



FCC RADIO TEST REPORT

FCC ID : TOR-C130
Equipment : 802.11a/b/g/n/ac AP
Brand Name : MOJO , ARISTA
Model Name : C-130E
Applicant : Mojo Networks, Inc.
5453 Great America Parkway Santa Clara, CA
95054 United States
Manufacturer : Mojo Networks, Inc.
5453 Great America Parkway Santa Clara, CA
95054 United States
Standard : 47 CFR FCC Part 15.407

The product was received on Jun. 04, 2019, and testing was started from Jun. 04, 2019 and completed on Jul. 01, 2019. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications 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 report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

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


Approved by: Cliff Chang

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

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



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History of this test report

TEL : 886-3-656-9065
FAX : 886-3-656-9085
Report Template No.: CB Ver1.0

Page Number : 3 of 31
Issued Date : Jul. 19, 2019
Report Version : 01



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.3	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 declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Cliff Chang

Report Producer: Vicky Huang



1 General Description

1.1 Information

1.1.1 RF General Information

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

For Radio 2

Band	Mode	BWch (MHz)	Nant
5.15-5.25GHz	802.11a	20	4TX
5.15-5.25GHz	802.11n HT20	20	4TX
5.15-5.25GHz	802.11n HT20-BF	20	4TX
5.15-5.25GHz	802.11ac VHT20	20	4TX
5.15-5.25GHz	802.11ac VHT20-BF	20	4TX
5.15-5.25GHz	802.11n HT40	40	4TX
5.15-5.25GHz	802.11n HT40-BF	40	4TX
5.15-5.25GHz	802.11ac VHT40	40	4TX
5.15-5.25GHz	802.11ac VHT40-BF	40	4TX
5.15-5.25GHz	802.11ac VHT80	80	4TX
5.15-5.25GHz	802.11ac VHT80-BF	80	4TX
5.25-5.35GHz	802.11a	20	4TX
5.25-5.35GHz	802.11n HT20	20	4TX
5.25-5.35GHz	802.11n HT20-BF	20	4TX
5.25-5.35GHz	802.11ac VHT20	20	4TX



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

**For Radio 3**

Band	Mode	BWch (MHz)	Nant
5.15-5.25GHz	802.11a	20	2TX
5.15-5.25GHz	802.11n HT20	20	2TX
5.15-5.25GHz	802.11ac VHT20	20	2TX
5.15-5.25GHz	802.11n HT40	40	2TX
5.15-5.25GHz	802.11ac VHT40	40	2TX
5.15-5.25GHz	802.11ac VHT80	80	2TX
5.25-5.35GHz	802.11a	20	2TX
5.25-5.35GHz	802.11n HT20	20	2TX
5.25-5.35GHz	802.11ac VHT20	20	2TX
5.25-5.35GHz	802.11n HT40	40	2TX
5.25-5.35GHz	802.11ac VHT40	40	2TX
5.25-5.35GHz	802.11ac VHT80	80	2TX
5.47-5.725GHz	802.11a	20	2TX
5.47-5.725GHz	802.11n HT20	20	2TX
5.47-5.725GHz	802.11ac VHT20	20	2TX
5.47-5.725GHz	802.11n HT40	40	2TX
5.47-5.725GHz	802.11ac VHT40	40	2TX
5.47-5.725GHz	802.11ac VHT80	80	2TX
5.725-5.85GHz	802.11a	20	2TX
5.725-5.85GHz	802.11n HT20	20	2TX
5.725-5.85GHz	802.11ac VHT20	20	2TX
5.725-5.85GHz	802.11n HT40	40	2TX
5.725-5.85GHz	802.11ac VHT40	40	2TX
5.725-5.85GHz	802.11ac VHT80	80	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.
- BWch is the nominal channel bandwidth.
- Nss-Min is the minimum number of spatial streams.
- Nant is the number of outputs. e.g., 2(2,3) means have 2 outputs for port 2 and port 3. 2 means have 2 outputs for port 1 and port 2.



1.1.2 Table for 80+80 MHz Mode

Type	Channel No.	Frequency
1	42+106	5210+5530 MHz
2	42+122	5210+5610 MHz
3	42+138	5210+5690 MHz
4	58+106	5290+5530 MHz
5	58+122	5290+5610 MHz
6	58+138	5290+5690 MHz
7	58+155	5290+5775 MHz
8	106+138	5530+5690 MHz
9	106+155	5530+5775 MHz
10	122+155	5610+5775 MHz
11	138+155	5690+5775 MHz

Note: Only radio 2 supports 80+80MHz mode

1.1.3 Antenna Information

Ant.	Port	Brand	P/N	Antenna Type	Connector	Gain (dBi)
1	1	WNC	XKAJ-N04	Dipole antenna	Reversed-SMA	Note 1
2	2	WNC	XKAJ-N04	Dipole antenna	Reversed-SMA	
3	3	WNC	XKAJ-N04	Dipole antenna	Reversed-SMA	
4	4	WNC	XKAJ-N04	Dipole antenna	Reversed-SMA	
5	1	WNC	XKAJ-N04	Dipole antenna	Reversed-SMA	
6	2	WNC	XKAJ-N04	Dipole antenna	Reversed-SMA	

Note 1:

Ant.	Port	Antenna Gain (dBi)				Cable Loss (dB)				True Gain (dBi)			
		Radio 1 (2.4G)	Radio 2 (5G)	Radio 3 (2.4G)	Radio 3 (5G)	Radio 1 (2.4G)	Radio 2 (5G)	Radio 3 (2.4G)	Radio 3 (5G)	Radio 1 (2.4G)	Radio 2 (5G)	Radio 3 (2.4G)	Radio 3 (5G)
1	1	4.32	5.04	-	-	1.5	3.5	-	-	2.82	1.54	-	-
2	2	4.32	5.04	-	-	1.5	3.5	-	-	2.82	1.54	-	-
3	3	4.32	5.04	-	-	1.5	3.5	-	-	2.82	1.54	-	-
4	4	4.32	5.04	-	-	1.5	3.5	-	-	2.82	1.54	-	-
5	1	-	-	4.32	5.04	-	-	1.0	1.8	-	-	3.32	3.24
6	2	-	-	4.32	5.04	-	-	1.0	1.8	-	-	3.32	3.24

Note 2: The above information was declared by manufacturer.



Note 3:

For radio 1 and radio 2 (4TX/4RX)

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

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

For radio 3 (Scan radio) (2TX/2RX)

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

Port 1 and Port 2 can could transmit/receive simultaneously.

1.1.4 Mode Test Duty Cycle**For Radio 2**

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11a	0.972	0.12	2.068m	1k
802.11ac VHT20	0.988	0.05	n/a (DC \geq 0.98)	n/a (DC \geq 0.98)
802.11ac VHT20-BF	0.988	0.05	n/a (DC \geq 0.98)	n/a (DC \geq 0.98)
802.11ac VHT40	0.976	0.11	2.44m	1k
802.11ac VHT40-BF	0.973	0.12	2.437m	1k
802.11ac VHT80	0.948	0.23	1.153m	1k
802.11ac VHT80-BF	0.947	0.24	1.15m	1k
802.11ac VHT80+80	0.972	0.12	2.238m	1k
802.11ac VHT80+80-BF	0.972	0.12	2.238m	1k

For Radio 3

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11a	0.966	0.15	2.068m	1k
802.11ac VHT20	0.965	0.15	1.935m	1k
802.11ac VHT40	0.934	0.3	955u	3k
802.11ac VHT80	0.878	0.57	467.5u	3k

Note:

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

**1.1.5 EUT Operational Condition**

EUT Power Type	From Power Adapter or PoE			
Beamforming Function	<input checked="" type="checkbox"/>	With beamforming	<input type="checkbox"/>	Without beamforming
Weather Band	<input checked="" type="checkbox"/>	With 5600~5650MHz	<input type="checkbox"/>	Without 5600~5650MHz
	The product has beamforming function for 802.11HT/VHT in 2.4GHz and 5GHz for Radio 1 and Radio 2.			
Function	<input type="checkbox"/>	Outdoor P2M	<input checked="" type="checkbox"/>	Indoor P2M
	<input type="checkbox"/>	Fixed P2P	<input type="checkbox"/>	Client
TPC Function	<input checked="" type="checkbox"/>	With TPC	<input type="checkbox"/>	Without TPC
Test Software Version	QCARCT Ver3.0.211.0			

Note: The above information was declared by manufacturer.

1.1.6 Table for Multiple Listing

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

Model Name	Brand Name	Description
C-130E	MOJO	The EUT has two brand names, the difference brand name served as marketing strategy.
	ARISTA	

1.1.7 Table for Radio Information

Radio	Function
Radio 1	2.4GHz
Radio 2	5GHz
Radio 3	2.4GHz / 5GHz (Scan Radio)

1.1.8 Table for Class II Change

This product is an extension of original one reported under Sporton project number: 641226-21AB

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

Modifications	Performance Checking
1. Adding 5GHz band 2 and band 3 (5250~5350 MHz, 5470~5725 MHz) for this device.	1. Emission Bandwidth
2. Adding the 80+80 mode for Radio 2.	2. Maximum Conducted Output Power
3. Adding the beam-forming function for Radio 2.	3. Peak Power Spectral Density
	4. Unwanted Emissions >1GHz
4. Adding the beam-forming function for Radio 1.	No test case need redo for this test report.



1.2 Applicable Standards

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

- ♦ 47 CFR FCC Part 15
- ♦ ANSI C63.10-2013
- ♦ FCC KDB 789033 D02 v02r01
- ♦ FCC KDB 662911 D01 v02r01
- ♦ FCC KDB 412172 D01 v01r01

1.3 Testing Location Information

Testing Location		
<input type="checkbox"/>	HWA YA	ADD : No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL : 886-3-327-3456 FAX : 886-3-327-0973
<input checked="" type="checkbox"/>	JHUBEI	ADD : No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C. TEL : 886-3-656-9065 FAX : 886-3-656-9085

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH01-CB	Lance Wu	22~24°C / 53~55%	Jun. 10, 2019~Jun. 19, 2019
Radiated	03CH01-CB	Stim Sung	22~24°C / 50~60%	Jun. 04, 2019~Jul. 01, 2019

Test site Designation No. TW0006 with FCC

Test site registered number IC 4086B with Industry Canada.

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
Radiated Emission (1GHz ~ 18GHz)	4.3 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	5.1 dB	Confidence levels of 95%
Conducted Emission	2.4 dB	Confidence levels of 95%
Output Power Measurement	1.5 dB	Confidence levels of 95%
Power Density Measurement	2.4 dB	Confidence levels of 95%
Bandwidth Measurement	2%	Confidence levels of 95%



2 Test Configuration of EUT

2.1 Test Channel Mode

For Radio 2

For Non-Beamforming mode

Mode	Power Setting
802.11a_Nss1,(6Mbps)_4TX	-
5260MHz	14.5
5300MHz	14.5
5320MHz	14.5
5500MHz	14.5
5580MHz	14.5
5700MHz	14.5
5720MHz Straddle 5.47-5.725GHz	14.5
5720MHz Straddle 5.725-5.85GHz	14.5
802.11ac VHT20_Nss1,(MCS0)_4TX	-
5260MHz	15
5300MHz	15
5320MHz	15
5500MHz	15
5580MHz	15
5700MHz	15
5720MHz Straddle 5.47-5.725GHz	15
5720MHz Straddle 5.725-5.85GHz	15
802.11ac VHT40_Nss1,(MCS0)_4TX	-
5270MHz	17
5310MHz	16
5510MHz	17
5550MHz	17
5670MHz	17
5710MHz Straddle 5.47-5.725GHz	18
5710MHz Straddle 5.725-5.85GHz	18
802.11ac VHT80_Nss1,(MCS0)_4TX	-
5290MHz	12.5
5530MHz	16.5



Mode	Power Setting
5610MHz	17
5690MHz Straddle 5.47-5.725GHz	18
5690MHz Straddle 5.725-5.85GHz	18
802.11ac VHT80+80_Nss1,(MCS0)_4TX	-
#5210MHz,5530MHz	19
#5210MHz,5610MHz	19
#5210MHz,5690MHz	19
#5290MHz,5530MHz	14.5
#5290MHz,5610MHz	14
#5290MHz,5690MHz	15
#5290MHz,5775MHz	14.5
802.11ac VHT80+80_Nss1,(MCS0)_4TX	-
5210MHz,#5530MHz	19
5290MHz,#5530MHz	14.5
5210MHz,#5610MHz	19
5290MHz,#5610MHz	14
5210MHz,#5690MHz Straddle 5.47-5.725GHz	19
5290MHz,#5690MHz Straddle 5.47-5.725GHz	15
802.11ac VHT80+80_Nss2,(MCS0)_4TX	-
#5530MHz,#5690MHz Straddle 5.47-5.725GHz	16
802.11ac VHT80+80_Nss1,(MCS0)_4TX	-
#5530MHz,5775MHz	18.5
#5610MHz,5775MHz	19
#5690MHz,#5775MHz Straddle 5.47-5.725GHz	19
802.11ac VHT80+80_Nss1,(MCS0)_4TX	-
#5530MHz,#5690MHz Straddle 5.725-5.85GHz	16
5210MHz,#5690MHz Straddle 5.725-5.85GHz	19
5290MHz,#5690MHz Straddle 5.725-5.85GHz	15
5290MHz,#5775MHz	14.5
5530MHz,#5775MHz	18.5
5610MHz,#5775MHz	19
802.11ac VHT80+80_Nss2,(MCS0)_4TX	-
#5690MHz,#5775MHz Straddle 5.725-5.85GHz	19

**For Beamforming mode**

Mode	PowerSetting
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-
5180MHz	19.5
5200MHz	21
5240MHz	20.5
5260MHz	15.5
5300MHz	15.5
5320MHz	15.5
5500MHz	15.5
5580MHz	16
5700MHz	15.5
5720MHz Straddle 5.47-5.725GHz	15.5
5720MHz Straddle 5.725-5.85GHz	15.5
5745MHz	21
5785MHz	21.5
5825MHz	21
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-
5190MHz	17
5230MHz	21
5270MHz	16
5310MHz	14
5510MHz	15.5
5550MHz	15.5
5670MHz	15.5
5710MHz Straddle 5.47-5.725GHz	15.5
5710MHz Straddle 5.725-5.85GHz	15.5
5755MHz	21.5
5795MHz	21.5
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-
5210MHz	15
5290MHz	10.5
5530MHz	11.5
5610MHz	16
5690MHz Straddle 5.47-5.725GHz	15.5



Mode	PowerSetting
5690MHz Straddle 5.725-5.85GHz	15.5
5775MHz	18.5
802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX	-
#5210MHz,5530MHz	18.5
#5210MHz,5610MHz	18
#5210MHz,5690MHz	18
#5290MHz,5530MHz	12.5
#5290MHz,5610MHz	12
#5290MHz,5690MHz	12.5
#5290MHz,5775MHz	12.5
802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX	-
5210MHz,#5530MHz	18.5
5290MHz,#5530MHz	12.5
5210MHz,#5610MHz	18
5290MHz,#5610MHz	12
5210MHz,#5690MHz Straddle 5.47-5.725GHz	18
5290MHz,#5690MHz Straddle 5.47-5.725GHz	12.5
802.11ac VHT80+80-BF_Nss2,(MCS0)_4TX	-
#5530MHz,#5690MHz Straddle 5.47-5.725GHz	16
802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX	-
#5530MHz,5775MHz	16.5
#5610MHz,5775MHz	19
#5690MHz,#5775MHz Straddle 5.47-5.725GHz	19
802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX	-
#5530MHz,#5690MHz Straddle 5.725-5.85GHz	16
5210MHz,#5690MHz Straddle 5.725-5.85GHz	18
5290MHz,#5690MHz Straddle 5.725-5.85GHz	12.5
5290MHz,#5775MHz	12.5
5530MHz,#5775MHz	16.5
5610MHz,#5775MHz	19
802.11ac VHT80+80-BF_Nss2,(MCS0)_4TX	-
#5690MHz,#5775MHz Straddle 5.725-5.85GHz	19

**For Radio 3**

Mode	Power Setting
802.11a_Nss1,(6Mbps)_2TX	-
5260MHz	19
5300MHz	18
5320MHz	15
5500MHz	16.5
5580MHz	19.5
5700MHz	16
5720MHz Straddle 5.47-5.725GHz	22.5
5720MHz Straddle 5.725-5.85GHz	22.5
802.11ac VHT20_Nss1,(MCS0)_2TX	-
5260MHz	18
5300MHz	18
5320MHz	15.5
5500MHz	16
5580MHz	19.5
5700MHz	15.5
5720MHz Straddle 5.47-5.725GHz	22.5
5720MHz Straddle 5.725-5.85GHz	22.5
802.11ac VHT40_Nss1,(MCS0)_2TX	-
5270MHz	19.5
5310MHz	13.5
5510MHz	15.5
5550MHz	20.5
5670MHz	20
5710MHz Straddle 5.47-5.725GHz	22
5710MHz Straddle 5.725-5.85GHz	22
802.11ac VHT80_Nss1,(MCS0)_2TX	-
5290MHz	12
5530MHz	14
5610MHz	20.5
5690MHz Straddle 5.47-5.725GHz	22
5690MHz Straddle 5.725-5.85GHz	22



Note:

- ♦ For Radio 2, there are two modes of EUT, one is Beamforming mode, and the other is Non-Beamforming mode, Both modes had been tested and recorded in this test report.
- ♦ VHT20/VHT40 covers HT20/HT40, due to same modulation. The power setting for 802.11n HT20 and HT40 are the same or lower than VHT20 and VHT40.

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
1	Radio 2
2	Radio 3

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
<p>For Radio 2 The EUT was performed at Y axis and Z axis position and the worst case was found at Y axis. So the measurement will follow this same test configuration.</p> <p>For Radio 3 The EUT was performed at Y axis and Z axis position and the worst case was found at Z axis. So the measurement will follow this same test configuration.</p>	
1	Radio 2 (5GHz) - EUT in Y axis
2	Radio 3 (5GHz) - EUT in Z axis

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	Radio1 (2.4G) + Radio2 (5G) + Radio3 (2.4G)
2	Radio1 (2.4G) + Radio2 (5G) + Radio3 (5G)
Refer to Sporton Test Report No.: FA641226-23 for Co-location RF Exposure Evaluation.	



2.3 EUT Operation during Test

For non-beamforming mode:

The EUT was programmed to be in continuously transmitting mode.

For beamforming mode:

For Conducted Mode:

The EUT was programmed to be in continuously transmitting mode.

The measured result was added array gain $10 \cdot \log(2) = 3.01\text{dBi}$ as worse case in beamforming mode.

The measured result was added array gain $10 \cdot \log(4) = 6.02\text{dBi}$ as worse case in beamforming mode.

For Radiated Mode:

The EUT was programmed to be in continuously transmitting mode.

The measured result was added array gain $10 \cdot \log(2) = 3.01\text{dBi}$ as worse case in beamforming mode.

The measured result was added array gain $10 \cdot \log(4) = 6.02\text{dBi}$ as worse case in beamforming mode.

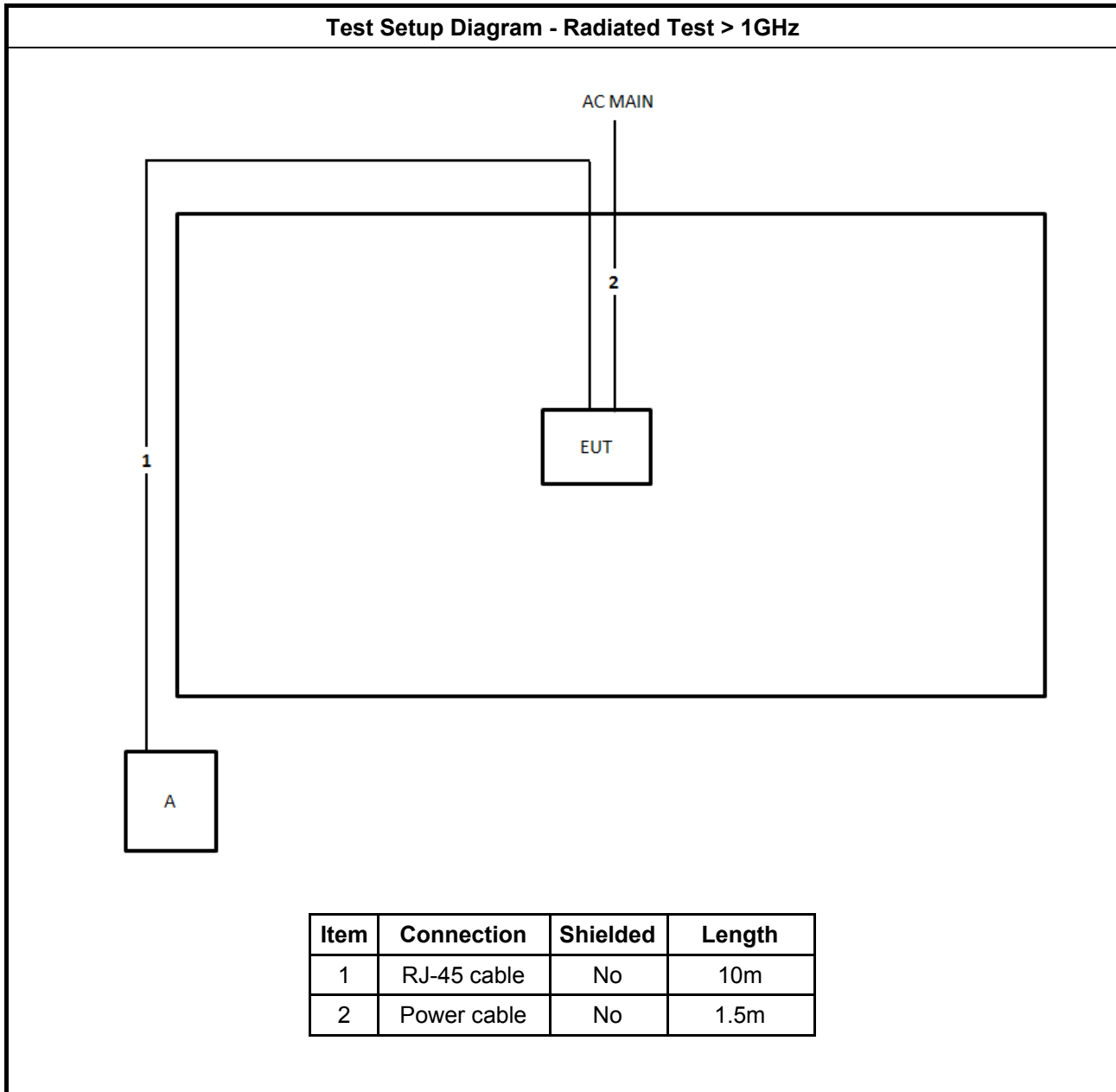
2.4 Accessories

Accessories			
Equipment Name	Brand Name	Model Name	Rating
Adapter	APD	WA-24Q12R	INPUT: 100-240V~,50-60Hz, 0.7A Max OUTPUT: 12V, 2A
Others			
US Plug*1			

2.5 Support Equipment

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	NB	DELL	E4300	N/A

2.6 Test Setup Diagram



3 Transmitter Test Result

3.1 Emission Bandwidth

3.1.1 Emission Bandwidth Limit

Emission Bandwidth Limit	
UNII Devices	
<input checked="" type="checkbox"/>	For the 5.15-5.25 GHz band, N/A
<input checked="" type="checkbox"/>	For the 5.25-5.35 GHz band, the maximum conducted output power shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz.
<input checked="" type="checkbox"/>	For the 5.47-5.725 GHz band, the maximum conducted output power shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz.
<input checked="" type="checkbox"/>	For the 5.725-5.85 GHz band, 6 dB emission bandwidth \geq 500kHz.
LE-LAN Devices	
<input type="checkbox"/>	For the band 5.15-5.25 GHz, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.
<input type="checkbox"/>	For the 5.25-5.35 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz
<input type="checkbox"/>	For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz
<input type="checkbox"/>	For the 5.725-5.85 GHz band, 6 dB emission bandwidth \geq 500kHz.

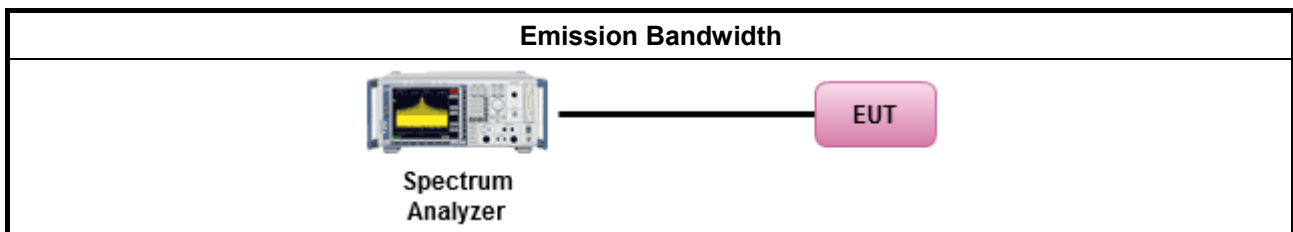
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> For the emission bandwidth shall be measured using one of the options below: 	
<input checked="" type="checkbox"/>	Refer as FCC KDB 789033, clause C for EBW and clause D for OBW measurement.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.
<input type="checkbox"/>	Refer as IC RSS-Gen, clause 4.6 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	
<input checked="" type="checkbox"/> For the 5.15-5.25 GHz band:	
<input type="checkbox"/>	<ul style="list-style-type: none">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 $P_{Out} = 24 - (G_{TX} - 6)$.
<input checked="" type="checkbox"/> 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 $P_{Out} = 24 - (G_{TX} - 6)$.	
<input checked="" type="checkbox"/> 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 $P_{Out} = 24 - (G_{TX} - 6)$.	
<input checked="" type="checkbox"/> For the 5.725-5.85 GHz band:	
<input type="checkbox"/>	<ul style="list-style-type: none">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.
LE-LAN Devices	
<input type="checkbox"/> For the 5.15-5.25 GHz band, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.	
<input type="checkbox"/> For the 5.25-5.35 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz	
<input type="checkbox"/> For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz	
<input type="checkbox"/> For the 5.725-5.85 GHz band:	
<input type="checkbox"/>	<ul style="list-style-type: none">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

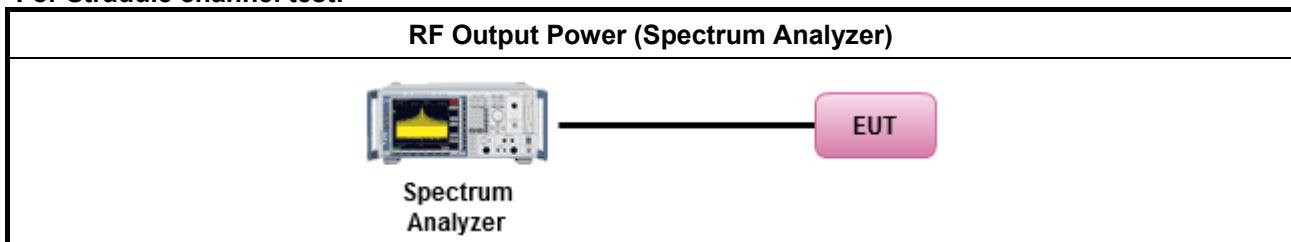
Refer a test equipment and calibration data table in this test report.

3.2.3 Test Procedures

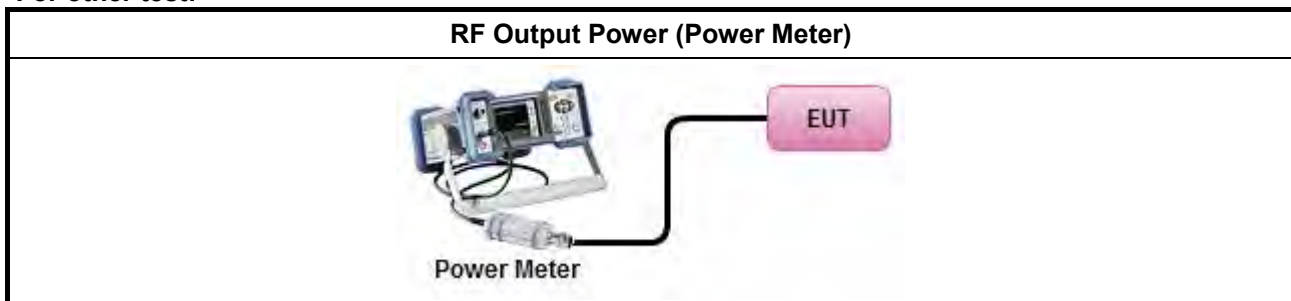
Test Method	
<ul style="list-style-type: none"> Maximum Conducted Output Power 	
	Average over on/off periods with duty factor
<input checked="" type="checkbox"/>	Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging).
<input type="checkbox"/>	Refer as FCC KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
	Wideband RF power meter and average over on/off periods with duty factor
<input checked="" type="checkbox"/>	Refer as FCC KDB 789033, clause E Method PM-G (using an RF average power meter).
<ul style="list-style-type: none"> For conducted measurement. 	
<ul style="list-style-type: none"> If the EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them. 	
<ul style="list-style-type: none"> 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 test:



For other test:



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	
<input checked="" type="checkbox"/> For the 5.15-5.25 GHz band:	
	<ul style="list-style-type: none"> 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 $PPSD = 11 - (G_{TX} - 6)$.
<input checked="" type="checkbox"/> For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.	
<input checked="" type="checkbox"/> For the 5.47-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.	
<input checked="" type="checkbox"/> For the 5.725-5.85 GHz band:	
	<ul style="list-style-type: none"> 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.
LE-LAN Devices	
<input type="checkbox"/> For the 5.15-5.25 GHz band, the e.i.r.p. peak power spectral density (PPSD) ≤ 10 dBm/MHz.	
<input type="checkbox"/> For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz.	
	<ul style="list-style-type: none"> e.i.r.p. greater than 200 mW shall comply with the following e.i.r.p. at different elevations, where θ is the angle above the local horizontal plane (of the Earth) as shown below: -13 dBW/MHz for $0^\circ \leq \theta < 8^\circ$; -13 - 0.716 (θ-8) dBW/MHz for $8^\circ \leq \theta < 40^\circ$ -35.9 - 1.22 (θ-40) dBW/MHz for $40^\circ \leq \theta \leq 45^\circ$; -42 dBW/MHz for $\theta > 45^\circ$
<input type="checkbox"/> For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz.	
<input type="checkbox"/> For the 5.725-5.85 GHz band:	
	<ul style="list-style-type: none"> 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.	

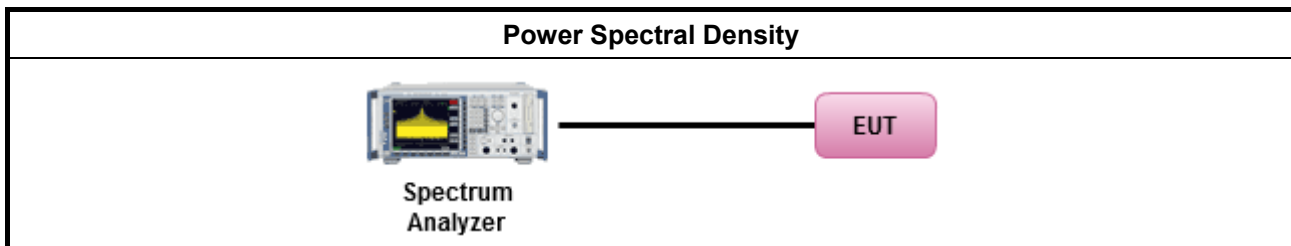
3.3.2 Measuring Instruments

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

**3.3.3 Test Procedures**

Test Method	
<ul style="list-style-type: none">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:	
<input type="checkbox"/>	Refer as FCC KDB 789033, F)5) power spectral density can be measured using resolution bandwidths < 1 MHz provided that the results are integrated over 1 MHz bandwidth
[duty cycle ≥ 98% or external video / power trigger]	
<input checked="" type="checkbox"/>	Refer as FCC KDB 789033, clause E Method SA-1 (spectral trace averaging).
<input type="checkbox"/>	Refer as FCC KDB 789033, clause E Method SA-1 Alt. (RMS detection with slow sweep speed)
duty cycle < 98% and average over on/off periods with duty factor	
<input checked="" type="checkbox"/>	Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging).
<input type="checkbox"/>	Refer as FCC KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
<ul style="list-style-type: none">For conducted measurement.	
<ul style="list-style-type: none">If the EUT supports multiple transmit chains using options given below:	
<input checked="" type="checkbox"/>	Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.
<input type="checkbox"/>	Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits,
<input type="checkbox"/>	Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.
<ul style="list-style-type: none">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 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
<input checked="" type="checkbox"/> 5.15 - 5.25 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
<input checked="" type="checkbox"/> 5.25 - 5.35 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
<input checked="" type="checkbox"/> 5.47 - 5.725 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
<input checked="" type="checkbox"/> 5.725 - 5.85 GHz	all emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

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).

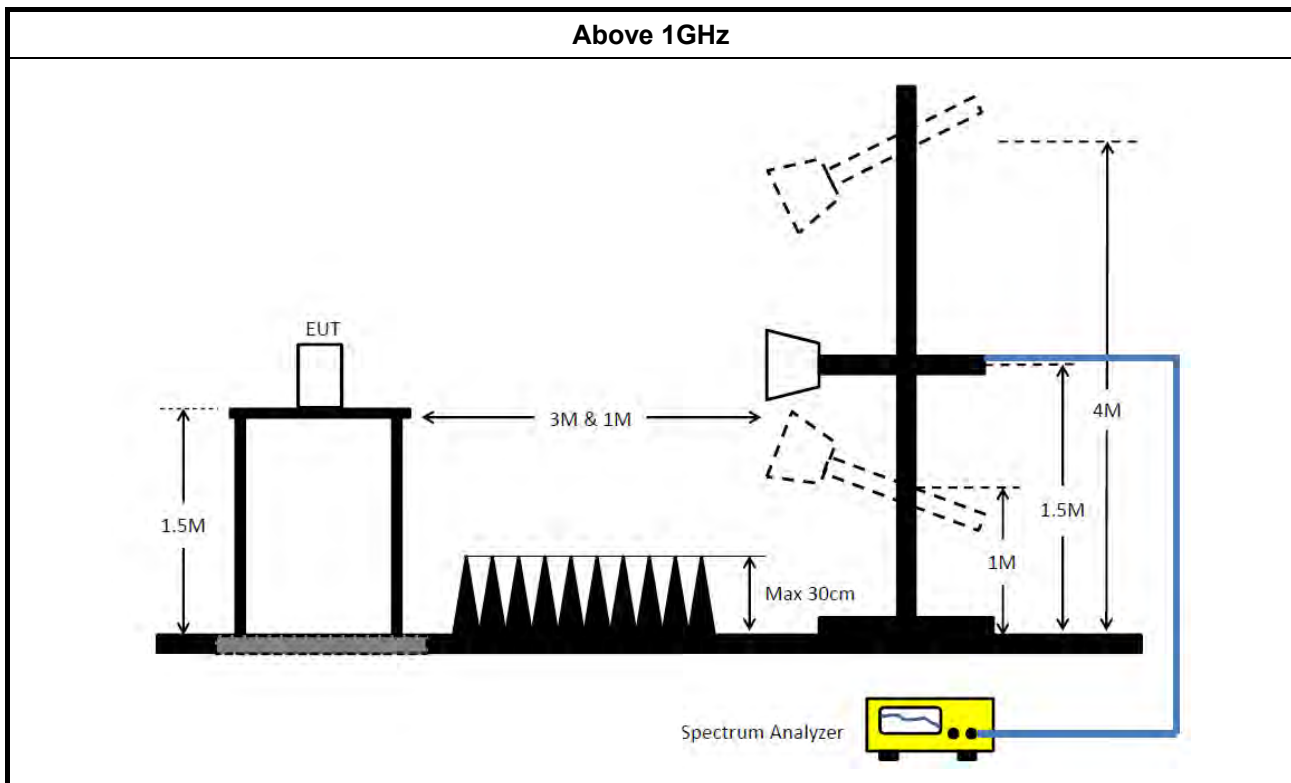
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method	
<ul style="list-style-type: none">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).	
<ul style="list-style-type: none">The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].	
<ul style="list-style-type: none">For the transmitter unwanted emissions shall be measured using following options below:	
	<ul style="list-style-type: none">Refer as FCC KDB 789033, clause G)2) for unwanted emissions into non-restricted bands.
	<ul style="list-style-type: none">Refer as FCC KDB 789033, clause G)1) for unwanted emissions into restricted bands.
	<input type="checkbox"/> Refer as FCC KDB 789033, G)6) Method AD (Trace Averaging).
	<input checked="" type="checkbox"/> Refer as FCC KDB 789033, G)6) Method VB (Reduced VBW).
	<input type="checkbox"/> Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW $\geq 1/T$, where T is pulse time.
	<input type="checkbox"/> Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions.
	<input checked="" type="checkbox"/> Refer as FCC KDB 789033, clause G)5) measurement procedure peak limit.
<input type="checkbox"/> Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak limit.	
<ul style="list-style-type: none">For radiated measurement.	
	<ul style="list-style-type: none">Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.
	<ul style="list-style-type: none">Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.
	<ul style="list-style-type: none">Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.
<ul style="list-style-type: none">The any unwanted emissions level shall not exceed the fundamental emission level.	
<ul style="list-style-type: none">All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.	

3.4.4 Test Setup



3.4.5 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

3.4.6 Test Result of Transmitter Unwanted Emissions

Refer as Appendix D



4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 13, 2018	Nov. 12, 2019	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jun. 28, 2018	Jun. 27, 2019	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 09, 2018	Jan. 08, 2019	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-H G	1864479	18GHz ~ 40GHz	Jul. 04, 2018	Jul. 03, 2019	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSP40	100080	9kHz~40GHz	Oct. 03, 2018	Oct. 02, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz ~ 40 GHz	Jul. 27, 2018	Jul. 26, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Jul. 27, 2018	Jul. 26, 2019	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 21, 2017	Dec. 20, 2018	Conducted (TH01-CB)
Spectrum analyzer	R&S	FSV40	101027	9kHz~40GHz	Jun. 22, 2018	Jun. 21, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz~26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz~26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz~26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz~26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz~26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 05, 2018	Nov. 04, 2019	Conducted (TH01-CB)

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

**For Non-Beamforming mode
Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.25-5.35GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	19.625M	16.417M	16M4D1D	19.2M	16.367M
802.11ac VHT20_Nss1,(MCS0)_4TX	20.675M	17.641M	17M6D1D	20.3M	17.566M
802.11ac VHT40_Nss1,(MCS0)_4TX	40M	36.032M	36M0D1D	39.2M	35.932M
802.11ac VHT80_Nss1,(MCS0)_4TX	85.8M	75.862M	75M9D1D	84.9M	75.662M
5.47-5.725GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	19.8M	16.442M	16M4D1D	14.64M	13.178M
802.11ac VHT20_Nss1,(MCS0)_4TX	20.775M	17.616M	17M6D1D	15.075M	13.778M
802.11ac VHT40_Nss1,(MCS0)_4TX	40.1M	36.082M	36M1D1D	34.545M	32.779M
802.11ac VHT80_Nss1,(MCS0)_4TX	86.1M	76.062M	76M1D1D	77.1M	72.489M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	3.16M	3.458M	3M46D1D	3.14M	3.418M
802.11ac VHT20_Nss1,(MCS0)_4TX	3.84M	3.938M	3M94D1D	3.76M	3.918M
802.11ac VHT40_Nss1,(MCS0)_4TX	3.16M	3.498M	3M50D1D	3.12M	3.438M
802.11ac VHT80_Nss1,(MCS0)_4TX	3.14M	6.077M	6M08D1D	3.12M	5.817M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;

Result

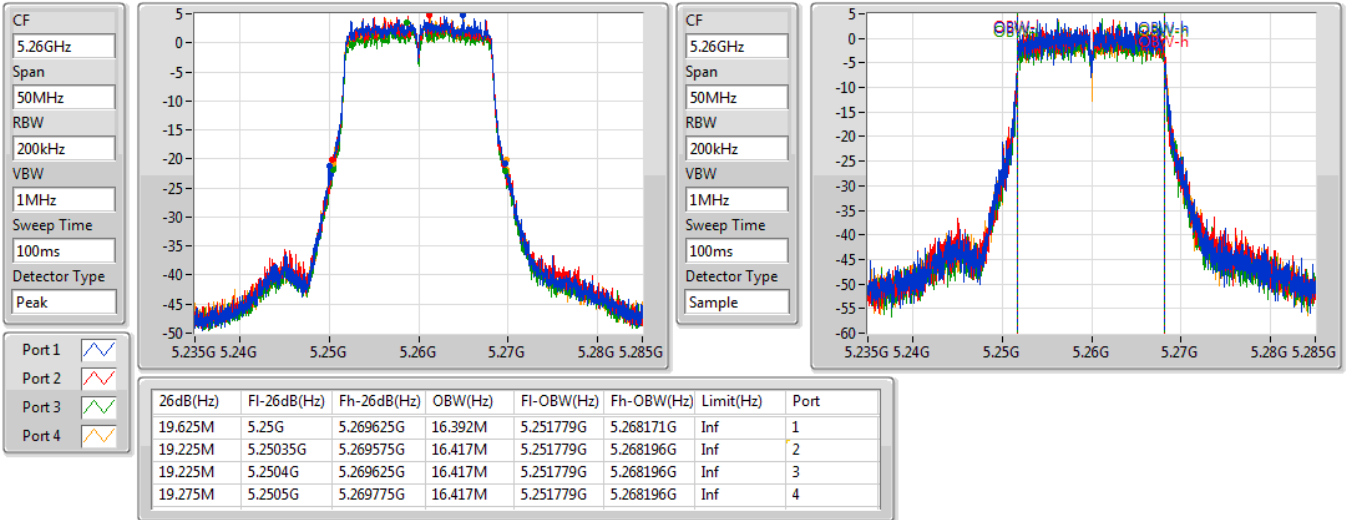
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	19.625M	16.392M	19.225M	16.417M	19.225M	16.417M	19.275M	16.417M
5300MHz	Pass	Inf	19.425M	16.392M	19.325M	16.367M	19.425M	16.392M	19.625M	16.417M
5320MHz	Pass	Inf	19.25M	16.417M	19.625M	16.392M	19.2M	16.392M	19.4M	16.392M
5500MHz	Pass	Inf	19.675M	16.417M	19.6M	16.442M	19.475M	16.417M	19.3M	16.417M
5580MHz	Pass	Inf	19.6M	16.392M	19.525M	16.392M	19.475M	16.442M	19.775M	16.417M
5700MHz	Pass	Inf	19.575M	16.392M	19.625M	16.392M	19.275M	16.442M	19.8M	16.417M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15M	13.178M	15.045M	13.193M	14.64M	13.178M	14.865M	13.178M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.14M	3.458M	3.14M	3.458M	3.14M	3.418M	3.16M	3.438M
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	20.675M	17.641M	20.3M	17.591M	20.4M	17.591M	20.3M	17.616M
5300MHz	Pass	Inf	20.45M	17.616M	20.5M	17.616M	20.45M	17.591M	20.4M	17.616M
5320MHz	Pass	Inf	20.45M	17.591M	20.5M	17.591M	20.55M	17.566M	20.45M	17.591M
5500MHz	Pass	Inf	20.775M	17.616M	20.5M	17.616M	20.575M	17.616M	20.375M	17.616M
5580MHz	Pass	Inf	20.55M	17.616M	20.45M	17.591M	20.525M	17.616M	20.325M	17.566M
5700MHz	Pass	Inf	20.55M	17.616M	20.65M	17.616M	20.525M	17.616M	20.475M	17.591M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.075M	13.808M	15.09M	13.793M	15.075M	13.778M	15.09M	13.793M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.78M	3.918M	3.84M	3.938M	3.76M	3.938M	3.76M	3.938M
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5270MHz	Pass	Inf	39.9M	35.982M	39.85M	36.032M	39.85M	35.982M	39.3M	35.932M
5310MHz	Pass	Inf	40M	36.032M	39.9M	36.032M	39.7M	35.982M	39.2M	35.932M
5510MHz	Pass	Inf	39.9M	35.932M	40M	35.932M	39.6M	35.932M	39.4M	35.982M
5550MHz	Pass	Inf	39.95M	35.882M	39.85M	36.032M	39.3M	35.882M	39.4M	35.832M
5670MHz	Pass	Inf	40.1M	35.982M	39.85M	36.082M	39.65M	35.932M	39.25M	36.032M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	34.965M	32.919M	34.965M	32.884M	34.825M	32.779M	34.545M	32.849M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.16M	3.498M	3.12M	3.498M	3.16M	3.498M	3.12M	3.438M
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5290MHz	Pass	Inf	85.2M	75.862M	84.9M	75.862M	85.7M	75.862M	85.8M	75.662M
5530MHz	Pass	Inf	85M	75.962M	84.7M	75.762M	86M	75.962M	86.1M	75.962M
5610MHz	Pass	Inf	85.1M	75.762M	85M	75.962M	85.5M	76.062M	85.7M	75.762M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	77.775M	72.489M	77.55M	72.639M	77.1M	72.564M	77.625M	72.489M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.14M	5.817M	3.14M	5.897M	3.14M	6.077M	3.12M	5.817M

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

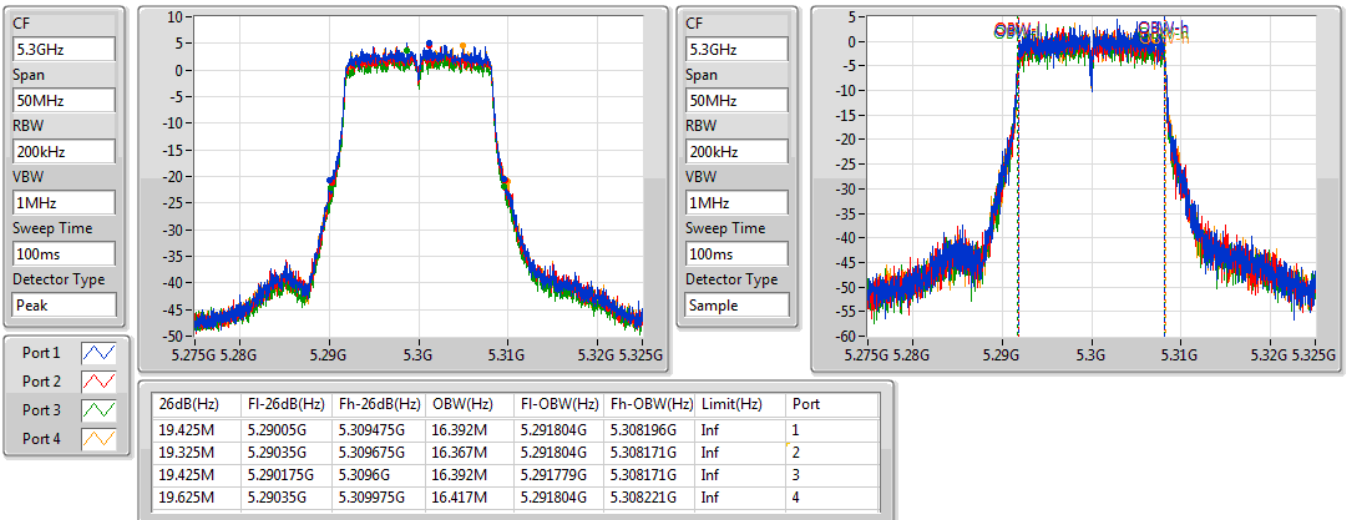
Port X-OBW = Port X 99% occupied bandwidth;

802.11a_Nss1,(6Mbps)_4TX
EBW
5260MHz

05/06/2019

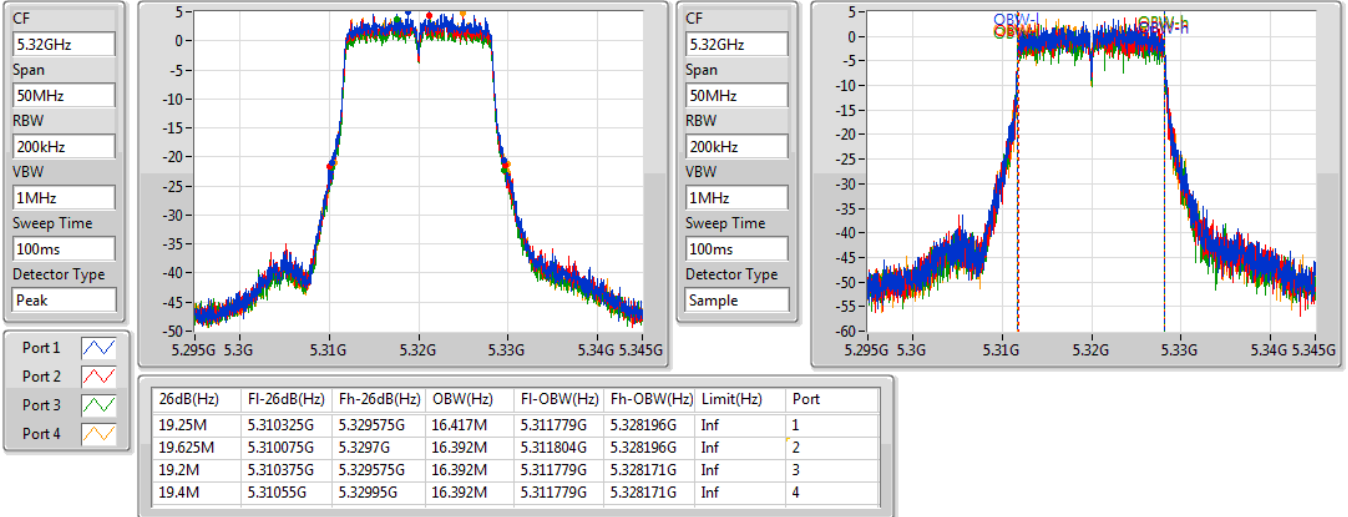

802.11a_Nss1,(6Mbps)_4TX
EBW
5300MHz

05/06/2019

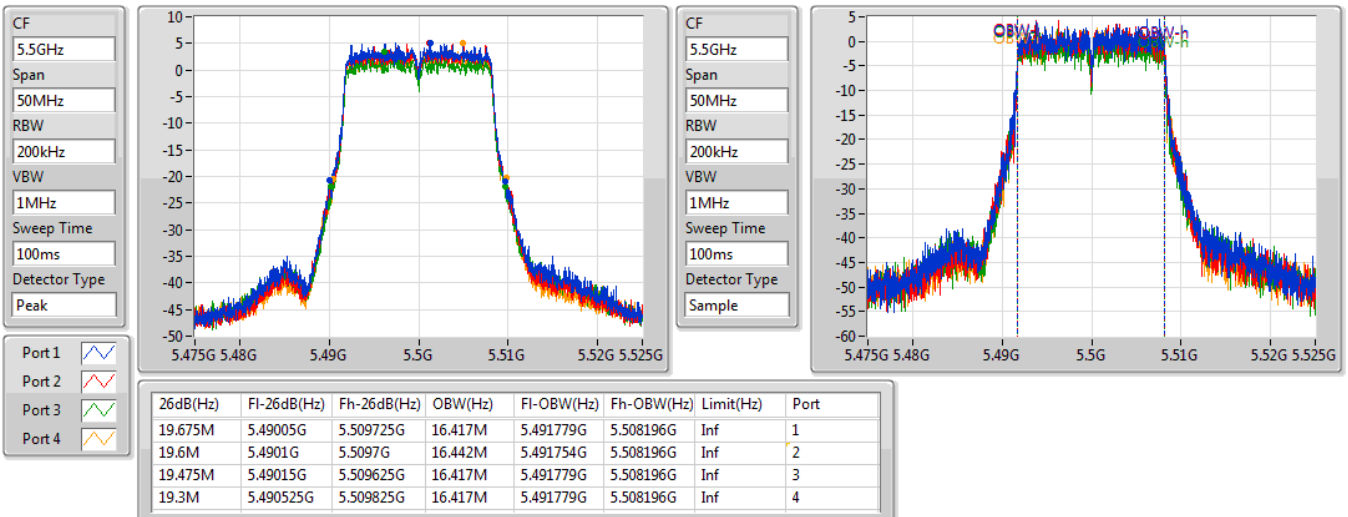


802.11a_Nss1,(6Mbps)_4TX
EBW
5320MHz

05/06/2019

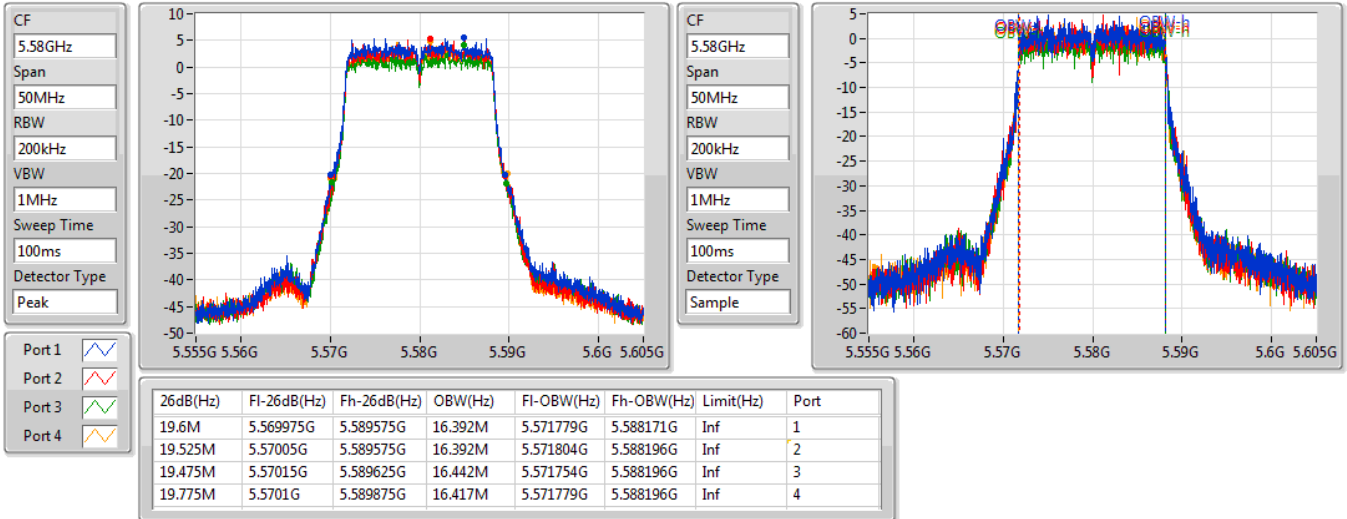

802.11a_Nss1,(6Mbps)_4TX
EBW
5500MHz

05/06/2019

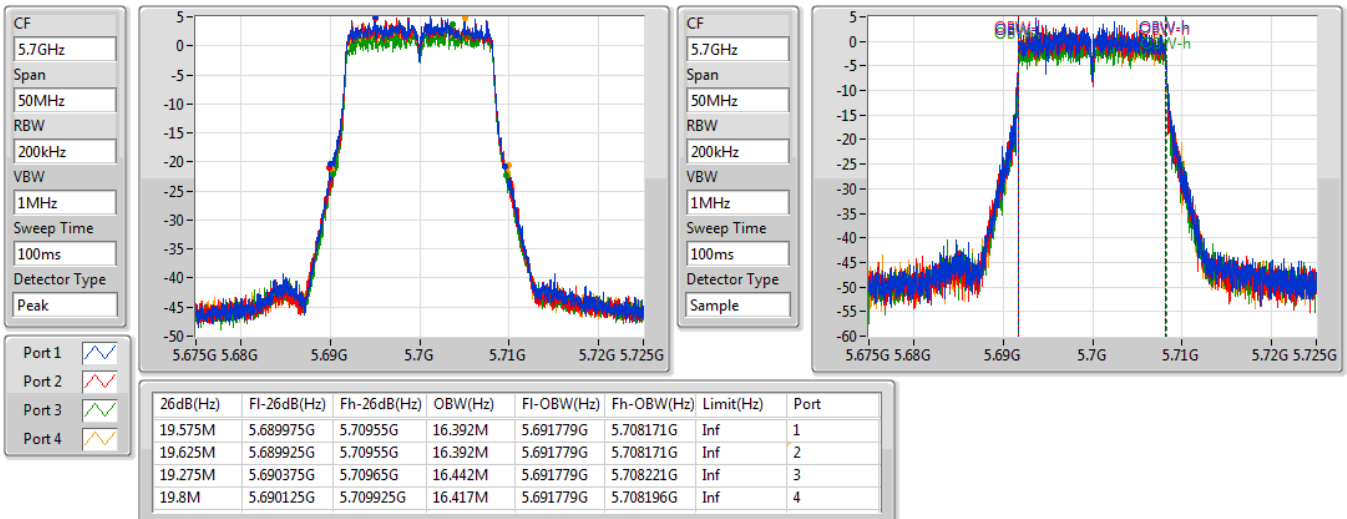


802.11a_Nss1,(6Mbps)_4TX
EBW
5580MHz

05/06/2019

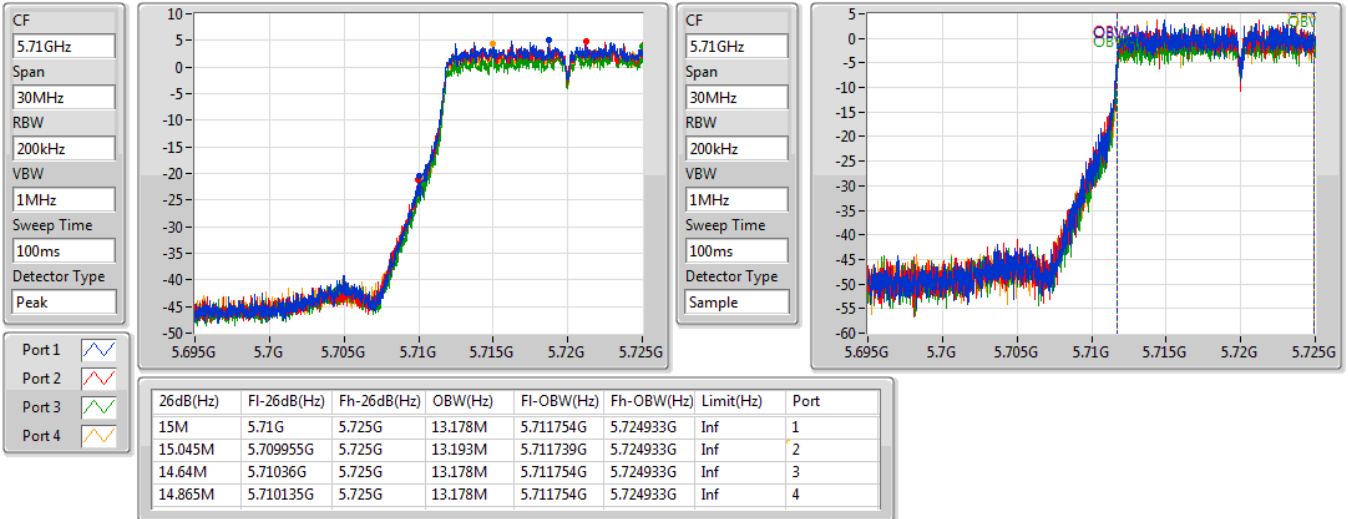

802.11a_Nss1,(6Mbps)_4TX
EBW
5700MHz

05/06/2019

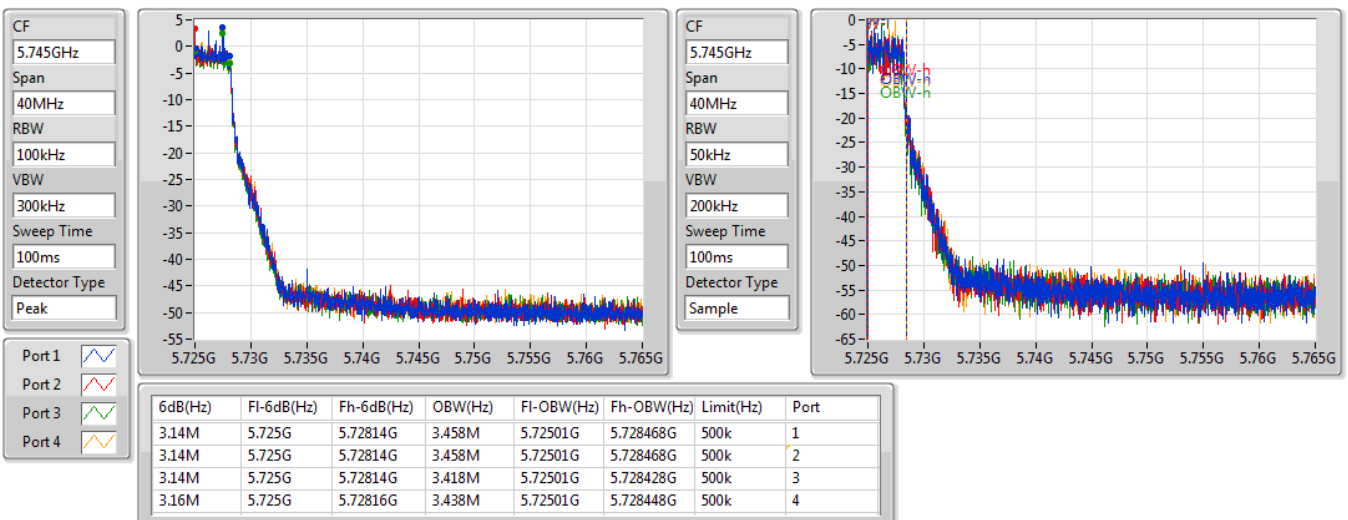


802.11a_Nss1,(6Mbps)_4TX
EBW
5720MHz Straddle 5.47-5.725GHz

05/06/2019

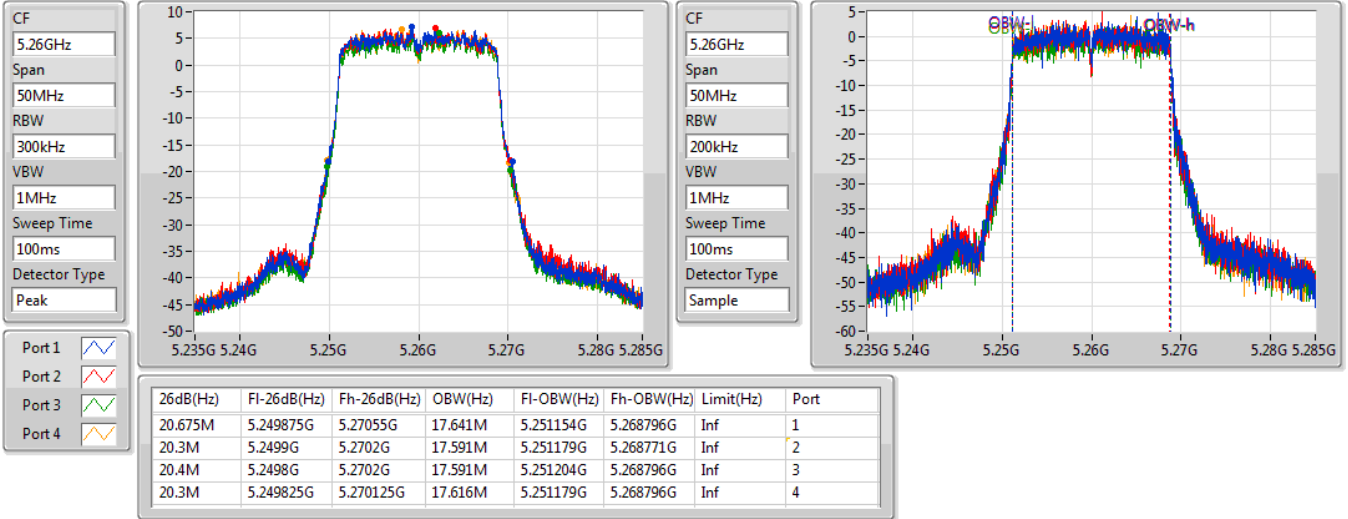

802.11a_Nss1,(6Mbps)_4TX
EBW
5720MHz Straddle 5.725-5.85GHz

05/06/2019

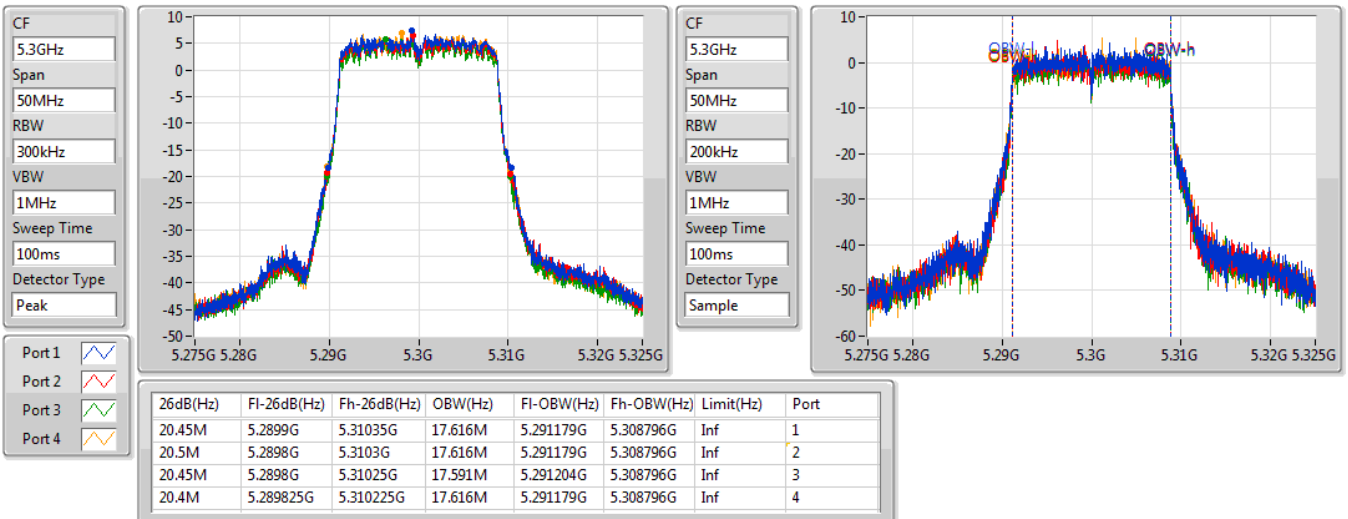


802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5260MHz

05/06/2019

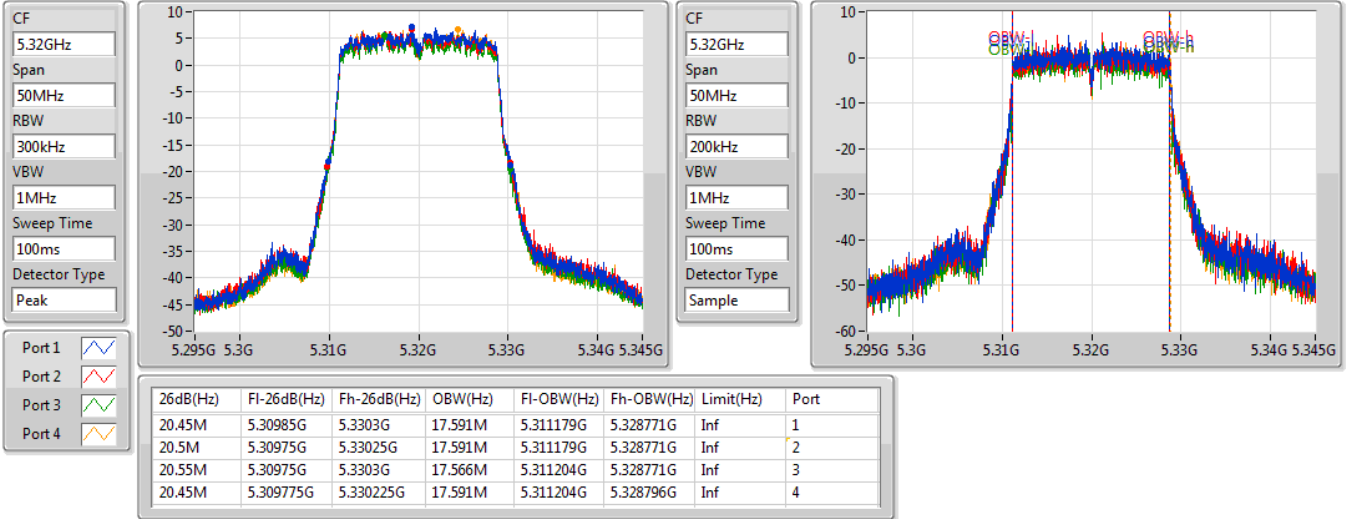

802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5300MHz

05/06/2019

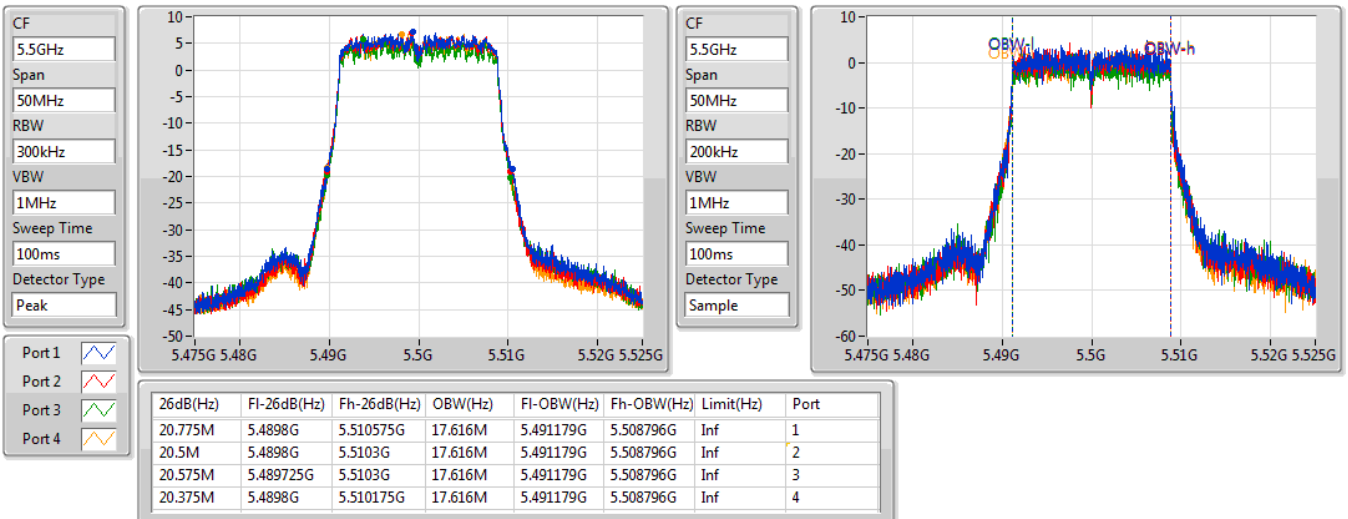


802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5320MHz

05/06/2019

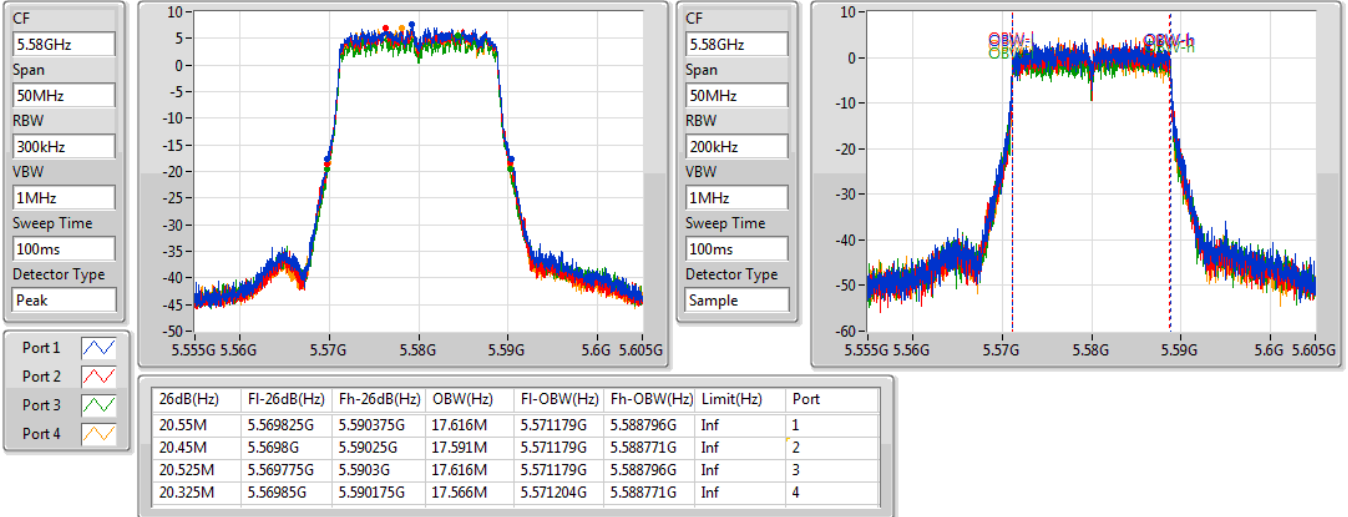

802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5500MHz

05/06/2019

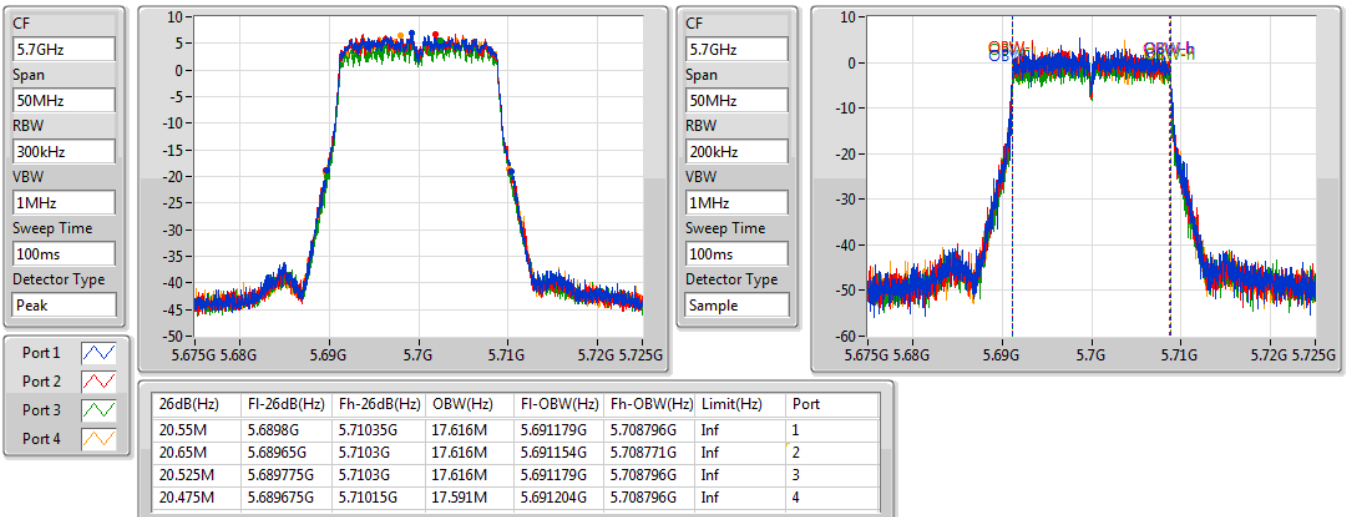


802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5580MHz

05/06/2019

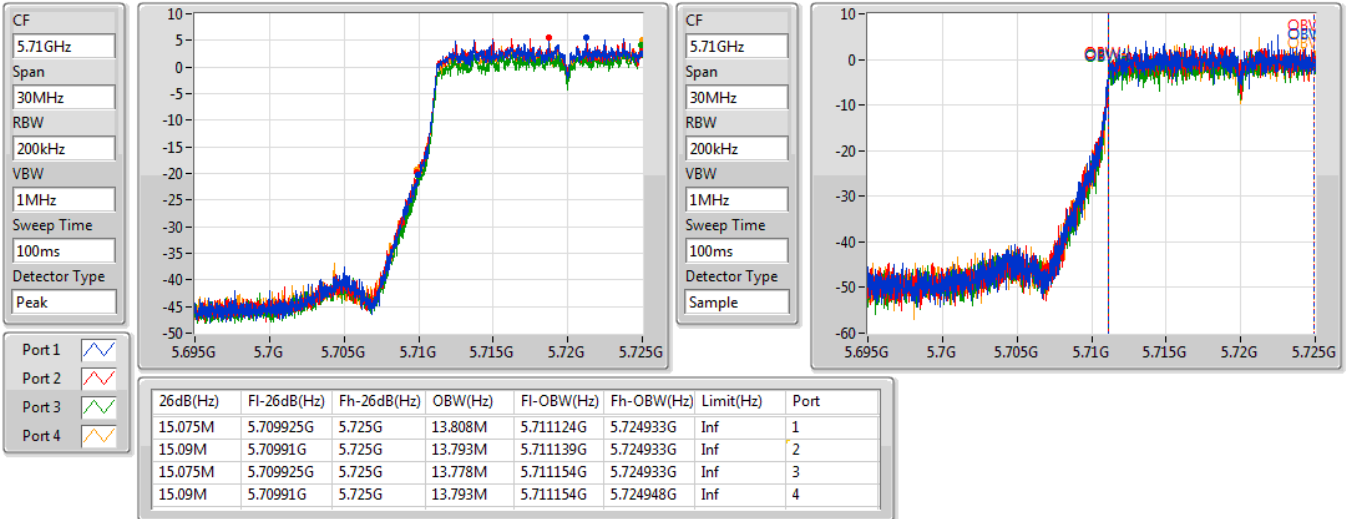

802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5700MHz

05/06/2019

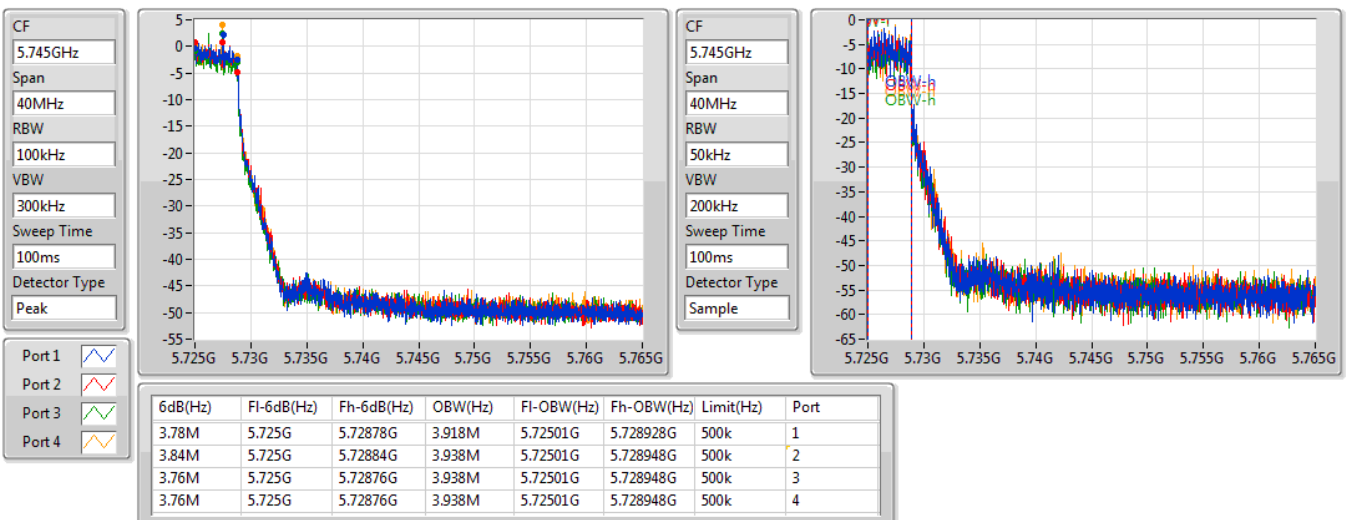


802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5720MHz Straddle 5.47-5.725GHz

05/06/2019

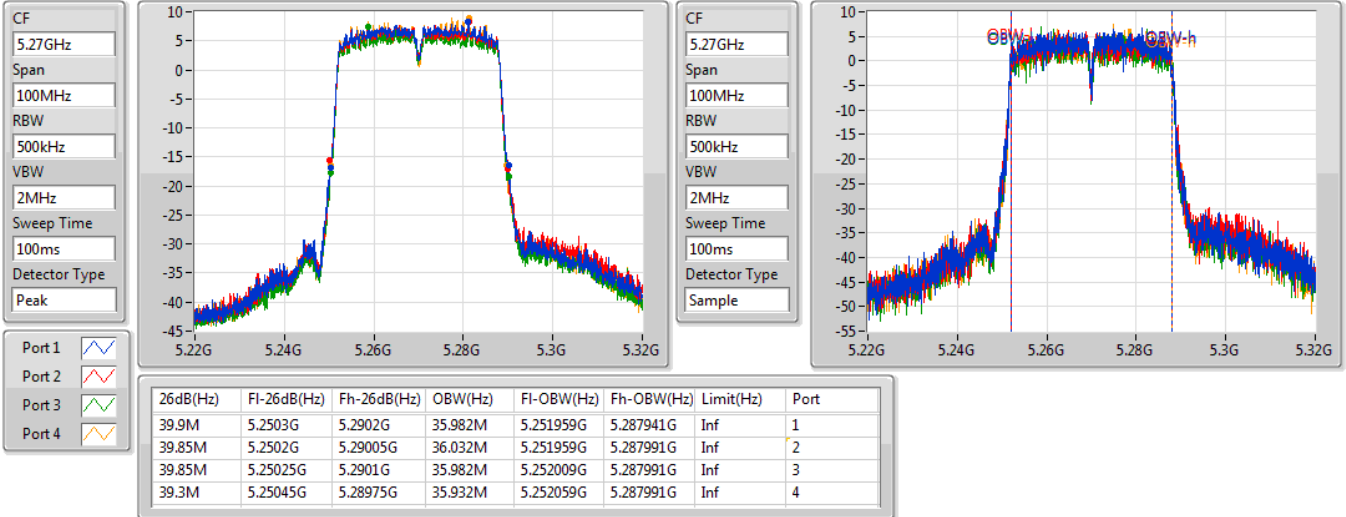

802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5720MHz Straddle 5.725-5.85GHz

05/06/2019

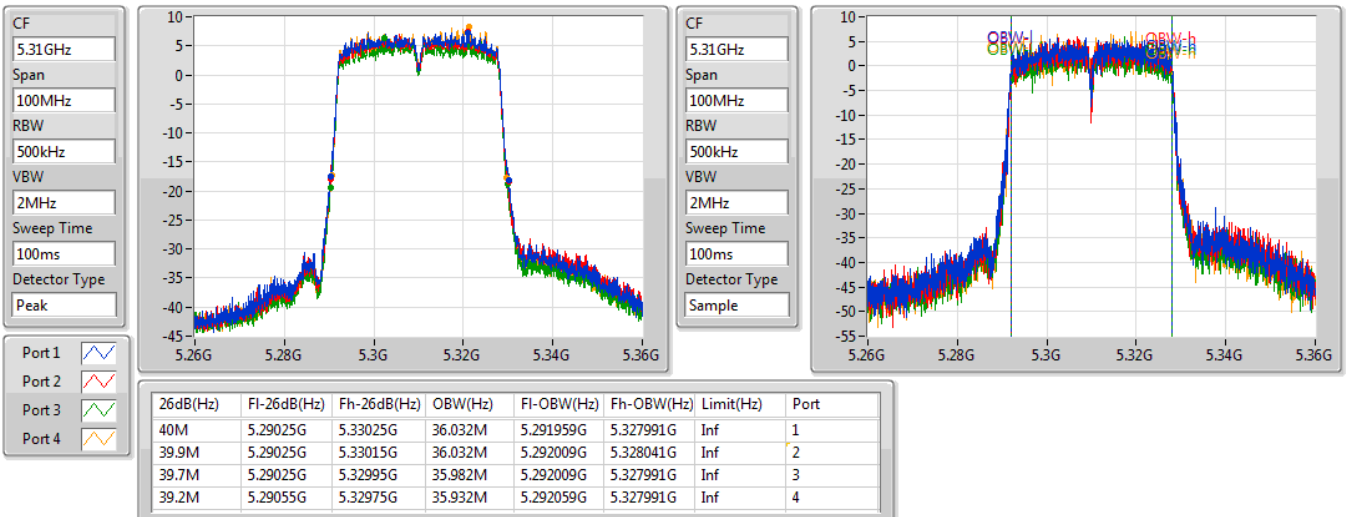


802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5270MHz

05/06/2019

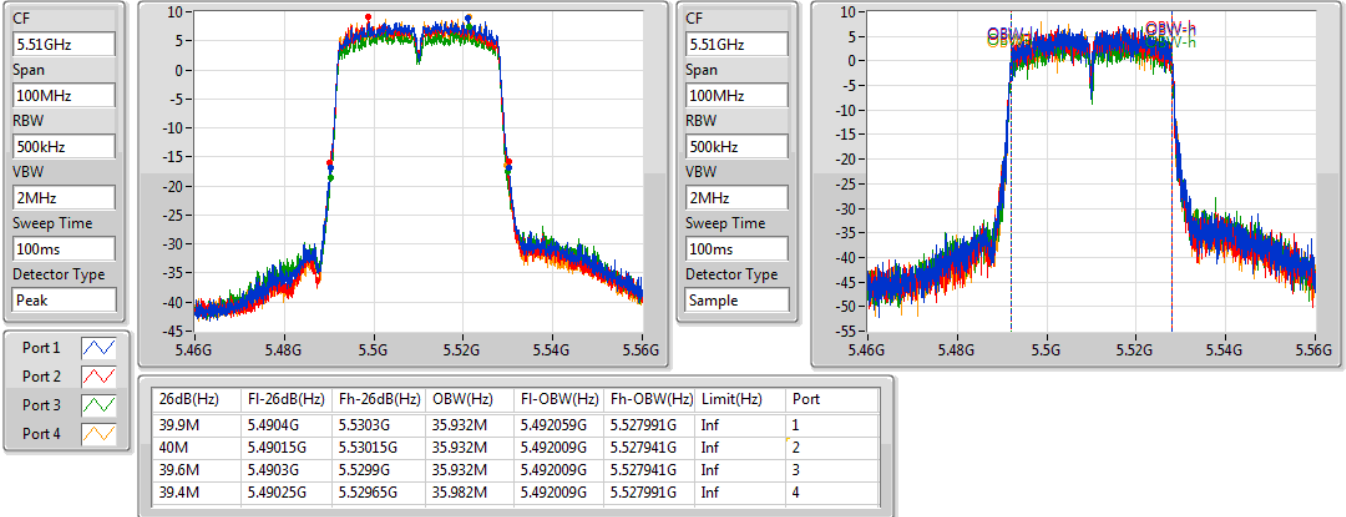

802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5310MHz

05/06/2019

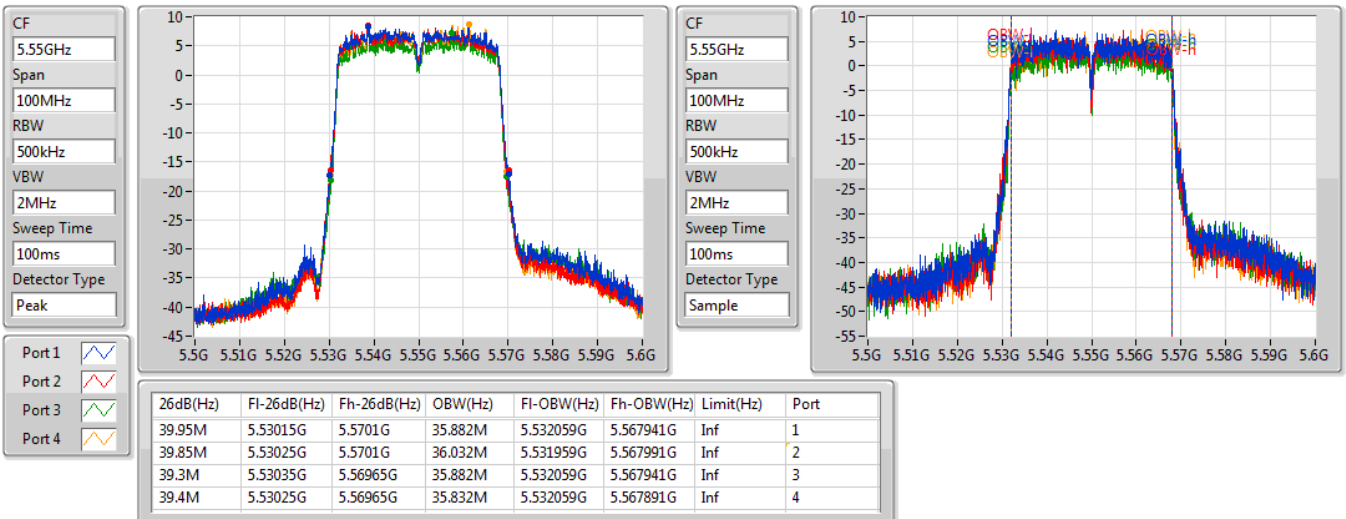


802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5510MHz

05/06/2019

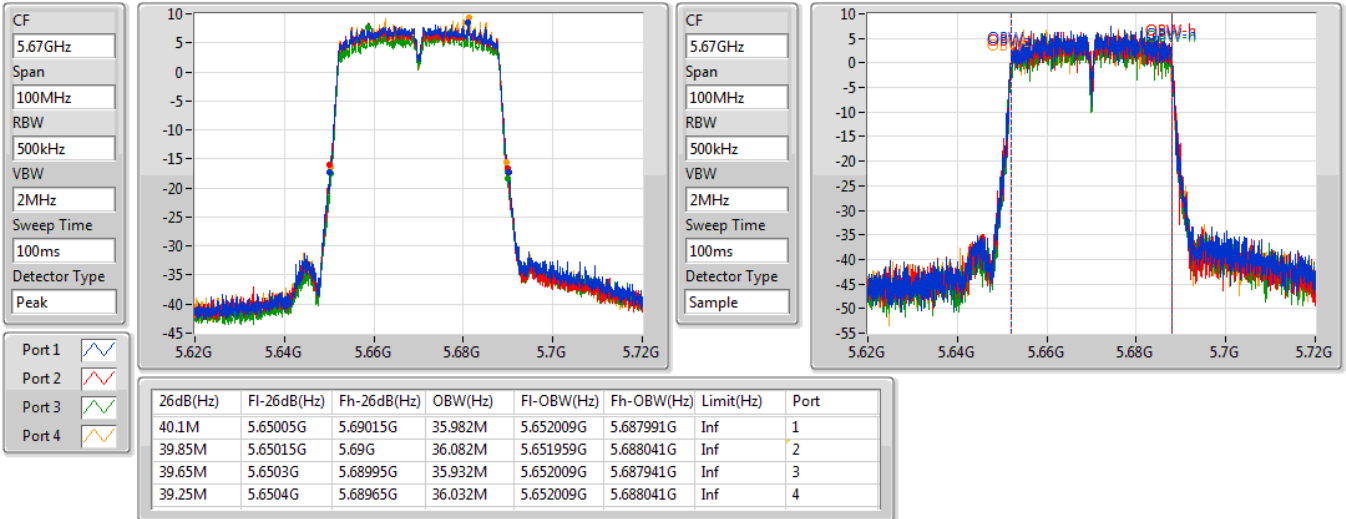

802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5550MHz

05/06/2019

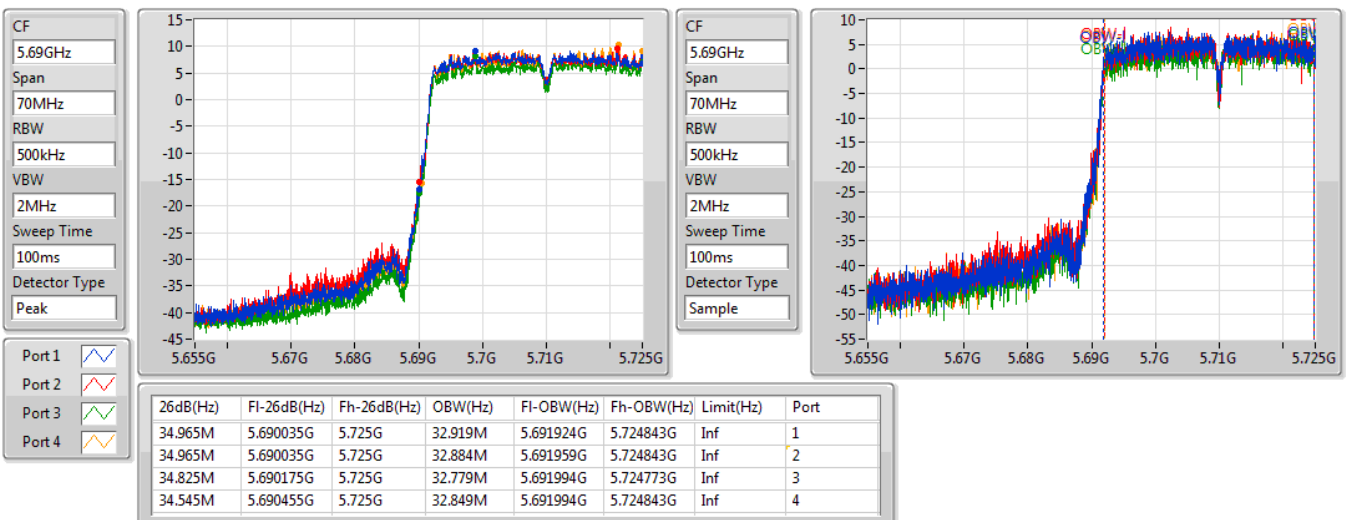


802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5670MHz

05/06/2019

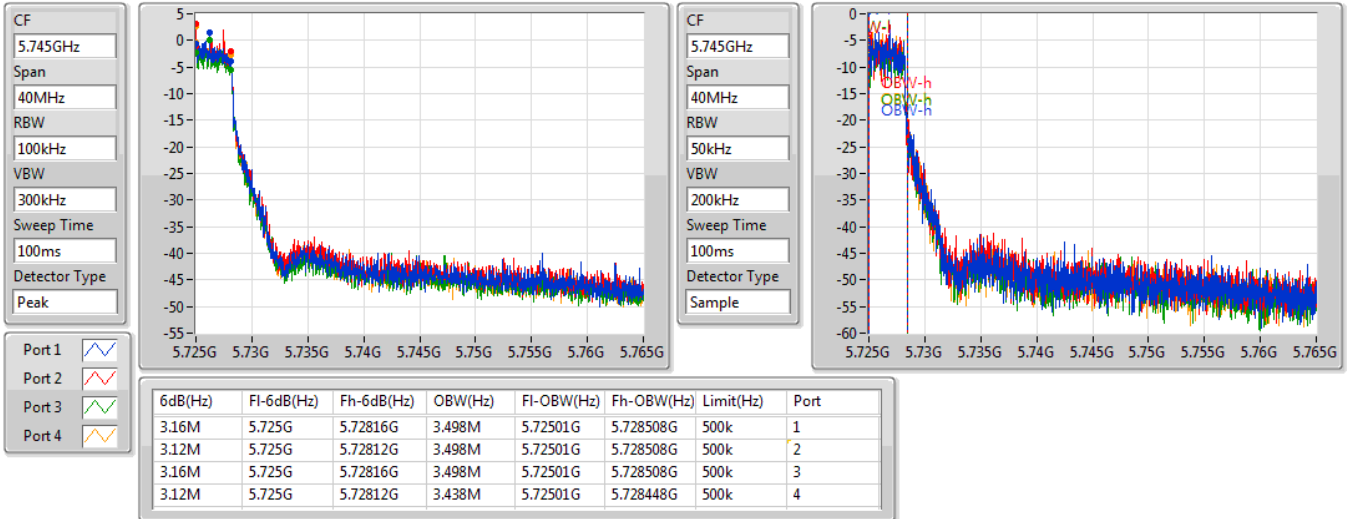

802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5710MHz Straddle 5.47-5.725GHz

05/06/2019

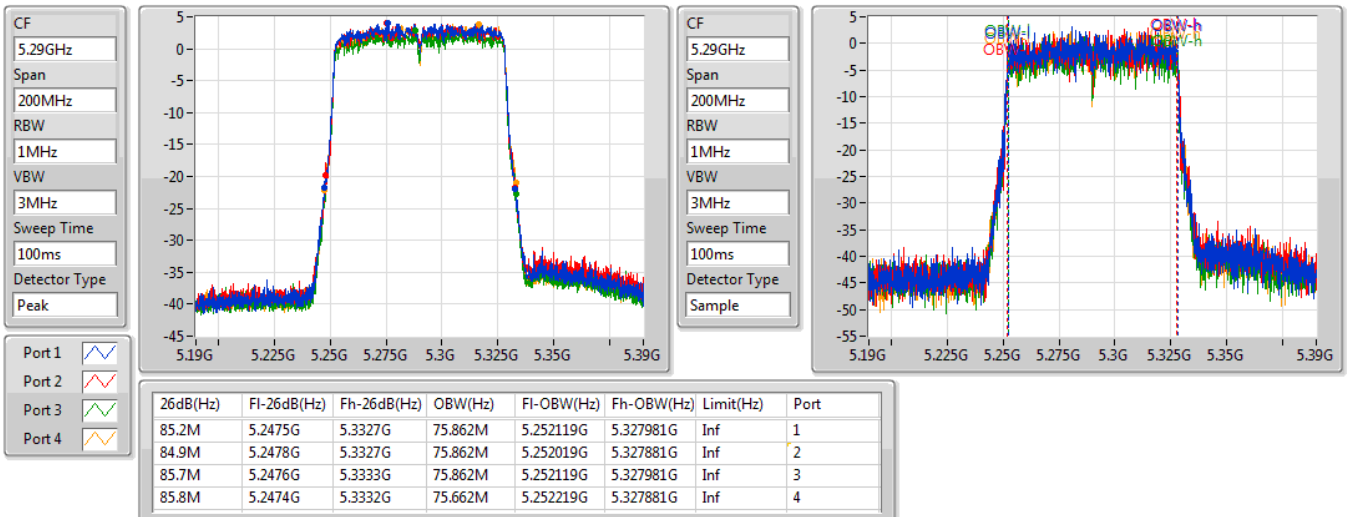


802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5710MHz Straddle 5.725-5.85GHz

05/06/2019

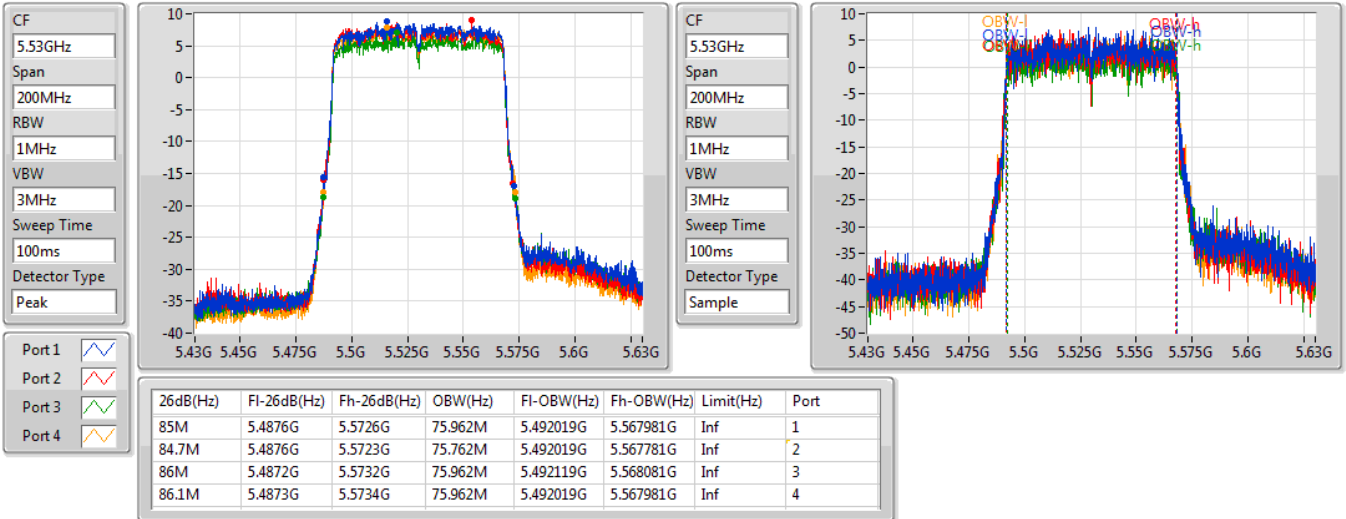

802.11ac VHT80_Nss1,(MCS0)_4TX
EBW
5290MHz

05/06/2019

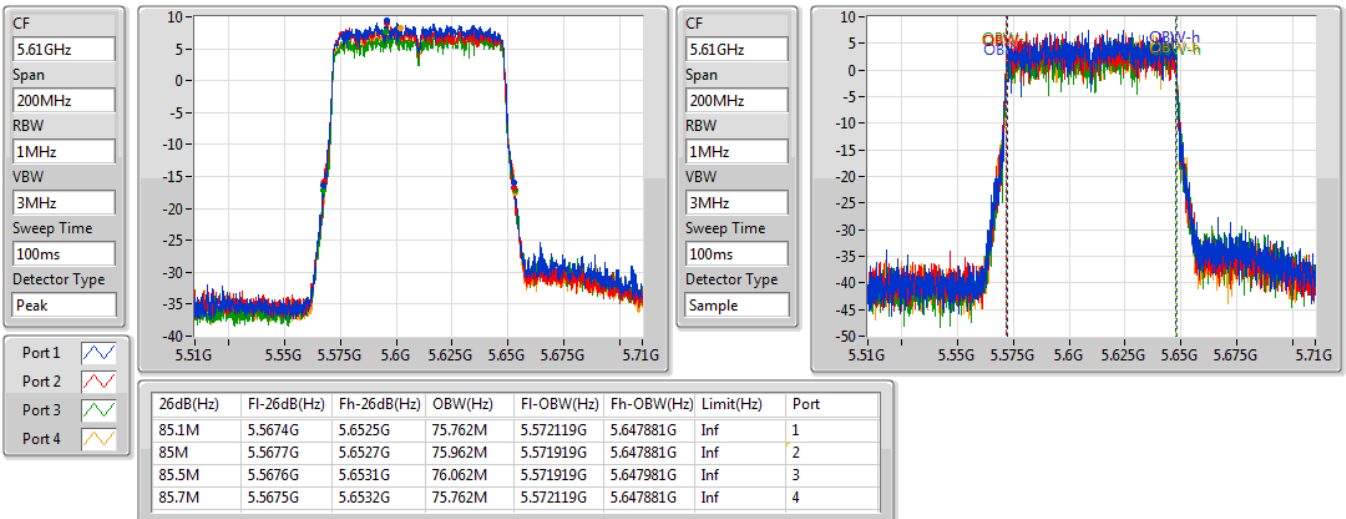


802.11ac VHT80_Nss1,(MCS0)_4TX
EBW
5530MHz

05/06/2019

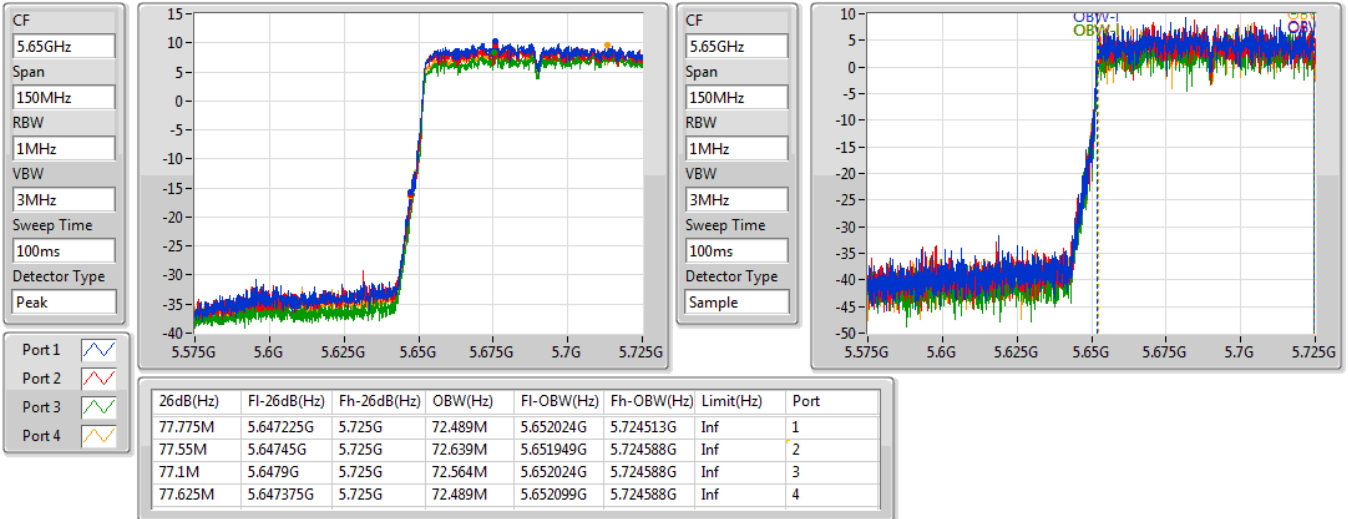

802.11ac VHT80_Nss1,(MCS0)_4TX
EBW
5610MHz

05/06/2019

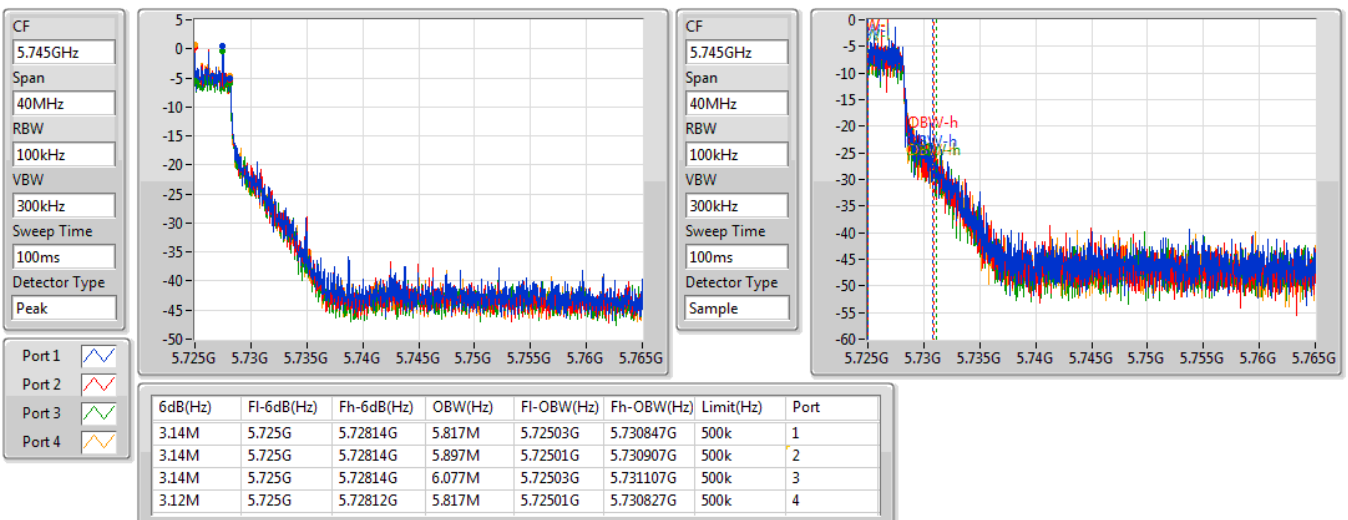


802.11ac VHT80_Nss1,(MCS0)_4TX
EBW
5690MHz Straddle 5.47-5.725GHz

05/06/2019


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

05/06/2019



**For Non-Beamforming mode
Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ac VHT80+80_Nss1,(MCS0)_4TX	86.7M	76.062M	76M1D1D	85.4M	75.762M
5.25-5.35GHz	-	-	-	-	-
802.11ac VHT80+80_Nss1,(MCS0)_4TX	86.7M	76.062M	76M1D1D	85.9M	75.862M
5.47-5.725GHz	-	-	-	-	-
802.11ac VHT80+80_Nss1,(MCS0)_4TX	86.6M	76.062M	76M1D1D	77.775M	72.564M
802.11ac VHT80+80_Nss2,(MCS0)_4TX	86.25M	75.712M	75M7D1D	77.7M	72.714M
802.11ac VHT80+80_Nss1,(MCS0)_4TX	86.1M	75.962M	76M0D1D	77.925M	72.789M
5.725-5.85GHz	-	-	-	-	-
802.11ac VHT80+80_Nss1,(MCS0)_4TX	74.9M	75.862M	75M9D1D	3.12M	6.917M
802.11ac VHT80+80_Nss2,(MCS0)_4TX	75.375M	75.937M	75M9D1D	3.075M	7.571M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;

Result

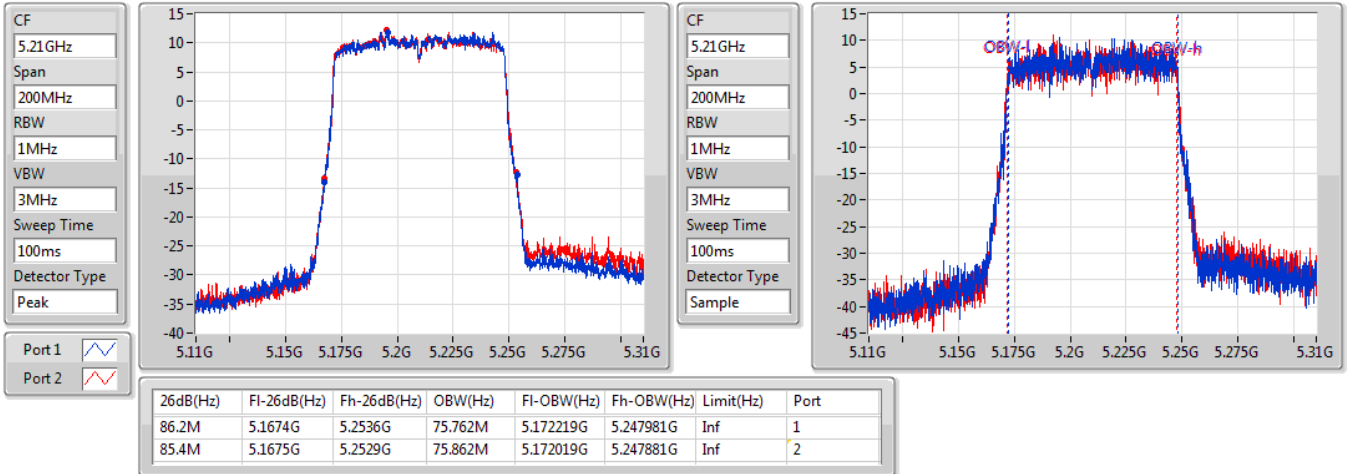
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ac VHT80+80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
#5210MHz,5530MHz	Pass	Inf	86.2M	75.762M	85.4M	75.862M				
#5210MHz,5610MHz	Pass	Inf	85.6M	75.862M	85.8M	75.962M				
#5210MHz,5690MHz	Pass	Inf	86.7M	75.762M	85.6M	76.062M				
#5290MHz,5530MHz	Pass	Inf	86.6M	76.062M	86.1M	76.062M				
#5290MHz,5610MHz	Pass	Inf	86.5M	75.862M	85.9M	75.962M				
#5290MHz,5690MHz	Pass	Inf	86.1M	75.962M	86.1M	75.862M				
#5290MHz,5775MHz	Pass	Inf	86.7M	75.862M	86M	75.862M				
802.11ac VHT80+80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz,#5530MHz	Pass	Inf					86.6M	75.762M	85.7M	75.862M
802.11ac VHT80+80_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
#5530MHz,#5690MHz Straddle 5.47-5.725GHz	Pass	Inf	86.25M	75.712M	85.95M	75.712M	77.7M	72.864M	77.7M	72.714M
802.11ac VHT80+80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
#5530MHz,5775MHz	Pass	Inf	86.1M	75.962M	86M	75.862M				
#5610MHz,5775MHz	Pass	Inf	86M	75.862M	85.6M	75.862M				
#5690MHz,#5775MHz Straddle 5.47-5.725GHz	Pass	Inf	77.925M	72.789M	77.925M	72.789M				
802.11ac VHT80+80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz,#5610MHz	Pass	Inf					85.9M	75.762M	85.4M	75.962M
5210MHz,#5690MHz Straddle 5.47-5.725GHz	Pass	Inf					77.925M	72.564M	77.775M	72.639M
5290MHz,#5530MHz	Pass	Inf					85.4M	75.762M	85.8M	76.062M
5290MHz,#5610MHz	Pass	Inf					86.4M	75.862M	85.6M	76.062M
5290MHz,#5690MHz Straddle 5.47-5.725GHz	Pass	Inf					77.925M	72.639M	78.075M	72.639M
5210MHz,#5690MHz Straddle 5.725-5.85GHz	Pass	500k					3.12M	7.176M	3.24M	6.917M
5290MHz,#5690MHz Straddle 5.725-5.85GHz	Pass	500k					3.18M	7.316M	3.16M	7.056M
5290MHz,#5775MHz	Pass	500k					71.3M	75.762M	72.5M	75.862M
#5530MHz,#5690MHz Straddle 5.725-5.85GHz	Pass	500k					3.16M	7.516M	3.16M	7.136M
5530MHz,#5775MHz	Pass	500k					74.9M	75.762M	73.7M	75.862M
5610MHz,#5775MHz	Pass	500k					74M	75.762M	70.7M	75.762M
802.11ac VHT80+80_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
#5690MHz,#5775MHz Straddle 5.725-5.85GHz	Pass	500k	3.075M	7.571M	3.225M	24.513M	74.1M	75.937M	75.375M	75.787M

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

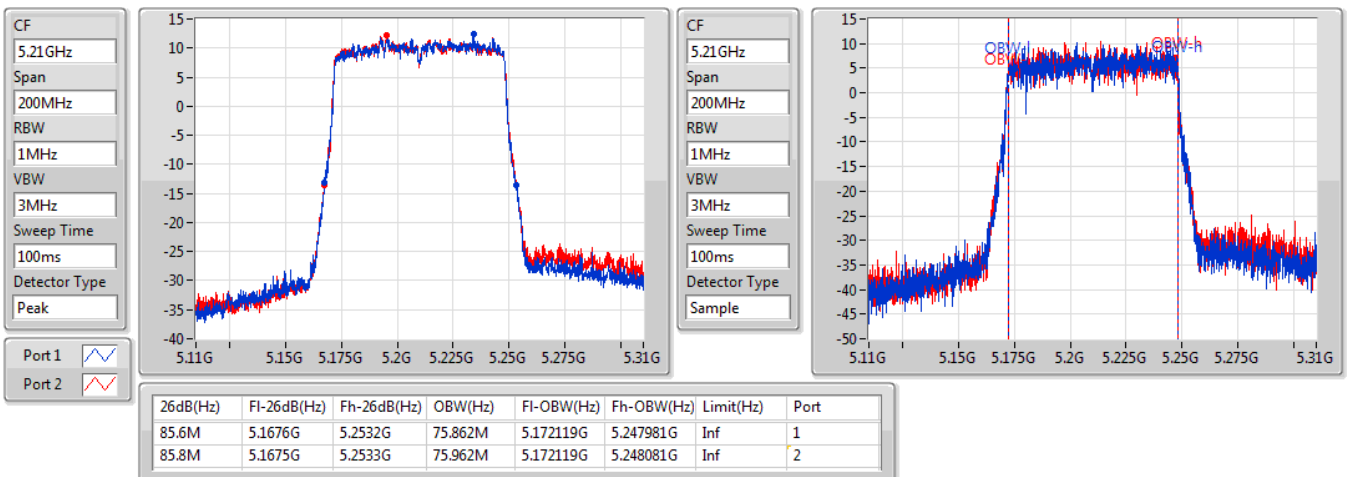
Port X-OBW = Port X 99% occupied bandwidth;

802.11ac VHT80+80_Nss1,(MCS0)_4TX
EBW
#5210MHz,5530MHz

19/06/2019

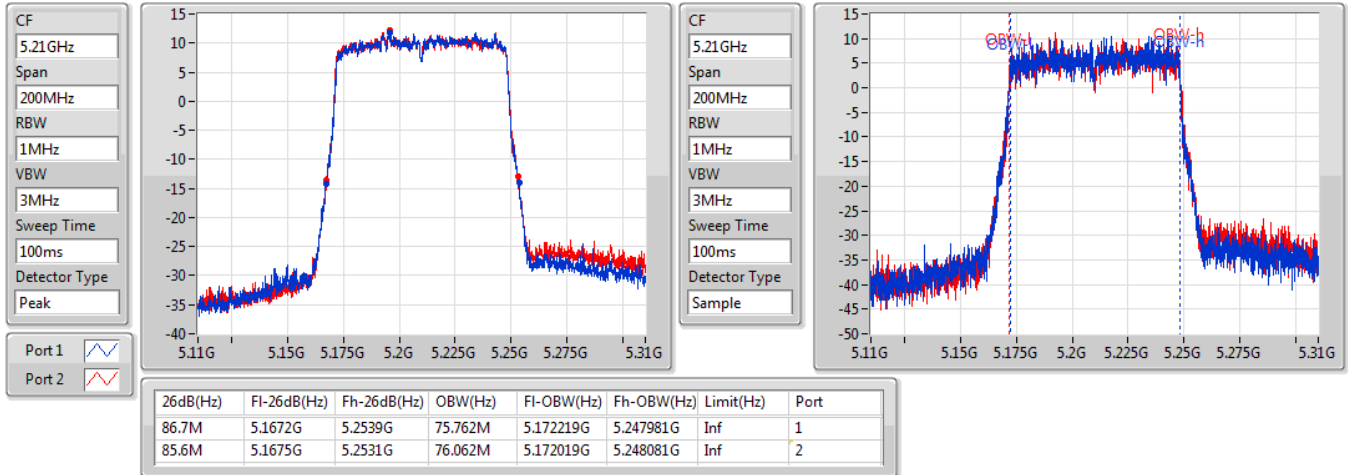

802.11ac VHT80+80_Nss1,(MCS0)_4TX
EBW
#5210MHz,5610MHz

19/06/2019

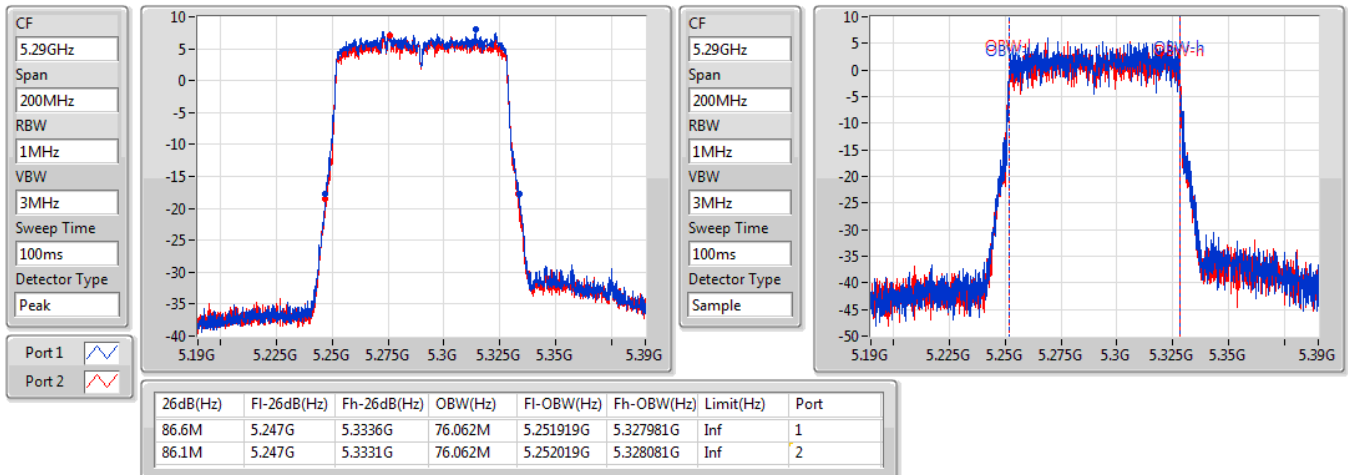


802.11ac VHT80+80_Nss1,(MCS0)_4TX
EBW
#5210MHz,5690MHz

19/06/2019

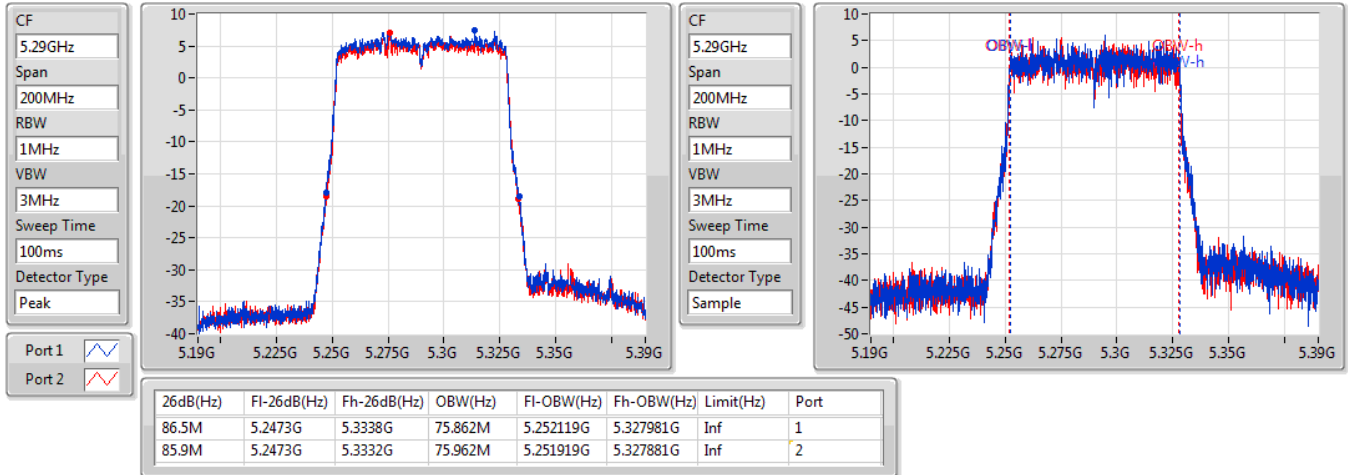

802.11ac VHT80+80_Nss1,(MCS0)_4TX
EBW
#5290MHz,5530MHz

19/06/2019

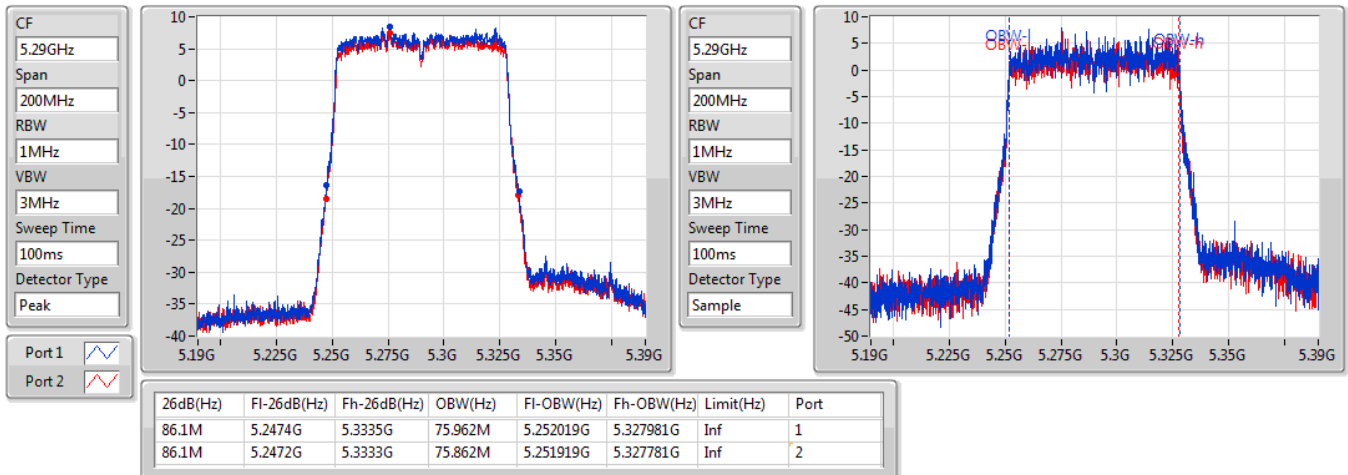


802.11ac VHT80+80_Nss1,(MCS0)_4TX
EBW
#5290MHz,5610MHz

19/06/2019

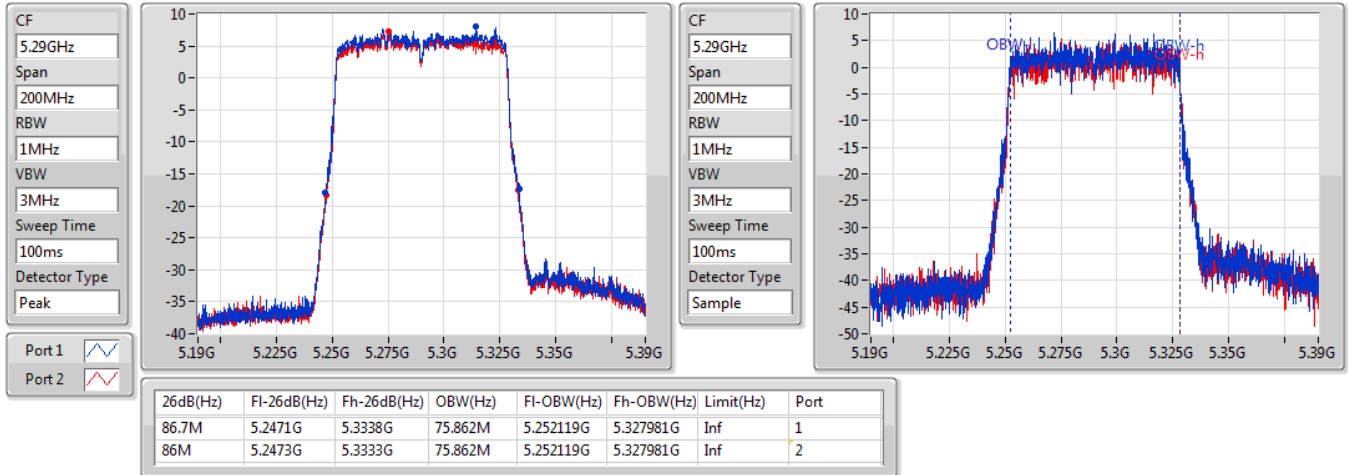

802.11ac VHT80+80_Nss1,(MCS0)_4TX
EBW
#5290MHz,5690MHz

19/06/2019

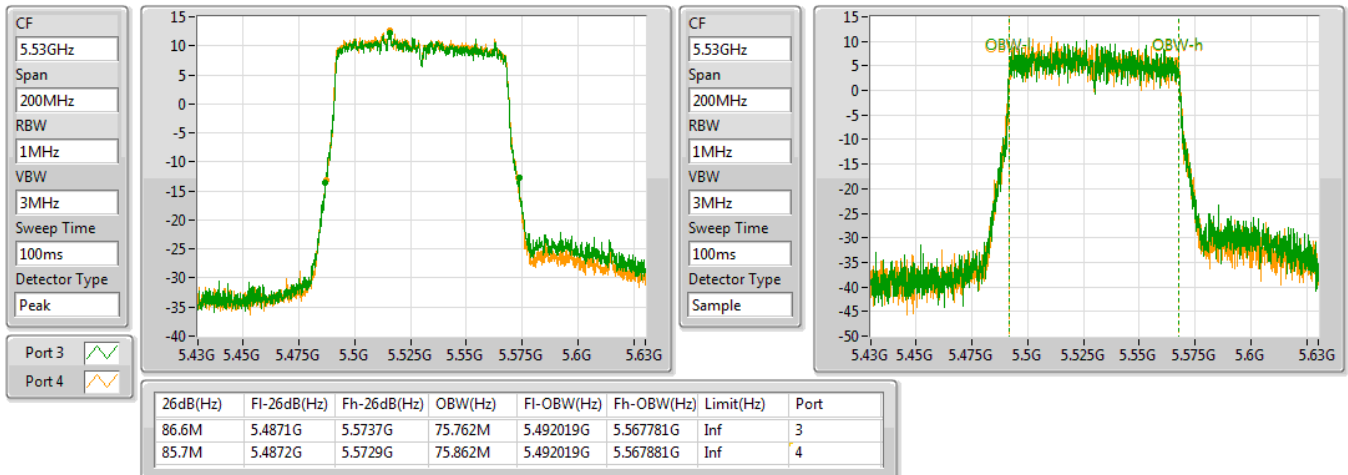


802.11ac VHT80+80_Nss1,(MCS0)_4TX
EBW
#5290MHz,5775MHz

19/06/2019

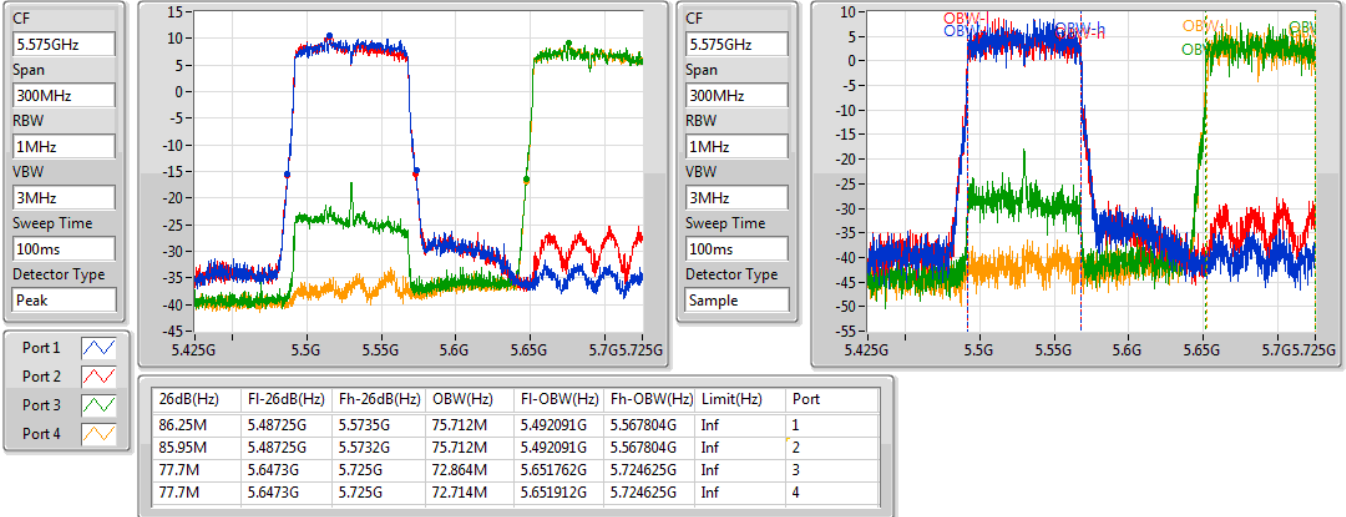

802.11ac VHT80+80_Nss1,(MCS0)_4TX
EBW
5210MHz,#5530MHz

19/06/2019

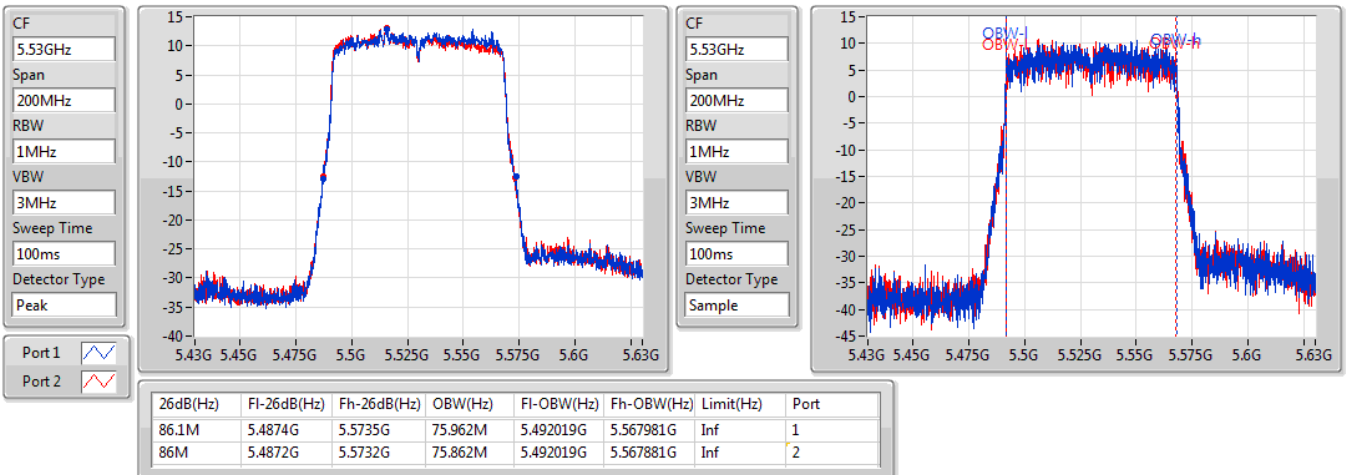


802.11ac VHT80+80_Nss2,(MCS0)_4TX
EBW
#5530MHz,#5690MHz Straddle 5.47-5.725GHz

19/06/2019

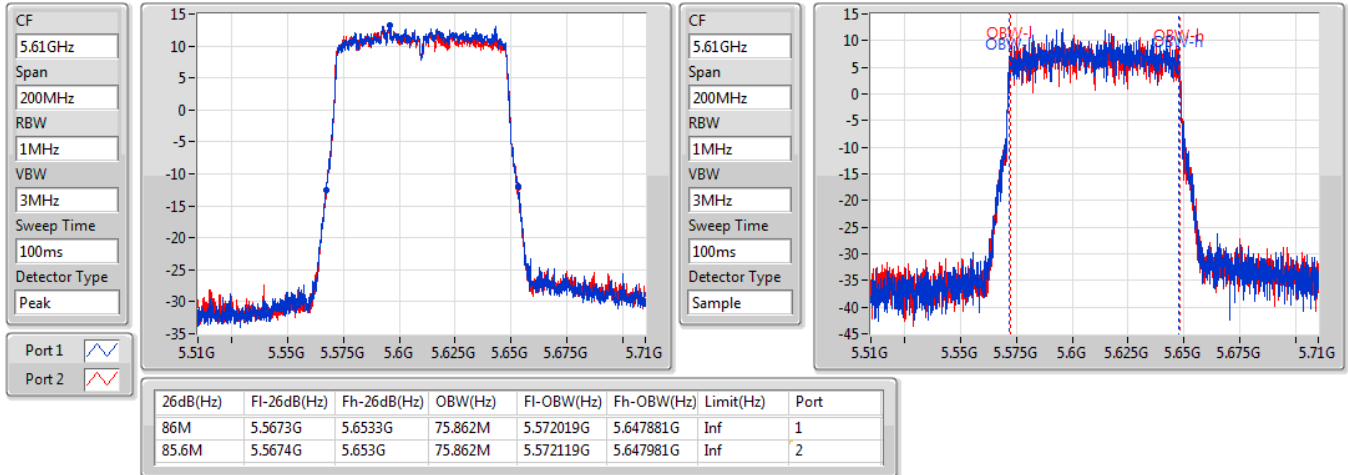

802.11ac VHT80+80_Nss1,(MCS0)_4TX
EBW
#5530MHz,5775MHz

19/06/2019

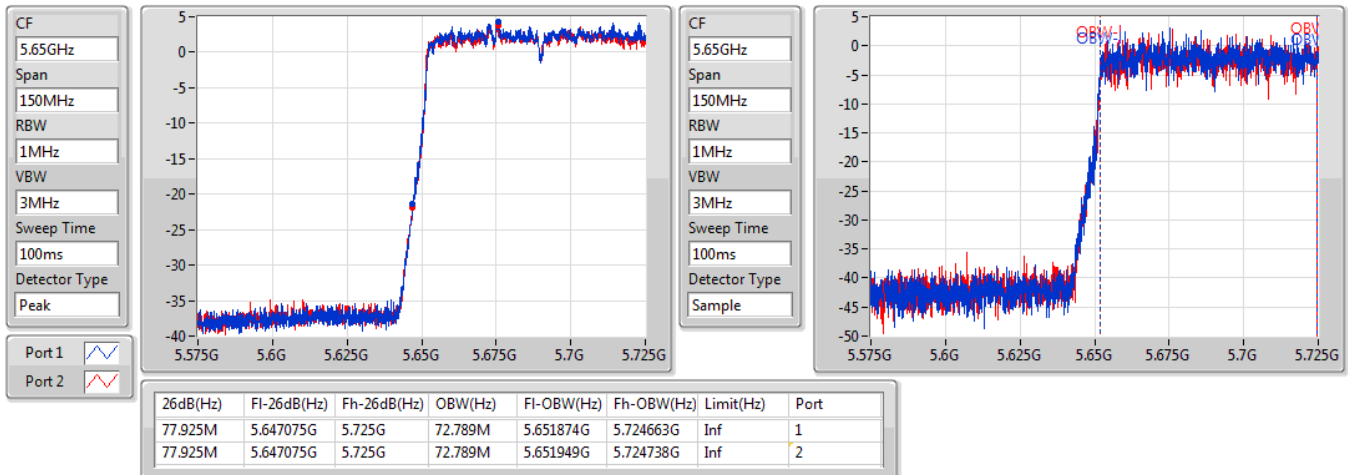


802.11ac VHT80+80_Nss1,(MCS0)_4TX
EBW
#5610MHz,5775MHz

19/06/2019

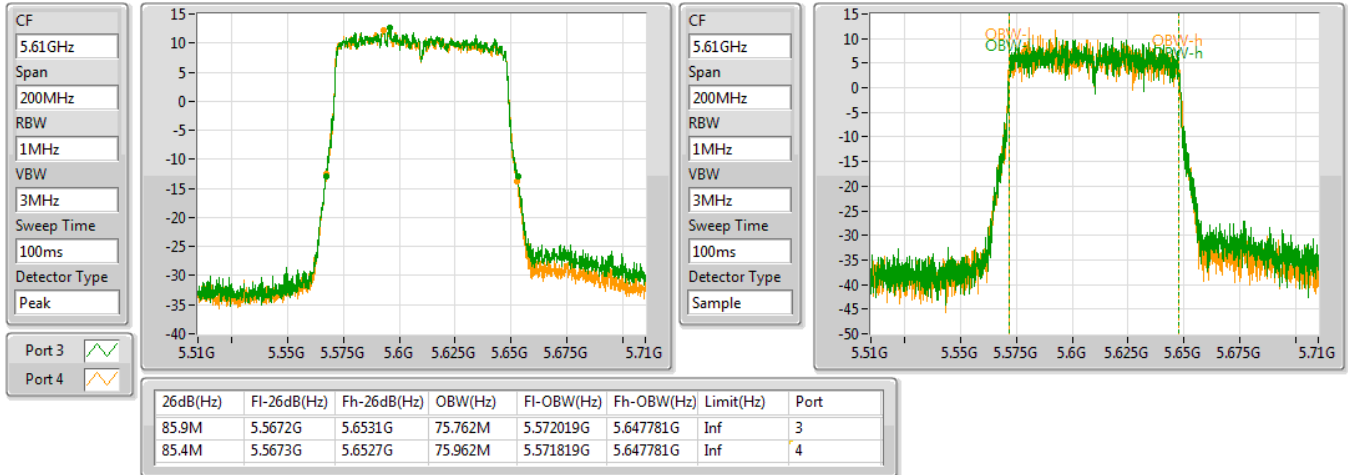

802.11ac VHT80+80_Nss1,(MCS0)_4TX
EBW
#5690MHz,#5775MHz Straddle 5.47-5.725GHz

19/06/2019

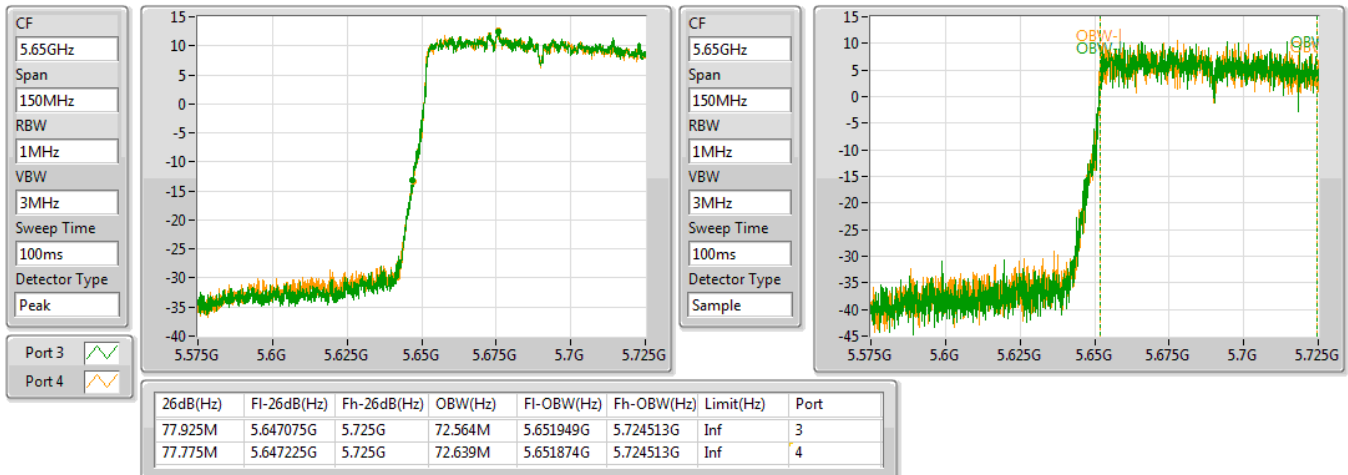


802.11ac VHT80+80_Nss1,(MCS0)_4TX
EBW
5210MHz,#5610MHz

19/06/2019

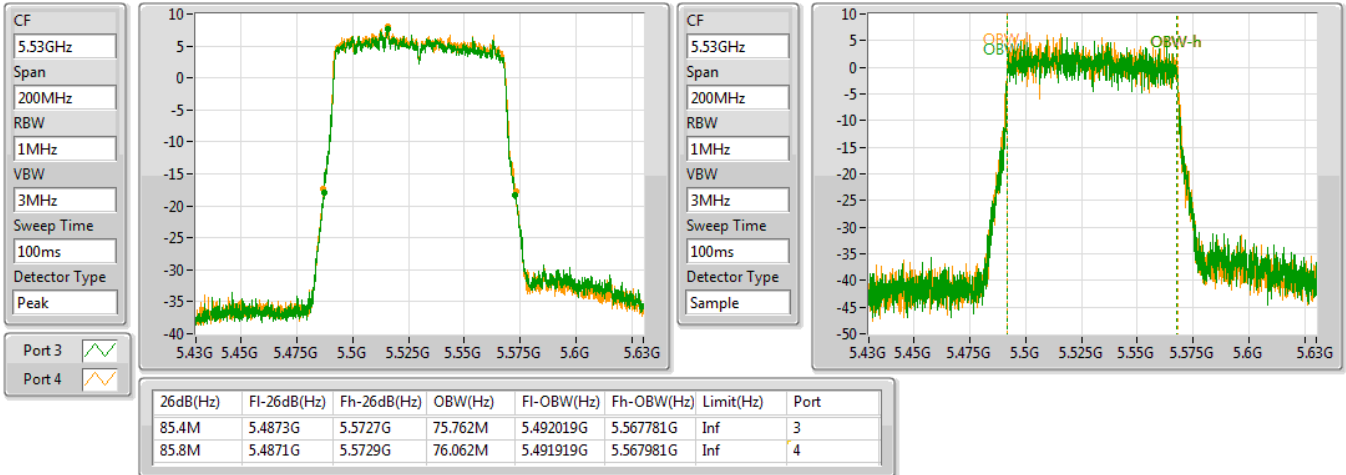

802.11ac VHT80+80_Nss1,(MCS0)_4TX
EBW
5210MHz,#5690MHz Straddle 5.47-5.725GHz

19/06/2019

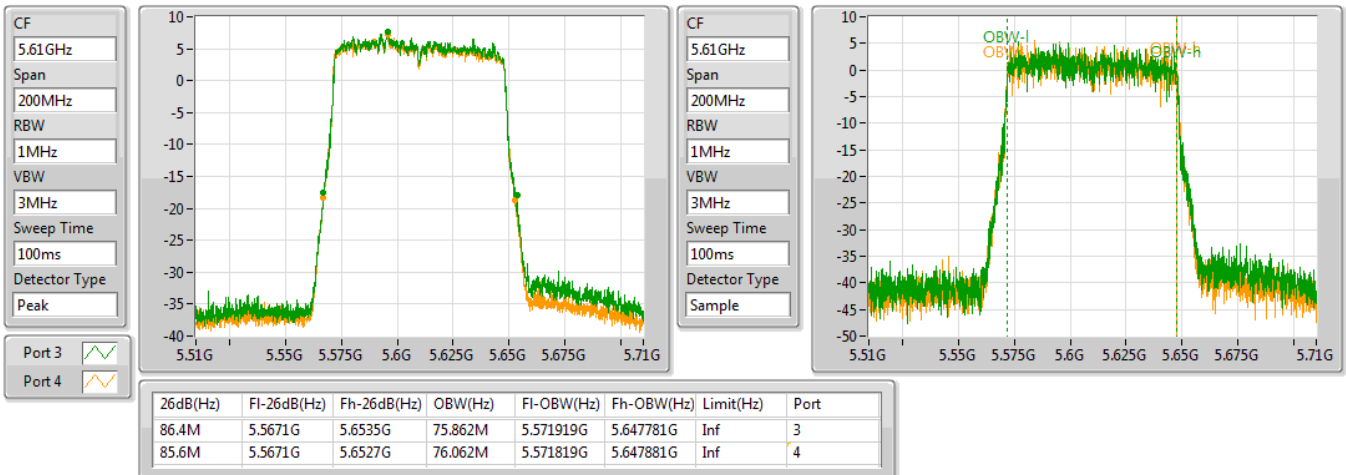


802.11ac VHT80+80_Nss1,(MCS0)_4TX
EBW
5290MHz,#5530MHz

19/06/2019

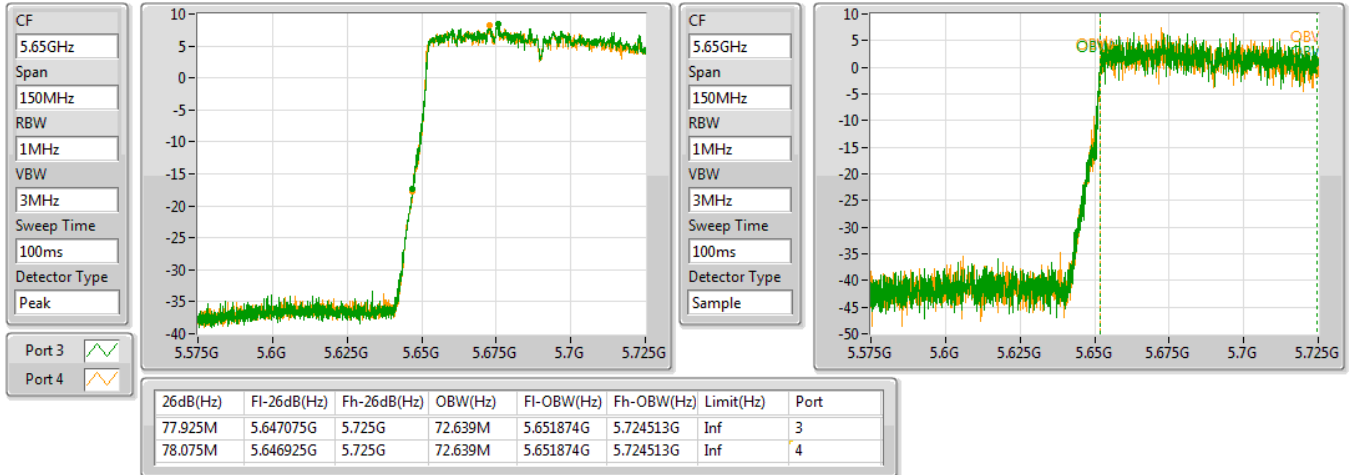

802.11ac VHT80+80_Nss1,(MCS0)_4TX
EBW
5290MHz,#5610MHz

19/06/2019

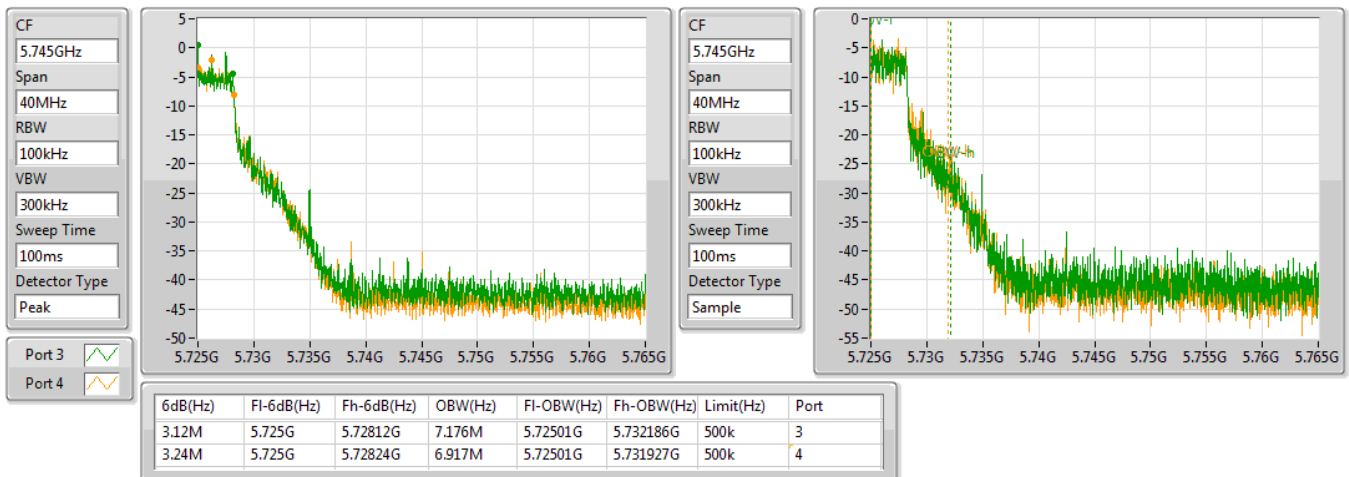


802.11ac VHT80+80_Nss1,(MCS0)_4TX
EBW
5290MHz,#5690MHz Straddle 5.47-5.725GHz

19/06/2019

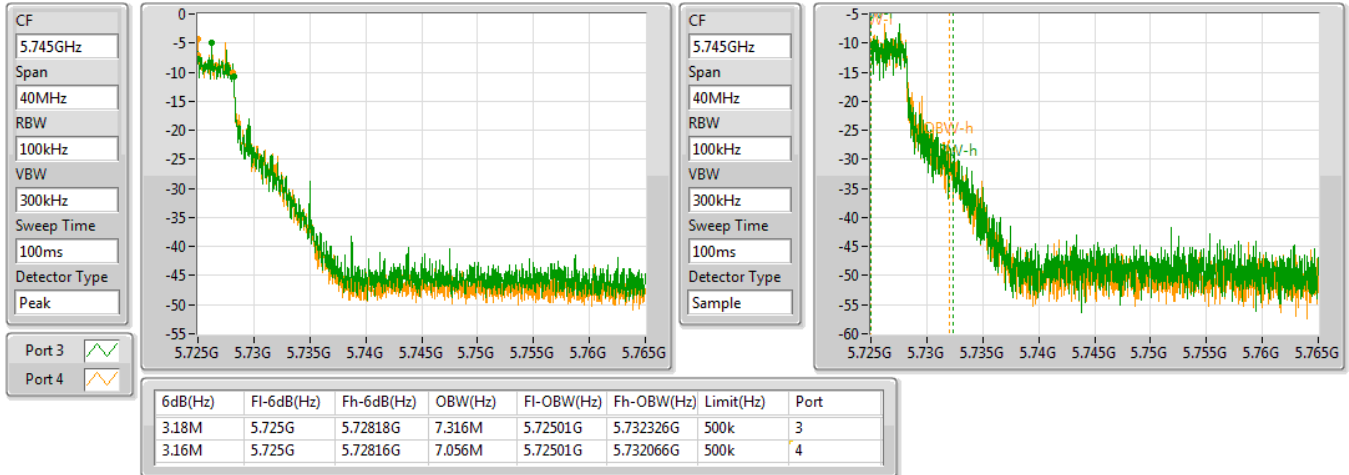

802.11ac VHT80+80_Nss1,(MCS0)_4TX
EBW
5210MHz,#5690MHz Straddle 5.725-5.85GHz

19/06/2019

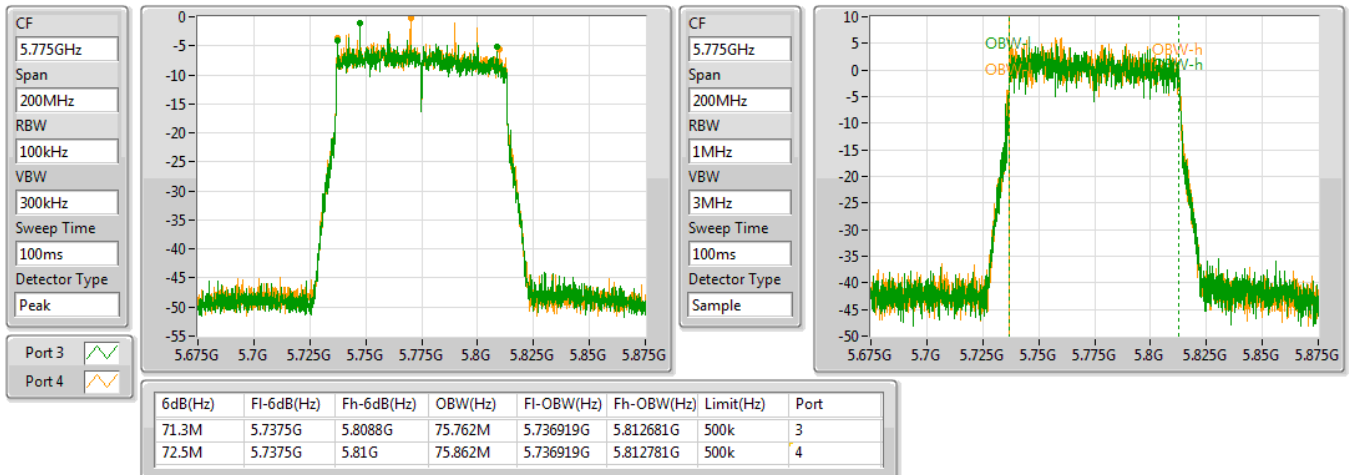


802.11ac VHT80+80_Nss1,(MCS0)_4TX
EBW
5290MHz,#5690MHz Straddle 5.725-5.85GHz

19/06/2019

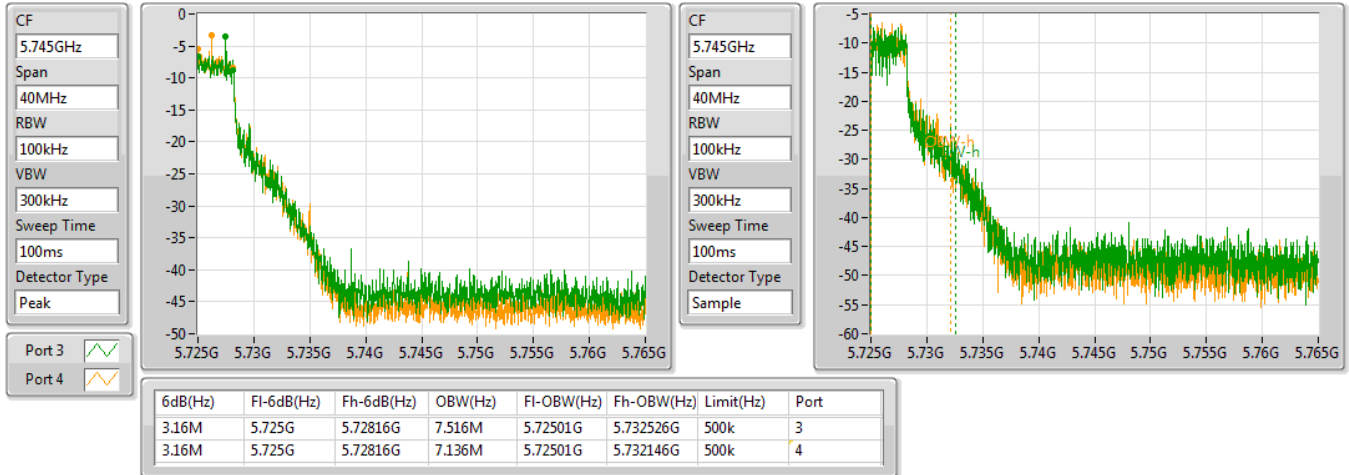

802.11ac VHT80+80_Nss1,(MCS0)_4TX
EBW
5290MHz,#5775MHz

19/06/2019

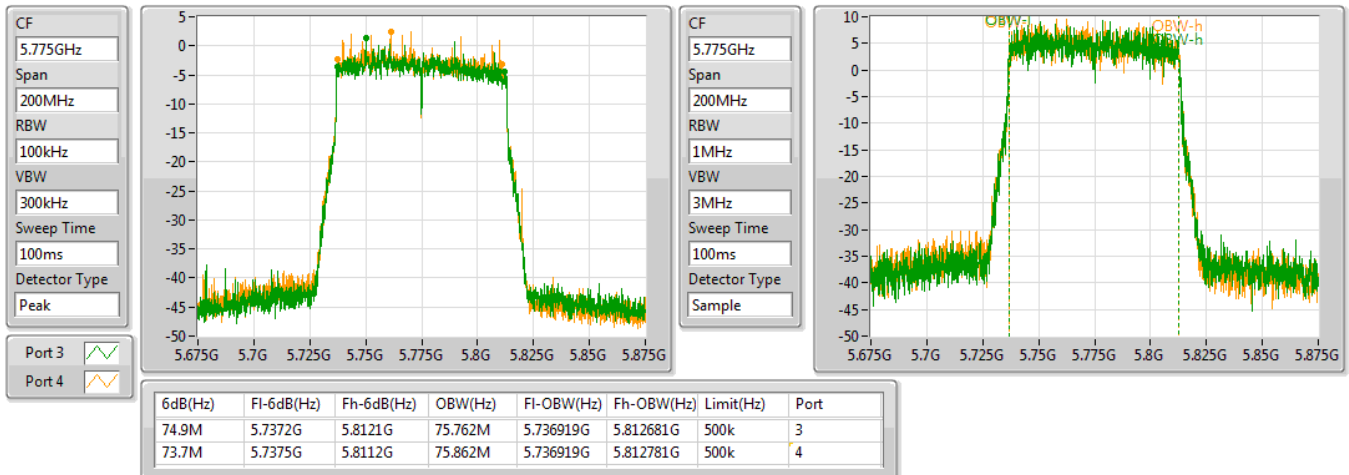


802.11ac VHT80+80_Nss1,(MCS0)_4TX
EBW
#5530MHz,#5690MHz Straddle 5.725-5.85GHz

19/06/2019

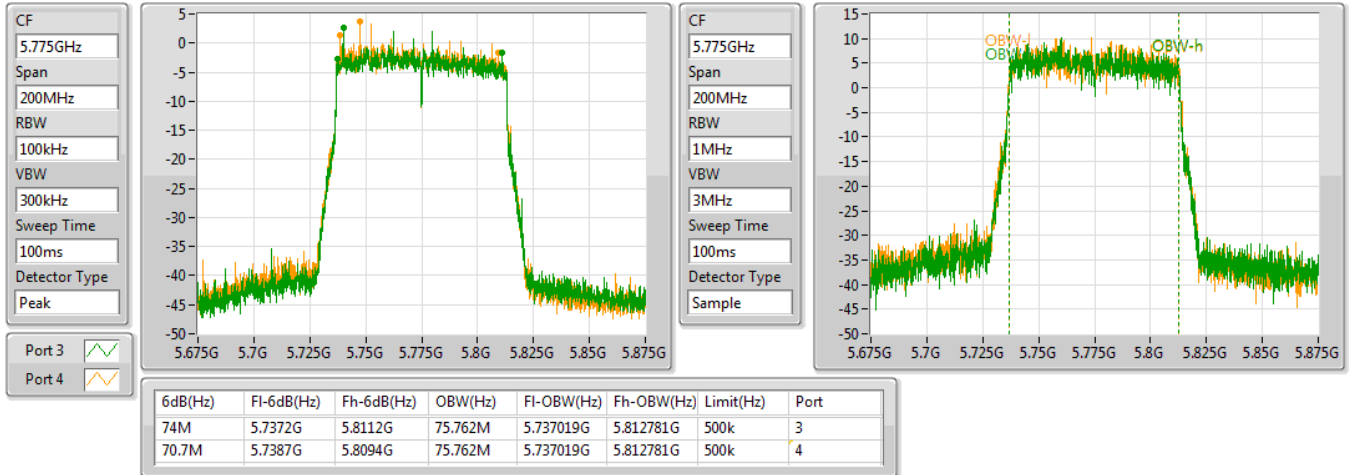

802.11ac VHT80+80_Nss1,(MCS0)_4TX
EBW
5530MHz,#5775MHz

19/06/2019

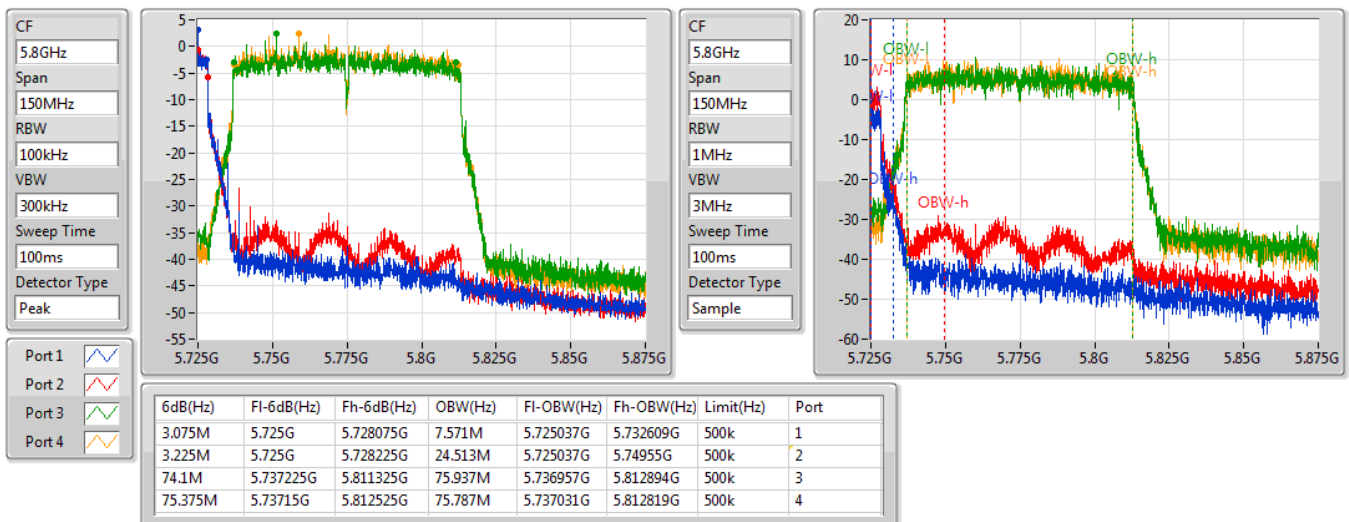


802.11ac VHT80+80_Nss1,(MCS0)_4TX
EBW
5610MHz,#5775MHz

19/06/2019


802.11ac VHT80+80_Nss2,(MCS0)_4TX
EBW
#5690MHz,#5775MHz Straddle 5.725-5.85GHz

19/06/2019



**For Beamforming mode
Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	21.4M	17.641M	17M6D1D	20.6M	17.616M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	47.1M	36.082M	36M1D1D	39.3M	35.932M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	85.9M	75.862M	75M9D1D	85.1M	75.762M
5.25-5.35GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	20.525M	17.616M	17M6D1D	20.275M	17.591M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	40.1M	36.082M	36M1D1D	39.05M	35.932M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	85.8M	75.962M	76M0D1D	84.9M	75.762M
5.47-5.725GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	20.675M	17.641M	17M6D1D	15.06M	13.748M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	40.2M	36.032M	36M0D1D	34.51M	32.779M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	85.8M	75.962M	76M0D1D	77.4M	72.339M
5.725-5.85GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	17.575M	17.841M	17M8D1D	3.76M	3.918M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	36.3M	36.382M	36M4D1D	3.14M	3.458M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	75.8M	75.862M	75M9D1D	3.12M	5.817M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;

Result

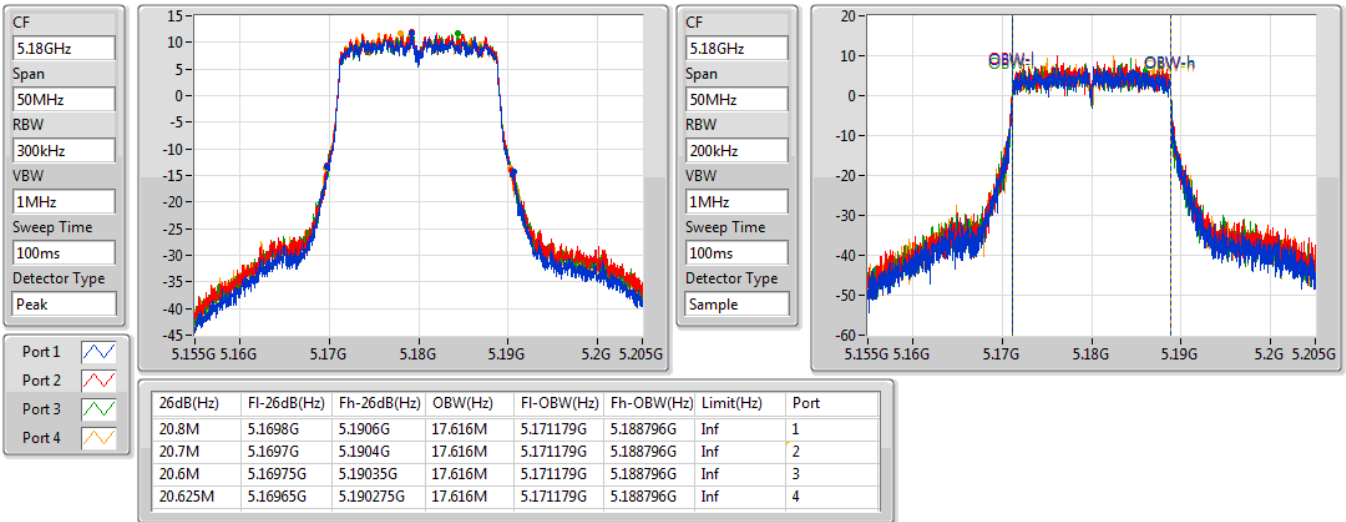
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	20.8M	17.616M	20.7M	17.616M	20.6M	17.616M	20.625M	17.616M
5200MHz	Pass	Inf	20.85M	17.616M	20.925M	17.641M	20.9M	17.641M	20.825M	17.641M
5240MHz	Pass	Inf	20.9M	17.616M	21.15M	17.616M	21.4M	17.616M	20.775M	17.641M
5260MHz	Pass	Inf	20.45M	17.616M	20.375M	17.616M	20.5M	17.591M	20.375M	17.591M
5300MHz	Pass	Inf	20.425M	17.616M	20.425M	17.616M	20.5M	17.616M	20.275M	17.616M
5320MHz	Pass	Inf	20.5M	17.616M	20.5M	17.616M	20.525M	17.616M	20.35M	17.616M
5500MHz	Pass	Inf	20.5M	17.591M	20.55M	17.641M	20.575M	17.616M	20.35M	17.616M
5580MHz	Pass	Inf	20.475M	17.616M	20.425M	17.616M	20.625M	17.616M	20.4M	17.591M
5700MHz	Pass	Inf	20.6M	17.616M	20.55M	17.616M	20.675M	17.591M	20.275M	17.616M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.06M	13.808M	15.12M	13.793M	15.09M	13.778M	15.12M	13.748M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.76M	3.918M	3.76M	3.938M	3.78M	3.938M	3.82M	3.958M
5745MHz	Pass	500k	17.55M	17.666M	17.525M	17.691M	16.9M	17.641M	17.15M	17.691M
5785MHz	Pass	500k	16.875M	17.741M	17.525M	17.841M	17.575M	17.741M	17.575M	17.791M
5825MHz	Pass	500k	17.5M	17.716M	17.525M	17.766M	17.15M	17.741M	17.55M	17.766M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	40.1M	36.032M	39.95M	35.982M	39.5M	36.032M	39.3M	35.932M
5230MHz	Pass	Inf	40.4M	36.082M	40.4M	36.032M	47.1M	36.082M	39.9M	36.032M
5270MHz	Pass	Inf	39.75M	36.032M	40M	36.032M	40M	36.082M	39.25M	35.932M
5310MHz	Pass	Inf	40.1M	35.982M	40.1M	35.932M	39.85M	35.982M	39.05M	35.932M
5510MHz	Pass	Inf	39.9M	35.982M	39.8M	35.882M	39.5M	35.932M	39.45M	35.982M
5550MHz	Pass	Inf	40.1M	35.932M	39.95M	35.932M	39.6M	35.932M	39.2M	36.032M
5670MHz	Pass	Inf	40.2M	36.032M	40M	35.982M	39.7M	35.932M	39.2M	35.982M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	34.965M	32.849M	34.965M	32.814M	34.65M	32.779M	34.51M	32.779M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.16M	3.498M	3.14M	3.498M	3.14M	3.498M	3.14M	3.458M
5755MHz	Pass	500k	35.25M	36.232M	36.3M	36.232M	35.05M	36.132M	34.65M	36.182M
5795MHz	Pass	500k	35.25M	36.182M	35.1M	36.332M	35M	36.232M	35.05M	36.382M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	85.4M	75.862M	85.1M	75.762M	85.5M	75.762M	85.9M	75.862M
5290MHz	Pass	Inf	84.9M	75.862M	85.1M	75.762M	85.8M	75.762M	85.5M	75.962M
5530MHz	Pass	Inf	84.6M	75.662M	84.5M	75.662M	85.4M	75.662M	85.8M	75.962M
5610MHz	Pass	Inf	84.9M	75.662M	85M	75.862M	85.5M	75.662M	85.8M	75.862M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	77.7M	72.564M	77.4M	72.414M	77.4M	72.489M	77.625M	72.339M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.14M	5.877M	3.14M	5.877M	3.14M	6.257M	3.12M	5.817M
5775MHz	Pass	500k	75.2M	75.862M	72.7M	75.862M	75.8M	75.862M	73.8M	75.762M

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

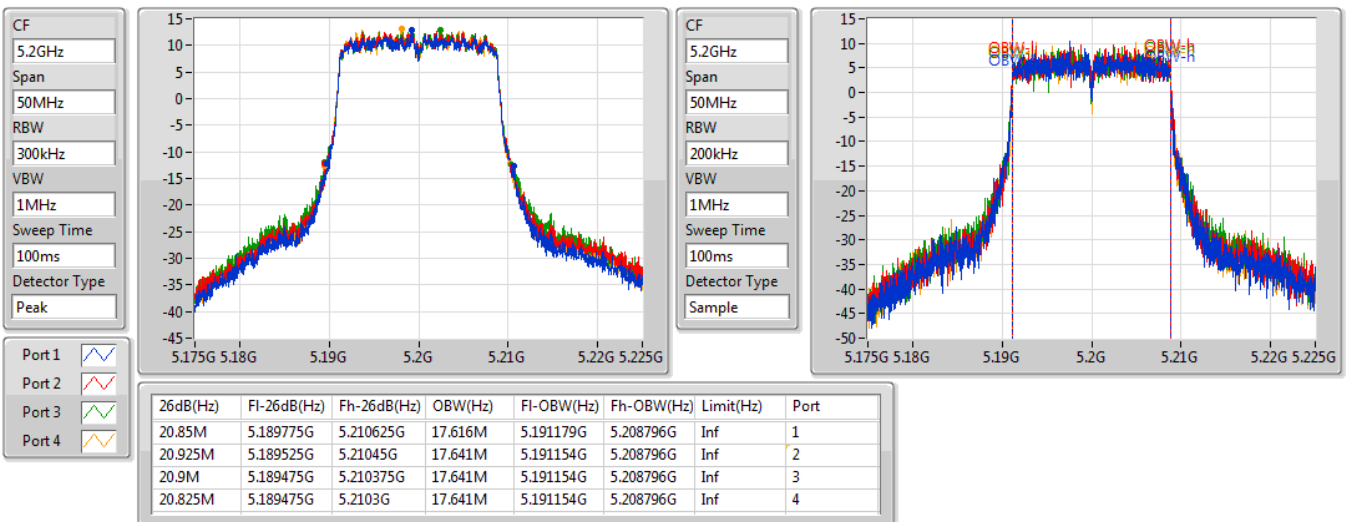
Port X-OBW = Port X 99% occupied bandwidth;

802.11ac VHT20-BF_Nss1,(MCS0)_4TX
EBW
5180MHz

11/06/2019

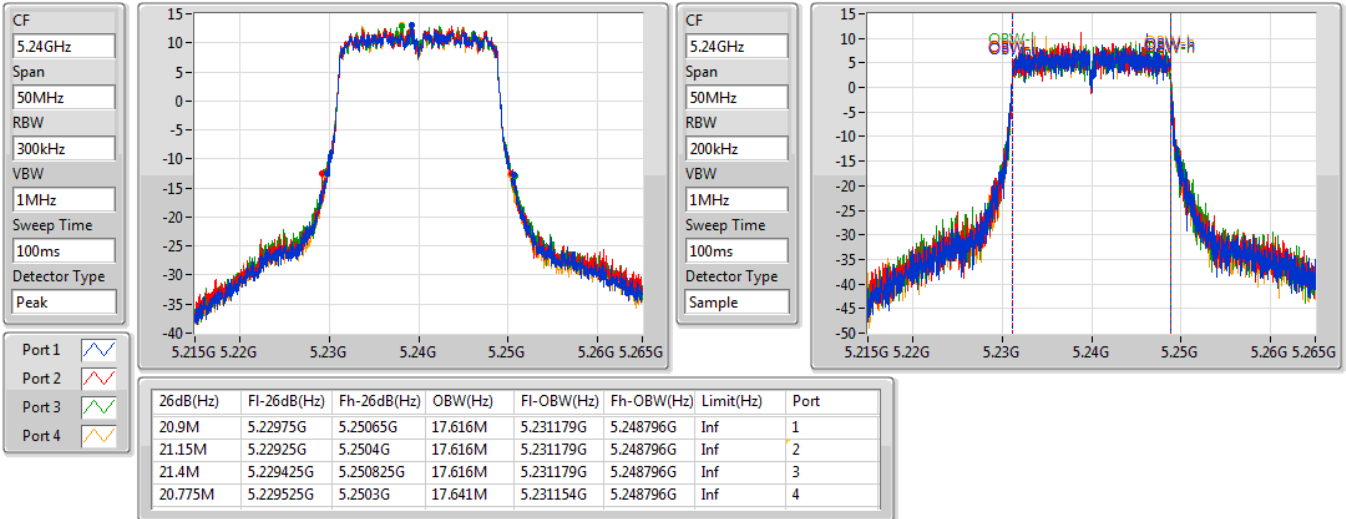

802.11ac VHT20-BF_Nss1,(MCS0)_4TX
EBW
5200MHz

11/06/2019

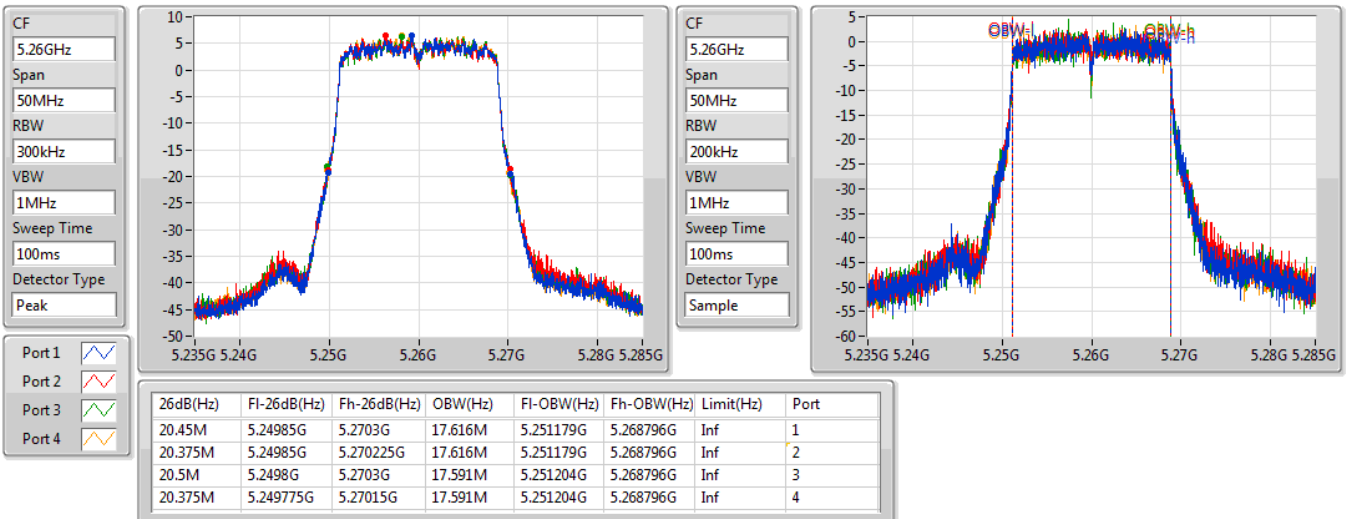


802.11ac VHT20-BF_Nss1,(MCS0)_4TX
EBW
5240MHz

11/06/2019

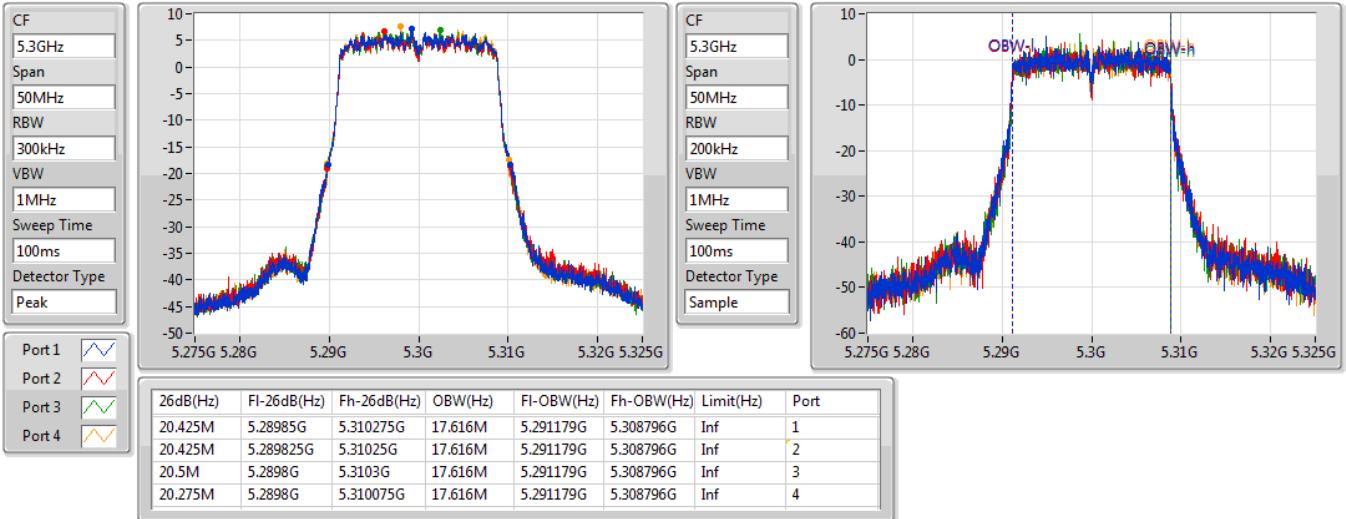

802.11ac VHT20-BF_Nss1,(MCS0)_4TX
EBW
5260MHz

11/06/2019

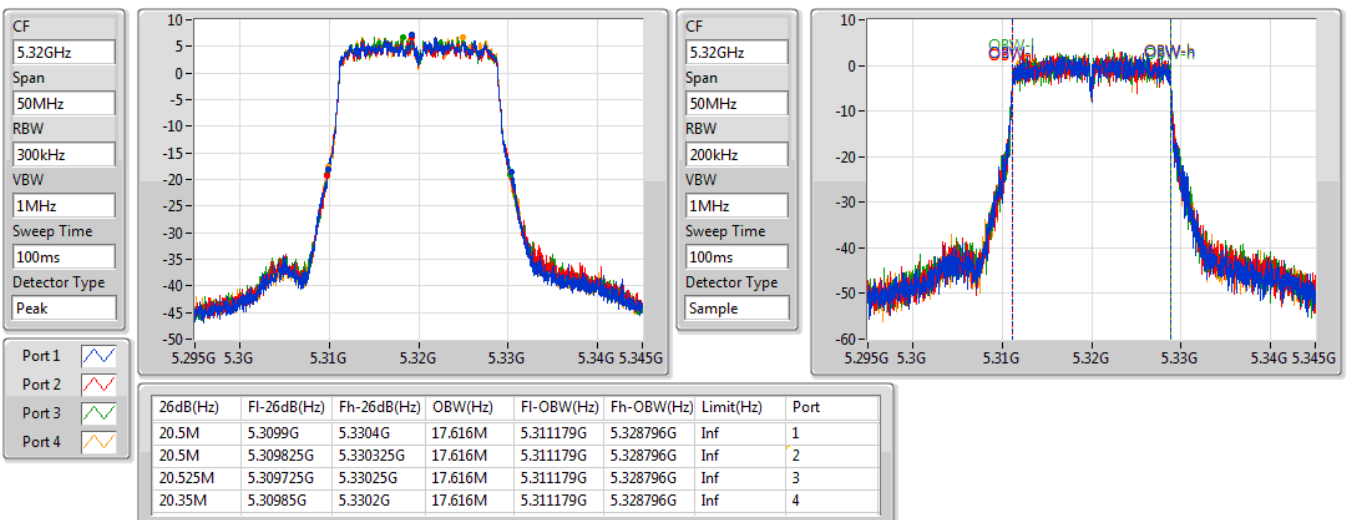


802.11ac VHT20-BF_Nss1,(MCS0)_4TX
EBW
5300MHz

11/06/2019

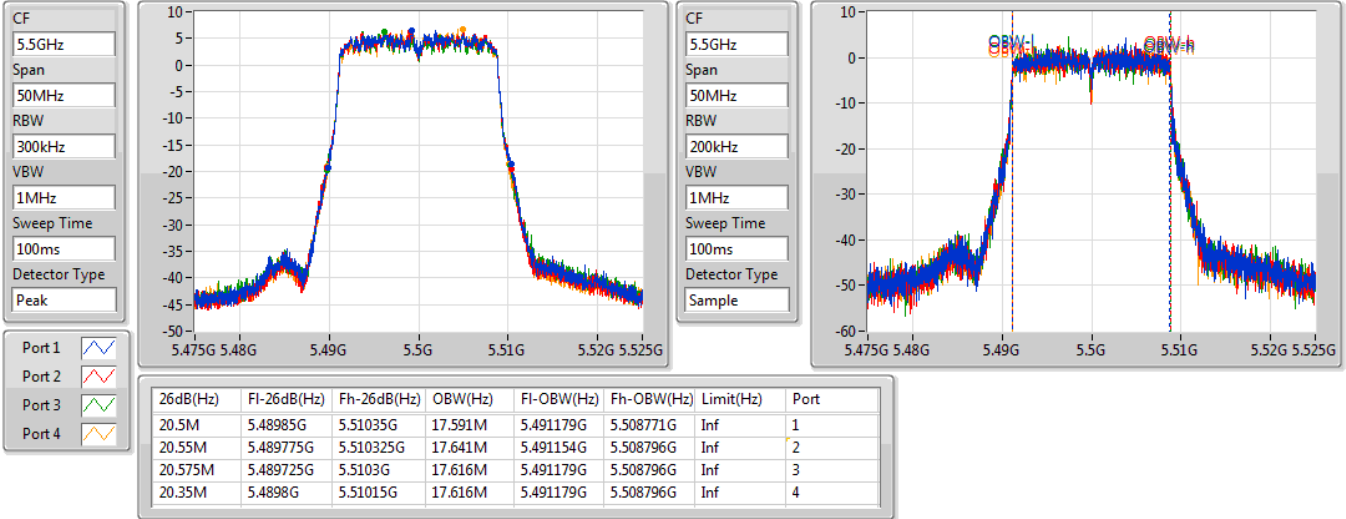

802.11ac VHT20-BF_Nss1,(MCS0)_4TX
EBW
5320MHz

11/06/2019

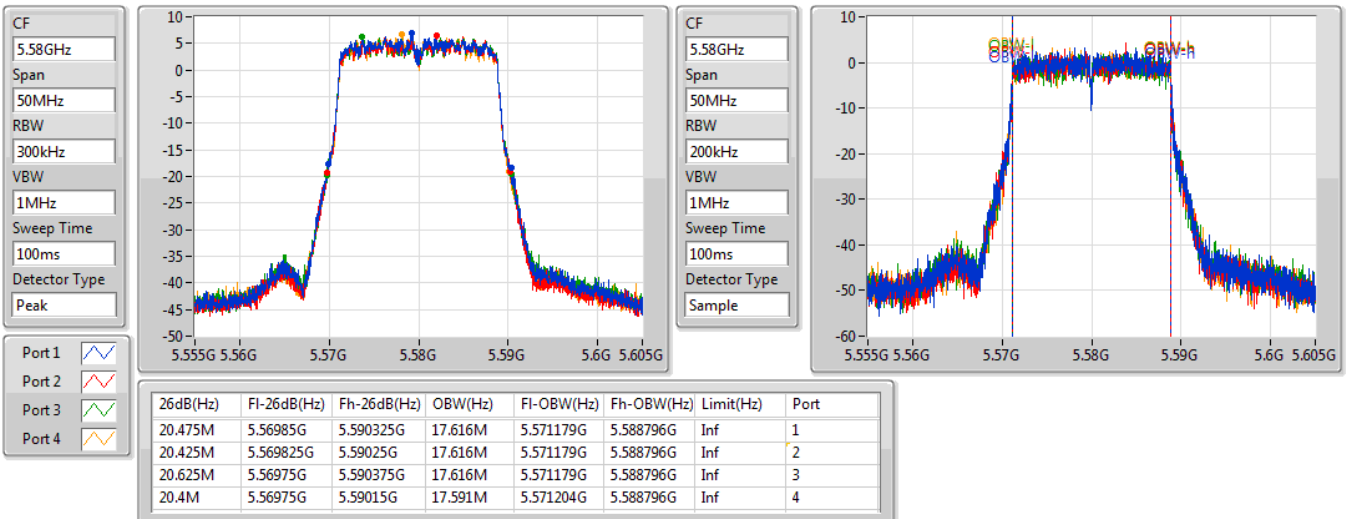


802.11ac VHT20-BF_Nss1,(MCS0)_4TX
EBW
5500MHz

11/06/2019

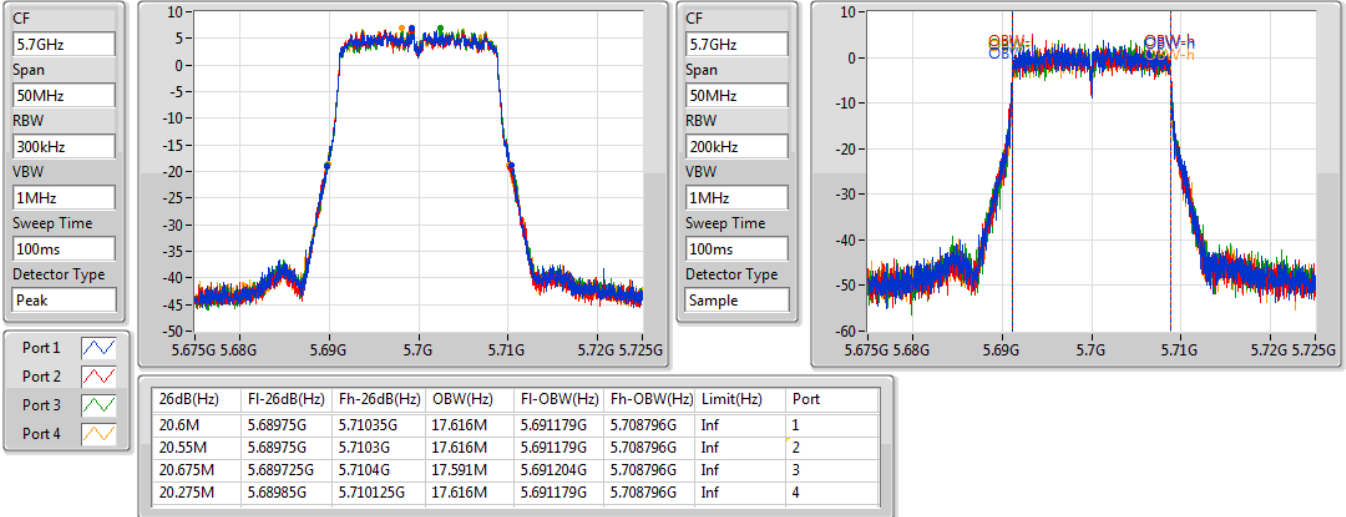

802.11ac VHT20-BF_Nss1,(MCS0)_4TX
EBW
5580MHz

11/06/2019

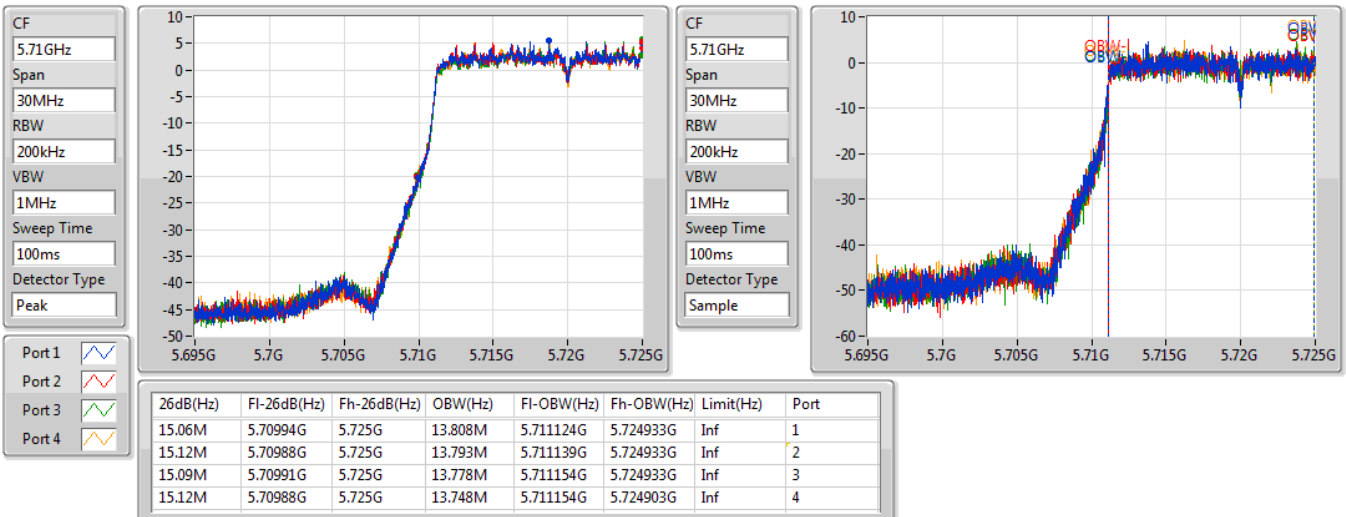


802.11ac VHT20-BF_Nss1,(MCS0)_4TX
EBW
5700MHz

11/06/2019

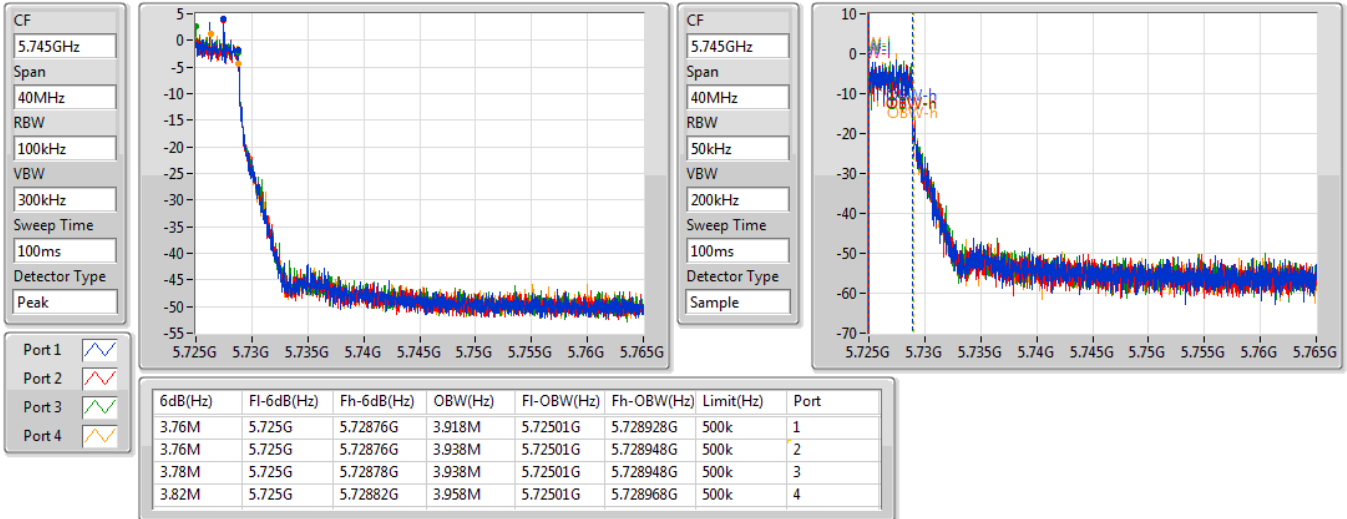

802.11ac VHT20-BF_Nss1,(MCS0)_4TX
EBW
5720MHz Straddle 5.47-5.725GHz

11/06/2019

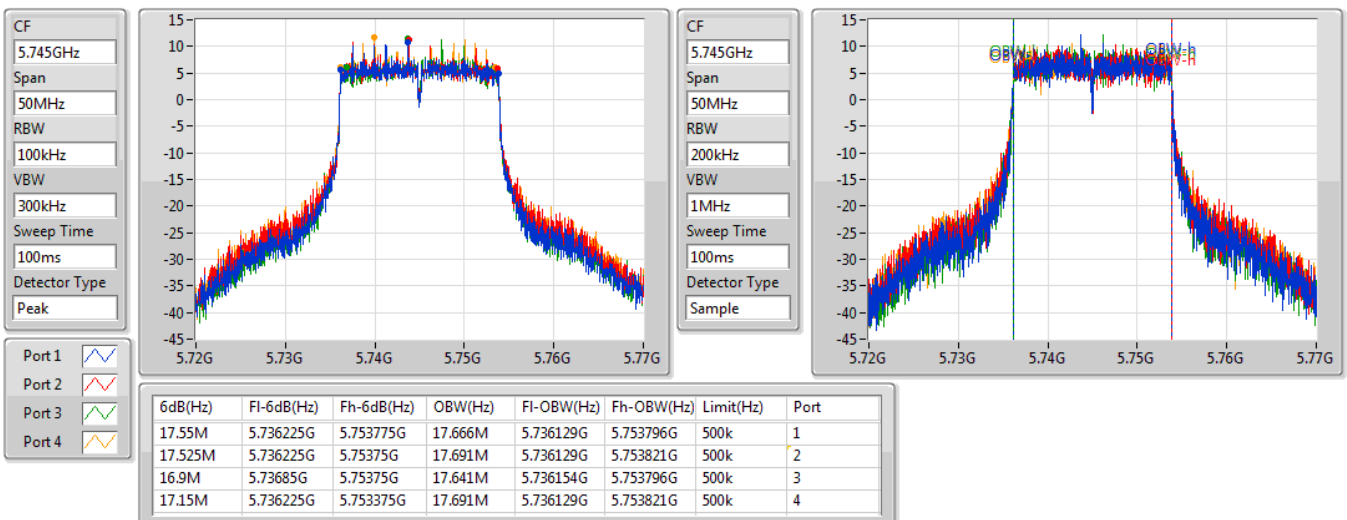


802.11ac VHT20-BF_Nss1,(MCS0)_4TX
EBW
5720MHz Straddle 5.725-5.85GHz

11/06/2019

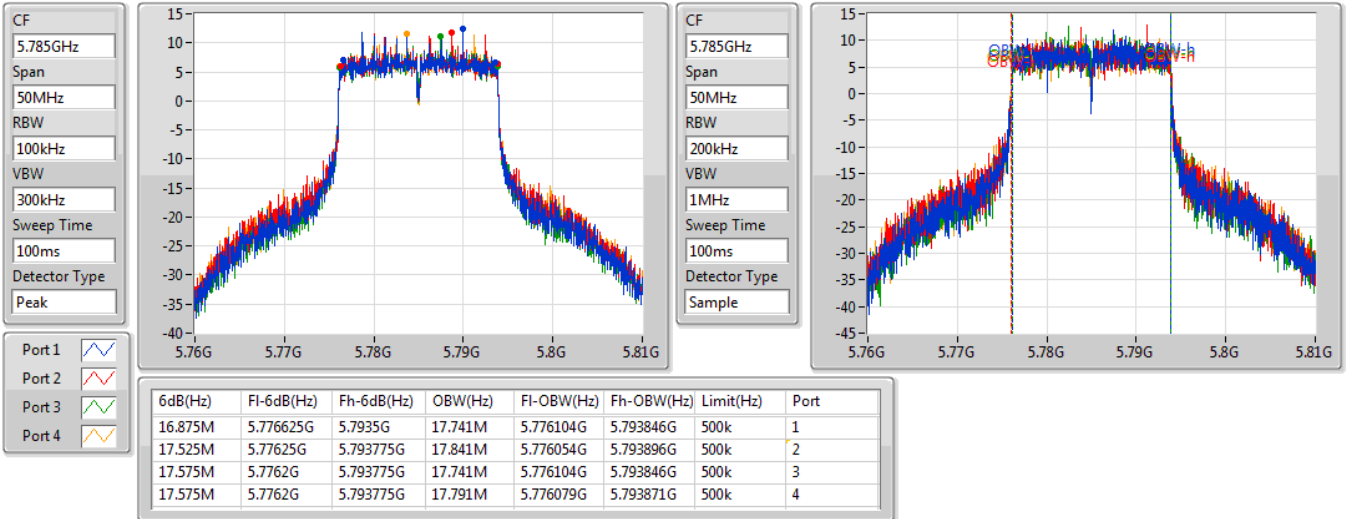

802.11ac VHT20-BF_Nss1,(MCS0)_4TX
EBW
5745MHz

11/06/2019

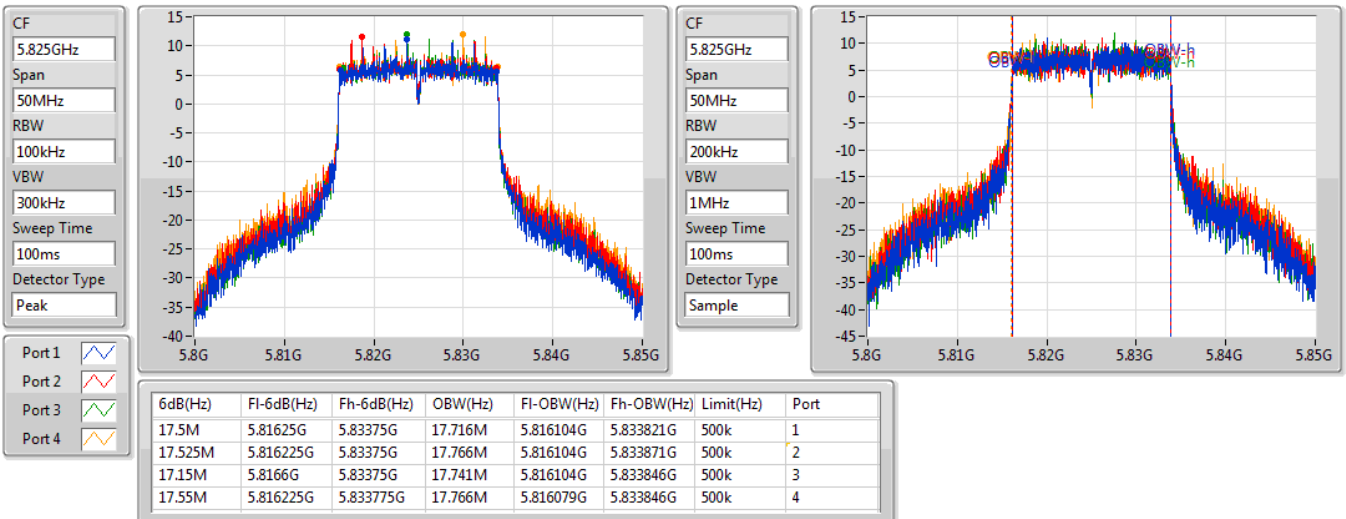


802.11ac VHT20-BF_Nss1,(MCS0)_4TX
EBW
5785MHz

11/06/2019

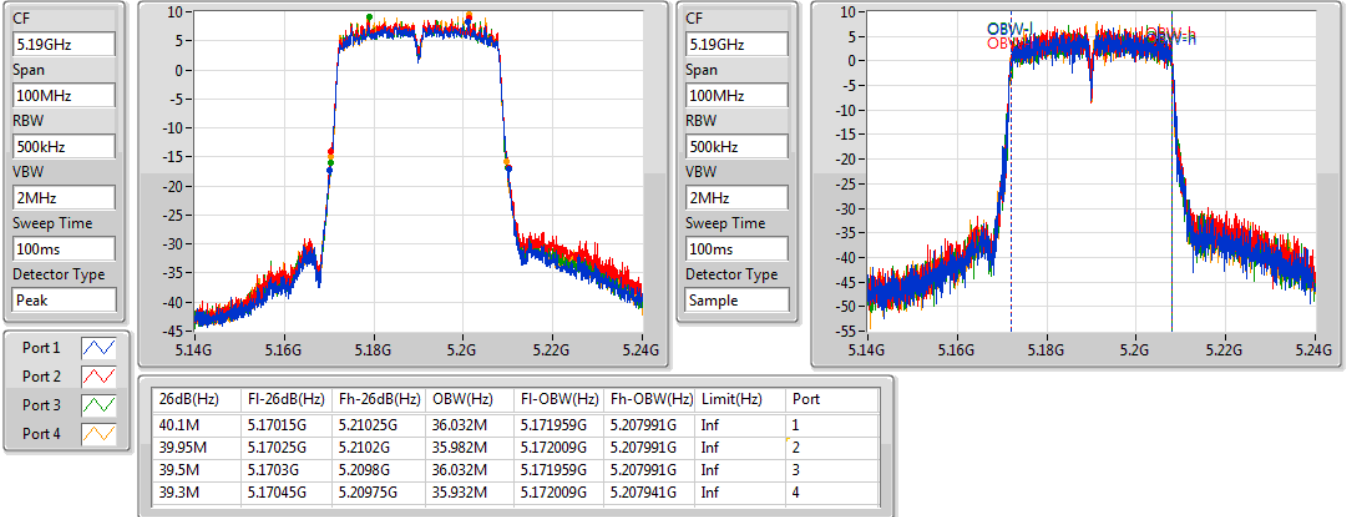

802.11ac VHT20-BF_Nss1,(MCS0)_4TX
EBW
5825MHz

11/06/2019

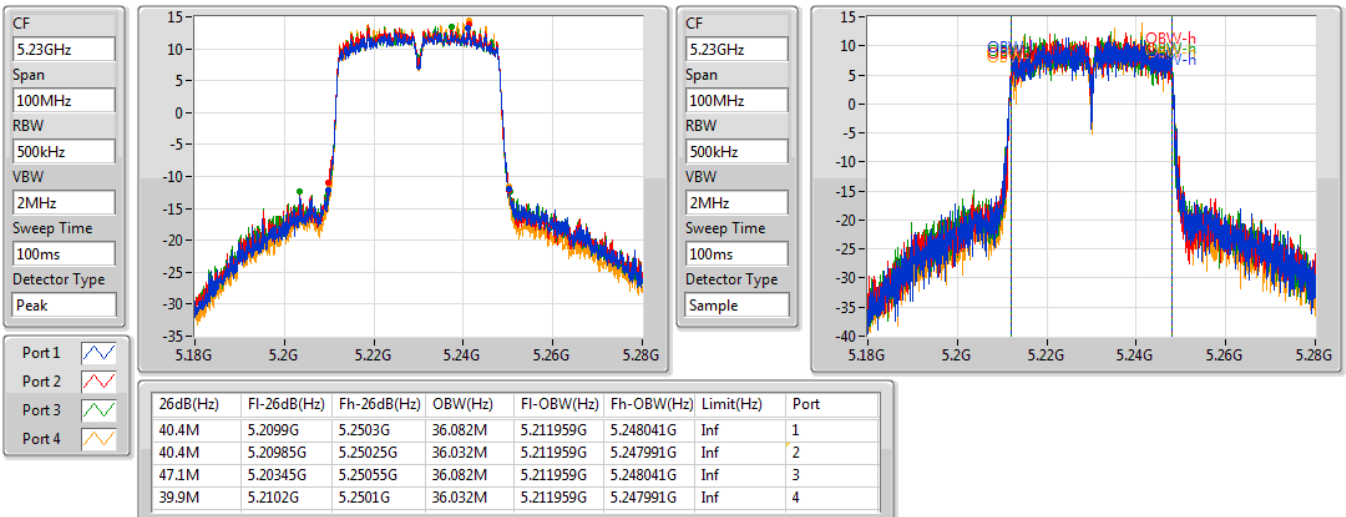


802.11ac VHT40-BF_Nss1,(MCS0)_4TX
EBW
5190MHz

11/06/2019

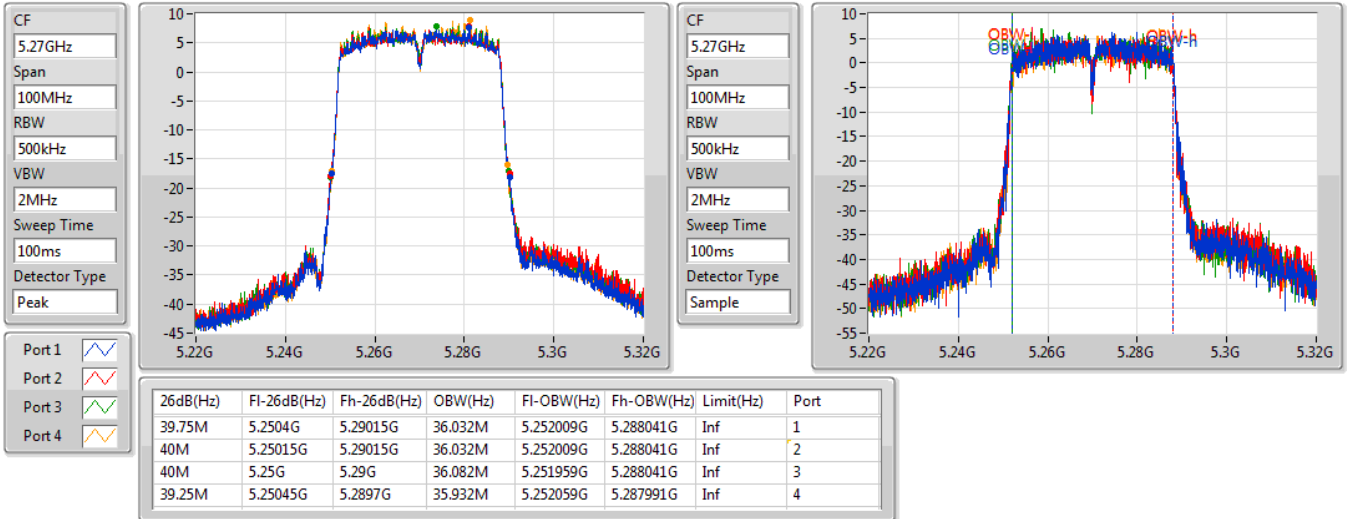

802.11ac VHT40-BF_Nss1,(MCS0)_4TX
EBW
5230MHz

11/06/2019

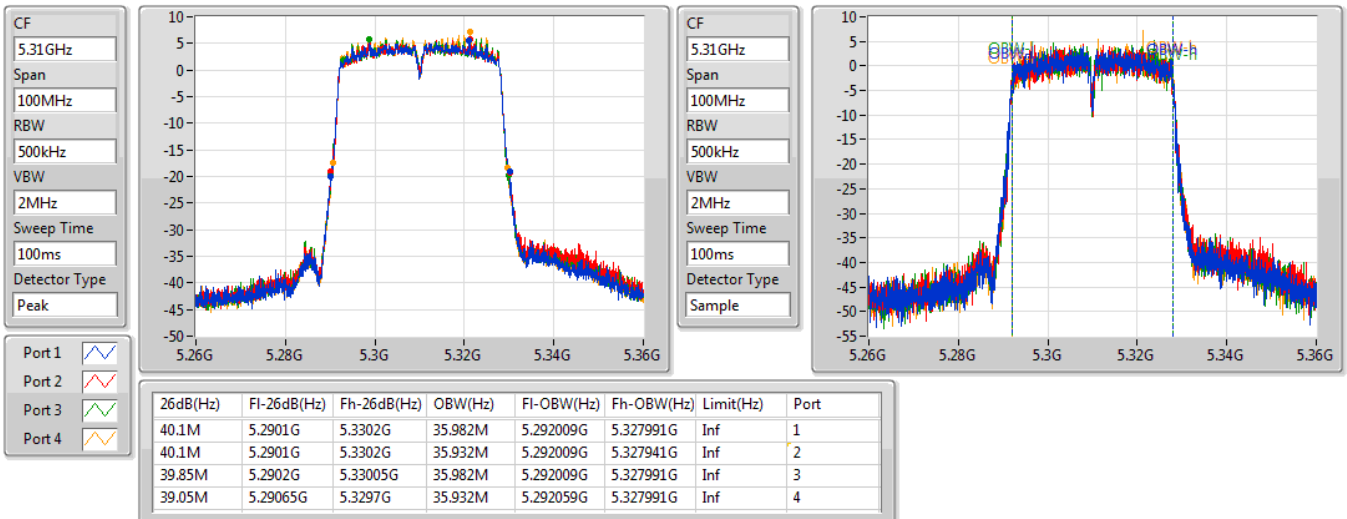


802.11ac VHT40-BF_Nss1,(MCS0)_4TX
EBW
5270MHz

11/06/2019

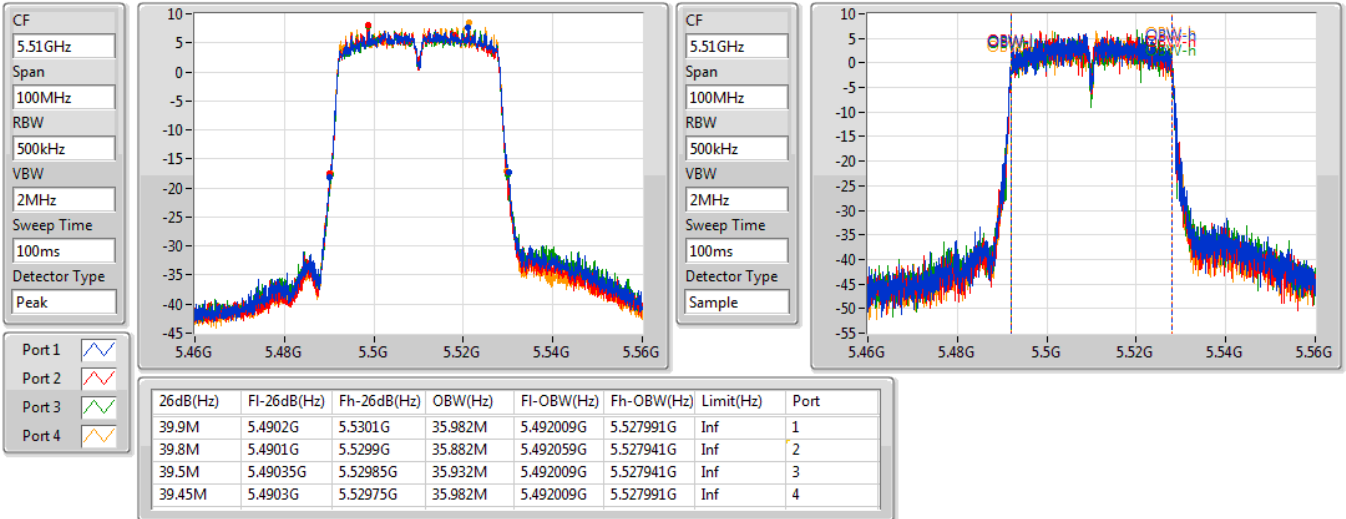

802.11ac VHT40-BF_Nss1,(MCS0)_4TX
EBW
5310MHz

11/06/2019

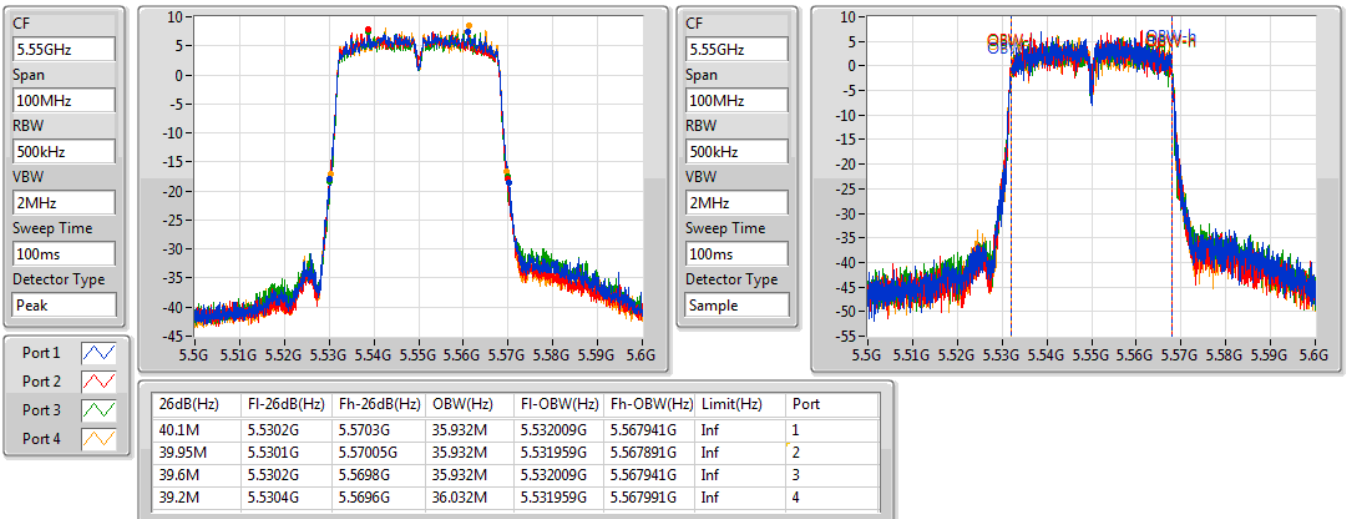


802.11ac VHT40-BF_Nss1,(MCS0)_4TX
EBW
5510MHz

11/06/2019

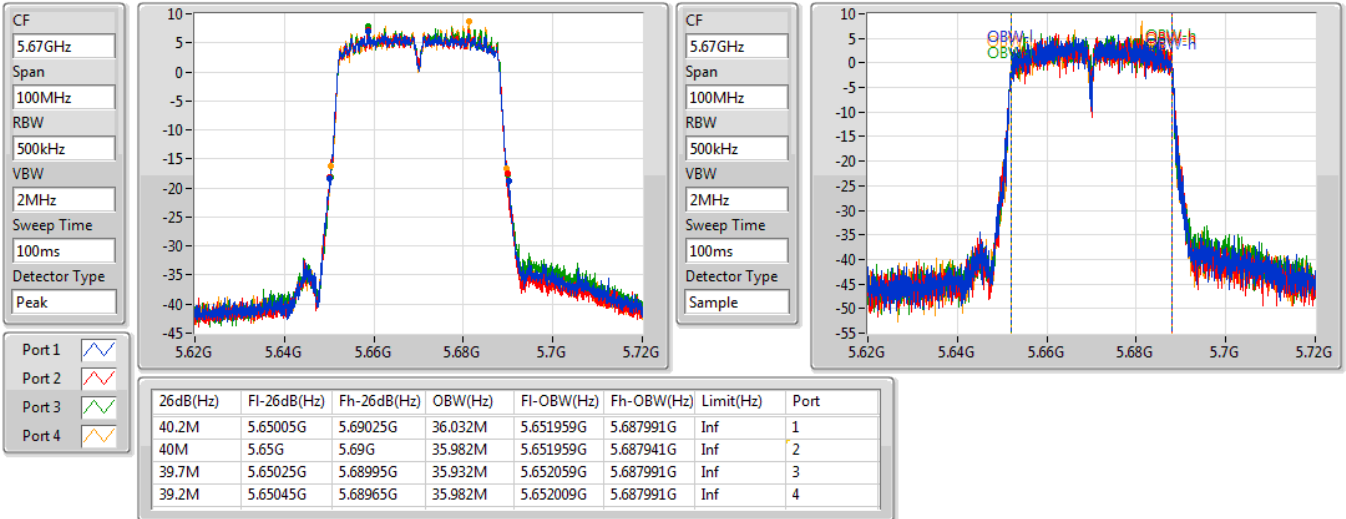

802.11ac VHT40-BF_Nss1,(MCS0)_4TX
EBW
5550MHz

11/06/2019

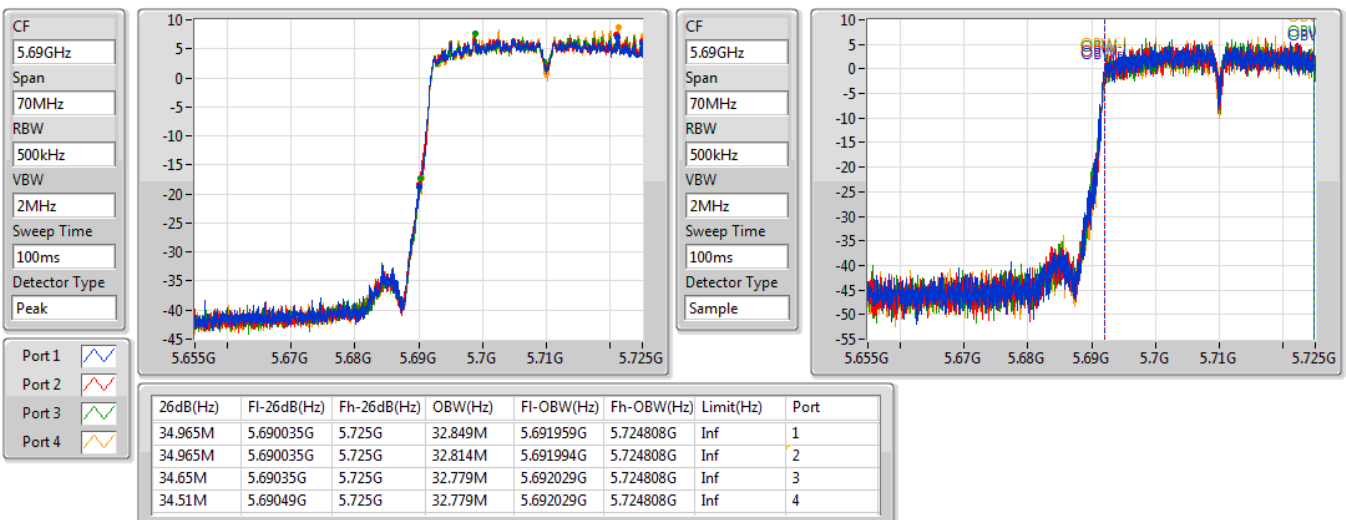


802.11ac VHT40-BF_Nss1,(MCS0)_4TX
EBW
5670MHz

11/06/2019

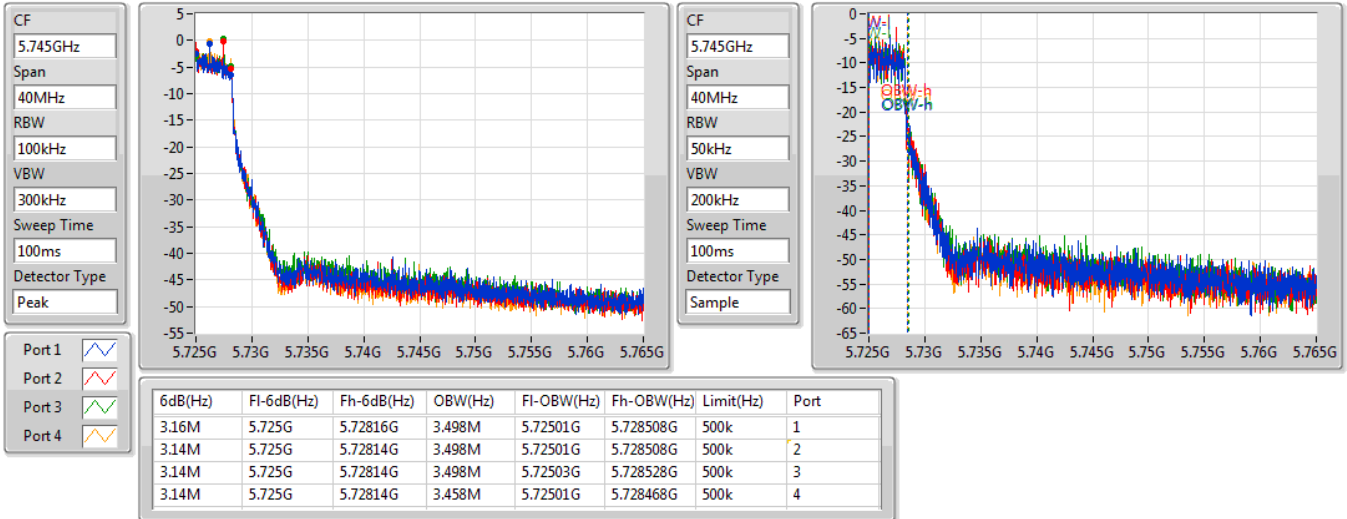

802.11ac VHT40-BF_Nss1,(MCS0)_4TX
EBW
5710MHz Straddle 5.47-5.725GHz

11/06/2019

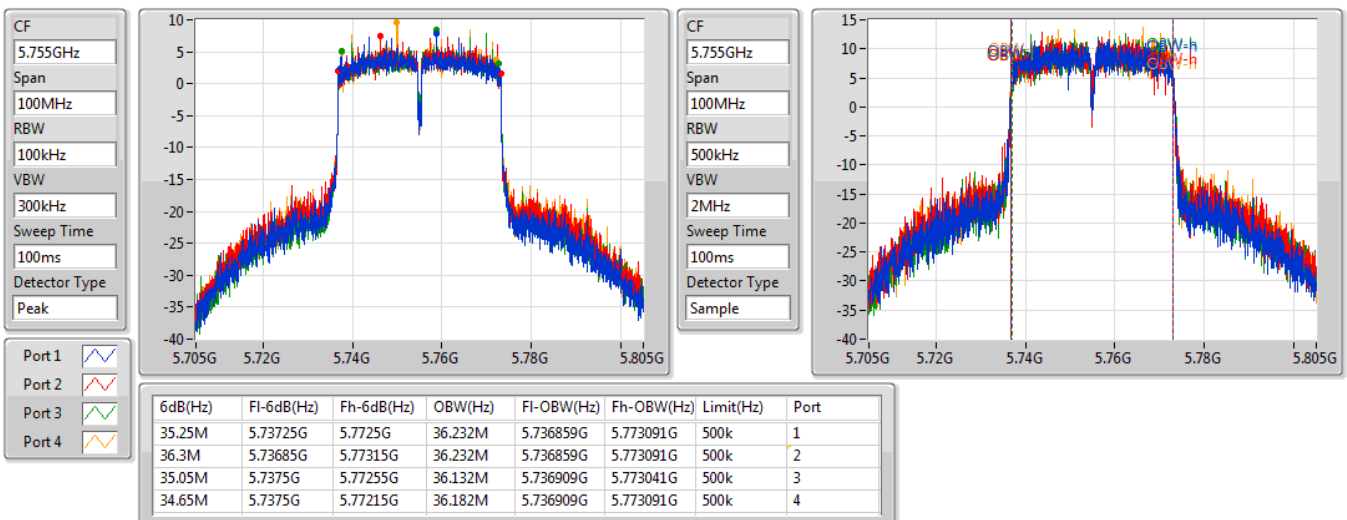


802.11ac VHT40-BF_Nss1,(MCS0)_4TX
EBW
5710MHz Straddle 5.725-5.85GHz

11/06/2019

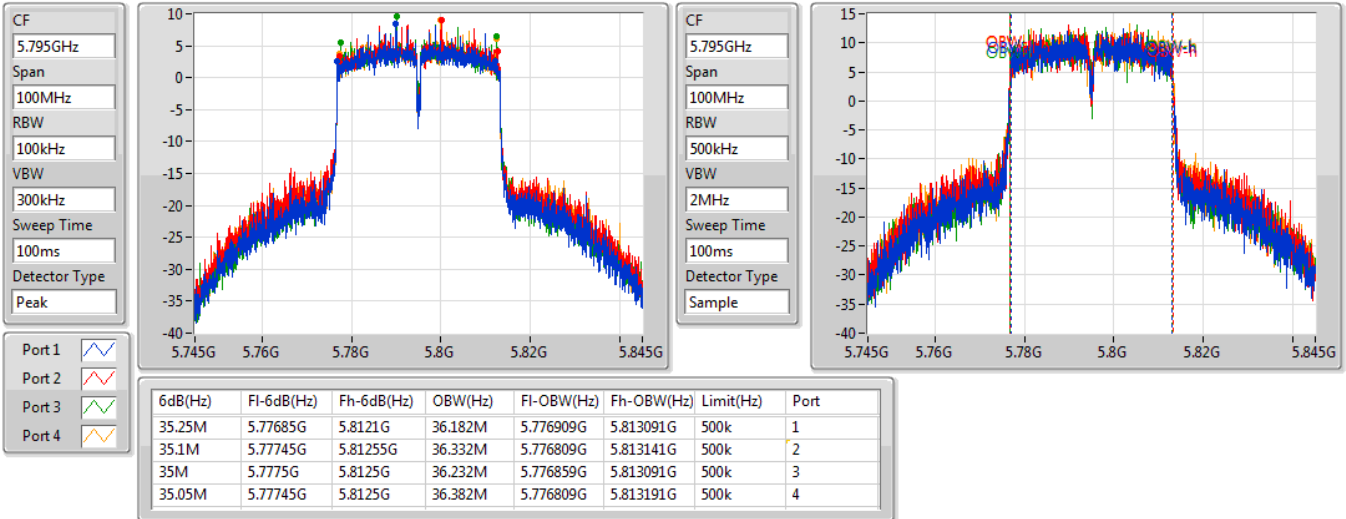

802.11ac VHT40-BF_Nss1,(MCS0)_4TX
EBW
5755MHz

11/06/2019

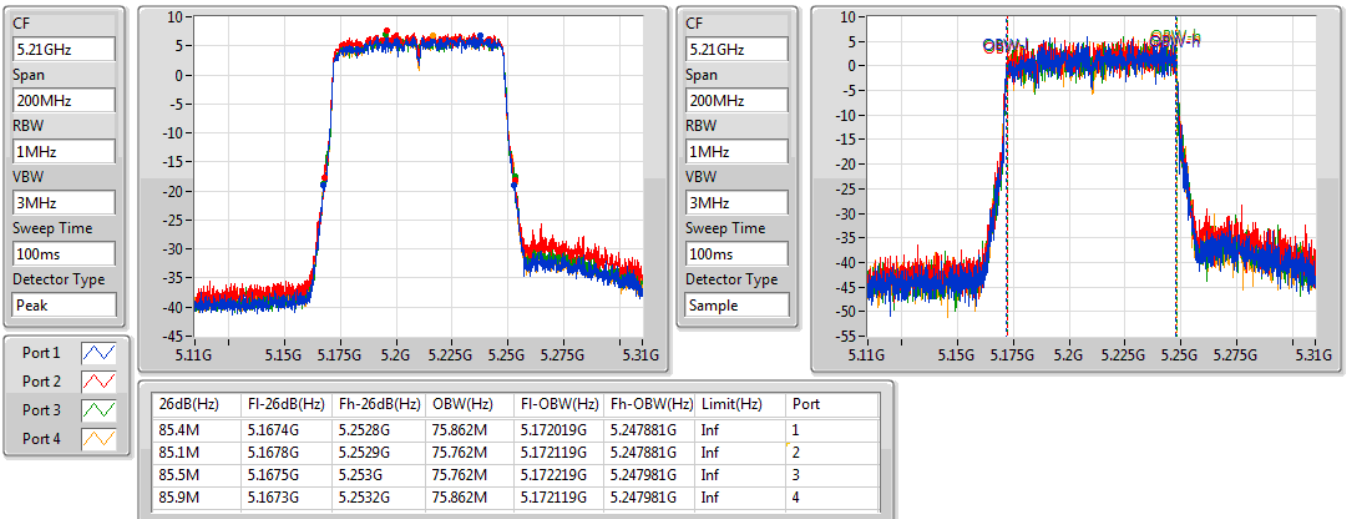


802.11ac VHT40-BF_Nss1,(MCS0)_4TX
EBW
5795MHz

11/06/2019

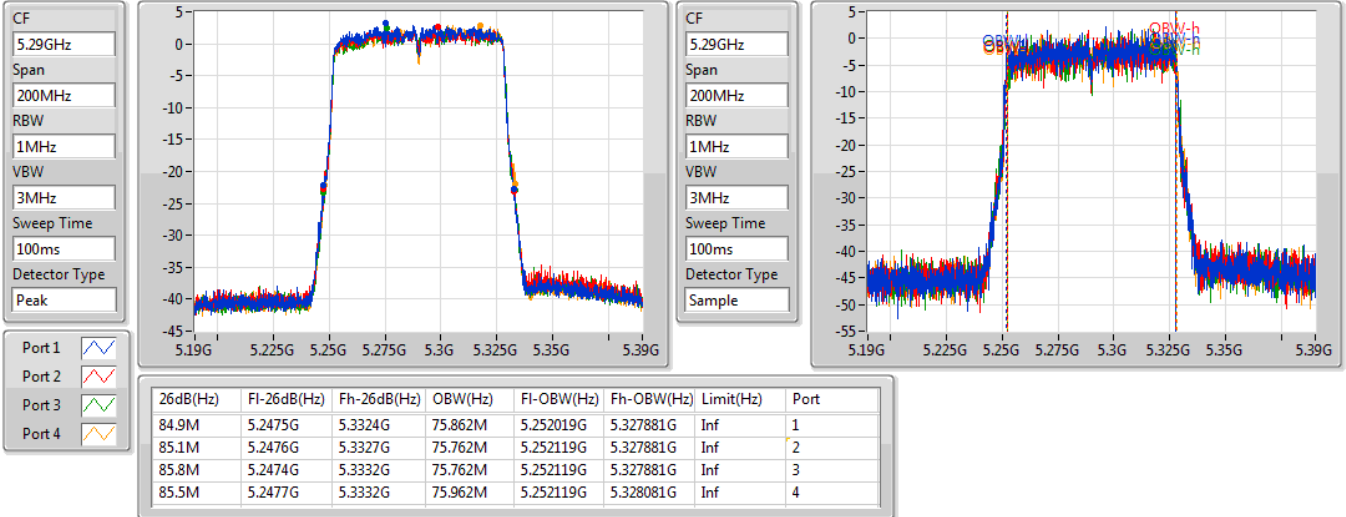

802.11ac VHT80-BF_Nss1,(MCS0)_4TX
EBW
5210MHz

11/06/2019

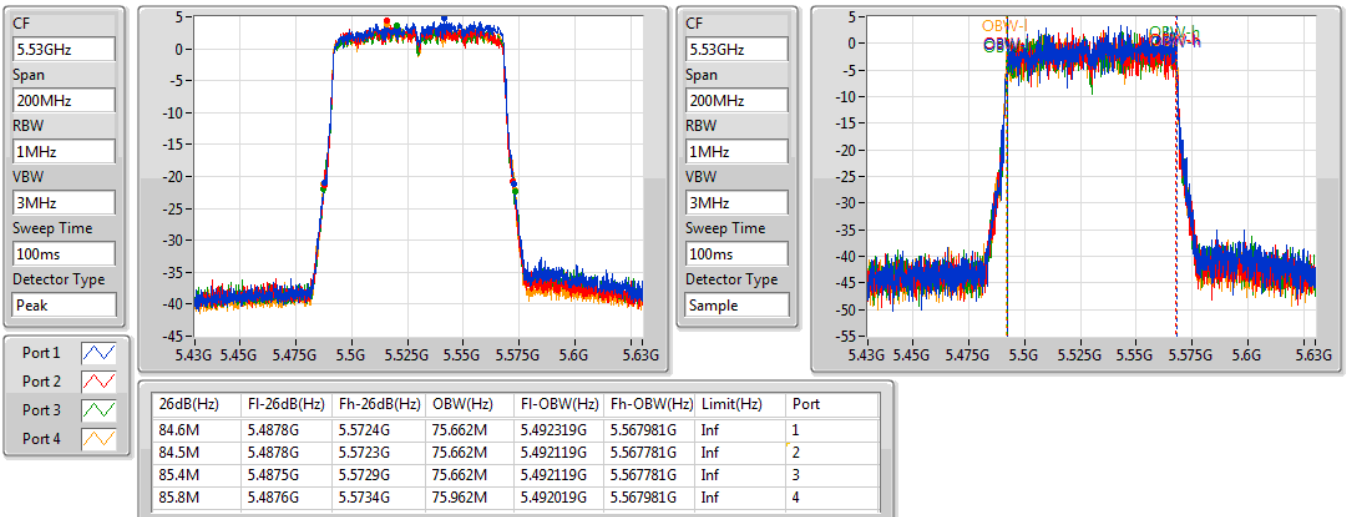


802.11ac VHT80-BF_Nss1,(MCS0)_4TX
EBW
5290MHz

11/06/2019

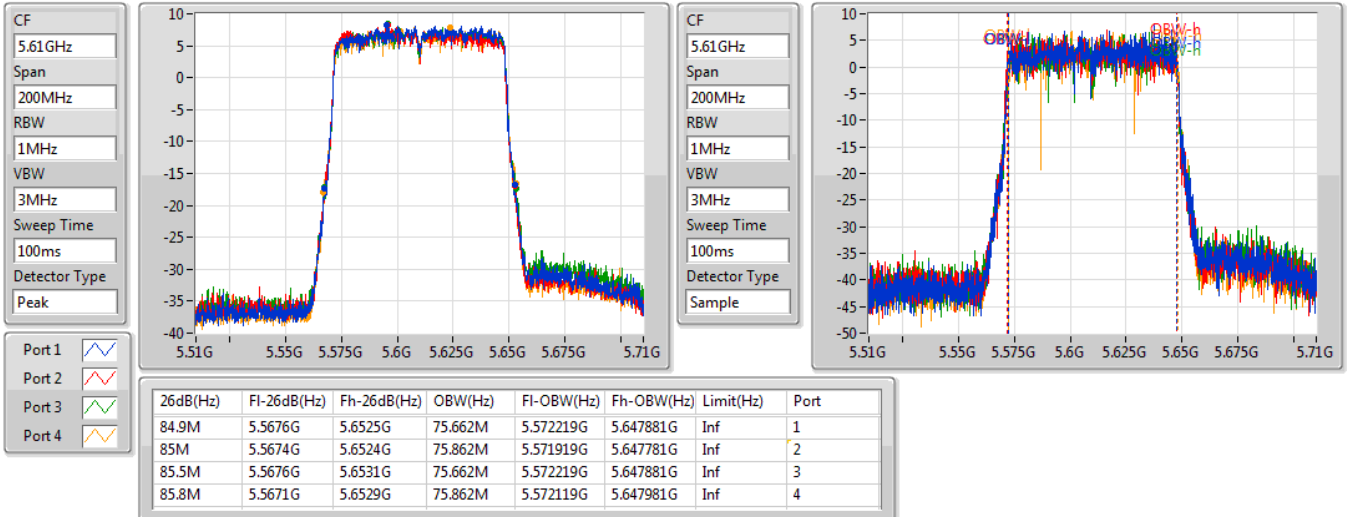

802.11ac VHT80-BF_Nss1,(MCS0)_4TX
EBW
5530MHz

11/06/2019

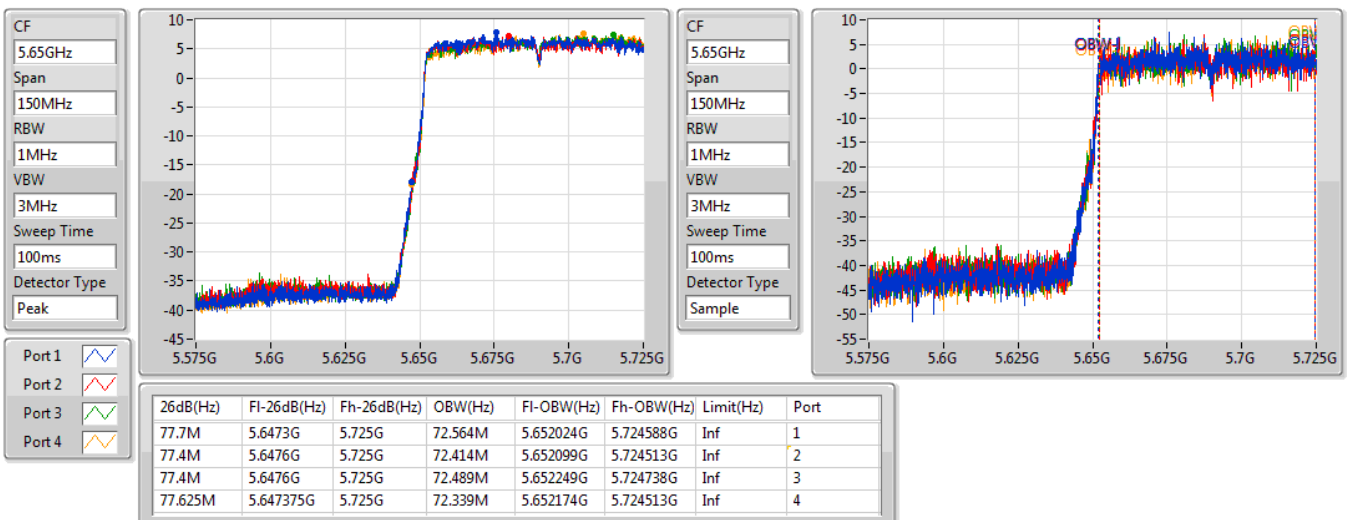


802.11ac VHT80-BF_Nss1,(MCS0)_4TX
EBW
5610MHz

11/06/2019

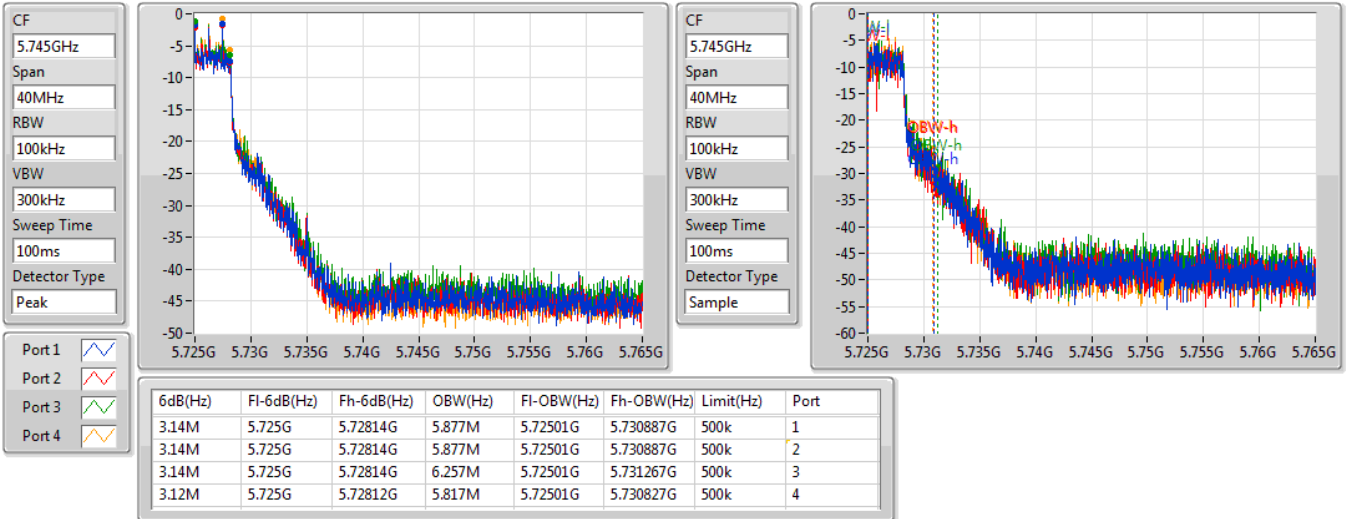

802.11ac VHT80-BF_Nss1,(MCS0)_4TX
EBW
5690MHz Straddle 5.47-5.725GHz

11/06/2019

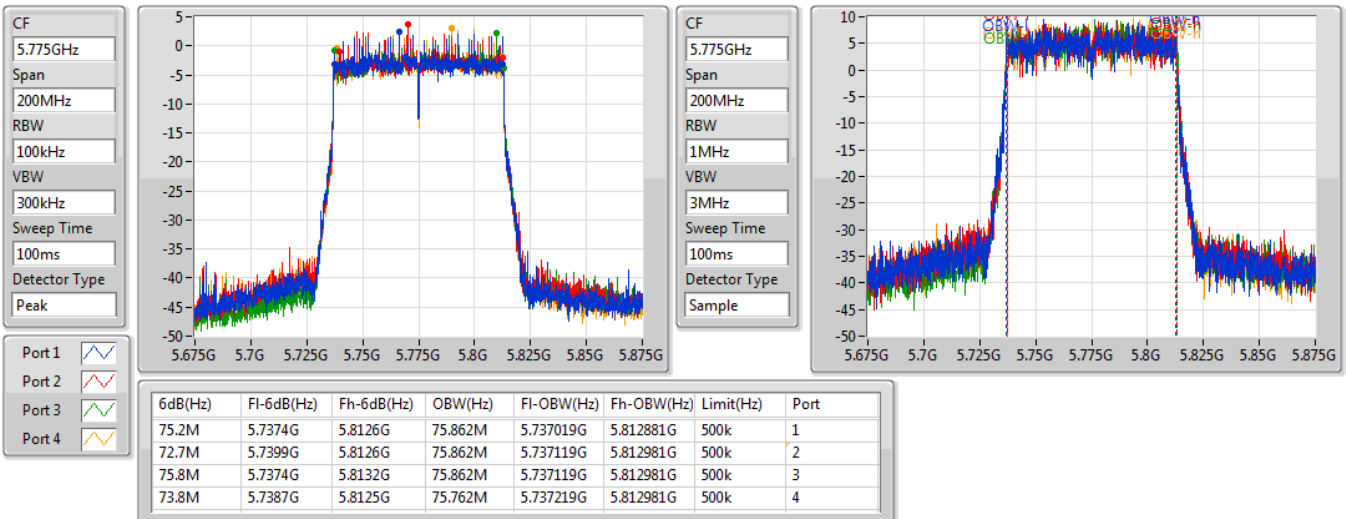


802.11ac VHT80-BF_Nss1,(MCS0)_4TX
EBW
5690MHz Straddle 5.725-5.85GHz

11/06/2019


802.11ac VHT80-BF_Nss1,(MCS0)_4TX
EBW
5775MHz

11/06/2019



**For Beamforming mode
Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX	86M	75.962M	76M0D1D	85.7M	75.762M
5.25-5.35GHz	-	-	-	-	-
802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX	86.5M	75.962M	76M0D1D	85.6M	75.762M
5.47-5.725GHz	-	-	-	-	-
802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX	86.3M	75.962M	76M0D1D	77.925M	72.414M
802.11ac VHT80+80-BF_Nss2,(MCS0)_4TX	85.8M	76.012M	76M0D1D	77.7M	72.414M
802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX	86.3M	75.962M	76M0D1D	77.775M	72.489M
5.725-5.85GHz	-	-	-	-	-
802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX	75.3M	76.062M	76M1D1D	3.14M	7.076M
802.11ac VHT80+80-BF_Nss2,(MCS0)_4TX	75.075M	148.351M	148MD1D	3.075M	9.97M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;

Result

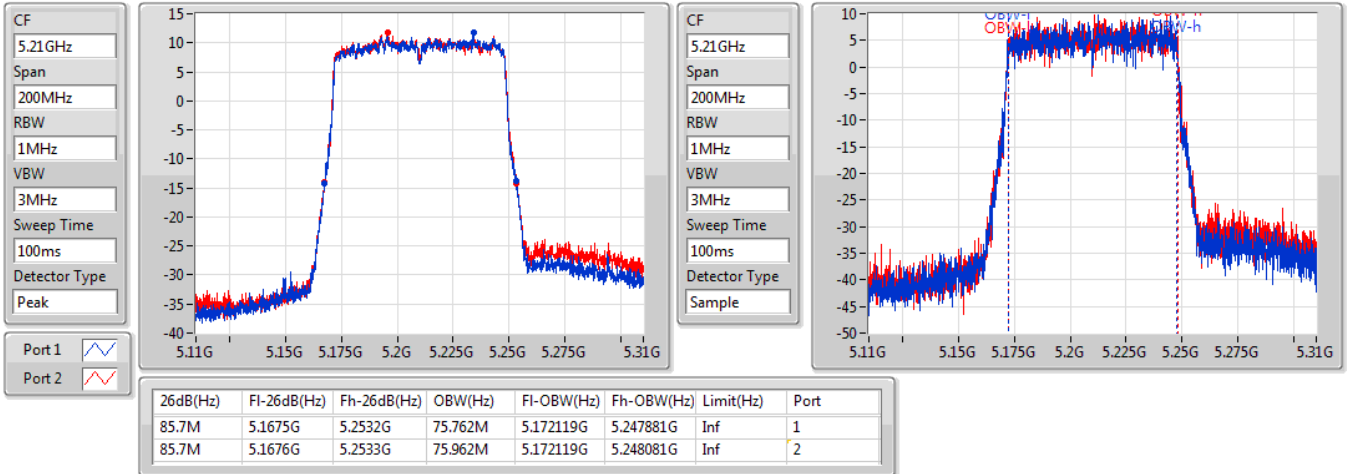
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
#5210MHz,5530MHz	Pass	Inf	85.7M	75.762M	85.7M	75.962M				
#5210MHz,5610MHz	Pass	Inf	85.9M	75.762M	85.8M	75.962M				
#5210MHz,5690MHz	Pass	Inf	86M	75.962M	85.8M	75.962M				
#5290MHz,5530MHz	Pass	Inf	86.2M	75.962M	85.7M	75.862M				
#5290MHz,5610MHz	Pass	Inf	86.3M	75.862M	85.6M	75.962M				
#5290MHz,5690MHz	Pass	Inf	85.9M	75.862M	86.1M	75.762M				
#5290MHz,5775MHz	Pass	Inf	86.5M	75.862M	86M	75.862M				
802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz,#5530MHz	Pass	Inf					86.3M	75.962M	85.9M	75.962M
802.11ac VHT80+80-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
#5530MHz,#5690MHz Straddle 5.47-5.725GHz	Pass	Inf	85.65M	76.012M	85.8M	75.862M	78M	72.414M	77.7M	72.864M
802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
#5530MHz,5775MHz	Pass	Inf	85.8M	75.862M	85.6M	75.762M				
#5610MHz,5775MHz	Pass	Inf	86.3M	75.962M	85.6M	75.862M				
#5690MHz,#5775MHz Straddle 5.47-5.725GHz	Pass	Inf	77.925M	72.714M	77.775M	72.489M				
802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz,#5610MHz	Pass	Inf					86.1M	75.862M	85.3M	75.862M
5210MHz,#5690MHz Straddle 5.47-5.725GHz	Pass	Inf					78.075M	72.564M	78.15M	72.714M
5290MHz,#5530MHz	Pass	Inf					85.4M	75.862M	85.8M	75.762M
5290MHz,#5610MHz	Pass	Inf					85.6M	75.962M	85.3M	75.862M
5290MHz,#5690MHz Straddle 5.47-5.725GHz	Pass	Inf					77.925M	72.414M	77.925M	72.714M
5210MHz,#5690MHz Straddle 5.725-5.85GHz	Pass	500k					3.16M	7.356M	3.16M	7.136M
5290MHz,#5690MHz Straddle 5.725-5.85GHz	Pass	500k					3.14M	7.256M	3.18M	7.076M
5290MHz,#5775MHz	Pass	500k					73.8M	75.962M	74.1M	75.862M
#5530MHz,#5690MHz Straddle 5.725-5.85GHz	Pass	500k					3.2M	7.516M	3.14M	7.136M
5530MHz,#5775MHz	Pass	500k					75.3M	75.862M	72.8M	75.862M
5610MHz,#5775MHz	Pass	500k					71.4M	75.862M	72.3M	76.062M
802.11ac VHT80+80-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
#5690MHz,#5775MHz Straddle 5.725-5.85GHz	Pass	500k	3.225M	148.351M	3.075M	9.97M	73.725M	75.712M	75.075M	75.787M

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

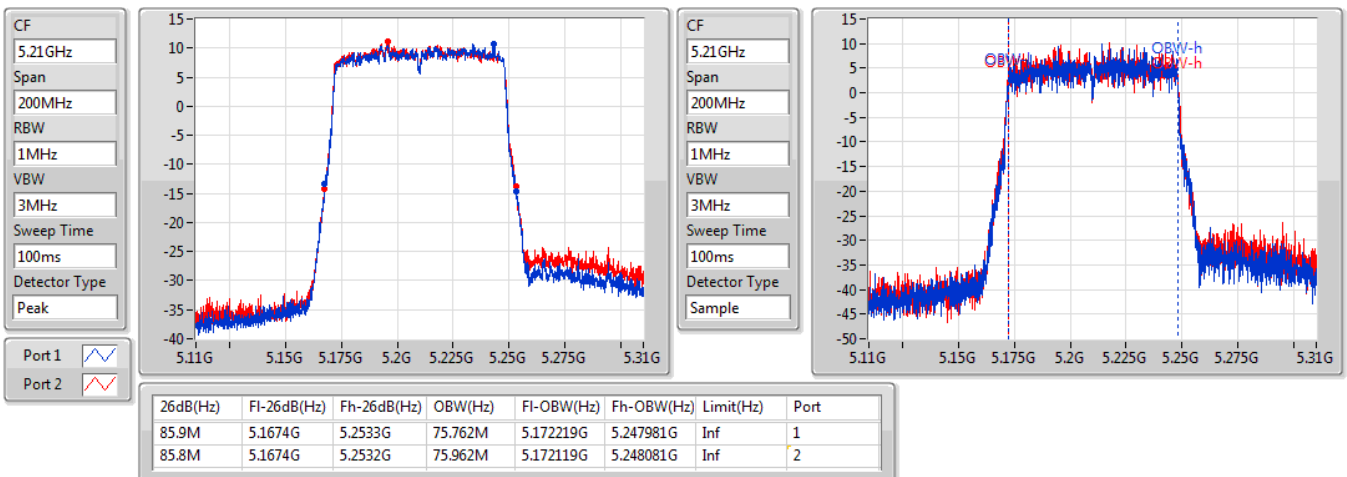
Port X-OBW = Port X 99% occupied bandwidth;

802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX
EBW
#5210MHz,5530MHz

19/06/2019

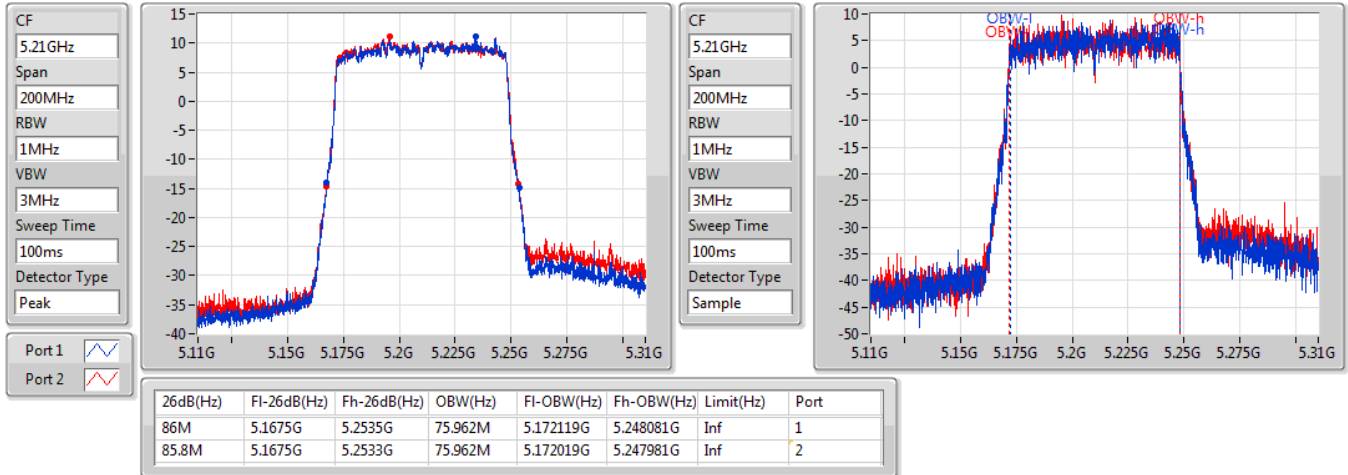

802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX
EBW
#5210MHz,5610MHz

19/06/2019

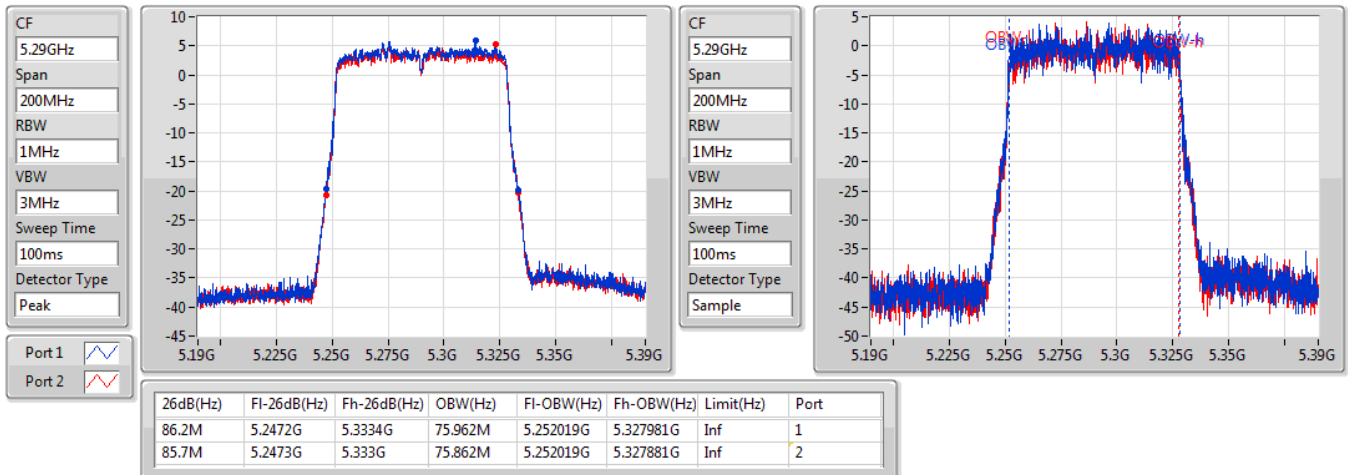


802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX
EBW
#5210MHz,5690MHz

19/06/2019

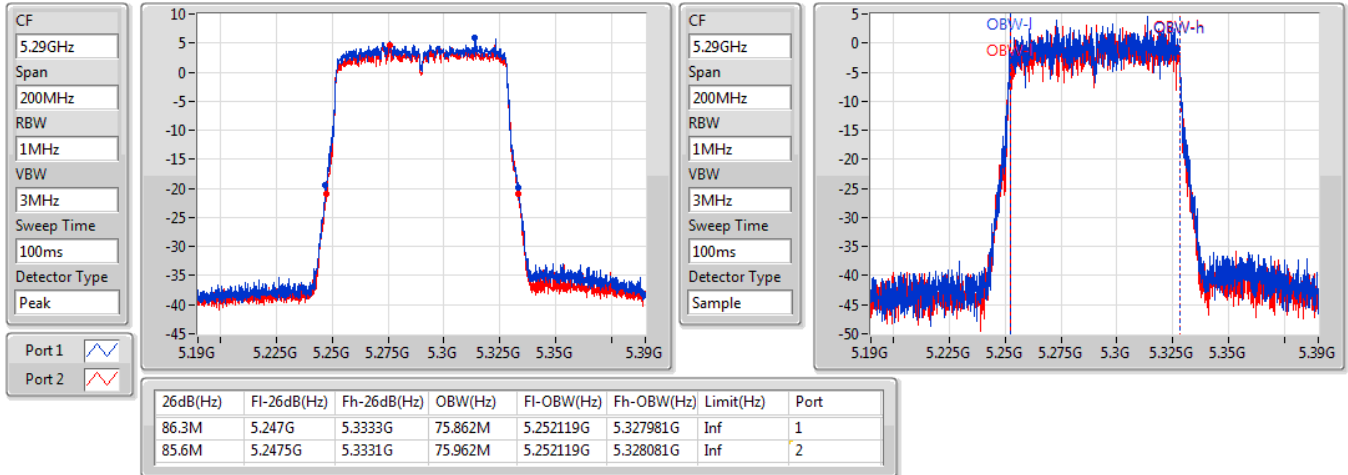

802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX
EBW
#5290MHz,5530MHz

19/06/2019

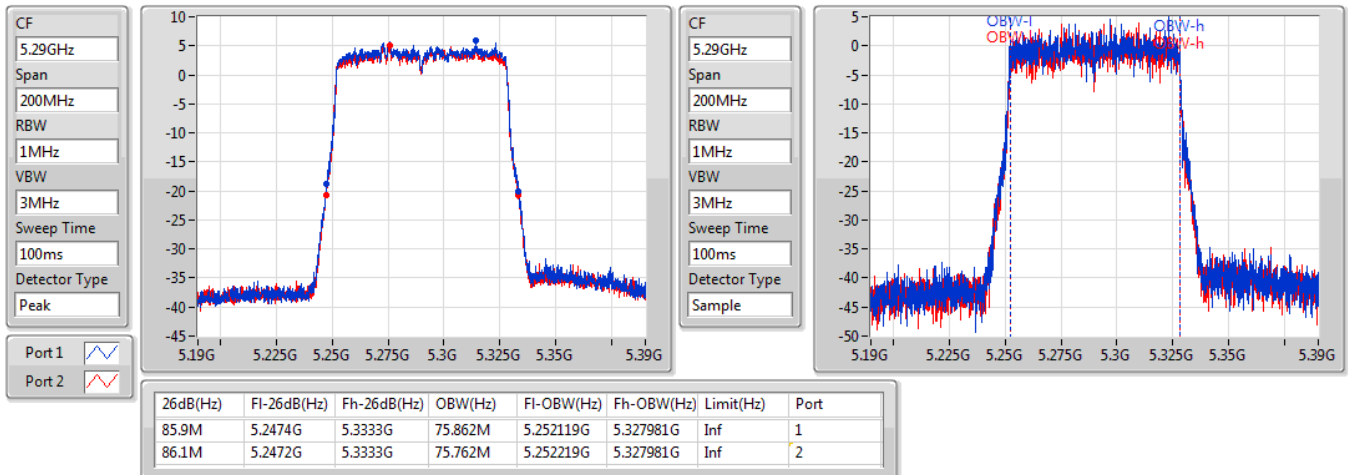


802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX
EBW
#5290MHz,5610MHz

19/06/2019

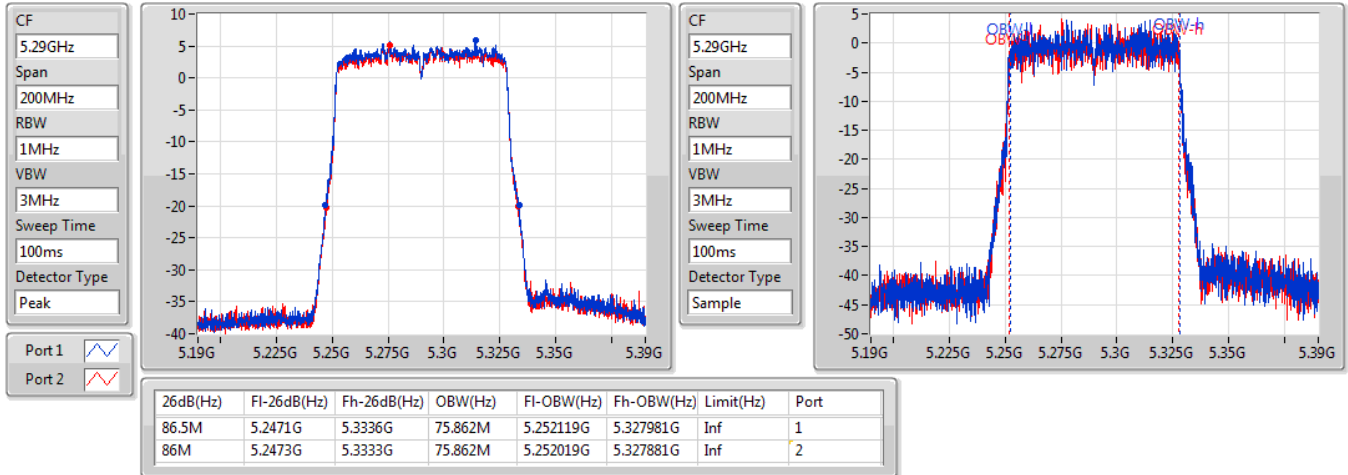

802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX
EBW
#5290MHz,5690MHz

19/06/2019

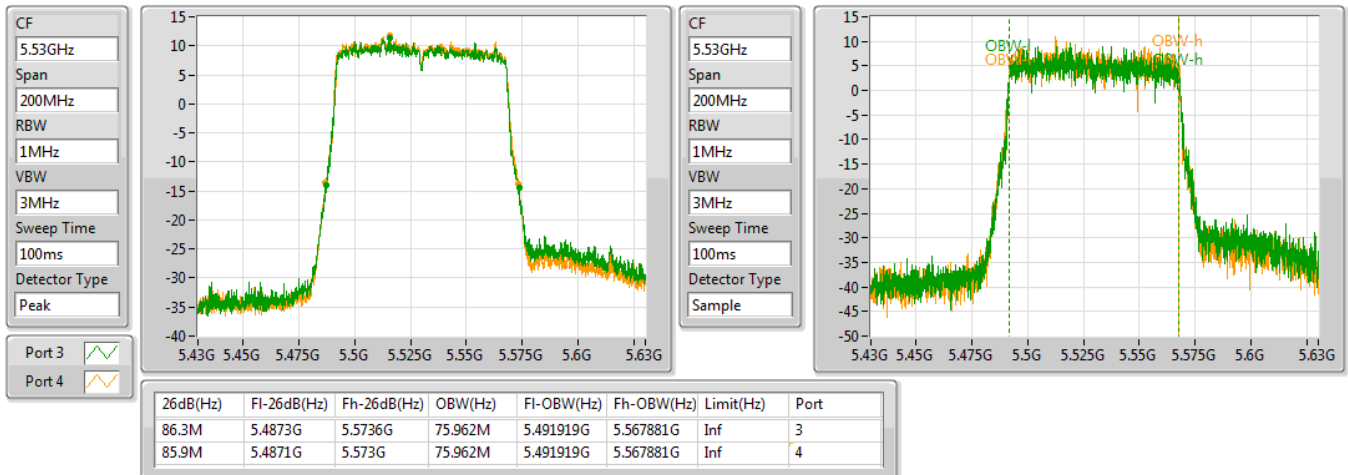


802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX
EBW
#5290MHz,5775MHz

19/06/2019

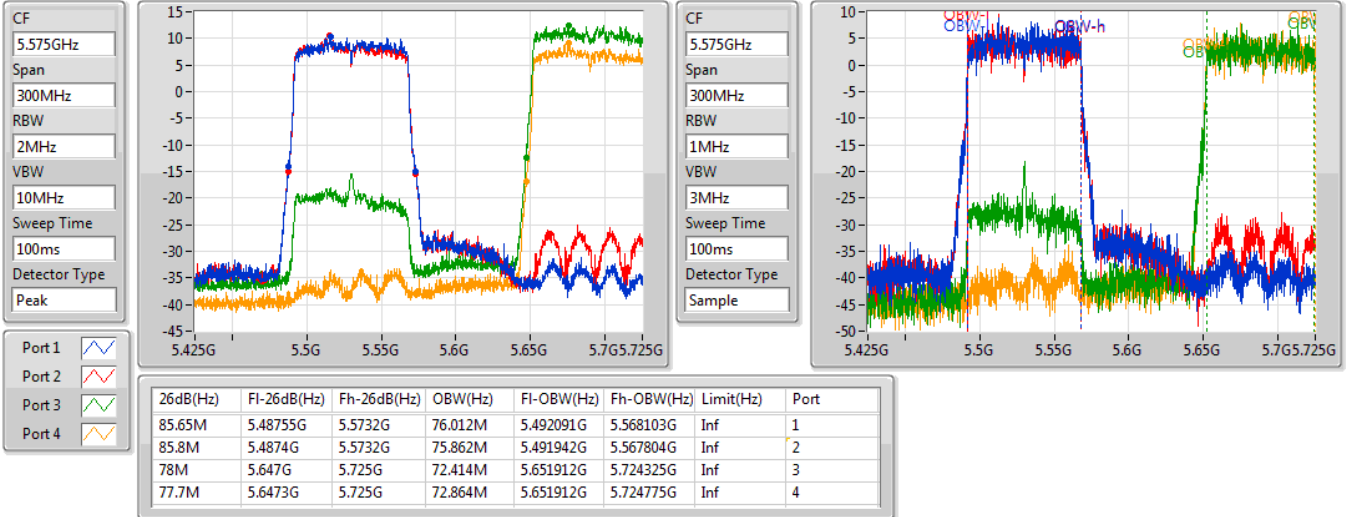

802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX
EBW
5210MHz,#5530MHz

19/06/2019

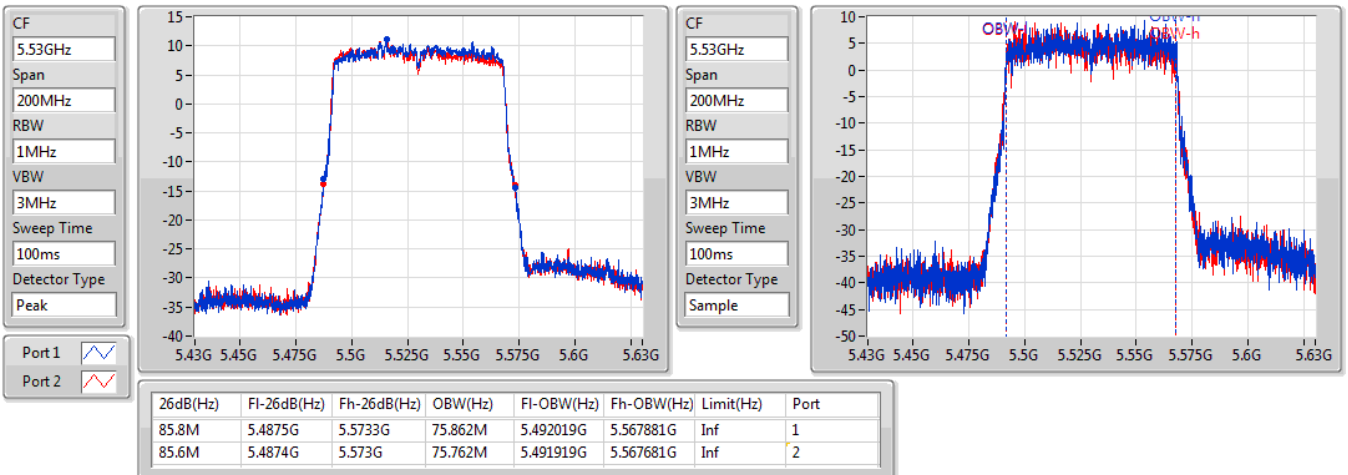


802.11ac VHT80+80-BF_Nss2,(MCS0)_4TX
EBW
#5530MHz,#5690MHz Straddle 5.47-5.725GHz

19/06/2019

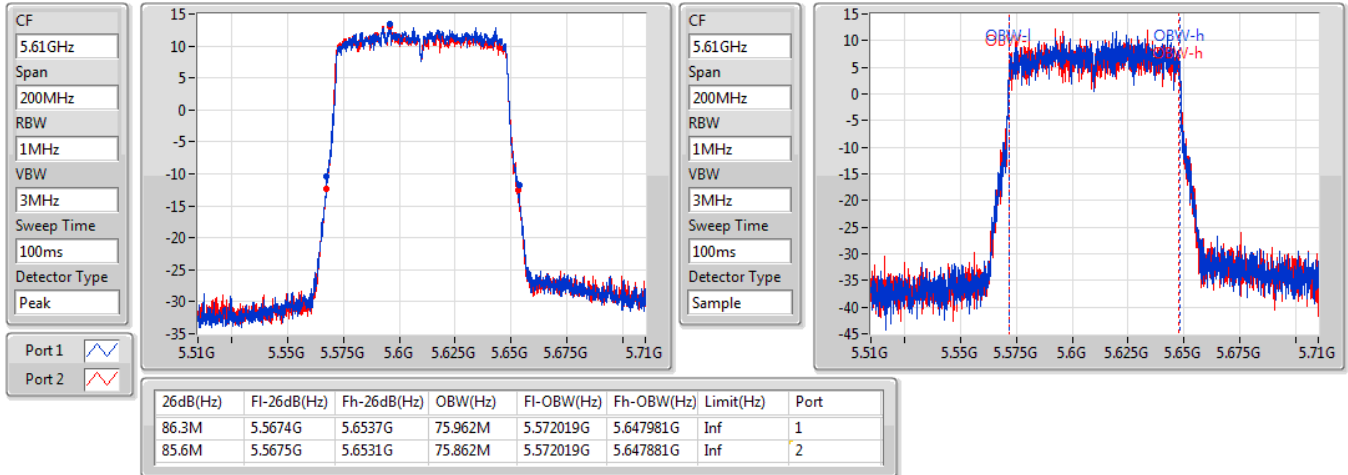

802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX
EBW
#5530MHz,5775MHz

19/06/2019

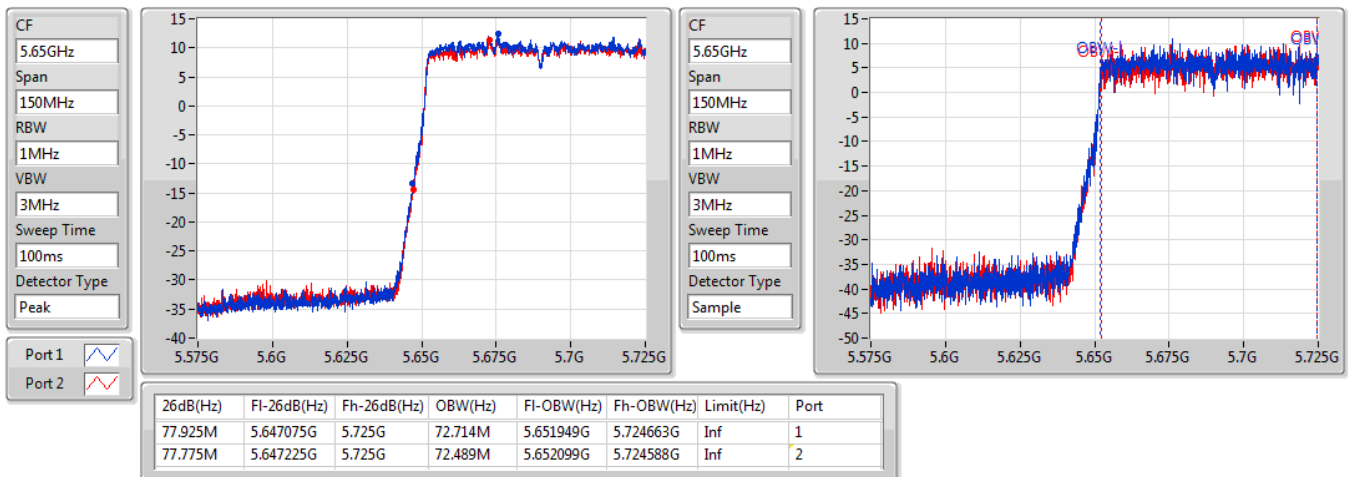


802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX
EBW
#5610MHz,5775MHz

19/06/2019

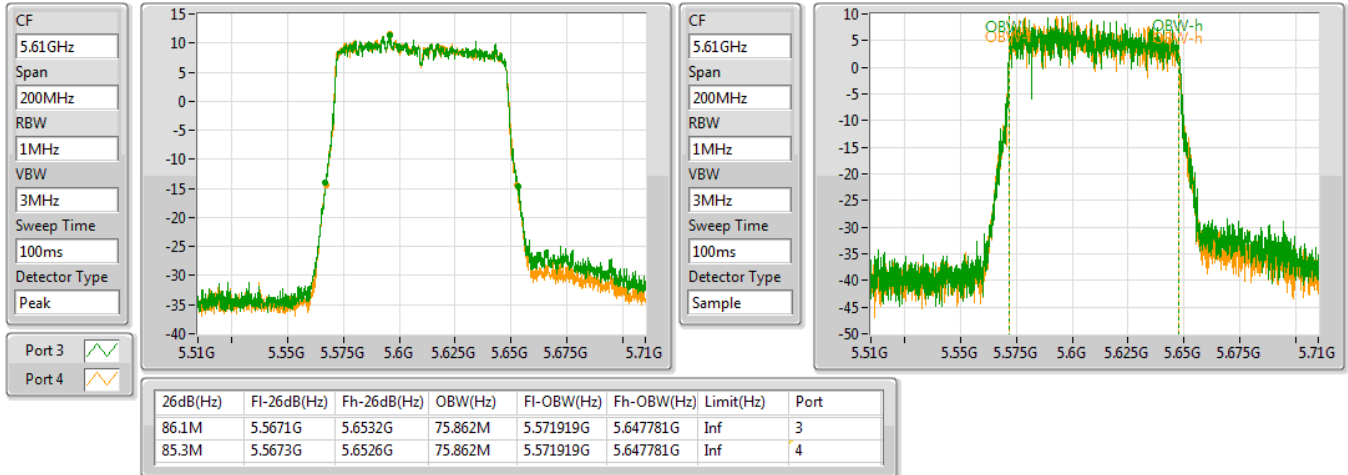

802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX
EBW
#5690MHz,#5775MHz Straddle 5.47-5.725GHz

19/06/2019

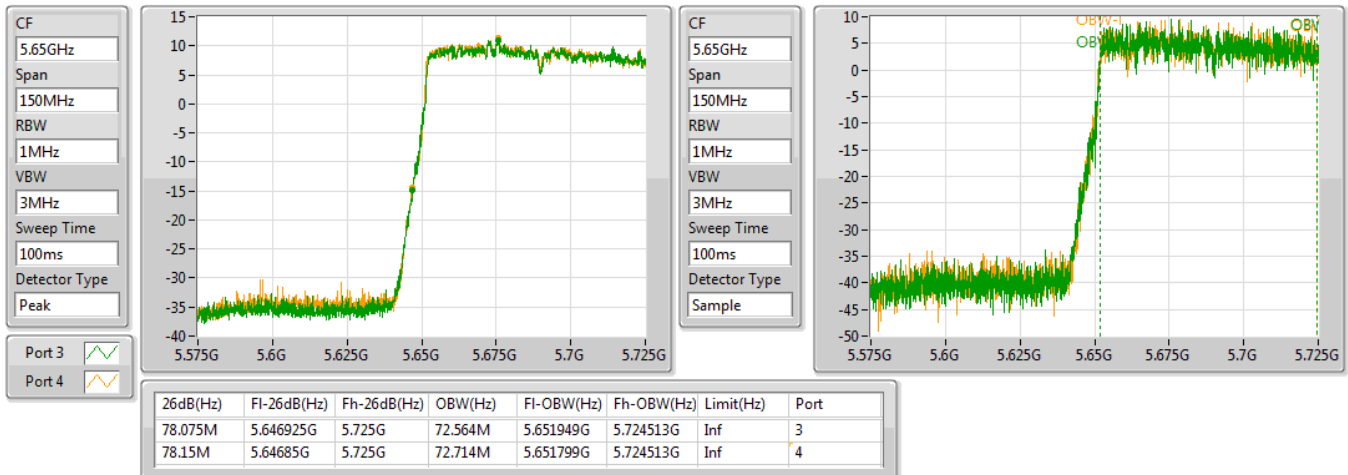


802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX
EBW
5210MHz,#5610MHz

19/06/2019

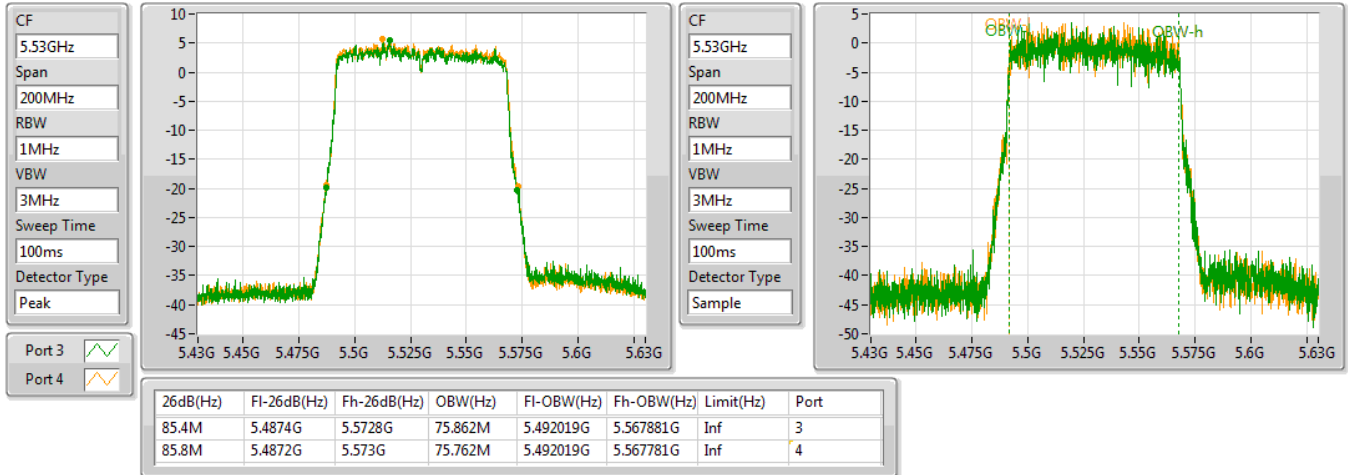

802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX
EBW
5210MHz,#5690MHz Straddle 5.47-5.725GHz

19/06/2019

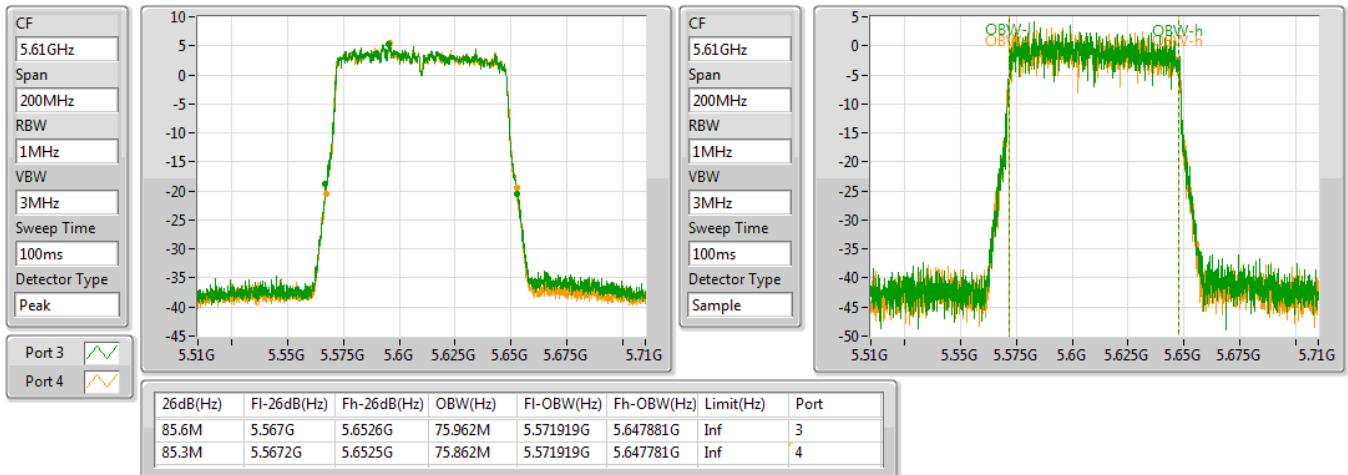


802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX
EBW
5290MHz,#5530MHz

19/06/2019

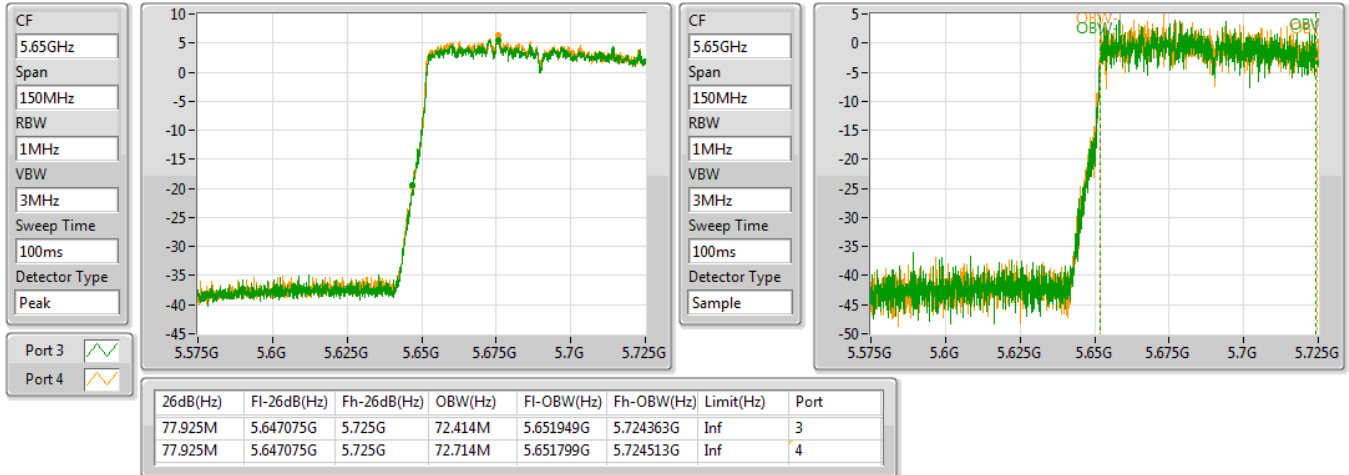

802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX
EBW
5290MHz,#5610MHz

19/06/2019

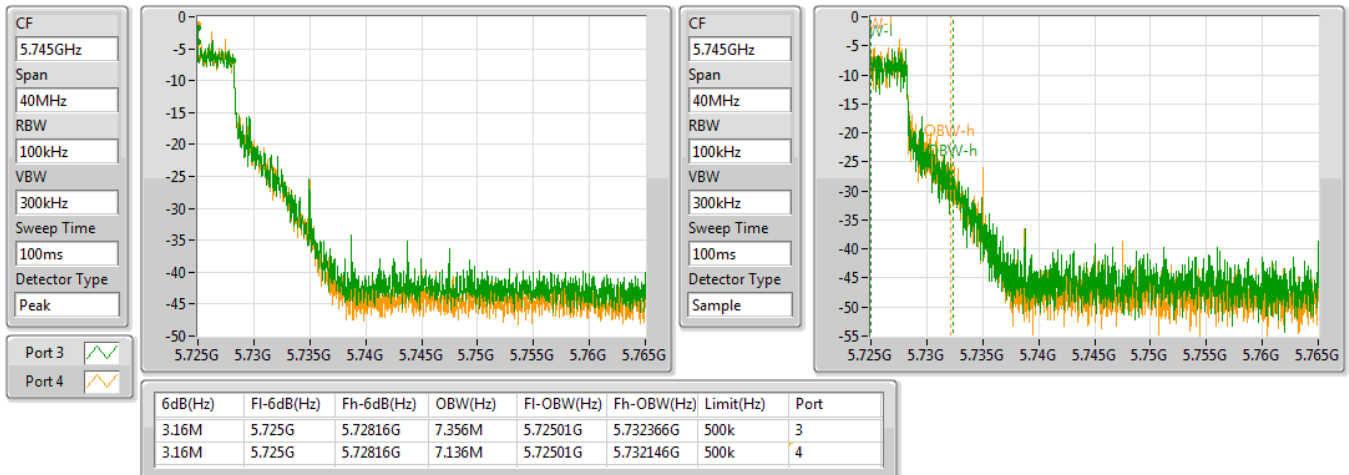


802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX
EBW
5290MHz,#5690MHz Straddle 5.47-5.725GHz

19/06/2019

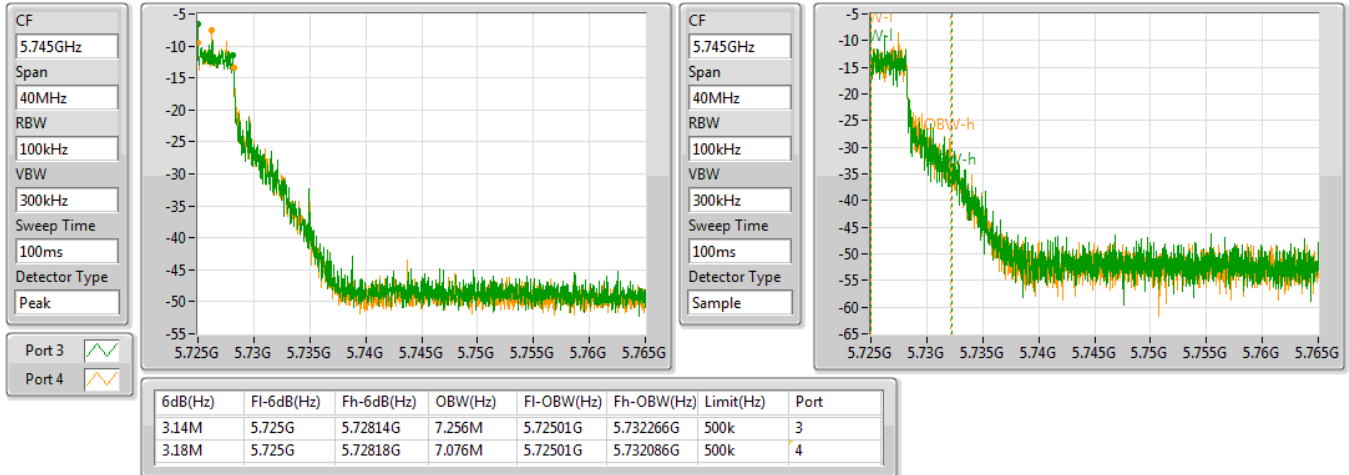

802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX
EBW
5210MHz,#5690MHz Straddle 5.725-5.85GHz

19/06/2019

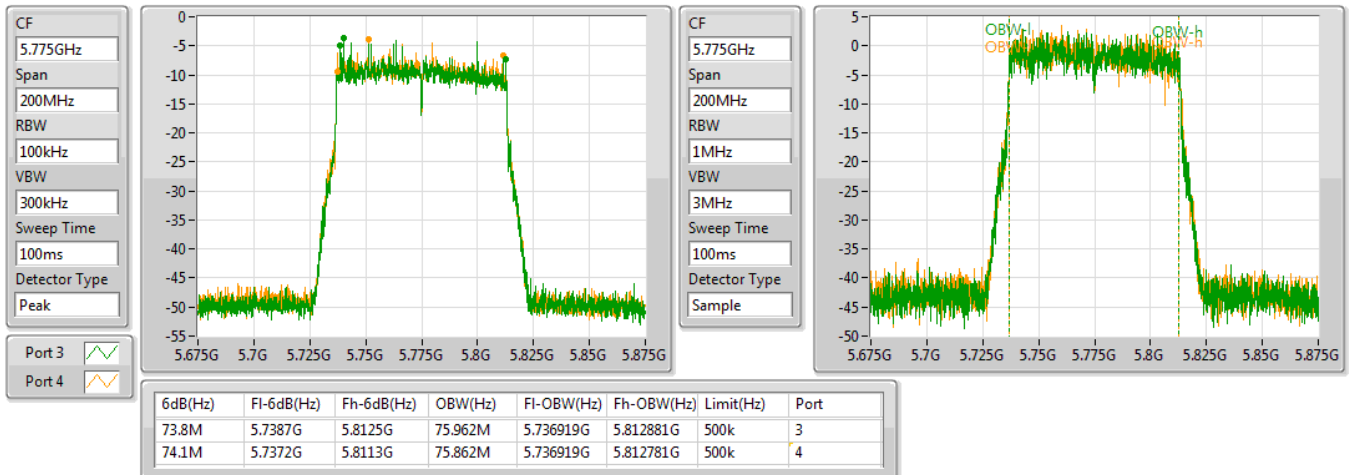


802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX
EBW
5290MHz,#5690MHz Straddle 5.725-5.85GHz

19/06/2019

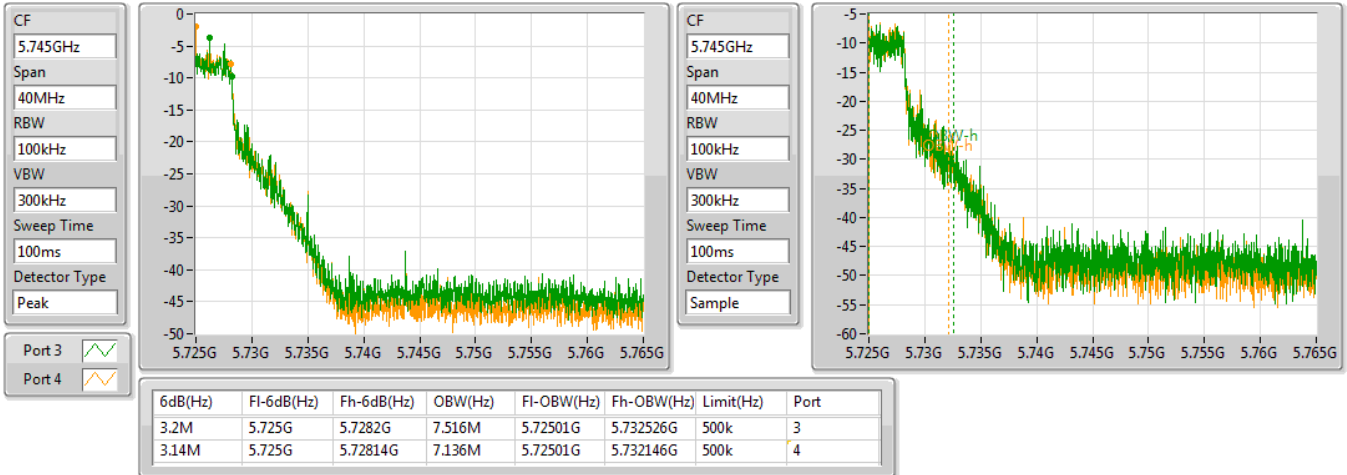

802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX
EBW
5290MHz,#5775MHz

19/06/2019

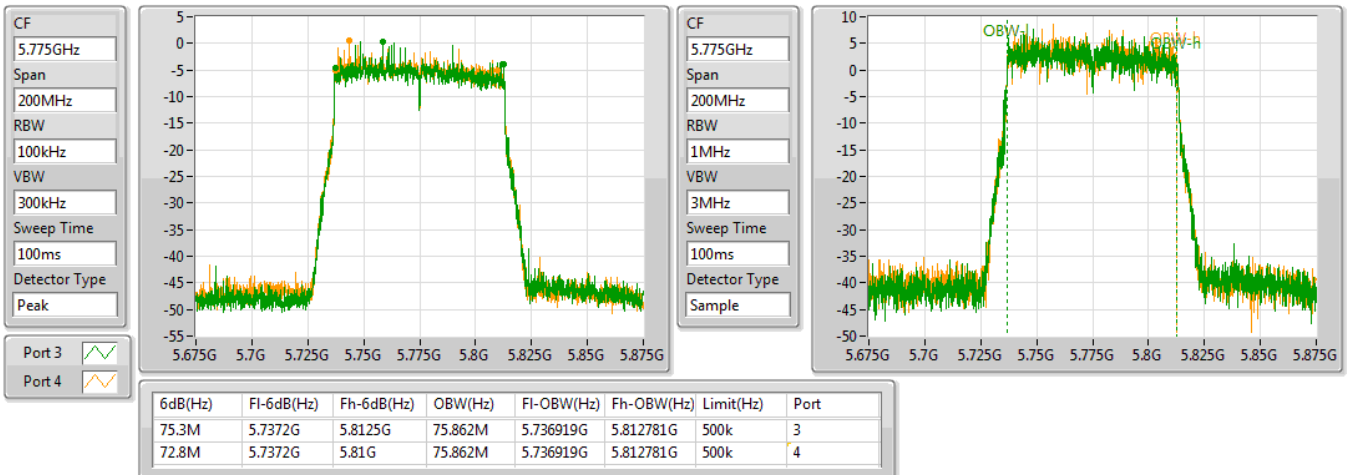


802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX
EBW
#5530MHz,#5690MHz Straddle 5.725-5.85GHz

19/06/2019

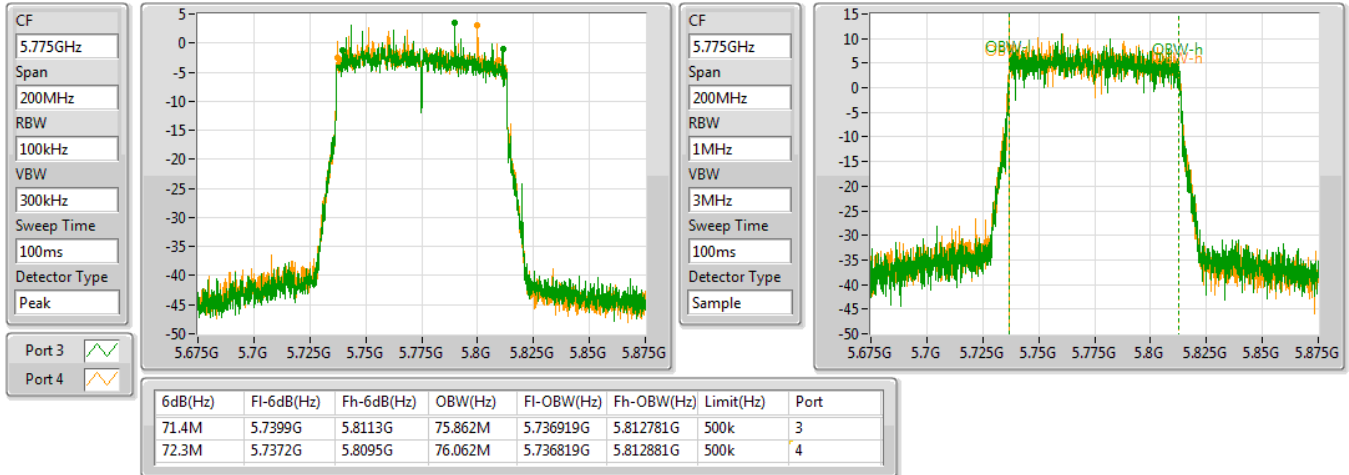

802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX
EBW
5530MHz,#5775MHz

19/06/2019

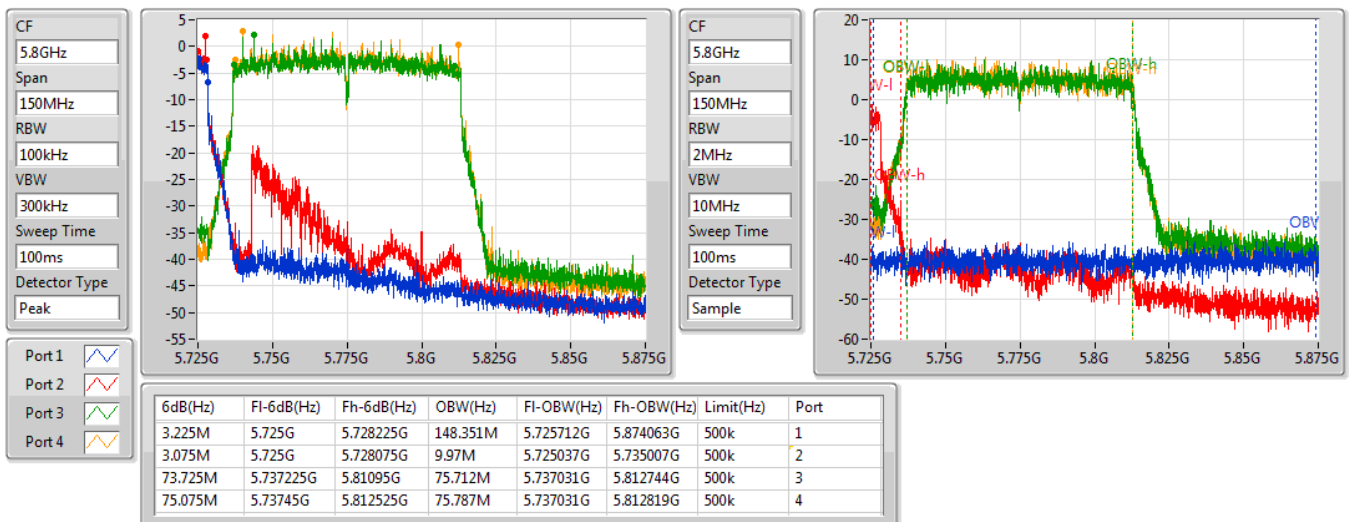


802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX
EBW
5610MHz,#5775MHz

19/06/2019


802.11ac VHT80+80-BF_Nss2,(MCS0)_4TX
EBW
#5690MHz,#5775MHz Straddle 5.725-5.85GHz

19/06/2019



**For Non-Beamforming mode
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	39.575M	19.69M	19M7D1D	21.775M	16.517M
802.11ac VHT20_Nss1,(MCS0)_2TX	43.225M	19.59M	19M6D1D	23.425M	17.741M
802.11ac VHT40_Nss1,(MCS0)_2TX	81.4M	37.931M	37M9D1D	44.8M	36.282M
802.11ac VHT80_Nss1,(MCS0)_2TX	88.8M	75.862M	75M9D1D	88.4M	75.762M
5.47-5.725GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	39.9M	18.991M	19M0D1D	25.025M	16.567M
802.11ac VHT20_Nss1,(MCS0)_2TX	44.35M	19.665M	19M7D1D	24.525M	17.741M
802.11ac VHT40_Nss1,(MCS0)_2TX	84.65M	38.761M	38M8D1D	46.2M	36.332M
802.11ac VHT80_Nss1,(MCS0)_2TX	156.3M	79.835M	79M8D1D	88.6M	75.762M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	3.04M	12.834M	12M8D1D	3.04M	12.594M
802.11ac VHT20_Nss1,(MCS0)_2TX	3.68M	13.693M	13M7D1D	3.66M	13.673M
802.11ac VHT40_Nss1,(MCS0)_2TX	3.06M	26.707M	26M7D1D	3.04M	26.107M
802.11ac VHT80_Nss1,(MCS0)_2TX	3.16M	37.641M	37M6D1D	3.16M	36.822M

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

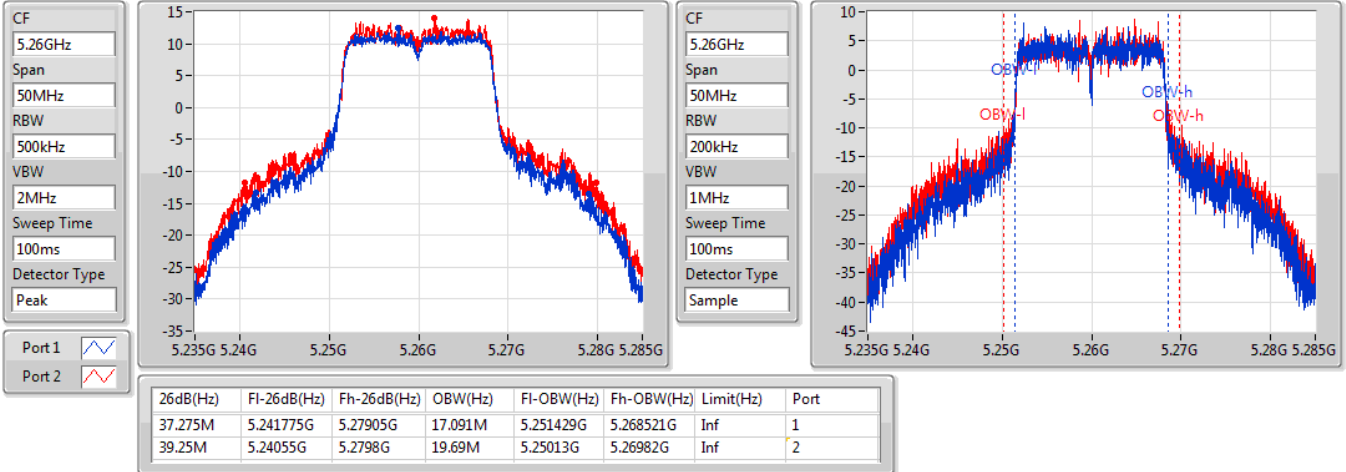
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
5260MHz	Pass	Inf	37.275M	17.091M	39.25M	19.69M
5300MHz	Pass	Inf	34.35M	16.767M	39.575M	19.49M
5320MHz	Pass	Inf	24.65M	16.567M	21.775M	16.517M
5500MHz	Pass	Inf	29.45M	16.642M	25.375M	16.617M
5580MHz	Pass	Inf	39.9M	18.916M	38.45M	18.991M
5700MHz	Pass	Inf	25.075M	16.567M	25.025M	16.567M
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5260MHz	Pass	Inf	31.9M	17.866M	42.525M	18.966M
5300MHz	Pass	Inf	34.075M	17.866M	43.225M	19.59M
5320MHz	Pass	Inf	24.625M	17.741M	23.425M	17.741M
5500MHz	Pass	Inf	25.225M	17.791M	25.05M	17.766M
5580MHz	Pass	Inf	43.5M	19.015M	44.35M	19.665M
5700MHz	Pass	Inf	24.525M	17.766M	24.8M	17.741M
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5270MHz	Pass	Inf	70.4M	36.482M	81.4M	37.931M
5310MHz	Pass	Inf	44.85M	36.282M	44.8M	36.282M
5510MHz	Pass	Inf	47.45M	36.332M	46.2M	36.332M
5550MHz	Pass	Inf	84.65M	37.681M	83.25M	36.982M
5670MHz	Pass	Inf	76.85M	36.732M	79.7M	37.231M
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5290MHz	Pass	Inf	88.4M	75.862M	88.8M	75.762M
5530MHz	Pass	Inf	89.2M	75.962M	88.6M	75.762M
5610MHz	Pass	Inf	156.3M	76.762M	140.6M	76.662M

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

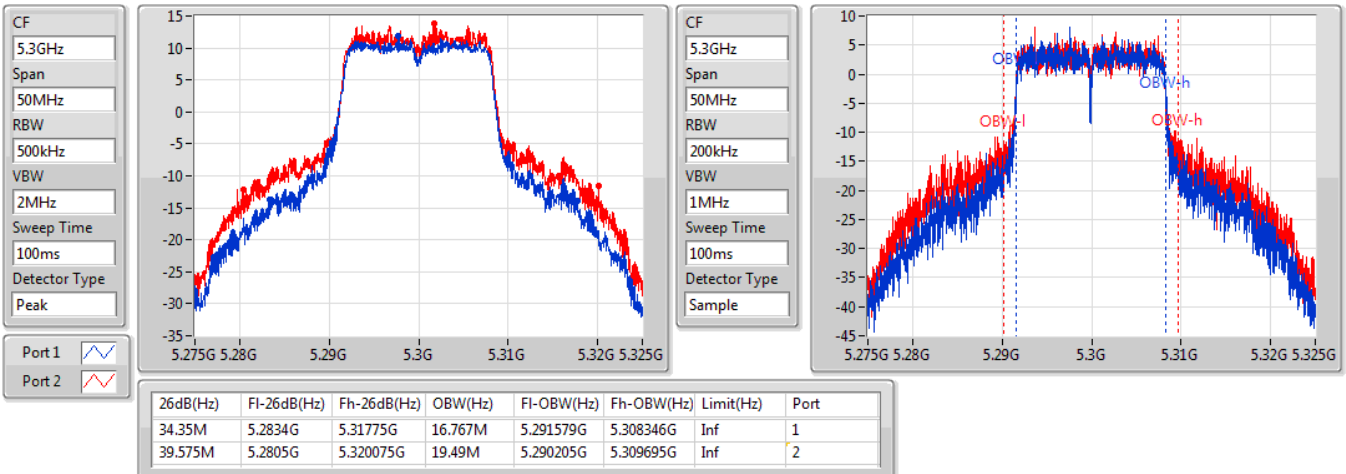
Port X-OBW = Port X 99% occupied bandwidth;

802.11a_Nss1,(6Mbps)_2TX
EBW
5260MHz

12/06/2019

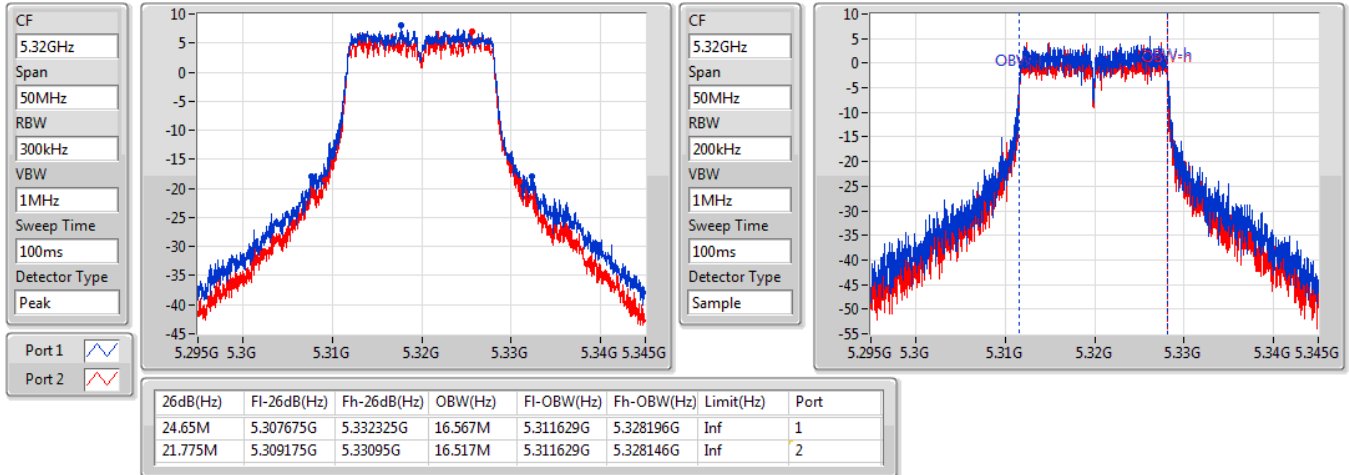

802.11a_Nss1,(6Mbps)_2TX
EBW
5300MHz

12/06/2019

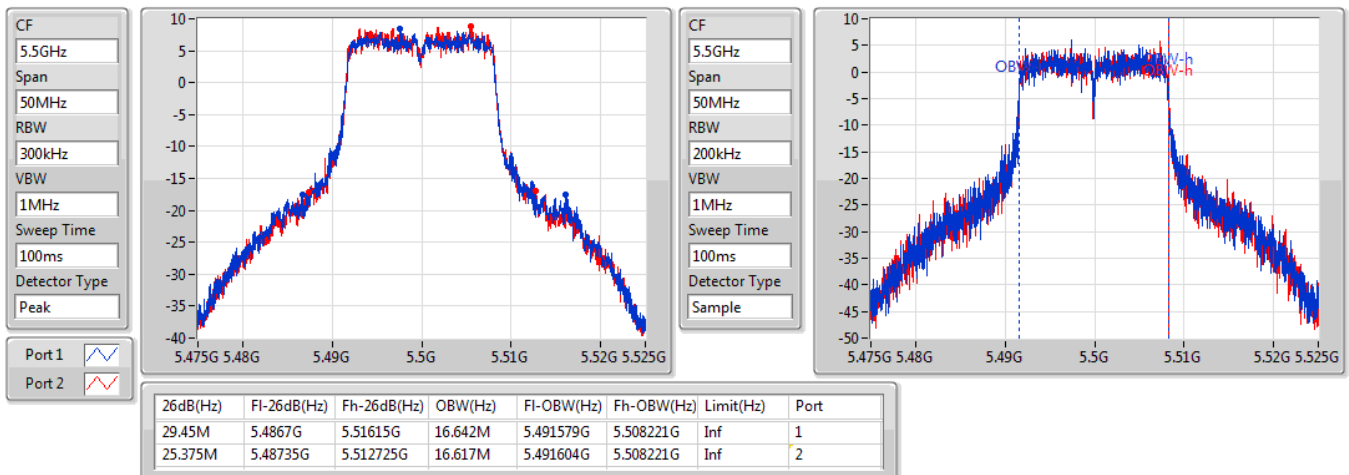


802.11a_Nss1,(6Mbps)_2TX
EBW
5320MHz

12/06/2019

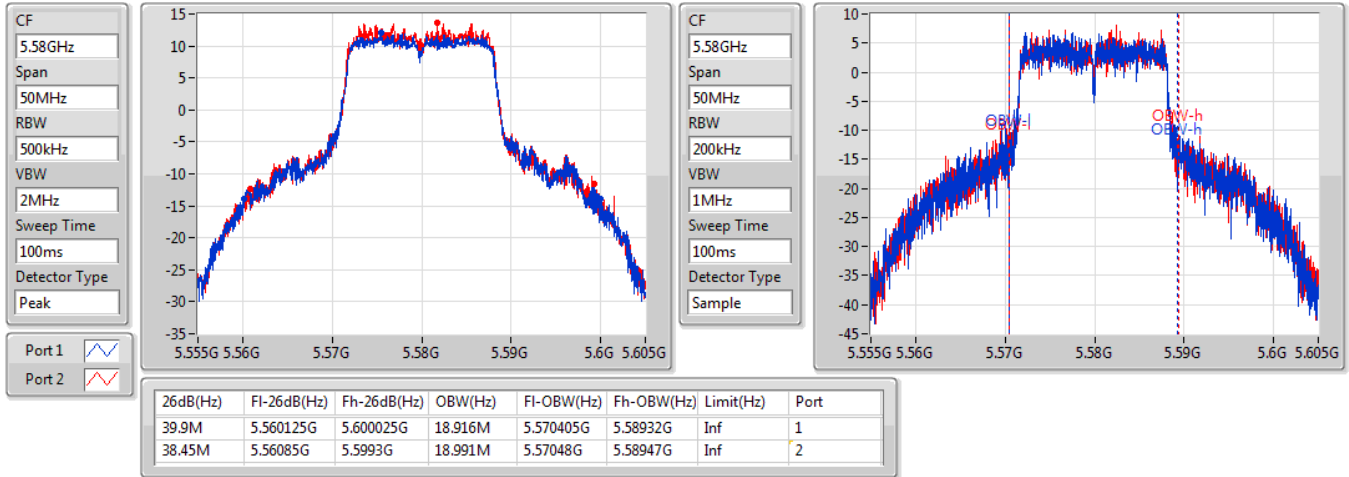

802.11a_Nss1,(6Mbps)_2TX
EBW
5500MHz

12/06/2019

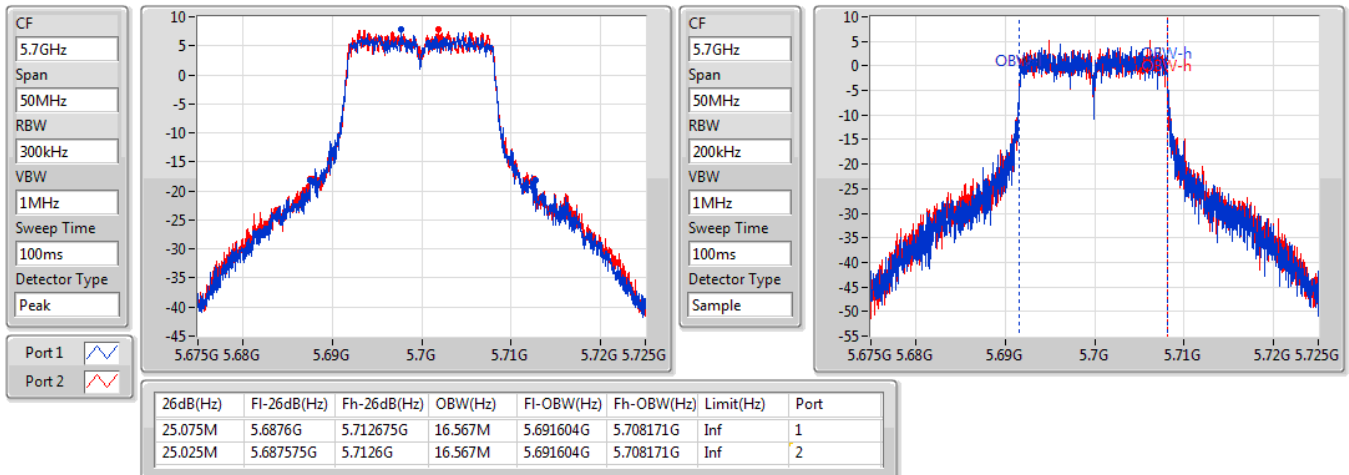


802.11a_Nss1,(6Mbps)_2TX
EBW
5580MHz

12/06/2019

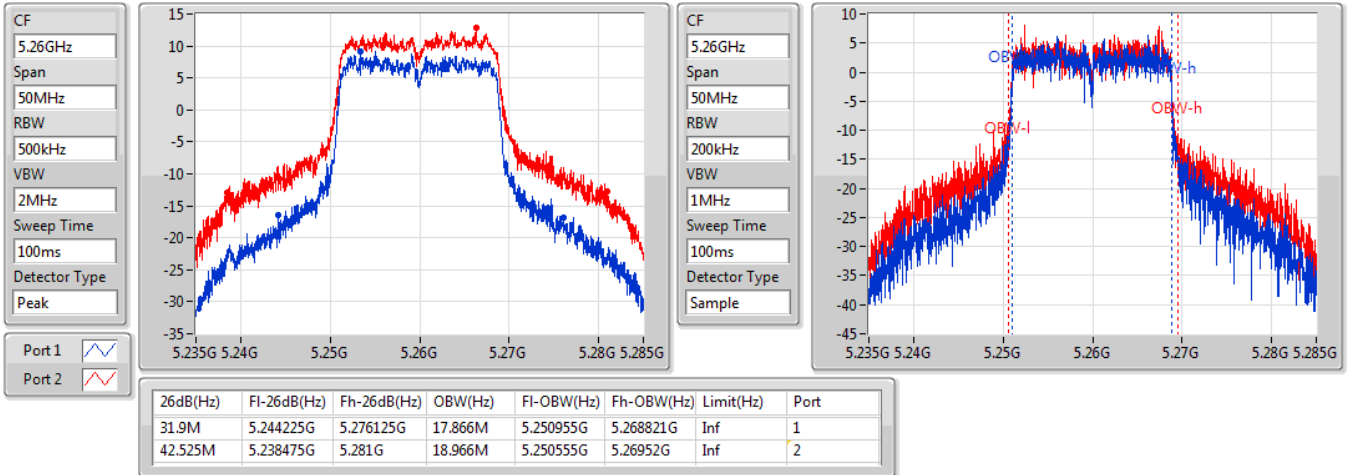

802.11a_Nss1,(6Mbps)_2TX
EBW
5700MHz

12/06/2019

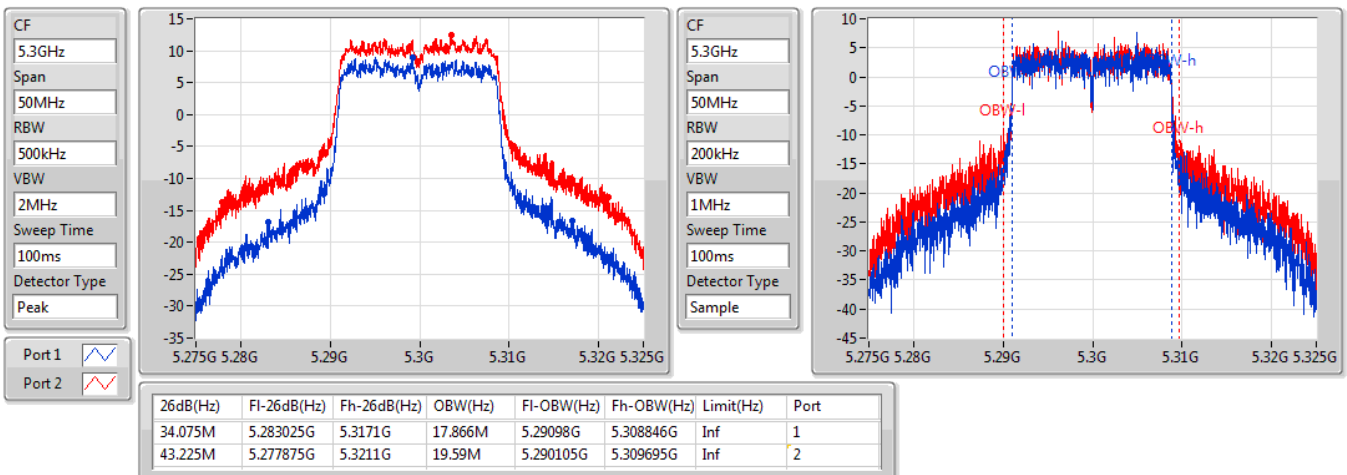


802.11ac VHT20_Nss1,(MCS0)_2TX
EBW
5260MHz

12/06/2019

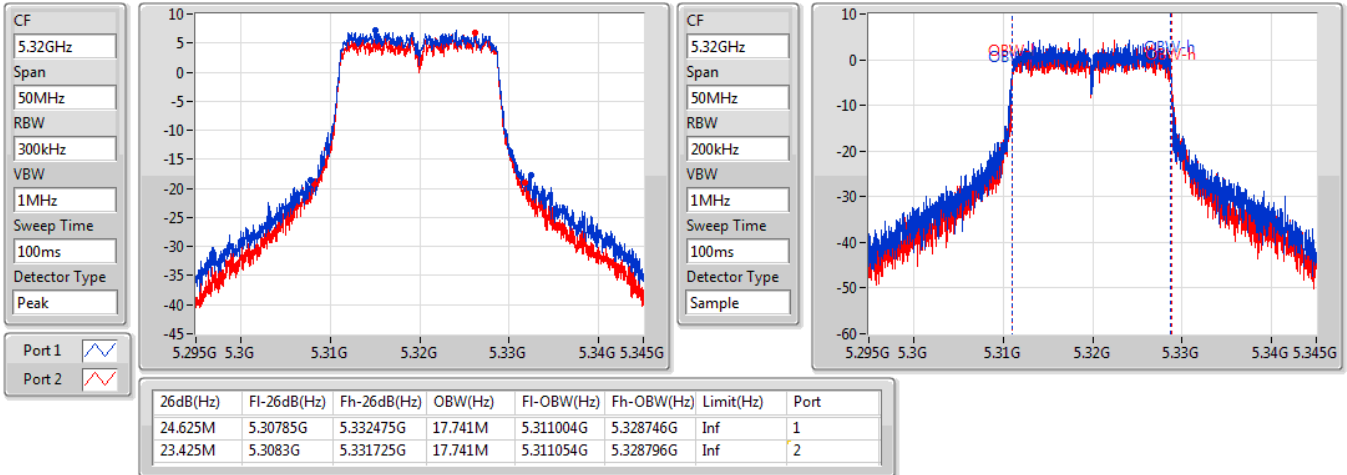

802.11ac VHT20_Nss1,(MCS0)_2TX
EBW
5300MHz

12/06/2019

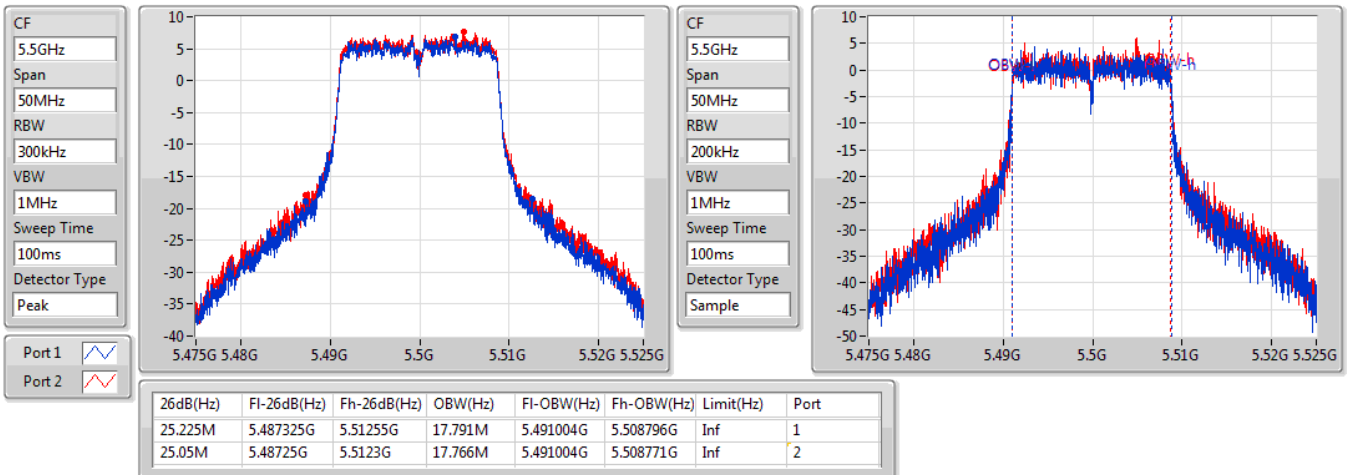


802.11ac VHT20_Nss1,(MCS0)_2TX
EBW
5320MHz

12/06/2019

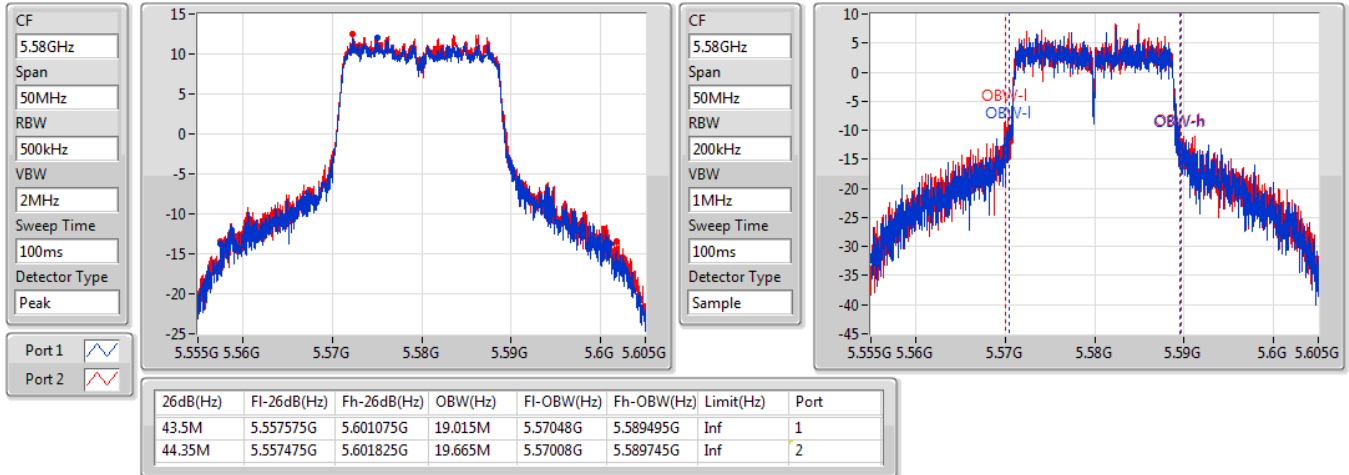

802.11ac VHT20_Nss1,(MCS0)_2TX
EBW
5500MHz

12/06/2019

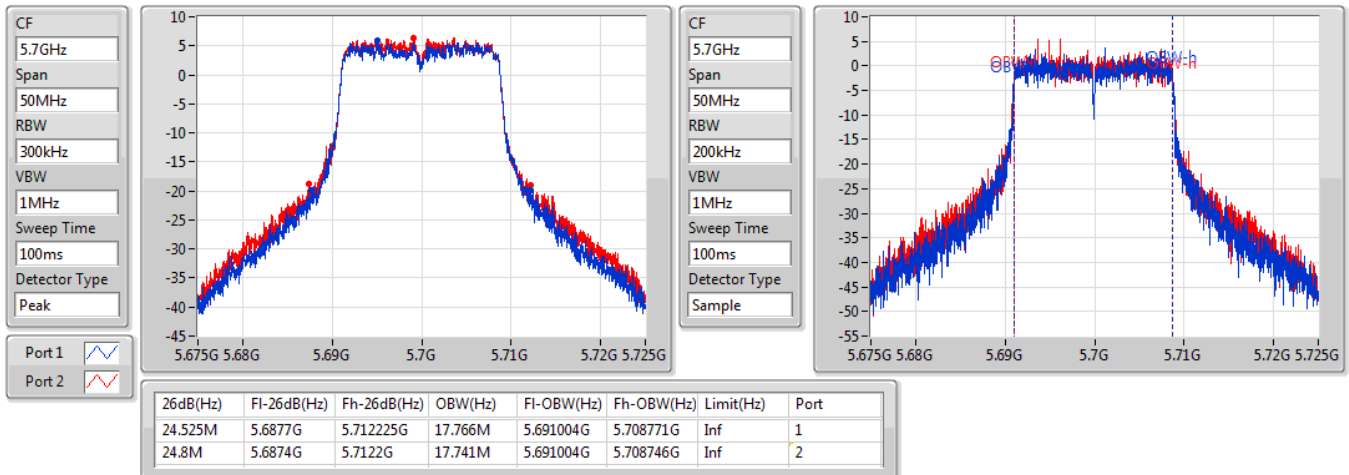


802.11ac VHT20_Nss1,(MCS0)_2TX
EBW
5580MHz

12/06/2019

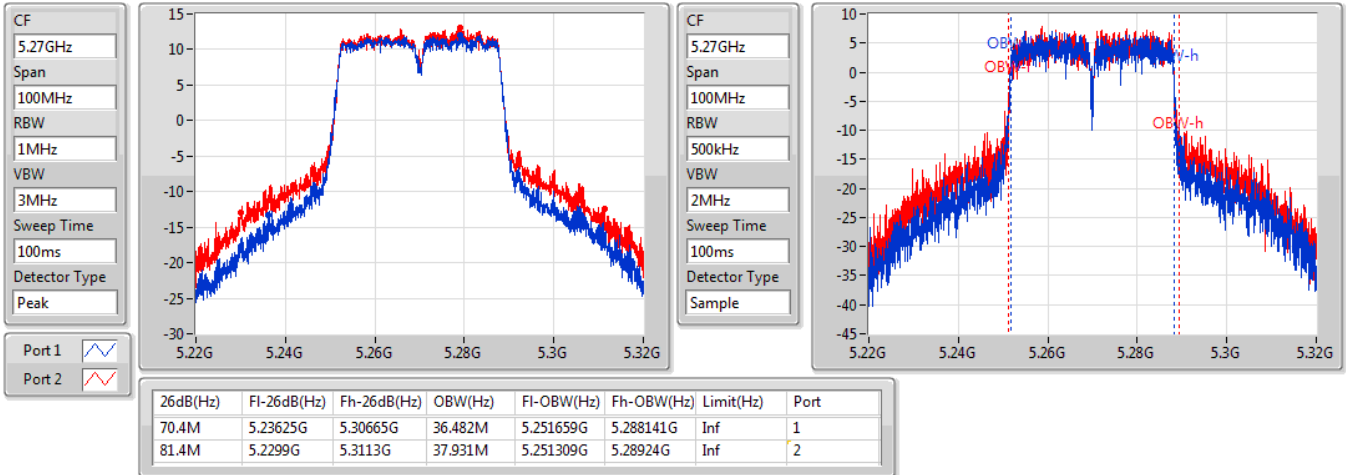

802.11ac VHT20_Nss1,(MCS0)_2TX
EBW
5700MHz

12/06/2019

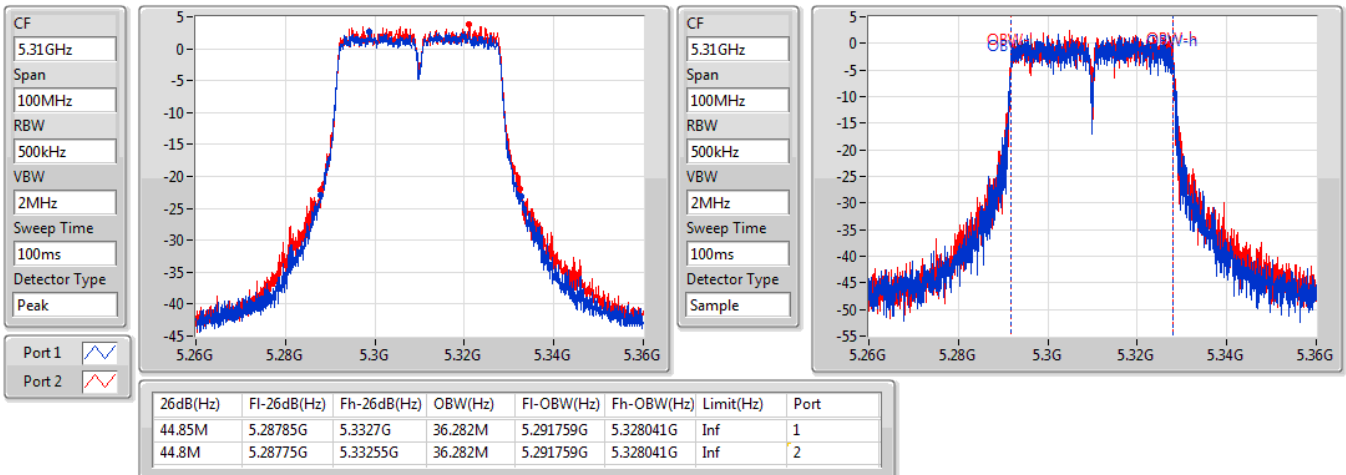


802.11ac VHT40_Nss1,(MCS0)_2TX
EBW
5270MHz

12/06/2019

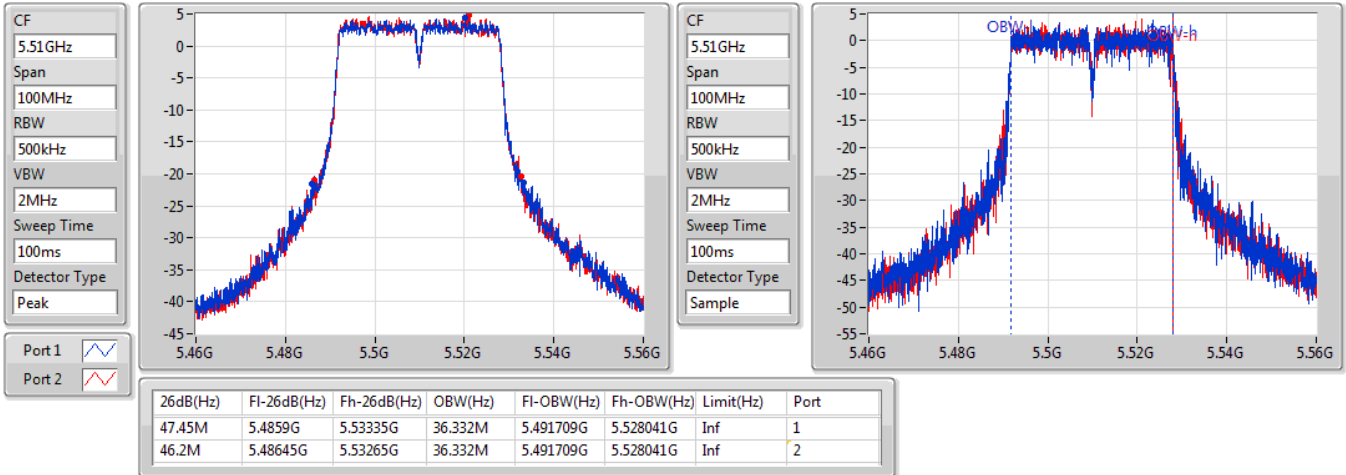

802.11ac VHT40_Nss1,(MCS0)_2TX
EBW
5310MHz

12/06/2019

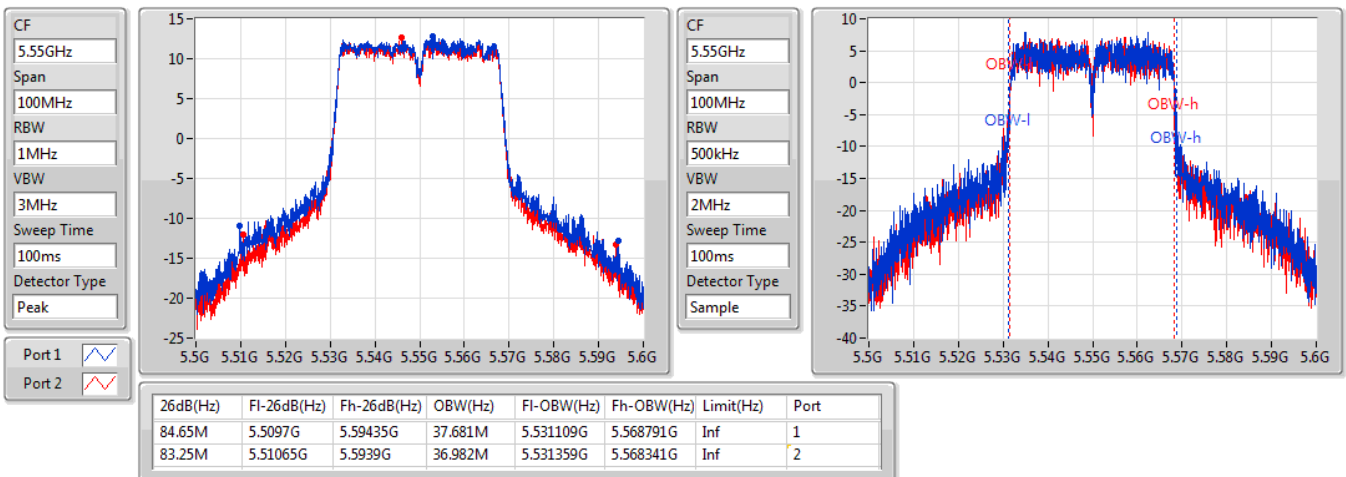


802.11ac VHT40_Nss1,(MCS0)_2TX
EBW
5510MHz

12/06/2019

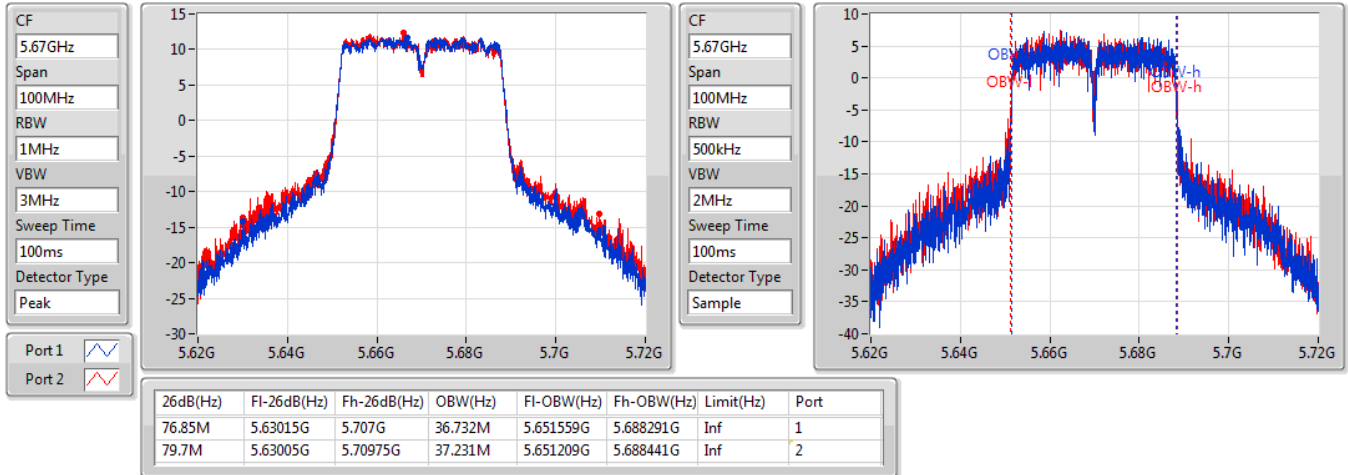

802.11ac VHT40_Nss1,(MCS0)_2TX
EBW
5550MHz

12/06/2019

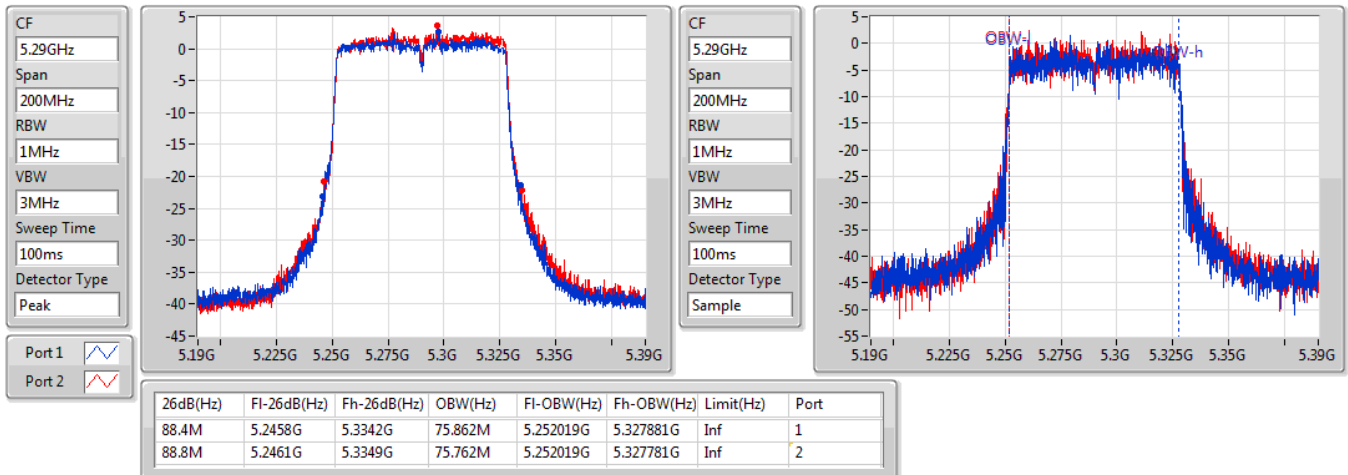


802.11ac VHT40_Nss1,(MCS0)_2TX
EBW
5670MHz

12/06/2019

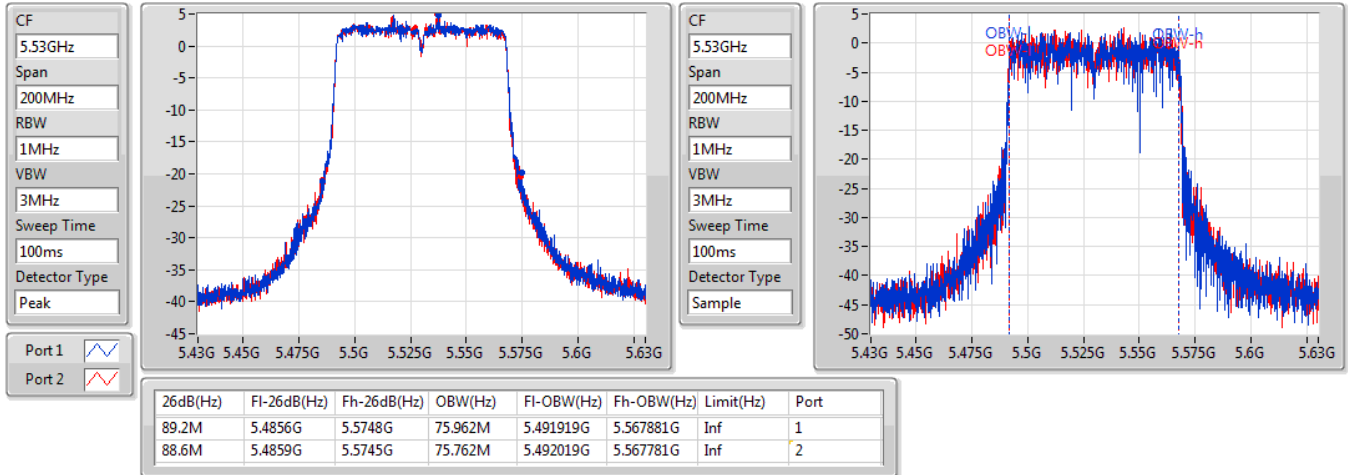

802.11ac VHT80_Nss1,(MCS0)_2TX
EBW
5290MHz

12/06/2019

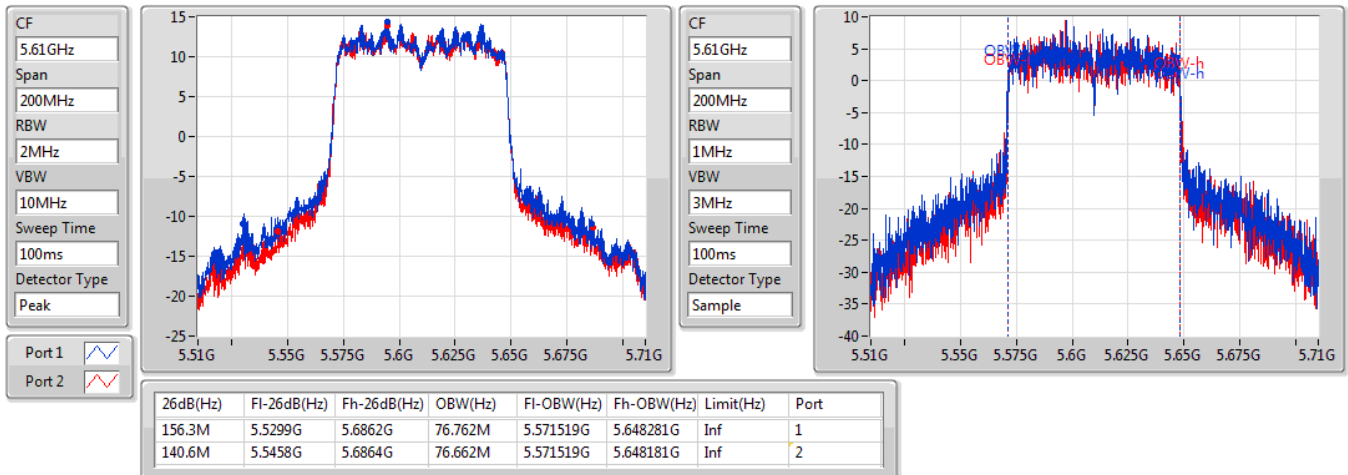


802.11ac VHT80_Nss1,(MCS0)_2TX
EBW
5530MHz

12/06/2019


802.11ac VHT80_Nss1,(MCS0)_2TX
EBW
5610MHz

12/06/2019



**For Non-Beamforming mode
Summary**

Mode	Total Power (dBm)	Total Power (W)
5.25-5.35GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	21.14	0.13002
802.11ac VHT20_Nss1,(MCS0)_4TX	21.45	0.13964
802.11ac VHT40_Nss1,(MCS0)_4TX	23.51	0.22439
802.11ac VHT80_Nss1,(MCS0)_4TX	19.09	0.08110
5.47-5.725GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	21.55	0.14289
802.11ac VHT20_Nss1,(MCS0)_4TX	21.94	0.15631
802.11ac VHT40_Nss1,(MCS0)_4TX	23.93	0.24717
802.11ac VHT80_Nss1,(MCS0)_4TX	23.83	0.24155
5.725-5.85GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	13.30	0.02138
802.11ac VHT20_Nss1,(MCS0)_4TX	14.09	0.02564
802.11ac VHT40_Nss1,(MCS0)_4TX	12.50	0.01778
802.11ac VHT80_Nss1,(MCS0)_4TX	9.99	0.00998



Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-
5260MHz	Pass	1.54	15.43	15.27	14.60	15.14	21.14	23.84
5300MHz	Pass	1.54	15.58	15.09	14.32	15.26	21.11	23.86
5320MHz	Pass	1.54	15.58	15.22	14.42	15.18	21.14	23.83
5500MHz	Pass	1.54	15.93	15.77	14.27	15.28	21.38	23.86
5580MHz	Pass	1.54	16.24	15.83	14.54	15.33	21.55	23.89
5700MHz	Pass	1.54	15.73	15.35	14.15	15.33	21.20	23.85
5720MHz Straddle 5.47-5.725GHz	Pass	1.54	14.07	13.96	12.55	13.49	19.58	22.66
5720MHz Straddle 5.725-5.85GHz	Pass	1.54	7.62	7.47	6.61	7.35	13.30	30.00
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5260MHz	Pass	1.54	15.79	15.69	14.73	15.44	21.45	23.98
5300MHz	Pass	1.54	15.86	15.59	14.76	15.41	21.44	23.98
5320MHz	Pass	1.54	15.83	15.61	14.62	15.43	21.42	23.98
5500MHz	Pass	1.54	16.28	15.98	14.66	15.61	21.69	23.98
5580MHz	Pass	1.54	16.71	16.11	14.94	15.71	21.94	23.98
5700MHz	Pass	1.54	16.08	15.92	14.53	15.57	21.59	23.98
5720MHz Straddle 5.47-5.725GHz	Pass	1.54	14.20	14.23	12.75	13.74	19.79	22.78
5720MHz Straddle 5.725-5.85GHz	Pass	1.54	8.34	8.34	7.34	8.20	14.09	30.00
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5270MHz	Pass	1.54	18.07	17.55	16.77	17.48	23.51	23.98
5310MHz	Pass	1.54	17.32	16.78	15.79	16.15	22.57	23.98
5510MHz	Pass	1.54	18.37	18.18	16.66	17.75	23.81	23.98
5550MHz	Pass	1.54	18.61	18.19	16.85	17.79	23.93	23.98
5670MHz	Pass	1.54	18.37	17.82	16.71	17.65	23.70	23.98
5710MHz Straddle 5.47-5.725GHz	Pass	1.54	18.24	18.15	16.69	17.68	23.75	23.98
5710MHz Straddle 5.725-5.85GHz	Pass	1.54	6.68	6.93	5.61	6.59	12.50	30.00
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5290MHz	Pass	1.54	13.43	13.41	12.29	13.07	19.09	23.98
5530MHz	Pass	1.54	17.84	17.61	16.09	16.95	23.19	23.98
5610MHz	Pass	1.54	18.32	17.75	16.66	17.30	23.57	23.98
5690MHz Straddle 5.47-5.725GHz	Pass	1.54	18.53	18.02	16.76	17.74	23.83	23.98
5690MHz Straddle 5.725-5.85GHz	Pass	1.54	4.32	4.19	3.22	4.08	9.99	30.00

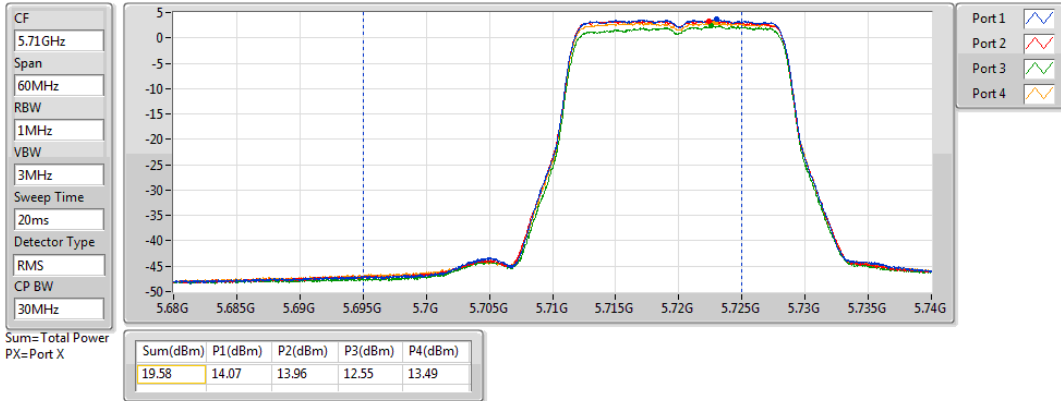
DG = Directional Gain; Port X = Port X output power

802.11a_Nss1,(6Mbps)_4TX

AV Power

5720MHz Straddle 5.47-5.725GHz

05/06/2019

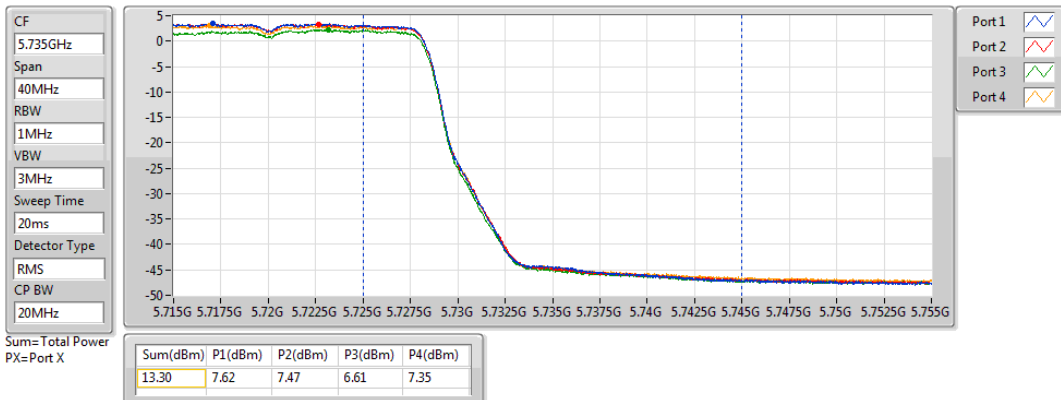


802.11a_Nss1,(6Mbps)_4TX

AV Power

5720MHz Straddle 5.725-5.85GHz

05/06/2019

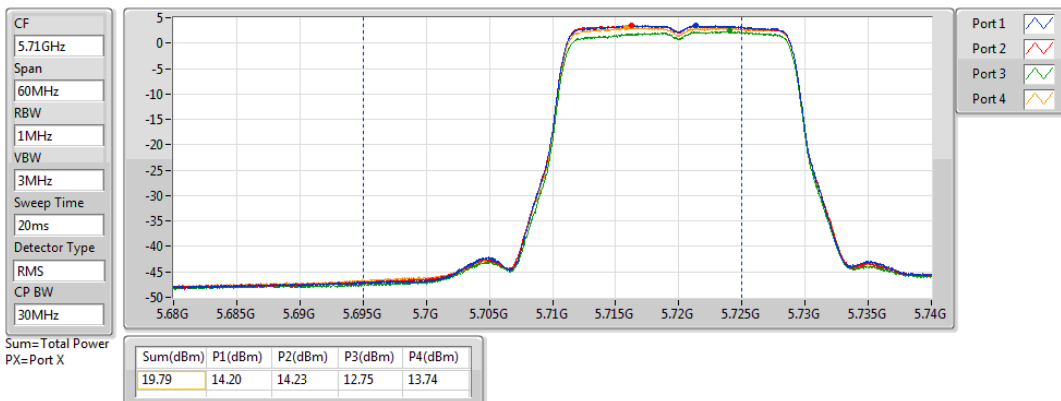


802.11ac VHT20_Nss1,(MCS0)_4TX

AV Power

5720MHz Straddle 5.47-5.725GHz

05/06/2019

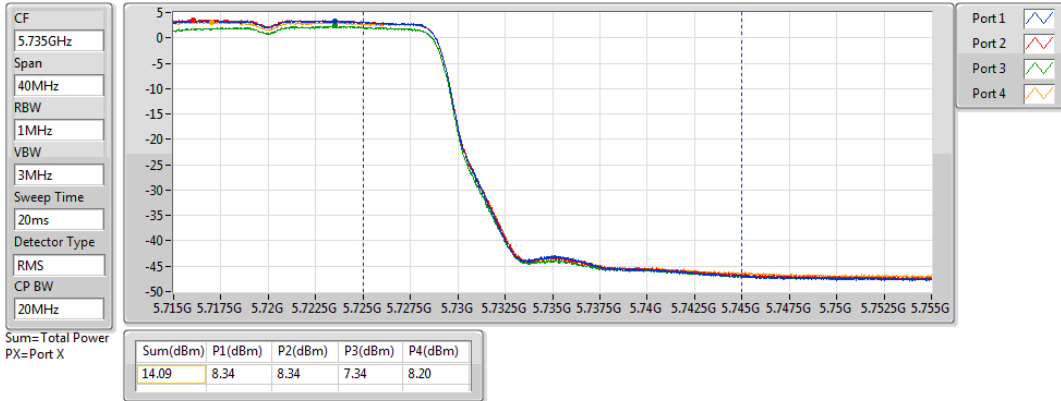


802.11ac VHT20_Nss1,(MCS0)_4TX

AV Power

5720MHz Straddle 5.725-5.85GHz

05/06/2019

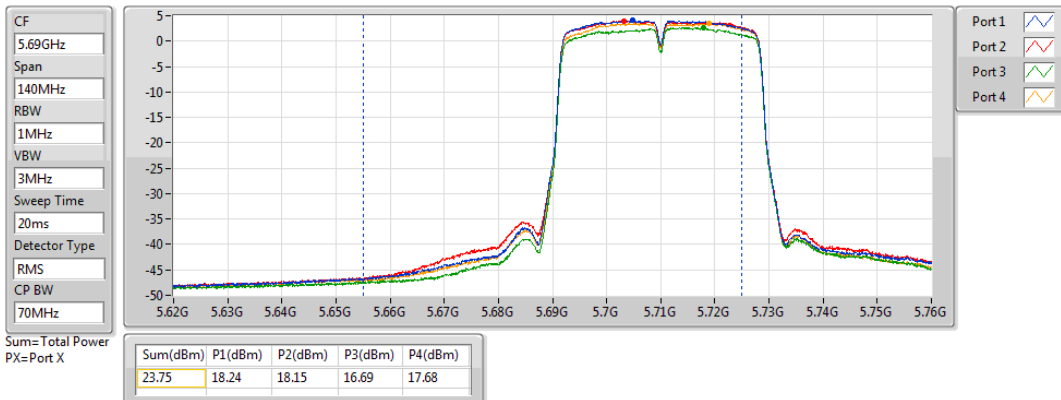


802.11ac VHT40_Nss1,(MCS0)_4TX

AV Power

5710MHz Straddle 5.47-5.725GHz

05/06/2019



802.11ac VHT40_Nss1,(MCS0)_4TX

AV Power

5710MHz Straddle 5.725-5.85GHz

05/06/2019

