



RADIO TEST REPORT

FCC ID : 2AHBN-AP45
Equipment : 802.11ax 6E Wireless Access Point
Brand Name : Juniper
Model Name : AP45,AP45E
Applicant : Juniper Networks, Inc.
1133 Innovation Way Sunnyvale, California 94089
USA
Manufacturer : Juniper Networks, Inc.
1133 Innovation Way Sunnyvale, California 94089
USA
Standard : 47 CFR FCC Part 15.407

The product was received on Oct. 19, 2021, and testing was started from Oct. 19, 2021 and completed on Apr. 07, 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 variant report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. Hsinchu Laboratory, the test report shall not be reproduced except in full.



Approved by: Sam Chen

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History of this test report

TEL : 886-3-656-9065
FAX : 886-3-656-9085
Report Template No.: CB-A12_1 Ver1.4

Page Number : 3 of 59
Issued Date : Nov. 24, 2022
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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 Output Power	PASS	-
3.4	15.407(a)	Power Spectral Density	PASS	-
3.5	15.407(b)	Unwanted Emissions	PASS	-
Note: Reference to Sporton Project No.: 182421-02.				

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: Penny Kao



1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
5150-5250	a, n (HT20), ac (VHT20), ax (HEW20)	5180-5240	36-48 [4]
5250-5350		5260-5320	52-64 [4]
5470-5725		5500-5720	100-144 [12]
5725-5850		5745-5825	149-165 [5]
5150-5250	n (HT40), ac (VHT40), ax (HEW40)	5190-5230	38-46 [2]
5250-5350		5270-5310	54-62 [2]
5470-5725		5510-5710	102-142 [6]
5725-5850		5755-5795	151-159 [2]
5150-5250	ac (VHT80), ax (HEW80)	5210	42 [1]
5250-5350		5290	58 [1]
5470-5725		5530-5690	106-138 [3]
5725-5850		5775	155 [1]

**For Radio 1**

Band	Mode	BWch (MHz)	Nant
5.15-5.35GHz	802.11a	20	4TX
5.15-5.35GHz	802.11n HT20	20	4TX
5.15-5.35GHz	802.11n HT20-BF	20	4TX
5.15-5.35GHz	802.11ac VHT20	20	4TX
5.15-5.35GHz	802.11ac VHT20-BF	20	4TX
5.15-5.35GHz	802.11ax HEW20	20	4TX
5.15-5.35GHz	802.11ax HEW20-BF	20	4TX
5.15-5.35GHz	802.11n HT40	40	4TX
5.15-5.35GHz	802.11n HT40-BF	40	4TX
5.15-5.35GHz	802.11ac VHT40	40	4TX
5.15-5.35GHz	802.11ac VHT40-BF	40	4TX
5.15-5.35GHz	802.11ax HEW40	40	4TX
5.15-5.35GHz	802.11ax HEW40-BF	40	4TX
5.15-5.35GHz	802.11ac VHT80	80	4TX
5.15-5.35GHz	802.11ac VHT80-BF	80	4TX
5.15-5.35GHz	802.11ax HEW80	80	4TX
5.15-5.35GHz	802.11ax HEW80-BF	80	4TX
5.47-5.725GHz	802.11a	20	4TX
5.47-5.725GHz	802.11n HT20	20	4TX
5.47-5.725GHz	802.11n HT20-BF	20	4TX
5.47-5.725GHz	802.11ac VHT20	20	4TX
5.47-5.725GHz	802.11ac VHT20-BF	20	4TX
5.47-5.725GHz	802.11ax HEW20	20	4TX
5.47-5.725GHz	802.11ax HEW20-BF	20	4TX
5.47-5.725GHz	802.11n HT40	40	4TX
5.47-5.725GHz	802.11n HT40-BF	40	4TX
5.47-5.725GHz	802.11ac VHT40	40	4TX
5.47-5.725GHz	802.11ac VHT40-BF	40	4TX
5.47-5.725GHz	802.11ax HEW40	40	4TX
5.47-5.725GHz	802.11ax HEW40-BF	40	4TX
5.47-5.725GHz	802.11ac VHT80	80	4TX
5.47-5.725GHz	802.11ac VHT80-BF	80	4TX
5.47-5.725GHz	802.11ax HEW80	80	4TX
5.47-5.725GHz	802.11ax HEW80-BF	80	4TX
5.725-5.85GHz	802.11a	20	4TX
5.725-5.85GHz	802.11n HT20	20	4TX
5.725-5.85GHz	802.11n HT20-BF	20	4TX
5.725-5.85GHz	802.11ac VHT20	20	4TX
5.725-5.85GHz	802.11ac VHT20-BF	20	4TX



Band	Mode	BWch (MHz)	Nant
5.725-5.85GHz	802.11ax HEW20	20	4TX
5.725-5.85GHz	802.11ax HEW20-BF	20	4TX
5.725-5.85GHz	802.11n HT40	40	4TX
5.725-5.85GHz	802.11n HT40-BF	40	4TX
5.725-5.85GHz	802.11ac VHT40	40	4TX
5.725-5.85GHz	802.11ac VHT40-BF	40	4TX
5.725-5.85GHz	802.11ax HEW40	40	4TX
5.725-5.85GHz	802.11ax HEW40-BF	40	4TX
5.725-5.85GHz	802.11ac VHT80	80	4TX
5.725-5.85GHz	802.11ac VHT80-BF	80	4TX
5.725-5.85GHz	802.11ax HEW80	80	4TX
5.725-5.85GHz	802.11ax HEW80-BF	80	4TX

**For Radio 2**

Band	Mode	BWch (MHz)	Nant
5.15-5.35GHz	802.11a	20	4TX
5.15-5.35GHz	802.11n HT20	20	4TX
5.15-5.35GHz	802.11n HT20-BF	20	4TX
5.15-5.35GHz	802.11ac VHT20	20	4TX
5.15-5.35GHz	802.11ac VHT20-BF	20	4TX
5.15-5.35GHz	802.11ax HEW20	20	4TX
5.15-5.35GHz	802.11ax HEW20-BF	20	4TX
5.15-5.35GHz	802.11n HT40	40	4TX
5.15-5.35GHz	802.11n HT40-BF	40	4TX
5.15-5.35GHz	802.11ac VHT40	40	4TX
5.15-5.35GHz	802.11ac VHT40-BF	40	4TX
5.15-5.35GHz	802.11ax HEW40	40	4TX
5.15-5.35GHz	802.11ax HEW40-BF	40	4TX
5.15-5.35GHz	802.11ac VHT80	80	4TX
5.15-5.35GHz	802.11ac VHT80-BF	80	4TX
5.15-5.35GHz	802.11ax HEW80	80	4TX
5.15-5.35GHz	802.11ax HEW80-BF	80	4TX

**For scanning radio 4**

Band	Mode	BWch (MHz)	Nant
5.15-5.35GHz	802.11a	20	1TX
5.15-5.35GHz	802.11n HT20	20	1TX
5.15-5.35GHz	802.11ac VHT20	20	1TX
5.15-5.35GHz	802.11ax HEW20	20	1TX
5.15-5.35GHz	802.11n HT40	40	1TX
5.15-5.35GHz	802.11ac VHT40	40	1TX
5.15-5.35GHz	802.11ax HEW40	40	1TX
5.15-5.35GHz	802.11ac VHT80	80	1TX
5.15-5.35GHz	802.11ax HEW80	80	1TX
5.47-5.725GHz	802.11a	20	1TX
5.47-5.725GHz	802.11n HT20	20	1TX
5.47-5.725GHz	802.11ac VHT20	20	1TX
5.47-5.725GHz	802.11ax HEW20	20	1TX
5.47-5.725GHz	802.11n HT40	40	1TX
5.47-5.725GHz	802.11ac VHT40	40	1TX
5.47-5.725GHz	802.11ax HEW40	40	1TX
5.47-5.725GHz	802.11ac VHT80	80	1TX
5.47-5.725GHz	802.11ax HEW80	80	1TX
5.725-5.85GHz	802.11a	20	1TX
5.725-5.85GHz	802.11n HT20	20	1TX
5.725-5.85GHz	802.11ac VHT20	20	1TX
5.725-5.85GHz	802.11ax HEW20	20	1TX
5.725-5.85GHz	802.11n HT40	40	1TX
5.725-5.85GHz	802.11ac VHT40	40	1TX
5.725-5.85GHz	802.11ax HEW40	40	1TX
5.725-5.85GHz	802.11ac VHT80	80	1TX
5.725-5.85GHz	802.11ax HEW80	80	1TX

Note:

- 11a, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- VHT20, VHT40, VHT80 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.
- HEW20, HEW40, HEW80 use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- BWch is the nominal channel bandwidth.


1.1.2 Antenna Information

Ant.	Port								Brand Name	Model Name	Ant. Type	Connector	Equip EUT	Gain (dBi)
	WLAN 5GHz (Radio 1)	WLAN 2.4GHz (Radio 2)	WLAN 5GHz (Radio 2)	WLAN 6GHz (Radio 3)	WLAN 2.4GHz (Radio 4)	WLAN 5GHz (Radio 4)	WLAN 6GHz (Radio 4)	BT (Radio 5)						
1	1	4	-	-	-	-	-	-	Juniper	AP45	PIFA	I-PEX	EUT 1	
2	2	3	-	-	-	-	-	-	Juniper	AP45	PIFA	I-PEX		
3	3	2	-	-	-	-	-	-	Juniper	AP45	PIFA	I-PEX		
4	4	1	-	-	-	-	-	-	Juniper	AP45	PIFA	I-PEX		
5	-	-	1	-	-	-	-	-	Juniper	AP45	PIFA	I-PEX		
6	-	-	2	-	-	-	-	-	Juniper	AP45	PIFA	I-PEX		
7	-	-	3	-	-	-	-	-	Juniper	AP45	PIFA	I-PEX		
8	-	-	4	-	-	-	-	-	Juniper	AP45	PIFA	I-PEX		
9	-	-	-	1	-	-	-	-	Juniper	AP45	PIFA	I-PEX		
10	-	-	-	2	-	-	-	-	Juniper	AP45	PIFA	I-PEX		
11	-	-	-	3	-	-	-	-	Juniper	AP45	PIFA	I-PEX		
12	-	-	-	4	-	-	-	-	Juniper	AP45	PIFA	I-PEX		
13	-	-	-	-	1	1	1	-	Juniper	AP45	PIFA	I-PEX		
14	-	-	-	-	2	2	2	-	Juniper	AP45	PIFA	I-PEX		
15	-	-	-	-	-	-	-	1	Juniper	AP45	PIFA	I-PEX	EUT 1, EUT 2	
16	1	4	-	-	-	-	-	-	Acce I Tex	ATS-OO-2 456-466-1 0MC-36	OMNI	4-Port connector	EUT 2	Note1
	2	3	-	-	-	-	-	-						
	3	2	-	-	-	-	-	-						
	4	1	-	-	-	-	-	-						
17	1	4	-	-	-	-	-	-	Acce I Tex	ATS-OP-2 456-81010 -10MC-36	Panel	4-Port connector		
	2	3	-	-	-	-	-	-						
	3	2	-	-	-	-	-	-						
	4	1	-	-	-	-	-	-						
18	-	-	-	-	4	1	-	-	Acce I Tex	ATS-OO-2 456-466-1 0MC-36	OMNI	6-Port connector		
	-	-	-	-	3	2	-	-						
	-	-	-	-	2	3	-	-						
	-	-	-	-	1	4	-	-						
19	-	-	-	-	4	1	-	-	Acce I Tex	ATS-OO-2 456-466-1 0MC-36	Panel	6-Port connector		
	-	-	-	-	3	2	-	-						
	-	-	-	-	2	3	-	-						
	-	-	-	-	1	4	-	-						



Note 1:

Ant.	Antenna Gain (dBi)																				
	WLAN 5GHz (Radio 1)				WLAN 2.4GHz (Radio 2)	WLAN 5GHz (Radio 2)		WLAN 6GHz (Radio 3)				WLAN 2.4GHz (Radio 4)	WLAN 5GHz (Radio 4)				WLAN 6GHz (Radio 4)				Bluetooth (Radio 5)
	UNII 1	UNII 2A	UNII 2C	UNII 3		UNII 1	UNII 2A	UNII 5	UNII 6	UNII 7	UNII 8		UNII 1	UNII 2A	UNII 2C	UNII 3	UNII 5	UNII 6	UNII 7	UNII 8	
1	2.89	3.7	3.46	2.39	2.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2	2.61	2.55	3.04	3.8	0.66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3	1.94	2.2	2.82	2.54	2.04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4	3.27	4.06	2.87	2.17	1.17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
5	-	-	-	-	-	3.2	3.56	-	-	-	-	-	-	-	-	-	-	-	-	-	
6	-	-	-	-	-	2.85	3.77	-	-	-	-	-	-	-	-	-	-	-	-	-	
7	-	-	-	-	-	3.37	3.23	-	-	-	-	-	-	-	-	-	-	-	-	-	
8	-	-	-	-	-	3.11	3.68	-	-	-	-	-	-	-	-	-	-	-	-	-	
9	-	-	-	-	-	-	-	4.9	5.4	5.4	5.6	-	-	-	-	-	-	-	-	-	
10	-	-	-	-	-	-	-	4.9	5.4	5.4	5.6	-	-	-	-	-	-	-	-	-	
11	-	-	-	-	-	-	-	4.9	5.4	5.4	5.6	-	-	-	-	-	-	-	-	-	
12	-	-	-	-	-	-	-	4.9	5.4	5.4	5.6	-	-	-	-	-	-	-	-	-	
13	-	-	-	-	-	-	-	-	-	-	-	5.0	5.4	5.4	5.5	5.3	4.7	4.8	4.8	4.1	
14	-	-	-	-	-	-	-	-	-	-	-	5.0	5.4	5.4	5.5	5.3	4.7	4.8	4.8	4.1	
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.5	
16	6	6	6	6	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
17	10	10	10	10	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
18	-	-	-	-	-	-	-	-	-	-	-	4	6	6	6	6	-	-	-	-	
19	-	-	-	-	-	-	-	-	-	-	-	8	10	10	10	10	-	-	-	-	

Ant.	Directional Gain (dBi)						
	WLAN 5GHz (Radio 1)				WLAN 2.4GHz (Radio 2)	WLAN 5GHz (Radio 2)	
	UNII 1	UNII 2A	UNII 2C	UNII 3		UNII 1	UNII 2A
1	6.44	6.41	7.19	6.67	4.23	-	-
2						-	-
3						-	-
4						-	-
5	-	-	-	-	-	7.7	8.16
6	-	-	-	-	-		
7	-	-	-	-	-		
8	-	-	-	-	-		

Note 2: The EUT has nineteen antennas. The ant.15 is BLE Array (Beam 1~Beam 9 and Omni).

Antenna 16 must be used with antenna 18 and antenna 17 must be used with antenna 19.

Note 3: The above information was declared by manufacturer.

Note 4: **For Radio 2**

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 Radio 1

For 5GHz UNII 1~3:

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 2

For 5GHz UNII 1~2A:

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 EUT1 only)

For 6E UNII 5~8 (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 4****For 2.4GHz, IEEE 802.11b/g/n/VHT/ax mode (1TX/2RX):**

The EUT supports the antenna with TX diversity functions.

Both Port 1 and Port 2 support transmit and receive functions, but only one of them will be used at one time.

The Port 1 for EUT 1 and EUT 2 + Ant. 18 generated the worst case, so it was selected to test and record in the report.

The Port 1 for EUT 2 + Ant. 19 generated the worst case, so it was selected to test and record in the report.

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

The EUT supports the antenna with TX diversity functions.

Both Port 1 and Port 2 support transmit and receive functions, but only one of them will be used at one time.

The Port 1 for EUT 1 and EUT 2 + Ant. 18 generated the worst case, so it was selected to test and record in the report.

The Port 1 for EUT 2 + Ant. 19 generated the worst case, so it was selected to test and record in the report.

For 6E UNII 5~8, IEEE 802.11ax mode (1TX/2RX): (For EUT1 only)

The EUT supports the antenna with TX diversity functions.

Both Port 1 and Port 2 support transmit and receive functions, but only one of them will be used at one time.

The Port 1 generated the worst case, so it was selected to test and record in the report.

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

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

Note 5: For EUT 1:

Radio 1, 2: Maximum Directional Gain following KDB662911 D03. The antenna report is provided in the operational description for this application.

For EUT 2: Maximum Directional Gain following KDB662911 D01.

For Radio 1 5GHz UNII 1~3 + Antenna 16:

For Radio 2 2.4GHz + Antenna 16:

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 $N_{ANT} \leq 4$	$Directional\ IGain = 10 \cdot \log \left[\frac{\sum_{i=1}^{N_{ss}} \left\{ \sum_{k=1}^{N_{ANT}} g_{i,k} \right\}^2}{N_{ANT}} \right]$
BF	$Directional\ IGain = 10 \cdot \log \left[\frac{\sum_{i=1}^{N_{ss}} \left\{ \sum_{k=1}^{N_{ANT}} g_{i,k} \right\}^2}{N_{ANT}} \right]$	$Directional\ IGain = 10 \cdot \log \left[\frac{\sum_{i=1}^{N_{ss}} \left\{ \sum_{k=1}^{N_{ANT}} g_{i,k} \right\}^2}{N_{ANT}} \right]$

Ex.

Directional Gain (NSS1) formula :

$$Directional\ IGain = 10 \cdot \log \left[\frac{\sum_{i=1}^{N_{ss}} \left\{ \sum_{k=1}^{N_{ANT}} g_{i,k} \right\}^2}{N_{ANT}} \right]$$

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

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

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

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

Where ;

$$2.4G \ G1 = 4 ; G2 = 4 ; G3 = 4 ; G4 = 4 ;$$

$$5G \ G1 = 6 ; G2 = 6 ; G3 = 6 ; G4 = 6 ;$$

$$2.4G \ DG = 10.02 \text{ dBi}$$

$$5 \text{ GHz U-NII-1 } DG = 12.02 \text{ dBi}$$

$$5 \text{ GHz U-NII-2A } DG = 12.02 \text{ dBi}$$

$$5 \text{ GHz U-NII-2C } DG = 12.02 \text{ dBi}$$

$$5 \text{ GHz U-NII-3 } DG = 12.02 \text{ dBi}$$

For Radio 1, 5GHz UNII 1~3 + Antenna 17:

For Radio 2, 2.4GHz + Antenna 17:

Directional gain information

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

Ex.

Directional Gain (NSS1) formula :

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

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

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

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

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

Where ;

$$2.4G\ G1 = 8 ; G2 = 8 ; G3 = 8 ; G4 = 8 ;$$

$$5G\ G1 = 10 ; G2 = 10 ; G3 = 10 ; G4 = 10 ;$$

$$2.4G\ DG = 14.02\ dBi$$

$$5\ GHz\ U-NII-1\ DG = 16.02\ dBi$$

$$5\ GHz\ U-NII-2A\ DG = 16.02\ dBi$$

$$5\ GHz\ U-NII-2C\ DG = 16.02\ dBi$$

$$5\ GHz\ U-NII-3\ DG = 16.02\ dBi$$

1.1.3 Mode Test Duty Cycle

For EUT 1 + Radio 1

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11a	0.948	0.23	2.065m	1k
802.11ax HEW20	0.984	0.07	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ax HEW40	0.967	0.15	780.625u	3k
802.11ax HEW80	0.934	0.3	413.75u	3k

For EUT 1 + Radio 2

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11a	0.948	0.23	2.065m	1k
802.11ax HEW20	0.982	0.08	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ax HEW40	0.965	0.15	780.625u	3k
802.11ax HEW80	0.94	0.27	413.75u	3k

For EUT 1 + Radio 4

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11a	0.952	0.21	2.066m	1k
802.11ax HEW20	0.981	0.08	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ax HEW40	0.967	0.15	781.875u	3k
802.11ax HEW80	0.94	0.27	413.75u	3k

For EUT 2 + Radio 1 + Ant.16

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11a	0.948	0.23	2.066m	1k
802.11ax HEW20	0.984	0.07	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ax HEW40	0.967	0.15	780.625u	3k
802.11ax HEW80	0.94	0.27	415u	3k

For EUT 2 + Radio 1 + Ant.17

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11a	0.958	0.19	2.066m	1k
802.11ax HEW20	0.984	0.07	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ax HEW40	0.967	0.15	780.625u	3k
802.11ax HEW80	0.94	0.27	413.75u	3k

For EUT 2 + Radio 4 + Ant.18

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11a	0.948	0.23	2.065m	1k
802.11ax HEW20	0.986	0.06	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ax HEW40	0.965	0.15	781.25u	3k
802.11ax HEW80	0.938	0.28	415u	3k

**For EUT 2 + Radio 4 + Ant.19**

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11a	0.948	0.23	2.066m	1k
802.11ax HEW20	0.984	0.07	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ax HEW40	0.966	0.15	781u	3k
802.11ax HEW80	0.935	0.29	414u	3k

Note:

- ♦ DC is Duty Cycle.
- ♦ DCF is Duty Cycle Factor.

1.1.4 EUT Operational Condition

EUT Power Type	From PoE			
Beamforming Function	☒	With beamforming	☐	Without beamforming
	The product has beamforming function for n/VHT/ax in 2.4GHz of radio 2, n/ac/ax in 5GHz UNII 1~UNII 3 of radio 1, 5GHz UNII 1~UNII 2 of radio 2 and ax in 6GHz UNII 5~UNII 8 of radio 3.			
Weather Band	☒	With 5600~5650MHz	☐	Without 5600~5650MHz
Function	☐	Outdoor P2M	☒	Indoor P2M
	☐	Fixed P2P	☐	Client
	☒	Point-to-multipoint	☐	Point-to-point
TPC Function	☒	With TPC	☐	Without TPC
Test Software Version	accessMTool 3.2.1.5, DOS [ver 6.1.7601]			

Note: The above information was declared by manufacturer.

1.1.5 Table for Multiple Listing

Model Name	EUT	Antenna	Operation Function
AP45	1	Internal	Mode 1: Radio 1 (WLAN 5GHz UNII 1~3)+Radio 2 (WLAN 2.4GHz)+Radio 3 (WLAN 6 GHz) +Radio 4 (WLAN 2.4GHz)+Radio 5 (BT) Mode 2: Radio 1 (WLAN 5GHz UNII 1~3)+Radio 2 (WLAN 2.4GHz)+Radio 3 (WLAN 6 GHz) +Radio 4 (WLAN 5 GHz) +Radio 5 (BT) Mode 3: Radio 1 (WLAN 5GHz UNII 1~3)+Radio 2 (WLAN 2.4GHz)+Radio 3 (WLAN 6 GHz) +Radio 4 (WLAN 6 GHz) +Radio 5 (BT) Mode 4: Radio 1 (WLAN 5GHz UNII 2C~3)+Radio 2 (WLAN 5GHz UNII 1~2A) +Radio 3 (WLAN 6 GHz) +Radio 4 (WLAN 2.4GHz) +Radio 5 (BT) Mode 5: Radio 1 (WLAN 5GHz UNII 2C~3)+Radio 2 (WLAN 5GHz UNII 1~2A) +Radio 3 (WLAN 6 GHz) +Radio 4 (WLAN 5 GHz) +Radio 5 (BT) Mode 6: Radio 1 (WLAN 5GHz UNII 2C~3)+Radio 2 (WLAN 5GHz UNII 1~2A) +Radio 3 (WLAN 6 GHz) +Radio 4 (WLAN 6 GHz) +Radio 5 (BT)
AP45E	2	External	Mode 1: Radio 1 (WLAN 5GHz UNII 1~3)+Radio 2 (WLAN 2.4GHz)+Radio 4 (WLAN 2.4GHz) +Radio 5 (BT) Mode 2: Radio 1 (WLAN 5GHz UNII 1~3)+Radio 2 (WLAN 2.4GHz)+Radio 4 (WLAN 5GHz) +Radio 5 (BT)

Note: The above information was declared by manufacturer.

1.1.6 Table for Configuration and Radio Function

Configuration	EUT	Radio 1	Radio 2	Radio 3	Radio 4 (Scanning)	Radio 5
1	EUT 1	(WLAN 5GHz UNII 1~3)	(WLAN 2.4GHz)	(WLAN 6GHz)	(WLAN 2.4GHz)	(Bluetooth)
2	EUT 1				(WLAN 5GHz)	
3	EUT 1				(WLAN 6GHz)	
4	EUT 1 (FEM)	(WLAN 5GHz UNII 2C~3)	(WLAN 5GHz UNII 1~2A)		(WLAN 2.4GHz)	
5	EUT 1 (FEM)				(WLAN 5GHz)	
6	EUT 1 (FEM)				(WLAN 6GHz)	
7	EUT 2	(WLAN 5GHz UNII 1~3)	(WLAN 2.4GHz)	-	(WLAN 2.4GHz)	
8	EUT 2				(WLAN 5GHz)	

Note: The above information was declared by manufacturer.



1.1.7 Table for Permissive Change

This product is an extension of original one reported under Sporton project number: FR182421-01AB

Below is the table for the change of the product with respect to the original one.

Modifications	Performance Checking
For EUT 1: 1. Radio 1: enable UNII 2A, 2C. 2. Radio 2: enable UNII 2A. 3. Radio 4: enable UNII 2A, 2C, 6G. For EUT 2: 1. Radio 1: enable UNII 2A, 2C. 2. Radio 4: enable this radio, the function includes 2.4G, 5G UNII 1~3. 3. Adding two sets antenna for radio 4 (Antenna set 18~19).	1. EUT 1 enable Radio 1 (5GHz UNII 2A, 2C) EUT 1 enable Radio 2 (5GHz UNII 2A) EUT 1 enable Radio 4 (5GHz UNII 2A, 2C) EUT 2 enable Radio 1 (5GHz UNII 2A, 2C) EUT 2 enable Radio 4 (5GHz UNII 1~3) ,the test items as below: a. Emission Bandwidth b. Maximum Output Power c. Power Spectral Density d. Unwanted Emissions above 1GHz. 2. EUT 1 enable Radio 4 (6GHz), EUT 2 enable Radio 4 (2.4GHz, 5GHz), the test items as below: a. AC Power-line Conducted Emissions b. Unwanted Emissions below 1GHz.



1.2 Applicable Standards

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

- ♦ 47 CFR FCC Part 15
- ♦ ANSI C63.10-2013
- ♦ FCC KDB 789033 D02 v02r01

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

- ♦ FCC KDB 662911 D01 v02r01
- ♦ FCC KDB 662911 D03 v01
- ♦ 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 (EUT 1)	TH03-CB	Brian Sun	24.3~25.2 / 60~62	Oct. 19, 2021~ Mar. 15, 2022
RF Conducted (EUT 2)	TH01-CB	Owen Hsu	20.3~21.9 / 58~62	Jan. 13, 2022~ Feb. 26, 2022
Radiated below 1GHz (Test Mode: Mode2~7)	03CH05-CB	Ken Yeh	22.5~23.6 / 56~59	Dec. 29, 2021
Radiated below 1GHz (Test Mode: Mode1)	03CH03-CB	Eason Chen	24.2-26.1 / 55-58	Mar. 30, 2022
Radiated Above 1GHz	03CH01-CB	Eason Chen	23.8-24.9 / 55-58	Oct. 23, 2021~ Mar. 01, 2022
	03CH02-CB		24.2-26.1 / 55-58	
AC Conduction (Test Mode: Mode1)	CO01-CB	Joe Chu	20~22 / 60~62	Apr. 07, 2022
AC Conduction (Test Mode: Mode2~3)	CO01-CB	Peter Wu	22~23 / 55~56	Nov. 15, 2021~ Jan. 04, 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 EUT 1 + Radio 1

Mode	Power Setting
802.11a_Nss1,(6Mbps)_4TX	-
5260MHz	69
5300MHz	69
5320MHz	69
5500MHz	63
5580MHz	63
5700MHz	56
5720MHz Straddle 5.47-5.725GHz	66
5720MHz Straddle 5.725-5.85GHz	66
802.11ax HEW20_Nss1,(MCS0)_4TX	-
5260MHz	70
5300MHz	70
5320MHz	72
5500MHz	65
5580MHz	64
5700MHz	49
5720MHz Straddle 5.47-5.725GHz	67
5720MHz Straddle 5.725-5.85GHz	67
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-
5260MHz	68
5300MHz	68
5320MHz	71
5500MHz	63
5580MHz	62
5700MHz	49
5720MHz Straddle 5.47-5.725GHz	67
5720MHz Straddle 5.725-5.85GHz	67
802.11ax HEW40_Nss1,(MCS0)_4TX	-
5270MHz	69
5310MHz	68
5510MHz	65
5550MHz	66
5670MHz	56
5710MHz Straddle 5.47-5.725GHz	65
5710MHz Straddle 5.725-5.85GHz	69



Mode	Power Setting
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-
5270MHz	67
5310MHz	68
5510MHz	63
5550MHz	61
5670MHz	56
5710MHz Straddle 5.47-5.725GHz	65
5710MHz Straddle 5.725-5.85GHz	65
802.11ax HEW80_Nss1,(MCS0)_4TX	-
5290MHz	65
5530MHz	66
5610MHz	65
5690MHz Straddle 5.47-5.725GHz	66
5690MHz Straddle 5.725-5.85GHz	66
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-
5290MHz	65
5530MHz	63
5610MHz	64
5690MHz Straddle 5.47-5.725GHz	66
5690MHz Straddle 5.725-5.85GHz	66

**For EUT 1 + Radio 2**

Mode	Power Setting
802.11a_Nss1,(6Mbps)_4TX	-
5260MHz	61
5300MHz	61
5320MHz	66
802.11ax HEW20_Nss1,(MCS0)_4TX	-
5260MHz	62
5300MHz	62
5320MHz	68
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-
5260MHz	70
5300MHz	71
5320MHz	76
802.11ax HEW40_Nss1,(MCS0)_4TX	-
5270MHz	70
5310MHz	74
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-
5270MHz	61
5310MHz	65
802.11ax HEW80_Nss1,(MCS0)_4TX	-
5290MHz	72
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-
5290MHz	63

**For EUT 1 + Radio 4**

Mode	Power Setting
802.11a_Nss1,(6Mbps)_1TX	-
5260MHz	85
5300MHz	85
5320MHz	86
5500MHz	79
5580MHz	75
5700MHz	63
5720MHz Straddle 5.47-5.725GHz	76
5720MHz Straddle 5.725-5.85GHz	76
802.11ax HEW20_Nss1,(MCS0)_1TX	-
5260MHz	84
5300MHz	84
5320MHz	85
5500MHz	78
5580MHz	74
5700MHz	58
5720MHz Straddle 5.47-5.725GHz	74
5720MHz Straddle 5.725-5.85GHz	74
802.11ax HEW40_Nss1,(MCS0)_1TX	-
5270MHz	83
5310MHz	79
5510MHz	70
5550MHz	75
5670MHz	72
5710MHz Straddle 5.47-5.725GHz	76
5710MHz Straddle 5.725-5.85GHz	76
802.11ax HEW80_Nss1,(MCS0)_1TX	-
5290MHz	77
5530MHz	69
5610MHz	74
5690MHz Straddle 5.47-5.725GHz	76
5690MHz Straddle 5.725-5.85GHz	76
802.11ax HEW160_Nss1,(MCS0)_1TX	-
5250MHz Straddle 5.15-5.25GHz	62
5250MHz Straddle 5.25-5.35GHz	62
5570MHz	62

**For EUT 2 + Radio 1 + Ant.16**

Mode	Power Setting
802.11a_Nss1,(6Mbps)_4TX	-
5260MHz	49
5300MHz	48
5320MHz	50
5500MHz	48
5580MHz	48
5700MHz	44
5720MHz Straddle 5.47-5.725GHz	52
5720MHz Straddle 5.725-5.85GHz	52
802.11ax HEW20_Nss1,(MCS0)_4TX	-
5260MHz	49
5300MHz	49
5320MHz	52
5500MHz	50
5580MHz	49
5700MHz	40
5720MHz Straddle 5.47-5.725GHz	52
5720MHz Straddle 5.725-5.85GHz	52
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-
5260MHz	46
5300MHz	47
5320MHz	49
5500MHz	47
5580MHz	46
5700MHz	40
5720MHz Straddle 5.47-5.725GHz	51
5720MHz Straddle 5.725-5.85GHz	51
802.11ax HEW40_Nss1,(MCS0)_4TX	-
5270MHz	61
5310MHz	50
5510MHz	54
5550MHz	58
5670MHz	45
5710MHz Straddle 5.47-5.725GHz	58
5710MHz Straddle 5.725-5.85GHz	58
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-
5270MHz	48
5310MHz	48
5510MHz	47



Mode	Power Setting
5550MHz	46
5670MHz	44
5710MHz Straddle 5.47-5.725GHz	49
5710MHz Straddle 5.725-5.85GHz	49
802.11ax HEW80_Nss1,(MCS0)_4TX	-
5290MHz	50
5530MHz	55
5610MHz	53
5690MHz Straddle 5.47-5.725GHz	59
5690MHz Straddle 5.725-5.85GHz	59
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-
5290MHz	47
5530MHz	47
5610MHz	46
5690MHz Straddle 5.47-5.725GHz	49
5690MHz Straddle 5.725-5.85GHz	49

**For EUT 2 + Radio 1 + Ant.17**

Mode	Power Setting
802.11a_Nss1,(6Mbps)_4TX	-
5260MHz	35
5300MHz	35
5320MHz	36
5500MHz	35
5580MHz	35
5700MHz	38
5720MHz Straddle 5.47-5.725GHz	38
5720MHz Straddle 5.725-5.85GHz	38
802.11ax HEW20_Nss1,(MCS0)_4TX	-
5260MHz	37
5300MHz	37
5320MHz	39
5500MHz	39
5580MHz	37
5700MHz	39
5720MHz Straddle 5.47-5.725GHz	39
5720MHz Straddle 5.725-5.85GHz	39
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-
5260MHz	31
5300MHz	31
5320MHz	32
5500MHz	33
5580MHz	33
5700MHz	34
5720MHz Straddle 5.47-5.725GHz	39
5720MHz Straddle 5.725-5.85GHz	39
802.11ax HEW40_Nss1,(MCS0)_4TX	-
5270MHz	47
5310MHz	49
5510MHz	47
5550MHz	46
5670MHz	42
5710MHz Straddle 5.47-5.725GHz	44
5710MHz Straddle 5.725-5.85GHz	44
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-
5270MHz	32
5310MHz	32
5510MHz	31



Mode	Power Setting
5550MHz	31
5670MHz	29
5710MHz Straddle 5.47-5.725GHz	33
5710MHz Straddle 5.725-5.85GHz	33
802.11ax HEW80_Nss1,(MCS0)_4TX	-
5290MHz	45
5530MHz	50
5610MHz	47
5690MHz Straddle 5.47-5.725GHz	55
5690MHz Straddle 5.725-5.85GHz	55
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-
5290MHz	32
5530MHz	31
5610MHz	29
5690MHz Straddle 5.47-5.725GHz	35
5690MHz Straddle 5.725-5.85GHz	35

For EUT 2 + Radio 4 + Ant.18

Mode	Power Setting
802.11a_Nss1,(6Mbps)_1TX	-
5180MHz	78
5200MHz	85
5240MHz	80
5260MHz	81
5300MHz	80
5320MHz	77
5500MHz	76
5580MHz	71
5700MHz	65
5720MHz Straddle 5.47-5.725GHz	74
5720MHz Straddle 5.725-5.85GHz	74
5745MHz	93
5785MHz	95
5825MHz	95
802.11ax HEW20_Nss1,(MCS0)_1TX	-
5180MHz	78
5200MHz	84
5240MHz	79
5260MHz	79
5300MHz	79



Mode	Power Setting
5320MHz	77
5500MHz	75
5580MHz	69
5700MHz	57
5720MHz Straddle 5.47-5.725GHz	72
5720MHz Straddle 5.725-5.85GHz	72
5745MHz	92
5785MHz	95
5825MHz	95
802.11ax HEW40_Nss1,(MCS0)_1TX	-
5190MHz	69
5230MHz	72
5270MHz	73
5310MHz	67
5510MHz	69
5550MHz	73
5670MHz	63
5710MHz Straddle 5.47-5.725GHz	69
5710MHz Straddle 5.725-5.85GHz	69
5755MHz	88
5795MHz	92
802.11ax HEW80_Nss1,(MCS0)_1TX	-
5210MHz	68
5290MHz	64
5530MHz	70
5610MHz	68
5690MHz Straddle 5.47-5.725GHz	73
5690MHz Straddle 5.725-5.85GHz	73
5775MHz	81

**For EUT 2 + Radio 4 + Ant.19**

Mode	Power Setting
802.11a_Nss1,(6Mbps)_1TX	-
5180MHz	71
5200MHz	83
5240MHz	80
5260MHz	81
5300MHz	80
5320MHz	74
5500MHz	72
5580MHz	70
5700MHz	52
5720MHz Straddle 5.47-5.725GHz	73
5720MHz Straddle 5.725-5.85GHz	73
5745MHz	93
5785MHz	95
5825MHz	95
802.11ax HEW20_Nss1,(MCS0)_1TX	-
5180MHz	72
5200MHz	80
5240MHz	79
5260MHz	80
5300MHz	79
5320MHz	74
5500MHz	72
5580MHz	69
5700MHz	45
5720MHz Straddle 5.47-5.725GHz	72
5720MHz Straddle 5.725-5.85GHz	72
5745MHz	92
5785MHz	95
5825MHz	93
802.11ax HEW40_Nss1,(MCS0)_1TX	-
5190MHz	63
5230MHz	72
5270MHz	76
5310MHz	68
5510MHz	61
5550MHz	70
5670MHz	52
5710MHz Straddle 5.47-5.725GHz	66



Mode	Power Setting
5710MHz Straddle 5.725-5.85GHz	66
5755MHz	83
5795MHz	86
802.11ax HEW80_Nss1,(MCS0)_1TX	-
5210MHz	66
5290MHz	66
5530MHz	62
5610MHz	58
5690MHz Straddle 5.47-5.725GHz	64
5690MHz Straddle 5.725-5.85GHz	64
5775MHz	74

Note:

- ♦ Evaluated HEW20/HEW40/HEW80 mode only, due to similar modulation. The power setting of HT20/HT40/VHT20/VHT40/VHT80 mode are the same or lower than HEW20/HEW40/HEW80.
- ♦ The EUT supports beamforming and CDD modes, and the CDD mode is the worst case. Therefore, all test items are evaluated in the report. The beamforming mode only evaluates the output power.

2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests							
Tests Item	AC power-line conducted emissions						
Condition	AC power-line conducted measurement for line and neutral Test Voltage: 120Vac / 60Hz						
Operating Mode	Normal Link						
	The EUT 1 performed testing at unsupported FEM and supported FEM mode The unsupported FEM mode has been evaluated to be the worst case. So the measurement will follow this same test configuration.						
	EUT	Radio 1	Radio 2	Radio 3	Radio 4	Radio 5	Powered by
1	EUT 1	5GHz Full band	2.4GHz	6GHz	6GHz	Bluetooth	PoE
2	EUT 2	5GHz Full band (Ant.17)	2.4GHz (Ant.17)	-	2.4GHz (Ant.19)	Bluetooth	PoE
3	EUT 2	5GHz Full band (Ant.17)	2.4GHz (Ant.17)	-	5GHz (Ant.19)	Bluetooth	PoE
For operating mode 2 is the worst case and it was record in this test report.							

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emission Bandwidth Maximum Output Power Power Spectral Density
Test Condition	Conducted measurement at transmit chains
1	EUT 1 + Radio 1
2	EUT 1 + Radio 2
3	EUT 1 + Radio 4
4	EUT 2 + Radio 1 + Ant.16
5	EUT 2 + Radio 1 + Ant.17
6	EUT 2 + Radio 4 + Ant.18
7	EUT 2 + Radio 4 + Ant.19

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						
	1. The EUT 1 performed testing at unsupported FEM and supported FEM mode, the unsupported FEM mode has been evaluated to be the worst case. So the measurement will follow this same test configuration. 2. The EUT 1 was performed at X axis, Y axis and Z axis position, and the worst case was EUT found at X axis. So the measurement will follow this same test configuration.						
	EUT	Radio 1	Radio 2	Radio 3	Radio 4	Radio 5	Powered by
1	EUT 1 in X axis	5GHz Full band	2.4GHz	6GHz	6GHz	Bluetooth	PoE
2	EUT 2 in Z axis	5GHz Full band (Ant.16)	2.4GHz (Ant.16)	-	2.4GHz (Ant.18)	Bluetooth	PoE
3	EUT 2 in Z axis	5GHz Full band (Ant.16)	2.4GHz (Ant.16)	-	5GHz (Ant.18)	Bluetooth	PoE
Mode 2 has been evaluated to be the worst case among Mode 2~3, thus measurement for mode 4 ~ 5 will follow this same test mode.							
4	EUT 2 in Y axis	5GHz Full band (Ant.16)	2.4GHz (Ant.16)	-	2.4GHz (Ant.18)	Bluetooth	PoE
5	EUT 2 in X axis	5GHz Full band (Ant.16)	2.4GHz (Ant.16)	-	2.4GHz (Ant.18)	Bluetooth	PoE
Mode 4 has been evaluated to be the worst case among Mode 2~5, thus measurement for mode 6 ~ 7 will follow this same test mode.							
6	EUT 2 in Y axis	5GHz Full band (Ant.17)	2.4GHz (Ant.17)	-	2.4GHz (Ant.19)	Bluetooth	PoE
7	EUT 2 in Y axis	5GHz Full band (Ant.17)	2.4GHz (Ant.17)	-	5GHz (Ant.19)	Bluetooth	PoE



For operating mode 1 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 position, and the worst case was found as below. So the measurement will follow this same test configuration
1	EUT 1 in Y axis + Radio 1
2	EUT 1 in Z axis + Radio 2
3	EUT 1 in Y axis + Radio 4
4	EUT 2 in Y axis + Radio 1 + Ant.16
5	EUT 2 in Y axis for harmonic and EUT in Z axis for bandedge + Radio 1 + Ant.17
6	EUT 2 in X axis + Radio 4 + Ant.18
7	EUT 2 in Z axis + Radio 4 + Ant.19

The Worst Case Mode for Following Conformance Tests

Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation					
Operating Mode	EUT	Radio 1	Radio 2	Radio 3	Radio 4	Radio 5
1	EUT 1	5GHz Full band	2.4GHz	6GHz	2.4GHz	Bluetooth
2	EUT 1	5GHz Full band	2.4GHz	6GHz	5GHz	Bluetooth
3	EUT 1	5GHz Full band	2.4GHz	6GHz	6GHz	Bluetooth
4	EUT 1	5GHz Full band	2.4GHz	6GHz	2.4GHz	Bluetooth
5	EUT 1	5GHz Full band	2.4GHz	6GHz	5GHz	Bluetooth
6	EUT 1	5GHz high band	5GHz low band	6GHz	6GHz	Bluetooth
7	EUT 2	5GHz Full band	2.4GHz	-	2.4GHz	Bluetooth
8	EUT 2	5GHz Full band	2.4GHz	-	5GHz	Bluetooth

Refer to Sporton Test Report No.: FA182421-05 for Co-location RF Exposure Evaluation.

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

PoE information as below:

Power	Brand	Model
PoE	PHIHONG	POE60U-1BT-5



2.3 EUT Operation during Test

For CTX Mode:

The EUT was programmed to be in continuously transmitting mode.

For Normal Link:

During the test, the EUT operation to normal function.

2.4 Accessories

Others
Antenna bracket*1 (Only for ant. 17 and ant. 19 use)
Bracket*1

2.5 Support Equipment

For AC Conduction:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	PoE	PHIHONG	POE60U-1BT-5	N/A
B	PD Load	JUNIPER	AP45	N/A
C	PD 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	SCAN NB	DELL	E6430	N/A
H	Flash disk3.0	Transcend	JetFlash-700	2AHBN-AP45

For Radiated (below 1GHz):

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	LAN Notebook	DELL	E4300	N/A
B	LAN Notebook	DELL	E4300	N/A
C	WLAN module(6E)	Intel	AX210NGW	PD9AX210NG
D	WLAN module(6E)	Intel	AX210NGW	PD9AX210NG
E	WiFi Notebook(2.4G)	DELL	E4300	N/A
F	WiFi Notebook(5G)	DELL	E4300	N/A
G	Flash disk3.0	Silicon Power	B06	N/A
H	PD Load	Juniper	AP45, AP45E	N/A
I	PoE	PHIHONG	ADP-60HR B	N/A

**For Radiated (above 1GHz):**

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A
B	PoE	PHIHONG	POE60U-1BT-5	N/A

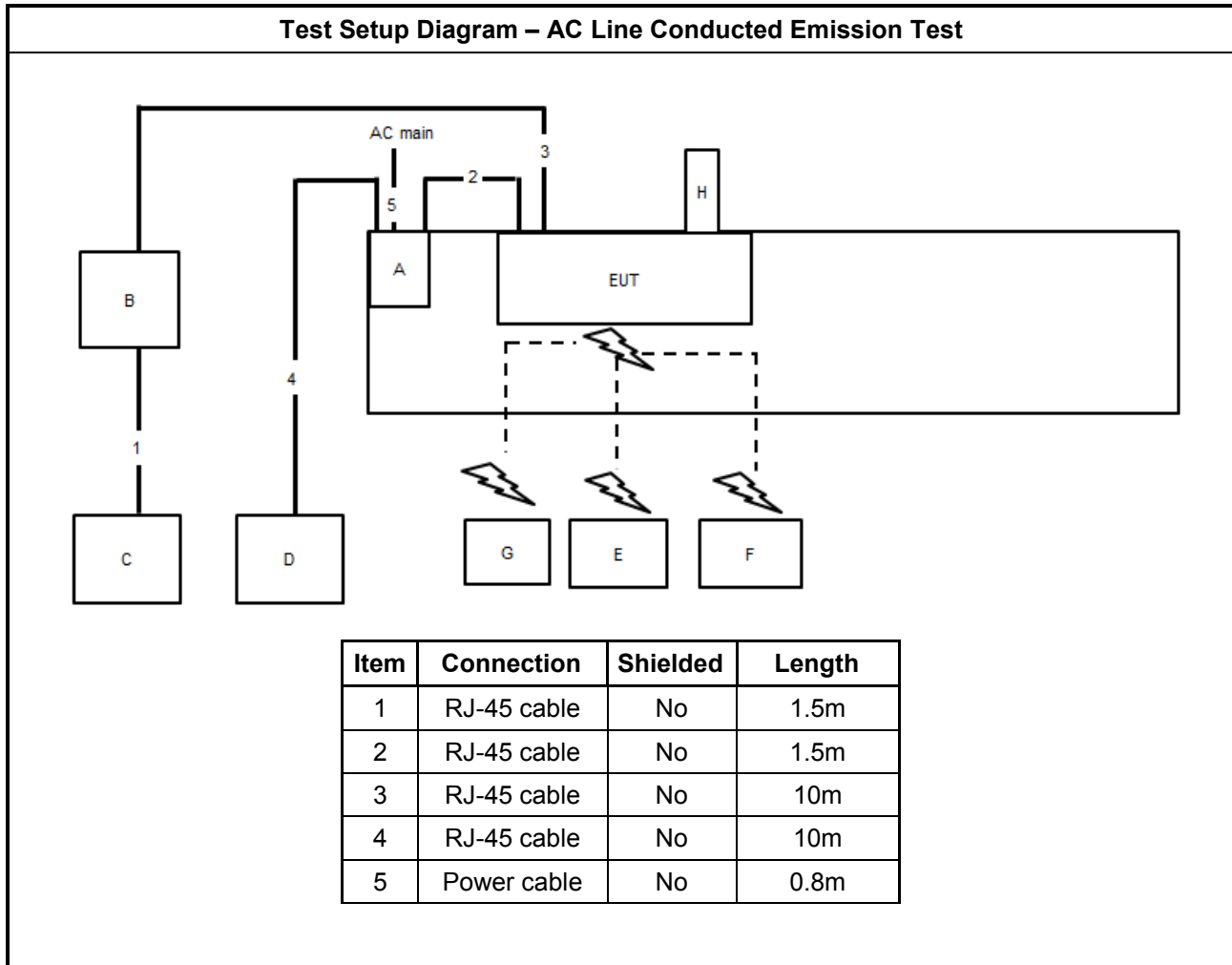
For RF Conducted:**For EUT 1**

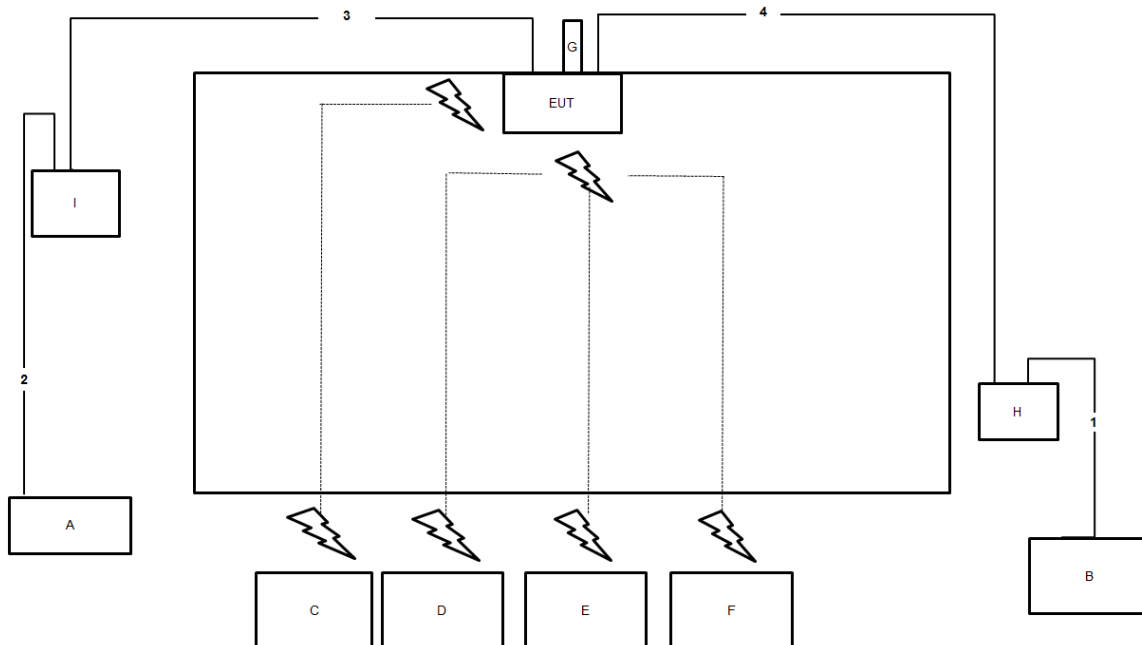
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	PoE	PHIHONG	POE60U-1BT-5	N/A
B	Notebook	DELL	E4300	N/A

For EUT 2

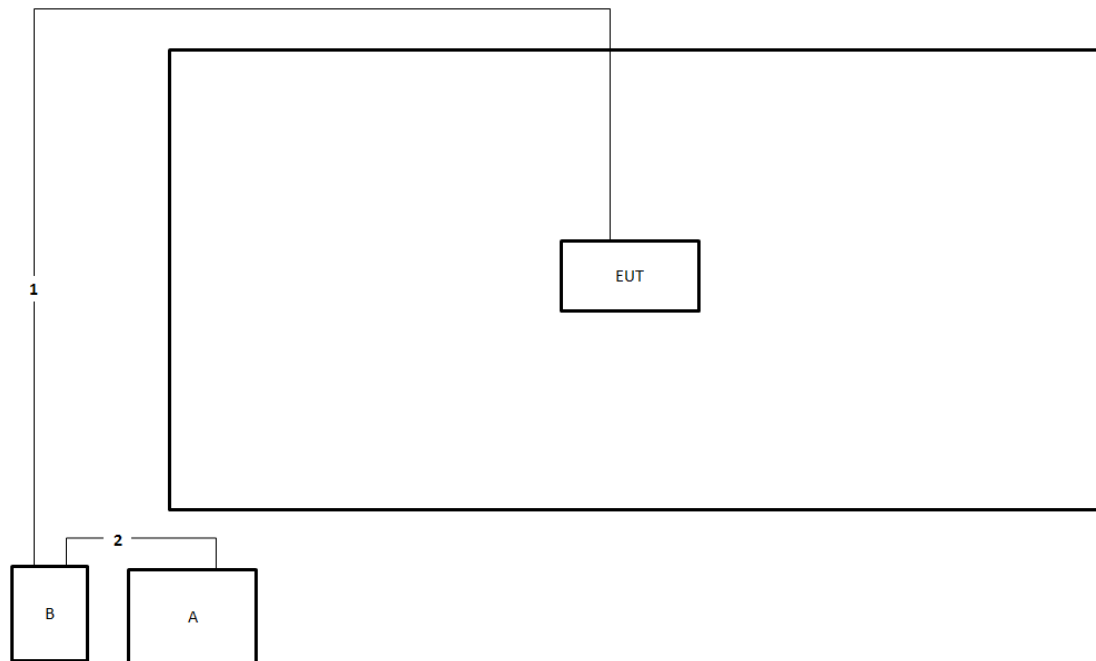
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A
B	PoE	PHIHONG	POE60U-1BT-5	N/A

2.6 Test Setup Diagram



Test Setup Diagram - Radiated Test < 1GHz


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

Test Setup Diagram - Radiated Test > 1GHz


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



3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

Note 1: * Decreases with the logarithm of the frequency.

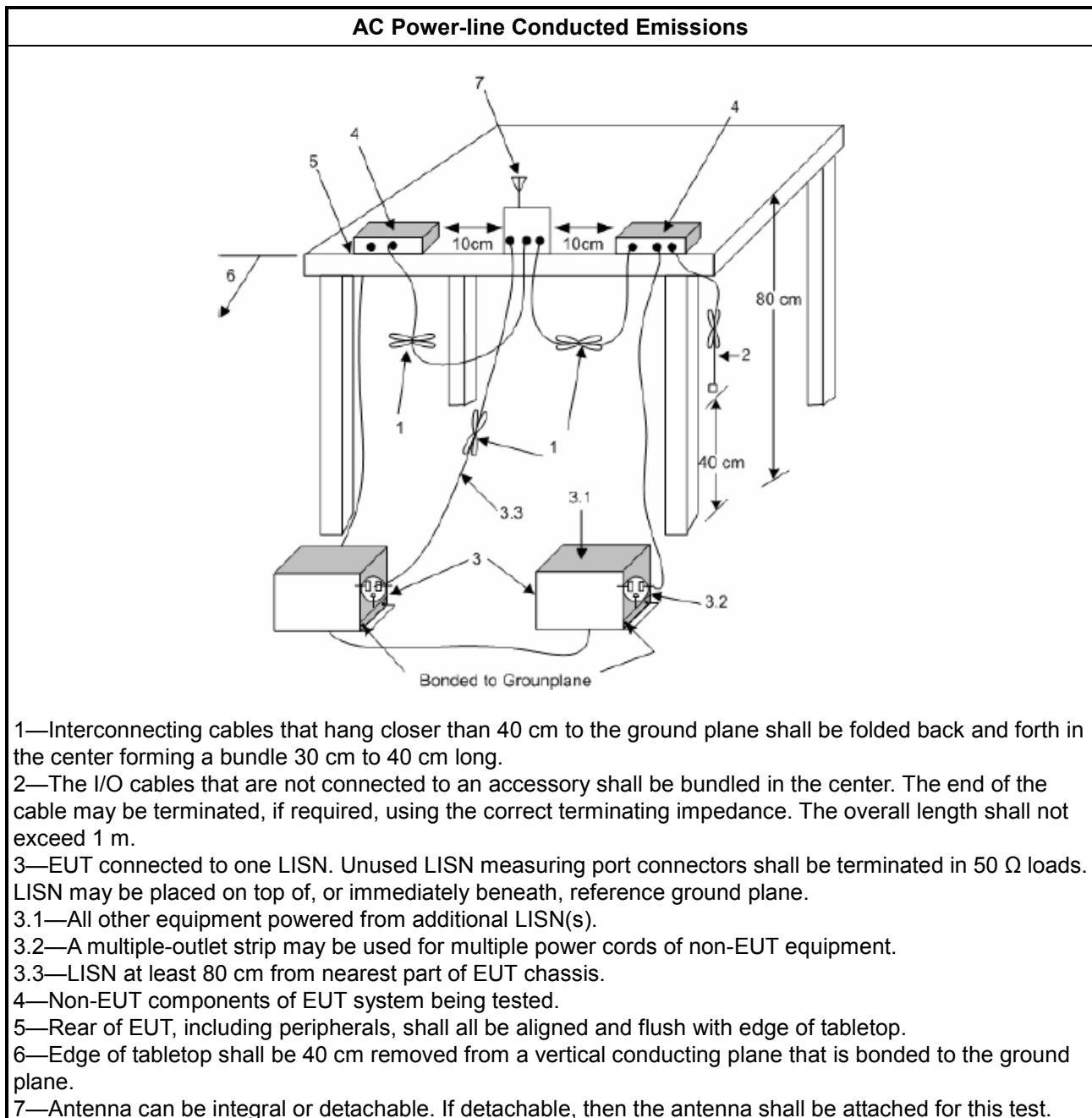
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

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

3.1.4 Test Setup



3.1.5 Measurement Results Calculation

The measured Level is calculated using:

- Corrected Reading: LISN Factor (LISN) + Attenuator (AT/AUX) + Cable Loss (CL) + Read Level (Raw) = Level
- Margin = -Limit + Level

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 5.15-5.25 GHz band, N/A
☒	For the 5.25-5.35 GHz band, the maximum conducted output power shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in MHz.
☒	For the 5.47-5.725 GHz band, the maximum conducted output power shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in MHz.
☒	For the 5.725-5.85 GHz band, 26 dB emission bandwidth ,N/A. 6 dB emission bandwidth $\geq 500\text{kHz}$.
☐	For the 5.85-5.895 GHz band, 26 dB emission bandwidth ,N/A. 6 dB emission bandwidth $\geq 500\text{kHz}$.
LE-LAN Devices	
☐	For the band 5.15-5.25 GHz, the maximum e.i.r.p. shall not exceed 200 mW or $10 + 10 \log B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.
☐	For the 5.25-5.35 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or $17 + 10 \log B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz
☐	For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or $17 + 10 \log B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz
☐	For the 5.725-5.85 GHz band, 6 dB emission bandwidth $\geq 500\text{kHz}$.

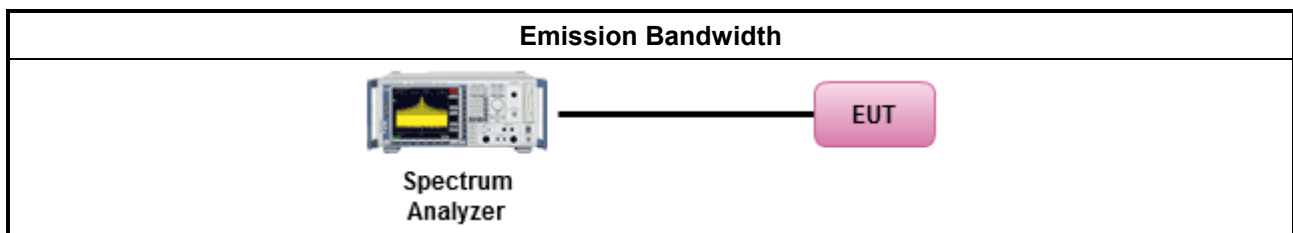
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method	
For the emission bandwidth shall be measured using one of the options below:	
☒	Refer as FCC KDB 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 Output Power

3.3.1 Limit

Maximum Output Power Limit	
UNII Devices	
☒ For the 5.15-5.25 GHz band:	
	- Outdoor AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$. e.i.r.p. at any elevation angle above 30 degrees ≤ 125mW [21dBm] - Indoor AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$ - Point-to-point AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 23$ dBi, then $P_{Out} = 30 - (G_{TX} - 23)$. - Mobile or Portable Client: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$.
☒ For the 5.25-5.35 GHz band, the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$.	
☒ For the 5.47-5.725 GHz band, the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$.	
☒ For the 5.725-5.85 GHz band:	
	- Point-to-multipoint systems (P2M): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$. - Point-to-point systems (P2P): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W.
Maximum EIRP Limit	
☐ For the 5.85-5.895 GHz band:	
	- Indoor AP & subordinate device < 36 dBm - Client device < 30 dBm
LE-LAN Devices	
☐ For the 5.15-5.25 GHz band, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.	
☐ For the 5.25-5.35 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz	
☐ For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz	
☐ For the 5.725-5.85 GHz band:	
	- Point-to-multipoint systems (P2M): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$. - Point-to-point systems (P2P): the maximum conducted output power (P_{Out}) shall not exceed the



lesser of 1 W.

P_{Out} = maximum conducted output power in dBm,

G_{TX} = the maximum transmitting antenna directional gain in dBi.

3.3.2 Measuring Instruments

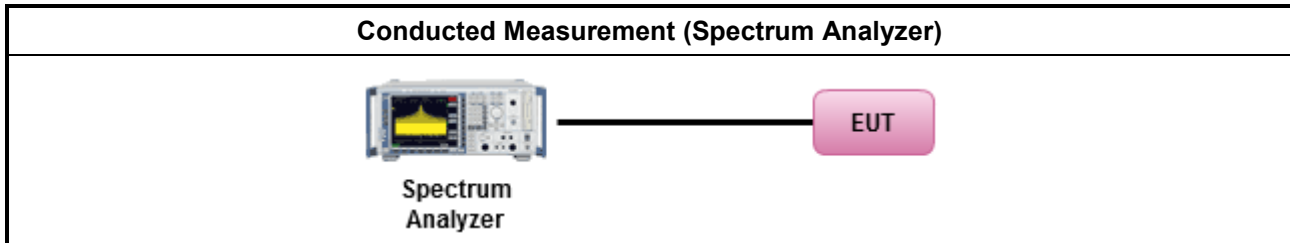
Refer a test equipment and calibration data table in this test report.

3.3.3 Test Procedures

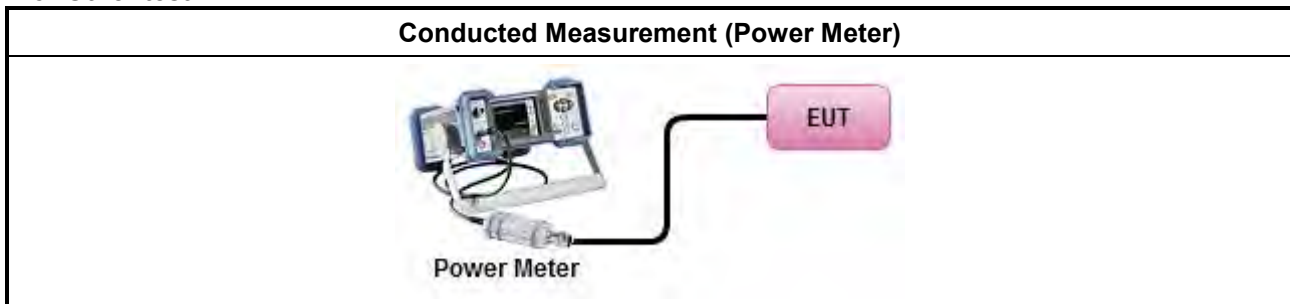
Test Method	
	Average over on/off periods with duty factor
☒	Refer as FCC KDB 789033 D02, clause E Method SA-2 (spectral trace averaging).
☐	Refer as FCC KDB 789033 D02, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
	Wideband RF power meter and average over on/off periods with duty 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: $P_{\text{total}} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $\text{EIRP}_{\text{total}} = P_{\text{total}} + \text{DG}$
☐	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.

3.3.4 Test Setup

For Straddle channel test



For Other test



3.3.5 Test Result of Maximum Output Power

Refer as Appendix C

3.4 Power Spectral Density

3.4.1 Limit

Peak Power Spectral Density Limit	
UNII Devices	
☒ For the 5.15-5.25 GHz band:	
	- Outdoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$. - Indoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$. - Point-to-point AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 23$ dBi, then $P_{Out} = 17 - (G_{TX} - 23)$. - Mobile or Portable Client: the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.
☒ For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.	
☒ For the 5.47-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.	
☒ For the 5.725-5.85 GHz band:	
	- Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If $G_{TX} > 6$ dBi, then $PPSD = 30 - (G_{TX} - 6)$. - Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.
EIRP Power Spectral Density Limit	
☐ For the 5.85-5.895 GHz band:	
	- Indoor AP & subordinate device < 20dBm/MHz - Client device < 14dBm/MHz
LE-LAN Devices	
☐ For the 5.15-5.25 GHz band, the e.i.r.p. peak power spectral density (PPSD) ≤ 10 dBm/MHz.	
☐ For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz.	
	e.i.r.p. greater than 200 mW shall comply with the following e.i.r.p. at different elevations, where θ is the angle above the local horizontal plane (of the Earth) as shown below: -13 dBW/MHz for $0^\circ \leq \theta < 8^\circ$; $-13 - 0.716(\theta - 8)$ dBW/MHz for $8^\circ \leq \theta < 40^\circ$ $-35.9 - 1.22(\theta - 40)$ dBW/MHz for $40^\circ \leq \theta \leq 45^\circ$; -42 dBW/MHz for $\theta > 45^\circ$
☐ For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz.	
☐ For the 5.725-5.85 GHz band:	
	- Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If $G_{TX} > 6$ dBi, then $PPSD = 30 - (G_{TX} - 6)$. - Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.
PPSD = peak power spectral density that he same method as used to determine the conducted output	



power shall be used to determine the power spectral density. And power spectral density in dBm/MHz
 G_{TX} = the maximum transmitting antenna directional gain in dBi.

3.4.2 Measuring Instruments

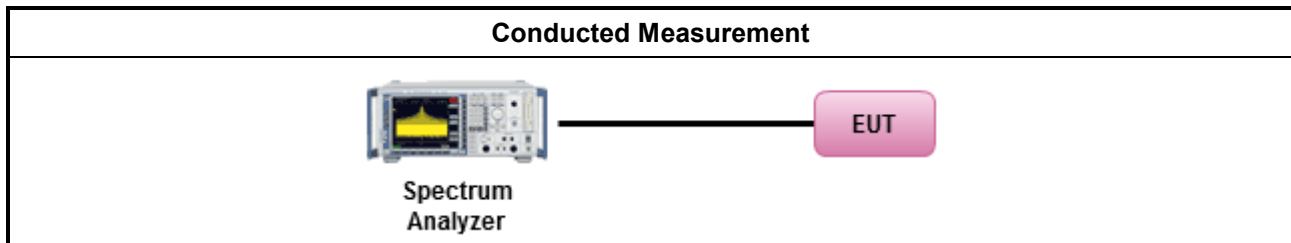
Refer a test equipment and calibration data table in this test report.

**3.4.3 Test Procedures**

Test Method	
Peak power spectral density procedures that the same method as used to determine the conducted output power 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.

3.4.4 Test Setup



3.4.5 Test Result of Power Spectral Density

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.



Un-restricted band emissions above 1GHz Limit	
Operating Band	Limit
☒ 5.15 - 5.25 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
☒ 5.25 - 5.35 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
☒ 5.47 - 5.725 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
☒ 5.725 - 5.85 GHz	all emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.
☐ 5.85 - 5.895 GHz	(i) For an indoor access point or subordinate device, all emissions at or above 5.895 GHz shall not exceed an e.i.r.p. of 15 dBm/MHz and shall decrease linearly to an e.i.r.p. of - 7 dBm/MHz at or above 5.925 GHz. (ii) For a client device, all emissions at or above 5.895 GHz shall not exceed an e.i.r.p. of -5 dBm/MHz and shall decrease linearly to an e.i.r.p. of -27 dBm/MHz at or above 5.925 GHz. (iii) For a client device or indoor access point or subordinate device, all emissions below 5.725 GHz shall not exceed an e.i.r.p. of -27 dBm/MHz at 5.65 GHz increasing linearly to 10 dBm/ MHz at 5.7 GHz, and from 5.7 GHz increasing linearly to a level of 15.6 dBm/MHz at 5.72 GHz, and from 5.72 GHz increasing linearly to a level of 27 dBm/MHz at 5.725 GHz.
Note 1: 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).	

3.5.2 Measuring Instruments

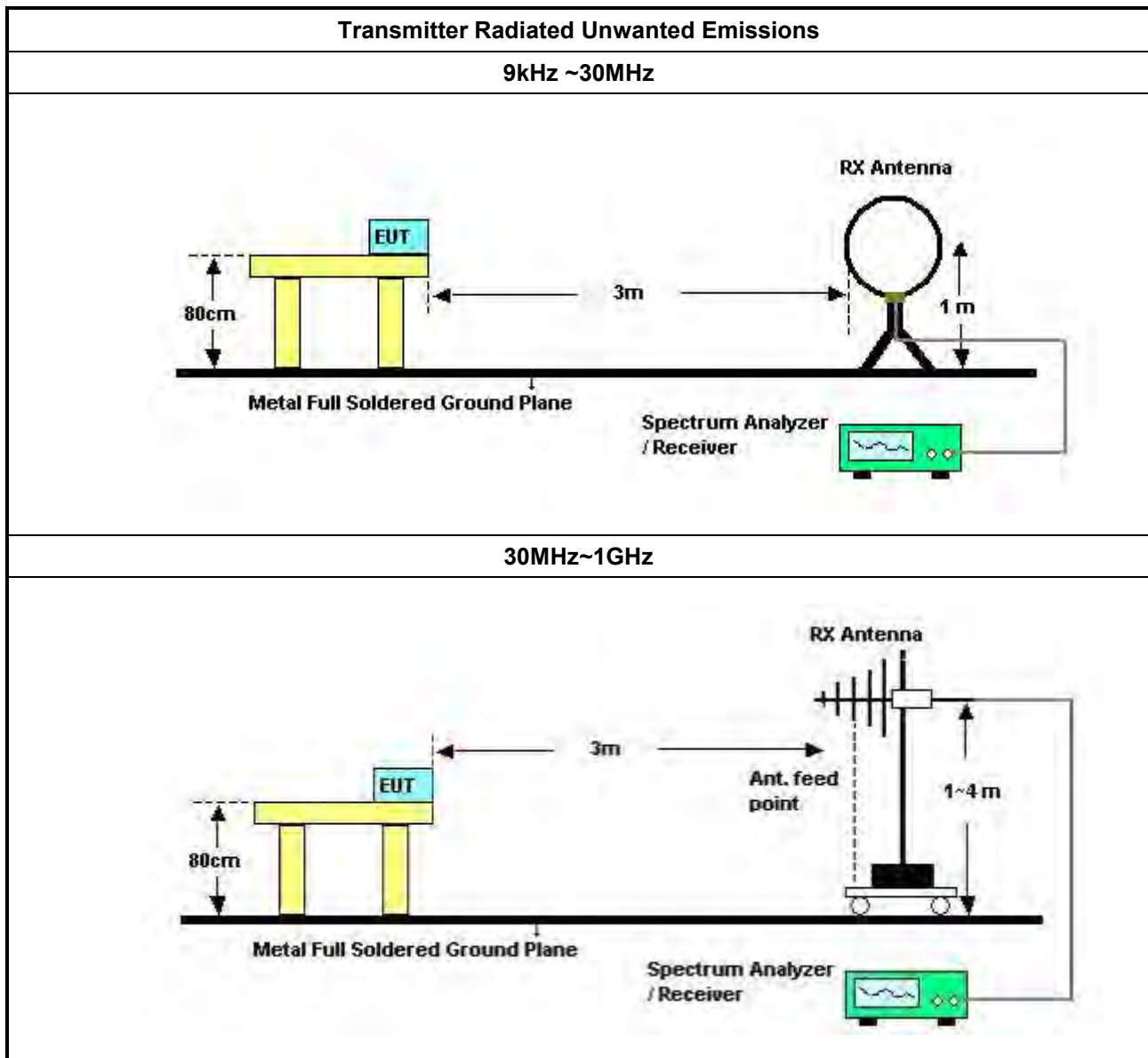
Refer a test equipment and calibration data table in this test report.

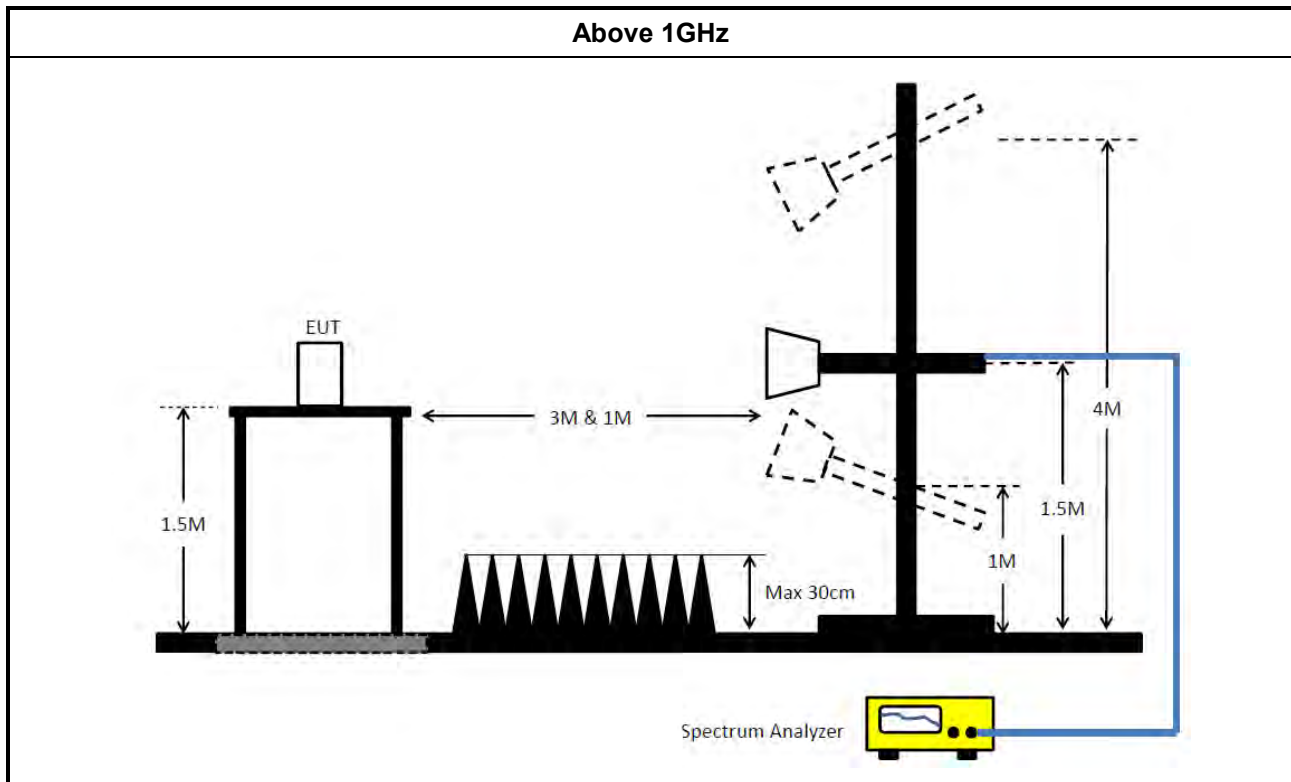


3.5.3 Test Procedures

Test Method	
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).
	☒ 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.
	☐ 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.
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.	

3.5.4 Test Setup





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



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)
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.4GHz	Feb. 22, 2022	Feb. 21, 2023	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	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Feb. 09, 2022	Feb. 08, 2023	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Mar. 07, 2021	Mar. 06, 2022	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127650	9kHz ~ 30MHz	Jan. 07, 2022	Jan. 06, 2023	Conduction (CO01-CB)
Pulse Limiter	Rohde&Schwarz	ESH3-Z2	100430	9kHz ~ 30MHz	Jan. 30, 2021	Jan. 29, 2022	Conduction (CO01-CB)
Pulse Limiter	Rohde&Schwarz	ESH3-Z2	100430	9kHz ~ 30MHz	Feb. 10, 2022	Feb. 09, 2023	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	9kHz ~ 30MHz	May 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 (03CH03-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH03-CB	30 MHz ~ 1 GHz	Jan. 26, 2022	Jan. 25, 2023	Radiation (03CH03-CB)
Bilog Antenna with 6 dB attenuator	Schaffner & EMCI	CBL6112B & N-6-06	2928 & AT-N0608	20MHz ~ 2GHz	Feb. 21, 2022	Feb. 20, 2023	Radiation (03CH03-CB)
Pre-Amplifier	Agilent	8447D	2944A10259	9kHz ~ 1.3GHz	Jan. 10, 2022	Jan. 09, 2023	Radiation (03CH03-CB)
Spectrum Analyzer	R&S	FSP40	100019	9kHz ~ 40GHz	Jun. 04, 2021	Jun. 03, 2022	Radiation (03CH03-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	Jun. 21, 2021	Jun. 20, 2022	Radiation (03CH03-CB)
RF Cable-low	Woken	RG402	Low Cable-02+29	30MHz ~ 1GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-20+29	1GHz ~ 18GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-29	1GHz ~ 18GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH03-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH03-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)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
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-LINDGREN	3115	00075790	750MHz ~ 18GHz	Nov. 06, 2020	Nov. 05, 2021	Radiation (03CH01-CB)
Horn Antenna	ETS-LINDGREN	3115	00075790	750MHz ~ 18GHz	Nov. 06, 2021	Nov. 05, 2022	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 05, 2021	Aug. 04, 2022	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02121	1GHz ~ 26.5GHz	May 20, 2021	May 19, 2022	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 13, 2021	Jul. 12, 2022	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	May 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)
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)
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)
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)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Pre-Amplifier	MITEQ	TTA1840-35-H G	1864479	18GHz ~ 40GHz	Jul. 13, 2021	Jul. 12, 2022	Radiation (03CH02-CB)
Signal Analyzer	R&S	FSV40	101903	9kHz ~ 40GHz	Mar. 22, 2021	Mar. 21, 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)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 15, 2021	Jul. 14, 2022	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 15, 2021	Jul. 14, 2022	Radiation (03CH02-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH02-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	May 21, 2021	May 20, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz ~ 26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz ~ 26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz ~ 26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz ~ 26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz ~ 26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-30	1 GHz ~ 26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
Switch	SPTCB	SP-SWI	SWI-01	1 GHz ~ 26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	SWI-01-P1	1 GHz ~ 26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	SWI-01-P2	1 GHz ~ 26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	SWI-01-P3	1 GHz ~ 26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	SWI-01-P4	1 GHz ~ 26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	SWI-01-P5	1 GHz ~ 26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH01-CB)
Power Sensor	Anritsu	MA2411B	1339408	300MHz~40GHz	Sep. 06, 2021	Sep. 05, 2022	Conducted (TH01-CB)
Power Meter	Anritsu	ML2495A	1517009	300MHz~40GHz	Sep. 06, 2021	Sep. 05, 2022	Conducted (TH01-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conducted (TH01-CB)
Spectrum analyzer	R&S	FSV40	101028	9kHz~40GHz	Dec. 31, 2020	Dec. 30, 2021	Conducted (TH03-CB)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Signal Analyzer	R&S	FSV40	101904	9kHz ~ 40GHz	Apr. 15, 2021	Apr. 14, 2022	Conducted (TH03-CB)
Power Sensor	Anritsu	MA2411B	1726195	300MHz~40GHz	Aug. 22, 2021	Aug. 21, 2022	Conducted (TH03-CB)
Power Meter	Anritsu	ML2495A	1035008	300MHz~40GHz	Aug. 22, 2021	Aug. 21, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-11	1 GHz ~18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-12	1 GHz ~18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-13	1 GHz ~18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-14	1 GHz ~18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-15	1 GHz ~18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conducted (TH03-CB)

Note: Calibration Interval of instruments listed above is one year.
N.C.R. means Non-Calibration required.



Conducted Emissions at Powerline

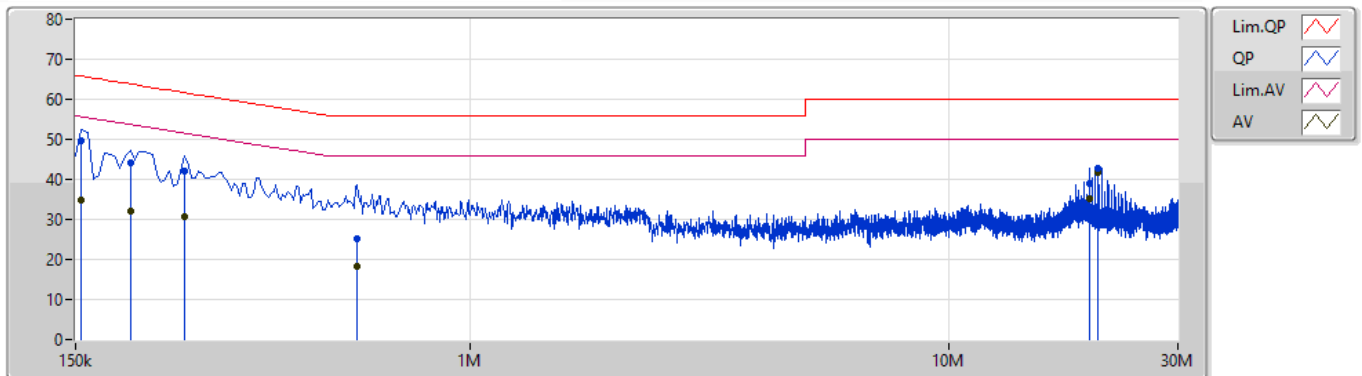
Appendix A

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 2	Pass	AV	20.364M	41.62	50.00	-8.38	Line

Mode 2

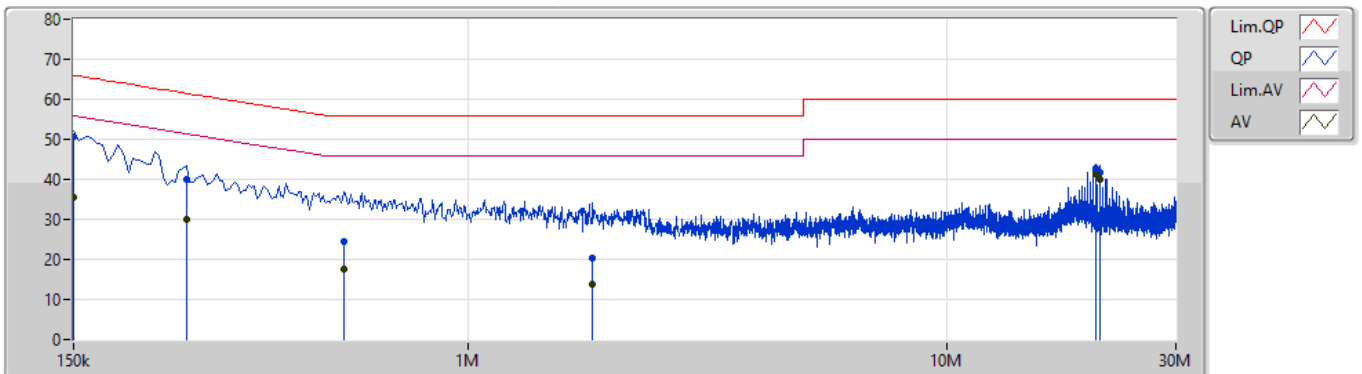
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Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	154.5k	49.68	65.75	-16.07	9.89	Line	-	39.79	0.04	0.04	9.81			
AV	154.5k	34.72	55.75	-21.03	9.89	Line	-	24.83	0.04	0.04	9.81			
QP	195k	44.22	63.82	-19.60	9.89	Line	-	34.33	0.04	0.04	9.81			
AV	195k	31.97	53.82	-21.85	9.89	Line	-	22.08	0.04	0.04	9.81			
QP	253.5k	42.12	61.64	-19.52	9.89	Line	-	32.23	0.04	0.04	9.81			
AV	253.5k	30.85	51.64	-20.79	9.89	Line	-	20.96	0.04	0.04	9.81			
QP	582k	25.17	56.00	-30.83	9.91	Line	-	15.26	0.05	0.04	9.82			
AV	582k	18.21	46.00	-27.79	9.91	Line	-	8.30	0.05	0.04	9.82			
QP	19.64M	38.97	60.00	-21.03	10.53	Line	-	28.44	0.32	0.22	9.99			
AV	19.64M	35.23	50.00	-14.77	10.53	Line	-	24.70	0.32	0.22	9.99			
QP	20.364M	42.82	60.00	-17.18	10.54	Line	-	32.28	0.32	0.22	10.00			
AV	20.364M	41.62	50.00	-8.38	10.54	Line	"Worst"	31.08	0.32	0.22	10.00			

Mode 2

04/01/2022



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	150k	50.67	66.00	-15.33	9.88	Neutral	-	40.79	0.03	0.04	9.81			
AV	150k	35.39	56.00	-20.61	9.88	Neutral	-	25.51	0.03	0.04	9.81			
QP	258k	40.07	61.49	-21.42	9.88	Neutral	-	30.19	0.03	0.04	9.81			
AV	258k	30.07	51.49	-21.42	9.88	Neutral	-	20.19	0.03	0.04	9.81			
QP	550.5k	24.54	56.00	-31.46	9.90	Neutral	-	14.64	0.04	0.04	9.82			
AV	550.5k	17.54	46.00	-28.46	9.90	Neutral	-	7.64	0.04	0.04	9.82			
QP	1.82M	20.34	56.00	-35.66	9.96	Neutral	-	10.38	0.07	0.07	9.82			
AV	1.82M	13.69	46.00	-32.31	9.96	Neutral	-	3.73	0.07	0.07	9.82			
QP	20.364M	42.77	60.00	-17.23	10.52	Neutral	-	32.25	0.30	0.22	10.00			
AV	20.364M	41.55	50.00	-8.45	10.52	Neutral	"Worst"	31.03	0.30	0.22	10.00			
QP	20.85M	41.88	60.00	-18.12	10.54	Neutral	-	31.34	0.31	0.23	10.00			
AV	20.85M	40.02	50.00	-9.98	10.54	Neutral	-	29.48	0.31	0.23	10.00			

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.25-5.35GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	32.58M	17.571M	17M6D1D	22.89M	17.241M
802.11ax HEW20_Nss1,(MCS0)_4TX	36.72M	19.37M	19M4D1D	21.39M	19.19M
802.11ax HEW40_Nss1,(MCS0)_4TX	69.3M	38.681M	38M7D1D	43.14M	38.141M
802.11ax HEW80_Nss1,(MCS0)_4TX	96.36M	78.081M	78M1D1D	84.24M	77.841M
5.47-5.725GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	38.07M	18.201M	18M2D1D	21.72M	14.138M
802.11ax HEW20_Nss1,(MCS0)_4TX	33.48M	19.37M	19M4D1D	21.465M	14.723M
802.11ax HEW40_Nss1,(MCS0)_4TX	64.08M	38.441M	38M4D1D	42.42M	34.248M
802.11ax HEW80_Nss1,(MCS0)_4TX	108M	78.321M	78M3D1D	85.32M	74.138M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	3.12M	10.955M	11M0D1D	3.12M	9.535M
802.11ax HEW20_Nss1,(MCS0)_4TX	4.52M	9.475M	9M48D1D	4.42M	7.076M
802.11ax HEW40_Nss1,(MCS0)_4TX	3.96M	20.95M	20M9D1D	3.86M	17.571M
802.11ax HEW80_Nss1,(MCS0)_4TX	3.88M	31.544M	31M5D1D	3.7M	29.545M

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

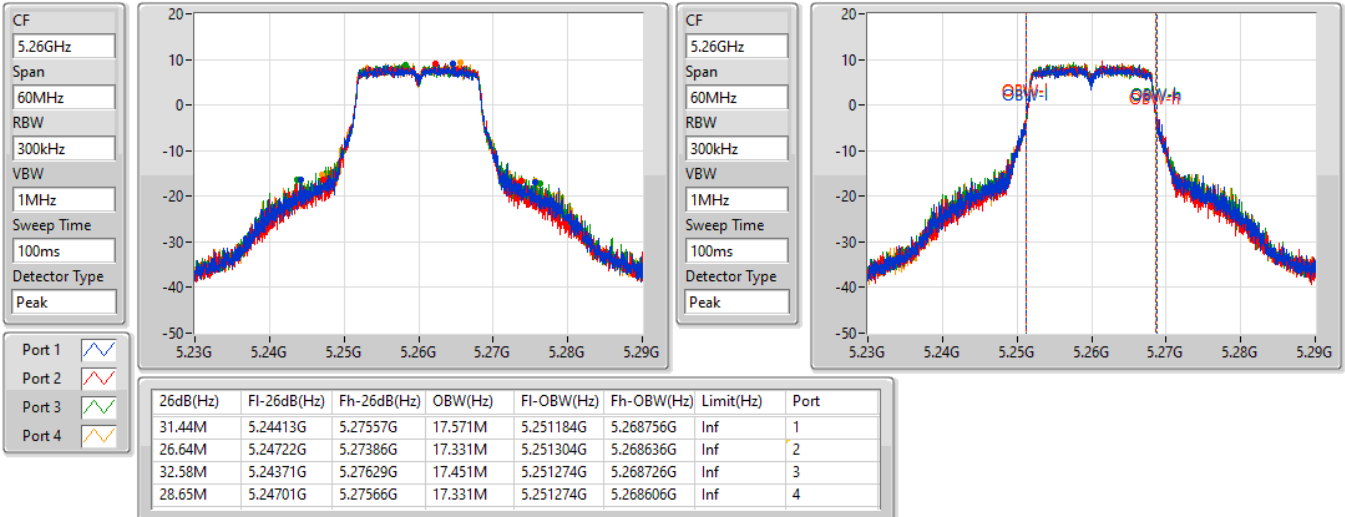
Result

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)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	31.44M	17.571M	26.64M	17.331M	32.58M	17.451M	28.65M	17.331M
5300MHz	Pass	Inf	28.23M	17.451M	24.87M	17.271M	26.7M	17.271M	27.63M	17.241M
5320MHz	Pass	Inf	25.2M	17.451M	24.03M	17.301M	22.89M	17.331M	25.53M	17.331M
5500MHz	Pass	Inf	29.1M	17.751M	29.58M	17.631M	28.92M	17.511M	31.23M	17.721M
5580MHz	Pass	Inf	38.07M	18.201M	35.22M	17.811M	33.33M	17.541M	34.26M	17.481M
5700MHz	Pass	Inf	24.06M	17.271M	22.86M	17.181M	23.82M	17.091M	21.72M	17.061M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	23.49M	14.933M	21.72M	14.288M	21.945M	14.138M	22.29M	14.168M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.12M	10.955M	3.12M	9.535M	3.12M	9.835M	3.12M	9.635M
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	36.72M	19.37M	28.71M	19.19M	30.69M	19.34M	33.54M	19.31M
5300MHz	Pass	Inf	33.69M	19.31M	21.39M	19.25M	28.68M	19.25M	28.5M	19.34M
5320MHz	Pass	Inf	23.28M	19.31M	23.76M	19.22M	25.08M	19.25M	22.77M	19.22M
5500MHz	Pass	Inf	31.23M	19.28M	30.18M	19.28M	25.08M	19.31M	30.69M	19.37M
5580MHz	Pass	Inf	32.61M	19.37M	33.48M	19.34M	29.91M	19.28M	29.64M	19.28M
5700MHz	Pass	Inf	21.78M	19.16M	21.66M	19.1M	21.66M	19.16M	21.78M	19.13M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	25.665M	14.873M	24.585M	14.723M	22.86M	14.768M	21.465M	14.753M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	4.52M	9.475M	4.42M	7.276M	4.44M	7.656M	4.44M	7.076M
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5270MHz	Pass	Inf	69.3M	38.681M	57.42M	38.321M	55.14M	38.441M	62.28M	38.501M
5310MHz	Pass	Inf	44.28M	38.201M	43.14M	38.141M	43.98M	38.141M	43.68M	38.201M
5510MHz	Pass	Inf	46.02M	38.201M	44.4M	38.201M	46.92M	38.141M	47.1M	38.201M
5550MHz	Pass	Inf	64.08M	38.441M	54.36M	38.261M	54.78M	38.321M	50.16M	38.321M
5670MHz	Pass	Inf	42.78M	38.141M	42.42M	38.141M	43.86M	38.141M	47.64M	38.081M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	53.305M	34.633M	52.08M	34.318M	44.52M	34.248M	49M	34.318M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.94M	20.95M	3.86M	17.571M	3.96M	17.731M	3.86M	17.691M
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5290MHz	Pass	Inf	85.68M	78.081M	96.36M	78.081M	84.24M	77.961M	85.92M	77.841M
5530MHz	Pass	Inf	85.32M	77.961M	95.88M	78.081M	89.88M	77.841M	86.28M	78.081M
5610MHz	Pass	Inf	92.52M	78.201M	103.44M	78.321M	104.52M	78.201M	96M	78.201M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	97.95M	74.138M	105.45M	74.213M	108M	74.288M	104.4M	74.363M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.7M	30.085M	3.8M	31.544M	3.84M	29.545M	3.88M	30.685M

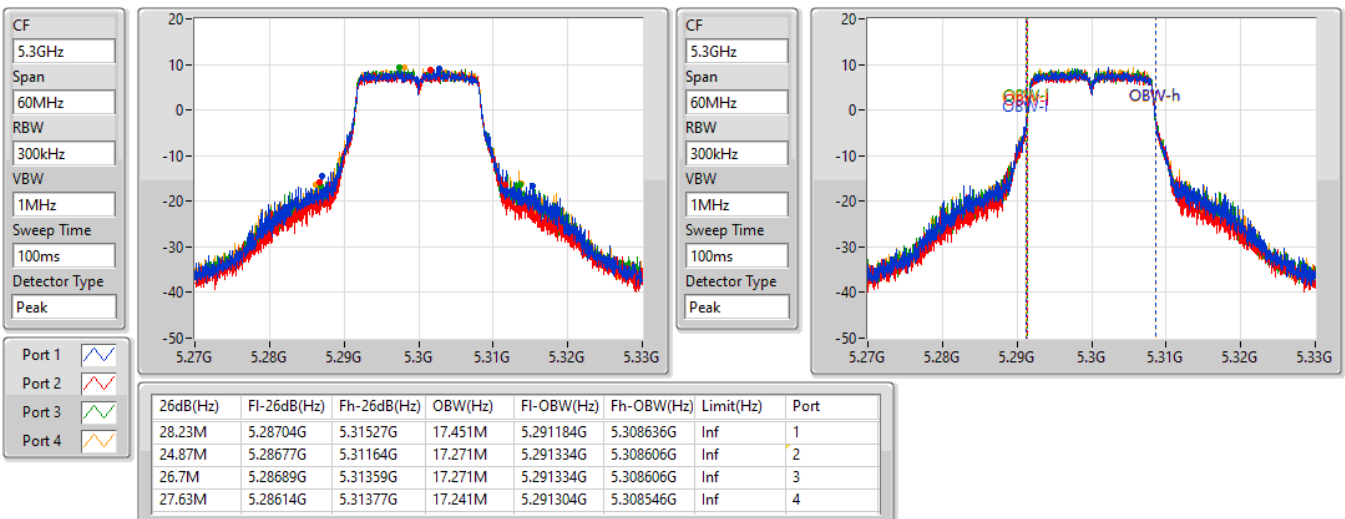
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11a_Nss1,(6Mbps)_4TX
EBW
5260MHz

29/10/2021

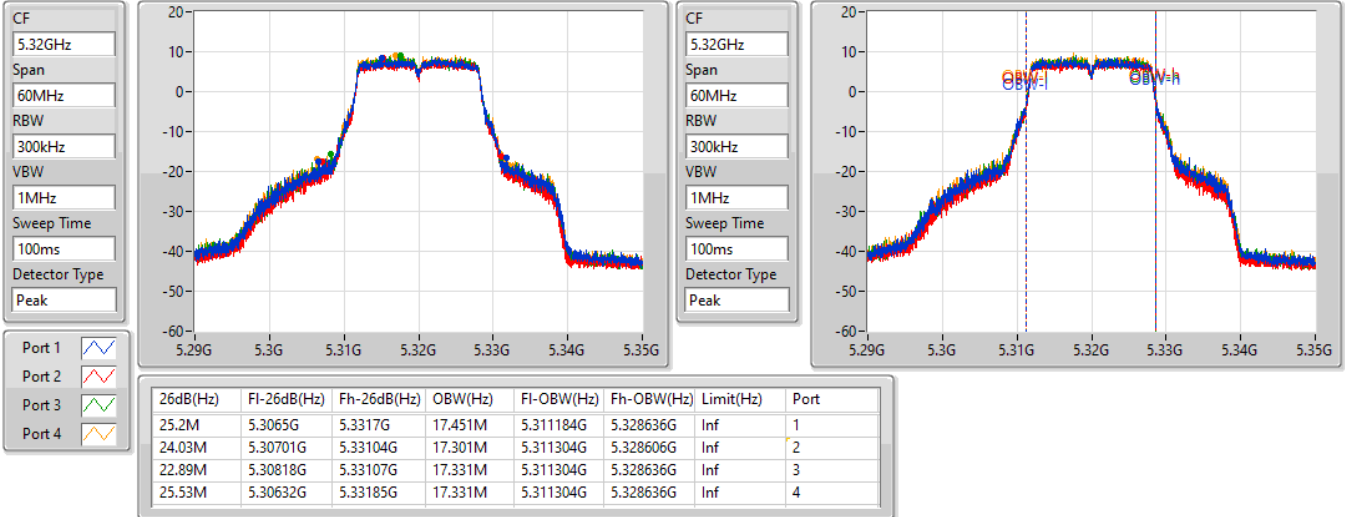

802.11a_Nss1,(6Mbps)_4TX
EBW
5300MHz

29/10/2021

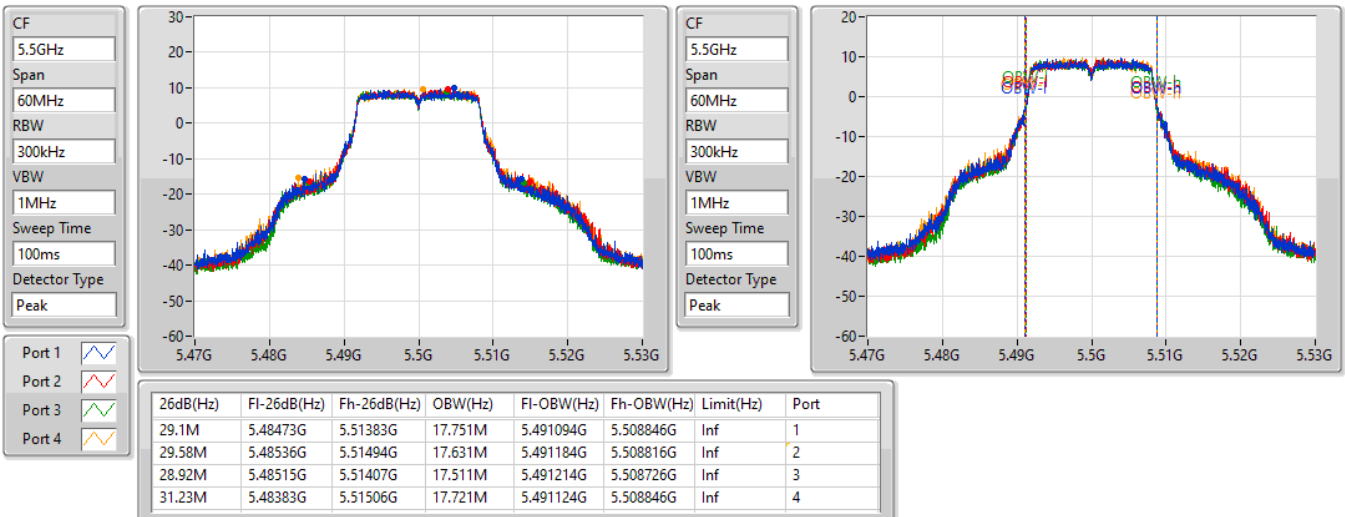


802.11a_Nss1,(6Mbps)_4TX
EBW
5320MHz

29/10/2021

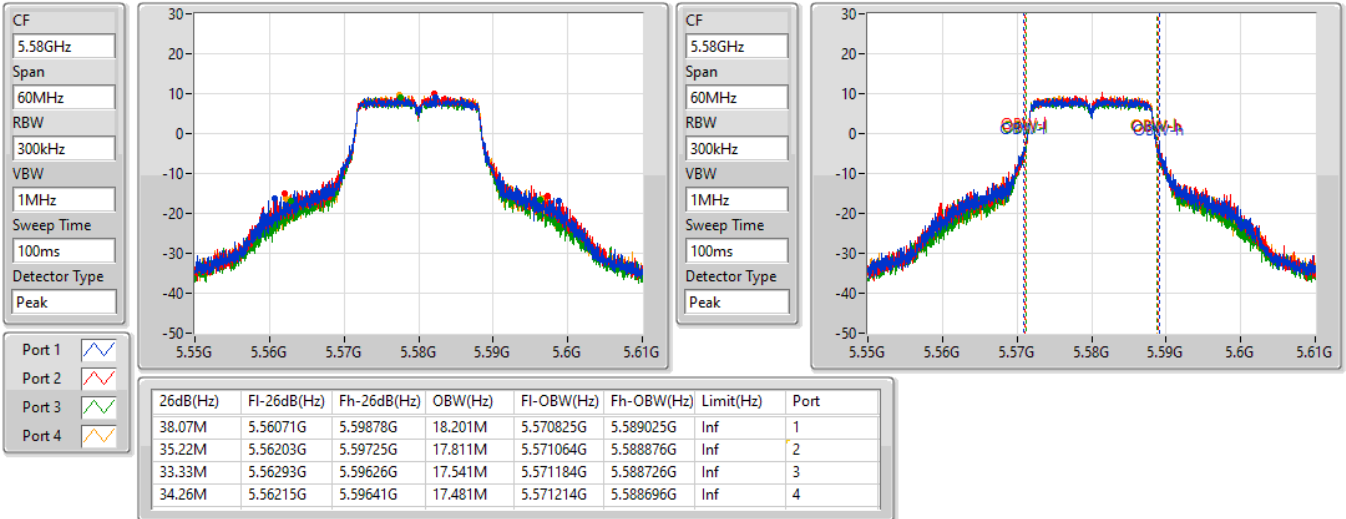

802.11a_Nss1,(6Mbps)_4TX
EBW
5500MHz

29/10/2021

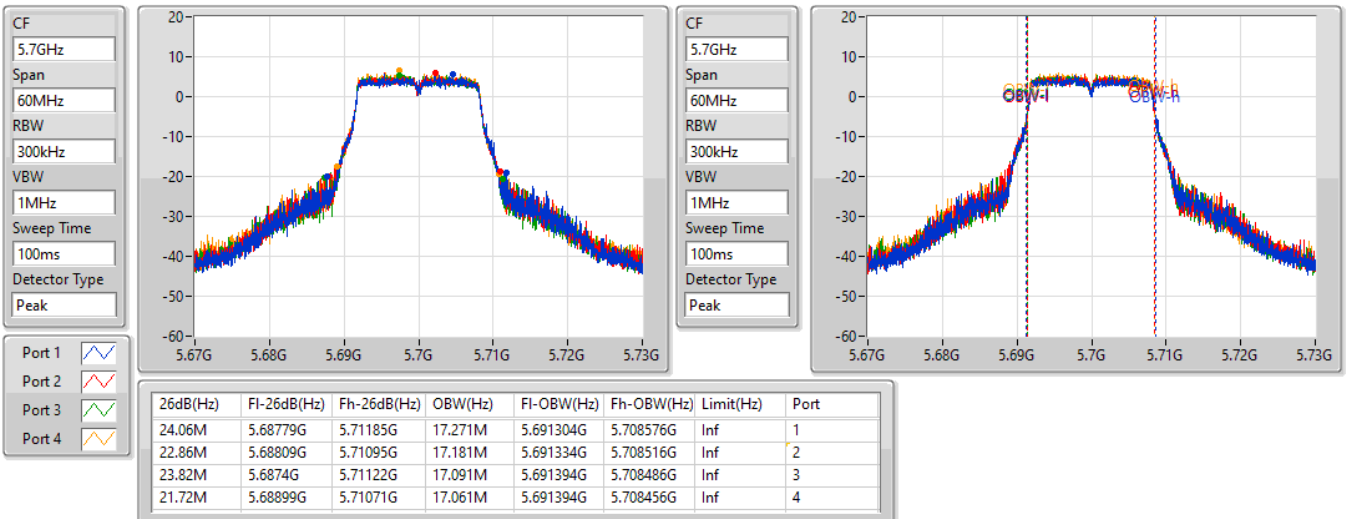


802.11a_Nss1,(6Mbps)_4TX
EBW
5580MHz

29/10/2021

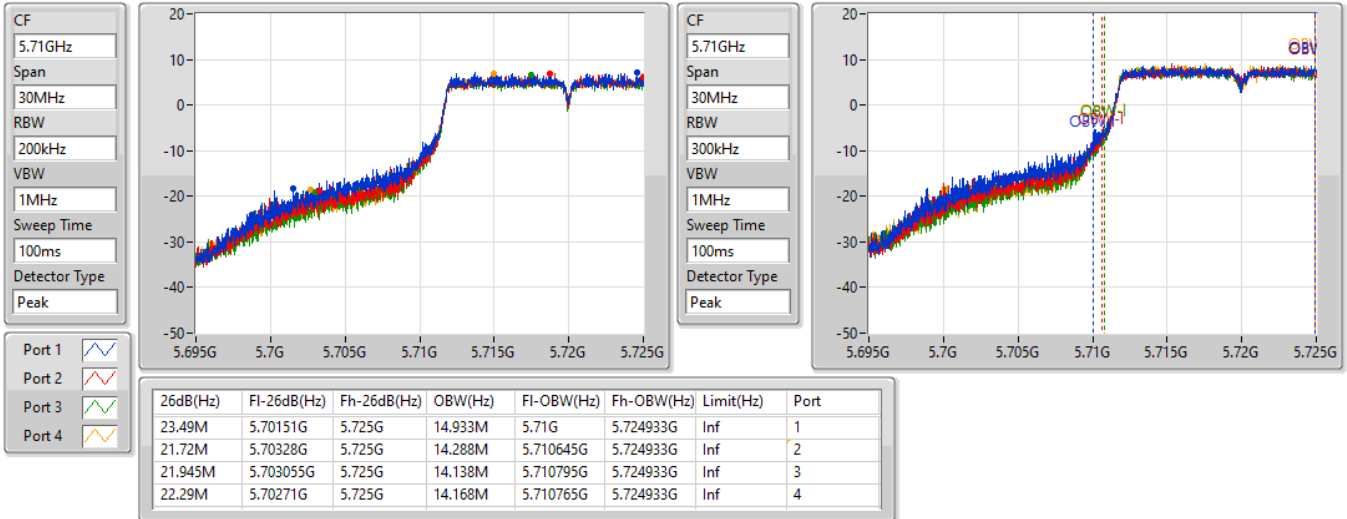

802.11a_Nss1,(6Mbps)_4TX
EBW
5700MHz

29/10/2021

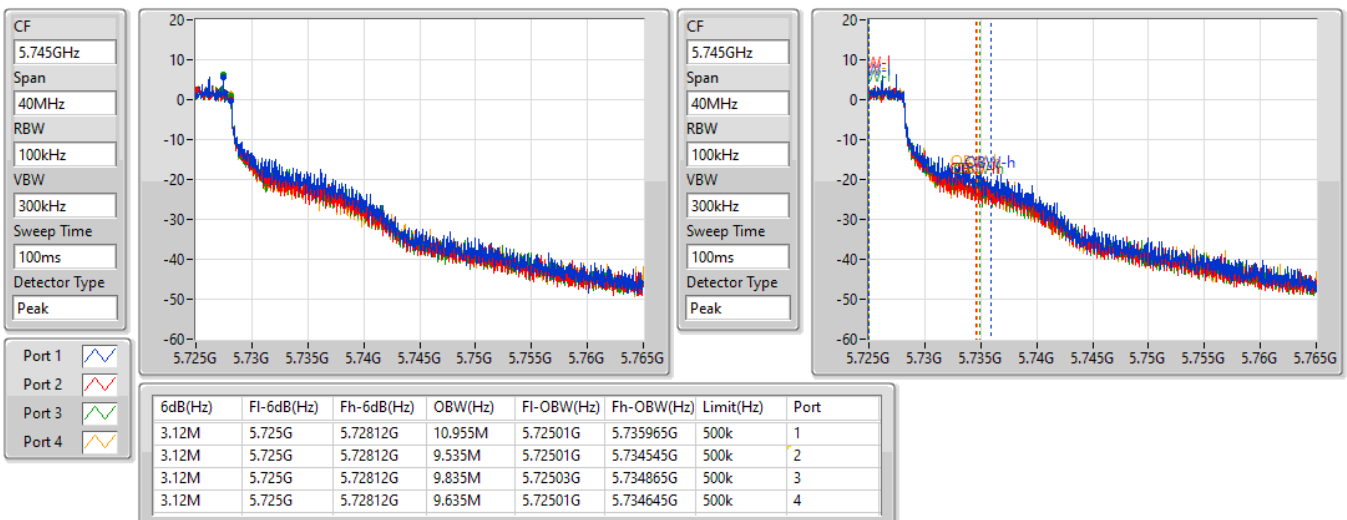


802.11a_Nss1,(6Mbps)_4TX
EBW
5720MHz Straddle 5.47-5.725GHz

29/10/2021

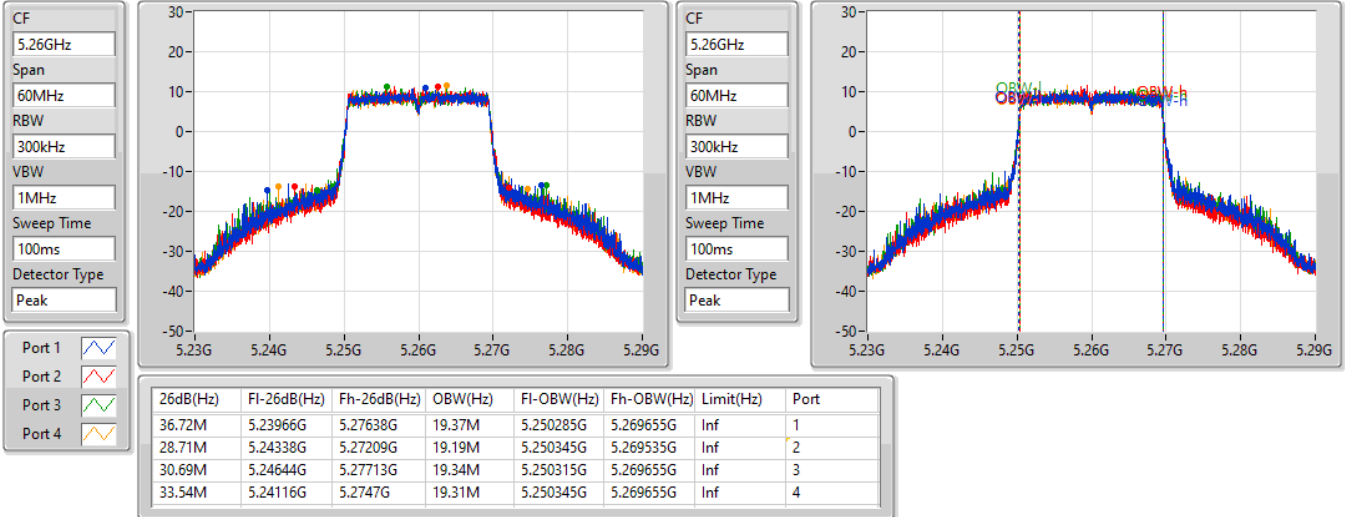

802.11a_Nss1,(6Mbps)_4TX
EBW
5720MHz Straddle 5.725-5.85GHz

29/10/2021

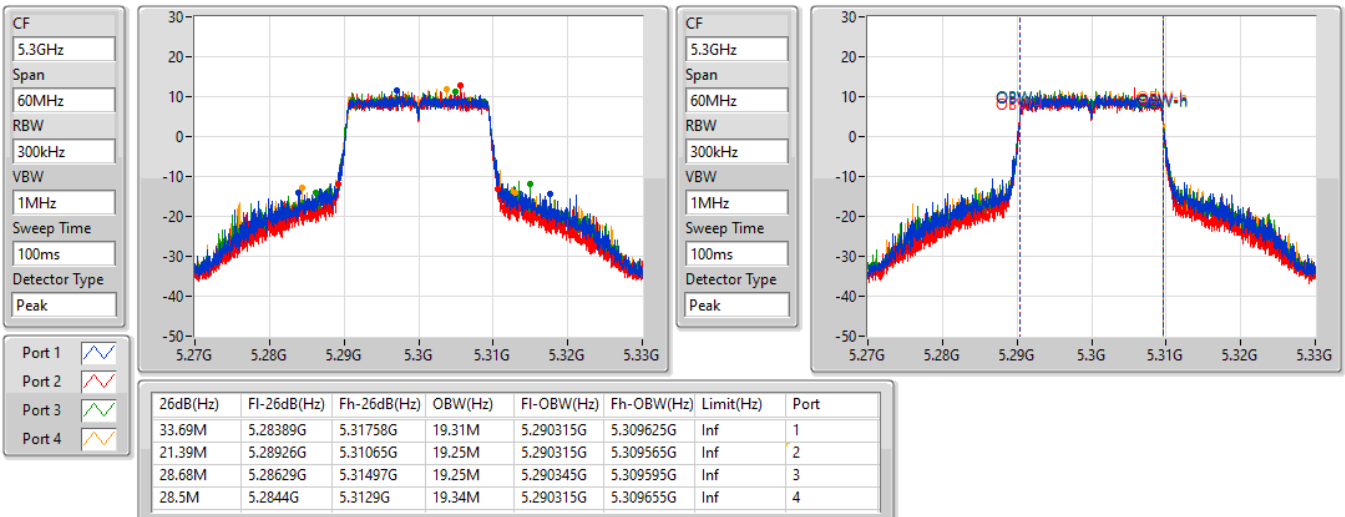


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5260MHz

29/10/2021

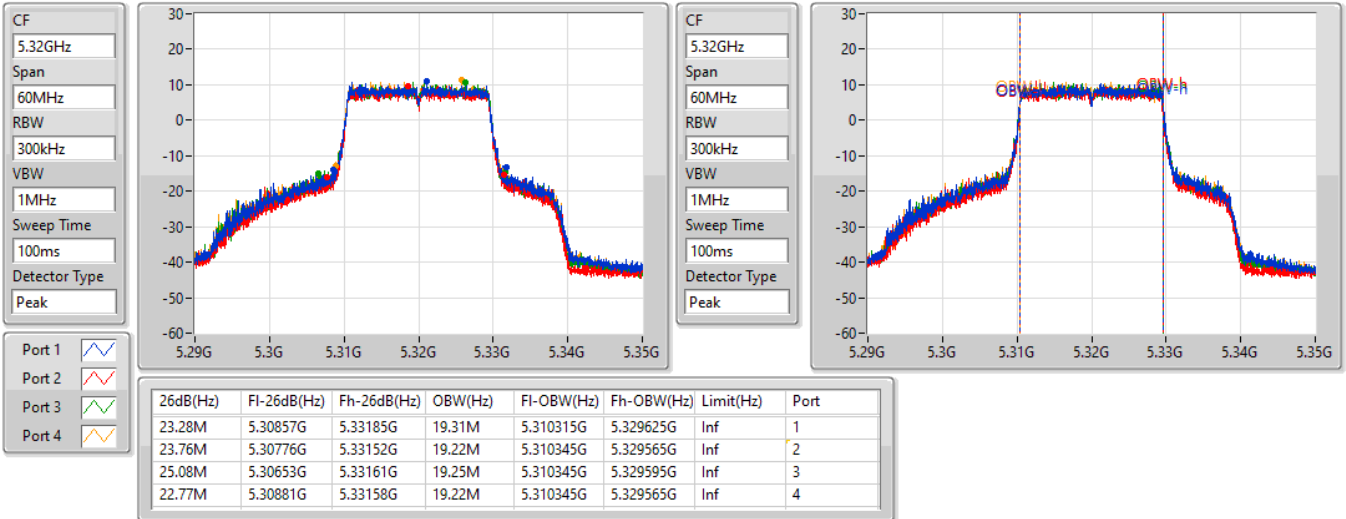

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5300MHz

29/10/2021

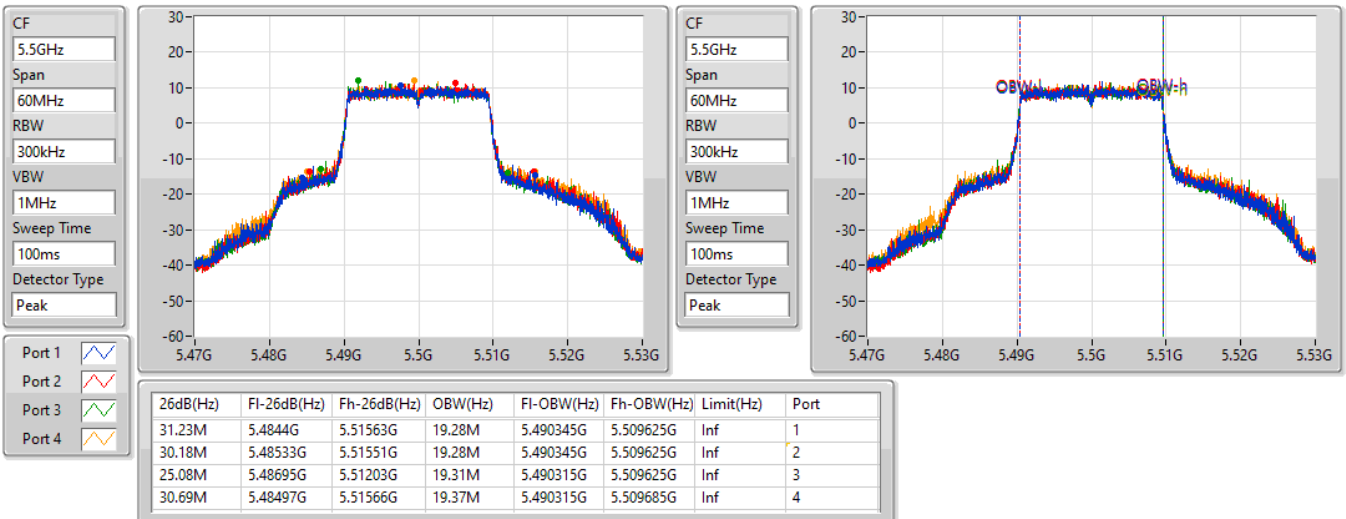


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5320MHz

29/10/2021

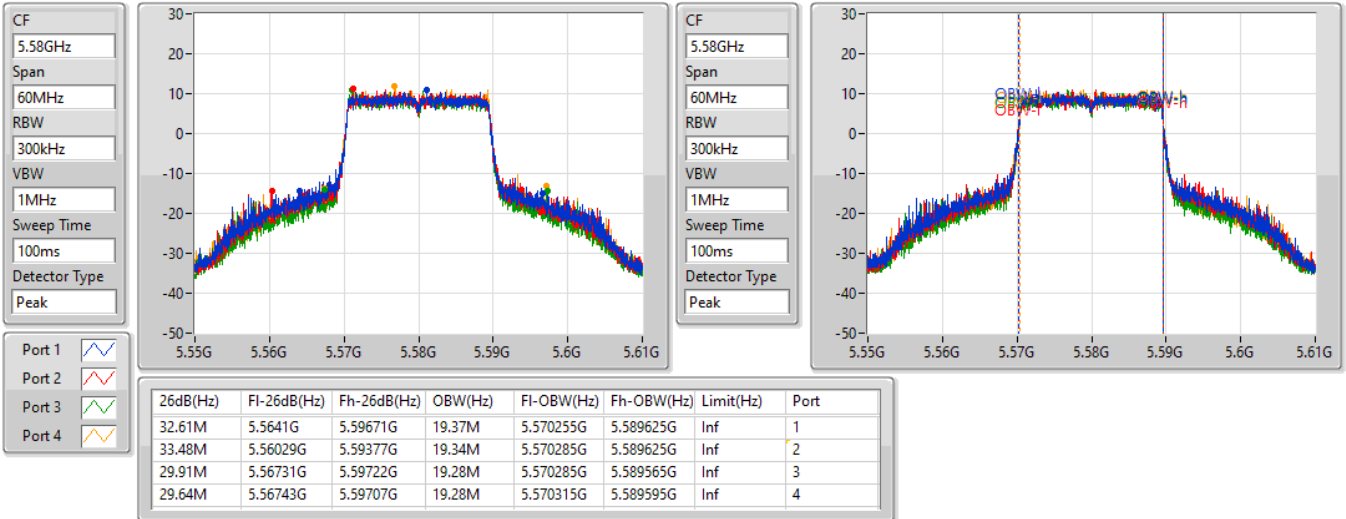

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5500MHz

29/10/2021

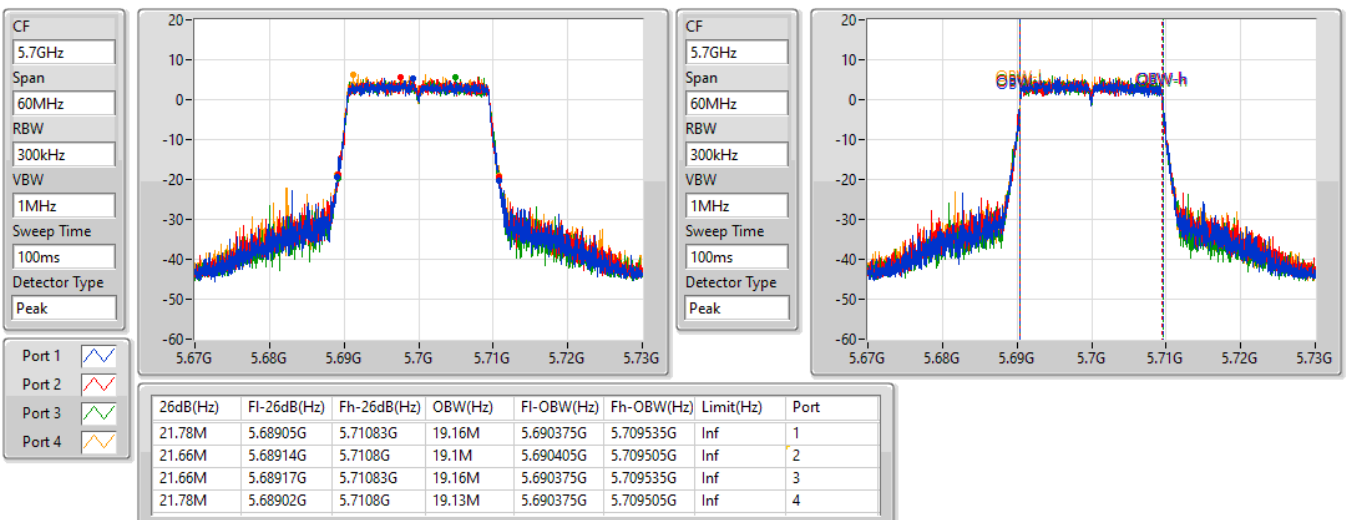


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5580MHz

29/10/2021

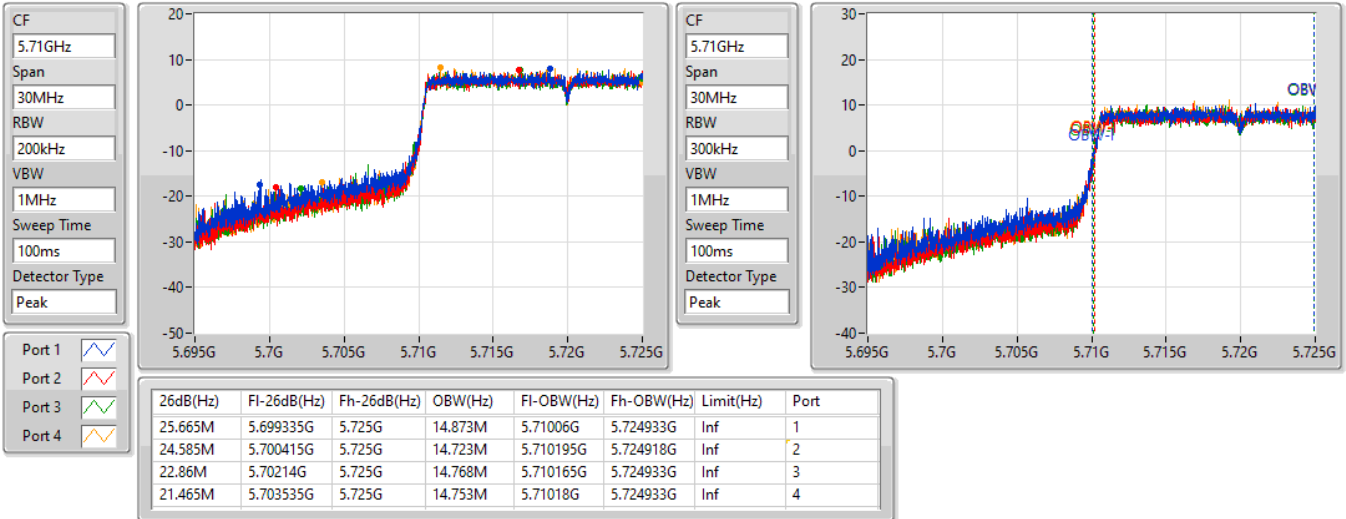

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5700MHz

29/10/2021

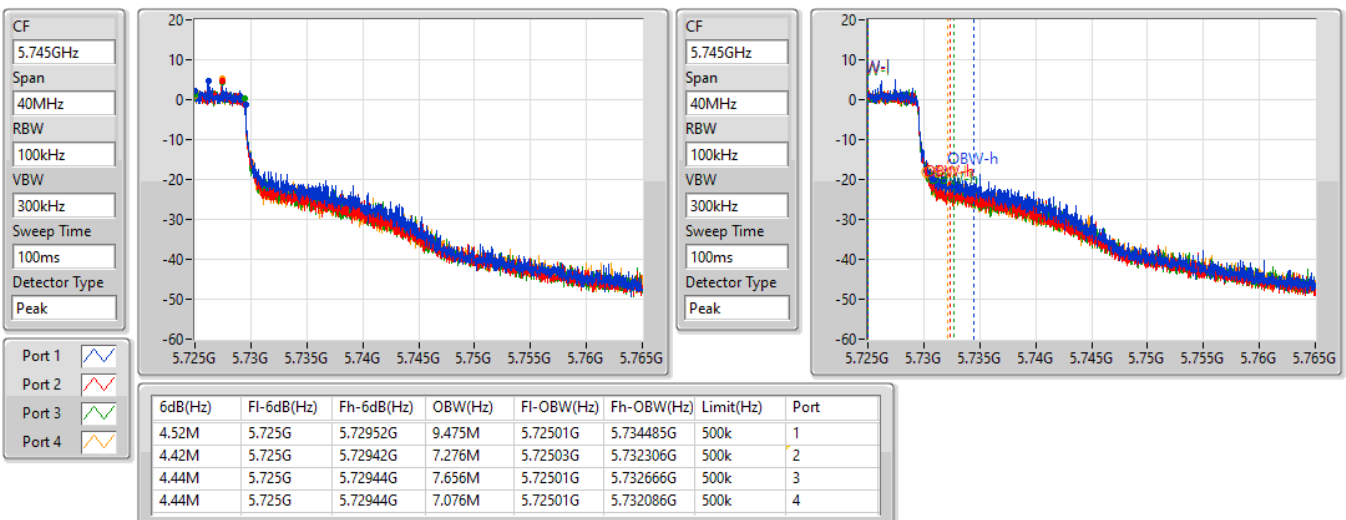


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5720MHz Straddle 5.47-5.725GHz

29/10/2021

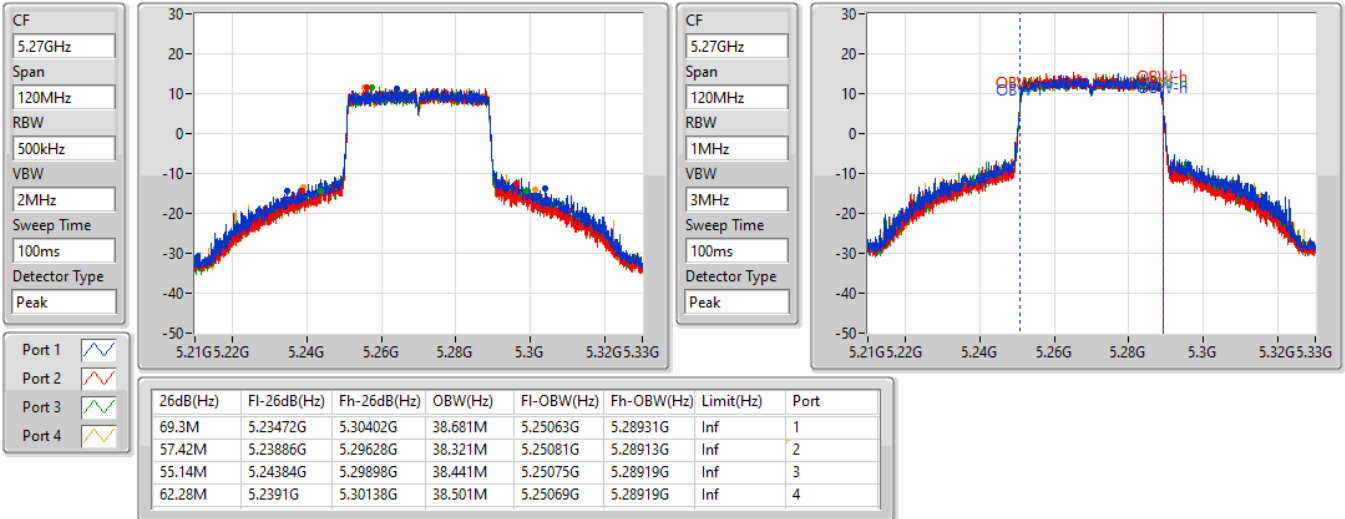

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5720MHz Straddle 5.725-5.85GHz

29/10/2021

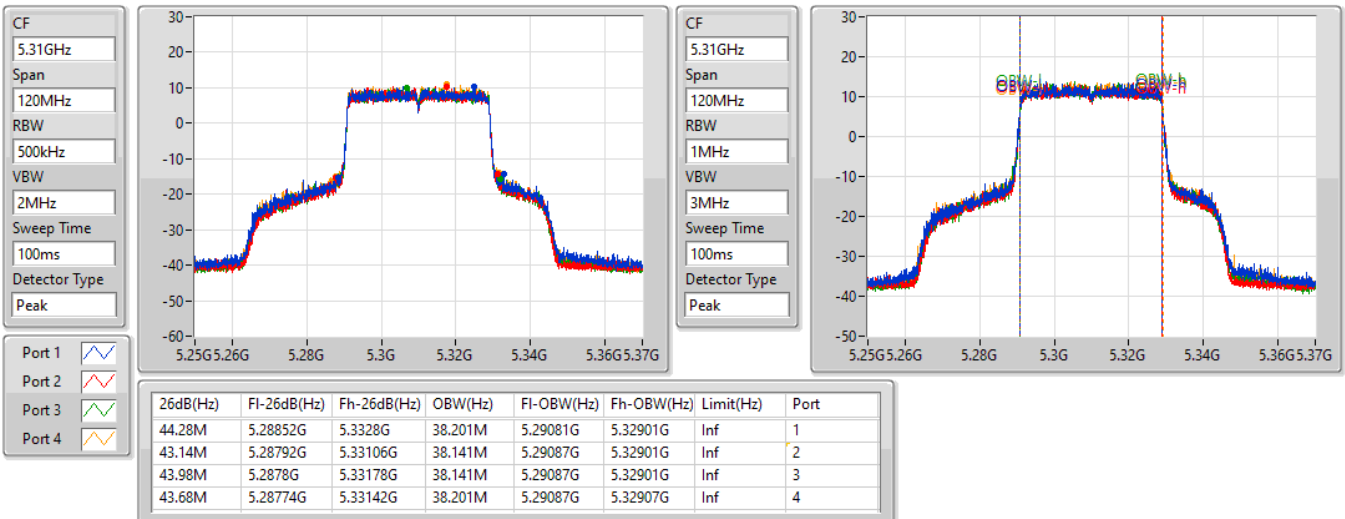


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5270MHz

29/10/2021

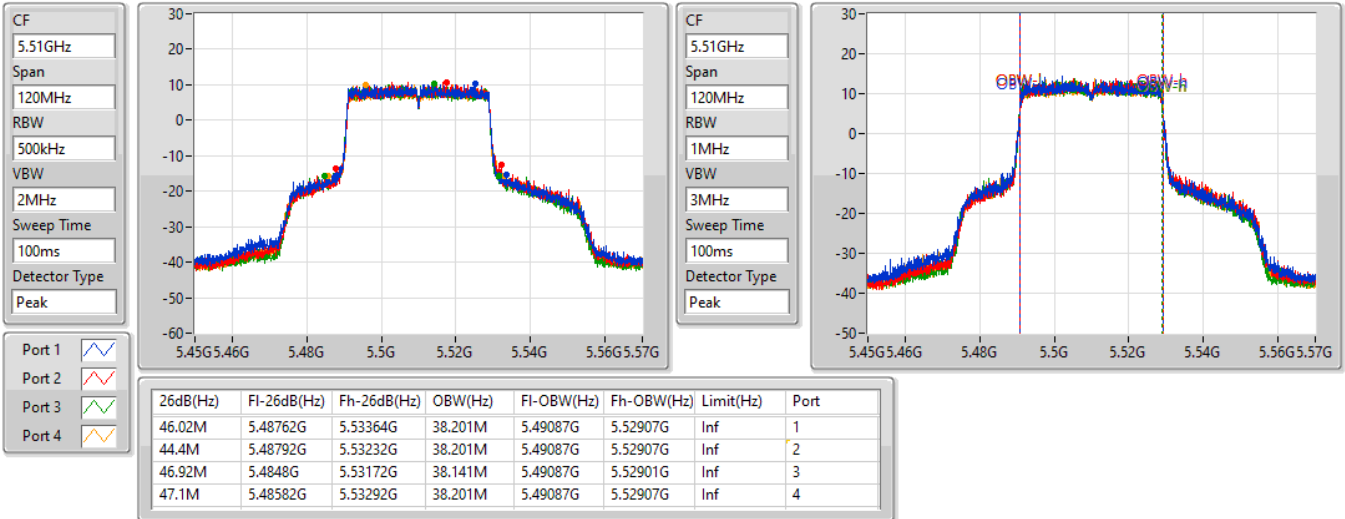

802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5310MHz

29/10/2021

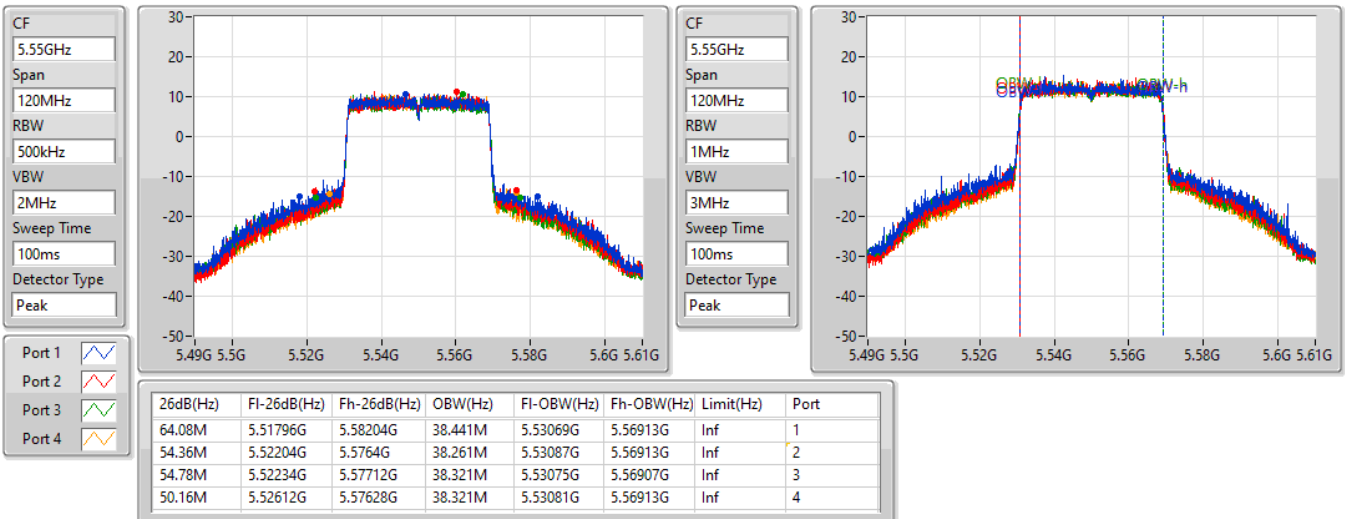


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5510MHz

29/10/2021

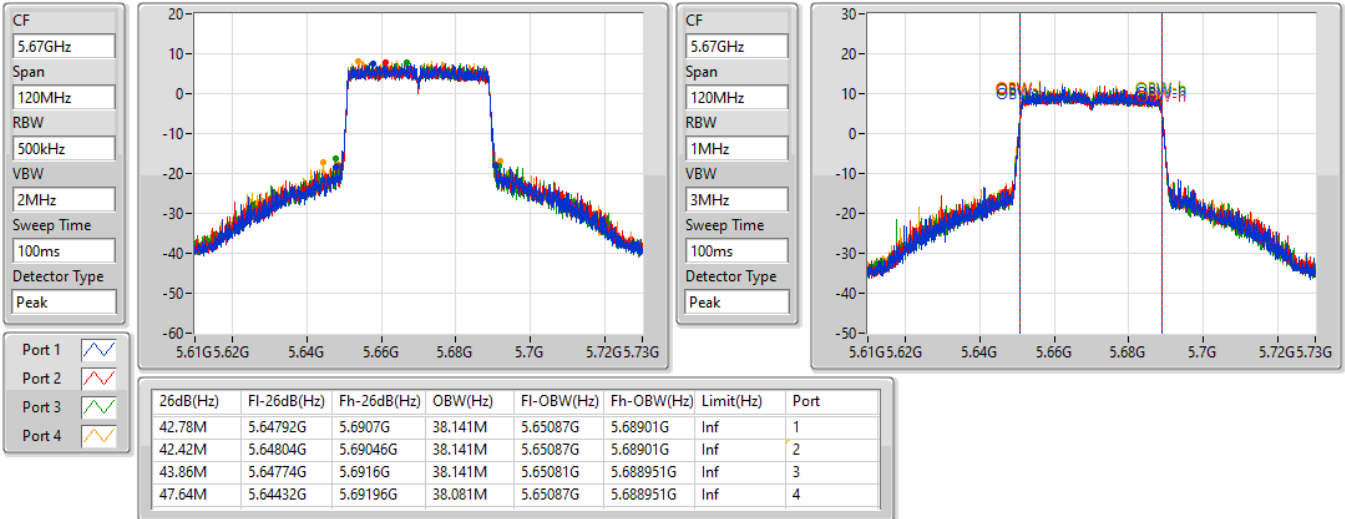

802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5550MHz

29/10/2021

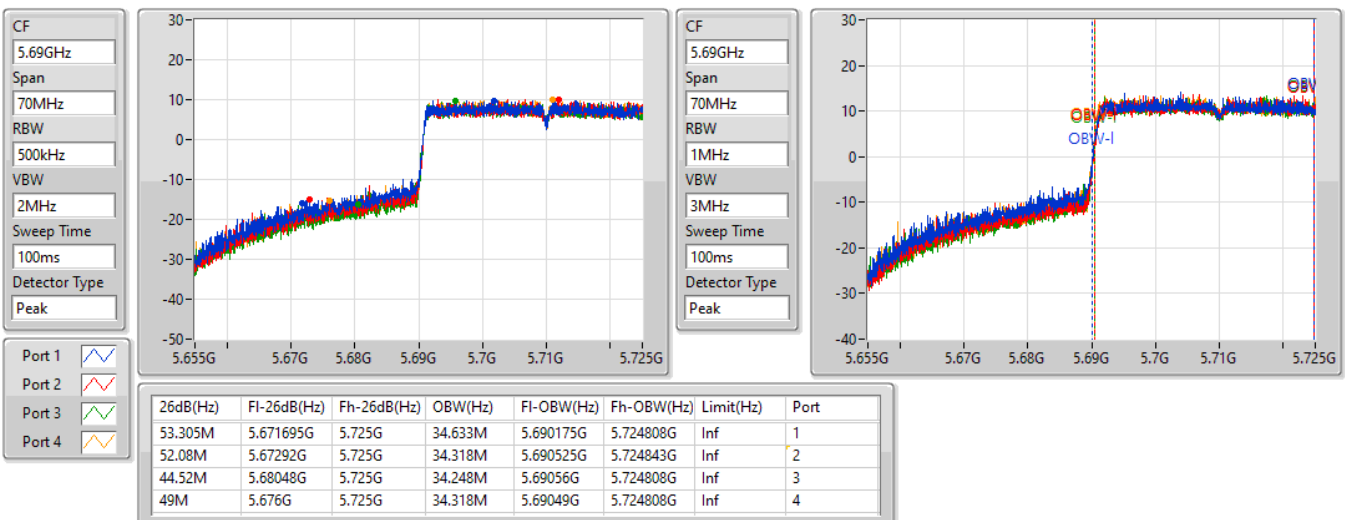


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5670MHz

29/10/2021

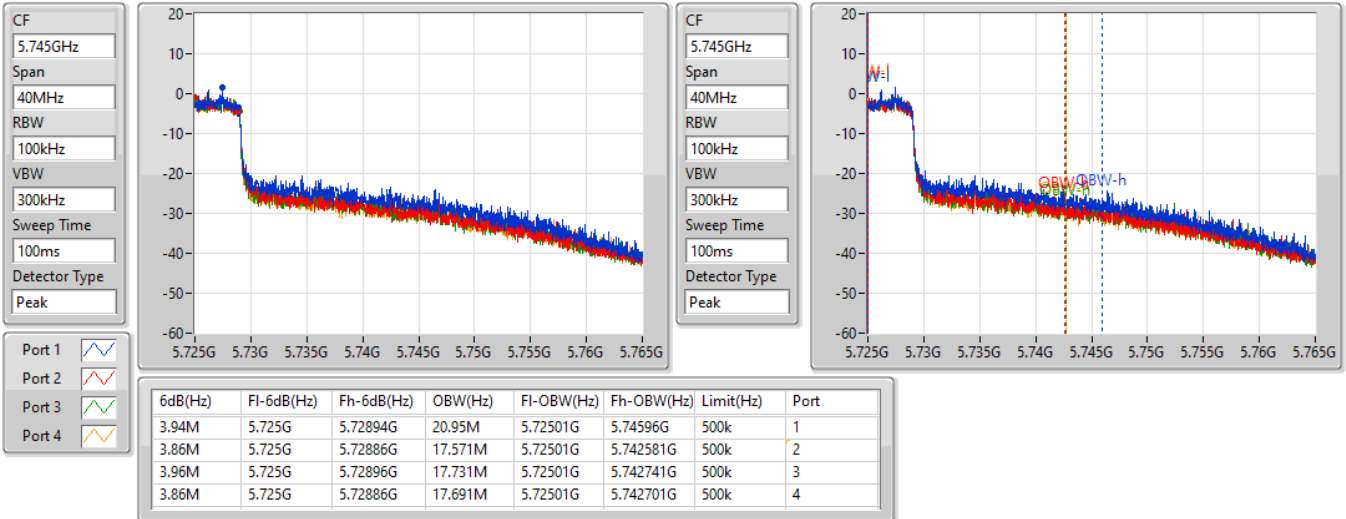

802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5710MHz Straddle 5.47-5.725GHz

29/10/2021

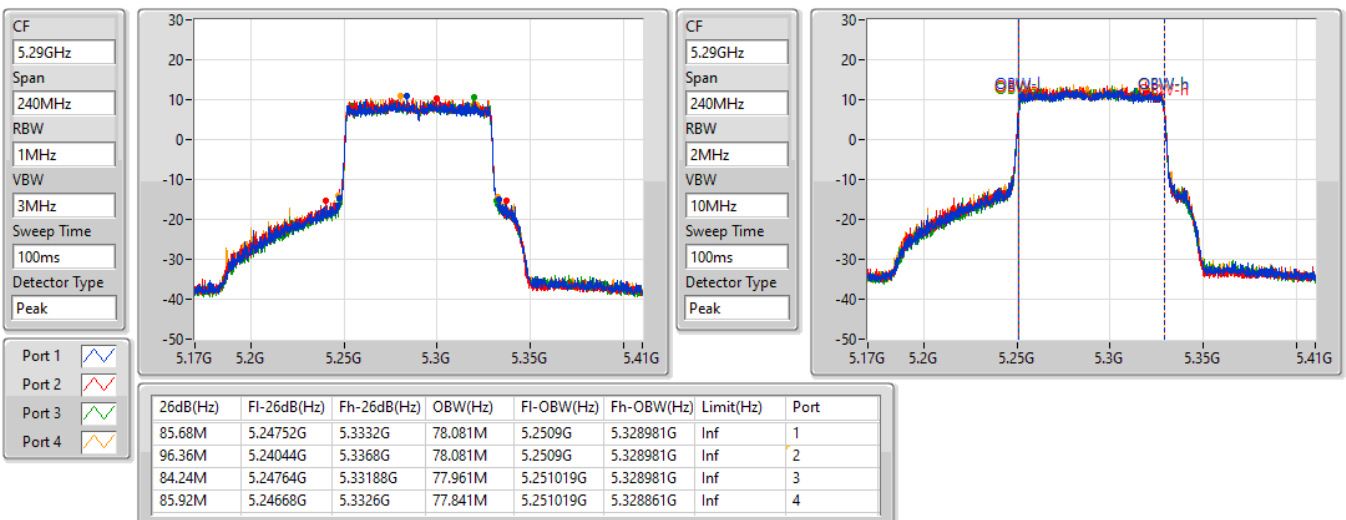


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5710MHz Straddle 5.725-5.85GHz

29/10/2021

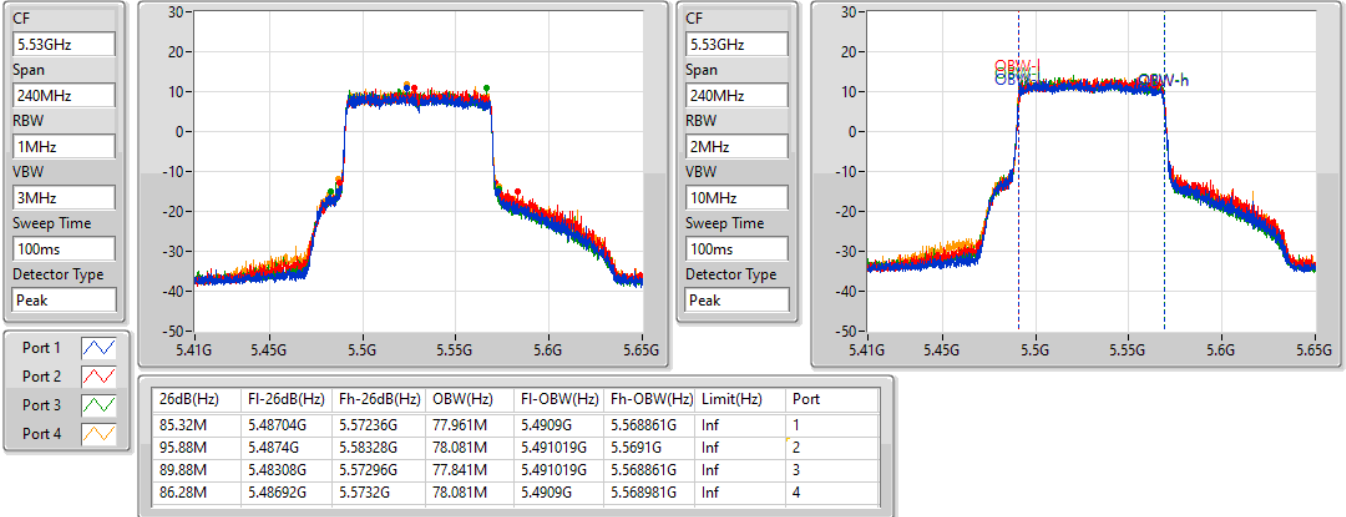

802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5290MHz

29/10/2021

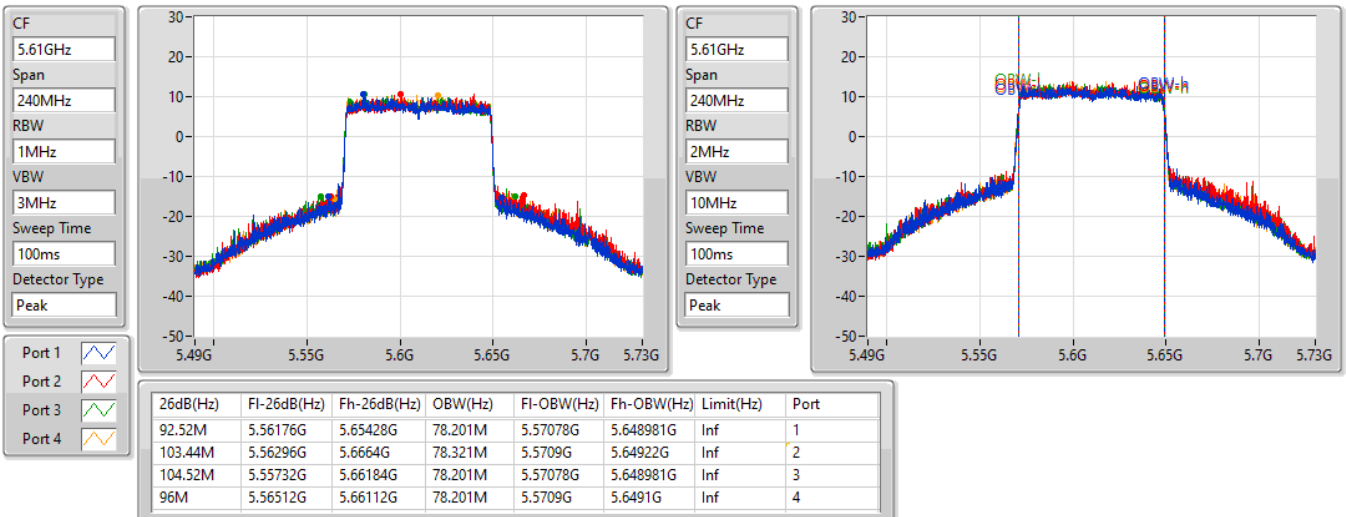


802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5530MHz

29/10/2021

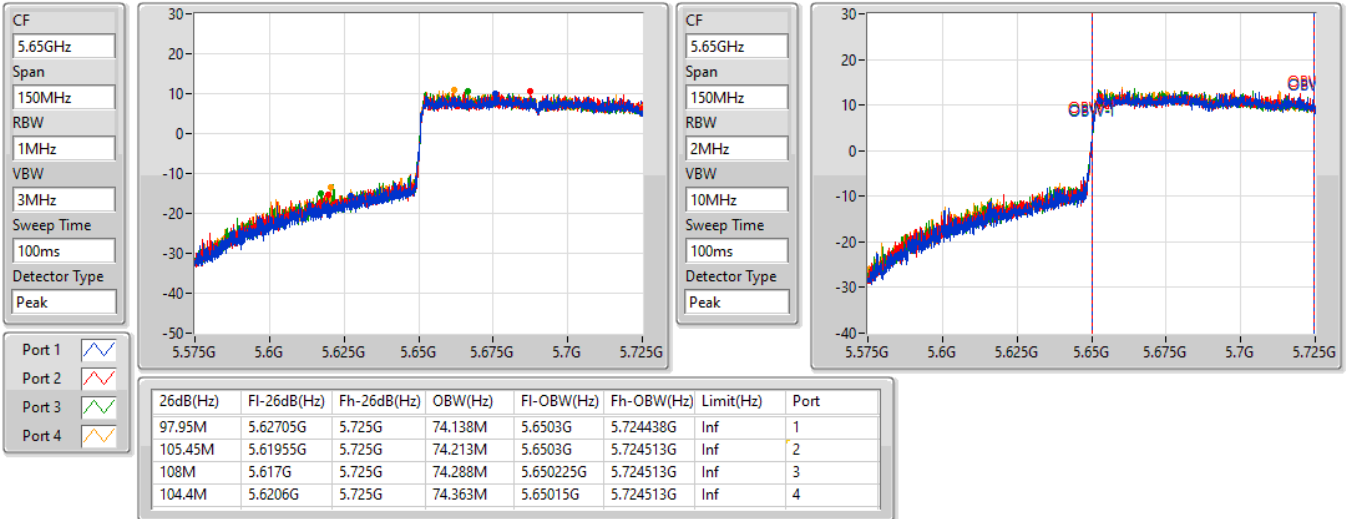

802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5610MHz

29/10/2021

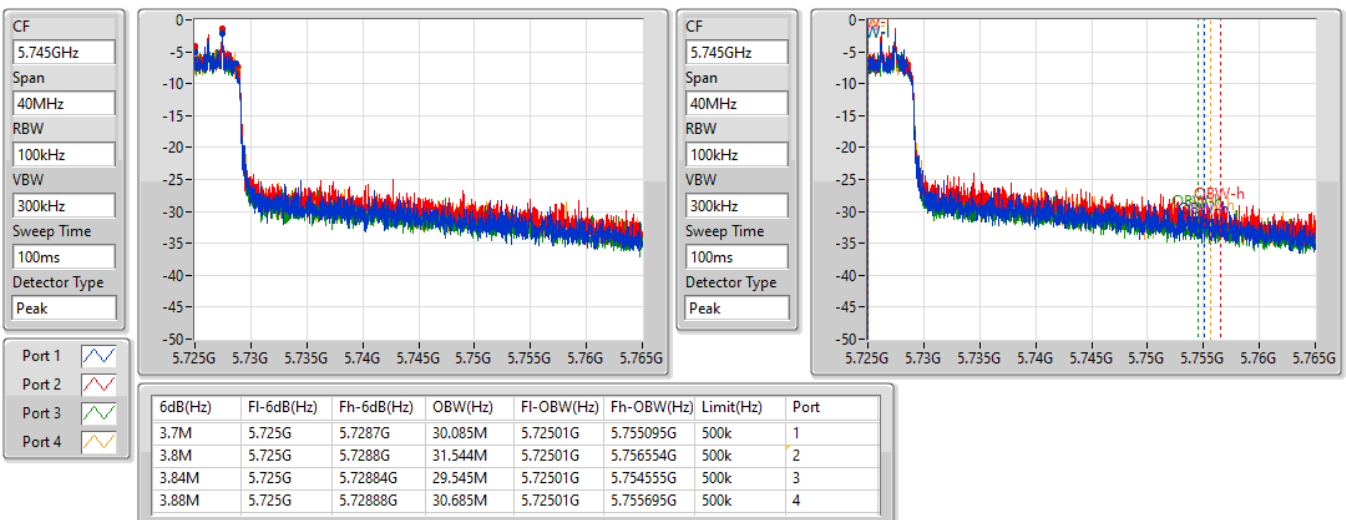


802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5690MHz Straddle 5.47-5.725GHz

29/10/2021


802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5690MHz Straddle 5.725-5.85GHz

29/10/2021



Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.25-5.35GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	25.74M	17.361M	17M4D1D	21.48M	16.942M
802.11ax HEW20_Nss1,(MCS0)_4TX	26.01M	19.31M	19M3D1D	21.42M	19.1M
802.11ax HEW40_Nss1,(MCS0)_4TX	44.88M	38.201M	38M2D1D	40.2M	37.901M
802.11ax HEW80_Nss1,(MCS0)_4TX	87.84M	77.841M	77M8D1D	83.4M	77.721M

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

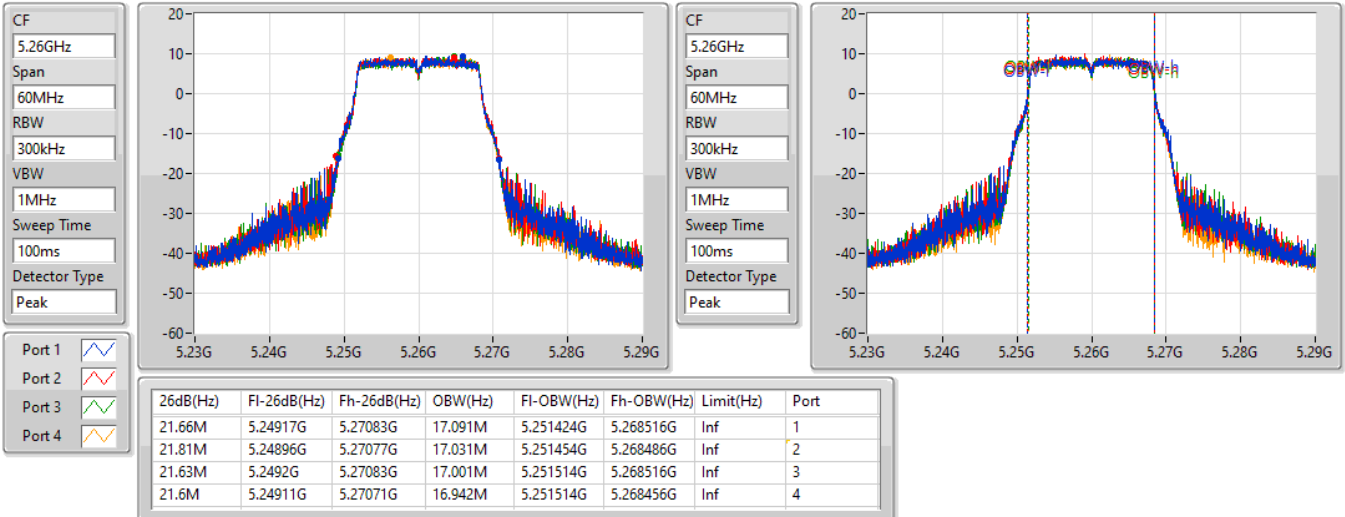
Result

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)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	21.66M	17.091M	21.81M	17.031M	21.63M	17.001M	21.6M	16.942M
5300MHz	Pass	Inf	21.54M	17.151M	21.48M	17.061M	21.75M	17.001M	21.51M	16.972M
5320MHz	Pass	Inf	23.82M	17.361M	22.8M	17.271M	25.74M	17.331M	23.04M	17.211M
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	21.81M	19.1M	21.42M	19.13M	21.81M	19.1M	21.63M	19.1M
5300MHz	Pass	Inf	21.87M	19.19M	21.78M	19.13M	21.54M	19.13M	21.63M	19.1M
5320MHz	Pass	Inf	22.71M	19.22M	26.01M	19.31M	23.76M	19.22M	25.59M	19.19M
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5270MHz	Pass	Inf	40.92M	37.901M	40.5M	37.961M	40.2M	37.961M	40.26M	37.961M
5310MHz	Pass	Inf	43.32M	38.141M	44.88M	38.141M	43.68M	38.201M	43.86M	38.141M
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5290MHz	Pass	Inf	85.8M	77.841M	85.68M	77.721M	87.84M	77.841M	83.4M	77.841M

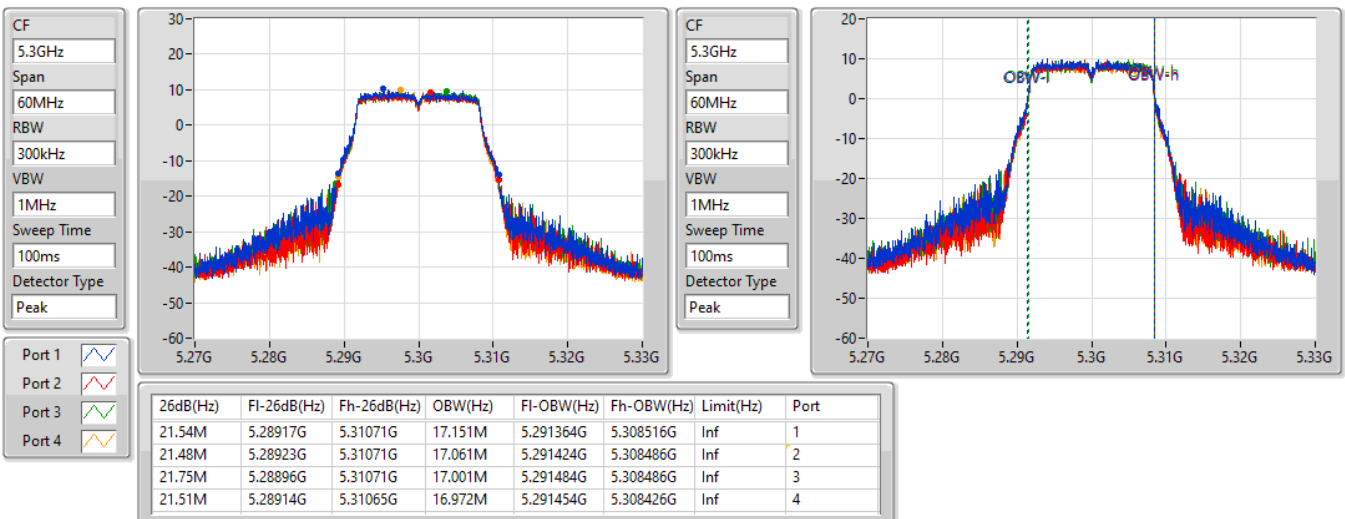
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11a_Nss1,(6Mbps)_4TX
EBW
5260MHz

27/10/2021

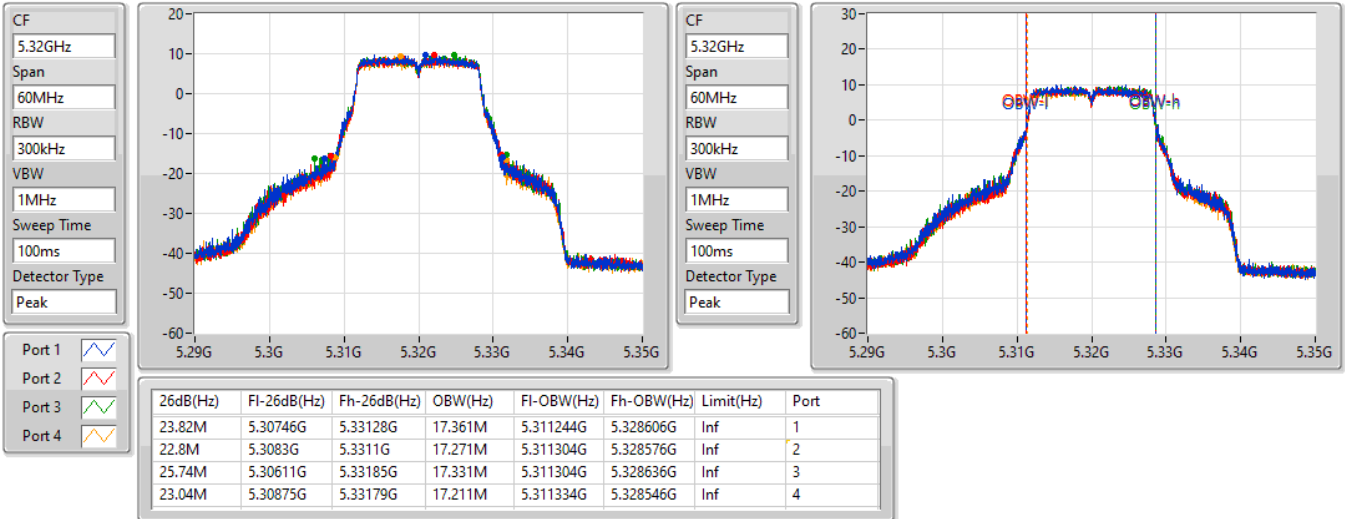

802.11a_Nss1,(6Mbps)_4TX
EBW
5300MHz

27/10/2021

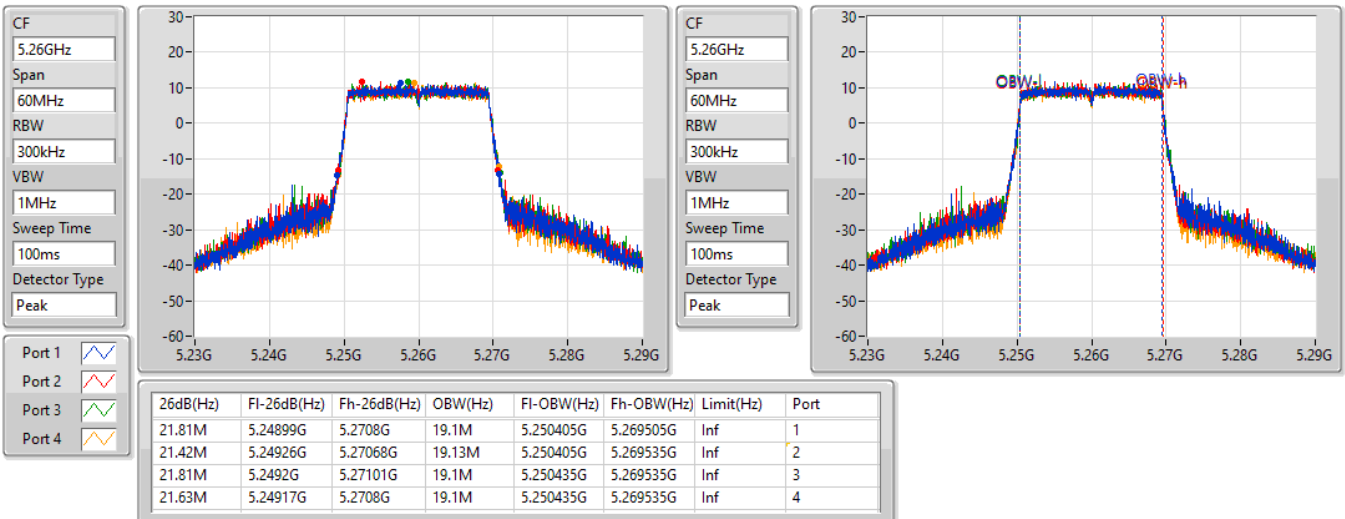


802.11a_Nss1,(6Mbps)_4TX
EBW
5320MHz

27/10/2021

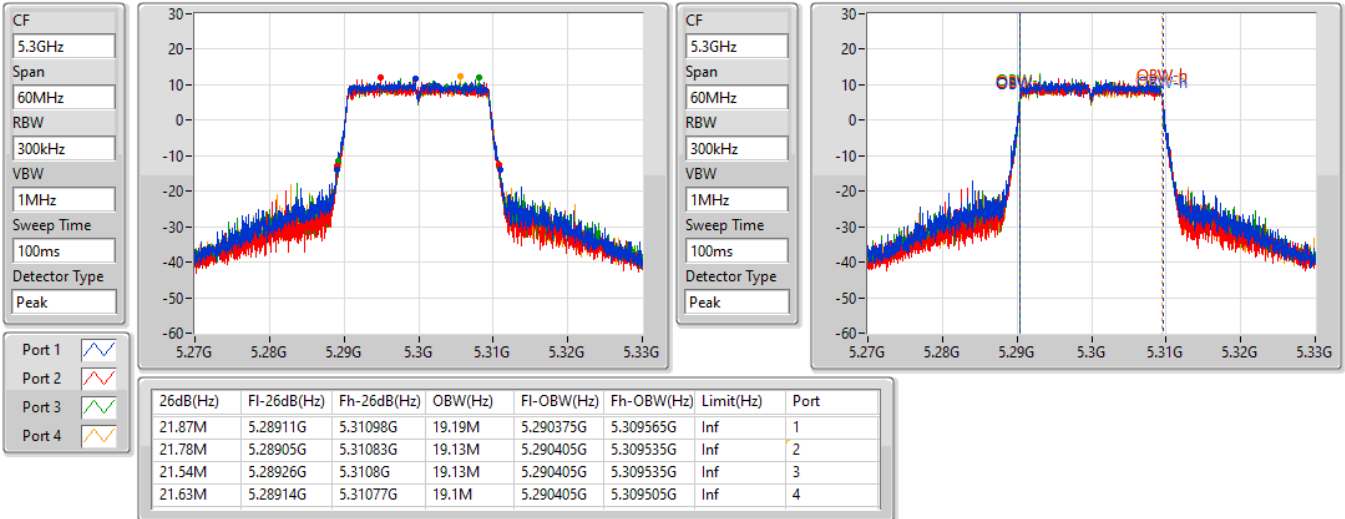

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5260MHz

27/10/2021

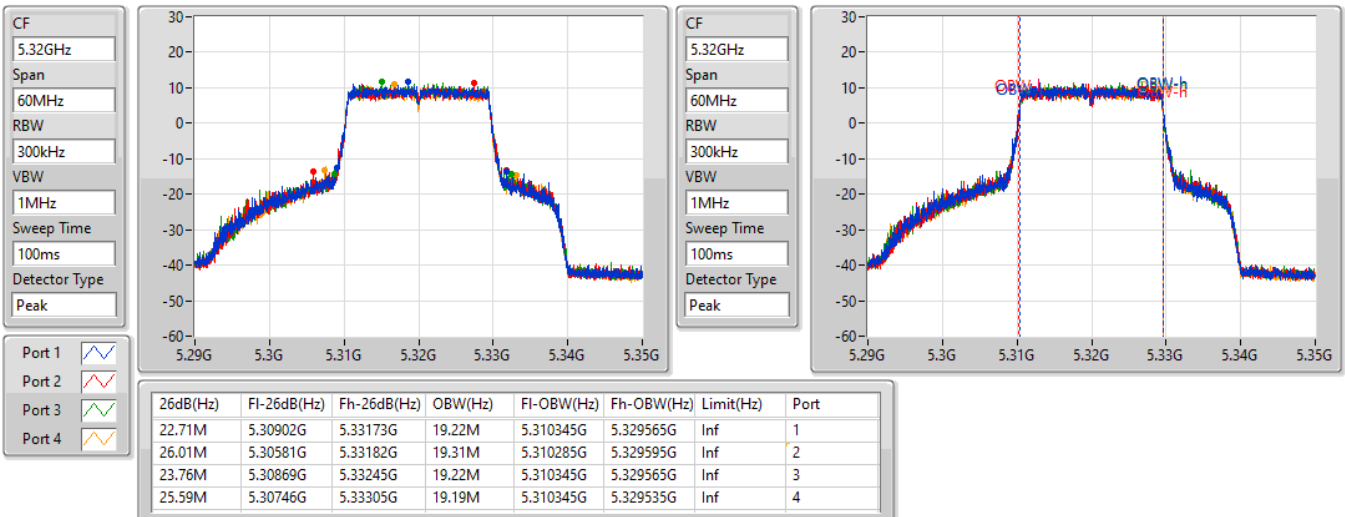


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5300MHz

27/10/2021

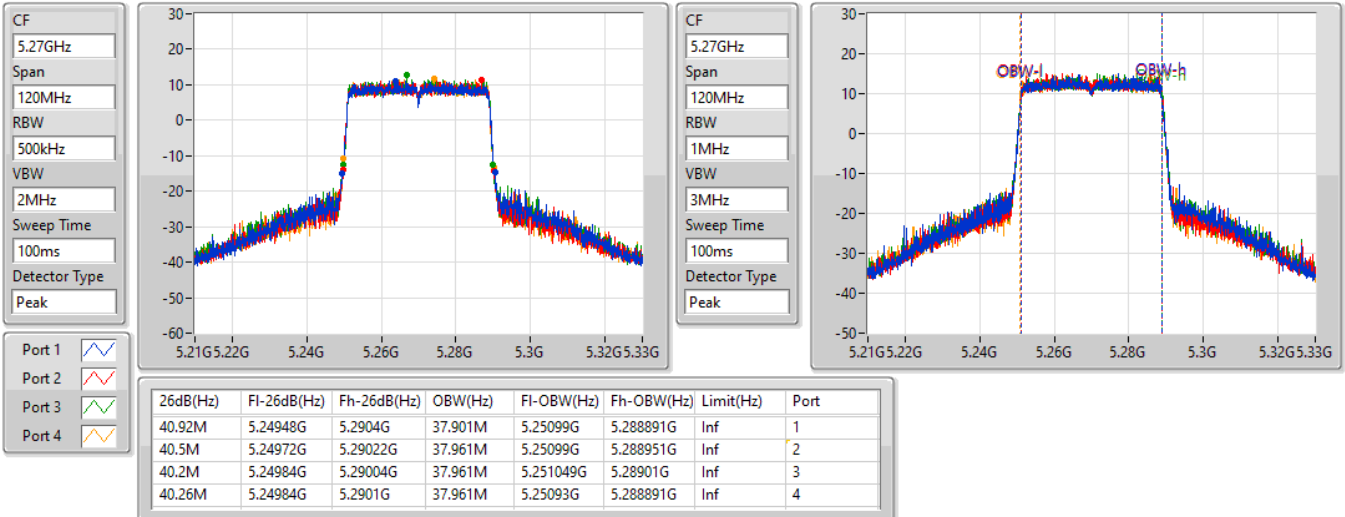

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5320MHz

27/10/2021

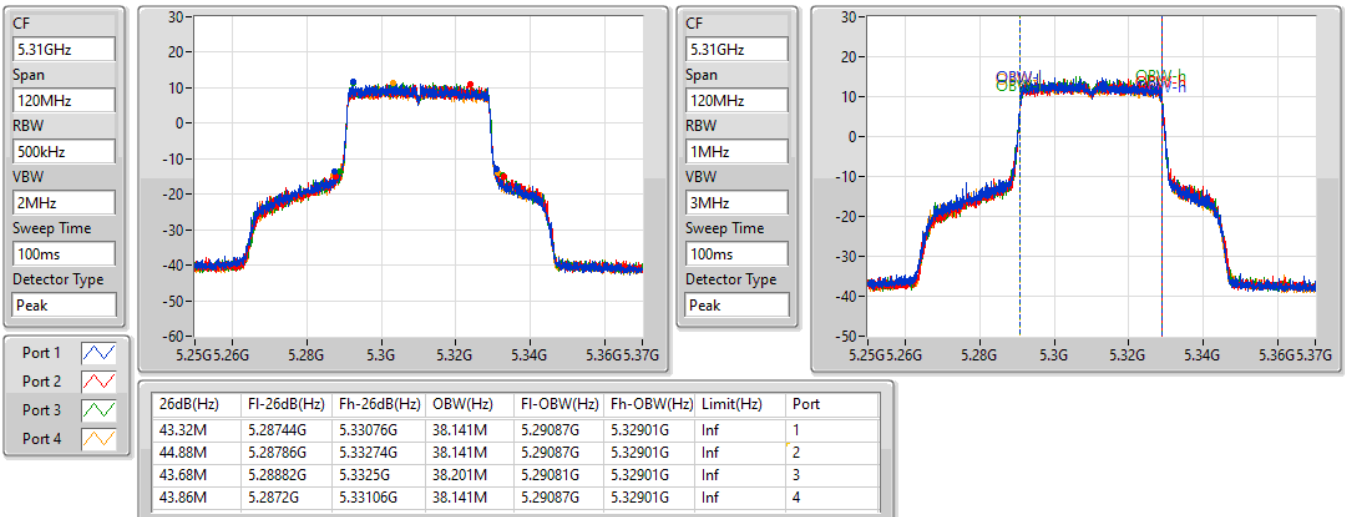


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5270MHz

27/10/2021


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5310MHz

27/10/2021

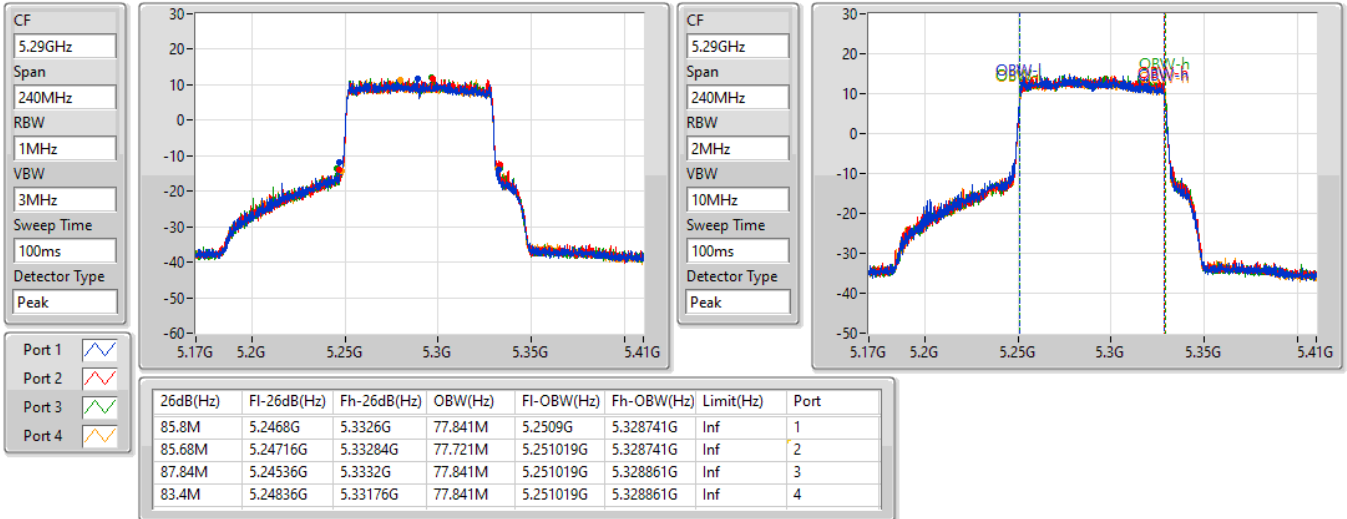


802.11ax HEW80_Nss1,(MCS0)_4TX

EBW

5290MHz

27/10/2021



Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.25-5.35GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	38.4M	19.73M	19M7D1D	35.91M	18.621M
802.11ax HEW20_Nss1,(MCS0)_1TX	43.65M	19.79M	19M8D1D	34.8M	19.43M
802.11ax HEW40_Nss1,(MCS0)_1TX	78.42M	39.46M	39M5D1D	54.78M	38.321M
802.11ax HEW80_Nss1,(MCS0)_1TX	94.8M	78.081M	78M1D1D	94.8M	78.081M
5.47-5.725GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	38.16M	19.4M	19M4D1D	22.89M	14.783M
802.11ax HEW20_Nss1,(MCS0)_1TX	41.88M	19.82M	19M8D1D	21.615M	14.858M
802.11ax HEW40_Nss1,(MCS0)_1TX	74.4M	39.16M	39M2D1D	51.31M	34.668M
802.11ax HEW80_Nss1,(MCS0)_1TX	157.56M	79.28M	79M3D1D	93.84M	74.513M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(MCS0)_1TX	3.12M	9.715M	9M72D1D	3.12M	9.715M
802.11ax HEW20_Nss1,(MCS0)_1TX	4.42M	9.835M	9M84D1D	4.42M	9.835M
802.11ax HEW40_Nss1,(MCS0)_1TX	3.88M	22.529M	22M5D1D	3.88M	22.529M
802.11ax HEW80_Nss1,(MCS0)_1TX	3.94M	33.983M	34M0D1D	3.94M	33.983M

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

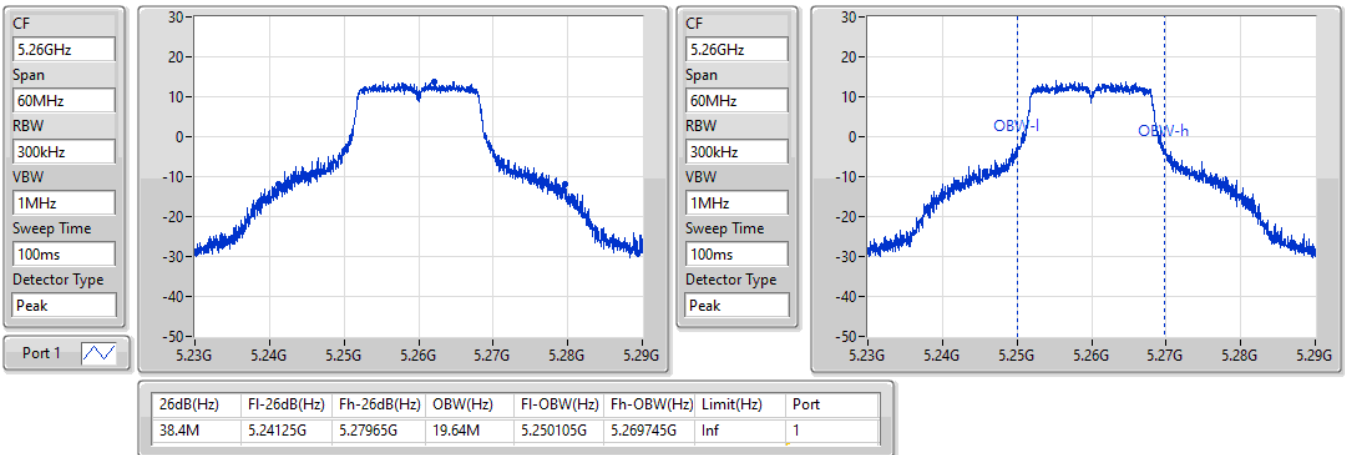
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11a_Nss1,(6Mbps)_1TX	-	-	-	-
5260MHz	Pass	Inf	38.4M	19.64M
5300MHz	Pass	Inf	37.59M	19.73M
5320MHz	Pass	Inf	35.91M	18.621M
5500MHz	Pass	Inf	33.69M	18.231M
5580MHz	Pass	Inf	38.16M	19.4M
5700MHz	Pass	Inf	23.04M	17.211M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	22.89M	14.783M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.12M	9.715M
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-
5260MHz	Pass	Inf	42.12M	19.79M
5300MHz	Pass	Inf	43.65M	19.76M
5320MHz	Pass	Inf	34.8M	19.43M
5500MHz	Pass	Inf	32.16M	19.43M
5580MHz	Pass	Inf	41.88M	19.82M
5700MHz	Pass	Inf	21.78M	19.1M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	21.615M	14.858M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	4.42M	9.835M
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-	-	-
5270MHz	Pass	Inf	78.42M	39.46M
5310MHz	Pass	Inf	54.78M	38.321M
5510MHz	Pass	Inf	52.5M	38.201M
5550MHz	Pass	Inf	74.4M	39.16M
5670MHz	Pass	Inf	67.92M	38.621M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	51.31M	34.668M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.88M	22.529M
802.11ax HEW80_Nss1,(MCS0)_1TX	-	-	-	-
5290MHz	Pass	Inf	94.8M	78.081M
5530MHz	Pass	Inf	93.84M	78.081M
5610MHz	Pass	Inf	157.56M	79.28M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	109.425M	74.513M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.94M	33.983M

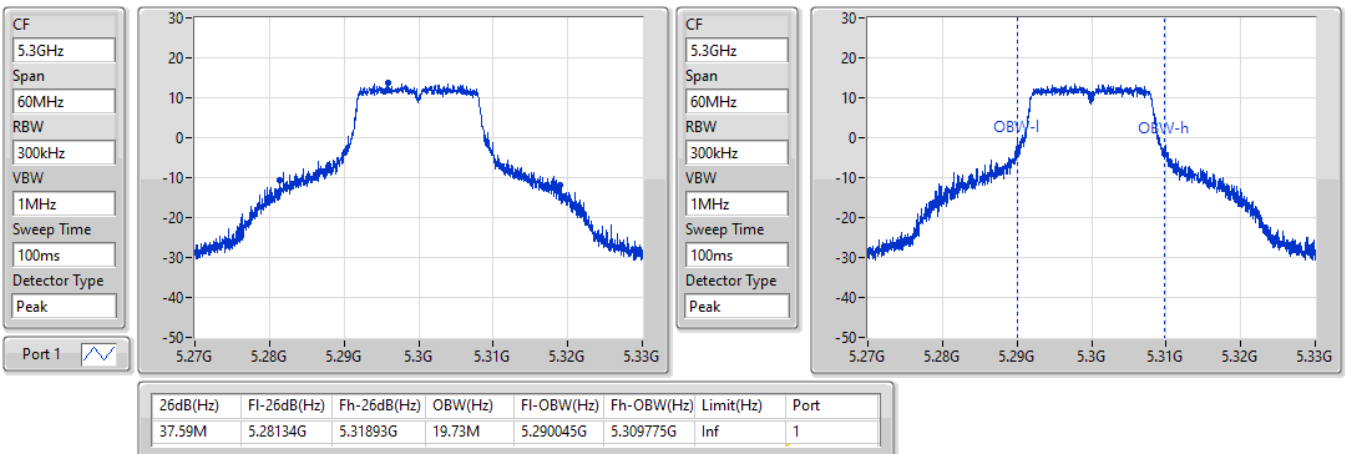
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11a_Nss1,(6Mbps)_1TX
EBW
5260MHz

29/10/2021

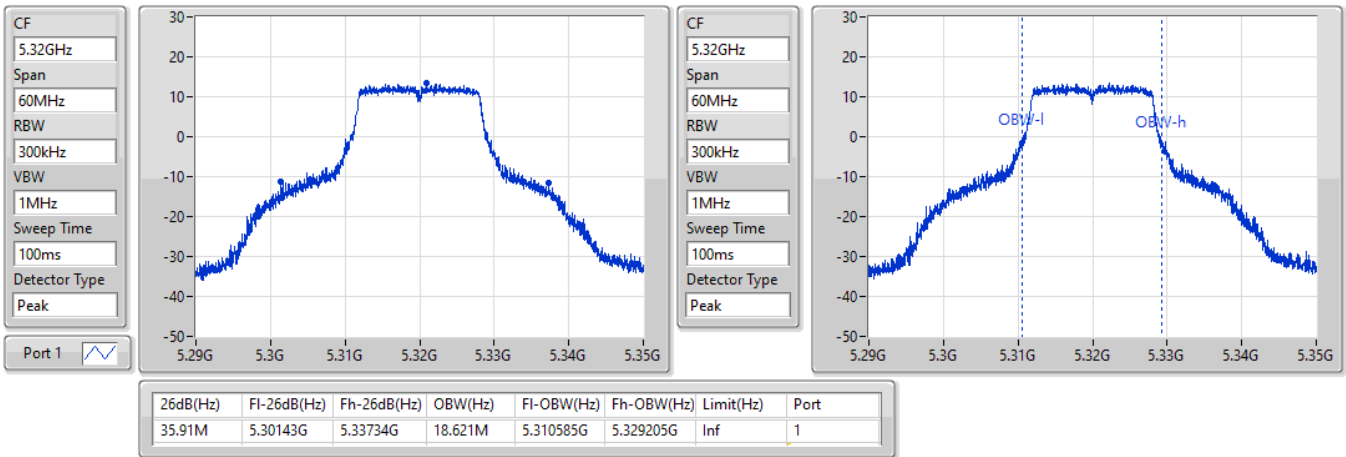

802.11a_Nss1,(6Mbps)_1TX
EBW
5300MHz

29/10/2021

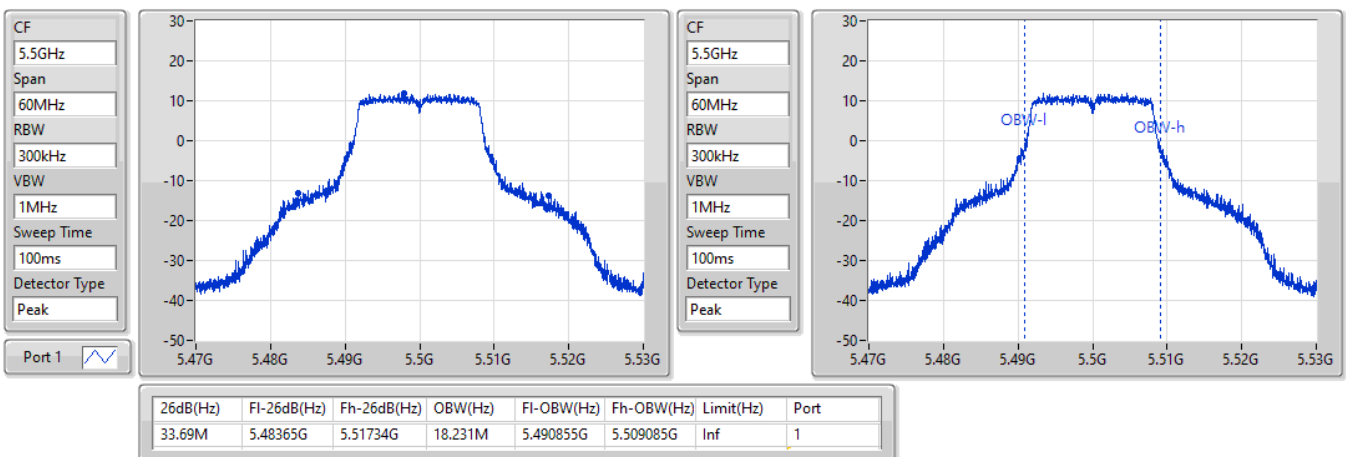


802.11a_Nss1,(6Mbps)_1TX
EBW
5320MHz

29/10/2021

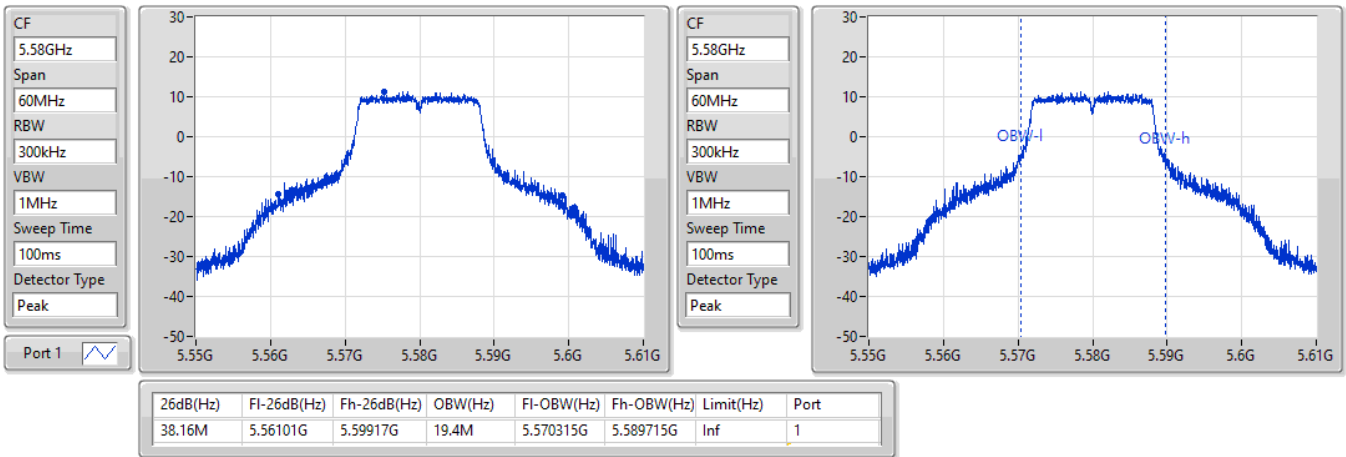

802.11a_Nss1,(6Mbps)_1TX
EBW
5500MHz

29/10/2021

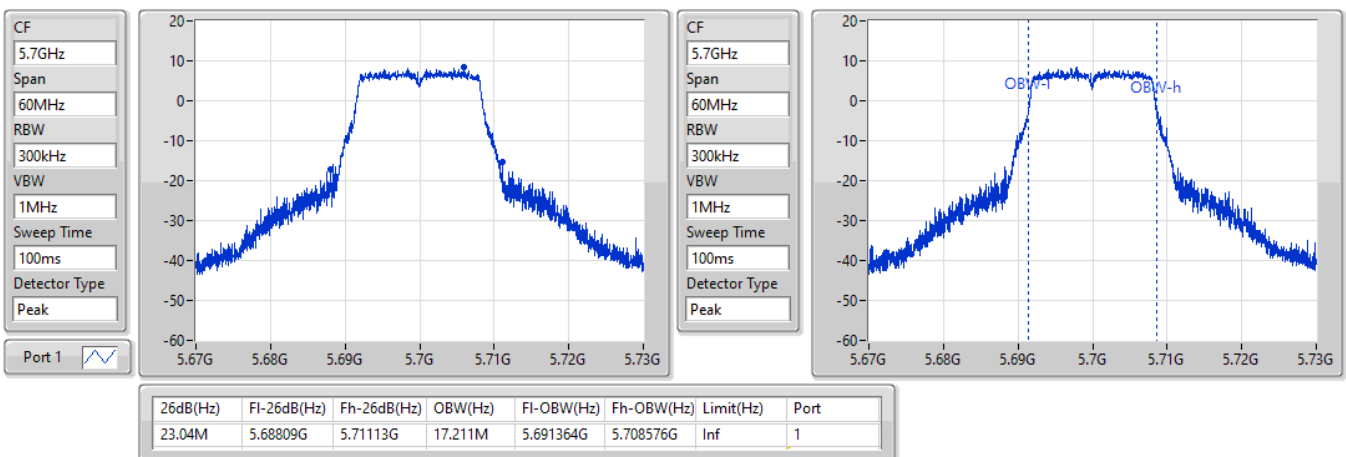


802.11a_Nss1,(6Mbps)_1TX
EBW
5580MHz

29/10/2021

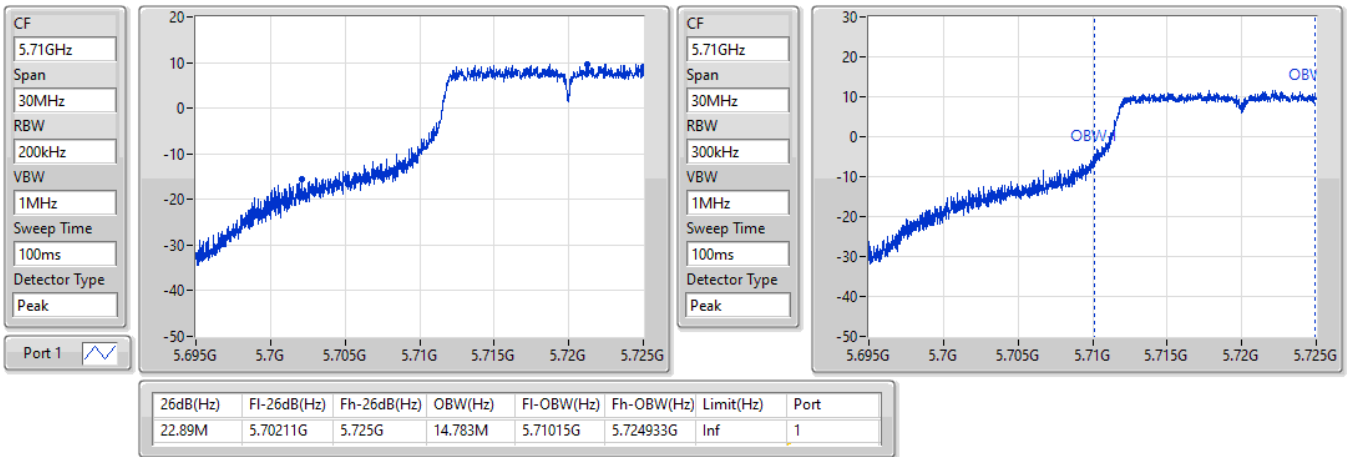

802.11a_Nss1,(6Mbps)_1TX
EBW
5700MHz

29/10/2021

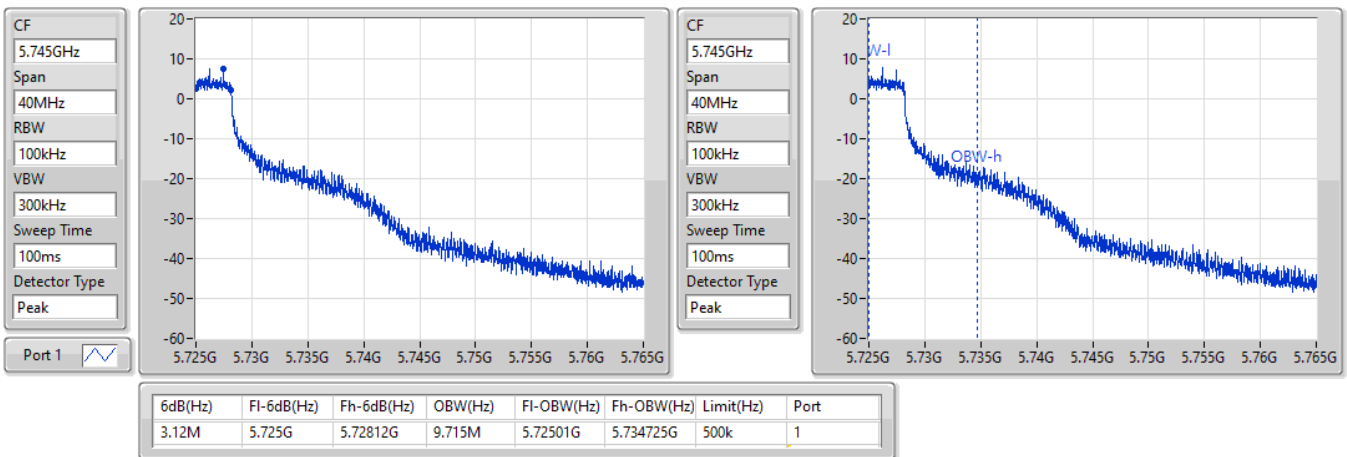


802.11a_Nss1,(6Mbps)_1TX
EBW
5720MHz Straddle 5.47-5.725GHz

29/10/2021

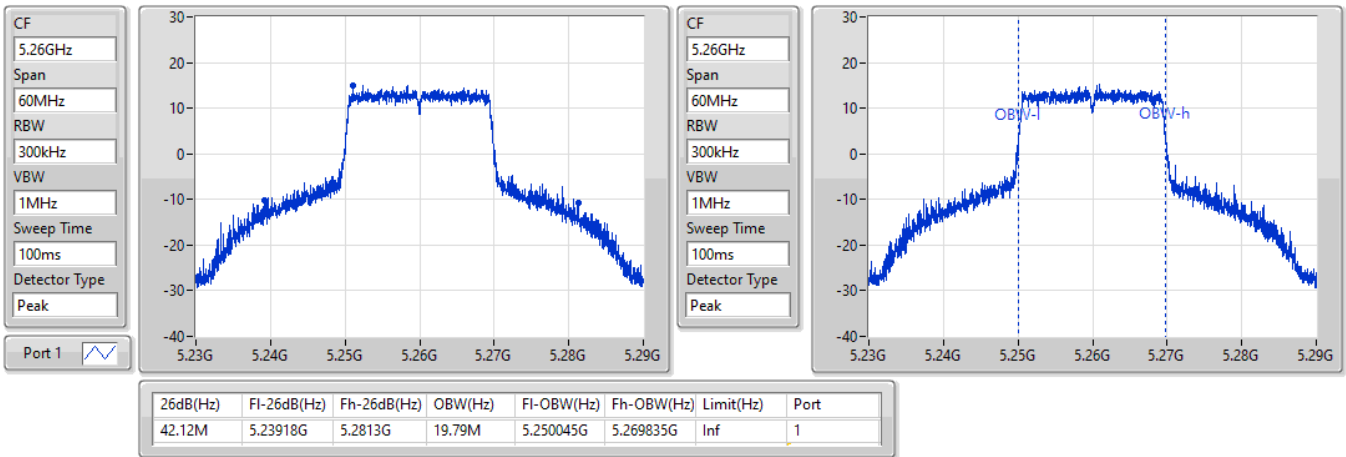

802.11a_Nss1,(MCS0)_1TX
EBW
5720MHz Straddle 5.725-5.85GHz

29/10/2021

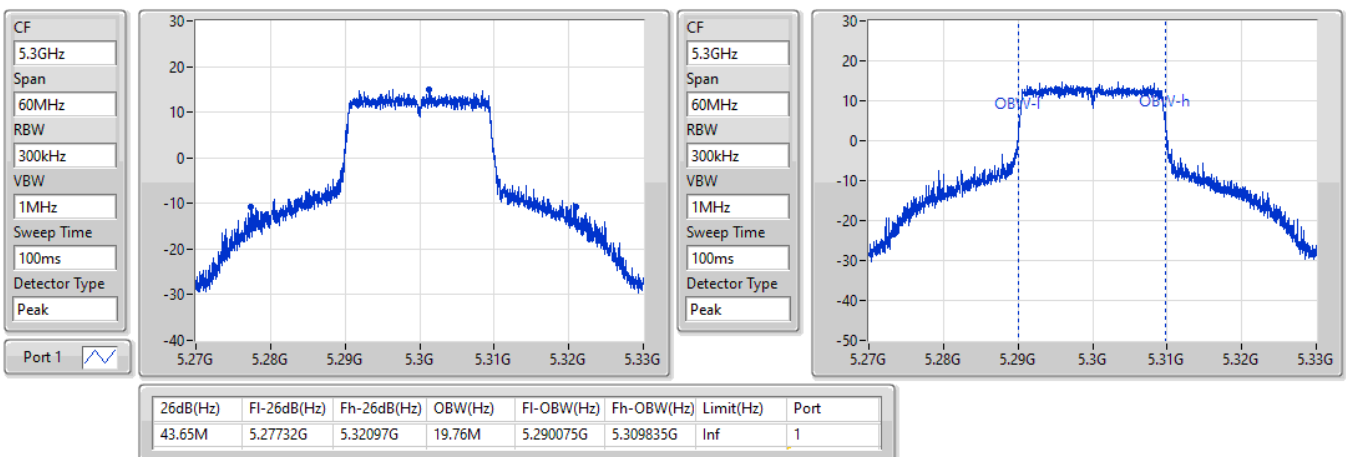


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5260MHz

29/10/2021

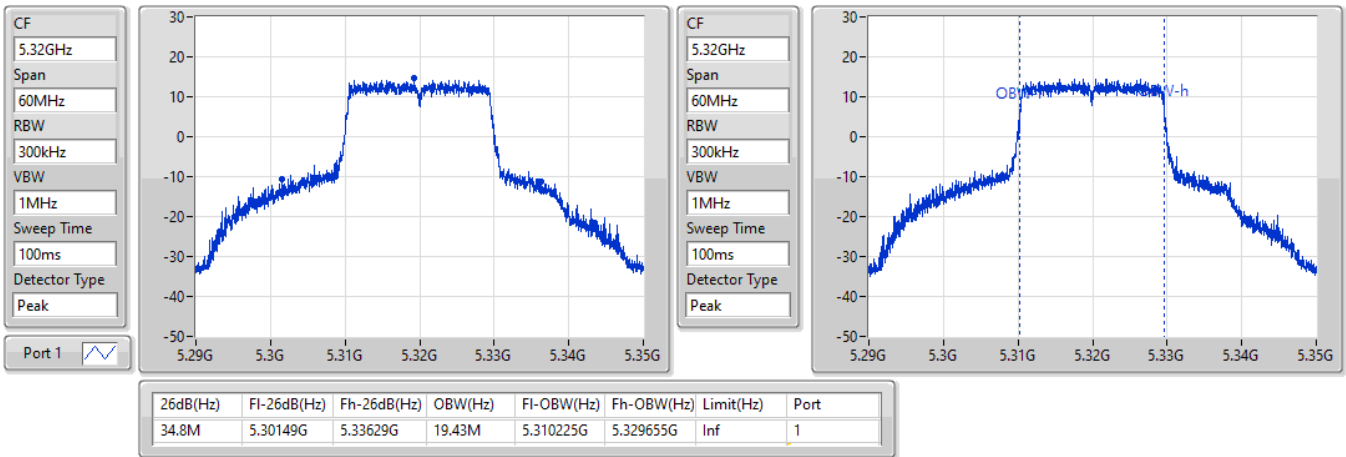

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5300MHz

29/10/2021

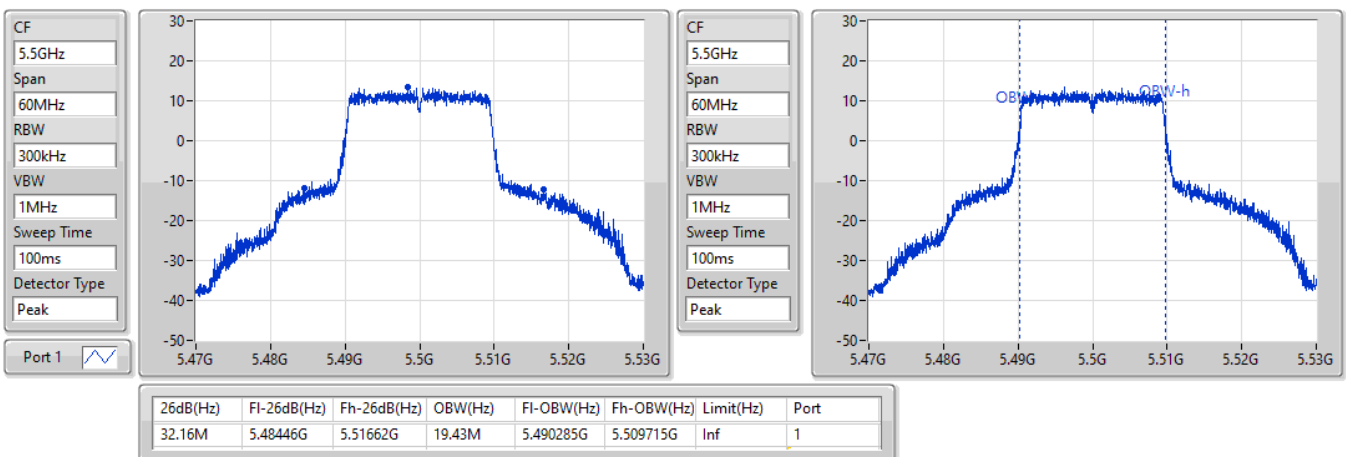


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5320MHz

29/10/2021

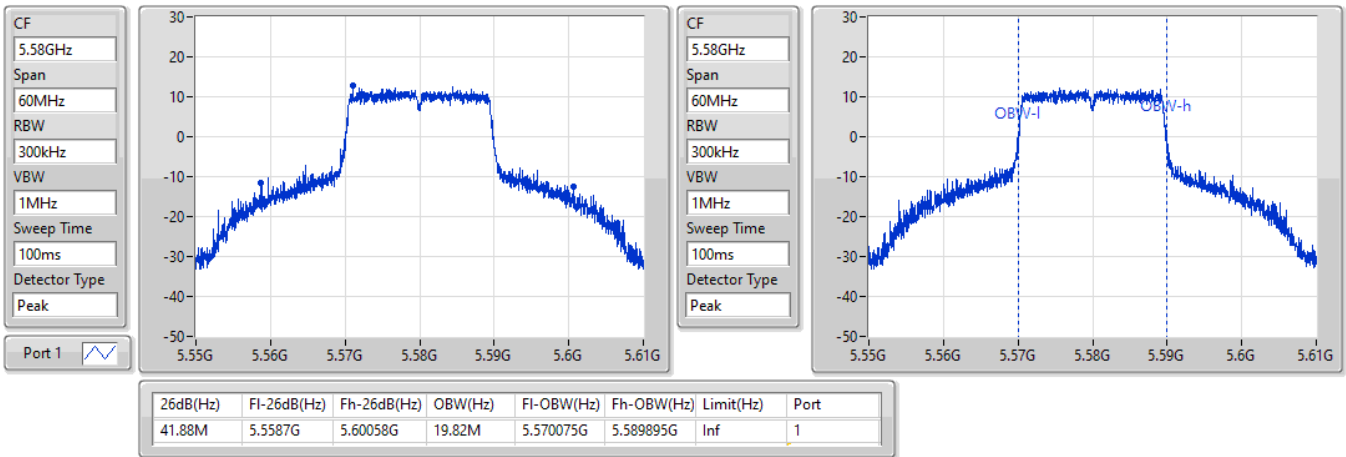

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5500MHz

29/10/2021

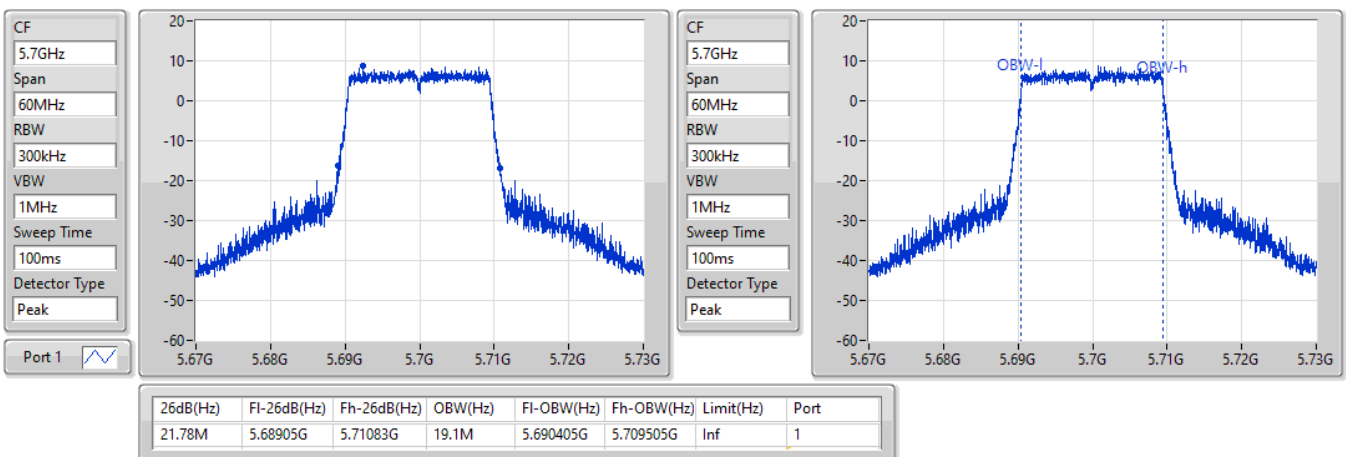


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5580MHz

29/10/2021

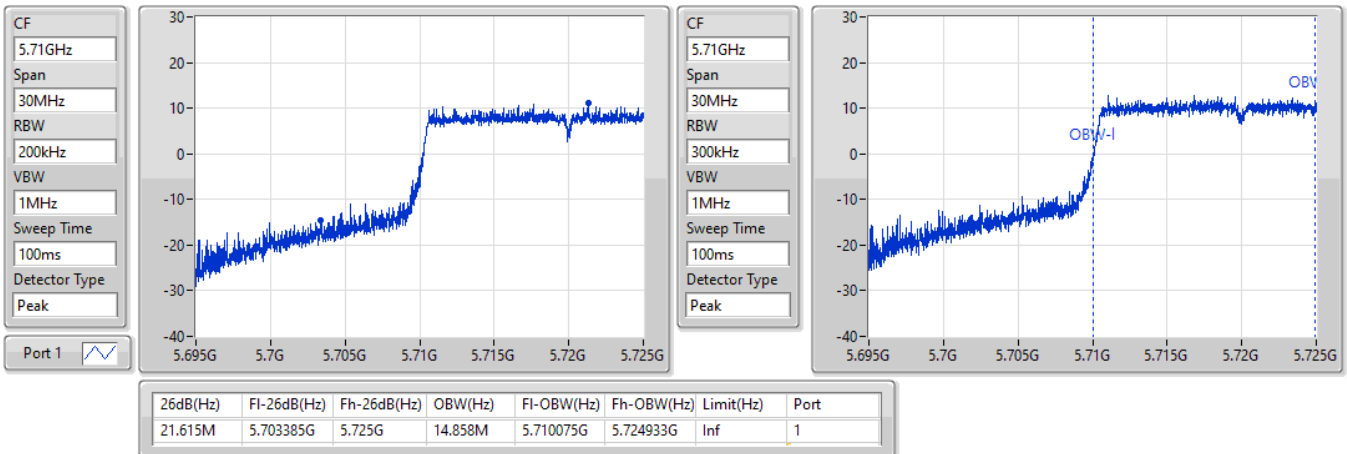

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5700MHz

29/10/2021

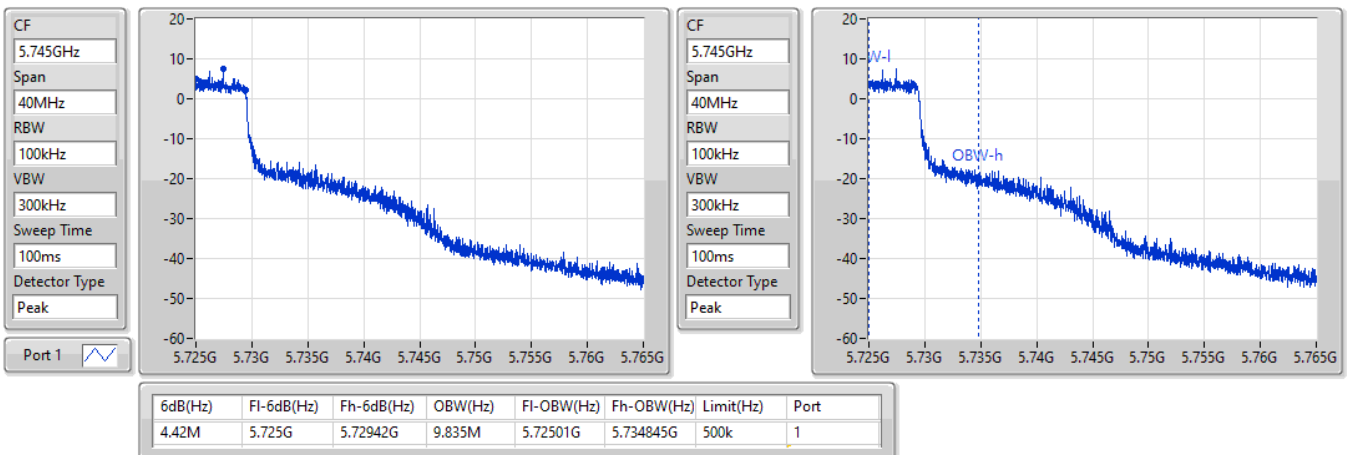


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5720MHz Straddle 5.47-5.725GHz

29/10/2021

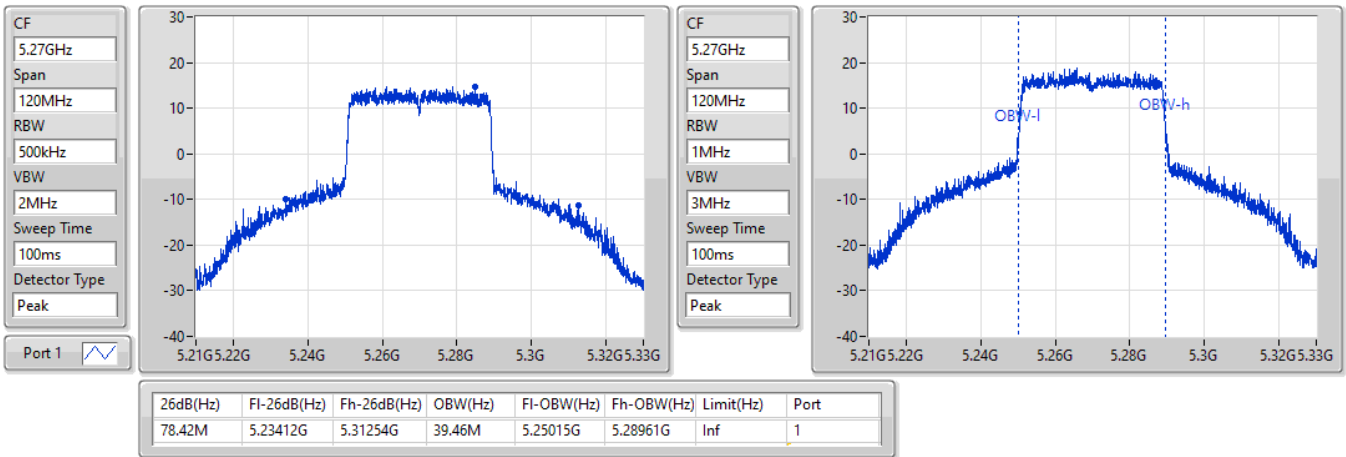

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5720MHz Straddle 5.725-5.85GHz

29/10/2021

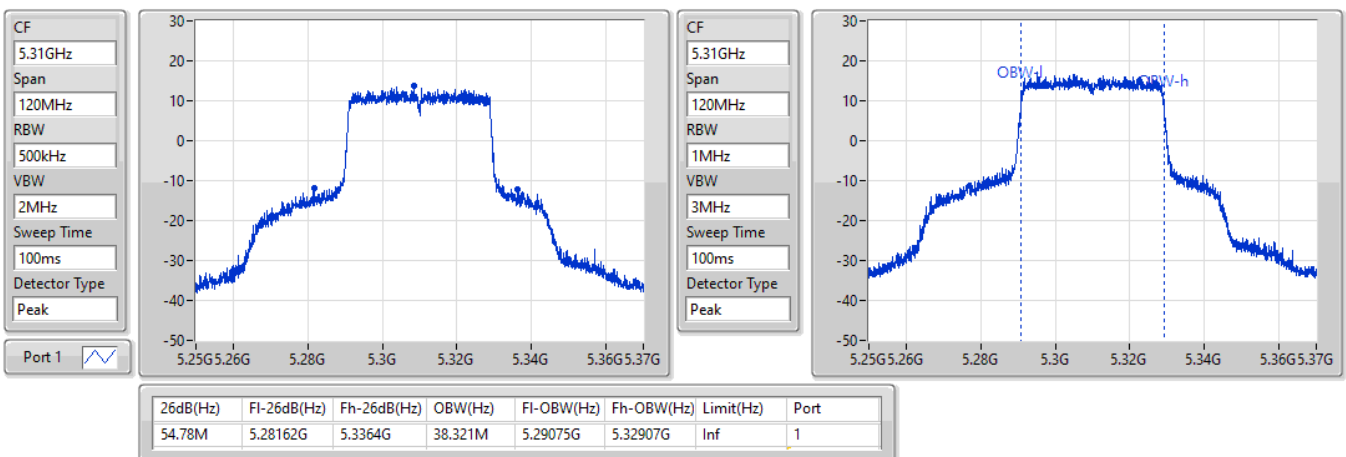


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
5270MHz

29/10/2021

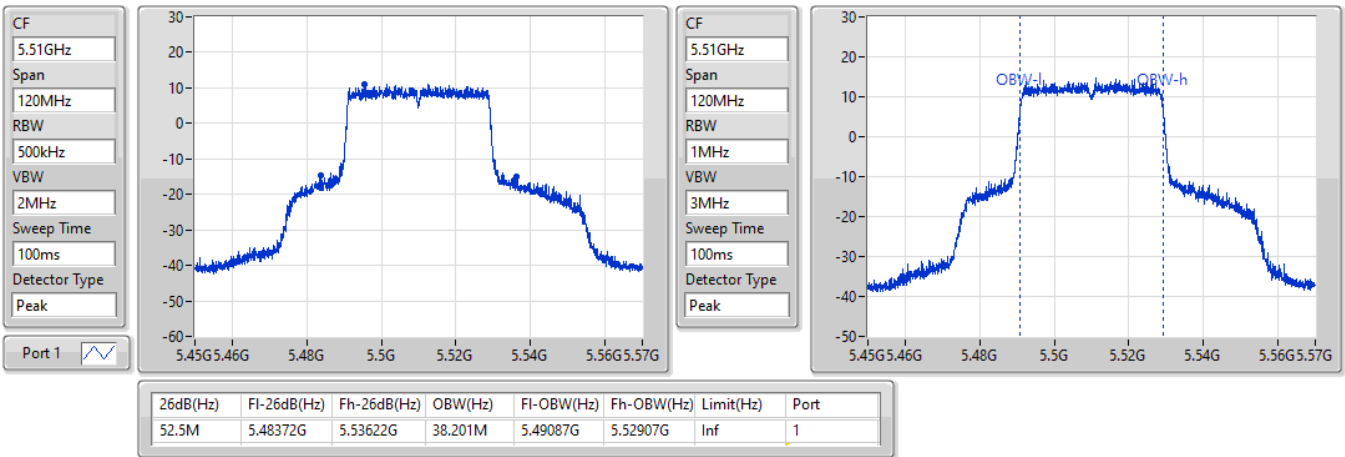

802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
5310MHz

29/10/2021

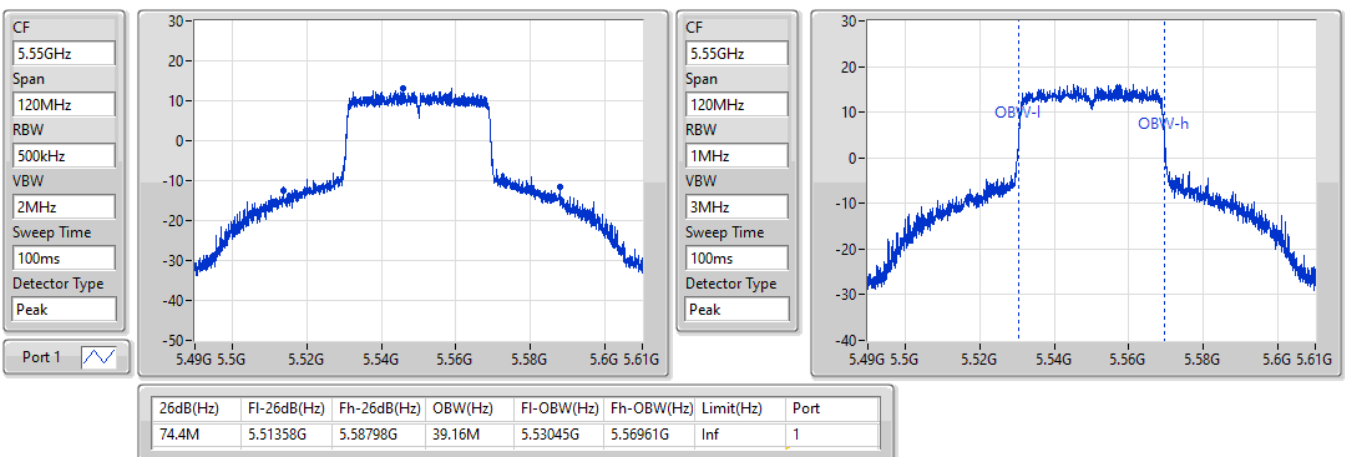


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
5510MHz

29/10/2021

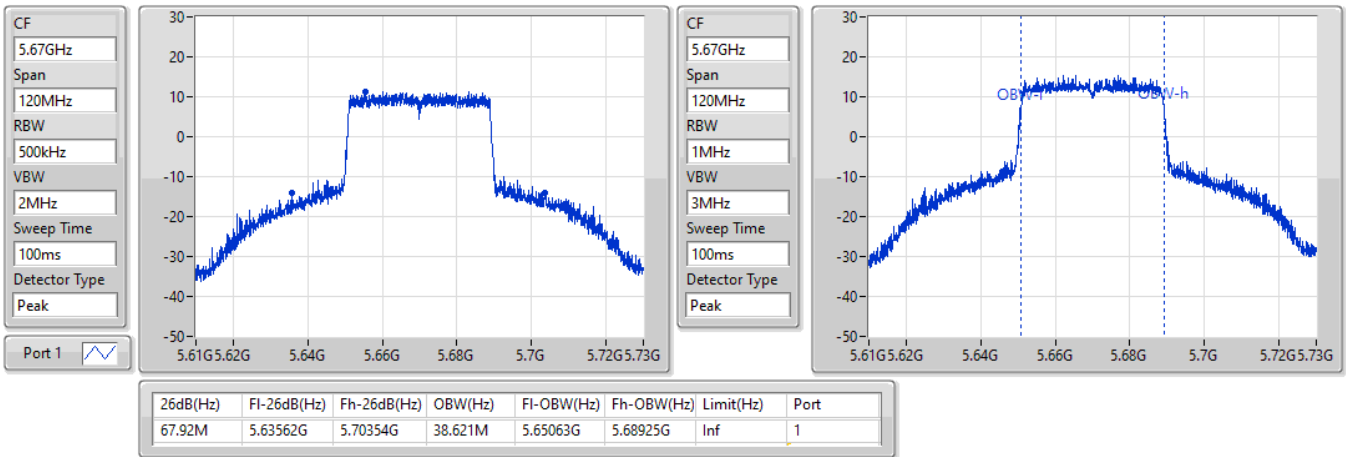

802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
5550MHz

29/10/2021

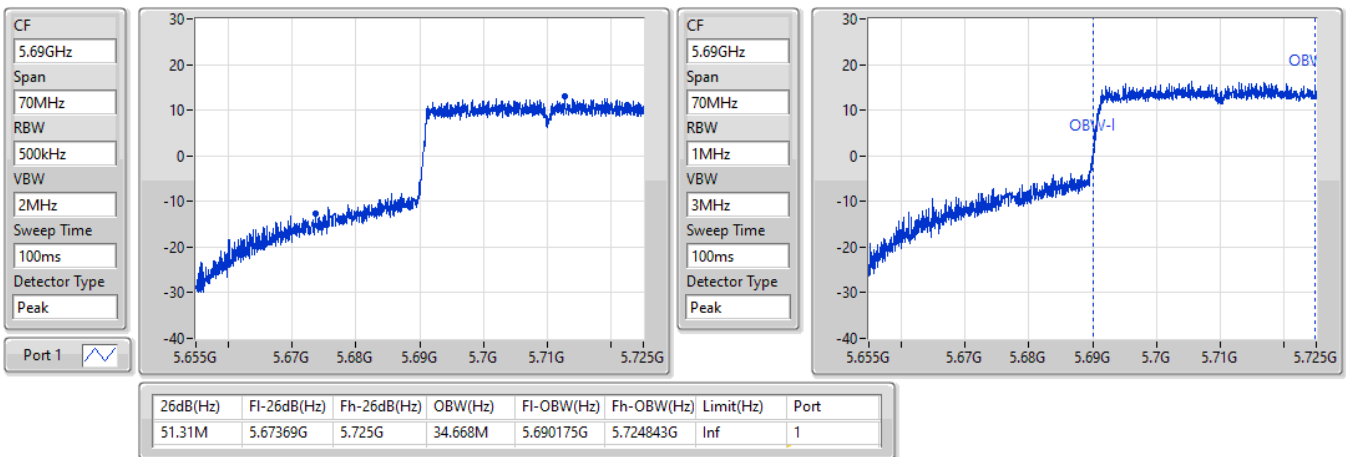


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
5670MHz

29/10/2021

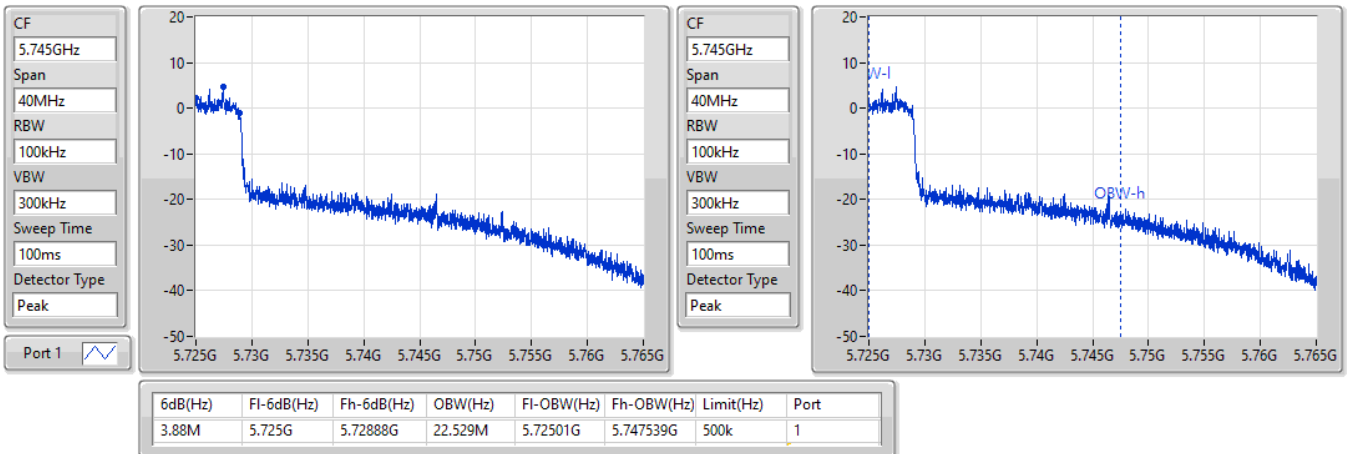

802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
5710MHz Straddle 5.47-5.725GHz

29/10/2021

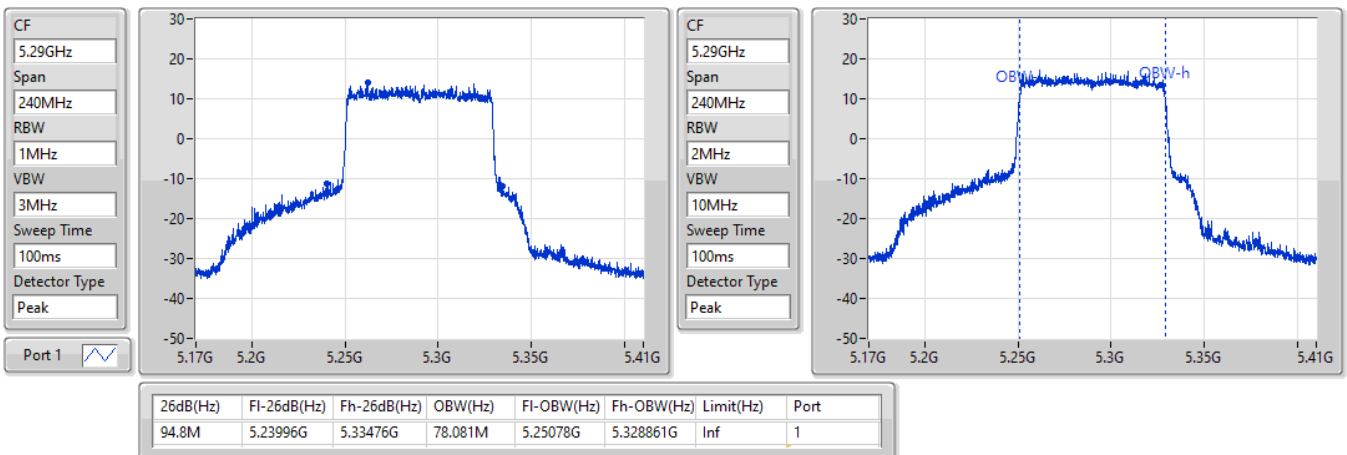


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
5710MHz Straddle 5.725-5.85GHz

29/10/2021

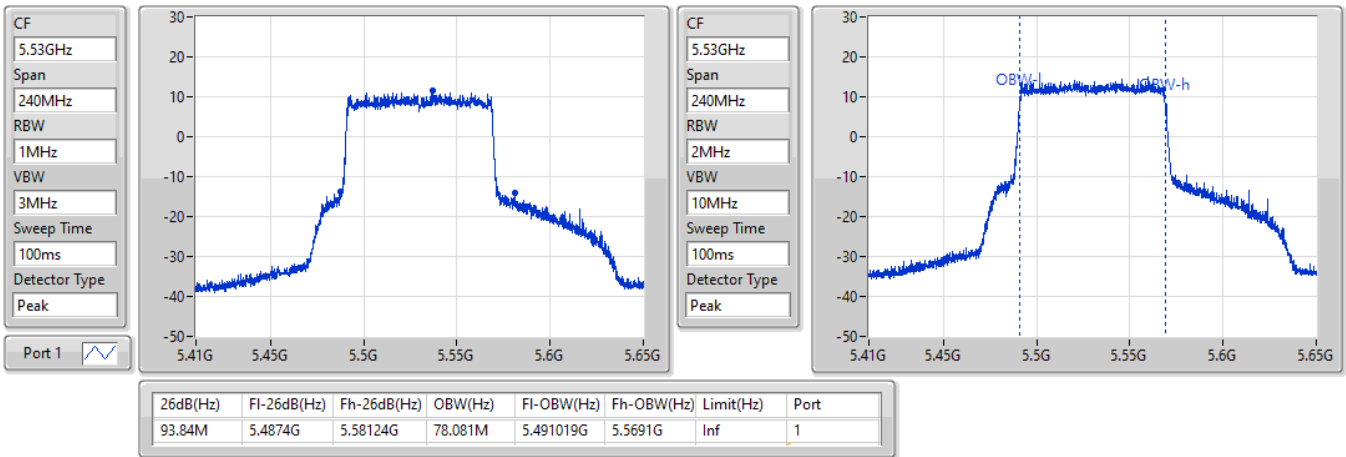

802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
5290MHz

29/10/2021

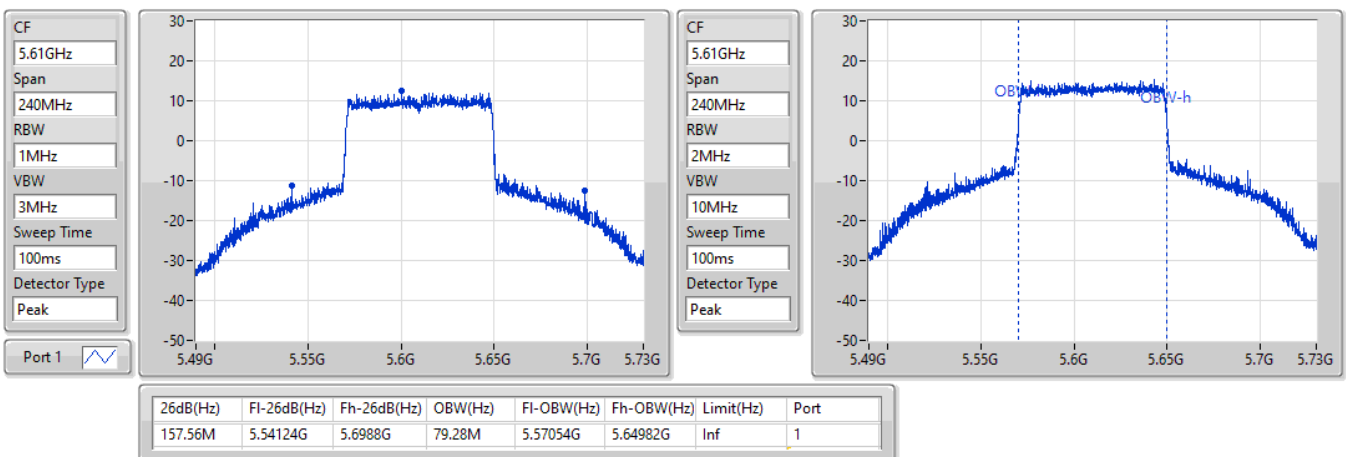


802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
5530MHz

29/10/2021

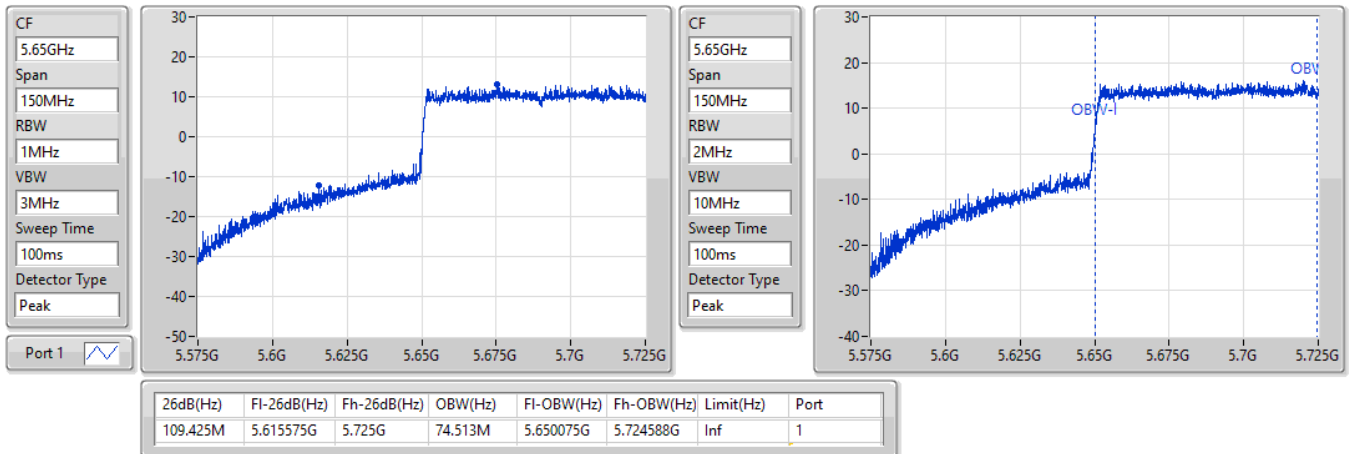

802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
5610MHz

29/10/2021

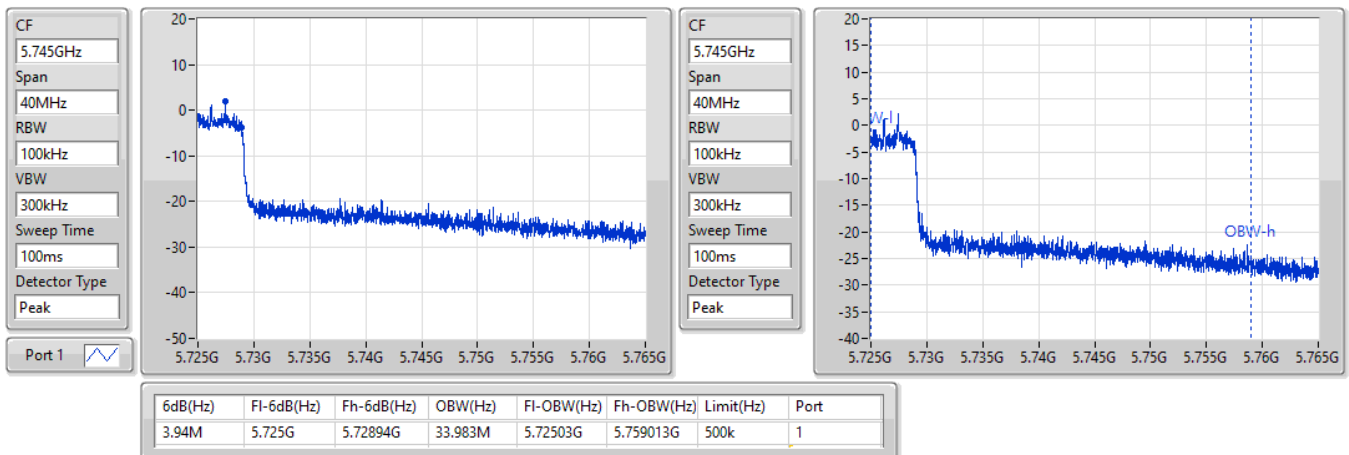


802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
5690MHz Straddle 5.47-5.725GHz

29/10/2021


802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
5690MHz Straddle 5.725-5.85GHz

29/10/2021



Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.25-5.35GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	26.04M	17.451M	17M5D1D	21.45M	16.942M
802.11ax HEW20_Nss1,(MCS0)_4TX	27.21M	19.31M	19M3D1D	21.54M	19.1M
802.11ax HEW40_Nss1,(MCS0)_4TX	64.56M	38.441M	38M4D1D	40.38M	38.021M
802.11ax HEW80_Nss1,(MCS0)_4TX	89.88M	77.961M	78M0D1D	83.88M	77.841M
5.47-5.725GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	27.36M	17.481M	17M5D1D	15.72M	13.568M
802.11ax HEW20_Nss1,(MCS0)_4TX	27.33M	19.25M	19M2D1D	15.825M	14.603M
802.11ax HEW40_Nss1,(MCS0)_4TX	60.06M	38.381M	38M4D1D	40.38M	34.003M
802.11ax HEW80_Nss1,(MCS0)_4TX	107.325M	78.081M	78M1D1D	81.72M	73.613M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	3.14M	4.438M	4M44D1D	3.14M	4.178M
802.11ax HEW20_Nss1,(MCS0)_4TX	4.48M	4.758M	4M76D1D	4.44M	4.678M
802.11ax HEW40_Nss1,(MCS0)_4TX	3.96M	21.849M	21M8D1D	3.8M	10.055M
802.11ax HEW80_Nss1,(MCS0)_4TX	3.84M	33.523M	33M5D1D	3.74M	21.889M

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

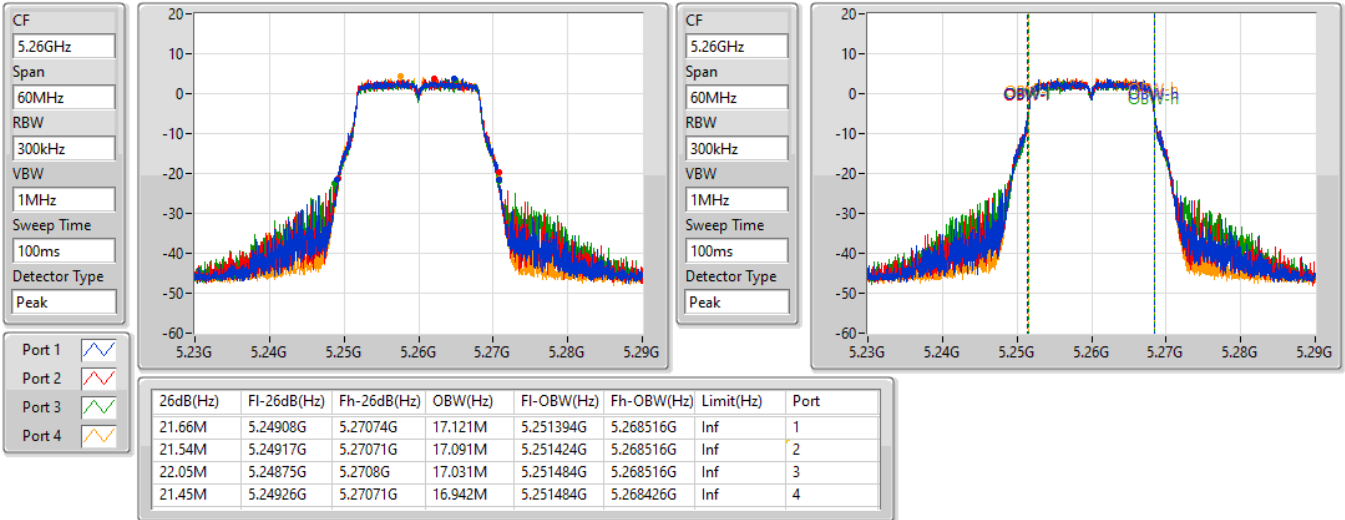
Result

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)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	21.66M	17.121M	21.54M	17.091M	22.05M	17.031M	21.45M	16.942M
5300MHz	Pass	Inf	21.96M	17.121M	21.93M	17.091M	22.02M	17.031M	21.51M	16.942M
5320MHz	Pass	Inf	25.26M	17.451M	26.04M	17.451M	25.68M	17.391M	24.36M	17.331M
5500MHz	Pass	Inf	27.36M	17.481M	24.09M	17.361M	25.68M	17.331M	23.55M	17.331M
5580MHz	Pass	Inf	21.6M	17.091M	23.22M	17.091M	21.63M	17.001M	21.75M	16.972M
5700MHz	Pass	Inf	21.72M	17.121M	21.63M	17.061M	21.54M	17.001M	21.54M	16.912M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.75M	13.673M	16.53M	13.748M	15.72M	13.568M	16.095M	13.658M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.14M	4.278M	3.14M	4.438M	3.14M	4.238M	3.14M	4.178M
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	21.72M	19.1M	21.75M	19.1M	21.72M	19.16M	21.75M	19.1M
5300MHz	Pass	Inf	21.93M	19.13M	21.63M	19.1M	21.6M	19.13M	21.54M	19.1M
5320MHz	Pass	Inf	26.16M	19.31M	23.46M	19.25M	27.21M	19.28M	24.66M	19.22M
5500MHz	Pass	Inf	25.62M	19.25M	24.33M	19.22M	25.2M	19.22M	27.33M	19.25M
5580MHz	Pass	Inf	21.87M	19.16M	21.54M	19.13M	21.87M	19.13M	21.6M	19.13M
5700MHz	Pass	Inf	21.81M	19.16M	21.87M	19.1M	21.93M	19.13M	21.63M	19.1M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.825M	14.603M	15.87M	14.633M	15.855M	14.618M	15.855M	14.618M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	4.44M	4.758M	4.48M	4.738M	4.44M	4.738M	4.48M	4.678M
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5270MHz	Pass	Inf	51.6M	38.201M	46.8M	38.141M	64.56M	38.441M	40.38M	38.021M
5310MHz	Pass	Inf	47.64M	38.141M	47.34M	38.201M	46.26M	38.201M	46.62M	38.201M
5510MHz	Pass	Inf	47.58M	38.201M	46.92M	38.141M	49.14M	38.201M	48.3M	38.261M
5550MHz	Pass	Inf	47.7M	38.141M	60.06M	38.381M	45.54M	38.081M	45M	38.081M
5670MHz	Pass	Inf	40.56M	37.961M	40.38M	37.901M	40.44M	37.961M	40.56M	38.021M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	40.74M	34.003M	40.845M	34.143M	48.125M	34.353M	54.81M	34.598M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.92M	10.055M	3.92M	16.352M	3.96M	20.01M	3.8M	21.849M
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5290MHz	Pass	Inf	83.88M	77.841M	84.6M	77.961M	89.88M	77.961M	86.4M	77.961M
5530MHz	Pass	Inf	89.64M	78.081M	92.28M	78.081M	84M	77.841M	84.96M	77.961M
5610MHz	Pass	Inf	82.44M	77.721M	81.84M	77.841M	81.72M	77.841M	84.48M	77.961M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	88.35M	73.838M	91.2M	73.688M	107.325M	74.438M	84.6M	73.613M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.84M	21.889M	3.82M	26.307M	3.74M	33.523M	3.82M	22.869M

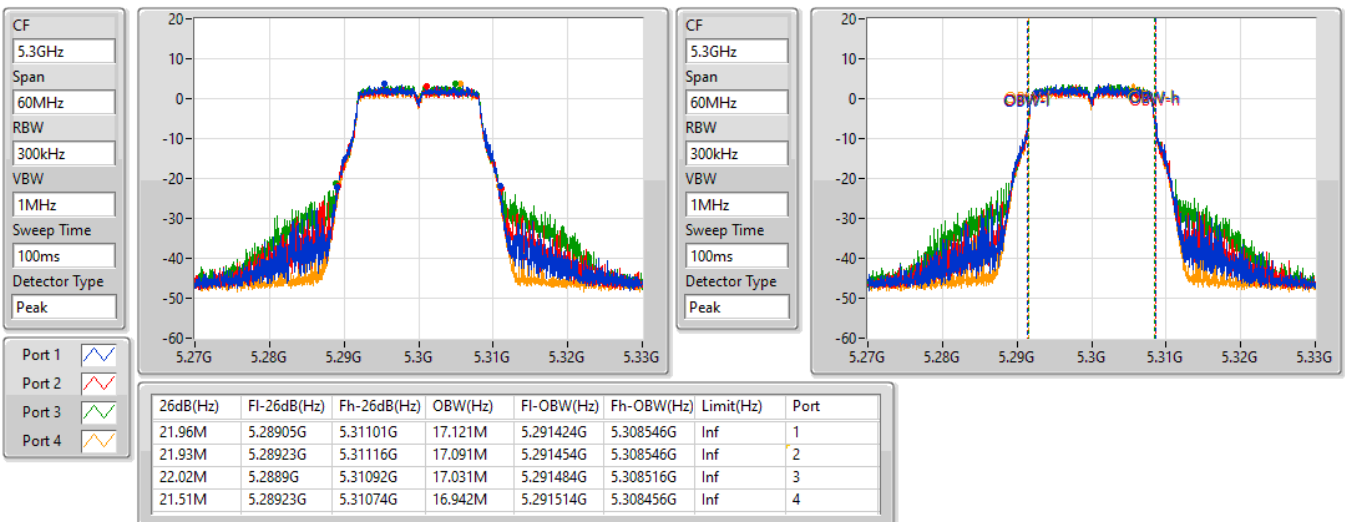
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11a_Nss1,(6Mbps)_4TX
EBW
5260MHz

13/01/2022

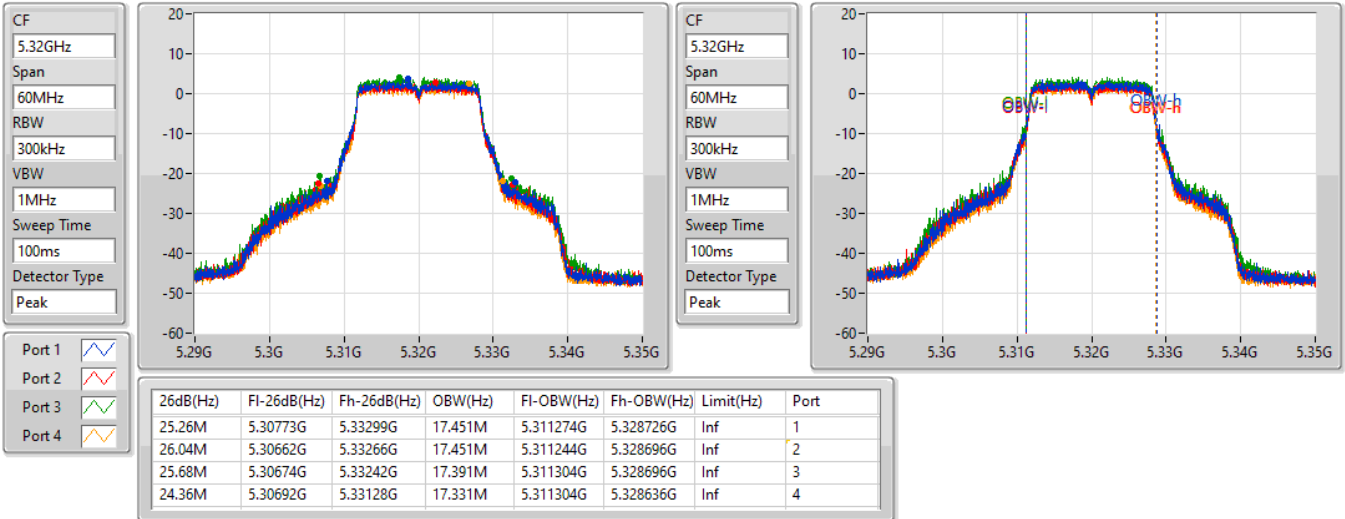

802.11a_Nss1,(6Mbps)_4TX
EBW
5300MHz

14/01/2022

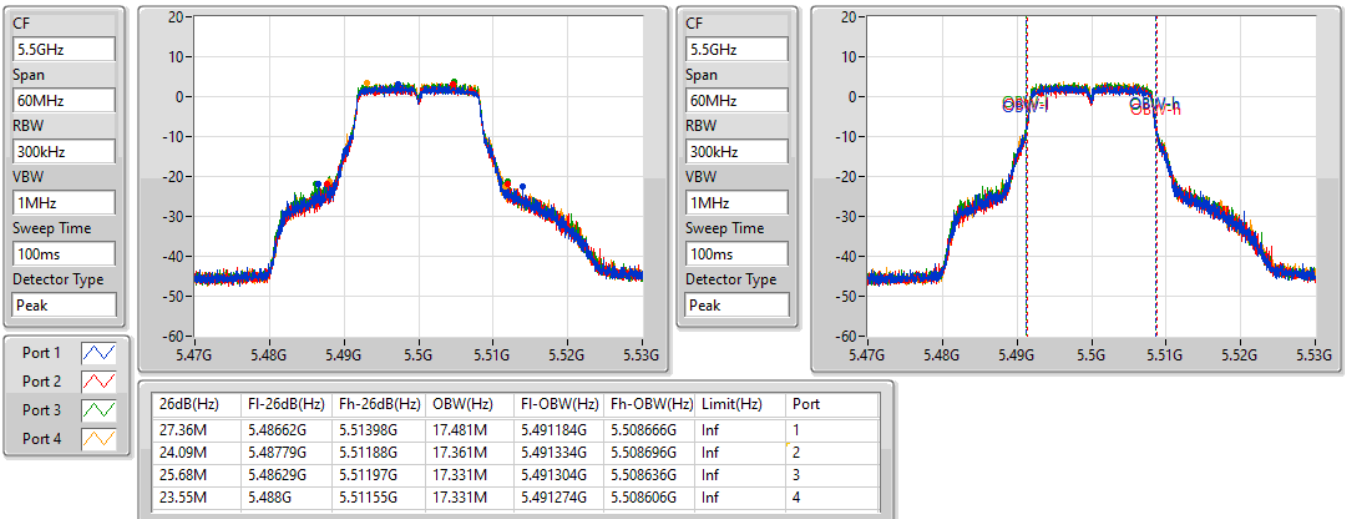


802.11a_Nss1,(6Mbps)_4TX
EBW
5320MHz

14/01/2022

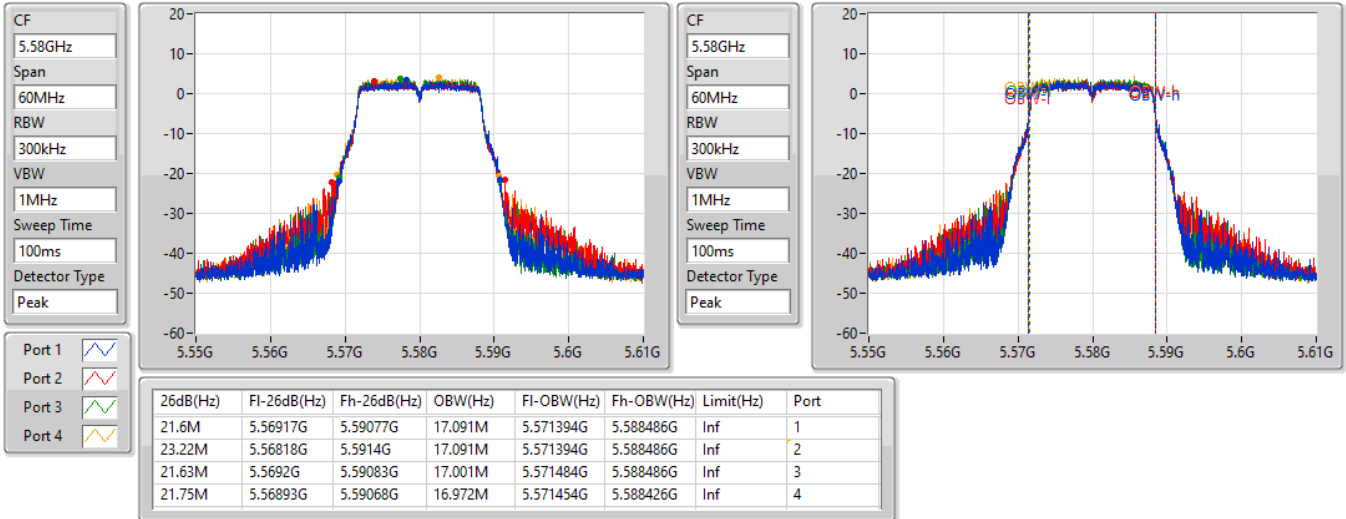

802.11a_Nss1,(6Mbps)_4TX
EBW
5500MHz

13/01/2022

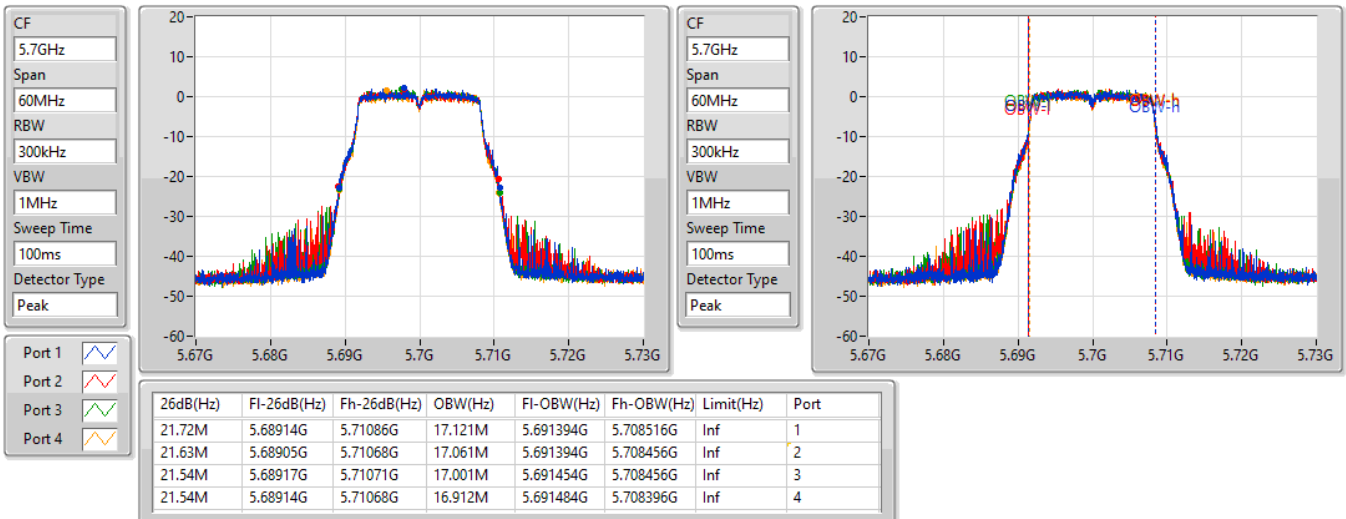


802.11a_Nss1,(6Mbps)_4TX
EBW
5580MHz

13/01/2022

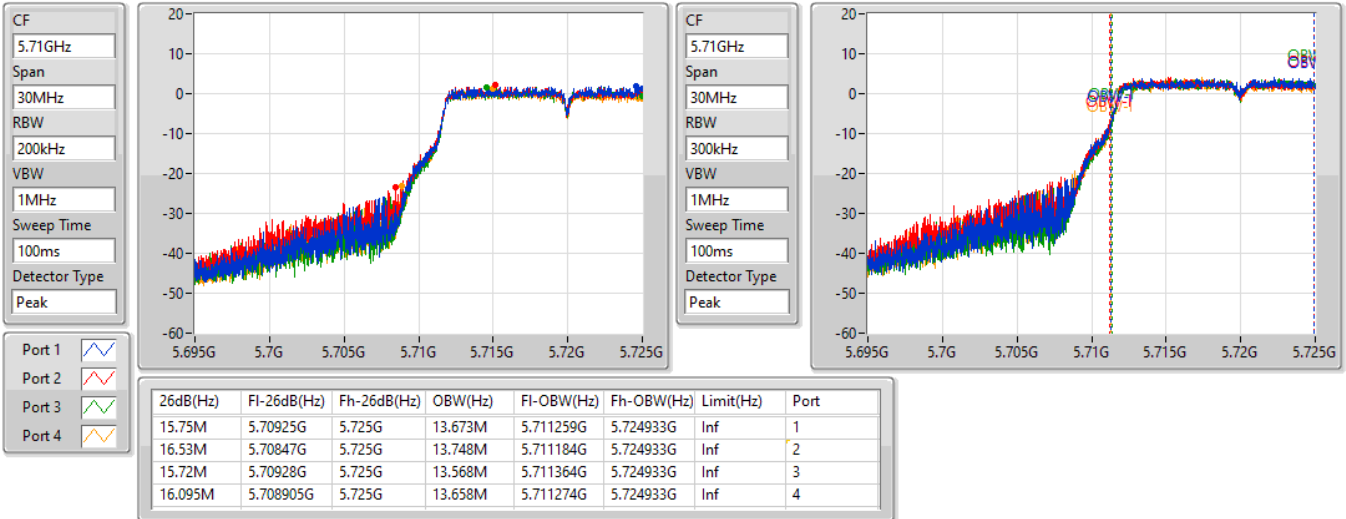

802.11a_Nss1,(6Mbps)_4TX
EBW
5700MHz

13/01/2022

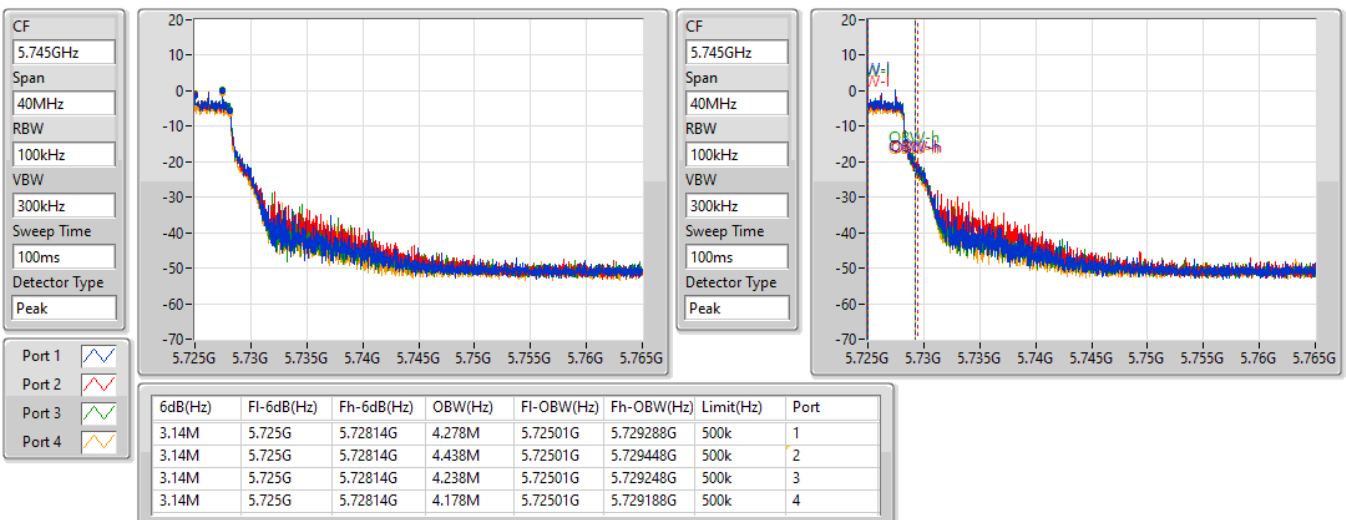


802.11a_Nss1,(6Mbps)_4TX
EBW
5720MHz Straddle 5.47-5.725GHz

13/01/2022


802.11a_Nss1,(6Mbps)_4TX
EBW
5720MHz Straddle 5.725-5.85GHz

14/01/2022

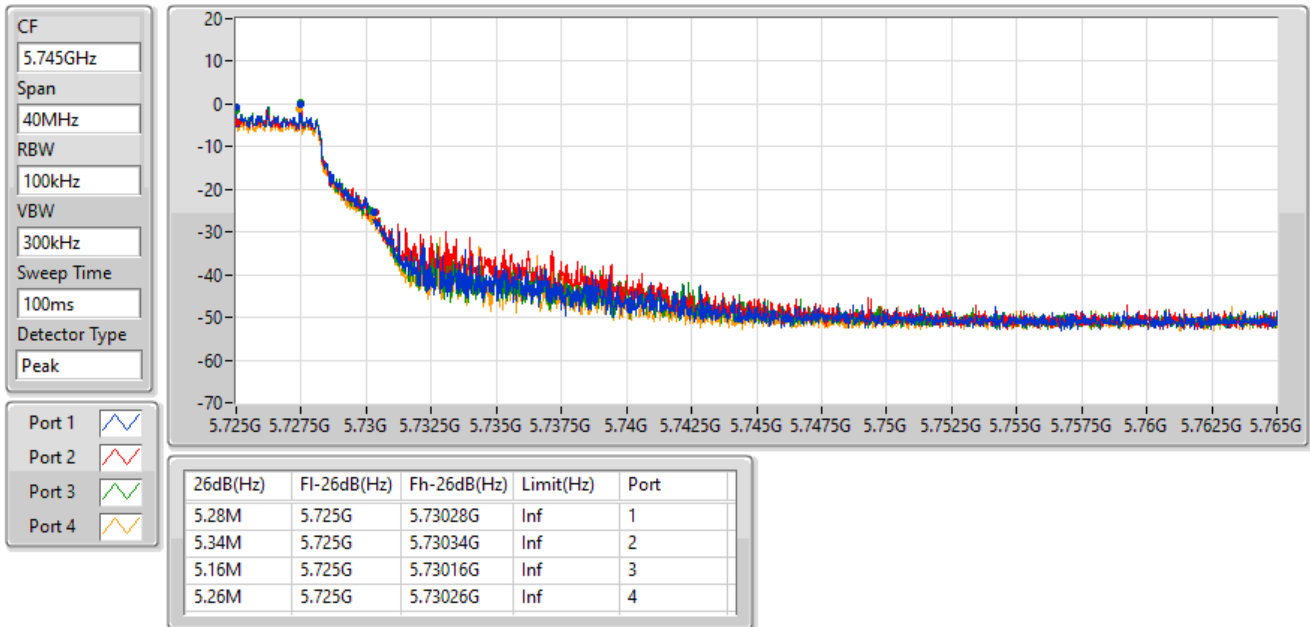


802.11a_Nss1,(6Mbps)_4TX

EBW

5720MHz Straddle 5.725-5.85GHz

14/01/2022

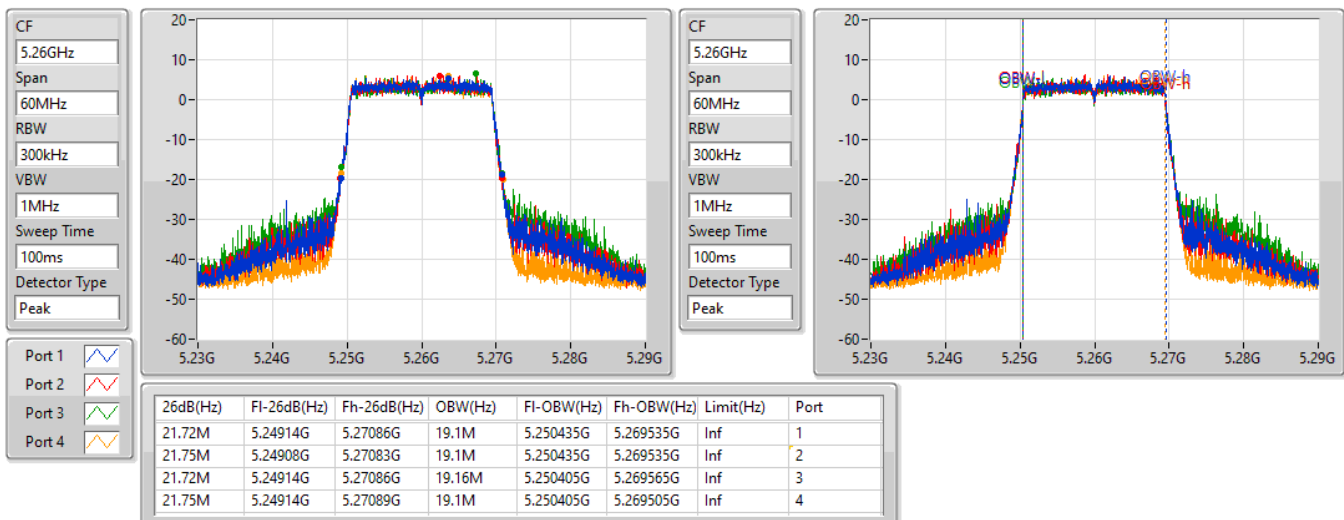


802.11ax HEW20_Nss1,(MCS0)_4TX

EBW

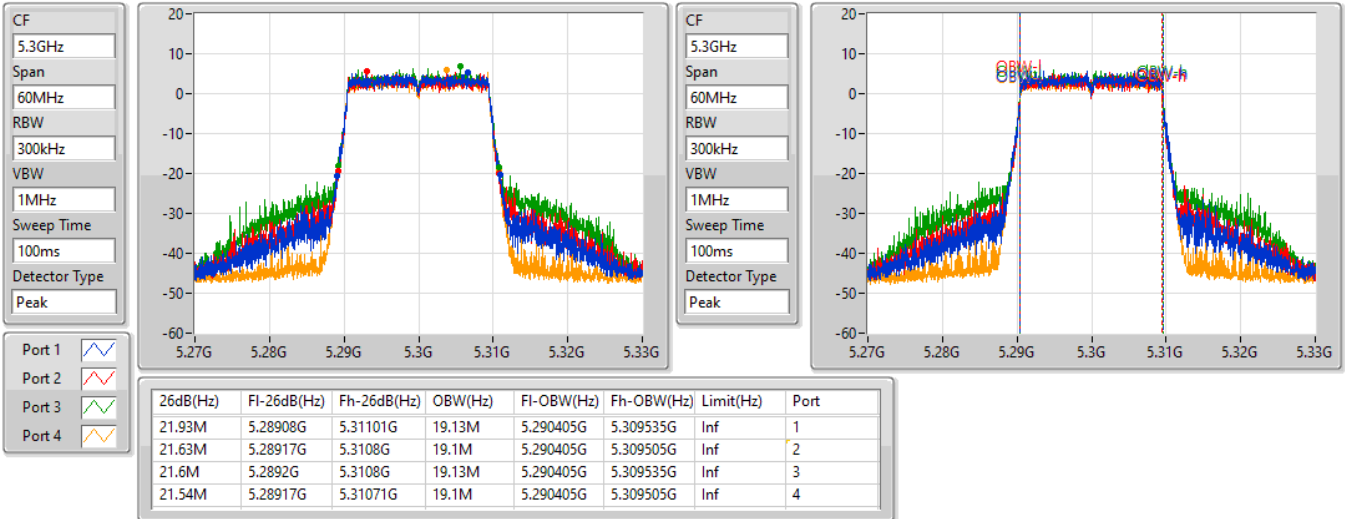
5260MHz

13/01/2022

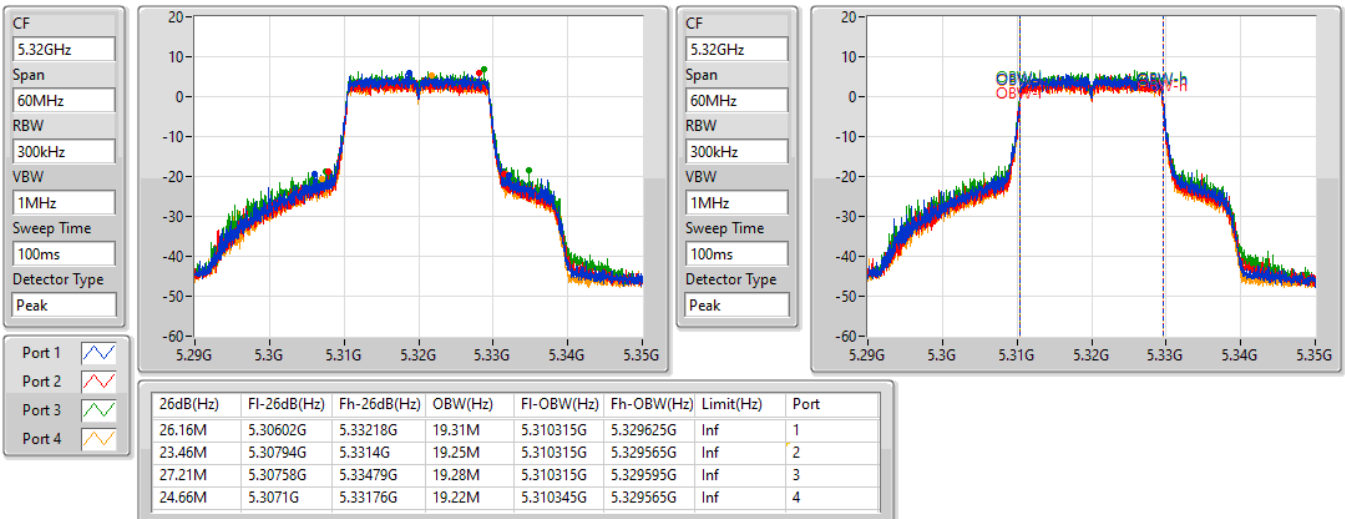


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5300MHz

13/01/2022

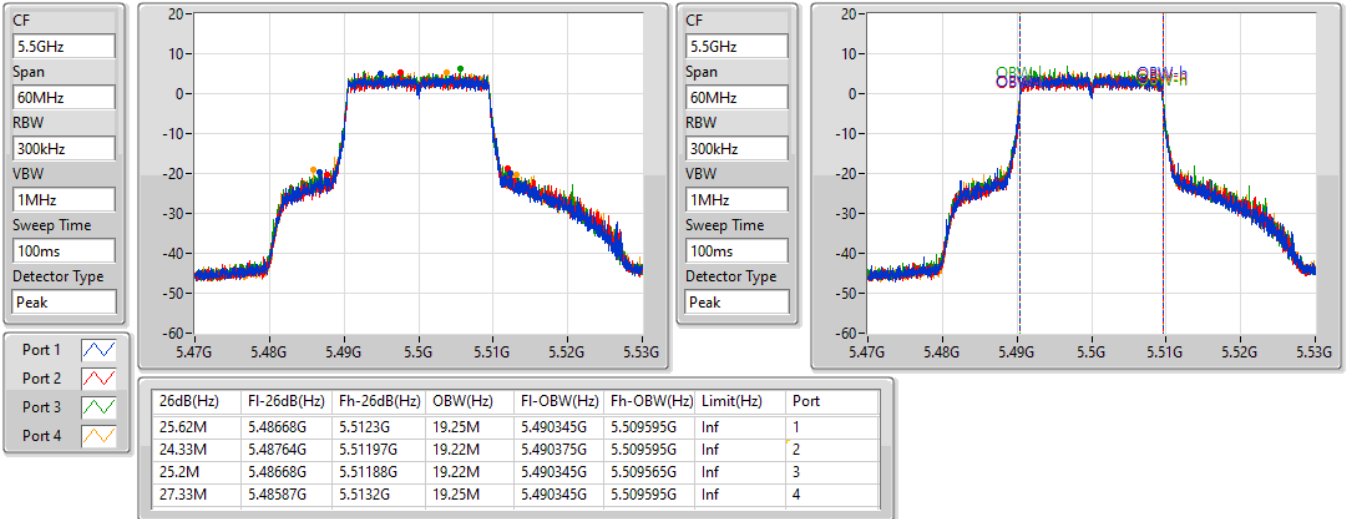

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5320MHz

13/01/2022

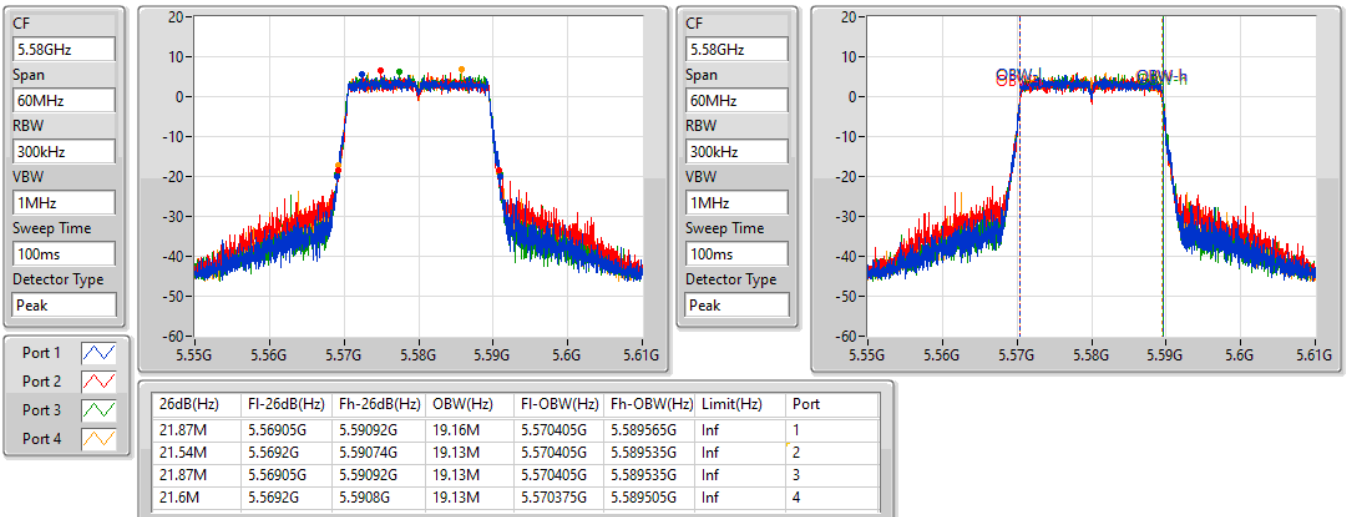


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5500MHz

13/01/2022

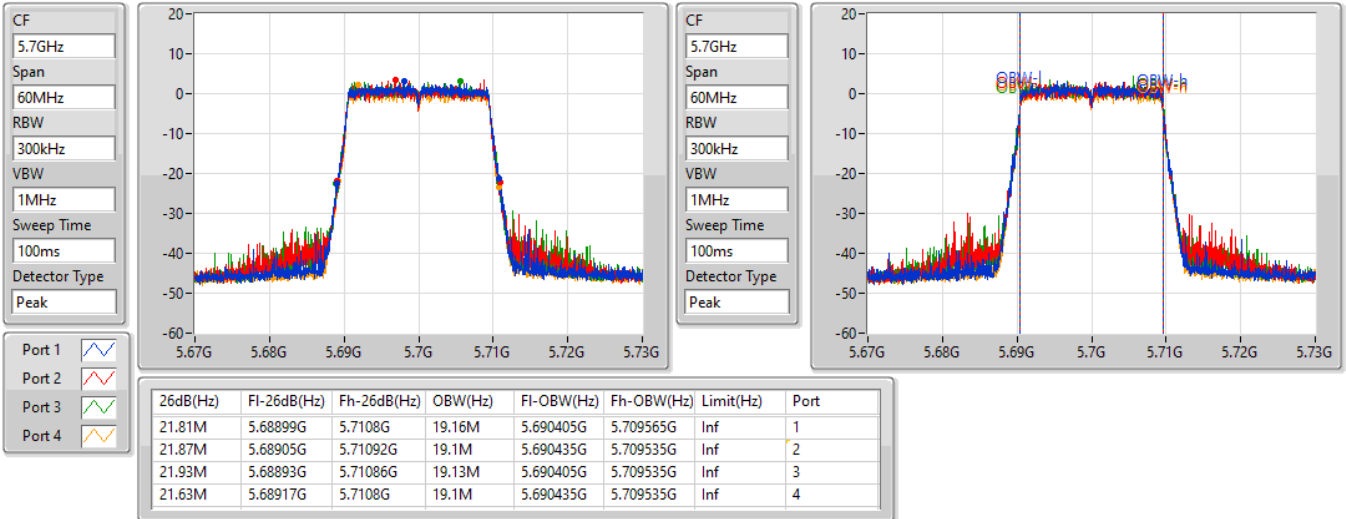

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5580MHz

13/01/2022

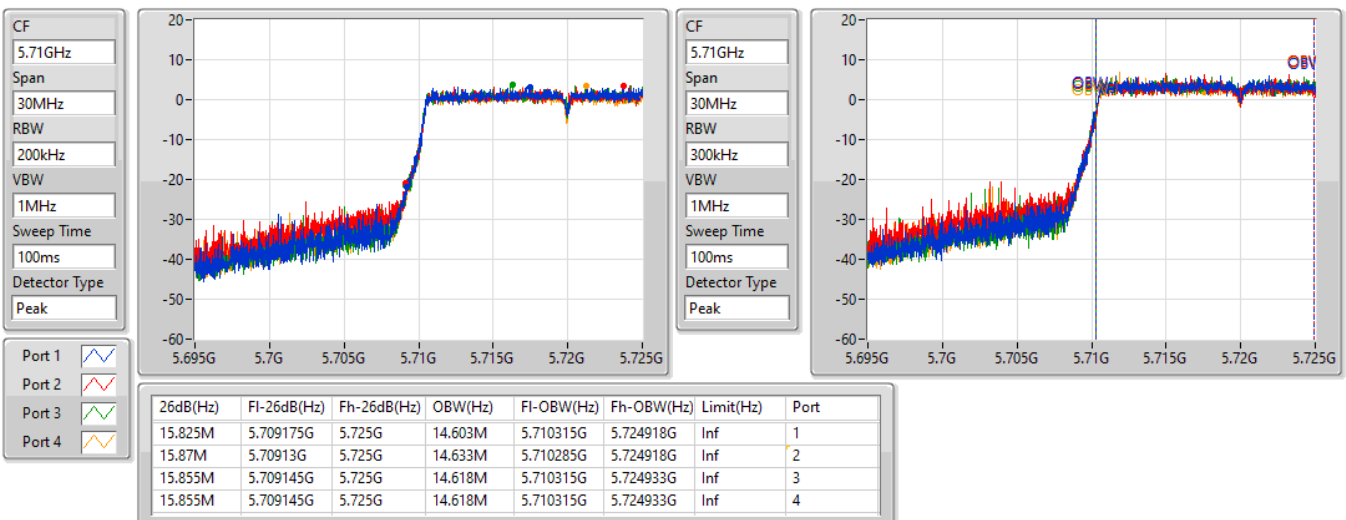


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5700MHz

14/01/2022

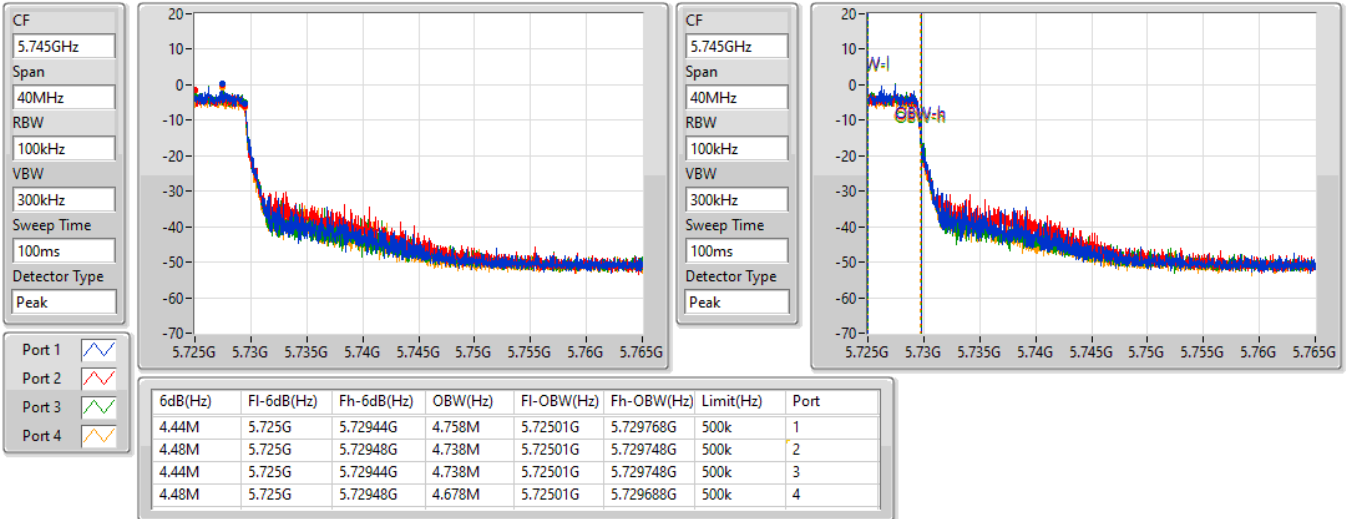

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5720MHz Straddle 5.47-5.725GHz

13/01/2022

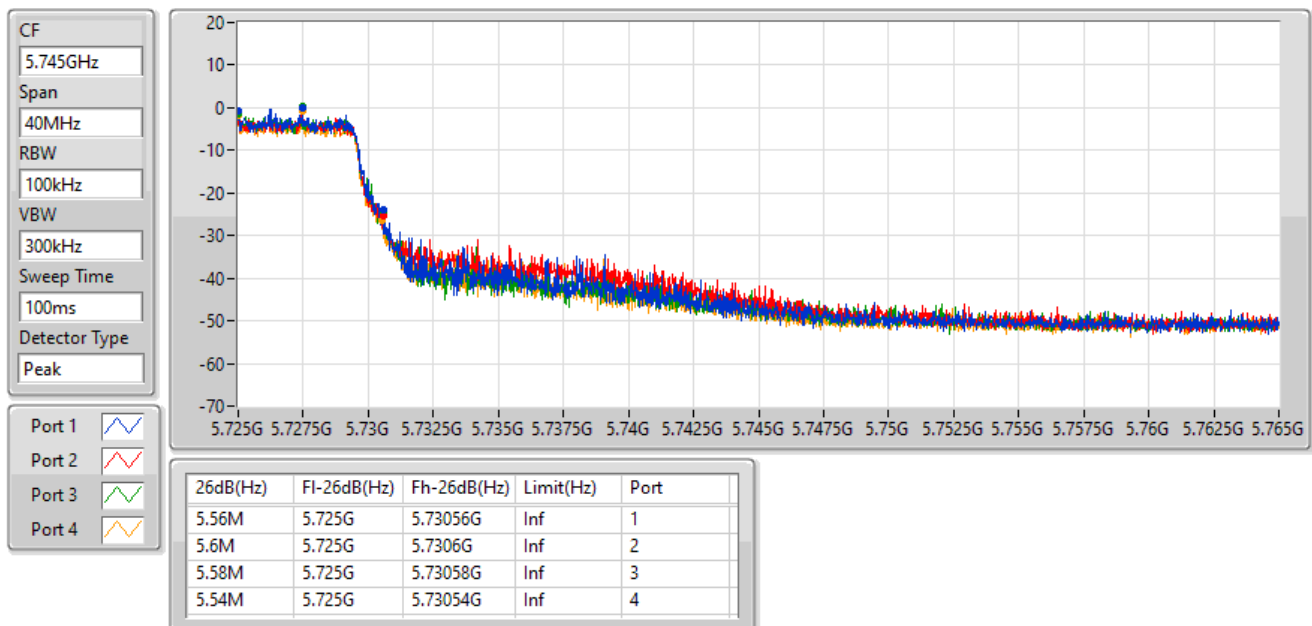


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5720MHz Straddle 5.725-5.85GHz

14/01/2022


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5720MHz Straddle 5.725-5.85GHz

14/01/2022

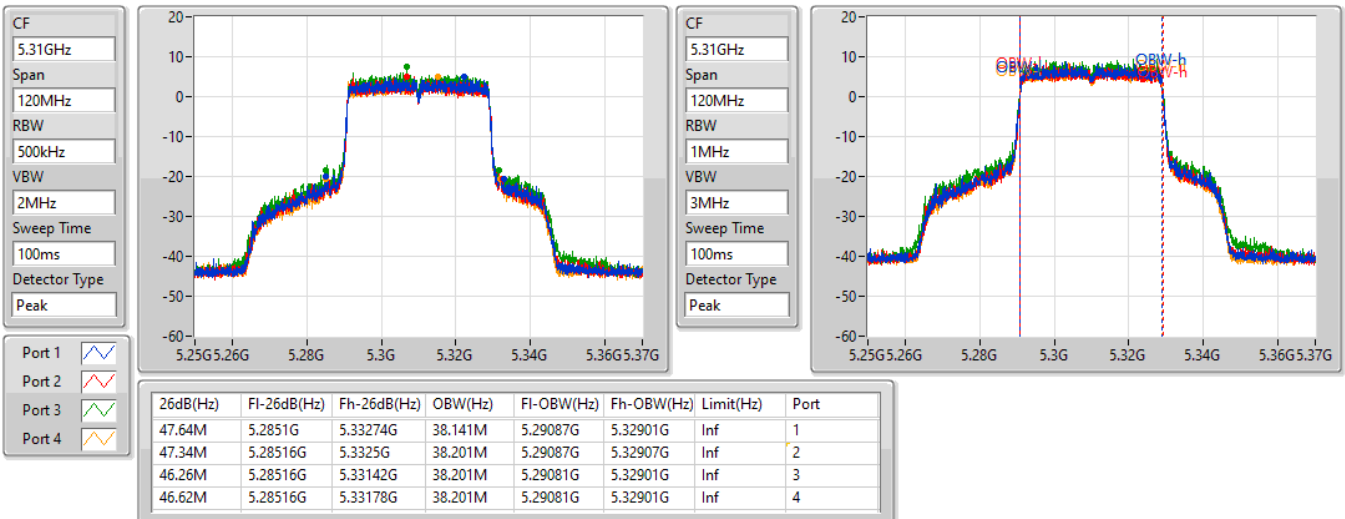


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5270MHz

13/01/2022

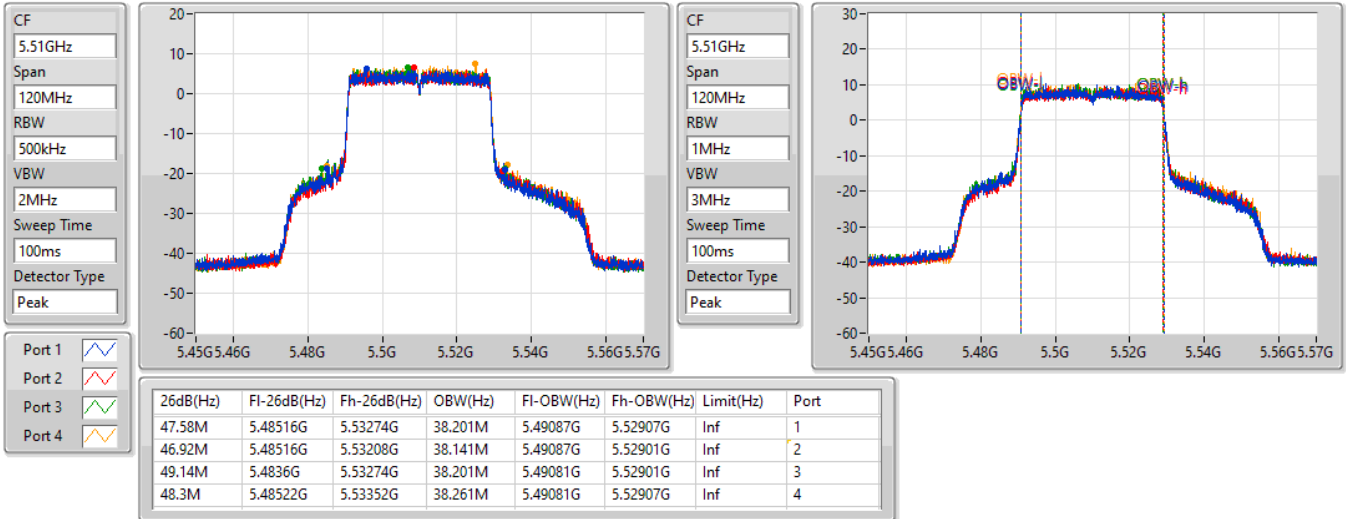

802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5310MHz

13/01/2022

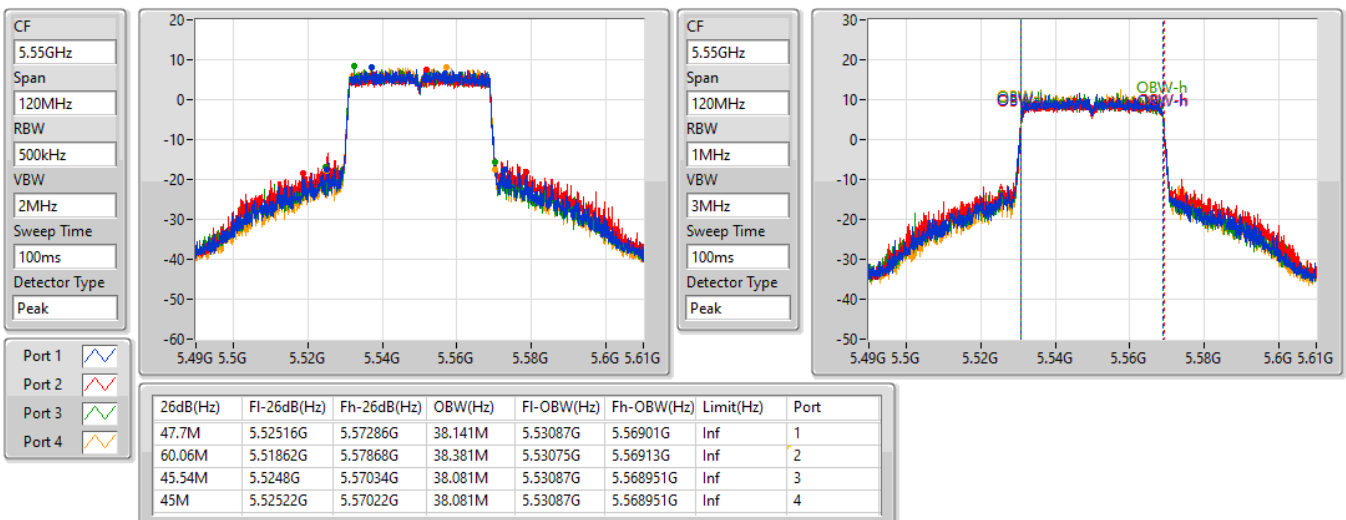


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5510MHz

13/01/2022

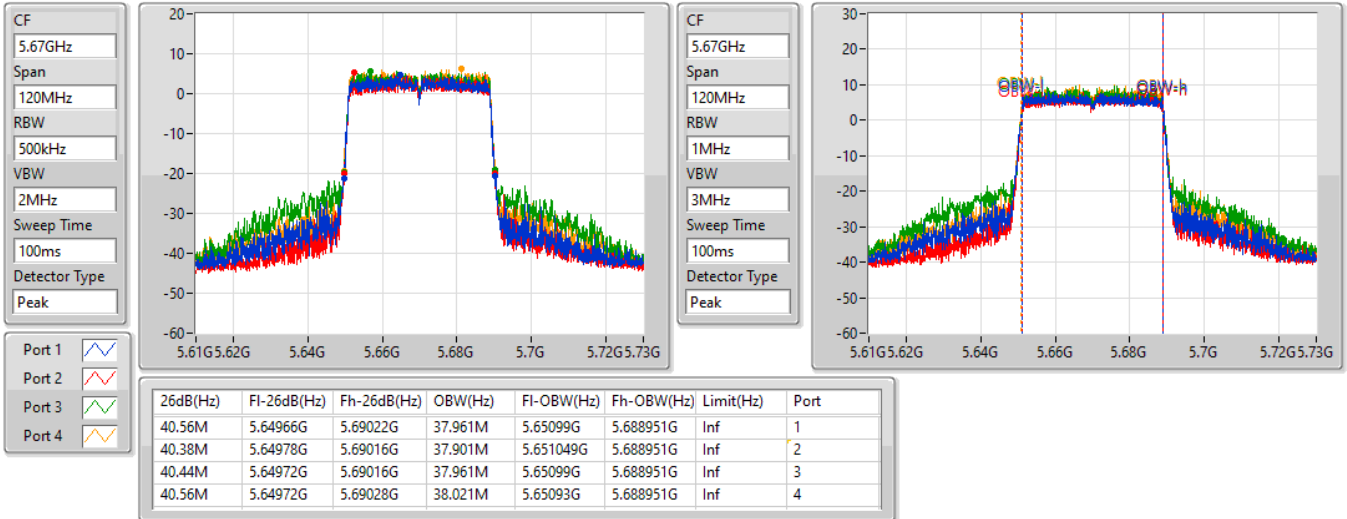

802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5550MHz

13/01/2022

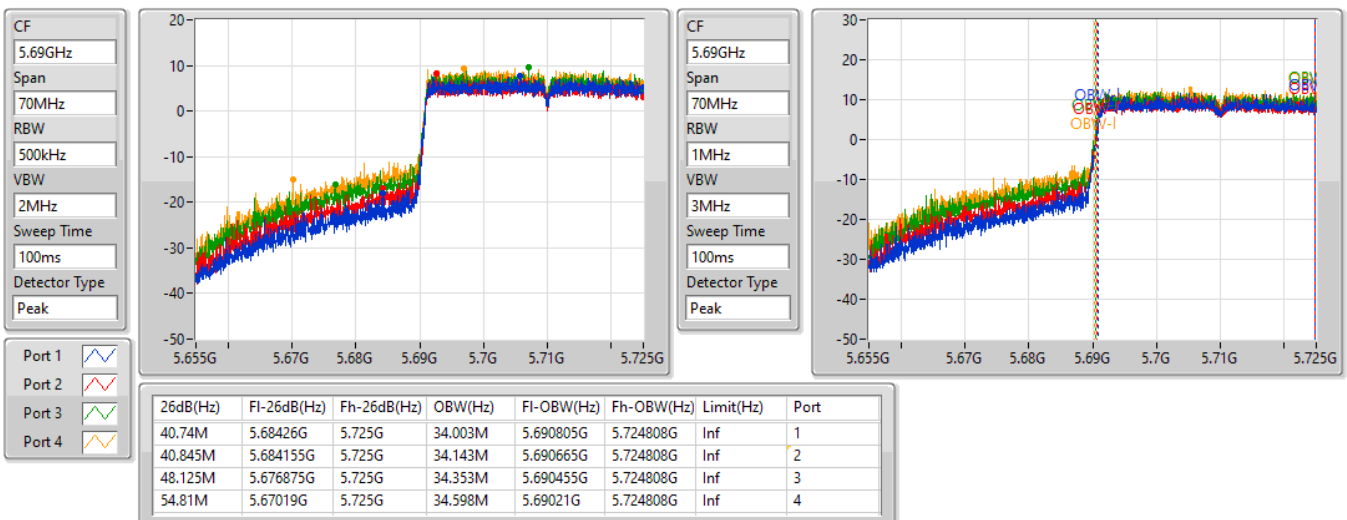


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5670MHz

13/01/2022

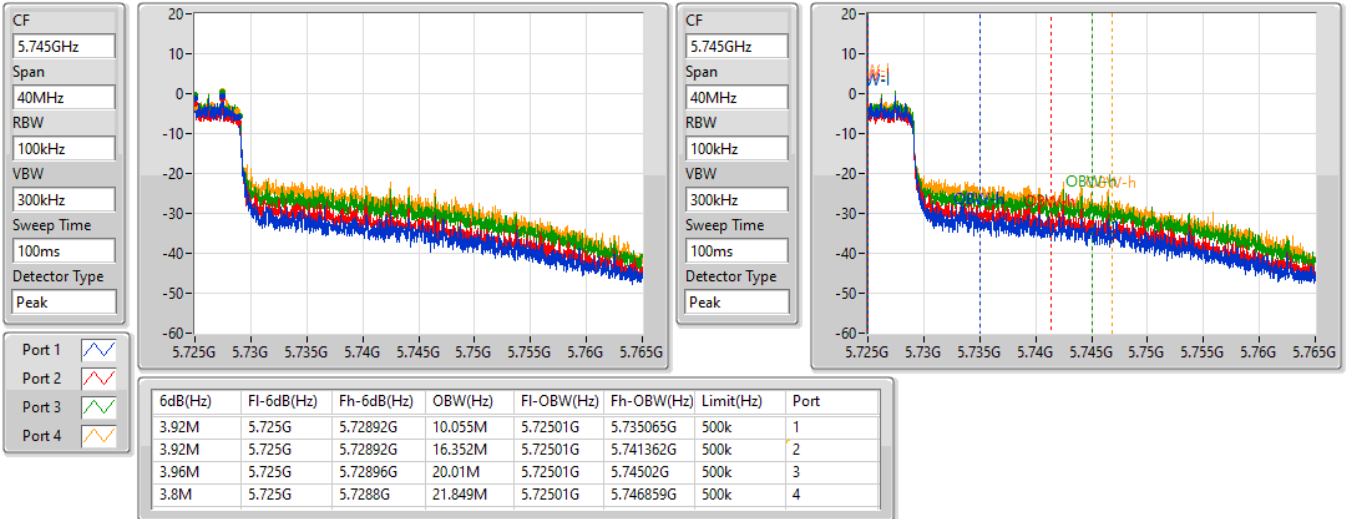

802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5710MHz Straddle 5.47-5.725GHz

14/01/2022

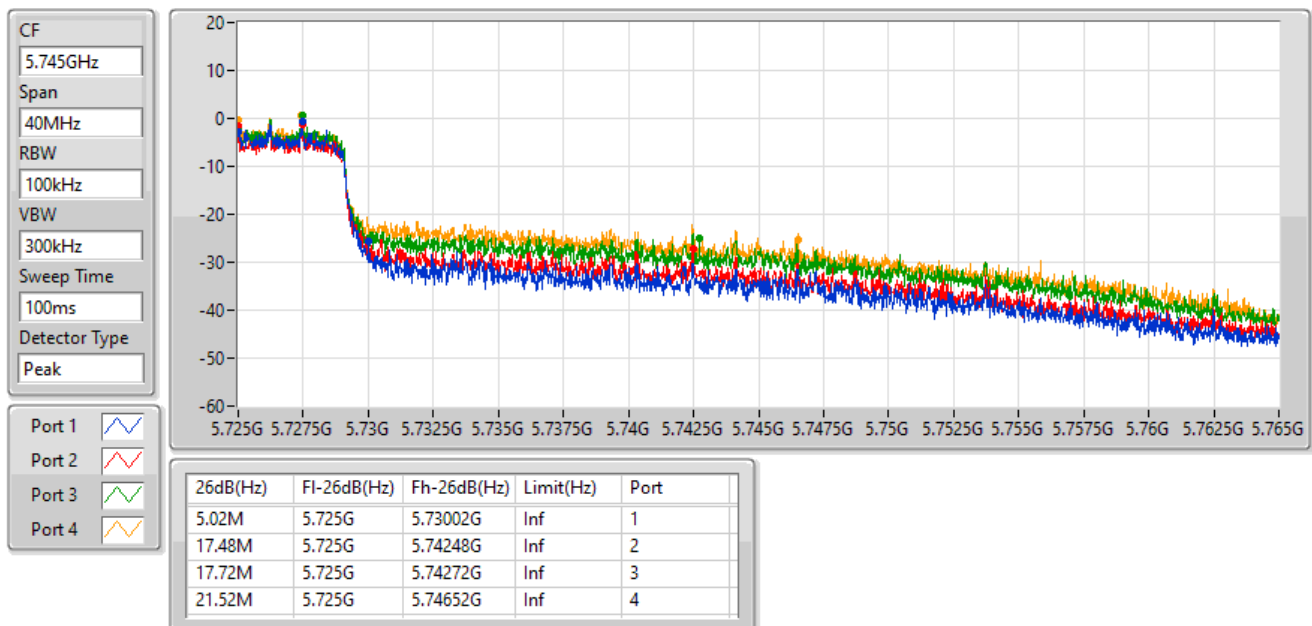


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5710MHz Straddle 5.725-5.85GHz

14/01/2022

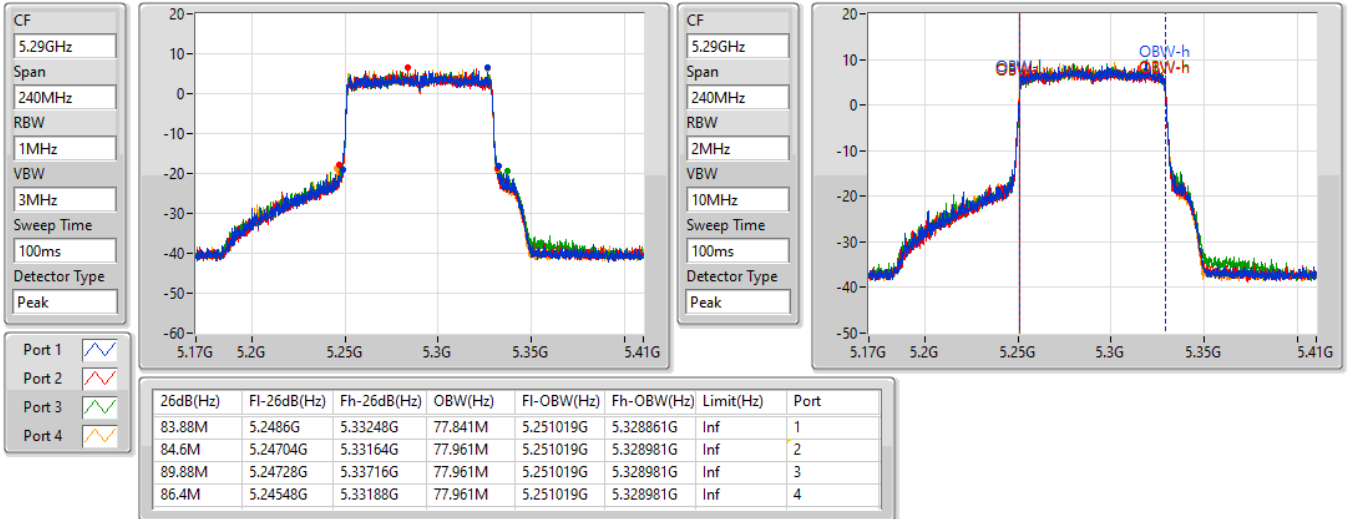

802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5710MHz Straddle 5.725-5.85GHz

14/01/2022

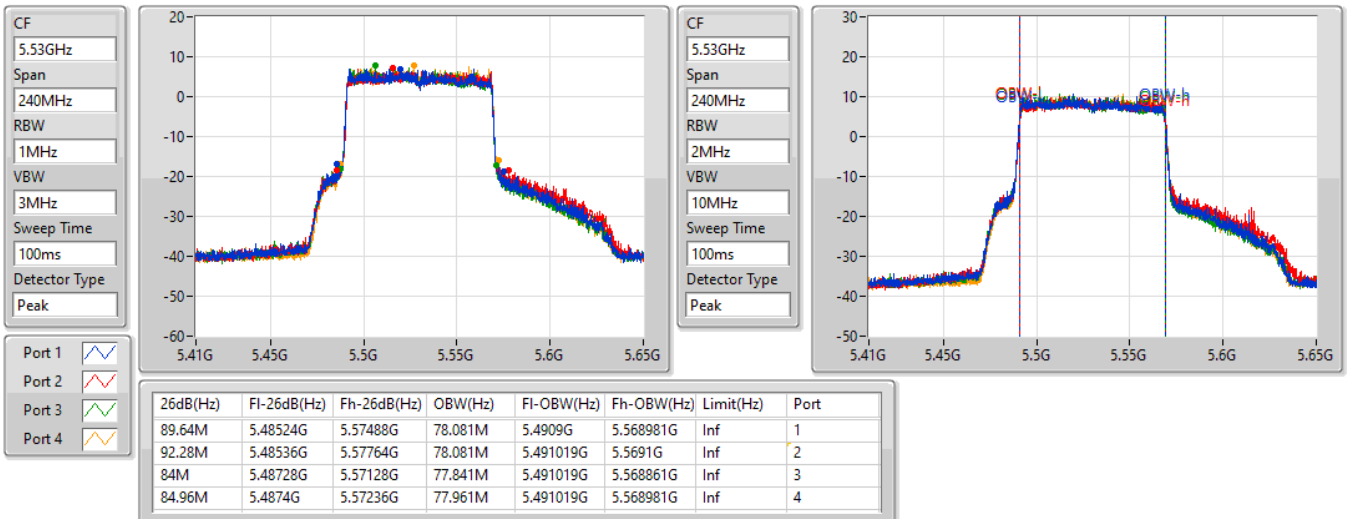


802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5290MHz

13/01/2022

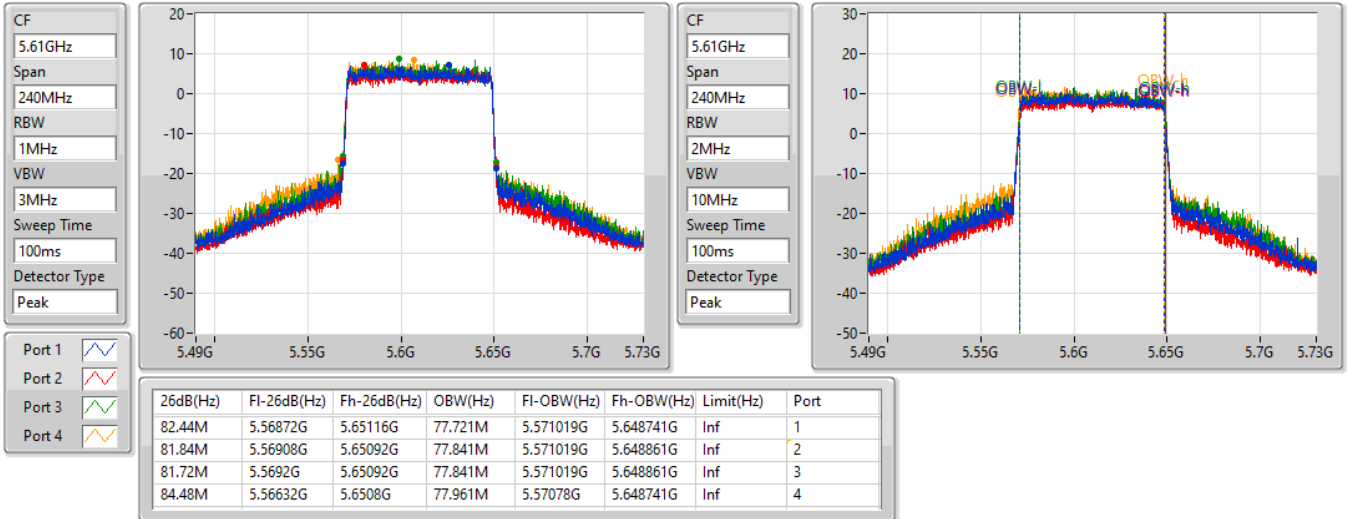

802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5530MHz

13/01/2022

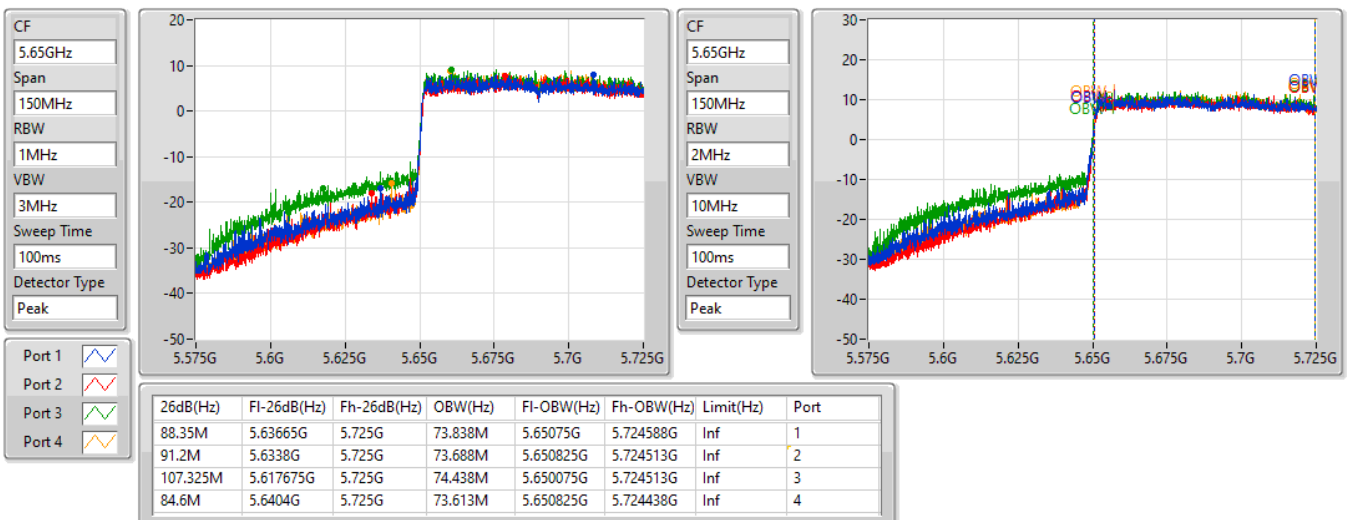


802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5610MHz

13/01/2022

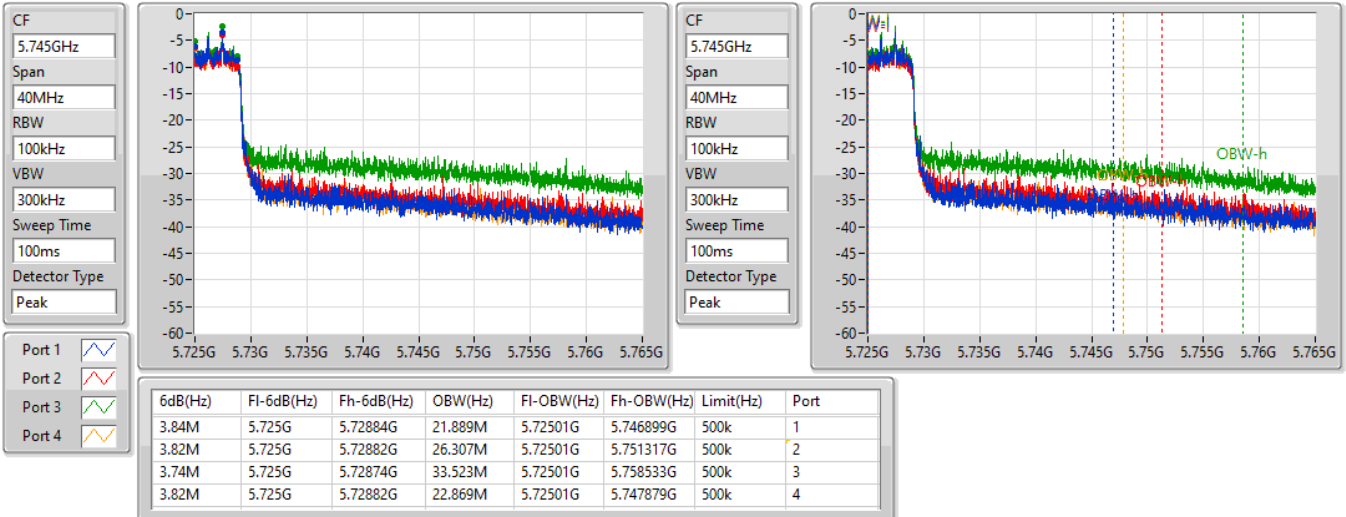

802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5690MHz Straddle 5.47-5.725GHz

14/01/2022

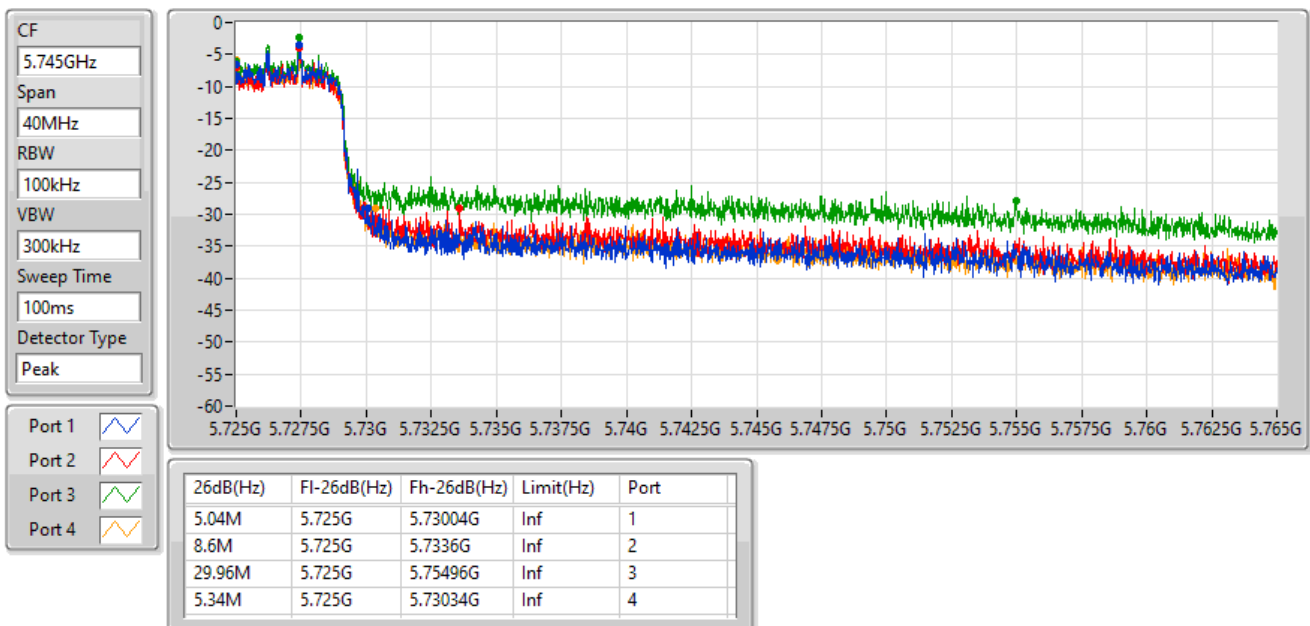


802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5690MHz Straddle 5.725-5.85GHz

14/01/2022


802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5690MHz Straddle 5.725-5.85GHz

14/01/2022



Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.25-5.35GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	26.76M	17.451M	17M5D1D	21.3M	16.942M
802.11ax HEW20_Nss1,(MCS0)_4TX	27.51M	19.25M	19M2D1D	21.42M	19.07M
802.11ax HEW40_Nss1,(MCS0)_4TX	46.68M	38.261M	38M3D1D	40.44M	37.841M
802.11ax HEW80_Nss1,(MCS0)_4TX	89.64M	78.081M	78M1D1D	84.24M	77.841M
5.47-5.725GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	25.53M	17.451M	17M5D1D	15.69M	13.553M
802.11ax HEW20_Nss1,(MCS0)_4TX	26.88M	19.25M	19M2D1D	15.78M	14.588M
802.11ax HEW40_Nss1,(MCS0)_4TX	49.68M	38.201M	38M2D1D	35.28M	33.898M
802.11ax HEW80_Nss1,(MCS0)_4TX	93.84M	78.081M	78M1D1D	76.125M	73.538M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	3.14M	4.238M	4M24D1D	3.12M	4.178M
802.11ax HEW20_Nss1,(MCS0)_4TX	4.44M	4.678M	4M68D1D	4.42M	4.618M
802.11ax HEW40_Nss1,(MCS0)_4TX	3.98M	4.218M	4M22D1D	3.84M	4.138M
802.11ax HEW80_Nss1,(MCS0)_4TX	3.86M	26.527M	26M5D1D	3.76M	7.776M

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

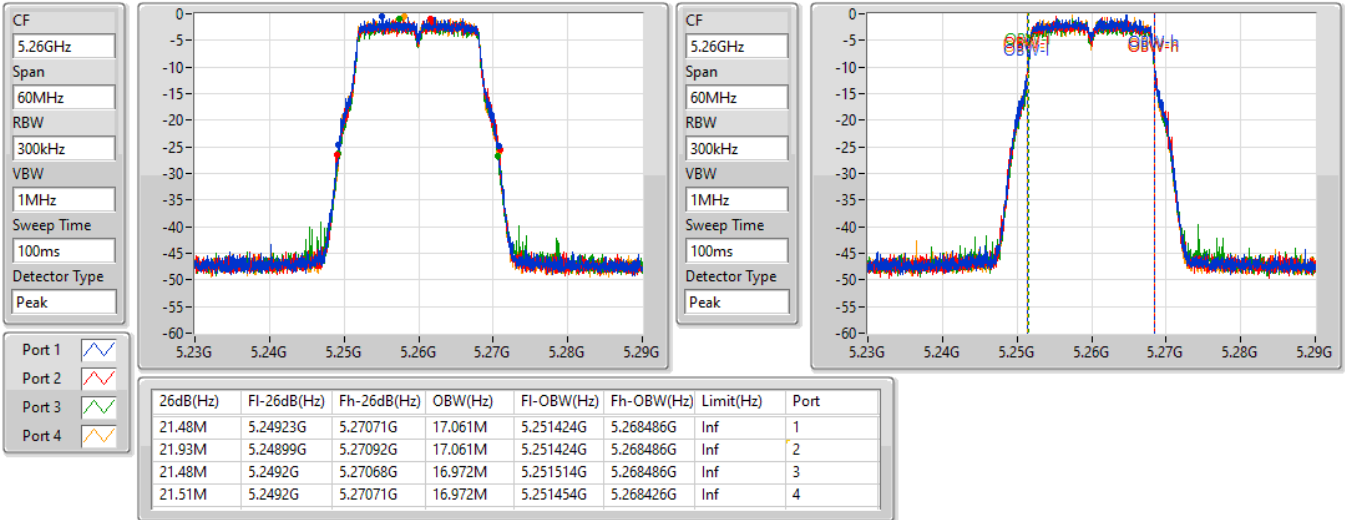
Result

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)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	21.48M	17.061M	21.93M	17.061M	21.48M	16.972M	21.51M	16.972M
5300MHz	Pass	Inf	21.54M	17.091M	21.75M	17.091M	21.6M	16.972M	21.3M	16.942M
5320MHz	Pass	Inf	24.12M	17.451M	26.76M	17.391M	25.86M	17.331M	24.24M	17.301M
5500MHz	Pass	Inf	24.42M	17.451M	25.53M	17.391M	23.85M	17.301M	23.34M	17.271M
5580MHz	Pass	Inf	21.45M	17.091M	21.63M	17.061M	21.45M	16.972M	21.54M	16.912M
5700MHz	Pass	Inf	21.75M	17.091M	21.54M	17.061M	21.51M	17.001M	21.48M	16.942M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.69M	13.643M	15.795M	13.688M	15.765M	13.553M	15.705M	13.598M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.12M	4.238M	3.12M	4.238M	3.12M	4.198M	3.14M	4.178M
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	21.72M	19.07M	21.57M	19.07M	21.78M	19.13M	21.45M	19.07M
5300MHz	Pass	Inf	21.81M	19.13M	21.75M	19.13M	21.69M	19.13M	21.42M	19.13M
5320MHz	Pass	Inf	24.9M	19.25M	27.51M	19.22M	26.4M	19.25M	25.05M	19.22M
5500MHz	Pass	Inf	25.5M	19.25M	24.36M	19.22M	24.9M	19.25M	26.88M	19.25M
5580MHz	Pass	Inf	21.93M	19.1M	21.6M	19.1M	21.63M	19.1M	21.75M	19.1M
5700MHz	Pass	Inf	21.99M	19.16M	21.63M	19.1M	21.84M	19.16M	21.54M	19.1M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.825M	14.588M	15.78M	14.588M	15.84M	14.603M	15.84M	14.588M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	4.44M	4.658M	4.44M	4.658M	4.42M	4.678M	4.44M	4.618M
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5270MHz	Pass	Inf	40.44M	37.841M	40.44M	37.841M	40.56M	38.081M	40.62M	37.961M
5310MHz	Pass	Inf	46.68M	38.141M	42.18M	38.201M	45.12M	38.261M	44.1M	38.141M
5510MHz	Pass	Inf	49.68M	38.141M	42.72M	38.201M	42.42M	38.141M	43.44M	38.141M
5550MHz	Pass	Inf	40.5M	37.901M	40.26M	37.961M	40.56M	37.961M	40.5M	37.901M
5670MHz	Pass	Inf	40.62M	37.961M	40.56M	37.841M	40.62M	38.021M	40.5M	37.961M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	35.35M	33.933M	35.28M	33.898M	35.35M	34.003M	35.385M	33.933M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.98M	4.138M	3.84M	4.138M	3.92M	4.138M	3.88M	4.218M
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5290MHz	Pass	Inf	89.64M	77.841M	84.24M	78.081M	86.16M	77.961M	88.8M	77.961M
5530MHz	Pass	Inf	85.56M	78.081M	93.84M	77.961M	88.8M	77.961M	89.4M	77.841M
5610MHz	Pass	Inf	82.2M	77.721M	81.96M	77.841M	81.84M	77.841M	82.2M	77.721M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	76.425M	73.763M	76.2M	73.538M	92.55M	73.988M	76.125M	73.538M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.84M	7.776M	3.86M	17.571M	3.76M	26.527M	3.86M	11.794M

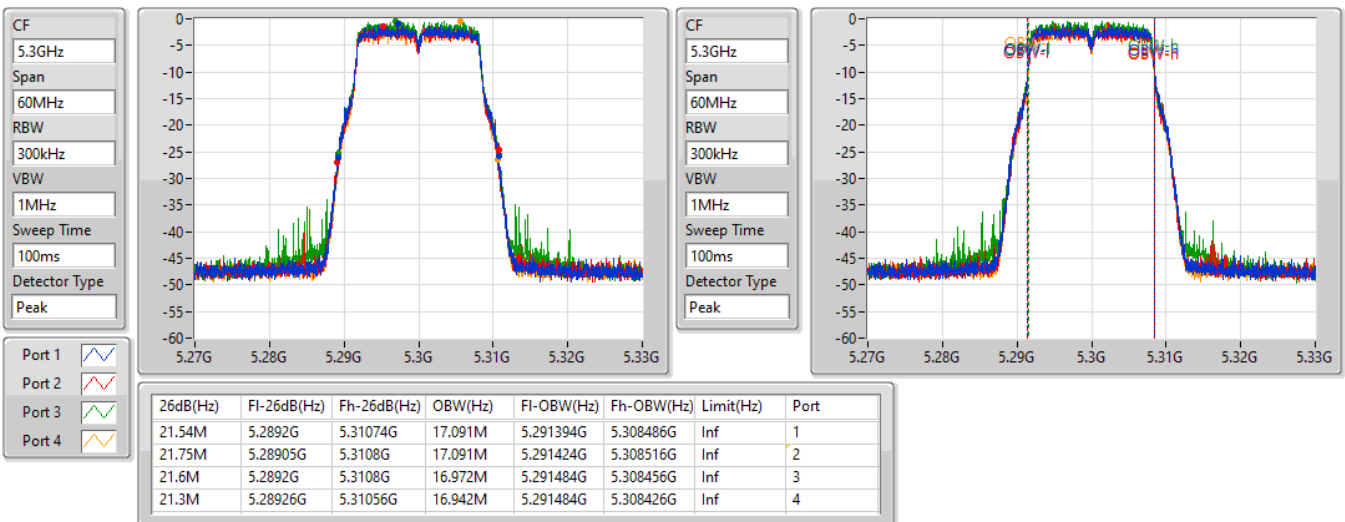
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11a_Nss1,(6Mbps)_4TX
EBW
5260MHz

14/01/2022

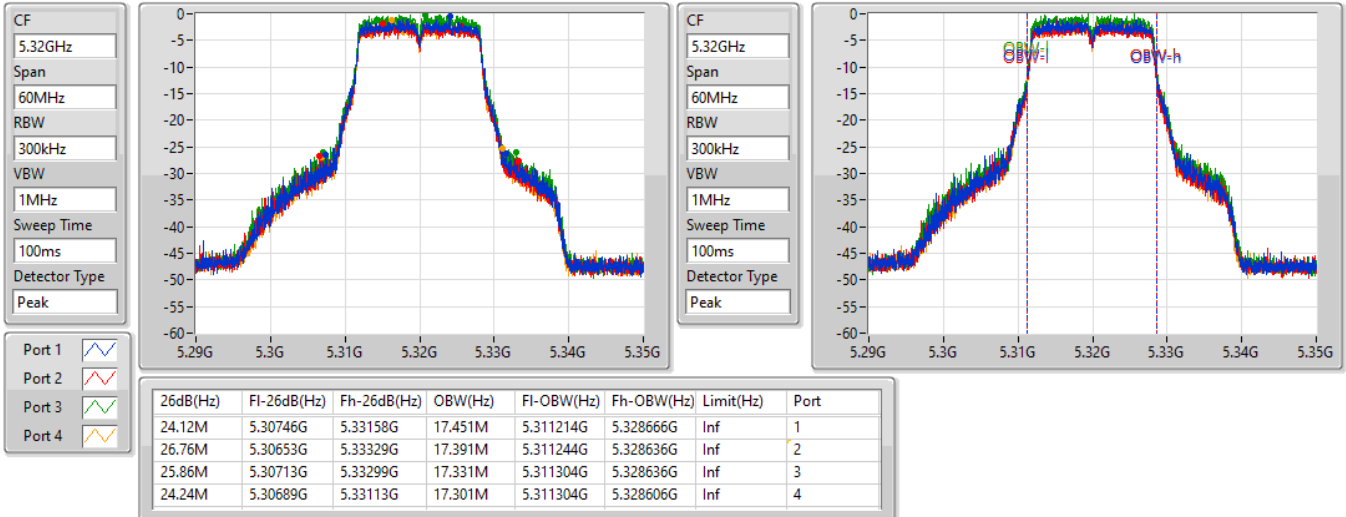

802.11a_Nss1,(6Mbps)_4TX
EBW
5300MHz

14/01/2022

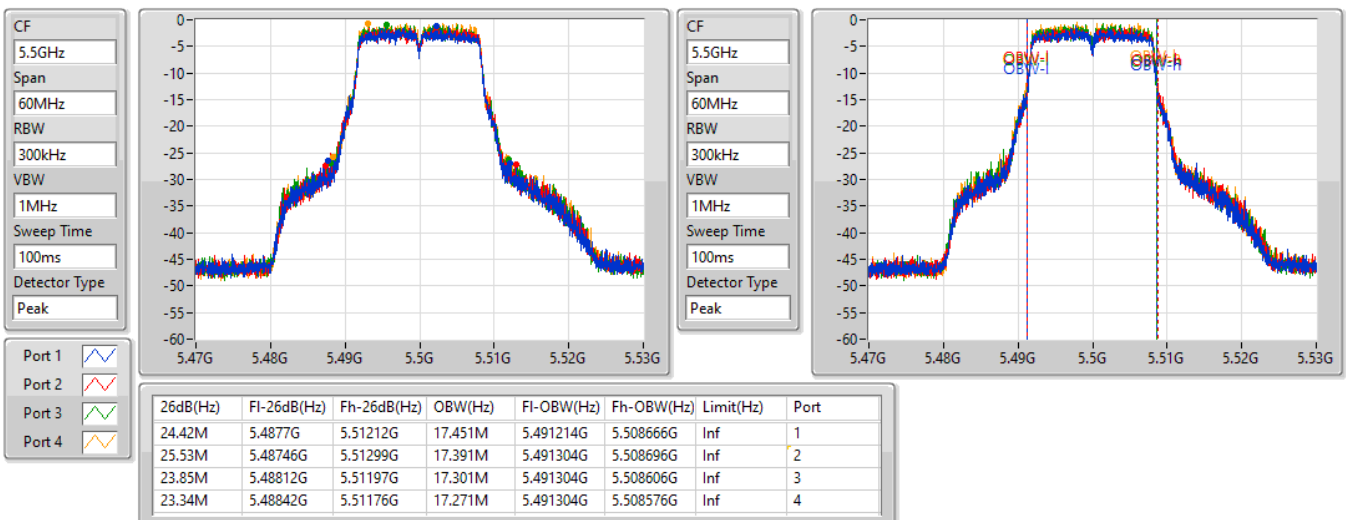


802.11a_Nss1,(6Mbps)_4TX
EBW
5320MHz

14/01/2022

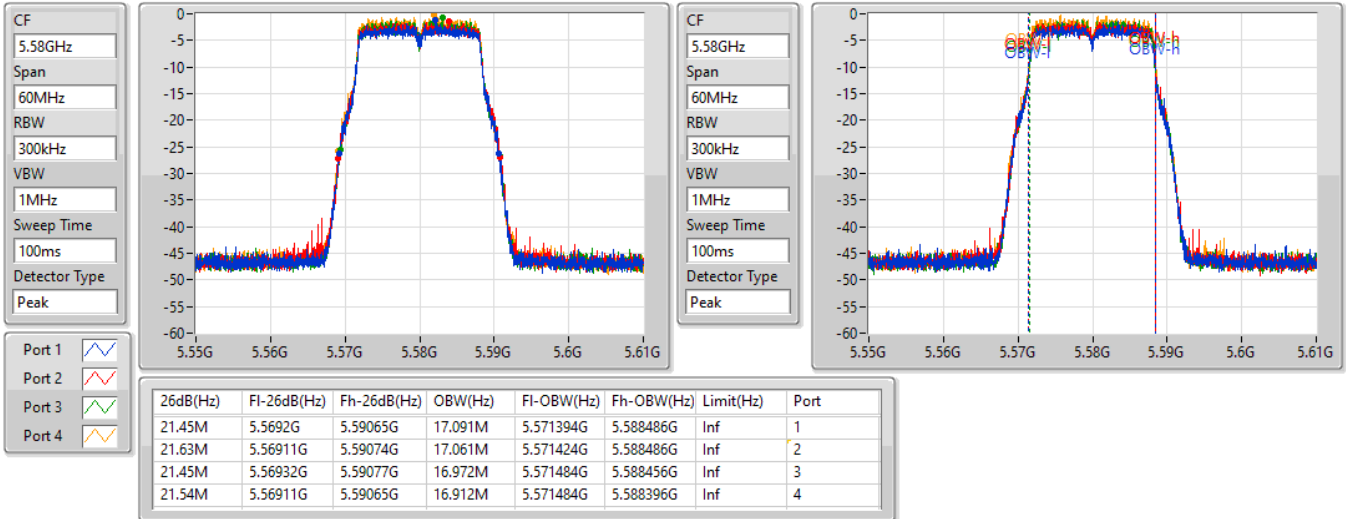

802.11a_Nss1,(6Mbps)_4TX
EBW
5500MHz

14/01/2022

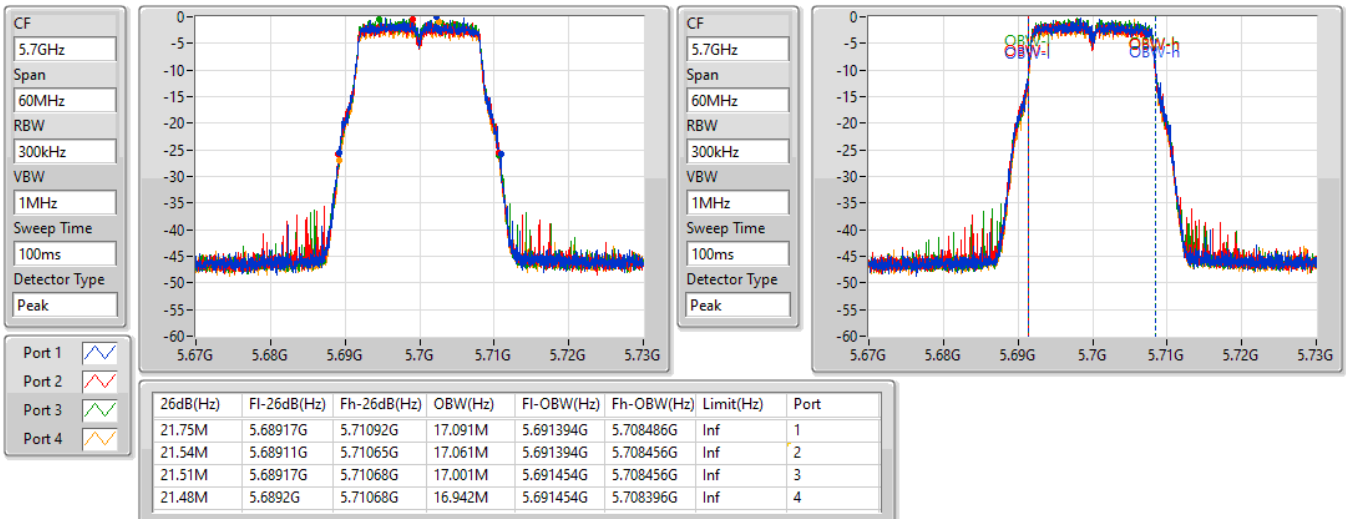


802.11a_Nss1,(6Mbps)_4TX
EBW
5580MHz

14/01/2022

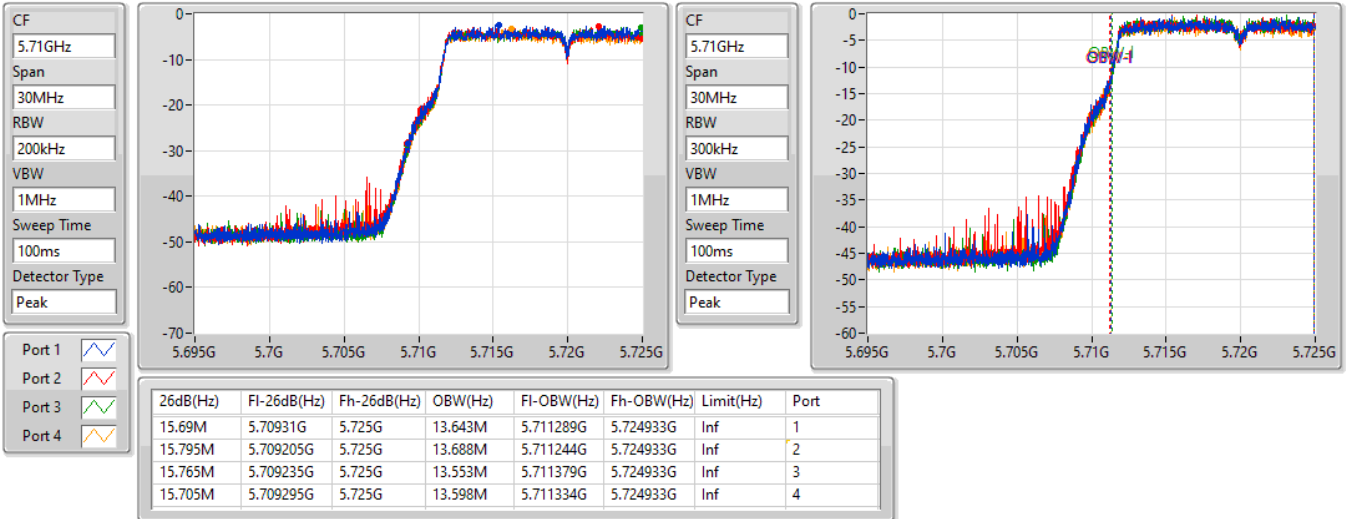

802.11a_Nss1,(6Mbps)_4TX
EBW
5700MHz

14/01/2022

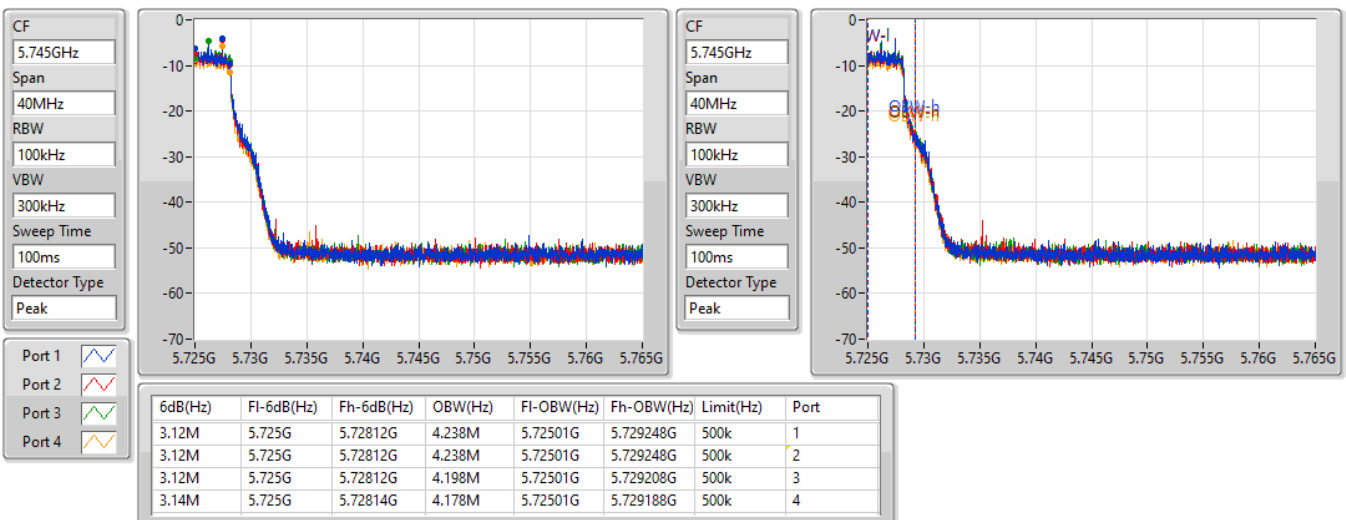


802.11a_Nss1,(6Mbps)_4TX
EBW
5720MHz Straddle 5.47-5.725GHz

14/01/2022


802.11a_Nss1,(6Mbps)_4TX
EBW
5720MHz Straddle 5.725-5.85GHz

14/01/2022

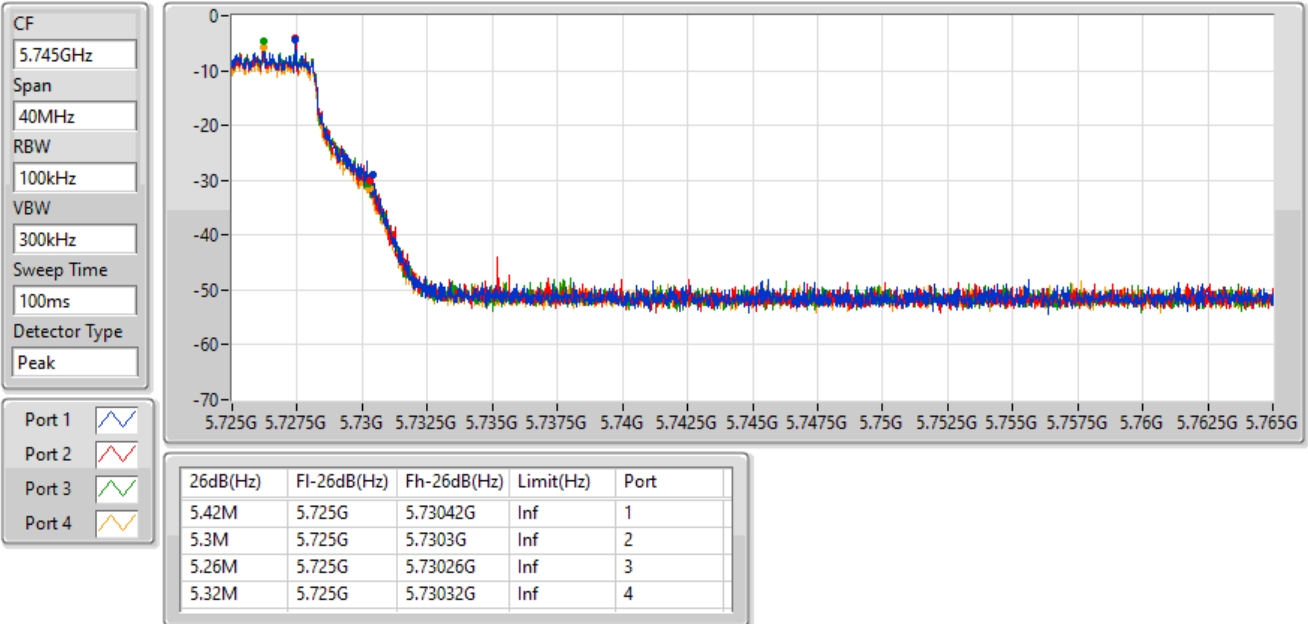


802.11a_Nss1,(6Mbps)_4TX

EBW

5720MHz Straddle 5.725-5.85GHz

14/01/2022

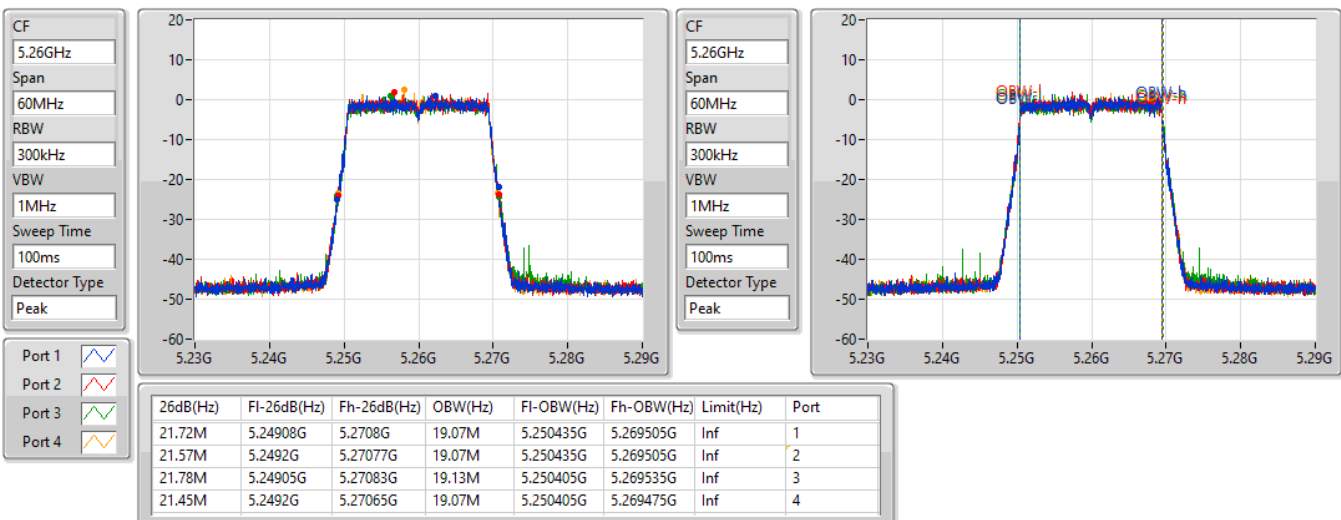


802.11ax HEW20_Nss1,(MCS0)_4TX

EBW

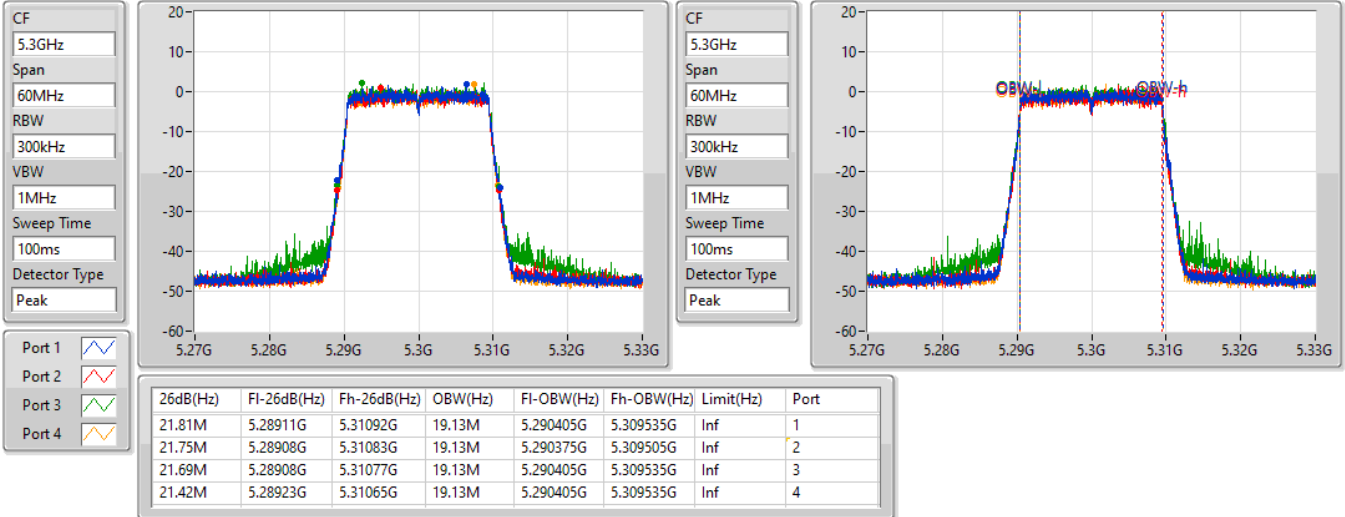
5260MHz

14/01/2022

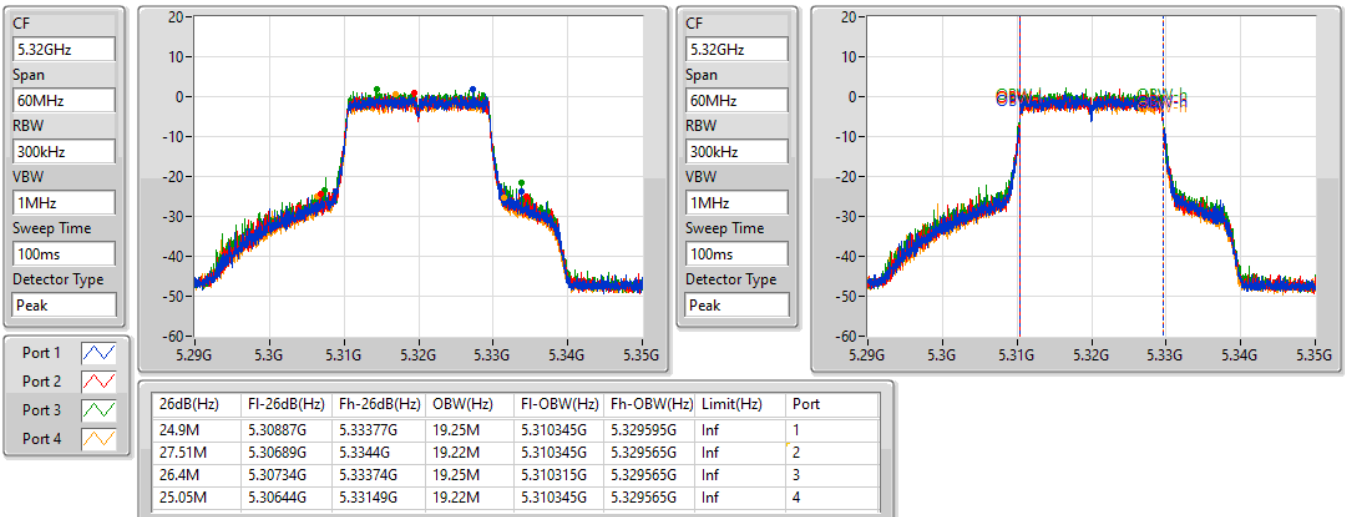


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5300MHz

14/01/2022

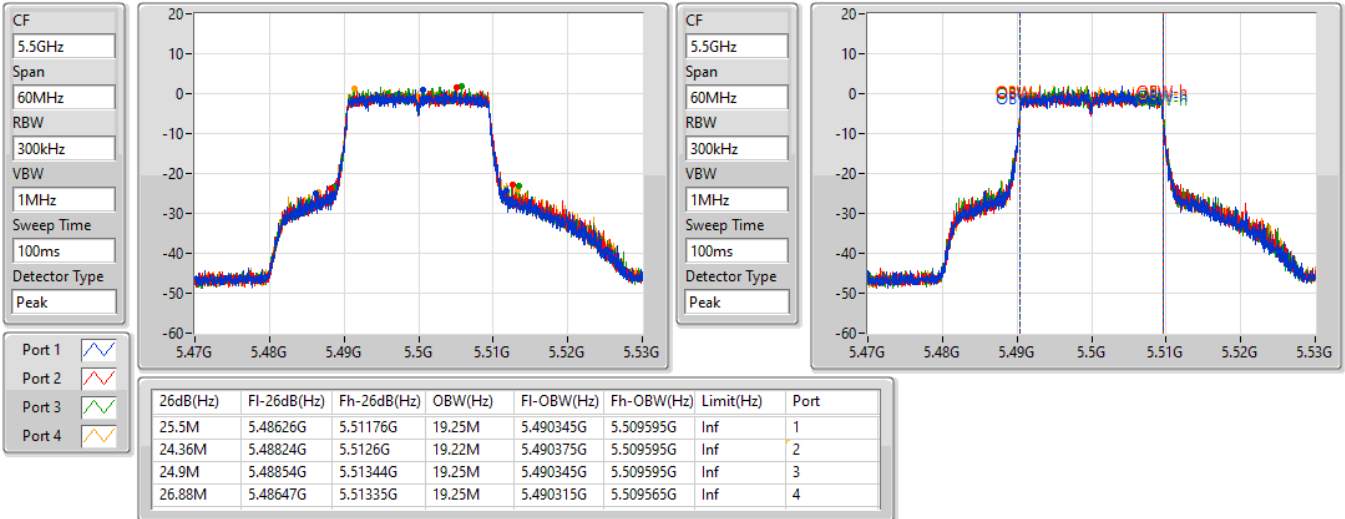

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5320MHz

14/01/2022

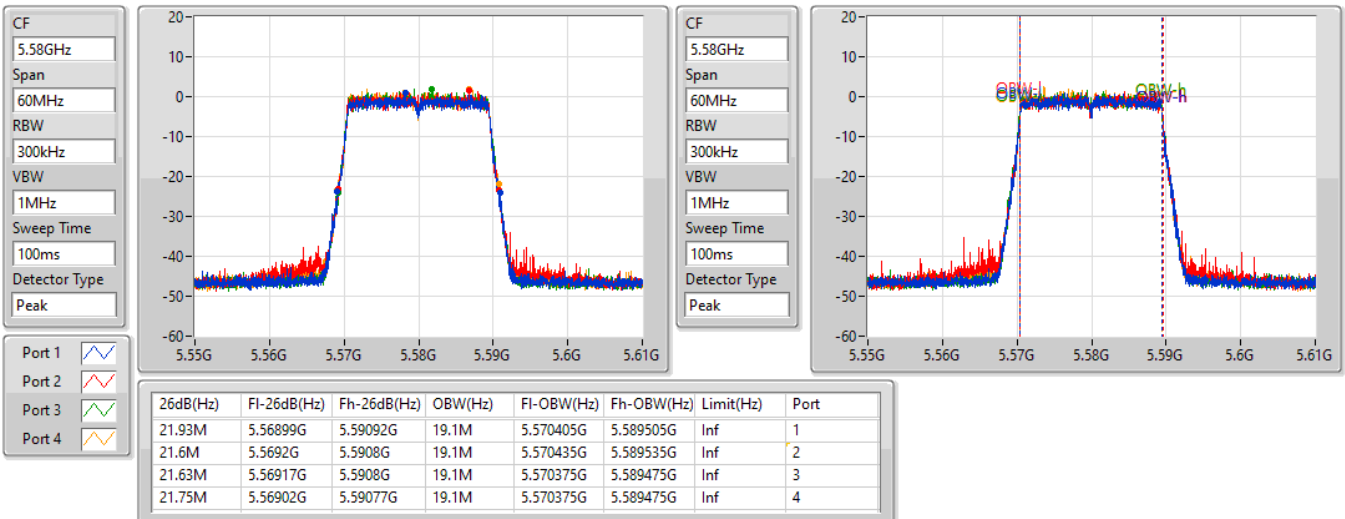


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5500MHz

14/01/2022

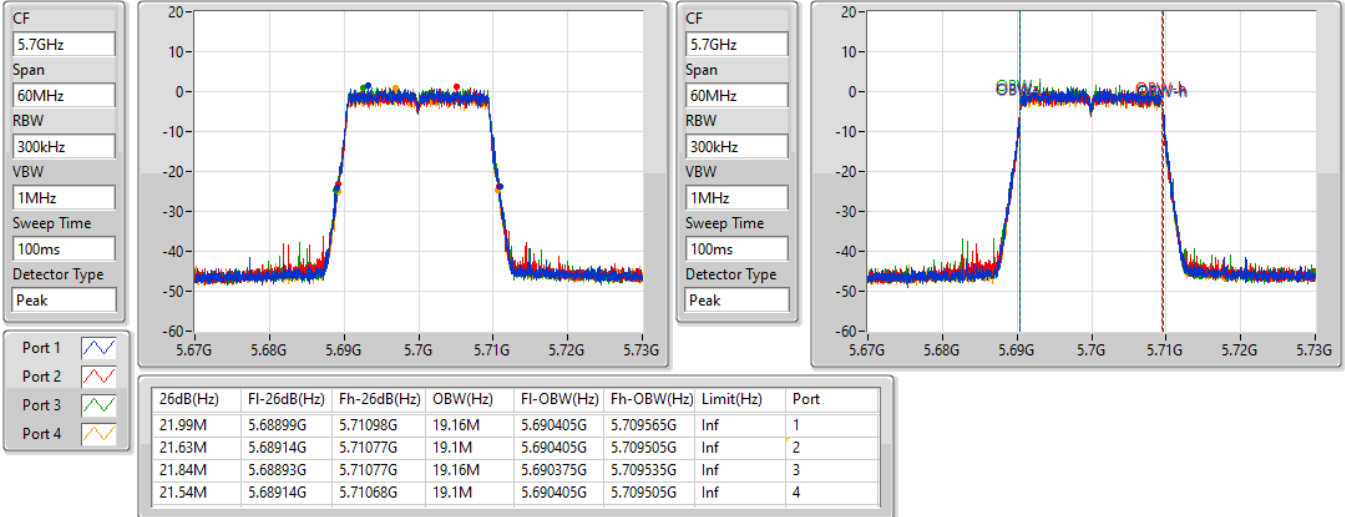

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5580MHz

14/01/2022

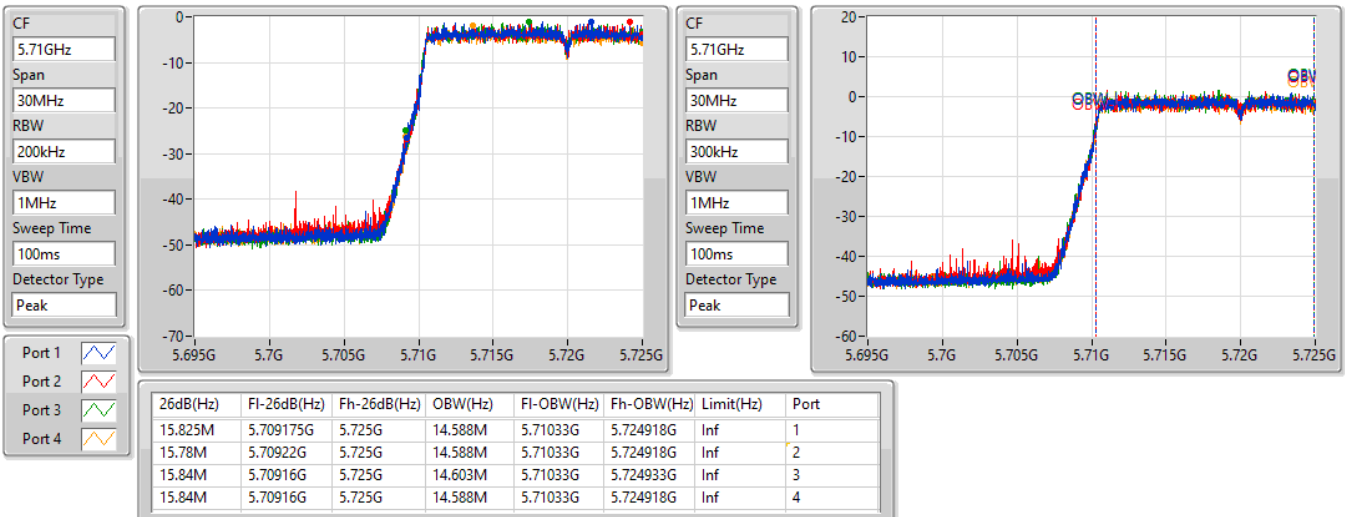


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5700MHz

14/01/2022

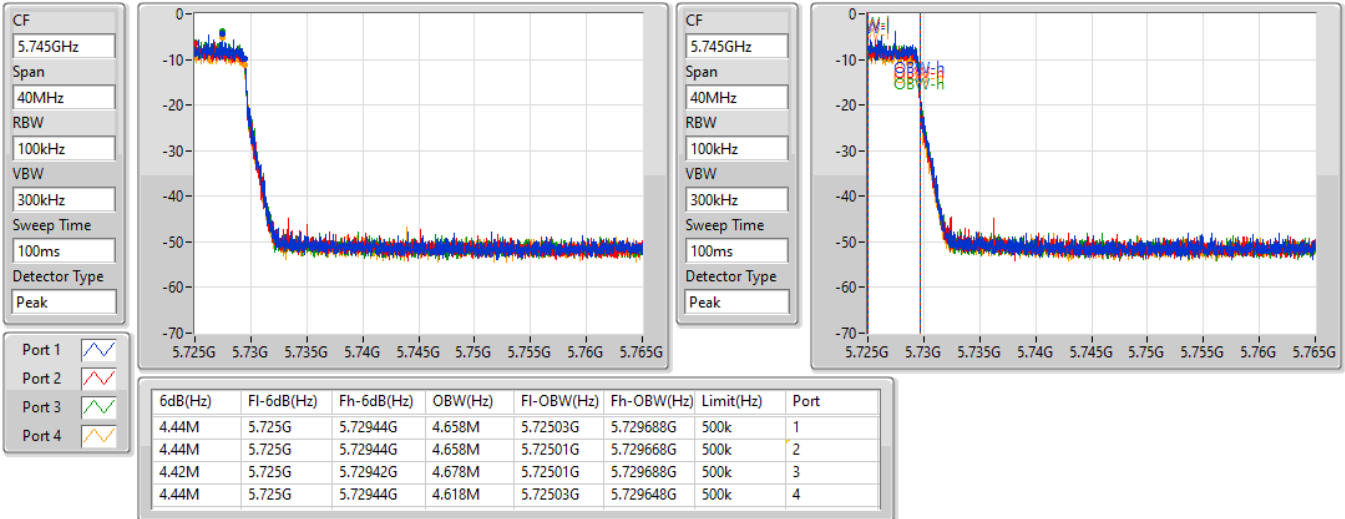

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5720MHz Straddle 5.47-5.725GHz

14/01/2022

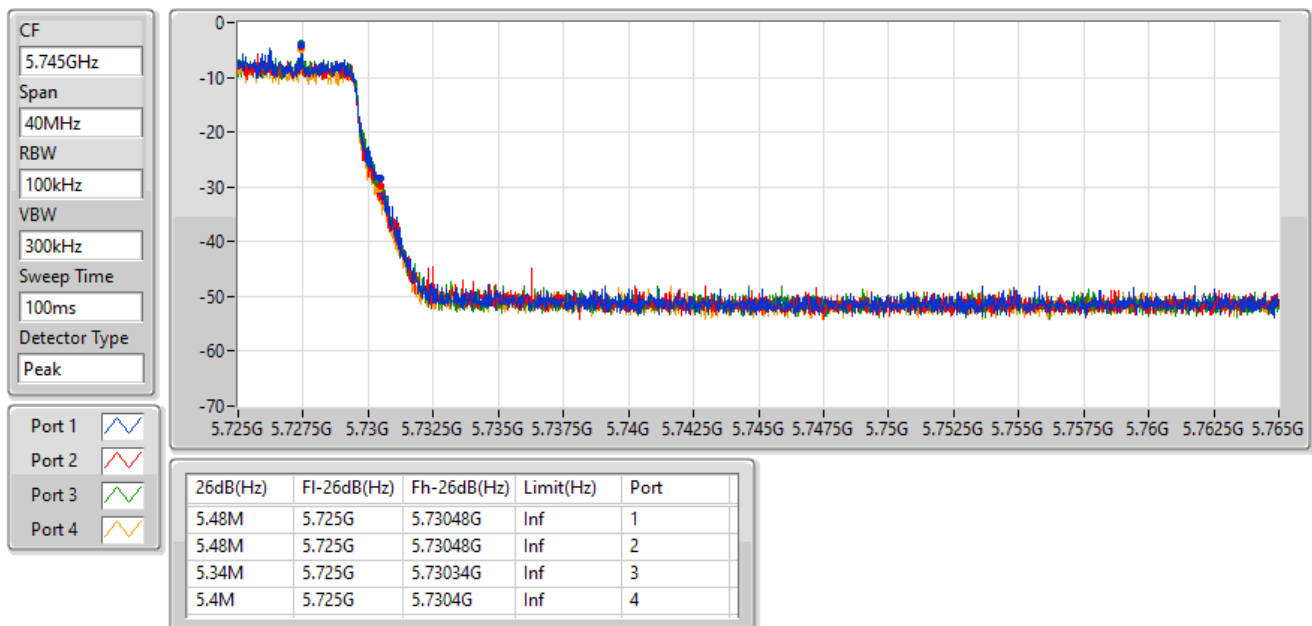


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5720MHz Straddle 5.725-5.85GHz

14/01/2022

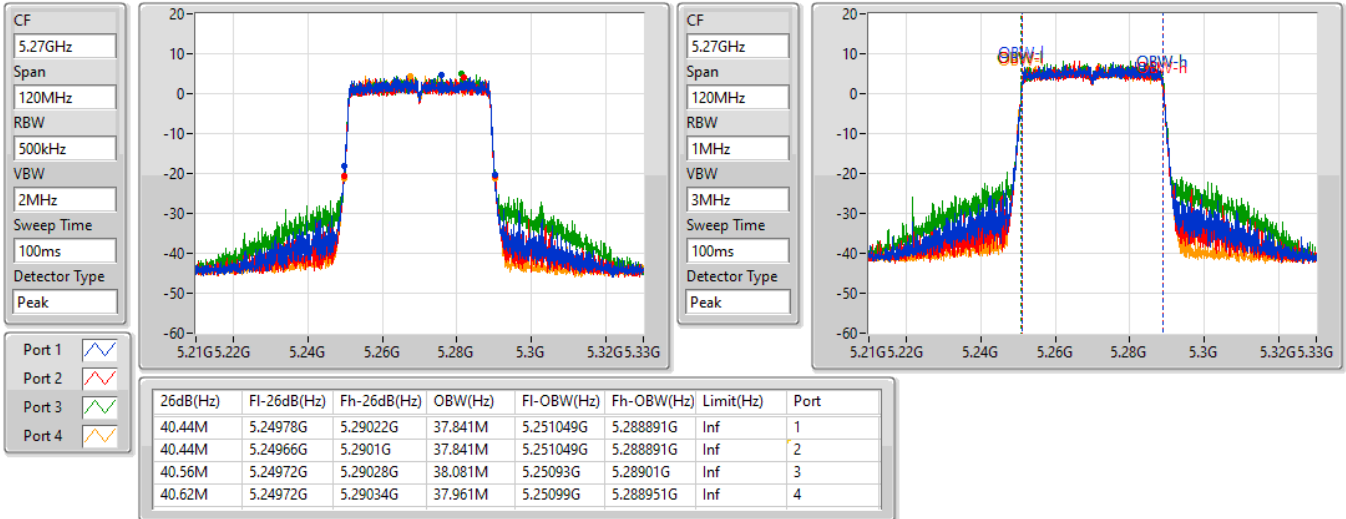

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5720MHz Straddle 5.725-5.85GHz

14/01/2022

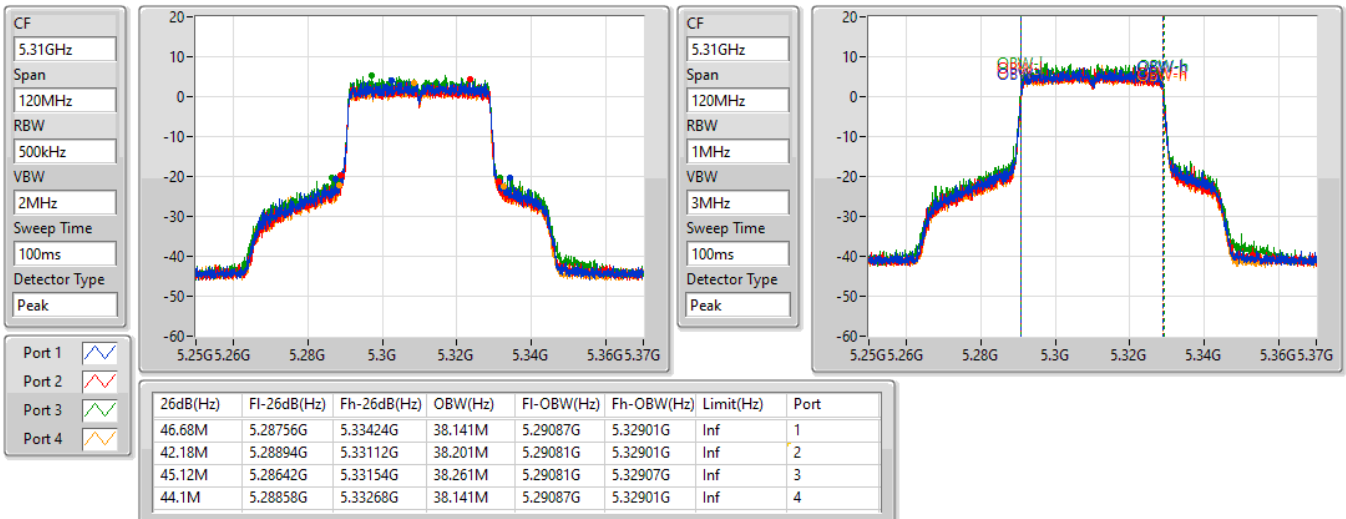


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5270MHz

14/01/2022

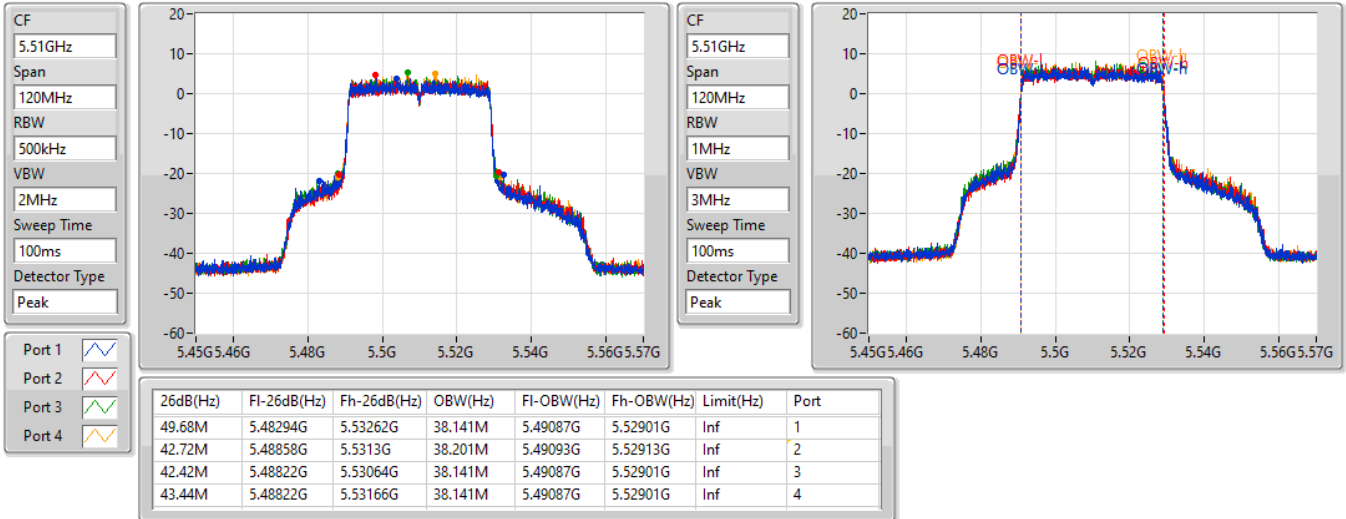

802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5310MHz

14/01/2022

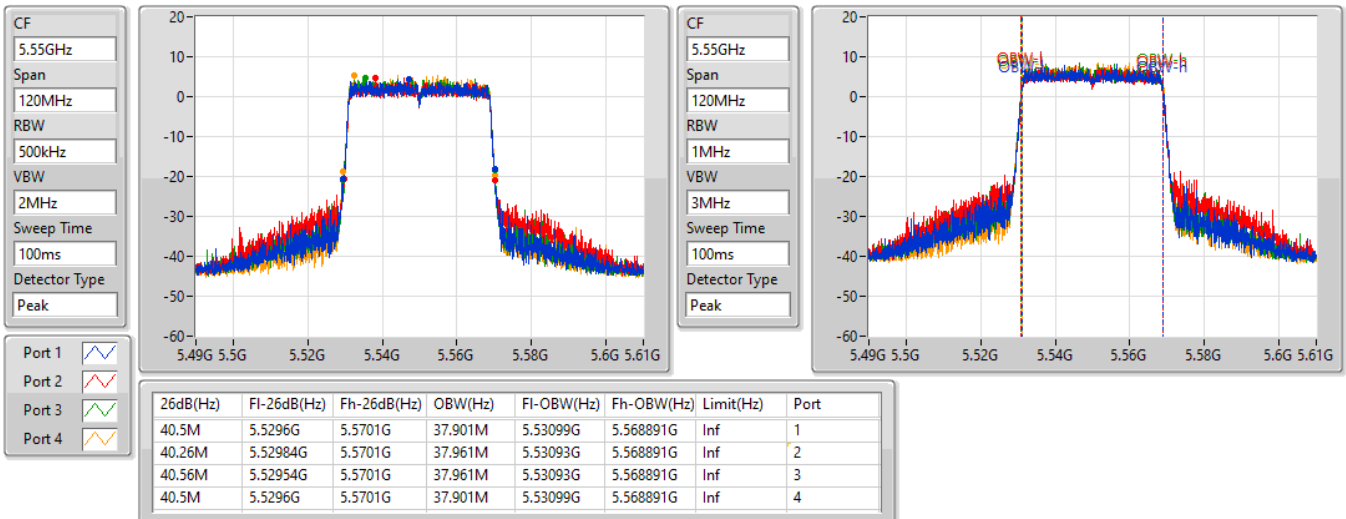


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5510MHz

14/01/2022

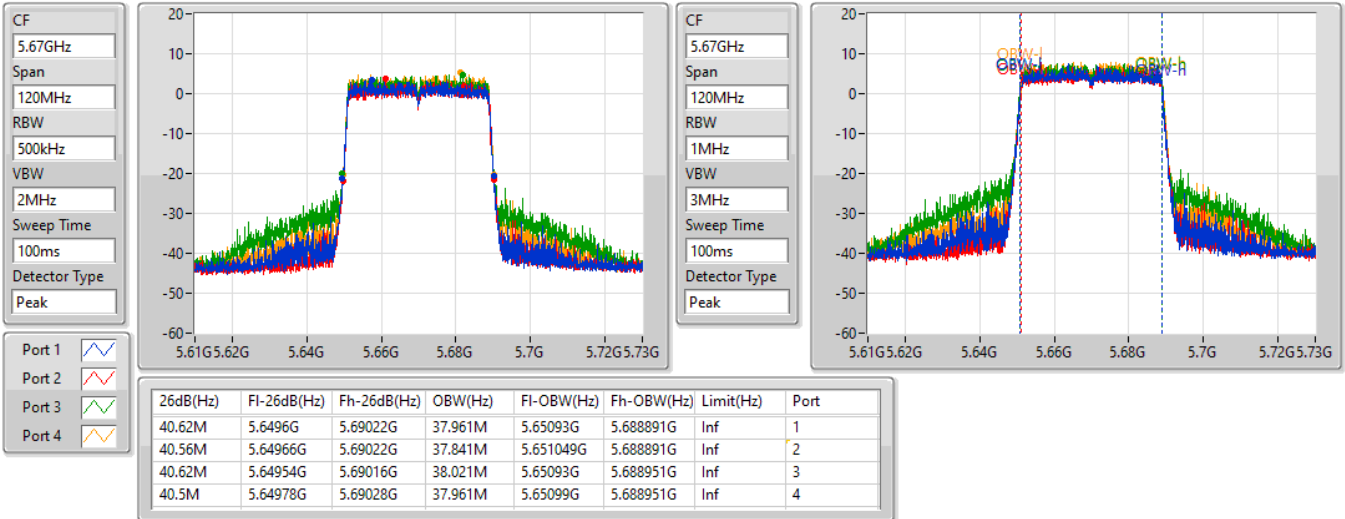

802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5550MHz

14/01/2022

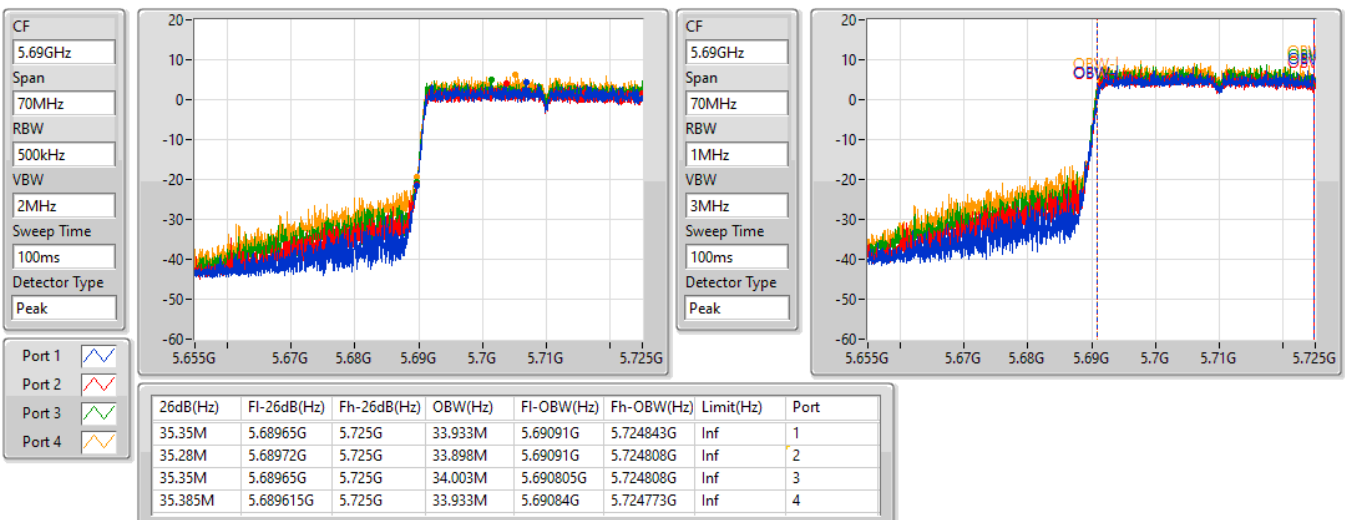


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5670MHz

14/01/2022

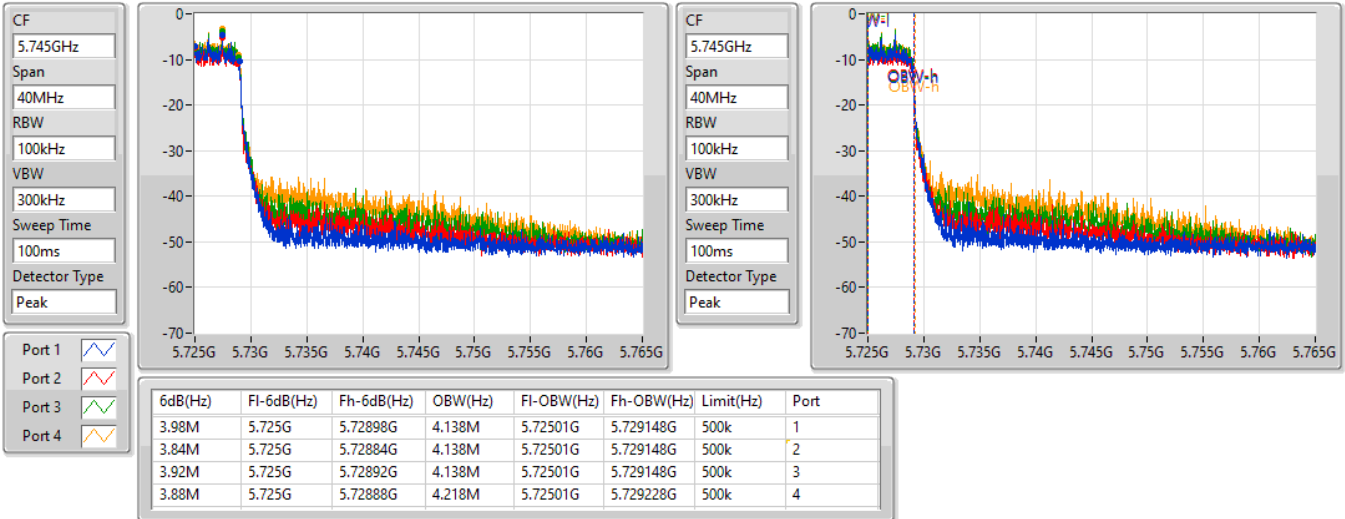

802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5710MHz Straddle 5.47-5.725GHz

14/01/2022

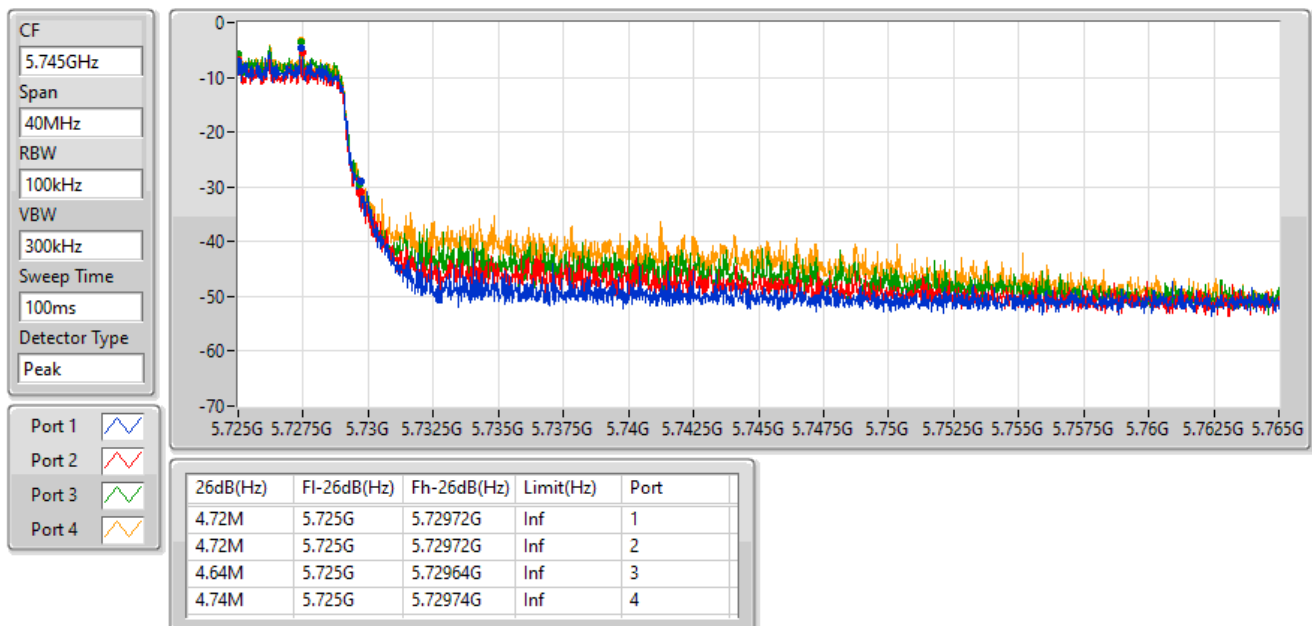


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5710MHz Straddle 5.725-5.85GHz

14/01/2022

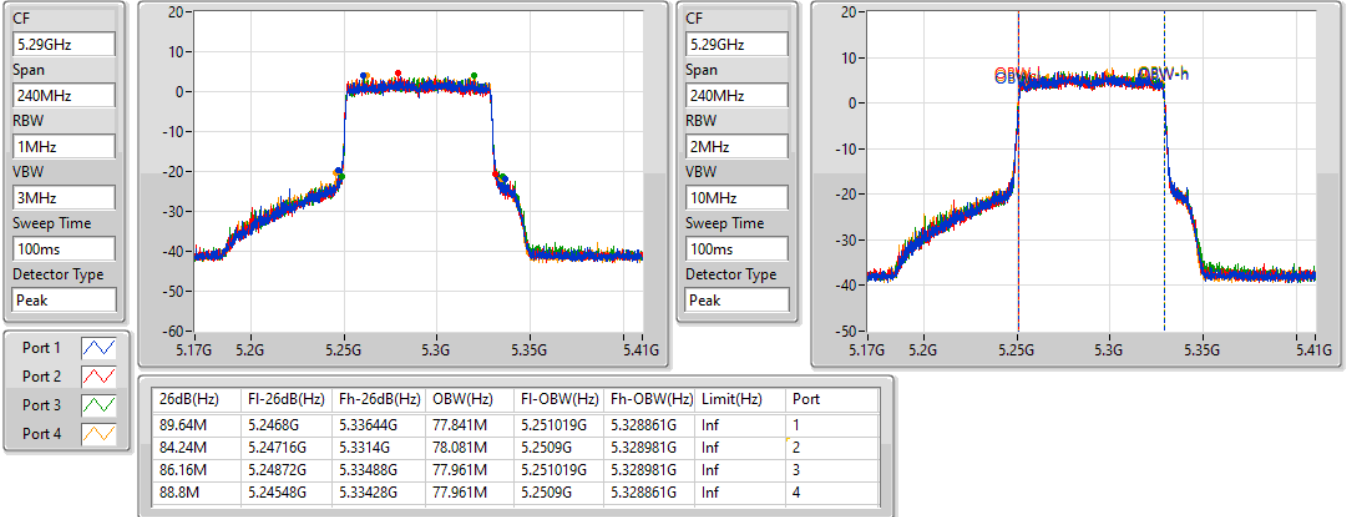

802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5710MHz Straddle 5.725-5.85GHz

14/01/2022

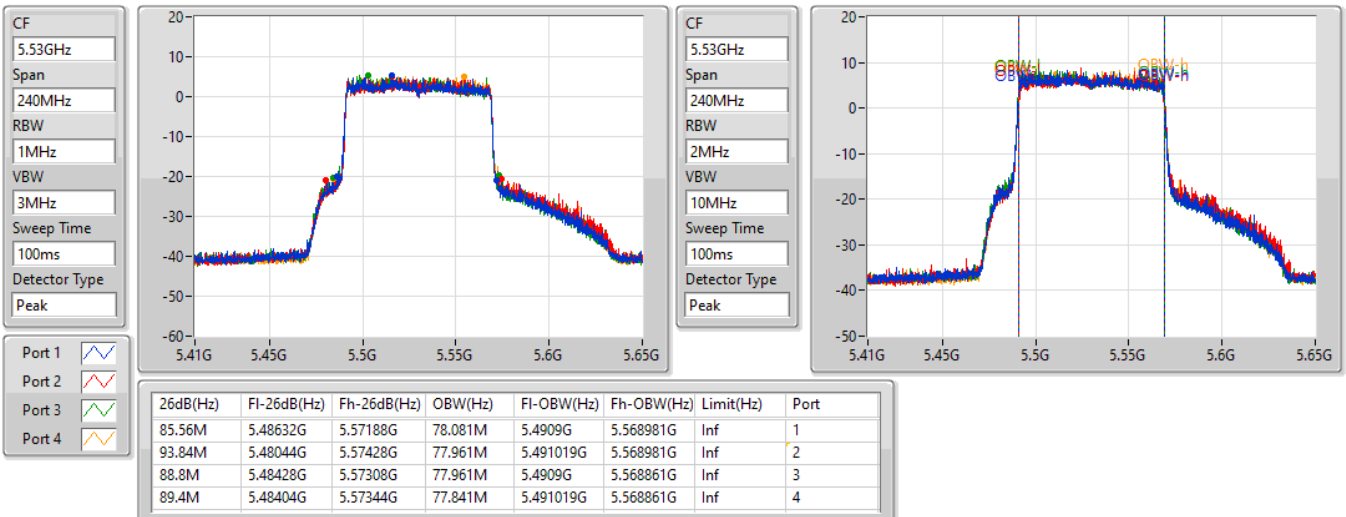


802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5290MHz

14/01/2022

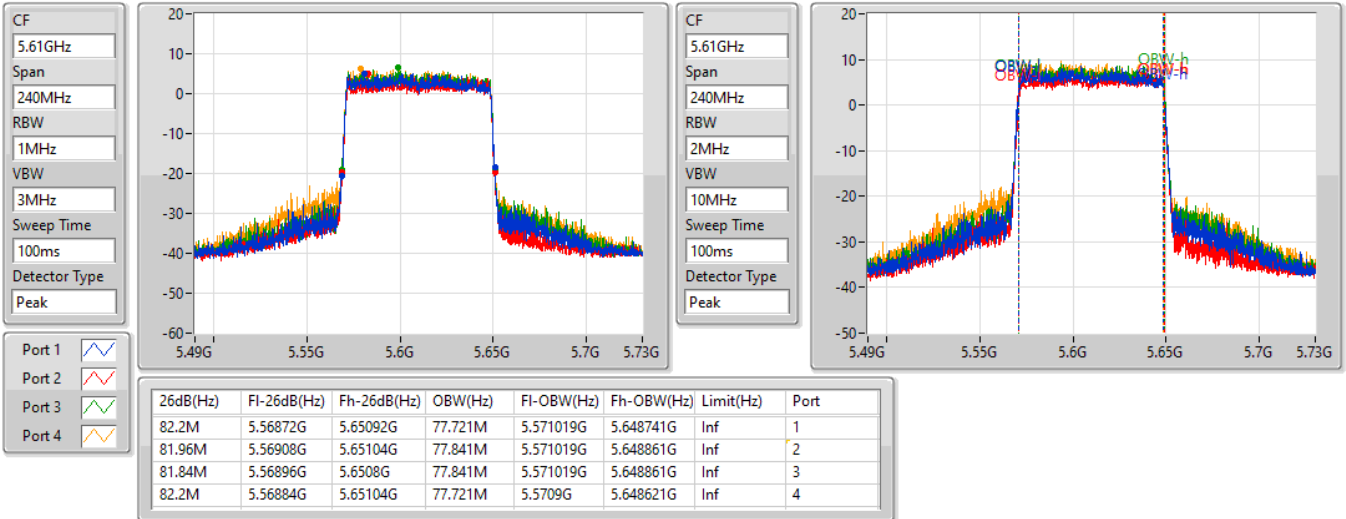

802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5530MHz

14/01/2022

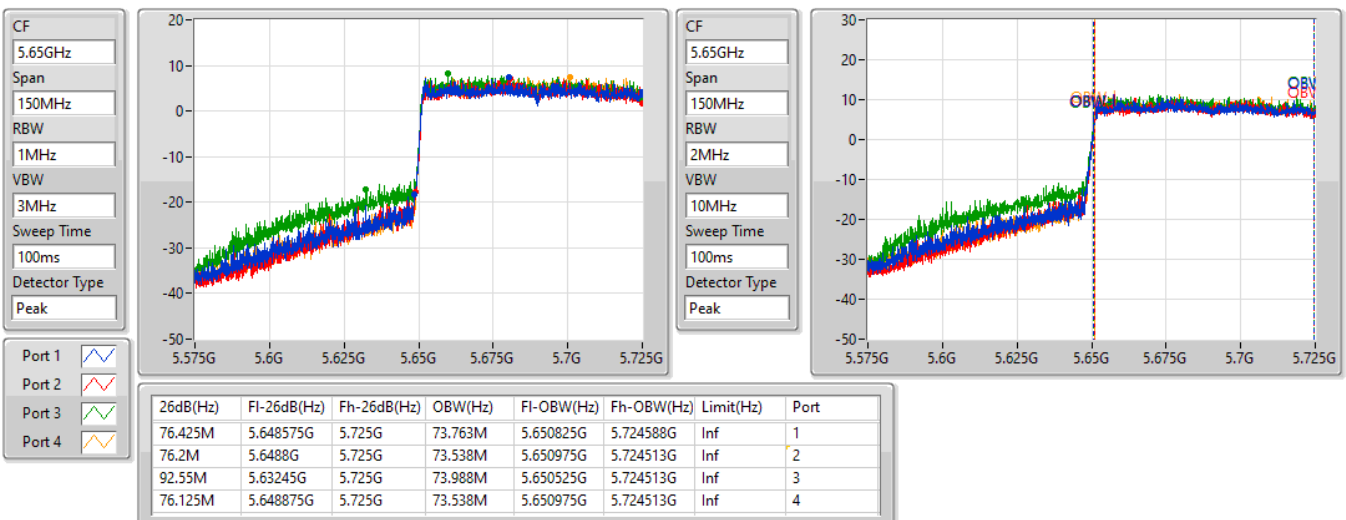


802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5610MHz

14/01/2022

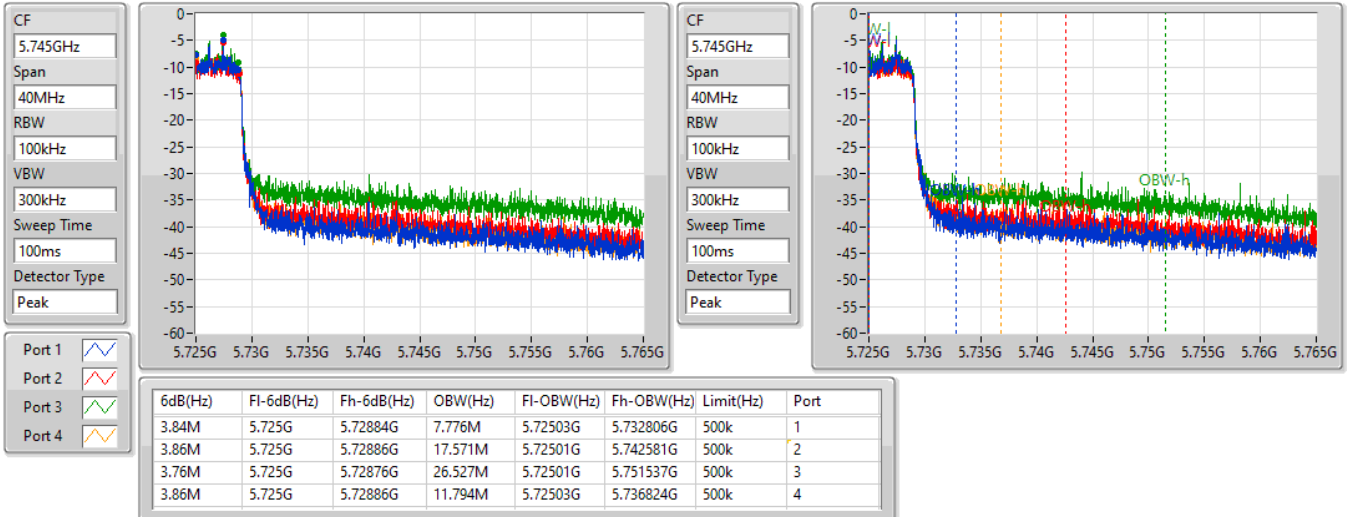

802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5690MHz Straddle 5.47-5.725GHz

14/01/2022

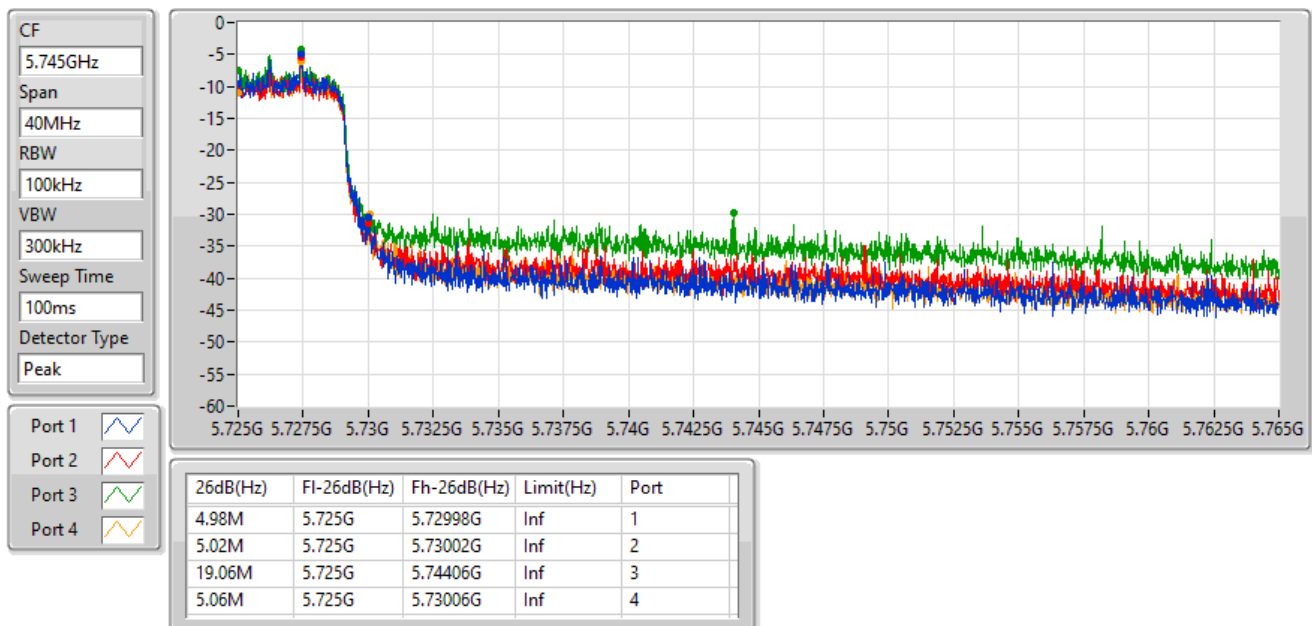


802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5690MHz Straddle 5.725-5.85GHz

14/01/2022


802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5690MHz Straddle 5.725-5.85GHz

14/01/2022



Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	42.63M	26.867M	26M9D1D	36.09M	18.621M
802.11ax HEW20_Nss1,(MCS0)_1TX	48.12M	26.477M	26M5D1D	36.39M	19.7M
802.11ax HEW40_Nss1,(MCS0)_1TX	67.14M	38.681M	38M7D1D	50.64M	38.201M
802.11ax HEW80_Nss1,(MCS0)_1TX	91.92M	78.081M	78M1D1D	91.92M	78.081M
5.25-5.35GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	39.24M	19.79M	19M8D1D	32.19M	17.991M
802.11ax HEW20_Nss1,(MCS0)_1TX	45.63M	19.79M	19M8D1D	31.32M	19.4M
802.11ax HEW40_Nss1,(MCS0)_1TX	72.06M	39.4M	39M4D1D	54.18M	38.321M
802.11ax HEW80_Nss1,(MCS0)_1TX	90M	78.201M	78M2D1D	90M	78.201M
5.47-5.725GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	39.87M	19.91M	19M9D1D	22.305M	14.678M
802.11ax HEW20_Nss1,(MCS0)_1TX	41.49M	19.82M	19M8D1D	21.84M	14.888M
802.11ax HEW40_Nss1,(MCS0)_1TX	76.92M	39.52M	39M5D1D	49.32M	34.598M
802.11ax HEW80_Nss1,(MCS0)_1TX	143.4M	78.921M	78M9D1D	93.84M	74.513M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	16.32M	40.99M	41M0D1D	3.12M	9.615M
802.11ax HEW20_Nss1,(MCS0)_1TX	18.72M	43.448M	43M4D1D	4.48M	9.835M
802.11ax HEW40_Nss1,(MCS0)_1TX	37.62M	77.601M	77M6D1D	3.94M	22.909M
802.11ax HEW80_Nss1,(MCS0)_1TX	75.72M	94.633M	94M6D1D	3.8M	35.802M

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

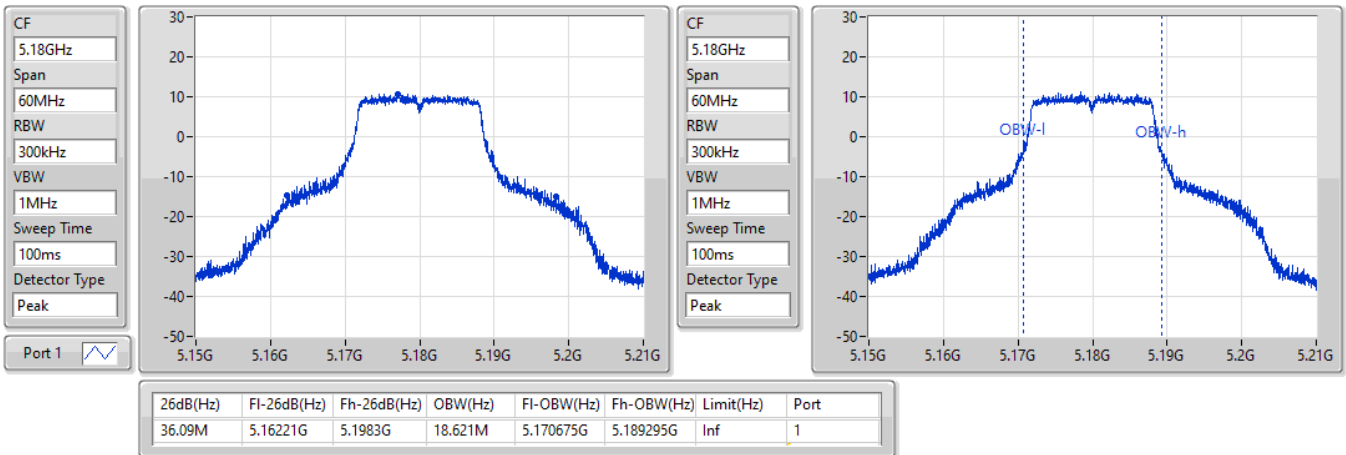
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11a_Nss1,(6Mbps)_1TX	-	-	-	-
5180MHz	Pass	Inf	36.09M	18.621M
5200MHz	Pass	Inf	42.63M	26.867M
5240MHz	Pass	Inf	39.15M	19.64M
5260MHz	Pass	Inf	37.77M	19.76M
5300MHz	Pass	Inf	39.24M	19.79M
5320MHz	Pass	Inf	32.19M	17.991M
5500MHz	Pass	Inf	36.96M	19.73M
5580MHz	Pass	Inf	39.87M	19.91M
5700MHz	Pass	Inf	26.25M	17.421M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	22.305M	14.678M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.12M	9.615M
5745MHz	Pass	500k	16.29M	38.081M
5785MHz	Pass	500k	16.29M	40M
5825MHz	Pass	500k	16.32M	40.99M
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-
5180MHz	Pass	Inf	36.39M	19.7M
5200MHz	Pass	Inf	48.12M	26.477M
5240MHz	Pass	Inf	43.98M	20.06M
5260MHz	Pass	Inf	40.29M	19.7M
5300MHz	Pass	Inf	45.63M	19.79M
5320MHz	Pass	Inf	31.32M	19.4M
5500MHz	Pass	Inf	39.42M	19.64M
5580MHz	Pass	Inf	41.49M	19.82M
5700MHz	Pass	Inf	21.84M	19.19M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	23.205M	14.888M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	4.48M	9.835M
5745MHz	Pass	500k	18.63M	38.621M
5785MHz	Pass	500k	18.51M	42.879M
5825MHz	Pass	500k	18.72M	43.448M
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-	-	-
5190MHz	Pass	Inf	50.64M	38.201M
5230MHz	Pass	Inf	67.14M	38.681M
5270MHz	Pass	Inf	72.06M	39.4M
5310MHz	Pass	Inf	54.18M	38.321M
5510MHz	Pass	Inf	53.1M	38.201M
5550MHz	Pass	Inf	76.92M	39.52M
5670MHz	Pass	Inf	49.32M	38.261M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	55.72M	34.598M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.94M	22.909M
5755MHz	Pass	500k	37.62M	63.388M
5795MHz	Pass	500k	37.62M	77.601M
802.11ax HEW80_Nss1,(MCS0)_1TX	-	-	-	-
5210MHz	Pass	Inf	91.92M	78.081M
5290MHz	Pass	Inf	90M	78.201M
5530MHz	Pass	Inf	93.84M	78.081M
5610MHz	Pass	Inf	143.4M	78.921M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	109.725M	74.513M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.8M	35.802M
5775MHz	Pass	500k	75.72M	94.633M

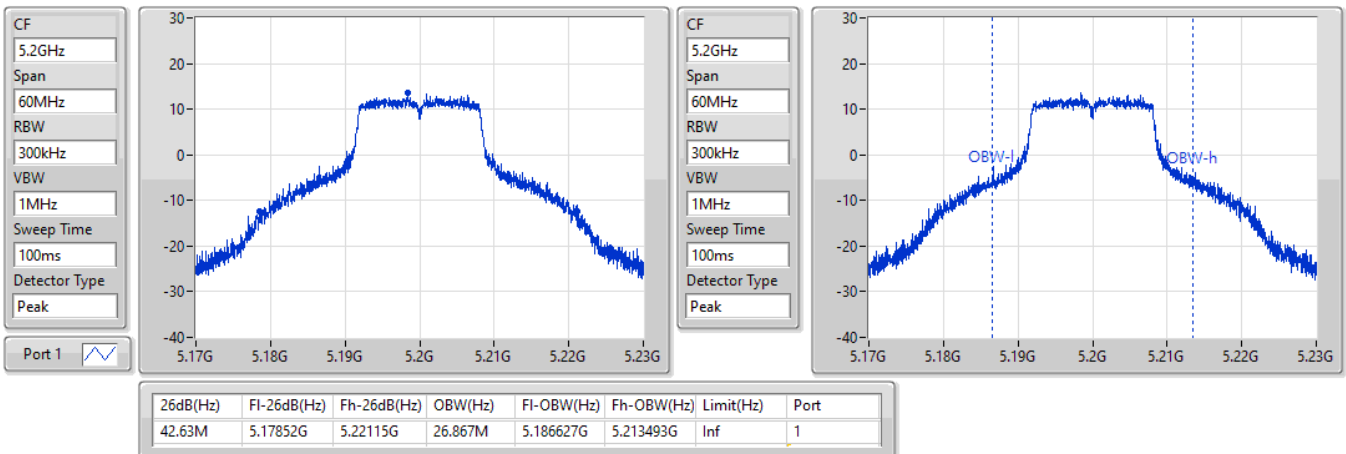
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11a_Nss1,(6Mbps)_1TX
EBW
5180MHz

15/02/2022

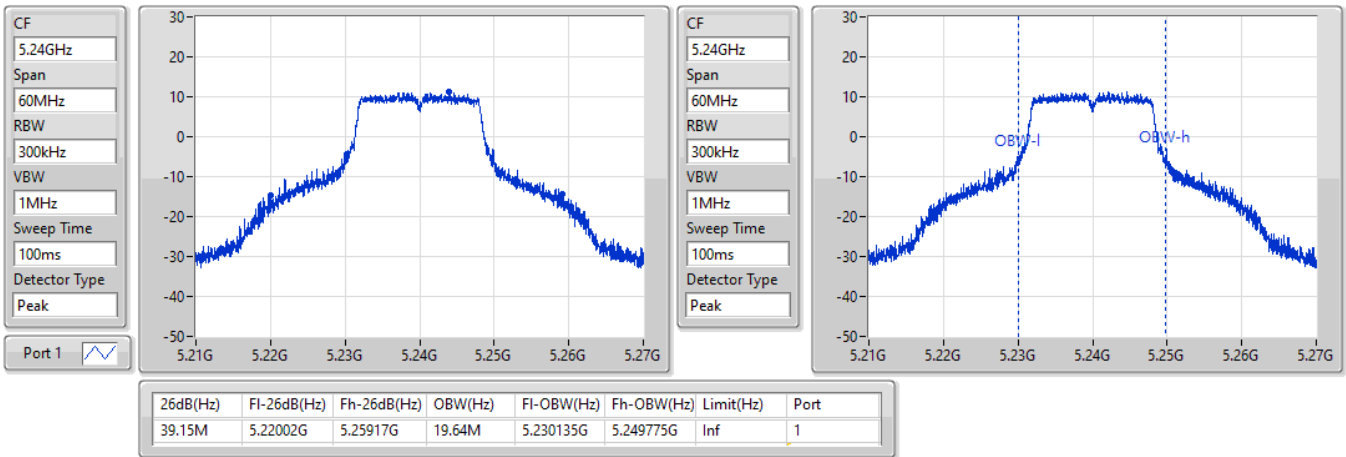

802.11a_Nss1,(6Mbps)_1TX
EBW
5200MHz

15/02/2022

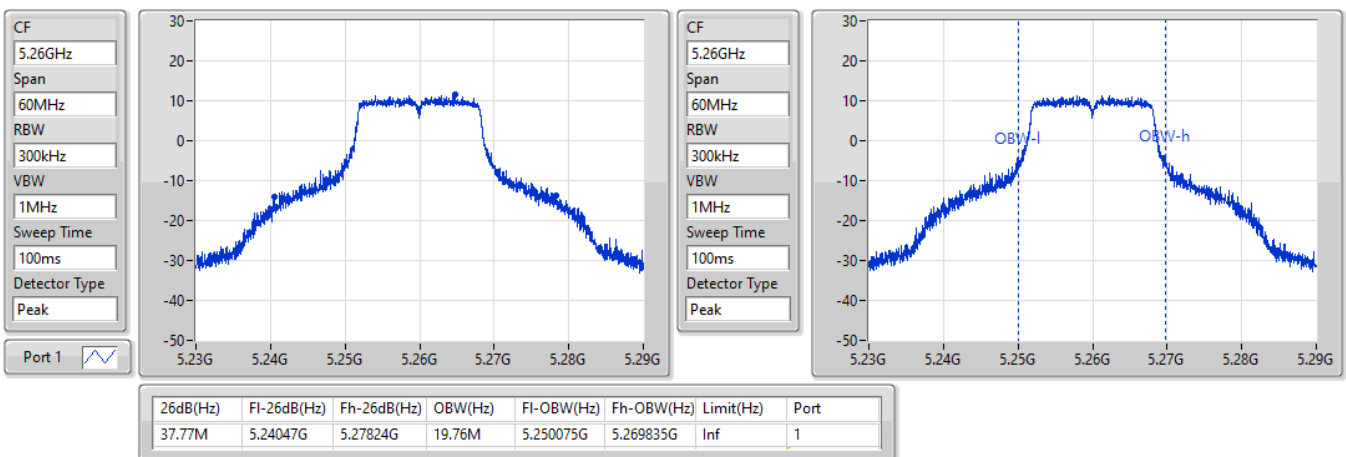


802.11a_Nss1,(6Mbps)_1TX
EBW
5240MHz

15/02/2022

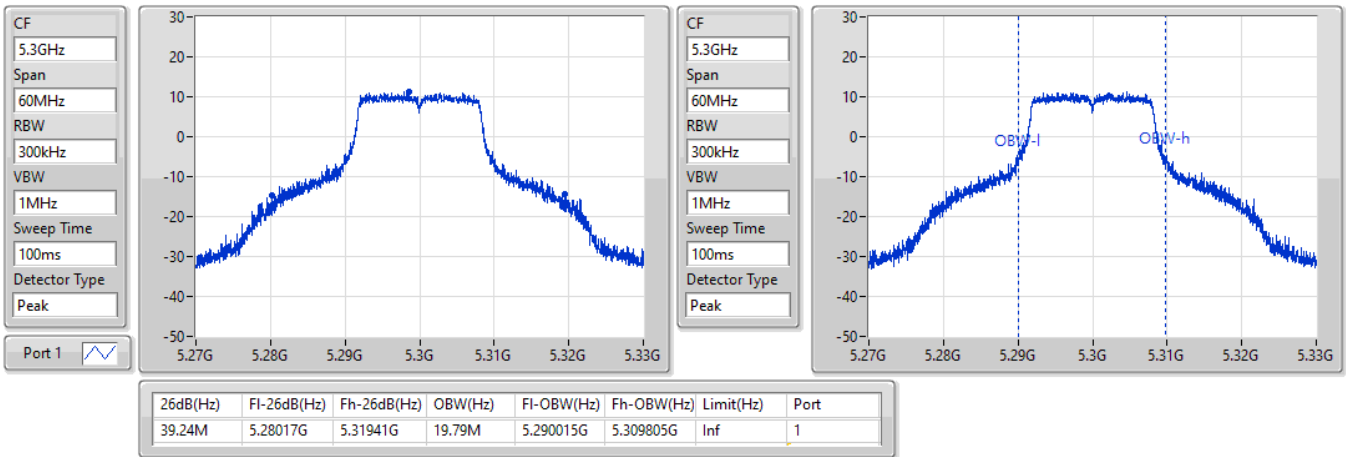

802.11a_Nss1,(6Mbps)_1TX
EBW
5260MHz

15/02/2022

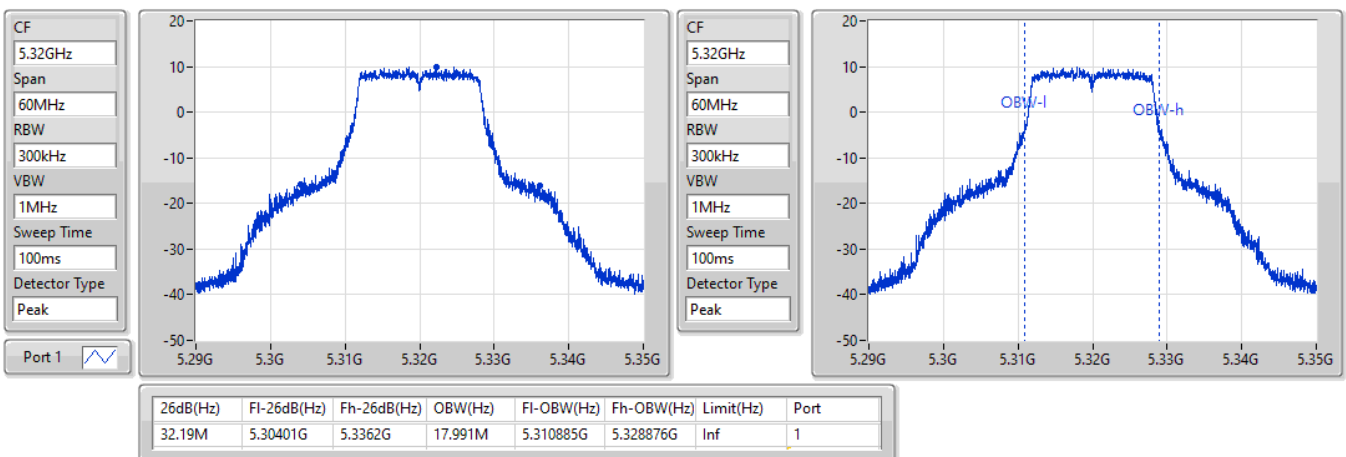


802.11a_Nss1,(6Mbps)_1TX
EBW
5300MHz

15/02/2022

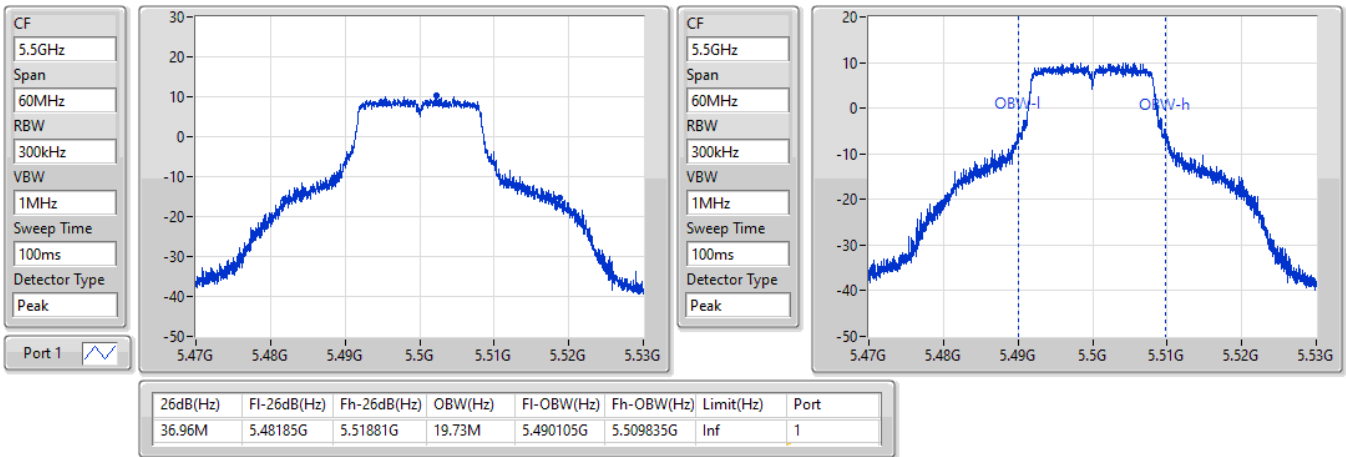

802.11a_Nss1,(6Mbps)_1TX
EBW
5320MHz

15/02/2022

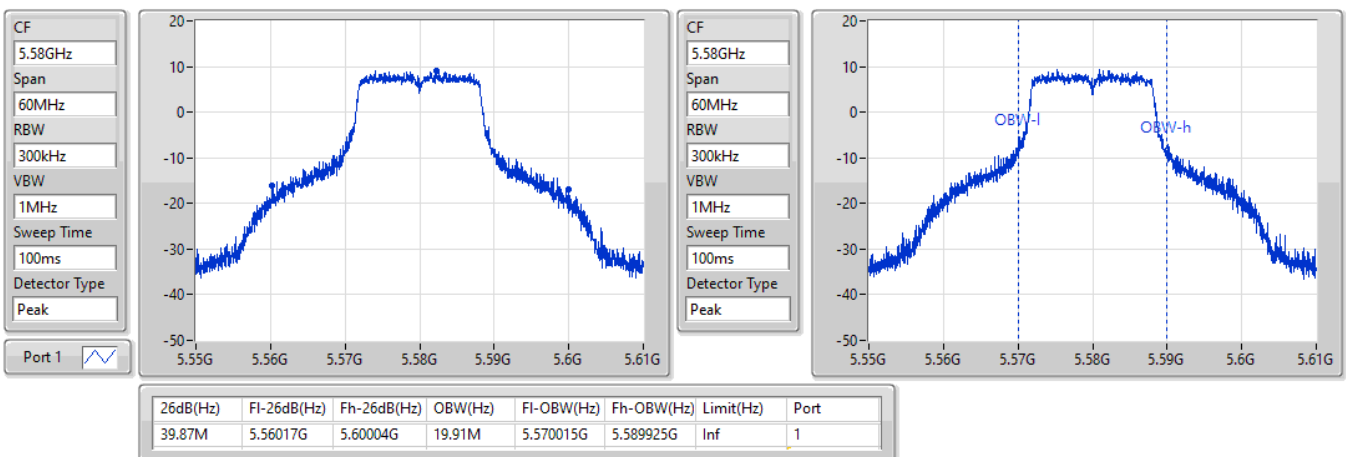


802.11a_Nss1,(6Mbps)_1TX
EBW
5500MHz

15/02/2022

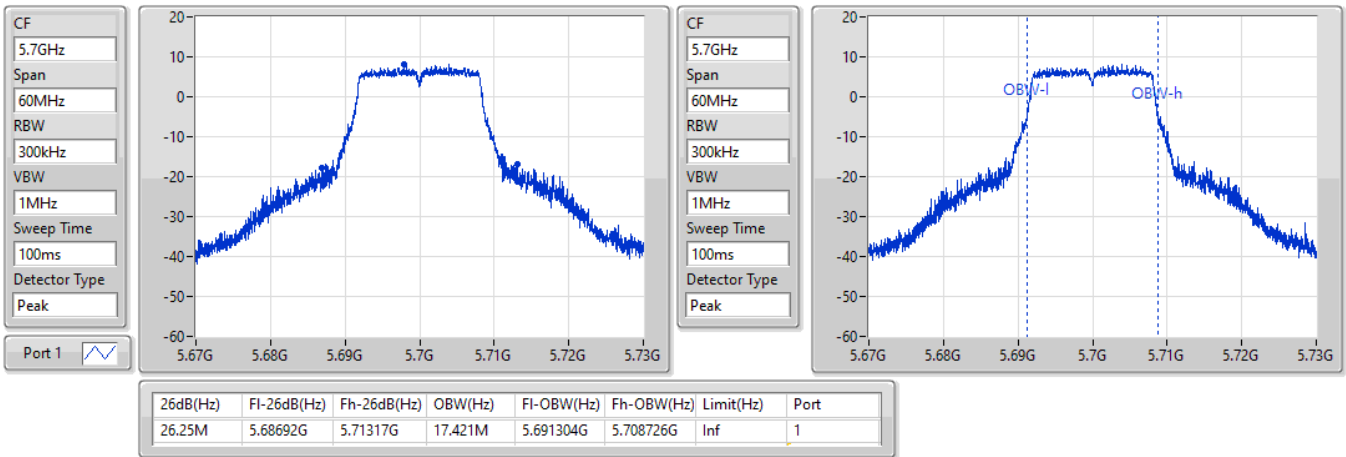

802.11a_Nss1,(6Mbps)_1TX
EBW
5580MHz

15/02/2022

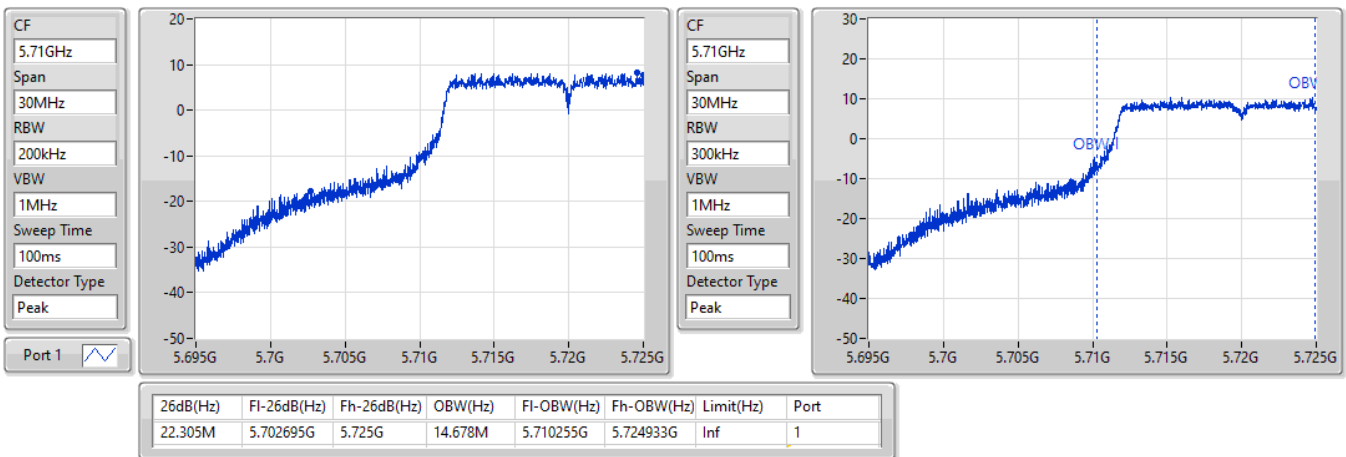


802.11a_Nss1,(6Mbps)_1TX
EBW
5700MHz

15/02/2022

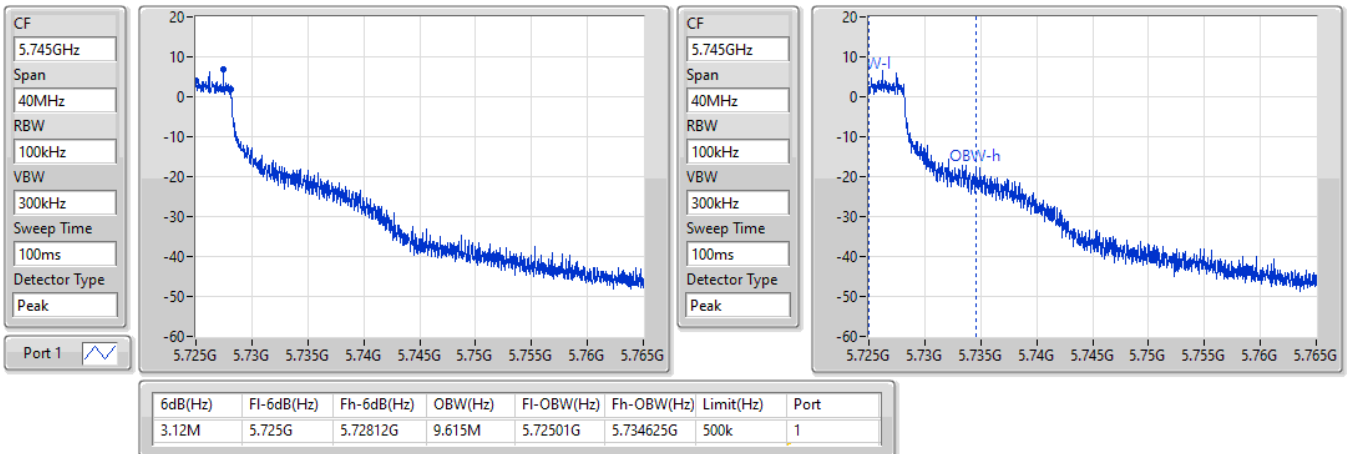

802.11a_Nss1,(6Mbps)_1TX
EBW
5720MHz Straddle 5.47-5.725GHz

15/02/2022

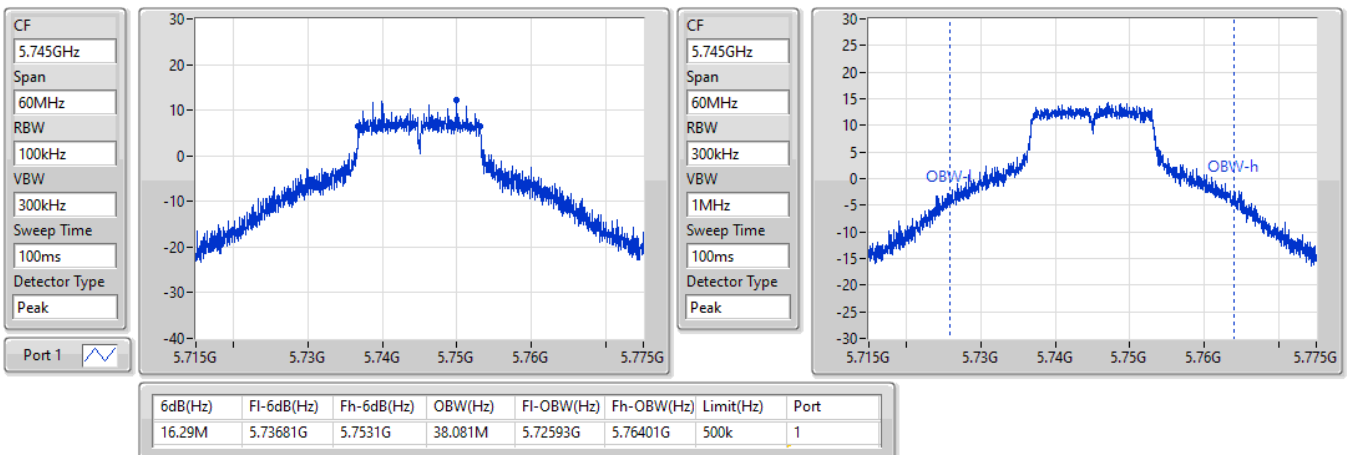


802.11a_Nss1,(6Mbps)_1TX
EBW
5720MHz Straddle 5.725-5.85GHz

15/02/2022

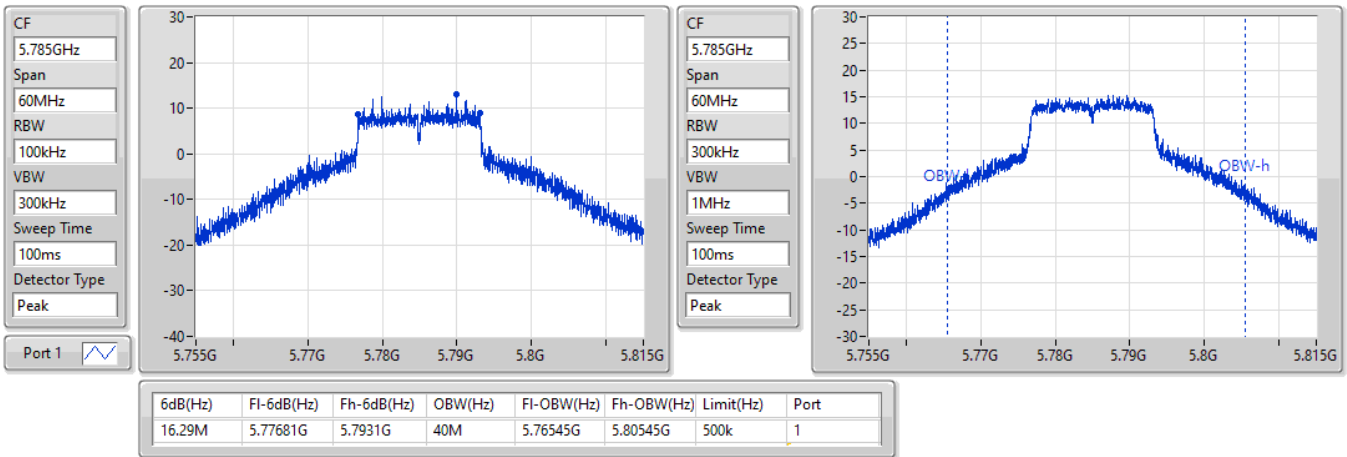

802.11a_Nss1,(6Mbps)_1TX
EBW
5745MHz

15/02/2022

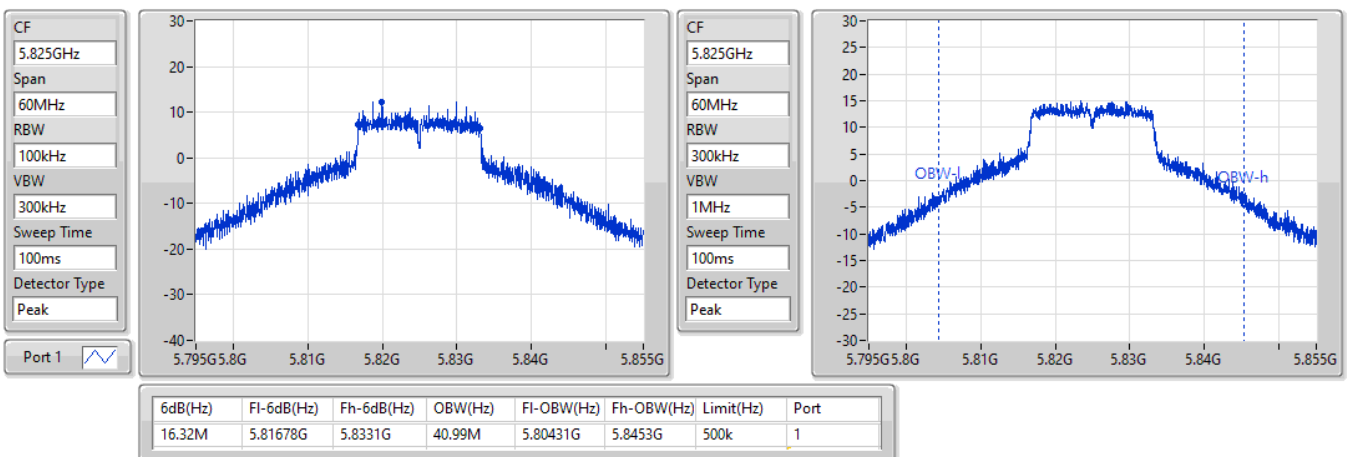


802.11a_Nss1,(6Mbps)_1TX
EBW
5785MHz

15/02/2022

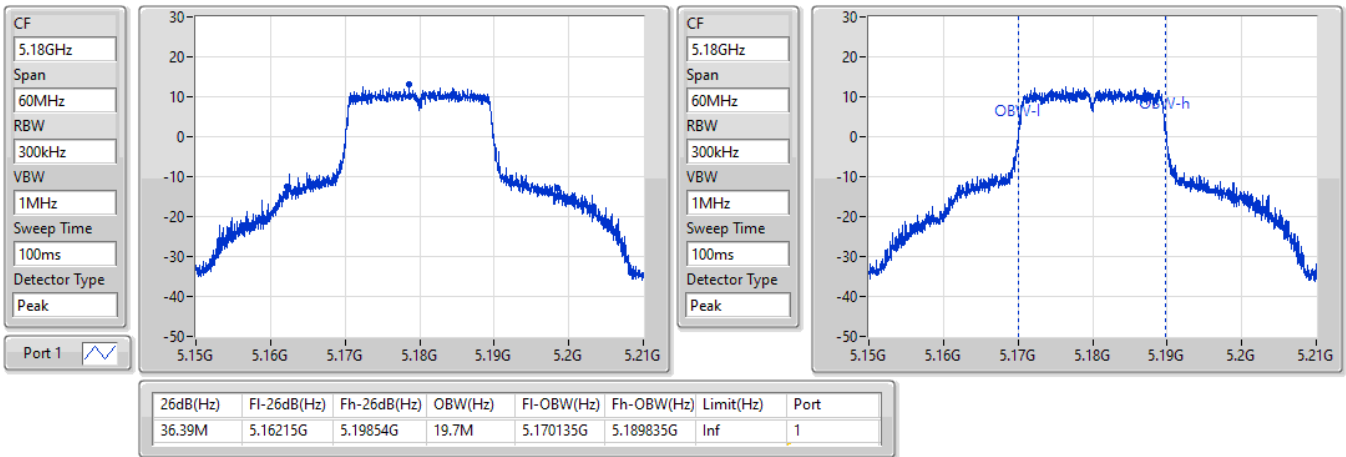

802.11a_Nss1,(6Mbps)_1TX
EBW
5825MHz

15/02/2022

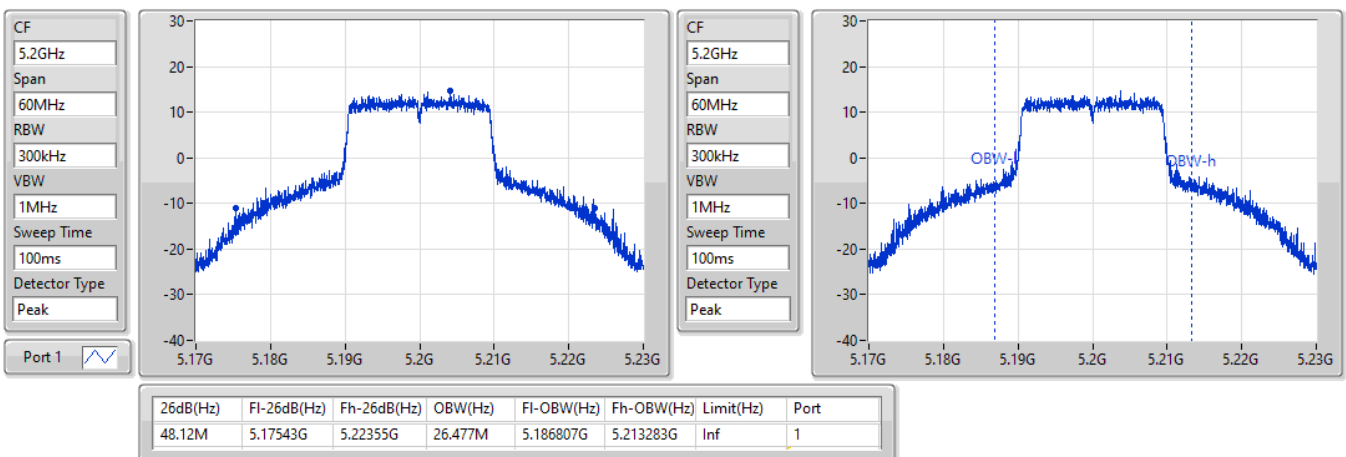


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5180MHz

15/02/2022

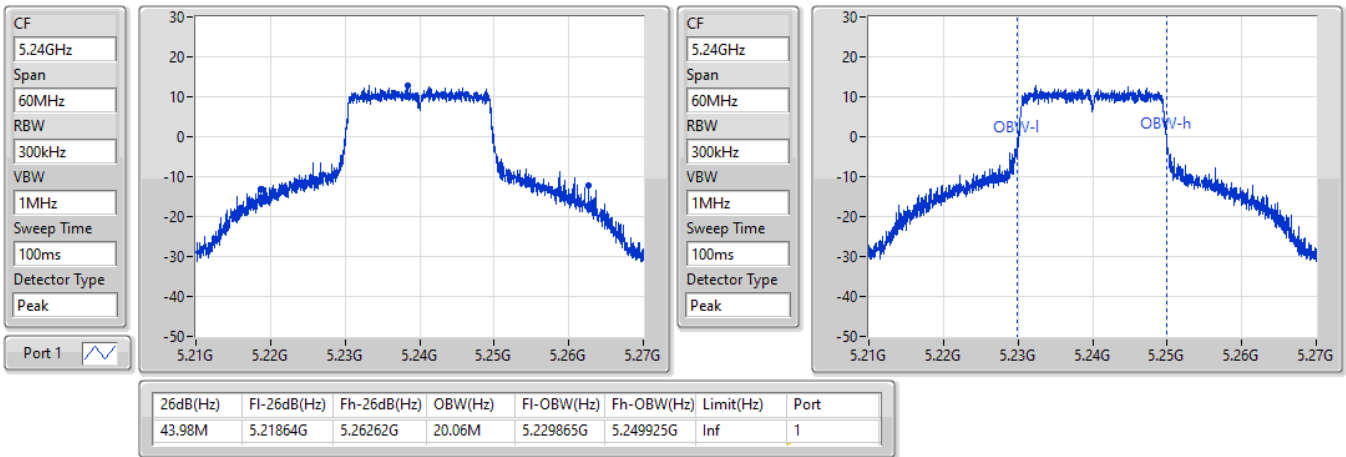

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5200MHz

15/02/2022

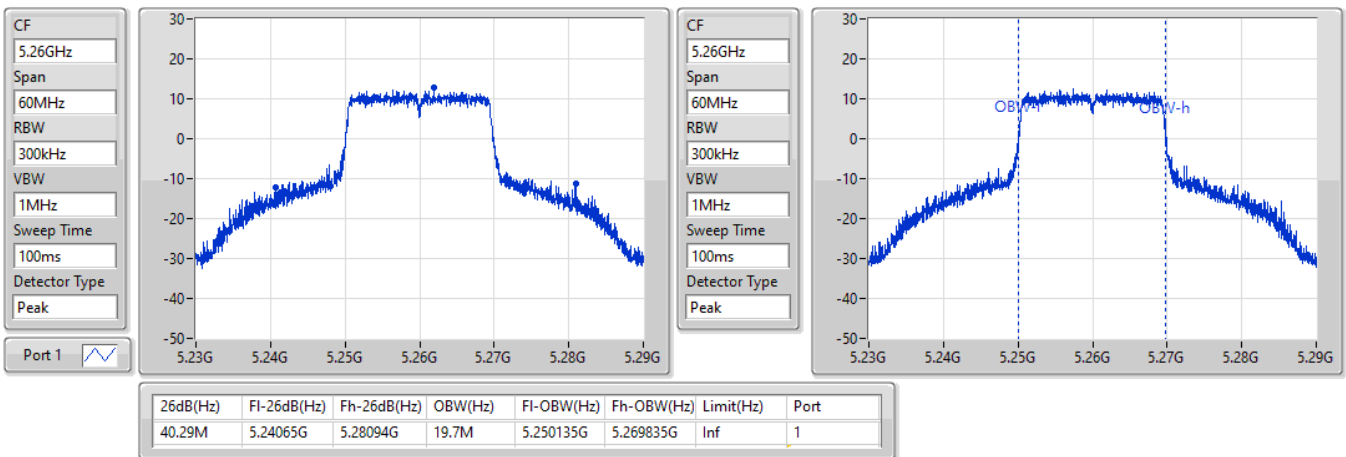


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5240MHz

15/02/2022

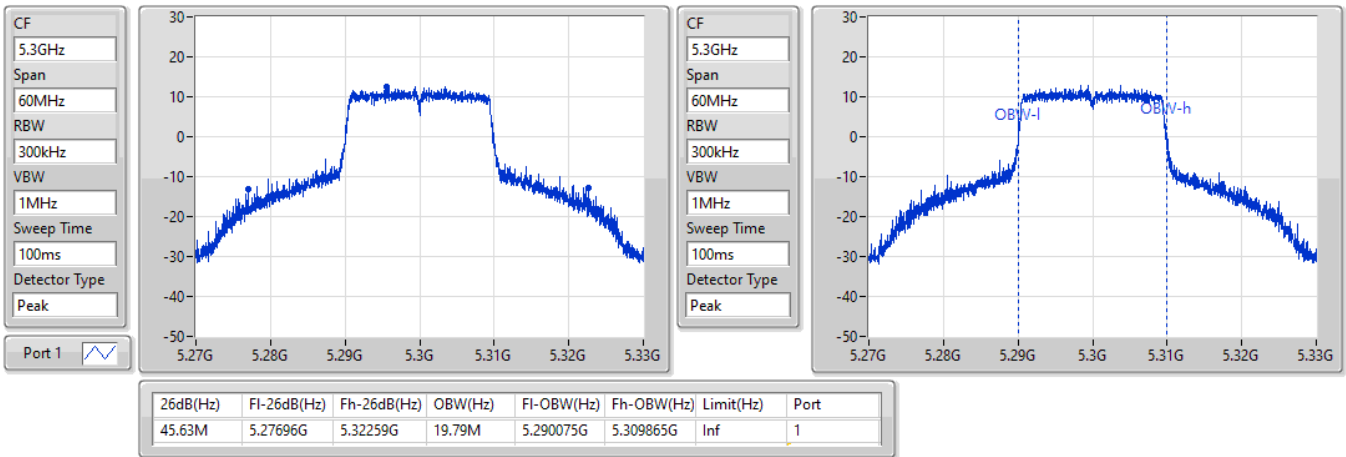

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5260MHz

15/02/2022

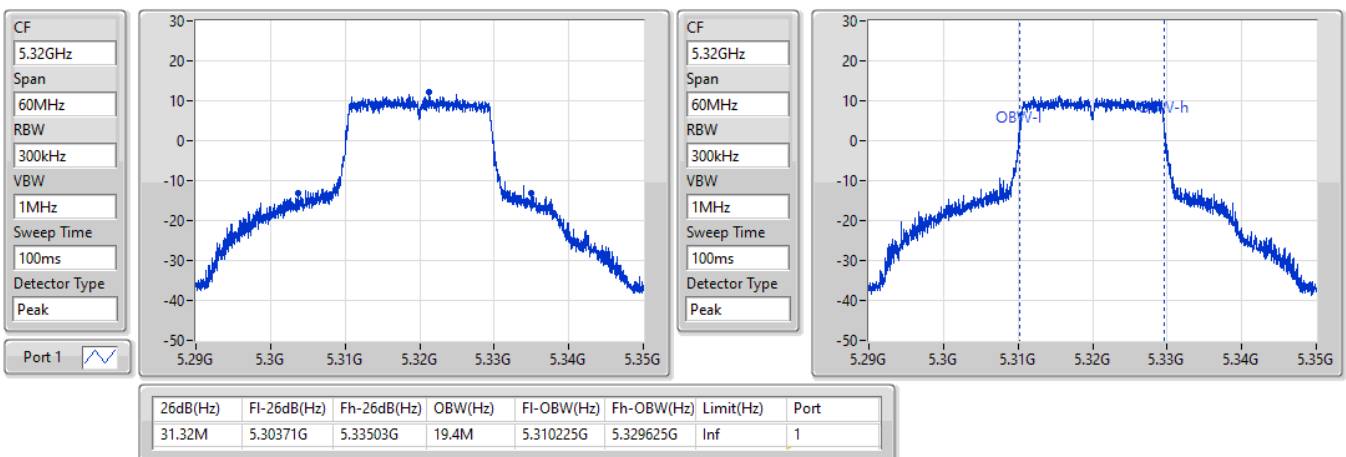


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5300MHz

15/02/2022

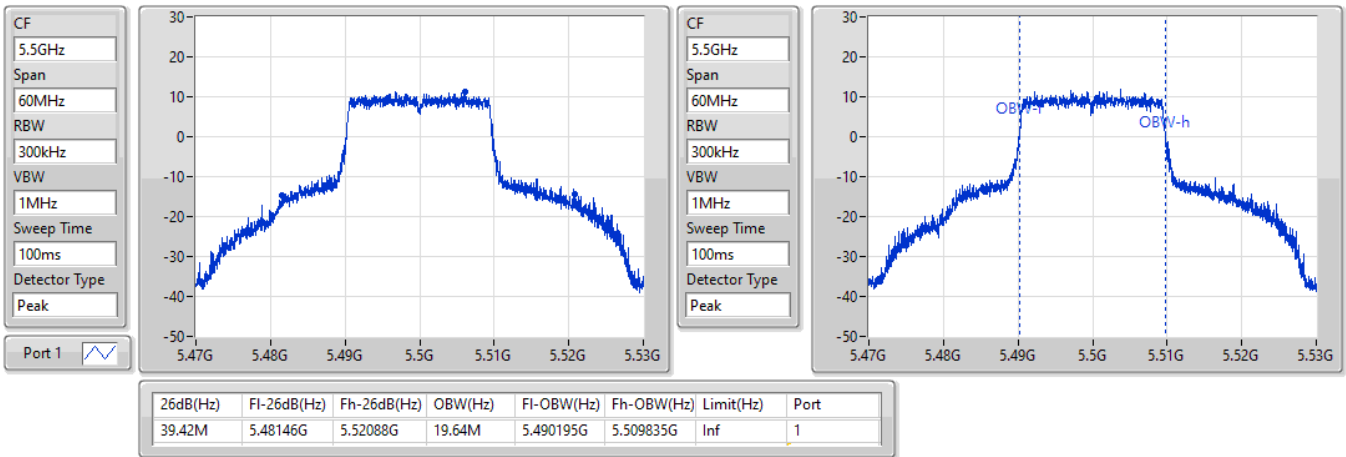

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5320MHz

15/02/2022

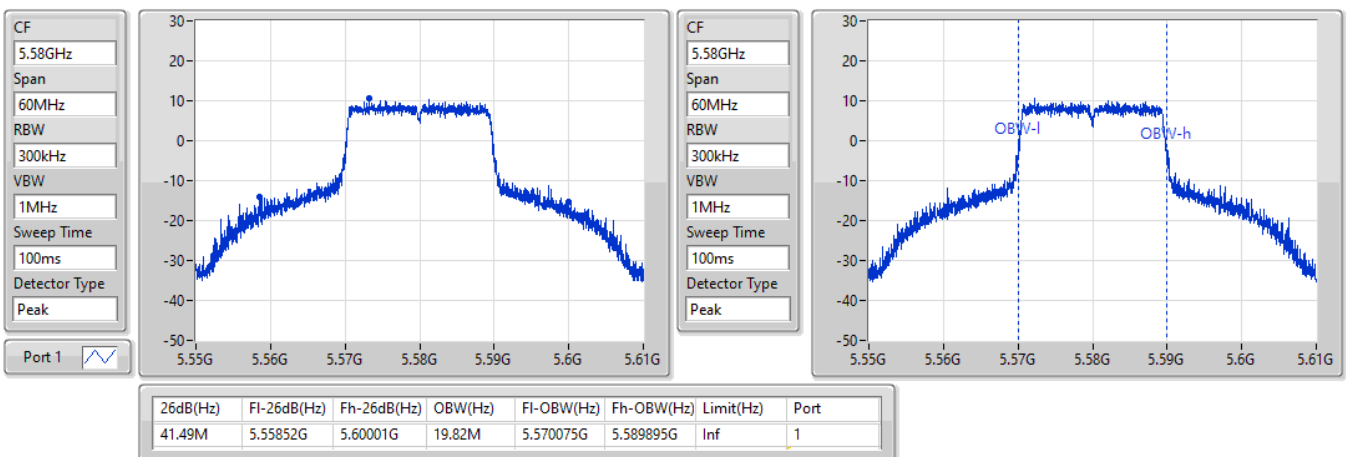


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5500MHz

15/02/2022

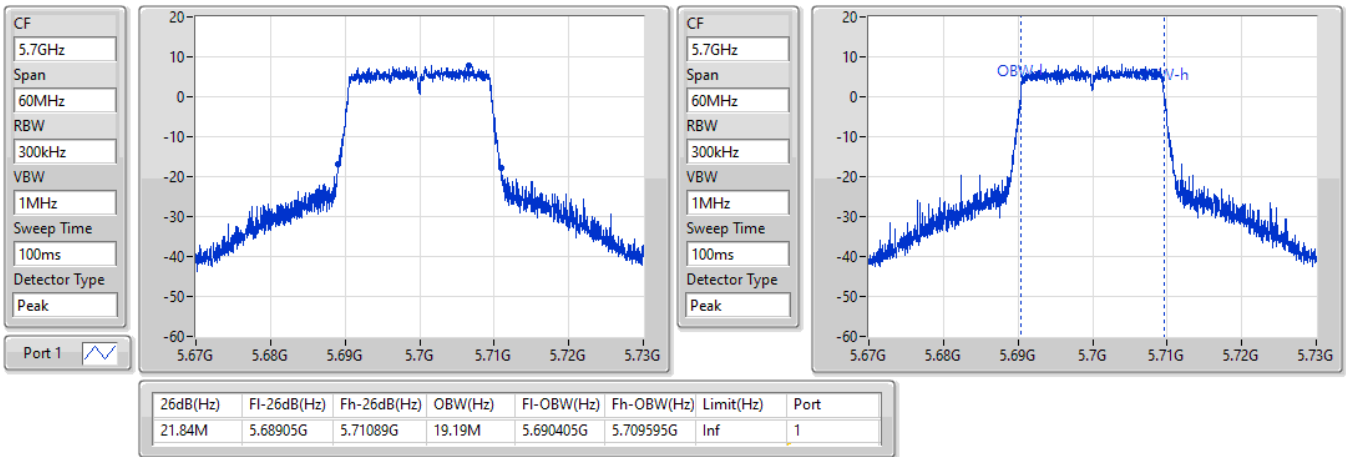

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5580MHz

15/02/2022

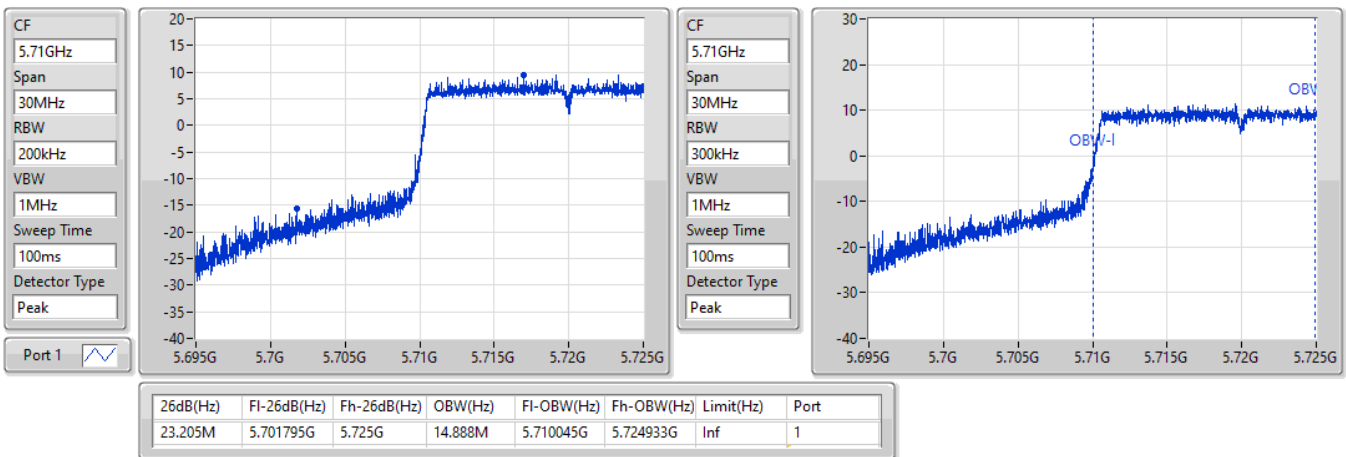


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5700MHz

15/02/2022

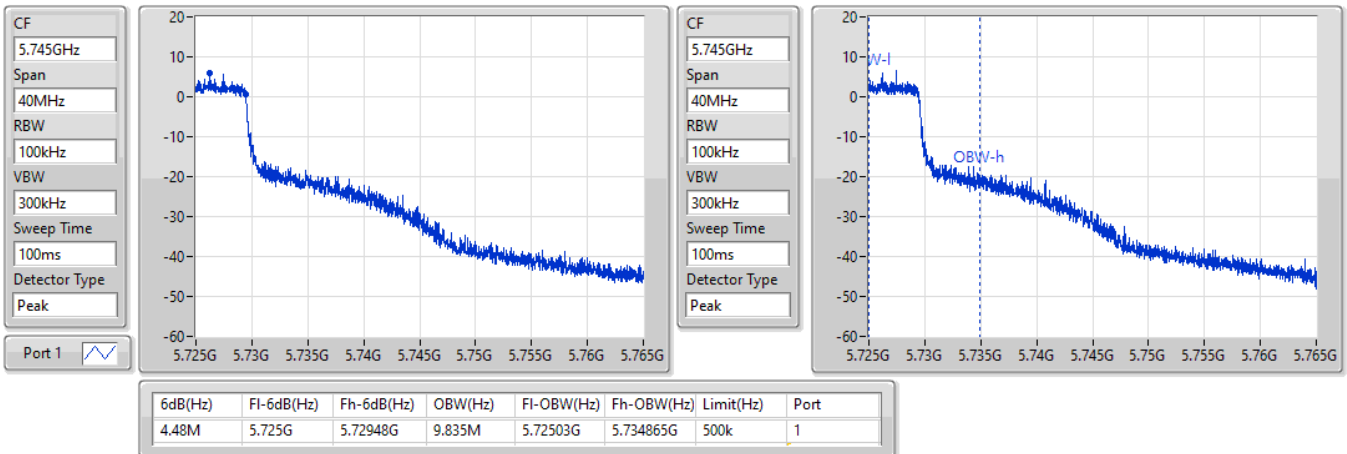

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5720MHz Straddle 5.47-5.725GHz

15/02/2022

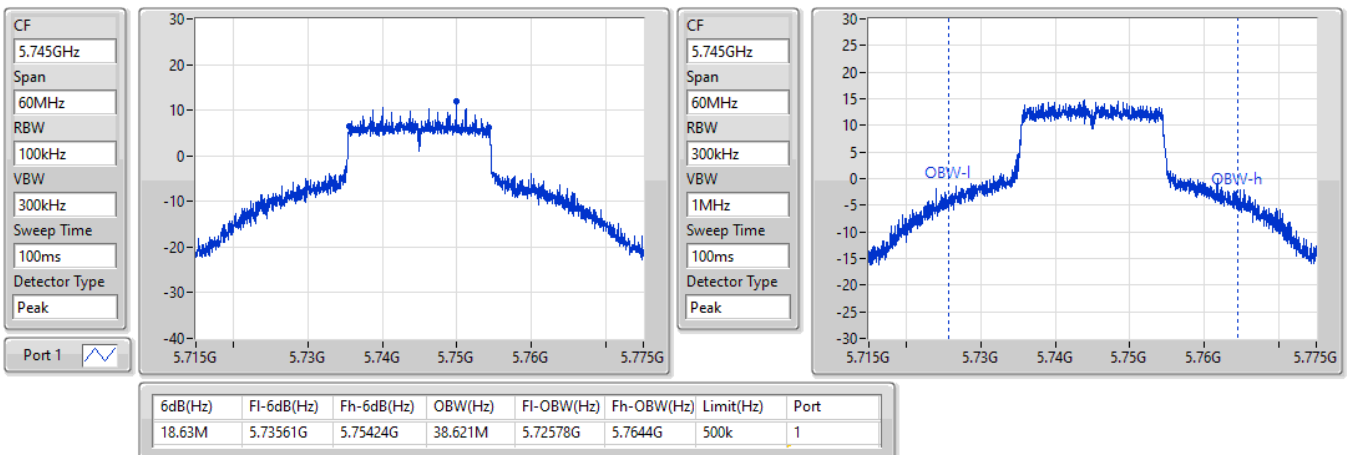


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5720MHz Straddle 5.725-5.85GHz

15/02/2022

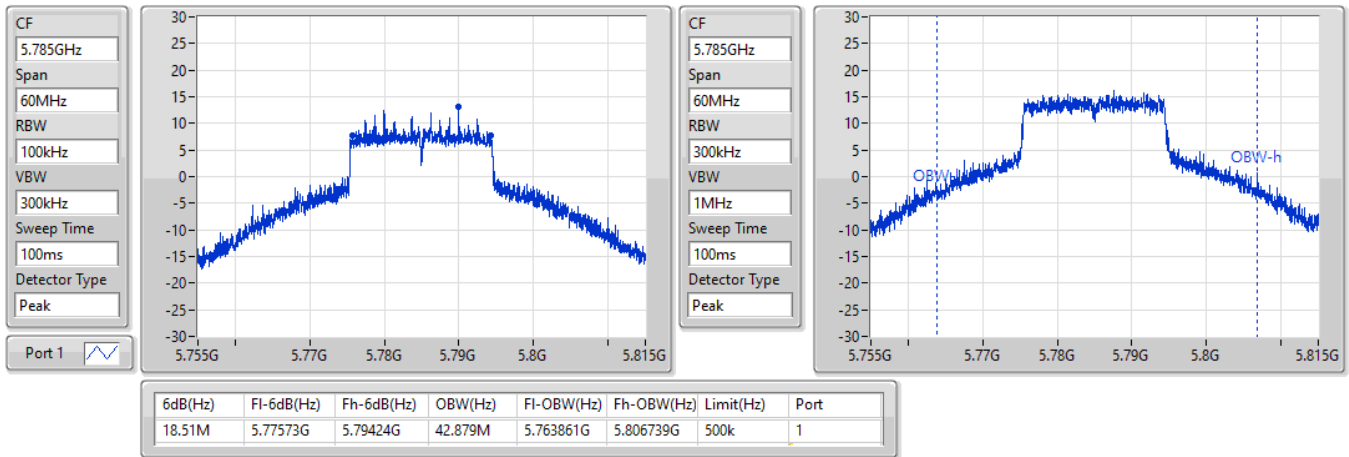

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5745MHz

15/02/2022

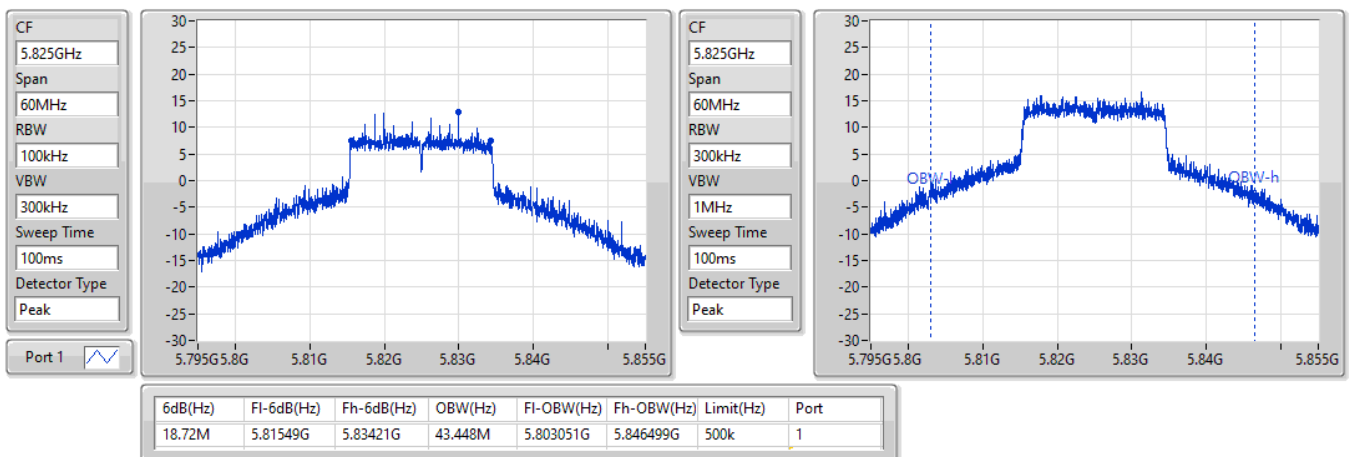


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5785MHz

15/02/2022

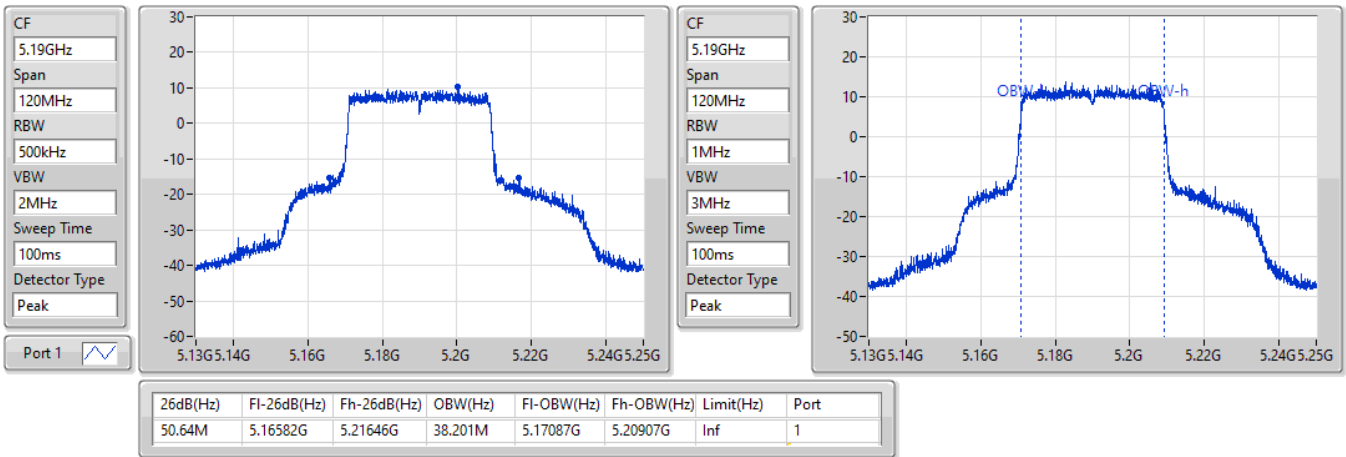

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5825MHz

15/02/2022

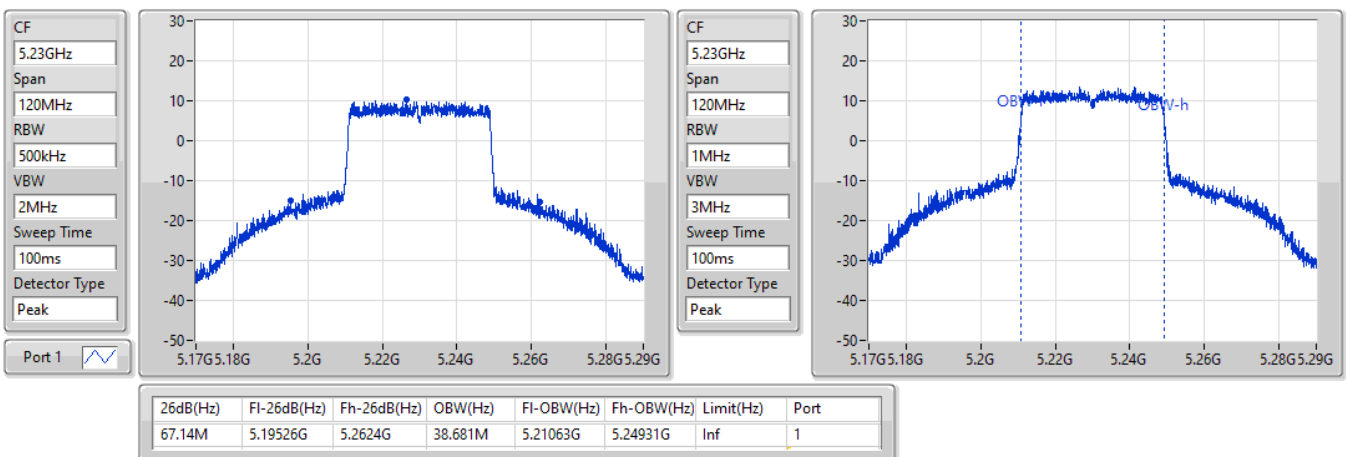


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
5190MHz

16/02/2022

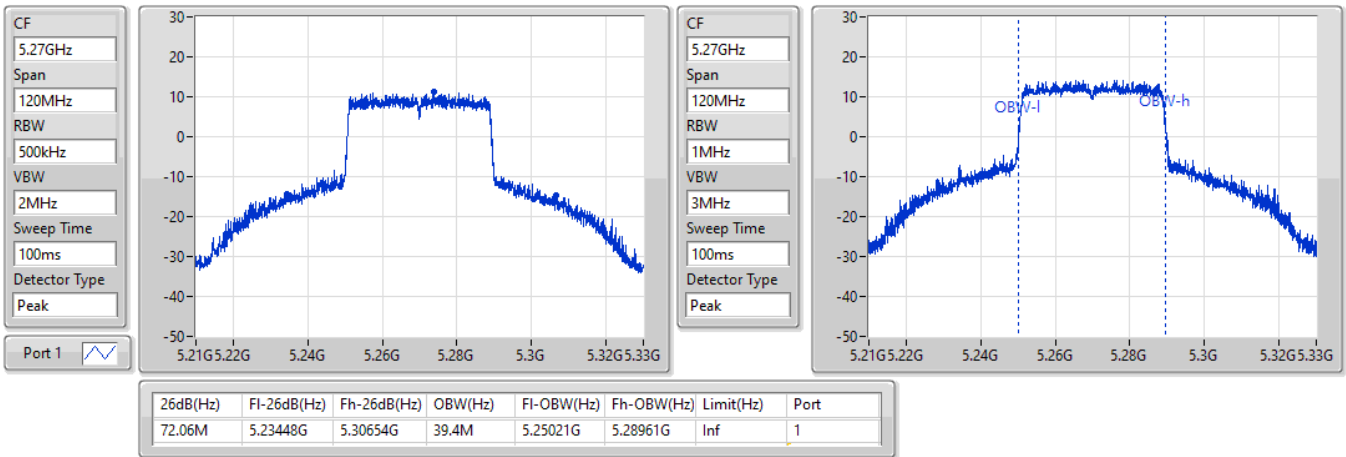

802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
5230MHz

16/02/2022

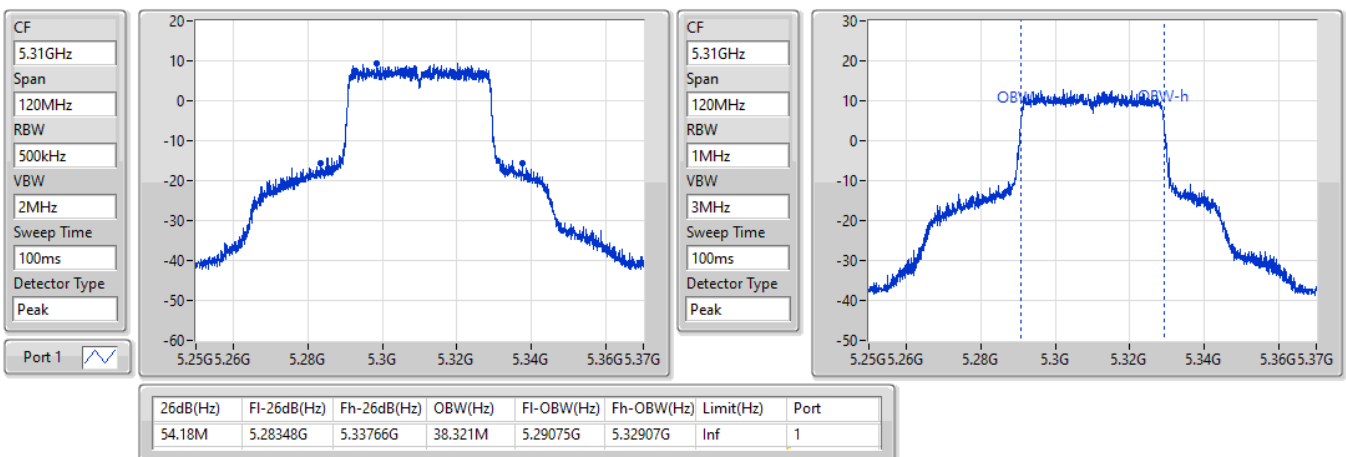


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
5270MHz

16/02/2022

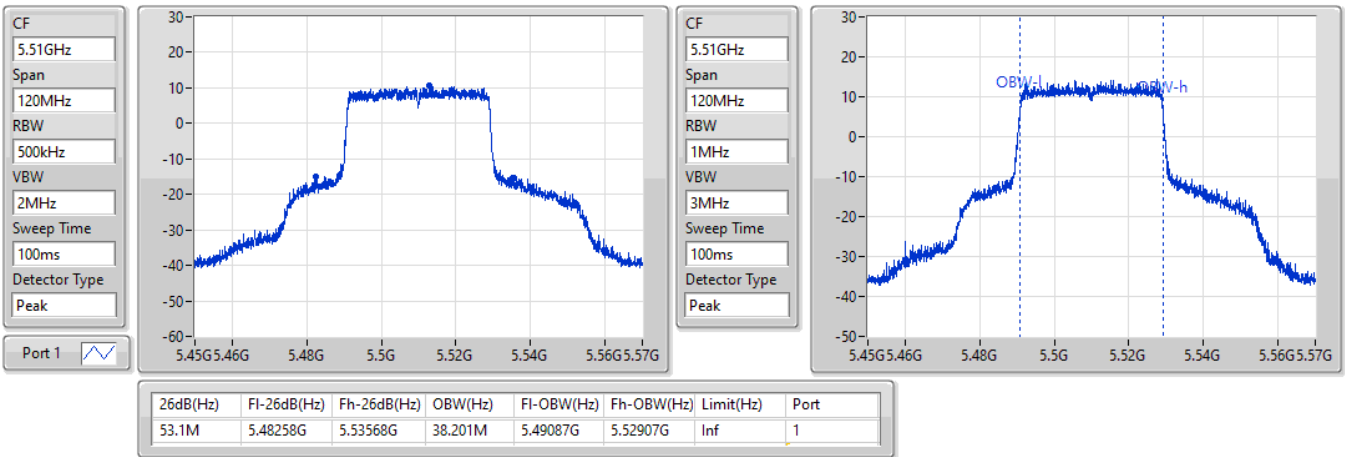

802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
5310MHz

16/02/2022

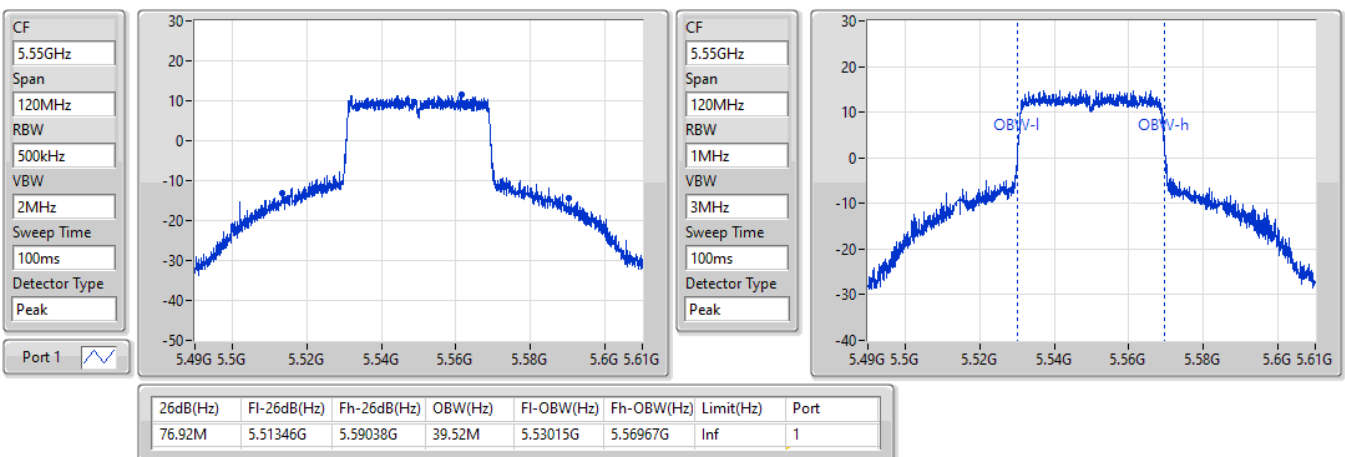


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
5510MHz

16/02/2022

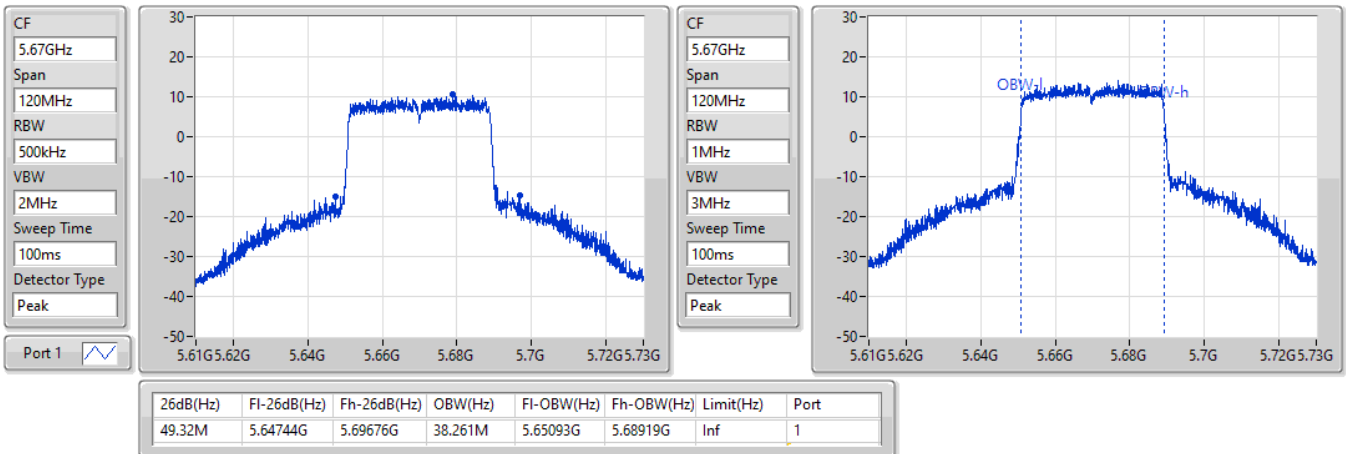

802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
5550MHz

16/02/2022

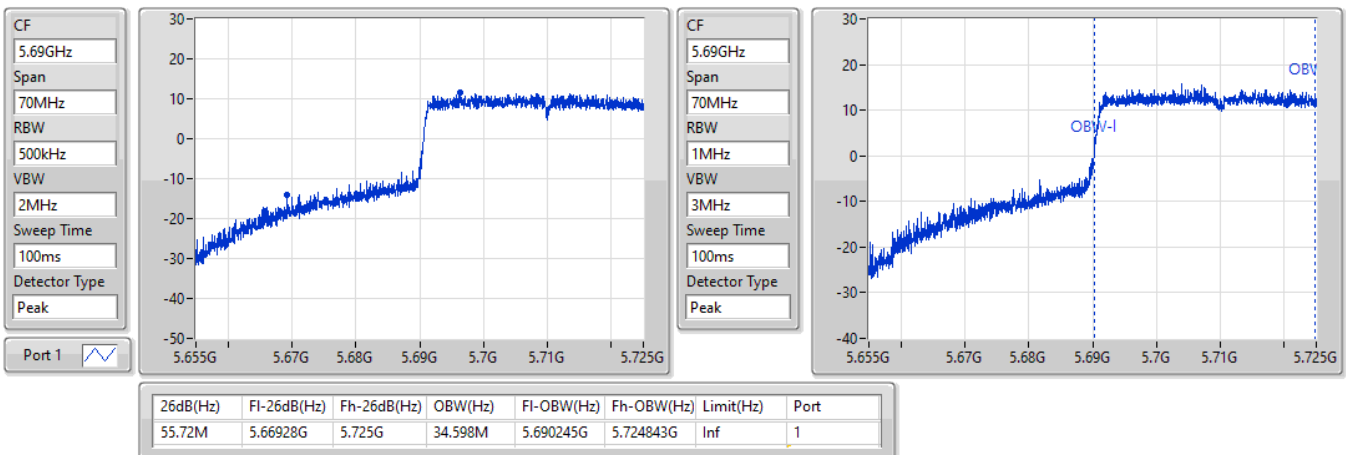


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
5670MHz

16/02/2022

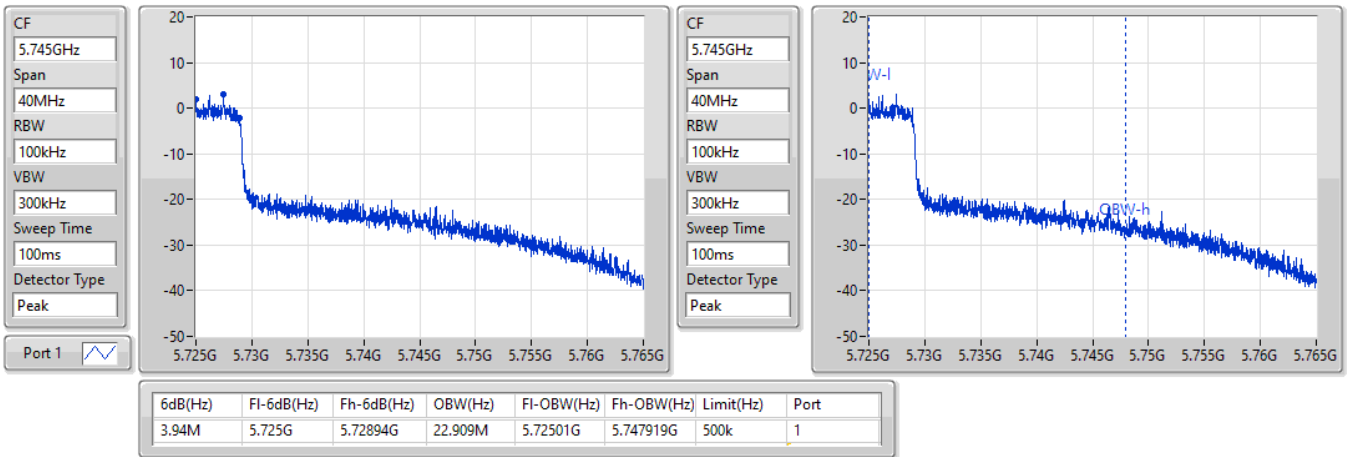

802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
5710MHz Straddle 5.47-5.725GHz

16/02/2022

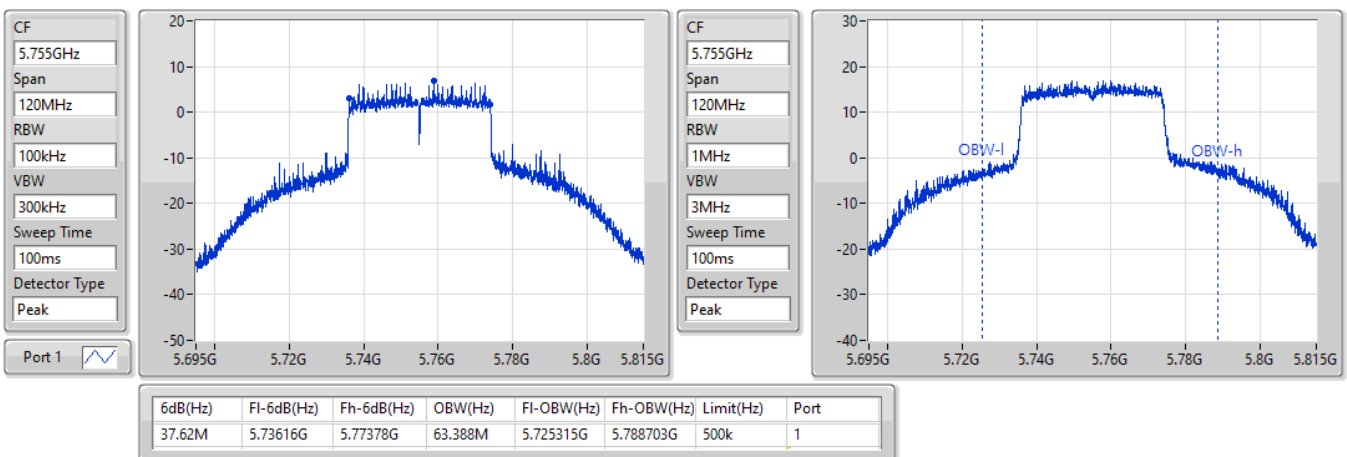


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
5710MHz Straddle 5.725-5.85GHz

16/02/2022

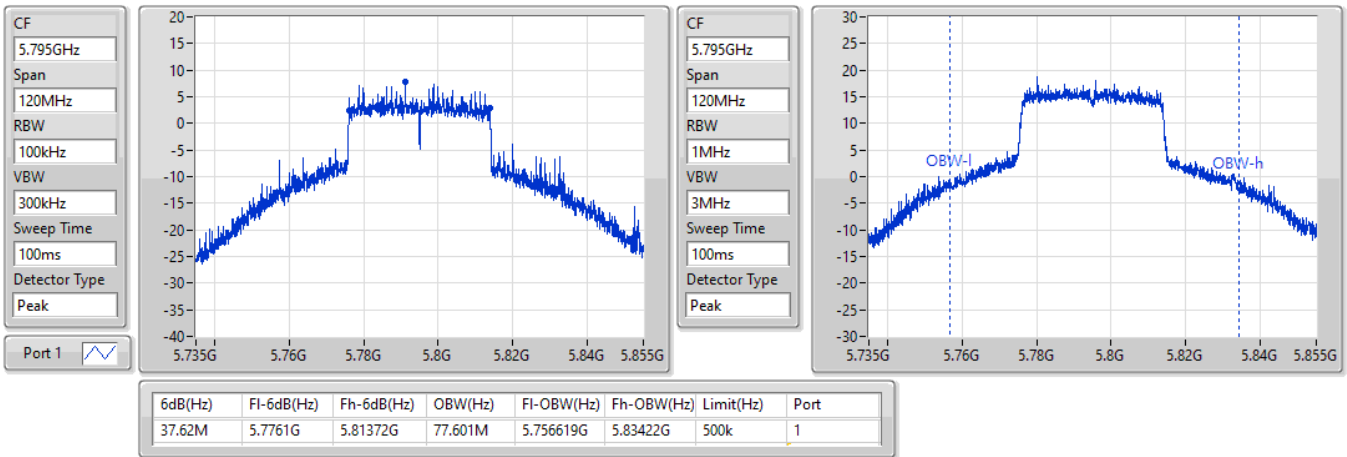

802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
5755MHz

16/02/2022

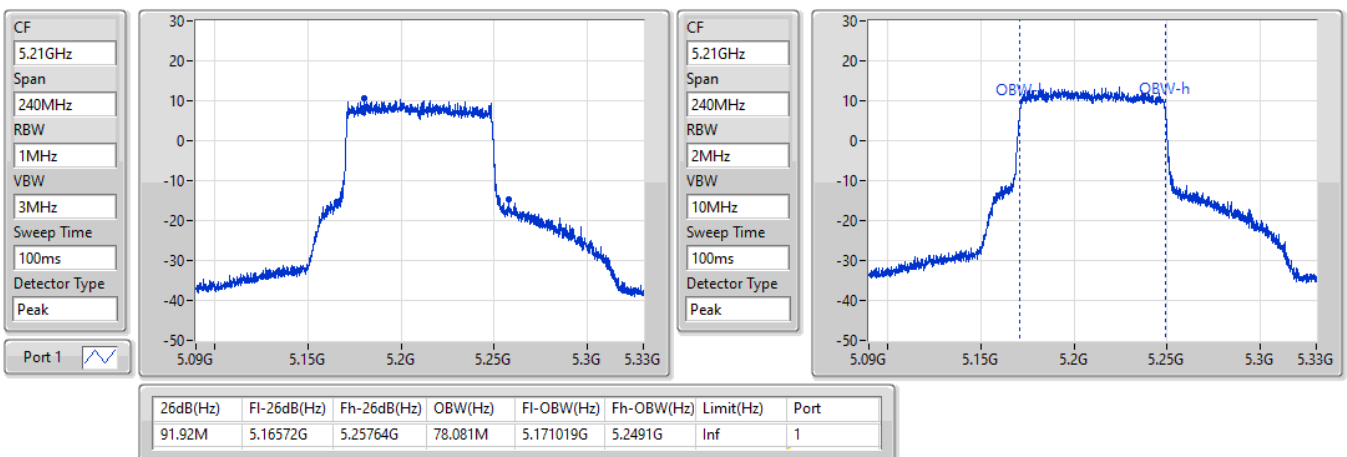


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
5795MHz

16/02/2022

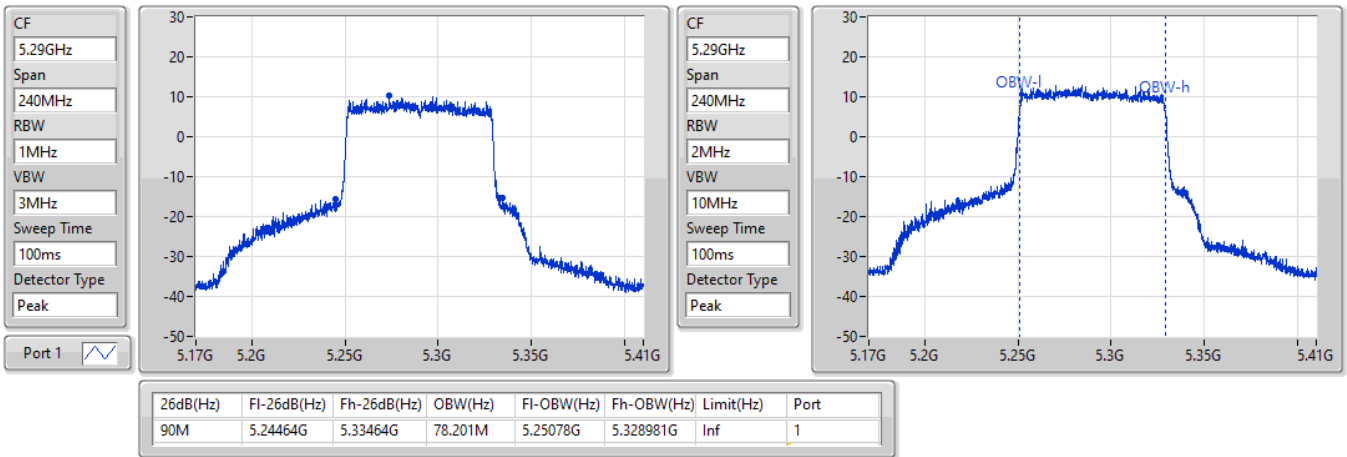

802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
5210MHz

16/02/2022

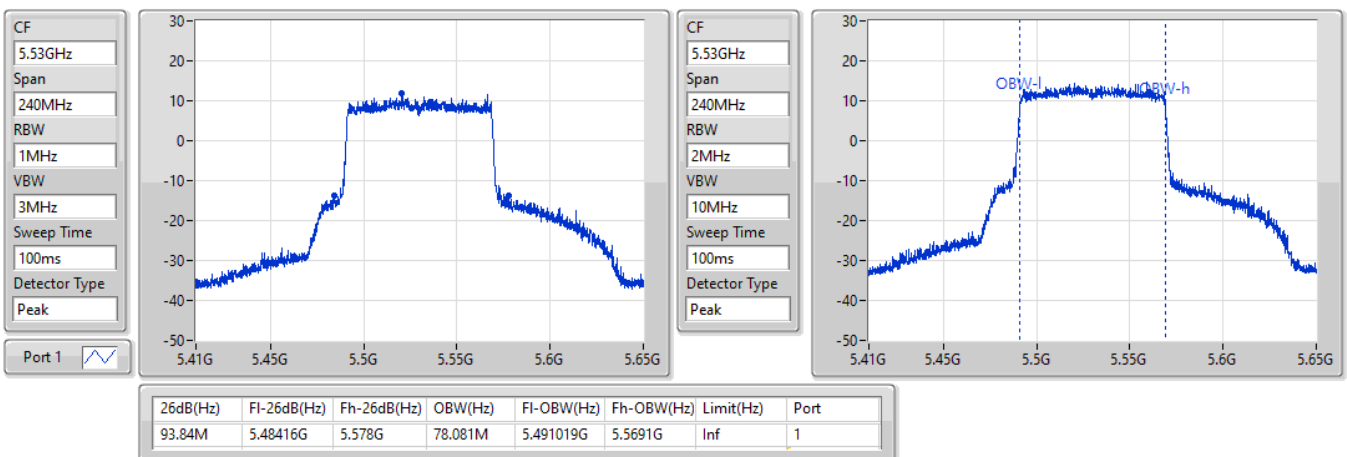


802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
5290MHz

16/02/2022

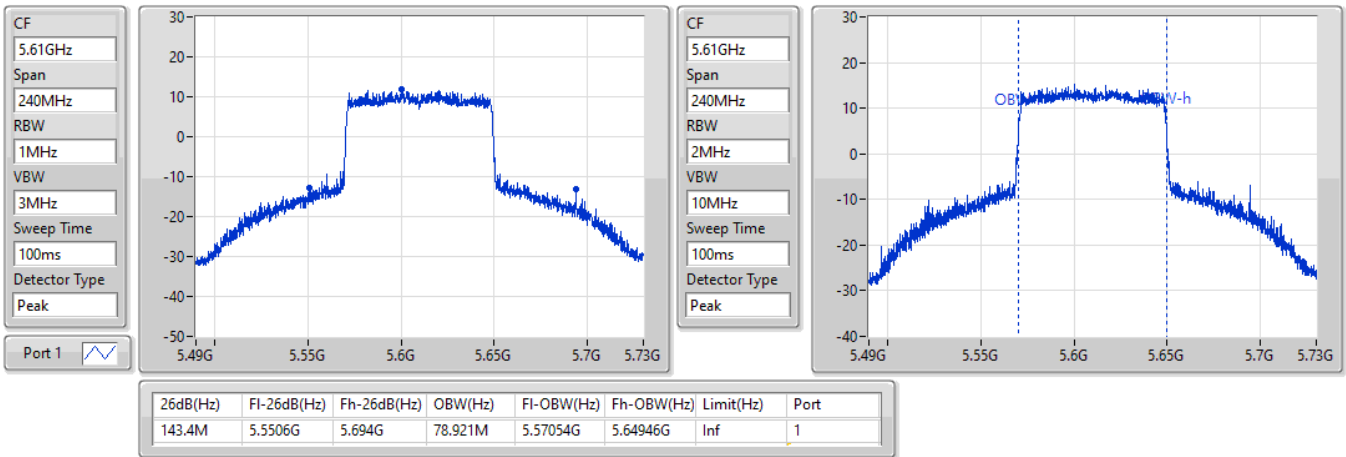

802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
5530MHz

16/02/2022

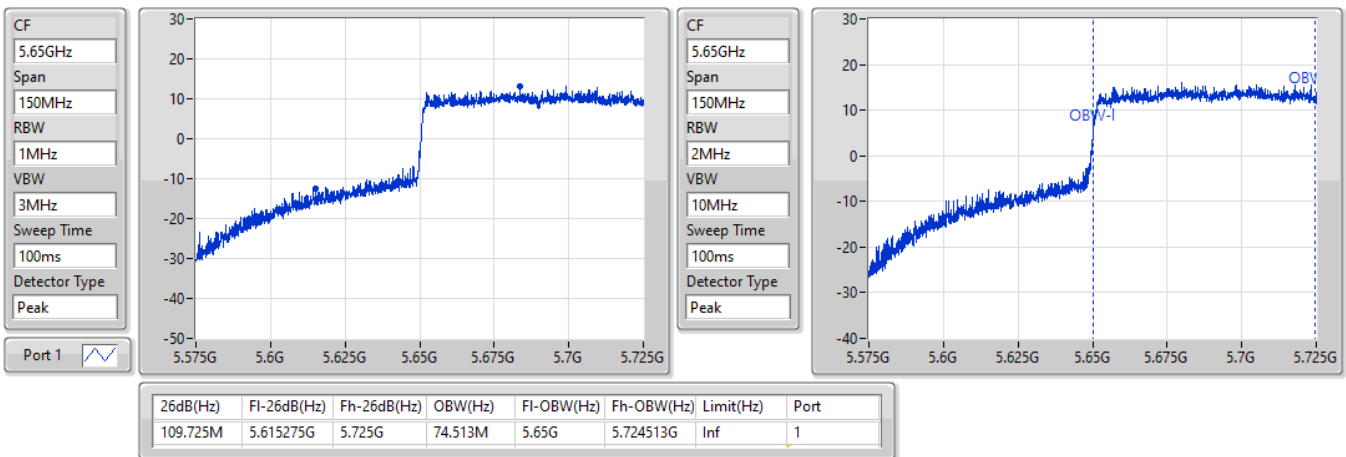


802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
5610MHz

16/02/2022

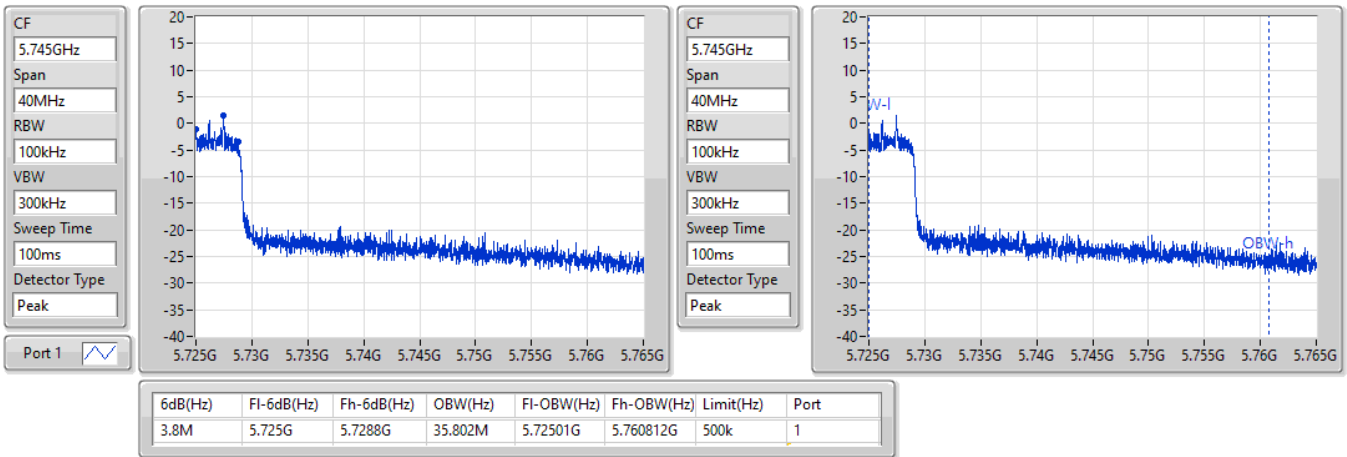

802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
5690MHz Straddle 5.47-5.725GHz

16/02/2022

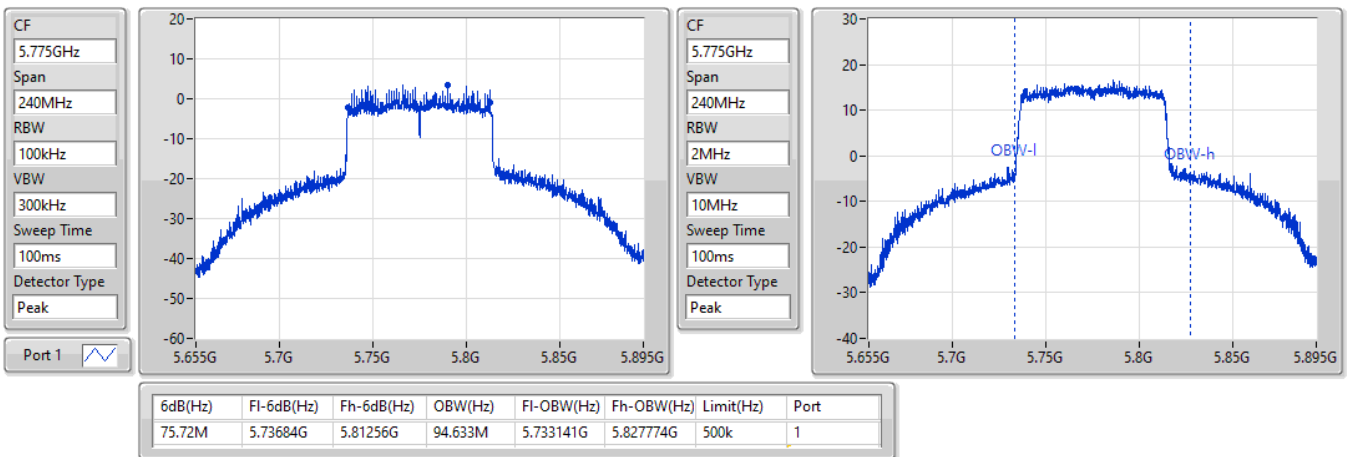


802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
5690MHz Straddle 5.725-5.85GHz

16/02/2022


802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
5775MHz

16/02/2022



Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	44.1M	24.918M	24M9D1D	26.64M	17.631M
802.11ax HEW20_Nss1,(MCS0)_1TX	43.92M	21.139M	21M1D1D	35.37M	19.31M
802.11ax HEW40_Nss1,(MCS0)_1TX	60.42M	38.561M	38M6D1D	43.68M	38.141M
802.11ax HEW80_Nss1,(MCS0)_1TX	87M	77.961M	78M0D1D	87M	77.961M
5.25-5.35GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	39.84M	19.73M	19M7D1D	26.1M	17.631M
802.11ax HEW20_Nss1,(MCS0)_1TX	41.7M	19.85M	19M8D1D	29.1M	19.28M
802.11ax HEW40_Nss1,(MCS0)_1TX	71.58M	38.801M	38M8D1D	47.52M	38.141M
802.11ax HEW80_Nss1,(MCS0)_1TX	84.6M	77.961M	78M0D1D	84.6M	77.961M
5.47-5.725GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	37.41M	19.34M	19M3D1D	21.81M	14.603M
802.11ax HEW20_Nss1,(MCS0)_1TX	46.14M	19.82M	19M8D1D	22.02M	14.918M
802.11ax HEW40_Nss1,(MCS0)_1TX	77.76M	39.64M	39M6D1D	48M	34.703M
802.11ax HEW80_Nss1,(MCS0)_1TX	112.32M	78.561M	78M6D1D	94.56M	74.513M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	16.38M	42.189M	42M2D1D	3.12M	9.635M
802.11ax HEW20_Nss1,(MCS0)_1TX	18.81M	43.718M	43M7D1D	4.44M	9.955M
802.11ax HEW40_Nss1,(MCS0)_1TX	37.62M	61.829M	61M8D1D	3.9M	23.728M
802.11ax HEW80_Nss1,(MCS0)_1TX	76.32M	78.801M	78M8D1D	3.92M	33.443M

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

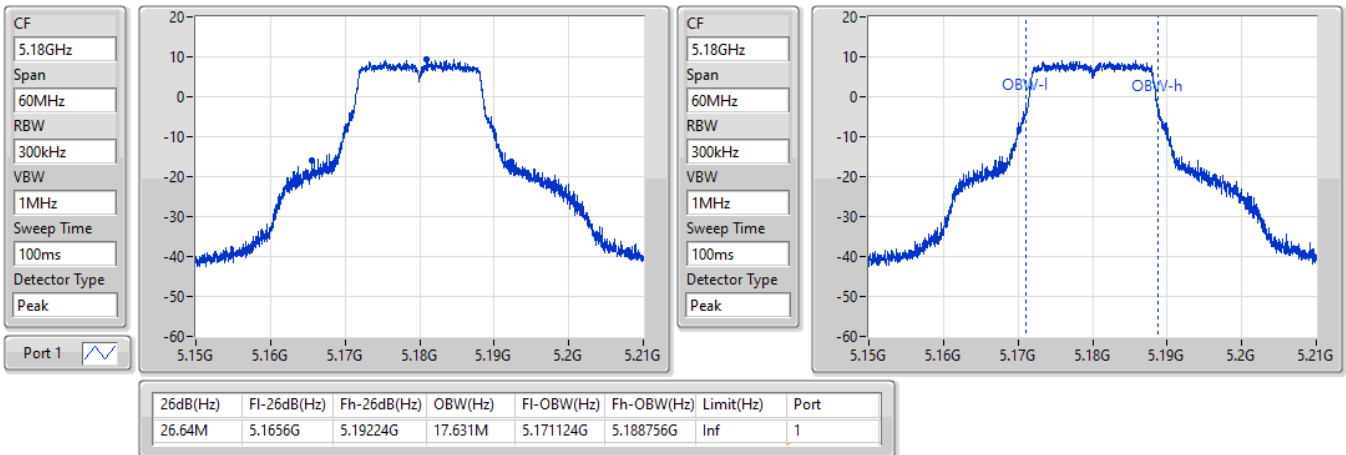
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11a_Nss1,(6Mbps)_1TX	-	-	-	-
5180MHz	Pass	Inf	26.64M	17.631M
5200MHz	Pass	Inf	44.1M	24.918M
5240MHz	Pass	Inf	39.63M	20M
5260MHz	Pass	Inf	38.7M	19.7M
5300MHz	Pass	Inf	39.84M	19.73M
5320MHz	Pass	Inf	26.1M	17.631M
5500MHz	Pass	Inf	33.18M	18.201M
5580MHz	Pass	Inf	37.41M	19.34M
5700MHz	Pass	Inf	21.81M	17.091M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	23.04M	14.603M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.12M	9.635M
5745MHz	Pass	500k	16.38M	39.19M
5785MHz	Pass	500k	16.26M	41.739M
5825MHz	Pass	500k	16.35M	42.189M
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-
5180MHz	Pass	Inf	35.37M	19.31M
5200MHz	Pass	Inf	43.59M	21.139M
5240MHz	Pass	Inf	43.92M	19.88M
5260MHz	Pass	Inf	39.57M	19.79M
5300MHz	Pass	Inf	41.7M	19.85M
5320MHz	Pass	Inf	29.1M	19.28M
5500MHz	Pass	Inf	34.68M	19.49M
5580MHz	Pass	Inf	46.14M	19.82M
5700MHz	Pass	Inf	22.02M	19.1M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	25.86M	14.918M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	4.44M	9.955M
5745MHz	Pass	500k	18.33M	39.58M
5785MHz	Pass	500k	18.75M	43.718M
5825MHz	Pass	500k	18.81M	38.981M
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-	-	-
5190MHz	Pass	Inf	43.68M	38.141M
5230MHz	Pass	Inf	60.42M	38.561M
5270MHz	Pass	Inf	71.58M	38.801M
5310MHz	Pass	Inf	47.52M	38.141M
5510MHz	Pass	Inf	48M	38.201M
5550MHz	Pass	Inf	77.76M	39.64M
5670MHz	Pass	Inf	51.48M	38.141M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	49.525M	34.703M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.9M	23.728M
5755MHz	Pass	500k	37.62M	54.153M
5795MHz	Pass	500k	37.62M	61.829M
802.11ax HEW80_Nss1,(MCS0)_1TX	-	-	-	-
5210MHz	Pass	Inf	87M	77.961M
5290MHz	Pass	Inf	84.6M	77.961M
5530MHz	Pass	Inf	94.56M	78.081M
5610MHz	Pass	Inf	112.32M	78.561M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	106.65M	74.513M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.92M	33.443M
5775MHz	Pass	500k	76.32M	78.801M

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

802.11a_Nss1,(6Mbps)_1TX
EBW
5180MHz

16/02/2022


802.11a_Nss1,(6Mbps)_1TX
EBW
5200MHz

16/02/2022

