

FCC RADIO TEST REPORT

FCC ID : QXO-AP560H
Equipment : 802.11ax Access Point
Brand Name : Extreme Networks
Model Name : AP560h
Applicant : Extreme Networks, Inc.
6480 Via Del Oro, San Jose, CA 95119
Manufacturer : Extreme Networks, Inc.
6480 Via Del Oro, San Jose, CA 95119
Standard : 47 CFR FCC Part 15.407

The product was received on Mar. 13, 2019, and testing was started from Mar. 22, 2019 and completed on May 22, 2019. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

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


Approved by: Cliff Chang

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
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History of this test report

TEL : 886-3-656-9065
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Report Version : 01



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:

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

Reviewed by: Sam Chen

Report Producer: Wendy Pan



1 General Description

1.1 Information

1.1.1 RF General Information

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

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



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

Note:

- ♦ 11a, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- ♦ VHT20, VHT40, VHT80 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.
- ♦ HEW20, HEW40, HEW80 use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- ♦ BWch is the nominal channel bandwidth.
- ♦ Nss-Min is the minimum number of spatial streams.
- ♦ Nant is the number of outputs. e.g., 2(2,3) means have 2 outputs for port 2 and port 3. 2 means have 2 outputs for port 1 and port 2.

1.1.2 Antenna Information

Ant.	Set	Port			Brand	Model Name	Antenna Type	Connector	Radio	Gain (dBi)				Beam width
		1TX	2TX	4TX						2.4GHz	5GHz	BT	Thread	
1	1	1	1	1	WNC	Seahawk 560h	Panel Antenna	I-PEX	R1-5GHz	-	8.27	-	-	30/70
		-	2	2	WNC	Seahawk 560h	Panel Antenna	I-PEX	R1-5GHz	-	8.27	-	-	30/70
	2	-	-	3	WNC	Seahawk 560h	Panel Antenna	I-PEX	R1-5GHz	-	8.27	-	-	30/70
		-	-	4	WNC	Seahawk 560h	Panel Antenna	I-PEX	R1-5GHz	-	8.27	-	-	30/70
	1	R2-1	R2-1	R1-4 R2-1	WNC	Seahawk 560h	Panel Antenna	I-PEX	R1-2.4GHz R2-5GHz	7.89	7.93	-	-	30/70
		-	R2-2	R1-3 R2-2	WNC	Seahawk 560h	Panel Antenna	I-PEX	R1-2.4GHz R2-5GHz	7.89	7.93	-	-	30/70
	2	-	R1-2	R1-2 R2-3	WNC	Seahawk 560h	Panel Antenna	I-PEX	R1-2.4GHz R2-5GHz	7.89	7.93	-	-	30/70
		R1-1	R1-1	R1-1 R2-4	WNC	Seahawk 560h	Panel Antenna	I-PEX	R1-2.4GHz R2-5GHz	7.89	7.93	-	-	30/70
2	1	1	1	1	WNC	Seahawk 560h	Panel Antenna	I-PEX	R1-5GHz	-	6.16	-	-	70/70
		1	2	2	WNC	Seahawk 560h	Panel Antenna	I-PEX	R1-5GHz	-	6.16	-	-	70/70
	2	-	-	3	WNC	Seahawk 560h	Panel Antenna	I-PEX	R1-5GHz	-	6.16	-	-	70/70
		-	-	4	WNC	Seahawk 560h	Panel Antenna	I-PEX	R1-5GHz	-	6.16	-	-	70/70
	1	R2-1	R2-1	R1-4 R2-1	WNC	Seahawk 560h	Panel Antenna	I-PEX	R1-2.4GHz R2-5GHz	6.22	6.32	-	-	70/70
		-	R2-2	R1-3 R2-2	WNC	Seahawk 560h	Panel Antenna	I-PEX	R1-2.4GHz R2-5GHz	6.22	6.32	-	-	70/70
	2	-	R1-2	R1-2 R2-3	WNC	Seahawk 560h	Panel Antenna	I-PEX	R1-2.4GHz R2-5GHz	6.22	6.32	-	-	70/70
		R1-1	R1-1	R1-1 R2-4	WNC	Seahawk 560h	Panel Antenna	I-PEX	R1-2.4GHz R2-5GHz	6.22	6.32	-	-	70/70
3	-	1	-	-	WNC	Seahawk 560h	Panel Antenna	I-PEX	R3	-	-	2.61	2.61	-

Note1: The above information was declared by manufacturer.

Note2: Both Ant.1 and Ant. 2 support transmit and receive functions, but only one of them will be used at one time.

Note3:

For 2.4GHz function:

For IEEE 802.11b/g/n/lax mode (1TX, 2TX, 4TX/4RX):

For 1TX

Only Port 1 can be use as transmitting antenna.

For 2TX

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

Port 1 and Port 2 could transmit simultaneously.

For 4TX

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

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

For 4RX



Port 1, Port 2, Port 3 and Port 4 can be used as receiving antennas.
Port 1, Port 2, Port 3 and Port 4 could receive simultaneously.

For 5GHz function:

For IEEE 802.11a/n/ac/ax mode (1TX, 2TX, 4TX/4RX):

For 1TX

Only Port 1 can be use as transmitting antenna.

For 2TX

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

Port 1 and Port 2 could transmit simultaneously.

For 4TX

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

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

For 4RX

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

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

For Bluetooth and Thread mode (1TX/1RX):

Only Port 1 can be use as transmitting/receiving antenna.

**1.1.3 Mode Test Duty Cycle****For Radio 1:****For 1T1S Mode:**

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11a	0.953	0.21	2.068m	1k
802.11ax HEW20	0.983	0.07	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ax HEW40	0.969	0.14	910u	3k
802.11ax HEW80	0.945	0.25	473.75u	3k

For 2T2S Mode:

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ax HEW20	0.972	0.12	925u	3k
802.11ax HEW40	0.944	0.25	504.375u	3k
802.11ax HEW80	0.896	0.48	288u	10k

For 4T1S Mode:

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11a	0.948	0.23	2.068m	1k
802.11ax HEW20	0.983	0.07	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ax HEW40	0.969	0.14	910u	3k
802.11ax HEW80	0.944	0.25	473.75u	3k
802.11ax HEW20-BF	0.859	0.66	1.5m	1k
802.11ax HEW40-BF	0.894	0.487	781.875u	3k
802.11ax HEW80-BF	0.928	0.325	3.834m	300

For 4T4S Mode:

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ax HEW20	0.952	0.21	536.625u	3k
802.11ax HEW40	0.924	0.34	328.5u	10k
802.11ax HEW80	0.884	0.54	220.25u	10k

**For Radio 2:****For 1T1S Mode:**

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11a	0.958	0.186	2.065m	1k
802.11ax HEW20	0.983	0.074	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ax HEW40	0.969	0.137	910u	3k
802.11ax HEW80	0.945	0.246	473.75u	3k

For 2T2S Mode:

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ax HEW20	0.971	0.128	924.5u	3k
802.11ax HEW40	0.91	0.41	504u	3k
802.11ax HEW80	0.91	0.41	288.125u	10k

For 4T1S Mode:

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11a	0.958	0.186	2.065m	1k
802.11ax HEW20	0.983	0.074	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ax HEW40	0.969	0.137	910u	3k
802.11ax HEW80	0.944	0.25	473.75u	3k
802.11ax HEW20-BF	0.938	0.278	1.498m	1k
802.11ax HEW40-BF	0.882	0.545	781.875u	3k
802.11ax HEW80-BF	0.929	0.32	3.834m	300

For 4T4S Mode:

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ax HEW20	0.95	0.223	536.5u	3k
802.11ax HEW40	0.923	0.348	328.5u	10k
802.11ax HEW80	0.884	0.535	220.25u	10k

Note:

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

**1.1.4 EUT Operational Condition**

EUT Power Type	From PoE			
Beamforming Function	☒	With beamforming	☐	Without beamforming
	For 802.11ax in 2.4GHz and 802.11n/ac/ax in 5GHz.			
Function	☒	Outdoor P2M	☒	Indoor P2M
	☐	Fixed P2P	☐	Client
Test Software Version	accessMtool 3.0.0.6			

Note: The above information was declared by manufacturer.

1.1.5 Table for Multiple Listing

1.The EUT has three radios, the information as following table:

Radio	Function		
	WLAN 2.4GHz	WLAN 5GHz	Bluetooth/Thread
1	V	V	-
2	-	V	-
3	-	-	V

2.Table for EUT support function

Function	Support Type	Support Band
AP	Master	WLAN 2.4GHz/Bluetooth/Thread/WLAN 5GHz Band 1~4
Client	Slave without Radar Detection (Sensor Mode)	WLAN 2.4GHz/Bluetooth/Thread/WLAN 5GHz Band 1+4
Bridge	Master	WLAN 2.4GHz/Bluetooth/Thread/WLAN 5GHz Band 1+4
Mesh	Master	WLAN 2.4GHz/Bluetooth/Thread/WLAN 5GHz Band 1+4

Note: 1.The above information was declared by manufacturer.

2.Only the AP mode was tested and recorded in this test report that is designated by the manufacturer.



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
- ♦ FCC KDB 789033 D02 v02r01
- ♦ FCC KDB 662911 D01 v02r01
- ♦ FCC KDB 412172 D01 v01r01

1.3 Testing Location Information

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

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH01-CB	Eddie Weng	21~23.5°C / 51~56%	Mar. 25, 2019 ~ Apr. 17, 2019
Radiated <1GHz	03CH01-CB	Bruce Yang	22~24°C / 50~60%	Mar. 22, 2019
Radiated >1GHz Co-location	03CH01-CB	Bruce Yang	22~24°C / 50~60%	Mar. 22, 2019 ~ May 22, 2019
Radiated >1GHz	03CH01-CB	Justin Lin	22~24°C / 50~60%	Mar. 22, 2019 ~ Apr. 26, 2019
AC Conduction	CO01-CB	Wei Li	23.23~24.84°C / 58.12~58.75%	Mar. 25, 2019

Test site Designation No. TW0006 with FCC

Test site registered number IC 4086B with Industry Canada.

1.4 Measurement Uncertainty

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

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	2.0 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.7 dB	Confidence levels of 95%
Output Power Measurement	1.33 dB	Confidence levels of 95%
Power Density Measurement	1.27 dB	Confidence levels of 95%
Bandwidth Measurement	9.74 x10 ⁻⁸	Confidence levels of 95%



2 Test Configuration of EUT

2.1 Test Channel Mode

For Radio 1 / Antenna 1 / Beam width 30/70:

For 1T1S Mode:

For Conducted measurement and Band Edge Emission test:

For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 4:

Mode	PowerSetting	PowerSetting (dBm)
802.11a_Nss1,(6Mbps)_1TX	-	-
5180MHz	77	19.25
5200MHz	86	21.5
5240MHz	82	20.5
5745MHz	65	16.25
5785MHz	64	16
5825MHz	64	16
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-
5180MHz	76	19
5200MHz	92	23
5240MHz	85	21.25
5745MHz	69	17.25
5785MHz	75	18.75
5825MHz	69	17.25
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-
5190MHz	67	16.75
5230MHz	85	21.25
5755MHz	72	18
5795MHz	71	17.75
802.11ax HEW80_Nss1,(MCS0)_1TX	-	-
5210MHz	66	16.5
5775MHz	82	20.5

**For Outdoor use for 5G Band 1:**

Mode	PowerSetting	PowerSetting (dBm)
802.11a_Nss1,(6Mbps)_1TX	-	-
5180MHz	63	15.75
5200MHz	63	15.75
5240MHz	63	15.75
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-
5180MHz	63	15.75
5200MHz	63	15.75
5240MHz	62	15.5
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-
5190MHz	62	15.5
5230MHz	62	15.5
802.11ax HEW80_Nss1,(MCS0)_1TX	-	-
5210MHz	62	15.5

**For 2T2S Mode:****For Conducted measurement and Band Edge Emission test:****For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 4:**

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW20_Nss2,(MCS0)_2TX	-	-
5180MHz	67	16.75
5200MHz	85	21.25
5240MHz	85	21.25
5745MHz	69	17.25
5785MHz	75	18.75
5825MHz	69	17.25
802.11ax HEW40_Nss2,(MCS0)_2TX	-	-
5190MHz	63	15.75
5230MHz	79	19.75
5755MHz	72	18
5795MHz	71	17.75
802.11ax HEW80_Nss2,(MCS0)_2TX	-	-
5210MHz	60	15
5775MHz	74	18.5

For Outdoor use for 5G Band 1:

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW20_Nss2,(MCS0)_2TX	-	-
5180MHz	52	13
5200MHz	52	13
5240MHz	52	13
802.11ax HEW40_Nss2,(MCS0)_2TX	-	-
5190MHz	52	13
5230MHz	52	13
802.11ax HEW80_Nss2,(MCS0)_2TX	-	-
5210MHz	52	13

**For 4T1S Mode:****For Radiated Emission:**

Mode	Radiated Setting
802.11a_Nss1,(6Mbps)_4TX	-
5180MHz	85
5200MHz	86
5240MHz	82
5745MHz	65
5785MHz	64
5825MHz	64
802.11ax HEW20_Nss1,(MCS0)_4TX	-
5180MHz	86
5200MHz	92
5240MHz	85
5745MHz	69
5785MHz	75
5825MHz	69
802.11ax HEW40_Nss1,(MCS0)_4TX	-
5190MHz	94
5230MHz	87
5755MHz	72
5795MHz	71
802.11ax HEW80_Nss1,(MCS0)_4TX	-
5210MHz	103
5775MHz	87



**For Conducted measurement and Band Edge Emission test:
For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 4:**

Mode	PowerSetting	PowerSetting (dBm)
802.11a_Nss1,(6Mbps)_4TX	-	-
5180MHz	64	16
5200MHz	66	16.5
5240MHz	66	16.5
5745MHz	65	16.25
5785MHz	64	16
5825MHz	64	16
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-
5180MHz	65	16.25
5200MHz	67	16.75
5240MHz	68	17
5745MHz	69	17.25
5785MHz	75	18.75
5825MHz	69	17.25
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-
5190MHz	58	14.5
5230MHz	72	18
5755MHz	72	18
5795MHz	71	17.75
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-
5210MHz	56	14
5775MHz	69	17.25
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-
5180MHz	47	11.75
5200MHz	64	16
5240MHz	64	16
5745MHz	63	15.75
5785MHz	63	15.75
5825MHz	63	15.75
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-
5190MHz	48	12
5230MHz	61	15.25
5755MHz	63	15.75
5795MHz	63	15.75
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-
5210MHz	51	12.75
5775MHz	63	15.75

**For Outdoor use for 5G Band 1:**

Mode	PowerSetting	PowerSetting (dBm)
802.11a_Nss1,(6Mbps)_4TX	-	-
5180MHz	41	10.25
5200MHz	41	10.25
5240MHz	42	10.5
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-
5180MHz	41	10.25
5200MHz	40	10
5240MHz	40	10
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-
5190MHz	40	10
5230MHz	40	10
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-
5210MHz	40	10
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-
5180MHz	16	4
5200MHz	16	4
5240MHz	16	4
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-
5190MHz	16	4
5230MHz	16	4
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-
5210MHz	16	4

**For 4T4S Mode:****For Conducted measurement and Band Edge Emission test:****For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 4:**

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW20_Nss4,(MCS0)_4TX	-	-
5180MHz	64	16
5200MHz	81	20.25
5240MHz	85	21.25
5745MHz	69	17.25
5785MHz	75	18.75
5825MHz	69	17.25
802.11ax HEW40_Nss4,(MCS0)_4TX	-	-
5190MHz	56	14
5230MHz	72	18
5755MHz	72	18
5795MHz	71	17.75
802.11ax HEW80_Nss4,(MCS0)_4TX	-	-
5210MHz	57	14.25
5775MHz	71	17.75

For Outdoor use for 5G Band 1:

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW20_Nss4,(MCS0)_4TX	-	-
5180MHz	41	10.25
5200MHz	41	10.25
5240MHz	41	10.25
802.11ax HEW40_Nss4,(MCS0)_4TX	-	-
5190MHz	40	10
5230MHz	41	10.25
802.11ax HEW80_Nss4,(MCS0)_4TX	-	-
5210MHz	41	10.25



For Radio 1 / Antenna 2 / Beam width 70/70:

For 1T1S Mode:

For Conducted measurement and Band Edge Emission test:

For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 4:

Mode	PowerSetting	PowerSetting (dBm)
802.11a_Nss1,(6Mbps)_1TX	-	-
5180MHz	81	20.25
5200MHz	84	21
5240MHz	79	19.75
5745MHz	61	15.25
5785MHz	60	15
5825MHz	63	15.75
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-
5180MHz	79	19.75
5200MHz	88	22
5240MHz	82	20.5
5745MHz	62	15.5
5785MHz	66	16.5
5825MHz	61	15.25
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-
5190MHz	69	17.25
5230MHz	87	21.75
5755MHz	69	17.25
5795MHz	71	17.75
802.11ax HEW80_Nss1,(MCS0)_1TX	-	-
5210MHz	68	17
5775MHz	81	20.25

**For Outdoor use for 5G Band 1:**

Mode	PowerSetting	PowerSetting (dBm)
802.11a_Nss1,(6Mbps)_1TX	-	-
5180MHz	73	18.25
5200MHz	73	18.25
5240MHz	73	18.25
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-
5180MHz	73	18.25
5200MHz	73	18.25
5240MHz	72	18
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-
5190MHz	69	17.25
5230MHz	72	18
802.11ax HEW80_Nss1,(MCS0)_1TX	-	-
5210MHz	68	17



For 2T2S Mode:

For Conducted measurement and Band Edge Emission test:

For Indoor of 5GHz Band 1 and Indoor / Outdoor of 5GHz Band 4 use:

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW20_Nss2,(MCS0)_2TX	-	-
5180MHz	72	18
5200MHz	88	22
5240MHz	82	20.5
5745MHz	62	15.5
5785MHz	66	16.5
5825MHz	61	15.25
802.11ax HEW40_Nss2,(MCS0)_2TX	-	-
5190MHz	67	16.75
5230MHz	84	21
5755MHz	69	17.25
5795MHz	71	17.75
802.11ax HEW80_Nss2,(MCS0)_2TX	-	-
5210MHz	63	15.75
5775MHz	80	20

For Outdoor use for 5G Band 1:

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW20_Nss2,(MCS0)_2TX	-	-
5180MHz	62	15.5
5200MHz	62	15.5
5240MHz	62	15.5
802.11ax HEW40_Nss2,(MCS0)_2TX	-	-
5190MHz	62	15.5
5230MHz	62	15.5
802.11ax HEW80_Nss2,(MCS0)_2TX	-	-
5210MHz	63	15.75

**For 4T1S Mode:****For Radiated Emission:**

Mode	Radiated Setting
802.11a_Nss1,(6Mbps)_4TX	-
5180MHz	82
5200MHz	84
5240MHz	79
5745MHz	61
5785MHz	60
5825MHz	63
802.11ax HEW20_Nss1,(MCS0)_4TX	-
5180MHz	85
5200MHz	88
5240MHz	82
5745MHz	62
5785MHz	66
5825MHz	61
802.11ax HEW40_Nss1,(MCS0)_4TX	-
5190MHz	90
5230MHz	87
5755MHz	69
5795MHz	71
802.11ax HEW80_Nss1,(MCS0)_4TX	-
5210MHz	101
5775MHz	81



**For Conducted measurement and Band Edge Emission test:
For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 4:**

Mode	PowerSetting	PowerSetting (dBm)
802.11a_Nss1,(6Mbps)_4TX	-	-
5180MHz	74	18.5
5200MHz	74	18.5
5240MHz	74	18.5
5745MHz	61	15.25
5785MHz	60	15
5825MHz	63	15.75
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-
5180MHz	68	17
5200MHz	76	19
5240MHz	76	19
5745MHz	62	15.5
5785MHz	66	16.5
5825MHz	61	15.25
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-
5190MHz	63	15.75
5230MHz	77	19.25
5755MHz	69	17.25
5795MHz	71	17.75
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-
5210MHz	62	15.5
5775MHz	72	18
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-
5180MHz	49	12.25
5200MHz	65	16.25
5240MHz	73	18.25
5745MHz	62	15.5
5785MHz	66	16.5
5825MHz	61	15.25
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-
5190MHz	49	12.25
5230MHz	64	16
5755MHz	69	17.25
5795MHz	71	17.75
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-
5210MHz	52	13
5775MHz	70	17.5

**For Outdoor use for 5G Band 1:**

Mode	PowerSetting	PowerSetting (dBm)
802.11a_Nss1,(6Mbps)_4TX	-	-
5180MHz	51	12.75
5200MHz	51	12.75
5240MHz	52	13
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-
5180MHz	51	12.75
5200MHz	50	12.5
5240MHz	51	12.75
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-
5190MHz	50	12.5
5230MHz	50	12.5
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-
5210MHz	50	12.5
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-
5180MHz	26	6.5
5200MHz	26	6.5
5240MHz	26	6.5
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-
5190MHz	26	6.5
5230MHz	26	6.5
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-
5210MHz	26	6.5

**For 4T4S Mode:****For Conducted measurement and Band Edge Emission test:****For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 4:**

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW20_Nss4,(MCS0)_4TX	-	-
5180MHz	68	17
5200MHz	85	21.25
5240MHz	82	20.5
5745MHz	62	15.5
5785MHz	66	16.5
5825MHz	61	15.25
802.11ax HEW40_Nss4,(MCS0)_4TX	-	-
5190MHz	61	15.25
5230MHz	80	20
5755MHz	69	17.25
5795MHz	71	17.75
802.11ax HEW80_Nss4,(MCS0)_4TX	-	-
5210MHz	62	15.5
5775MHz	75	18.75

For Outdoor use for 5G Band 1:

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW20_Nss4,(MCS0)_4TX	-	-
5180MHz	51	12.75
5200MHz	51	12.75
5240MHz	51	12.75
802.11ax HEW40_Nss4,(MCS0)_4TX	-	-
5190MHz	51	12.75
5230MHz	51	12.75
802.11ax HEW80_Nss4,(MCS0)_4TX	-	-
5210MHz	51	12.75



For Radio 2 / Antenna 1 / Beam width 30/70:

For 1T1S Mode:

For Conducted measurement and Band Edge Emission test:

For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 4:

Mode	PowerSetting	PowerSetting (dBm)
802.11a_Nss1,(6Mbps)_1TX	-	-
5180MHz	78	19.5
5200MHz	85	21.25
5240MHz	77	19.25
5745MHz	93	23.25
5785MHz	95	23.75
5825MHz	95	23.75
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-
5180MHz	76	19
5200MHz	80	20
5240MHz	75	18.75
5745MHz	88	22
5785MHz	91	22.75
5825MHz	91	22.75
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-
5190MHz	67	16.75
5230MHz	76	19
5755MHz	97	24.25
5795MHz	100	25
802.11ax HEW80_Nss1,(MCS0)_1TX	-	-
5210MHz	67	16.75
5775MHz	88	22

**For Outdoor use for 5G Band 1:**

Mode	PowerSetting	PowerSetting (dBm)
802.11a_Nss1,(6Mbps)_1TX	-	-
5180MHz	67	16.75
5200MHz	67	16.75
5240MHz	67	16.75
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-
5180MHz	66	16.5
5200MHz	66	16.5
5240MHz	66	16.5
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-
5190MHz	65	16.25
5230MHz	65	16.25
802.11ax HEW80_Nss1,(MCS0)_1TX	-	-
5210MHz	65	16.25

**For 2T2S Mode:****For Conducted measurement and Band Edge Emission test:****For Indoor of 5GHz Band 1 and Indoor / Outdoor of 5GHz Band 4 use:**

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW20_Nss2,(MCS0)_2TX	-	-
5180MHz	70	17.5
5200MHz	80	20
5240MHz	75	18.75
5745MHz	88	22
5785MHz	91	22.75
5825MHz	91	22.75
802.11ax HEW40_Nss2,(MCS0)_2TX	-	-
5190MHz	66	16.5
5230MHz	76	19
5755MHz	88	22
5795MHz	96	24
802.11ax HEW80_Nss2,(MCS0)_2TX	-	-
5210MHz	62	15.5
5775MHz	77	19.25

For Outdoor use for 5G Band 1:

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW20_Nss2,(MCS0)_2TX	-	-
5180MHz	53	13.25
5200MHz	52	13
5240MHz	51	12.75
802.11ax HEW40_Nss2,(MCS0)_2TX	-	-
5190MHz	52	13
5230MHz	52	13
802.11ax HEW80_Nss2,(MCS0)_2TX	-	-
5210MHz	52	13

**For 4T1S Mode:****For Radiated Emission:**

Mode	Radiated Setting
802.11a_Nss1,(6Mbps)_4TX	-
5180MHz	82
5200MHz	85
5240MHz	77
5745MHz	93
5785MHz	95
5825MHz	95
802.11ax HEW20_Nss1,(MCS0)_4TX	-
5180MHz	82
5200MHz	80
5240MHz	75
5745MHz	88
5785MHz	91
5825MHz	91
802.11ax HEW40_Nss1,(MCS0)_4TX	-
5190MHz	79
5230MHz	76
5755MHz	98
5795MHz	106
802.11ax HEW80_Nss1,(MCS0)_4TX	-
5210MHz	95
5775MHz	106



**For Conducted measurement and Band Edge Emission test:
For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 4:**

Mode	PowerSetting	PowerSetting (dBm)
802.11a_Nss1,(6Mbps)_4TX	-	-
5180MHz	68	17
5200MHz	68	17
5240MHz	67	16.75
5745MHz	93	23.25
5785MHz	95	23.75
5825MHz	95	23.75
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-
5180MHz	66	16.5
5200MHz	69	17.25
5240MHz	68	17
5745MHz	88	22
5785MHz	91	22.75
5825MHz	91	22.75
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-
5190MHz	57	14.25
5230MHz	75	18.75
5755MHz	85	21.25
5795MHz	90	22.5
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-
5210MHz	58	14.5
5775MHz	70	17.5
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-
5180MHz	52	13
5200MHz	65	16.25
5240MHz	65	16.25
5745MHz	65	16.25
5785MHz	65	16.25
5825MHz	65	16.25
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-
5190MHz	52	13
5230MHz	65	16.25
5755MHz	64	16
5795MHz	65	16.25
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-
5210MHz	53	13.25
5775MHz	65	16.25

**For Outdoor use for 5G Band 1:**

Mode	PowerSetting	PowerSetting (dBm)
802.11a_Nss1,(6Mbps)_4TX	-	-
5180MHz	42	10.5
5200MHz	42	10.5
5240MHz	41	10.25
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-
5180MHz	41	10.25
5200MHz	41	10.25
5240MHz	40	10
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-
5190MHz	40	10
5230MHz	39	9.75
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-
5210MHz	40	10
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-
5180MHz	17	4.25
5200MHz	17	4.25
5240MHz	16	4
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-
5190MHz	16	4
5230MHz	15	3.75
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-
5210MHz	15	3.75

**For 4T4S Mode:****For Conducted measurement and Band Edge Emission test:****For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 4:**

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW20_Nss4,(MCS0)_4TX	-	-
5180MHz	67	16.75
5200MHz	80	20
5240MHz	75	18.75
5745MHz	88	22
5785MHz	91	22.75
5825MHz	91	22.75
802.11ax HEW40_Nss4,(MCS0)_4TX	-	-
5190MHz	55	13.75
5230MHz	73	18.25
5755MHz	86	21.5
5795MHz	92	23
802.11ax HEW80_Nss4,(MCS0)_4TX	-	-
5210MHz	57	14.25
5775MHz	71	17.75

For Outdoor use for 5G Band 1:

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW20_Nss4,(MCS0)_4TX	-	-
5180MHz	42	10.5
5200MHz	41	10.25
5240MHz	41	10.25
802.11ax HEW40_Nss4,(MCS0)_4TX	-	-
5190MHz	41	10.25
5230MHz	40	10
802.11ax HEW80_Nss4,(MCS0)_4TX	-	-
5210MHz	40	10



For Radio 2 / Antenna 2 / Beam width 70/70:

For 1T1S Mode:

For Conducted measurement and Band Edge Emission test:

For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 4:

Mode	PowerSetting	PowerSetting (dBm)
802.11a_Nss1,(6Mbps)_1TX	-	-
5180MHz	80	20
5200MHz	82	20.5
5240MHz	76	19
5745MHz	95	23.75
5785MHz	96	24
5825MHz	95	23.75
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-
5180MHz	79	19.75
5200MHz	83	20.75
5240MHz	80	20
5745MHz	95	23.75
5785MHz	94	23.5
5825MHz	94	23.5
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-
5190MHz	69	17.25
5230MHz	80	20
5755MHz	97	24.25
5795MHz	103	25.75
802.11ax HEW80_Nss1,(MCS0)_1TX	-	-
5210MHz	69	17.25
5775MHz	93	23.25

**For Outdoor use for 5G Band 1:**

Mode	PowerSetting	PowerSetting (dBm)
802.11a_Nss1,(6Mbps)_1TX	-	-
5180MHz	67	16.75
5200MHz	67	16.75
5240MHz	68	17
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-
5180MHz	66	16.5
5200MHz	66	16.5
5240MHz	66	16.5
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-
5190MHz	66	16.5
5230MHz	66	16.5
802.11ax HEW80_Nss1,(MCS0)_1TX	-	-
5210MHz	66	16.5



For 2T2S Mode:

For Conducted measurement and Band Edge Emission test:

For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 4:

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW20_Nss2,(MCS0)_2TX	-	-
5180MHz	72	18
5200MHz	83	20.75
5240MHz	80	20
5745MHz	95	23.75
5785MHz	94	23.5
5825MHz	94	23.5
802.11ax HEW40_Nss2,(MCS0)_2TX	-	-
5190MHz	65	16.25
5230MHz	80	20
5755MHz	95	23.75
5795MHz	102	25.5
802.11ax HEW80_Nss2,(MCS0)_2TX	-	-
5210MHz	63	15.75
5775MHz	81	20.25

For Indoor of 5GHz Band 1 use:

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW20_Nss2,(MCS0)_2TX	-	-
5180MHz	53	13.25
5200MHz	53	13.25
5240MHz	52	13
802.11ax HEW40_Nss2,(MCS0)_2TX	-	-
5190MHz	52	13
5230MHz	52	13
802.11ax HEW80_Nss2,(MCS0)_2TX	-	-
5210MHz	52	13

**For 4T1S Mode:****For Radiated Emission:**

Mode	Radiated Setting
802.11a_Nss1,(6Mbps)_4TX	-
5180MHz	80
5200MHz	82
5240MHz	76
5745MHz	95
5785MHz	96
5825MHz	95
802.11ax HEW20_Nss1,(MCS0)_4TX	-
5180MHz	81
5200MHz	83
5240MHz	80
5745MHz	95
5785MHz	94
5825MHz	94
802.11ax HEW40_Nss1,(MCS0)_4TX	-
5190MHz	82
5230MHz	80
5755MHz	106
5795MHz	106
802.11ax HEW80_Nss1,(MCS0)_4TX	-
5210MHz	92
5775MHz	106



**For Conducted measurement and Band Edge Emission test:
For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 4:**

Mode	PowerSetting	PowerSetting (dBm)
802.11a_Nss1,(6Mbps)_4TX	-	-
5180MHz	74	18.5
5200MHz	74	18.5
5240MHz	73	18.25
5745MHz	95	23.75
5785MHz	96	24
5825MHz	95	23.75
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-
5180MHz	71	17.75
5200MHz	75	18.75
5240MHz	75	18.75
5745MHz	95	23.75
5785MHz	94	23.5
5825MHz	94	23.5
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-
5190MHz	62	15.5
5230MHz	80	20
5755MHz	89	22.25
5795MHz	93	23.25
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-
5210MHz	62	15.5
5775MHz	74	18.5

**For Outdoor use for 5G Band 1:**

Mode	PowerSetting	PowerSetting (dBm)
802.11a_Nss1,(6Mbps)_4TX	-	-
5180MHz	42	10.5
5200MHz	42	10.5
5240MHz	41	10.25
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-
5180MHz	41	10.25
5200MHz	41	10.25
5240MHz	40	10
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-
5190MHz	40	10
5230MHz	40	10
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-
5210MHz	40	10
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-
5180MHz	18	4.5
5200MHz	18	4.5
5240MHz	17	4.25
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-
5190MHz	17	4.25
5230MHz	16	4
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-
5210MHz	16	4

**For 4T4S Mode:****For Conducted measurement and Band Edge Emission test:****For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 4:**

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-
5180MHz	53	13.25
5200MHz	68	17
5240MHz	72	18
5745MHz	72	18
5785MHz	72	18
5825MHz	72	18
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-
5190MHz	53	13.25
5230MHz	70	17.5
5755MHz	71	17.75
5795MHz	71	17.75
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-
5210MHz	56	14
5775MHz	72	18

For Outdoor use for 5G Band 1:

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW20_Nss4,(MCS0)_4TX	-	-
5180MHz	42	10.5
5200MHz	42	10.5
5240MHz	41	10.25
802.11ax HEW40_Nss4,(MCS0)_4TX	-	-
5190MHz	41	10.25
5230MHz	41	10.25
802.11ax HEW80_Nss4,(MCS0)_4TX	-	-
5210MHz	41	10.25

2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests									
Tests Item	AC power-line conducted emissions								
Condition	AC power-line conducted measurement for line and neutral								
Operating Mode	Normal Link								
	Radio 1 with 2.4GHz function	Radio 1 with 5GHz function	Radio 2 with 5GHz function	Radio 3 with Bluetooth	Radio 3 with Thread	EUT GE1	EUT GE2	PoE connect with EUT GE1	PoE connect with EUT GE2
1	● (Ant.1)	-	● (Ant.1)	● (Ant.3)	-	●	●	●	-
2	● (Ant.2)	-	● (Ant.2)	● (Ant.3)	-	●	●	●	-
3	-	● (Ant.1)	● (Ant.1)	● (Ant.3)	-	●	●	●	-
4	-	● (Ant.2)	● (Ant.2)	● (Ant.3)	-	●	●	●	-
Mode 2 has been evaluated to be the worst case among Mode 1~4, thus measurement for Mode 5~6 of Thread function will follow this same test mode.									
5	● (Ant.2)	-	● (Ant.2)	-	● (Ant.3)	●	●	●	-
6	-	● (Ant.2)	● (Ant.2)	-	● (Ant.3)	●	●	●	-
Mode 2 has been evaluated to be the worst case among Mode 1~6, thus measurement for Mode 7 for another PoE port will follow this same test mode.									
7	● (Ant.2)	-	● (Ant.2)	● (Ant.3)	-	●	●	-	●
Mode 2 generated the worst test result, so it was recorded in this report.									



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
Test Mode	(Refer to note 1 for detail test mode)

The Worst Case Mode for Following Conformance Tests									
Tests Item	Unwanted Emissions								
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.								
Operating Mode < 1GHz	Normal Link								
	Radio 1 with 2.4GHz function	Radio 1 with 5GHz function	Radio 2 with 5GHz function	Radio 3 with Bluetooth	Radio 3 with Thread	EUT GE1	EUT GE2	PoE connect with EUT GE1	PoE connect with EUT GE2
	1	● (Ant.1)	-	● (Ant.1)	● (Ant.3)	-	●	●	●
	2	● (Ant.2)	-	● (Ant.2)	● (Ant.3)	-	●	●	●
	3	-	● (Ant.1)	● (Ant.1)	● (Ant.3)	-	●	●	●
	4	-	● (Ant.2)	● (Ant.2)	● (Ant.3)	-	●	●	●
Mode 4 has been evaluated to be the worst case among Mode 1~4, thus measurement for Mode 5~6 of Thread function will follow this same test mode.									
5	● (Ant.2)	-	● (Ant.2)	-	● (Ant.3)	●	●	●	-
6	-	● (Ant.2)	● (Ant.2)	-	● (Ant.3)	●	●	●	-
Mode 4 has been evaluated to be the worst case among Mode 1~6, thus measurement for Mode 7 for another PoE port will follow this same test mode.									
7	-	● (Ant.2)	● (Ant.2)	● (Ant.3)	-	●	●	-	●
For operating mode 4 is the worst case and it was record in this test report.									
Operating Mode > 1GHz	CTX								
Test Mode	(Refer to note 1 for detail test mode)								

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Radiated Emission Co-location
Test Condition	Radiated measurement
Operating Mode	Normal Link
1	WLAN 2.4GHz (Radio 1) + WLAN 5GHz (Radio 2) / Antenna 1
2	WLAN 2.4GHz (Radio 1) + WLAN 5GHz (Radio 2) / Antenna 2
For operating mode 2 is the worst case and it was record in this test report.	
Refer to Appendix F for Radiated Emission Co-location.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	WLAN 2.4GHz (Radio 1) + WLAN 5GHz (Radio 2) + Bluetooth (Radio 3)
2	WLAN 5GHz (Radio 1) + WLAN 5GHz (Radio 2) + Bluetooth (Radio 3)
3	WLAN 2.4GHz (Radio 1) + WLAN 5GHz (Radio 2) + Thread (Radio 3)
4	WLAN 5GHz (Radio 1) + WLAN 5GHz (Radio 2) + Thread (Radio 3)
Refer to Sporton Test Report No.: FA8O1739-09 for Co-location RF Exposure Evaluation.	

Note:

1. Test Mode:

Test Mode									
Test Item	802.11a		802.11ax HEW20/40/80						
	1T1S	4T1S	CDD 1T1S	SDM 2T2S	CDD 4T1S	SDM 4T4S	TxBF 2T2S	TxBF 4T1S	TxBF 4T4S
Maximum Conducted Output Power	V	V	V	V	V	V	-	V	-
Emission Bandwidth	V	V	V	V	V	V	-	V	-
Peak Power Spectral Density	V	V	V	V	V	V	-	V	-
Radiated Emission	Cover by CDD 4T1S Max setting	V	Cover by CDD 4T1S Max setting	Cover by CDD 4T1S Max setting	Max setting	Cover by CDD 4T1S Max setting	-	Cover by CDD 4T1S Max setting	-
Band Edge Emission	V	V	V	V	V	V	-	V	-

- 802.11ax modulation and bandwidth are similar for 802.11n mode for 20MHz / 40MHz and 802.11ac mode for 20/40/80MHz, therefore investigated worst case to representative mode in test report.
- The EUT can only be used at Y axis.
- The PoE is for measurement only, would not be marketed.

PoE information as below:

Support Unit	Brand	Model
PoE	Microsemi	PD-9001GR/AT/AC



2.3 EUT Operation during Test

For CTX Mode:

non-beamforming mode:

The EUT was programmed to be in continuously transmitting mode.

beamforming mode:

For Conducted Mode:

The EUT was programmed to be in continuously transmitting mode.

For Radiated Mode:

During the test, the following programs under WIN 7 were executed.

The program was executed as follows:

1. During the test, the EUT operation to normal function.
2. Executed command fixed test channel under Telnet.
3. Executed "Lantest.exe" to link with the remote workstation to transmit and receive packet by WLAN module and transmit duty cycle no less than 98%.

For Normal Link:

During the test, the EUT operation to normal function.

2.4 Accessories

N/A



2.5 Support Equipment

For AC Conduction:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	PoE	Microsemi	PD-9001GR/AT/AC	N/A
B	GE1 PC	DELL	T3400	N/A
C	GE2 NB	DELL	E6430	N/A
D	WLAN2.4G NB	DELL	E6430	N/A
E	WLAN5G NB	DELL	E6430	N/A
F	802.11ax Access Point (Device)	Extreme Networks	AP505i	QXO-AP505I
G	Device NB	DELL	E6430	N/A

For Radiated (below 1GHz) and Radiated (above 1GHz) Co-location test:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	GE1 PC	DELL	T3400	N/A
B	WLAN2.4G NB	Apple	Mac Book	N/A
C	WLAN5G NB	Apple	Mac Book	N/A
D	Device NB	DELL	E4300	N/A
E	GE2 NB	DELL	E4300	N/A
F	802.11ax Access Point (Device)	Extreme Networks	AP505i	QXO-AP505I
G	PoE	Microsemi	PD-9001GR/AT/AC	N/A

**For Radiated (above 1GHz) other test:****For Non-Beamforming Mode:**

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

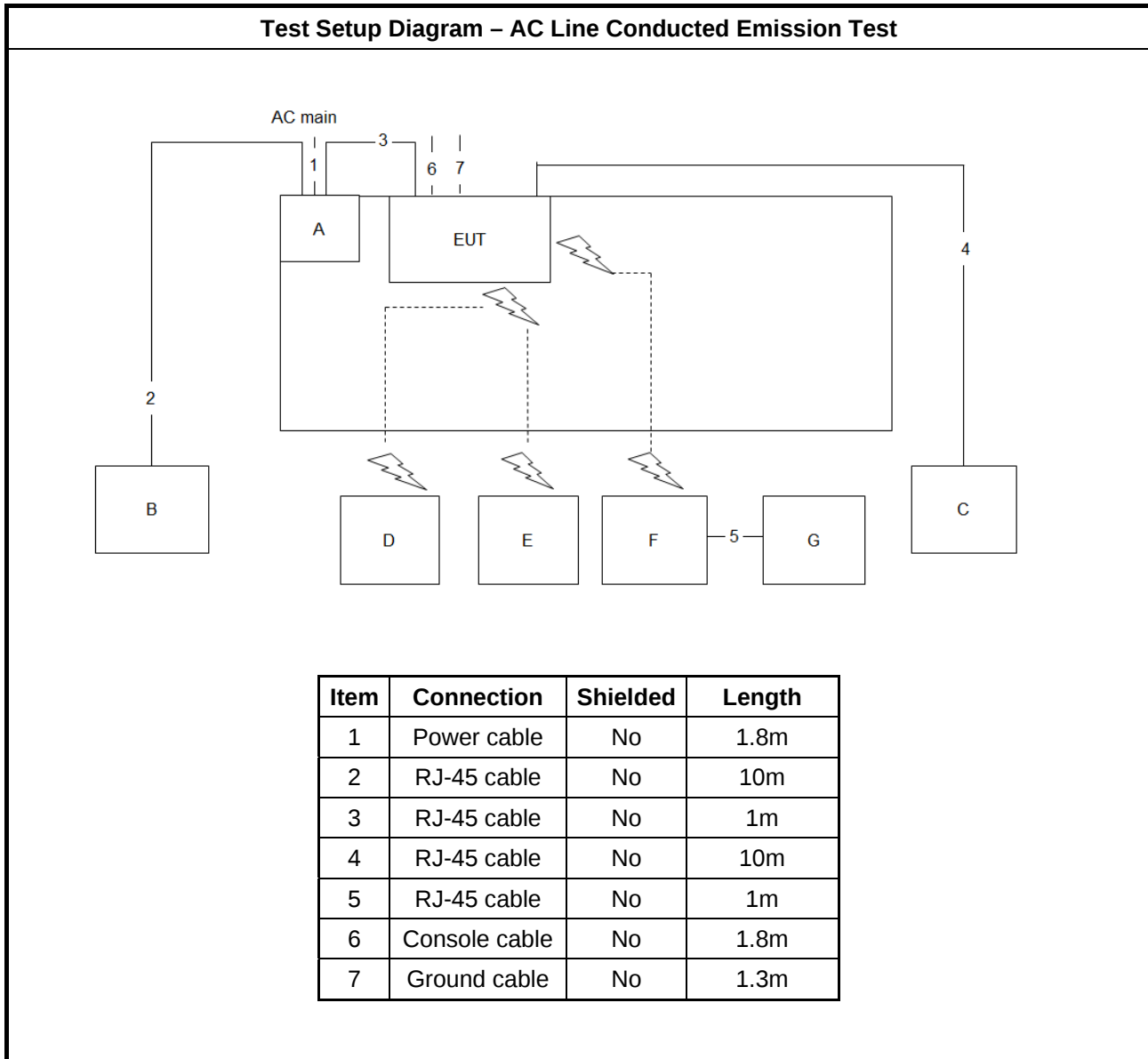
For Beamforming Mode:

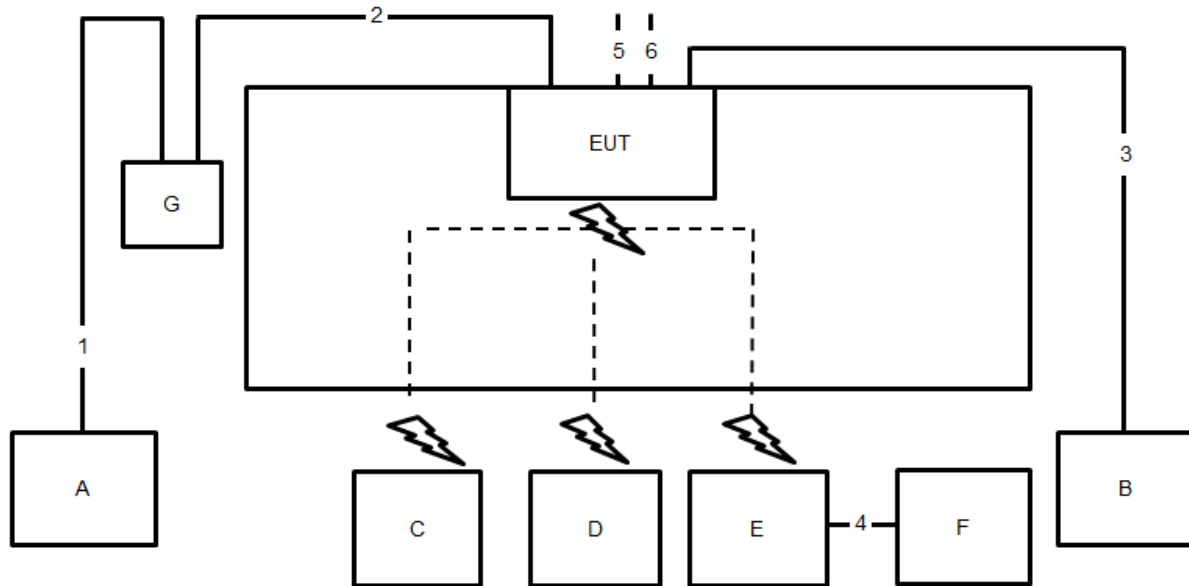
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A
C	Notebook	DELL	E4300	N/A
D	WLAN module	Boardcom	BCM 943684MCH5	N/A
E	PoE	Microsemi	PD-9001GR/AT/AC	N/A

For RF Conducted:

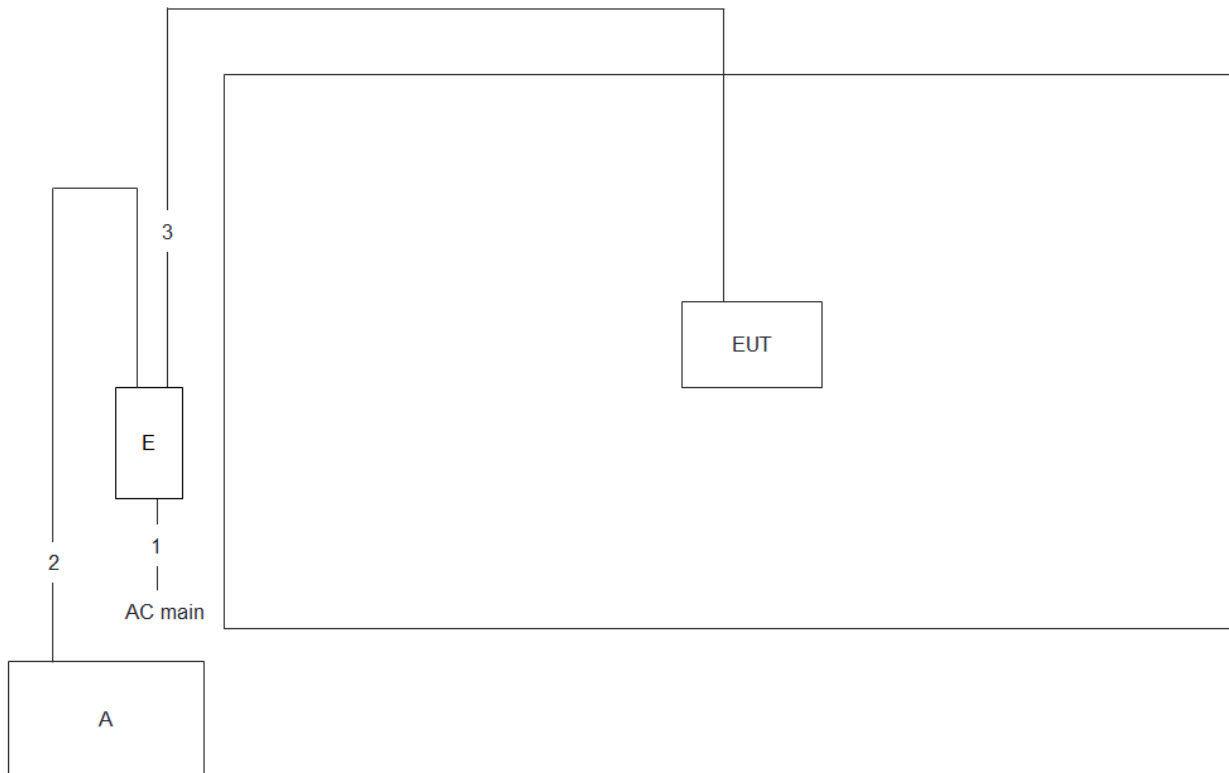
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A
B	PoE	Microsemi	PD-9001GR/AT/AC	N/A

2.6 Test Setup Diagram

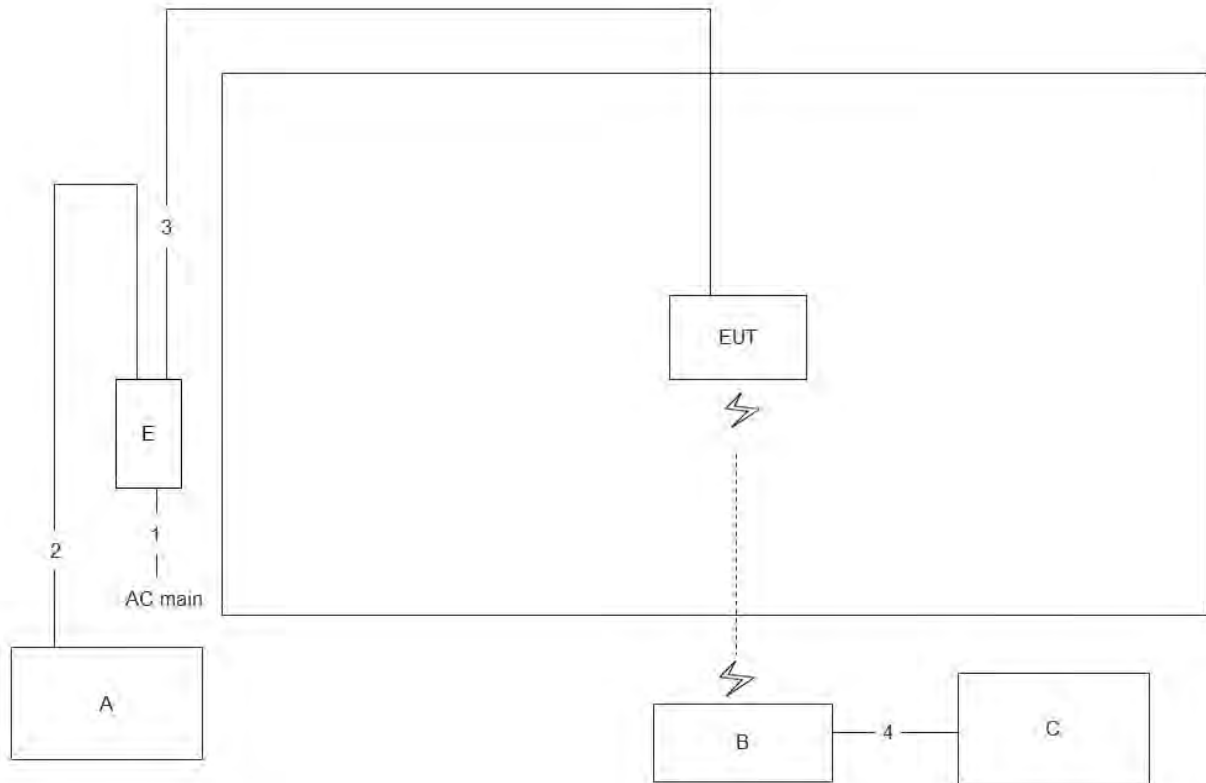


Test Setup Diagram - Radiated Test < 1GHz


Item	Connection	Shielded	Length
1	RJ-45 cable	No	1.5m
2	RJ-45 cable	No	10m
3	RJ-45 cable	No	10m
4	RJ-45 cable	No	10m
5	Console cable	No	1.5m
6	Ground cable	No	1.5m

Test Setup Diagram - Radiated Test > 1GHz / Non-Beamforming Mode


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

Test Setup Diagram - Radiated Test > 1GHz / Beamforming Mode


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



3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

Note 1: * Decreases with the logarithm of the frequency.

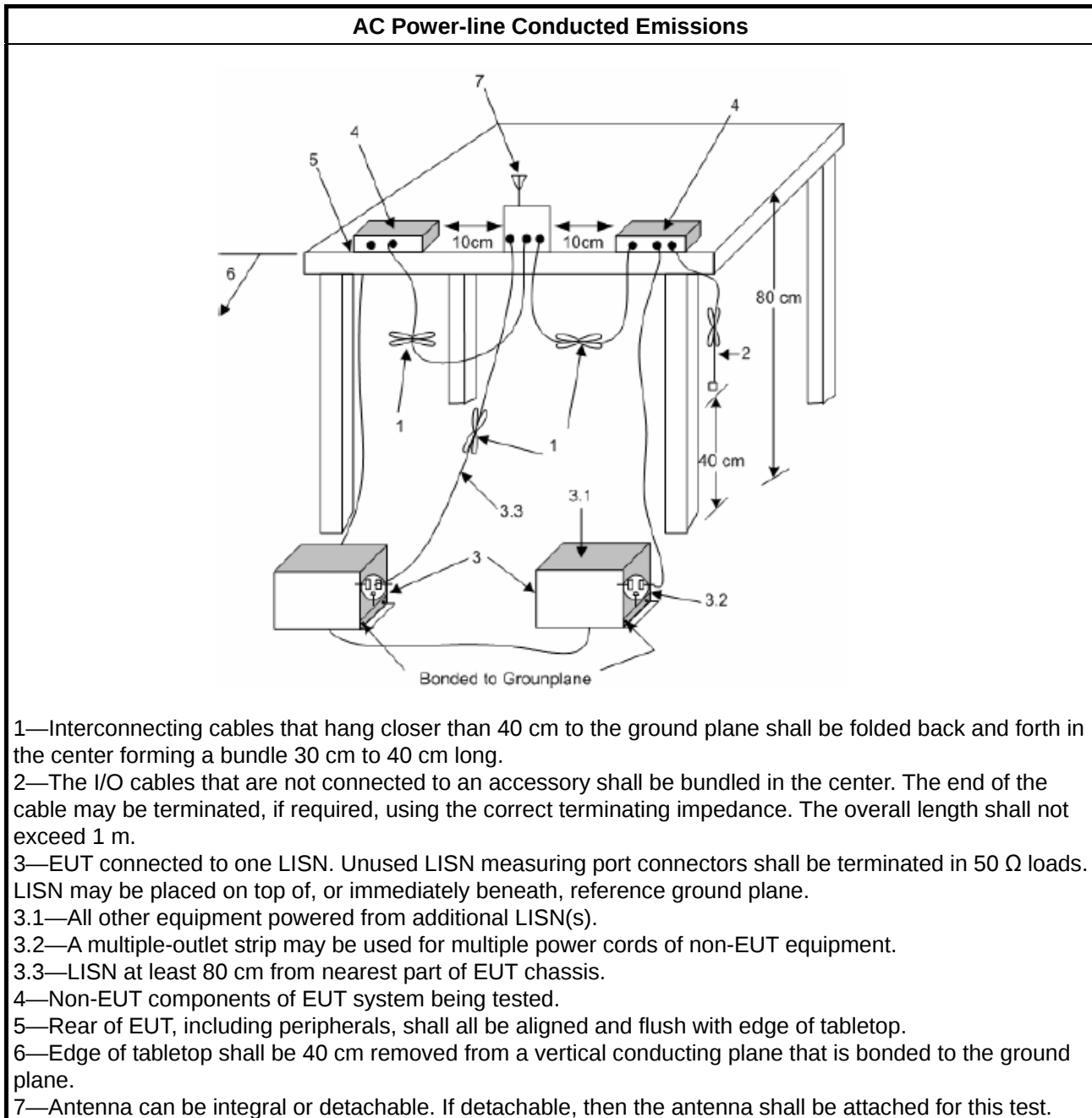
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

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

3.1.4 Test Setup



3.1.5 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 Emission Bandwidth

3.2.1 Emission Bandwidth Limit

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

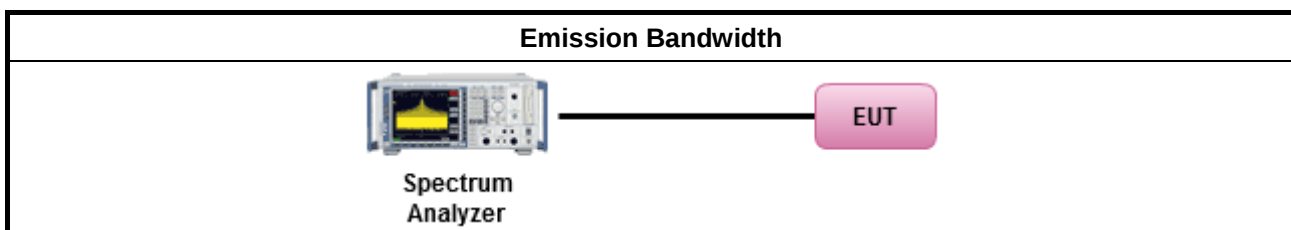
3.2.2 Measuring Instruments

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 FCC KDB 789033, clause C for EBW and clause D for OBW measurement.
☐	Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.
☐	Refer as IC RSS-Gen, clause 4.6 for bandwidth testing.

3.2.4 Test Setup



3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

3.3 Maximum 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.
LE-LAN Devices	
☐	For the 5.15-5.25 GHz band, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.
☐	For the 5.25-5.35 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz
☐	For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz
☐ For the 5.725-5.85 GHz band:	
☐	- Point-to-multipoint systems (P2M): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$. - Point-to-point systems (P2P): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W.
P_{Out} = maximum conducted output power in dBm, G_{TX} = the maximum transmitting antenna directional gain in dBi.	

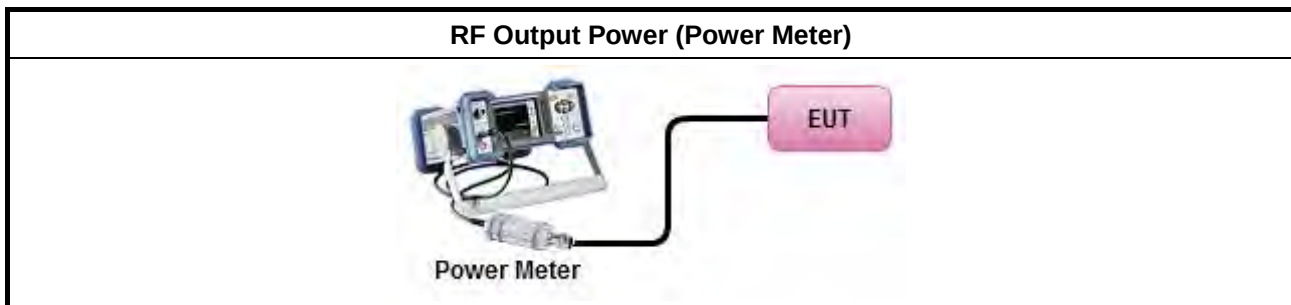
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

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

3.3.4 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.
LE-LAN Devices	
☐ For the 5.15-5.25 GHz band, the e.i.r.p. peak power spectral density (PPSD) ≤ 10 dBm/MHz.	
☐ For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz.	
	e.i.r.p. greater than 200 mW shall comply with the following e.i.r.p. at different elevations, where θ is the angle above the local horizontal plane (of the Earth) as shown below: -13 dBW/MHz for $0^\circ \leq \theta < 8^\circ$; -13 - 0.716 (θ-8) dBW/MHz for $8^\circ \leq \theta < 40^\circ$ -35.9 - 1.22 (θ-40) dBW/MHz for $40^\circ \leq \theta \leq 45^\circ$; -42 dBW/MHz for $\theta > 45^\circ$
☐ For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz.	
☐ For the 5.725-5.85 GHz band:	
	- Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If $G_{TX} > 6$ dBi, then $PPSD = 30 - (G_{TX} - 6)$. - Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.
PPSD = peak power spectral density that he same method as used to determine the conducted output power shall be used to determine the power spectral density. And power spectral density in dBm/MHz G_{TX} = the maximum transmitting antenna directional gain in dBi.	

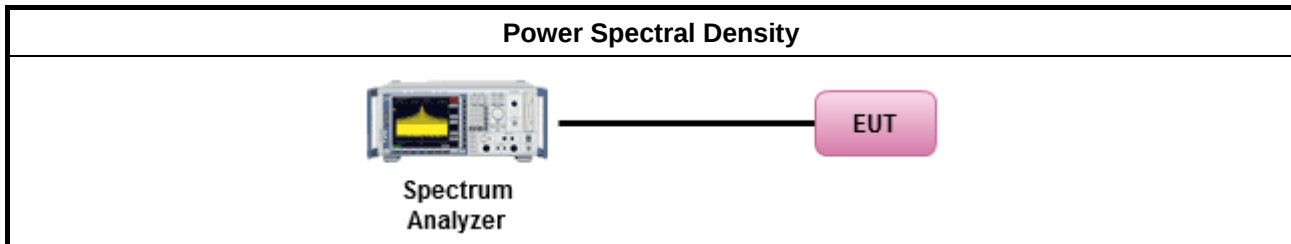
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method	
Peak power spectral density procedures that the same method as used to determine the conducted output power shall be used to determine the peak power spectral density and use the peak search function on the spectrum analyzer to find the peak of the spectrum. For the peak power spectral density shall be measured using below options:	
☐	Refer as FCC KDB 789033, F5) power spectral density can be measured using resolution bandwidths < 1 MHz provided that the results are integrated over 1 MHz bandwidth [duty cycle ≥ 98% or external video / power trigger]
☒	Refer as FCC KDB 789033, clause E Method SA-1 (spectral trace averaging).
☐	Refer as FCC KDB 789033, clause E Method SA-1 Alt. (RMS detection with slow sweep speed) duty cycle < 98% and average over on/off periods with duty factor
☒	Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging).
☐	Refer as FCC 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:	
☒	Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.
☐	Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits,
☐	Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.
☐	If multiple transmit chains, EIRP PPSD calculation could be following as methods: $PPSD_{total} = PPSD_1 + PPSD_2 + \dots + PPSD_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = PPSD_{total} + DG$

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 Unwanted Emissions Limit

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

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

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

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

Un-restricted band emissions above 1GHz Limit	
Operating Band	Limit
☒ 5.15 - 5.25 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
☐ 5.25 - 5.35 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
☐ 5.47 - 5.725 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
☒ 5.725 - 5.85 GHz	all emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

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



linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

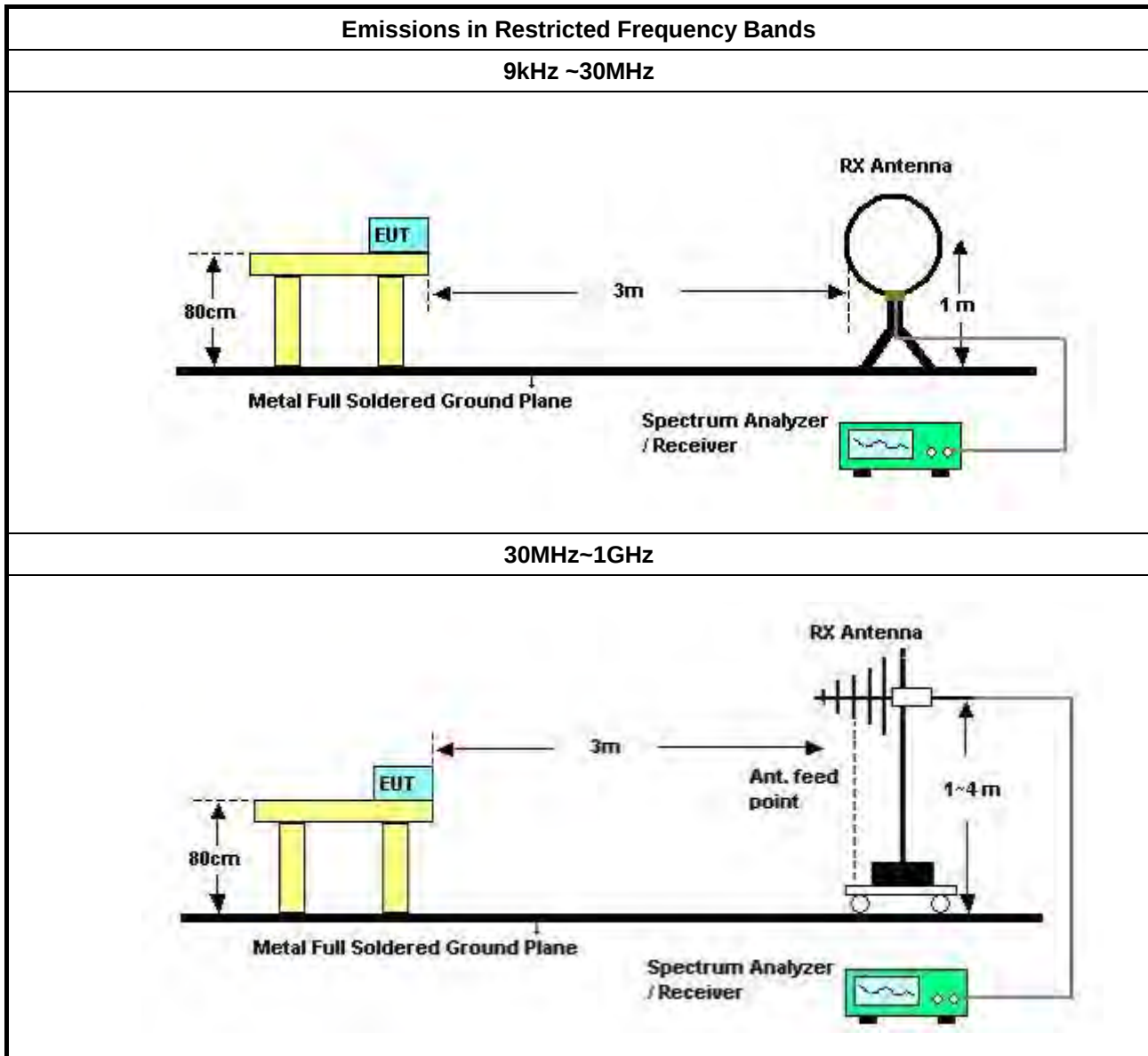
3.5.2 Measuring Instruments

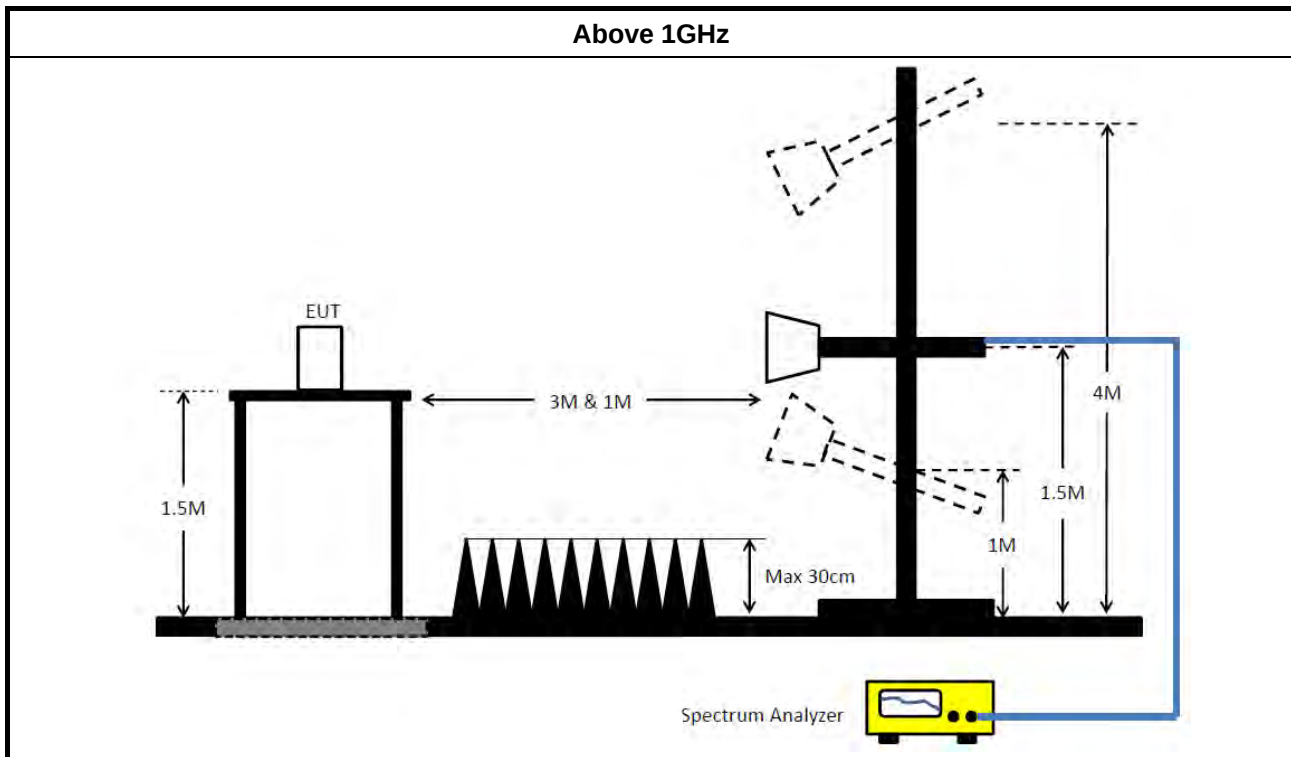
Refer a test equipment and calibration data table in this test report.

3.5.3 Test Procedures

Test Method	
Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 m for frequencies above 30 MHz, unless it can be further demonstrated that measurements at a distance of 30 m or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).	
The average emission levels shall be measured in [duty cycle $\geq$ 98 or duty factor].	
For the transmitter unwanted emissions shall be measured using following options below:	
	Refer as FCC KDB 789033, clause G)2) for unwanted emissions into non-restricted bands.
	Refer as FCC KDB 789033, clause G)1) for unwanted emissions into restricted bands.
	☐ Refer as FCC KDB 789033, G)6) Method AD (Trace Averaging).
	☒ Refer as FCC KDB 789033, G)6) Method VB (Reduced VBW).
	☐ Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW $\geq$ 1/T, where T is pulse time.
	☐ Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions.
	☒ Refer as FCC KDB 789033, clause G)5) measurement procedure peak limit.
	☐ Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak limit.
For radiated measurement.	
	Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.
	Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.
	Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.
The any unwanted emissions level shall not exceed the fundamental emission level.	
All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.	

3.5.4 Test Setup





3.5.5 Transmitter Unwanted Emissions (Below 30MHz)

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

The radiated emissions were investigated from 9 kHz or the lowest frequency generated within the device, up to the 10 harmonic or 40 GHz, whichever is appropriate.

3.5.6 Test Result of Transmitter Unwanted Emissions

Refer as Appendix E



4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.45GHz	Jan. 28, 2019	Jan. 29, 2020	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Dec. 24, 2018	Dec. 23, 2019	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Jan. 11, 2019	Jan. 10, 2020	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	150kHz ~ 30MHz	May 22, 2018	May 21, 2019	Conduction (CO01-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Aug. 27, 2018	Aug. 26, 2019	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	31244	9kHz - 30 MHz	Mar. 15, 2019	Mar. 14, 2020	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 13, 2018	Nov. 12, 2019	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jun. 28, 2018	Jun. 27, 2019	Radiation (03CH01-CB)
Pre-Amplifier	EMCI	EMC330N	980332	20MHz ~ 3GHz	May 02, 2018	May 01, 2019	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 08, 2019	Jan. 07, 2020	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-H G	1864479	18GHz ~ 40GHz	Jul. 04, 2018	Jul. 03, 2019	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Jan. 31, 2019	Jan. 30, 2020	Radiation (03CH01-CB)
EMI Test Receiver	R&S	ESCS	100359	9kHz ~ 2.75GHz	Jul. 03, 2018	Jul. 02, 2019	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~ 1 GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz ~ 40 GHz	Jul. 27, 2018	Jul. 26, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Jul. 27, 2018	Jul. 26, 2019	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Feb. 25, 2019	Feb. 24, 2020	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz ~ 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz ~ 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)



Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-08	1 GHz –26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz –26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-28	1 GHz –26.5 GHz	Nov. 19, 2018	Nov. 18, 2019	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 05, 2018	Nov. 04, 2019	Conducted (TH01-CB)

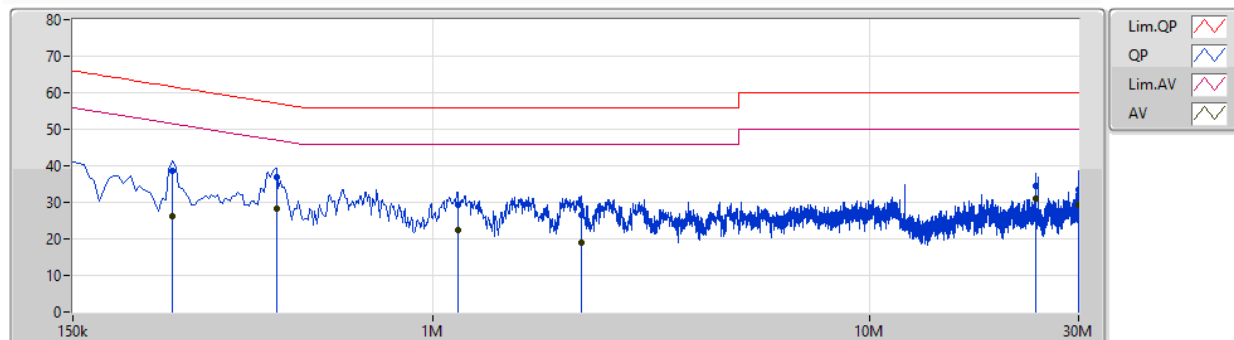
Note: Calibration Interval of instruments listed above is one year.

NCR means Non-Calibration required.

Test Mode	Mode 2	Frequency Range	0.15 MHz to 30 MHz
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Mode 2

25/03/2019

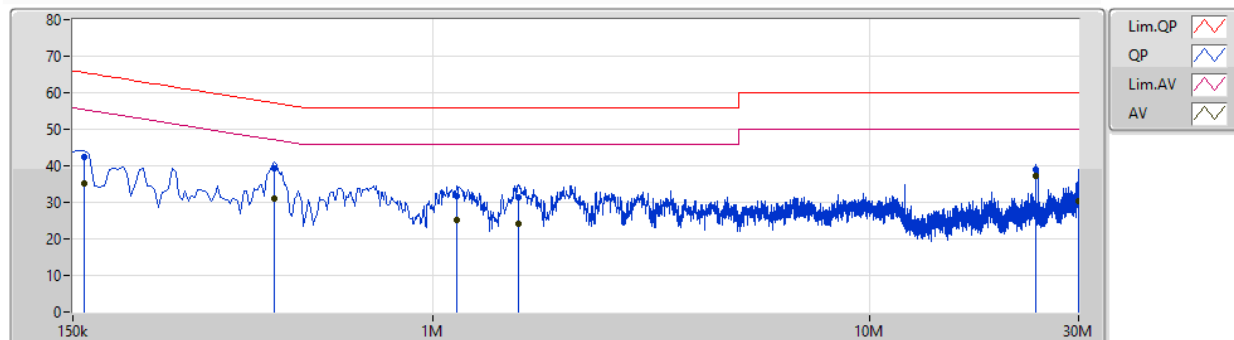


Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	AF (dB)	CL (dB)	AT (dB)			
QP	253.5k	38.46	61.64	-23.18	9.99	Line	-	28.47	0.06	0.13	9.80			
AV	253.5k	26.10	51.64	-25.54	9.99	Line	-	16.11	0.06	0.13	9.80			
QP	438k	37.00	57.11	-20.11	10.00	Line	-	27.00	0.06	0.13	9.81			
AV	438k	28.25	47.11	-18.86	10.00	Line	"Worst"	18.25	0.06	0.13	9.81			
QP	1.14M	29.41	56.00	-26.59	10.09	Line	-	19.32	0.07	0.20	9.82			
AV	1.14M	22.25	46.00	-23.75	10.09	Line	-	12.16	0.07	0.20	9.82			
QP	2.18M	26.67	56.00	-29.33	10.14	Line	-	16.53	0.09	0.22	9.83			
AV	2.18M	18.91	46.00	-27.09	10.14	Line	-	8.77	0.09	0.22	9.83			
QP	24.009M	34.36	60.00	-25.64	10.59	Line	-	23.77	0.32	0.26	10.01			
AV	24.009M	30.93	50.00	-19.07	10.59	Line	-	20.34	0.32	0.26	10.01			
QP	30M	33.55	60.00	-26.45	10.70	Line	-	22.85	0.36	0.29	10.05			
AV	30M	29.32	50.00	-20.68	10.70	Line	-	18.62	0.36	0.29	10.05			

Test Mode	Mode 2	Frequency Range	0.15 MHz to 30 MHz
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Mode 2

25/03/2019



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	AF (dB)	CL (dB)	AT (dB)			
QP	159k	42.25	65.52	-23.27	9.99	Neutral	-	32.26	0.04	0.16	9.79			
AV	159k	35.11	55.52	-20.41	9.99	Neutral	-	25.12	0.04	0.16	9.79			
QP	433.5k	39.23	57.19	-17.96	9.98	Neutral	-	29.25	0.04	0.13	9.81			
AV	433.5k	30.91	47.19	-16.28	9.98	Neutral	-	20.93	0.04	0.13	9.81			
QP	1.131M	31.73	56.00	-24.27	10.08	Neutral	-	21.65	0.06	0.20	9.82			
AV	1.131M	25.11	46.00	-20.89	10.08	Neutral	-	15.03	0.06	0.20	9.82			
QP	1.568M	31.42	56.00	-24.58	10.12	Neutral	-	21.30	0.07	0.22	9.83			
AV	1.568M	24.07	46.00	-21.93	10.12	Neutral	-	13.95	0.07	0.22	9.83			
QP	24.005M	39.04	60.00	-20.96	10.58	Neutral	-	28.46	0.31	0.26	10.01			
AV	24.005M	37.10	50.00	-12.90	10.58	Neutral	"Worst"	26.52	0.31	0.26	10.01			
QP	30M	34.80	60.00	-25.20	10.72	Neutral	-	24.08	0.38	0.29	10.05			
AV	30M	30.21	50.00	-19.79	10.72	Neutral	-	19.49	0.38	0.29	10.05			

**For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 4:
Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	43.175M	18.191M	18M2D1D	28.325M	16.692M
802.11ax HEW20_Nss1,(MCS0)_1TX	48.725M	23.863M	23M9D1D	28.025M	19.015M
802.11ax HEW40_Nss1,(MCS0)_1TX	74.75M	38.031M	38M0D1D	39.95M	37.581M
802.11ax HEW80_Nss1,(MCS0)_1TX	81.7M	77.261M	77M3D1D	81.7M	77.261M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	16.35M	16.617M	16M6D1D	16.325M	16.592M
802.11ax HEW20_Nss1,(MCS0)_1TX	18.925M	19.04M	19M0D1D	18.8M	18.991M
802.11ax HEW40_Nss1,(MCS0)_1TX	37.55M	37.681M	37M7D1D	37.45M	37.631M
802.11ax HEW80_Nss1,(MCS0)_1TX	75.4M	78.361M	78M4D1D	75.4M	78.361M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;

Result

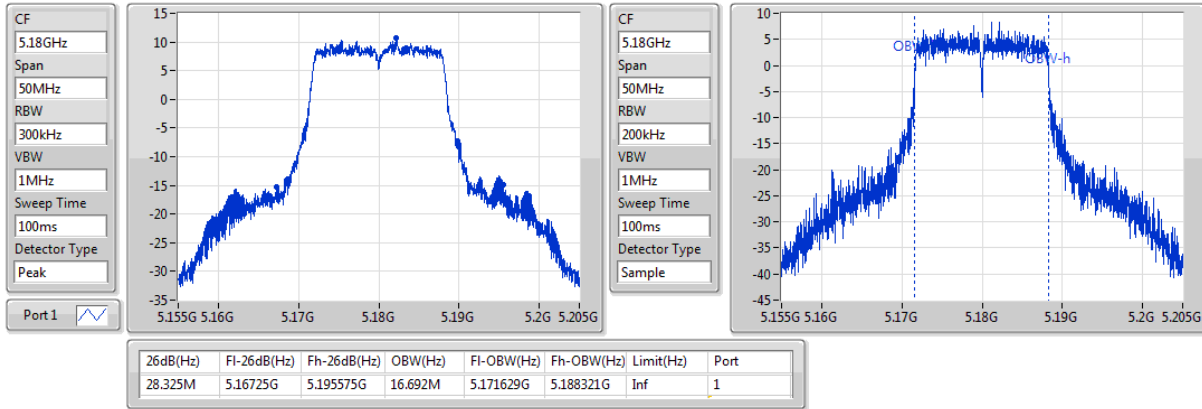
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11a_Nss1,(6Mbps)_1TX	-	-	-	-
5180MHz	Pass	Inf	28.325M	16.692M
5200MHz	Pass	Inf	43.175M	18.191M
5240MHz	Pass	Inf	42.475M	17.241M
5745MHz	Pass	500k	16.325M	16.592M
5785MHz	Pass	500k	16.325M	16.617M
5825MHz	Pass	500k	16.35M	16.617M
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-
5180MHz	Pass	Inf	28.025M	19.015M
5200MHz	Pass	Inf	48.725M	23.863M
5240MHz	Pass	Inf	41.25M	19.39M
5745MHz	Pass	500k	18.925M	18.991M
5785MHz	Pass	500k	18.925M	19.04M
5825MHz	Pass	500k	18.8M	18.991M
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-	-	-
5190MHz	Pass	Inf	39.95M	37.581M
5230MHz	Pass	Inf	74.75M	38.031M
5755MHz	Pass	500k	37.45M	37.681M
5795MHz	Pass	500k	37.55M	37.631M
802.11ax HEW80_Nss1,(MCS0)_1TX	-	-	-	-
5210MHz	Pass	Inf	81.7M	77.261M
5775MHz	Pass	500k	75.4M	78.361M

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

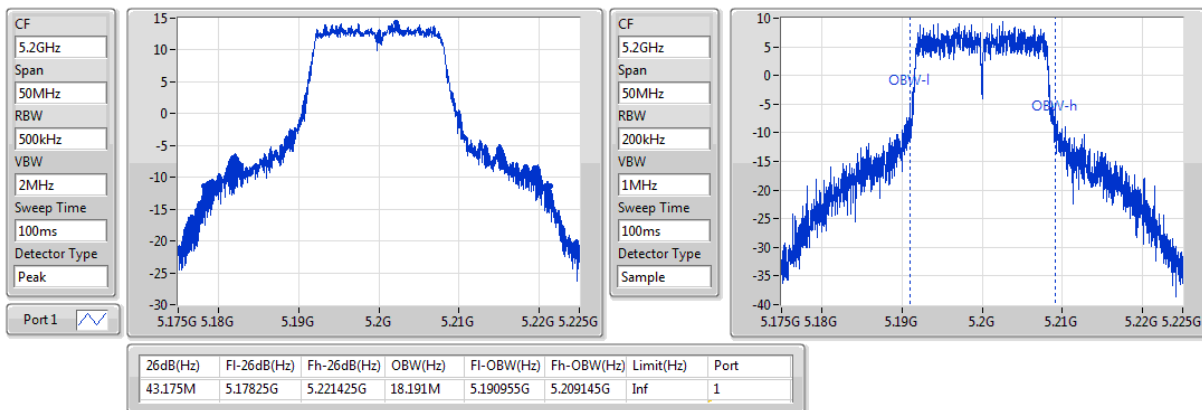
Port X-OBW = Port X 99% occupied bandwidth;

802.11a_Nss1,(6Mbps)_1TX
EBW
5180MHz

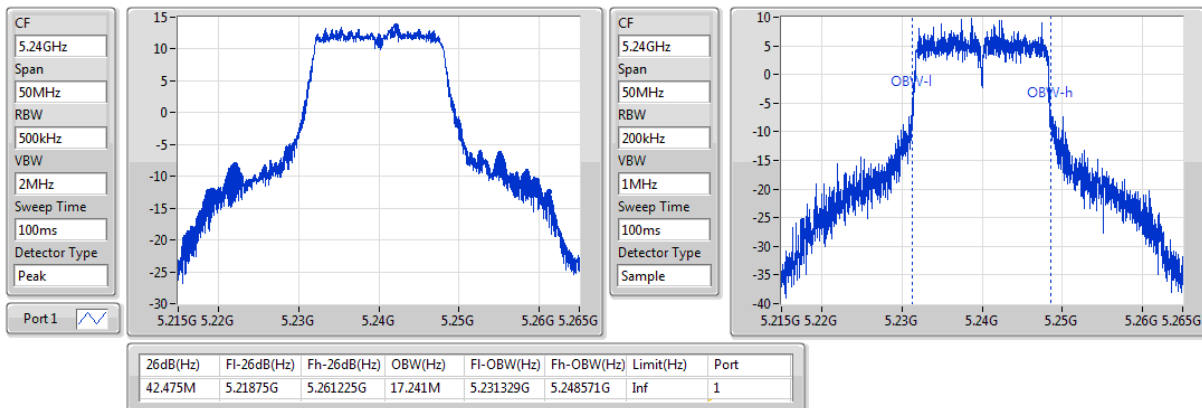
27/03/2019


802.11a_Nss1,(6Mbps)_1TX
EBW
5200MHz

27/03/2019

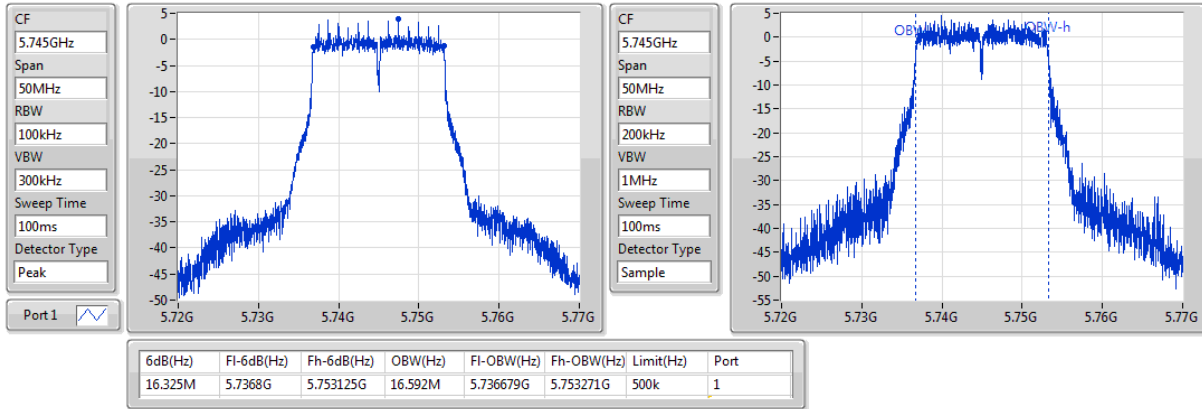

802.11a_Nss1,(6Mbps)_1TX
EBW
5240MHz

27/03/2019

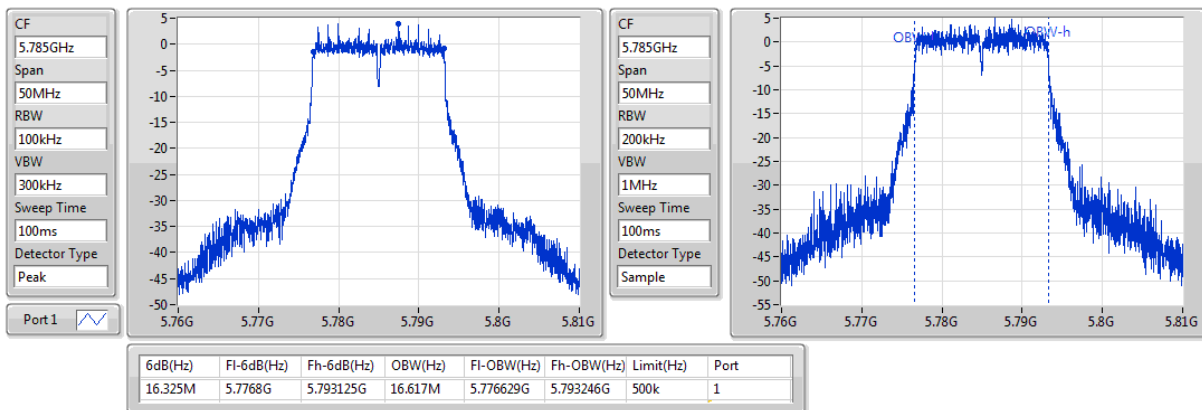


802.11a_Nss1,(6Mbps)_1TX
EBW
5745MHz

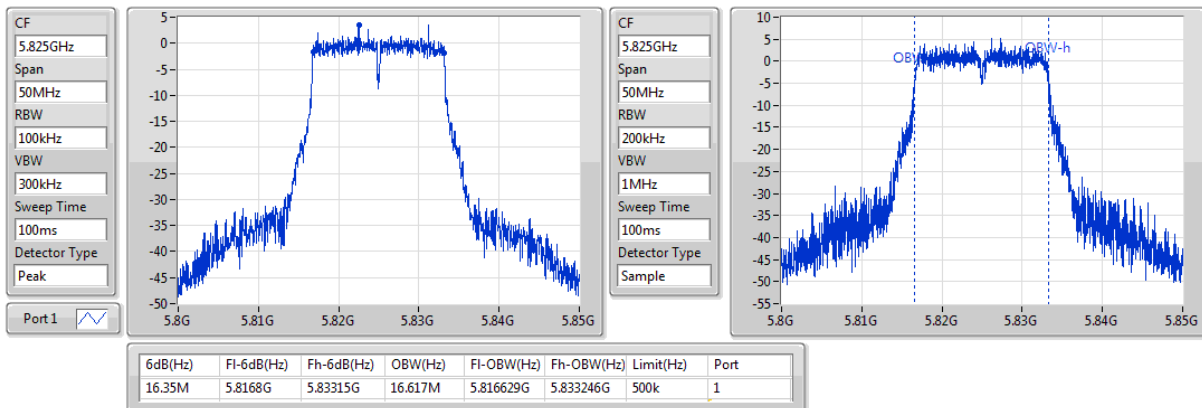
27/03/2019


802.11a_Nss1,(6Mbps)_1TX
EBW
5785MHz

28/03/2019

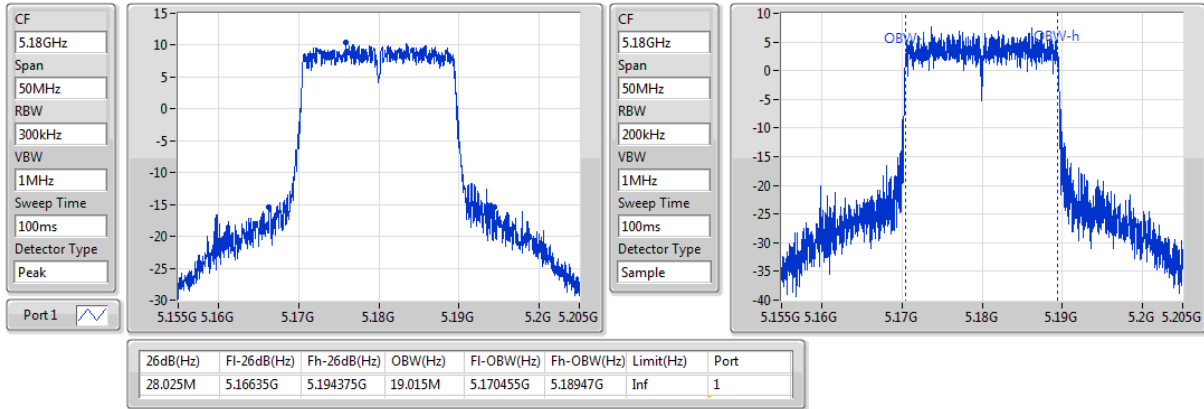

802.11a_Nss1,(6Mbps)_1TX
EBW
5825MHz

28/03/2019

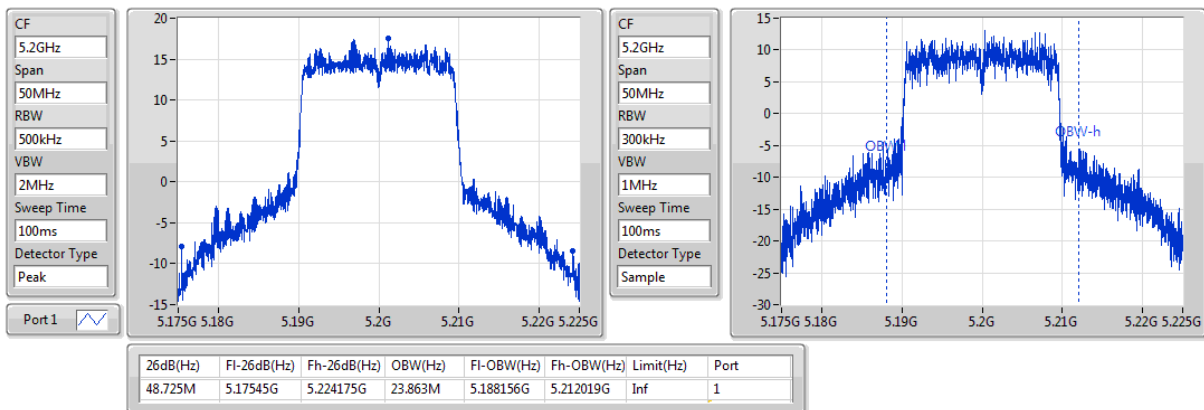


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5180MHz

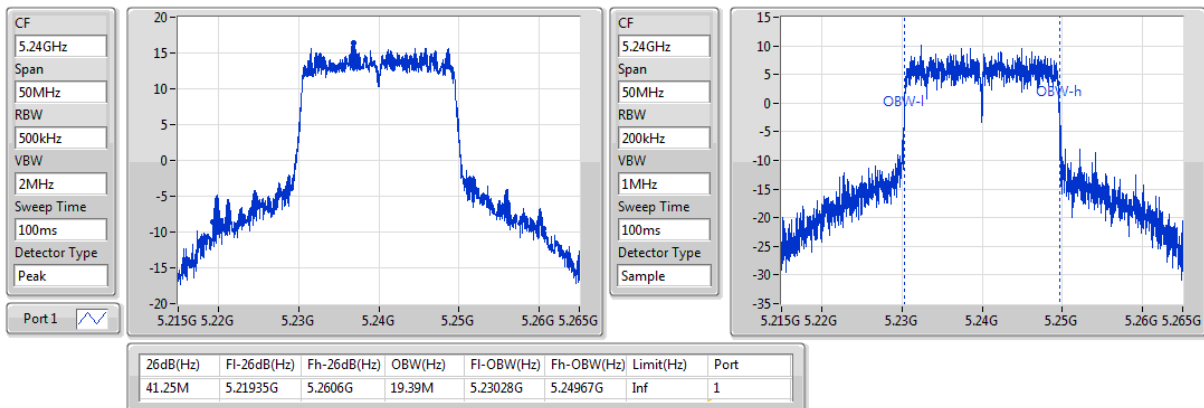
28/03/2019


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5200MHz

28/03/2019

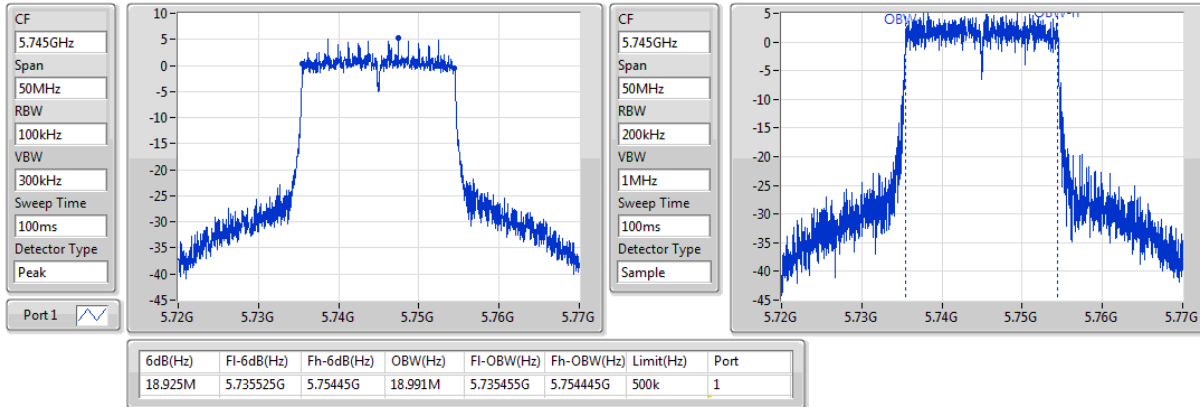

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5240MHz

28/03/2019

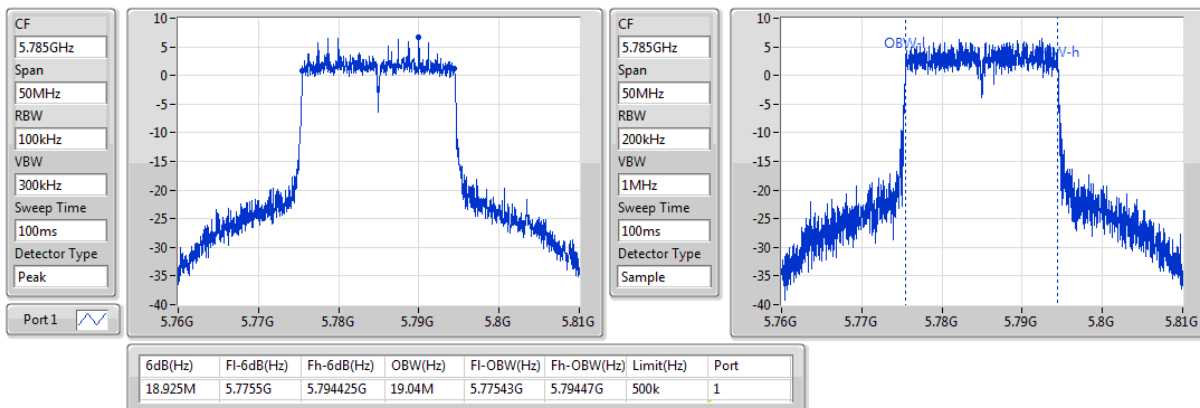


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5745MHz

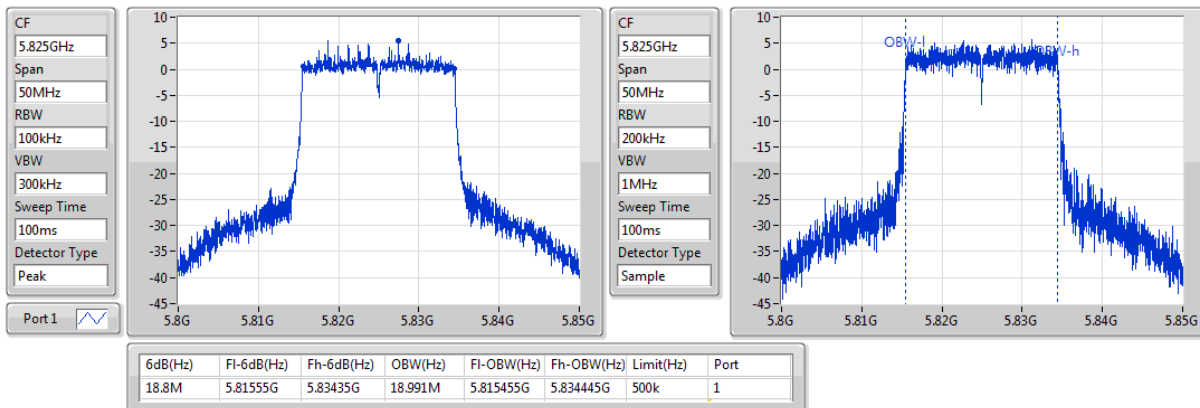
28/03/2019


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5785MHz

28/03/2019

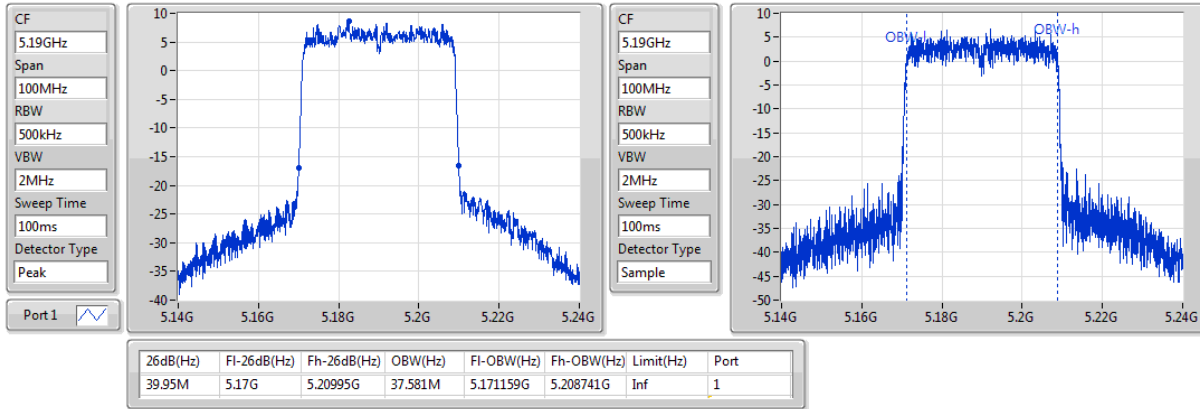

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5825MHz

28/03/2019

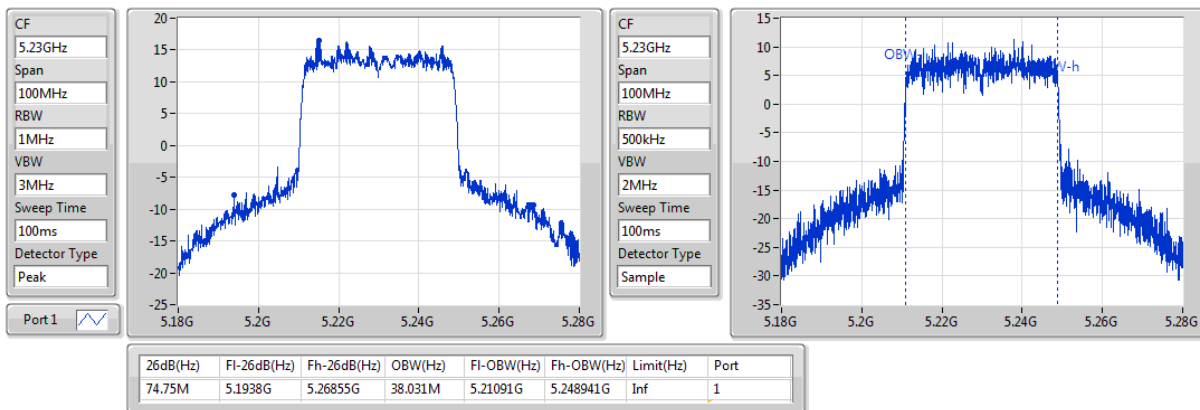


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
5190MHz

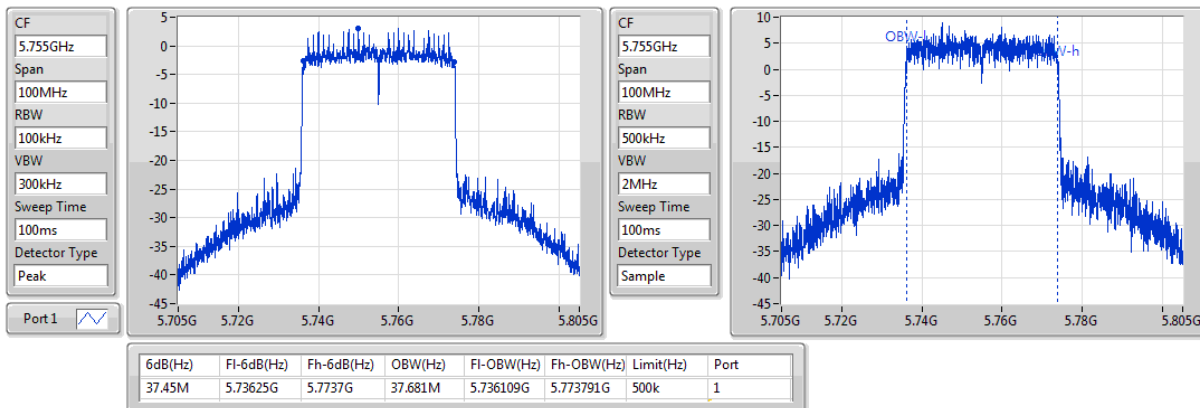
28/03/2019


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
5230MHz

28/03/2019

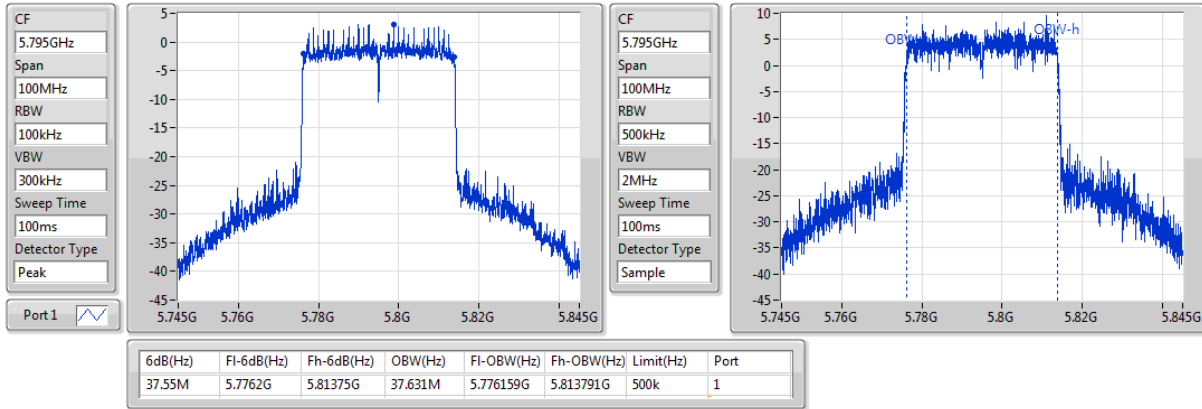

802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
5755MHz

28/03/2019

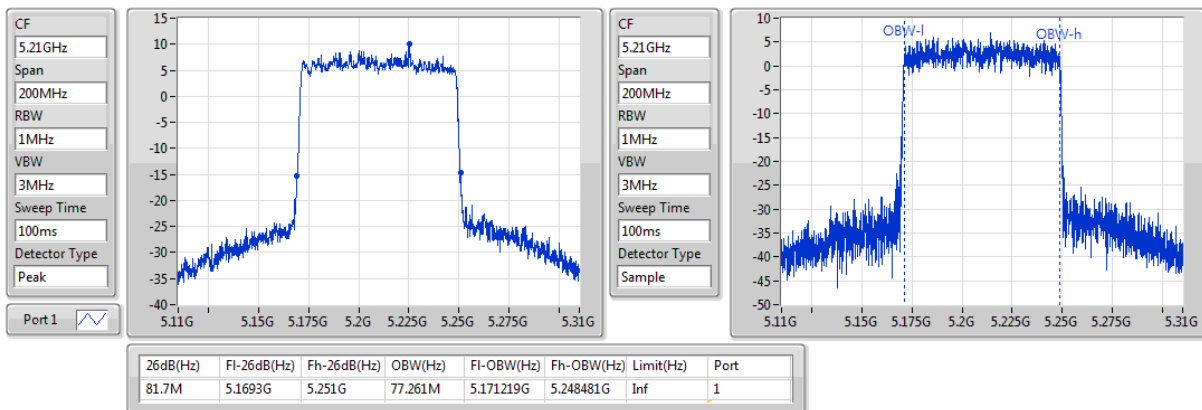


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
5795MHz

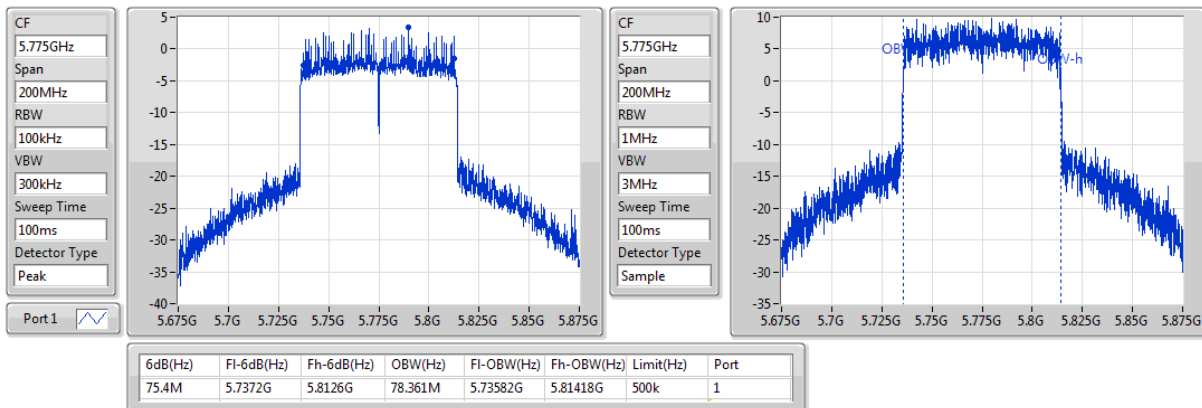
28/03/2019


802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
5210MHz

28/03/2019


802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
5775MHz

28/03/2019



For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 4:
Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ax HEW20_Nss2,(MCS0)_2TX	45.35M	19.365M	19M4D1D	21.525M	18.941M
802.11ax HEW40_Nss2,(MCS0)_2TX	61.85M	37.731M	37M7D1D	39.9M	37.381M
802.11ax HEW80_Nss2,(MCS0)_2TX	81.7M	77.061M	77M1D1D	81.5M	76.662M
5.725-5.85GHz	-	-	-	-	-
802.11ax HEW20_Nss2,(MCS0)_2TX	18.975M	19.04M	19M0D1D	18.65M	18.966M
802.11ax HEW40_Nss2,(MCS0)_2TX	37.6M	37.681M	37M7D1D	36.95M	37.581M
802.11ax HEW80_Nss2,(MCS0)_2TX	76.3M	77.361M	77M4D1D	75.8M	77.261M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;

Result

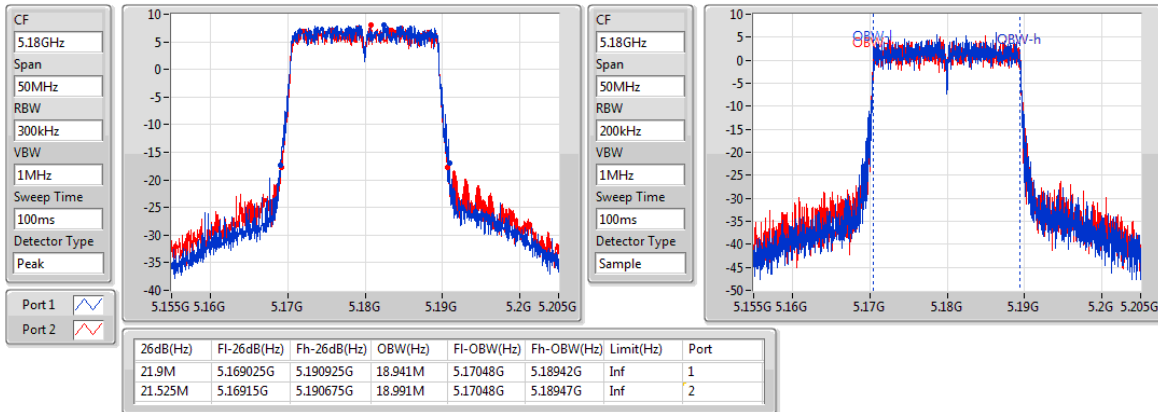
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11ax HEW20_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	21.9M	18.941M	21.525M	18.991M
5200MHz	Pass	Inf	45.35M	19.365M	42.15M	19.115M
5240MHz	Pass	Inf	38.8M	19.215M	42.6M	19.19M
5745MHz	Pass	500k	18.975M	18.966M	18.95M	18.966M
5785MHz	Pass	500k	18.95M	19.015M	18.65M	19.04M
5825MHz	Pass	500k	18.925M	18.991M	18.925M	18.966M
802.11ax HEW40_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	Inf	39.9M	37.581M	40.05M	37.381M
5230MHz	Pass	Inf	61.85M	37.681M	54.4M	37.731M
5755MHz	Pass	500k	37M	37.681M	37.3M	37.581M
5795MHz	Pass	500k	36.95M	37.581M	37.6M	37.581M
802.11ax HEW80_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	Inf	81.7M	77.061M	81.5M	76.662M
5775MHz	Pass	500k	76.3M	77.361M	75.8M	77.261M

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

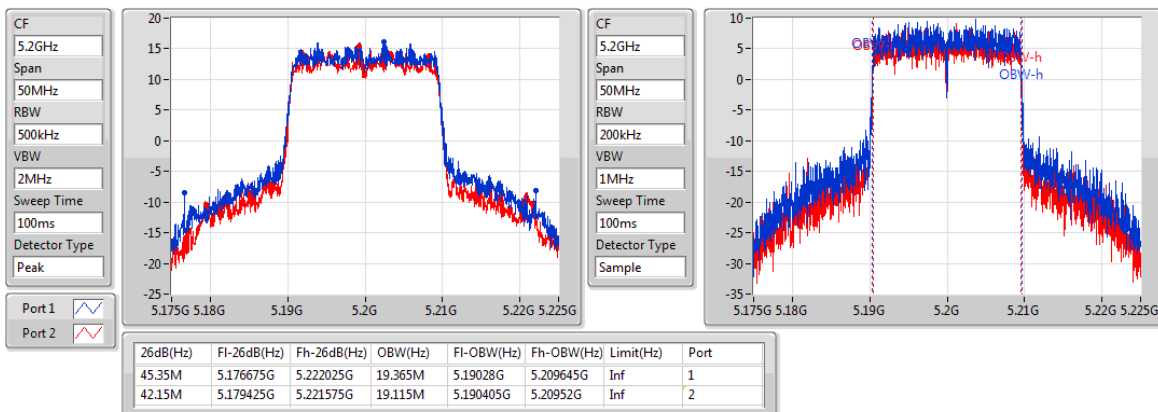
Port X-OBW = Port X 99% occupied bandwidth;

802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
5180MHz

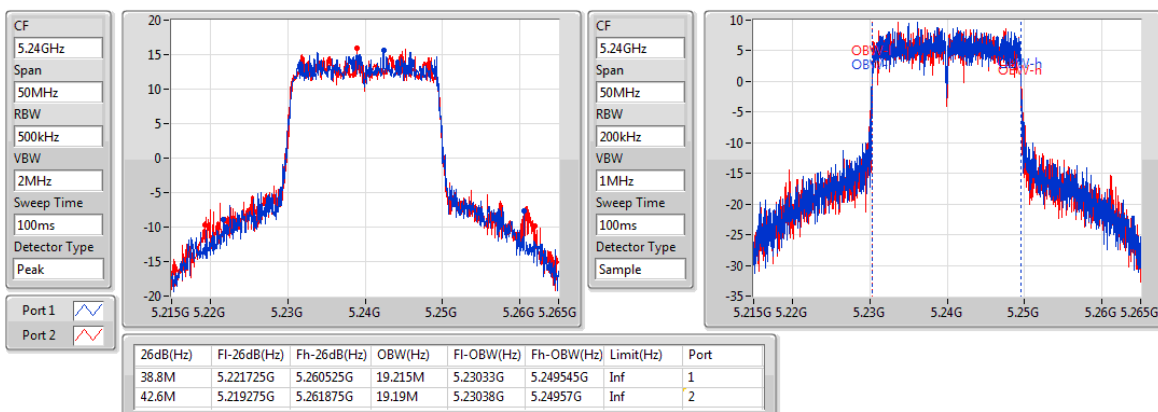
27/03/2019


802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
5200MHz

27/03/2019

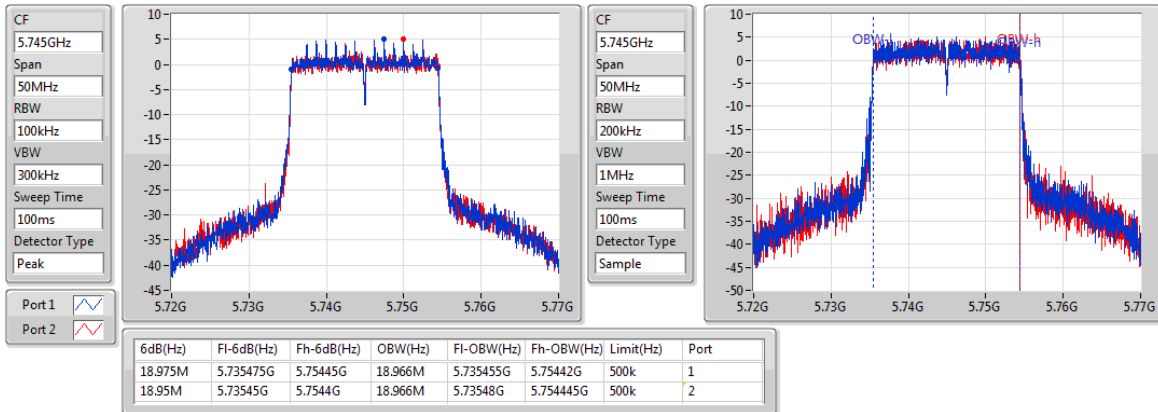

802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
5240MHz

27/03/2019

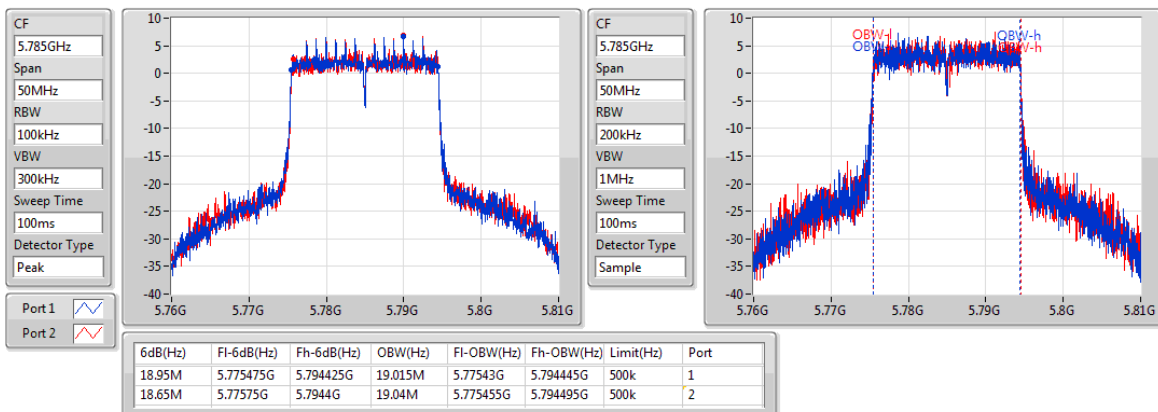


802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
5745MHz

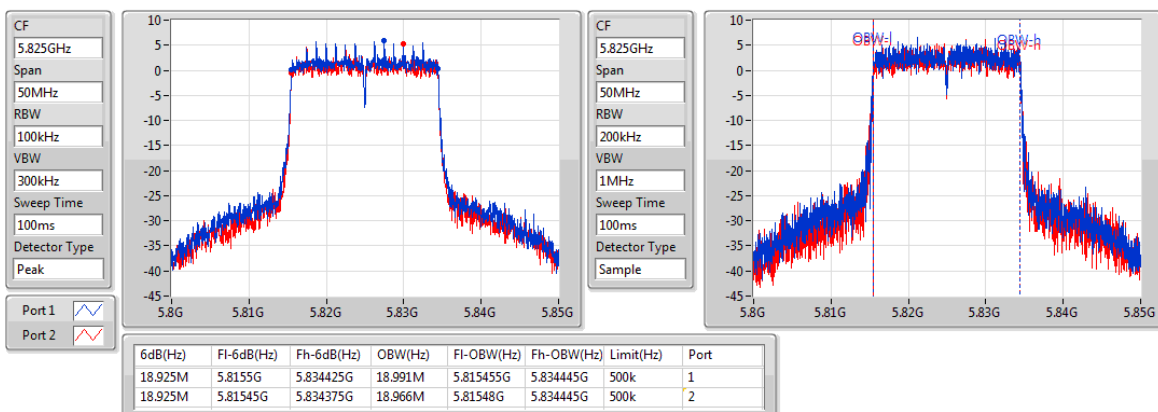
27/03/2019


802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
5785MHz

27/03/2019

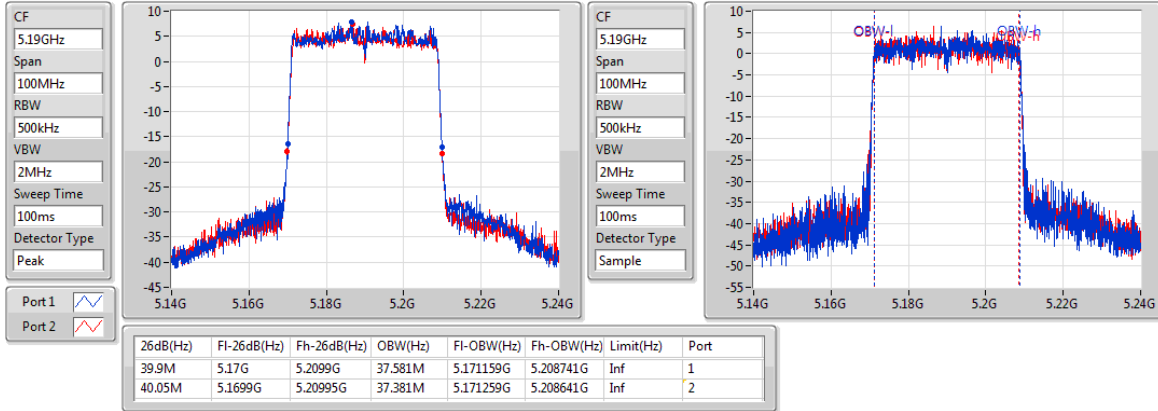

802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
5825MHz

27/03/2019

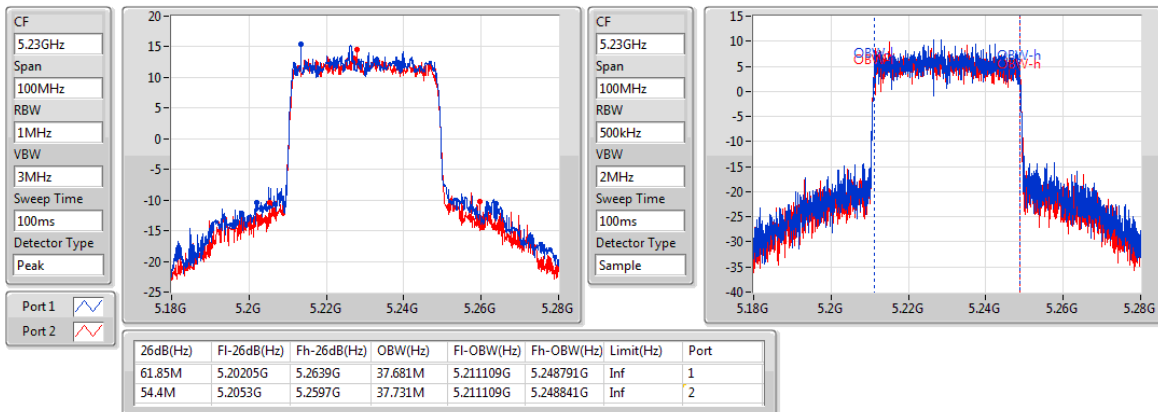


802.11ax HEW40_Nss2,(MCS0)_2TX
EBW
5190MHz

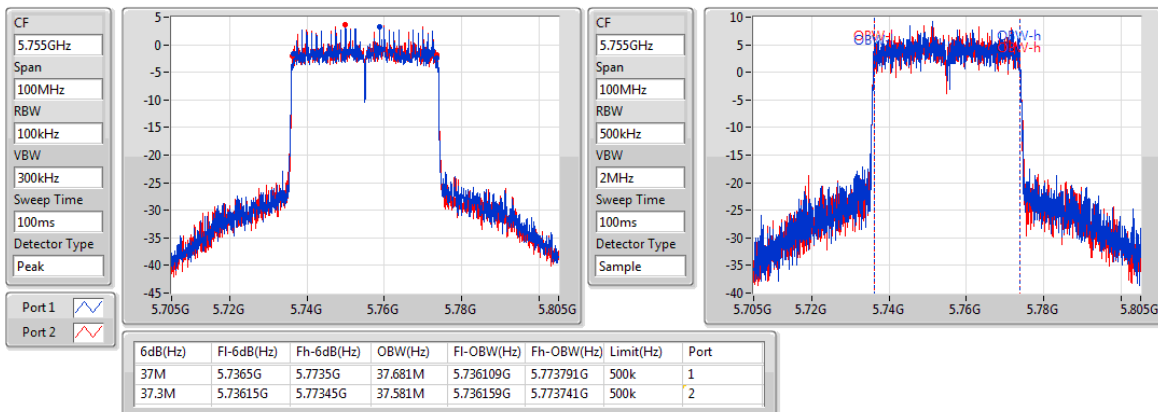
27/03/2019


802.11ax HEW40_Nss2,(MCS0)_2TX
EBW
5230MHz

27/03/2019

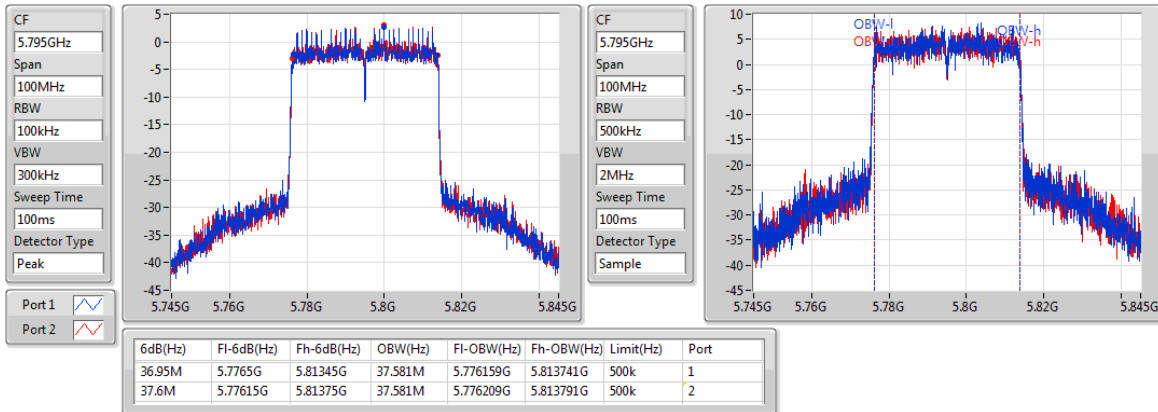

802.11ax HEW40_Nss2,(MCS0)_2TX
EBW
5755MHz

27/03/2019

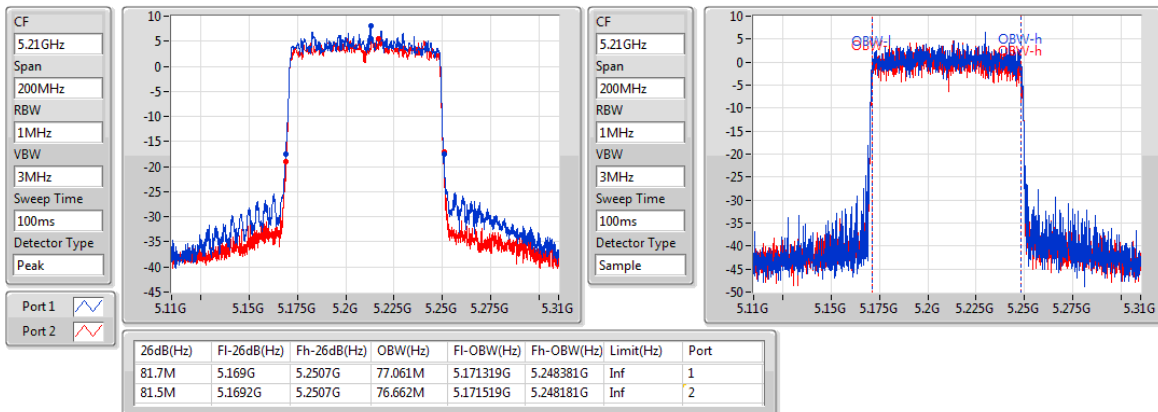


802.11ax HEW40_Nss2,(MCS0)_2TX
EBW
5795MHz

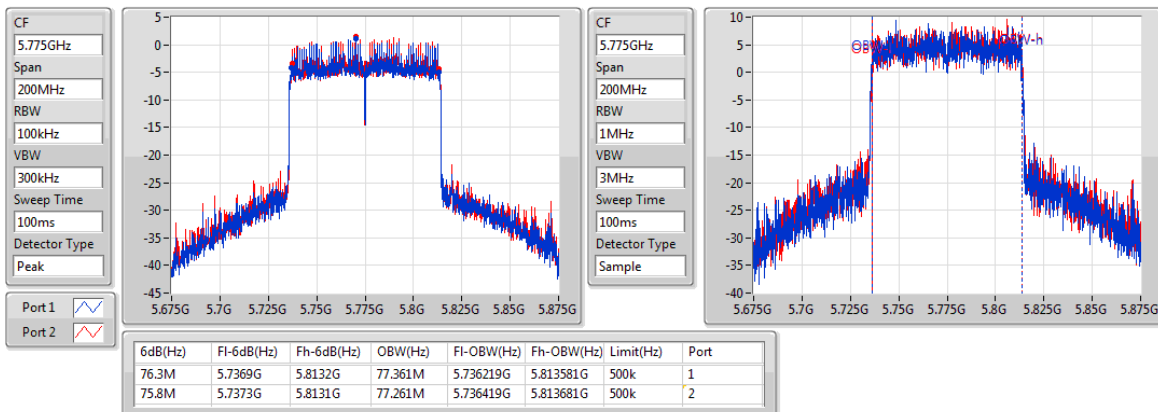
27/03/2019


802.11ax HEW80_Nss2,(MCS0)_2TX
EBW
5210MHz

27/03/2019


802.11ax HEW80_Nss2,(MCS0)_2TX
EBW
5775MHz

27/03/2019



For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 4:
Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	21.85M	16.642M	16M6D1D	21.45M	16.567M
802.11ax HEW20_Nss1,(MCS0)_4TX	24.675M	18.991M	19M0D1D	21.35M	18.941M
802.11ax HEW40_Nss1,(MCS0)_4TX	44.15M	37.631M	37M6D1D	39.9M	37.481M
802.11ax HEW80_Nss1,(MCS0)_4TX	81.5M	77.161M	77M2D1D	81.1M	76.962M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	16.35M	16.642M	16M6D1D	16.3M	16.567M
802.11ax HEW20_Nss1,(MCS0)_4TX	19.05M	19.065M	19M1D1D	18.875M	18.966M
802.11ax HEW40_Nss1,(MCS0)_4TX	37.6M	37.781M	37M8D1D	37M	37.631M
802.11ax HEW80_Nss1,(MCS0)_4TX	77.4M	77.261M	77M3D1D	76.9M	77.161M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;

Result

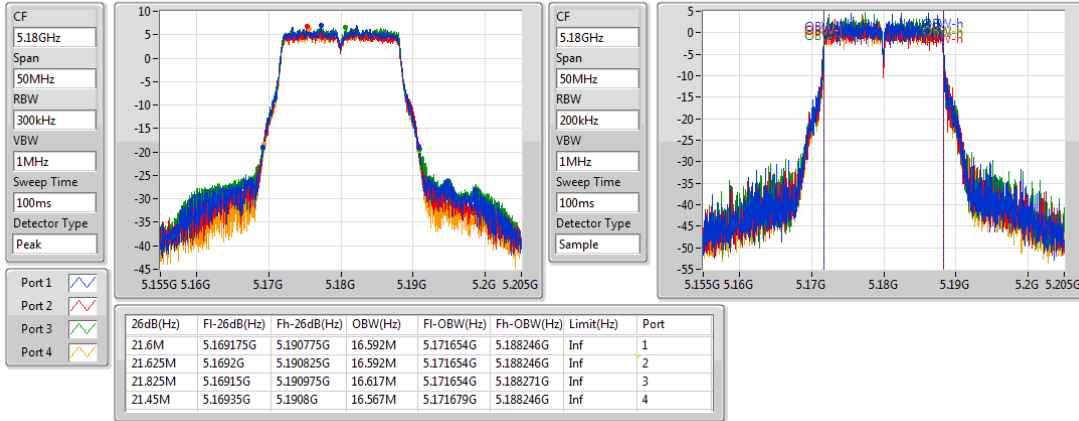
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.6M	16.592M	21.625M	16.592M	21.825M	16.617M	21.45M	16.567M
5200MHz	Pass	Inf	21.55M	16.592M	21.55M	16.642M	21.825M	16.617M	21.575M	16.592M
5240MHz	Pass	Inf	21.6M	16.592M	21.625M	16.592M	21.85M	16.617M	21.475M	16.567M
5745MHz	Pass	500k	16.325M	16.617M	16.325M	16.642M	16.325M	16.617M	16.35M	16.592M
5785MHz	Pass	500k	16.3M	16.567M	16.325M	16.617M	16.325M	16.617M	16.35M	16.617M
5825MHz	Pass	500k	16.325M	16.592M	16.325M	16.617M	16.35M	16.592M	16.35M	16.567M
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.8M	18.941M	23.025M	18.966M	24.675M	18.966M	21.4M	18.966M
5200MHz	Pass	Inf	23.375M	18.966M	21.7M	18.966M	24.4M	18.991M	21.375M	18.966M
5240MHz	Pass	Inf	23.8M	18.991M	23.15M	18.991M	23.875M	18.966M	21.35M	18.966M
5745MHz	Pass	500k	18.9M	19.015M	18.975M	18.991M	18.95M	18.966M	19M	18.966M
5785MHz	Pass	500k	18.975M	19.015M	18.975M	19.04M	18.875M	19.065M	18.975M	19.04M
5825MHz	Pass	500k	18.95M	18.966M	18.975M	19.015M	18.975M	19.015M	19.05M	19.015M
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	39.9M	37.531M	40.1M	37.631M	40.1M	37.531M	40.15M	37.481M
5230MHz	Pass	Inf	40M	37.631M	40M	37.581M	44.15M	37.581M	40.2M	37.631M
5755MHz	Pass	500k	37.55M	37.681M	37.1M	37.631M	37.25M	37.781M	37.4M	37.731M
5795MHz	Pass	500k	37.6M	37.681M	37M	37.631M	37.55M	37.681M	37.45M	37.631M
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	81.5M	77.061M	81.3M	76.962M	81.1M	77.161M	81.3M	77.061M
5775MHz	Pass	500k	77.4M	77.261M	77.2M	77.261M	76.9M	77.261M	77.1M	77.161M

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

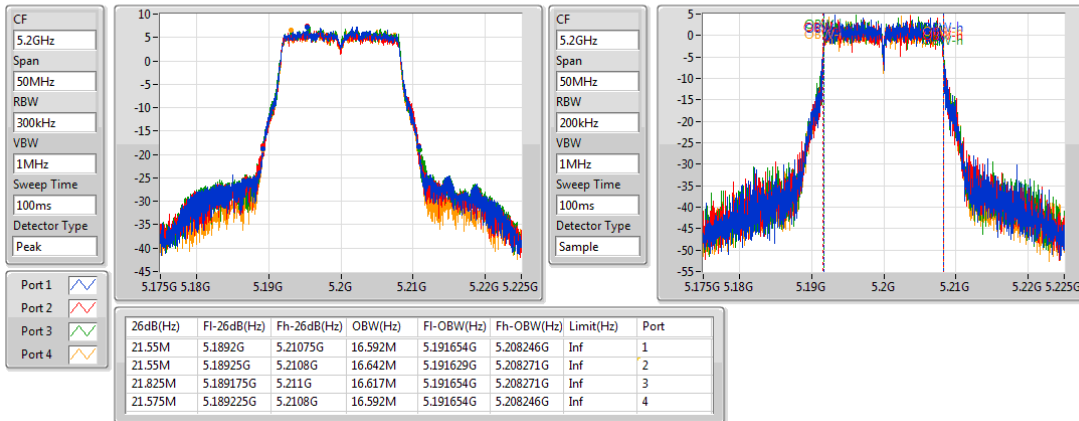
Port X-OBW = Port X 99% occupied bandwidth;

802.11a_Nss1,(6Mbps)_4TX
EBW
5180MHz

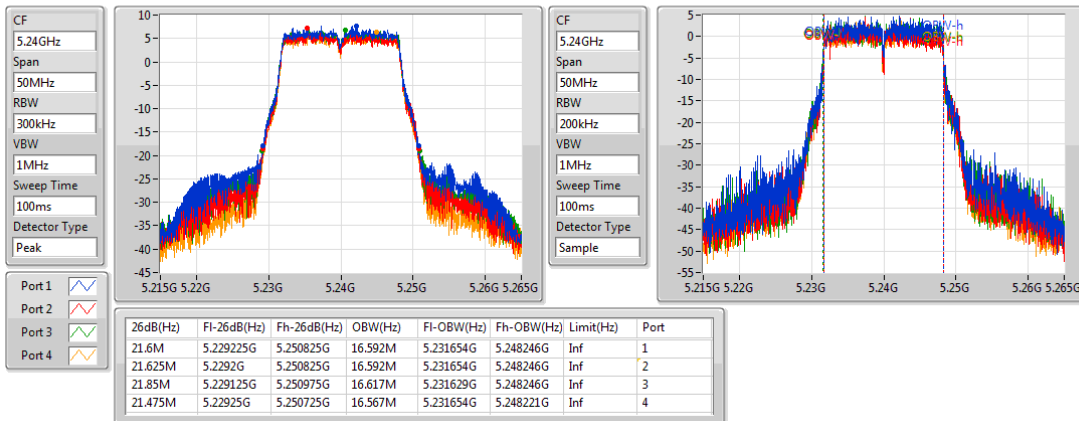
27/03/2019


802.11a_Nss1,(6Mbps)_4TX
EBW
5200MHz

27/03/2019


802.11a_Nss1,(6Mbps)_4TX
EBW
5240MHz

27/03/2019

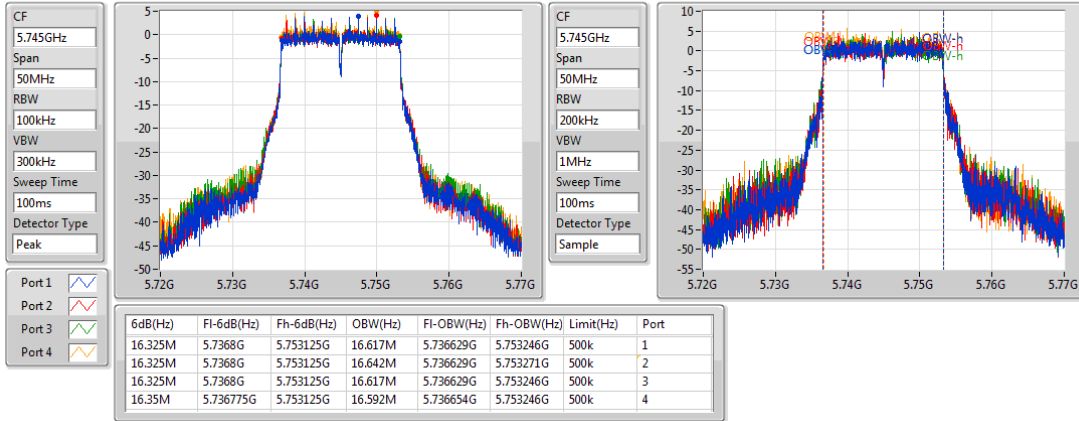


802.11a_Nss1,(6Mbps)_4TX

EBW

5745MHz

27/03/2019

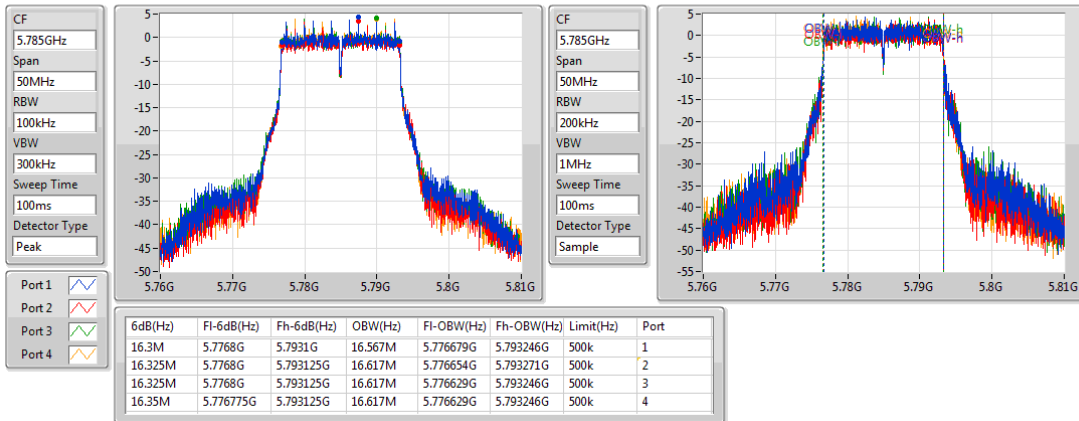


802.11a_Nss1,(6Mbps)_4TX

EBW

5785MHz

27/03/2019

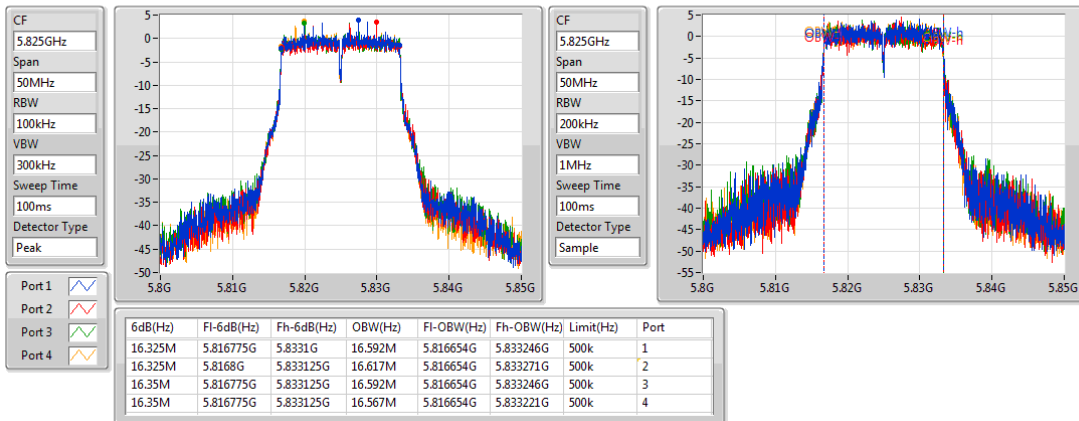


802.11a_Nss1,(6Mbps)_4TX

EBW

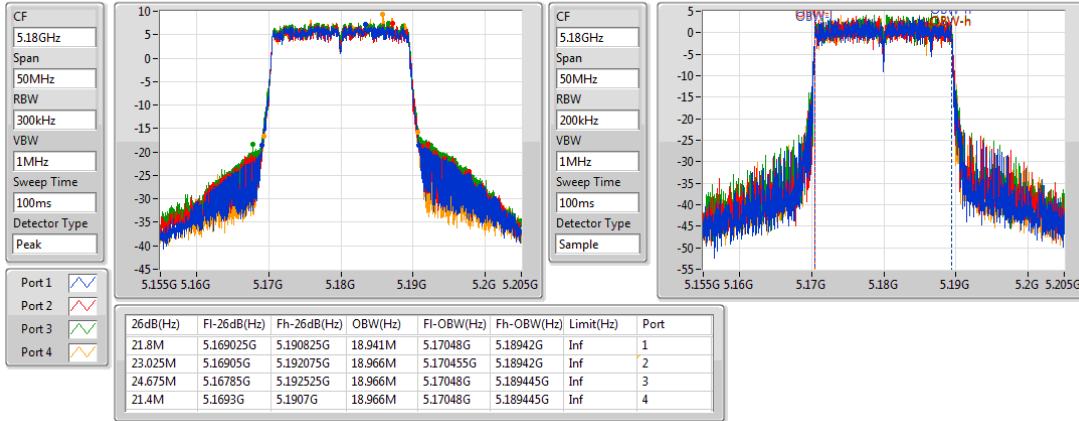
5825MHz

27/03/2019

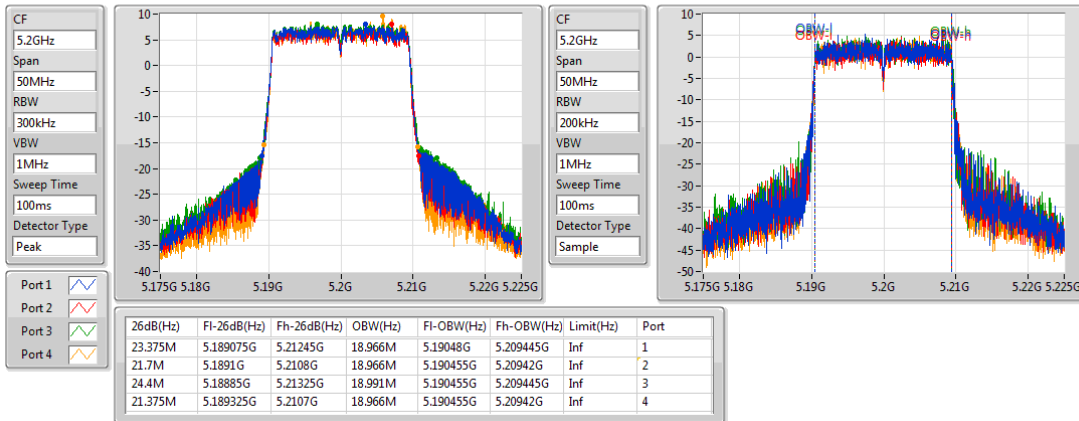


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5180MHz

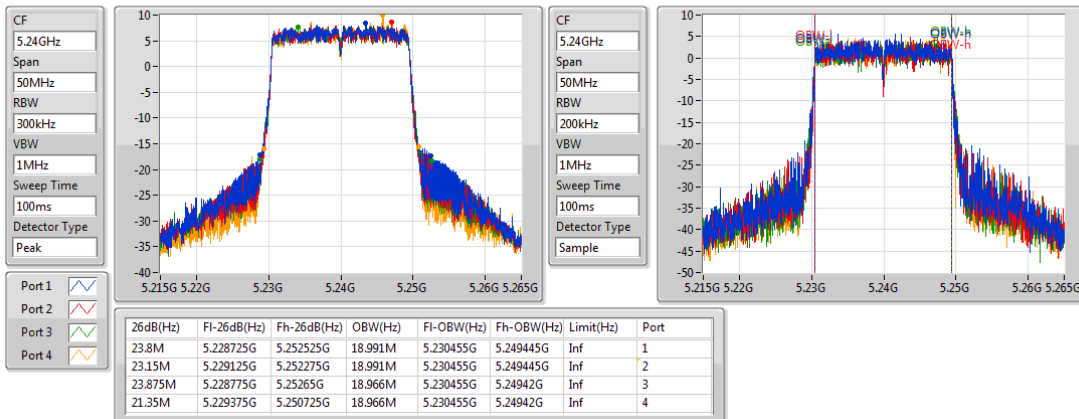
27/03/2019


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5200MHz

27/03/2019

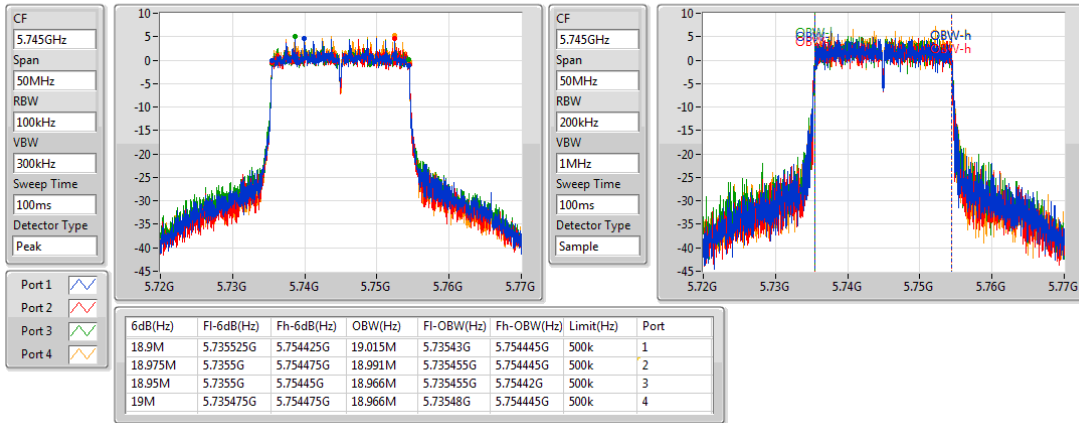

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5240MHz

27/03/2019

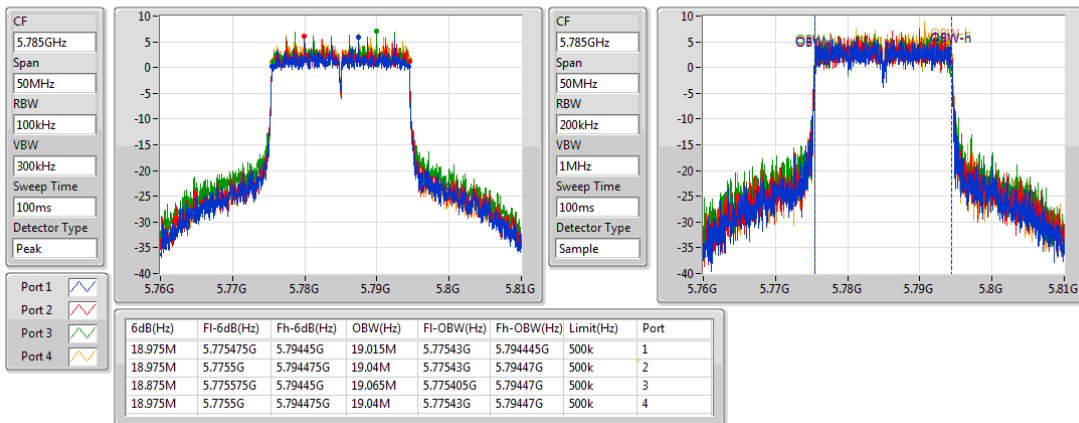


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5745MHz

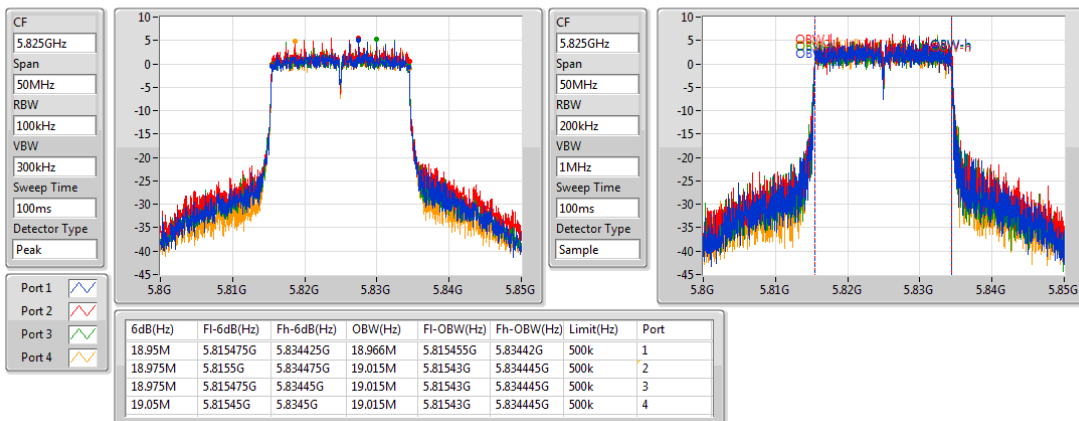
27/03/2019


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5785MHz

27/03/2019

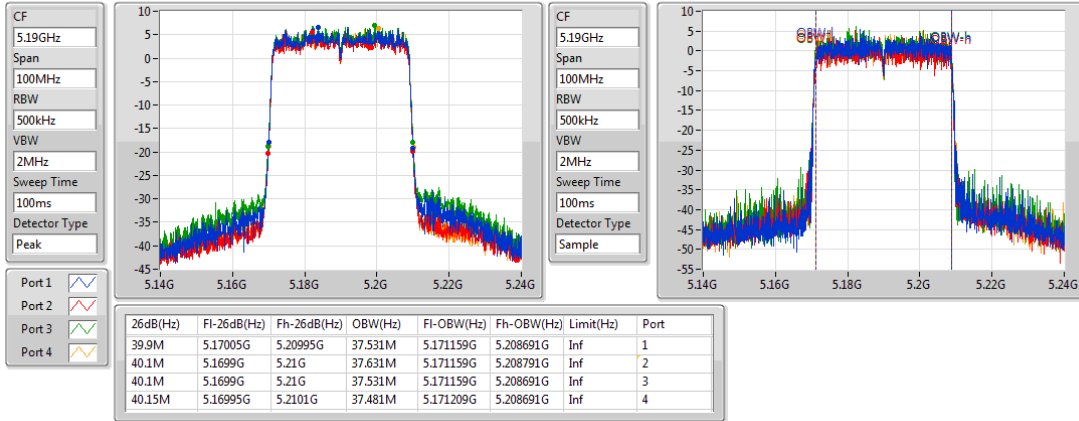

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5825MHz

27/03/2019

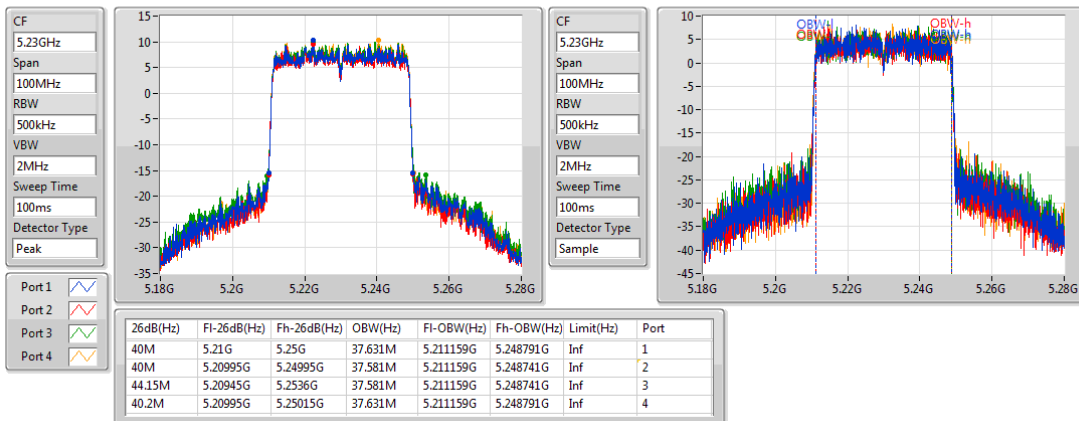


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5190MHz

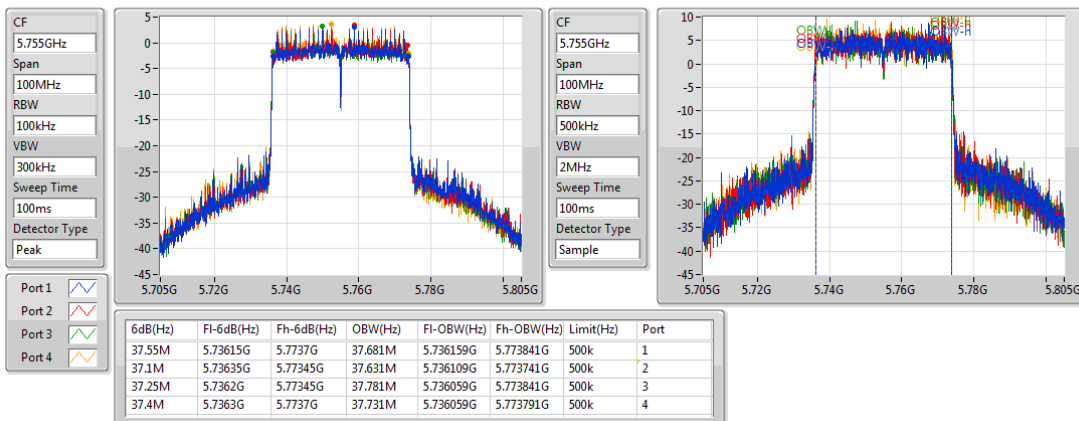
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802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5230MHz

27/03/2019

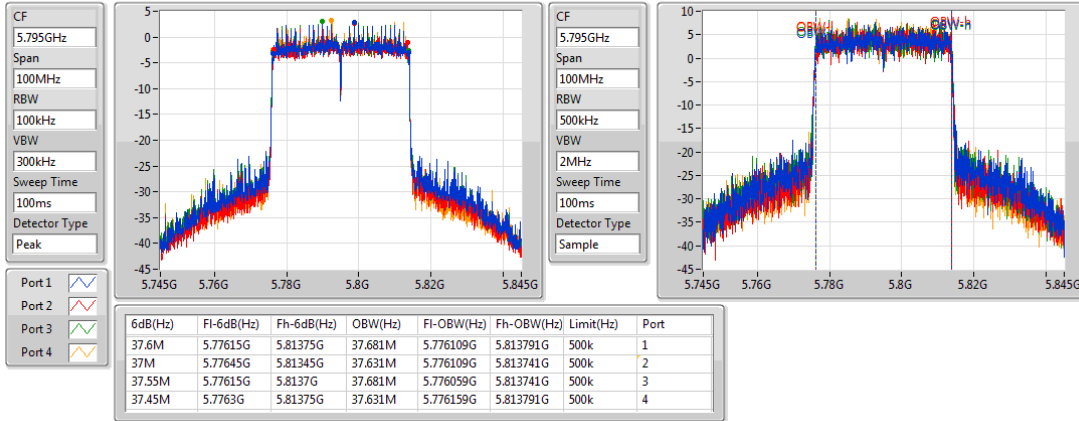

802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5755MHz

27/03/2019

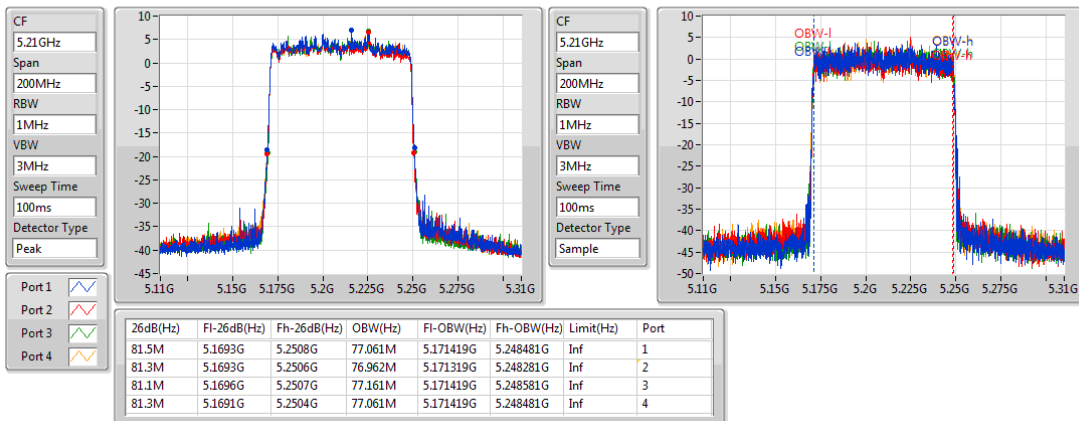


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5795MHz

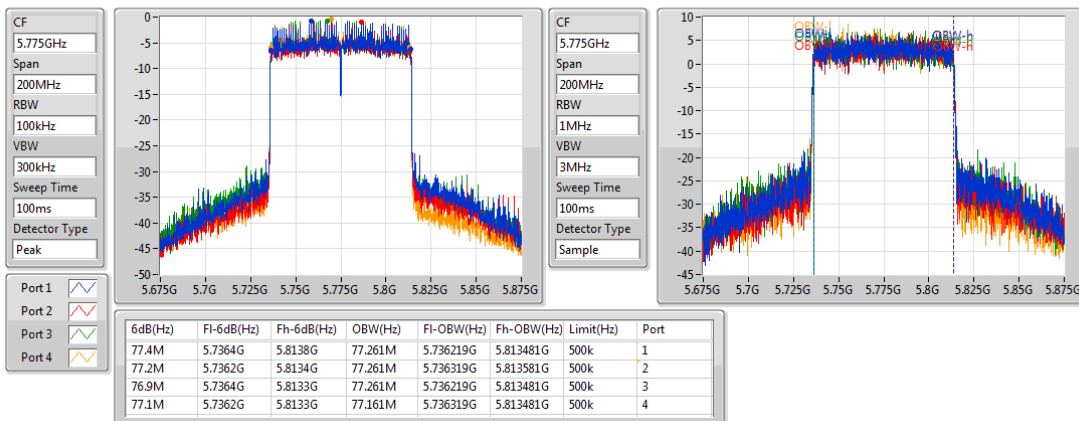
27/03/2019


802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5210MHz

27/03/2019


802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5775MHz

27/03/2019



**For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 4:
Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	23.275M	19.015M	19M0D1D	21.375M	18.941M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	40.2M	37.581M	37M6D1D	39.95M	37.481M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	81.5M	77.261M	77M3D1D	81M	76.862M
5.725-5.85GHz	-	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	19.05M	18.991M	19M0D1D	18.925M	18.941M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	37.5M	37.581M	37M6D1D	37.1M	37.481M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	77.7M	77.261M	77M3D1D	75.9M	76.962M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;

Result

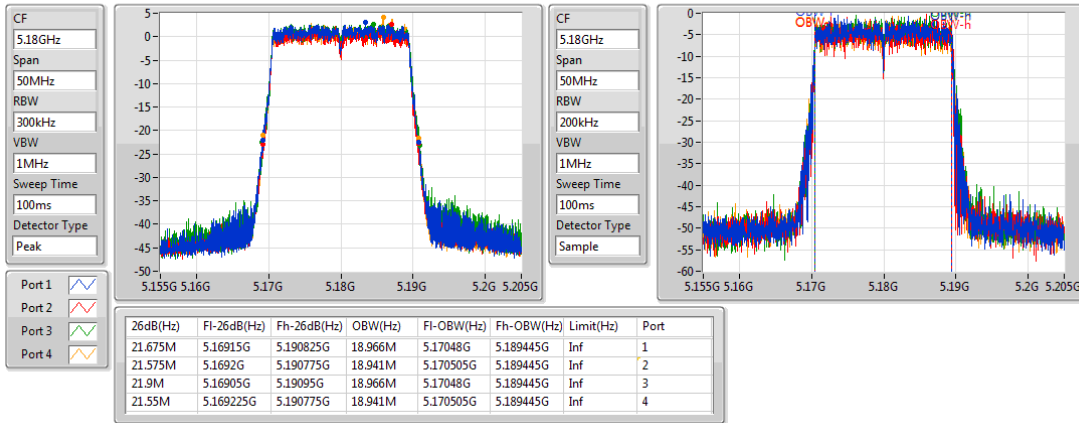
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.675M	18.966M	21.575M	18.941M	21.9M	18.966M	21.55M	18.941M
5200MHz	Pass	Inf	22.5M	18.966M	21.65M	18.966M	23.15M	18.991M	21.4M	18.941M
5240MHz	Pass	Inf	23.05M	18.966M	21.725M	18.991M	23.275M	18.966M	21.375M	19.015M
5745MHz	Pass	500k	18.925M	18.966M	19.025M	18.966M	19M	18.941M	19.025M	18.966M
5785MHz	Pass	500k	18.975M	18.991M	18.975M	18.941M	18.95M	18.966M	19.05M	18.966M
5825MHz	Pass	500k	18.95M	18.991M	18.925M	18.966M	19.025M	18.966M	19M	18.941M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	40.1M	37.531M	40.1M	37.481M	40M	37.531M	40.2M	37.531M
5230MHz	Pass	Inf	39.95M	37.531M	40.05M	37.581M	40.1M	37.531M	40.15M	37.581M
5755MHz	Pass	500k	37.25M	37.531M	37.1M	37.581M	37.25M	37.581M	37.5M	37.581M
5795MHz	Pass	500k	37.5M	37.481M	37.15M	37.531M	37.4M	37.531M	37.15M	37.531M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	81.5M	76.862M	81M	77.261M	81.2M	77.161M	81.1M	77.061M
5775MHz	Pass	500k	75.9M	77.261M	77.2M	76.962M	77M	77.061M	77.7M	77.261M

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

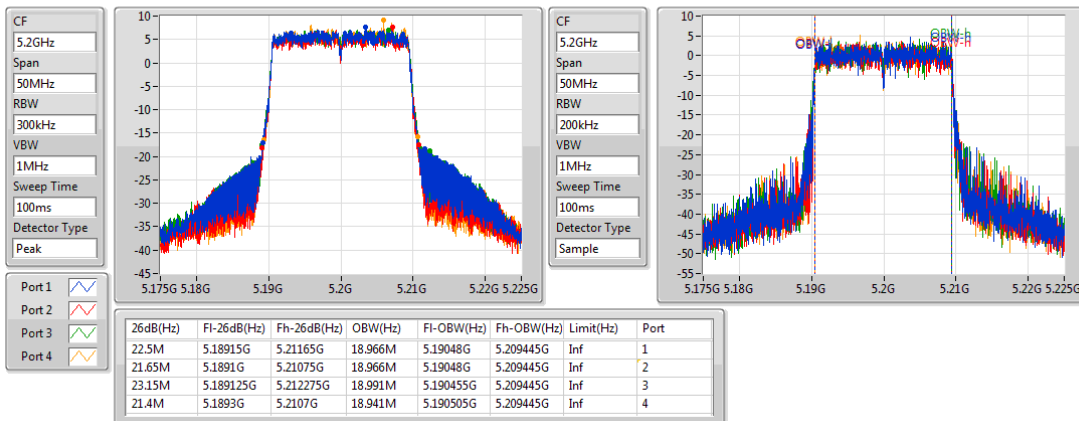
Port X-OBW = Port X 99% occupied bandwidth;

802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5180MHz

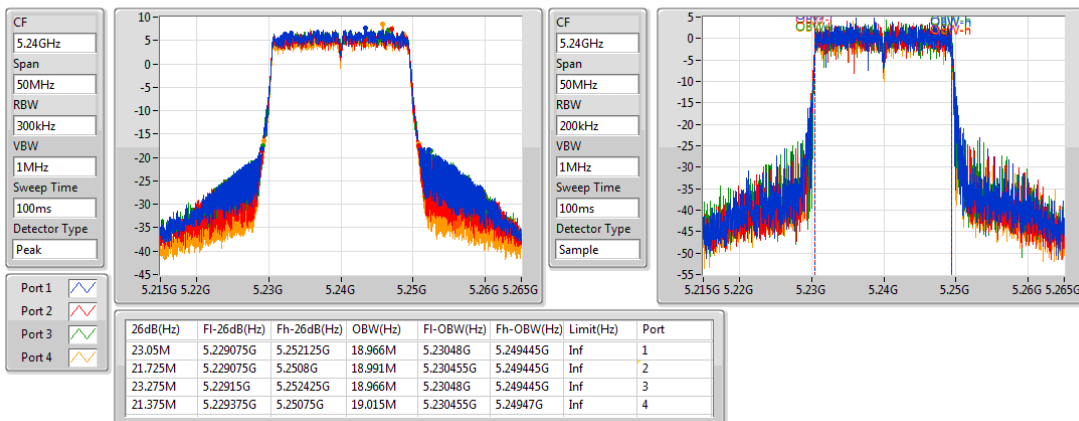
02/04/2019


802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5200MHz

02/04/2019

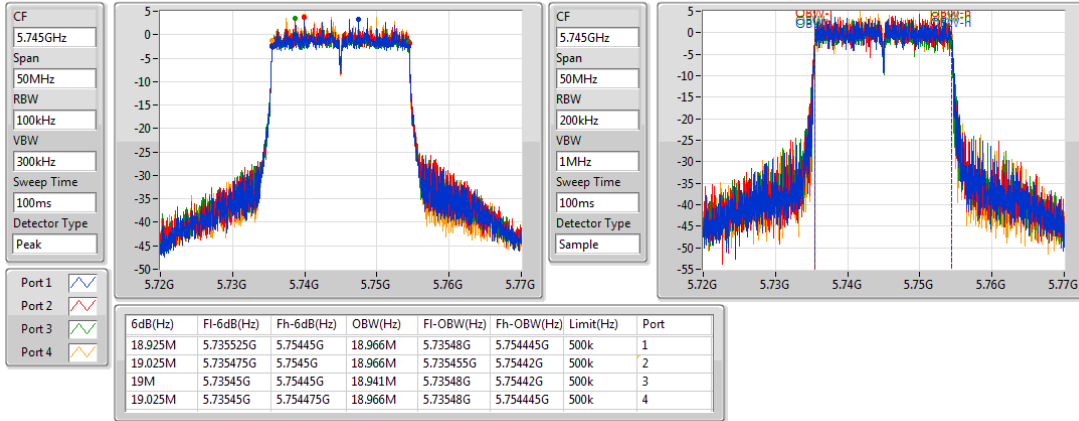

802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5240MHz

02/04/2019

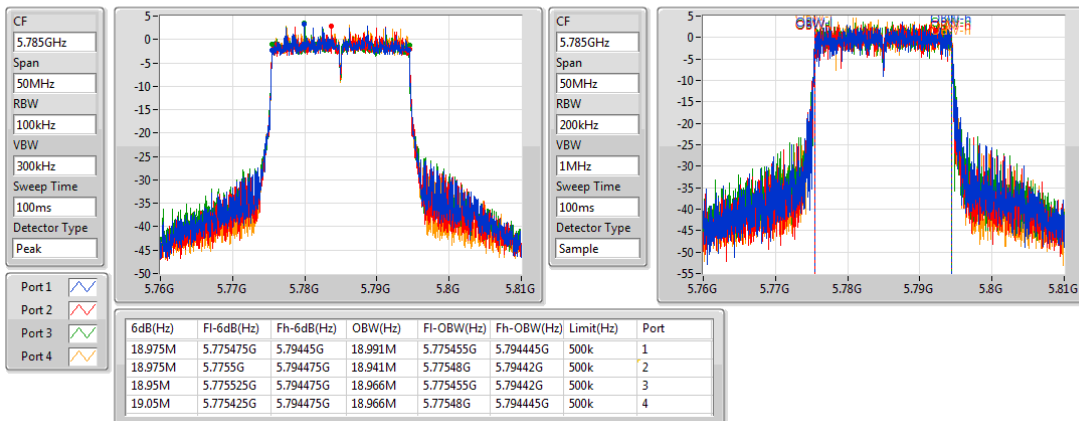


802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5745MHz

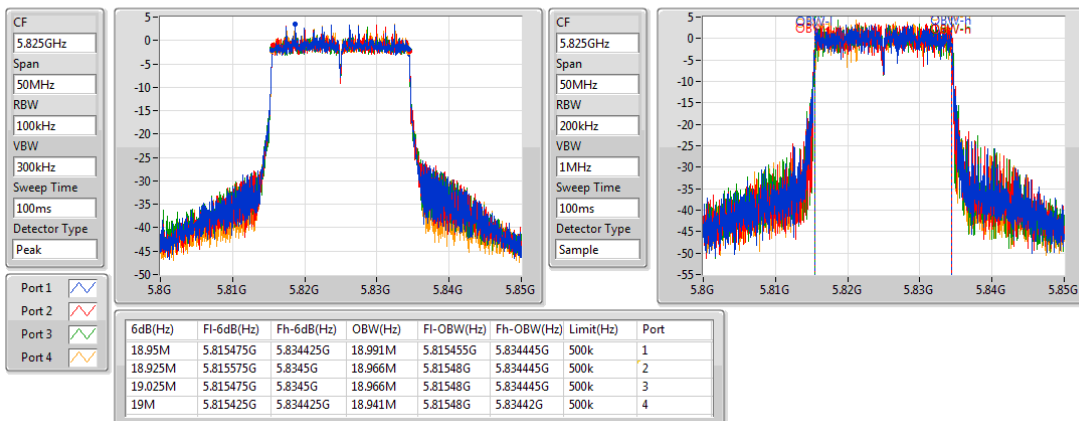
02/04/2019


802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5785MHz

02/04/2019

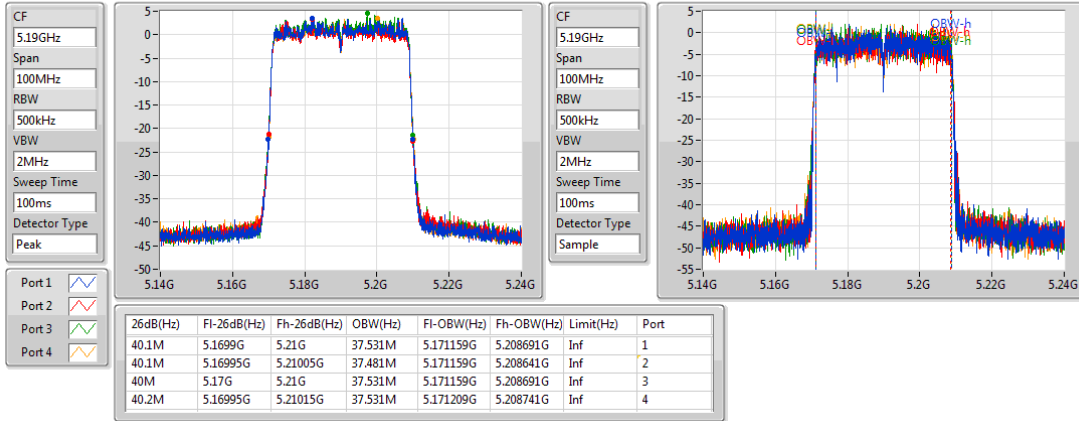

802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5825MHz

02/04/2019

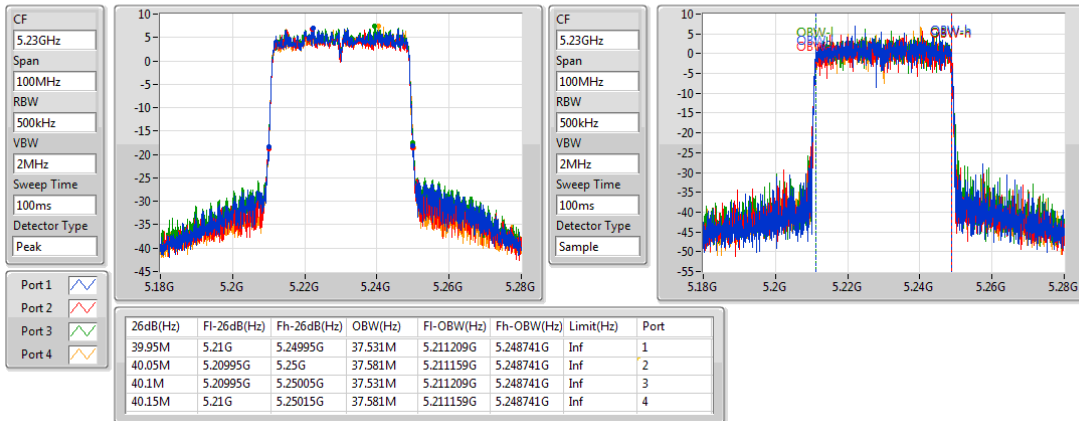


802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
5190MHz

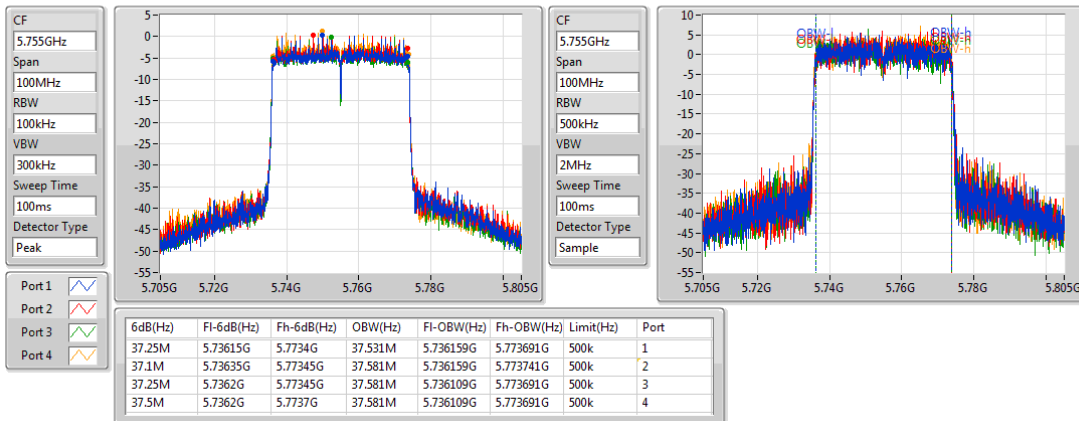
02/04/2019


802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
5230MHz

02/04/2019

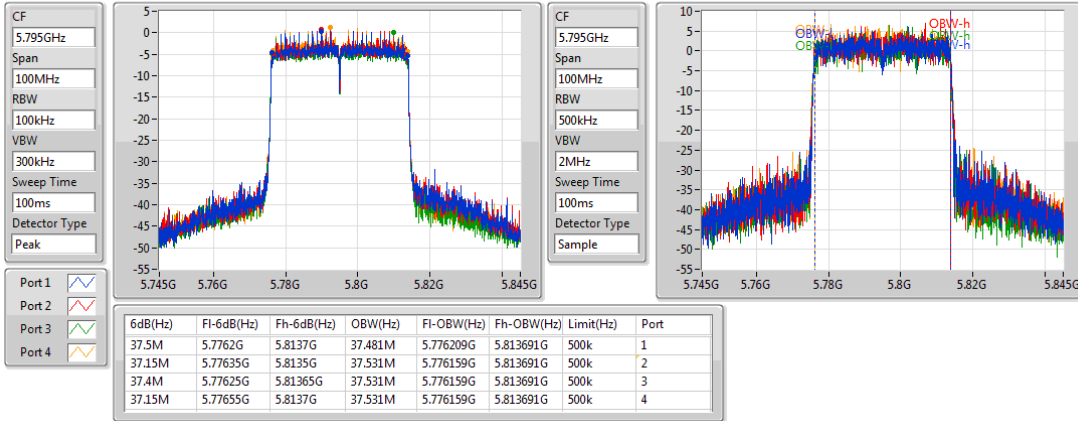

802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
5755MHz

02/04/2019

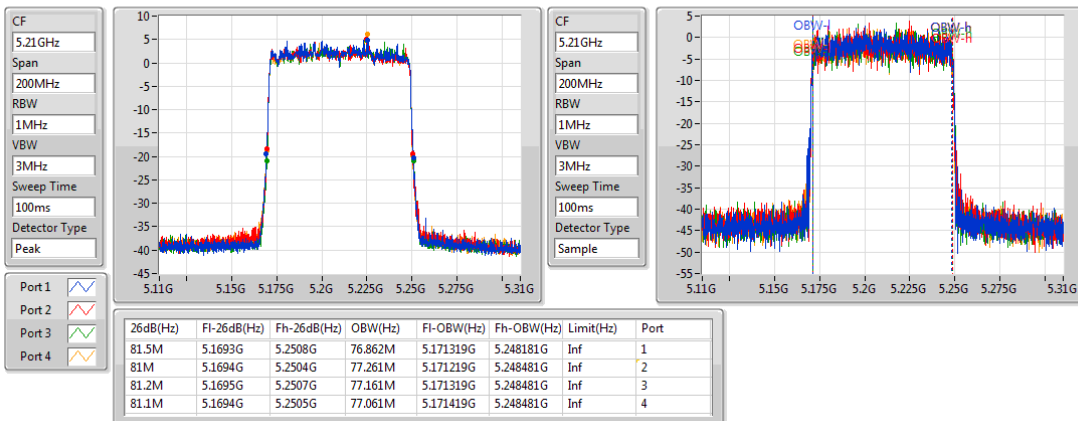


802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
5795MHz

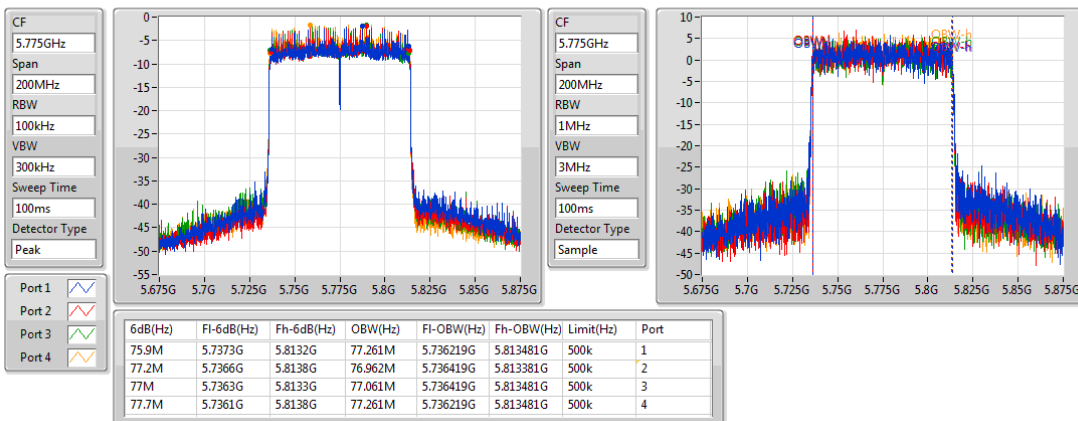
02/04/2019


802.11ax HEW80-BF_Nss1,(MCS0)_4TX
EBW
5210MHz

02/04/2019


802.11ax HEW80-BF_Nss1,(MCS0)_4TX
EBW
5775MHz

02/04/2019



For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 4:
Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ax HEW20_Nss4,(MCS0)_4TX	41.075M	19.265M	19M3D1D	21.4M	18.941M
802.11ax HEW40_Nss4,(MCS0)_4TX	42.8M	37.731M	37M7D1D	40.05M	37.481M
802.11ax HEW80_Nss4,(MCS0)_4TX	82M	77.061M	77M1D1D	81.1M	76.962M
5.725-5.85GHz	-	-	-	-	-
802.11ax HEW20_Nss4,(MCS0)_4TX	19.075M	19.04M	19M0D1D	18.7M	18.941M
802.11ax HEW40_Nss4,(MCS0)_4TX	37.45M	37.781M	37M8D1D	36.65M	37.581M
802.11ax HEW80_Nss4,(MCS0)_4TX	76.9M	77.261M	77M3D1D	75.5M	77.161M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;

Result

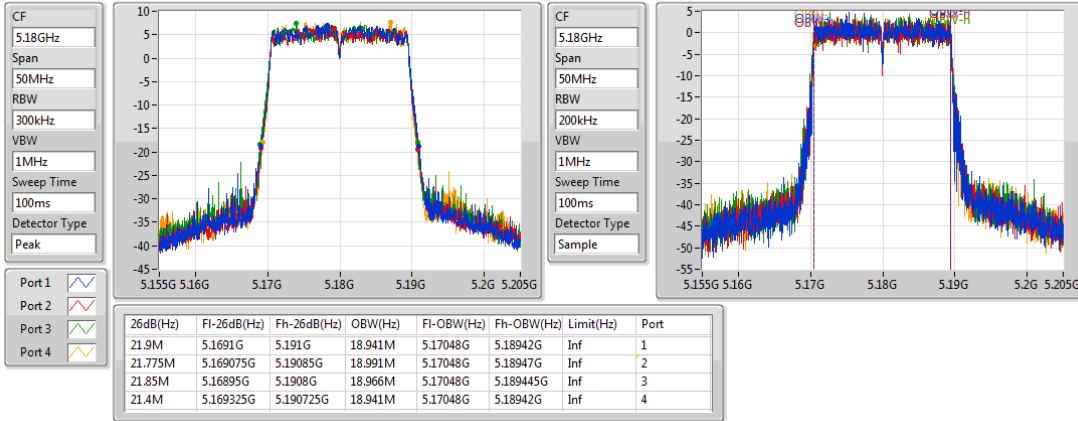
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ax HEW20_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.9M	18.941M	21.775M	18.991M	21.85M	18.966M	21.4M	18.941M
5200MHz	Pass	Inf	30.9M	19.065M	35.85M	19.04M	37.325M	19.04M	28.675M	18.991M
5240MHz	Pass	Inf	41.075M	19.265M	38.925M	19.09M	39.675M	19.115M	29.7M	18.991M
5745MHz	Pass	500k	18.95M	18.966M	18.9M	18.991M	18.85M	18.991M	18.85M	18.941M
5785MHz	Pass	500k	18.925M	19.015M	19M	19.04M	18.825M	19.015M	19.075M	18.991M
5825MHz	Pass	500k	18.925M	18.966M	18.95M	18.966M	18.7M	18.991M	19.025M	18.966M
802.11ax HEW40_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	40.2M	37.531M	40.2M	37.531M	40.05M	37.481M	40.2M	37.581M
5230MHz	Pass	Inf	42.8M	37.581M	40.3M	37.631M	40.45M	37.731M	40.5M	37.581M
5755MHz	Pass	500k	37.1M	37.631M	36.9M	37.681M	37.45M	37.731M	37.1M	37.631M
5795MHz	Pass	500k	36.9M	37.781M	36.65M	37.631M	37.45M	37.581M	37.2M	37.631M
802.11ax HEW80_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	81.3M	76.962M	81.1M	77.061M	81.8M	77.061M	82M	77.061M
5775MHz	Pass	500k	76.5M	77.161M	76.1M	77.161M	75.5M	77.161M	76.9M	77.261M

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

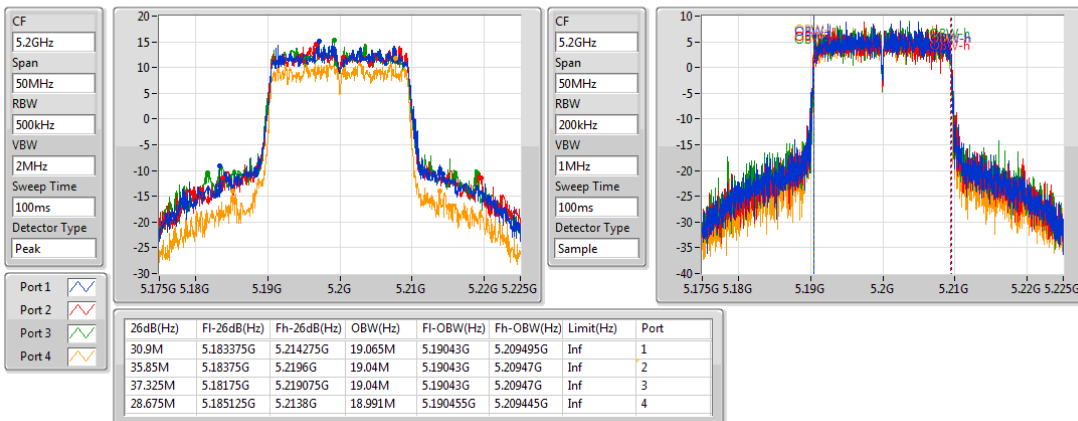
Port X-OBW = Port X 99% occupied bandwidth;

802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
5180MHz

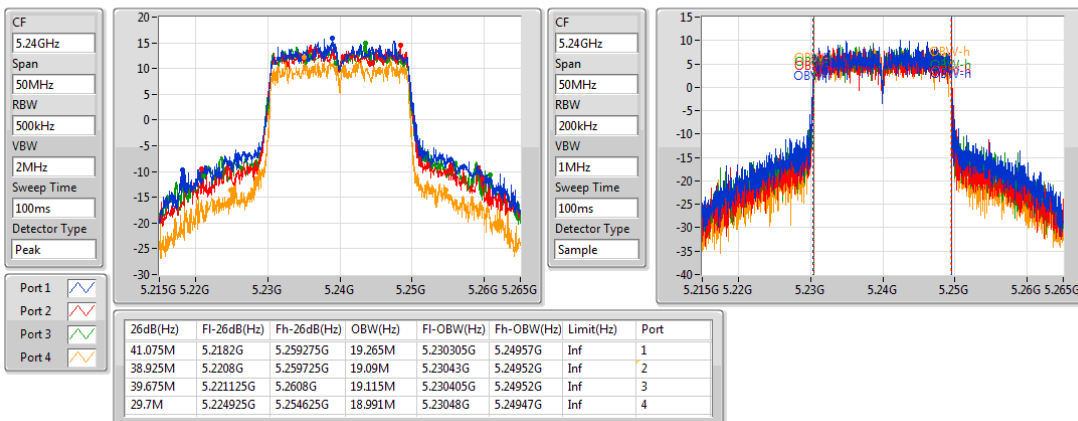
27/03/2019


802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
5200MHz

27/03/2019

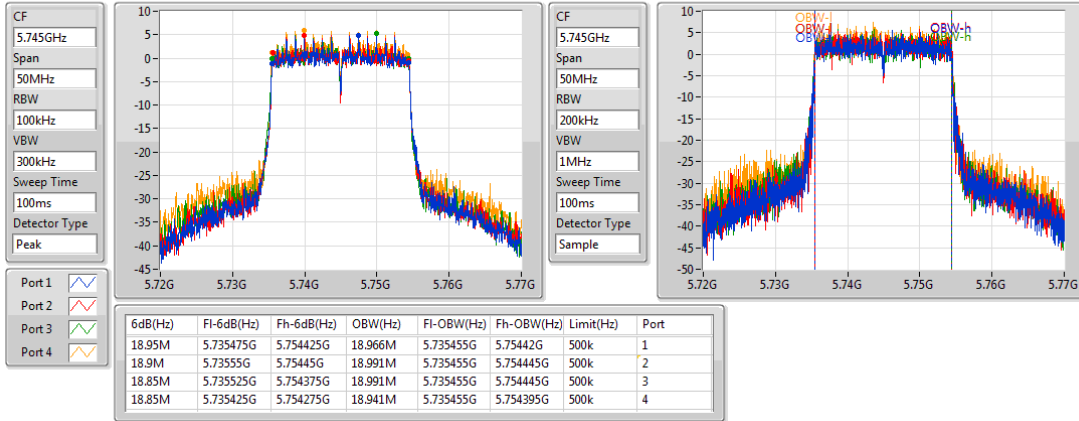

802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
5240MHz

27/03/2019

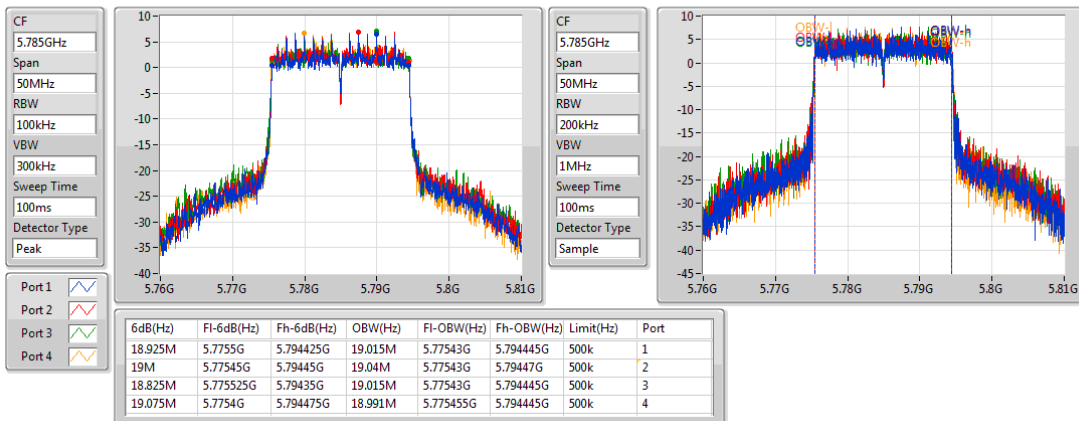


802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
5745MHz

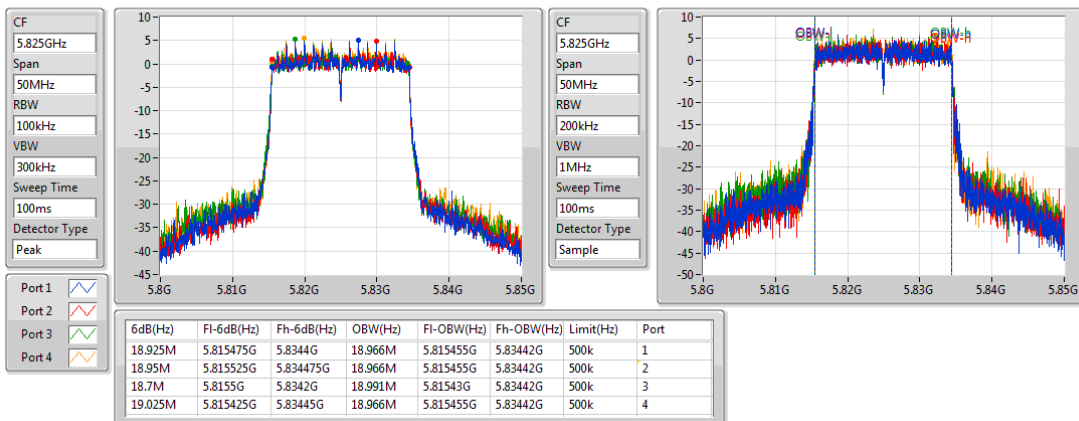
27/03/2019


802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
5785MHz

27/03/2019

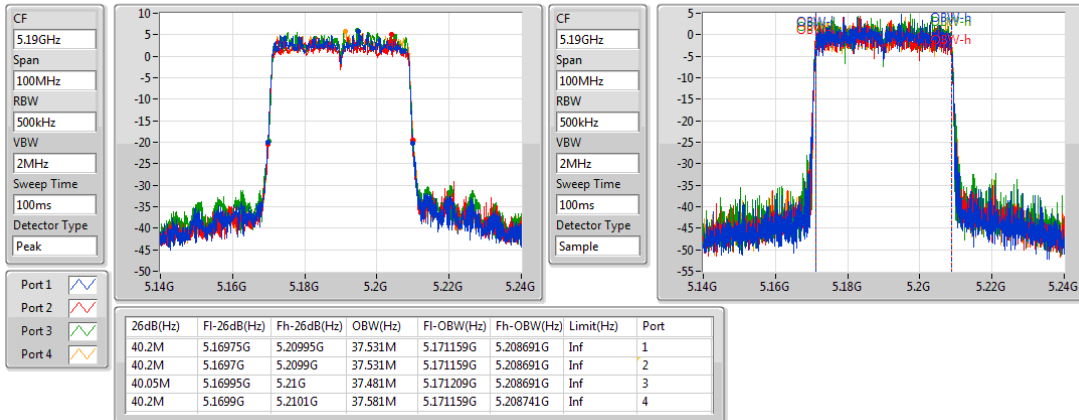

802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
5825MHz

27/03/2019

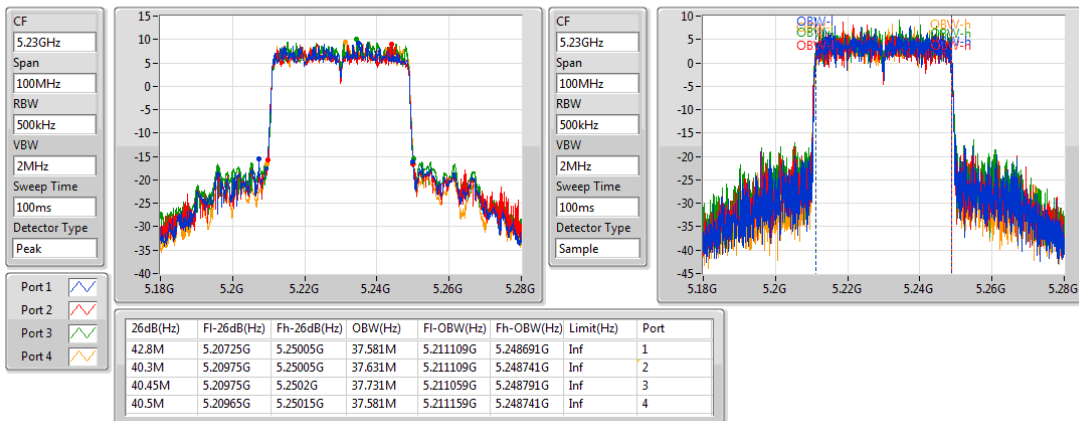


802.11ax HEW40_Nss4,(MCS0)_4TX
EBW
5190MHz

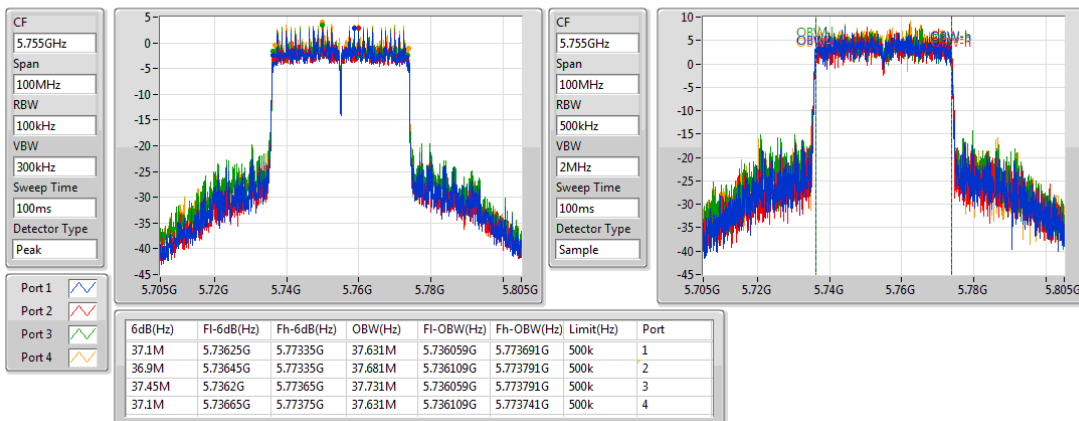
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802.11ax HEW40_Nss4,(MCS0)_4TX
EBW
5230MHz

27/03/2019

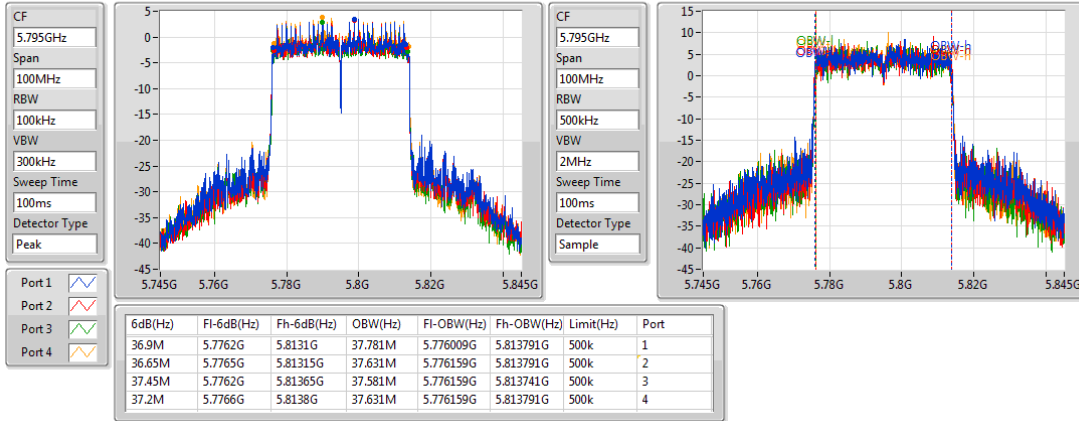

802.11ax HEW40_Nss4,(MCS0)_4TX
EBW
5755MHz

27/03/2019

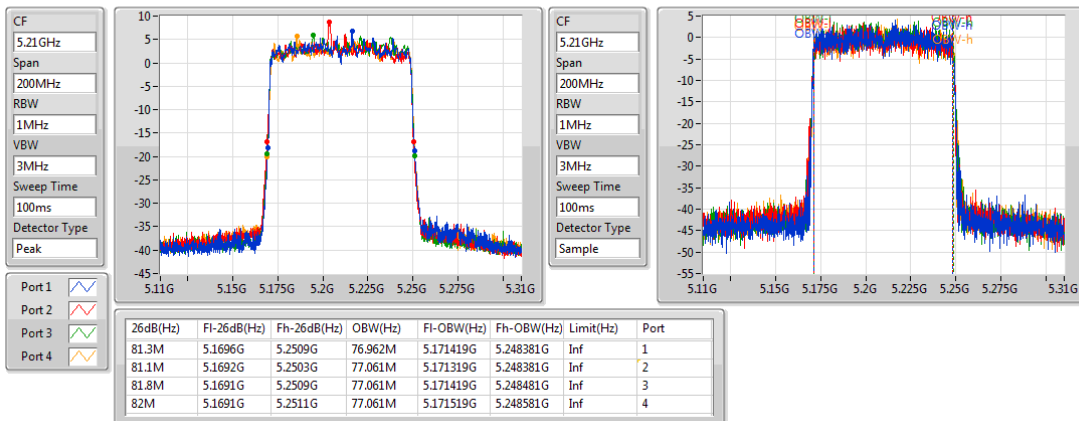


802.11ax HEW40_Nss4,(MCS0)_4TX
EBW
5795MHz

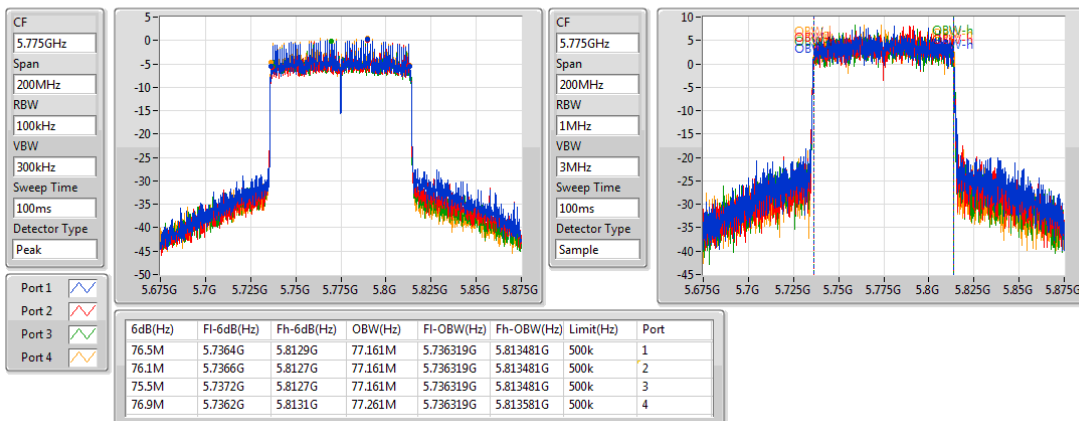
27/03/2019


802.11ax HEW80_Nss4,(MCS0)_4TX
EBW
5210MHz

27/03/2019


802.11ax HEW80_Nss4,(MCS0)_4TX
EBW
5775MHz

27/03/2019



For Outdoor use for 5G Band 1:
Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	21.575M	16.592M	16M6D1D	21.475M	16.542M
802.11ax HEW20_Nss1,(MCS0)_1TX	21.8M	18.991M	19M0D1D	21.675M	18.966M
802.11ax HEW40_Nss1,(MCS0)_1TX	40.05M	37.581M	37M6D1D	40.05M	37.531M
802.11ax HEW80_Nss1,(MCS0)_1TX	81.3M	77.061M	77M1D1D	81.3M	77.061M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;

Result

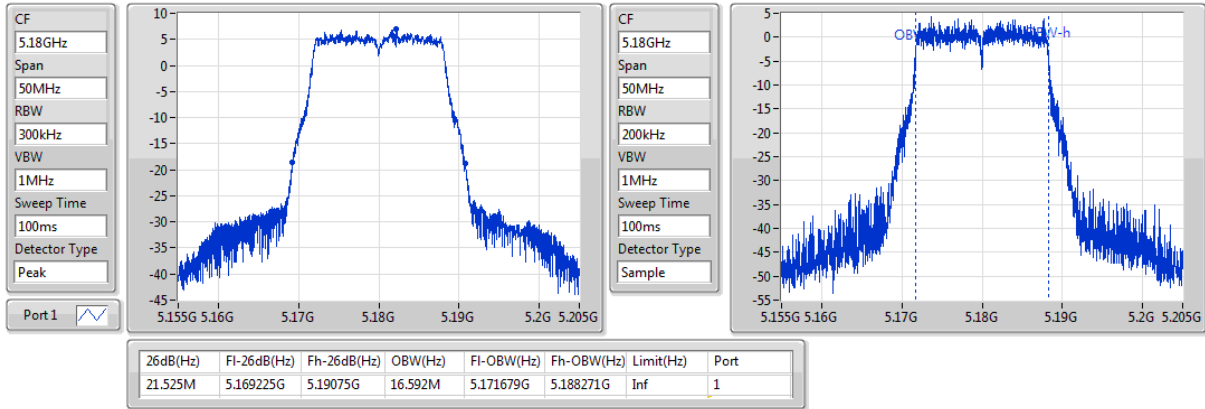
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11a_Nss1,(6Mbps)_1TX	-	-	-	-
5180MHz	Pass	Inf	21.525M	16.592M
5200MHz	Pass	Inf	21.475M	16.542M
5240MHz	Pass	Inf	21.575M	16.567M
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-
5180MHz	Pass	Inf	21.8M	18.991M
5200MHz	Pass	Inf	21.7M	18.966M
5240MHz	Pass	Inf	21.675M	18.991M
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-	-	-
5190MHz	Pass	Inf	40.05M	37.531M
5230MHz	Pass	Inf	40.05M	37.581M
802.11ax HEW80_Nss1,(MCS0)_1TX	-	-	-	-
5210MHz	Pass	Inf	81.3M	77.061M

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

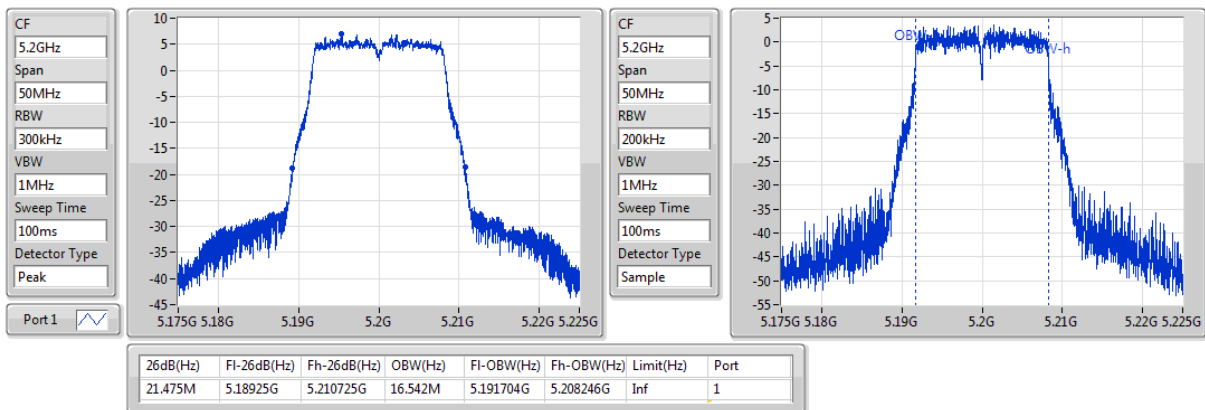
Port X-OBW = Port X 99% occupied bandwidth;

802.11a_Nss1,(6Mbps)_1TX
EBW
5180MHz

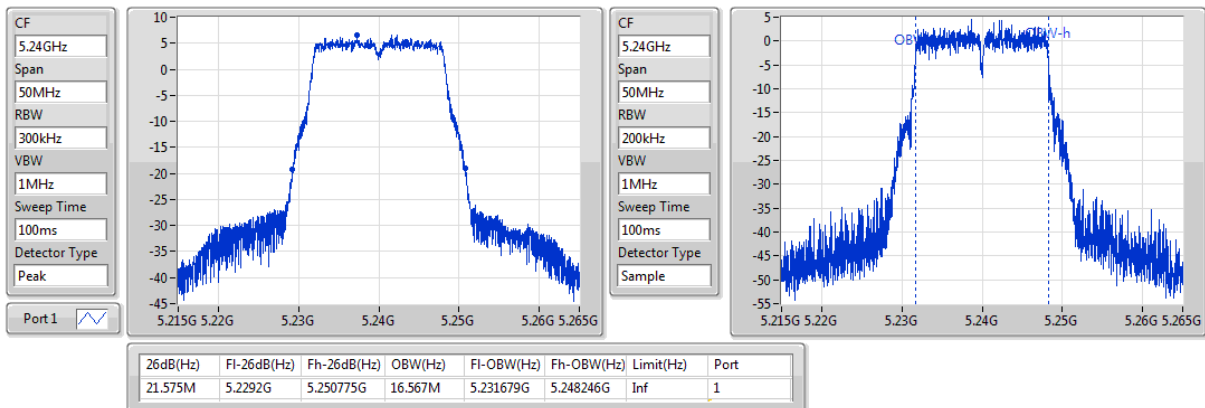
16/04/2019


802.11a_Nss1,(6Mbps)_1TX
EBW
5200MHz

16/04/2019

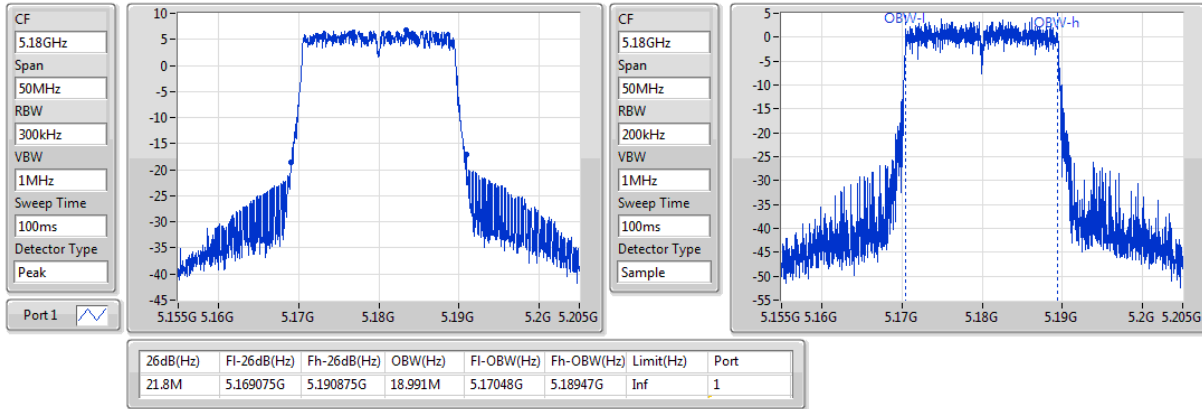

802.11a_Nss1,(6Mbps)_1TX
EBW
5240MHz

16/04/2019

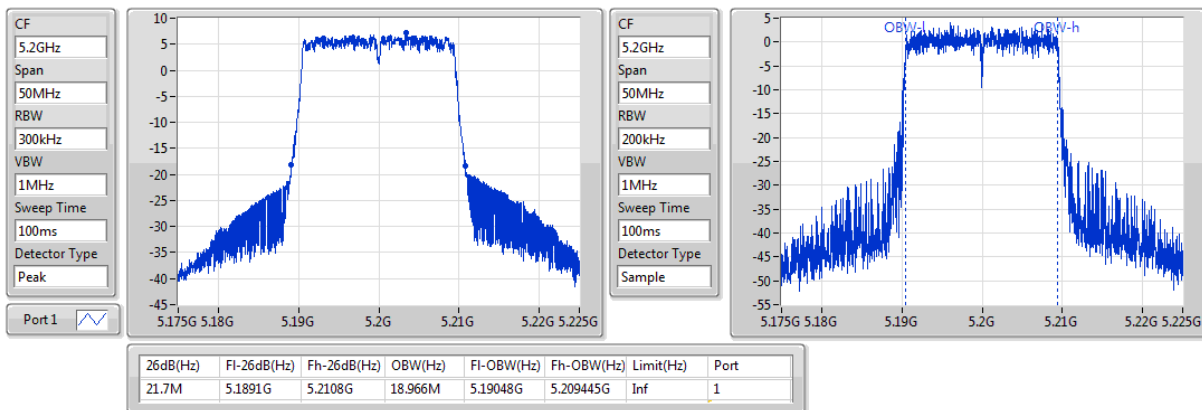


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5180MHz

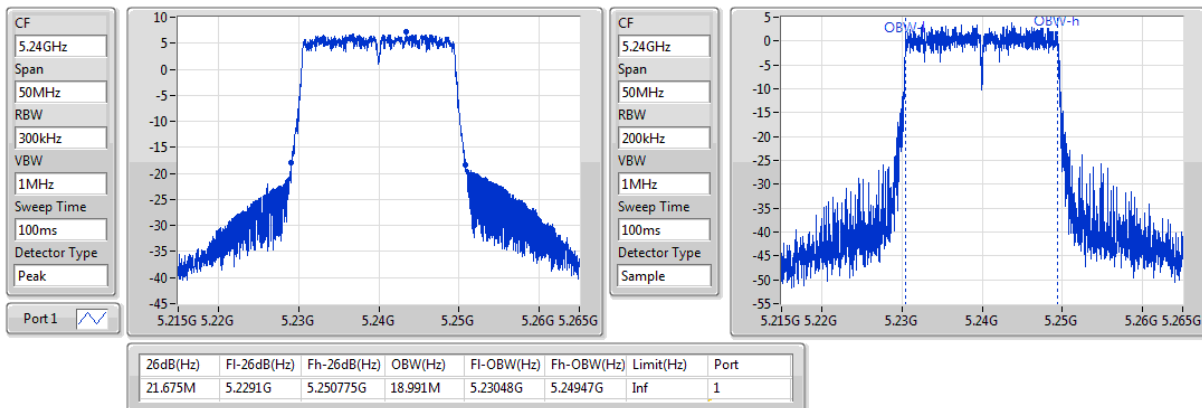
16/04/2019


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5200MHz

16/04/2019

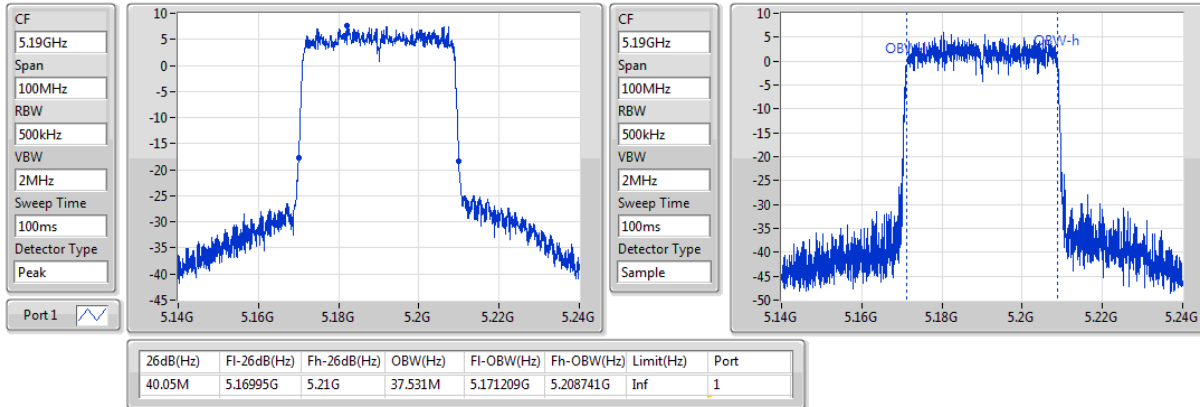

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5240MHz

16/04/2019

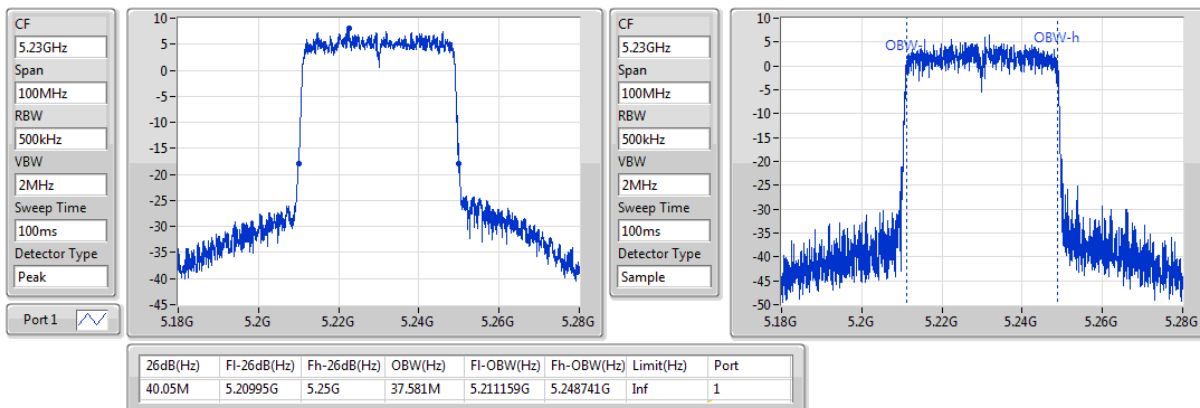


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
5190MHz

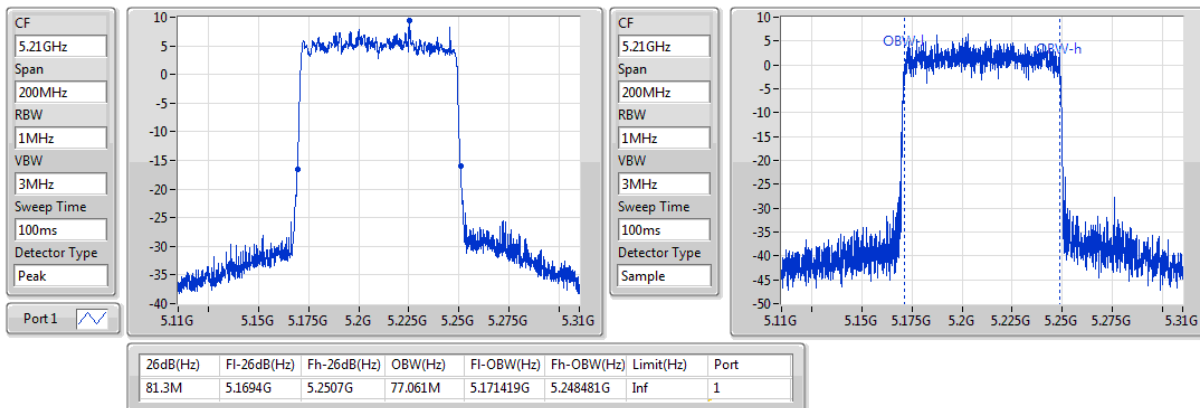
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802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
5230MHz

16/04/2019


802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
5210MHz

16/04/2019



For Outdoor use for 5G Band 1:
Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ax HEW20_Nss2,(MCS0)_2TX	22.075M	18.966M	19M0D1D	21.325M	18.941M
802.11ax HEW40_Nss2,(MCS0)_2TX	40.05M	37.631M	37M6D1D	39.9M	37.531M
802.11ax HEW80_Nss2,(MCS0)_2TX	81.4M	76.962M	77M0D1D	81.3M	76.662M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;

Result

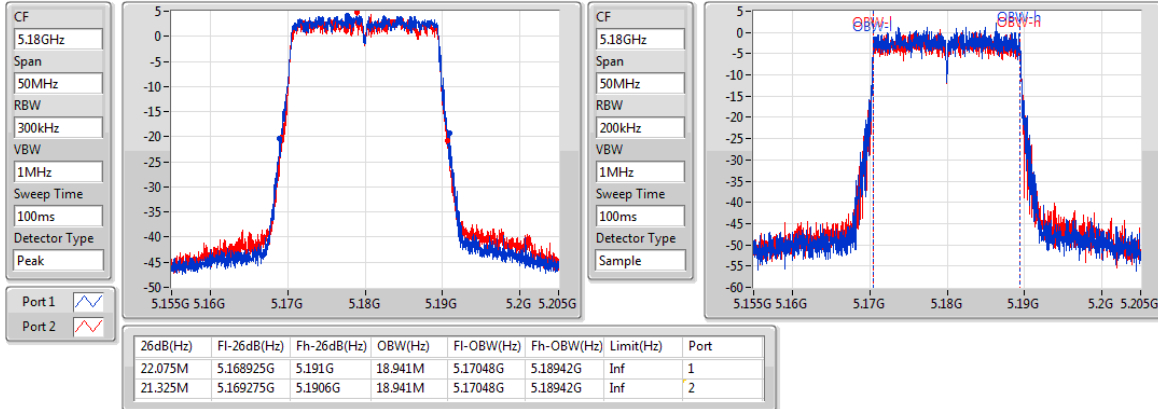
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11ax HEW20_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	22.075M	18.941M	21.325M	18.941M
5200MHz	Pass	Inf	22.075M	18.941M	21.35M	18.966M
5240MHz	Pass	Inf	22M	18.966M	21.525M	18.966M
802.11ax HEW40_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	Inf	40M	37.631M	39.9M	37.531M
5230MHz	Pass	Inf	40M	37.531M	40.05M	37.531M
802.11ax HEW80_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	Inf	81.3M	76.662M	81.4M	76.962M

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

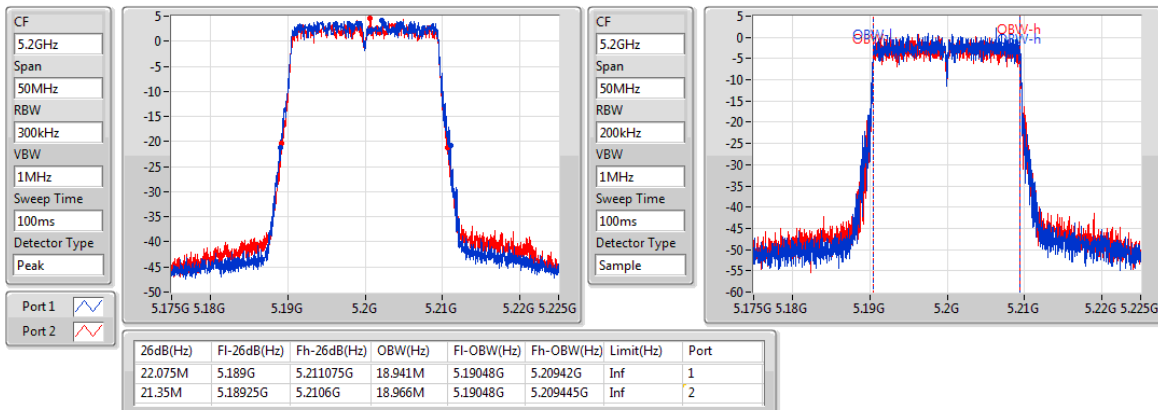
Port X-OBW = Port X 99% occupied bandwidth;

802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
5180MHz

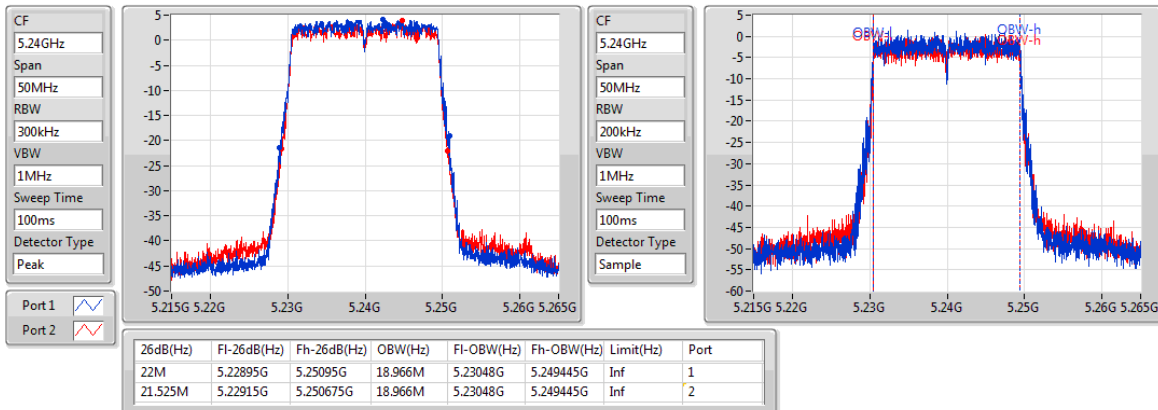
16/04/2019


802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
5200MHz

16/04/2019

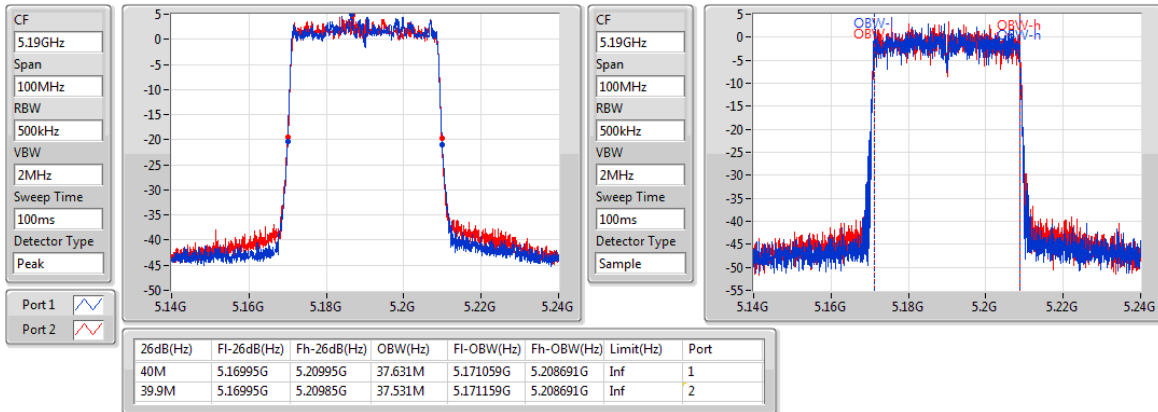

802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
5240MHz

16/04/2019

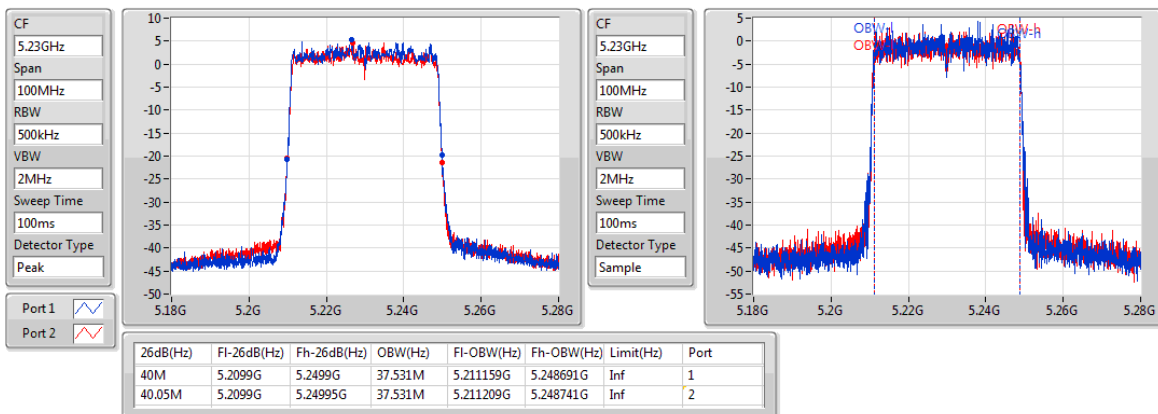


802.11ax HEW40_Nss2,(MCS0)_2TX
EBW
5190MHz

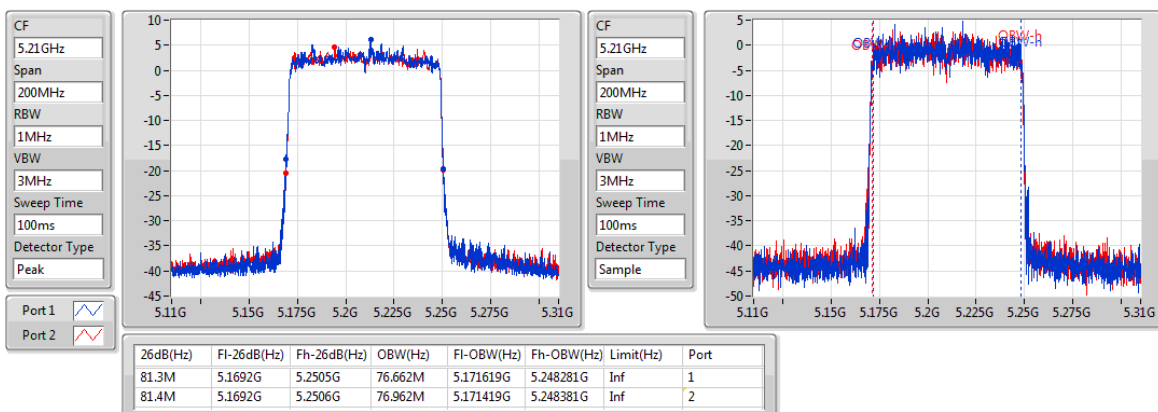
16/04/2019


802.11ax HEW40_Nss2,(MCS0)_2TX
EBW
5230MHz

16/04/2019


802.11ax HEW80_Nss2,(MCS0)_2TX
EBW
5210MHz

16/04/2019



For Outdoor use for 5G Band 1:
Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	21.75M	16.617M	16M6D1D	21.4M	16.542M
802.11ax HEW20_Nss1,(MCS0)_4TX	21.85M	18.966M	19M0D1D	21.375M	18.941M
802.11ax HEW40_Nss1,(MCS0)_4TX	40.1M	37.631M	37M6D1D	39.95M	37.481M
802.11ax HEW80_Nss1,(MCS0)_4TX	81.5M	77.261M	77M3D1D	81M	77.061M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;

Result

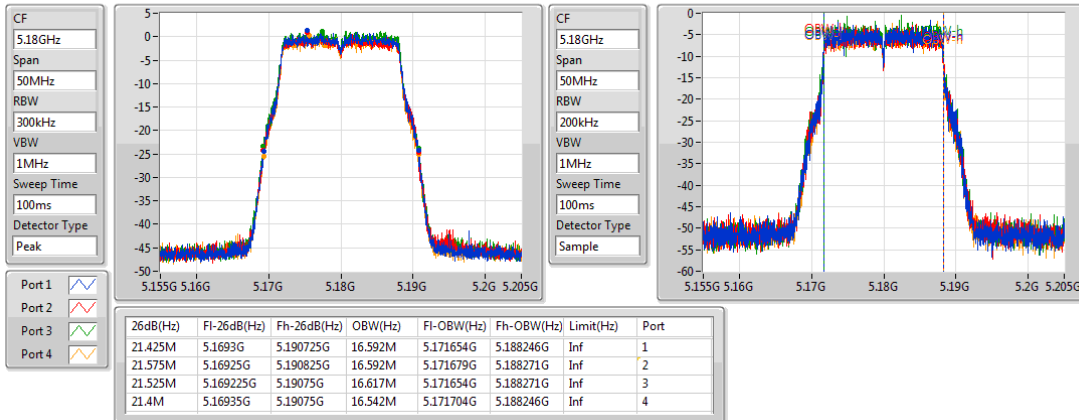
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.425M	16.592M	21.575M	16.592M	21.525M	16.617M	21.4M	16.542M
5200MHz	Pass	Inf	21.425M	16.567M	21.575M	16.592M	21.6M	16.592M	21.55M	16.542M
5240MHz	Pass	Inf	21.5M	16.592M	21.75M	16.567M	21.625M	16.592M	21.45M	16.592M
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.775M	18.966M	21.525M	18.941M	21.85M	18.966M	21.475M	18.966M
5200MHz	Pass	Inf	21.7M	18.966M	21.65M	18.966M	21.825M	18.966M	21.45M	18.941M
5240MHz	Pass	Inf	21.7M	18.966M	21.7M	18.966M	21.85M	18.941M	21.375M	18.941M
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	39.95M	37.531M	40.05M	37.531M	40.05M	37.631M	40.1M	37.581M
5230MHz	Pass	Inf	40.05M	37.481M	40.1M	37.581M	40M	37.581M	40.05M	37.531M
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	81.5M	77.061M	81.1M	77.161M	81M	77.061M	81.5M	77.261M

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

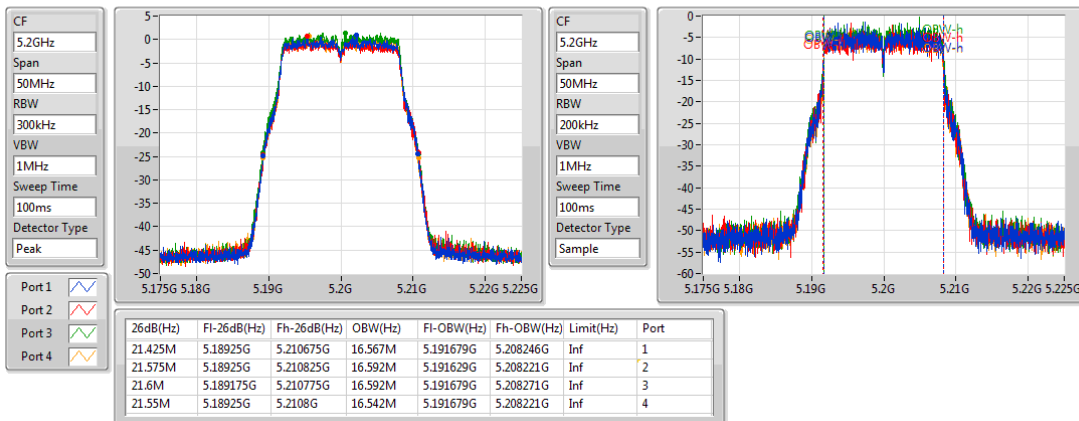
Port X-OBW = Port X 99% occupied bandwidth;

802.11a_Nss1,(6Mbps)_4TX
EBW
5180MHz

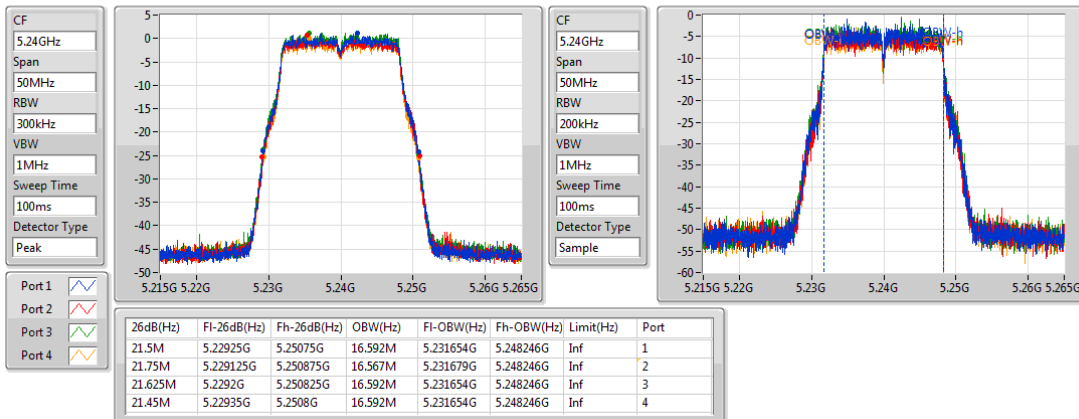
16/04/2019


802.11a_Nss1,(6Mbps)_4TX
EBW
5200MHz

16/04/2019

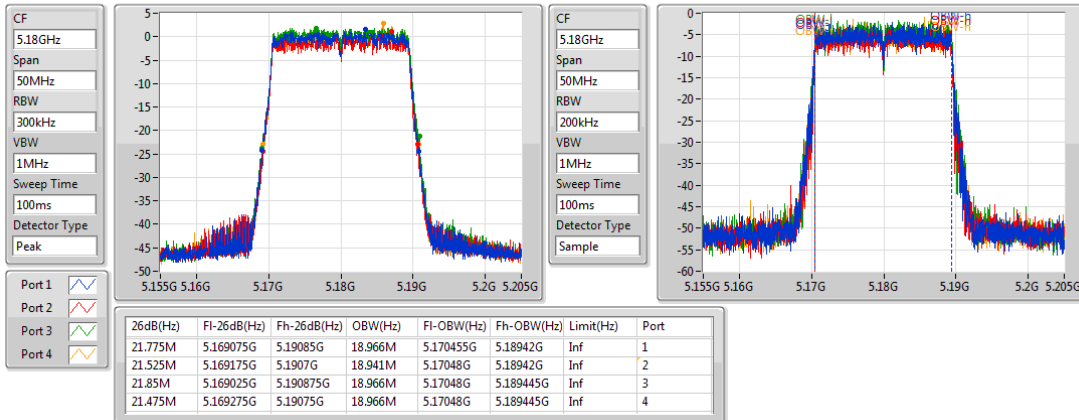

802.11a_Nss1,(6Mbps)_4TX
EBW
5240MHz

16/04/2019

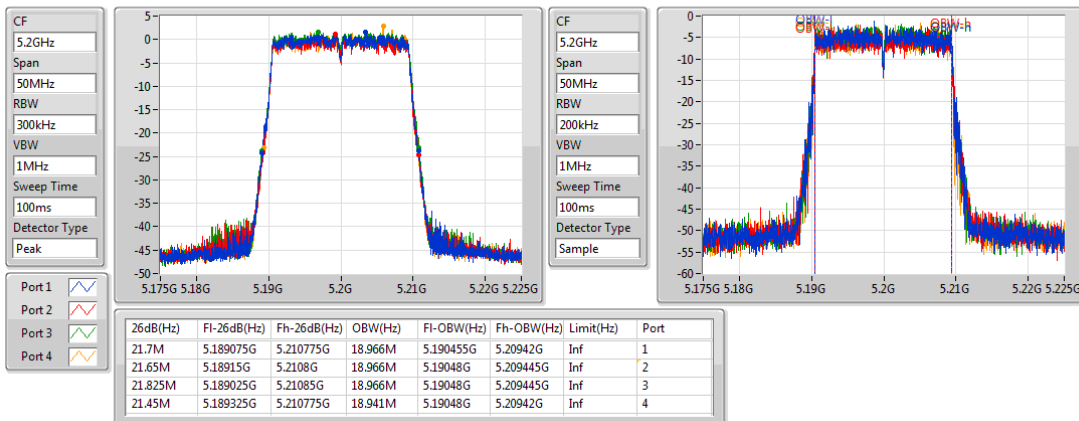


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5180MHz

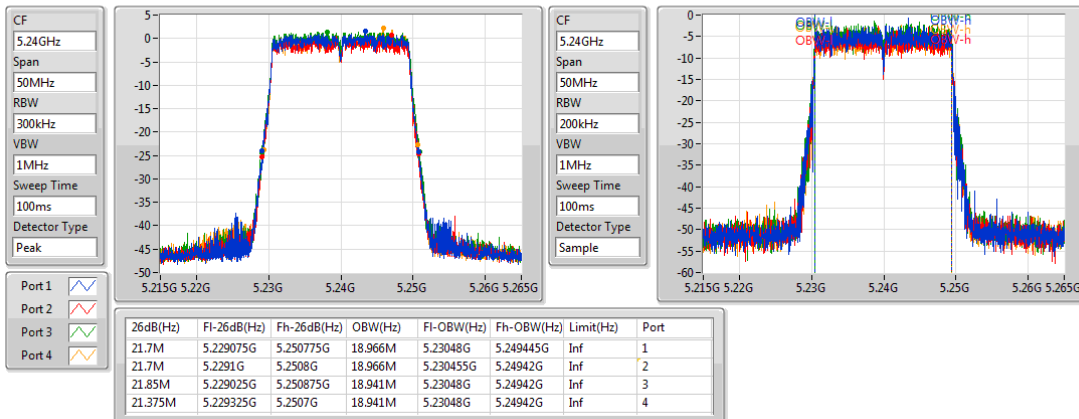
16/04/2019


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5200MHz

16/04/2019

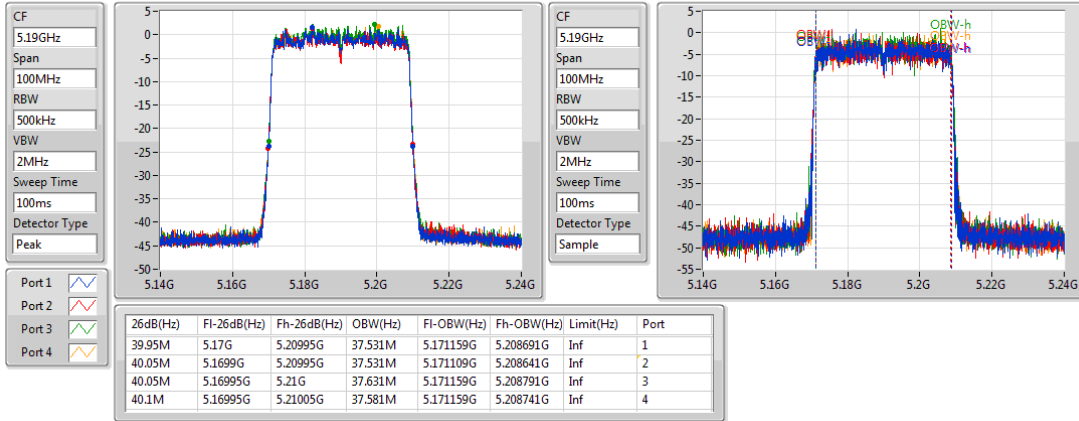

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5240MHz

16/04/2019

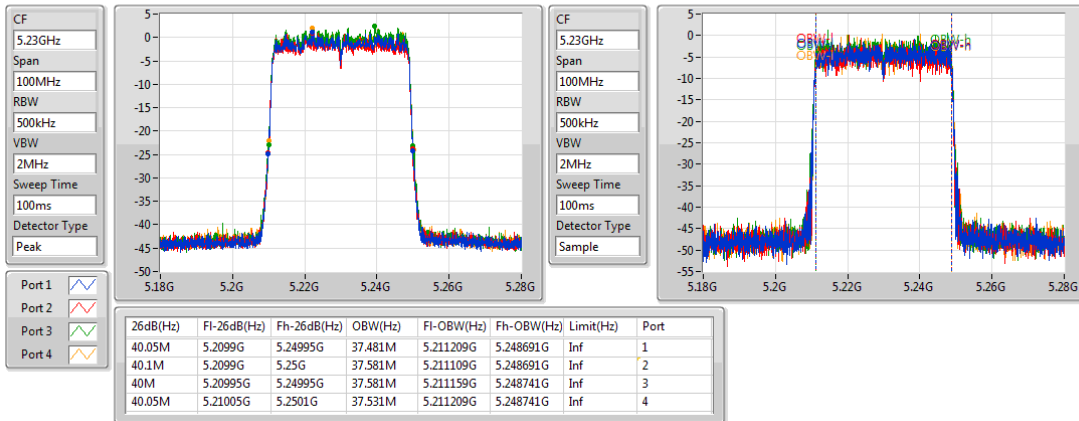


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5190MHz

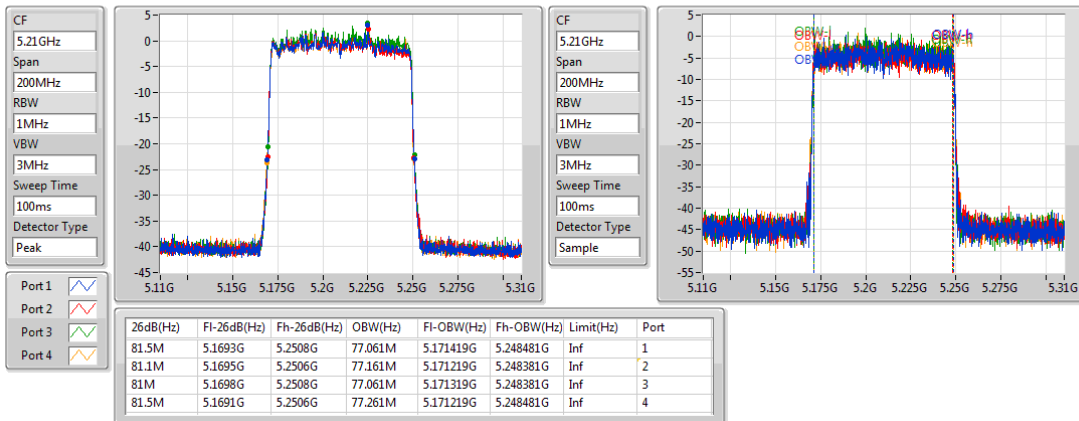
16/04/2019


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5230MHz

16/04/2019


802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5210MHz

16/04/2019



**For Outdoor use for 5G Band 1:****Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	21.975M	18.991M	19M0D1D	21.375M	18.916M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	40.15M	37.581M	37M6D1D	40M	37.531M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	81.5M	77.161M	77M2D1D	81.2M	77.061M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;

Result

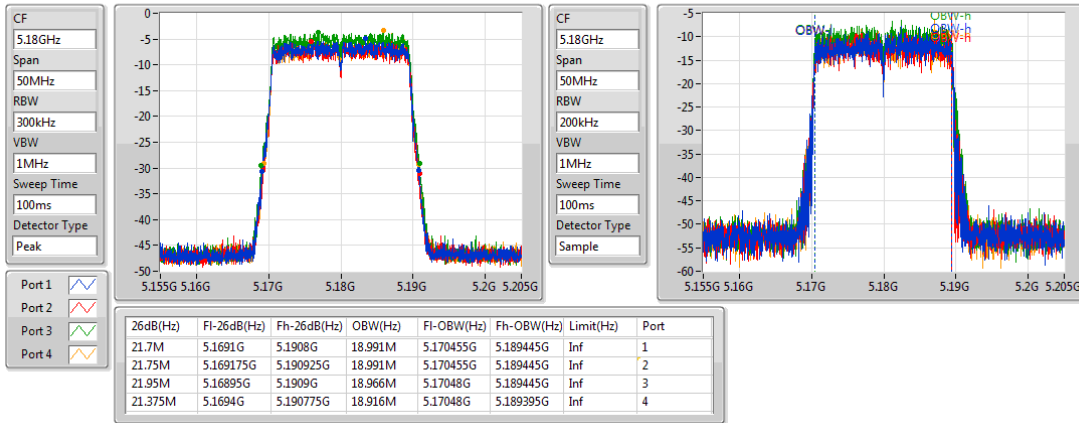
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.7M	18.991M	21.75M	18.991M	21.95M	18.966M	21.375M	18.916M
5200MHz	Pass	Inf	21.75M	18.966M	21.6M	18.966M	21.875M	18.991M	21.4M	18.966M
5240MHz	Pass	Inf	21.7M	18.941M	21.55M	18.941M	21.975M	18.991M	21.5M	18.916M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	40M	37.581M	40.1M	37.581M	40.15M	37.531M	40.05M	37.531M
5230MHz	Pass	Inf	40.05M	37.581M	40M	37.581M	40M	37.531M	40.1M	37.531M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	81.5M	77.061M	81.3M	77.161M	81.2M	77.161M	81.3M	77.161M

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

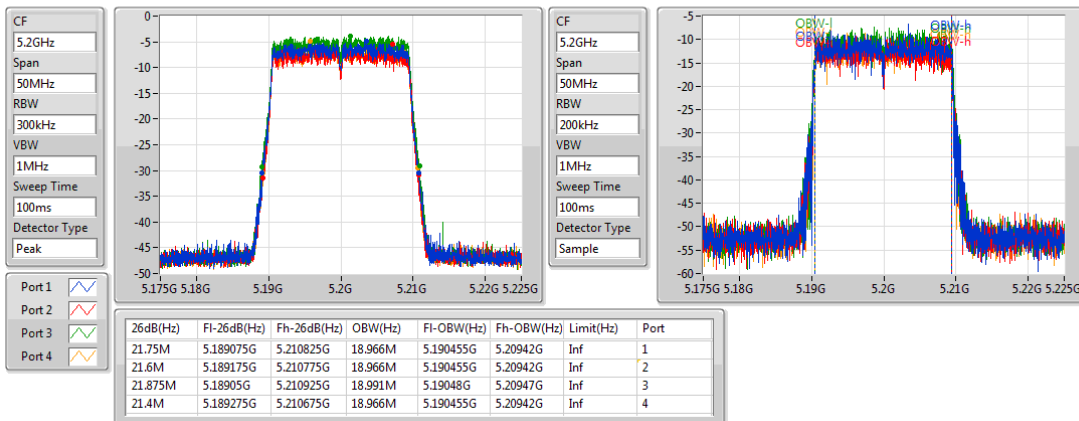
Port X-OBW = Port X 99% occupied bandwidth;

802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5180MHz

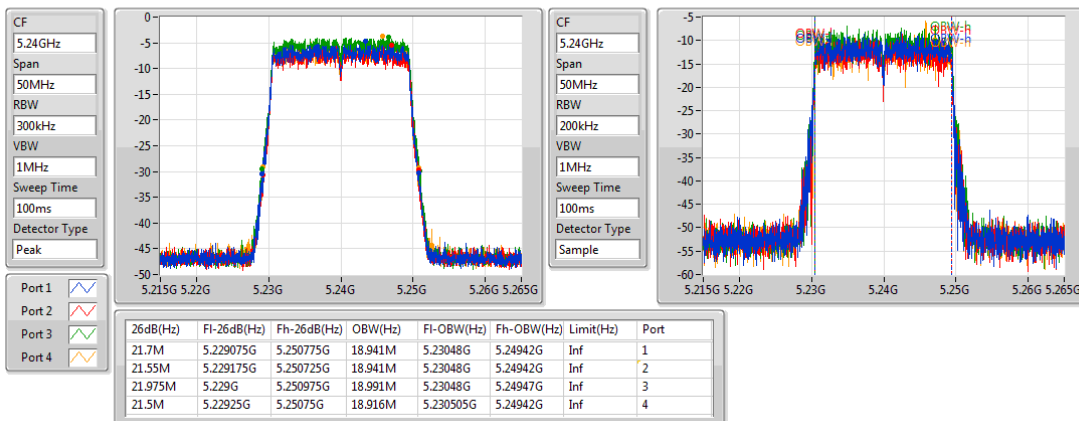
17/04/2019


802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5200MHz

17/04/2019

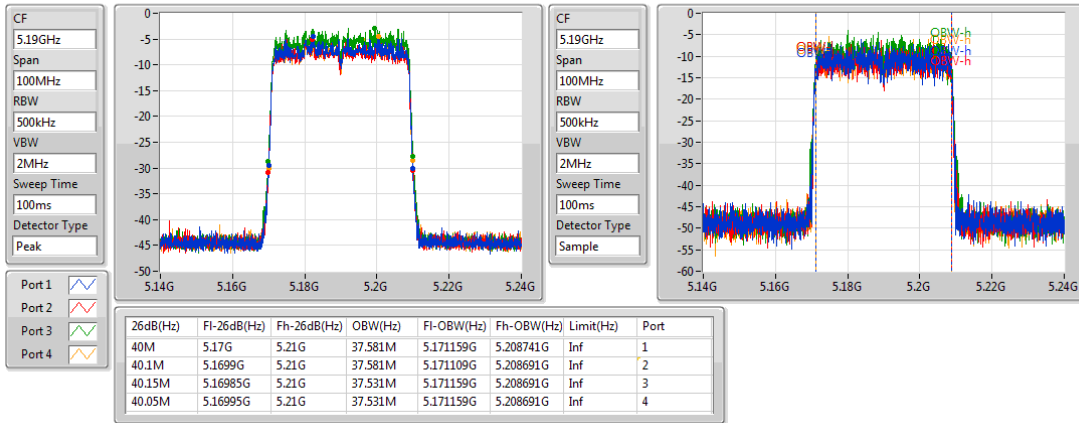

802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5240MHz

17/04/2019

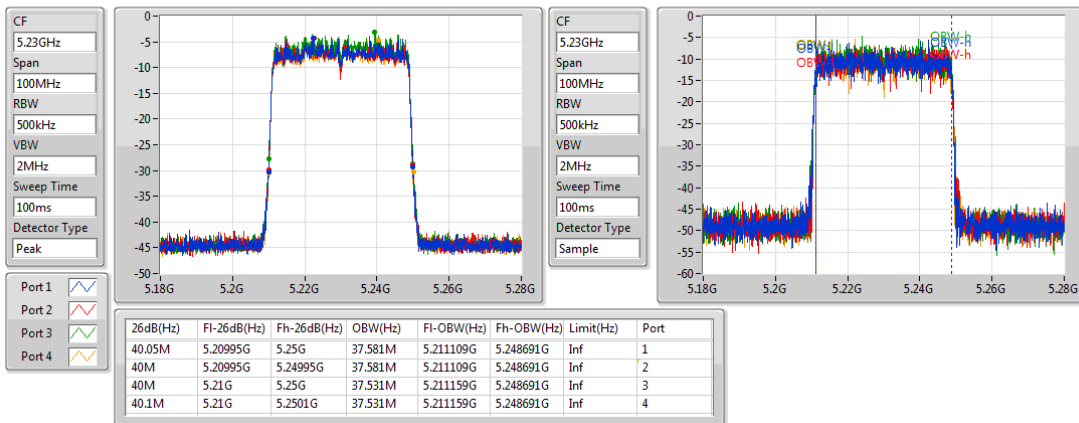


802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
5190MHz

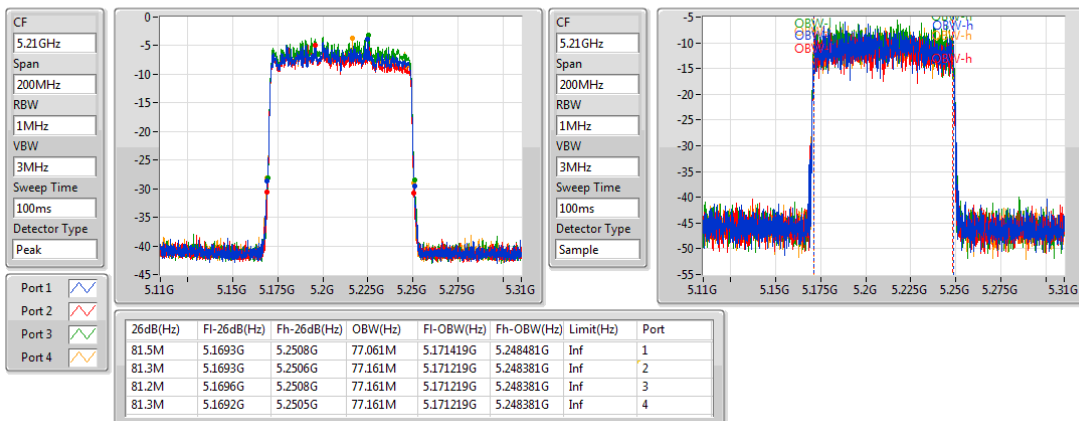
17/04/2019


802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
5230MHz

17/04/2019


802.11ax HEW80-BF_Nss1,(MCS0)_4TX
EBW
5210MHz

17/04/2019



**For Outdoor use for 5G Band 1:****Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ax HEW20_Nss4,(MCS0)_4TX	21.925M	18.991M	19M0D1D	21.4M	18.916M
802.11ax HEW40_Nss4,(MCS0)_4TX	40.35M	37.631M	37M6D1D	40.1M	37.481M
802.11ax HEW80_Nss4,(MCS0)_4TX	82.1M	77.161M	77M2D1D	81.2M	77.061M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;

Result

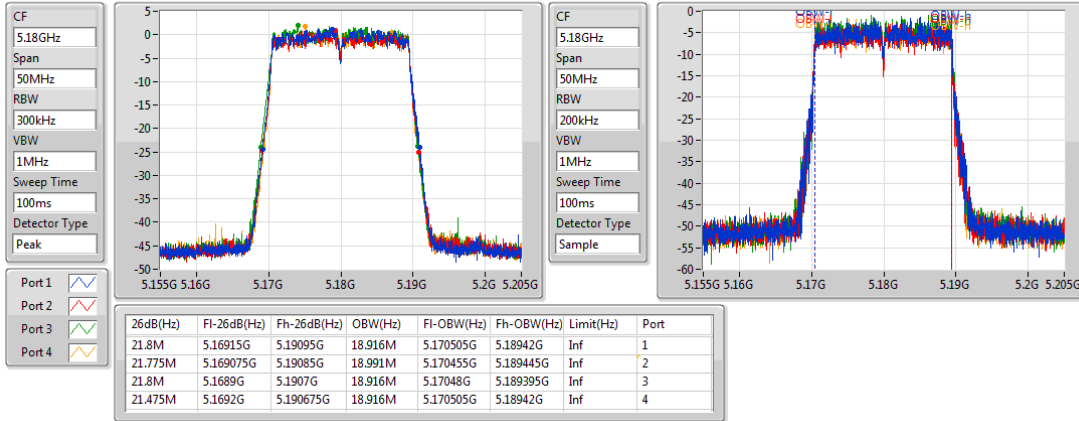
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ax HEW20_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.8M	18.916M	21.775M	18.991M	21.8M	18.916M	21.475M	18.916M
5200MHz	Pass	Inf	21.8M	18.966M	21.7M	18.941M	21.925M	18.916M	21.4M	18.941M
5240MHz	Pass	Inf	21.775M	18.966M	21.8M	18.966M	21.9M	18.941M	21.45M	18.966M
802.11ax HEW40_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	40.35M	37.581M	40.3M	37.581M	40.1M	37.531M	40.15M	37.581M
5230MHz	Pass	Inf	40.35M	37.631M	40.25M	37.531M	40.1M	37.481M	40.2M	37.631M
802.11ax HEW80_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	81.6M	77.161M	81.2M	77.061M	81.8M	77.061M	82.1M	77.161M

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

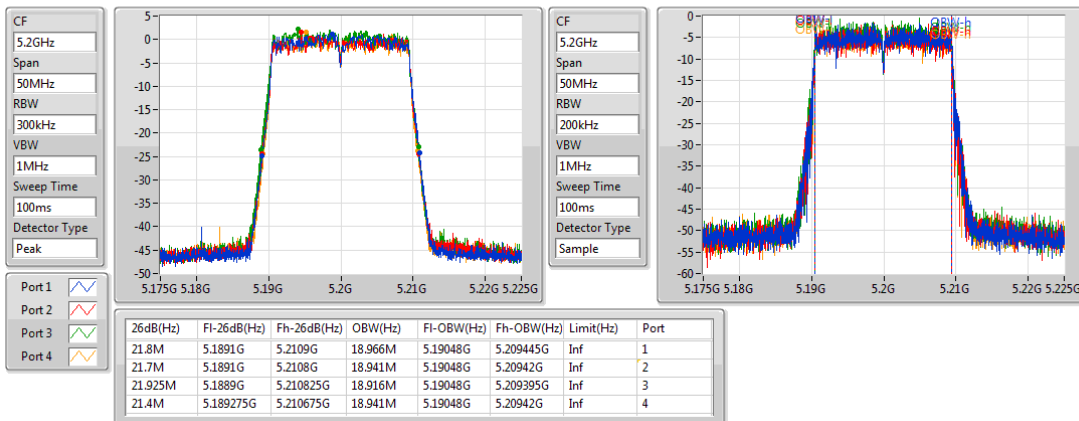
Port X-OBW = Port X 99% occupied bandwidth;

802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
5180MHz

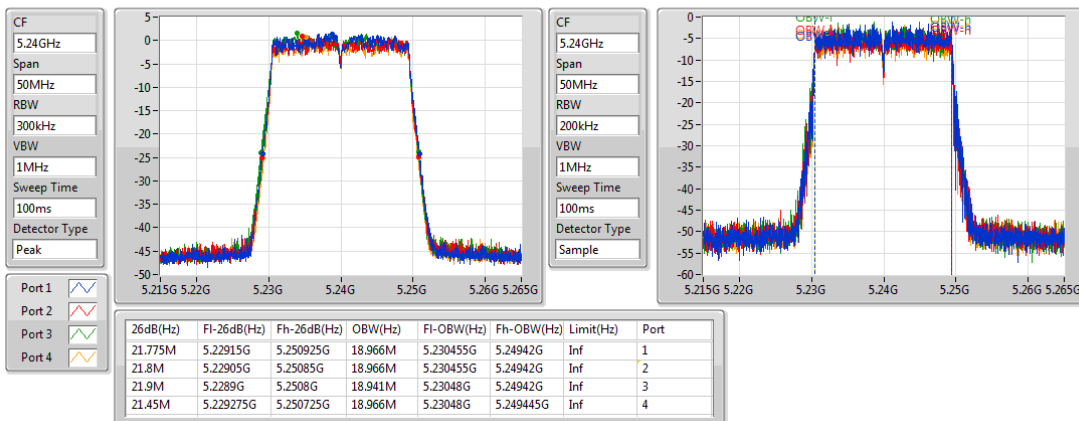
16/04/2019


802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
5200MHz

16/04/2019

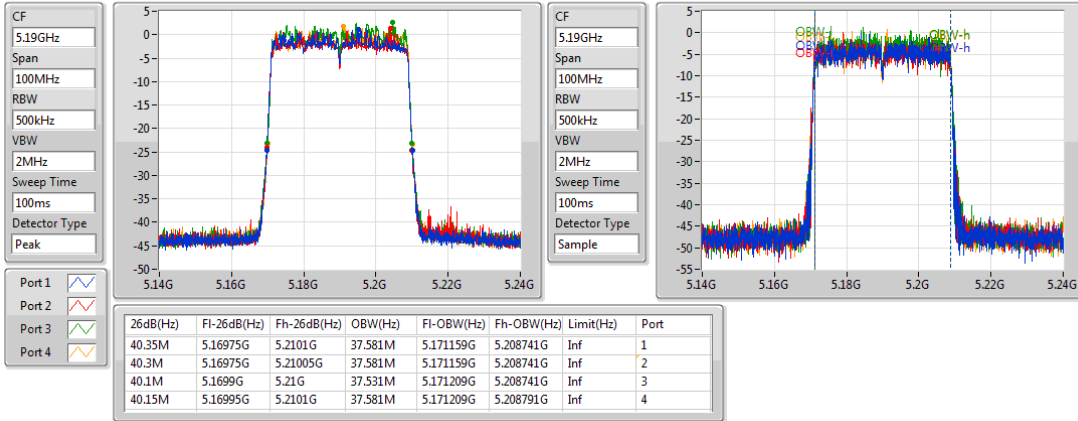

802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
5240MHz

16/04/2019

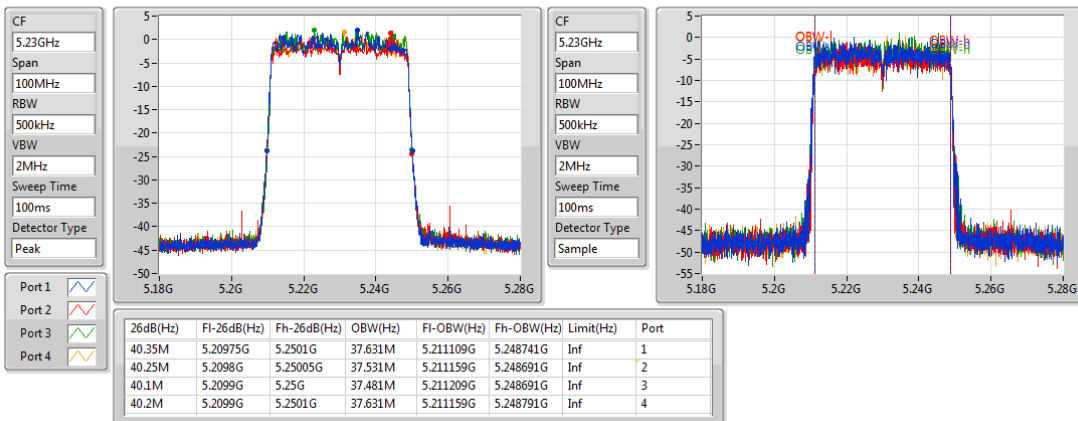


802.11ax HEW40_Nss4,(MCS0)_4TX
EBW
5190MHz

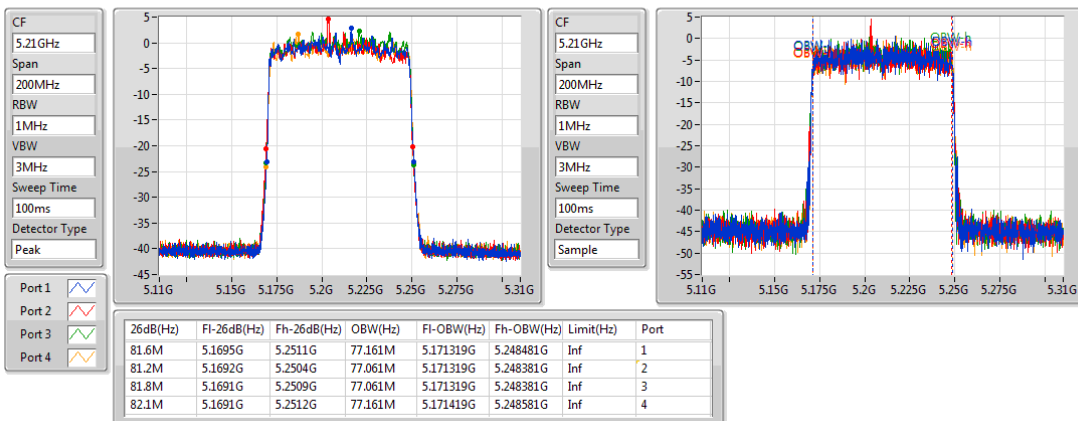
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802.11ax HEW40_Nss4,(MCS0)_4TX
EBW
5230MHz

16/04/2019


802.11ax HEW80_Nss4,(MCS0)_4TX
EBW
5210MHz

16/04/2019



**For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 4:
Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	43.125M	17.891M	17M9D1D	38.575M	16.842M
802.11ax HEW20_Nss1,(MCS0)_1TX	41.45M	19.89M	19M9D1D	36.725M	19.065M
802.11ax HEW40_Nss1,(MCS0)_1TX	79.6M	38.331M	38M3D1D	39.95M	37.531M
802.11ax HEW80_Nss1,(MCS0)_1TX	81.5M	77.161M	77M2D1D	81.5M	77.161M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	16.325M	16.617M	16M6D1D	16.325M	16.567M
802.11ax HEW20_Nss1,(MCS0)_1TX	18.975M	18.991M	19M0D1D	18.925M	18.966M
802.11ax HEW40_Nss1,(MCS0)_1TX	37.55M	37.731M	37M7D1D	37.5M	37.581M
802.11ax HEW80_Nss1,(MCS0)_1TX	76.7M	78.161M	78M2D1D	76.7M	78.161M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;

Result

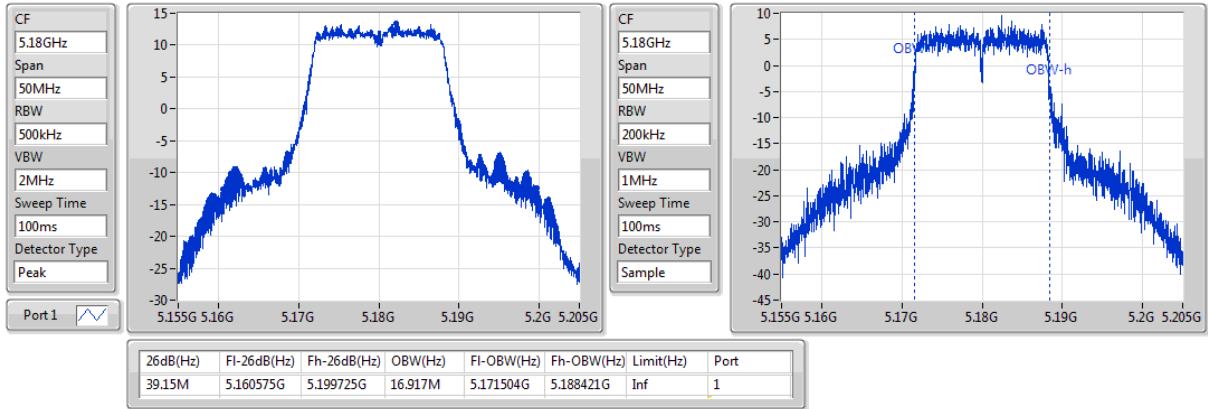
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11a_Nss1,(6Mbps)_1TX	-	-	-	-
5180MHz	Pass	Inf	39.15M	16.917M
5200MHz	Pass	Inf	43.125M	17.891M
5240MHz	Pass	Inf	38.575M	16.842M
5745MHz	Pass	500k	16.325M	16.567M
5785MHz	Pass	500k	16.325M	16.567M
5825MHz	Pass	500k	16.325M	16.617M
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-
5180MHz	Pass	Inf	36.725M	19.065M
5200MHz	Pass	Inf	41.45M	19.89M
5240MHz	Pass	Inf	41M	19.215M
5745MHz	Pass	500k	18.975M	18.991M
5785MHz	Pass	500k	18.975M	18.966M
5825MHz	Pass	500k	18.925M	18.966M
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-	-	-
5190MHz	Pass	Inf	39.95M	37.531M
5230MHz	Pass	Inf	79.6M	38.331M
5755MHz	Pass	500k	37.5M	37.581M
5795MHz	Pass	500k	37.55M	37.731M
802.11ax HEW80_Nss1,(MCS0)_1TX	-	-	-	-
5210MHz	Pass	Inf	81.5M	77.161M
5775MHz	Pass	500k	76.7M	78.161M

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

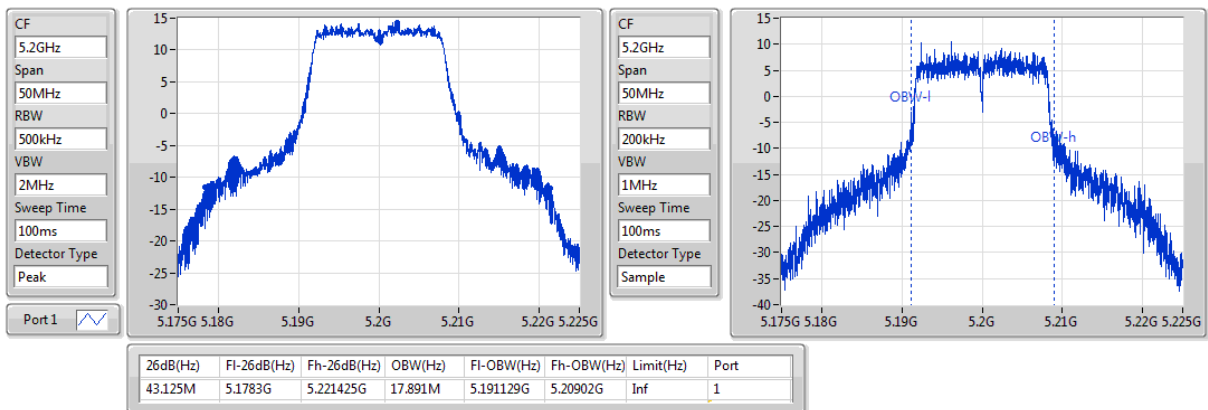
Port X-OBW = Port X 99% occupied bandwidth;

802.11a_Nss1,(6Mbps)_1TX
EBW
5180MHz

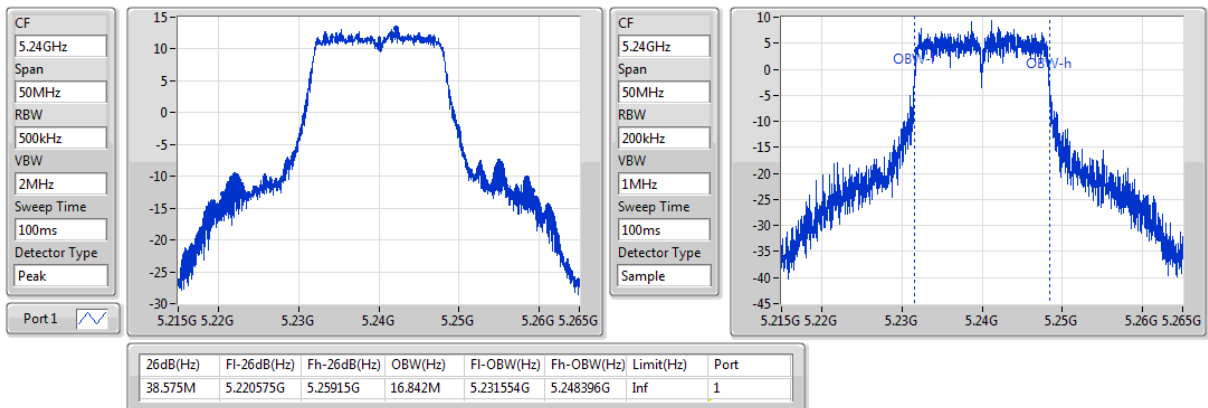
30/03/2019


802.11a_Nss1,(6Mbps)_1TX
EBW
5200MHz

30/03/2019

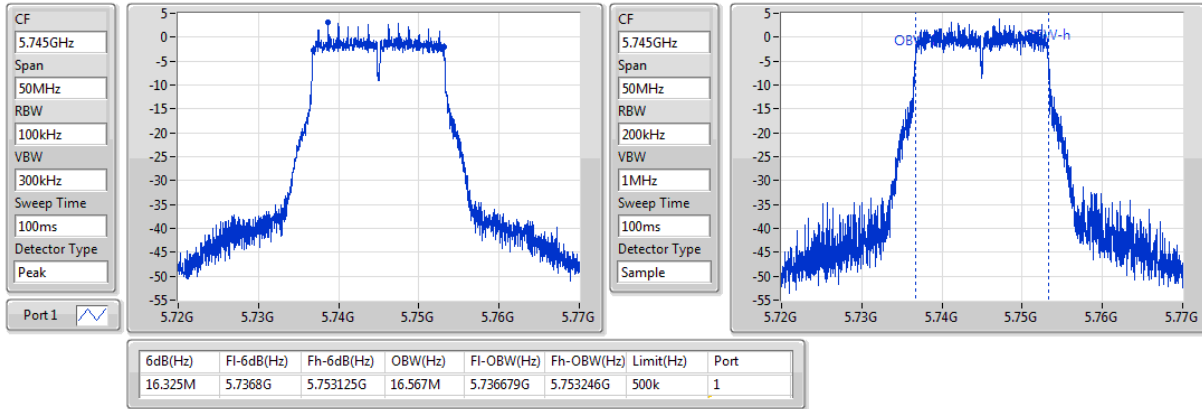

802.11a_Nss1,(6Mbps)_1TX
EBW
5240MHz

30/03/2019

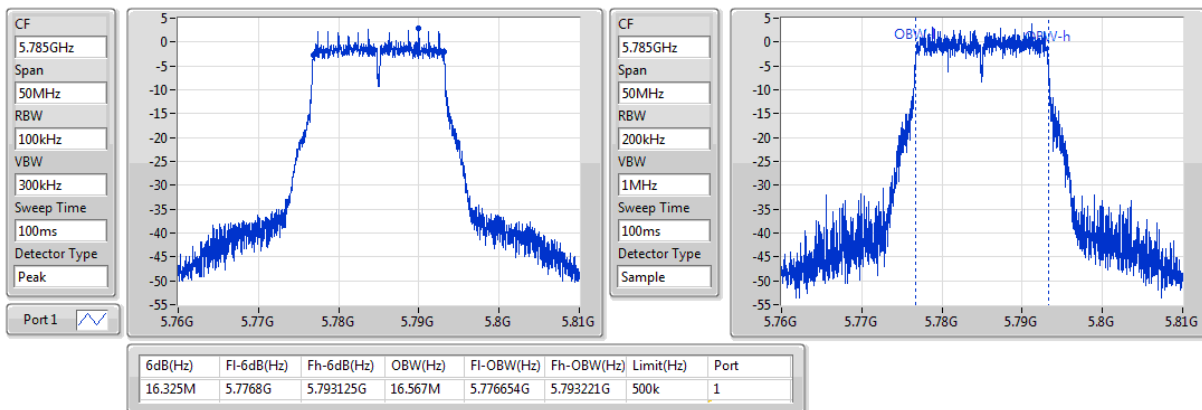


802.11a_Nss1,(6Mbps)_1TX
EBW
5745MHz

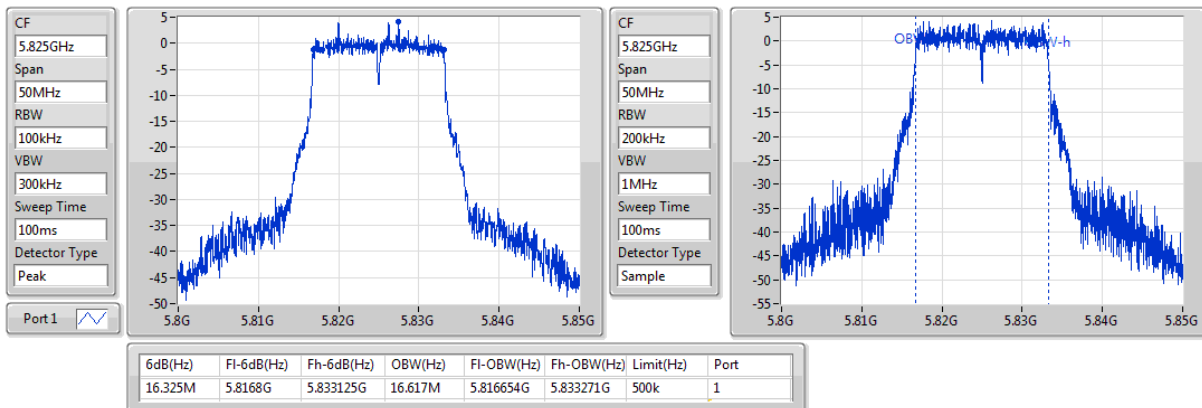
30/03/2019


802.11a_Nss1,(6Mbps)_1TX
EBW
5785MHz

30/03/2019

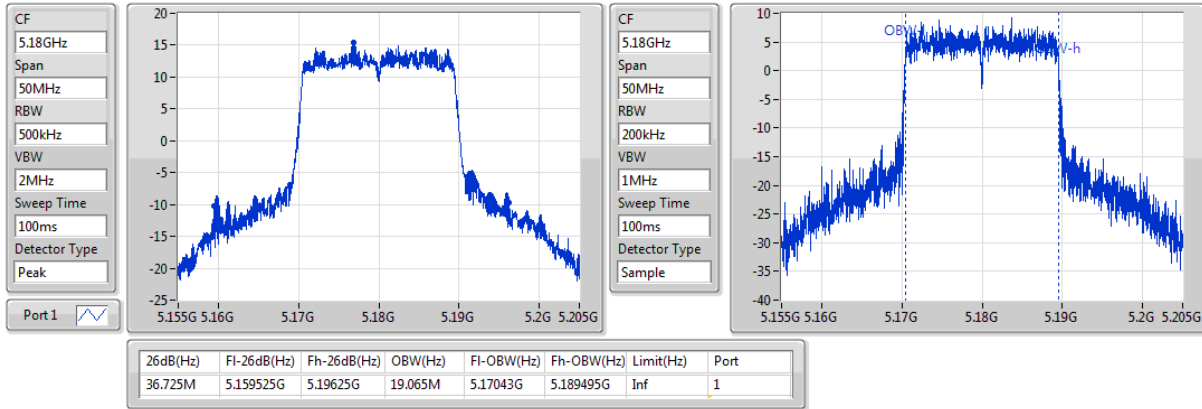

802.11a_Nss1,(6Mbps)_1TX
EBW
5825MHz

30/03/2019

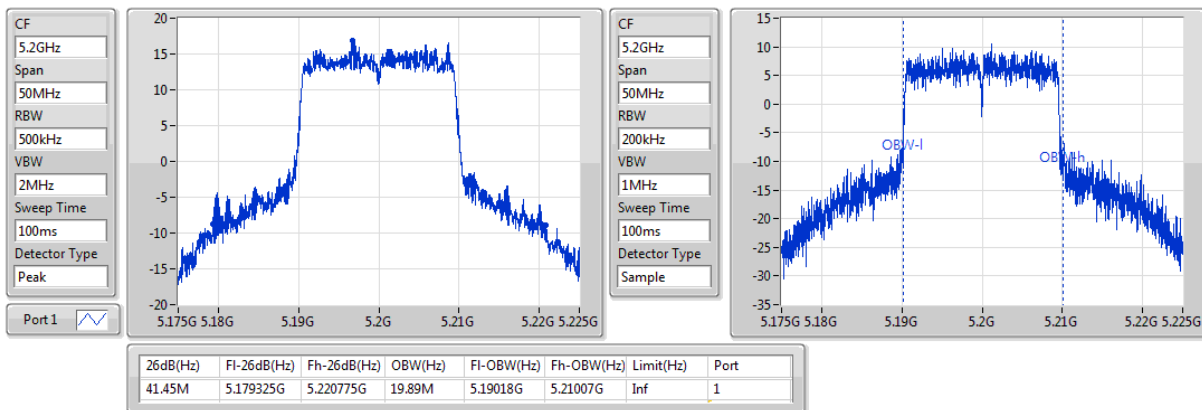


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5180MHz

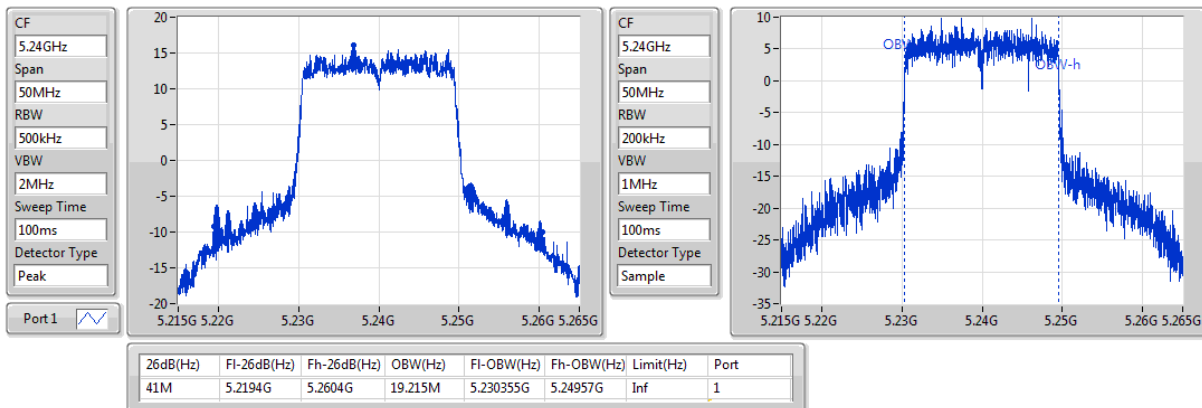
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802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5200MHz

30/03/2019

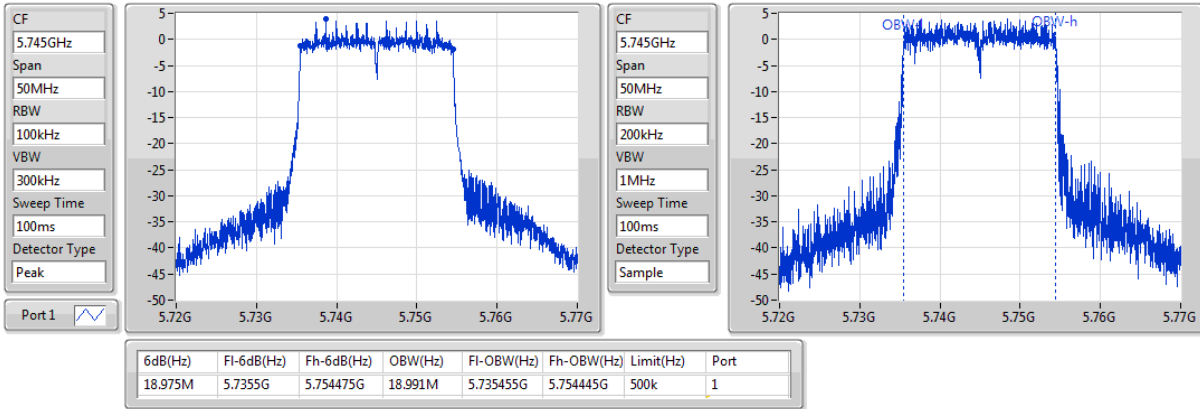

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5240MHz

30/03/2019

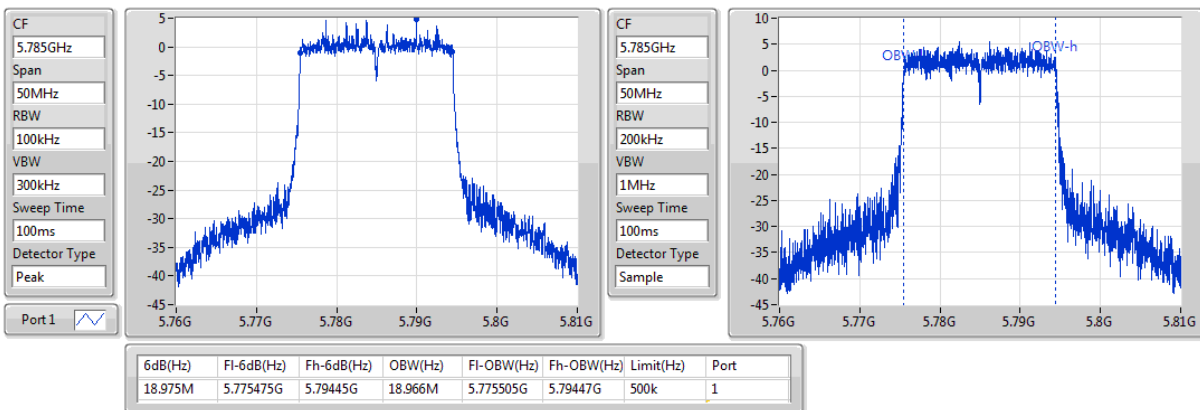


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5745MHz

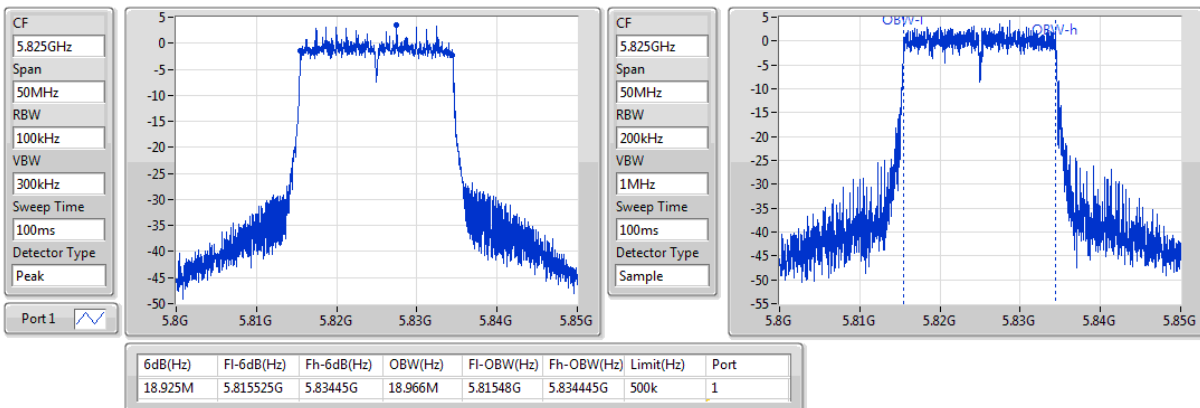
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802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5785MHz

30/03/2019

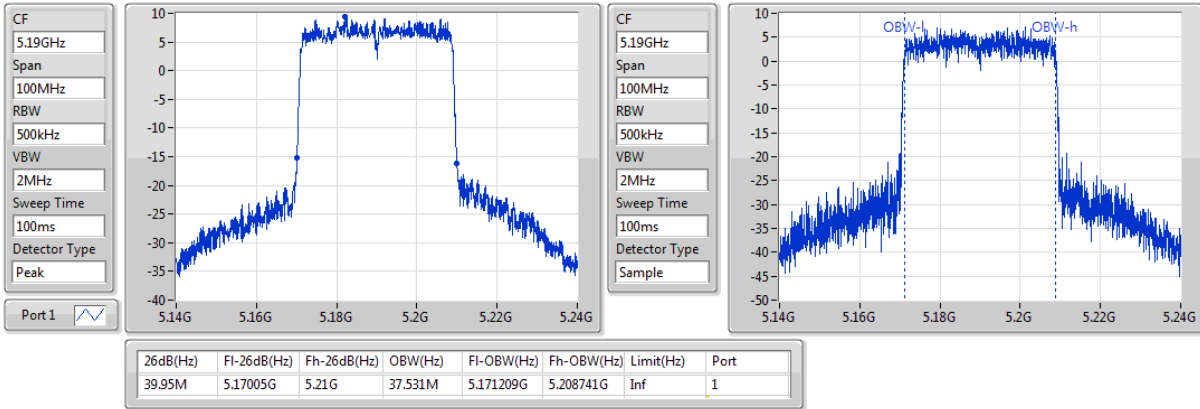

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5825MHz

30/03/2019

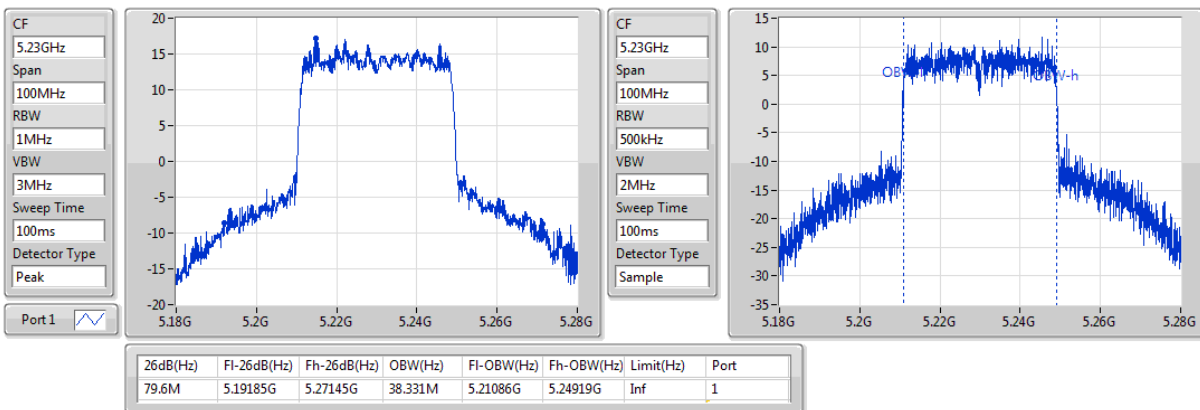


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
5190MHz

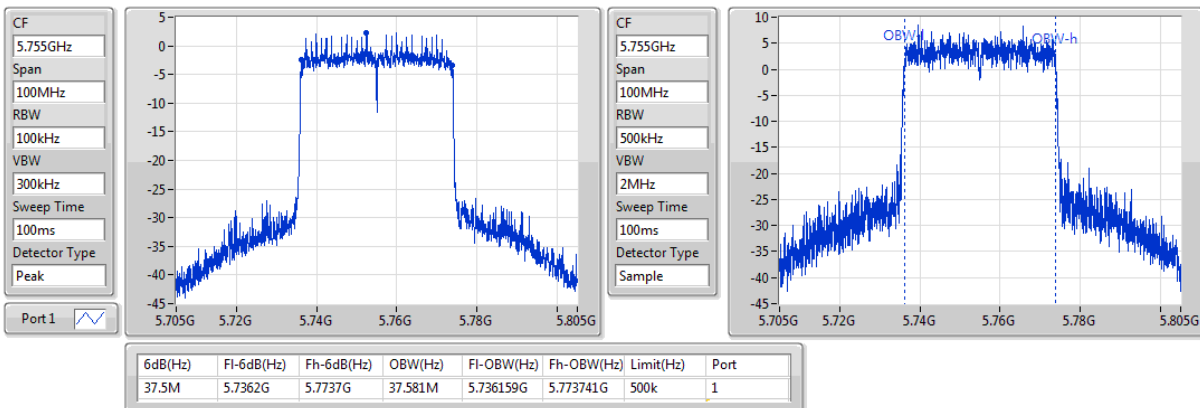
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802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
5230MHz

30/03/2019

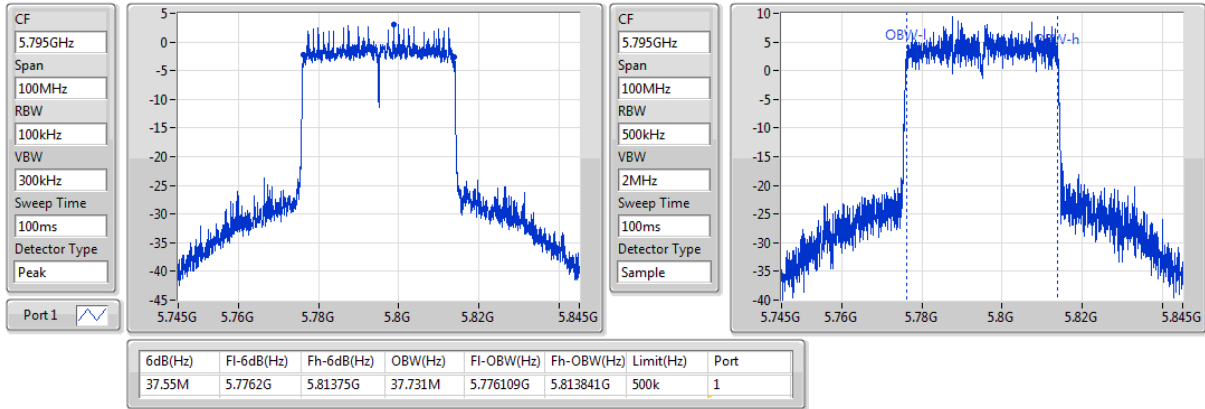

802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
5755MHz

30/03/2019

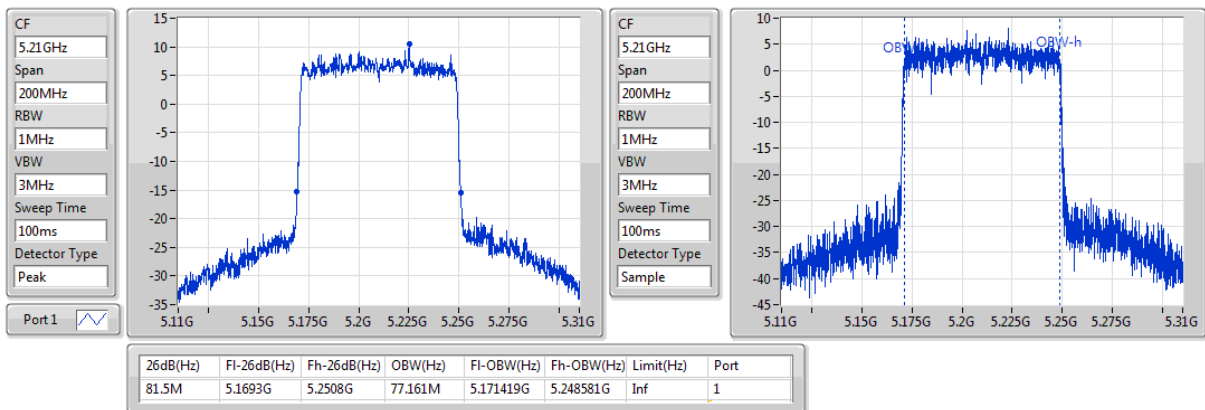


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
5795MHz

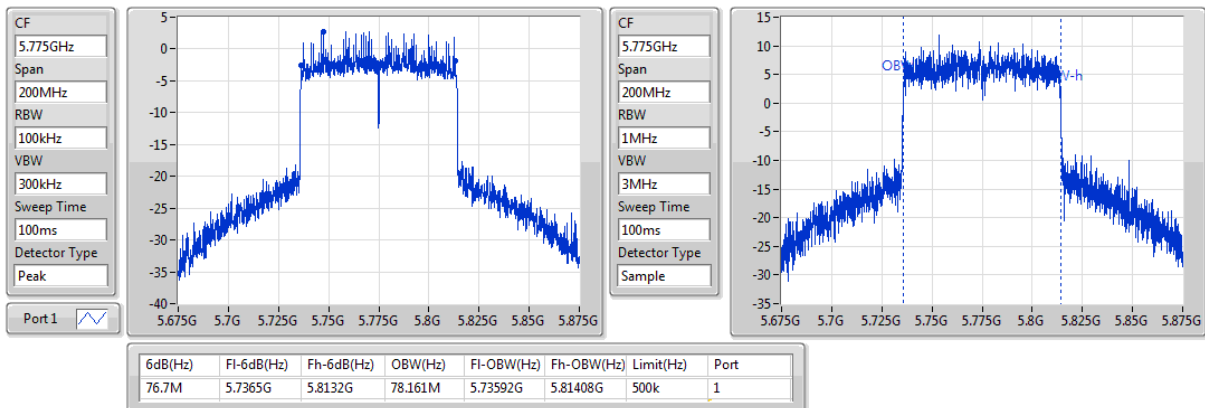
30/03/2019


802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
5210MHz

30/03/2019


802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
5775MHz

30/03/2019



For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 4:
Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ax HEW20_Nss2,(MCS0)_2TX	45.4M	19.94M	19M9D1D	22.525M	18.966M
802.11ax HEW40_Nss2,(MCS0)_2TX	83.75M	38.181M	38M2D1D	40M	37.481M
802.11ax HEW80_Nss2,(MCS0)_2TX	81.9M	77.061M	77M1D1D	81.4M	76.862M
5.725-5.85GHz	-	-	-	-	-
802.11ax HEW20_Nss2,(MCS0)_2TX	19M	18.966M	19M0D1D	18.75M	18.916M
802.11ax HEW40_Nss2,(MCS0)_2TX	37.35M	37.681M	37M7D1D	37M	37.581M
802.11ax HEW80_Nss2,(MCS0)_2TX	76.8M	78.061M	78M1D1D	76.4M	77.661M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;

Result

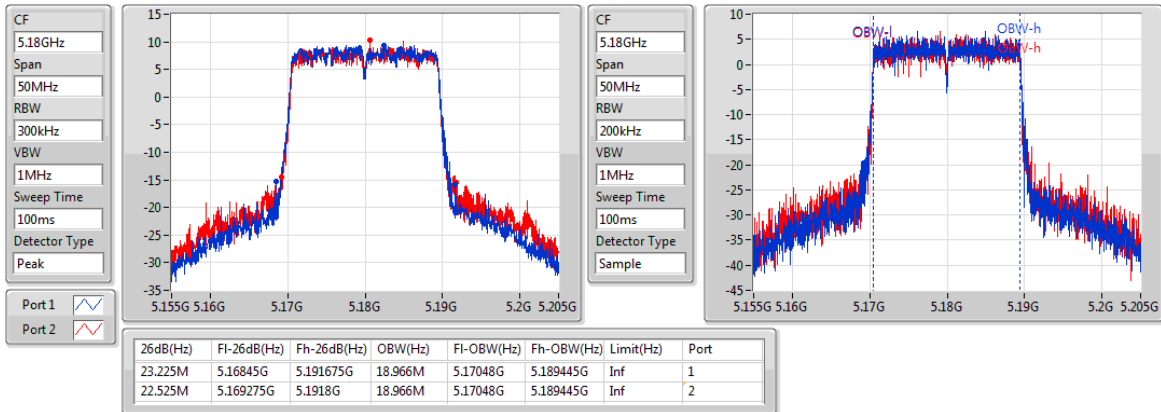
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11ax HEW20_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	23.225M	18.966M	22.525M	18.966M
5200MHz	Pass	Inf	43.475M	19.715M	45.4M	19.94M
5240MHz	Pass	Inf	40.875M	19.065M	42.35M	19.115M
5745MHz	Pass	500k	19M	18.966M	18.75M	18.916M
5785MHz	Pass	500k	18.925M	18.941M	18.9M	18.966M
5825MHz	Pass	500k	19M	18.941M	18.875M	18.941M
802.11ax HEW40_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	Inf	40M	37.531M	40.15M	37.481M
5230MHz	Pass	Inf	77.2M	37.931M	83.75M	38.181M
5755MHz	Pass	500k	37M	37.681M	37.35M	37.581M
5795MHz	Pass	500k	37.05M	37.681M	37.3M	37.631M
802.11ax HEW80_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	Inf	81.9M	77.061M	81.4M	76.862M
5775MHz	Pass	500k	76.8M	78.061M	76.4M	77.661M

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

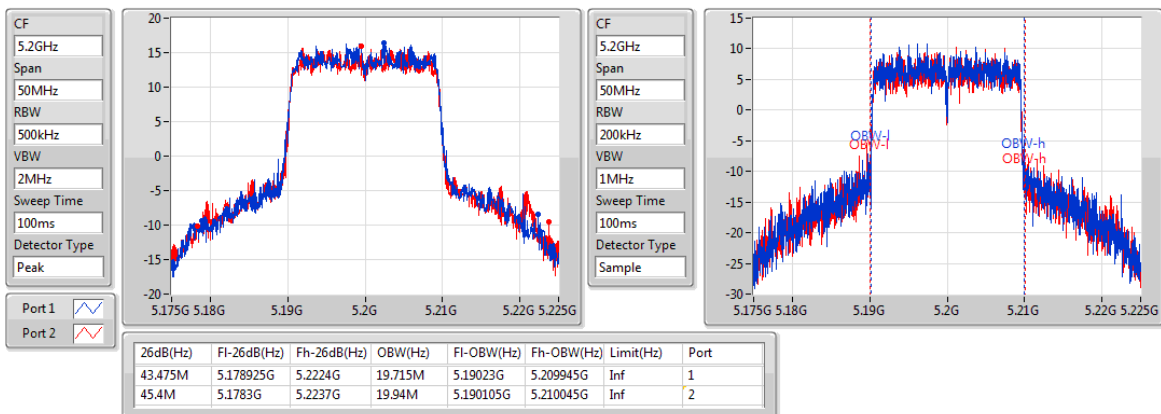
Port X-OBW = Port X 99% occupied bandwidth;

802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
5180MHz

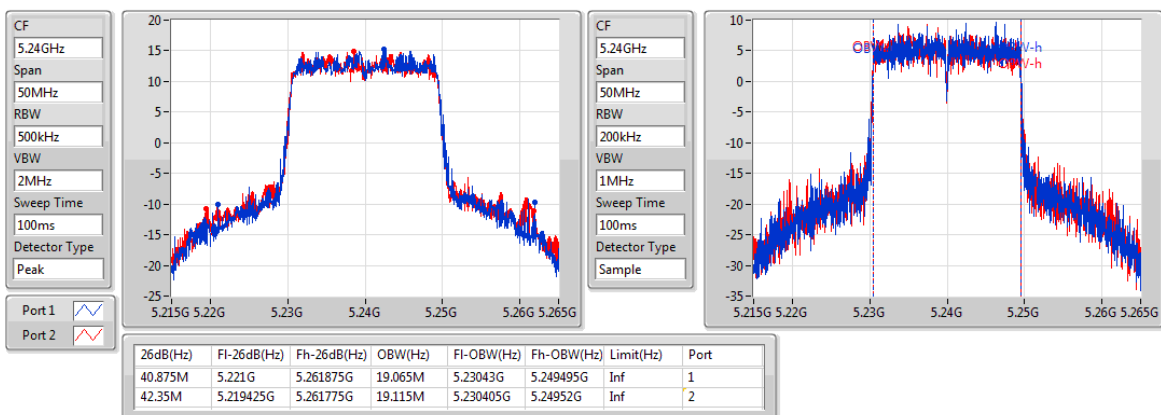
30/03/2019


802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
5200MHz

30/03/2019

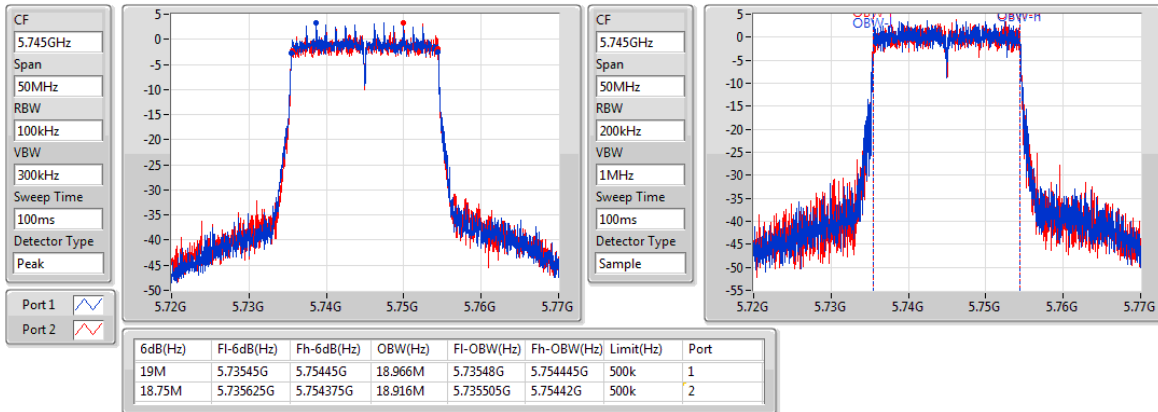

802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
5240MHz

30/03/2019

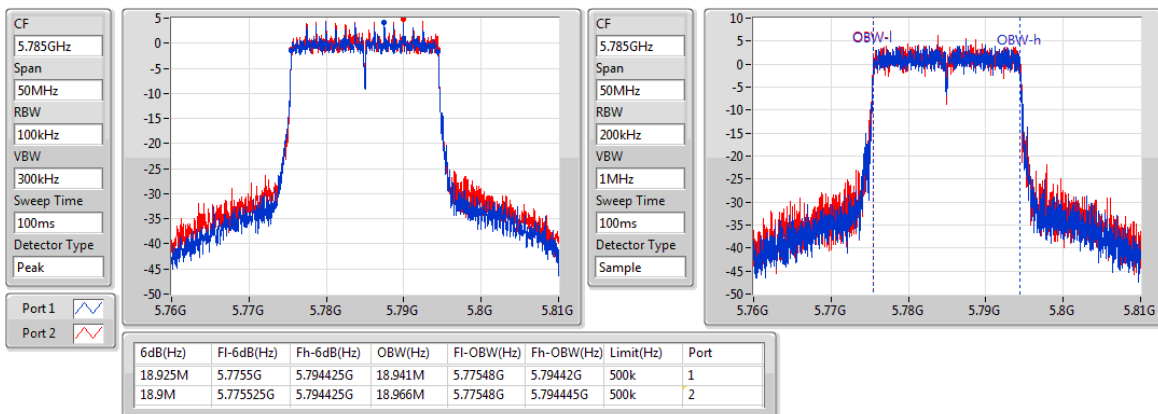


802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
5745MHz

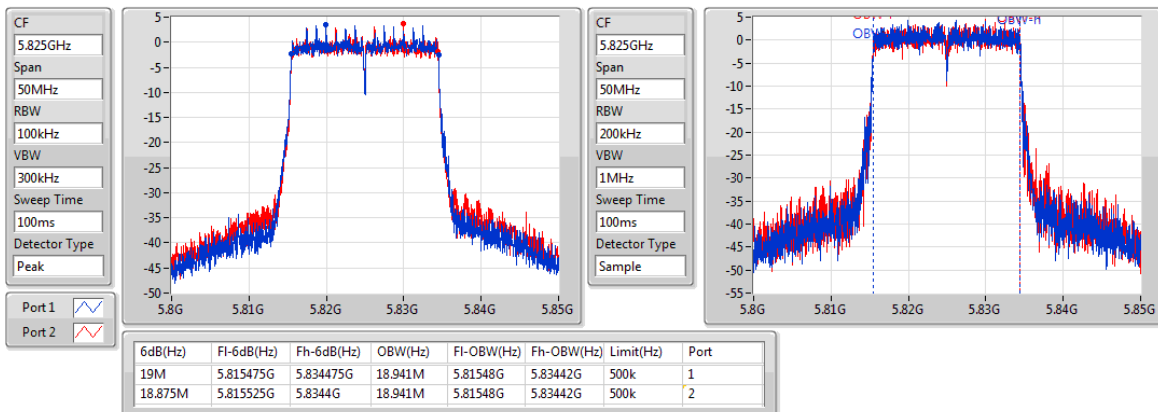
30/03/2019


802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
5785MHz

30/03/2019

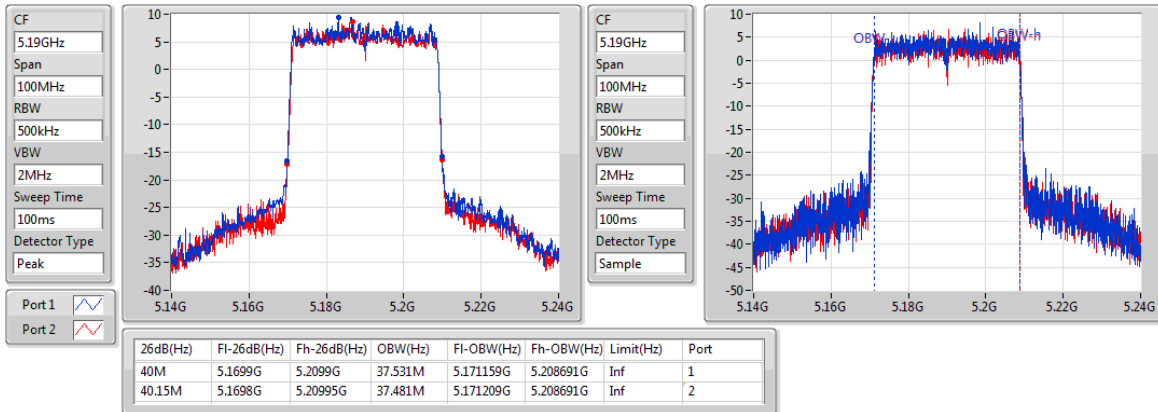

802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
5825MHz

30/03/2019

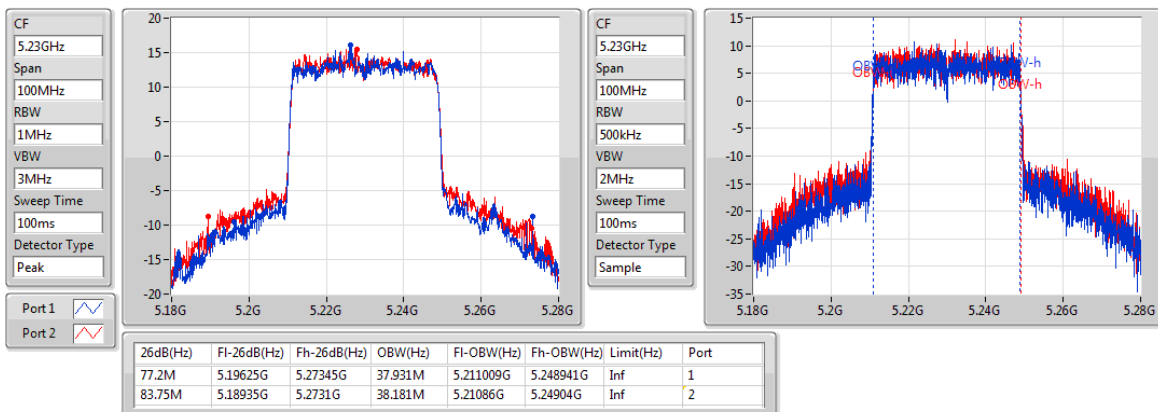


802.11ax HEW40_Nss2,(MCS0)_2TX
EBW
5190MHz

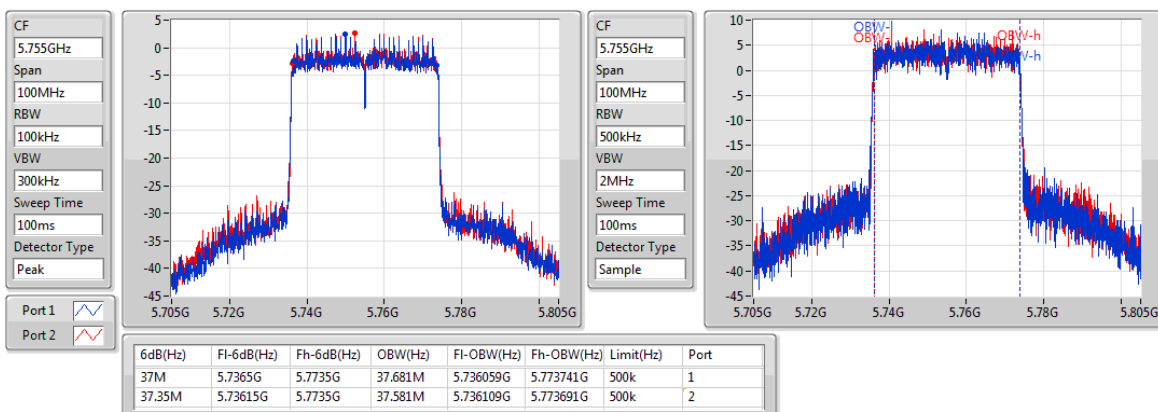
30/03/2019


802.11ax HEW40_Nss2,(MCS0)_2TX
EBW
5230MHz

30/03/2019

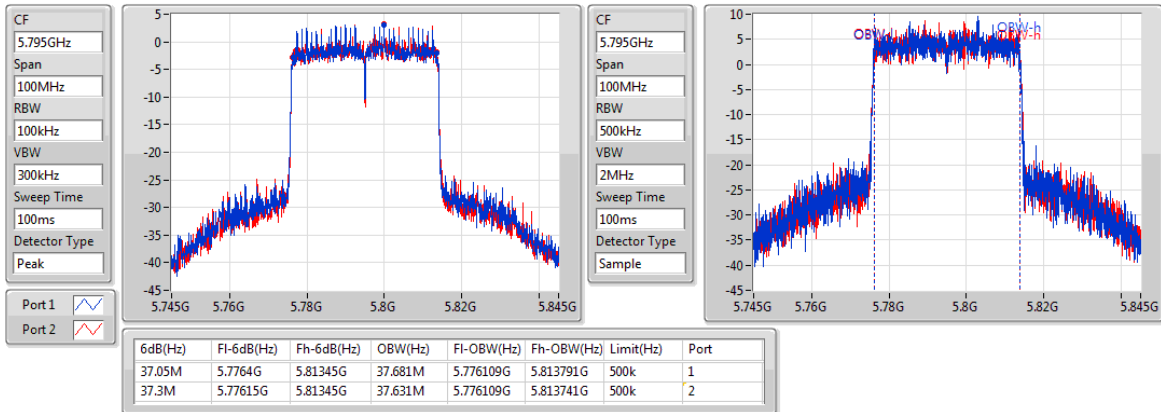

802.11ax HEW40_Nss2,(MCS0)_2TX
EBW
5755MHz

30/03/2019

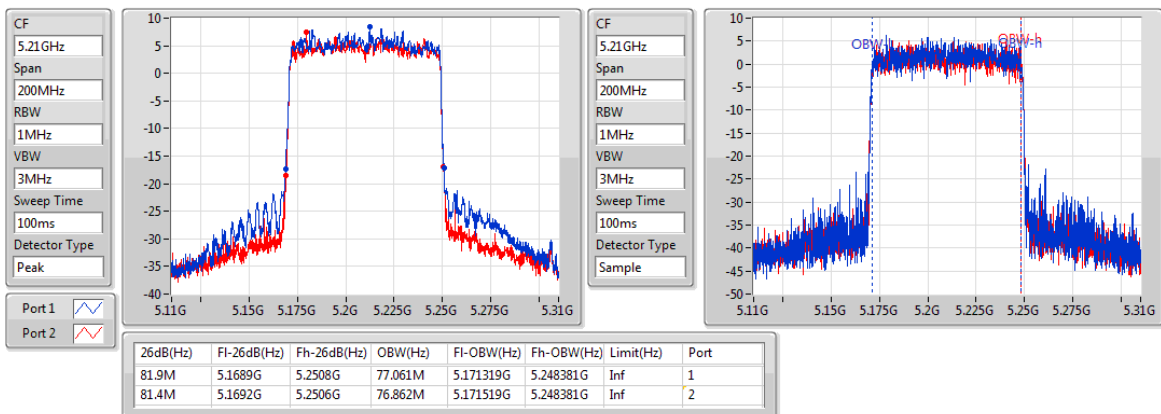


802.11ax HEW40_Nss2,(MCS0)_2TX
EBW
5795MHz

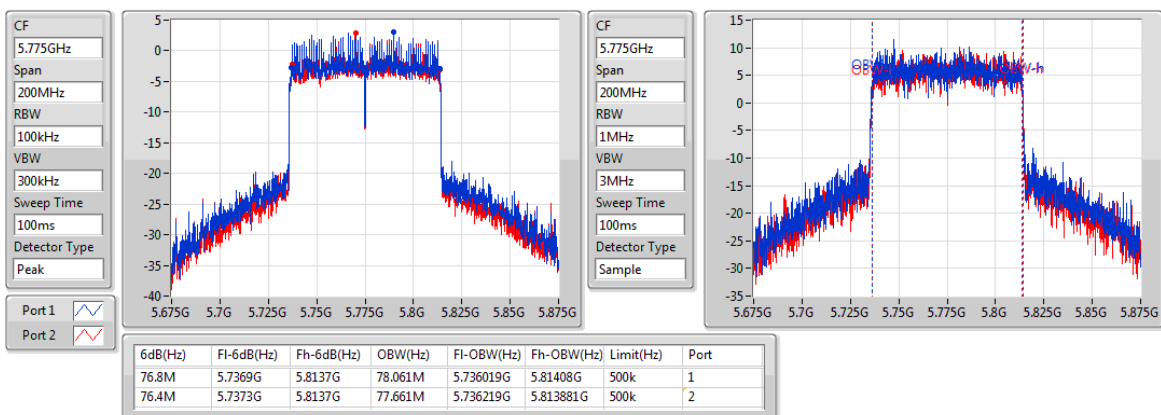
30/03/2019


802.11ax HEW80_Nss2,(MCS0)_2TX
EBW
5210MHz

30/03/2019


802.11ax HEW80_Nss2,(MCS0)_2TX
EBW
5775MHz

30/03/2019



**For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 4:
Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	27.325M	16.667M	16M7D1D	21.775M	16.567M
802.11ax HEW20_Nss1,(MCS0)_4TX	30.5M	19.015M	19M0D1D	21.45M	18.966M
802.11ax HEW40_Nss1,(MCS0)_4TX	49.6M	37.731M	37M7D1D	39.95M	37.531M
802.11ax HEW80_Nss1,(MCS0)_4TX	81.3M	77.161M	77M2D1D	81M	76.962M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	16.35M	16.617M	16M6D1D	16.325M	16.542M
802.11ax HEW20_Nss1,(MCS0)_4TX	19.05M	19.015M	19M0D1D	18.95M	18.916M
802.11ax HEW40_Nss1,(MCS0)_4TX	37.45M	37.731M	37M7D1D	37.05M	37.631M
802.11ax HEW80_Nss1,(MCS0)_4TX	76.9M	77.461M	77M5D1D	76.8M	77.261M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;

Result

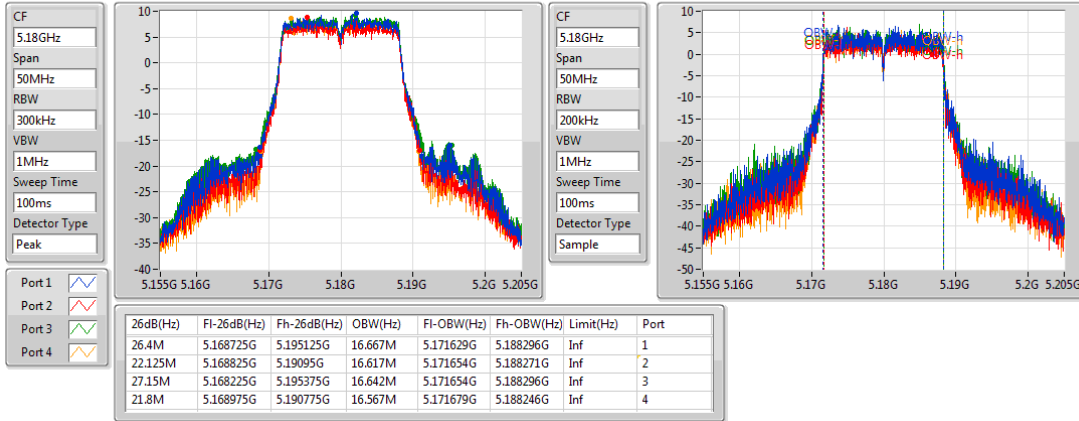
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	26.4M	16.667M	22.125M	16.617M	27.15M	16.642M	21.8M	16.567M
5200MHz	Pass	Inf	26.25M	16.617M	22.05M	16.642M	27.325M	16.642M	21.875M	16.592M
5240MHz	Pass	Inf	26.475M	16.667M	22.45M	16.642M	26.75M	16.667M	21.775M	16.617M
5745MHz	Pass	500k	16.325M	16.542M	16.325M	16.617M	16.325M	16.592M	16.325M	16.567M
5785MHz	Pass	500k	16.325M	16.592M	16.35M	16.592M	16.325M	16.567M	16.35M	16.542M
5825MHz	Pass	500k	16.35M	16.592M	16.325M	16.592M	16.325M	16.592M	16.35M	16.567M
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	24.65M	18.966M	23.35M	18.991M	25.275M	18.991M	21.45M	18.966M
5200MHz	Pass	Inf	27.925M	18.991M	24.8M	18.991M	30.5M	19.015M	22.9M	18.991M
5240MHz	Pass	Inf	29.675M	19.015M	24.675M	18.991M	24.375M	18.991M	21.55M	18.966M
5745MHz	Pass	500k	19M	18.966M	18.975M	18.966M	19M	18.991M	18.975M	18.966M
5785MHz	Pass	500k	18.95M	18.966M	18.975M	18.966M	18.975M	19.015M	19M	18.991M
5825MHz	Pass	500k	18.975M	18.941M	19.025M	18.966M	18.95M	18.916M	19.05M	18.966M
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	40.1M	37.581M	39.95M	37.581M	40.2M	37.531M	40.1M	37.581M
5230MHz	Pass	Inf	49.6M	37.681M	46.5M	37.681M	48M	37.731M	44.2M	37.731M
5755MHz	Pass	500k	37.3M	37.631M	37.3M	37.631M	37.25M	37.681M	37.4M	37.681M
5795MHz	Pass	500k	37.45M	37.631M	37.05M	37.681M	37.25M	37.631M	37.3M	37.731M
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	81.3M	77.061M	81.1M	77.061M	81M	77.161M	81.3M	76.962M
5775MHz	Pass	500k	76.9M	77.461M	76.8M	77.361M	76.8M	77.261M	76.8M	77.361M

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

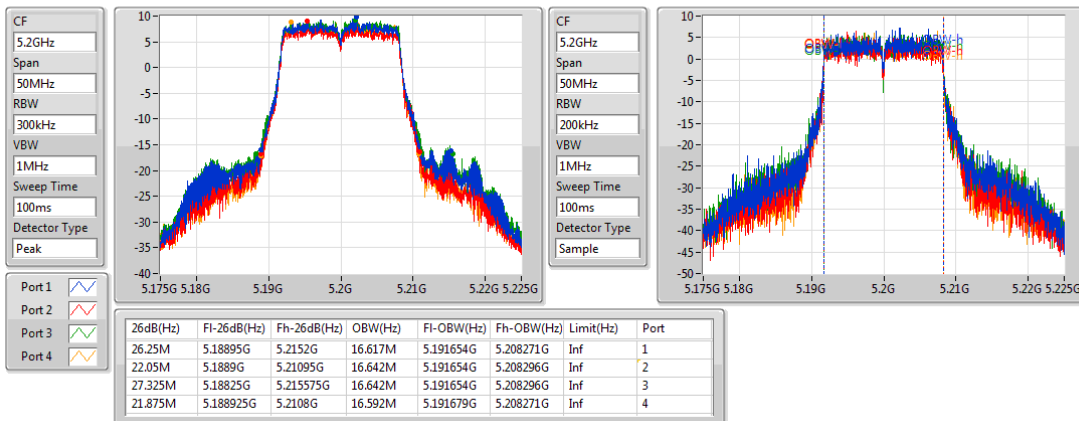
Port X-OBW = Port X 99% occupied bandwidth;

802.11a_Nss1,(6Mbps)_4TX
EBW
5180MHz

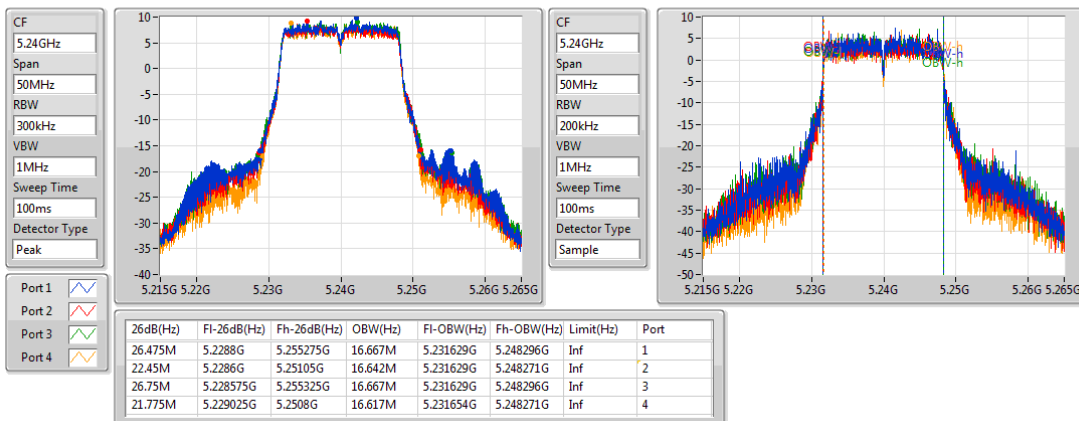
29/03/2019


802.11a_Nss1,(6Mbps)_4TX
EBW
5200MHz

29/03/2019

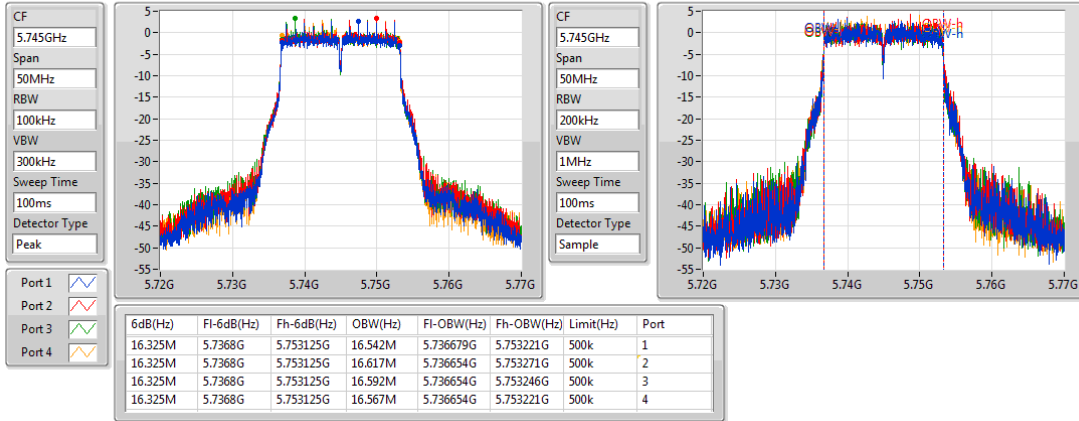

802.11a_Nss1,(6Mbps)_4TX
EBW
5240MHz

29/03/2019

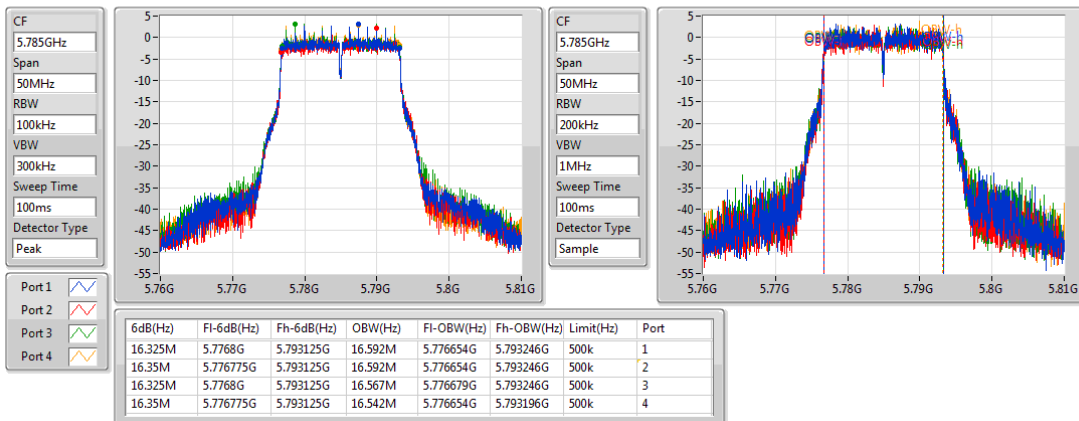


802.11a_Nss1,(6Mbps)_4TX
EBW
5745MHz

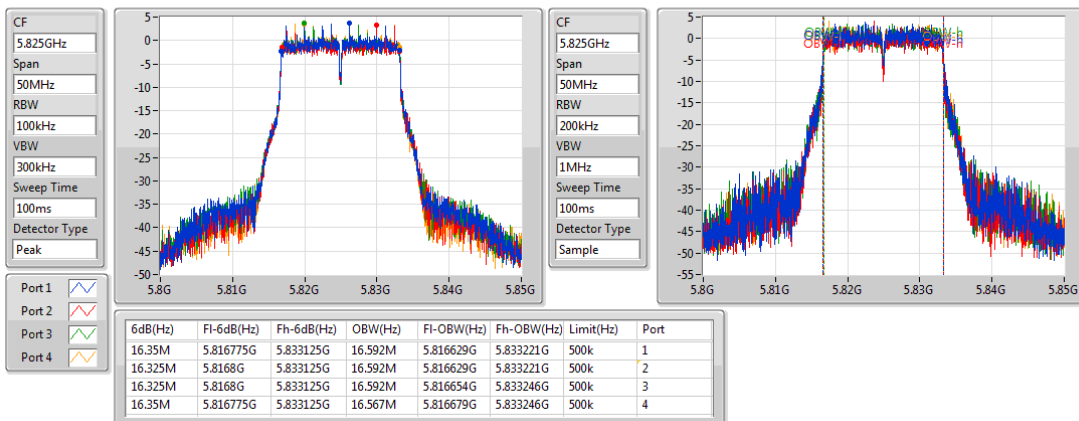
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802.11a_Nss1,(6Mbps)_4TX
EBW
5785MHz

29/03/2019

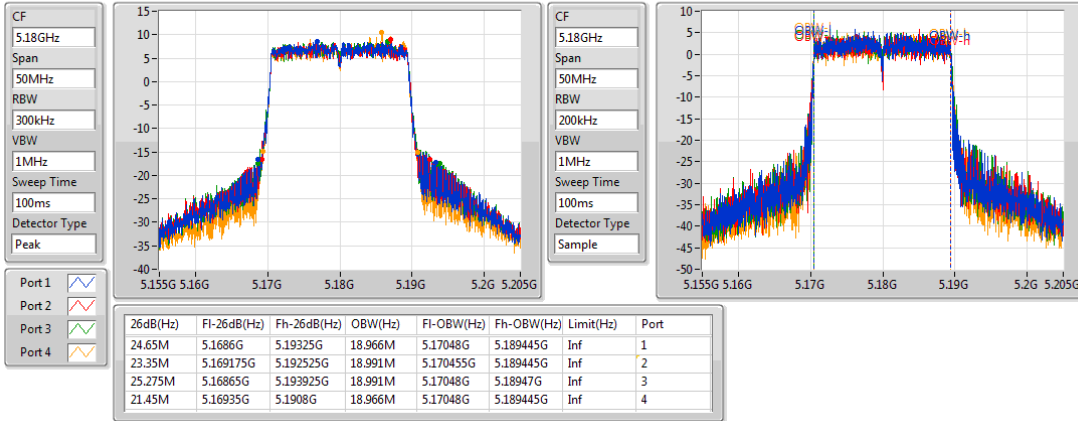

802.11a_Nss1,(6Mbps)_4TX
EBW
5825MHz

29/03/2019

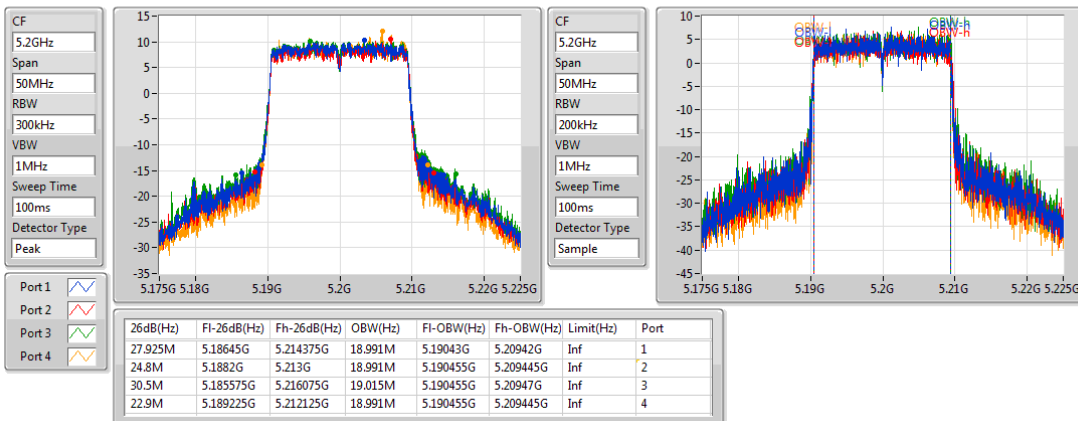


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5180MHz

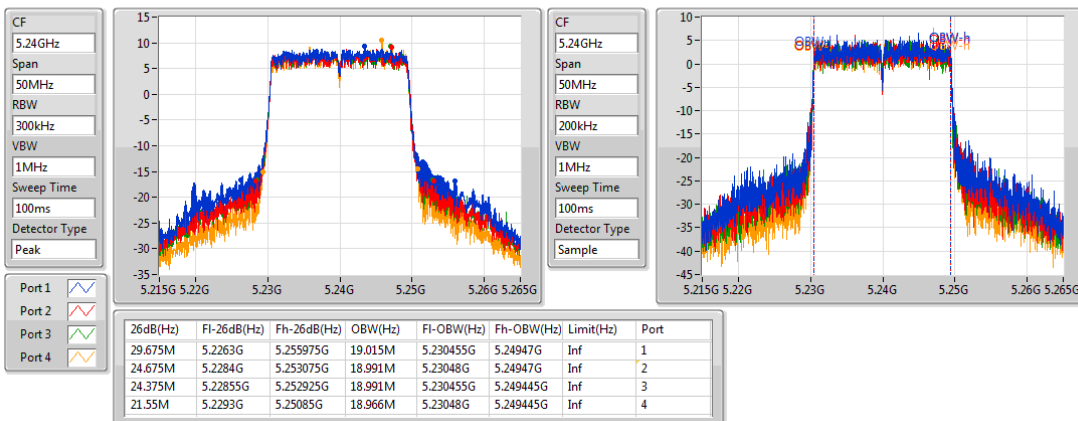
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802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5200MHz

29/03/2019

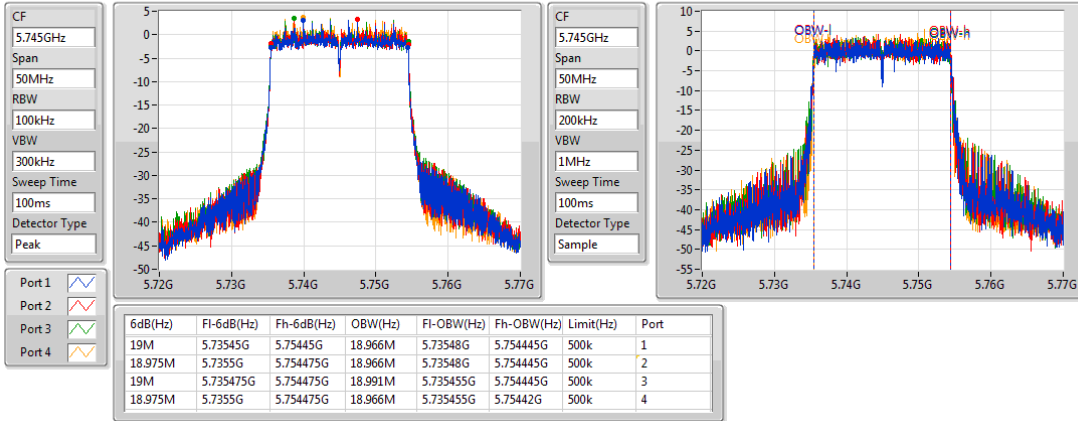

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5240MHz

12/04/2019

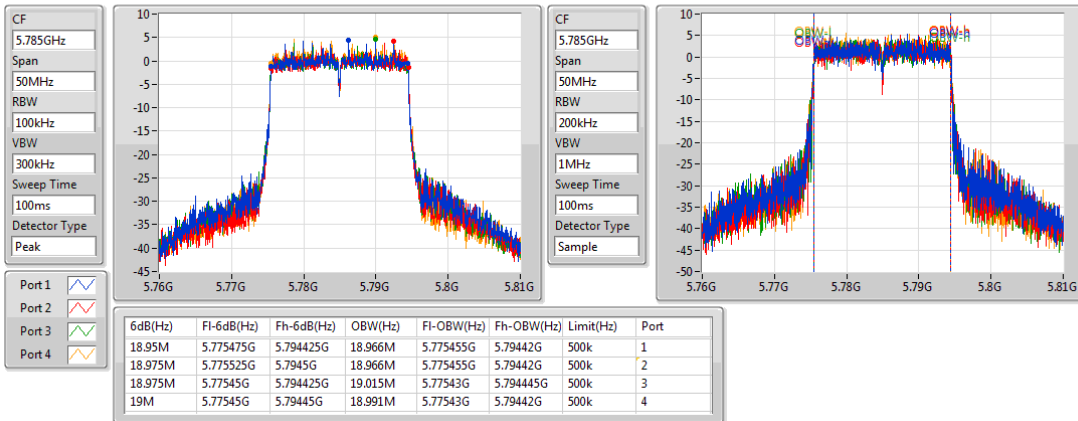


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5745MHz

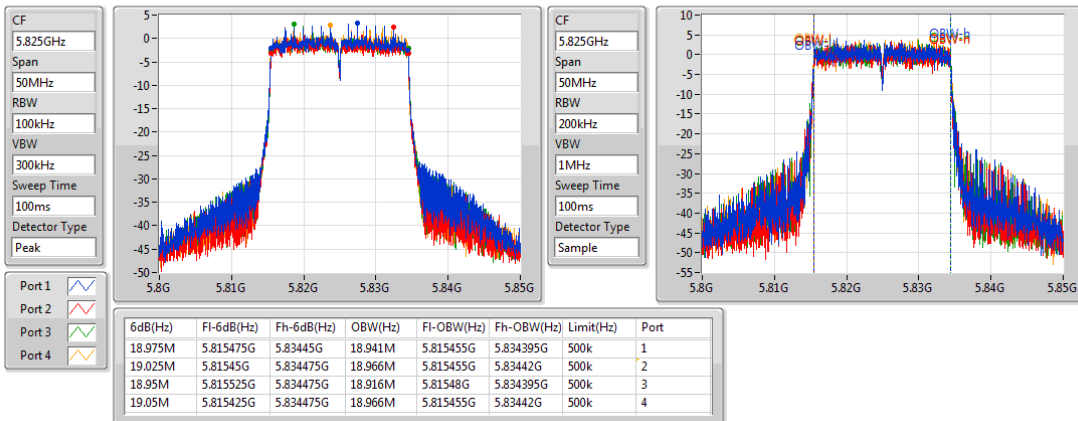
29/03/2019


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5785MHz

29/03/2019

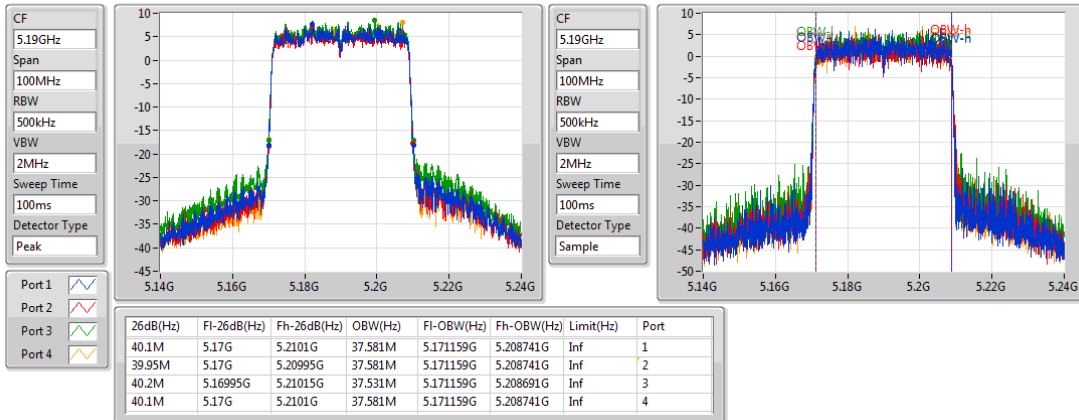

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5825MHz

29/03/2019

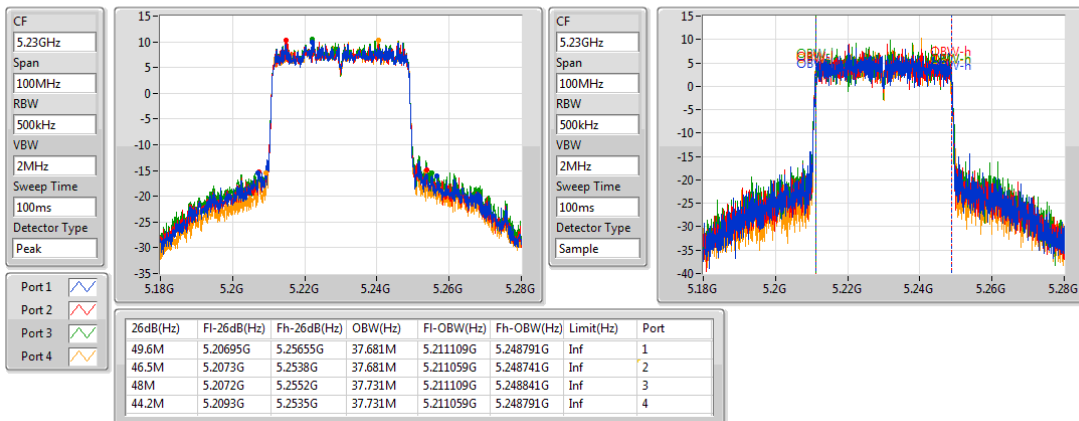


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5190MHz

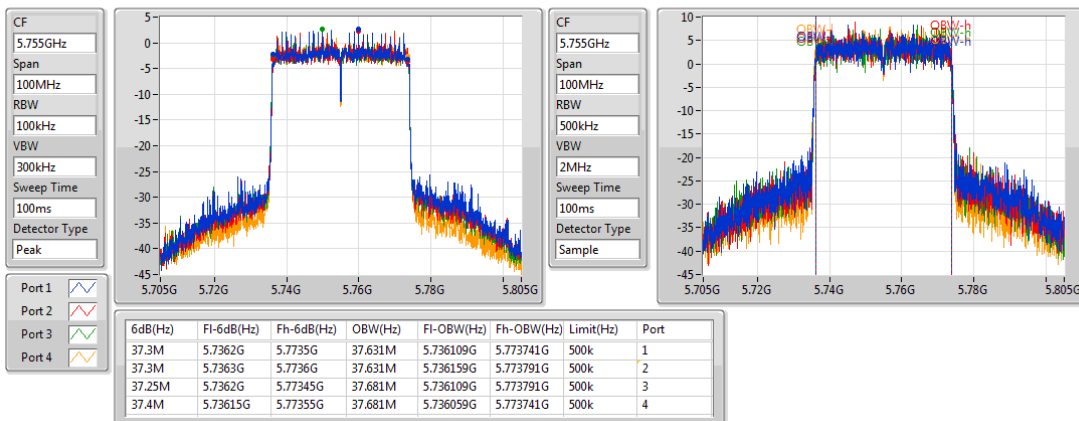
29/03/2019


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5230MHz

12/04/2019


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5755MHz

29/03/2019

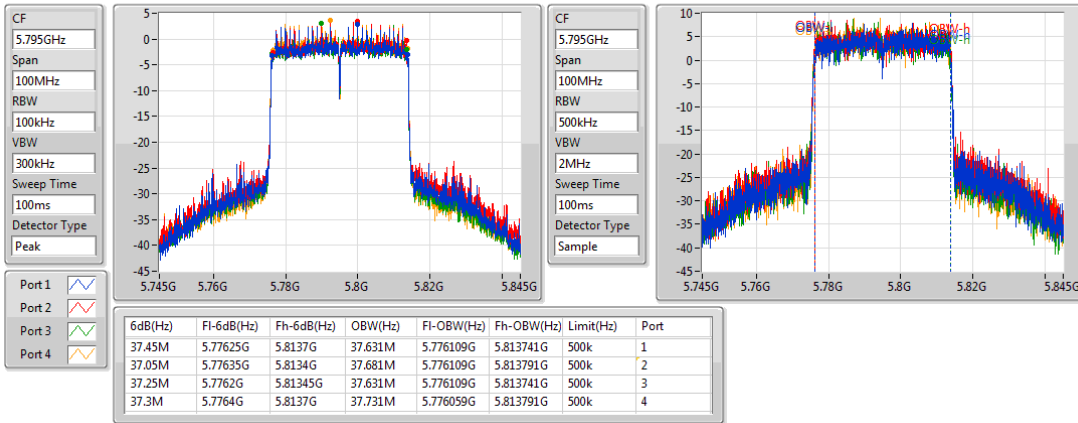


802.11ax HEW40_Nss1,(MCS0)_4TX

5795MHz

EBW

29/03/2019

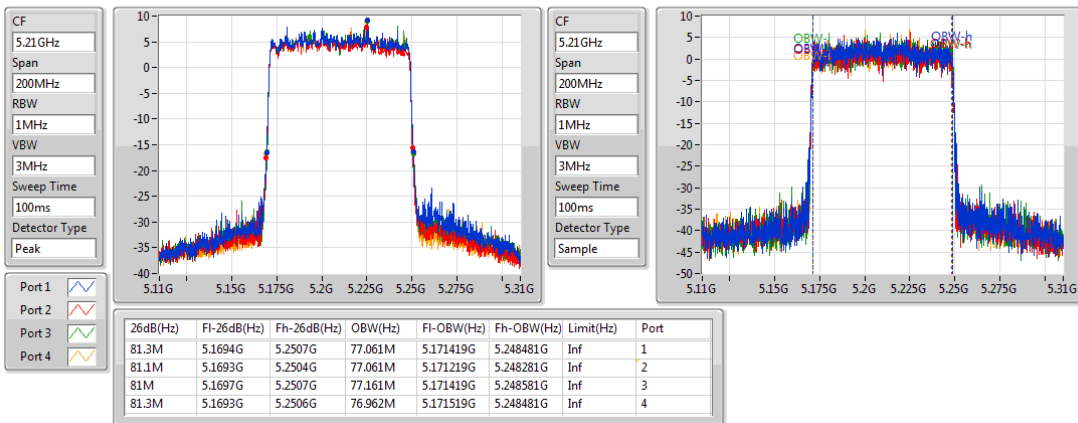


802.11ax HEW80_Nss1,(MCS0)_4TX

5210MHz

EBW

29/03/2019

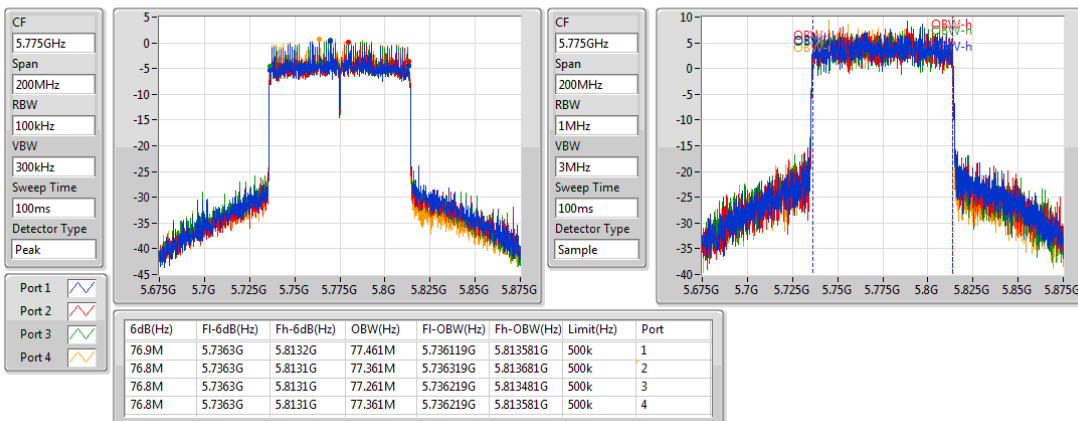


802.11ax HEW80_Nss1,(MCS0)_4TX

5775MHz

EBW

29/03/2019



For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 4:
Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	26.8M	19.015M	19M0D1D	21.375M	18.941M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	40.25M	37.581M	37M6D1D	40M	37.431M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	81.4M	77.161M	77M2D1D	81.1M	76.962M
5.725-5.85GHz	-	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	19.05M	18.991M	19M0D1D	18.9M	18.941M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	37.75M	37.781M	37M8D1D	37.1M	37.531M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	77.5M	77.361M	77M4D1D	76.9M	77.061M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;

Result

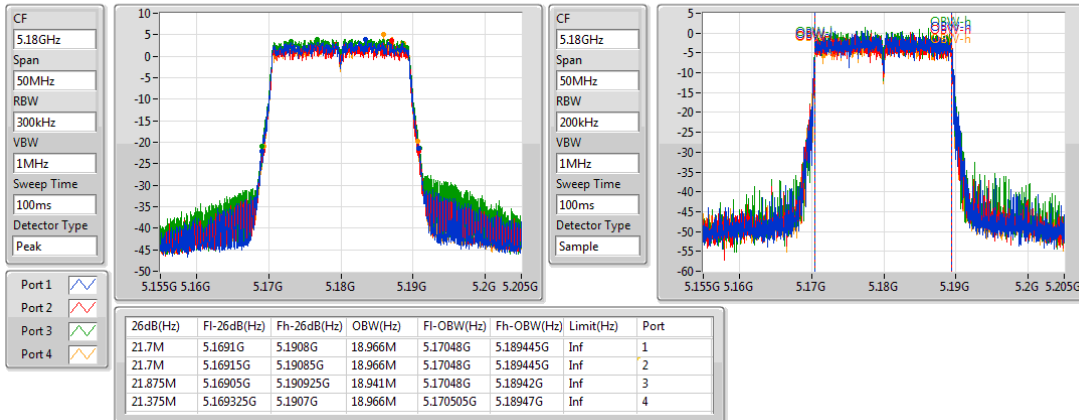
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.7M	18.966M	21.7M	18.966M	21.875M	18.941M	21.375M	18.966M
5200MHz	Pass	Inf	23.025M	18.966M	21.7M	18.966M	23.3M	18.991M	21.4M	18.941M
5240MHz	Pass	Inf	25.925M	18.941M	24.375M	19.015M	26.8M	18.991M	21.7M	18.966M
5745MHz	Pass	500k	19.025M	18.966M	18.975M	18.991M	18.95M	18.966M	18.95M	18.966M
5785MHz	Pass	500k	18.95M	18.991M	19.05M	18.966M	18.975M	18.991M	18.9M	18.991M
5825MHz	Pass	500k	18.975M	18.941M	18.95M	18.966M	18.975M	18.941M	19.05M	18.941M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	40M	37.481M	40.05M	37.431M	40.05M	37.531M	40.2M	37.531M
5230MHz	Pass	Inf	40.05M	37.431M	40M	37.531M	40.2M	37.581M	40.25M	37.531M
5755MHz	Pass	500k	37.45M	37.631M	37.1M	37.631M	37.45M	37.531M	37.55M	37.681M
5795MHz	Pass	500k	37.55M	37.781M	37.4M	37.631M	37.25M	37.681M	37.75M	37.581M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	81.4M	76.962M	81.1M	77.061M	81.1M	77.161M	81.2M	76.962M
5775MHz	Pass	500k	77.5M	77.361M	77.2M	77.161M	76.9M	77.161M	76.9M	77.061M

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

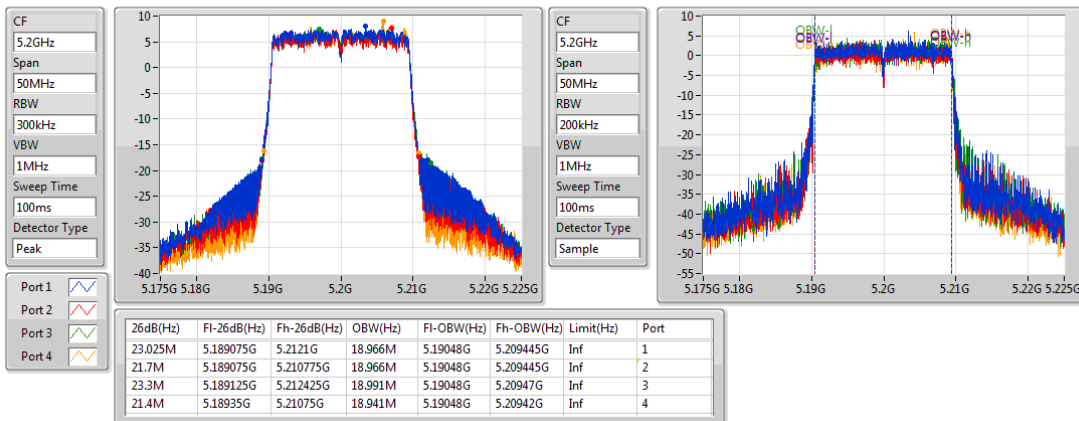
Port X-OBW = Port X 99% occupied bandwidth;

802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5180MHz

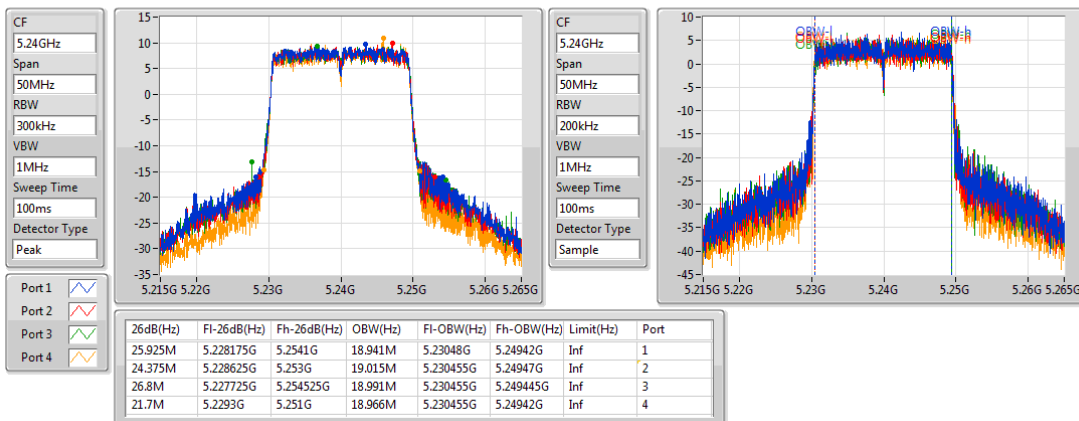
03/04/2019


802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5200MHz

03/04/2019

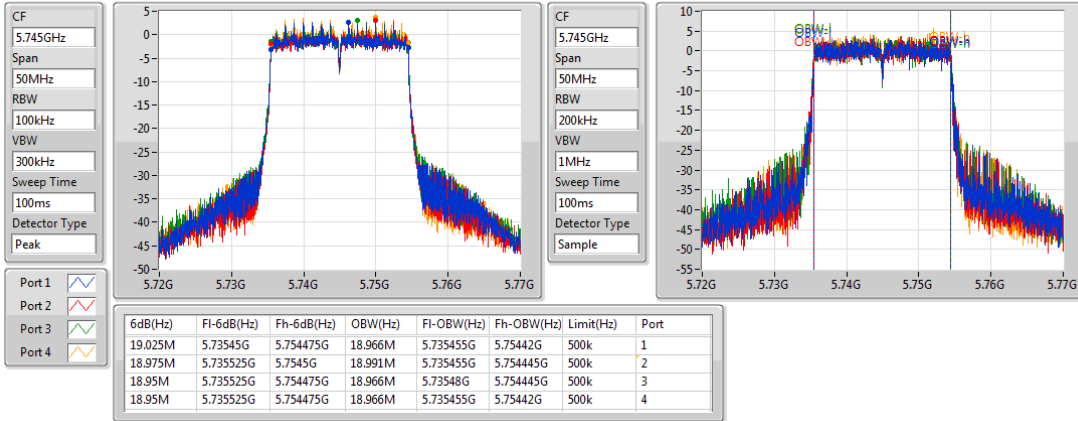

802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5240MHz

03/04/2019

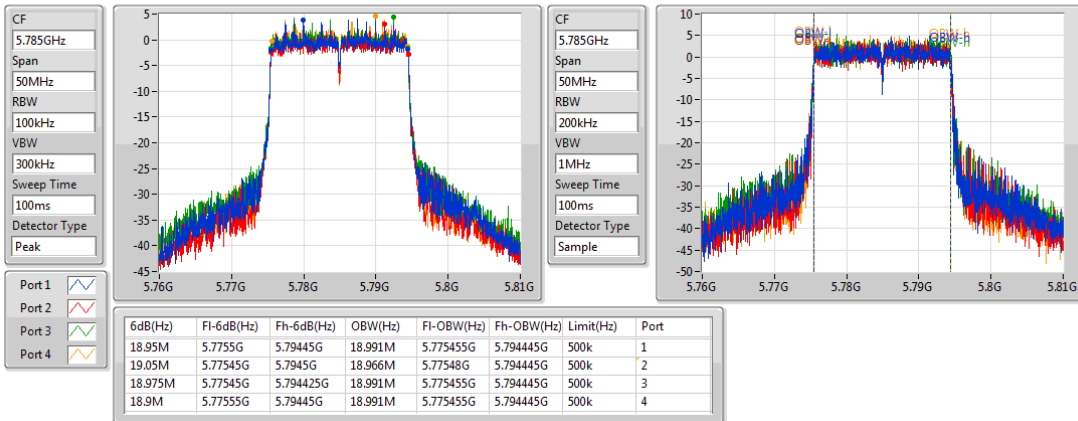


802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5745MHz

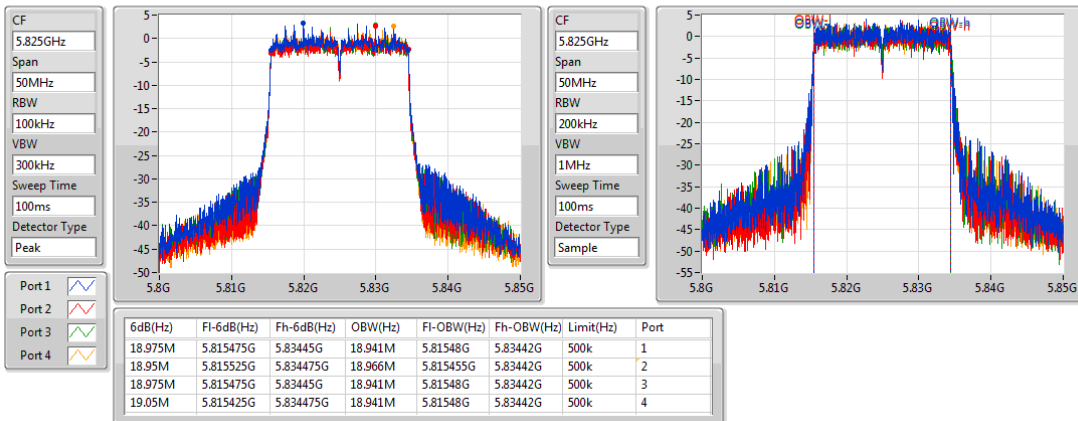
03/04/2019


802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5785MHz

04/04/2019

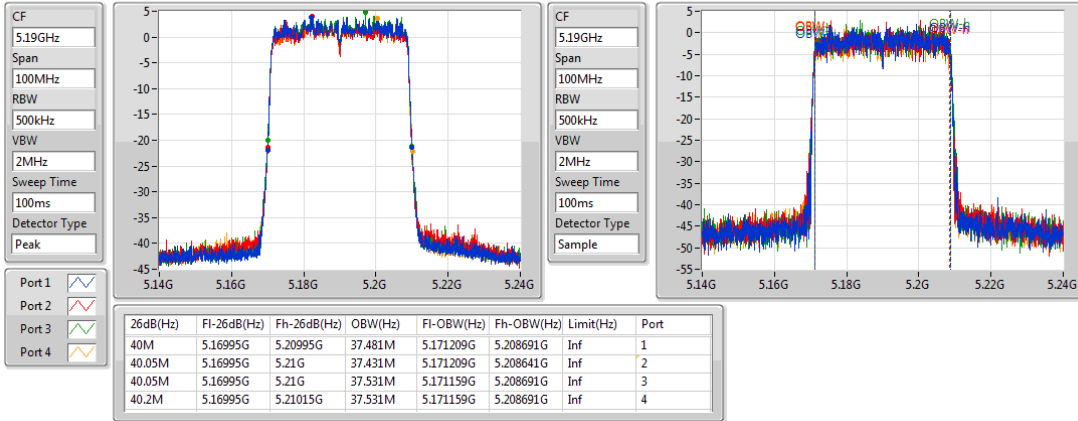

802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5825MHz

04/04/2019

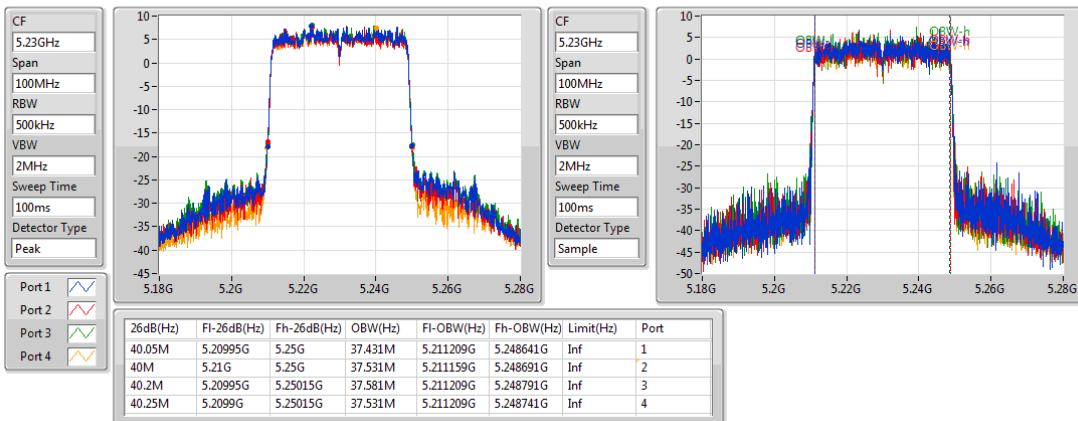


802.11ax HEW40-BF_Nss1.(MCS0)_4TX
EBW
5190MHz

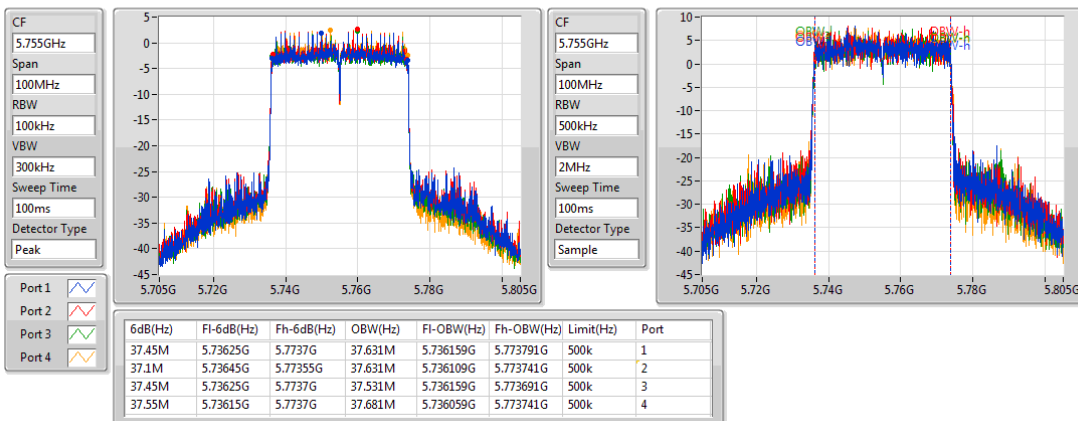
04/04/2019


802.11ax HEW40-BF_Nss1.(MCS0)_4TX
EBW
5230MHz

04/04/2019

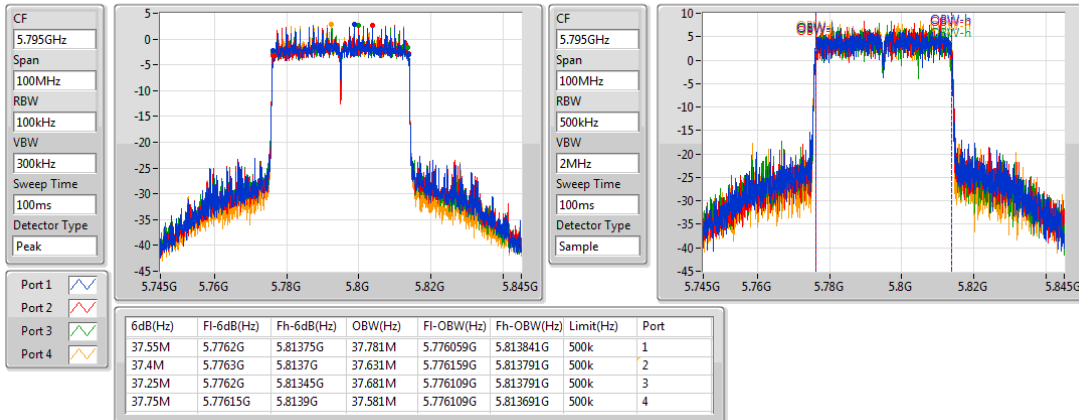

802.11ax HEW40-BF_Nss1.(MCS0)_4TX
EBW
5755MHz

04/04/2019

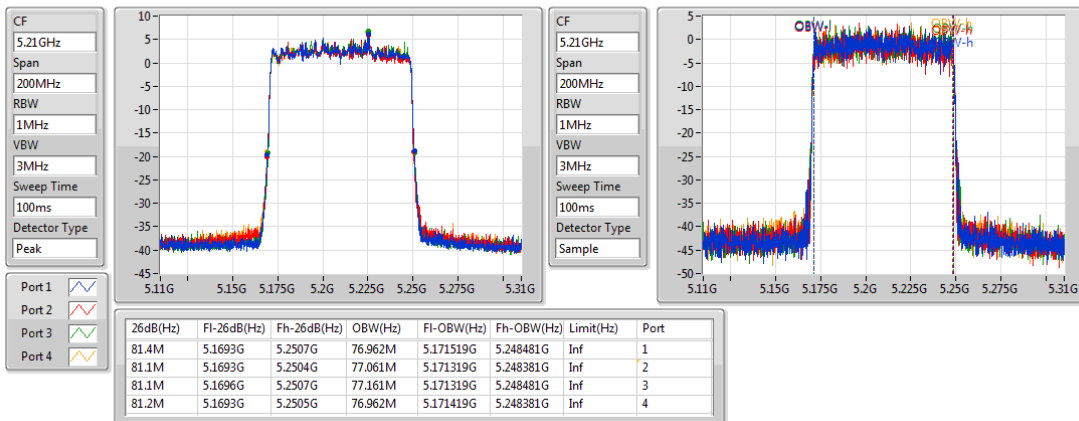


802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
5795MHz

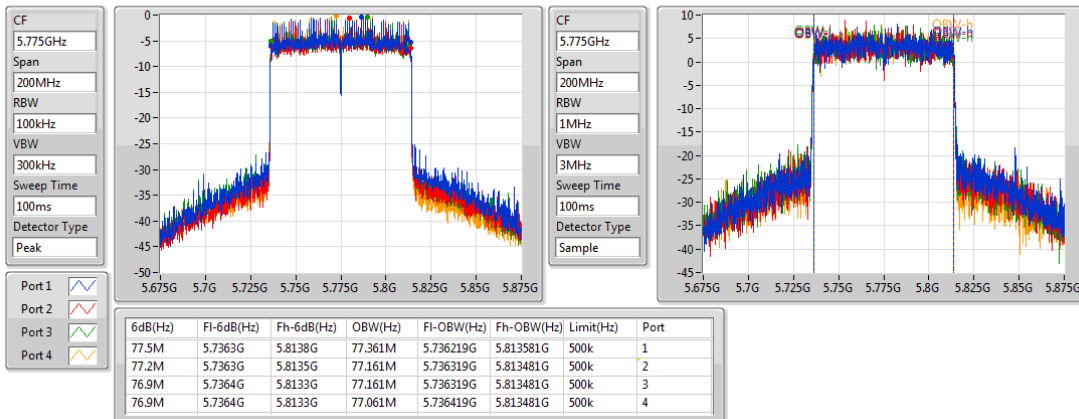
04/04/2019


802.11ax HEW80-BF_Nss1,(MCS0)_4TX
EBW
5210MHz

04/04/2019


802.11ax HEW80-BF_Nss1,(MCS0)_4TX
EBW
5775MHz

04/04/2019



For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 4:
Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ax HEW20_Nss4,(MCS0)_4TX	42.325M	19.165M	19M2D1D	21.375M	18.941M
802.11ax HEW40_Nss4,(MCS0)_4TX	71.05M	37.831M	37M8D1D	40.1M	37.481M
802.11ax HEW80_Nss4,(MCS0)_4TX	82M	77.161M	77M2D1D	81.2M	76.862M
5.725-5.85GHz	-	-	-	-	-
802.11ax HEW20_Nss4,(MCS0)_4TX	19.075M	18.966M	19M0D1D	18.875M	18.941M
802.11ax HEW40_Nss4,(MCS0)_4TX	37.5M	37.731M	37M7D1D	36.65M	37.581M
802.11ax HEW80_Nss4,(MCS0)_4TX	77.4M	77.461M	77M5D1D	76.2M	77.261M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;

Result

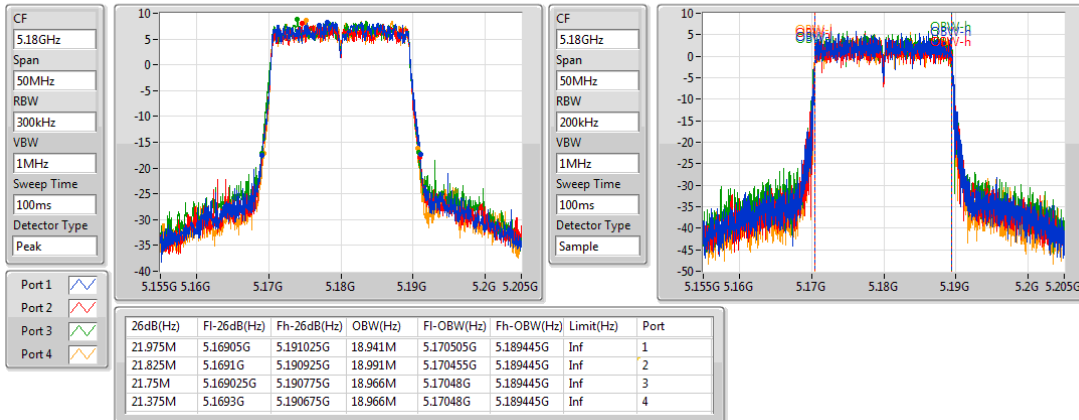
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ax HEW20_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.975M	18.941M	21.825M	18.991M	21.75M	18.966M	21.375M	18.966M
5200MHz	Pass	Inf	42.275M	19.165M	39.5M	19.115M	42.325M	19.165M	42.275M	19.09M
5240MHz	Pass	Inf	36.225M	19.14M	33.725M	19.115M	37.9M	19.09M	37.875M	19.065M
5745MHz	Pass	500k	18.95M	18.966M	18.975M	18.941M	18.9M	18.941M	19.05M	18.941M
5785MHz	Pass	500k	18.925M	18.966M	19.025M	18.966M	18.875M	18.966M	19.025M	18.966M
5825MHz	Pass	500k	18.925M	18.966M	18.9M	18.966M	18.9M	18.941M	19.075M	18.941M
802.11ax HEW40_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	40.1M	37.581M	40.2M	37.481M	40.1M	37.581M	40.25M	37.581M
5230MHz	Pass	Inf	66.5M	37.831M	71.05M	37.831M	66.35M	37.731M	63.55M	37.731M
5755MHz	Pass	500k	37.15M	37.581M	36.65M	37.581M	36.9M	37.581M	37.1M	37.581M
5795MHz	Pass	500k	37.15M	37.681M	36.85M	37.631M	37.5M	37.731M	37.05M	37.631M
802.11ax HEW80_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	81.2M	77.061M	81.4M	76.862M	81.7M	76.862M	82M	77.161M
5775MHz	Pass	500k	77.4M	77.261M	76.2M	77.461M	76.4M	77.361M	76.6M	77.361M

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

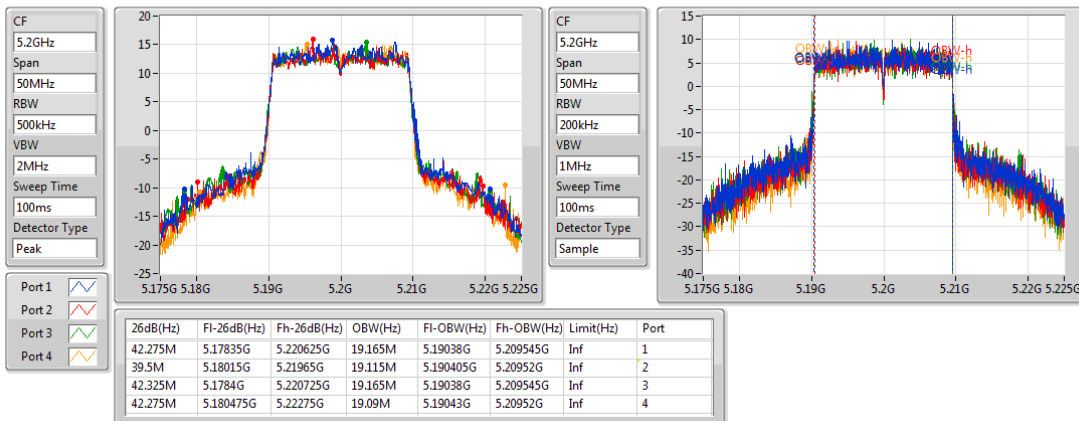
Port X-OBW = Port X 99% occupied bandwidth;

802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
5180MHz

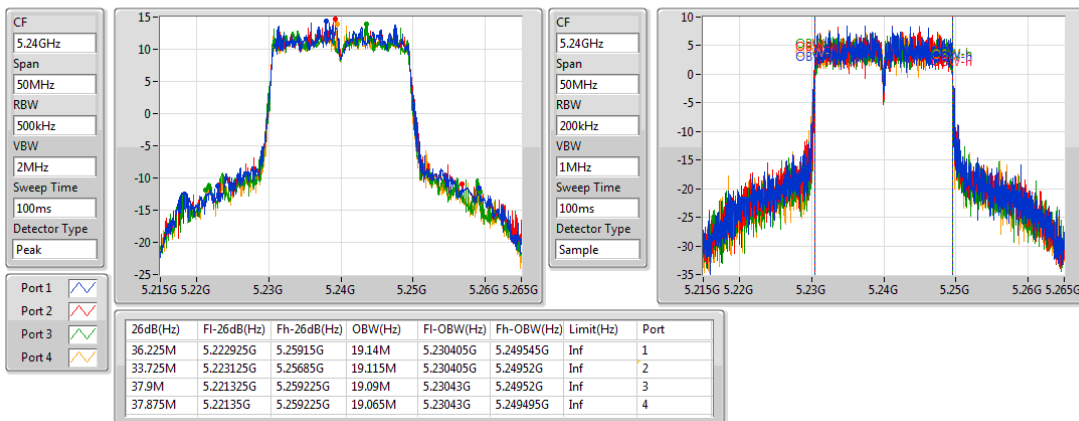
30/03/2019


802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
5200MHz

30/03/2019

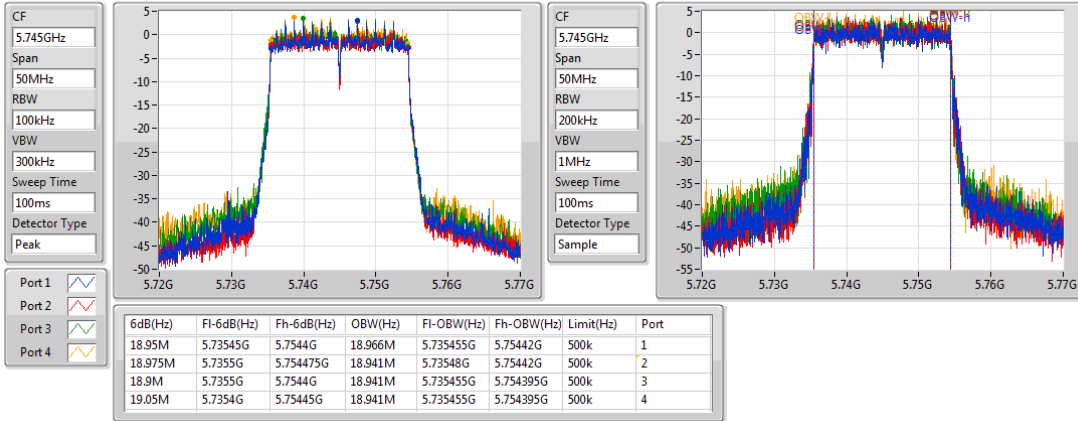

802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
5240MHz

12/04/2019

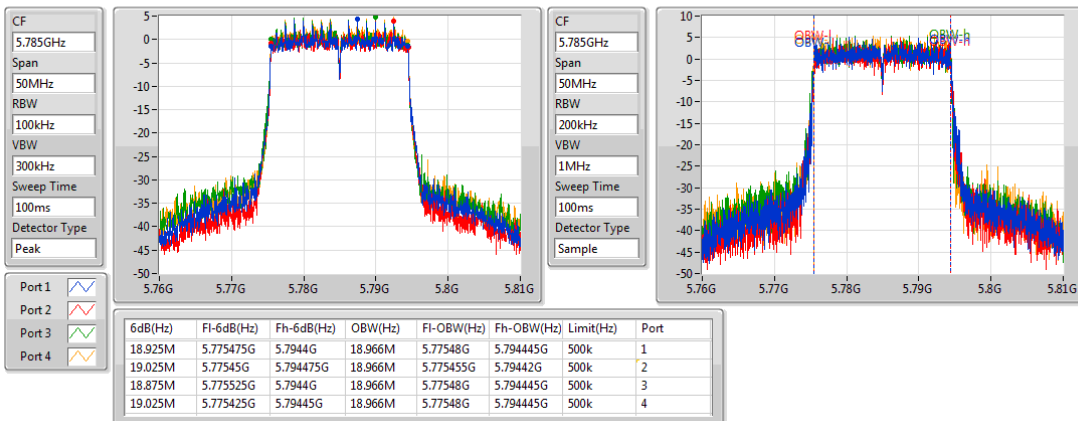


802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
5745MHz

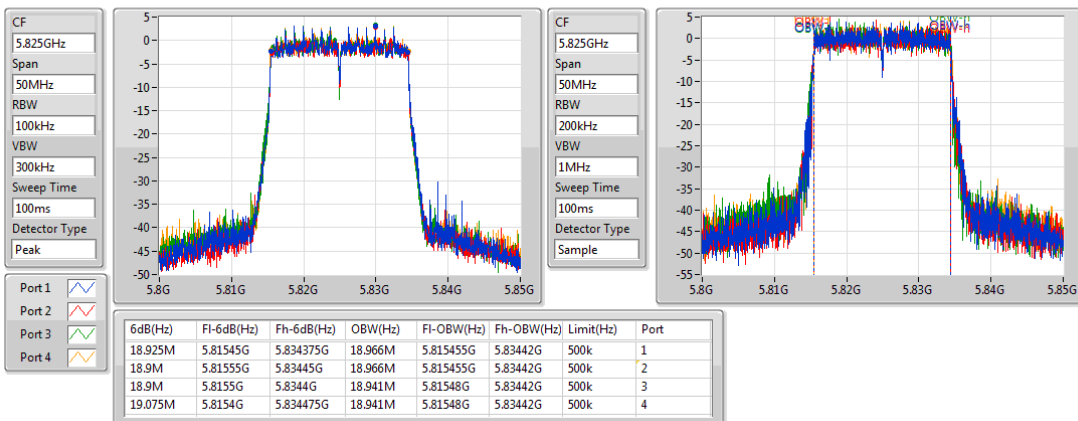
30/03/2019


802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
5785MHz

30/03/2019

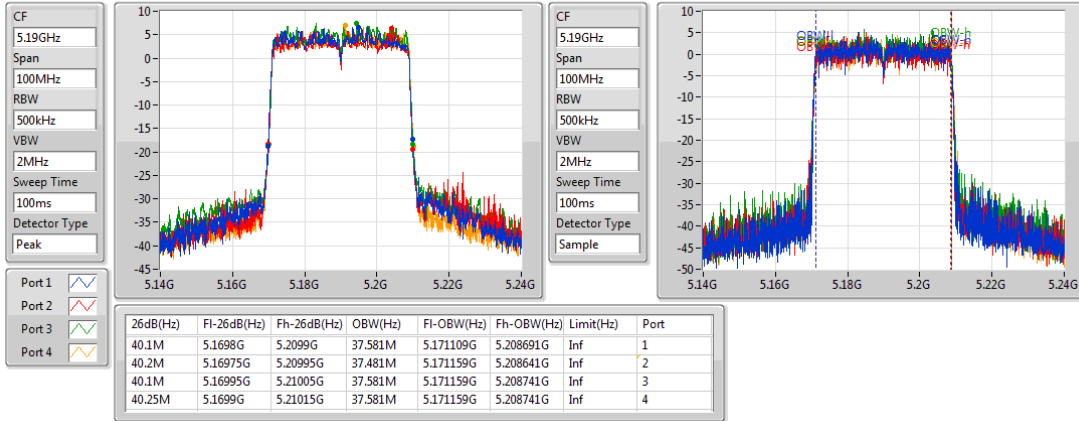

802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
5825MHz

30/03/2019

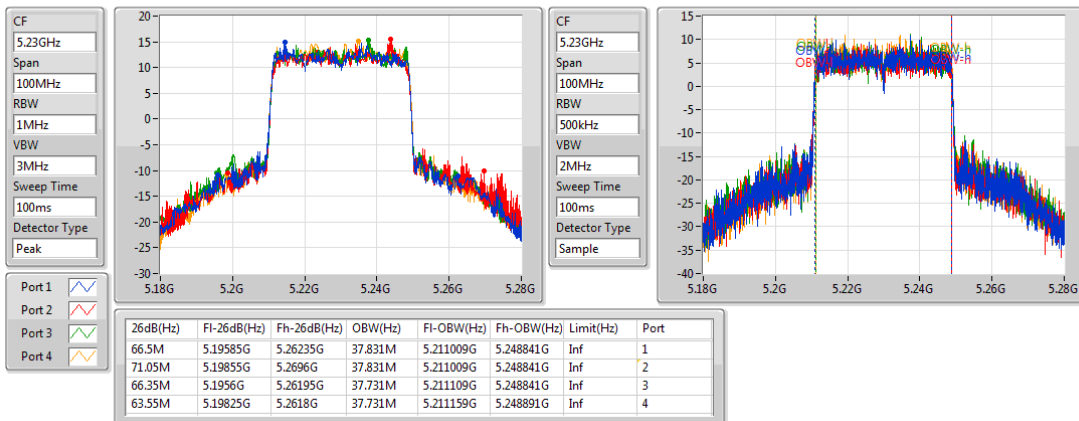


802.11ax HEW40_Nss4,(MCS0)_4TX
EBW
5190MHz

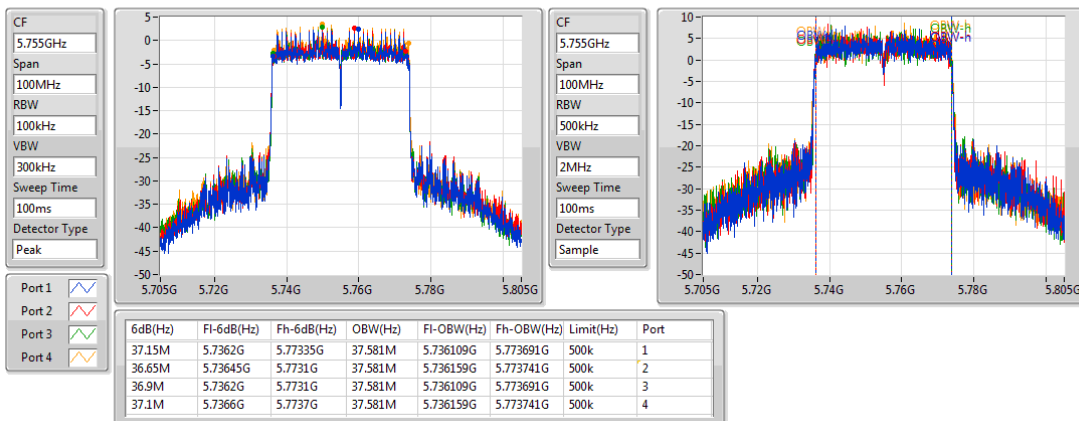
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802.11ax HEW40_Nss4,(MCS0)_4TX
EBW
5230MHz

30/03/2019

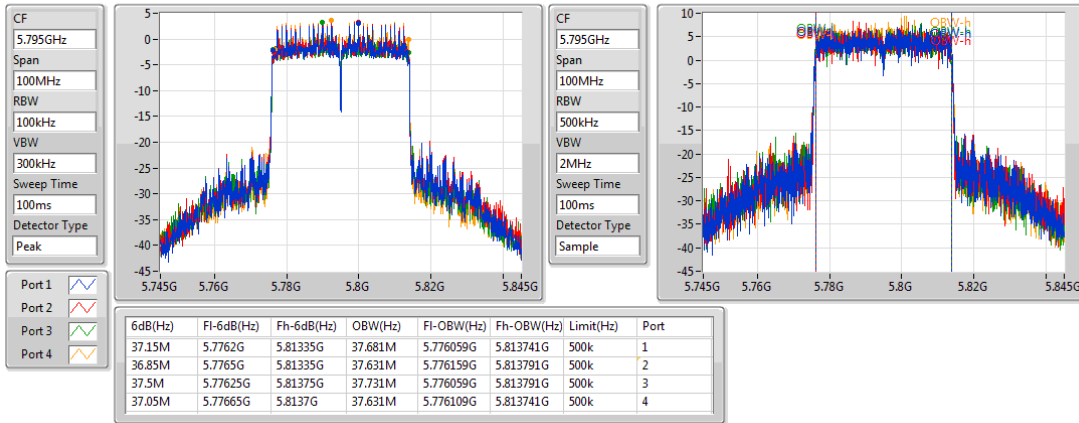

802.11ax HEW40_Nss4,(MCS0)_4TX
EBW
5755MHz

30/03/2019

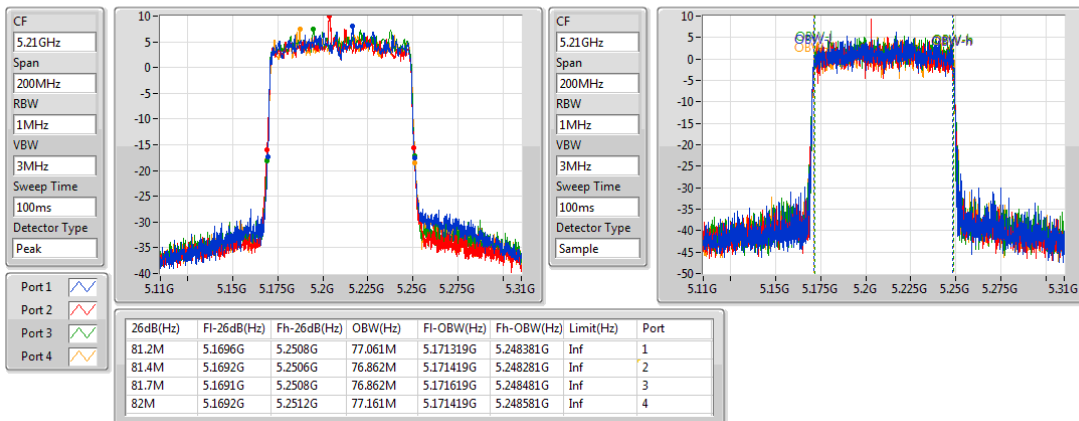


802.11ax HEW40_Nss4,(MCS0)_4TX
EBW
5795MHz

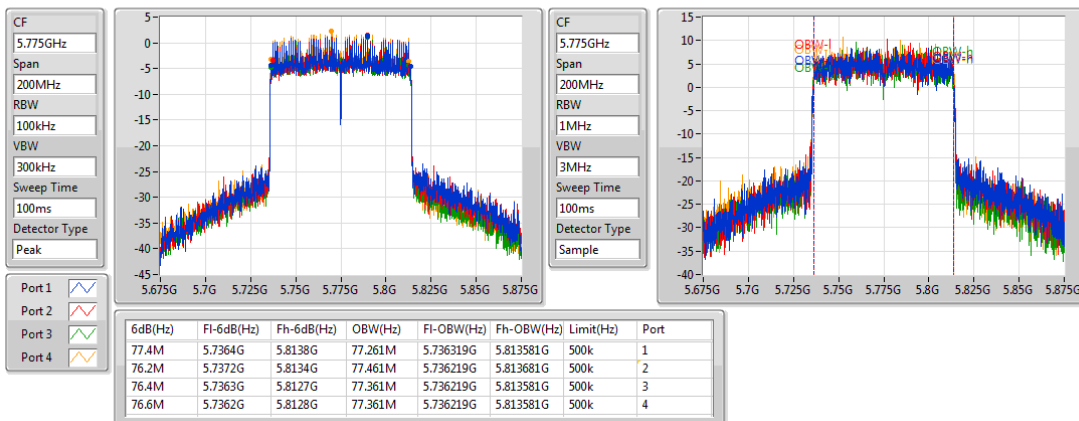
30/03/2019


802.11ax HEW80_Nss4,(MCS0)_4TX
EBW
5210MHz

30/03/2019


802.11ax HEW80_Nss4,(MCS0)_4TX
EBW
5775MHz

30/03/2019



For Outdoor use for 5G Band 1:
Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	26.45M	16.667M	16M7D1D	21.95M	16.617M
802.11ax HEW20_Nss1,(MCS0)_1TX	25.925M	19.015M	19M0D1D	25.275M	18.966M
802.11ax HEW40_Nss1,(MCS0)_1TX	44.1M	37.681M	37M7D1D	39.95M	37.531M
802.11ax HEW80_Nss1,(MCS0)_1TX	81.5M	77.161M	77M2D1D	81.5M	77.161M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;

Result

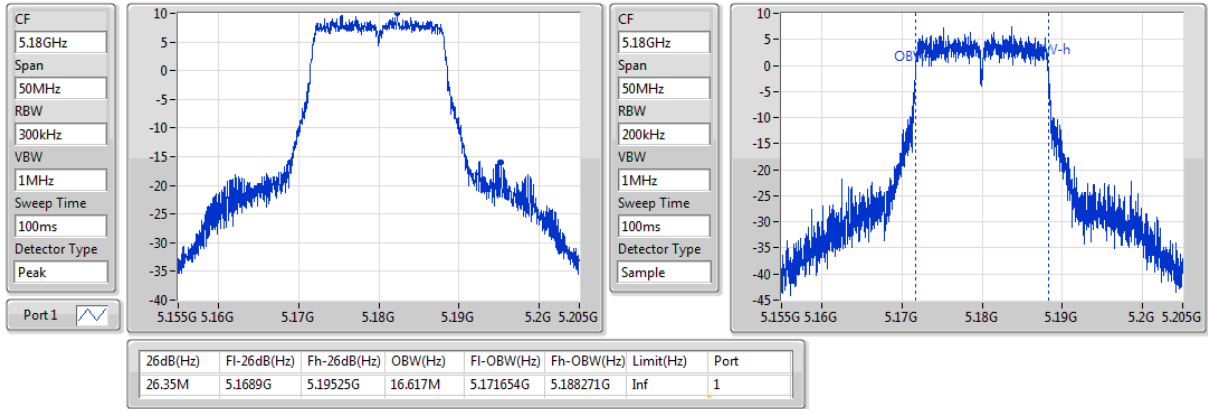
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11a_Nss1,(6Mbps)_1TX	-	-	-	-
5180MHz	Pass	Inf	26.35M	16.617M
5200MHz	Pass	Inf	21.95M	16.667M
5240MHz	Pass	Inf	26.45M	16.642M
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-
5180MHz	Pass	Inf	25.275M	19.015M
5200MHz	Pass	Inf	25.925M	19.015M
5240MHz	Pass	Inf	25.875M	18.966M
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-	-	-
5190MHz	Pass	Inf	39.95M	37.531M
5230MHz	Pass	Inf	44.1M	37.681M
802.11ax HEW80_Nss1,(MCS0)_1TX	-	-	-	-
5210MHz	Pass	Inf	81.5M	77.161M

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

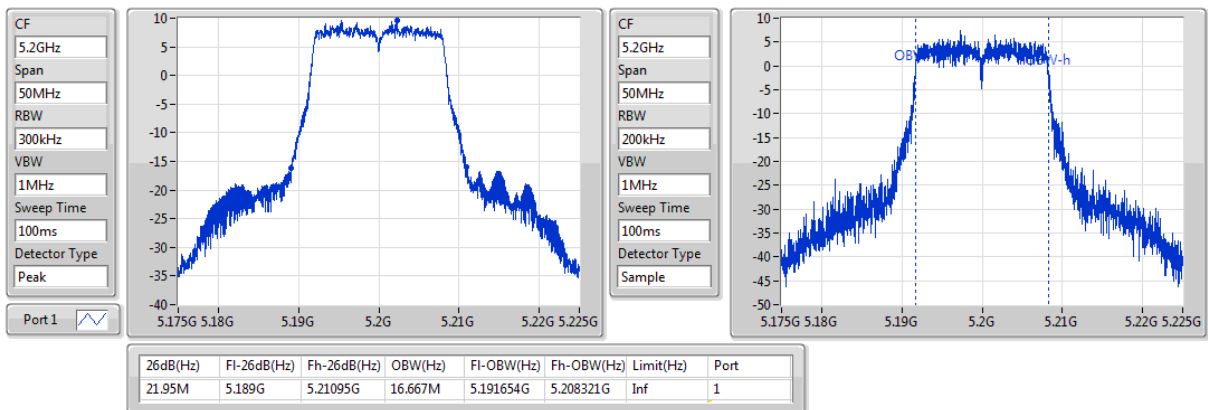
Port X-OBW = Port X 99% occupied bandwidth;

802.11a_Nss1,(6Mbps)_1TX
EBW
5180MHz

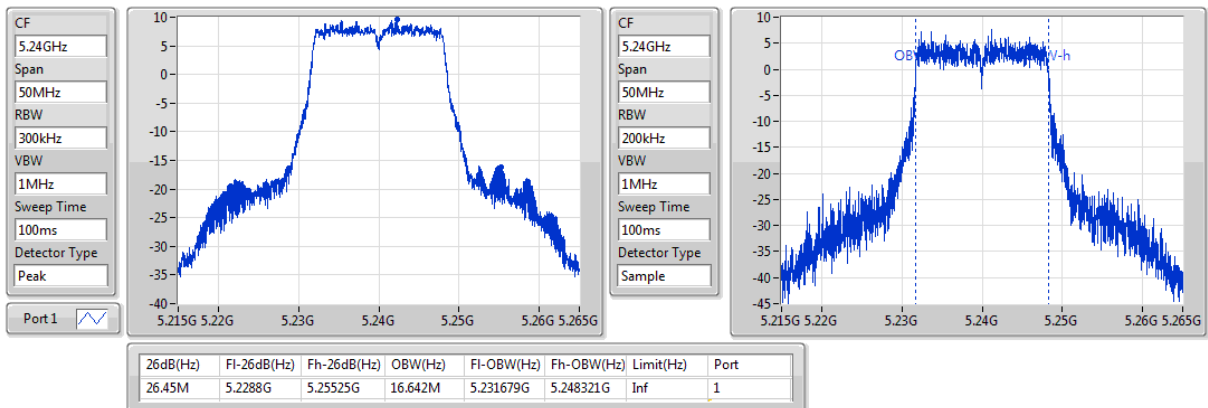
17/04/2019


802.11a_Nss1,(6Mbps)_1TX
EBW
5200MHz

17/04/2019

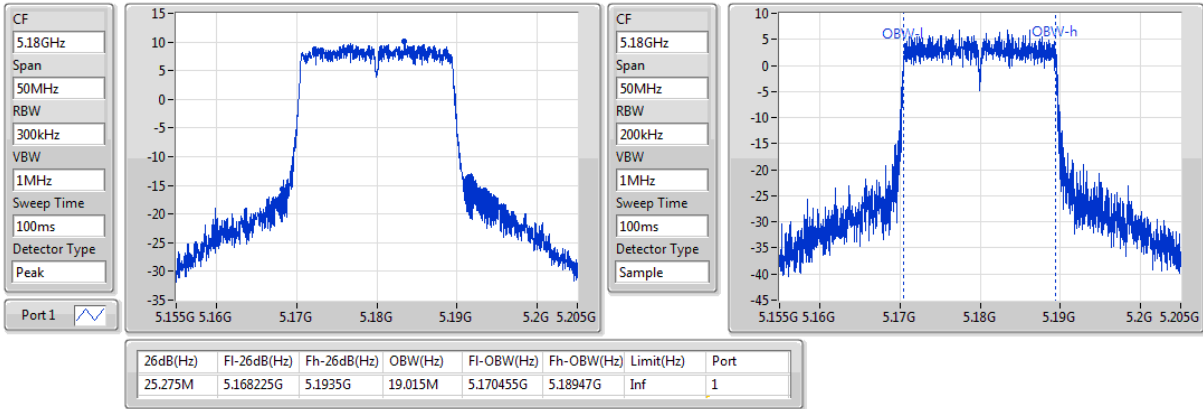

802.11a_Nss1,(6Mbps)_1TX
EBW
5240MHz

17/04/2019

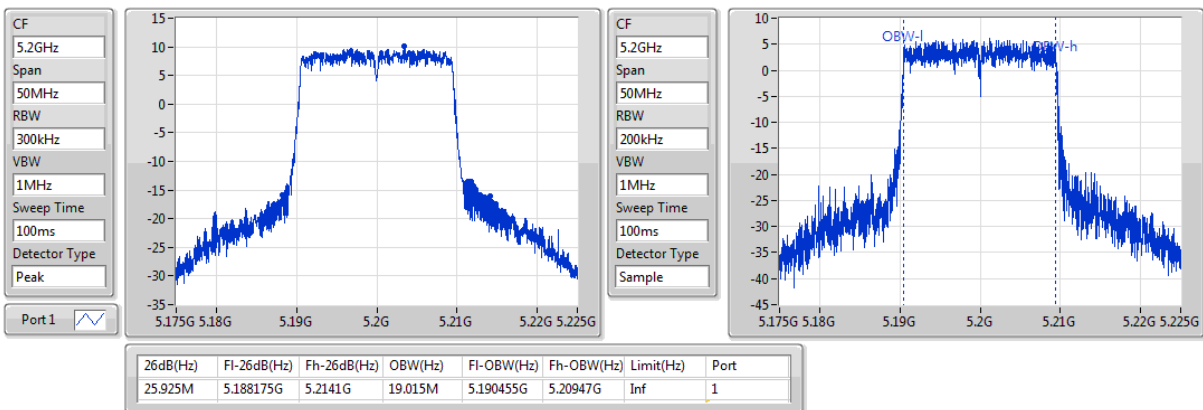


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5180MHz

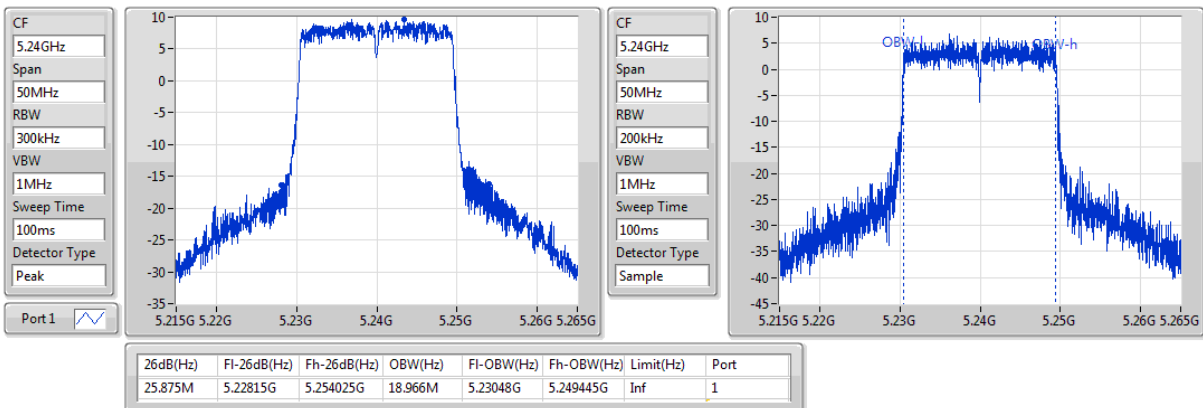
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802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5200MHz

17/04/2019

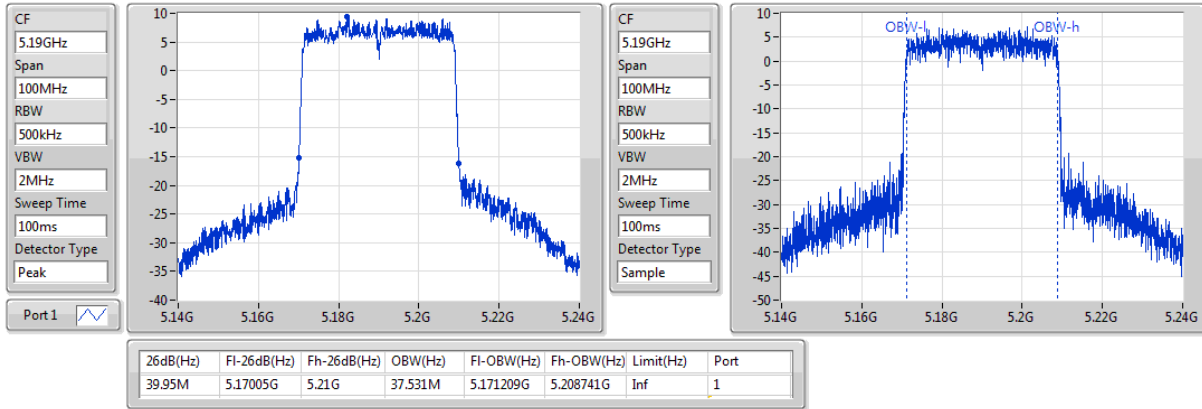

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5240MHz

17/04/2019

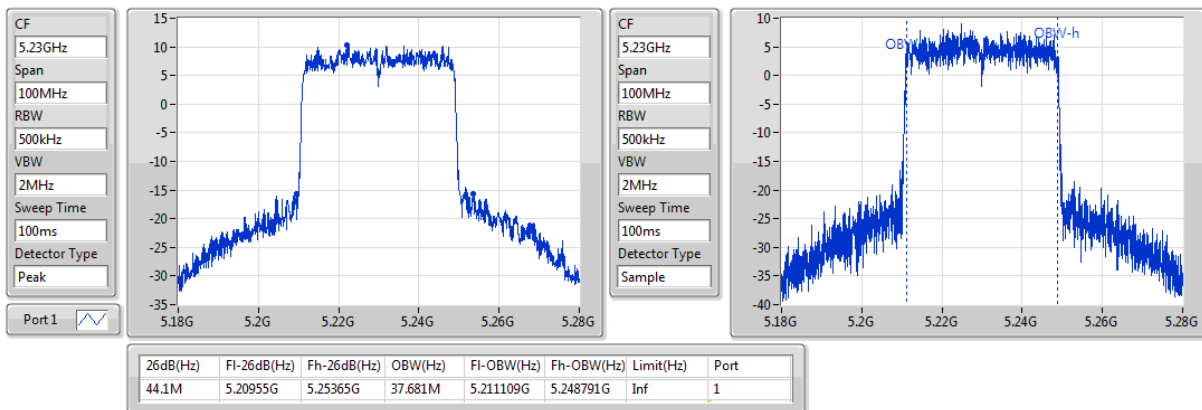


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
5190MHz

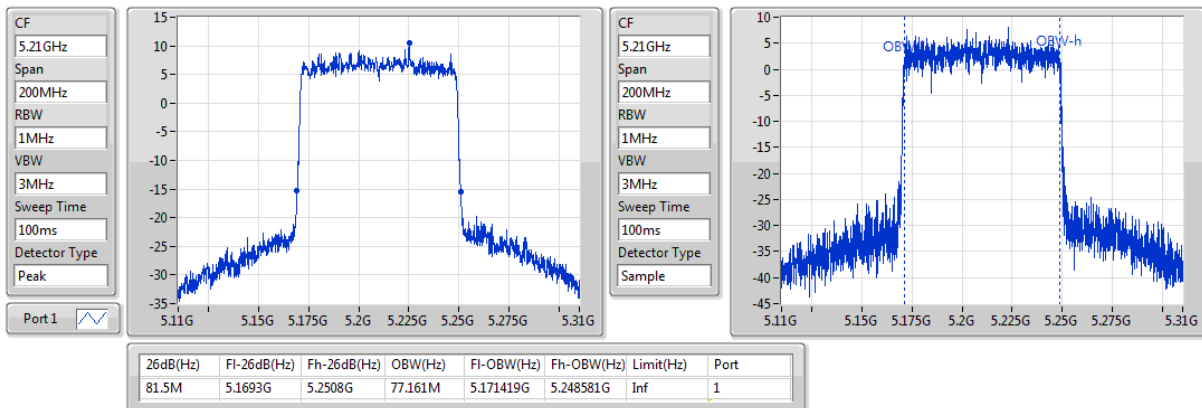
30/03/2019


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
5230MHz

17/04/2019


802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
5210MHz

30/03/2019



For Outdoor use for 5G Band 1:
Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ax HEW20_Nss2,(MCS0)_2TX	22.075M	18.966M	19M0D1D	21.425M	18.916M
802.11ax HEW40_Nss2,(MCS0)_2TX	40.1M	37.631M	37M6D1D	39.95M	37.481M
802.11ax HEW80_Nss2,(MCS0)_2TX	81.9M	77.061M	77M1D1D	81.4M	76.862M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;

Result

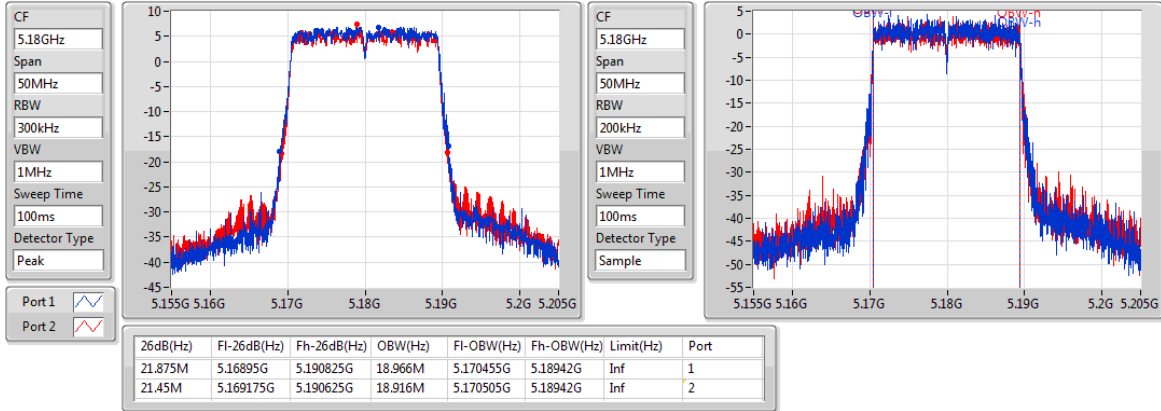
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11ax HEW20_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	21.875M	18.966M	21.45M	18.916M
5200MHz	Pass	Inf	21.925M	18.941M	21.425M	18.966M
5240MHz	Pass	Inf	22.075M	18.966M	21.525M	18.966M
802.11ax HEW40_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	Inf	39.95M	37.631M	40.1M	37.481M
5230MHz	Pass	Inf	39.95M	37.581M	40M	37.481M
802.11ax HEW80_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	Inf	81.9M	77.061M	81.4M	76.862M

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

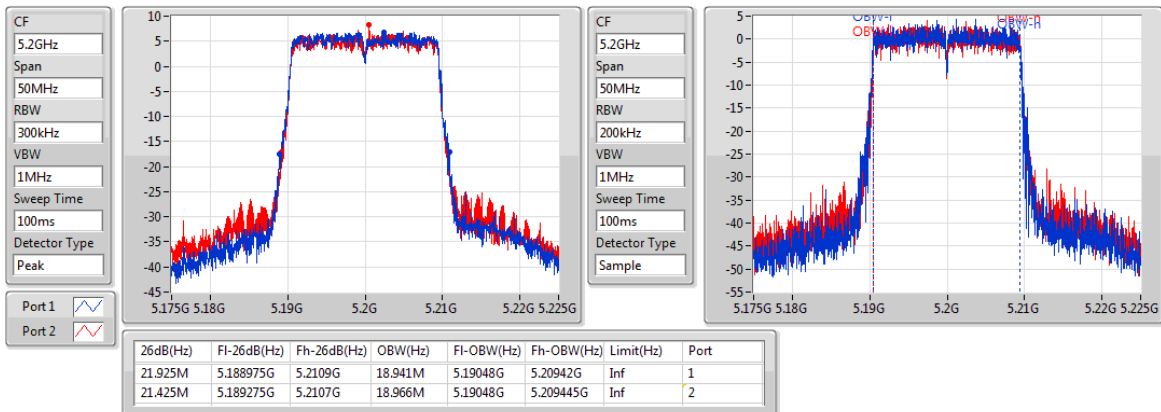
Port X-OBW = Port X 99% occupied bandwidth;

802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
5180MHz

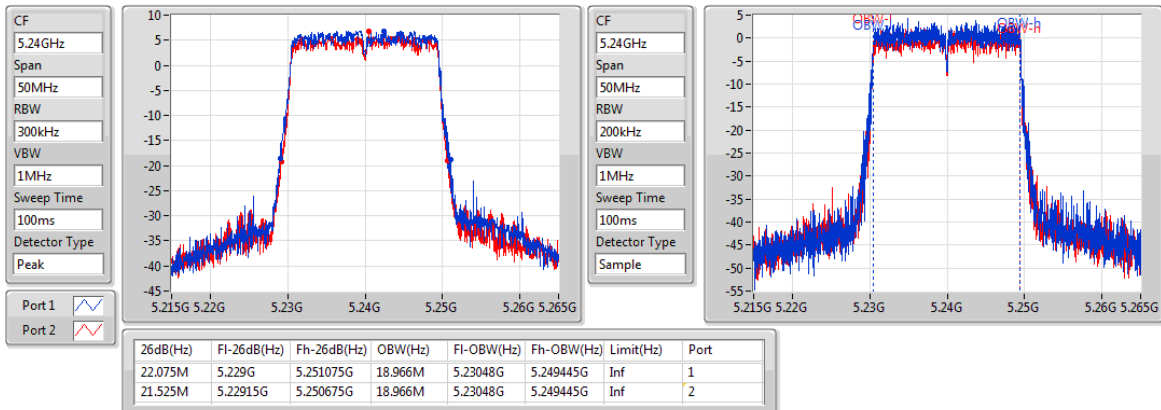
17/04/2019


802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
5200MHz

17/04/2019

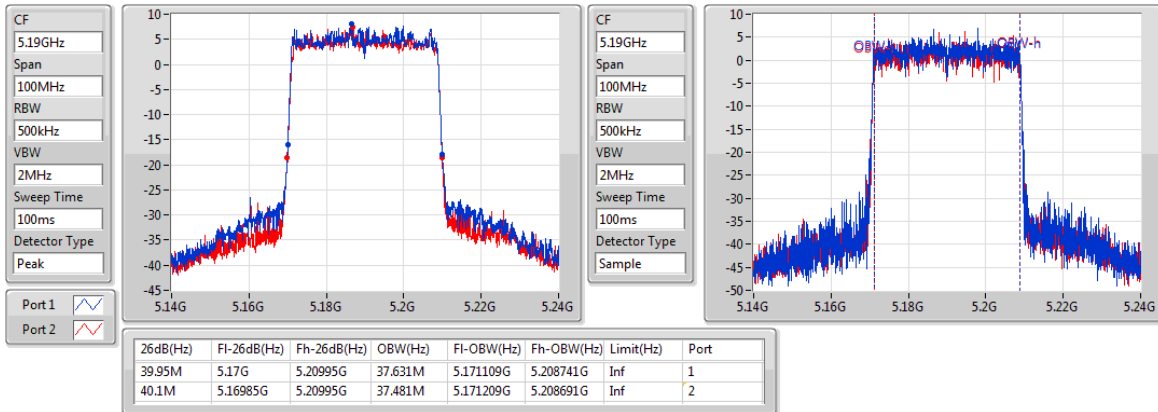

802.11ax HEW20_Nss2,(MCS0)_2TX
EBW
5240MHz

17/04/2019

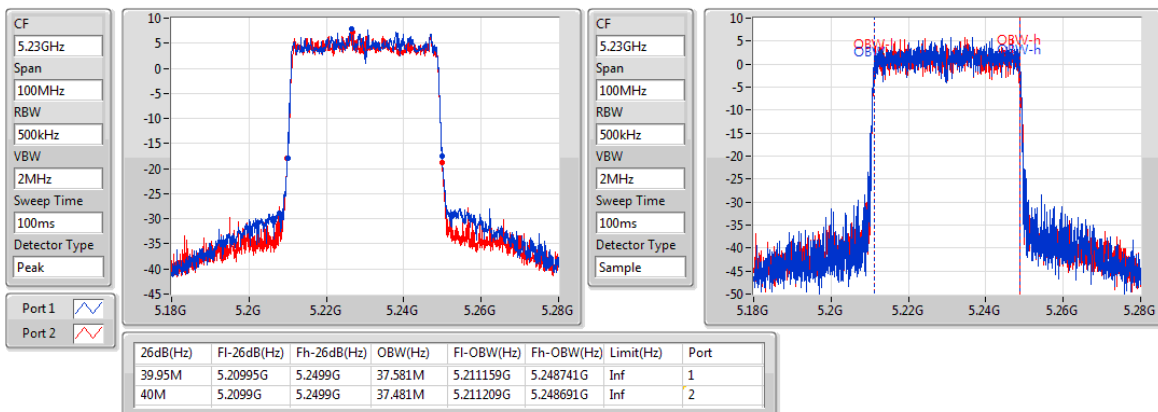


802.11ax HEW40_Nss2,(MCS0)_2TX
EBW
5190MHz

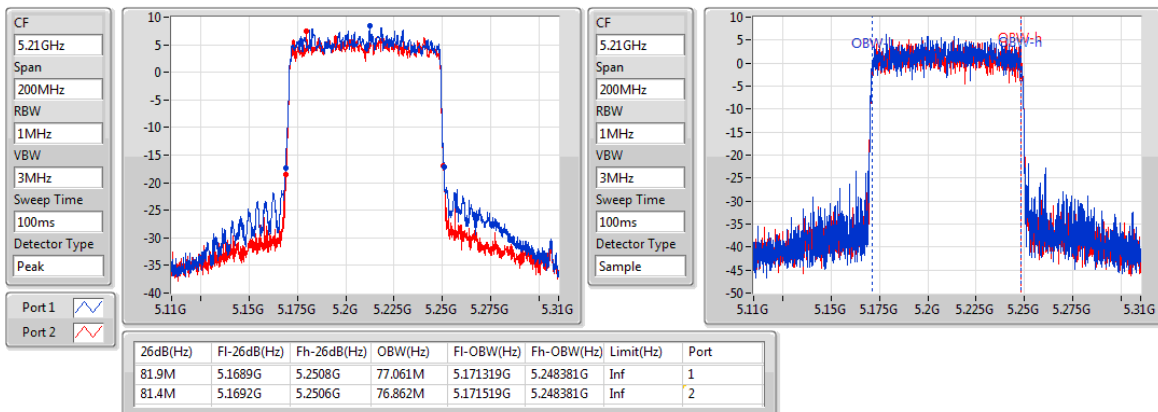
17/04/2019


802.11ax HEW40_Nss2,(MCS0)_2TX
EBW
5230MHz

17/04/2019


802.11ax HEW80_Nss2,(MCS0)_2TX
EBW
5210MHz

30/03/2019



For Outdoor use for 5G Band 1:
Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	21.675M	16.617M	16M6D1D	21.375M	16.542M
802.11ax HEW20_Nss1,(MCS0)_4TX	21.95M	19.015M	19M0D1D	21.4M	18.941M
802.11ax HEW40_Nss1,(MCS0)_4TX	40.15M	37.531M	37M5D1D	40M	37.481M
802.11ax HEW80_Nss1,(MCS0)_4TX	81.6M	77.061M	77M1D1D	81M	76.962M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;

Result

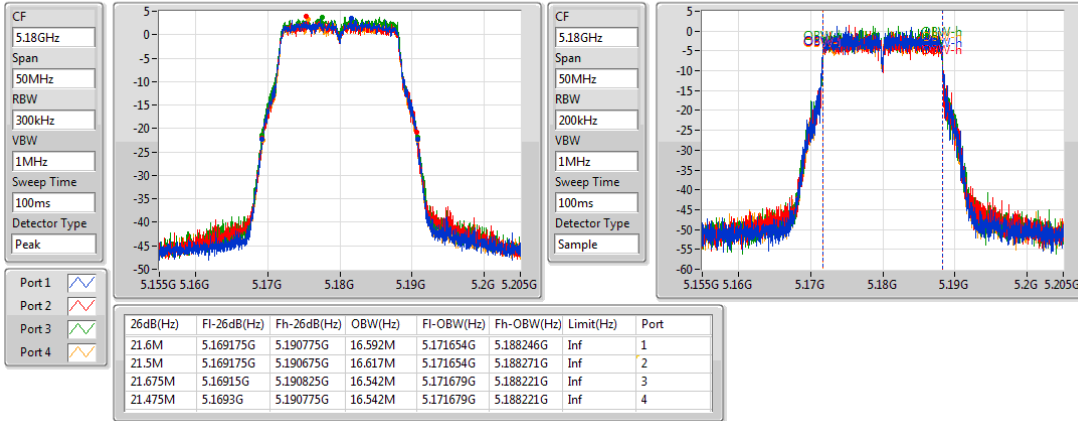
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.6M	16.592M	21.5M	16.617M	21.675M	16.542M	21.475M	16.542M
5200MHz	Pass	Inf	21.575M	16.592M	21.575M	16.617M	21.675M	16.617M	21.475M	16.542M
5240MHz	Pass	Inf	21.375M	16.567M	21.625M	16.617M	21.6M	16.617M	21.525M	16.567M
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.7M	18.991M	21.575M	18.966M	21.875M	19.015M	21.475M	18.991M
5200MHz	Pass	Inf	21.9M	18.966M	21.675M	18.941M	21.85M	18.941M	21.4M	18.966M
5240MHz	Pass	Inf	21.65M	18.941M	21.575M	18.966M	21.95M	18.941M	21.4M	18.941M
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	40.1M	37.531M	40.15M	37.531M	40.05M	37.481M	40.15M	37.481M
5230MHz	Pass	Inf	40M	37.531M	40.05M	37.531M	40.1M	37.531M	40.15M	37.531M
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	81.6M	77.061M	81.5M	77.061M	81M	77.061M	81.3M	76.962M

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

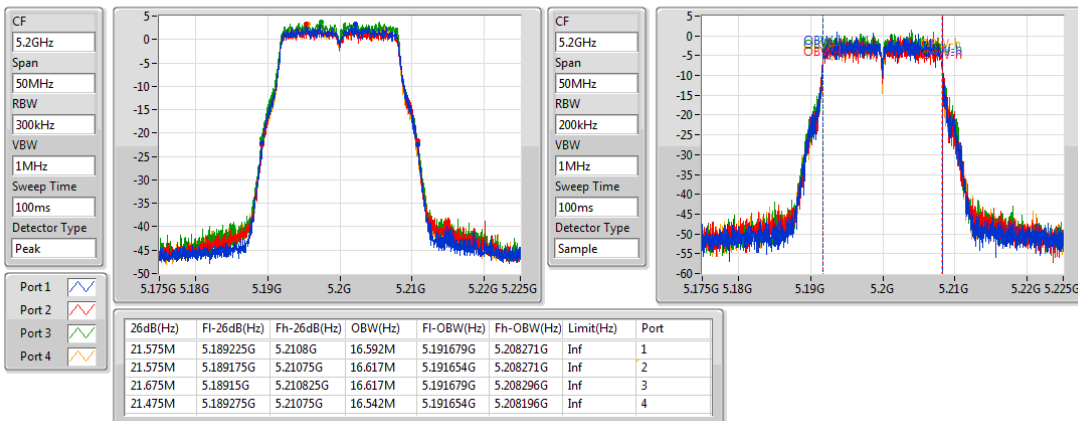
Port X-OBW = Port X 99% occupied bandwidth;

802.11a_Nss1,(6Mbps)_4TX
EBW
5180MHz

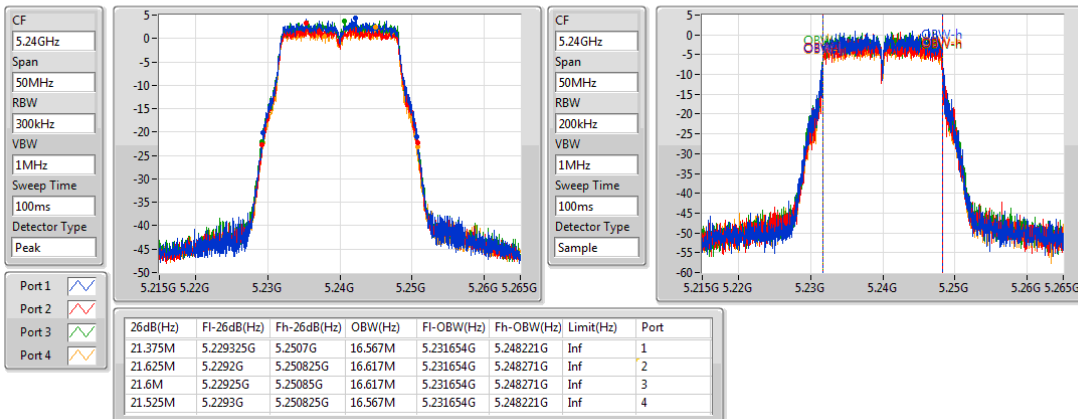
17/04/2019


802.11a_Nss1,(6Mbps)_4TX
EBW
5200MHz

17/04/2019

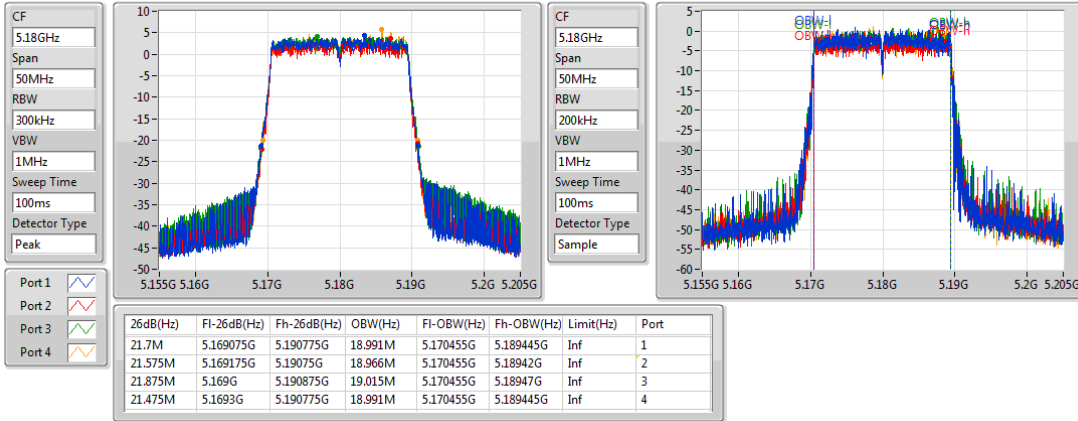

802.11a_Nss1,(6Mbps)_4TX
EBW
5240MHz

17/04/2019

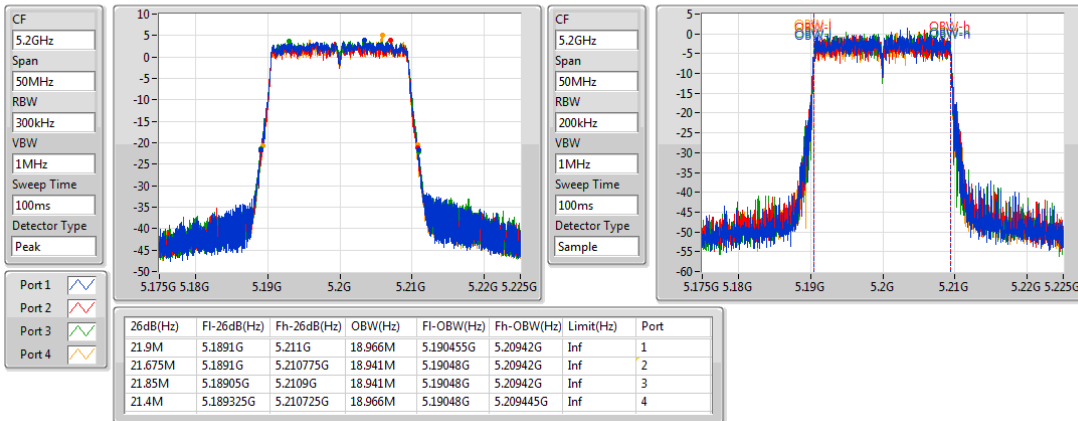


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5180MHz

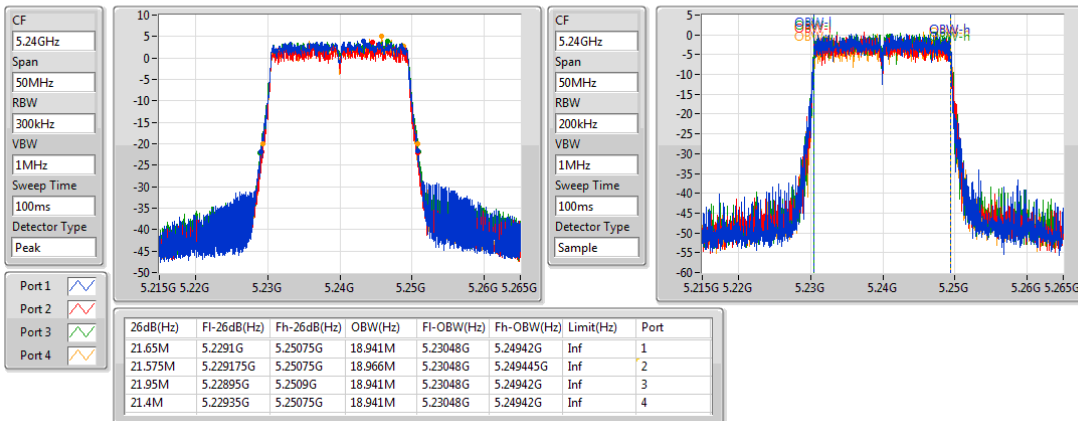
17/04/2019


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5200MHz

17/04/2019

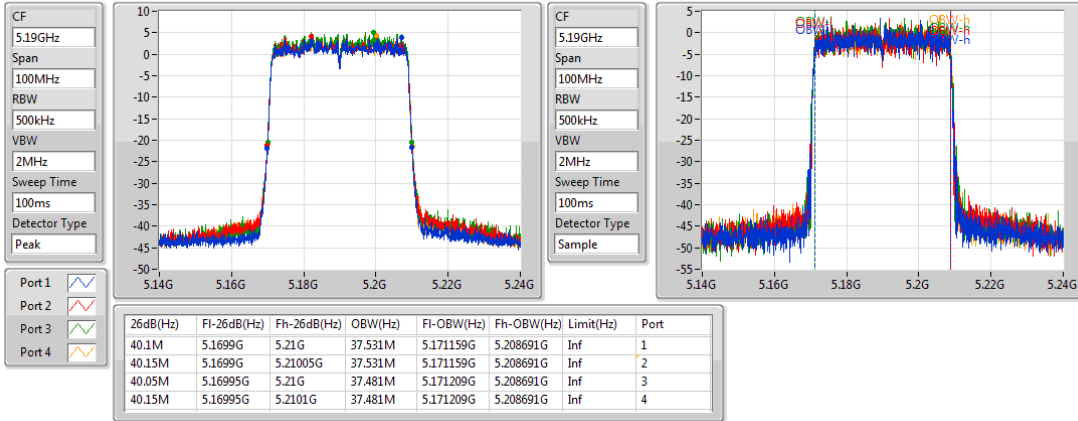

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5240MHz

17/04/2019

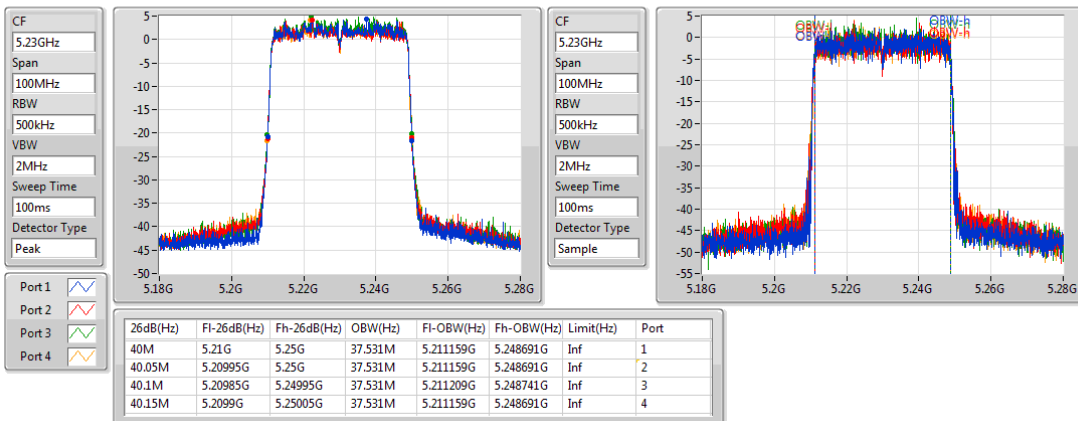


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5190MHz

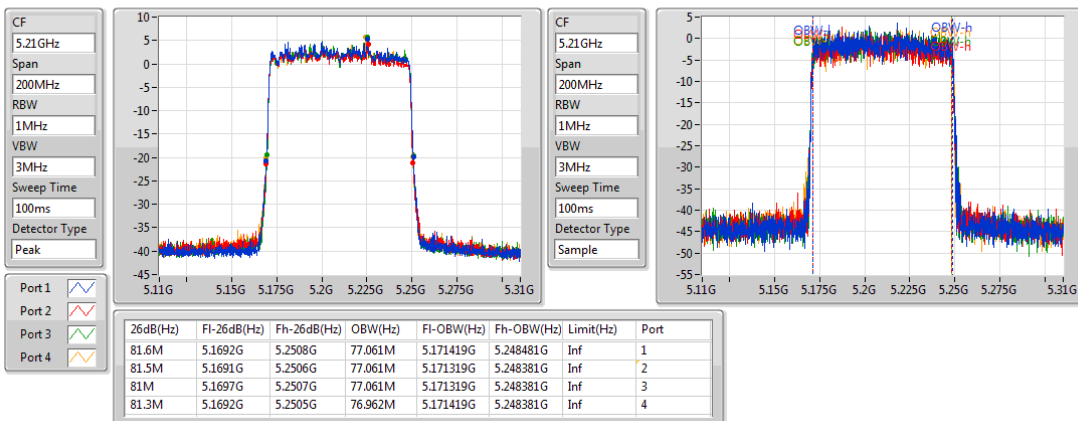
17/04/2019


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5230MHz

17/04/2019


802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5210MHz

17/04/2019



For Outdoor use for 5G Band 1:
Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	21.975M	18.991M	19M0D1D	21.45M	18.916M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	40.2M	37.631M	37M6D1D	39.95M	37.531M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	82M	77.161M	77M2D1D	81.3M	76.962M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;

Result

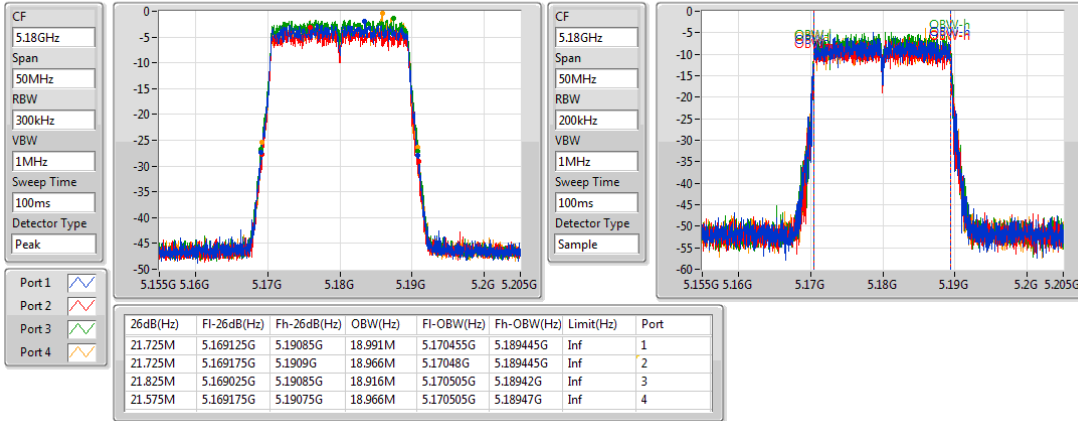
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.725M	18.991M	21.725M	18.966M	21.825M	18.916M	21.575M	18.966M
5200MHz	Pass	Inf	21.825M	18.941M	21.6M	18.991M	21.9M	18.966M	21.45M	18.966M
5240MHz	Pass	Inf	21.75M	18.941M	21.675M	18.966M	21.975M	18.941M	21.45M	18.966M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	40M	37.531M	40.2M	37.531M	40.05M	37.531M	40M	37.581M
5230MHz	Pass	Inf	39.95M	37.631M	39.95M	37.531M	40.15M	37.531M	40.1M	37.581M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	81.5M	77.161M	81.4M	76.962M	81.3M	77.061M	82M	76.962M

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

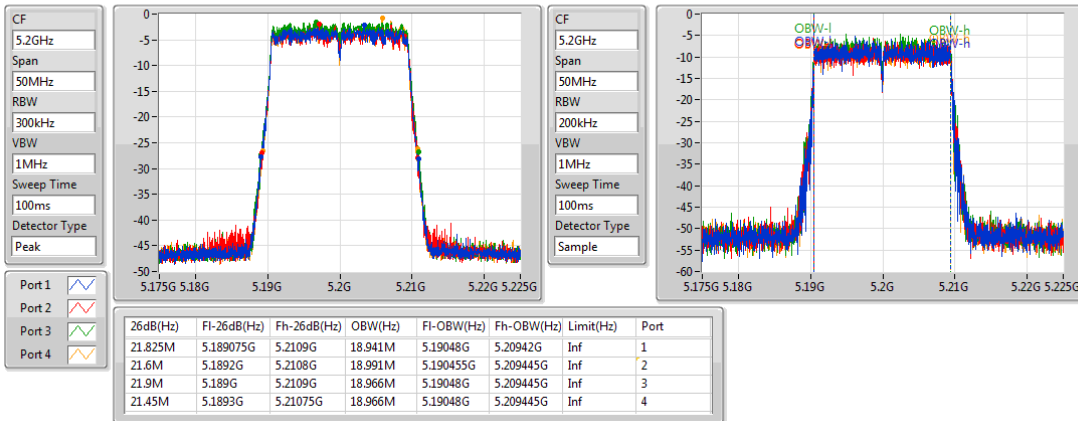
Port X-OBW = Port X 99% occupied bandwidth;

802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5180MHz

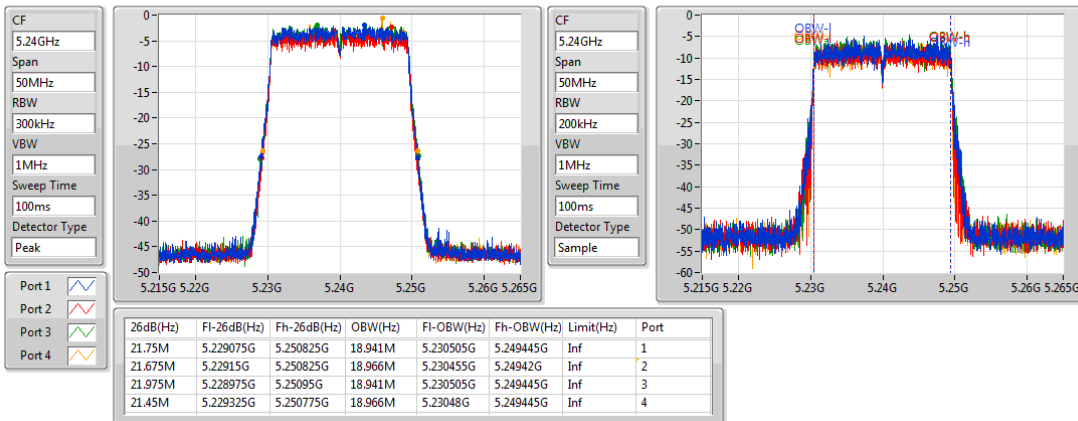
17/04/2019


802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5200MHz

17/04/2019

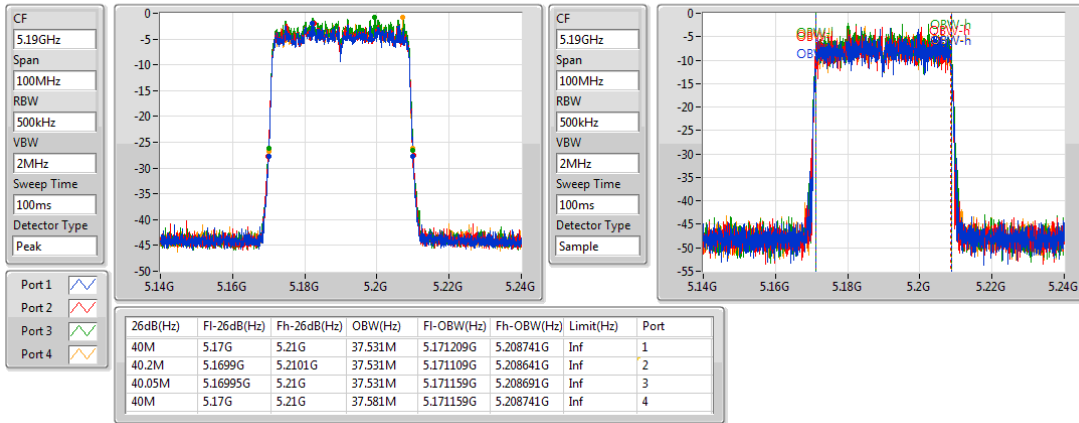

802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5240MHz

17/04/2019

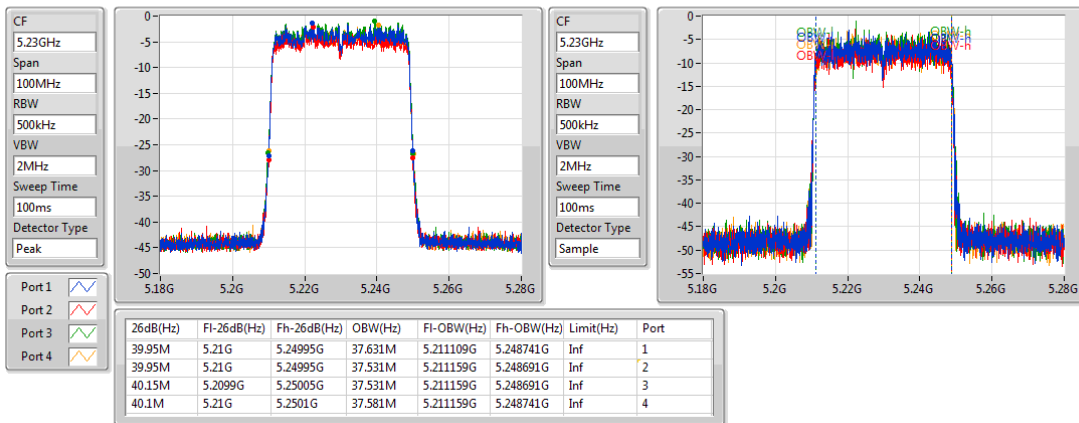


802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
5190MHz

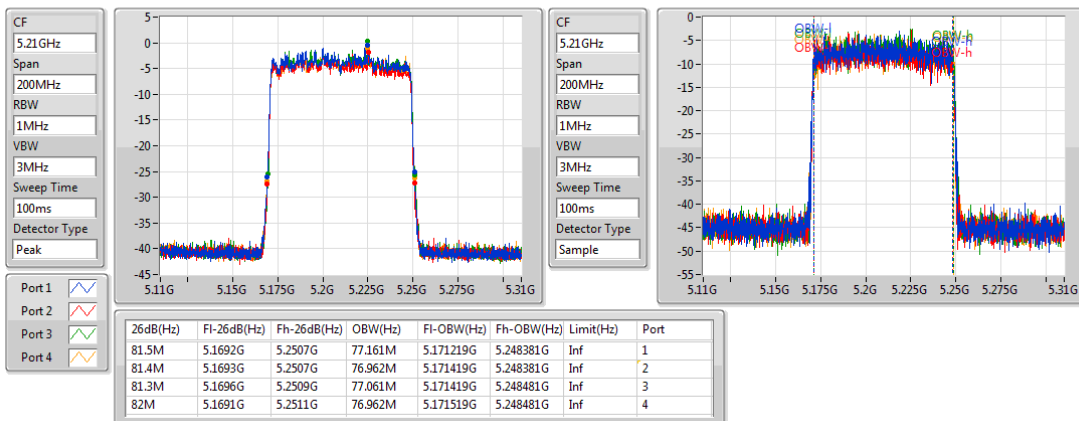
17/04/2019


802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
5230MHz

17/04/2019


802.11ax HEW80-BF_Nss1,(MCS0)_4TX
EBW
5210MHz

17/04/2019



**For Outdoor use for 5G Band 1:****Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ax HEW20_Nss4,(MCS0)_4TX	21.875M	18.991M	19M0D1D	21.325M	18.916M
802.11ax HEW40_Nss4,(MCS0)_4TX	40.25M	37.581M	37M6D1D	40M	37.431M
802.11ax HEW80_Nss4,(MCS0)_4TX	81.8M	76.962M	77M0D1D	81M	76.862M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;

Result

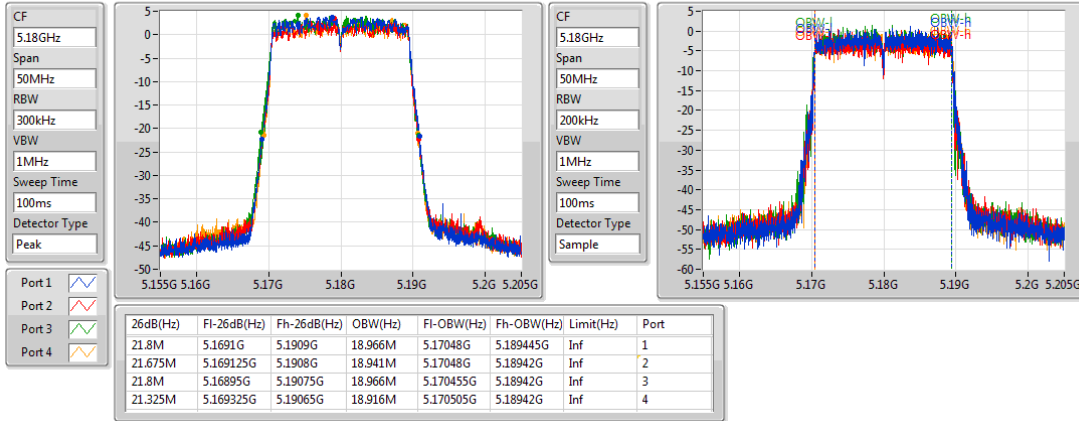
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ax HEW20_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.8M	18.966M	21.675M	18.941M	21.8M	18.966M	21.325M	18.916M
5200MHz	Pass	Inf	21.85M	18.966M	21.675M	18.941M	21.875M	18.941M	21.45M	18.991M
5240MHz	Pass	Inf	21.825M	18.941M	21.725M	18.941M	21.85M	18.966M	21.4M	18.941M
802.11ax HEW40_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	40.1M	37.481M	40.1M	37.581M	40M	37.481M	40.25M	37.581M
5230MHz	Pass	Inf	40.2M	37.581M	40.05M	37.581M	40.05M	37.431M	40.25M	37.531M
802.11ax HEW80_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	81.4M	76.962M	81M	76.962M	81.7M	76.962M	81.8M	76.862M

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

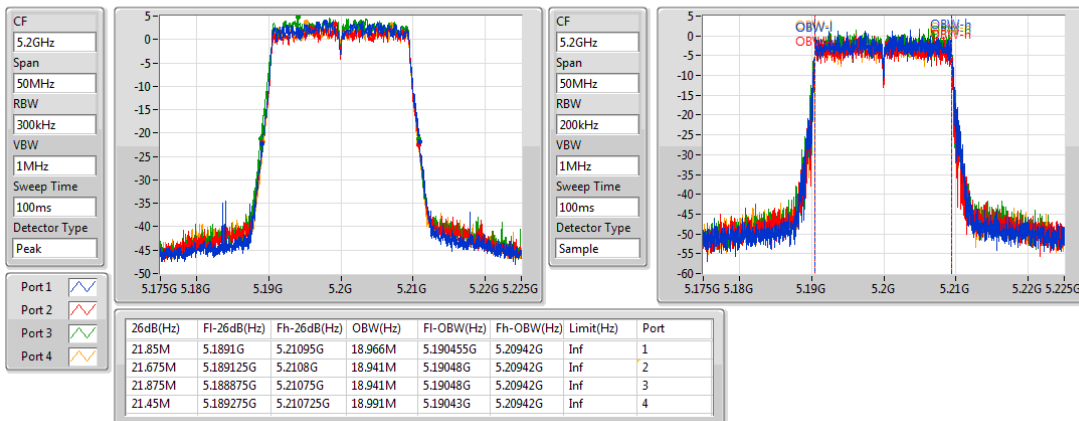
Port X-OBW = Port X 99% occupied bandwidth;

802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
5180MHz

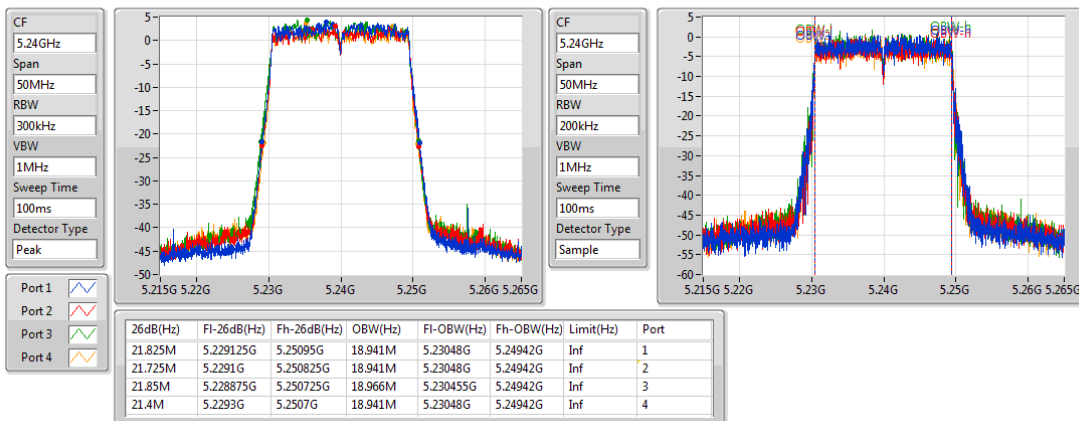
17/04/2019


802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
5200MHz

17/04/2019

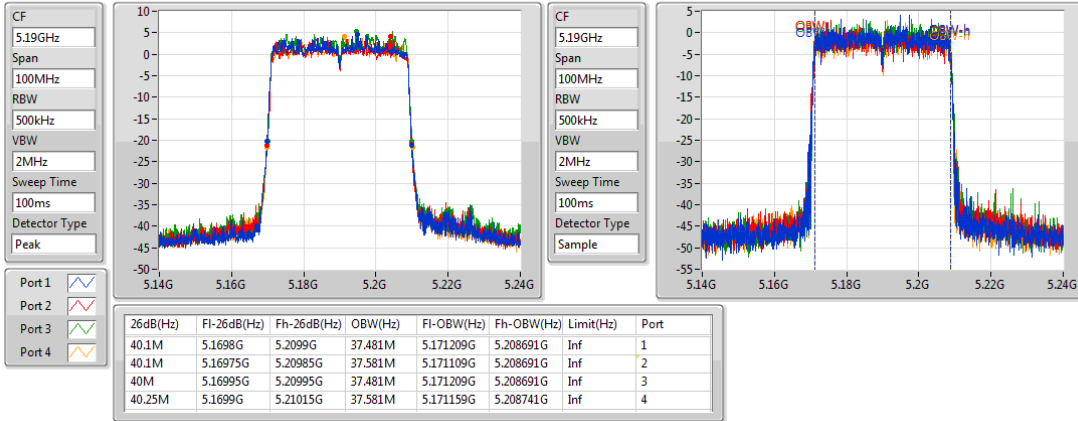

802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
5240MHz

17/04/2019

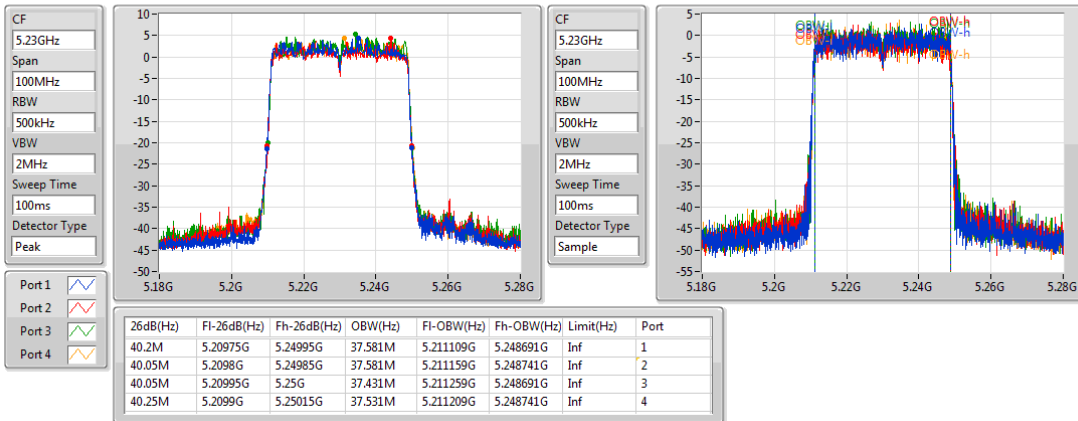


802.11ax HEW40_Nss4,(MCS0)_4TX
EBW
5190MHz

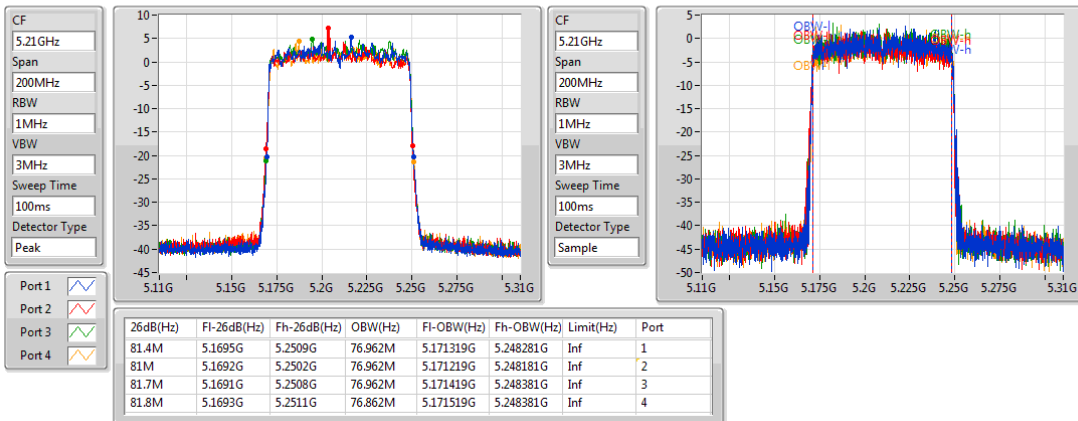
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802.11ax HEW40_Nss4,(MCS0)_4TX
EBW
5230MHz

17/04/2019


802.11ax HEW80_Nss4,(MCS0)_4TX
EBW
5210MHz

17/04/2019



For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 4:
Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	38.875M	16.867M	16M9D1D	26.075M	16.642M
802.11ax HEW20_Nss1,(MCS0)_1TX	36.4M	19.04M	19M0D1D	24.875M	18.966M
802.11ax HEW40_Nss1,(MCS0)_1TX	45.85M	37.681M	37M7D1D	39.85M	37.531M
802.11ax HEW80_Nss1,(MCS0)_1TX	81.9M	76.962M	77M0D1D	81.9M	76.962M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	16.325M	26.687M	26M7D1D	16.3M	23.888M
802.11ax HEW20_Nss1,(MCS0)_1TX	18.8M	25.812M	25M8D1D	18.625M	20.915M
802.11ax HEW40_Nss1,(MCS0)_1TX	37.45M	68.766M	68M8D1D	37.15M	61.469M
802.11ax HEW80_Nss1,(MCS0)_1TX	76.7M	87.056M	87M1D1D	76.7M	87.056M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;

Result

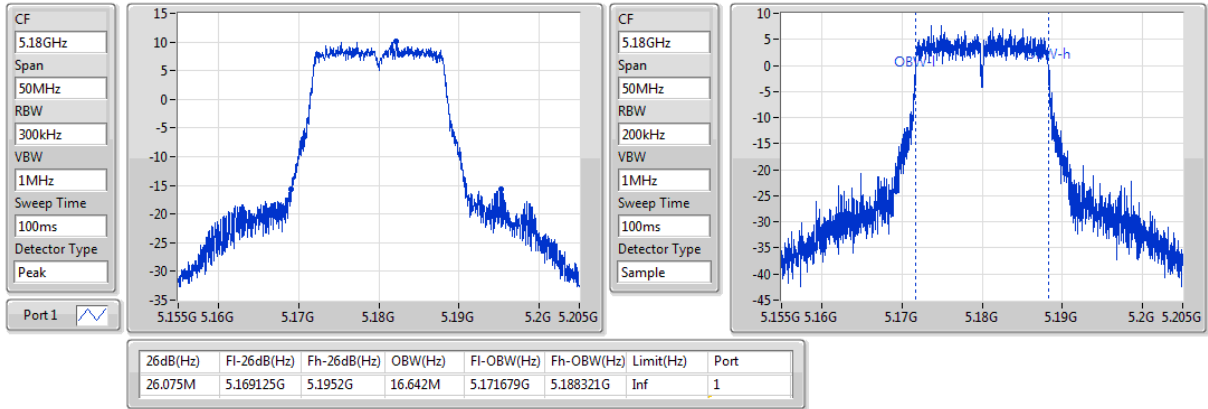
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11a_Nss1,(6Mbps)_1TX	-	-	-	-
5180MHz	Pass	Inf	26.075M	16.642M
5200MHz	Pass	Inf	38.875M	16.867M
5240MHz	Pass	Inf	28.475M	16.717M
5745MHz	Pass	500k	16.325M	23.888M
5785MHz	Pass	500k	16.3M	25.762M
5825MHz	Pass	500k	16.325M	26.687M
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-
5180MHz	Pass	Inf	25.1M	18.966M
5200MHz	Pass	Inf	36.4M	19.04M
5240MHz	Pass	Inf	24.875M	18.991M
5745MHz	Pass	500k	18.8M	20.915M
5785MHz	Pass	500k	18.7M	23.963M
5825MHz	Pass	500k	18.625M	25.812M
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-	-	-
5190MHz	Pass	Inf	39.85M	37.531M
5230MHz	Pass	Inf	45.85M	37.681M
5755MHz	Pass	500k	37.45M	61.469M
5795MHz	Pass	500k	37.15M	68.766M
802.11ax HEW80_Nss1,(MCS0)_1TX	-	-	-	-
5210MHz	Pass	Inf	81.9M	76.962M
5775MHz	Pass	500k	76.7M	87.056M

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

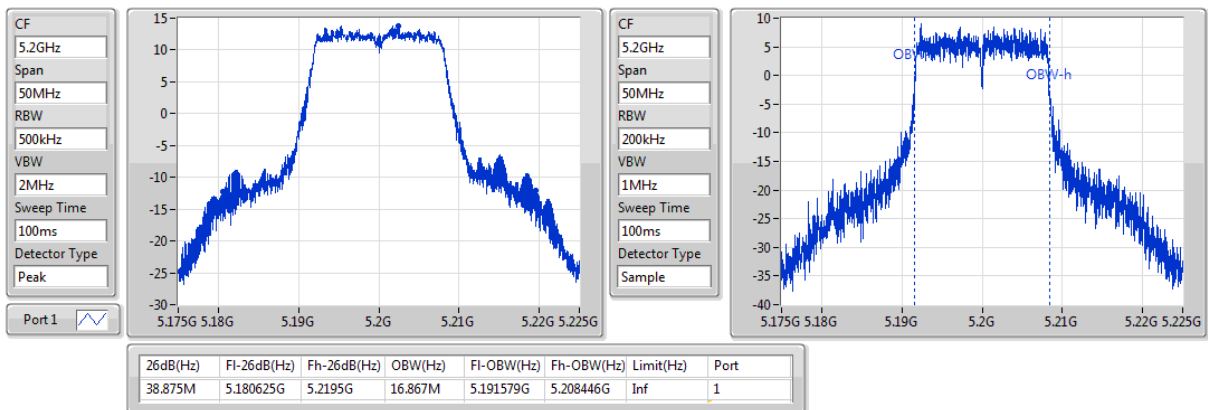
Port X-OBW = Port X 99% occupied bandwidth;

802.11a_Nss1,(6Mbps)_1TX
EBW
5180MHz

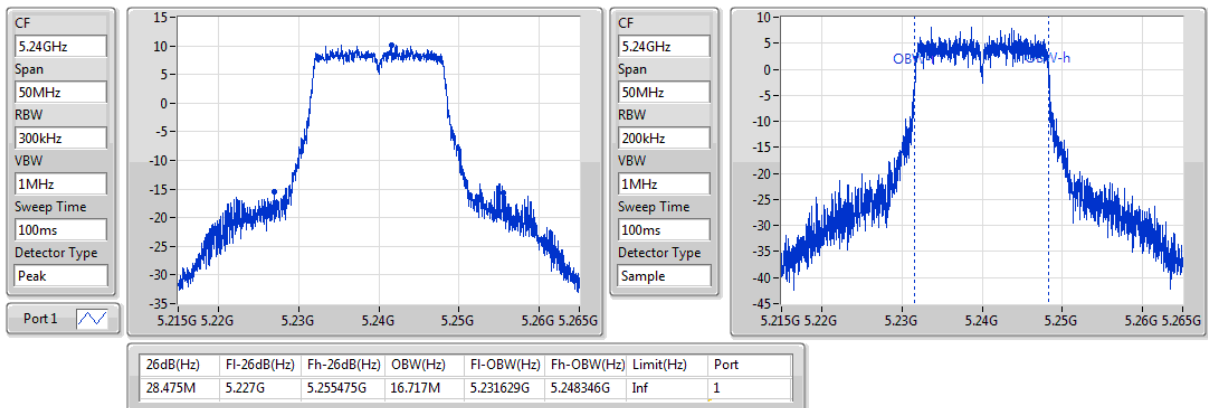
29/03/2019


802.11a_Nss1,(6Mbps)_1TX
EBW
5200MHz

29/03/2019

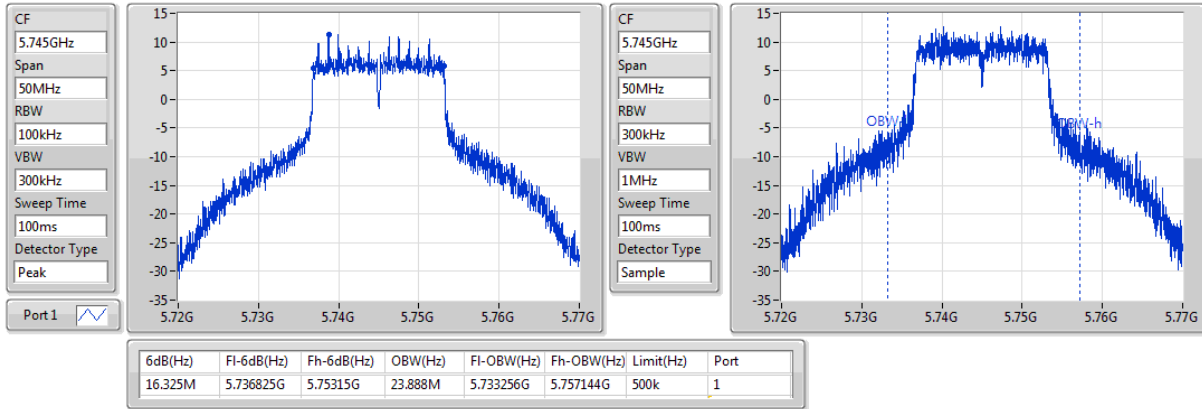

802.11a_Nss1,(6Mbps)_1TX
EBW
5240MHz

29/03/2019

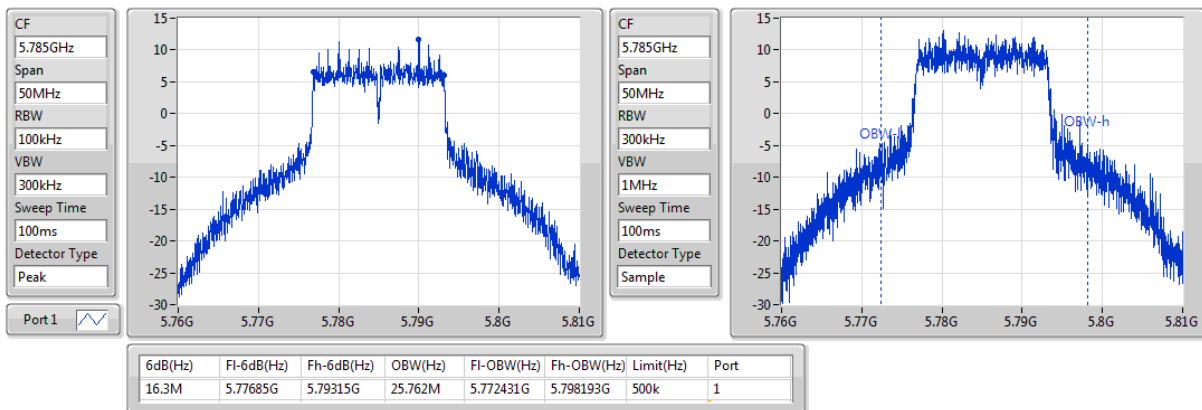


802.11a_Nss1,(6Mbps)_1TX
EBW
5745MHz

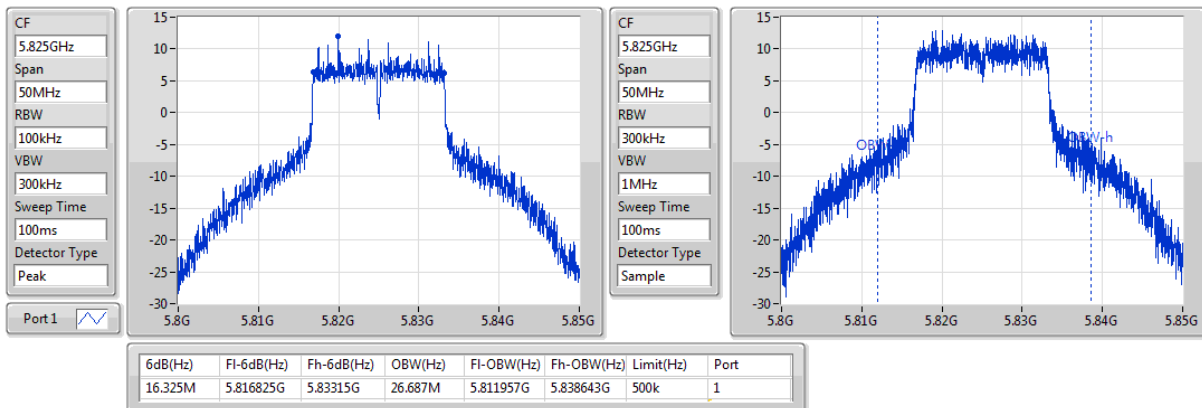
29/03/2019


802.11a_Nss1,(6Mbps)_1TX
EBW
5785MHz

29/03/2019

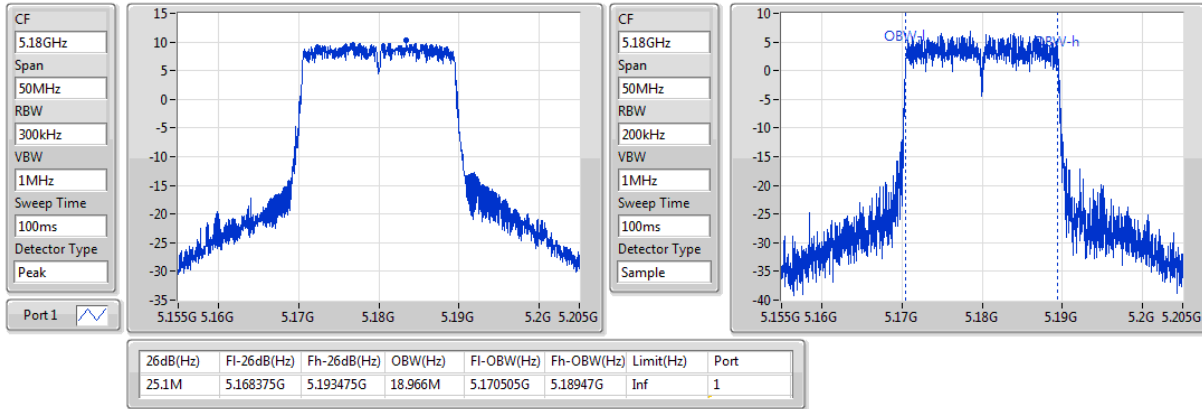

802.11a_Nss1,(6Mbps)_1TX
EBW
5825MHz

29/03/2019

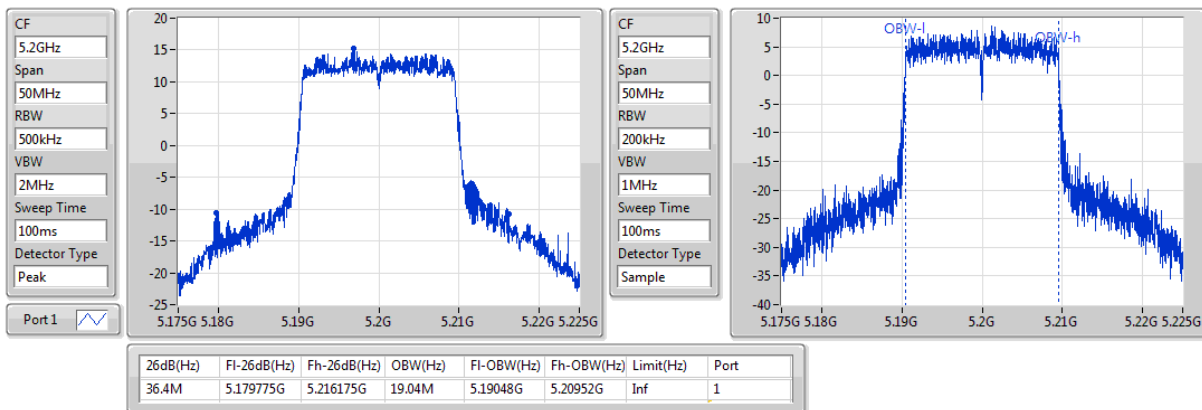


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5180MHz

29/03/2019


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5200MHz

29/03/2019


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5240MHz

29/03/2019

