

FCC Radio Test Report

FCC ID : TVE-3518T01236

Equipment : Secured Wireless Access Point

Brand Name : FORTINET

Model Name : FortiAP 231Gxxxxxx, FORTIAP-231Gxxxxxx, FAP-231Gxxxxxx,
(where "x" can be used as "A-Z", or "0-9", or "-", or blank for
software changes or marketing purposes only)

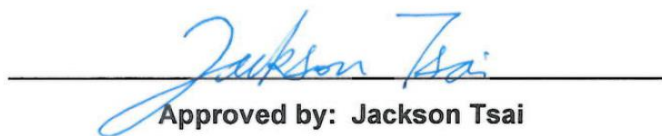
Applicant : Fortinet, Inc.
899 Kifer Road, Sunnyvale, CA 94086, USA

Manufacturer : Fortinet, Inc.
899 Kifer Road, Sunnyvale, CA 94086, USA

Standard : 47 CFR FCC Part 15.407

The product was received on Aug. 08, 2022, and testing was started from Aug. 10, 2022 and completed on Apr. 20, 2023. 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: Jackson Tsai

SPORTON INTERNATIONAL INC. Hsinhua Laboratory

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History of this test report

[illegible]

Summary of Test Result

Report Clause	Ref. Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	-
3.1	15.407(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:

The EUT supports beamforming and CDD modes, and the CDD mode is the worst case. Therefore, all test items are evaluated in the report. The beamforming mode only evaluates the output power.

Reviewed by: Barry Hsiao

Report Producer: Amber Chiu

1 General Description

1.1 Information

1.1.1 RF General Information

Radio2

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]
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]
5250-5350	ac (VHT80), ax(HEW80)	5290	58 [1]
5470-5725		5530-5610	106-122 [2]
Straddle 5690		5690	138 [1]

Non-Beamforming

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

Band	Mode	BWch (MHz)	Nant
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
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

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
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

Radio2(Low Band)+Radio3(High Band)

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]
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]
5250-5350	ac (VHT80), ax(HEW80)	5290	58 [1]
5470-5725		5530-5610	106-122 [2]
Straddle 5690		5690	138 [1]
5470-5725	ac (VHT160), ax (HEW160)	5570	114 [1]

Non-Beamforming

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
5.47-5.725GHz	802.11ac VHT160	160	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



Band	Mode	BWch (MHz)	Nant
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
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
5.47-5.725GHz	802.11ax HEW160	160	2TX

Beamforming

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
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
5.47-5.725GHz	802.11ax HEW160-BF	160	2TX

Radio3

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]
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]
5250-5350	ac (VHT80), ax(HEW80)	5290	58 [1]
5470-5725		5530-5610	106-122 [2]
Straddle 5690		5690	138 [1]
5150-5250	ac (VHT160), ax (HEW160)	5250	50 [1]
5470-5725		5570	114 [1]

Non-Beamforming

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
5.15-5.25GHz	802.11ac VHT160	160	2TX
5.25-5.35GHz	802.11ac VHT160	160	2TX
5.47-5.725GHz	802.11ac VHT160	160	2TX
5.25-5.35GHz	802.11ax HEW20	20	2TX

Band	Mode	BWch (MHz)	Nant
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
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
5.15-5.25GHz	802.11ax HEW160	160	2TX
5.25-5.35GHz	802.11ax HEW160	160	2TX
5.47-5.725GHz	802.11ax HEW160	160	2TX

Beamforming

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
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
5.15-5.25GHz	802.11ax HEW160-BF	160	2TX
5.25-5.35GHz	802.11ax HEW160-BF	160	2TX
5.47-5.725GHz	802.11ax HEW160-BF	160	2TX

Note:

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

1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector	Support
1	SENAO	5718A0675300	PIFA	I-Pex	2.4G+5G
2	SENAO	5718A0677300	PIFA	I-Pex	2.4G+5G
3	SENAO	5718A0678300	PIFA	I-Pex	2.4G+5G+6G
4	SENAO	5718A0676300	PIFA	I-Pex	2.4G+5G+6G
5	SENAO	5718A0679300	PIFA	I-Pex	BT & Zigbee

Ant.	Port	Gain (dBi)				Remark	
		2.4G	5G	6G	BT & Zigbee		
1	1	4.5	5.3	-	-	Radio 1 2.4G 2*2 & Radio2 5G 2*2	Radio 2 5G Low Band+ Radio 3 5G High Band 2*2
2	2	4.3	5.3	-	-		
3	1	4.3	5.2	5.3	-	Radio 3 2.4G/5G/6G 2*2	
4	2	4.4	5.3	5.2	-		
5	1	-	-	-	5.1	-	

Note 1: The EUT has five antennas.

For 2.4GHz function:

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

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

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

For BT function:

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

Only Ant.5 (port 1) can be used as transmitting/receiving.

For 5GHz function:

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

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

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

For 6GHz function:

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

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

1.1.3 EUT Information

Operational Condition			
EUT Power Type	From AC Adapter / PoE		
EUT Function	☐ Outdoor AP	☒	Indoor AP
	☐ Fixed P2P AP	☐	Client
Beamforming Function	☒ With beamforming	☐	Without beamforming
TPC Function	☒ With TPC Function	☐	Without TPC Function
Weather Band	☒ With 5600~5650MHz	☐	Without 5600~5650MHz
Resource Unit(802.11ax)	☒ Full RU	☐	Partial RU
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_Radio2

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11a_Nss1,(6Mbps)_2TX	0.939	0.27	1.977m	1k
802.11n HT20_Nss1,(MCS0)_2TX	0.941	0.26	5.428m	300
802.11n HT40_Nss1,(MCS0)_2TX	0.841	0.75	5.428m	300
802.11ac VHT20_Nss1,(MCS0)_2TX	0.944	0.25	5.428m	300
802.11ac VHT40_Nss1,(MCS0)_2TX	0.841	0.75	5.428m	300
802.11ac VHT80_Nss1,(MCS0)_2TX	0.903	0.44	5.429m	300
802.11ax HEW20_Nss1,(MCS0)_2TX	0.947	0.24	5.445m	300
802.11ax HEW40_Nss1,(MCS0)_2TX	0.936	0.29	5.445m	300
802.11ax HEW80_Nss1,(MCS0)_2TX	0.942	0.26	5.446m	300

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

Non-Beamforming_Radio2(Low Band)+Radio3(High Band)

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq$ 1/T
802.11a_Nss1,(6Mbps)_2TX	0.945	0.25	1.977m	1k
802.11n HT20_Nss1,(MCS0)_2TX	0.953	0.21	5.429m	300
802.11n HT40_Nss1,(MCS0)_2TX	0.901	0.45	5.429m	300
802.11ac VHT20_Nss1,(MCS0)_2TX	0.954	0.2	5.429m	300
802.11ac VHT40_Nss1,(MCS0)_2TX	0.917	0.38	5.429m	300
802.11ac VHT80_Nss1,(MCS0)_2TX	0.908	0.42	5.429m	300
802.11ac VHT160_Nss1,(MCS0)_2TX	0.863	0.64	5.429m	300
802.11ax HEW20_Nss1,(MCS0)_2TX	0.944	0.25	5.446m	300
802.11ax HEW40_Nss1,(MCS0)_2TX	0.938	0.28	5.452m	300
802.11ax HEW80_Nss1,(MCS0)_2TX	0.941	0.26	5.452m	300
802.11ax HEW160_Nss1,(MCS0)_2TX	0.918	0.37	5.452m	300

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

Non-Beamforming_Radio3

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq$ 1/T
802.11a_Nss1,(6Mbps)_2TX	0.949	0.23	1.977m	1k
802.11n HT20_Nss1,(MCS0)_2TX	0.886	0.53	5.429m	300
802.11n HT40_Nss1,(MCS0)_2TX	0.923	0.35	5.429m	300
802.11ac VHT20_Nss1,(MCS0)_2TX	0.84	0.76	5.429m	300
802.11ac VHT40_Nss1,(MCS0)_2TX	0.888	0.52	5.429m	300
802.11ac VHT80_Nss1,(MCS0)_2TX	0.915	0.39	5.429m	300
802.11ac VHT160_Nss1,(MCS0)_2TX	0.929	0.32	5.429m	300
802.11ax HEW20_Nss1,(MCS0)_2TX	0.944	0.25	5.446m	300
802.11ax HEW40_Nss1,(MCS0)_2TX	0.938	0.28	5.452m	300
802.11ax HEW80_Nss1,(MCS0)_2TX	0.941	0.26	5.452m	300
802.11ax HEW160_Nss1,(MCS0)_2TX	0.903	0.44	5.452m	300

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

Beamforming_Radio2

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq$ 1/T
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	0.947	0.24	5.445m	300
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	0.936	0.29	5.445m	300
802.11ax HEW80-BF_Nss1,(MCS0)_2TX	0.942	0.26	5.446m	300

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

Beamforming_Radio2(Low Band)+Radio3(High Band)

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq$ 1/T
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	0.944	0.25	5.446m	300
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	0.938	0.28	5.452m	300
802.11ax HEW80-BF_Nss1,(MCS0)_2TX	0.941	0.26	5.452m	300
802.11ax HEW160-BF_Nss1,(MCS0)_2TX	0.918	0.37	5.452m	300

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

Beamforming_Radio3

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq$ 1/T
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	0.944	0.25	5.446m	300
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	0.938	0.28	5.452m	300
802.11ax HEW80-BF_Nss1,(MCS0)_2TX	0.941	0.26	5.452m	300
802.11ax HEW160-BF_Nss1,(MCS0)_2TX	0.903	0.44	5.452m	300

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

1.1.5 Table for Multiple Listing

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

Model Name	Description
FortiAP 231Gxxxxxx, FORTIAP-231Gxxxxxx, FAP-231Gxxxxxx, (where "x" can be used as "A-Z", or "0-9", or "-", or blank for software changes or marketing purposes only)	All the models are identical, the difference model served as marketing strategy.

**1.1.6 Table for Permissive Change**

This product is an extension of original one reported under Sporton project number: FR262434AM

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

Modifications	Performance Checking
1. Adding DFS bands of operation (5250MHz~5350MHz and 5470MHz~5725MHz) by software. 2. Adding an absorber on QCN9072. 3. Changing radio 2(5GHz) capacitors (C466, C467, C492, C395, C396, C434) from bottom side to the top side, and capacitance from 47pF to 100nF.	Emission Bandwidth, Maximum Conducted Output Power, Peak Power Spectral Density and Unwanted Emissions above 1GHz were evaluated

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	TH01-HY	Johnny Yu	20.6~26.9°C / 50~60%	26/Aug/2022~19/Oct/2022
RF Conducted	TH07-HY	Yuna Lin	22.5~23.6°C / 51~62%	21/Mar/2023~20/Apr/2023
Radiated	03CH02-HY	Daniel Lin	22.4~26.1°C / 53~64%	10/Aug/2022~20/Sep/2022
Radiated	03CH02-HY	Daniel Lin	20.5~22.1°C / 56~61%	07/Mar/2023~19/Apr/2023
☐ 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
Emission Bandwidth	3 MHz	Confidence levels of 95%
Maximum Conducted Output Power	2 dB	Confidence levels of 95%
Power Spectral Density	2 dB	Confidence levels of 95%
Unwanted Emissions	4.8 dB	Confidence levels of 95%
Receiver Radiated Unwanted Emissions	4.8 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

Non-Beamforming_Radio2

Test Software Version	QDART-Connectivity1.0-00081
-----------------------	-----------------------------

Mode	Power Setting
802.11a_Nss1,(6Mbps)_2TX	-
5260MHz	19
5300MHz	19
5320MHz	19
5500MHz	19.5
5580MHz	17.5
5700MHz	19
5720MHz Straddle 5.47-5.725GHz	19
5720MHz Straddle 5.725-5.85GHz	19
802.11n HT20_Nss1,(MCS0)_2TX	-
5260MHz	20
5300MHz	20
5320MHz	20
5500MHz	20.5
5580MHz	19
5700MHz	20
5720MHz Straddle 5.47-5.725GHz	20.5
5720MHz Straddle 5.725-5.85GHz	20.5
802.11n HT40_Nss1,(MCS0)_2TX	-
5270MHz	21.5
5310MHz	20.5
5510MHz	21.5
5550MHz	22.5
5670MHz	21.5
5710MHz Straddle 5.47-5.725GHz	21.5
5710MHz Straddle 5.725-5.85GHz	21.5
802.11ac VHT20_Nss1,(MCS0)_2TX	-
5260MHz	20
5300MHz	20
5320MHz	20



Mode	Power Setting
5500MHz	20.5
5580MHz	19
5700MHz	20
5720MHz Straddle 5.47-5.725GHz	20.5
5720MHz Straddle 5.725-5.85GHz	20.5
802.11ac VHT40_Nss1,(MCS0)_2TX	-
5270MHz	21.5
5310MHz	20.5
5510MHz	21.5
5550MHz	22.5
5670MHz	21.5
5710MHz Straddle 5.47-5.725GHz	21.5
5710MHz Straddle 5.725-5.85GHz	21.5
802.11ac VHT80_Nss1,(MCS0)_2TX	-
5290MHz	19.5
5530MHz	19
5610MHz	19.5
5690MHz Straddle 5.47-5.725GHz	22
5690MHz Straddle 5.725-5.85GHz	22
802.11ax HEW20_Nss1,(MCS0)_2TX	-
5260MHz	20
5300MHz	20
5320MHz	20
5500MHz	20.5
5580MHz	19
5700MHz	20
5720MHz Straddle 5.47-5.725GHz	20.5
5720MHz Straddle 5.725-5.85GHz	20.5
802.11ax HEW40_Nss1,(MCS0)_2TX	-
5270MHz	21.5
5310MHz	20.5
5510MHz	21.5
5550MHz	22.5
5670MHz	21.5
5710MHz Straddle 5.47-5.725GHz	21.5
5710MHz Straddle 5.725-5.85GHz	21.5



Mode	Power Setting
802.11ax HEW80_Nss1,(MCS0)_2TX	-
5290MHz	19.5
5530MHz	19
5610MHz	19.5
5690MHz Straddle 5.47-5.725GHz	22
5690MHz Straddle 5.725-5.85GHz	22

**Non-Beamforming_Radio2(Low Band)+Radio3(High Band)**

Test Software Version	QDART-Connectivity1.0-00081
------------------------------	-----------------------------

Mode	Power Setting
802.11a_Nss1,(6Mbps)_2TX	-
5260MHz	19
5300MHz	19.5
5320MHz	18.5
5500MHz	18.5
5580MHz	19.5
5700MHz	18.5
5720MHz Straddle 5.47-5.725GHz	19
5720MHz Straddle 5.725-5.85GHz	19
802.11n HT20_Nss1,(MCS0)_2TX	-
5260MHz	20
5300MHz	20.5
5320MHz	20
5500MHz	18.5
5580MHz	20.5
5700MHz	19
5720MHz Straddle 5.47-5.725GHz	19
5720MHz Straddle 5.725-5.85GHz	19
802.11n HT40_Nss1,(MCS0)_2TX	-
5270MHz	22
5310MHz	21.5
5510MHz	17.5
5550MHz	22
5670MHz	19
5710MHz Straddle 5.47-5.725GHz	22
5710MHz Straddle 5.725-5.85GHz	22
802.11ac VHT20_Nss1,(MCS0)_2TX	-
5260MHz	20
5300MHz	20.5
5320MHz	20
5500MHz	18.5
5580MHz	20.5
5700MHz	19
5720MHz Straddle 5.47-5.725GHz	19



Mode	Power Setting
5720MHz Straddle 5.725-5.85GHz	19
802.11ac VHT40_Nss1,(MCS0)_2TX	-
5270MHz	22
5310MHz	21.5
5510MHz	17.5
5550MHz	22
5670MHz	19
5710MHz Straddle 5.47-5.725GHz	22
5710MHz Straddle 5.725-5.85GHz	22
802.11ac VHT80_Nss1,(MCS0)_2TX	-
5290MHz	20
5530MHz	17.5
5610MHz	19.5
5690MHz Straddle 5.47-5.725GHz	21.5
5690MHz Straddle 5.725-5.85GHz	21.5
802.11ac VHT160_Nss1,(MCS0)_2TX	-
5570MHz	18.5
802.11ax HEW20_Nss1,(MCS0)_2TX	-
5260MHz	20
5300MHz	20.5
5320MHz	20
5500MHz	18.5
5580MHz	20.5
5700MHz	19.5
5720MHz Straddle 5.47-5.725GHz	19
5720MHz Straddle 5.725-5.85GHz	19
802.11ax HEW40_Nss1,(MCS0)_2TX	-
5270MHz	22
5310MHz	21.5
5510MHz	17.5
5550MHz	22
5670MHz	19
5710MHz Straddle 5.47-5.725GHz	22
5710MHz Straddle 5.725-5.85GHz	22
802.11ax HEW80_Nss1,(MCS0)_2TX	-
5290MHz	20



Mode	Power Setting
5530MHz	17.5
5610MHz	19.5
5690MHz Straddle 5.47-5.725GHz	21.5
5690MHz Straddle 5.725-5.85GHz	21.5
802.11ax HEW160_Nss1,(MCS0)_2TX	-
5570MHz	18.5

**Non-Beamforming_Radio3**

Test Software Version	QDART-Connectivity1.0-00081
------------------------------	-----------------------------

Mode	Power Setting
802.11a_Nss1,(6Mbps)_2TX	-
5260MHz	18
5300MHz	18
5320MHz	18
5500MHz	18
5580MHz	17
5700MHz	17
5720MHz Straddle 5.47-5.725GHz	17.5
5720MHz Straddle 5.725-5.85GHz	17.5
802.11n HT20_Nss1,(MCS0)_2TX	-
5260MHz	18.5
5300MHz	18.5
5320MHz	17.5
5500MHz	18.5
5580MHz	18.5
5700MHz	18.5
5720MHz Straddle 5.47-5.725GHz	18.5
5720MHz Straddle 5.725-5.85GHz	18.5
802.11n HT40_Nss1,(MCS0)_2TX	-
5270MHz	21
5310MHz	18.5
5510MHz	19.5
5550MHz	21
5670MHz	20
5710MHz Straddle 5.47-5.725GHz	21
5710MHz Straddle 5.725-5.85GHz	21
802.11ac VHT20_Nss1,(MCS0)_2TX	-
5260MHz	18.5
5300MHz	18.5
5320MHz	17.5
5500MHz	18.5
5580MHz	18.5
5700MHz	18.5
5720MHz Straddle 5.47-5.725GHz	18.5



Mode	Power Setting
5720MHz Straddle 5.725-5.85GHz	18.5
802.11ac VHT40_Nss1,(MCS0)_2TX	-
5270MHz	21
5310MHz	18.5
5510MHz	19.5
5550MHz	21
5670MHz	20
5710MHz Straddle 5.47-5.725GHz	21
5710MHz Straddle 5.725-5.85GHz	21
802.11ac VHT80_Nss1,(MCS0)_2TX	-
5290MHz	18
5530MHz	18.5
5610MHz	21
5690MHz Straddle 5.47-5.725GHz	21
5690MHz Straddle 5.725-5.85GHz	21
802.11ac VHT160_Nss1,(MCS0)_2TX	-
5250MHz Straddle 5.15-5.25GHz	17
5250MHz Straddle 5.25-5.35GHz	17
5570MHz	18.5
802.11ax HEW20_Nss1,(MCS0)_2TX	-
5260MHz	18.5
5300MHz	18.5
5320MHz	17.5
5500MHz	18.5
5580MHz	18.5
5700MHz	18.5
5720MHz Straddle 5.47-5.725GHz	18.5
5720MHz Straddle 5.725-5.85GHz	18.5
802.11ax HEW40_Nss1,(MCS0)_2TX	-
5270MHz	21
5310MHz	18.5
5510MHz	19.5
5550MHz	21
5670MHz	20
5710MHz Straddle 5.47-5.725GHz	21
5710MHz Straddle 5.725-5.85GHz	21



Mode	Power Setting
802.11ax HEW80_Nss1,(MCS0)_2TX	-
5290MHz	18
5530MHz	18.5
5610MHz	21
5690MHz Straddle 5.47-5.725GHz	21
5690MHz Straddle 5.725-5.85GHz	21
802.11ax HEW160_Nss1,(MCS0)_2TX	-
5250MHz Straddle 5.15-5.25GHz	17
5250MHz Straddle 5.25-5.35GHz	17
5570MHz	18.5

**Beamforming_Radio2**

Test Software Version	DOS V6.1
------------------------------	----------

Mode	Power Setting
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	-
5260MHz	19.5
5300MHz	19.5
5320MHz	19.5
5500MHz	19.5
5580MHz	18.5
5700MHz	20
5720MHz Straddle 5.47-5.725GHz	20.5
5720MHz Straddle 5.725-5.85GHz	20.5
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	-
5270MHz	19
5310MHz	19.5
5510MHz	19.5
5550MHz	20
5670MHz	21.5
5710MHz Straddle 5.47-5.725GHz	20.5
5710MHz Straddle 5.725-5.85GHz	20.5
802.11ax HEW80-BF_Nss1,(MCS0)_2TX	-
5290MHz	19
5530MHz	19
5610MHz	19.5
5690MHz Straddle 5.47-5.725GHz	20.5
5690MHz Straddle 5.725-5.85GHz	20.5

**Beamforming_Radio2(Low Band)+Radio3(High Band)**

Test Software Version	DOS V6.1
------------------------------	----------

Mode	Power Setting
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	-
5260MHz	20
5300MHz	20.5
5320MHz	20
5500MHz	18.5
5580MHz	18.5
5700MHz	19.5
5720MHz Straddle 5.47-5.725GHz	19
5720MHz Straddle 5.725-5.85GHz	19
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	-
5270MHz	19.5
5310MHz	19.5
5510MHz	17.5
5550MHz	19.5
5670MHz	19
5710MHz Straddle 5.47-5.725GHz	18.5
5710MHz Straddle 5.725-5.85GHz	18.5
802.11ax HEW80-BF_Nss1,(MCS0)_2TX	-
5290MHz	20
5530MHz	17.5
5610MHz	19
5690MHz Straddle 5.47-5.725GHz	18.5
5690MHz Straddle 5.725-5.85GHz	18.5
802.11ax HEW160-BF_Nss1,(MCS0)_2TX	-
5570MHz	18.5

**Beamforming_Radio3**

Test Software Version	DOS V6.1
------------------------------	----------

Mode	Power Setting
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	-
5260MHz	18
5300MHz	18
5320MHz	17.5
5500MHz	18.5
5580MHz	17.5
5700MHz	18.5
5720MHz Straddle 5.47-5.725GHz	18.5
5720MHz Straddle 5.725-5.85GHz	18.5
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	-
5270MHz	18.5
5310MHz	18.5
5510MHz	18.5
5550MHz	19
5670MHz	18.5
5710MHz Straddle 5.47-5.725GHz	18.5
5710MHz Straddle 5.725-5.85GHz	18.5
802.11ax HEW80-BF_Nss1,(MCS0)_2TX	-
5290MHz	18
5530MHz	18.5
5610MHz	19
5690MHz Straddle 5.47-5.725GHz	18.5
5690MHz Straddle 5.725-5.85GHz	18.5
802.11ax HEW160-BF_Nss1,(MCS0)_2TX	-
5250MHz Straddle 5.15-5.25GHz	17
5250MHz Straddle 5.25-5.35GHz	17
5570MHz	18.5

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		
1	Adapter Mode		
Operating Mode > 1GHz	CTX		
Orthogonal Planes of EUT	X Plane	Y Plane	Z Plane
			
Worst Planes of EUT	V		

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 1:2.4G + Radio 2:5G + Radio 3:5G + Bluetooth
3	Radio 1:2.4G + Radio 2:5G + Radio 3:6G + Bluetooth
4	Radio 1:2.4G + Radio 2:5G + Radio 3:2.4G + Zigbee
5	Radio 1:2.4G + Radio 2:5G + Radio 3:5G + Zigbee
6	Radio 1:2.4G + Radio 2:5G + Radio 3:6G + Zigbee
7	Radio 1:2.4G + (Radio 2:5G(Low Band) + Radio 3:5G(High Band)) + Bluetooth
8	Radio 1:2.4G + (Radio 2:5G(Low Band) + Radio 3:5G(High Band)) + Zigbee
Refer to Sporton Test Report No.: FA262434-01 for Co-location RF Exposure Evaluation.	

2.3 Accessories

Accessories				
Bracket ceiling mount 1	Brand Name	DRAGONJET CORPORATION	Model Name	CLIP CEILING 9/16 LFP
Bracket ceiling mount 2	Brand Name	DRAGONJET CORPORATION	Model Name	CLIP CEILING 15/16 LFP

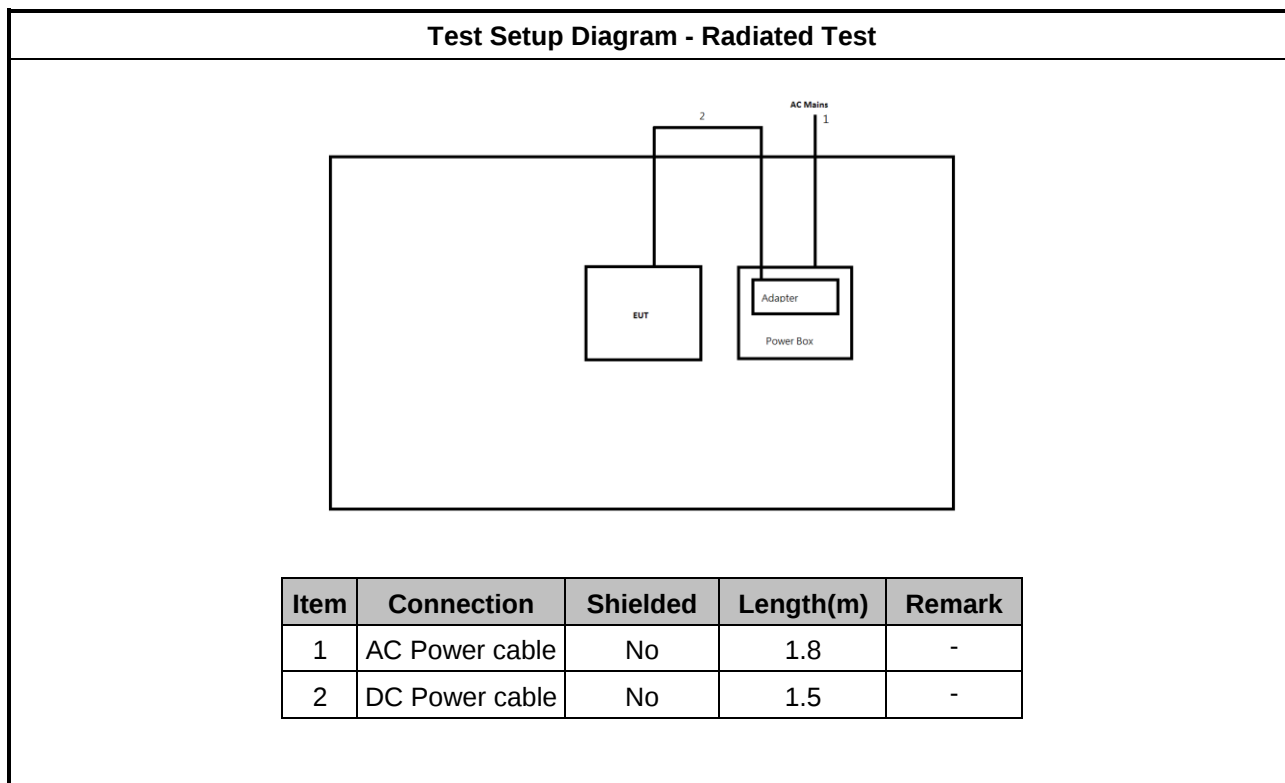
Reminder: Regarding to more detail and other information, please refer to user manual.

2.4 Support Equipment

Support Equipment – Conducted					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Notebook	DELL	E5410	-	-
2	Adapter for NB	DELL	HA65NM130	-	-
3	AC Adapter	ASIAN POWER DEVICES INC.	WA-48A12R	-	Provided by Customer
4	PoE Adapter	SENAO	EPA5006GPR	-	Provided by Customer
5	Client For BF	Fortinet	FAP-231G	-	Provided by Customer

Support Equipment – Radiated					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	AC Power cable	Power sync	PW-GPC180-3	-	-
2	AC Adapter	ASIAN POWER DEVICES INC.	WA-48A12R	-	Provided by Customer

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.

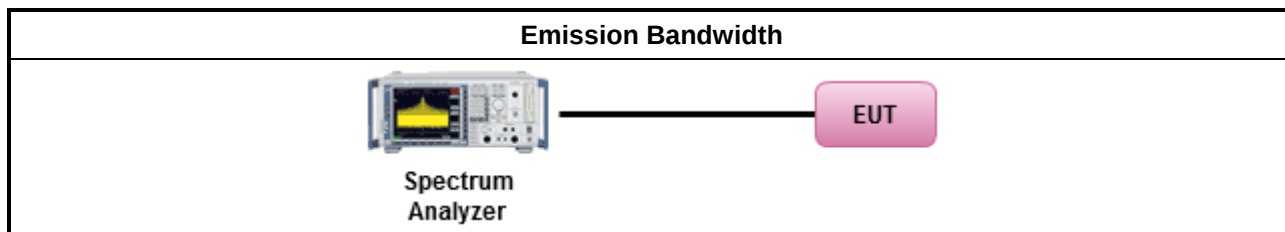
3.1.2 Measuring Instruments

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 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$.	
☒ For the 5.47-5.725 GHz band, the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$.	
☒ For the 5.725-5.85 GHz band:	
	- Point-to-multipoint systems (P2M): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$. - Point-to-point systems (P2P): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W.
P_{Out} = maximum conducted output power in dBm, G_{TX} = the maximum transmitting antenna directional gain in dBi.	

3.2.2 Measuring Instruments

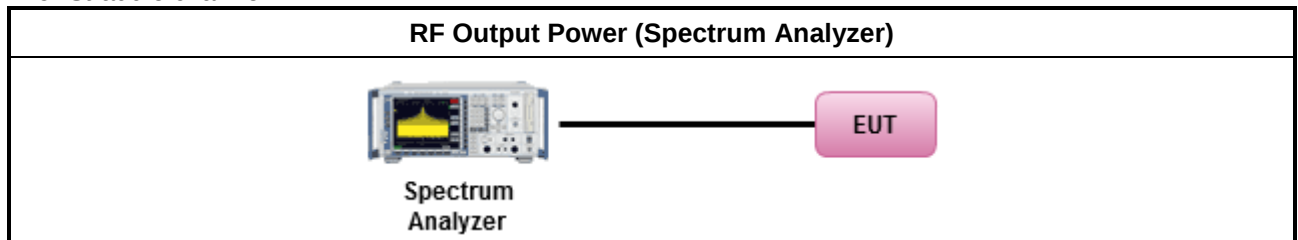
Refer a test equipment and calibration data table in this test report.

3.2.3 Test Procedures

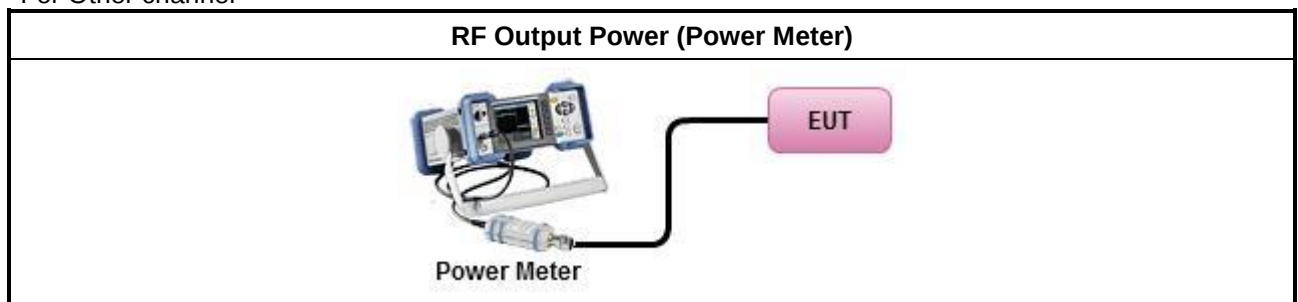
Test Method	
Maximum Conducted Output Power	
	Duty cycle $\geq 98\%$
☐	Refer as KDB 789033, clause E Method SA-2 (spectral trace averaging).
	Duty cycle $< 98\%$
☒	Refer as KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
	Wideband RF power meter and average over on/off periods 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

For Straddle channel



For Other channel



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

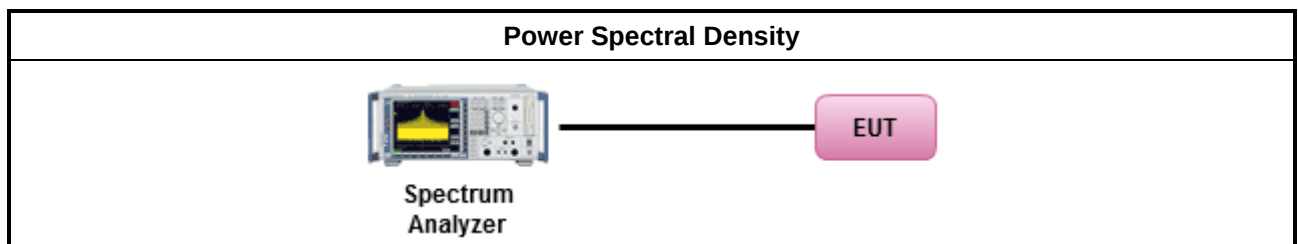
3.3.2 Measuring Instruments

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, F5) 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

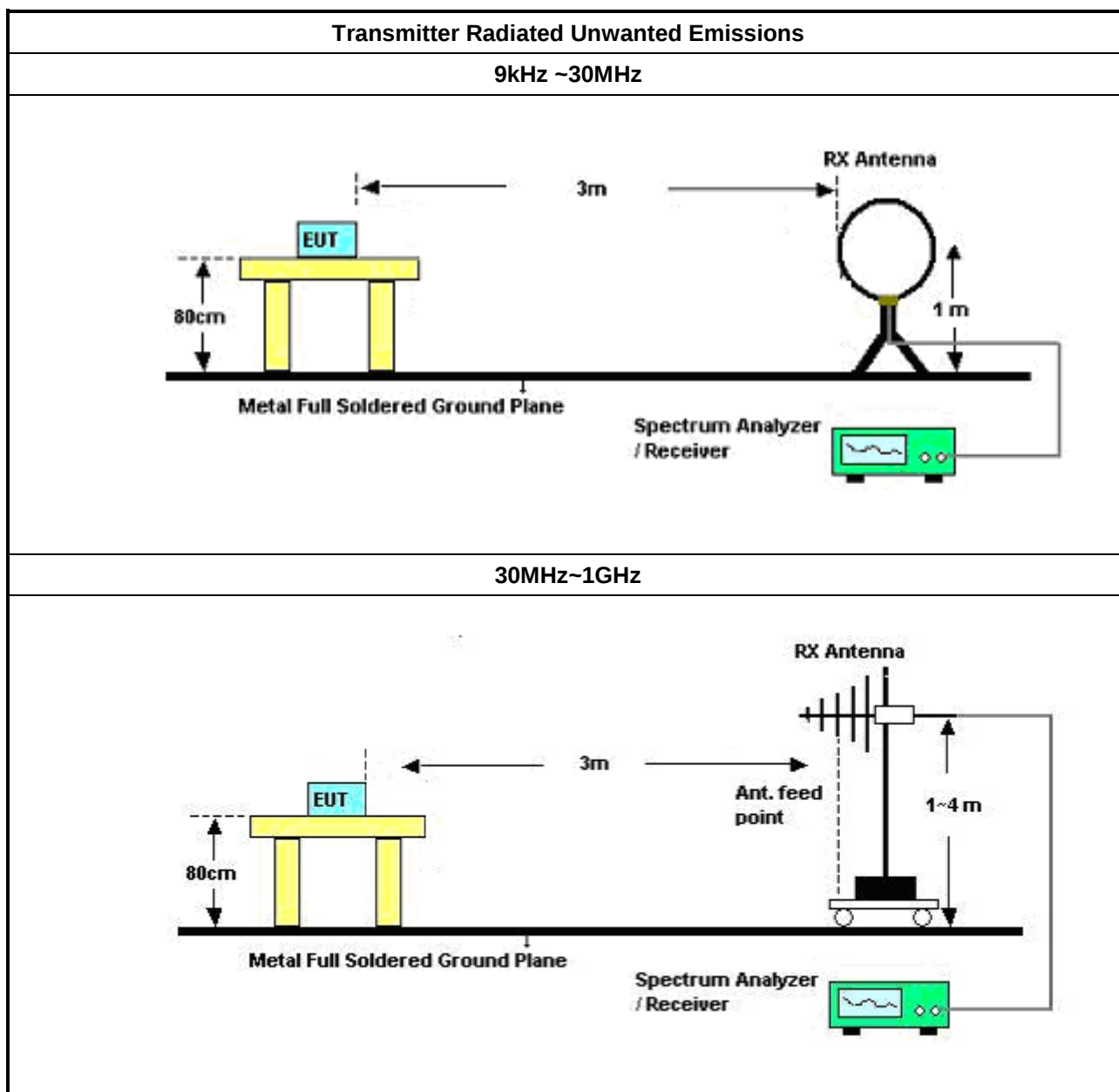
Test Method	
Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 m for frequencies above 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.

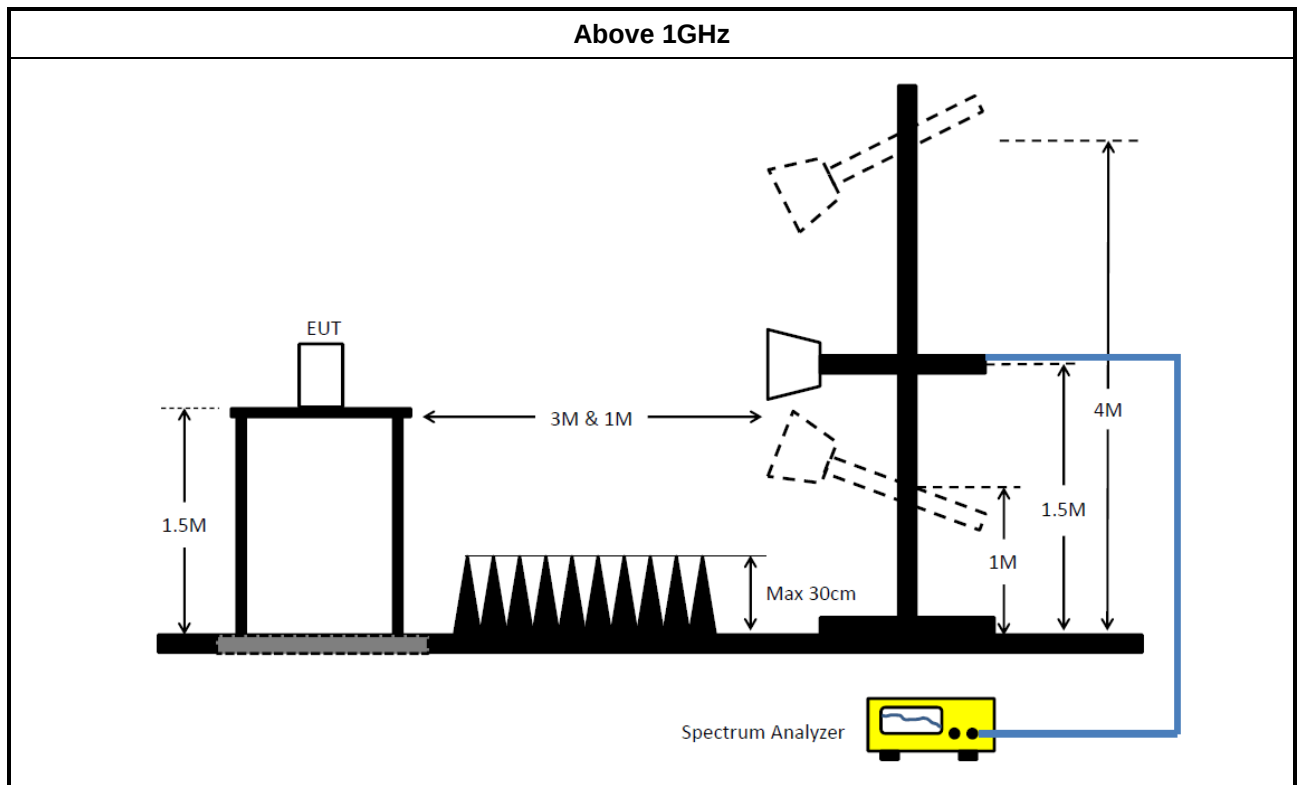
3.4.4 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Raw(Read Level) + AF(Antenna Factor) + CL(Cable Loss) - PA(Preamp 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	101515	10Hz~40GHz	14/Feb/2023	13/Feb/2024
SMB100A Signal Generator	R&S	SMB100A	181147	100kHz~40GHz	21/Oct/2022	20/Oct/2023
Pulse Sensor	Anritsu	MA2411B	1339407	300MHz~40GHz	14/Dec/2022	13/Dec/2023
Power Meter	Anritsu	ML2495A	1517010	300MHz~40GHz	14/Dec/2022	13/Dec/2023
SENSE-15407_NII	Sporton	V5.10.8.7.1	N/A	N/A	N/A	N/A
Signal Analyzer	R&S	FSV 40	101013	10Hz~40GHz	01/Apr/2022	31/Mar/2023
SMR 40 Signal Generator	R&S	SMR 40	100116	10 MHz ~10GHz	11/Jan/2022	10/Jan/2023
Pulse Sensor	Anritsu	MA2411B	0917017	300MHz~40GHz	21/Feb/2022	20/Feb/2023
Power Meter	Anritsu	ML2495A	0949003	300MHz~40GHz	21/Feb/2022	20/Feb/2023
SENSE-15407_NII	Sporton	V5.10.8.3	N/A	N/A	N/A	N/A

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	30/Jul/2022	29/Jul/2023
Signal Analyzer	R&S	FSP40	100593	9kHz~40GHz	08/Apr/2022	07/Apr/2023
Signal Analyzer	ROHDE & SCHWARZ	FSV3044	101410	10Hz~44GHz	02/Nov/2022	01/Nov/2023
Microwave Preamplifier	Agilent	8449B	3008A02373	1GHz~26.5GHz	03/Nov/2021	02/Nov/2022
Microwave Preamplifier	Agilent	8449B	3008A02373	1GHz~26.5GHz	02/Nov/2022	01/Nov/2023
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	02744	1GHz ~18GHz	09/Aug/2022	08/Aug/2023
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	02268	1GHz ~18GHz	14/Sep/2021	13/Sep/2022
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	02268	1GHz ~18GHz	27/Sep/2022	26/Sep/2023
RF Cable-R03m	HUBER+SUHNER	SUCOFLEX104	805193/4+805192/4	1GHz~40GHz	01/Apr/2022	31/Mar/2023
RF Cable-R03m	HUBER+SUHNER	SUCOFLEX104	03CH02-cable-01	1GHz~40GHz	10/Feb/2023	09/Feb/2024
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170221	15GHz~40GHz	18/Mar/2022	17/Mar/2023
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	01248	18GHz~40GHz	22/Aug/2022	21/Aug/2023
Microwave Preamplifier	EMC INSTRUMENTS	EM18G40G	060604	18GHz~40GHz	08/Mar/2022	07/Mar/2023
Amplifier	EM	EM18G40GA	060874	18GHz ~40GHz	23/Aug/2022	22/Aug/2023
SENSE-15407_NII	Sporton	V5.10.8.5	N/A	N/A	N/A	N/A
SENSE-15407_NII	Sporton	V5.11	N/A	N/A	N/A	N/A

**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	20.73M	16.388M	16M4D1D	20.52M	16.363M
802.11n HT20_Nss1,(MCS0)_2TX	22.02M	17.602M	17M7D1D	21.06M	17.572M
802.11n HT40_Nss1,(MCS0)_2TX	41.22M	36.144M	36M2D1D	40.26M	36.085M
802.11ac VHT20_Nss1,(MCS0)_2TX	21.42M	17.602M	17M7D1D	21.12M	17.543M
802.11ac VHT40_Nss1,(MCS0)_2TX	41.1M	36.144M	36M2D1D	40.38M	36.085M
802.11ac VHT80_Nss1,(MCS0)_2TX	82.32M	75.344M	75M4D1D	81.84M	75.344M
802.11ax HEW20_Nss1,(MCS0)_2TX	21.66M	18.924M	19M0D1D	21.27M	18.895M
802.11ax HEW40_Nss1,(MCS0)_2TX	41.34M	37.731M	37M8D1D	40.98M	37.731M
802.11ax HEW80_Nss1,(MCS0)_2TX	82.8M	77.225M	77M3D1D	81.96M	77.107M
5.47-5.725GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	20.79M	16.388M	16M4D1D	15.285M	13.178M
802.11n HT20_Nss1,(MCS0)_2TX	21.72M	17.602M	17M7D1D	15.75M	13.793M
802.11n HT40_Nss1,(MCS0)_2TX	41.4M	36.144M	36M2D1D	35.315M	32.884M
802.11ac VHT20_Nss1,(MCS0)_2TX	21.51M	17.602M	17M7D1D	15.435M	13.748M
802.11ac VHT40_Nss1,(MCS0)_2TX	41.34M	36.144M	36M2D1D	35.315M	32.849M
802.11ac VHT80_Nss1,(MCS0)_2TX	82.32M	75.344M	75M4D1D	75.975M	72.039M
802.11ax HEW20_Nss1,(MCS0)_2TX	21.69M	18.924M	19M0D1D	15.66M	14.423M
802.11ax HEW40_Nss1,(MCS0)_2TX	41.58M	37.79M	37M8D1D	35.315M	33.688M
802.11ax HEW80_Nss1,(MCS0)_2TX	82.8M	77.107M	77M2D1D	75.975M	72.939M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	3.16M	3.598M	3M60D1D	3.14M	3.538M
802.11n HT20_Nss1,(MCS0)_2TX	3.78M	4.098M	4M10D1D	3.74M	4.078M
802.11n HT40_Nss1,(MCS0)_2TX	3.16M	3.758M	3M76D1D	3.16M	3.738M
802.11ac VHT20_Nss1,(MCS0)_2TX	3.78M	4.138M	4M14D1D	3.78M	4.118M
802.11ac VHT40_Nss1,(MCS0)_2TX	3.16M	3.778M	3M78D1D	3.14M	3.718M
802.11ac VHT80_Nss1,(MCS0)_2TX	3.18M	4.418M	4M42D1D	3.16M	4.058M
802.11ax HEW20_Nss1,(MCS0)_2TX	4.44M	4.598M	4M60D1D	4.28M	4.578M
802.11ax HEW40_Nss1,(MCS0)_2TX	4.12M	4.178M	4M18D1D	4.04M	4.178M
802.11ax HEW80_Nss1,(MCS0)_2TX	4.02M	4.318M	4M32D1D	3.98M	4.238M

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	20.52M	16.363M	20.61M	16.363M
5300MHz	Pass	Inf	20.58M	16.388M	20.67M	16.363M
5320MHz	Pass	Inf	20.58M	16.363M	20.73M	16.388M
5500MHz	Pass	Inf	20.4M	16.363M	20.61M	16.388M
5580MHz	Pass	Inf	20.79M	16.363M	20.64M	16.363M
5700MHz	Pass	Inf	20.58M	16.363M	20.49M	16.363M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.315M	13.178M	15.285M	13.178M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.14M	3.538M	3.16M	3.598M
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5260MHz	Pass	Inf	21.39M	17.572M	21.3M	17.602M
5300MHz	Pass	Inf	21.81M	17.572M	21.54M	17.602M
5320MHz	Pass	Inf	21.06M	17.602M	22.02M	17.572M
5500MHz	Pass	Inf	21.27M	17.572M	21.21M	17.543M
5580MHz	Pass	Inf	21.24M	17.572M	21.72M	17.572M
5700MHz	Pass	Inf	21.48M	17.572M	21.39M	17.602M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.9M	13.793M	15.75M	13.823M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.78M	4.078M	3.74M	4.098M
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5270MHz	Pass	Inf	40.92M	36.085M	40.8M	36.144M
5310MHz	Pass	Inf	41.22M	36.144M	40.26M	36.085M
5510MHz	Pass	Inf	40.74M	36.144M	40.32M	36.085M
5550MHz	Pass	Inf	41.4M	36.085M	40.92M	36.085M
5670MHz	Pass	Inf	40.32M	36.085M	40.8M	36.144M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	35.63M	32.884M	35.315M	32.884M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.16M	3.758M	3.16M	3.738M
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5260MHz	Pass	Inf	21.36M	17.572M	21.42M	17.543M
5300MHz	Pass	Inf	21.24M	17.572M	21.21M	17.572M
5320MHz	Pass	Inf	21.12M	17.602M	21.42M	17.572M
5500MHz	Pass	Inf	21.09M	17.572M	21.09M	17.572M
5580MHz	Pass	Inf	21.51M	17.543M	21.33M	17.572M
5700MHz	Pass	Inf	21.12M	17.572M	21.33M	17.602M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.435M	13.748M	15.72M	13.748M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.78M	4.138M	3.78M	4.118M
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5270MHz	Pass	Inf	40.86M	36.085M	40.38M	36.085M
5310MHz	Pass	Inf	41.1M	36.144M	40.56M	36.085M
5510MHz	Pass	Inf	40.98M	36.144M	41.1M	36.085M
5550MHz	Pass	Inf	40.62M	36.085M	41.34M	36.085M
5670MHz	Pass	Inf	40.8M	36.026M	40.56M	36.085M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	35.42M	32.849M	35.315M	32.919M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.16M	3.718M	3.14M	3.778M
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5290MHz	Pass	Inf	82.32M	75.344M	81.84M	75.344M
5530MHz	Pass	Inf	81.84M	75.226M	82.32M	75.226M
5610MHz	Pass	Inf	81.96M	75.226M	82.08M	75.344M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	76.05M	72.039M	75.975M	72.189M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.18M	4.058M	3.16M	4.418M
802.11ax HEW20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5260MHz	Pass	Inf	21.63M	18.924M	21.42M	18.895M
5300MHz	Pass	Inf	21.66M	18.924M	21.27M	18.895M
5320MHz	Pass	Inf	21.39M	18.895M	21.45M	18.895M
5500MHz	Pass	Inf	21.69M	18.924M	21.57M	18.924M
5580MHz	Pass	Inf	21.42M	18.924M	21.6M	18.924M



EBW_Non-Beamforming_Radio2

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)
5700MHz	Pass	Inf	21.57M	18.924M	21.18M	18.865M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.66M	14.453M	15.735M	14.423M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	4.28M	4.578M	4.44M	4.598M
802.11ax HEW40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5270MHz	Pass	Inf	41.34M	37.731M	41.22M	37.731M
5310MHz	Pass	Inf	40.98M	37.731M	41.1M	37.731M
5510MHz	Pass	Inf	40.74M	37.731M	41.46M	37.79M
5550MHz	Pass	Inf	41.28M	37.731M	41.58M	37.672M
5670MHz	Pass	Inf	41.34M	37.79M	40.92M	37.731M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	35.42M	33.688M	35.315M	33.688M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	4.04M	4.178M	4.12M	4.178M
802.11ax HEW80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5290MHz	Pass	Inf	81.96M	77.225M	82.8M	77.107M
5530MHz	Pass	Inf	81.96M	77.107M	82.8M	77.107M
5610MHz	Pass	Inf	82.2M	77.107M	82.44M	77.107M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	75.975M	72.939M	76.2M	73.013M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	4.02M	4.318M	3.98M	4.238M

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

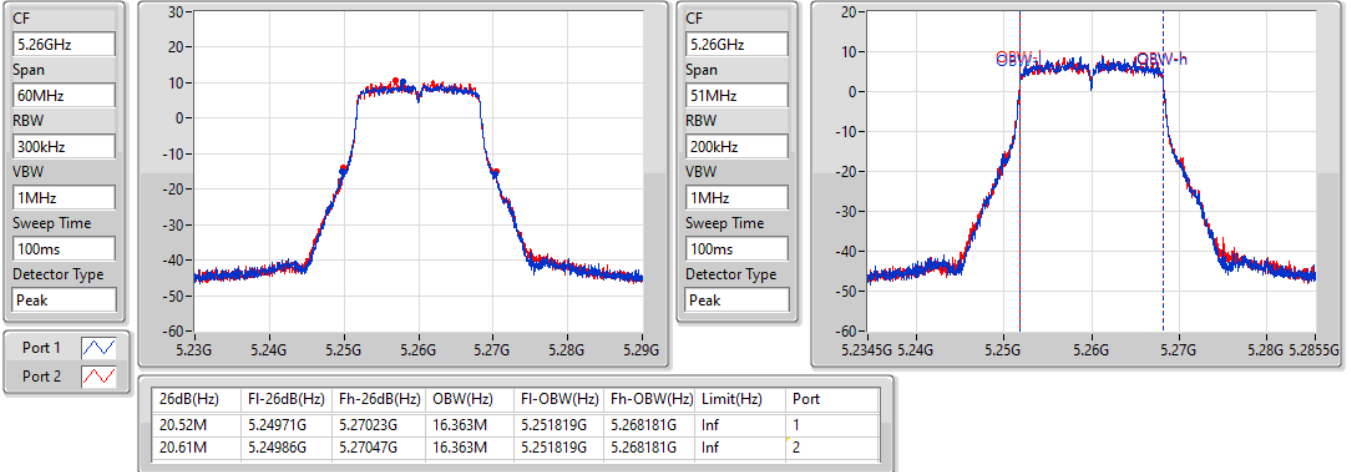
Port X-OBW = Port X 99% occupied bandwidth

5.25-5.35GHz_802.11a_Nss1,(6Mbps)_2TX

EBW

5260MHz

14/09/2022

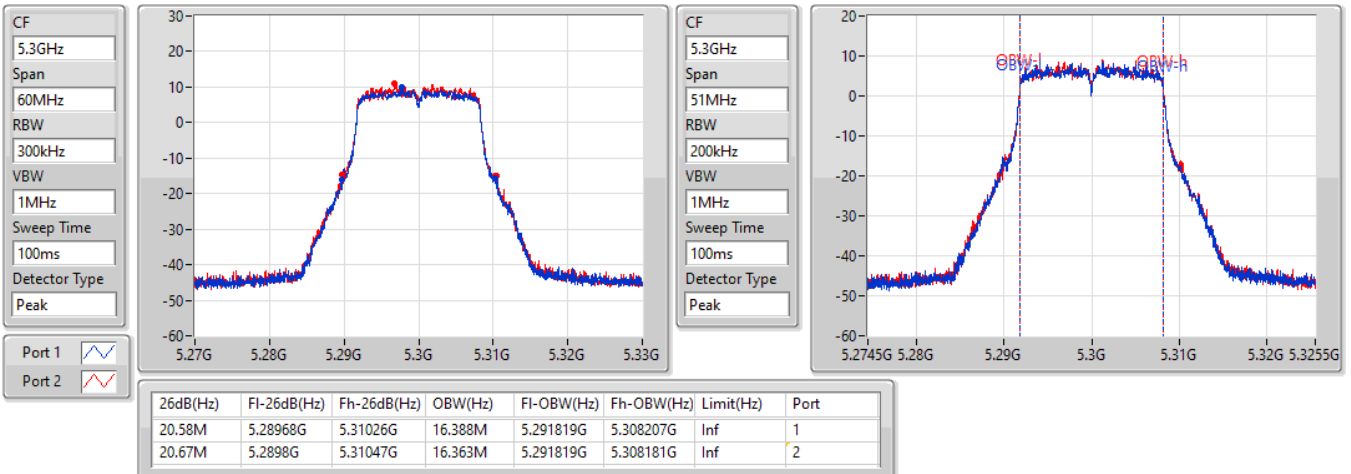


5.25-5.35GHz_802.11a_Nss1,(6Mbps)_2TX

EBW

5300MHz

14/09/2022

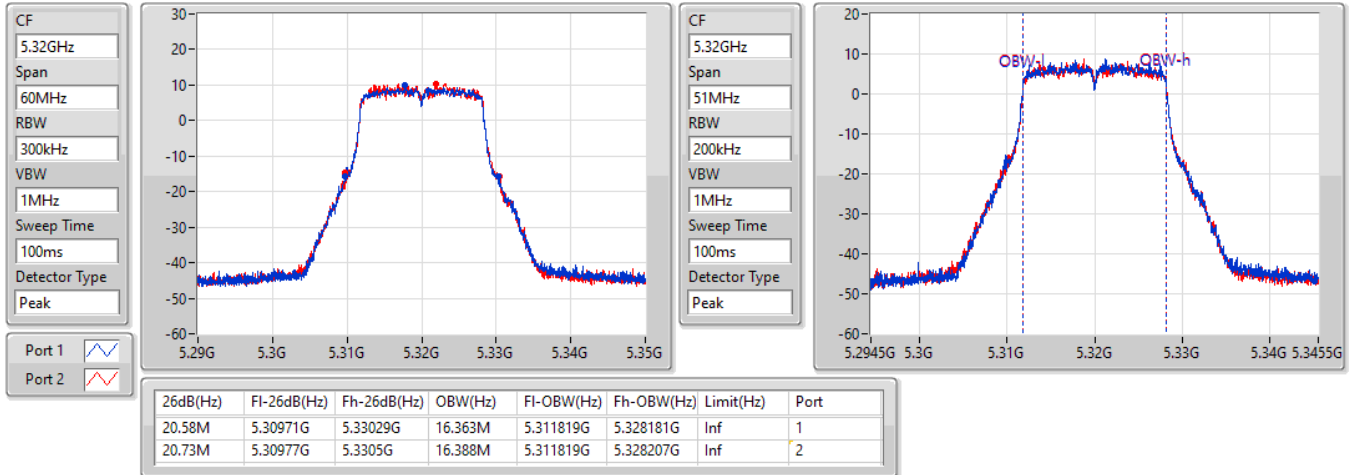


5.25-5.35GHz_802.11a_Nss1,(6Mbps)_2TX

EBW

5320MHz

14/09/2022

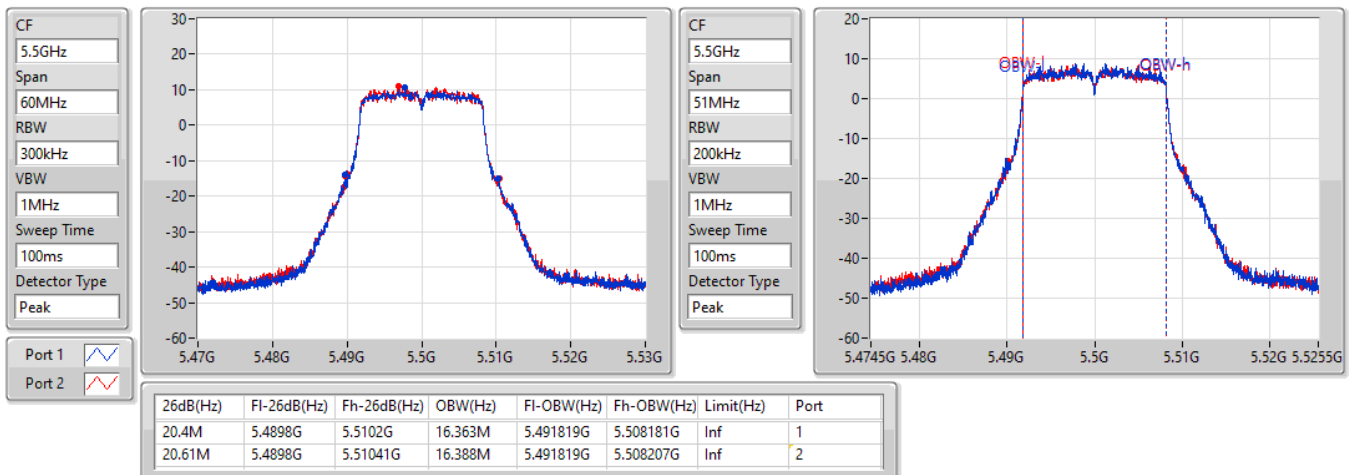


5.47-5.725GHz_802.11a_Nss1,(6Mbps)_2TX

EBW

5500MHz

24/03/2023

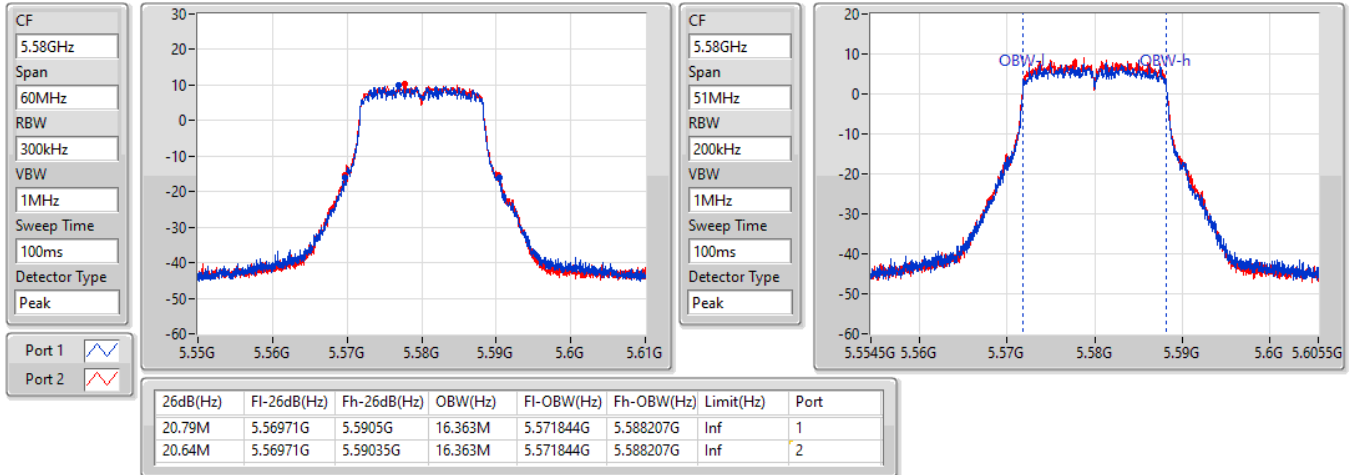


5.47-5.725GHz_802.11a_Nss1,(6Mbps)_2TX

EBW

5580MHz

20/03/2023

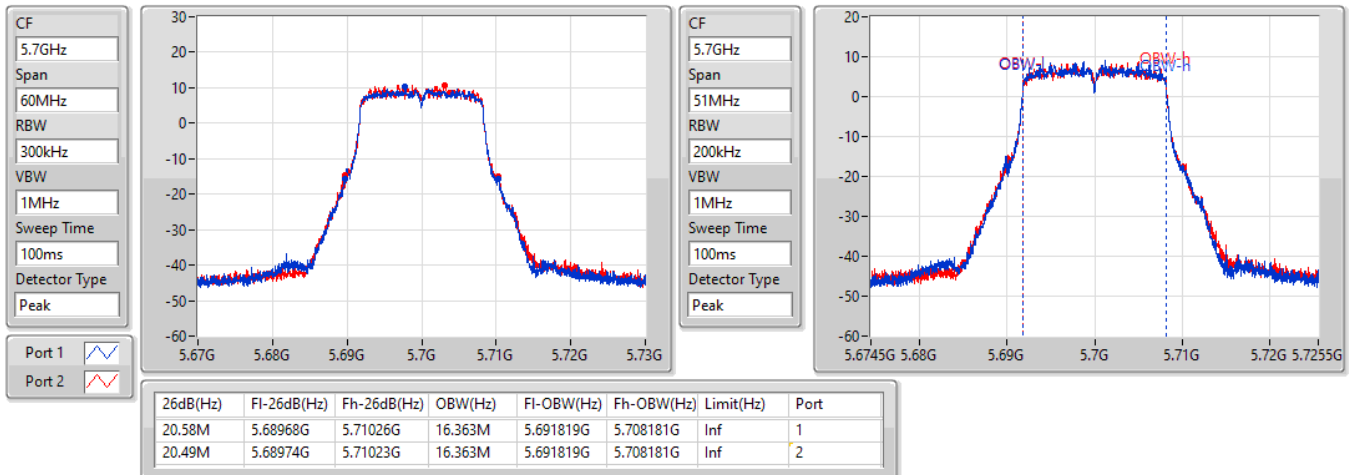


5.47-5.725GHz_802.11a_Nss1,(6Mbps)_2TX

EBW

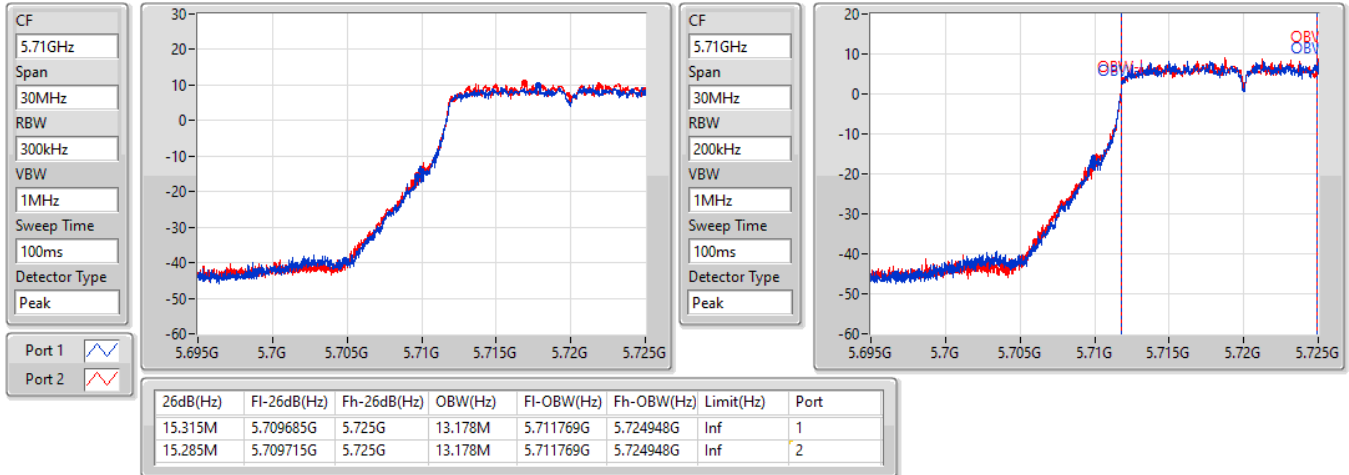
5700MHz

14/09/2022

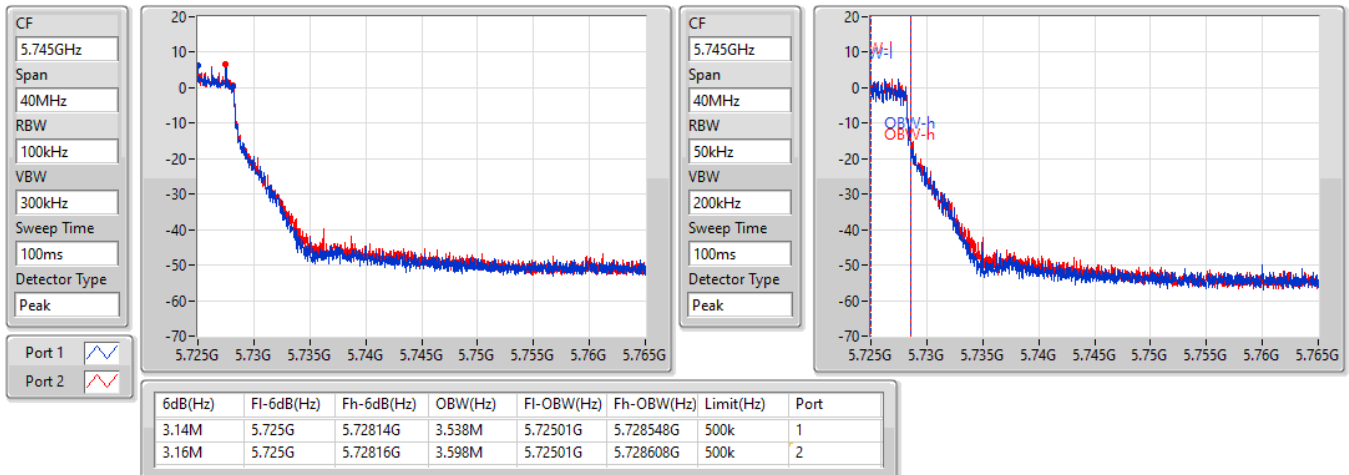


5.47-5.725GHz_802.11a_Nss1,(6Mbps)_2TX
EBW
5720MHz Straddle 5.47-5.725GHz

14/09/2022


5.725-5.85GHz_802.11a_Nss1,(6Mbps)_2TX
EBW
5720MHz Straddle 5.725-5.85GHz

14/09/2022

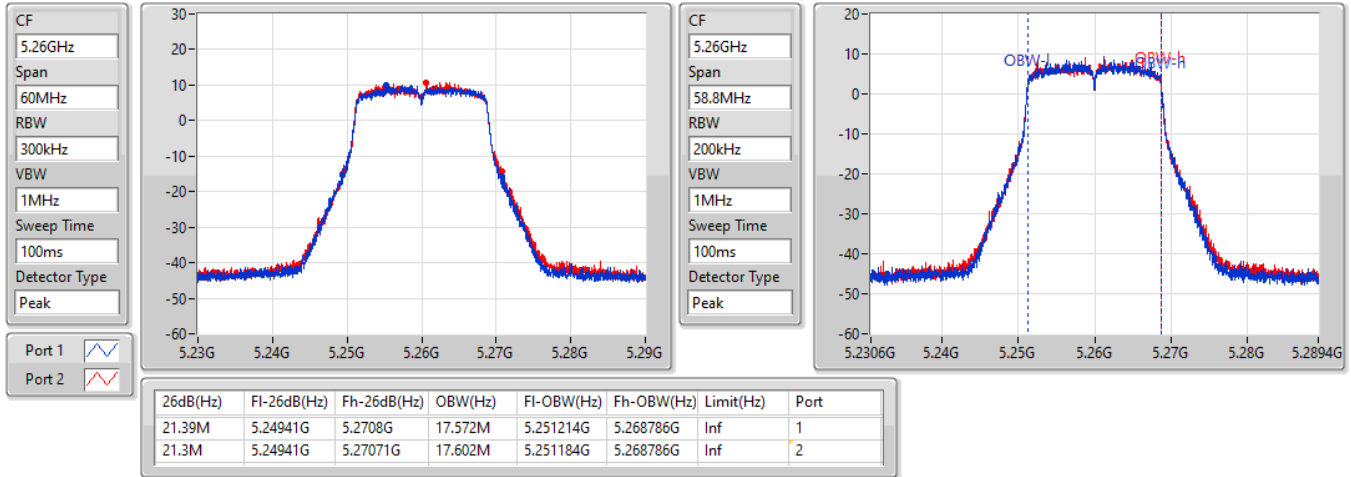


5.25-5.35GHz_802.11n HT20_Nss1,(MCS0)_2TX

EBW

5260MHz

16/09/2022

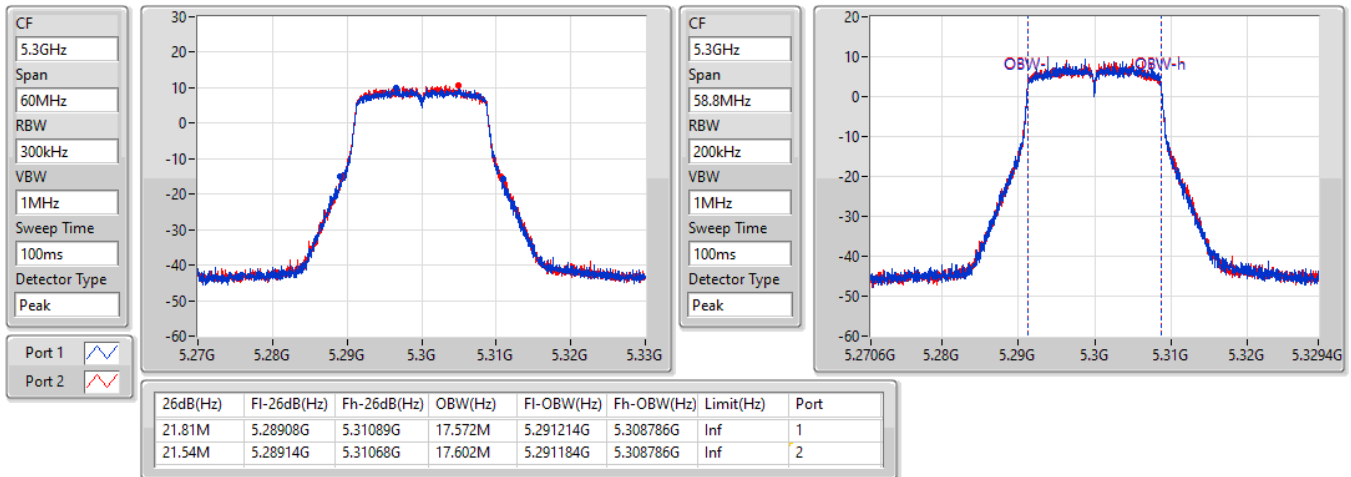


5.25-5.35GHz_802.11n HT20_Nss1,(MCS0)_2TX

EBW

5300MHz

16/09/2022

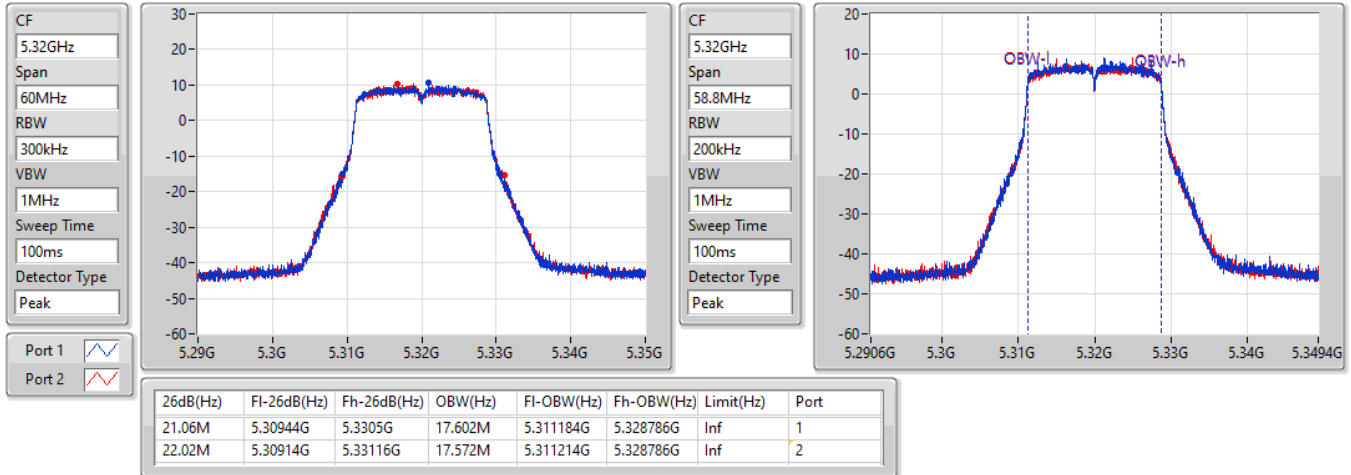


5.25-5.35GHz_802.11n HT20_Nss1,(MCS0)_2TX

EBW

5320MHz

16/09/2022

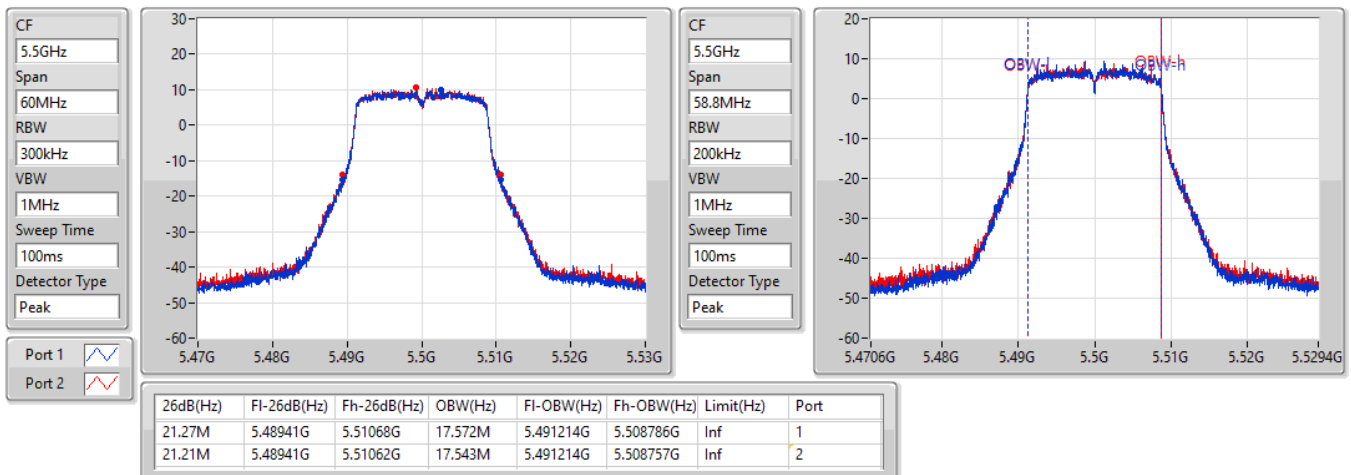


5.47-5.725GHz_802.11n HT20_Nss1,(MCS0)_2TX

EBW

5500MHz

24/03/2023

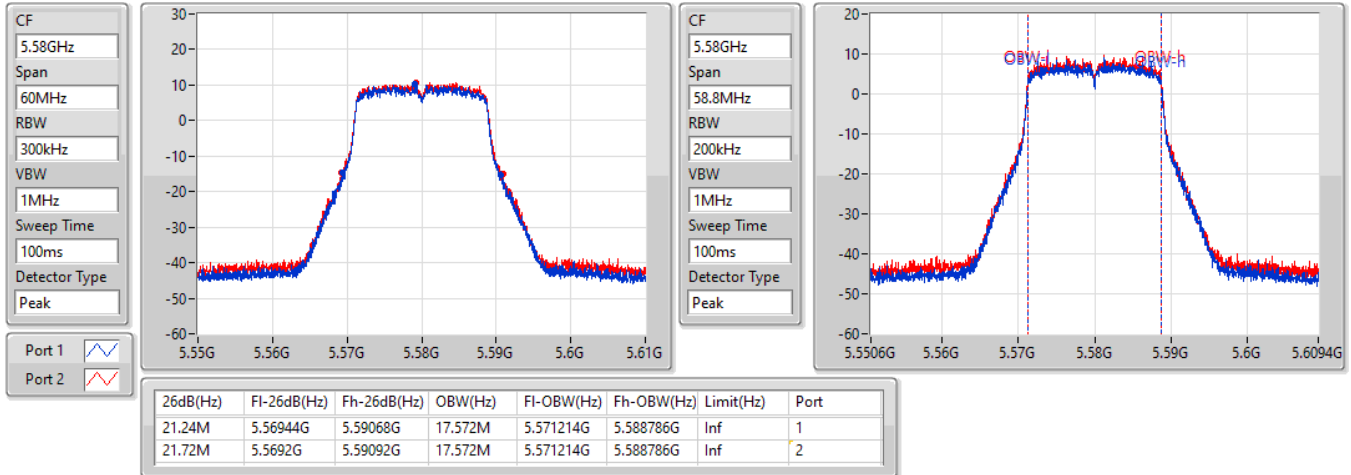


5.47-5.725GHz_802.11n HT20_Nss1,(MCS0)_2TX

EBW

5580MHz

20/03/2023

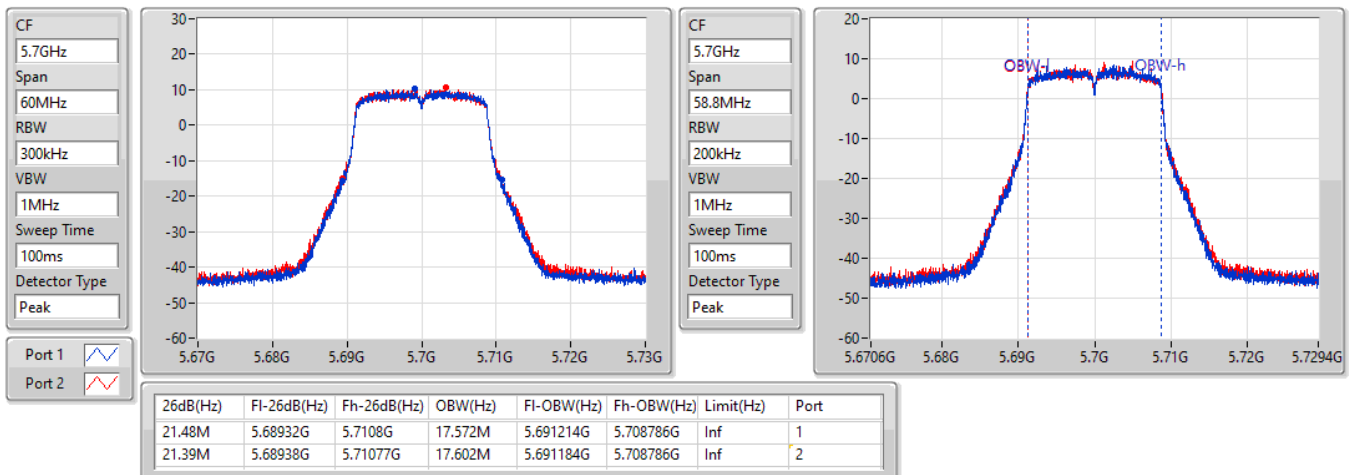


5.47-5.725GHz_802.11n HT20_Nss1,(MCS0)_2TX

EBW

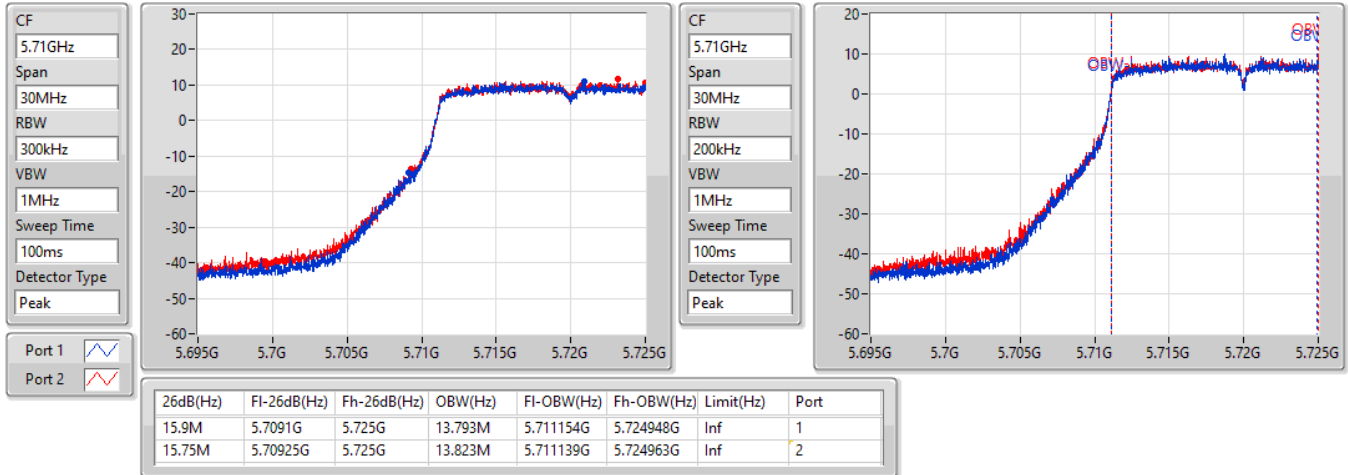
5700MHz

16/09/2022

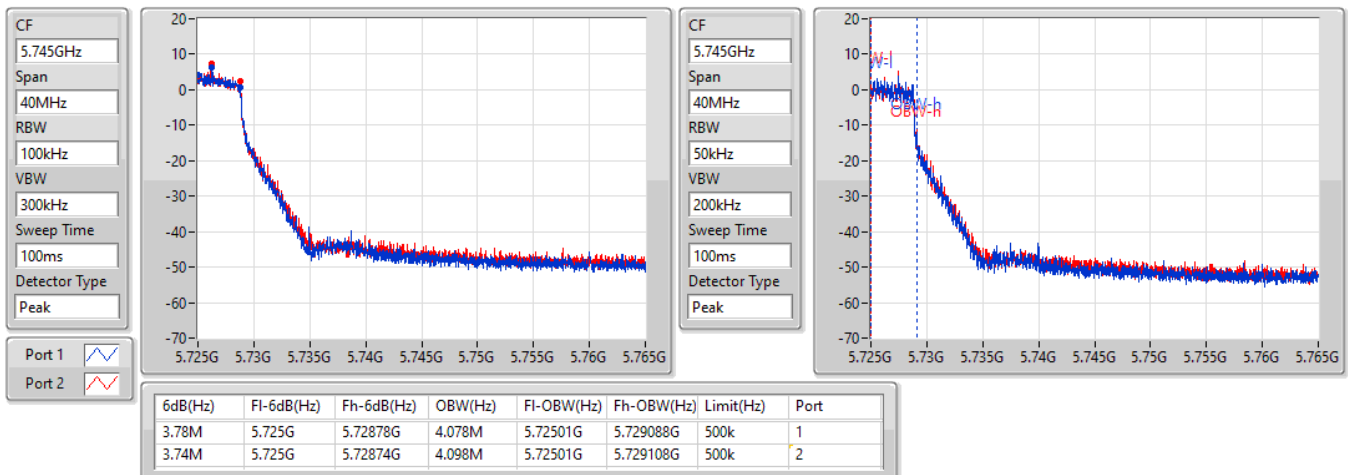


5.47-5.725GHz_802.11n HT20_Nss1,(MCS0)_2TX
EBW
5720MHz Straddle 5.47-5.725GHz

16/09/2022

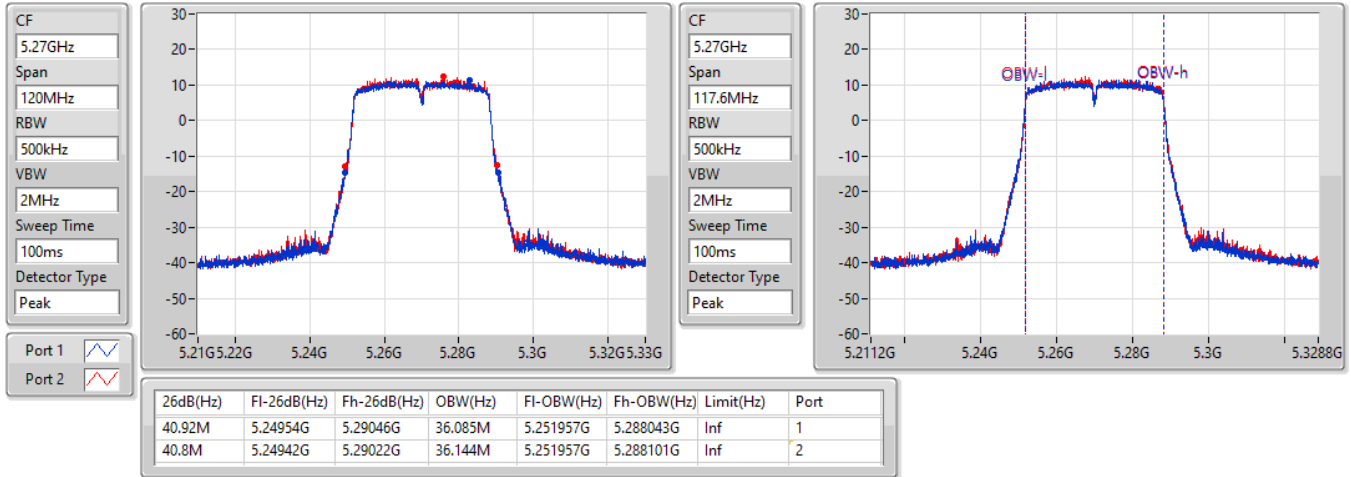

5.725-5.85GHz_802.11n HT20_Nss1,(MCS0)_2TX
EBW
5720MHz Straddle 5.725-5.85GHz

16/09/2022

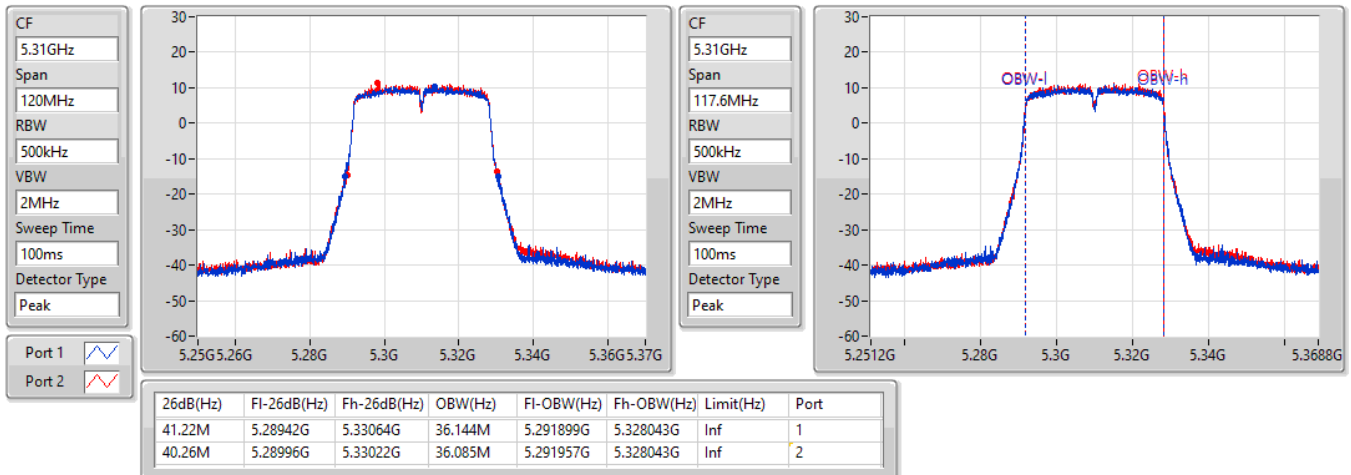


5.25-5.35GHz_802.11n HT40_Nss1,(MCS0)_2TX
EBW
5270MHz

16/09/2022

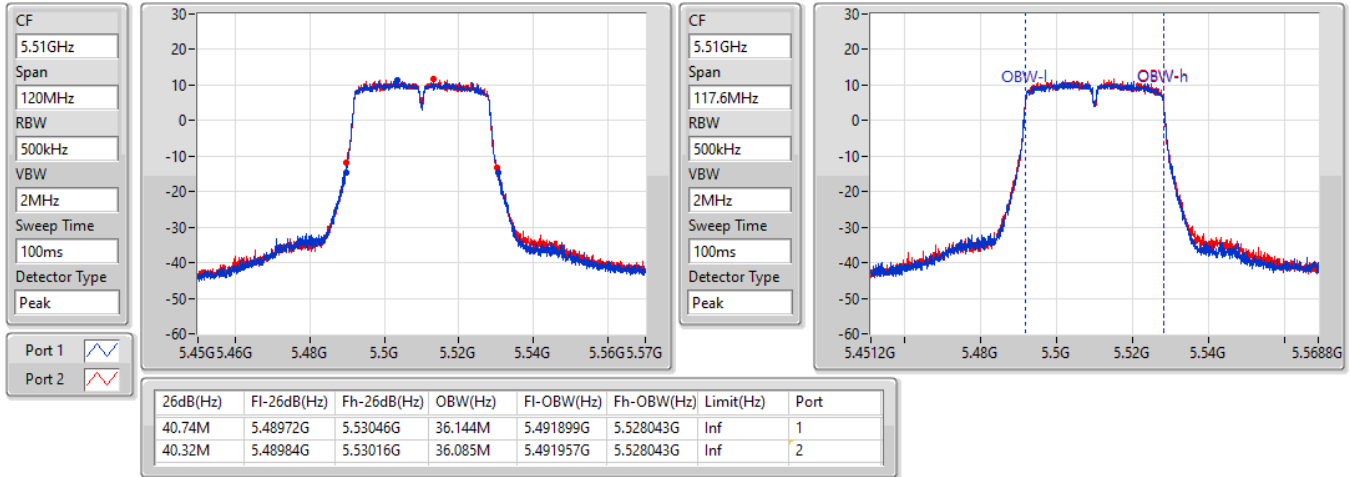

5.25-5.35GHz_802.11n HT40_Nss1,(MCS0)_2TX
EBW
5310MHz

16/09/2022

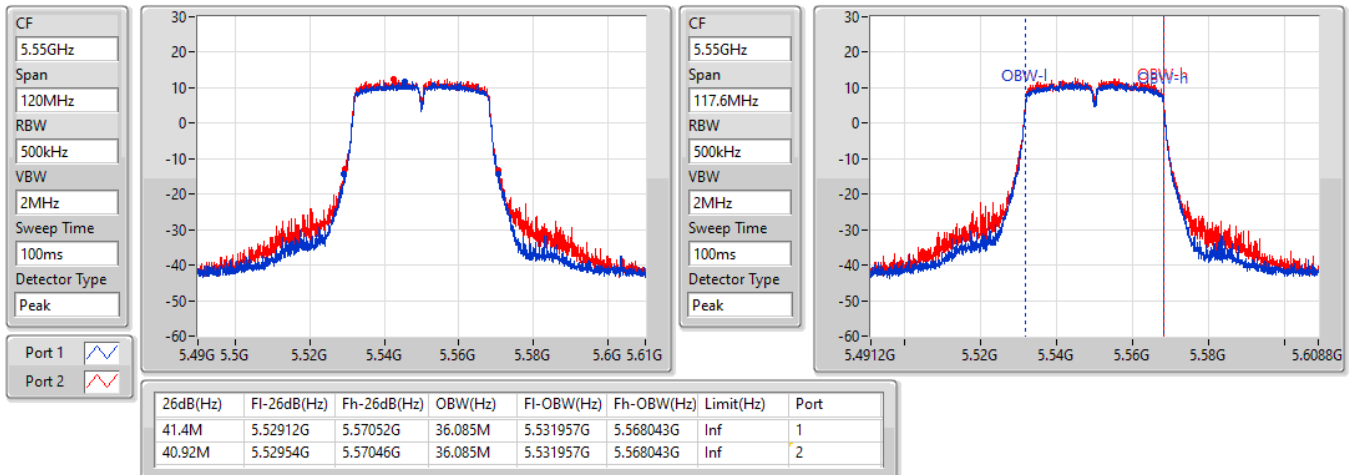


5.47-5.725GHz_802.11n HT40_Nss1,(MCS0)_2TX
EBW
5510MHz

24/03/2023


5.47-5.725GHz_802.11n HT40_Nss1,(MCS0)_2TX
EBW
5550MHz

27/03/2023

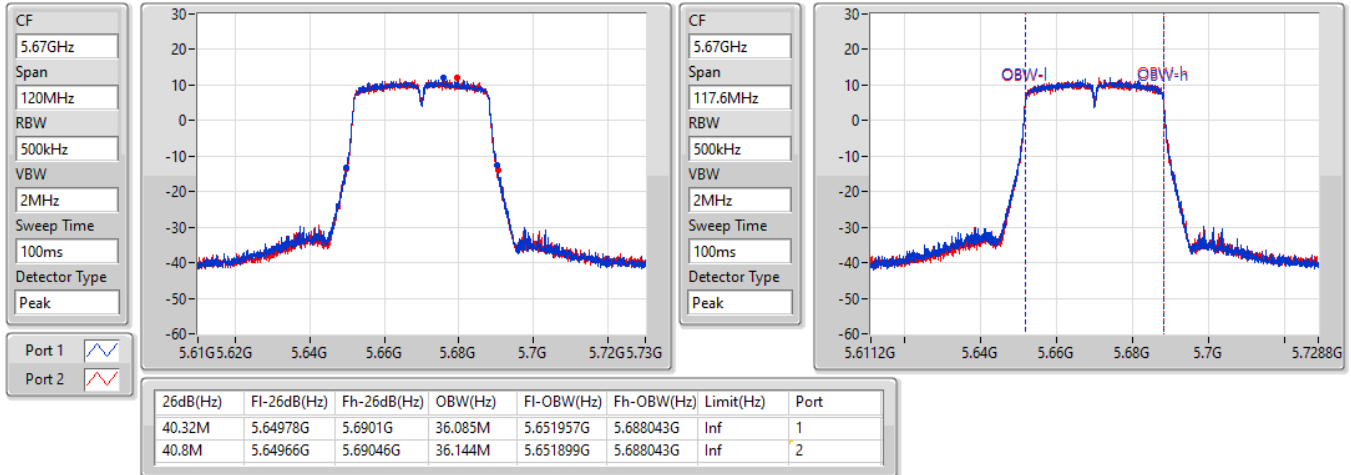


5.47-5.725GHz_802.11n HT40_Nss1,(MCS0)_2TX

EBW

5670MHz

16/09/2022

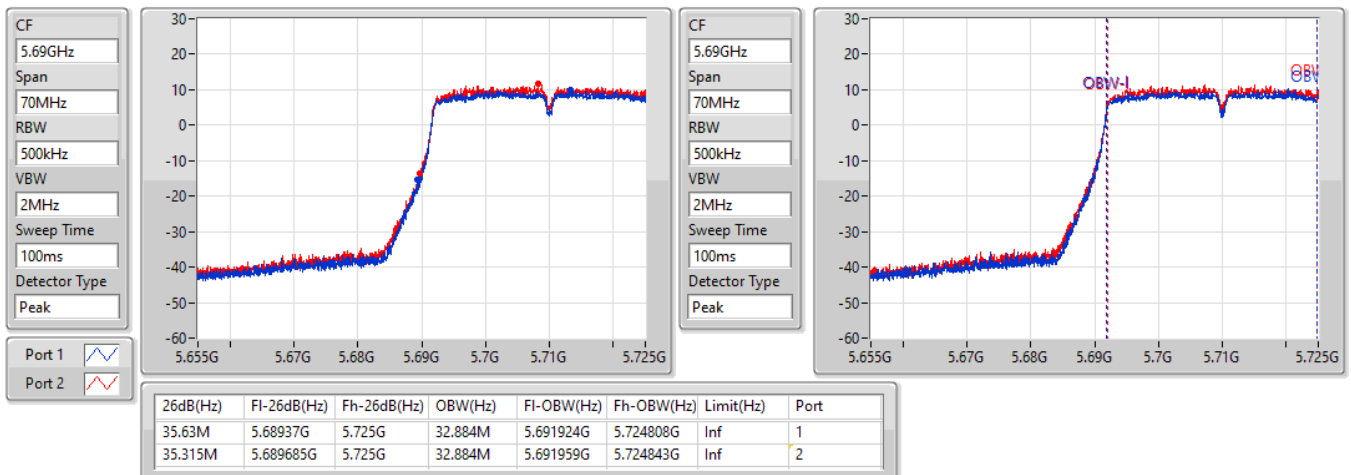


5.47-5.725GHz_802.11n HT40_Nss1,(MCS0)_2TX

EBW

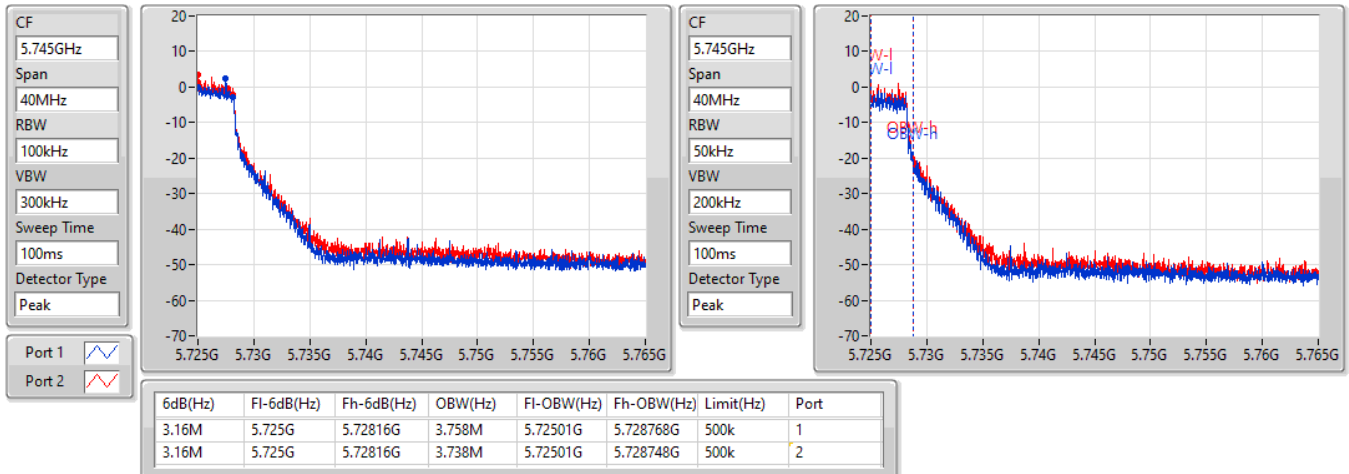
5710MHz Straddle 5.47-5.725GHz

21/09/2022

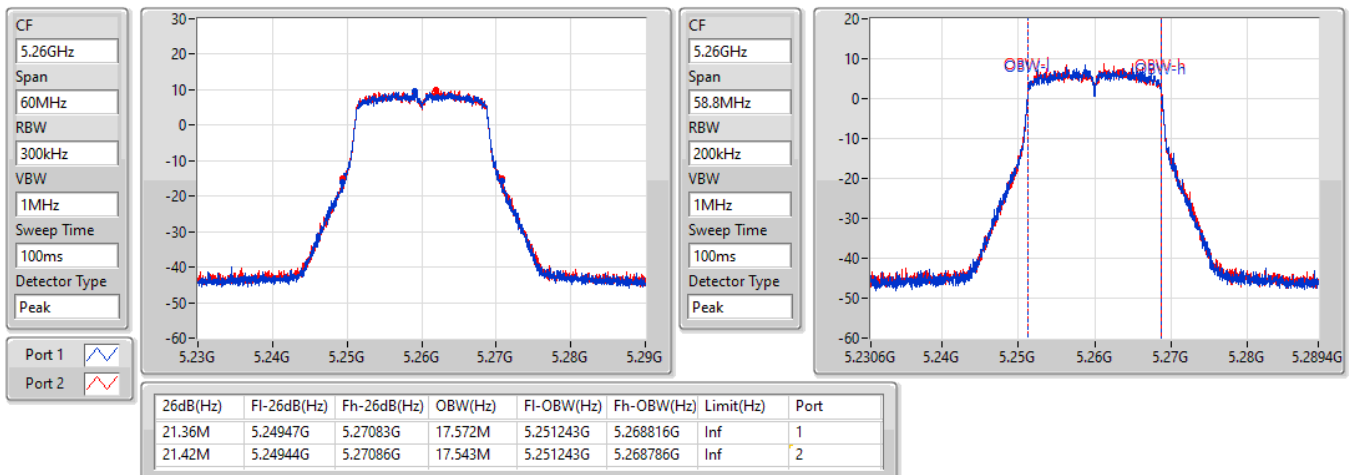


5.725-5.85GHz_802.11n HT40_Nss1,(MCS0)_2TX
EBW
5710MHz Straddle 5.725-5.85GHz

21/09/2022


5.25-5.35GHz_802.11ac VHT20_Nss1,(MCS0)_2TX
EBW
5260MHz

16/09/2022

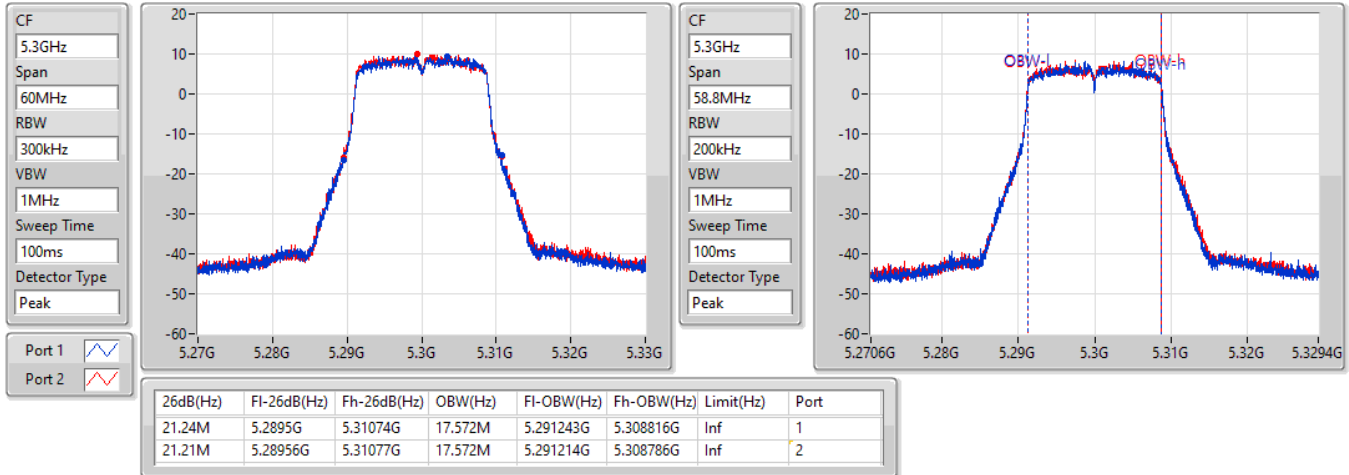


5.25-5.35GHz_802.11ac VHT20_Nss1,(MCS0)_2TX

EBW

5300MHz

16/09/2022

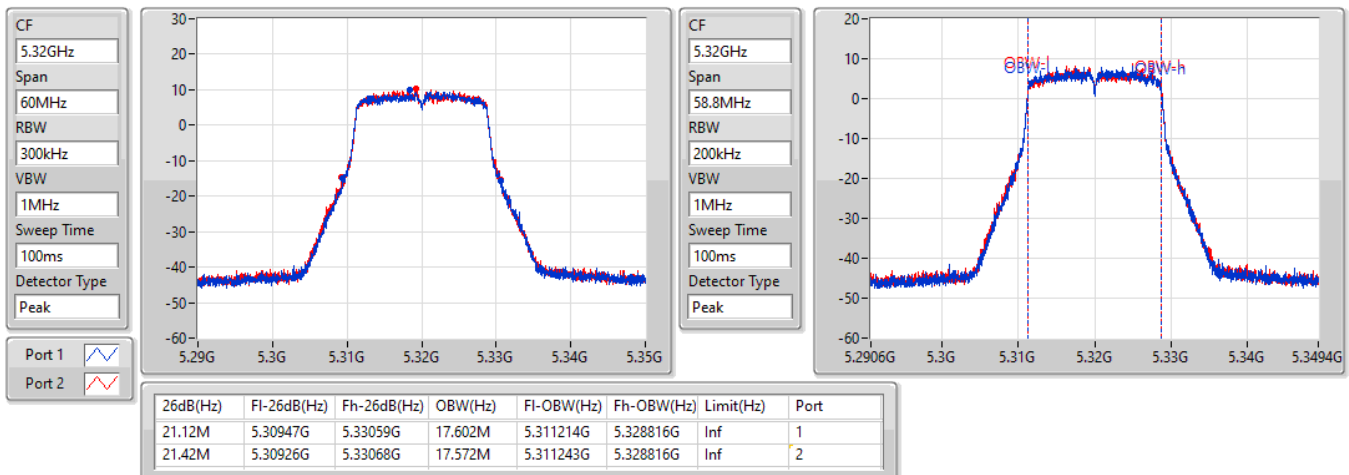


5.25-5.35GHz_802.11ac VHT20_Nss1,(MCS0)_2TX

EBW

5320MHz

16/09/2022

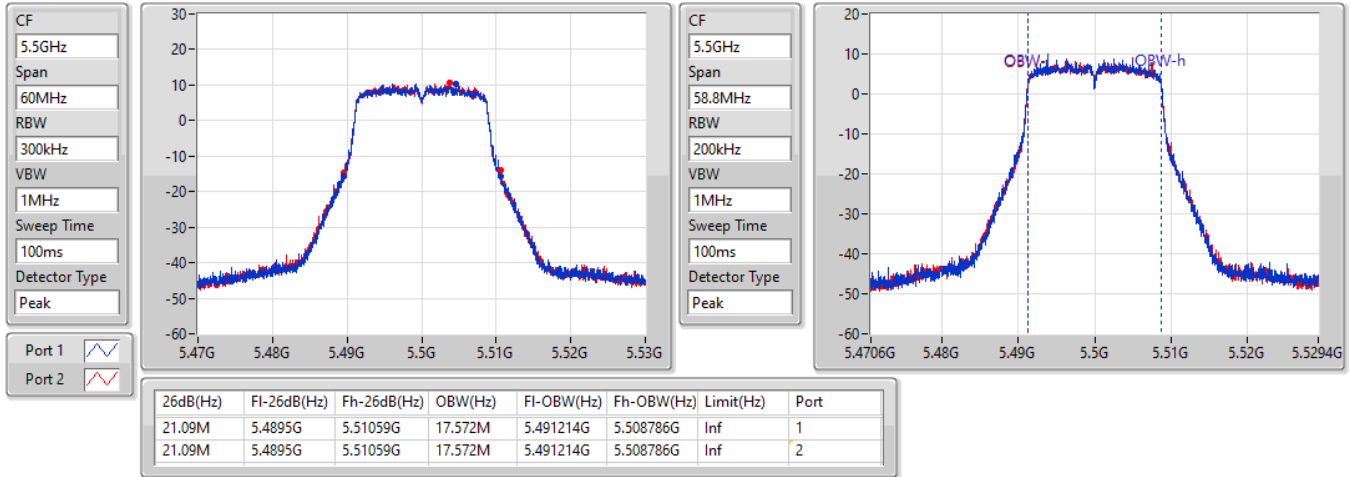


5.47-5.725GHz_802.11ac VHT20_Nss1,(MCS0)_2TX

EBW

5500MHz

24/03/2023

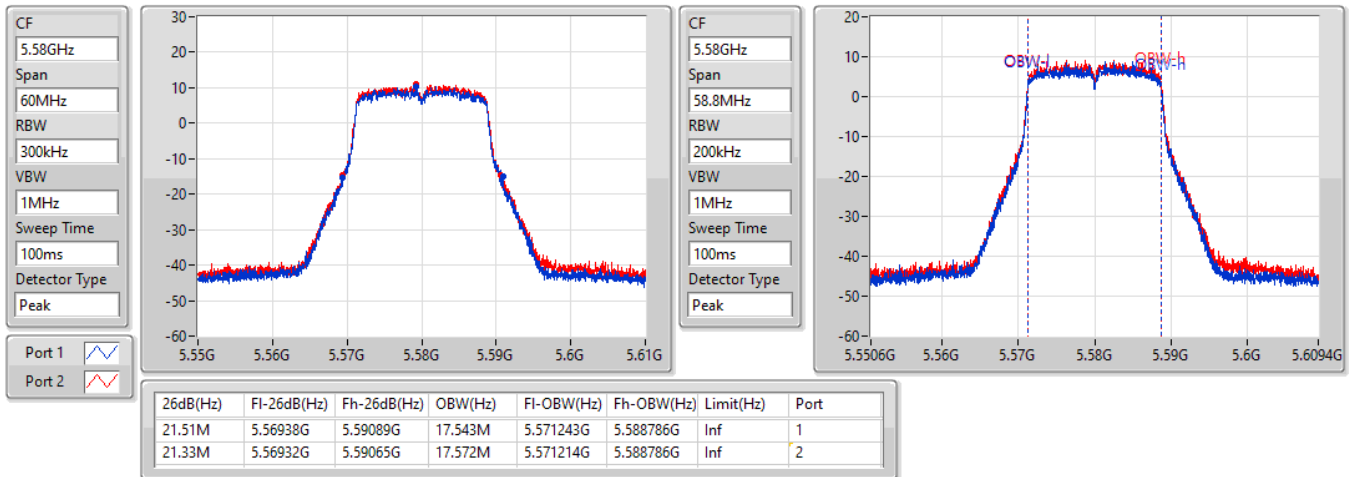


5.47-5.725GHz_802.11ac VHT20_Nss1,(MCS0)_2TX

EBW

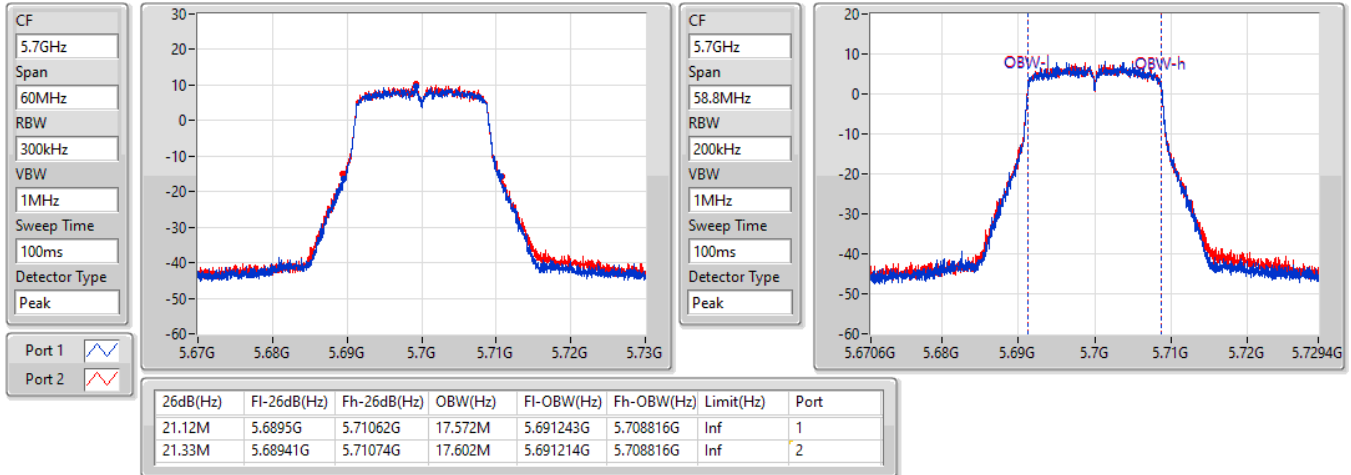
5580MHz

20/03/2023

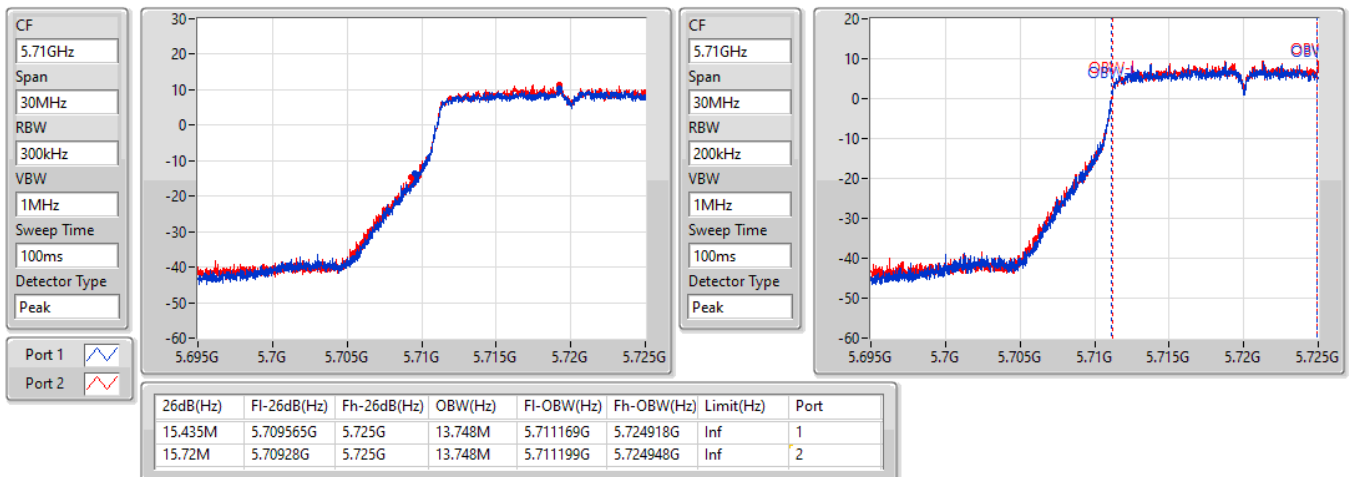


5.47-5.725GHz_802.11ac VHT20_Nss1,(MCS0)_2TX
EBW
5700MHz

16/09/2022


5.47-5.725GHz_802.11ac VHT20_Nss1,(MCS0)_2TX
EBW
5720MHz Straddle 5.47-5.725GHz

16/09/2022

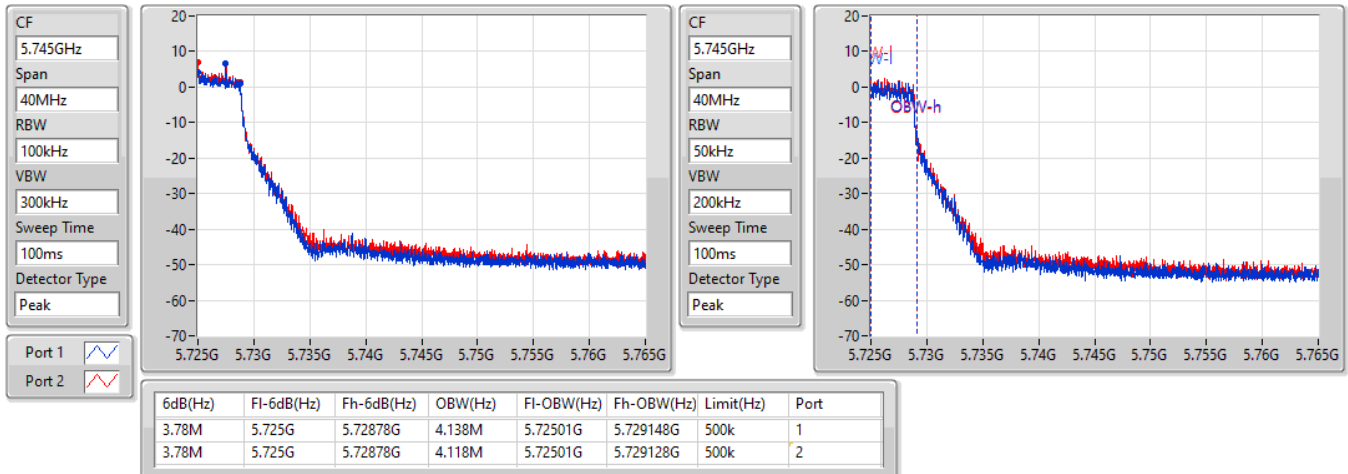


5.725-5.85GHz_802.11ac VHT20_Nss1,(MCS0)_2TX

EBW

5720MHz Straddle 5.725-5.85GHz

16/09/2022

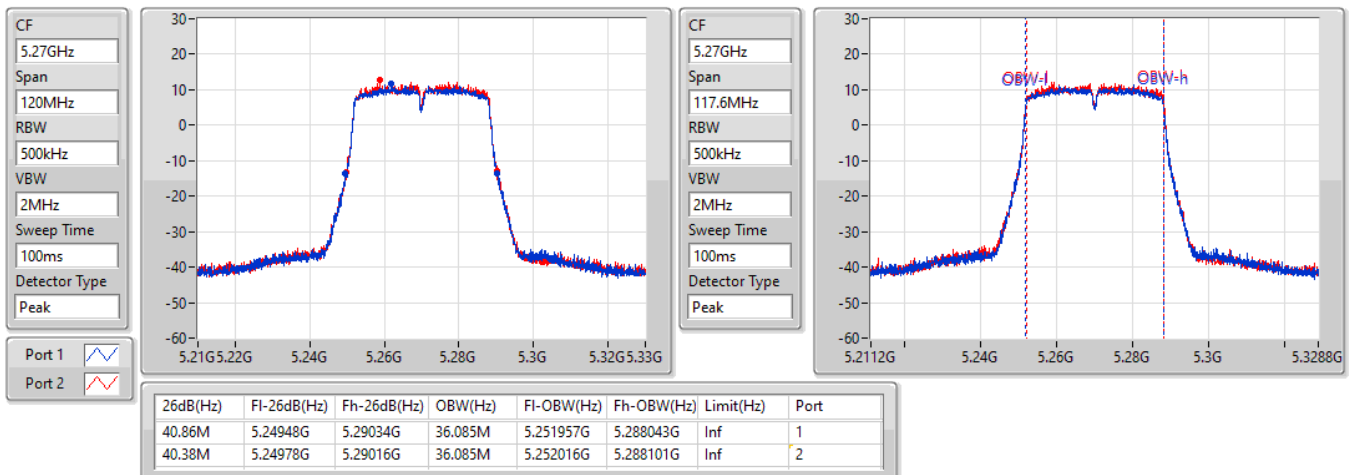


5.25-5.35GHz_802.11ac VHT40_Nss1,(MCS0)_2TX

EBW

5270MHz

16/09/2022

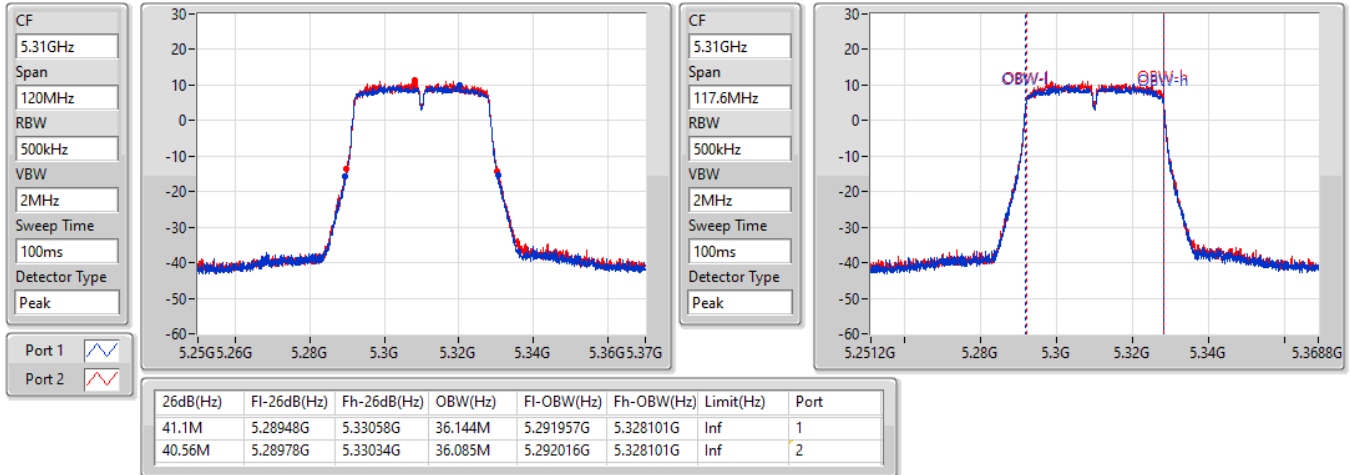


5.25-5.35GHz_802.11ac VHT40_Nss1,(MCS0)_2TX

EBW

5310MHz

16/09/2022

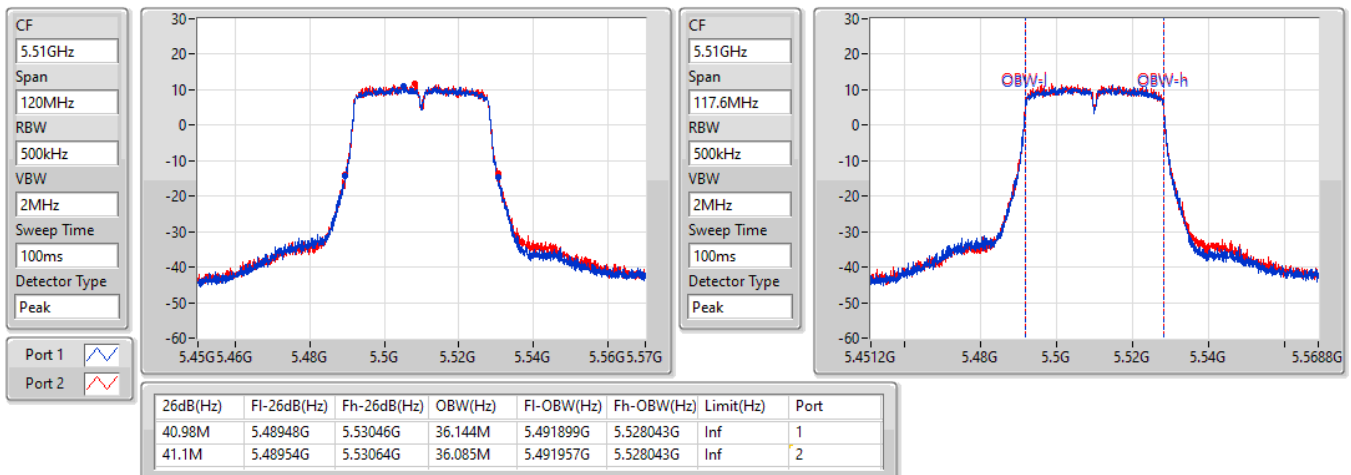


5.47-5.725GHz_802.11ac VHT40_Nss1,(MCS0)_2TX

EBW

5510MHz

24/03/2023

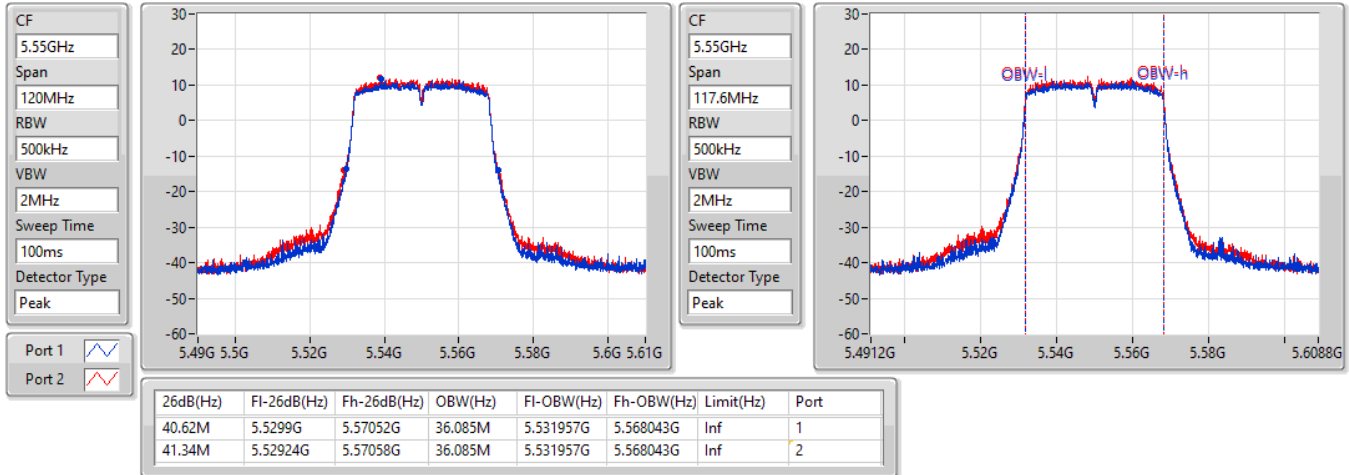


5.47-5.725GHz_802.11ac VHT40_Nss1,(MCS0)_2TX

EBW

5550MHz

27/03/2023

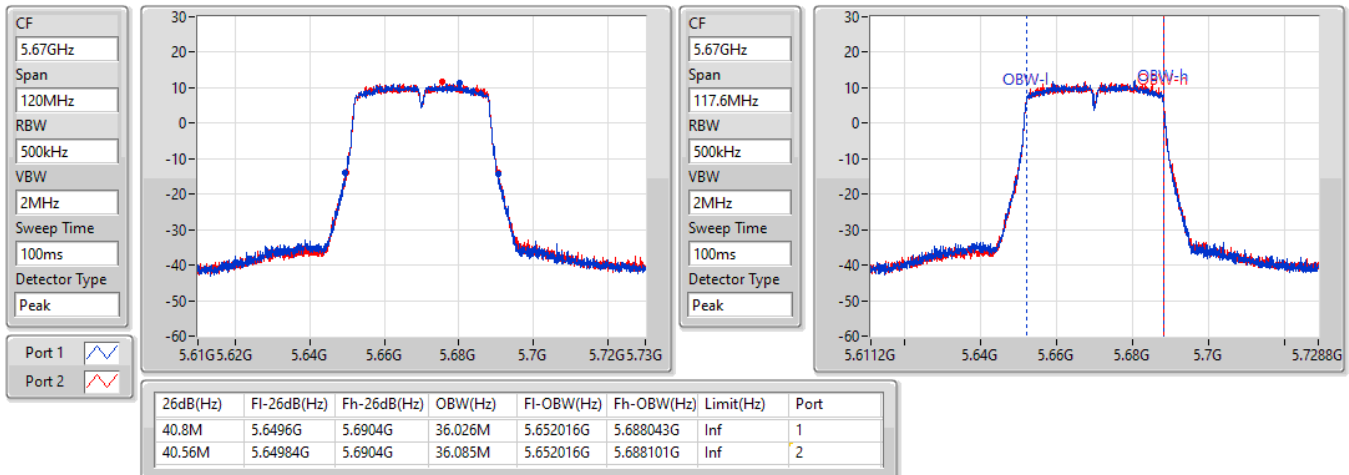


5.47-5.725GHz_802.11ac VHT40_Nss1,(MCS0)_2TX

EBW

5670MHz

16/09/2022

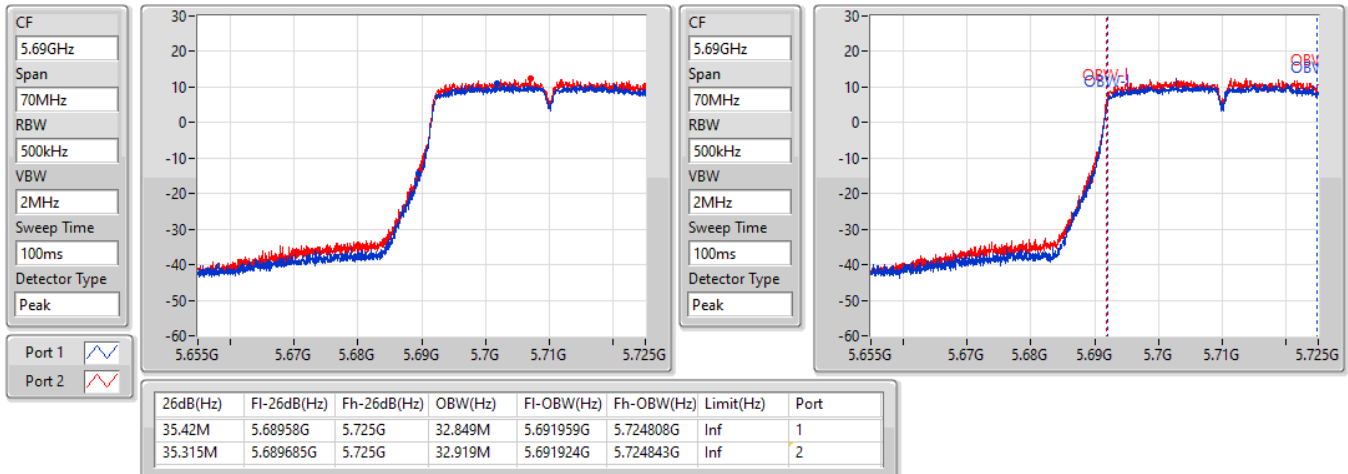


5.47-5.725GHz_802.11ac VHT40_Nss1,(MCS0)_2TX

EBW

5710MHz Straddle 5.47-5.725GHz

21/09/2022

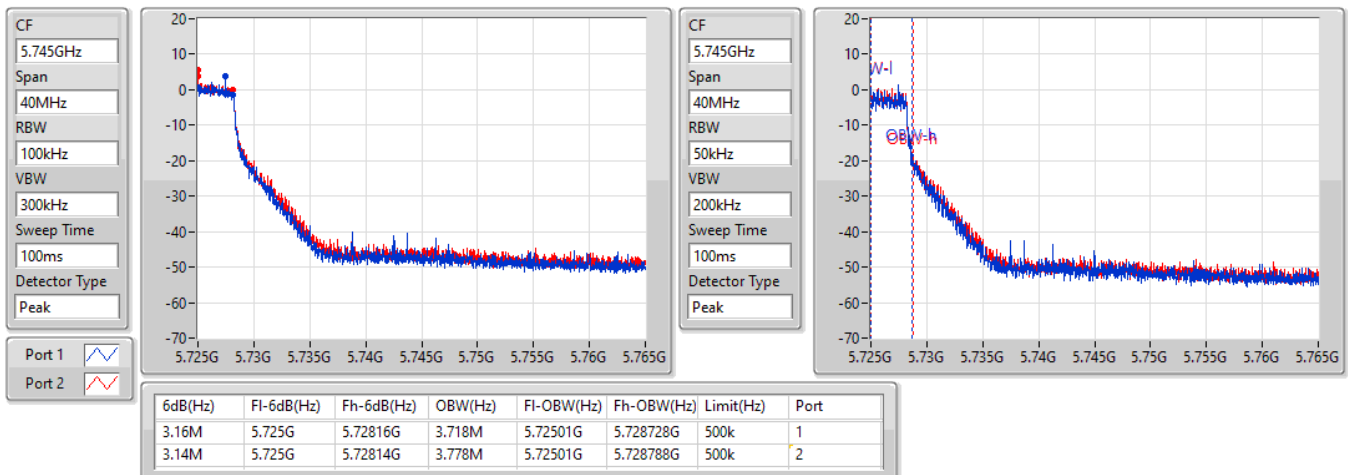


5.725-5.85GHz_802.11ac VHT40_Nss1,(MCS0)_2TX

EBW

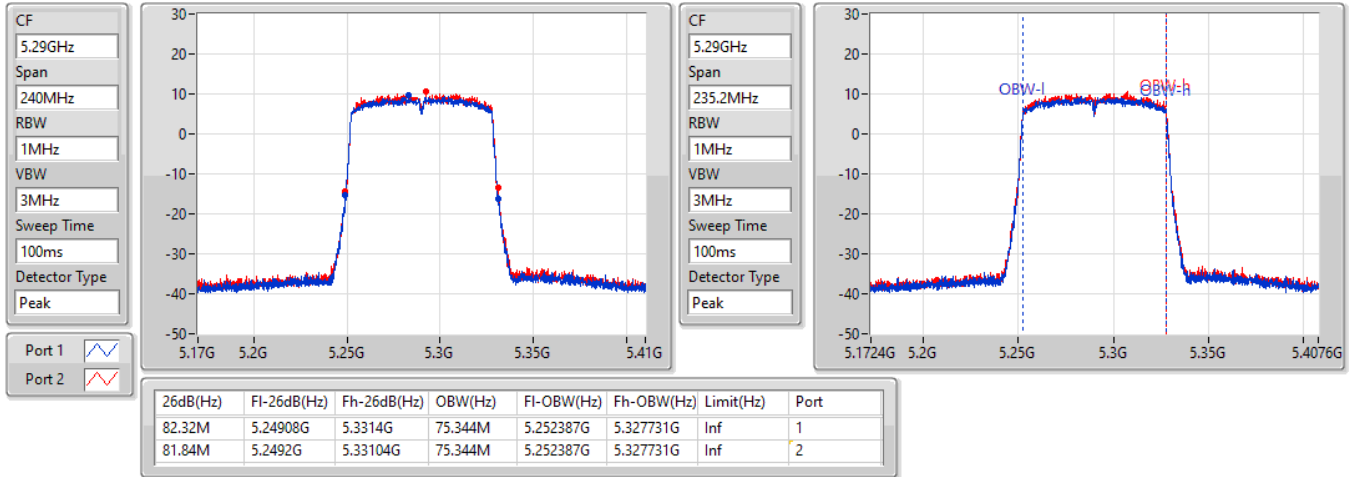
5710MHz Straddle 5.725-5.85GHz

21/09/2022

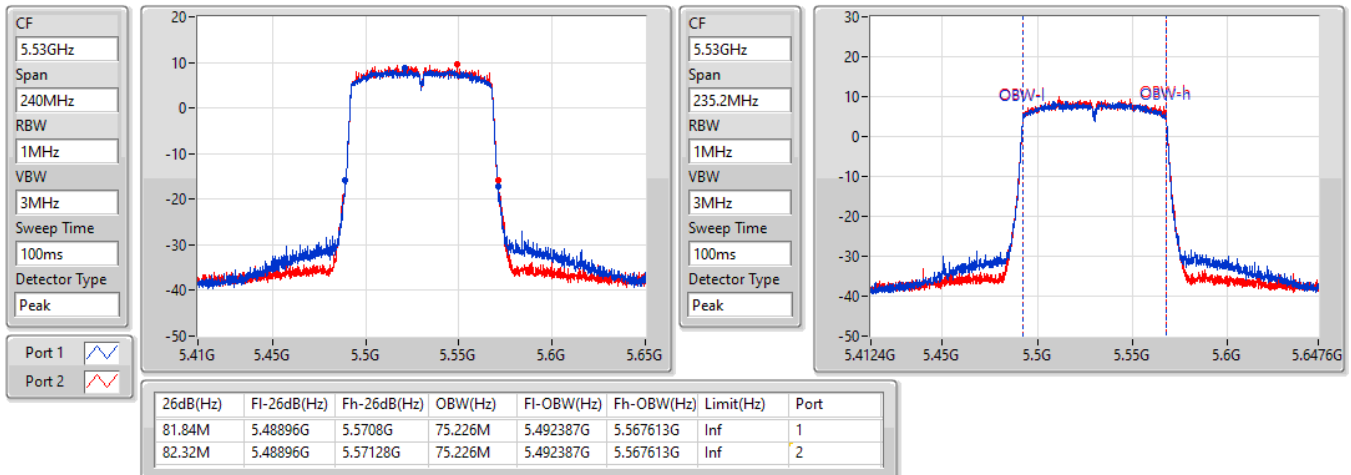


5.25-5.35GHz_802.11ac VHT80_Nss1,(MCS0)_2TX
EBW
5290MHz

16/09/2022


5.47-5.725GHz_802.11ac VHT80_Nss1,(MCS0)_2TX
EBW
5530MHz

16/09/2022

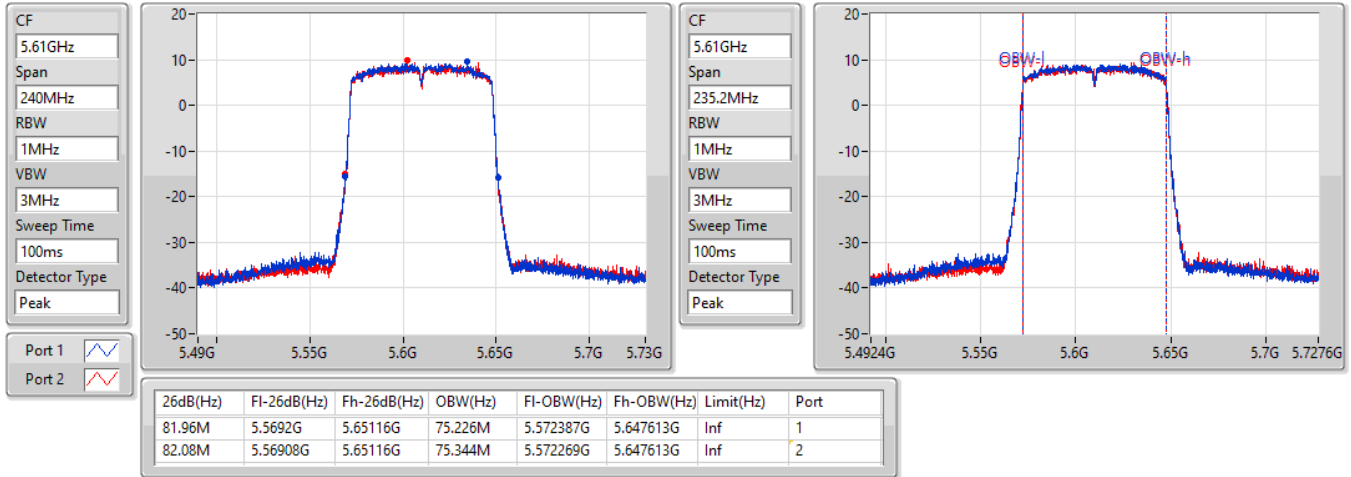


5.47-5.725GHz_802.11ac VHT80_Nss1,(MCS0)_2TX

EBW

5610MHz

16/09/2022

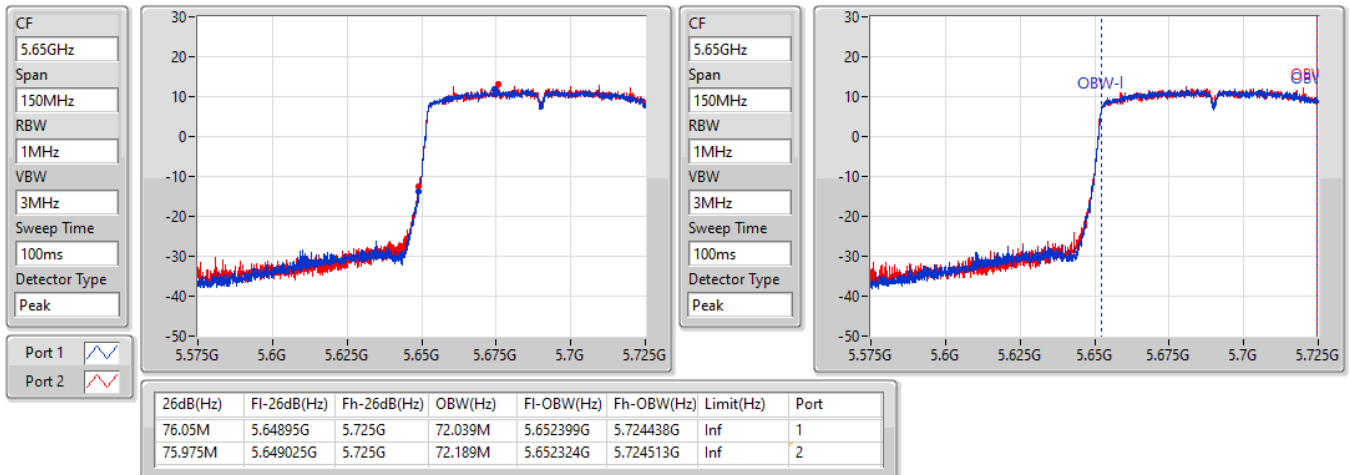


5.47-5.725GHz_802.11ac VHT80_Nss1,(MCS0)_2TX

EBW

5690MHz Straddle 5.47-5.725GHz

16/09/2022

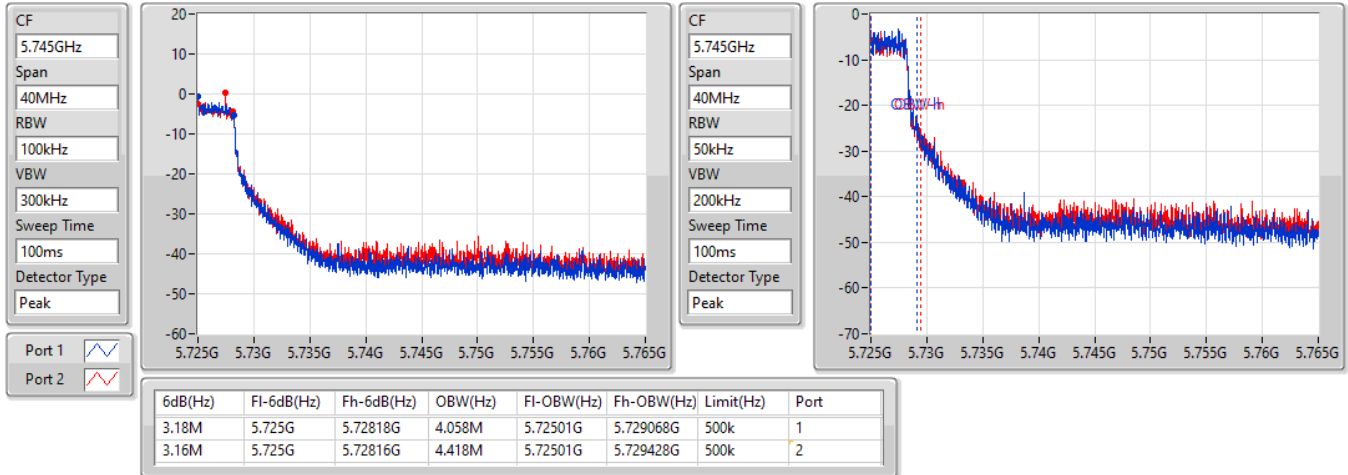


5.725-5.85GHz_802.11ac VHT80_Nss1,(MCS0)_2TX

EBW

5690MHz Straddle 5.725-5.85GHz

16/09/2022

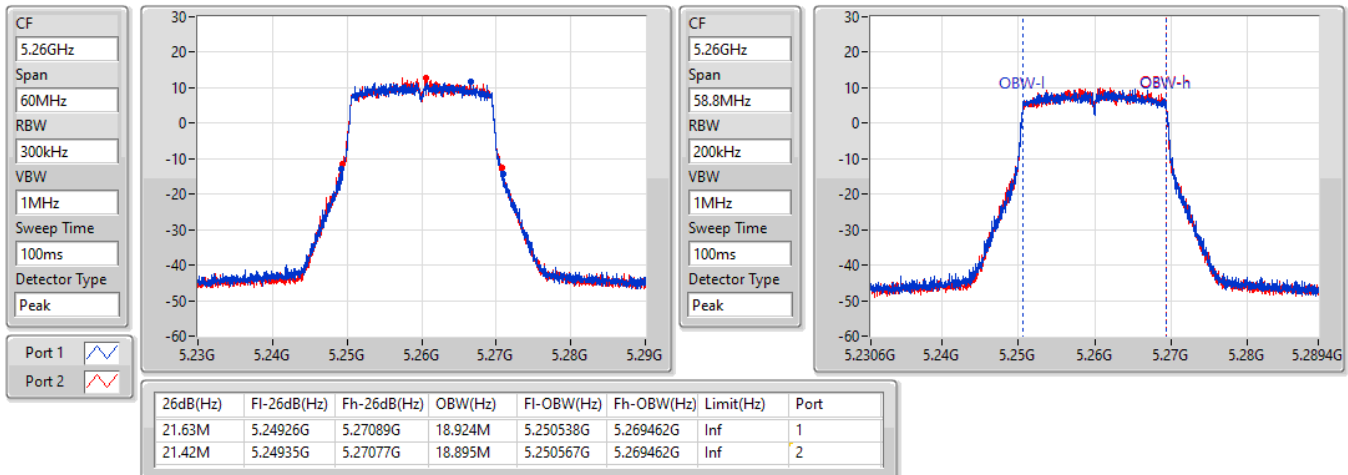


5.25-5.35GHz_802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

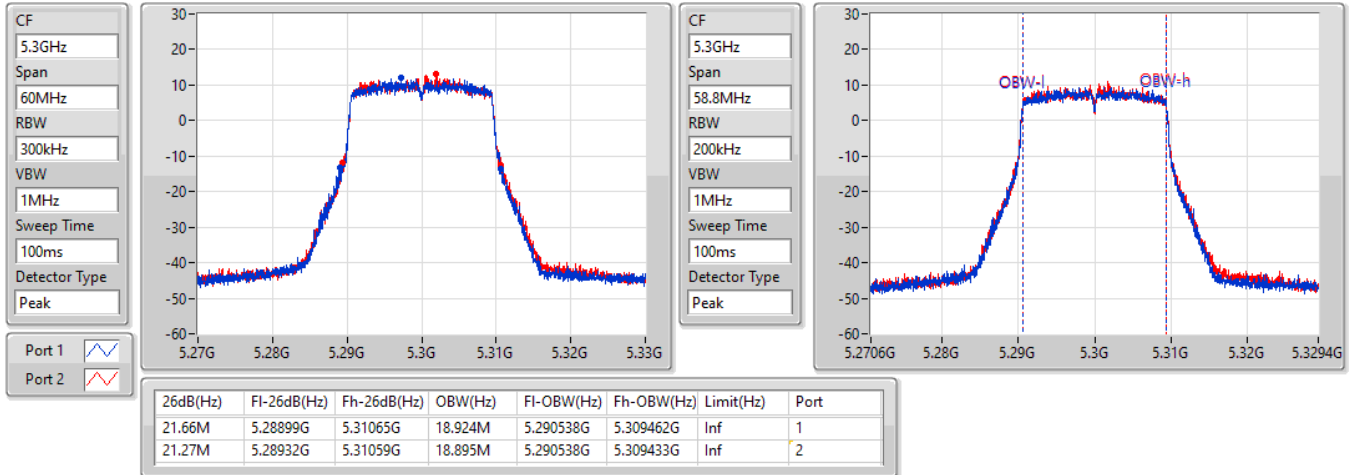
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14/09/2022

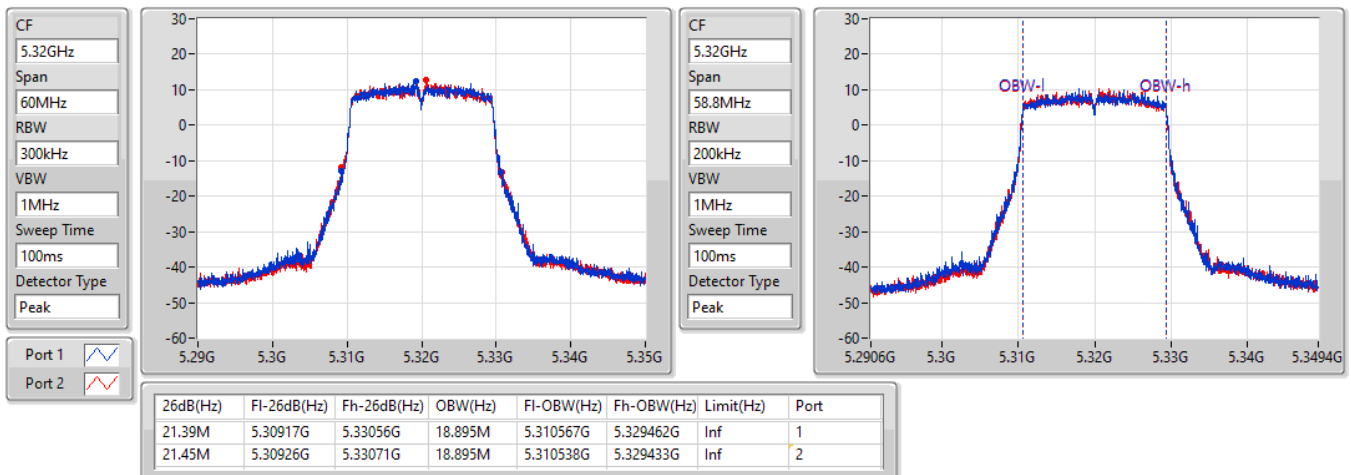


5.25-5.35GHz_802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
5300MHz

14/09/2022


5.25-5.35GHz_802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
5320MHz

14/09/2022

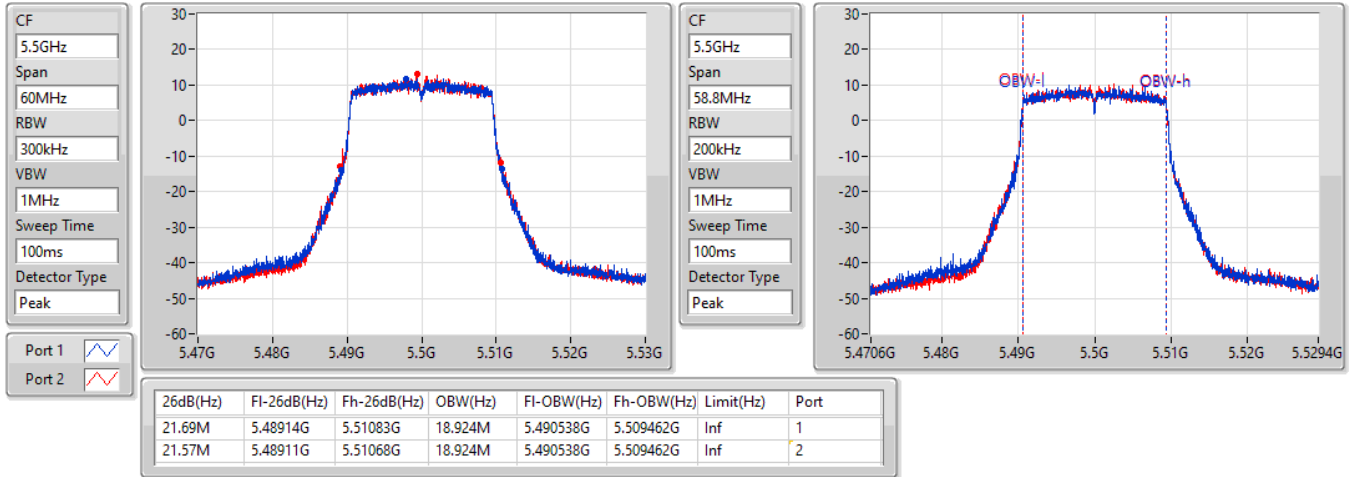


5.47-5.725GHz_802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

5500MHz

24/03/2023

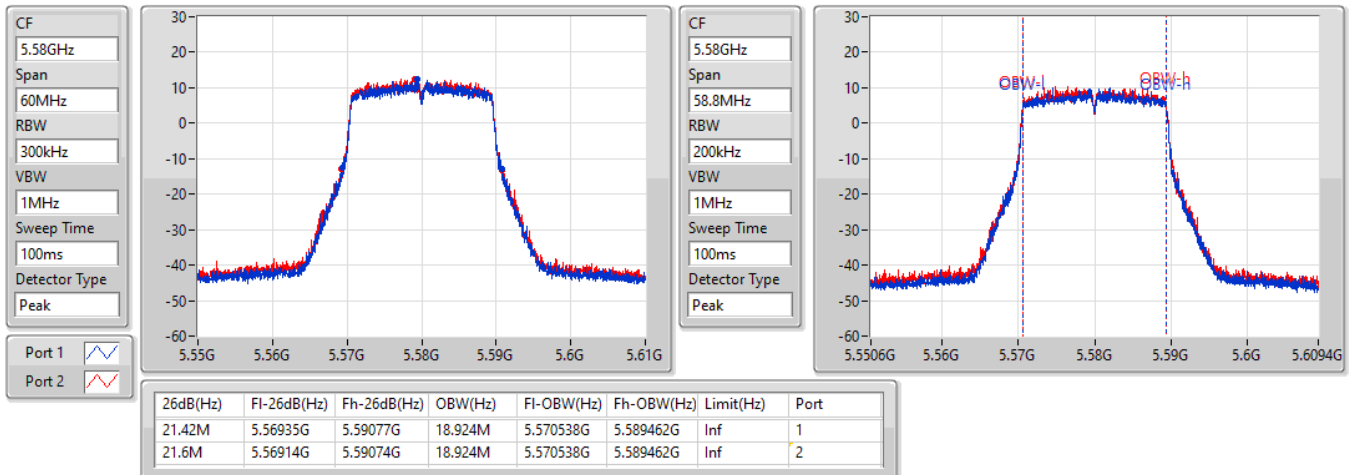


5.47-5.725GHz_802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

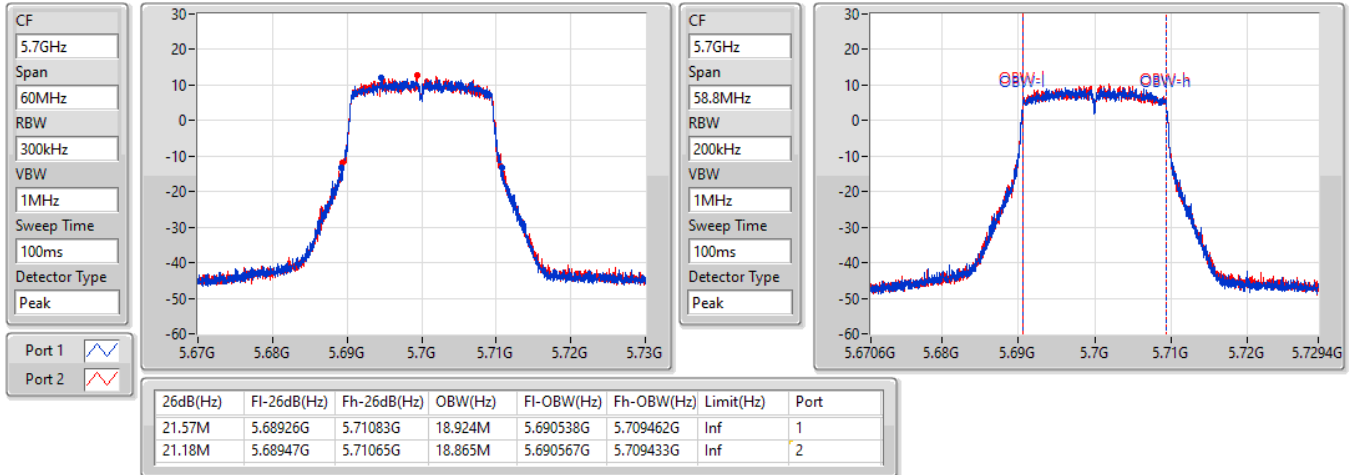
5580MHz

20/03/2023

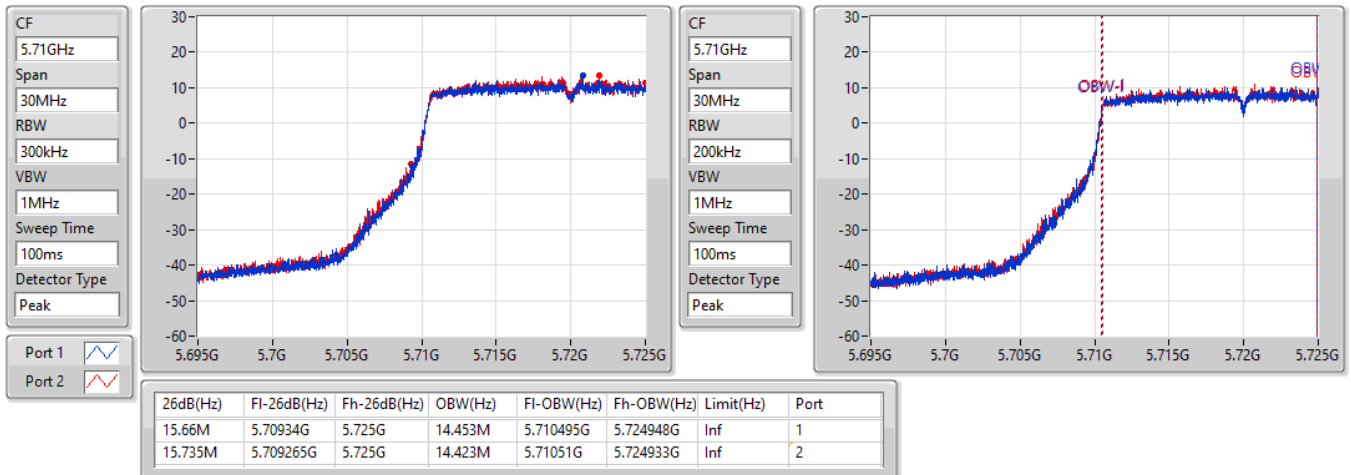


5.47-5.725GHz_802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
5700MHz

14/09/2022


5.47-5.725GHz_802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
5720MHz Straddle 5.47-5.725GHz

14/09/2022

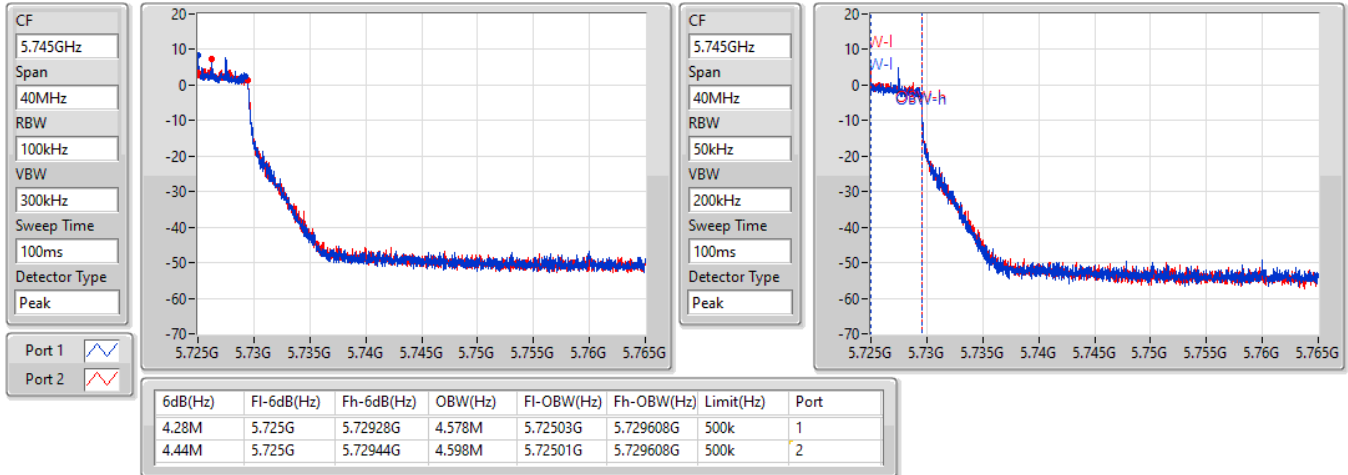


5.725-5.85GHz_802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

5720MHz Straddle 5.725-5.85GHz

14/09/2022

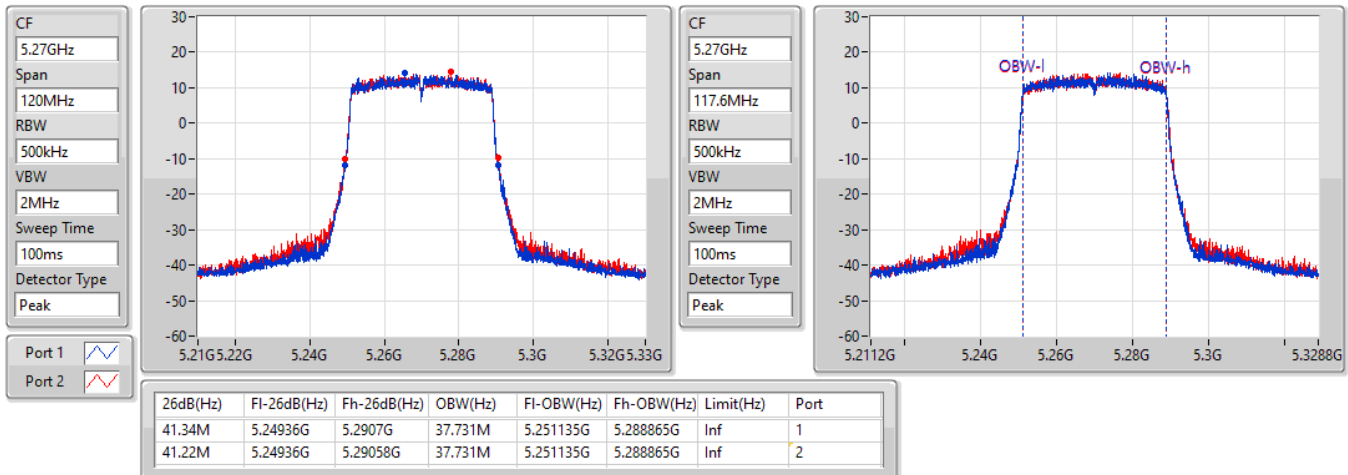


5.25-5.35GHz_802.11ax HEW40_Nss1,(MCS0)_2TX

EBW

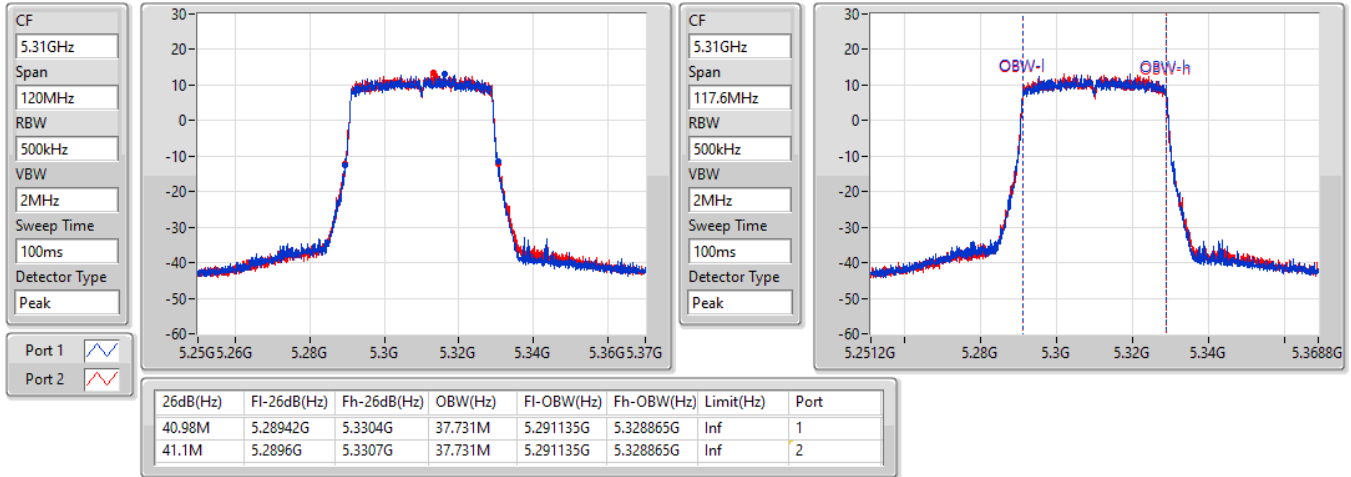
5270MHz

14/09/2022

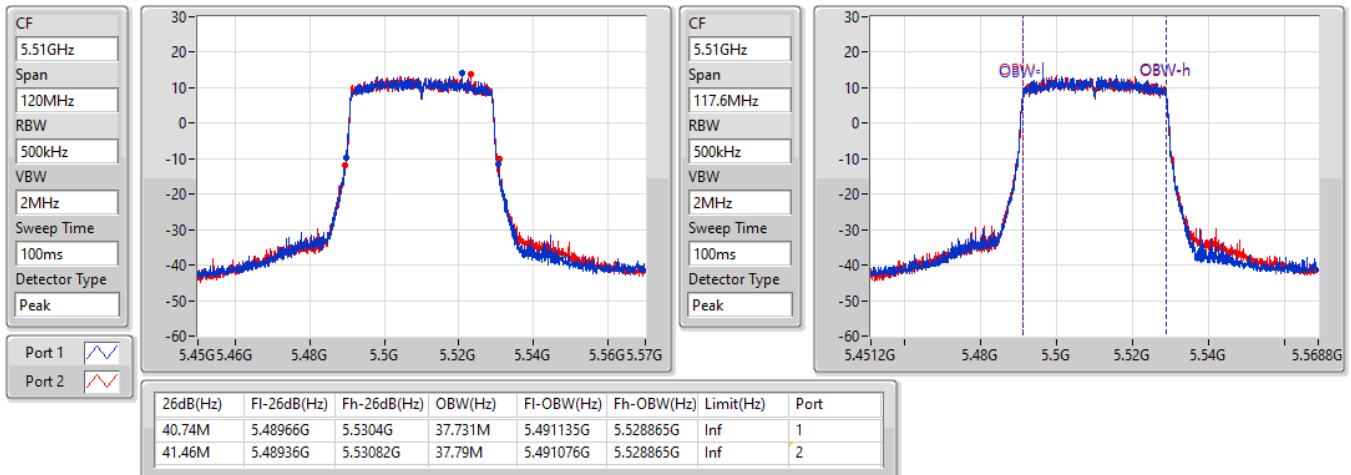


5.25-5.35GHz_802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
5310MHz

14/09/2022

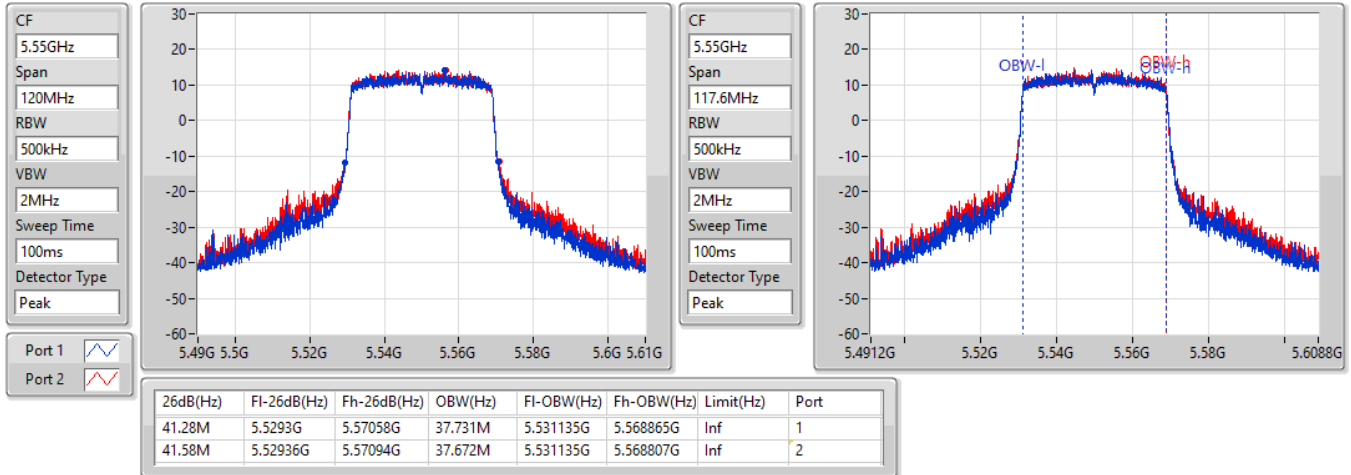

5.47-5.725GHz_802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
5510MHz

24/03/2023

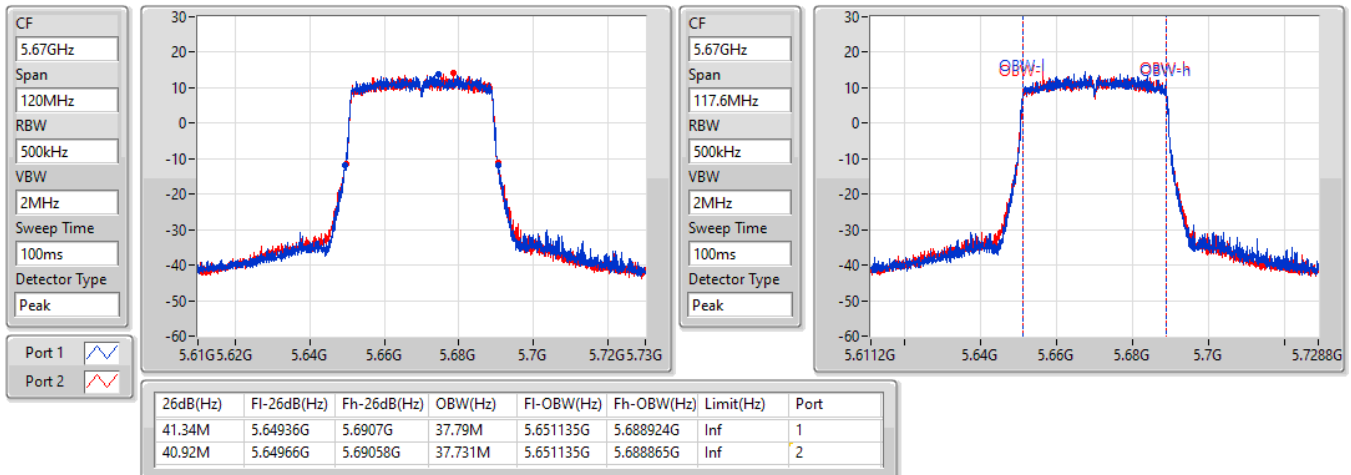


5.47-5.725GHz_802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
5550MHz

27/03/2023

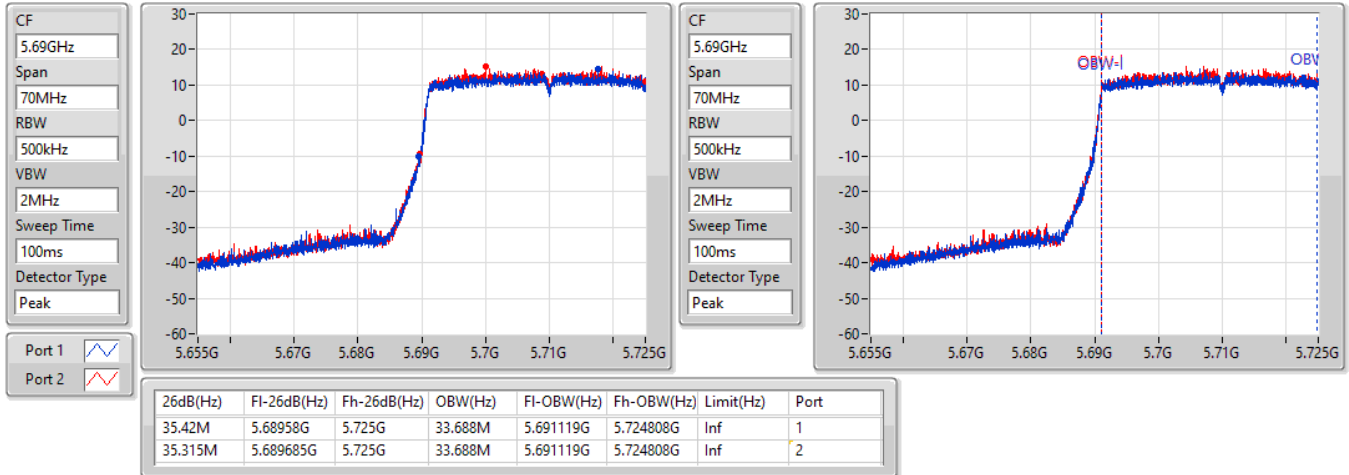

5.47-5.725GHz_802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
5670MHz

14/09/2022

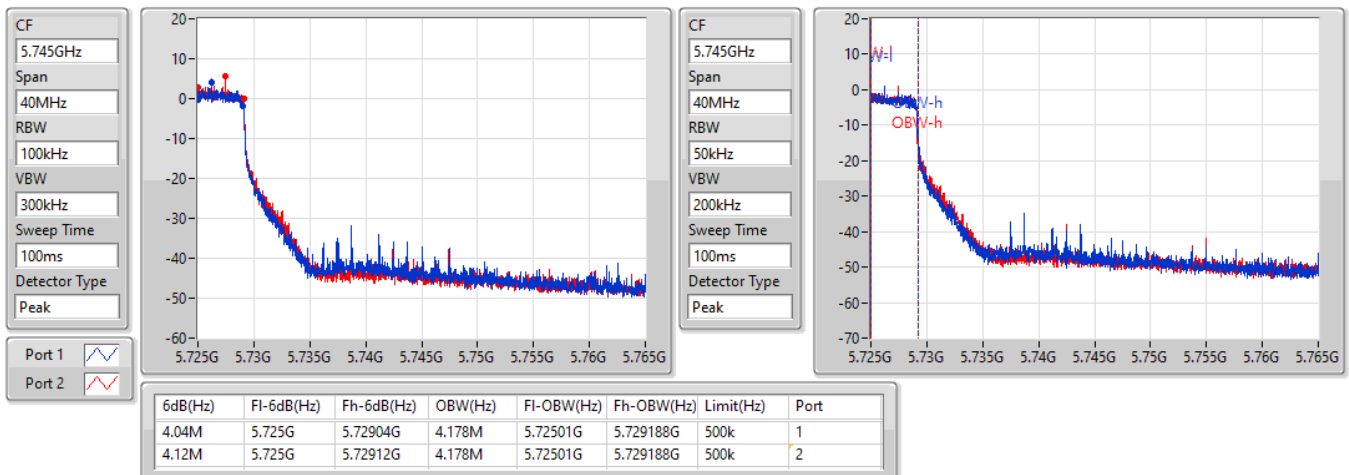


5.47-5.725GHz_802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
5710MHz Straddle 5.47-5.725GHz

20/09/2022


5.725-5.85GHz_802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
5710MHz Straddle 5.725-5.85GHz

20/09/2022

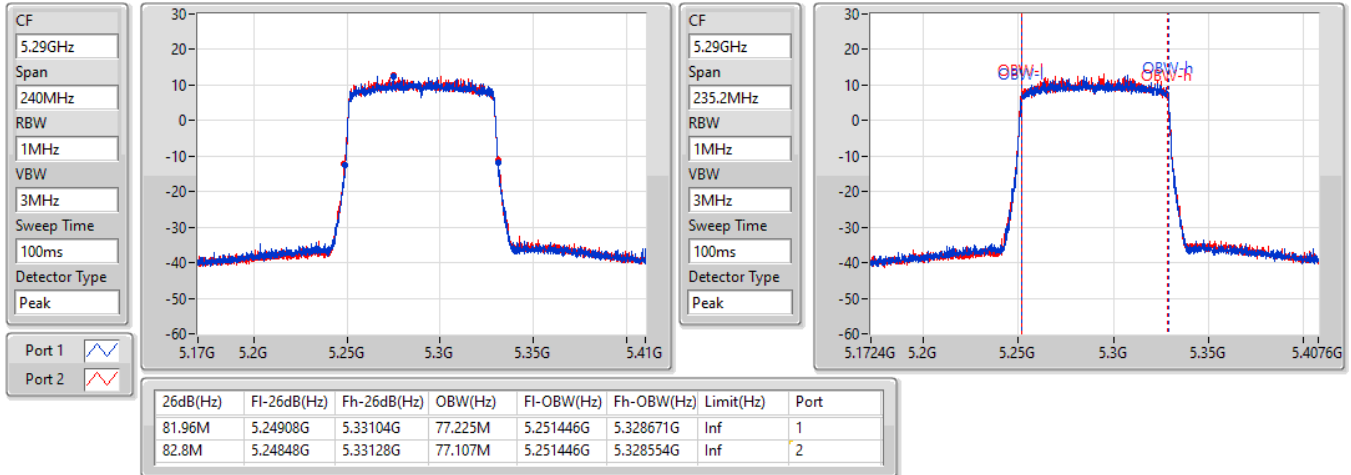


5.25-5.35GHz_802.11ax HEW80_Nss1,(MCS0)_2TX

EBW

5290MHz

14/09/2022

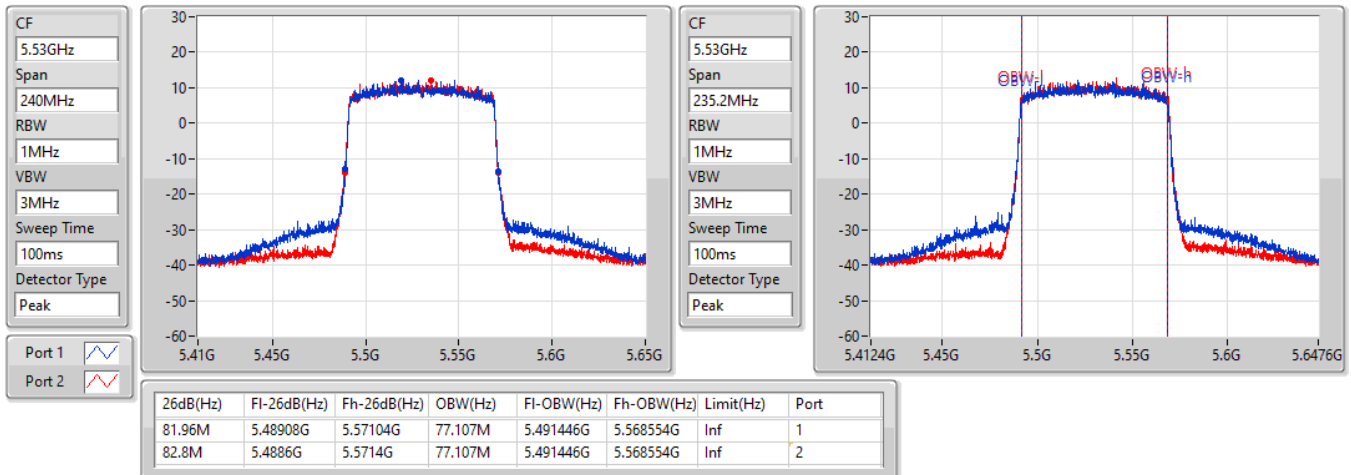


5.47-5.725GHz_802.11ax HEW80_Nss1,(MCS0)_2TX

EBW

5530MHz

14/09/2022

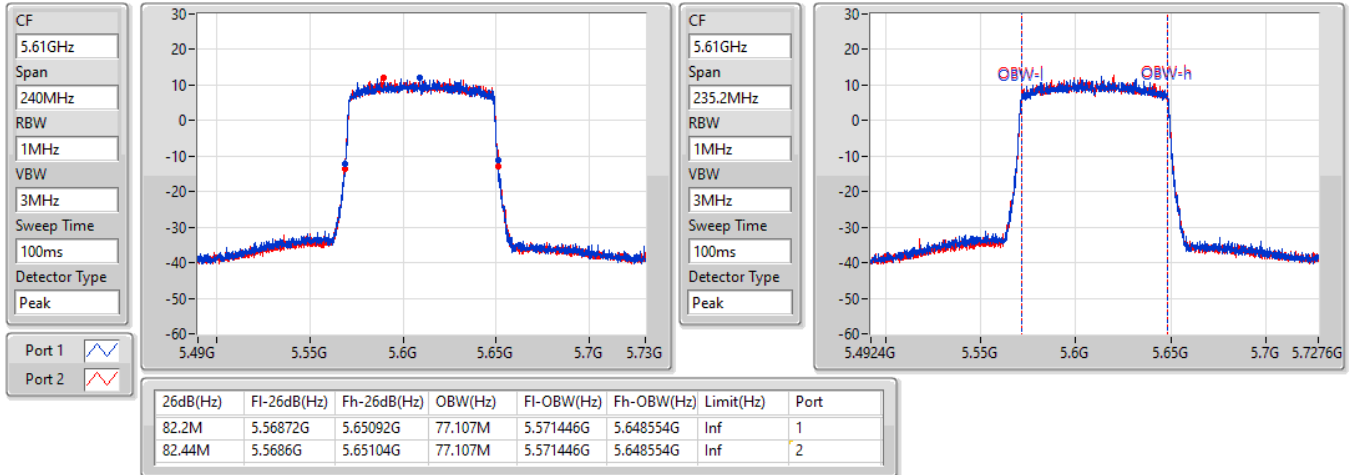


5.47-5.725GHz_802.11ax HEW80_Nss1,(MCS0)_2TX

EBW

5610MHz

14/09/2022

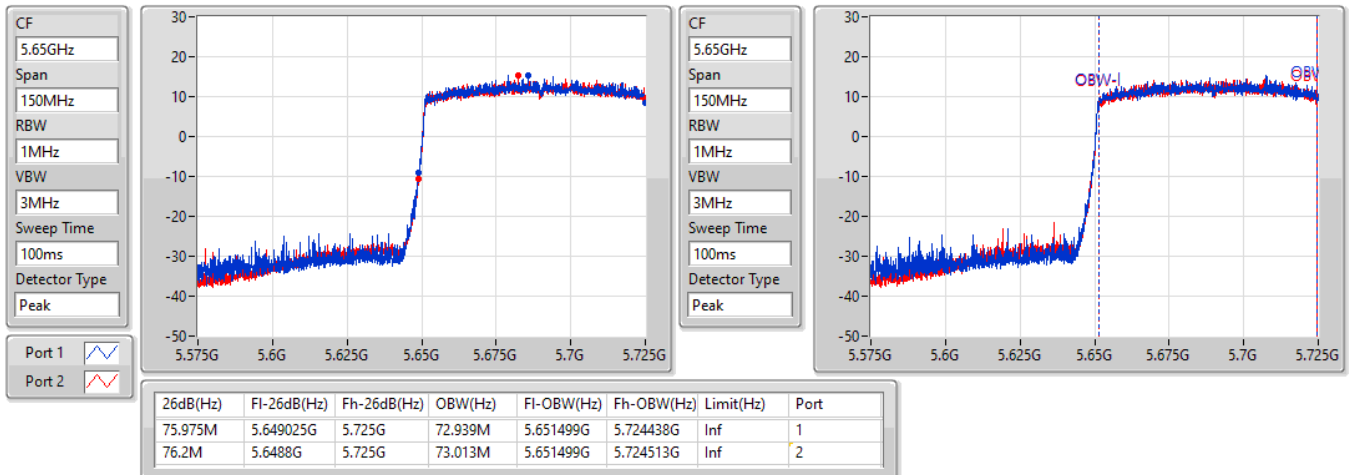


5.47-5.725GHz_802.11ax HEW80_Nss1,(MCS0)_2TX

EBW

5690MHz Straddle 5.47-5.725GHz

14/09/2022

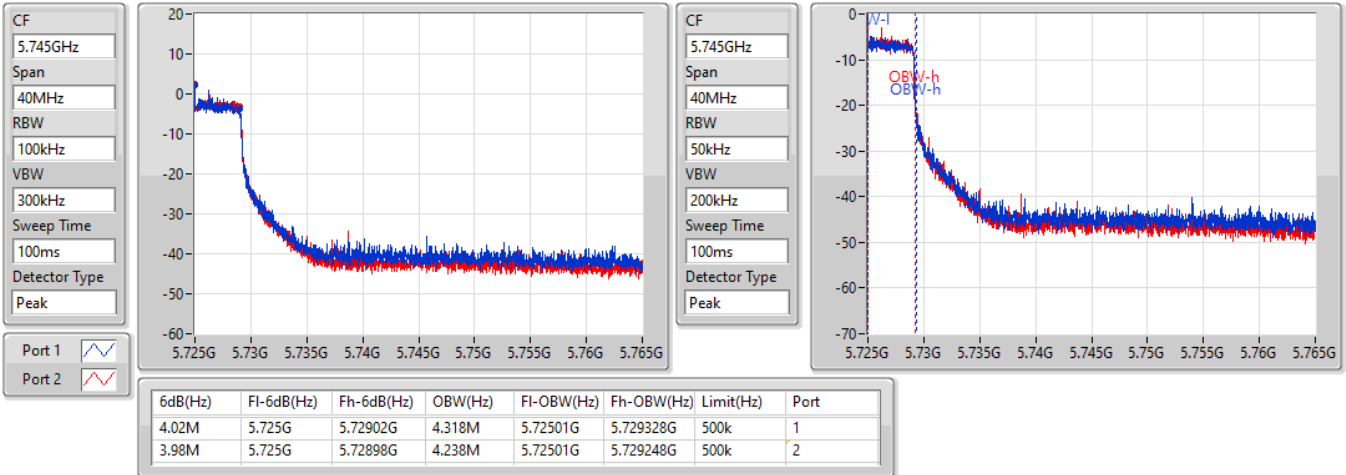


5.725-5.85GHz_802.11ax HEW80_Nss1,(MCS0)_2TX

EBW

5690MHz Straddle 5.725-5.85GHz

14/09/2022





EBW_Non-Beamforming_Radio2(Low Band)+Radio3(High Band) Appendix A.2

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	20.64M	16.462M	16M5D1D	20.34M	16.432M
802.11n HT20_Nss1,(MCS0)_2TX	21.84M	17.631M	17M6D1D	21.03M	17.601M
802.11n HT40_Nss1,(MCS0)_2TX	41.1M	36.222M	36M2D1D	40.56M	36.222M
802.11ac VHT20_Nss1,(MCS0)_2TX	21.69M	17.631M	17M6D1D	21.12M	17.601M
802.11ac VHT40_Nss1,(MCS0)_2TX	40.98M	36.282M	36M3D1D	40.5M	36.162M
802.11ac VHT80_Nss1,(MCS0)_2TX	82.56M	75.562M	75M6D1D	82.32M	75.442M
802.11ax HEW20_Nss1,(MCS0)_2TX	21.6M	18.951M	19M0D1D	21.3M	18.921M
802.11ax HEW40_Nss1,(MCS0)_2TX	41.28M	37.901M	37M9D1D	40.56M	37.841M
802.11ax HEW80_Nss1,(MCS0)_2TX	83.16M	77.481M	77M5D1D	82.32M	77.361M
5.47-5.725GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	25.59M	16.75M	16M8D1D	15.12M	13.358M
802.11n HT20_Nss1,(MCS0)_2TX	33.51M	18.228M	18M2D1D	15.405M	13.913M
802.11n HT40_Nss1,(MCS0)_2TX	58.56M	36.522M	36M5D1D	35.21M	33.023M
802.11ac VHT20_Nss1,(MCS0)_2TX	31.95M	18.216M	18M2D1D	15.495M	13.928M
802.11ac VHT40_Nss1,(MCS0)_2TX	56.04M	36.582M	36M6D1D	35.42M	32.954M
802.11ac VHT80_Nss1,(MCS0)_2TX	82.44M	75.562M	75M6D1D	77.625M	72.264M
802.11ac VHT160_Nss1,(MCS0)_2TX	164.4M	153.523M	154MD1D	163.44M	153.283M
802.11ax HEW20_Nss1,(MCS0)_2TX	39.72M	19.537M	19M5D1D	15.975M	14.558M
802.11ax HEW40_Nss1,(MCS0)_2TX	40.68M	37.901M	37M9D1D	35.35M	33.863M
802.11ax HEW80_Nss1,(MCS0)_2TX	82.56M	77.481M	77M5D1D	77.025M	73.313M
802.11ax HEW160_Nss1,(MCS0)_2TX	164.64M	154.963M	155MD1D	163.44M	154.723M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	3.16M	3.558M	3M56D1D	3.14M	3.538M
802.11n HT20_Nss1,(MCS0)_2TX	3.76M	4.138M	4M14D1D	3.74M	4.098M
802.11n HT40_Nss1,(MCS0)_2TX	3.14M	13.153M	13M2D1D	3.12M	13.033M
802.11ac VHT20_Nss1,(MCS0)_2TX	3.78M	4.138M	4M14D1D	3.76M	4.118M
802.11ac VHT40_Nss1,(MCS0)_2TX	3.12M	12.814M	12M8D1D	3.1M	12.614M
802.11ac VHT80_Nss1,(MCS0)_2TX	3.14M	28.426M	28M4D1D	3.1M	27.746M
802.11ax HEW20_Nss1,(MCS0)_2TX	4.52M	4.638M	4M64D1D	4.48M	4.638M
802.11ax HEW40_Nss1,(MCS0)_2TX	37.74M	38.441M	38M4D1D	36.78M	38.441M
802.11ax HEW80_Nss1,(MCS0)_2TX	4.04M	23.508M	23M5D1D	4M	21.529M

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



EBW_Non-Beamforming_Radio2(Low Band)+Radio3(High Band) Appendix A.2

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	20.52M	16.432M	20.34M	16.432M
5300MHz	Pass	Inf	20.55M	16.462M	20.64M	16.432M
5320MHz	Pass	Inf	20.58M	16.432M	20.61M	16.462M
5500MHz	Pass	Inf	20.16M	16.672M	19.95M	16.582M
5580MHz	Pass	Inf	25.59M	16.75M	22.41M	16.632M
5700MHz	Pass	Inf	20.4M	16.672M	19.92M	16.612M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.3M	13.388M	15.12M	13.358M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.14M	3.538M	3.16M	3.558M
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5260MHz	Pass	Inf	21.12M	17.631M	21.45M	17.601M
5300MHz	Pass	Inf	21.84M	17.631M	21.39M	17.631M
5320MHz	Pass	Inf	21.03M	17.631M	21.06M	17.601M
5500MHz	Pass	Inf	21.21M	17.871M	21.42M	17.781M
5580MHz	Pass	Inf	33.51M	18.228M	28.23M	17.91M
5700MHz	Pass	Inf	21.06M	17.841M	21.9M	17.781M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.495M	13.943M	15.405M	13.913M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.76M	4.138M	3.74M	4.098M
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5270MHz	Pass	Inf	41.1M	36.222M	40.68M	36.222M
5310MHz	Pass	Inf	40.8M	36.222M	40.56M	36.222M
5510MHz	Pass	Inf	39.78M	36.102M	39.66M	36.102M
5550MHz	Pass	Inf	44.88M	36.282M	58.56M	36.522M
5670MHz	Pass	Inf	39.72M	36.102M	39.6M	36.102M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	35.42M	33.023M	35.21M	33.023M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.12M	13.033M	3.14M	13.153M
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5260MHz	Pass	Inf	21.36M	17.601M	21.27M	17.631M
5300MHz	Pass	Inf	21.69M	17.631M	21.33M	17.631M
5320MHz	Pass	Inf	21.42M	17.601M	21.12M	17.601M
5500MHz	Pass	Inf	21.24M	17.841M	21.39M	17.781M
5580MHz	Pass	Inf	31.95M	18.216M	27.75M	17.911M
5700MHz	Pass	Inf	21.54M	17.841M	21.75M	17.781M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.495M	13.958M	15.735M	13.928M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.78M	4.138M	3.76M	4.118M
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5270MHz	Pass	Inf	40.98M	36.222M	40.5M	36.222M
5310MHz	Pass	Inf	40.92M	36.162M	40.68M	36.282M
5510MHz	Pass	Inf	39.6M	36.102M	39.48M	36.042M
5550MHz	Pass	Inf	52.32M	36.342M	56.04M	36.582M
5670MHz	Pass	Inf	39.78M	36.042M	39.54M	36.102M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	35.42M	32.954M	35.665M	33.023M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.12M	12.814M	3.1M	12.614M
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5290MHz	Pass	Inf	82.56M	75.562M	82.32M	75.442M
5530MHz	Pass	Inf	82.32M	75.442M	81.24M	75.322M
5610MHz	Pass	Inf	82.44M	75.562M	81.72M	75.322M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	77.625M	72.264M	80.25M	72.339M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.14M	27.746M	3.1M	28.426M
802.11ac VHT160_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5570MHz	Pass	Inf	164.4M	153.523M	163.44M	153.283M
802.11ax HEW20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5260MHz	Pass	Inf	21.45M	18.951M	21.6M	18.921M
5300MHz	Pass	Inf	21.3M	18.921M	21.33M	18.921M
5320MHz	Pass	Inf	21.45M	18.921M	21.39M	18.921M



EBW_Non-Beamforming_Radio2(Low Band)+Radio3(High Band) Appendix A.2

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
5500MHz	Pass	Inf	21.81M	19.1M	21.93M	19.1M
5580MHz	Pass	Inf	39.72M	19.537M	35.34M	19.275M
5700MHz	Pass	Inf	21.69M	19.1M	21.75M	19.07M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.975M	14.588M	16.05M	14.558M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	4.52M	4.638M	4.48M	4.638M
802.11ax HEW40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5270MHz	Pass	Inf	41.16M	37.901M	40.8M	37.901M
5310MHz	Pass	Inf	41.28M	37.901M	40.56M	37.841M
5510MHz	Pass	Inf	40.5M	37.841M	40.44M	37.781M
5550MHz	Pass	Inf	40.26M	37.841M	40.38M	37.901M
5670MHz	Pass	Inf	40.68M	37.781M	40.26M	37.721M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	35.525M	33.863M	35.35M	33.863M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	37.74M	38.441M	36.78M	38.441M
802.11ax HEW80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5290MHz	Pass	Inf	83.16M	77.481M	82.32M	77.361M
5530MHz	Pass	Inf	82.08M	77.481M	82.56M	77.361M
5610MHz	Pass	Inf	82.2M	77.481M	82.56M	77.241M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	80.775M	73.313M	77.025M	73.313M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	4M	23.508M	4.04M	21.529M
802.11ax HEW160_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5570MHz	Pass	Inf	164.64M	154.723M	163.44M	154.963M

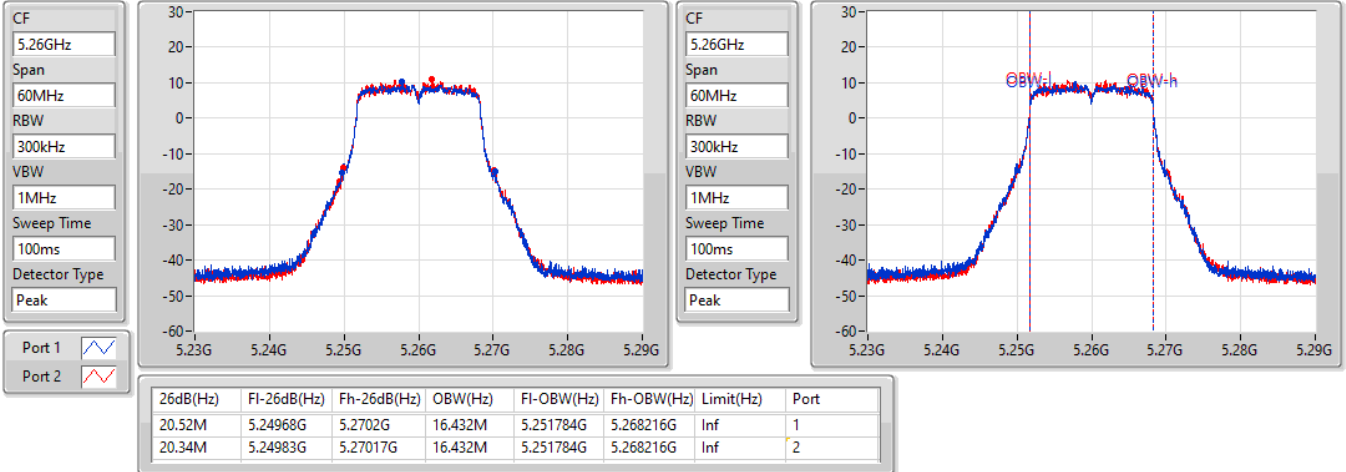
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11a_Nss1,(6Mbps)_2TX

EBW

5260MHz

02/09/2022

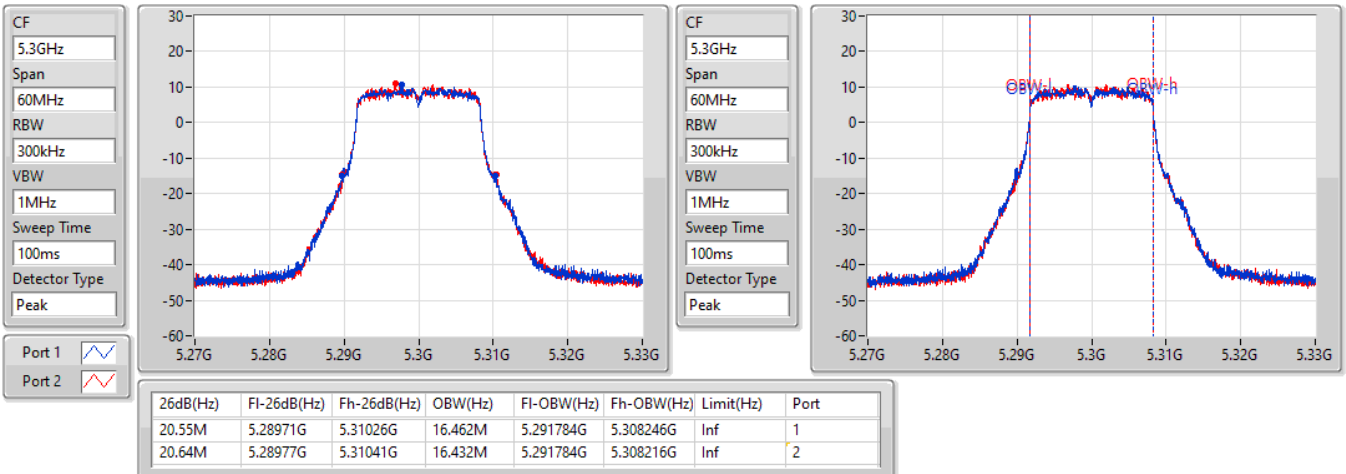


802.11a_Nss1,(6Mbps)_2TX

EBW

5300MHz

02/09/2022

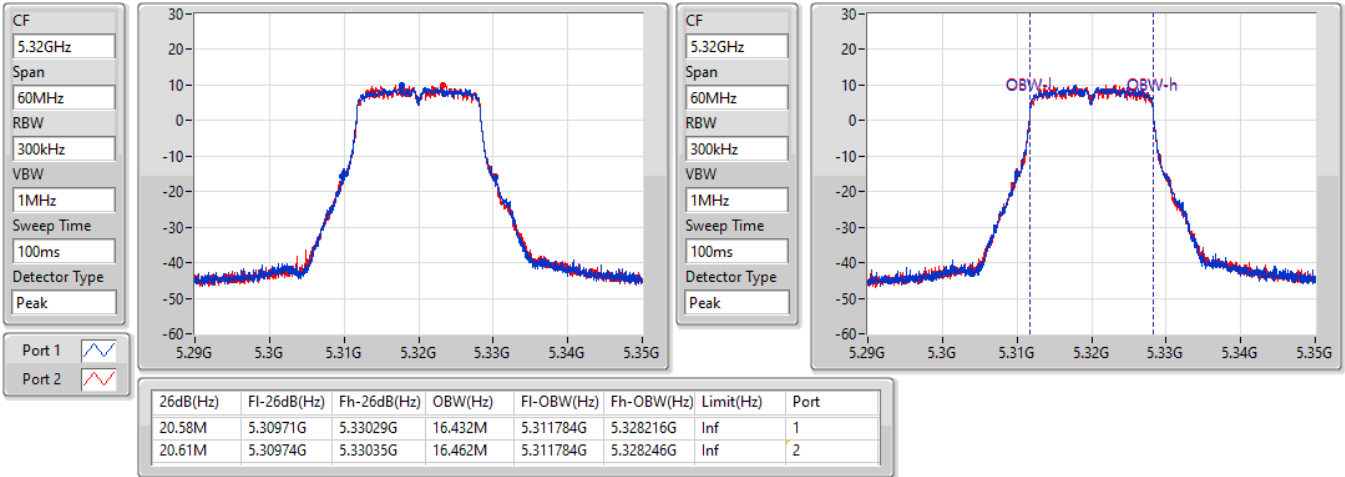


802.11a_Nss1,(6Mbps)_2TX

EBW

5320MHz

02/09/2022

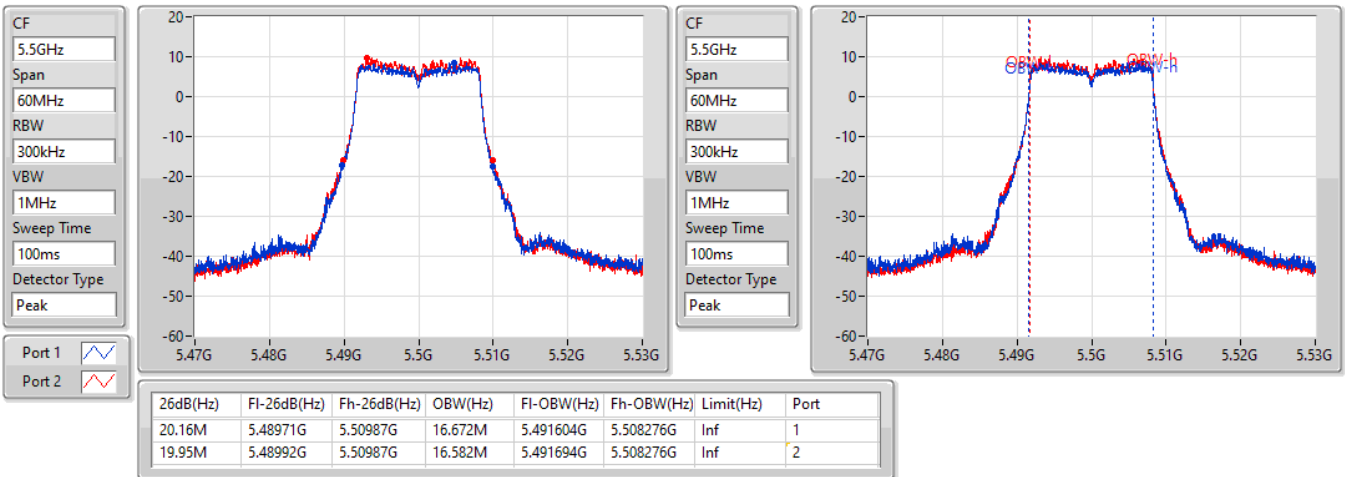


802.11a_Nss1,(6Mbps)_2TX

EBW

5500MHz

02/09/2022

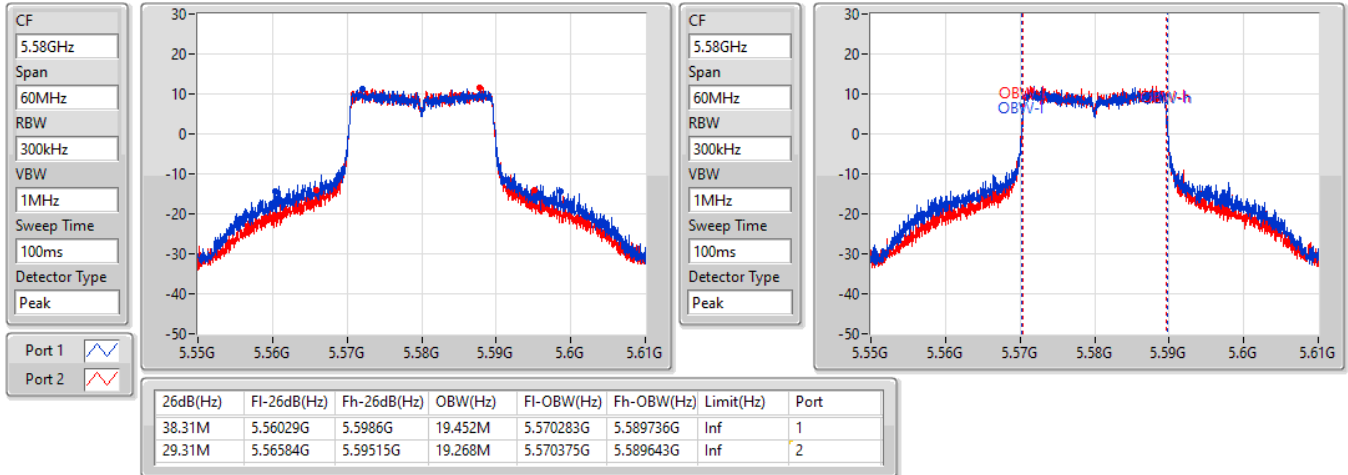


802.11a_Nss1,(6Mbps)_2TX

EBW

5580MHz

17/04/2023

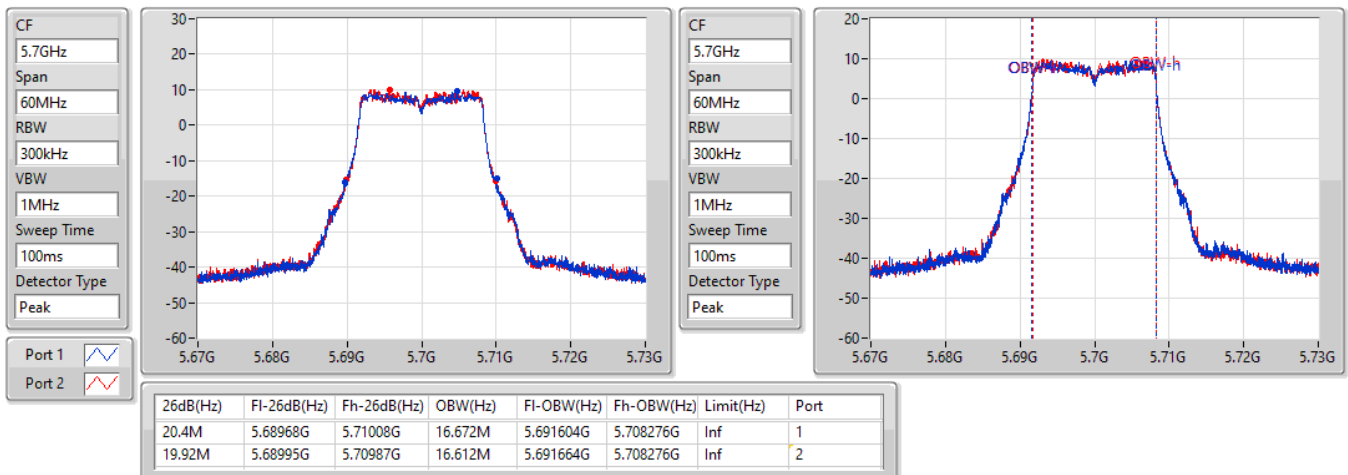


802.11a_Nss1,(6Mbps)_2TX

EBW

5700MHz

02/09/2022

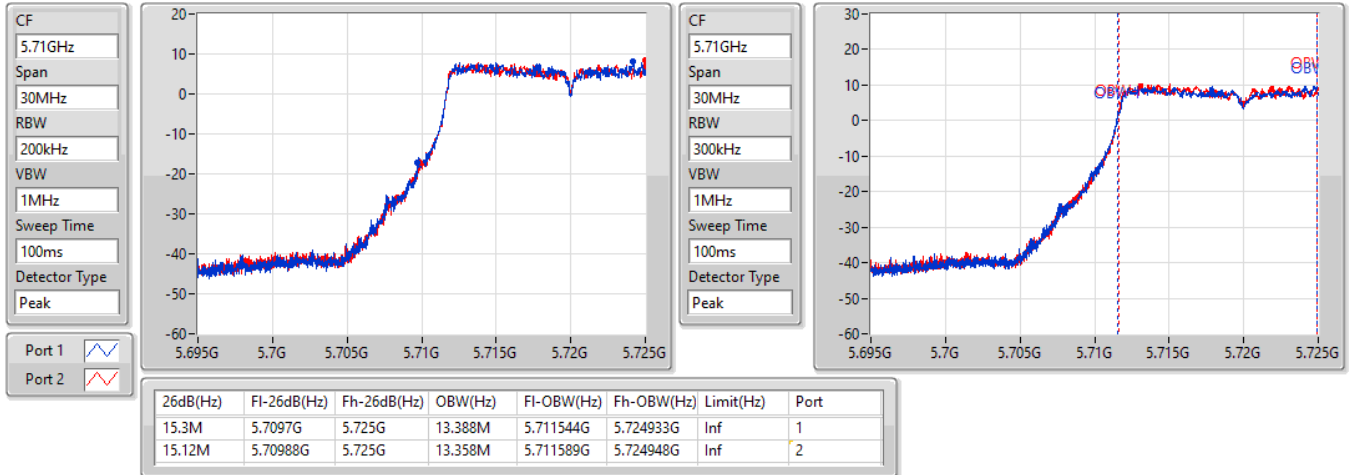


802.11a_Nss1,(6Mbps)_2TX

EBW

5720MHz Straddle 5.47-5.725GHz

02/09/2022

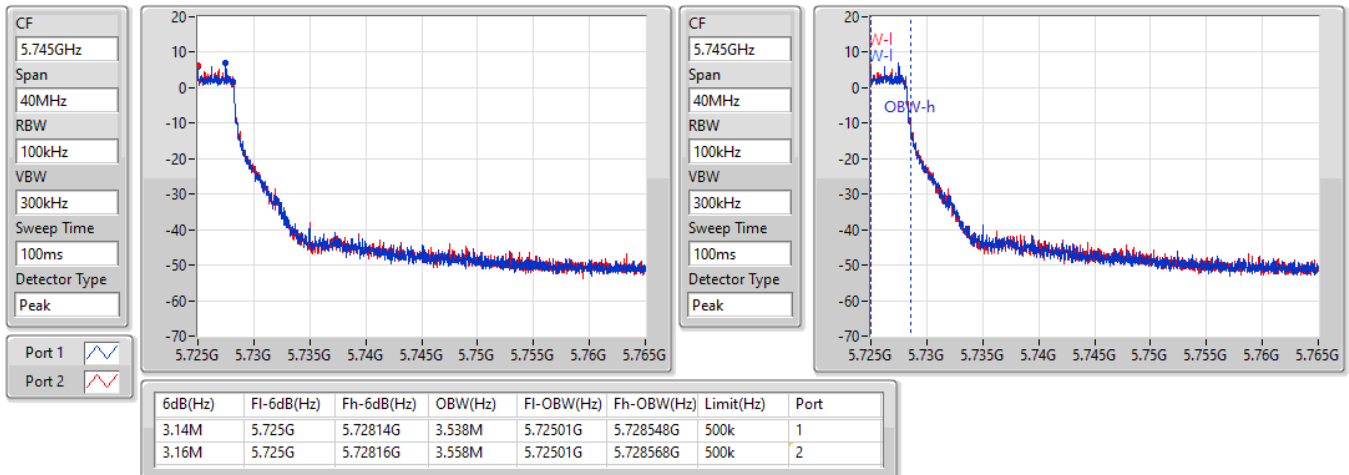


802.11a_Nss1,(6Mbps)_2TX

EBW

5720MHz Straddle 5.725-5.85GHz

02/09/2022

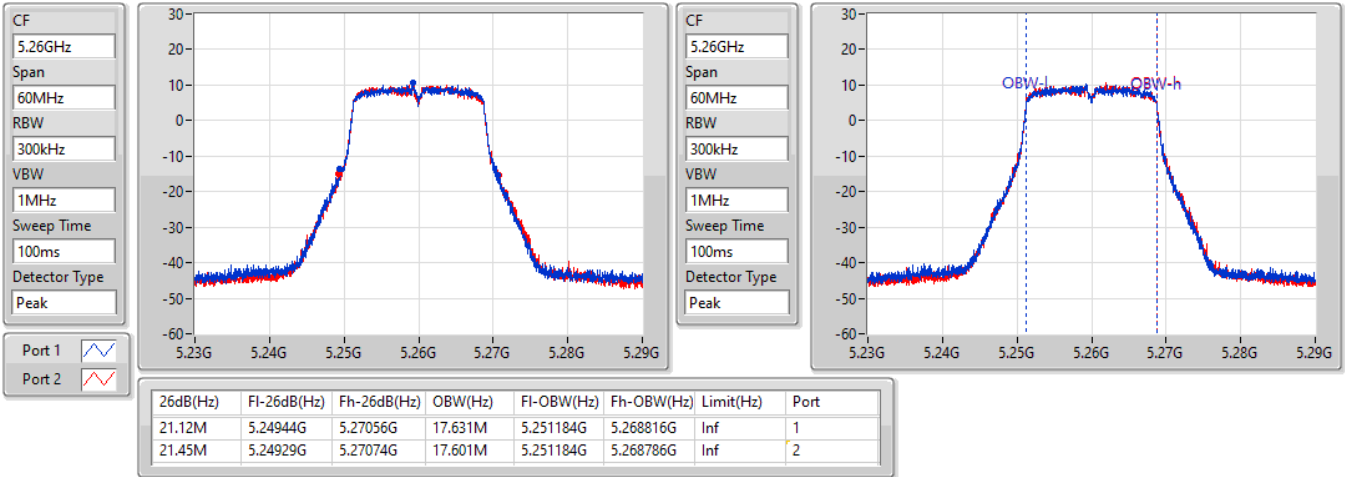


802.11n HT20_Nss1,(MCS0)_2TX

EBW

5260MHz

02/09/2022

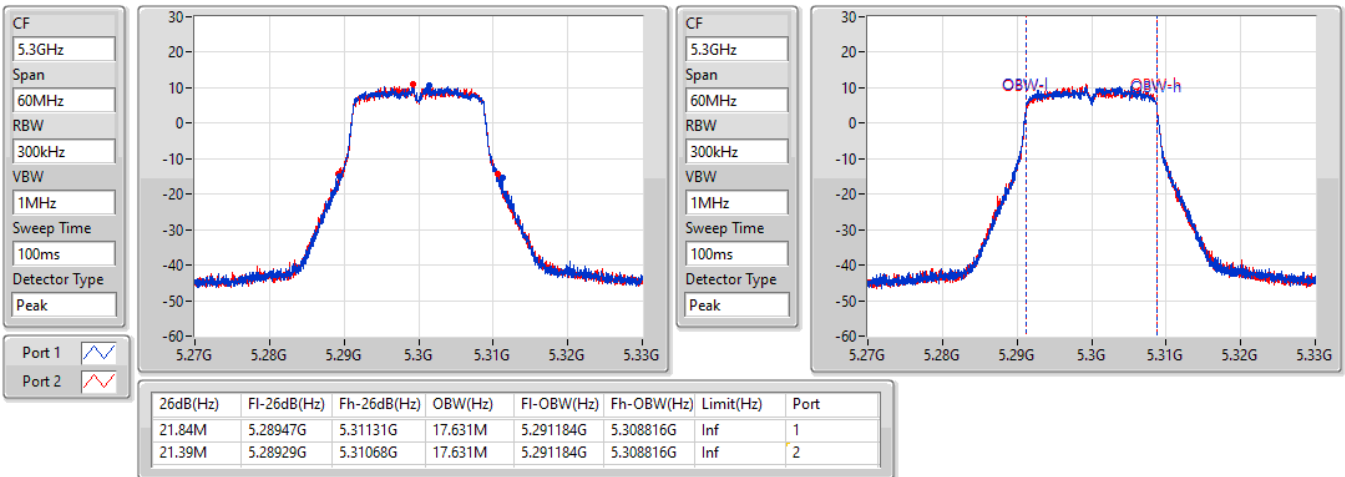


802.11n HT20_Nss1,(MCS0)_2TX

EBW

5300MHz

02/09/2022

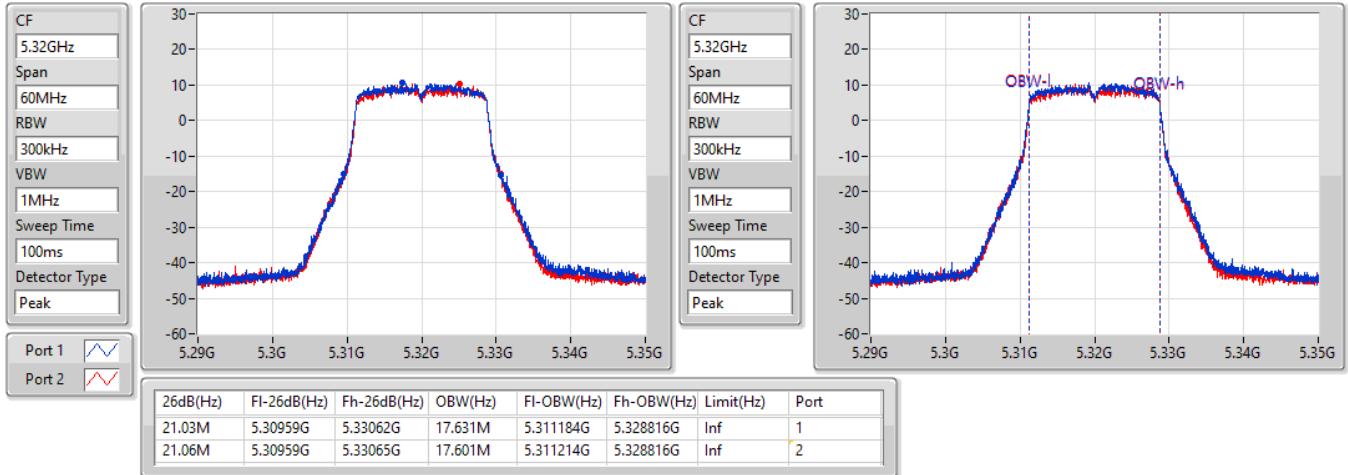


802.11n HT20_Nss1,(MCS0)_2TX

EBW

5320MHz

02/09/2022

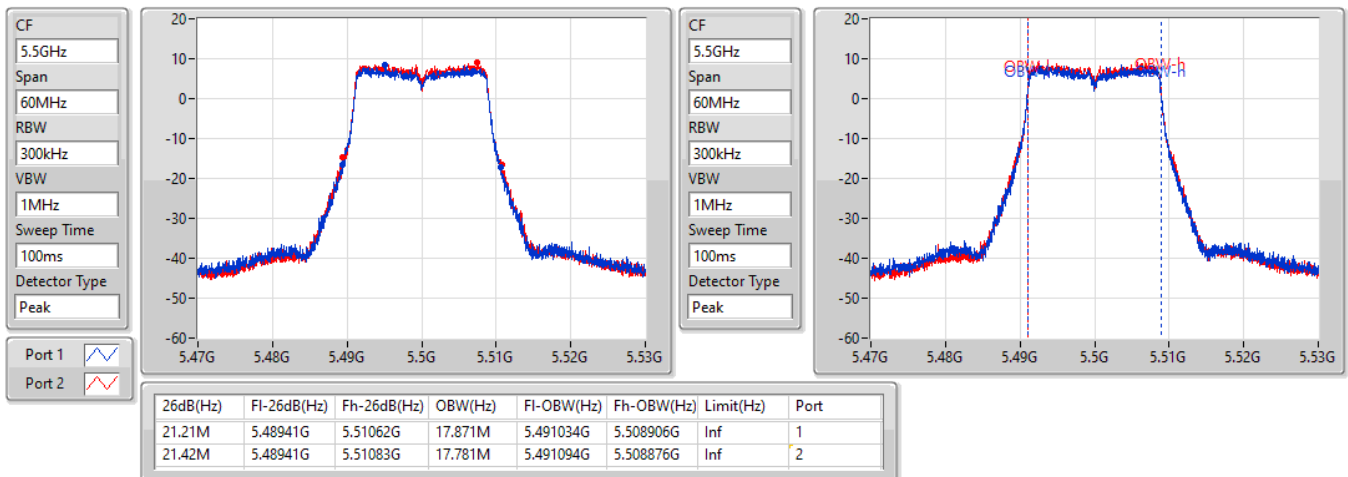


802.11n HT20_Nss1,(MCS0)_2TX

EBW

5500MHz

02/09/2022

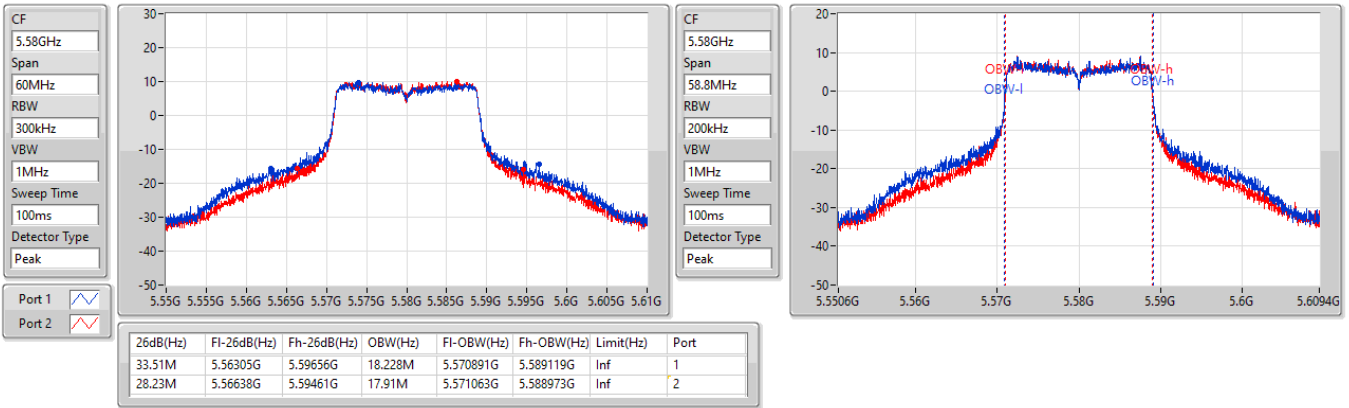


5.6G_802.11n HT20_Nss1,(MCS0)_2TX

EBW

5580MHz

17/04/2023

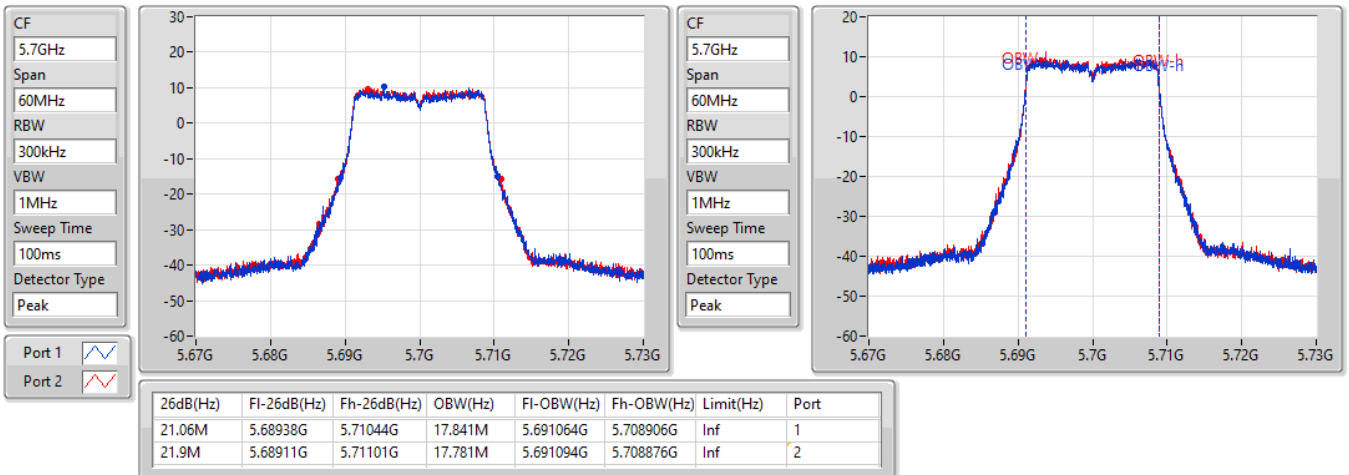


802.11n HT20_Nss1,(MCS0)_2TX

EBW

5700MHz

02/09/2022

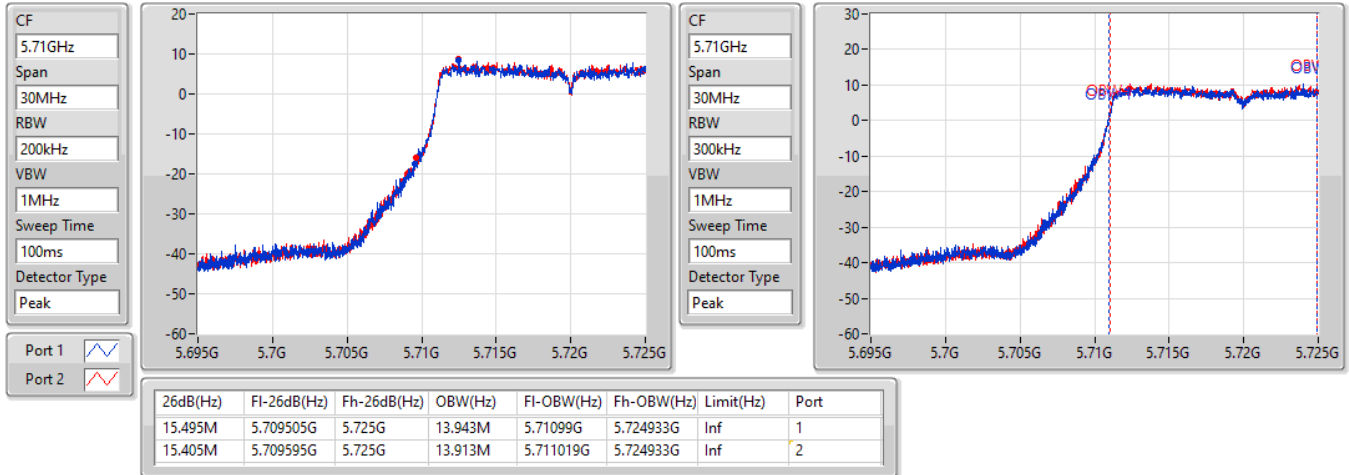


802.11n HT20_Nss1,(MCS0)_2TX

EBW

5720MHz Straddle 5.47-5.725GHz

02/09/2022

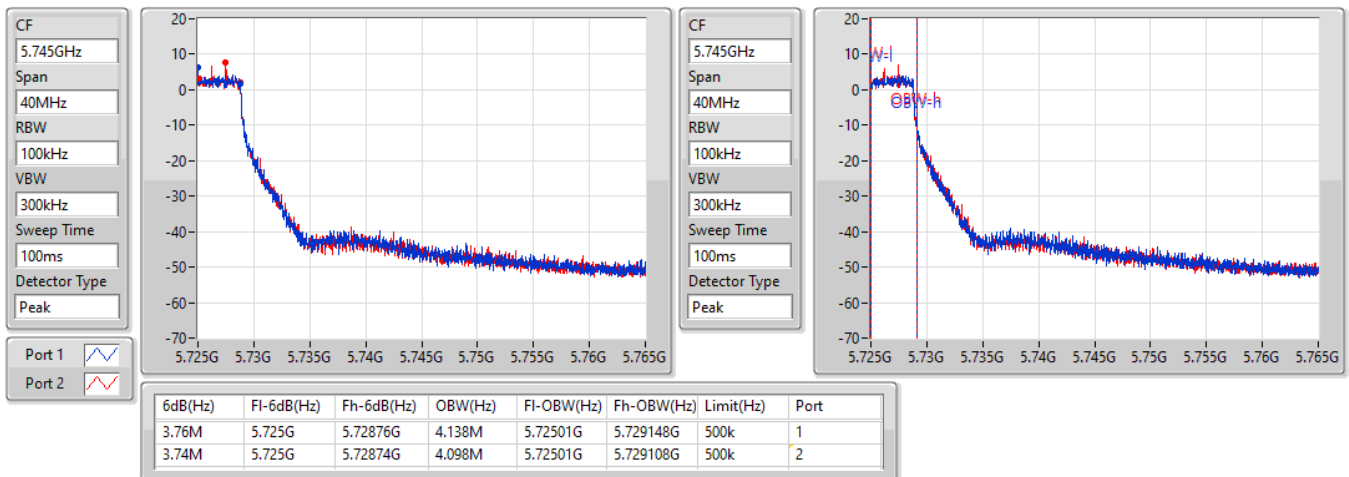


802.11n HT20_Nss1,(MCS0)_2TX

EBW

5720MHz Straddle 5.725-5.85GHz

02/09/2022

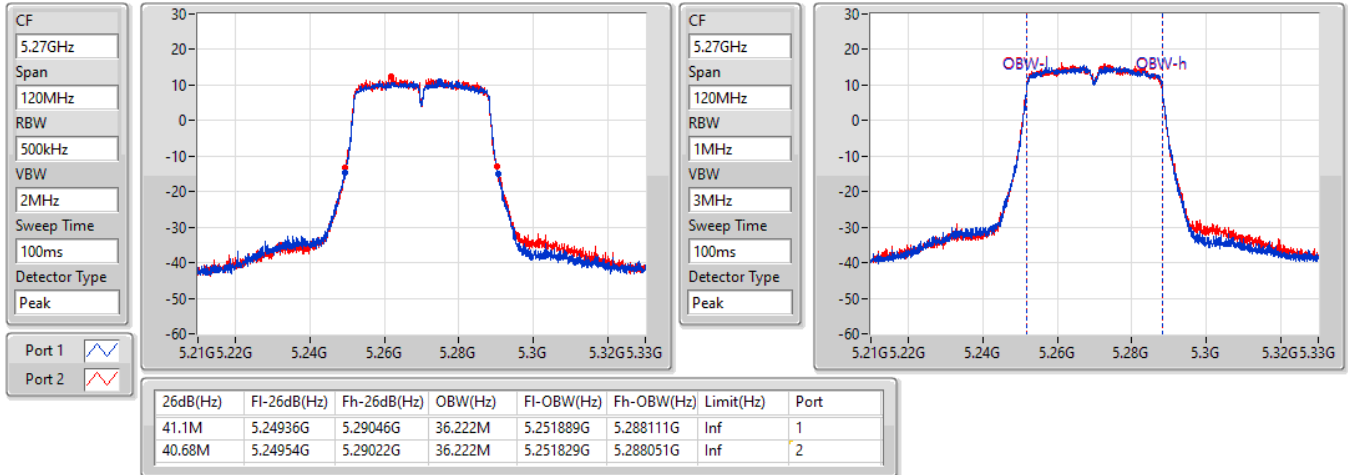


802.11n HT40_Nss1,(MCS0)_2TX

EBW

5270MHz

02/09/2022

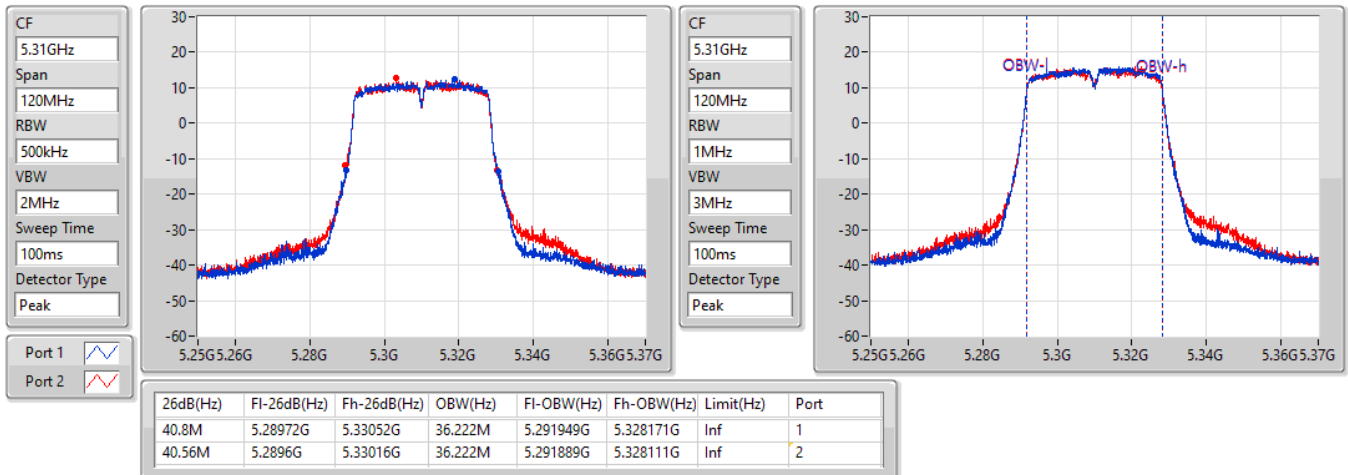


802.11n HT40_Nss1,(MCS0)_2TX

EBW

5310MHz

02/09/2022

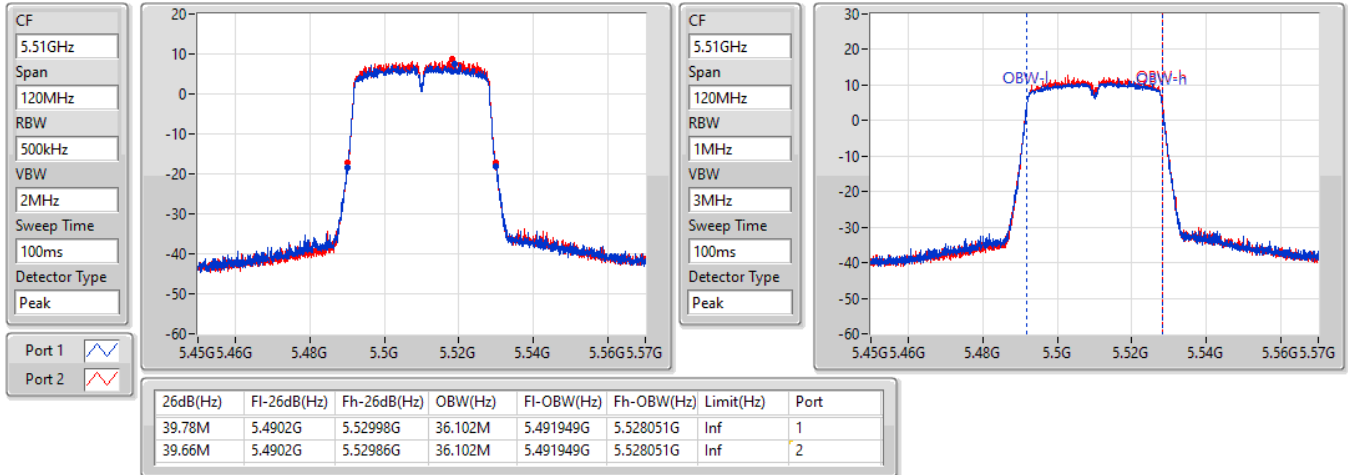


802.11n HT40_Nss1,(MCS0)_2TX

EBW

5510MHz

02/09/2022

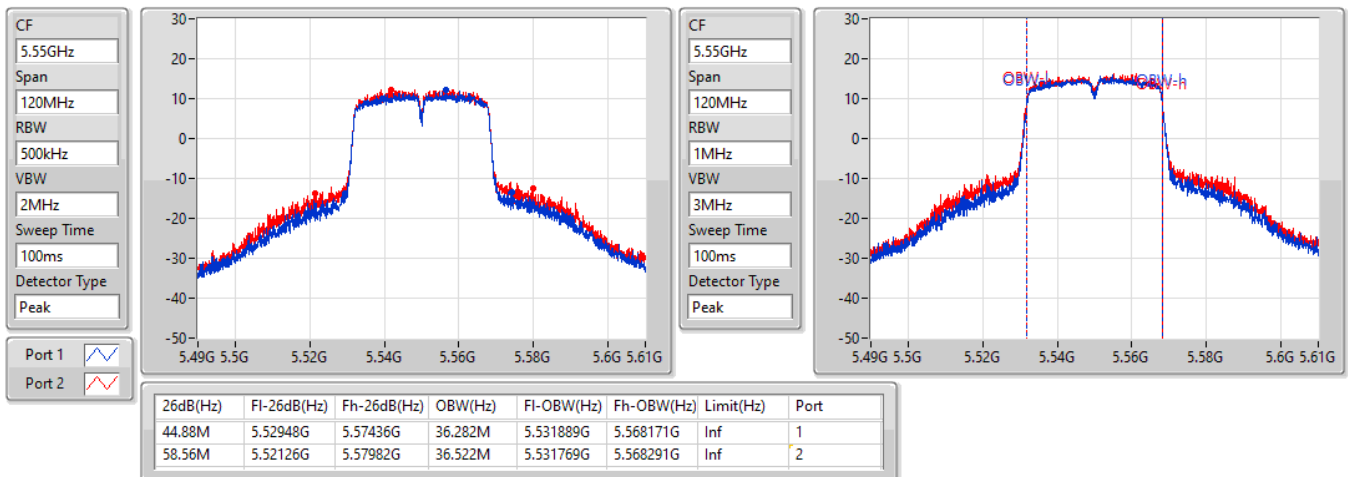


802.11n HT40_Nss1,(MCS0)_2TX

EBW

5550MHz

02/09/2022

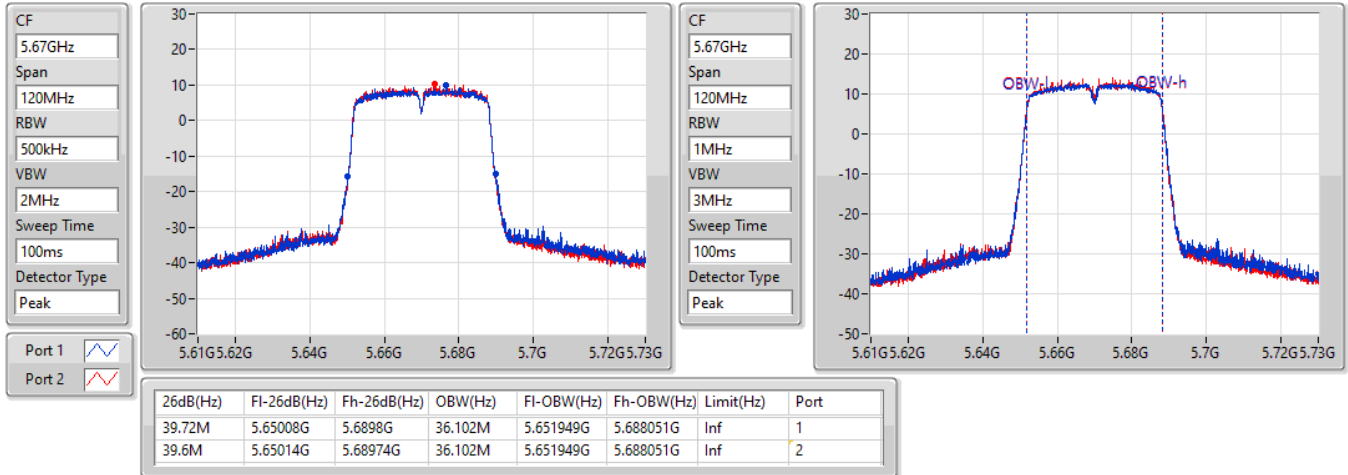


802.11n HT40_Nss1,(MCS0)_2TX

EBW

5670MHz

02/09/2022

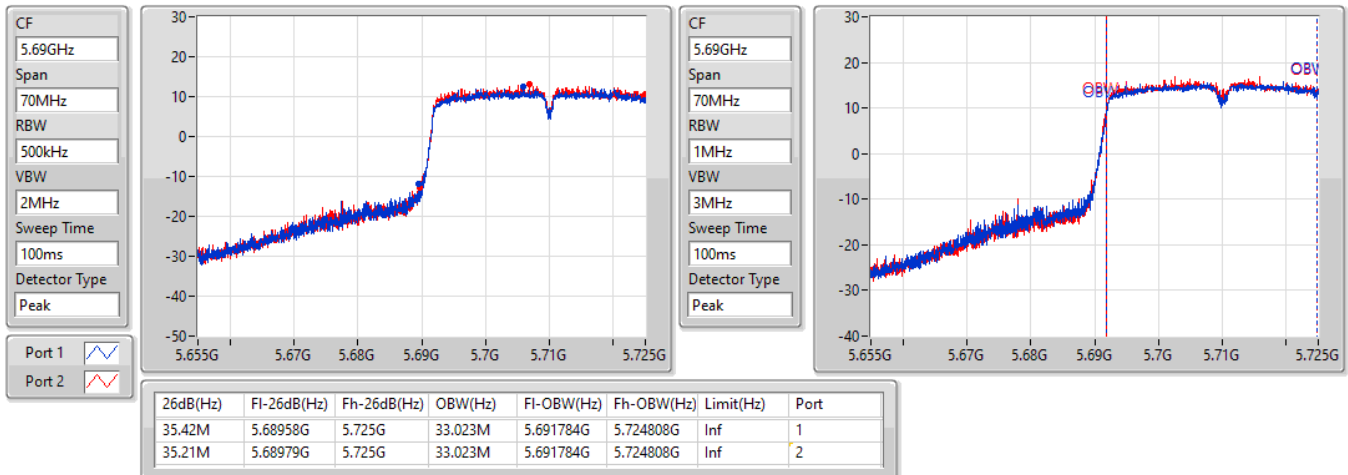


802.11n HT40_Nss1,(MCS0)_2TX

EBW

5710MHz Straddle 5.47-5.725GHz

02/09/2022

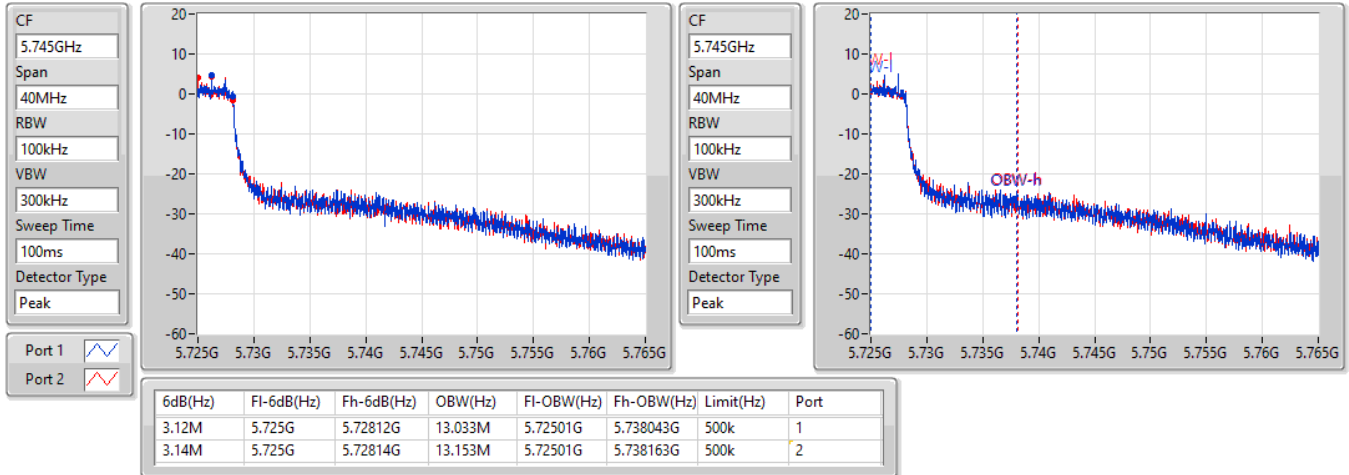


802.11n HT40_Nss1,(MCS0)_2TX

EBW

5710MHz Straddle 5.725-5.85GHz

02/09/2022

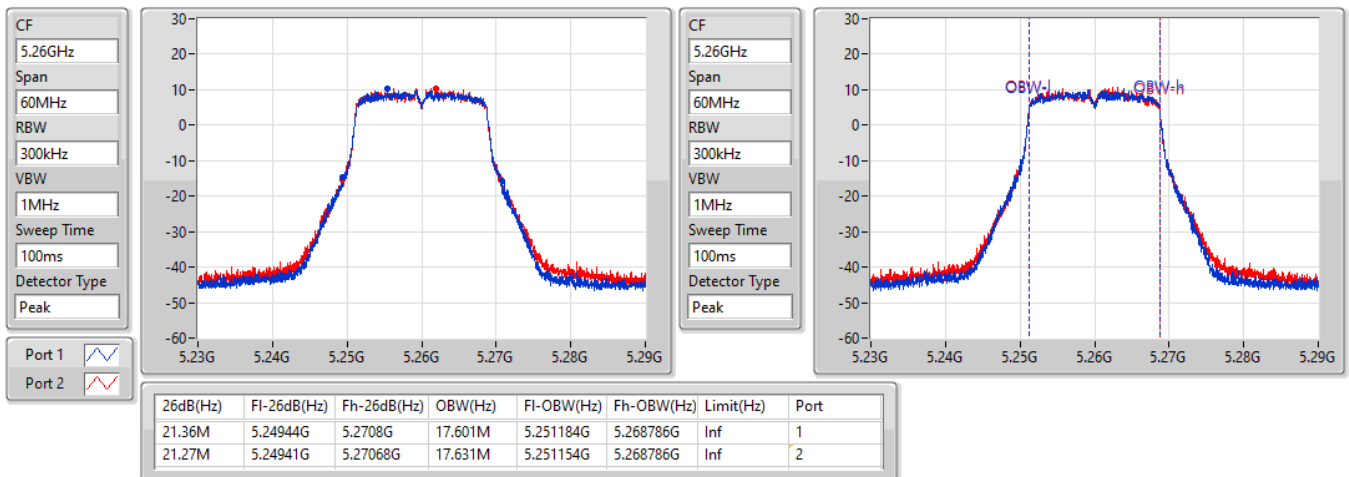


802.11ac VHT20_Nss1,(MCS0)_2TX

EBW

5260MHz

02/09/2022

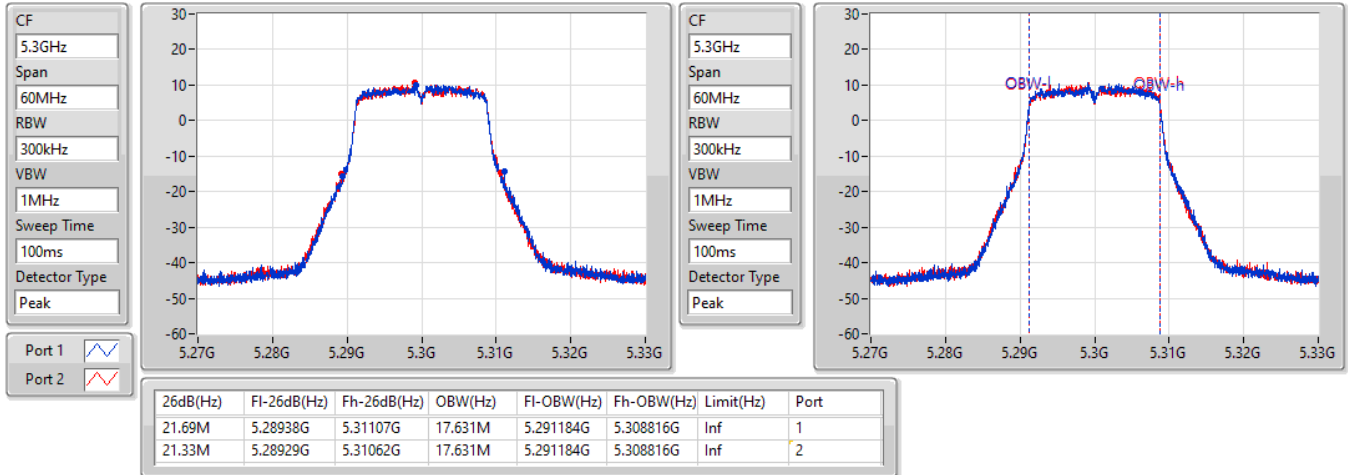


802.11ac VHT20_Nss1,(MCS0)_2TX

EBW

5300MHz

02/09/2022

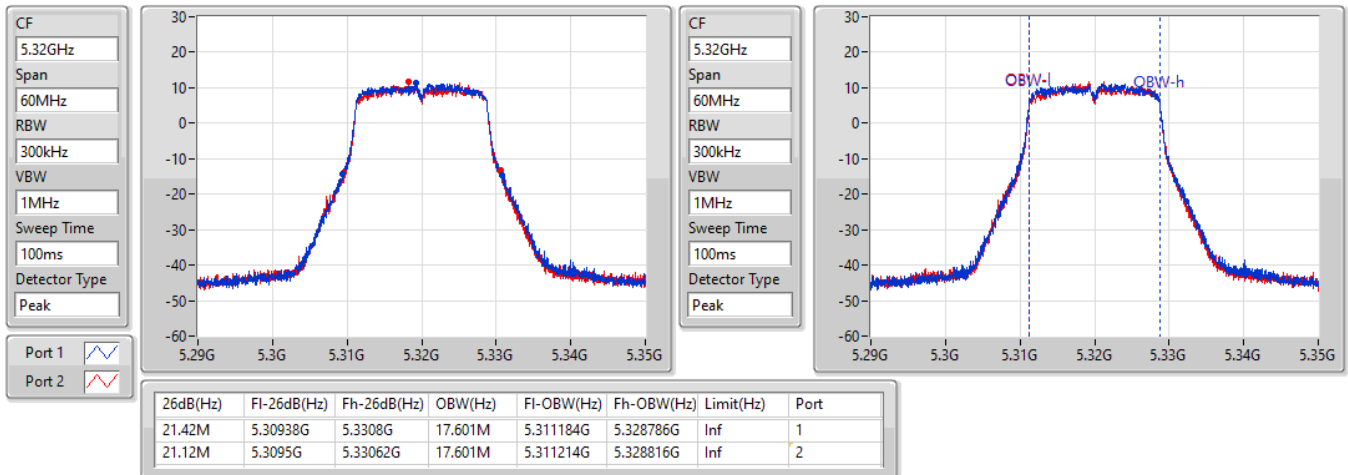


802.11ac VHT20_Nss1,(MCS0)_2TX

EBW

5320MHz

02/09/2022

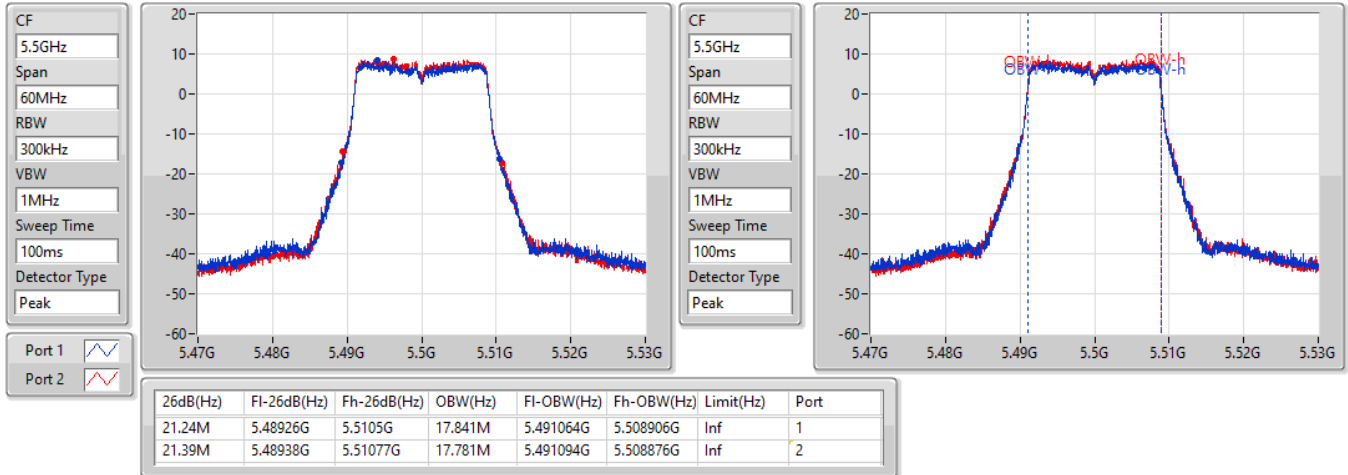


802.11ac VHT20_Nss1,(MCS0)_2TX

EBW

5500MHz

02/09/2022

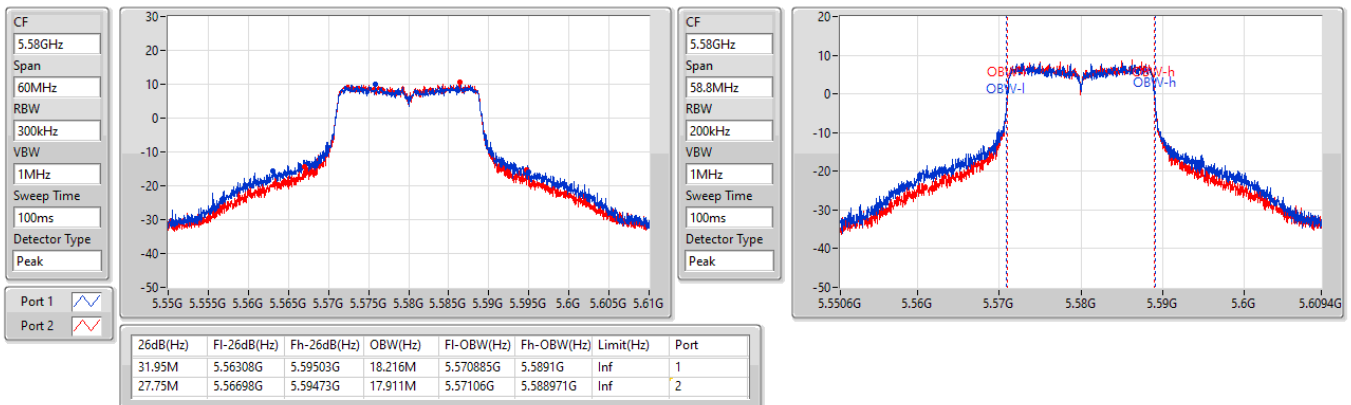


5.6G_802.11ac VHT20_Nss1,(MCS0)_2TX

EBW

5580MHz

17/04/2023

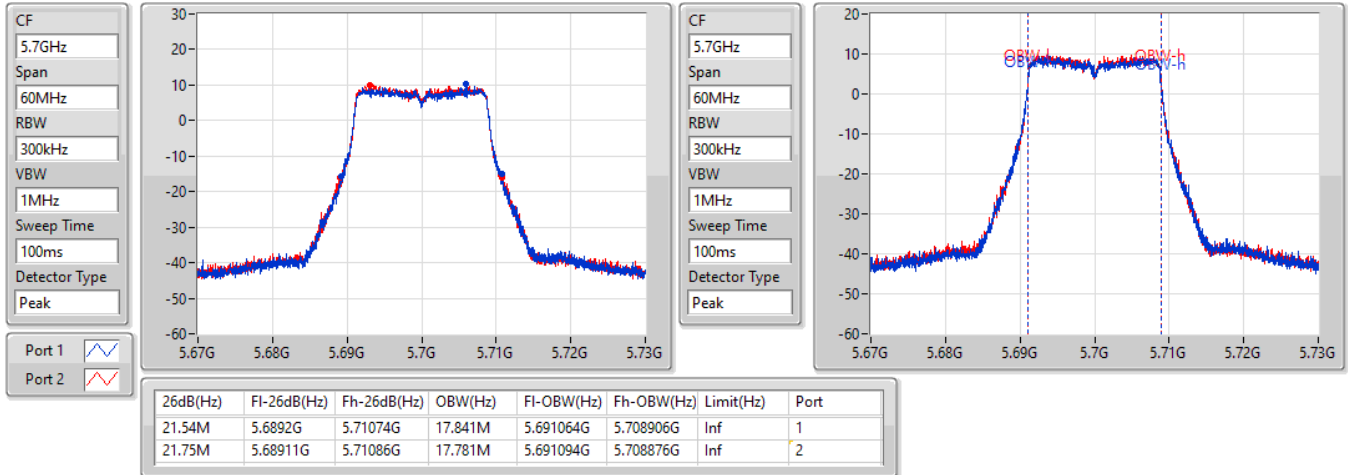


802.11ac VHT20_Nss1,(MCS0)_2TX

EBW

5700MHz

02/09/2022

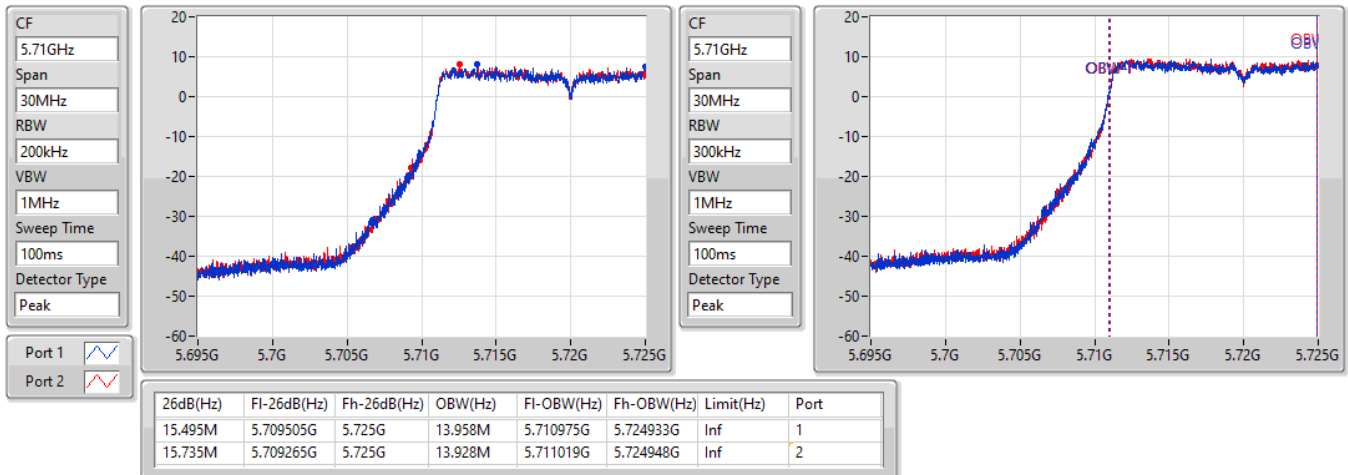


802.11ac VHT20_Nss1,(MCS0)_2TX

EBW

5720MHz Straddle 5.47-5.725GHz

02/09/2022

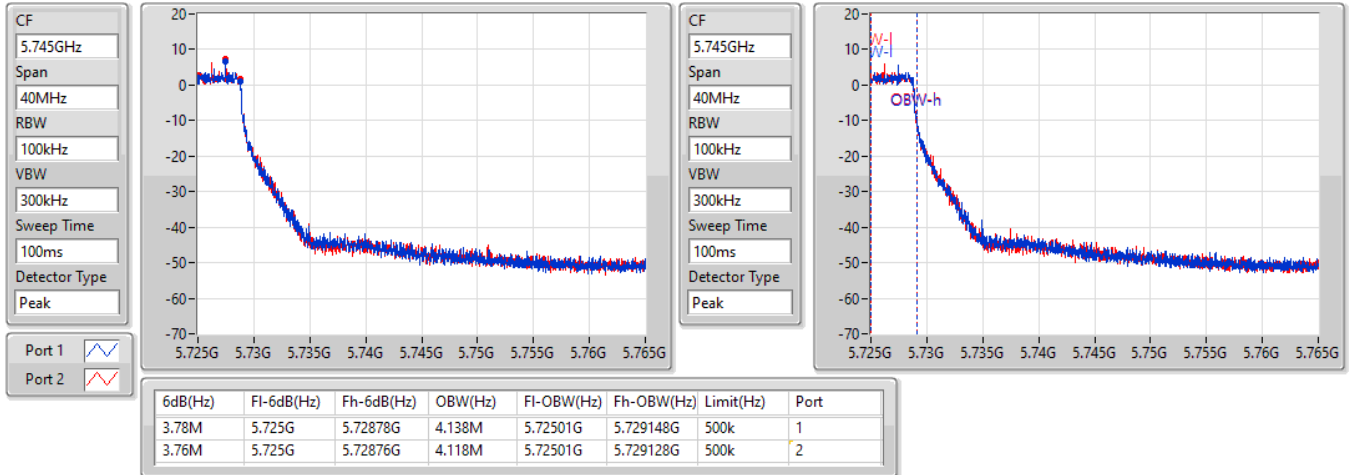


802.11ac VHT20_Nss1,(MCS0)_2TX

EBW

5720MHz Straddle 5.725-5.85GHz

02/09/2022

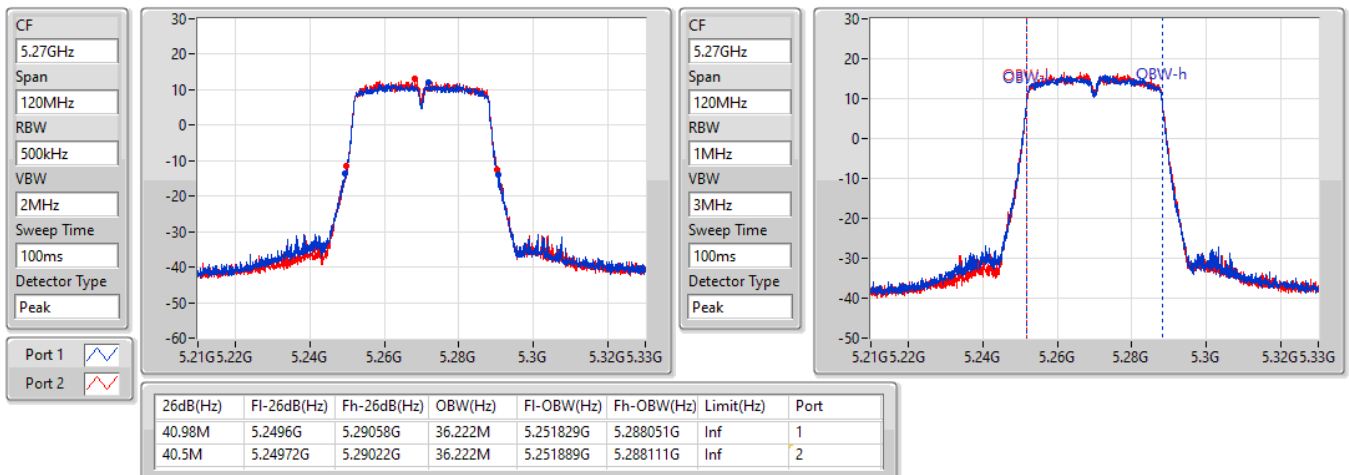


802.11ac VHT40_Nss1,(MCS0)_2TX

EBW

5270MHz

02/09/2022

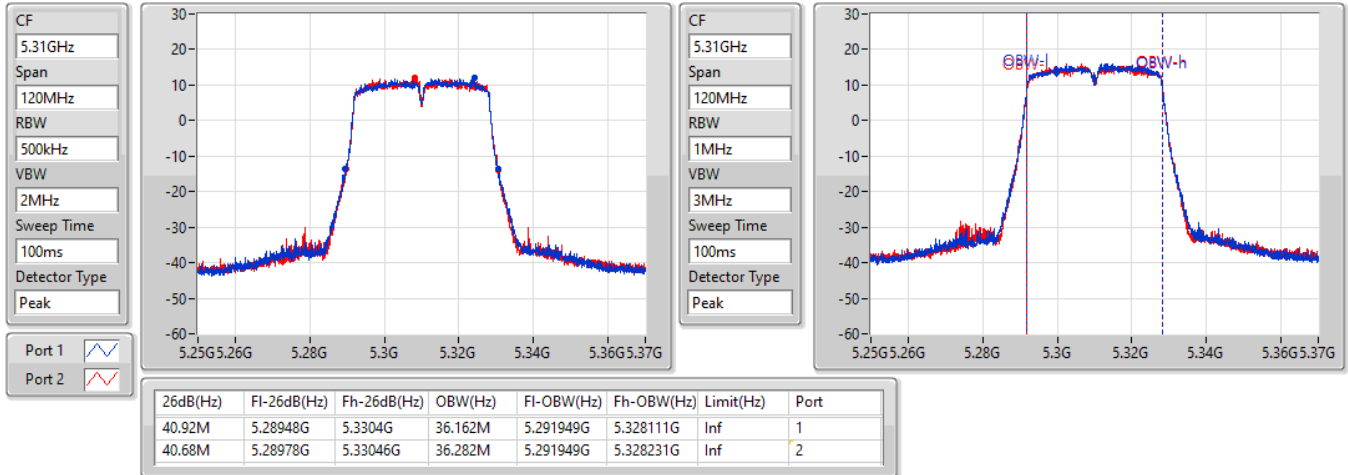


802.11ac VHT40_Nss1,(MCS0)_2TX

EBW

5310MHz

02/09/2022

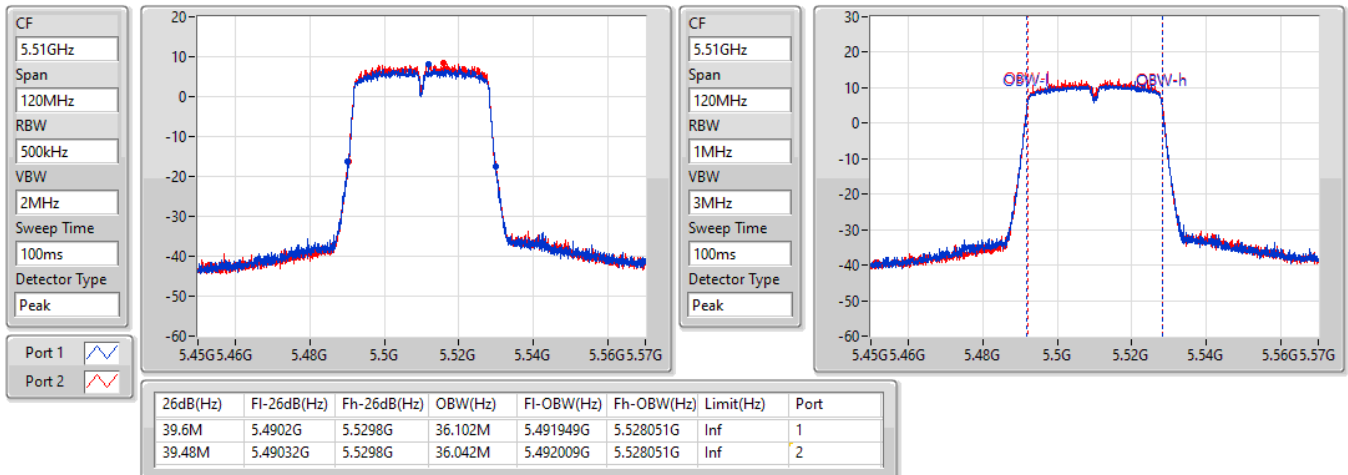


802.11ac VHT40_Nss1,(MCS0)_2TX

EBW

5510MHz

02/09/2022

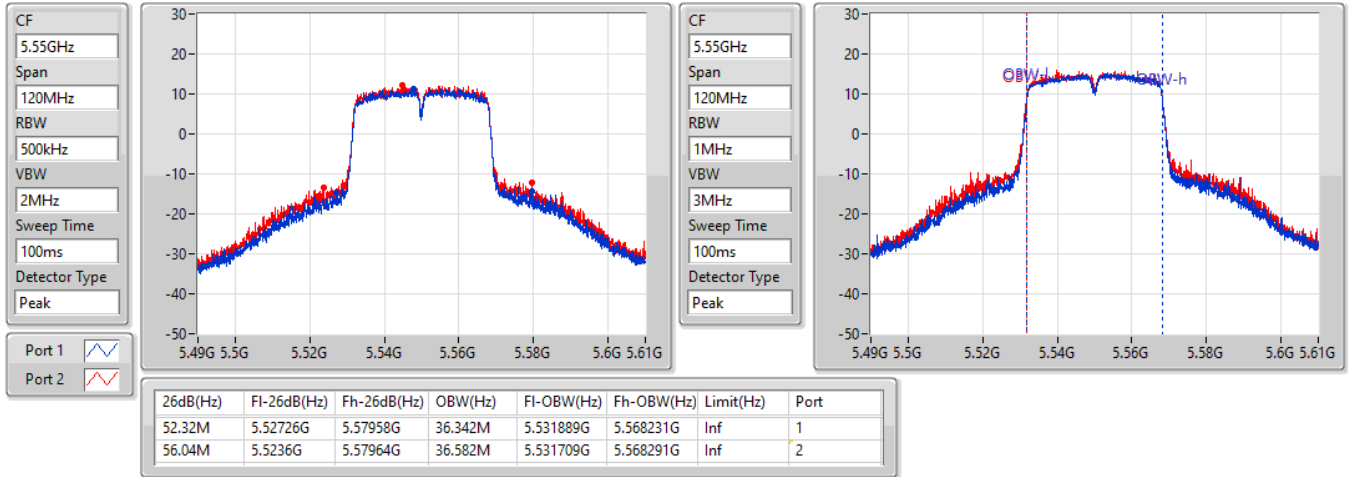


802.11ac VHT40_Nss1,(MCS0)_2TX

EBW

5550MHz

02/09/2022

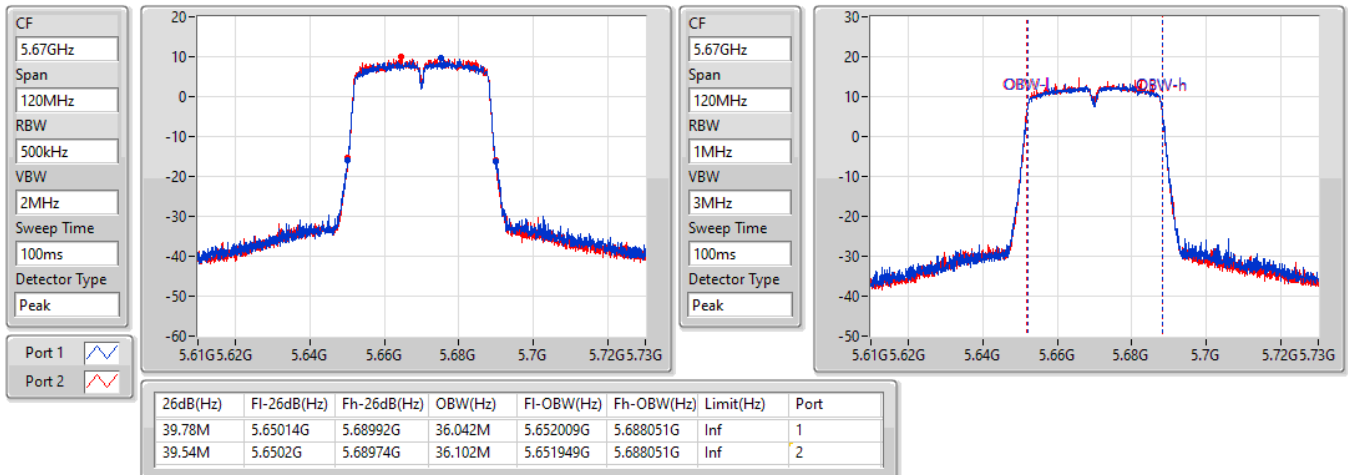


802.11ac VHT40_Nss1,(MCS0)_2TX

EBW

5670MHz

02/09/2022

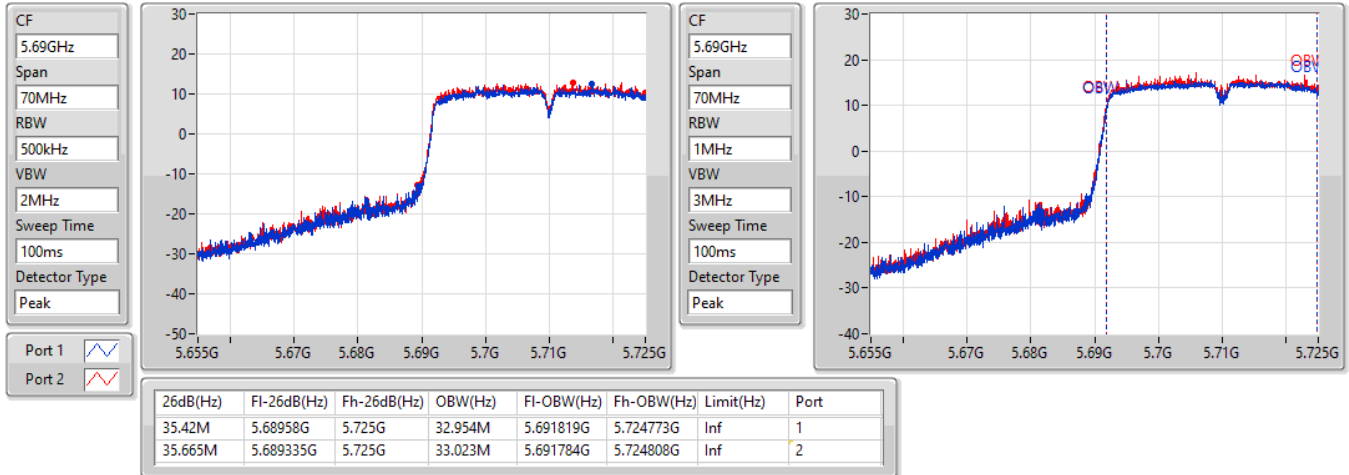


802.11ac VHT40_Nss1,(MCS0)_2TX

EBW

5710MHz Straddle 5.47-5.725GHz

02/09/2022

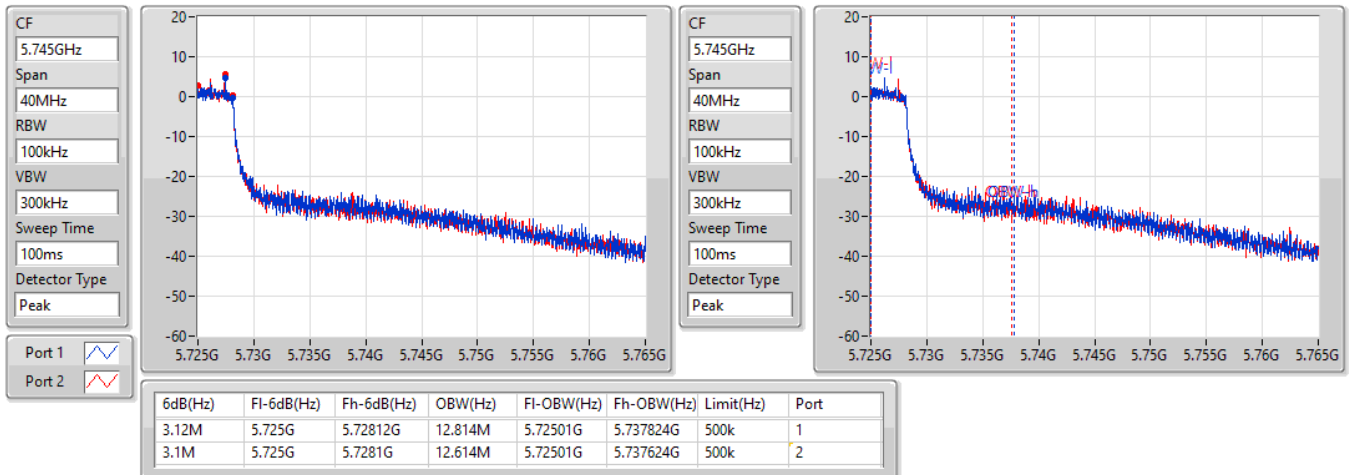


802.11ac VHT40_Nss1,(MCS0)_2TX

EBW

5710MHz Straddle 5.725-5.85GHz

02/09/2022

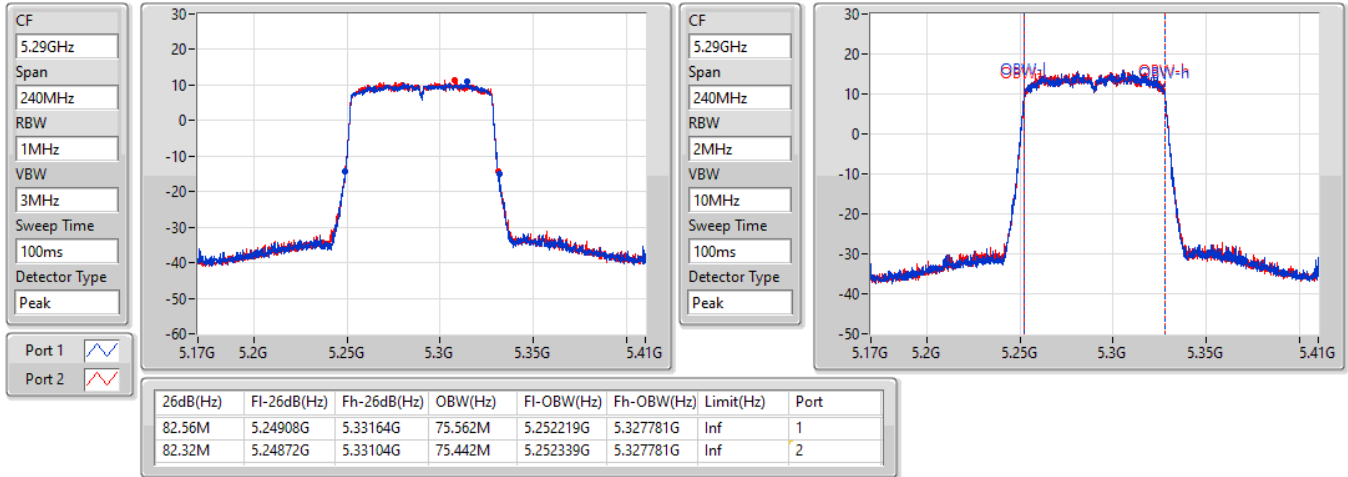


802.11ac VHT80_Nss1,(MCS0)_2TX

EBW

5290MHz

02/09/2022

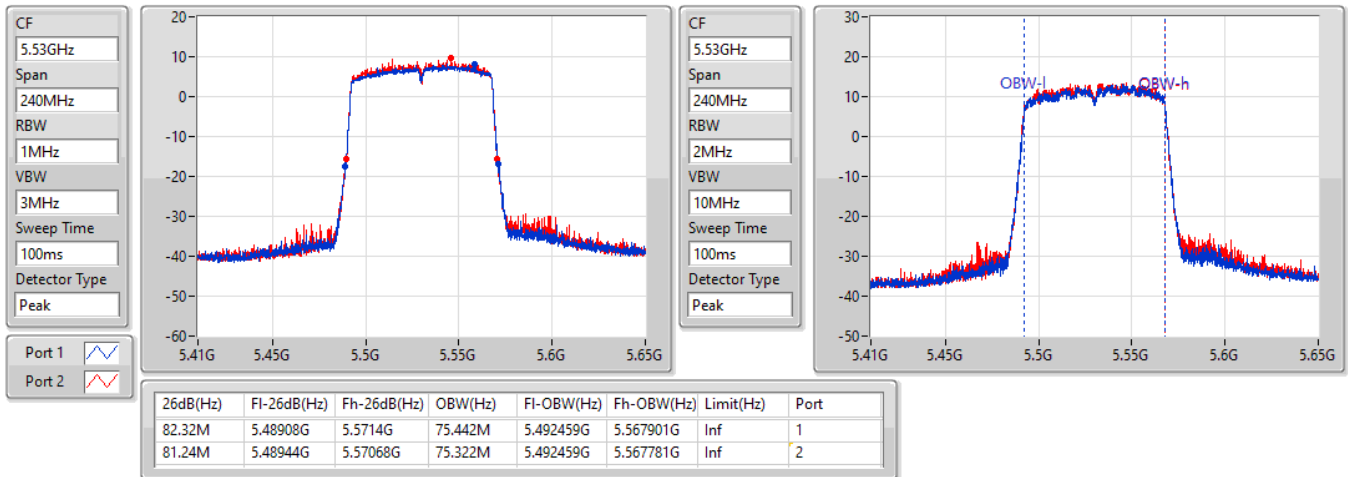


802.11ac VHT80_Nss1,(MCS0)_2TX

EBW

5530MHz

02/09/2022

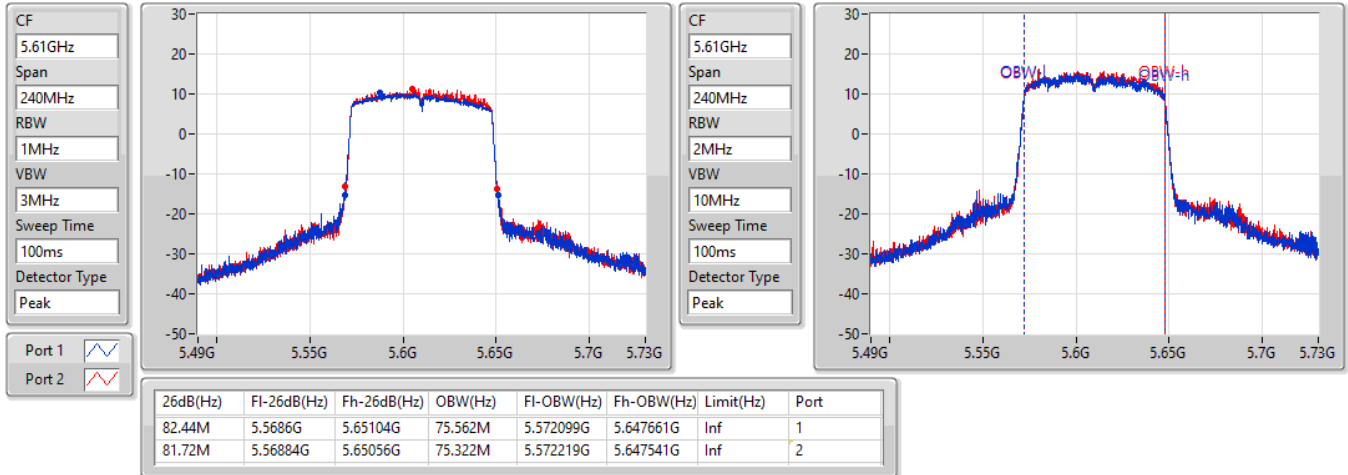


802.11ac VHT80_Nss1,(MCS0)_2TX

EBW

5610MHz

02/09/2022

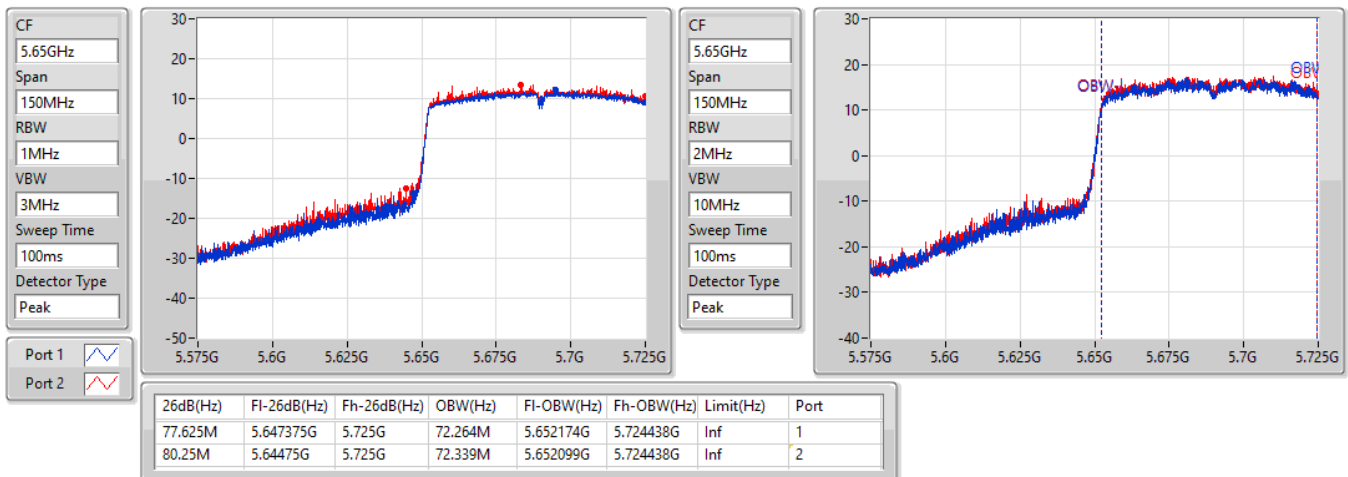


802.11ac VHT80_Nss1,(MCS0)_2TX

EBW

5690MHz Straddle 5.47-5.725GHz

02/09/2022

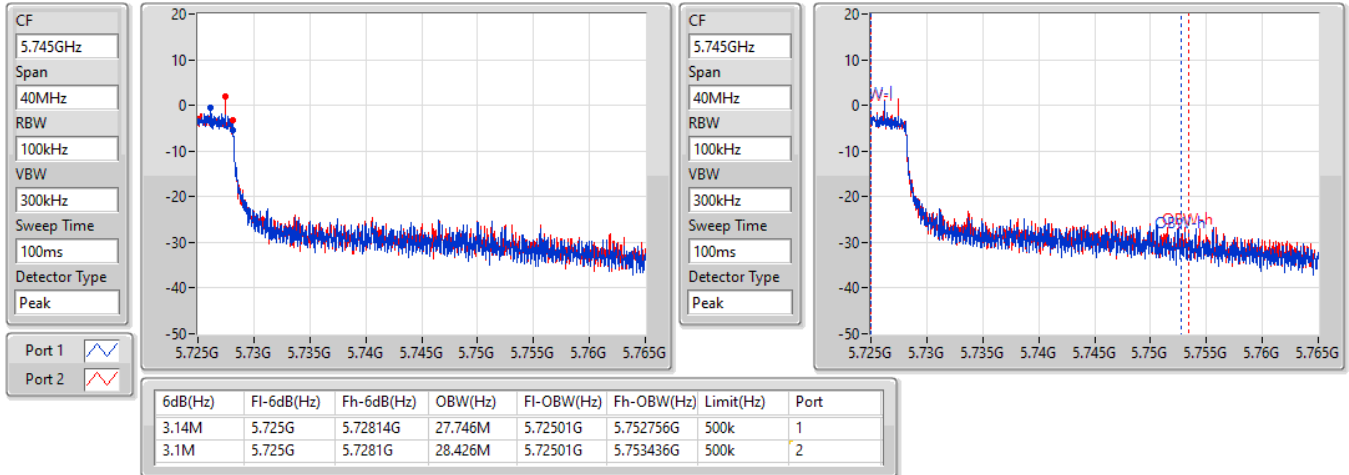


802.11ac VHT80_Nss1,(MCS0)_2TX

EBW

5690MHz Straddle 5.725-5.85GHz

02/09/2022

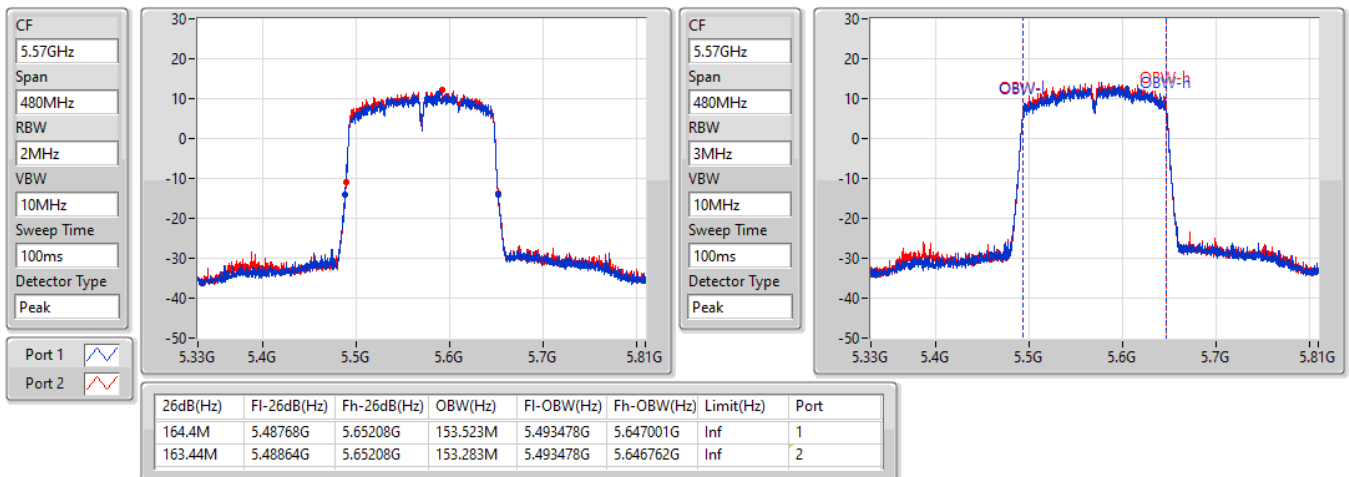


802.11ac VHT160_Nss1,(MCS0)_2TX

EBW

5570MHz

02/09/2022

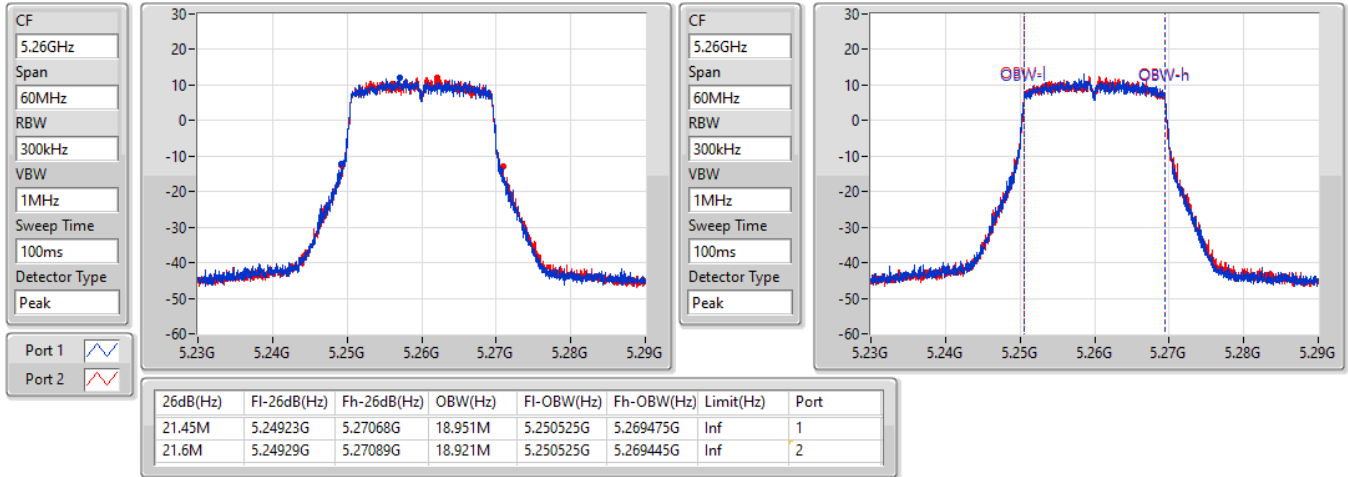


802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

5260MHz

02/09/2022

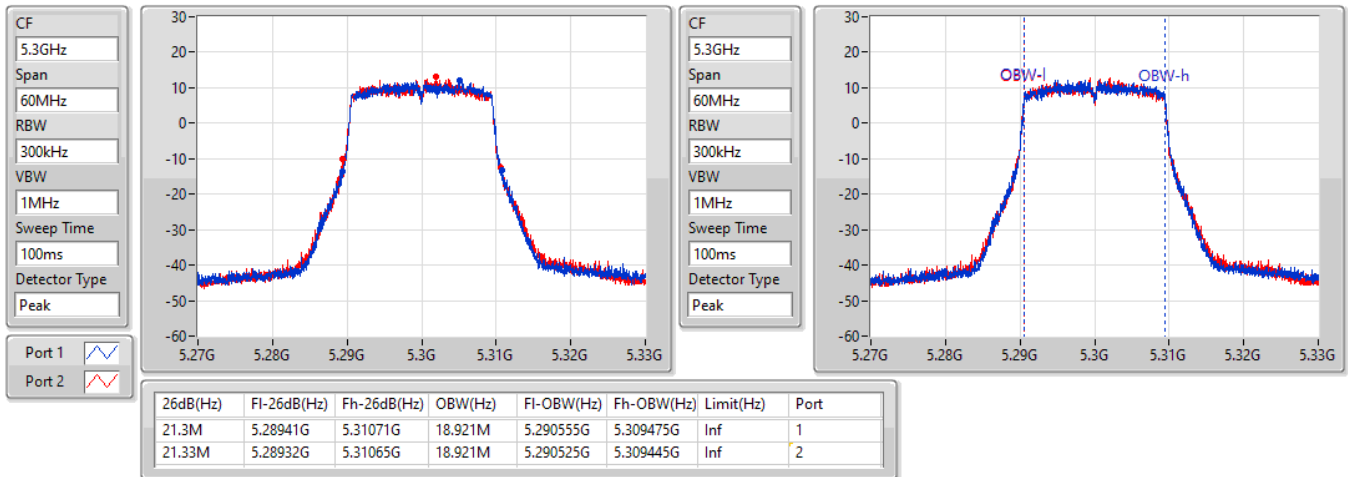


802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

5300MHz

02/09/2022

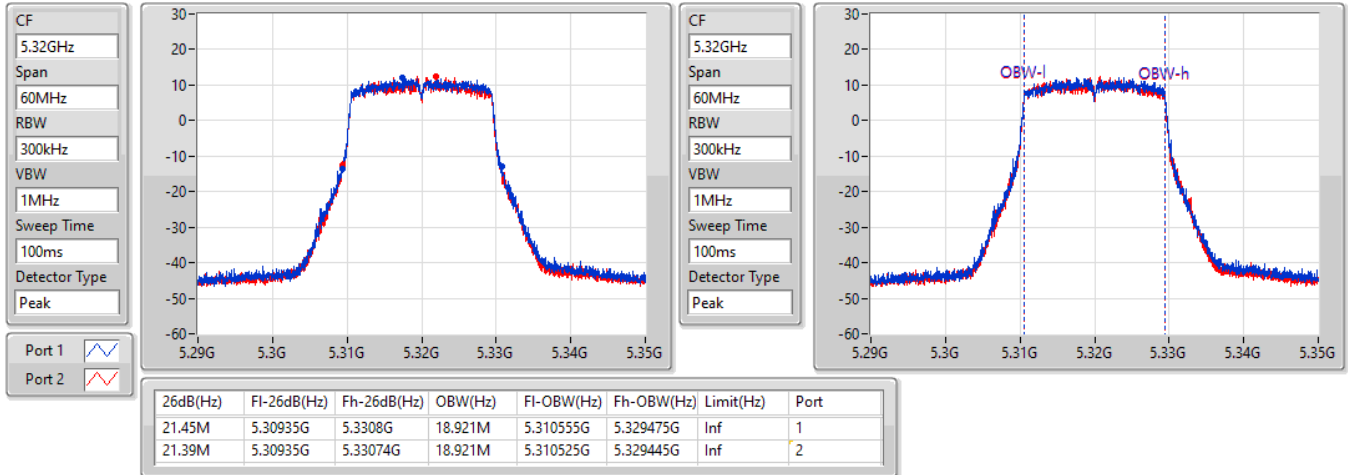


802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

5320MHz

02/09/2022

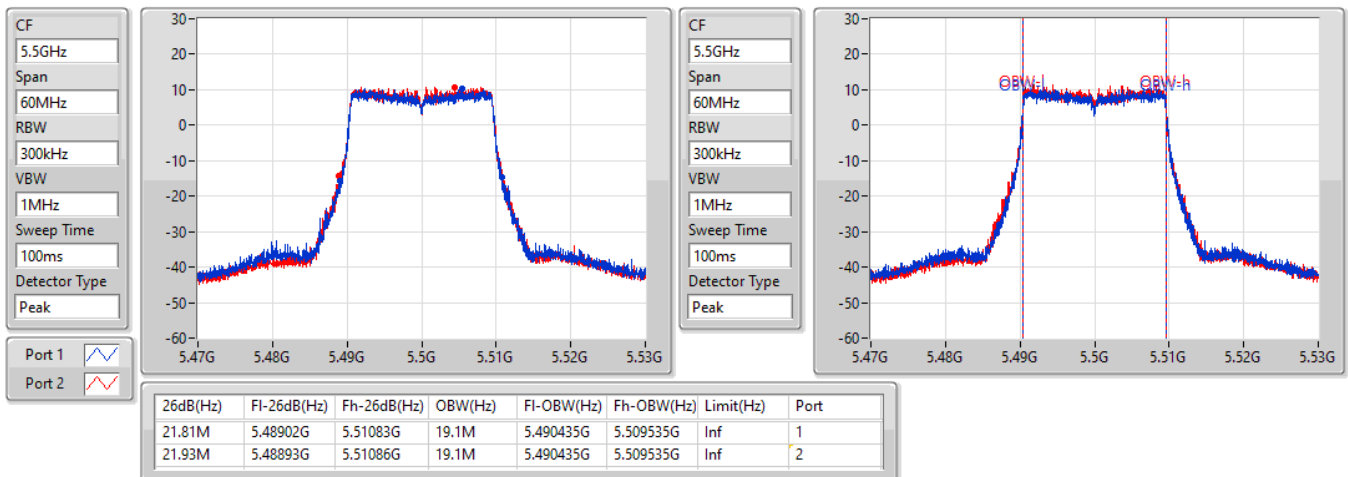


802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

5500MHz

02/09/2022

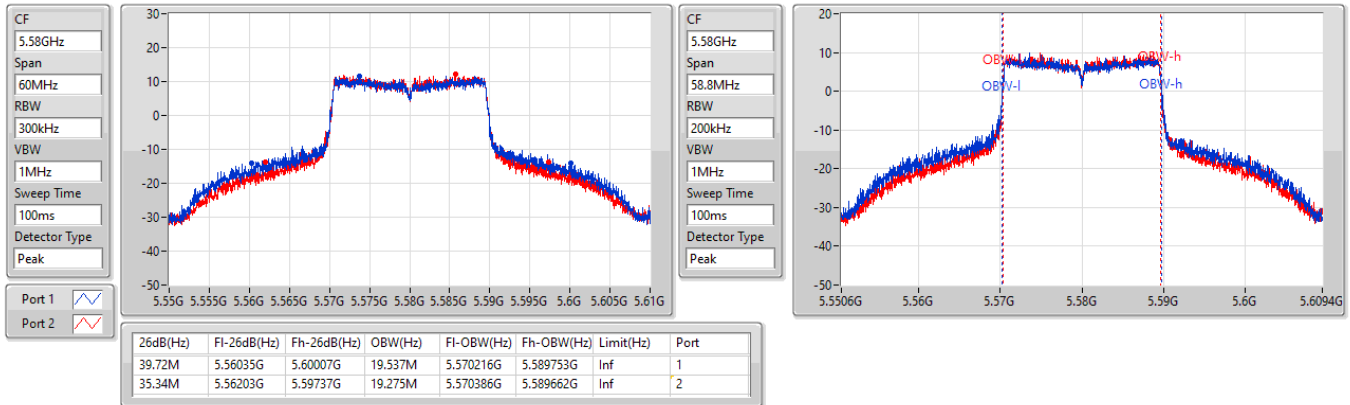


5.6G_802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

5580MHz

17/04/2023

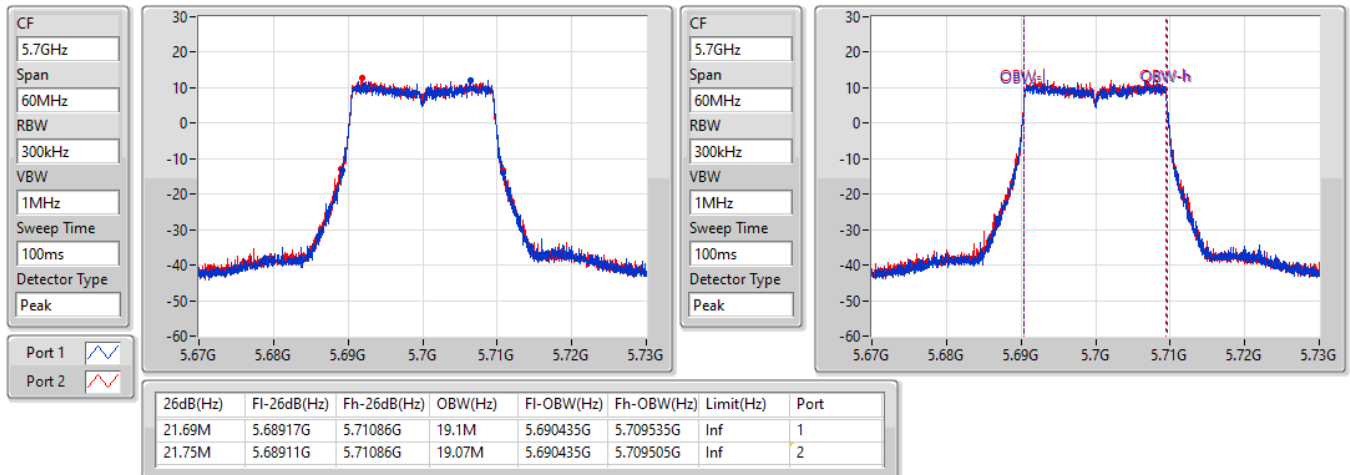


802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

5700MHz

02/09/2022

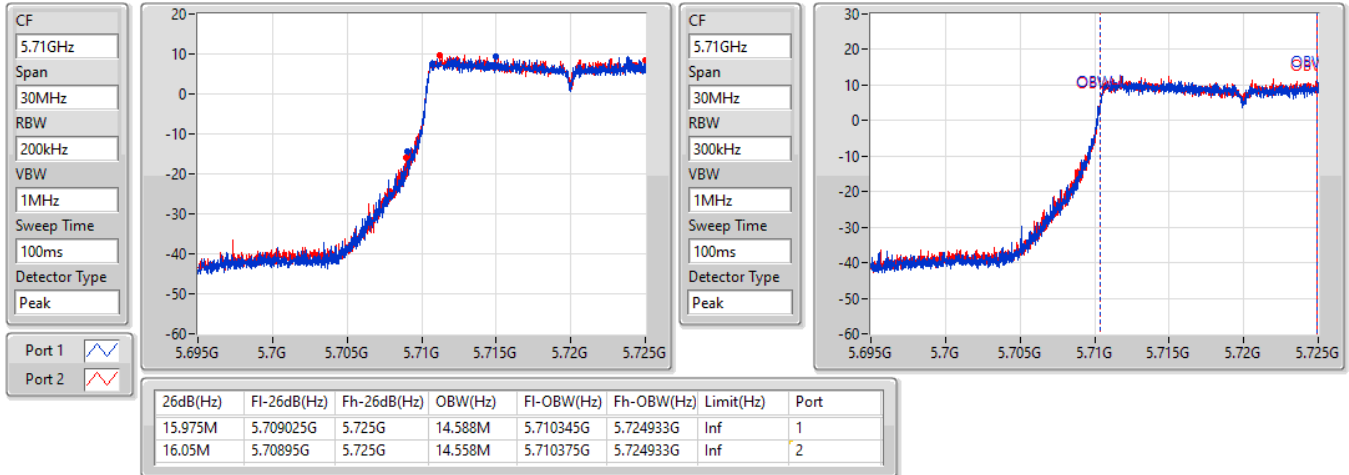


802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

5720MHz Straddle 5.47-5.725GHz

02/09/2022

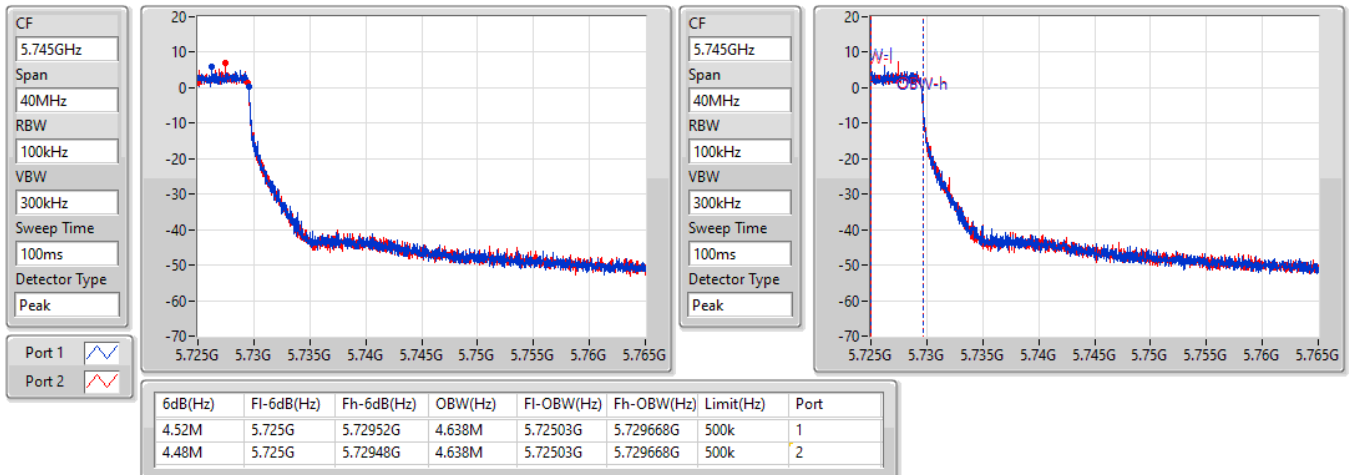


802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

5720MHz Straddle 5.725-5.85GHz

02/09/2022

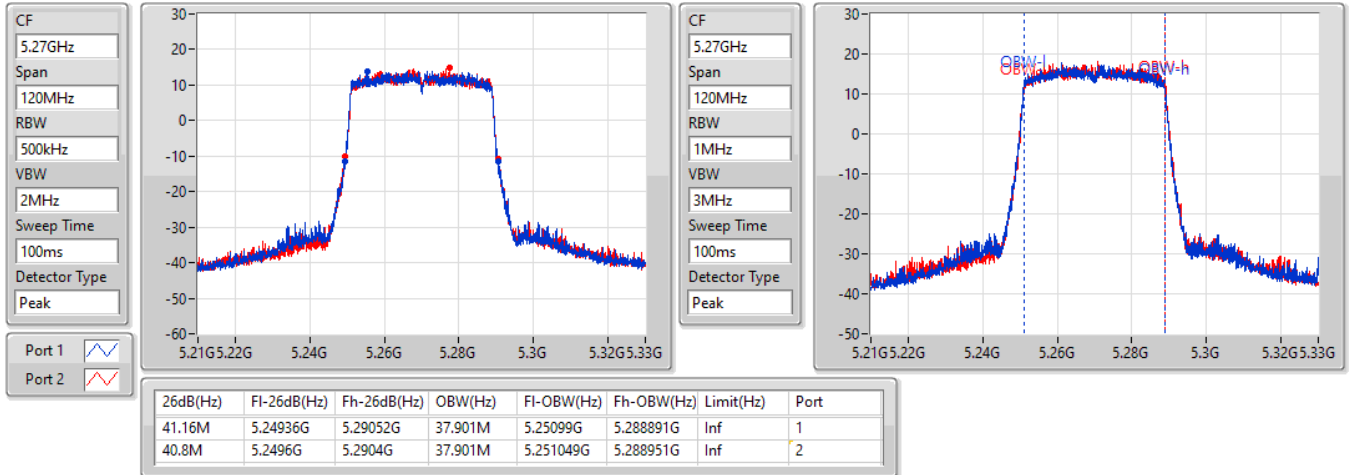


802.11ax HEW40_Nss1,(MCS0)_2TX

EBW

5270MHz

02/09/2022

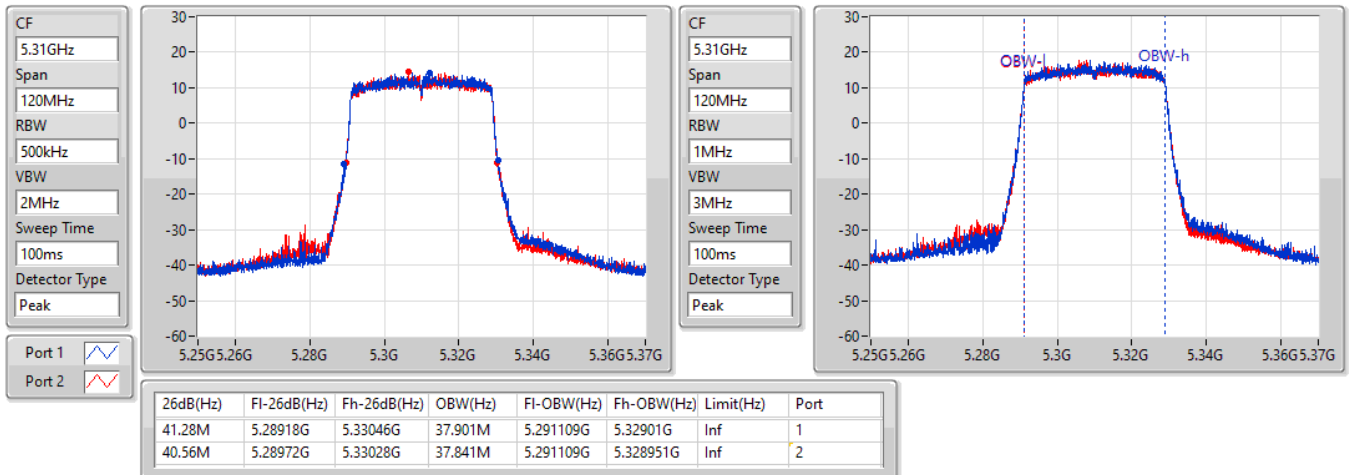


802.11ax HEW40_Nss1,(MCS0)_2TX

EBW

5310MHz

02/09/2022

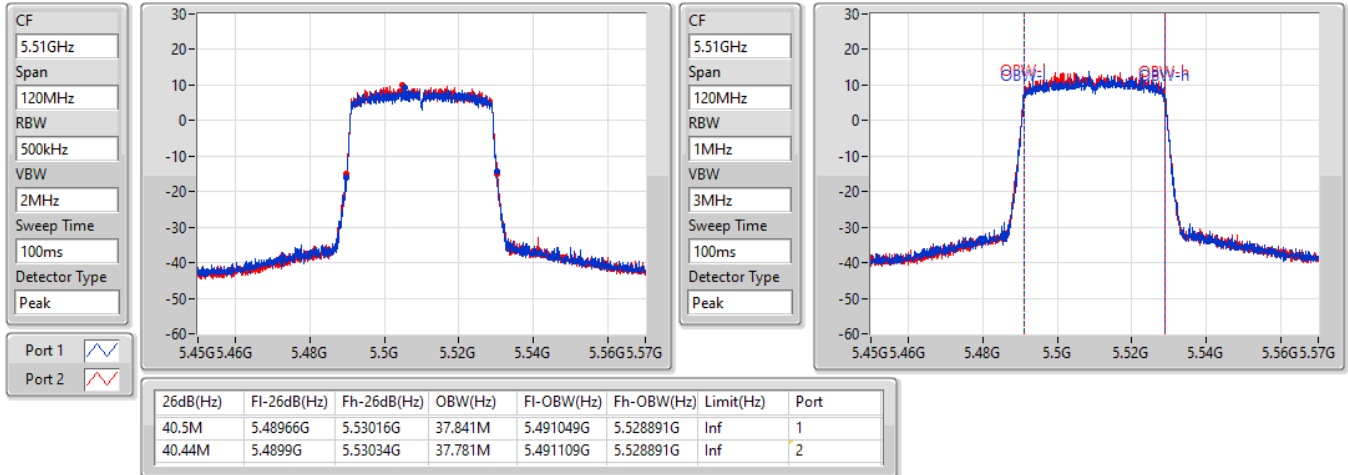


802.11ax HEW40_Nss1,(MCS0)_2TX

EBW

5510MHz

02/09/2022

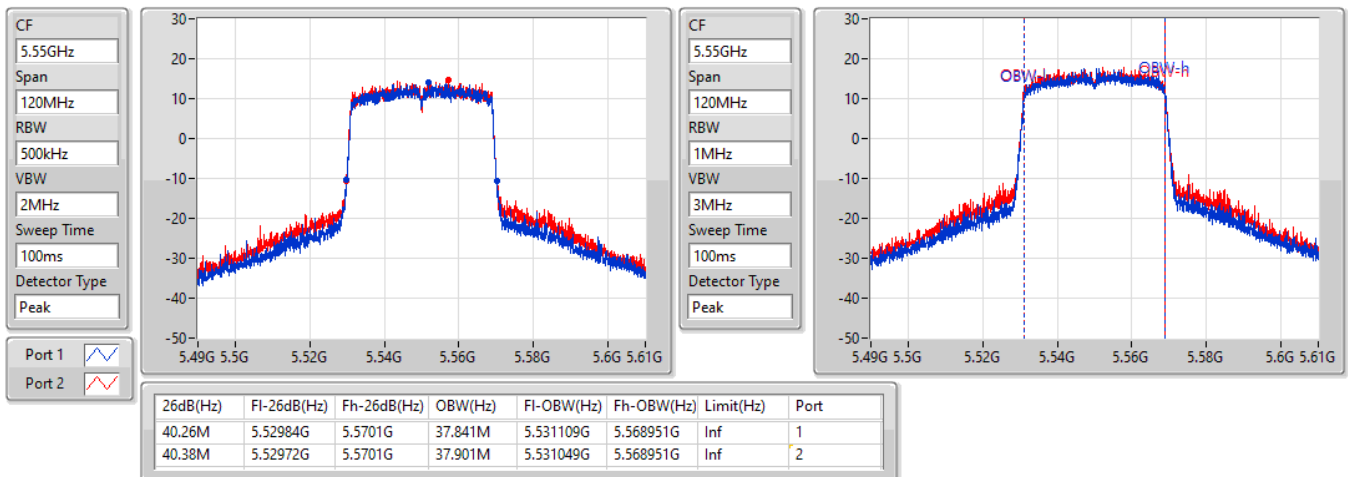


802.11ax HEW40_Nss1,(MCS0)_2TX

EBW

5550MHz

02/09/2022

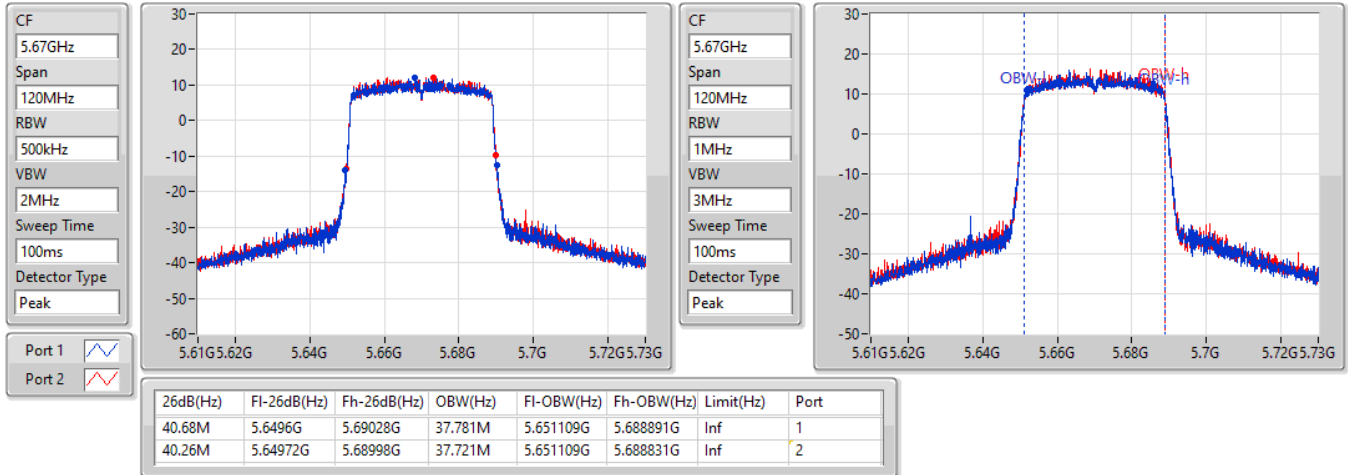


802.11ax HEW40_Nss1,(MCS0)_2TX

EBW

5670MHz

02/09/2022

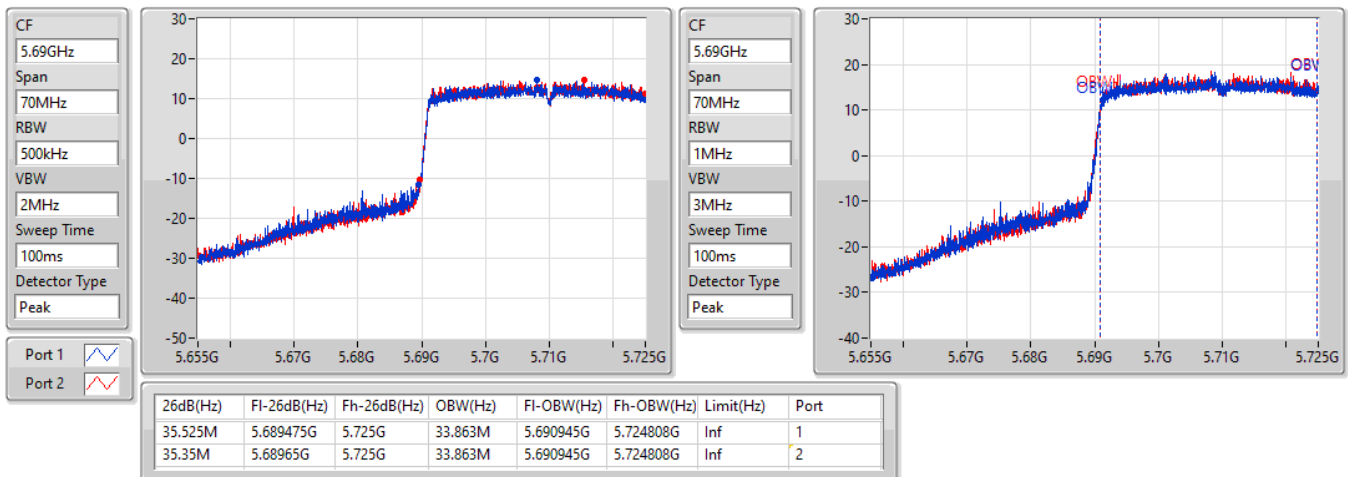


802.11ax HEW40_Nss1,(MCS0)_2TX

EBW

5710MHz Straddle 5.47-5.725GHz

02/09/2022

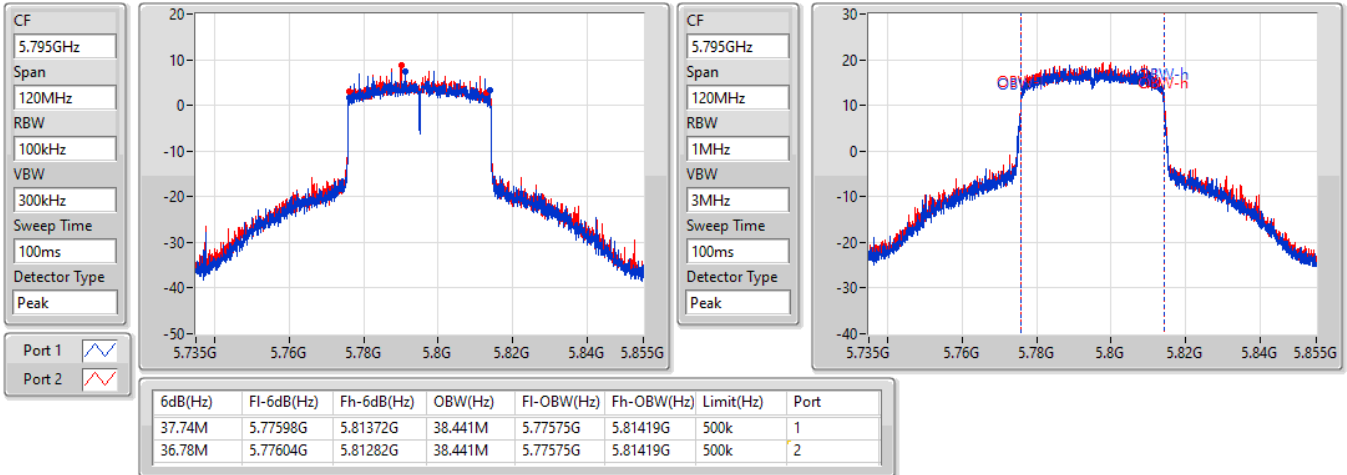


802.11ax HEW40_Nss1,(MCS0)_2TX

EBW

5795MHz

02/09/2022

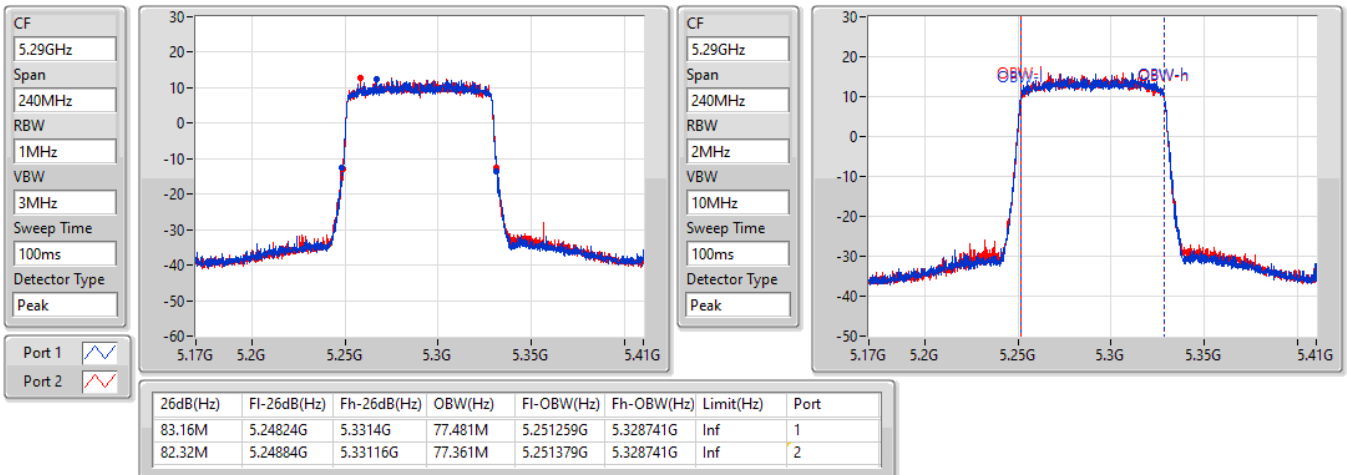


802.11ax HEW80_Nss1,(MCS0)_2TX

EBW

5290MHz

02/09/2022

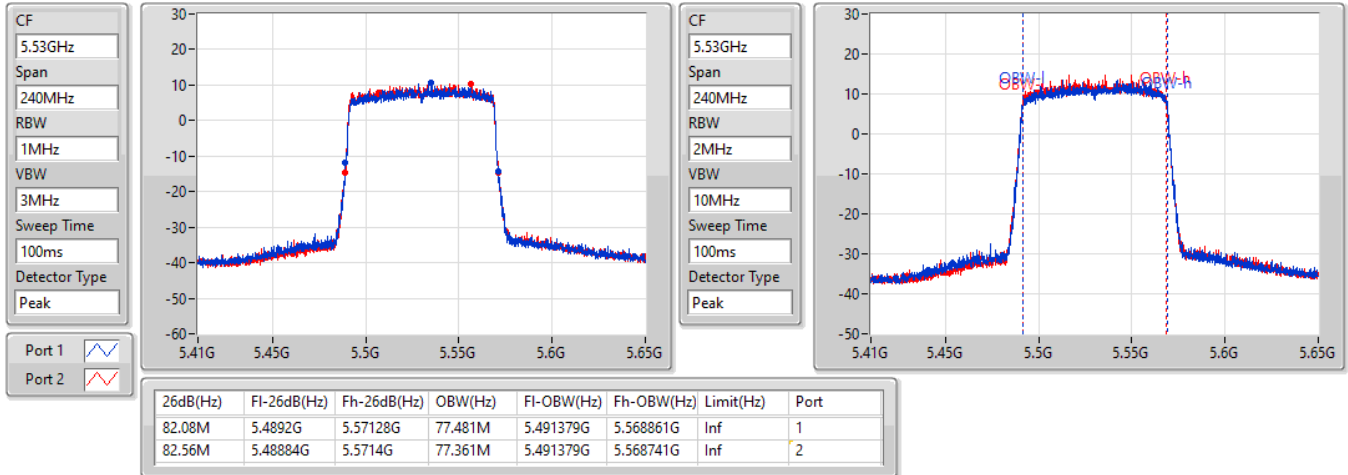


802.11ax HEW80_Nss1,(MCS0)_2TX

EBW

5530MHz

02/09/2022

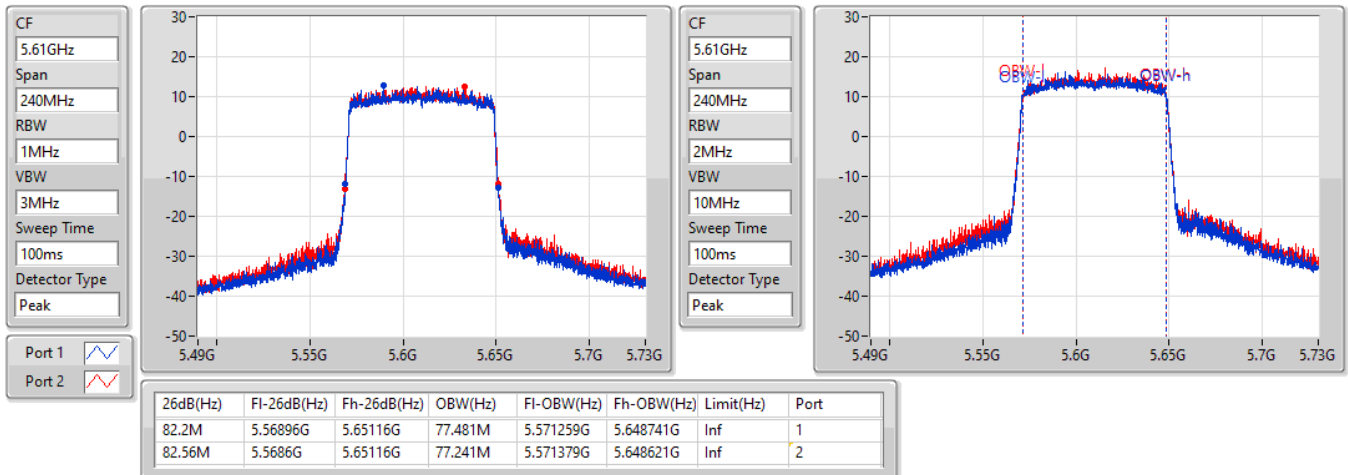


802.11ax HEW80_Nss1,(MCS0)_2TX

EBW

5610MHz

02/09/2022

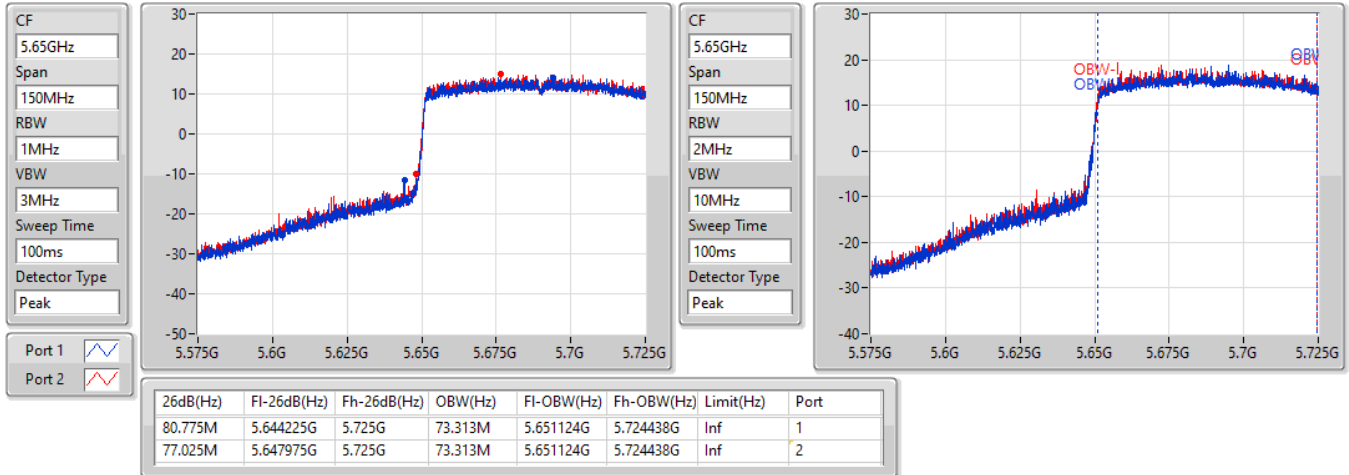


802.11ax HEW80_Nss1,(MCS0)_2TX

EBW

5690MHz Straddle 5.47-5.725GHz

02/09/2022

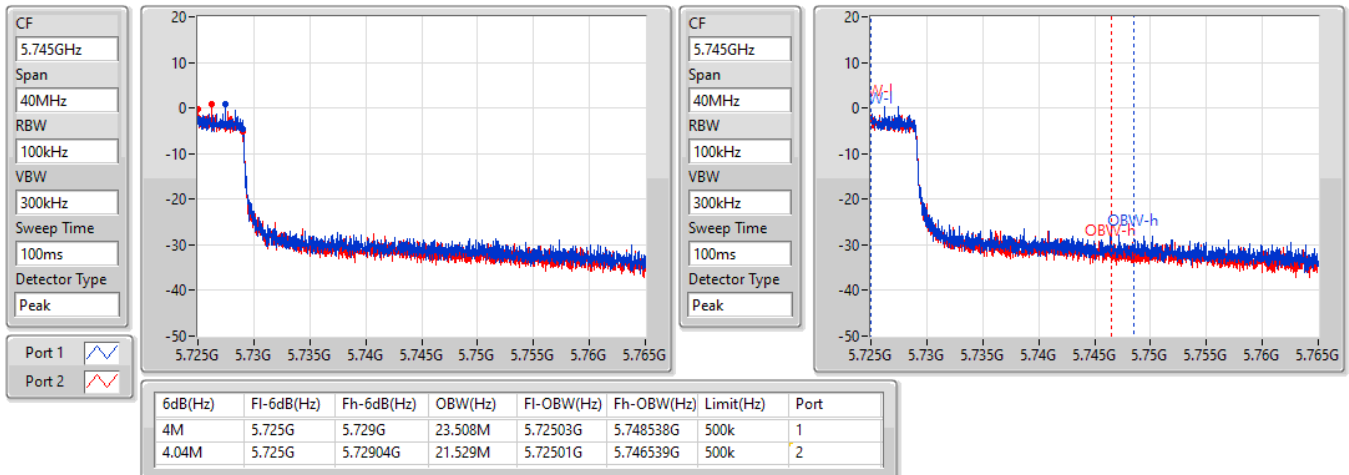


802.11ax HEW80_Nss1,(MCS0)_2TX

EBW

5690MHz Straddle 5.725-5.85GHz

02/09/2022

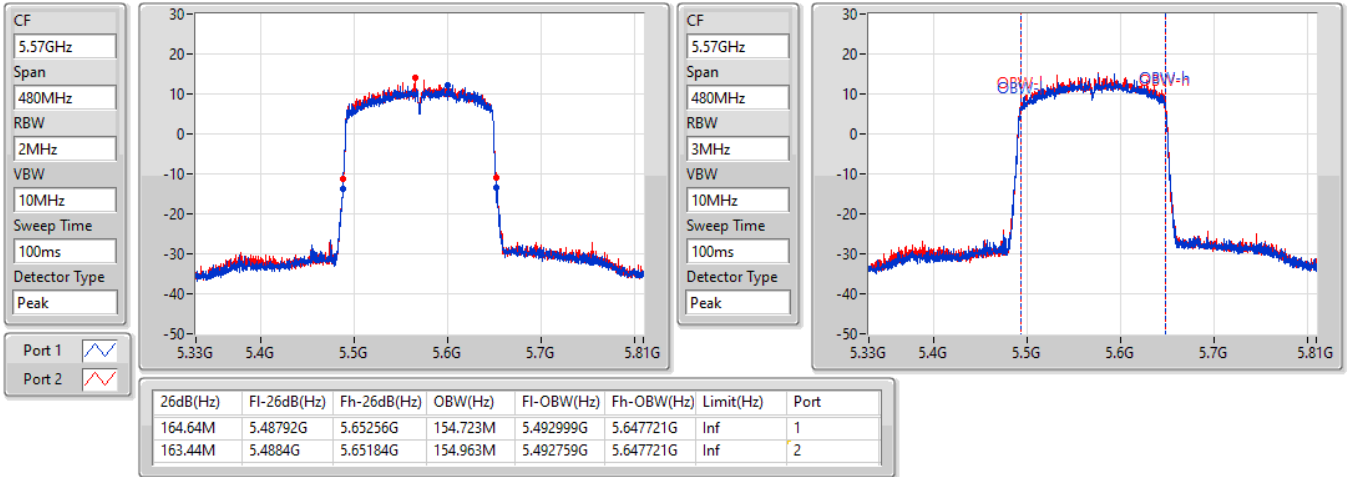


802.11ax HEW160_Nss1,(MCS0)_2TX

EBW

5570MHz

02/09/2022



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)_2TX	82.48M	76.922M	76M9D1D	81.84M	76.762M
802.11ax HEW160_Nss1,(MCS0)_2TX	82.56M	77.801M	77M8D1D	82.4M	77.721M
5.25-5.35GHz-	-	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	20.73M	16.672M	16M7D1D	19.74M	16.512M
802.11n HT20_Nss1,(MCS0)_2TX	22.14M	17.871M	17M9D1D	21.51M	17.709M
802.11n HT40_Nss1,(MCS0)_2TX	39.96M	36.222M	36M2D1D	39.54M	36.102M
802.11ac VHT20_Nss1,(MCS0)_2TX	21.87M	17.871M	17M9D1D	21.45M	17.723M
802.11ac VHT40_Nss1,(MCS0)_2TX	40.5M	36.222M	36M2D1D	39.54M	36.102M
802.11ac VHT80_Nss1,(MCS0)_2TX	82.08M	75.442M	75M4D1D	81.6M	75.322M
802.11ac VHT160_Nss1,(MCS0)_2TX	82.24M	76.762M	76M8D1D	82M	76.762M
802.11ax HEW20_Nss1,(MCS0)_2TX	21.93M	19.13M	19M1D1D	21.75M	19.047M
802.11ax HEW40_Nss1,(MCS0)_2TX	45.12M	37.961M	38M0D1D	40.38M	37.781M
802.11ax HEW80_Nss1,(MCS0)_2TX	81.96M	77.361M	77M4D1D	81.96M	77.361M
802.11ax HEW160_Nss1,(MCS0)_2TX	82.16M	77.881M	77M9D1D	82.16M	77.801M
5.47-5.725GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	20.61M	16.672M	16M7D1D	15.12M	13.358M
802.11n HT20_Nss1,(MCS0)_2TX	21.87M	17.841M	17M8D1D	15.525M	13.898M
802.11n HT40_Nss1,(MCS0)_2TX	39.78M	36.102M	36M1D1D	34.86M	32.884M
802.11ac VHT20_Nss1,(MCS0)_2TX	21.96M	17.871M	17M9D1D	15.495M	13.898M
802.11ac VHT40_Nss1,(MCS0)_2TX	40.02M	36.102M	36M1D1D	34.755M	32.884M
802.11ac VHT80_Nss1,(MCS0)_2TX	82.56M	75.442M	75M4D1D	76.2M	72.264M
802.11ac VHT160_Nss1,(MCS0)_2TX	164.16M	153.523M	154MD1D	163.44M	153.283M
802.11ax HEW20_Nss1,(MCS0)_2TX	22.14M	19.13M	19M1D1D	15.87M	14.543M
802.11ax HEW40_Nss1,(MCS0)_2TX	40.56M	37.841M	37M8D1D	35.35M	33.723M
802.11ax HEW80_Nss1,(MCS0)_2TX	82.68M	77.481M	77M5D1D	76.575M	73.163M
802.11ax HEW160_Nss1,(MCS0)_2TX	165.36M	154.723M	155MD1D	164.16M	154.723M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	3.16M	3.578M	3M58D1D	3.16M	3.558M
802.11n HT20_Nss1,(MCS0)_2TX	3.8M	4.158M	4M16D1D	3.78M	4.138M
802.11n HT40_Nss1,(MCS0)_2TX	3.16M	3.758M	3M76D1D	3.14M	3.718M
802.11ac VHT20_Nss1,(MCS0)_2TX	3.78M	4.158M	4M16D1D	3.78M	4.158M
802.11ac VHT40_Nss1,(MCS0)_2TX	3.16M	3.798M	3M80D1D	3.16M	3.738M
802.11ac VHT80_Nss1,(MCS0)_2TX	3.16M	13.853M	13M9D1D	3.16M	9.595M
802.11ax HEW20_Nss1,(MCS0)_2TX	4.56M	4.658M	4M66D1D	4.5M	4.658M
802.11ax HEW40_Nss1,(MCS0)_2TX	4.1M	4.498M	4M50D1D	4M	4.298M
802.11ax HEW80_Nss1,(MCS0)_2TX	4.14M	17.731M	17M7D1D	4.04M	14.573M

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	20.73M	16.672M	20.13M	16.582M
5300MHz	Pass	Inf	20.22M	16.518M	20.16M	16.512M
5320MHz	Pass	Inf	20.25M	16.513M	19.74M	16.513M
5500MHz	Pass	Inf	20.61M	16.522M	20.46M	16.523M
5580MHz	Pass	Inf	20.19M	16.672M	20.19M	16.612M
5700MHz	Pass	Inf	20.22M	16.642M	20.22M	16.612M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.285M	13.373M	15.12M	13.358M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.16M	3.558M	3.16M	3.578M
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5260MHz	Pass	Inf	22.02M	17.781M	21.51M	17.871M
5300MHz	Pass	Inf	21.63M	17.781M	21.6M	17.871M
5320MHz	Pass	Inf	21.54M	17.763M	22.14M	17.709M
5500MHz	Pass	Inf	21.69M	17.781M	21.54M	17.841M
5580MHz	Pass	Inf	21.72M	17.758M	21.84M	17.703M
5700MHz	Pass	Inf	21.48M	17.781M	21.87M	17.841M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.525M	13.898M	15.54M	13.928M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.78M	4.138M	3.8M	4.158M
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5270MHz	Pass	Inf	39.96M	36.222M	39.96M	36.222M
5310MHz	Pass	Inf	39.54M	36.102M	39.84M	36.102M
5510MHz	Pass	Inf	39.78M	36.102M	39.66M	36.102M
5550MHz	Pass	Inf	39.54M	36.102M	39.78M	36.102M
5670MHz	Pass	Inf	39.78M	36.102M	39.72M	36.102M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	35.035M	32.919M	34.86M	32.884M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.14M	3.718M	3.16M	3.758M
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5260MHz	Pass	Inf	21.87M	17.781M	21.45M	17.871M
5300MHz	Pass	Inf	21.63M	17.781M	21.63M	17.871M
5320MHz	Pass	Inf	21.48M	17.759M	21.66M	17.723M
5500MHz	Pass	Inf	21.57M	17.781M	21.51M	17.871M
5580MHz	Pass	Inf	21.96M	17.759M	21.72M	17.706M
5700MHz	Pass	Inf	21.81M	17.811M	21.87M	17.841M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.615M	13.898M	15.495M	13.928M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.78M	4.158M	3.78M	4.158M
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5270MHz	Pass	Inf	40.32M	36.222M	40.5M	36.222M
5310MHz	Pass	Inf	39.96M	36.162M	39.54M	36.102M
5510MHz	Pass	Inf	39.84M	36.042M	39.78M	36.102M
5550MHz	Pass	Inf	40.02M	36.102M	39.78M	36.042M
5670MHz	Pass	Inf	39.9M	36.102M	39.6M	36.042M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	34.965M	32.954M	34.755M	32.884M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.16M	3.738M	3.16M	3.798M
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5290MHz	Pass	Inf	81.6M	75.322M	82.08M	75.442M
5530MHz	Pass	Inf	81.36M	75.442M	82.56M	75.442M
5610MHz	Pass	Inf	81.48M	75.442M	81.96M	75.442M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	76.2M	72.264M	76.35M	72.339M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.16M	9.595M	3.16M	13.853M
802.11ac VHT160_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	Inf	81.84M	76.762M	82.48M	76.922M
5250MHz Straddle 5.25-5.35GHz	Pass	Inf	82M	76.762M	82.24M	76.762M
5570MHz	Pass	Inf	163.44M	153.283M	164.16M	153.523M
802.11ax HEW20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5260MHz	Pass	Inf	21.81M	19.1M	21.75M	19.13M

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
5300MHz	Pass	Inf	21.93M	19.1M	21.84M	19.13M
5320MHz	Pass	Inf	21.93M	19.067M	21.84M	19.047M
5500MHz	Pass	Inf	21.87M	19.1M	21.72M	19.13M
5580MHz	Pass	Inf	21.69M	19.074M	22.14M	19.064M
5700MHz	Pass	Inf	21.69M	19.07M	22.11M	19.1M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	16.005M	14.543M	15.87M	14.543M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	4.56M	4.658M	4.5M	4.658M
802.11ax HEW40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5270MHz	Pass	Inf	40.38M	37.901M	45.12M	37.961M
5310MHz	Pass	Inf	40.56M	37.841M	40.44M	37.781M
5510MHz	Pass	Inf	40.2M	37.841M	40.38M	37.841M
5550MHz	Pass	Inf	40.44M	37.841M	40.56M	37.841M
5670MHz	Pass	Inf	40.38M	37.841M	40.44M	37.781M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	35.35M	33.723M	35.385M	33.793M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	4M	4.298M	4.1M	4.498M
802.11ax HEW80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5290MHz	Pass	Inf	81.96M	77.361M	81.96M	77.361M
5530MHz	Pass	Inf	81.96M	77.241M	82.08M	77.241M
5610MHz	Pass	Inf	82.68M	77.481M	82.56M	77.361M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	76.575M	73.388M	76.8M	73.163M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	4.14M	14.573M	4.04M	17.731M
802.11ax HEW160_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	Inf	82.4M	77.721M	82.56M	77.801M
5250MHz Straddle 5.25-5.35GHz	Pass	Inf	82.16M	77.801M	82.16M	77.881M
5570MHz	Pass	Inf	164.16M	154.723M	165.36M	154.723M

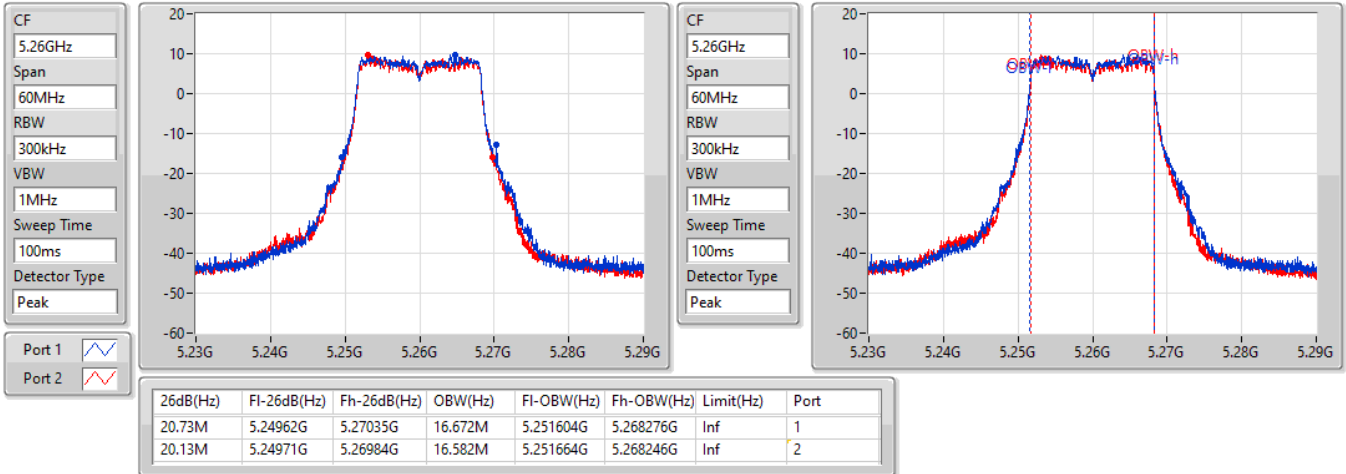
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11a_Nss1,(6Mbps)_2TX

EBW

5260MHz

26/08/2022

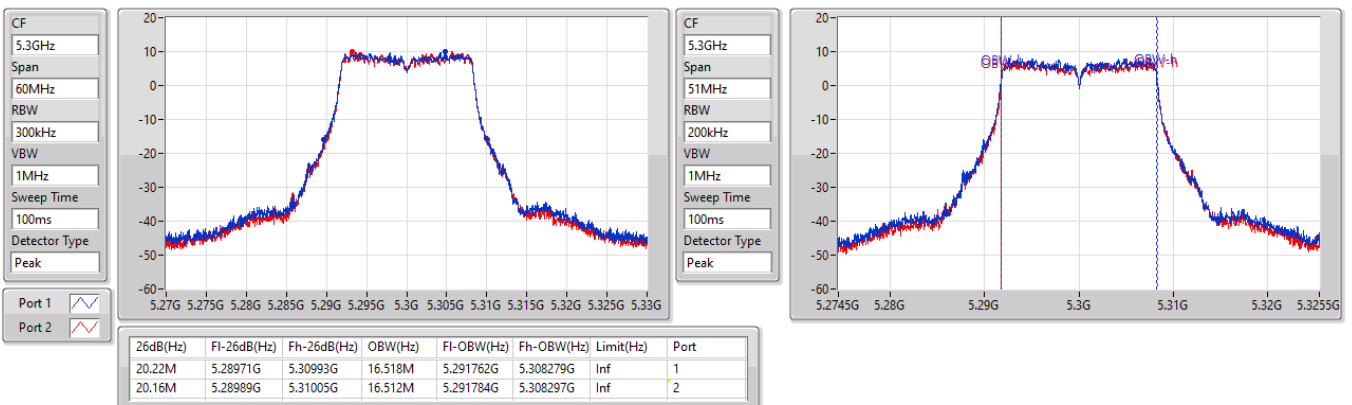


5.3G_802.11a_Nss1,(6Mbps)_2TX

EBW

5300MHz

19/04/2023

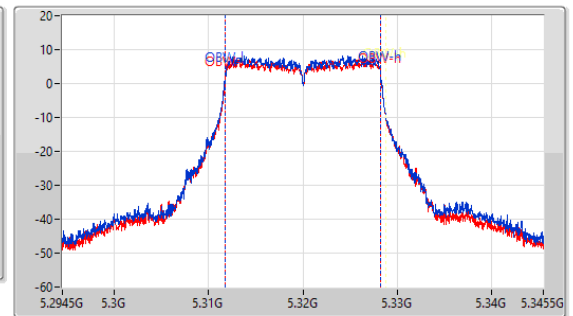
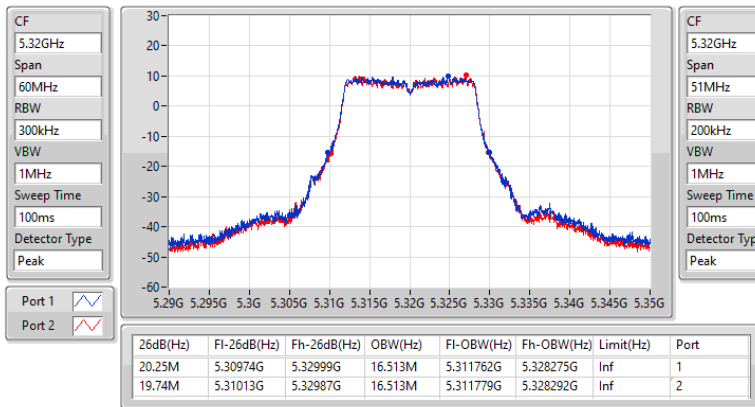


5.3G_802.11a_Nss1,(6Mbps)_2TX

5320MHz

EBW

19/04/2023

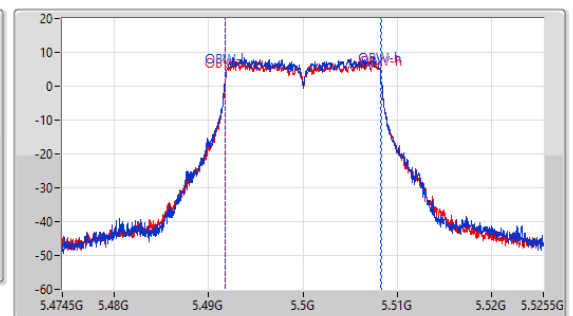
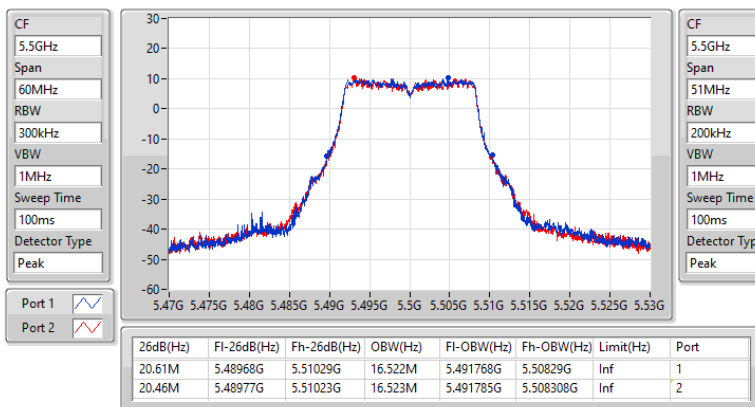


5.6G_802.11a_Nss1,(6Mbps)_2TX

5500MHz

EBW

19/04/2023

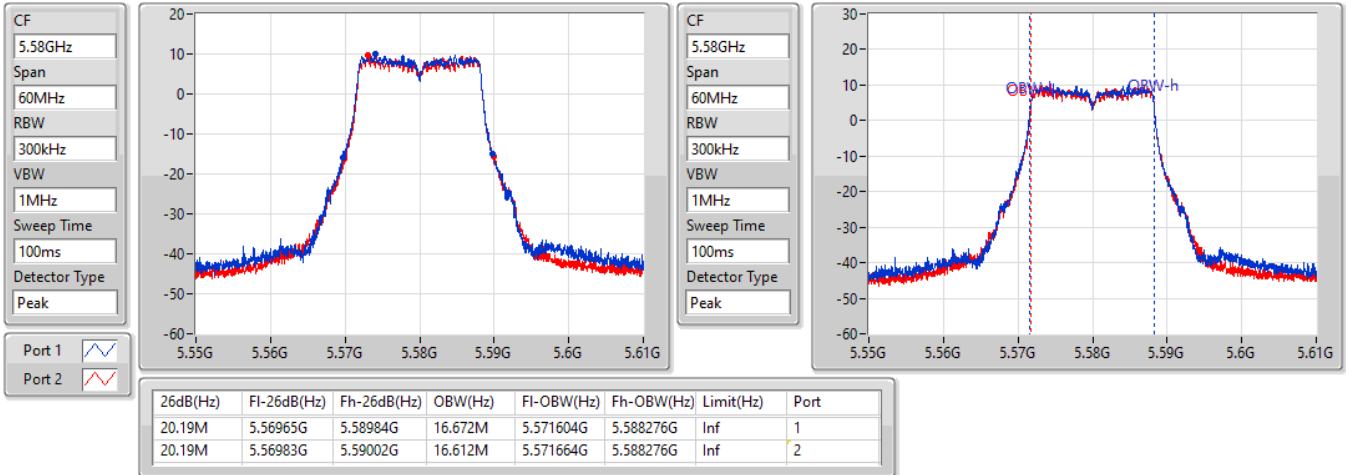


802.11a_Nss1,(6Mbps)_2TX

EBW

5580MHz

26/08/2022

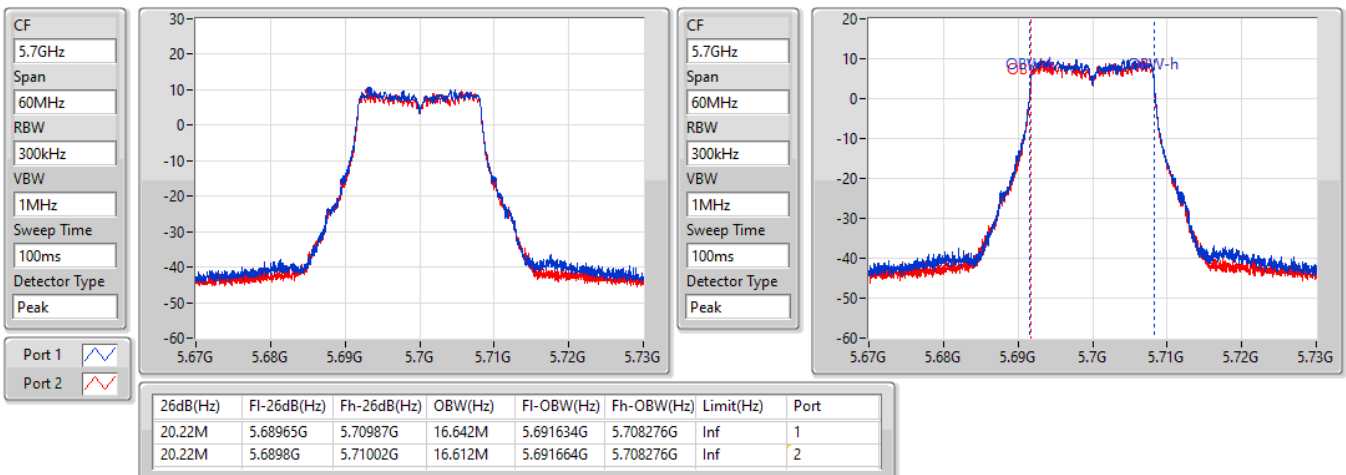


802.11a_Nss1,(6Mbps)_2TX

EBW

5700MHz

26/08/2022

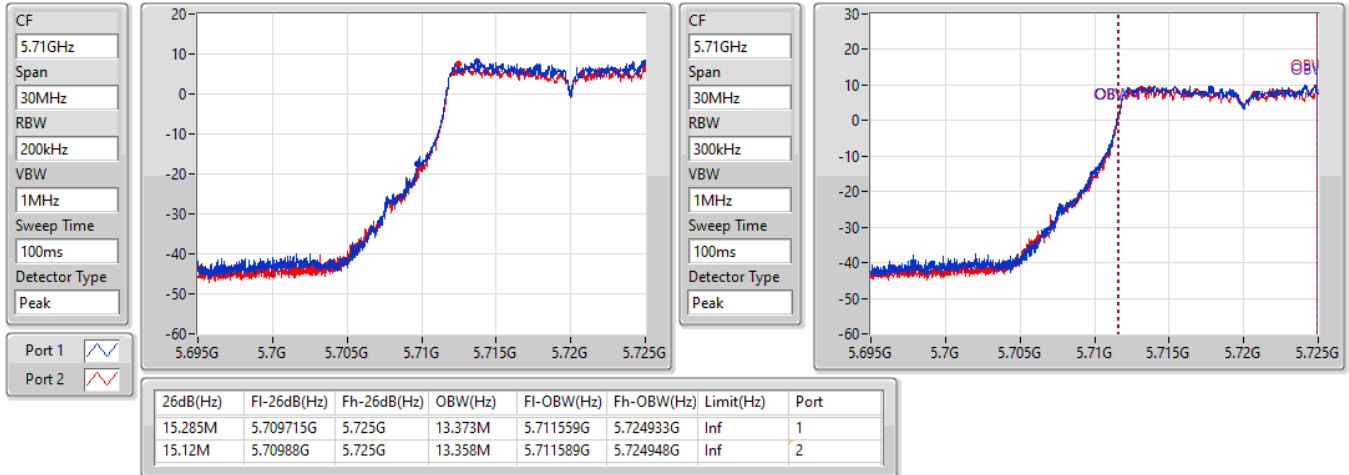


802.11a_Nss1,(6Mbps)_2TX

EBW

5720MHz Straddle 5.47-5.725GHz

26/08/2022

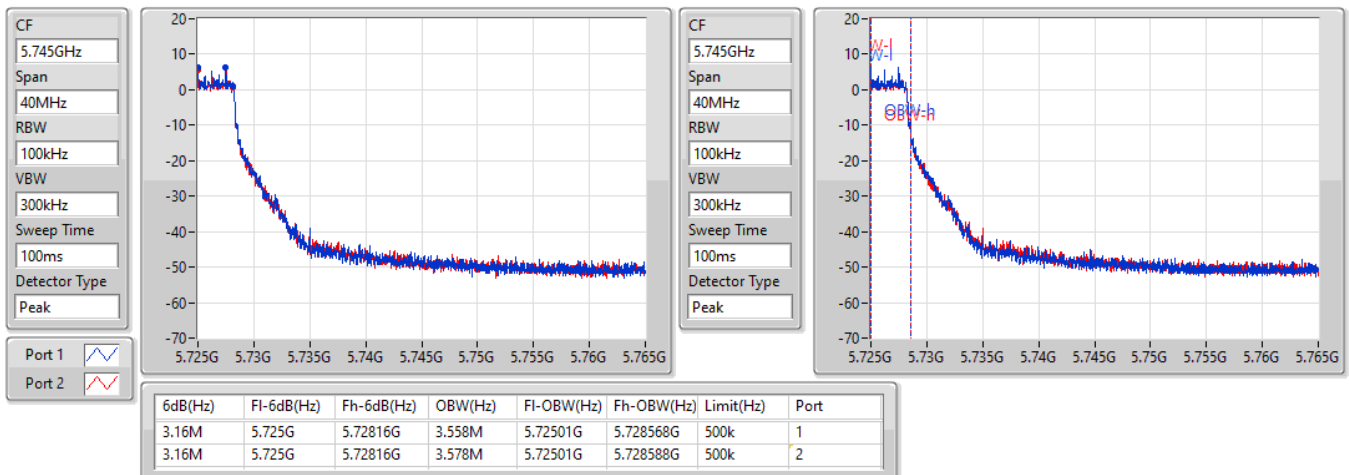


802.11a_Nss1,(6Mbps)_2TX

EBW

5720MHz Straddle 5.725-5.85GHz

30/08/2022

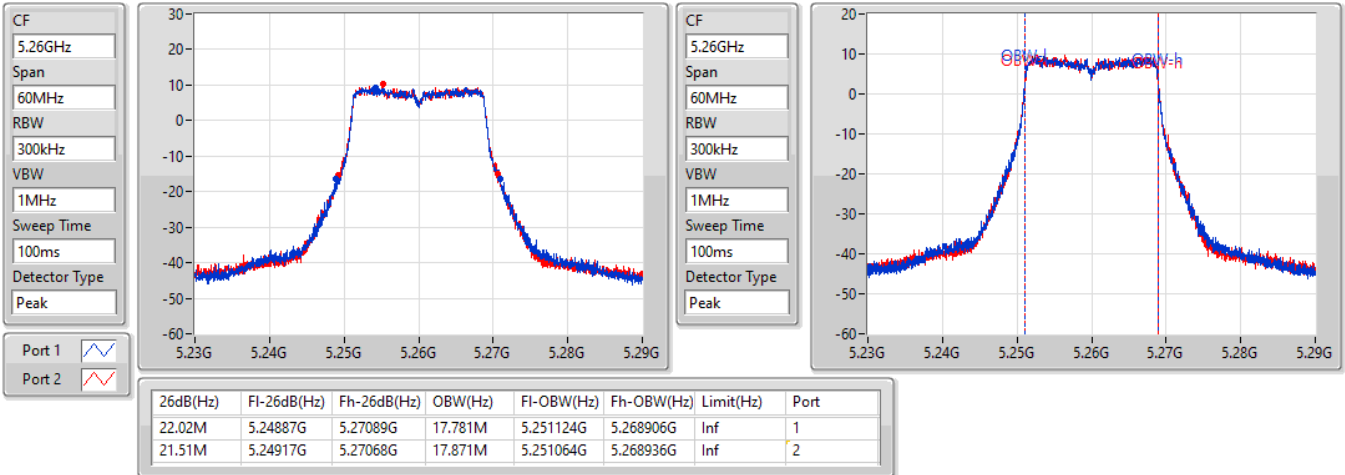


802.11n HT20_Nss1,(MCS0)_2TX

EBW

5260MHz

30/08/2022

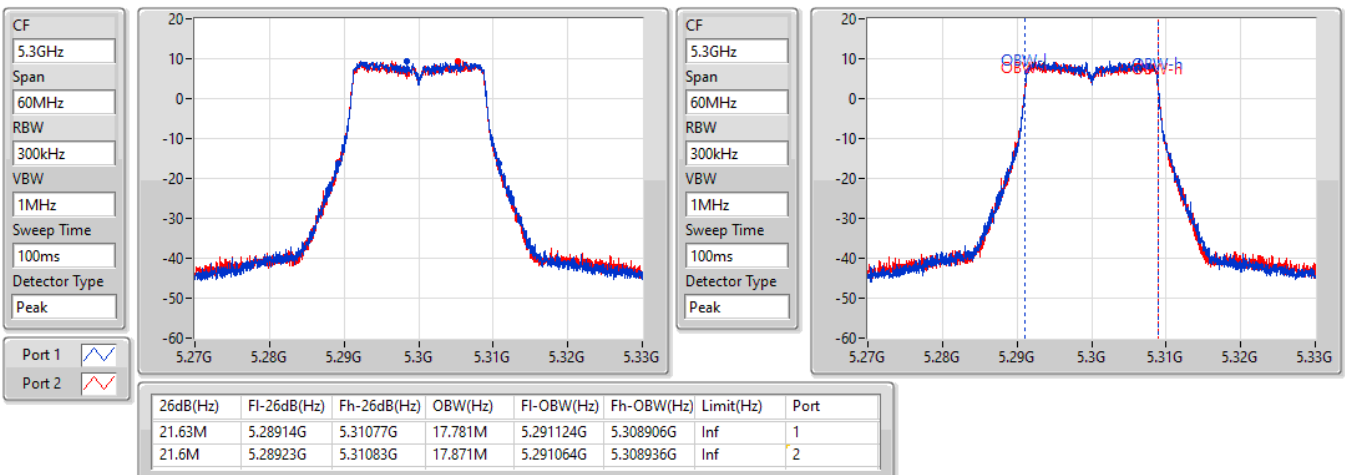


802.11n HT20_Nss1,(MCS0)_2TX

EBW

5300MHz

30/08/2022

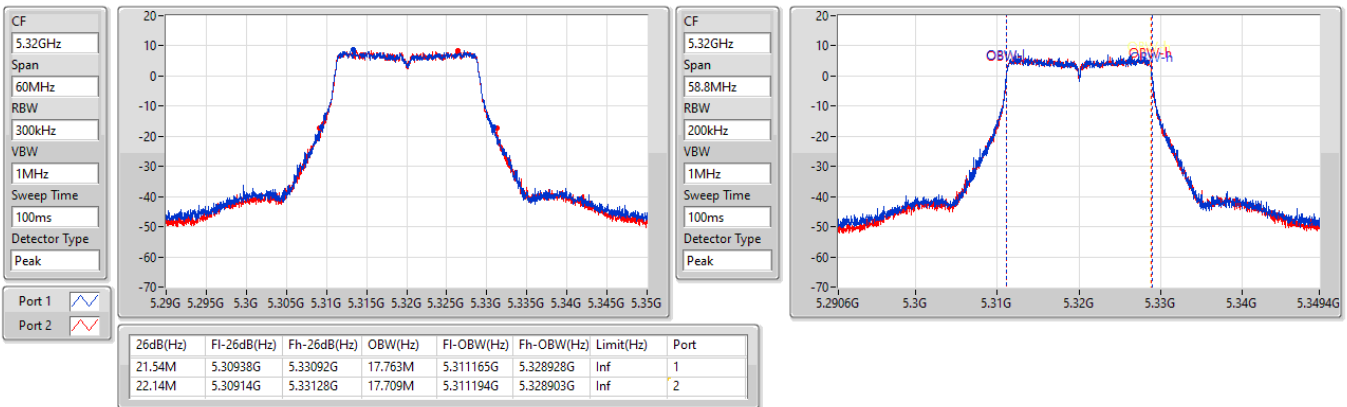


5.3G_802.11n HT20_Nss1,(MCS0)_2TX

EBW

5320MHz

19/04/2023

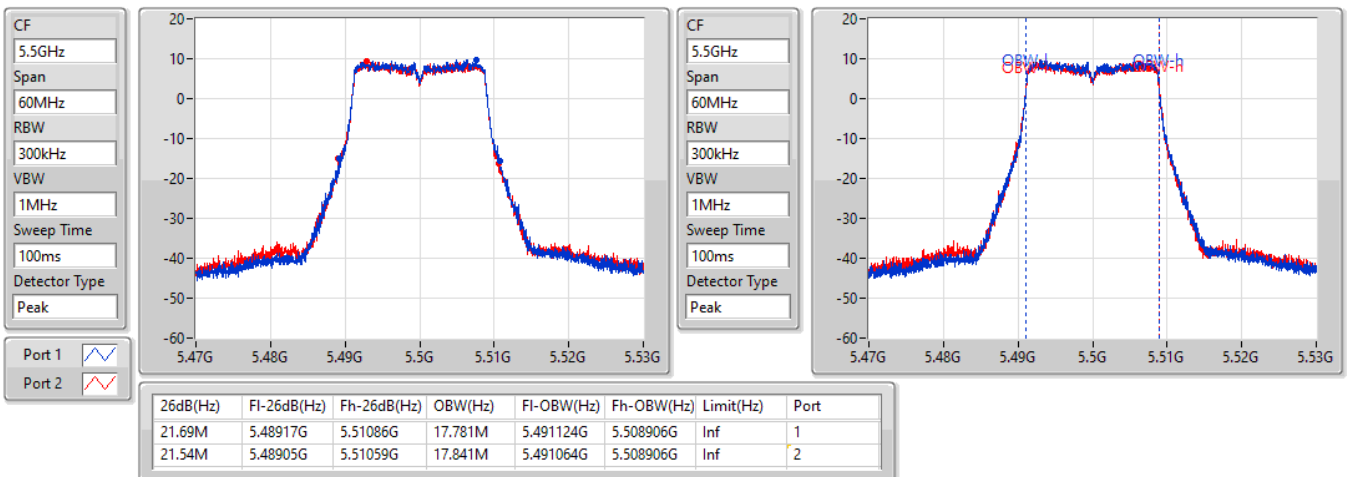


802.11n HT20_Nss1,(MCS0)_2TX

EBW

5500MHz

30/08/2022

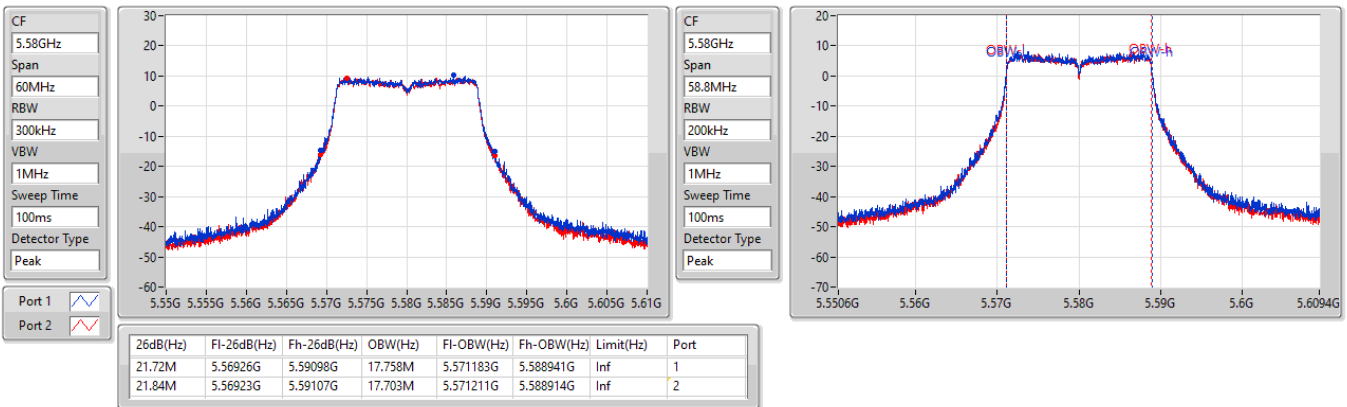


5.6G_802.11n HT20_Nss1,(MCS0)_2TX

EBW

5580MHz

19/04/2023

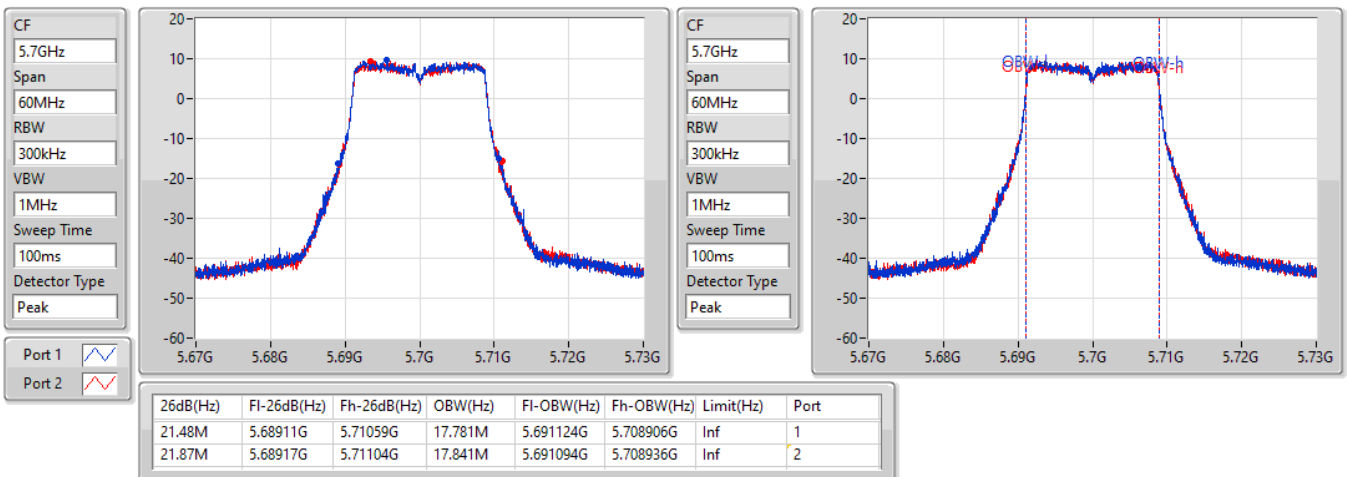


802.11n HT20_Nss1,(MCS0)_2TX

EBW

5700MHz

30/08/2022

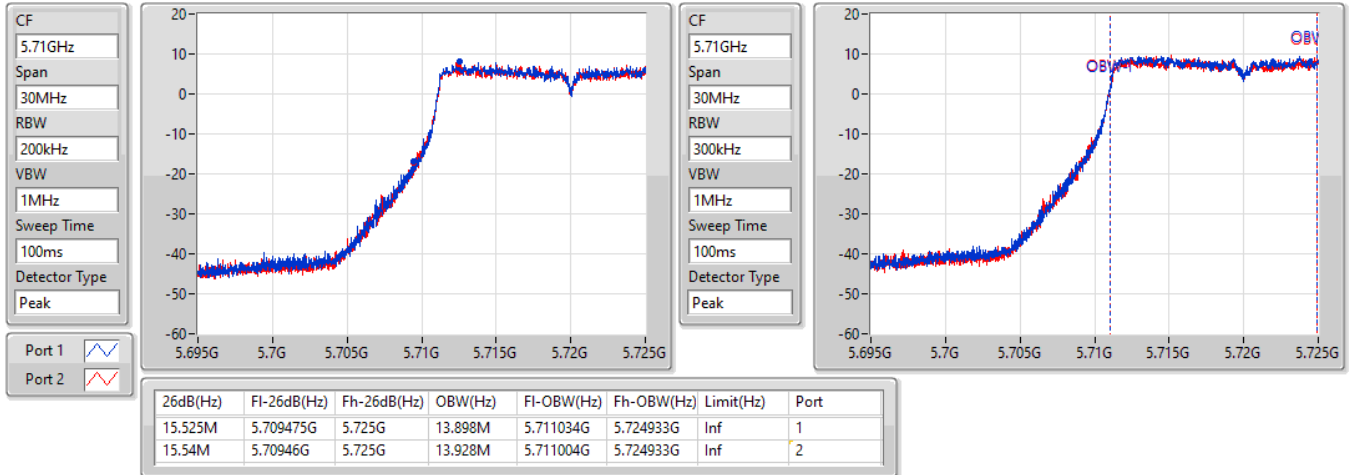


802.11n HT20_Nss1,(MCS0)_2TX

EBW

5720MHz Straddle 5.47-5.725GHz

30/08/2022

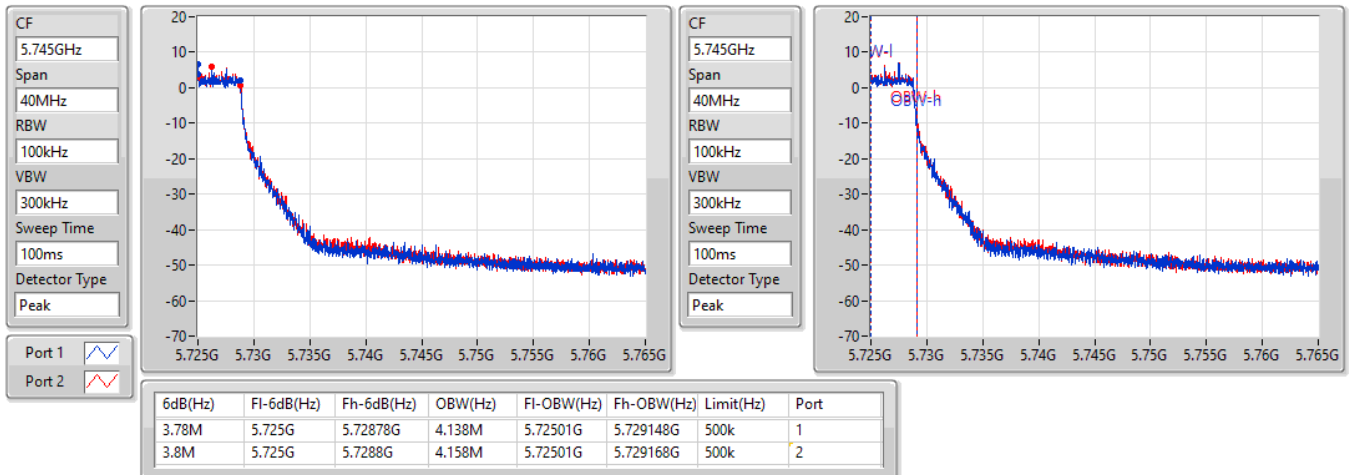


802.11n HT20_Nss1,(MCS0)_2TX

EBW

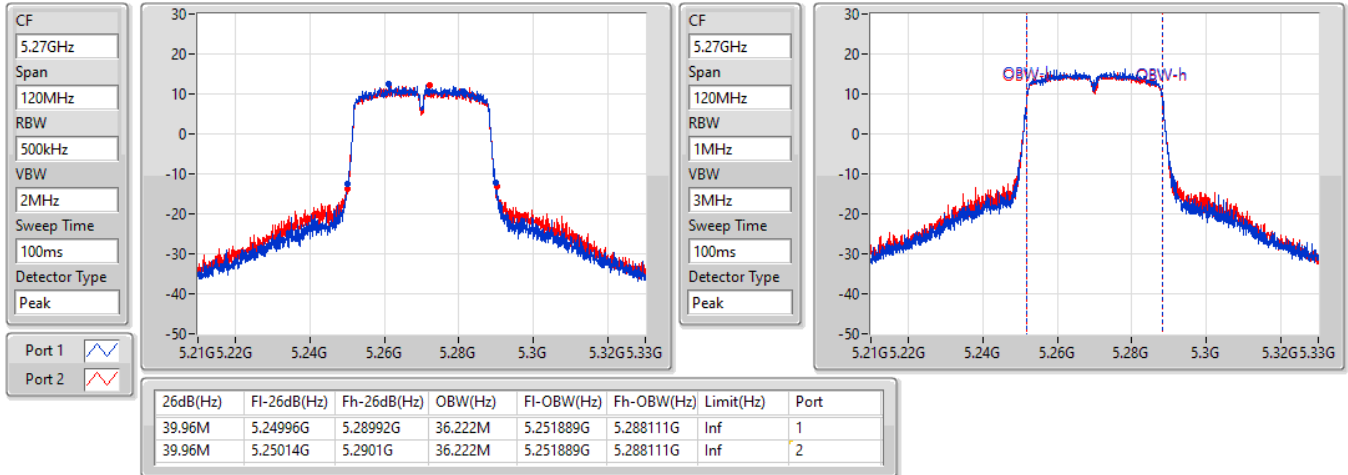
5720MHz Straddle 5.725-5.85GHz

30/08/2022

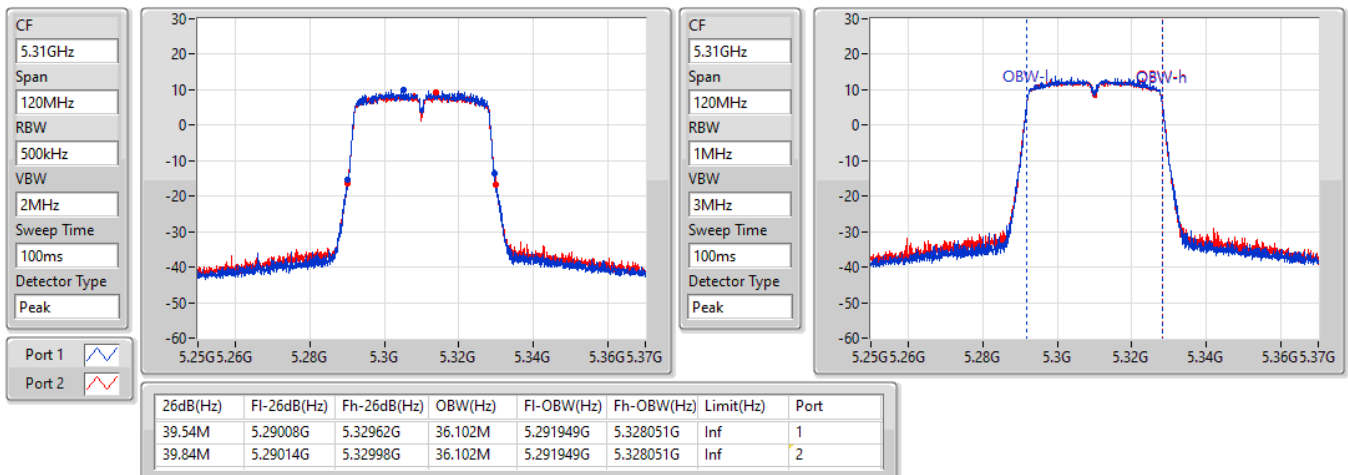


802.11n HT40_Nss1,(MCS0)_2TX
EBW
5270MHz

30/08/2022


802.11n HT40_Nss1,(MCS0)_2TX
EBW
5310MHz

30/08/2022

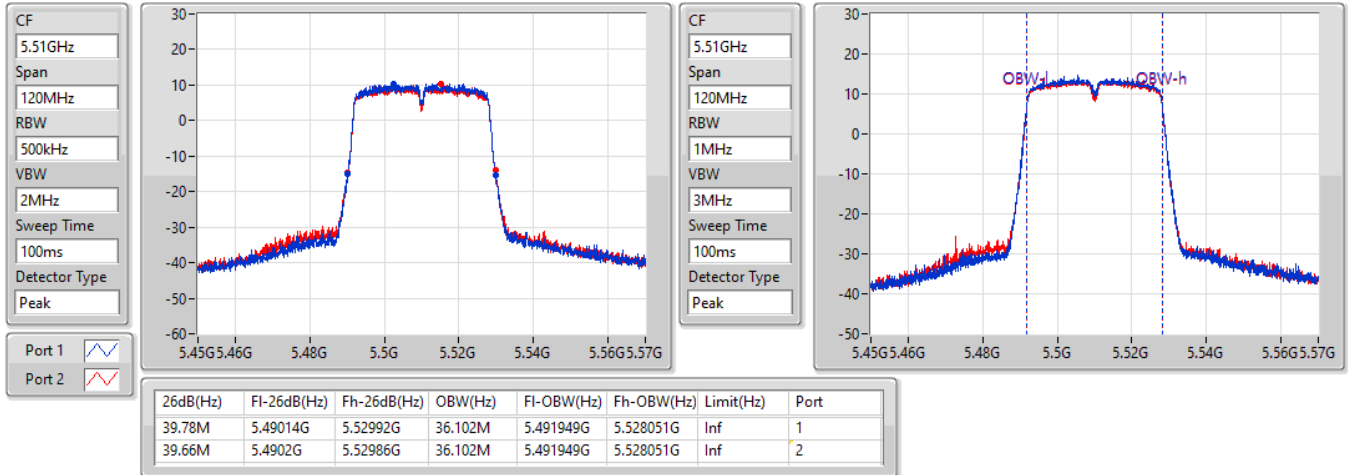


802.11n HT40_Nss1,(MCS0)_2TX

EBW

5510MHz

30/08/2022

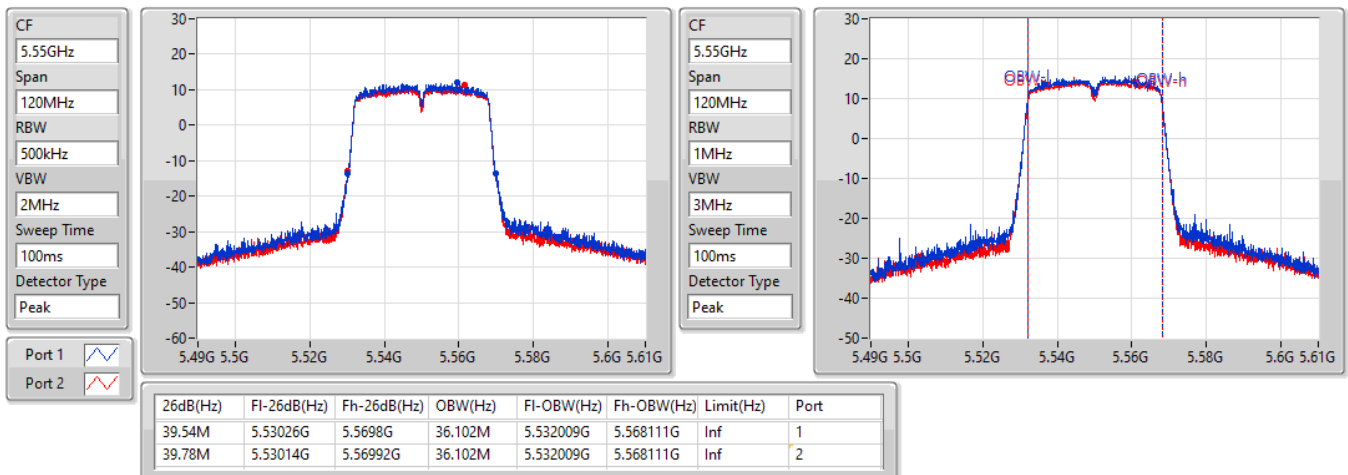


802.11n HT40_Nss1,(MCS0)_2TX

EBW

5550MHz

30/08/2022

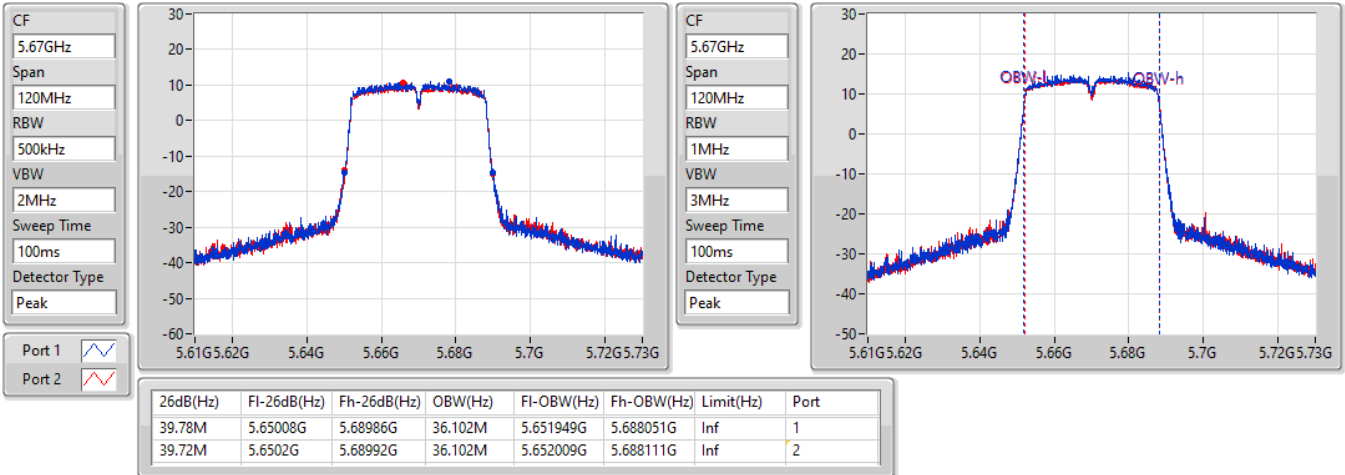


802.11n HT40_Nss1,(MCS0)_2TX

EBW

5670MHz

30/08/2022

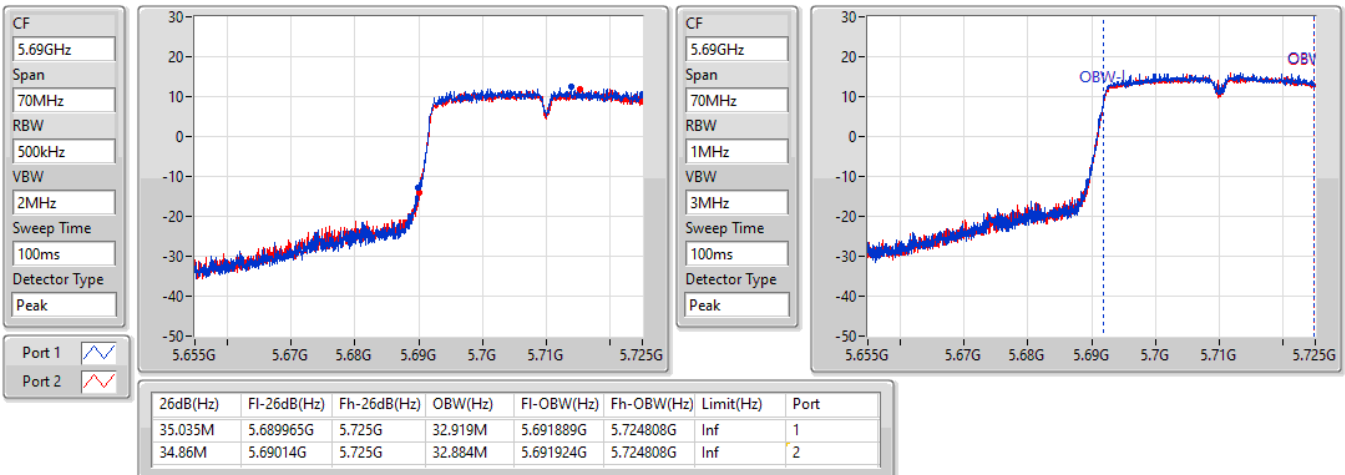


802.11n HT40_Nss1,(MCS0)_2TX

EBW

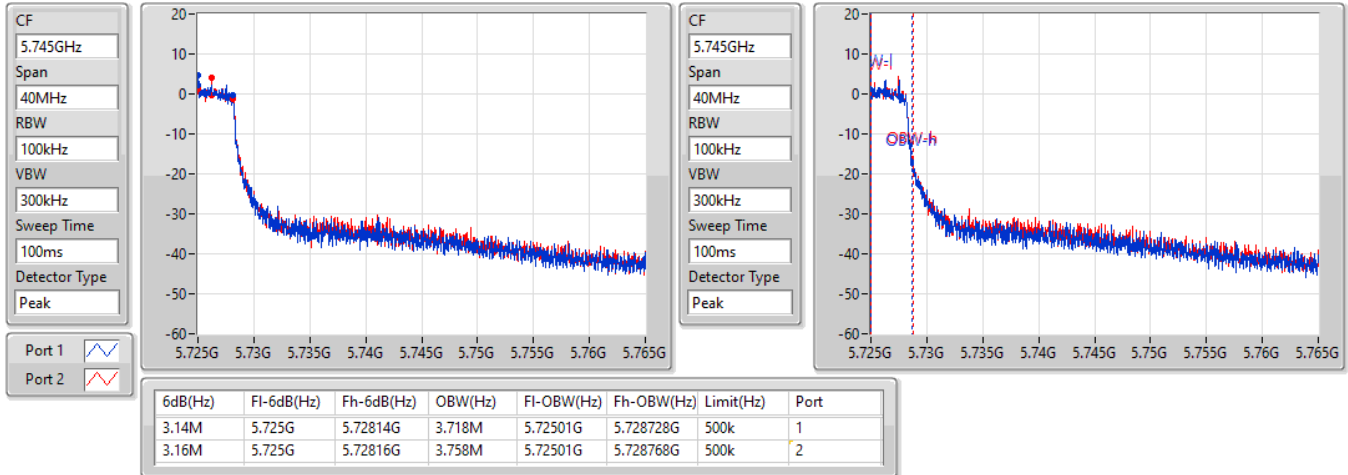
5710MHz Straddle 5.47-5.725GHz

30/08/2022

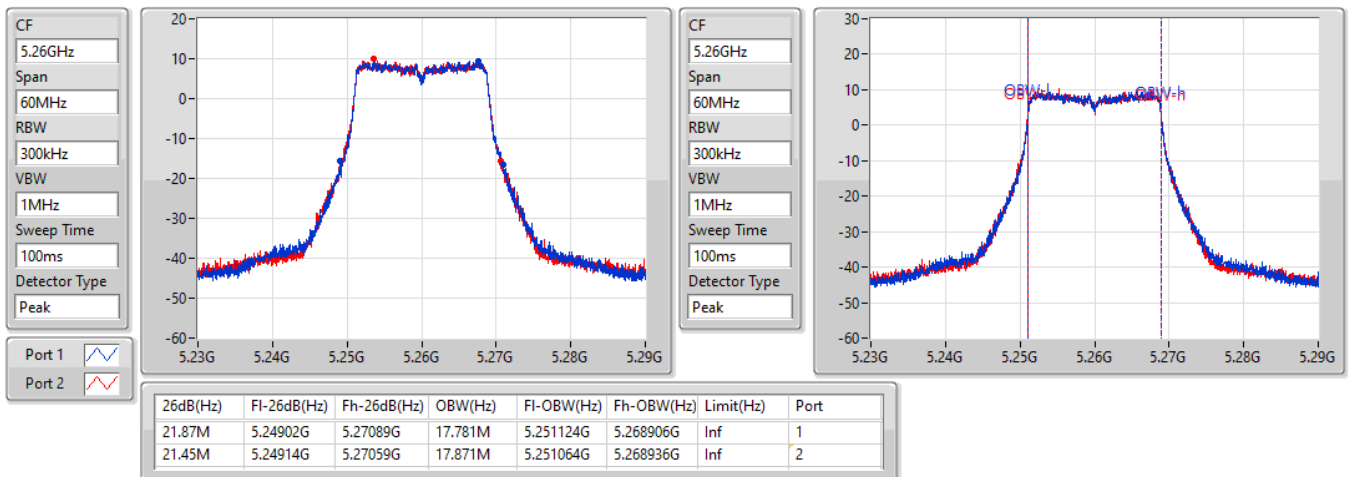


802.11n HT40_Nss1,(MCS0)_2TX
EBW
5710MHz Straddle 5.725-5.85GHz

30/08/2022


802.11ac VHT20_Nss1,(MCS0)_2TX
EBW
5260MHz

30/08/2022

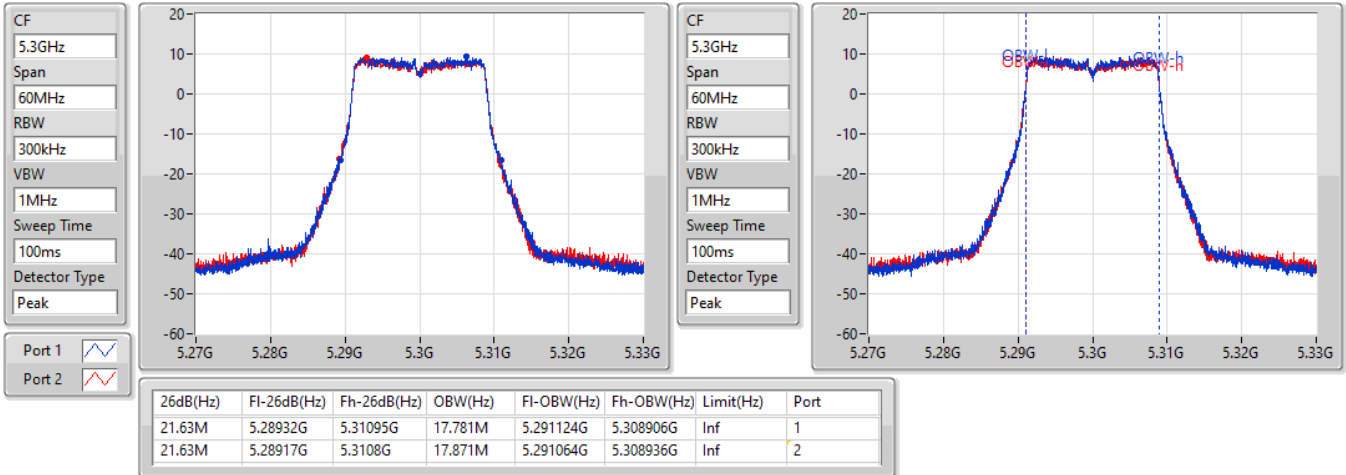


802.11ac VHT20_Nss1,(MCS0)_2TX

EBW

5300MHz

30/08/2022

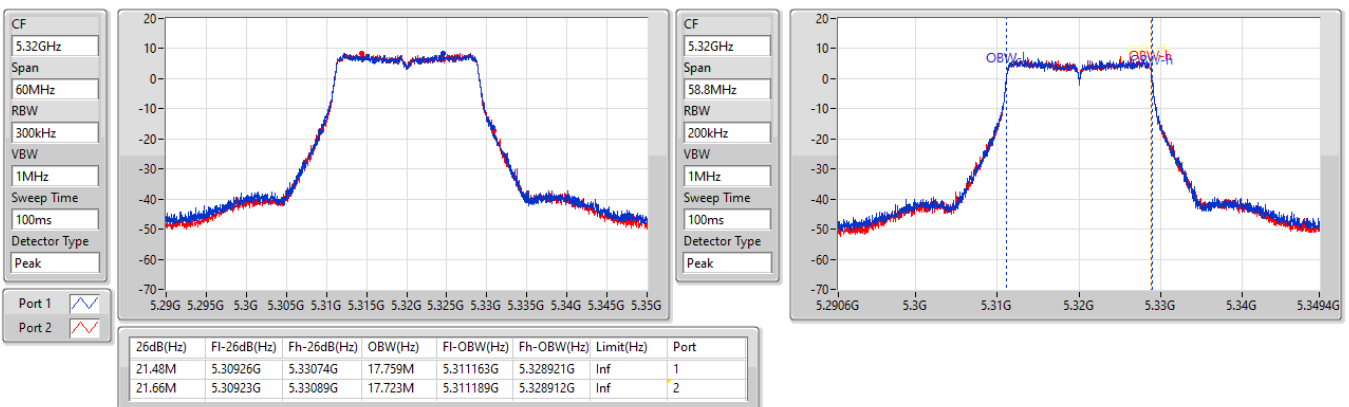


5.3G_802.11ac VHT20_Nss1,(MCS0)_2TX

EBW

5320MHz

19/04/2023

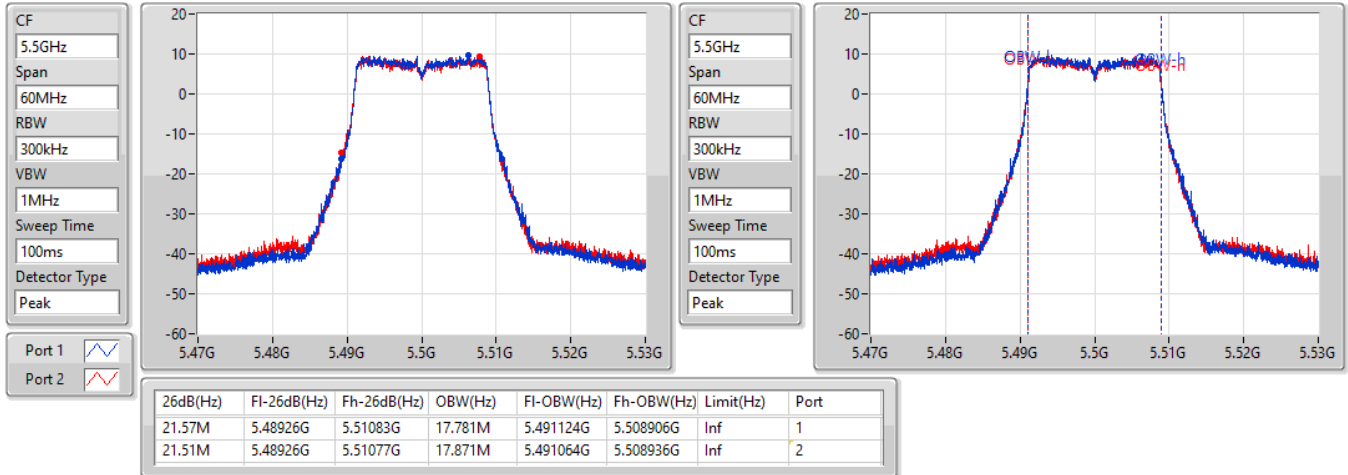


802.11ac VHT20_Nss1,(MCS0)_2TX

EBW

5500MHz

30/08/2022

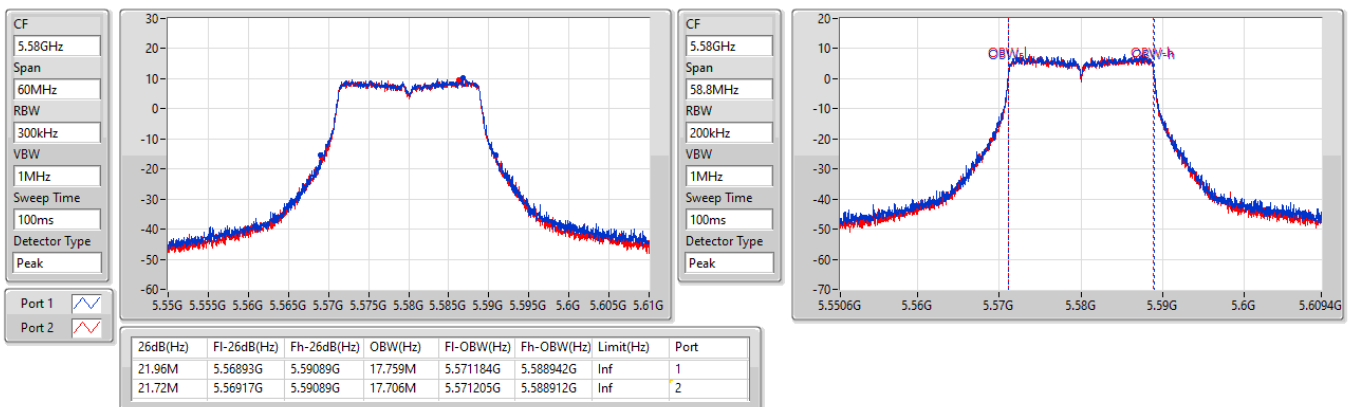


5.6G_802.11ac VHT20_Nss1,(MCS0)_2TX

EBW

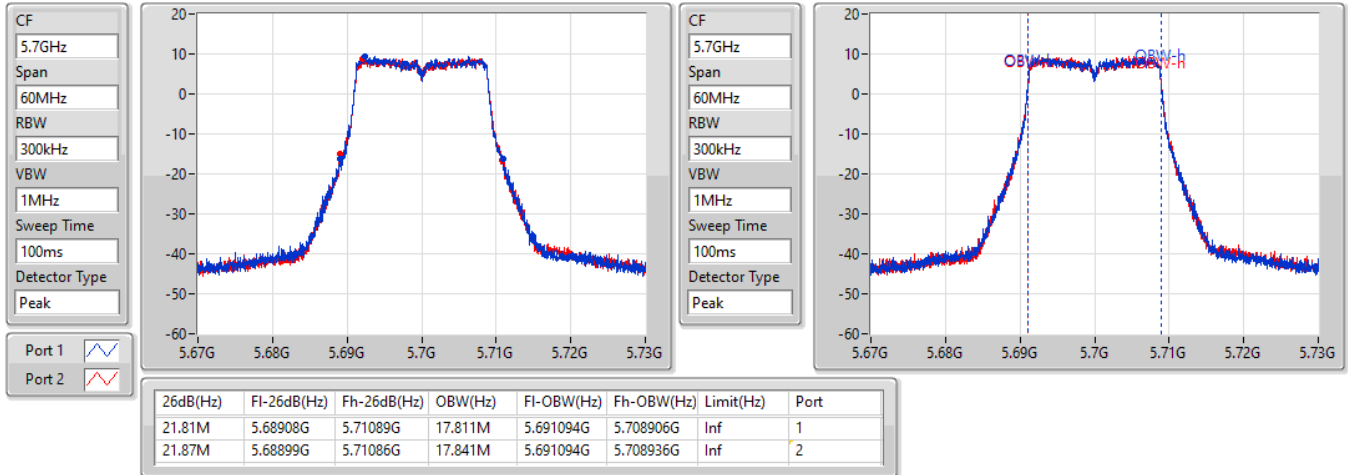
5580MHz

19/04/2023

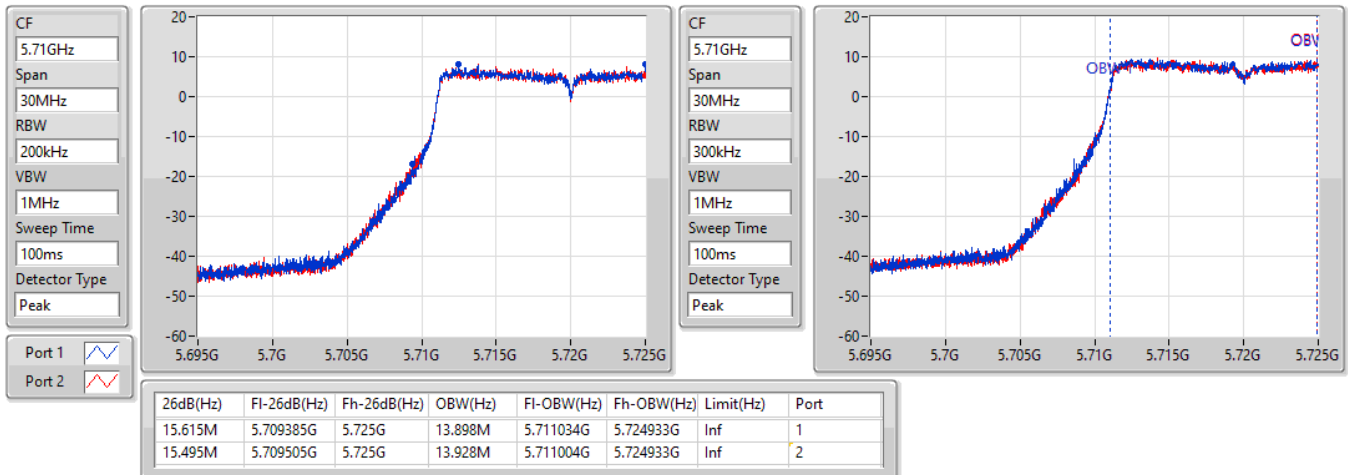


802.11ac VHT20_Nss1,(MCS0)_2TX
EBW
5700MHz

30/08/2022


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

30/08/2022

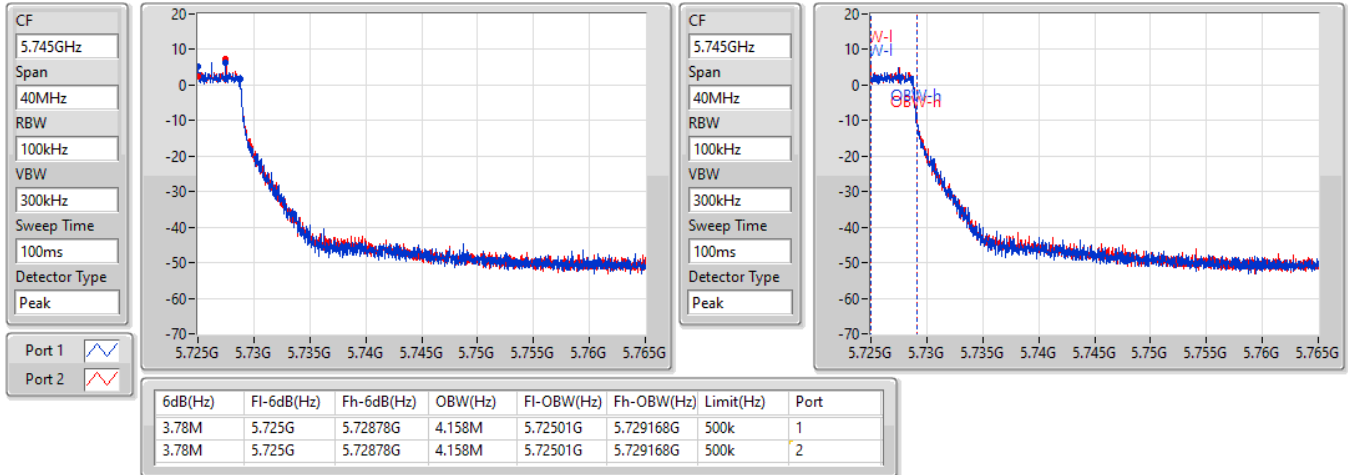


802.11ac VHT20_Nss1,(MCS0)_2TX

EBW

5720MHz Straddle 5.725-5.85GHz

30/08/2022

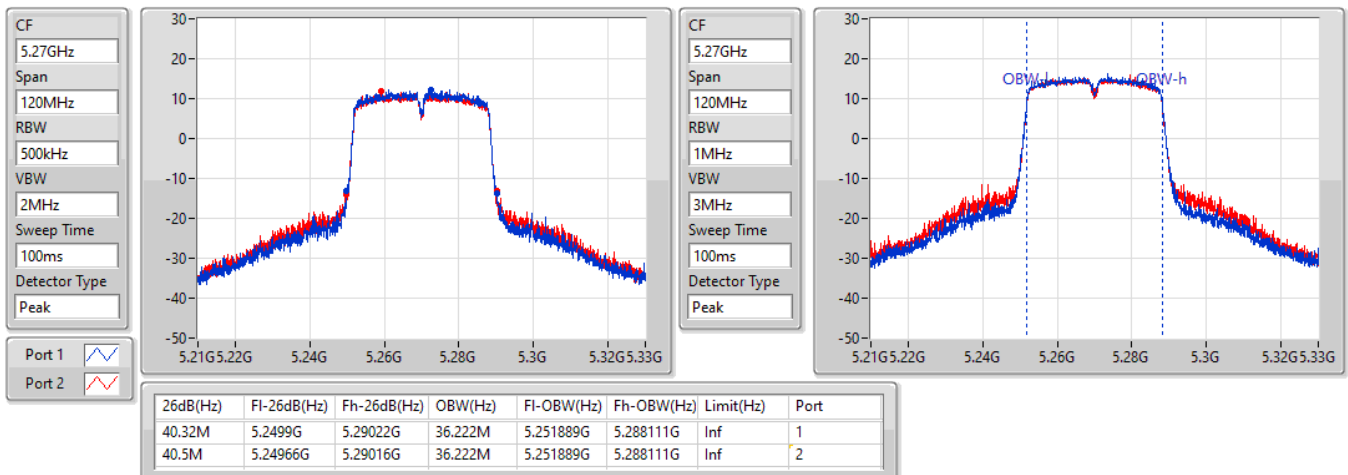


802.11ac VHT40_Nss1,(MCS0)_2TX

EBW

5270MHz

30/08/2022

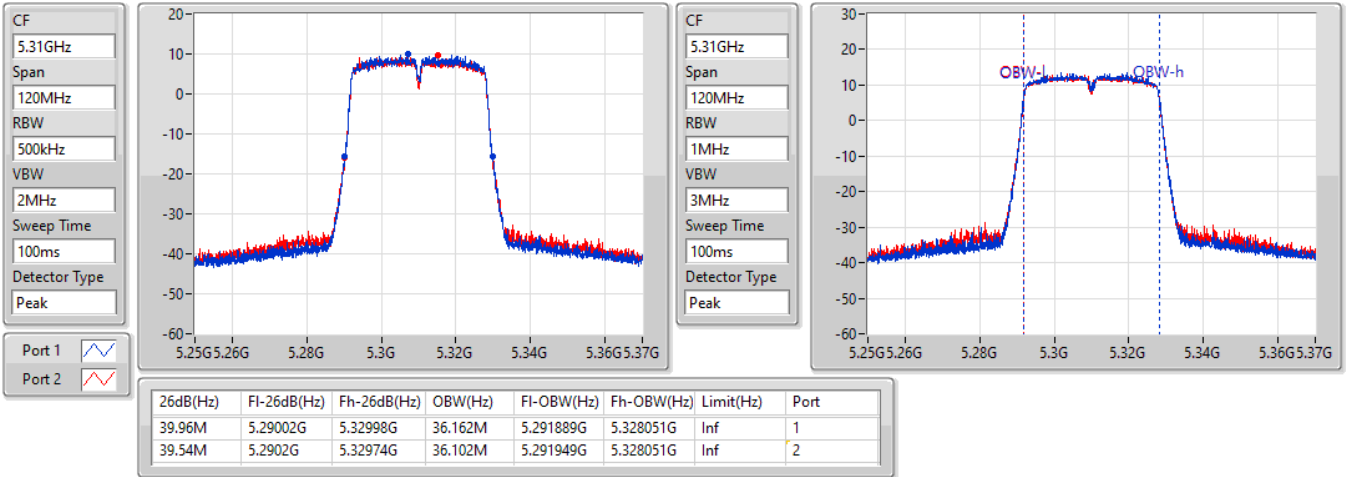


802.11ac VHT40_Nss1,(MCS0)_2TX

EBW

5310MHz

30/08/2022

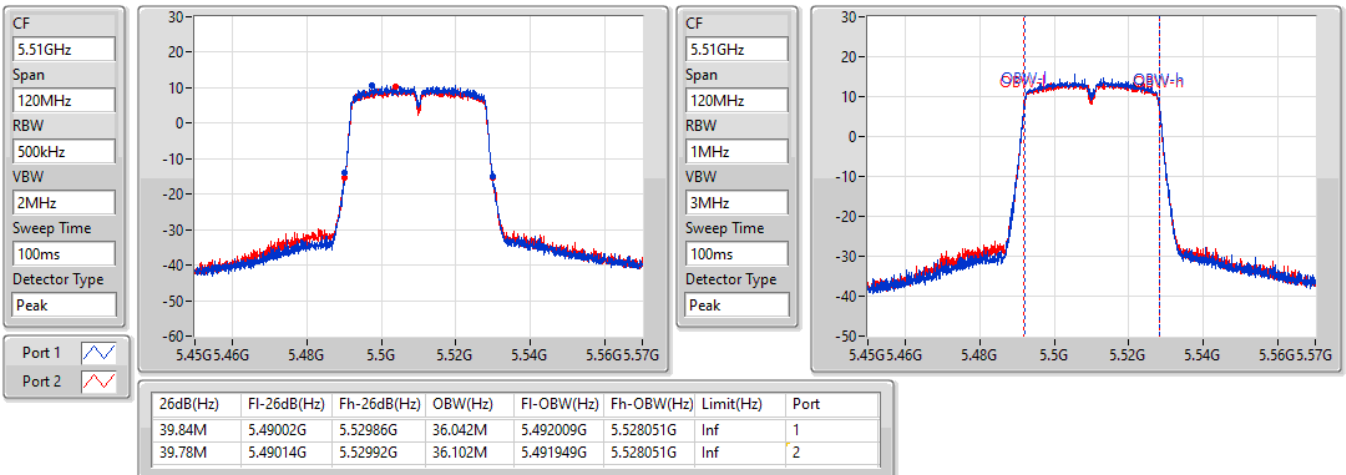


802.11ac VHT40_Nss1,(MCS0)_2TX

EBW

5510MHz

30/08/2022

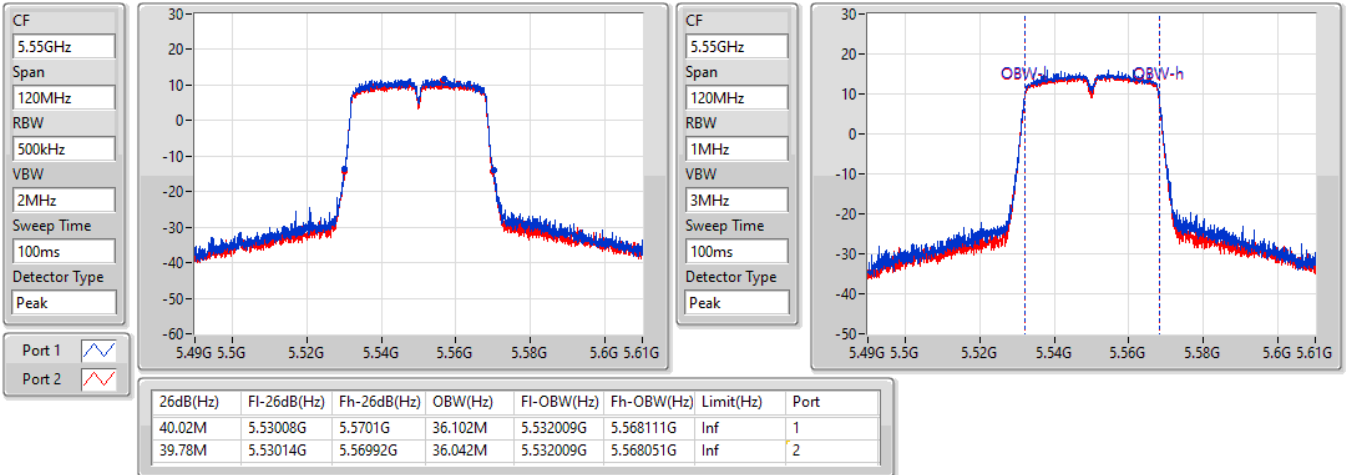


802.11ac VHT40_Nss1,(MCS0)_2TX

EBW

5550MHz

30/08/2022

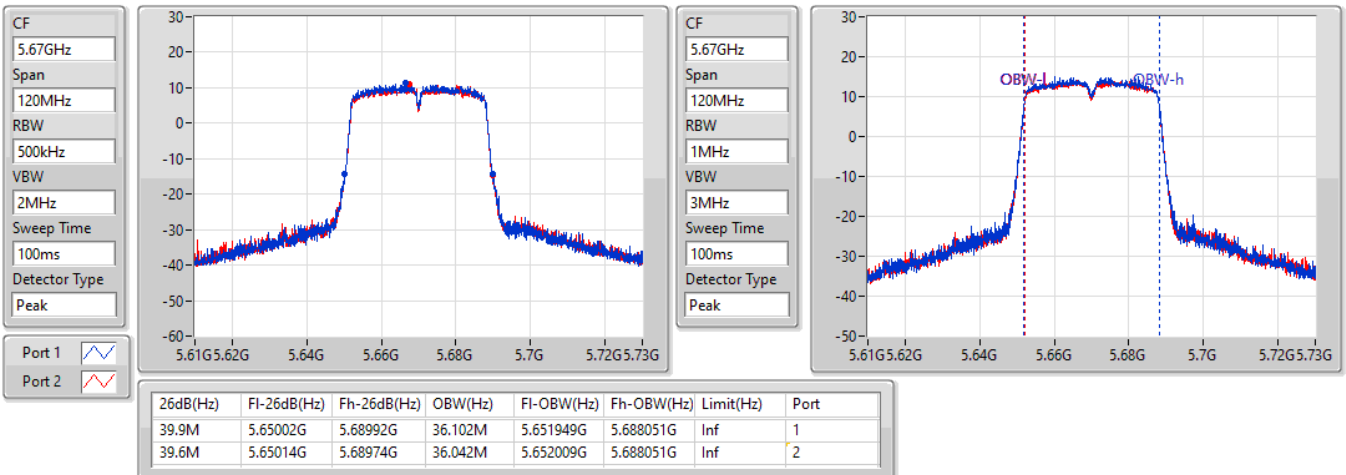


802.11ac VHT40_Nss1,(MCS0)_2TX

EBW

5670MHz

30/08/2022

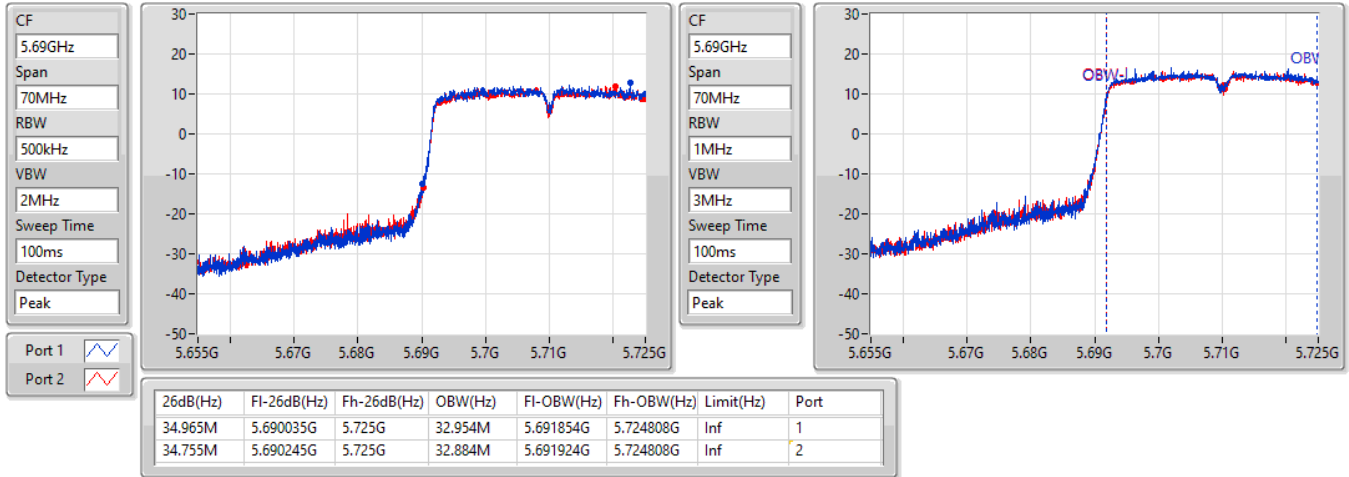


802.11ac VHT40_Nss1,(MCS0)_2TX

EBW

5710MHz Straddle 5.47-5.725GHz

30/08/2022

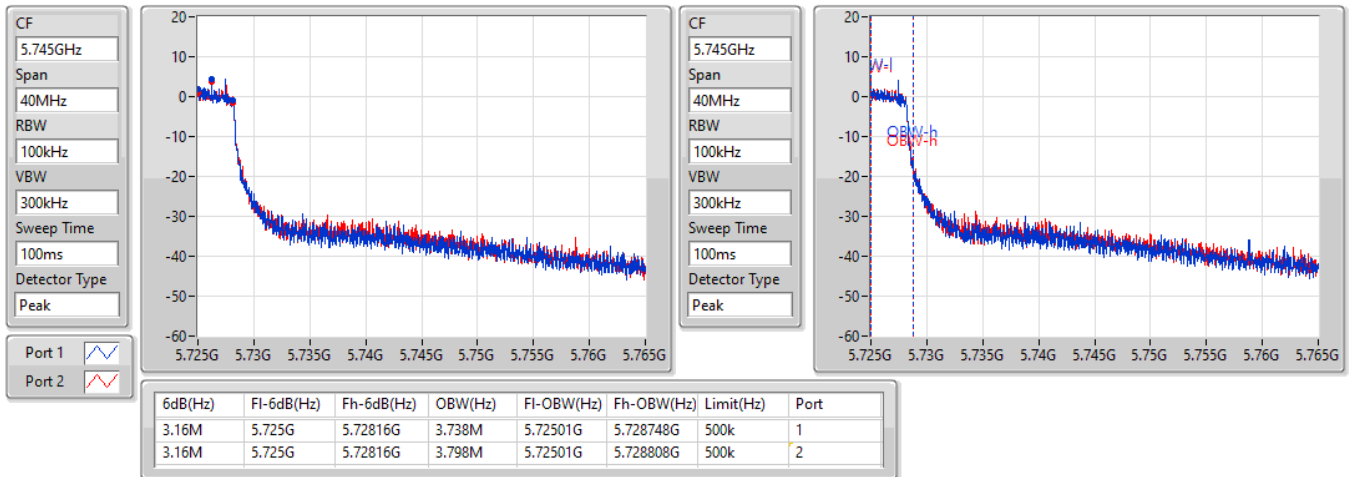


802.11ac VHT40_Nss1,(MCS0)_2TX

EBW

5710MHz Straddle 5.725-5.85GHz

30/08/2022

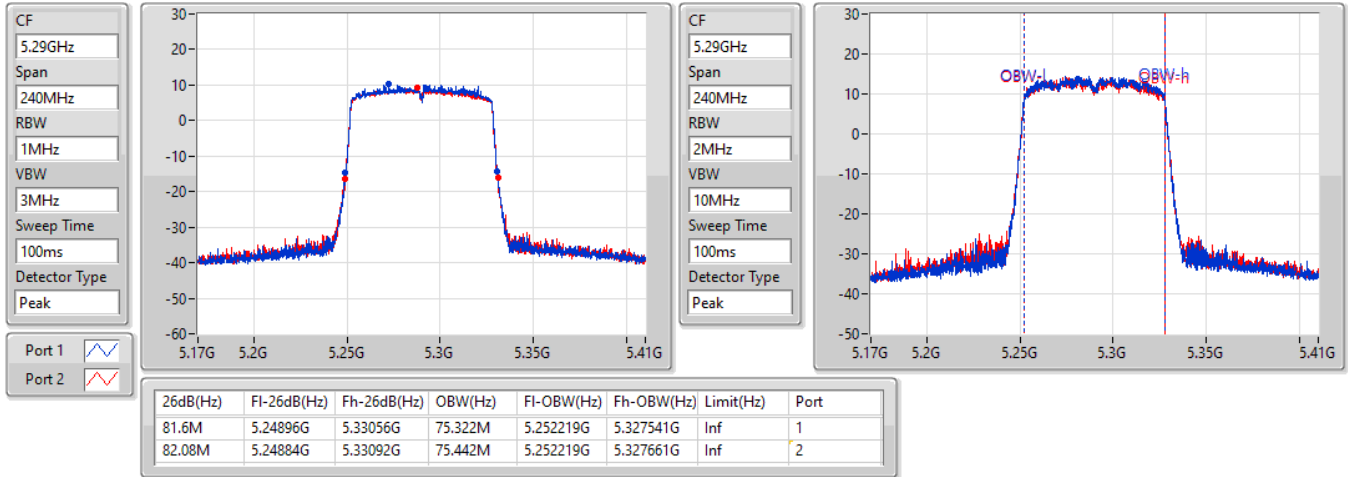


802.11ac VHT80_Nss1,(MCS0)_2TX

EBW

5290MHz

30/08/2022

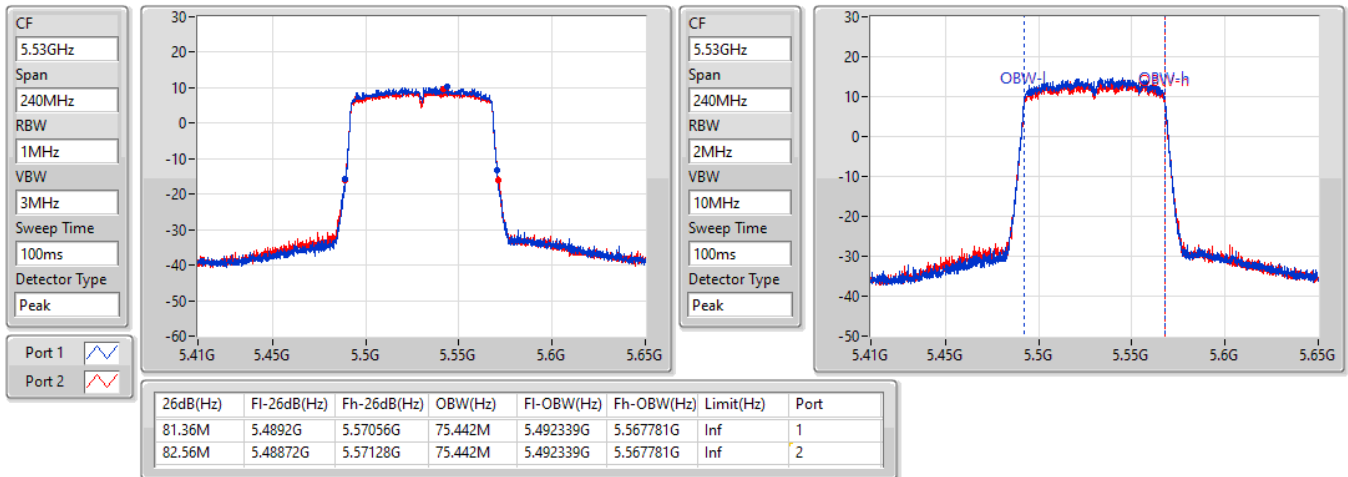


802.11ac VHT80_Nss1,(MCS0)_2TX

EBW

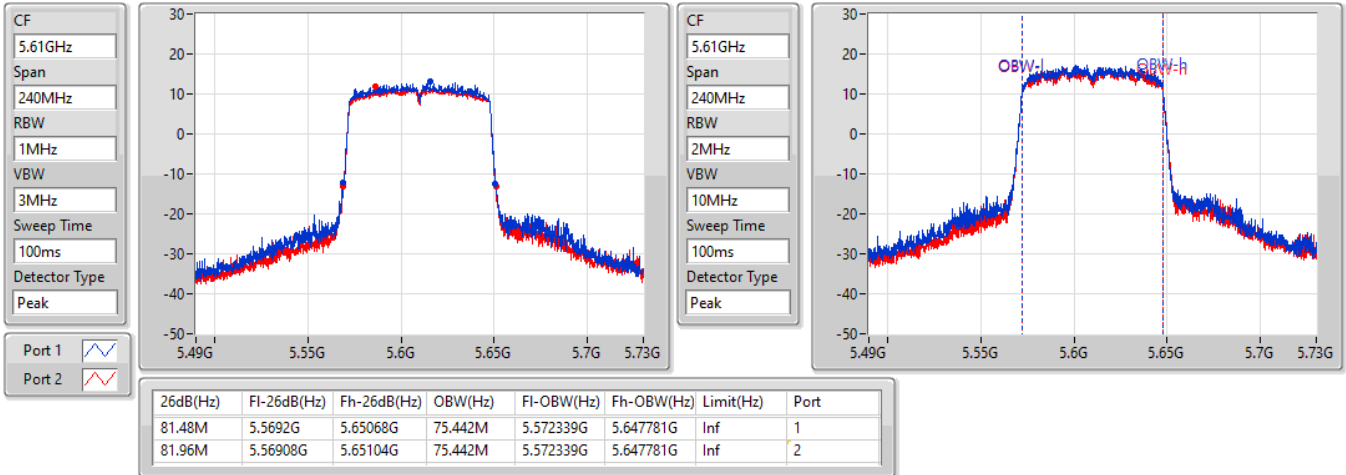
5530MHz

30/08/2022

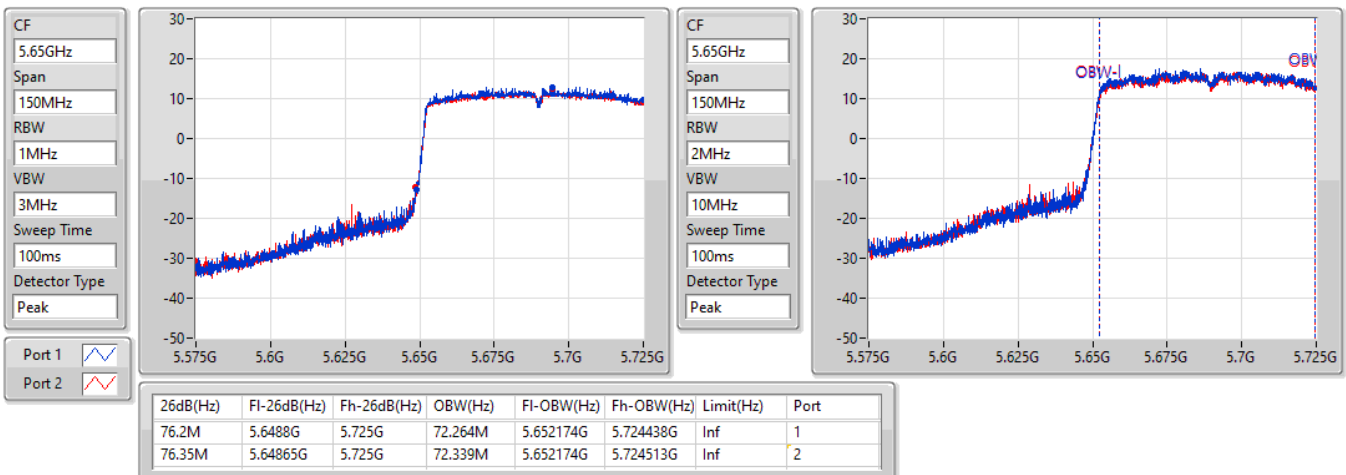


802.11ac VHT80_Nss1,(MCS0)_2TX
EBW
5610MHz

30/08/2022


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

30/08/2022

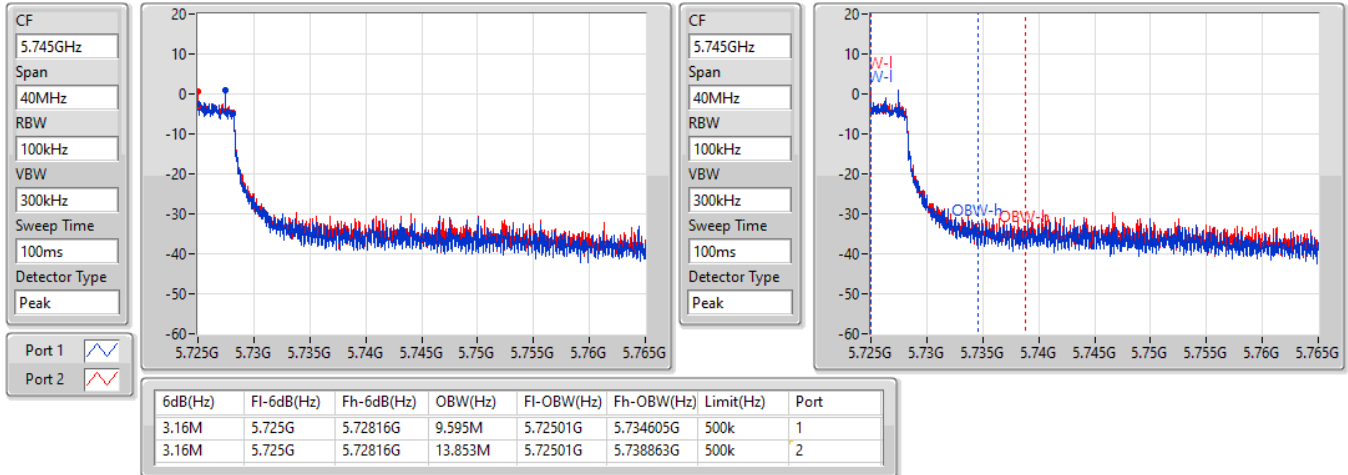


802.11ac VHT80_Nss1,(MCS0)_2TX

EBW

5690MHz Straddle 5.725-5.85GHz

30/08/2022

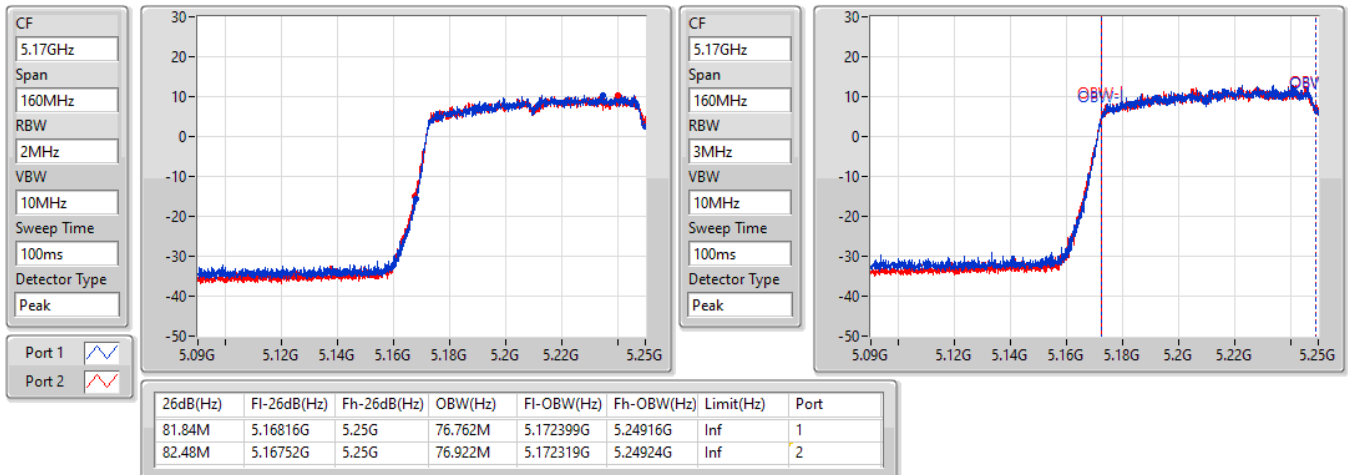


802.11ac VHT160_Nss1,(MCS0)_2TX

EBW

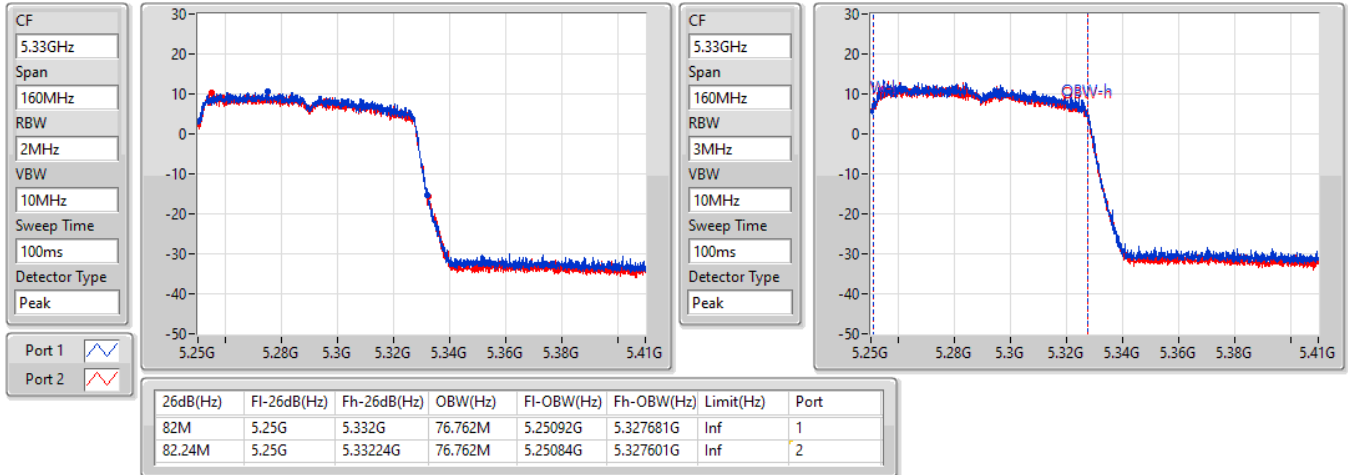
5250MHz Straddle 5.15-5.25GHz

30/08/2022

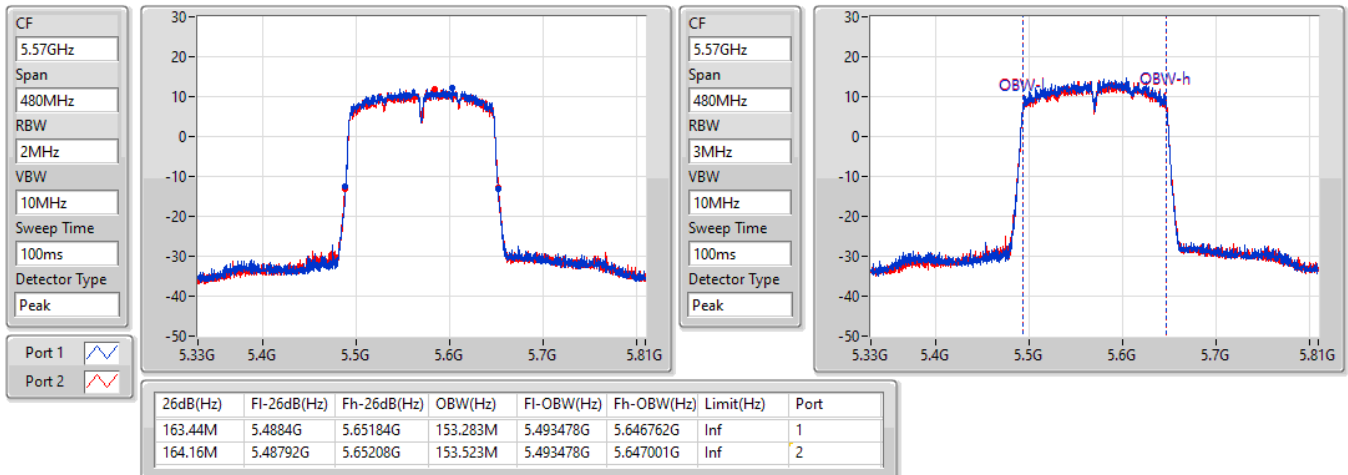


802.11ac VHT160_Nss1,(MCS0)_2TX
EBW
5250MHz Straddle 5.25-5.35GHz

30/08/2022


802.11ac VHT160_Nss1,(MCS0)_2TX
EBW
5570MHz

30/08/2022

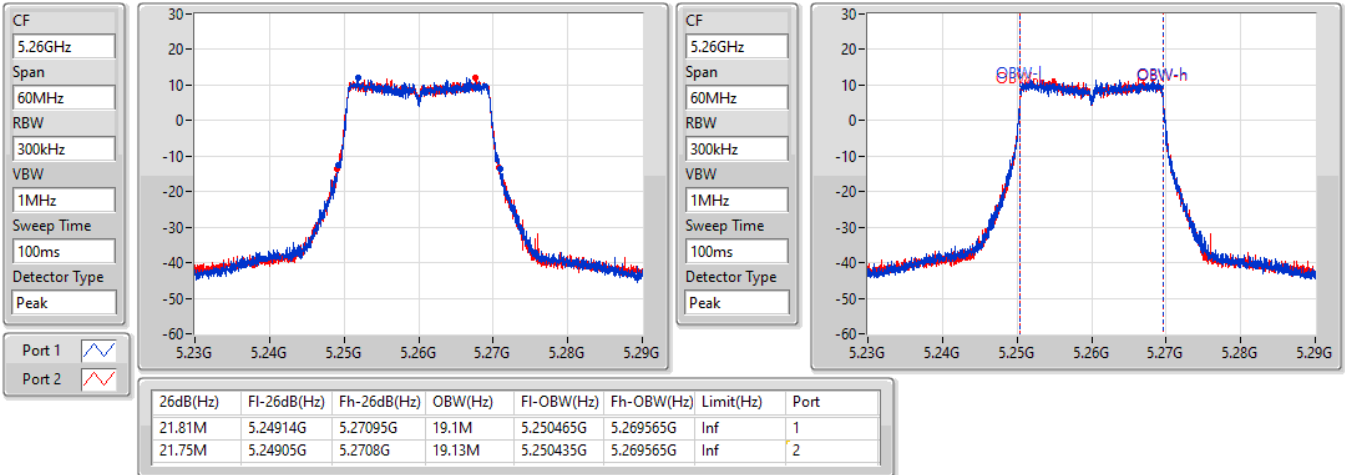


802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

5260MHz

30/08/2022

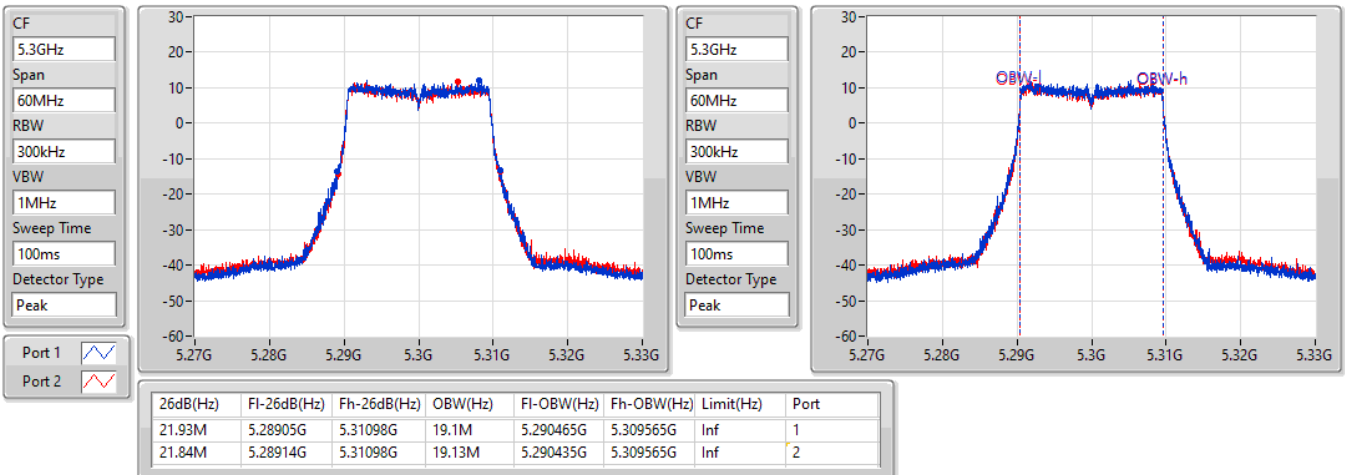


802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

5300MHz

30/08/2022

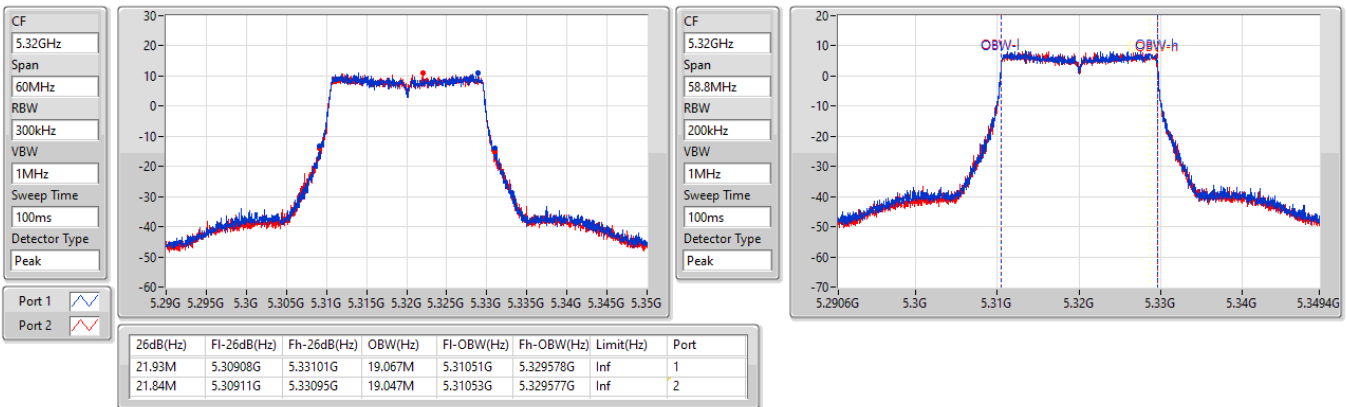


5.3G_802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

5320MHz

19/04/2023

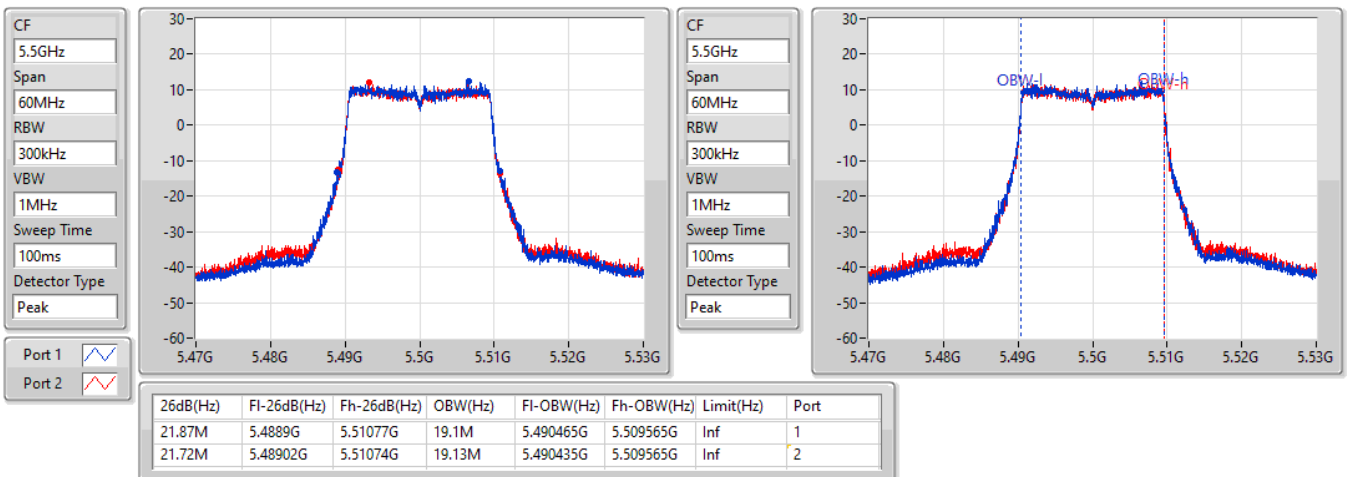


802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

5500MHz

30/08/2022

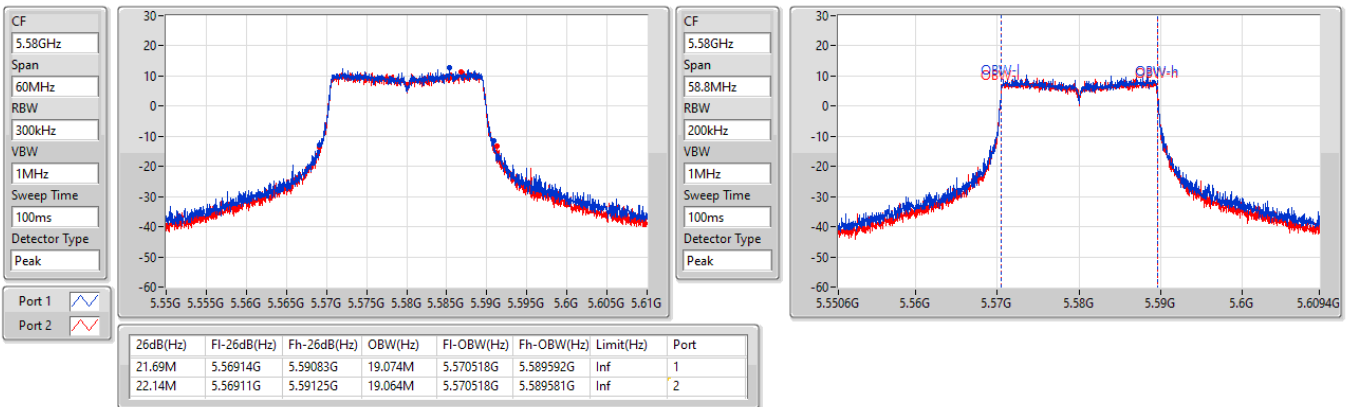


5.6G_802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

5580MHz

19/04/2023

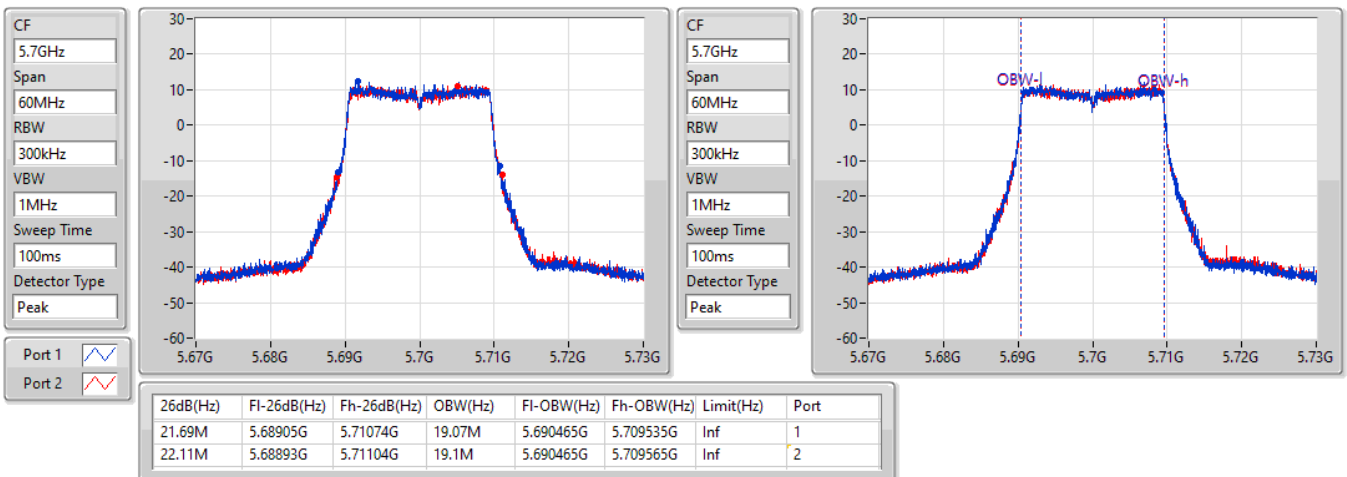


802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

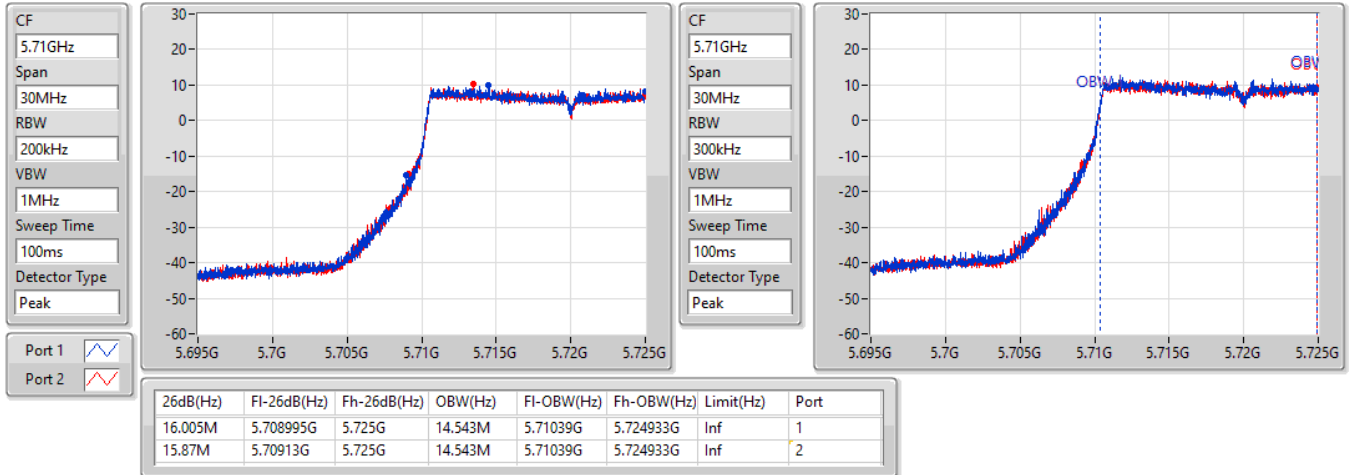
5700MHz

30/08/2022

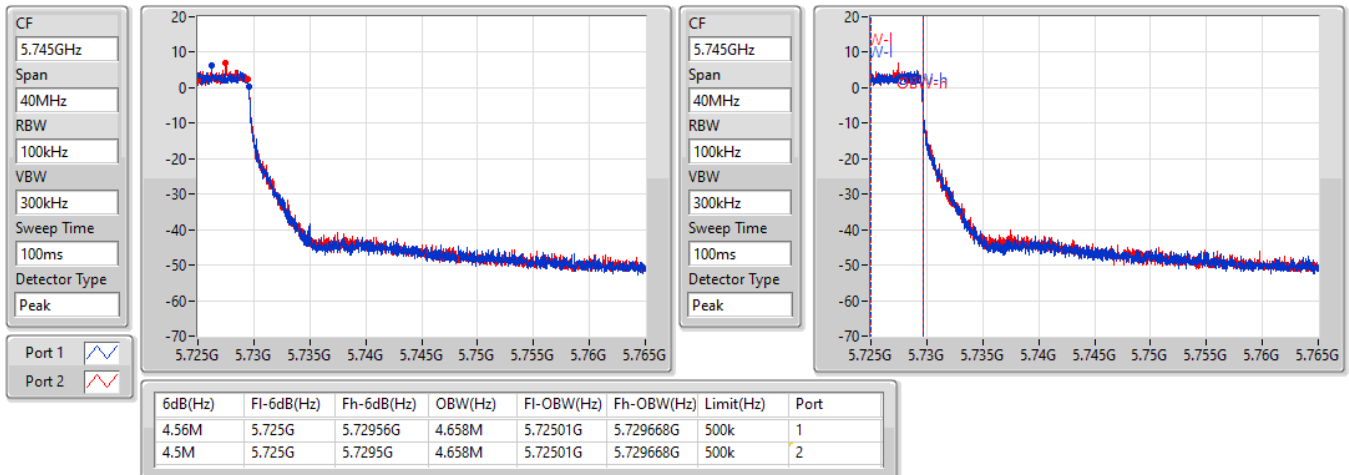


802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
5720MHz Straddle 5.47-5.725GHz

30/08/2022

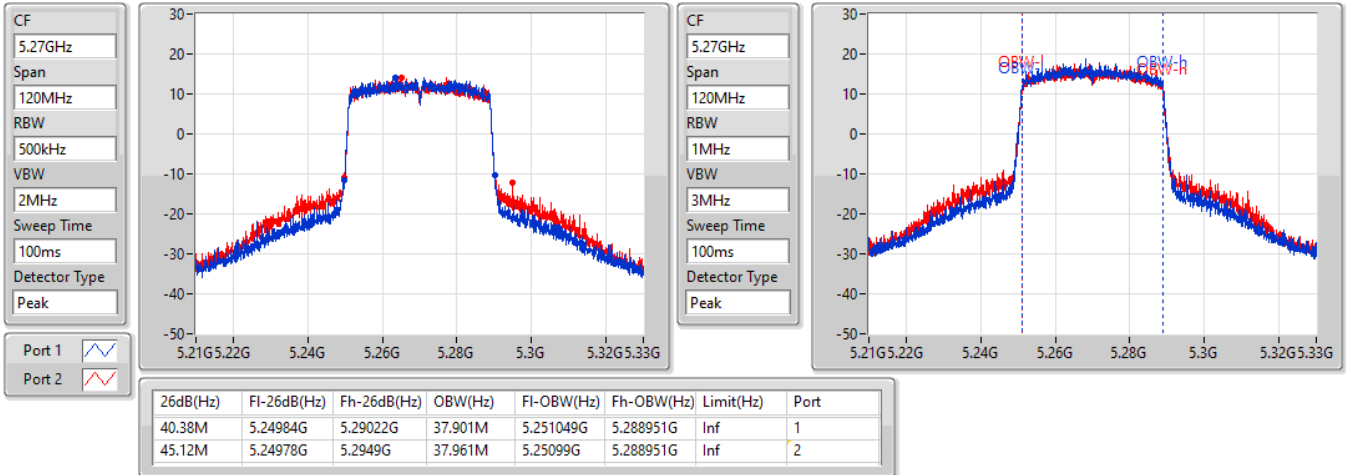

802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
5720MHz Straddle 5.725-5.85GHz

30/08/2022

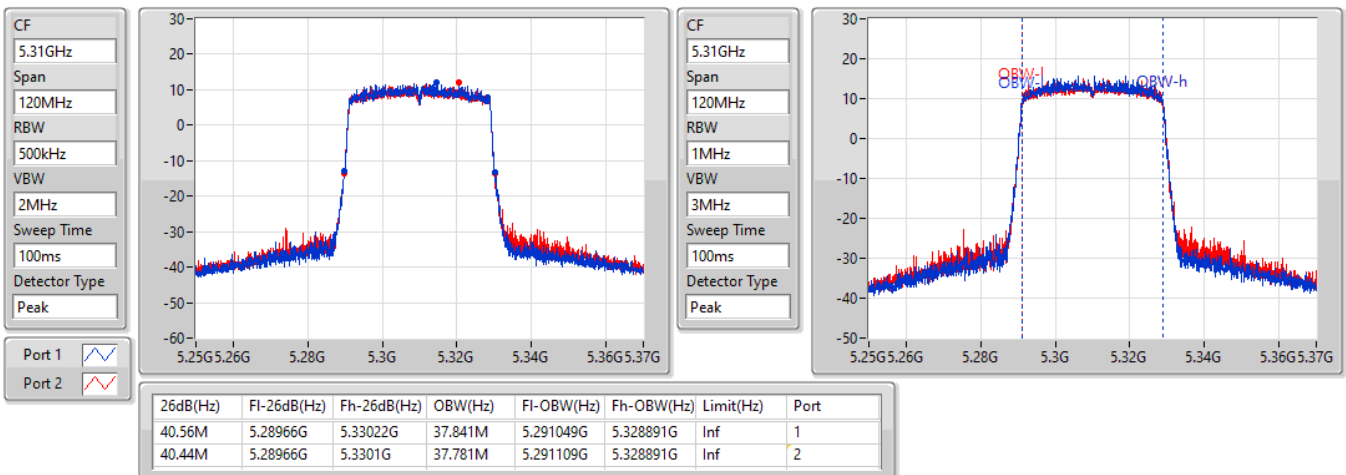


802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
5270MHz

30/08/2022

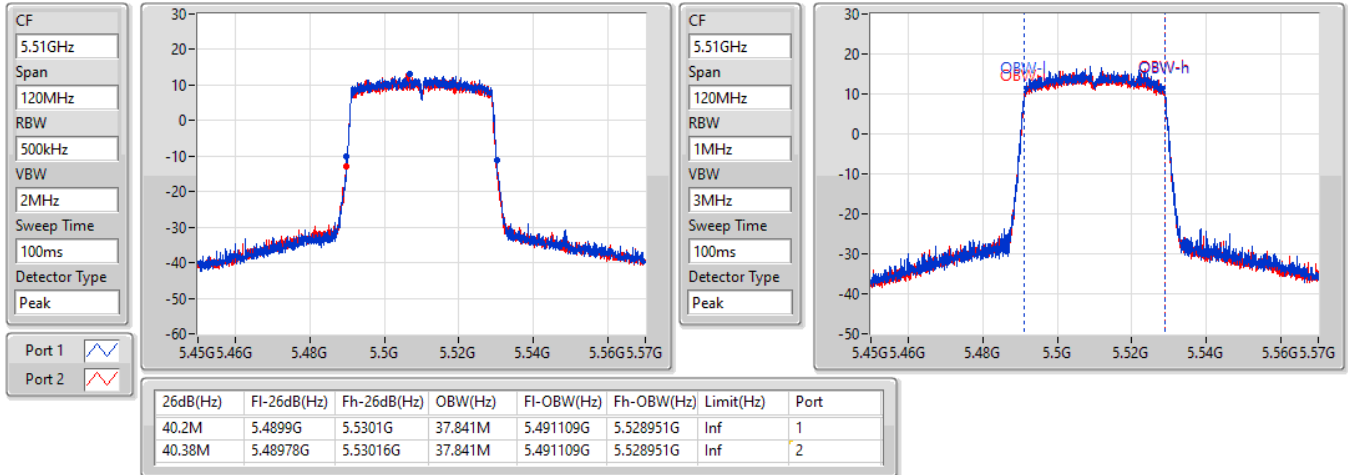

802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
5310MHz

30/08/2022

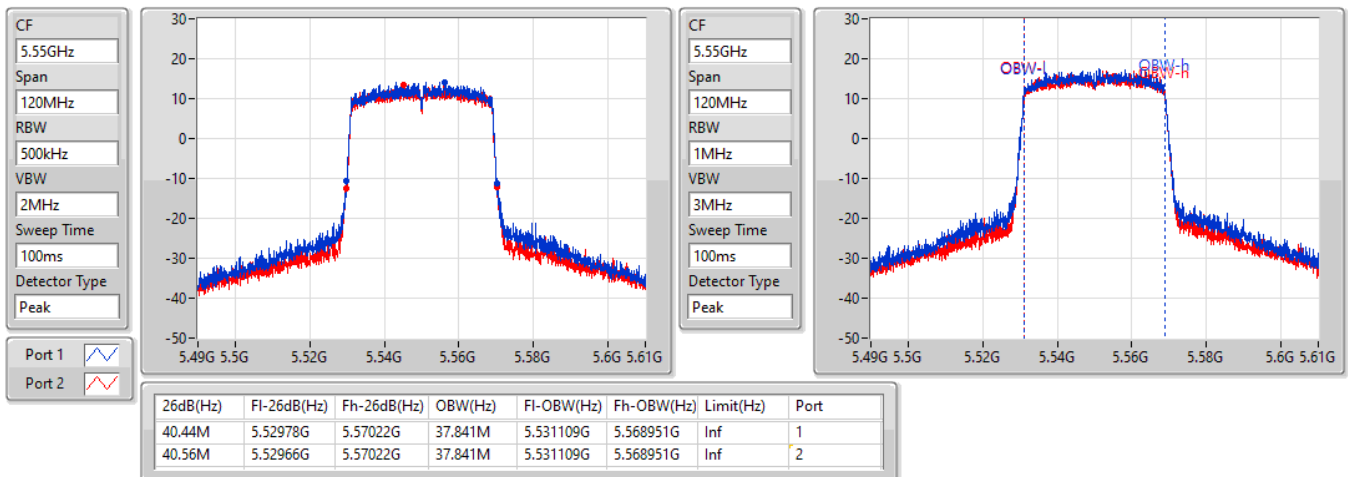


802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
5510MHz

30/08/2022


802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
5550MHz

30/08/2022

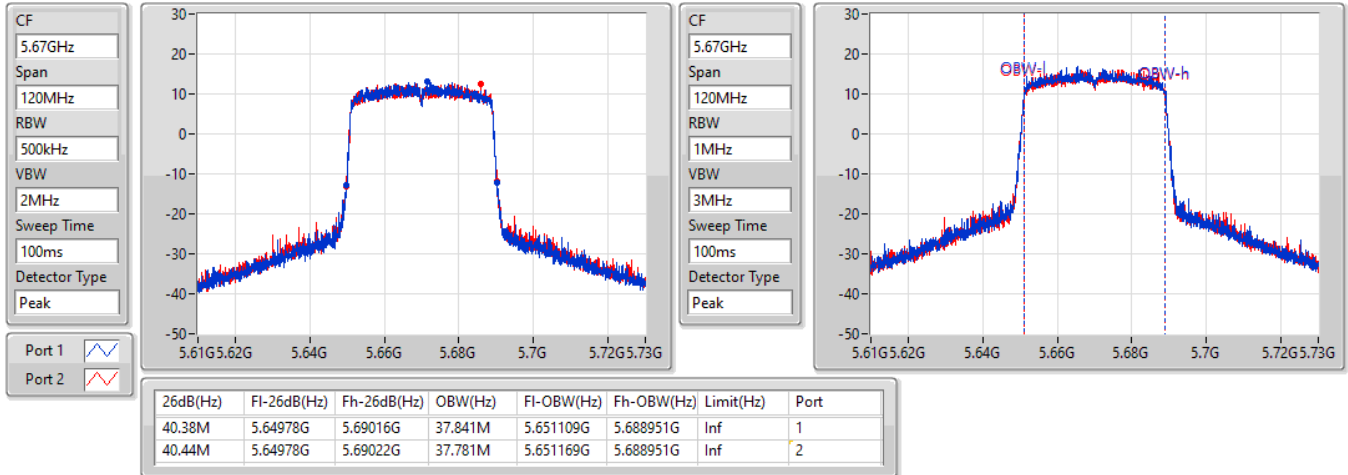


802.11ax HEW40_Nss1,(MCS0)_2TX

EBW

5670MHz

30/08/2022

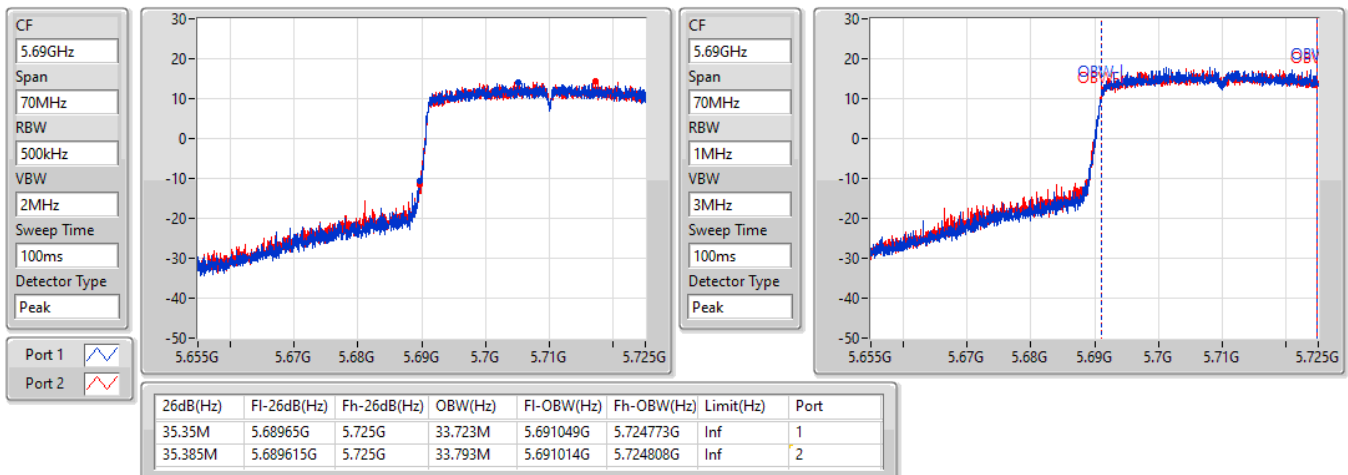


802.11ax HEW40_Nss1,(MCS0)_2TX

EBW

5710MHz Straddle 5.47-5.725GHz

30/08/2022

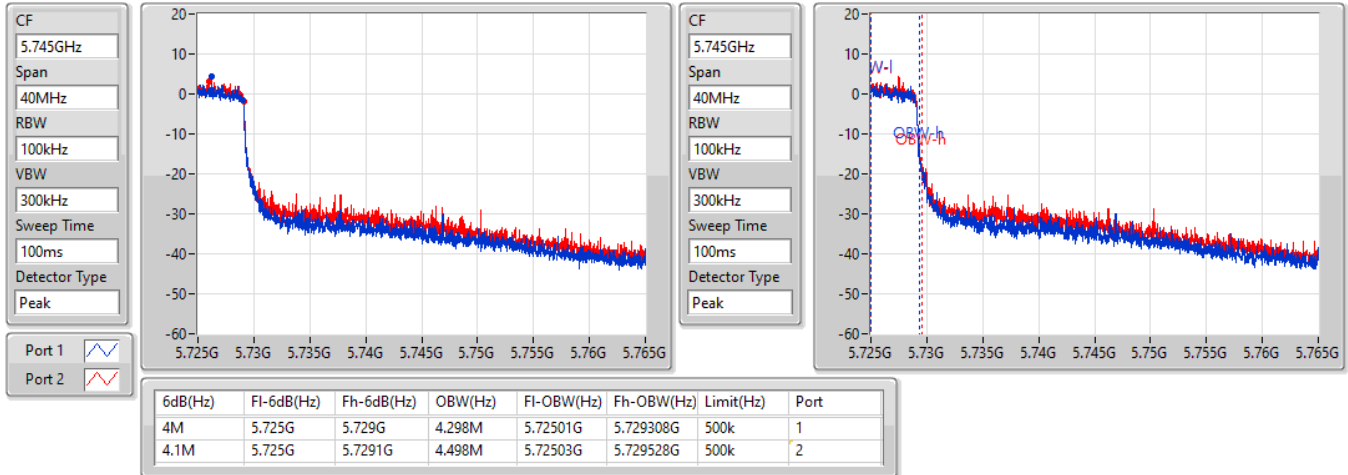


802.11ax HEW40_Nss1,(MCS0)_2TX

EBW

5710MHz Straddle 5.725-5.85GHz

30/08/2022

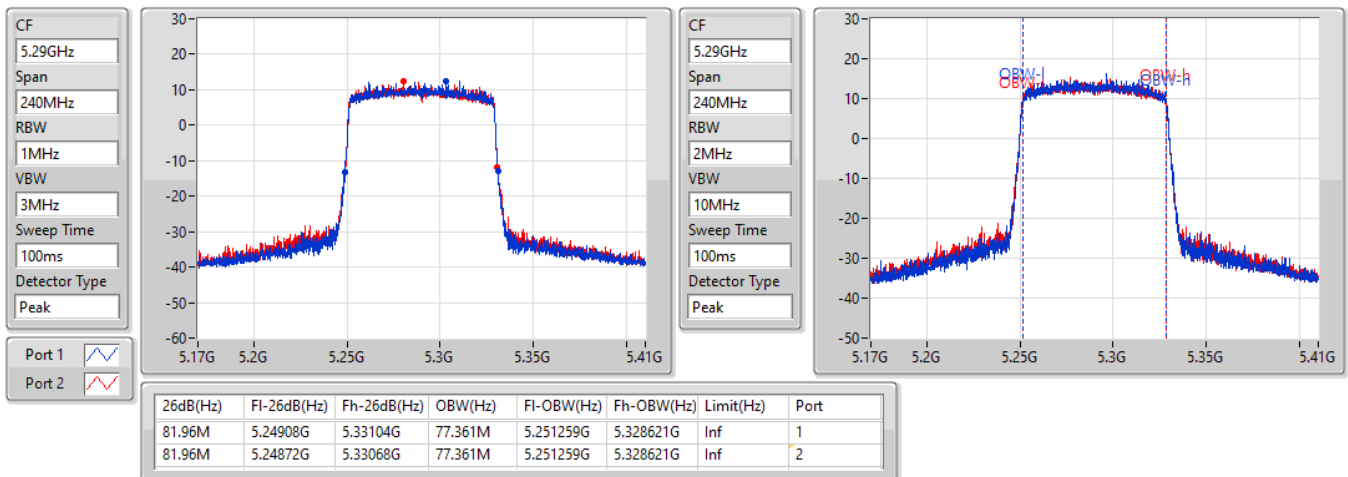


802.11ax HEW80_Nss1,(MCS0)_2TX

EBW

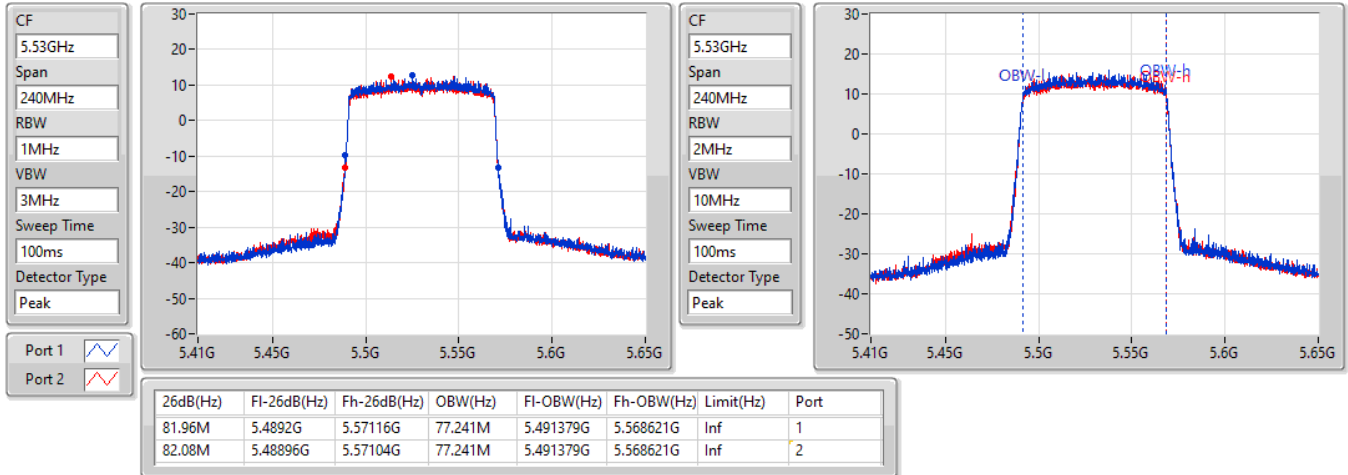
5290MHz

30/08/2022

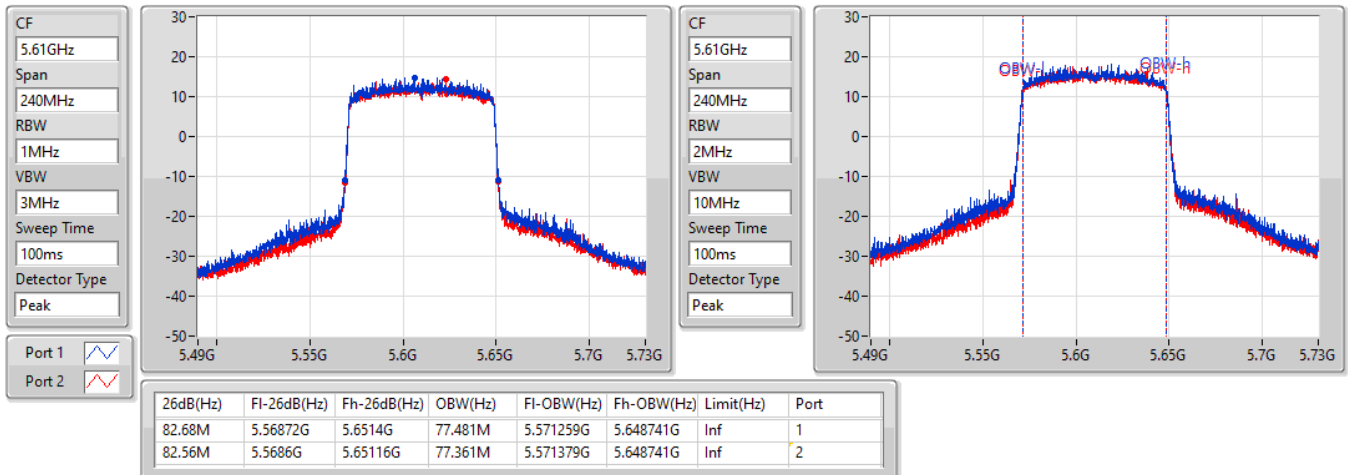


802.11ax HEW80_Nss1,(MCS0)_2TX
EBW
5530MHz

30/08/2022


802.11ax HEW80_Nss1,(MCS0)_2TX
EBW
5610MHz

30/08/2022

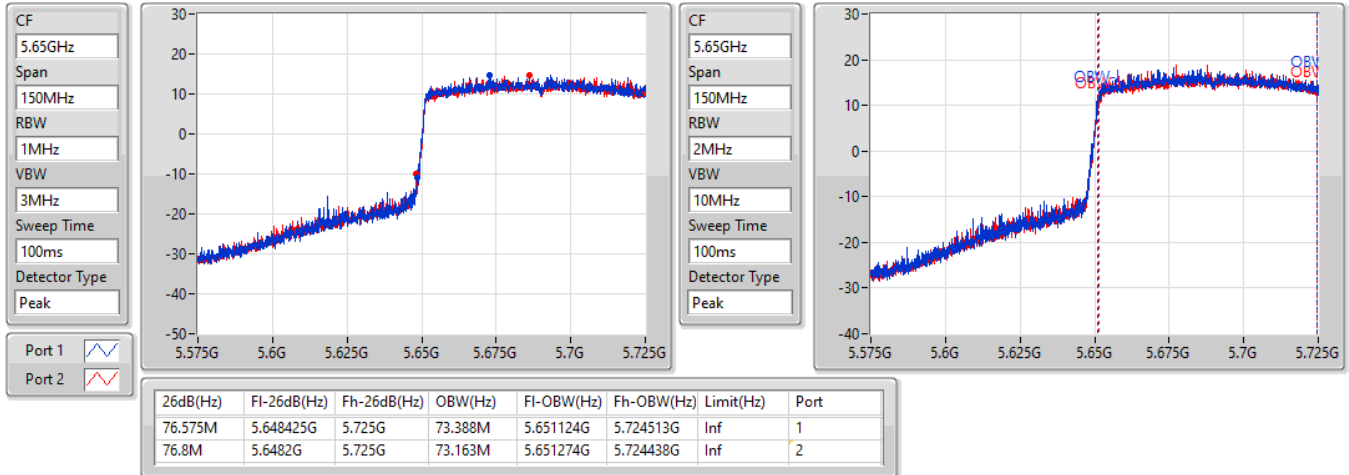


802.11ax HEW80_Nss1,(MCS0)_2TX

EBW

5690MHz Straddle 5.47-5.725GHz

30/08/2022

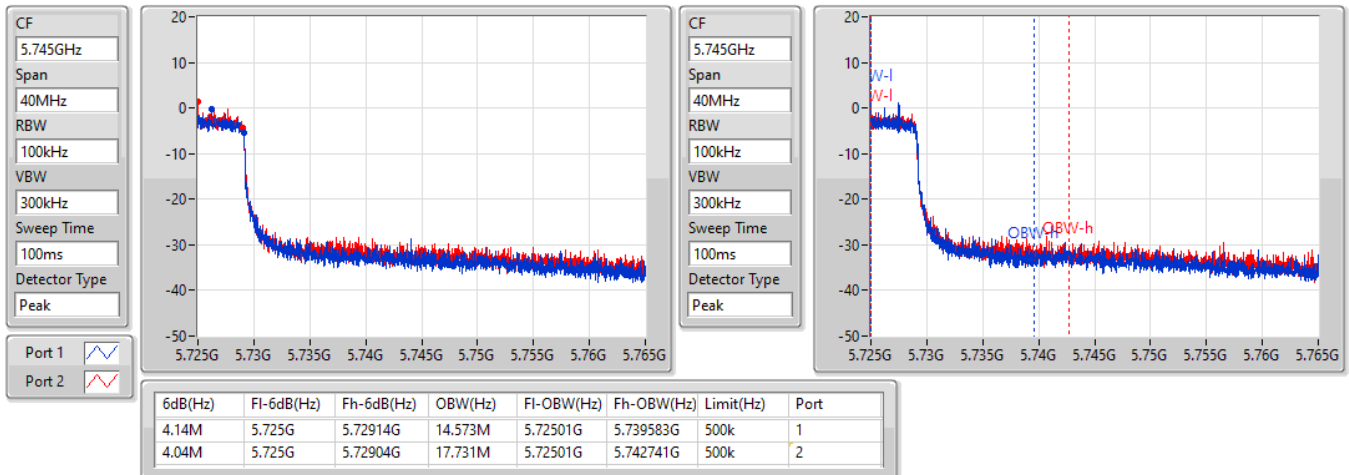


802.11ax HEW80_Nss1,(MCS0)_2TX

EBW

5690MHz Straddle 5.725-5.85GHz

30/08/2022

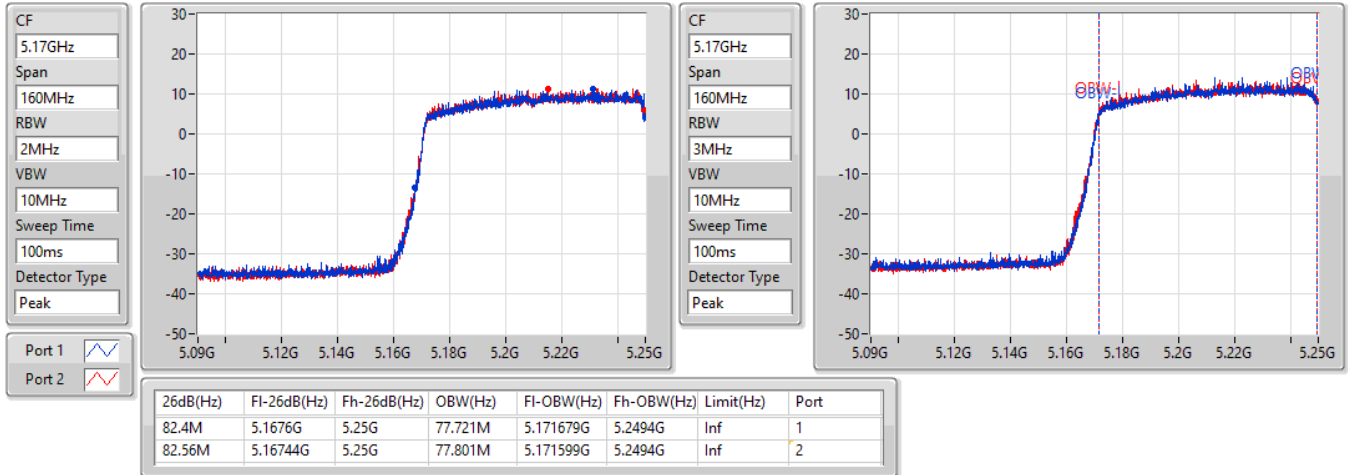


802.11ax HEW160_Nss1,(MCS0)_2TX

EBW

5250MHz Straddle 5.15-5.25GHz

30/08/2022

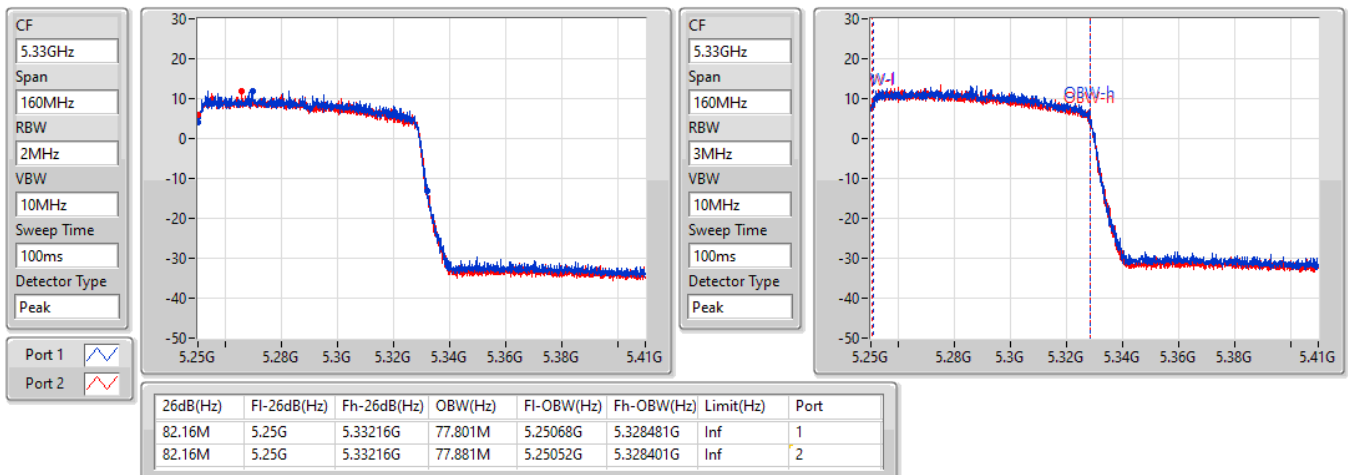


802.11ax HEW160_Nss1,(MCS0)_2TX

EBW

5250MHz Straddle 5.25-5.35GHz

30/08/2022

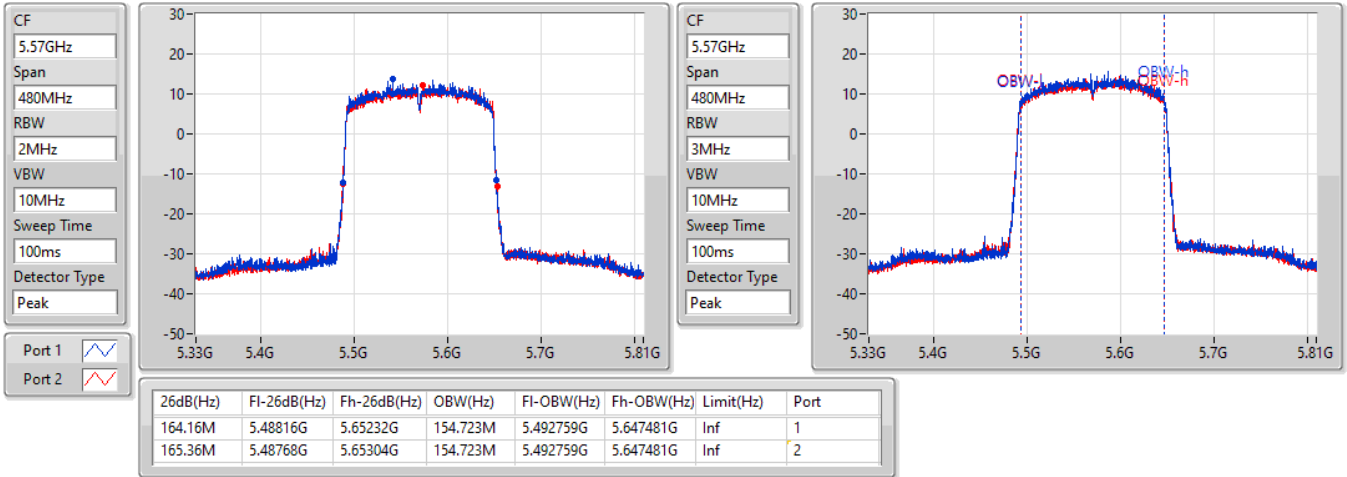


802.11ax HEW160_Nss1,(MCS0)_2TX

EBW

5570MHz

30/08/2022





Average Power_Non-Beamforming_Radio2

Appendix B.1

Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.25-5.35GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	21.20	0.13183	26.50	0.44668
802.11n HT20_Nss1,(MCS0)_2TX	21.49	0.14093	26.79	0.47753
802.11n HT40_Nss1,(MCS0)_2TX	23.50	0.22387	28.80	0.75858
802.11ac VHT20_Nss1,(MCS0)_2TX	21.56	0.14322	26.86	0.48529
802.11ac VHT40_Nss1,(MCS0)_2TX	23.73	0.23605	29.03	0.79983
802.11ac VHT80_Nss1,(MCS0)_2TX	21.46	0.13996	26.76	0.47424
802.11ax HEW20_Nss1,(MCS0)_2TX	21.60	0.14454	26.90	0.48978
802.11ax HEW40_Nss1,(MCS0)_2TX	23.82	0.24099	29.12	0.81658
802.11ax HEW80_Nss1,(MCS0)_2TX	21.49	0.14093	26.79	0.47753
5.47-5.725GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	21.42	0.13868	26.72	0.46989
802.11n HT20_Nss1,(MCS0)_2TX	21.64	0.14588	26.94	0.49431
802.11n HT40_Nss1,(MCS0)_2TX	23.33	0.21528	28.63	0.72946
802.11ac VHT20_Nss1,(MCS0)_2TX	21.69	0.14757	26.99	0.50003
802.11ac VHT40_Nss1,(MCS0)_2TX	23.76	0.23768	29.06	0.80538
802.11ac VHT80_Nss1,(MCS0)_2TX	23.65	0.23174	28.95	0.78524
802.11ax HEW20_Nss1,(MCS0)_2TX	21.85	0.15311	27.15	0.51880
802.11ax HEW40_Nss1,(MCS0)_2TX	23.84	0.24210	29.14	0.82035
802.11ax HEW80_Nss1,(MCS0)_2TX	23.72	0.23550	29.02	0.79799
5.725-5.85GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	13.73	0.02360	19.03	0.07998
802.11n HT20_Nss1,(MCS0)_2TX	15.02	0.03177	20.32	0.10765
802.11n HT40_Nss1,(MCS0)_2TX	11.18	0.01312	16.48	0.04446
802.11ac VHT20_Nss1,(MCS0)_2TX	15.14	0.03266	20.44	0.11066
802.11ac VHT40_Nss1,(MCS0)_2TX	12.10	0.01622	17.40	0.05495
802.11ac VHT80_Nss1,(MCS0)_2TX	8.75	0.00750	14.05	0.02541
802.11ax HEW20_Nss1,(MCS0)_2TX	15.27	0.03365	20.57	0.11402
802.11ax HEW40_Nss1,(MCS0)_2TX	13.37	0.02173	18.67	0.07362
802.11ax HEW80_Nss1,(MCS0)_2TX	9.54	0.00899	14.84	0.03048

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-
5260MHz	Pass	5.30	18.15	18.23	21.20	23.98	26.50	30.00
5300MHz	Pass	5.30	17.93	18.25	21.10	23.98	26.40	30.00
5320MHz	Pass	5.30	18.11	17.99	21.06	23.98	26.36	30.00
5500MHz	Pass	5.30	18.4	18.41	21.42	23.98	26.72	30.00
5580MHz	Pass	5.30	17.1	17.83	20.49	23.98	25.79	30.00
5700MHz	Pass	5.30	18.15	18.2	21.19	23.98	26.49	30.00
5720MHz Straddle 5.47-5.725GHz	Pass	5.30	17.07	17.36	20.23	22.84	25.53	28.84
5720MHz Straddle 5.725-5.85GHz	Pass	5.30	10.63	10.81	13.73	30.00	19.03	36.00
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5260MHz	Pass	5.30	18.38	18.57	21.49	23.98	26.79	30.00
5300MHz	Pass	5.30	18.19	18.54	21.38	23.98	26.68	30.00
5320MHz	Pass	5.30	18.31	18.33	21.33	23.98	26.63	30.00
5500MHz	Pass	5.30	18.6	18.65	21.64	23.98	26.94	30.00
5580MHz	Pass	5.30	17.81	18.44	21.15	23.98	26.45	30.00
5700MHz	Pass	5.30	18.33	18.58	21.47	23.98	26.77	30.00
5720MHz Straddle 5.47-5.725GHz	Pass	5.30	17.67	18.03	20.86	22.97	26.16	28.97
5720MHz Straddle 5.725-5.85GHz	Pass	5.30	11.79	12.21	15.02	30.00	20.32	36.00
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5270MHz	Pass	5.30	20.46	20.51	23.50	23.98	28.80	30.00
5310MHz	Pass	5.30	19.44	19.58	22.52	23.98	27.82	30.00
5510MHz	Pass	5.30	20.12	20.18	23.16	23.98	28.46	30.00
5550MHz	Pass	5.30	20.12	20.51	23.33	23.98	28.63	30.00
5670MHz	Pass	5.30	20.26	19.94	23.11	23.98	28.41	30.00
5710MHz Straddle 5.47-5.725GHz	Pass	5.30	18.76	19.54	22.18	23.98	27.48	30.00
5710MHz Straddle 5.725-5.85GHz	Pass	5.30	7.54	8.72	11.18	30.00	16.48	36.00
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5260MHz	Pass	5.30	18.45	18.65	21.56	23.98	26.86	30.00
5300MHz	Pass	5.30	18.19	18.62	21.42	23.98	26.72	30.00
5320MHz	Pass	5.30	18.32	18.43	21.39	23.98	26.69	30.00
5500MHz	Pass	5.30	18.72	18.64	21.69	23.98	26.99	30.00
5580MHz	Pass	5.30	17.79	18.56	21.20	23.98	26.50	30.00
5700MHz	Pass	5.30	18.42	18.64	21.54	23.98	26.84	30.00
5720MHz Straddle 5.47-5.725GHz	Pass	5.30	17.7	18.03	20.88	22.89	26.18	28.89
5720MHz Straddle 5.725-5.85GHz	Pass	5.30	11.89	12.35	15.14	30.00	20.44	36.00
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5270MHz	Pass	5.30	20.63	20.8	23.73	23.98	29.03	30.00
5310MHz	Pass	5.30	19.46	19.64	22.56	23.98	27.86	30.00
5510MHz	Pass	5.30	20.22	20.25	23.25	23.98	28.55	30.00
5550MHz	Pass	5.30	20.58	20.92	23.76	23.98	29.06	30.00
5670MHz	Pass	5.30	20.41	20.17	23.30	23.98	28.60	30.00
5710MHz Straddle 5.47-5.725GHz	Pass	5.30	19.71	20.56	23.17	23.98	28.47	30.00
5710MHz Straddle 5.725-5.85GHz	Pass	5.30	8.8	9.36	12.10	30.00	17.40	36.00
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5290MHz	Pass	5.30	18.29	18.6	21.46	23.98	26.76	30.00
5530MHz	Pass	5.30	17.66	17.94	20.81	23.98	26.11	30.00
5610MHz	Pass	5.30	17.75	17.77	20.77	23.98	26.07	30.00
5690MHz Straddle 5.47-5.725GHz	Pass	5.30	20.65	20.63	23.65	23.98	28.95	30.00
5690MHz Straddle 5.725-5.85GHz	Pass	5.30	5.62	5.86	8.75	30.00	14.05	36.00
802.11ax HEW20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5260MHz	Pass	5.30	18.55	18.62	21.60	23.98	26.90	30.00
5300MHz	Pass	5.30	18.27	18.6	21.45	23.98	26.75	30.00
5320MHz	Pass	5.30	18.41	18.45	21.44	23.98	26.74	30.00
5500MHz	Pass	5.30	18.77	18.91	21.85	23.98	27.15	30.00
5580MHz	Pass	5.30	17.99	18.76	21.40	23.98	26.70	30.00



Average Power_Non-Beamforming_Radio2

Appendix B.1

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
5700MHz	Pass	5.30	18.52	18.6	21.57	23.98	26.87	30.00
5720MHz Straddle 5.47-5.725GHz	Pass	5.30	17.77	18.05	20.92	22.95	26.22	28.95
5720MHz Straddle 5.725-5.85GHz	Pass	5.30	12.04	12.47	15.27	30.00	20.57	36.00
802.11ax HEW40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5270MHz	Pass	5.30	20.66	20.95	23.82	23.98	29.12	30.00
5310MHz	Pass	5.30	19.46	19.72	22.60	23.98	27.90	30.00
5510MHz	Pass	5.30	20.23	20.27	23.26	23.98	28.56	30.00
5550MHz	Pass	5.30	20.72	20.94	23.84	23.98	29.14	30.00
5670MHz	Pass	5.30	20.49	20.25	23.38	23.98	28.68	30.00
5710MHz Straddle 5.47-5.725GHz	Pass	5.30	20.27	20.98	23.65	23.98	28.95	30.00
5710MHz Straddle 5.725-5.85GHz	Pass	5.30	10.16	10.55	13.37	30.00	18.67	36.00
802.11ax HEW80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5290MHz	Pass	5.30	18.39	18.57	21.49	23.98	26.79	30.00
5530MHz	Pass	5.30	17.81	18.01	20.92	23.98	26.22	30.00
5610MHz	Pass	5.30	17.97	17.96	20.98	23.98	26.28	30.00
5690MHz Straddle 5.47-5.725GHz	Pass	5.30	20.8	20.62	23.72	23.98	29.02	30.00
5690MHz Straddle 5.725-5.85GHz	Pass	5.30	6.49	6.57	9.54	30.00	14.84	36.00

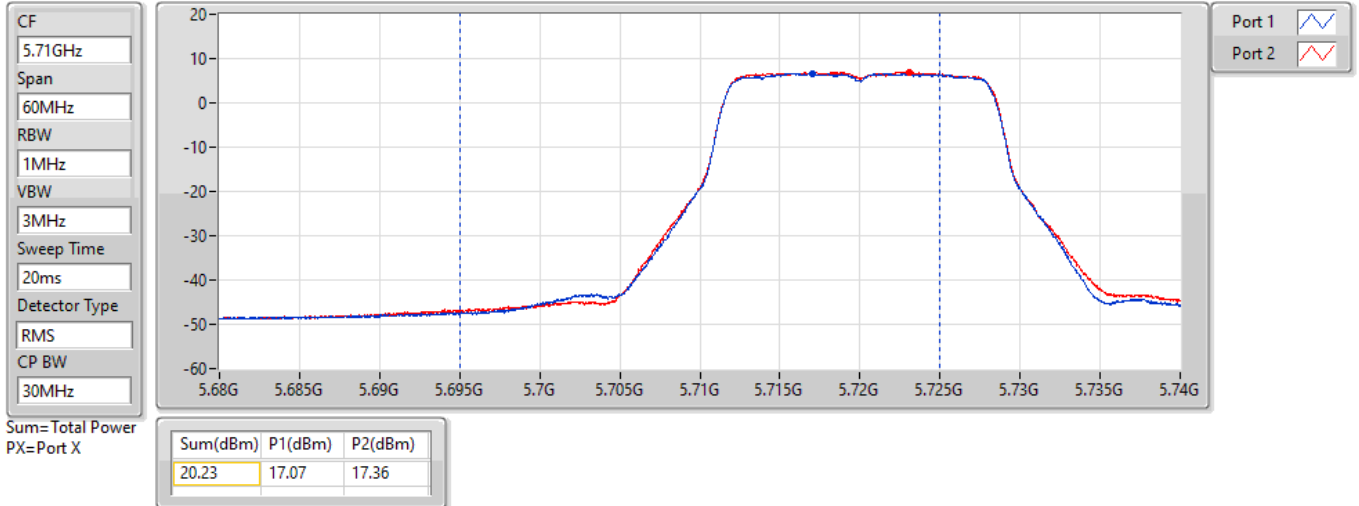
DG = Directional Gain; Port X = Port X output power

5.47-5.725GHz_802.11a_Nss1,(6Mbps)_2TX

AV Power

5720MHz Straddle 5.47-5.725GHz_TX

14/09/2022

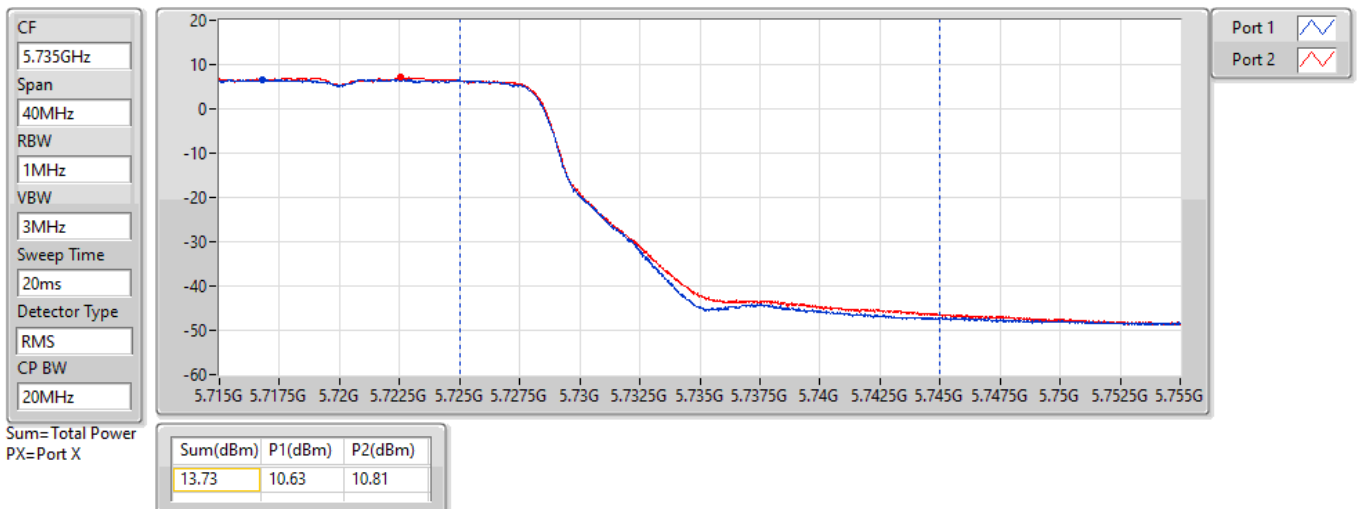


5.725-5.85GHz_802.11a_Nss1,(6Mbps)_2TX

AV Power

5720MHz Straddle 5.725-5.85GHz_TX

14/09/2022

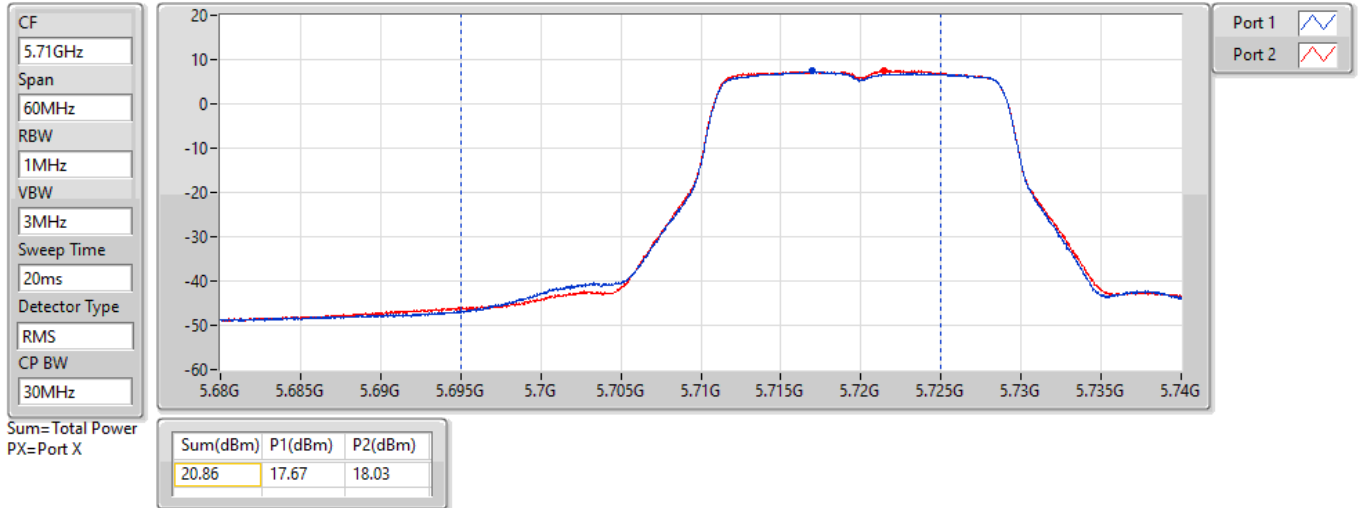


5.47-5.725GHz_802.11n HT20_Nss1,(MCS0)_2TX

AV Power

5720MHz Straddle 5.47-5.725GHz_TX

14/09/2022

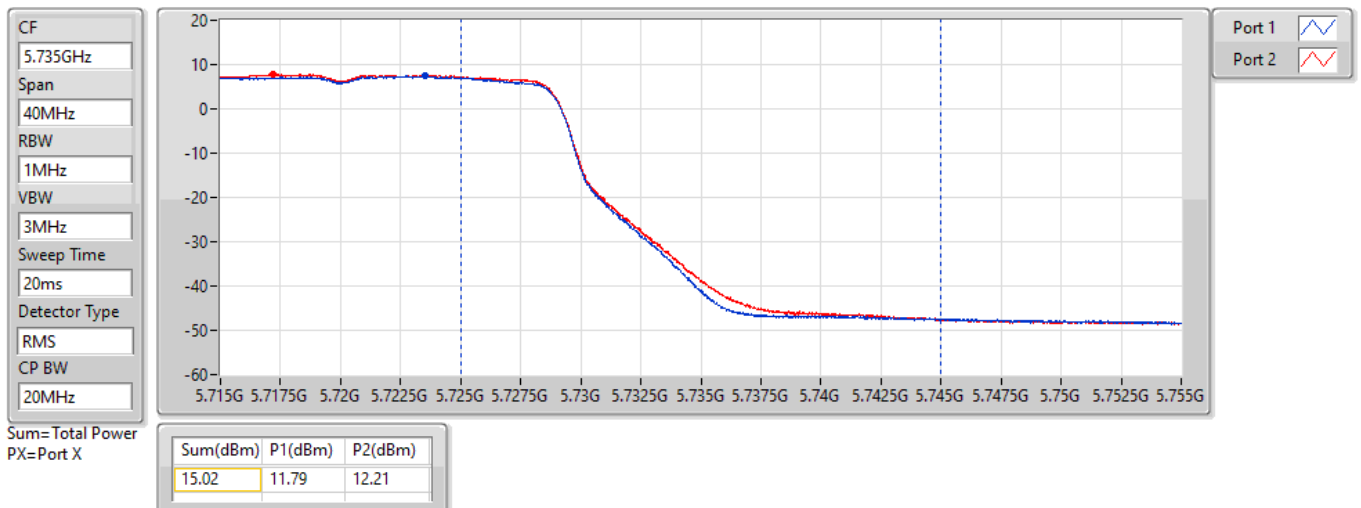


5.725-5.85GHz_802.11n HT20_Nss1,(MCS0)_2TX

AV Power

5720MHz Straddle 5.725-5.85GHz_TX

14/09/2022

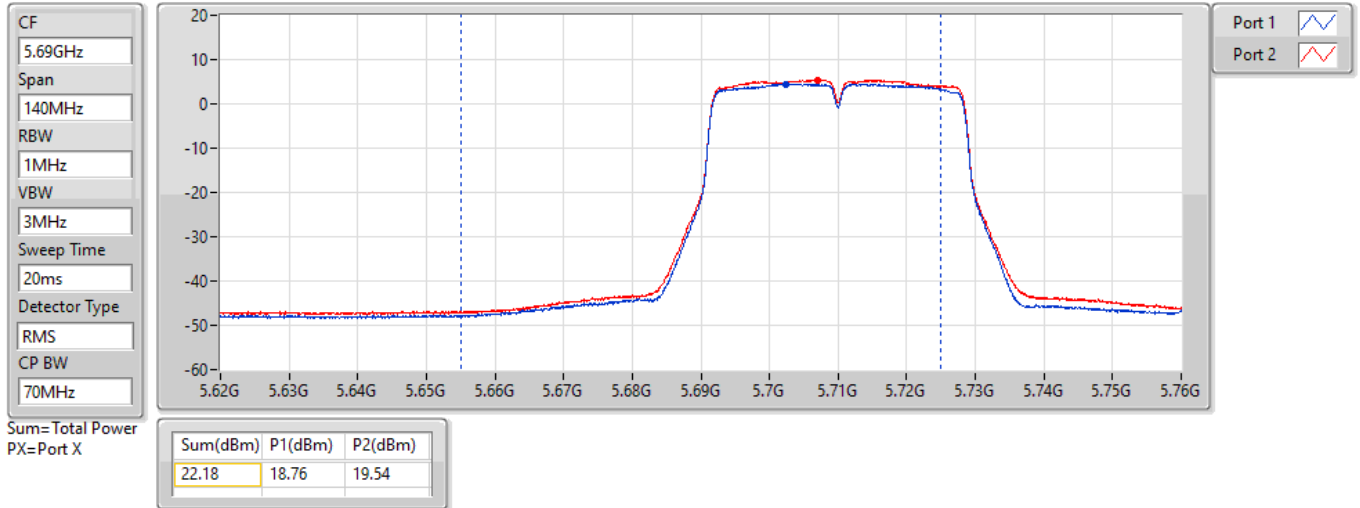


5.47-5.725GHz_802.11n HT40_Nss1,(MCS0)_2TX

AV Power

5710MHz Straddle 5.47-5.725GHz_TX

21/09/2022



5.725-5.85GHz_802.11n HT40_Nss1,(MCS0)_2TX

AV Power

5710MHz Straddle 5.725-5.85GHz_TX

21/09/2022

