

FCC Radio Test Report

FCC ID : PPQ-WCBN3515A
Equipment : Wireless LAN module
Brand Name : LITE-ON
Model Name : WCBN3515A
Applicant : LITE-ON TECHNOLOGY CORP.
Bldg. C, 90, Chien 1 Road, Chung Ho, New Taipei City
23585, Taiwan, R.O.C
Manufacturer : LITE-ON TECHNOLOGY (Changzhou) CO., LTD
A9 Building, No.88 Yanghu Road, Wujin Hi-Tech
Industrial Development Zone, Changzhou City, Jiangsu
Province 213100 China
Standard : 47 CFR FCC Part 15.407

The product was received on Feb. 24, 2020, and testing was started from Mar. 10, 2020 and completed on May 20, 2021. We, SPORTON INTERNATIONAL INC. Hsinhua Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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



Approved by: Allen Lin

SPORTON INTERNATIONAL INC. Hsinhua Laboratory

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TEL : 886-3-3273456
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Report Template No.: HE1-D1 Ver4.0
FCC ID: PPQ-WCBN3515A

Summary of Test Result

Report Clause	Ref. Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	-
3.1	15.207	AC Power-line Conducted Emissions	PASS	-
3.2	15.407(a)	Emission Bandwidth	PASS	-
3.3	15.407(a)	Maximum Conducted Output Power	PASS	-
3.4	15.407(a)	Peak Power Spectral Density	PASS	-
3.5	15.407(b)	Unwanted Emissions	PASS	-

Declaration of Conformity:

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

Comments and explanations:

None

Reviewed by: Sam Tsai

Report Producer: Yunha Liou

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 (5M), a (10M), a (20M), n (5M), n (10M), n (HT20), ac (VHT20)	5180-5240	36-48 [4]
5725-5850		5745-5825	149-165 [5]
5150-5250	n (HT40), ac (VHT40)	5190-5230	38-46 [2]
5725-5850		5755-5795	151-159 [2]
5150-5250	ac (VHT80)	5210	42 [1]
5725-5850		5775	155 [1]

Band	Mode	BWch (MHz)	Nant
5.15-5.25GHz	11a-5M	5	2TX
5.725-5.85GHz	11a-5M	5	2TX
5.15-5.25GHz	11n-5M	5	2TX
5.725-5.85GHz	11n-5M	5	2TX
5.15-5.25GHz	11a-10M	10	2TX
5.725-5.85GHz	11a-10M	10	2TX
5.15-5.25GHz	11n-10M	10	2TX
5.725-5.85GHz	11n-10M	10	2TX
5.15-5.25GHz	11a-20M	20	2TX
5.725-5.85GHz	11a-20M	20	2TX
5.15-5.25GHz	802.11ac VHT20	20	2TX
5.725-5.85GHz	802.11ac VHT20	20	2TX
5.15-5.25GHz	802.11ac VHT40	40	2TX
5.725-5.85GHz	802.11ac VHT40	40	2TX
5.15-5.25GHz	802.11ac VHT80	80	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.

1.1.2 Antenna Information

Case	Ant.	Brand	Model Name	Antenna Type	Connector
1	1	Itabashiseiki Co.,Ltd.	ANW-3001	Dipole	I-PEX
	2	Itabashiseiki Co.,Ltd.	ANW-3001	Dipole	I-PEX
2	3	INPAQ Technology Co.,Ltd	Patch-3001	Patch	I-PEX
	4	Itabashiseiki Co.,Ltd.	ANW-3001	Dipole	I-PEX
3	5	Itabashiseiki Co.,Ltd.	ANW-3001	Dipole	I-PEX
	6	INPAQ Technology Co.,Ltd	Patch-3001	Patch	I-PEX
4	7	INPAQ Technology Co.,Ltd	Patch-3001	Patch	I-PEX
	8	INPAQ Technology Co.,Ltd	Patch-3001	Patch	I-PEX

Case	Ant.	Port	Gain (dBi)		
			2.4G	5G Band 1	5G Band 4
1	1	1	2.8	3.5	4.6
	2	2	2.8	3.5	4.6
2	3	1	3.6	4.6	3.2
	4	2	2.8	3.5	4.6
3	5	1	2.8	3.5	4.6
	6	2	3.6	4.6	3.2
4	7	1	3.6	4.6	3.2
	8	2	3.6	4.6	3.2

Note 1: The EUT has four combination of antenna.

Note 2: EUT can match with above antennas for using. Higher gain in each case of antenna was used to perform the worst configuration and result of that was recorded as the final test result.

For 2.4GHz function:

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

Port 1 and Port 2 could transmit/receive simultaneously.

For 5GHz function:

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

Port 1 and Port 2 could transmit/receive simultaneously.

1.1.3 EUT Information

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

1.1.4 Mode Test Duty Cycle

Client_Case 1 & Outdoor AP_Case 1 & Outdoor AP_Case 2

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
11a-5M_Nss1_2TX	0.997	0.01	85.606ms	n/a (DC $\geq$ 0.98)
11a-10M_Nss1_2TX	0.997	0.01	42.806ms	n/a (DC $\geq$ 0.98)
11a-20M_Nss1_2TX	0.942	0.26	2.03ms	1k
11n-5M_Nss1_2TX	0.913	0.4	204.375u	10k
11n-10M_Nss1_2TX	0.995	0.02	25.017m	10
802.11ac VHT20_Nss1_2TX	0.938	0.28	1.903ms	1k
802.11ac VHT40_Nss1_2TX	0.884	0.54	936.063us	3k
802.11ac VHT80_Nss1_2TX	0.794	1	457.5us	3k

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

**Client_Case 2**

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
11a-5M_Nss1_2TX	0.997	0.01	85.606m	10
11a-10M_Nss1_2TX	0.997	0.01	42.806m	10
11a-20M_Nss1_2TX	0.942	0.26	2.03m	1k
11n-5M_Nss1_2TX	0.997	0.01	68.528m	10
11n-10M_Nss1_2TX	0.997	0.01	39.547m	10
802.11ac VHT20_Nss1_2TX	0.938	0.28	1.903m	1k
802.11ac VHT40_Nss1_2TX	0.884	0.54	939.063u	3k
802.11ac VHT80_Nss1_2TX	0.794	1	457.5u	3k

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

Client_Case 3 & Outdoor AP_Case 3

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
11a-5M_Nss1_2TX	0.993	0.03	85.603m	10
11a-10M_Nss1_2TX	0.997	0.01	42.803m	10
11a-20M_Nss1_2TX	0.944	0.25	2.034m	1k
11n-5M_Nss1_2TX	0.992	0.03	79.094m	10
11n-10M_Nss1_2TX	0.998	0.01	39.547m	10
802.11ac VHT20_Nss1_2TX	0.943	0.25	1.903m	1k
802.11ac VHT40_Nss1_2TX	0.884	0.54	940.625u	3k
802.11ac VHT80_Nss1_2TX	0.793	1.01	459.375u	3k

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

Client_Case 4 & Outdoor AP_Case 4

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
11a-5M_Nss1_2TX	0.993	0.03	85.603m	10
11a-10M_Nss1_2TX	0.997	0.01	42.803m	10
11a-20M_Nss1_2TX	0.944	0.25	2.034m	1k
11n-5M_Nss1_2TX	0.997	0.01	73.225m	10
11n-10M_Nss1_2TX	0.995	0.02	39.547m	10
802.11ac VHT20_Nss1_2TX	0.943	0.25	1.903m	1k
802.11ac VHT40_Nss1_2TX	0.884	0.54	940.625u	3k
802.11ac VHT80_Nss1_2TX	0.793	1.01	459.375u	3k

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

1.2 Testing Applied Standards

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

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

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

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

1.3 Testing Location Information

Test Lab. : Sporton International Inc. Hsinhua Laboratory				
☒ Hsinhua (TAF: 3785)	ADD: No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)			
	TEL: 886-3-327-3456		FAX: 886-3-327-0973	
Test site Designation No. TW3785 with FCC.				
Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
AC Conduction	CO04-HY	Edward Wang	23.1~24.5°C / 62~68%	10/Jul/2020
RF Conducted	TH01-HY	Vivi Jiang	22.1~26.9°C / 50~61%	12/Mar/2020~20/May/2021
Radiated	03CH02-HY	Streak Liao	21.5~22.8°C / 49~63%	10/Mar/2020~13/Mar/2020
☒ Wen 33rd.St. (TAF: 3785)	ADD: No.14-1, Ln. 19, Wen 33rd St., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)			
	TEL: 886-3-318-0787		FAX: 886-3-318-0287	
Test site Designation No. TW0008 with FCC.				
Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
Radiated (above 1G)	03CH09-HY	Lego Lin	20.5~24.8°C / 45~65%	13/Mar/2020~11/Dec/2020 29/Apr/2021~18/May/2021

1.4 Measurement Uncertainty

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

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



2 Test Configuration of EUT

2.1 Test Condition

Condition Item	Abbreviation/Remark	Remark
TnomVnom	Tnom	20°C
-	Vnom	120V

2.2 Test Channel Mode

Test Software Version	QDART-Connectivity 1.0-00057 and qdart_conn.win.1.0_installer_00072.1
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Client_Case 1

Mode	Power Setting
11a-5M_Nss1_2TX	-
5180MHz	12.5
5200MHz	13
5240MHz	14
5745MHz	16
5785MHz	16.5
5825MHz	21
11a-10M_Nss1_2TX	-
5180MHz	16
5200MHz	16
5240MHz	16
5745MHz	22.5
5785MHz	22.5
5825MHz	21.5
11a-20M_Nss1_2TX	-
5180MHz	19
5200MHz	19.5
5240MHz	19.5
5745MHz	26.5
5785MHz	27
5825MHz	22
11n-5M_Nss1_2TX	-
5180MHz	10



Mode	Power Setting
5200MHz	9
5240MHz	10.5
5745MHz	17
5785MHz	15
5825MHz	20
11n-10M_Nss1_2TX	-
5180MHz	13.5
5200MHz	12.5
5240MHz	14
5745MHz	20
5785MHz	23
5825MHz	25.5
802.11ac VHT20_Nss1_2TX	-
5180MHz	20.5
5200MHz	20.5
5240MHz	21
5745MHz	23
5785MHz	22
5825MHz	26
802.11ac VHT40_Nss1_2TX	-
5190MHz	20
5230MHz	21.5
5755MHz	24
5795MHz	23
802.11ac VHT80_Nss1_2TX	-
5210MHz	18.5
5775MHz	25

**Client_Case 2**

Mode	Power Setting
11a-5M_Nss1_2TX	-
5180MHz	15
5200MHz	15.5
5240MHz	15.5
5745MHz	12.5
5785MHz	14.5
5825MHz	14.5
11a-10M_Nss1_2TX	-
5180MHz	16
5200MHz	16.5
5240MHz	16.5
5745MHz	14
5785MHz	16
5825MHz	16.5
11a-20M_Nss1_2TX	-
5180MHz	18.5
5200MHz	21
5240MHz	20.5
5745MHz	15.5
5785MHz	16
5825MHz	21
11n-5M_Nss1_2TX	-
5180MHz	9.5
5200MHz	8.5
5240MHz	10
5745MHz	15
5785MHz	16
5825MHz	21.5
11n-10M_Nss1_2TX	-
5180MHz	13
5200MHz	12
5240MHz	13.5
5745MHz	25
5785MHz	21.5



Mode	Power Setting
5825MHz	23
802.11ac VHT20_Nss1_2TX	-
5180MHz	21
5200MHz	21
5240MHz	21
5745MHz	16.5
5785MHz	18
5825MHz	19
802.11ac VHT40_Nss1_2TX	-
5190MHz	19
5230MHz	21.5
5755MHz	18
5795MHz	19.5
802.11ac VHT80_Nss1_2TX	-
5210MHz	17.5
5775MHz	21

**Client_Case 3**

Mode	Power Setting
11a-5M_Nss1_2TX	-
5180MHz	15
5200MHz	15.5
5240MHz	15.5
5745MHz	12
5785MHz	11
5825MHz	10.5
11a-10M_Nss1_2TX	-
5180MHz	17
5200MHz	16
5240MHz	16
5745MHz	24.5
5785MHz	23
5825MHz	24.5
11a-20M_Nss1_2TX	-
5180MHz	18.5
5200MHz	20.5
5240MHz	20.5
5745MHz	15
5785MHz	16
5825MHz	16
11n-5M_Nss1_2TX	-
5180MHz	9.5
5200MHz	8.5
5240MHz	10
5745MHz	16.5
5785MHz	15.5
5825MHz	18.5
11n-10M_Nss1_2TX	-
5180MHz	13
5200MHz	12
5240MHz	13.5
5745MHz	20
5785MHz	23.5



Mode	Power Setting
5825MHz	24.5
802.11ac VHT20_Nss1_2TX	-
5180MHz	18.5
5200MHz	21
5240MHz	21
5745MHz	16
5785MHz	16
5825MHz	16.5
802.11ac VHT40_Nss1_2TX	-
5190MHz	18.5
5230MHz	21.5
5755MHz	15.5
5795MHz	17
802.11ac VHT80_Nss1_2TX	-
5210MHz	14.5
5775MHz	21

**Client_Case 4**

Mode	Power Setting
11a-5M_Nss1_2TX	-
5180MHz	13
5200MHz	12.5
5240MHz	12.5
5745MHz	17.5
5785MHz	18
5825MHz	22
11a-10M_Nss1_2TX	-
5180MHz	15.5
5200MHz	14.5
5240MHz	16
5745MHz	17.5
5785MHz	17.5
5825MHz	21.5
11a-20M_Nss1_2TX	-
5180MHz	19.5
5200MHz	19.5
5240MHz	19.5
5745MHz	24.5
5785MHz	22
5825MHz	23.5
11n-5M_Nss1_2TX	-
5180MHz	9
5200MHz	8.5
5240MHz	9.5
5745MHz	15.5
5785MHz	15.5
5825MHz	20
11n-10M_Nss1_2TX	-
5180MHz	12.5
5200MHz	11.5
5240MHz	13
5745MHz	20
5785MHz	19.5



Mode	Power Setting
5825MHz	21
802.11ac VHT20_Nss1_2TX	-
5180MHz	20
5200MHz	20
5240MHz	20
5745MHz	24
5785MHz	24
5825MHz	23.5
802.11ac VHT40_Nss1_2TX	-
5190MHz	20
5230MHz	22
5755MHz	25.5
5795MHz	25.5
802.11ac VHT80_Nss1_2TX	-
5210MHz	18.5
5775MHz	25.5

**Outdoor AP_Case 1**

Mode	Power Setting
11a-5M_Nss1_2TX	-
5180MHz	14
5200MHz	14
5240MHz	14.5
5745MHz	16
5785MHz	16.5
5825MHz	21
11a-10M_Nss1_2TX	-
5180MHz	15.5
5200MHz	14
5240MHz	14
5745MHz	22.5
5785MHz	22.5
5825MHz	21.5
11a-20M_Nss1_2TX	-
5180MHz	15
5200MHz	15.5
5240MHz	14
5745MHz	25
5785MHz	25
5825MHz	22
11n-5M_Nss1_2TX	-
5180MHz	14
5200MHz	14.5
5240MHz	15
5745MHz	17
5785MHz	15
5825MHz	20
11n-10M_Nss1_2TX	-
5180MHz	14
5200MHz	14
5240MHz	14.5
5745MHz	20
5785MHz	23



Mode	Power Setting
5825MHz	25
802.11ac VHT20_Nss1_2TX	-
5180MHz	15.5
5200MHz	15
5240MHz	15.5
5745MHz	23
5785MHz	22
5825MHz	25
802.11ac VHT40_Nss1_2TX	-
5190MHz	15
5230MHz	15
5755MHz	24
5795MHz	23
802.11ac VHT80_Nss1_2TX	-
5210MHz	15
5775MHz	25

**Outdoor AP_Case 2**

Mode	Power Setting
11a-5M_Nss1_2TX	-
5180MHz	14.5
5200MHz	14.5
5240MHz	14.5
5745MHz	12.5
5785MHz	14.5
5825MHz	14.5
11a-10M_Nss1_2TX	-
5180MHz	14.5
5200MHz	14.5
5240MHz	14.5
5745MHz	25
5785MHz	22
5825MHz	22
11a-20M_Nss1_2TX	-
5180MHz	14
5200MHz	14.5
5240MHz	14
5745MHz	15.5
5785MHz	16
5825MHz	21
11n-5M_Nss1_2TX	-
5180MHz	14.5
5200MHz	13.5
5240MHz	13.5
5745MHz	15
5785MHz	16
5825MHz	21.5
11n-10M_Nss1_2TX	-
5180MHz	14
5200MHz	14
5240MHz	13.5
5745MHz	25
5785MHz	21.5



Mode	Power Setting
5825MHz	23
802.11ac VHT20_Nss1_2TX	-
5180MHz	14.5
5200MHz	14.5
5240MHz	14.5
5745MHz	16.5
5785MHz	18
5825MHz	19
802.11ac VHT40_Nss1_2TX	-
5190MHz	14
5230MHz	14.5
5755MHz	18
5795MHz	19.5
802.11ac VHT80_Nss1_2TX	-
5210MHz	14
5775MHz	21

**Outdoor AP_Case 3**

Mode	Power Setting
11a-5M_Nss1_2TX	-
5180MHz	14.5
5200MHz	14.5
5240MHz	14.5
5745MHz	12
5785MHz	11
5825MHz	10.5
11a-10M_Nss1_2TX	-
5180MHz	14.5
5200MHz	14.5
5240MHz	14.5
5745MHz	24.5
5785MHz	23
5825MHz	24.5
11a-20M_Nss1_2TX	-
5180MHz	14
5200MHz	14
5240MHz	14.5
5745MHz	15
5785MHz	16
5825MHz	16
11n-5M_Nss1_2TX	-
5180MHz	10.5
5200MHz	10.5
5240MHz	9.5
5745MHz	16.5
5785MHz	15.5
5825MHz	18.5
11n-10M_Nss1_2TX	-
5180MHz	9.5
5200MHz	10
5240MHz	10
5745MHz	20
5785MHz	23.5



Mode	Power Setting
5825MHz	24.5
802.11ac VHT20_Nss1_2TX	-
5180MHz	14.5
5200MHz	14.5
5240MHz	14.5
5745MHz	16
5785MHz	16
5825MHz	16.5
802.11ac VHT40_Nss1_2TX	-
5190MHz	14
5230MHz	14.5
5755MHz	15.5
5795MHz	17
802.11ac VHT80_Nss1_2TX	-
5210MHz	14
5775MHz	21

**Outdoor AP_Case 4**

Mode	Power Setting
11a-5M_Nss1_2TX	-
5180MHz	13
5200MHz	13
5240MHz	13
5745MHz	17.5
5785MHz	18
5825MHz	22
11a-10M_Nss1_2TX	-
5180MHz	15.5
5200MHz	14.5
5240MHz	16
5745MHz	17.5
5785MHz	17.5
5825MHz	21.5
11a-20M_Nss1_2TX	-
5180MHz	14.5
5200MHz	14.5
5240MHz	14.5
5745MHz	24.5
5785MHz	22
5825MHz	23.5
11n-5M_Nss1_2TX	-
5180MHz	10.5
5200MHz	10.5
5240MHz	11
5745MHz	15.5
5785MHz	15.5
5825MHz	20
11n-10M_Nss1_2TX	-
5180MHz	9.5
5200MHz	9.5
5240MHz	9.5
5745MHz	20
5785MHz	19.5



Mode	Power Setting
5825MHz	21
802.11ac VHT20_Nss1_2TX	-
5180MHz	14.5
5200MHz	14.5
5240MHz	14.5
5745MHz	24
5785MHz	24
5825MHz	23.5
802.11ac VHT40_Nss1_2TX	-
5190MHz	14
5230MHz	14.5
5755MHz	25.5
5795MHz	25.5
802.11ac VHT80_Nss1_2TX	-
5210MHz	14
5775MHz	25.5

2.3 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral
Operating Mode	CTX
1	Adapter mode; Patch Ant.
2	Adapter mode; Dipole Ant.

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

The Worst Case Mode for Following Conformance Tests	
Tests Item	Unwanted Emissions
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	CTX
1	Adapter mode; Client Case 1
2	Adapter mode; Client Case 2
3	Adapter mode; Client Case 3
4	Adapter mode; Client Case 4
5	Adapter mode; Outdoor AP Case 1
6	Adapter mode; Outdoor AP Case 2
7	Adapter mode; Outdoor AP Case 3
8	Adapter mode; Outdoor AP Case 4
Operating Mode > 1GHz	CTX
Orthogonal Planes of EUT	Z Plane
	

2.4 Support Equipment

Support Equipment – AC Conduction					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Test fixture	-	-	-	Note 1
2	Adapter	APD	WA-36A12R	-	Note 1

Note 1: Provided by Customer.

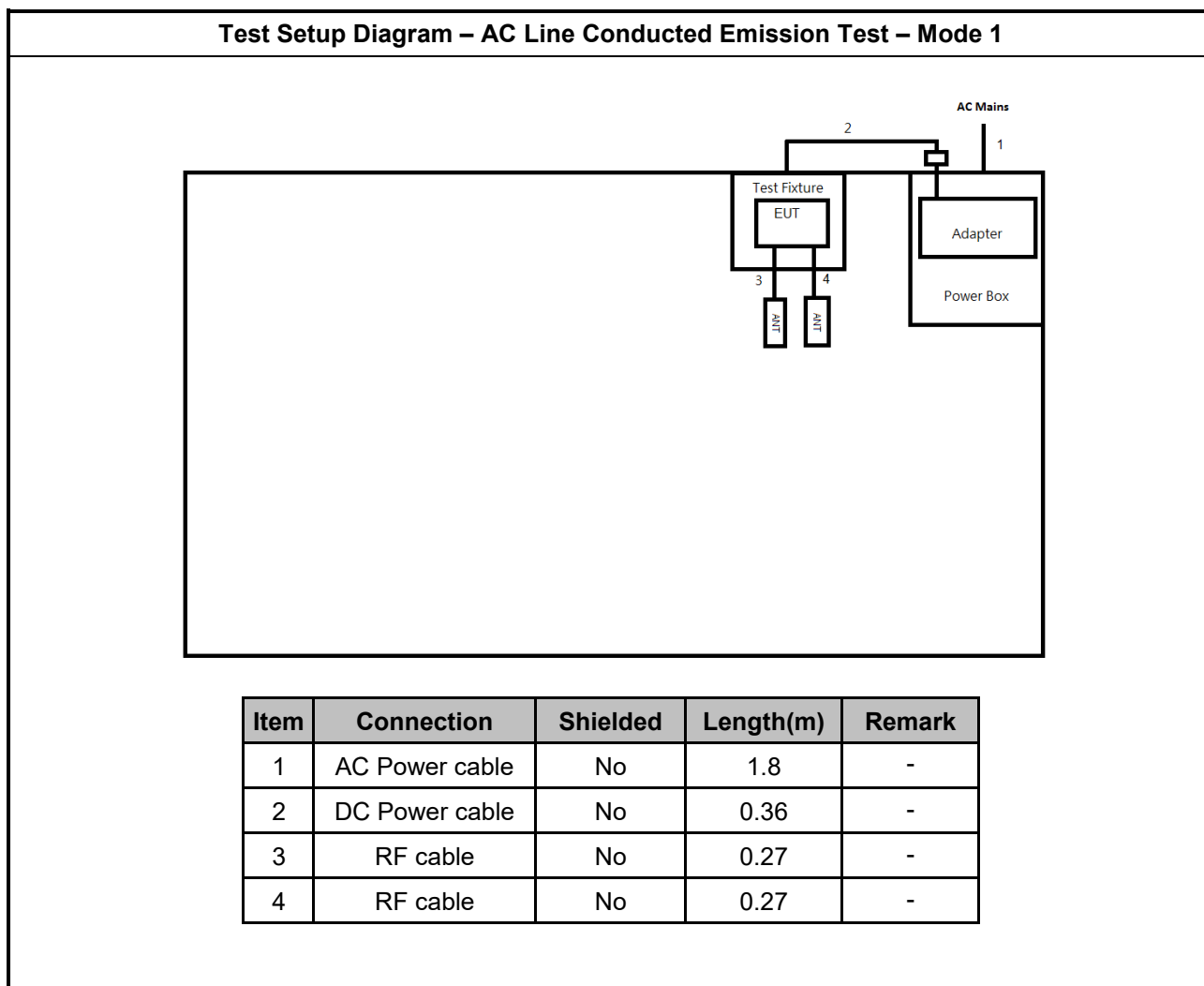
Support Equipment – Conducted					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Notebook	DELL	E5410	-	-
2	Adapter for NB	DELL	HA65NM130	-	-
3	Notebook	DELL	E5410	-	-
4	Adapter for NB	DELL	HA65NM130	-	-
5	DC Power Supply	GW	GPS-3030DD	-	-
6	Fixture	-	-	-	Note 1

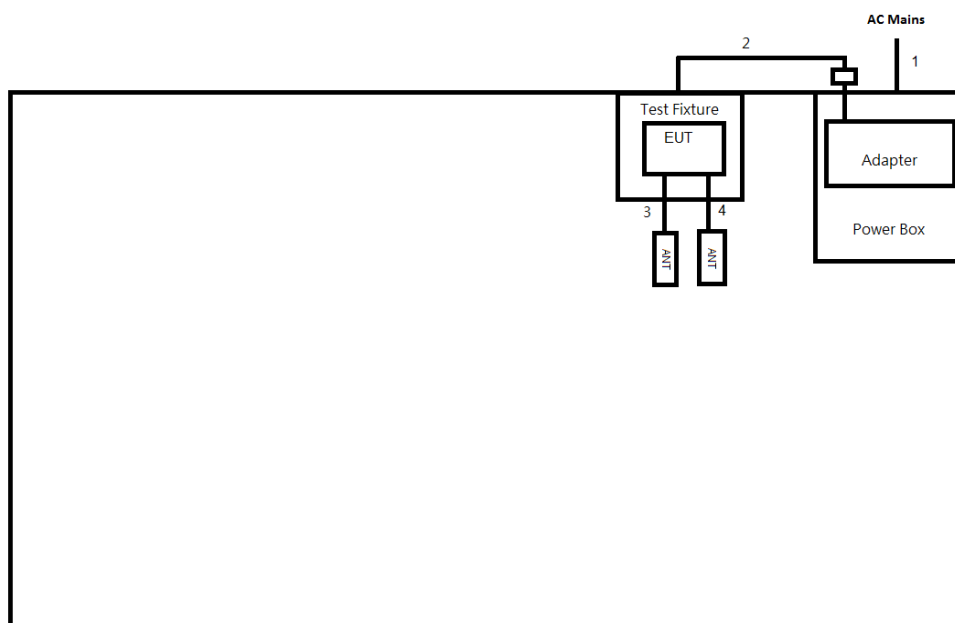
Note 1: Provided by Customer.

Support Equipment – Radiated					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Test fixture	-	-	-	Note 1
2	Adapter	PHIHONG	PSAA12A-120L6	-	Note 1

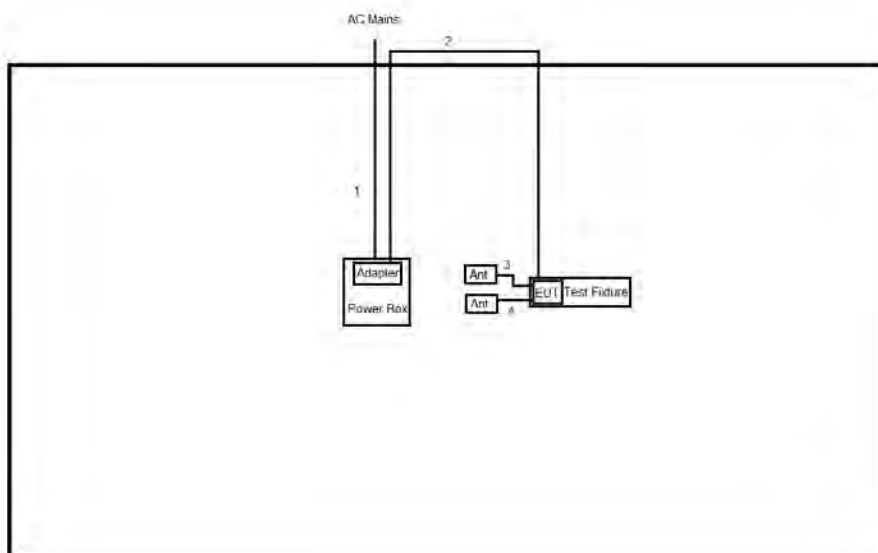
Note 1: Provided by Customer.

2.5 Test Setup Diagram

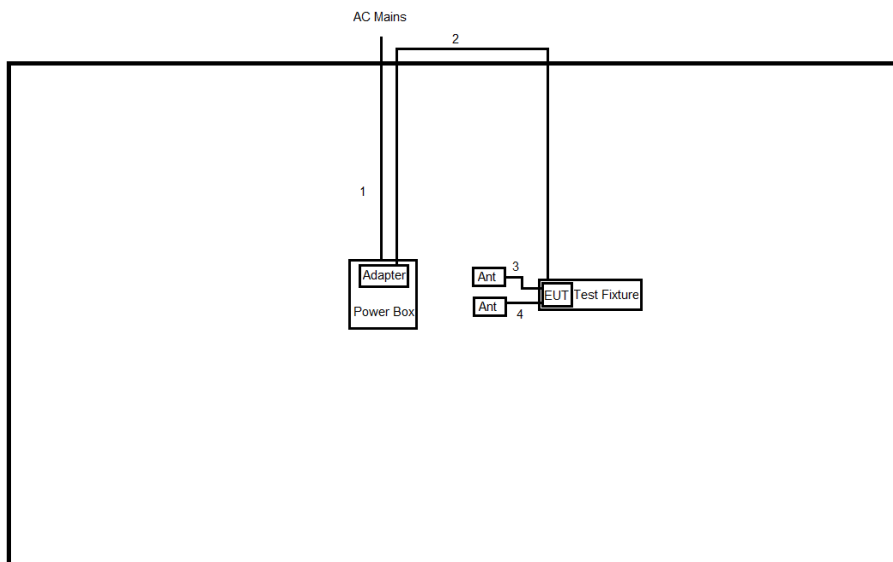


Test Setup Diagram – AC Line Conducted Emission Test – Mode 2


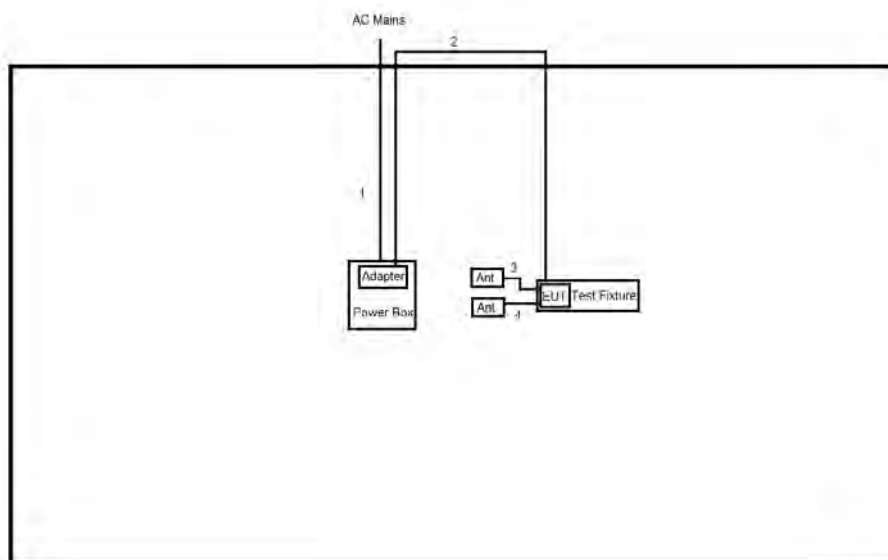
Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	DC Power cable	No	0.36	-
3	RF cable	No	0.1	-
4	RF cable	No	0.1	-

Test Setup Diagram - Radiated Test – Mode 1, 5


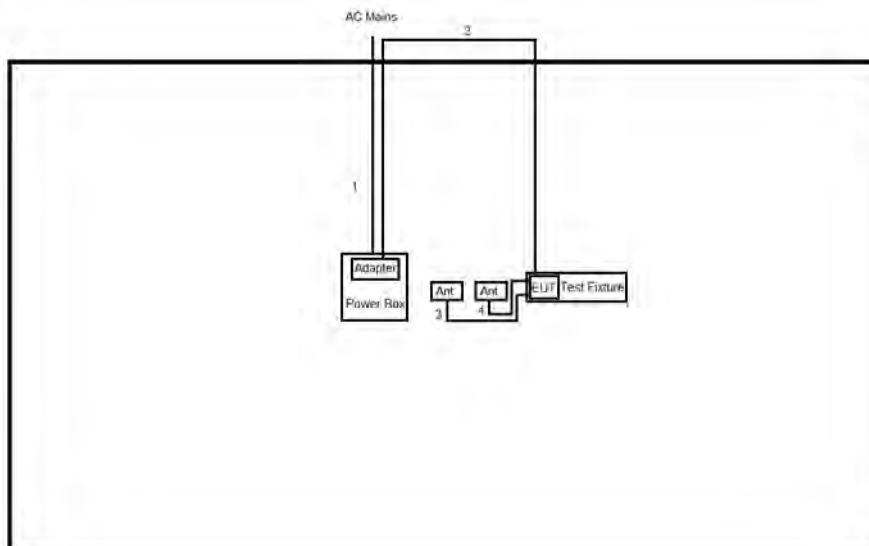
Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	DC Power cable	No	1.16	-
3	RF cable	No	0.1	-
4	RF cable	No	0.1	-

Test Setup Diagram - Radiated Test – Mode 2, 6


Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	DC Power cable	No	1.16	-
3	RF cable	No	0.1	-
4	RF cable	No	0.27	-

Test Setup Diagram - Radiated Test – Mode 3, 7


Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	DC Power cable	No	1.16	-
3	RF cable	No	0.27	-
4	RF cable	No	0.1	-

Test Setup Diagram - Radiated Test – Mode 4, 8


Item	Connection	Shielded	Length(m)	Remark
1	AC Power cable	No	1.8	-
2	DC Power cable	No	1.16	-
3	RF cable	No	0.27	-
4	RF cable	No	0.27	-

3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

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

3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

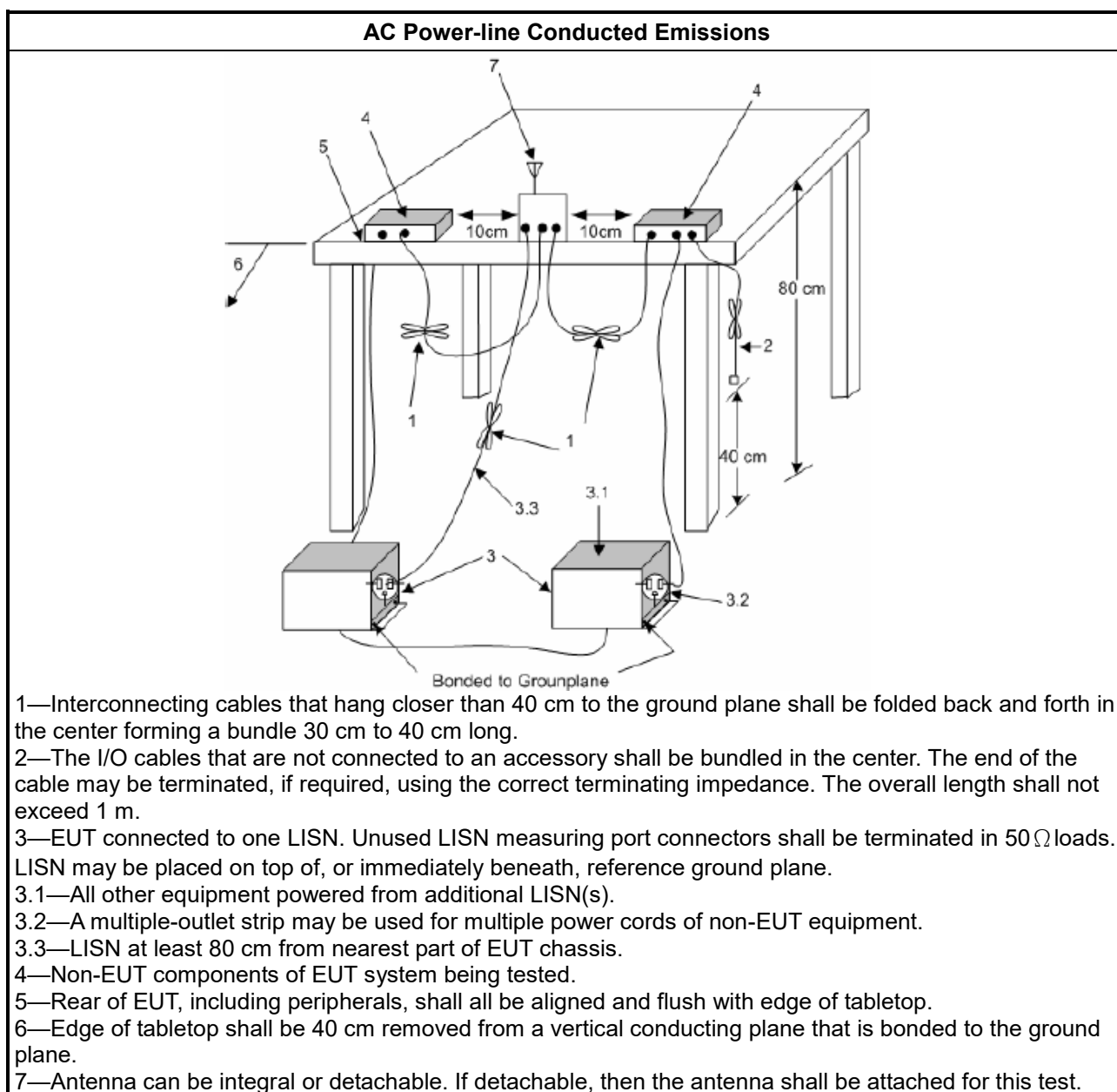
Test Method
☒ Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

3.1.4 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Raw(Read Level) + LISN(LISN Factor) + CL(Cable Loss) + AT(Attenuator).

3.1.5 Test Setup



3.1.6 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 Emission Bandwidth

3.2.1 Emission Bandwidth Limit

Emission Bandwidth Limit	
UNII Devices	
☒	For the 5.15-5.25 GHz band, N/A
☐	For the 5.25-5.35 GHz band, N/A
☐	For the 5.47-5.725 GHz band, N/A
☒	For the 5.725-5.85 GHz band, 6 dB emission bandwidth $\geq$ 500kHz.

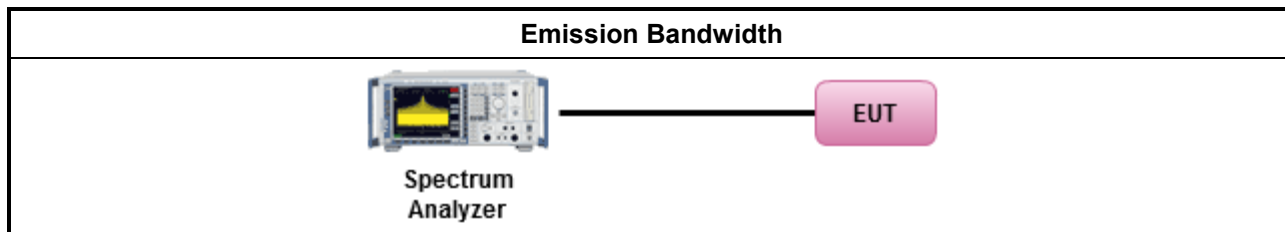
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

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

3.2.4 Test Setup



3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

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

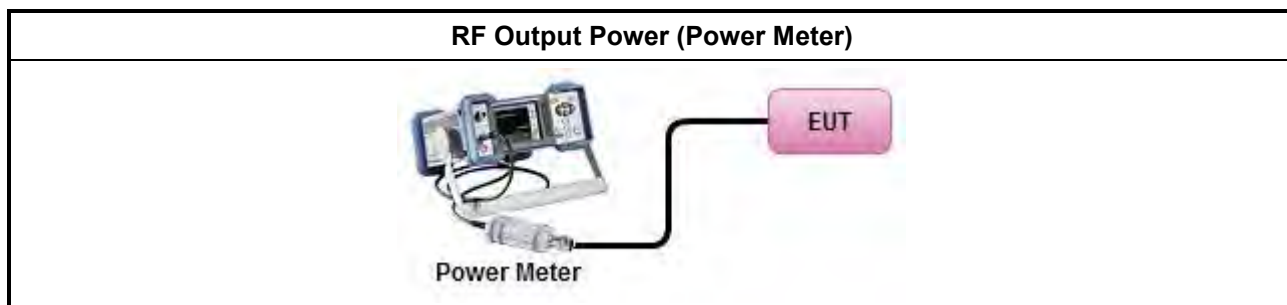
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

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

3.3.4 Test Setup



3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

3.4 Peak Power Spectral Density

3.4.1 Peak Power Spectral Density Limit

Peak Power Spectral Density Limit	
UNII Devices	
☒ For the 5.15-5.25 GHz band:	
	Outdoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$.
	Indoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$.
	Point-to-point AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 23$ dBi, then $P_{Out} = 17 - (G_{TX} - 23)$.
	Mobile or Portable Client: the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.
☐ For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.	
☐ For the 5.47-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.	
☒ For the 5.725-5.85 GHz band:	
	Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If $G_{TX} > 6$ dBi, then $PPSD = 30 - (G_{TX} - 6)$.
	Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.
PPSD = peak power spectral density that the same method as used to determine the conducted output power shall be used to determine the power spectral density. And power spectral density in dBm/MHz G_{TX} = the maximum transmitting antenna directional gain in dBi.	

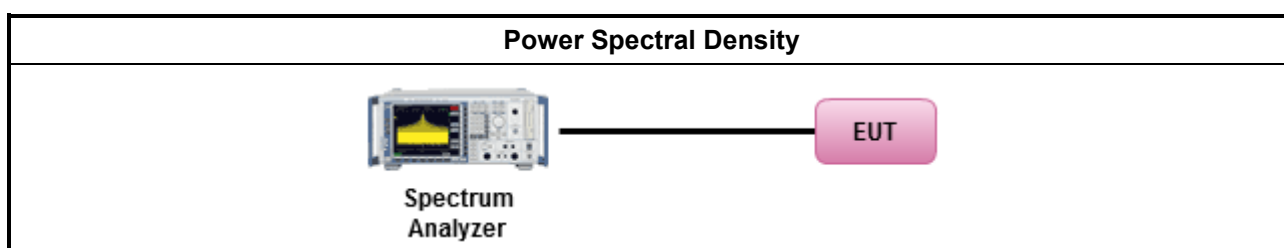
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method	
Peak power spectral density procedures that the same method as used to determine the conducted output power shall be used to determine the peak power spectral density and use the peak search function on the spectrum analyzer to find the peak of the spectrum. For the peak power spectral density shall be measured using below options:	
☐ Refer as KDB 789033, F)5) power spectral density can be measured using resolution bandwidths < 1 MHz provided that the results are integrated over 1 MHz bandwidth	
Duty cycle ≥ 98%	
☒ Refer as KDB 789033, clause E Method SA-2 (spectral trace averaging).	
Duty cycle < 98%	
☒ Refer as KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)	
For conducted measurement.	
If the EUT supports multiple transmit chains using options given below:	
☐ Measure and sum the spectra across the outputs. Refer as KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.	
If multiple transmit chains, EIRP PPSD calculation could be following as methods: $PPSD_{total} = PPSD_1 + PPSD_2 + \dots + PPSD_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = PPSD_{total} + DG$	

3.4.4 Test Setup



3.4.5 Test Result of Peak Power Spectral Density

Refer as Appendix D

3.5 Unwanted Emissions

3.5.1 Transmitter Radiated Unwanted Emissions Limit

Unwanted emissions below 1 GHz and restricted band emissions above 1GHz limit			
Frequency Range (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measure Distance (m)
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

Note 3: Using the distance of 1m during the test for above 18 GHz, and the test value to correct for the distance factor at 3m.

Un-restricted band emissions above 1GHz Limit	
Operating Band	Limit
5.15 - 5.25 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.25 - 5.35 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.47 - 5.725 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.725 - 5.85 GHz	5.650-5700 GHz: e.i.r.p. -27 ~ 10 dBm [68.2 ~ 105.2 dBuV/m@3m] 5.700-5720 GHz: e.i.r.p. 10 ~ 15.6 dBm [105.2 ~ 110.8 dBuV/m@3m] 5.720-5725 GHz: e.i.r.p. 15.6 ~ 27 dBm [110.8 ~ 122.2 dBuV/m@3m] 5.850-5.855 GHz: e.i.r.p. 27 ~ 15.6 dBm [122.2 ~ 110.8 dBuV/m@3m] 5.855-5.875 GHz: e.i.r.p. 15.6 ~ 10 dBm [110.8 ~ 105.2 dBuV/m@3m] 5.875-5.925 GHz: e.i.r.p. 10 ~ -27 dBm [105.2 ~ 68.2dBuV/m@3m] Other un-restricted band: e.i.r.p. -27 dBm [68.2 dBuV/m@3m]

Note 1: Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

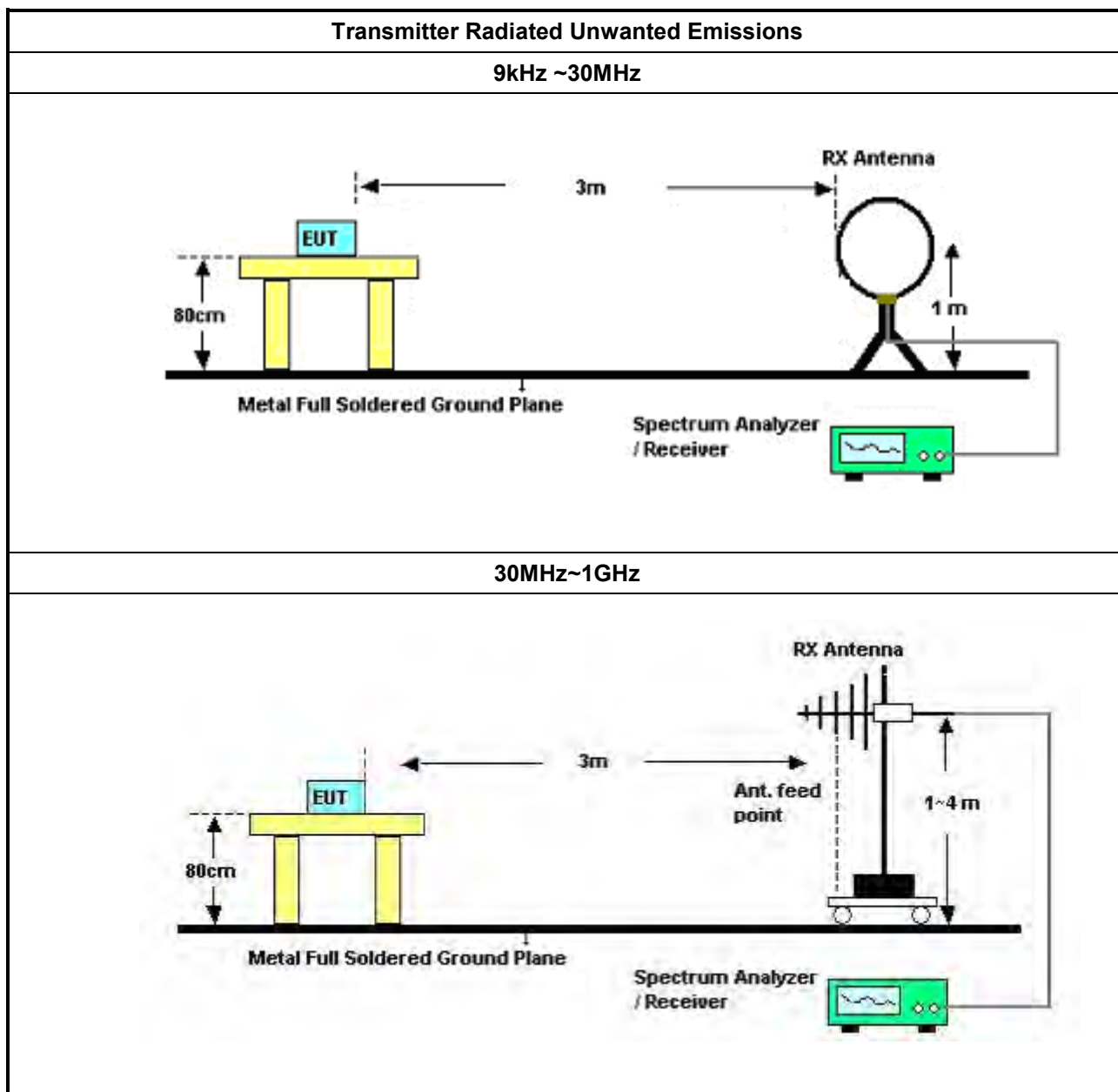
Test Method	
Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 m for frequencies above 30 MHz, unless it can be further demonstrated that measurements at a distance of 30 m or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).	
The average emission levels shall be measured in [duty cycle $\geq$ 98 or duty factor].	
For the transmitter unwanted emissions shall be measured using following options below:	
	Refer as KDB 789033, clause G)2) for unwanted emissions into non-restricted bands.
	Refer as KDB 789033, clause G)1) for unwanted emissions into restricted bands.
	☒ Refer as KDB 789033, G)6) Method VB (ANSI C63.10, clause 4.1.4.2.3), Reduced VBW.
	☒ Refer as KDB 789033, clause G)5) (ANSI C63.10, clause 4.1.4.2.2), measurement procedure peak limit.
For radiated measurement.	
	Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.
	Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.
	Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.
The any unwanted emissions level shall not exceed the fundamental emission level.	
All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.	

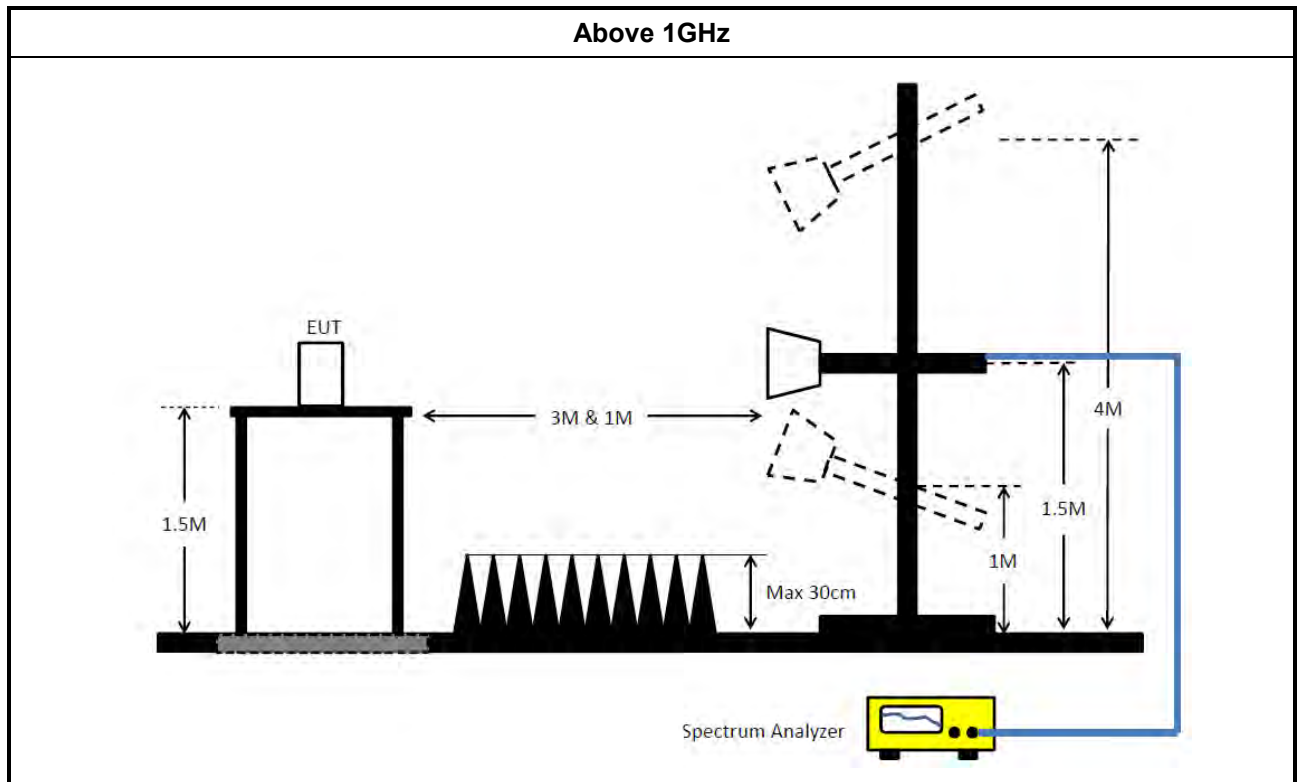
3.5.4 Measurement Results Calculation

The measured Level is calculated using:

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

3.5.5 Test Setup





3.5.6 Transmitter Unwanted Emissions (Below 30MHz)

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

3.5.7 Test Result of Transmitter Unwanted Emissions

Refer as Appendix E

4 Test Equipment and Calibration Data

Instrument for AC Conduction

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
EMC Receiver	R&S	ESR3	102051	9kHz ~ 3.6GHz	29/May/2020	28/May/2021
LISN	R&S	ENV216	101295	9kHz ~ 30MHz	05/Nov/2019	04/Nov/2020
RF Cable-CON	MTJ	RG142	CB002-CO	9kHz ~ 200MHz	23/Sep/2019	22/Sep/2020
AC POWER	APC	AFC-11005G	F310050055	47Hz~63Hz 5~300V	NCR	NCR
Impuls Begrenzer Pulse Limiter	SCHWARZBECK	VTSD 9561-F	9561-F041	9kHz ~ 30 MHz	24/Sep/2019	23/Sep/2020

NCR: No Calibration Required

Instrument for Conducted Test

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Signal Analyzer	R&S	FSV 40	101029	10kHz~40GHz	01/Oct/2019	30/Sep/2020
Signal Analyzer	R&S	FSV 40	101013	10Hz~40GHz	19/Mar/2020	18/Mar/2021
Signal Analyzer	R&S	FSV 40	101013	10Hz~40GHz	30/Mar/2021	29/Mar/2022
SMB100A Signal Generator	R&S	SMB100A03	181147	100kHz~40GHz	12/Nov/2018	11/Nov/2020
SMB100A Signal Generator	R&S	SMB100A03	181147	100kHz~40GHz	20/Oct/2020	19/Oct/2021
Pulse Sensor	Anritsu	MA2411B	1339407	300MHz~40GHz	25/Nov/2019	24/Nov/2020
Power Meter	Anritsu	ML2495A	1517010	300MHz~40GHz	25/Nov/2019	24/Nov/2020
Pulse Sensor	Anritsu	MA2411B	1027452	300MHz~40GHz	18/Mar/2020	17/Mar/2021
Power Meter	Anritsu	ML2495A	1124009	300MHz~40GHz	18/Mar/2020	17/Mar/2021
Pulse Sensor	Anritsu	MA2411B	1339407	300MHz~40GHz	27/Nov/2020	26/Nov/2021
Power Meter	Anritsu	ML2495A	1517010	300MHz~40GHz	27/Nov/2020	26/Nov/2021

Instrument for Radiated Test (03CH02-HY)

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH02-HY	30MHz~1GHz 3m	29/Aug/2019	28/Aug/2020
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH02-HY	1GHz~18GHz 3m	29/Aug/2019	28/Aug/2020
Signal Analyzer	R&S	FSP40	100593	1GHz~26.5GHz	27/Feb/2020	26/Feb/2021
Amplifier	Agilent	8447D	2944A11149	100kHz~1.3GHz	02/Jul/2019	01/Jul/2020
Microwave Preamplifier	EMC INSTRUMENT	EMC051845BE	980241	1GHz~18GHz	21/May/2019	20/May/2020
Microwave Preamplifier	Agilent	8449B	3008A02373	1GHz~18GHz	16/Oct/2019	15/Oct/2020
Bilog Antenna & 5dB Attenuator	SCHAFFNER / MTJ	CBL 6112B / MTJ6102-05	2723 / 2	30MHz~1GHz	28/Feb/2020	27/Feb/2021
Double Ridged Guide Horn Antenna	COM-POWER	AH-118	10094	1GHz~18GHz	17/Jul/2019	16/Jul/2020
Double Ridged Guide Horn Antenna	SCHWARZBEC	BBHA 9120 D	BBHA 9120 D 01543	1GHz~18GHz	03/Jun/2019	02/Jun/2020
RF Cable-R03m	Jye Bao	RG142	CB017	30MHz~1GHz	25/Mar/2020	24/Mar/2021
RF Cable-high 6m	HUBER+SUHNER	SUCOFLEX104	SN 805193/4	1GHz~40GHz	09/Apr/2019	08/Apr/2020
RF Cable-high 7m	HUBER+SUHNER	SUCOFLEX104	SN 805192/4	1GHz~40GHz	09/Apr/2019	08/Apr/2020
RF Cable-R03m	HUBER+SUHNER	SUCOFLEX104	805193/4+805192/4	1GHz~40GHz	08/Apr/2020	07/Apr/2021
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170614	18GHz~40GHz	22/May/2019	21/May/2020
Preamplifier	MITEQ	TTA1840-35-HG	1864481	18GHz~40GHz	10/Mar/2020	09/Mar/2021
Loop Antenna	Teseq	HLA 6120	24155	9kHz~30MHz	13/Apr/2020	12/Apr/2021
EMI Test Receiver	R&S	ESR3	102051	9kHz~3.6GHz	28/May/2019	27/May/2020

**Instrument for Radiated Test (03CH09-HY)**

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	1GHz~18GHz 3m	19/Mar/2020	18/Mar/2021
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	1GHz~18GHz 3m	18/Mar/2021	17/Mar/2022
EXA Signal Analyzer	KEYSIGHT	N9010A	MY54200885	10Hz~44GHz	07/Aug/2019	06/Aug/2020
EXA Signal Analyzer	KEYSIGHT	N9010A	MY54200882	10Hz~44GHz	29/Jul/2020	28/Jul/2021
Microwave Preamplifier	Agilent	8449B	3008A02096	1GHz~26.5GHz	04/Sep/2019	03/Sep/2020
Microwave Preamplifier	Agilent	8449B	3008A02096	1GHz~26.5GHz	24/Jul/2020	23/Jul/2021
Microwave Preamplifier with 10dB Attenuator	EMC / Woken	EMC051845 & WK0602-10	980240 & 01	1GHz~18GHz	10/Jan/2020	09/Jan/2021
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA9120 D 1534	1GHz~18GHz	22/May/2019	21/May/2020
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA9120 D 1534	1GHz~18GHz	28/May/2020	27/May/2021
Double Ridged Guide Horn Antenna	COM-POWER	AH-118	071028	1GHz~18GHz	09/Jun/2020	08/Jun/2021
RF CABLE 5m+3m+1m	HUBER+SUHNER	SUCOFLEX104	SN MY25918/4+ SN MY39478/4 + SN 324530/4	1GHz~40GHz	15/Aug/2020	14/Aug/2021
RF Cable-high	HUBER+SUHNER	SUCOFLEX104	324530/4+17173/4	1GHz~40GHz	12/Feb/2020	11/Feb/2021
Preamplifier	MITEQ	TTA1840-35-HG	1864481	18GHz~40GHz	10/Mar/2020	09/Mar/2021
Microwave Preamplifier	EMC INSTRUMENTS	EM18G40G	060604	18GHz~40GHz	09/Mar/2021	08/Mar/2022
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170221	18GHz~40GHz	11/Mar/2021	10/Mar/2022

**Summary**

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	AV	432.041k	24.73	47.20	-22.47	Line
Mode 2	Pass	AV	432.041k	24.50	47.20	-22.70	Line

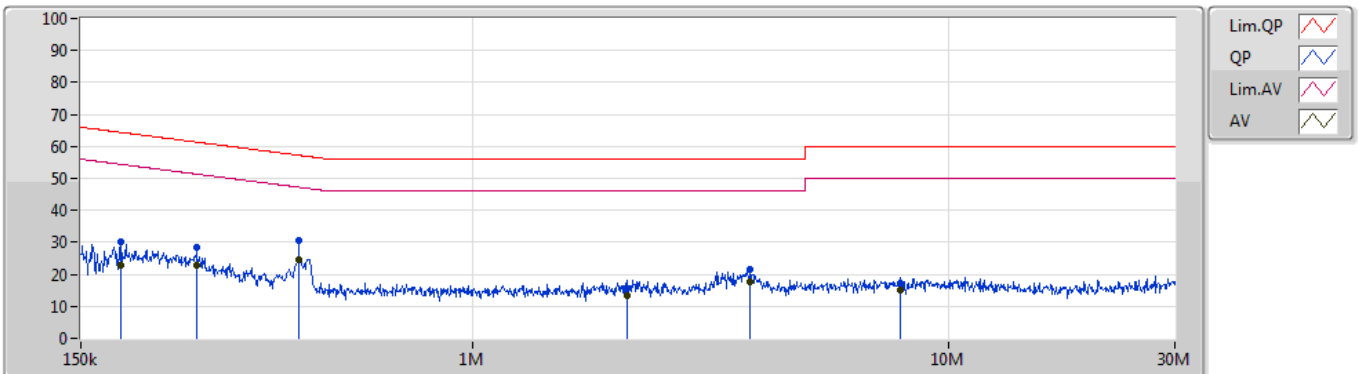
Mode Configure

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition	Comments
Mode 1	Pass	QP	181.681k	30.27	64.41	-34.14	Line	-
Mode 1	Pass	AV	181.681k	22.95	54.41	-31.46	Line	-
Mode 1	Pass	QP	263.357k	28.65	61.32	-32.67	Line	-
Mode 1	Pass	AV	263.357k	22.88	51.32	-28.44	Line	-
Mode 1	Pass	QP	432.041k	30.78	57.20	-26.42	Line	-
Mode 1	Pass	AV	432.041k	24.73	47.20	-22.47	Line	"Worst"
Mode 1	Pass	QP	2.108M	15.68	56.00	-40.32	Line	-
Mode 1	Pass	AV	2.108M	13.54	46.00	-32.46	Line	-
Mode 1	Pass	QP	3.836M	21.38	56.00	-34.62	Line	-
Mode 1	Pass	AV	3.836M	17.78	46.00	-28.22	Line	-
Mode 1	Pass	QP	7.964M	17.26	60.00	-42.74	Line	-
Mode 1	Pass	AV	7.964M	15.19	50.00	-34.81	Line	-
Mode 1	Pass	QP	175.97k	29.36	64.68	-35.32	Neutral	-
Mode 1	Pass	AV	175.97k	21.76	54.68	-32.92	Neutral	-
Mode 1	Pass	QP	255.079k	26.88	61.58	-34.70	Neutral	-
Mode 1	Pass	AV	255.079k	21.23	51.58	-30.35	Neutral	-
Mode 1	Pass	QP	433.769k	28.84	57.19	-28.35	Neutral	-
Mode 1	Pass	AV	433.769k	22.36	47.19	-24.83	Neutral	"Worst"
Mode 1	Pass	QP	2.274M	17.04	56.00	-38.96	Neutral	-
Mode 1	Pass	AV	2.274M	14.34	46.00	-31.66	Neutral	-
Mode 1	Pass	QP	3.851M	20.80	56.00	-35.20	Neutral	-
Mode 1	Pass	AV	3.851M	16.76	46.00	-29.24	Neutral	-
Mode 1	Pass	QP	9.306M	17.55	60.00	-42.45	Neutral	-
Mode 1	Pass	AV	9.306M	15.15	50.00	-34.85	Neutral	-
Mode 2	Pass	QP	164.425k	30.57	65.24	-34.67	Line	-
Mode 2	Pass	AV	164.425k	22.22	55.24	-33.02	Line	-
Mode 2	Pass	QP	259.185k	29.64	61.45	-31.81	Line	-
Mode 2	Pass	AV	259.185k	24.16	51.45	-27.29	Line	-
Mode 2	Pass	QP	432.041k	30.52	57.20	-26.68	Line	-
Mode 2	Pass	AV	432.041k	24.50	47.20	-22.70	Line	"Worst"
Mode 2	Pass	QP	2.366M	17.24	56.00	-38.76	Line	-
Mode 2	Pass	AV	2.366M	14.54	46.00	-31.46	Line	-
Mode 2	Pass	QP	3.701M	21.39	56.00	-34.61	Line	-
Mode 2	Pass	AV	3.701M	17.31	46.00	-28.69	Line	-
Mode 2	Pass	QP	9.723M	17.38	60.00	-42.62	Line	-
Mode 2	Pass	AV	9.723M	15.09	50.00	-34.91	Line	-
Mode 2	Pass	QP	156.109k	32.31	65.67	-33.36	Neutral	-
Mode 2	Pass	AV	156.109k	20.98	55.67	-34.69	Neutral	-
Mode 2	Pass	QP	195.997k	27.57	63.78	-36.21	Neutral	-
Mode 2	Pass	AV	195.997k	20.90	53.78	-32.88	Neutral	-
Mode 2	Pass	QP	433.769k	28.52	57.19	-28.67	Neutral	-
Mode 2	Pass	AV	433.769k	22.20	47.19	-24.99	Neutral	"Worst"
Mode 2	Pass	QP	2.211M	18.83	56.00	-37.17	Neutral	-

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition	Comments
Mode 2	Pass	AV	2.211M	14.77	46.00	-31.23	Neutral	-
Mode 2	Pass	QP	4.089M	18.36	56.00	-37.64	Neutral	-
Mode 2	Pass	AV	4.089M	15.23	46.00	-30.77	Neutral	-
Mode 2	Pass	QP	9.493M	17.05	60.00	-42.95	Neutral	-
Mode 2	Pass	AV	9.493M	14.99	50.00	-35.01	Neutral	-

Conducted Emissions at Powerline_Mode 1

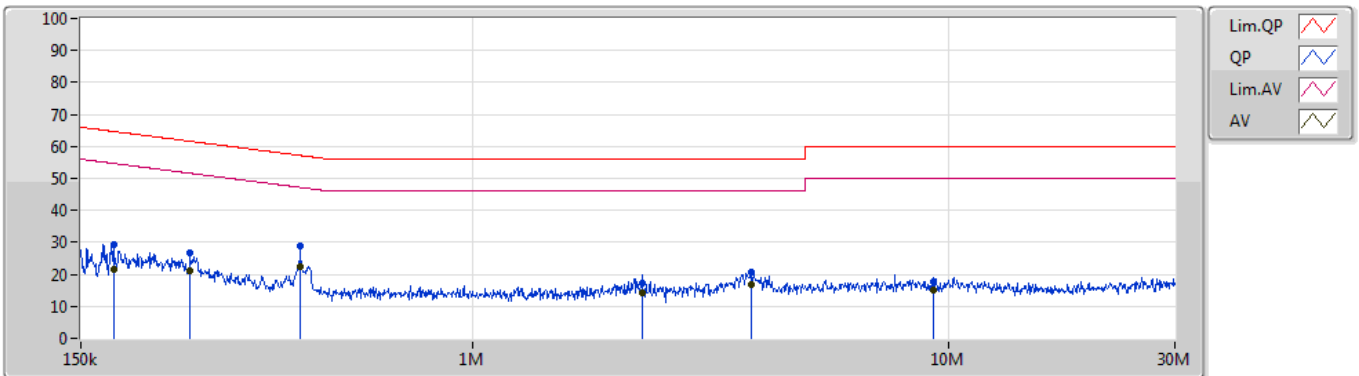
10/07/2020



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	181.681k	30.27	64.41	-34.14	19.63	Line	-	10.64	9.65	0.11	9.87			
AV	181.681k	22.95	54.41	-31.46	19.63	Line	-	3.32	9.65	0.11	9.87			
QP	263.357k	28.65	61.32	-32.67	19.64	Line	-	9.01	9.65	0.12	9.87			
AV	263.357k	22.88	51.32	-28.44	19.64	Line	-	3.24	9.65	0.12	9.87			
QP	432.041k	30.78	57.20	-26.42	19.64	Line	-	11.14	9.64	0.13	9.87			
AV	432.041k	24.73	47.20	-22.47	19.64	Line	"Worst"	5.09	9.64	0.13	9.87			
QP	2.108M	15.68	56.00	-40.32	19.66	Line	-	-3.98	9.65	0.14	9.87			
AV	2.108M	13.54	46.00	-32.46	19.66	Line	-	-6.12	9.65	0.14	9.87			
QP	3.836M	21.38	56.00	-34.62	19.72	Line	-	1.66	9.66	0.18	9.88			
AV	3.836M	17.78	46.00	-28.22	19.72	Line	-	-1.94	9.66	0.18	9.88			
QP	7.964M	17.26	60.00	-42.74	19.81	Line	-	-2.55	9.68	0.25	9.88			
AV	7.964M	15.19	50.00	-34.81	19.81	Line	-	-4.62	9.68	0.25	9.88			

Conducted Emissions at Powerline_Mode 1

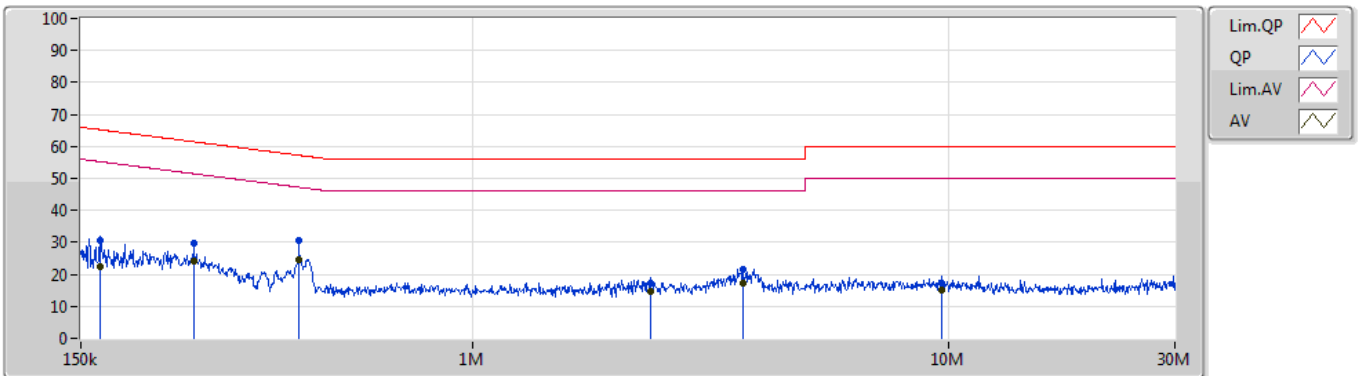
10/07/2020



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT			
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)			
QP	175.97k	29.36	64.68	-35.32	19.62	Neutral	-	9.74	9.64	0.11	9.87			
AV	175.97k	21.76	54.68	-32.92	19.62	Neutral	-	2.14	9.64	0.11	9.87			
QP	255.079k	26.88	61.58	-34.70	19.63	Neutral	-	7.25	9.64	0.12	9.87			
AV	255.079k	21.23	51.58	-30.35	19.63	Neutral	-	1.60	9.64	0.12	9.87			
QP	433.769k	28.84	57.19	-28.35	19.63	Neutral	-	9.21	9.63	0.13	9.87			
AV	433.769k	22.36	47.19	-24.83	19.63	Neutral	"Worst"	2.73	9.63	0.13	9.87			
QP	2.274M	17.04	56.00	-38.96	19.67	Neutral	-	-2.63	9.65	0.15	9.87			
AV	2.274M	14.34	46.00	-31.66	19.67	Neutral	-	-5.33	9.65	0.15	9.87			
QP	3.851M	20.80	56.00	-35.20	19.72	Neutral	-	1.08	9.66	0.18	9.88			
AV	3.851M	16.76	46.00	-29.24	19.72	Neutral	-	-2.96	9.66	0.18	9.88			
QP	9.306M	17.55	60.00	-42.45	19.84	Neutral	-	-2.29	9.70	0.26	9.88			
AV	9.306M	15.15	50.00	-34.85	19.84	Neutral	-	-4.69	9.70	0.26	9.88			

Conducted Emissions at Powerline_Mode 2

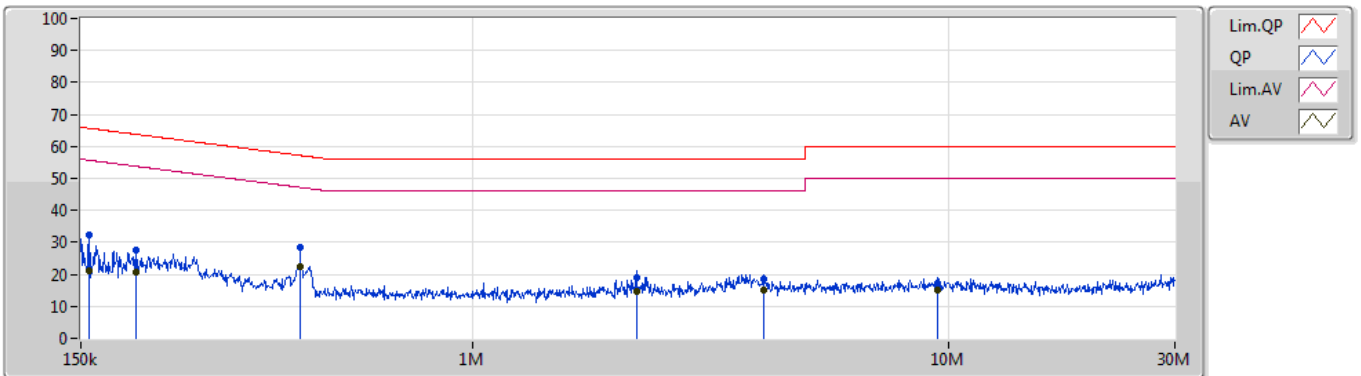
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Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	164.425k	30.57	65.24	-34.67	19.64	Line	-	10.93	9.66	0.11	9.87			
AV	164.425k	22.22	55.24	-33.02	19.64	Line	-	2.58	9.66	0.11	9.87			
QP	259.185k	29.64	61.45	-31.81	19.64	Line	-	10.00	9.65	0.12	9.87			
AV	259.185k	24.16	51.45	-27.29	19.64	Line	-	4.52	9.65	0.12	9.87			
QP	432.041k	30.52	57.20	-26.68	19.64	Line	-	10.88	9.64	0.13	9.87			
AV	432.041k	24.50	47.20	-22.70	19.64	Line	"Worst"	4.86	9.64	0.13	9.87			
QP	2.366M	17.24	56.00	-38.76	19.67	Line	-	-2.43	9.65	0.15	9.87			
AV	2.366M	14.54	46.00	-31.46	19.67	Line	-	-5.13	9.65	0.15	9.87			
QP	3.701M	21.39	56.00	-34.61	19.72	Line	-	1.67	9.66	0.18	9.88			
AV	3.701M	17.31	46.00	-28.69	19.72	Line	-	-2.41	9.66	0.18	9.88			
QP	9.723M	17.38	60.00	-42.62	19.84	Line	-	-2.46	9.69	0.27	9.88			
AV	9.723M	15.09	50.00	-34.91	19.84	Line	-	-4.75	9.69	0.27	9.88			

Conducted Emissions at Powerline_Mode 2

10/07/2020



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	156.109k	32.31	65.67	-33.36	19.63	Neutral	-	12.68	9.65	0.11	9.87			
AV	156.109k	20.98	55.67	-34.69	19.63	Neutral	-	1.35	9.65	0.11	9.87			
QP	195.997k	27.57	63.78	-36.21	19.62	Neutral	-	7.95	9.64	0.11	9.87			
AV	195.997k	20.90	53.78	-32.88	19.62	Neutral	-	1.28	9.64	0.11	9.87			
QP	433.769k	28.52	57.19	-28.67	19.63	Neutral	-	8.89	9.63	0.13	9.87			
AV	433.769k	22.20	47.19	-24.99	19.63	Neutral	"Worst"	2.57	9.63	0.13	9.87			
QP	2.211M	18.83	56.00	-37.17	19.67	Neutral	-	-0.84	9.65	0.15	9.87			
AV	2.211M	14.77	46.00	-31.23	19.67	Neutral	-	-4.90	9.65	0.15	9.87			
QP	4.089M	18.36	56.00	-37.64	19.72	Neutral	-	-1.36	9.66	0.18	9.88			
AV	4.089M	15.23	46.00	-30.77	19.72	Neutral	-	-4.49	9.66	0.18	9.88			
QP	9.493M	17.05	60.00	-42.95	19.84	Neutral	-	-2.79	9.70	0.26	9.88			
AV	9.493M	14.99	50.00	-35.01	19.84	Neutral	-	-4.85	9.70	0.26	9.88			

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
11a-5M_Nss1_2TX	4.86M	4.07M	4M07D1D	4.665M	4.07M
11a-10M_Nss1_2TX	9.675M	8.141M	8M14D1D	9.03M	8.126M
11a-20M_Nss1_2TX	19.17M	16.252M	16M3D1D	18.78M	16.252M
11n-5M_Nss1_2TX	5.153M	4.378M	4M38D1D	5.033M	4.355M
11n-10M_Nss1_2TX	10.35M	8.756M	8M76D1D	10.125M	8.726M
802.11ac VHT20_Nss1_2TX	20.01M	17.361M	17M4D1D	19.65M	17.361M
802.11ac VHT40_Nss1_2TX	41.46M	35.922M	35M9D1D	40.56M	35.862M
802.11ac VHT80_Nss1_2TX	82.44M	74.843M	74M8D1D	81.6M	74.843M
5.725-5.85GHz	-	-	-	-	-
11a-5M_Nss1_2TX	4.043M	4.115M	4M12D1D	3.833M	4.063M
11a-10M_Nss1_2TX	8.145M	9.22M	9M22D1D	7.95M	8.171M
11a-20M_Nss1_2TX	15.84M	25.487M	25M5D1D	14.97M	16.252M
11n-5M_Nss1_2TX	4.313M	4.453M	4M45D1D	4.163M	4.37M
11n-10M_Nss1_2TX	8.775M	13.103M	13M1D1D	8.475M	10.885M
802.11ac VHT20_Nss1_2TX	15.42M	20.42M	20M4D1D	14.4M	17.361M
802.11ac VHT40_Nss1_2TX	35.04M	41.619M	41M6D1D	33.78M	36.042M
802.11ac VHT80_Nss1_2TX	73.92M	88.756M	88M8D1D	72.48M	76.042M

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

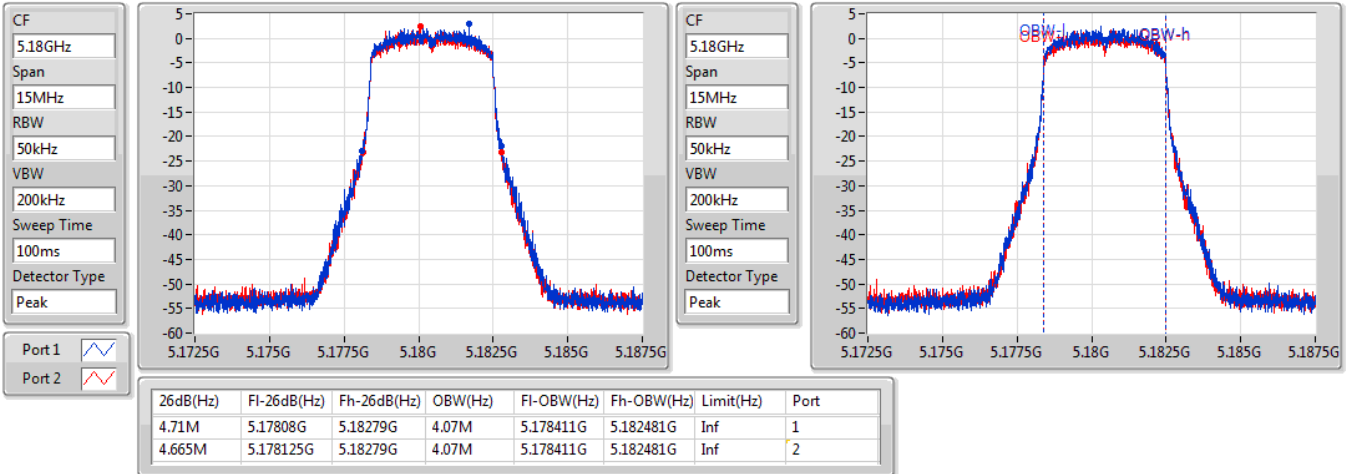
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
11a-5M_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	4.71M	4.07M	4.665M	4.07M
5200MHz	Pass	Inf	4.808M	4.07M	4.793M	4.07M
5240MHz	Pass	Inf	4.823M	4.07M	4.86M	4.07M
5745MHz	Pass	500k	3.99M	4.078M	3.915M	4.063M
5785MHz	Pass	500k	3.833M	4.063M	3.998M	4.07M
5825MHz	Pass	500k	3.863M	4.078M	4.043M	4.115M
11a-10M_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	9.03M	8.126M	9.675M	8.126M
5200MHz	Pass	Inf	9.09M	8.126M	9.6M	8.126M
5240MHz	Pass	Inf	9.135M	8.126M	9.585M	8.141M
5745MHz	Pass	500k	7.95M	8.201M	7.965M	9.22M
5785MHz	Pass	500k	8.145M	8.186M	7.98M	9.07M
5825MHz	Pass	500k	8.13M	8.171M	8.055M	8.291M
11a-20M_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	18.96M	16.252M	19.17M	16.252M
5200MHz	Pass	Inf	18.87M	16.252M	19.17M	16.252M
5240MHz	Pass	Inf	18.78M	16.252M	18.93M	16.252M
5745MHz	Pass	500k	15.06M	17.361M	15.84M	24.438M
5785MHz	Pass	500k	15.12M	18.471M	15.27M	25.487M
5825MHz	Pass	500k	15.3M	16.342M	14.97M	16.252M
11n-5M_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	5.07M	4.363M	5.093M	4.378M
5200MHz	Pass	Inf	5.153M	4.37M	5.033M	4.355M
5240MHz	Pass	Inf	5.123M	4.37M	5.153M	4.363M
5745MHz	Pass	500k	4.253M	4.453M	4.313M	4.43M
5785MHz	Pass	500k	4.238M	4.378M	4.215M	4.37M
5825MHz	Pass	500k	4.26M	4.445M	4.163M	4.438M
11n-10M_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	10.305M	8.726M	10.125M	8.741M
5200MHz	Pass	Inf	10.35M	8.741M	10.17M	8.756M
5240MHz	Pass	Inf	10.14M	8.741M	10.275M	8.726M
5745MHz	Pass	500k	8.595M	11.304M	8.475M	10.885M
5785MHz	Pass	500k	8.7M	13.103M	8.7M	12.789M
5825MHz	Pass	500k	8.52M	11.934M	8.775M	12.489M
802.11ac VHT20_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	19.95M	17.361M	19.98M	17.361M
5200MHz	Pass	Inf	19.95M	17.361M	19.65M	17.361M
5240MHz	Pass	Inf	20.01M	17.361M	19.71M	17.361M
5745MHz	Pass	500k	15.09M	17.451M	15.06M	17.841M
5785MHz	Pass	500k	15.09M	17.361M	15M	17.601M
5825MHz	Pass	500k	14.4M	17.751M	15.42M	20.42M
802.11ac VHT40_Nss1_2TX	-	-	-	-	-	-
5190MHz	Pass	Inf	40.56M	35.862M	40.62M	35.862M
5230MHz	Pass	Inf	41.04M	35.922M	41.46M	35.922M
5755MHz	Pass	500k	35.04M	36.222M	34.98M	41.619M
5795MHz	Pass	500k	34.92M	36.042M	33.78M	37.601M
802.11ac VHT80_Nss1_2TX	-	-	-	-	-	-
5210MHz	Pass	Inf	82.44M	74.843M	81.6M	74.843M
5775MHz	Pass	500k	73.92M	76.042M	72.48M	88.756M

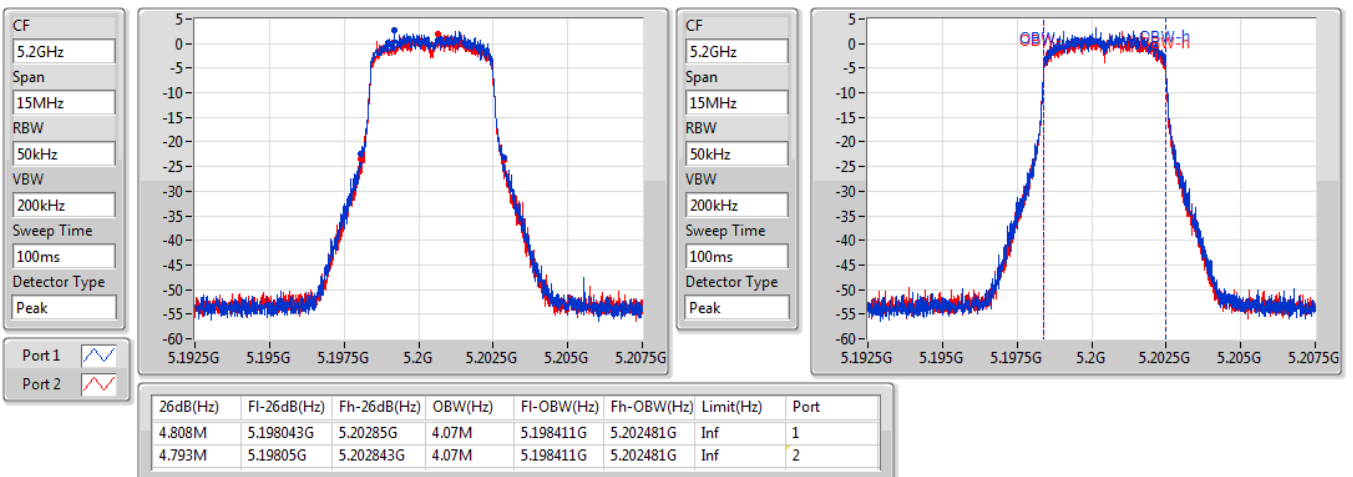
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

11a-5M_Nss1_2TX
EBW
5180MHz

13/03/2020

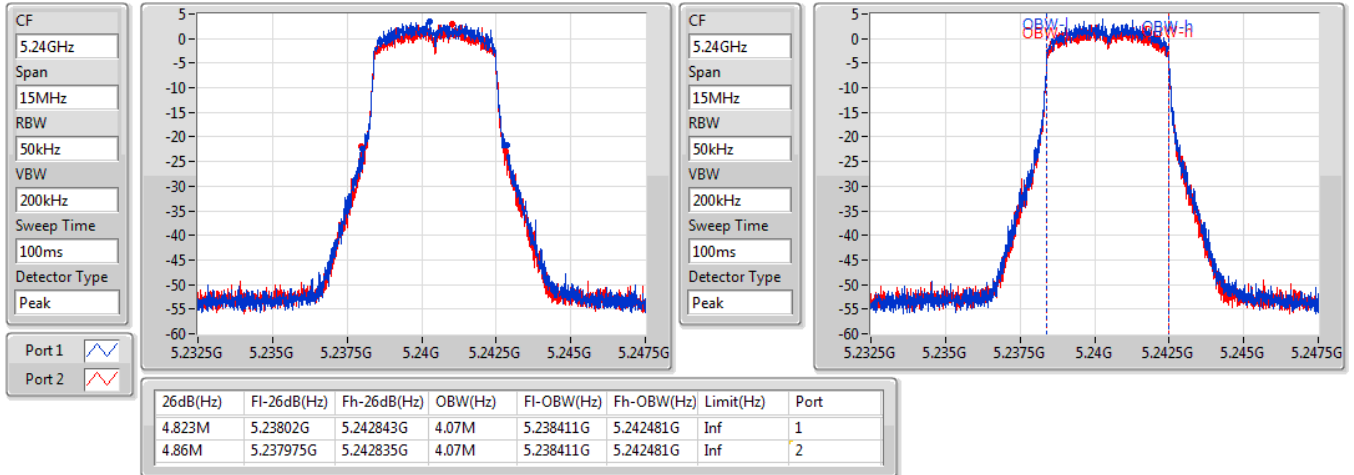

11a-5M_Nss1_2TX
EBW
5200MHz

13/03/2020

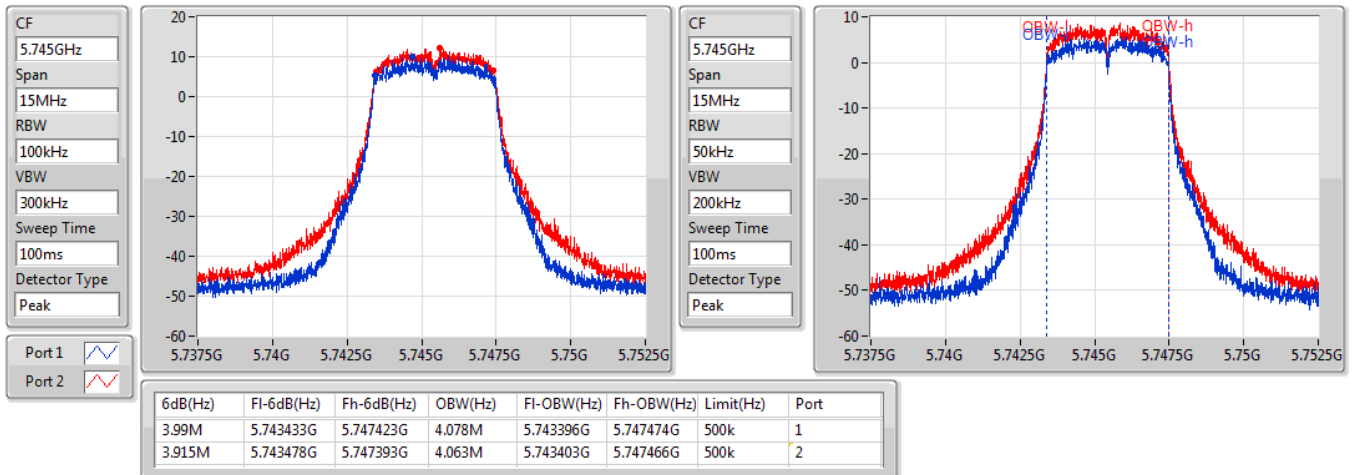


11a-5M_Nss1_2TX
EBW
5240MHz

13/03/2020

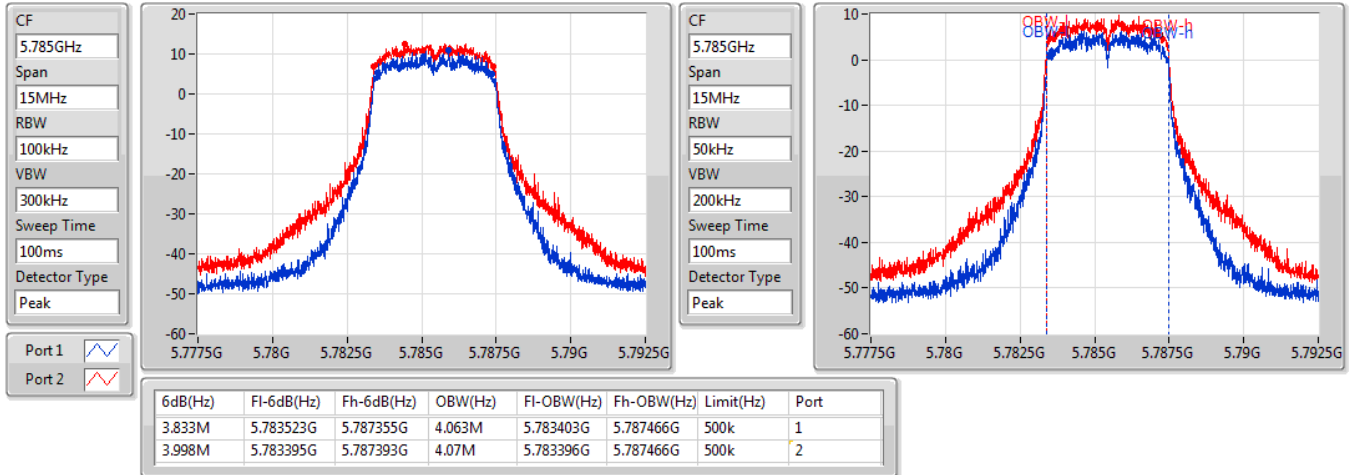

11a-5M_Nss1_2TX
EBW
5745MHz

13/03/2020

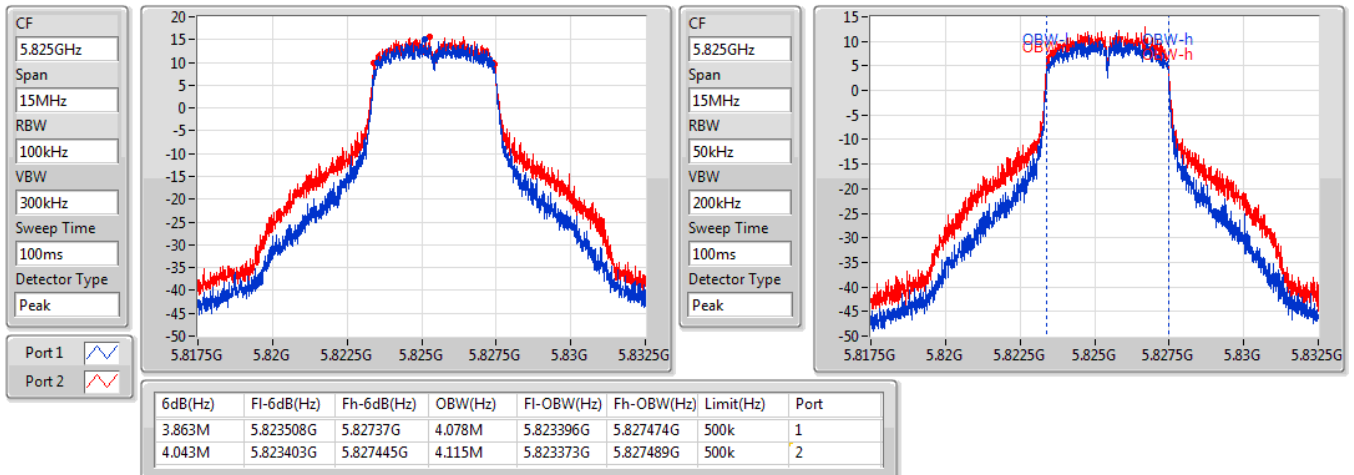


11a-5M_Nss1_2TX
EBW
5785MHz

13/03/2020

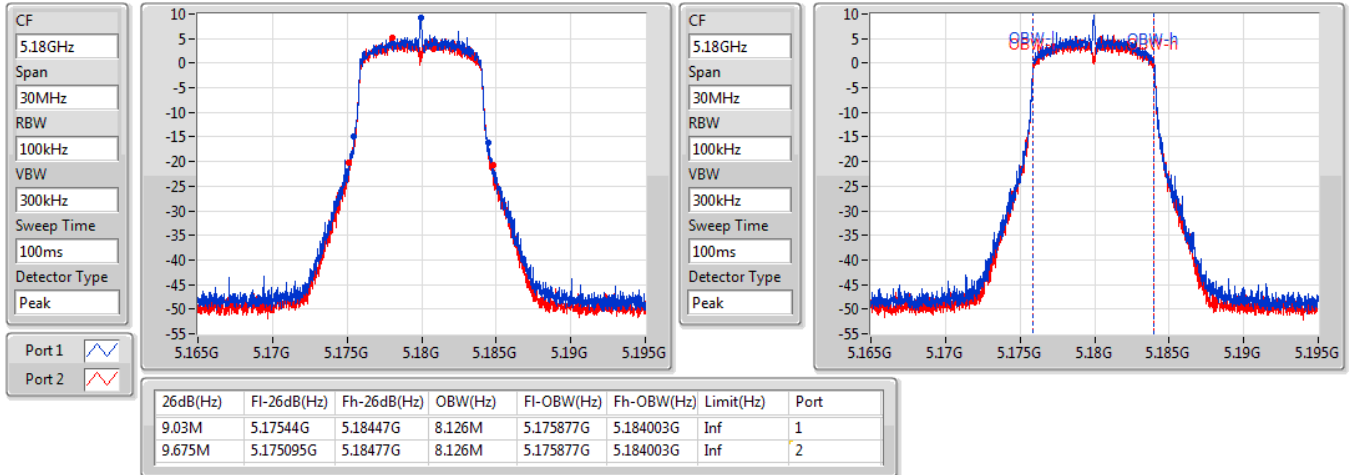

11a-5M_Nss1_2TX
EBW
5825MHz

13/03/2020

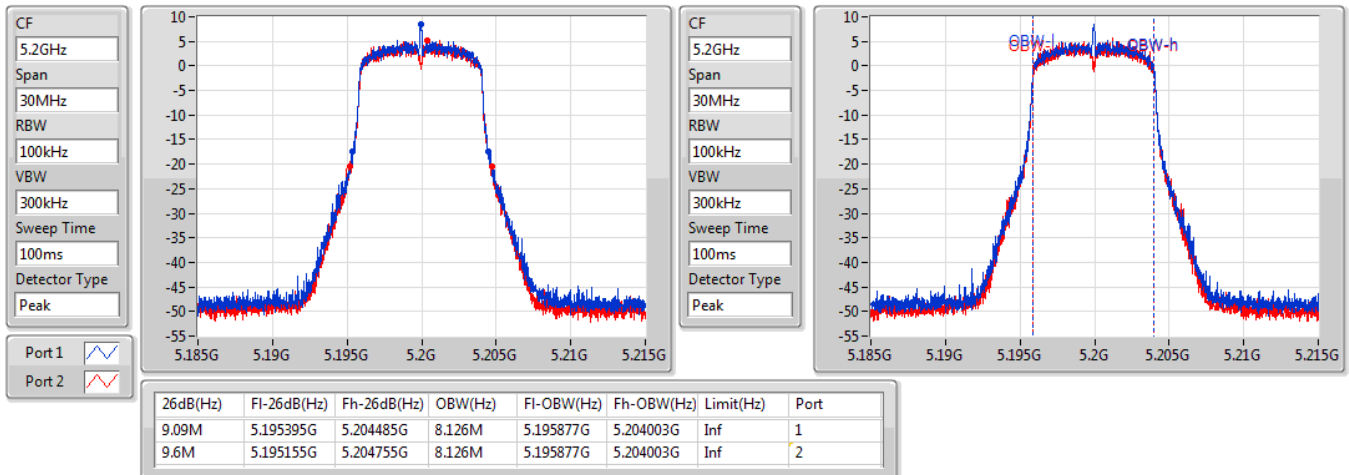


11a-10M_Nss1_2TX
EBW
5180MHz

13/03/2020

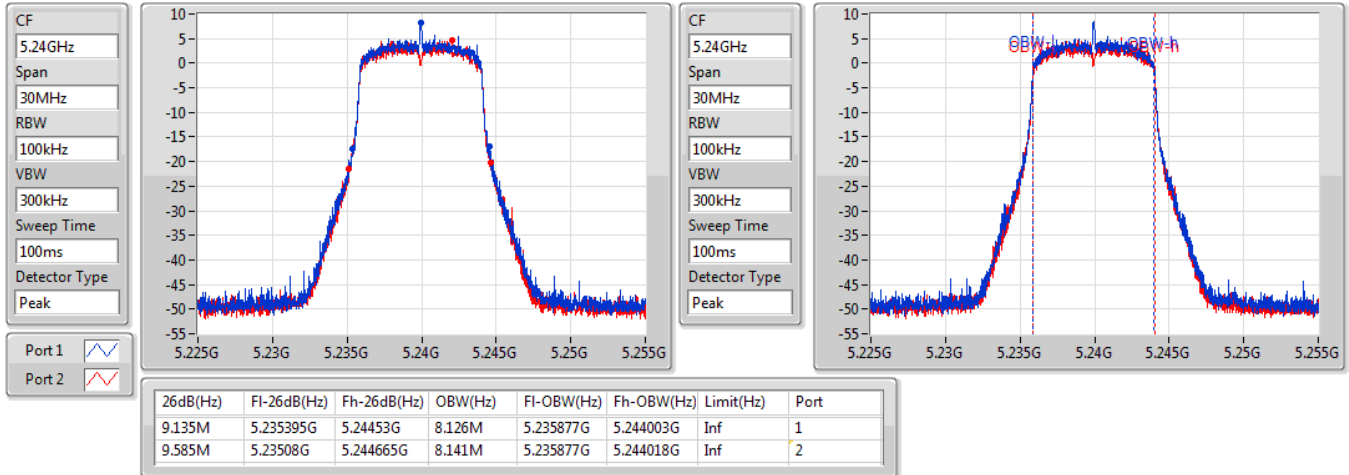

11a-10M_Nss1_2TX
EBW
5200MHz

13/03/2020

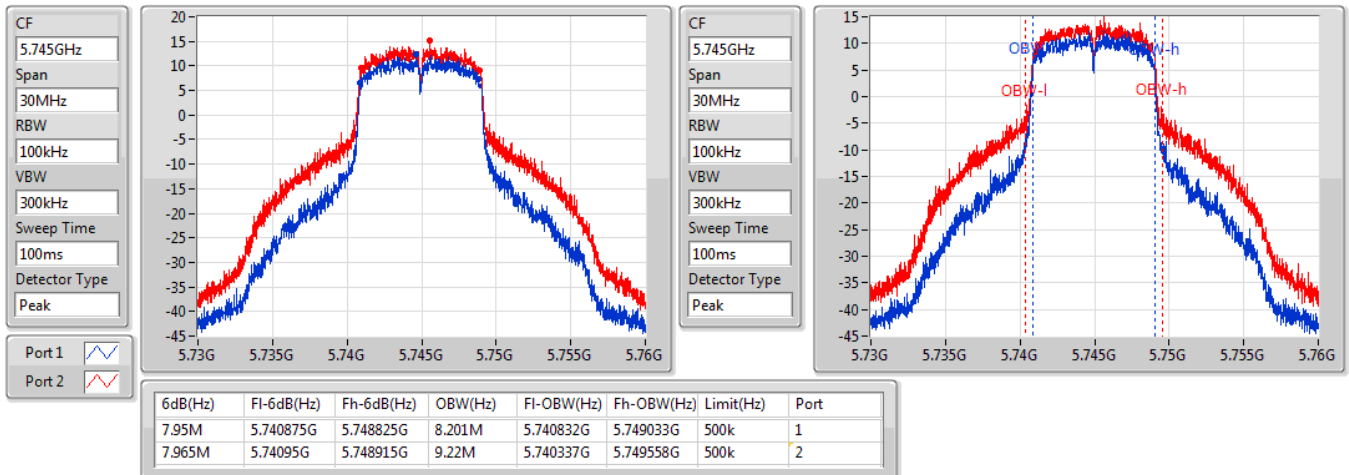


11a-10M_Nss1_2TX
EBW
5240MHz

13/03/2020

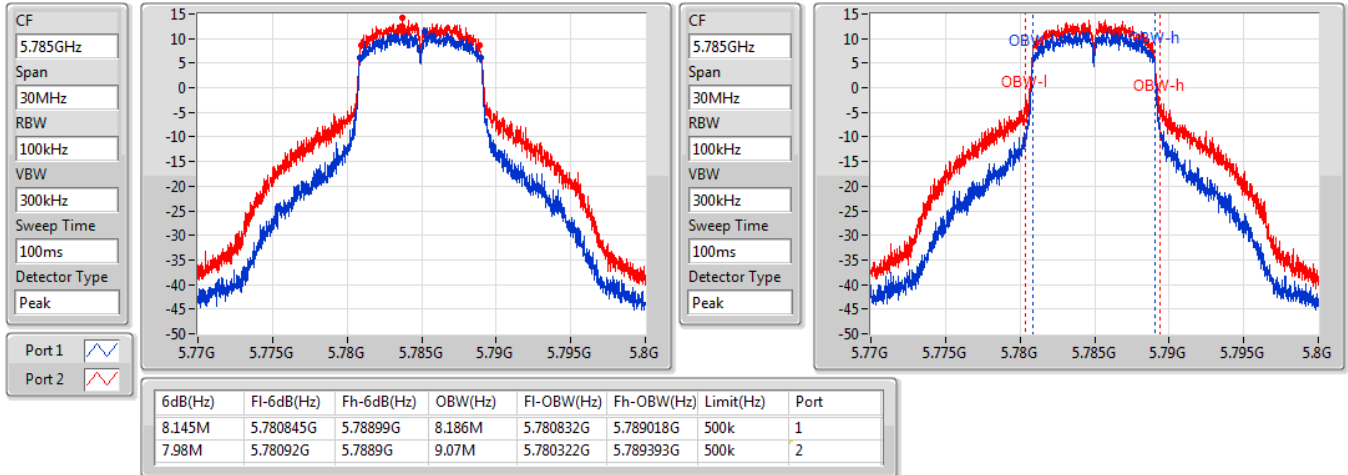

11a-10M_Nss1_2TX
EBW
5745MHz

13/03/2020

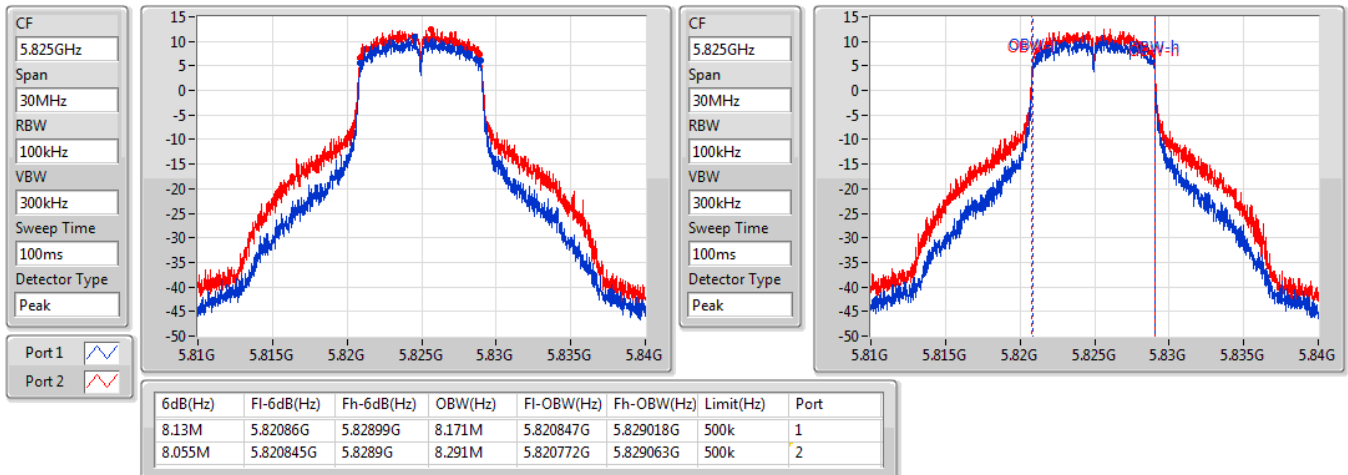


11a-10M_Nss1_2TX
EBW
5785MHz

13/03/2020

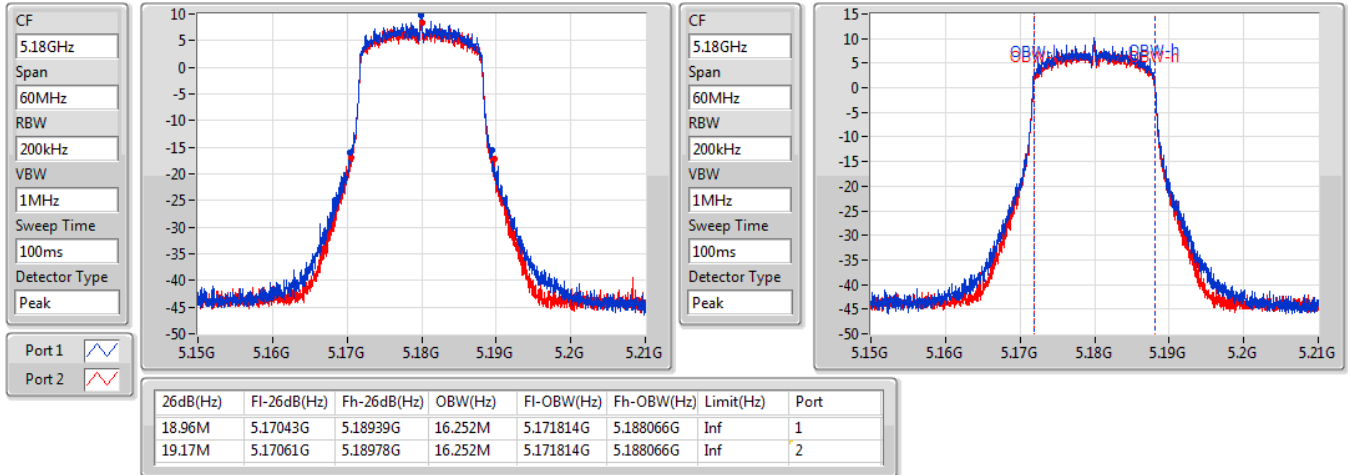

11a-10M_Nss1_2TX
EBW
5825MHz

13/03/2020

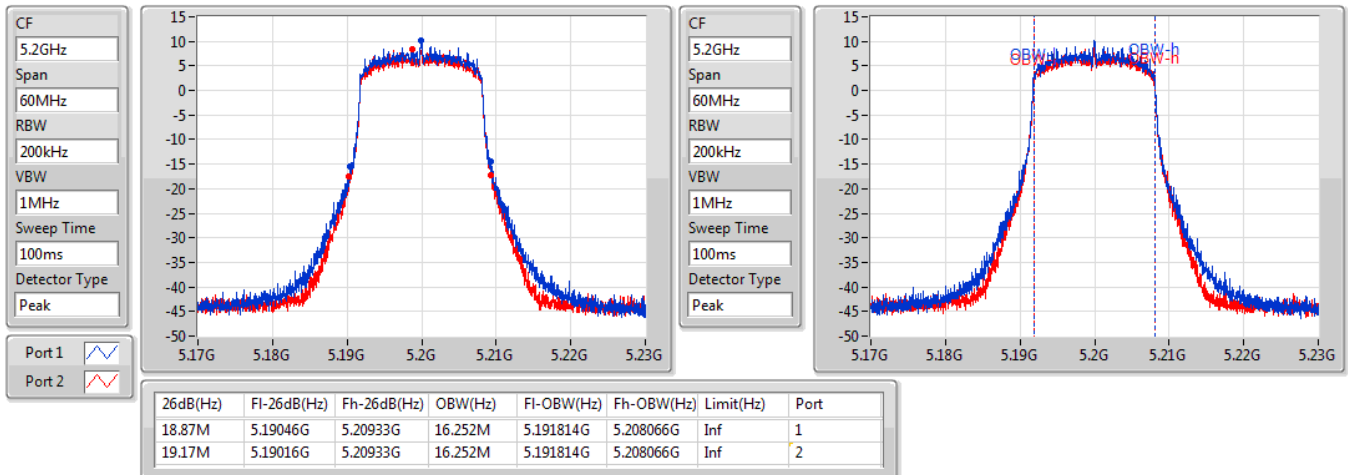


11a-20M_Nss1_2TX
EBW
5180MHz

13/03/2020

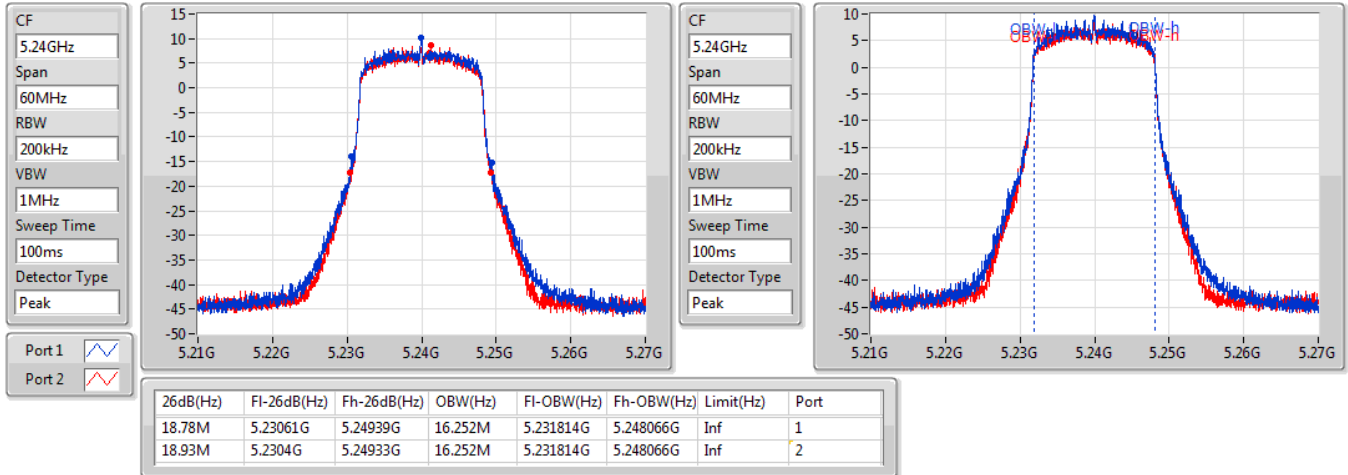

11a-20M_Nss1_2TX
EBW
5200MHz

13/03/2020

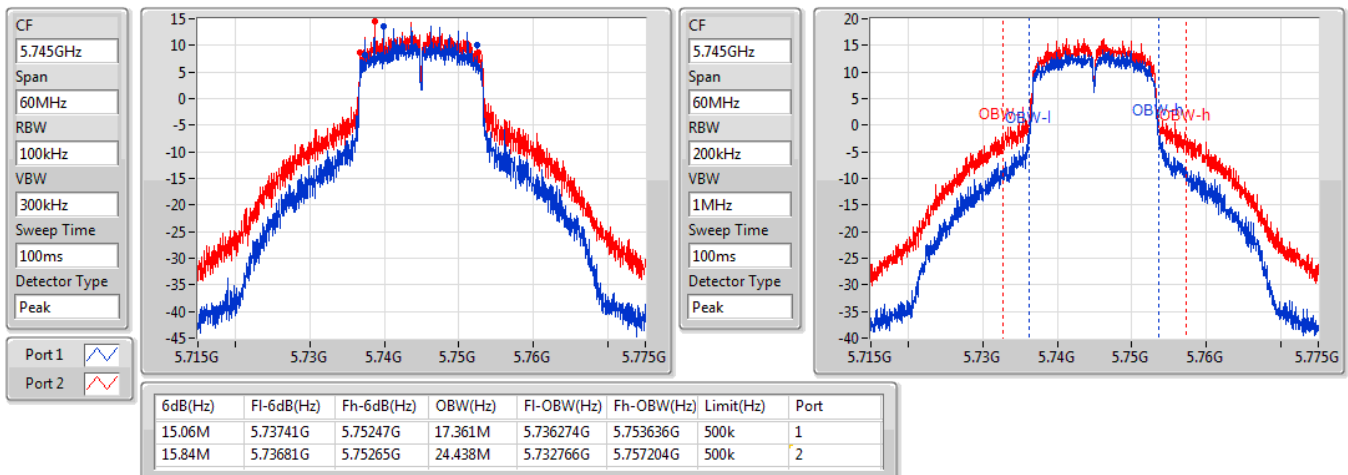


11a-20M_Nss1_2TX
EBW
5240MHz

13/03/2020

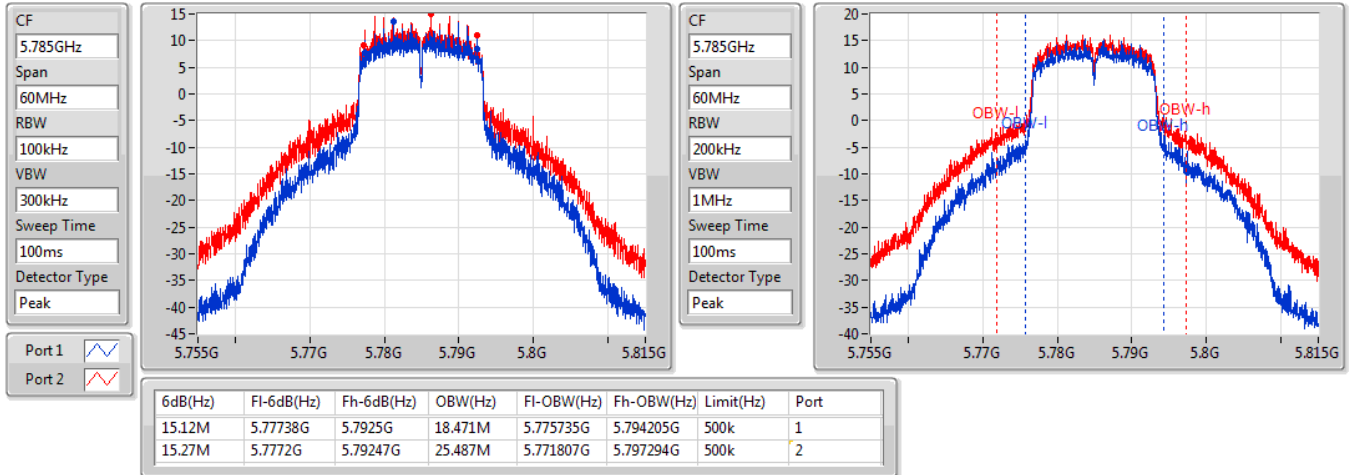

11a-20M_Nss1_2TX
EBW
5745MHz

13/03/2020

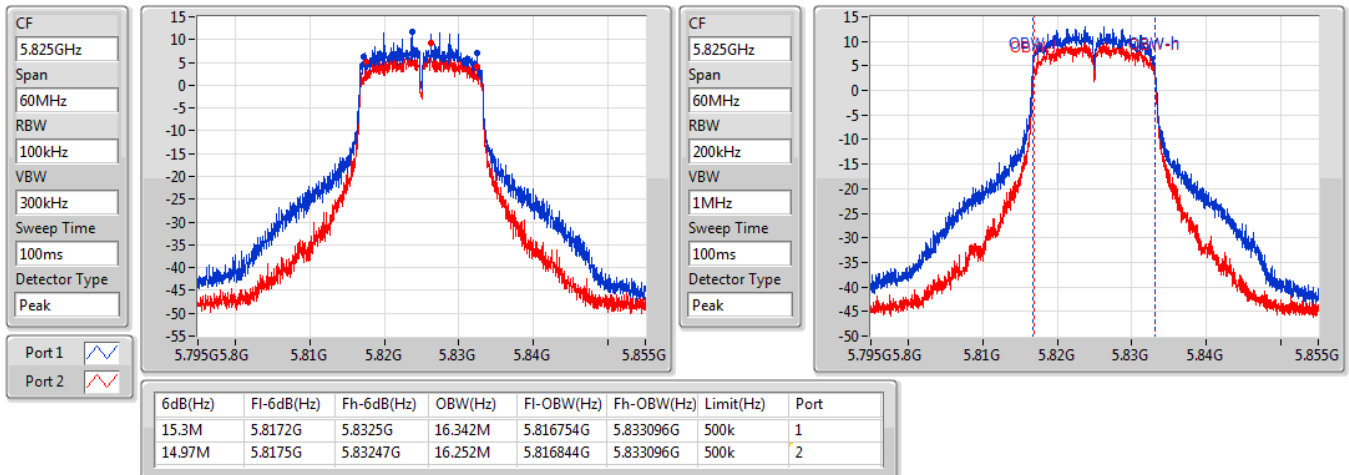


11a-20M_Nss1_2TX
EBW
5785MHz

13/03/2020

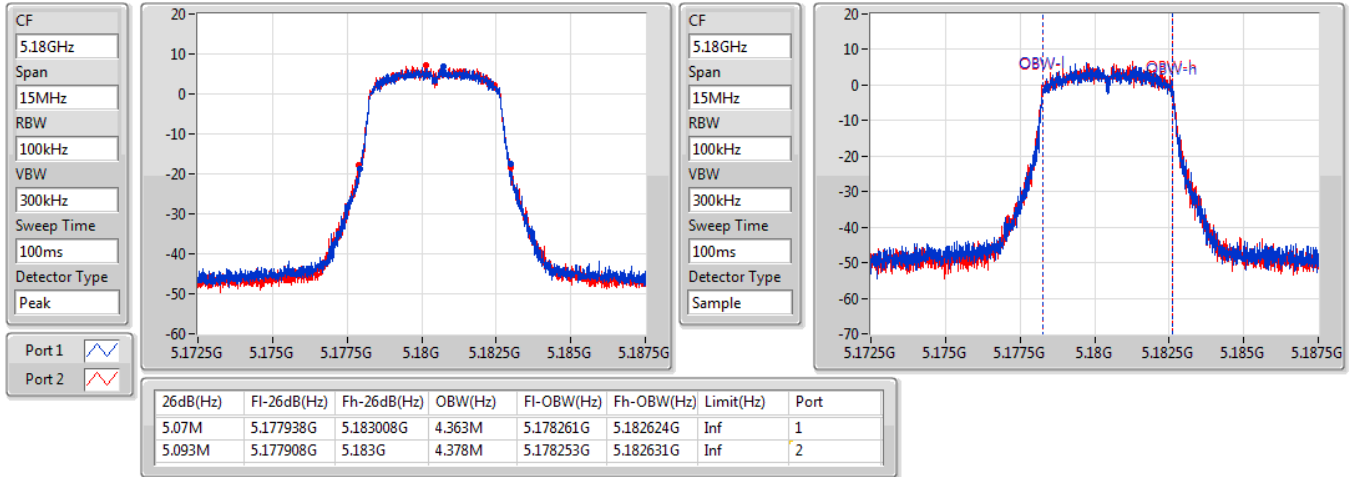

11a-20M_Nss1_2TX
EBW
5825MHz

15/03/2020

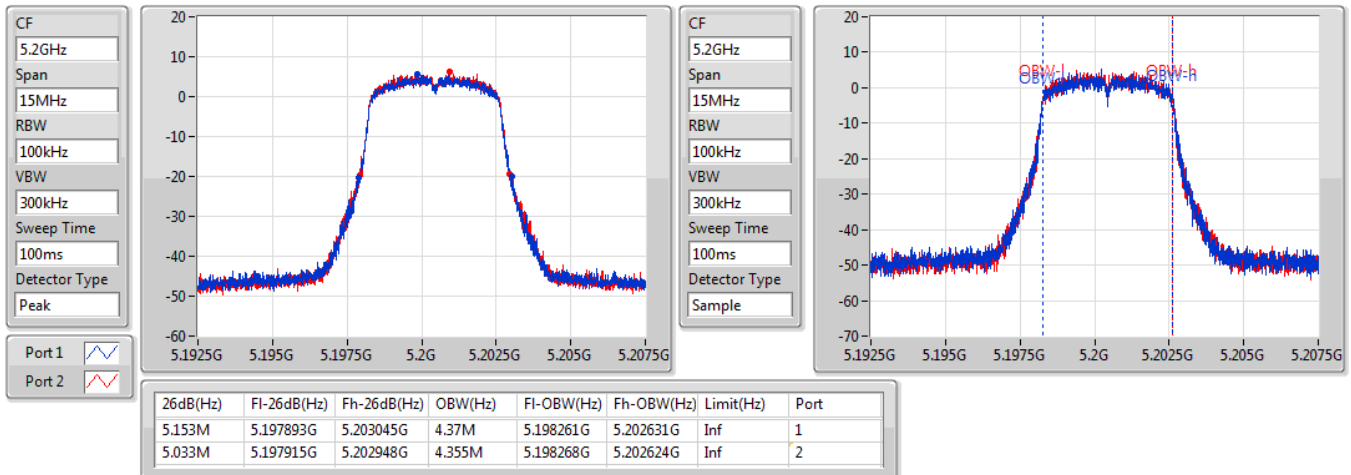


11n-5M_Nss1_2TX
EBW
5180MHz

14/12/2020

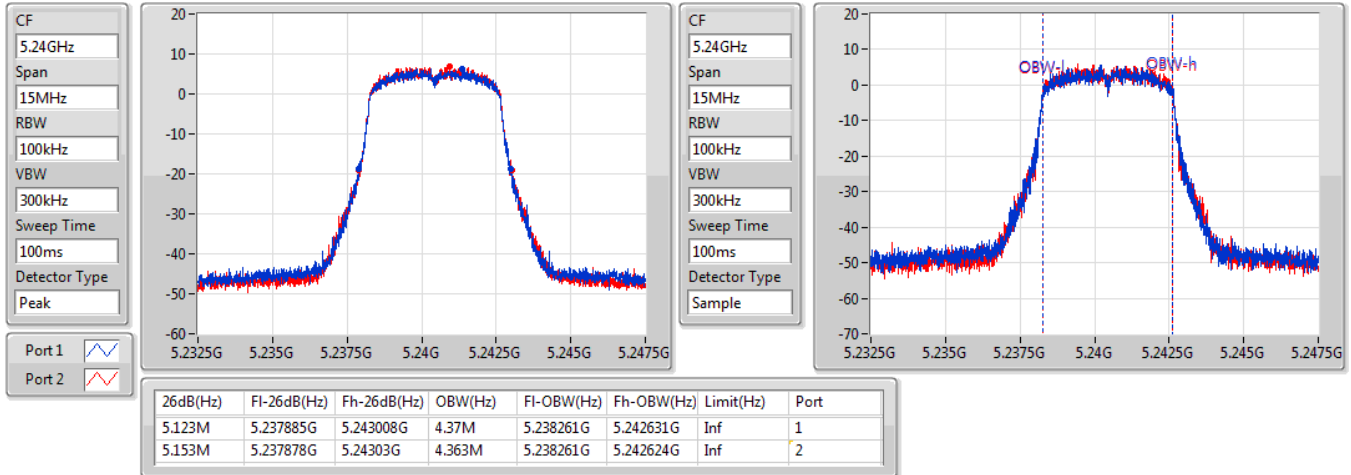

11n-5M_Nss1_2TX
EBW
5200MHz

14/12/2020

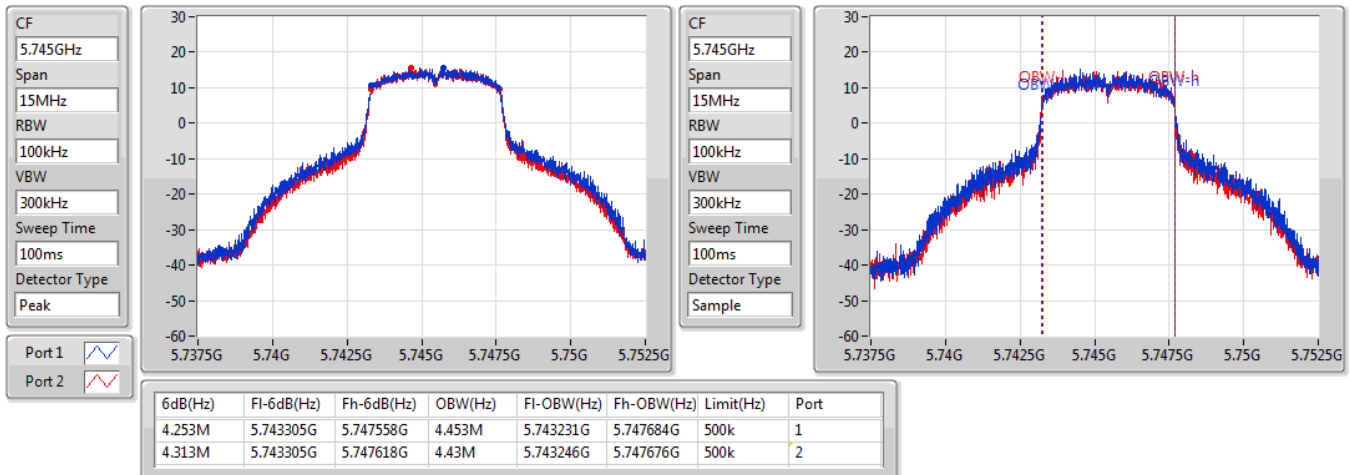


11n-5M_Nss1_2TX
EBW
5240MHz

14/12/2020

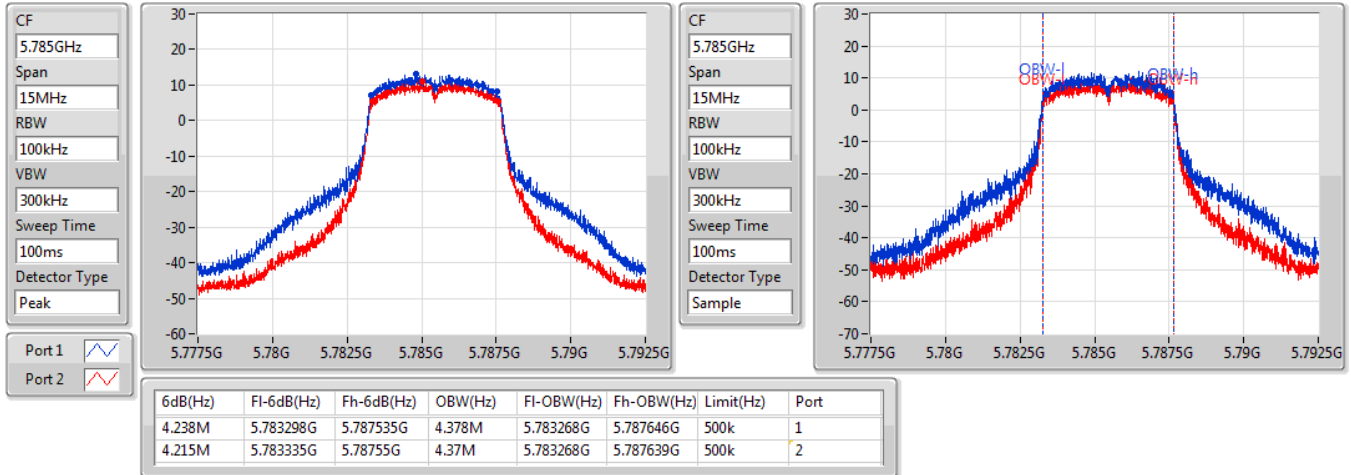

11n-5M_Nss1_2TX
EBW
5745MHz

14/12/2020

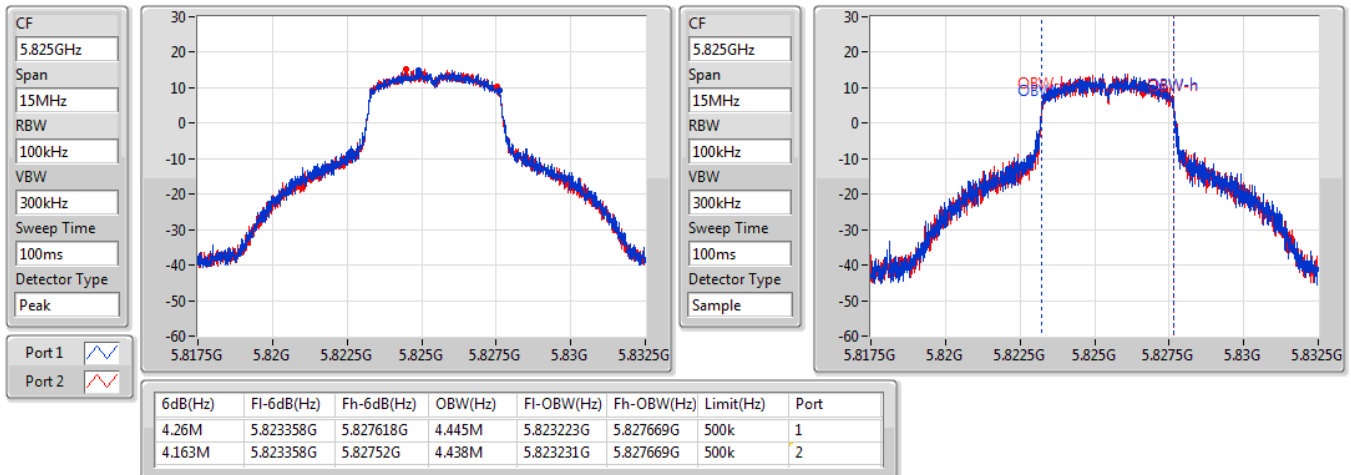


11n-5M_Nss1_2TX
EBW
5785MHz

14/12/2020

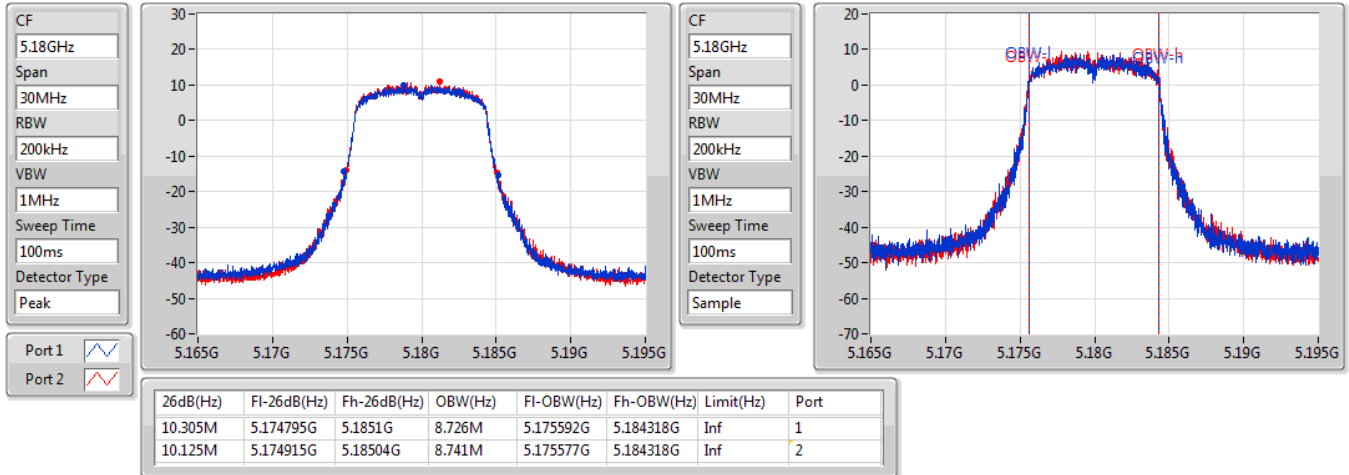

11n-5M_Nss1_2TX
EBW
5825MHz

14/12/2020

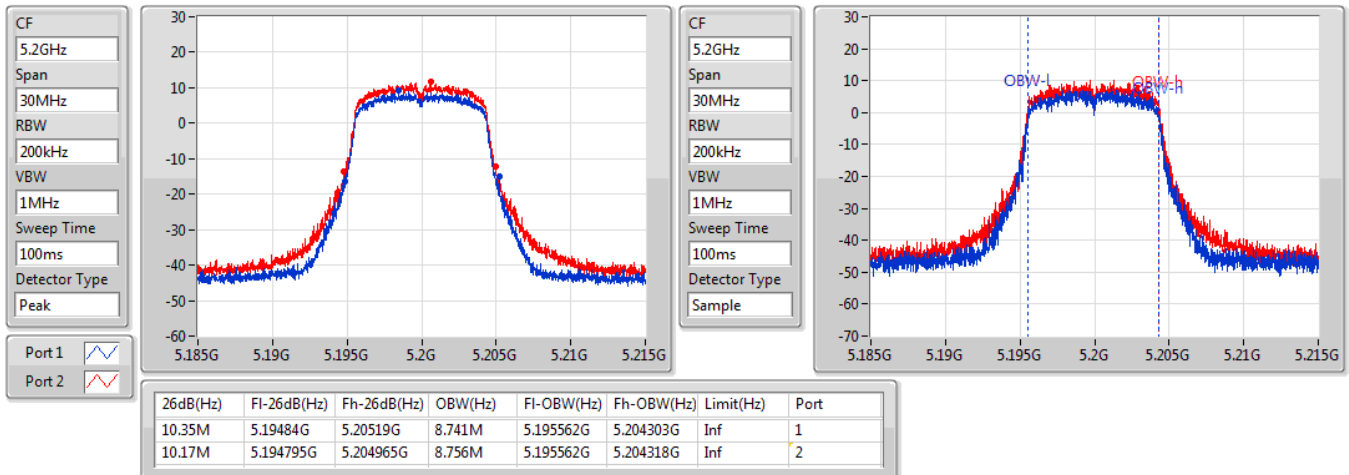


11n-10M_Nss1_2TX
EBW
5180MHz

14/12/2020

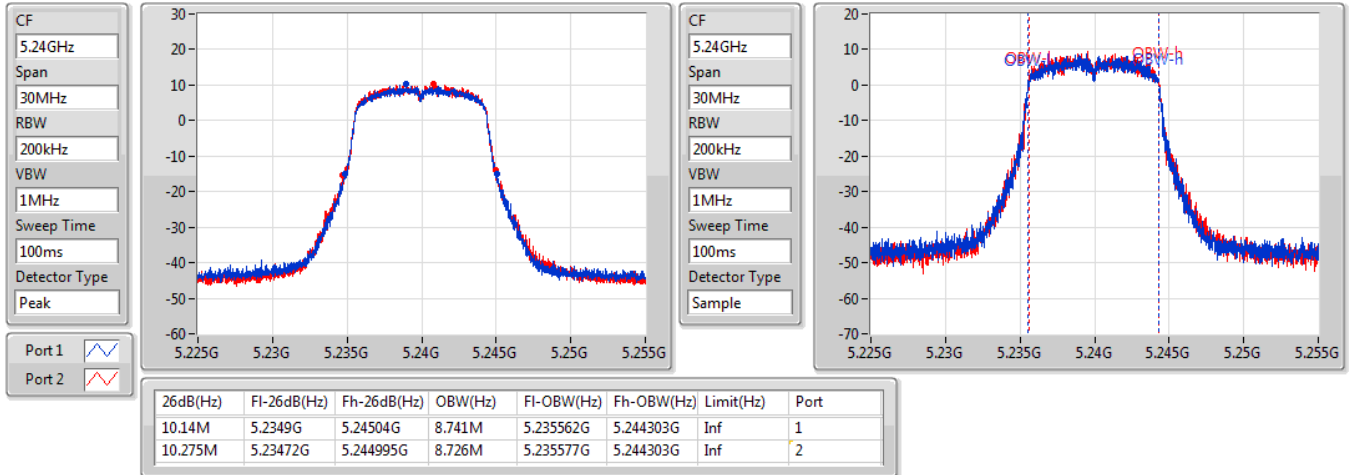

11n-10M_Nss1_2TX
EBW
5200MHz

14/12/2020

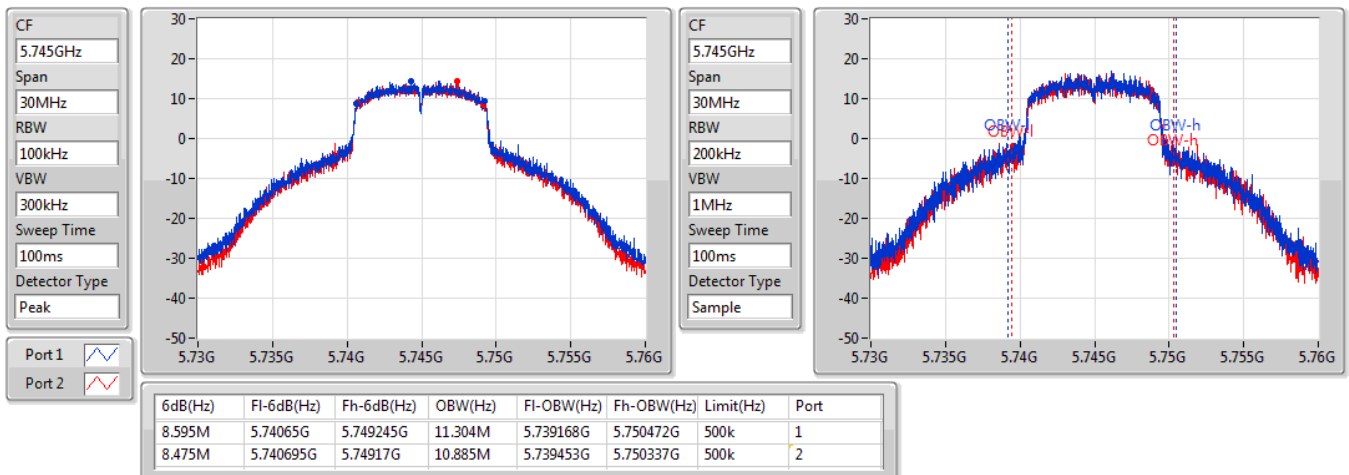


11n-10M_Nss1_2TX
EBW
5240MHz

14/12/2020

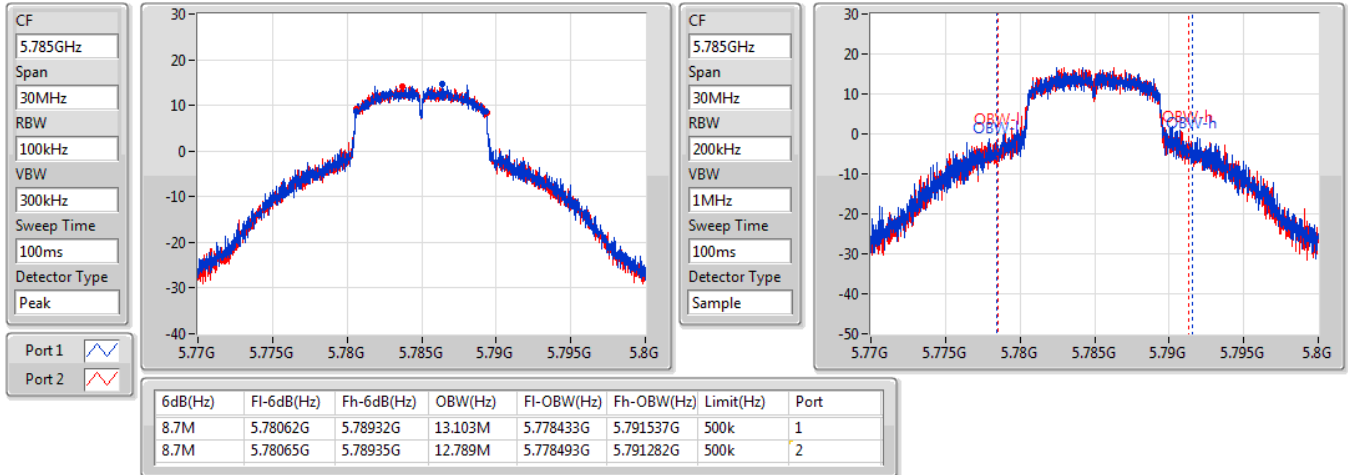

11n-10M_Nss1_2TX
EBW
5745MHz

14/12/2020

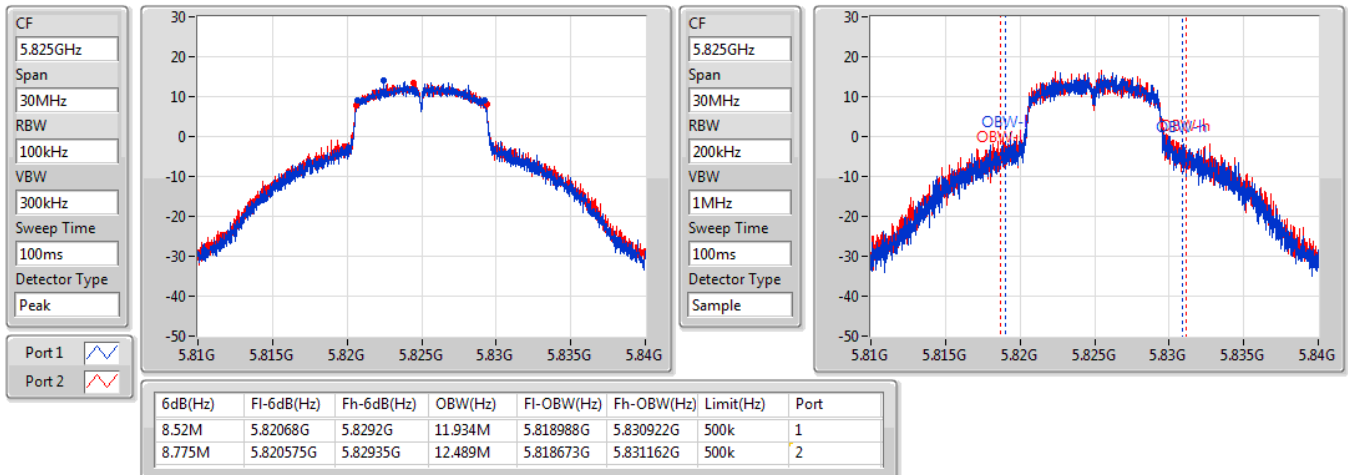


11n-10M_Nss1_2TX
EBW
5785MHz

14/12/2020

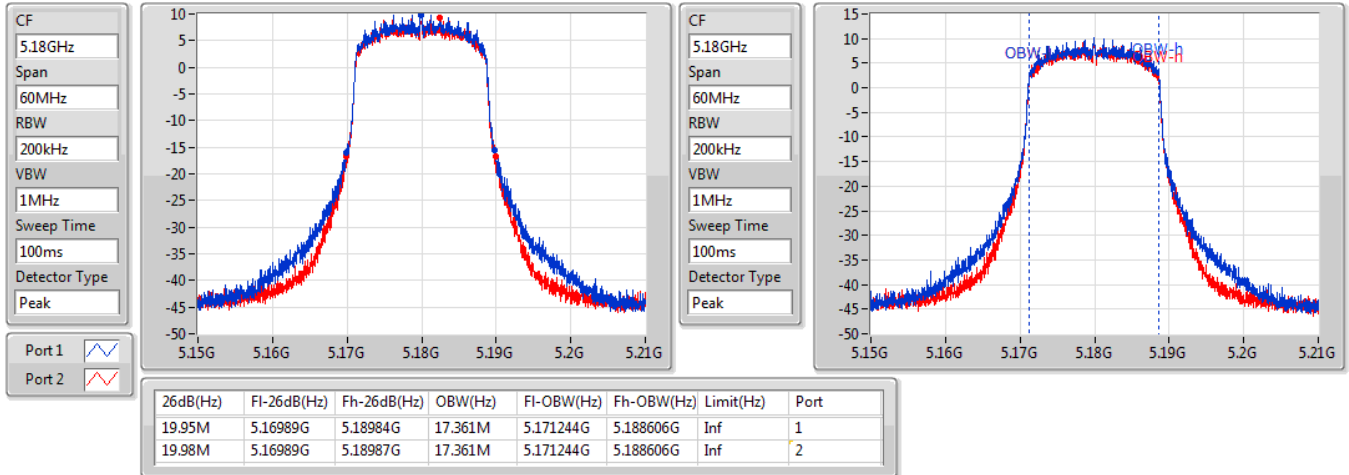

11n-10M_Nss1_2TX
EBW
5825MHz

14/12/2020

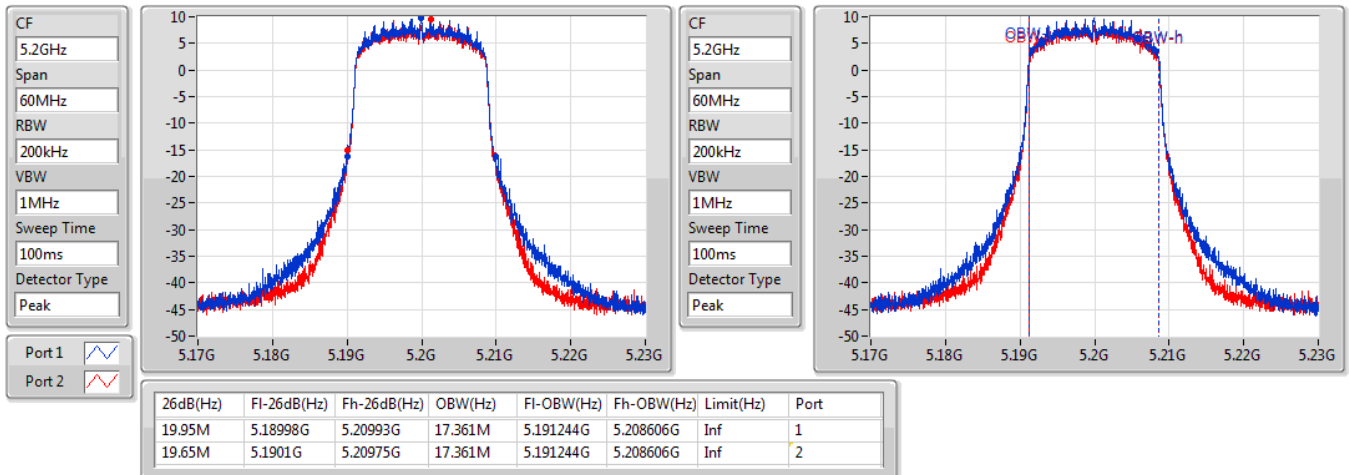


802.11ac VHT20_Nss1_2TX
EBW
5180MHz

13/03/2020

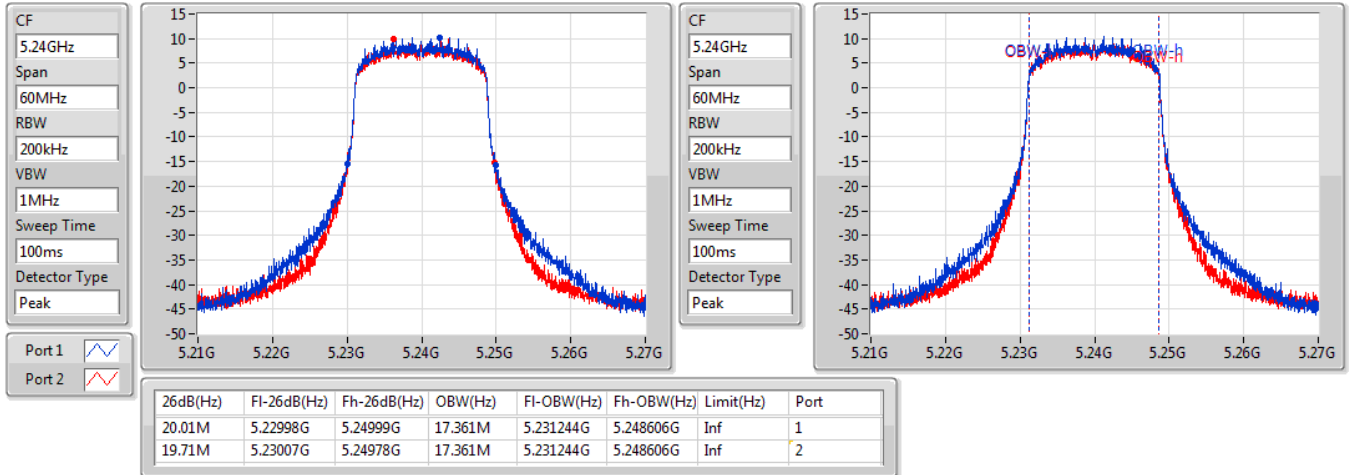

802.11ac VHT20_Nss1_2TX
EBW
5200MHz

13/03/2020

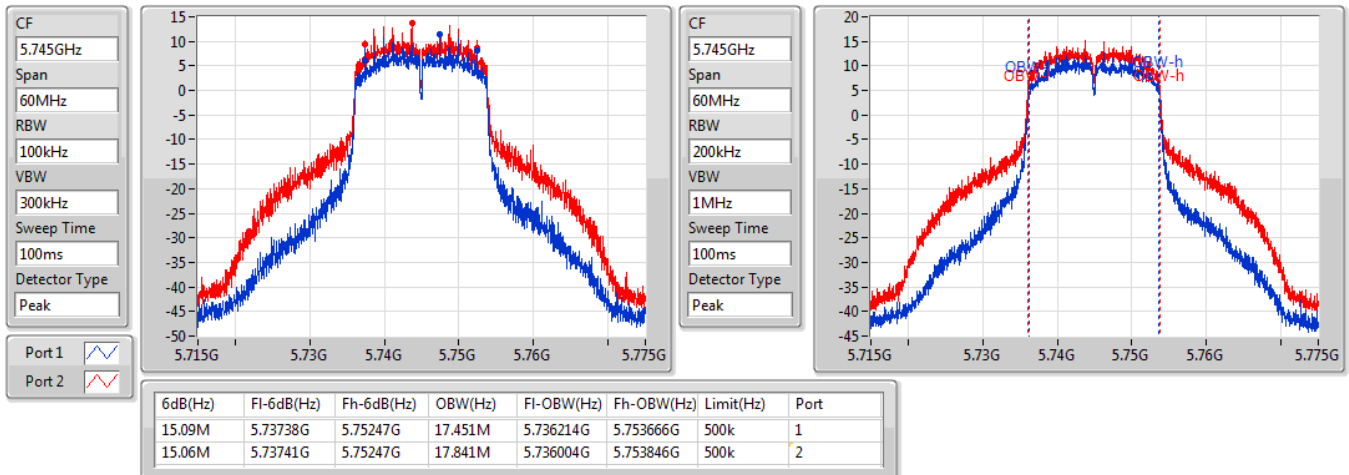


802.11ac VHT20_Nss1_2TX
EBW
5240MHz

13/03/2020

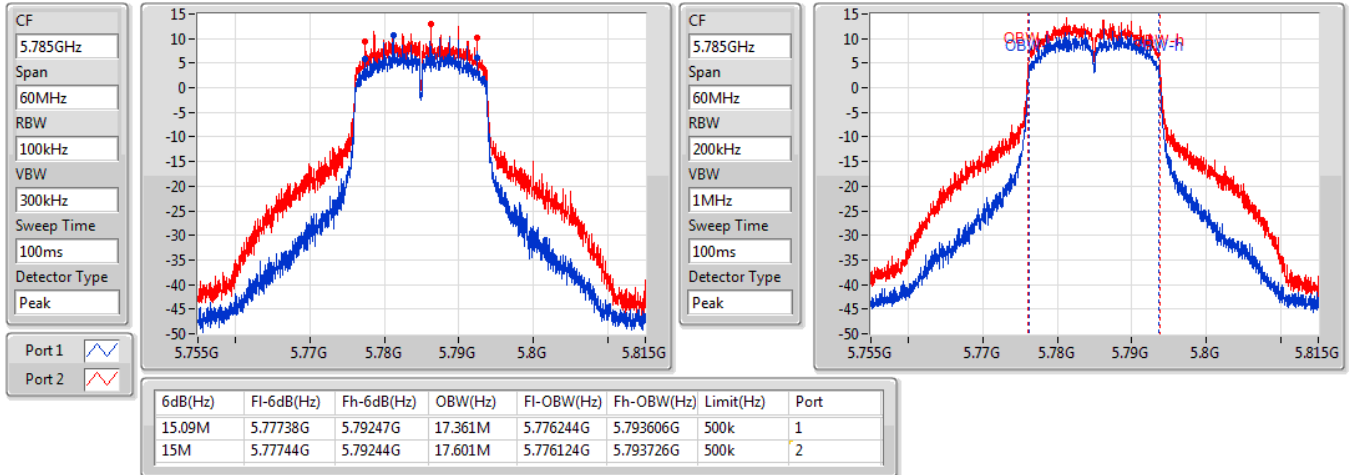

802.11ac VHT20_Nss1_2TX
EBW
5745MHz

13/03/2020

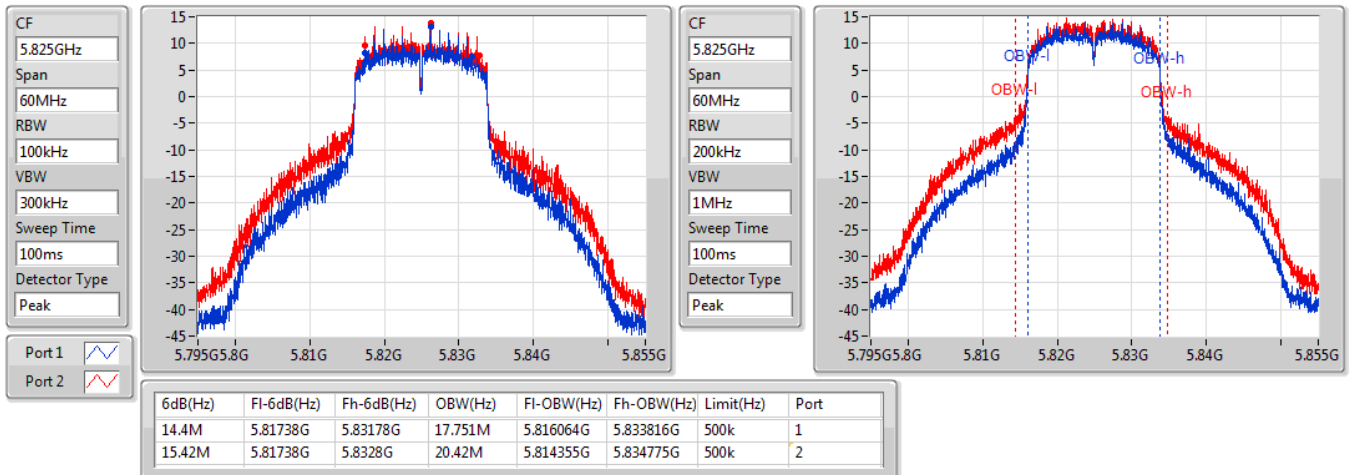


802.11ac VHT20_Nss1_2TX
EBW
5785MHz

13/03/2020

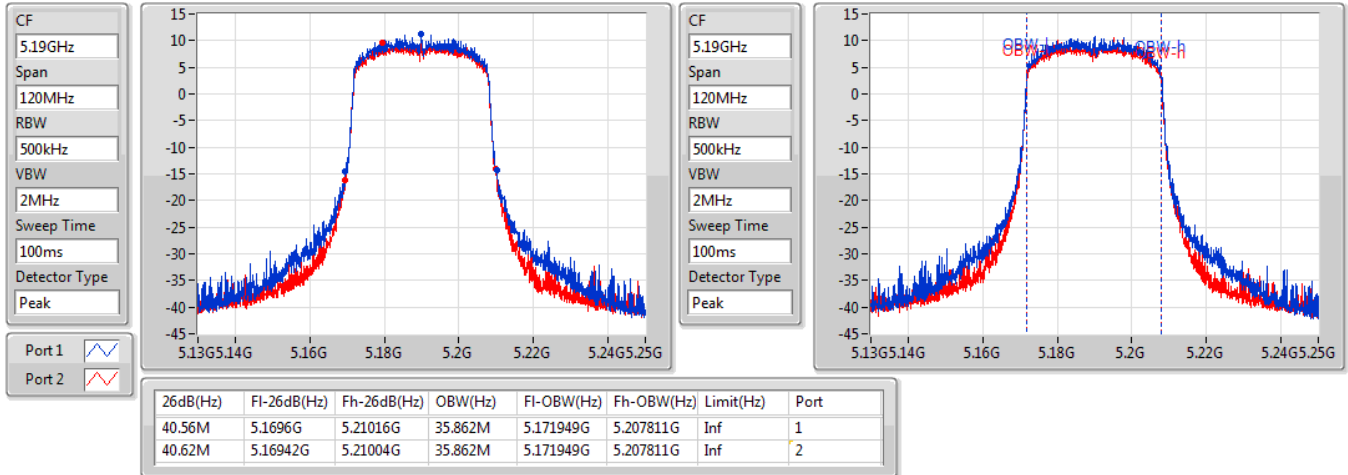

802.11ac VHT20_Nss1_2TX
EBW
5825MHz

13/03/2020

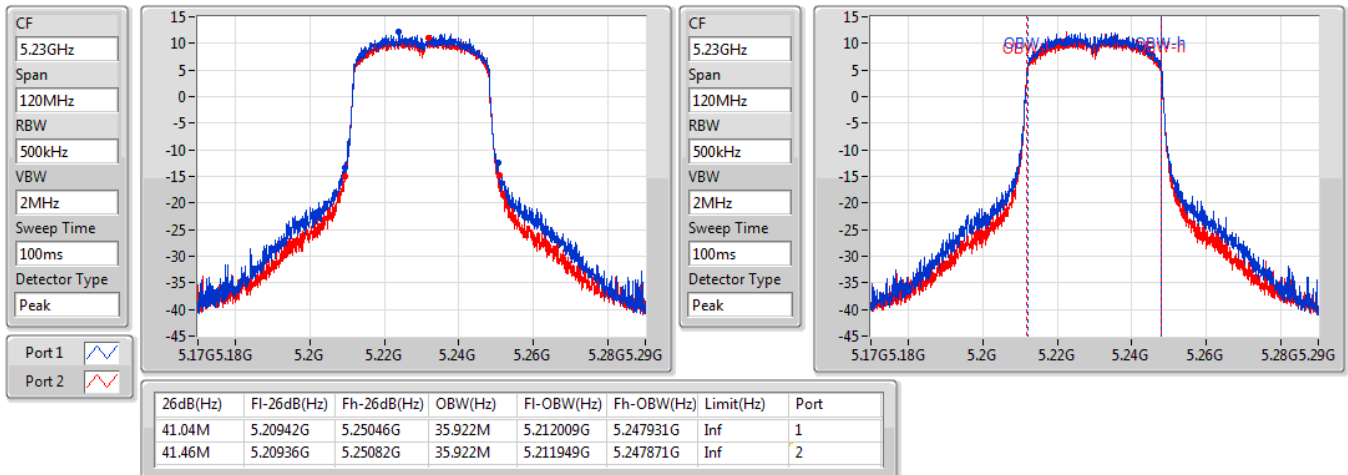


802.11ac VHT40_Nss1_2TX
EBW
5190MHz

13/03/2020

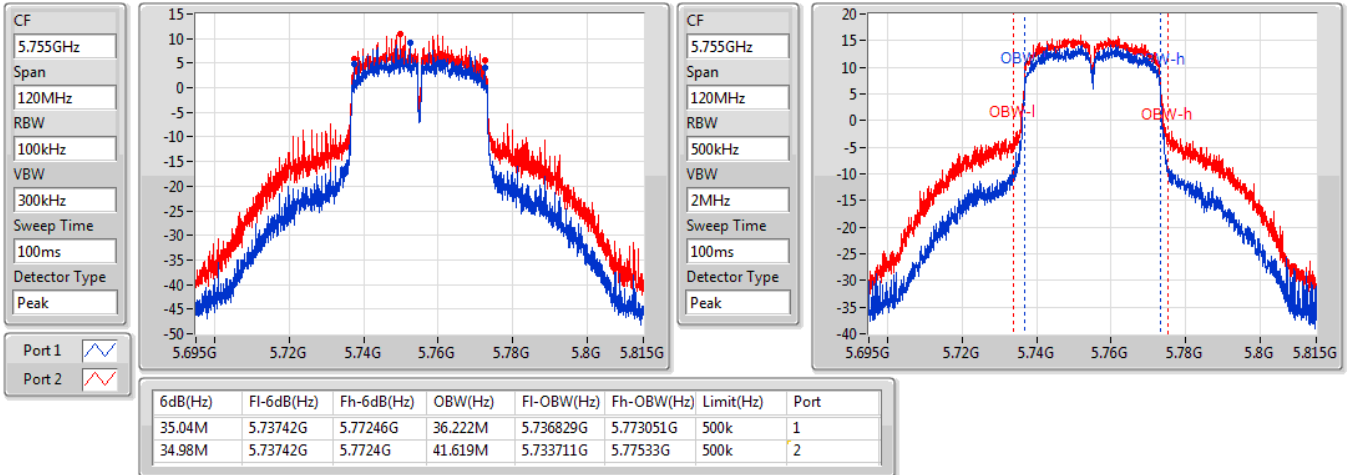

802.11ac VHT40_Nss1_2TX
EBW
5230MHz

13/03/2020

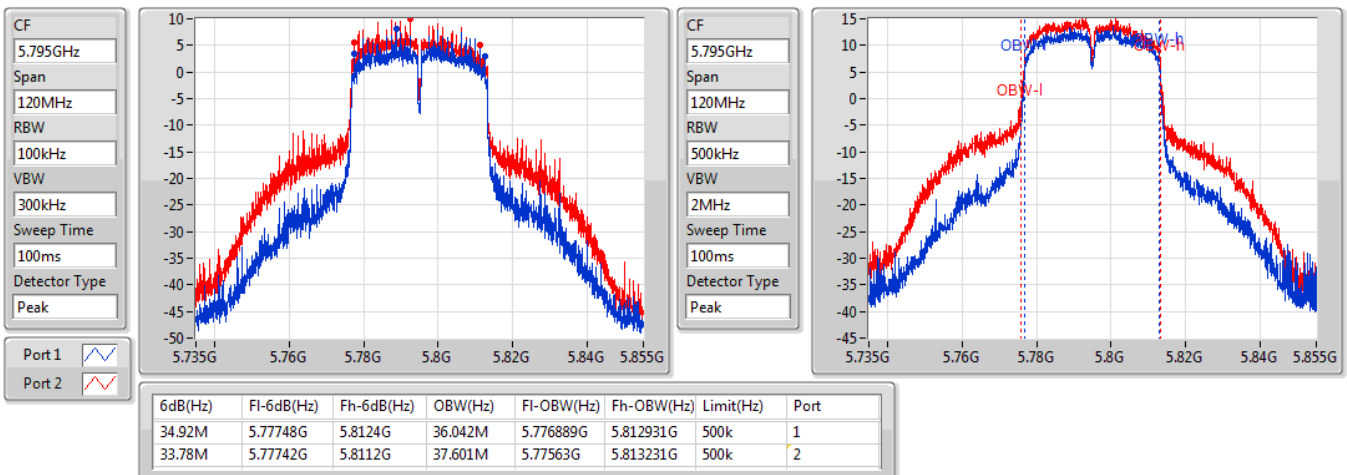


802.11ac VHT40_Nss1_2TX
EBW
5755MHz

13/03/2020

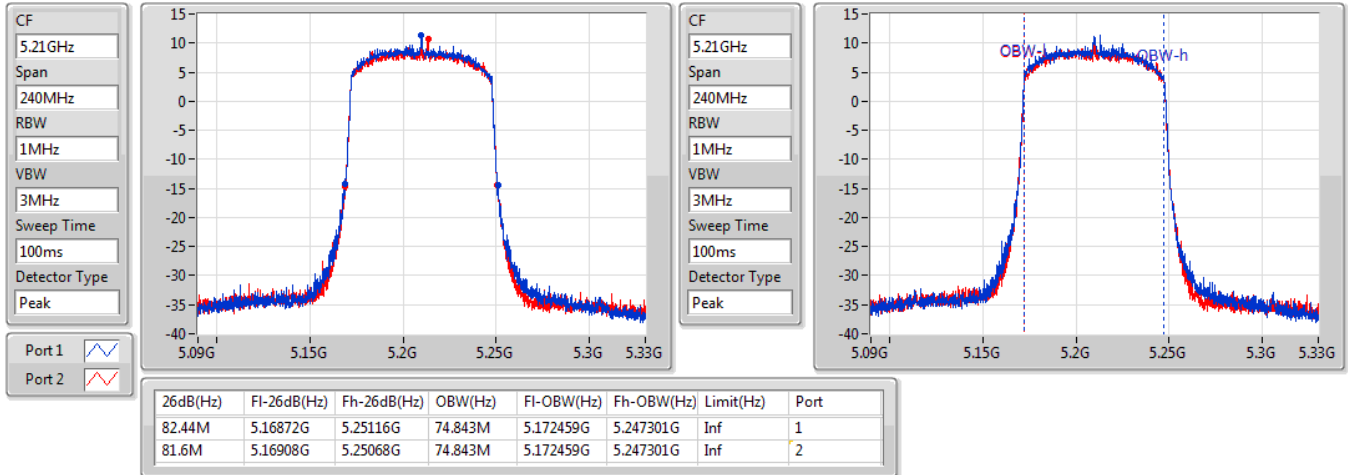

802.11ac VHT40_Nss1_2TX
EBW
5795MHz

13/03/2020

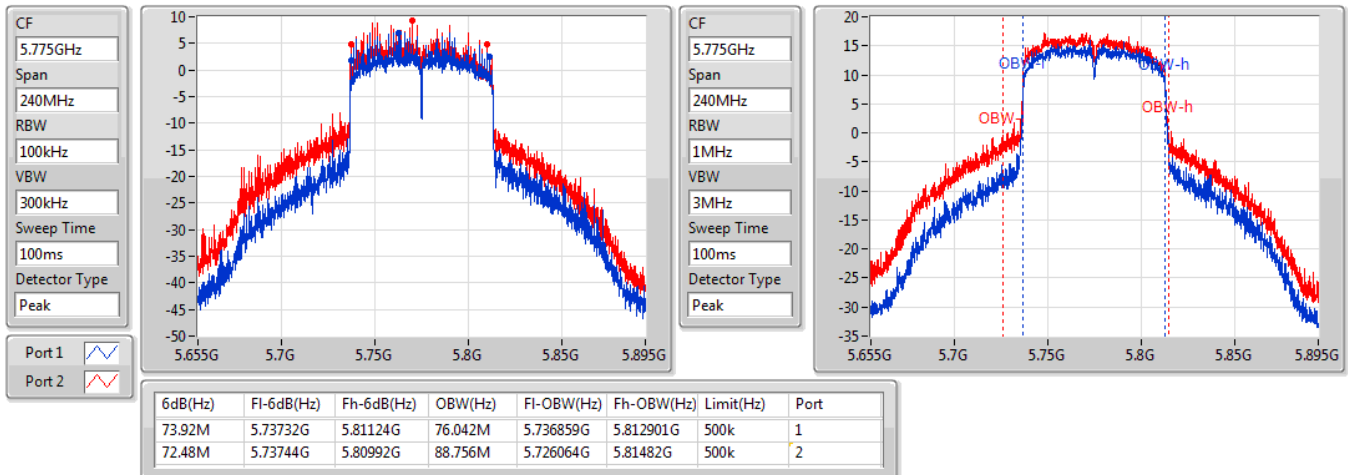


802.11ac VHT80_Nss1_2TX
EBW
5210MHz

13/03/2020


802.11ac VHT80_Nss1_2TX
EBW
5775MHz

13/03/2020



Summary

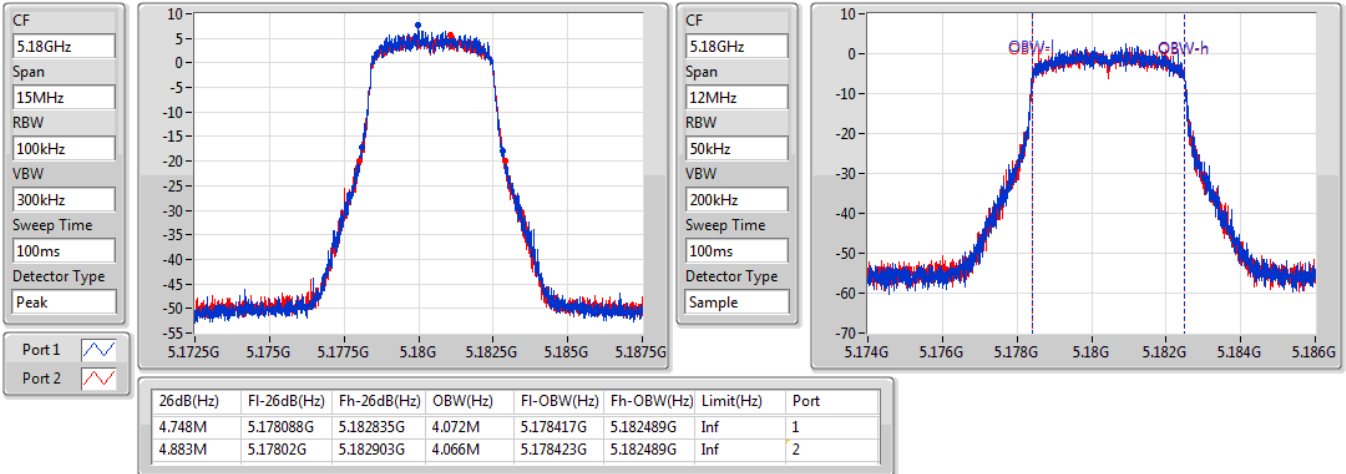
Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
11a-5M_Nss1_2TX	4.95M	4.078M	4M08D1D	4.748M	4.066M
11a-10M_Nss1_2TX	10.005M	8.144M	8M14D1D	9.3M	8.132M
11a-20M_Nss1_2TX	19.56M	16.312M	16M3D1D	19.14M	16.288M
11n-5M_Nss1_2TX	5.183M	4.37M	4M37D1D	4.995M	4.363M
11n-10M_Nss1_2TX	10.44M	8.756M	8M76D1D	10.125M	8.726M
802.11ac VHT20_Nss1_2TX	20.79M	17.463M	17M5D1D	20.34M	17.415M
802.11ac VHT40_Nss1_2TX	41.28M	35.838M	35M8D1D	40.8M	35.742M
802.11ac VHT80_Nss1_2TX	83.04M	75.034M	75M0D1D	82.92M	74.843M
5.725-5.85GHz	-	-	-	-	-
11a-5M_Nss1_2TX	4.013M	4.072M	4M07D1D	3.848M	4.066M
11a-10M_Nss1_2TX	8.115M	8.144M	8M14D1D	7.95M	8.132M
11a-20M_Nss1_2TX	15.3M	16.312M	16M3D1D	15.06M	16.264M
11n-5M_Nss1_2TX	4.358M	4.633M	4M63D1D	4.193M	4.378M
11n-10M_Nss1_2TX	8.76M	15.592M	15M6D1D	8.49M	10.21M
802.11ac VHT20_Nss1_2TX	15.69M	17.463M	17M5D1D	13.8M	17.391M
802.11ac VHT40_Nss1_2TX	35.04M	35.838M	35M8D1D	34.98M	35.79M
802.11ac VHT80_Nss1_2TX	75M	74.939M	74M9D1D	73.8M	74.939M

Result

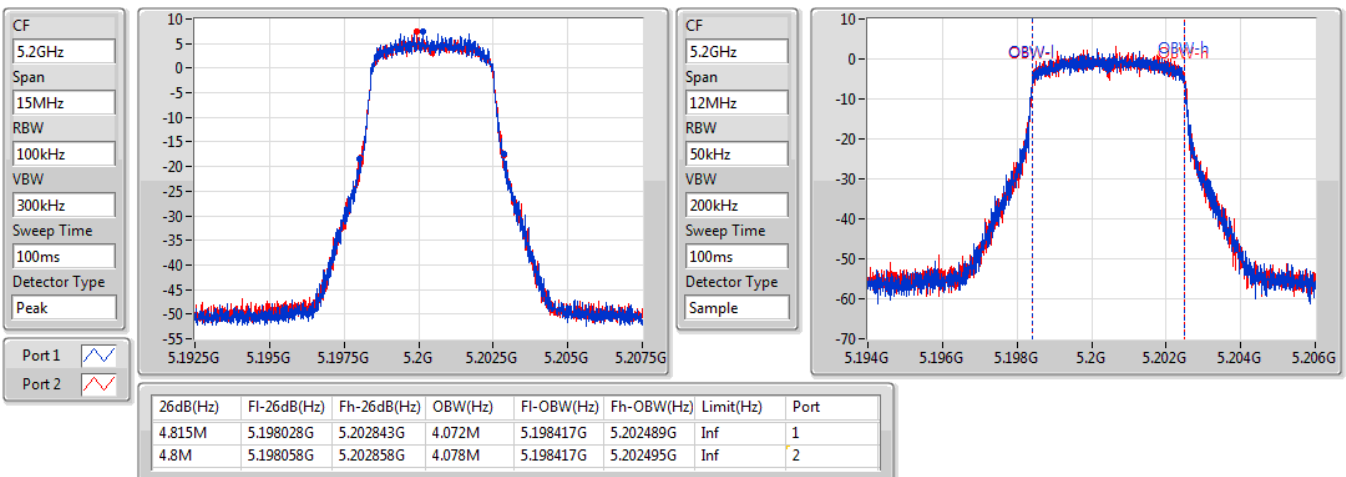
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
11a-5M_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	4.748M	4.072M	4.883M	4.066M
5200MHz	Pass	Inf	4.815M	4.072M	4.8M	4.078M
5240MHz	Pass	Inf	4.815M	4.072M	4.95M	4.072M
5745MHz	Pass	500k	3.99M	4.072M	4.013M	4.066M
5785MHz	Pass	500k	3.848M	4.072M	4.005M	4.072M
5825MHz	Pass	500k	3.953M	4.072M	3.923M	4.072M
11a-10M_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	9.39M	8.132M	10.005M	8.144M
5200MHz	Pass	Inf	9.3M	8.132M	9.885M	8.144M
5240MHz	Pass	Inf	9.75M	8.144M	9.585M	8.144M
5745MHz	Pass	500k	8.115M	8.144M	7.95M	8.144M
5785MHz	Pass	500k	8.115M	8.144M	8.01M	8.144M
5825MHz	Pass	500k	8.04M	8.132M	8.025M	8.144M
11a-20M_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	19.14M	16.288M	19.47M	16.288M
5200MHz	Pass	Inf	19.56M	16.312M	19.5M	16.288M
5240MHz	Pass	Inf	19.29M	16.288M	19.5M	16.288M
5745MHz	Pass	500k	15.06M	16.288M	15.27M	16.288M
5785MHz	Pass	500k	15.09M	16.288M	15.09M	16.264M
5825MHz	Pass	500k	15.3M	16.264M	15.12M	16.312M
11n-5M_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	5.078M	4.37M	5.048M	4.37M
5200MHz	Pass	Inf	5.183M	4.37M	5.123M	4.363M
5240MHz	Pass	Inf	5.153M	4.363M	4.995M	4.363M
5745MHz	Pass	500k	4.268M	4.4M	4.26M	4.385M
5785MHz	Pass	500k	4.305M	4.408M	4.193M	4.378M
5825MHz	Pass	500k	4.275M	4.58M	4.358M	4.633M
11n-10M_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	10.26M	8.741M	10.44M	8.741M
5200MHz	Pass	Inf	10.14M	8.741M	10.275M	8.756M
5240MHz	Pass	Inf	10.41M	8.726M	10.125M	8.726M
5745MHz	Pass	500k	8.67M	15.592M	8.76M	15.412M
5785MHz	Pass	500k	8.49M	11.064M	8.58M	10.9M
5825MHz	Pass	500k	8.595M	10.24M	8.55M	10.21M
802.11ac VHT20_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	20.7M	17.463M	20.52M	17.415M
5200MHz	Pass	Inf	20.79M	17.439M	20.67M	17.415M
5240MHz	Pass	Inf	20.34M	17.439M	20.34M	17.439M
5745MHz	Pass	500k	15.69M	17.439M	13.8M	17.439M
5785MHz	Pass	500k	15.15M	17.439M	15M	17.439M
5825MHz	Pass	500k	15.03M	17.463M	14.94M	17.391M
802.11ac VHT40_Nss1_2TX	-	-	-	-	-	-
5190MHz	Pass	Inf	40.92M	35.742M	40.8M	35.742M
5230MHz	Pass	Inf	41.28M	35.838M	40.98M	35.79M
5755MHz	Pass	500k	34.98M	35.79M	34.98M	35.838M
5795MHz	Pass	500k	35.04M	35.79M	35.04M	35.838M
802.11ac VHT80_Nss1_2TX	-	-	-	-	-	-
5210MHz	Pass	Inf	82.92M	74.843M	83.04M	75.034M
5775MHz	Pass	500k	75M	74.939M	73.8M	74.939M

11a-5M_Nss1_2TX
EBW
5180MHz

11/05/2020

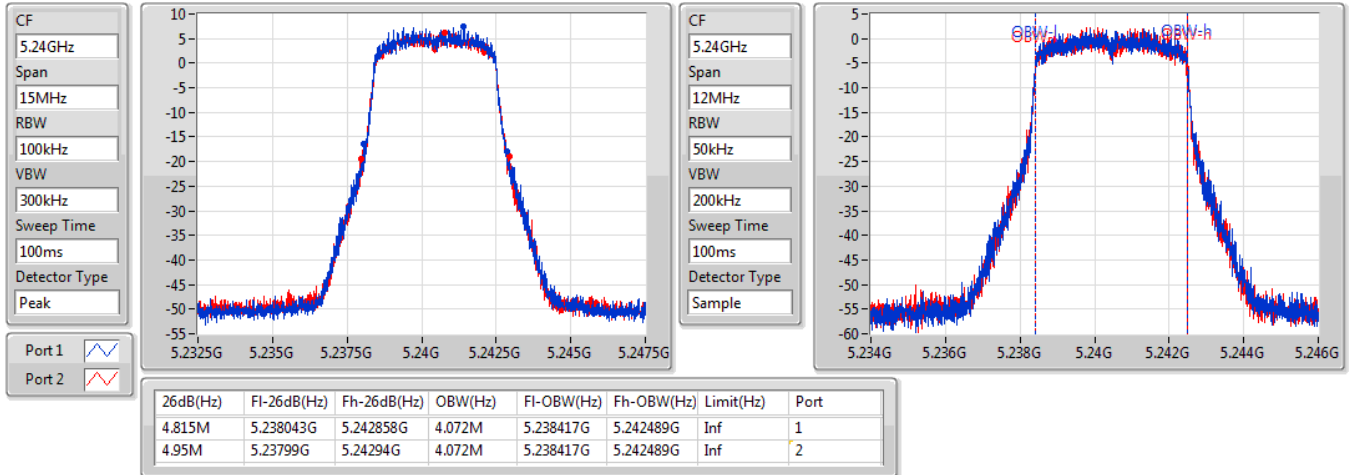

11a-5M_Nss1_2TX
EBW
5200MHz

11/05/2020

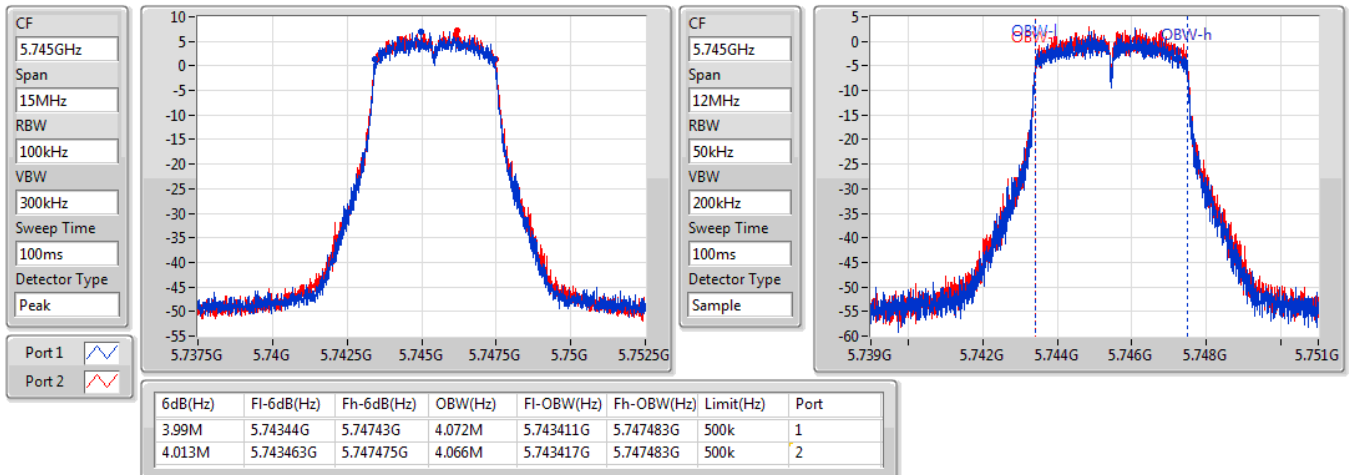


11a-5M_Nss1_2TX
EBW
5240MHz

11/05/2020

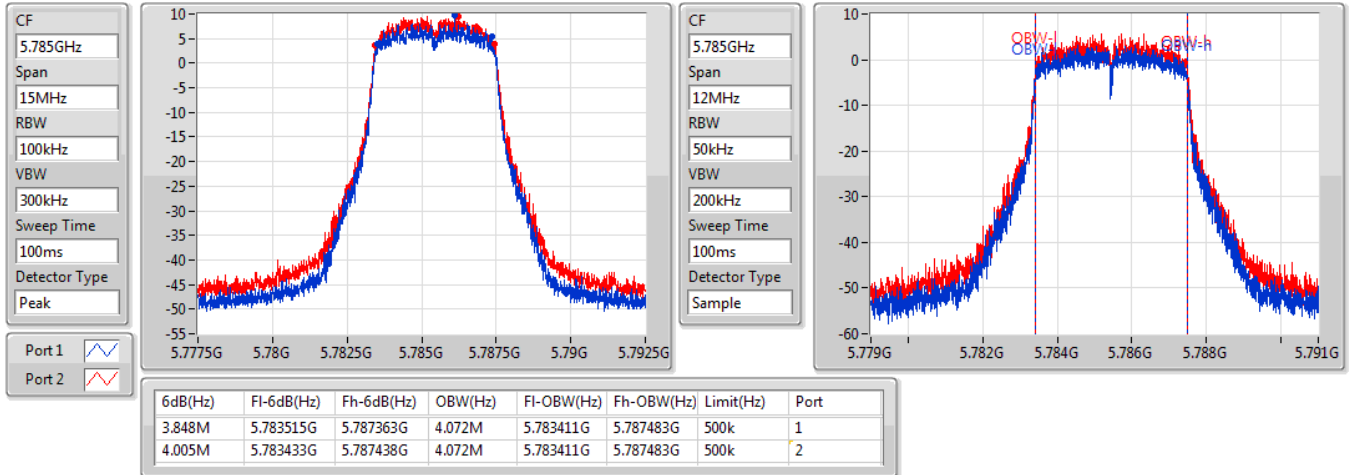

11a-5M_Nss1_2TX
EBW
5745MHz

11/05/2020

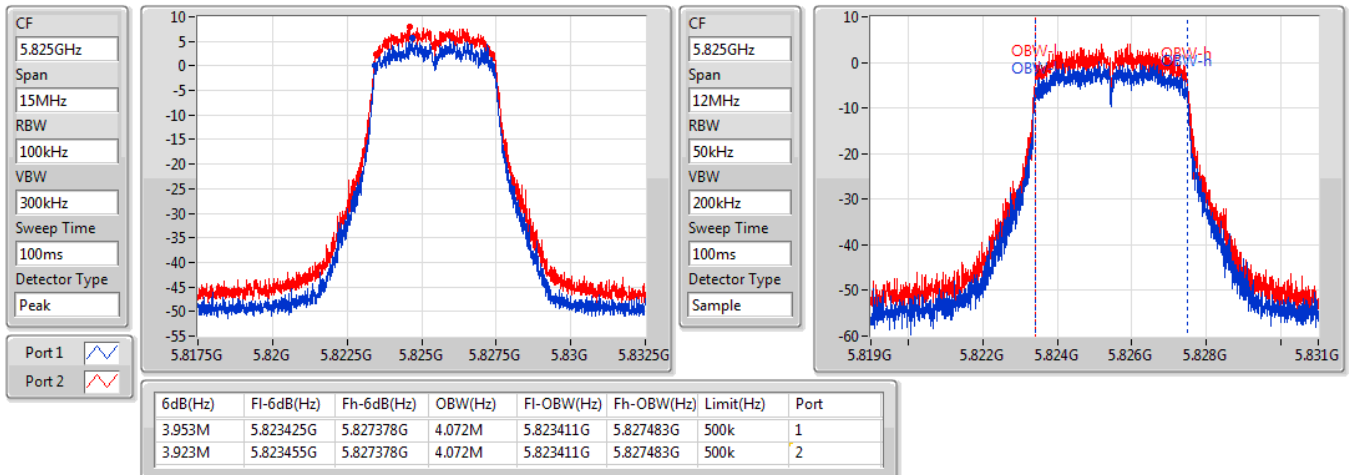


11a-5M_Nss1_2TX
EBW
5785MHz

11/05/2020

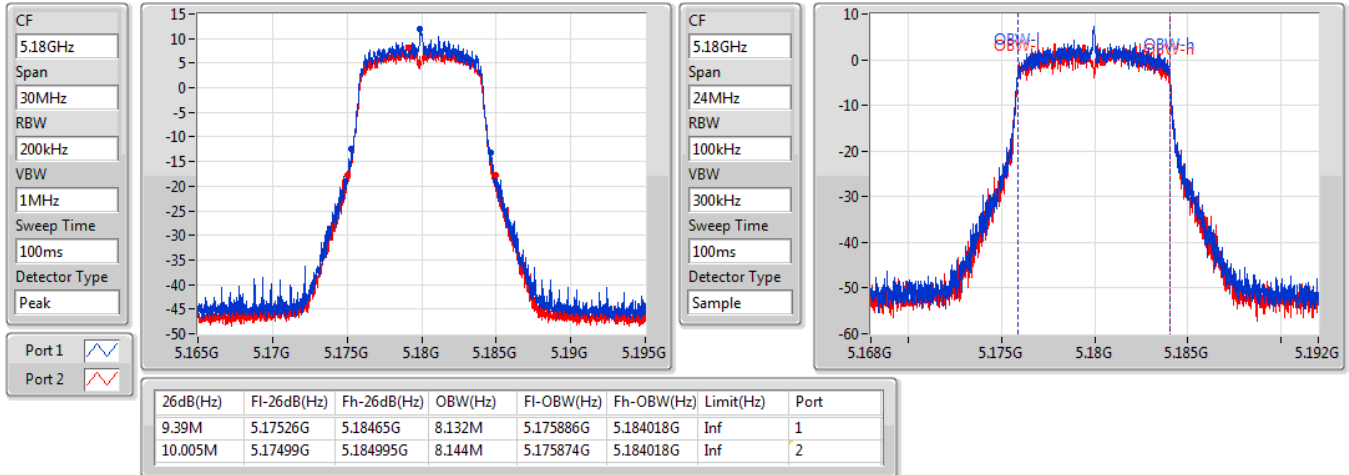

11a-5M_Nss1_2TX
EBW
5825MHz

11/05/2020

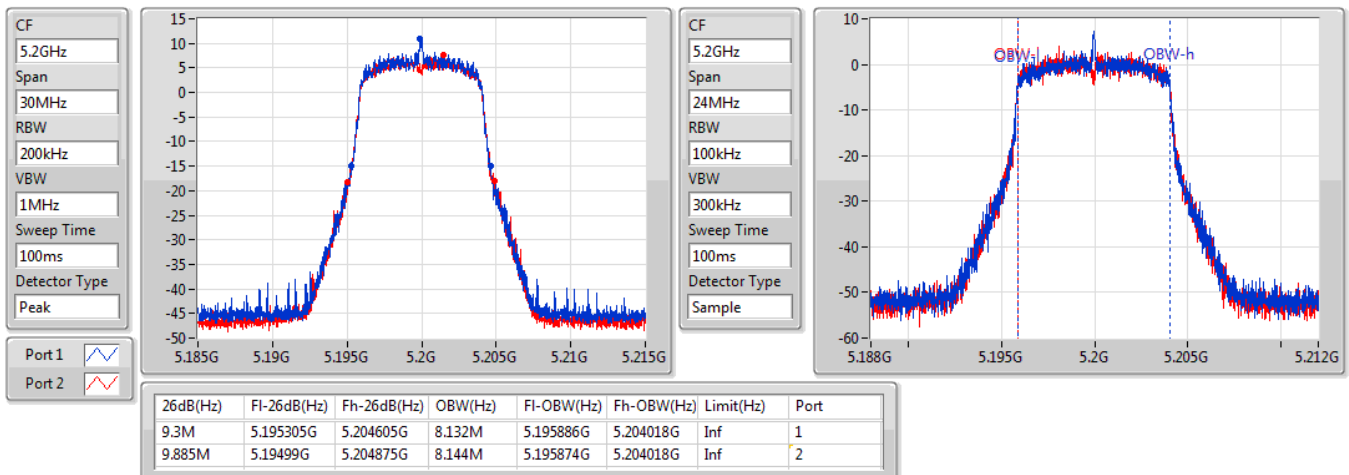


11a-10M_Nss1_2TX
EBW
5180MHz

12/05/2020

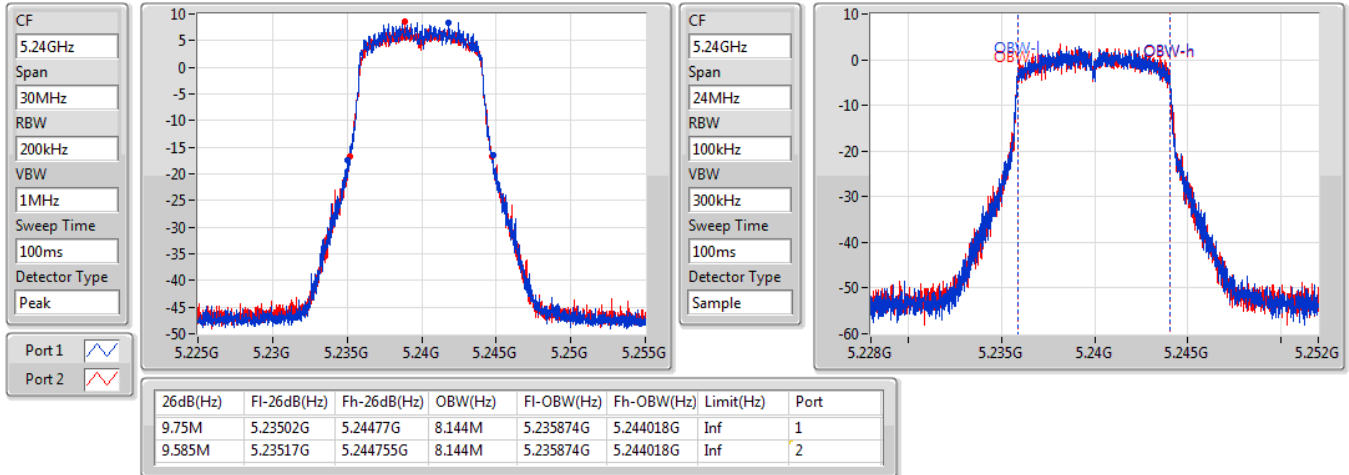

11a-10M_Nss1_2TX
EBW
5200MHz

12/05/2020

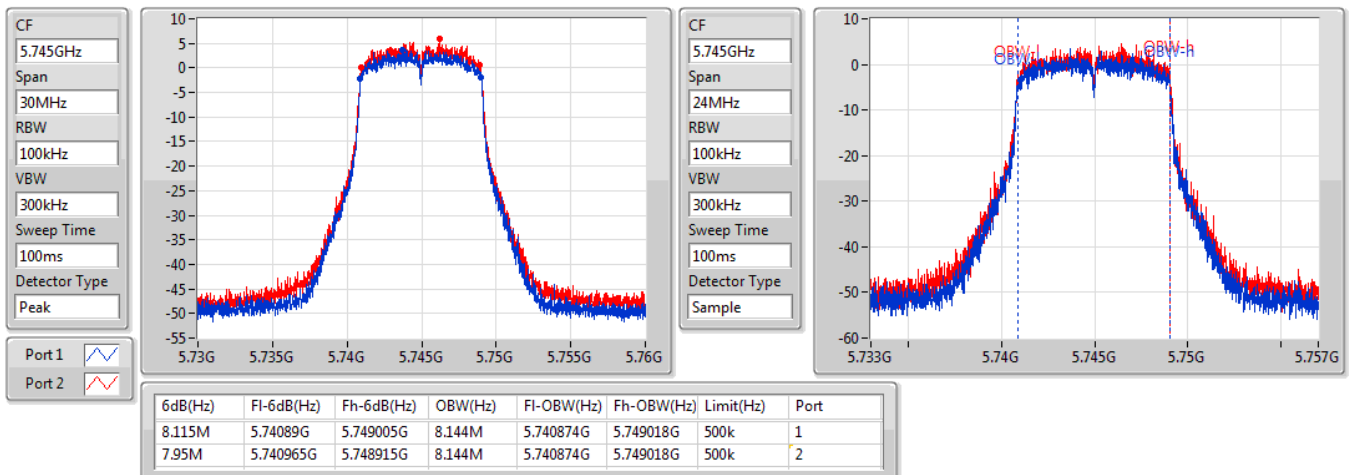


11a-10M_Nss1_2TX
EBW
5240MHz

12/05/2020

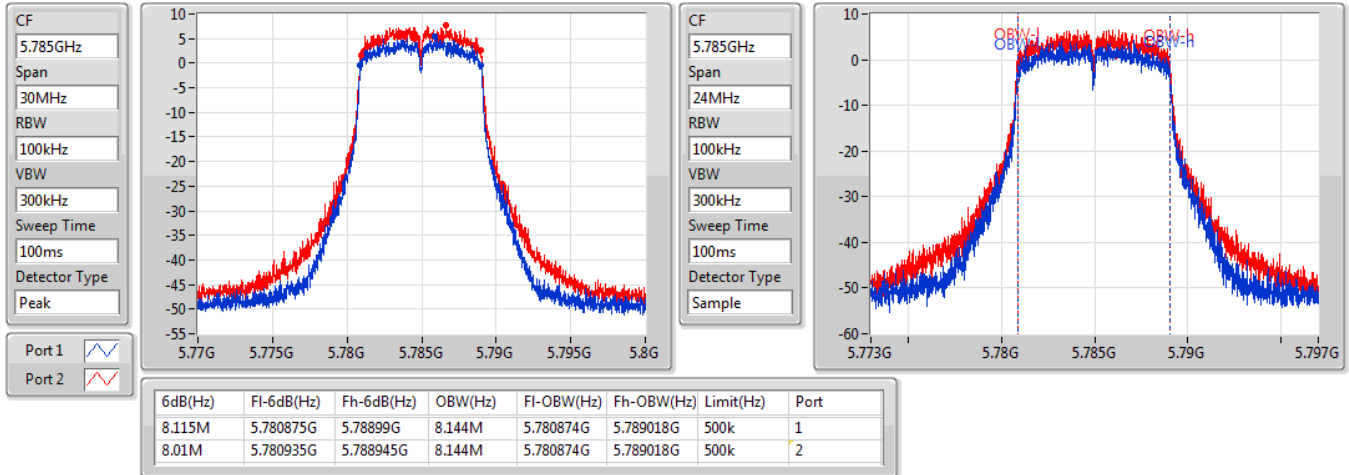

11a-10M_Nss1_2TX
EBW
5745MHz

12/05/2020

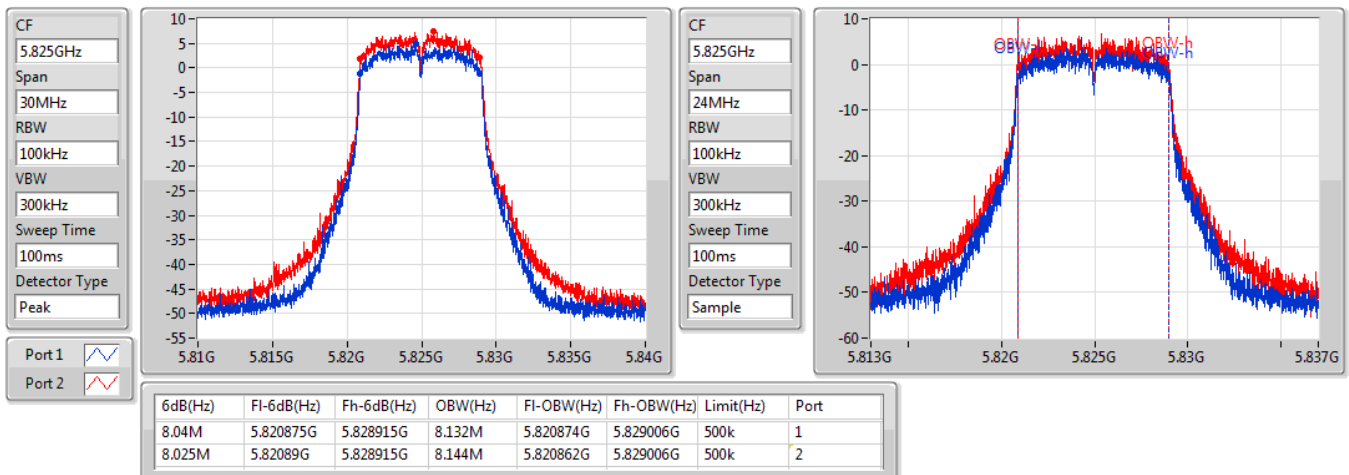


11a-10M_Nss1_2TX
EBW
5785MHz

12/05/2020

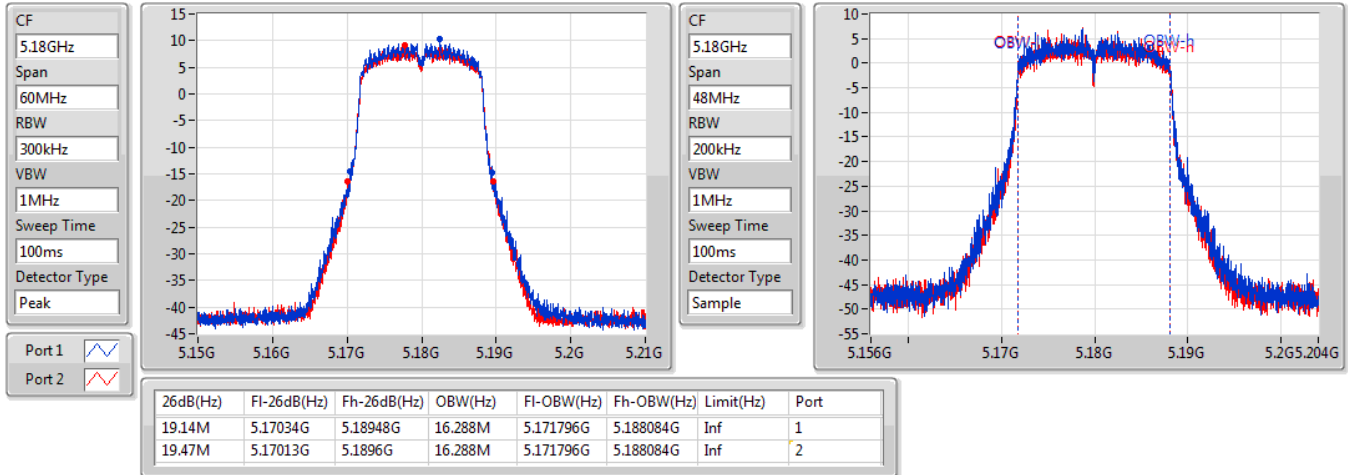

11a-10M_Nss1_2TX
EBW
5825MHz

12/05/2020

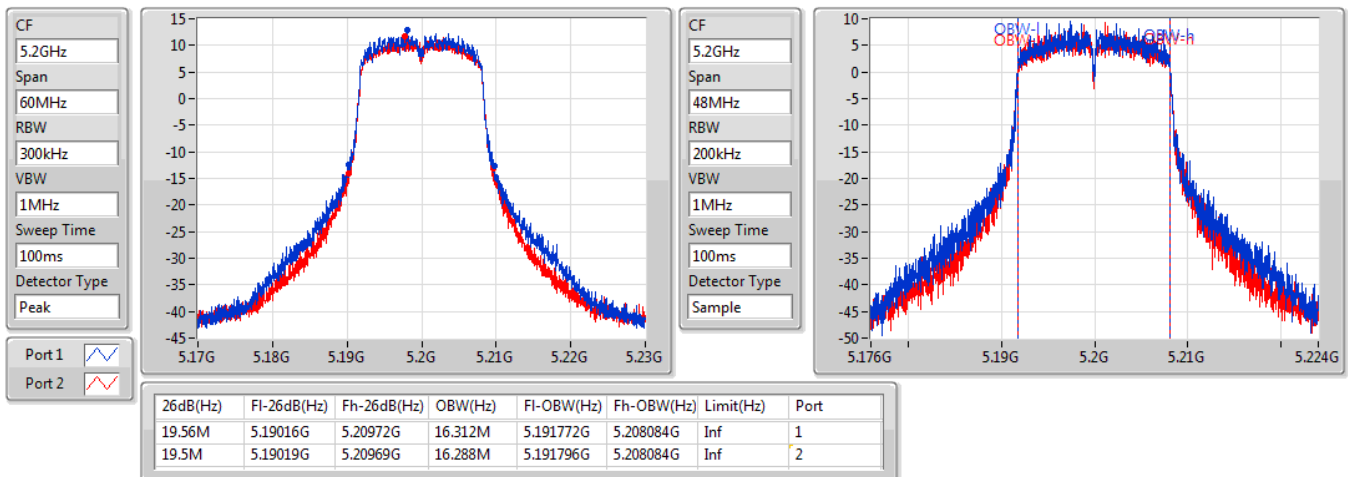


11a-20M_Nss1_2TX
EBW
5180MHz

11/05/2020

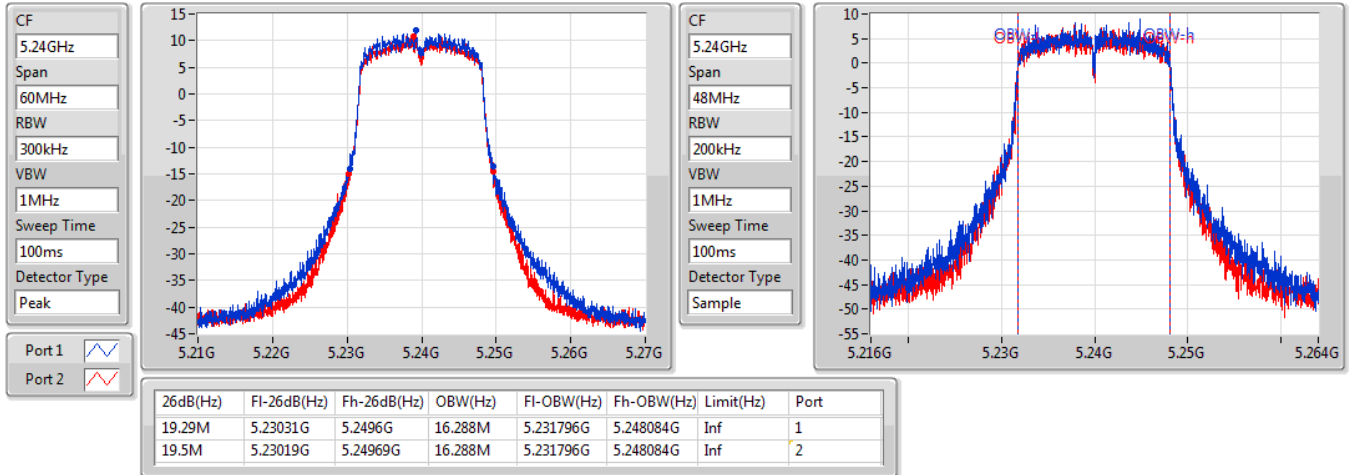

11a-20M_Nss1_2TX
EBW
5200MHz

11/05/2020

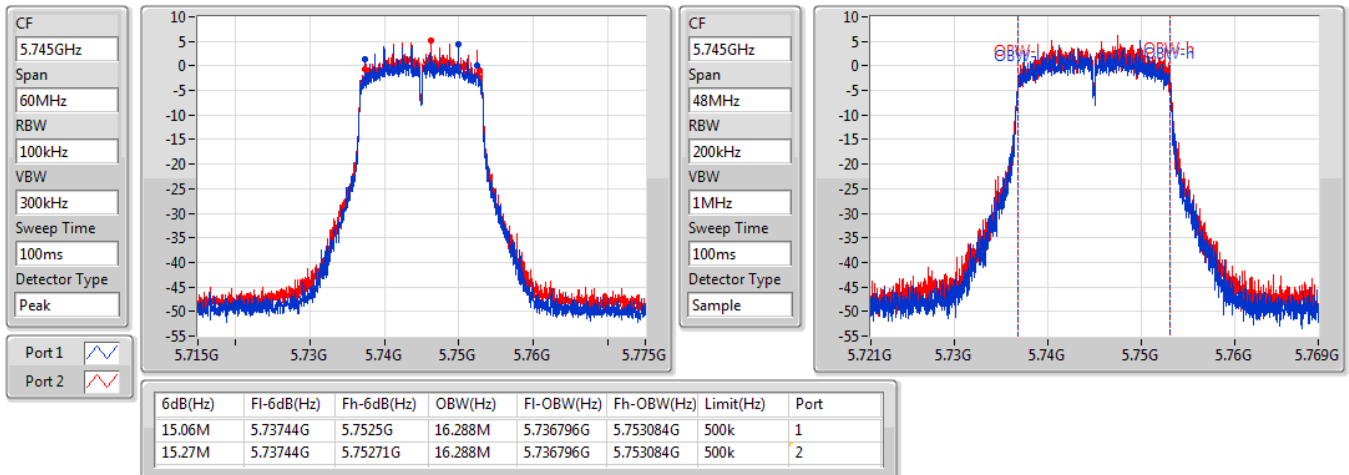


11a-20M_Nss1_2TX
EBW
5240MHz

11/05/2020

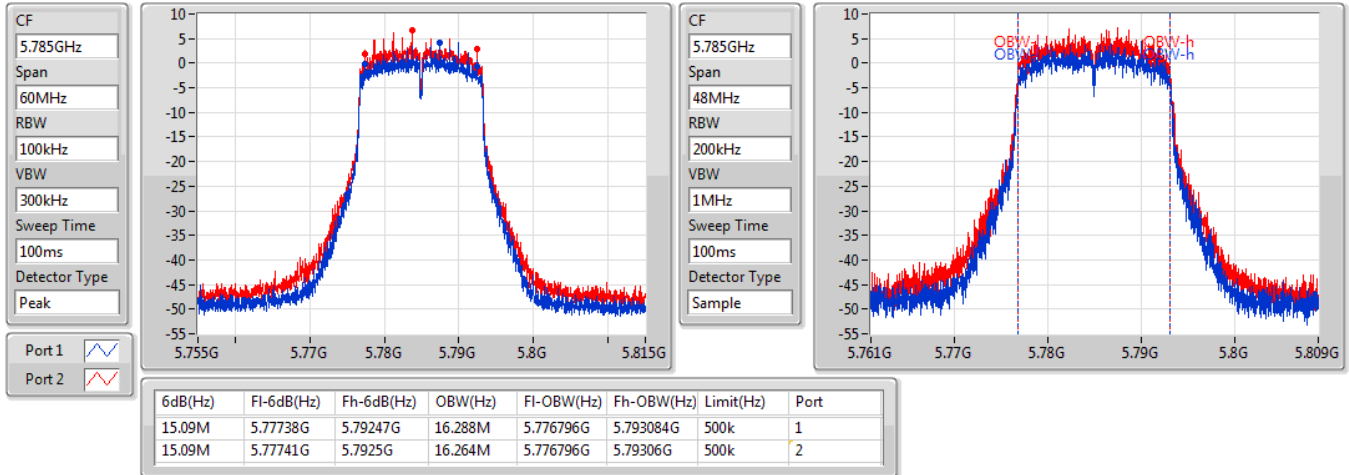

11a-20M_Nss1_2TX
EBW
5745MHz

11/05/2020

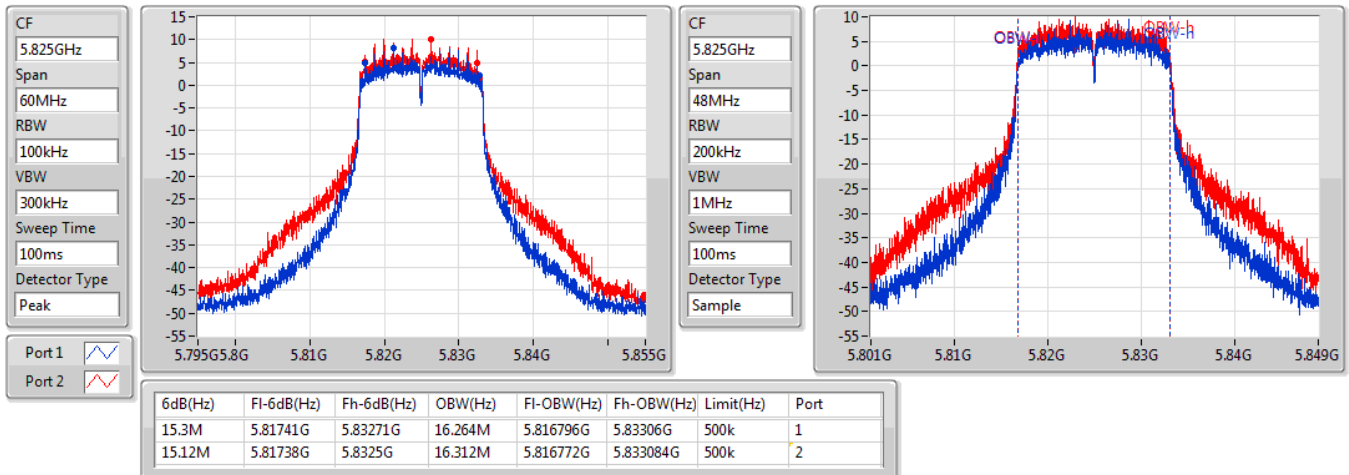


11a-20M_Nss1_2TX
EBW
5785MHz

11/05/2020

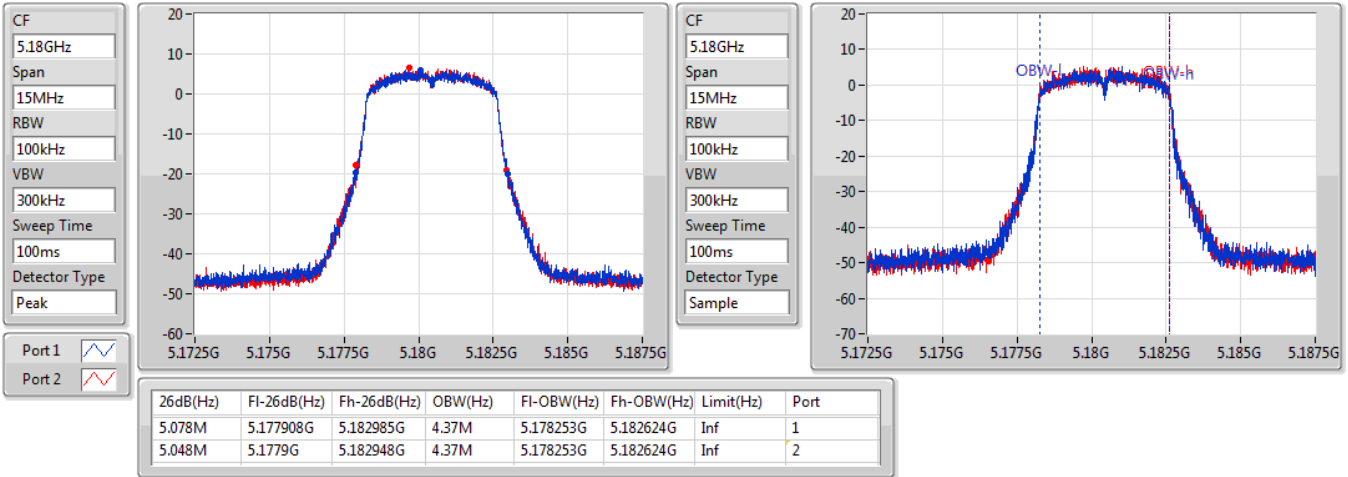

11a-20M_Nss1_2TX
EBW
5825MHz

11/05/2020

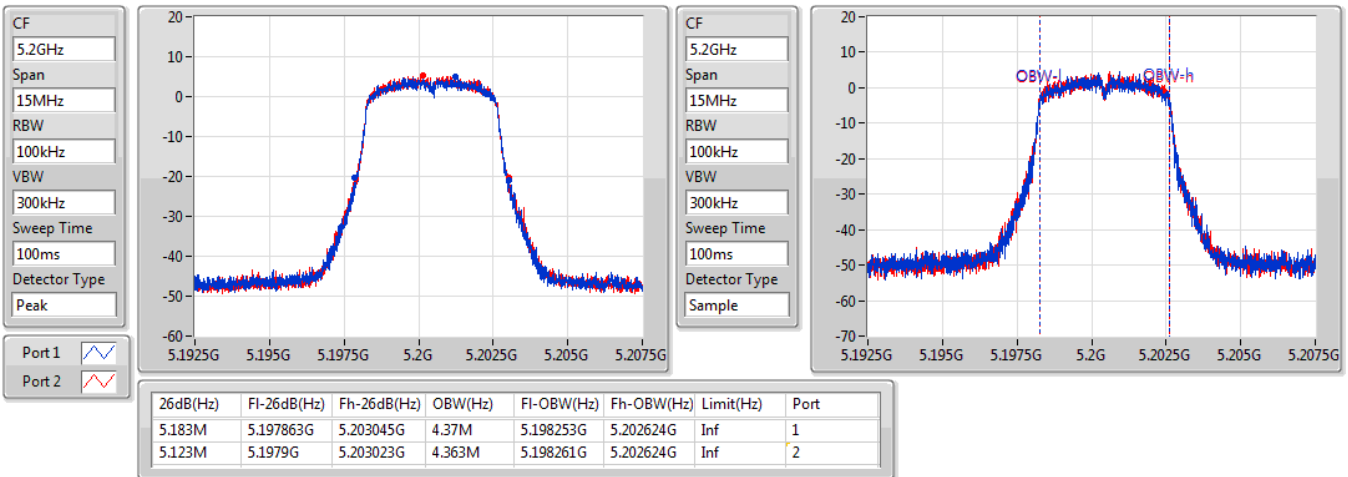


11n-5M_Nss1_2TX
5180MHz

14/12/2020

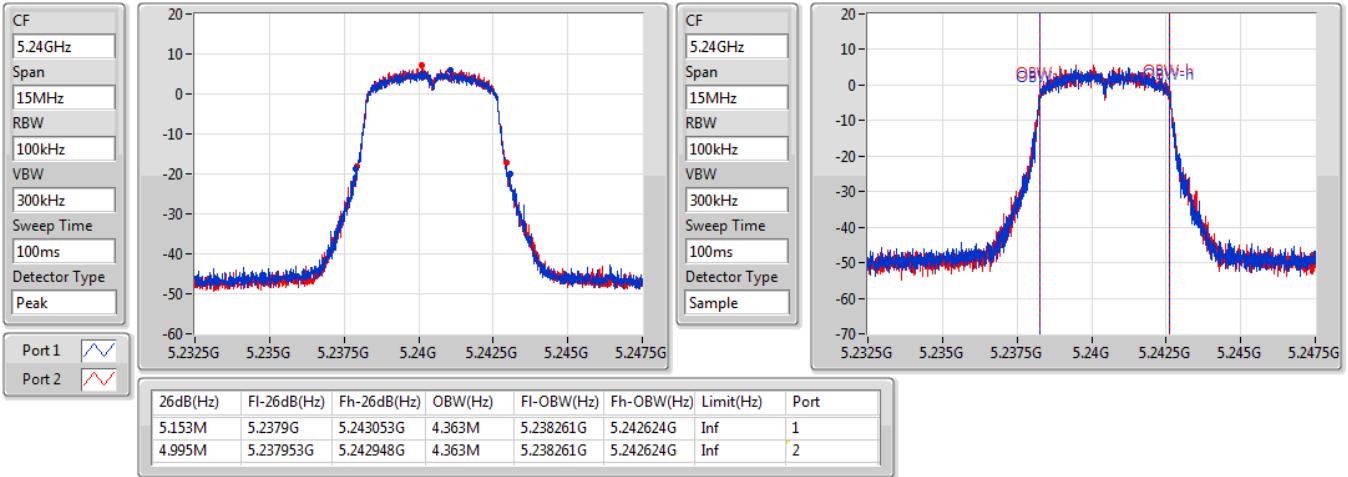

11n-5M_Nss1_2TX
5200MHz

14/12/2020

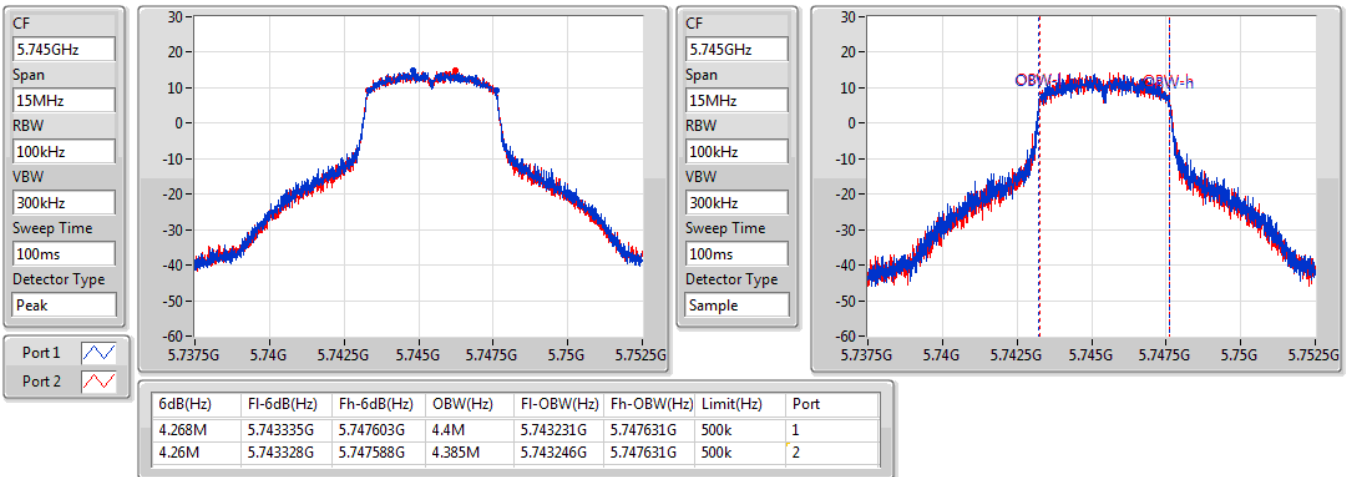


11n-5M_Nss1_2TX
5240MHz

14/12/2020

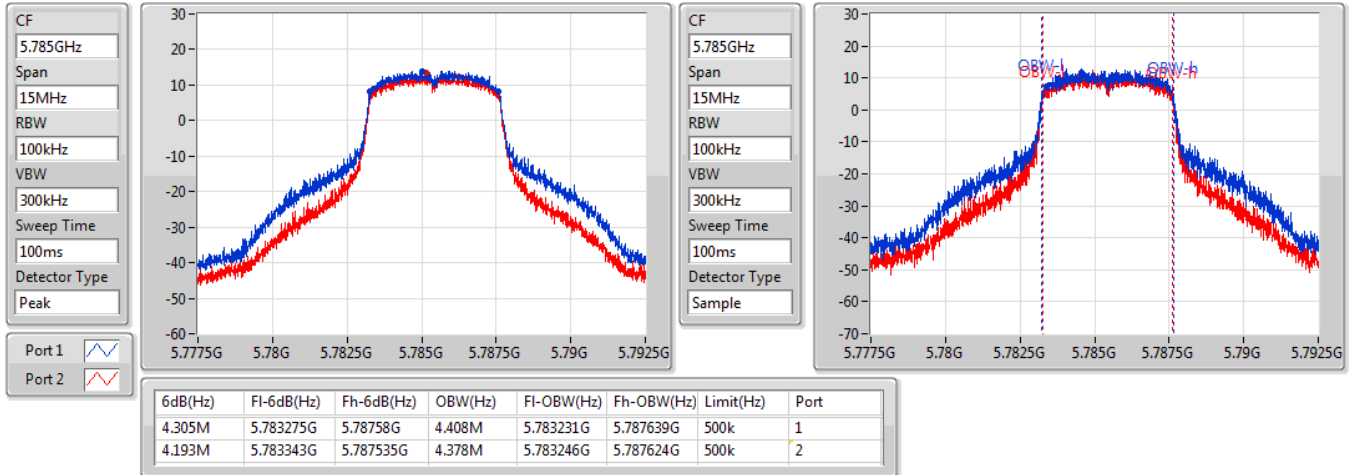

11n-5M_Nss1_2TX
5745MHz

14/12/2020

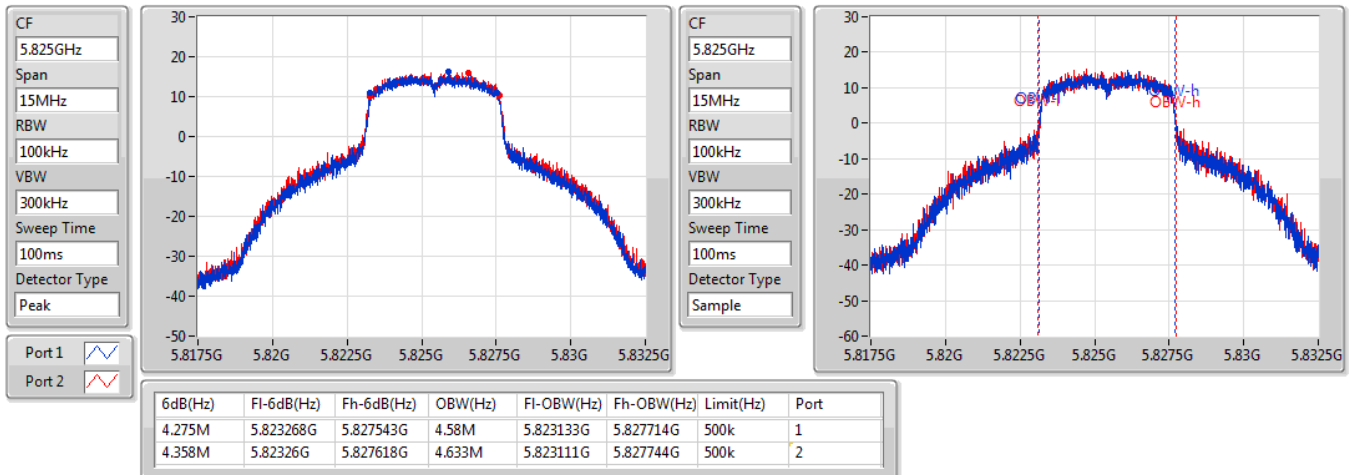


11n-5M_Nss1_2TX
EBW
5785MHz

14/12/2020

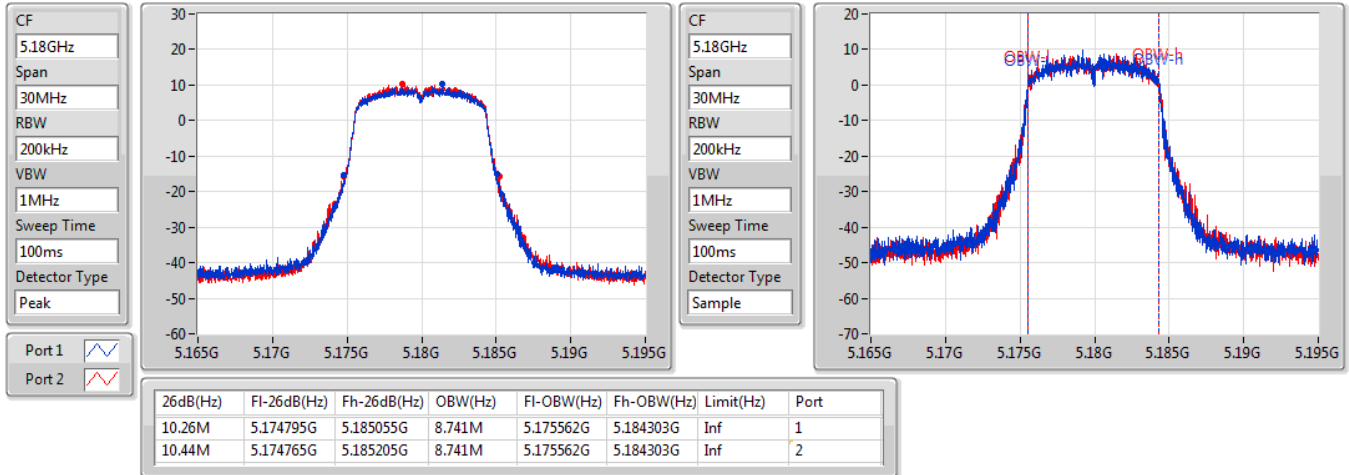

11n-5M_Nss1_2TX
EBW
5825MHz

14/12/2020

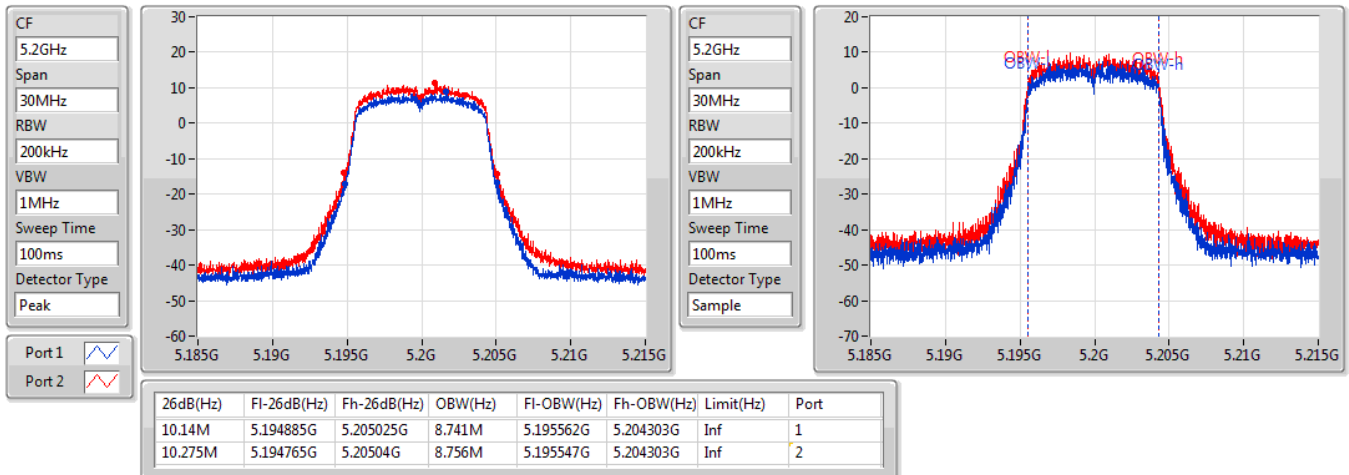


11n-10M_Nss1_2TX
EBW
5180MHz

14/12/2020

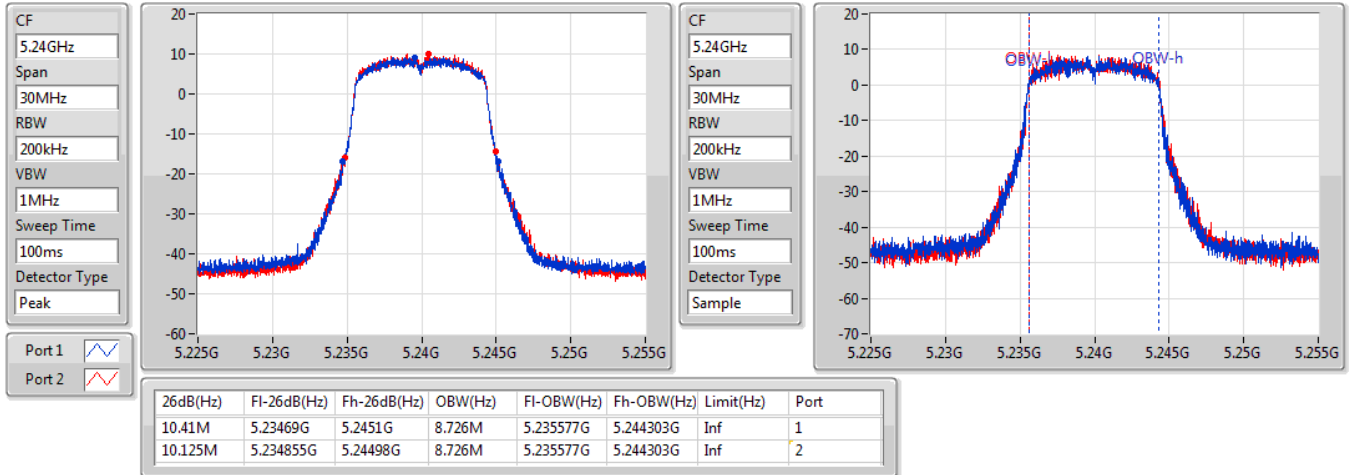

11n-10M_Nss1_2TX
EBW
5200MHz

14/12/2020

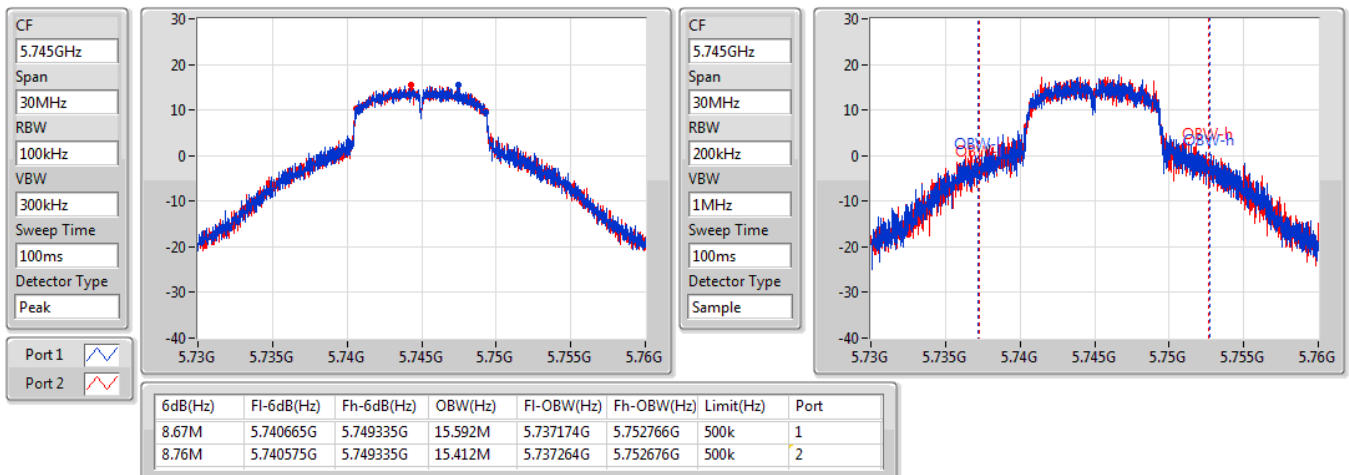


11n-10M_Nss1_2TX
EBW
5240MHz

14/12/2020

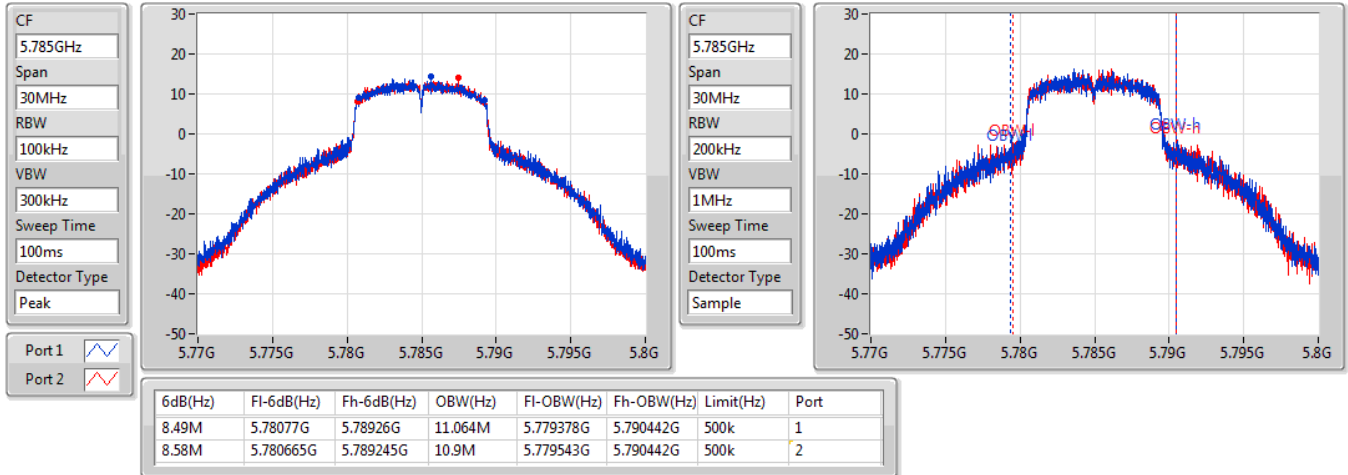

11n-10M_Nss1_2TX
EBW
5745MHz

14/12/2020

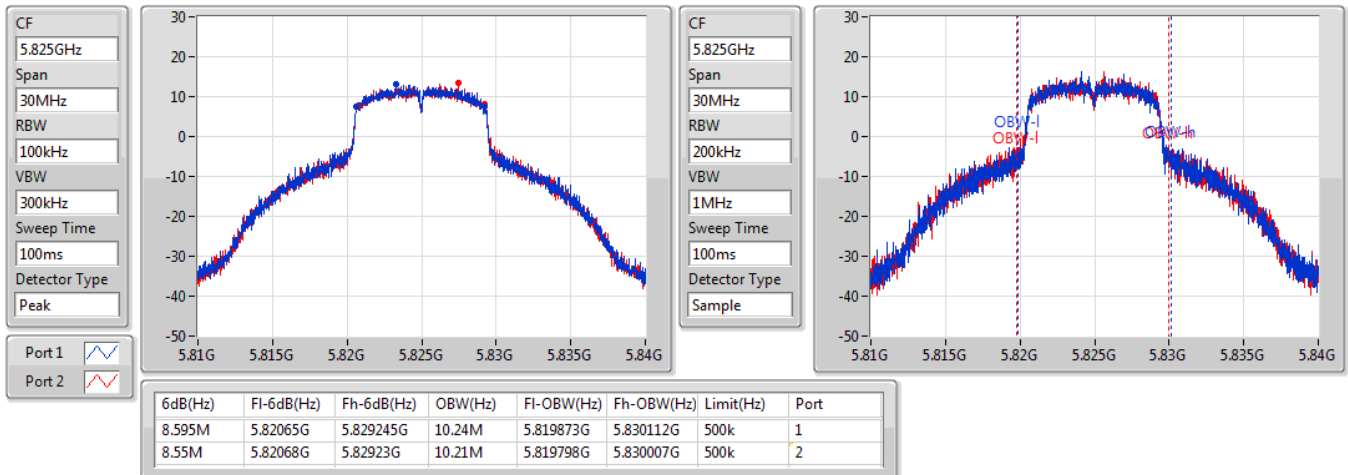


11n-10M_Nss1_2TX
EBW
5785MHz

14/12/2020

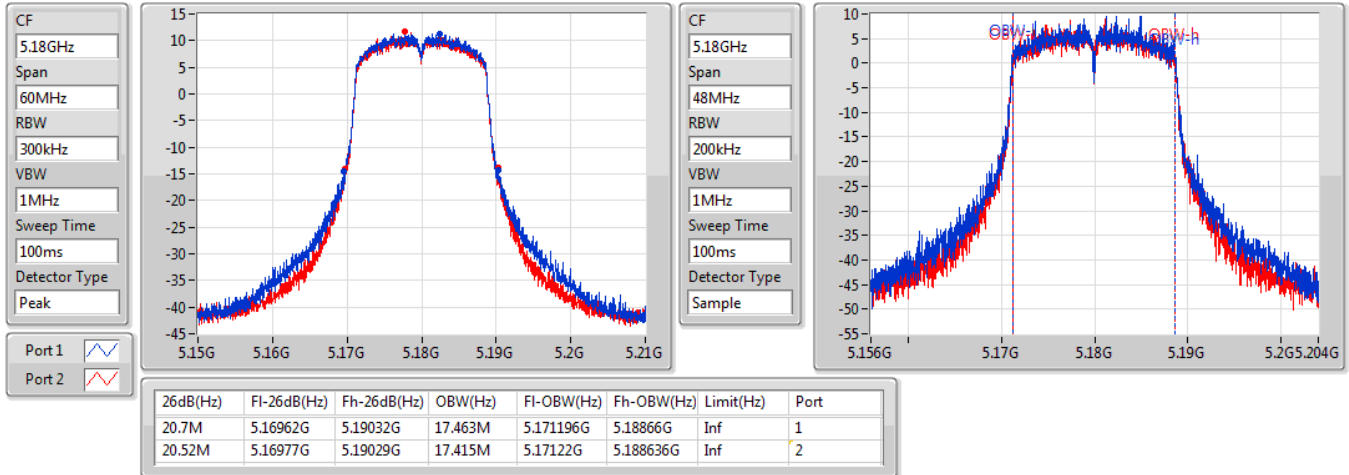

11n-10M_Nss1_2TX
EBW
5825MHz

14/12/2020

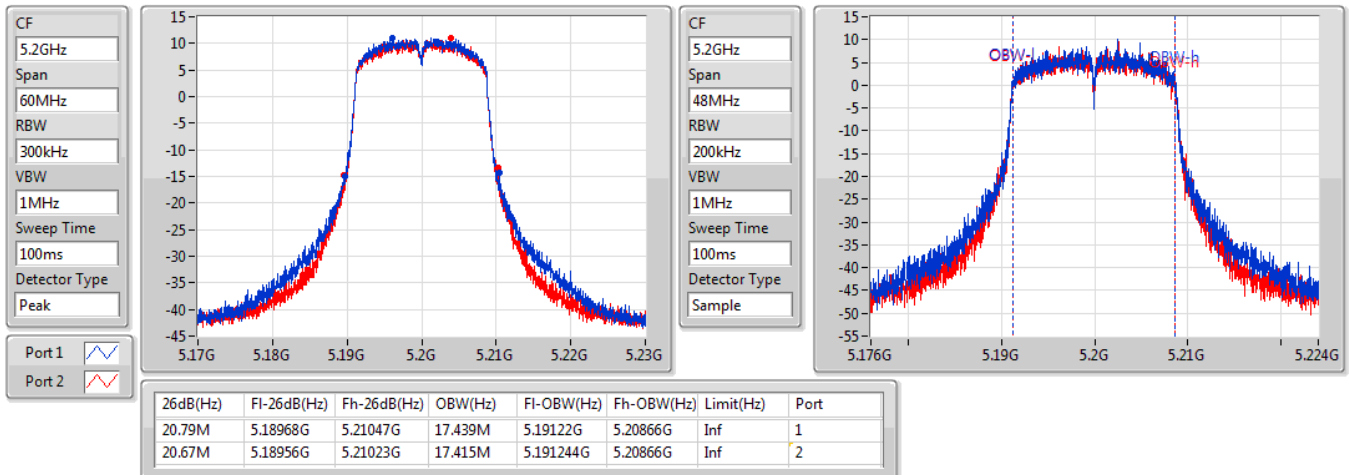


802.11ac VHT20_Nss1_2TX
EBW
5180MHz

11/05/2020

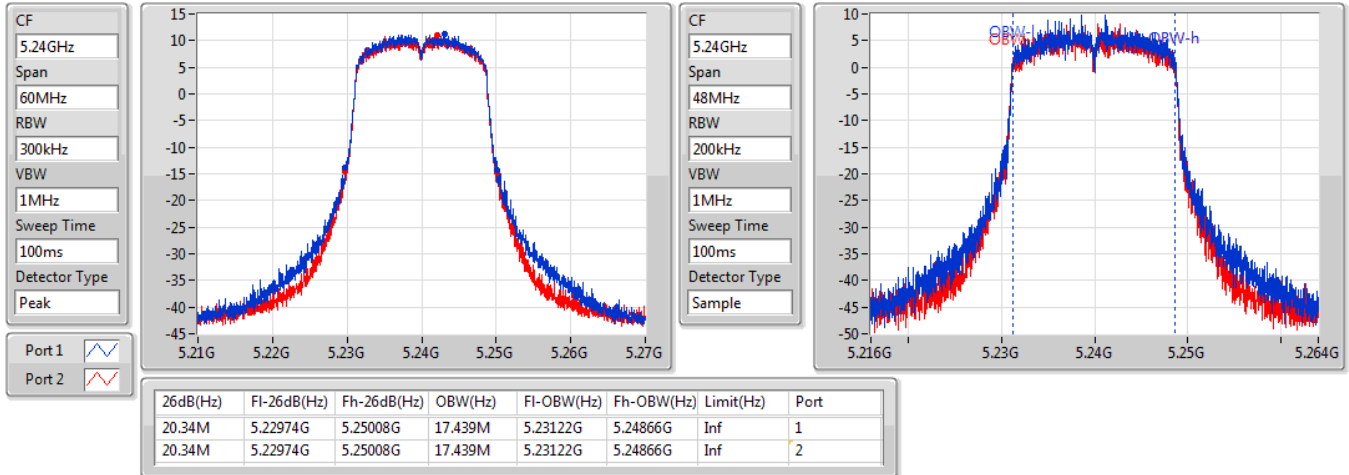

802.11ac VHT20_Nss1_2TX
EBW
5200MHz

11/05/2020

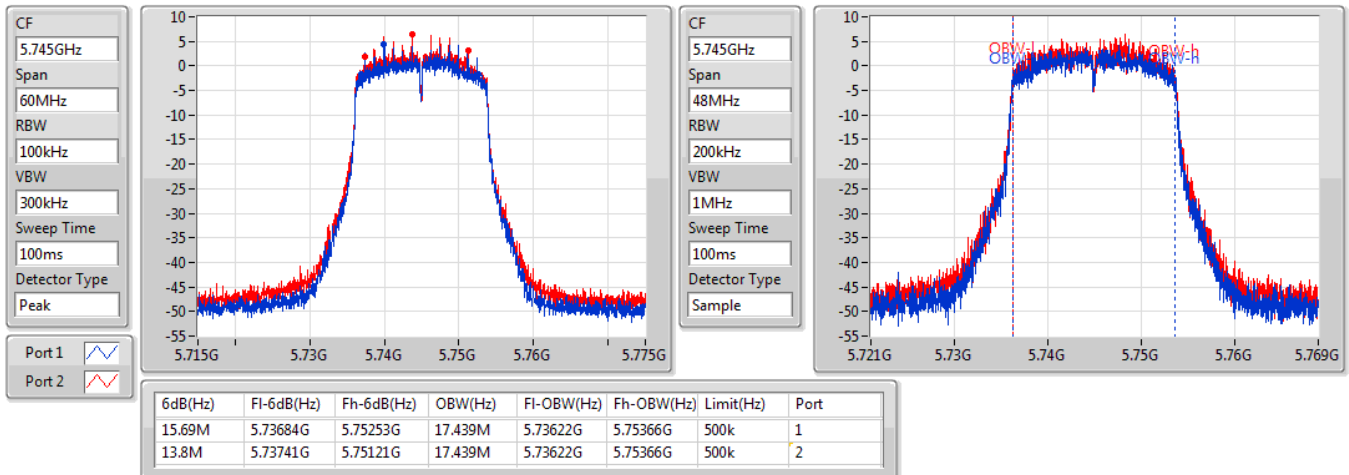


802.11ac VHT20_Nss1_2TX
EBW
5240MHz

11/05/2020

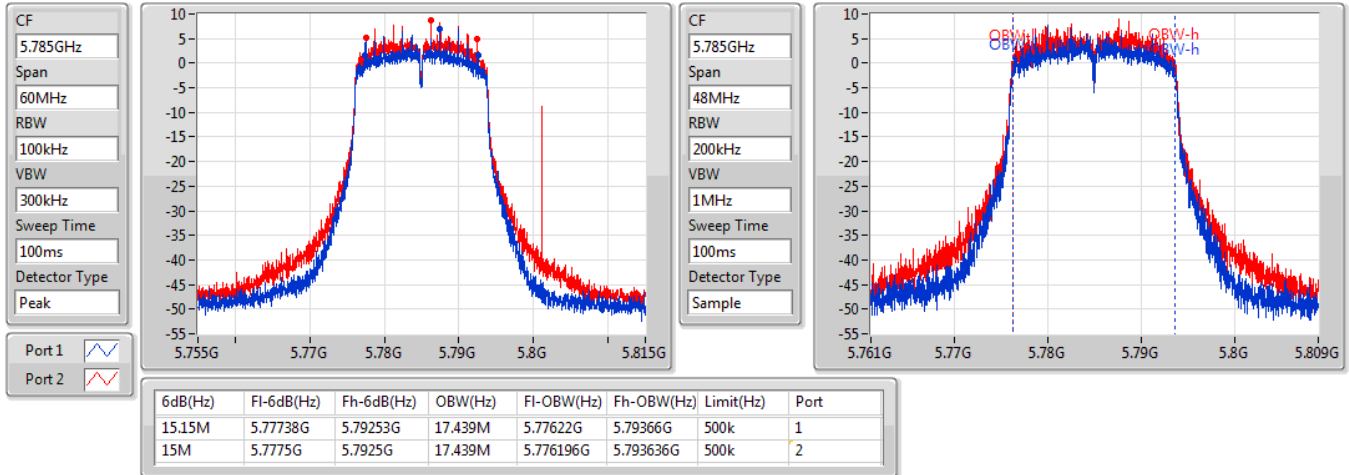

802.11ac VHT20_Nss1_2TX
EBW
5745MHz

11/05/2020

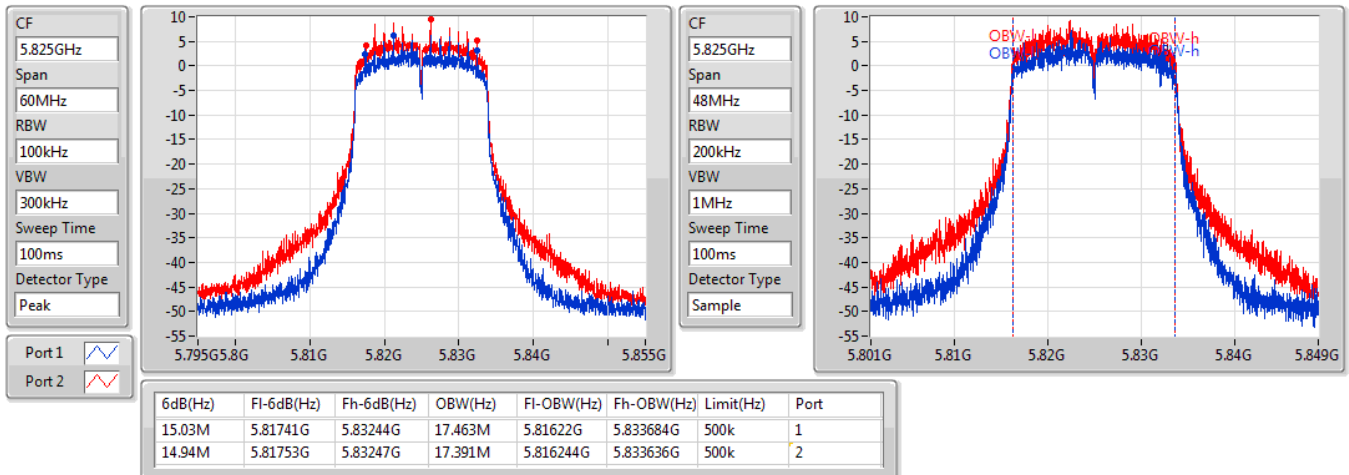


802.11ac VHT20_Nss1_2TX
EBW
5785MHz

11/05/2020

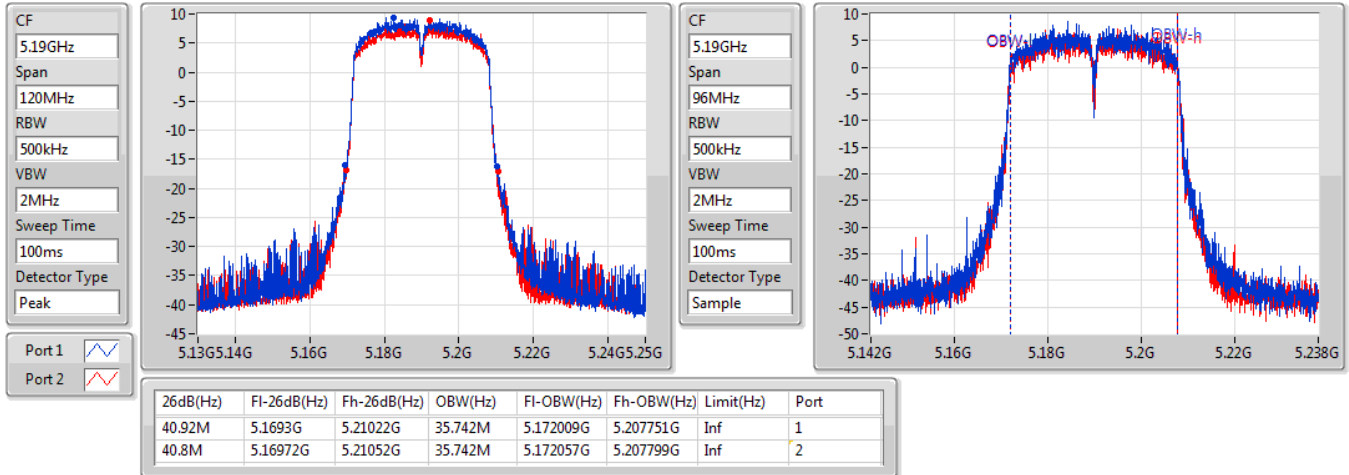

802.11ac VHT20_Nss1_2TX
EBW
5825MHz

11/05/2020

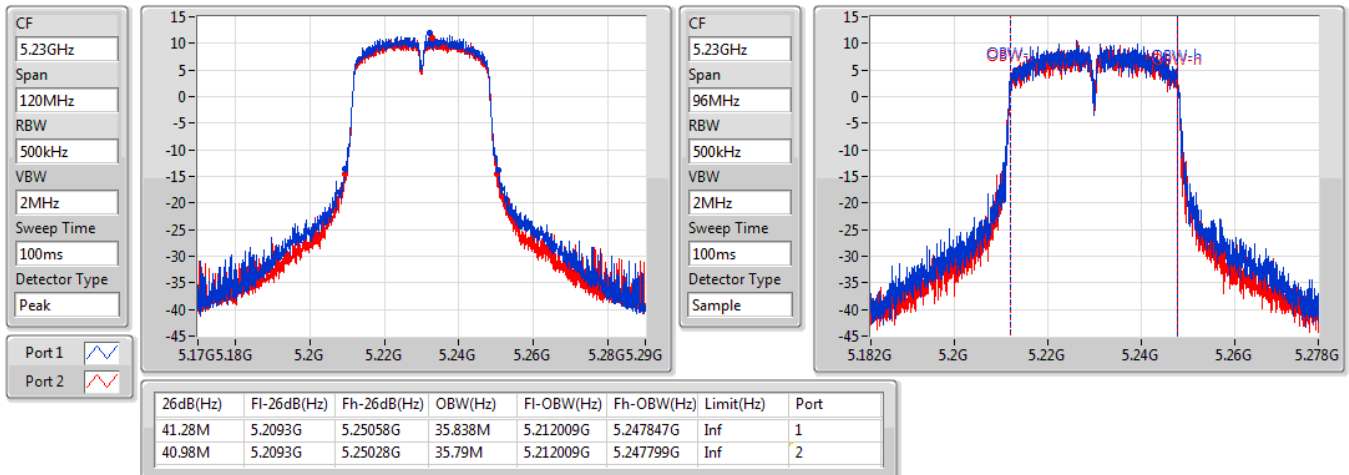


802.11ac VHT40_Nss1_2TX
EBW
5190MHz

11/05/2020

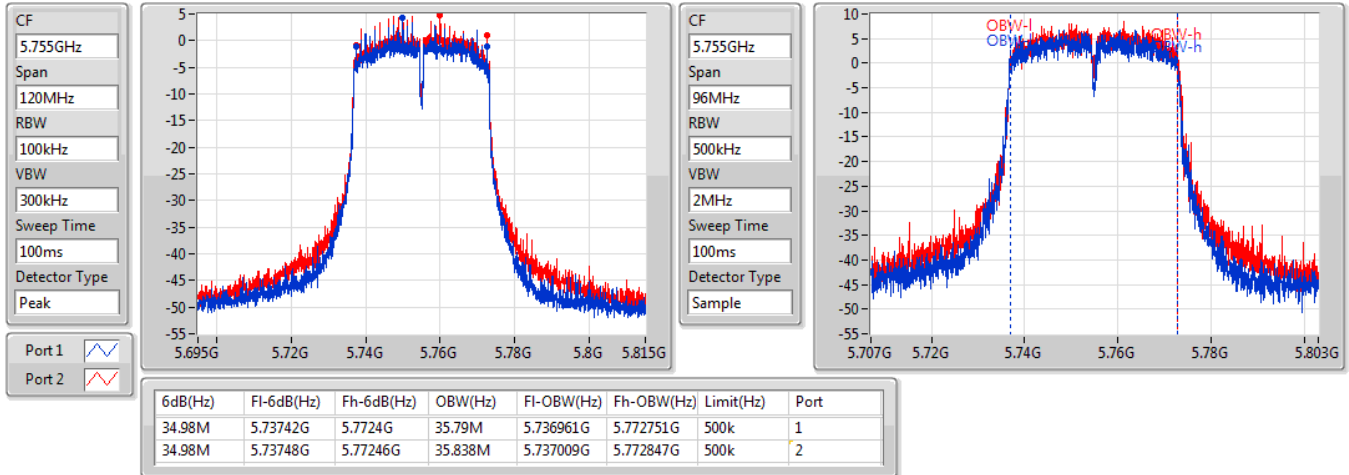

802.11ac VHT40_Nss1_2TX
EBW
5230MHz

11/05/2020

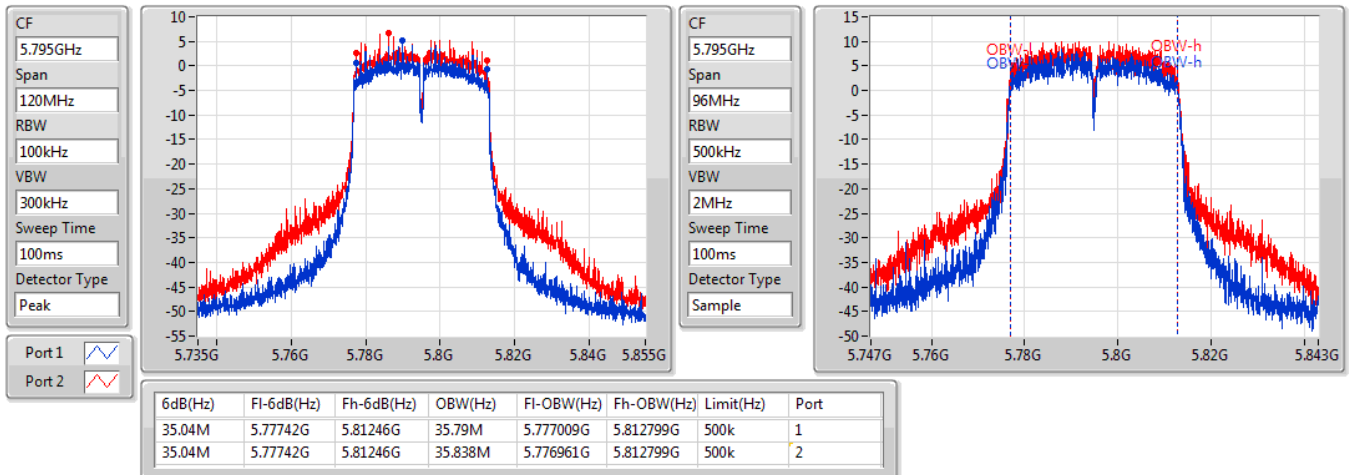


802.11ac VHT40_Nss1_2TX
EBW
5755MHz

11/05/2020

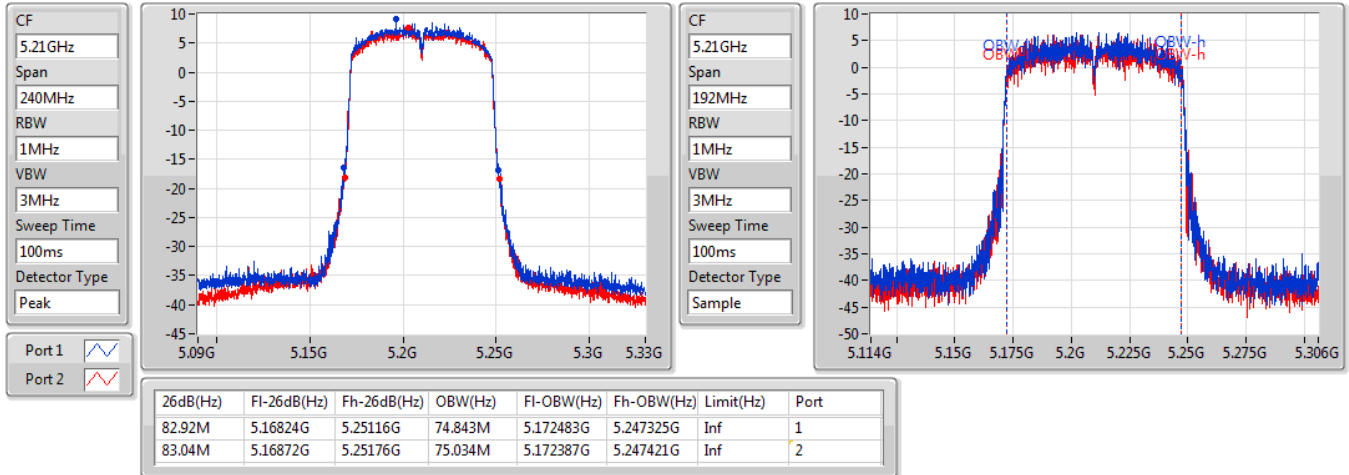

802.11ac VHT40_Nss1_2TX
EBW
5795MHz

11/05/2020

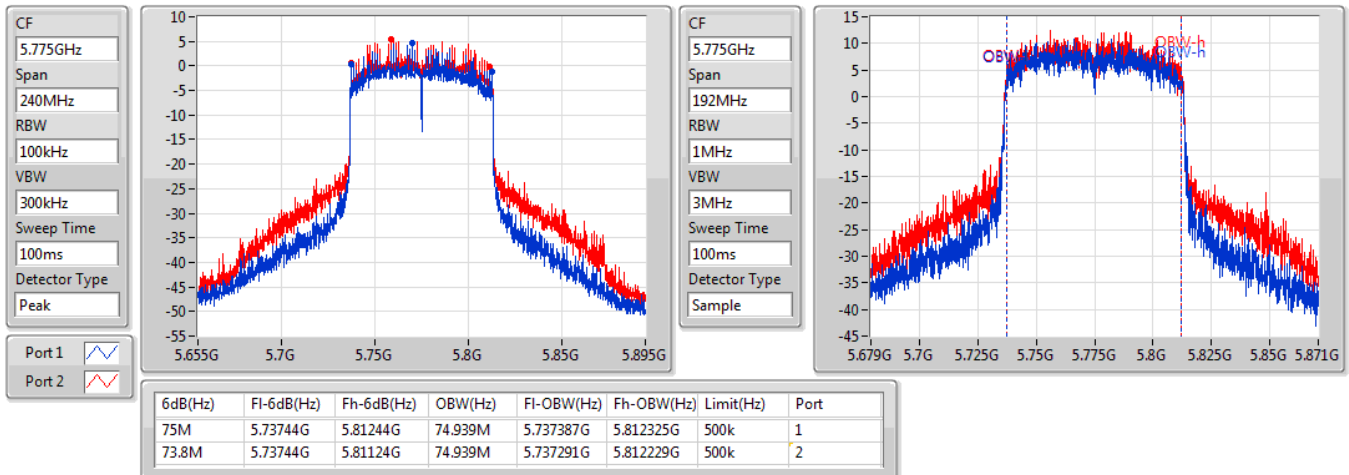


802.11ac VHT80_Nss1_2TX
EBW
5210MHz

11/05/2020


802.11ac VHT80_Nss1_2TX
EBW
5775MHz

11/05/2020



Summary

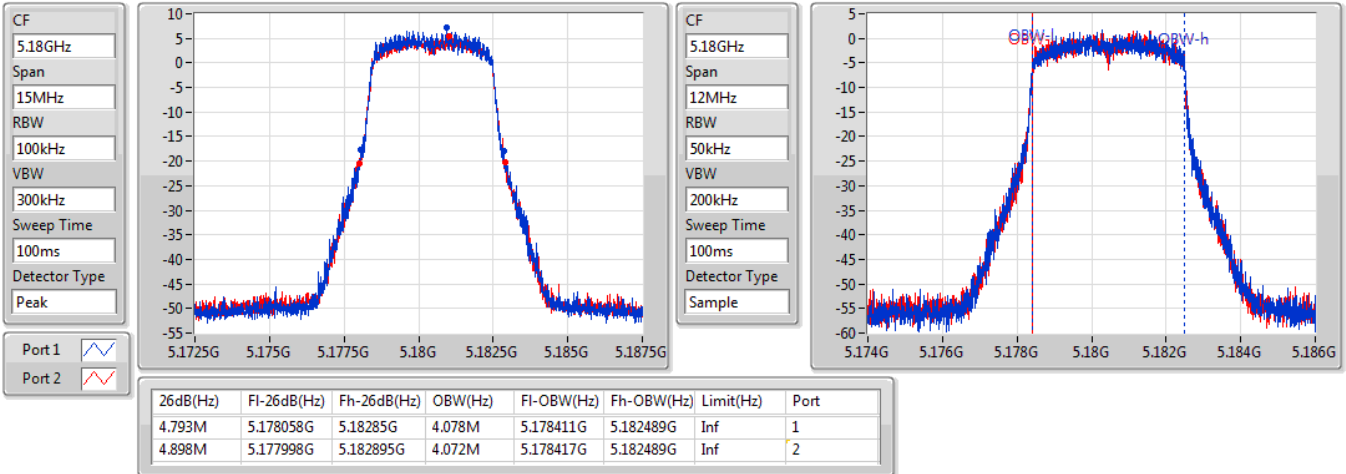
Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
11a-5M_Nss1_2TX	4.95M	4.078M	4M08D1D	4.793M	4.066M
11a-10M_Nss1_2TX	9.855M	8.144M	8M14D1D	9.33M	8.132M
11a-20M_Nss1_2TX	19.86M	16.288M	16M3D1D	19.14M	16.264M
11n-5M_Nss1_2TX	5.183M	4.37M	4M37D1D	4.995M	4.363M
11n-10M_Nss1_2TX	10.44M	8.756M	8M76D1D	10.125M	8.726M
802.11ac VHT20_Nss1_2TX	21.09M	17.439M	17M4D1D	20.07M	17.415M
802.11ac VHT40_Nss1_2TX	41.22M	35.838M	35M8D1D	40.86M	35.742M
802.11ac VHT80_Nss1_2TX	82.68M	74.939M	74M9D1D	82.56M	74.843M
5.725-5.85GHz	-	-	-	-	-
11a-5M_Nss1_2TX	4.028M	4.078M	4M08D1D	3.9M	4.066M
11a-10M_Nss1_2TX	8.16M	8.985M	8M99D1D	7.95M	8.132M
11a-20M_Nss1_2TX	15.78M	16.312M	16M3D1D	15.06M	16.264M
11n-5M_Nss1_2TX	4.305M	4.46M	4M46D1D	4.2M	4.378M
11n-10M_Nss1_2TX	8.745M	13.778M	13M8D1D	8.46M	10.69M
802.11ac VHT20_Nss1_2TX	15.09M	17.463M	17M5D1D	15M	17.391M
802.11ac VHT40_Nss1_2TX	35.04M	35.934M	35M9D1D	33.78M	35.79M
802.11ac VHT80_Nss1_2TX	75M	75.13M	75M1D1D	73.8M	75.034M

Result

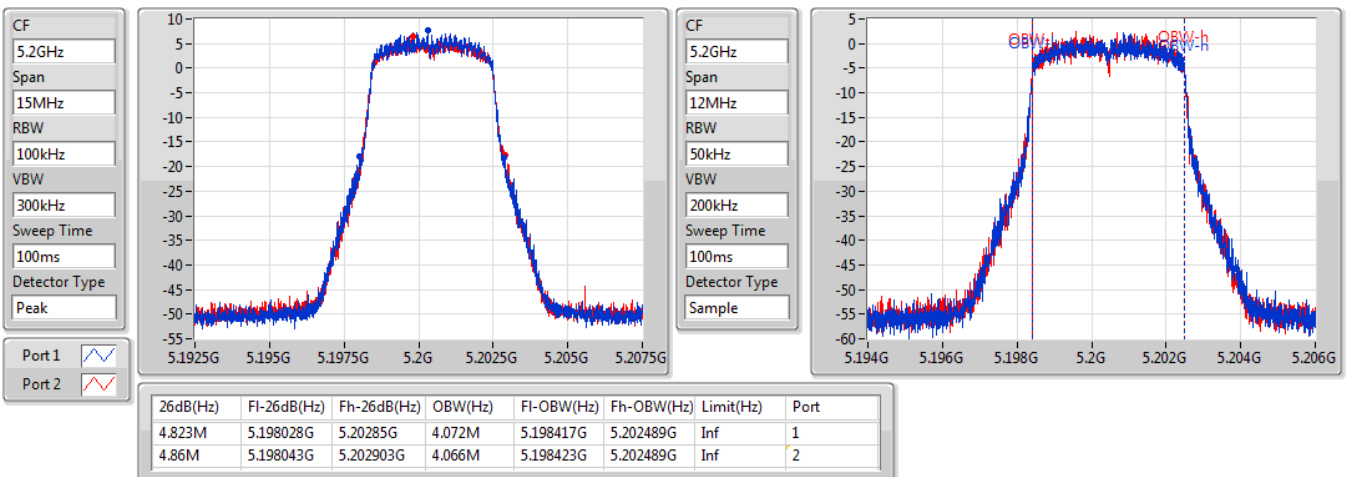
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
11a-5M_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	4.793M	4.078M	4.898M	4.072M
5200MHz	Pass	Inf	4.823M	4.072M	4.86M	4.066M
5240MHz	Pass	Inf	4.815M	4.066M	4.95M	4.072M
5745MHz	Pass	500k	3.998M	4.078M	3.99M	4.078M
5785MHz	Pass	500k	3.998M	4.072M	4.028M	4.066M
5825MHz	Pass	500k	3.968M	4.072M	3.9M	4.066M
11a-10M_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	9.33M	8.144M	9.78M	8.144M
5200MHz	Pass	Inf	9.36M	8.132M	9.855M	8.144M
5240MHz	Pass	Inf	9.615M	8.144M	9.825M	8.132M
5745MHz	Pass	500k	8.115M	8.144M	7.95M	8.156M
5785MHz	Pass	500k	8.01M	8.76M	8.16M	8.985M
5825MHz	Pass	500k	8.145M	8.132M	8.025M	8.132M
11a-20M_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	19.56M	16.264M	19.65M	16.264M
5200MHz	Pass	Inf	19.14M	16.288M	19.86M	16.288M
5240MHz	Pass	Inf	19.59M	16.288M	19.74M	16.288M
5745MHz	Pass	500k	15.78M	16.288M	15.12M	16.264M
5785MHz	Pass	500k	15.06M	16.288M	15.06M	16.288M
5825MHz	Pass	500k	15.06M	16.312M	15.09M	16.288M
11n-5M_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	5.078M	4.37M	5.048M	4.37M
5200MHz	Pass	Inf	5.183M	4.37M	5.123M	4.363M
5240MHz	Pass	Inf	5.153M	4.363M	4.995M	4.363M
5745MHz	Pass	500k	4.305M	4.46M	4.2M	4.43M
5785MHz	Pass	500k	4.208M	4.393M	4.223M	4.378M
5825MHz	Pass	500k	4.29M	4.415M	4.2M	4.393M
11n-10M_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	10.26M	8.741M	10.44M	8.741M
5200MHz	Pass	Inf	10.14M	8.741M	10.275M	8.756M
5240MHz	Pass	Inf	10.41M	8.726M	10.125M	8.726M
5745MHz	Pass	500k	8.58M	11.319M	8.46M	10.69M
5785MHz	Pass	500k	8.655M	13.778M	8.745M	13.523M
5825MHz	Pass	500k	8.505M	11.919M	8.55M	12.099M
802.11ac VHT20_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	20.22M	17.439M	20.1M	17.439M
5200MHz	Pass	Inf	20.49M	17.439M	20.34M	17.415M
5240MHz	Pass	Inf	21.09M	17.439M	20.07M	17.415M
5745MHz	Pass	500k	15.06M	17.439M	15.06M	17.391M
5785MHz	Pass	500k	15.06M	17.439M	15.09M	17.415M
5825MHz	Pass	500k	15.03M	17.463M	15M	17.415M
802.11ac VHT40_Nss1_2TX	-	-	-	-	-	-
5190MHz	Pass	Inf	40.86M	35.838M	41.22M	35.742M
5230MHz	Pass	Inf	41.16M	35.79M	40.86M	35.79M
5755MHz	Pass	500k	35.04M	35.838M	35.04M	35.79M
5795MHz	Pass	500k	33.78M	35.934M	35.04M	35.79M
802.11ac VHT80_Nss1_2TX	-	-	-	-	-	-
5210MHz	Pass	Inf	82.56M	74.939M	82.68M	74.843M
5775MHz	Pass	500k	75M	75.034M	73.8M	75.13M

11a-5M_Nss1_2TX
EBW
5180MHz

11/05/2020

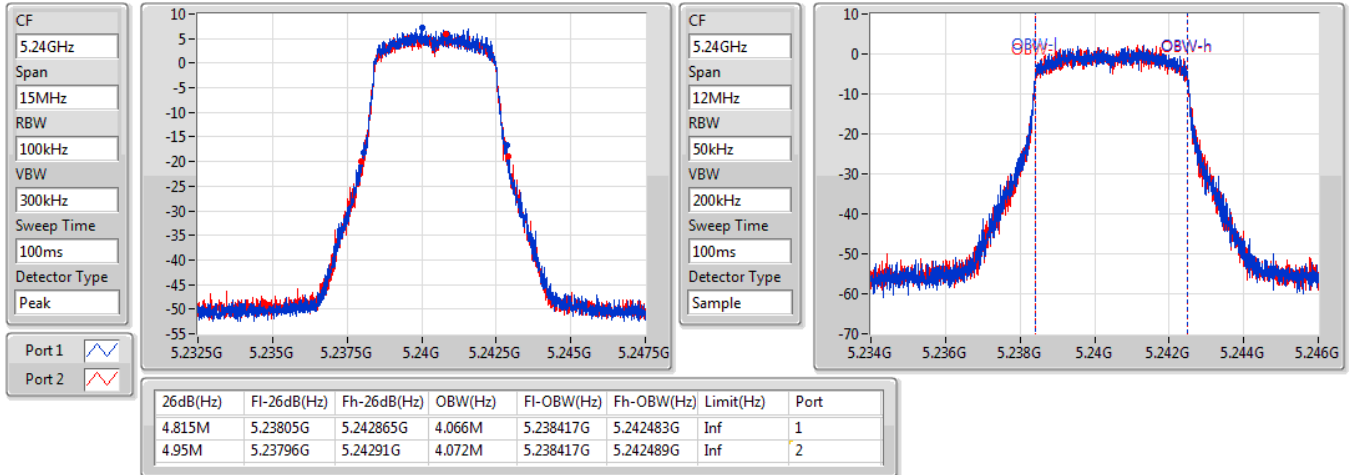

11a-5M_Nss1_2TX
EBW
5200MHz

11/05/2020

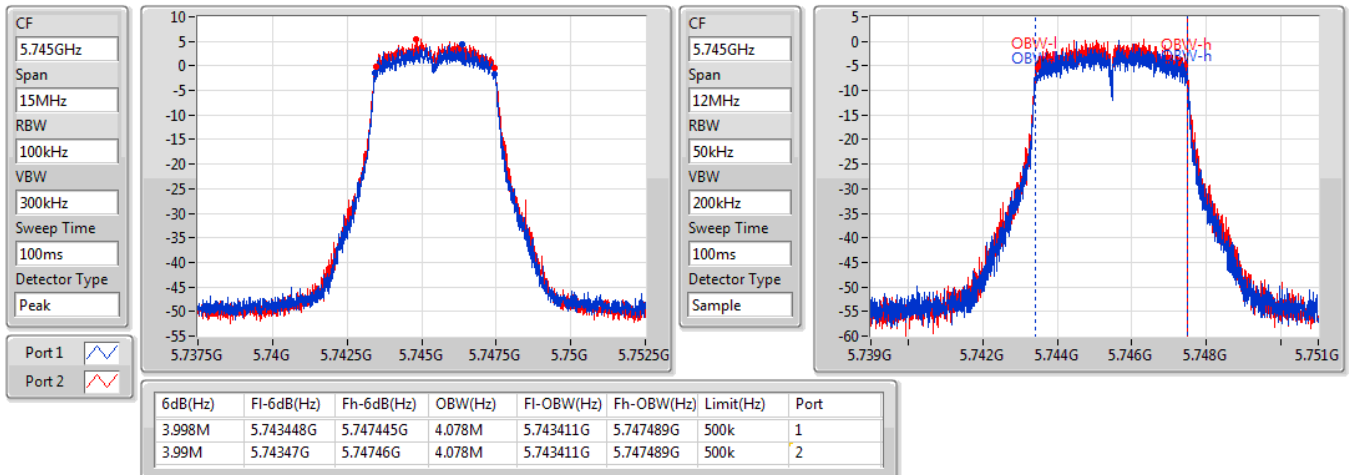


11a-5M_Nss1_2TX
EBW
5240MHz

11/05/2020

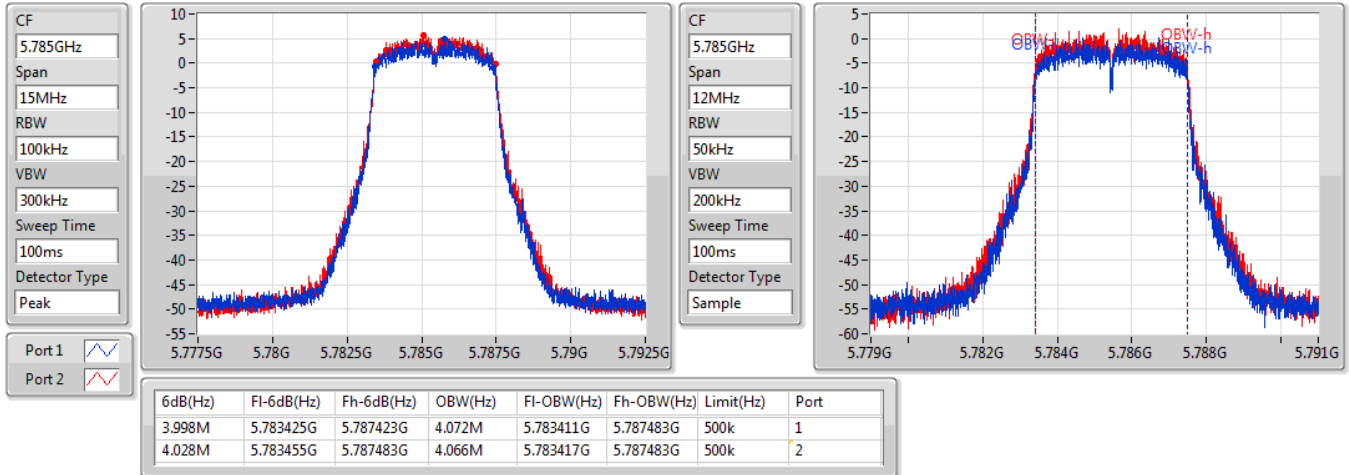

11a-5M_Nss1_2TX
EBW
5745MHz

11/05/2020

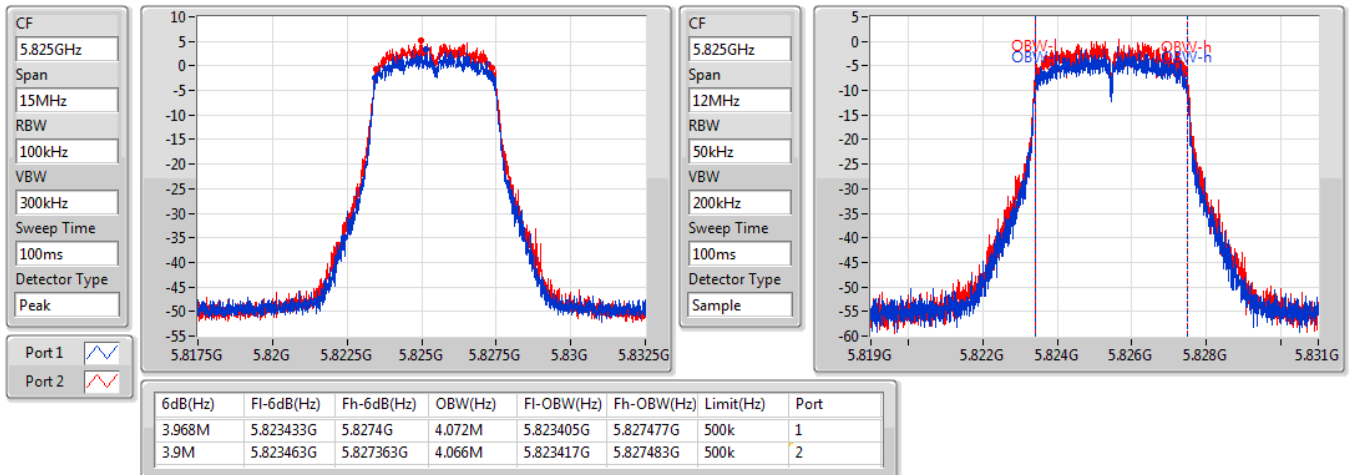


11a-5M_Nss1_2TX
EBW
5785MHz

11/05/2020

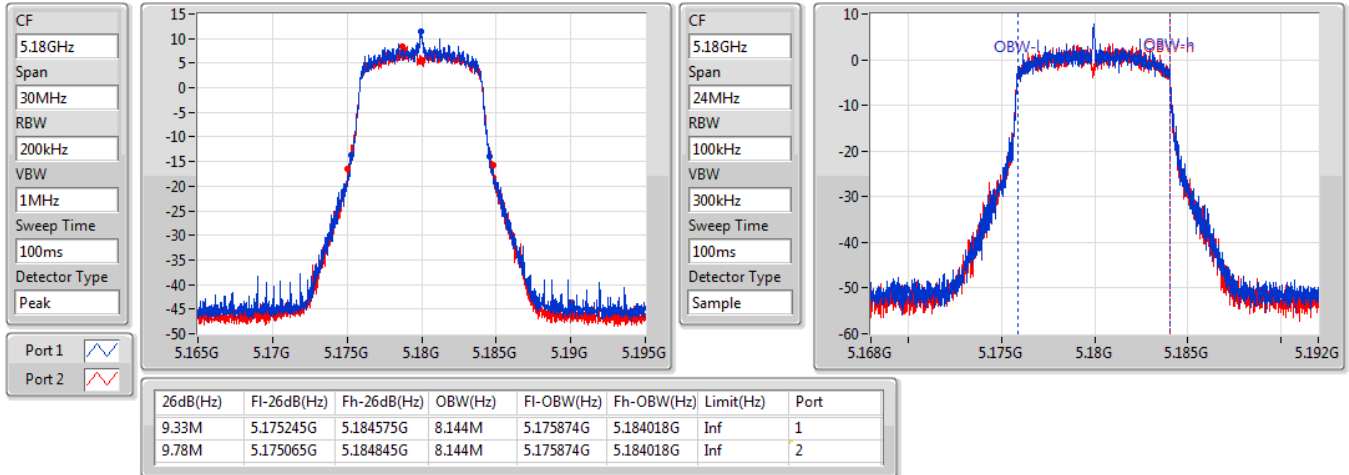

11a-5M_Nss1_2TX
EBW
5825MHz

11/05/2020

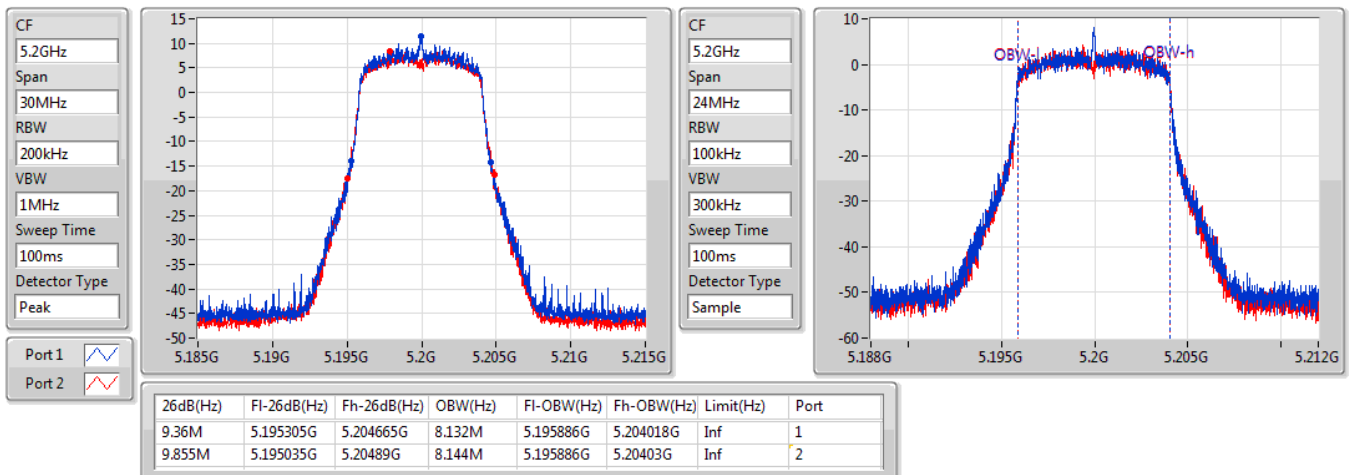


11a-10M_Nss1_2TX
EBW
5180MHz

12/05/2020

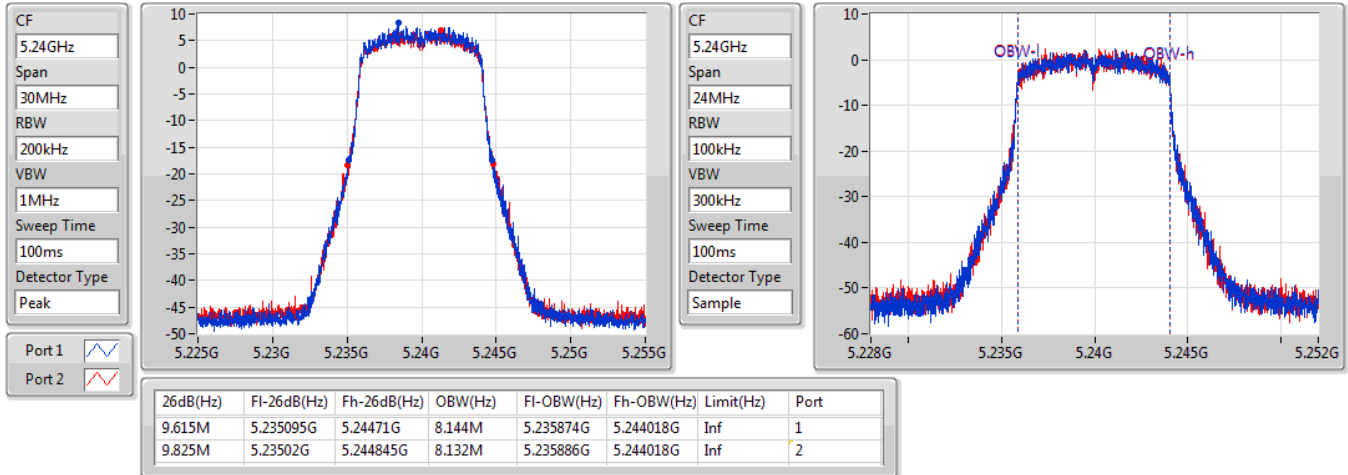

11a-10M_Nss1_2TX
EBW
5200MHz

12/05/2020

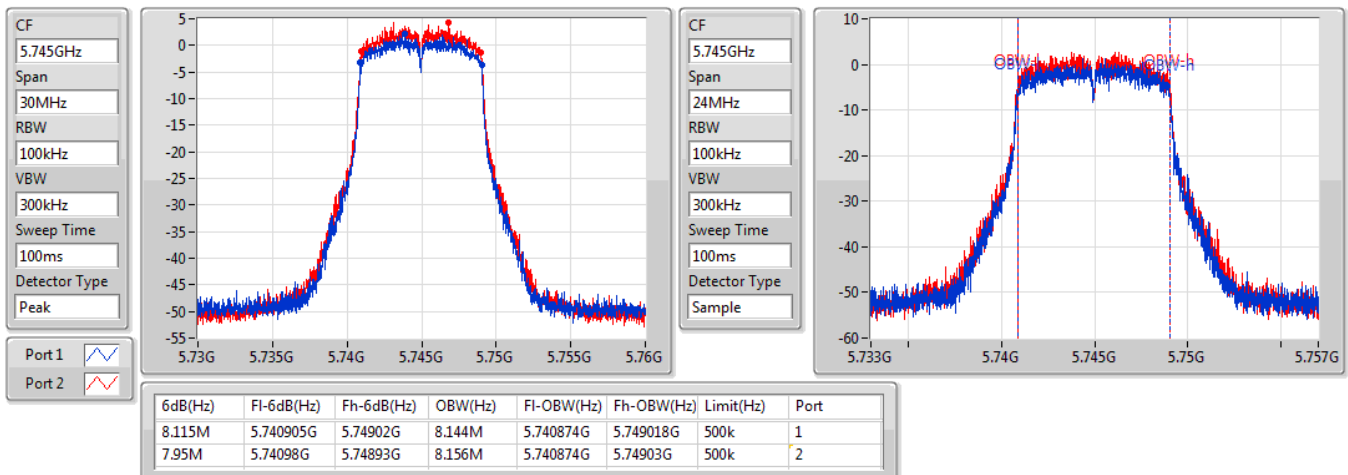


11a-10M_Nss1_2TX
EBW
5240MHz

12/05/2020

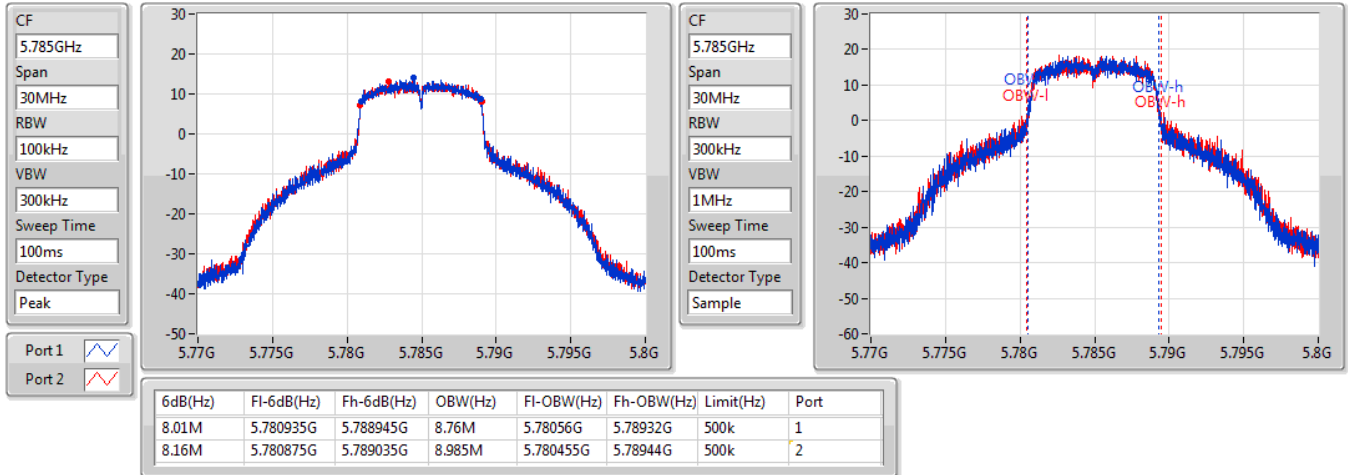

11a-10M_Nss1_2TX
EBW
5745MHz

12/05/2020

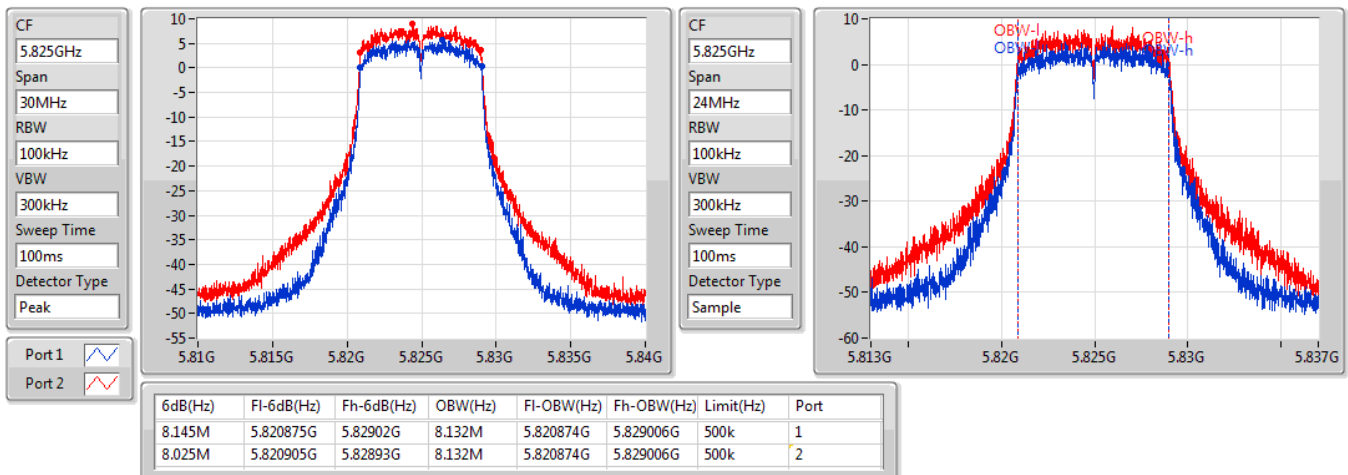


11a-10M_Nss1_2TX
EBW
5785MHz

19/05/2021

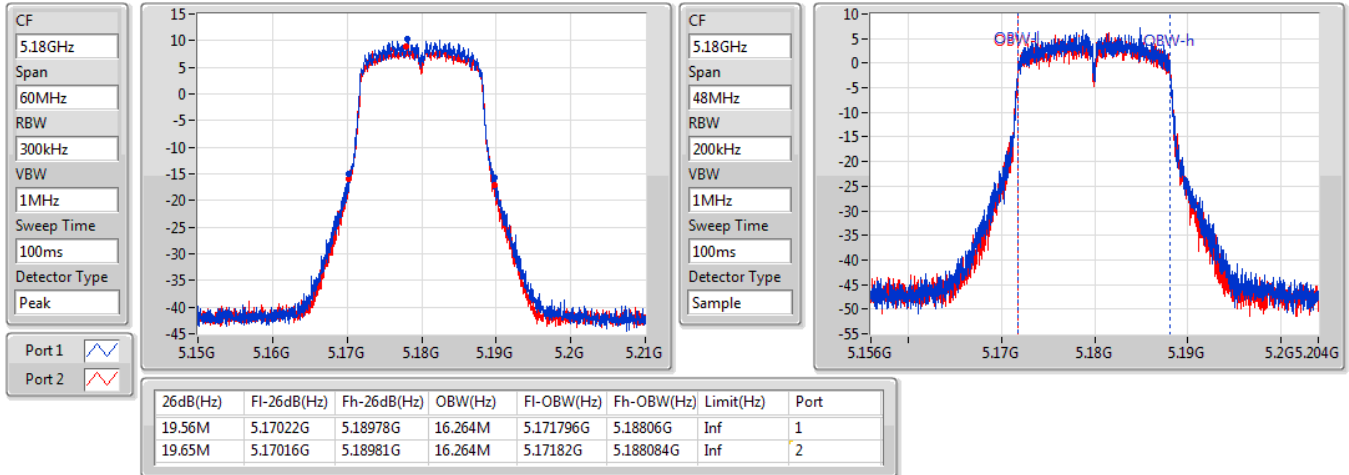

11a-10M_Nss1_2TX
EBW
5825MHz

12/05/2020

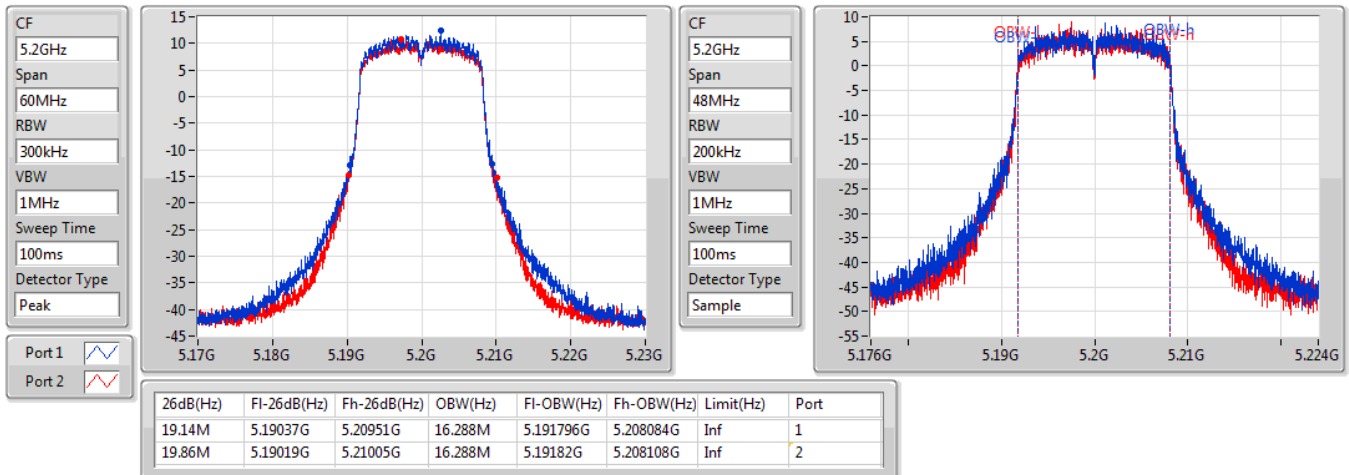


11a-20M_Nss1_2TX
EBW
5180MHz

11/05/2020

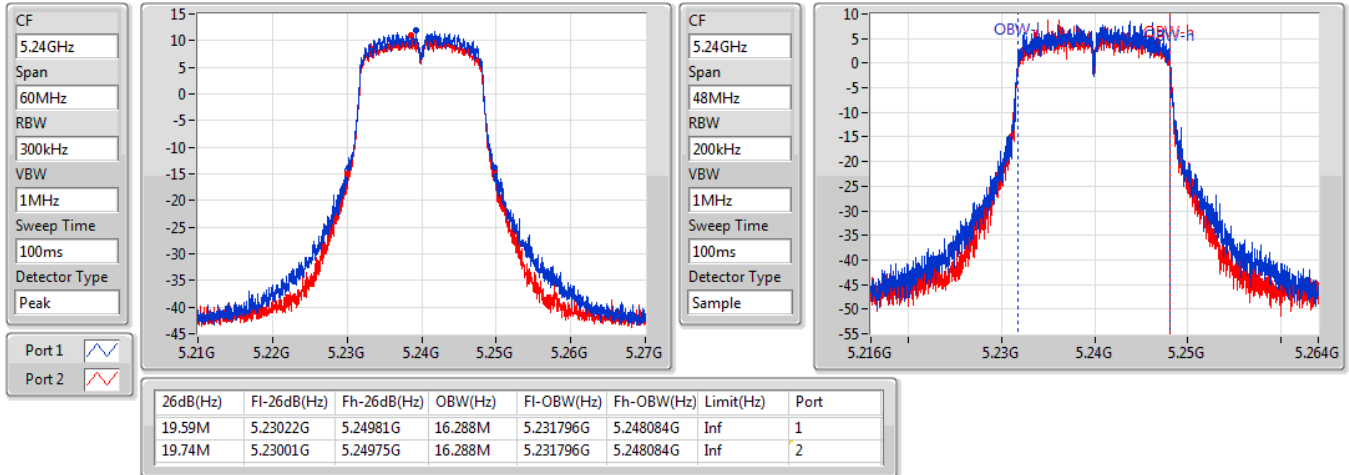

11a-20M_Nss1_2TX
EBW
5200MHz

11/05/2020

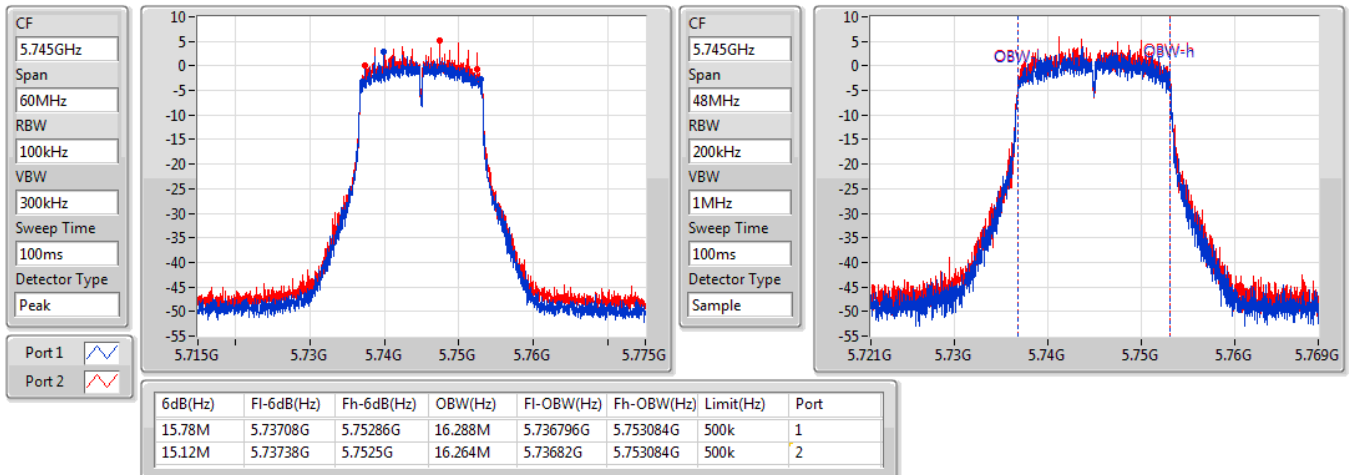


11a-20M_Nss1_2TX
EBW
5240MHz

11/05/2020

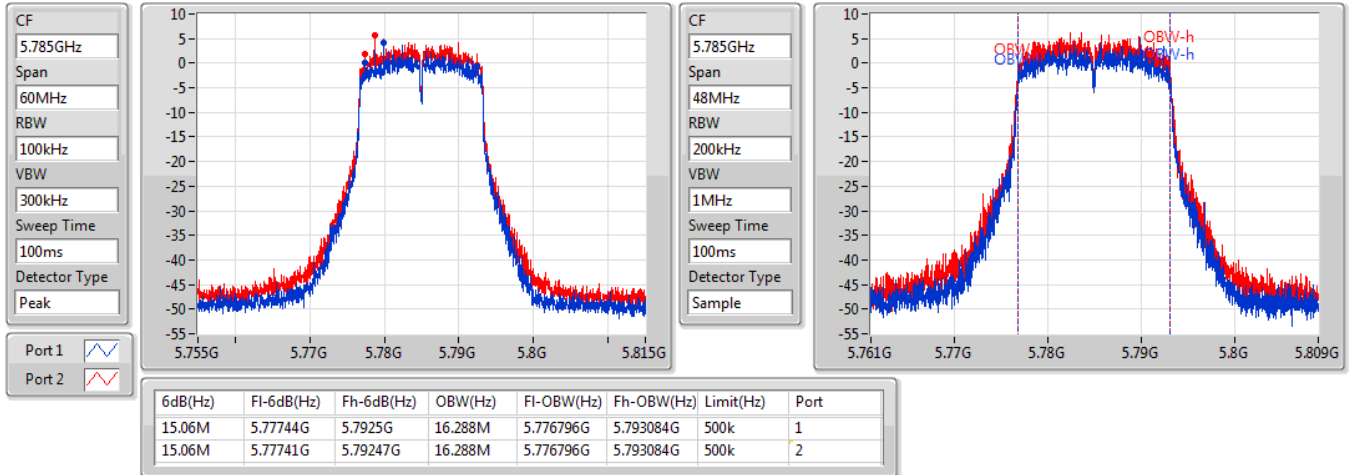

11a-20M_Nss1_2TX
EBW
5745MHz

11/05/2020

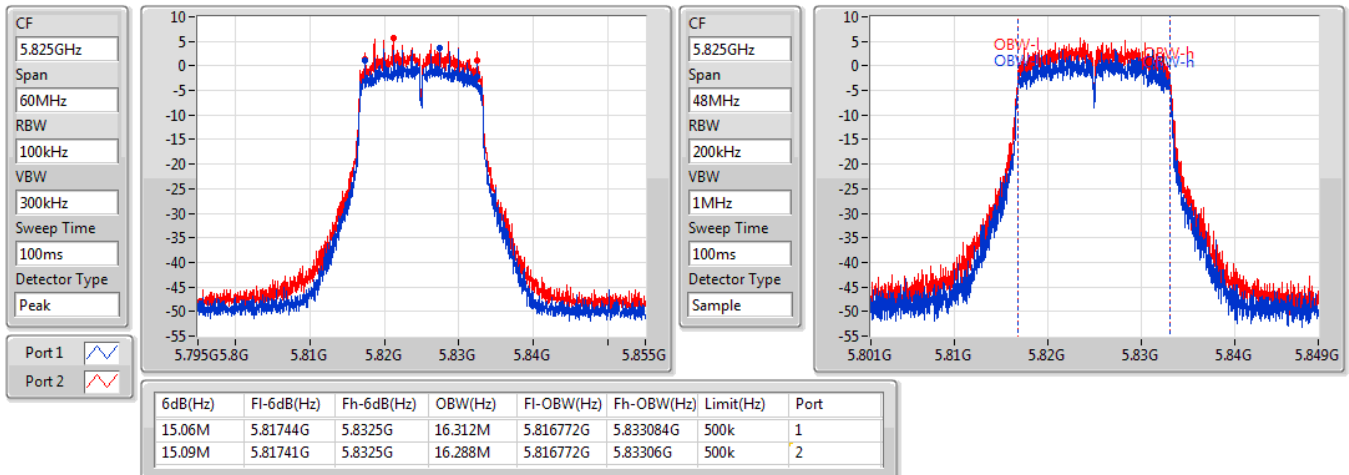


11a-20M_Nss1_2TX
EBW
5785MHz

11/05/2020

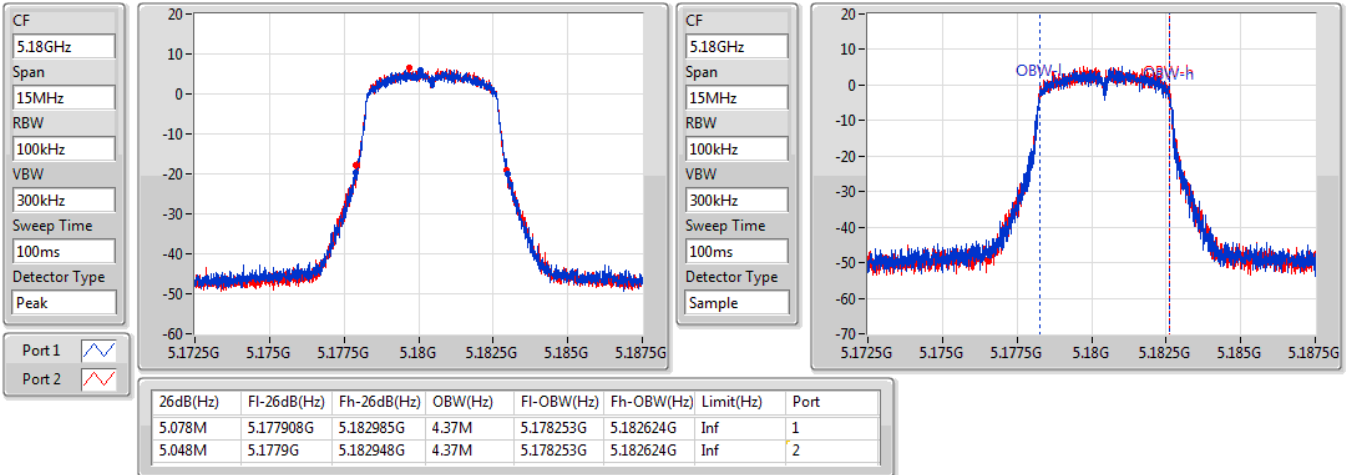

11a-20M_Nss1_2TX
EBW
5825MHz

11/05/2020

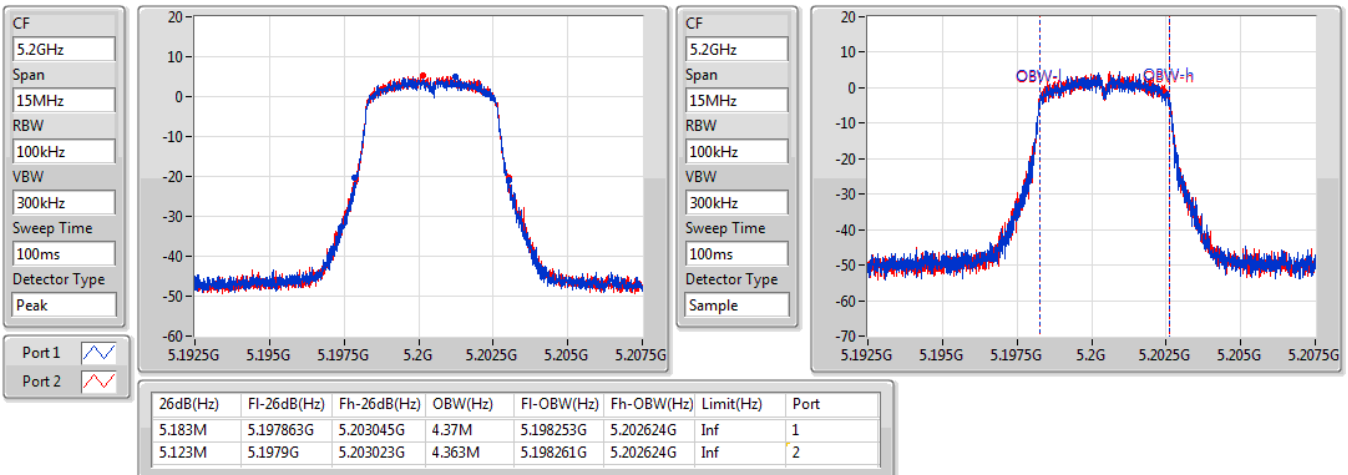


11n-5M_Nss1_2TX
5180MHz

14/12/2020

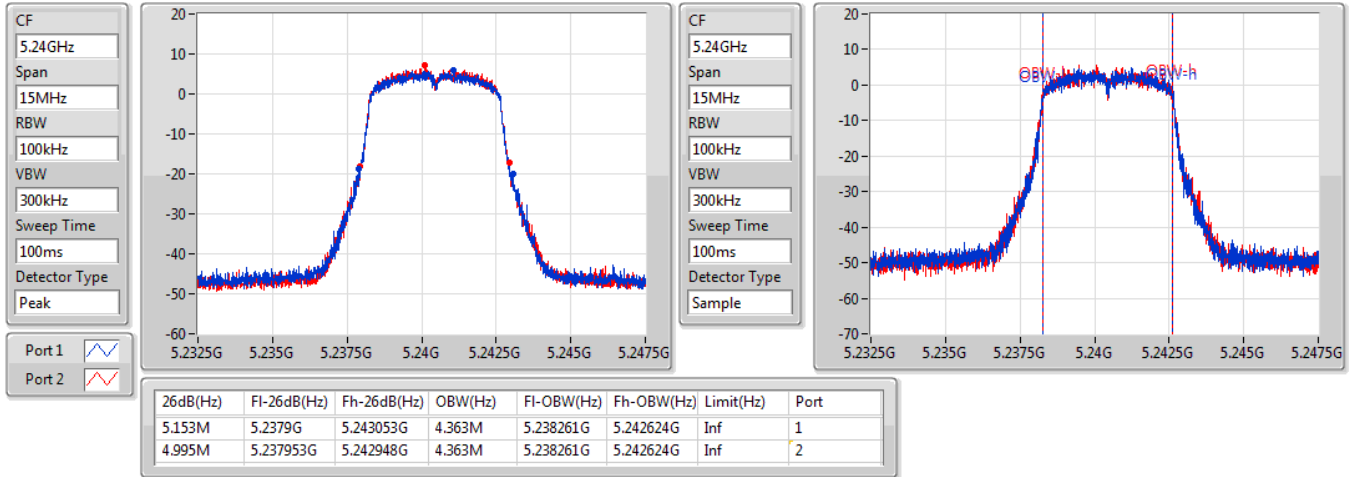

11n-5M_Nss1_2TX
5200MHz

14/12/2020

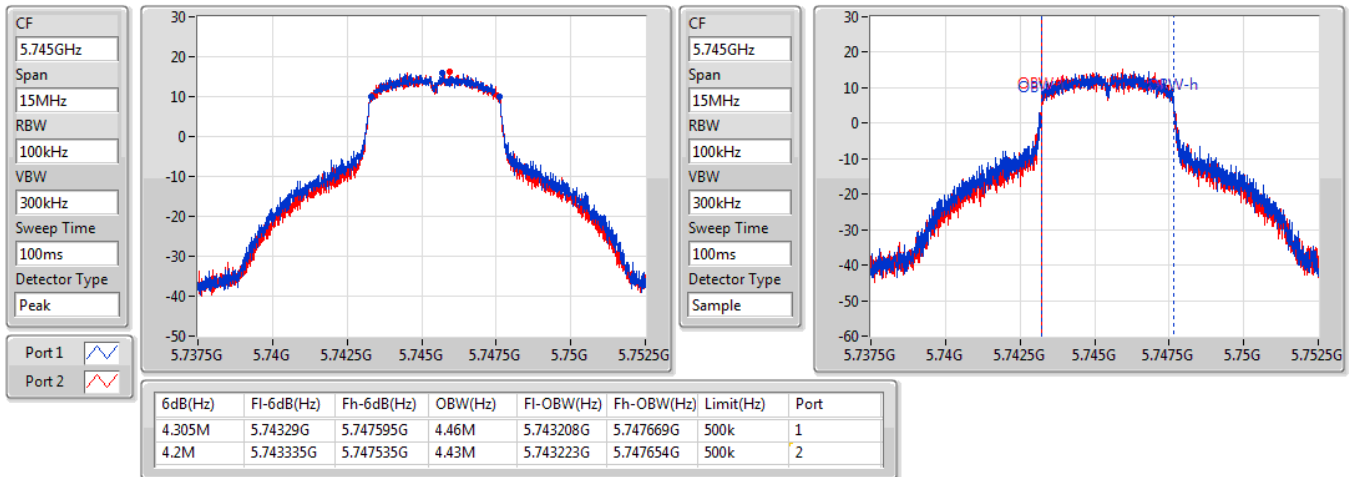


11n-5M_Nss1_2TX
EBW
5240MHz

14/12/2020

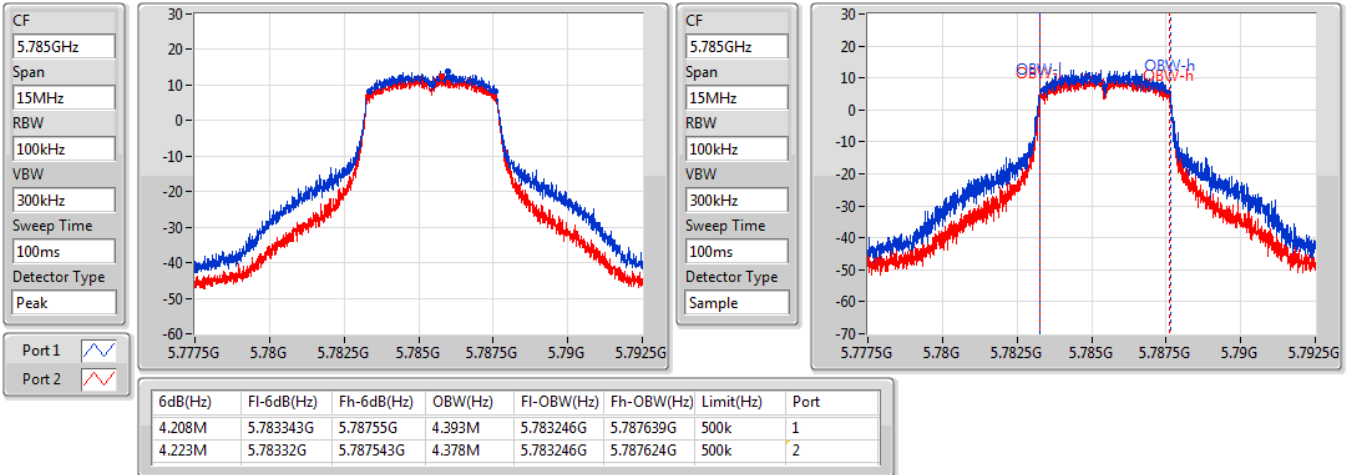

11n-5M_Nss1_2TX
EBW
5745MHz

14/12/2020

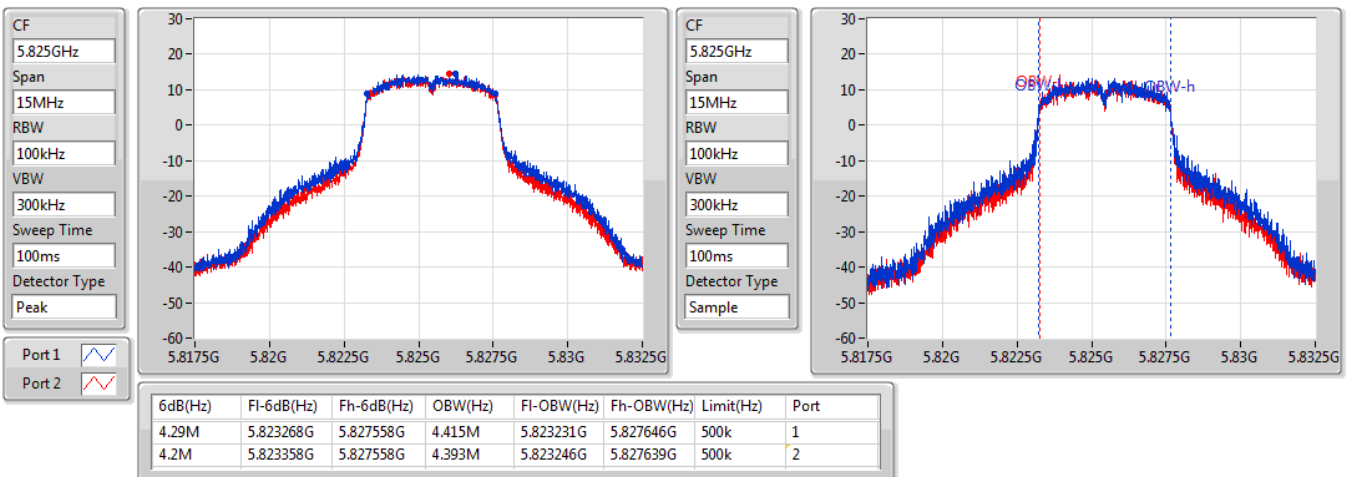


11n-5M_Nss1_2TX
5785MHz

14/12/2020

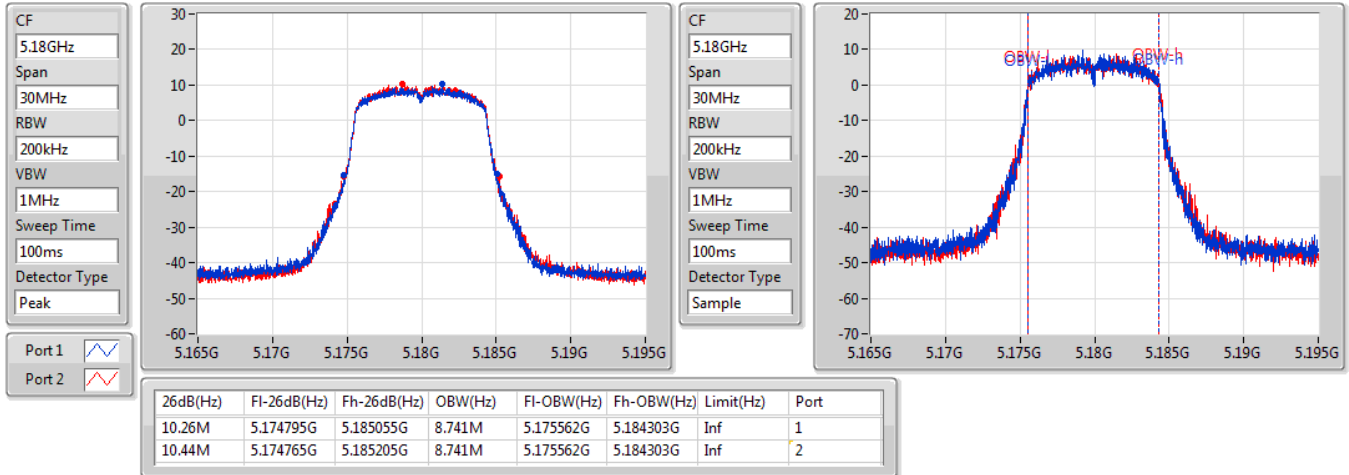

11n-5M_Nss1_2TX
5825MHz

14/12/2020

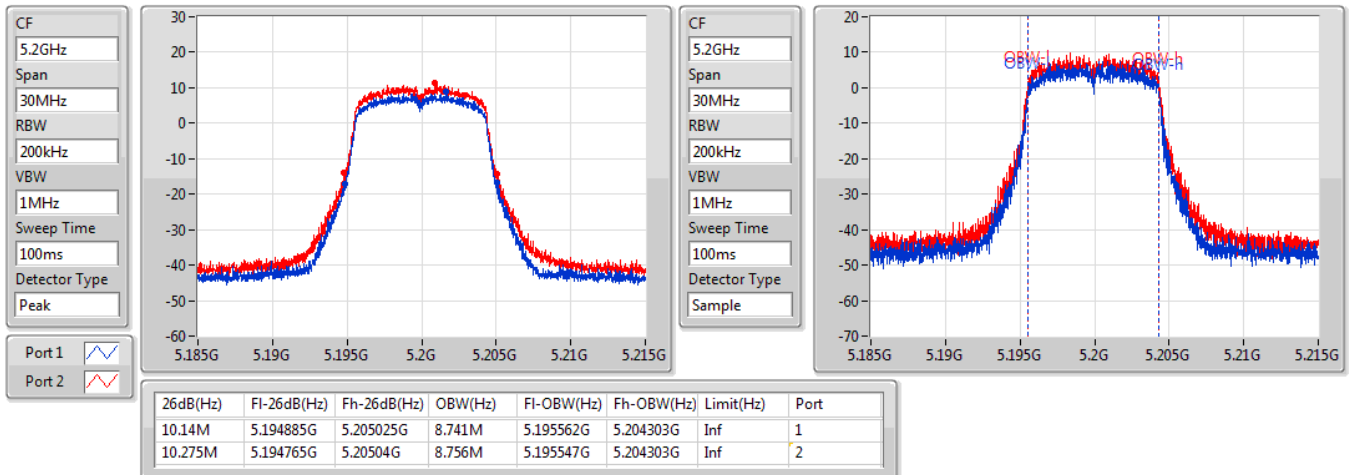


11n-10M_Nss1_2TX
EBW
5180MHz

14/12/2020

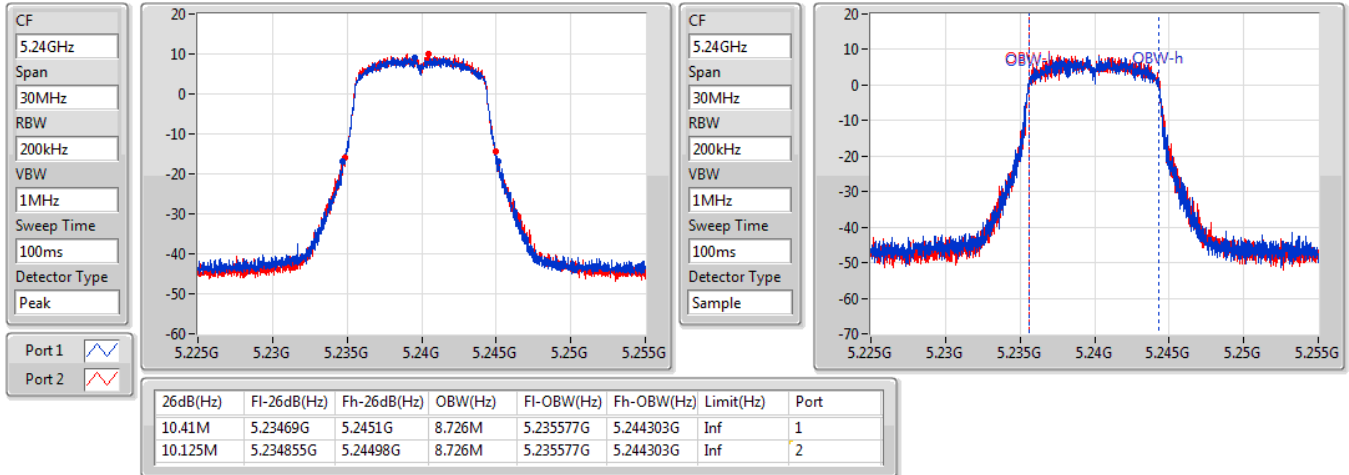

11n-10M_Nss1_2TX
EBW
5200MHz

14/12/2020

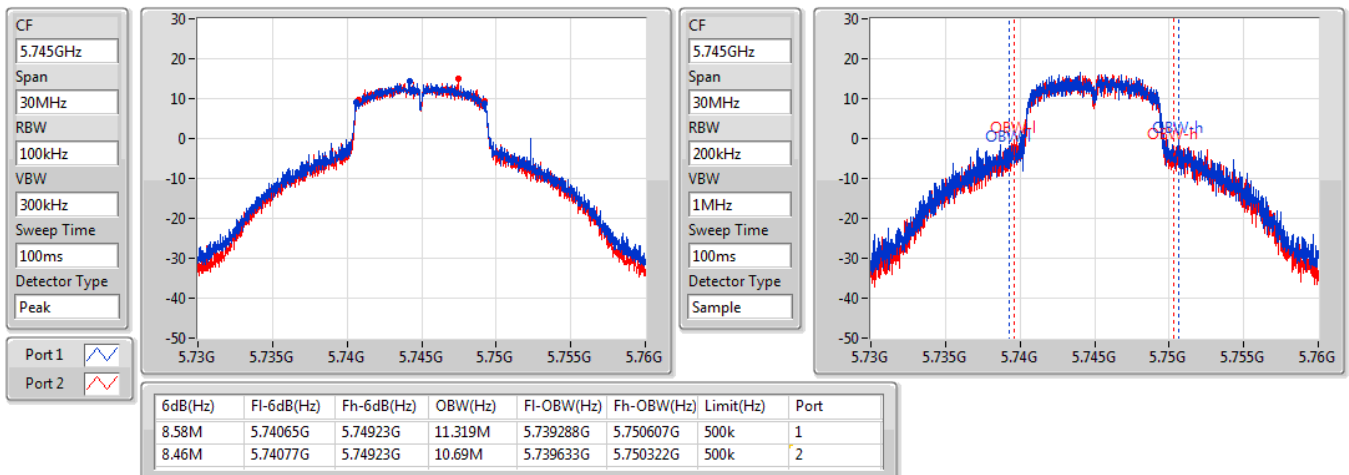


11n-10M_Nss1_2TX
EBW
5240MHz

14/12/2020

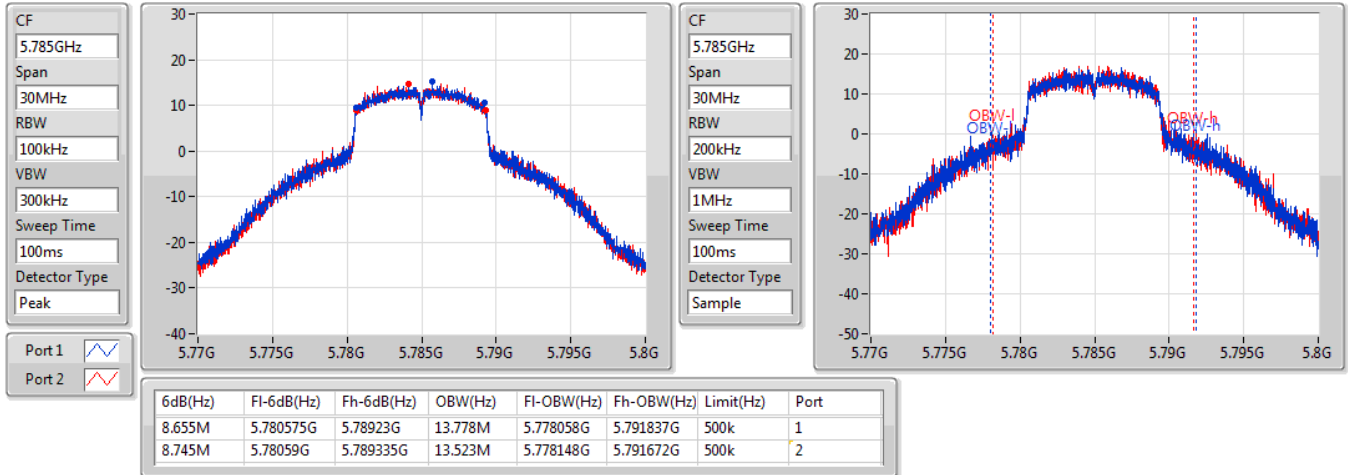

11n-10M_Nss1_2TX
EBW
5745MHz

14/12/2020

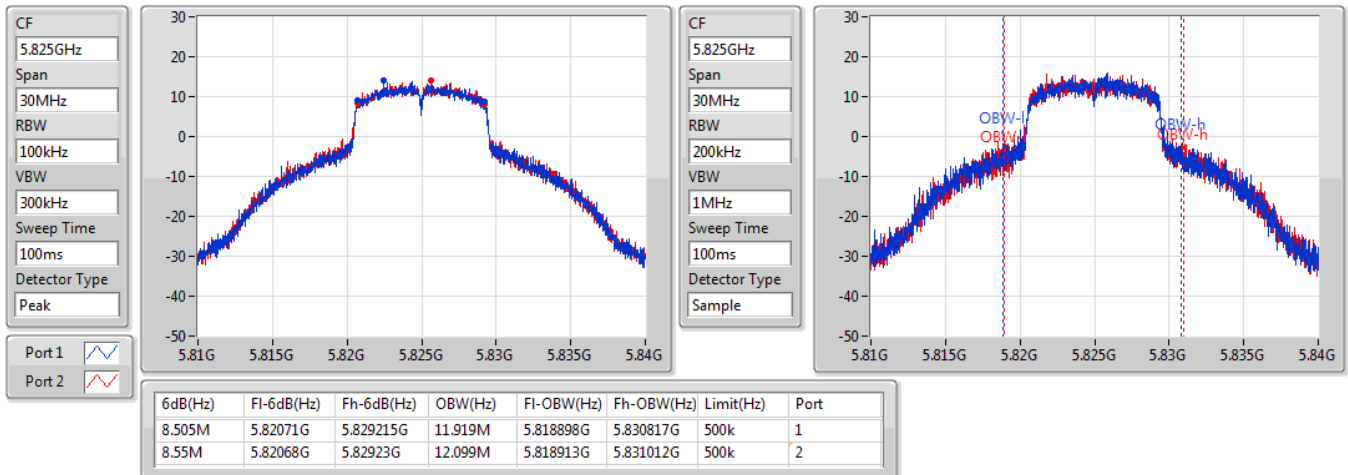


11n-10M_Nss1_2TX
EBW
5785MHz

14/12/2020

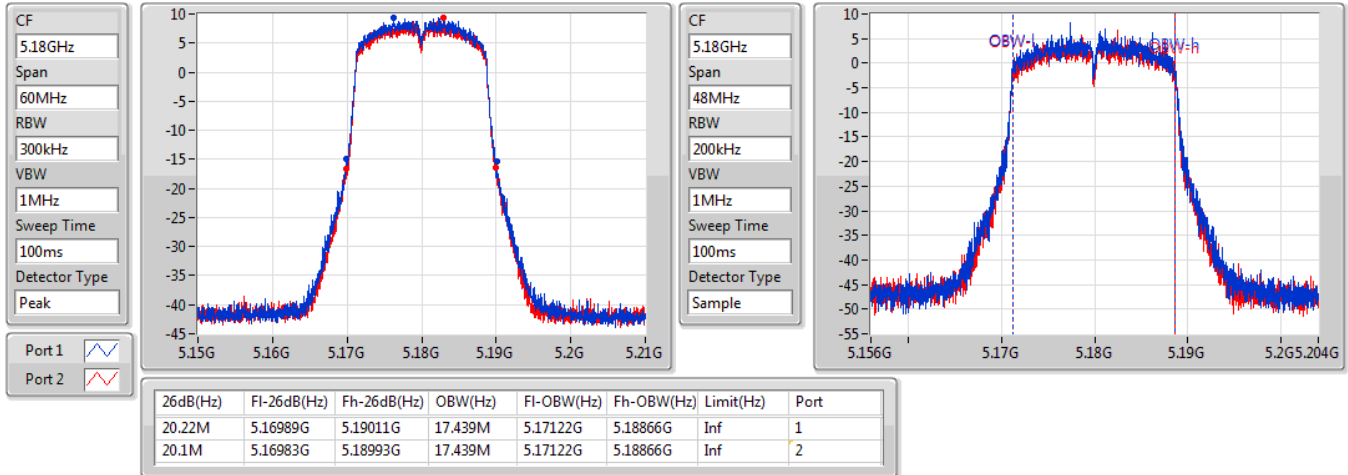

11n-10M_Nss1_2TX
EBW
5825MHz

14/12/2020

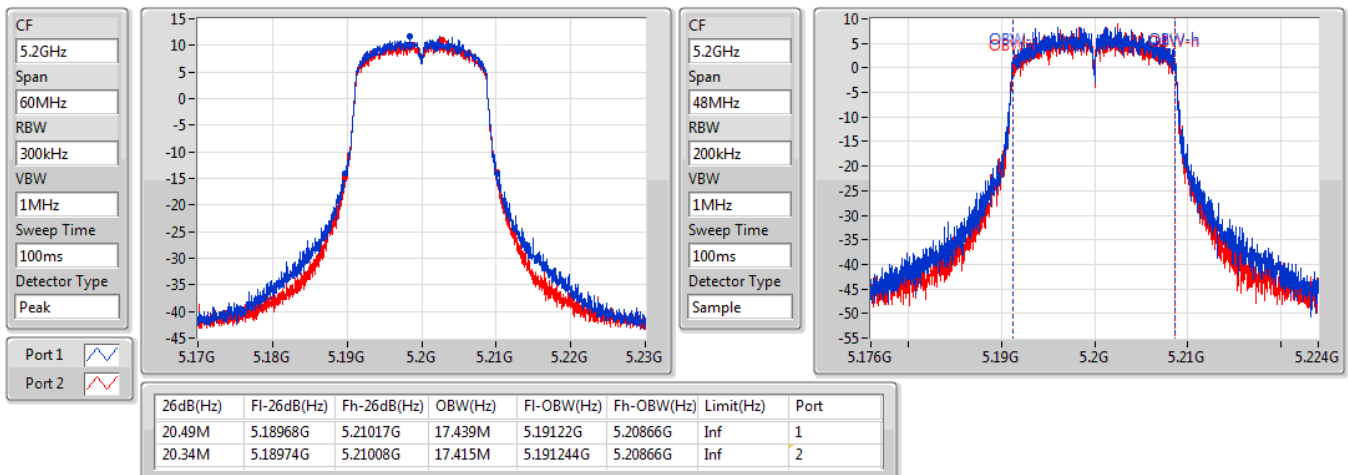


802.11ac VHT20_Nss1_2TX
EBW
5180MHz

11/05/2020

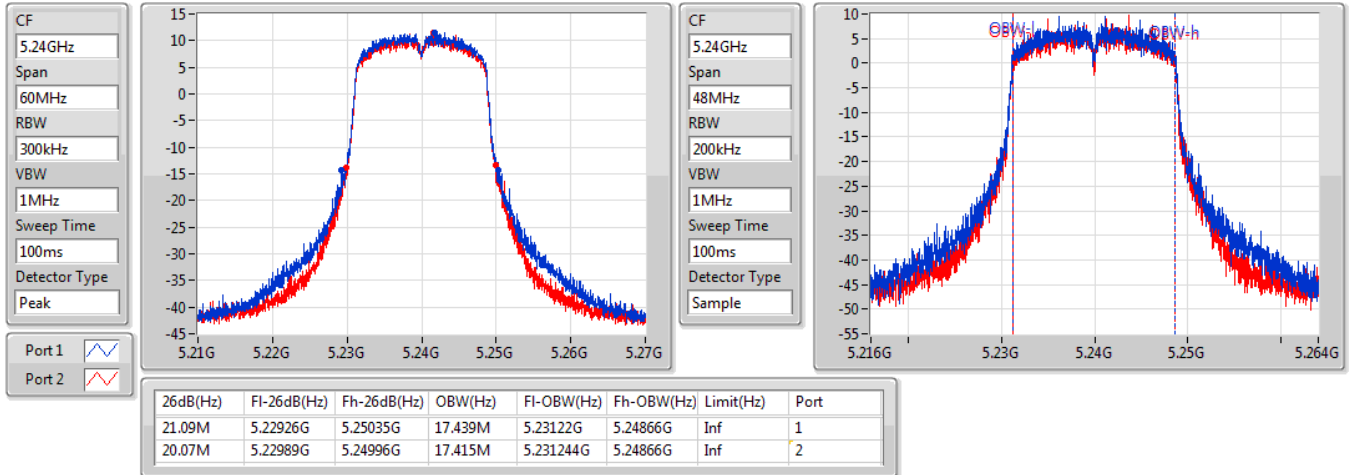

802.11ac VHT20_Nss1_2TX
EBW
5200MHz

11/05/2020

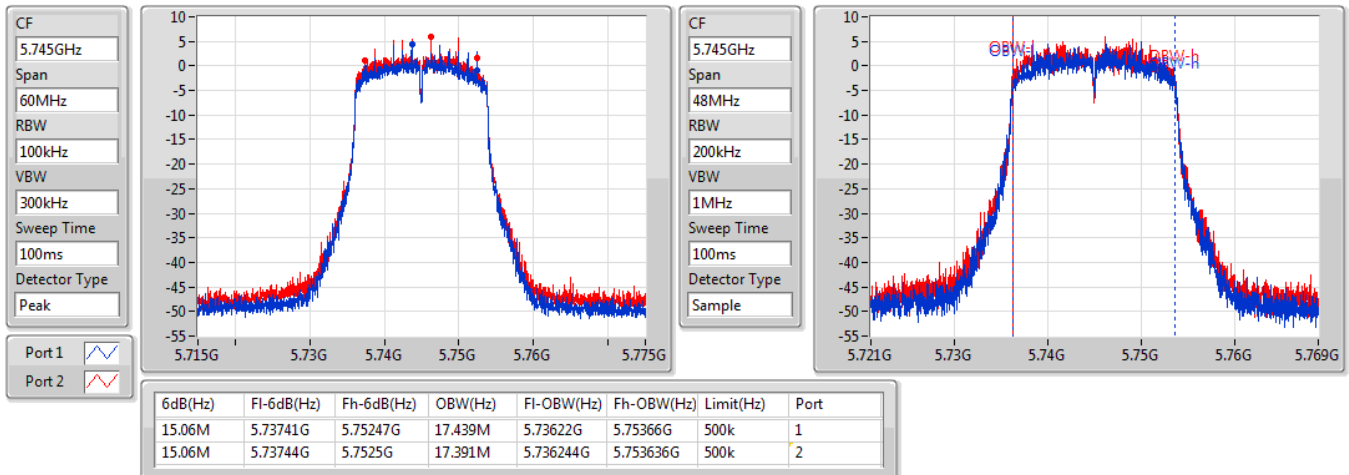


802.11ac VHT20_Nss1_2TX
EBW
5240MHz

11/05/2020

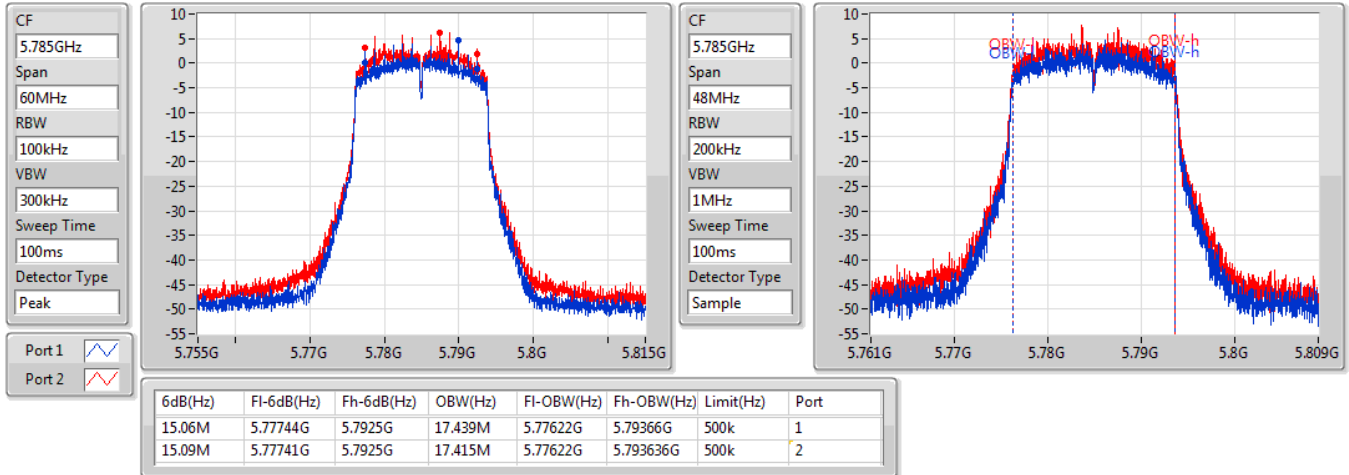

802.11ac VHT20_Nss1_2TX
EBW
5745MHz

11/05/2020

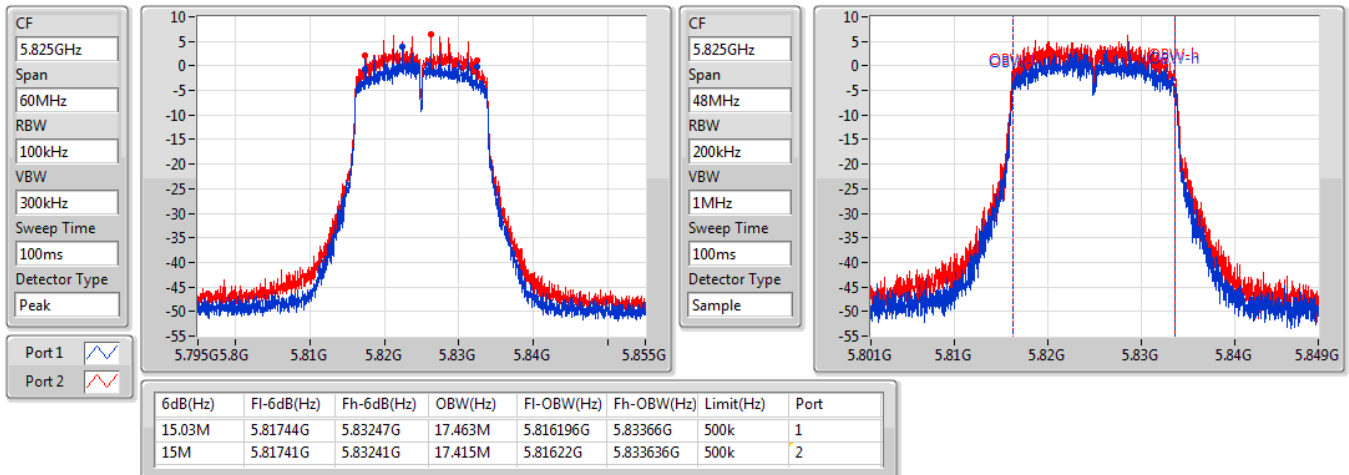


802.11ac VHT20_Nss1_2TX
EBW
5785MHz

11/05/2020

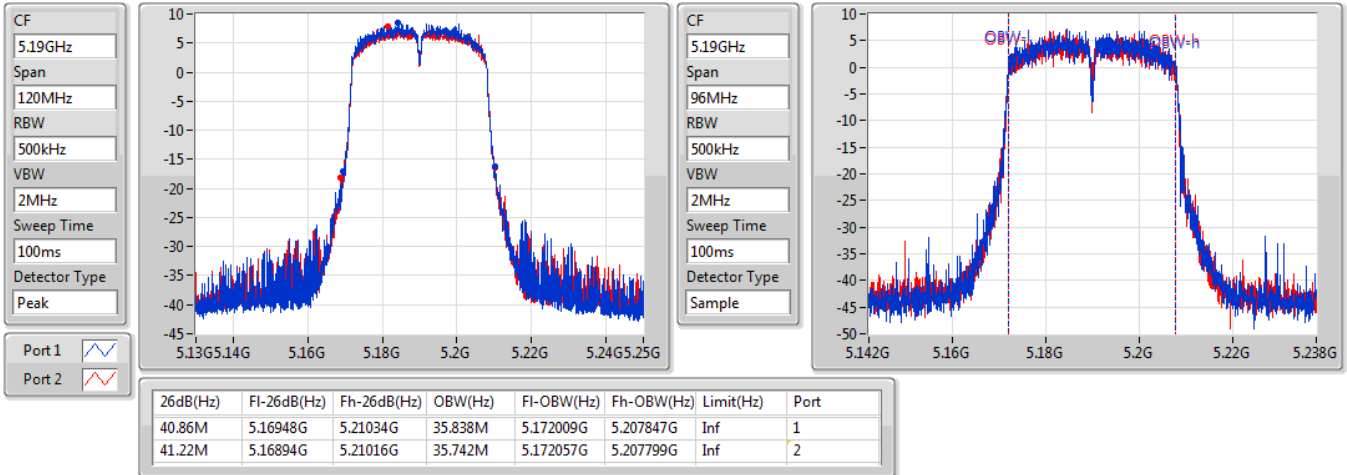

802.11ac VHT20_Nss1_2TX
EBW
5825MHz

11/05/2020

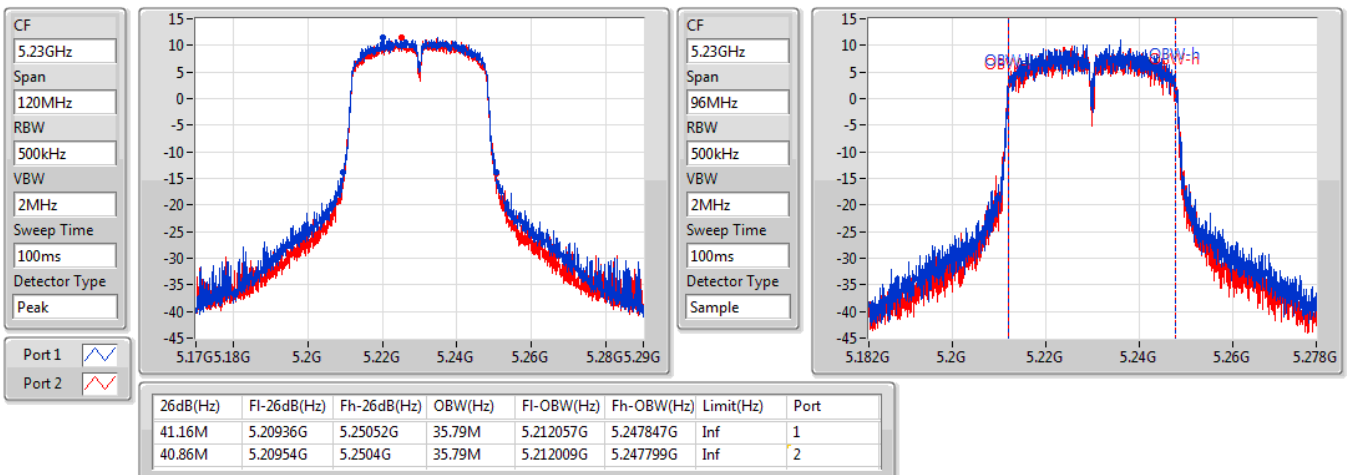


802.11ac VHT40_Nss1_2TX
EBW
5190MHz

11/05/2020

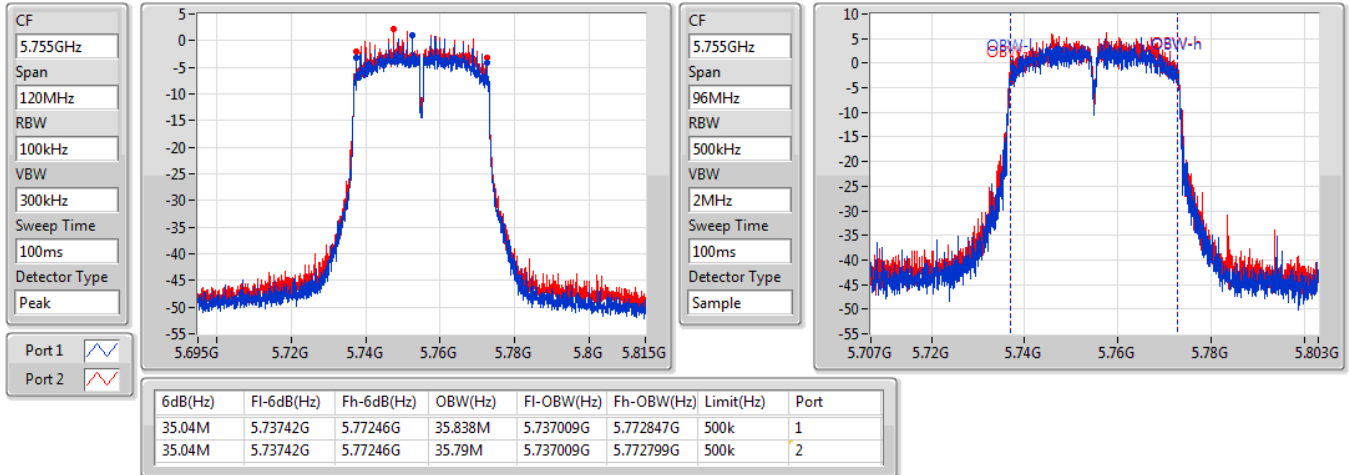

802.11ac VHT40_Nss1_2TX
EBW
5230MHz

11/05/2020

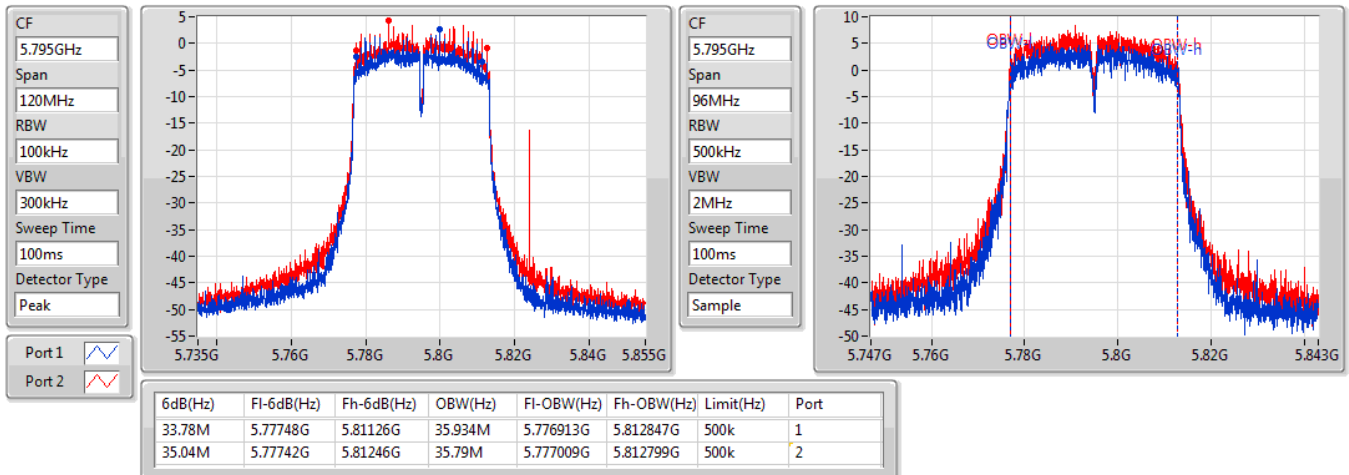


802.11ac VHT40_Nss1_2TX
EBW
5755MHz

11/05/2020

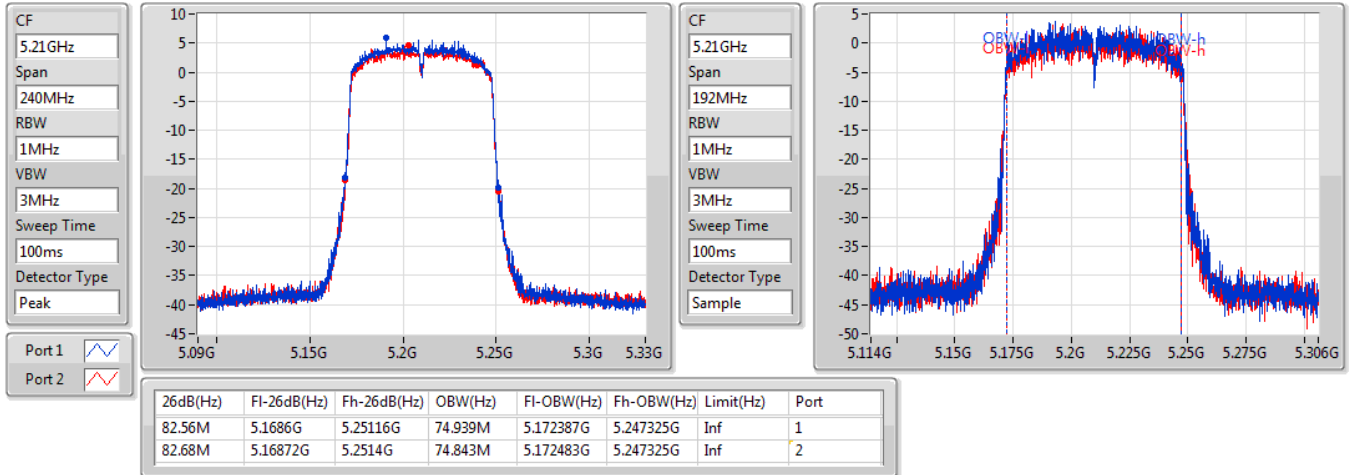

802.11ac VHT40_Nss1_2TX
EBW
5795MHz

11/05/2020

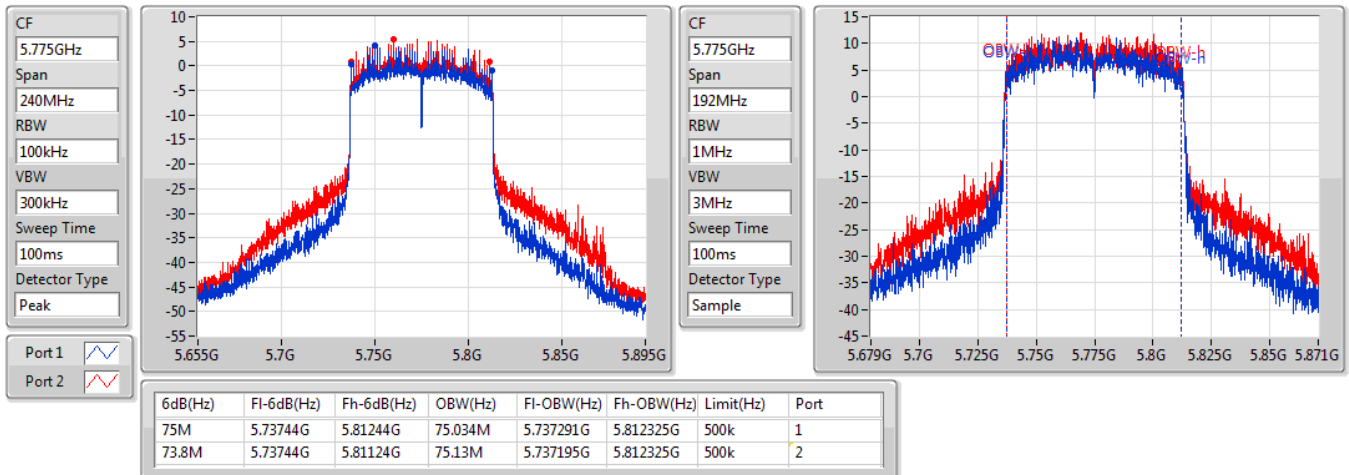


802.11ac VHT80_Nss1_2TX
EBW
5210MHz

11/05/2020


802.11ac VHT80_Nss1_2TX
EBW
5775MHz

11/05/2020



Summary

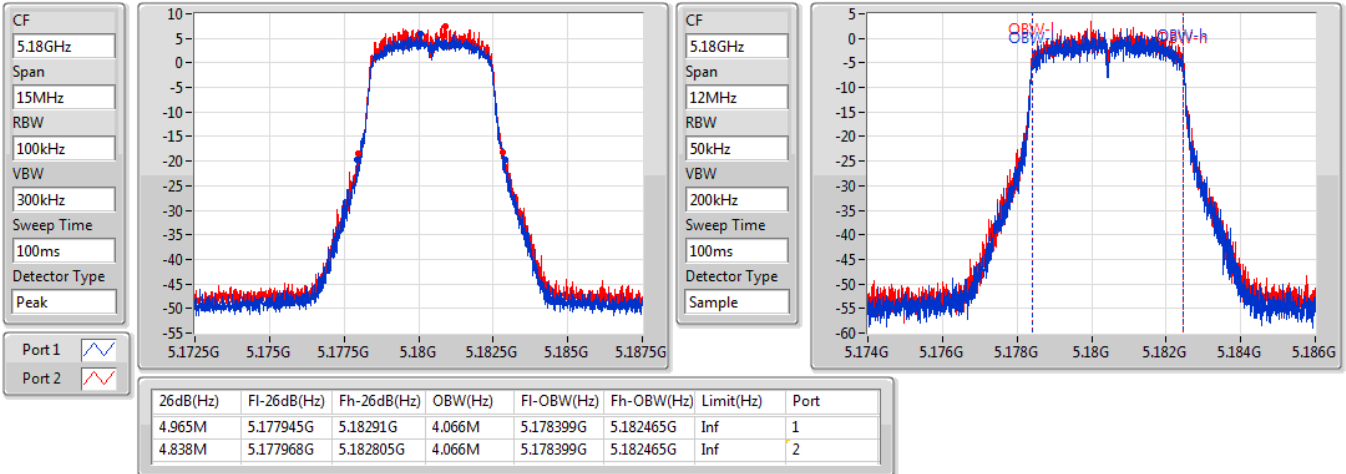
Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
11a-5M_Nss1_2TX	4.965M	4.078M	4M08D1D	4.808M	4.066M
11a-10M_Nss1_2TX	9.945M	8.144M	8M14D1D	9.18M	8.12M
11a-20M_Nss1_2TX	19.83M	16.312M	16M3D1D	19.14M	16.264M
11n-5M_Nss1_2TX	5.198M	4.385M	4M39D1D	5.033M	4.363M
11n-10M_Nss1_2TX	10.335M	8.771M	8M77D1D	10.065M	8.726M
802.11ac VHT20_Nss1_2TX	20.67M	17.439M	17M4D1D	20.13M	17.391M
802.11ac VHT40_Nss1_2TX	42.42M	35.886M	35M9D1D	40.5M	35.79M
802.11ac VHT80_Nss1_2TX	82.92M	74.939M	74M9D1D	82.8M	74.843M
5.725-5.85GHz	-	-	-	-	-
11a-5M_Nss1_2TX	4.058M	4.21M	4M21D1D	3.885M	4.072M
11a-10M_Nss1_2TX	8.115M	8.168M	8M17D1D	7.92M	8.144M
11a-20M_Nss1_2TX	15.69M	18.783M	18M8D1D	15.03M	16.264M
11n-5M_Nss1_2TX	4.305M	4.438M	4M44D1D	4.155M	4.378M
11n-10M_Nss1_2TX	8.64M	11.289M	11M3D1D	8.43M	8.981M
802.11ac VHT20_Nss1_2TX	15.09M	18.135M	18M1D1D	15M	17.559M
802.11ac VHT40_Nss1_2TX	34.98M	43.706M	43M7D1D	31.92M	36.27M
802.11ac VHT80_Nss1_2TX	72.48M	85.781M	85M8D1D	67.56M	76.282M

Result

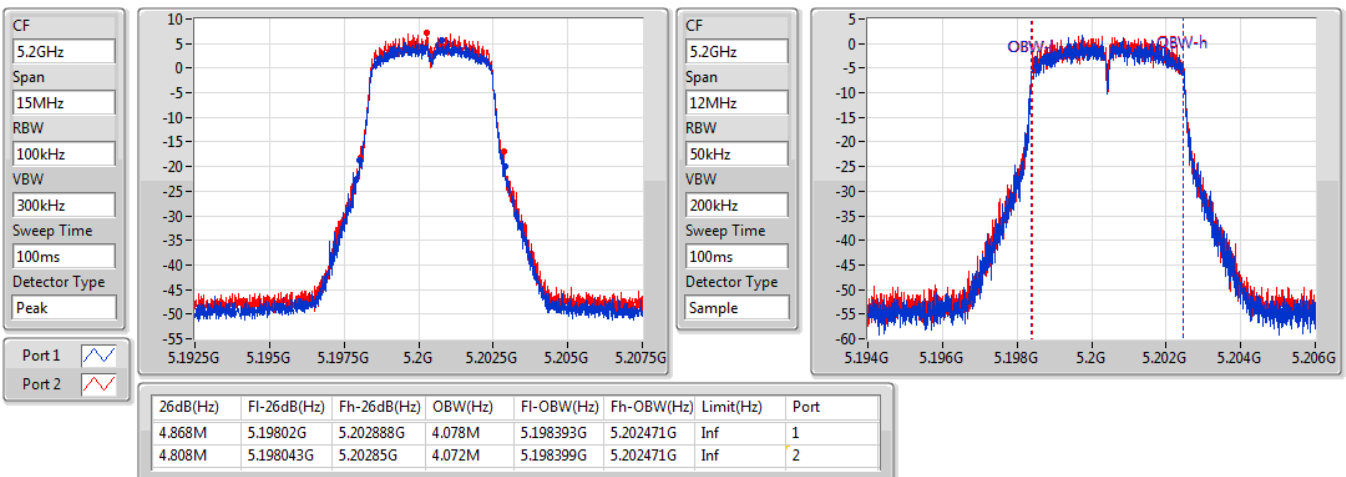
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
11a-5M_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	4.965M	4.066M	4.838M	4.066M
5200MHz	Pass	Inf	4.868M	4.078M	4.808M	4.072M
5240MHz	Pass	Inf	4.958M	4.066M	4.845M	4.072M
5745MHz	Pass	500k	4.035M	4.084M	4.058M	4.078M
5785MHz	Pass	500k	3.99M	4.072M	4.05M	4.072M
5825MHz	Pass	500k	3.945M	4.21M	3.885M	4.096M
11a-10M_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	9.9M	8.144M	9.18M	8.132M
5200MHz	Pass	Inf	9.945M	8.12M	9.36M	8.144M
5240MHz	Pass	Inf	9.69M	8.144M	9.705M	8.144M
5745MHz	Pass	500k	7.965M	8.144M	7.92M	8.144M
5785MHz	Pass	500k	8.025M	8.144M	8.115M	8.144M
5825MHz	Pass	500k	8.025M	8.168M	8.04M	8.156M
11a-20M_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	19.59M	16.264M	19.14M	16.312M
5200MHz	Pass	Inf	19.71M	16.264M	19.44M	16.288M
5240MHz	Pass	Inf	19.71M	16.264M	19.83M	16.312M
5745MHz	Pass	500k	15.06M	18.783M	15.69M	16.456M
5785MHz	Pass	500k	15.3M	16.456M	15.03M	16.264M
5825MHz	Pass	500k	15.3M	16.648M	15.09M	16.384M
11n-5M_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	5.145M	4.378M	5.168M	4.385M
5200MHz	Pass	Inf	5.033M	4.37M	5.145M	4.37M
5240MHz	Pass	Inf	5.198M	4.37M	5.07M	4.363M
5745MHz	Pass	500k	4.305M	4.408M	4.26M	4.415M
5785MHz	Pass	500k	4.26M	4.4M	4.155M	4.378M
5825MHz	Pass	500k	4.245M	4.438M	4.178M	4.438M
11n-10M_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	10.065M	8.726M	10.155M	8.756M
5200MHz	Pass	Inf	10.335M	8.741M	10.14M	8.741M
5240MHz	Pass	Inf	10.29M	8.726M	10.215M	8.771M
5745MHz	Pass	500k	8.535M	11.289M	8.43M	11.079M
5785MHz	Pass	500k	8.565M	9.22M	8.64M	9.145M
5825MHz	Pass	500k	8.505M	8.981M	8.46M	8.981M
802.11ac VHT20_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	20.31M	17.439M	20.67M	17.439M
5200MHz	Pass	Inf	20.31M	17.415M	20.64M	17.439M
5240MHz	Pass	Inf	20.49M	17.391M	20.13M	17.439M
5745MHz	Pass	500k	15.06M	18.135M	15.06M	17.631M
5785MHz	Pass	500k	15.06M	18.135M	15.09M	17.583M
5825MHz	Pass	500k	15.06M	17.727M	15M	17.559M
802.11ac VHT40_Nss1_2TX	-	-	-	-	-	-
5190MHz	Pass	Inf	40.68M	35.838M	40.5M	35.79M
5230MHz	Pass	Inf	41.1M	35.838M	42.42M	35.886M
5755MHz	Pass	500k	31.92M	43.706M	34.98M	36.27M
5795MHz	Pass	500k	32.52M	43.418M	33.72M	36.414M
802.11ac VHT80_Nss1_2TX	-	-	-	-	-	-
5210MHz	Pass	Inf	82.92M	74.843M	82.8M	74.939M
5775MHz	Pass	500k	72.48M	85.781M	67.56M	76.282M

11a-5M_Nss1_2TX
EBW
5180MHz

05/05/2020

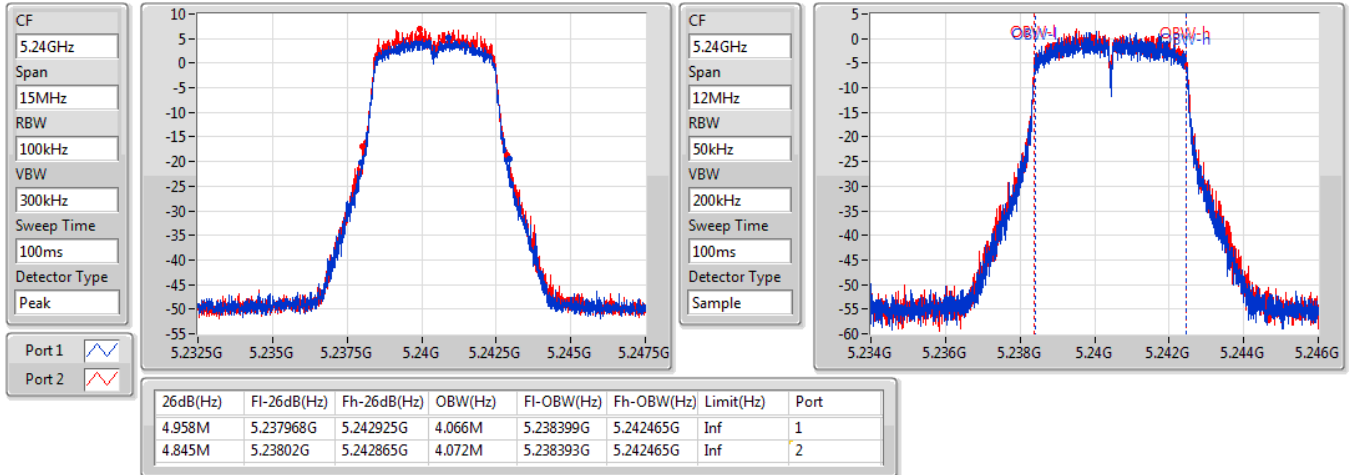

11a-5M_Nss1_2TX
EBW
5200MHz

05/05/2020

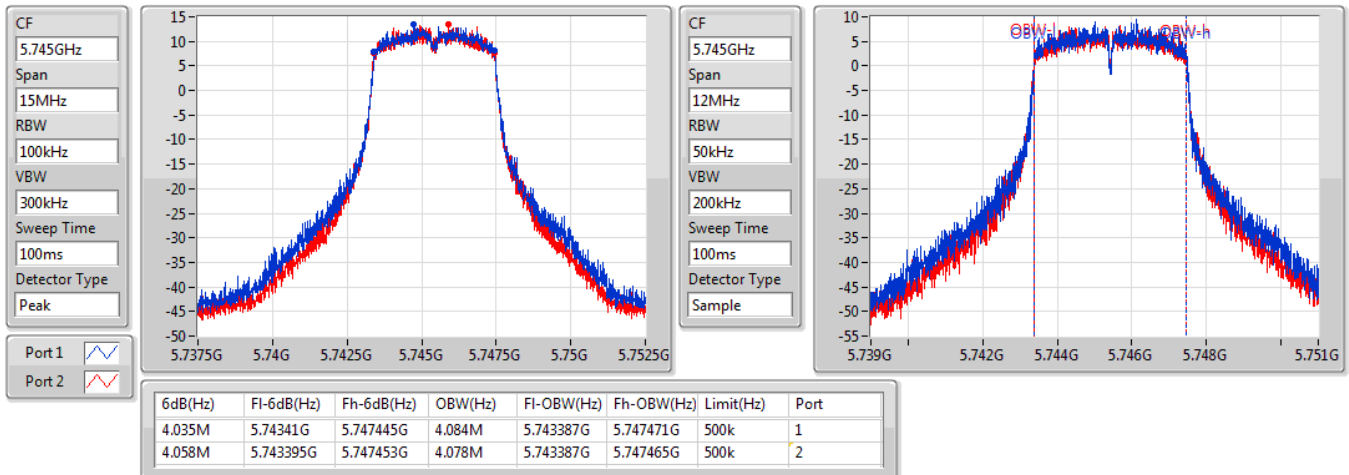


11a-5M_Nss1_2TX
EBW
5240MHz

05/05/2020

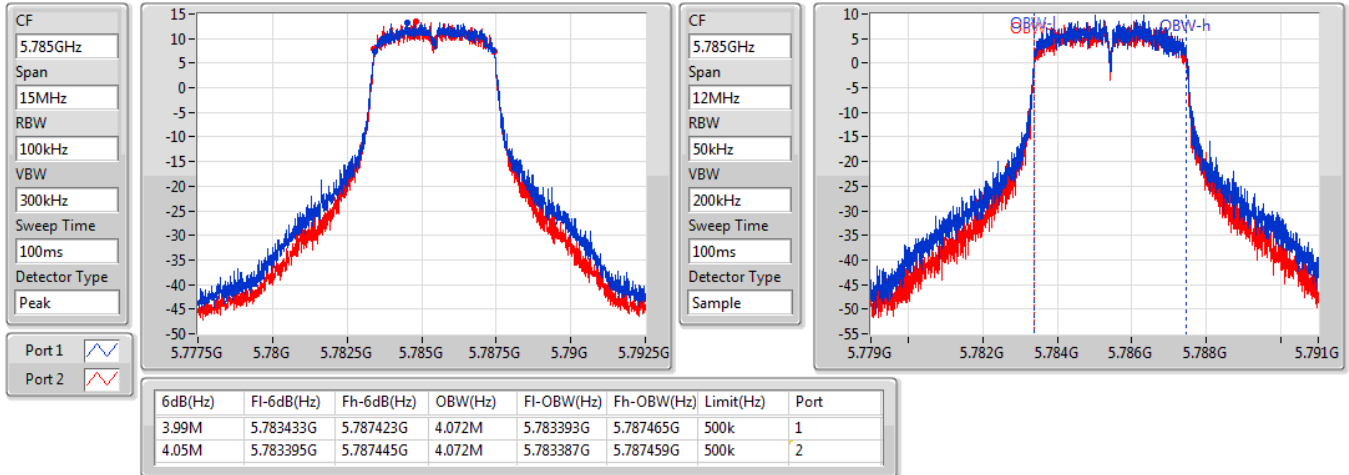

11a-5M_Nss1_2TX
EBW
5745MHz

05/05/2020

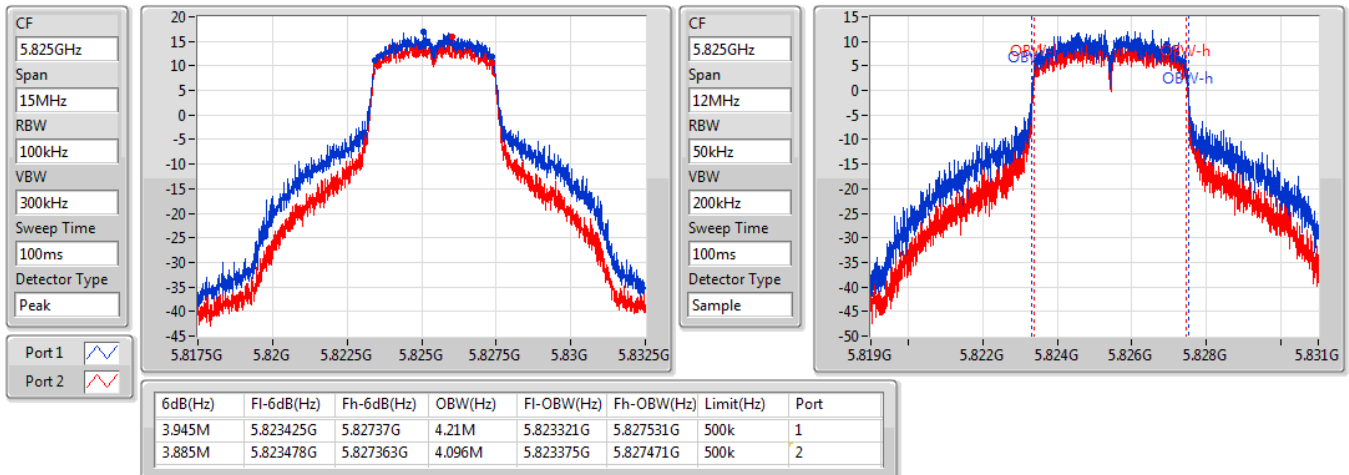


11a-5M_Nss1_2TX
EBW
5785MHz

05/05/2020

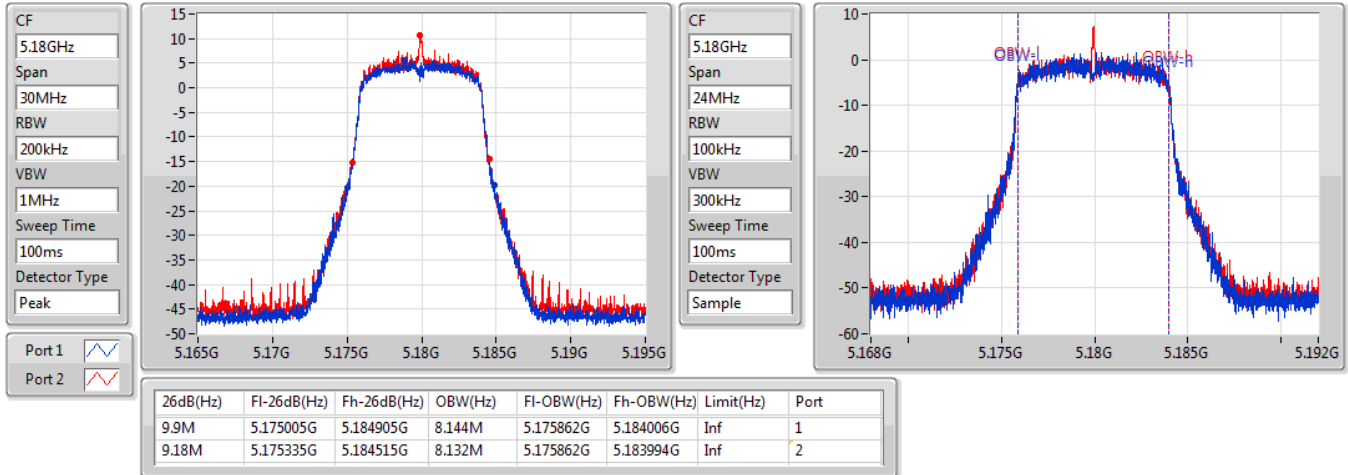

11a-5M_Nss1_2TX
EBW
5825MHz

05/05/2020

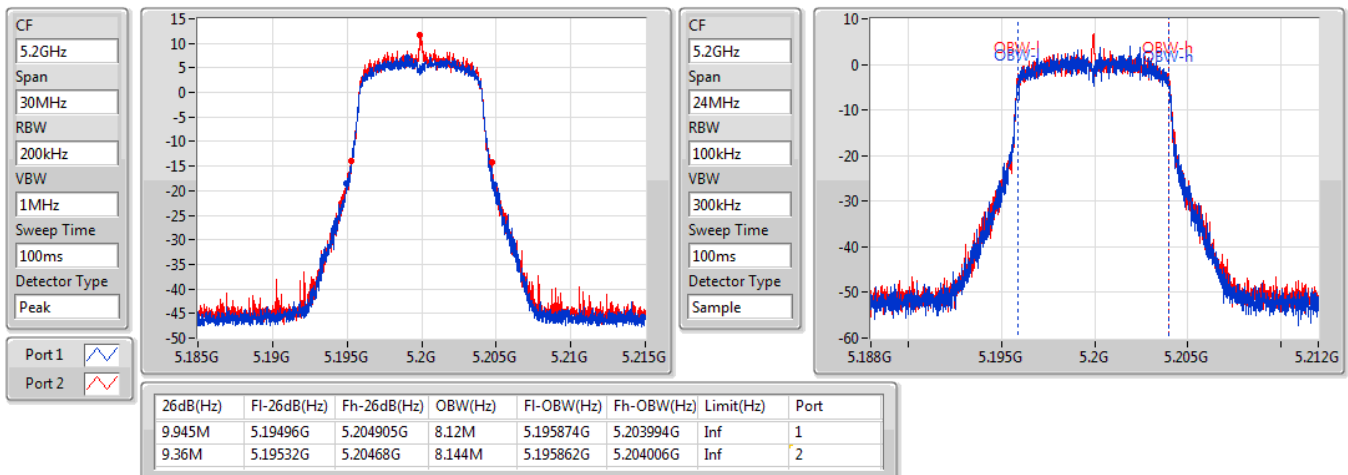


11a-10M_Nss1_2TX
EBW
5180MHz

05/05/2020

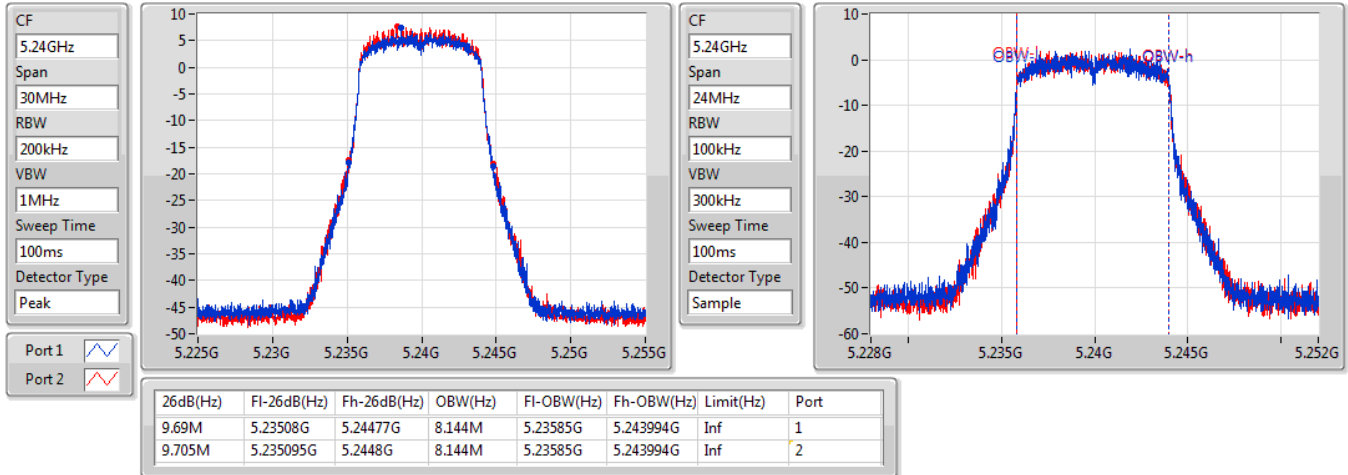

11a-10M_Nss1_2TX
EBW
5200MHz

05/05/2020

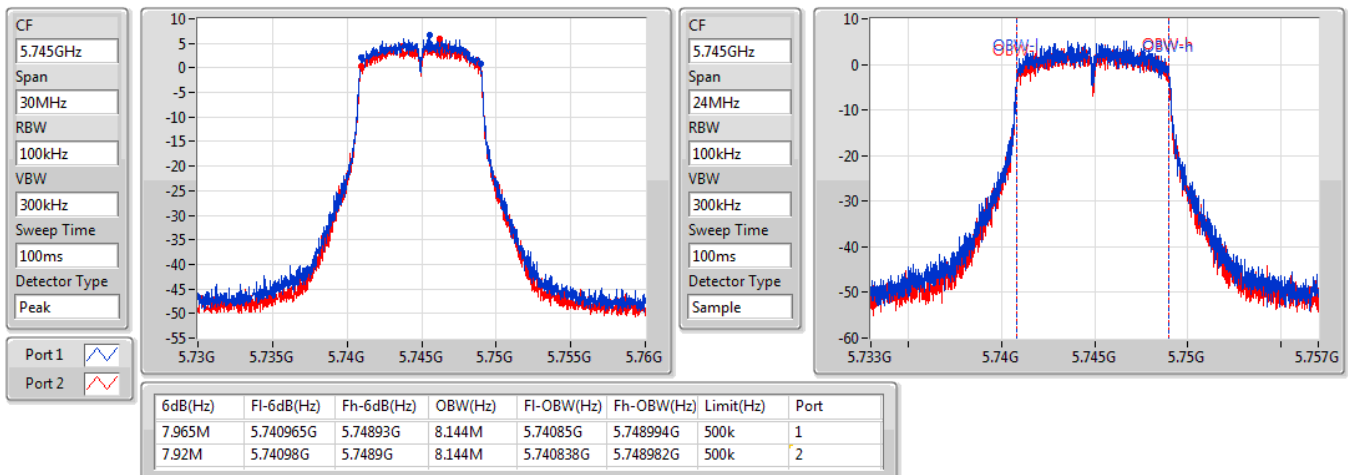


11a-10M_Nss1_2TX
EBW
5240MHz

05/05/2020

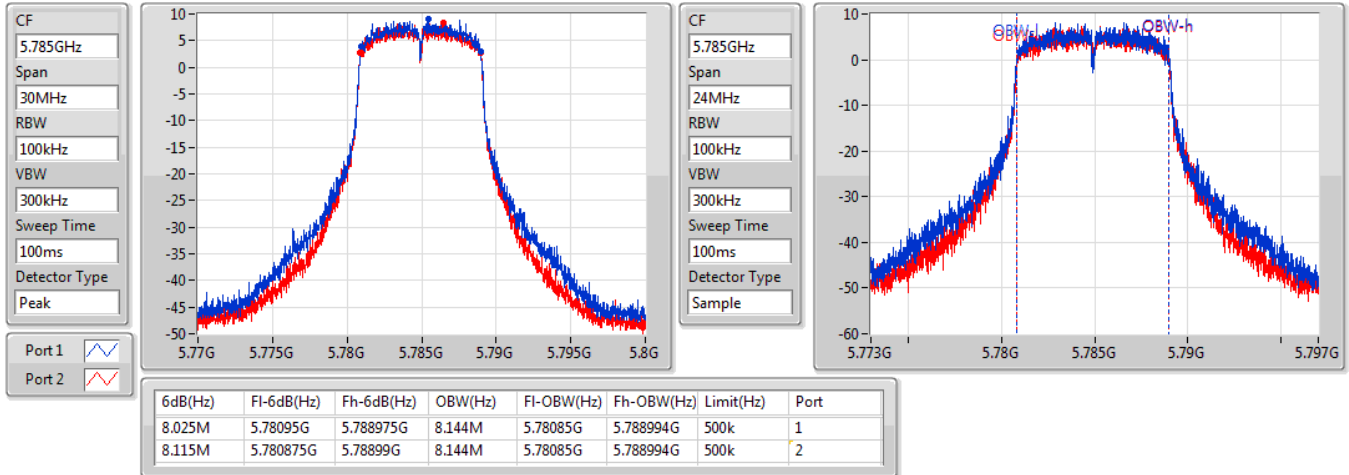

11a-10M_Nss1_2TX
EBW
5745MHz

05/05/2020

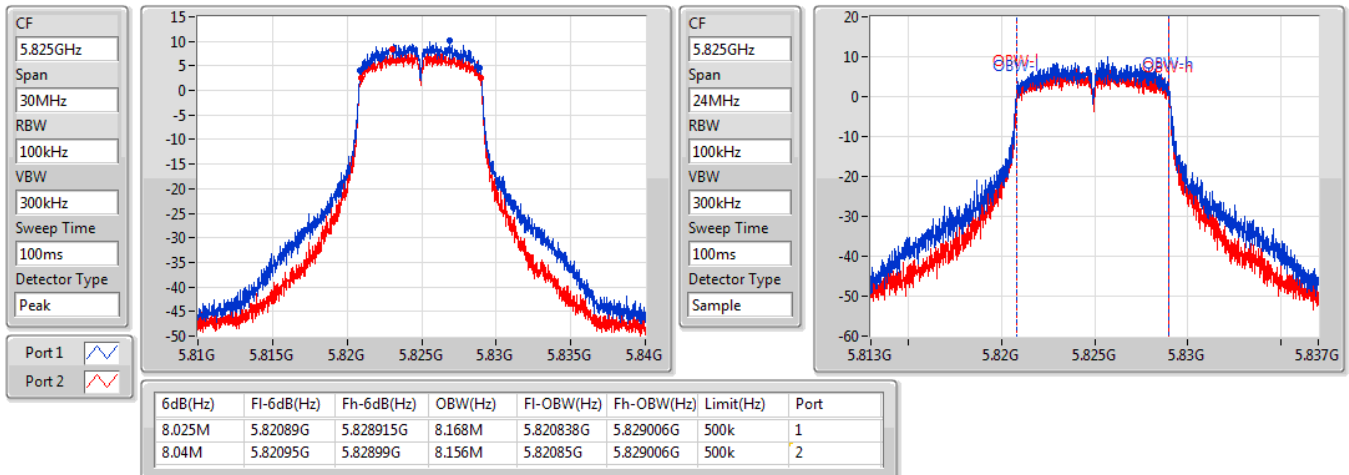


11a-10M_Nss1_2TX
EBW
5785MHz

05/05/2020

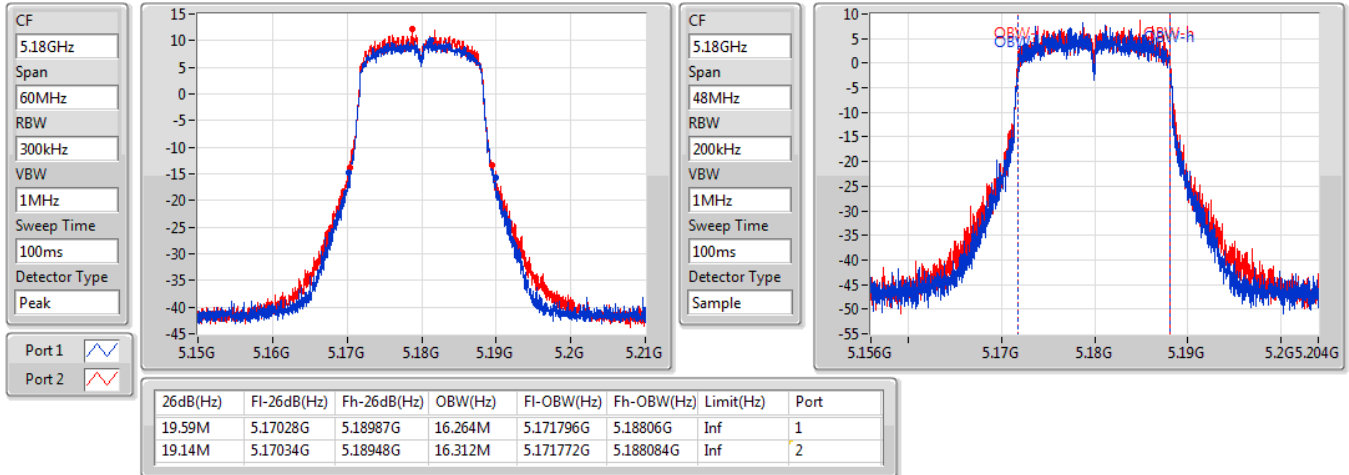

11a-10M_Nss1_2TX
EBW
5825MHz

05/05/2020

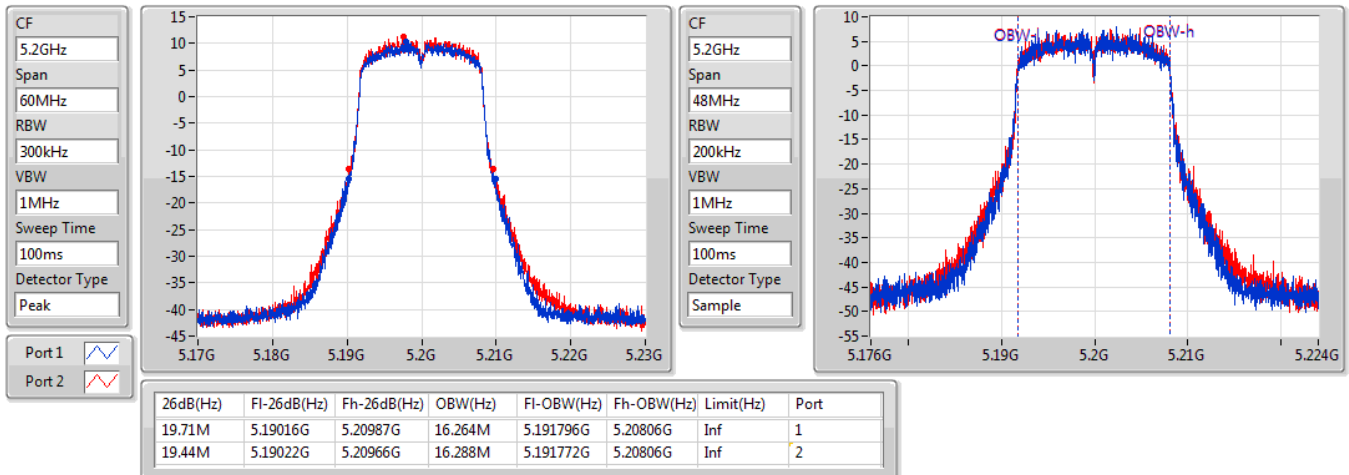


11a-20M_Nss1_2TX
EBW
5180MHz

05/05/2020

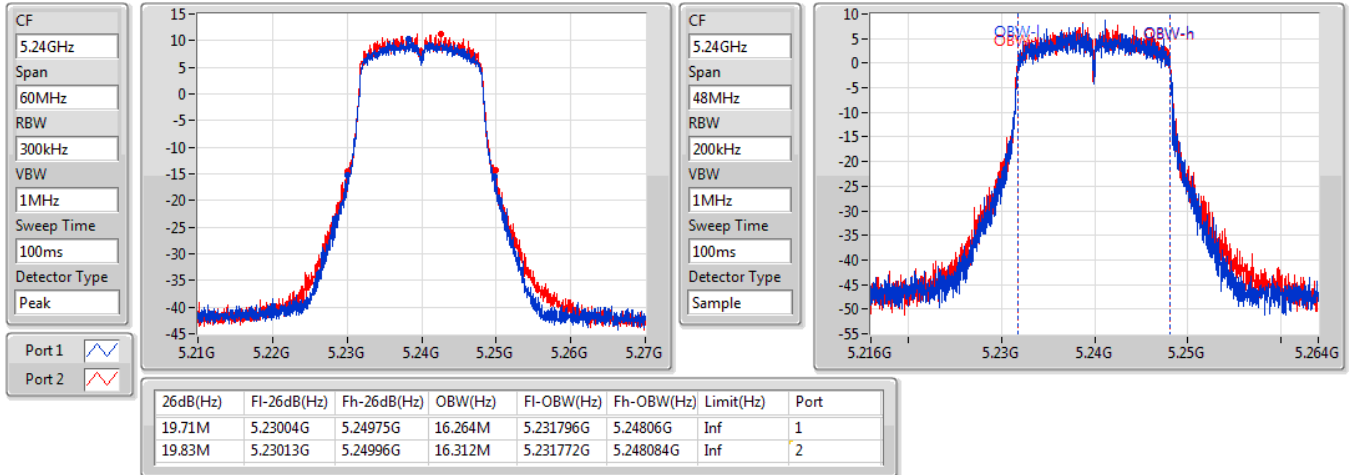

11a-20M_Nss1_2TX
EBW
5200MHz

05/05/2020

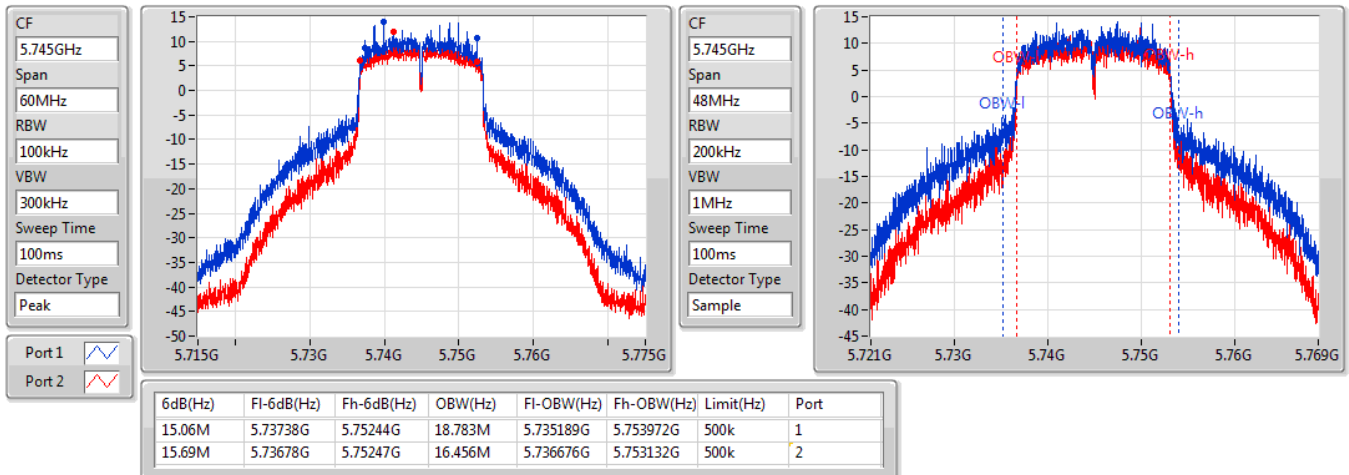


11a-20M_Nss1_2TX
EBW
5240MHz

05/05/2020

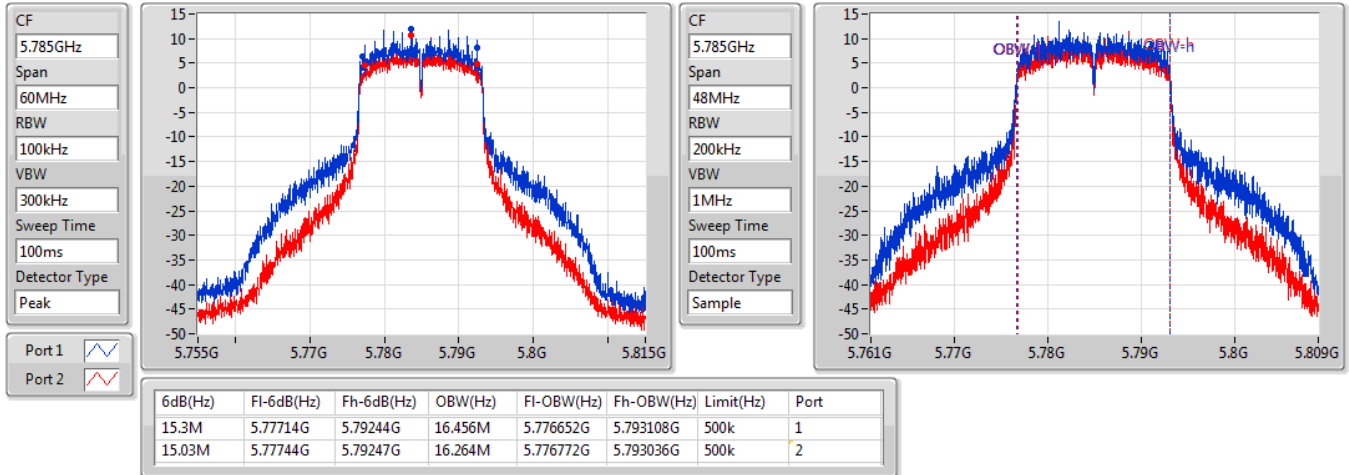

11a-20M_Nss1_2TX
EBW
5745MHz

05/05/2020

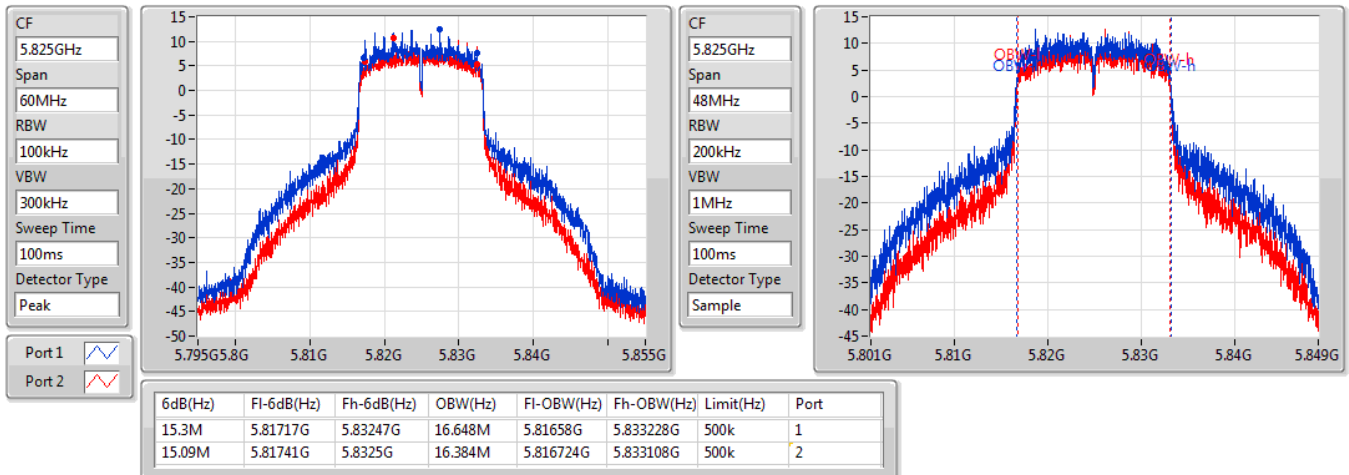


11a-20M_Nss1_2TX
EBW
5785MHz

05/05/2020

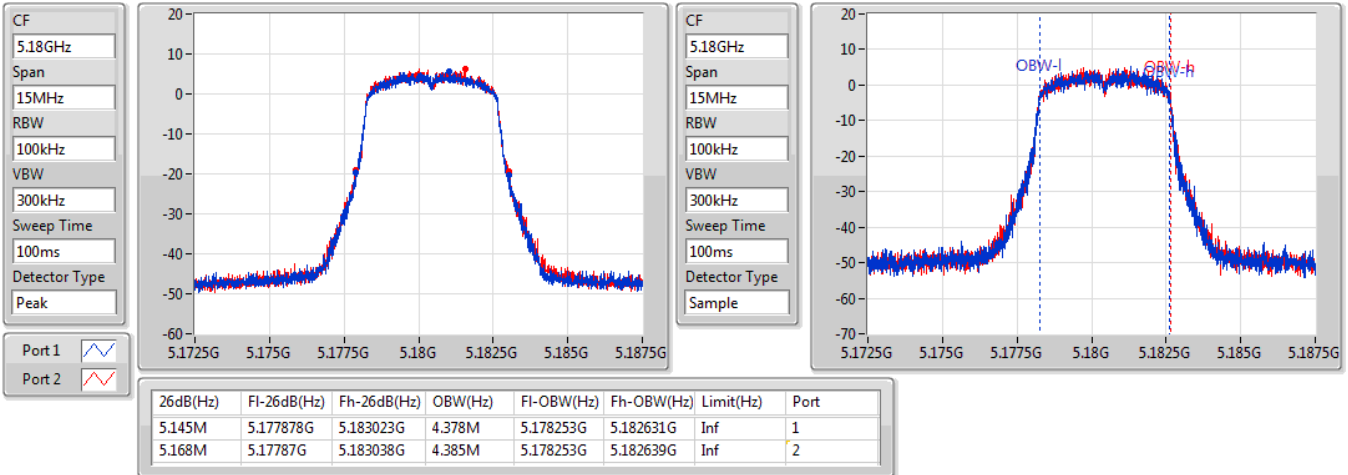

11a-20M_Nss1_2TX
EBW
5825MHz

05/05/2020

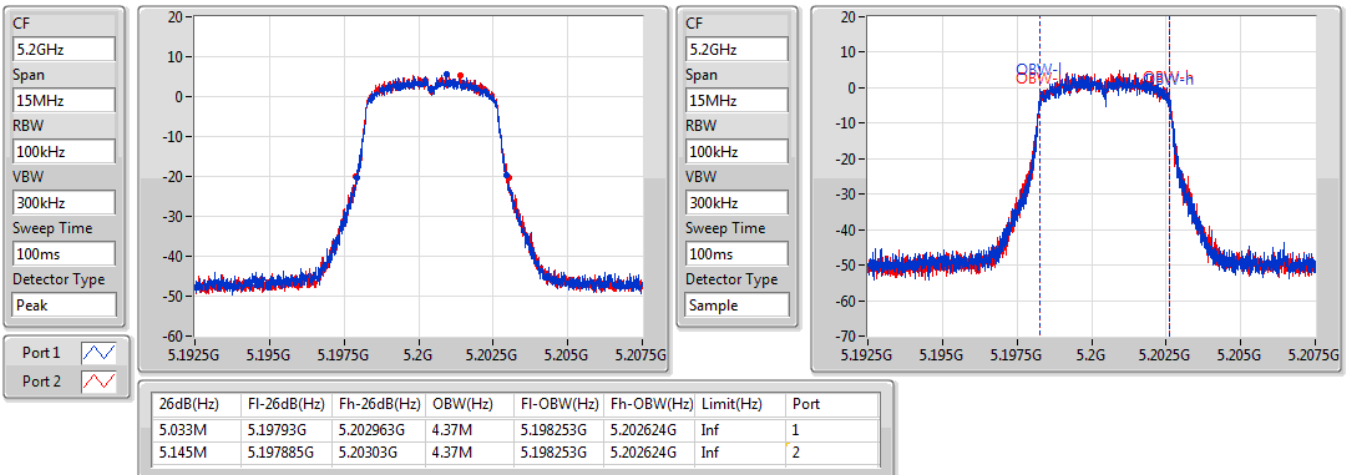


11n-5M_Nss1_2TX
5180MHz

14/12/2020

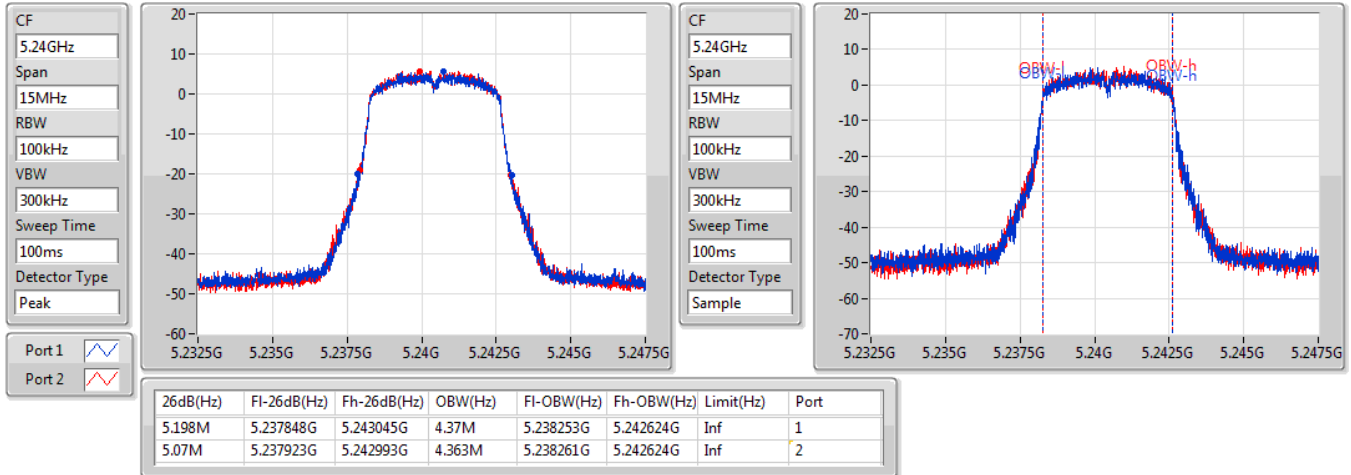

11n-5M_Nss1_2TX
5200MHz

14/12/2020

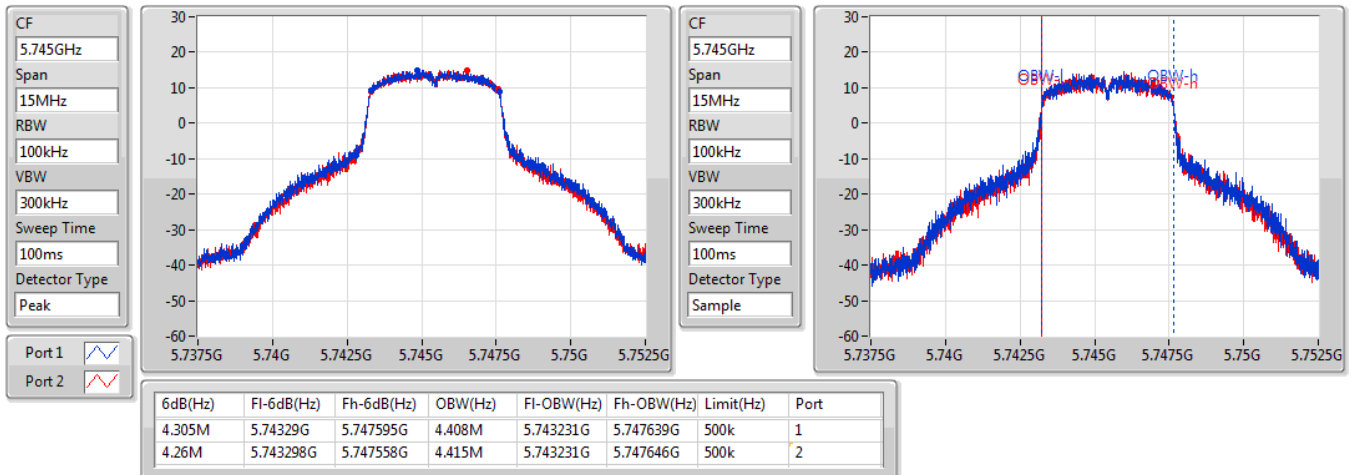


11n-5M_Nss1_2TX
EBW
5240MHz

14/12/2020

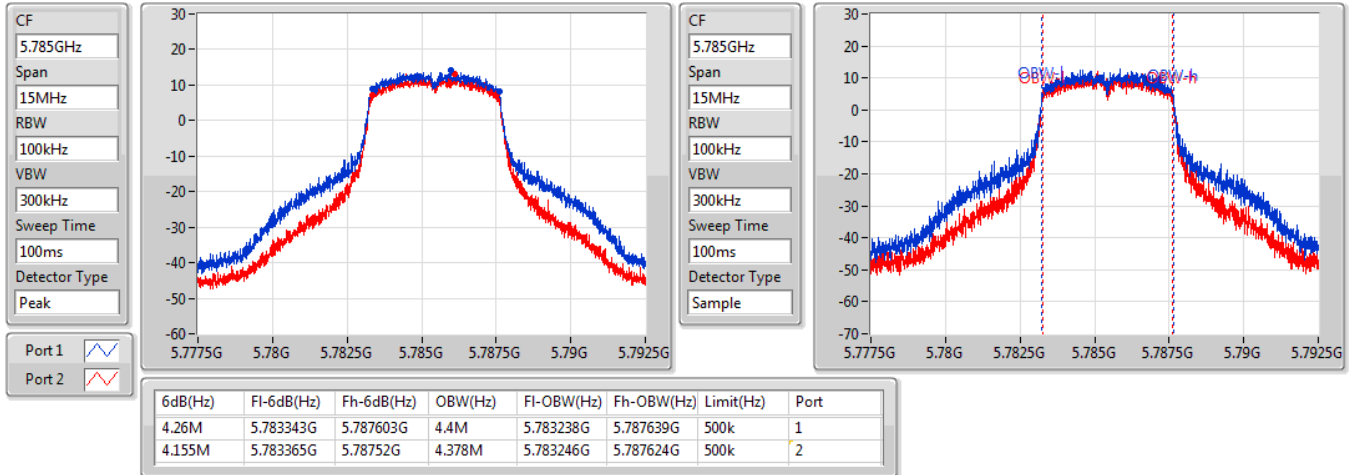

11n-5M_Nss1_2TX
EBW
5745MHz

15/12/2020

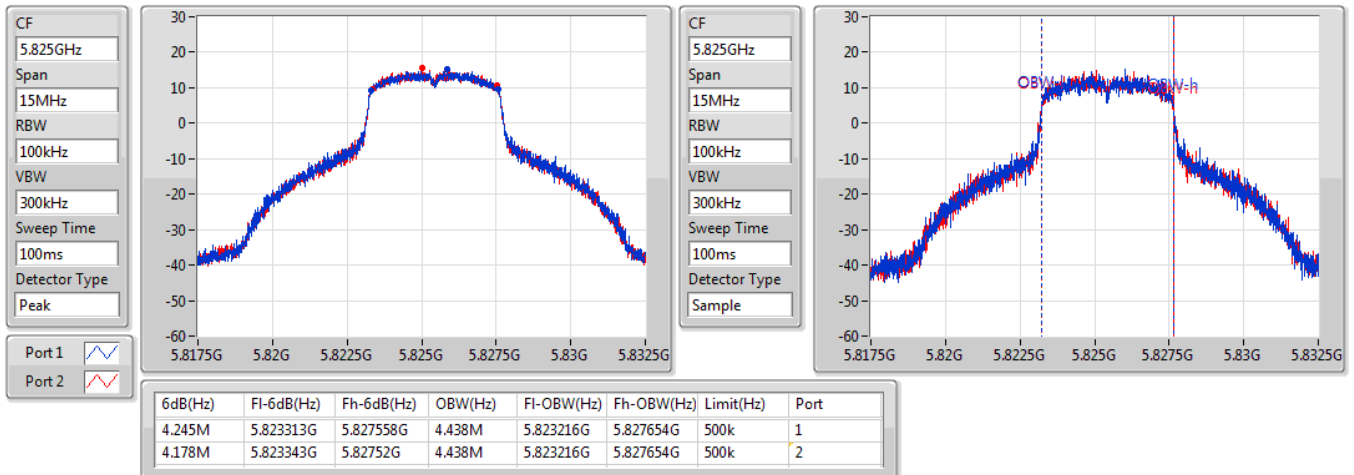


11n-5M_Nss1_2TX
EBW
5785MHz

15/12/2020

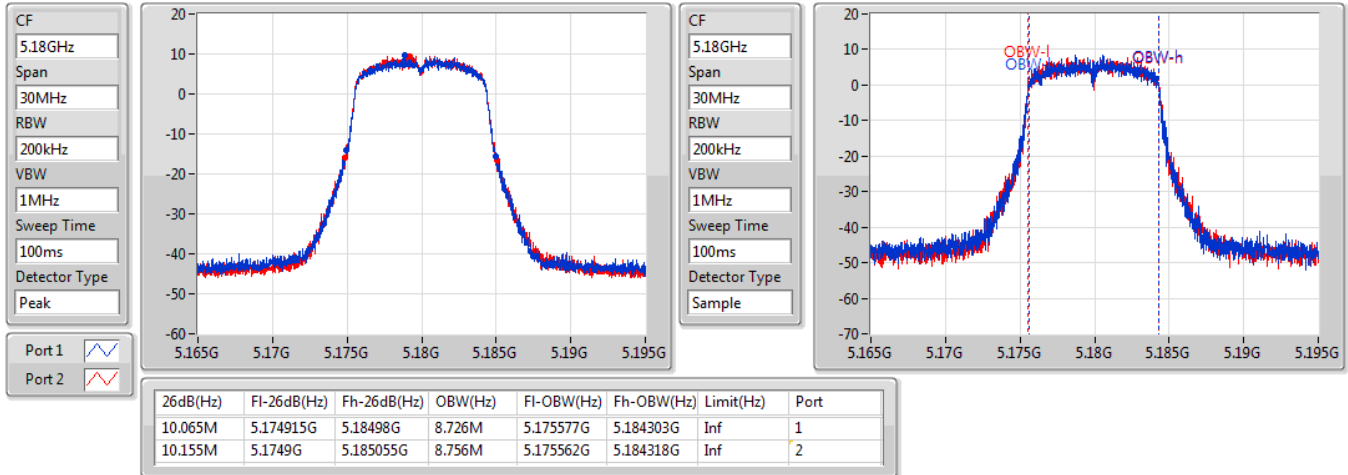

11n-5M_Nss1_2TX
EBW
5825MHz

15/12/2020

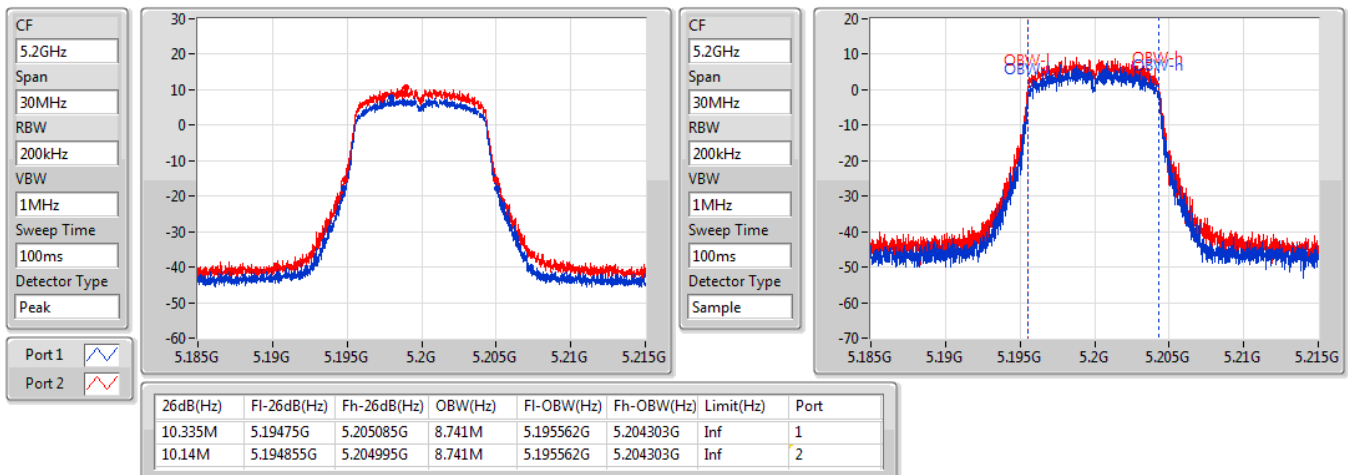


11n-10M_Nss1_2TX
EBW
5180MHz

15/12/2020

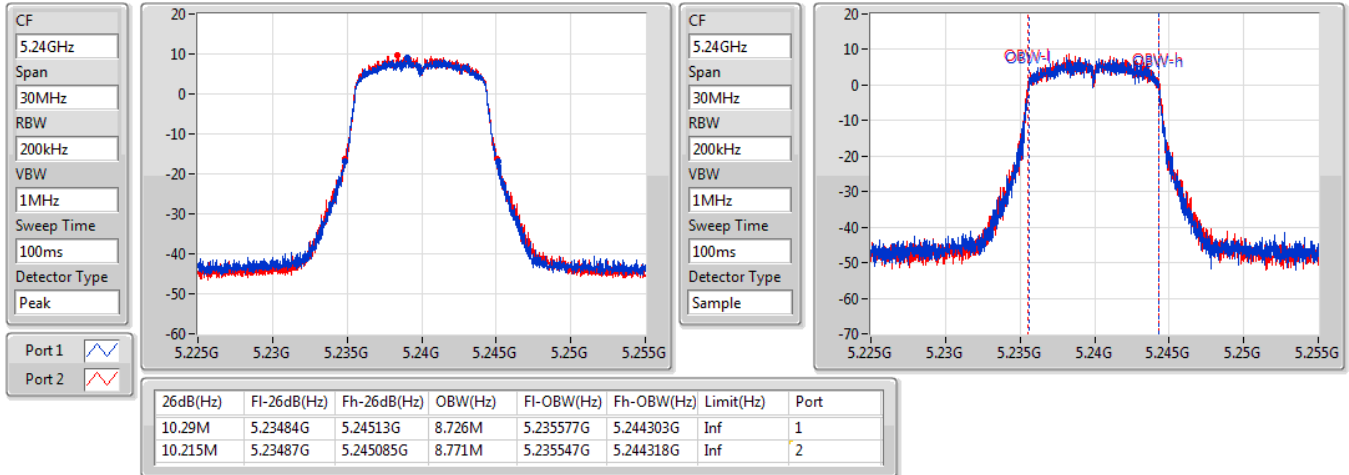

11n-10M_Nss1_2TX
EBW
5200MHz

15/12/2020

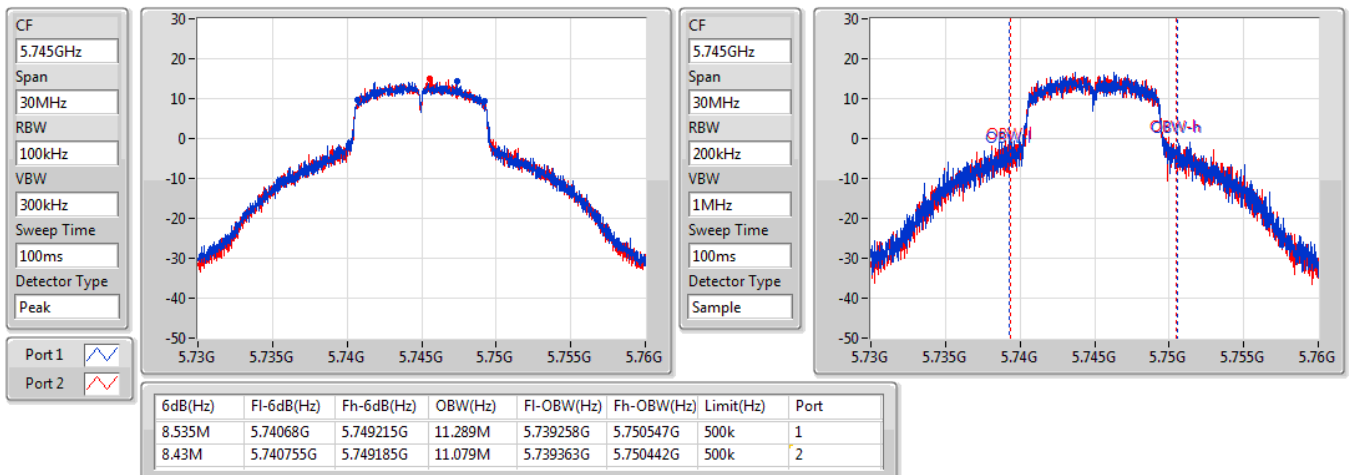


11n-10M_Nss1_2TX
EBW
5240MHz

15/12/2020

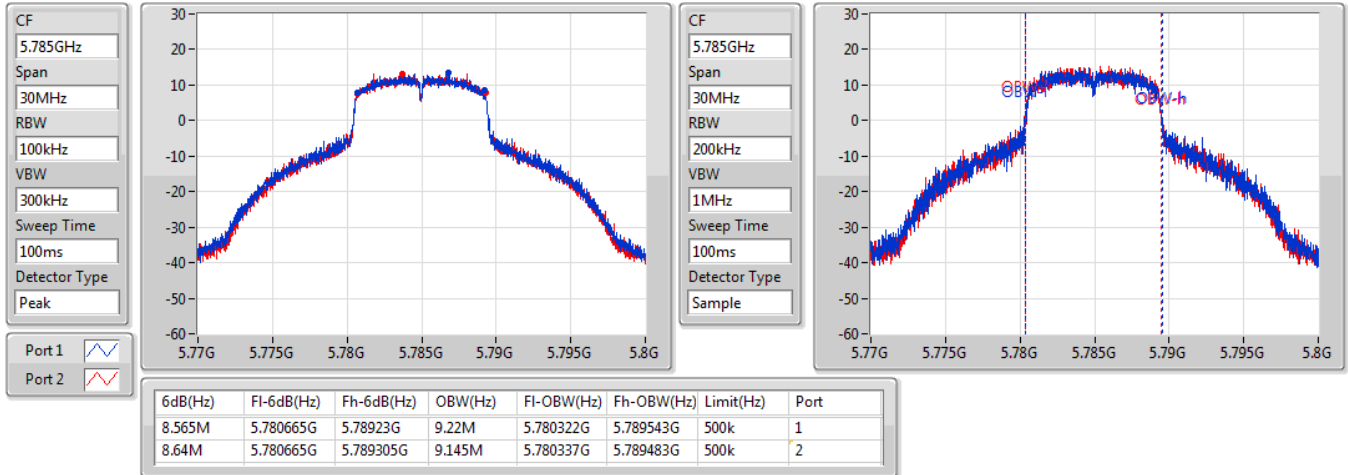

11n-10M_Nss1_2TX
EBW
5745MHz

15/12/2020

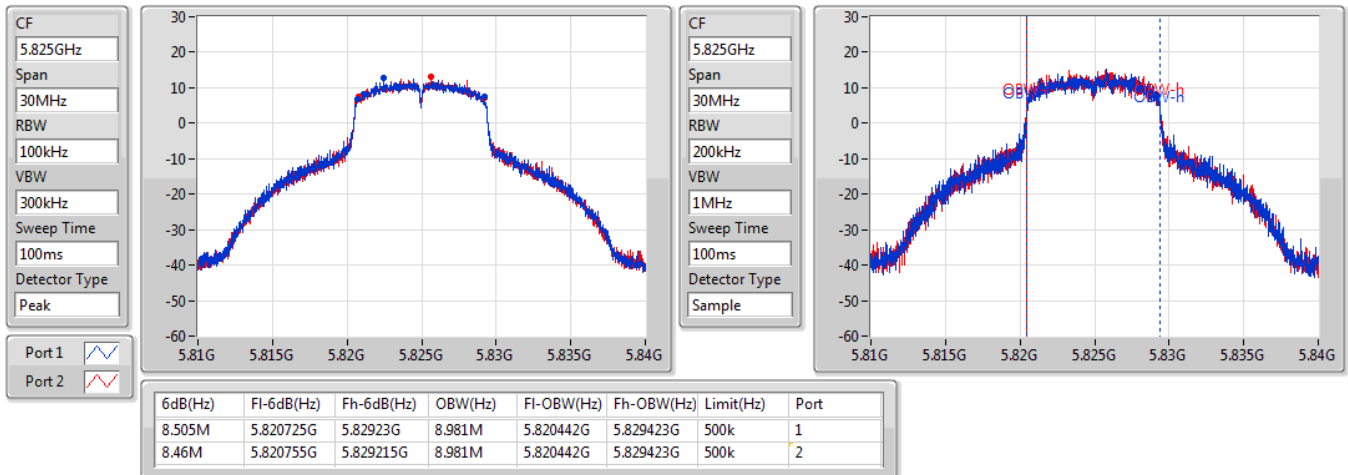


11n-10M_Nss1_2TX
EBW
5785MHz

15/12/2020

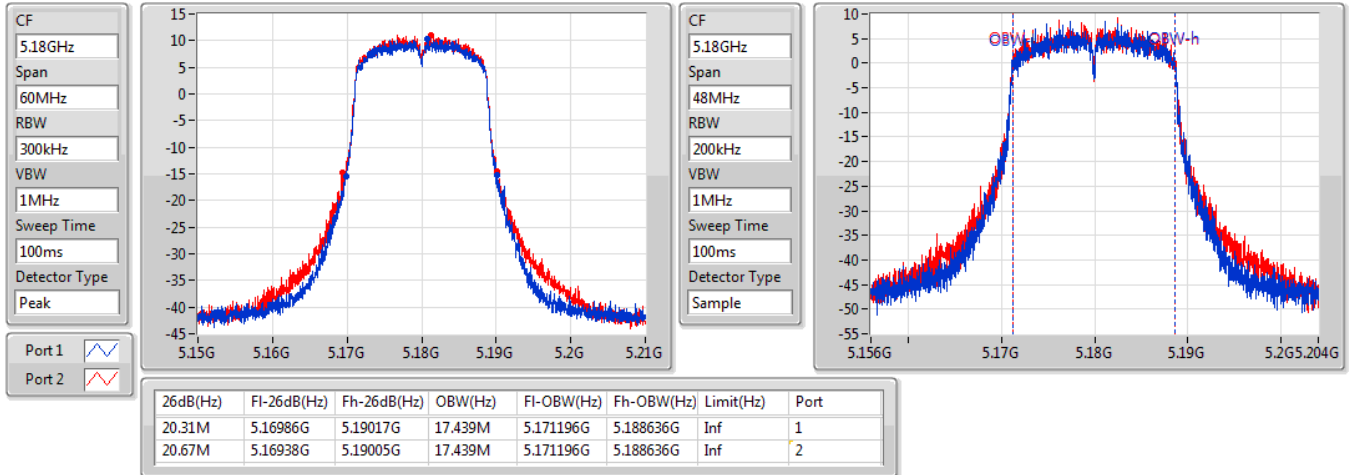

11n-10M_Nss1_2TX
EBW
5825MHz

15/12/2020

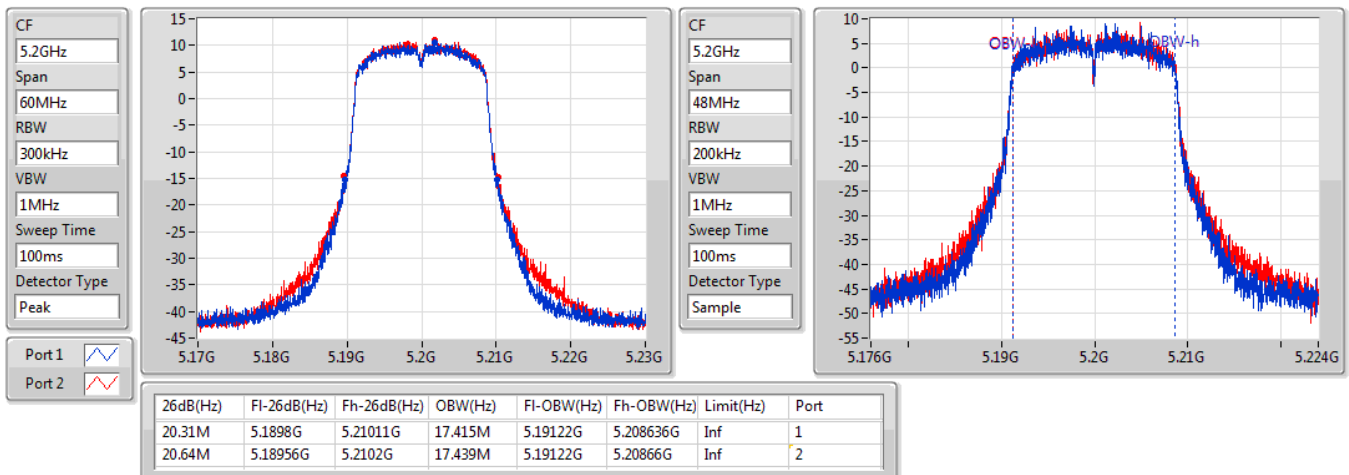


802.11ac VHT20_Nss1_2TX
EBW
5180MHz

05/05/2020

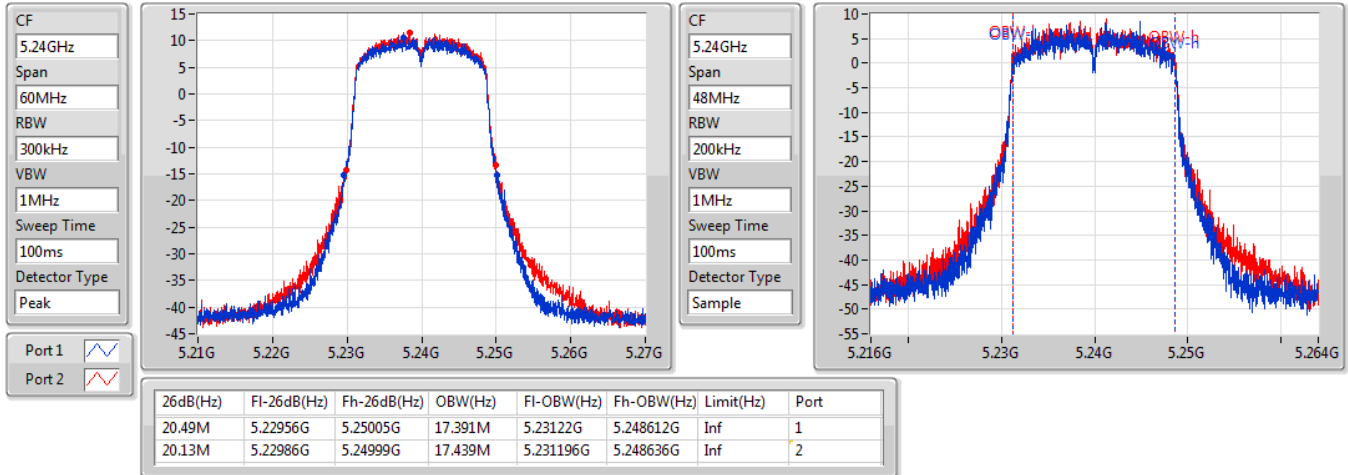

802.11ac VHT20_Nss1_2TX
EBW
5200MHz

05/05/2020

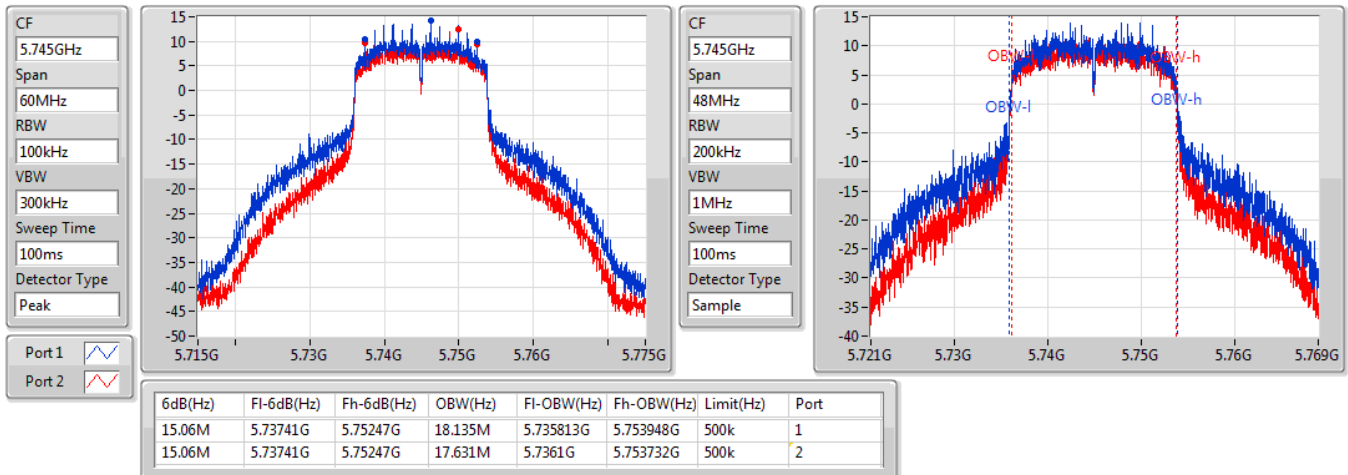


802.11ac VHT20_Nss1_2TX
EBW
5240MHz

05/05/2020

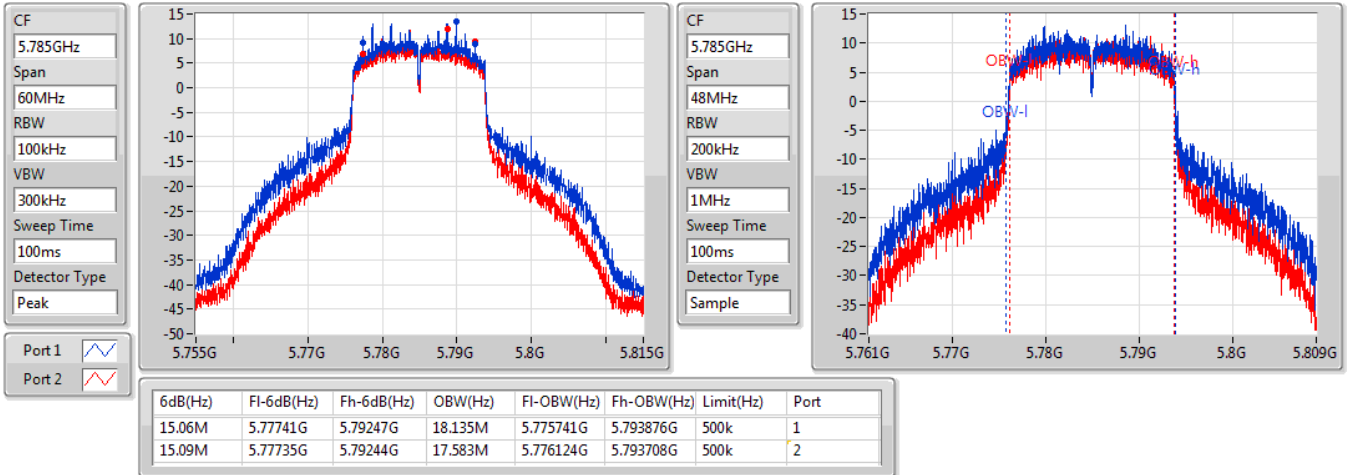

802.11ac VHT20_Nss1_2TX
EBW
5745MHz

05/05/2020

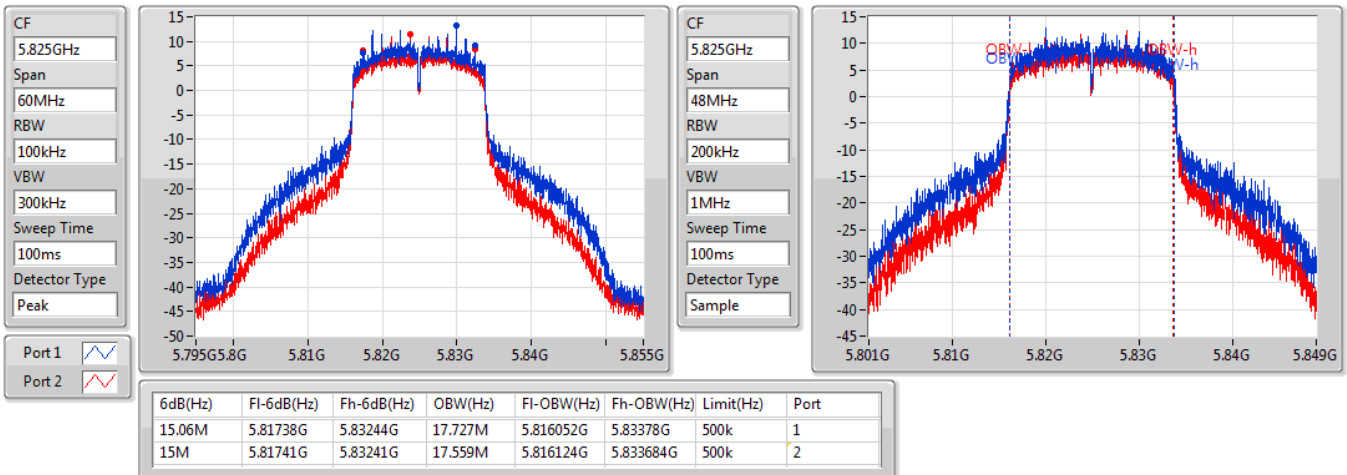


802.11ac VHT20_Nss1_2TX
EBW
5785MHz

05/05/2020

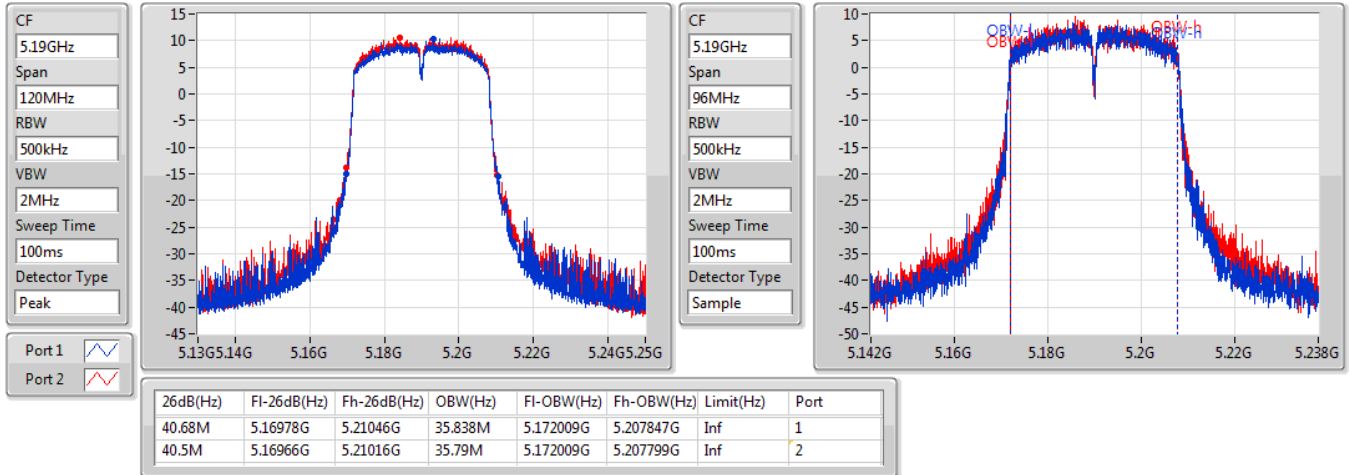

802.11ac VHT20_Nss1_2TX
EBW
5825MHz

05/05/2020

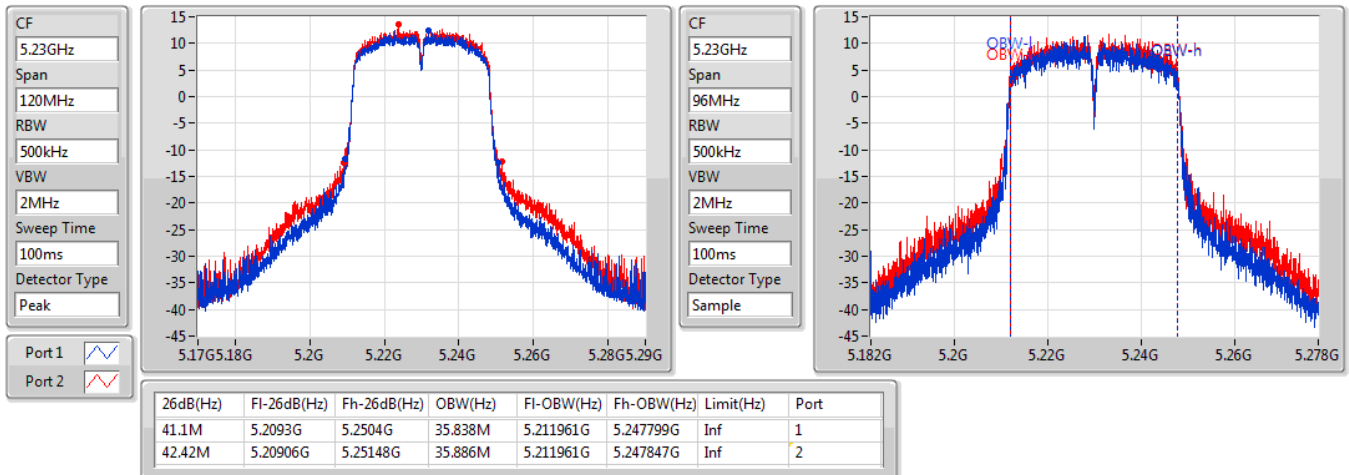


802.11ac VHT40_Nss1_2TX
EBW
5190MHz

05/05/2020

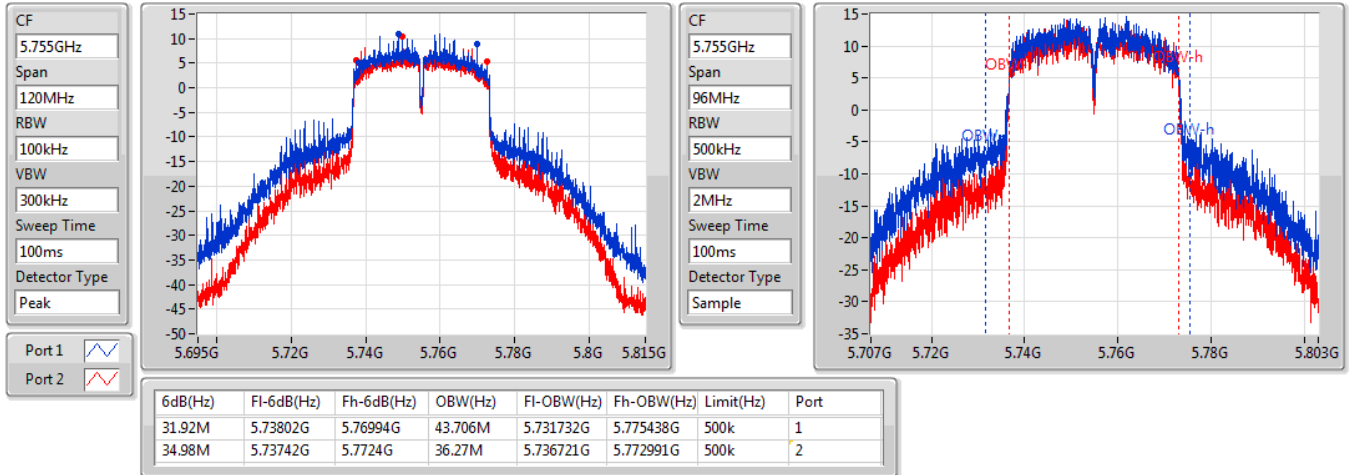

802.11ac VHT40_Nss1_2TX
EBW
5230MHz

05/05/2020

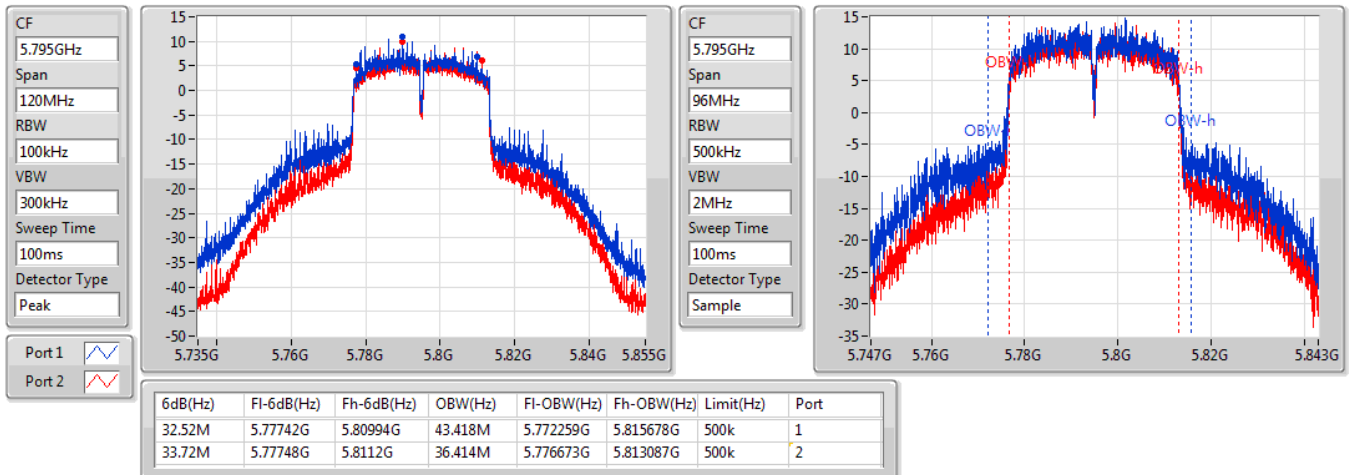


802.11ac VHT40_Nss1_2TX
EBW
5755MHz

05/05/2020

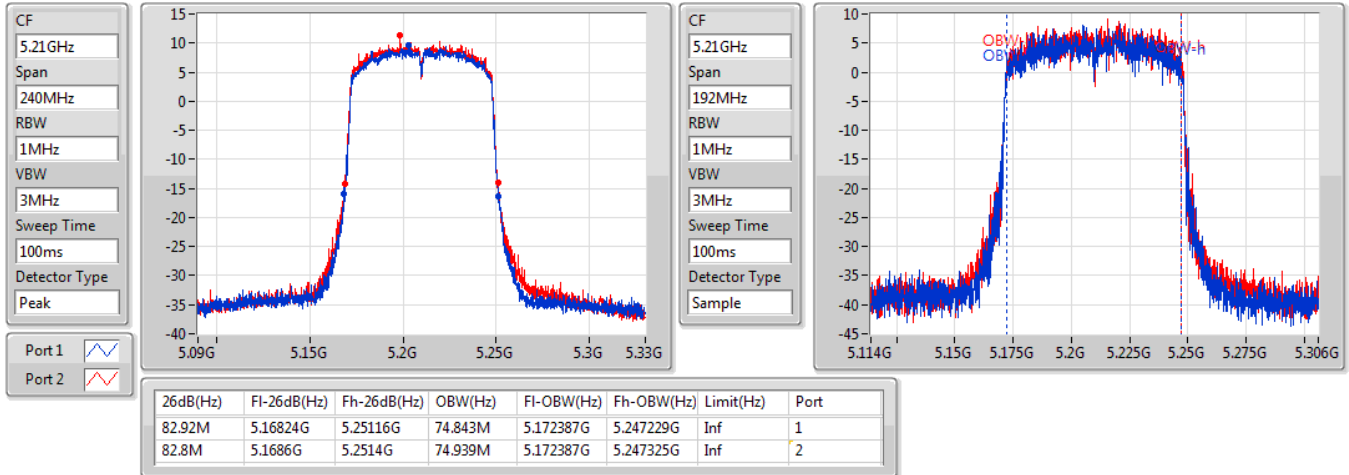

802.11ac VHT40_Nss1_2TX
EBW
5795MHz

05/05/2020

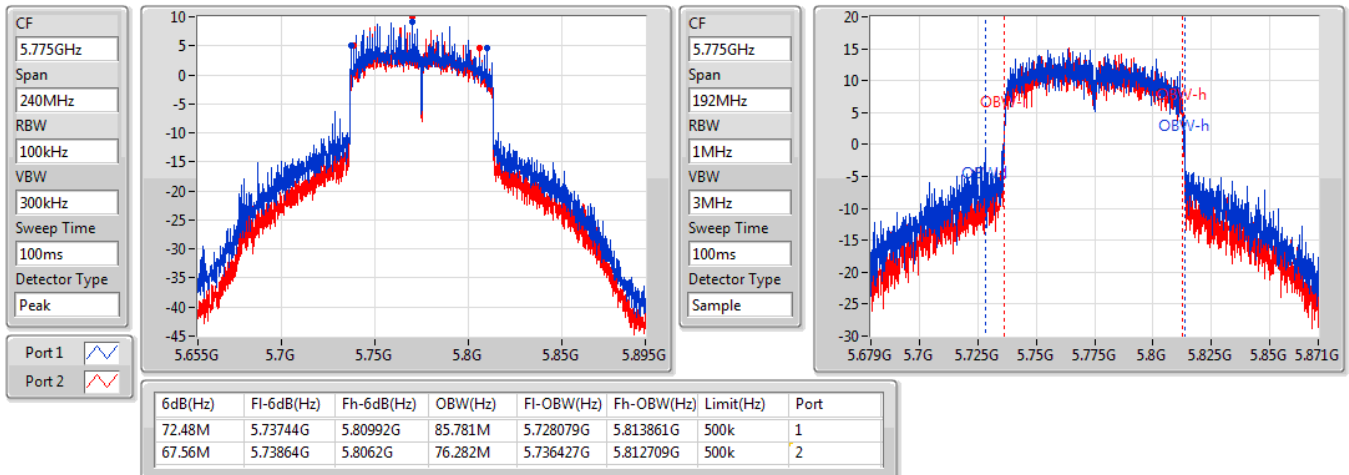


802.11ac VHT80_Nss1_2TX
EBW
5210MHz

05/05/2020


802.11ac VHT80_Nss1_2TX
EBW
5775MHz

05/05/2020



Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
11a-5M_Nss1_2TX	4.935M	4.072M	4M07D1D	4.613M	4.06M
11a-10M_Nss1_2TX	10.035M	8.144M	8M14D1D	9.27M	8.12M
11a-20M_Nss1_2TX	19.68M	16.288M	16M3D1D	18.33M	16.264M
11n-5M_Nss1_2TX	5.16M	4.37M	4M37D1D	4.943M	4.348M
11n-10M_Nss1_2TX	10.29M	8.726M	8M73D1D	9.87M	8.711M
802.11ac VHT20_Nss1_2TX	20.19M	17.439M	17M4D1D	19.23M	17.367M
802.11ac VHT40_Nss1_2TX	40.68M	35.886M	35M9D1D	39.12M	35.79M
802.11ac VHT80_Nss1_2TX	83.04M	74.939M	74M9D1D	80.4M	74.747M
5.725-5.85GHz	-	-	-	-	-
11a-5M_Nss1_2TX	4.043M	4.115M	4M12D1D	3.833M	4.063M
11a-10M_Nss1_2TX	8.145M	9.22M	9M22D1D	7.95M	8.171M
11a-20M_Nss1_2TX	15.66M	23.82M	23M8D1D	14.85M	16.44M
11n-5M_Nss1_2TX	4.313M	4.453M	4M45D1D	4.163M	4.37M
11n-10M_Nss1_2TX	8.775M	13.103M	13M1D1D	8.475M	10.885M
802.11ac VHT20_Nss1_2TX	15.42M	20.42M	20M4D1D	14.4M	17.361M
802.11ac VHT40_Nss1_2TX	35.04M	41.619M	41M6D1D	33.78M	36.042M
802.11ac VHT80_Nss1_2TX	73.92M	88.756M	88M8D1D	72.48M	76.042M

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

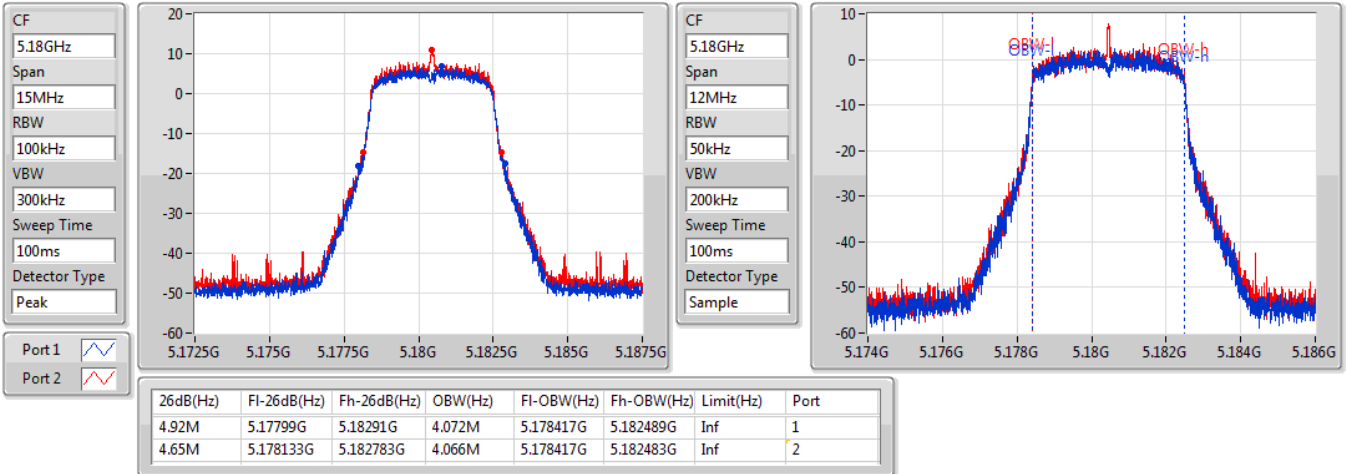
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
11a-5M_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	4.92M	4.072M	4.65M	4.066M
5200MHz	Pass	Inf	4.935M	4.066M	4.613M	4.06M
5240MHz	Pass	Inf	4.845M	4.072M	4.86M	4.066M
5745MHz	Pass	500k	3.99M	4.078M	3.915M	4.063M
5785MHz	Pass	500k	3.833M	4.063M	3.998M	4.07M
5825MHz	Pass	500k	3.863M	4.078M	4.043M	4.115M
11a-10M_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	9.765M	8.144M	9.27M	8.12M
5200MHz	Pass	Inf	9.855M	8.132M	9.315M	8.132M
5240MHz	Pass	Inf	10.035M	8.132M	9.615M	8.144M
5745MHz	Pass	500k	7.95M	8.201M	7.965M	9.22M
5785MHz	Pass	500k	8.145M	8.186M	7.98M	9.07M
5825MHz	Pass	500k	8.13M	8.171M	8.055M	8.291M
11a-20M_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	19.53M	16.264M	18.33M	16.264M
5200MHz	Pass	Inf	19.59M	16.264M	19.11M	16.264M
5240MHz	Pass	Inf	19.68M	16.288M	19.5M	16.288M
5745MHz	Pass	500k	15.66M	21.18M	14.85M	18.66M
5785MHz	Pass	500k	15.66M	23.82M	15.27M	19.35M
5825MHz	Pass	500k	15.3M	16.47M	15.36M	16.44M
11n-5M_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	5.138M	4.363M	5.033M	4.37M
5200MHz	Pass	Inf	5.115M	4.355M	4.943M	4.363M
5240MHz	Pass	Inf	5.16M	4.37M	4.973M	4.348M
5745MHz	Pass	500k	4.253M	4.453M	4.313M	4.43M
5785MHz	Pass	500k	4.238M	4.378M	4.215M	4.37M
5825MHz	Pass	500k	4.26M	4.445M	4.163M	4.438M
11n-10M_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	10.2M	8.726M	10.17M	8.726M
5200MHz	Pass	Inf	10.29M	8.726M	9.975M	8.711M
5240MHz	Pass	Inf	10.275M	8.711M	9.87M	8.726M
5745MHz	Pass	500k	8.595M	11.304M	8.475M	10.885M
5785MHz	Pass	500k	8.7M	13.103M	8.7M	12.789M
5825MHz	Pass	500k	8.52M	11.934M	8.775M	12.489M
802.11ac VHT20_Nss1_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	20.19M	17.391M	19.29M	17.367M
5200MHz	Pass	Inf	19.98M	17.439M	19.23M	17.391M
5240MHz	Pass	Inf	20.19M	17.415M	20.13M	17.415M
5745MHz	Pass	500k	15.09M	17.451M	15.06M	17.841M
5785MHz	Pass	500k	15.09M	17.361M	15M	17.601M
5825MHz	Pass	500k	14.4M	17.751M	15.42M	20.42M
802.11ac VHT40_Nss1_2TX	-	-	-	-	-	-
5190MHz	Pass	Inf	40.56M	35.886M	39.12M	35.838M
5230MHz	Pass	Inf	40.68M	35.838M	40.5M	35.79M
5755MHz	Pass	500k	35.04M	36.222M	34.98M	41.619M
5795MHz	Pass	500k	34.92M	36.042M	33.78M	37.601M
802.11ac VHT80_Nss1_2TX	-	-	-	-	-	-
5210MHz	Pass	Inf	83.04M	74.939M	80.4M	74.747M
5775MHz	Pass	500k	73.92M	76.042M	72.48M	88.756M

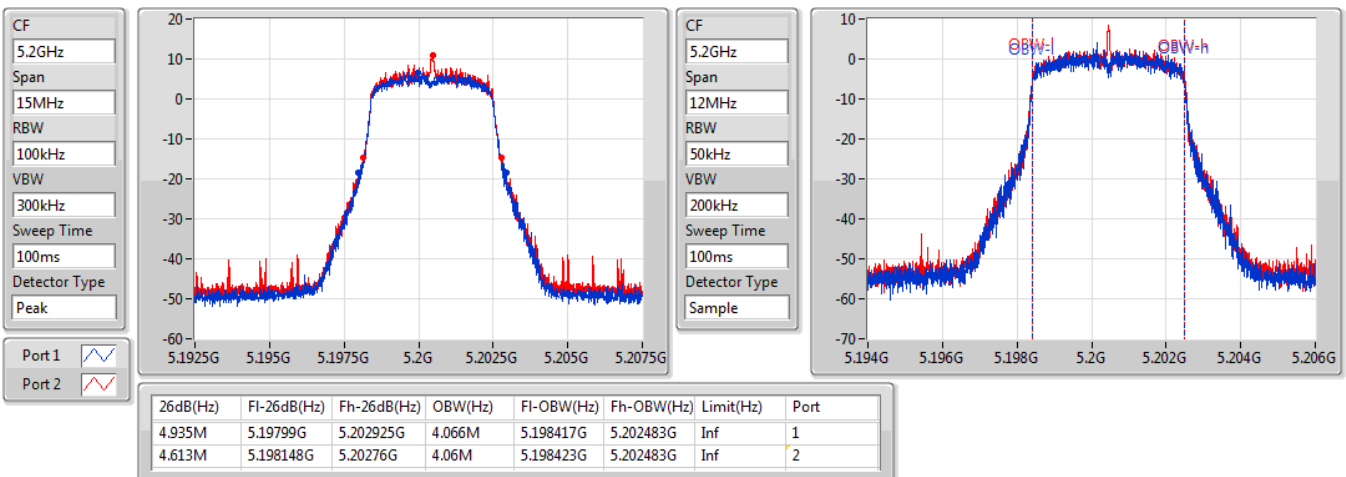
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

11a-5M_Nss1_2TX
EBW
5180MHz

30/06/2020

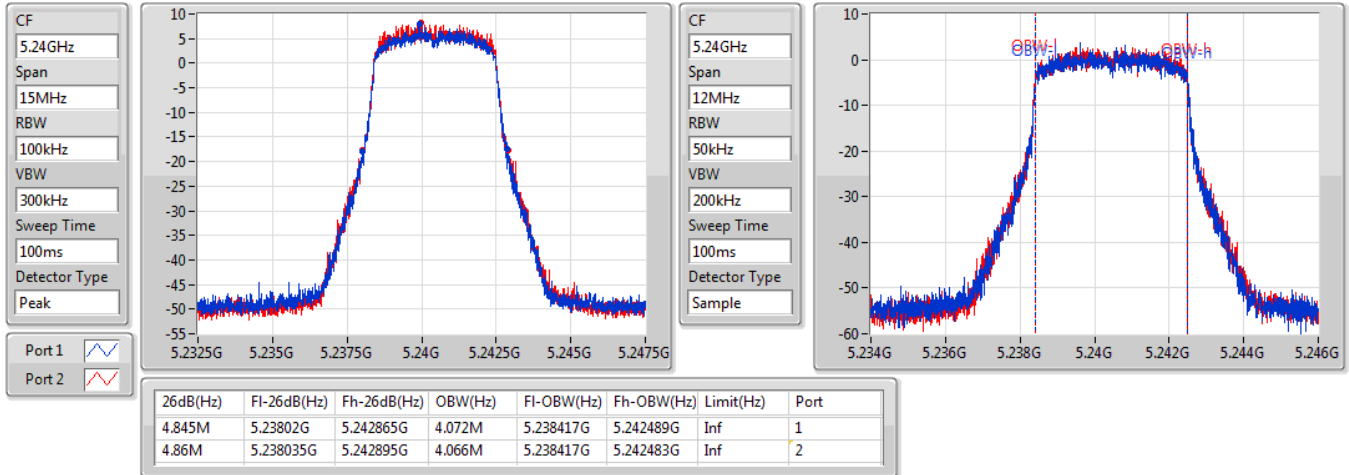

11a-5M_Nss1_2TX
EBW
5200MHz

01/07/2020

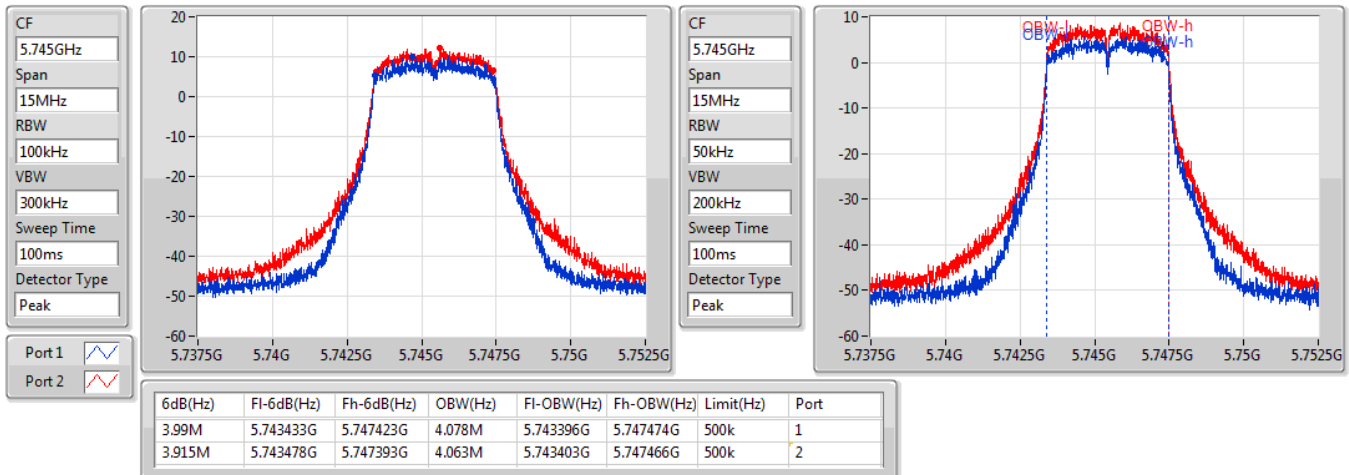


11a-5M_Nss1_2TX
EBW
5240MHz

01/07/2020

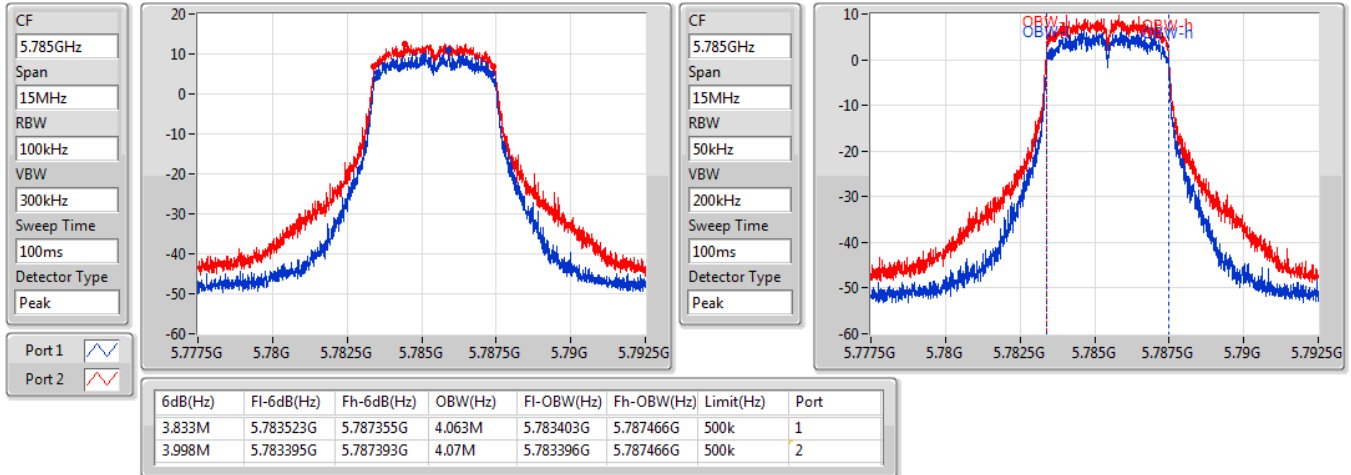

11a-5M_Nss1_2TX
EBW
5745MHz

13/03/2020

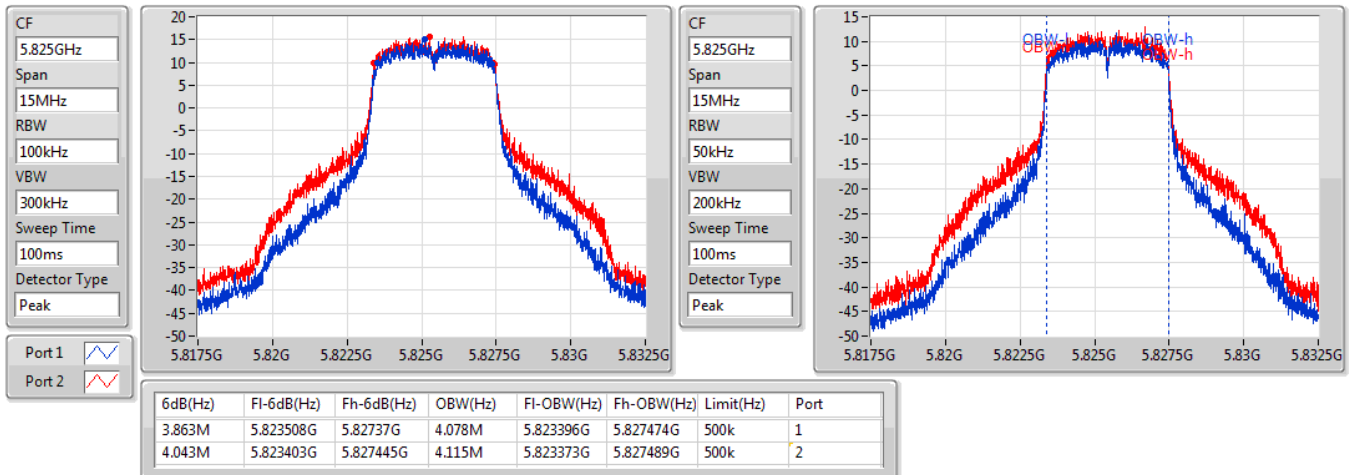


11a-5M_Nss1_2TX
EBW
5785MHz

13/03/2020

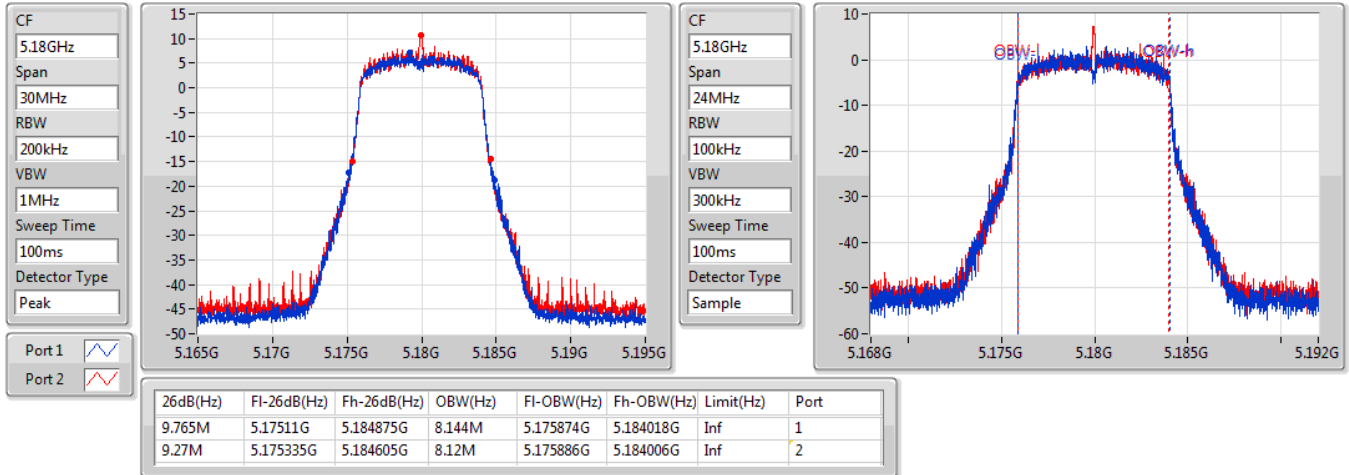

11a-5M_Nss1_2TX
EBW
5825MHz

13/03/2020

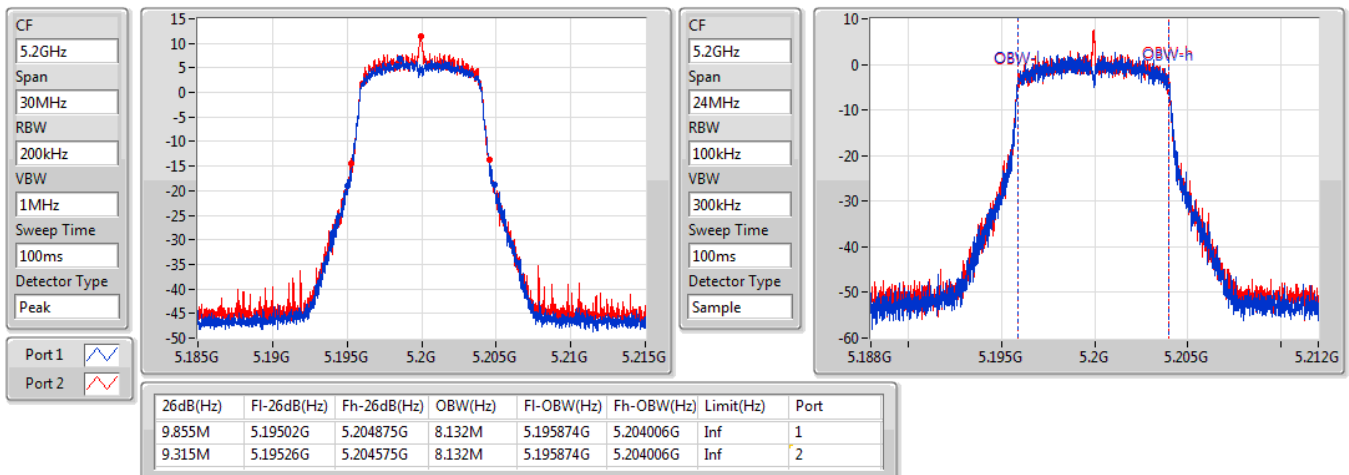


11a-10M_Nss1_2TX
EBW
5180MHz

30/06/2020

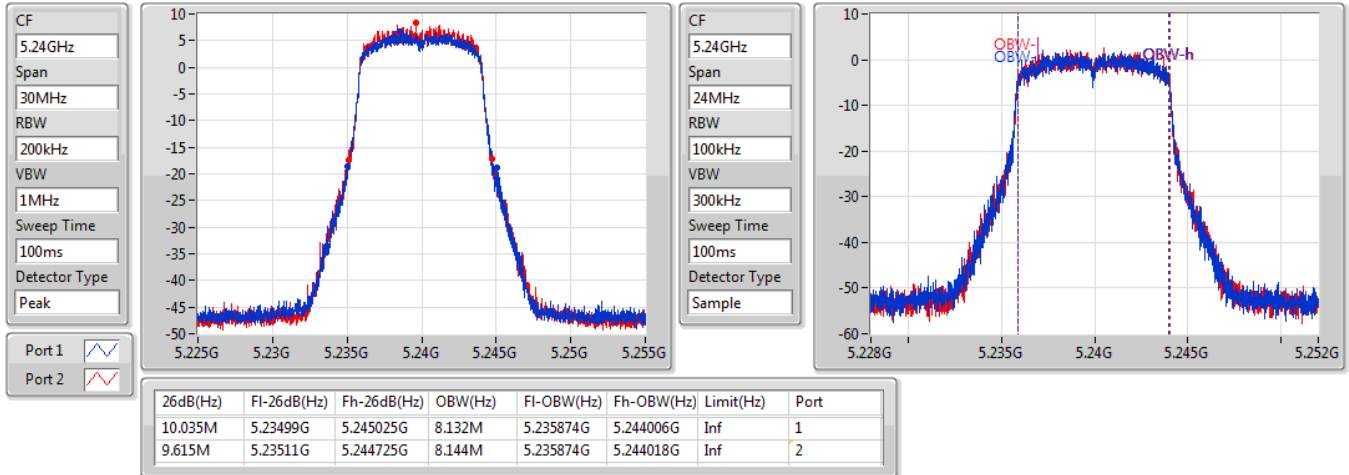

11a-10M_Nss1_2TX
EBW
5200MHz

30/06/2020

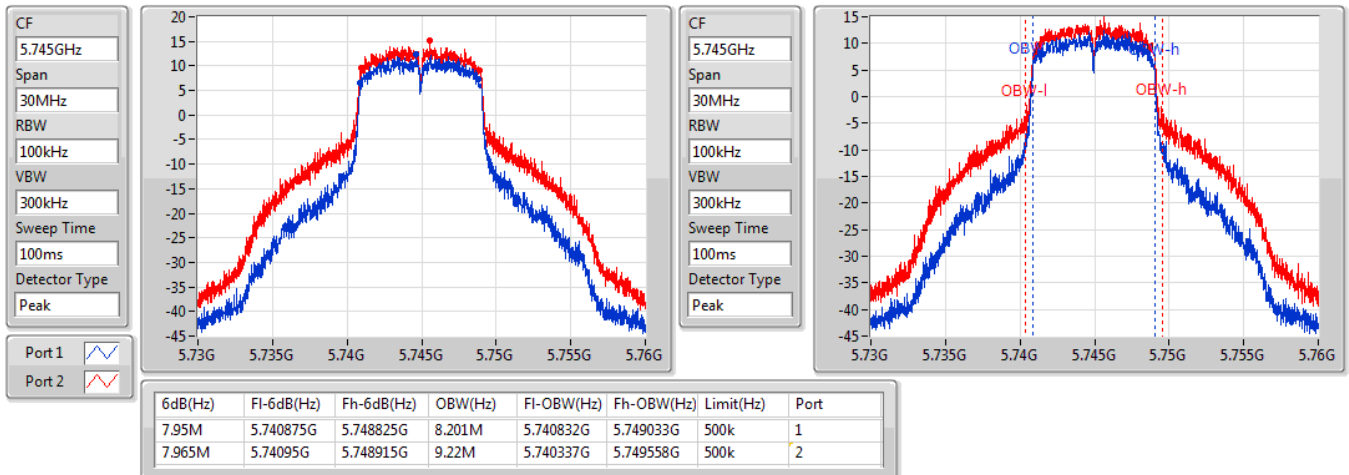


11a-10M_Nss1_2TX
EBW
5240MHz

30/06/2020

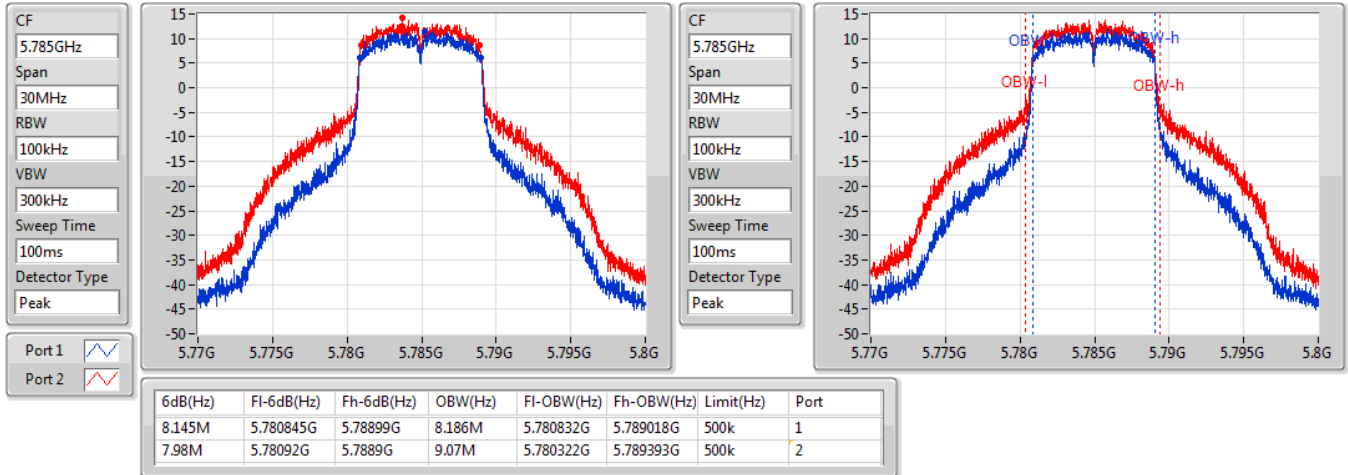

11a-10M_Nss1_2TX
EBW
5745MHz

13/03/2020

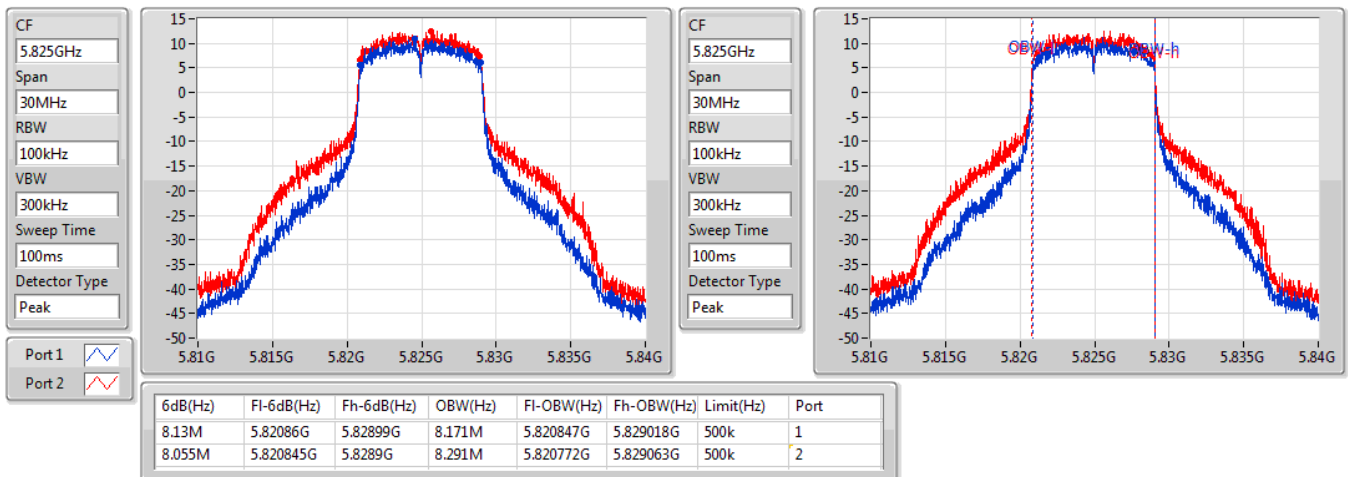


11a-10M_Nss1_2TX
EBW
5785MHz

13/03/2020

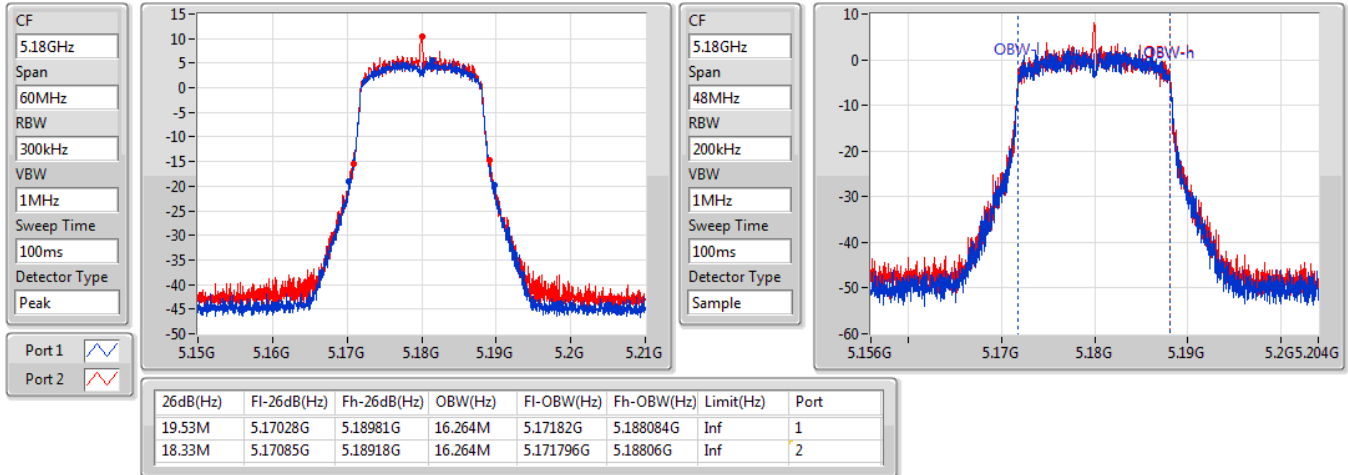

11a-10M_Nss1_2TX
EBW
5825MHz

13/03/2020

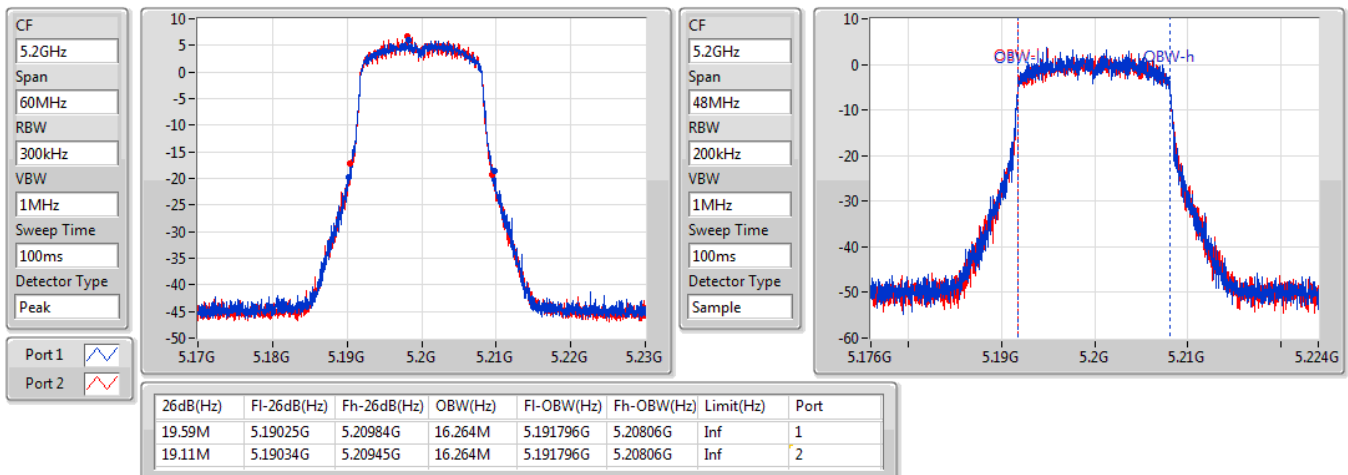


11a-20M_Nss1_2TX
EBW
5180MHz

30/06/2020

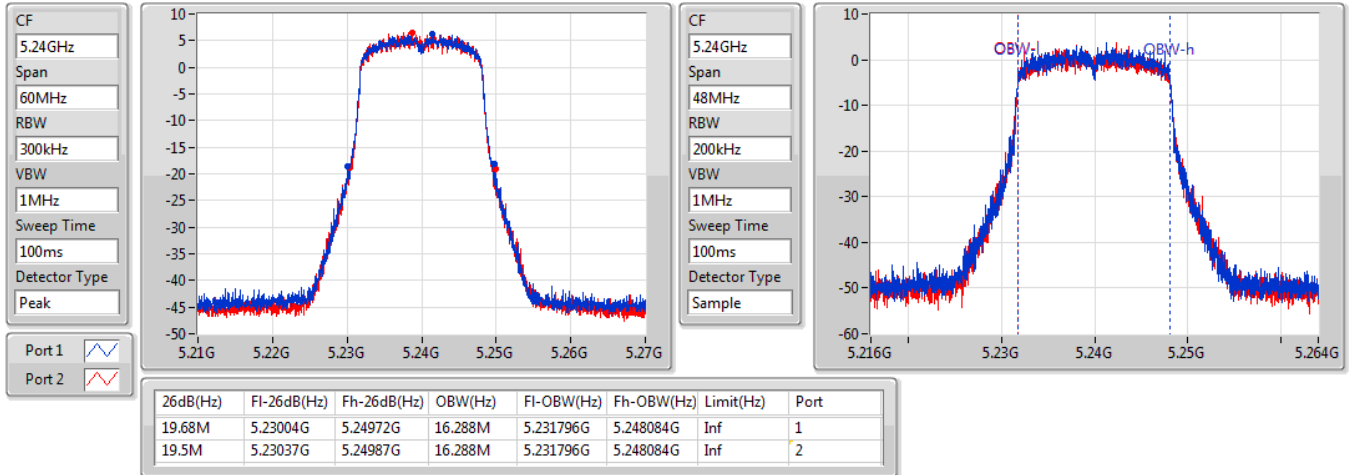

11a-20M_Nss1_2TX
EBW
5200MHz

30/06/2020

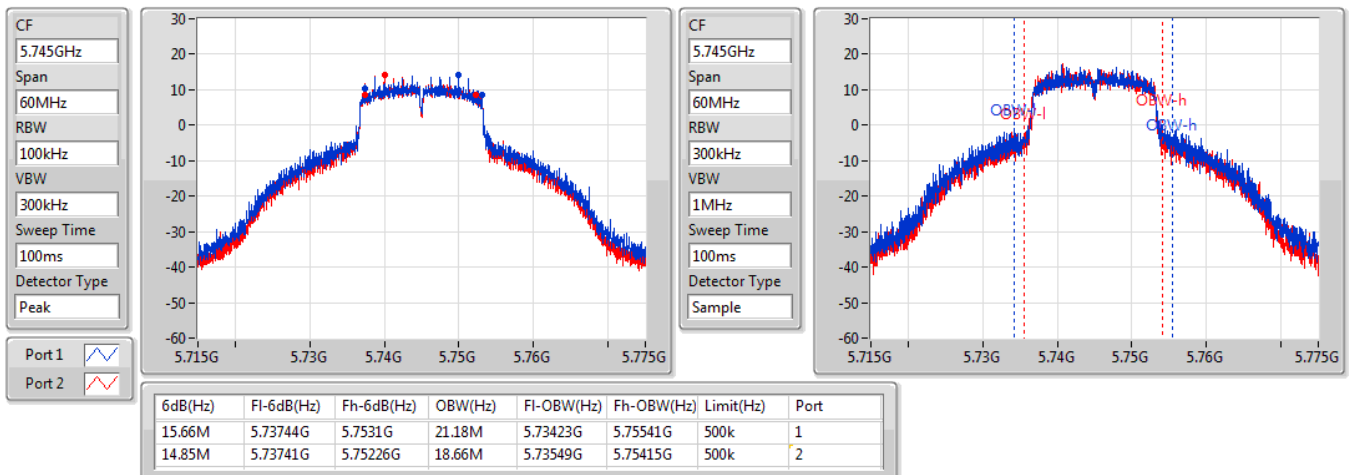


11a-20M_Nss1_2TX
EBW
5240MHz

30/06/2020

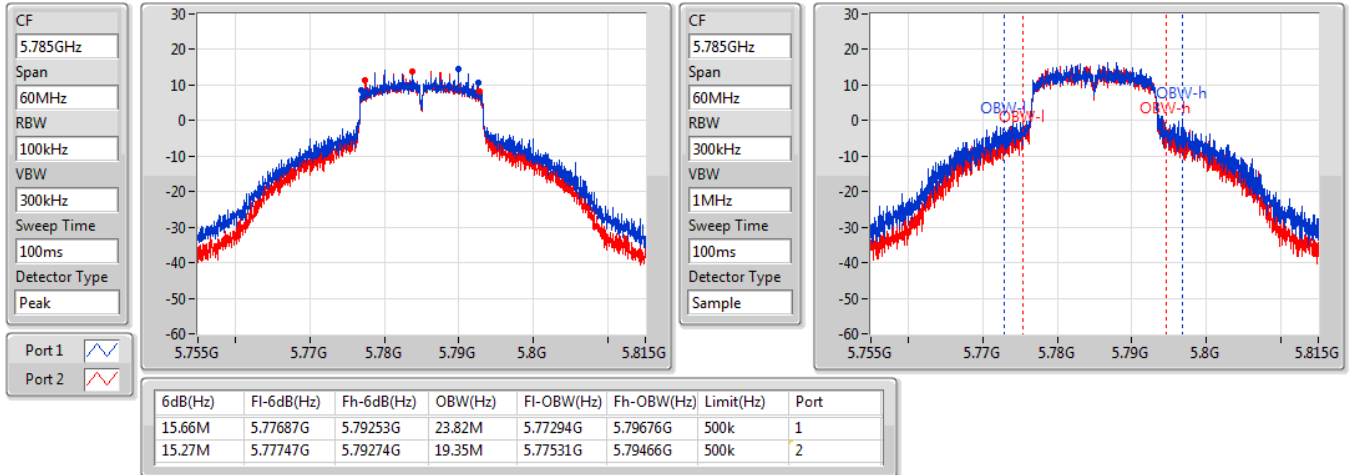

11a-20M_Nss1_2TX
EBW
5745MHz

04/02/2021



11a-20M_Nss1_2TX
EBW
5785MHz

04/02/2021


11a-20M_Nss1_2TX
EBW
5825MHz

04/02/2021

