



RADIO TEST REPORT

FCC ID : QXO-AP5050
Equipment : Access Point
Brand Name : Extreme Networks
Model Name : AP5050U
Applicant : Extreme Networks, Inc.
2121 RDU Center Drive Morrisville North Carolina
United States 27560
Manufacturer : Extreme Networks, Inc.
2121 RDU Center Drive Morrisville North Carolina
United States 27560
Standard : 47 CFR FCC Part 15.407

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

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

Approved by: Sam Chen

Sporton International Inc. Hsinchu Laboratory

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



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



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	-

Declaration of Conformity:

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

Comments and Explanations:

1. The test configuration, test mode and test software were written in this test report are declared by the manufacturer.
2. The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Sam Chen**Report Producer: Viola Huang**



1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
5150-5250	a, n (HT20), ac (VHT20), ax (HEW20)	5180-5240	36-48 [4]
5725-5850		5745-5825	149-165 [5]
5150-5250	n (HT40), ac (VHT40), ax (HEW40)	5190-5230	38-46 [2]
5725-5850		5755-5795	151-159 [2]
5150-5250	ac (VHT80), ax (HEW80)	5210	42 [1]
5725-5850		5775	155 [1]

For Radio 2

Band	Mode	BWch (MHz)	Nant
5.15-5.25GHz	802.11a	20	1, 2, 4
5.15-5.25GHz	802.11n HT20	20	1, 2, 4
5.15-5.25GHz	802.11n HT20-BF	20	2, 4
5.15-5.25GHz	802.11ac VHT20	20	1, 2, 4
5.15-5.25GHz	802.11ac VHT20-BF	20	2, 4
5.15-5.25GHz	802.11ax HEW20	20	1, 2, 4
5.15-5.25GHz	802.11ax HEW20-BF	20	2, 4
5.15-5.25GHz	802.11n HT40	40	1, 2, 4
5.15-5.25GHz	802.11n HT40-BF	40	2, 4
5.15-5.25GHz	802.11ac VHT40	40	1, 2, 4
5.15-5.25GHz	802.11ac VHT40-BF	40	2, 4
5.15-5.25GHz	802.11ax HEW40	40	1, 2, 4
5.15-5.25GHz	802.11ax HEW40-BF	40	2, 4
5.15-5.25GHz	802.11ac VHT80	80	1, 2, 4
5.15-5.25GHz	802.11ac VHT80-BF	80	2, 4
5.15-5.25GHz	802.11ax HEW80	80	1, 2, 4
5.15-5.25GHz	802.11ax HEW80-BF	80	2, 4
5.725-5.85GHz	802.11a	20	1, 2, 4
5.725-5.85GHz	802.11n HT20	20	1, 2, 4
5.725-5.85GHz	802.11n HT20-BF	20	2, 4
5.725-5.85GHz	802.11ac VHT20	20	1, 2, 4
5.725-5.85GHz	802.11ac VHT20-BF	20	2, 4
5.725-5.85GHz	802.11ax HEW20	20	1, 2, 4
5.725-5.85GHz	802.11ax HEW20-BF	20	2, 4
5.725-5.85GHz	802.11n HT40	40	1, 2, 4



Band	Mode	BWch (MHz)	Nant
5.725-5.85GHz	802.11n HT40-BF	40	2, 4
5.725-5.85GHz	802.11ac VHT40	40	1, 2, 4
5.725-5.85GHz	802.11ac VHT40-BF	40	2, 4
5.725-5.85GHz	802.11ax HEW40	40	1, 2, 4
5.725-5.85GHz	802.11ax HEW40-BF	40	2, 4
5.725-5.85GHz	802.11ac VHT80	80	1, 2, 4
5.725-5.85GHz	802.11ac VHT80-BF	80	2, 4
5.725-5.85GHz	802.11ax HEW80	80	1, 2, 4
5.725-5.85GHz	802.11ax HEW80-BF	80	2, 4

For Scanning radio 1

Band	Mode	BWch (MHz)	Nant
5.15-5.25GHz	802.11a	20	2
5.15-5.25GHz	802.11n HT20	20	2
5.15-5.25GHz	802.11ac VHT20	20	2
5.15-5.25GHz	802.11ax HEW20	20	2
5.15-5.25GHz	802.11n HT40	40	2
5.15-5.25GHz	802.11ac VHT40	40	2
5.15-5.25GHz	802.11ax HEW40	40	2
5.15-5.25GHz	802.11ac VHT80	80	2
5.15-5.25GHz	802.11ax HEW80	80	2
5.725-5.85GHz	802.11a	20	2
5.725-5.85GHz	802.11n HT20	20	2
5.725-5.85GHz	802.11ac VHT20	20	2
5.725-5.85GHz	802.11ax HEW20	20	2
5.725-5.85GHz	802.11n HT40	40	2
5.725-5.85GHz	802.11ac VHT40	40	2
5.725-5.85GHz	802.11ax HEW40	40	2
5.725-5.85GHz	802.11ac VHT80	80	2
5.725-5.85GHz	802.11ax HEW80	80	2

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	Antenna Type	Connector	Gain (dBi)
	WLAN 2.4GHz (Radio 1) (Scanning Radio 1)	WLAN 5GHz (Radio 2)	WLAN 5GHz (Scanning Radio 1)	BT / IEEE802.15.4 (Radio 3)	GPS (Radio 4)					
1	1	-	-	-	-	WNC	95XEAJ15.G45	Metal PIFA	I-PEX	Note 1
2	2	-	-	-	-	WNC	95XEAJ15.G46	Metal PIFA	I-PEX	
3	3	-	1	-	-	WNC	95XEAJ15.G53	Metal PIFA	I-PEX	
4	4	-	2	-	-	WNC	95XEAJ15.G54	Metal PIFA	I-PEX	
5	-	1	-	-	-	WNC	95XEAJ15.G47	Metal PIFA	I-PEX	
6	-	2	-	-	-	WNC	95XEAJ15.G48	Metal PIFA	I-PEX	
7	-	3	-	-	-	WNC	95XEAJ15.G91	Metal PIFA	I-PEX	
8	-	4	-	-	-	WNC	95XEAJ15.G92	Metal PIFA	I-PEX	
9	-	-	-	-	-	WNC	95XEAJ15.G49	Metal PIFA	I-PEX	
10	-	-	-	-	-	WNC	95XEAJ15.G50	Metal PIFA	I-PEX	
11	-	-	-	-	-	WNC	95XEAJ15.G51	Metal PIFA	I-PEX	
12	-	-	-	-	-	WNC	95XEAJ15.G52	Metal PIFA	I-PEX	
13	-	-	-	1	-	WNC	95XEAJ15.G55	Metal PIFA	I-PEX	
14	-	-	-	-	1	WNC	95XEAJ15.G89	Metal PIFA	I-PEX	

Note 1:

Ant.	Antenna Gain (dBi)												
	WLAN 2.4GHz (Radio 1) (Scanning Radio 1)			WLAN 5GHz (Radio 2)				WLAN 5GHz (Scanning Radio 1)				BT / IEEE802.15.4 (Radio 3)	GPS (Radio 4)
	2.4G	2.45G	2.4835G	UNII 1	UNII 2A	UNII 2C	UNII 3	UNII 1	UNII 2A	UNII 2C	UNII 3		
1	2.3	2.62	2.51	-	-	-	-	-	-	-	-	-	-
2	2.79	3.09	3.11	-	-	-	-	-	-	-	-	-	-
3	3.18	2.35	2.56	-	-	-	-	4.4	4.4	4.4	4.4	-	-
4	3.8	4.63	3.64	-	-	-	-	4.4	4.4	4.4	4.4	-	-
5	-	-	-	3.18	2.87	2.65	2.51	-	-	-	-	-	-
6	-	-	-	3.24	3.59	3.6	3.35	-	-	-	-	-	-
7	-	-	-	3.75	4.08	3.8	4.59	-	-	-	-	-	-
8	-	-	-	3.3	3.05	2.6	2.53	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	4.9	-
14	-	-	-	-	-	-	-	-	-	-	-	-	3.3



Ant.	Directional Gain (dBi)														
	WLAN 2.4GHz (Radio 1) (Scanning Radio 1)														
	2.4G		2.45G		2.4835G		2.4G			2.45G			2.4835G		
	2T1S	2T2S	2T1S	2T2S	2T1S	2T2S	4T1S	4T2S	4T4S	4T1S	4T2S	4T4S	4T1S	4T2S	4T4S
1	4.13	2.79	4.72	3.09	4.15	3.11	7.27	4.27	3.8	7.68	4.68	4.63	7.05	4.05	3.64
2															
3	-	-	-	-	-	-									
4															

Ant.	Directional Gain (dBi)							
	WLAN 5GHz (Radio 2)							
	UNII 1		UNII 2A		UNII 2C		UNII 3	
	2T1S	2T2S	2T1S	2T2S	2T1S	2T2S	2T1S	2T2S
5	5.5	3.24	5.81	3.59	4.34	3.6	4.53	3.35
6								

Ant.	Directional Gain (dBi)											
	WLAN 5GHz (Radio 2)											
	UNII 1			UNII 2A			UNII 2C			UNII 3		
	4T1S	4T2S	4T4S	4T1S	4T2S	4T4S	4T1S	4T2S	4T4S	4T1S	4T2S	4T4S
5	8.43	5.43	3.75	8.12	5.12	4.08	7.02	4.02	3.8	7.68	4.68	4.59
6												
7												
8												

Note 2: The EUT has fourteen antennas.

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

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

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

Note 6: The EUT doesn't enable the DFS and 6GHz band. The antenna 9~12 is 6GHz's antenna. Thus, the antenna 9~12 function doesn't enable it at this time.

Note 7: Directional gain information.

For Scanning Radio 1 5GHz

5G G1 = 4.4 dBi; G2 = 4.4 dBi

5G 2T1S DG= 7.41 dBi; 2T2S DG= 4.4 dBi

**For Radio 1****For 2.4GHz:****For IEEE 802.11b/g/n/VHT/ax mode (1TX, 2TX, 4TX/4RX):****1TX**

Only Port 1 can be use as transmitting antenna.

2TX

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

Port 1, Port 2 could transmitting simultaneously.

4TX

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

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

4RX

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

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

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

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

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

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

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

Port 1, Port 2 could transmit/receive simultaneously.

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

Only Port 1 can be use as transmitting antenna.

2TX

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

Port 1, Port 2 could transmitting simultaneously.

4TX

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

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

4RX

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

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

For Radio 3**Bluetooth / IEEE802.15.4 (1TX):**

Only Port 1 can be used as transmitting antenna.

For Radio 4**GPS (1RX):**

Only Port 1 can be used as receiving antenna.

**1.1.3 Mode Test Duty Cycle****For indoor use and UNII 3 indoor/outdoor****For Radio 2****1T1S**

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11a	0.948	0.23	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	0.968	0.14	781.25u	3k
802.11ax HEW80	0.941	0.26	415u	3k

2T1S

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11a	0.948	0.23	2.066m	1k

2T2S

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ax HEW20	0.965	0.15	781.25u	3k
802.11ax HEW40	0.941	0.26	427.5u	3k
802.11ax HEW80	0.901	0.45	245u	10k

4T1S

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11a	0.958	0.19	2.065m	1k
802.11ax HEW20	0.983	0.07	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ax HEW40	0.968	0.14	781.25u	3k
802.11ax HEW80	0.938	0.28	415u	3k

4T4S

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ax HEW20	0.983	0.07	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ax HEW40	0.968	0.14	781.25u	3k
802.11ax HEW80	0.938	0.28	415u	3k

For Scanning radio 1**2T1S**

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11a	0.951	0.22	2.068m	1k

2T2S

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ax HEW20	0.968	0.14	782.5u	3k
802.11ax HEW40	0.944	0.25	430u	3k
802.11ax HEW80	0.906	0.43	247.5u	10k



For outdoor use
For Radio 2
1T1S

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11a	0.948	0.23	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	0.968	0.14	781.25u	3k
802.11ax HEW80	0.941	0.26	415u	3k

2T1S

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11a	0.948	0.23	2.066m	1k

2T2S

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ax HEW20	0.965	0.15	781.25u	3k
802.11ax HEW40	0.941	0.26	427.5u	3k
802.11ax HEW80	0.901	0.45	245u	10k

4T1S

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11a	0.958	0.19	2.065m	1k
802.11ax HEW20	0.983	0.07	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ax HEW40	0.968	0.14	781.25u	3k
802.11ax HEW80	0.938	0.28	415u	3k

4T4S

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ax HEW20	0.983	0.07	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ax HEW40	0.968	0.14	781.25u	3k
802.11ax HEW80	0.938	0.28	415u	3k

For Scanning radio 1

2T1S

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11a	0.951	0.22	2.068m	1k

2T2S

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ax HEW20	0.968	0.14	782.5u	3k
802.11ax HEW40	0.944	0.25	430u	3k
802.11ax HEW80	0.906	0.43	247.5u	10k

Note:

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

1.1.4 EUT Operational Condition

EUT Power Type	From PoE			
Beamforming Function	☒	With beamforming	☐	Without beamforming
	The product has beamforming function for 11n/VHT/11ax in radio 1 2.4GHz, 11n/11ac/11ax in radio 2 5GHz.			
Function	☒	Outdoor P2M	☒	Indoor P2M
	☐	Fixed P2P	☐	Client
	☒	Point-to-multipoint	☐	Point-to-point
Channel Puncturing Function	☐	Supported	☒	Unsupported
Test Software Version	Mtool (v3.2.1.5)			

Note: The above information was declared by manufacturer.

1.1.5 Table for EUT support function

Function
AP
Bridge
Mesh

Note1: For above table list, only AP mode was tested and recorded in this test.

Note2: The above information was declared by manufacturer.

1.1.6 Table for Radio function

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

Note: The above information was declared by manufacturer.



1.2 Applicable Standards

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

- ♦ 47 CFR FCC Part 15
- ♦ 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 (TAF: 3787)	ADD: No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.) TEL: 886-3-656-9065 FAX: 886-3-656-9085 Test site Designation No. TW3787 with FCC. Conformity Assessment Body Identifier (CABID) TW3787 with ISED.

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
RF Conducted	TH03-CB	Caster Chang	25.6~26.1 / 65~69	Jun. 06, 2022~Aug. 15, 2022
Radiated below 1GHz	10CH01-CB	Joe Chu	22~23 / 57~58	May 30, 2022~Sep. 12, 2022
Radiated above 1GHz	03CH01-CB	RJ Huang	24.1~26.1 / 60~65	May 31, 2022~Jul. 01, 2022
	03CH03-CB		23.7~25.1 / 66~68	
	03CH04-CB		24.3~25.9 / 62~66	
AC Conduction	CO01-CB	Allen Chung	23~24 / 56~57	May 30, 2022



1.4 Measurement Uncertainty

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

Test Date : After Mar. 10, 2022

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

Test Date : Before Nov. 04, 2022

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

Test Date : Before Jun. 01, 2022

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

Test Date : After May 31, 2022

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



2 Test Configuration of EUT

2.1 Test Channel Mode

For indoor use and UNII 3 indoor/outdoor

For Radio 2

1T1S

Mode	Power Setting
802.11a_Nss1,(6Mbps)_1TX	-
5180MHz	86
5200MHz	87
5240MHz	86
5745MHz	90
5785MHz	90
5825MHz	92
802.11ax HEW20_Nss1,(MCS0)_1TX	-
5180MHz	86
5200MHz	86
5240MHz	84
5745MHz	90
5785MHz	89
5825MHz	91
802.11ax HEW40_Nss1,(MCS0)_1TX	-
5190MHz	74
5230MHz	86
5755MHz	88
5795MHz	86
802.11ax HEW80_Nss1,(MCS0)_1TX	-
5210MHz	74
5775MHz	88

2T1S

Mode	Power Setting
802.11a_Nss1,(6Mbps)_2TX	-
5180MHz	81
5200MHz	77
5240MHz	77
5745MHz	83
5785MHz	82
5825MHz	83

**2T2S**

Mode	Power Setting
802.11ax HEW20_Nss2,(MCS0)_2TX	-
5180MHz	81
5200MHz	78
5240MHz	77
5745MHz	83
5785MHz	83
5825MHz	84
802.11ax HEW40_Nss2,(MCS0)_2TX	-
5190MHz	68
5230MHz	76
5755MHz	82
5795MHz	82
802.11ax HEW80_Nss2,(MCS0)_2TX	-
5210MHz	64
5775MHz	82

4T1S for non beamforming and beamforming mode

Mode	Power Setting
802.11a_Nss1,(6Mbps)_4TX	-
5180MHz	81
5200MHz	77
5240MHz	76
5745MHz	82
5785MHz	82
5825MHz	83
802.11ax HEW20_Nss1,(MCS0)_4TX	-
5180MHz	81
5200MHz	77
5240MHz	75
5745MHz	81
5785MHz	81
5825MHz	82
802.11ax HEW40_Nss1,(MCS0)_4TX	-
5190MHz	59
5230MHz	81
5755MHz	80
5795MHz	79
802.11ax HEW80_Nss1,(MCS0)_4TX	-
5210MHz	61
5775MHz	76



Mode	Power Setting
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-
5180MHz	81
5200MHz	77
5240MHz	75
5745MHz	79
5785MHz	80
5825MHz	79
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-
5190MHz	59
5230MHz	79
5755MHz	78
5795MHz	77
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-
5210MHz	61
5775MHz	76

4T4S

Mode	Power Setting
802.11ax HEW20_Nss4,(MCS0)_4TX	-
5180MHz	82
5200MHz	83
5240MHz	87
5745MHz	95
5785MHz	91
5825MHz	90
802.11ax HEW40_Nss4,(MCS0)_4TX	-
5190MHz	62
5230MHz	81
5755MHz	83
5795MHz	82
802.11ax HEW80_Nss4,(MCS0)_4TX	-
5210MHz	65
5775MHz	82

**For Scanning radio 1
2T1S**

Mode	Power Setting
802.11a_Nss1,(6Mbps)_2TX	-
5180MHz	82
5200MHz	82
5240MHz	76
5745MHz	84
5785MHz	83
5825MHz	83

2T2S

Mode	Power Setting
802.11ax HEW20_Nss2,(MCS0)_2TX	-
5180MHz	81
5200MHz	82
5240MHz	78
5745MHz	82
5785MHz	81
5825MHz	82
802.11ax HEW40_Nss2,(MCS0)_2TX	-
5190MHz	68
5230MHz	80
5755MHz	82
5795MHz	79
802.11ax HEW80_Nss2,(MCS0)_2TX	-
5210MHz	67
5775MHz	82



For outdoor use
For Radio 2
1T1S

Mode	Power Setting
802.11a_Nss1,(6Mbps)_1TX	-
5180MHz	72
5200MHz	67
5240MHz	65
802.11ax HEW20_Nss1,(MCS0)_1TX	-
5180MHz	71
5200MHz	65
5240MHz	63
802.11ax HEW40_Nss1,(MCS0)_1TX	-
5190MHz	69
5230MHz	63
802.11ax HEW80_Nss1,(MCS0)_1TX	-
5210MHz	70

2T1S

Mode	Power Setting
802.11a_Nss1,(6Mbps)_2TX	-
5180MHz	58
5200MHz	53
5240MHz	50

2T2S

Mode	Power Setting
802.11ax HEW20_Nss2,(MCS0)_2TX	-
5180MHz	57
5200MHz	52
5240MHz	49
802.11ax HEW40_Nss2,(MCS0)_2TX	-
5190MHz	56
5230MHz	51
802.11ax HEW80_Nss2,(MCS0)_2TX	-
5210MHz	56

**4T1S for non beamforming and beamforming mode**

Mode	Power Setting
802.11a_Nss1,(6Mbps)_4TX	-
5180MHz	46
5200MHz	41
5240MHz	40
802.11ax HEW20_Nss1,(MCS0)_4TX	-
5180MHz	45
5200MHz	40
5240MHz	39
802.11ax HEW40_Nss1,(MCS0)_4TX	-
5190MHz	43
5230MHz	39
802.11ax HEW80_Nss1,(MCS0)_4TX	-
5210MHz	43
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-
5180MHz	26
5200MHz	21
5240MHz	19
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-
5190MHz	23
5230MHz	19
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-
5210MHz	24

4T4S

Mode	Power Setting
802.11ax HEW20_Nss4,(MCS0)_4TX	-
5180MHz	45
5200MHz	40
5240MHz	39
802.11ax HEW40_Nss4,(MCS0)_4TX	-
5190MHz	43
5230MHz	39
802.11ax HEW80_Nss4,(MCS0)_4TX	-
5210MHz	44

**For Scanning radio 1****2T1S**

Mode	Power Setting
802.11a_Nss1,(6Mbps)_2TX	-
5180MHz	58
5200MHz	55
5240MHz	54

2T2S

Mode	Power Setting
802.11ax HEW20_Nss2,(MCS0)_2TX	-
5180MHz	57
5200MHz	54
5240MHz	54
802.11ax HEW40_Nss2,(MCS0)_2TX	-
5190MHz	55
5230MHz	54
802.11ax HEW80_Nss2,(MCS0)_2TX	-
5210MHz	56

Note:

- ♦ Evaluated HEW20/HEW40/HEW80 mode only due to the 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(WLAN, GPS), CTX(Bluetooth, IEEE802.15.4)
1	R1 (2.4GHz)+R2 (5GHz)+R3 (BT)+R4 (GPS)+PoE 1
2	R1 (2.4GHz)+R2 (5GHz)+R3 (802.15.4)+R4 (GPS)+PoE 1
Mode 2 has been evaluated to be the worst case between Mode 1~2, thus measurement for Mode 3 will follow this same test mode.	
3	Scanning R1 (5GHz)+R2 (5GHz)+R3 (802.15.4)+R4 (GPS)+PoE 1
For operating mode 3 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	Refer to note 1 for detail operating mode



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(WLAN, GPS), CTX(Bluetooth, IEEE802.15.4)
1	EUT in Z axis_R1 (2.4GHz)+R2 (5GHz)+R3 (BT)+R4 (GPS)+PoE 1
2	EUT in Y axis_R1 (2.4GHz)+R2 (5GHz)+R3 (BT)+R4 (GPS)+PoE 1
3	EUT in X axis_R1 (2.4GHz)+R2 (5GHz)+R3 (BT)+R4 (GPS)+PoE 1
Mode 1 has been evaluated to be the worst case among Mode 1~3, thus measurement for Mode 4~Mode 6 will follow this same test mode.	
4	EUT in Z axis_R1 (2.4GHz)+R2 (5GHz)+R3 (802.15.4)+R4 (GPS)+PoE 1
5	EUT in Z axis_Scanning R1 (5GHz)+R2 (5GHz)+R3 (BT)+R4 (GPS)+PoE 1
6	EUT in Z axis_Scanning R1 (5GHz)+R2 (5GHz)+R3 (802.15.4)+R4 (GPS)+PoE 1
For operating mode 1 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX
	1. The EUT was performed at X axis, Y axis and Z axis position, and the worst case was found as below. So the measurement will follow this same test configuration. 2. Refer to note 1 for detail operating mode
1	EUT in X axis_R2_1T1S
2	EUT in Y axis for harmonic and EUT in X axis for bandedge_R2_2T1S_2T2S
3	EUT in X axis_R2_4T1S
4	EUT in X axis_R2_4T4S
5	EUT in Y axis_Scanning R1_2T1S_2T2S

Note 1:Test Mode

Test Mode											
Test Item	802.11a					802.11ax HEW20/40/80					
	1T1S	2T1S	2T2S	4T1S	4T4S	1T1S	2T1S	2T2S	4T1S	TXBF 4T1S	4T4S
Maximum Conducted Output Power	V	V	-	V	-	V	Note2	V	V	V	V
Emission Bandwidth	V	V	-	V	-	V	Note2	V	V	-	V
Peak Power Spectral Density	V	V	-	V	-	V	Note2	V	V	-	V
Radiated Emission	V	V	-	V	-	V	Note2	V	V	-	V
Band Edge Emission	V	V	-	V	-	V	Note2	V	V	-	V

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



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

Their information as below:

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

2.3 EUT Operation during Test

For CTX Mode:

The EUT was programmed to be in continuously transmitting mode.

For Normal Link Mode:

During the test, the EUT operation to normal function.

2.4 Accessories

Accessories
Bracket*1
Sealing Collar*2

2.5 Support Equipment

For AC Conduction and Radiated (below 1GHz):

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

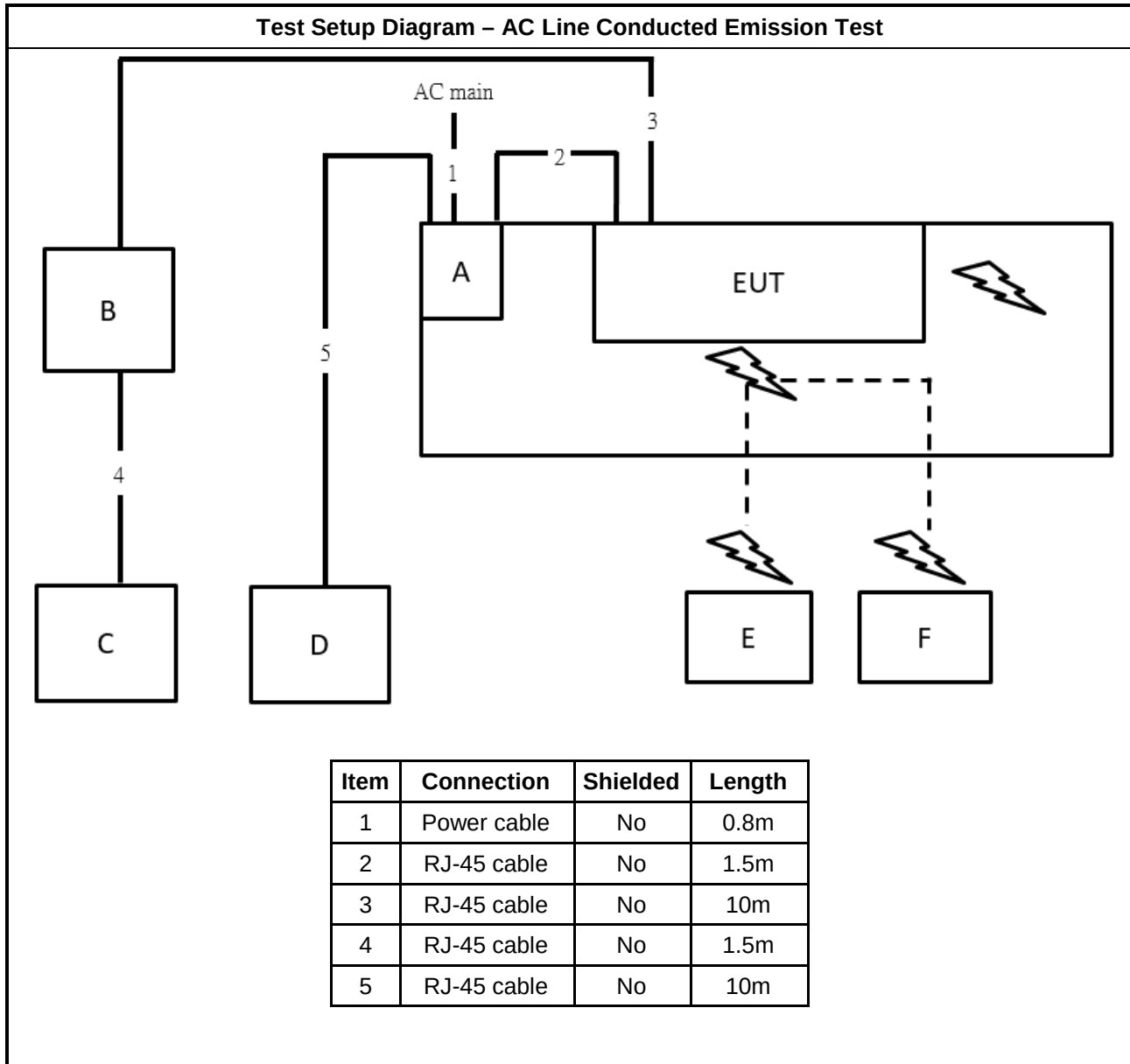
For Radiated (above 1GHz):

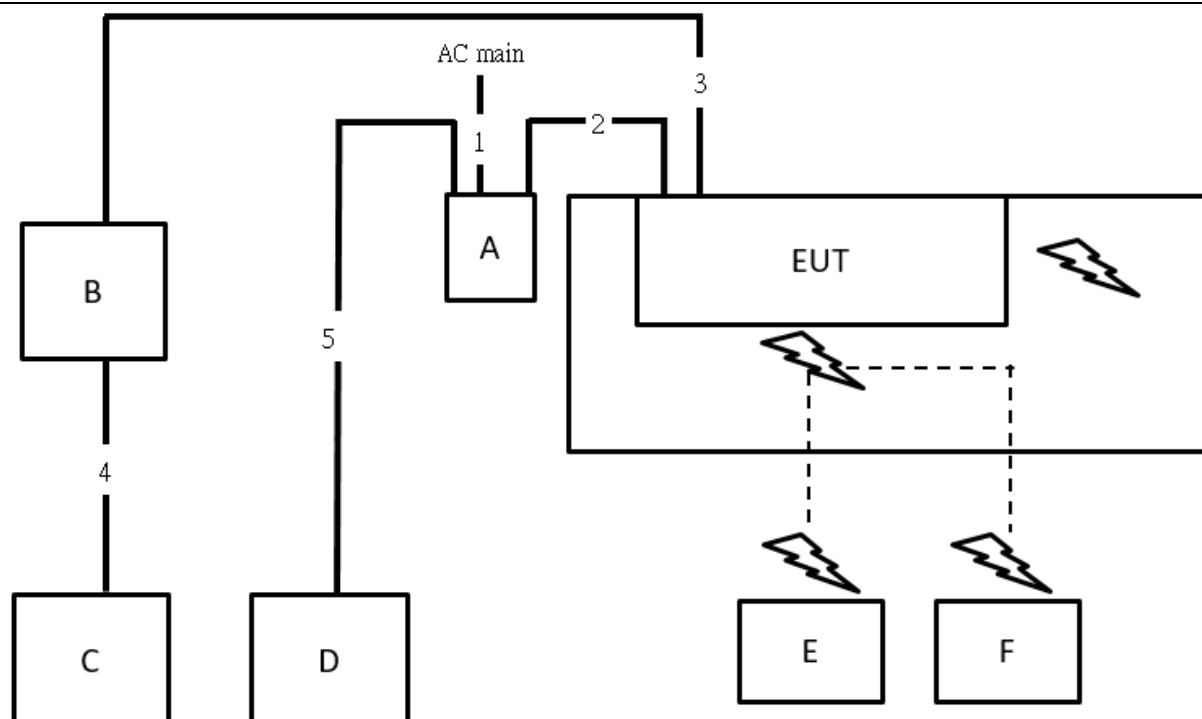
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A
B	PoE 1	Microsemi	PD-9501-10GC/AC	N/A

**For RF Conducted:**

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

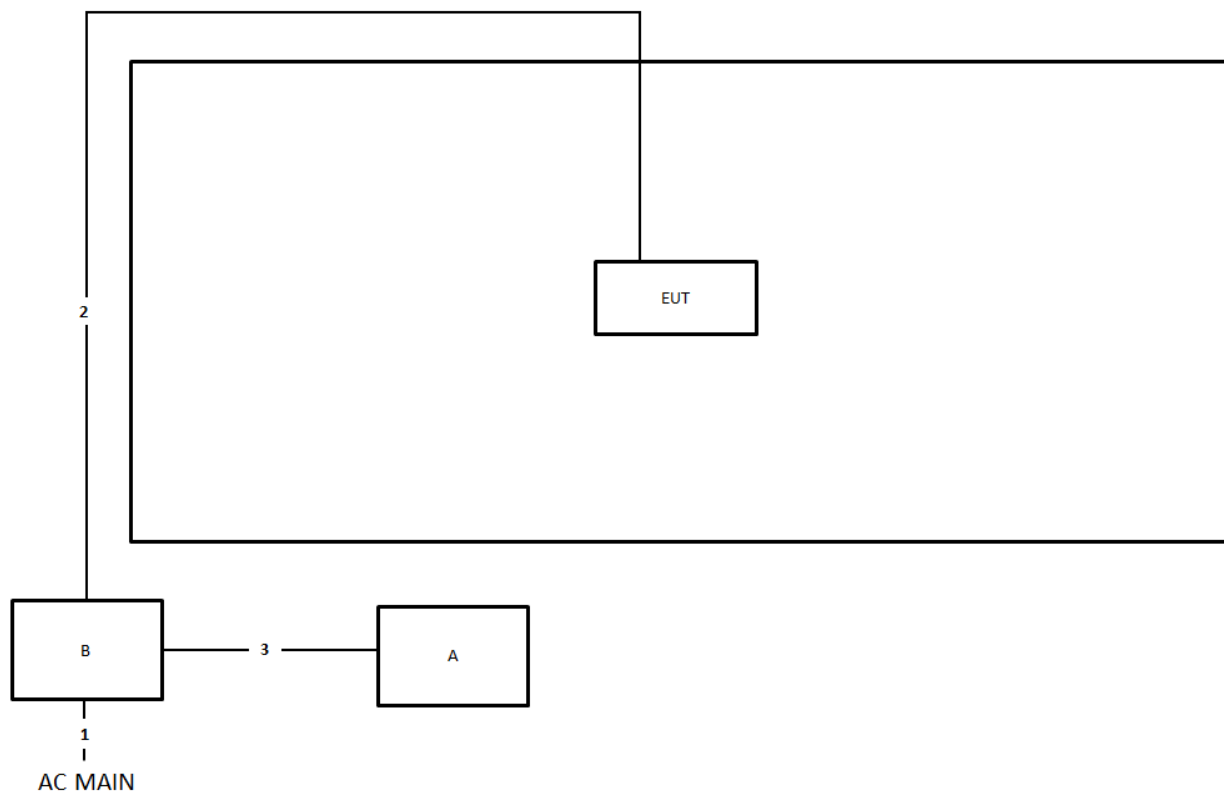
2.6 Test Setup Diagram



Test Setup Diagram - Radiated Test < 1GHz


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

Test Setup Diagram - Radiated Test > 1GHz



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



3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50
Note 1: * Decreases with the logarithm of the frequency.		

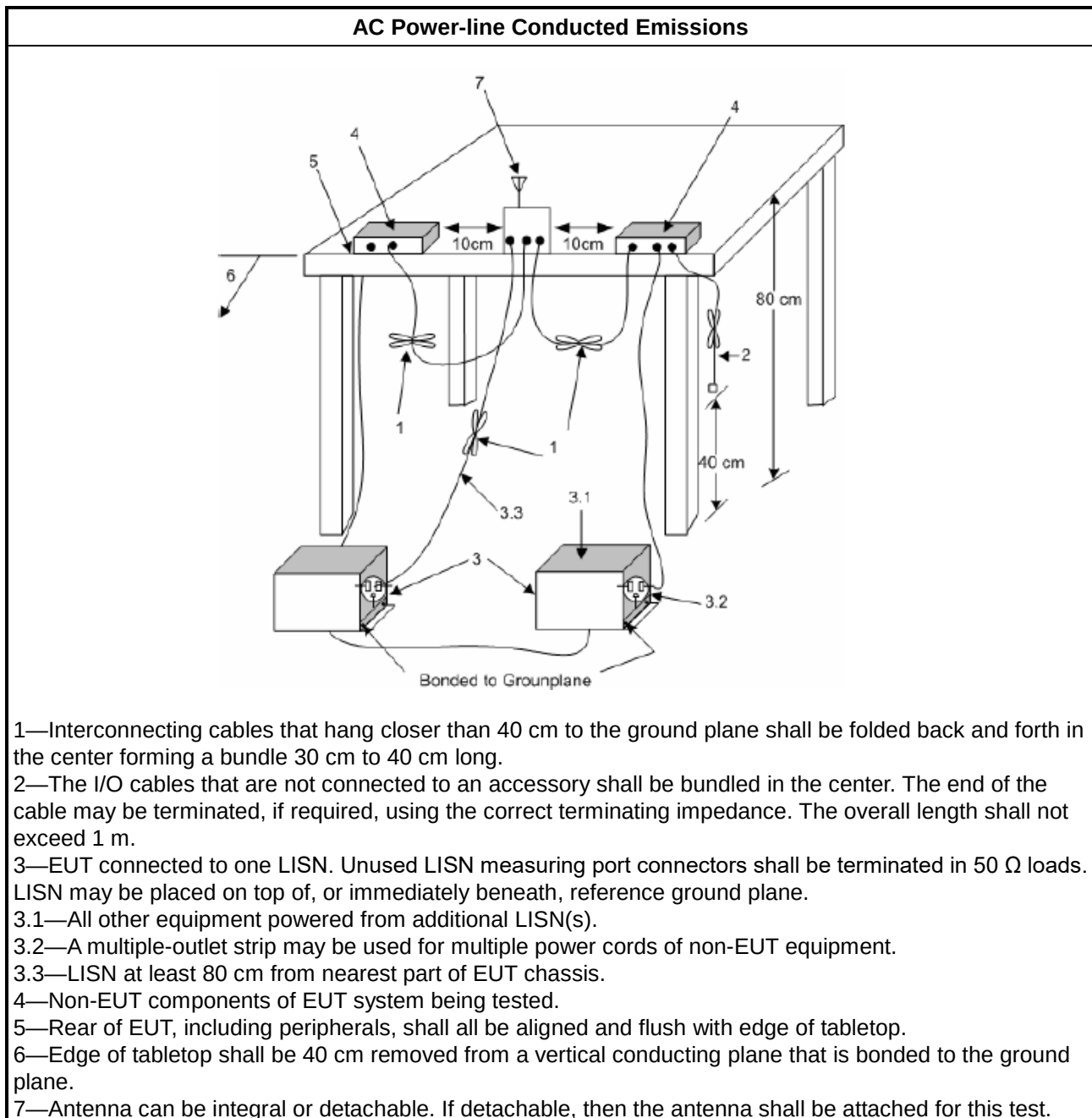
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

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

3.1.4 Test Setup



3.1.5 Measurement Results Calculation

The measured Level is calculated using:

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

3.1.6 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A



3.2 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 $\geq 500\text{kHz}$.

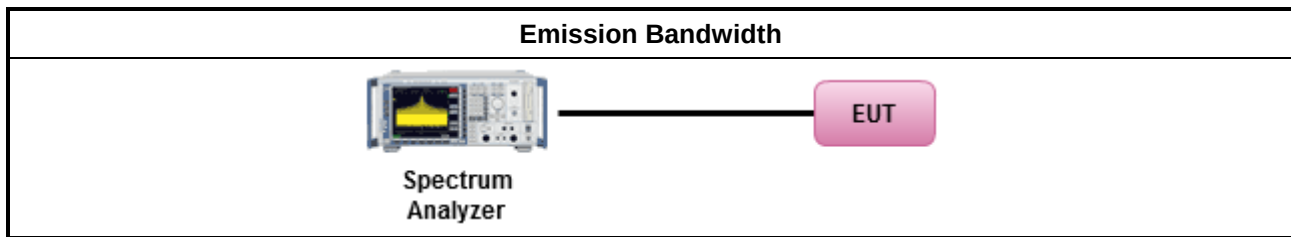
3.2.2 Measuring Instruments

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.

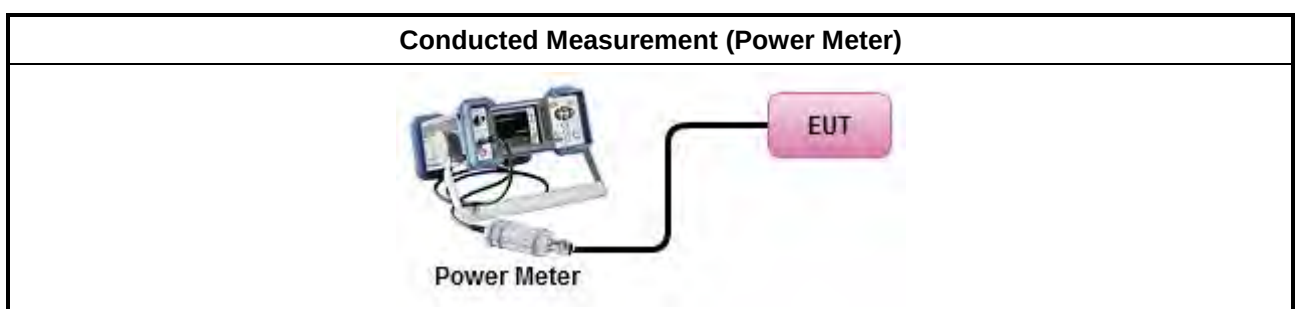
3.3.2 Measuring Instruments

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



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 (θ-8) dBW/MHz for $8^\circ \leq \theta < 40^\circ$ -35.9 - 1.22 (θ-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

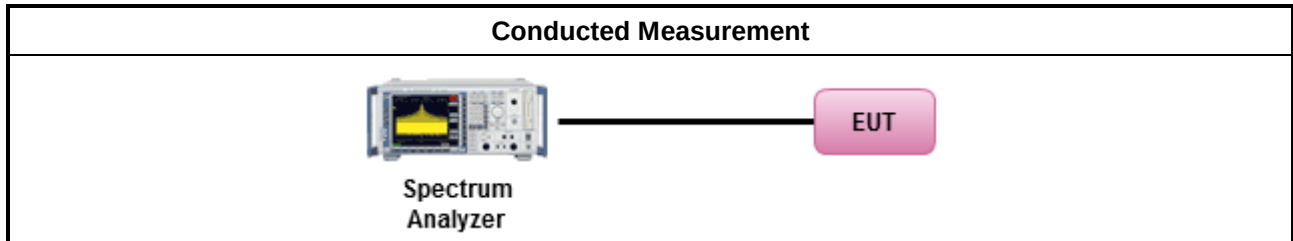
Refer a test equipment and calibration data table in this test report.

**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.	

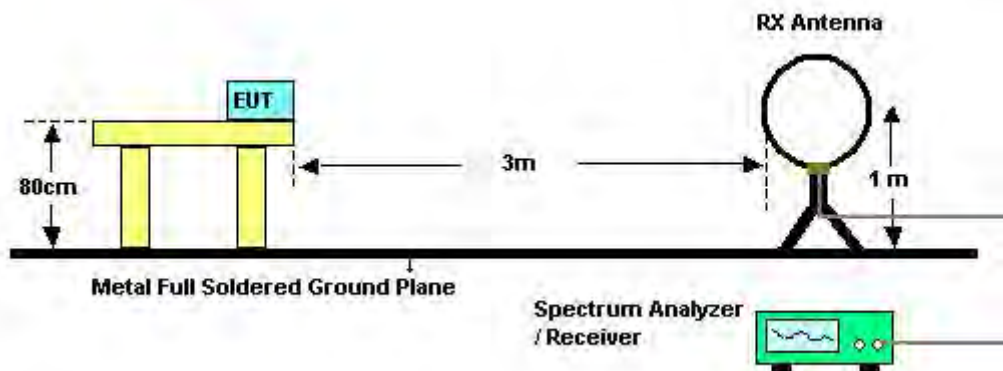
Test Method

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

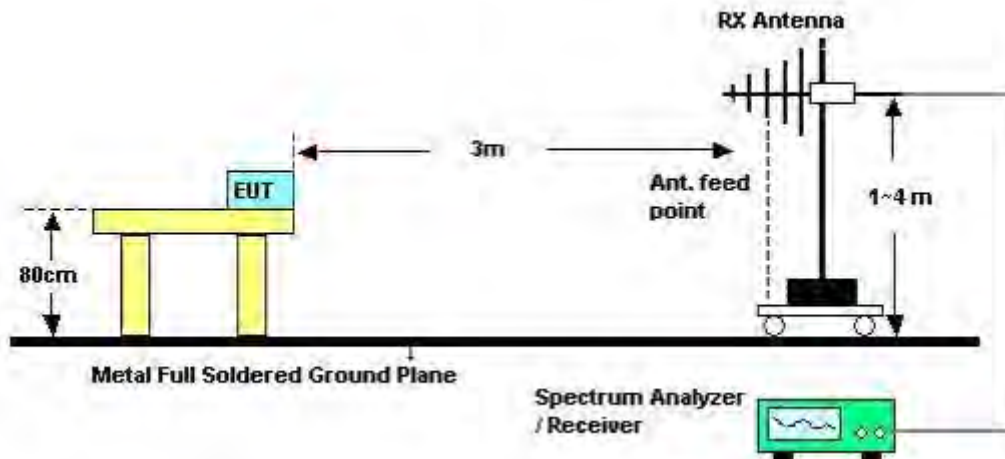
3.5.4 Test Setup

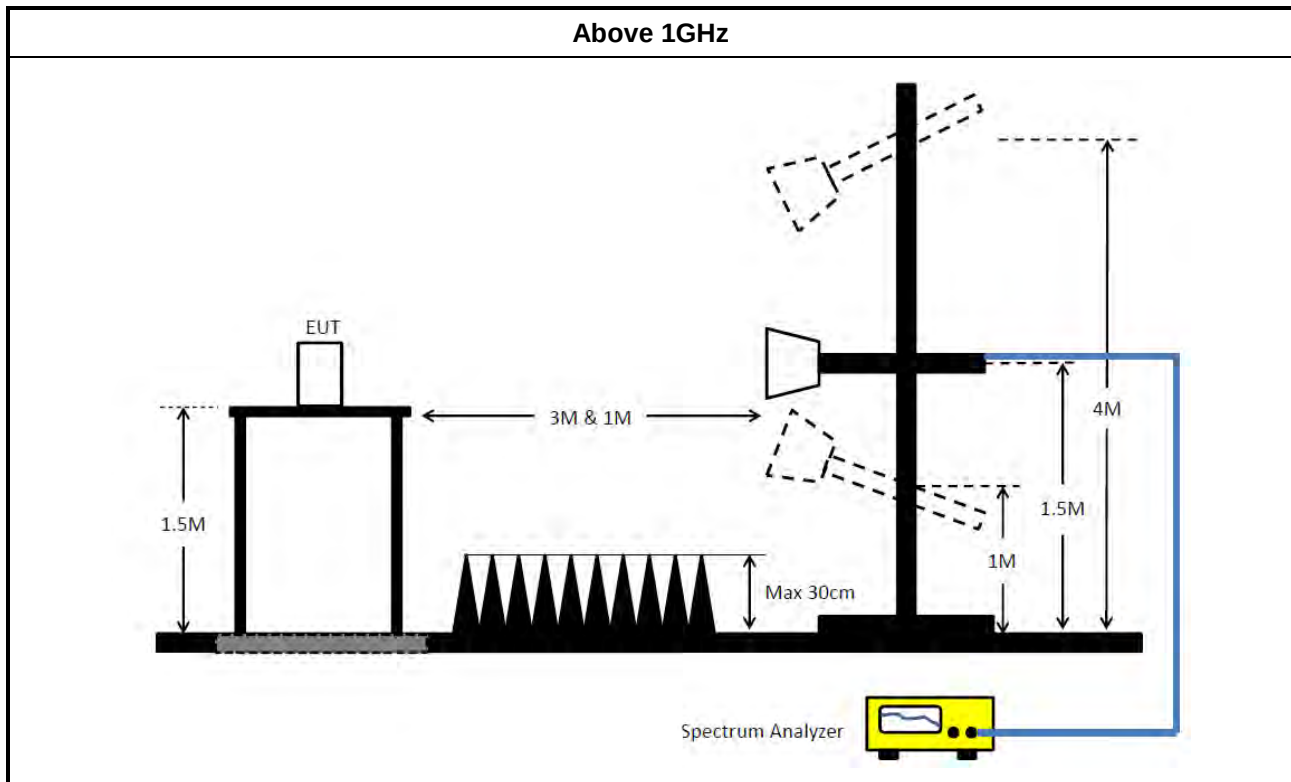
Transmitter Radiated Unwanted Emissions

9kHz ~30MHz



30MHz~1GHz





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	Feb. 22, 2022	Feb. 21, 2023	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-1 6-2	04083	150kHz ~ 100MHz	Feb. 09, 2022	Feb. 08, 2023	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Apr. 12, 2022	Apr. 11, 2023	Conduction (CO01-CB)
Pulse Limiter	Rohde& Schwarz	ESH3-Z2	100430	9kHz ~ 30MHz	Feb. 10, 2022	Feb. 09, 2023	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	9kHz ~ 30MHz	May 18, 2022	May 17, 2023	Conduction (CO01-CB)
Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	May 14, 2022	May 13, 2023	Radiation (10CH01-CB)
10m Semi Anechoic Chamber NSA	TDK	SAC-10M	10CH01-CB	30MHz~1GHz 10m,3m	Jan. 27, 2022	Jan. 26, 2023	Radiation (10CH01-CB)
Amplifier	Agilent	8447D	2944A10783	9kHz ~ 1.3GHz	Mar. 11, 2022	Mar. 10, 2023	Radiation (10CH01-CB)
Amplifier	Agilent	8447D	2944A10784	9kHz ~ 1.3GHz	Mar. 11, 2022	Mar. 10, 2023	Radiation (10CH01-CB)
Low Cable	Woken	SUCOFLEX 104	low cable-01	25MHz ~ 1GHz	Oct. 19, 2021	Oct. 18, 2022	Radiation (10CH01-CB)
Low Cable	Woken	SUCOFLEX 104	low cable-02	25MHz ~ 1GHz	Oct. 19, 2021	Oct. 18, 2022	Radiation (10CH01-CB)
EMI Test Receiver	Rohde& Schwarz	ESCI	100186	9kHz ~ 3GHz	Jul. 12, 2021	Jul. 11, 2022	Radiation (10CH01-CB)
EMI Test Receiver	Rohde& Schwarz	ESCI	100186	9kHz ~ 3GHz	Jul. 11, 2022	Jul. 10, 2023	Radiation (10CH01-CB)
Spectrum Analyzer	Rohde& Schwarz	FSV30	101026	9kHz ~ 30GHz	Apr. 22, 2022	Apr. 21, 2023	Radiation (10CH01-CB)
Bilog Antenna with 6dB Attenuator	Chase & EMCi	CBL6111A &N-6-06	1543 &AT-N0609	30MHz ~ 1GHz	Jul. 01, 2021	Jun. 30, 2022	Radiation (10CH01-CB)
Bilog Antenna with 6dB Attenuator	Chase & EMCi	CBL6111A &N-6-06	1543 &AT-N0609	30MHz ~ 1GHz	Jun. 25, 2022	Jun. 24, 2023	Radiation (10CH01-CB)
Amplifier	EM	EM101	060703	10MHz ~ 1GHz	Oct. 20, 2021	Oct. 19, 2022	Radiation (10CH01-CB)
Low Cable	TITAN	T318E	low cable-03	30MHz ~ 1GHz	Jun. 17, 2022	Jun. 16, 2023	Radiation (10CH01-CB)
Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (10CH01-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH01-CB	1GHz ~18GHz 3m	May 06, 2022	May 05, 2023	Radiation (03CH01-CB)



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



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH04-CB	1GHz ~18GHz 3m	Feb. 24, 2022	Feb. 23, 2023	Radiation (03CH04-CB)
Horn Antenna	ETS • Lindgren	3115	00143147	750MHz~18GHz	Oct. 25, 2021	Oct. 24, 2022	Radiation (03CH04-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 05, 2021	Aug. 04, 2022	Radiation (03CH04-CB)
Pre-Amplifier	Agilent	83017A	MY53270063	0.5GHz ~ 26.5GHz	Jul. 12, 2021	Jul. 11, 2022	Radiation (03CH04-CB)
Pre-Amplifier	MITEQ	TTA1840-35-H G	1864479	18GHz ~ 40GHz	Jul. 13, 2021	Jul. 12, 2022	Radiation (03CH04-CB)
Spectrum Analyzer	R&S	FSP40	100142	9kHz~40GHz	Mar. 28, 2022	Mar. 27, 2023	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-21	1GHz - 18GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-21+67	1GHz - 18GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH04-CB)
High Cable	Woken	WCA0929M	40G#5+7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH04-CB)
High Cable	Woken	WCA0929M	40G#5	1GHz ~ 40 GHz	Dec. 08, 2021	Dec. 07, 2022	Radiation (03CH04-CB)
High Cable	Woken	WCA0929M	40G#7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH04-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH04-CB)
Spectrum analyzer	R&S	FSV40	101028	9kHz~40GHz	Jan. 07, 2022	Jan. 06, 2023	Conducted (TH03-CB)
Power Sensor	Anritsu	MA2411B	1726195	300MHz~40GHz	Aug. 22, 2021	Aug. 21, 2022	Conducted (TH03-CB)
Power Meter	Anritsu	ML2495A	1035008	300MHz~40GHz	Aug. 22, 2021	Aug. 21, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-11	1 GHz ~18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-12	1 GHz ~18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-13	1 GHz ~18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-14	1 GHz ~18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-15	1 GHz ~18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
Switch	SPTCB	SP-SWI	SWI-03	1 GHz ~26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	SWI-03-P1	1 GHz ~26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	SWI-03-P2	1 GHz ~26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	SWI-03-P3	1 GHz ~26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH03-CB)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	SWI-03-P4	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	SWI-03-P5	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH03-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conducted (TH03-CB)

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

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



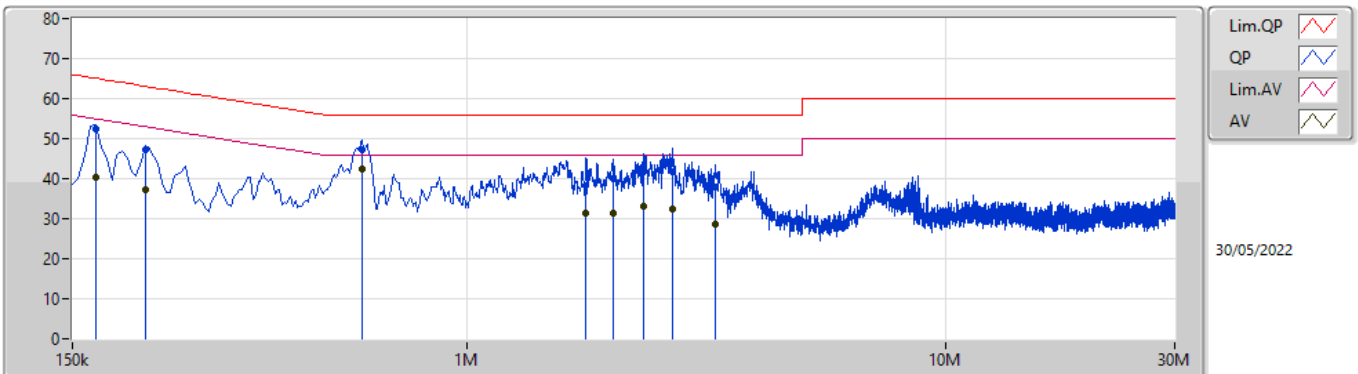
Conducted Emissions at Powerline

Appendix A

Summary

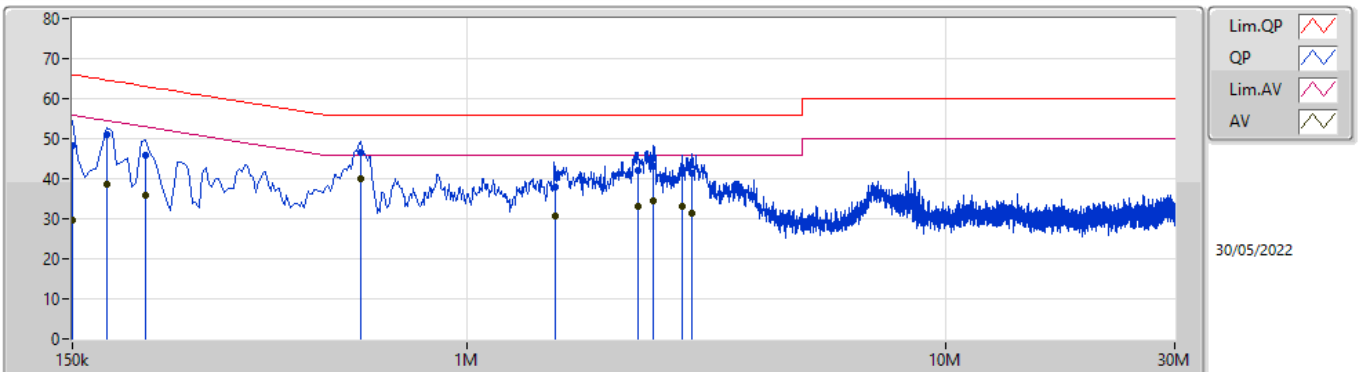
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 3	Pass	AV	604.5k	42.51	46.00	-3.49	Line

Mode 3



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	168k	52.47	65.06	-12.59	9.99	Line	-	42.48	0.06	0.04	9.89			
AV	168k	40.32	55.06	-14.74	9.99	Line	-	30.33	0.06	0.04	9.89			
QP	213k	47.23	63.09	-15.86	9.99	Line	-	37.24	0.06	0.04	9.89			
AV	213k	37.29	53.09	-15.80	9.99	Line	-	27.30	0.06	0.04	9.89			
QP	604.5k	47.13	56.00	-8.87	10.00	Line	-	37.13	0.06	0.05	9.89			
AV	604.5k	42.51	46.00	-3.49	10.00	Line	"Worst"	32.51	0.06	0.05	9.89			
QP	1.77M	38.43	56.00	-17.57	10.06	Line	-	28.37	0.09	0.08	9.89			
AV	1.77M	31.23	46.00	-14.77	10.06	Line	-	21.17	0.09	0.08	9.89			
QP	2.013M	40.03	56.00	-15.97	10.07	Line	-	29.96	0.09	0.09	9.89			
AV	2.013M	31.36	46.00	-14.64	10.07	Line	-	21.29	0.09	0.09	9.89			
QP	2.342M	41.63	56.00	-14.37	10.08	Line	-	31.55	0.10	0.09	9.89			
AV	2.342M	33.01	46.00	-12.99	10.08	Line	-	22.93	0.10	0.09	9.89			
QP	2.684M	41.87	56.00	-14.13	10.08	Line	-	31.79	0.10	0.09	9.89			
AV	2.684M	32.42	46.00	-13.58	10.08	Line	-	22.34	0.10	0.09	9.89			
QP	3.296M	37.98	56.00	-18.02	10.10	Line	-	27.88	0.11	0.10	9.89			
AV	3.296M	28.71	46.00	-17.29	10.10	Line	-	18.61	0.11	0.10	9.89			

Mode 3



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	150k	48.44	66.00	-17.56	10.00	Neutral	-	38.44	0.07	0.04	9.89			
AV	150k	29.80	56.00	-26.20	10.00	Neutral	-	19.80	0.07	0.04	9.89			
QP	177k	51.05	64.62	-13.57	10.00	Neutral	-	41.05	0.07	0.04	9.89			
AV	177k	38.72	54.62	-15.90	10.00	Neutral	-	28.72	0.07	0.04	9.89			
QP	213k	45.72	63.09	-17.37	10.00	Neutral	-	35.72	0.07	0.04	9.89			
AV	213k	35.74	53.09	-17.35	10.00	Neutral	-	25.74	0.07	0.04	9.89			
QP	600k	46.63	56.00	-9.37	10.01	Neutral	-	36.62	0.07	0.05	9.89			
AV	600k	39.97	46.00	-6.03	10.01	Neutral	"Worst"	29.96	0.07	0.05	9.89			
QP	1.523M	37.97	56.00	-18.03	10.05	Neutral	-	27.92	0.09	0.07	9.89			
AV	1.523M	30.57	46.00	-15.43	10.05	Neutral	-	20.52	0.09	0.07	9.89			
QP	2.27M	41.92	56.00	-14.08	10.09	Neutral	-	31.83	0.11	0.09	9.89			
AV	2.27M	32.94	46.00	-13.06	10.09	Neutral	-	22.85	0.11	0.09	9.89			
QP	2.454M	43.04	56.00	-12.96	10.09	Neutral	-	32.95	0.11	0.09	9.89			
AV	2.454M	34.41	46.00	-11.59	10.09	Neutral	-	24.32	0.11	0.09	9.89			
QP	2.805M	42.34	56.00	-13.66	10.09	Neutral	-	32.25	0.11	0.09	9.89			
AV	2.805M	33.15	46.00	-12.85	10.09	Neutral	-	23.06	0.11	0.09	9.89			
QP	2.945M	41.52	56.00	-14.48	10.11	Neutral	-	31.41	0.12	0.10	9.89			
AV	2.945M	31.49	46.00	-14.51	10.11	Neutral	-	21.38	0.12	0.10	9.89			

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	42.36M	24.978M	25M0D1D	34.68M	18.411M
802.11ax HEW20_Nss1,(MCS0)_1TX	48.09M	24.978M	25M0D1D	33.51M	19.46M
802.11ax HEW40_Nss1,(MCS0)_1TX	78.78M	39.34M	39M4D1D	49.98M	38.261M
802.11ax HEW80_Nss1,(MCS0)_1TX	86.4M	77.961M	78M0D1D	86.4M	77.961M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	16.35M	42.489M	42M5D1D	16.26M	36.192M
802.11ax HEW20_Nss1,(MCS0)_1TX	18.51M	43.898M	43M9D1D	18.33M	38.351M
802.11ax HEW40_Nss1,(MCS0)_1TX	37.92M	69.385M	69M4D1D	37.8M	55.232M
802.11ax HEW80_Nss1,(MCS0)_1TX	77.16M	79.52M	79M6D1D	77.16M	79.52M

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

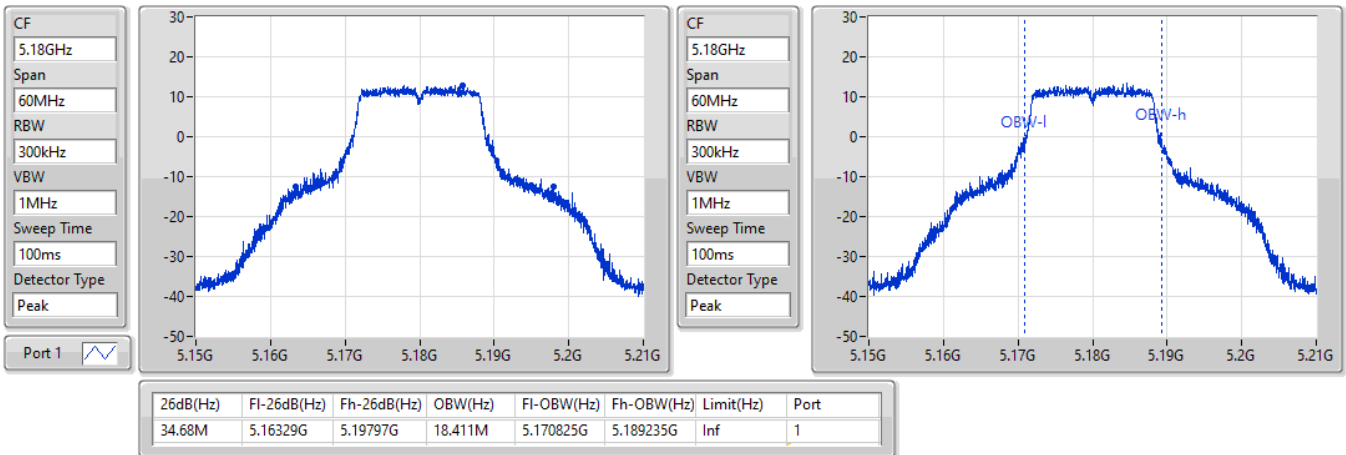
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11a_Nss1,(6Mbps)_1TX	-	-	-	-
5180MHz	Pass	Inf	34.68M	18.411M
5200MHz	Pass	Inf	42.36M	24.978M
5240MHz	Pass	Inf	39.06M	19.55M
5745MHz	Pass	500k	16.26M	36.192M
5785MHz	Pass	500k	16.35M	42.489M
5825MHz	Pass	500k	16.35M	42.459M
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-
5180MHz	Pass	Inf	33.51M	19.46M
5200MHz	Pass	Inf	48.09M	24.978M
5240MHz	Pass	Inf	42.78M	19.73M
5745MHz	Pass	500k	18.45M	38.351M
5785MHz	Pass	500k	18.51M	40.18M
5825MHz	Pass	500k	18.33M	43.898M
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-	-	-
5190MHz	Pass	Inf	49.98M	38.261M
5230MHz	Pass	Inf	78.78M	39.34M
5755MHz	Pass	500k	37.8M	55.232M
5795MHz	Pass	500k	37.92M	69.385M
802.11ax HEW80_Nss1,(MCS0)_1TX	-	-	-	-
5210MHz	Pass	Inf	86.4M	77.961M
5775MHz	Pass	500k	77.16M	79.52M

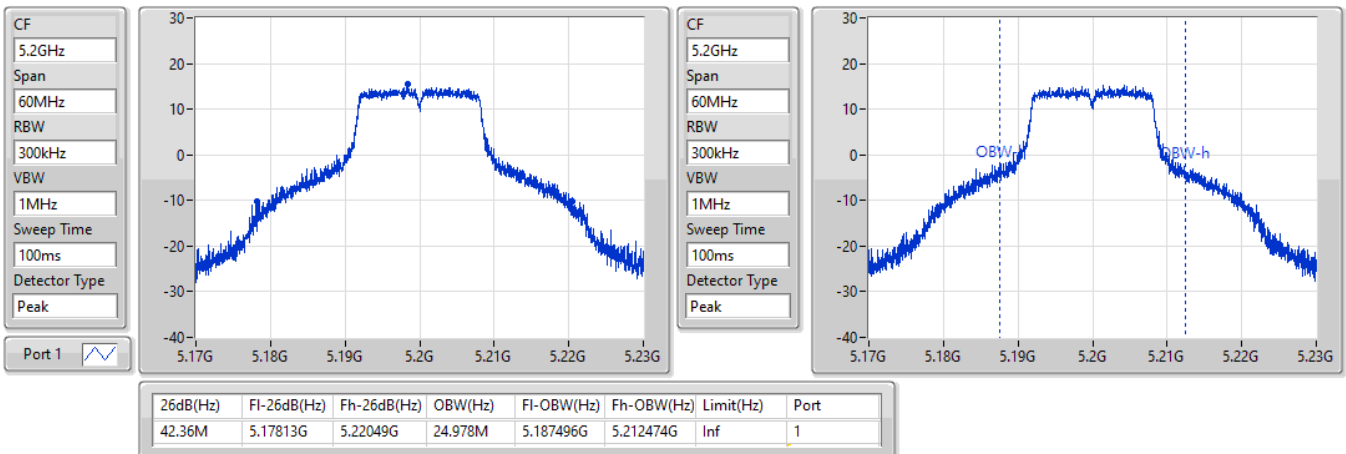
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11a_Nss1,(6Mbps)_1TX
EBW
5180MHz

18/06/2022

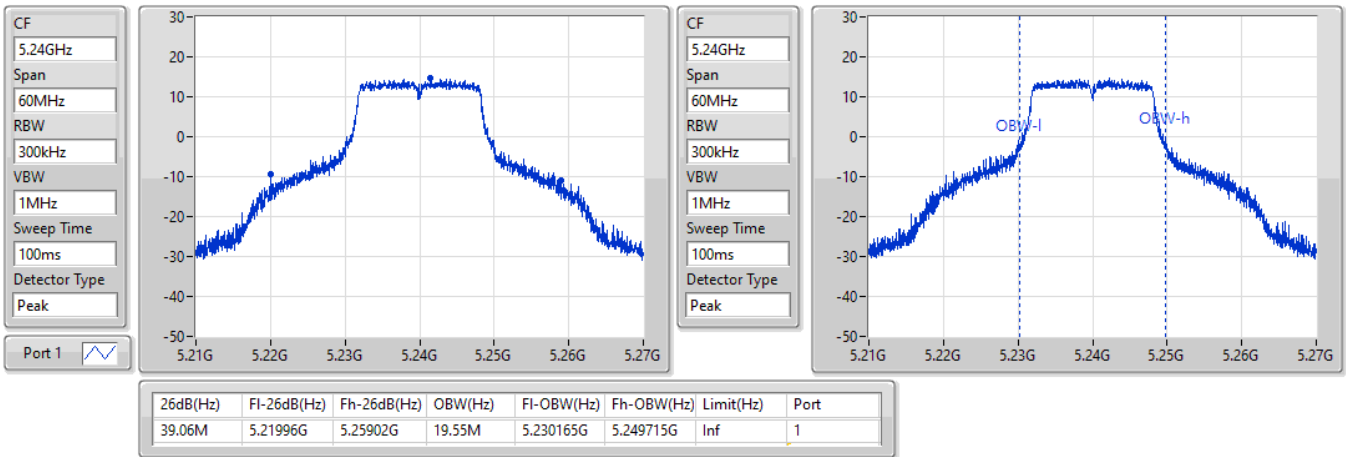

802.11a_Nss1,(6Mbps)_1TX
EBW
5200MHz

18/06/2022

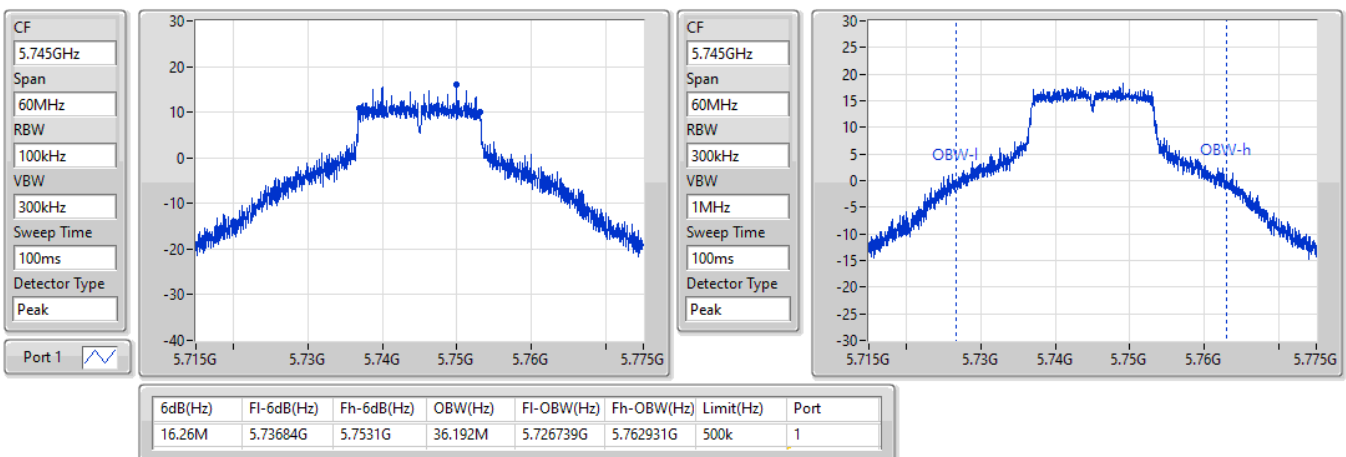


802.11a_Nss1,(6Mbps)_1TX
EBW
5240MHz

18/06/2022


802.11a_Nss1,(6Mbps)_1TX
EBW
5745MHz

18/06/2022

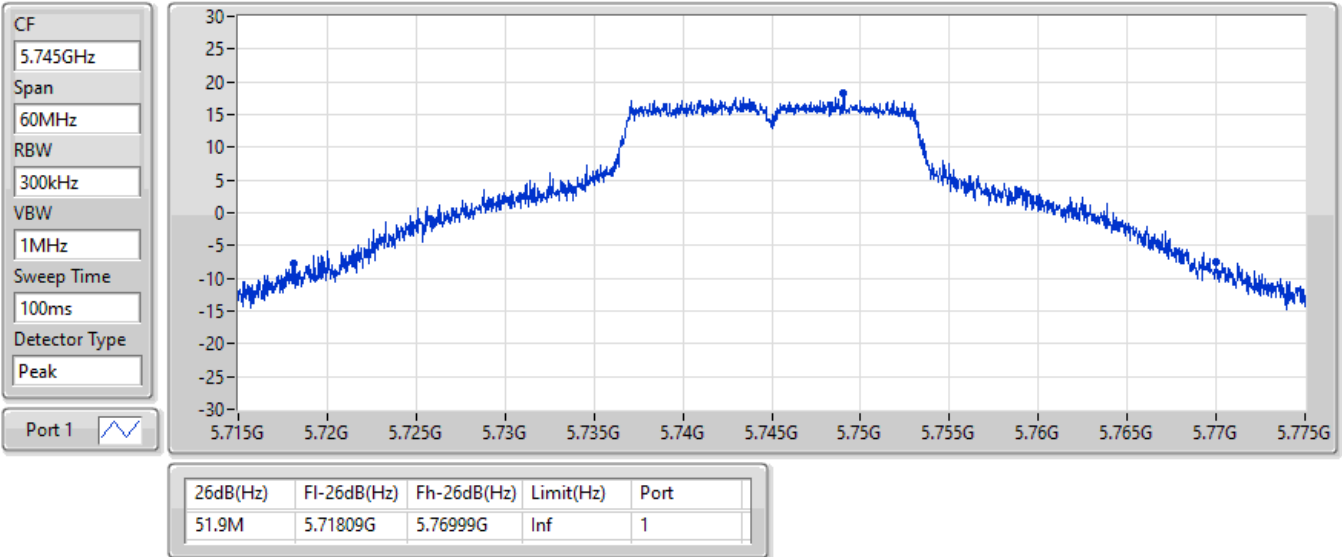


802.11a_Nss1,(6Mbps)_1TX

EBW

5745MHz

18/06/2022

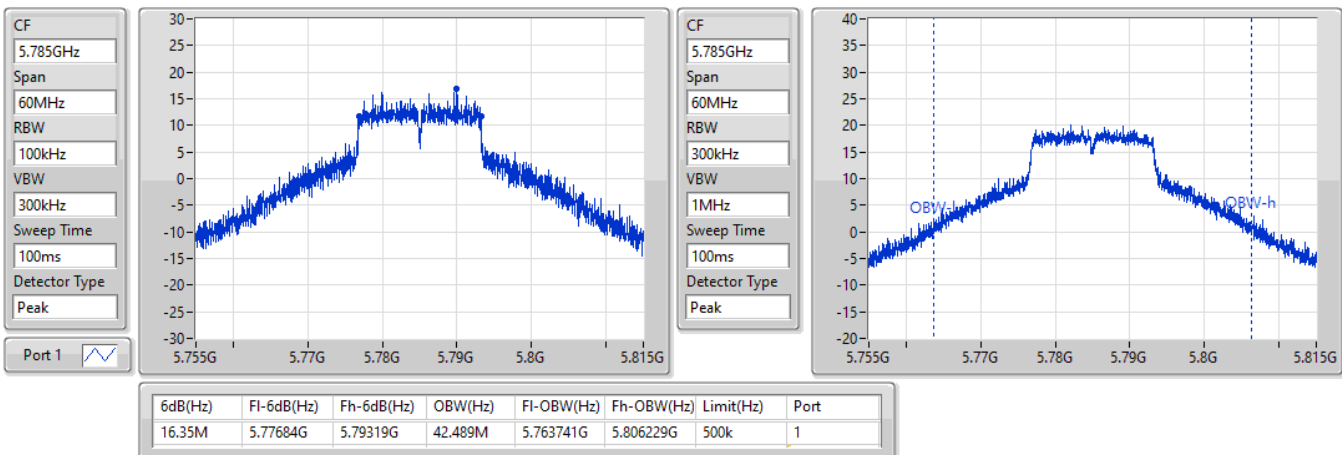


802.11a_Nss1,(6Mbps)_1TX

EBW

5785MHz

18/06/2022

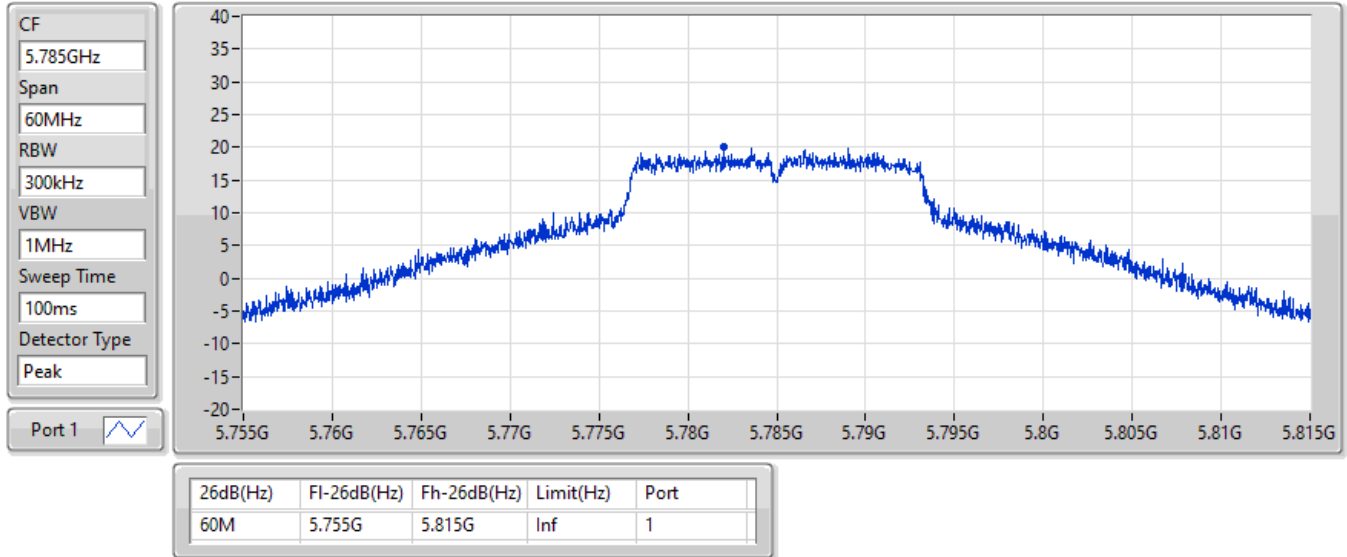


802.11a_Nss1,(6Mbps)_1TX

EBW

5785MHz

18/06/2022

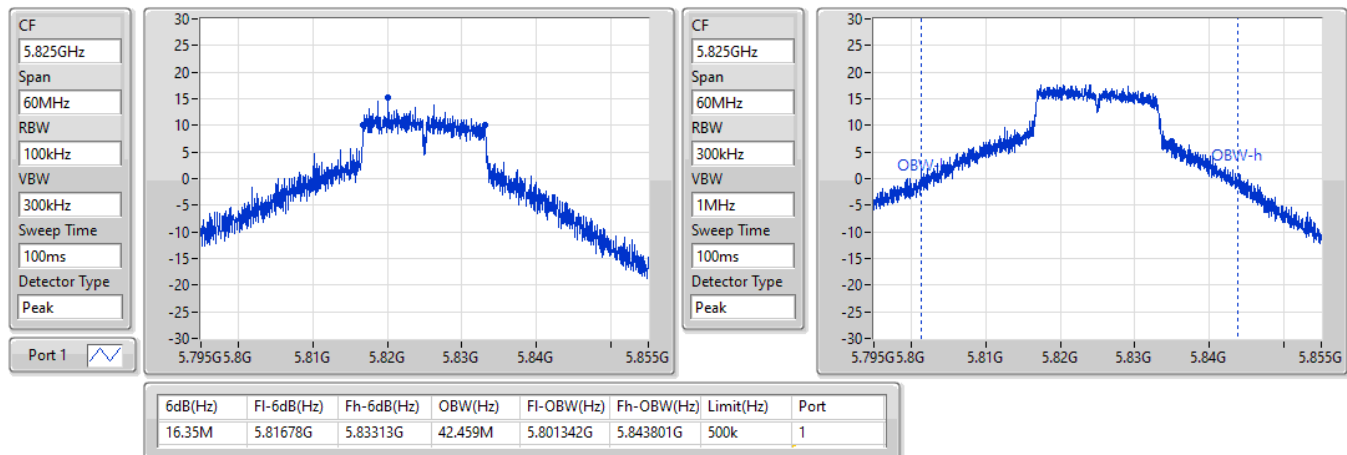


802.11a_Nss1,(6Mbps)_1TX

EBW

5825MHz

18/06/2022

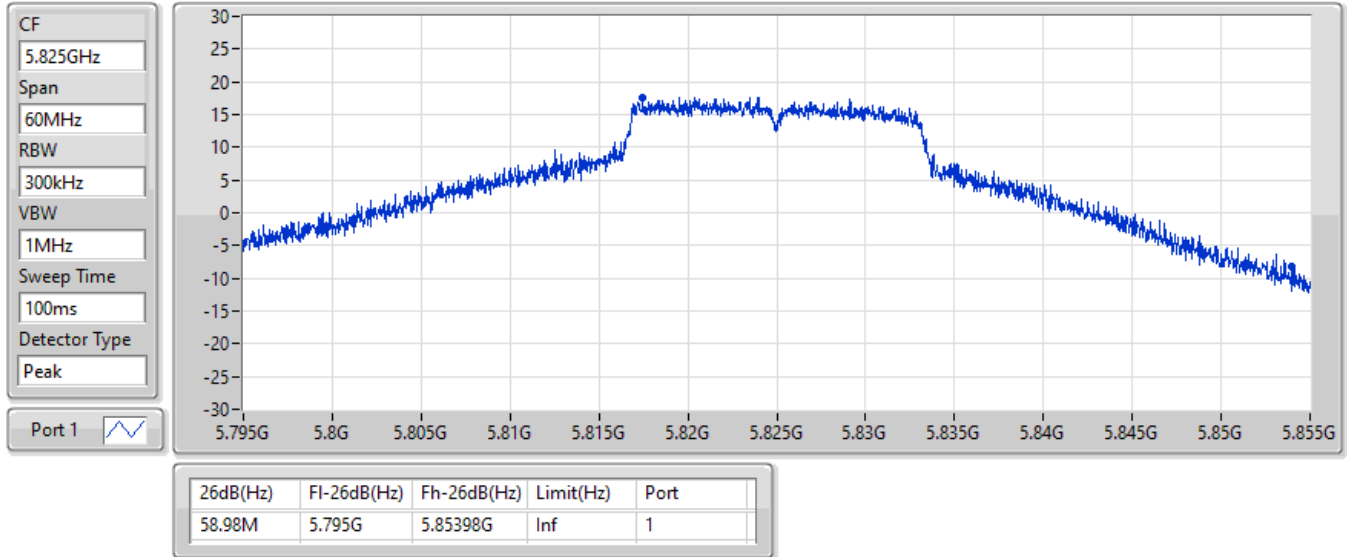


802.11a_Nss1,(6Mbps)_1TX

EBW

5825MHz

18/06/2022

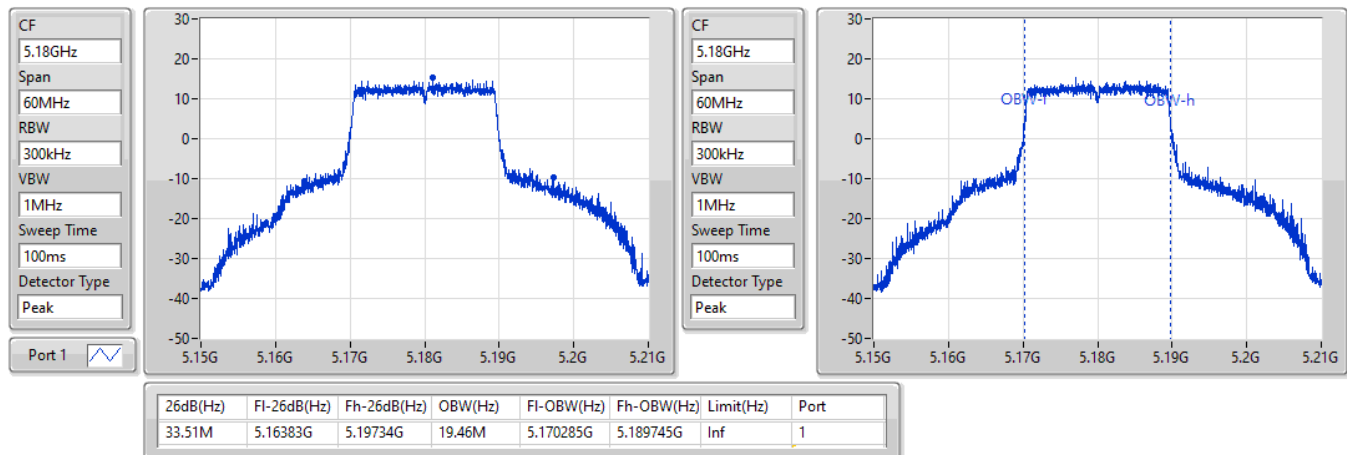


802.11ax HEW20_Nss1,(MCS0)_1TX

EBW

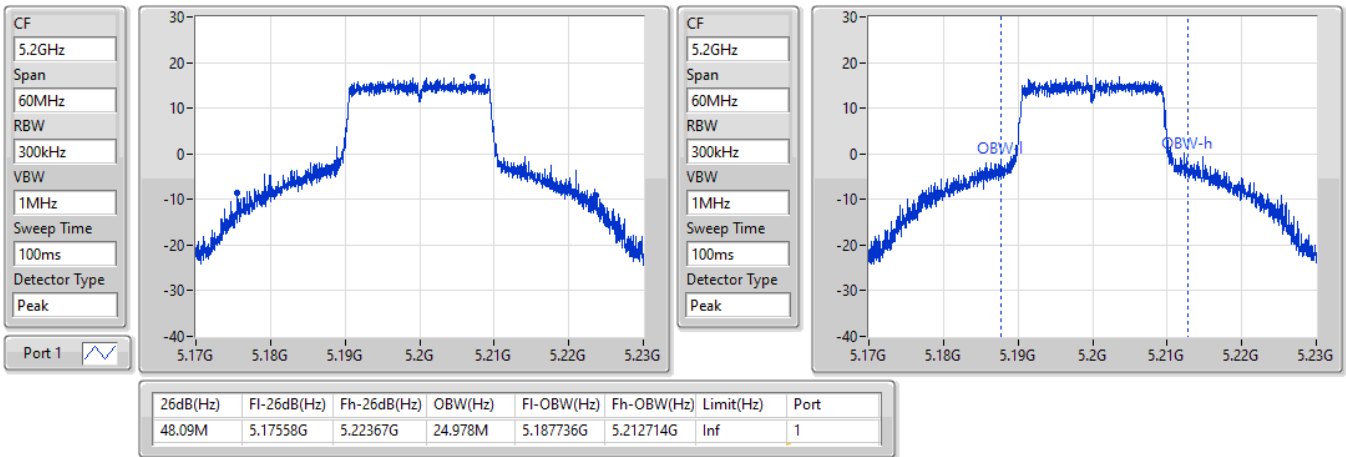
5180MHz

18/06/2022

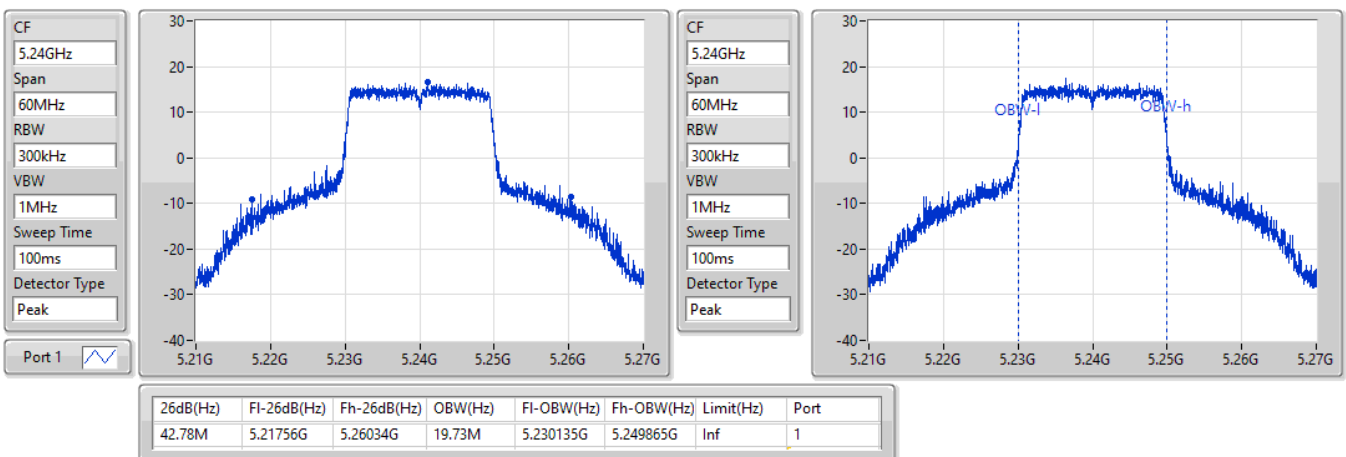


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5200MHz

18/06/2022

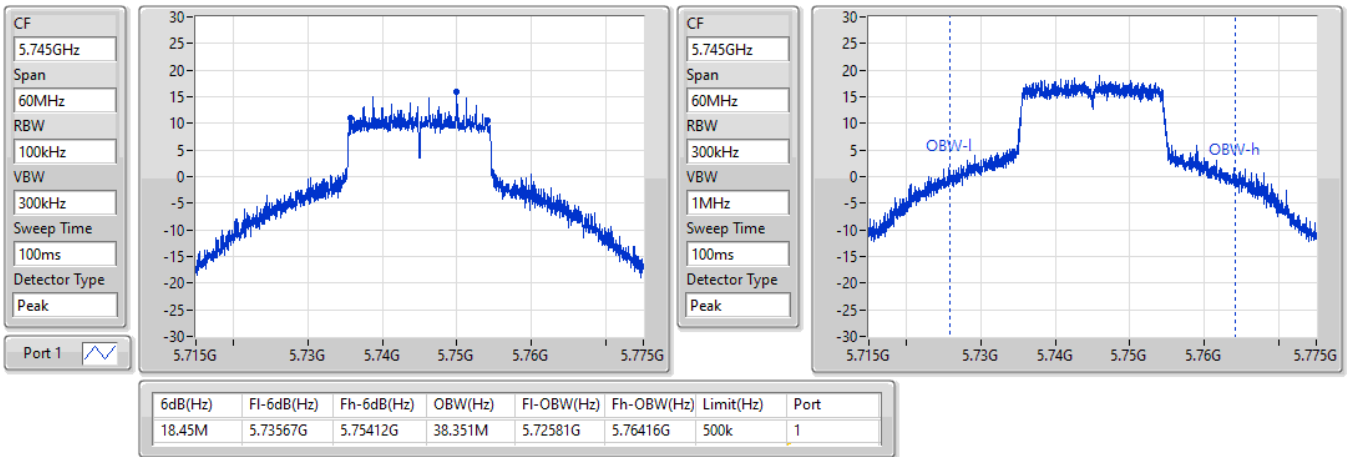

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5240MHz

18/06/2022

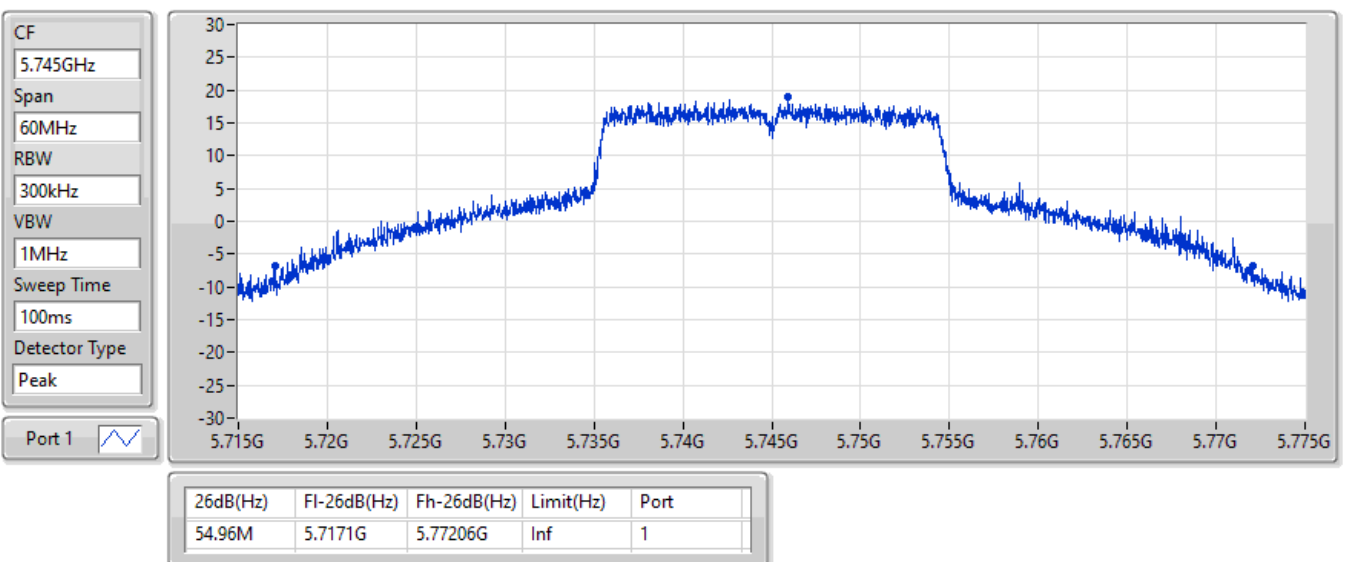


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5745MHz

18/06/2022

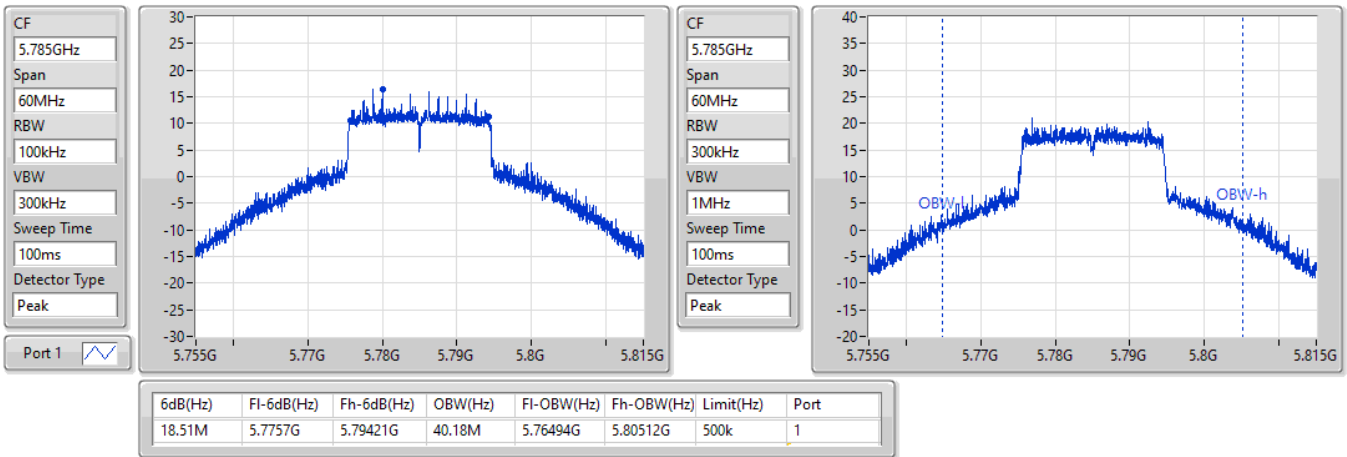

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5745MHz

18/06/2022

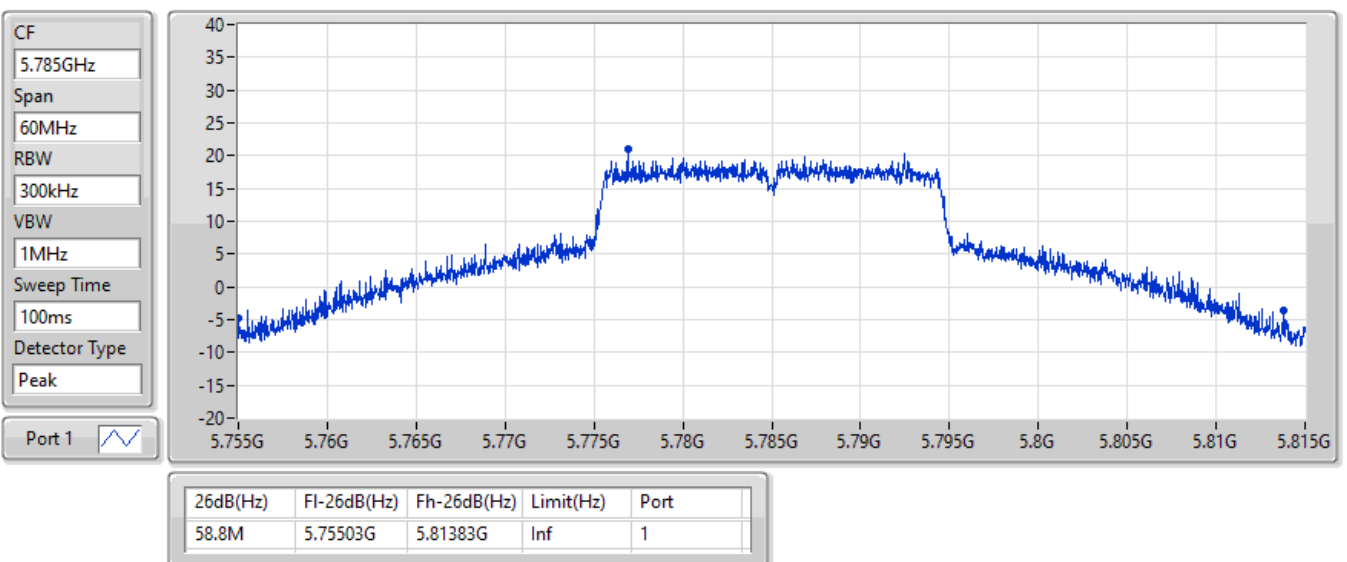


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5785MHz

18/06/2022

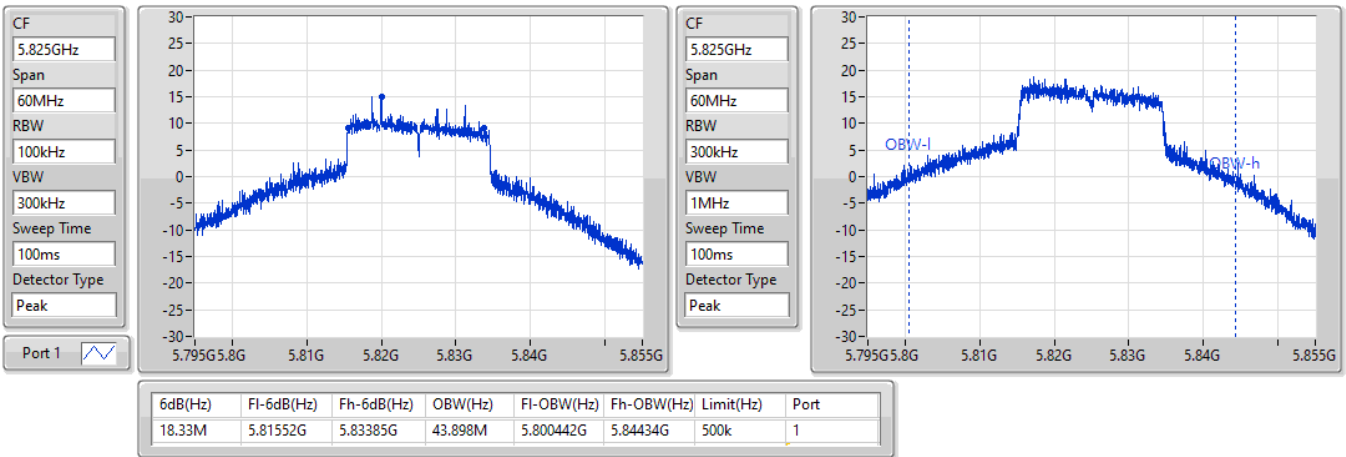

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5785MHz

18/06/2022

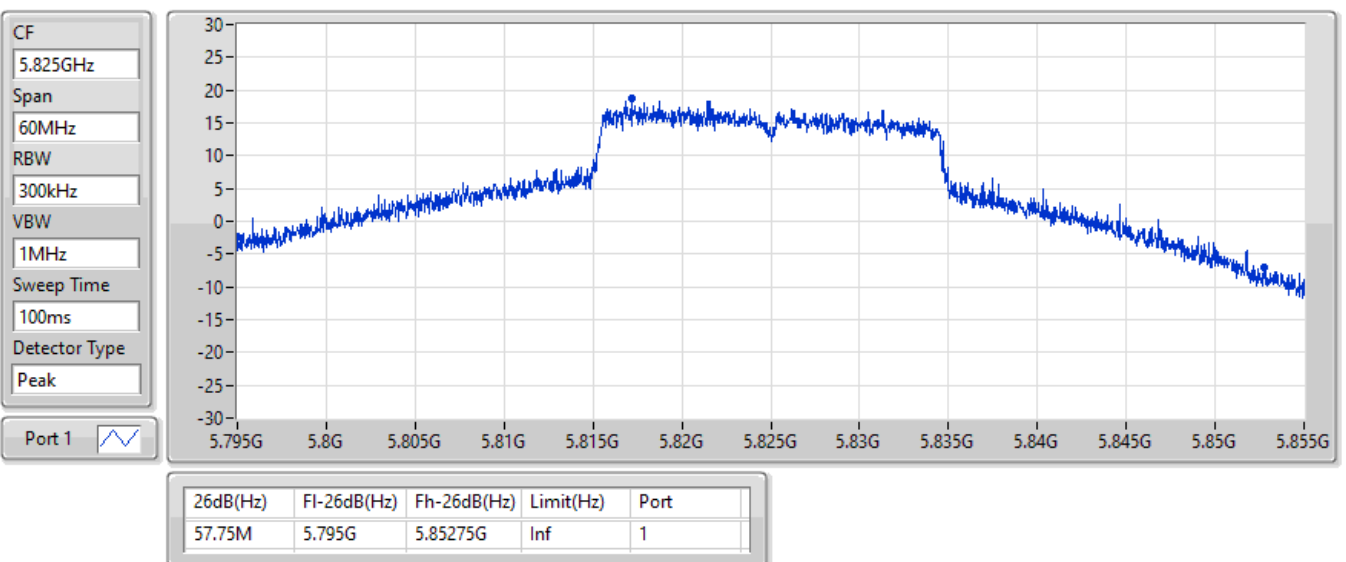


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5825MHz

18/06/2022

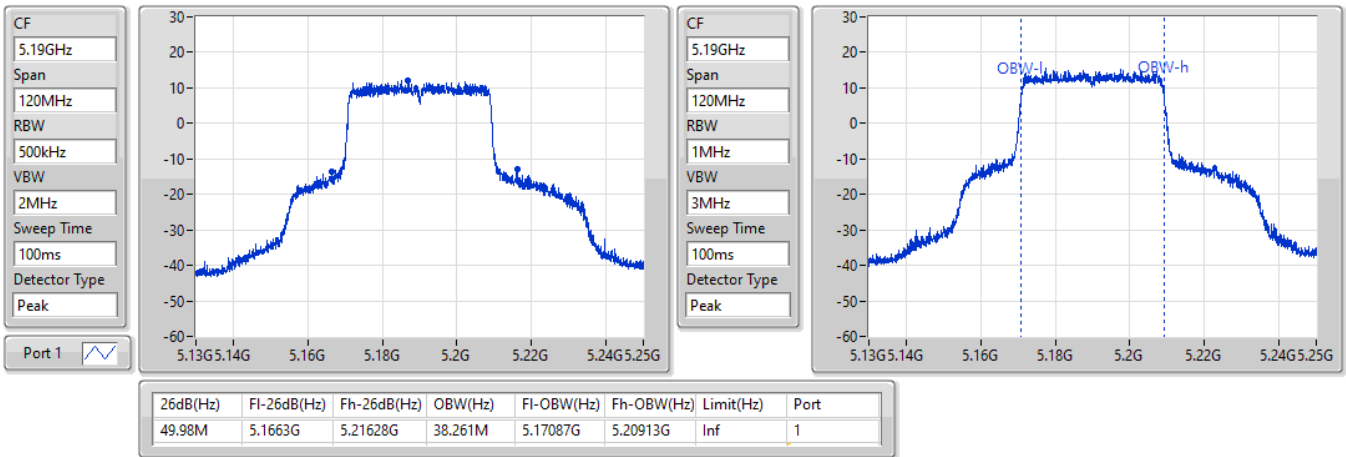

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5825MHz

18/06/2022

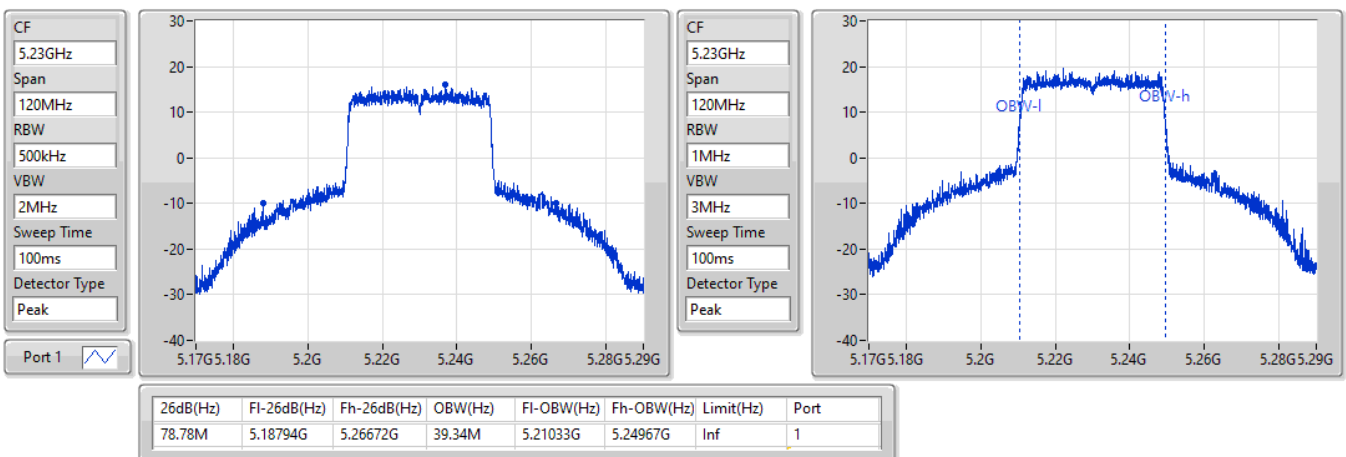


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
5190MHz

18/06/2022


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
5230MHz

18/06/2022

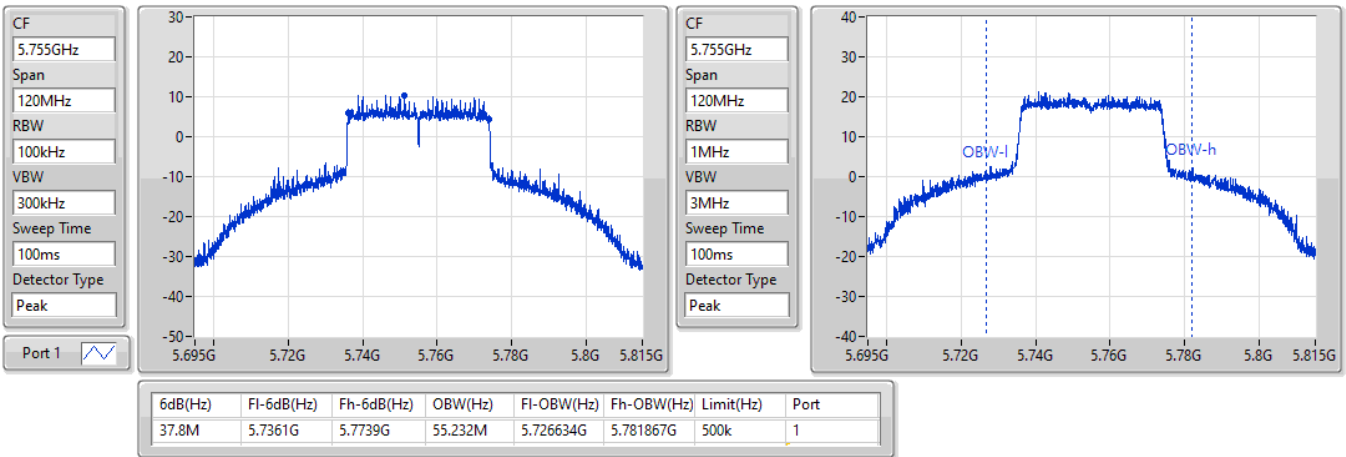


802.11ax HEW40_Nss1,(MCS0)_1TX

EBW

5755MHz

18/06/2022

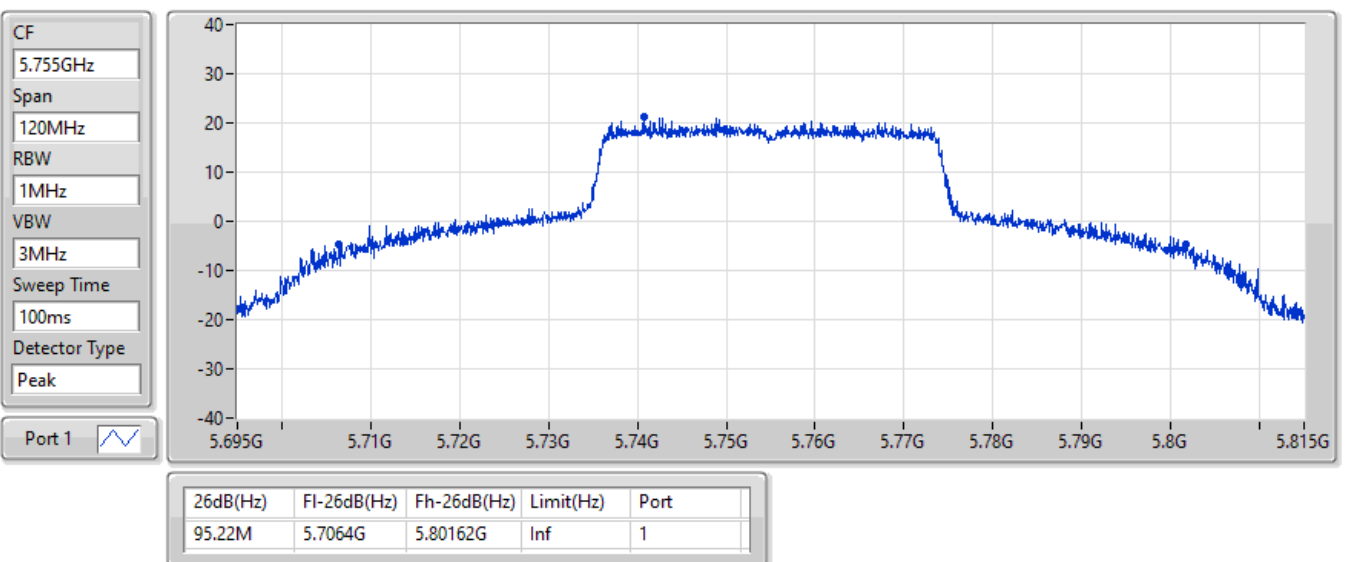


802.11ax HEW40_Nss1,(MCS0)_1TX

EBW

5755MHz

18/06/2022

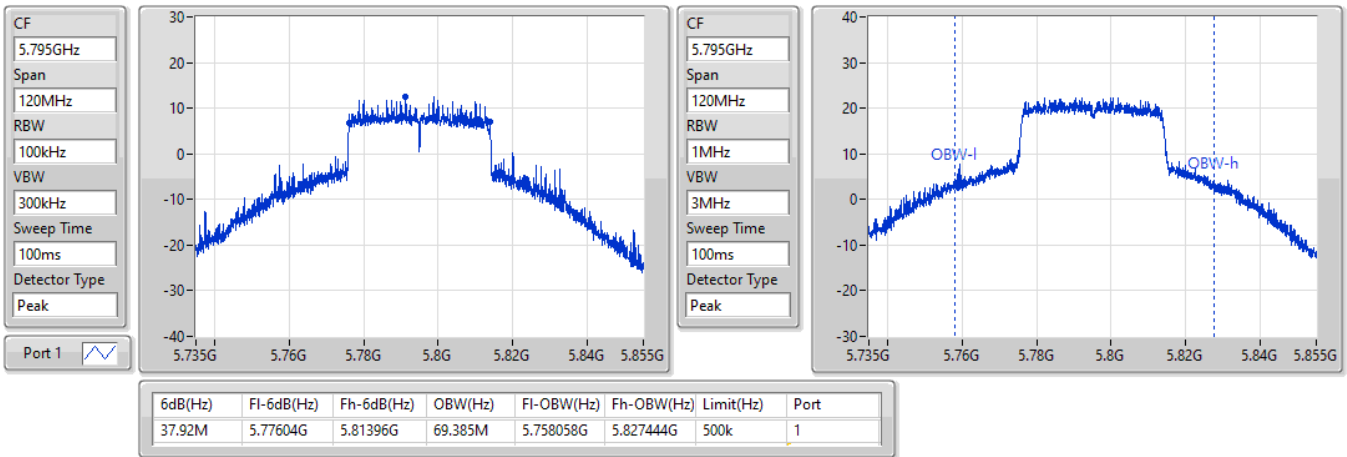


802.11ax HEW40_Nss1,(MCS0)_1TX

EBW

5795MHz

18/06/2022

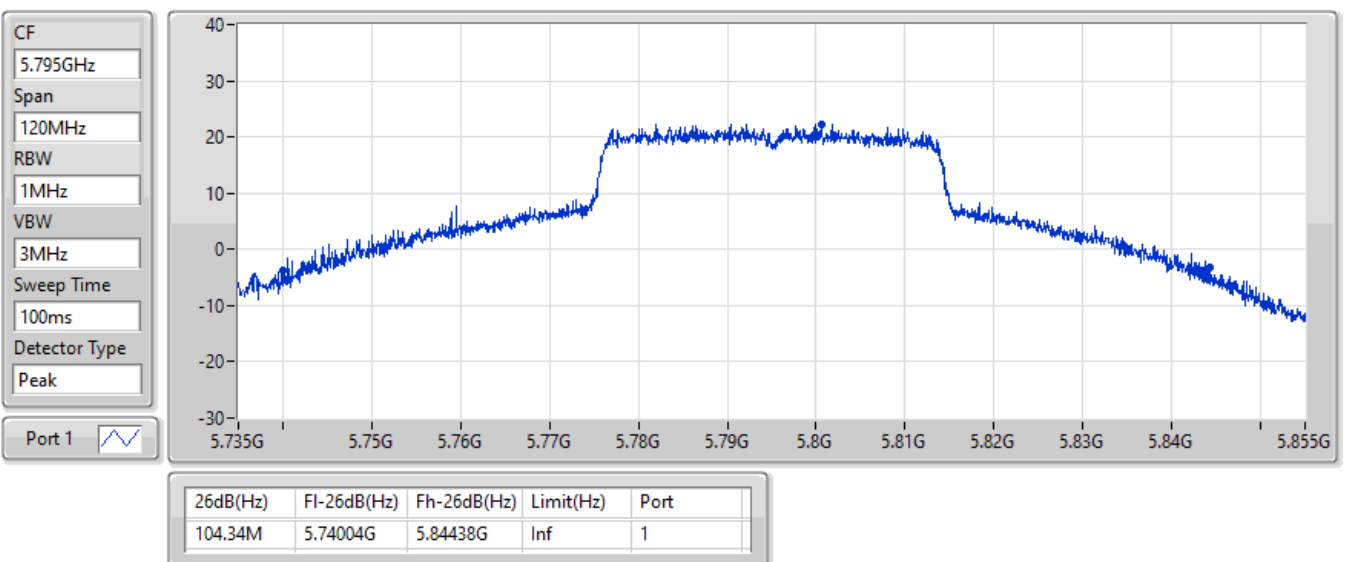


802.11ax HEW40_Nss1,(MCS0)_1TX

EBW

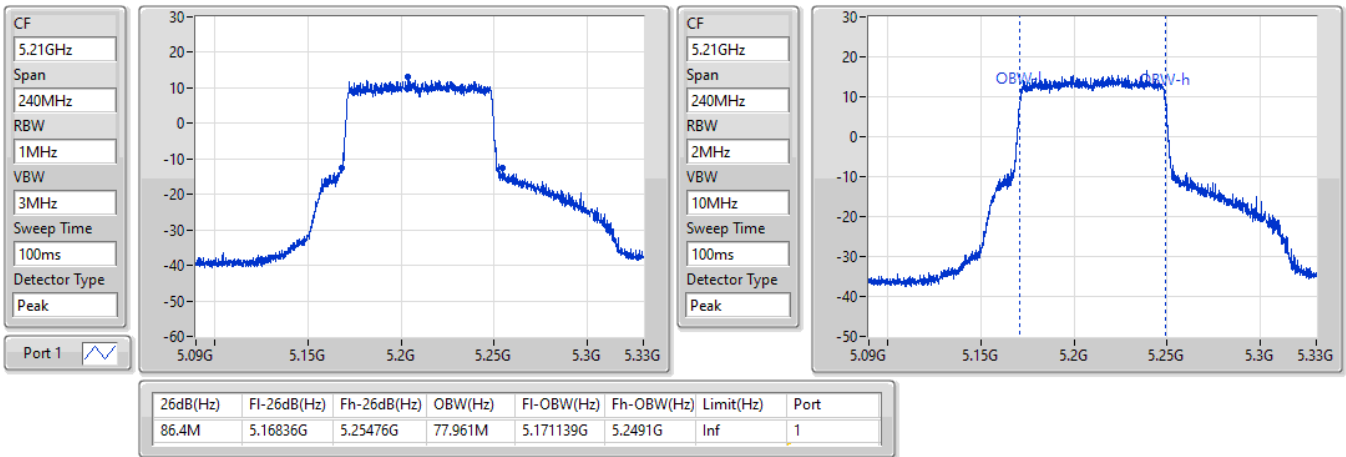
5795MHz

18/06/2022

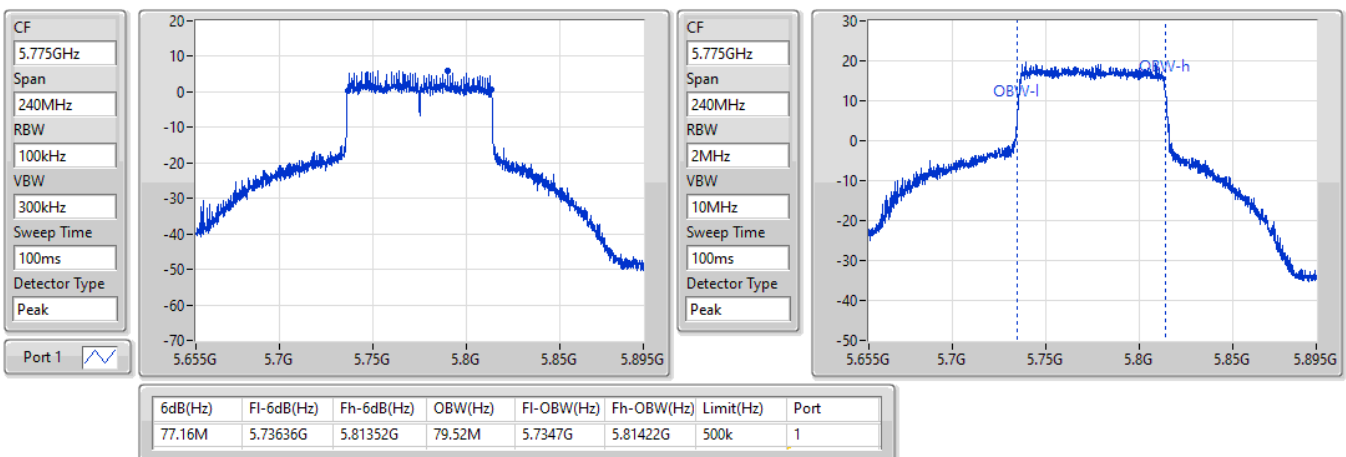


802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
5210MHz

18/06/2022


802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
5775MHz

18/06/2022

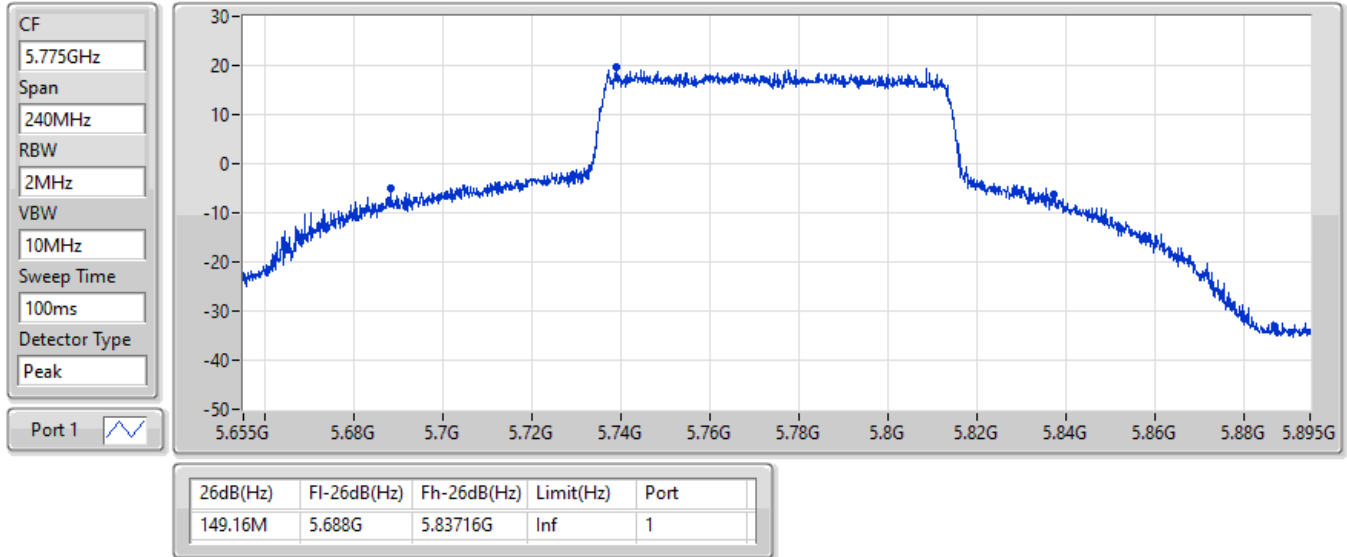


802.11ax HEW80_Nss1,(MCS0)_1TX

EBW

5775MHz

18/06/2022



**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)_2TX	40.23M	21.619M	21M7D1D	27.78M	17.571M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	16.35M	42.519M	42M6D1D	16.29M	24.858M

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

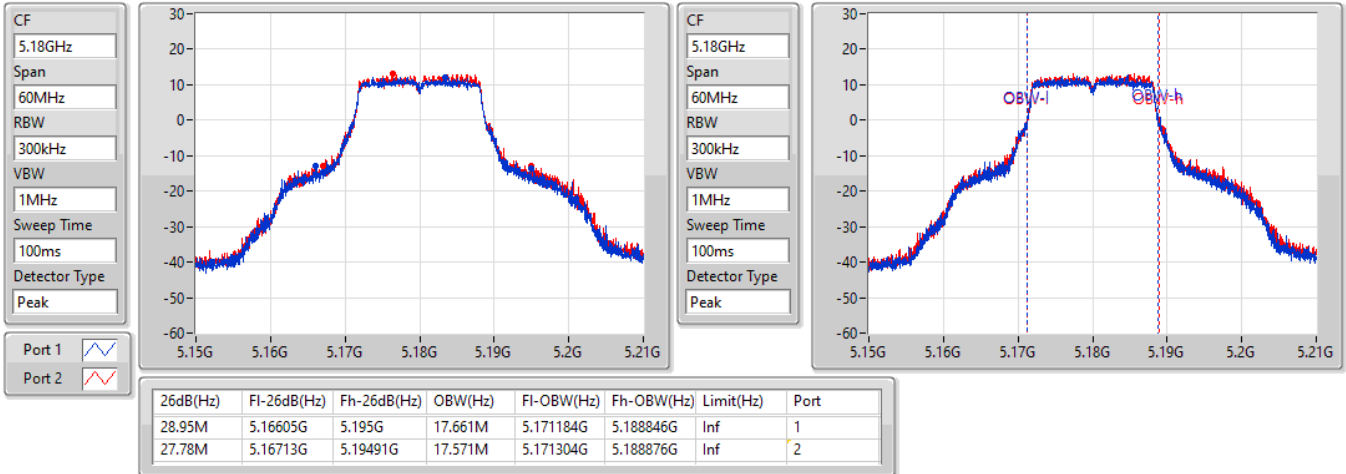
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	28.95M	17.661M	27.78M	17.571M
5200MHz	Pass	Inf	38.97M	19.7M	40.23M	21.619M
5240MHz	Pass	Inf	38.64M	18.531M	38.13M	19.25M
5745MHz	Pass	500k	16.32M	24.858M	16.35M	34.753M
5785MHz	Pass	500k	16.35M	42.309M	16.32M	37.301M
5825MHz	Pass	500k	16.29M	42.519M	16.32M	37.421M

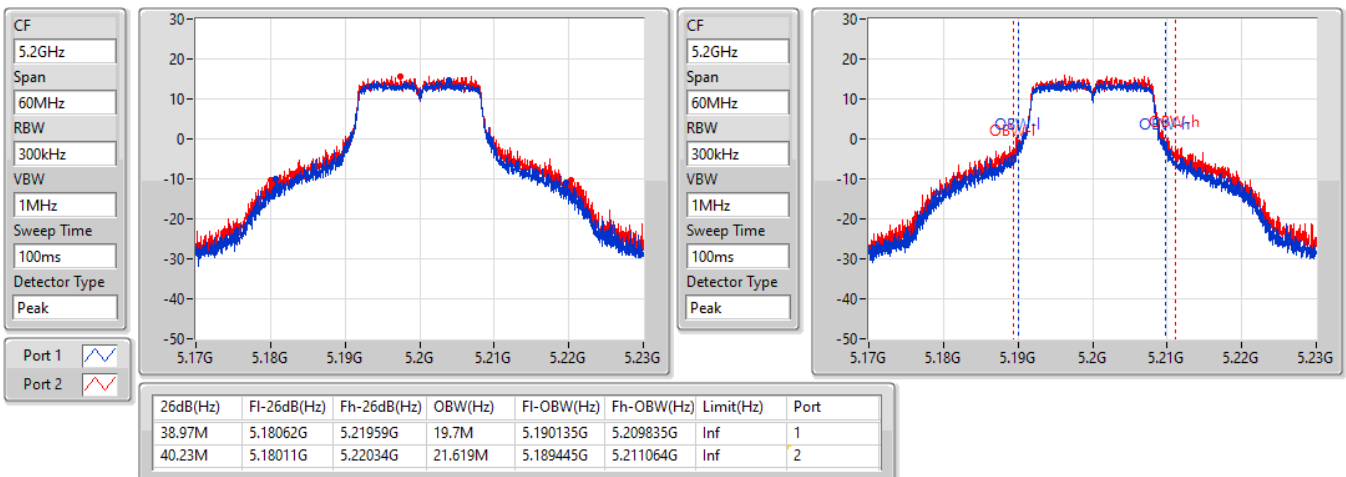
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11a_Nss1,(6Mbps)_2TX
EBW
5180MHz

18/06/2022

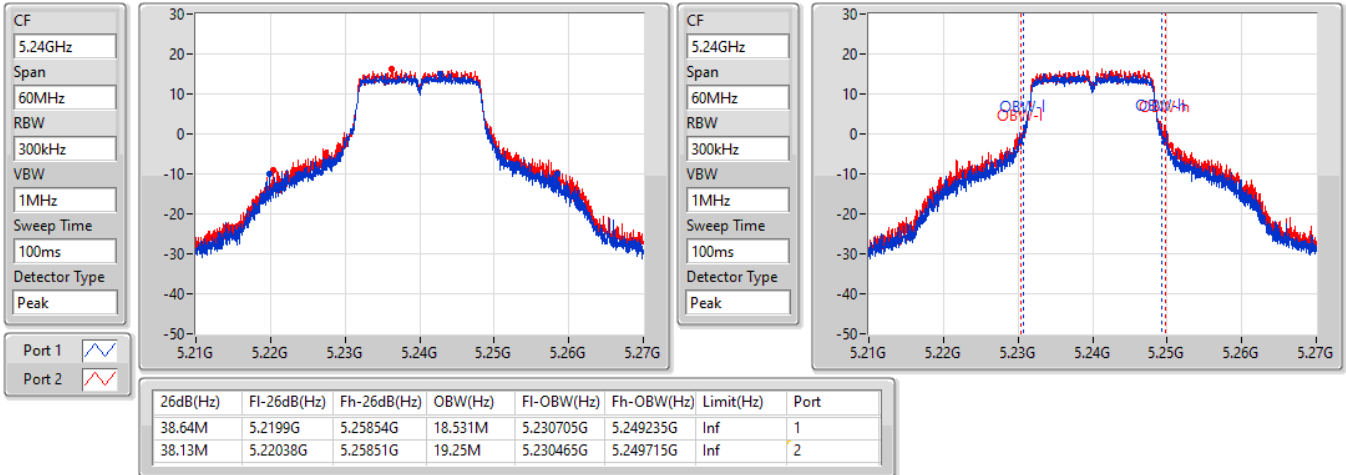

802.11a_Nss1,(6Mbps)_2TX
EBW
5200MHz

18/06/2022

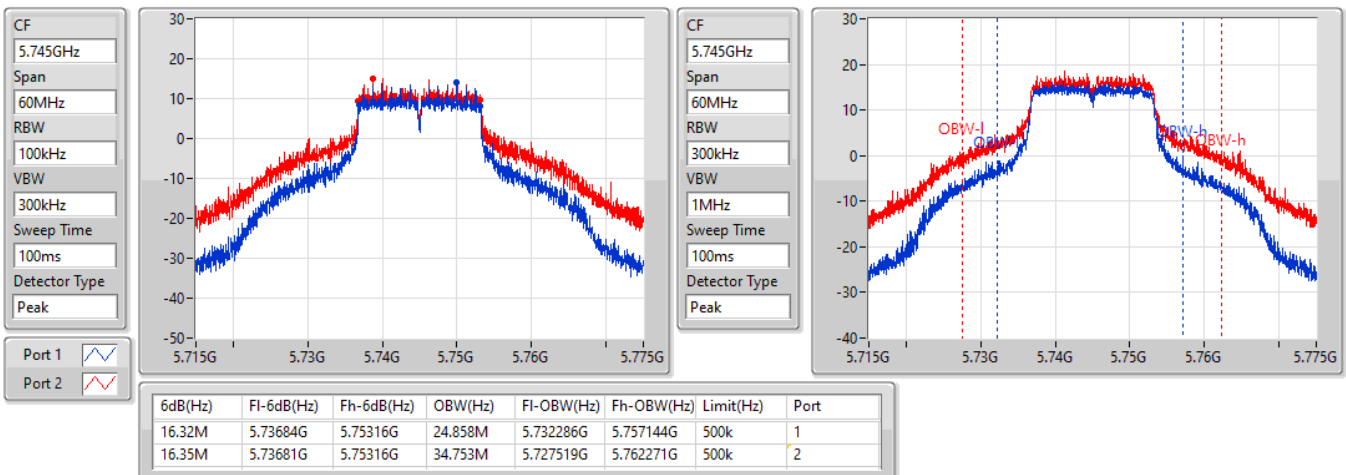


802.11a_Nss1,(6Mbps)_2TX
EBW
5240MHz

18/06/2022


802.11a_Nss1,(6Mbps)_2TX
EBW
5745MHz

18/06/2022

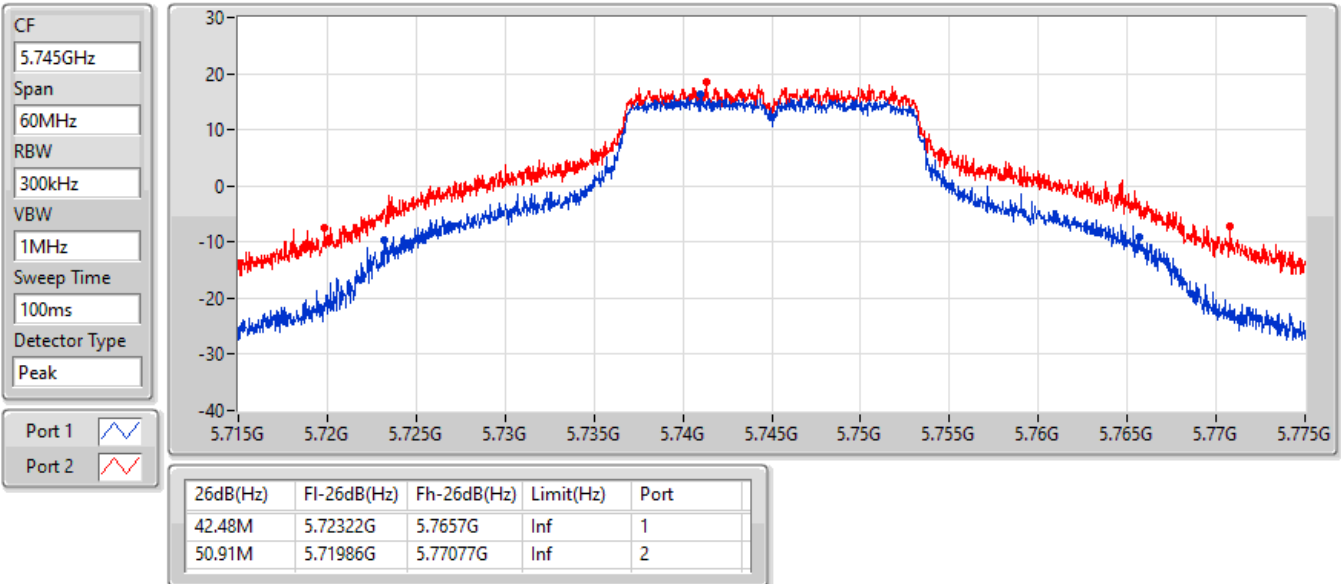


802.11a_Nss1,(6Mbps)_2TX

EBW

5745MHz

18/06/2022

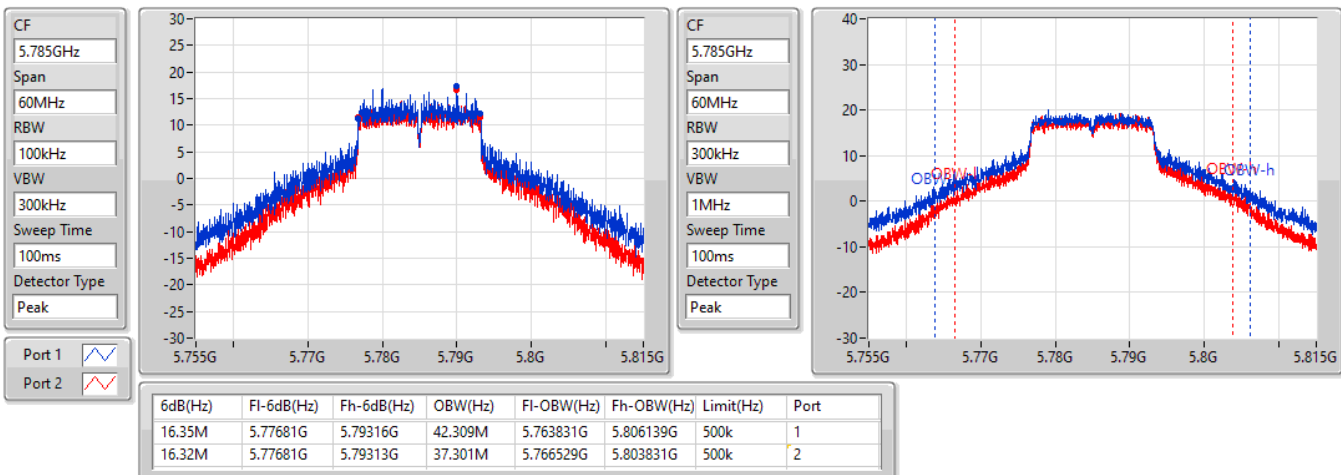


802.11a_Nss1,(6Mbps)_2TX

EBW

5785MHz

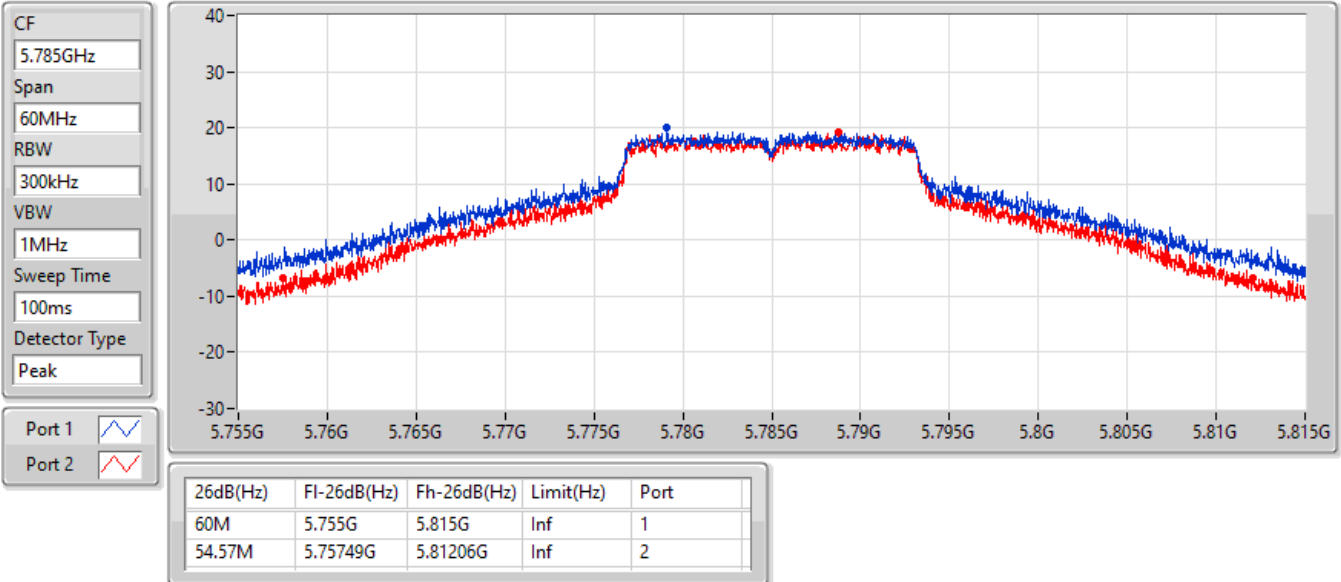
18/06/2022



802.11a_Nss1,(6Mbps)_2TX

EBW
5785MHz

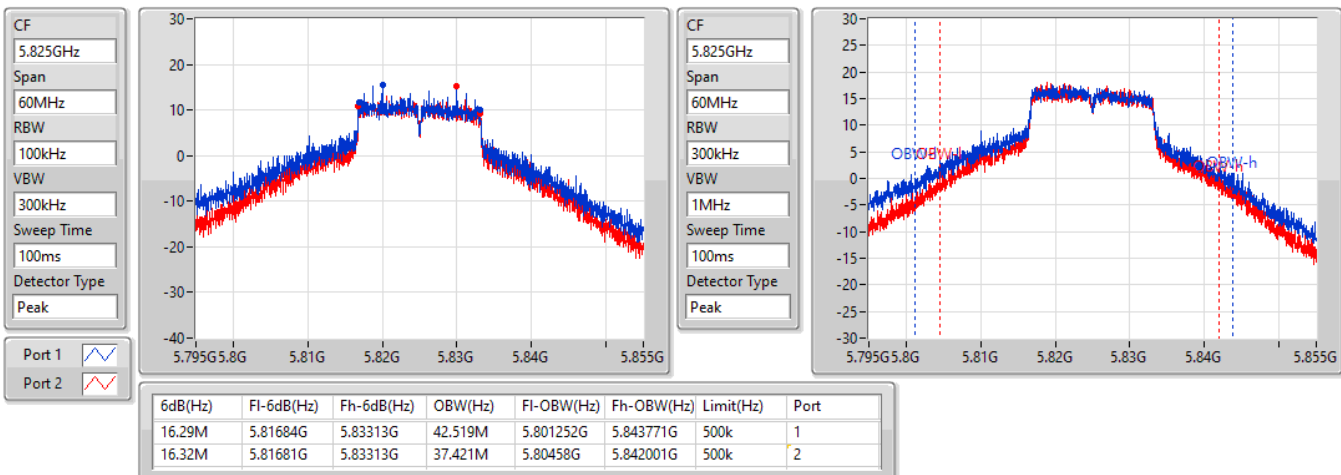
18/06/2022



802.11a_Nss1,(6Mbps)_2TX

EBW
5825MHz

18/06/2022

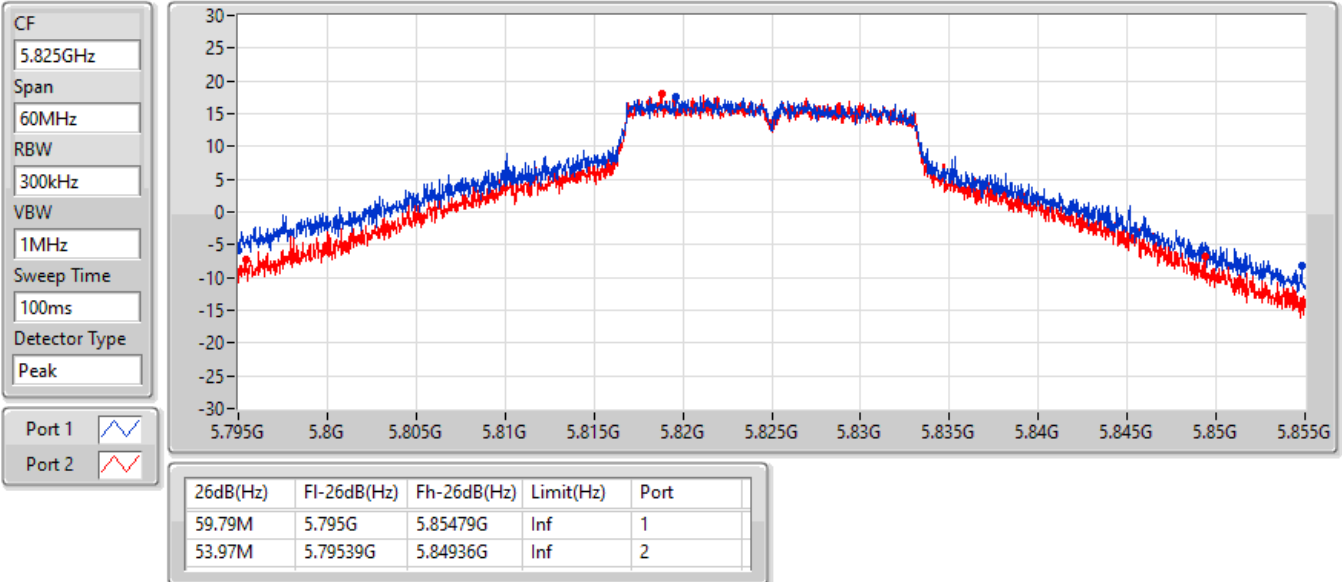


802.11a_Nss1,(6Mbps)_2TX

EBW

5825MHz

18/06/2022



Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ax HEW20_Nss2,(MCS0)_2TX	46.38M	19.94M	20M0D1D	31.62M	19.31M
802.11ax HEW40_Nss2,(MCS0)_2TX	65.64M	38.621M	38M7D1D	43.56M	38.081M
802.11ax HEW80_Nss2,(MCS0)_2TX	85.2M	78.081M	78M1D1D	84.96M	77.961M
5.725-5.85GHz	-	-	-	-	-
802.11ax HEW20_Nss2,(MCS0)_2TX	18.84M	43.928M	44M0D1D	17.28M	22.339M
802.11ax HEW40_Nss2,(MCS0)_2TX	37.74M	60.21M	60M3D1D	37.5M	38.801M
802.11ax HEW80_Nss2,(MCS0)_2TX	77.64M	78.201M	78M3D1D	77.52M	77.961M

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

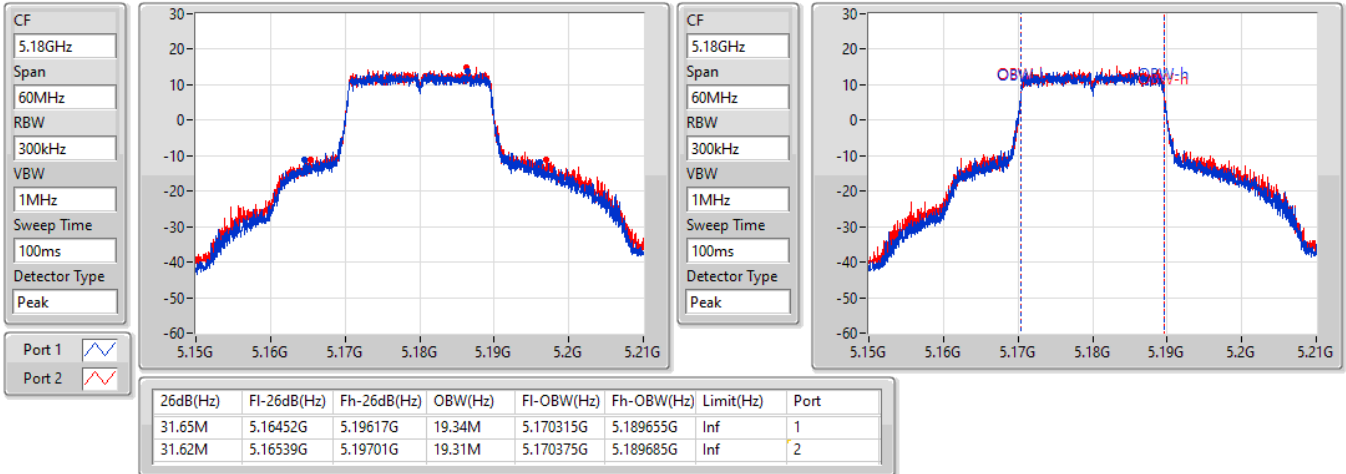
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11ax HEW20_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	31.65M	19.34M	31.62M	19.31M
5200MHz	Pass	Inf	38.82M	19.55M	42.27M	19.94M
5240MHz	Pass	Inf	40.77M	19.58M	46.38M	19.73M
5745MHz	Pass	500k	18.84M	22.339M	18.12M	33.973M
5785MHz	Pass	500k	18.51M	37.091M	17.73M	40.45M
5825MHz	Pass	500k	17.94M	43.928M	17.28M	40.48M
802.11ax HEW40_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	Inf	44.22M	38.261M	43.56M	38.081M
5230MHz	Pass	Inf	64.92M	38.501M	65.64M	38.621M
5755MHz	Pass	500k	37.74M	38.801M	37.62M	43.898M
5795MHz	Pass	500k	37.5M	47.196M	37.68M	60.21M
802.11ax HEW80_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	Inf	84.96M	77.961M	85.2M	78.081M
5775MHz	Pass	500k	77.64M	77.961M	77.52M	78.201M

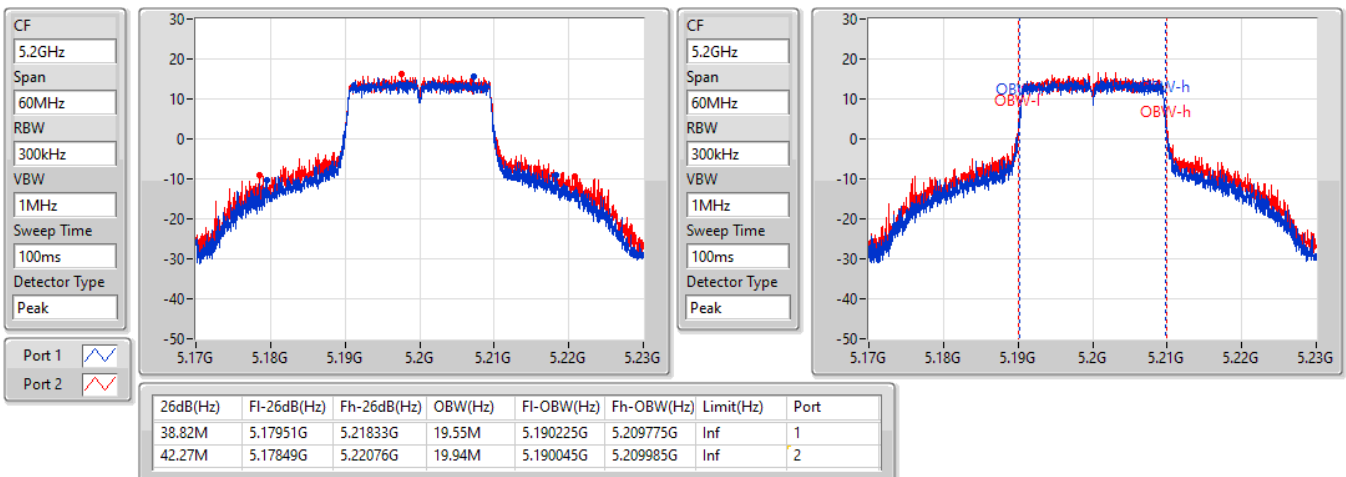
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
5180MHz

18/06/2022

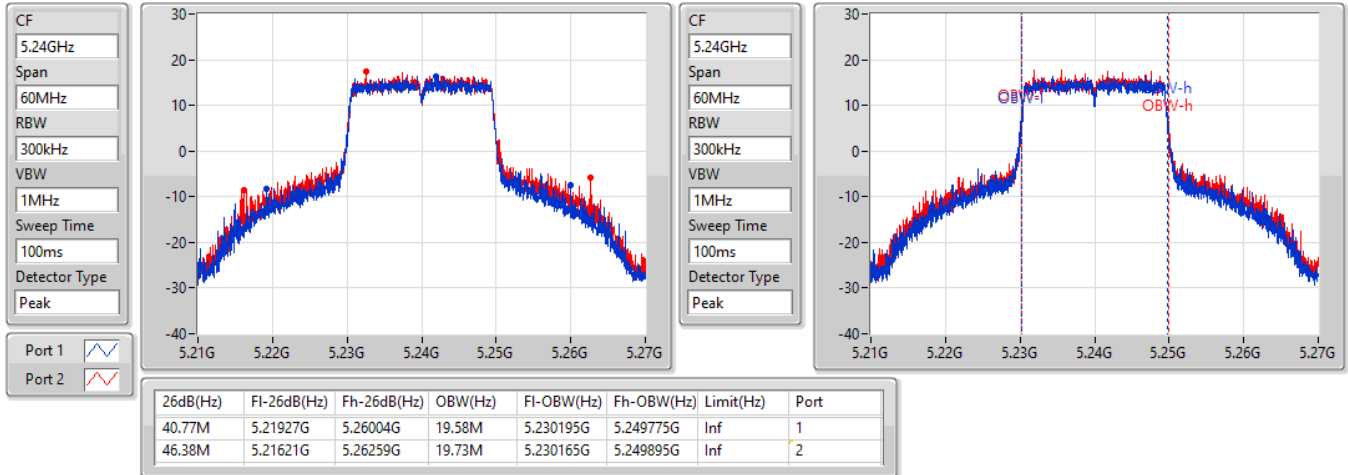

802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
5200MHz

18/06/2022

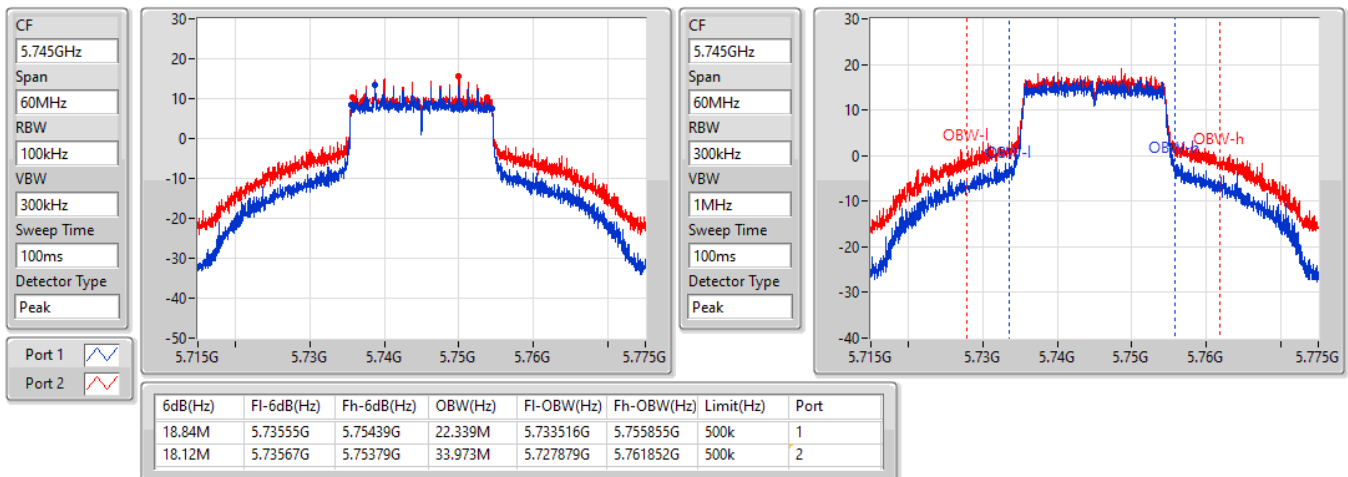


802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
5240MHz

18/06/2022


802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
5745MHz

18/06/2022

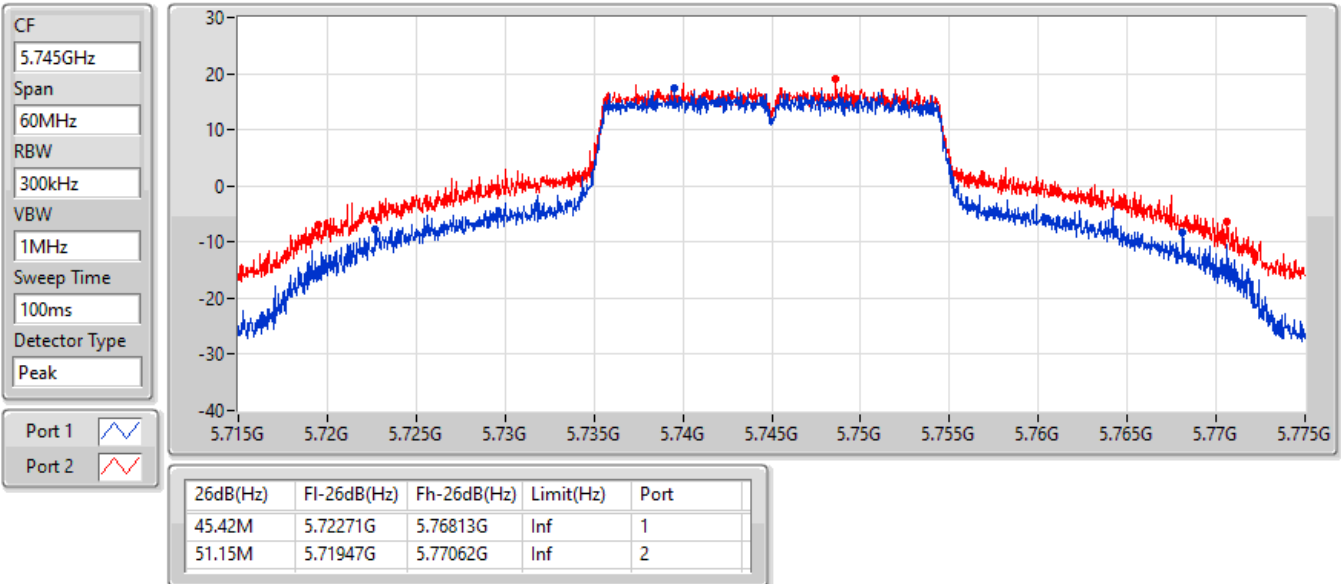


802.11ax HEW20_Nss2,(MCS0)_2TX

EBW

5745MHz

18/06/2022

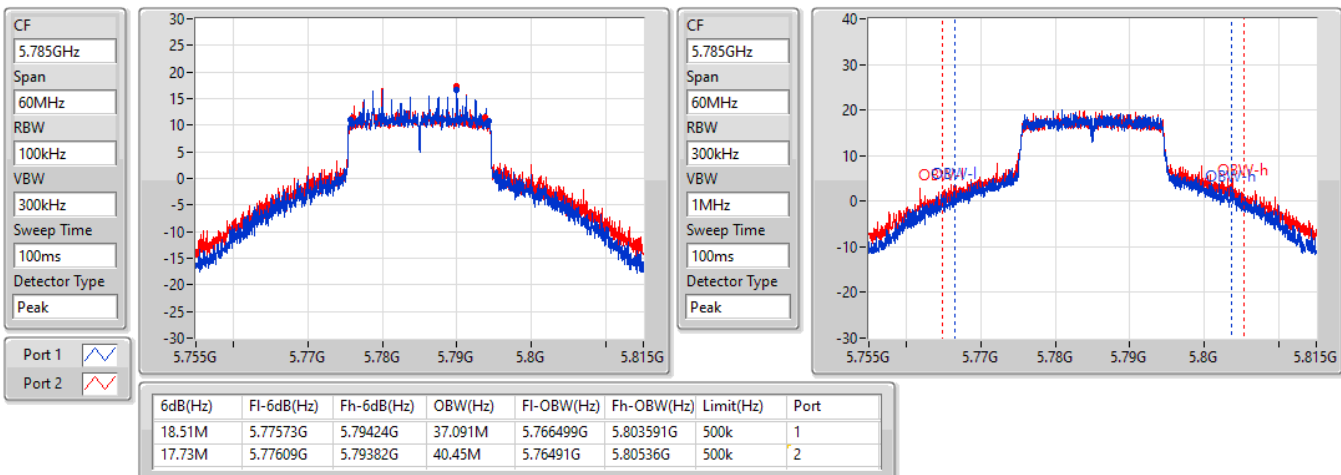


802.11ax HEW20_Nss2,(MCS0)_2TX

EBW

5785MHz

18/06/2022

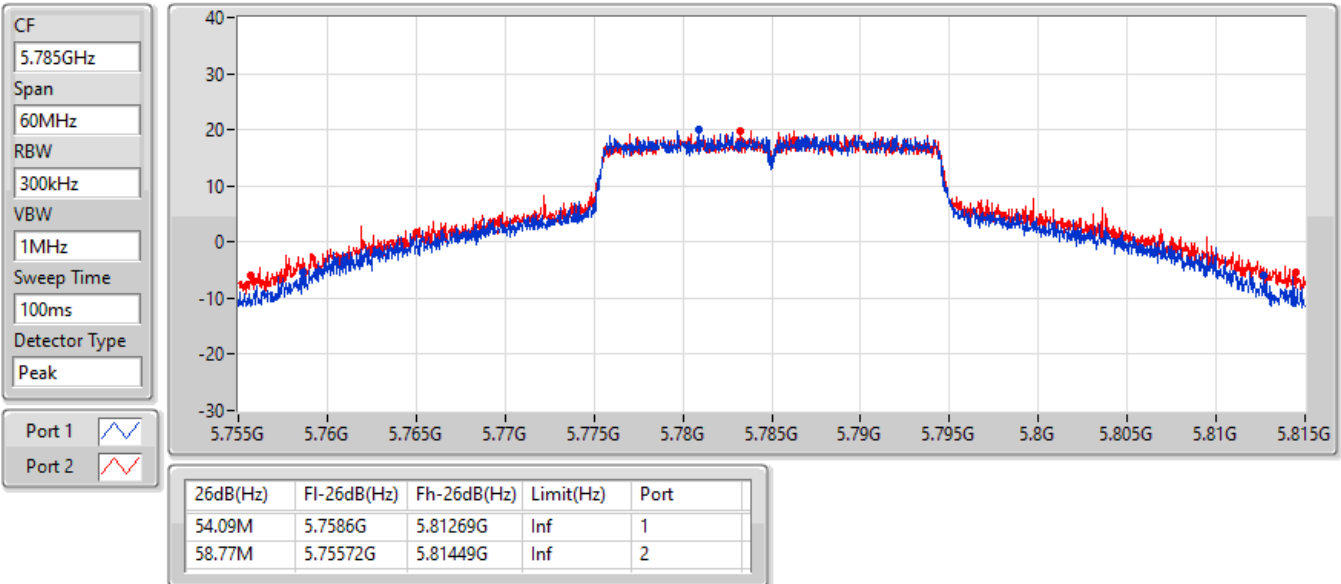


802.11ax HEW20_Nss2,(MCS0)_2TX

EBW

5785MHz

18/06/2022

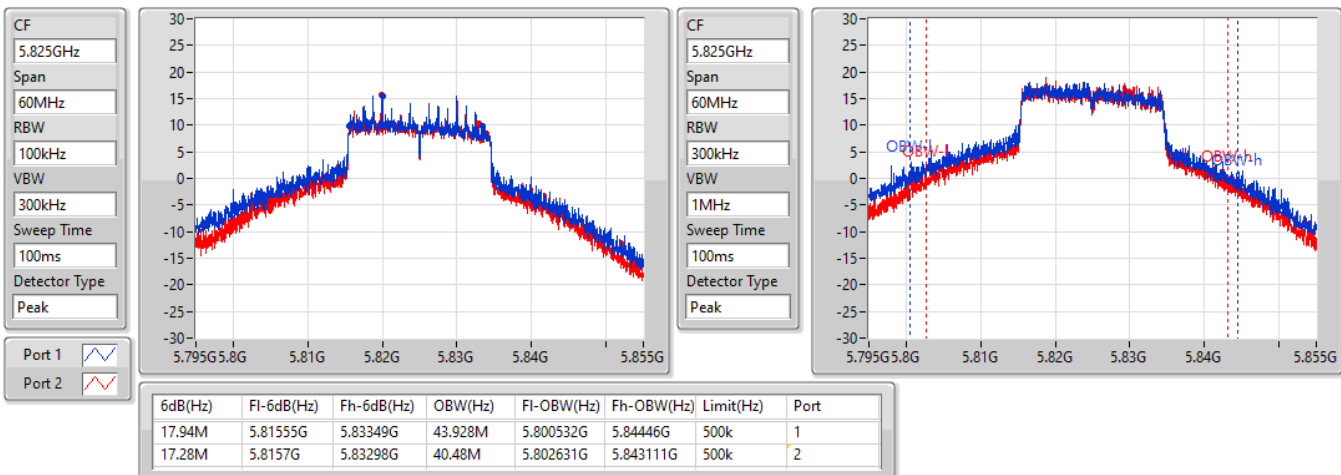


802.11ax HEW20_Nss2,(MCS0)_2TX

EBW

5825MHz

18/06/2022

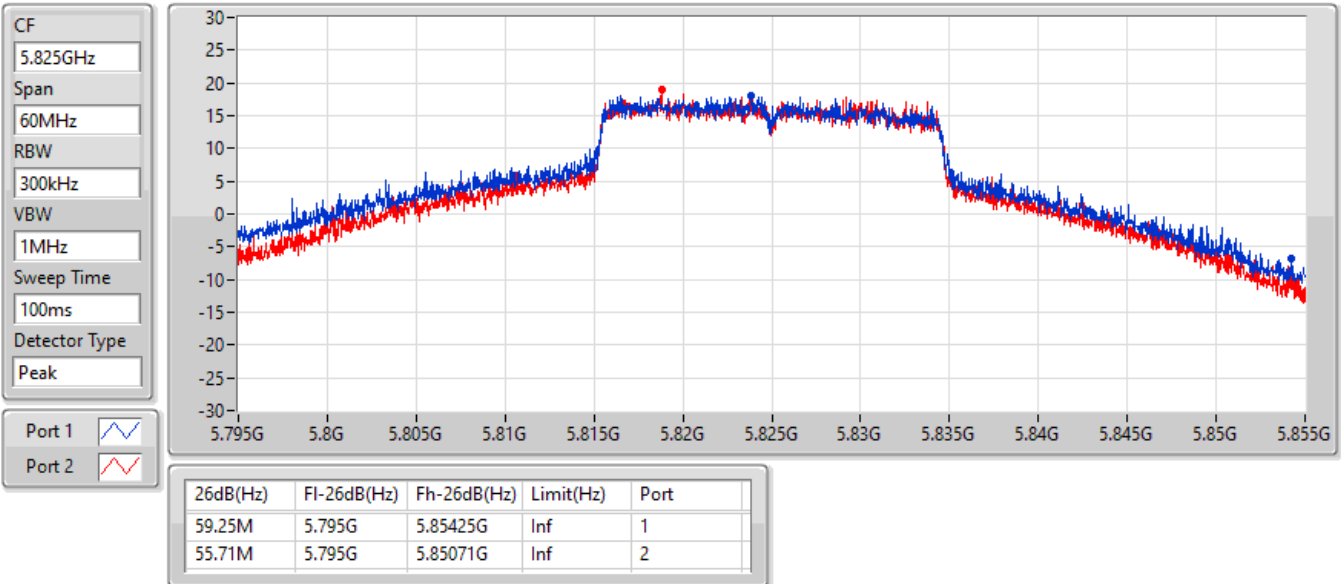


802.11ax HEW20_Nss2,(MCS0)_2TX

EBW

5825MHz

18/06/2022

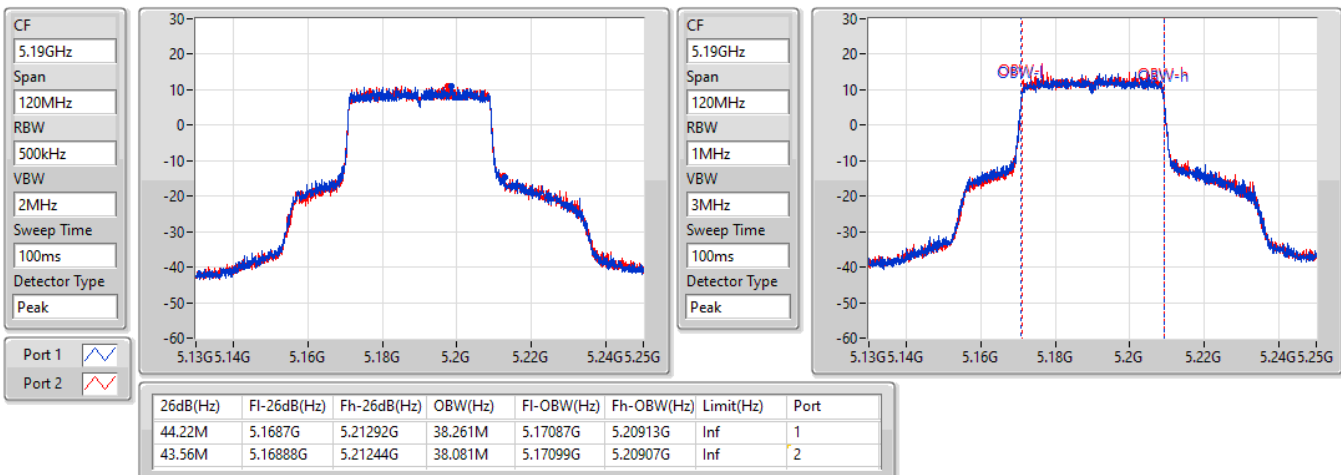


802.11ax HEW40_Nss2,(MCS0)_2TX

EBW

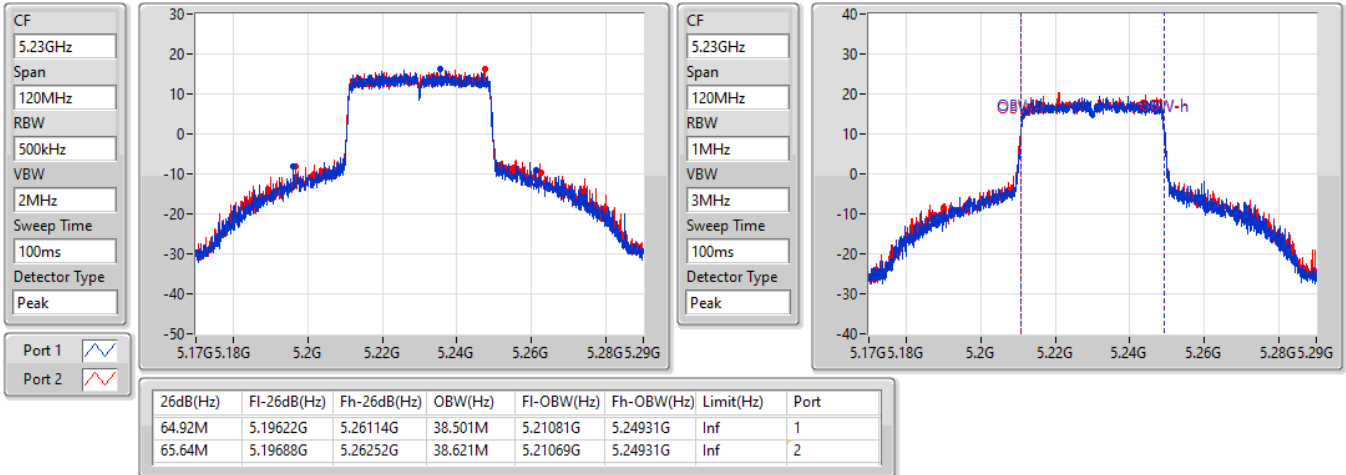
5190MHz

18/06/2022

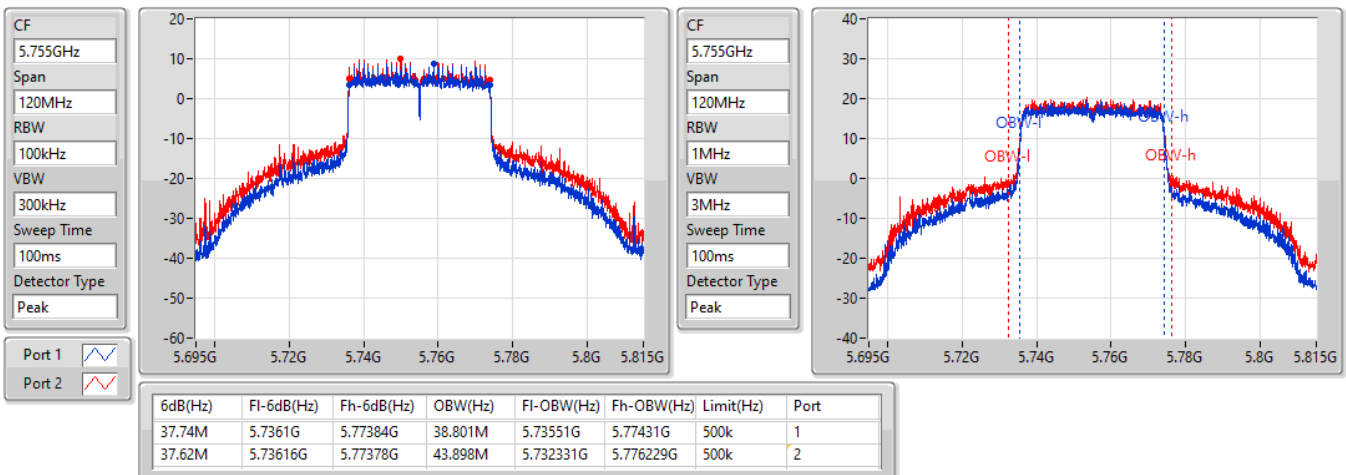


802.11ax HEW40_Nss2,(MCS0)_2TX
EBW
5230MHz

18/06/2022


802.11ax HEW40_Nss2,(MCS0)_2TX
EBW
5755MHz

18/06/2022

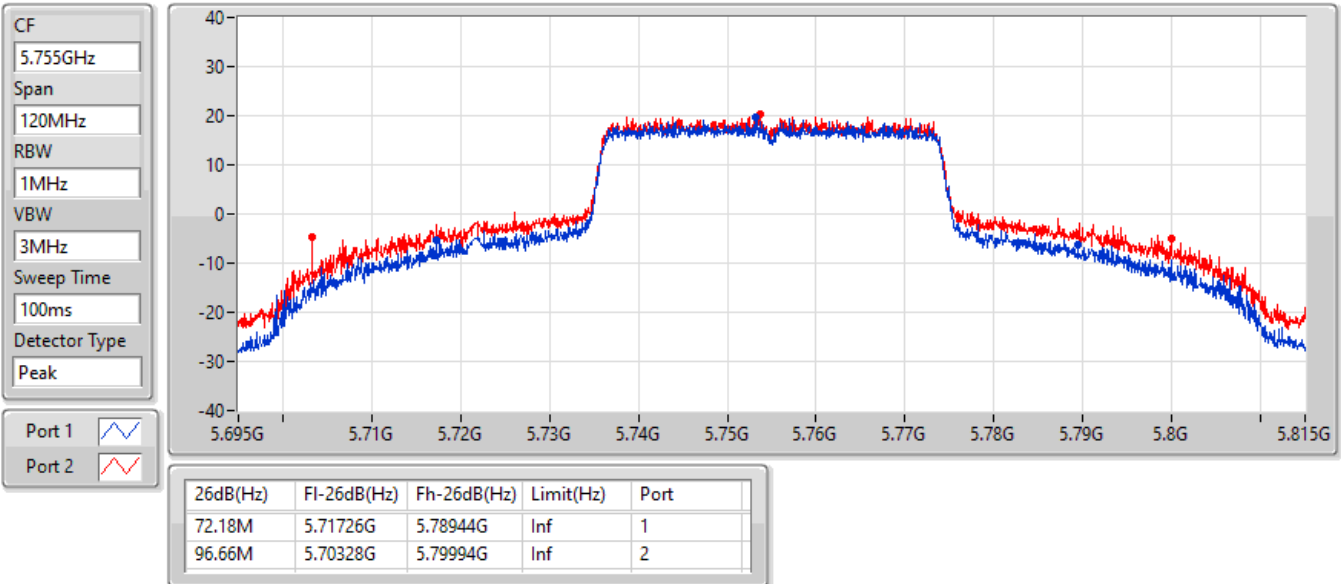


802.11ax HEW40_Nss2,(MCS0)_2TX

EBW

5755MHz

18/06/2022

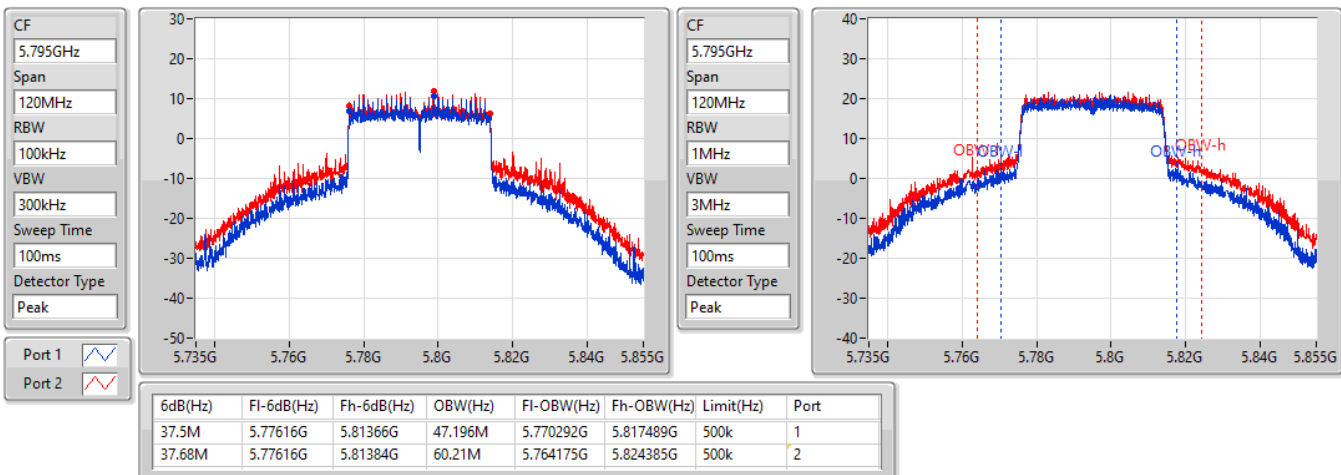


802.11ax HEW40_Nss2,(MCS0)_2TX

EBW

5795MHz

18/06/2022

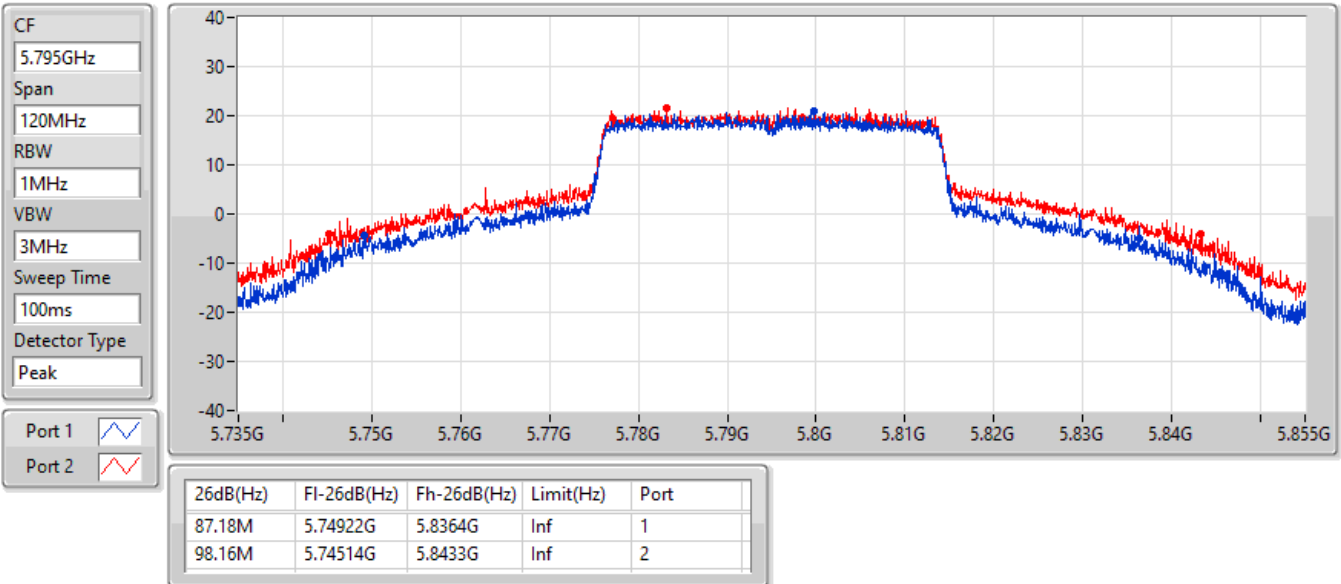


802.11ax HEW40_Nss2,(MCS0)_2TX

EBW

5795MHz

18/06/2022

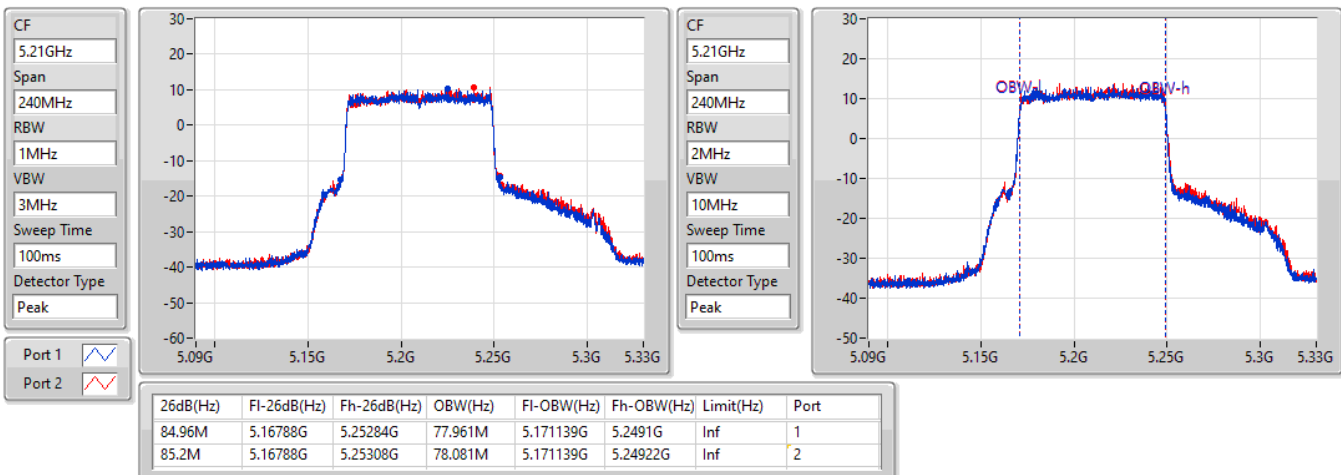


802.11ax HEW80_Nss2,(MCS0)_2TX

EBW

5210MHz

18/06/2022

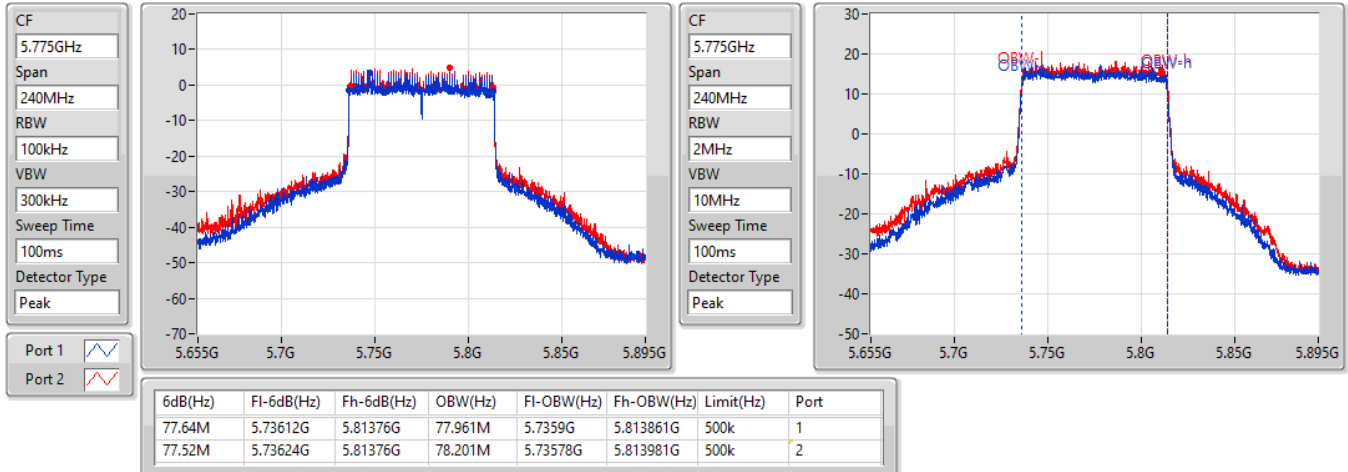


802.11ax HEW80_Nss2,(MCS0)_2TX

EBW

5775MHz

18/06/2022

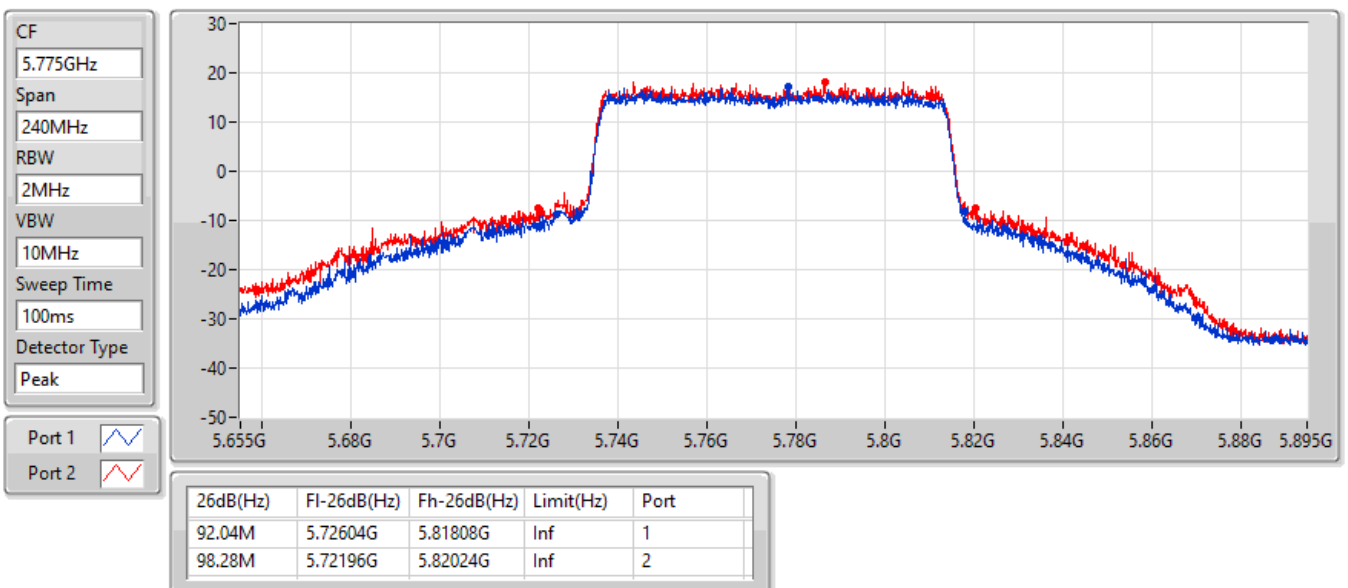


802.11ax HEW80_Nss2,(MCS0)_2TX

EBW

5775MHz

18/06/2022



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)_4TX	34.41M	18.291M	18M3D1D	24.81M	17.151M
802.11ax HEW20_Nss1,(MCS0)_4TX	38.67M	19.49M	19M5D1D	22.11M	19.19M
802.11ax HEW40_Nss1,(MCS0)_4TX	61.32M	38.561M	38M6D1D	43.5M	38.141M
802.11ax HEW80_Nss1,(MCS0)_4TX	96.48M	77.961M	78M0D1D	84.6M	77.961M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	16.44M	32.924M	33M0D1D	15.93M	18.651M
802.11ax HEW20_Nss1,(MCS0)_4TX	18.96M	35.952M	36M0D1D	17.55M	19.73M
802.11ax HEW40_Nss1,(MCS0)_4TX	37.86M	51.154M	51M2D1D	37.2M	38.681M
802.11ax HEW80_Nss1,(MCS0)_4TX	77.4M	78.201M	78M3D1D	77.16M	77.961M

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

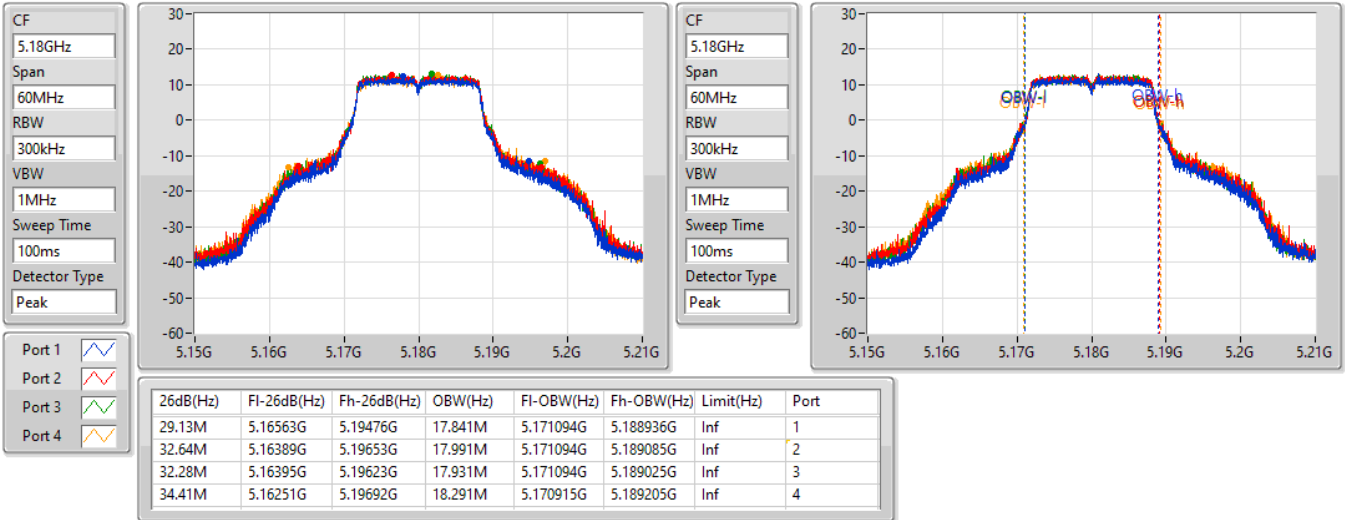
Result

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	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	29.13M	17.841M	32.64M	17.991M	32.28M	17.931M	34.41M	18.291M
5200MHz	Pass	Inf	32.76M	17.601M	31.29M	17.481M	30.84M	17.451M	32.13M	17.571M
5240MHz	Pass	Inf	24.81M	17.391M	25.89M	17.301M	25.86M	17.151M	27.93M	17.271M
5745MHz	Pass	500k	16.44M	20.12M	16.35M	27.736M	16.29M	26.087M	16.29M	24.378M
5785MHz	Pass	500k	16.35M	18.651M	16.35M	23.268M	16.35M	21.769M	16.35M	21.889M
5825MHz	Pass	500k	15.93M	27.496M	16.05M	32.924M	16.32M	30.825M	16.26M	29.805M
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	28.86M	19.34M	28.5M	19.34M	31.56M	19.34M	35.58M	19.4M
5200MHz	Pass	Inf	35.01M	19.37M	34.32M	19.4M	36.69M	19.4M	38.67M	19.49M
5240MHz	Pass	Inf	27.45M	19.25M	24.27M	19.19M	22.11M	19.22M	25.17M	19.28M
5745MHz	Pass	500k	18.96M	19.79M	18.24M	26.657M	18.72M	25.097M	18.9M	23.088M
5785MHz	Pass	500k	18.87M	19.73M	18.75M	25.367M	18.78M	22.669M	18.87M	22.369M
5825MHz	Pass	500k	18.24M	28.486M	17.55M	35.952M	17.91M	33.133M	18.09M	31.964M
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	44.52M	38.201M	43.5M	38.141M	47.94M	38.261M	52.38M	38.201M
5230MHz	Pass	Inf	55.98M	38.381M	61.02M	38.321M	52.86M	38.321M	61.32M	38.561M
5755MHz	Pass	500k	37.86M	38.681M	37.8M	40.54M	37.68M	39.34M	37.56M	39.94M
5795MHz	Pass	500k	37.2M	39.94M	37.68M	51.154M	37.62M	47.736M	37.56M	45.997M
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	88.2M	77.961M	87.12M	77.961M	96.48M	77.961M	84.6M	77.961M
5775MHz	Pass	500k	77.16M	78.081M	77.28M	78.081M	77.4M	78.201M	77.28M	77.961M

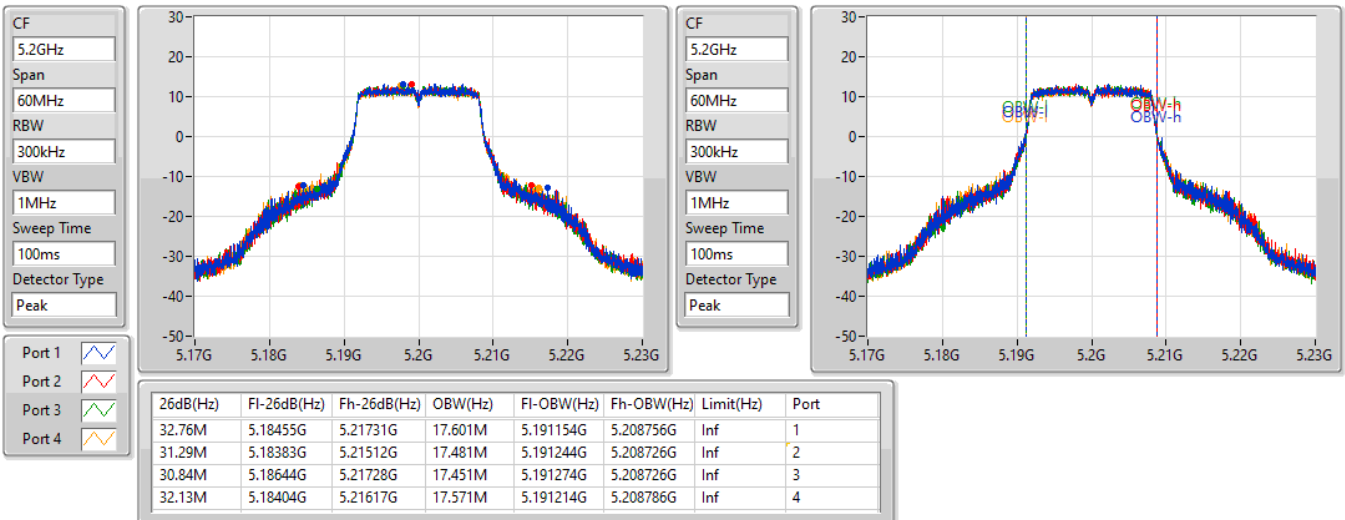
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11a_Nss1,(6Mbps)_4TX
EBW
5180MHz

18/06/2022

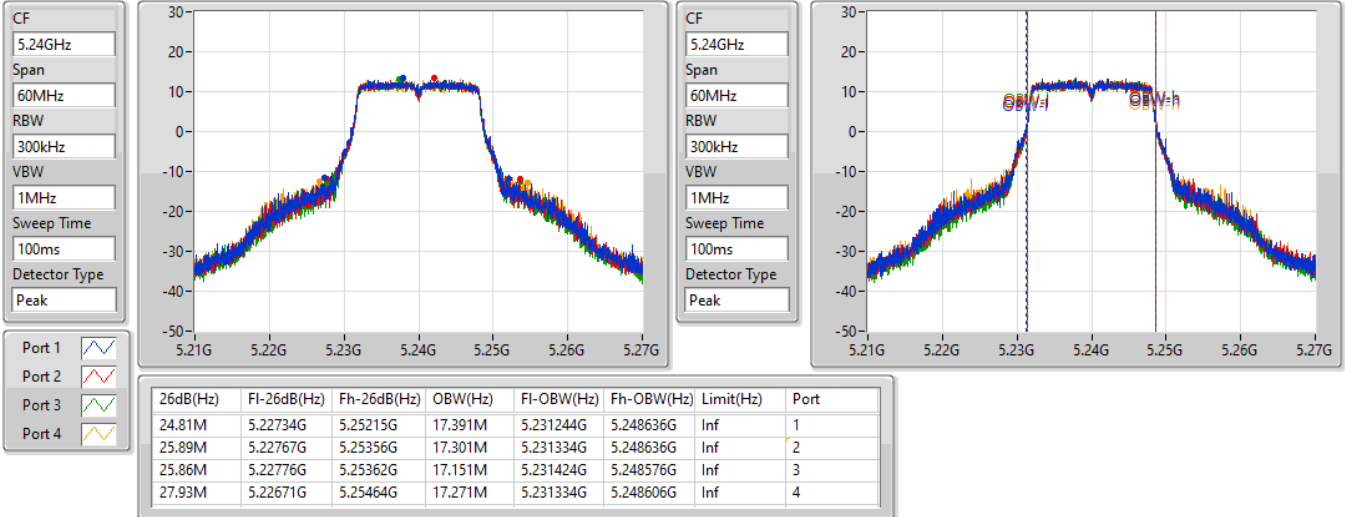

802.11a_Nss1,(6Mbps)_4TX
EBW
5200MHz

18/06/2022

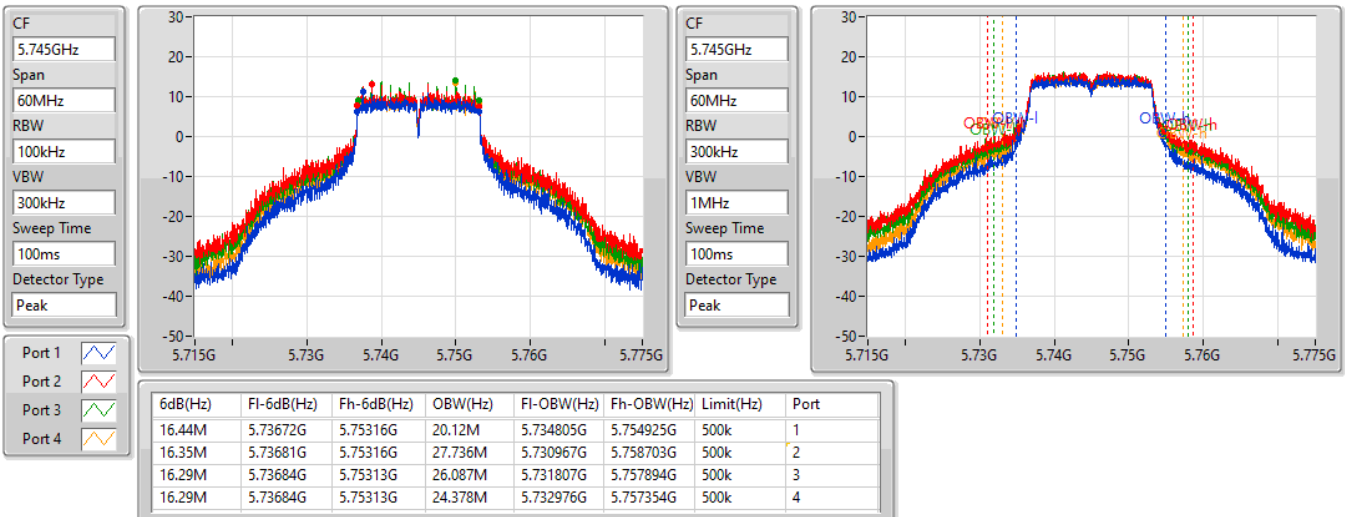


802.11a_Nss1,(6Mbps)_4TX
EBW
5240MHz

18/06/2022


802.11a_Nss1,(6Mbps)_4TX
EBW
5745MHz

18/06/2022

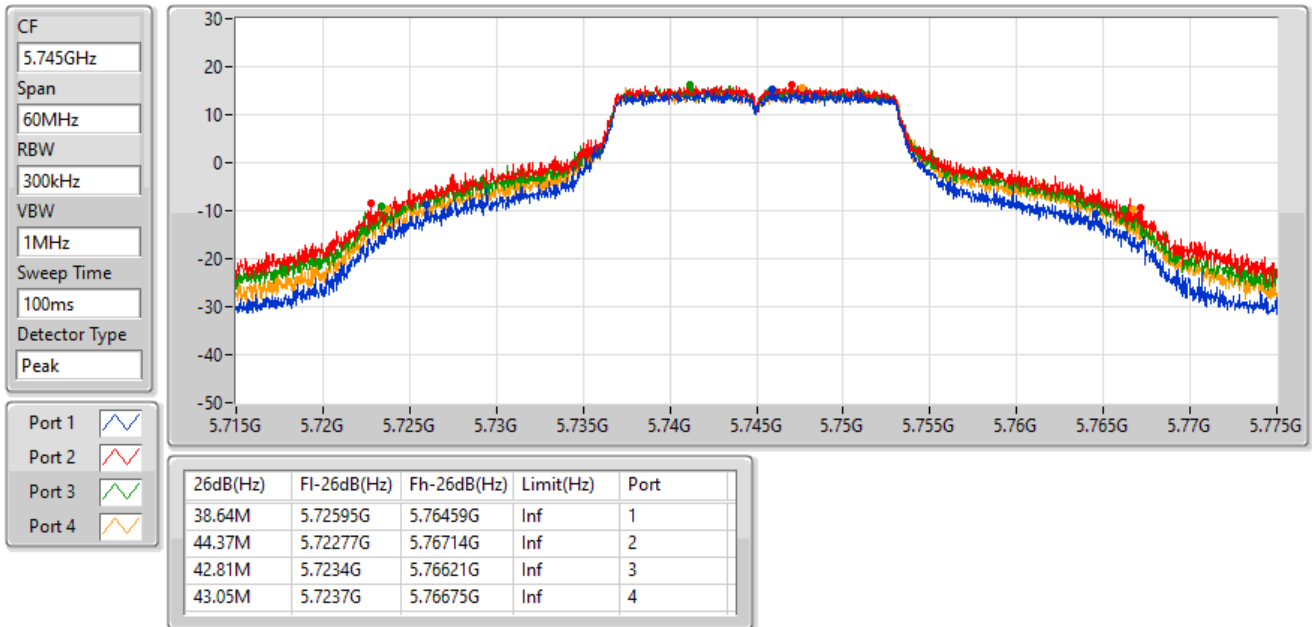


802.11a_Nss1,(6Mbps)_4TX

EBW

5745MHz

18/06/2022

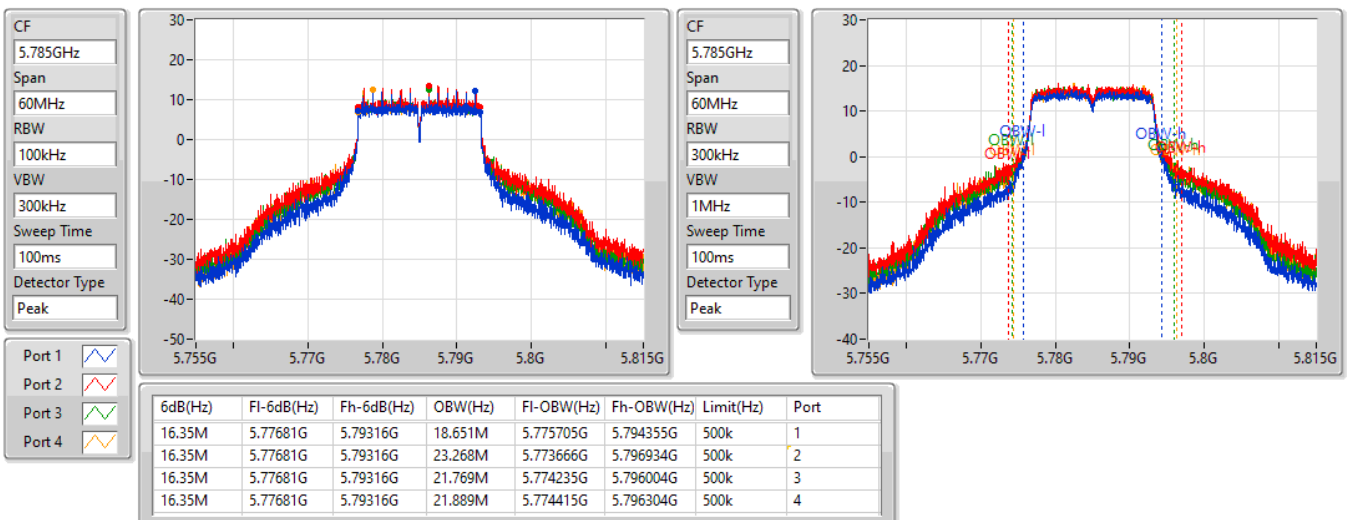


802.11a_Nss1,(6Mbps)_4TX

EBW

5785MHz

18/06/2022

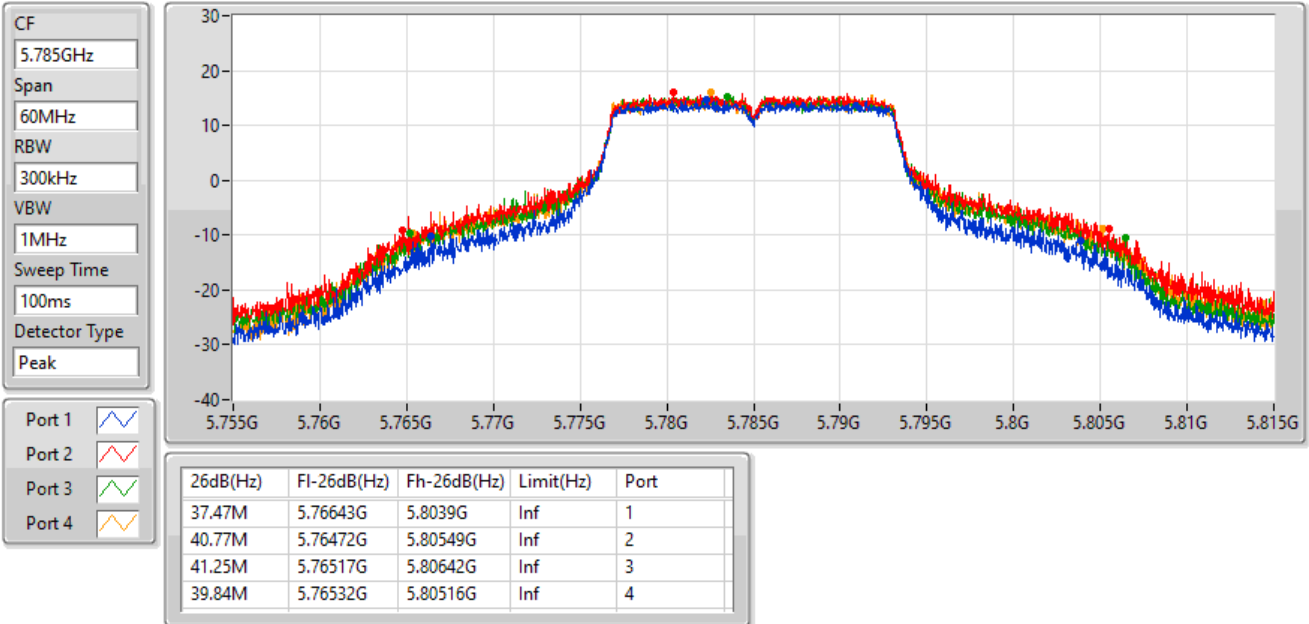


802.11a_Nss1,(6Mbps)_4TX

EBW

5785MHz

18/06/2022

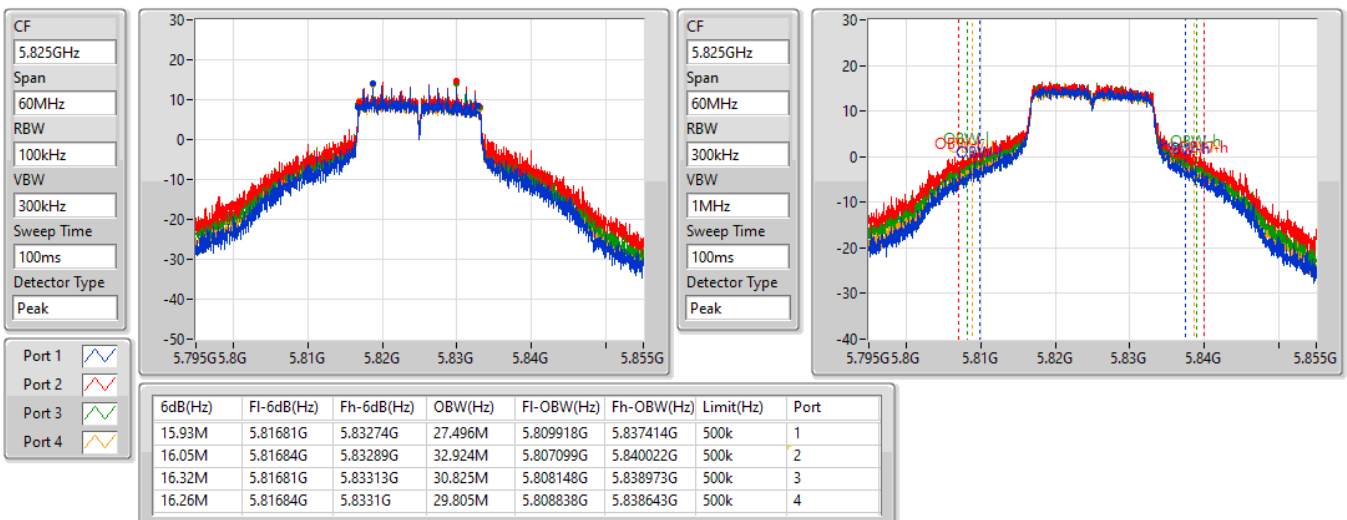


802.11a_Nss1,(6Mbps)_4TX

EBW

5825MHz

18/06/2022

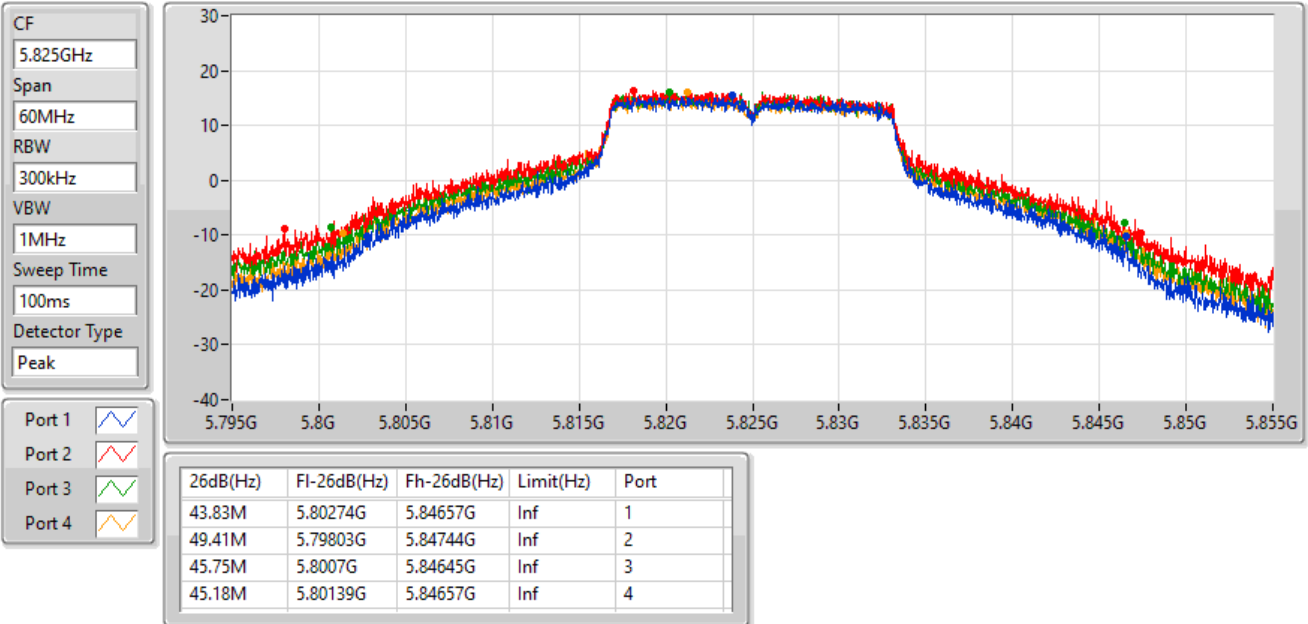


802.11a_Nss1,(6Mbps)_4TX

EBW

5825MHz

18/06/2022

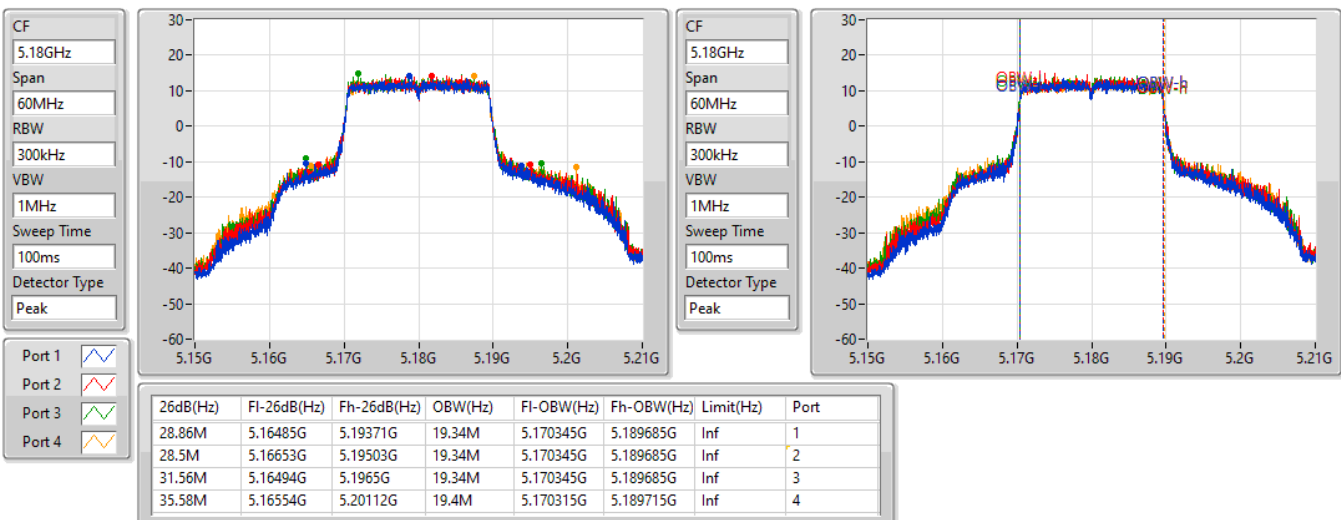


802.11ax HEW20_Nss1,(MCS0)_4TX

EBW

5180MHz

18/06/2022

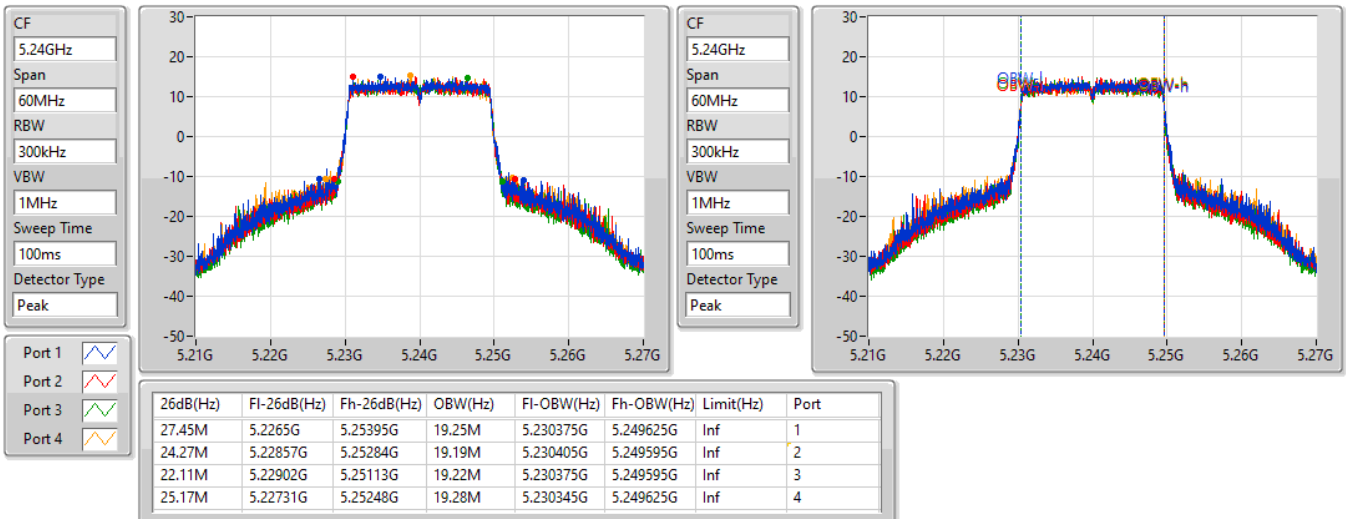


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5200MHz

18/06/2022

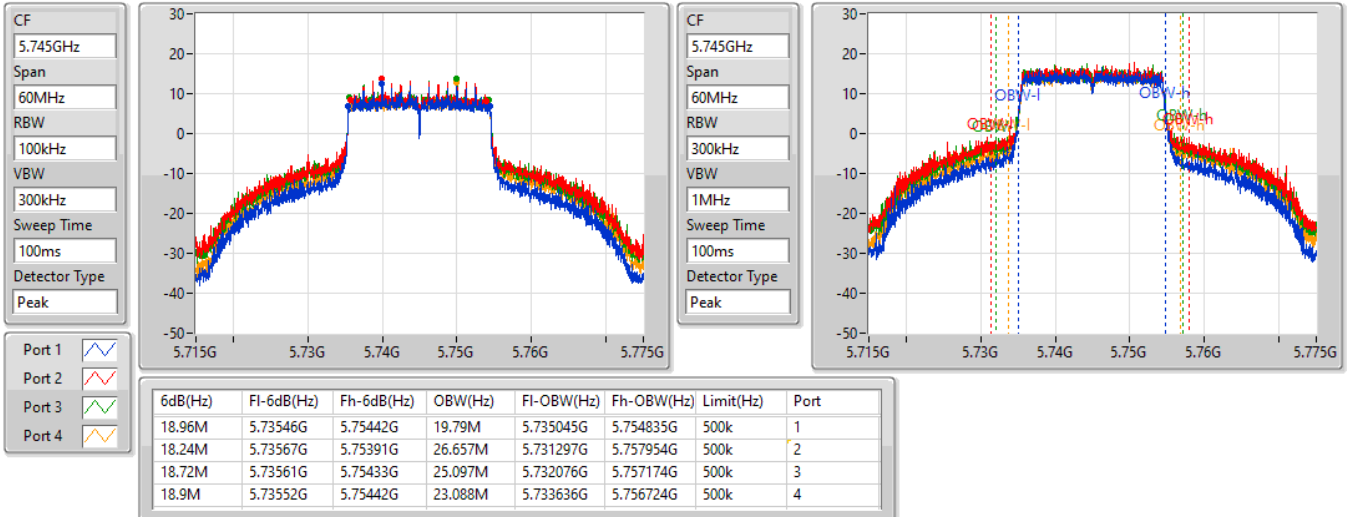

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5240MHz

18/06/2022

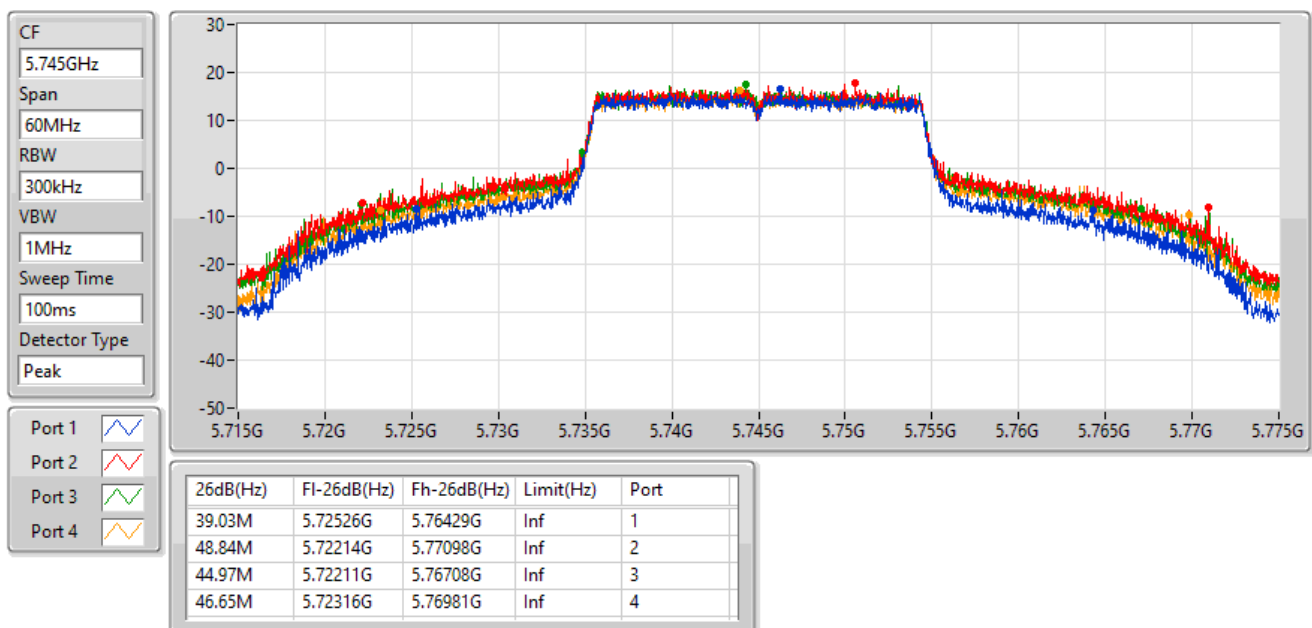


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5745MHz

18/06/2022

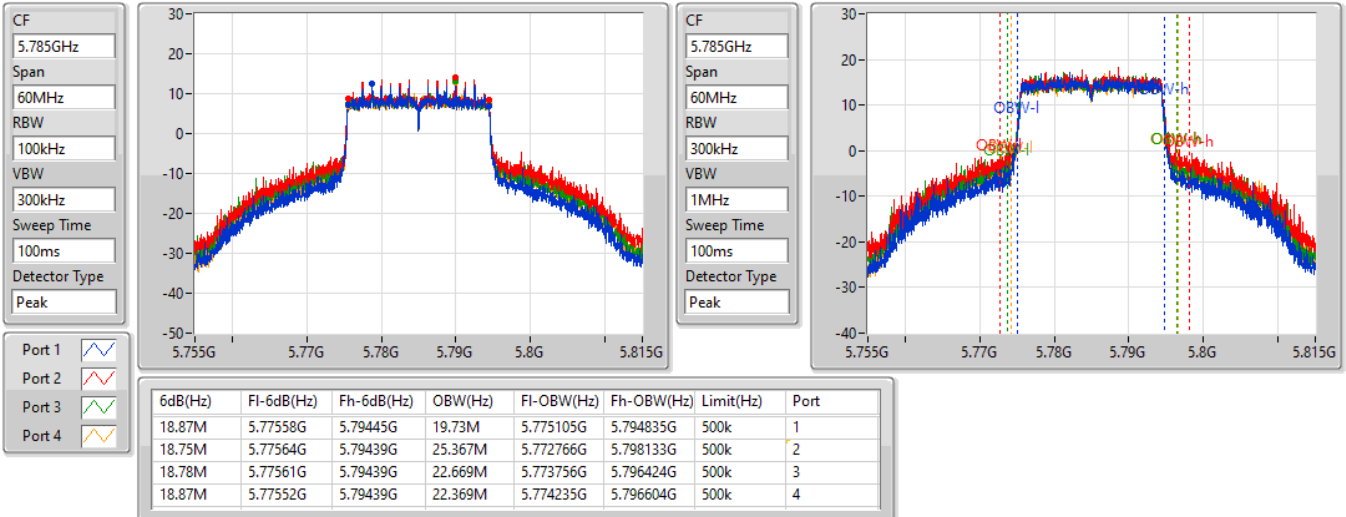

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5745MHz

18/06/2022

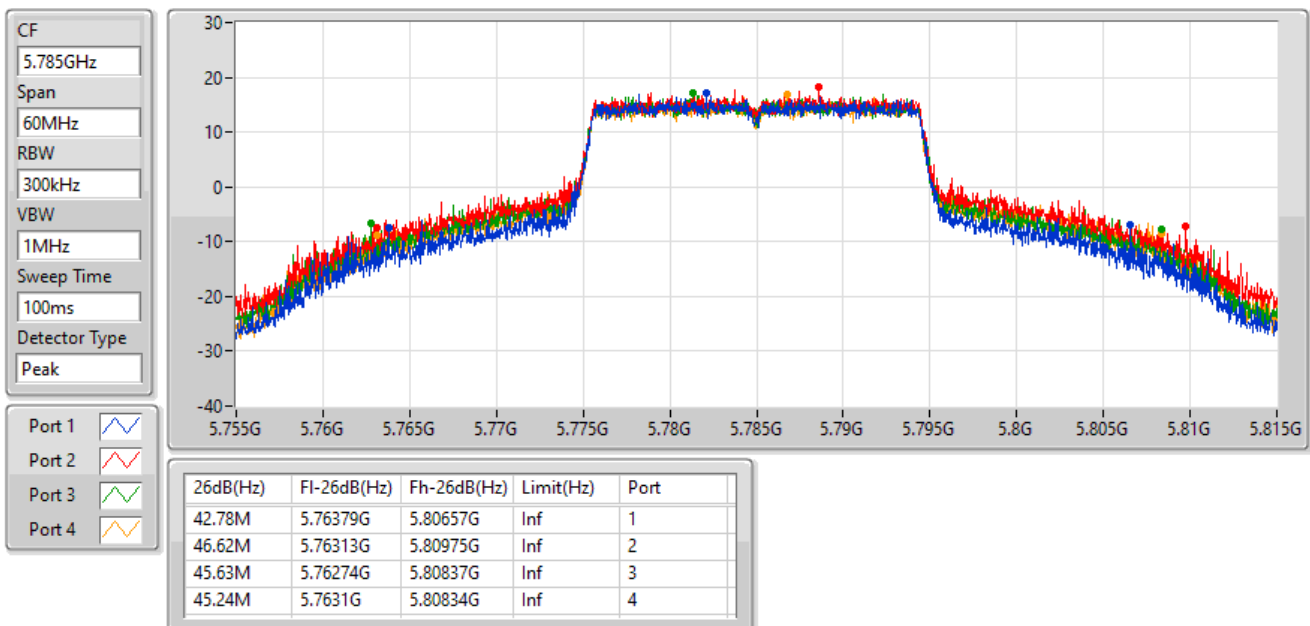


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5785MHz

18/06/2022

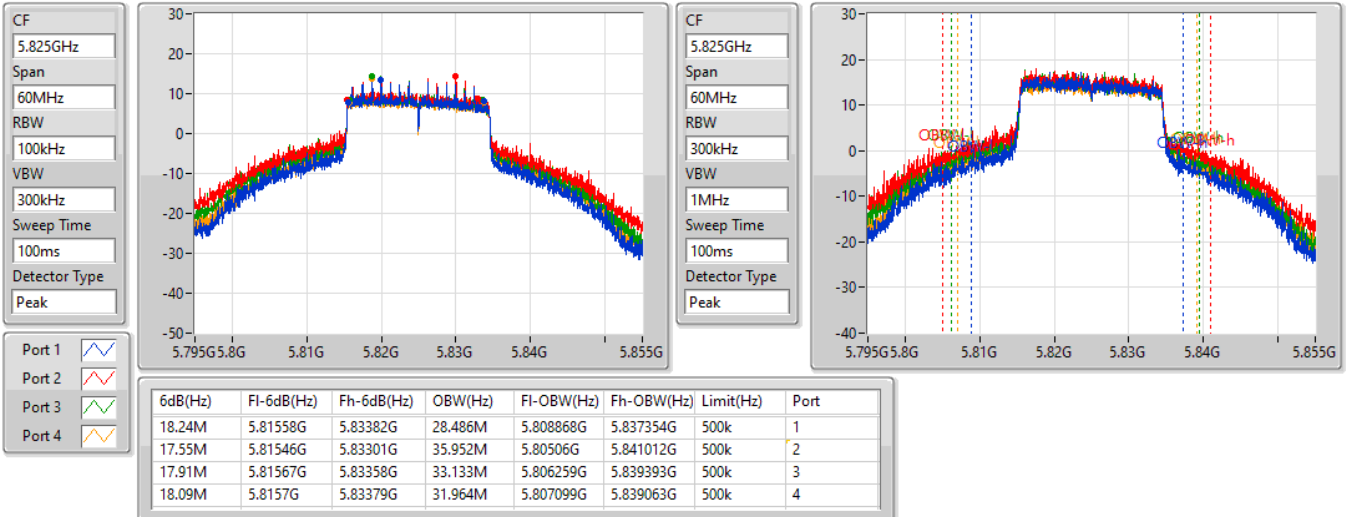

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5785MHz

18/06/2022

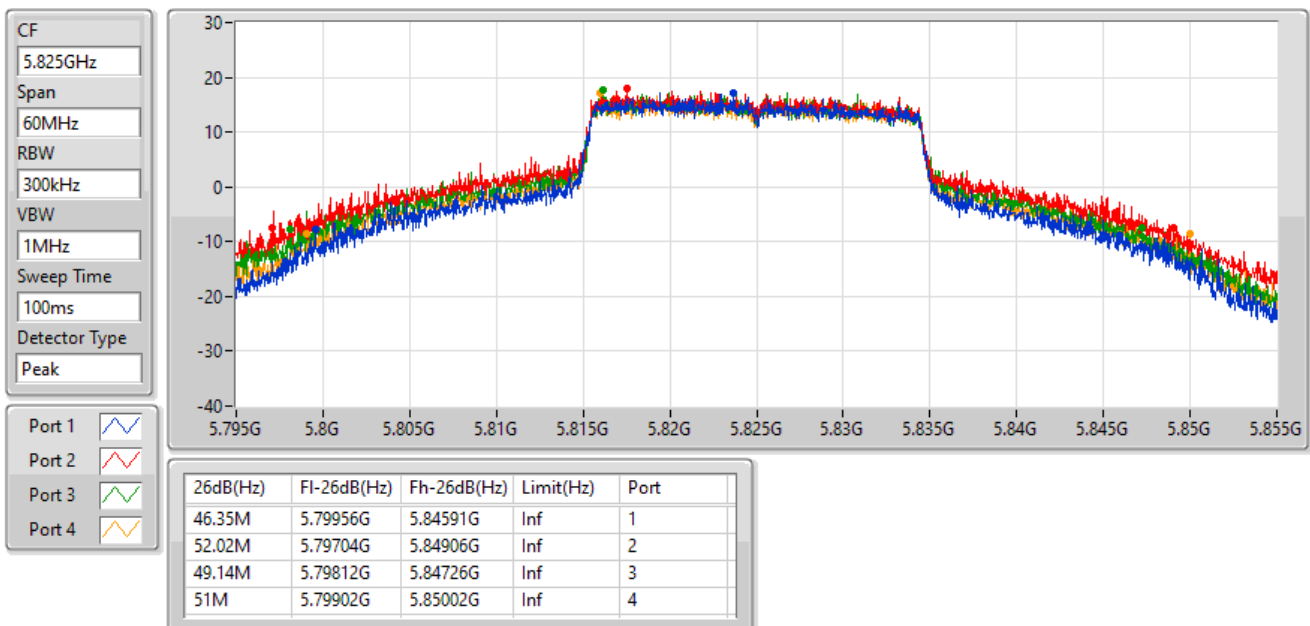


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5825MHz

18/06/2022

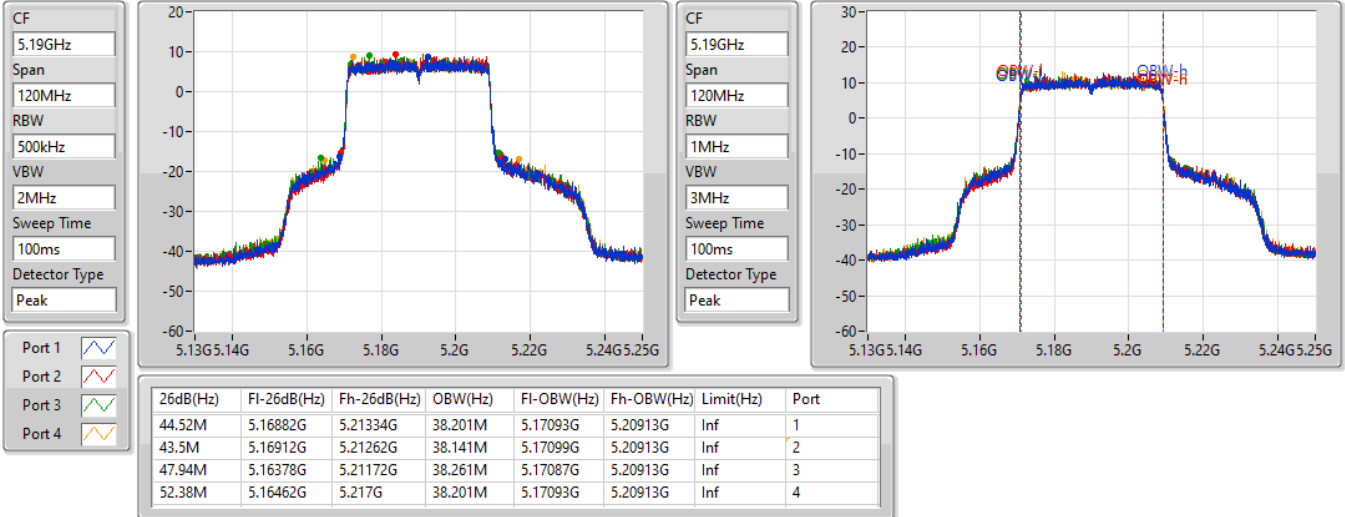

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5825MHz

18/06/2022

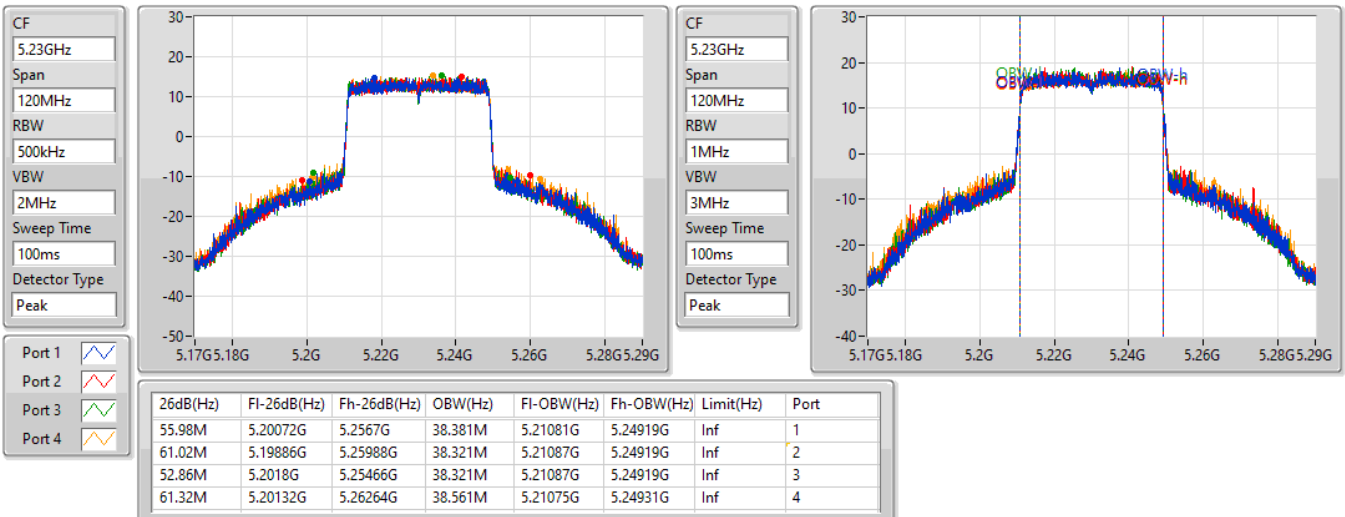


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5190MHz

18/06/2022

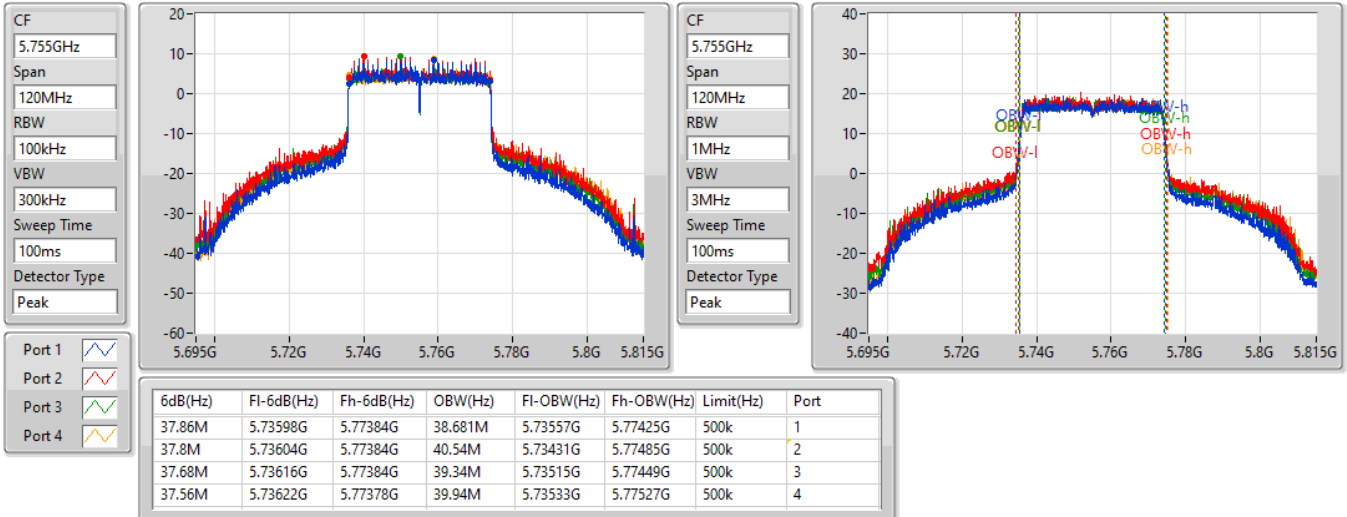

802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5230MHz

18/06/2022

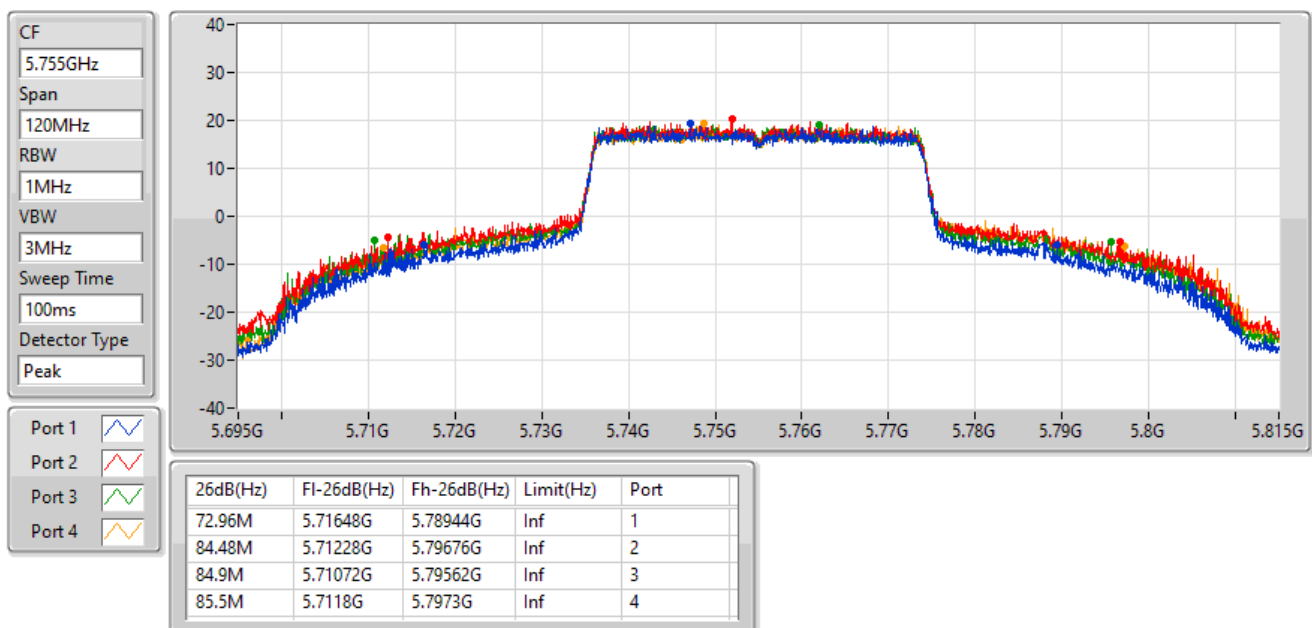


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5755MHz

18/06/2022

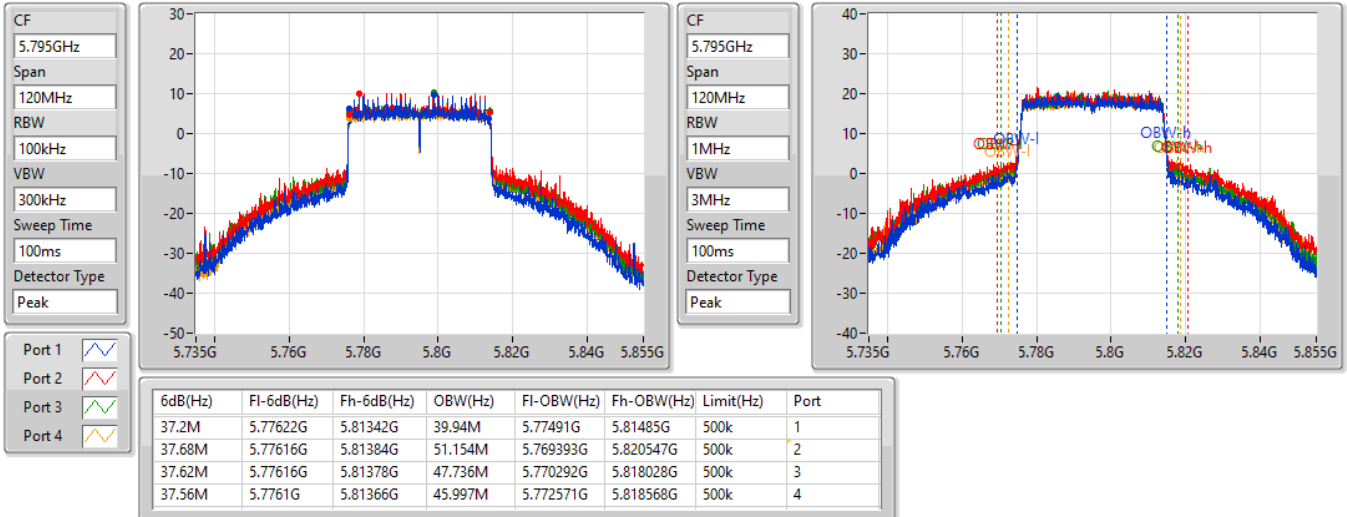

802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5755MHz

18/06/2022

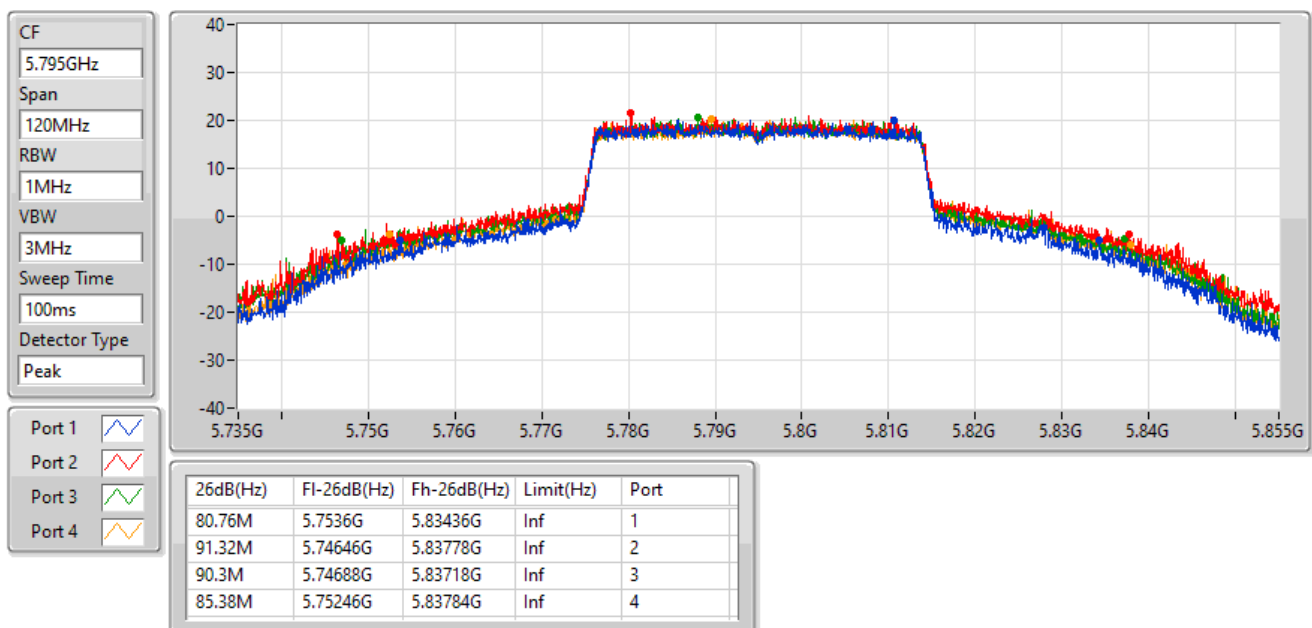


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5795MHz

18/06/2022

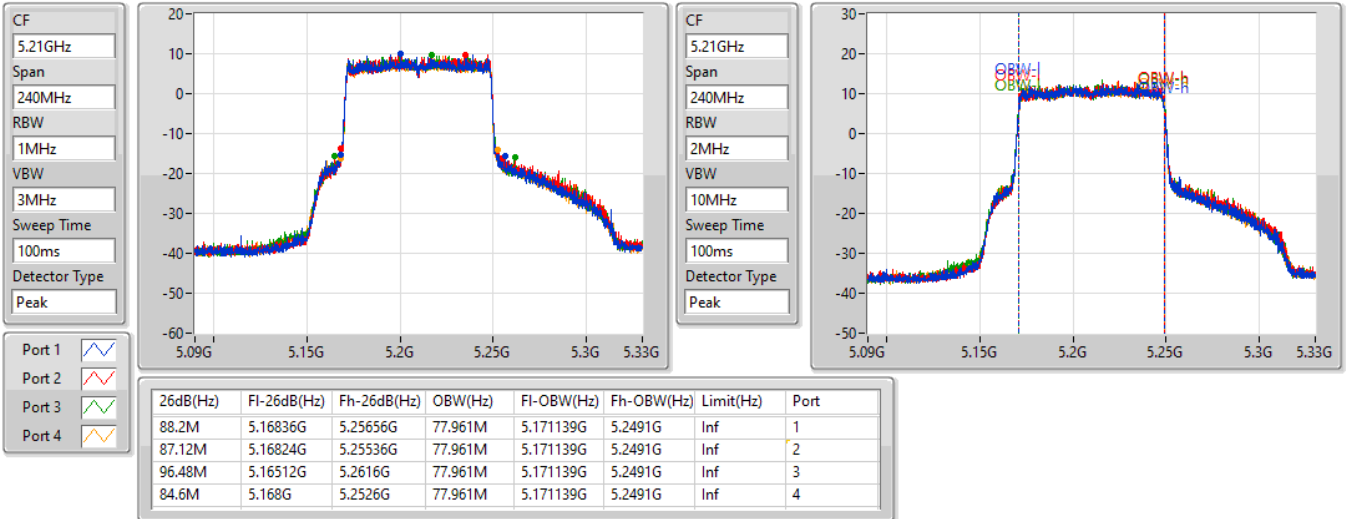

802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5795MHz

18/06/2022



802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5210MHz

18/06/2022

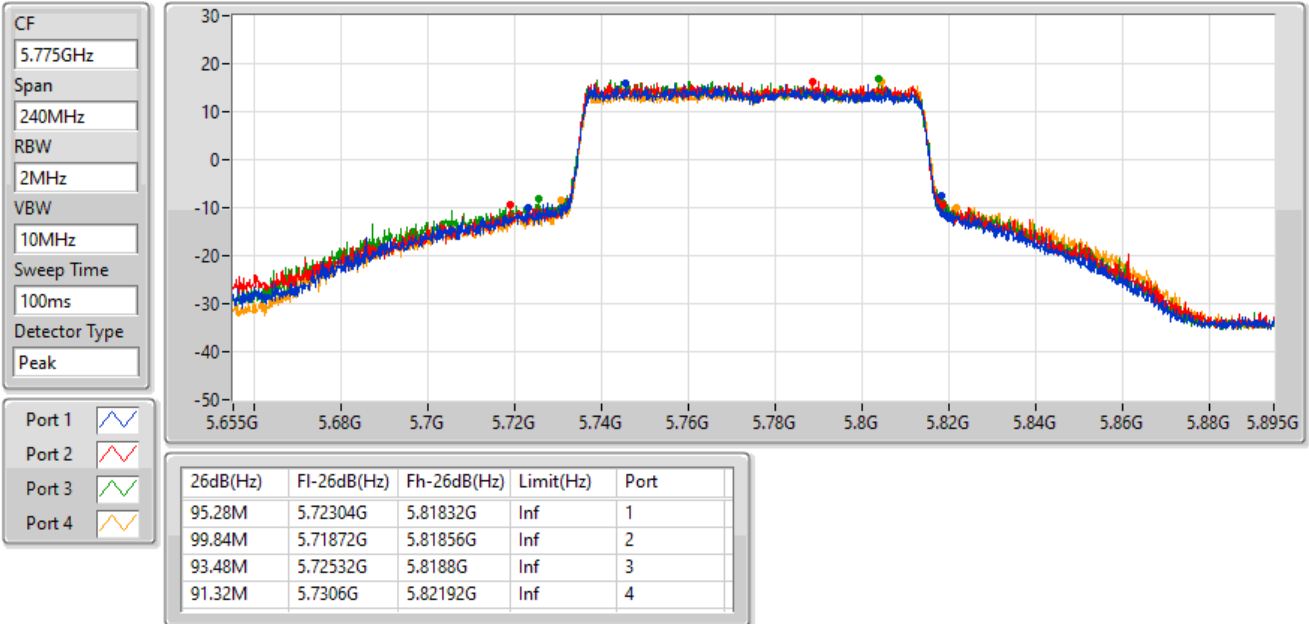

802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5775MHz

18/06/2022



802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5775MHz

18/06/2022



Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ax HEW20_Nss4,(MCS0)_4TX	43.35M	19.85M	19M9D1D	30.51M	19.34M
802.11ax HEW40_Nss4,(MCS0)_4TX	66.36M	38.441M	38M5D1D	44.64M	38.081M
802.11ax HEW80_Nss4,(MCS0)_4TX	95.04M	77.961M	78M0D1D	83.16M	77.961M
5.725-5.85GHz	-	-	-	-	-
802.11ax HEW20_Nss4,(MCS0)_4TX	18.96M	29.085M	29M1D1D	17.97M	19.4M
802.11ax HEW40_Nss4,(MCS0)_4TX	37.92M	38.321M	38M4D1D	37.44M	37.961M
802.11ax HEW80_Nss4,(MCS0)_4TX	77.4M	78.441M	78M5D1D	76.68M	78.081M

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;

Max-OBW = Maximum 99% occupied bandwidth;

Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;

Min-OBW = Minimum 99% occupied bandwidth

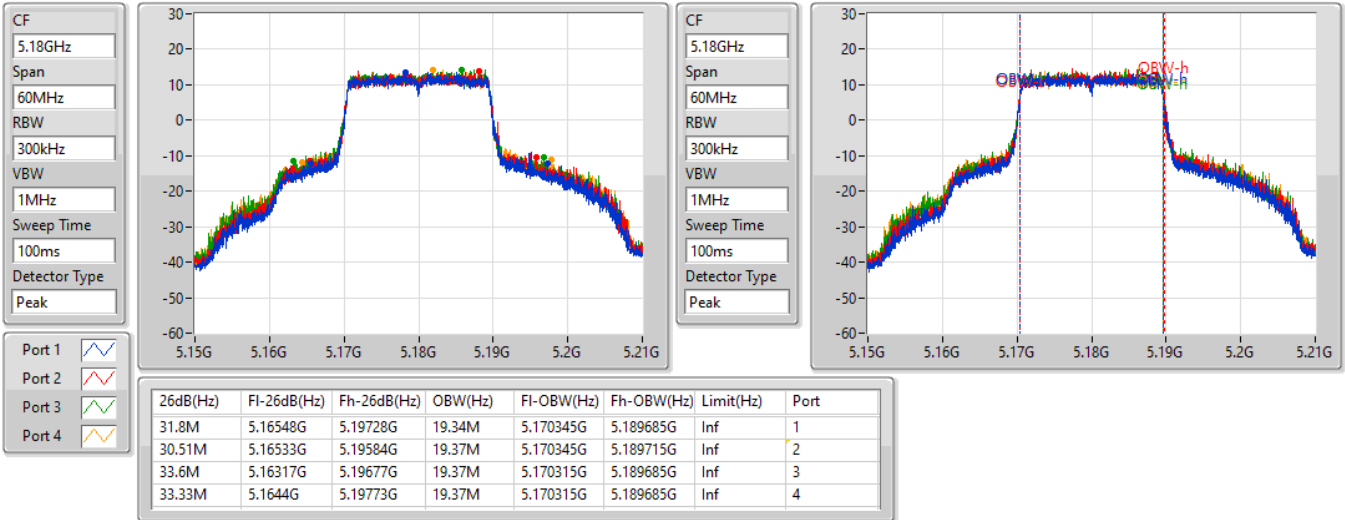
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ax HEW20_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	31.8M	19.34M	30.51M	19.37M	33.6M	19.37M	33.33M	19.37M
5200MHz	Pass	Inf	35.04M	19.49M	38.67M	19.64M	38.97M	19.52M	40.44M	19.64M
5240MHz	Pass	Inf	40.44M	19.61M	43.35M	19.85M	40.47M	19.58M	41.31M	19.73M
5745MHz	Pass	500k	18.87M	20.09M	17.97M	29.085M	18.09M	26.867M	18.6M	24.708M
5785MHz	Pass	500k	18.9M	19.4M	18.96M	19.82M	18.81M	19.61M	18.81M	19.55M
5825MHz	Pass	500k	18.45M	19.82M	18.33M	24.198M	18.21M	22.969M	18.42M	22.579M
802.11ax HEW40_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	44.64M	38.141M	50.58M	38.081M	47.04M	38.141M	54.42M	38.261M
5230MHz	Pass	Inf	52.8M	38.381M	57.3M	38.321M	54.54M	38.321M	66.36M	38.441M
5755MHz	Pass	500k	37.74M	38.261M	37.62M	38.321M	37.8M	38.321M	37.44M	38.261M
5795MHz	Pass	500k	37.92M	37.961M	37.68M	37.961M	37.62M	37.961M	37.68M	37.961M
802.11ax HEW80_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	89.64M	77.961M	83.16M	77.961M	95.04M	77.961M	83.4M	77.961M
5775MHz	Pass	500k	76.68M	78.081M	76.8M	78.321M	77.4M	78.441M	77.4M	78.201M

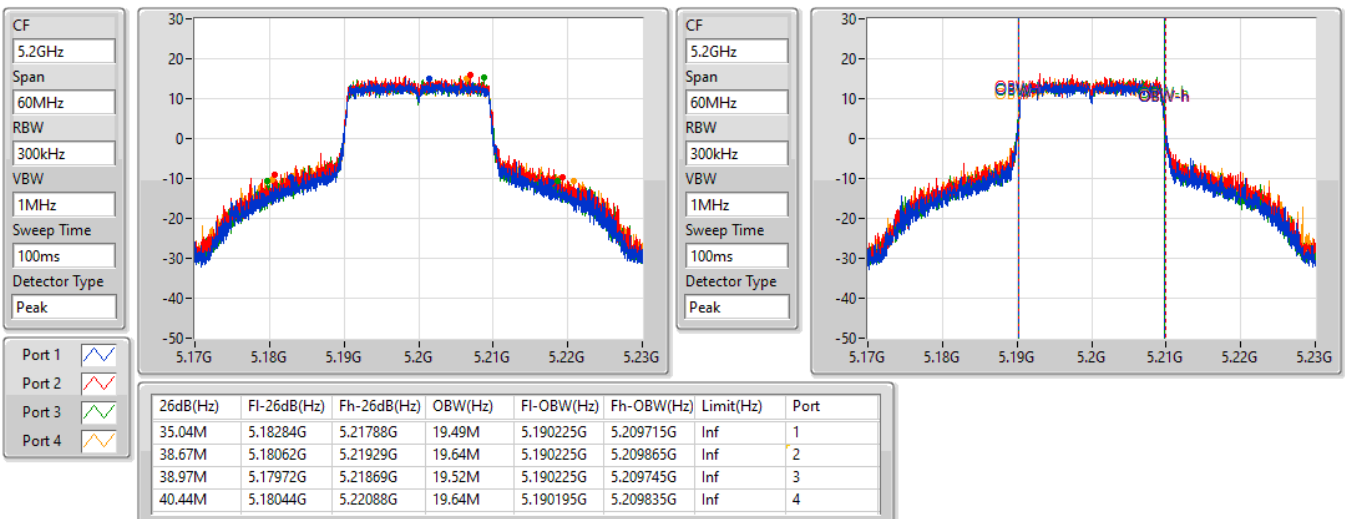
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
5180MHz

25/06/2022

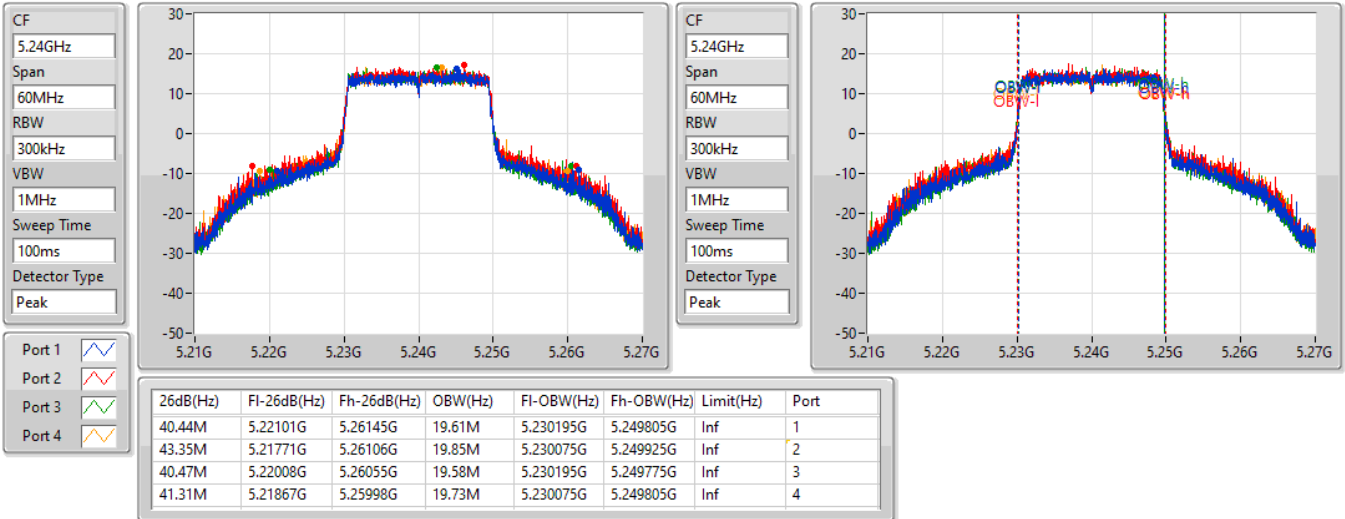

802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
5200MHz

25/06/2022

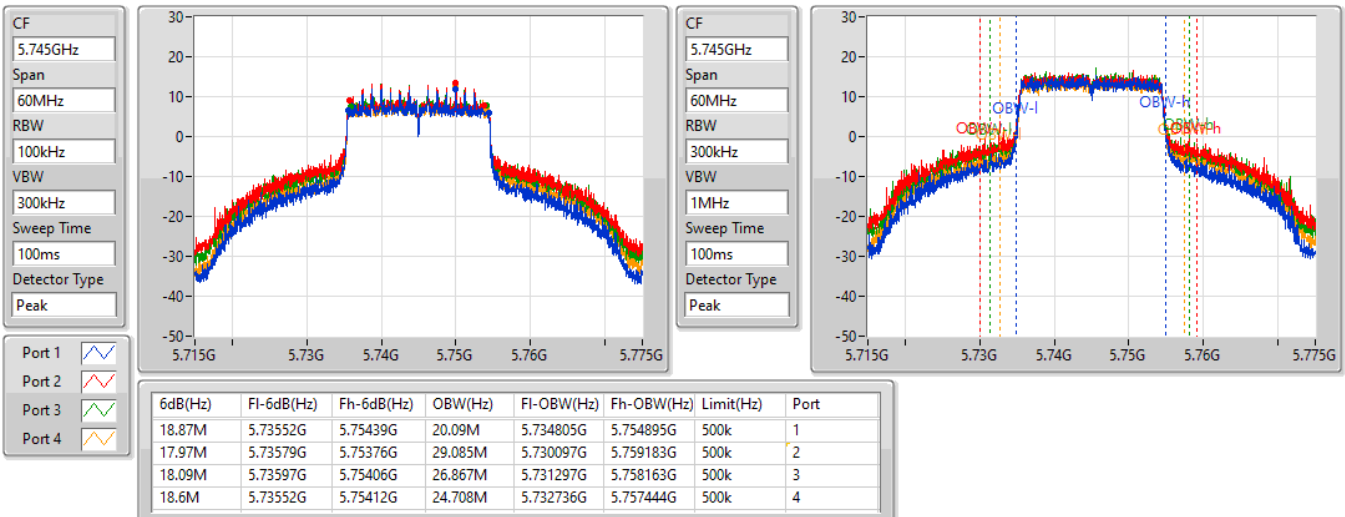


802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
5240MHz

25/06/2022

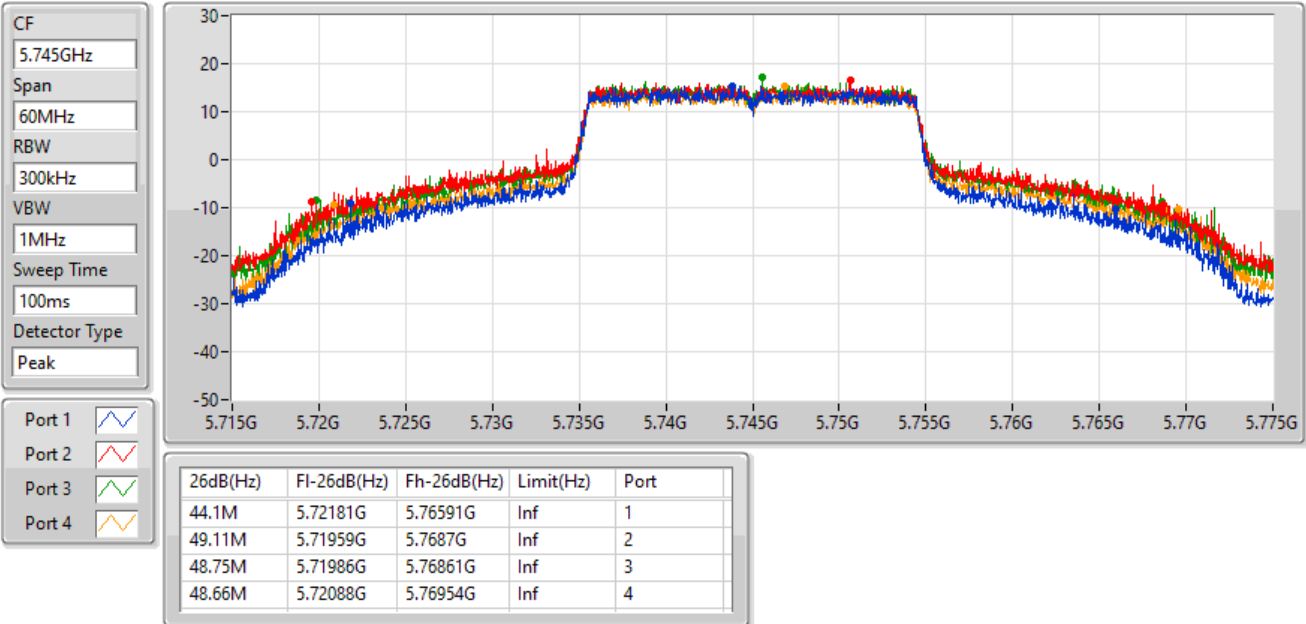

802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
5745MHz

04/07/2022

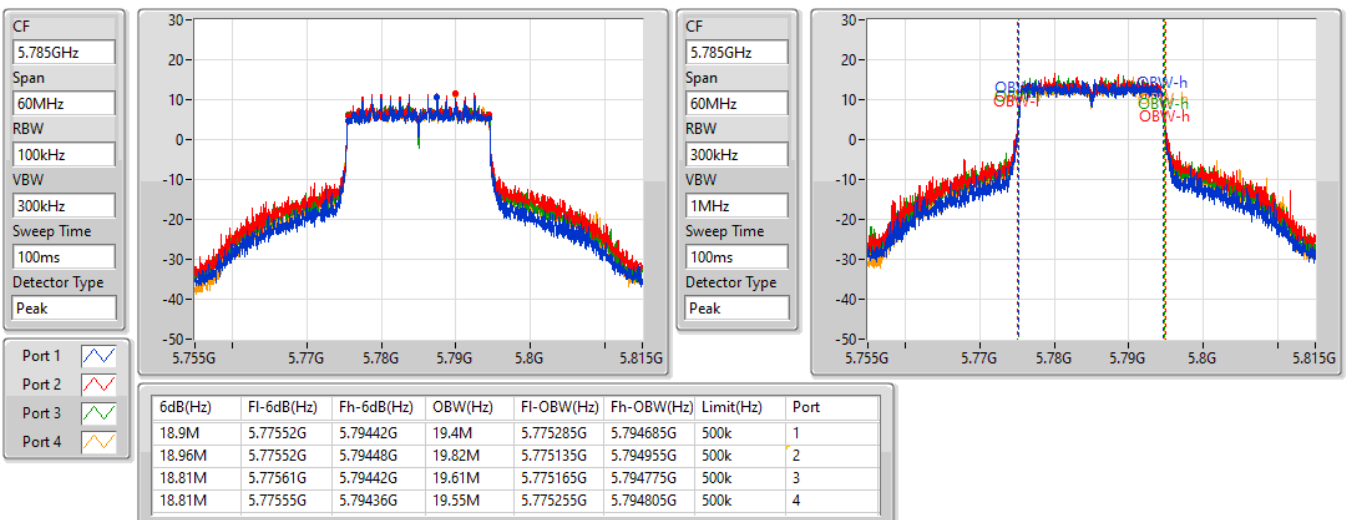


802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
5745MHz

04/07/2022


802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
5785MHz

04/07/2022

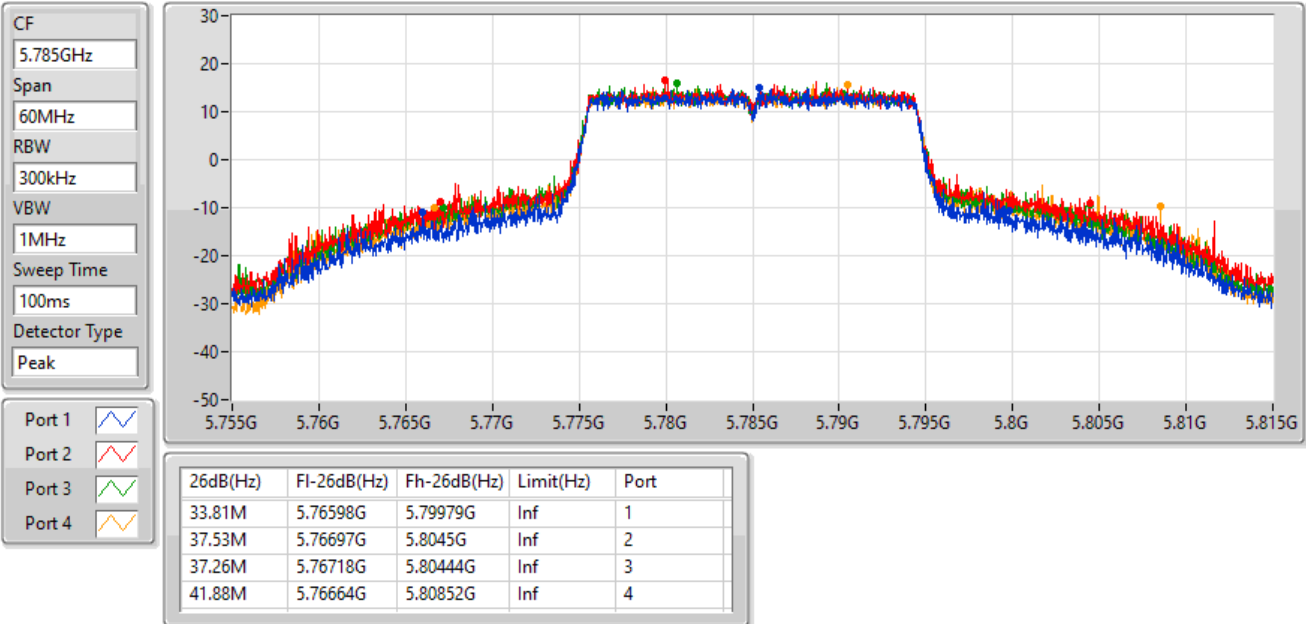


802.11ax HEW20_Nss4,(MCS0)_4TX

EBW

5785MHz

04/07/2022

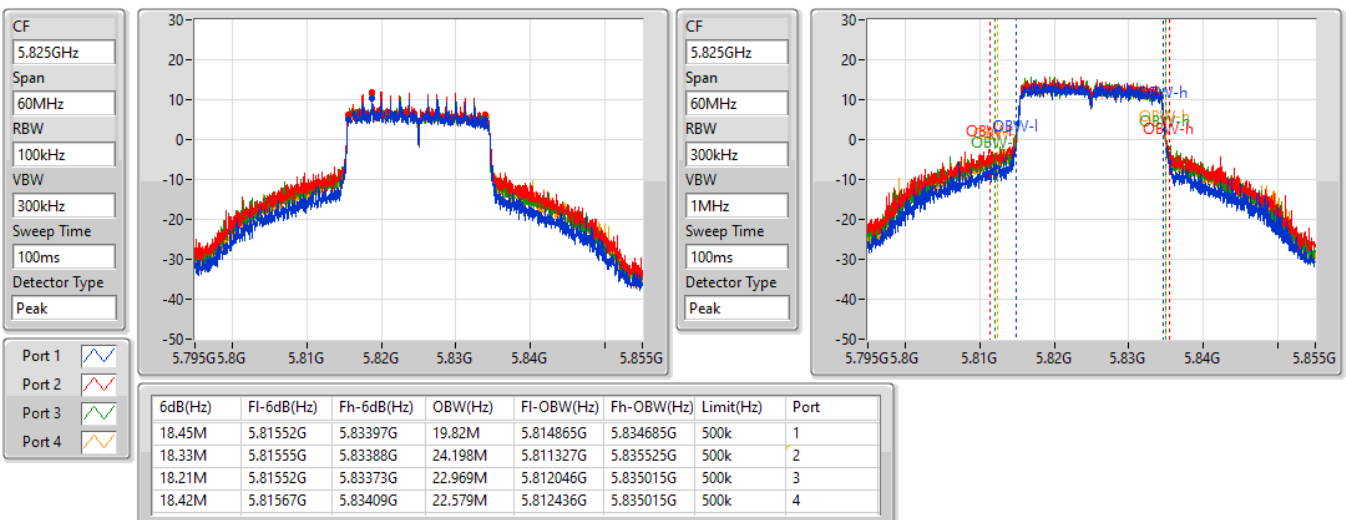


802.11ax HEW20_Nss4,(MCS0)_4TX

EBW

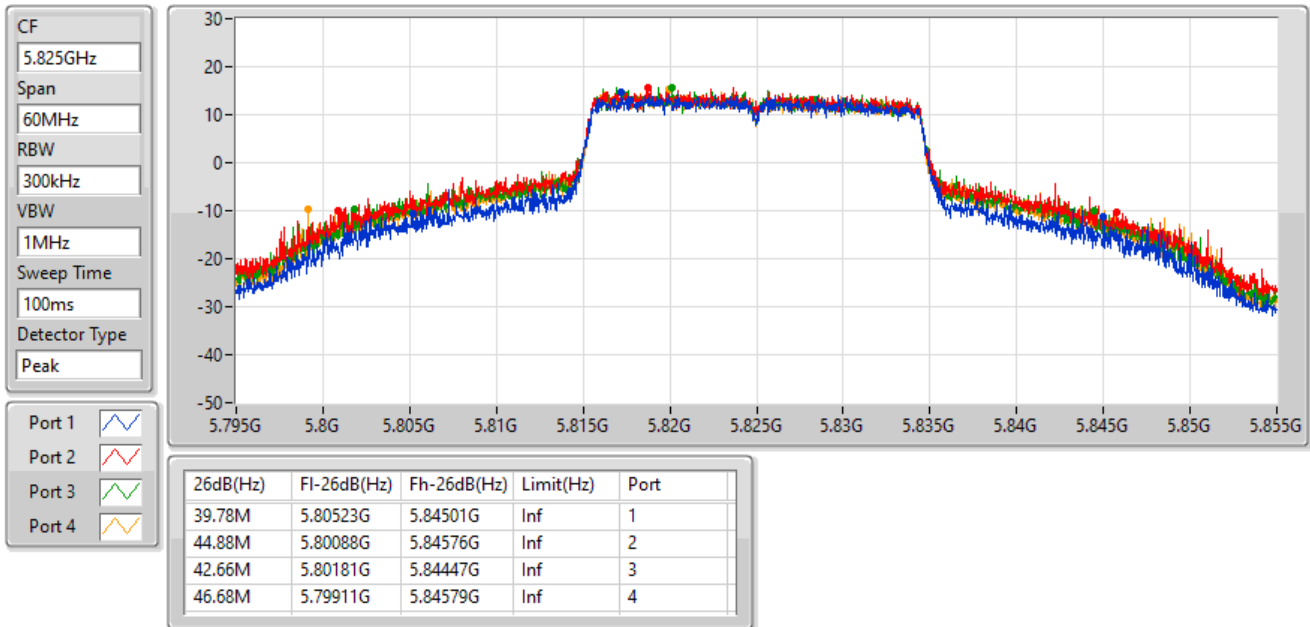
5825MHz

04/07/2022

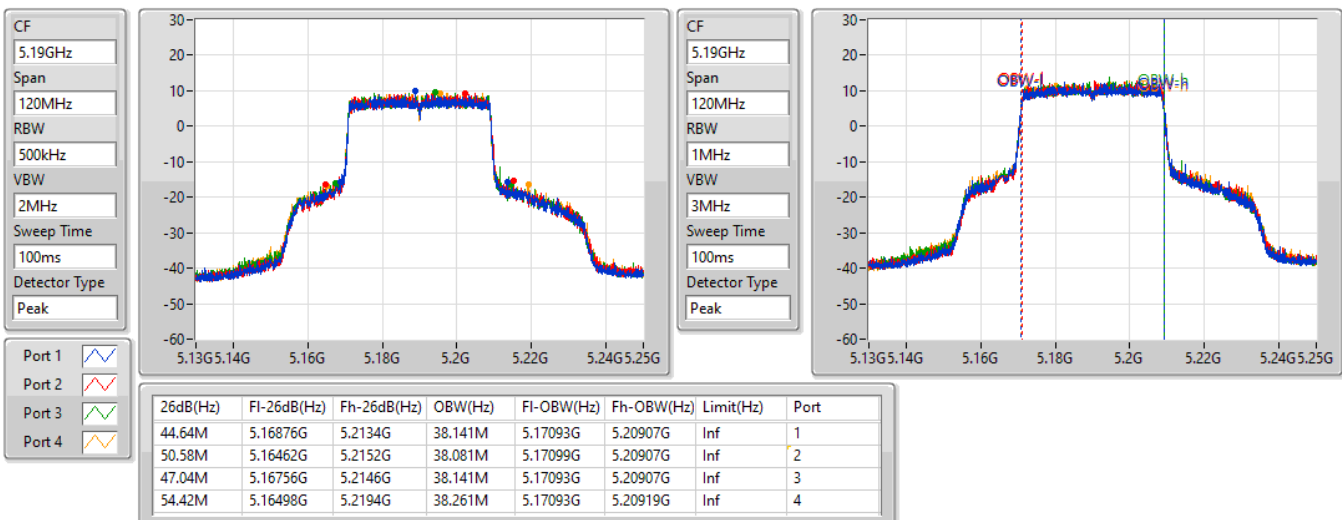


802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
5825MHz

04/07/2022

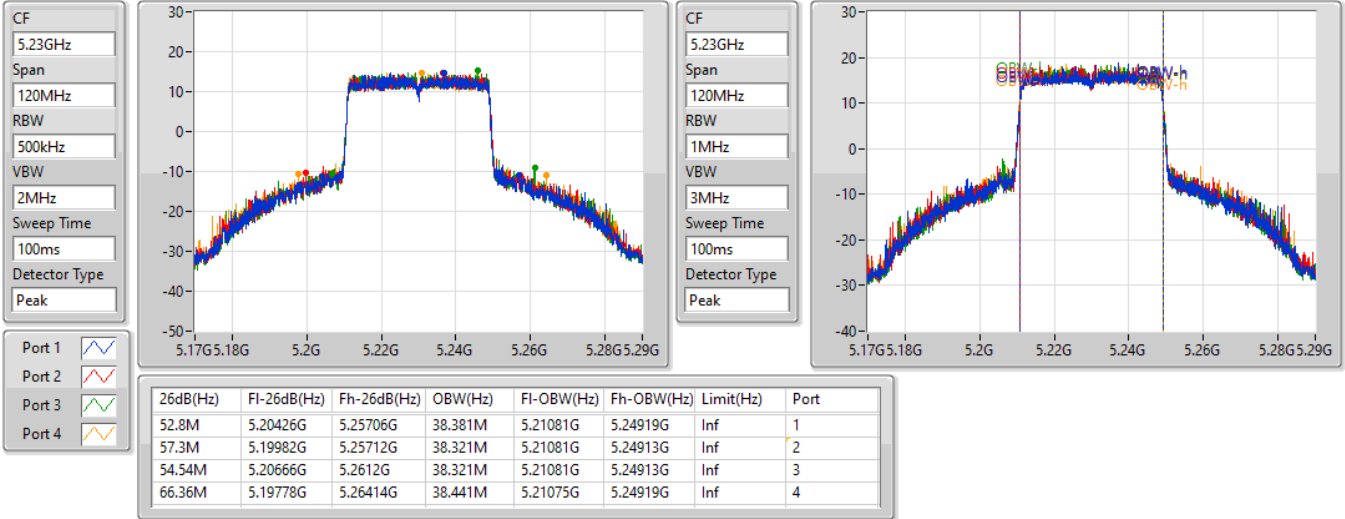

802.11ax HEW40_Nss4,(MCS0)_4TX
EBW
5190MHz

25/06/2022

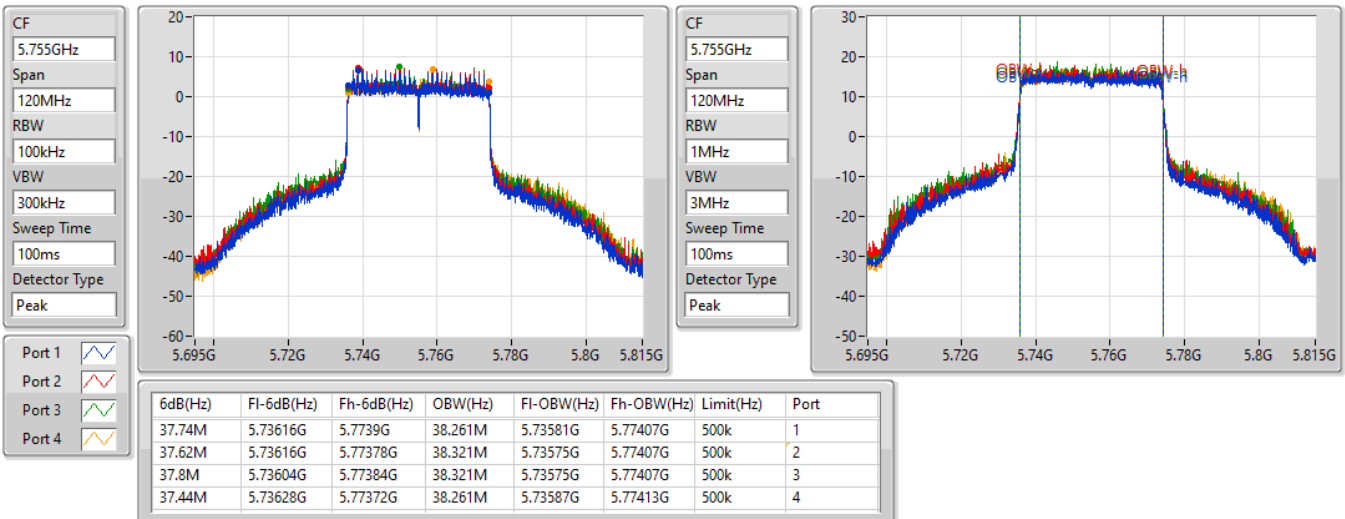


802.11ax HEW40_Nss4,(MCS0)_4TX
EBW
5230MHz

25/06/2022

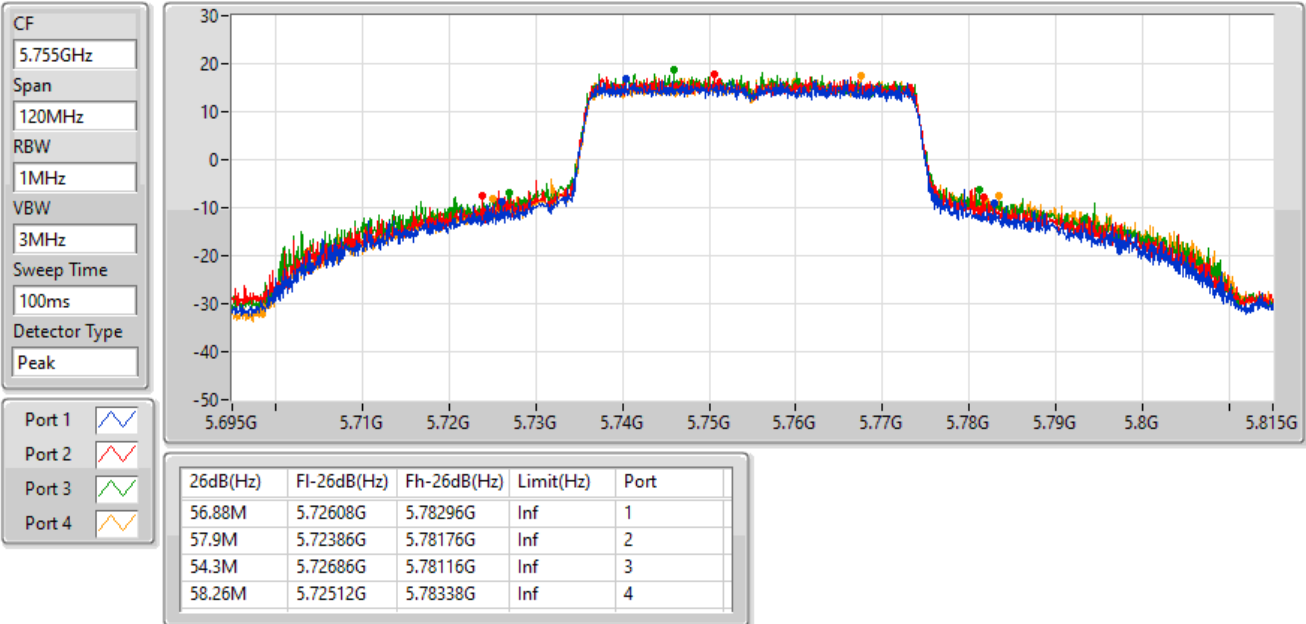

802.11ax HEW40_Nss4,(MCS0)_4TX
EBW
5755MHz

25/06/2022

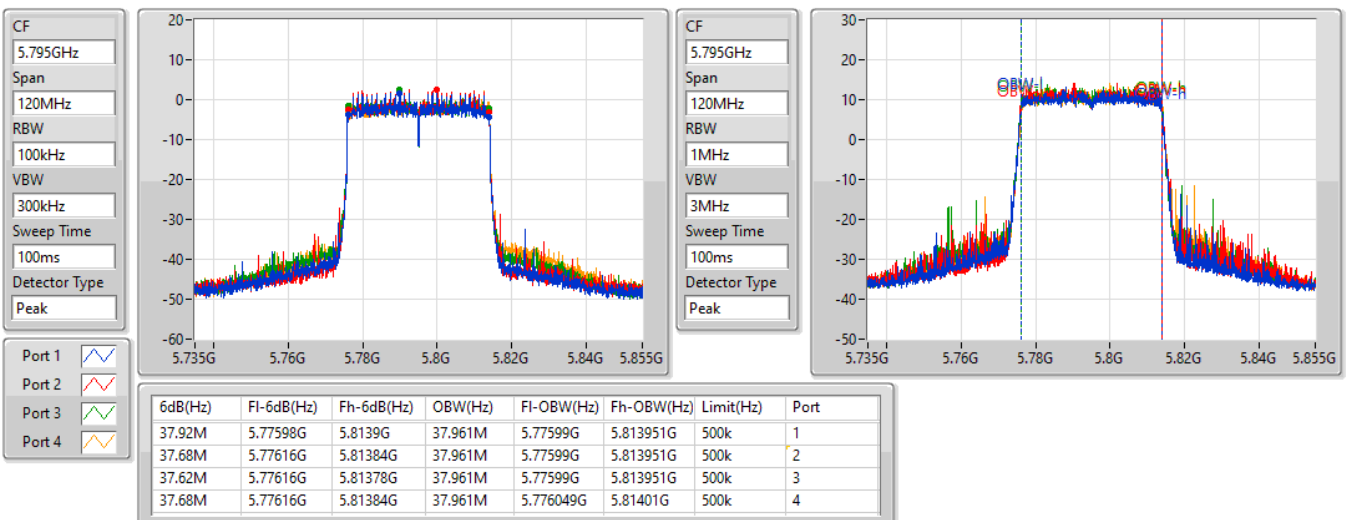


802.11ax HEW40_Nss4,(MCS0)_4TX
EBW
5755MHz

25/06/2022

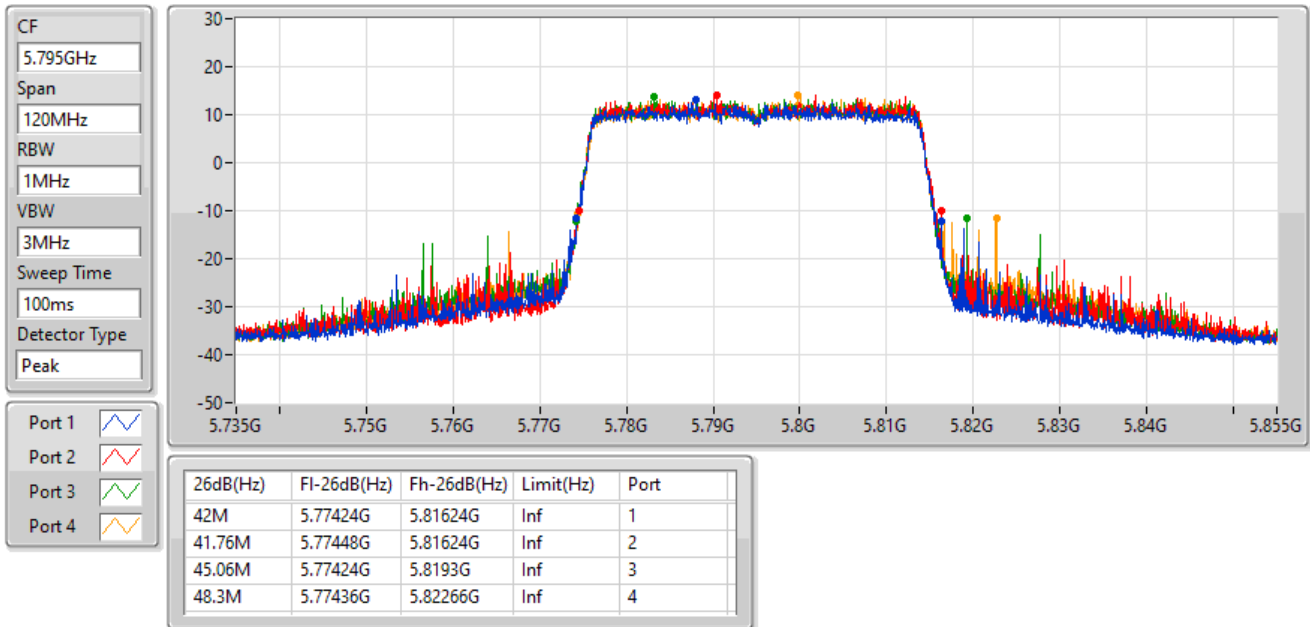

802.11ax HEW40_Nss4,(MCS0)_4TX
EBW
5795MHz

25/06/2022

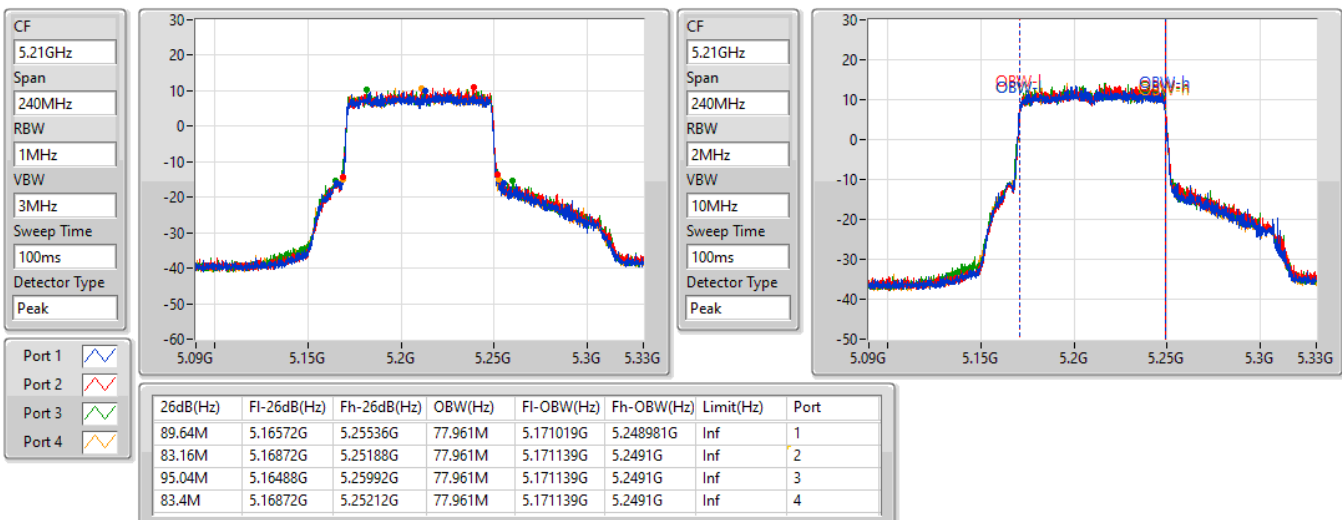


802.11ax HEW40_Nss4,(MCS0)_4TX
EBW
5795MHz

25/06/2022

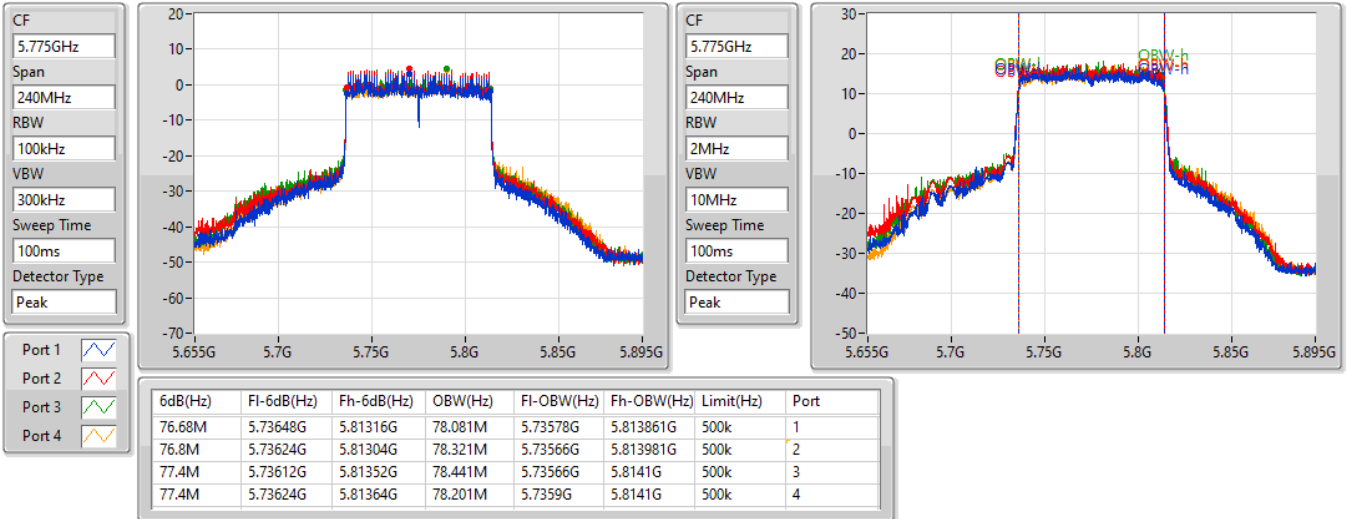

802.11ax HEW80_Nss4,(MCS0)_4TX
EBW
5210MHz

25/06/2022

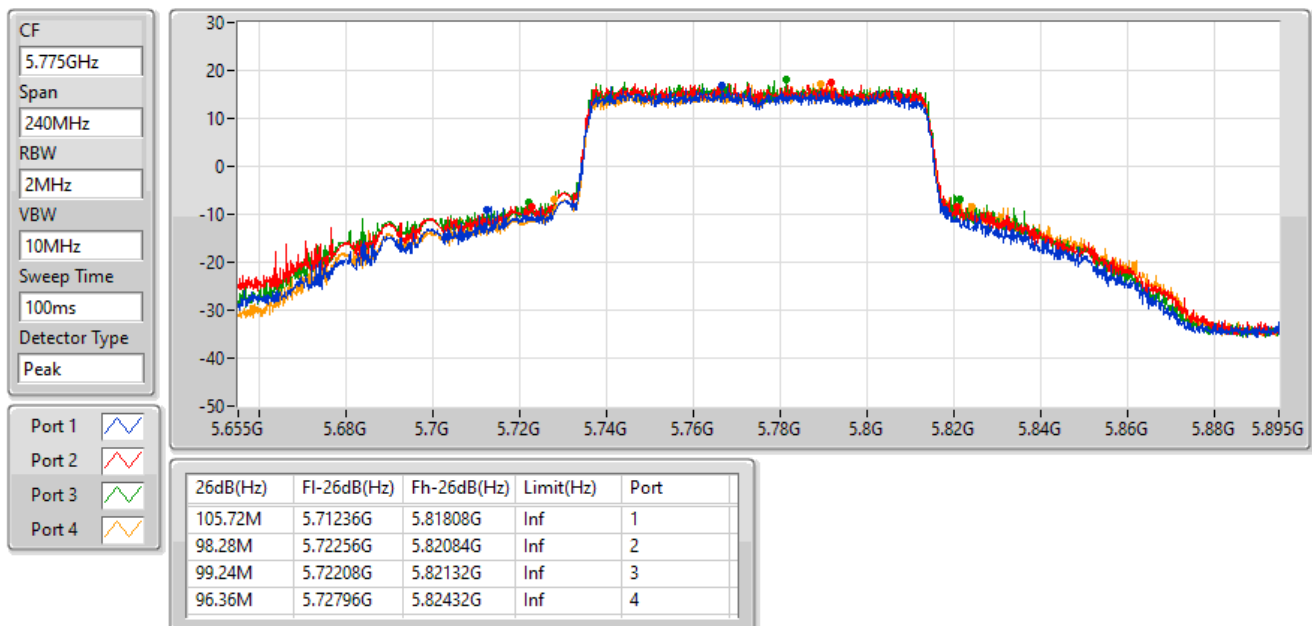


802.11ax HEW80_Nss4,(MCS0)_4TX
EBW
5775MHz

25/06/2022


802.11ax HEW80_Nss4,(MCS0)_4TX
EBW
5775MHz

25/06/2022



**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)_2TX	38.43M	18.411M	18M5D1D	25.11M	17.361M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	16.5M	41.289M	41M3D1D	16.29M	32.924M

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

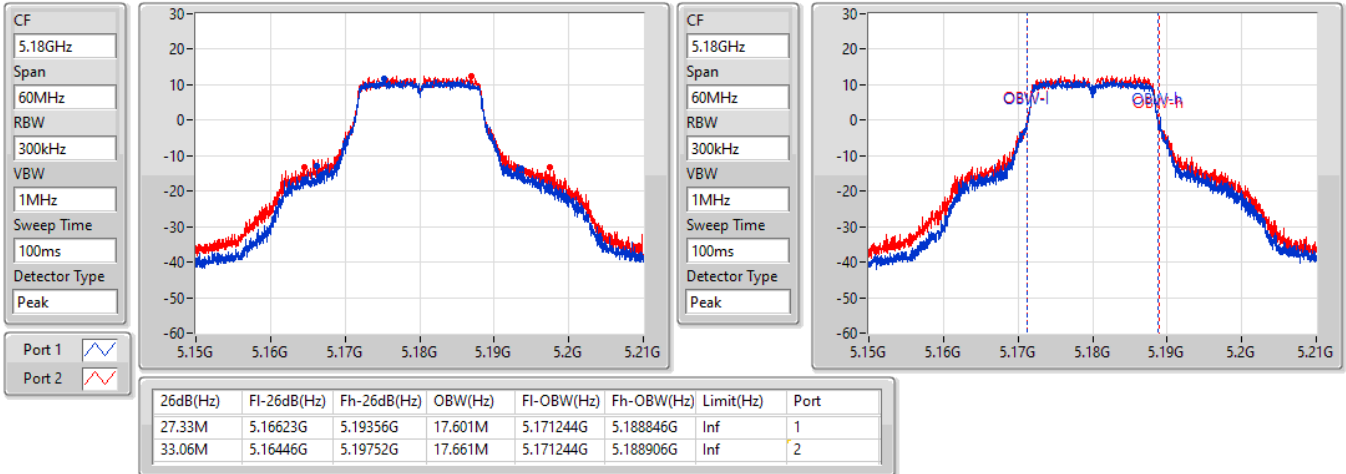
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	27.33M	17.601M	33.06M	17.661M
5200MHz	Pass	Inf	37.98M	17.991M	38.43M	18.411M
5240MHz	Pass	Inf	25.11M	17.361M	27.15M	17.361M
5745MHz	Pass	500k	16.47M	32.924M	16.35M	37.001M
5785MHz	Pass	500k	16.5M	41.289M	16.5M	39.55M
5825MHz	Pass	500k	16.29M	40.57M	16.29M	38.801M

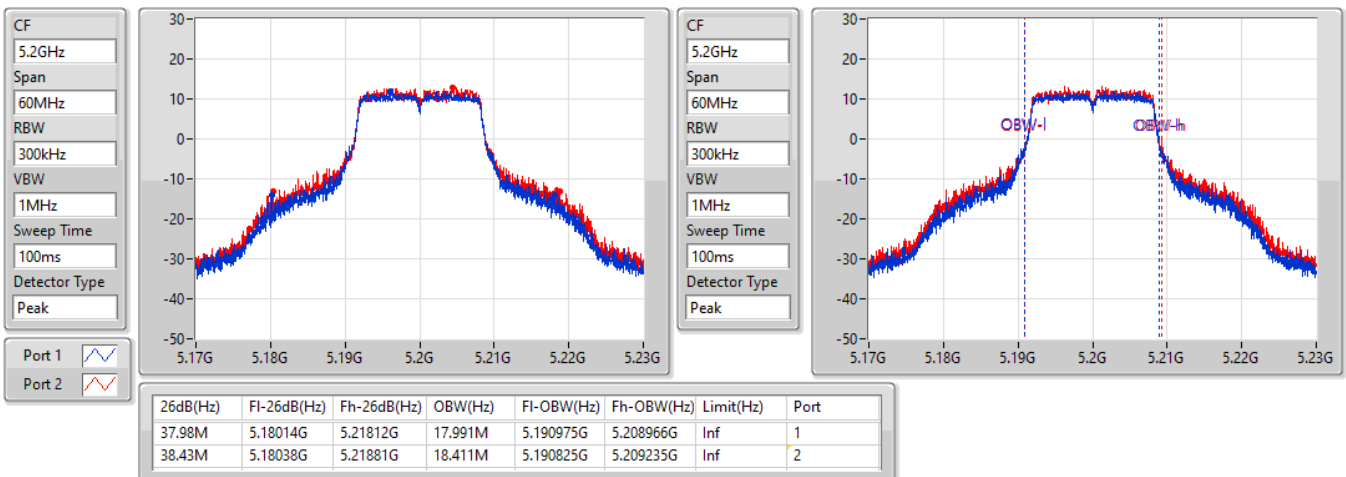
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11a_Nss1,(6Mbps)_2TX
EBW
5180MHz

24/06/2022


802.11a_Nss1,(6Mbps)_2TX
EBW
5200MHz

24/06/2022

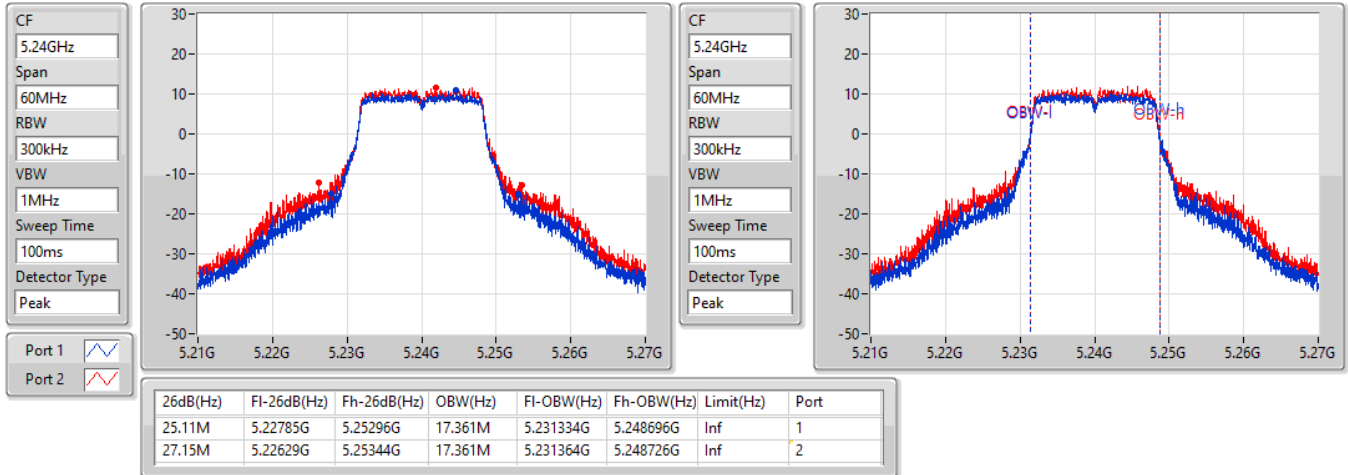


802.11a_Nss1,(6Mbps)_2TX

EBW

5240MHz

24/06/2022

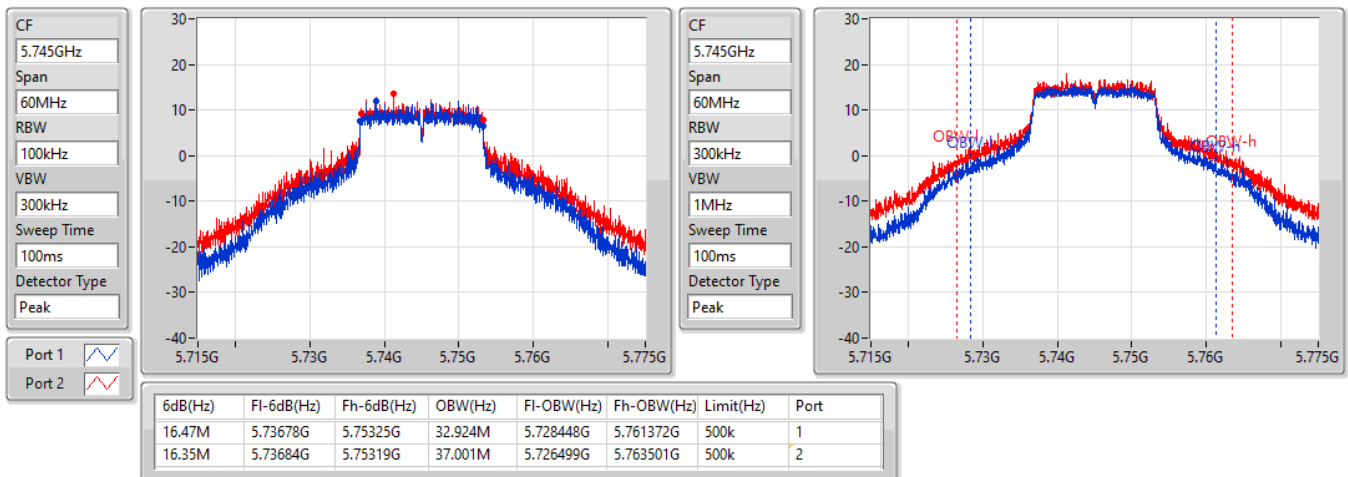


802.11a_Nss1,(6Mbps)_2TX

EBW

5745MHz

24/06/2022

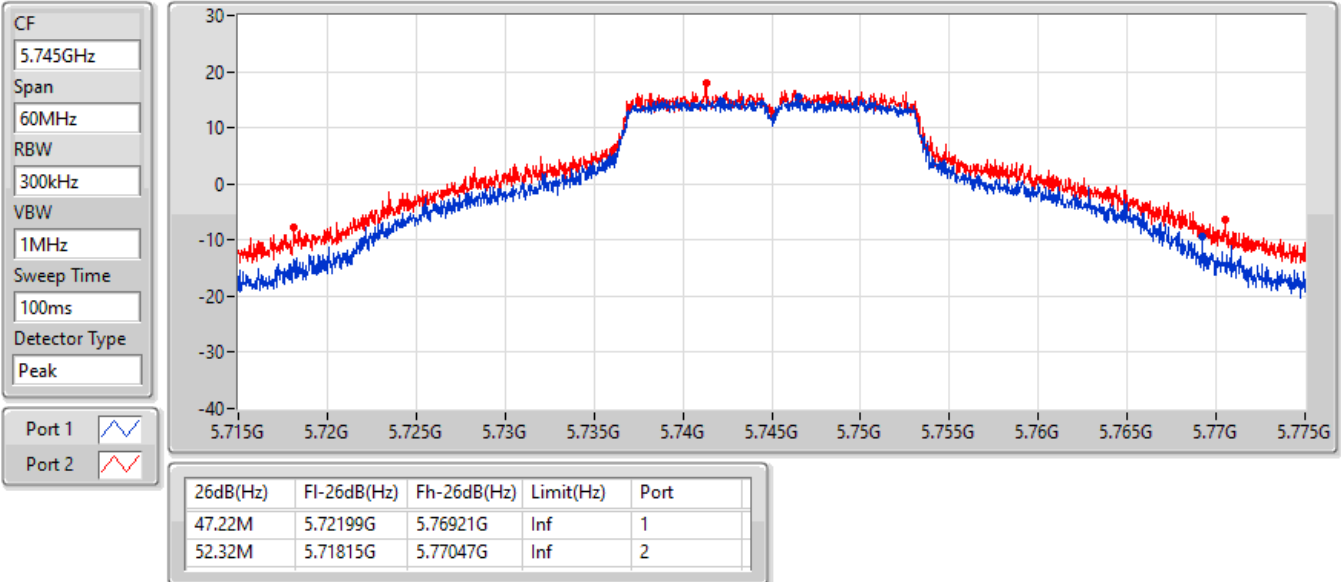


802.11a_Nss1,(6Mbps)_2TX

EBW

5745MHz

24/06/2022

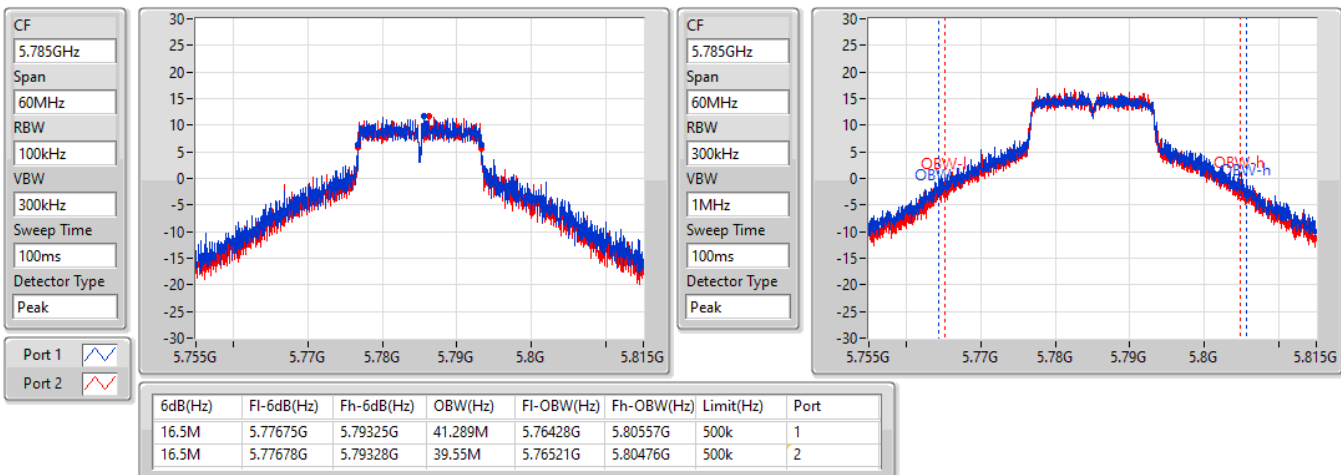


802.11a_Nss1,(6Mbps)_2TX

EBW

5785MHz

24/06/2022

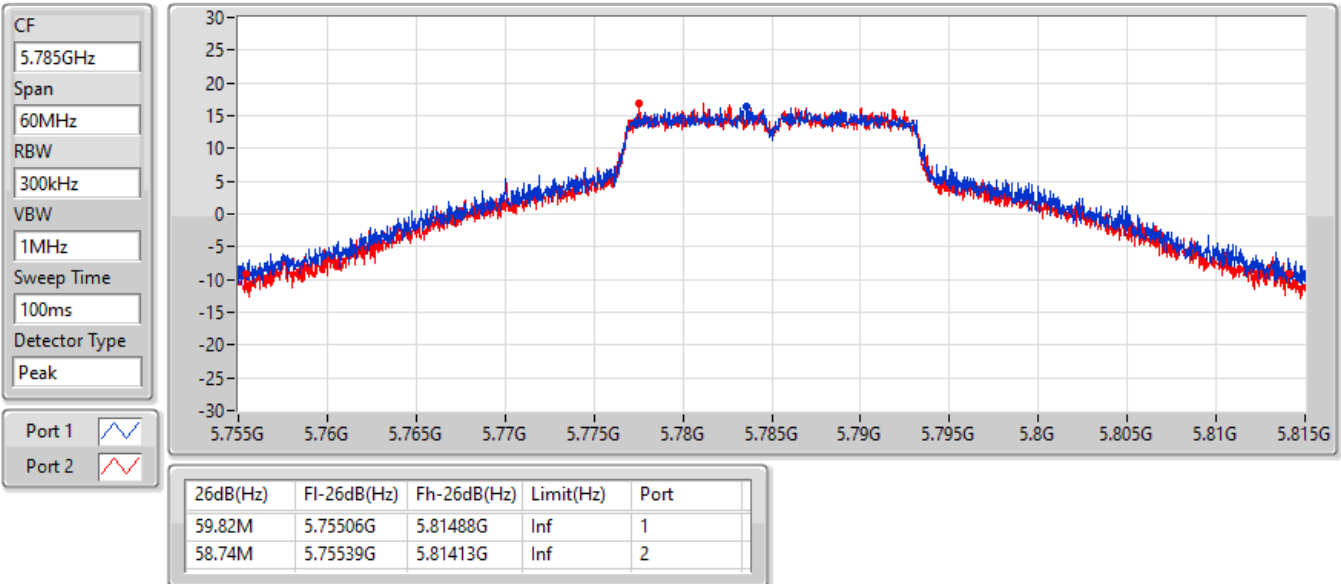


802.11a_Nss1,(6Mbps)_2TX

EBW

5785MHz

24/06/2022

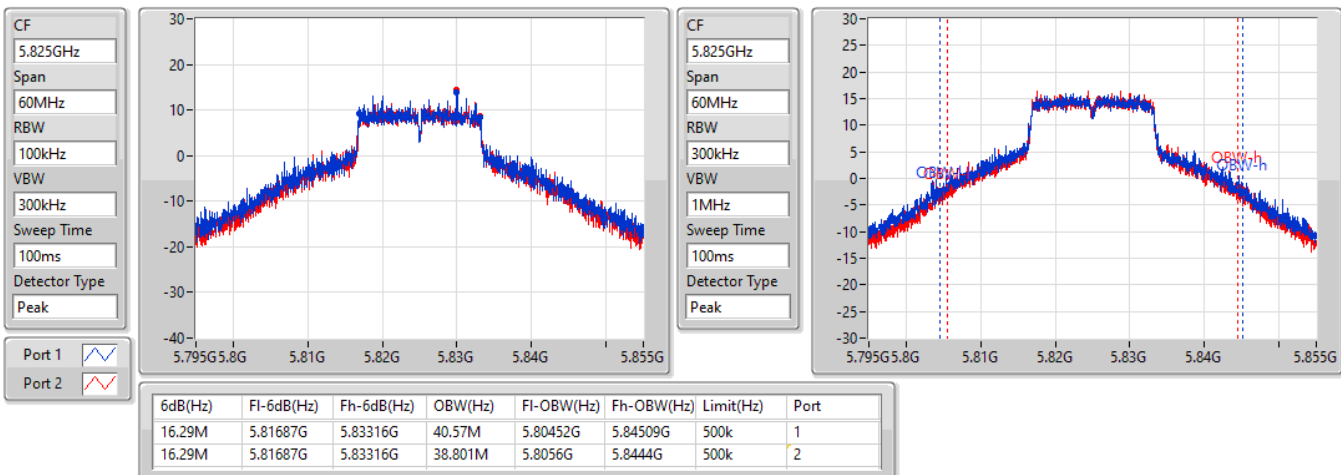


802.11a_Nss1,(6Mbps)_2TX

EBW

5825MHz

24/06/2022

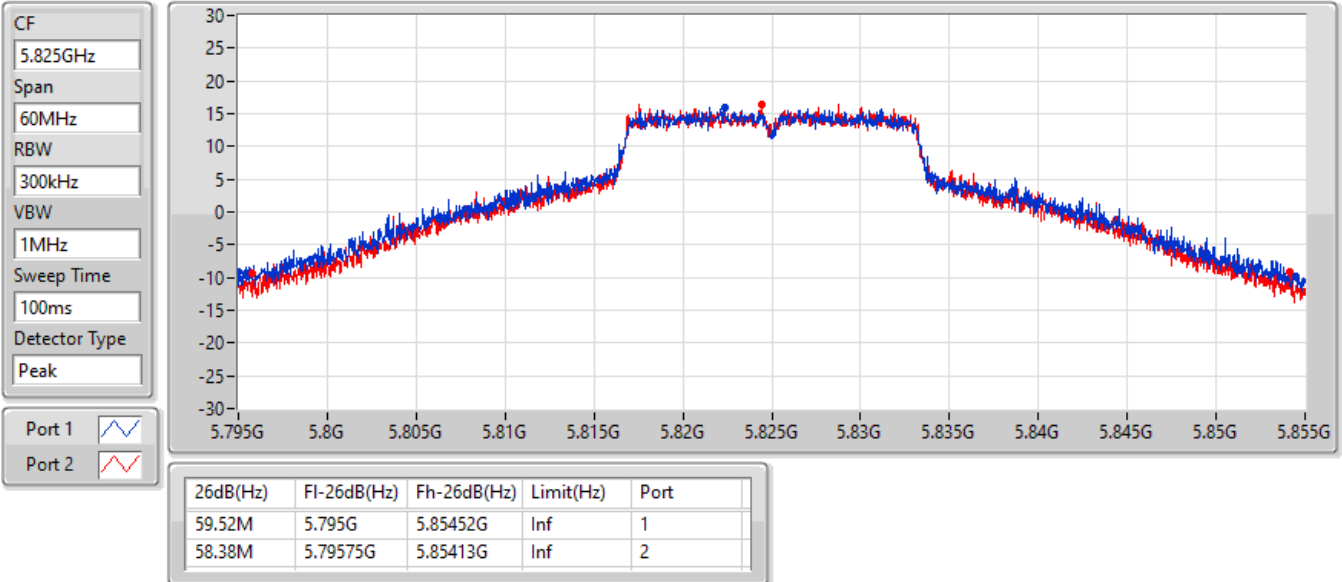


802.11a_Nss1,(6Mbps)_2TX

EBW

5825MHz

24/06/2022



Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ax HEW20_Nss2,(MCS0)_2TX	47.31M	21.379M	21M4D1D	29.67M	19.31M
802.11ax HEW40_Nss2,(MCS0)_2TX	75.36M	39.22M	39M3D1D	43.86M	38.141M
802.11ax HEW80_Nss2,(MCS0)_2TX	82.56M	77.961M	78M0D1D	82.44M	77.961M
5.725-5.85GHz	-	-	-	-	-
802.11ax HEW20_Nss2,(MCS0)_2TX	18.75M	43.598M	43M6D1D	17.91M	26.327M
802.11ax HEW40_Nss2,(MCS0)_2TX	37.68M	71.484M	71M5D1D	37.56M	53.313M
802.11ax HEW80_Nss2,(MCS0)_2TX	77.4M	79.04M	79M0D1D	76.56M	78.801M

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

Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11ax HEW20_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	29.67M	19.31M	31.17M	19.34M
5200MHz	Pass	Inf	41.61M	19.76M	47.31M	21.379M
5240MHz	Pass	Inf	30.45M	19.31M	34.08M	19.4M
5745MHz	Pass	500k	18.72M	26.327M	18.75M	28.036M
5785MHz	Pass	500k	18.75M	43.598M	17.91M	42.579M
5825MHz	Pass	500k	18.72M	43.208M	18.12M	41.739M
802.11ax HEW40_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	Inf	45.78M	38.141M	43.86M	38.201M
5230MHz	Pass	Inf	63.06M	38.621M	75.36M	39.22M
5755MHz	Pass	500k	37.68M	53.313M	37.56M	58.411M
5795MHz	Pass	500k	37.68M	65.547M	37.56M	71.484M
802.11ax HEW80_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	Inf	82.44M	77.961M	82.56M	77.961M
5775MHz	Pass	500k	77.4M	78.801M	76.56M	79.04M

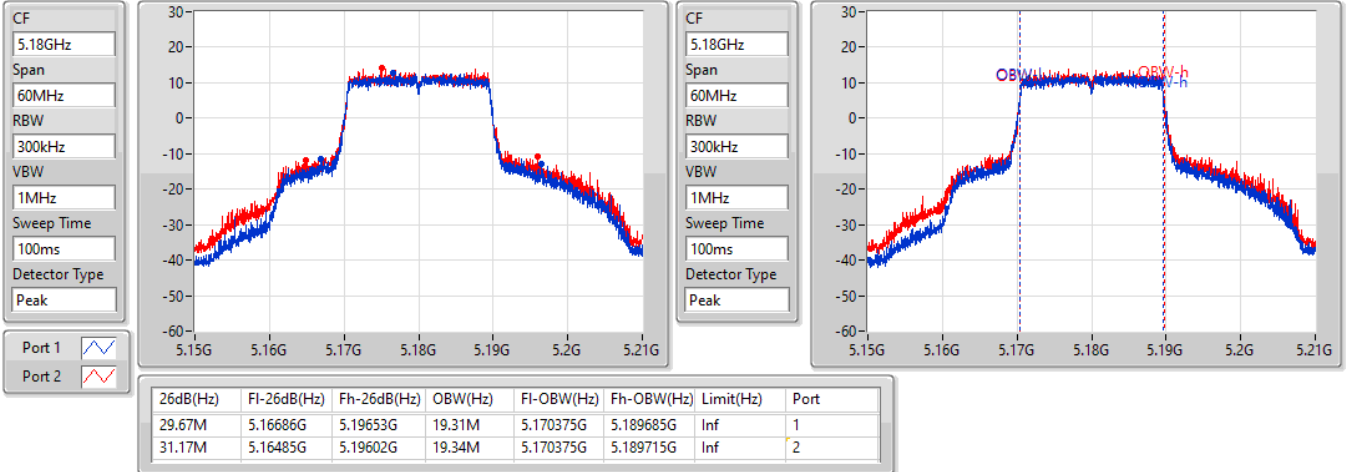
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11ax HEW20_Nss2,(MCS0)_2TX

EBW

5180MHz

24/06/2022

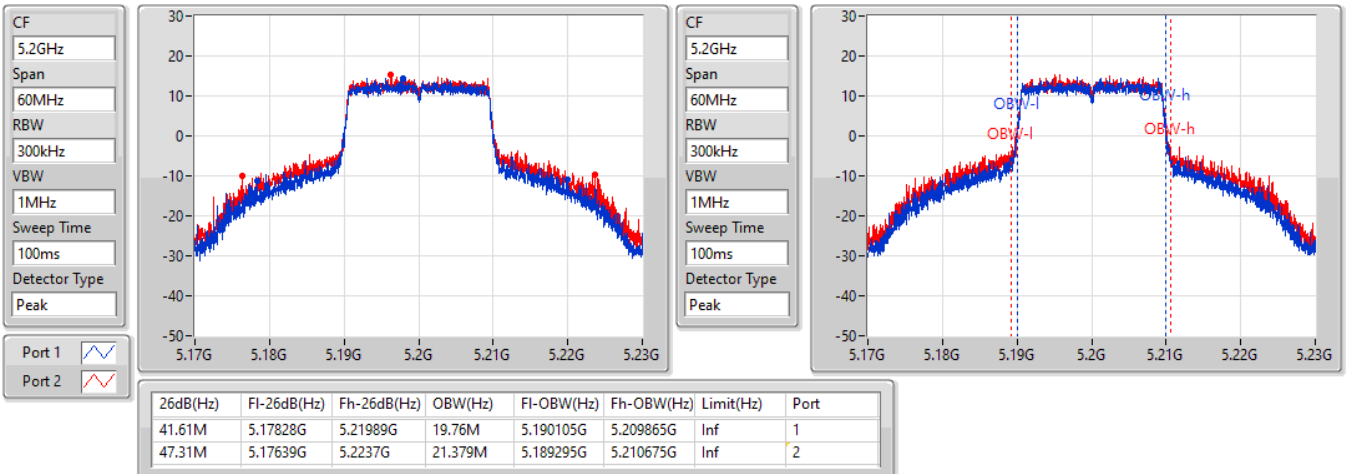


802.11ax HEW20_Nss2,(MCS0)_2TX

EBW

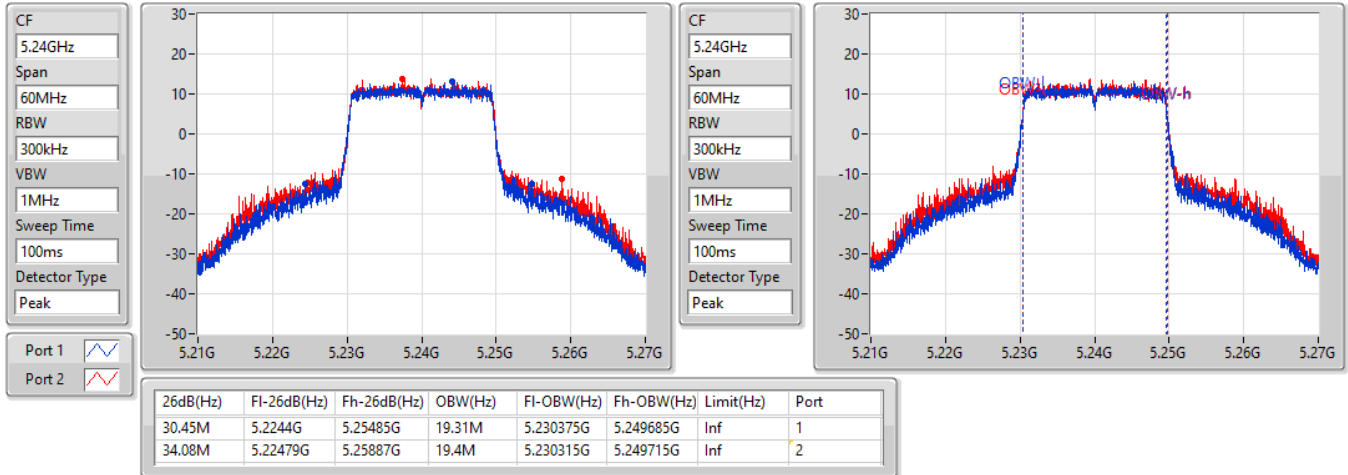
5200MHz

24/06/2022

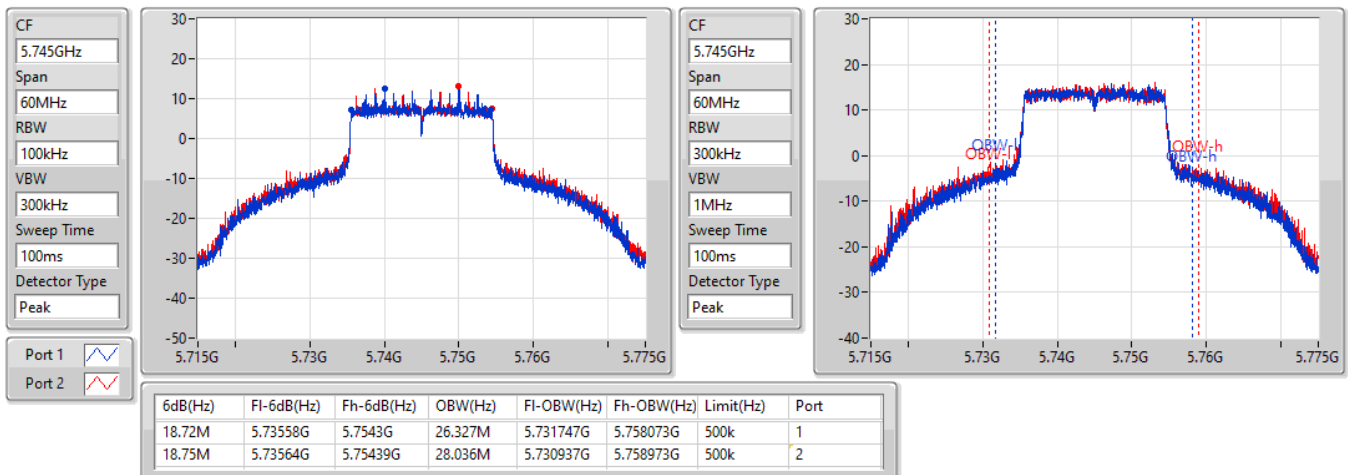


802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
5240MHz

24/06/2022


802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
5745MHz

24/06/2022

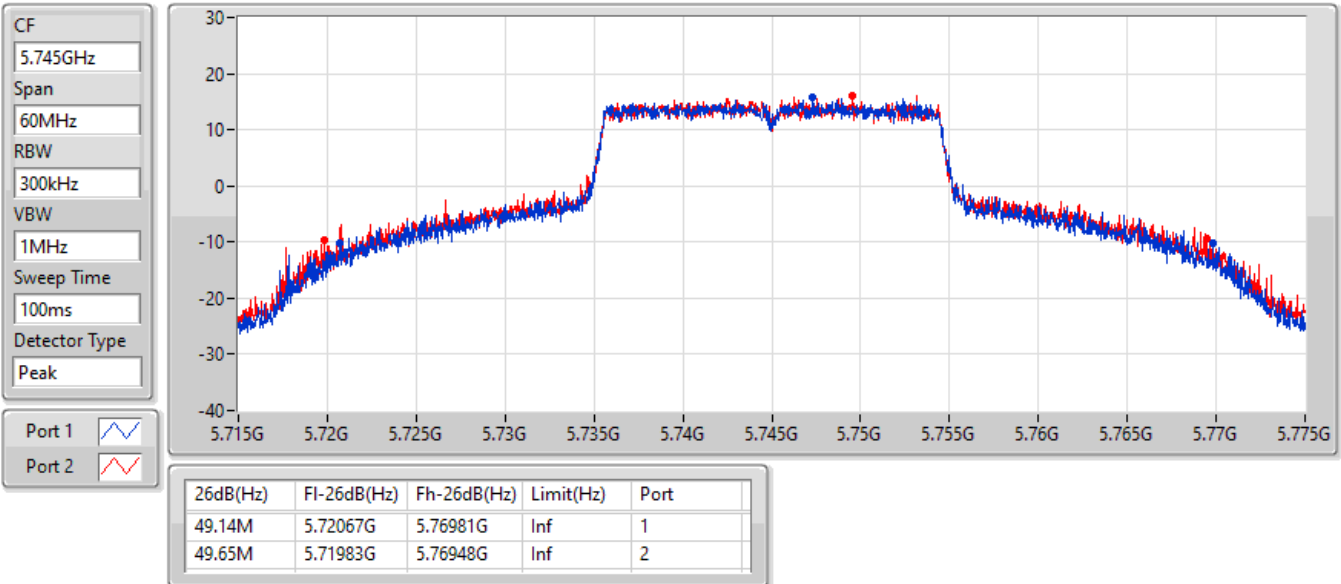


802.11ax HEW20_Nss2,(MCS0)_2TX

EBW

5745MHz

24/06/2022

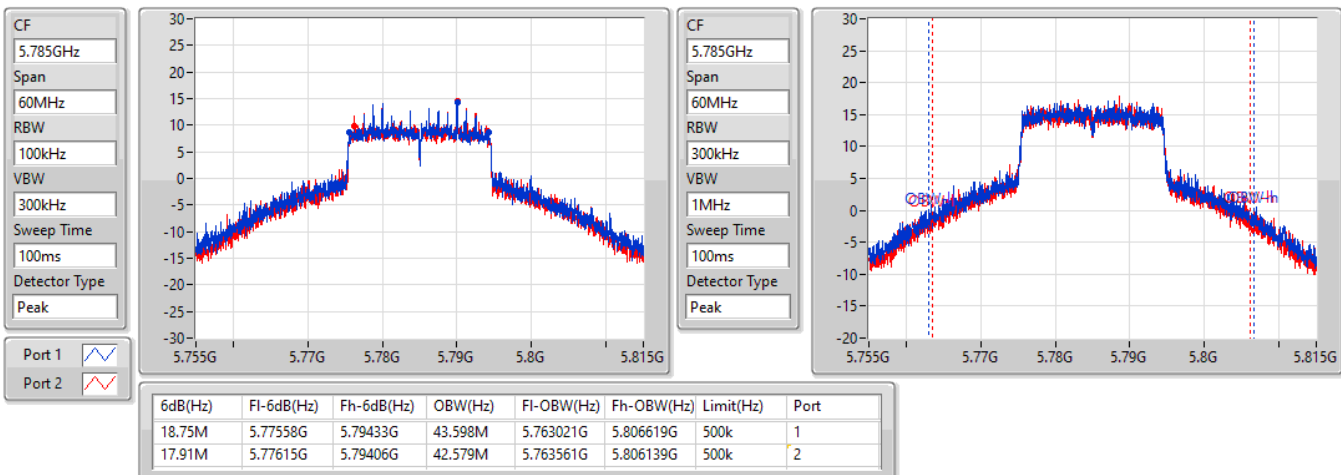


802.11ax HEW20_Nss2,(MCS0)_2TX

EBW

5785MHz

24/06/2022

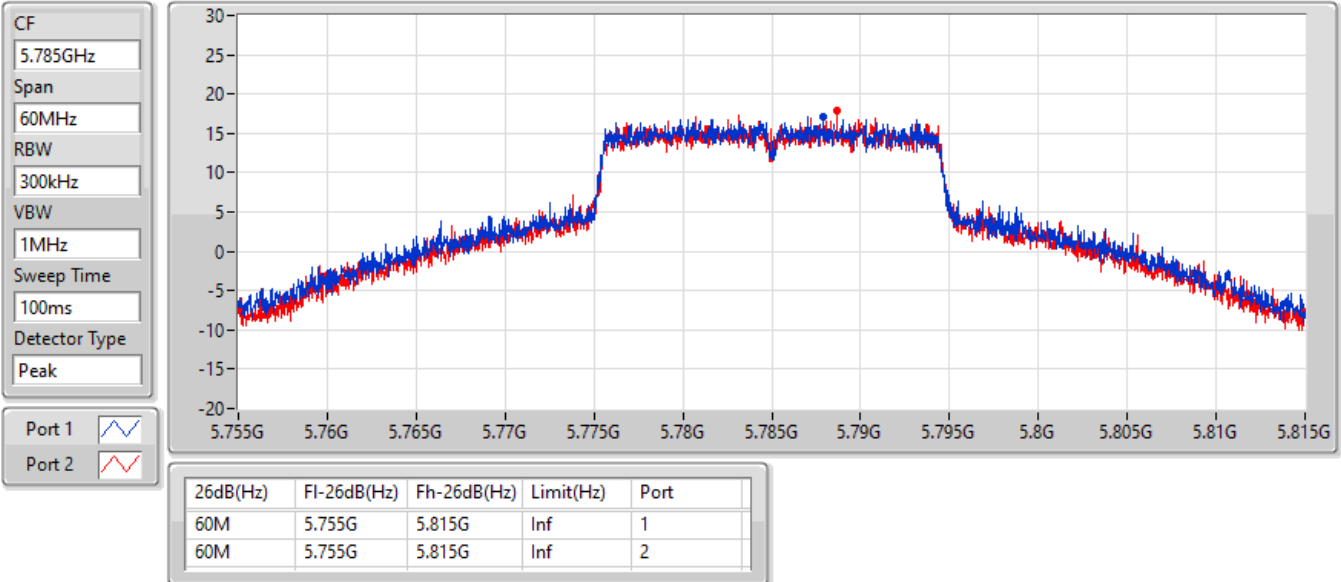


802.11ax HEW20_Nss2,(MCS0)_2TX

EBW

5785MHz

24/06/2022

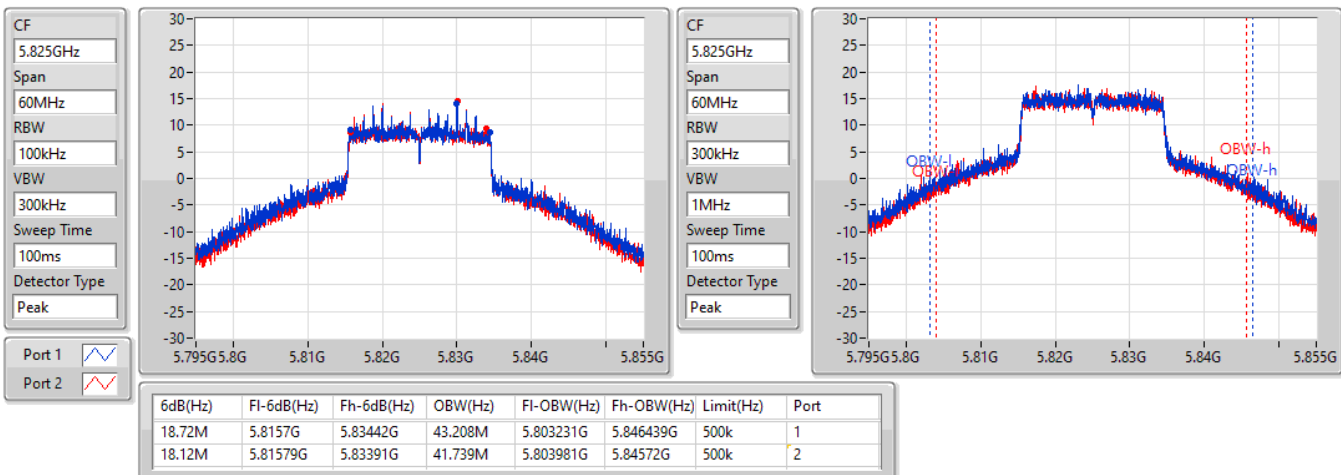


802.11ax HEW20_Nss2,(MCS0)_2TX

EBW

5825MHz

24/06/2022

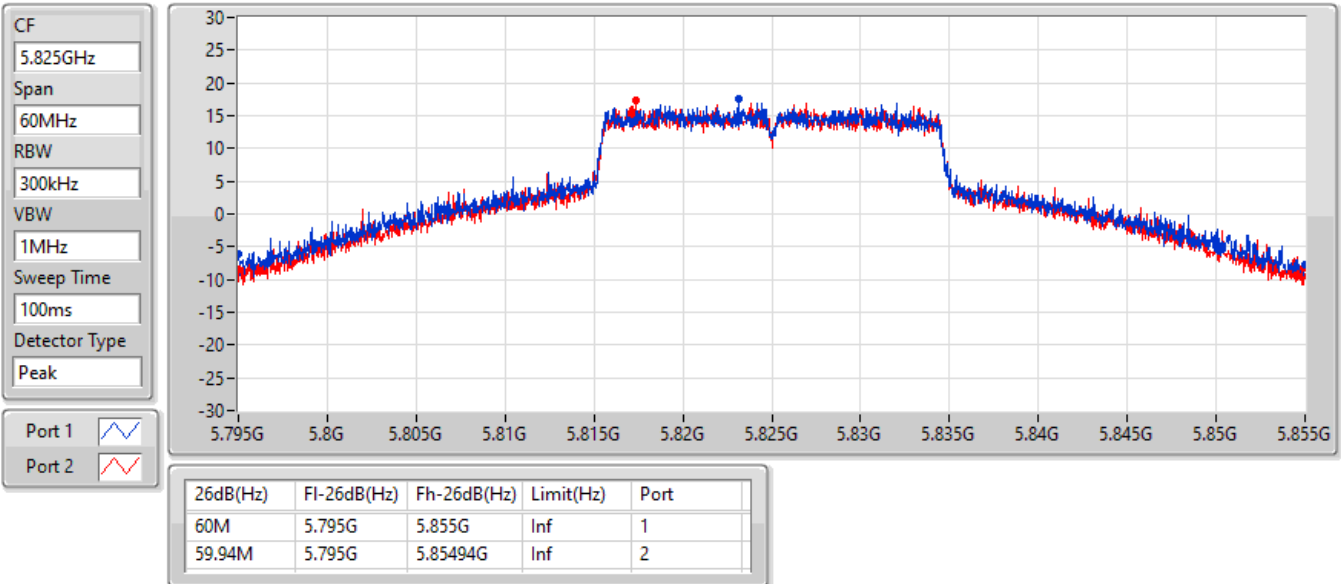


802.11ax HEW20_Nss2,(MCS0)_2TX

EBW

5825MHz

24/06/2022

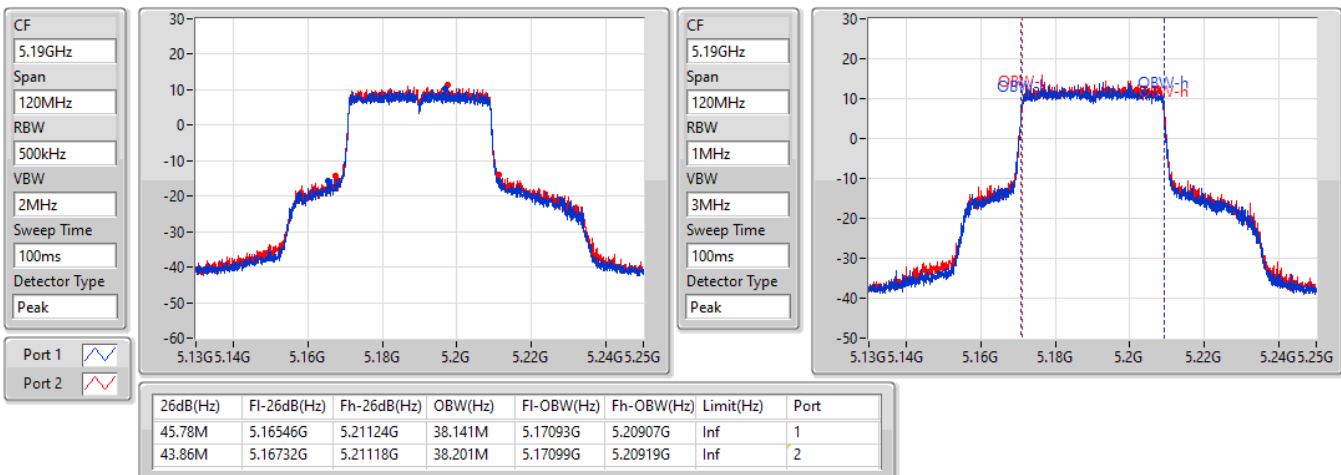


802.11ax HEW40_Nss2,(MCS0)_2TX

EBW

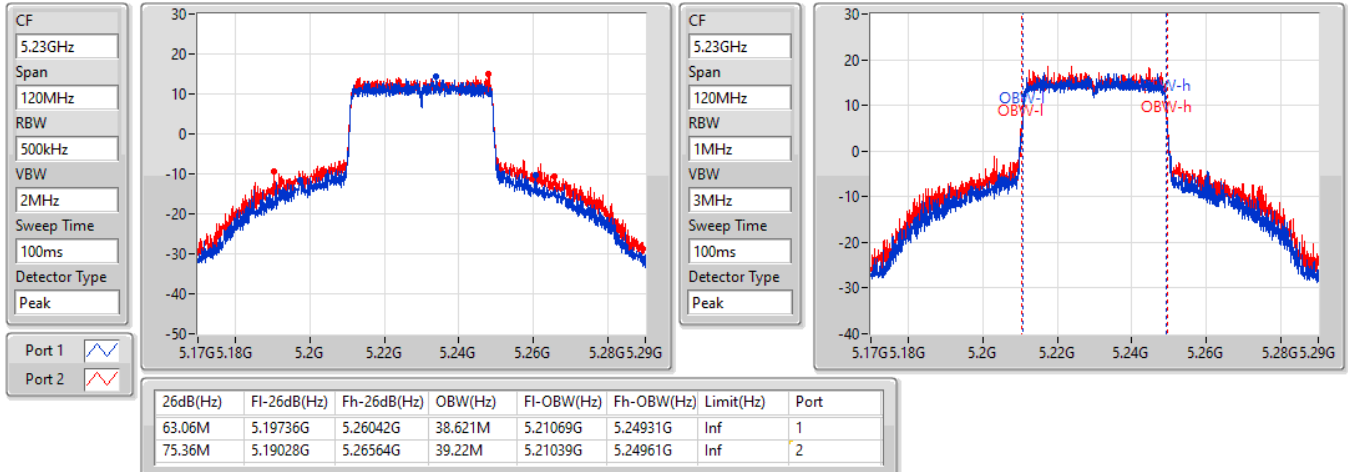
5190MHz

24/06/2022

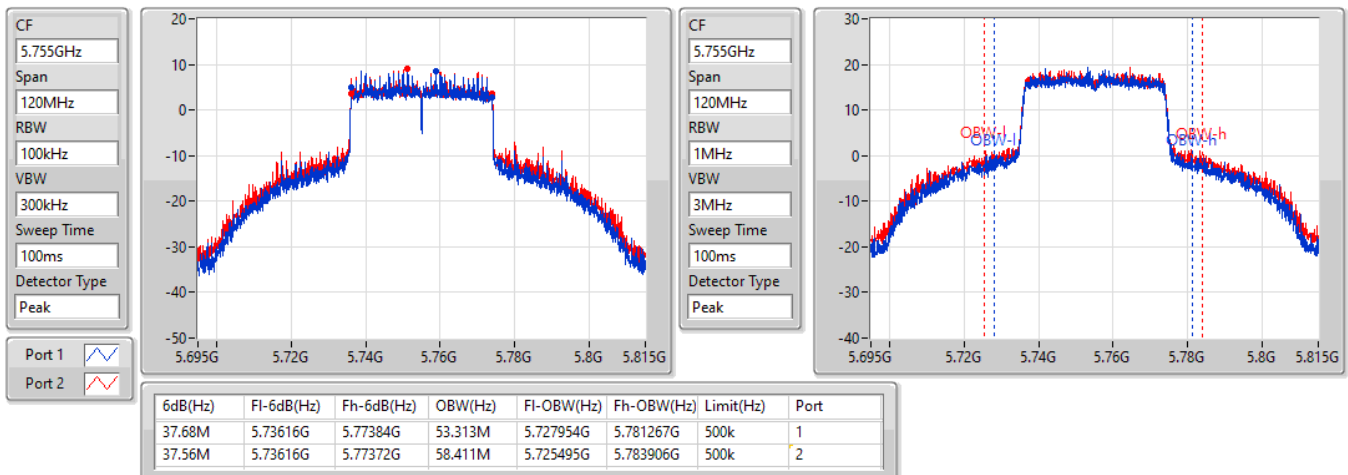


802.11ax HEW40_Nss2,(MCS0)_2TX
EBW
5230MHz

24/06/2022


802.11ax HEW40_Nss2,(MCS0)_2TX
EBW
5755MHz

24/06/2022

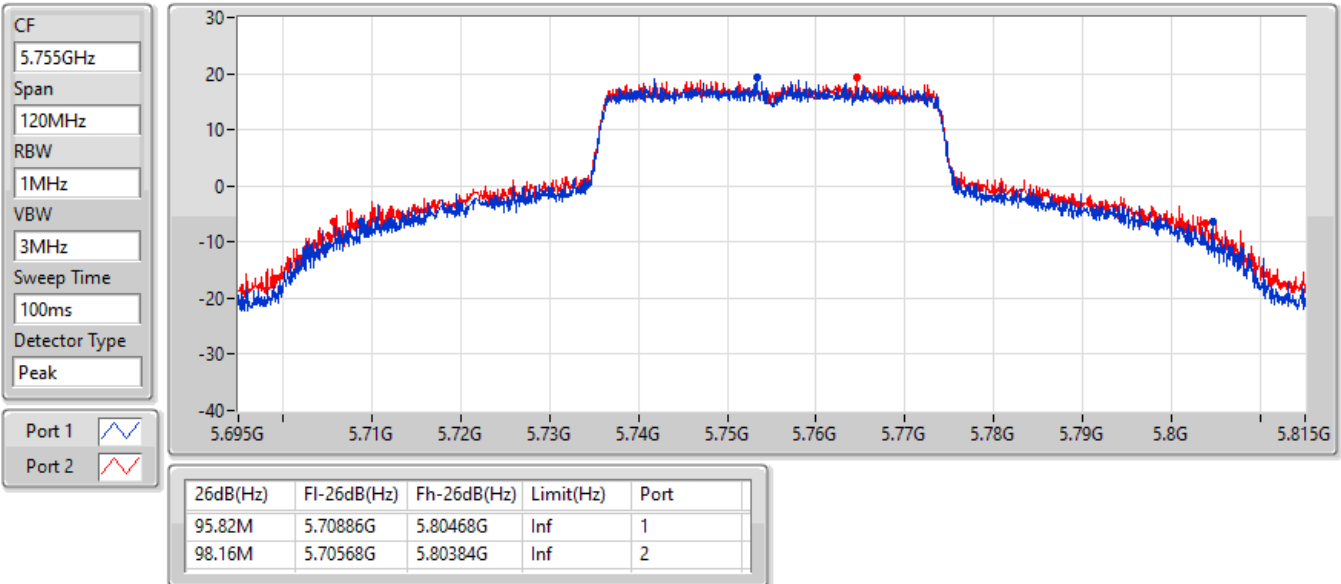


802.11ax HEW40_Nss2,(MCS0)_2TX

EBW

5755MHz

24/06/2022

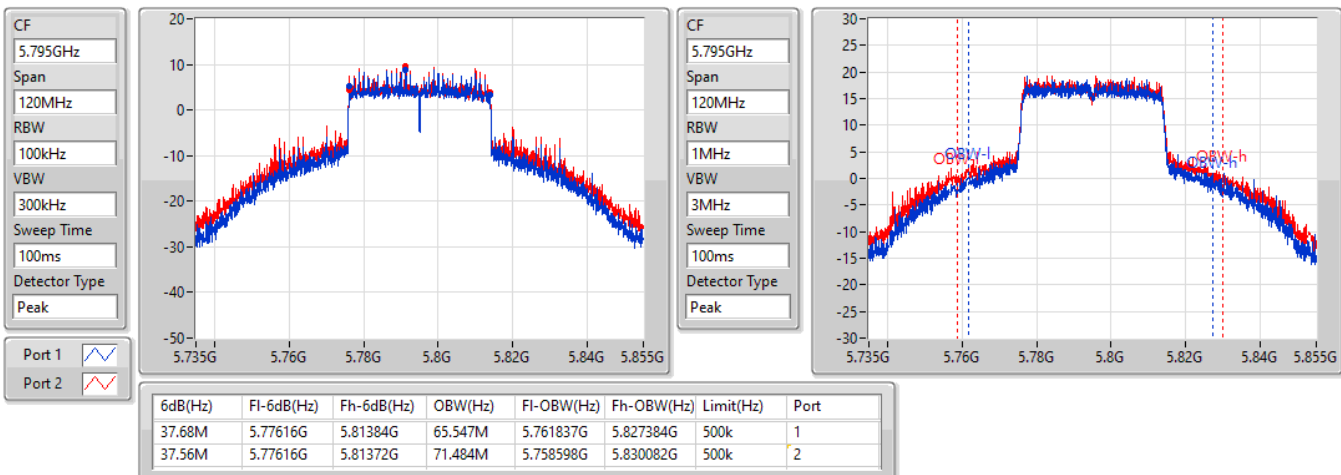


802.11ax HEW40_Nss2,(MCS0)_2TX

EBW

5795MHz

24/06/2022

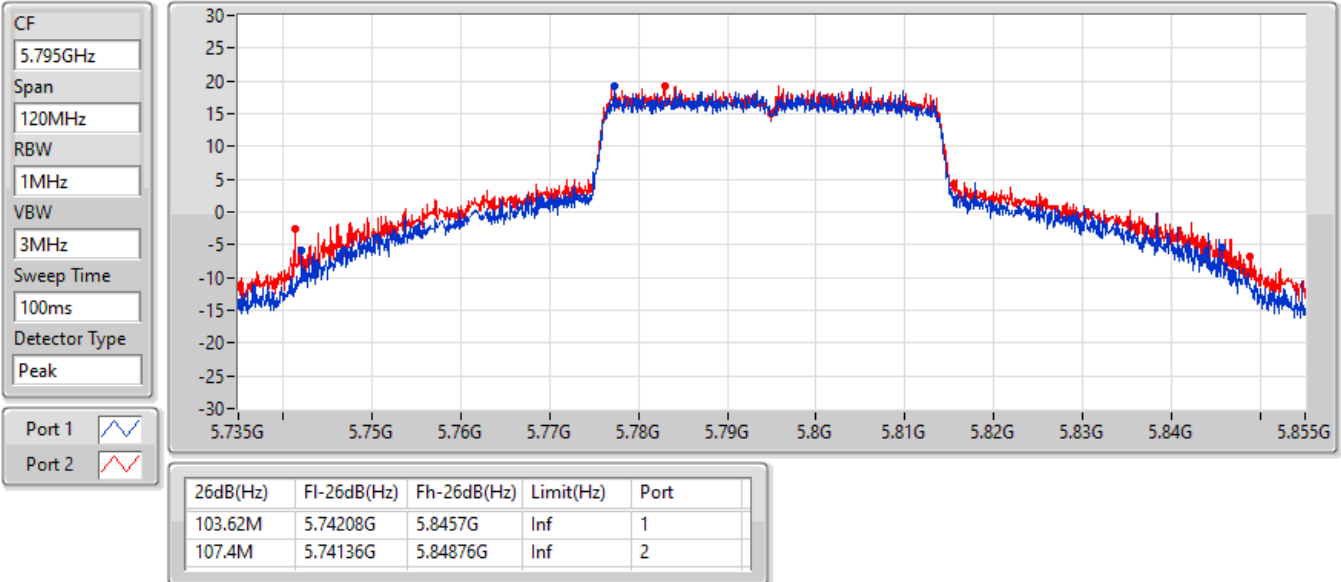


802.11ax HEW40_Nss2,(MCS0)_2TX

EBW

5795MHz

24/06/2022

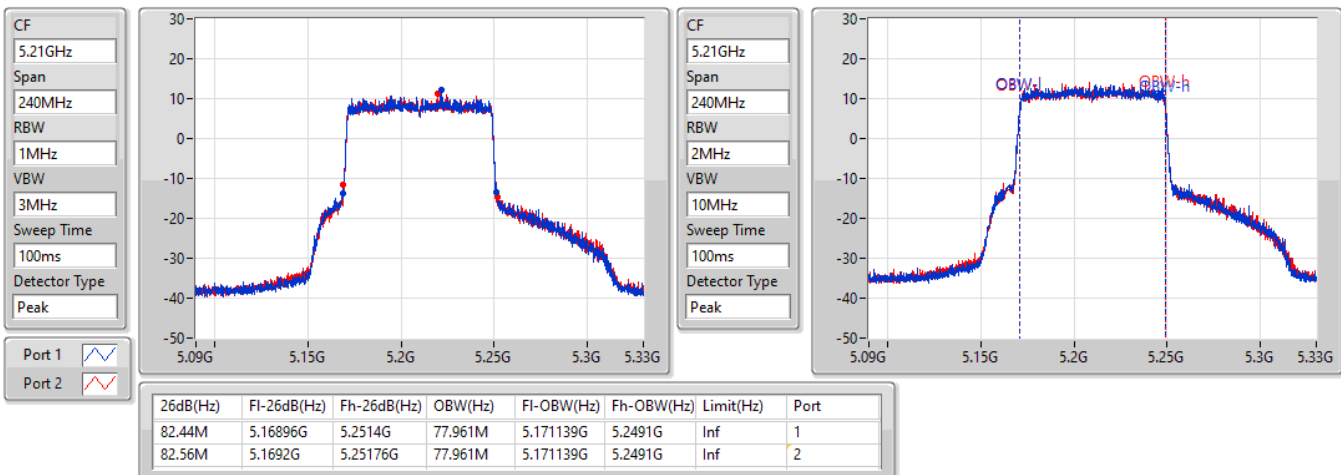


802.11ax HEW80_Nss2,(MCS0)_2TX

EBW

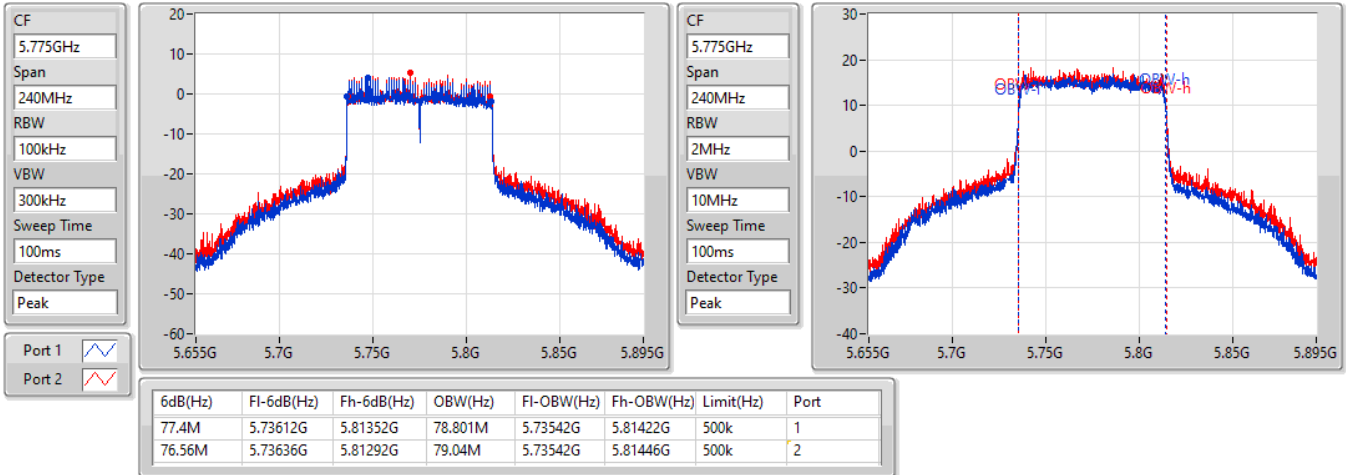
5210MHz

24/06/2022

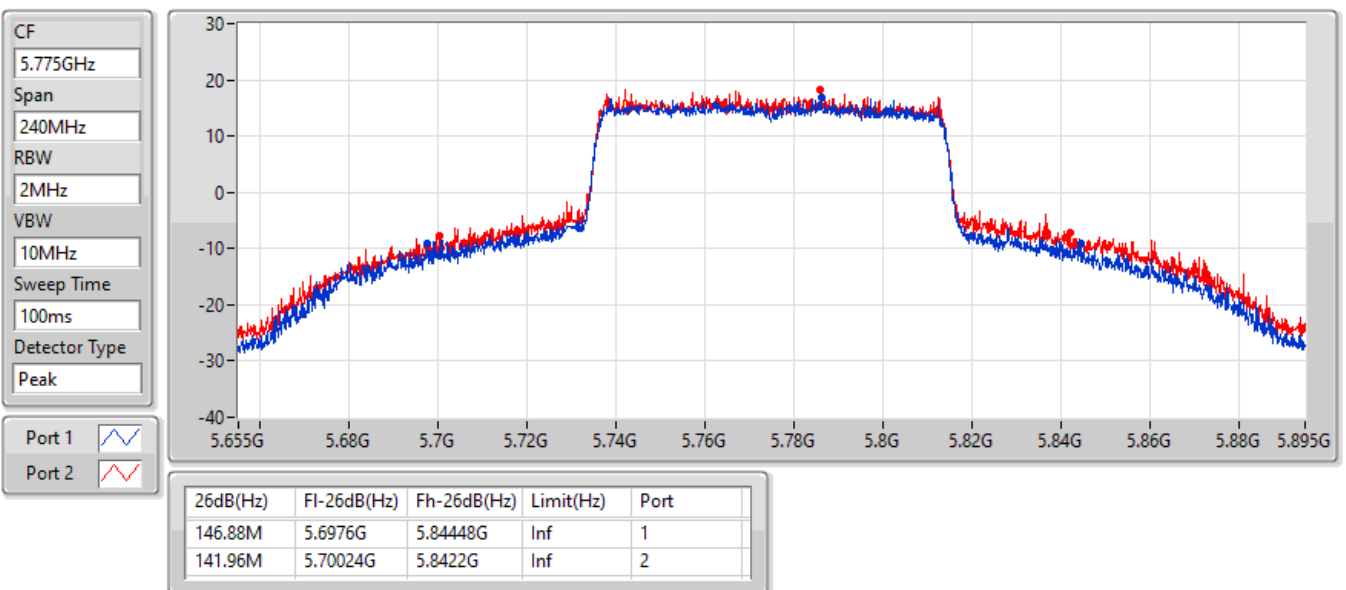


802.11ax HEW80_Nss2,(MCS0)_2TX
EBW
5775MHz

24/06/2022


802.11ax HEW80_Nss2,(MCS0)_2TX
EBW
5775MHz

24/06/2022



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	25.26M	17.481M	17M5D1D	21.57M	17.121M
802.11ax HEW20_Nss1,(MCS0)_1TX	25.02M	19.28M	19M3D1D	21.75M	19.13M
802.11ax HEW40_Nss1,(MCS0)_1TX	48.42M	38.141M	38M2D1D	41.1M	37.961M
802.11ax HEW80_Nss1,(MCS0)_1TX	86.52M	77.961M	78M0D1D	86.52M	77.961M

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	25.26M	17.481M
5200MHz	Pass	Inf	21.75M	17.121M
5240MHz	Pass	Inf	21.57M	17.151M
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-
5180MHz	Pass	Inf	25.02M	19.28M
5200MHz	Pass	Inf	21.75M	19.13M
5240MHz	Pass	Inf	21.84M	19.13M
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-	-	-
5190MHz	Pass	Inf	48.42M	38.141M
5230MHz	Pass	Inf	41.1M	37.961M
802.11ax HEW80_Nss1,(MCS0)_1TX	-	-	-	-
5210MHz	Pass	Inf	86.52M	77.961M

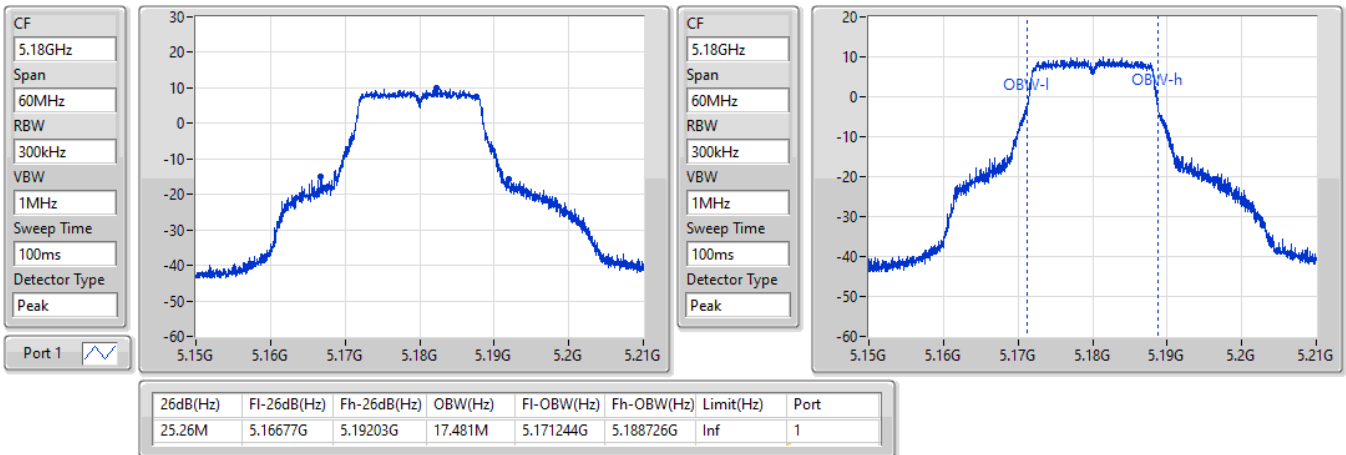
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11a_Nss1,(6Mbps)_1TX

EBW

5180MHz

13/07/2022

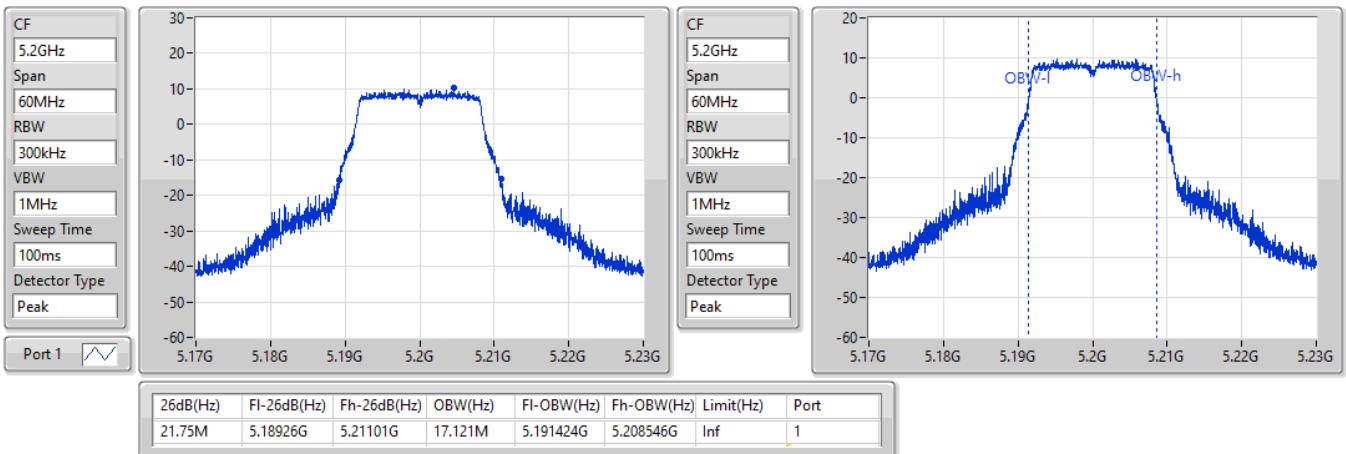


802.11a_Nss1,(6Mbps)_1TX

EBW

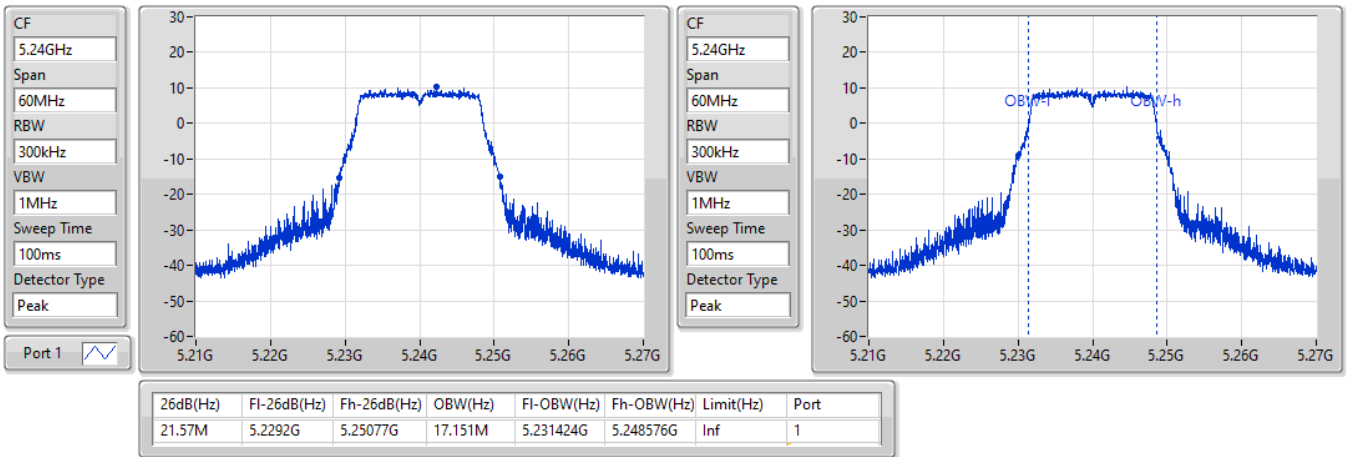
5200MHz

13/07/2022

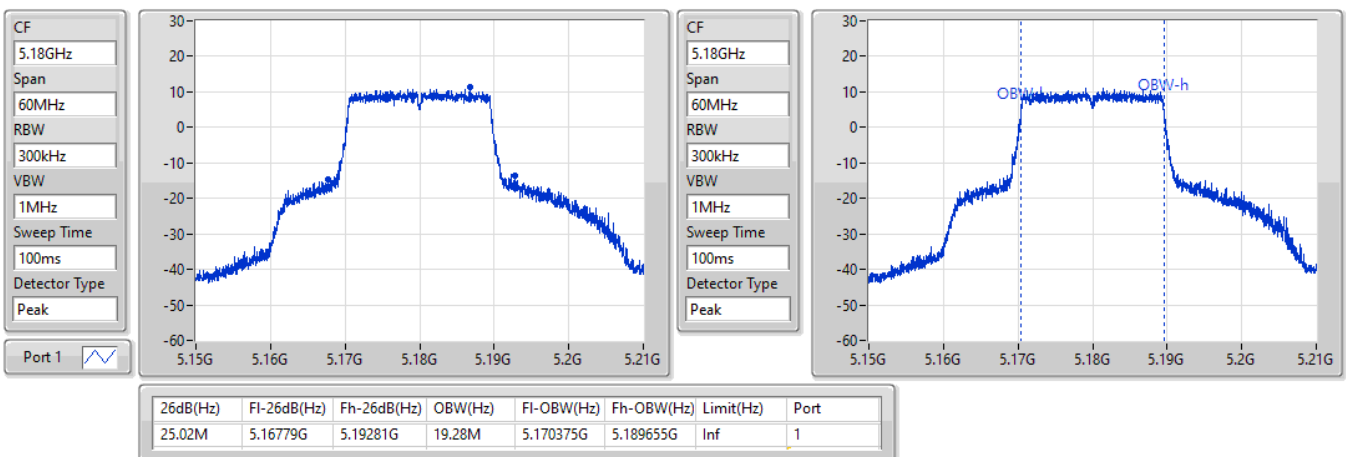


802.11a_Nss1,(6Mbps)_1TX
EBW
5240MHz

13/07/2022

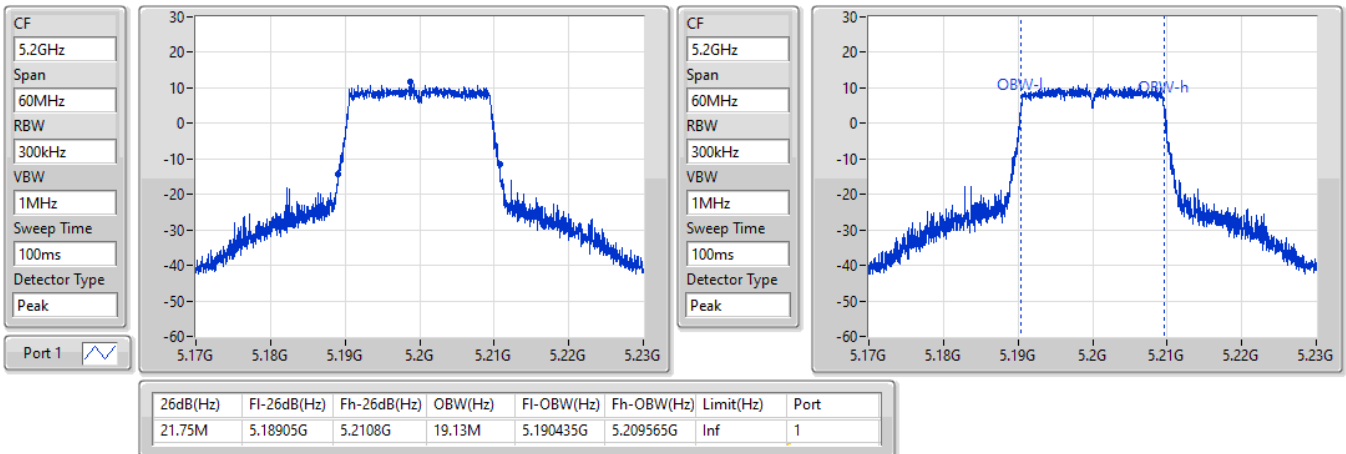

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5180MHz

13/07/2022

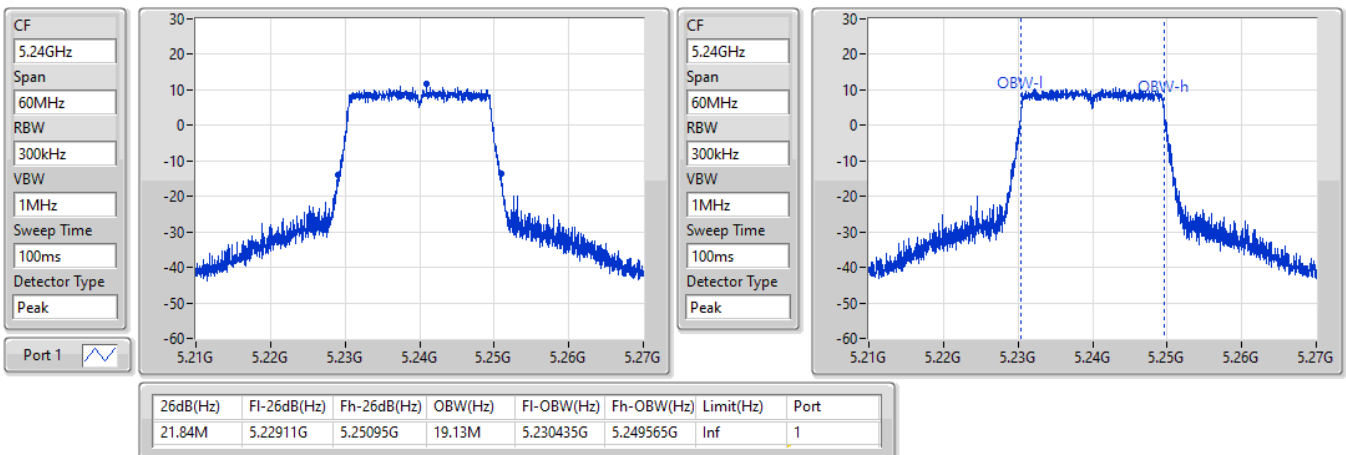


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5200MHz

13/07/2022

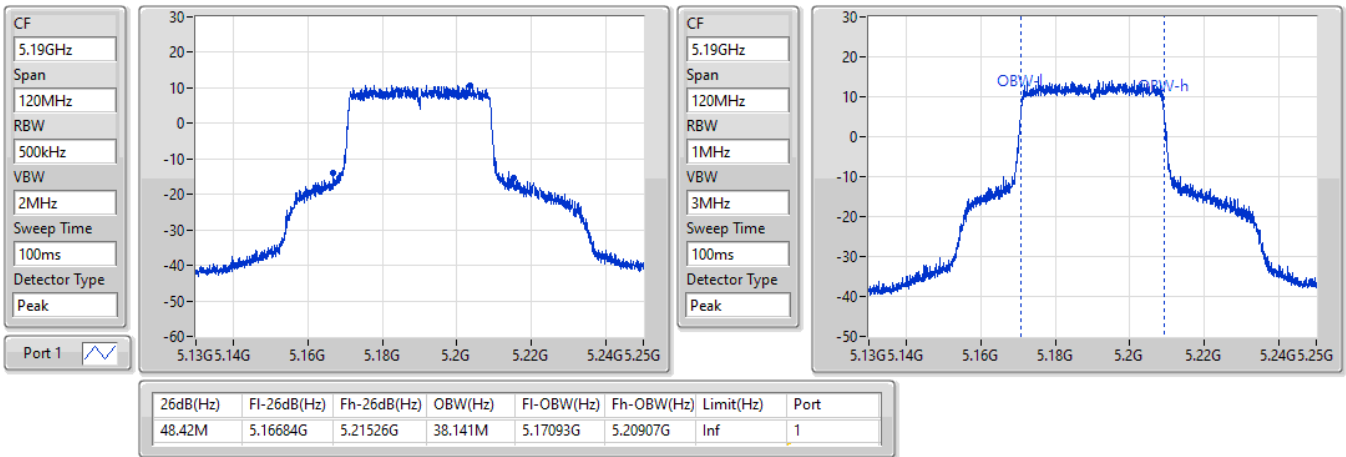

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5240MHz

13/07/2022

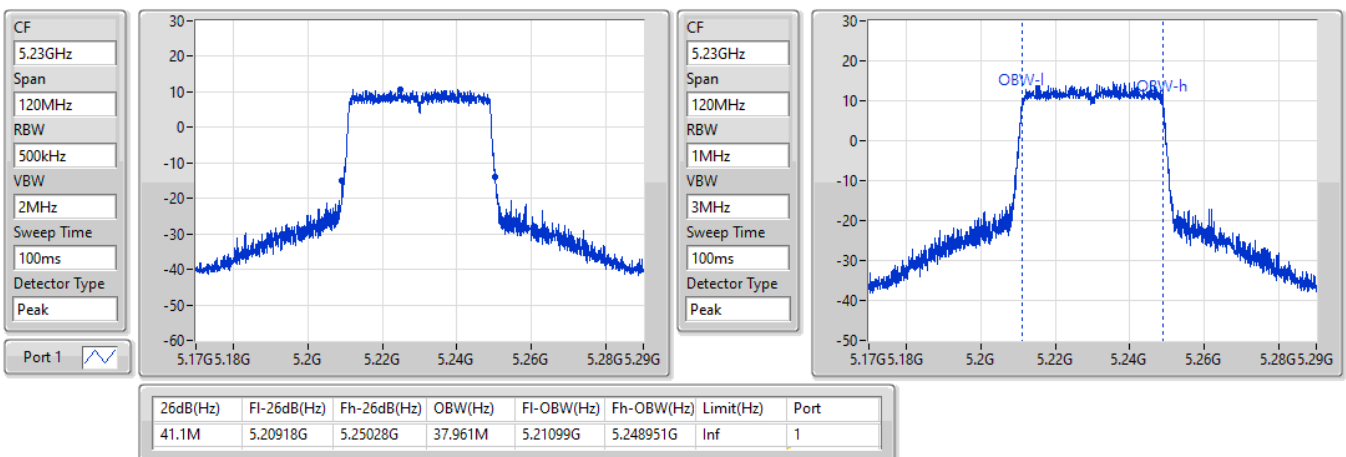


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
5190MHz

13/07/2022


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
5230MHz

13/07/2022

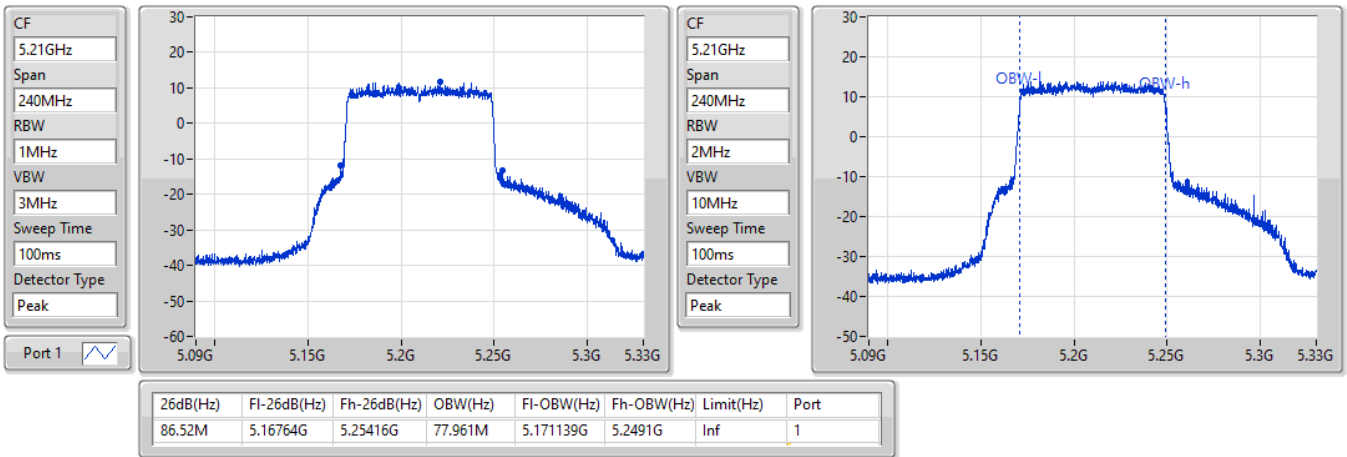


802.11ax HEW80_Nss1,(MCS0)_1TX

EBW

5210MHz

13/07/2022



**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)_2TX	24.54M	17.511M	17M6D1D	21.33M	16.912M

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

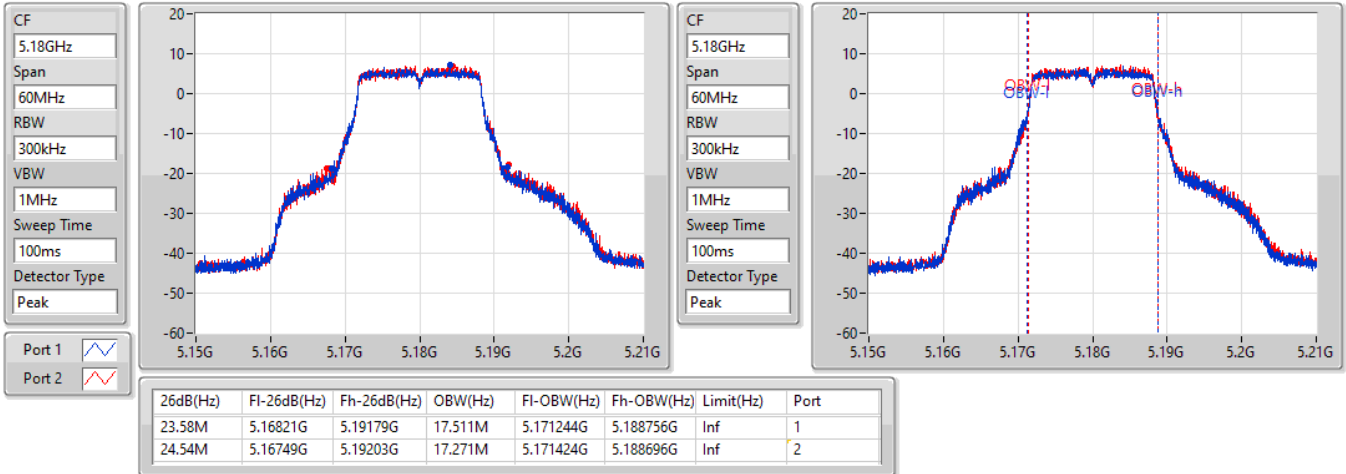
**Result**

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	23.58M	17.511M	24.54M	17.271M
5200MHz	Pass	Inf	21.63M	17.091M	21.54M	16.912M
5240MHz	Pass	Inf	21.54M	17.091M	21.33M	16.942M

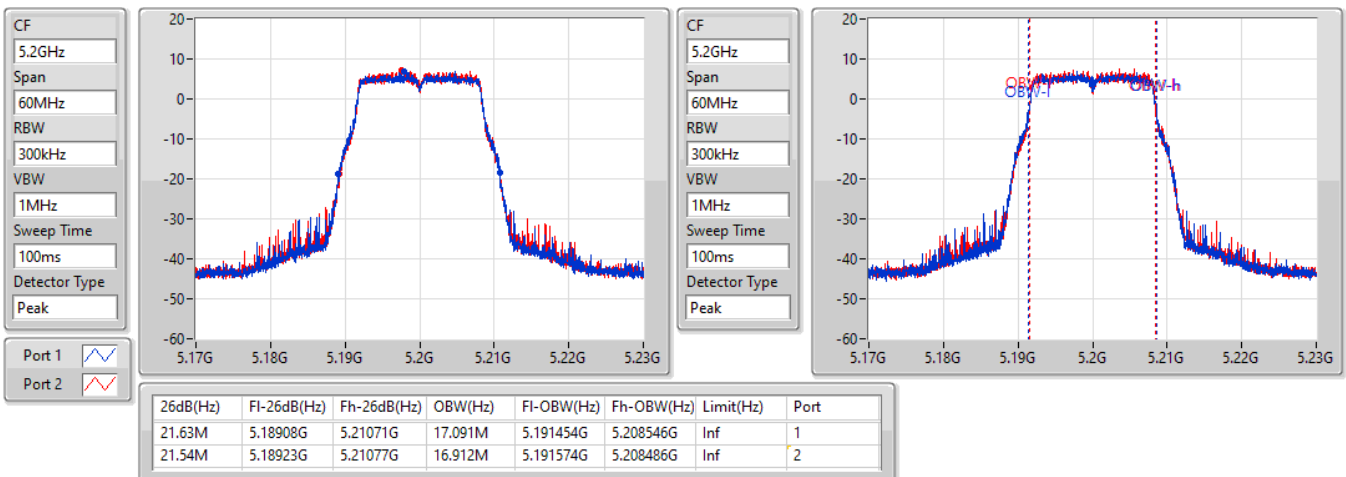
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11a_Nss1,(6Mbps)_2TX
EBW
5180MHz

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802.11a_Nss1,(6Mbps)_2TX
EBW
5200MHz

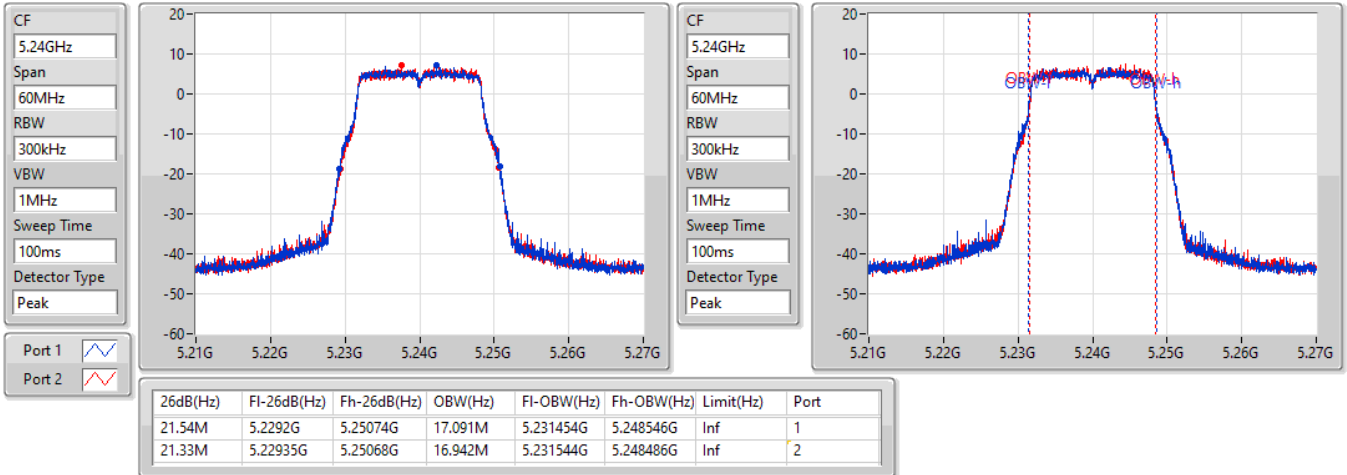
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802.11a_Nss1,(6Mbps)_2TX

5240MHz

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Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ax HEW20_Nss2,(MCS0)_2TX	26.19M	19.28M	19M3D1D	21.45M	19.07M
802.11ax HEW40_Nss2,(MCS0)_2TX	45.12M	38.201M	38M3D1D	40.62M	37.901M
802.11ax HEW80_Nss2,(MCS0)_2TX	91.2M	78.081M	78M1D1D	84.72M	77.961M

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

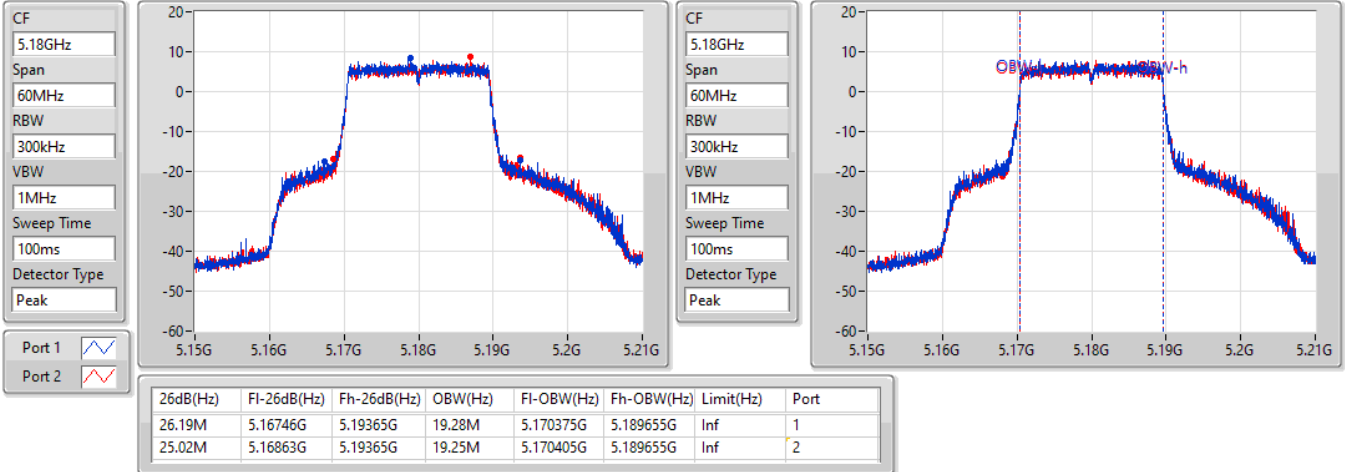
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11ax HEW20_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	26.19M	19.28M	25.02M	19.25M
5200MHz	Pass	Inf	21.81M	19.1M	21.78M	19.1M
5240MHz	Pass	Inf	21.66M	19.13M	21.45M	19.07M
802.11ax HEW40_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	Inf	44.04M	38.201M	45.12M	38.141M
5230MHz	Pass	Inf	40.74M	37.901M	40.62M	37.961M
802.11ax HEW80_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	Inf	84.72M	77.961M	91.2M	78.081M

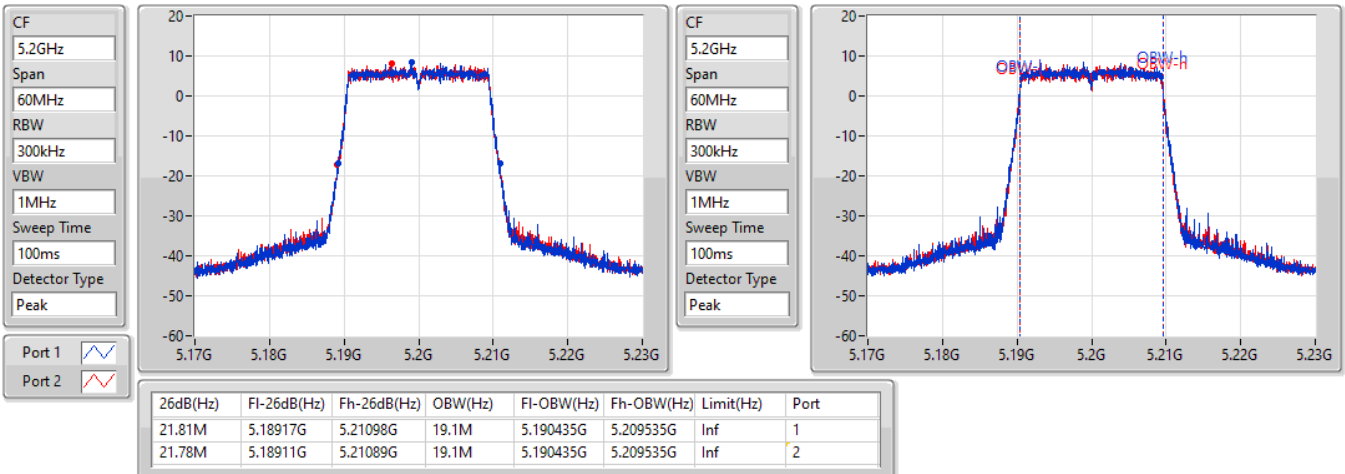
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
5180MHz

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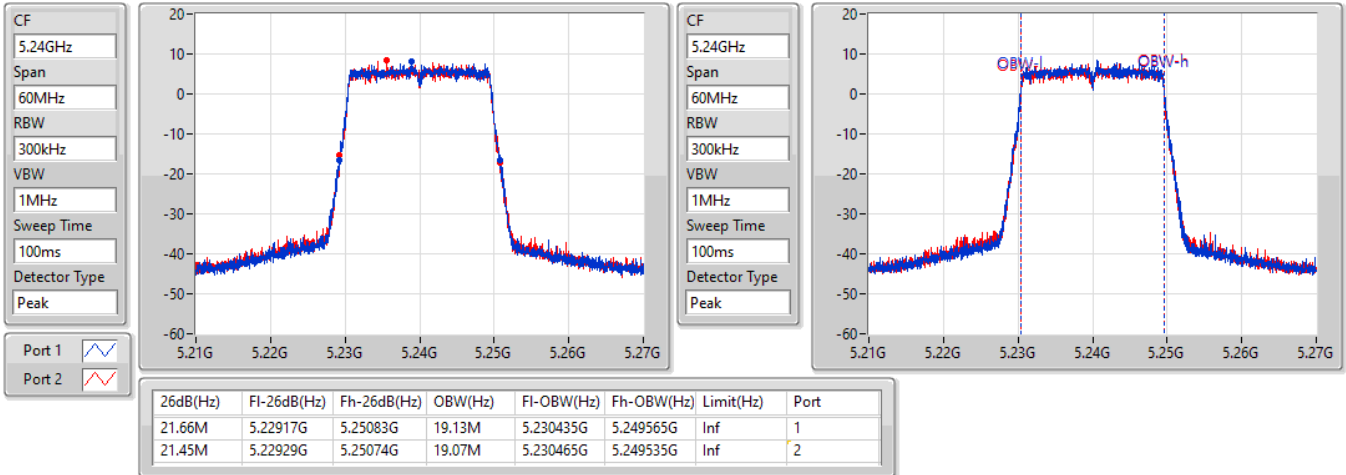

802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
5200MHz

13/07/2022

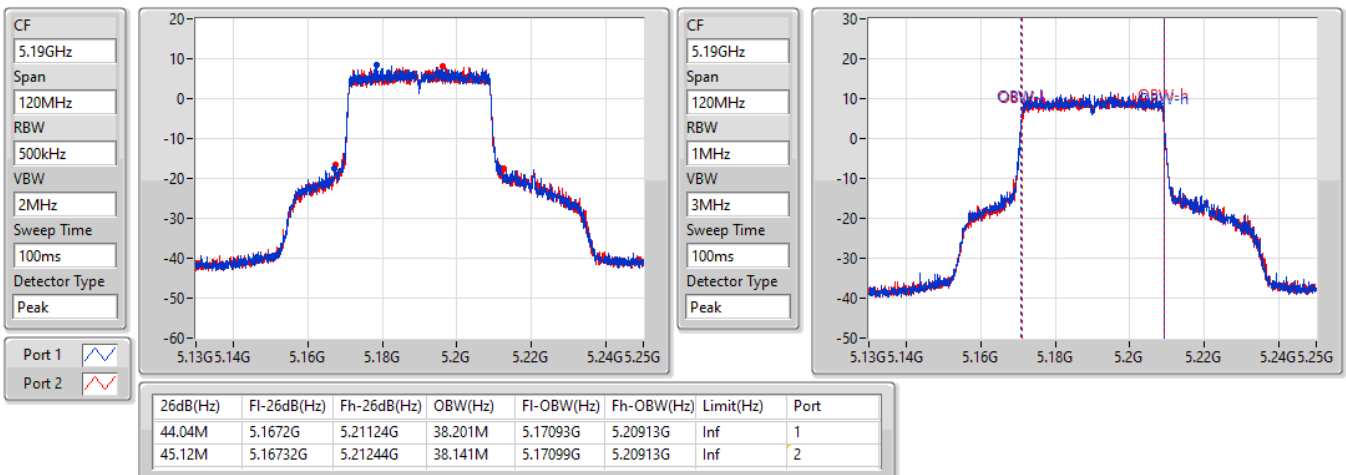


802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
5240MHz

13/07/2022

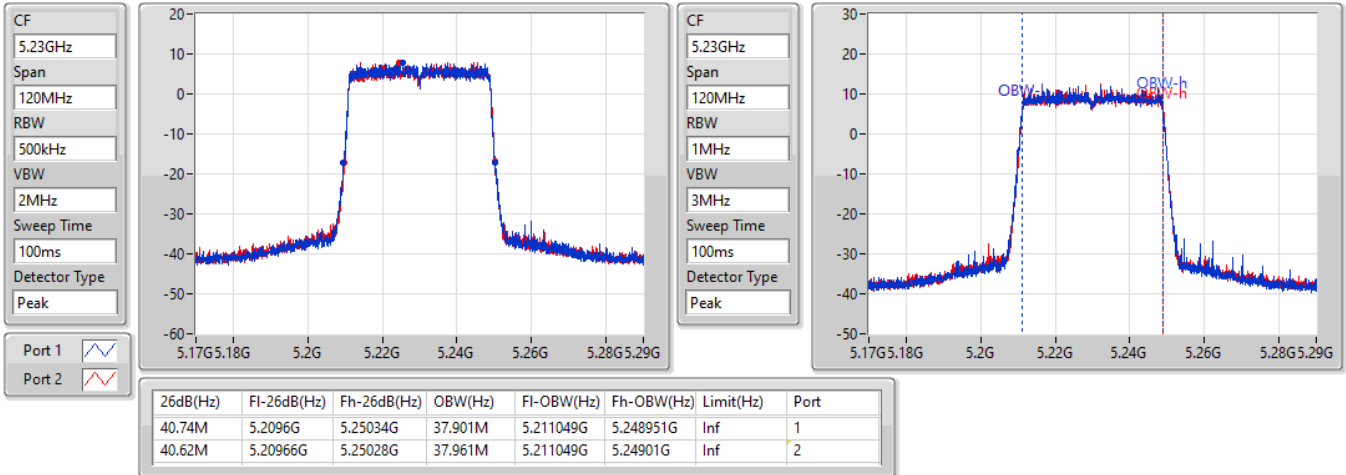

802.11ax HEW40_Nss2,(MCS0)_2TX
EBW
5190MHz

13/07/2022

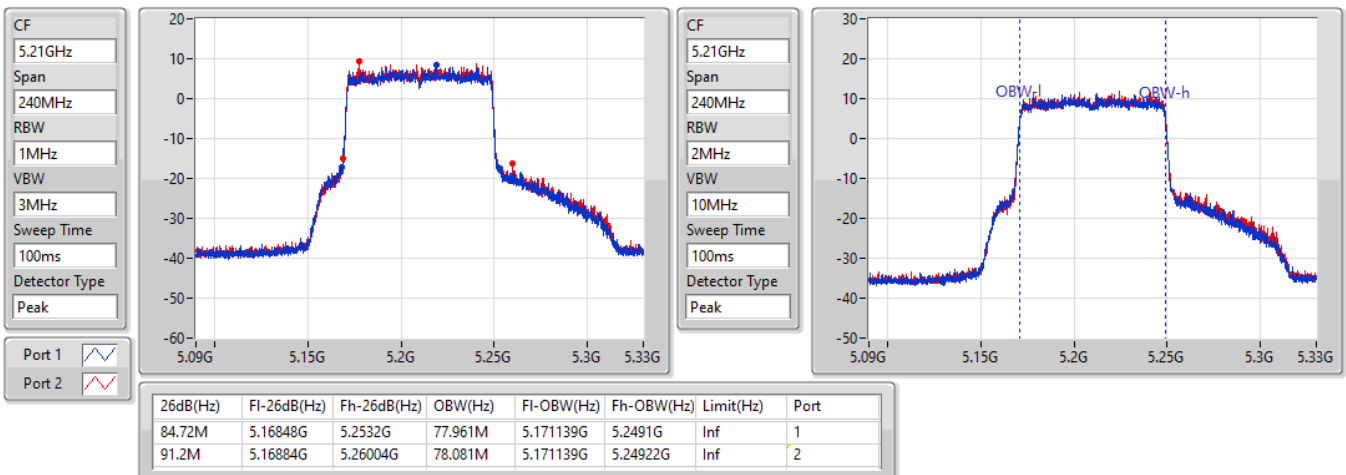


802.11ax HEW40_Nss2,(MCS0)_2TX
EBW
5230MHz

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802.11ax HEW80_Nss2,(MCS0)_2TX
EBW
5210MHz

13/07/2022



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)_4TX	27.3M	17.481M	17M5D1D	21.42M	16.912M
802.11ax HEW20_Nss1,(MCS0)_4TX	29.49M	19.31M	19M4D1D	21.57M	19.07M
802.11ax HEW40_Nss1,(MCS0)_4TX	46.2M	38.201M	38M3D1D	40.32M	37.901M
802.11ax HEW80_Nss1,(MCS0)_4TX	96M	77.961M	78M0D1D	84.24M	77.961M

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

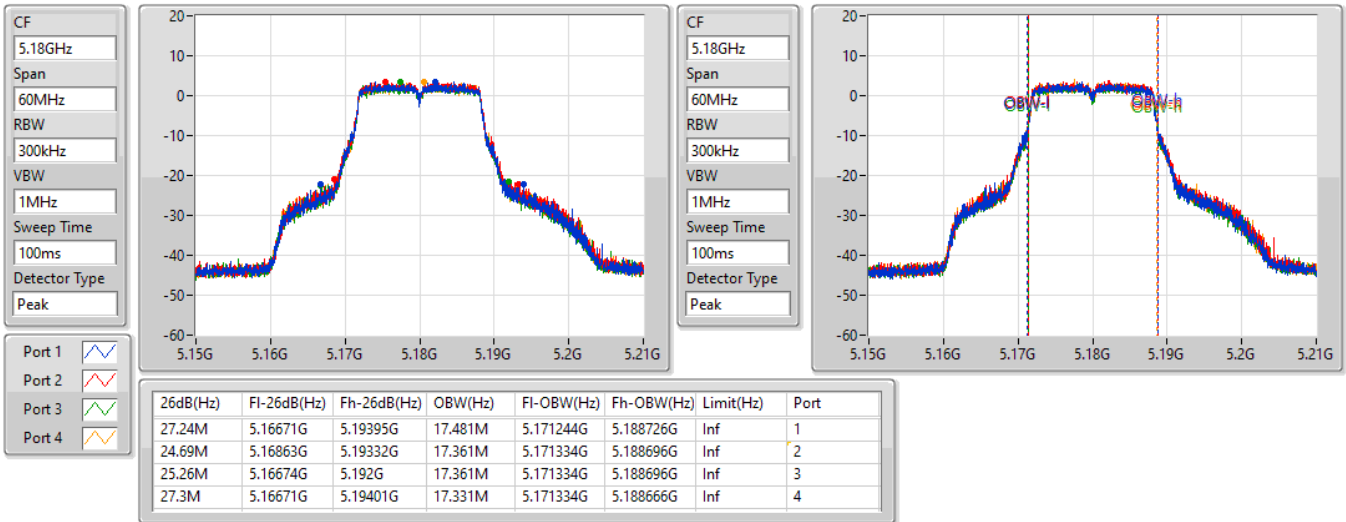
Result

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	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	27.24M	17.481M	24.69M	17.361M	25.26M	17.361M	27.3M	17.331M
5200MHz	Pass	Inf	21.78M	17.091M	21.51M	17.061M	21.51M	16.972M	21.45M	16.912M
5240MHz	Pass	Inf	21.69M	17.091M	21.42M	17.091M	21.45M	17.001M	21.48M	16.942M
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	26.82M	19.22M	24.9M	19.22M	25.23M	19.31M	29.49M	19.28M
5200MHz	Pass	Inf	21.96M	19.1M	21.63M	19.1M	21.57M	19.1M	21.81M	19.1M
5240MHz	Pass	Inf	21.93M	19.1M	21.78M	19.07M	21.72M	19.13M	21.63M	19.1M
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	46.2M	38.201M	42.84M	38.141M	43.68M	38.141M	44.1M	38.201M
5230MHz	Pass	Inf	40.74M	37.901M	40.32M	37.901M	40.56M	37.901M	40.62M	37.901M
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	84.24M	77.961M	96M	77.961M	89.16M	77.961M	84.6M	77.961M

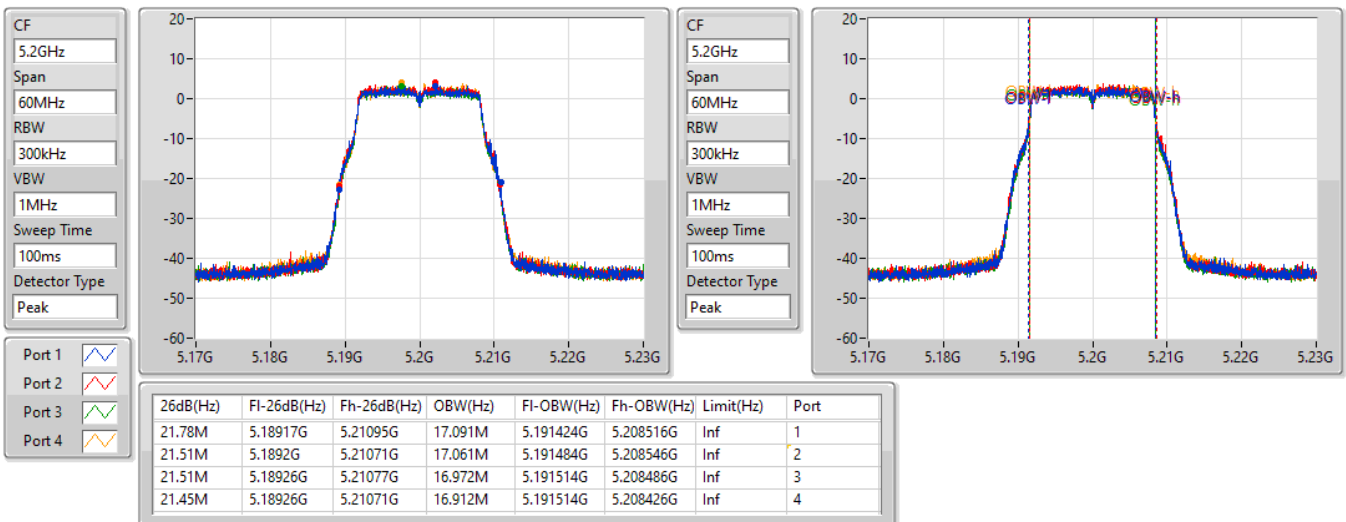
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11a_Nss1,(6Mbps)_4TX
EBW
5180MHz

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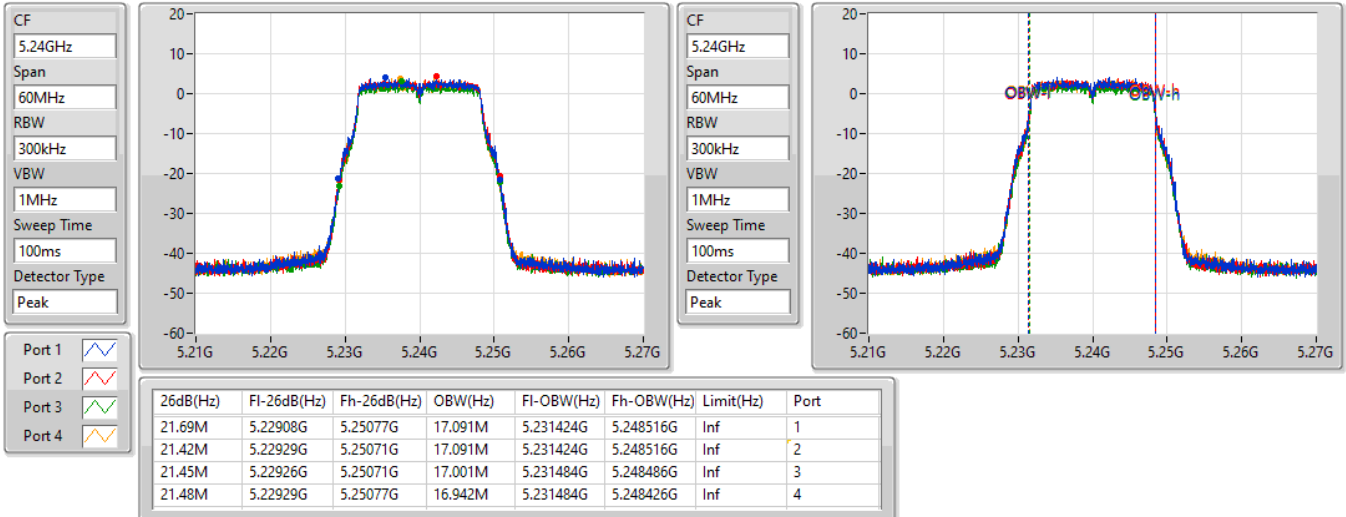

802.11a_Nss1,(6Mbps)_4TX
EBW
5200MHz

13/07/2022

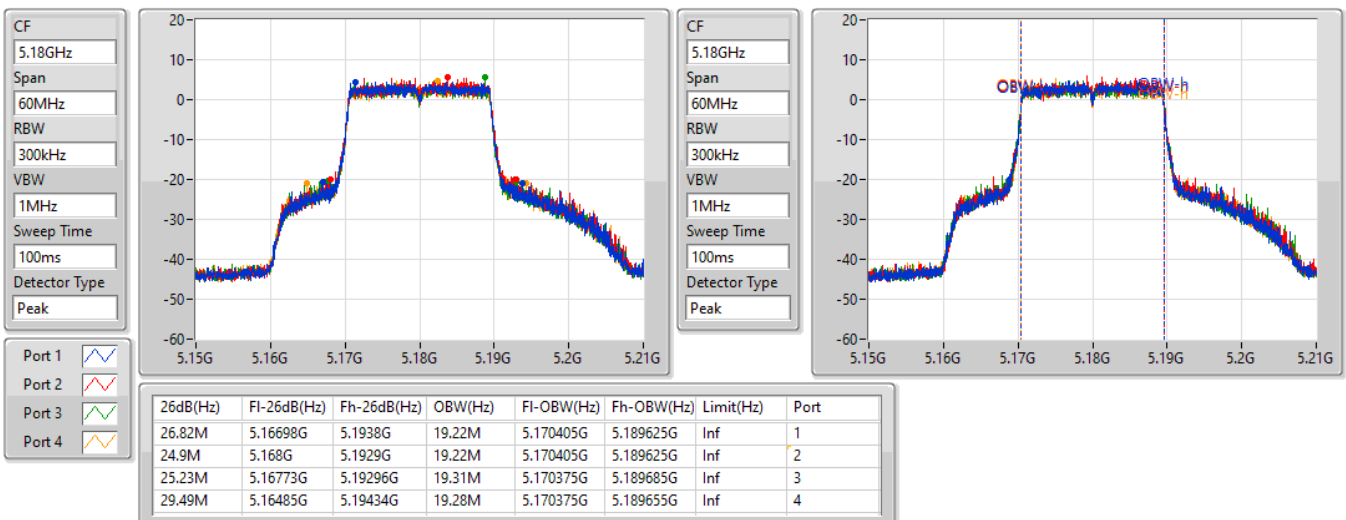


802.11a_Nss1,(6Mbps)_4TX
EBW
5240MHz

13/07/2022

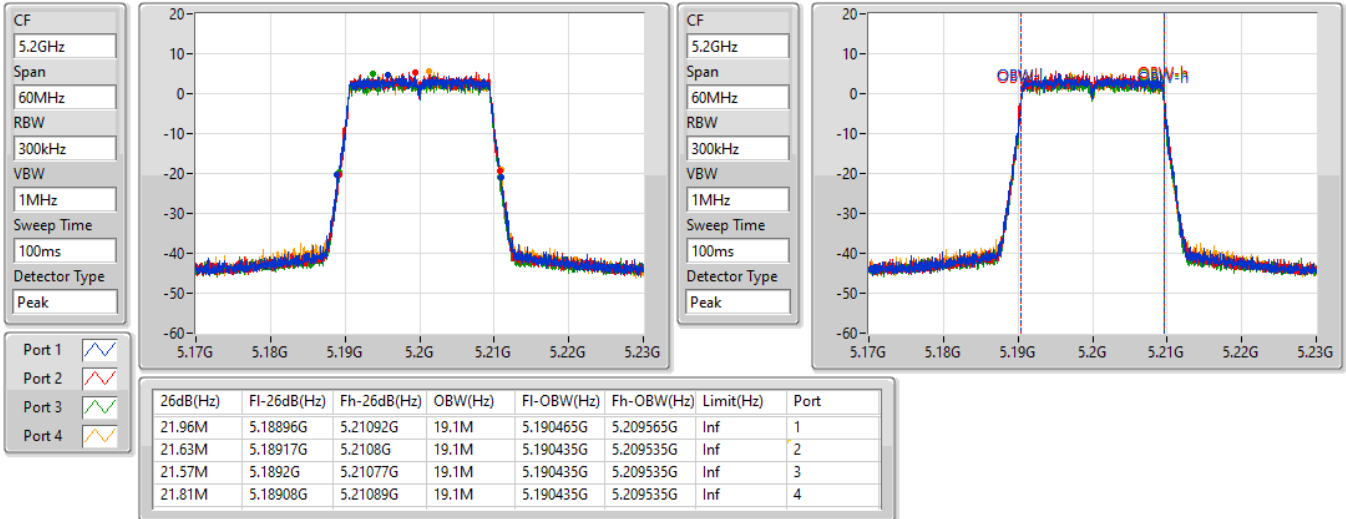

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5180MHz

13/07/2022

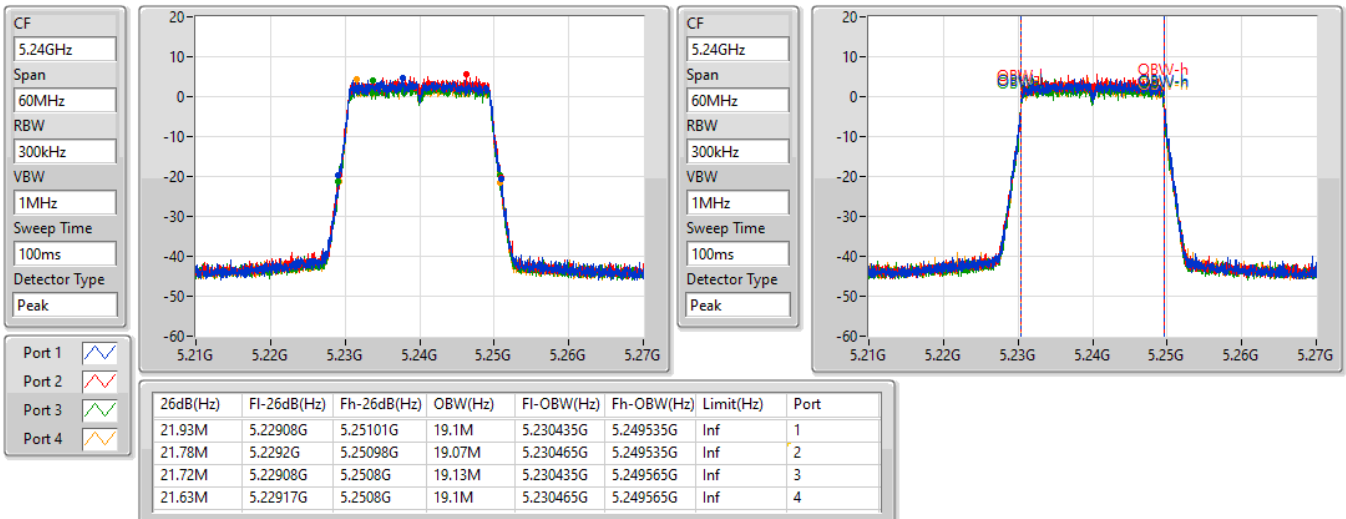


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5200MHz

13/07/2022

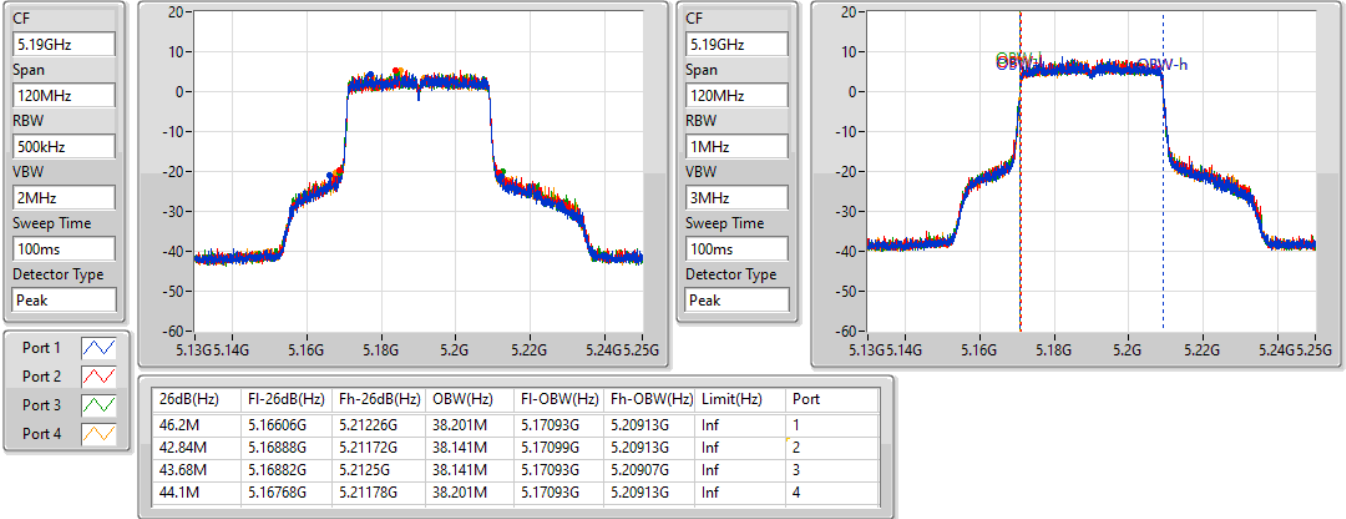

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5240MHz

13/07/2022

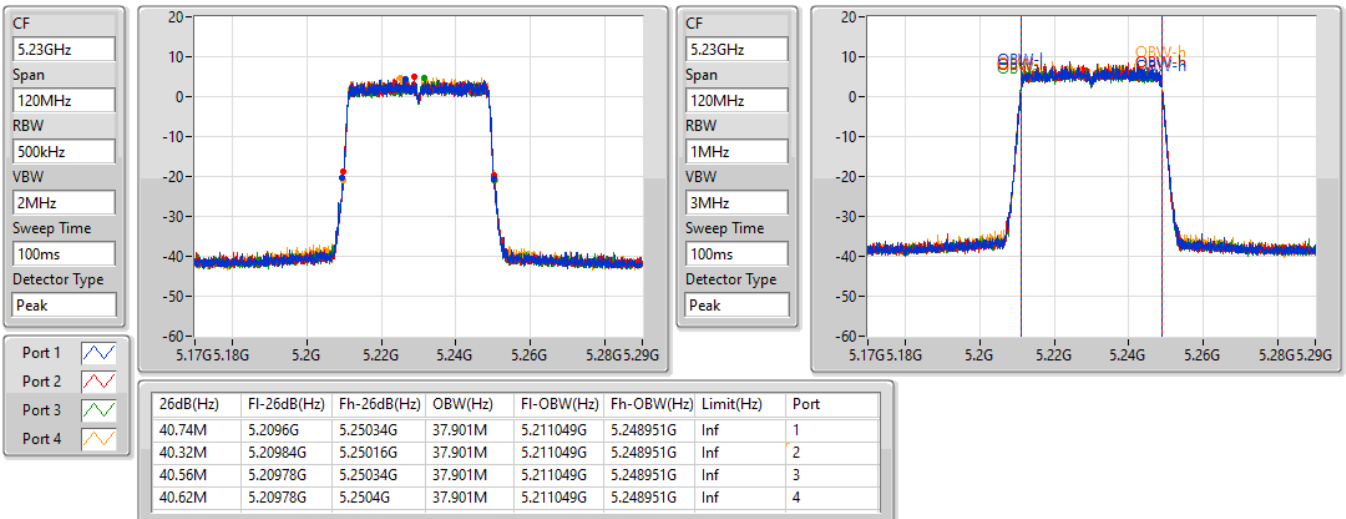


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5190MHz

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802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5230MHz

13/07/2022

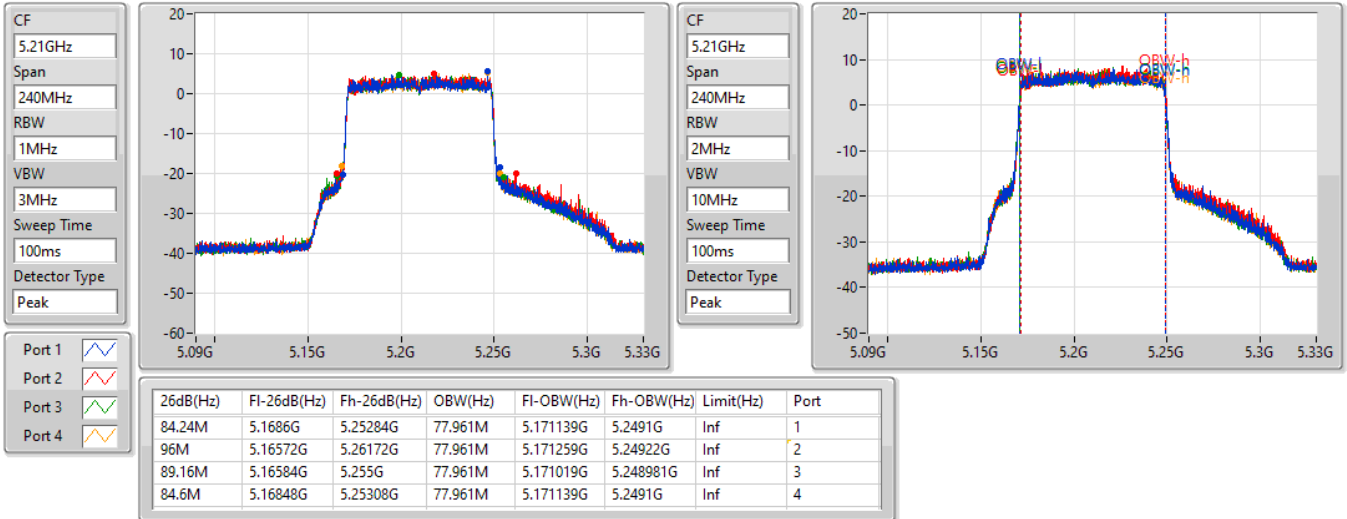


802.11ax HEW80_Nss1,(MCS0)_4TX

EBW

5210MHz

13/07/2022



Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ax HEW20_Nss4,(MCS0)_4TX	28.8M	19.25M	19M3D1D	21.48M	19.07M
802.11ax HEW40_Nss4,(MCS0)_4TX	54.06M	38.261M	38M3D1D	40.38M	37.901M
802.11ax HEW80_Nss4,(MCS0)_4TX	92.28M	78.201M	78M3D1D	85.08M	77.841M

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

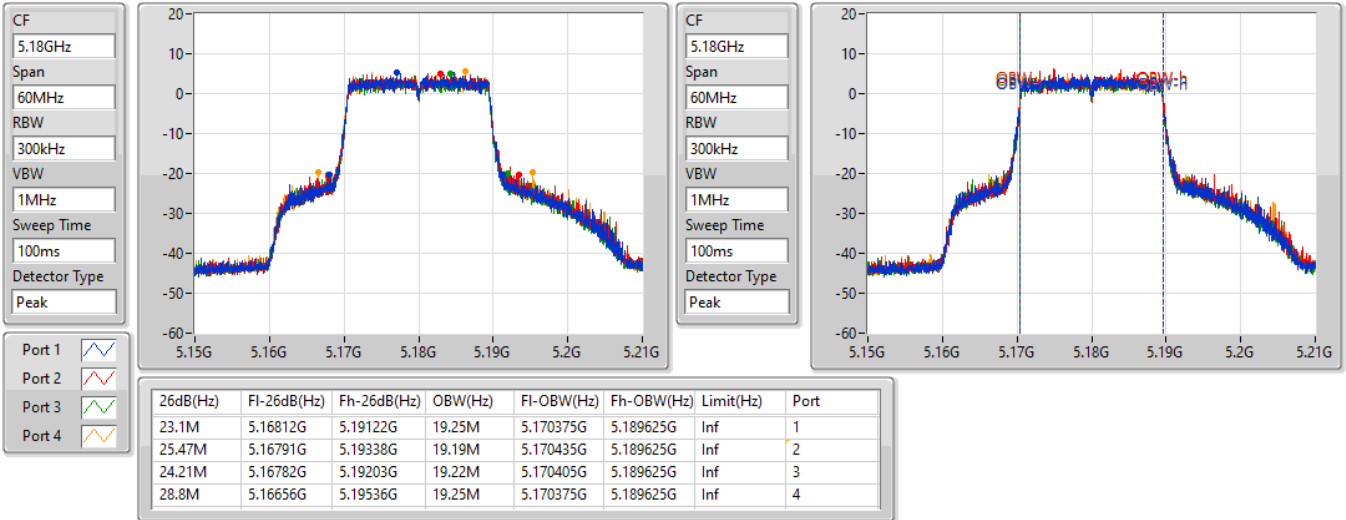
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ax HEW20_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	23.1M	19.25M	25.47M	19.19M	24.21M	19.22M	28.8M	19.25M
5200MHz	Pass	Inf	21.93M	19.16M	21.69M	19.1M	21.63M	19.1M	21.63M	19.1M
5240MHz	Pass	Inf	22.02M	19.13M	21.48M	19.13M	21.72M	19.07M	21.51M	19.1M
802.11ax HEW40_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	46.26M	38.201M	44.82M	38.261M	44.4M	38.201M	54.06M	38.141M
5230MHz	Pass	Inf	40.62M	38.021M	40.38M	37.901M	40.68M	37.901M	40.44M	37.901M
802.11ax HEW80_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	85.2M	77.841M	86.28M	78.201M	85.08M	78.081M	92.28M	77.841M

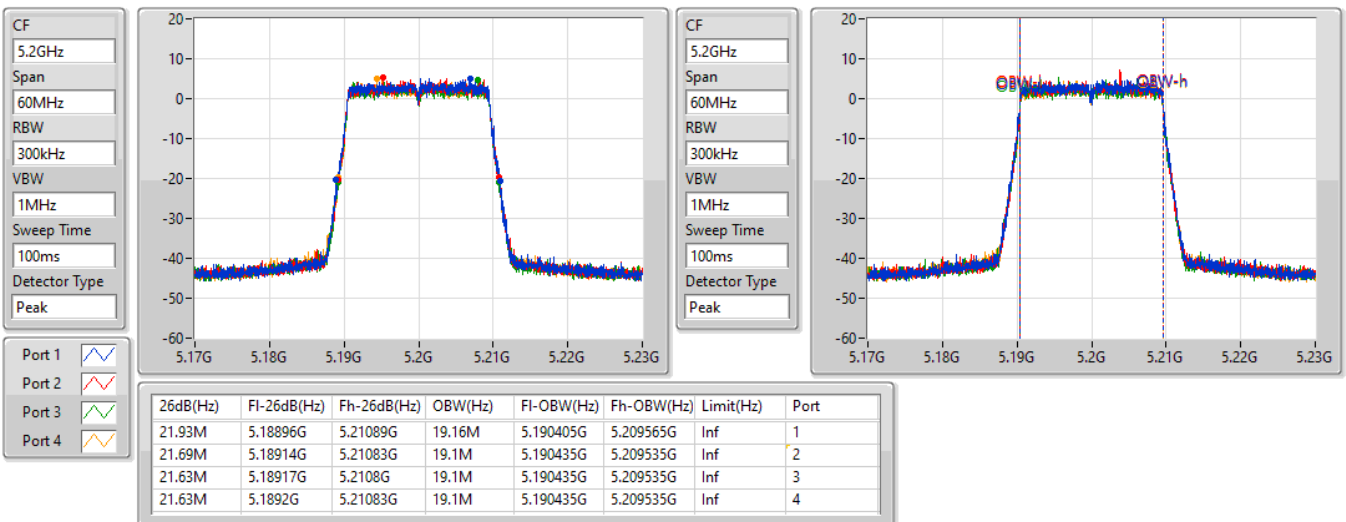
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
5180MHz

13/07/2022

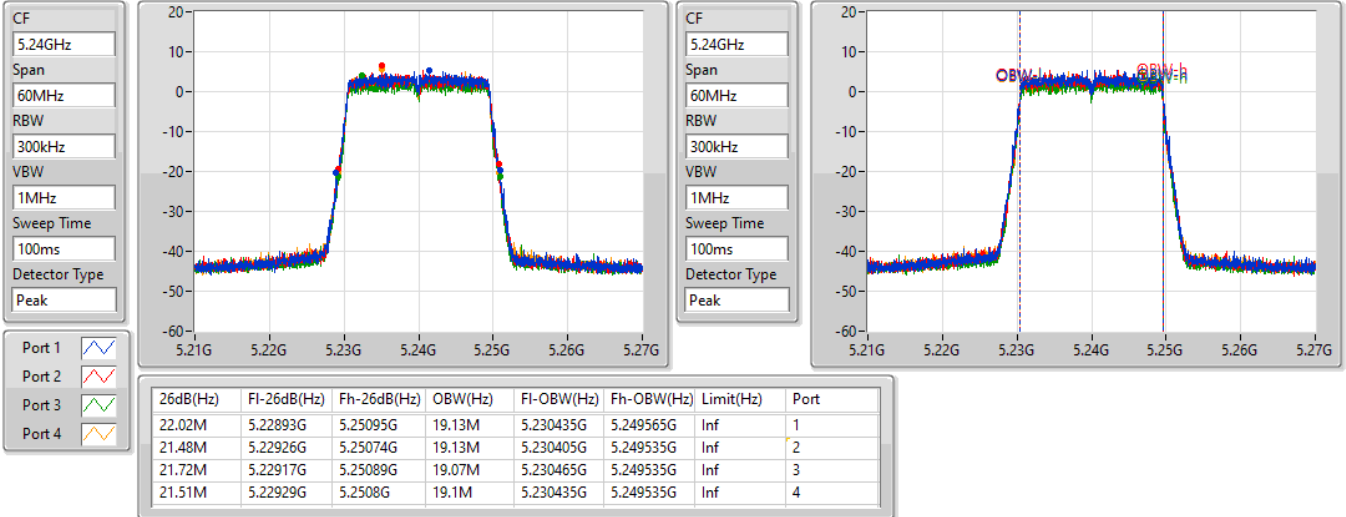

802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
5200MHz

13/07/2022

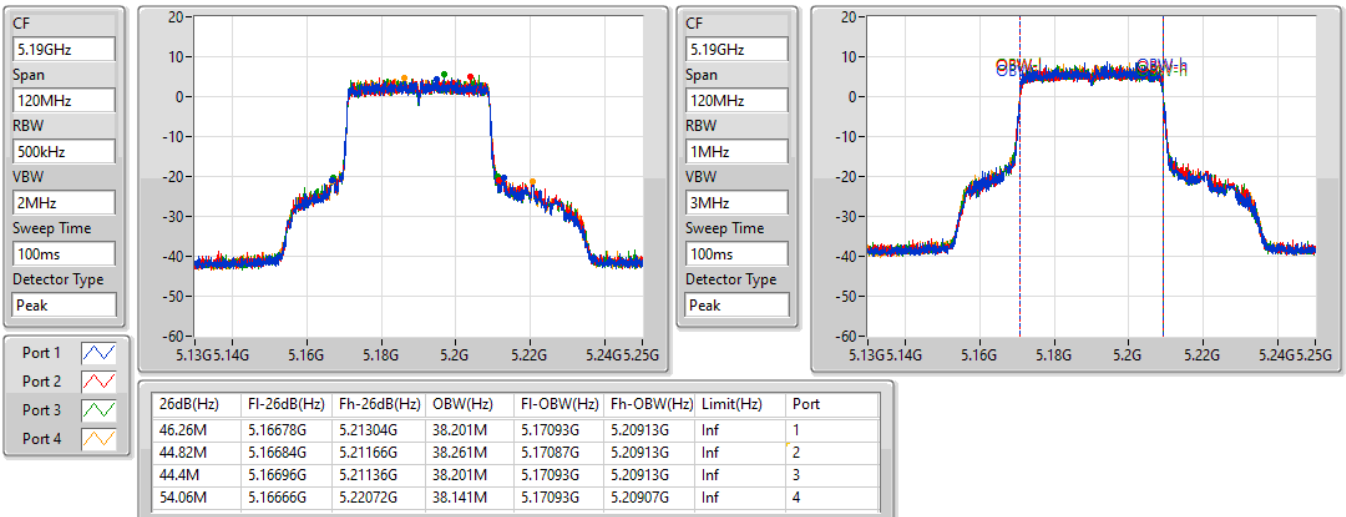


802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
5240MHz

13/07/2022

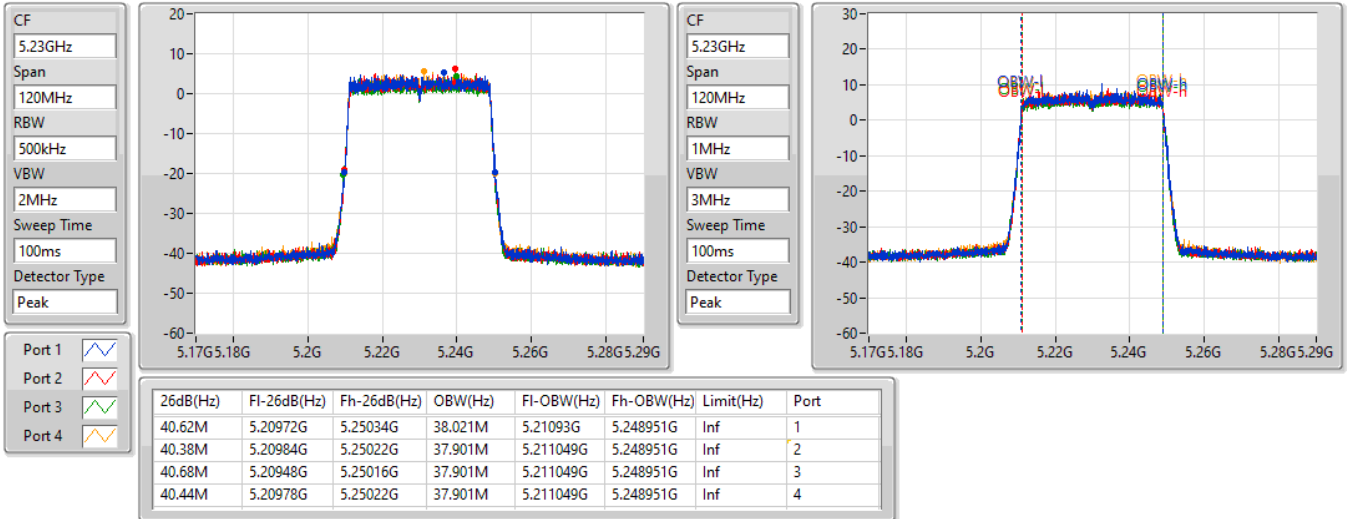

802.11ax HEW40_Nss4,(MCS0)_4TX
EBW
5190MHz

13/07/2022

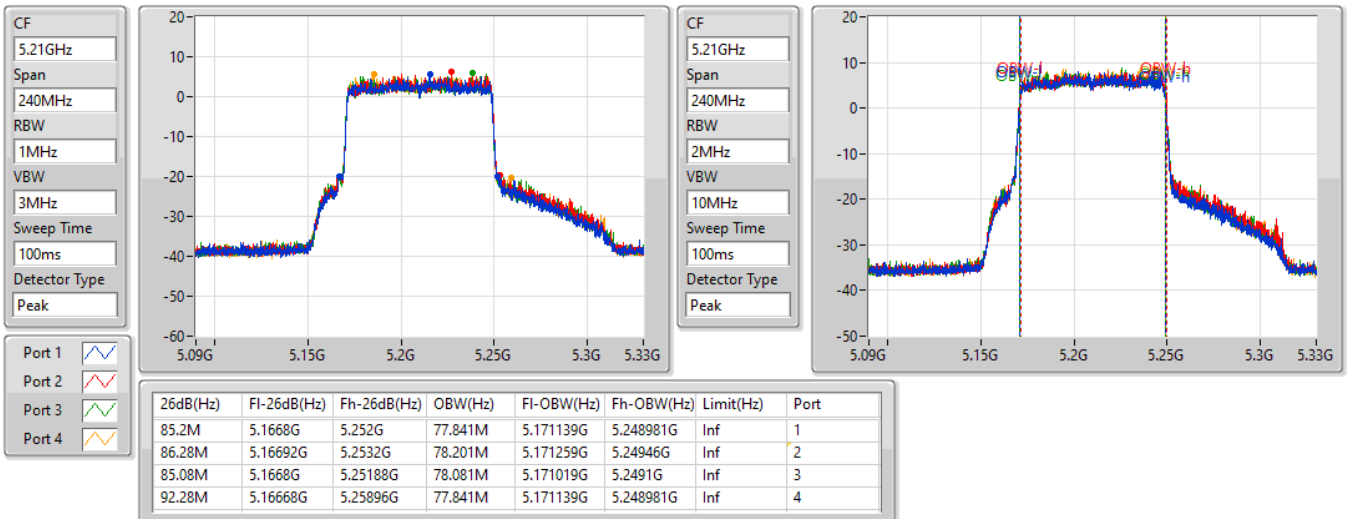


802.11ax HEW40_Nss4,(MCS0)_4TX
EBW
5230MHz

13/07/2022


802.11ax HEW80_Nss4,(MCS0)_4TX
EBW
5210MHz

13/07/2022



**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)_2TX	23.16M	17.421M	17M5D1D	21.39M	16.882M

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