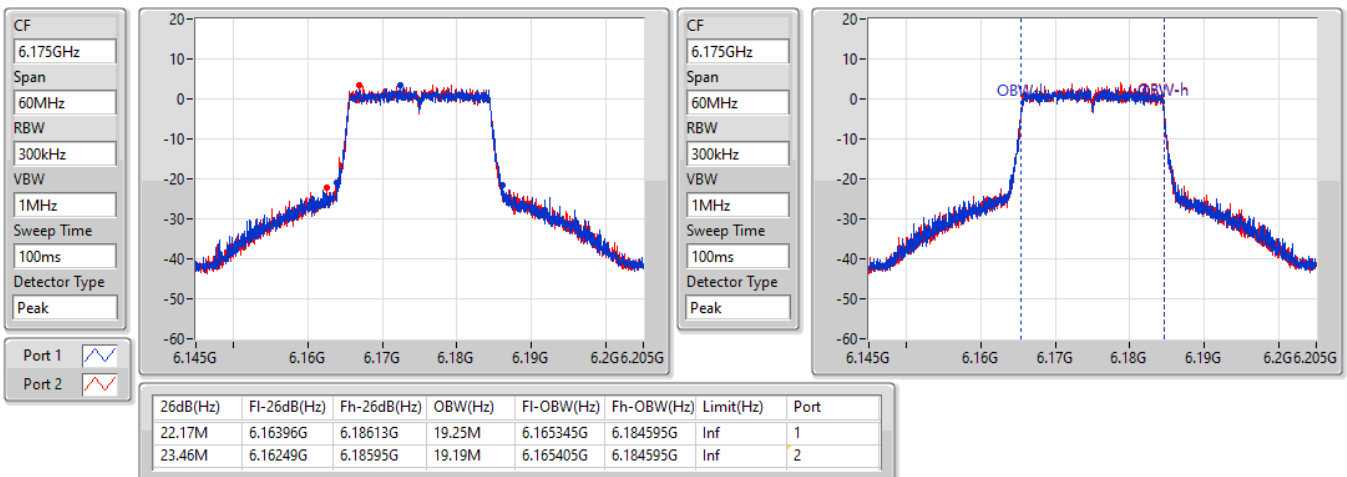
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11ax HEW20-BF_Nss1,(MCS0)_2TX
EBW
5955MHz

21/01/2022

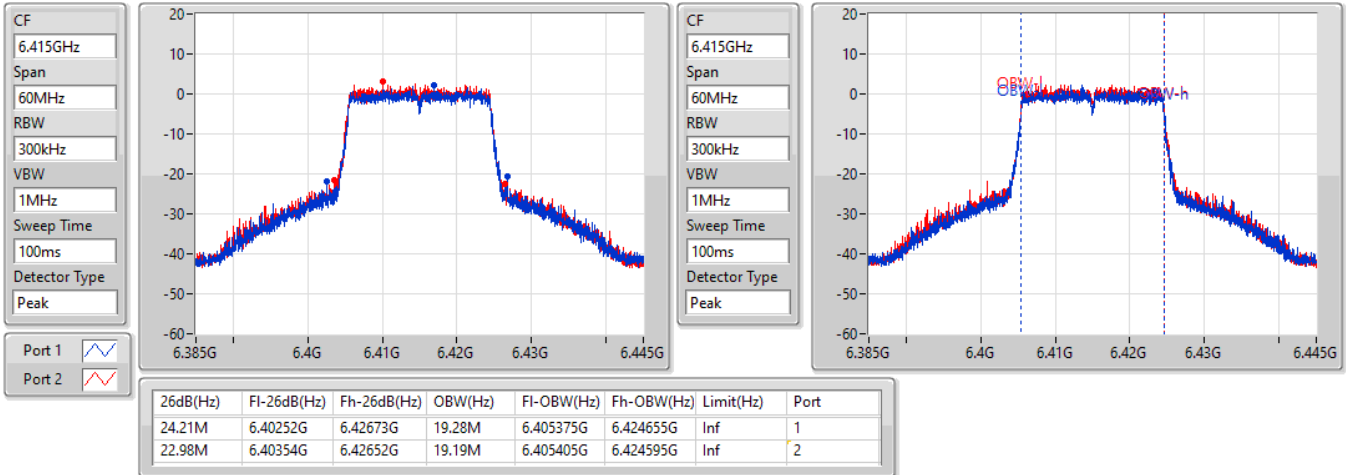

802.11ax HEW20-BF_Nss1,(MCS0)_2TX
EBW
6175MHz

21/01/2022

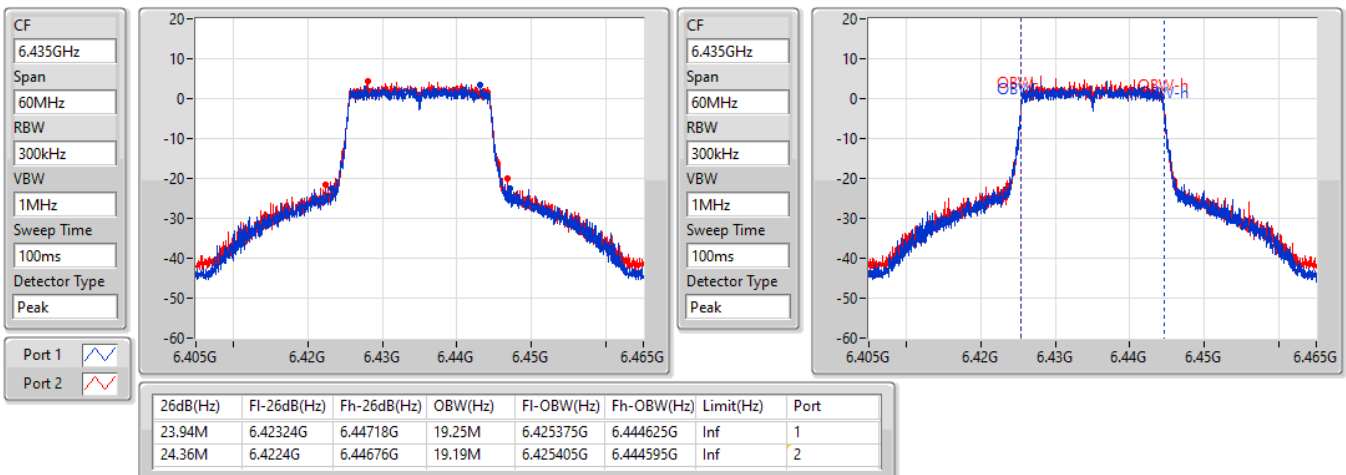


802.11ax HEW20-BF_Nss1,(MCS0)_2TX
EBW
6415MHz

21/01/2022

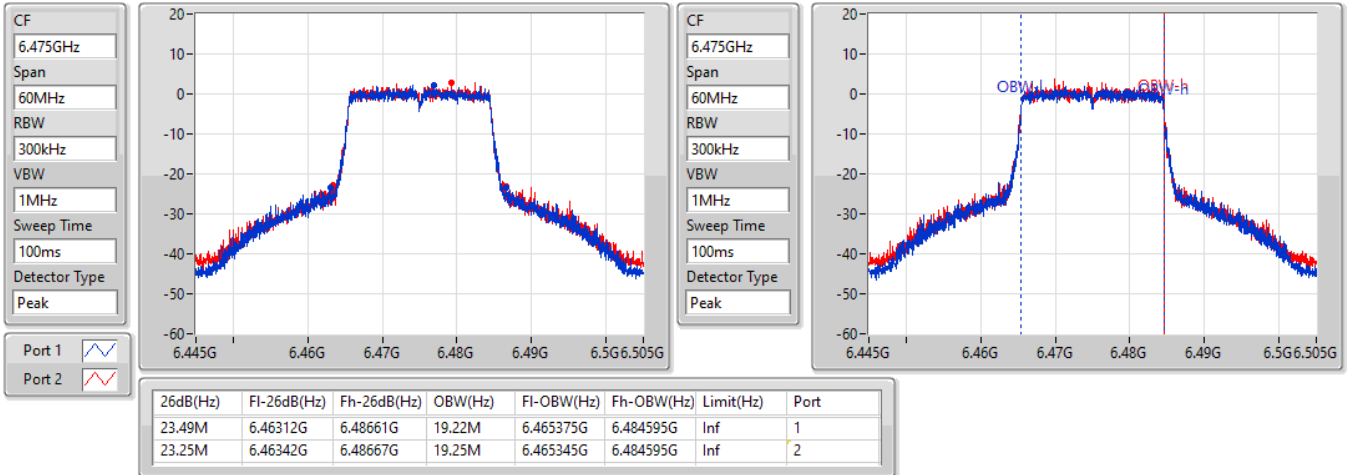

802.11ax HEW20-BF_Nss1,(MCS0)_2TX
EBW
6435MHz

21/01/2022

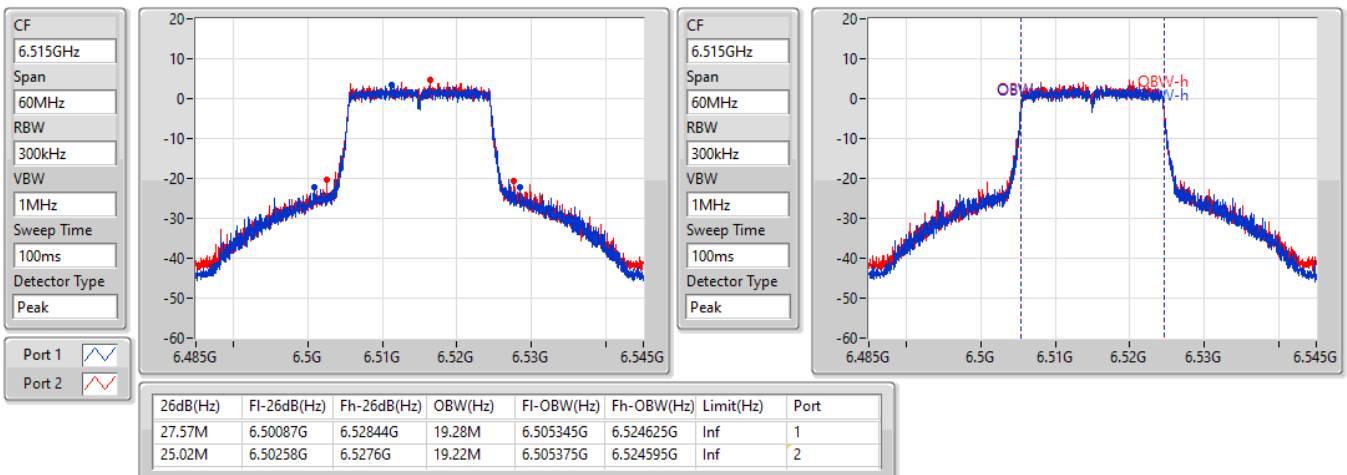


802.11ax HEW20-BF_Nss1,(MCS0)_2TX
EBW
6475MHz

21/01/2022

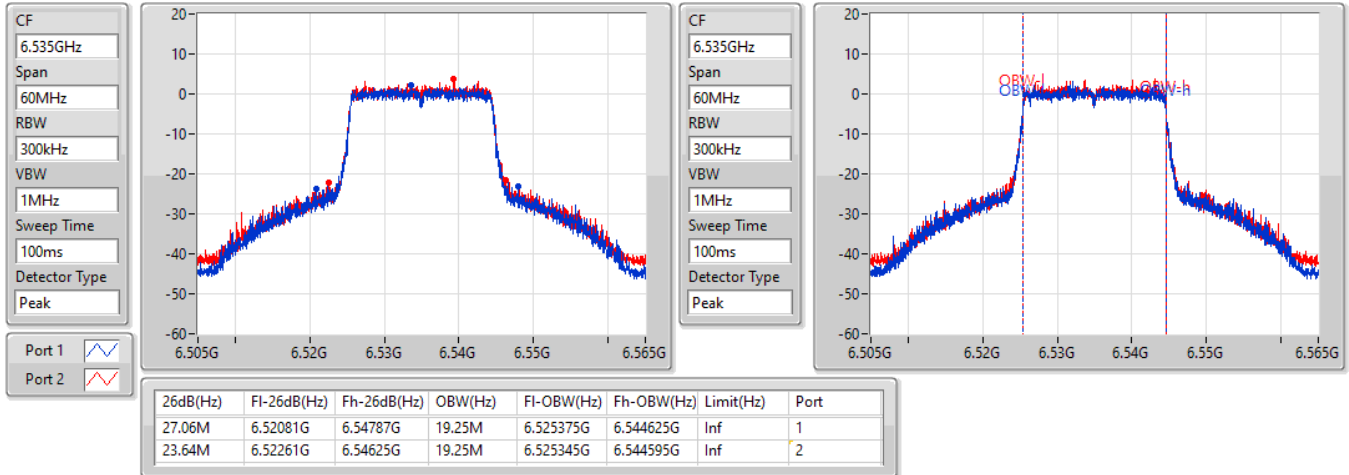

802.11ax HEW20-BF_Nss1,(MCS0)_2TX
EBW
6515MHz

21/01/2022

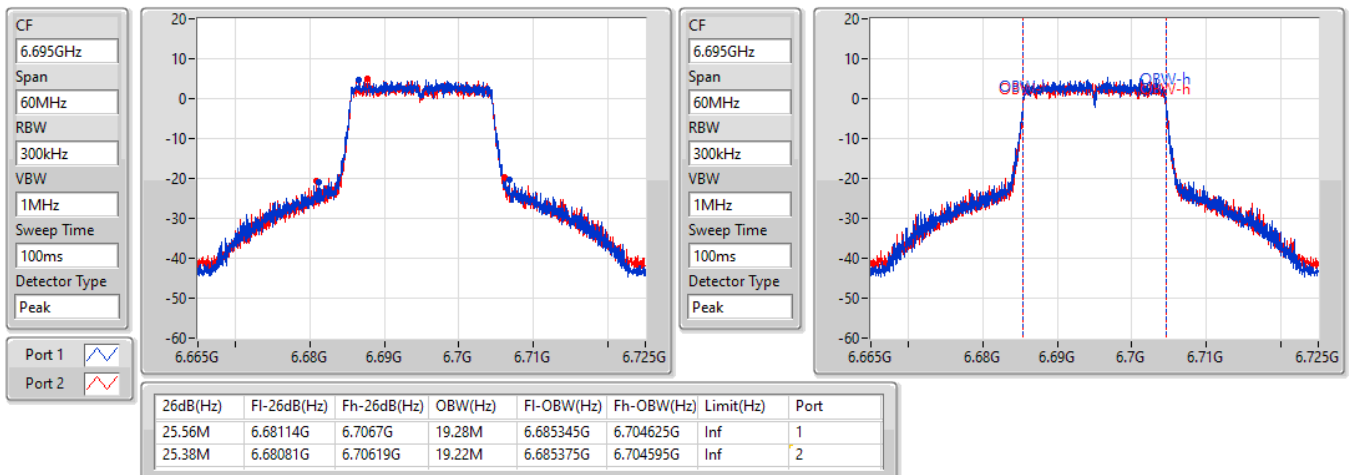


802.11ax HEW20-BF_Nss1,(MCS0)_2TX
EBW
6535MHz

21/01/2022

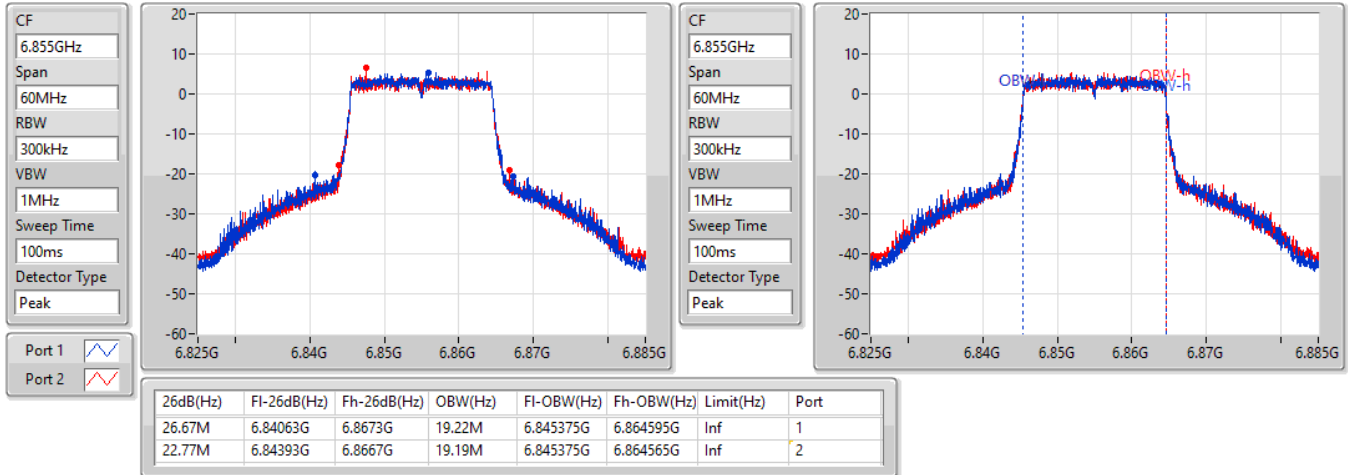

802.11ax HEW20-BF_Nss1,(MCS0)_2TX
EBW
6695MHz

21/01/2022

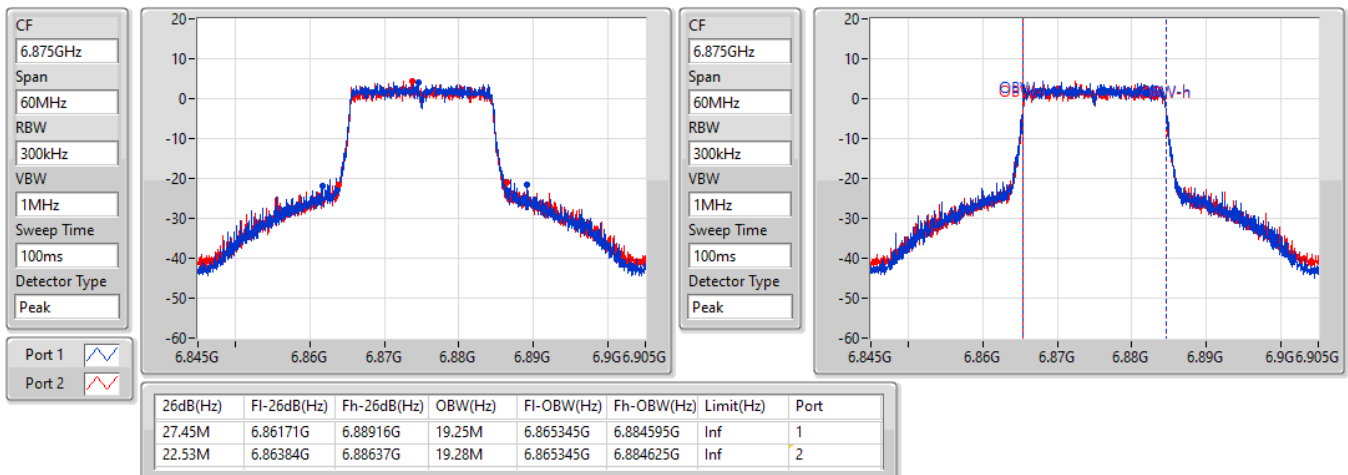


802.11ax HEW20-BF_Nss1,(MCS0)_2TX
EBW
6855MHz

21/01/2022

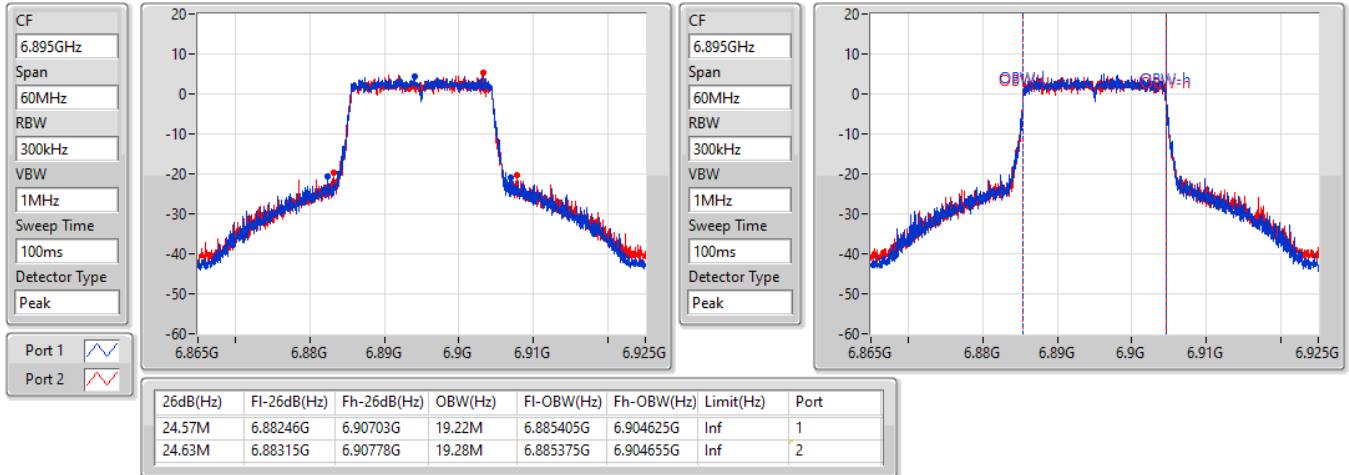

802.11ax HEW20-BF_Nss1,(MCS0)_2TX
EBW
6875MHz Straddle 6.525-6.875GHz

21/01/2022

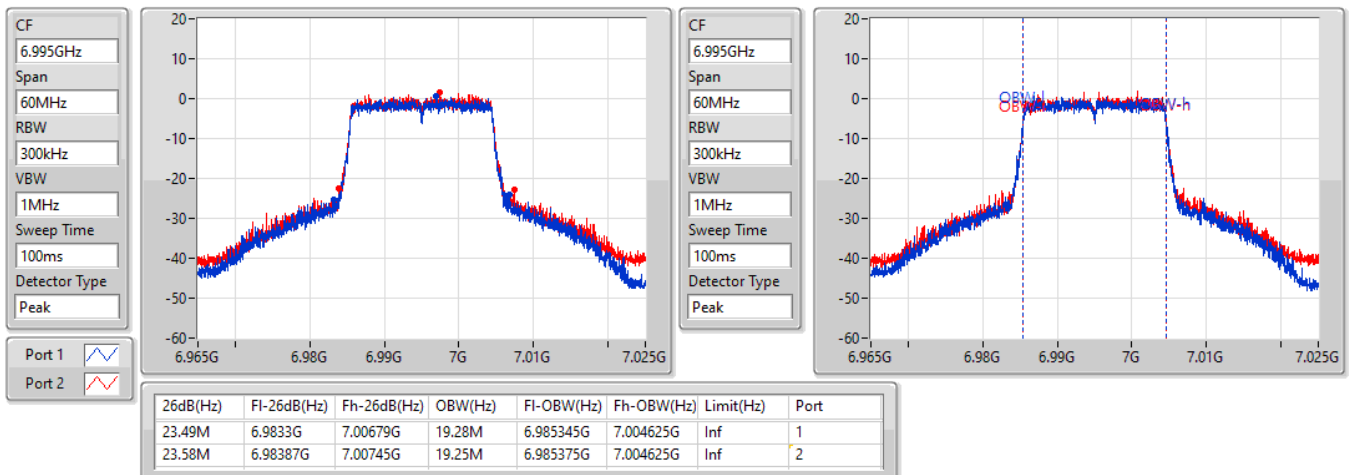


802.11ax HEW20-BF_Nss1,(MCS0)_2TX
EBW
6895MHz

21/01/2022


802.11ax HEW20-BF_Nss1,(MCS0)_2TX
EBW
6995MHz

21/01/2022

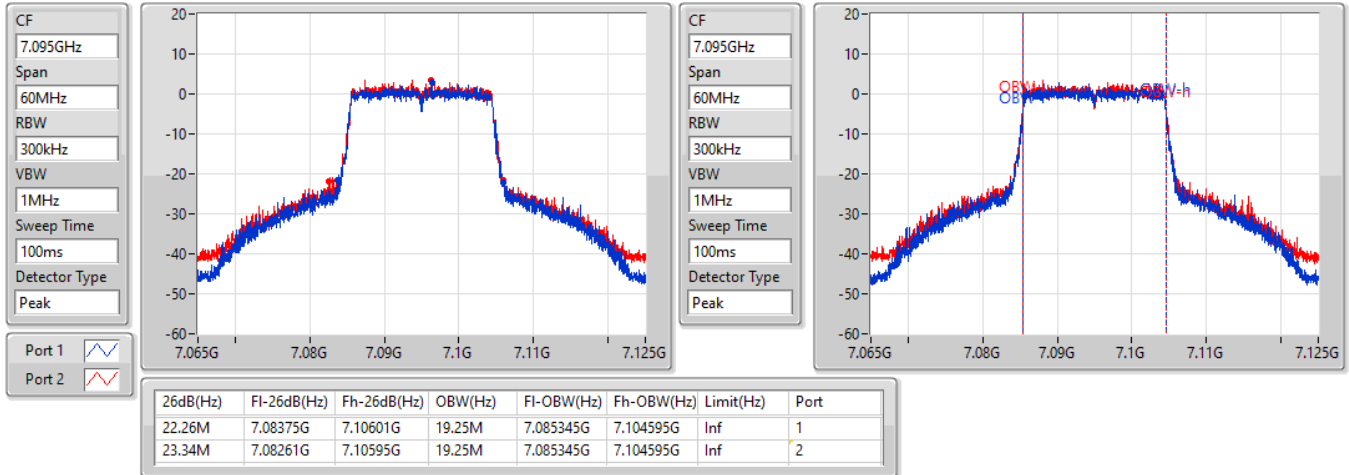


802.11ax HEW20-BF_Nss1,(MCS0)_2TX

EBW

7095MHz

21/01/2022

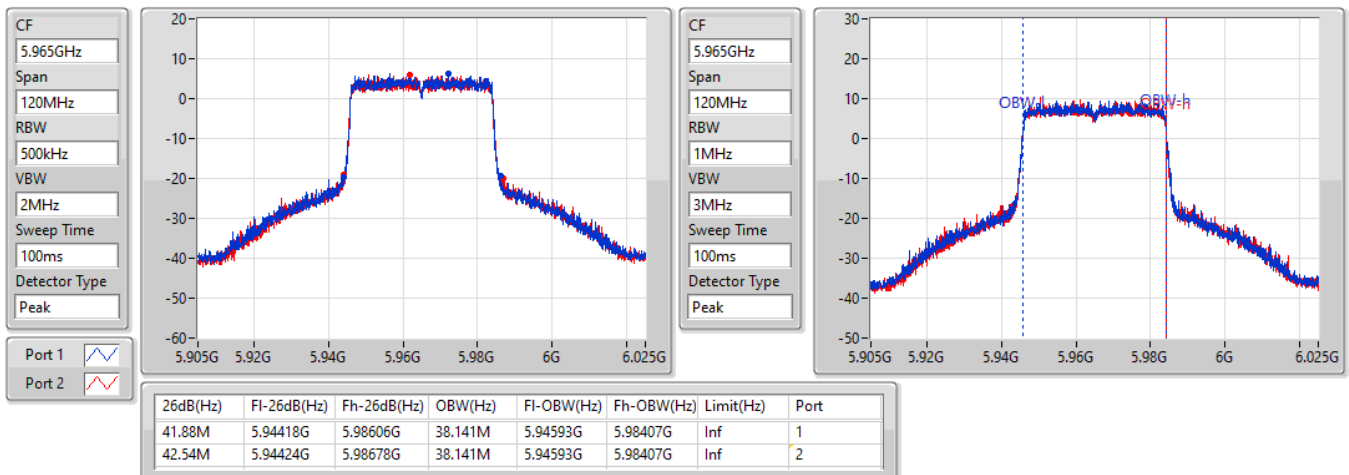


802.11ax HEW40-BF_Nss1,(MCS0)_2TX

EBW

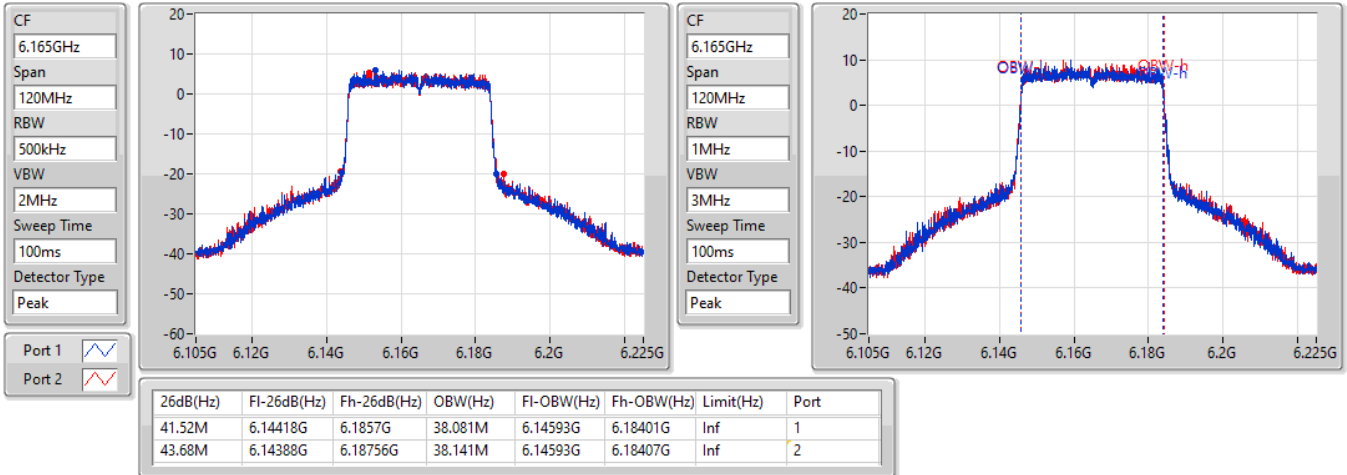
5965MHz

21/01/2022

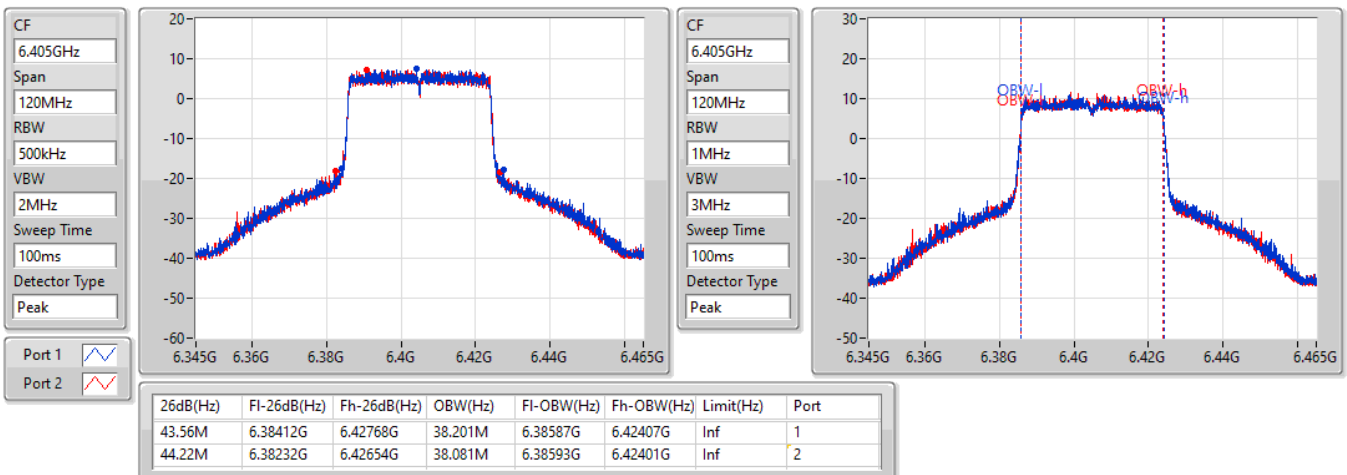


802.11ax HEW40-BF_Nss1,(MCS0)_2TX
EBW
6165MHz

21/01/2022

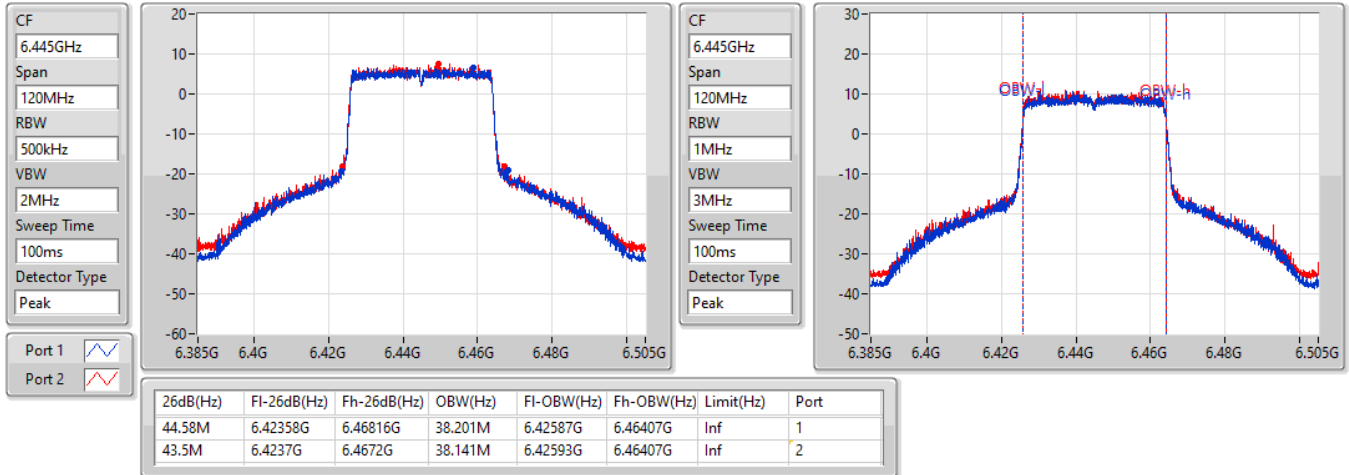

802.11ax HEW40-BF_Nss1,(MCS0)_2TX
EBW
6405MHz

21/01/2022

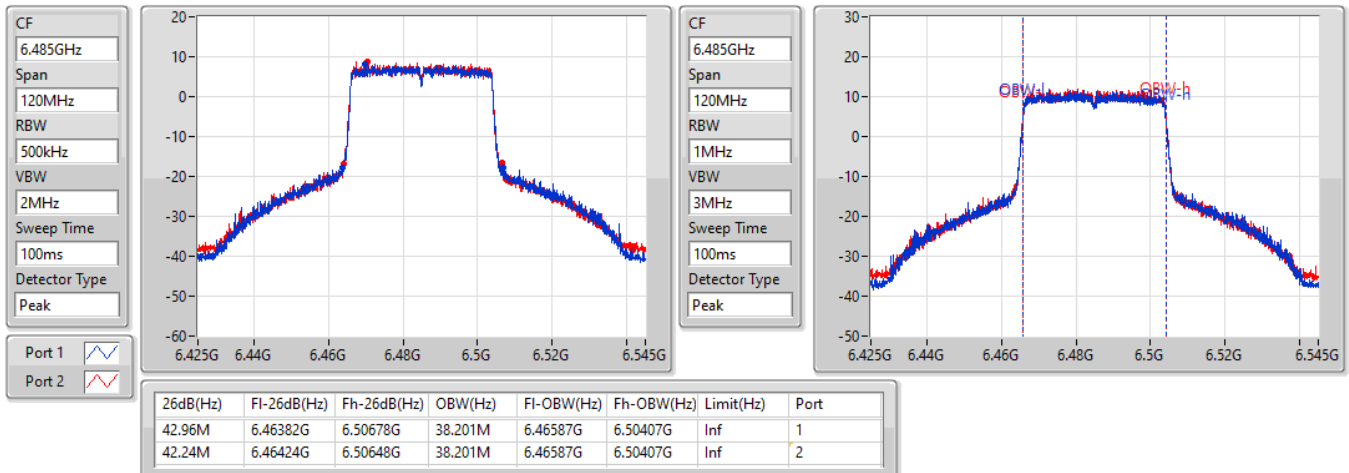


802.11ax HEW40-BF_Nss1,(MCS0)_2TX
EBW
6445MHz

21/01/2022

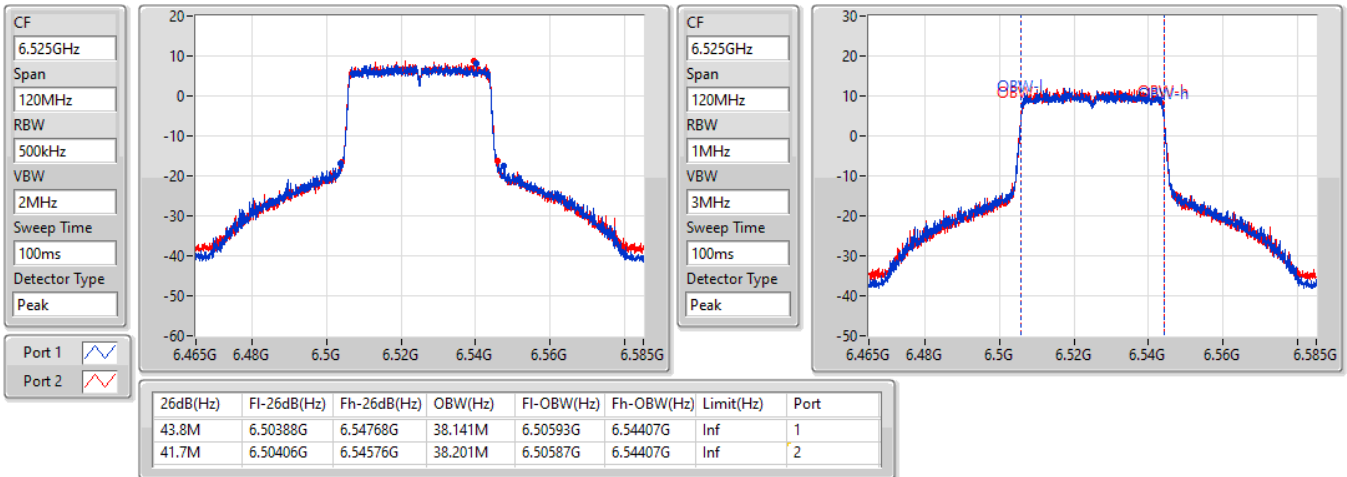

802.11ax HEW40-BF_Nss1,(MCS0)_2TX
EBW
6485MHz

21/01/2022

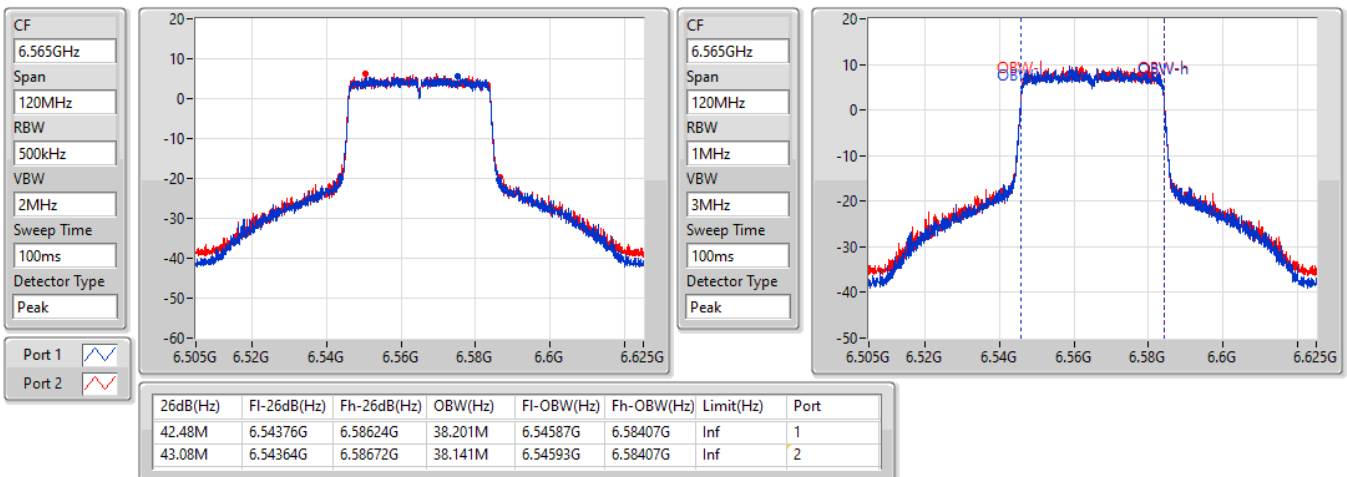


802.11ax HEW40-BF_Nss1,(MCS0)_2TX
EBW
6525MHz Straddle 6.425-6.525GHz

21/01/2022

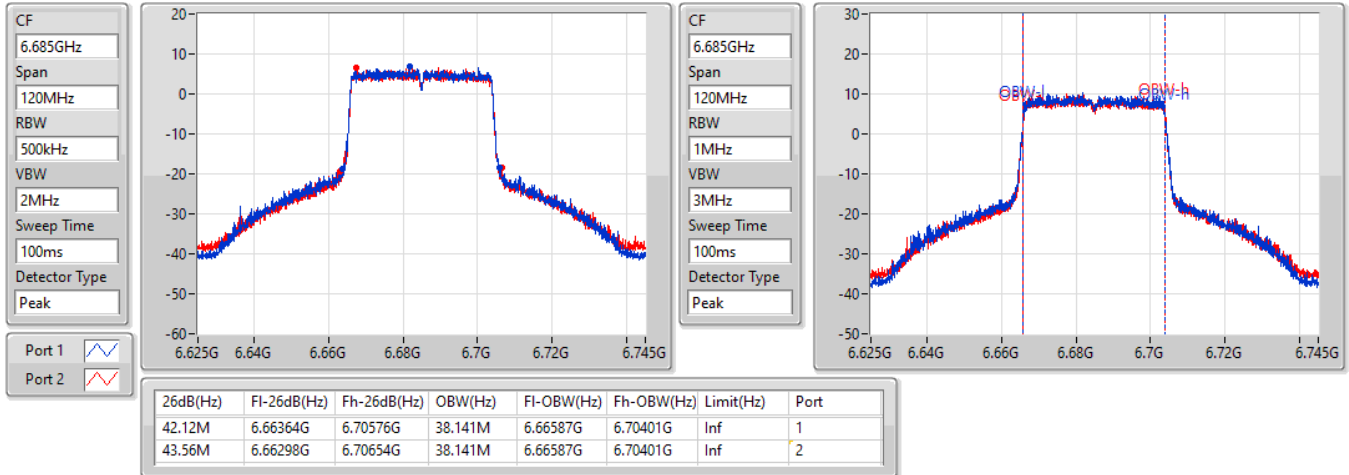

802.11ax HEW40-BF_Nss1,(MCS0)_2TX
EBW
6565MHz

21/01/2022

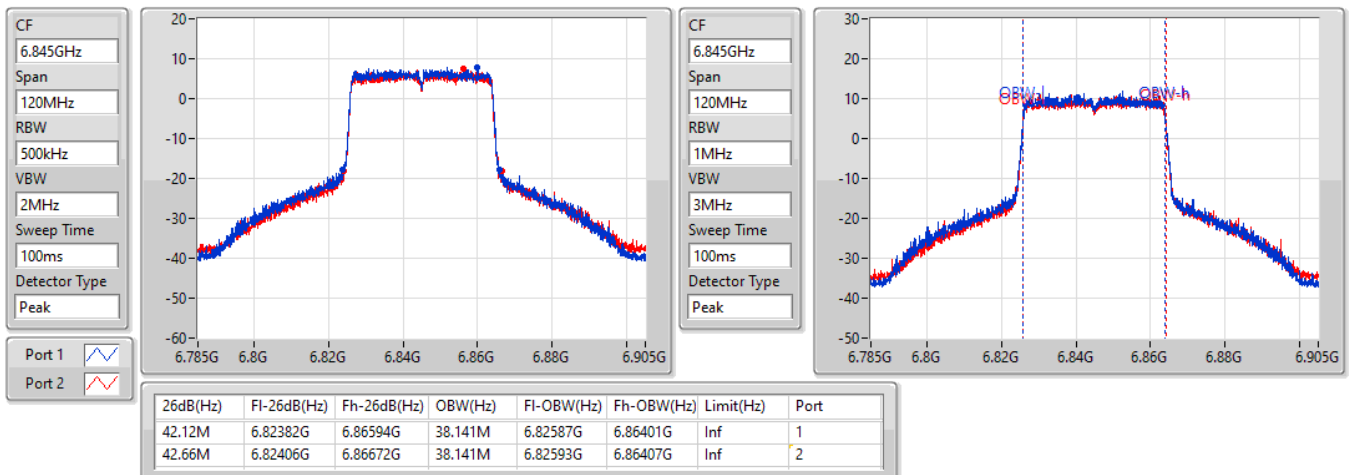


802.11ax HEW40-BF_Nss1,(MCS0)_2TX
EBW
6685MHz

21/01/2022

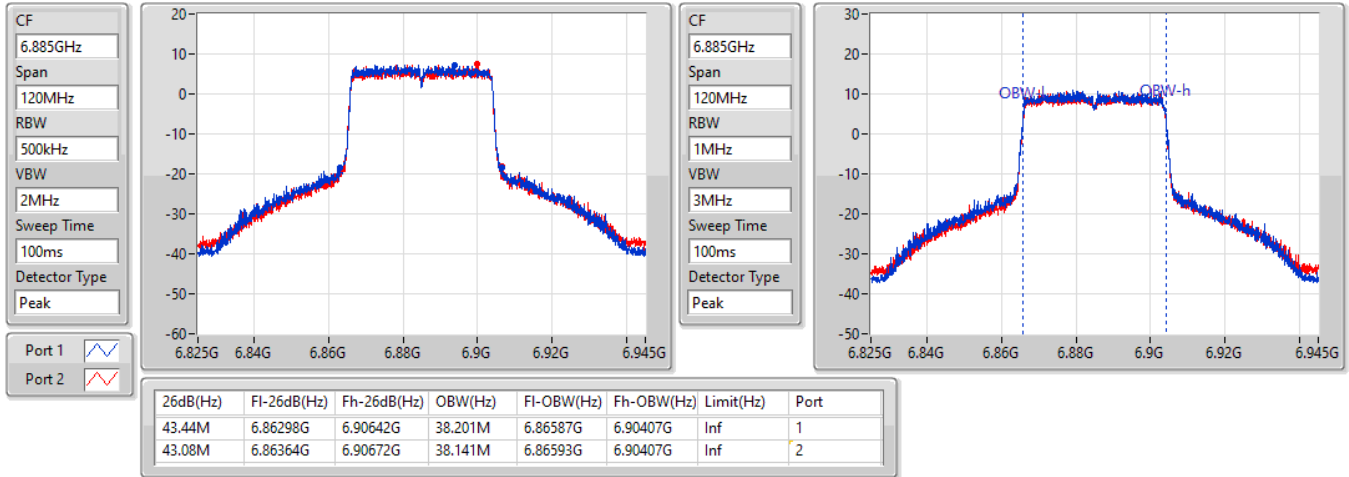

802.11ax HEW40-BF_Nss1,(MCS0)_2TX
EBW
6845MHz

21/01/2022

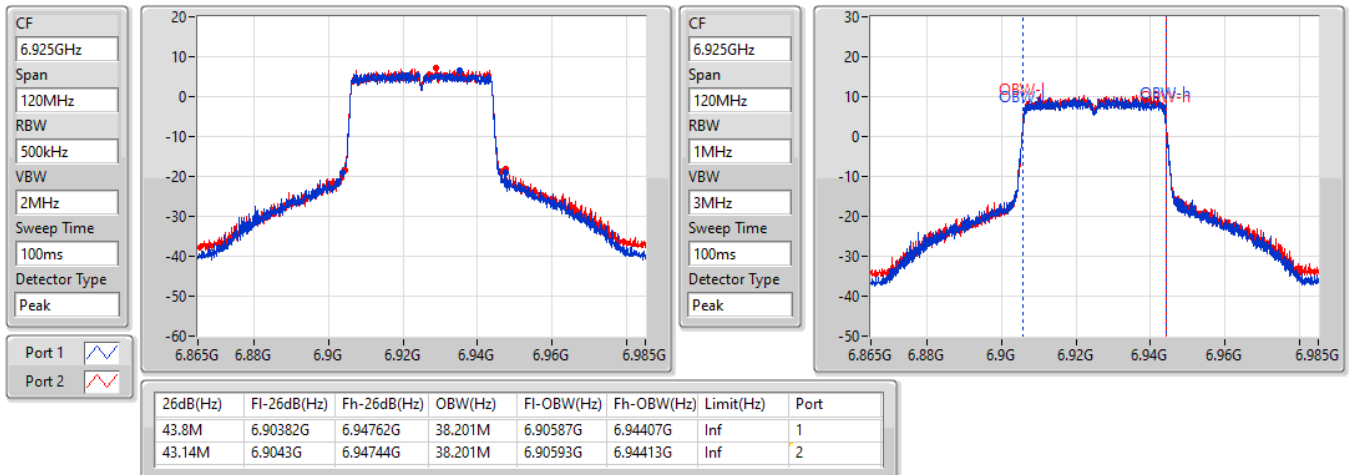


802.11ax HEW40-BF_Nss1,(MCS0)_2TX
EBW
6885MHz Straddle 6.525-6.875GHz

21/01/2022

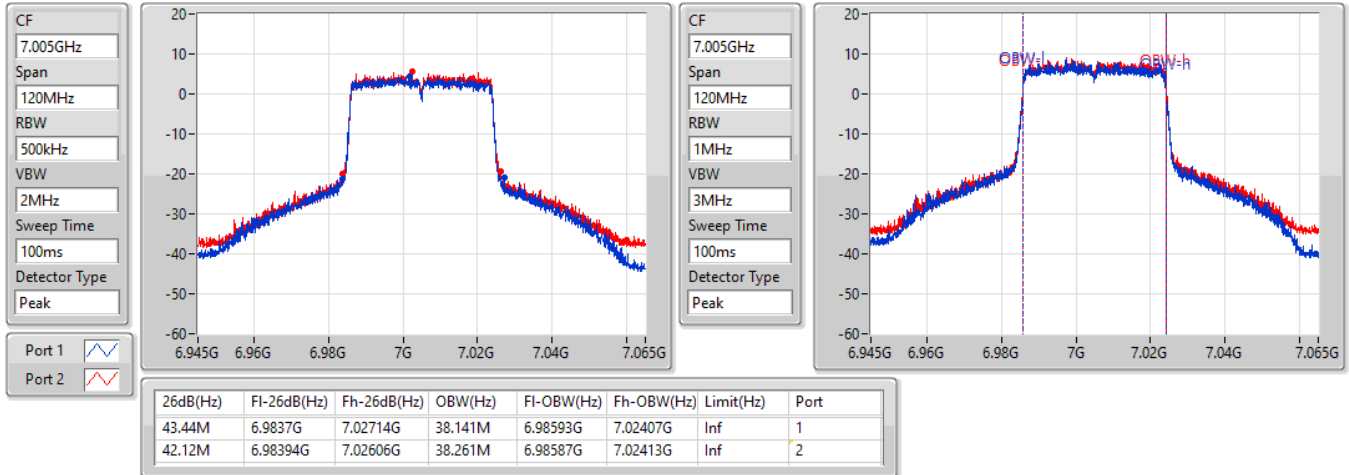

802.11ax HEW40-BF_Nss1,(MCS0)_2TX
EBW
6925MHz

21/01/2022

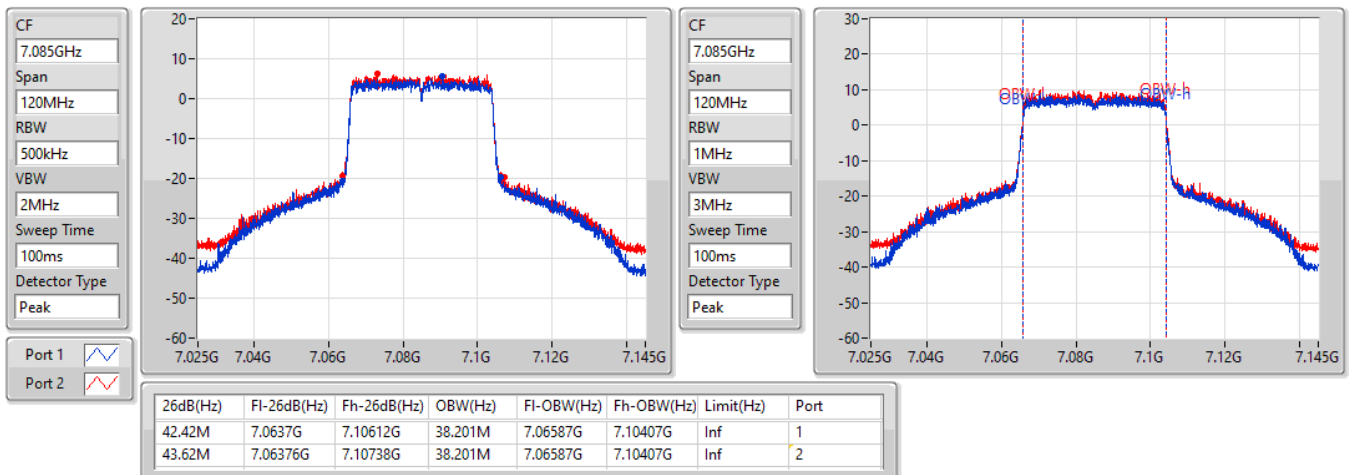


802.11ax HEW40-BF_Nss1,(MCS0)_2TX
EBW
7005MHz

21/01/2022

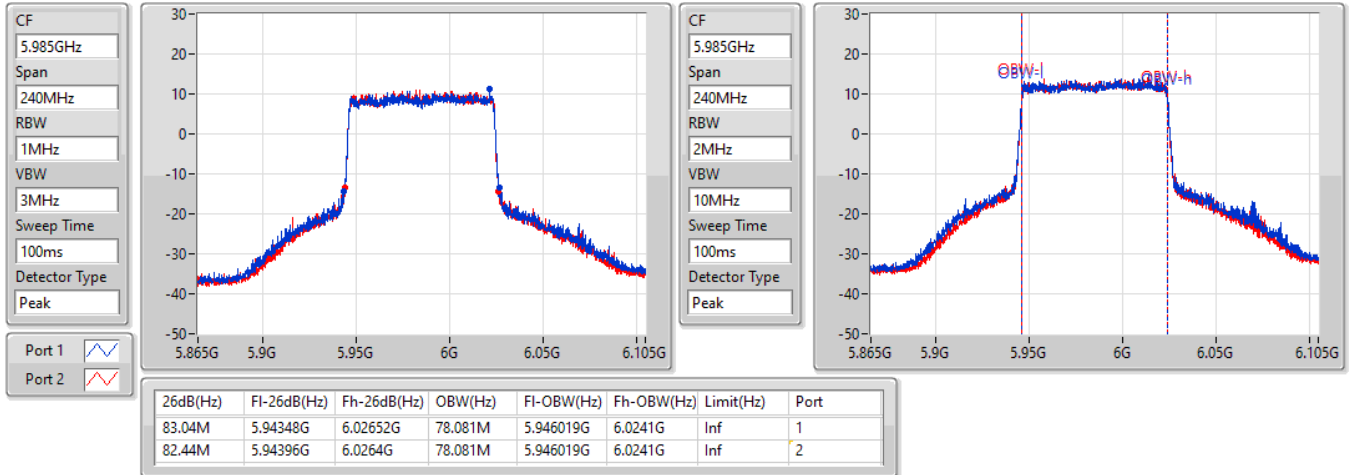

802.11ax HEW40-BF_Nss1,(MCS0)_2TX
EBW
7085MHz

21/01/2022

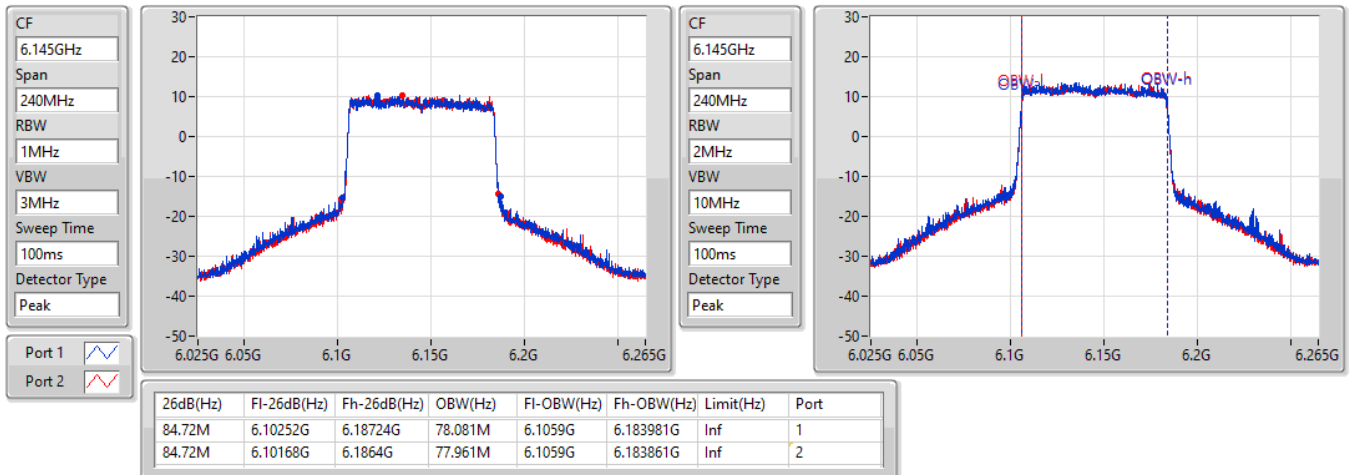


802.11ax HEW80-BF_Nss1,(MCS0)_2TX
EBW
5985MHz

21/01/2022

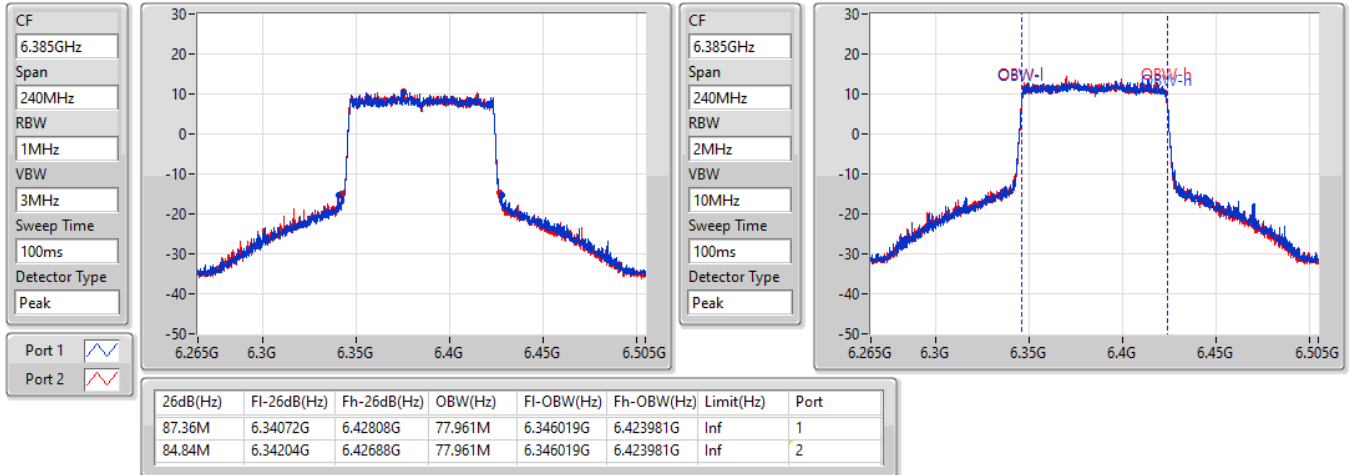

802.11ax HEW80-BF_Nss1,(MCS0)_2TX
EBW
6145MHz

21/01/2022

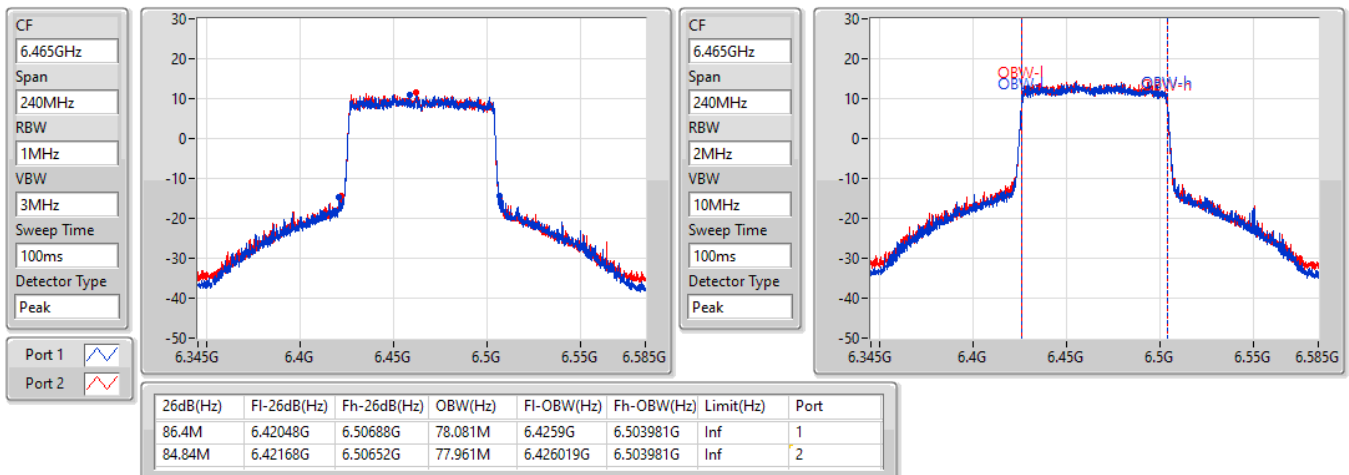


802.11ax HEW80-BF_Nss1,(MCS0)_2TX
EBW
6385MHz

21/01/2022

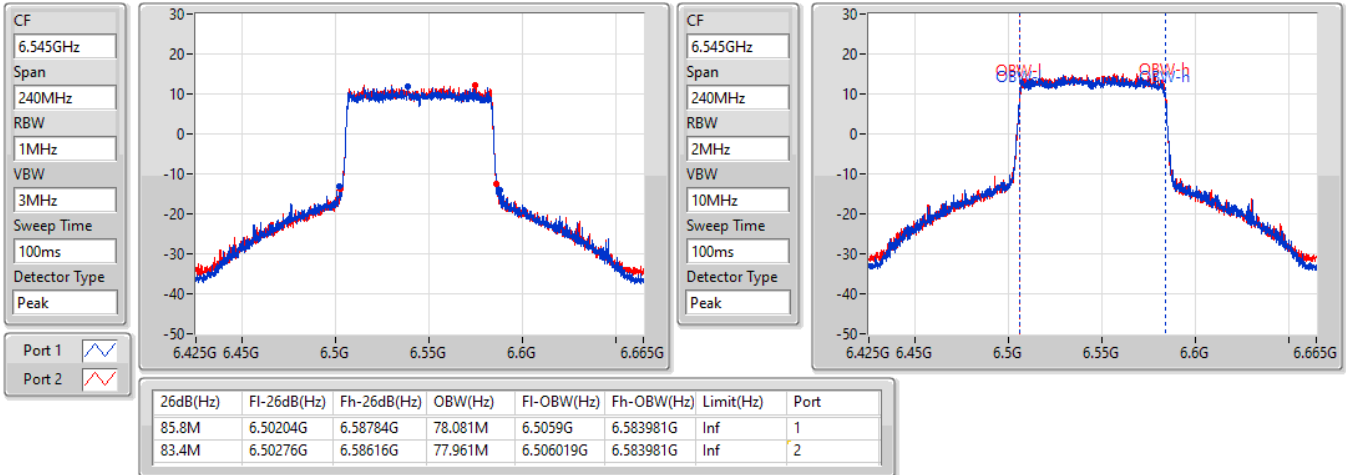

802.11ax HEW80-BF_Nss1,(MCS0)_2TX
EBW
6465MHz

21/01/2022

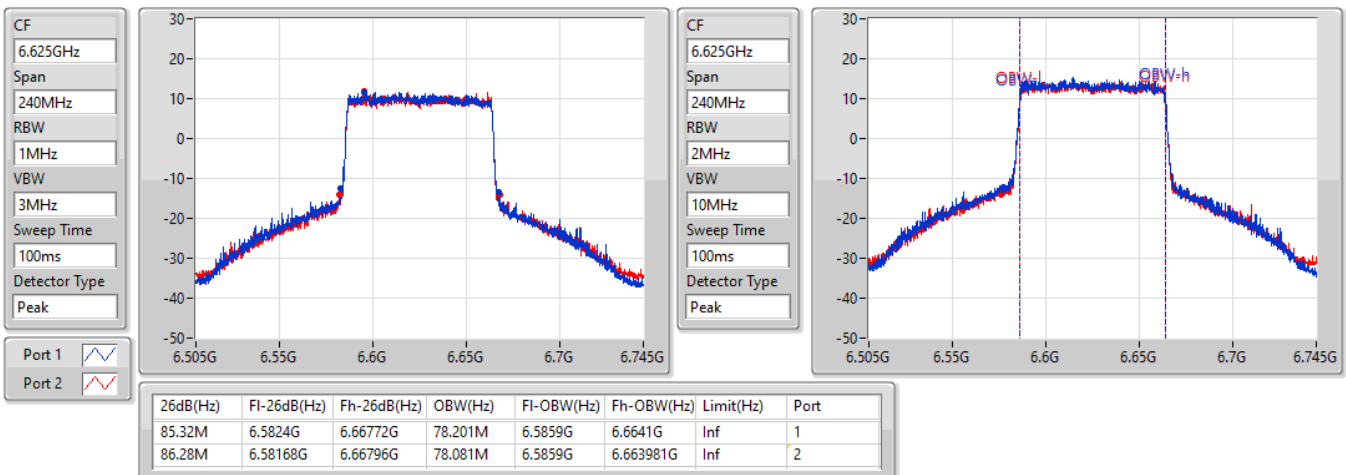


802.11ax HEW80-BF_Nss1,(MCS0)_2TX
EBW
6545MHz Straddle 6.425-6.525GHz

21/01/2022

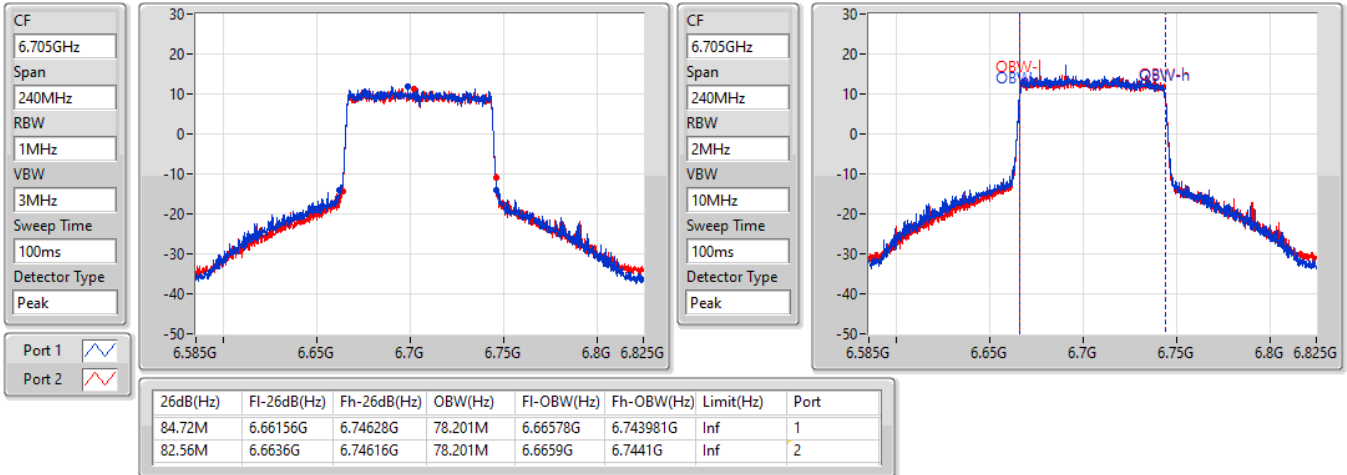

802.11ax HEW80-BF_Nss1,(MCS0)_2TX
EBW
6625MHz

21/01/2022

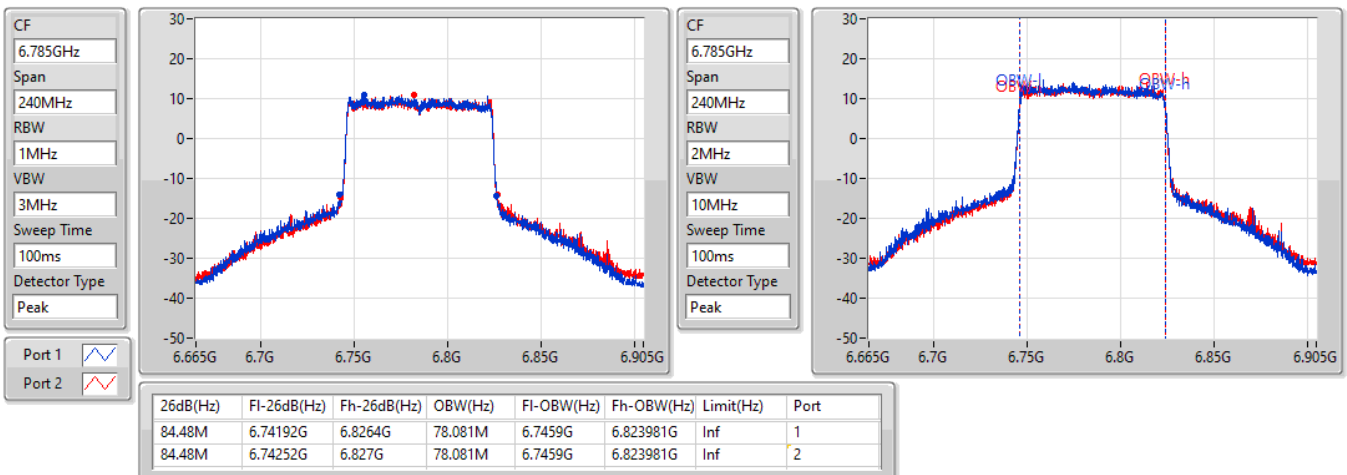


802.11ax HEW80-BF_Nss1,(MCS0)_2TX
EBW
6705MHz

21/01/2022


802.11ax HEW80-BF_Nss1,(MCS0)_2TX
EBW
6785MHz

21/01/2022

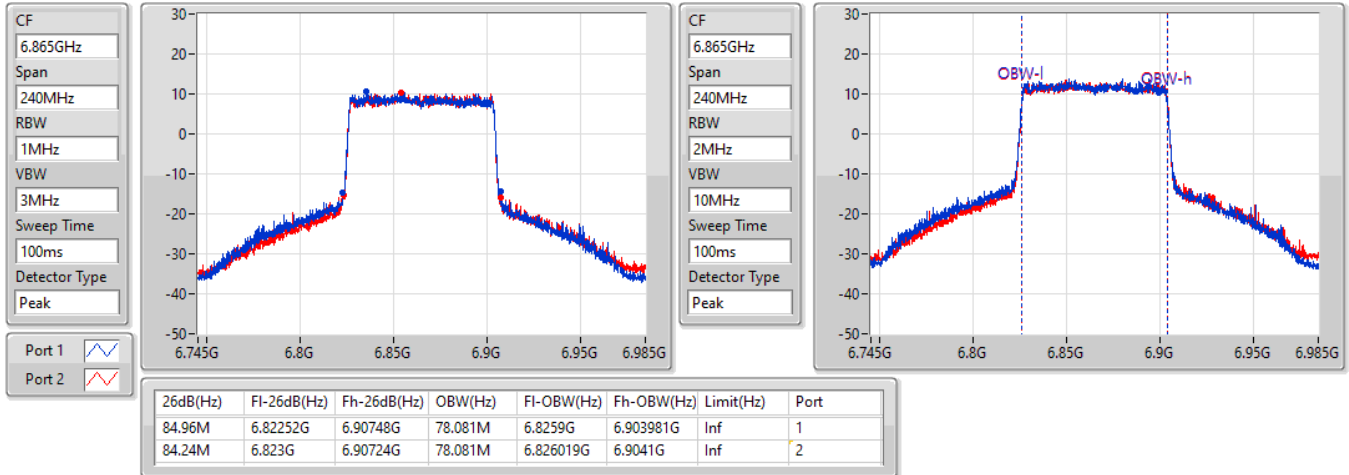


802.11ax HEW80-BF_Nss1,(MCS0)_2TX

EBW

6865MHz Straddle 6.525-6.875GHz

21/01/2022

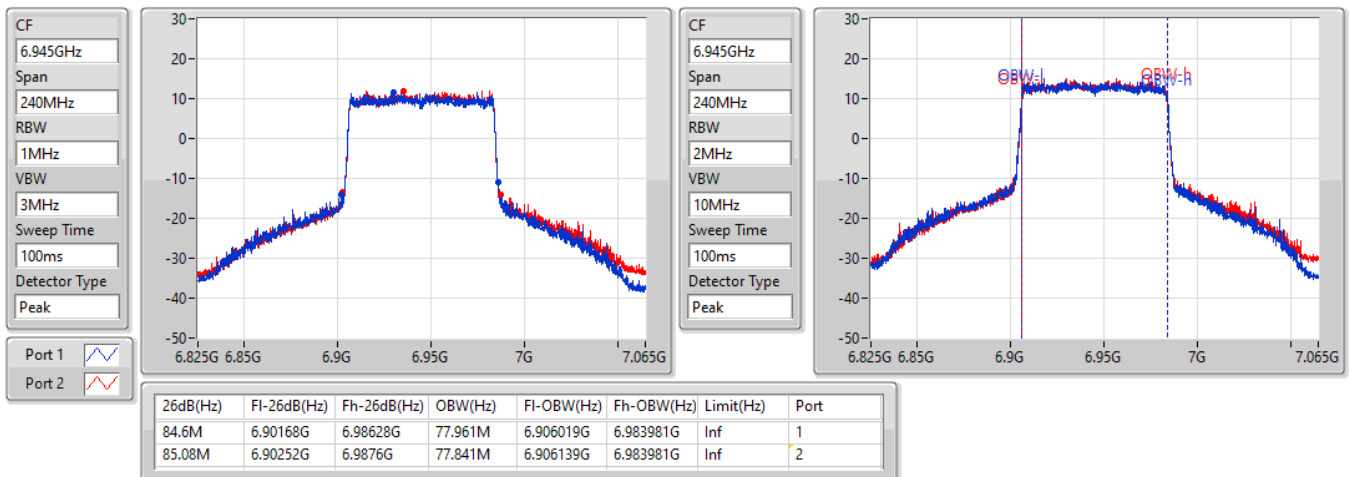


802.11ax HEW80-BF_Nss1,(MCS0)_2TX

EBW

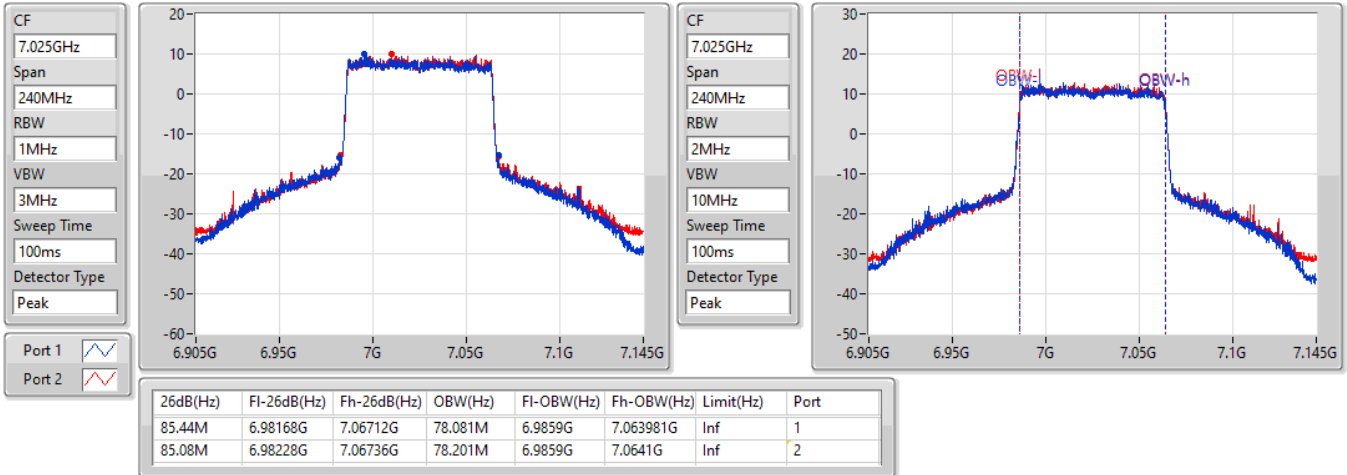
6945MHz

21/01/2022

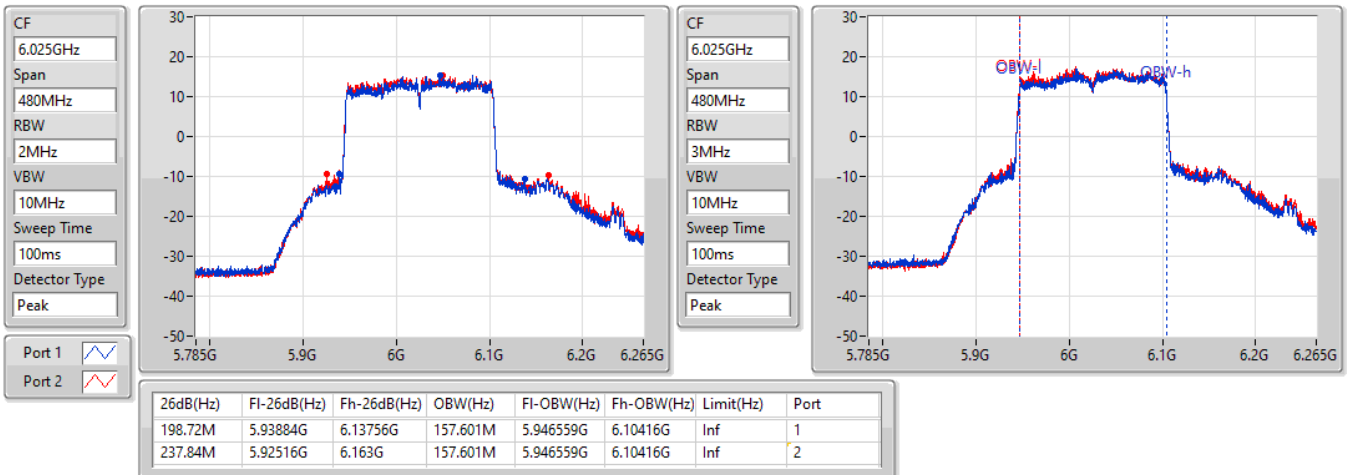


802.11ax HEW80-BF_Nss1,(MCS0)_2TX
EBW
7025MHz

21/01/2022

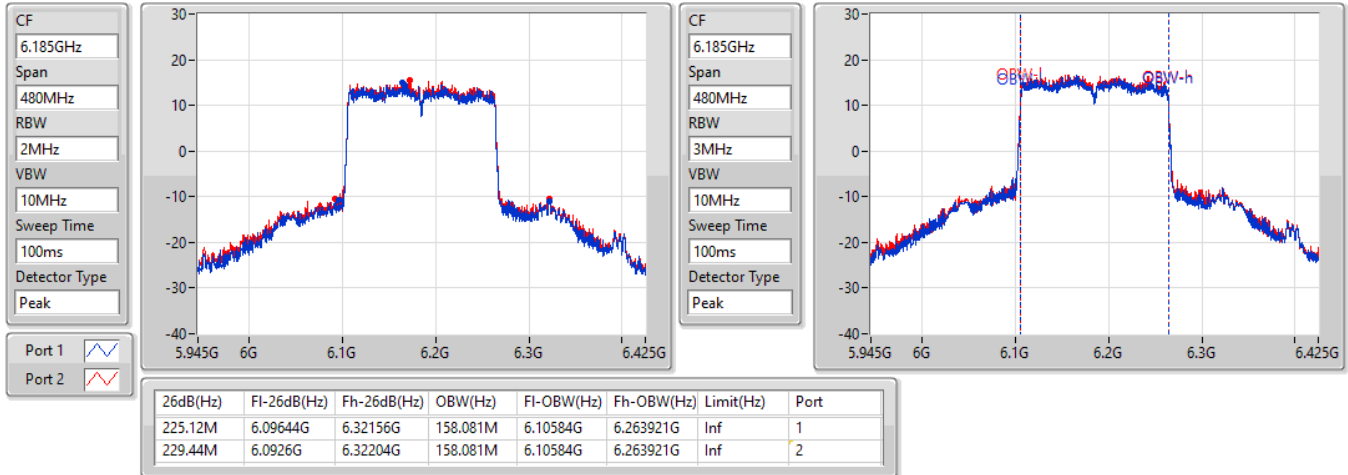

802.11ax HEW160-BF_Nss1,(MCS0)_2TX
EBW
6025MHz

21/01/2022



802.11ax HEW160-BF_Nss1,(MCS0)_2TX
EBW
6185MHz

21/01/2022


802.11ax HEW160-BF_Nss1,(MCS0)_2TX
EBW
6345MHz

22/01/2022

