

FCC Radio Test Report

FCC ID : TVE-4111BBE0671
Equipment : Secured Wireless Access Point
Brand Name : FORTINET
Model Name : FortiAP U432Fxxxxxx, FAP-U432Fxxxxxx, FORTIAP-U432Fxxxxxx
(where "x" can be "A-Z", or "0-9", or "-", or blank for software purposes or marketing purposes only)
Applicant : Fortinet, Inc.
899 Kifer Road, Sunnyvale, CA 94086, USA
Manufacturer : Fortinet, Inc.
899 Kifer Road, Sunnyvale, CA 94086, USA
Standard : 47 CFR FCC Part 15.407

The product was received on Dec. 16, 2020, and testing was started from Dec. 24, 2020 and completed on Apr. 15, 2021. We, SPORTON INTERNATIONAL INC. Hsinhua Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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



Approved by: Allen Lin

SPORTON INTERNATIONAL INC. Hsinhua Laboratory

No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)



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TEL : 886-3-3273456
FAX : 886-3-3270973
Report Template No.: HE1-D1 Ver4.0
FCC ID: TVE-4111BBE0671

Summary of Test Result

Report Clause	Ref. Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	-
-	15.207	AC Power-line Conducted Emissions	Not Required	Refer as 1.1.6
3.1	15.407(a)	Emission Bandwidth	PASS	-
3.2	15.407(a)	Maximum Conducted Output Power	PASS	-
3.3	15.407(a)	Peak Power Spectral Density	PASS	-
3.4	15.407(b)	Unwanted Emissions	PASS	-

Declaration of Conformity:

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

Comments and explanations:

None

Reviewed by: Sam Tsai

Report Producer: Debby Hung

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
5250-5350	a, n (HT20), ac (VHT20) , ax (HEW20)	5260-5320	52-64 [4]
5470-5725		5500-5700	100-140 [11]
Straddle 5720		5720	144 [1]
5725-5850		5745-5825	149-165 [5]
5250-5350	n (HT40), ac (VHT40) ,ax (HEW40)	5270-5310	54-62 [2]
5470-5725		5510-5670	102-134 [5]
Straddle 5710		5710	142 [1]
5725-5850		5755-5795	151-159 [2]
5250-5350	ac (VHT80) , ax (HEW80)	5290	58 [1]
5470-5725		5530-5610	106-122 [2]
Straddle 5690		5690	138 [1]
5725-5850		5775	155 [1]
5150-5350	ac (VHT160) ,ax (HEW160)	5250	50 [1]
5470-5725		5570	114 [1]

Non-Beamforming_Radio 1

Band	Mode	BWch (MHz)	Nant
5.47-5.725GHz	802.11a	20	4TX
5.725-5.85GHz	802.11a	20	4TX
5.47-5.725GHz	802.11n HT20	20	4TX
5.725-5.85GHz	802.11n HT20	20	4TX
5.47-5.725GHz	802.11n HT40	40	4TX
5.725-5.85GHz	802.11n HT40	40	4TX
5.47-5.725GHz	802.11ac VHT20	20	4TX
5.725-5.85GHz	802.11ac VHT20	20	4TX
5.47-5.725GHz	802.11ac VHT40	40	4TX
5.725-5.85GHz	802.11ac VHT40	40	4TX
5.47-5.725GHz	802.11ac VHT80	80	4TX
5.725-5.85GHz	802.11ac VHT80	80	4TX
5.47-5.725GHz	802.11ac VHT160	160	4TX



Band	Mode	BWch (MHz)	Nant
5.47-5.725GHz	802.11ax HEW20	20	4TX
5.725-5.85GHz	802.11ax HEW20	20	4TX
5.47-5.725GHz	802.11ax HEW40	40	4TX
5.725-5.85GHz	802.11ax HEW40	40	4TX
5.47-5.725GHz	802.11ax HEW80	80	4TX
5.725-5.85GHz	802.11ax HEW80	80	4TX
5.47-5.725GHz	802.11ax HEW160	160	4TX

Non-Beamforming_Radio 2

Band	Mode	BWch (MHz)	Nant
5.25-5.35GHz	802.11a	20	4TX
5.47-5.725GHz	802.11a	20	4TX
5.725-5.85GHz	802.11a	20	4TX
5.25-5.35GHz	802.11n HT20	20	4TX
5.47-5.725GHz	802.11n HT20	20	4TX
5.725-5.85GHz	802.11n HT20	20	4TX
5.25-5.35GHz	802.11n HT40	40	4TX
5.47-5.725GHz	802.11n HT40	40	4TX
5.725-5.85GHz	802.11n HT40	40	4TX
5.25-5.35GHz	802.11ac VHT20	20	4TX
5.47-5.725GHz	802.11ac VHT20	20	4TX
5.725-5.85GHz	802.11ac VHT20	20	4TX
5.25-5.35GHz	802.11ac VHT40	40	4TX
5.47-5.725GHz	802.11ac VHT40	40	4TX
5.725-5.85GHz	802.11ac VHT40	40	4TX
5.25-5.35GHz	802.11ac VHT80	80	4TX
5.47-5.725GHz	802.11ac VHT80	80	4TX
5.725-5.85GHz	802.11ac VHT80	80	4TX
5.15-5.25GHz	802.11ac VHT160	160	4TX
5.25-5.35GHz	802.11ac VHT160	160	4TX
5.47-5.725GHz	802.11ac VHT160	160	4TX
5.25-5.35GHz	802.11ax HEW20	20	4TX
5.47-5.725GHz	802.11ax HEW20	20	4TX
5.725-5.85GHz	802.11ax HEW20	20	4TX
5.25-5.35GHz	802.11ax HEW40	40	4TX



Band	Mode	BWch (MHz)	Nant
5.47-5.725GHz	802.11ax HEW40	40	4TX
5.725-5.85GHz	802.11ax HEW40	40	4TX
5.25-5.35GHz	802.11ax HEW80	80	4TX
5.47-5.725GHz	802.11ax HEW80	80	4TX
5.725-5.85GHz	802.11ax HEW80	80	4TX
5.15-5.25GHz	802.11ax HEW160	160	4TX
5.25-5.35GHz	802.11ax HEW160	160	4TX
5.47-5.725GHz	802.11ax HEW160	160	4TX

Non-Beamforming_Radio 3

Band	Mode	BWch (MHz)	Nant
5.25-5.35GHz	802.11a	20	2TX
5.47-5.725GHz	802.11a	20	2TX
5.725-5.85GHz	802.11a	20	2TX
5.25-5.35GHz	802.11n HT20	20	2TX
5.47-5.725GHz	802.11n HT20	20	2TX
5.725-5.85GHz	802.11n HT20	20	2TX
5.25-5.35GHz	802.11n HT40	40	2TX
5.47-5.725GHz	802.11n HT40	40	2TX
5.725-5.85GHz	802.11n HT40	40	2TX
5.25-5.35GHz	802.11ac VHT20	20	2TX
5.47-5.725GHz	802.11ac VHT20	20	2TX
5.725-5.85GHz	802.11ac VHT20	20	2TX
5.25-5.35GHz	802.11ac VHT40	40	2TX
5.47-5.725GHz	802.11ac VHT40	40	2TX
5.725-5.85GHz	802.11ac VHT40	40	2TX
5.25-5.35GHz	802.11ac VHT80	80	2TX
5.47-5.725GHz	802.11ac VHT80	80	2TX
5.725-5.85GHz	802.11ac VHT80	80	2TX
5.25-5.35GHz	802.11ax HEW20	20	2TX
5.47-5.725GHz	802.11ax HEW20	20	2TX
5.725-5.85GHz	802.11ax HEW20	20	2TX
5.25-5.35GHz	802.11ax HEW40	40	2TX
5.47-5.725GHz	802.11ax HEW40	40	2TX
5.725-5.85GHz	802.11ax HEW40	40	2TX

Band	Mode	BWch (MHz)	Nant
5.25-5.35GHz	802.11ax HEW80	80	2TX
5.47-5.725GHz	802.11ax HEW80	80	2TX
5.725-5.85GHz	802.11ax HEW80	80	2TX

Beamforming_Radio 1

Band	Mode	BWch (MHz)	Nant
5.47-5.725GHz	802.11ax HEW20-BF	20	4TX
5.725-5.85GHz	802.11ax HEW20-BF	20	4TX
5.47-5.725GHz	802.11ax HEW40-BF	40	4TX
5.725-5.85GHz	802.11ax HEW40-BF	40	4TX
5.47-5.725GHz	802.11ax HEW80-BF	80	4TX
5.725-5.85GHz	802.11ax HEW80-BF	80	4TX
5.47-5.725GHz	802.11ax HEW160-BF	160	4TX

Beamforming_Radio 2

Band	Mode	BWch (MHz)	Nant
5.25-5.35GHz	802.11ax HEW20-BF	20	4TX
5.47-5.725GHz	802.11ax HEW20-BF	20	4TX
5.725-5.85GHz	802.11ax HEW20-BF	20	4TX
5.25-5.35GHz	802.11ax HEW40-BF	40	4TX
5.47-5.725GHz	802.11ax HEW40-BF	40	4TX
5.725-5.85GHz	802.11ax HEW40-BF	40	4TX
5.25-5.35GHz	802.11ax HEW80-BF	80	4TX
5.47-5.725GHz	802.11ax HEW80-BF	80	4TX
5.725-5.85GHz	802.11ax HEW80-BF	80	4TX
5.15-5.25GHz	802.11ax HEW160-BF	160	4TX
5.25-5.35GHz	802.11ax HEW160-BF	160	4TX
5.47-5.725GHz	802.11ax HEW160-BF	160	4TX

Beamforming_Radio 3

Band	Mode	BWch (MHz)	Nant
5.25-5.35GHz	802.11ax HEW20-BF	20	2TX
5.47-5.725GHz	802.11ax HEW20-BF	20	2TX
5.725-5.85GHz	802.11ax HEW20-BF	20	2TX
5.25-5.35GHz	802.11ax HEW40-BF	40	2TX
5.47-5.725GHz	802.11ax HEW40-BF	40	2TX

Band	Mode	BWch (MHz)	Nant
5.725-5.85GHz	802.11ax HEW40-BF	40	2TX
5.25-5.35GHz	802.11ax HEW80-BF	80	2TX
5.47-5.725GHz	802.11ax HEW80-BF	80	2TX
5.725-5.85GHz	802.11ax HEW80-BF	80	2TX

Note:

- 11a, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- VHT20, VHT40, VHT80, VHT160 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.
- HEW20, HEW40, HEW80, HEW160 use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector
1	SENAO	5718A0619300	Dipole	N-type
2	SENAO	5718A0619300	Dipole	N-type
3	SENAO	5718A0619300	Dipole	N-type
4	SENAO	5718A0619300	Dipole	N-type
5	SENAO	5718A0620300	Dipole	N-type
6	SENAO	5718A0620300	Dipole	N-type
7	SENAO	5718A0620300	Dipole	N-type
8	SENAO	5718A0620300	Dipole	N-type
9	SENAO	5718A0619300	Dipole	N-type
10	SENAO	5718A0619300	Dipole	N-type
11	SENAO	5718A0618300	Dipole	N-type

Radio	Ant.	Port	Antenna Gain (dBi)				Cable Loss Gain (dBi)			
			2.4G	5G	BT	Zigbee	2.4G	5G	BT	Zigbee
1	1	1	5.5	7.2	-	-	0.6	1	-	-
	2	2	5.5	7.2	-	-	0.6	1	-	-
	3	3	5.5	7.2	-	-	0.5	0.8	-	-
	4	4	5.5	7.2	-	-	0.4	0.7	-	-
2	5	1	-	6.3	-	-	-	1	-	-
	6	2	-	6.3	-	-	-	1.1	-	-
	7	3	-	6.3	-	-	-	0.9	-	-
	8	4	-	6.3	-	-	-	0.9	-	-
3	9	1	5.5	7.2	-	-	0.6	1	-	-
	10	2	5.5	7.2	-	-	0.6	1	-	-

Radio	Ant.	Port	Antenna Gain (dBi)				Cable Loss Gain (dBi)			
			2.4G	5G	BT	Zigbee	2.4G	5G	BT	Zigbee
BT+Zigbee	11	1	-	-	4.5	4.5	-	-	0.5	0.5

Radio	Ant.	Port	At Any Elevation Angle Above 30 Degrees Gain (dBi)
1	1	1	0.16
	2	2	0.16
	3	3	0.16
	4	4	0.16
2	5	1	0.16
	6	2	0.16
	7	3	0.16
	8	4	0.16
3	9	1	0.16
	10	2	0.16

Note 1: The EUT has eleven antennas.

For 2.4GHz function:

Radio 1

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

Ant. 1 (port 1), Ant. 2 (port 2), Ant. 3 (port 3) and Ant. 4 (port 4) could transmit/receive simultaneously.

Radio 3

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

Ant. 9 (port 1) and Ant. 10 (port 2) could transmit/receive simultaneously.

For 5GHz function:

Radio 1

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

Ant. 1 (port 1), Ant. 2 (port 2), Ant. 3 (port 3) and Ant. 4 (port 4) could transmit/receive simultaneously.

Radio 2

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

Ant. 5 (port 1), Ant. 6 (port 2), Ant. 7 (port 3) and Ant. 8 (port 4) could transmit/receive simultaneously.

Radio 3

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

Ant. 9 (port 1) and Ant. 10 (port 2) could transmit/receive simultaneously.

For Bluetooth function:

For IEEE 802.15.1 Bluetooth mode (1TX/1RX)

Only Ant. 11 (port 1) could transmit/receive.

For Zigbee function:

For Zigbee mode (1TX/1RX)

Only Ant. 11 (port 1) could transmit/receive.

1.1.3 EUT Information

Operational Condition			
EUT Power Type	From PoE		
EUT Function	☒	Outdoor AP	☐ Indoor AP
	☐	Fixed P2P AP	☐ Outdoor Client
Beamforming Function	☒	With beamforming	☐ Without beamforming
TPC Function	☒	With TPC Function	☐ Without TPC Function
Weather Band	☒	With 5600~5650MHz	☐ Without 5600~5650MHz
Type of EUT			
☒	Stand-alone		
☐	Combined (EUT where the radio part is fully integrated within another device)		
	Combined Equipment - Brand Name / Model No.:		...
☐	Plug-in radio (EUT intended for a variety of host systems)		
	Host System - Brand Name / Model No.:		
☐	Other:		

1.1.4 Mode Test Duty Cycle

Non-Beamforming_Radio 1

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq$ 1/T
802.11a_Nss1,(6Mbps)_4TX	0.952	0.21	2.065m	1k
802.11n HT20_Nss1,(MCS0)_4TX	0.95	0.22	1.921m	1k
802.11n HT40_Nss1,(MCS0)_4TX	0.906	0.43	945u	3k
802.11ac VHT20_Nss1,(MCS0)_4TX	0.985	0.07	1.929m	10
802.11ac VHT40_Nss1,(MCS0)_4TX	0.97	0.13	953.125u	3k
802.11ac VHT80_Nss1,(MCS0)_4TX	0.941	0.26	461.25u	3k
802.11ac VHT160_Nss1,(MCS0)_4TX	0.897	0.47	253.125u	10k
802.11ax HEW20_Nss1,(MCS0)_4TX	0.98	0.09	1.488m	1k
802.11ax HEW40_Nss1,(MCS0)_4TX	0.962	0.17	773.125u	3k
802.11ax HEW80_Nss1,(MCS0)_4TX	0.927	0.33	401.875u	3k
802.11ax HEW160_Nss1,(MCS0)_4TX	0.885	0.53	233.125u	10k

Note. If DC < 0.98, the DCF was added while measuring Output power and PSD.

Non-Beamforming_Radio 2

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq$ 1/T
802.11a_Nss1,(6Mbps)_4TX	0.541	2.67	128.437u	10k
802.11n HT20_Nss1,(MCS0)_4TX	0.95	0.22	1.921m	1k
802.11n HT40_Nss1,(MCS0)_4TX	0.901	0.45	944.375u	3k
802.11ac VHT20_Nss1,(MCS0)_4TX	0.985	0.07	1.928m	10
802.11ac VHT40_Nss1,(MCS0)_4TX	0.971	0.13	952.5u	3k
802.11ac VHT80_Nss1,(MCS0)_4TX	0.939	0.27	460.625u	3k
802.11ac VHT160_Nss1,(MCS0)_4TX	0.901	0.45	254.375u	10k
802.11ax HEW20_Nss1,(MCS0)_4TX	0.914	0.39	318.125u	10k
802.11ax HEW40_Nss1,(MCS0)_4TX	0.903	0.44	304.375u	10k
802.11ax HEW80_Nss1,(MCS0)_4TX	0.927	0.33	401.25u	3k
802.11ax HEW160_Nss1,(MCS0)_4TX	0.89	0.51	234.375u	10k

Note. If DC < 0.98, the DCF was added while measuring Output power and PSD.

Non-Beamforming_Radio 3

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq$ 1/T
802.11a_Nss1,(6Mbps)_2TX	0.95	0.22	2.066m	1k
802.11n HT20_Nss1,(MCS0)_2TX	0.951	0.22	1.922m	1k
802.11n HT40_Nss1,(MCS0)_2TX	0.905	0.43	946u	3k
802.11ac VHT20_Nss1,(MCS0)_2TX	0.986	0.06	1.93m	10
802.11ac VHT40_Nss1,(MCS0)_2TX	0.971	0.13	953u	3k
802.11ac VHT80_Nss1,(MCS0)_2TX	0.943	0.25	462u	3k
802.11ax HEW20_Nss1,(MCS0)_2TX	0.98	0.09	1.489m	1k
802.11ax HEW40_Nss1,(MCS0)_2TX	0.963	0.16	774u	3k
802.11ax HEW80_Nss1,(MCS0)_2TX	0.928	0.32	402u	3k

Note. If DC < 0.98, the DCF was added while measuring Output power and PSD.

Beamforming_Radio 1

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq$ 1/T
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	0.929	0.32	2.932m	1k
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	0.943	0.25	4.368m	300
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	0.933	0.3	4.15m	300
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	0.95	0.22	4.83m	300

Note. If DC < 0.98, the DCF was added while measuring Output power and PSD.

Beamforming_Radio 2

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq$ 1/T
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	0.888	0.52	2.932m	1k
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	0.922	0.35	4.368m	300
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	0.939	0.27	4.15m	300
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	0.952	0.21	4.83m	300

Note. If DC < 0.98, the DCF was added while measuring Output power and PSD.

Beamforming_Radio 3

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq$ 1/T
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	0.953	0.21	2.932m	1k
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	0.951	0.22	4.368m	300
802.11ax HEW80-BF_Nss1,(MCS0)_2TX	0.955	0.2	4.15m	300

Note. If DC < 0.98, the DCF was added while measuring Output power and PSD.

1.1.5 Table for Multiple Listing

The brand/model names in the following table are all refer to the identical product.

Brand Name	Model Name	Description
FORTINET	FortiAP U432Fxxxxxx	All the models are identical, the difference model for served as marketing strategy.
	FAP-U432Fxxxxxx	
	FORTIAP-U432Fxxxxxx	

1.1.6 Table for Permissive Change

This product is an extension of original one reported under Sporton project number: FR0D1422BN

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

Modifications	Performance Checking
U-NII-2A and U-NII-2C was added	Emission Bandwidth, Maximum Conducted Output Power, Peak Power Spectral Density and Unwanted Emissions above 1GHz

1.2 Testing Applied 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
- ♦ KDB 789033 D02 v02r01

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

- ♦ KDB 662911 D01 v02r01
- ♦ KDB 414788 D01 v01r01

1.3 Testing Location Information

Test Lab. : Sporton International Inc. Hsinhua Laboratory				
☒ Hsinhua (TAF: 3785)	ADD: No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)			
	TEL: 886-3-327-3456		FAX: 886-3-327-0973	
Test site Designation No. TW3785 with FCC.				
Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH06-HY	Alan	20.1~26.9°C / 50~60%	25/Dec/2020~14/Feb/2021
Radiated	03CH02-HY	Frank	19.7~26.5°C / 50~60%	24/Dec/2020~15/Apr/2021
☐ Wen 33rd.St. (TAF: 3785)	ADD: No.14-1, Ln. 19, Wen 33rd St., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)			
	TEL: 886-3-318-0787		FAX: 886-3-318-0287	
Test site Designation No. TW0008 with FCC.				

1.4 Measurement Uncertainty

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

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	0.9 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	2.4 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.0 dB	Confidence levels of 95%
Temperature	0.41 °C	Confidence levels of 95%
Humidity	3.4 %	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Test Software Version	accessMTool_REL_3_1_0_1
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Non-Beamforming_Radio 1

Mode	Power Setting
802.11a_Nss1,(6Mbps)_4TX	-
5500MHz	46
5580MHz	42
5700MHz	45
5720MHz Straddle 5.47-5.725GHz	45
5720MHz Straddle 5.725-5.85GHz	45
802.11n HT20_Nss1,(MCS0)_4TX	-
5500MHz	46
5580MHz	43
5700MHz	46
5720MHz Straddle 5.47-5.725GHz	46
5720MHz Straddle 5.725-5.85GHz	46
802.11n HT40_Nss1,(MCS0)_4TX	-
5510MHz	54
5550MHz	56
5670MHz	57
5710MHz Straddle 5.47-5.725GHz	58
5710MHz Straddle 5.725-5.85GHz	58
802.11ac VHT20_Nss1,(MCS0)_4TX	-
5500MHz	46
5580MHz	43
5700MHz	46
5720MHz Straddle 5.47-5.725GHz	46
5720MHz Straddle 5.725-5.85GHz	46
802.11ac VHT40_Nss1,(MCS0)_4TX	-
5510MHz	54
5550MHz	56
5670MHz	57
5710MHz Straddle 5.47-5.725GHz	58



Mode	Power Setting
5710MHz Straddle 5.725-5.85GHz	58
802.11ac VHT80_Nss1,(MCS0)_4TX	-
5530MHz	53
5610MHz	68
5690MHz Straddle 5.47-5.725GHz	68
5690MHz Straddle 5.725-5.85GHz	68
802.11ac VHT160_Nss1,(MCS0)_4TX	-
5570MHz	47
802.11ax HEW20_Nss1,(MCS0)_4TX	-
5500MHz	46
5580MHz	43
5700MHz	46
5720MHz Straddle 5.47-5.725GHz	46
5720MHz Straddle 5.725-5.85GHz	46
802.11ax HEW40_Nss1,(MCS0)_4TX	-
5510MHz	54
5550MHz	56
5670MHz	57
5710MHz Straddle 5.47-5.725GHz	58
5710MHz Straddle 5.725-5.85GHz	58
802.11ax HEW80_Nss1,(MCS0)_4TX	-
5530MHz	53
5610MHz	68
5690MHz Straddle 5.47-5.725GHz	68
5690MHz Straddle 5.725-5.85GHz	68
802.11ax HEW160_Nss1,(MCS0)_4TX	-
5570MHz	47

**Non-Beamforming_Radio 2**

Mode	Power Setting
802.11a_Nss1,(6Mbps)_4TX	-
5260MHz	37
5300MHz	37
5320MHz	39
5500MHz	39
5580MHz	39
5700MHz	39
5720MHz Straddle 5.47-5.725GHz	39
5720MHz Straddle 5.725-5.85GHz	39
802.11n HT20_Nss1,(MCS0)_4TX	-
5260MHz	48
5300MHz	48
5320MHz	47
5500MHz	47
5580MHz	47
5700MHz	47
5720MHz Straddle 5.47-5.725GHz	47
5720MHz Straddle 5.725-5.85GHz	47
802.11n HT40_Nss1,(MCS0)_4TX	-
5270MHz	60
5310MHz	60
5510MHz	59
5550MHz	61
5670MHz	61
5710MHz Straddle 5.47-5.725GHz	61
5710MHz Straddle 5.725-5.85GHz	61
802.11ac VHT20_Nss1,(MCS0)_4TX	-
5260MHz	48
5300MHz	48
5320MHz	47
5500MHz	47
5580MHz	47
5700MHz	47
5720MHz Straddle 5.47-5.725GHz	47



Mode	Power Setting
5720MHz Straddle 5.725-5.85GHz	47
802.11ac VHT40_Nss1,(MCS0)_4TX	-
5270MHz	60
5310MHz	60
5510MHz	59
5550MHz	61
5670MHz	61
5710MHz Straddle 5.47-5.725GHz	61
5710MHz Straddle 5.725-5.85GHz	61
802.11ac VHT80_Nss1,(MCS0)_4TX	-
5290MHz	57
5530MHz	57
5610MHz	71
5690MHz Straddle 5.47-5.725GHz	71
5690MHz Straddle 5.725-5.85GHz	71
802.11ac VHT160_Nss1,(MCS0)_4TX	-
5250MHz Straddle 5.15-5.25GHz	54
5250MHz Straddle 5.25-5.35GHz	54
5570MHz	49
802.11ax HEW20_Nss1,(MCS0)_4TX	-
5260MHz	48
5300MHz	48
5320MHz	47
5500MHz	47
5580MHz	47
5700MHz	47
5720MHz Straddle 5.47-5.725GHz	47
5720MHz Straddle 5.725-5.85GHz	47
802.11ax HEW40_Nss1,(MCS0)_4TX	-
5270MHz	60
5310MHz	60
5510MHz	59
5550MHz	61
5670MHz	61
5710MHz Straddle 5.47-5.725GHz	61



Mode	Power Setting
5710MHz Straddle 5.725-5.85GHz	61
802.11ax HEW80_Nss1,(MCS0)_4TX	-
5290MHz	57
5530MHz	57
5610MHz	71
5690MHz Straddle 5.47-5.725GHz	71
5690MHz Straddle 5.725-5.85GHz	71
802.11ax HEW160_Nss1,(MCS0)_4TX	-
5250MHz Straddle 5.15-5.25GHz	54
5250MHz Straddle 5.25-5.35GHz	54
5570MHz	49

Non-Beamforming_Radio 3

Mode	Power Setting
802.11a_Nss1,(6Mbps)_2TX	-
5260MHz	66
5300MHz	60
5320MHz	60
5500MHz	58
5580MHz	65
5700MHz	59
5720MHz Straddle 5.47-5.725GHz	70
5720MHz Straddle 5.725-5.85GHz	70
802.11n HT20_Nss1,(MCS0)_2TX	-
5260MHz	67
5300MHz	64
5320MHz	62
5500MHz	63
5580MHz	69
5700MHz	52
5720MHz Straddle 5.47-5.725GHz	70
5720MHz Straddle 5.725-5.85GHz	70
802.11n HT40_Nss1,(MCS0)_2TX	-
5270MHz	70
5310MHz	58



Mode	Power Setting
5510MHz	59
5550MHz	74
5670MHz	64
5710MHz Straddle 5.47-5.725GHz	84
5710MHz Straddle 5.725-5.85GHz	84
802.11ac VHT20_Nss1,(MCS0)_2TX	-
5260MHz	67
5300MHz	64
5320MHz	62
5500MHz	63
5580MHz	69
5700MHz	52
5720MHz Straddle 5.47-5.725GHz	70
5720MHz Straddle 5.725-5.85GHz	70
802.11ac VHT40_Nss1,(MCS0)_2TX	-
5270MHz	70
5310MHz	58
5510MHz	59
5550MHz	74
5670MHz	64
5710MHz Straddle 5.47-5.725GHz	84
5710MHz Straddle 5.725-5.85GHz	84
802.11ac VHT80_Nss1,(MCS0)_2TX	-
5290MHz	54
5530MHz	60
5610MHz	67
5690MHz Straddle 5.47-5.725GHz	80
5690MHz Straddle 5.725-5.85GHz	80
802.11ax HEW20_Nss1,(MCS0)_2TX	-
5260MHz	67
5300MHz	64
5320MHz	62
5500MHz	63
5580MHz	69
5700MHz	52



Mode	Power Setting
5720MHz Straddle 5.47-5.725GHz	70
5720MHz Straddle 5.725-5.85GHz	70
802.11ax HEW40_Nss1,(MCS0)_2TX	-
5270MHz	70
5310MHz	58
5510MHz	59
5550MHz	74
5670MHz	64
5710MHz Straddle 5.47-5.725GHz	84
5710MHz Straddle 5.725-5.85GHz	84
802.11ax HEW80_Nss1,(MCS0)_2TX	-
5290MHz	54
5530MHz	60
5610MHz	67
5690MHz Straddle 5.47-5.725GHz	80
5690MHz Straddle 5.725-5.85GHz	80

Beamforming_Radio 1

Mode	Power Setting
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-
5500MHz	45
5580MHz	40
5700MHz	43
5720MHz Straddle 5.47-5.725GHz	44
5720MHz Straddle 5.725-5.85GHz	44
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-
5510MHz	46
5550MHz	44
5670MHz	44
5710MHz Straddle 5.47-5.725GHz	45
5710MHz Straddle 5.725-5.85GHz	45
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-
5530MHz	42
5610MHz	43
5690MHz Straddle 5.47-5.725GHz	43



Mode	Power Setting
5690MHz Straddle 5.725-5.85GHz	43
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-
5570MHz	42

Beamforming_Radio 2

Mode	Power Setting
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-
5260MHz	50
5300MHz	50
5320MHz	50
5500MHz	50
5580MHz	50
5700MHz	50
5720MHz Straddle 5.47-5.725GHz	50
5720MHz Straddle 5.725-5.85GHz	50
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-
5270MHz	49
5310MHz	52
5510MHz	50
5550MHz	49
5670MHz	51
5710MHz Straddle 5.47-5.725GHz	52
5710MHz Straddle 5.725-5.85GHz	52
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-
5290MHz	48
5530MHz	48
5610MHz	51
5690MHz Straddle 5.47-5.725GHz	51
5690MHz Straddle 5.725-5.85GHz	51
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-
5250MHz Straddle 5.15-5.25GHz	65
5250MHz Straddle 5.25-5.35GHz	65
5570MHz	50

**Beamforming_Radio 3**

Mode	Power Setting
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	-
5260MHz	68
5300MHz	65
5320MHz	67
5500MHz	62
5580MHz	67
5700MHz	58
5720MHz Straddle 5.47-5.725GHz	67
5720MHz Straddle 5.725-5.85GHz	67
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	-
5270MHz	68
5310MHz	65
5510MHz	57
5550MHz	68
5670MHz	64
5710MHz Straddle 5.47-5.725GHz	68
5710MHz Straddle 5.725-5.85GHz	68
802.11ax HEW80-BF_Nss1,(MCS0)_2TX	-
5290MHz	61
5530MHz	62
5610MHz	68
5690MHz Straddle 5.47-5.725GHz	68
5690MHz Straddle 5.725-5.85GHz	68

2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emission Bandwidth Maximum Conducted Output Power Peak Power Spectral Density
Test Condition	Conducted measurement at transmit chains

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	CTX
Orthogonal Planes of EUT	Y Plane
	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis
Operating Mode	CTX
1	Radio 1(2.4G)+ Radio 2(5G)+ Radio 3(2.4G)+ Bluetooth
2	Radio 1(5G)+ Radio 2(5G)+ Radio 3(2.4G)+ Bluetooth
3	Radio 1(5G)+ Radio 2(5G)+ Radio 3(5G)+ Bluetooth
4	Radio 1(2.4G)+ Radio 2(5G)+ Radio 3(5G)+ Bluetooth
5	Radio 1(2.4G)+ Radio 2(5G)+ Radio 3(2.4G)+Zigbee
6	Radio 1(5G)+ Radio 2(5G)+ Radio 3(2.4G)+Zigbee
7	Radio 1(5G)+ Radio 2(5G)+ Radio 3(5G)+Zigbee
8	Radio 1(2.4G)+ Radio 2(5G)+ Radio 3(5G)+Zigbee
Refer to Sporton Test Report No.: FA0D1422-01 for Co-location RF Exposure Evaluation.	

2.3 Accessories

Accessories				
PoE Adapter	Brand Name	Senao Inc.	Model Name	PIN060-54PR
	Power Rating	I/P: 100-240Vac, 1.5A, 50-60Hz, O/P: 54Vdc, 1.11A		
AC CORD	Brand Name	I-SHENG	Model Name	AC CORD 600mm
	Signal Line	0.5 meter, shielded cable, w/o ferrite core		
Ground Wire	Brand Name	BO YAO	Model Name	WIRE GEN AWG10 180cm
	Signal Line	1.8 meter, shielded cable, w/o ferrite core		
Bracket wall mount	Brand Name	XIERTEK	Model Name	BRACKET WALL MOUNT
Bracket pole mount	Brand Name	CUN SHENG	Model Name	BRACKET POLE MOUN

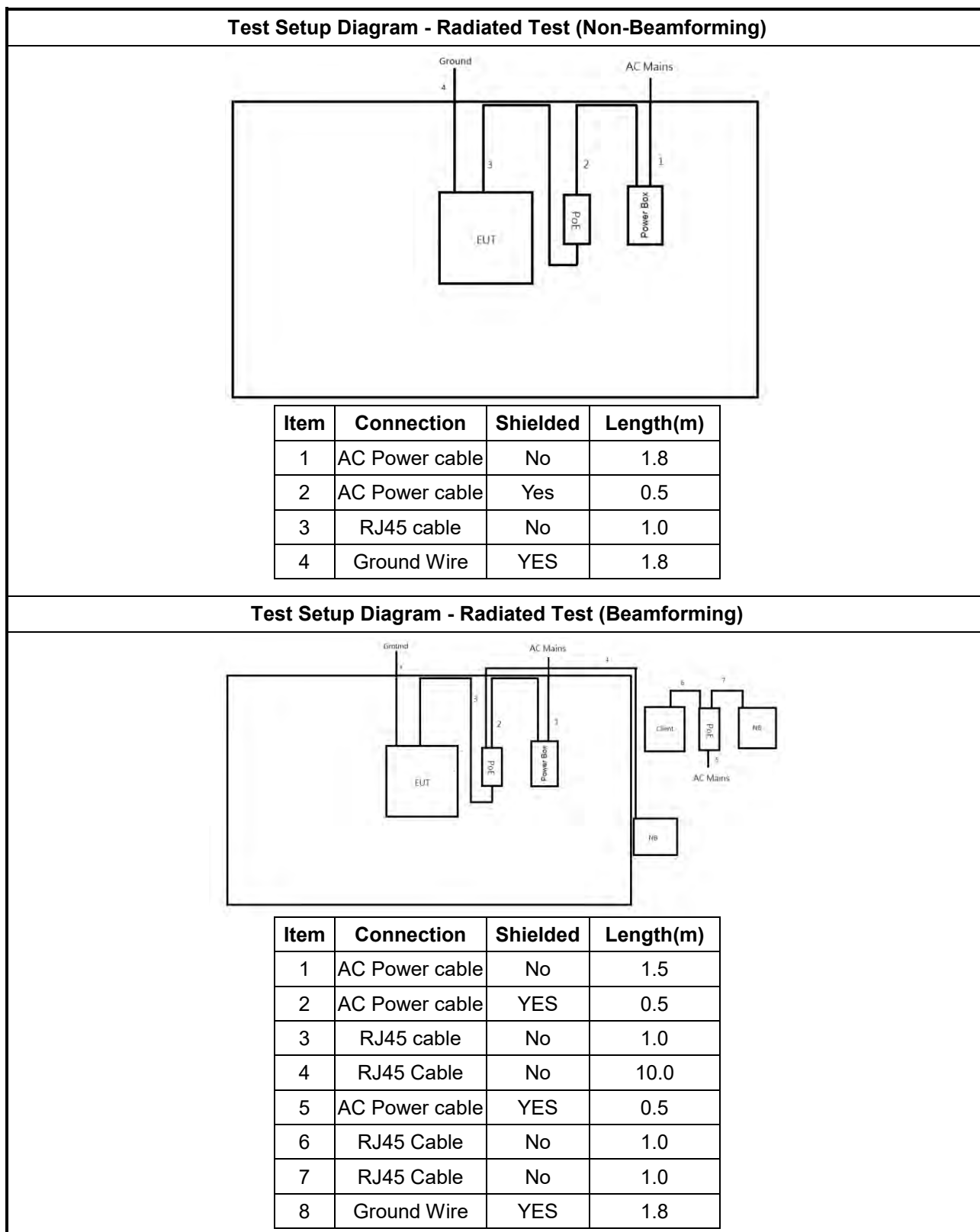
Reminder: Regarding to more detail and other information, please refer to user manual.

2.4 Support Equipment

Support Equipment – Conducted					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Notebook	DELL	E5410	-	-
2	AC Adapter for NB	DELL	HA65NM130	-	-

Support Equipment – Radiated					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	RJ45 Cable	Power Sync	CAT-6E-01	-	-
2	RJ45 Cable	Power Sync	CAT-6E-10	-	-
3	Notebook	HP	5220M	-	Remote
4	AC Adapter for NB	HP	PPP012L-E	-	Remote
5	RJ45 Cable	Power Sync	CAT-6E-01	-	Remote
6	RJ45 Cable	Power Sync	CAT-6E-10	-	Remote
7	Client	SENAO	FAP-U432F	-	Customer provide /Remote

2.5 Test Setup Diagram



3 Transmitter Test Result

3.1 Emission Bandwidth

3.1.1 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, N/A
☒	For the 5.47-5.725 GHz band, N/A
☒	For the 5.725-5.85 GHz band, 6 dB emission bandwidth $\geq$ 500kHz.

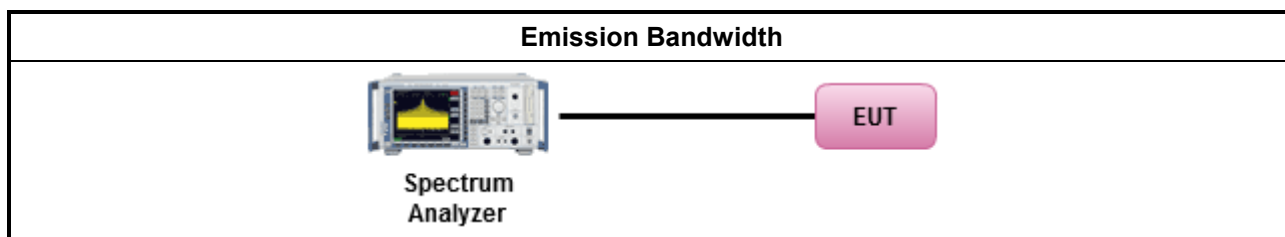
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

Test Method	
For the emission bandwidth shall be measured using one of the options below:	
☒	Refer as KDB 789033, clause C for EBW and clause D for OBW measurement.
☐	Refer as ANSI C63.10, clause 6.9.3 for occupied bandwidth testing.
☐	Refer as IC RSS-Gen, clause 6.7 for bandwidth testing.

3.1.4 Test Setup



3.1.5 Test Result of Emission Bandwidth

Refer as Appendix A

3.2 Maximum Conducted Output Power

3.2.1 Maximum Conducted Output Power Limit

Maximum Conducted 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 $11 \text{ dBm} + 10 \log B$, 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 $11 \text{ dBm} + 10 \log B$, 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.
P_{Out} = maximum conducted output power in dBm, G_{TX} = the maximum transmitting antenna directional gain in dBi.	

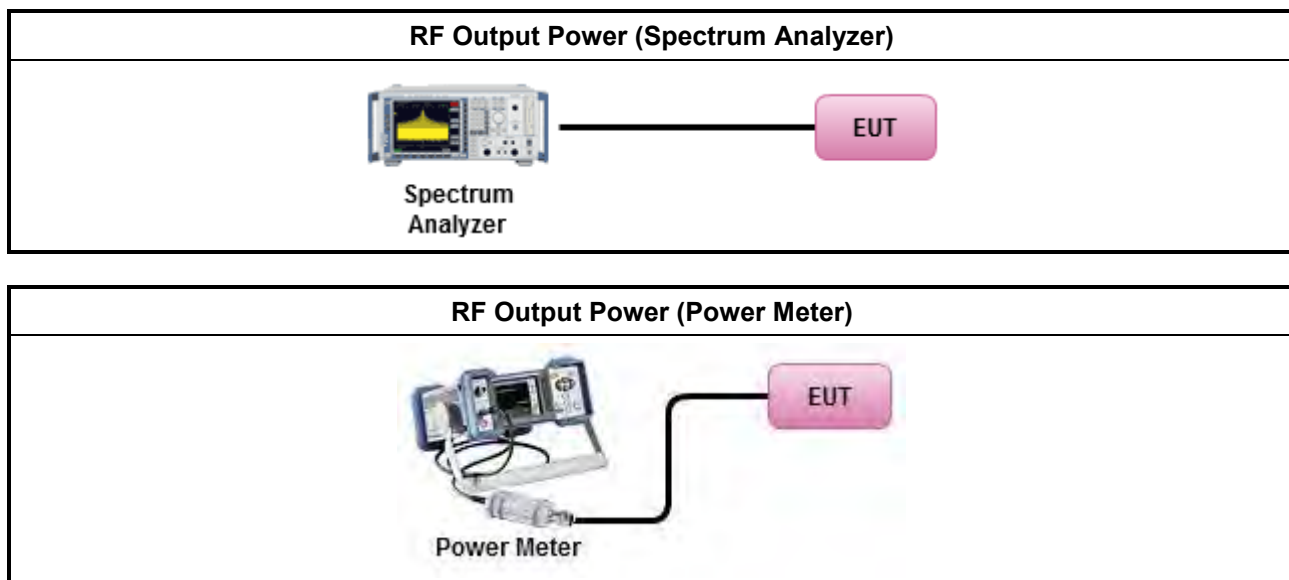
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method	
Maximum Conducted Output Power	
	Duty cycle $\geq 98\%$
☒	Refer as KDB 789033, clause E Method SA-2 (spectral trace averaging).
	Duty cycle $< 98\%$
☒	Refer as KDB 789033, 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 KDB 789033, clause E Method PM (using an RF average power meter).
For conducted measurement.	
	If the EUT supports multiple transmit chains using options given below: Refer as KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.
	If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Refer as Appendix B

3.3 Peak Power Spectral Density

3.3.1 Peak Power Spectral Density 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.
PPSD = peak power spectral density that the 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.	

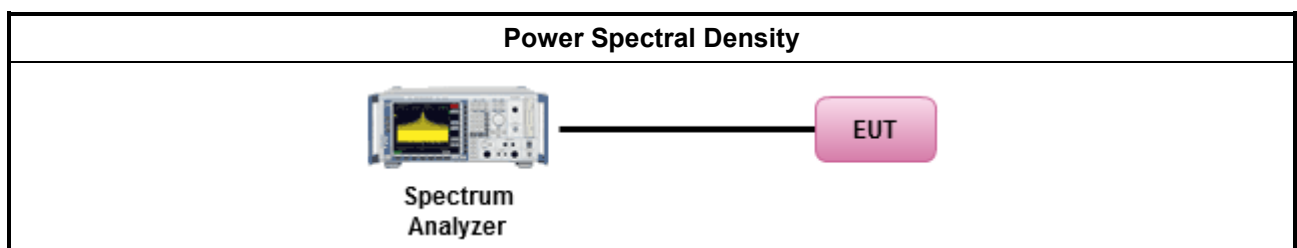
3.3.2 Measuring Instruments

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

3.3.3 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 KDB 789033, 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%
☒ Refer as KDB 789033, clause E Method SA-2 (spectral trace averaging).	Duty cycle < 98%
☒ Refer as KDB 789033, 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:	Measure and sum the spectra across the outputs. Refer as 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.
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]) $EIRP_{total} = PPSD_{total} + DG$	

3.3.4 Test Setup



3.3.5 Test Result of Peak Power Spectral Density

Refer as Appendix C

3.4 Unwanted Emissions

3.4.1 Transmitter Radiated 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	5.650-5700 GHz: e.i.r.p. -27 ~ 10 dBm [68.2 ~ 105.2 dBuV/m@3m] 5.700-5720 GHz: e.i.r.p. 10 ~ 15.6 dBm [105.2 ~ 110.8 dBuV/m@3m] 5.720-5725 GHz: e.i.r.p. 15.6 ~ 27 dBm [110.8 ~ 122.2 dBuV/m@3m] 5.850-5.855 GHz: e.i.r.p. 27 ~ 15.6 dBm [122.2 ~ 110.8 dBuV/m@3m] 5.855-5.875 GHz: e.i.r.p. 15.6 ~ 10 dBm [110.8 ~ 105.2 dBuV/m@3m] 5.875-5.925 GHz: e.i.r.p. 10 ~ -27 dBm [105.2 ~ 68.2dBuV/m@3m] Other un-restricted band: e.i.r.p. -27 dBm [68.2 dBuV/m@3m]

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).

3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

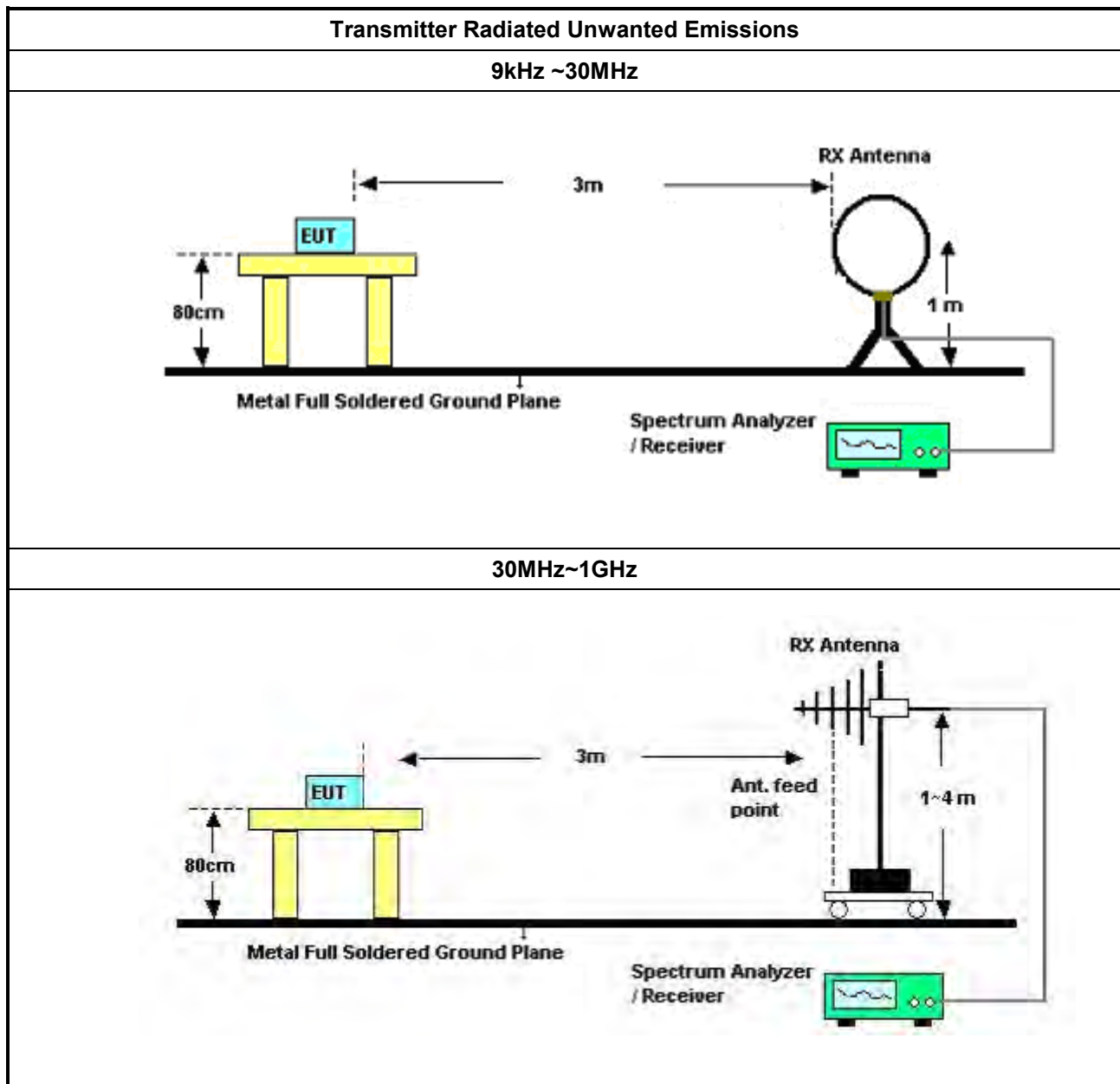
Test Method	
Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 m for frequencies above 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 KDB 789033, clause G)2) for unwanted emissions into non-restricted bands.
	Refer as KDB 789033, clause G)1) for unwanted emissions into restricted bands.
☒	Refer as KDB 789033, G)6) Method VB (ANSI C63.10, clause 4.1.4.2.3), Reduced VBW.
☒	Refer as KDB 789033, clause G)5) (ANSI C63.10, clause 4.1.4.2.2), measurement procedure peak limit.
For radiated measurement.	
	Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.
	Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.
	Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.
The any unwanted emissions level shall not exceed the fundamental emission level.	
All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.	
Use the following spectrum analyzer settings:	
	Set RBW=100 kHz for $f < 1$ GHz; VBW=3 * RBW; Sweep = auto; Detector function = peak; Trace = max hold.
	Set RBW = 1 MHz, VBW= 3MHz for $f \geq 1$ GHz for peak measurement. For average measurement, refer as 1.1.4.
KDB 414788 Open-Field Test Sites and Chamber Correlation Justification.	
	Based on FCC 15.31(f)(2): measurements may be performed at a distance closer than that specified in regulations; however, an attempt should be made to avoid making measurements in the near field.
	Open-field site and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

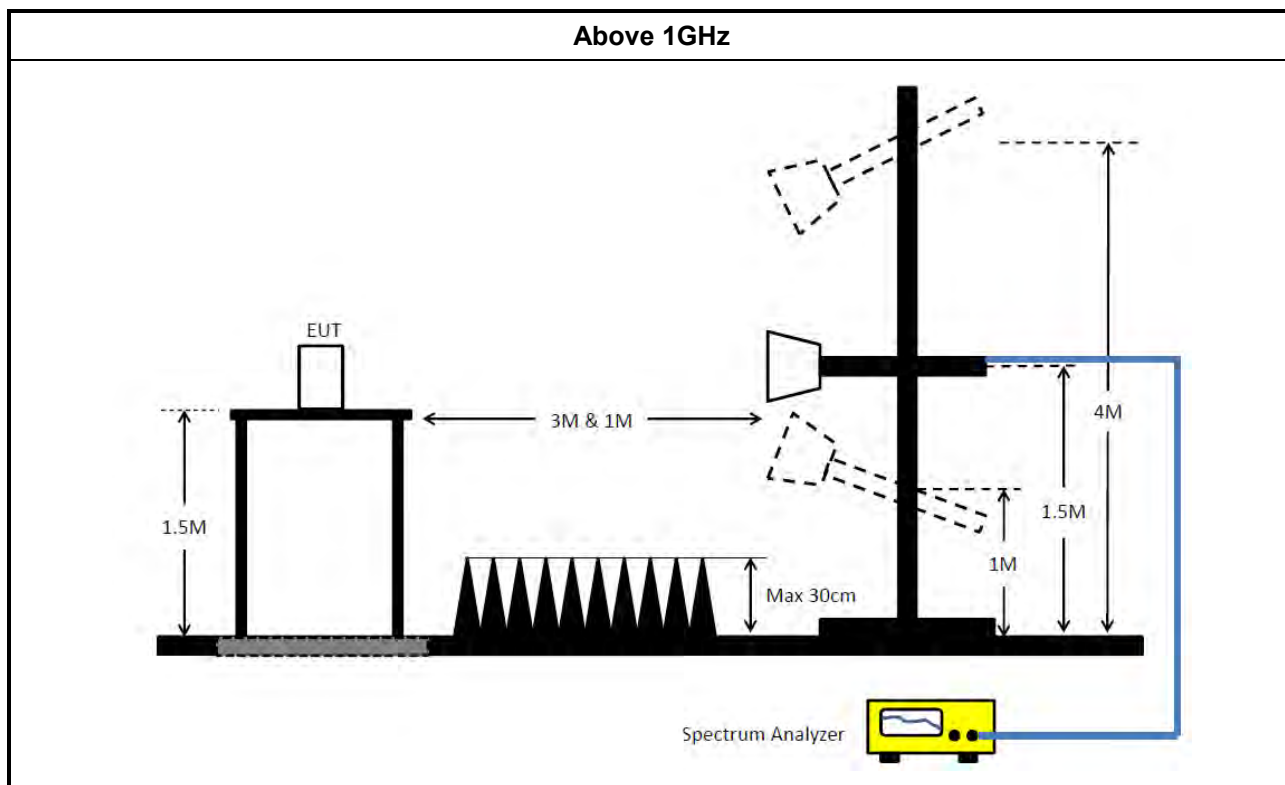
3.4.4 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Raw(Read Level) + AF(Antenna Factor) + CL(Cable Loss) - PA(Preamplifier Factor)

3.4.5 Test Setup





3.4.6 Transmitter Unwanted Emissions (Below 30MHz)

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

3.4.7 Test Result of Transmitter Unwanted Emissions

Refer as Appendix D

4 Test Equipment and Calibration Data

Instrument for Conducted Test

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Signal Analyzer	R&S	FSV 40	101029	10Hz~40GHz	19/Oct/2020	18/Oct/2021
SMB100A Signal Generator	R&S	SMB100A03	181147	100kHz~40GHz	20/Oct/2020	19/Oct/2021
Pulse Sensor	Anritsu	MA2411B	1339407	300MHz~40GHz	27/Nov/2020	26/Nov/2021
Power Meter	Anritsu	ML2495A	1517010	300MHz~40GHz	27/Nov/2020	26/Nov/2021

Instrument for Radiated Test

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH02-HY	1GHz~18GHz 3m	02/Aug/2020	01/Aug/2021
Signal Analyzer	R&S	FSV40	101500	10Hz~40GHz	19/Aug/2020	18/Aug/2021
Microwave Preamplifier	Agilent	8449B	3008A02373	1GHz~18GHz	23/Oct/2020	22/Oct/2021
Double Ridged Guide Horn Antenna	SCHWARZBEC	BBHA 9120 D	BBHA 9120 D 01543	1GHz~18GHz	09/Jun/2020	08/Jun/2021
RF Cable-R03m	HUBER+SUHNER	SUCOFLEX104	805193/4+8051 92/4	1GHz~40GHz	08/Apr/2020	07/Apr/2021
RF Cable-R03m	HUBER+SUHNER	SUCOFLEX104	805193/4+8051 92/4	1GHz~40GHz	06/Apr/2021	05/Apr/2022
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170221	18GHz~40GHz	13/Mar/2020	12/Mar/2021
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170221	18GHz~40GHz	11/Mar/2021	10/Mar/2022
Preamplifier	MITEQ	TTA1840-35-HG	1864481	18GHz~40GHz	10/Mar/2020	09/Mar/2021
Microwave Preamplifier	EMC INSTRUMENTS	EM18G40G	060604	18GHz~40GHz	09/Mar/2021	08/Mar/2022

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.47-5.725GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	21.75M	16.852M	16M9D1D	15.565M	13.413M
802.11n HT20_Nss1,(MCS0)_4TX	21.78M	17.931M	17M9D1D	15.73M	13.977M
802.11n HT40_Nss1,(MCS0)_4TX	40.2M	36.522M	36M5D1D	34.763M	33.092M
802.11ac VHT20_Nss1,(MCS0)_4TX	21.87M	17.961M	18M0D1D	15.785M	13.991M
802.11ac VHT40_Nss1,(MCS0)_4TX	40.26M	36.582M	36M6D1D	34.864M	33.092M
802.11ac VHT80_Nss1,(MCS0)_4TX	82.32M	76.282M	76M3D1D	75.52M	72.534M
802.11ac VHT160_Nss1,(MCS0)_4TX	164.64M	154.483M	154MD1D	163.2M	154.003M
802.11ax HEW20_Nss1,(MCS0)_4TX	21.78M	19.04M	19M0D1D	15.675M	14.526M
802.11ax HEW40_Nss1,(MCS0)_4TX	40.08M	37.841M	37M8D1D	34.931M	33.733M
802.11ax HEW80_Nss1,(MCS0)_4TX	82.32M	77.721M	77M7D1D	75.668M	73.197M
802.11ax HEW160_Nss1,(MCS0)_4TX	164.16M	155.202M	155MD1D	163.44M	154.723M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	3.18M	4.018M	4M02D1D	3.105M	3.898M
802.11n HT20_Nss1,(MCS0)_4TX	3.75M	4.273M	4M27D1D	3.735M	4.198M
802.11n HT40_Nss1,(MCS0)_4TX	3.12M	3.463M	3M46D1D	3.105M	3.388M
802.11ac VHT20_Nss1,(MCS0)_4TX	3.75M	4.303M	4M30D1D	3.735M	4.243M
802.11ac VHT40_Nss1,(MCS0)_4TX	3.18M	3.448M	3M45D1D	3.09M	3.433M
802.11ac VHT80_Nss1,(MCS0)_4TX	3.105M	3.583M	3M58D1D	3.09M	3.478M
802.11ax HEW20_Nss1,(MCS0)_4TX	4.485M	4.573M	4M57D1D	4.41M	4.528M
802.11ax HEW40_Nss1,(MCS0)_4TX	3.825M	4.018M	4M02D1D	3.69M	3.988M
802.11ax HEW80_Nss1,(MCS0)_4TX	3.795M	4.063M	4M06D1D	3.69M	4.018M

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	-	-	-	-	-	-	-	-	-	-
5500MHz	Pass	Inf	21.48M	16.672M	21.57M	16.852M	21.66M	16.792M	21.63M	16.762M
5580MHz	Pass	Inf	21.39M	16.702M	21.75M	16.762M	21.66M	16.732M	21.51M	16.732M
5700MHz	Pass	Inf	21.39M	16.702M	21.66M	16.762M	21.66M	16.822M	21.39M	16.702M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.565M	13.413M	15.661M	13.468M	15.799M	13.427M	15.593M	13.441M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.18M	4.003M	3.12M	4.018M	3.105M	3.958M	3.12M	3.898M
802.11n HT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5500MHz	Pass	Inf	21.75M	17.931M	21.57M	17.871M	21.45M	17.841M	21.42M	17.901M
5580MHz	Pass	Inf	21.78M	17.871M	21.51M	17.871M	21.51M	17.901M	21.48M	17.841M
5700MHz	Pass	Inf	21.66M	17.931M	21.54M	17.841M	21.48M	17.871M	21.45M	17.931M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.854M	14.032M	15.813M	14.018M	15.73M	14.004M	15.73M	13.977M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.735M	4.273M	3.75M	4.258M	3.735M	4.198M	3.735M	4.243M
802.11n HT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5510MHz	Pass	Inf	40.2M	36.402M	39.42M	36.402M	39.78M	36.462M	39.66M	36.402M
5550MHz	Pass	Inf	40.02M	36.402M	39.42M	36.402M	39.72M	36.402M	39.66M	36.342M
5670MHz	Pass	Inf	40.08M	36.402M	39.54M	36.342M	39.9M	36.462M	39.54M	36.522M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	35.134M	33.092M	34.763M	33.092M	35.066M	33.16M	35.033M	33.16M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.105M	3.463M	3.12M	3.448M	3.105M	3.448M	3.105M	3.388M
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5500MHz	Pass	Inf	21.87M	17.901M	21.6M	17.901M	21.42M	17.841M	21.72M	17.901M
5580MHz	Pass	Inf	21.78M	17.931M	21.51M	17.901M	21.66M	17.901M	21.69M	17.901M
5700MHz	Pass	Inf	21.72M	17.961M	21.57M	17.871M	21.48M	17.961M	21.69M	17.931M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.813M	14.004M	15.799M	14.018M	15.785M	14.004M	15.868M	13.991M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.735M	4.303M	3.75M	4.288M	3.75M	4.243M	3.735M	4.273M
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5510MHz	Pass	Inf	40.26M	36.402M	39.84M	36.342M	40.08M	36.522M	39.84M	36.522M
5550MHz	Pass	Inf	40.26M	36.462M	39.66M	36.342M	40.08M	36.462M	39.9M	36.402M
5670MHz	Pass	Inf	40.26M	36.462M	39.78M	36.402M	40.02M	36.582M	39.6M	36.402M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	35.066M	33.16M	34.864M	33.193M	35.1M	33.092M	34.931M	33.092M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.09M	3.433M	3.18M	3.448M	3.105M	3.433M	3.105M	3.433M
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5530MHz	Pass	Inf	81.6M	75.802M	81.12M	76.042M	81.36M	75.922M	81.72M	75.922M
5610MHz	Pass	Inf	82.32M	76.162M	81.6M	76.282M	81.6M	76.282M	81.84M	76.162M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	75.594M	72.607M	75.52M	72.534M	75.594M	72.681M	75.889M	72.681M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.105M	3.583M	3.105M	3.583M	3.105M	3.508M	3.09M	3.478M
802.11ac VHT160_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5570MHz	Pass	Inf	163.2M	154.003M	164.64M	154.483M	164.64M	154.483M	163.44M	154.243M
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5500MHz	Pass	Inf	21.63M	19.01M	21.45M	19.04M	21.51M	19.01M	21.72M	19.04M
5580MHz	Pass	Inf	21.69M	19.04M	21.63M	19.04M	21.75M	19.01M	21.69M	19.01M
5700MHz	Pass	Inf	21.57M	19.01M	21.54M	18.981M	21.78M	19.04M	21.69M	18.981M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.744M	14.568M	15.675M	14.526M	15.785M	14.554M	15.675M	14.54M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	4.425M	4.543M	4.425M	4.573M	4.41M	4.528M	4.485M	4.573M
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5510MHz	Pass	Inf	40.02M	37.781M	39.78M	37.781M	39.96M	37.781M	40.08M	37.721M
5550MHz	Pass	Inf	40.08M	37.781M	39.9M	37.661M	40.02M	37.841M	40.02M	37.721M
5670MHz	Pass	Inf	40.08M	37.721M	39.84M	37.721M	39.96M	37.601M	39.96M	37.721M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	34.931M	33.733M	34.931M	33.733M	35.168M	33.733M	34.999M	33.767M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.735M	4.003M	3.825M	4.018M	3.69M	3.988M	3.825M	4.018M
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5530MHz	Pass	Inf	81.84M	77.121M	82.2M	77.241M	81.84M	77.361M	81.6M	77.481M
5610MHz	Pass	Inf	82.32M	77.601M	82.2M	77.721M	81.96M	77.601M	81.84M	77.361M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	75.668M	73.492M	75.815M	73.197M	76.036M	73.492M	75.889M	73.492M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.795M	4.063M	3.78M	4.018M	3.69M	4.018M	3.69M	4.018M
802.11ax HEW160_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-



EBW_Non-Beamforming_Radio 1

Appendix A.1

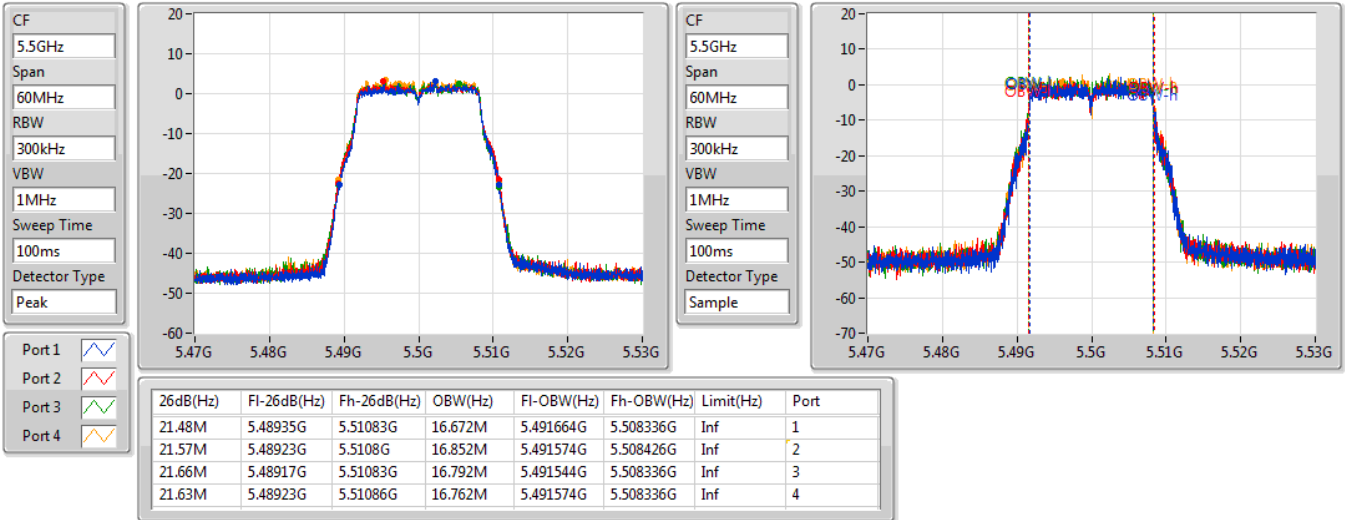
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
5570MHz	Pass	Inf	163.44M	154.723M	163.92M	155.202M	164.16M	154.963M	164.16M	154.963M

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

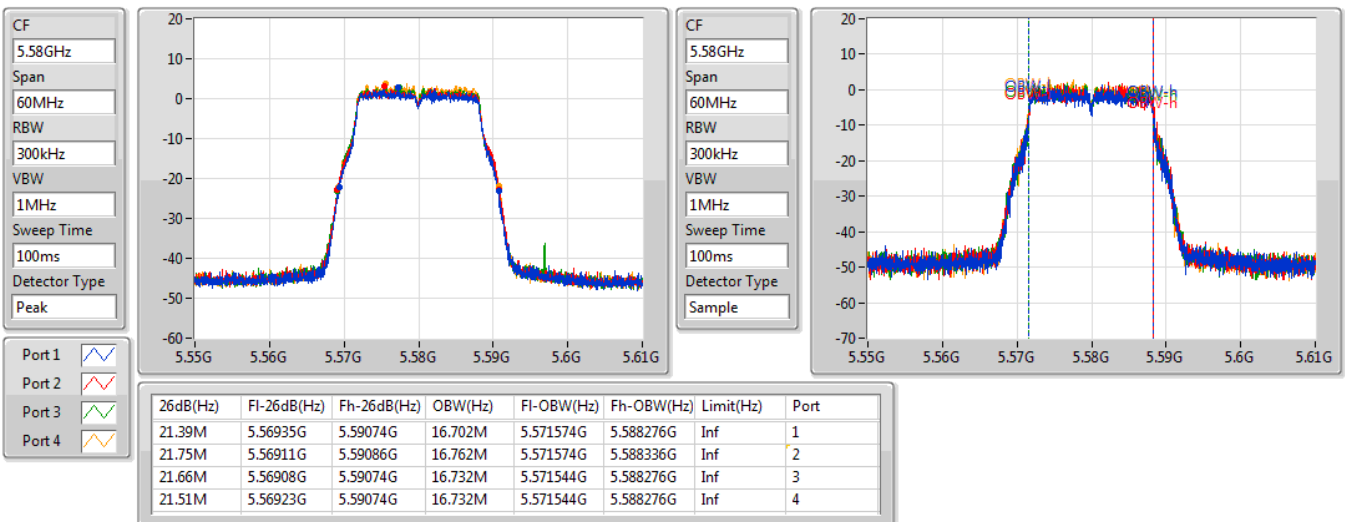
Port X-OBW = Port X 99% occupied bandwidth

802.11a_Nss1,(6Mbps)_4TX
EBW
5500MHz

29/12/2020

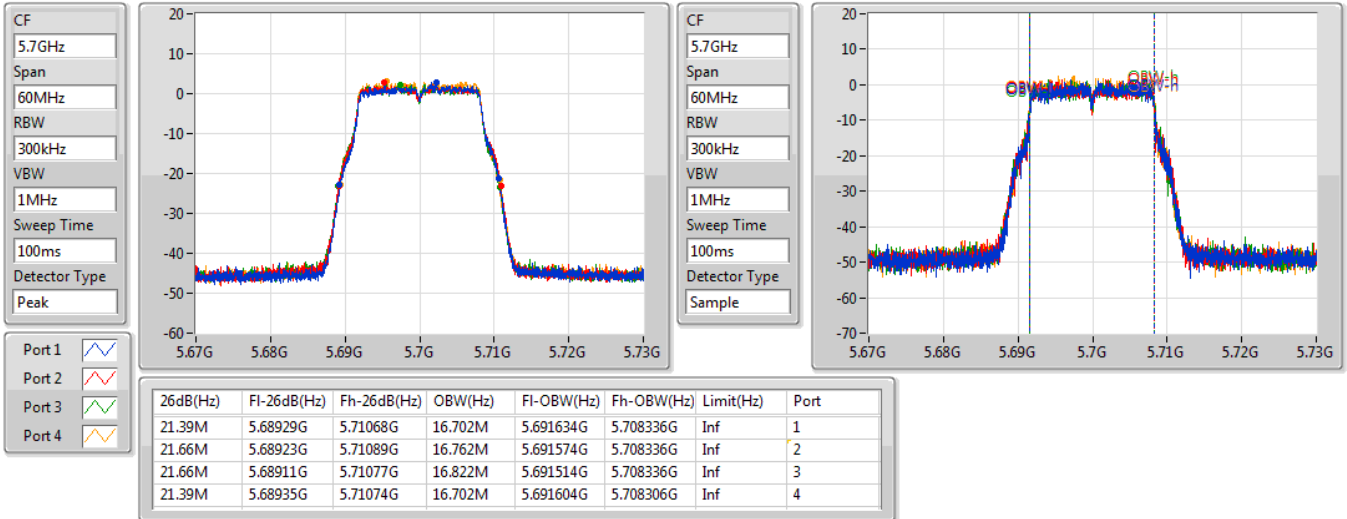

802.11a_Nss1,(6Mbps)_4TX
EBW
5580MHz

29/12/2020

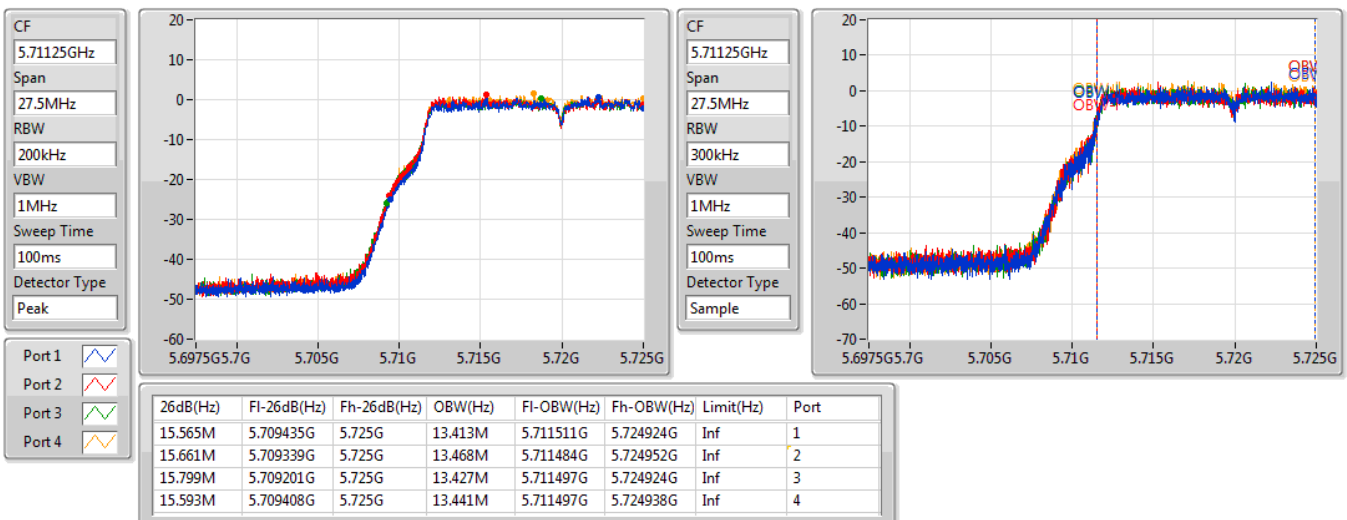


802.11a_Nss1,(6Mbps)_4TX
EBW
5700MHz

29/12/2020

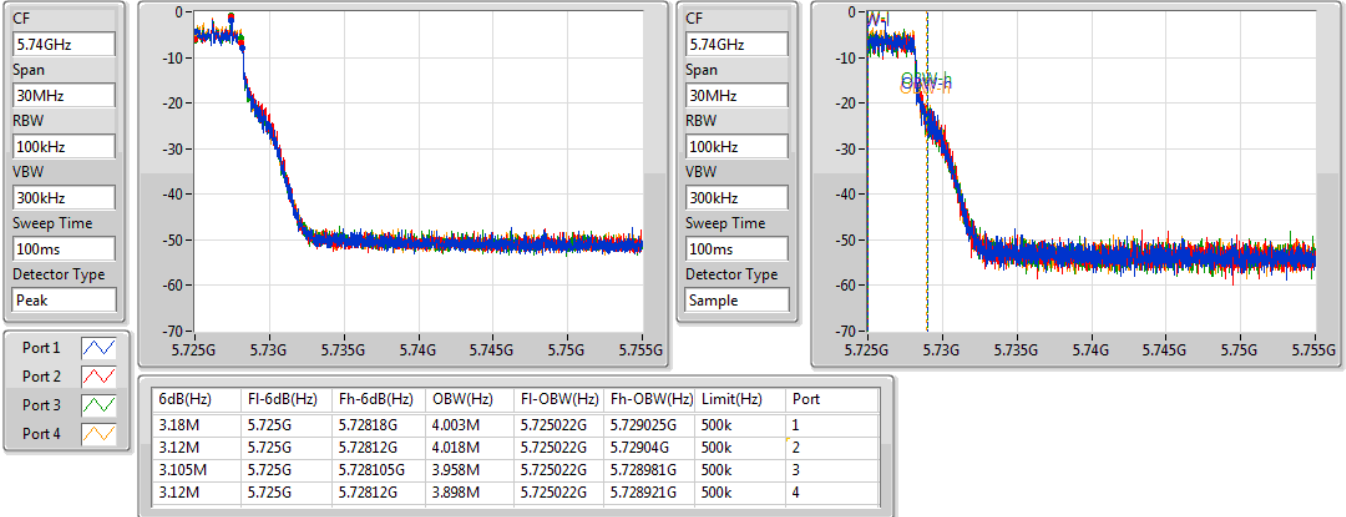

802.11a_Nss1,(6Mbps)_4TX
EBW
5720MHz Straddle 5.47-5.725GHz

29/12/2020

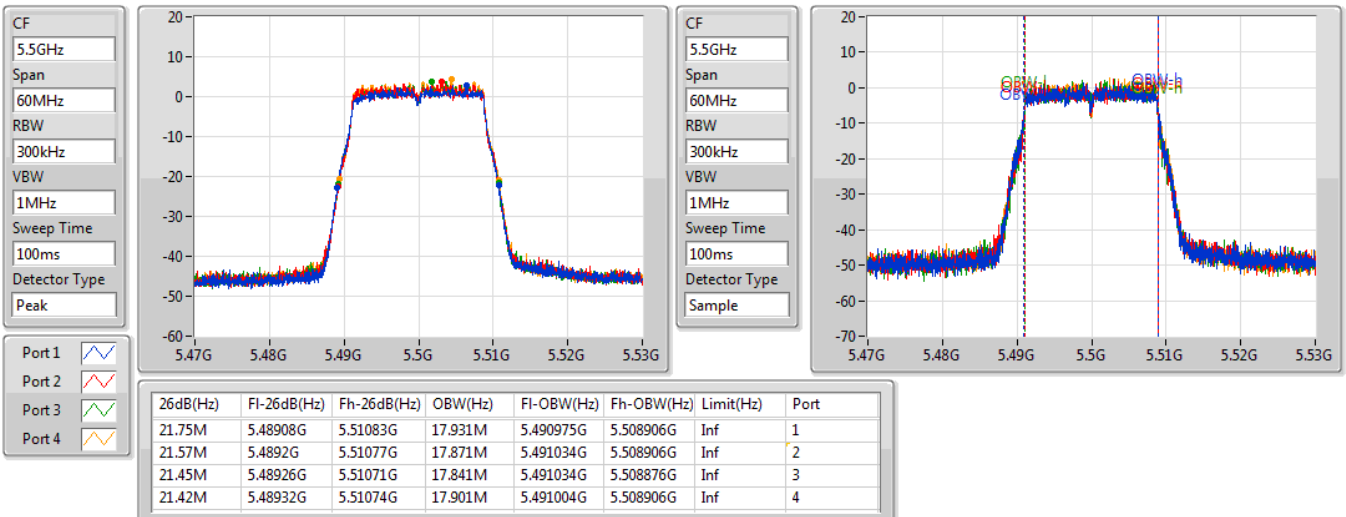


802.11a_Nss1,(6Mbps)_4TX
EBW
5720MHz Straddle 5.725-5.85GHz

29/12/2020

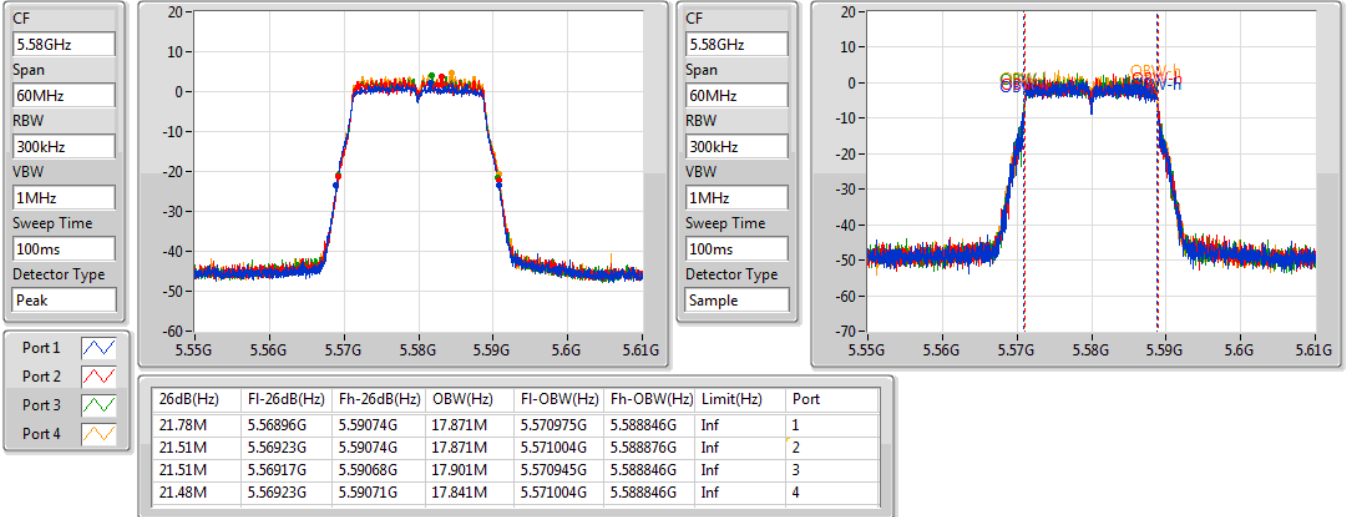

802.11n HT20_Nss1,(MCS0)_4TX
EBW
5500MHz

29/12/2020

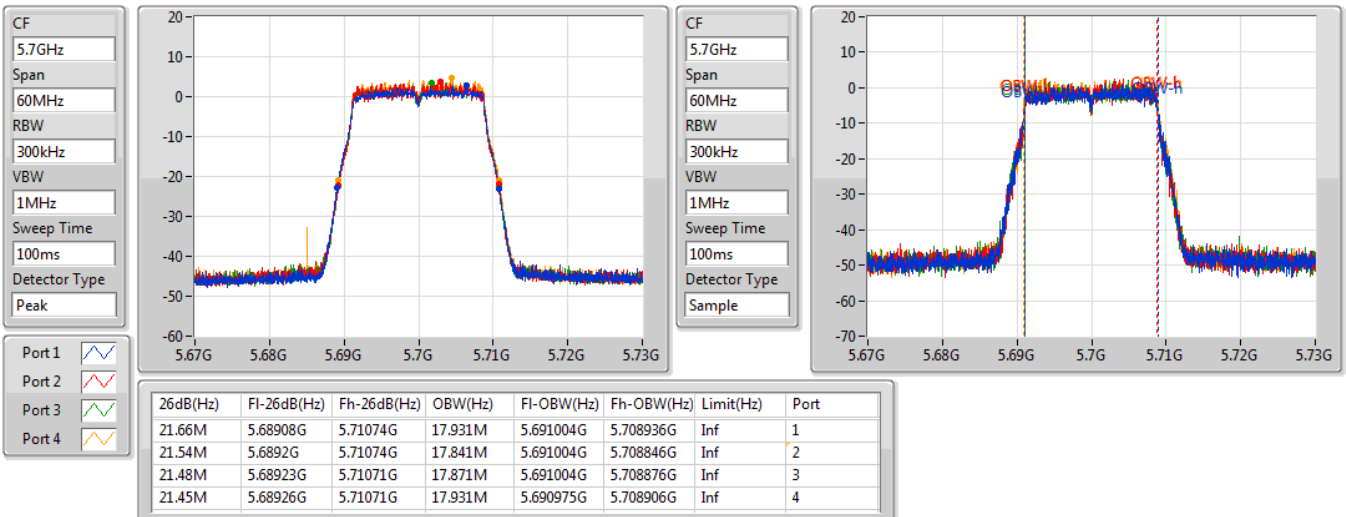


802.11n HT20_Nss1,(MCS0)_4TX
EBW
5580MHz

29/12/2020

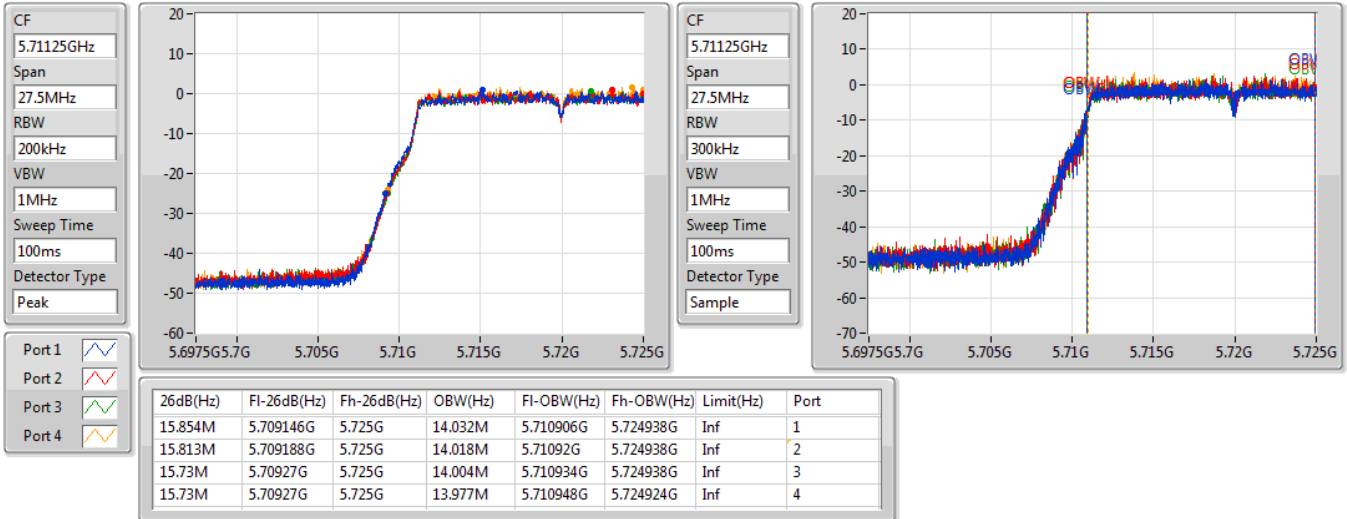

802.11n HT20_Nss1,(MCS0)_4TX
EBW
5700MHz

29/12/2020

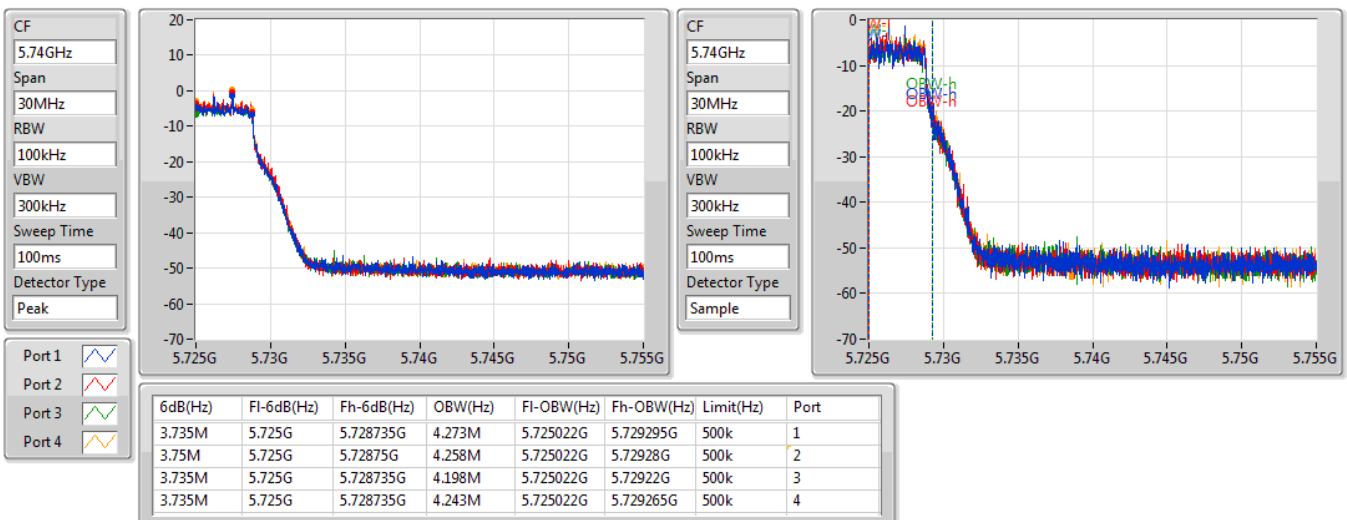


802.11n HT20_Nss1,(MCS0)_4TX
EBW
5720MHz Straddle 5.47-5.725GHz

29/12/2020


802.11n HT20_Nss1,(MCS0)_4TX
EBW
5720MHz Straddle 5.725-5.85GHz

29/12/2020

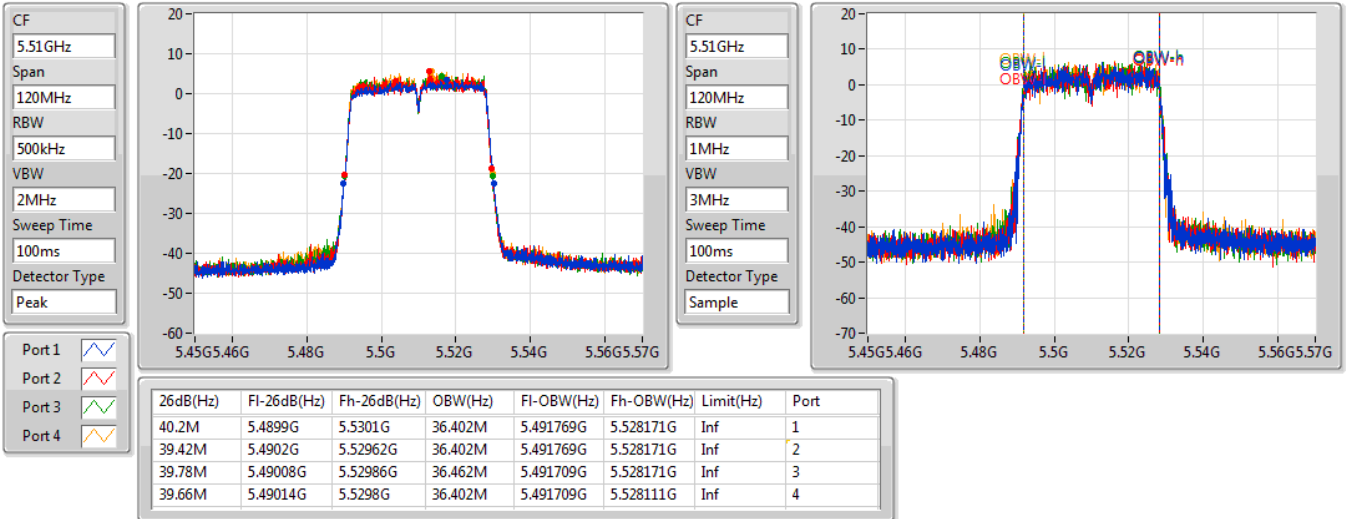


802.11n HT40_Nss1,(MCS0)_4TX

EBW

5510MHz

29/12/2020

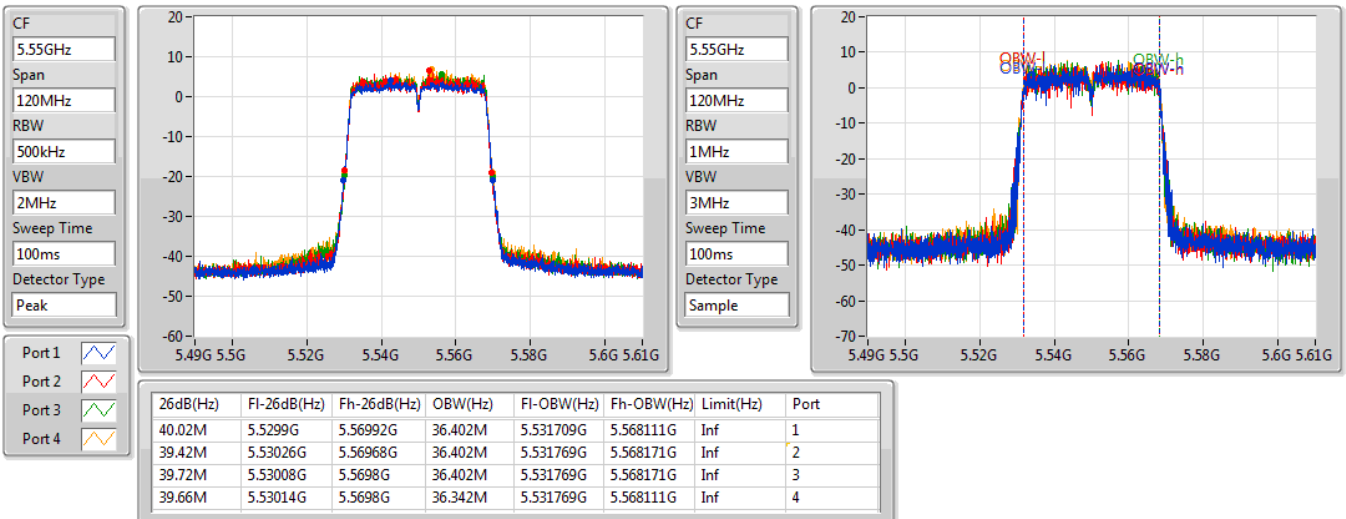


802.11n HT40_Nss1,(MCS0)_4TX

EBW

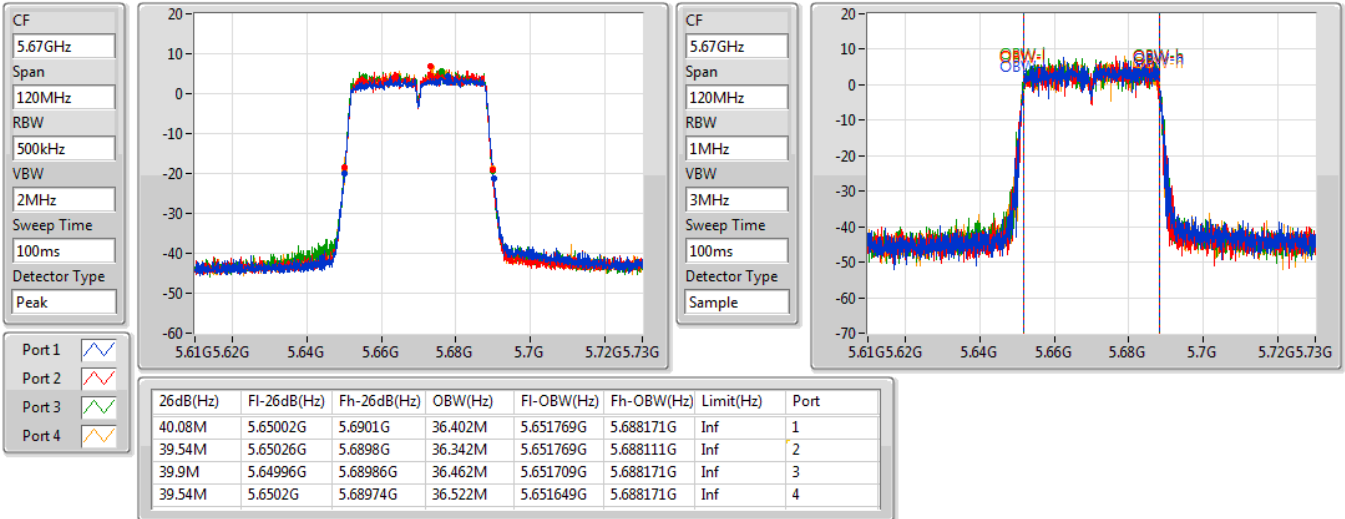
5550MHz

29/12/2020

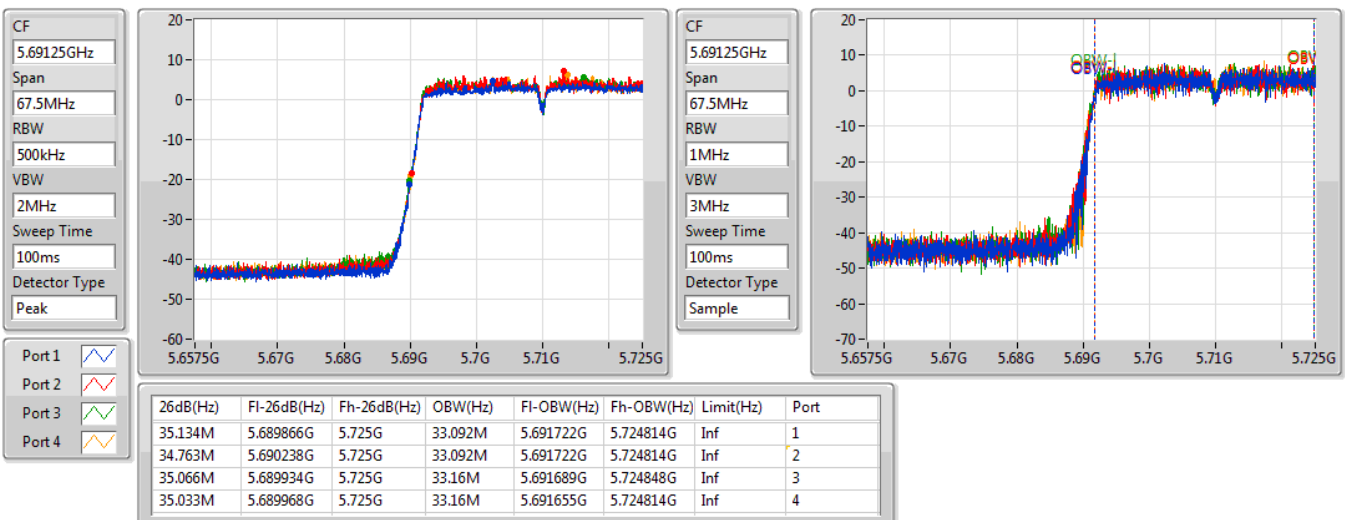


802.11n HT40_Nss1,(MCS0)_4TX
EBW
5670MHz

29/12/2020

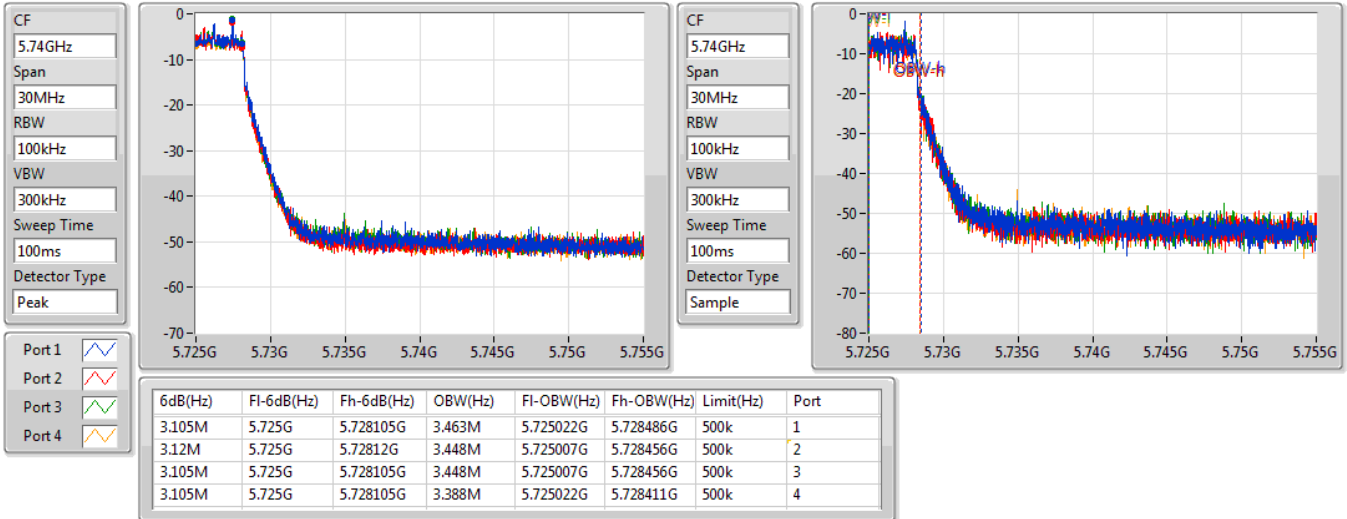

802.11n HT40_Nss1,(MCS0)_4TX
EBW
5710MHz Straddle 5.47-5.725GHz

29/12/2020

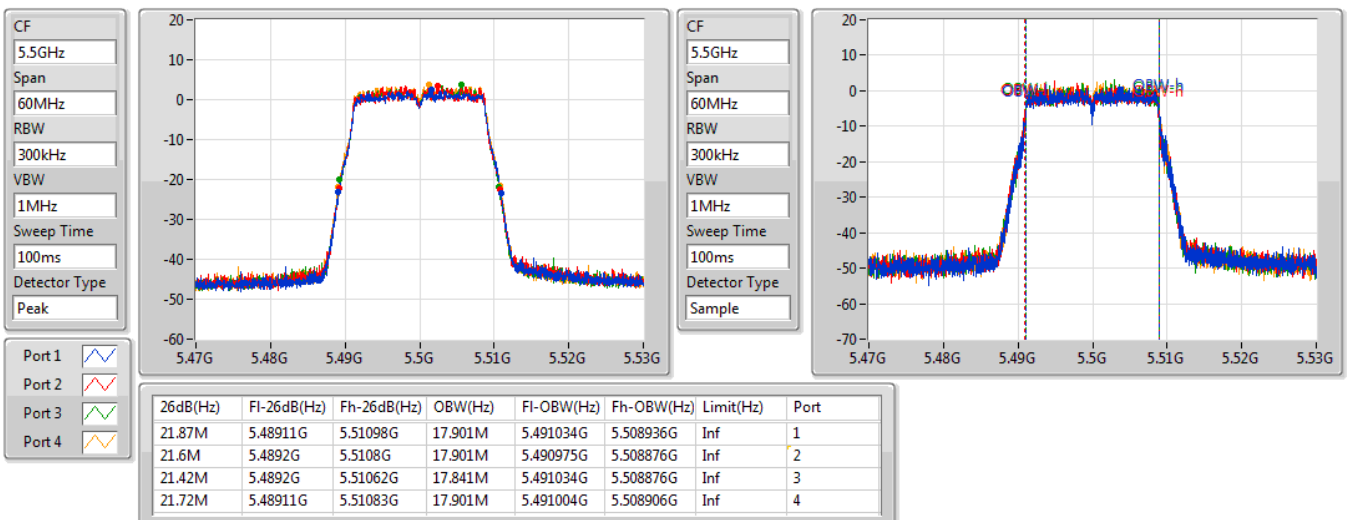


802.11n HT40_Nss1,(MCS0)_4TX
EBW
5710MHz Straddle 5.725-5.85GHz

29/12/2020


802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5500MHz

29/12/2020

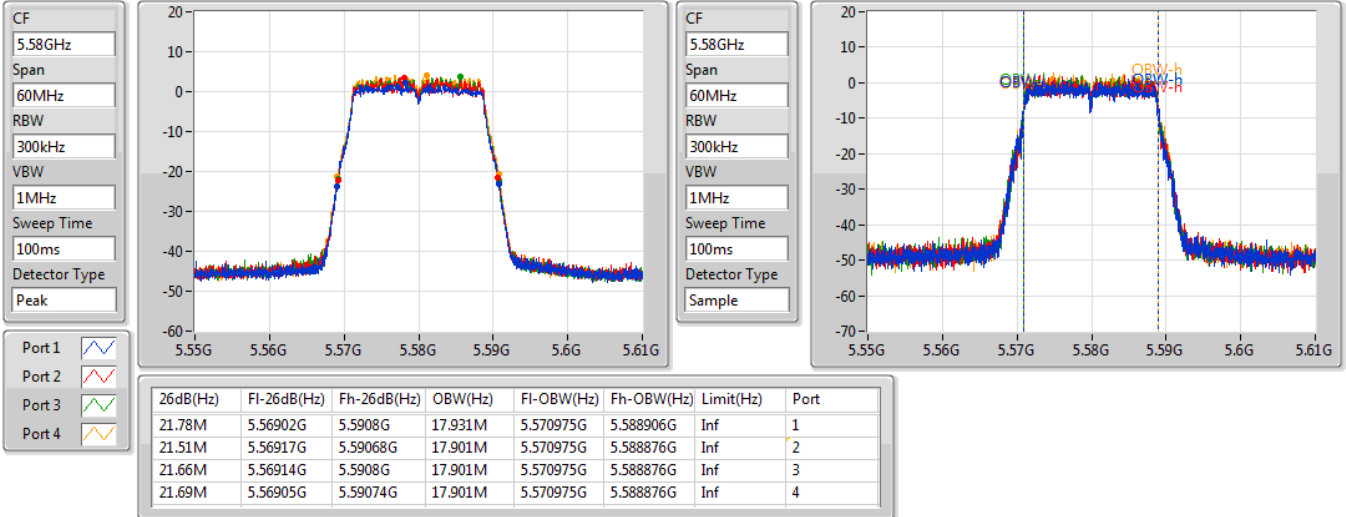


802.11ac VHT20_Nss1,(MCS0)_4TX

EBW

5580MHz

29/12/2020

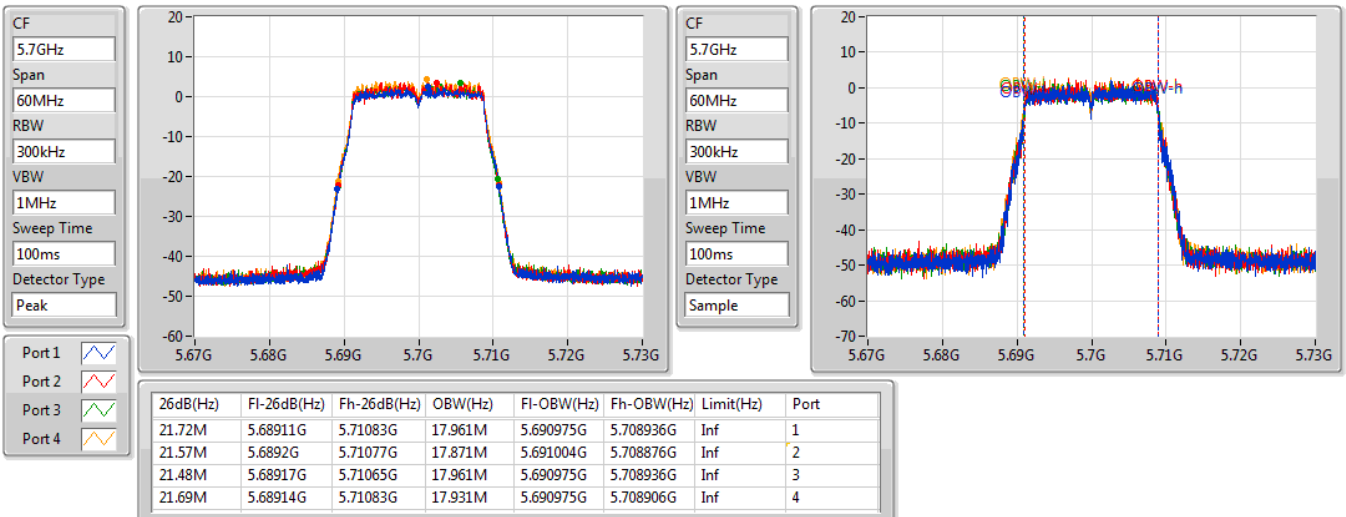


802.11ac VHT20_Nss1,(MCS0)_4TX

EBW

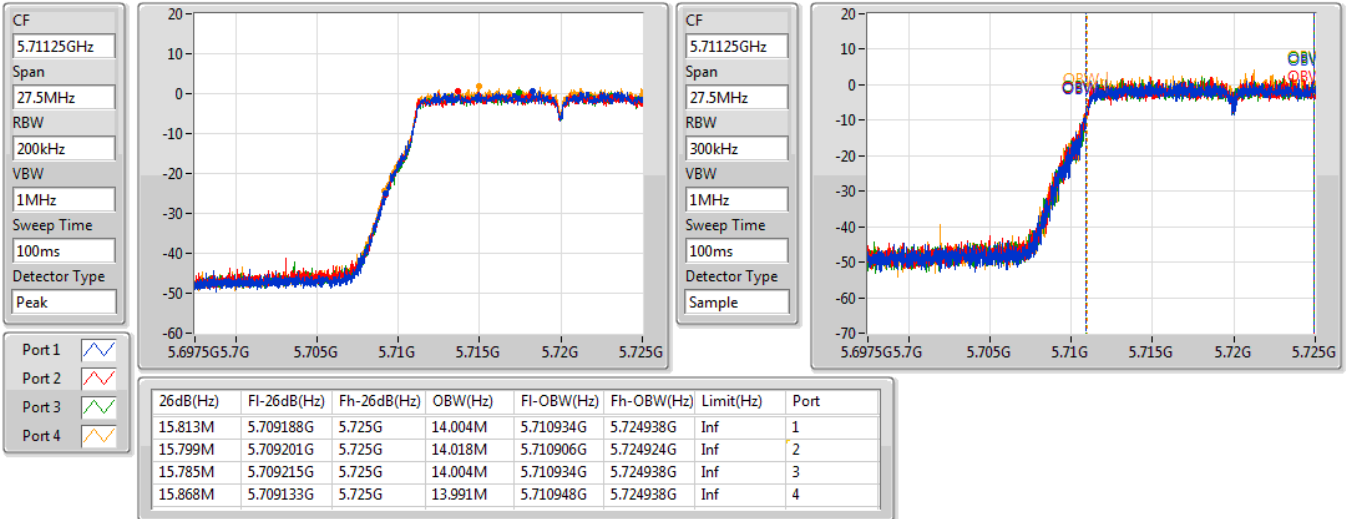
5700MHz

29/12/2020

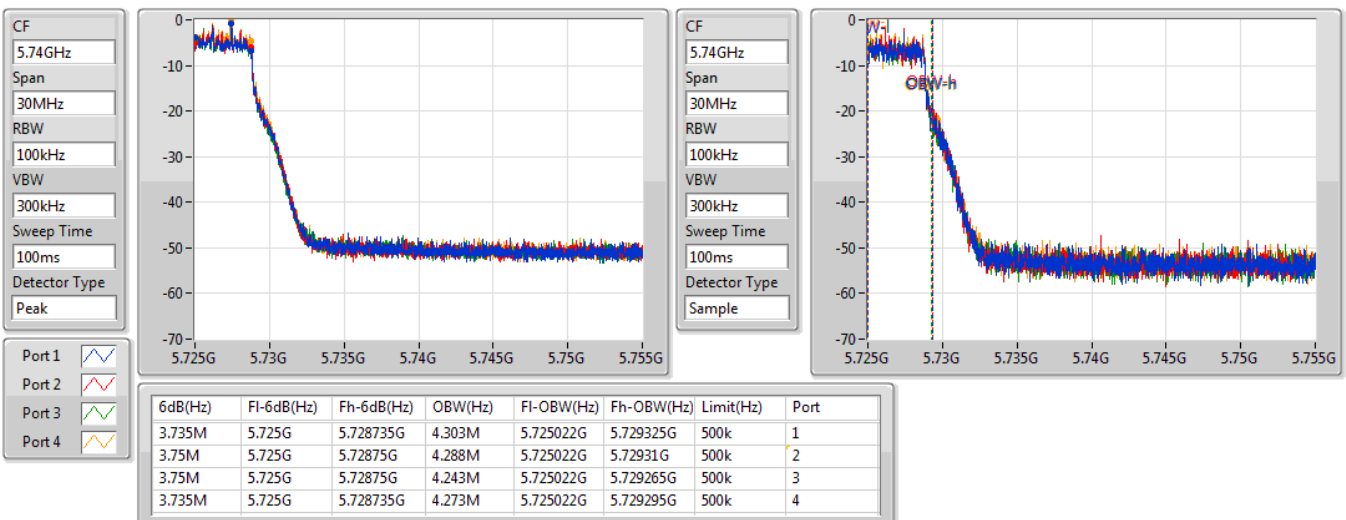


802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5720MHz Straddle 5.47-5.725GHz

29/12/2020

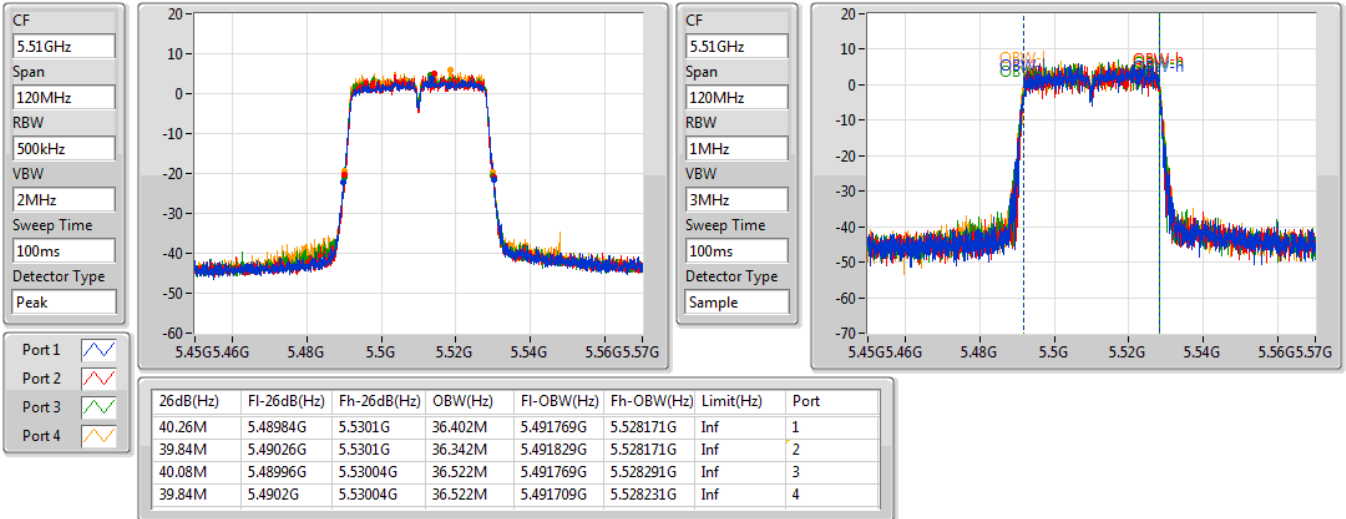

802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5720MHz Straddle 5.725-5.85GHz

29/12/2020

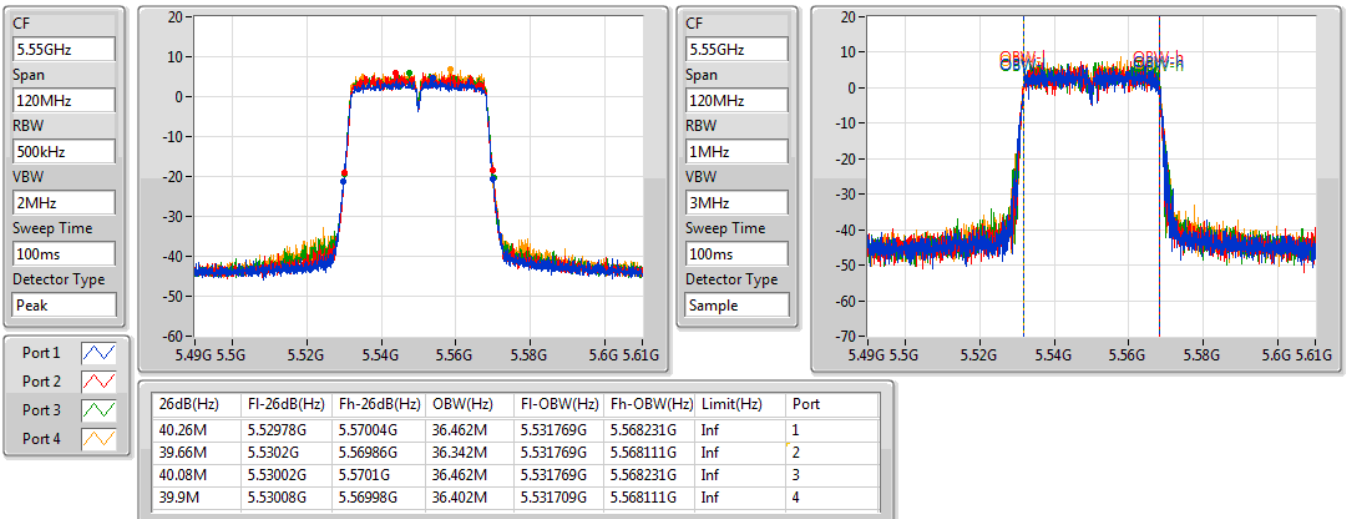


802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5510MHz

29/12/2020

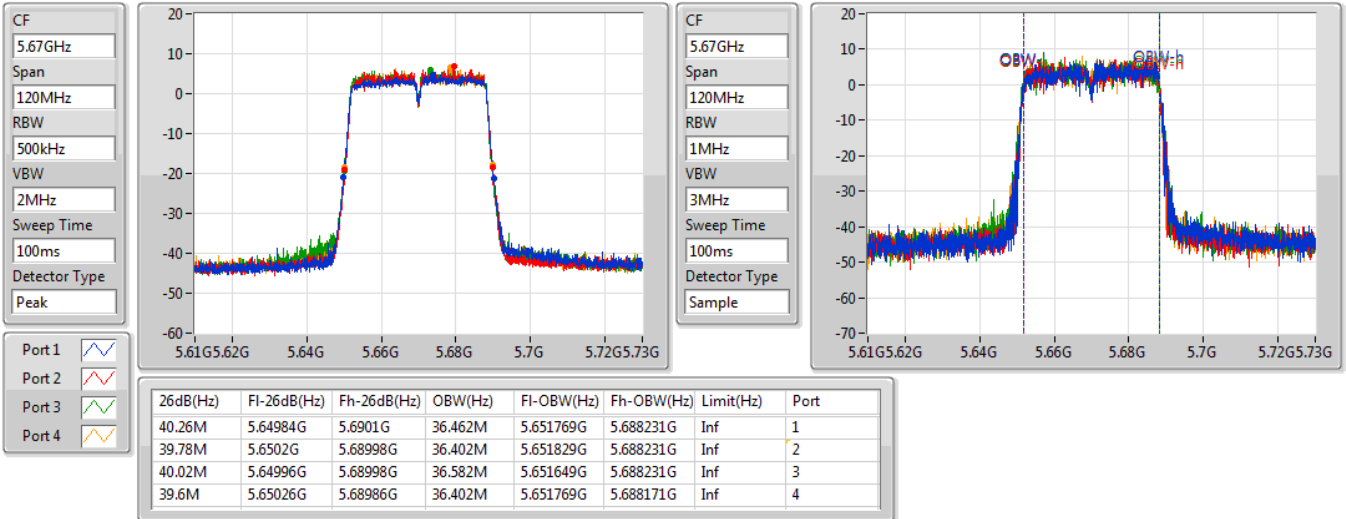

802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5550MHz

29/12/2020

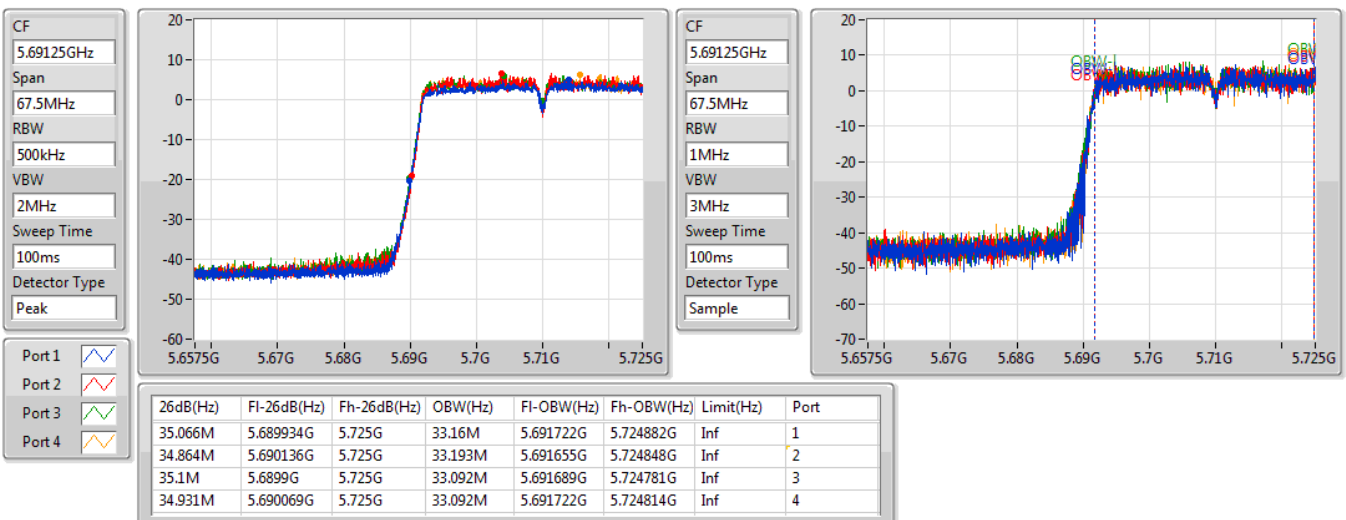


802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5670MHz

29/12/2020

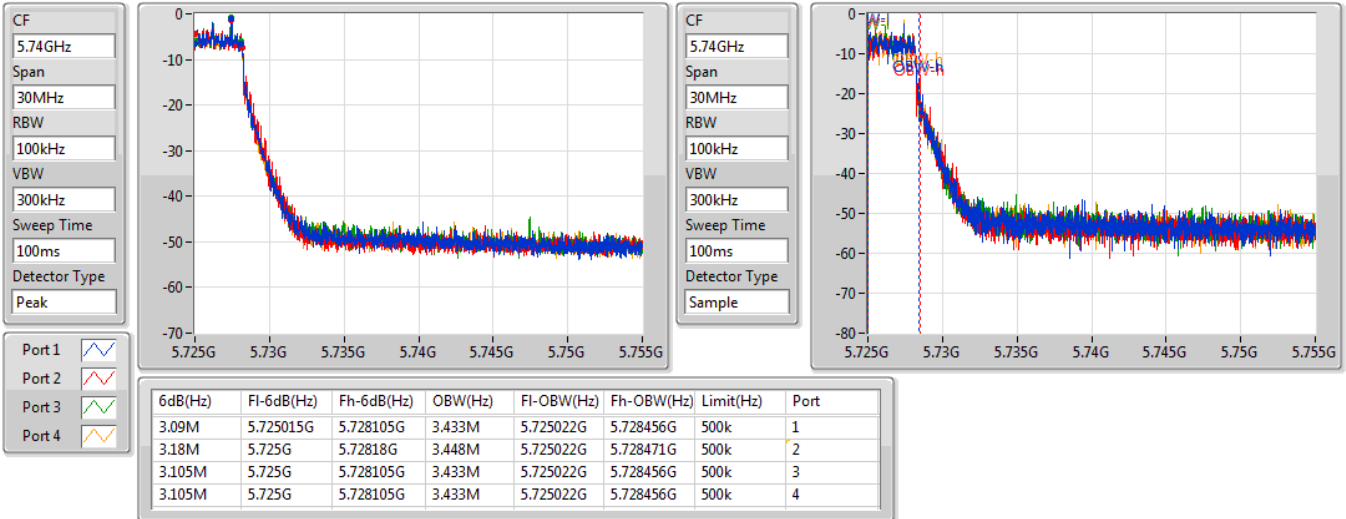

802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5710MHz Straddle 5.47-5.725GHz

29/12/2020

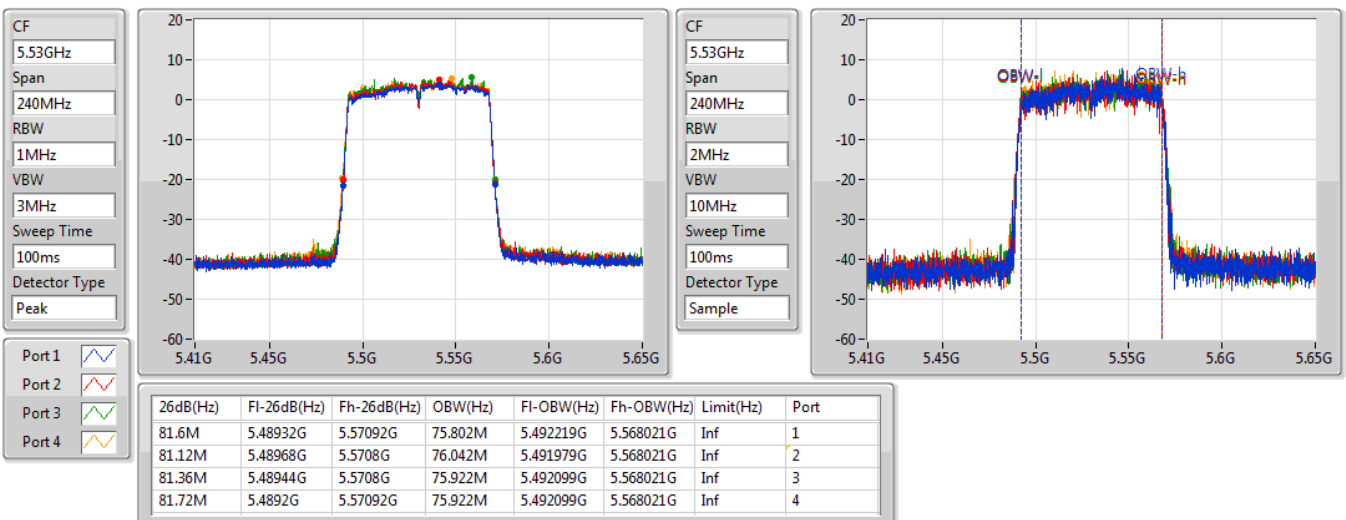


802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5710MHz Straddle 5.725-5.85GHz

29/12/2020

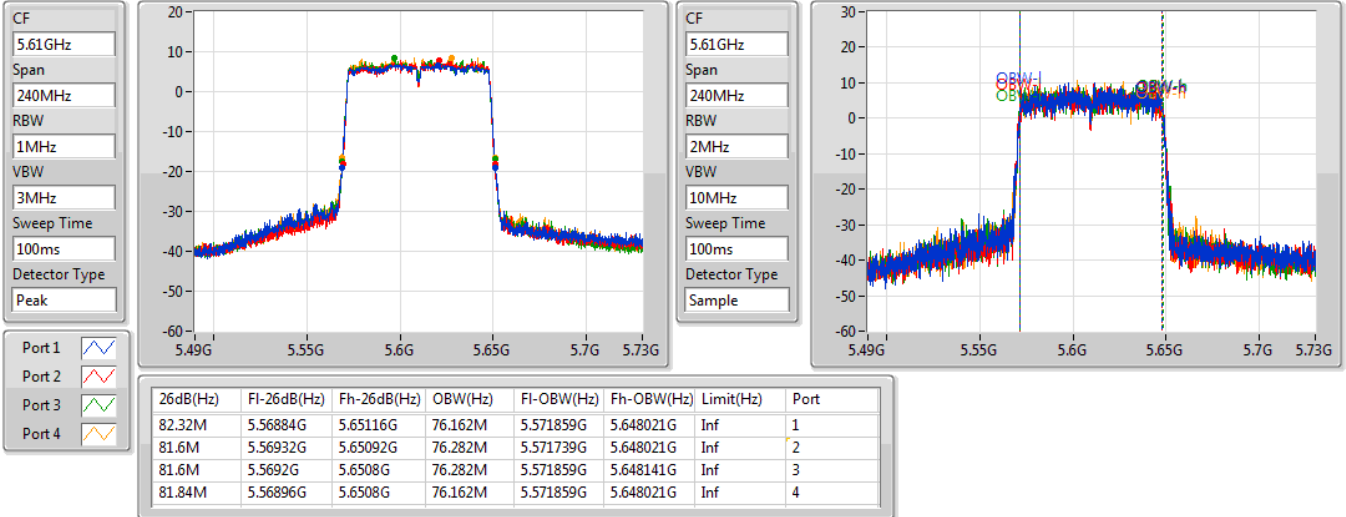

802.11ac VHT80_Nss1,(MCS0)_4TX
EBW
5530MHz

29/12/2020

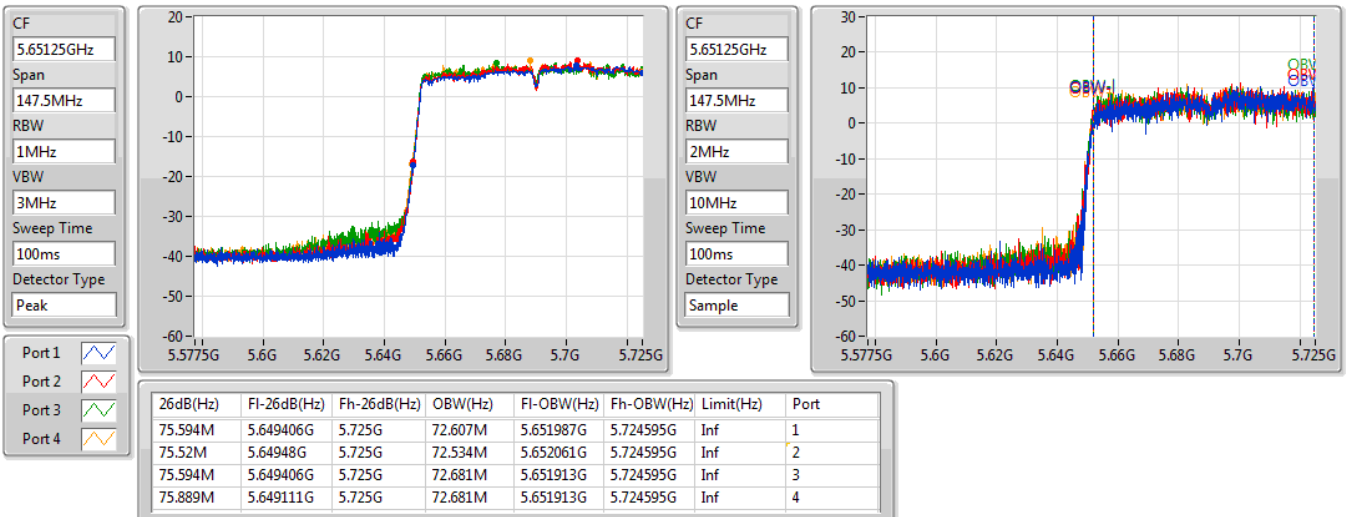


802.11ac VHT80_Nss1,(MCS0)_4TX
EBW
5610MHz

29/12/2020

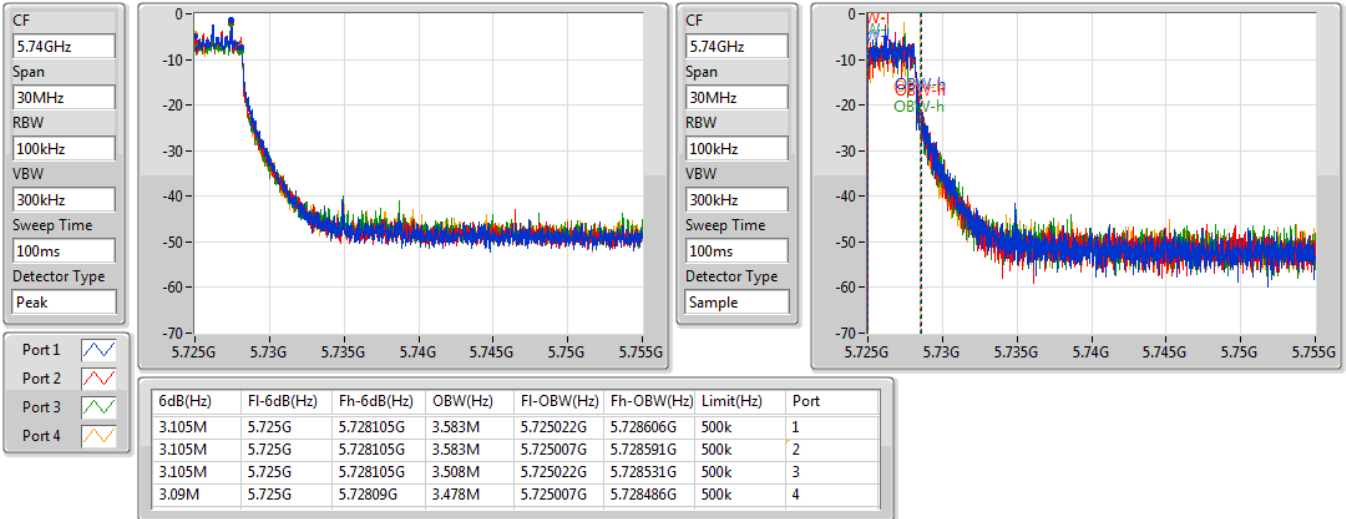

802.11ac VHT80_Nss1,(MCS0)_4TX
EBW
5690MHz Straddle 5.47-5.725GHz

29/12/2020

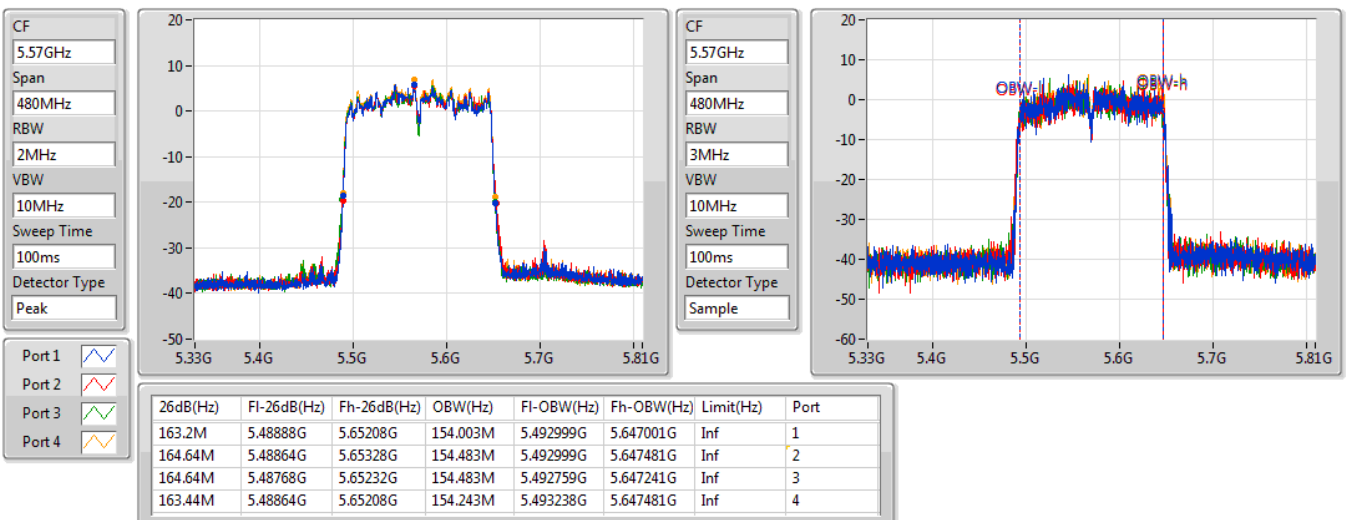


802.11ac VHT80_Nss1,(MCS0)_4TX
EBW
5690MHz Straddle 5.725-5.85GHz

29/12/2020

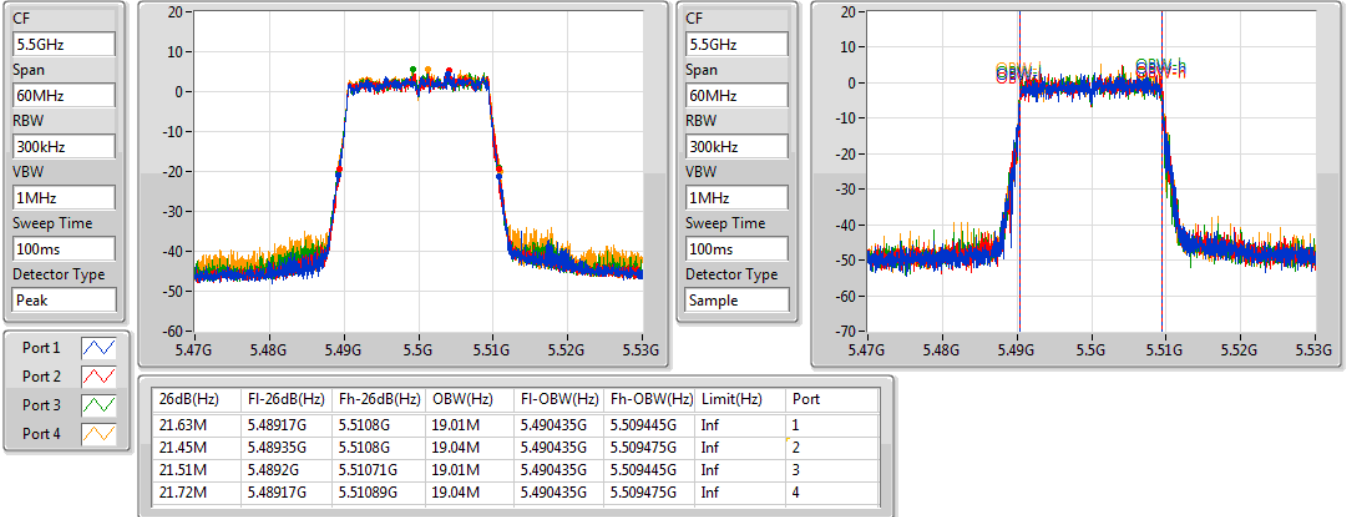

802.11ac VHT160_Nss1,(MCS0)_4TX
EBW
5570MHz

29/12/2020

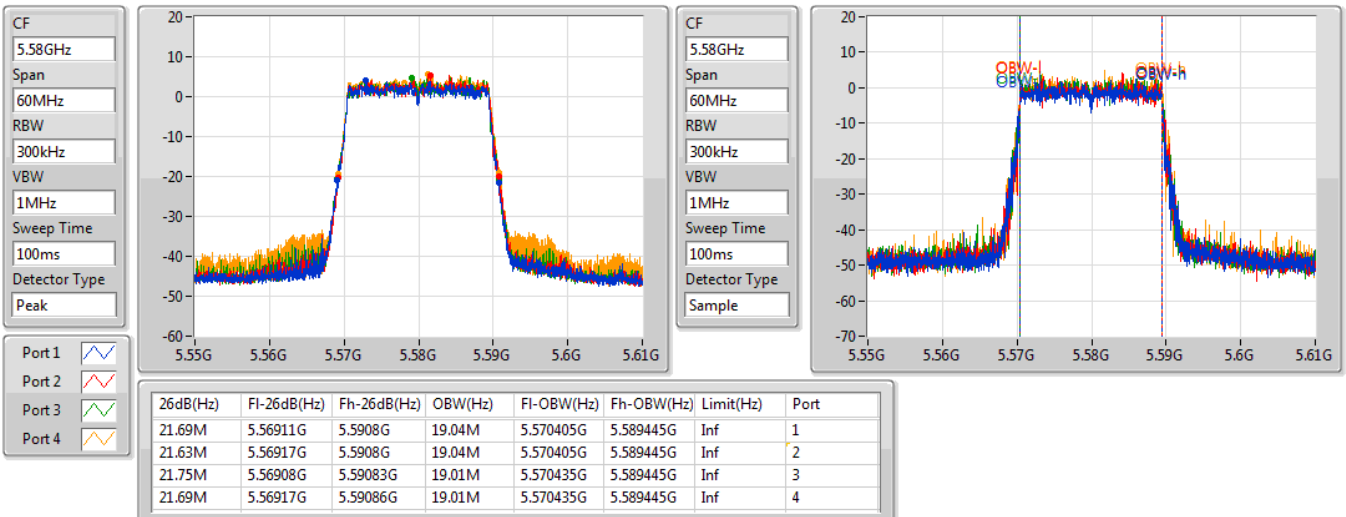


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5500MHz

29/12/2020


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5580MHz

29/12/2020

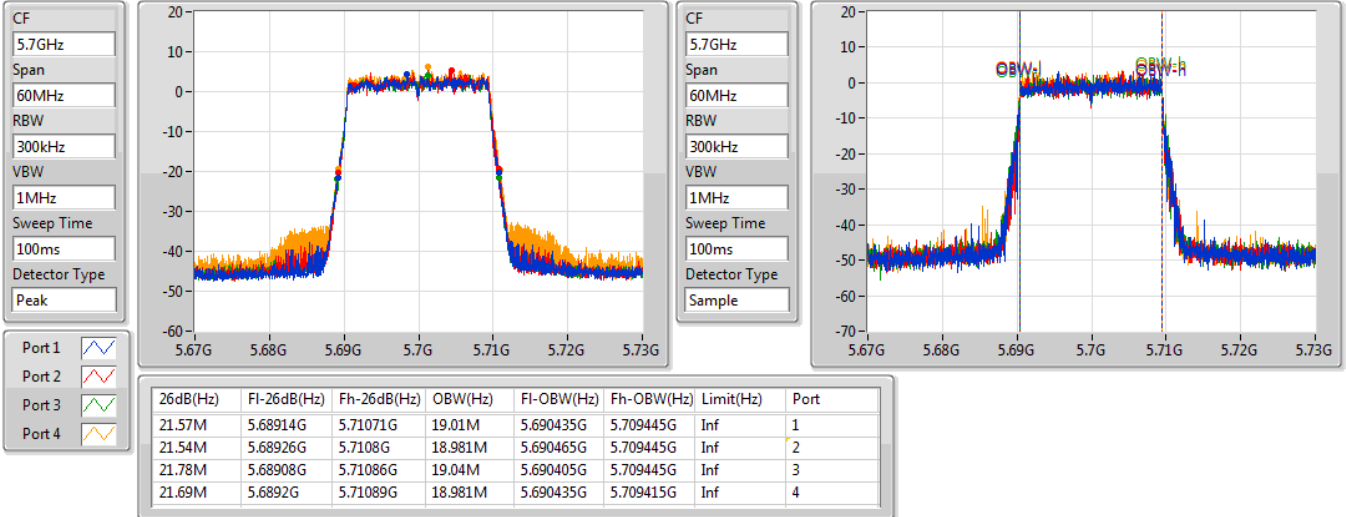


802.11ax HEW20_Nss1,(MCS0)_4TX

EBW

5700MHz

29/12/2020

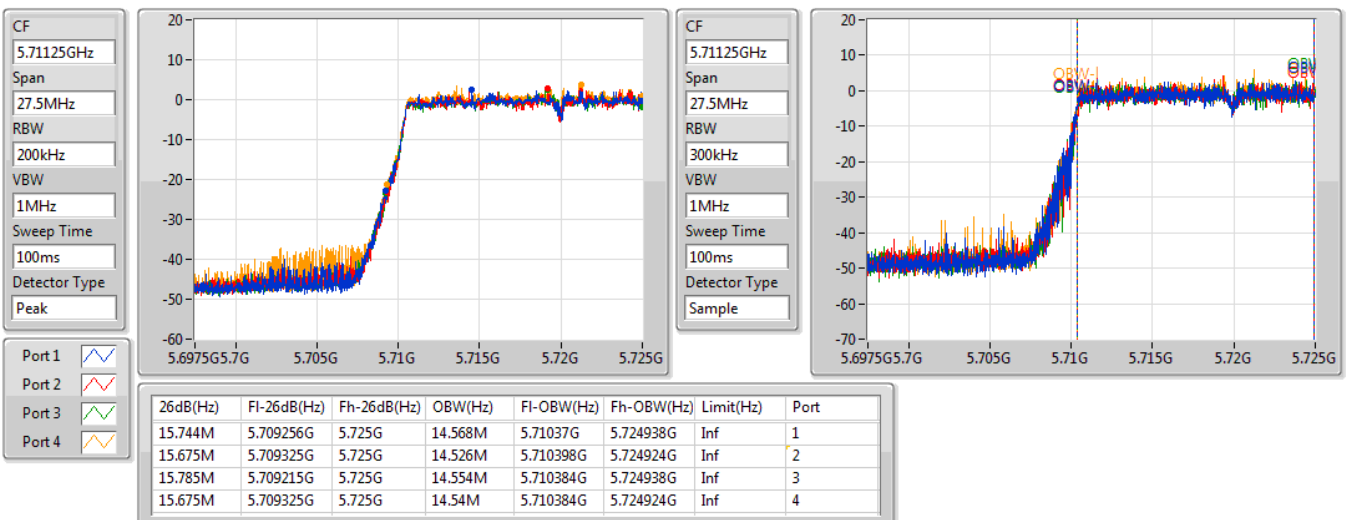


802.11ax HEW20_Nss1,(MCS0)_4TX

EBW

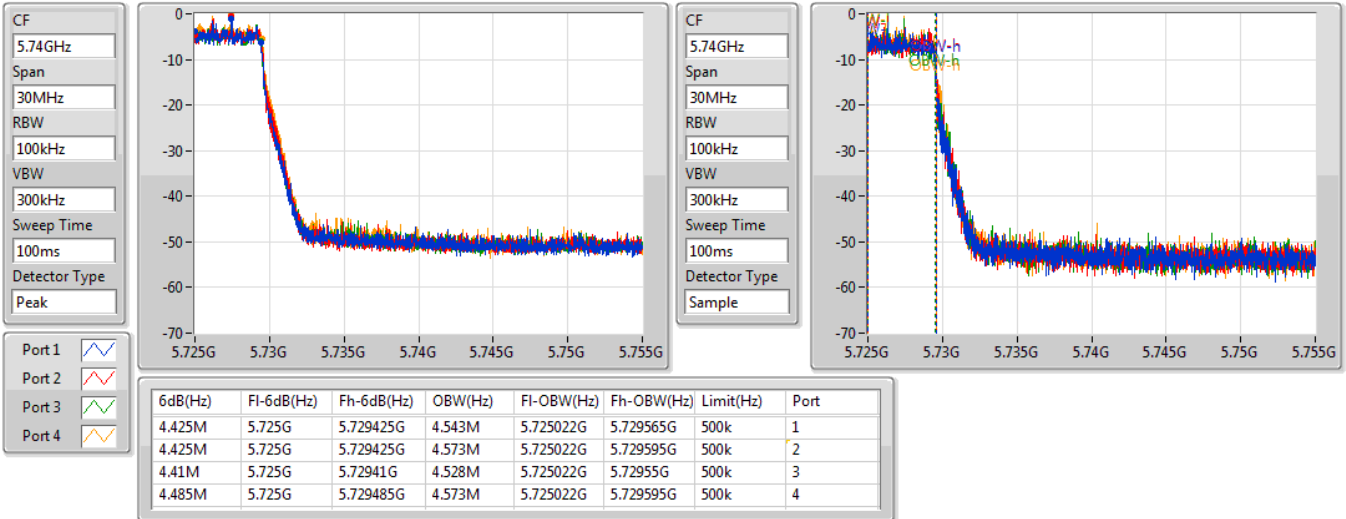
5720MHz Straddle 5.47-5.725GHz

29/12/2020

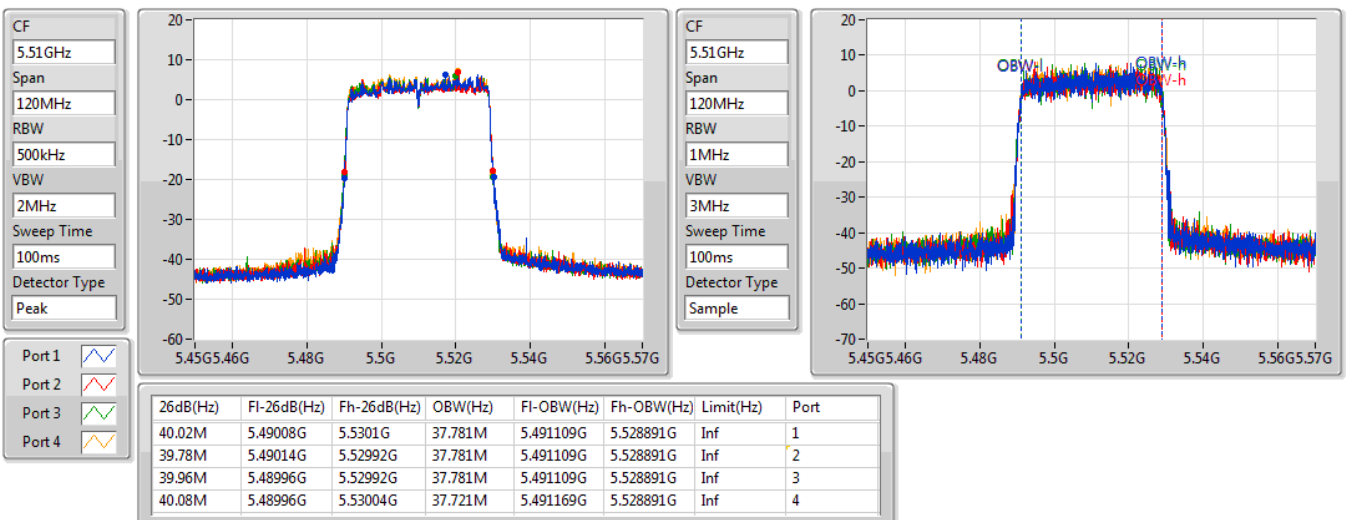


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5720MHz Straddle 5.725-5.85GHz

29/12/2020

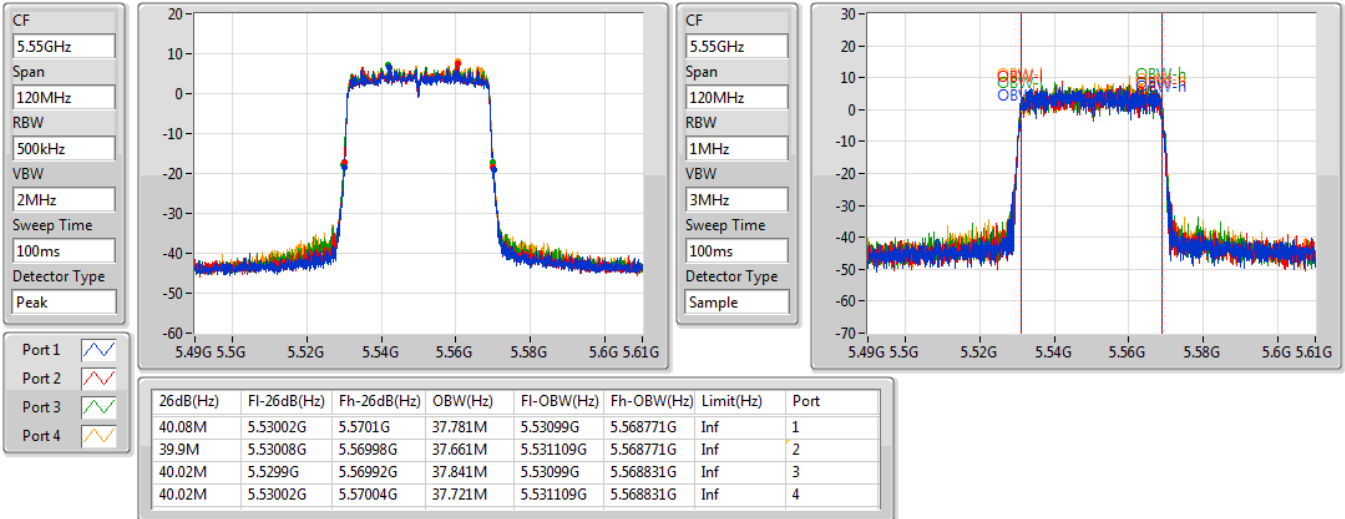

802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5510MHz

29/12/2020

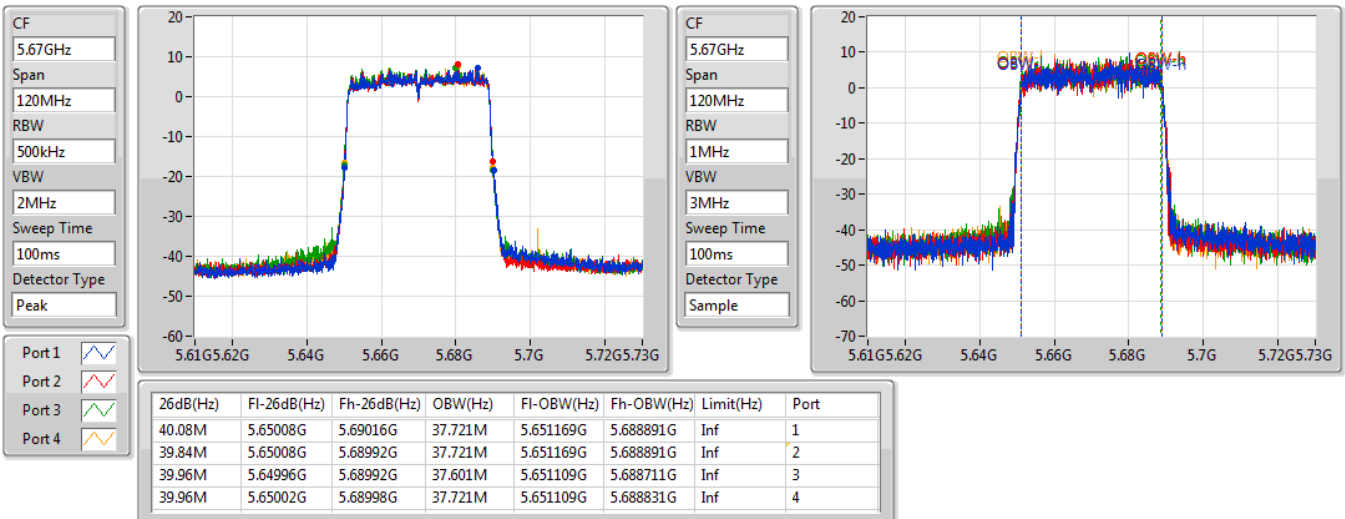


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5550MHz

29/12/2020

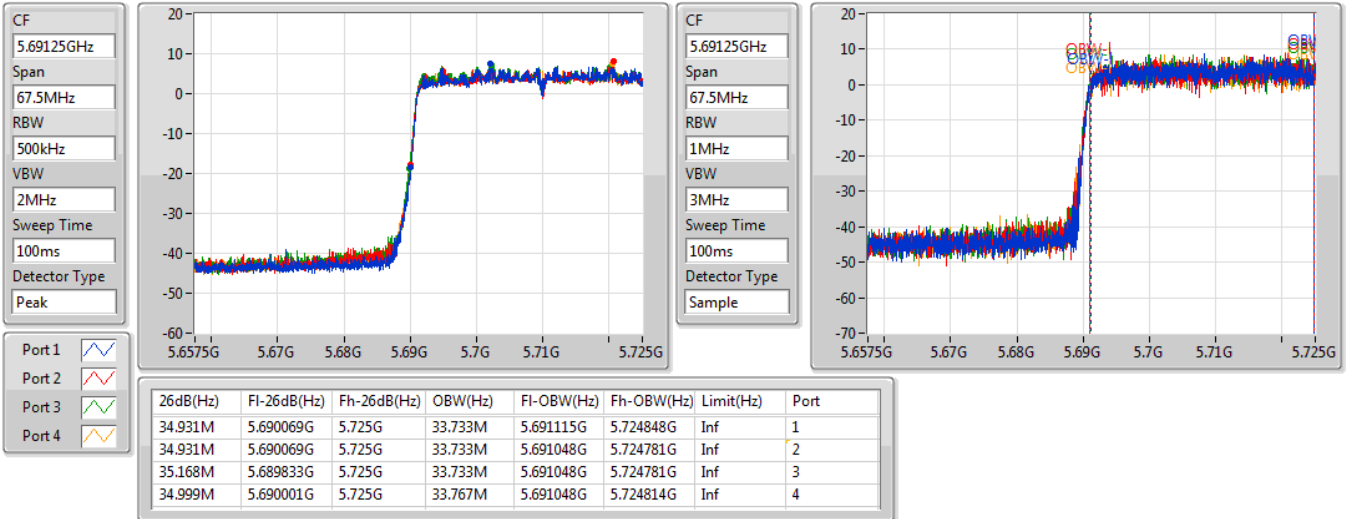

802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5670MHz

29/12/2020

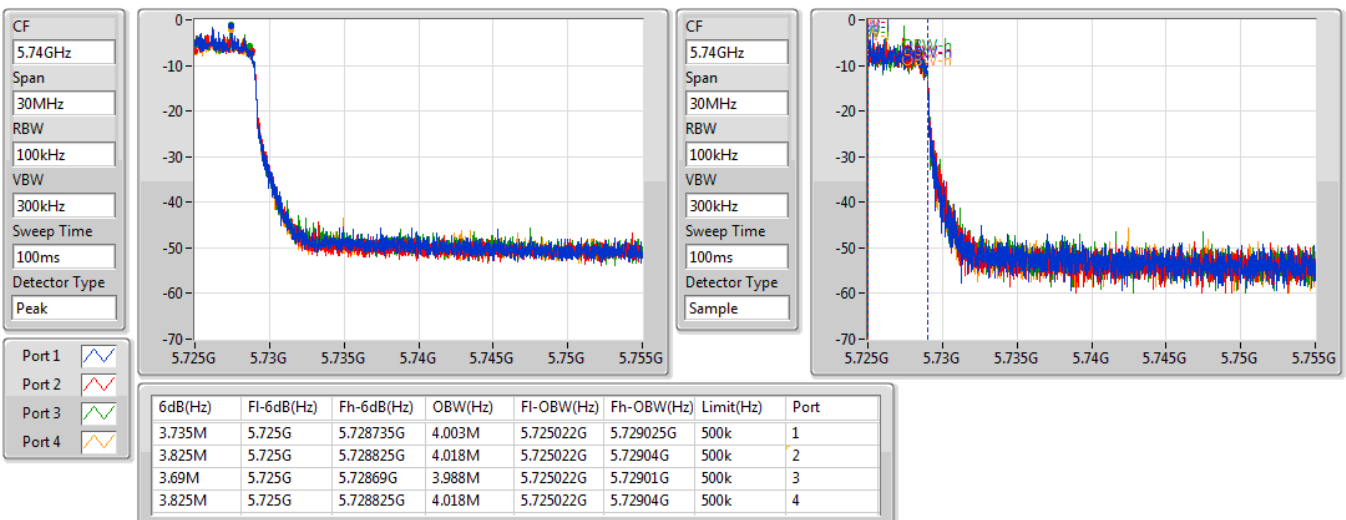


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5710MHz Straddle 5.47-5.725GHz

29/12/2020

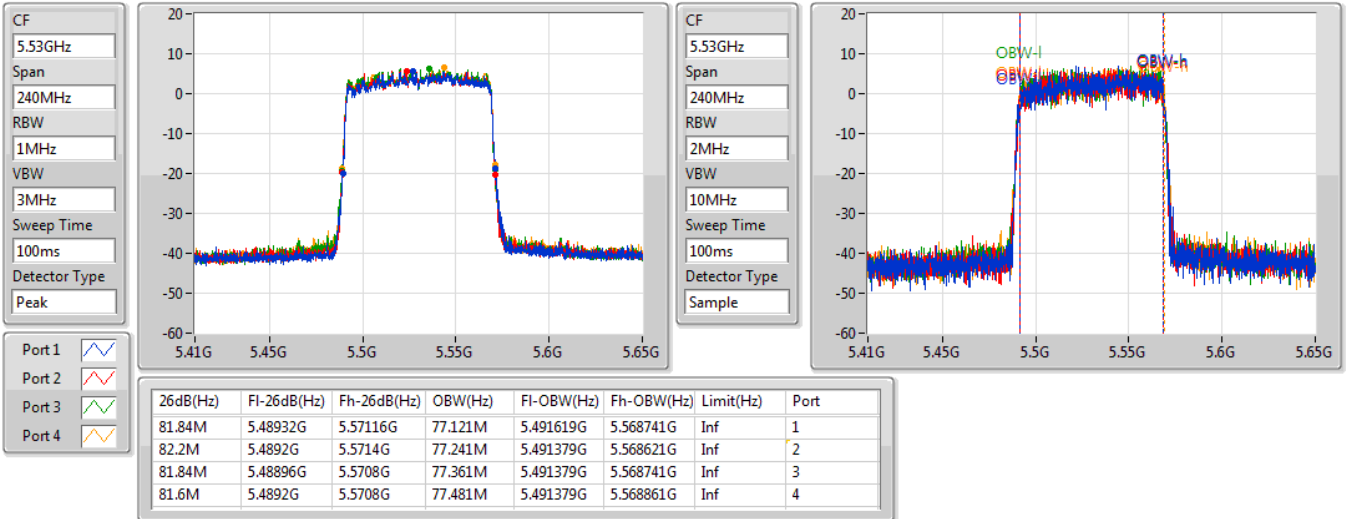

802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5710MHz Straddle 5.725-5.85GHz

29/12/2020

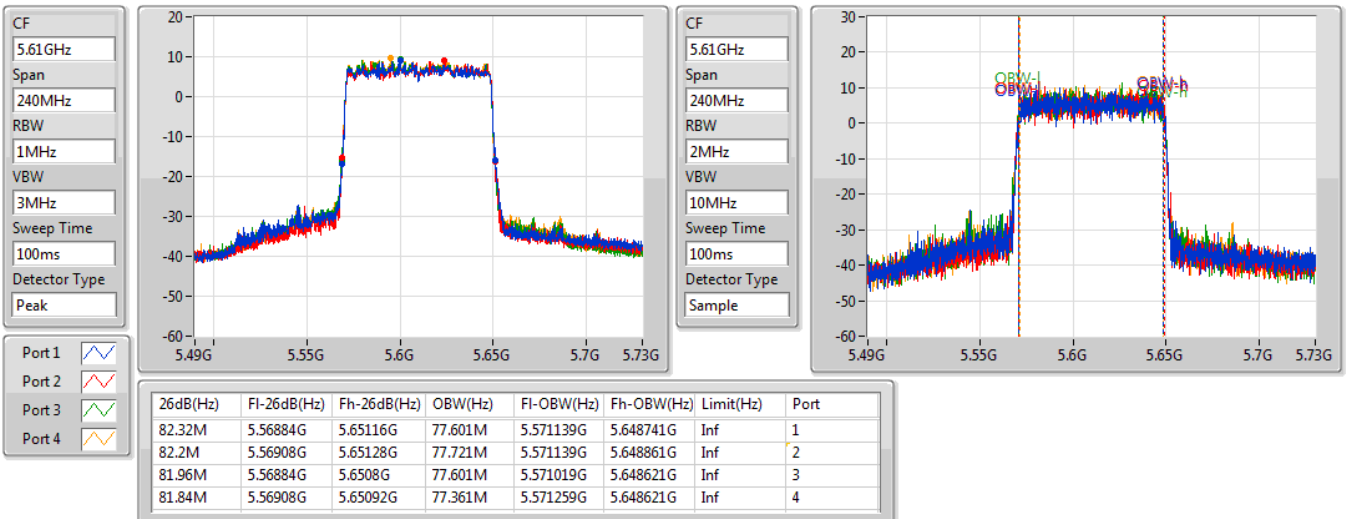


802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5530MHz

29/12/2020

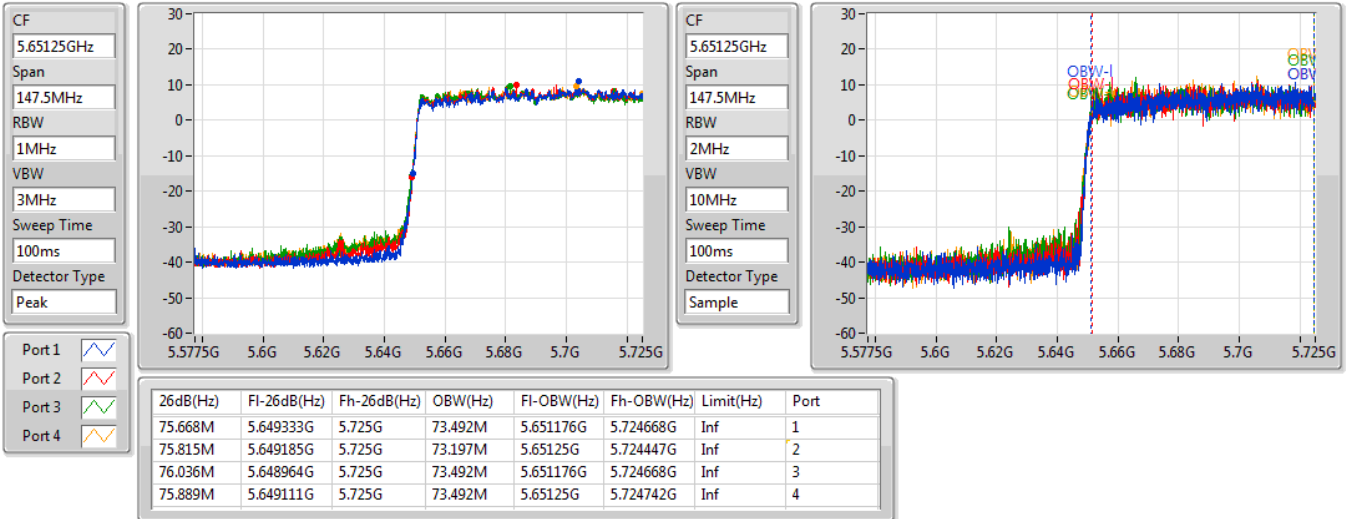

802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5610MHz

29/12/2020

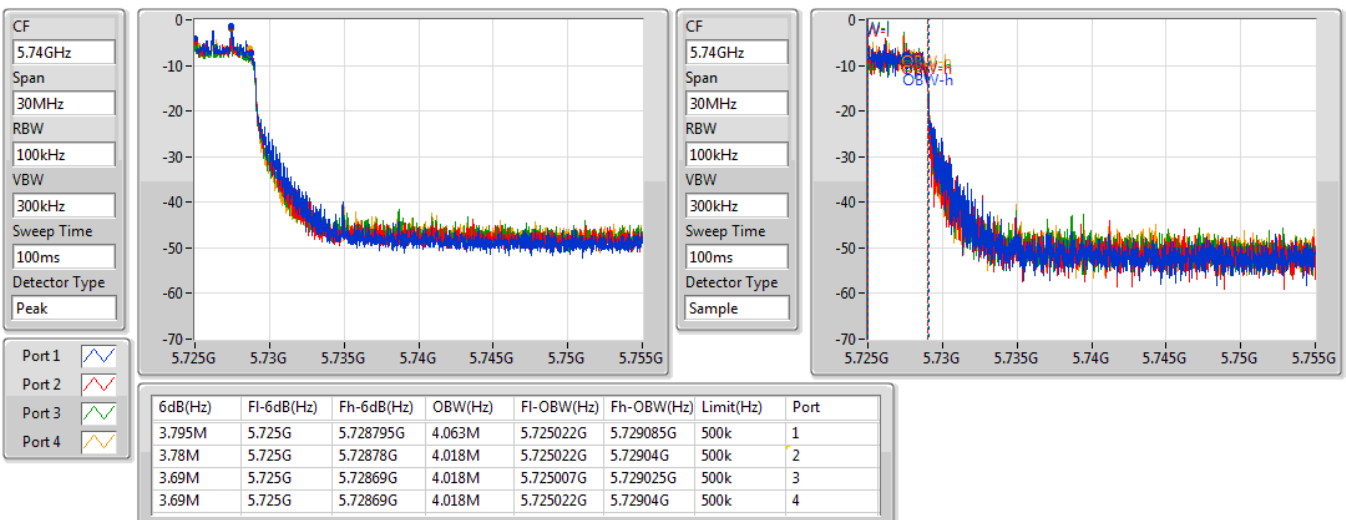


802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5690MHz Straddle 5.47-5.725GHz

29/12/2020

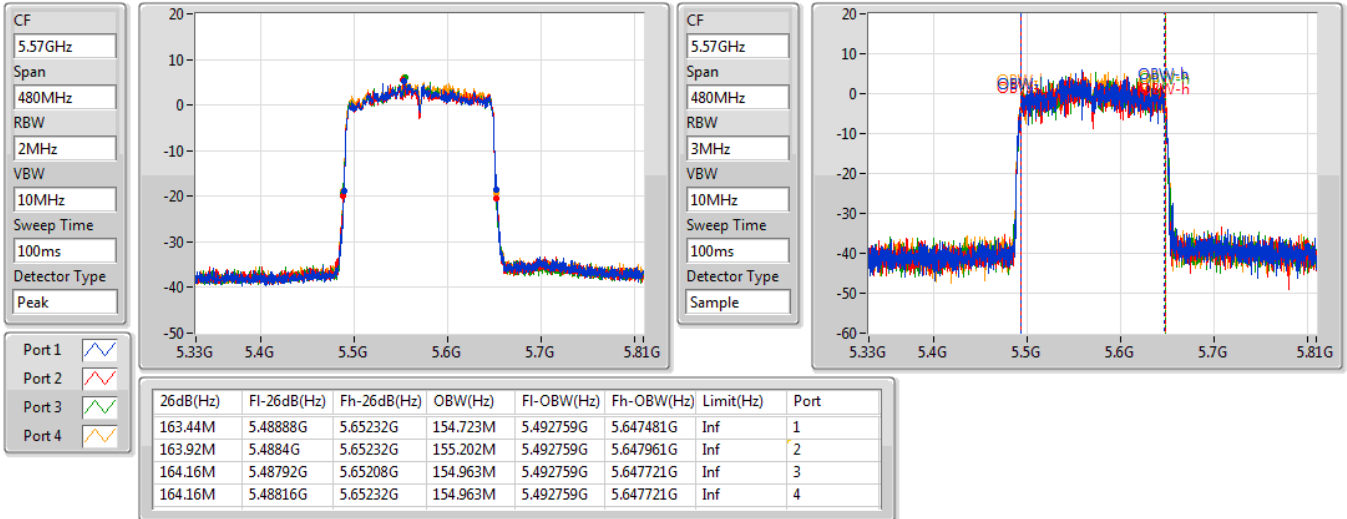

802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5690MHz Straddle 5.725-5.85GHz

29/12/2020



802.11ax HEW160_Nss1,(MCS0)_4TX
EBW
5570MHz

29/12/2020



Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ac VHT160_Nss1,(MCS0)_4TX	82.68M	77.361M	77M4D1D	81.72M	76.642M
802.11ax HEW160_Nss1,(MCS0)_4TX	82.68M	78.081M	78M1D1D	81.6M	77.841M
5.25-5.35GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	21.69M	16.822M	16M8D1D	21.39M	16.612M
802.11n HT20_Nss1,(MCS0)_4TX	21.75M	17.871M	17M9D1D	21.36M	17.751M
802.11n HT40_Nss1,(MCS0)_4TX	40.26M	36.582M	36M6D1D	39.48M	36.402M
802.11ac VHT20_Nss1,(MCS0)_4TX	21.78M	17.961M	18M0D1D	21.36M	17.811M
802.11ac VHT40_Nss1,(MCS0)_4TX	40.26M	36.462M	36M5D1D	39.72M	36.402M
802.11ac VHT80_Nss1,(MCS0)_4TX	81.72M	76.282M	76M3D1D	81.12M	76.042M
802.11ac VHT160_Nss1,(MCS0)_4TX	83.04M	76.882M	76M9D1D	81.84M	76.642M
802.11ax HEW20_Nss1,(MCS0)_4TX	21.78M	19.07M	19M1D1D	21.48M	18.951M
802.11ax HEW40_Nss1,(MCS0)_4TX	40.38M	37.841M	37M8D1D	39.78M	37.601M
802.11ax HEW80_Nss1,(MCS0)_4TX	82.32M	77.601M	77M6D1D	81.72M	77.241M
802.11ax HEW160_Nss1,(MCS0)_4TX	82.92M	78.201M	78M2D1D	82.44M	77.721M
5.47-5.725GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	21.72M	16.762M	16M8D1D	15.51M	13.372M
802.11n HT20_Nss1,(MCS0)_4TX	21.75M	17.901M	17M9D1D	15.703M	13.922M
802.11n HT40_Nss1,(MCS0)_4TX	40.26M	36.642M	36M6D1D	34.796M	33.126M
802.11ac VHT20_Nss1,(MCS0)_4TX	21.78M	17.961M	18M0D1D	15.744M	13.949M
802.11ac VHT40_Nss1,(MCS0)_4TX	40.32M	36.582M	36M6D1D	34.864M	33.126M
802.11ac VHT80_Nss1,(MCS0)_4TX	81.84M	76.162M	76M2D1D	75.52M	72.607M
802.11ac VHT160_Nss1,(MCS0)_4TX	164.88M	154.483M	154MD1D	163.92M	154.243M
802.11ax HEW20_Nss1,(MCS0)_4TX	21.72M	19.01M	19M0D1D	15.565M	14.513M
802.11ax HEW40_Nss1,(MCS0)_4TX	40.32M	37.841M	37M8D1D	34.965M	33.767M
802.11ax HEW80_Nss1,(MCS0)_4TX	82.44M	77.721M	77M7D1D	75.889M	73.271M
802.11ax HEW160_Nss1,(MCS0)_4TX	165.12M	155.682M	156MD1D	164.4M	154.963M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	3.21M	3.988M	3M99D1D	3.12M	3.883M
802.11n HT20_Nss1,(MCS0)_4TX	3.765M	4.258M	4M26D1D	3.735M	4.198M
802.11n HT40_Nss1,(MCS0)_4TX	3.135M	3.478M	3M48D1D	3.09M	3.433M
802.11ac VHT20_Nss1,(MCS0)_4TX	3.765M	4.333M	4M33D1D	3.735M	4.168M
802.11ac VHT40_Nss1,(MCS0)_4TX	3.195M	3.523M	3M52D1D	3.105M	3.448M
802.11ac VHT80_Nss1,(MCS0)_4TX	3.105M	3.583M	3M58D1D	3M	3.523M
802.11ax HEW20_Nss1,(MCS0)_4TX	4.515M	4.558M	4M56D1D	4.425M	4.498M
802.11ax HEW40_Nss1,(MCS0)_4TX	3.81M	4.018M	4M02D1D	3.75M	4.003M
802.11ax HEW80_Nss1,(MCS0)_4TX	3.795M	4.063M	4M06D1D	3.465M	4.033M

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

Result

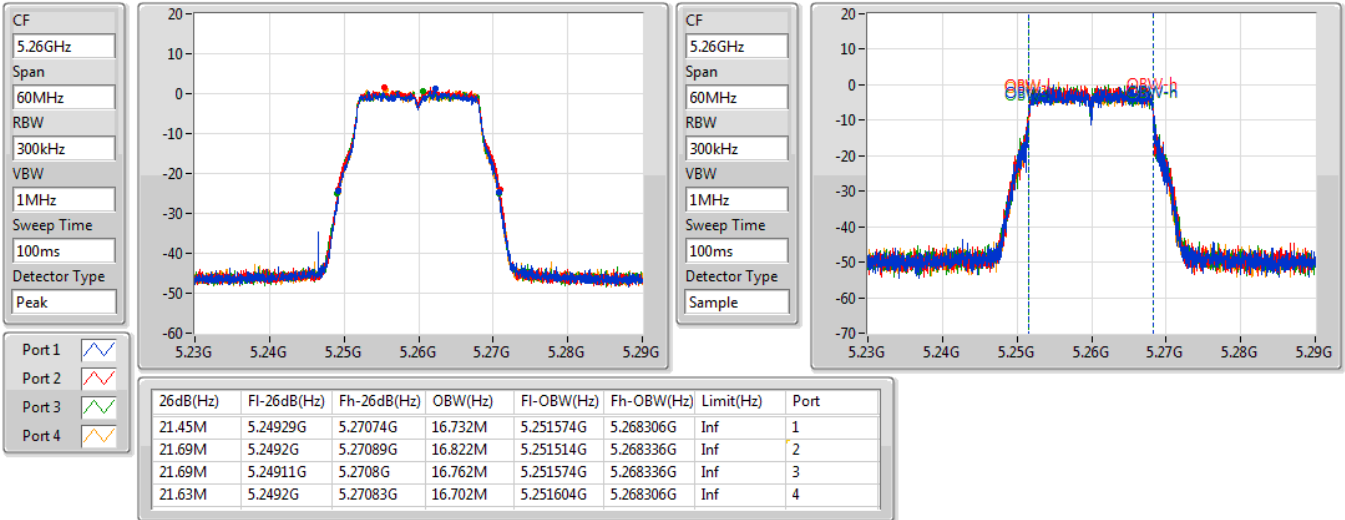
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	21.45M	16.732M	21.69M	16.822M	21.69M	16.762M	21.63M	16.702M
5300MHz	Pass	Inf	21.39M	16.672M	21.45M	16.612M	21.45M	16.672M	21.42M	16.612M
5320MHz	Pass	Inf	21.42M	16.672M	21.48M	16.702M	21.63M	16.762M	21.51M	16.642M
5500MHz	Pass	Inf	21.45M	16.642M	21.51M	16.642M	21.57M	16.762M	21.48M	16.612M
5580MHz	Pass	Inf	21.42M	16.702M	21.06M	16.642M	21.39M	16.642M	21.39M	16.552M
5700MHz	Pass	Inf	21.42M	16.642M	21.72M	16.732M	21.48M	16.702M	21.33M	16.702M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.51M	13.372M	15.675M	13.386M	15.716M	13.441M	15.73M	13.427M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.12M	3.913M	3.12M	3.958M	3.21M	3.988M	3.15M	3.883M
802.11n HT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	21.72M	17.871M	21.51M	17.811M	21.36M	17.811M	21.51M	17.841M
5300MHz	Pass	Inf	21.72M	17.781M	21.54M	17.811M	21.42M	17.751M	21.42M	17.811M
5320MHz	Pass	Inf	21.75M	17.841M	21.45M	17.841M	21.48M	17.841M	21.45M	17.811M
5500MHz	Pass	Inf	21.69M	17.901M	21.42M	17.841M	21.51M	17.811M	21.48M	17.781M
5580MHz	Pass	Inf	21.72M	17.901M	21.48M	17.841M	21.42M	17.811M	21.42M	17.841M
5700MHz	Pass	Inf	21.75M	17.871M	21.51M	17.811M	21.45M	17.811M	21.51M	17.811M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.854M	13.977M	15.785M	13.922M	15.703M	13.922M	15.703M	13.963M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.75M	4.258M	3.75M	4.243M	3.735M	4.228M	3.765M	4.198M
802.11n HT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5270MHz	Pass	Inf	40.26M	36.402M	39.54M	36.462M	39.66M	36.522M	39.6M	36.462M
5310MHz	Pass	Inf	40.08M	36.522M	39.48M	36.402M	40.02M	36.582M	39.66M	36.402M
5510MHz	Pass	Inf	40.08M	36.582M	39.48M	36.462M	39.66M	36.462M	39.72M	36.402M
5550MHz	Pass	Inf	40.02M	36.462M	39.48M	36.462M	39.72M	36.462M	39.54M	36.462M
5670MHz	Pass	Inf	40.26M	36.462M	39.48M	36.402M	39.66M	36.642M	39.66M	36.462M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	35.1M	33.16M	34.796M	33.126M	34.864M	33.227M	34.864M	33.193M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.105M	3.448M	3.135M	3.478M	3.105M	3.433M	3.09M	3.448M
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	21.66M	17.961M	21.57M	17.871M	21.51M	17.901M	21.69M	17.871M
5300MHz	Pass	Inf	21.75M	17.871M	21.51M	17.841M	21.36M	17.841M	21.72M	17.841M
5320MHz	Pass	Inf	21.78M	17.901M	21.63M	17.811M	21.42M	17.811M	21.72M	17.841M
5500MHz	Pass	Inf	21.75M	17.811M	21.54M	17.841M	21.48M	17.961M	21.69M	17.781M
5580MHz	Pass	Inf	21.78M	17.871M	21.48M	17.931M	21.48M	17.871M	21.57M	17.871M
5700MHz	Pass	Inf	21.75M	17.871M	21.51M	17.901M	21.42M	17.811M	21.69M	17.841M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.758M	13.949M	15.744M	13.977M	15.758M	14.018M	15.799M	14.004M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.735M	4.333M	3.765M	4.258M	3.735M	4.213M	3.735M	4.168M
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5270MHz	Pass	Inf	40.2M	36.462M	39.72M	36.462M	40.2M	36.462M	39.84M	36.462M
5310MHz	Pass	Inf	40.26M	36.462M	39.72M	36.462M	40.08M	36.462M	40.02M	36.402M
5510MHz	Pass	Inf	40.32M	36.462M	39.54M	36.462M	39.96M	36.462M	39.78M	36.462M
5550MHz	Pass	Inf	40.2M	36.522M	39.84M	36.522M	39.96M	36.462M	39.84M	36.462M
5670MHz	Pass	Inf	40.26M	36.462M	39.78M	36.462M	39.84M	36.462M	39.9M	36.582M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	35.201M	33.126M	34.864M	33.126M	34.965M	33.126M	35.033M	33.227M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.105M	3.478M	3.195M	3.508M	3.12M	3.448M	3.105M	3.523M
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5290MHz	Pass	Inf	81.6M	76.162M	81.36M	76.042M	81.12M	76.282M	81.72M	76.162M
5530MHz	Pass	Inf	81.72M	76.042M	81.6M	76.162M	81.36M	76.042M	81.84M	76.042M
5610MHz	Pass	Inf	81.72M	76.162M	81.36M	76.162M	81.48M	76.162M	81.6M	76.162M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	75.815M	72.607M	75.52M	72.755M	75.668M	72.902M	76.11M	72.607M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.09M	3.583M	3.105M	3.583M	3M	3.523M	3.09M	3.553M
802.11ac VHT160_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	Inf	81.72M	76.642M	81.72M	76.762M	82.68M	77.361M	81.96M	77.001M
5250MHz Straddle 5.25-5.35GHz	Pass	Inf	81.96M	76.762M	83.04M	76.642M	82.2M	76.882M	81.84M	76.762M
5570MHz	Pass	Inf	164.16M	154.483M	164.88M	154.483M	164.64M	154.243M	163.92M	154.483M
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	21.72M	19.01M	21.57M	19.01M	21.66M	18.951M	21.54M	18.981M

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)
5300MHz	Pass	Inf	21.57M	18.981M	21.48M	19.07M	21.75M	18.981M	21.72M	18.981M
5320MHz	Pass	Inf	21.6M	19.04M	21.57M	19.04M	21.78M	19.01M	21.69M	19.04M
5500MHz	Pass	Inf	21.63M	18.981M	21.45M	19.01M	21.66M	19.01M	21.72M	19.01M
5580MHz	Pass	Inf	21.57M	19.01M	21.27M	19.01M	21.54M	18.951M	21.72M	19.01M
5700MHz	Pass	Inf	21.63M	19.01M	21.6M	18.981M	21.66M	18.951M	21.48M	18.981M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.785M	14.513M	15.565M	14.513M	15.799M	14.513M	15.648M	14.513M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	4.44M	4.543M	4.425M	4.558M	4.425M	4.498M	4.515M	4.543M
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5270MHz	Pass	Inf	40.02M	37.841M	39.96M	37.661M	40.02M	37.721M	40.14M	37.781M
5310MHz	Pass	Inf	40.38M	37.841M	39.78M	37.721M	40.26M	37.661M	39.96M	37.601M
5510MHz	Pass	Inf	40.2M	37.781M	39.9M	37.781M	40.32M	37.841M	40.14M	37.841M
5550MHz	Pass	Inf	40.02M	37.721M	39.96M	37.781M	40.08M	37.721M	40.08M	37.661M
5670MHz	Pass	Inf	40.08M	37.721M	39.84M	37.841M	40.08M	37.661M	40.14M	37.721M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	34.965M	33.801M	34.965M	33.834M	35.168M	33.767M	35.134M	33.801M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.75M	4.003M	3.81M	4.018M	3.78M	4.003M	3.75M	4.003M
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5290MHz	Pass	Inf	82.32M	77.241M	81.72M	77.601M	81.84M	77.361M	82.08M	77.481M
5530MHz	Pass	Inf	81.96M	77.361M	82.08M	77.481M	82.44M	77.601M	82.32M	77.601M
5610MHz	Pass	Inf	81.96M	77.481M	81.96M	77.721M	82.08M	77.361M	82.32M	77.601M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	75.889M	73.345M	75.889M	73.271M	76.184M	73.345M	75.963M	73.492M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.795M	4.048M	3.675M	4.048M	3.72M	4.033M	3.465M	4.063M
802.11ax HEW160_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	Inf	81.96M	78.081M	81.6M	78.081M	82.68M	77.961M	82.32M	77.841M
5250MHz Straddle 5.25-5.35GHz	Pass	Inf	82.92M	77.961M	82.56M	77.721M	82.68M	78.201M	82.44M	77.961M
5570MHz	Pass	Inf	164.88M	155.202M	164.64M	154.963M	165.12M	155.682M	164.4M	155.442M

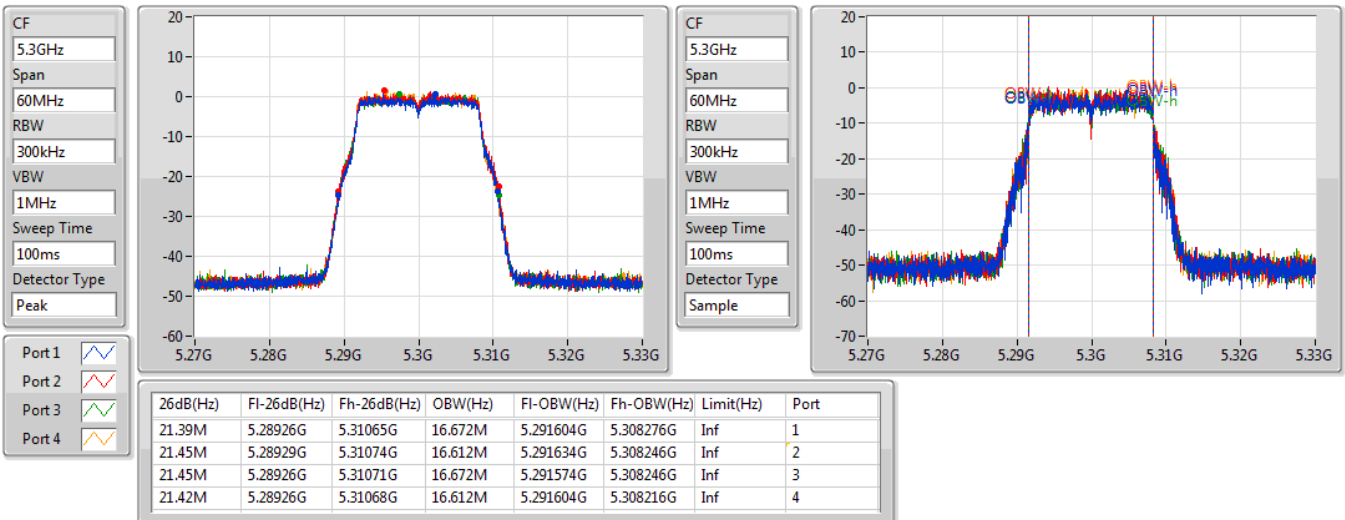
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11a_Nss1,(6Mbps)_4TX
EBW
5260MHz

30/12/2020


802.11a_Nss1,(6Mbps)_4TX
EBW
5300MHz

30/12/2020

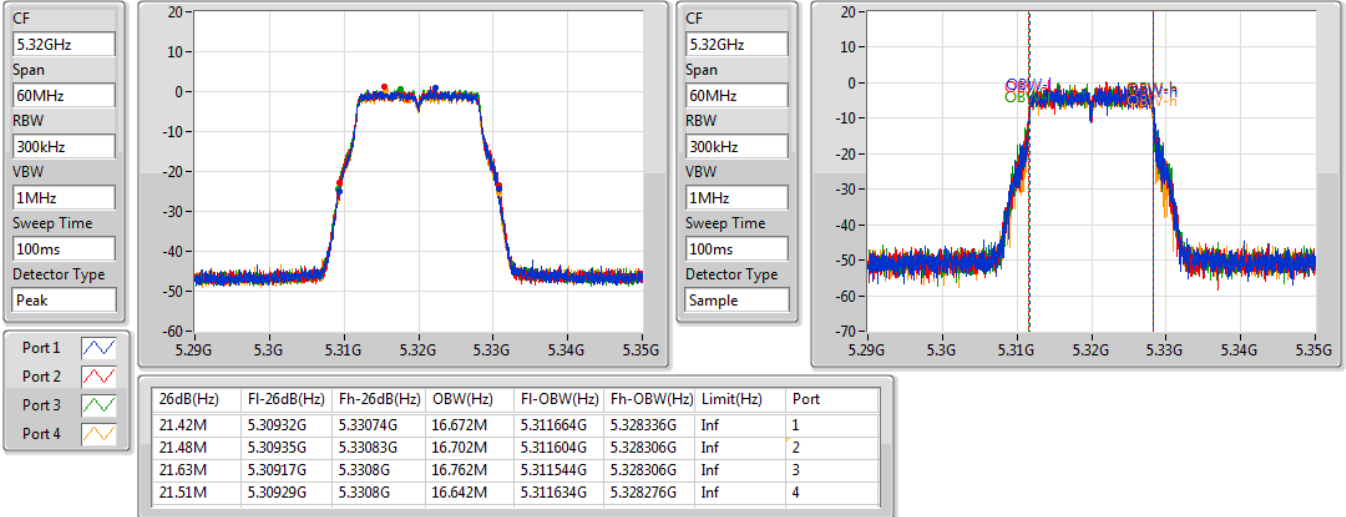


802.11a_Nss1,(6Mbps)_4TX

EBW

5320MHz

30/12/2020

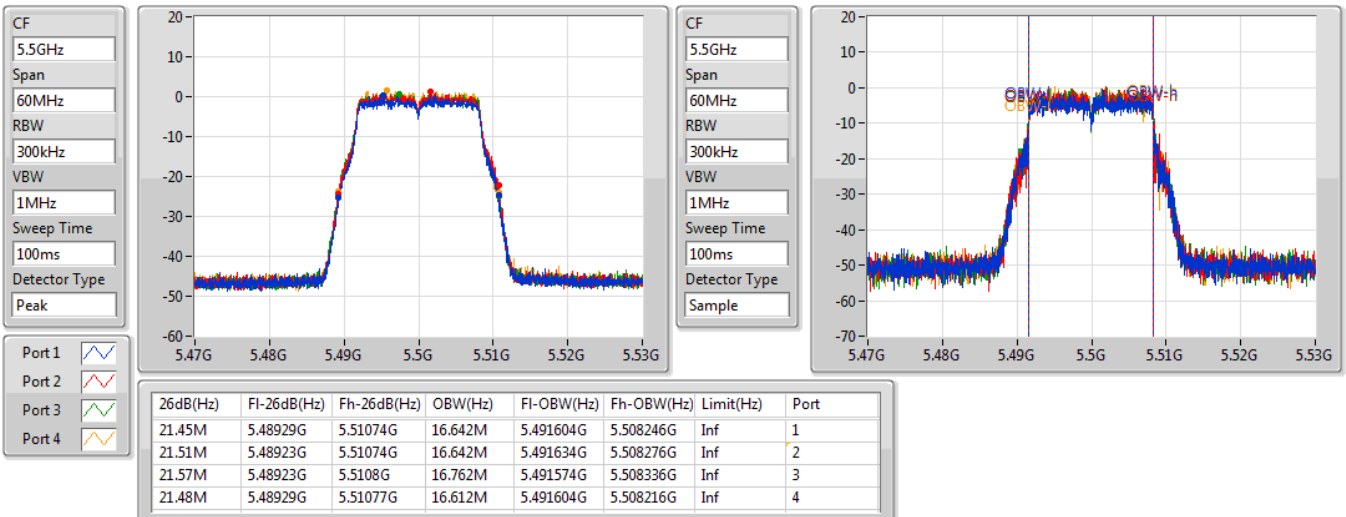


802.11a_Nss1,(6Mbps)_4TX

EBW

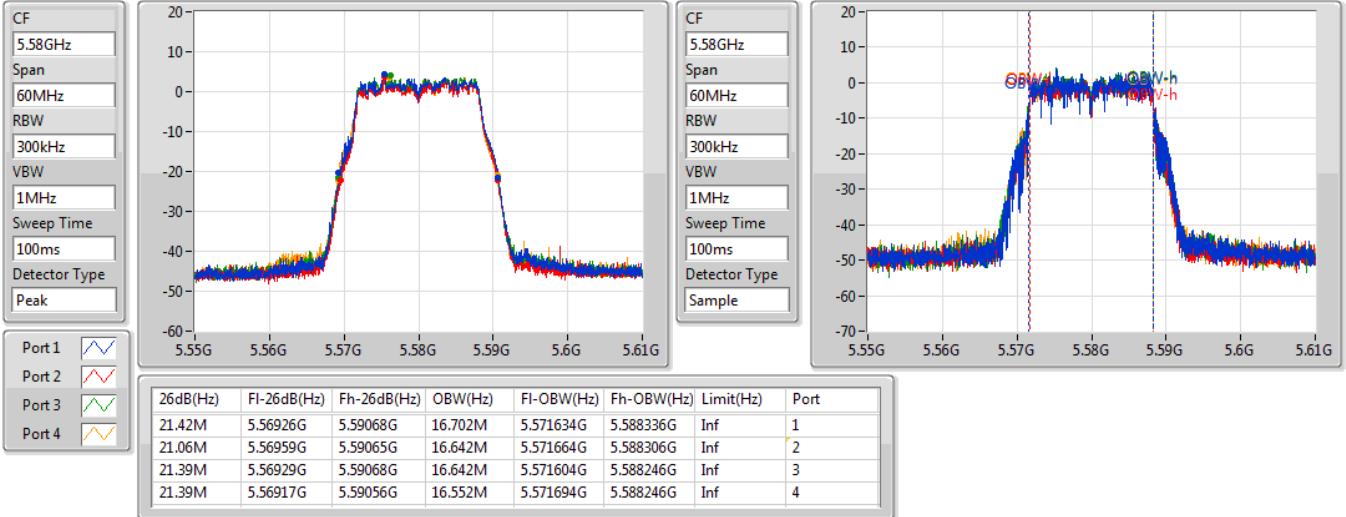
5500MHz

30/12/2020

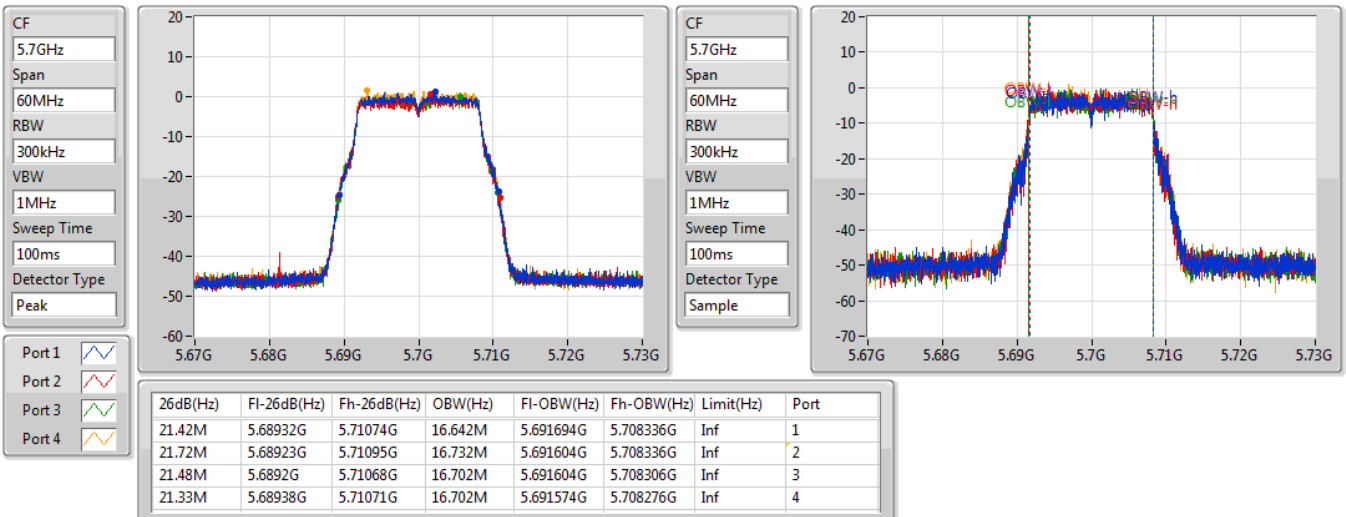


802.11a_Nss1,(6Mbps)_4TX
EBW
5580MHz

30/12/2020

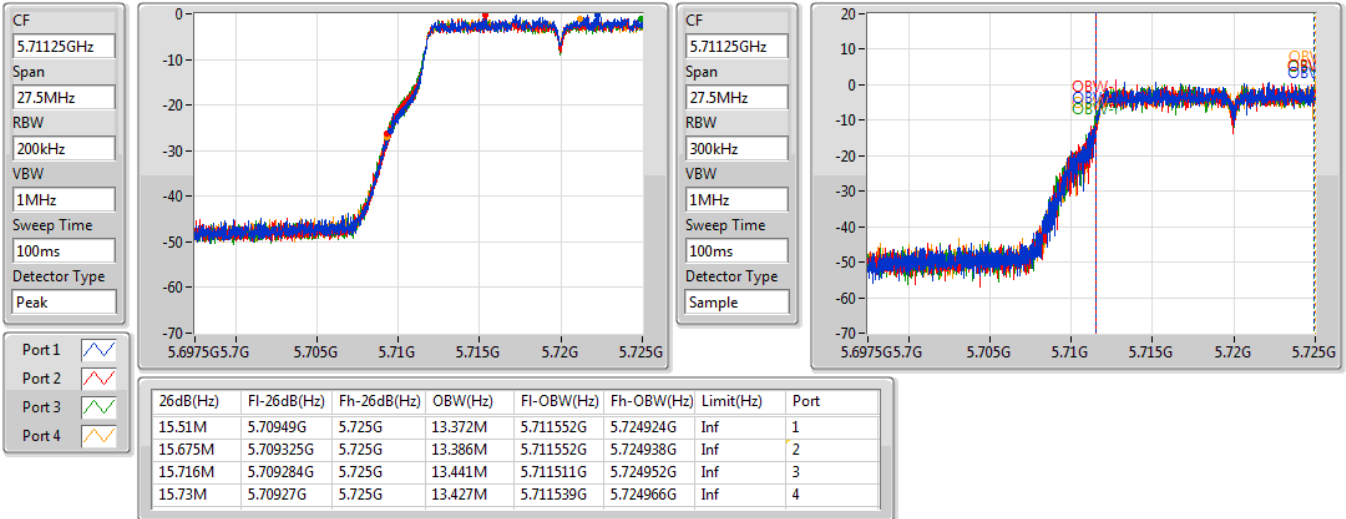

802.11a_Nss1,(6Mbps)_4TX
EBW
5700MHz

30/12/2020

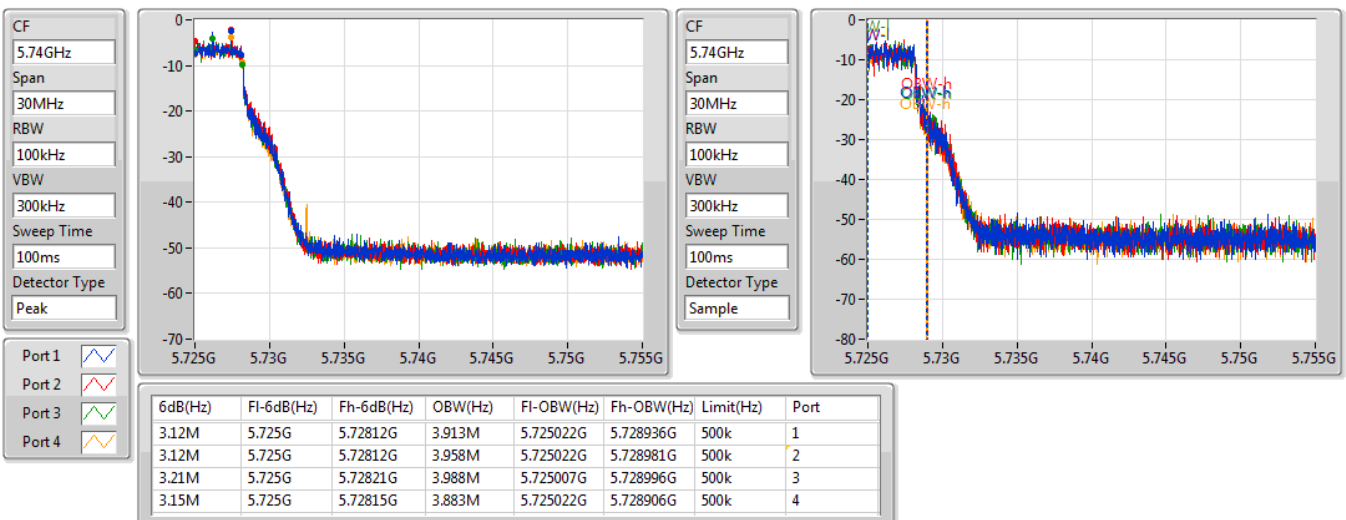


802.11a_Nss1,(6Mbps)_4TX
EBW
5720MHz Straddle 5.47-5.725GHz

30/12/2020

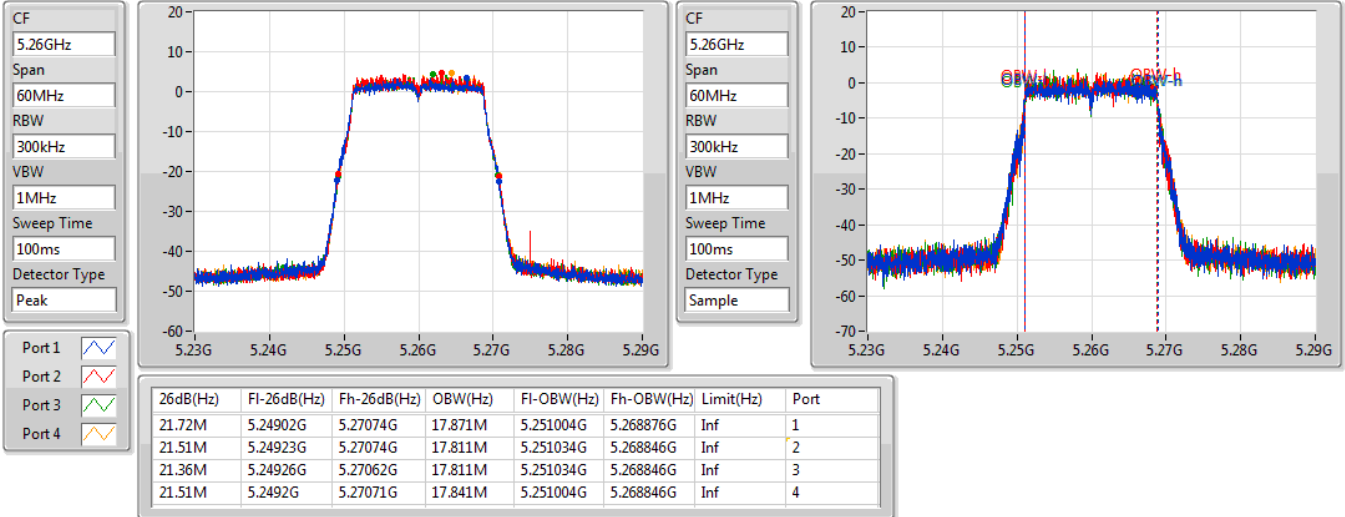

802.11a_Nss1,(6Mbps)_4TX
EBW
5720MHz Straddle 5.725-5.85GHz

30/12/2020

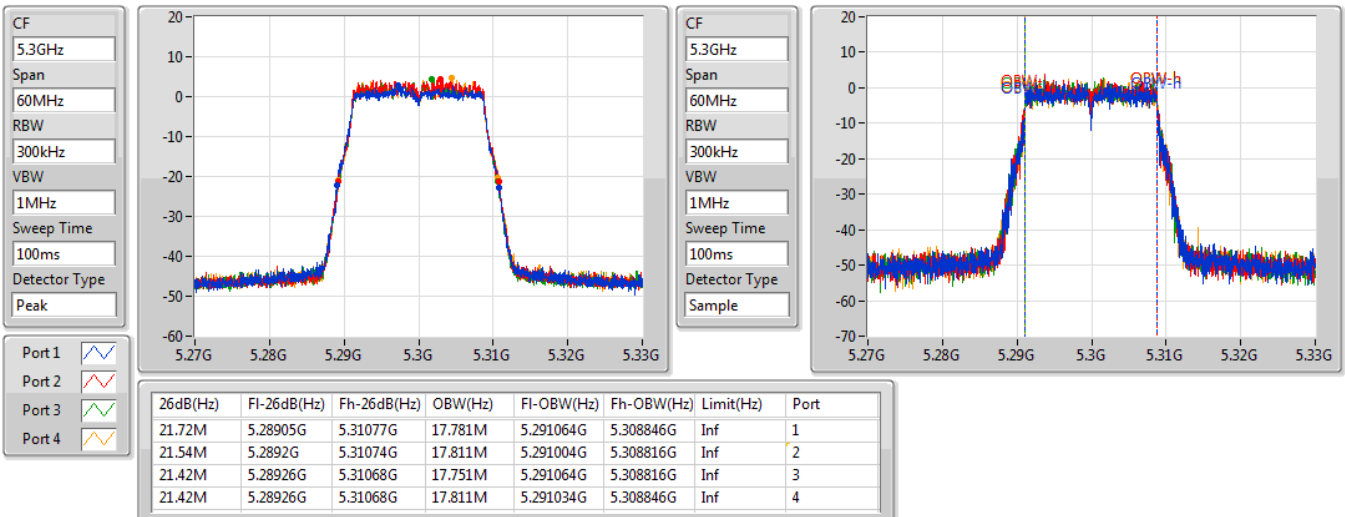


802.11n HT20_Nss1,(MCS0)_4TX
EBW
5260MHz

30/12/2020


802.11n HT20_Nss1,(MCS0)_4TX
EBW
5300MHz

30/12/2020

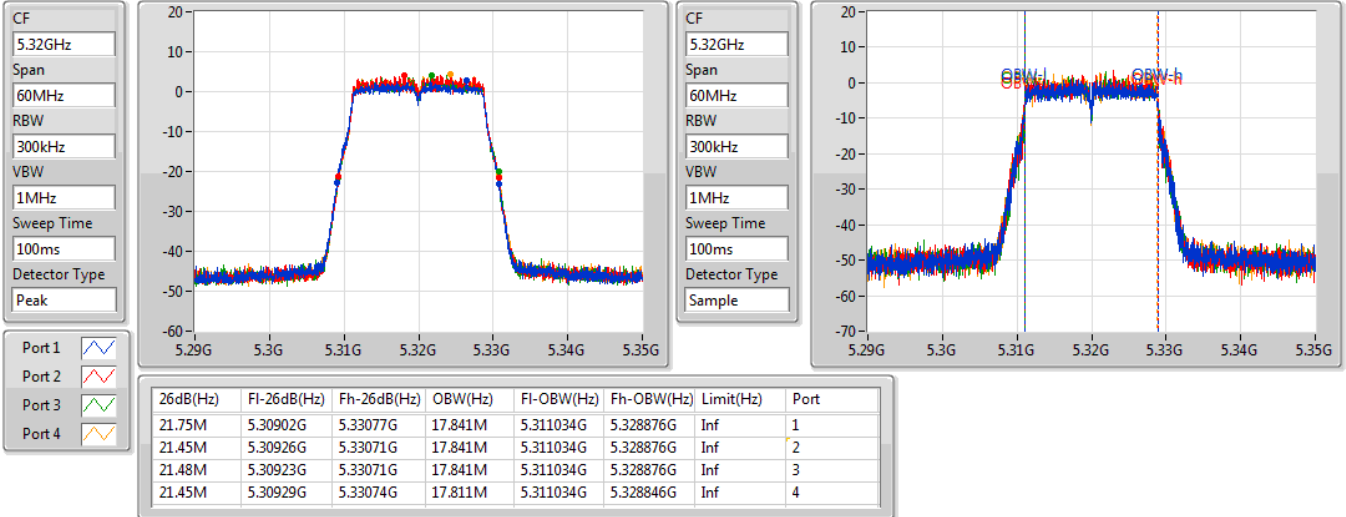


802.11n HT20_Nss1,(MCS0)_4TX

EBW

5320MHz

30/12/2020

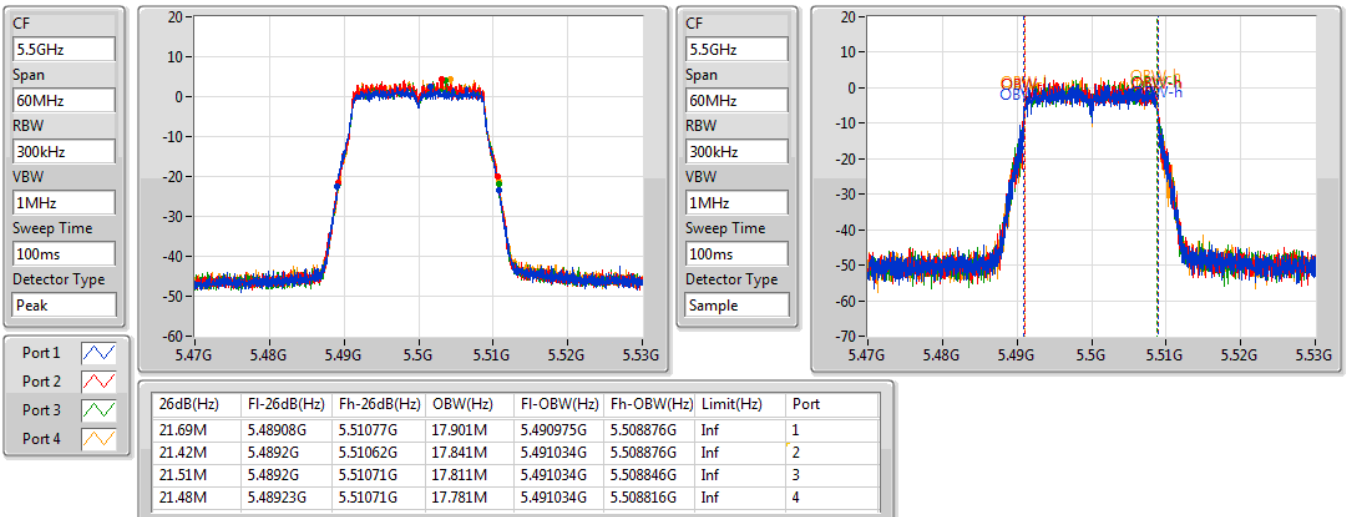


802.11n HT20_Nss1,(MCS0)_4TX

EBW

5500MHz

30/12/2020

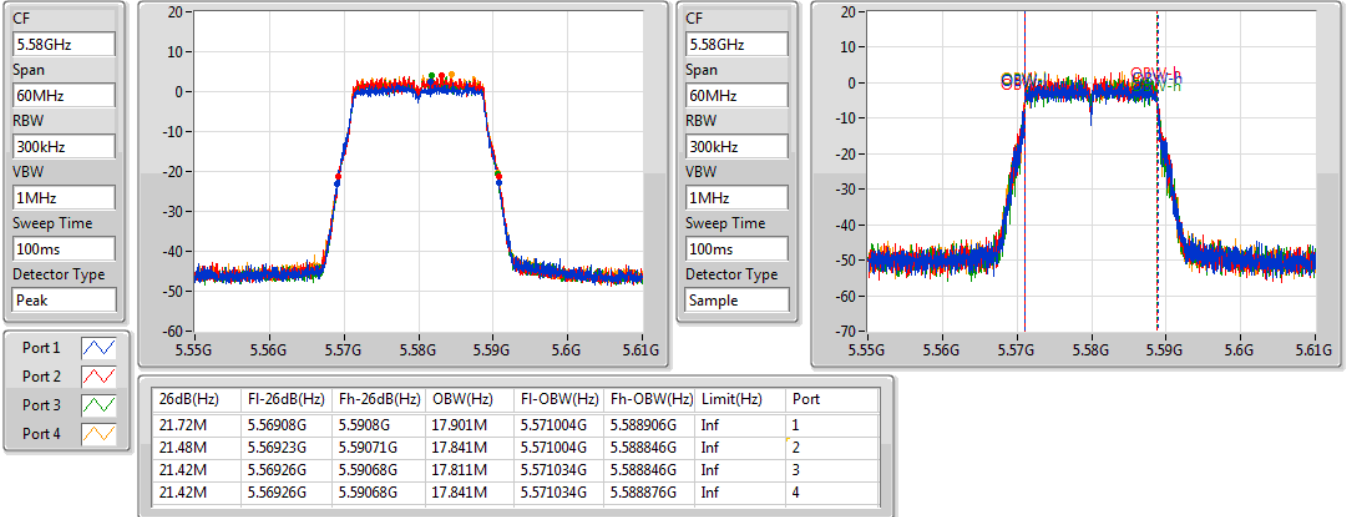


802.11n HT20_Nss1,(MCS0)_4TX

EBW

5580MHz

30/12/2020

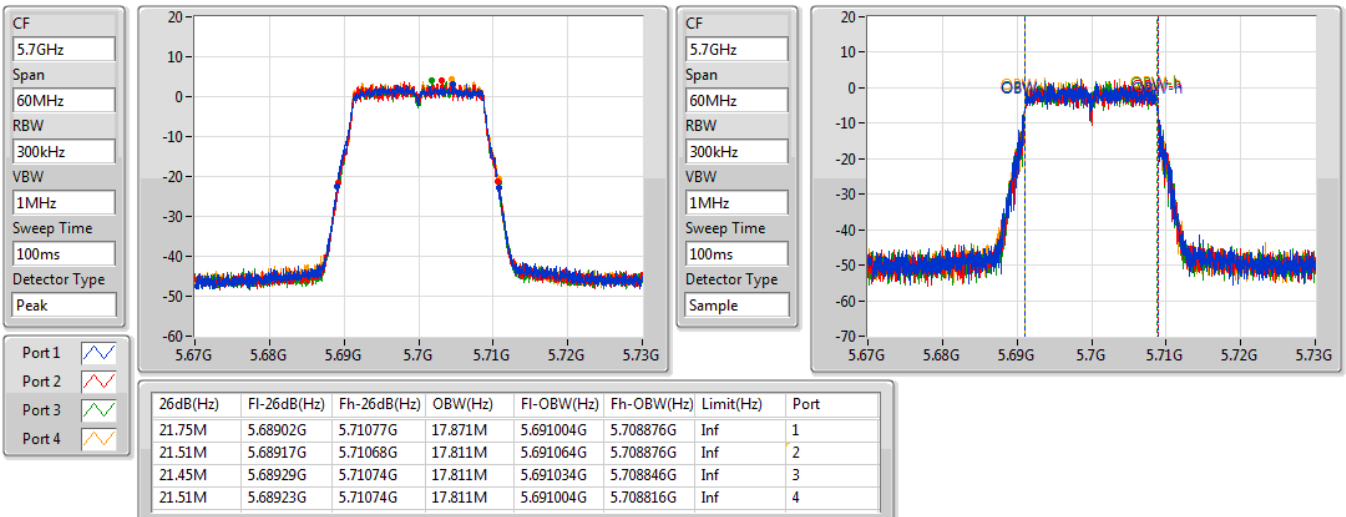


802.11n HT20_Nss1,(MCS0)_4TX

EBW

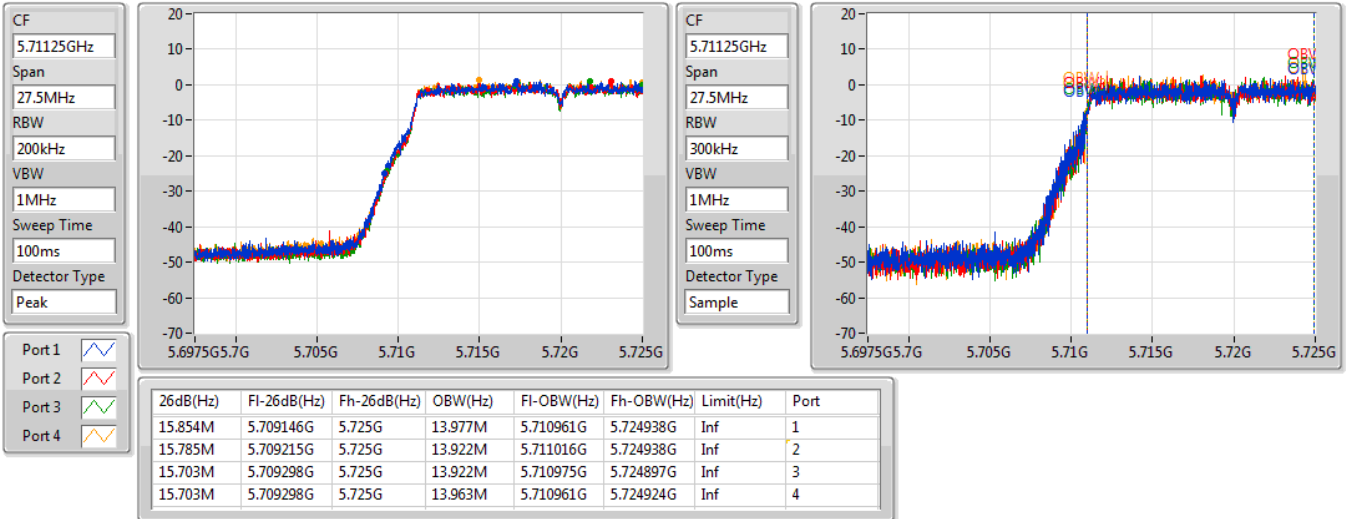
5700MHz

30/12/2020

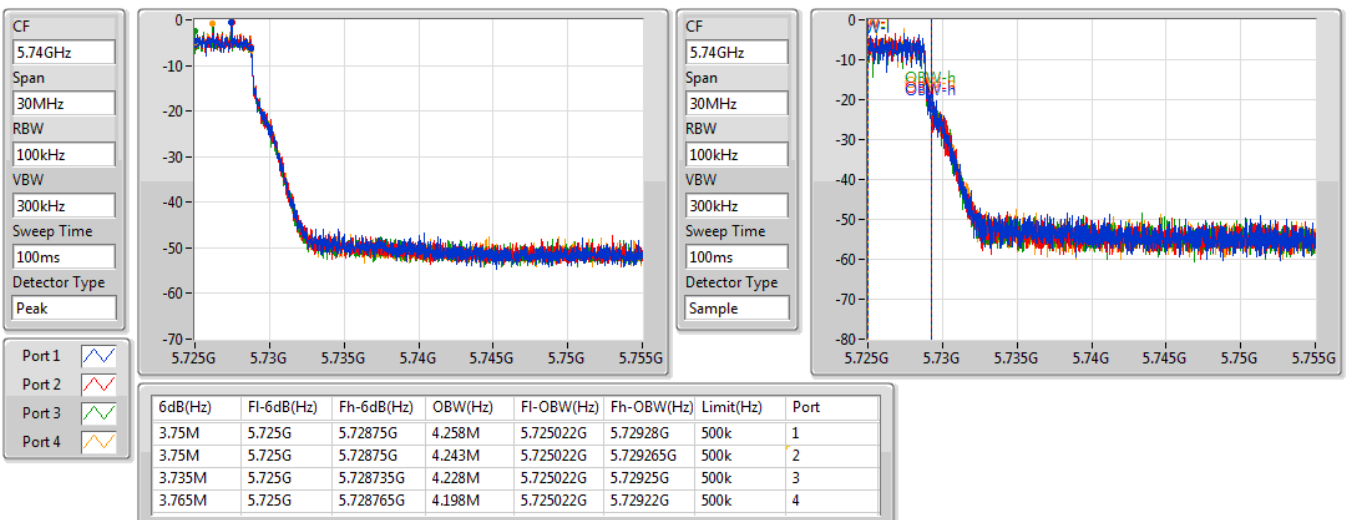


802.11n HT20_Nss1,(MCS0)_4TX
EBW
5720MHz Straddle 5.47-5.725GHz

30/12/2020


802.11n HT20_Nss1,(MCS0)_4TX
EBW
5720MHz Straddle 5.725-5.85GHz

30/12/2020

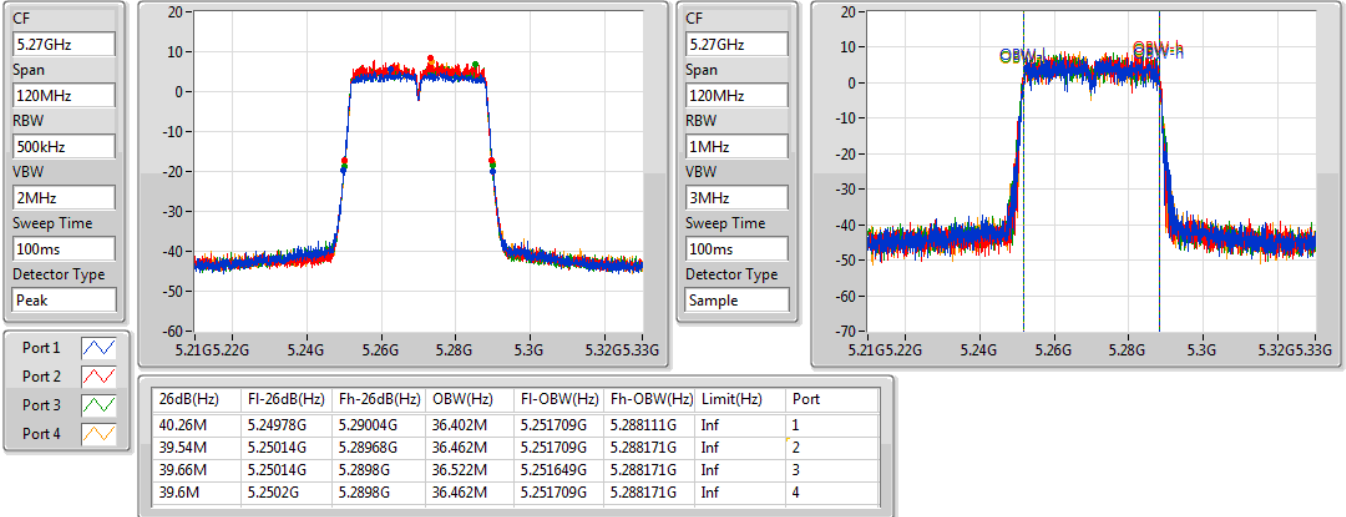


802.11n HT40_Nss1,(MCS0)_4TX

EBW

5270MHz

30/12/2020

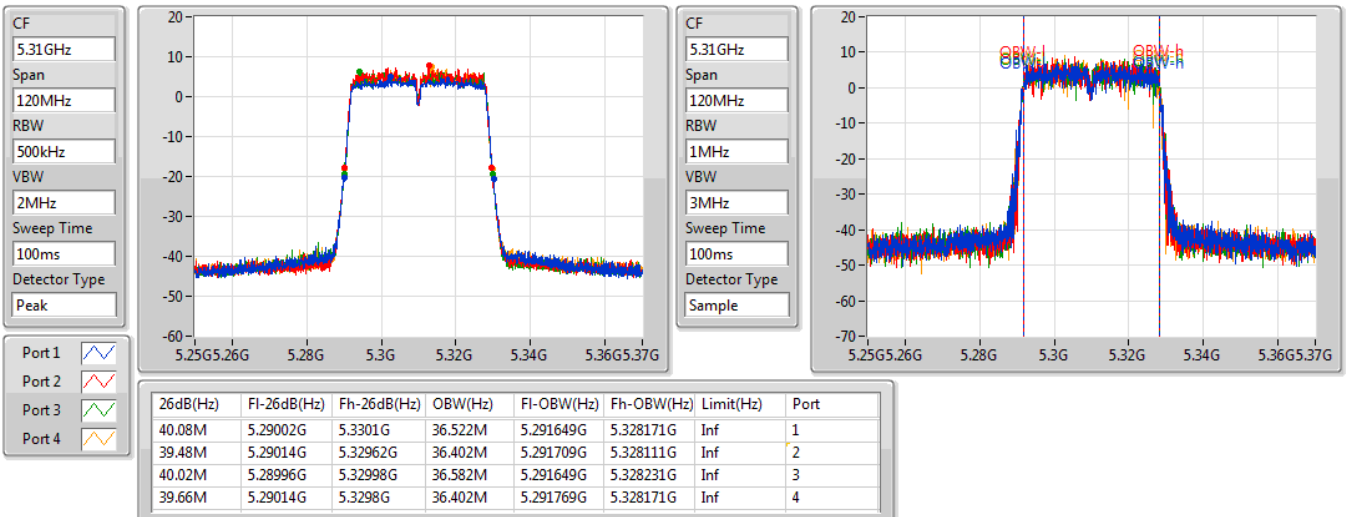


802.11n HT40_Nss1,(MCS0)_4TX

EBW

5310MHz

30/12/2020

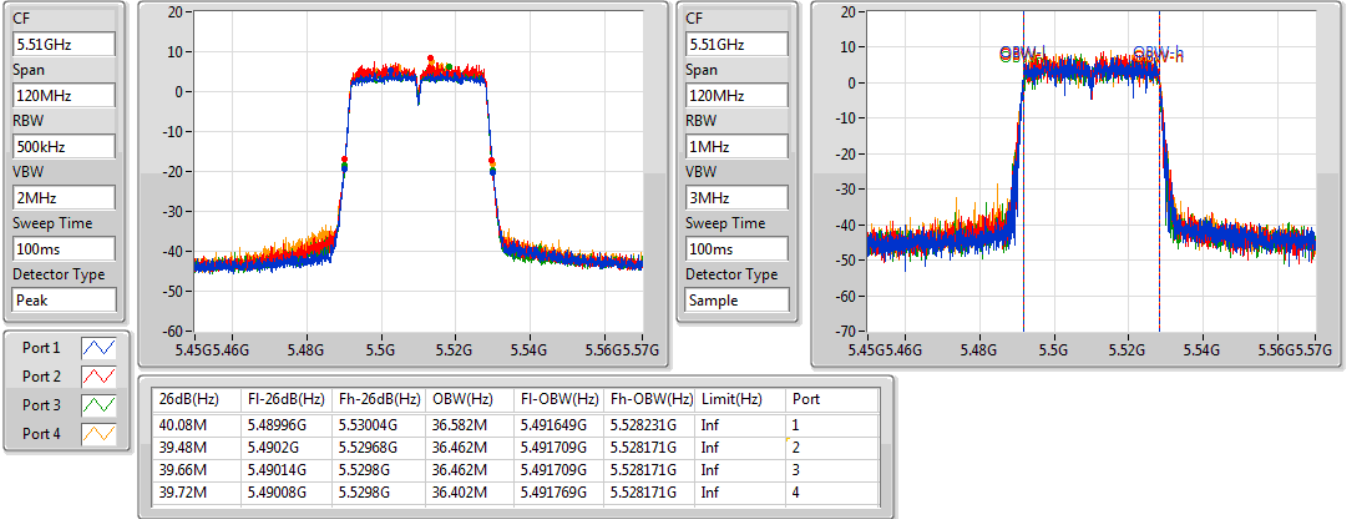


802.11n HT40_Nss1,(MCS0)_4TX

EBW

5510MHz

30/12/2020

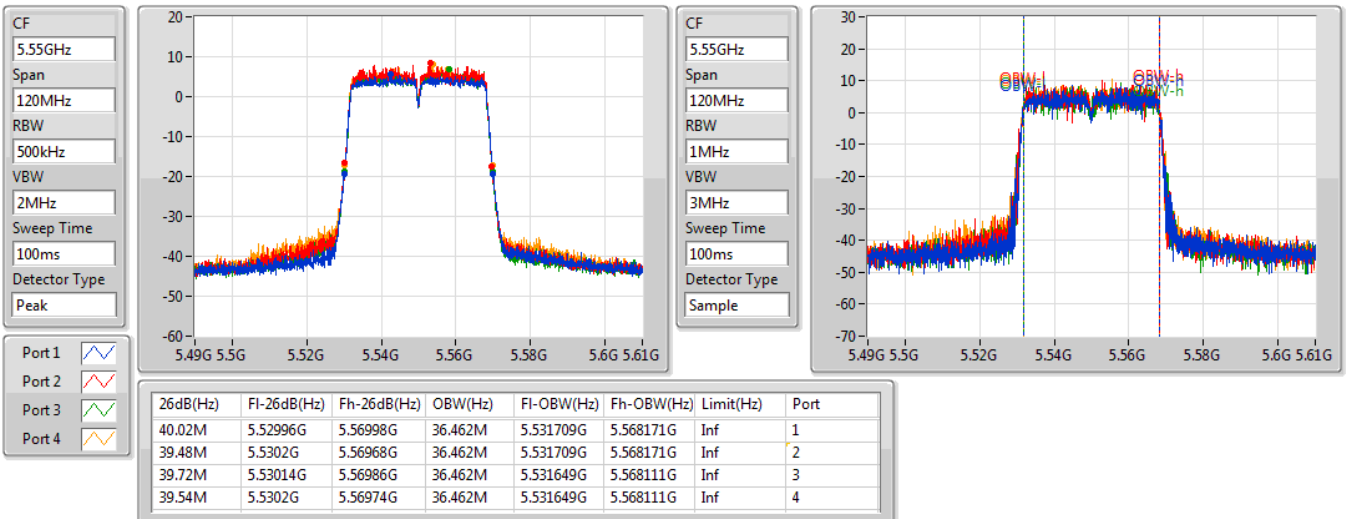


802.11n HT40_Nss1,(MCS0)_4TX

EBW

5550MHz

30/12/2020

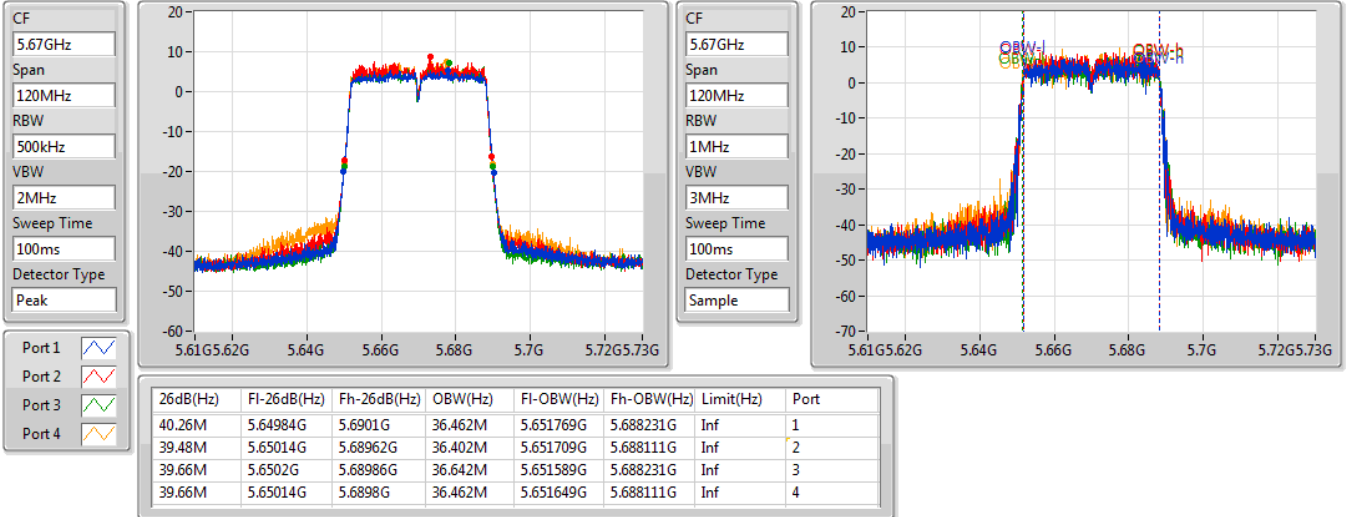


802.11n HT40_Nss1,(MCS0)_4TX

EBW

5670MHz

30/12/2020

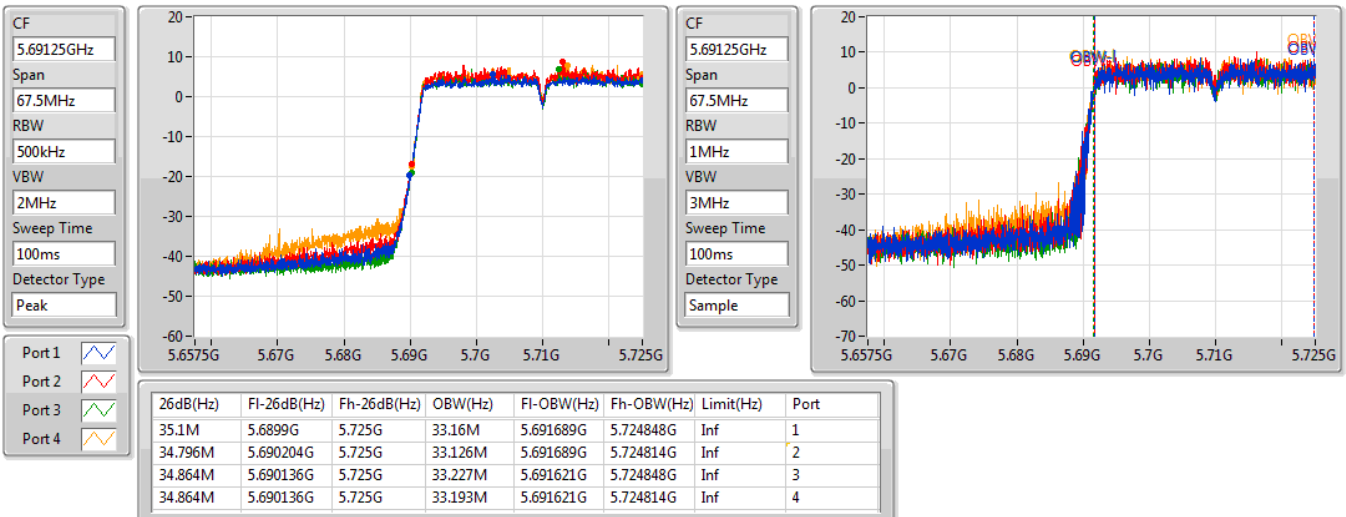


802.11n HT40_Nss1,(MCS0)_4TX

EBW

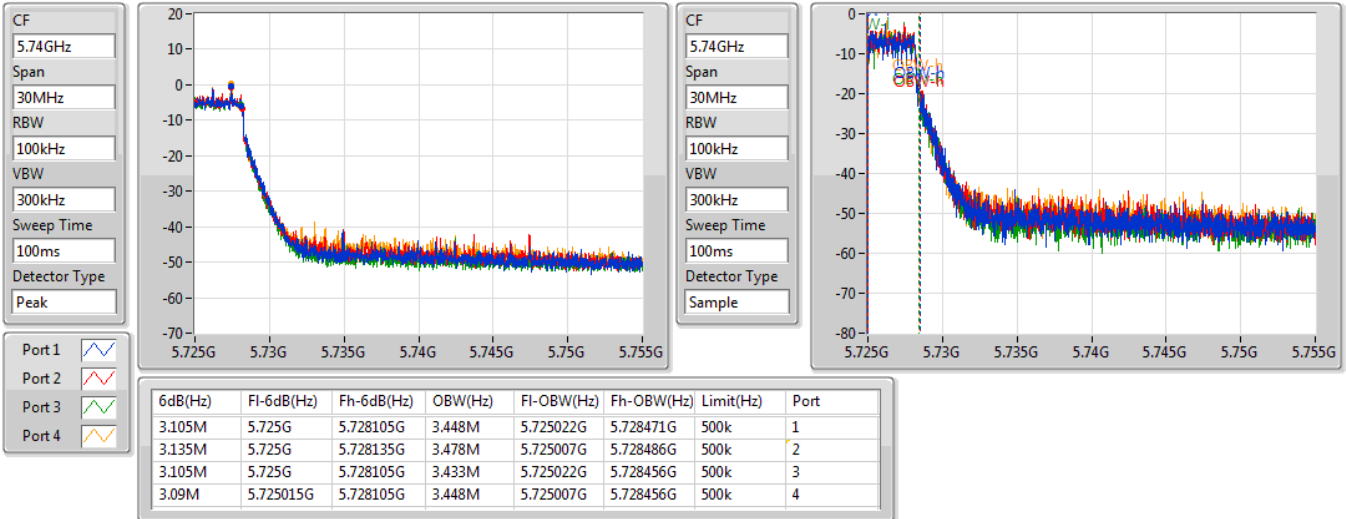
5710MHz Straddle 5.47-5.725GHz

30/12/2020

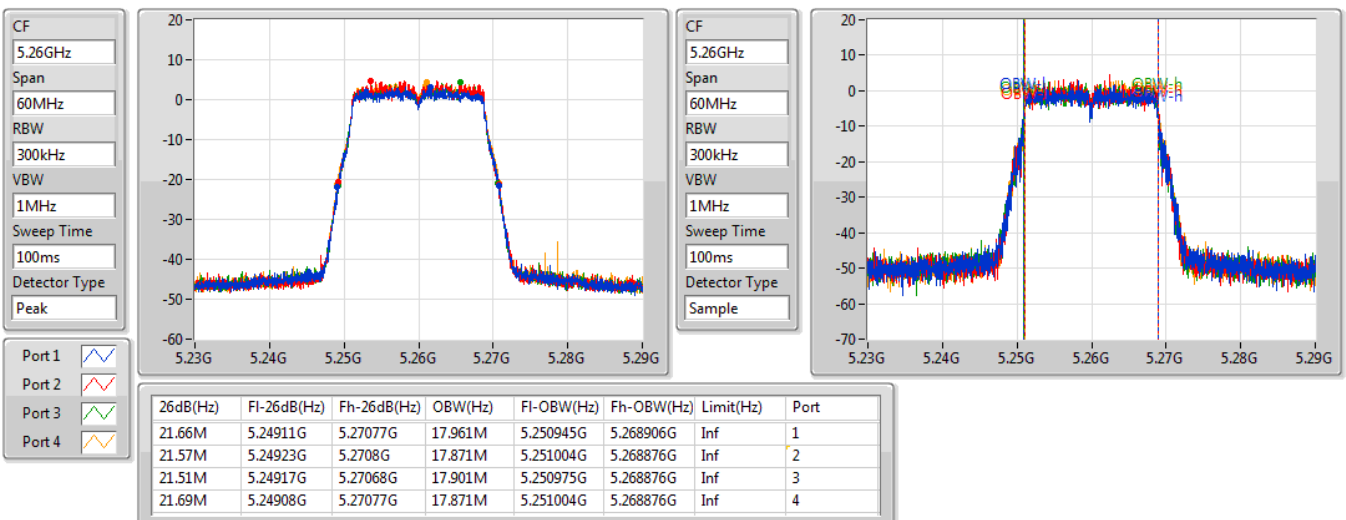


802.11n HT40_Nss1,(MCS0)_4TX
EBW
5710MHz Straddle 5.725-5.85GHz

30/12/2020

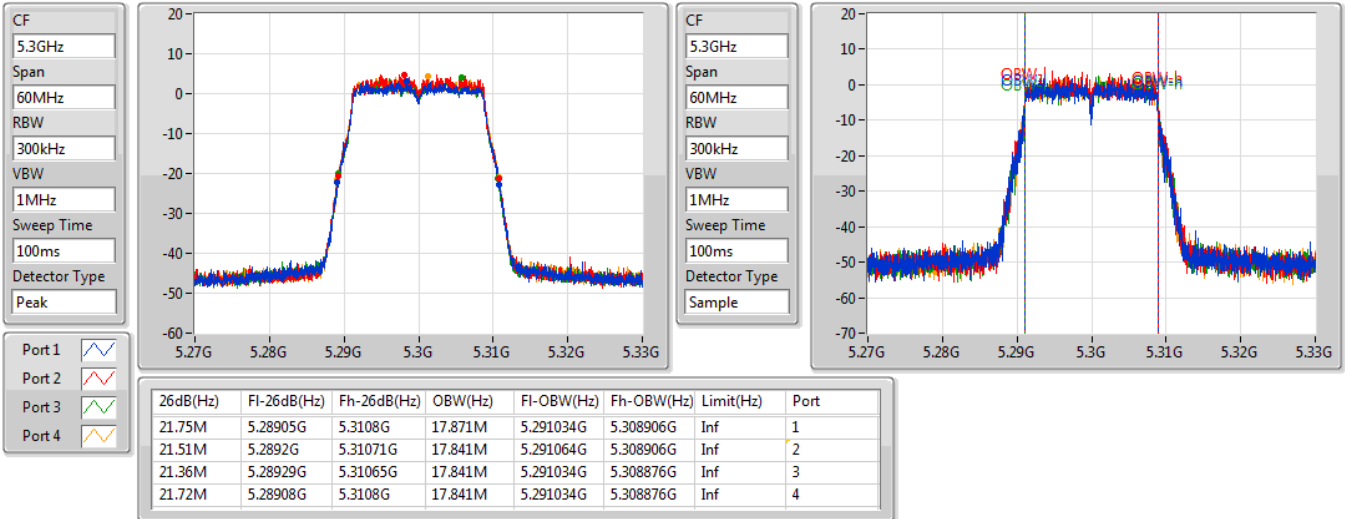

802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5260MHz

30/12/2020

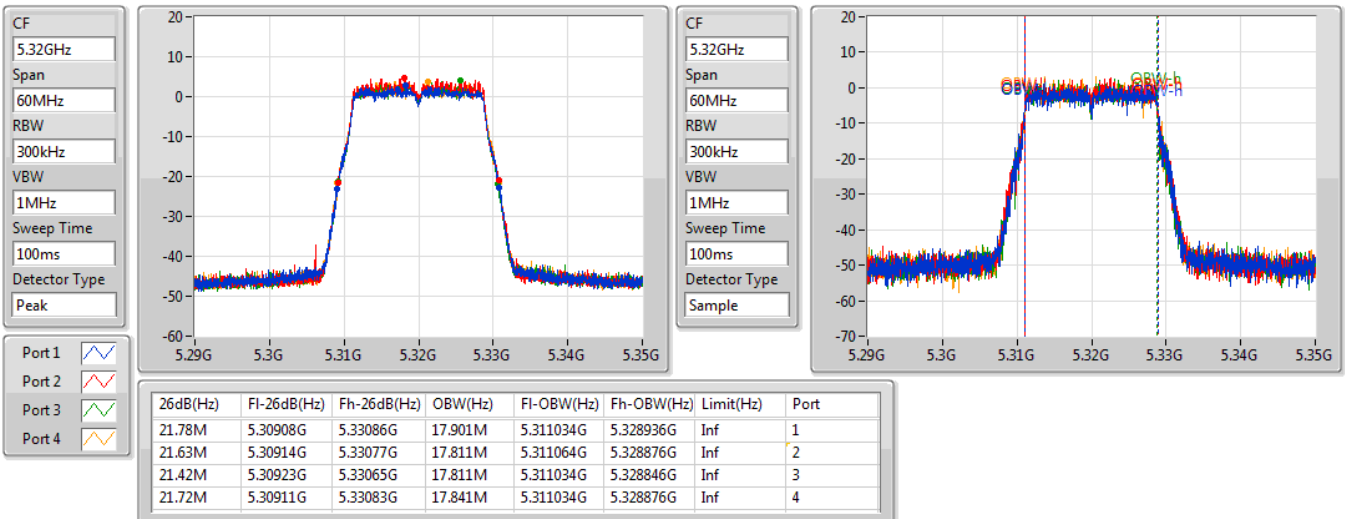


802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5300MHz

30/12/2020

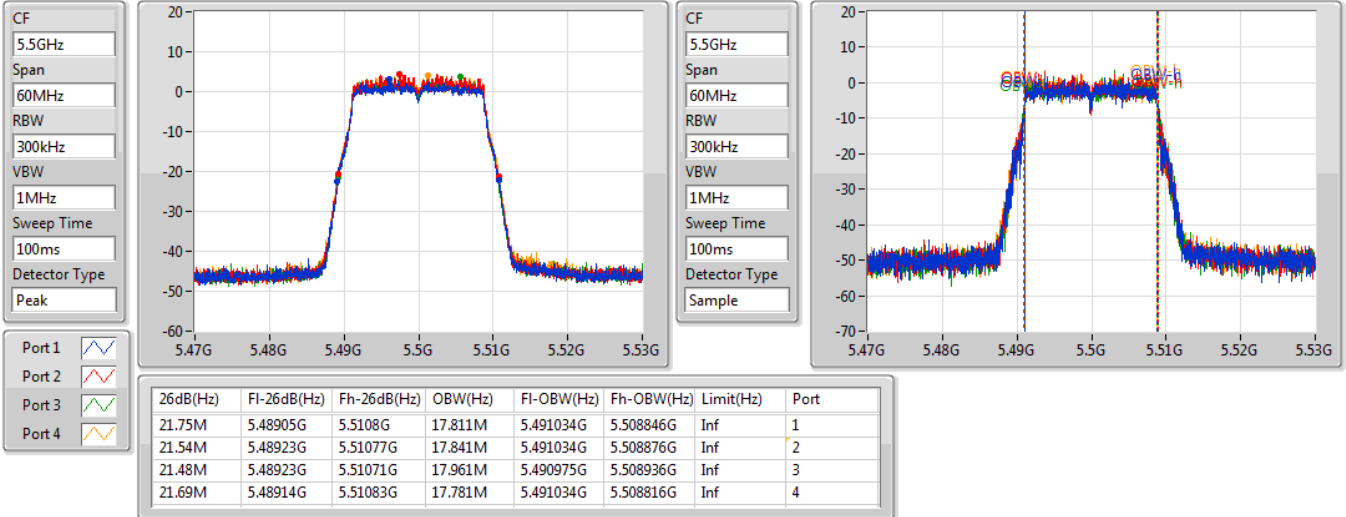

802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5320MHz

30/12/2020

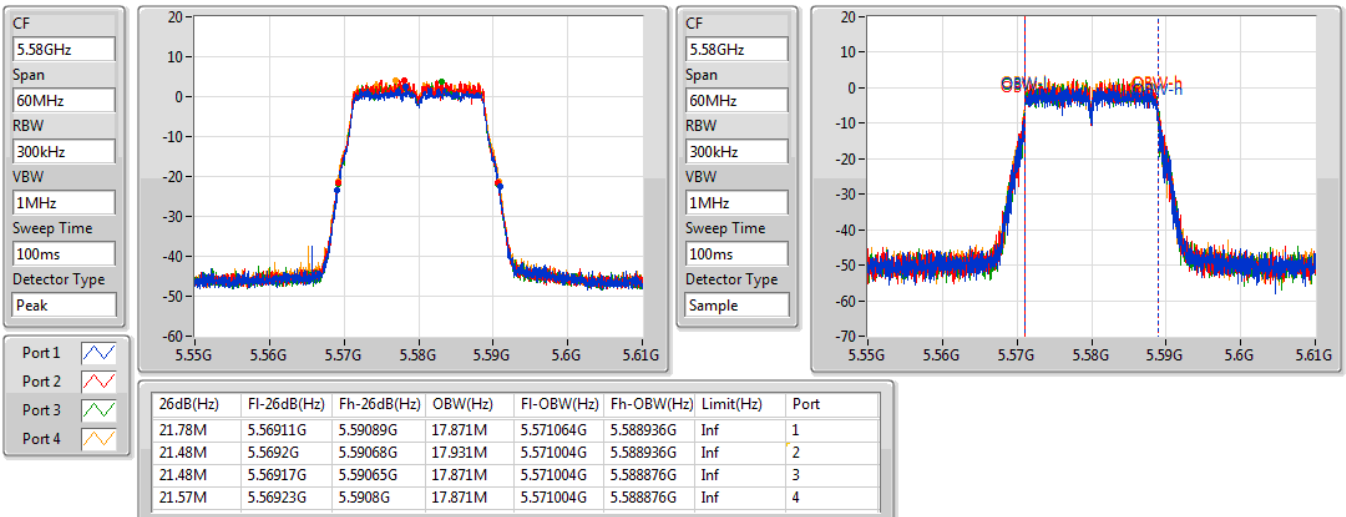


802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5500MHz

30/12/2020

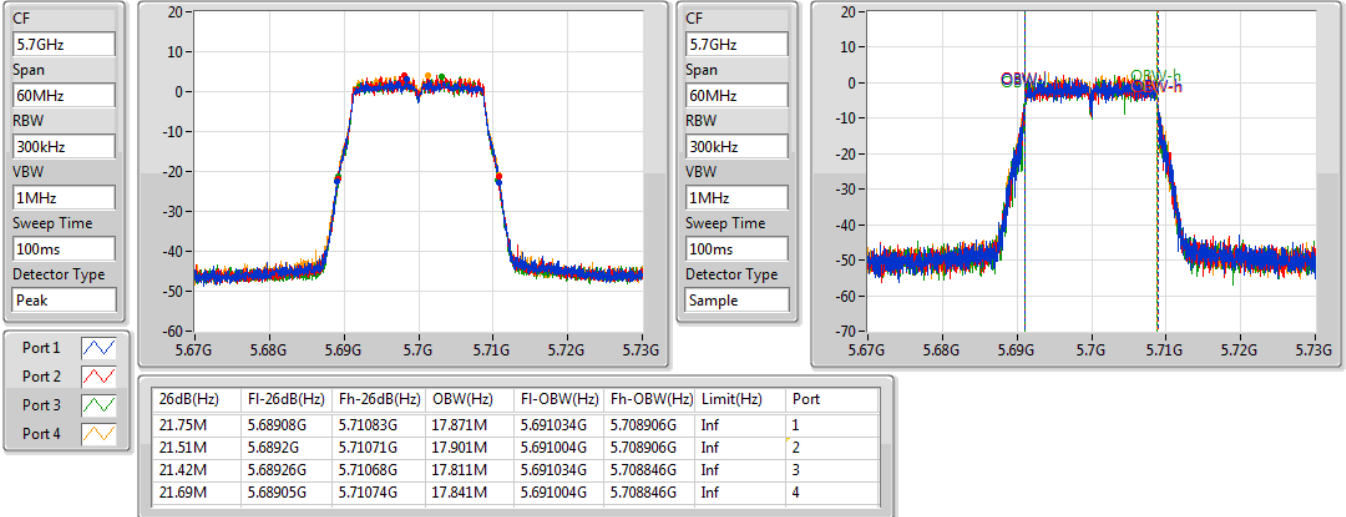

802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5580MHz

30/12/2020

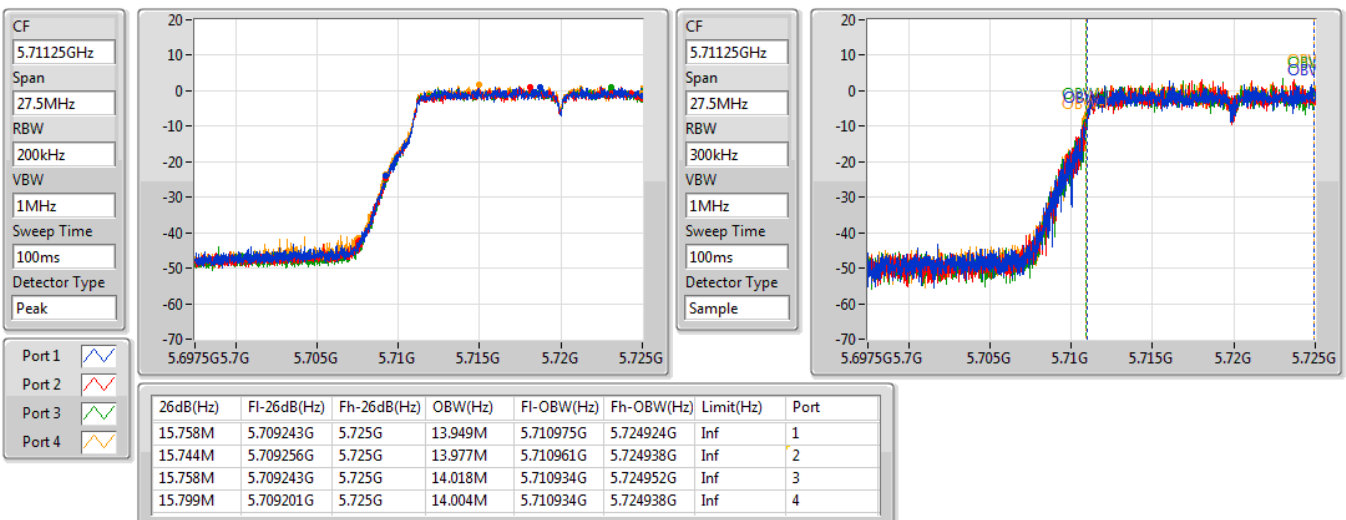


802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5700MHz

30/12/2020

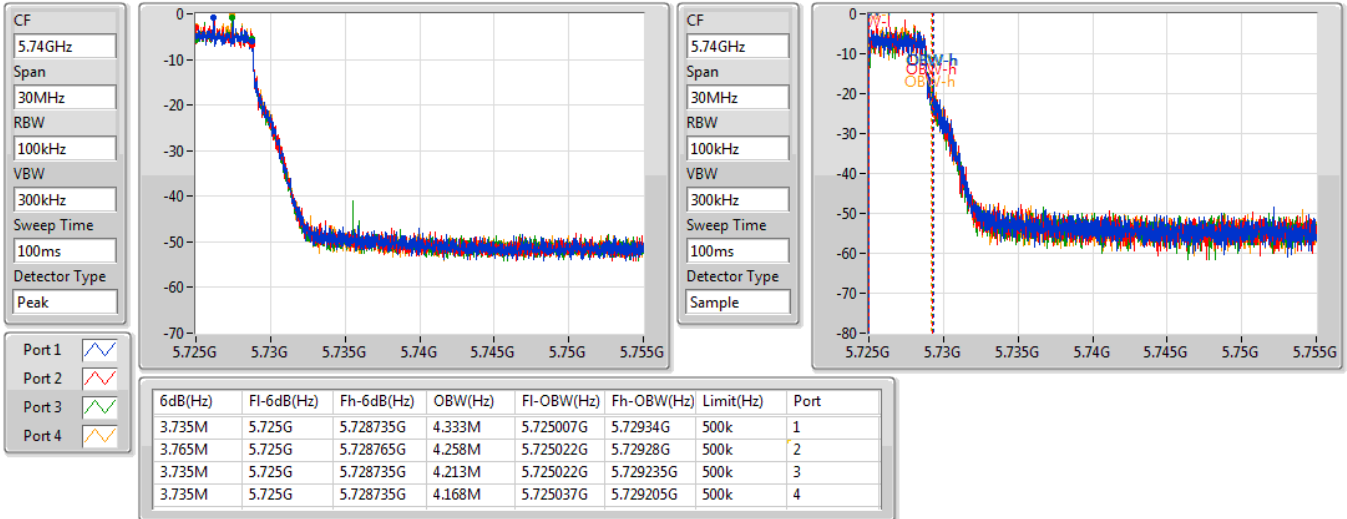

802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5720MHz Straddle 5.47-5.725GHz

30/12/2020

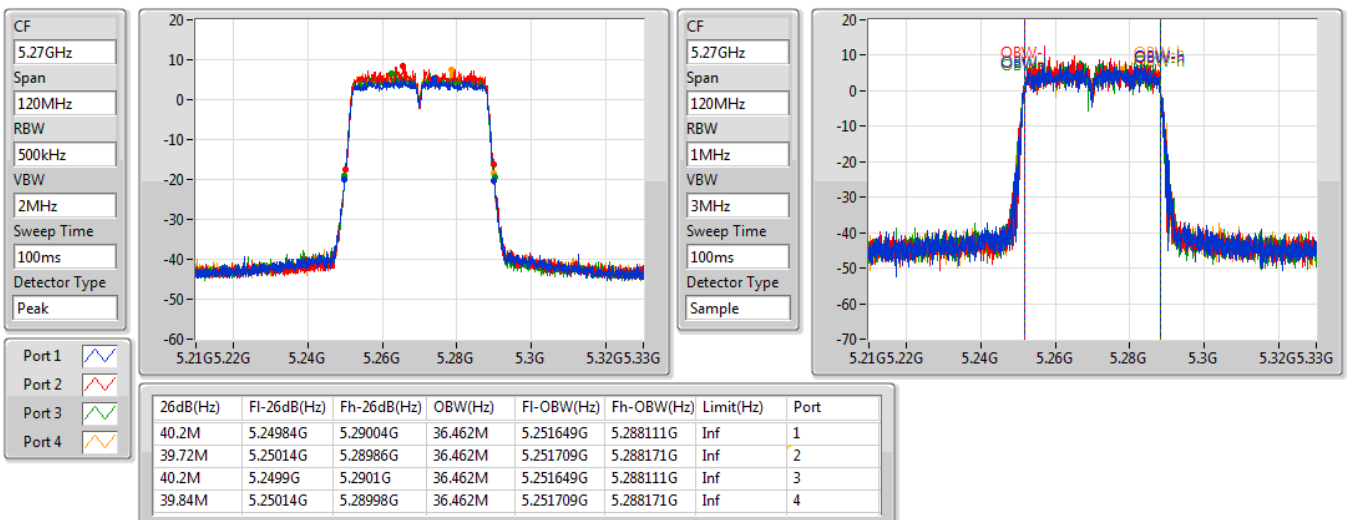


802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5720MHz Straddle 5.725-5.85GHz

30/12/2020

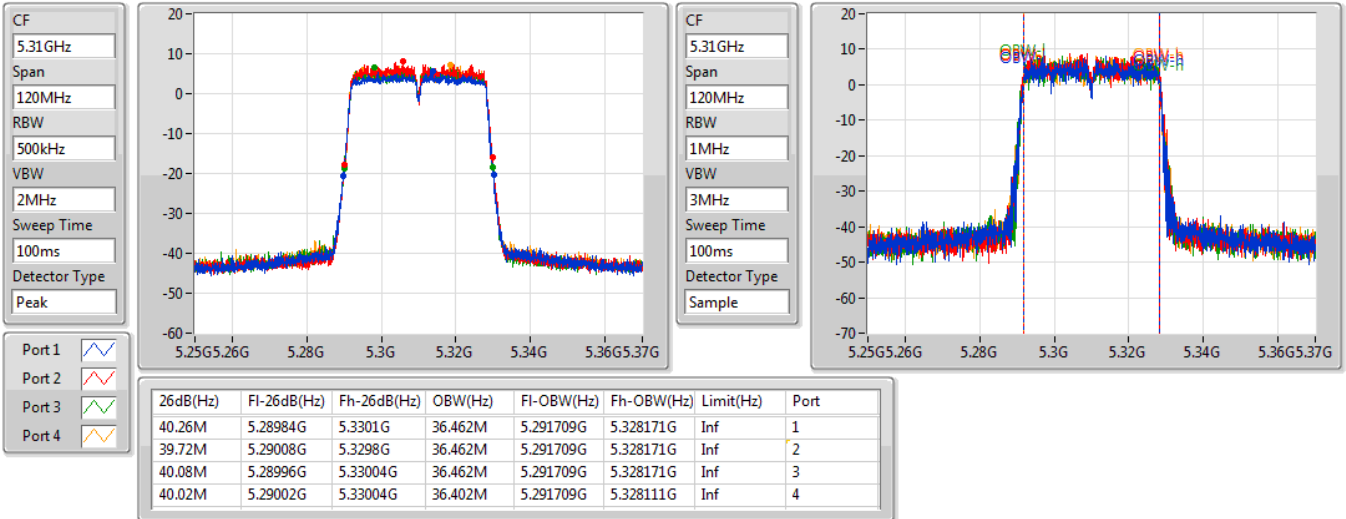

802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5270MHz

30/12/2020

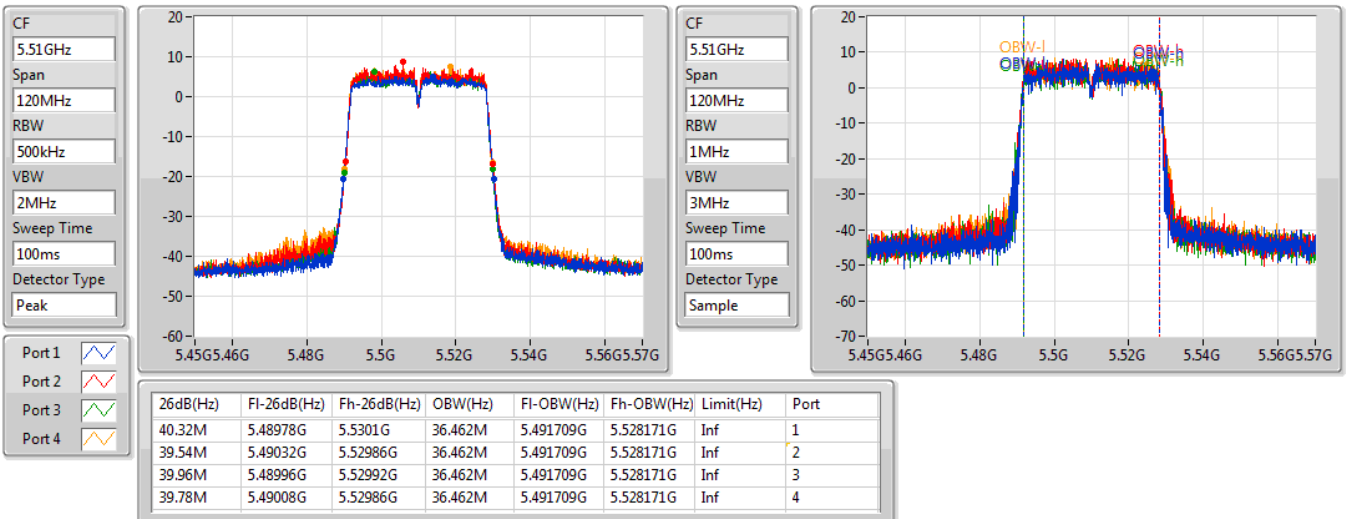


802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5310MHz

30/12/2020


802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5510MHz

30/12/2020

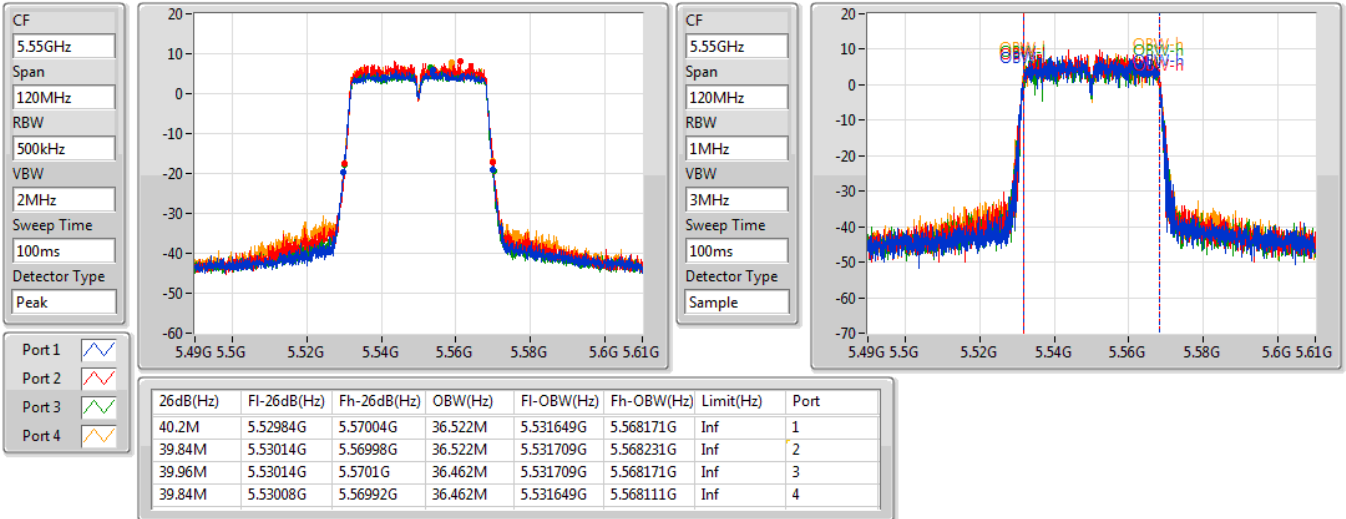


802.11ac VHT40_Nss1,(MCS0)_4TX

EBW

5550MHz

30/12/2020

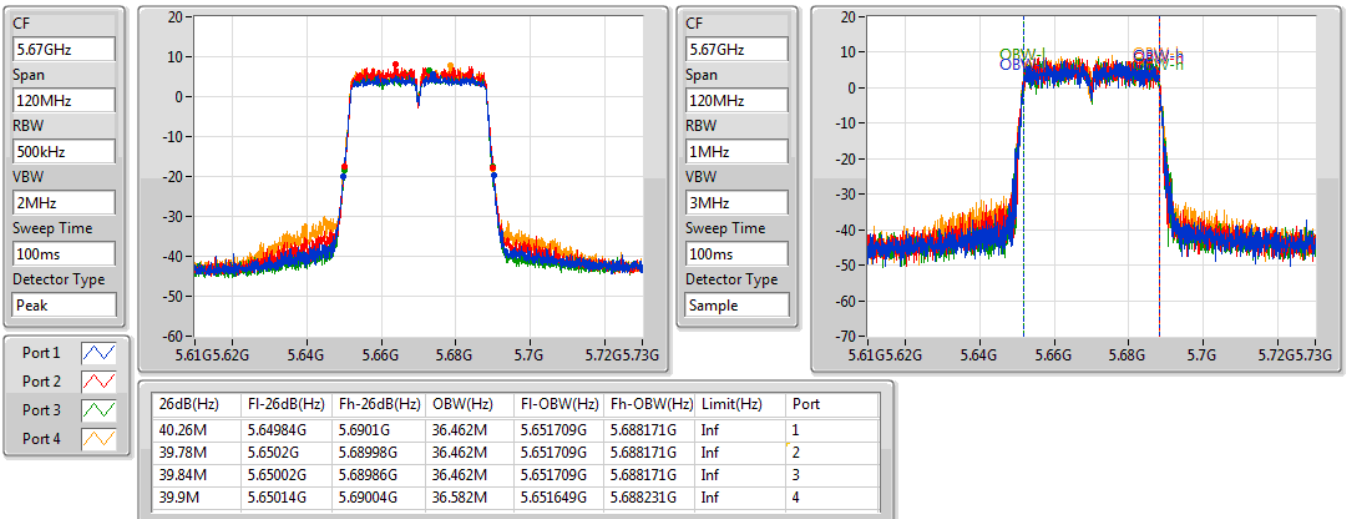


802.11ac VHT40_Nss1,(MCS0)_4TX

EBW

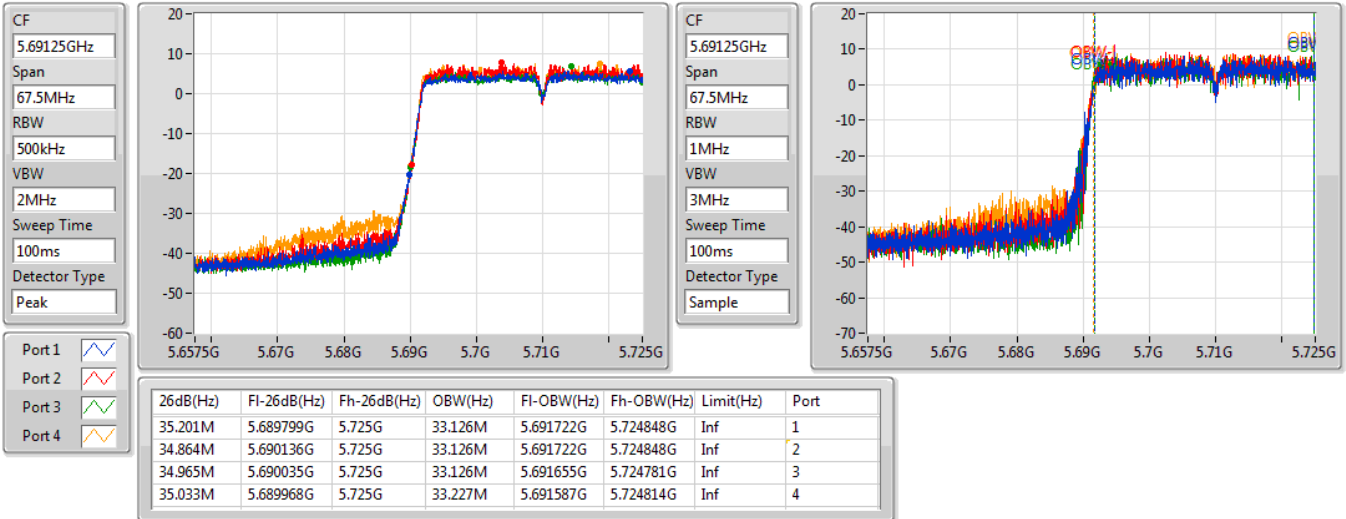
5670MHz

30/12/2020

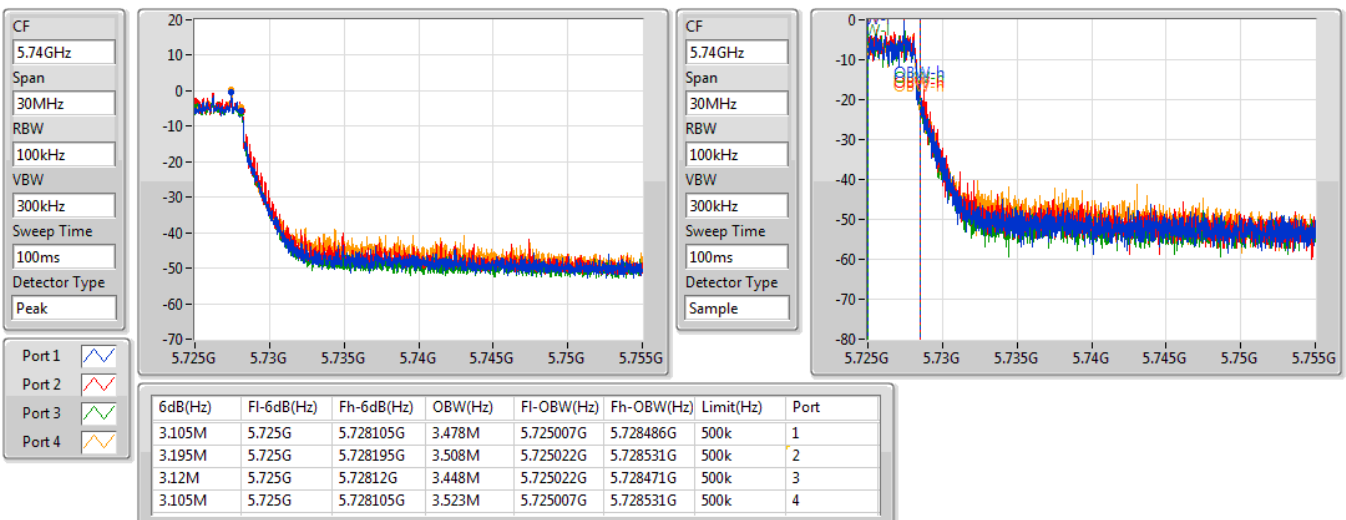


802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5710MHz Straddle 5.47-5.725GHz

30/12/2020

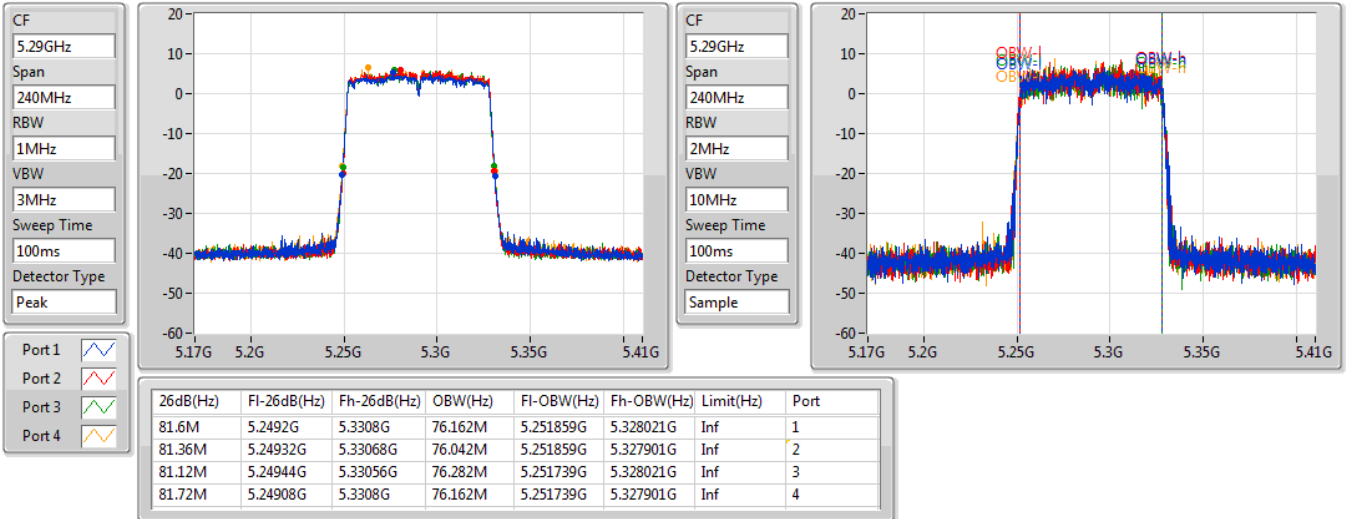

802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5710MHz Straddle 5.725-5.85GHz

30/12/2020

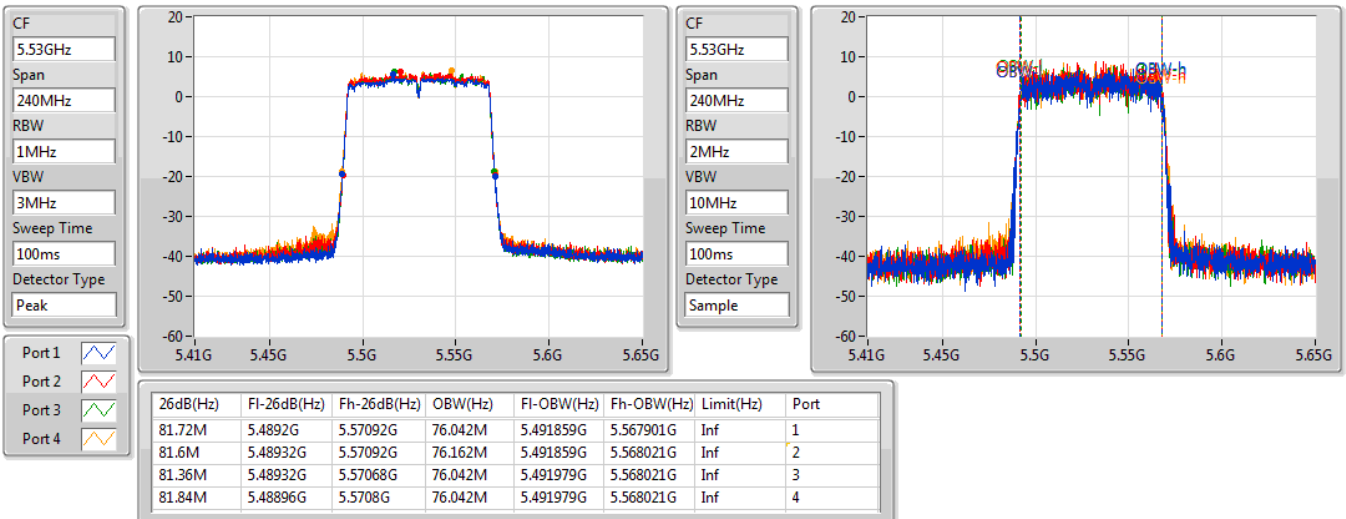


802.11ac VHT80_Nss1,(MCS0)_4TX
EBW
5290MHz

30/12/2020


802.11ac VHT80_Nss1,(MCS0)_4TX
EBW
5530MHz

30/12/2020

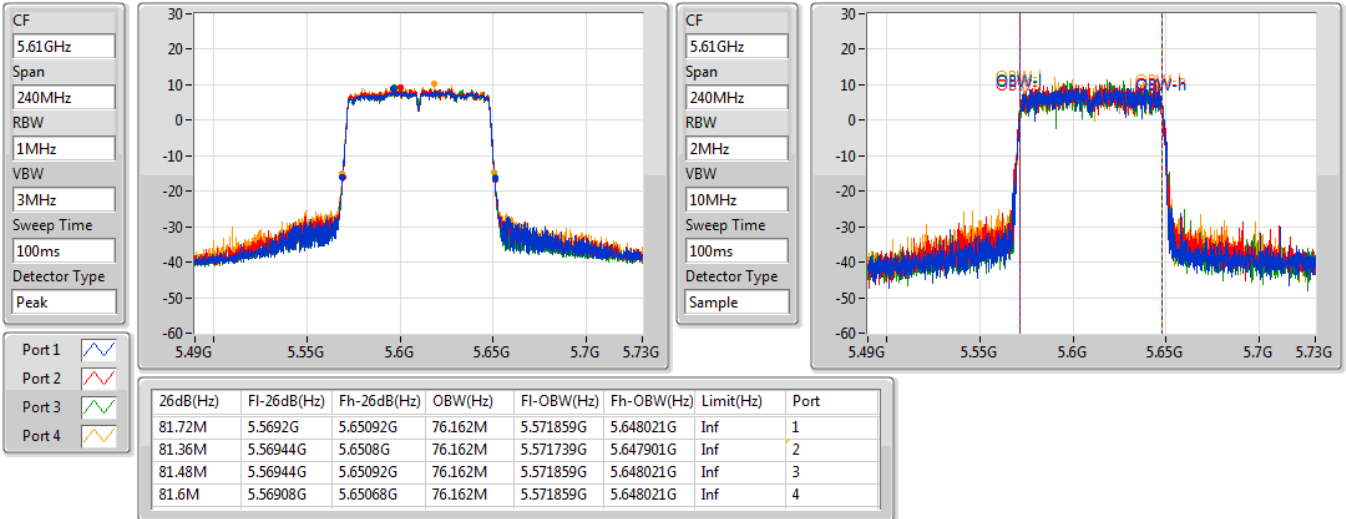


802.11ac VHT80_Nss1,(MCS0)_4TX

EBW

5610MHz

30/12/2020

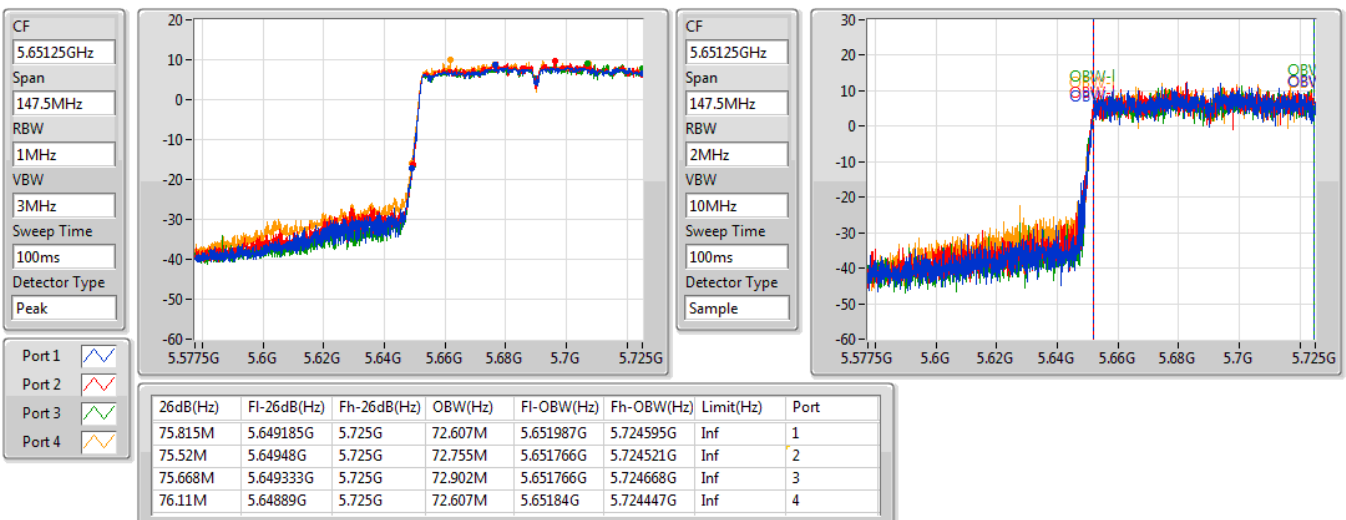


802.11ac VHT80_Nss1,(MCS0)_4TX

EBW

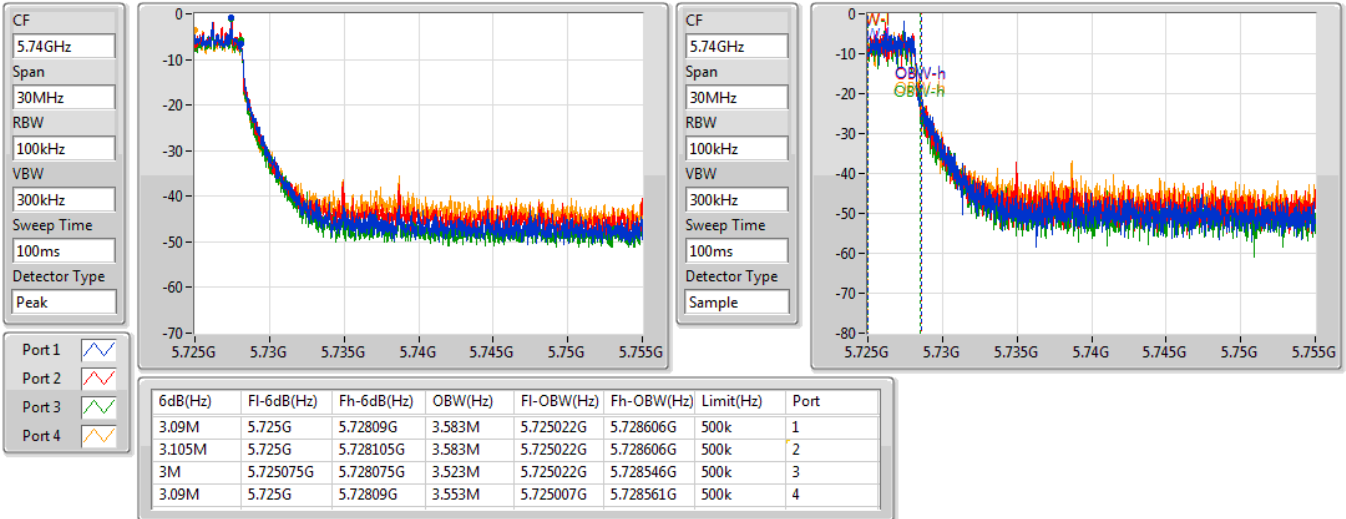
5690MHz Straddle 5.47-5.725GHz

30/12/2020

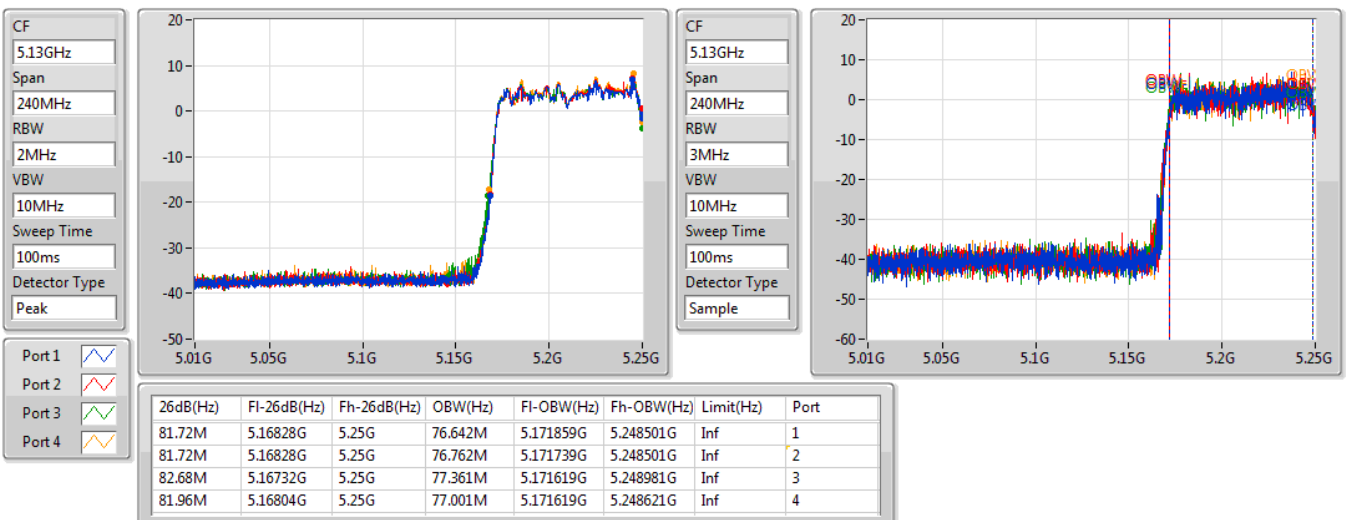


802.11ac VHT80_Nss1,(MCS0)_4TX
EBW
5690MHz Straddle 5.725-5.85GHz

30/12/2020

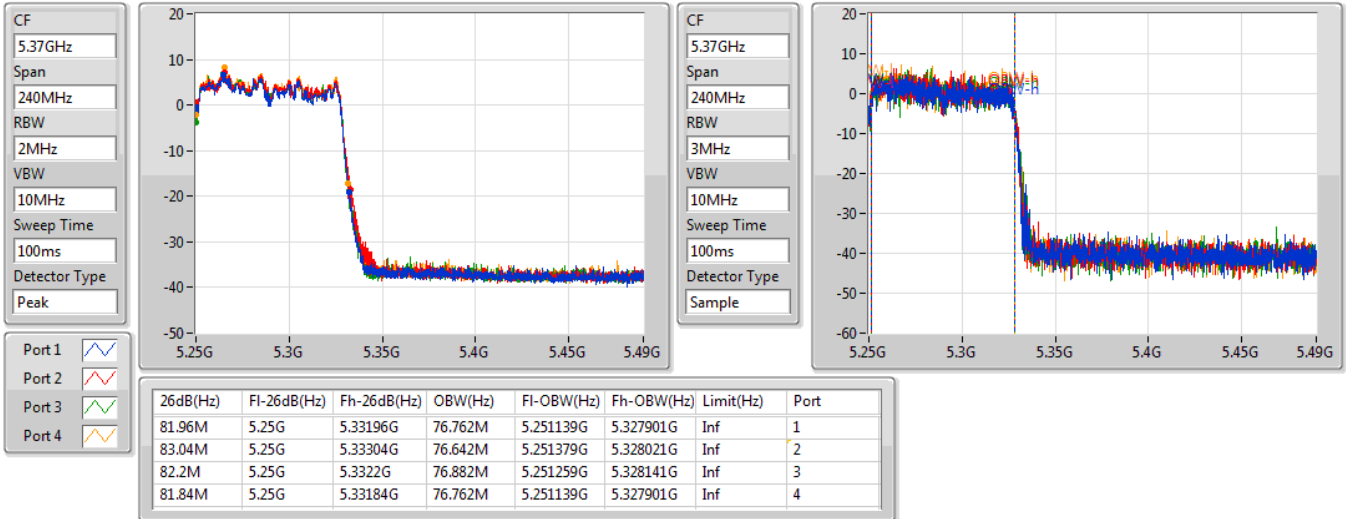

802.11ac VHT160_Nss1,(MCS0)_4TX
EBW
5250MHz Straddle 5.15-5.25GHz

30/12/2020

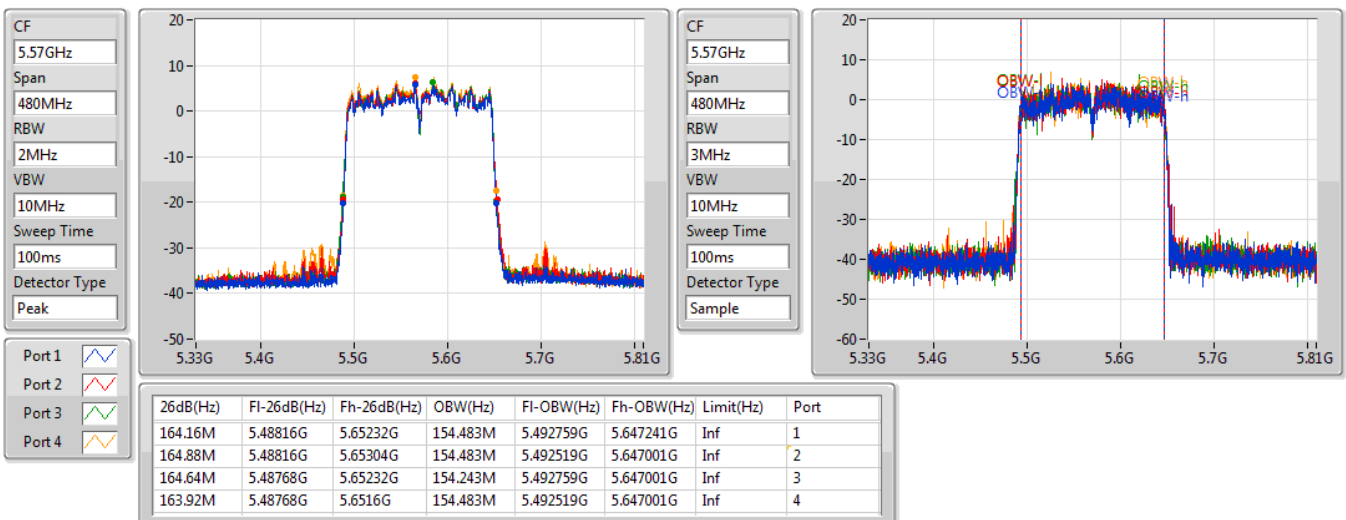


802.11ac VHT160_Nss1,(MCS0)_4TX
EBW
5250MHz Straddle 5.25-5.35GHz

30/12/2020

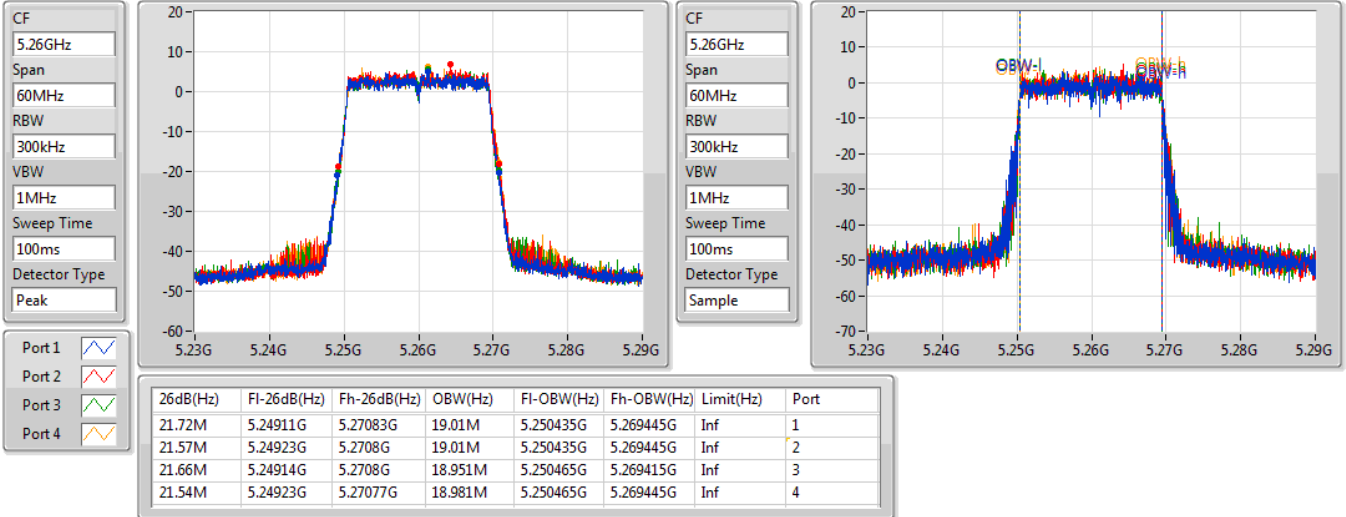

802.11ac VHT160_Nss1,(MCS0)_4TX
EBW
5570MHz

30/12/2020

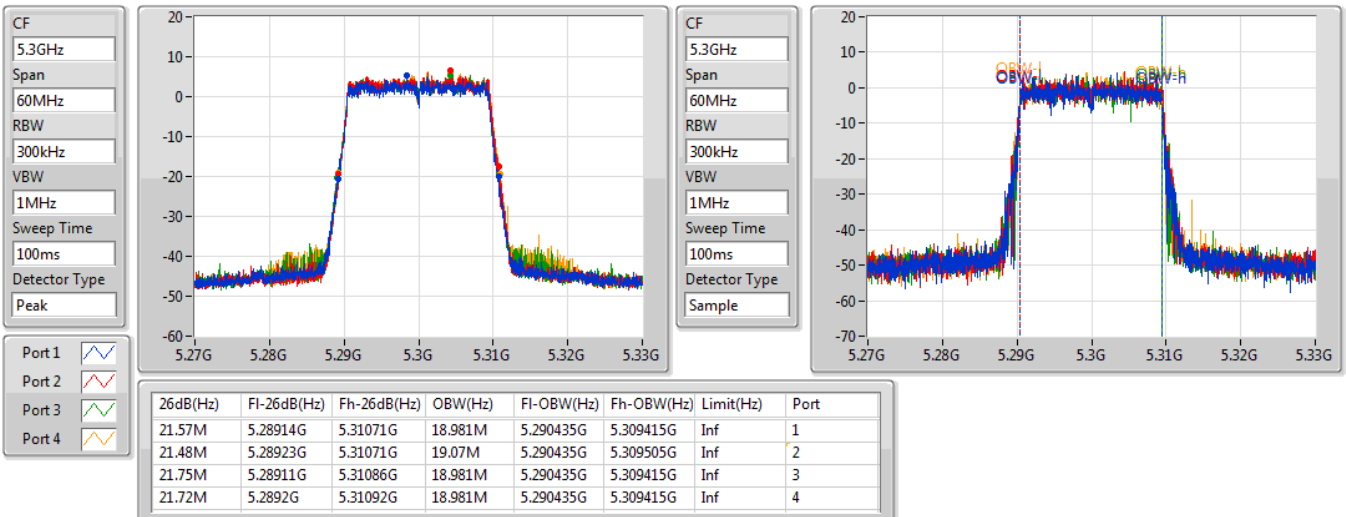


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5260MHz

30/12/2020


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5300MHz

30/12/2020

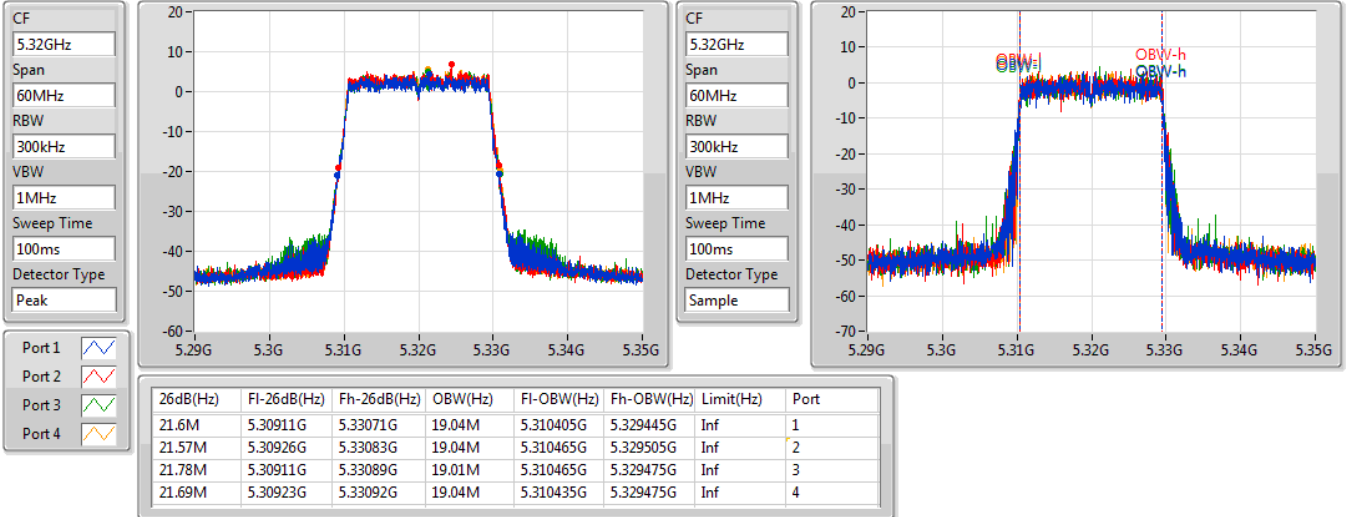


802.11ax HEW20_Nss1,(MCS0)_4TX

EBW

5320MHz

30/12/2020

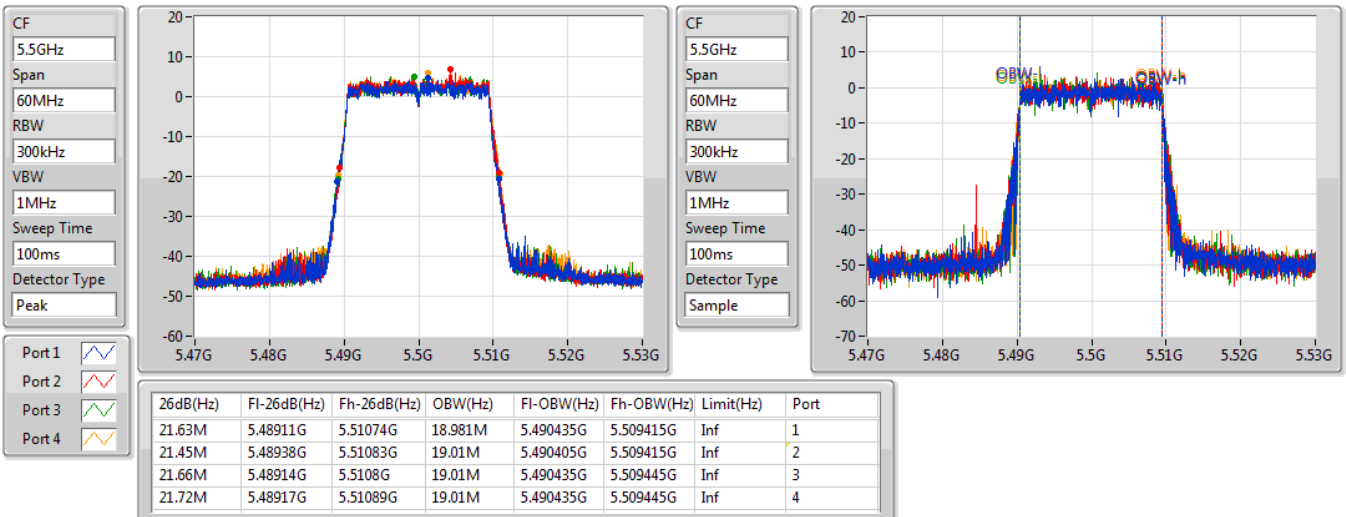


802.11ax HEW20_Nss1,(MCS0)_4TX

EBW

5500MHz

30/12/2020

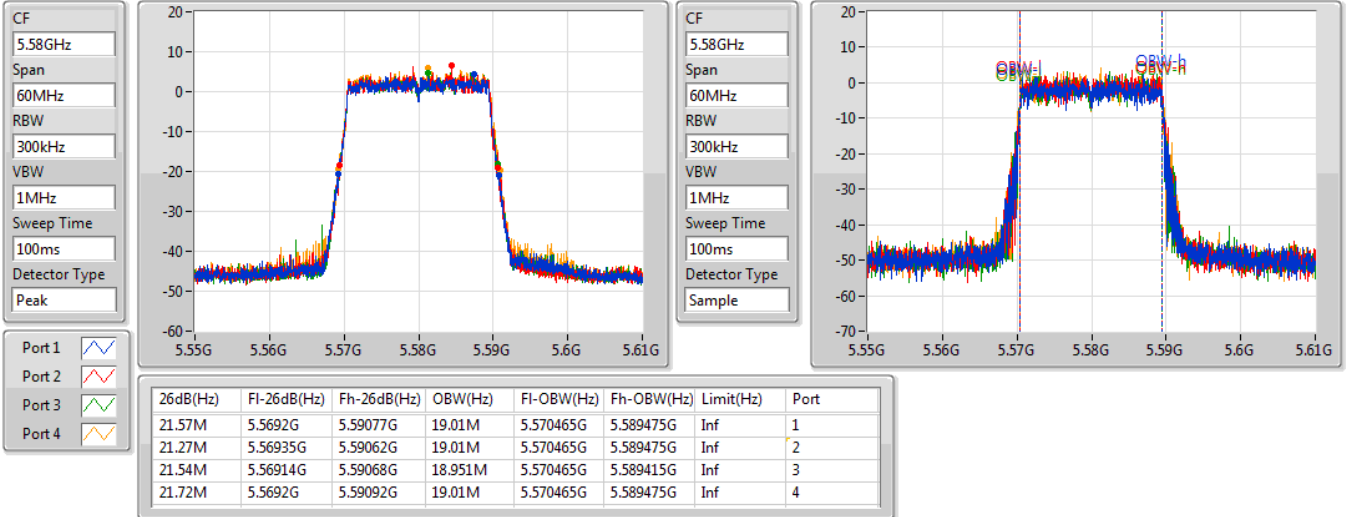


802.11ax HEW20_Nss1,(MCS0)_4TX

EBW

5580MHz

30/12/2020

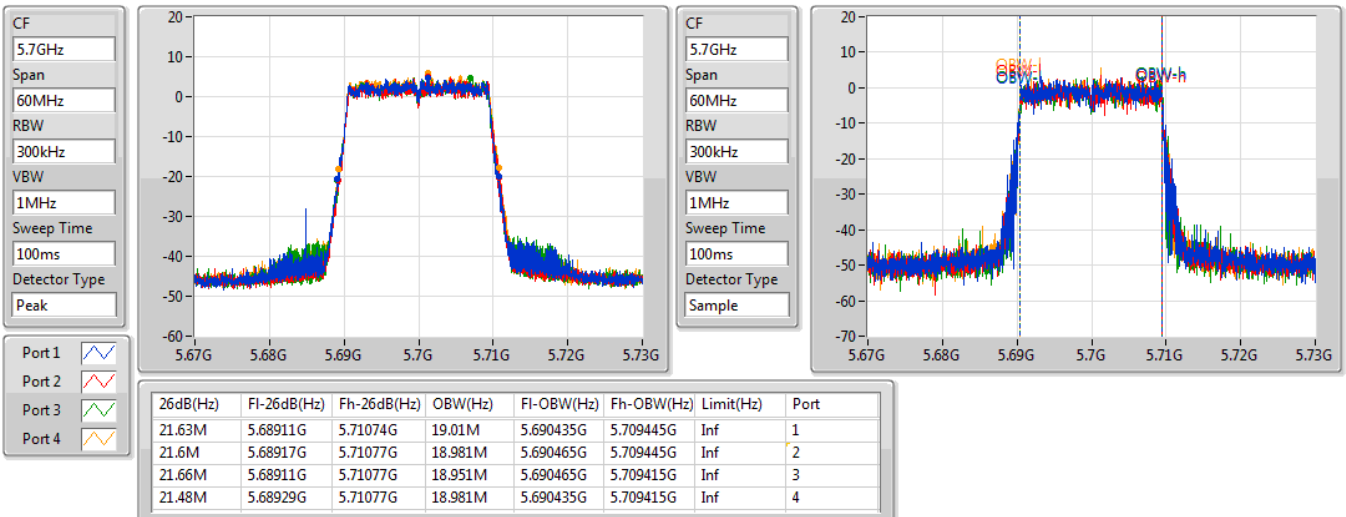


802.11ax HEW20_Nss1,(MCS0)_4TX

EBW

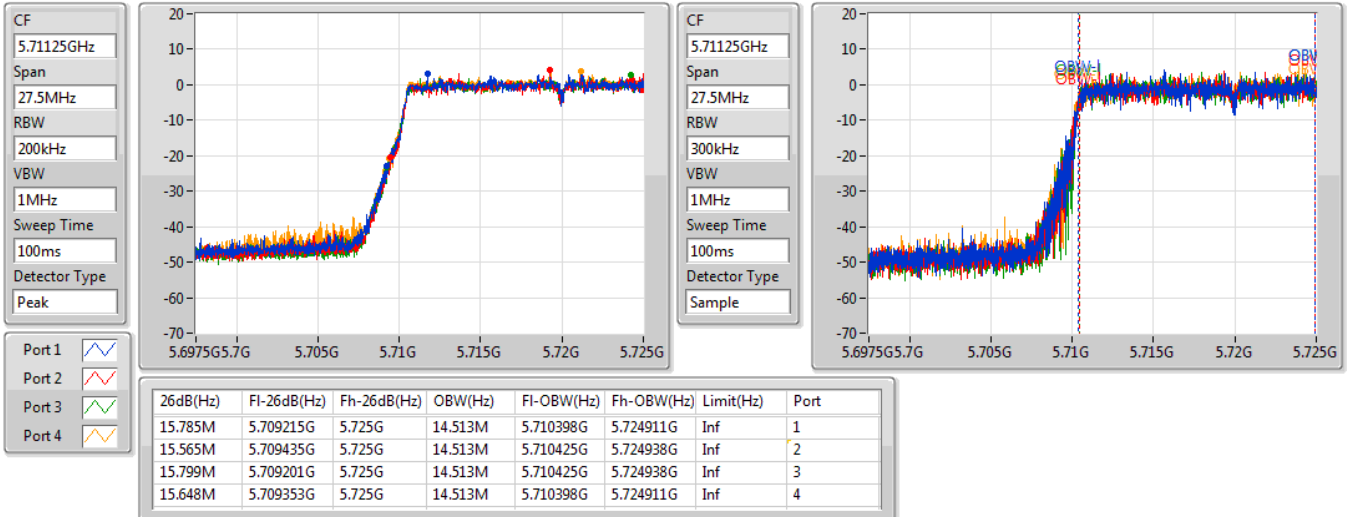
5700MHz

30/12/2020

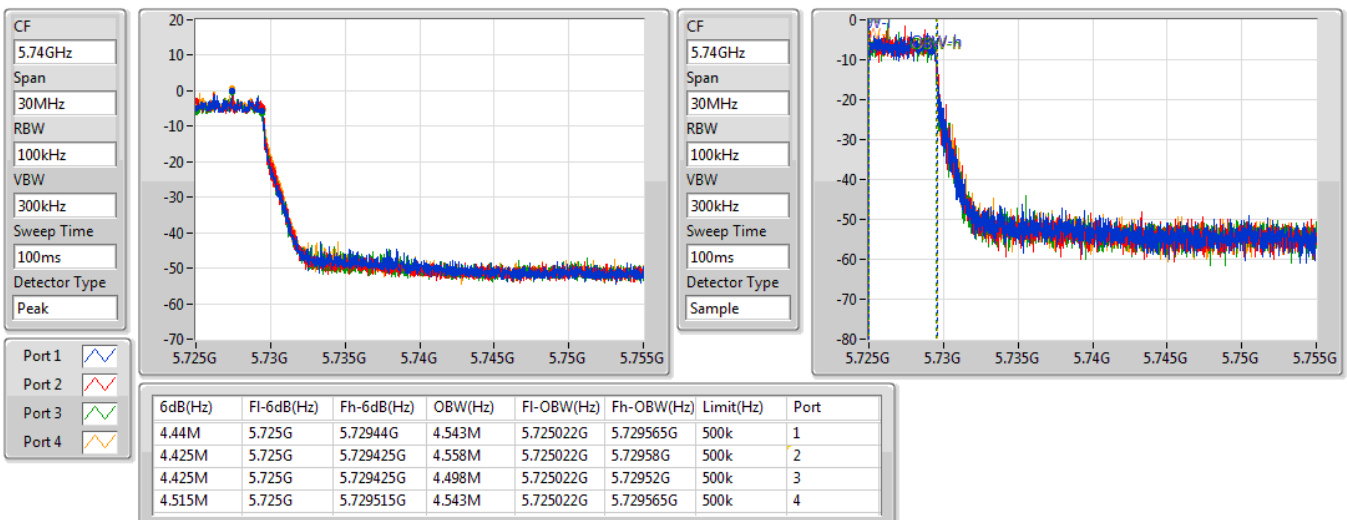


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5720MHz Straddle 5.47-5.725GHz

30/12/2020


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

30/12/2020

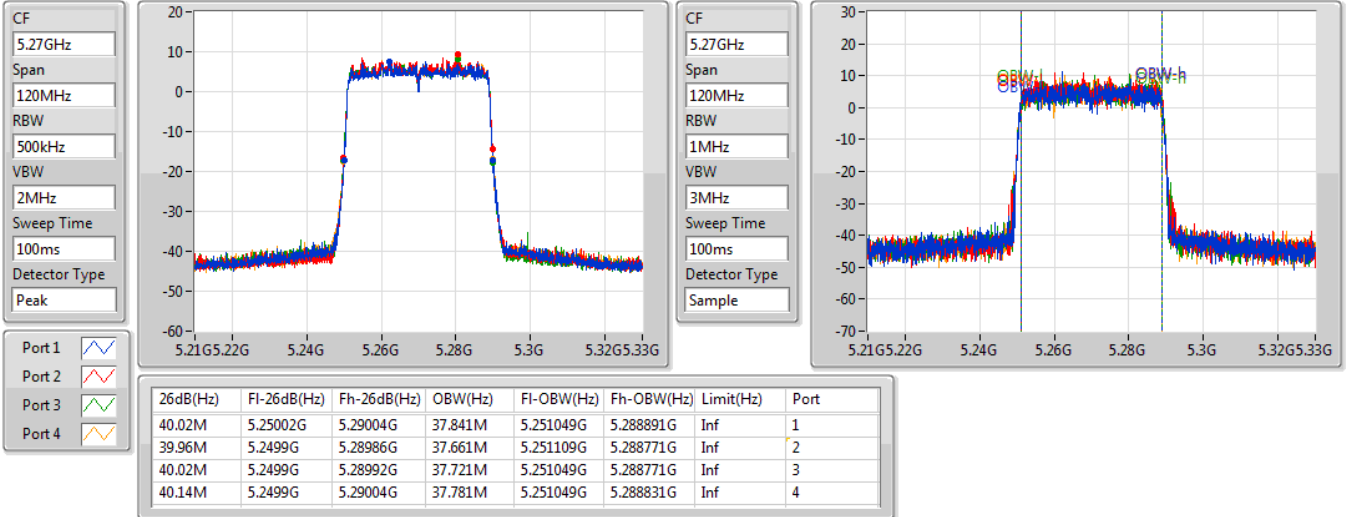


802.11ax HEW40_Nss1,(MCS0)_4TX

EBW

5270MHz

30/12/2020

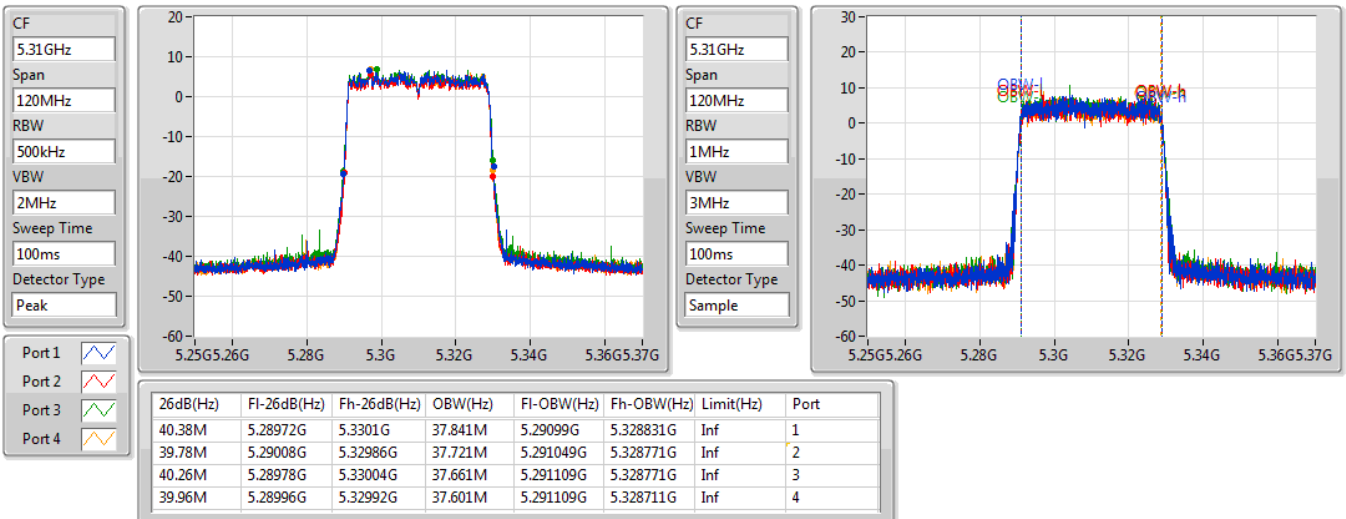


802.11ax HEW40_Nss1,(MCS0)_4TX

EBW

5310MHz

30/12/2020

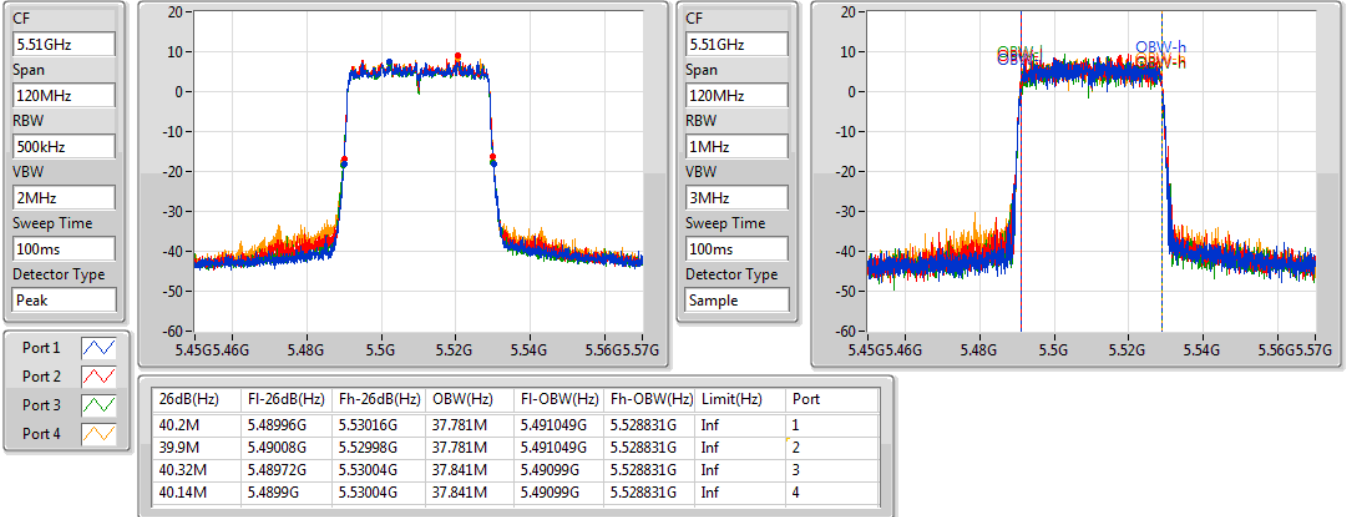


802.11ax HEW40_Nss1,(MCS0)_4TX

EBW

5510MHz

30/12/2020

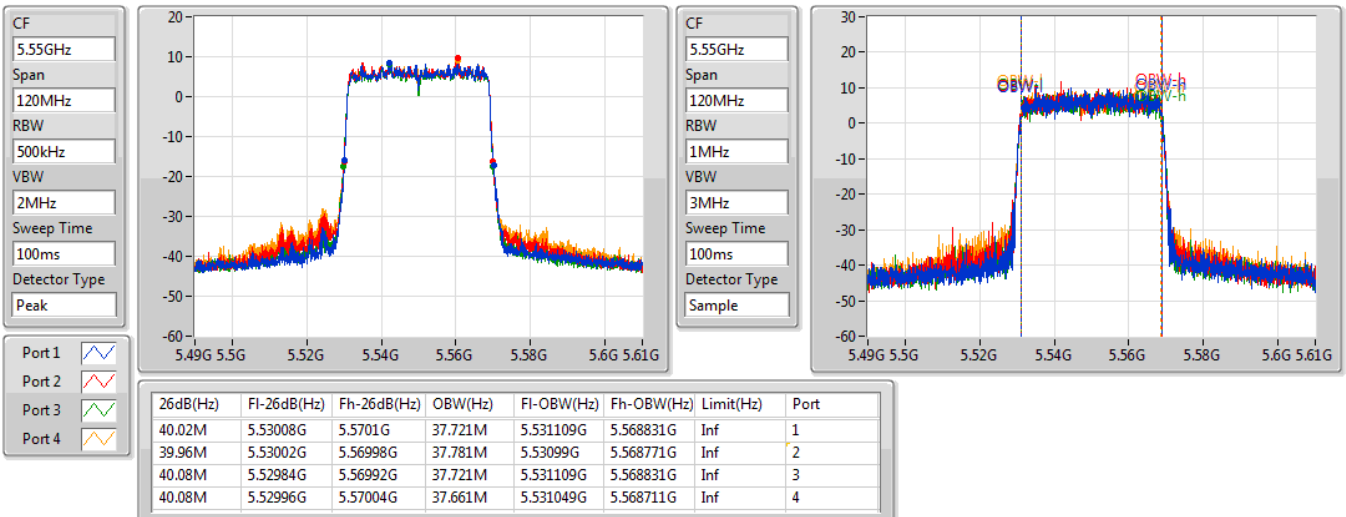


802.11ax HEW40_Nss1,(MCS0)_4TX

EBW

5550MHz

30/12/2020

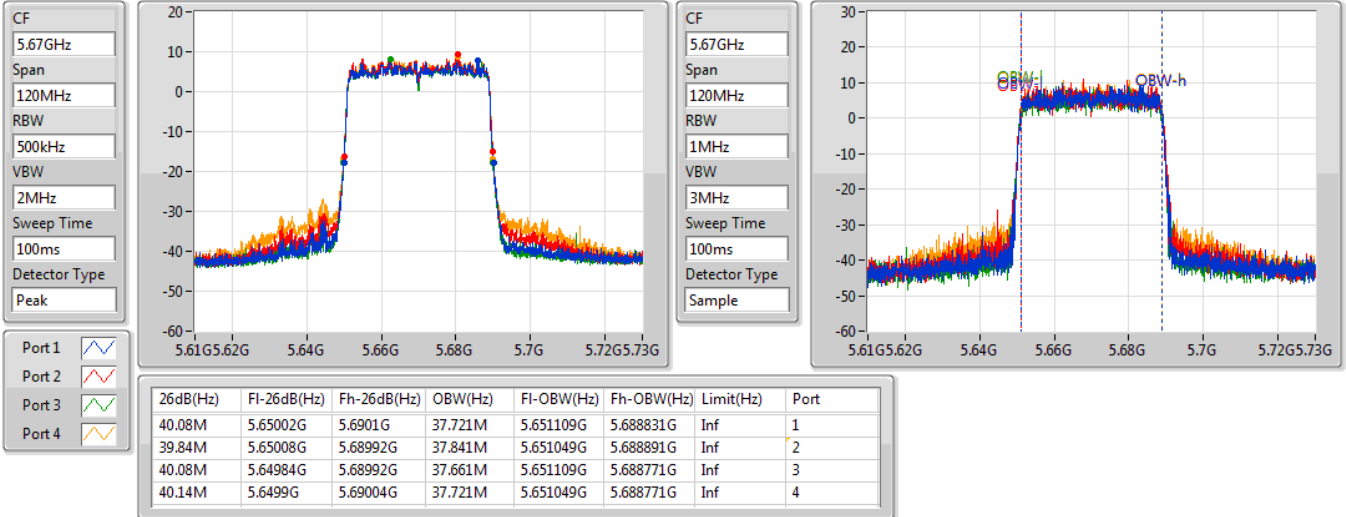


802.11ax HEW40_Nss1,(MCS0)_4TX

EBW

5670MHz

30/12/2020

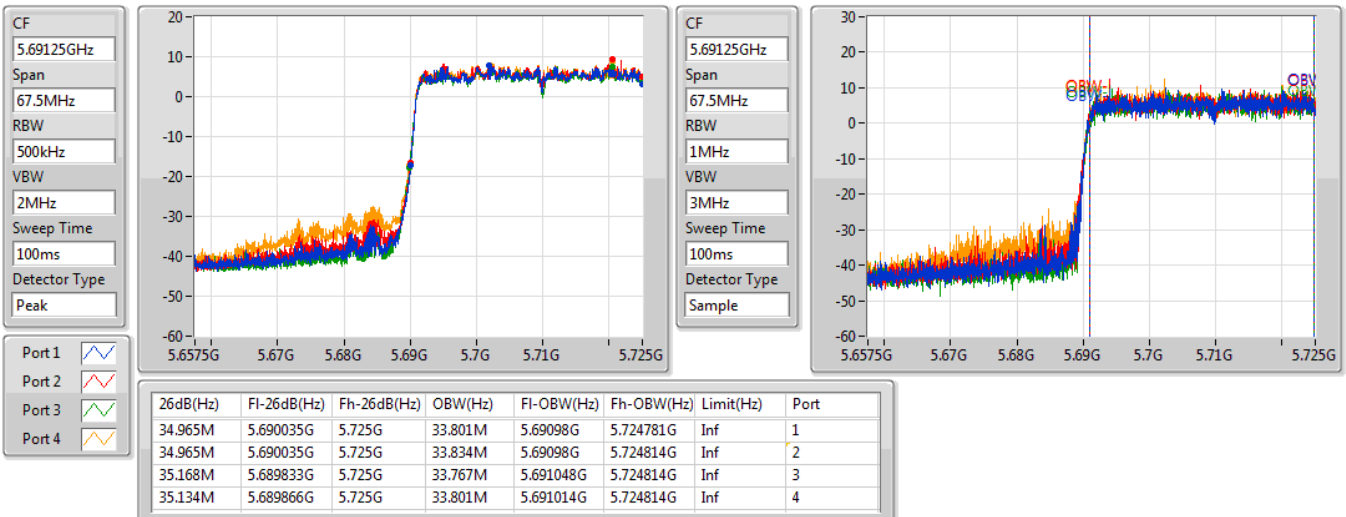


802.11ax HEW40_Nss1,(MCS0)_4TX

EBW

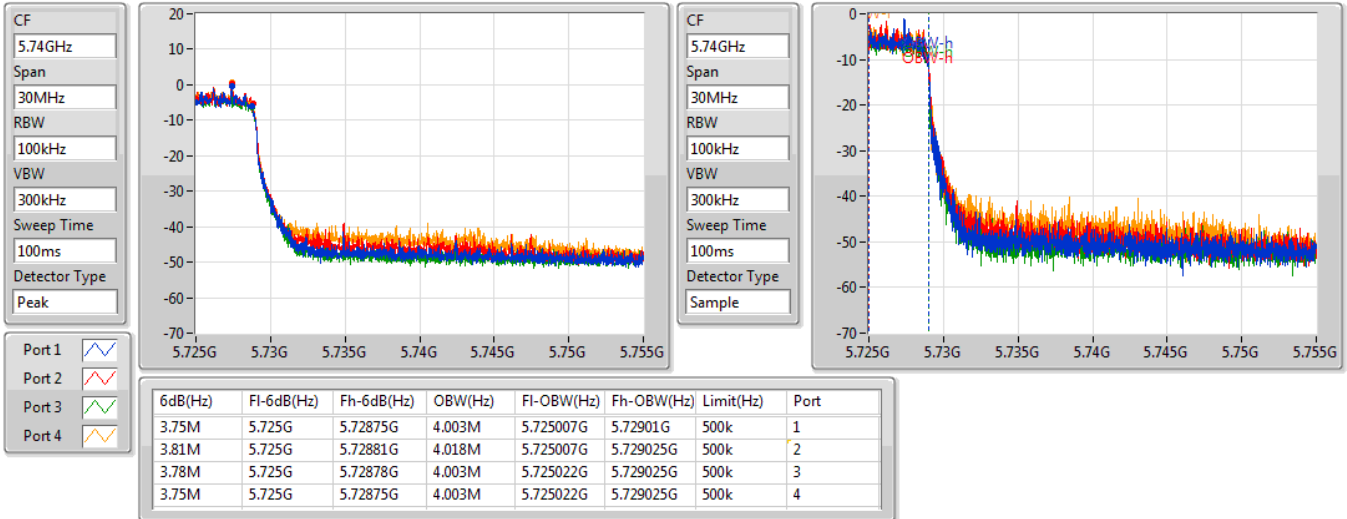
5710MHz Straddle 5.47-5.725GHz

30/12/2020

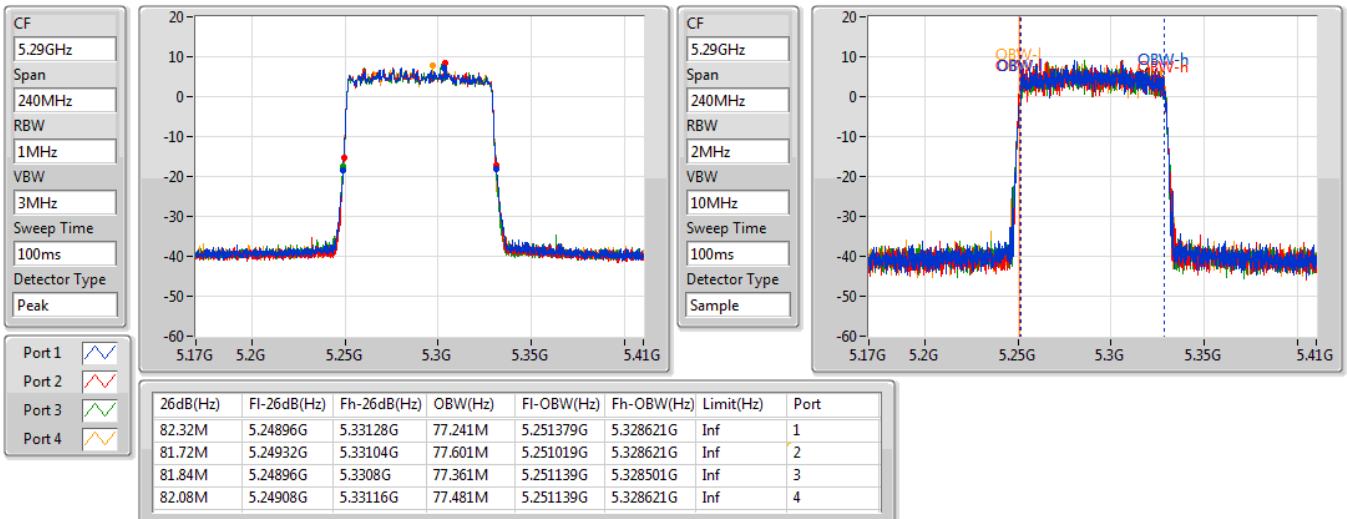


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5710MHz Straddle 5.725-5.85GHz

30/12/2020

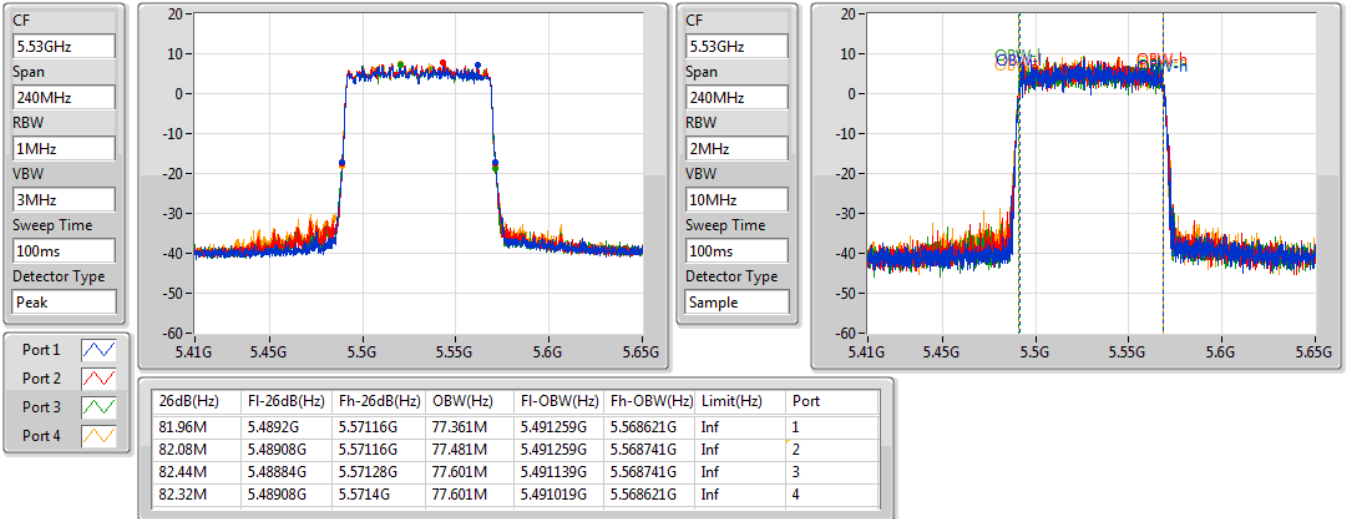

802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5290MHz

30/12/2020

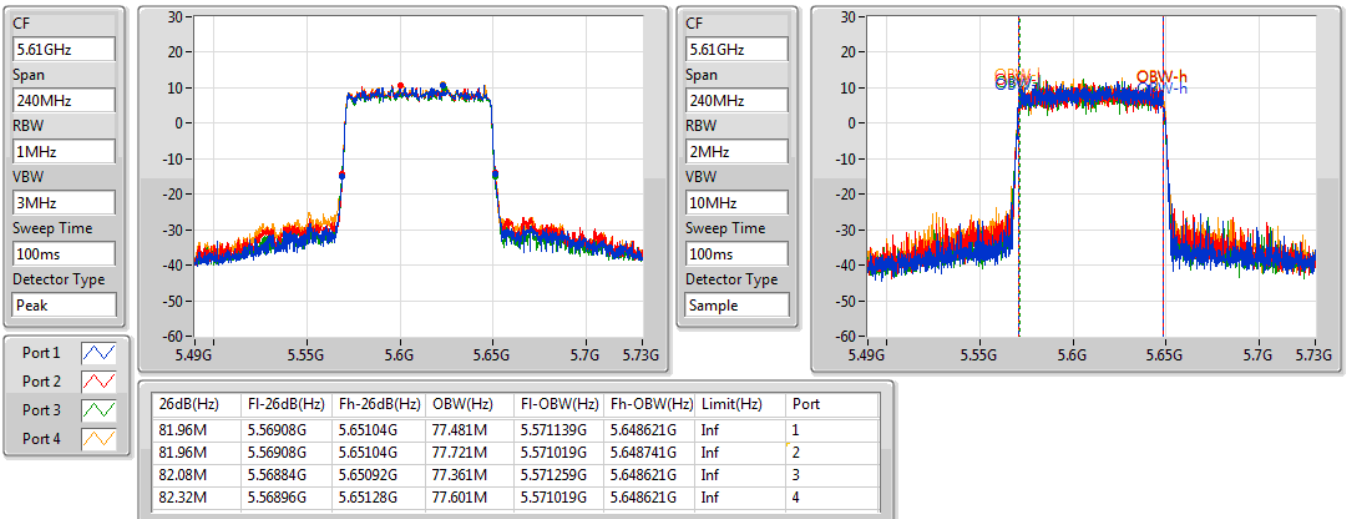


802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5530MHz

30/12/2020

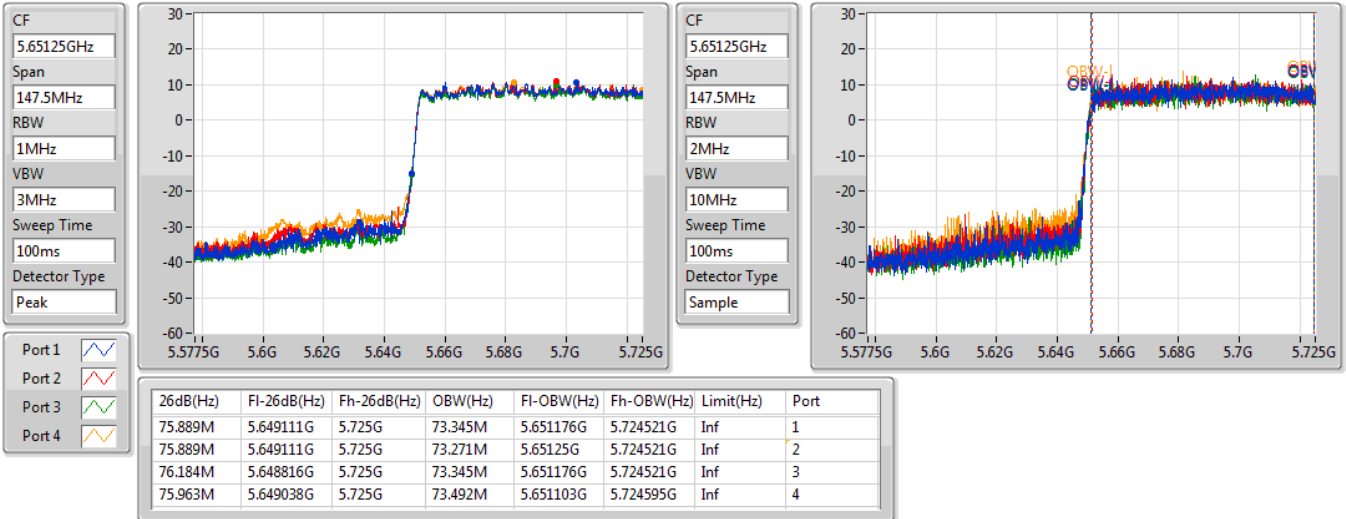

802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5610MHz

30/12/2020

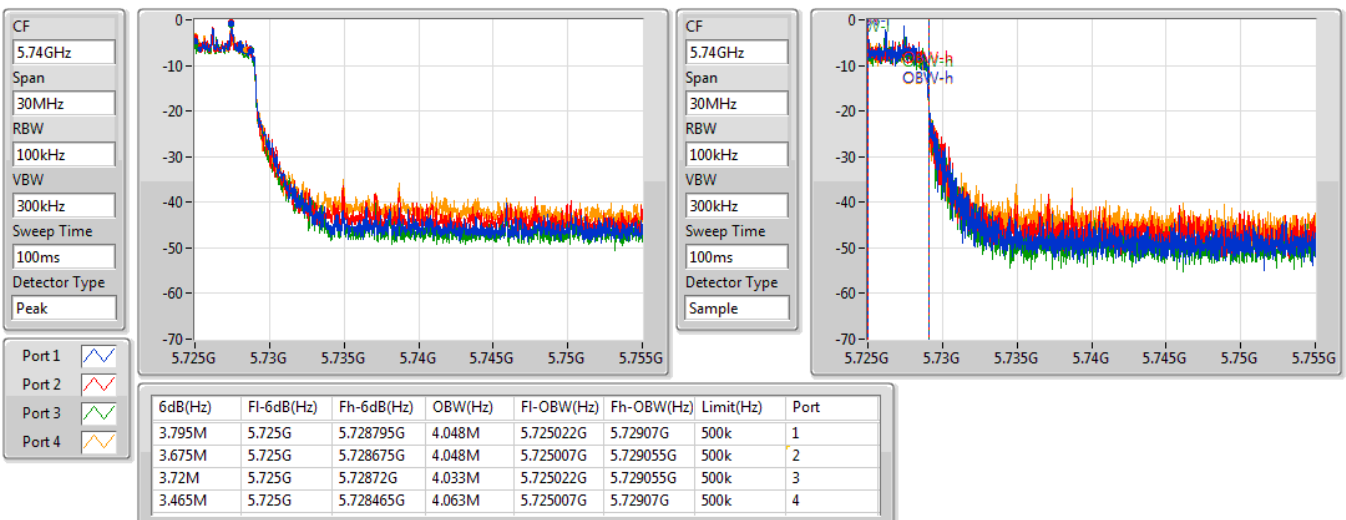


802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5690MHz Straddle 5.47-5.725GHz

30/12/2020

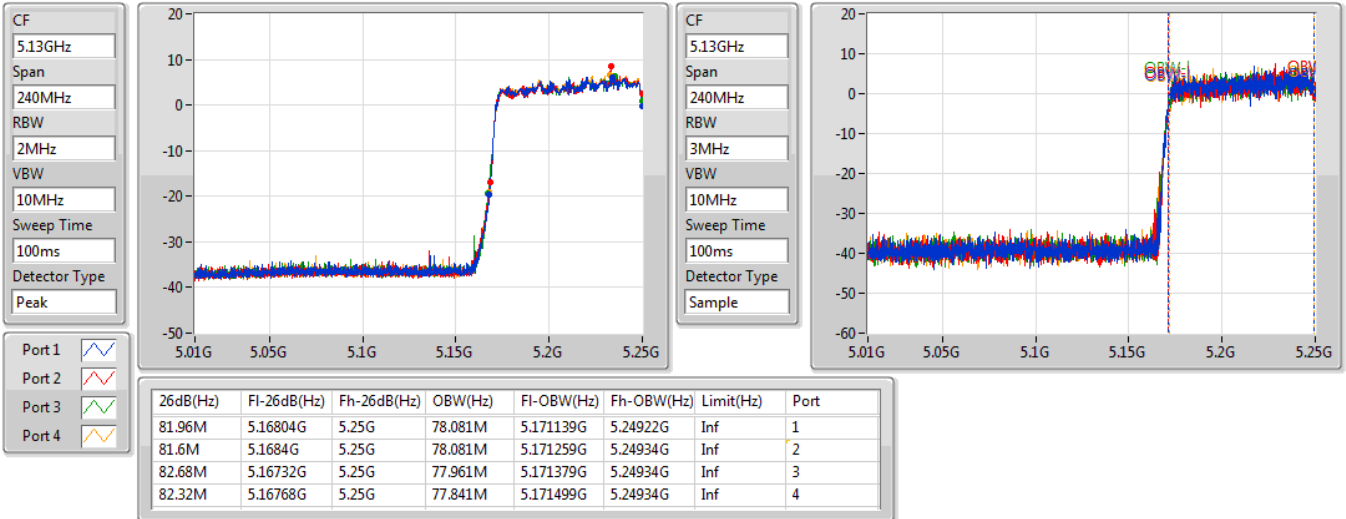

802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5690MHz Straddle 5.725-5.85GHz

30/12/2020

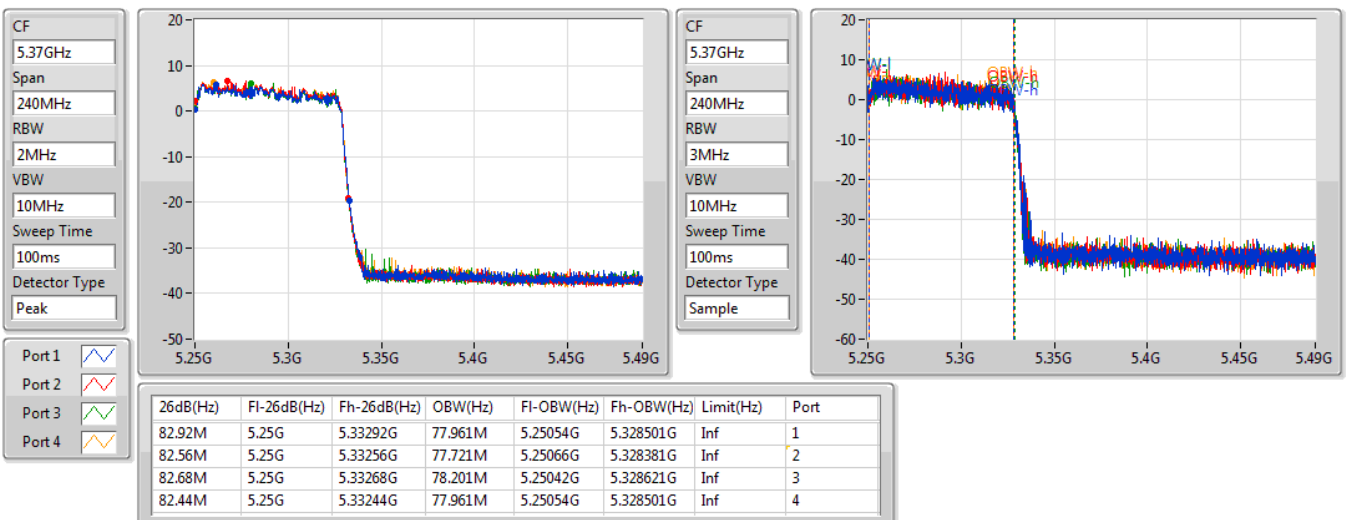


802.11ax HEW160_Nss1,(MCS0)_4TX
EBW
5250MHz Straddle 5.15-5.25GHz

30/12/2020


802.11ax HEW160_Nss1,(MCS0)_4TX
EBW
5250MHz Straddle 5.25-5.35GHz

30/12/2020

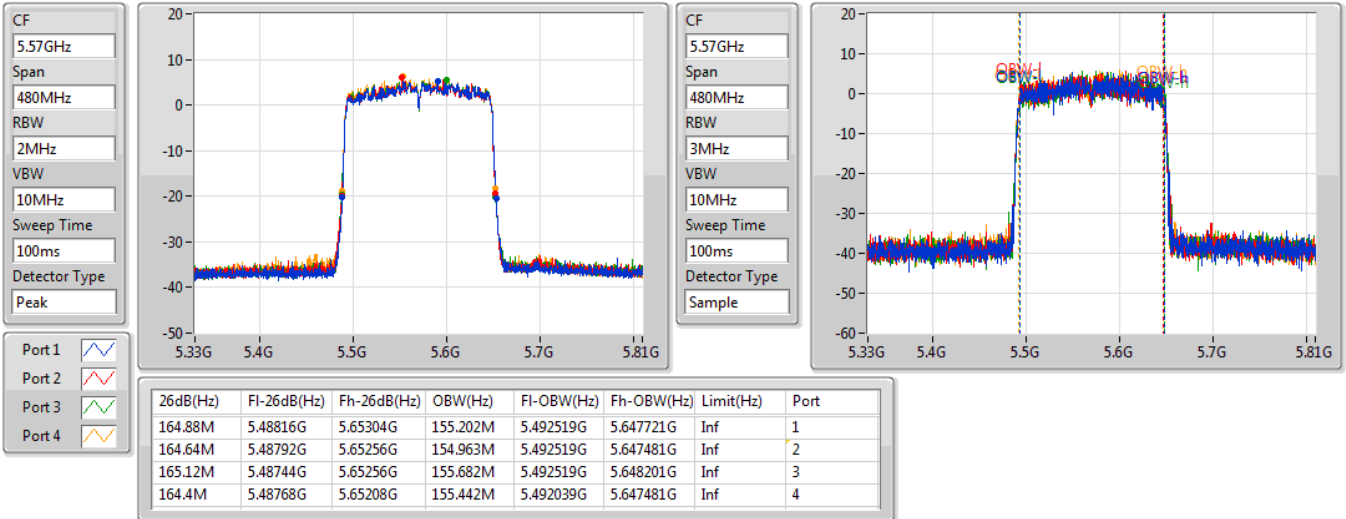


802.11ax HEW160_Nss1,(MCS0)_4TX

EBW

5570MHz

30/12/2020



Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.25-5.35GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	21.54M	16.77M	16M8D1D	21.3M	16.689M
802.11n HT20_Nss1,(MCS0)_2TX	21.78M	17.935M	17M9D1D	21.54M	17.826M
802.11n HT40_Nss1,(MCS0)_2TX	40.14M	36.51M	36M5D1D	39.42M	36.438M
802.11ac VHT20_Nss1,(MCS0)_2TX	21.69M	17.897M	17M9D1D	21.45M	17.851M
802.11ac VHT40_Nss1,(MCS0)_2TX	40.2M	36.526M	36M5D1D	39.78M	36.326M
802.11ac VHT80_Nss1,(MCS0)_2TX	81.96M	76.064M	76M1D1D	81.36M	75.985M
802.11ax HEW20_Nss1,(MCS0)_2TX	21.66M	19.021M	19M0D1D	21.42M	18.961M
802.11ax HEW40_Nss1,(MCS0)_2TX	40.2M	37.787M	37M8D1D	39.72M	37.695M
802.11ax HEW80_Nss1,(MCS0)_2TX	81.84M	77.421M	77M4D1D	81.24M	77.371M
5.47-5.725GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	21.75M	16.787M	16M8D1D	15.579M	13.446M
802.11n HT20_Nss1,(MCS0)_2TX	21.75M	17.947M	17M9D1D	15.716M	13.978M
802.11n HT40_Nss1,(MCS0)_2TX	52.954M	36.496M	36M5D1D	39.42M	33.16M
802.11ac VHT20_Nss1,(MCS0)_2TX	21.72M	17.937M	17M9D1D	15.771M	13.967M
802.11ac VHT40_Nss1,(MCS0)_2TX	51.469M	36.53M	36M5D1D	39.84M	33.126M
802.11ac VHT80_Nss1,(MCS0)_2TX	91.819M	76.198M	76M2D1D	76.331M	72.677M
802.11ax HEW20_Nss1,(MCS0)_2TX	21.69M	19.031M	19M0D1D	15.675M	14.522M
802.11ax HEW40_Nss1,(MCS0)_2TX	43.943M	37.795M	37M8D1D	35.168M	33.902M
802.11ax HEW80_Nss1,(MCS0)_2TX	100.374M	77.637M	77M6D1D	75.963M	73.549M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	3.135M	4.01M	4M01D1D	3.135M	4.003M
802.11n HT20_Nss1,(MCS0)_2TX	3.765M	4.31M	4M31D1D	3.75M	4.308M
802.11n HT40_Nss1,(MCS0)_2TX	3.18M	13.658M	13M7D1D	3.135M	12.744M
802.11ac VHT20_Nss1,(MCS0)_2TX	3.765M	4.364M	4M36D1D	3.75M	4.34M
802.11ac VHT40_Nss1,(MCS0)_2TX	3.15M	14.693M	14M7D1D	3.15M	13.343M
802.11ac VHT80_Nss1,(MCS0)_2TX	3.105M	20.207M	20M2D1D	3.09M	7.016M
802.11ax HEW20_Nss1,(MCS0)_2TX	4.455M	4.629M	4M63D1D	4.44M	4.592M
802.11ax HEW40_Nss1,(MCS0)_2TX	3.84M	14.978M	15M0D1D	3.81M	13.508M
802.11ax HEW80_Nss1,(MCS0)_2TX	3.765M	20.949M	20M9D1D	3.69M	6.746M

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**

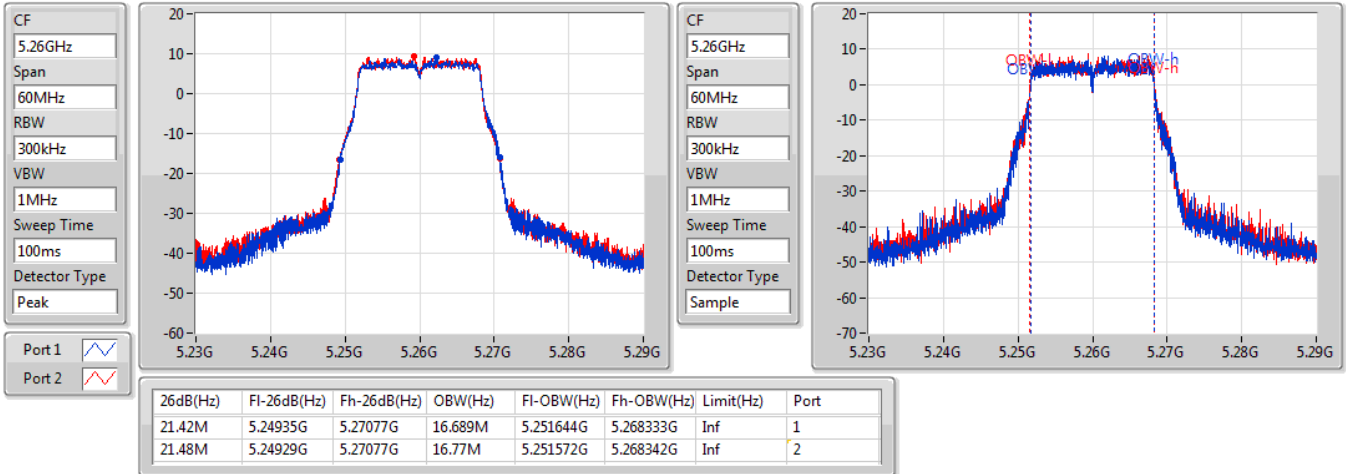
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
5260MHz	Pass	Inf	21.42M	16.689M	21.48M	16.77M
5300MHz	Pass	Inf	21.54M	16.69M	21.3M	16.75M
5320MHz	Pass	Inf	21.45M	16.748M	21.3M	16.724M
5500MHz	Pass	Inf	21.42M	16.728M	21.36M	16.752M
5580MHz	Pass	Inf	21.48M	16.77M	21.75M	16.75M
5700MHz	Pass	Inf	21.48M	16.742M	21.33M	16.787M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.579M	13.452M	15.936M	13.446M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.135M	4.01M	3.135M	4.003M
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5260MHz	Pass	Inf	21.78M	17.874M	21.66M	17.826M
5300MHz	Pass	Inf	21.63M	17.919M	21.63M	17.872M
5320MHz	Pass	Inf	21.72M	17.935M	21.54M	17.843M
5500MHz	Pass	Inf	21.66M	17.892M	21.48M	17.822M
5580MHz	Pass	Inf	21.69M	17.914M	21.42M	17.824M
5700MHz	Pass	Inf	21.75M	17.947M	21.54M	17.841M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.881M	14.023M	15.716M	13.978M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.765M	4.31M	3.75M	4.308M
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5270MHz	Pass	Inf	40.08M	36.438M	39.54M	36.488M
5310MHz	Pass	Inf	40.14M	36.51M	39.42M	36.449M
5510MHz	Pass	Inf	40.2M	36.423M	39.54M	36.496M
5550MHz	Pass	Inf	40.08M	36.422M	39.48M	36.449M
5670MHz	Pass	Inf	40.2M	36.414M	39.42M	36.391M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	52.954M	33.328M	45.394M	33.16M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.18M	13.658M	3.135M	12.744M
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5260MHz	Pass	Inf	21.69M	17.851M	21.45M	17.885M
5300MHz	Pass	Inf	21.63M	17.897M	21.48M	17.863M
5320MHz	Pass	Inf	21.57M	17.894M	21.45M	17.879M
5500MHz	Pass	Inf	21.72M	17.937M	21.54M	17.889M
5580MHz	Pass	Inf	21.63M	17.913M	21.69M	17.93M
5700MHz	Pass	Inf	21.69M	17.863M	21.54M	17.914M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.771M	13.967M	15.813M	13.994M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.75M	4.364M	3.765M	4.34M
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5270MHz	Pass	Inf	40.2M	36.501M	39.78M	36.326M
5310MHz	Pass	Inf	40.2M	36.526M	39.84M	36.492M
5510MHz	Pass	Inf	40.14M	36.501M	39.9M	36.459M
5550MHz	Pass	Inf	40.2M	36.442M	39.84M	36.522M
5670MHz	Pass	Inf	40.26M	36.53M	44.04M	36.509M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	51.469M	33.295M	45.293M	33.126M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.15M	14.693M	3.15M	13.343M
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5290MHz	Pass	Inf	81.96M	76.064M	81.36M	75.985M
5530MHz	Pass	Inf	82.2M	76.048M	81.36M	76.198M
5610MHz	Pass	Inf	82.2M	76.132M	81.24M	76.186M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	76.331M	72.677M	91.819M	72.88M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.09M	7.016M	3.105M	20.207M
802.11ax HEW20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5260MHz	Pass	Inf	21.6M	18.961M	21.54M	19.001M
5300MHz	Pass	Inf	21.6M	18.985M	21.66M	19.011M
5320MHz	Pass	Inf	21.57M	19.021M	21.42M	18.984M
5500MHz	Pass	Inf	21.54M	19.029M	21.54M	18.992M
5580MHz	Pass	Inf	21.45M	19.004M	21.33M	18.973M

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
5700MHz	Pass	Inf	21.69M	18.998M	21.54M	19.031M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.854M	14.522M	15.675M	14.527M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	4.455M	4.592M	4.44M	4.629M
802.11ax HEW40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5270MHz	Pass	Inf	40.08M	37.695M	39.72M	37.768M
5310MHz	Pass	Inf	40.2M	37.787M	39.78M	37.748M
5510MHz	Pass	Inf	40.14M	37.739M	39.84M	37.744M
5550MHz	Pass	Inf	40.26M	37.764M	39.9M	37.795M
5670MHz	Pass	Inf	40.2M	37.789M	39.78M	37.737M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	43.943M	33.902M	35.168M	33.902M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.84M	14.978M	3.81M	13.508M
802.11ax HEW80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5290MHz	Pass	Inf	81.84M	77.421M	81.24M	77.371M
5530MHz	Pass	Inf	81.84M	77.457M	81.72M	77.485M
5610MHz	Pass	Inf	81.96M	77.422M	81.36M	77.637M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	75.963M	73.549M	100.374M	73.605M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.765M	6.746M	3.69M	20.949M

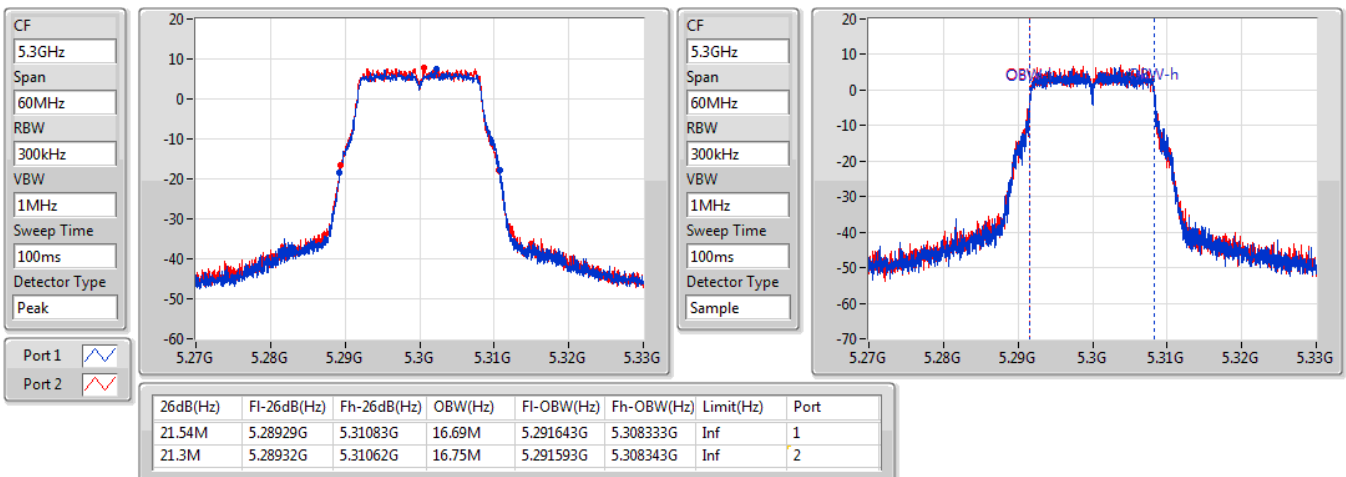
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11a_Nss1,(6Mbps)_2TX
EBW
5260MHz

04/01/2021

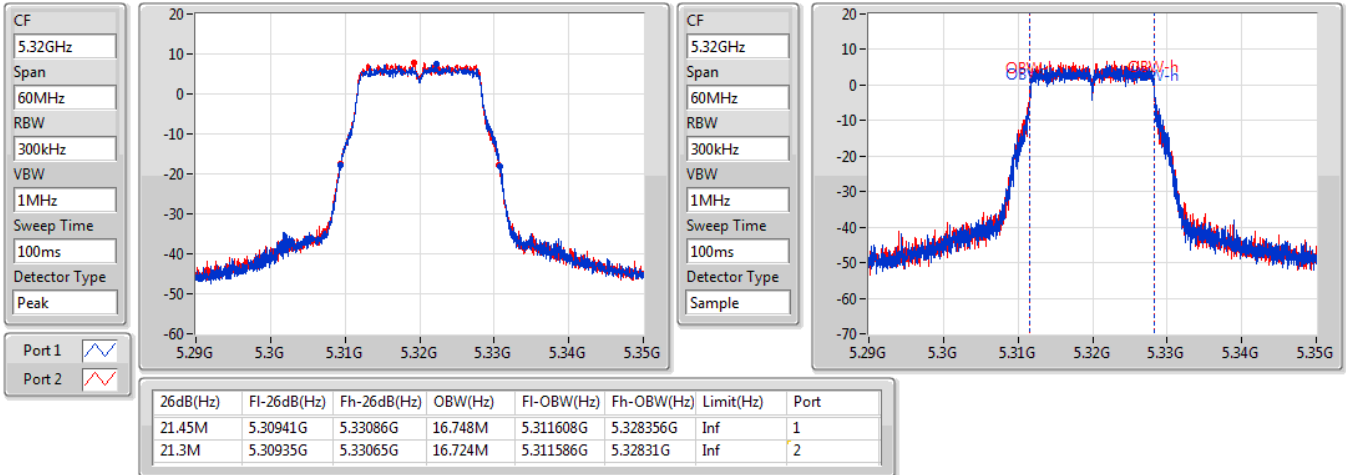

802.11a_Nss1,(6Mbps)_2TX
EBW
5300MHz

04/01/2021

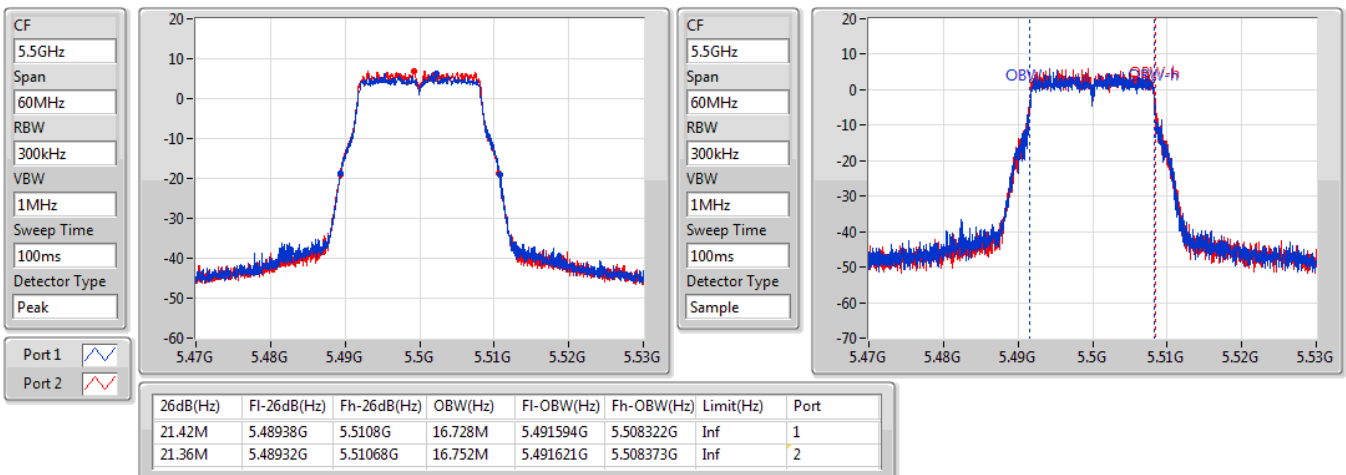


802.11a_Nss1,(6Mbps)_2TX
EBW
5320MHz

04/01/2021

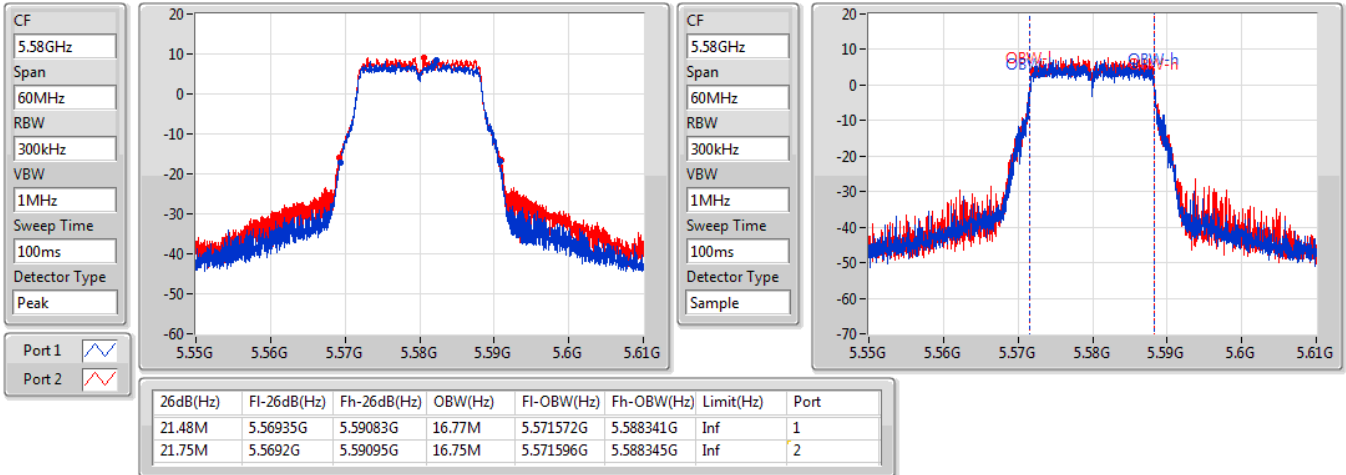

802.11a_Nss1,(6Mbps)_2TX
EBW
5500MHz

04/01/2021

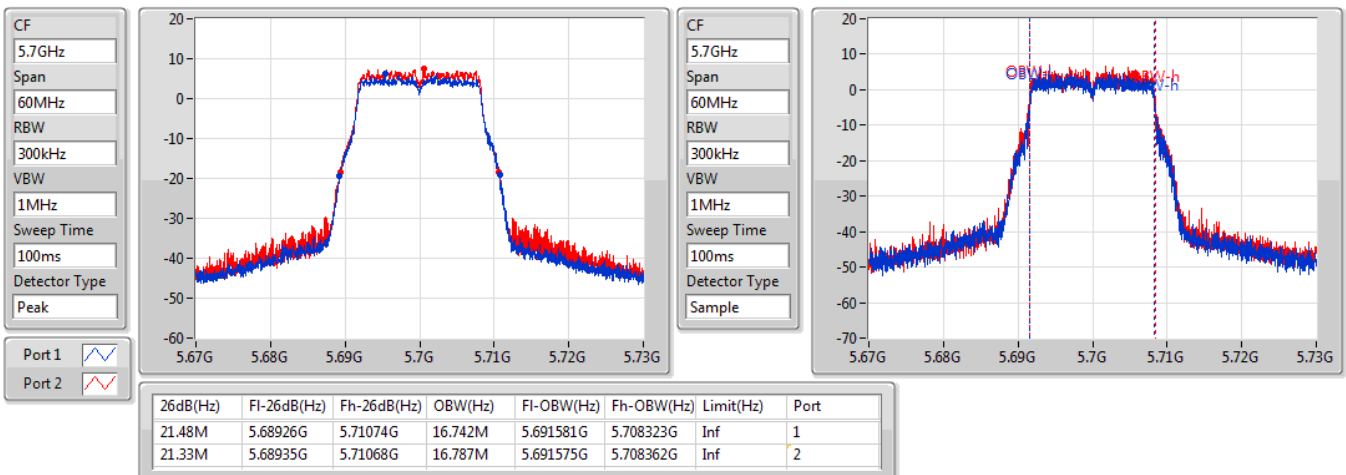


802.11a_Nss1,(6Mbps)_2TX
EBW
5580MHz

04/01/2021

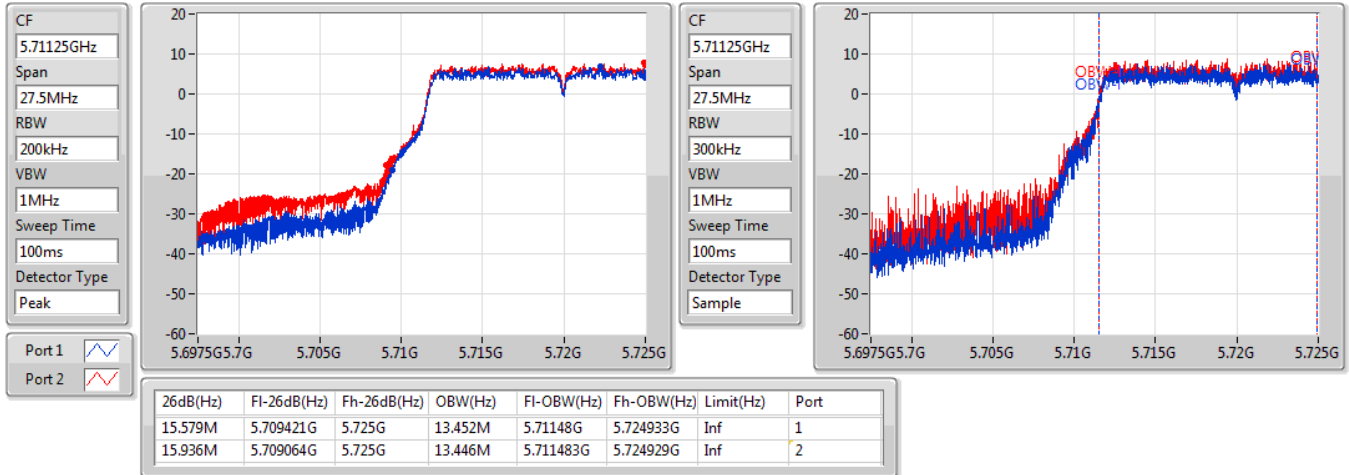

802.11a_Nss1,(6Mbps)_2TX
EBW
5700MHz

04/01/2021

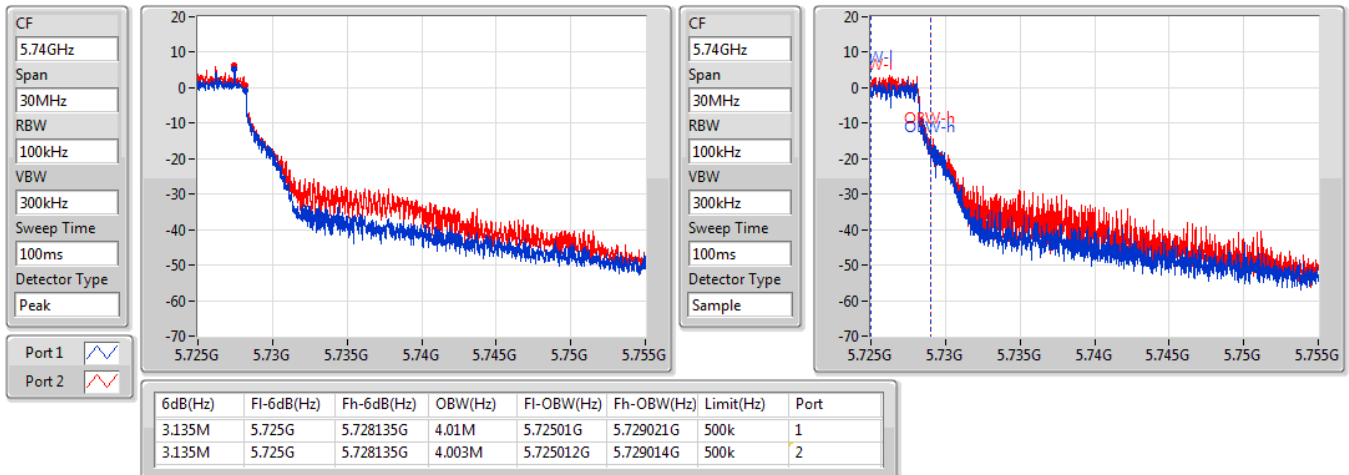


802.11a_Nss1,(6Mbps)_2TX
EBW
5720MHz Straddle 5.47-5.725GHz

04/01/2021

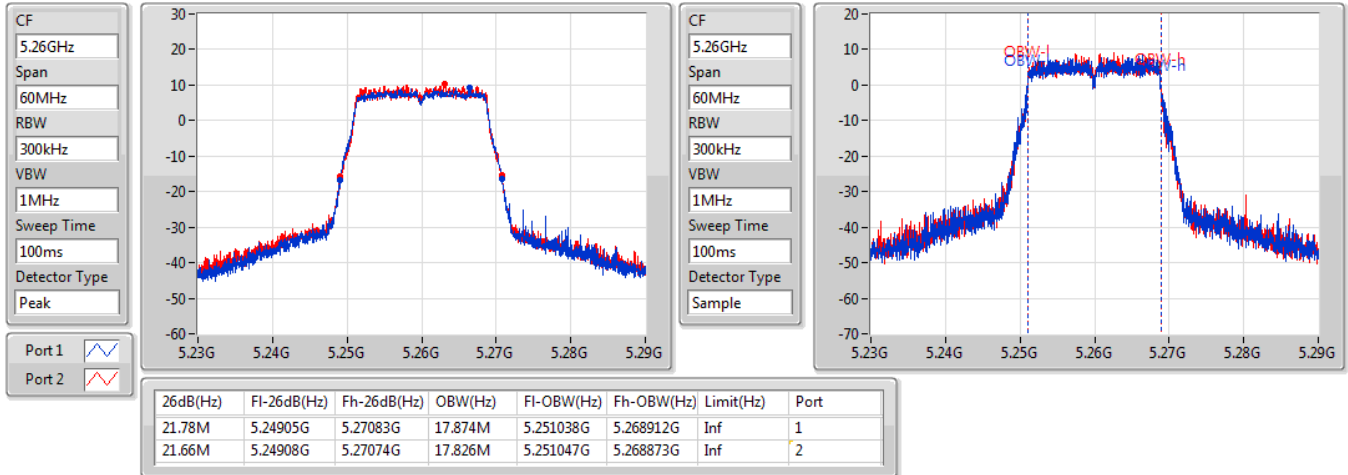

802.11a_Nss1,(6Mbps)_2TX
EBW
5720MHz Straddle 5.725-5.85GHz

04/01/2021

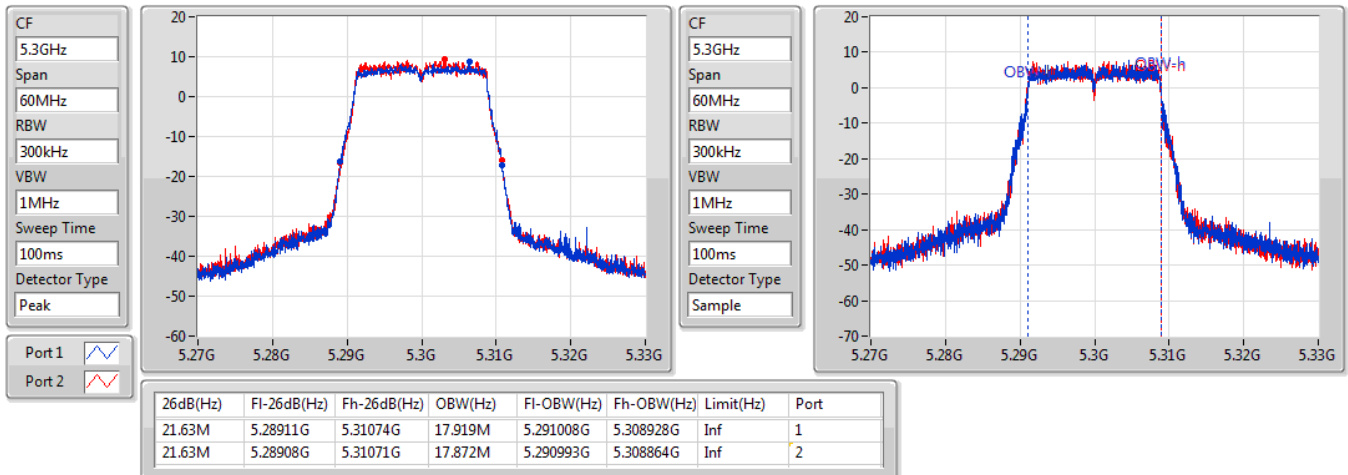


802.11n HT20_Nss1,(MCS0)_2TX
EBW
5260MHz

04/01/2021

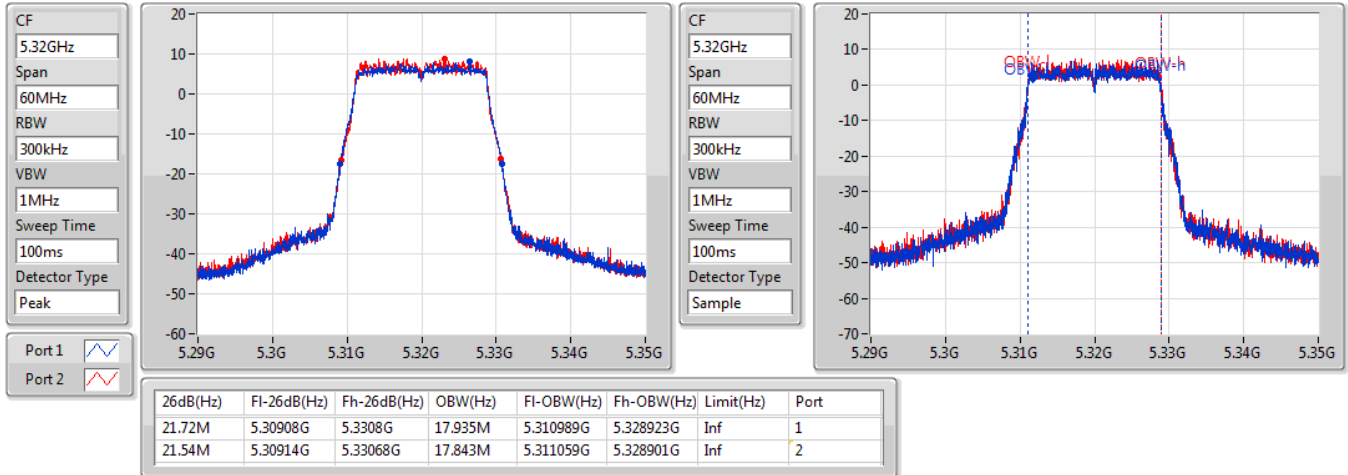

802.11n HT20_Nss1,(MCS0)_2TX
EBW
5300MHz

04/01/2021

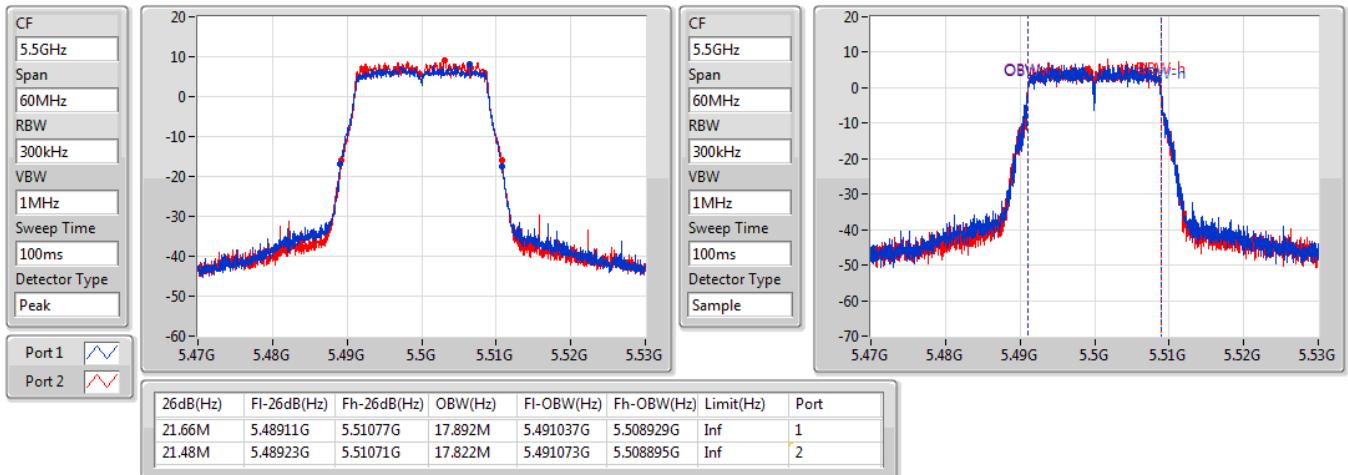


802.11n HT20_Nss1,(MCS0)_2TX
EBW
5320MHz

04/01/2021

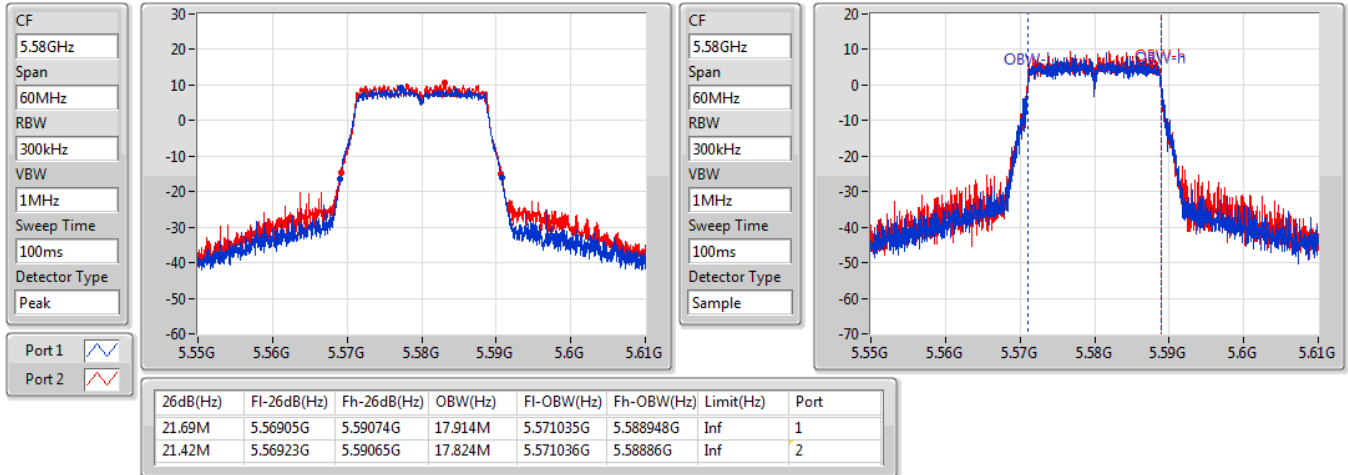

802.11n HT20_Nss1,(MCS0)_2TX
EBW
5500MHz

04/01/2021

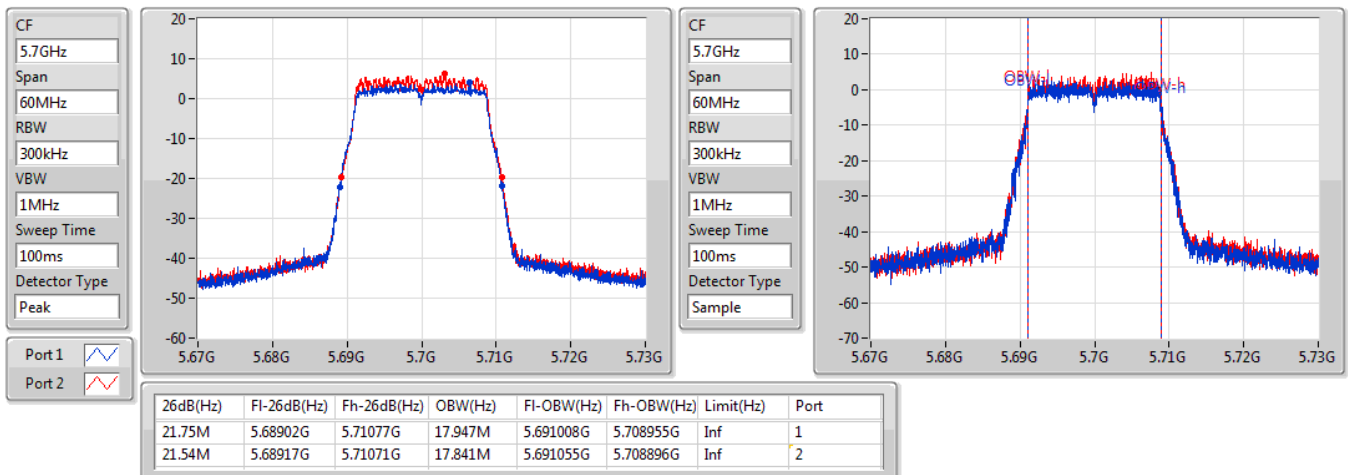


802.11n HT20_Nss1,(MCS0)_2TX
EBW
5580MHz

04/01/2021

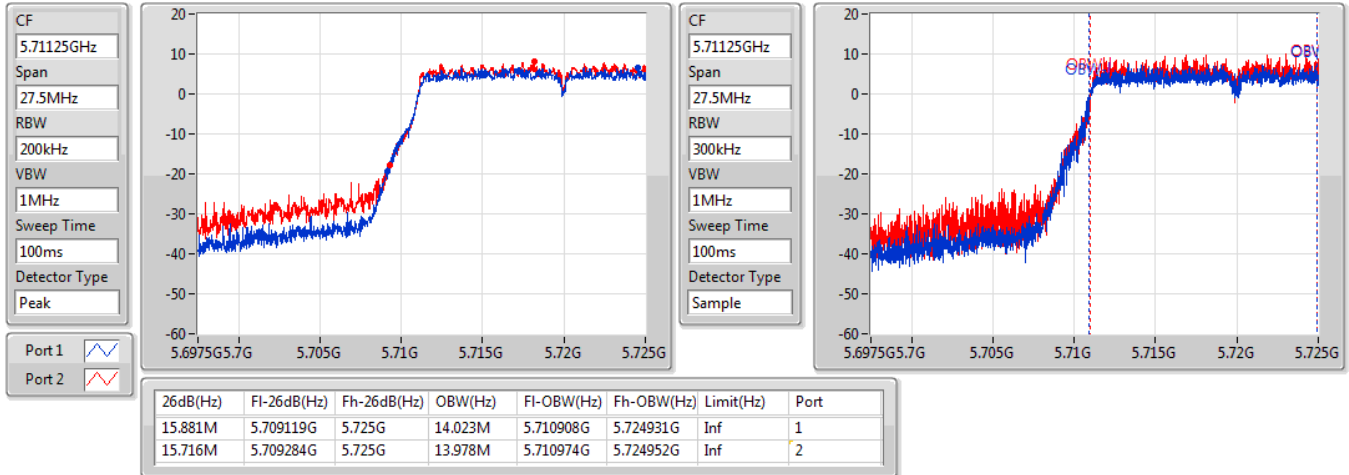

802.11n HT20_Nss1,(MCS0)_2TX
EBW
5700MHz

04/01/2021

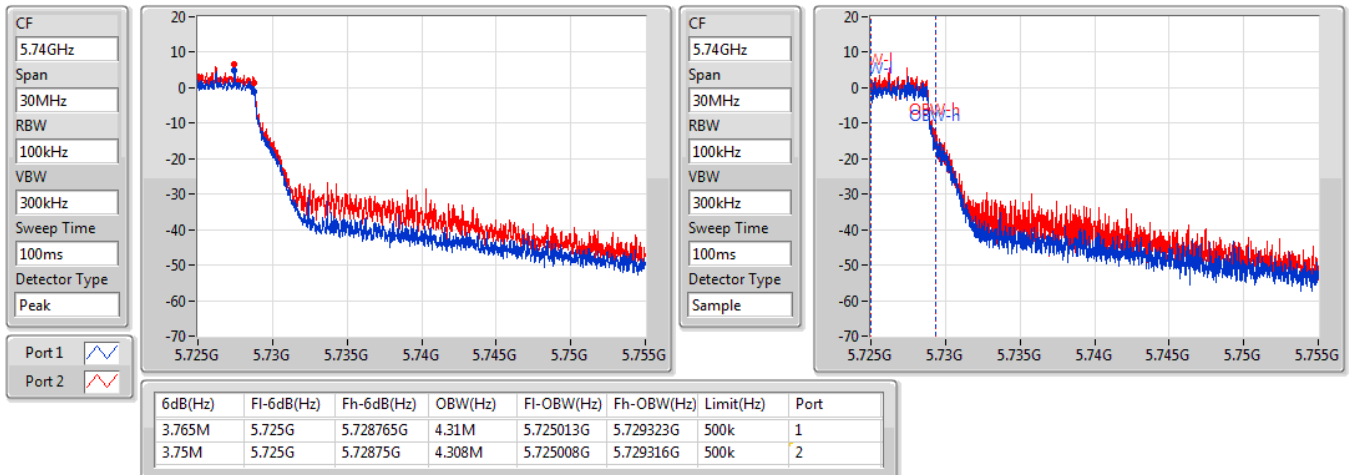


802.11n HT20_Nss1,(MCS0)_2TX
EBW
5720MHz Straddle 5.47-5.725GHz

04/01/2021

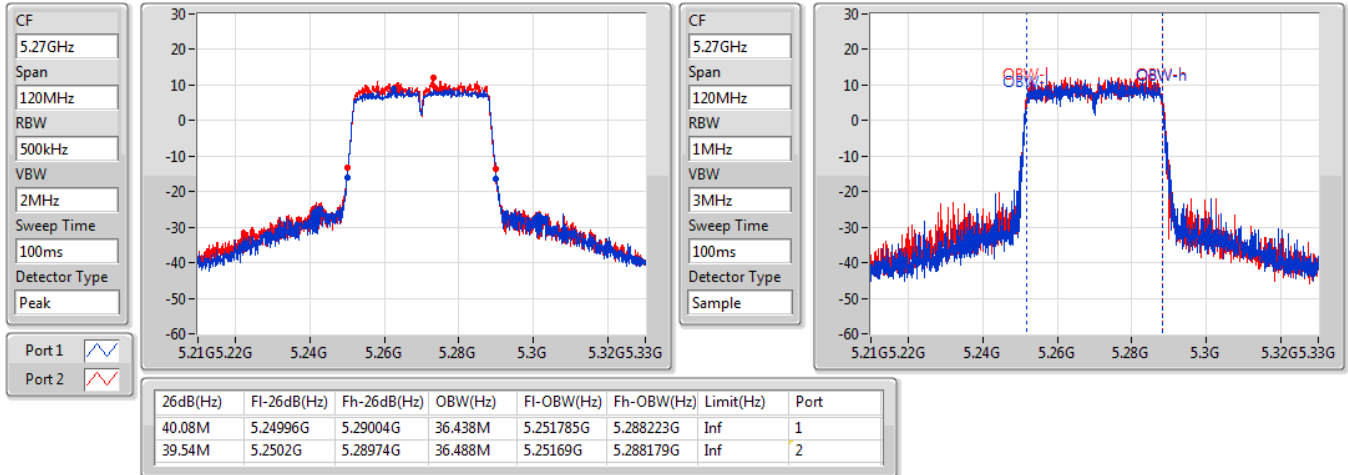

802.11n HT20_Nss1,(MCS0)_2TX
EBW
5720MHz Straddle 5.725-5.85GHz

04/01/2021

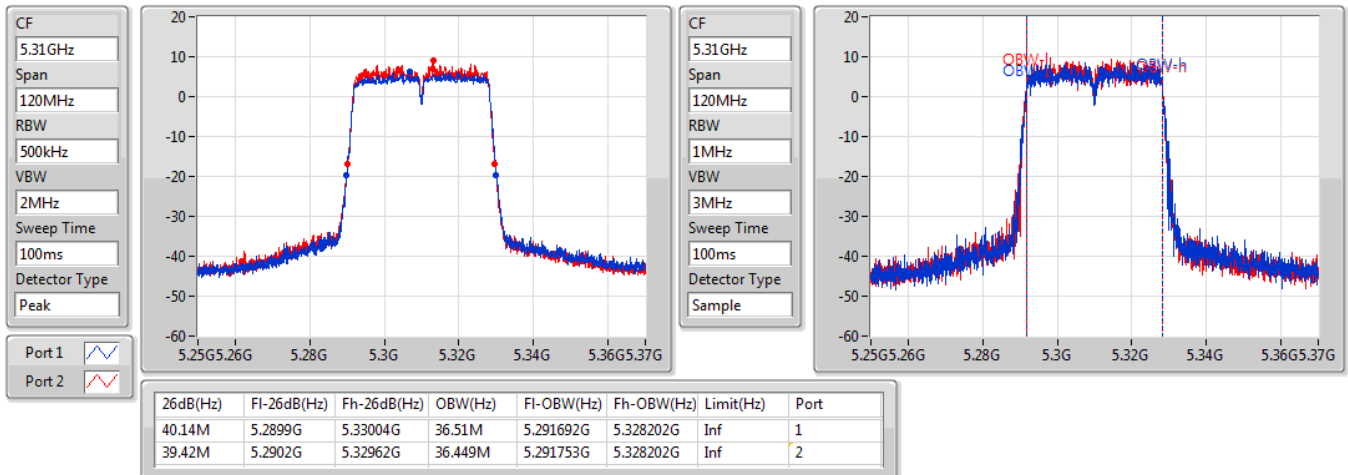


802.11n HT40_Nss1,(MCS0)_2TX
EBW
5270MHz

04/01/2021

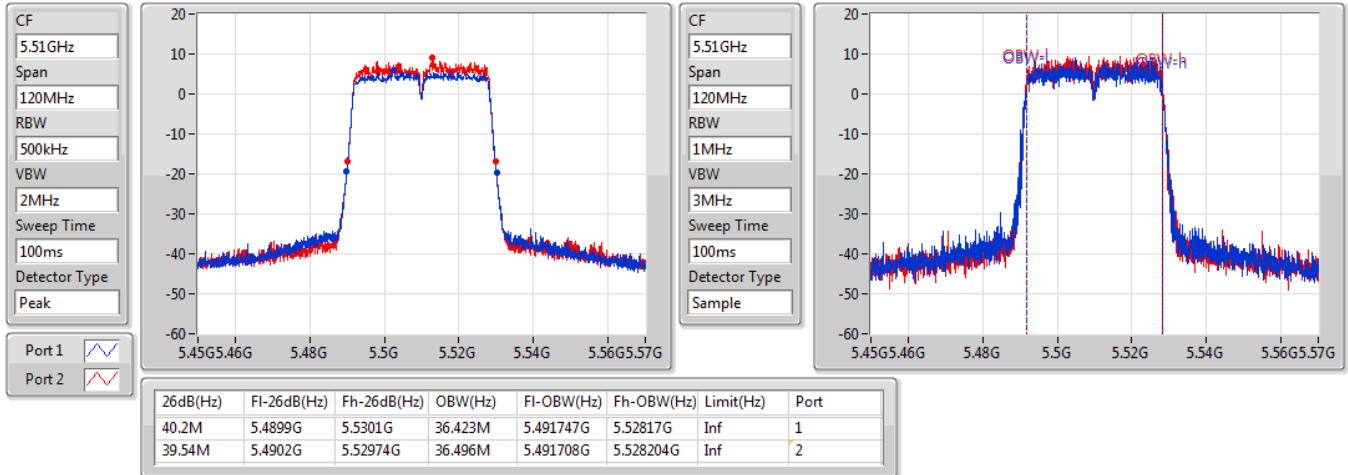

802.11n HT40_Nss1,(MCS0)_2TX
EBW
5310MHz

04/01/2021

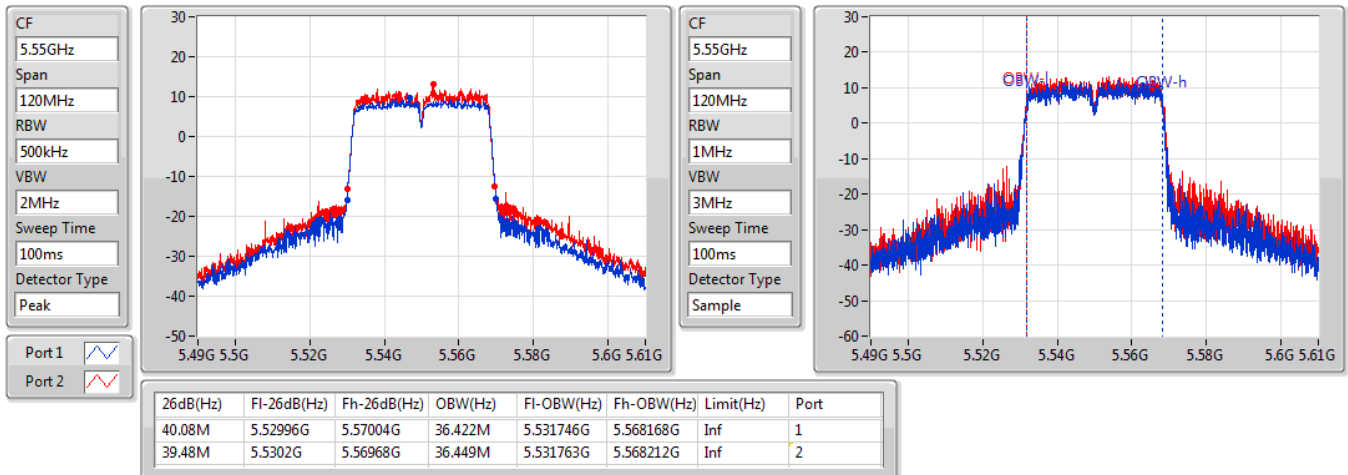


802.11n HT40_Nss1,(MCS0)_2TX
EBW
5510MHz

04/01/2021

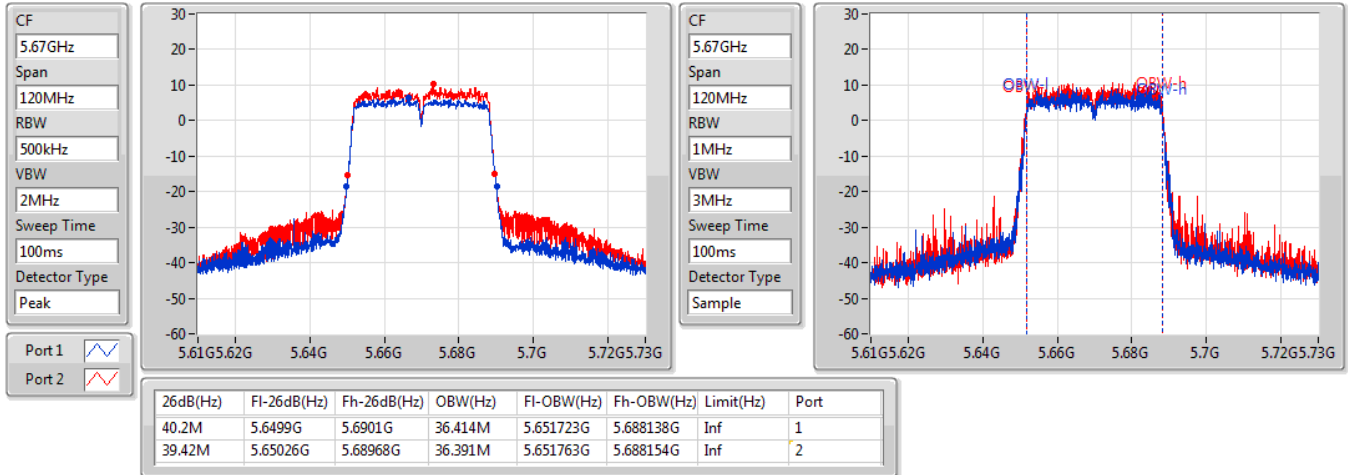

802.11n HT40_Nss1,(MCS0)_2TX
EBW
5550MHz

04/01/2021

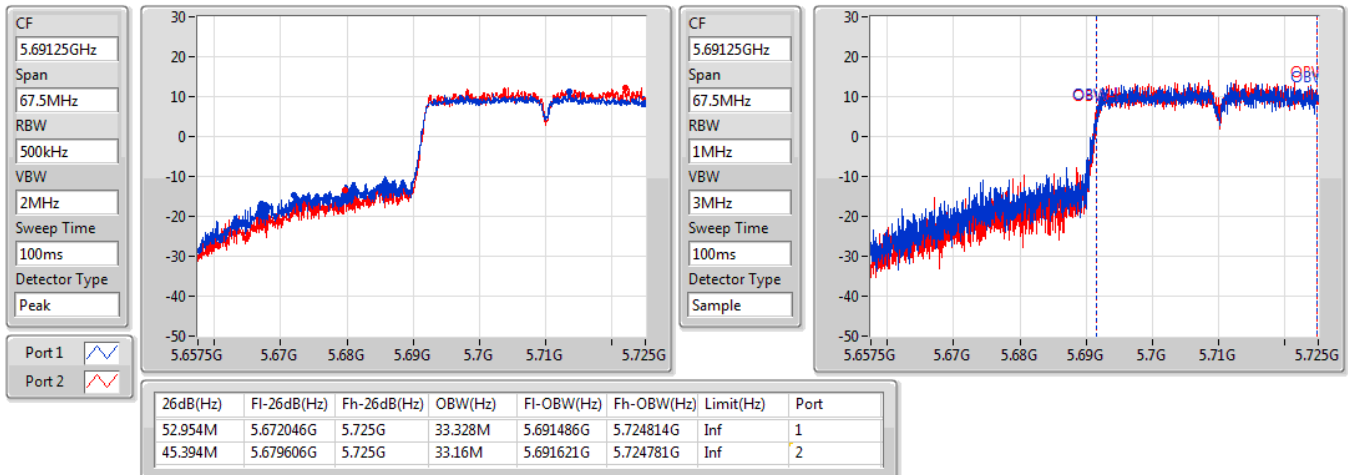


802.11n HT40_Nss1,(MCS0)_2TX
EBW
5670MHz

04/01/2021

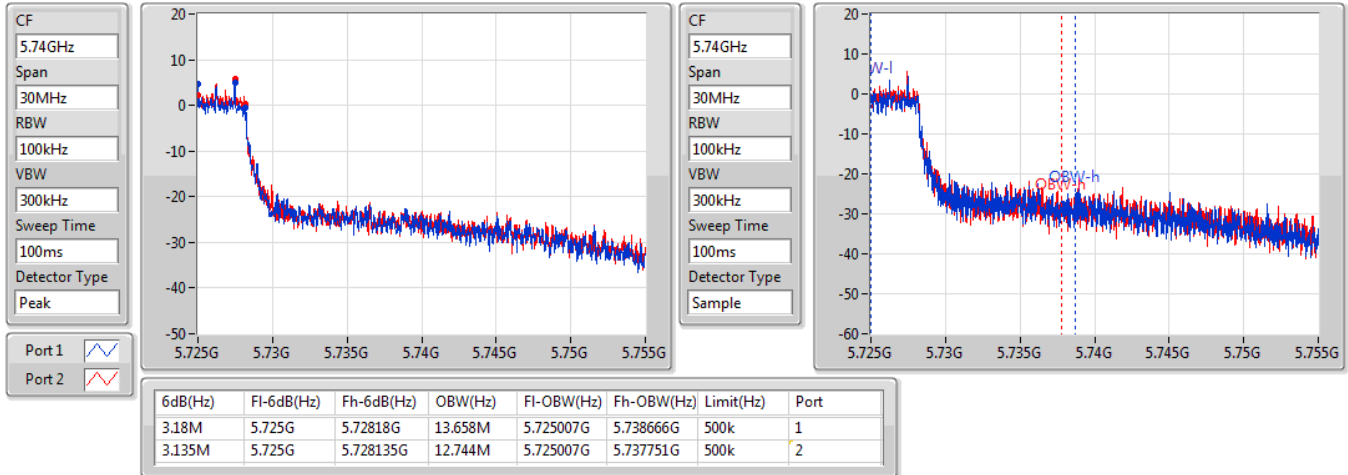

802.11n HT40_Nss1,(MCS0)_2TX
EBW
5710MHz Straddle 5.47-5.725GHz

04/01/2021

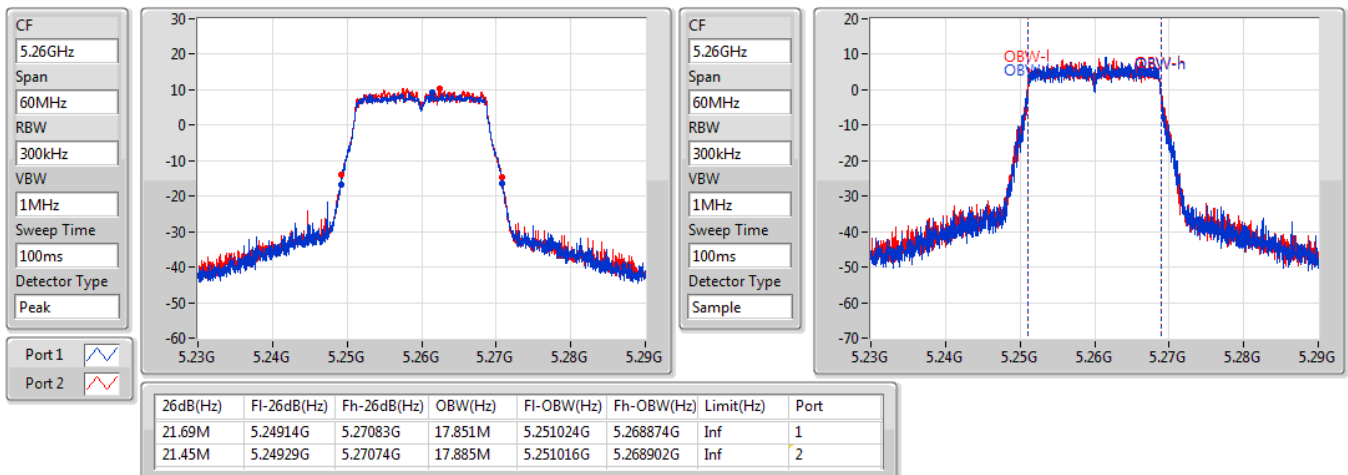


802.11n HT40_Nss1,(MCS0)_2TX
EBW
5710MHz Straddle 5.725-5.85GHz

04/01/2021

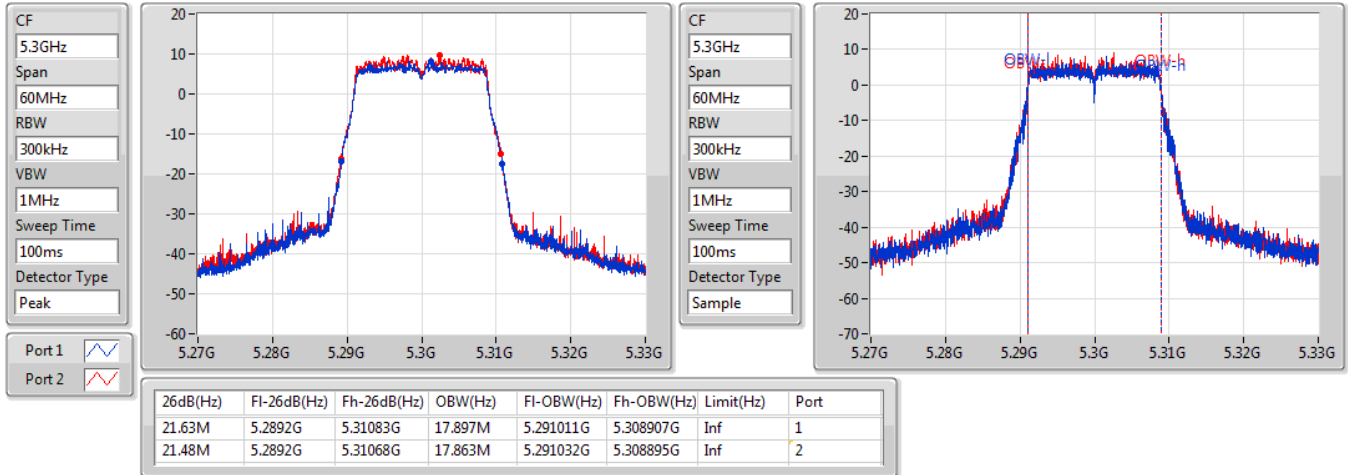

802.11ac VHT20_Nss1,(MCS0)_2TX
EBW
5260MHz

04/01/2021

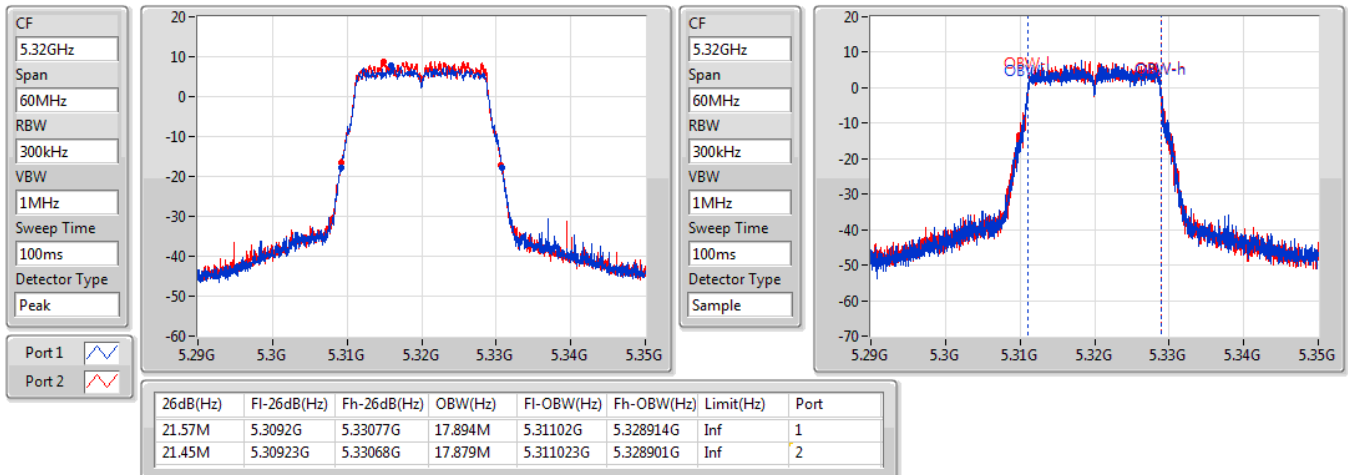


802.11ac VHT20_Nss1,(MCS0)_2TX
EBW
5300MHz

04/01/2021

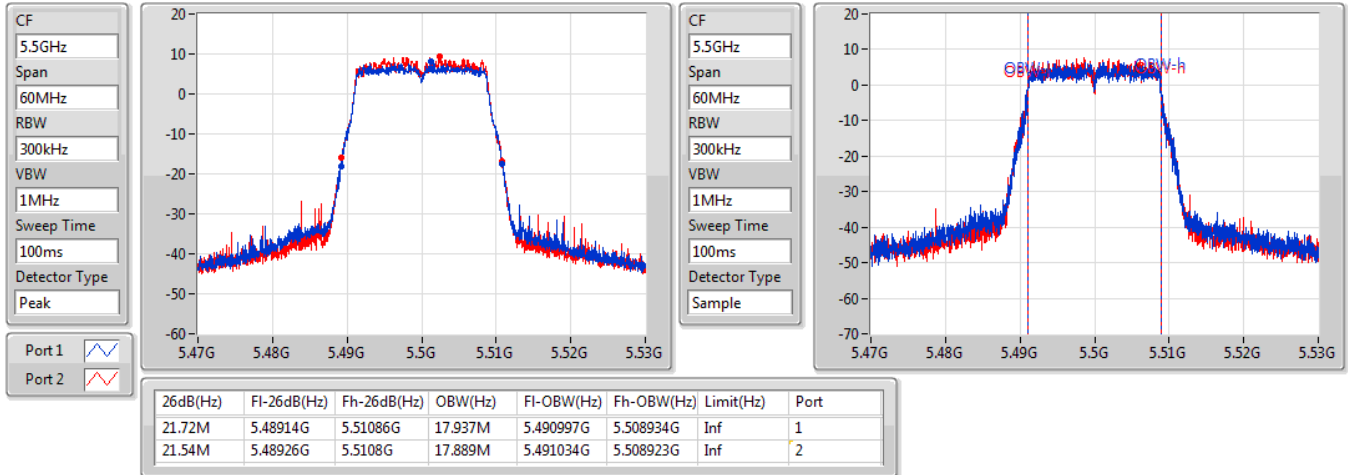

802.11ac VHT20_Nss1,(MCS0)_2TX
EBW
5320MHz

04/01/2021

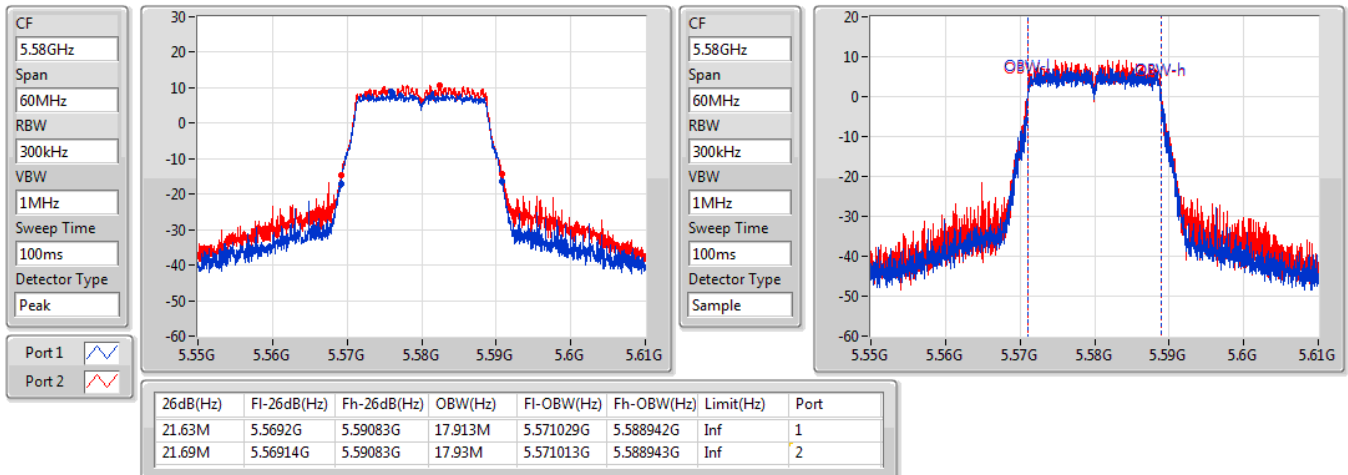


802.11ac VHT20_Nss1,(MCS0)_2TX
EBW
5500MHz

04/01/2021

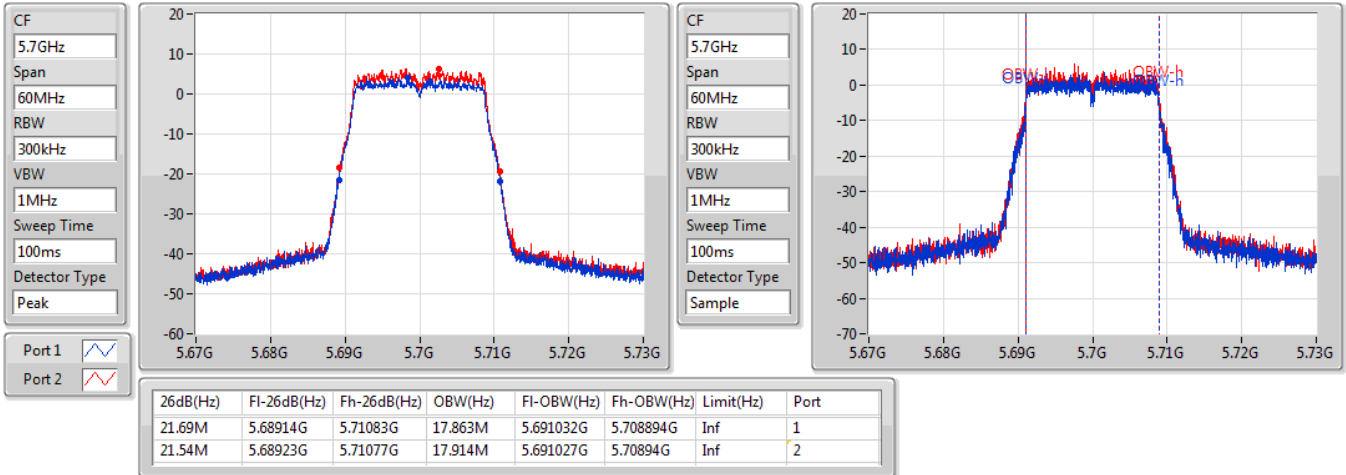

802.11ac VHT20_Nss1,(MCS0)_2TX
EBW
5580MHz

04/01/2021

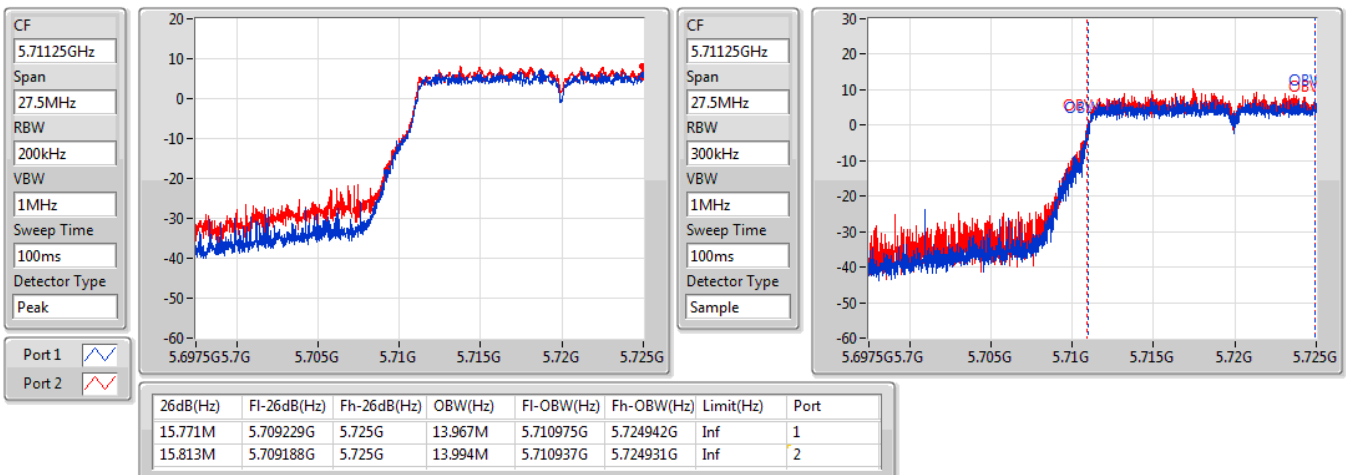


802.11ac VHT20_Nss1,(MCS0)_2TX
EBW
5700MHz

04/01/2021

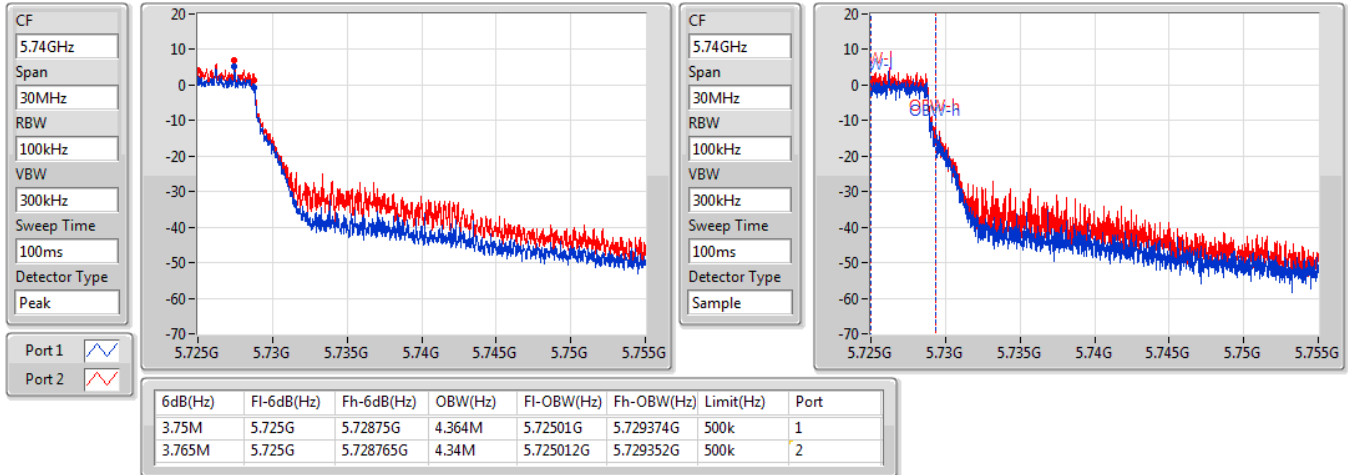

802.11ac VHT20_Nss1,(MCS0)_2TX
EBW
5720MHz Straddle 5.47-5.725GHz

04/01/2021

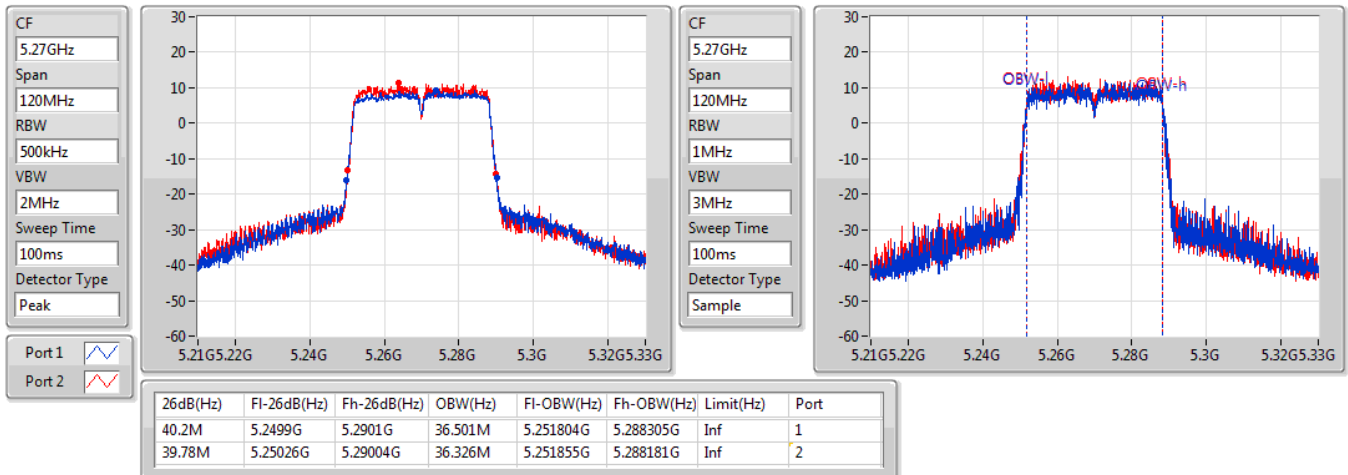


802.11ac VHT20_Nss1,(MCS0)_2TX
EBW
5720MHz Straddle 5.725-5.85GHz

04/01/2021

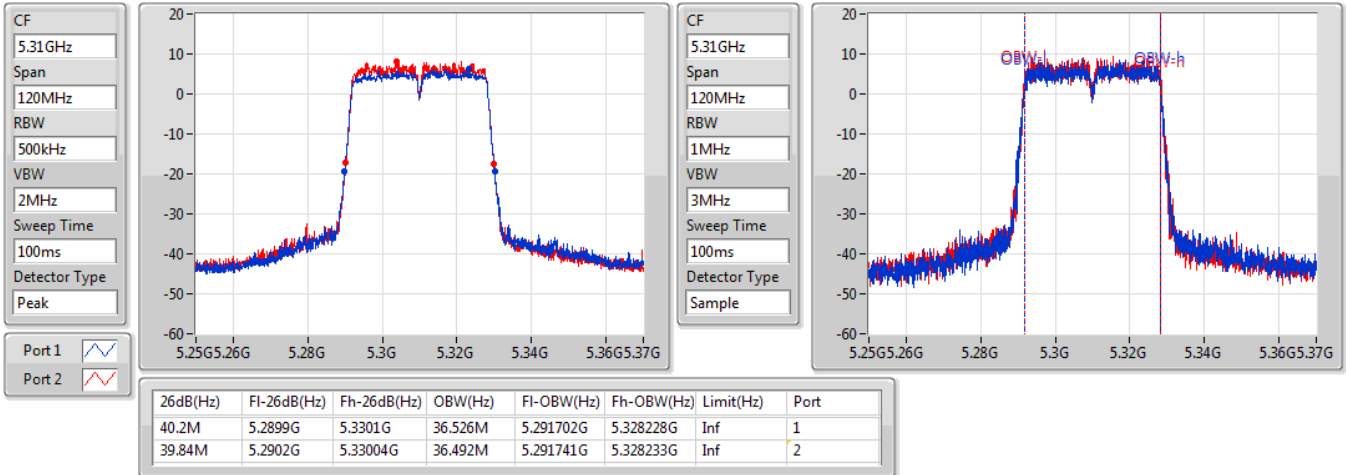

802.11ac VHT40_Nss1,(MCS0)_2TX
EBW
5270MHz

04/01/2021

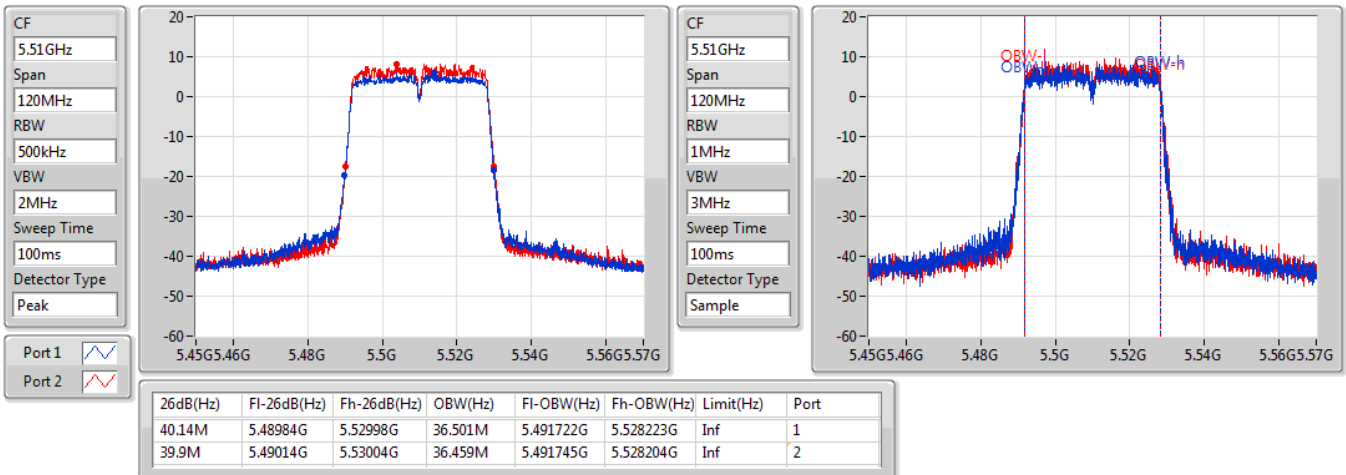


802.11ac VHT40_Nss1,(MCS0)_2TX
EBW
5310MHz

04/01/2021

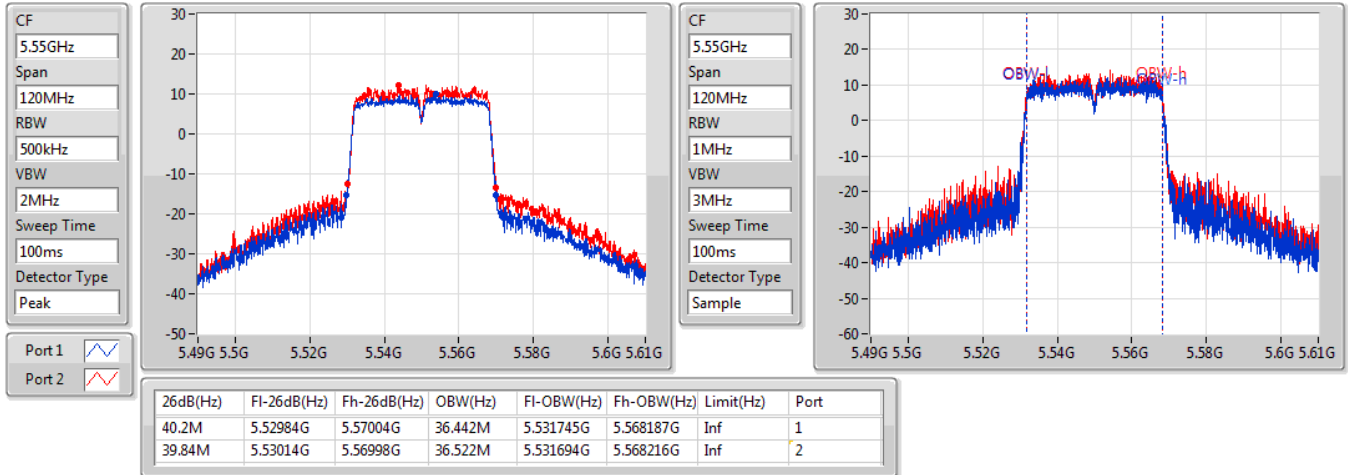

802.11ac VHT40_Nss1,(MCS0)_2TX
EBW
5510MHz

04/01/2021

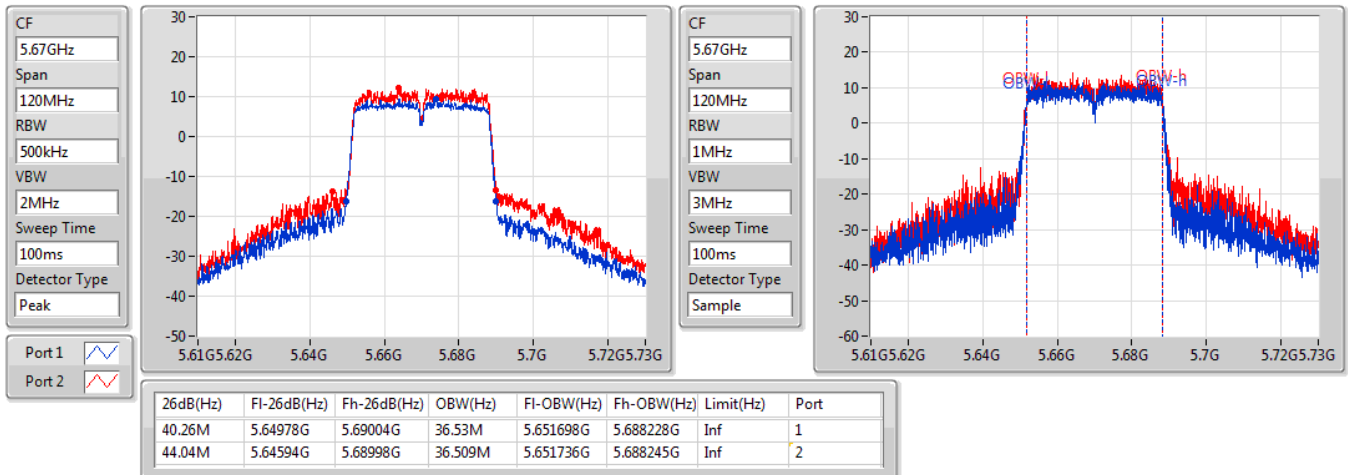


802.11ac VHT40_Nss1,(MCS0)_2TX
EBW
5550MHz

04/01/2021

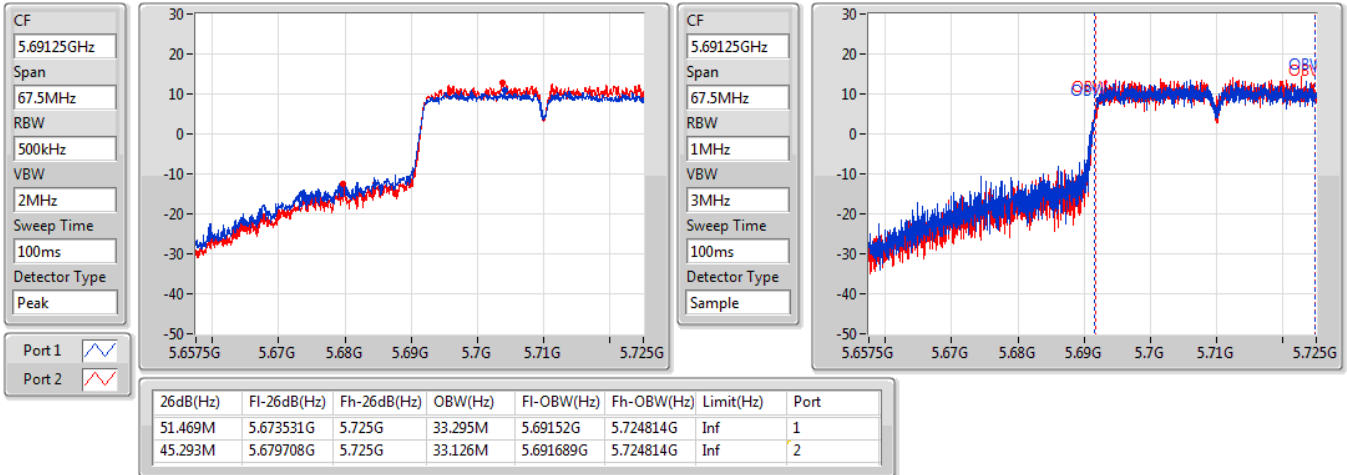

802.11ac VHT40_Nss1,(MCS0)_2TX
EBW
5670MHz

04/01/2021

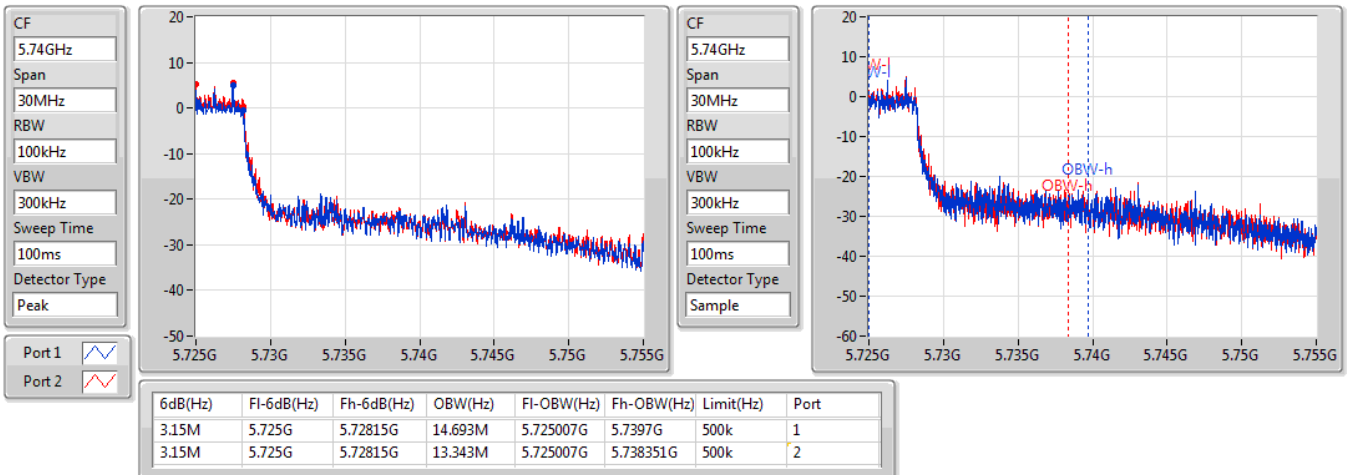


802.11ac VHT40_Nss1,(MCS0)_2TX
EBW
5710MHz Straddle 5.47-5.725GHz

04/01/2021

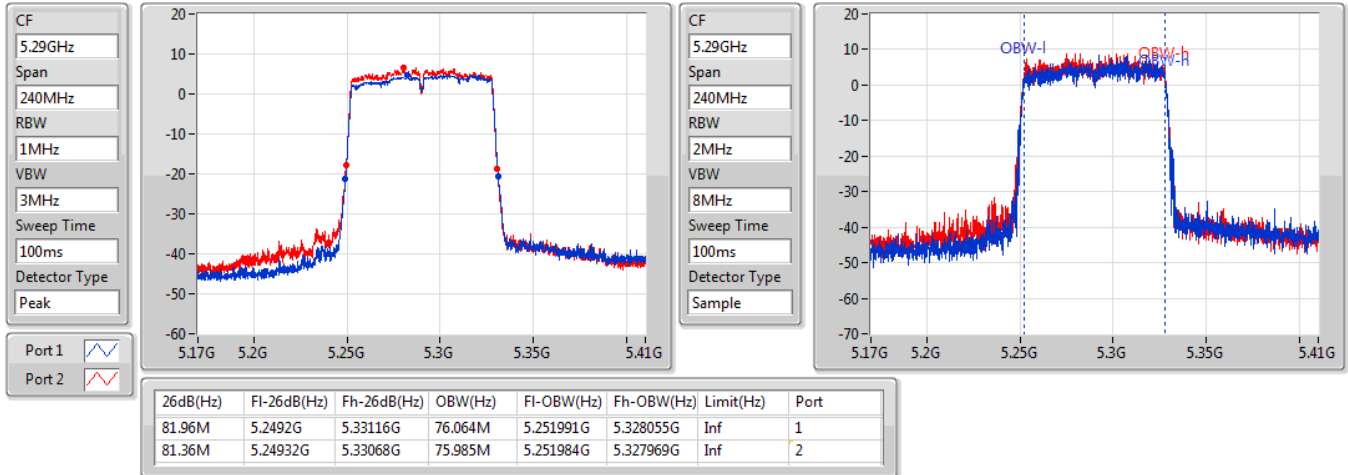

802.11ac VHT40_Nss1,(MCS0)_2TX
EBW
5710MHz Straddle 5.725-5.85GHz

04/01/2021

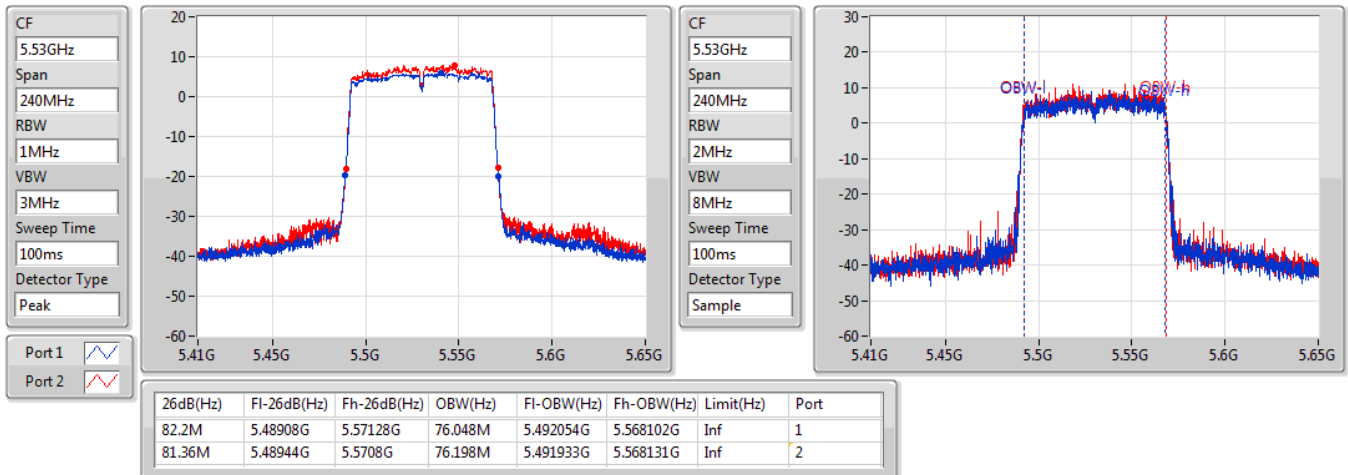


802.11ac VHT80_Nss1,(MCS0)_2TX
EBW
5290MHz

04/01/2021

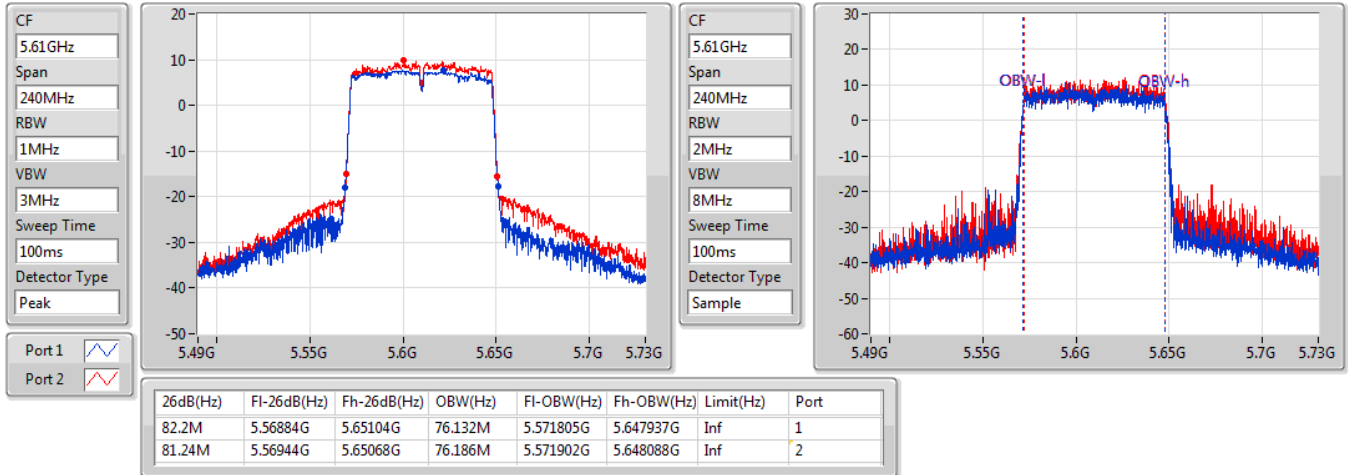

802.11ac VHT80_Nss1,(MCS0)_2TX
EBW
5530MHz

04/01/2021

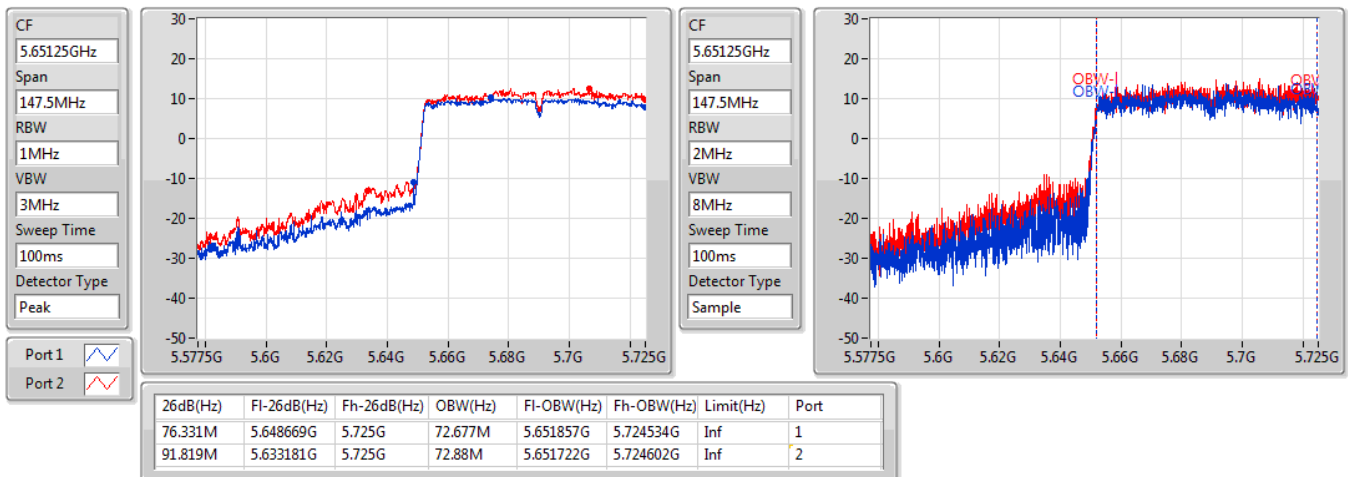


802.11ac VHT80_Nss1,(MCS0)_2TX
EBW
5610MHz

04/01/2021

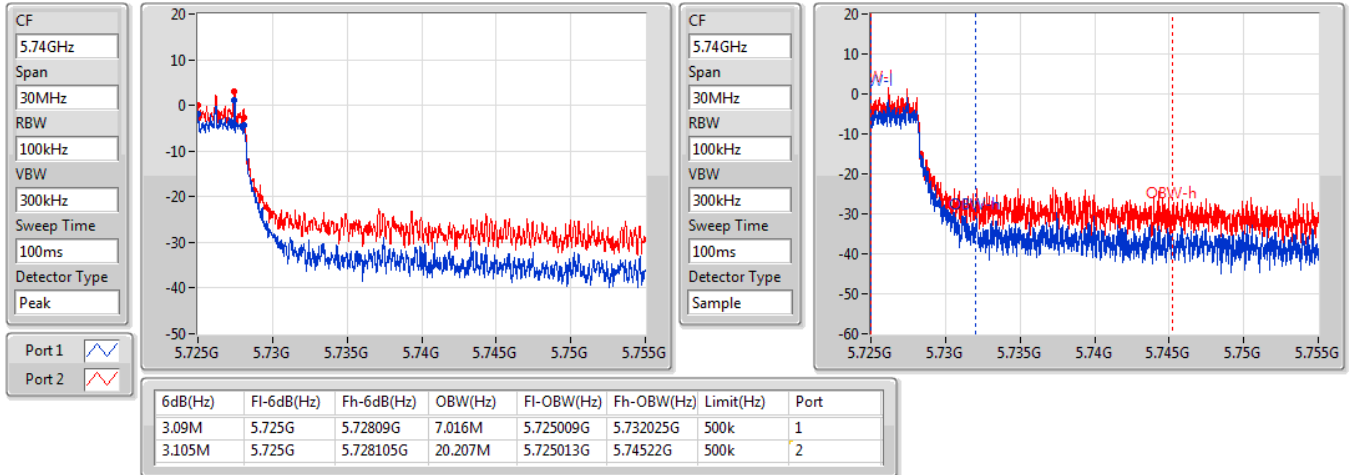

802.11ac VHT80_Nss1,(MCS0)_2TX
EBW
5690MHz Straddle 5.47-5.725GHz

04/01/2021

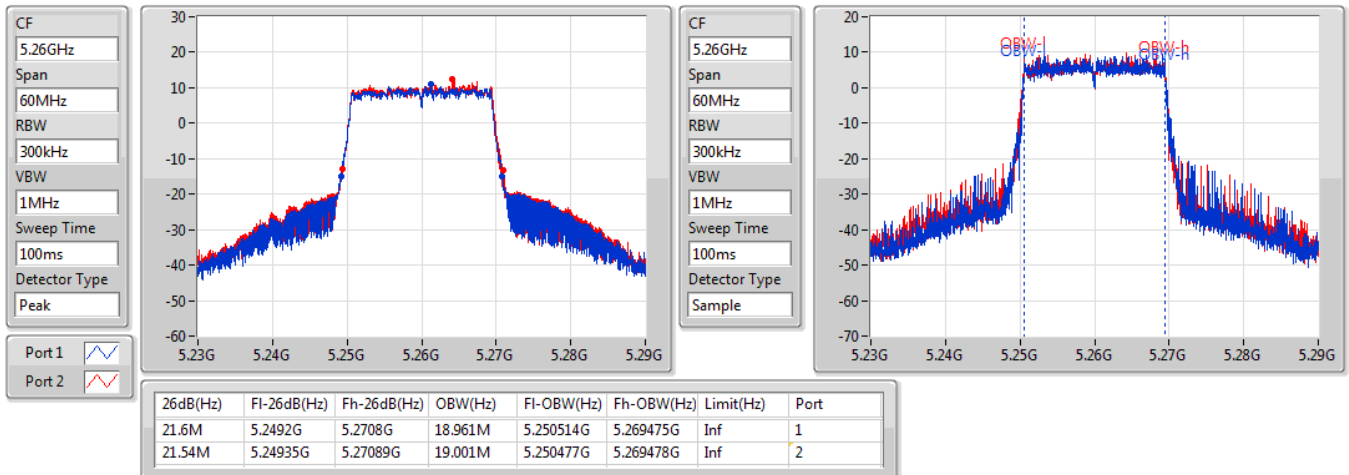


802.11ac VHT80_Nss1,(MCS0)_2TX
EBW
5690MHz Straddle 5.725-5.85GHz

04/01/2021

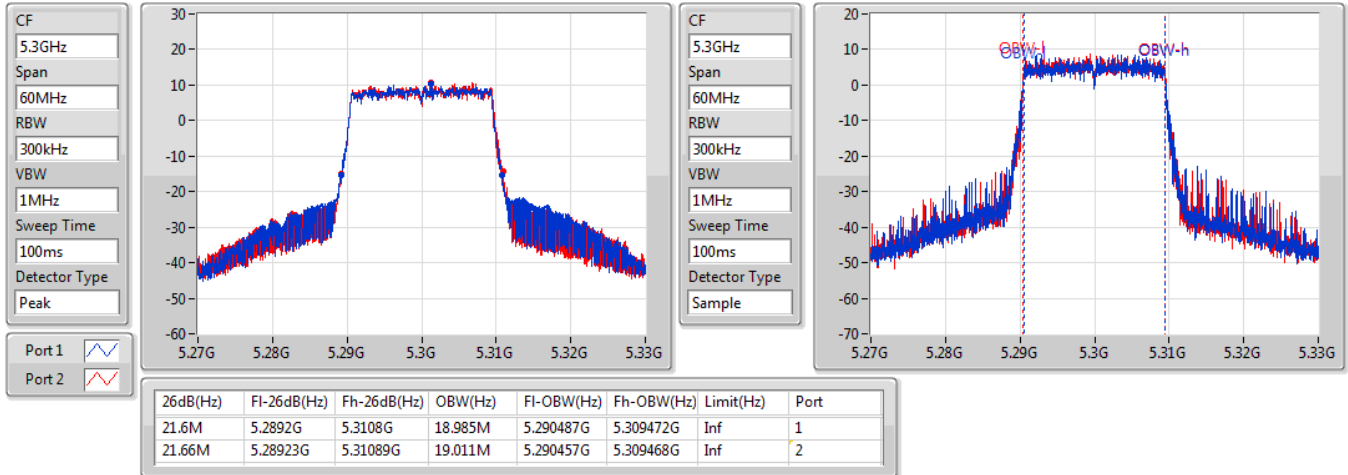

802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
5260MHz

04/01/2021

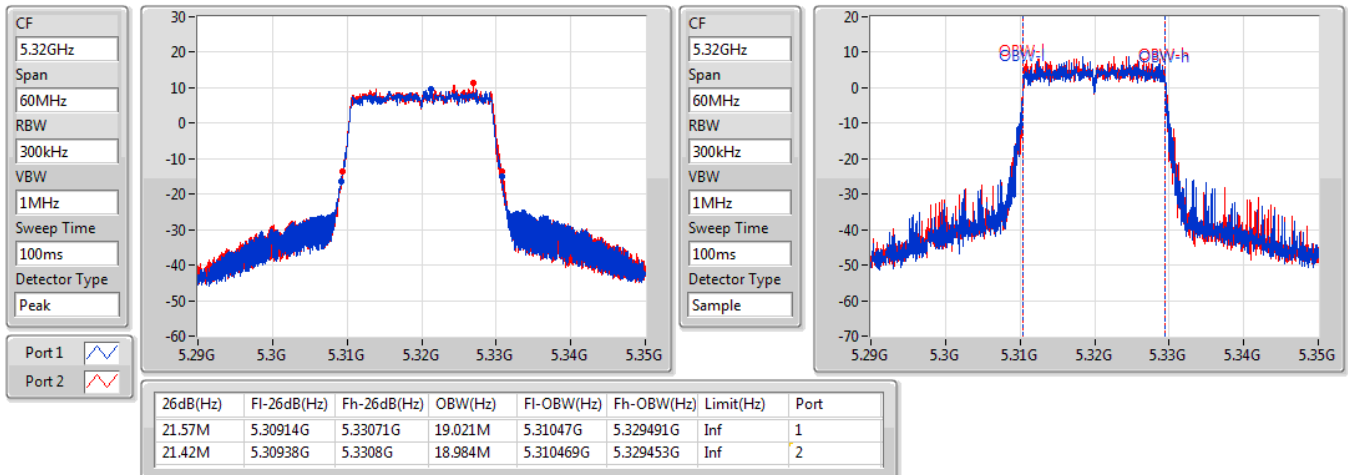


802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
5300MHz

04/01/2021

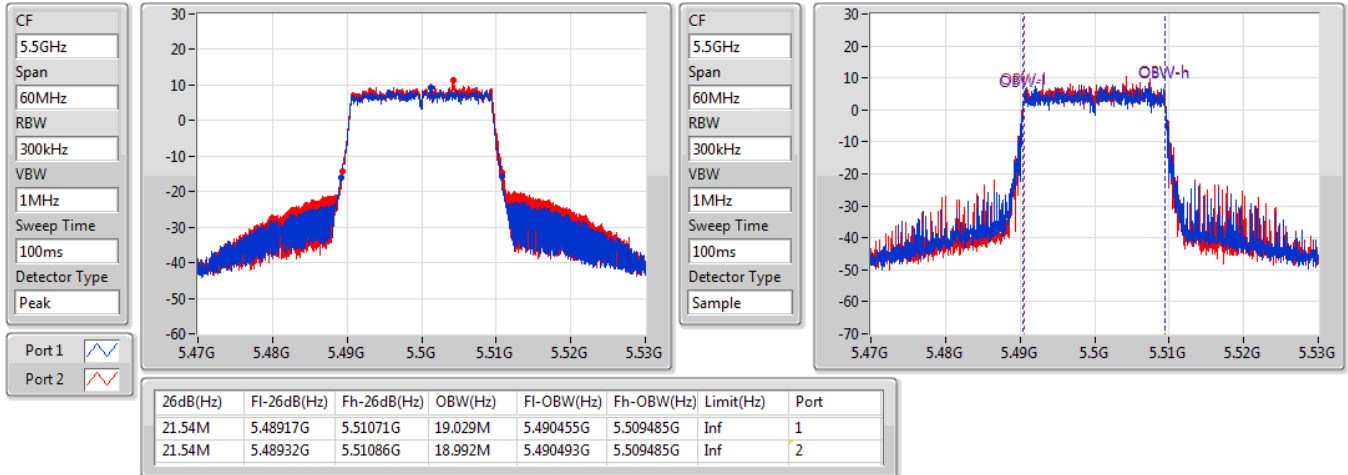

802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
5320MHz

04/01/2021

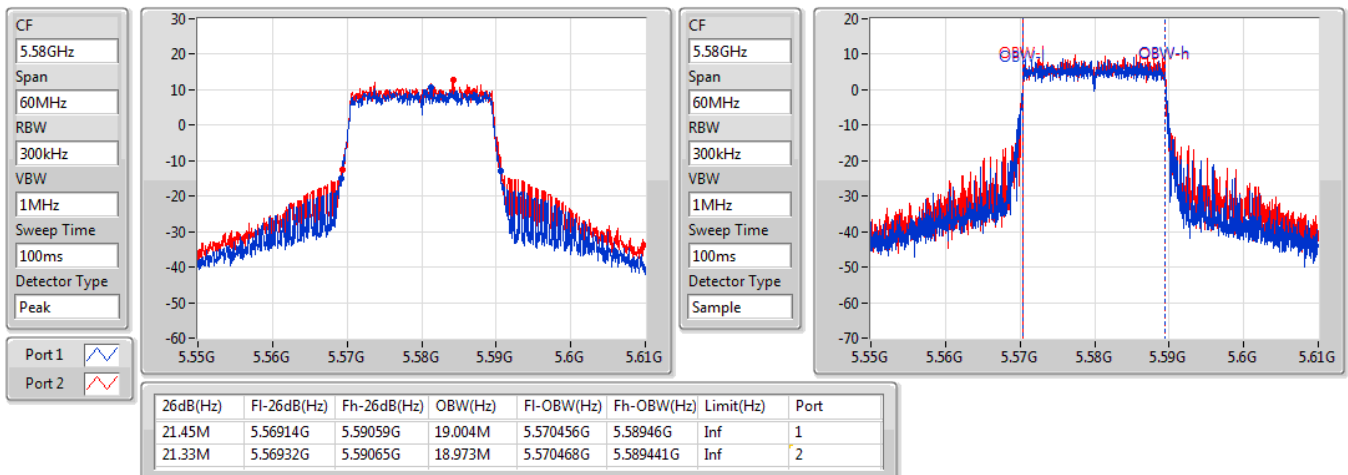


802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
5500MHz

04/01/2021

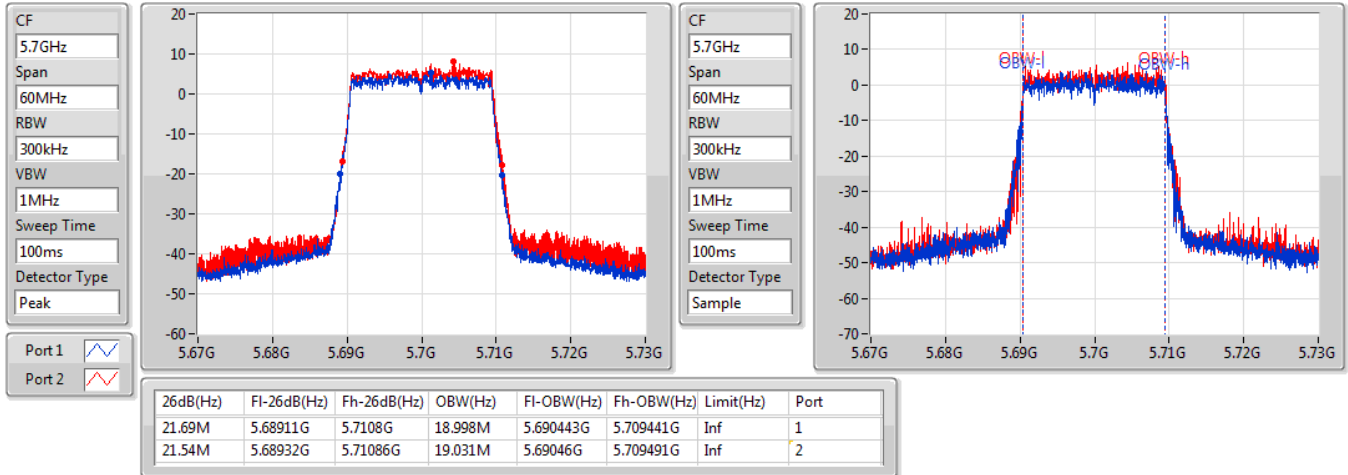

802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
5580MHz

04/01/2021

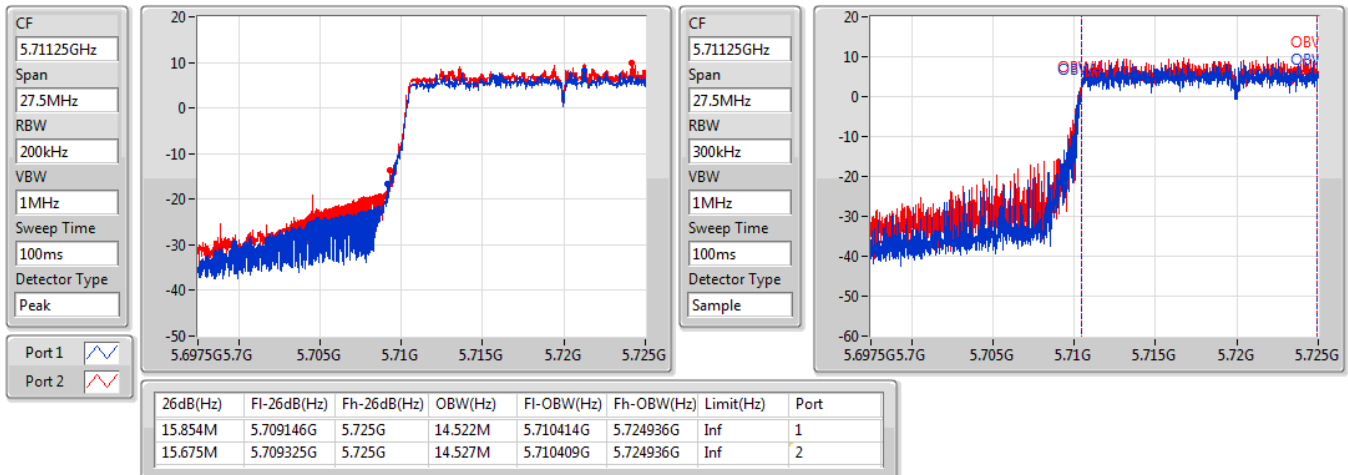


802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
5700MHz

04/01/2021

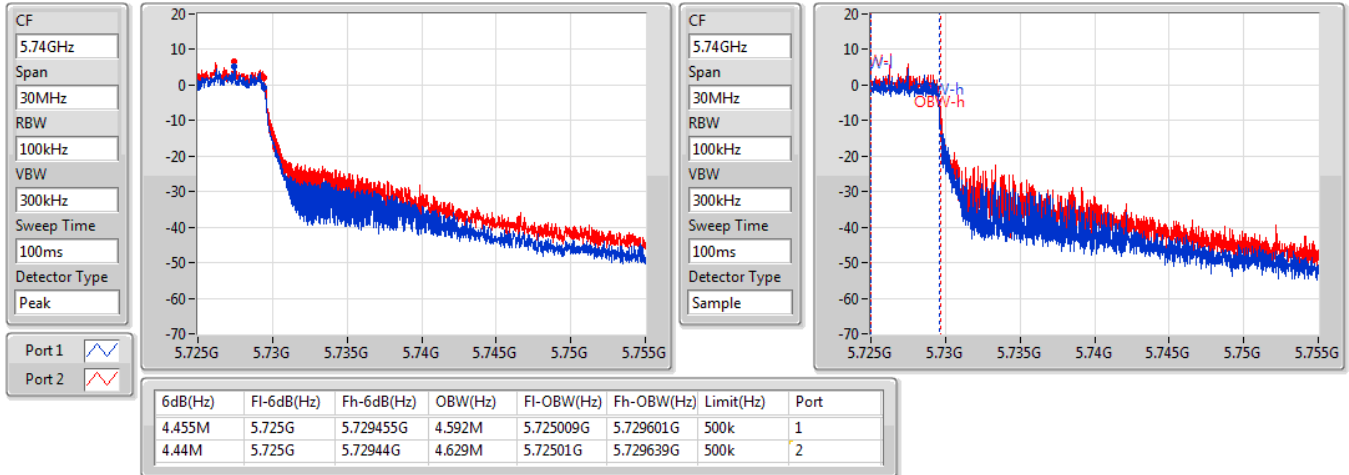

802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
5720MHz Straddle 5.47-5.725GHz

04/01/2021

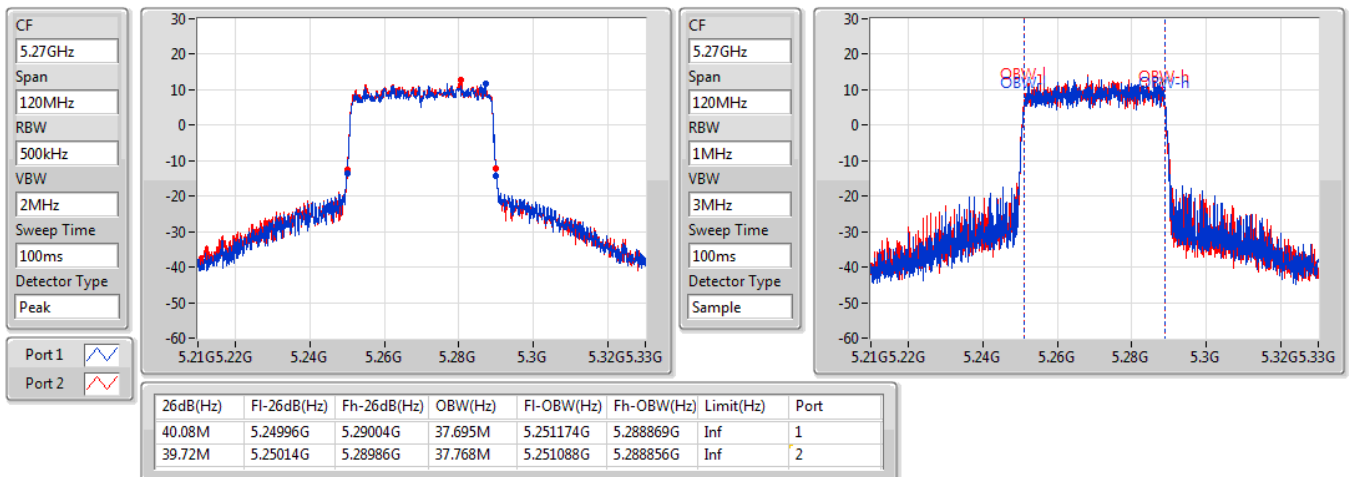


802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
5720MHz Straddle 5.725-5.85GHz

04/01/2021

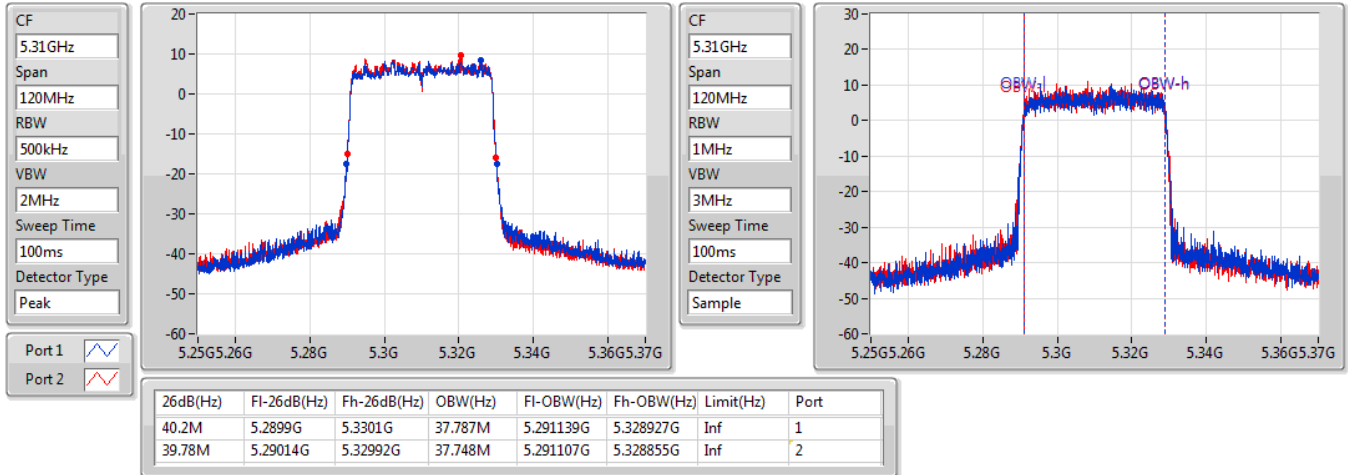

802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
5270MHz

04/01/2021

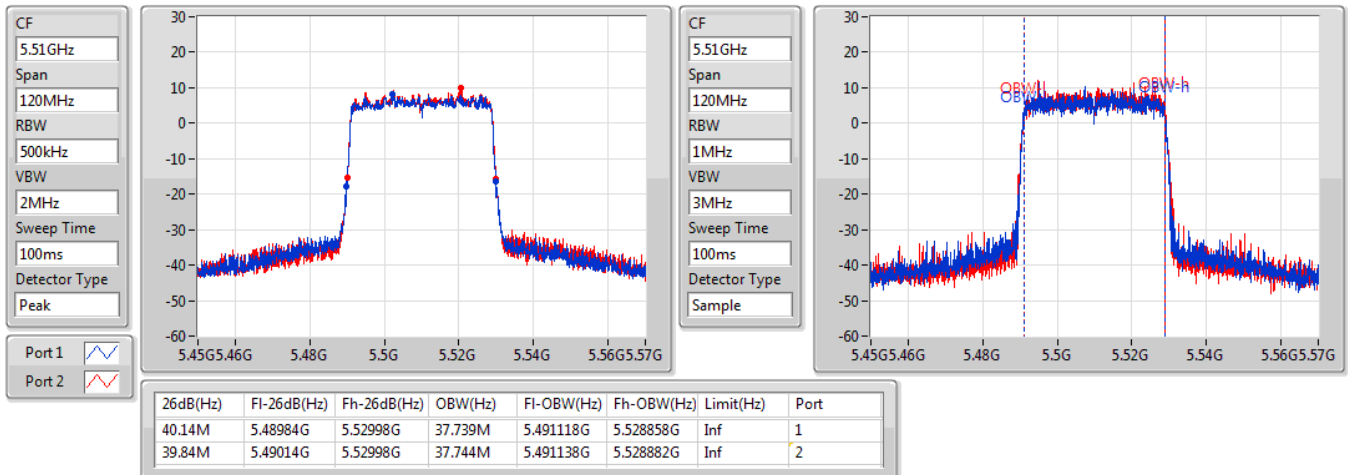


802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
5310MHz

04/01/2021

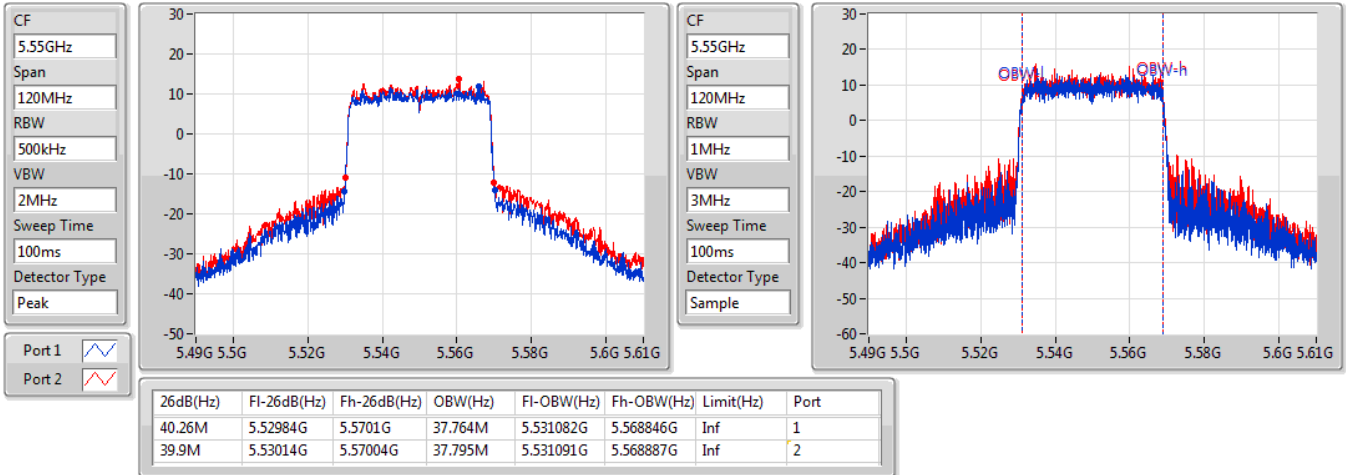

802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
5510MHz

04/01/2021

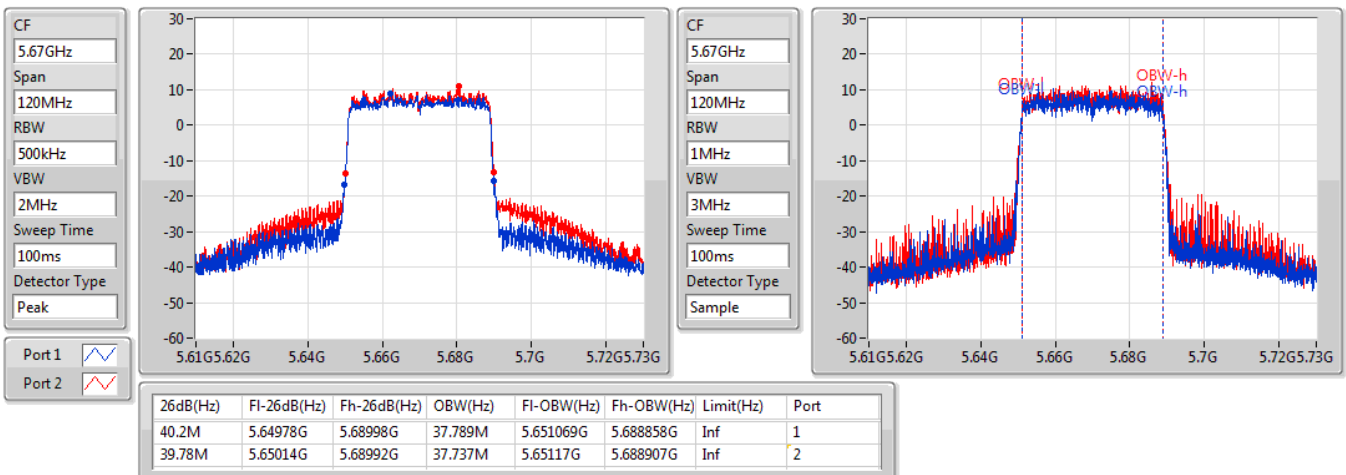


802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
5550MHz

04/01/2021

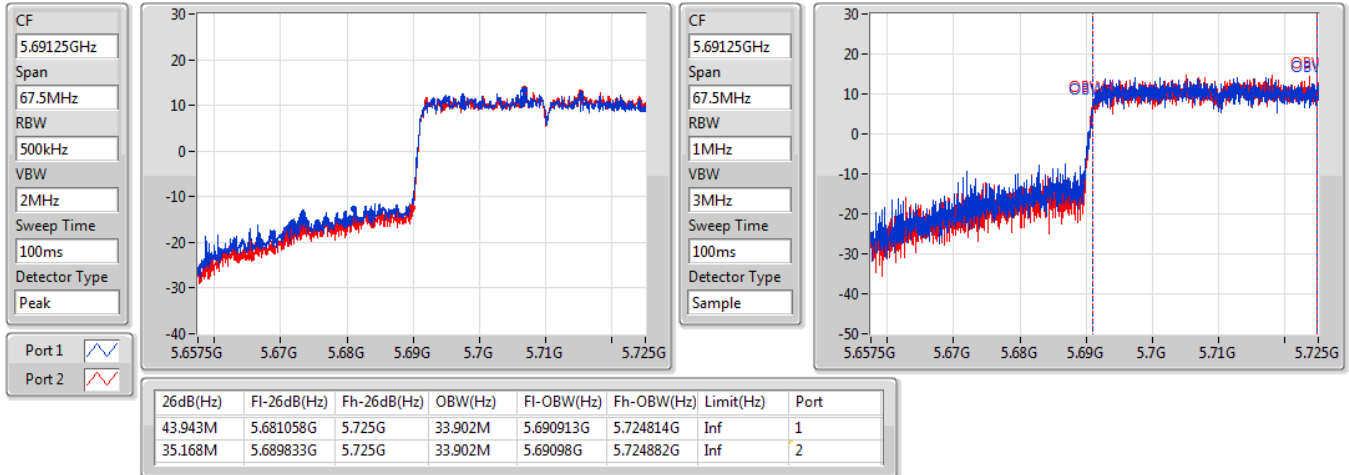

802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
5670MHz

04/01/2021

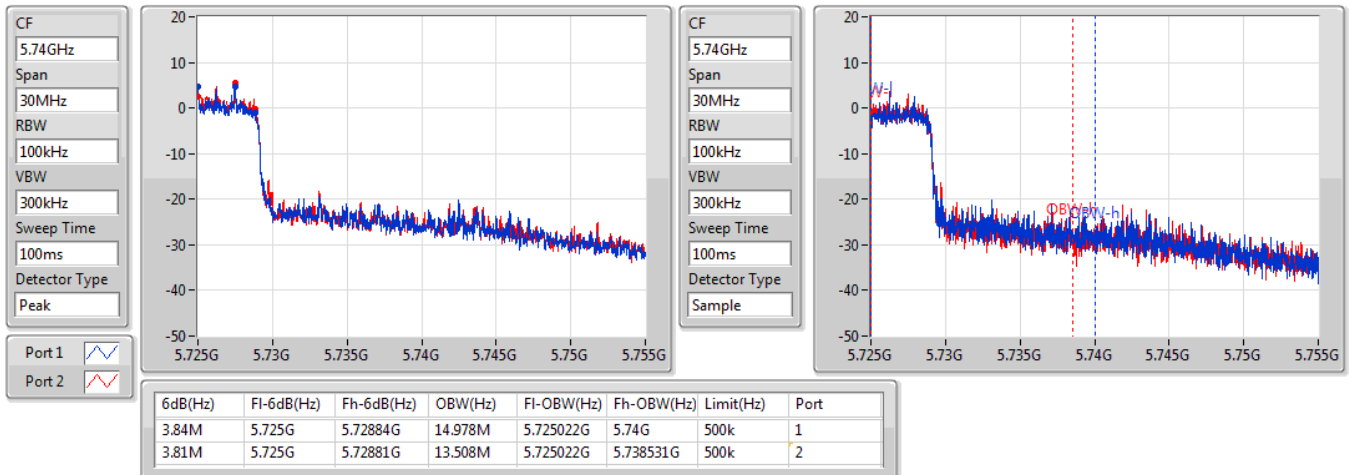


802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
5710MHz Straddle 5.47-5.725GHz

04/01/2021

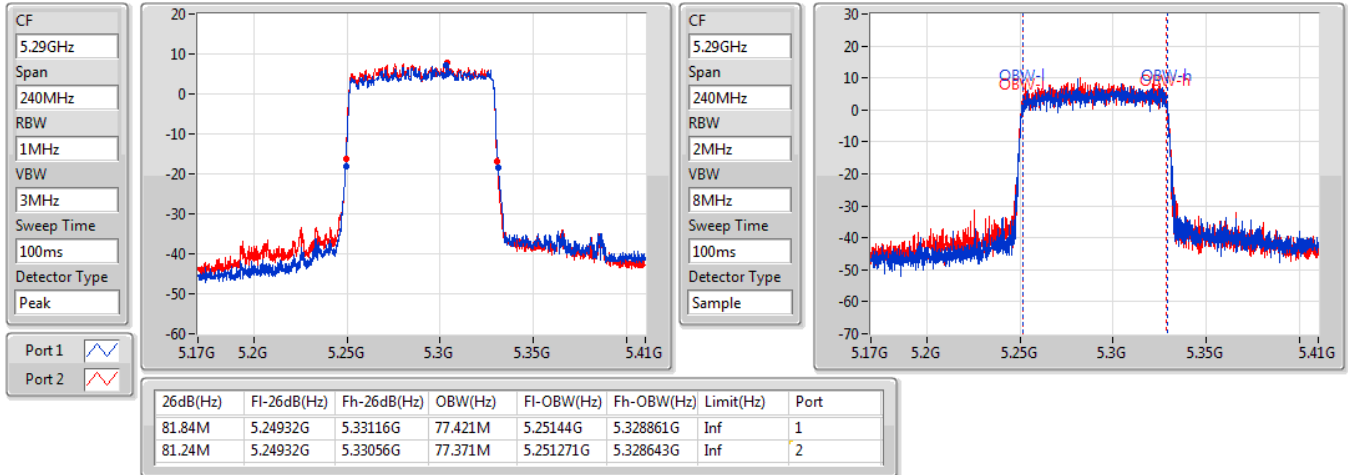

802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
5710MHz Straddle 5.725-5.85GHz

04/01/2021

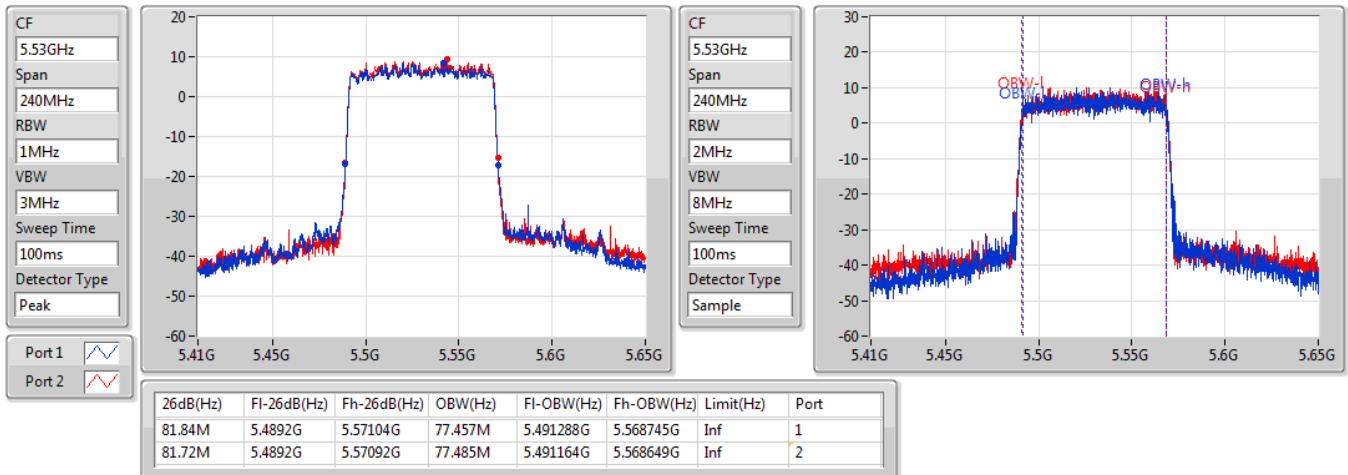


802.11ax HEW80_Nss1,(MCS0)_2TX
EBW
5290MHz

04/01/2021

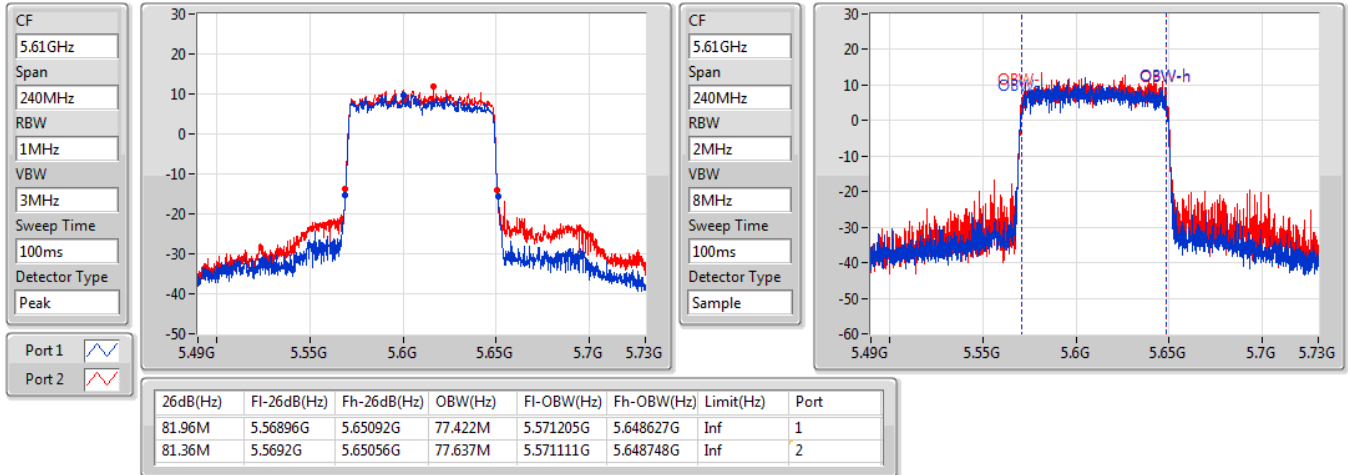

802.11ax HEW80_Nss1,(MCS0)_2TX
EBW
5530MHz

04/01/2021

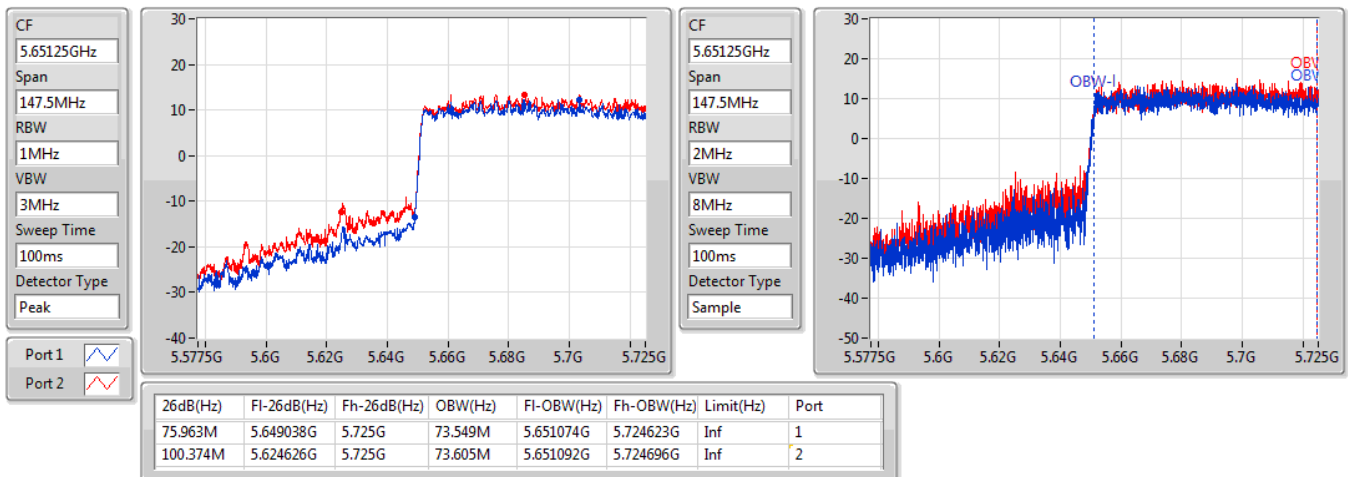


802.11ax HEW80_Nss1,(MCS0)_2TX
EBW
5610MHz

04/01/2021


802.11ax HEW80_Nss1,(MCS0)_2TX
EBW
5690MHz Straddle 5.47-5.725GHz

04/01/2021



802.11ax HEW80_Nss1,(MCS0)_2TX

EBW

5690MHz Straddle 5.725-5.85GHz

04/01/2021

