

FCC RADIO TEST REPORT

FCC ID : O6ZBGW320
Equipment : BGW320-500 Wireless Integrated ONT Residential Gateway
Brand Name : HUMAX
Model Name : BGW320-500
Applicant : Humax Co., Ltd.
HUMAX BLDG., 2, Yeongmun-ro Cheoin-gu Yongin-si,
Gyeonggi-do South Korea 17040
Manufacturer : Humax Co., Ltd.
HUMAX BLDG., 2, Yeongmun-ro Cheoin-gu Yongin-si,
Gyeonggi-do South Korea 17040
Standard : 47 CFR FCC Part 15.407

The product was received on Aug. 14, 2019, and testing was started from Aug. 23, 2019 and completed on Oct. 29, 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: Sam Chen

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TEL : 886-3-656-9065
FAX : 886-3-656-9085
Report Template No.: CB-A12_1 Ver1.0



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:

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: Cindy Peng



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	4TX
5.15-5.25GHz	802.11n HT20	20	1TX, 2TX, 3TX, 4TX
5.15-5.25GHz	802.11n HT20-BF	20	2TX, 3TX, 4TX
5.15-5.25GHz	802.11ac VHT20	20	1TX, 2TX, 3TX, 4TX
5.15-5.25GHz	802.11ac VHT20-BF	20	2TX, 3TX, 4TX
5.15-5.25GHz	802.11ax HEW20	20	1TX, 2TX, 3TX, 4TX
5.15-5.25GHz	802.11ax HEW20-BF	20	2TX, 3TX, 4TX
5.15-5.25GHz	802.11n HT40	40	1TX, 2TX, 3TX, 4TX
5.15-5.25GHz	802.11n HT40-BF	40	2TX, 3TX, 4TX
5.15-5.25GHz	802.11ac VHT40	40	1TX, 2TX, 3TX, 4TX
5.15-5.25GHz	802.11ac VHT40-BF	40	2TX, 3TX, 4TX
5.15-5.25GHz	802.11ax HEW40	40	1TX, 2TX, 3TX, 4TX
5.15-5.25GHz	802.11ax HEW40-BF	40	2TX, 3TX, 4TX
5.15-5.25GHz	802.11ac VHT80	80	1TX, 2TX, 3TX, 4TX
5.15-5.25GHz	802.11ac VHT80-BF	80	2TX, 3TX, 4TX
5.15-5.25GHz	802.11ax HEW80	80	1TX, 2TX, 3TX, 4TX
5.15-5.25GHz	802.11ax HEW80-BF	80	2TX, 3TX, 4TX
5.725-5.85GHz	802.11a	20	4TX
5.725-5.85GHz	802.11n HT20	20	1TX, 2TX, 3TX, 4TX
5.725-5.85GHz	802.11n HT20-BF	20	2TX, 3TX, 4TX
5.725-5.85GHz	802.11ac VHT20	20	1TX, 2TX, 3TX, 4TX
5.725-5.85GHz	802.11ac VHT20-BF	20	2TX, 3TX, 4TX
5.725-5.85GHz	802.11ax HEW20	20	1TX, 2TX, 3TX, 4TX
5.725-5.85GHz	802.11ax HEW20-BF	20	2TX, 3TX, 4TX
5.725-5.85GHz	802.11n HT40	40	1TX, 2TX, 3TX, 4TX
5.725-5.85GHz	802.11n HT40-BF	40	2TX, 3TX, 4TX
5.725-5.85GHz	802.11ac VHT40	40	1TX, 2TX, 3TX, 4TX
5.725-5.85GHz	802.11ac VHT40-BF	40	2TX, 3TX, 4TX
5.725-5.85GHz	802.11ax HEW40	40	1TX, 2TX, 3TX, 4TX
5.725-5.85GHz	802.11ax HEW40-BF	40	2TX, 3TX, 4TX
5.725-5.85GHz	802.11ac VHT80	80	1TX, 2TX, 3TX, 4TX
5.725-5.85GHz	802.11ac VHT80-BF	80	2TX, 3TX, 4TX
5.725-5.85GHz	802.11ax HEW80	80	1TX, 2TX, 3TX, 4TX
5.725-5.85GHz	802.11ax HEW80-BF	80	2TX, 3TX, 4TX



Note:

- ♦ 11a, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- ♦ VHT20, VHT40 and VHT80 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- ♦ HEW20, HEW40 and 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.	Brand	Model Name	Type	Connector	Gain (dBi)
1	CALTRONICS	02102140-06811U1	PCB	I-PEX	Note 1
2	CALTRONICS	02102140-06811U1	PCB	I-PEX	
3	CALTRONICS	02102140-06811U1	PCB	I-PEX	
4	CALTRONICS	02102140-06811U1	PCB	I-PEX	
5	CALTRONICS	02102140-06811U1	PCB	I-PEX	
6	CALTRONICS	02102140-06811U1	PCB	I-PEX	
7	CALTRONICS	02102140-06811U1	PCB	I-PEX	
8	CALTRONICS	02102140-06811U1	PCB	I-PEX	
9	CALTRONICS	02102140-06811U1	PCB	I-PEX	

Note 1:

Ant.	2.4GHz Port				5GHz Band 1 Port				5GHz Band 4 Port				Gain (dBi)		
													1TX mode for output power, PSD		
	1TX	2TX	3TX	4TX	1TX	2TX	3TX	4TX	1TX	2TX	3TX	4TX	2.4GHz	5GHz Band 1	5GHz Band 4
1	1	1	1	1	4	4	4	4	-	-	-	-	3.70	4.10	-
2	2	2	2	2	3	3	3	3	-	-	-	-	3.90	4.60	-
3	3	3	3	3	2	2	2	2	-	-	-	-	3.70	4.10	-
4	4	4	-	4	1	1	1	1	-	-	-	-	4.10	4.60	-
5	-	-	-	-	-	-	-	-	1	1	1	1	-	-	5.30
6	-	-	-	-	-	-	-	-	2	2	2	2	-	-	6.00
7	-	-	-	-	-	-	-	-	3	3	3	3	-	-	5.30
8	-	-	-	-	-	-	-	-	4	4	4	4	-	-	5.50
9	-	-	-	-	RX only	-	-	-	RX only	-	-	-	-	5.50	5.50

Ant.	Gain (dBi)			
	CDD mode for PSD			
	Beamforming mode, SDM Mode for output power & PSD			
	2.4GHz		5GHz Band 1	5GHz Band 4
1	4.99	5.88	6.09	-
2				
3				
4				
5	-	-	-	6.03
6				
7				
8				
9	-	-	5.50	5.50



Note 2: The above information was declared by manufacturer.

Note 3: The EUT has nine antennas.

Note 4:

For 2.4GHz function:

For IEEE 802.11b (1TX/1RX, 4TX/4RX):

For 1TX, 1RX

Only Port 1 can be used as transmitting antenna.

The EUT supports all antennas with RX diversity functions.

At once time there is only one antenna port can receiving RF signal

For 4TX, 4RX

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

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

For IEEE 802.11g (4TX/4RX):

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

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

For IEEE 802.11n/VHT/ax (1TX, 2TX, 3TX, 4TX/4RX):

For 1TX

The EUT supports all antennas with TX diversity functions.

At once time there is only one antenna port can transmitting RF signal.

For 2TX

The EUT supports all antennas with TX diversity functions.

At once time there are only two antenna port can transmitting RF signal.

For 3TX

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

For 4TX, 4RX

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

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

For 5GHz function:

For IEEE 802.11a (4TX/4RX):

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

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

For IEEE 802.11n/ac/ax (1TX, 2TX, 3TX, 4TX/4RX):

For 1TX

The EUT supports all antennas with TX diversity functions.

At once time there is only one antenna port can transmitting RF signal.

For 2TX

The EUT supports all antennas with TX diversity functions.

At once time there are only two antenna port can transmitting RF signal.

For 3TX

The EUT supports all antennas with TX diversity functions.

At once time there are only three antenna port can transmitting RF signal

For 4TX, 4RX

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

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

For 1RX:

Ant. 9 can be use as receiving antenna only.

**1.1.3 Mode Test Duty Cycle**

<For non-beamforming mode>

4T1S

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11a	0.953	0.21	2.068m	1k
802.11ac VHT20	0.986	0.06	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ac VHT40	0.972	0.12	953.75u	3k
802.11ac VHT80	0.943	0.25	461.25u	3k
802.11ax HEW20	0.982	0.08	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ax HEW40	0.965	0.15	773.75u	3k
802.11ax HEW80	0.93	0.32	402.5u	3k

4T2S

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ac VHT20	0.873	0.59	686.25u	3k
802.11ac VHT40	0.783	1.06	353.75u	3k
802.11ac VHT80	0.657	1.82	190u	10k
802.11ax HEW20	0.576	2.4	136.875u	10k
802.11ax HEW40	0.511	2.92	106.25u	10k
802.11ax HEW80	0.466	3.32	87.5u	10k

4T3S

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ac VHT20	0.833	0.79	482.5u	3k
802.11ac VHT40	0.729	1.37	265u	10k
802.11ac VHT80	0.604	2.19	150u	10k
802.11ax HEW20	0.56	2.52	128.75u	10k
802.11ax HEW40	0.516	2.87	106.25u	10k
802.11ax HEW80	0.496	3.05	96.25u	10k

**<For beamforming mode>****4T1S**

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ac VHT20-BF	0.964	0.16	3.9m	300
802.11ac VHT40-BF	0.97	0.13	3.695m	300
802.11ac VHT80-BF	0.952	0.21	5.098m	300
802.11ax HEW20-BF	0.938	0.28	2.995m	1k
802.11ax HEW40-BF	0.968	0.14	4.893m	300
802.11ax HEW80-BF	0.964	0.16	4.85m	300

4T2S

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ac VHT20-BF	0.975	0.11	3.838m	300
802.11ac VHT40-BF	0.957	0.19	4.609m	300
802.11ac VHT80-BF	0.907	0.42	5.101m	300
802.11ax HEW20-BF	0.935	0.29	4.365m	300
802.11ax HEW40-BF	0.957	0.19	4.413m	300
802.11ax HEW80-BF	0.946	0.24	4.853m	300

4T3S

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ac VHT20-BF	0.98	0.09	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ac VHT40-BF	0.962	0.17	4.945m	300
802.11ac VHT80-BF	0.982	0.08	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ax HEW20-BF	0.958	0.19	3.904m	300
802.11ax HEW40-BF	0.957	0.19	4.413m	300
802.11ax HEW80-BF	0.978	0.1	7.78m	300

Note:

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

1.1.4 EUT Operational Condition

EUT Power Type	From power adapter			
Beamforming Function	☒	With beamforming	☐	Without beamforming
	The product has beamforming function for n/VHT/ax in 2.4GHz and n/ac/ax in 5GHz.			
Function	☐	Outdoor P2M	☒	Indoor P2M
	☐	Fixed P2P	☐	Client
Test Software Version	MTool 3.1.0.1 V17.10.77.15 ; Telnet			

Note: The above information was declared by manufacturer.



1.2 Applicable Standards

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

- ♦ 47 CFR FCC Part 15
- ♦ ANSI C63.10-2013
- ♦ FCC KDB 789033 D02 v02r01
- ♦ FCC KDB 662911 D01 v02r01
- ♦ FCC KDB 412172 D01 v01r01
- ♦ FCC KDB 414788 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	TH02-CB	Owen Hsu	24.7~25.6°C / 59~61%	Sep. 02, 2019~Sep. 11, 2019
Radiated	03CH04-CB	Cola Fan	24~25.3°C / 55~59%	Aug. 23, 2019~Oct. 22, 2019
AC Conduction	CO01-CB	Deven Huang	20~22°C / 55~56%	Oct. 29, 2019

Test site Designation No. TW0006 with FCC

Test site registered number IC 4086D 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)	4.3 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	4.3 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	5.1 dB	Confidence levels of 95%
Conducted Emission	2.4 dB	Confidence levels of 95%
Output Power Measurement	1.5 dB	Confidence levels of 95%
Power Density Measurement	2.4 dB	Confidence levels of 95%
Bandwidth Measurement	2%	Confidence levels of 95%



2 Test Configuration of EUT

2.1 Test Channel Mode

<For non-beamforming mode>

4T1S

Mode	Power Setting
802.11a_Nss1,(6Mbps)_4TX	-
5180MHz	78
5200MHz	95
5240MHz	95
5745MHz	92
5785MHz	93
5825MHz	95
802.11ac VHT20_Nss1,(MCS0)_4TX	-
5180MHz	79
5200MHz	95
5240MHz	96
5745MHz	92
5785MHz	93
5825MHz	95
802.11ac VHT40_Nss1,(MCS0)_4TX	-
5190MHz	71
5230MHz	90
5755MHz	94
5795MHz	95
802.11ac VHT80_Nss1,(MCS0)_4TX	-
5210MHz	70
5775MHz	87
802.11ax HEW20_Nss1,(MCS0)_4TX	-
5180MHz	77
5200MHz	94
5240MHz	94
5745MHz	91
5785MHz	91
5825MHz	93
802.11ax HEW40_Nss1,(MCS0)_4TX	-
5190MHz	70
5230MHz	89
5755MHz	93
5795MHz	94



Mode	Power Setting
802.11ax HEW80_Nss1,(MCS0)_4TX	-
5210MHz	68
5775MHz	81

4T2S

Mode	Power Setting
802.11ac VHT20_Nss2,(MCS0)_4TX	-
5180MHz	20
802.11ac VHT40_Nss2,(MCS0)_4TX	-
5190MHz	18
802.11ac VHT80_Nss2,(MCS0)_4TX	-
5210MHz	16
5775MHz	22
802.11ax HEW20_Nss2,(MCS0)_4TX	-
5180MHz	19
802.11ax HEW40_Nss2,(MCS0)_4TX	-
5190MHz	17
802.11ax HEW80_Nss2,(MCS0)_4TX	-
5210MHz	16.5
5775MHz	21.5

4T3S

Mode	Power Setting
802.11ac VHT20_Nss3,(MCS0)_4TX	-
5180MHz	20
802.11ac VHT40_Nss3,(MCS0)_4TX	-
5190MHz	18.5
802.11ac VHT80_Nss3,(MCS0)_4TX	-
5210MHz	17
5775MHz	22
802.11ax HEW20_Nss3,(MCS0)_4TX	-
5180MHz	19
802.11ax HEW40_Nss3,(MCS0)_4TX	-
5190MHz	18
802.11ax HEW80_Nss3,(MCS0)_4TX	-
5210MHz	17
5775MHz	21.5

**<For beamforming mode>****4T1S**

Mode	Power Setting
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-
5180MHz	79
5200MHz	95
5240MHz	96
5745MHz	92
5785MHz	93
5825MHz	94
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-
5190MHz	69
5230MHz	90
5755MHz	94
5795MHz	95
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-
5210MHz	69
5775MHz	86
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-
5180MHz	75
5200MHz	91
5240MHz	94
5745MHz	91
5785MHz	91
5825MHz	93
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-
5190MHz	68
5230MHz	90
5755MHz	93
5795MHz	94
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-
5210MHz	70
5775MHz	82

**4T2S**

Mode	Power Setting
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	-
5180MHz	82
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	-
5190MHz	74
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	-
5210MHz	73
5775MHz	89
802.11ax HEW20-BF_Nss2,(MCS0)_4TX	-
5180MHz	78
802.11ax HEW40-BF_Nss2,(MCS0)_4TX	-
5190MHz	74
802.11ax HEW80-BF_Nss2,(MCS0)_4TX	-
5210MHz	75
5775MHz	86

4T3S

Mode	Power Setting
802.11ac VHT20-BF_Nss3,(MCS0)_4TX	-
5180MHz	82
802.11ac VHT40-BF_Nss3,(MCS0)_4TX	-
5190MHz	75
802.11ac VHT80-BF_Nss3,(MCS0)_4TX	-
5210MHz	76
5775MHz	89
802.11ax HEW20-BF_Nss3,(MCS0)_4TX	-
5180MHz	80
802.11ax HEW40-BF_Nss3,(MCS0)_4TX	-
5190MHz	76
802.11ax HEW80-BF_Nss3,(MCS0)_4TX	-
5210MHz	75
5775MHz	89

Note:

- ♦ VHT20/VHT40 covers HT20/HT40, due to same modulation. The power setting for 802.11n HT20 and HT40 are the same or lower than 802.11ac VHT20 and VHT40.
- ♦ There are two modes of EUT, one is beamforming mode, and the other is Non-beamforming mode for n/VHT/ax in 2.4GHz and n/ac/ax in 5GHz, Beamforming mode and Non-beamforming mode has been test and record in this test report.

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	CTX
1	WLAN 2.4GHz
2	WLAN 5GHz
For operating mode 2 is the worst case and it was record in this test 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

The Worst Case Mode for Following Conformance Tests	
Tests Item	Unwanted Emissions
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	CTX
1	WLAN 2.4GHz
2	WLAN 5GHz
For operating mode 1 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX

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 + WLAN 5GHz Band 1
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 + WLAN 5GHz Band 1 + WLAN 5GHz Band 4
Refer to Sporton Test Report No.: FA981323 for Co-location RF Exposure Evaluation.	

Note: The EUT can only be used at Y axis position.

2.3 EUT Operation during Test

For CTX Mode:

For non-beamforming mode:

The EUT was programmed to be in continuously transmitting mode.

For beamforming mode:

For Conducted Mode:

The EUT was programmed to be in continuously transmitting mode.

For Radiated Mode:

During the test, the following programs under WIN XP 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 RX Device and transmit duty cycle no less than 98%.

For Normal Link:

During the test, the EUT operation to normal function.



2.4 Accessories

Accessories				
No.	Equipment Name	Brand Name	Model Name	Rating
1	Adapter	DIRECTV	EPS48R0-16	Input: 120V~1.1A, 60Hz Output: 12V, 4A, 48W

2.5 Support Equipment

For AC Conduction:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Flash disk3.0	Transcend	JetFlash-700	N/A
B	LAN NB	DELL	E6430	N/A

For Radiated (below 1GHz) and RF Conducted:

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

For Radiated (above 1GHz):

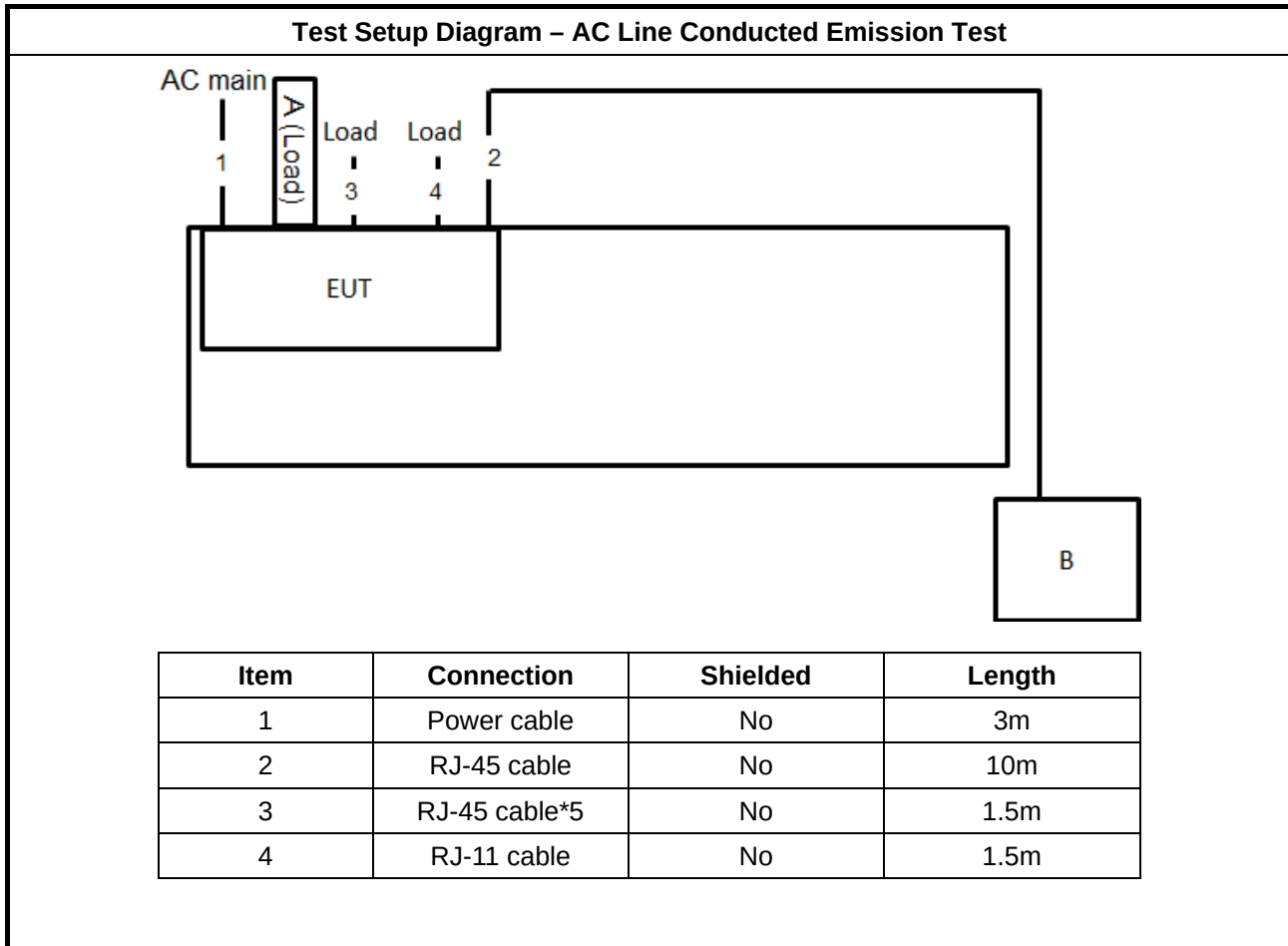
For non-beamforming mode:

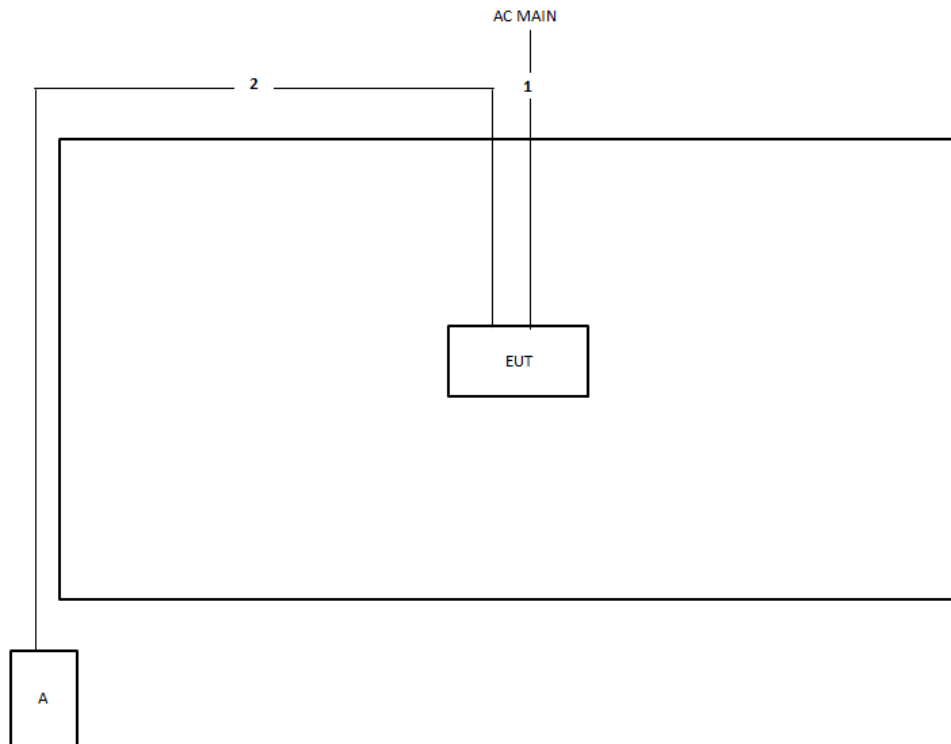
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A

For beamforming mode:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A
B	RX Device	ASUS	RT-AX88U	MSQ-RTAXHP00
C	Notebook	DELL	E4300	N/A

2.6 Test Setup Diagram

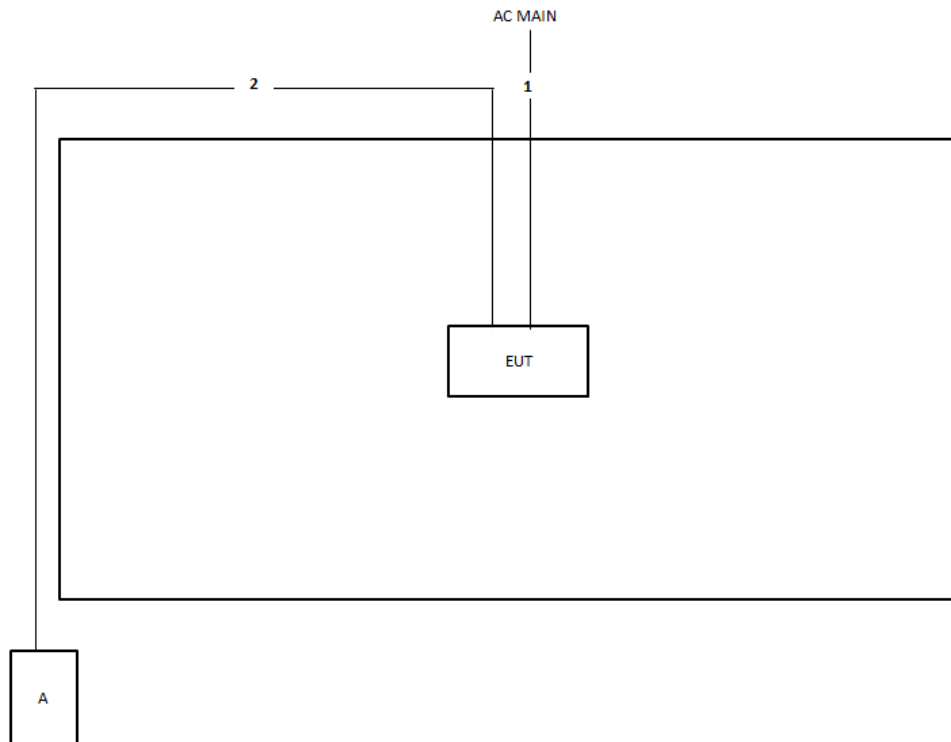


Test Setup Diagram - Radiated Test < 1GHz


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

Test Setup Diagram - Radiated Test > 1GHz

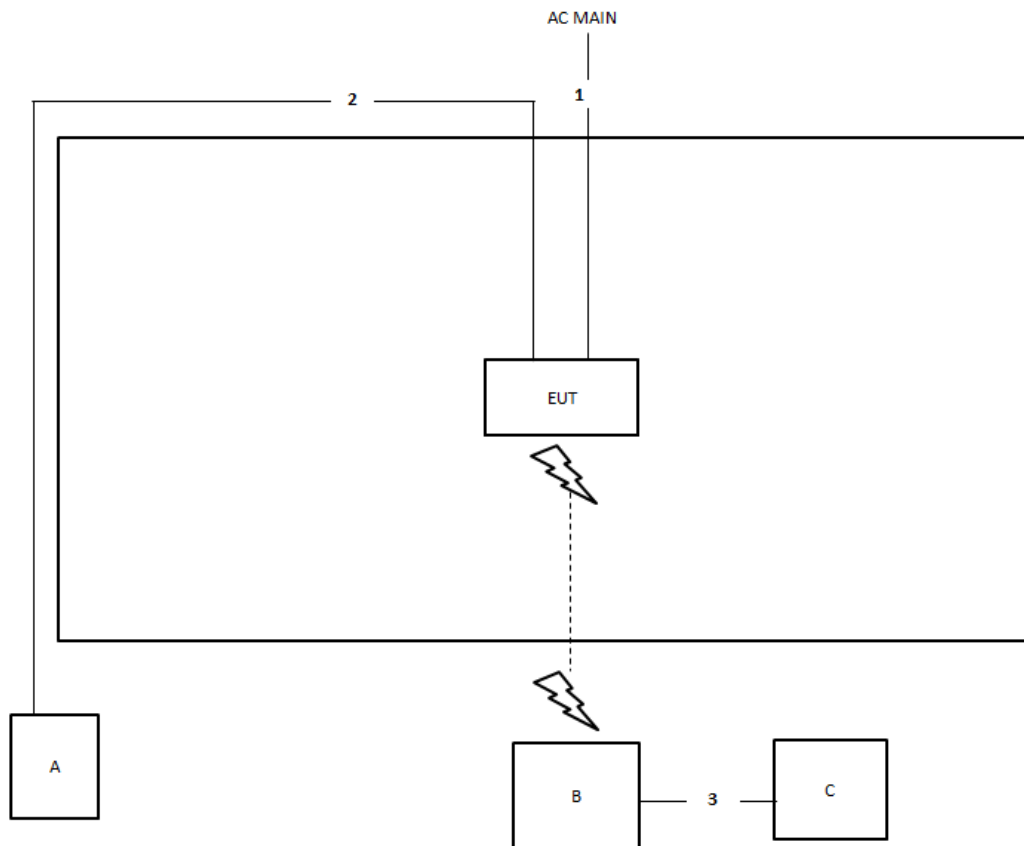
For non-beamforming mode:



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

Test Setup Diagram - Radiated Test > 1GHz

For beamforming mode:



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



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.

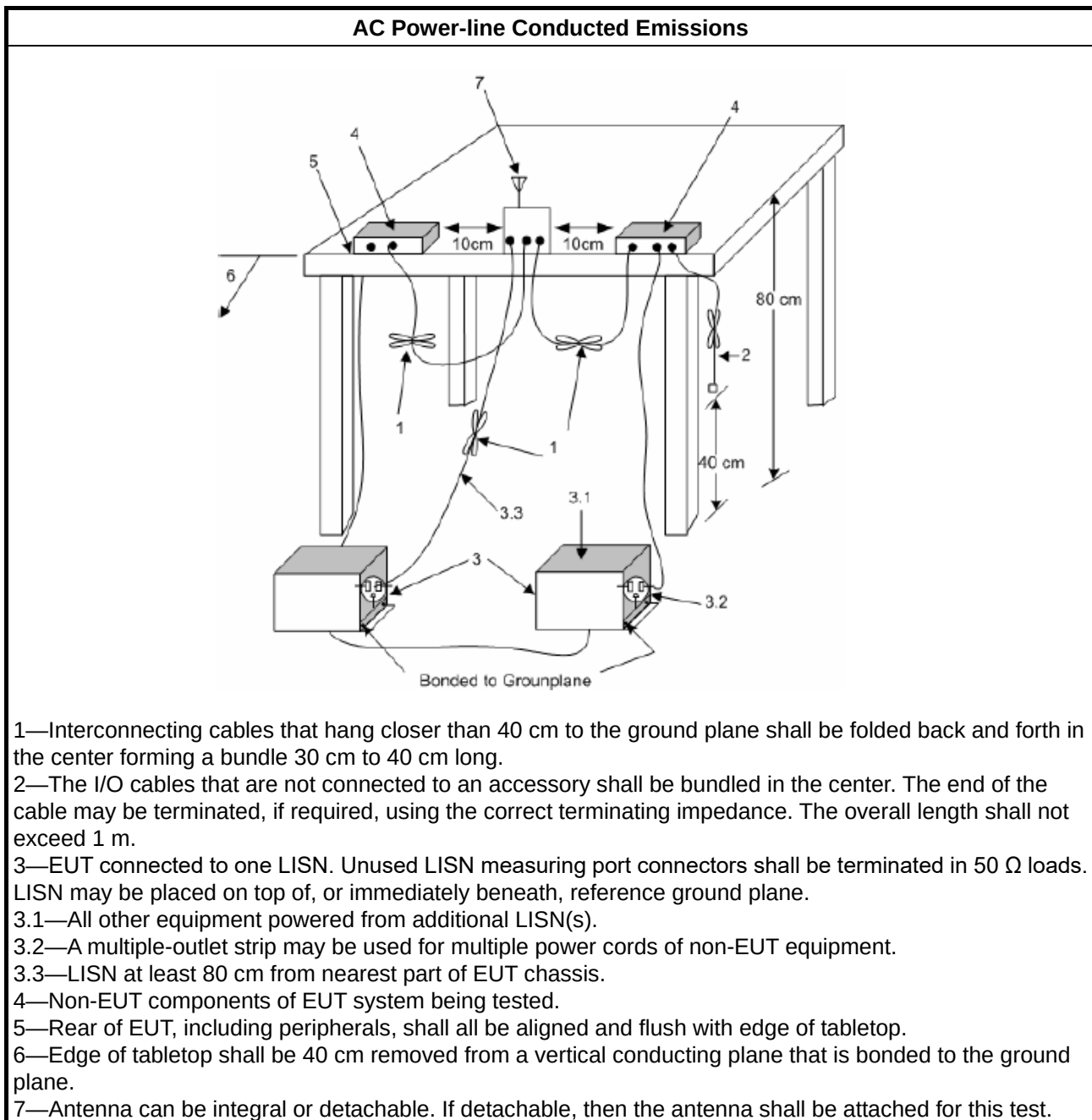
3.1.2 Measuring Instruments

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.

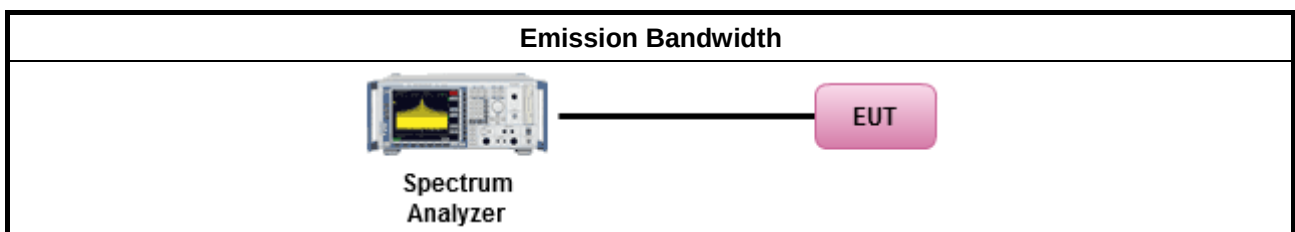
3.2.2 Measuring Instruments

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.	

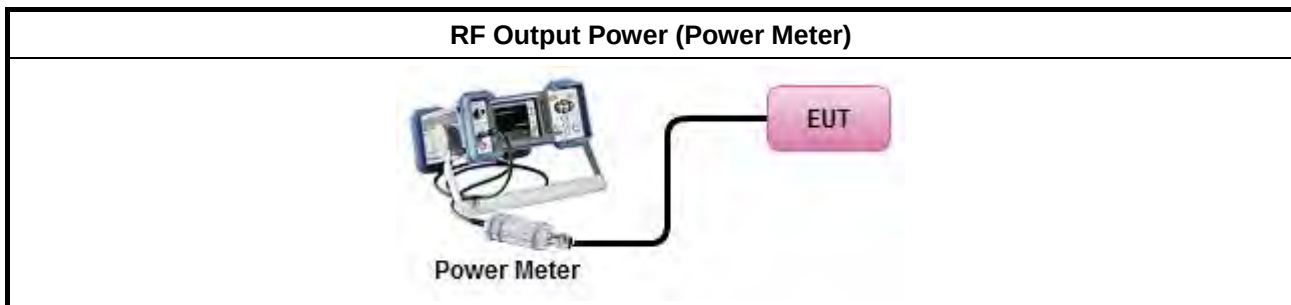
3.3.2 Measuring Instruments

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

3.4.2 Measuring Instruments

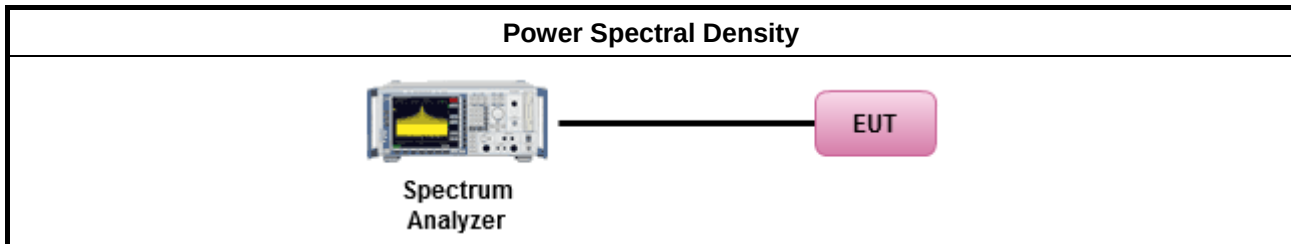
Refer a test equipment and calibration data table in this test report.



3.4.3 Test Procedures

Test Method	
Peak power spectral density procedures that the same method as used to determine the conducted output power shall be used to determine the peak power spectral density and use the peak search function on the spectrum analyzer to find the peak of the spectrum. For the peak power spectral density shall be measured using below options:	
☐	Refer as FCC KDB 789033, F)5) power spectral density can be measured using resolution bandwidths < 1 MHz provided that the results are integrated over 1 MHz bandwidth
[duty cycle ≥ 98% or external video / power trigger]	
☒	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).

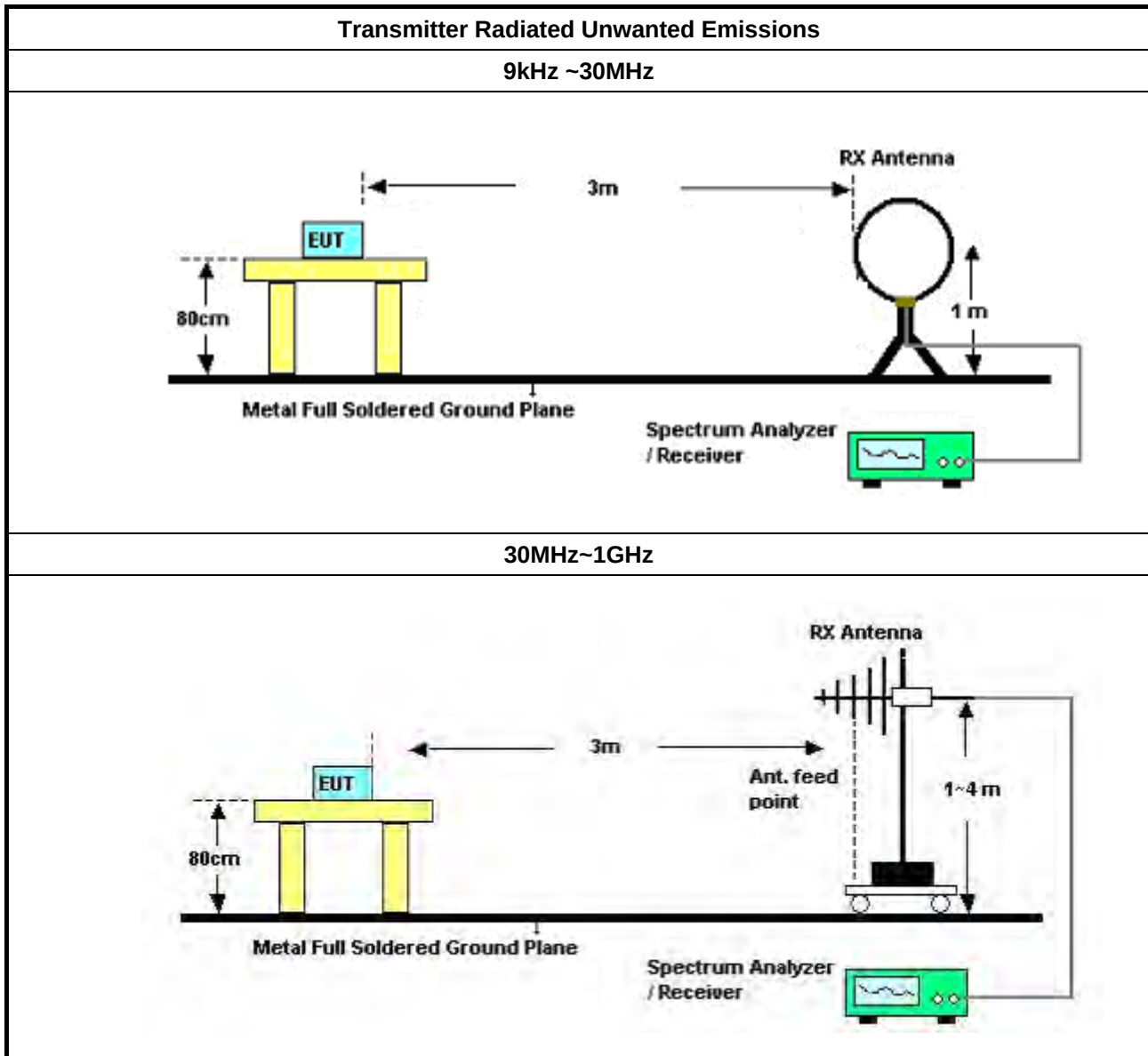
3.5.2 Measuring Instruments

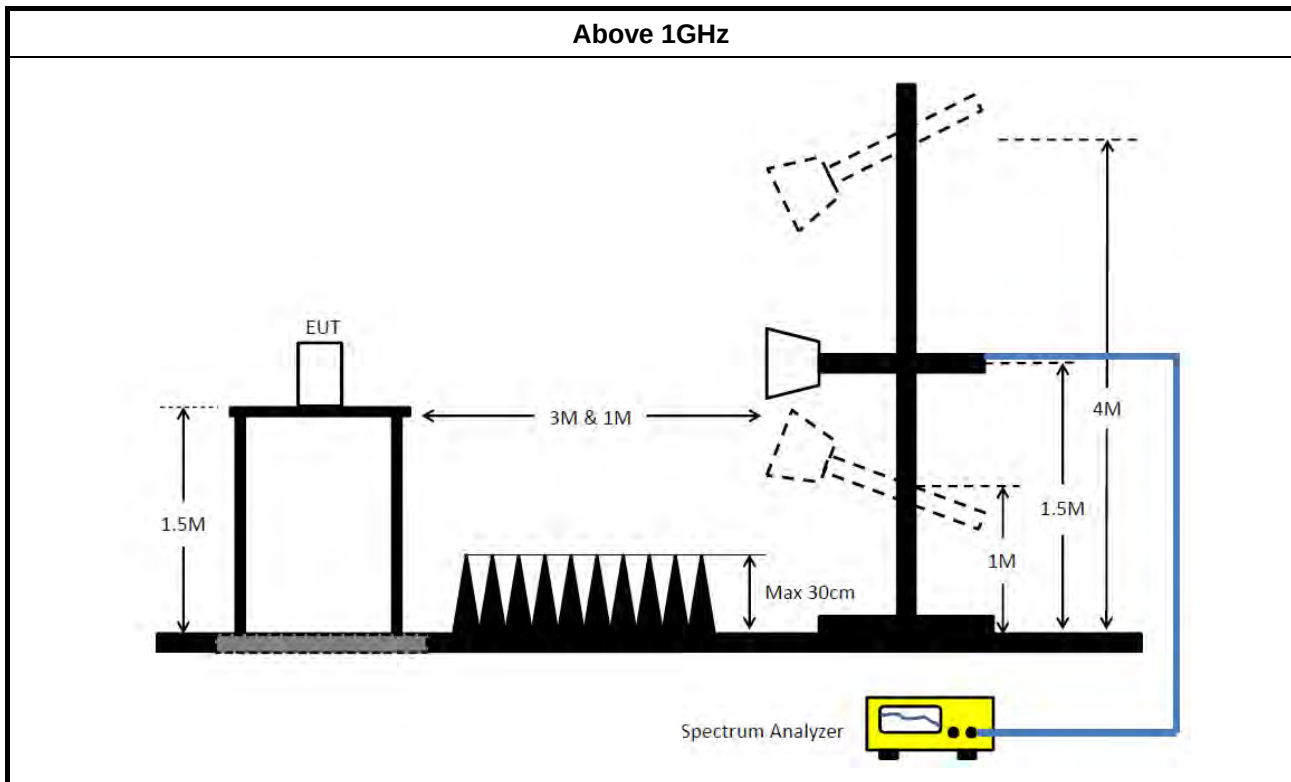
Refer a test equipment and calibration data table in this test report.

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 Measurement Results Calculation

The measured Level is calculated using:

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

3.5.6 Transmitter Unwanted Emissions (Below 30MHz)

There is a comparison data of both open-field test site and alternative test site - semi-Anechoic chamber according to KDB414788 Radiated Test Site, and the result came out very similar.

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.

3.5.7 Test Result of Transmitter Unwanted Emissions

Refer as Appendix E



4 Test Equipment and Calibration Data

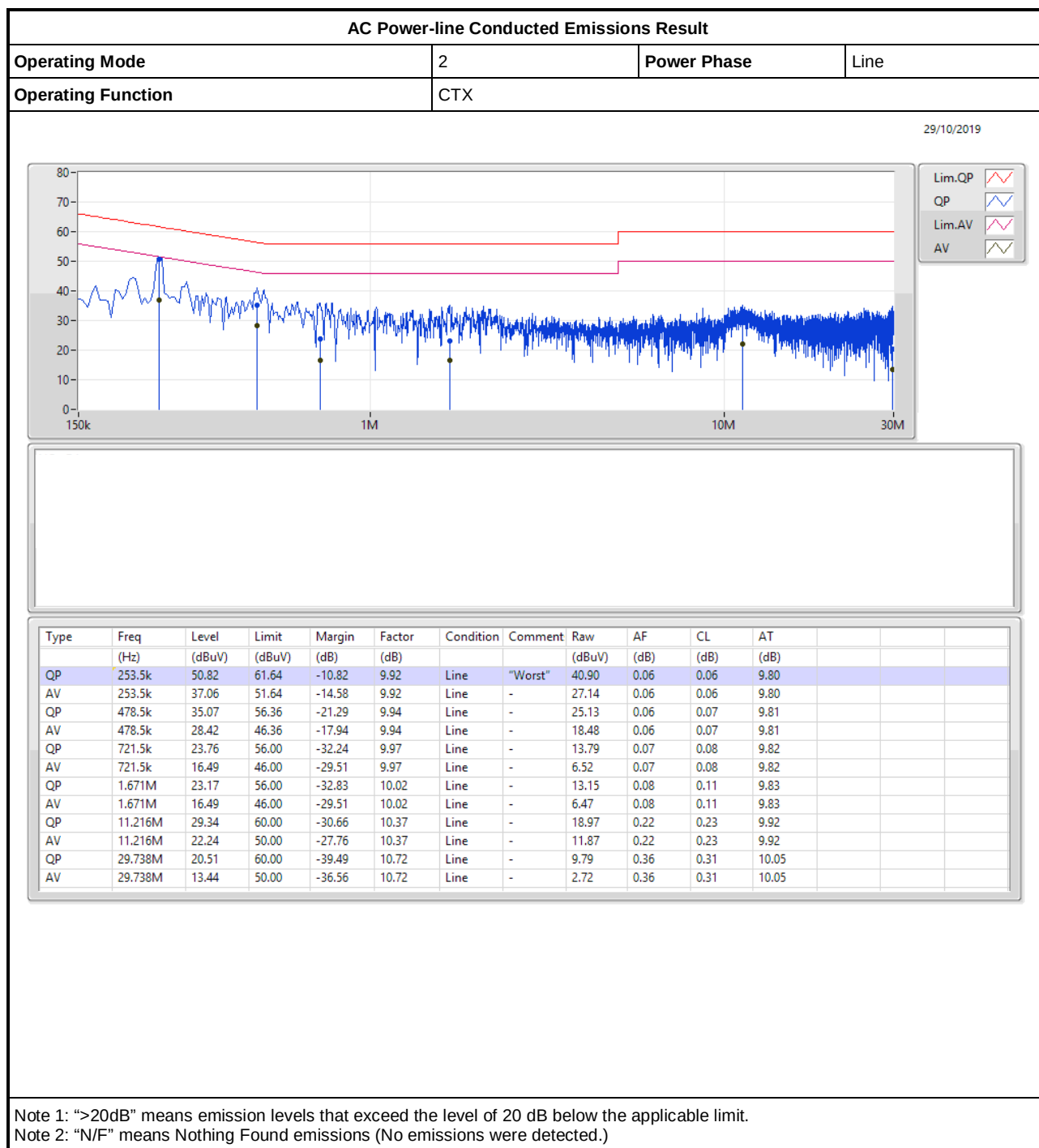
Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.45GHz	Jan. 28, 2019	Jan. 29, 2020	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Dec. 24, 2018	Dec. 23, 2019	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Jan. 11, 2019	Jan. 10, 2020	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	9kHz ~ 30MHz	May 21, 2019	May 20, 2020	Conduction (CO01-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 29, 2019	Mar. 28, 2020	Radiation (03CH04-CB)
BILOG ANTENNA with 6 dB attenuator	Schaffner & Woken	CBL6112B & N-6-06	22021&AT-N0 607	30MHz ~ 1GHz	Oct. 12, 2018	Oct. 11, 2019	Radiation (03CH04-CB)
BILOG ANTENNA with 6 dB attenuator	Schaffner & EMCI	CBL6112B & N-6-06	22021&AT-N0 607	30MHz ~ 1GHz	Oct. 11, 2019	Oct. 10, 2020	Radiation (03CH04-CB)
Horn Antenna	ETS · Lindgren	3115	00143147	750MHz~18GHz	Oct. 26, 2018	Oct. 25, 2019	Radiation (03CH04-CB)
Horn Antenna	ETS · Lindgren	3115	00143147	750MHz~18GHz	Oct. 22, 2019	Oct. 21, 2020	Radiation (03CH04-CB)
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170507	15GHz ~ 40GHz	Jun. 12, 2019	Jun. 11, 2020	Radiation (03CH04-CB)
Pre-Amplifier	Agilent	310N	187291	0.1MHz ~ 1GHz	Mar. 19, 2019	Mar. 18, 2020	Radiation (03CH04-CB)
Pre-Amplifier	Agilent	83017A	MY53270063	0.5GHz ~ 26.5GHz	Mar. 19, 2019	Mar. 18, 2020	Radiation (03CH04-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 03, 2019	Jul. 02, 2020	Radiation (03CH04-CB)
Spectrum Analyzer	R&S	FSP40	100142	9kHz~40GHz	Dec. 26, 2018	Dec. 25, 2019	Radiation (03CH04-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	May 15, 2019	May 14, 2020	Radiation (03CH04-CB)
RF Cable-low	Woken	RG402	Low Cable-03+22	30MHz ~ 1GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH04-CB)
RF Cable-low	Woken	RG402	Low Cable-03+22	30MHz ~ 1GHz	Oct. 07, 2019	Oct. 06, 2020	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-21	1GHz - 18GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-21	1GHz - 18GHz	Oct. 07, 2019	Oct. 06, 2020	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-21+22	1GHz - 18GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-21+22	1GHz - 18GHz	Oct. 07, 2019	Oct. 06, 2020	Radiation (03CH04-CB)

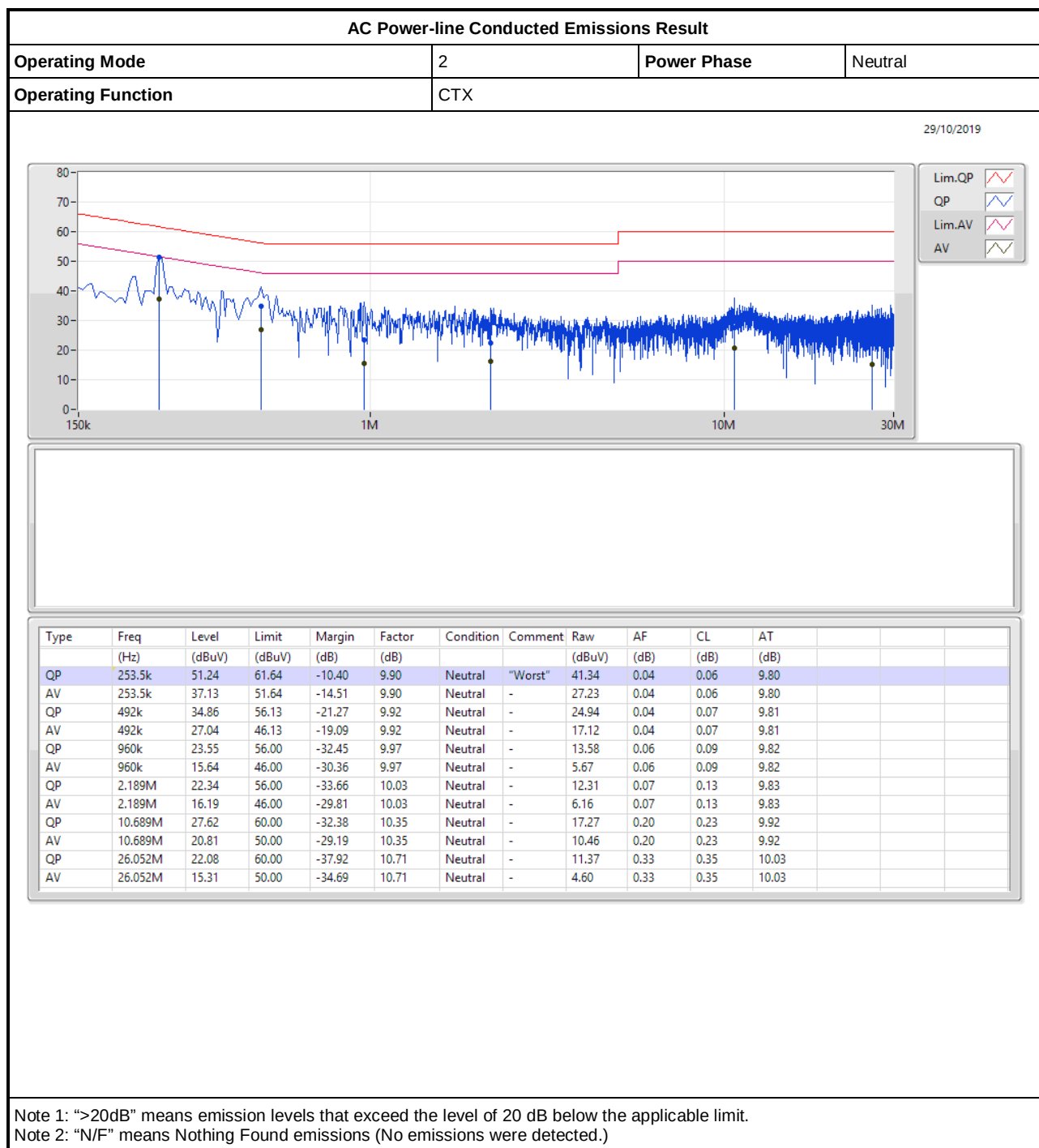


Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 24, 2019	Jul. 23, 2020	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 24, 2019	Jul. 23, 2020	Radiation (03CH04-CB)
Spectrum analyzer	R&S	FSV40	101027	9kHz~40GHz	Jul. 02, 2019	Jul. 01, 2020	Conducted (TH02-CB)
Power Sensor	Anritsu	MA2411B	1531343	300MHz~40GHz	Jul. 31, 2019	Jul. 30, 2020	Conducted (TH02-CB)
Power Meter	Anritsu	ML2495A	1728001	300MHz~40GHz	Jul. 31, 2019	Jul. 30, 2020	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-01	1 GHz – 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-02	1 GHz – 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-3	1 GHz – 26.5 GHz	Oct. 24, 2018	Oct. 23, 2019	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-04	1 GHz – 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-05	1 GHz – 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH02-CB)

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

N.C.R. means Non-Calibration required.





<For non-beamforming mode>

4T1S

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	38.261M	16.702M	16M7D1D	21.33M	16.517M
802.11ac VHT20_Nss1,(MCS0)_4TX	32.957M	17.873M	17M9D1D	21.478M	17.723M
802.11ac VHT40_Nss1,(MCS0)_4TX	44.174M	36.311M	36M3D1D	39.478M	36.187M
802.11ac VHT80_Nss1,(MCS0)_4TX	82.087M	76.043M	76M0D1D	80.696M	75.505M
802.11ax HEW20_Nss1,(MCS0)_4TX	34.348M	19.056M	19M1D1D	21.391M	18.929M
802.11ax HEW40_Nss1,(MCS0)_4TX	40.348M	37.745M	37M7D1D	39.652M	37.544M
802.11ax HEW80_Nss1,(MCS0)_4TX	82.087M	77.433M	77M4D1D	81.391M	76.703M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	16.348M	16.606M	16M6D1D	3.188M	3.859M
802.11ac VHT20_Nss1,(MCS0)_4TX	17.565M	17.775M	17M8D1D	3.826M	4.131M
802.11ac VHT40_Nss1,(MCS0)_4TX	36.348M	36.329M	36M3D1D	3.188M	3.527M
802.11ac VHT80_Nss1,(MCS0)_4TX	75.826M	75.838M	75M8D1D	3.13M	3.513M
802.11ax HEW20_Nss1,(MCS0)_4TX	19.043M	19.004M	19M0D1D	4.464M	4.549M
802.11ax HEW40_Nss1,(MCS0)_4TX	37.565M	37.749M	37M7D1D	3.71M	4.09M
802.11ax HEW80_Nss1,(MCS0)_4TX	76.87M	77.266M	77M3D1D	3.768M	4.08M

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

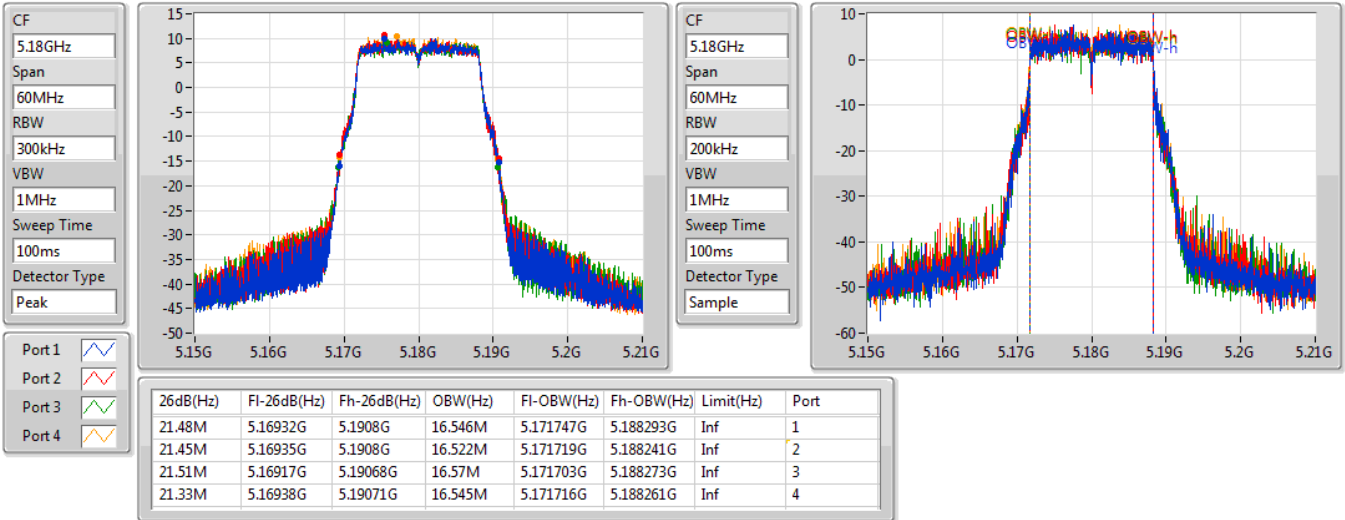
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.48M	16.546M	21.45M	16.522M	21.51M	16.57M	21.33M	16.545M
5200MHz	Pass	Inf	28.087M	16.581M	27.391M	16.552M	38.261M	16.677M	33.565M	16.662M
5240MHz	Pass	Inf	27.304M	16.623M	22M	16.621M	33.565M	16.702M	22.087M	16.517M
5745MHz	Pass	500k	16.348M	16.569M	16.348M	16.582M	16.348M	16.581M	16.348M	16.489M
5785MHz	Pass	500k	16.348M	16.531M	16.348M	16.554M	16.348M	16.565M	16.348M	16.559M
5825MHz	Pass	500k	16.348M	16.582M	16.348M	16.57M	16.348M	16.606M	16.348M	16.486M
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.652M	17.778M	21.478M	17.813M	21.478M	17.723M	21.652M	17.806M
5200MHz	Pass	Inf	22.957M	17.873M	30.957M	17.769M	32.957M	17.808M	27.739M	17.863M
5240MHz	Pass	Inf	24.522M	17.783M	23.217M	17.779M	31.478M	17.87M	23.478M	17.79M
5745MHz	Pass	500k	17.565M	17.76M	17.565M	17.712M	17.565M	17.697M	17.565M	17.739M
5785MHz	Pass	500k	17.565M	17.775M	17.565M	17.768M	17.565M	17.7M	17.565M	17.761M
5825MHz	Pass	500k	17.565M	17.692M	17.565M	17.775M	17.565M	17.738M	17.565M	17.769M
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	40.174M	36.311M	39.478M	36.2M	40M	36.225M	39.826M	36.258M
5230MHz	Pass	Inf	44.174M	36.284M	40M	36.305M	41.739M	36.248M	39.652M	36.187M
5755MHz	Pass	500k	36.174M	36.329M	36.348M	36.322M	36.174M	36.287M	36.174M	36.253M
5795MHz	Pass	500k	35.652M	36.322M	36M	36.298M	36.348M	36.201M	36.174M	36.318M
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	82.087M	76.043M	80.696M	75.604M	81.043M	75.505M	81.739M	75.939M
5775MHz	Pass	500k	75.478M	75.33M	75.826M	75.838M	75.478M	75.581M	75.478M	75.481M
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.391M	18.964M	21.565M	18.949M	21.826M	18.929M	21.652M	19.025M
5200MHz	Pass	Inf	26M	18.99M	23.478M	18.973M	27.913M	19.056M	26.957M	19.009M
5240MHz	Pass	Inf	24.087M	18.929M	23.652M	18.996M	34.348M	18.98M	24.087M	18.981M
5745MHz	Pass	500k	18.87M	18.977M	18.957M	18.949M	18.957M	19.004M	18.957M	18.989M
5785MHz	Pass	500k	18.87M	19.002M	18.957M	18.904M	18.957M	18.98M	19.043M	18.985M
5825MHz	Pass	500k	18.783M	18.993M	18.957M	18.987M	18.957M	19.001M	18.957M	18.932M
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	40M	37.648M	39.652M	37.544M	40M	37.58M	40M	37.557M
5230MHz	Pass	Inf	39.826M	37.582M	39.652M	37.636M	40.348M	37.745M	40M	37.678M
5755MHz	Pass	500k	37.565M	37.452M	37.217M	37.582M	37.565M	37.651M	37.391M	37.276M
5795MHz	Pass	500k	37.217M	37.749M	37.043M	37.642M	37.391M	37.658M	37.043M	37.663M
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	82.087M	76.703M	81.739M	77.433M	81.739M	76.757M	81.391M	77.06M
5775MHz	Pass	500k	76.174M	77.006M	76.87M	77.266M	76.174M	76.985M	76.522M	77.171M

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

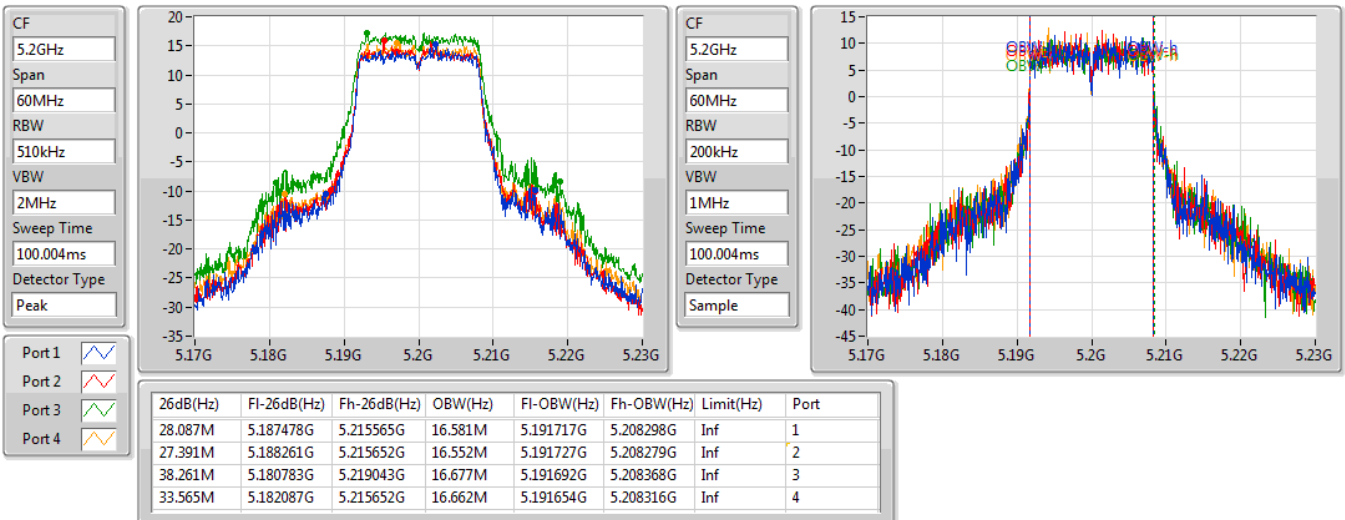
Port X-OBW = Port X 99% occupied bandwidth;

802.11a_Nss1,(6Mbps)_4TX
EBW
5180MHz

03/09/2019

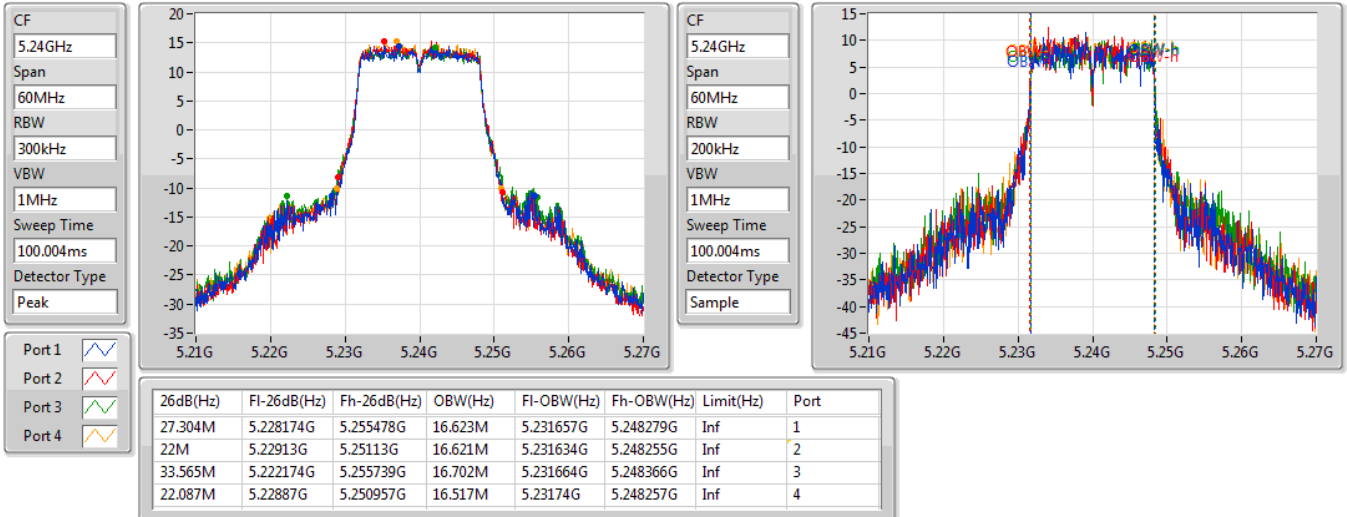

802.11a_Nss1,(6Mbps)_4TX
EBW
5200MHz

03/09/2019

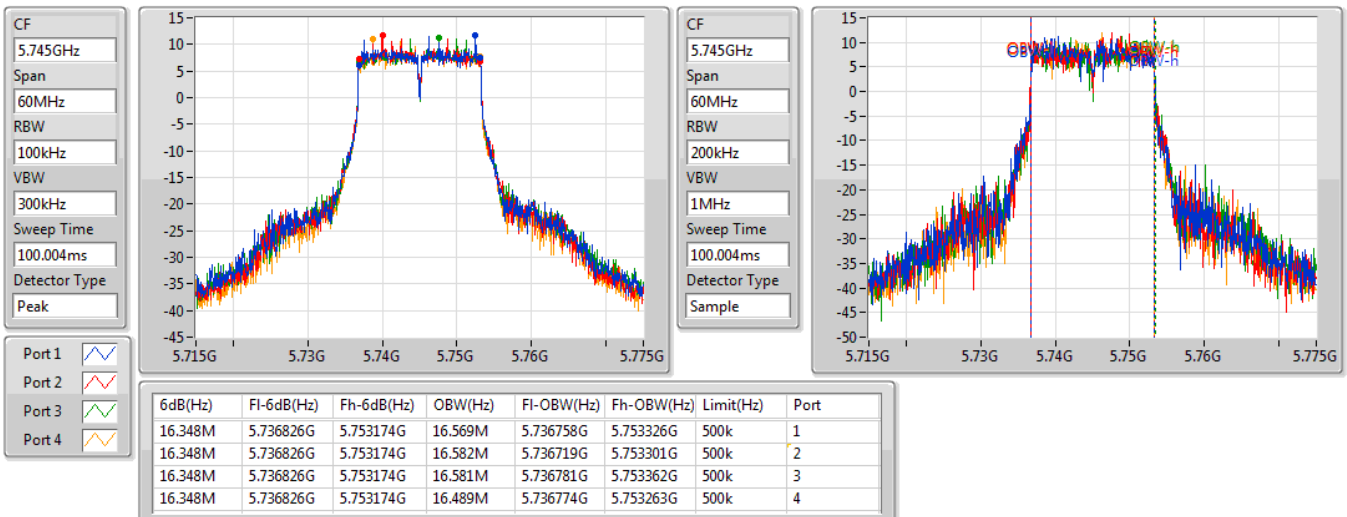


802.11a_Nss1,(6Mbps)_4TX
EBW
5240MHz

03/09/2019

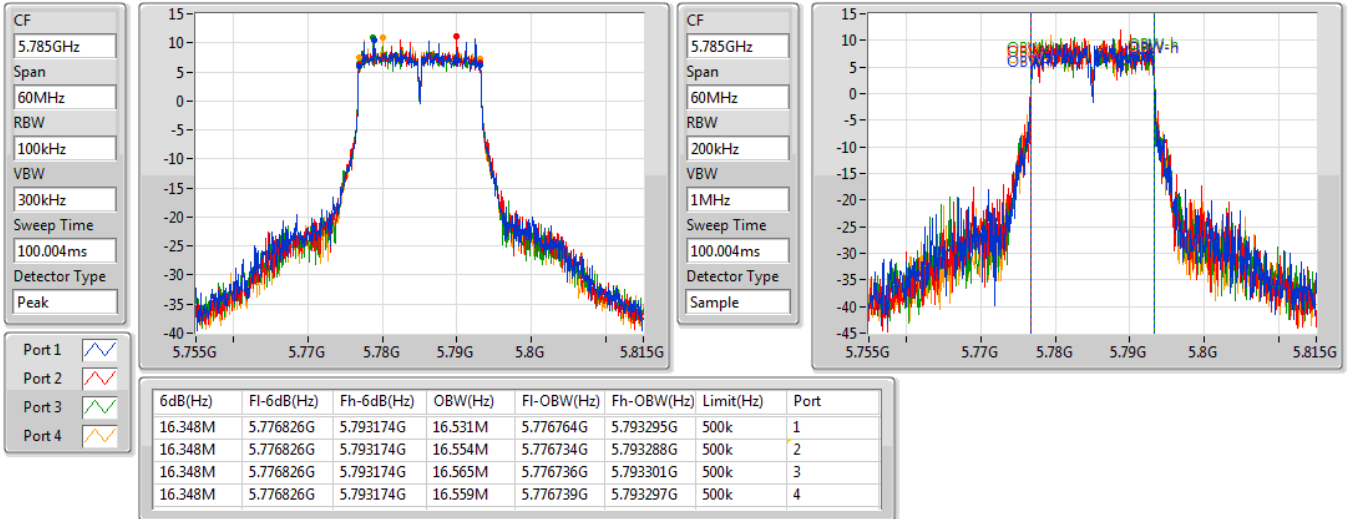

802.11a_Nss1,(6Mbps)_4TX
EBW
5745MHz

03/09/2019

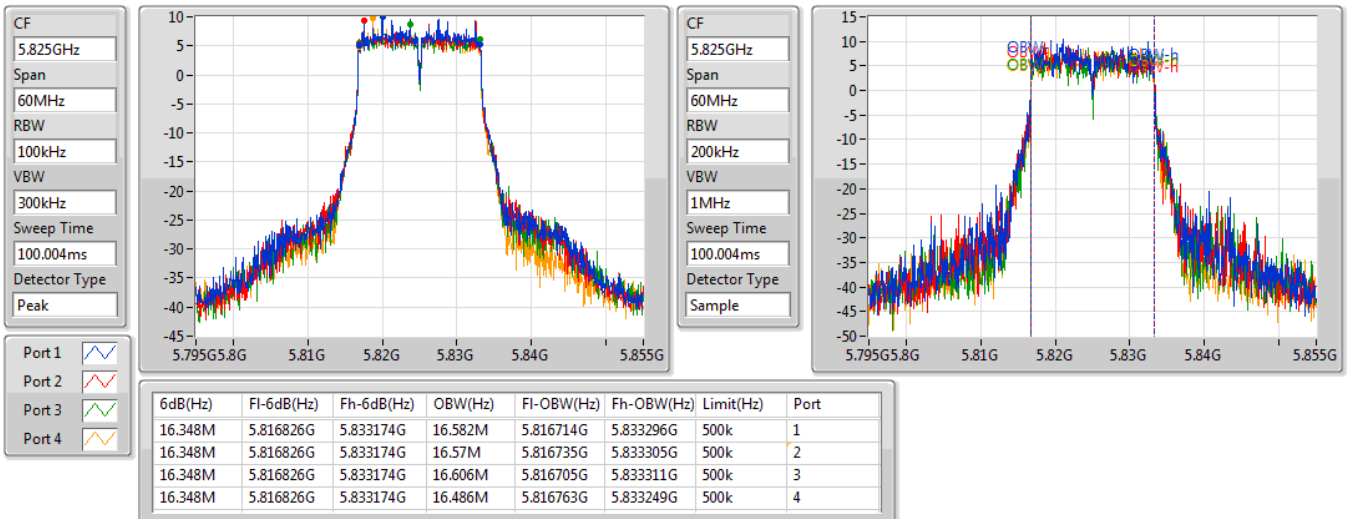


802.11a_Nss1,(6Mbps)_4TX
EBW
5785MHz

03/09/2019

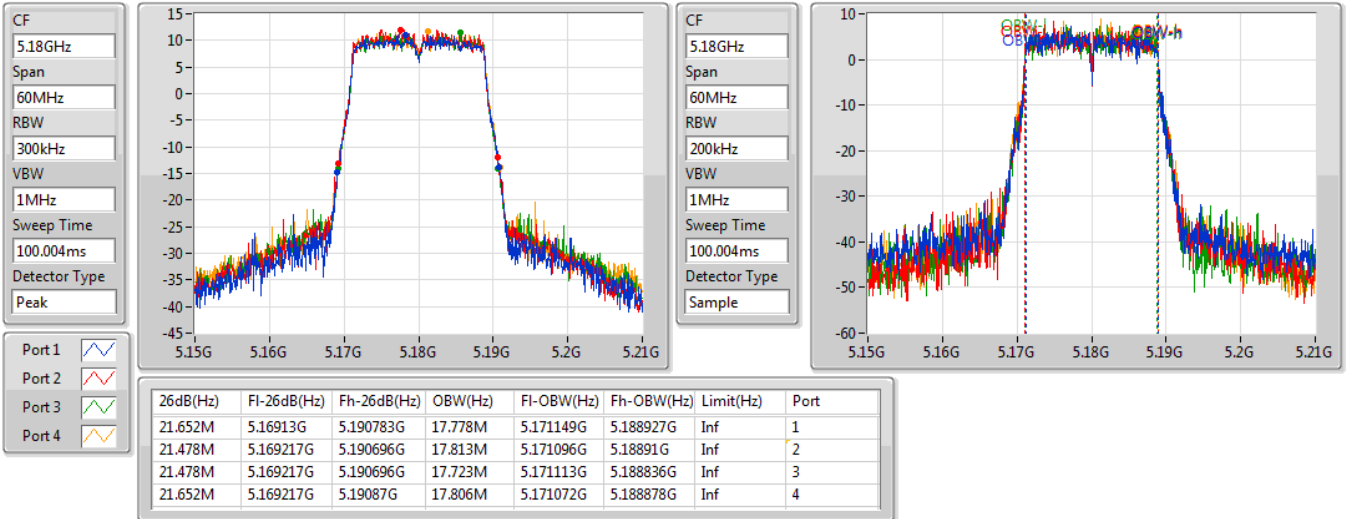

802.11a_Nss1,(6Mbps)_4TX
EBW
5825MHz

03/09/2019

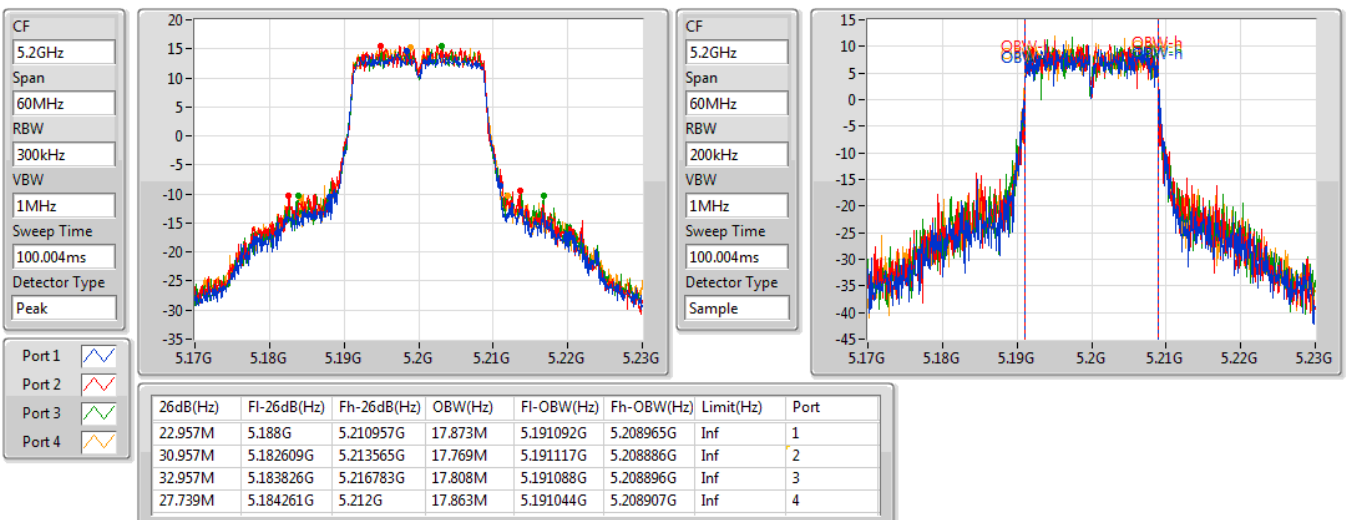


802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5180MHz

03/09/2019

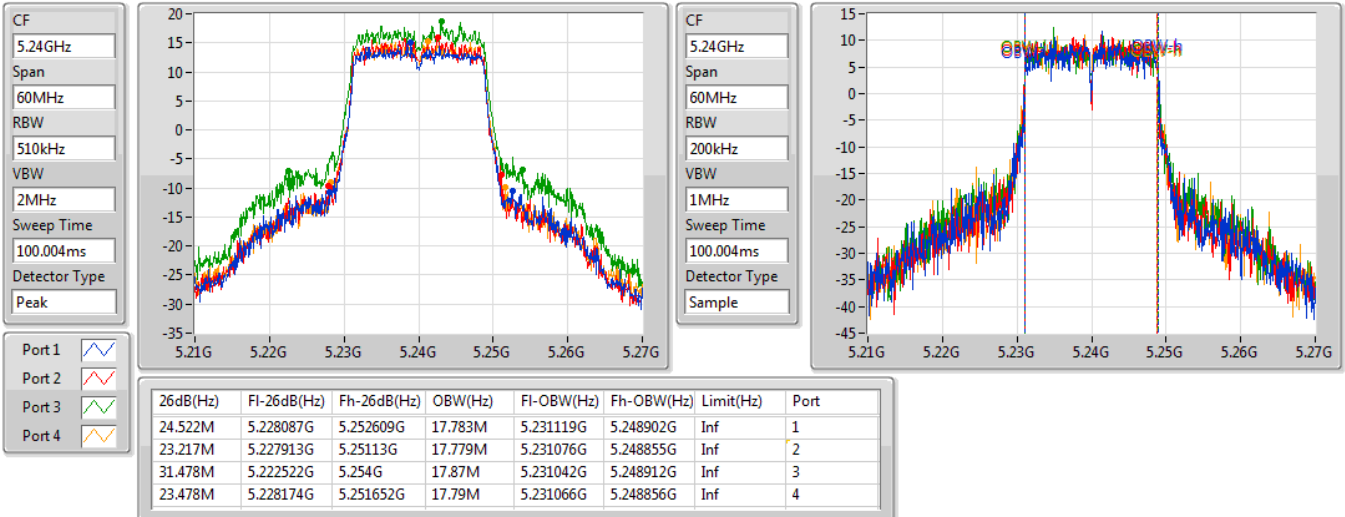

802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5200MHz

03/09/2019

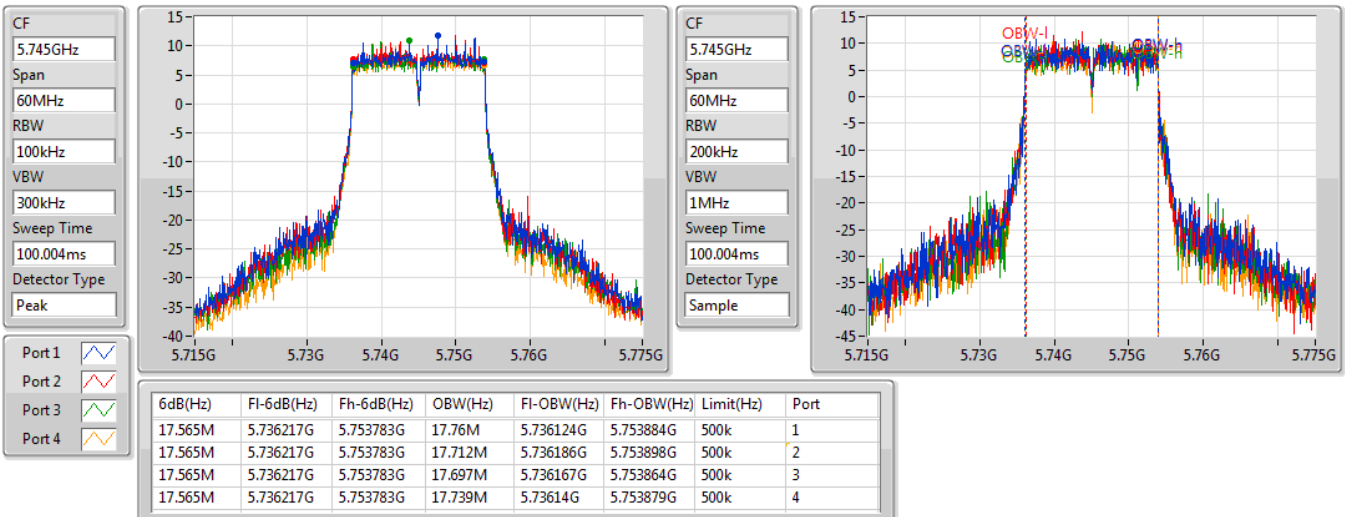


802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5240MHz

03/09/2019

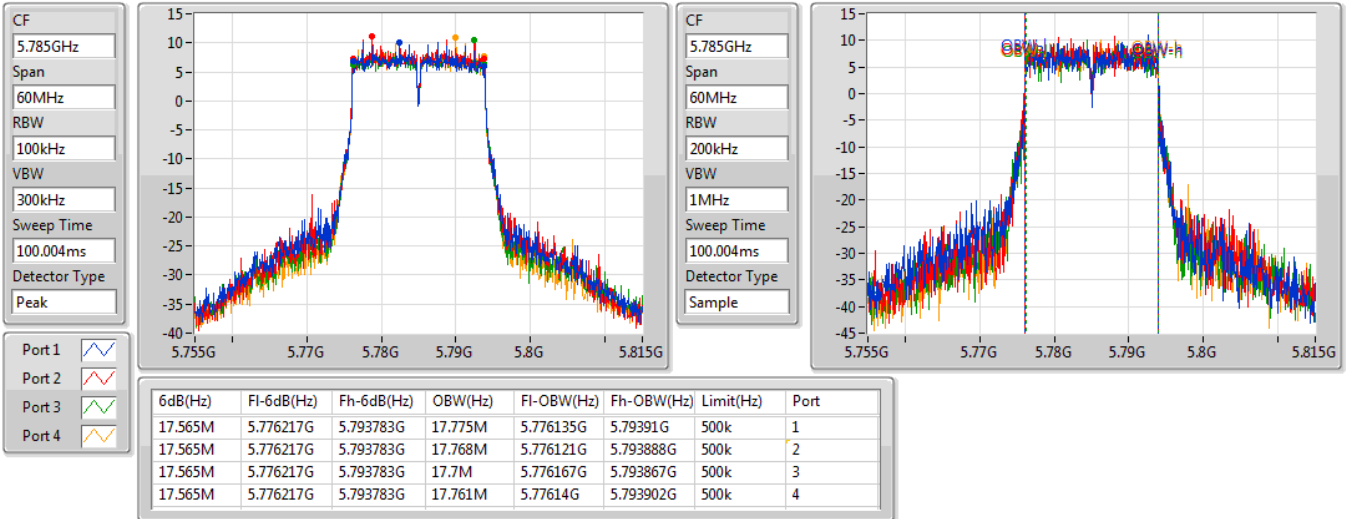

802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5745MHz

03/09/2019

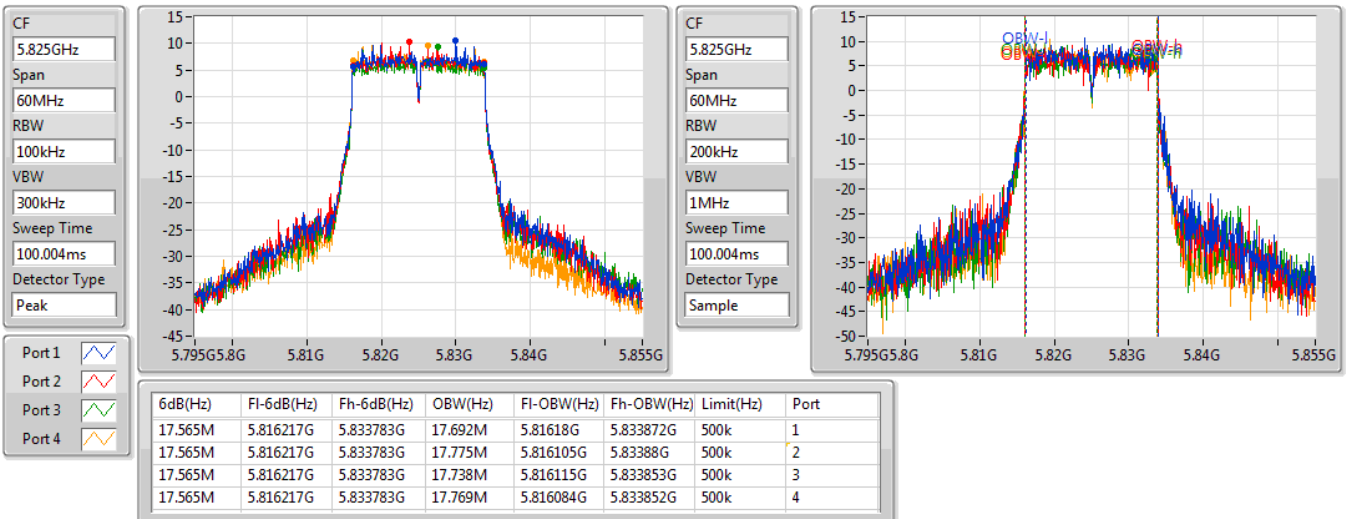


802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5785MHz

03/09/2019

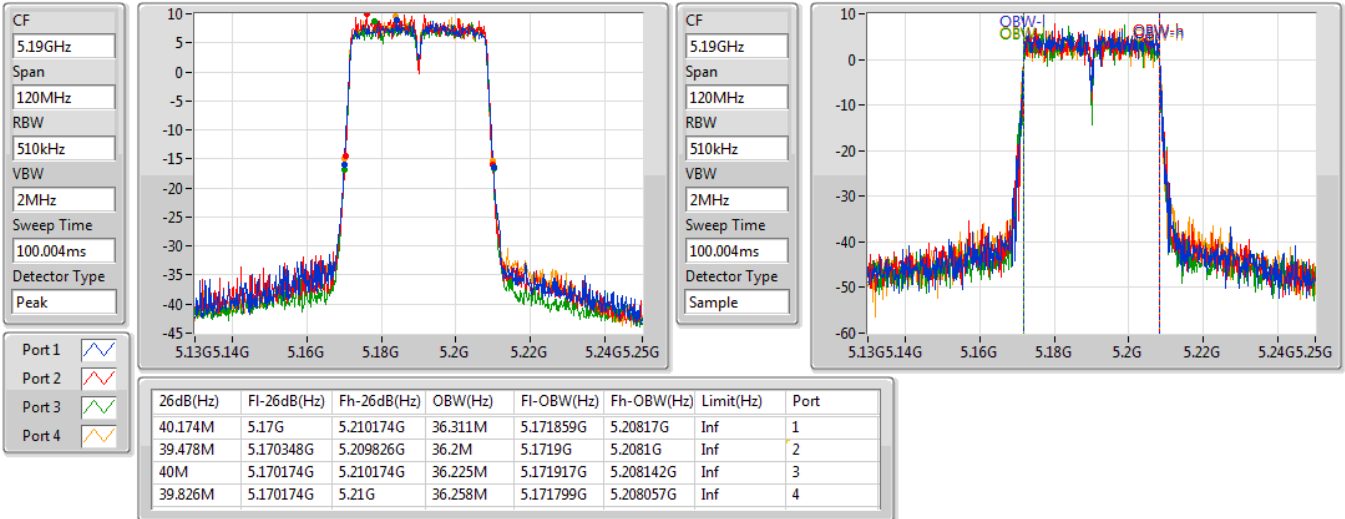

802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5825MHz

03/09/2019

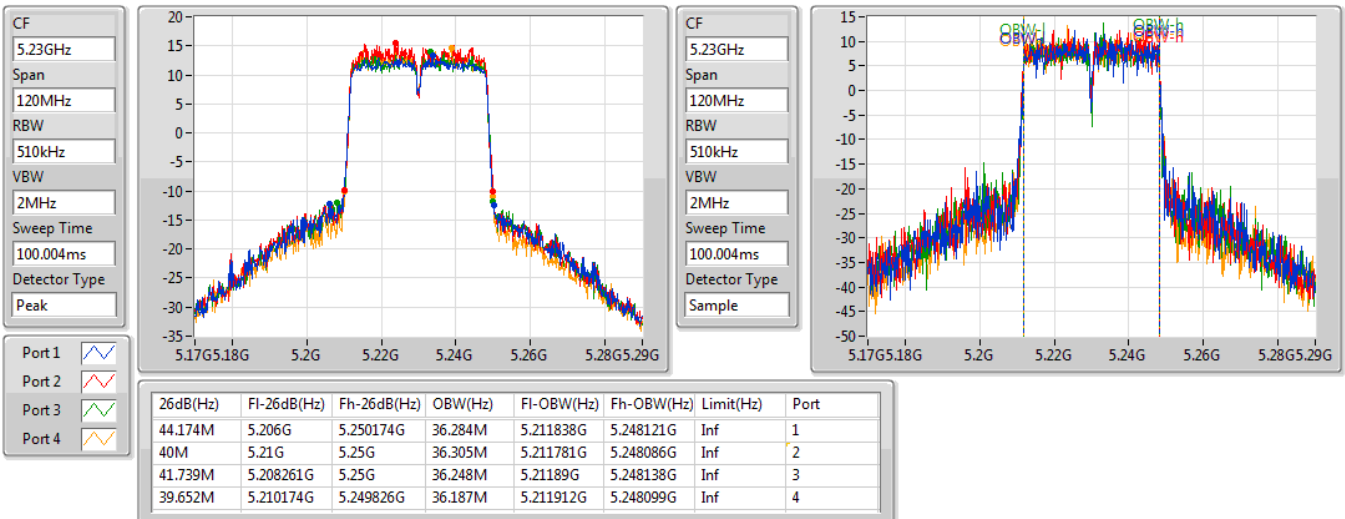


802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5190MHz

03/09/2019

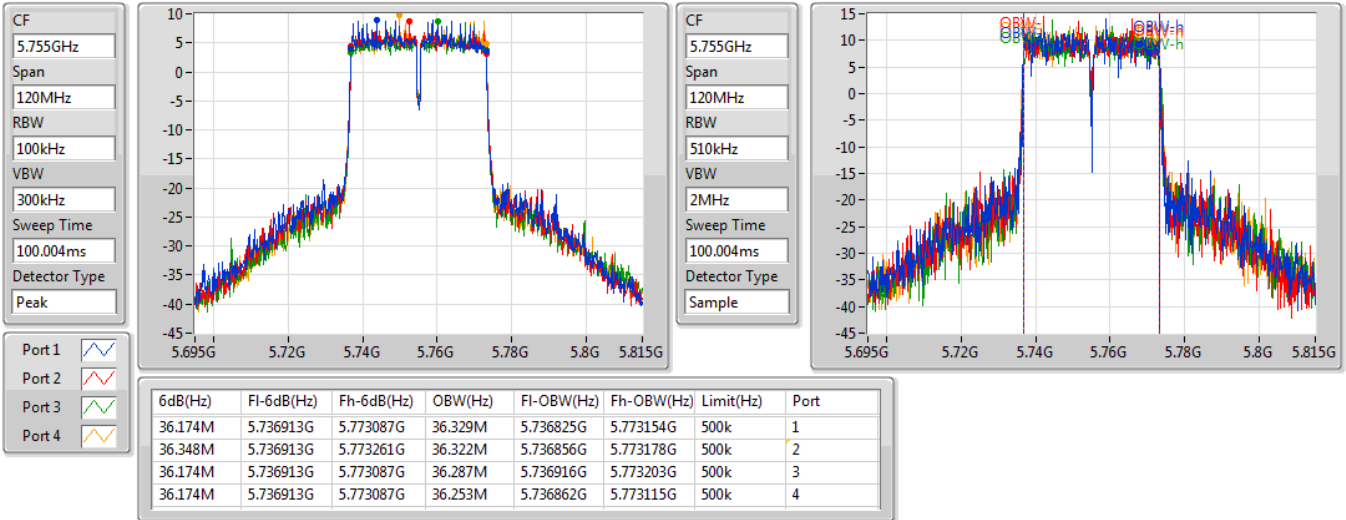

802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5230MHz

03/09/2019

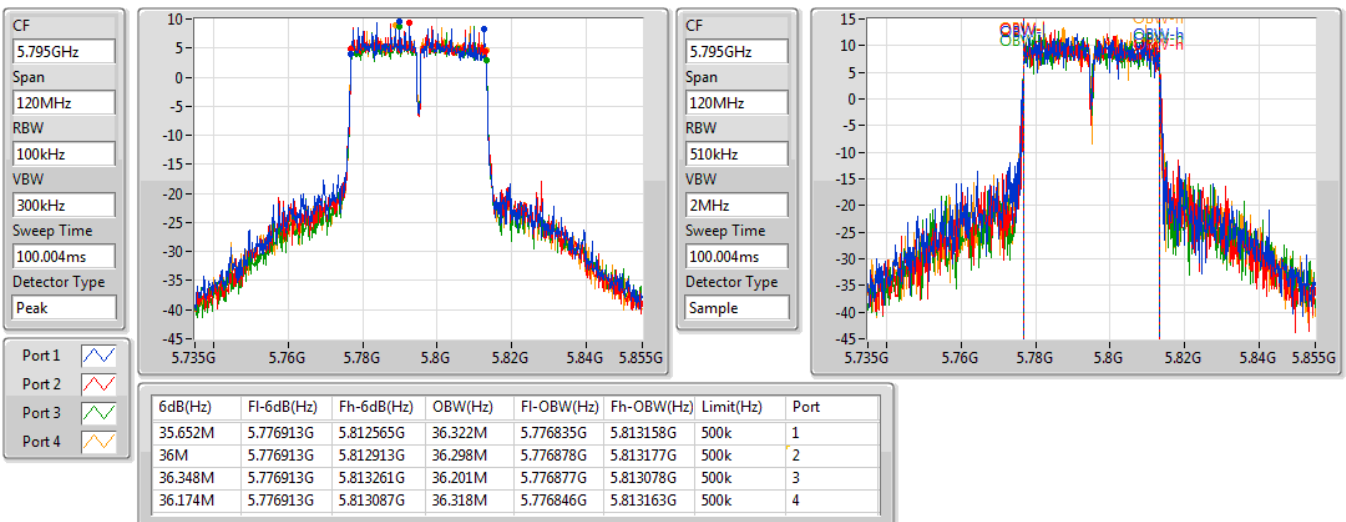


802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5755MHz

03/09/2019

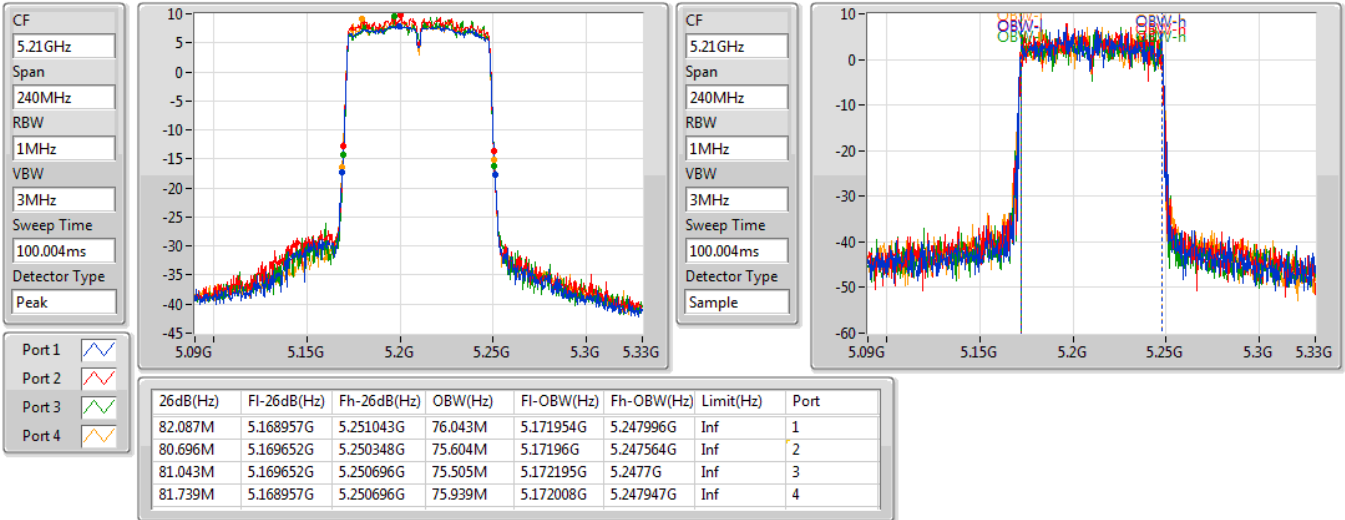

802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5795MHz

03/09/2019

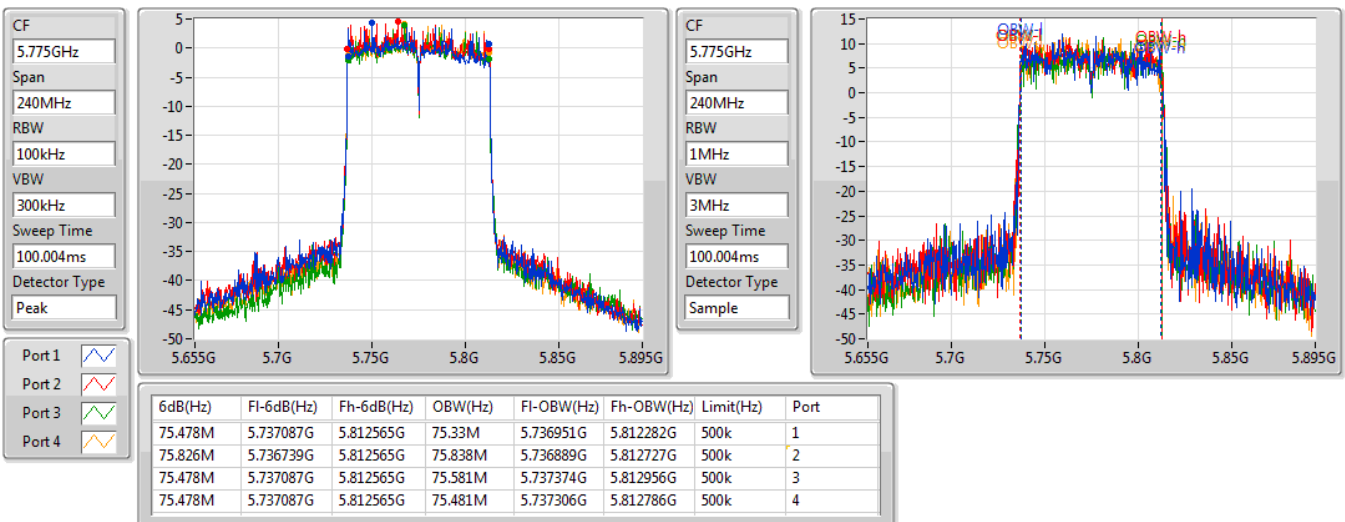


802.11ac VHT80_Nss1,(MCS0)_4TX
EBW
5210MHz

03/09/2019

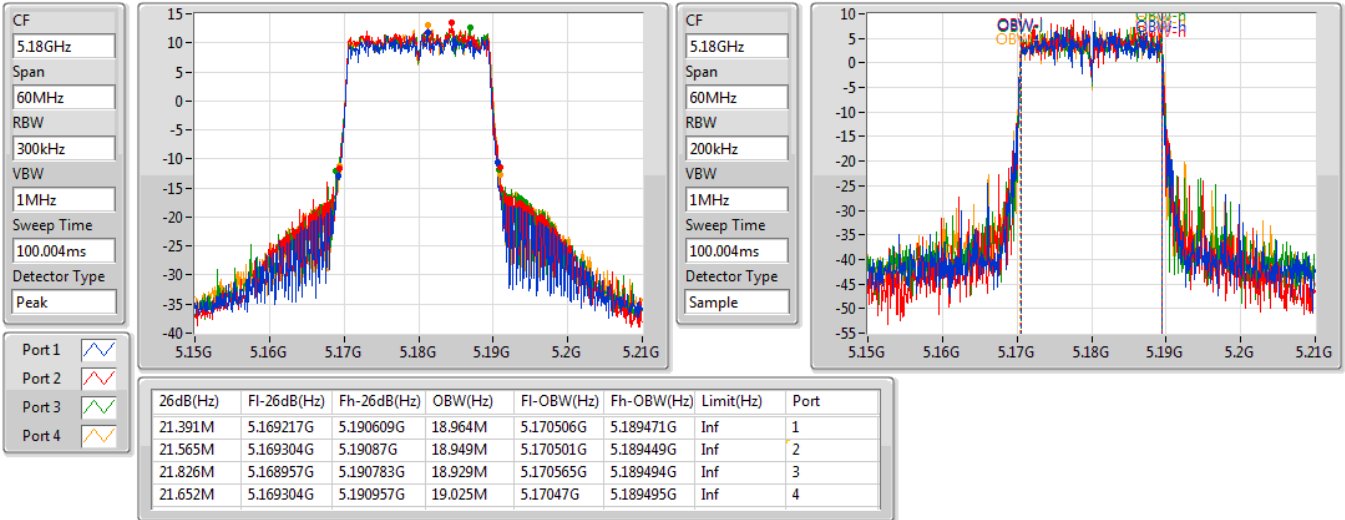

802.11ac VHT80_Nss1,(MCS0)_4TX
EBW
5775MHz

03/09/2019

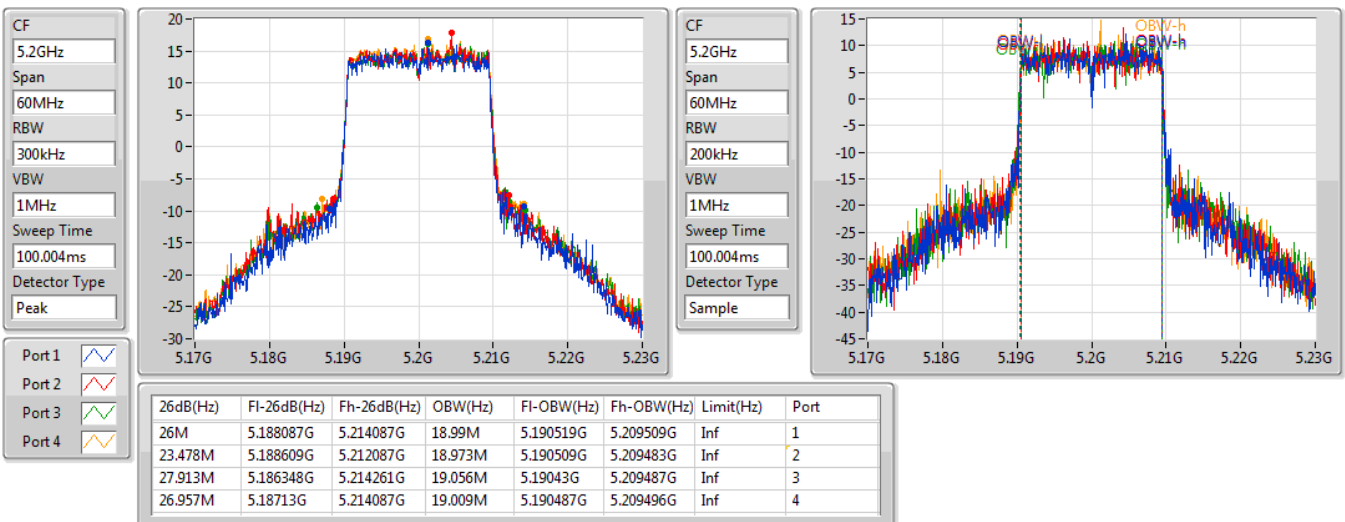


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5180MHz

03/09/2019

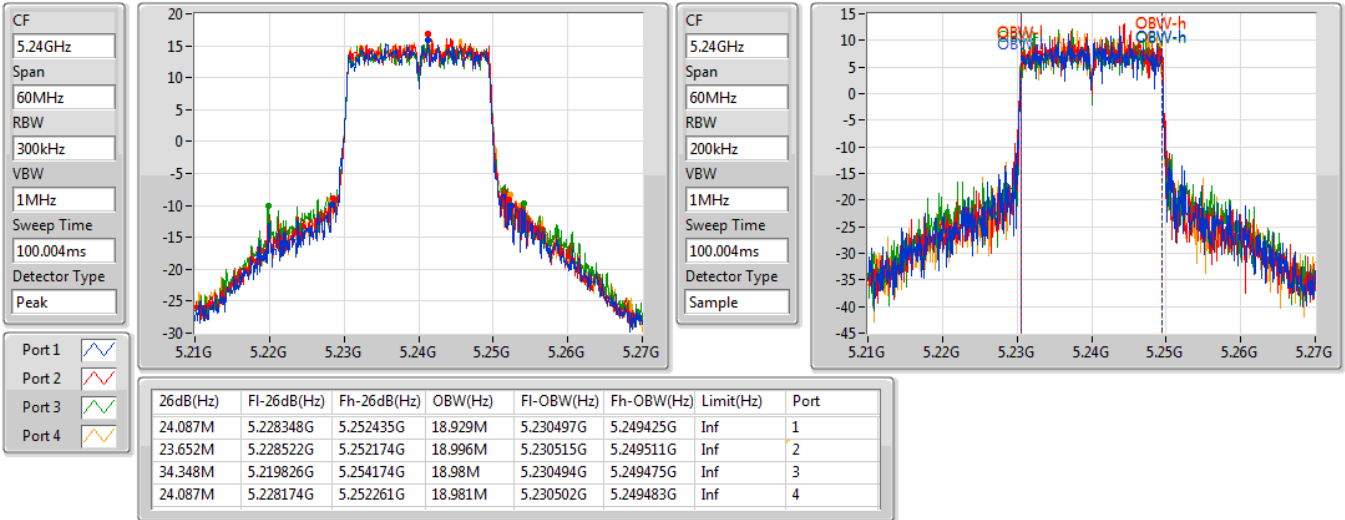

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5200MHz

03/09/2019

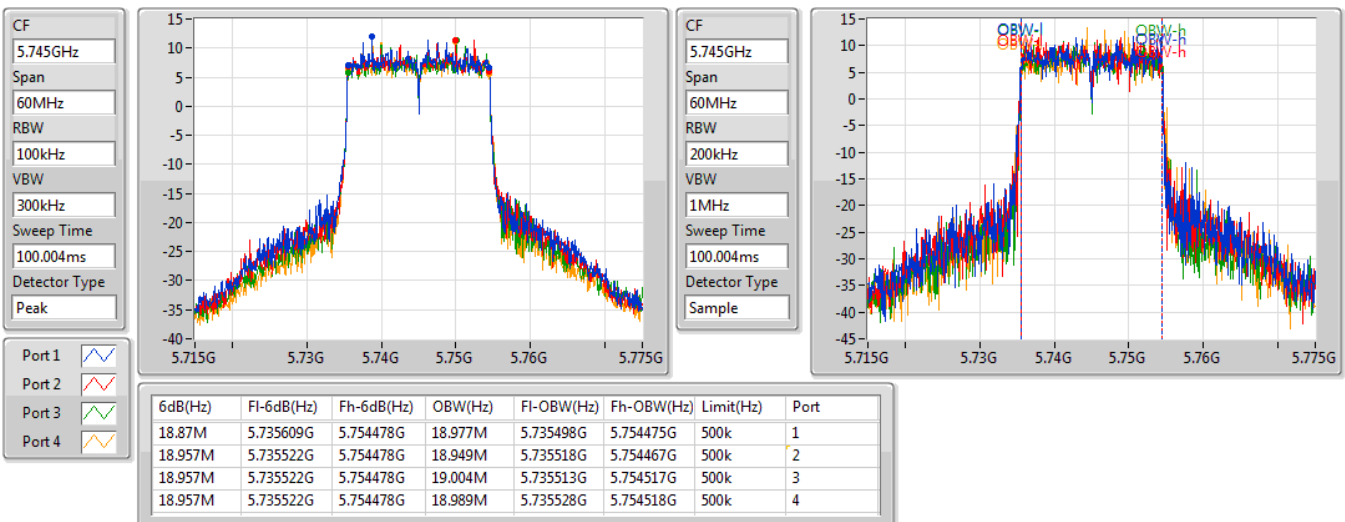


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5240MHz

03/09/2019

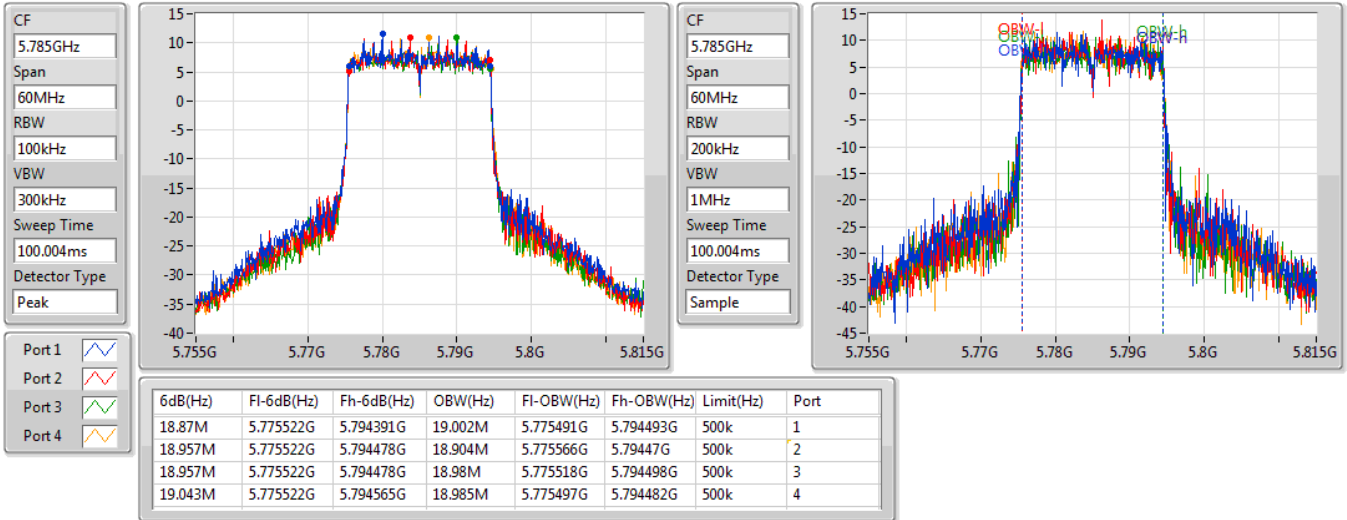

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5745MHz

03/09/2019

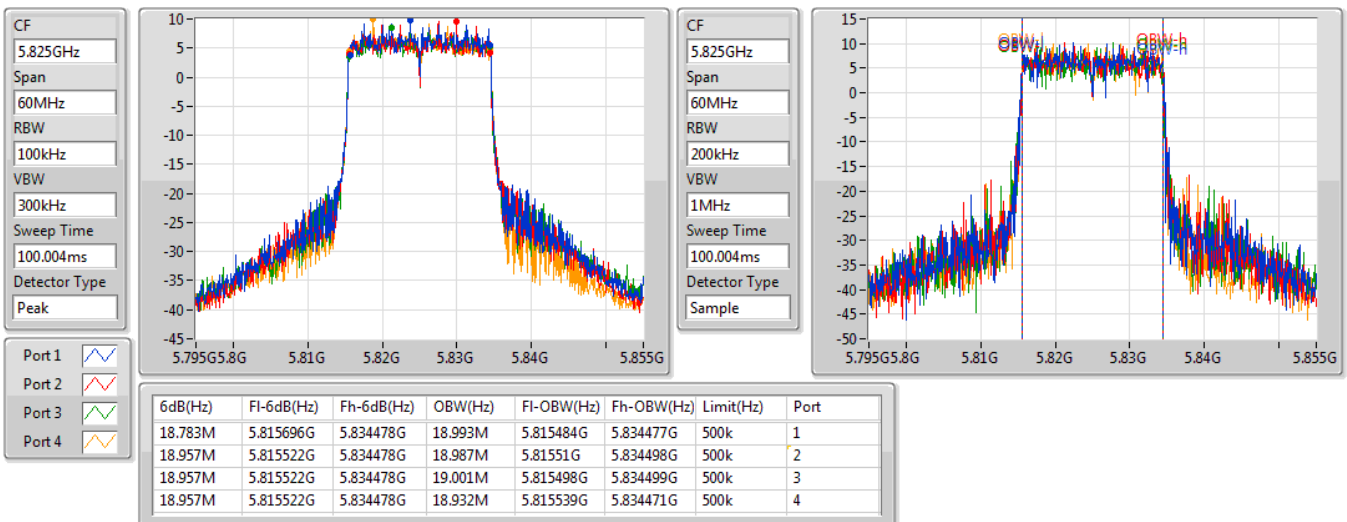


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5785MHz

03/09/2019

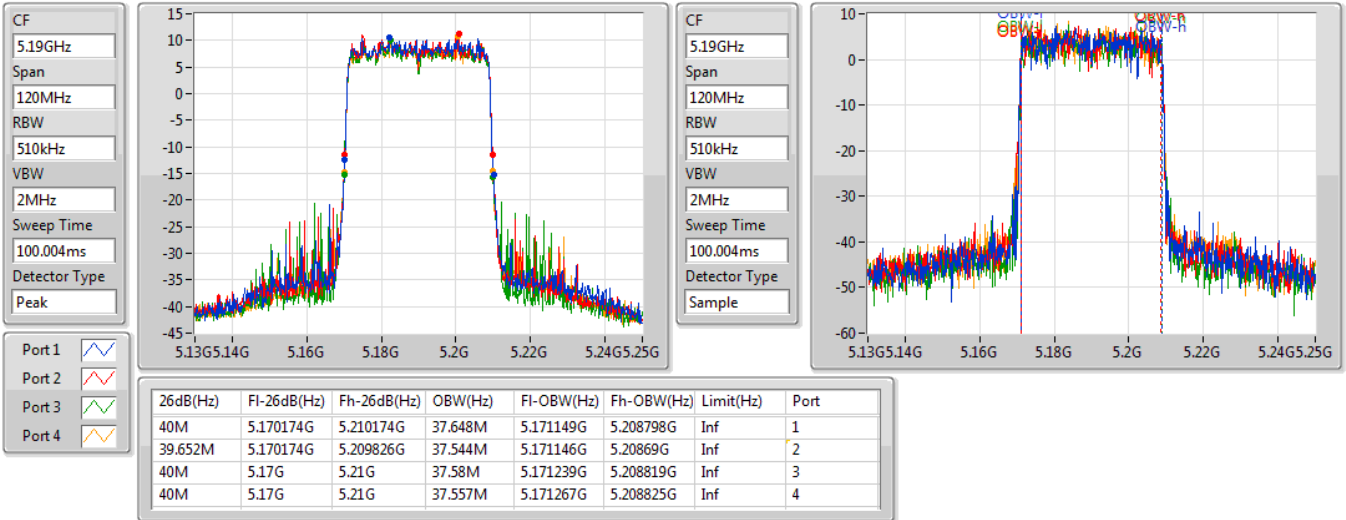

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5825MHz

03/09/2019

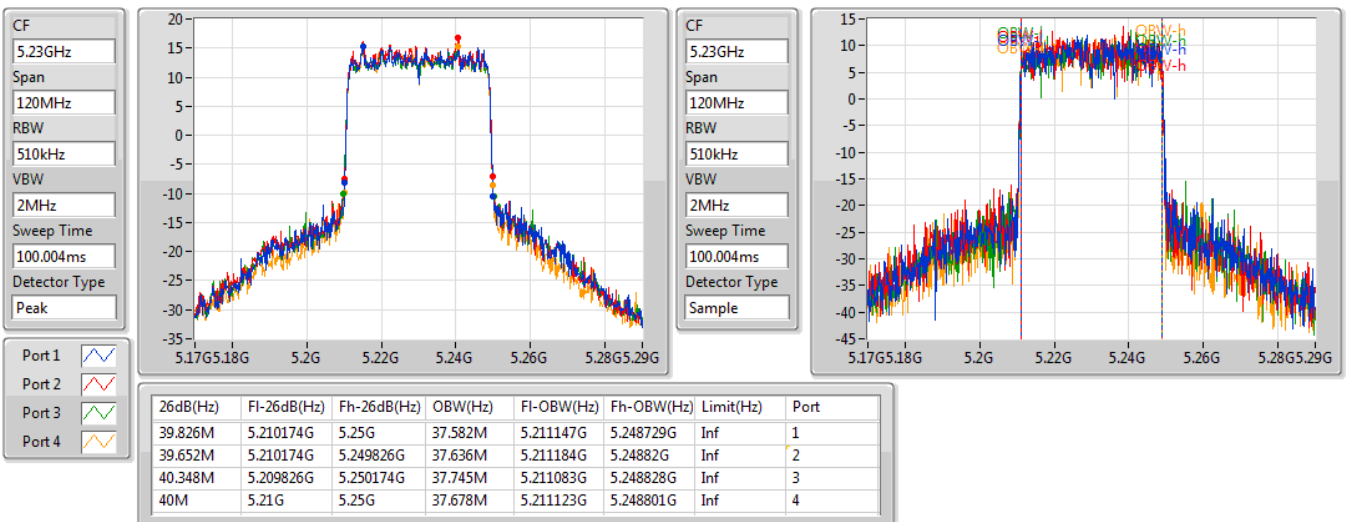


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5190MHz

03/09/2019

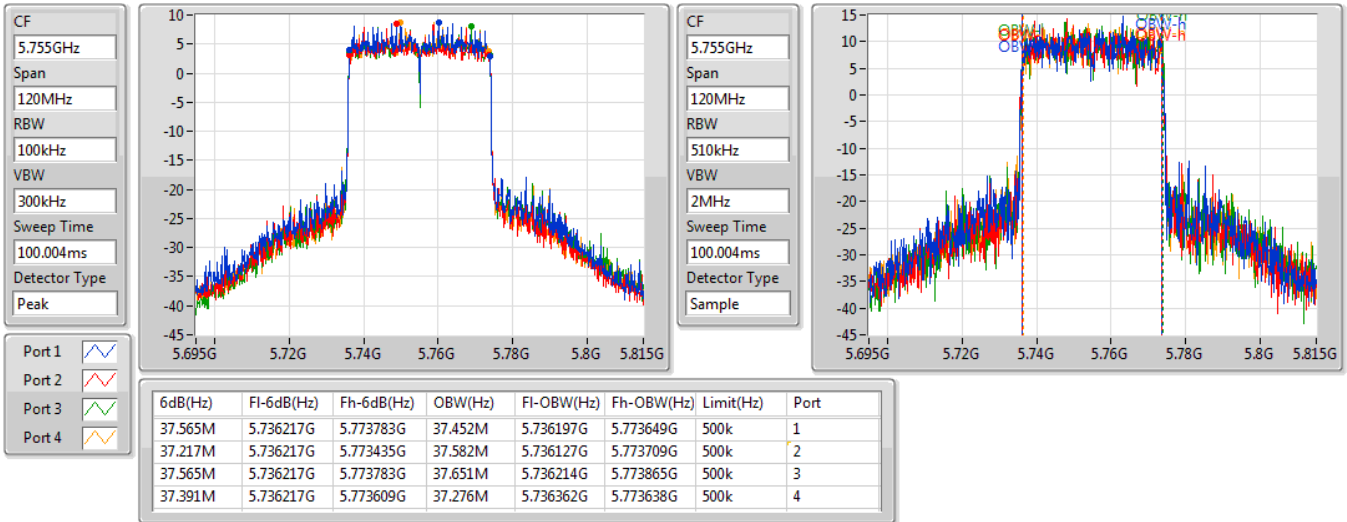

802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5230MHz

03/09/2019

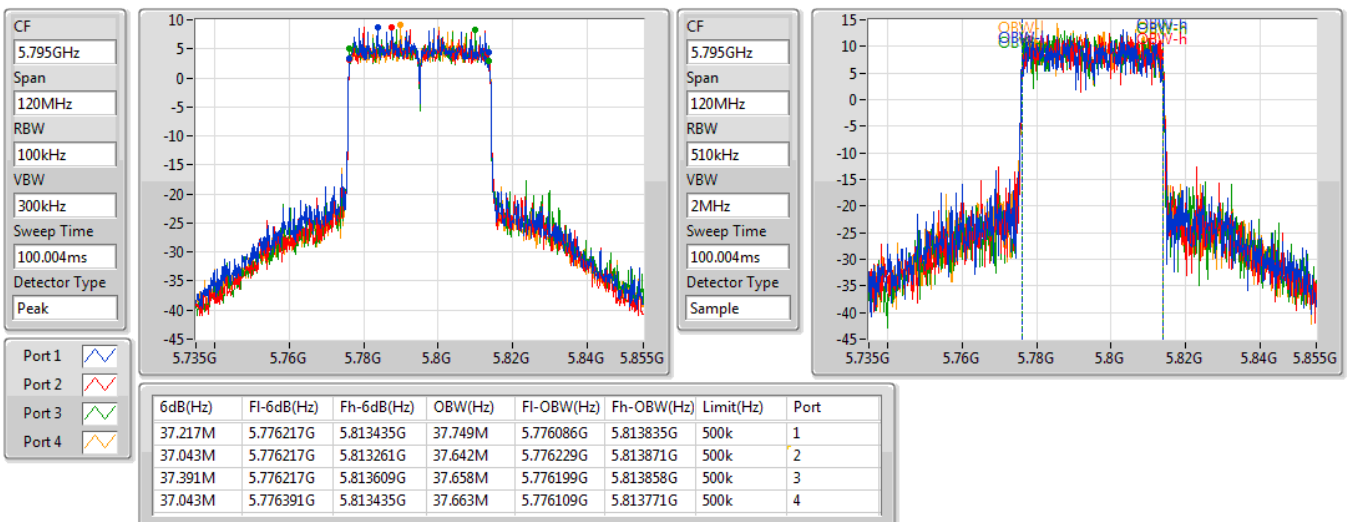


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5755MHz

03/09/2019

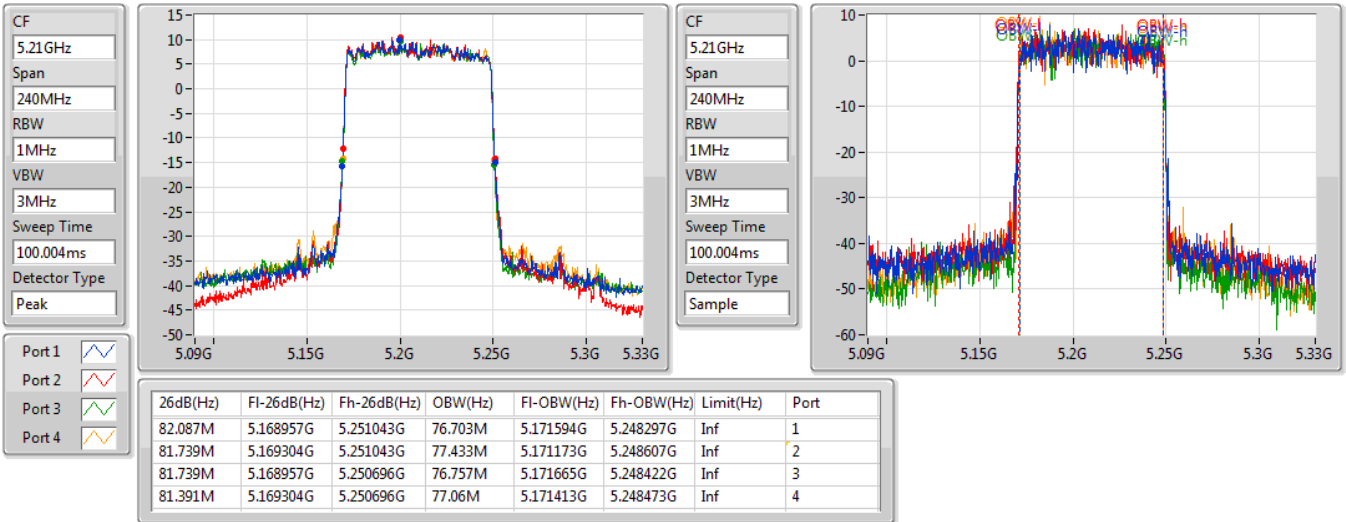

802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5795MHz

03/09/2019

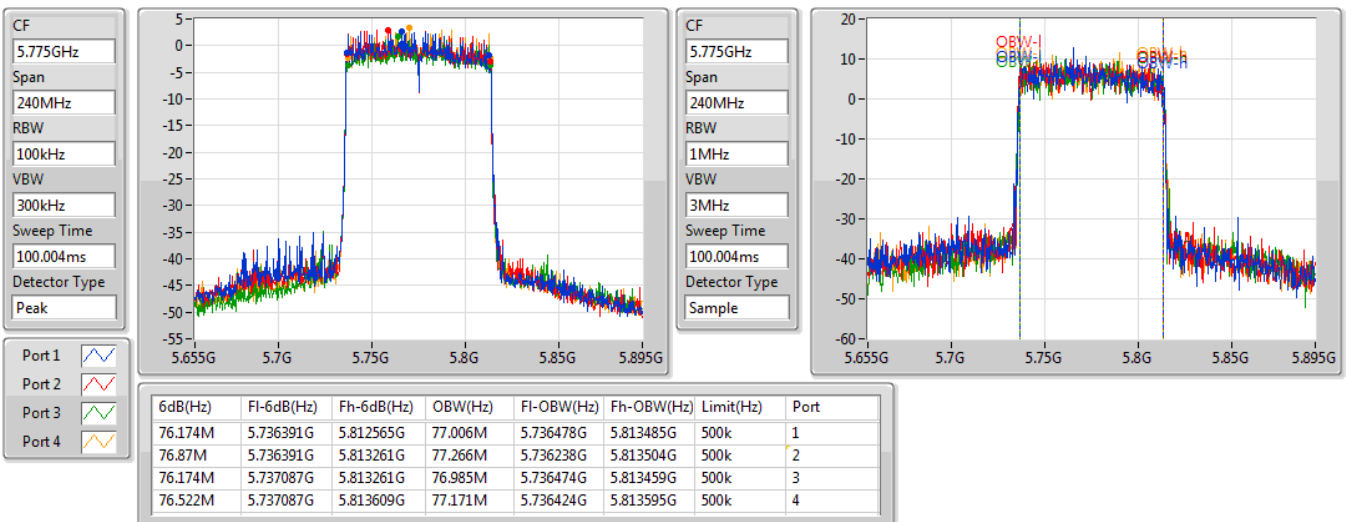


802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5210MHz

03/09/2019


802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5775MHz

03/09/2019



**4T2S
Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ac VHT20_Nss2,(MCS0)_4TX	21.739M	17.793M	17M8D1D	21.304M	17.714M
802.11ac VHT40_Nss2,(MCS0)_4TX	40M	36.329M	36M3D1D	39.304M	36.247M
802.11ac VHT80_Nss2,(MCS0)_4TX	82.087M	75.935M	75M9D1D	81.391M	75.235M
802.11ax HEW20_Nss2,(MCS0)_4TX	21.826M	18.992M	19M0D1D	21.217M	18.907M
802.11ax HEW40_Nss2,(MCS0)_4TX	39.826M	37.648M	37M6D1D	39.652M	37.453M
802.11ax HEW80_Nss2,(MCS0)_4TX	81.391M	76.828M	76M8D1D	80.696M	76.743M
5.725-5.85GHz	-	-	-	-	-
802.11ac VHT80_Nss2,(MCS0)_4TX	76.522M	75.735M	75M7D1D	75.478M	75.575M
802.11ax HEW80_Nss2,(MCS0)_4TX	76.522M	77.125M	77M1D1D	75.13M	76.688M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;

Result

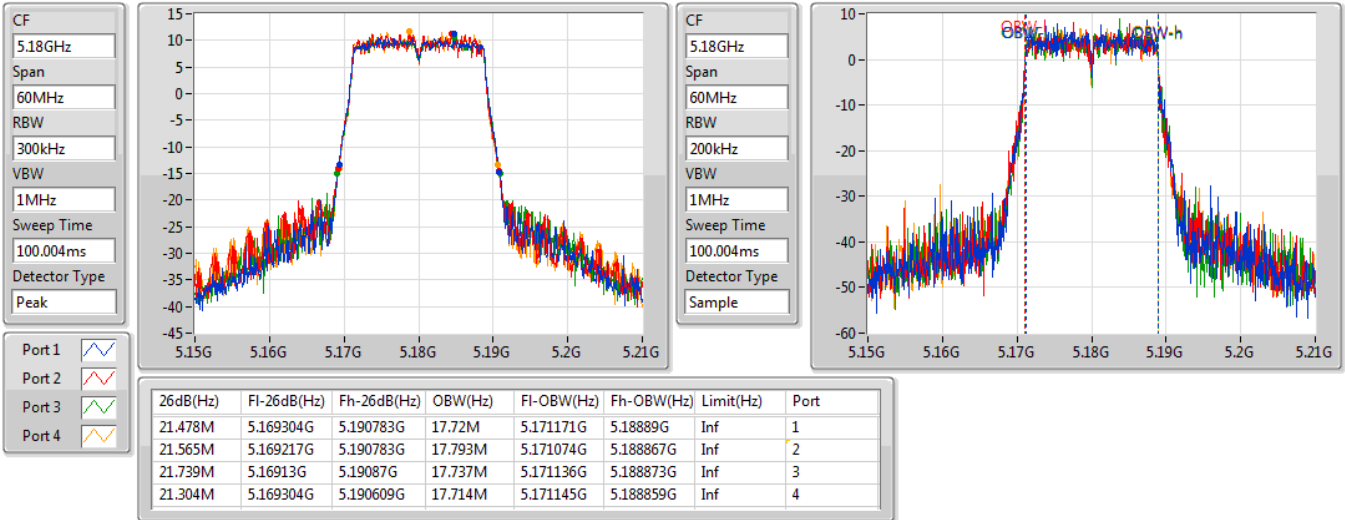
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ac VHT20_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.478M	17.72M	21.565M	17.793M	21.739M	17.737M	21.304M	17.714M
802.11ac VHT40_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	39.826M	36.308M	39.826M	36.315M	40M	36.247M	39.304M	36.329M
802.11ac VHT80_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	82.087M	75.657M	81.391M	75.708M	81.391M	75.235M	81.739M	75.935M
5775MHz	Pass	500k	75.826M	75.575M	76.522M	75.724M	75.478M	75.735M	75.826M	75.634M
802.11ax HEW20_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.478M	18.907M	21.652M	18.95M	21.826M	18.992M	21.217M	18.955M
802.11ax HEW40_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	39.826M	37.453M	39.652M	37.648M	39.826M	37.508M	39.826M	37.615M
802.11ax HEW80_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	81.043M	76.828M	81.043M	76.773M	80.696M	76.796M	81.391M	76.743M
5775MHz	Pass	500k	76.174M	76.897M	75.13M	76.769M	76.522M	77.125M	75.13M	76.688M

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

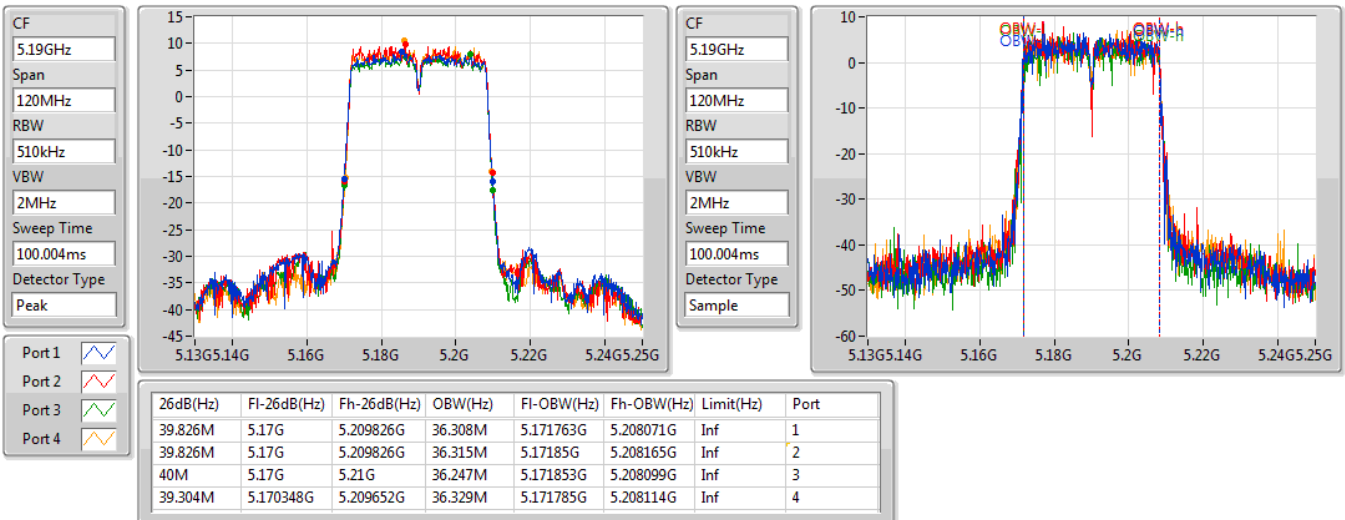
Port X-OBW = Port X 99% occupied bandwidth;

802.11ac VHT20_Nss2,(MCS0)_4TX
EBW
5180MHz

04/09/2019

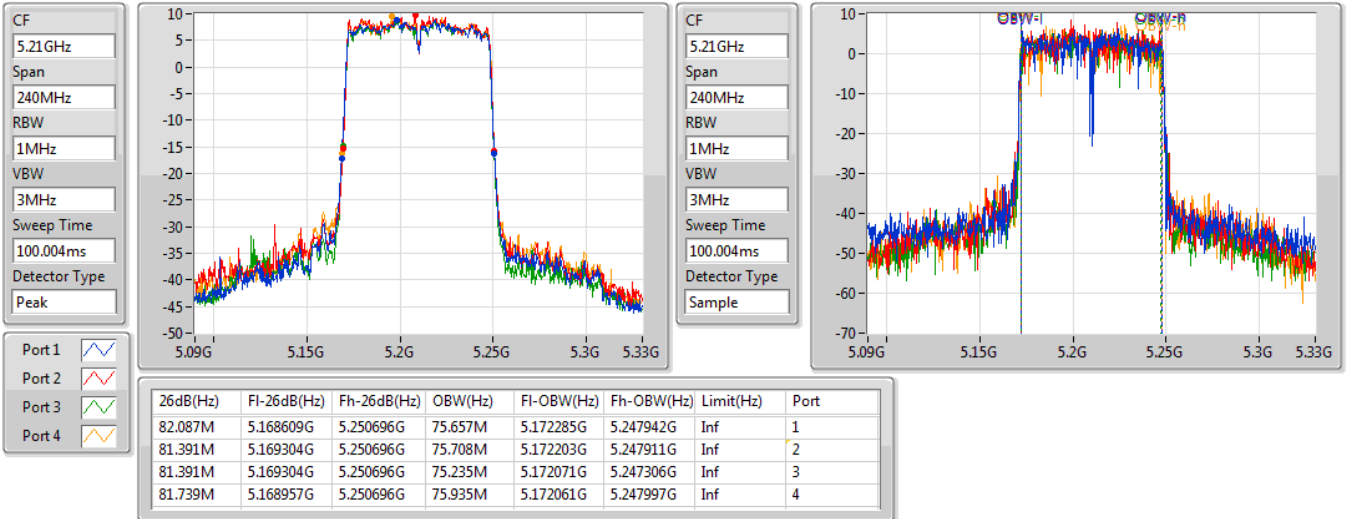

802.11ac VHT40_Nss2,(MCS0)_4TX
EBW
5190MHz

04/09/2019

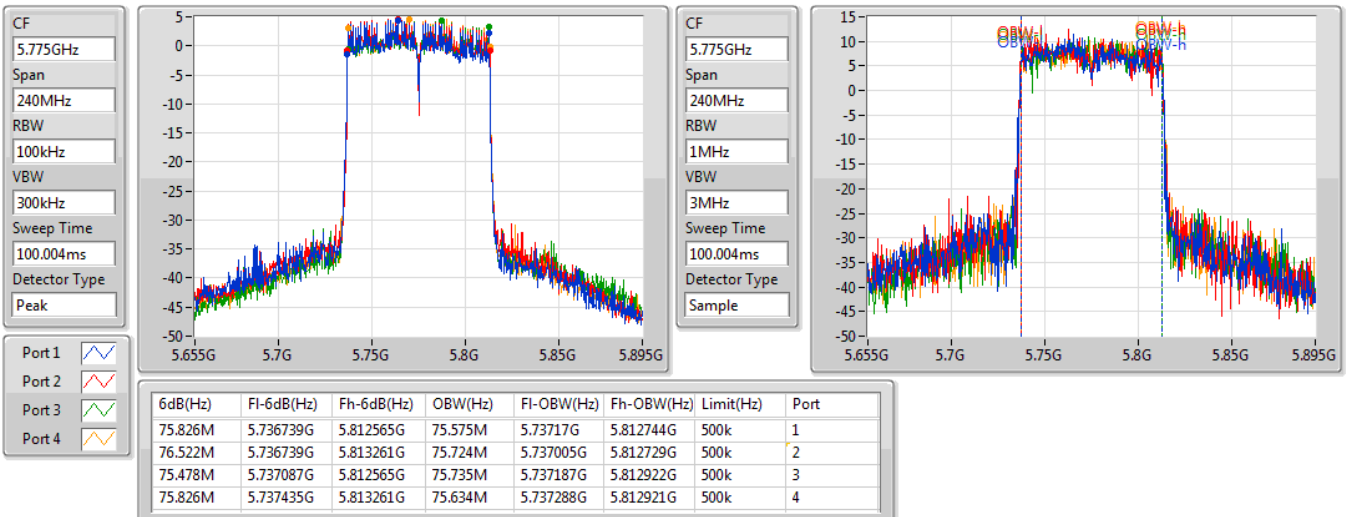


802.11ac VHT80_Nss2,(MCS0)_4TX
EBW
5210MHz

04/09/2019

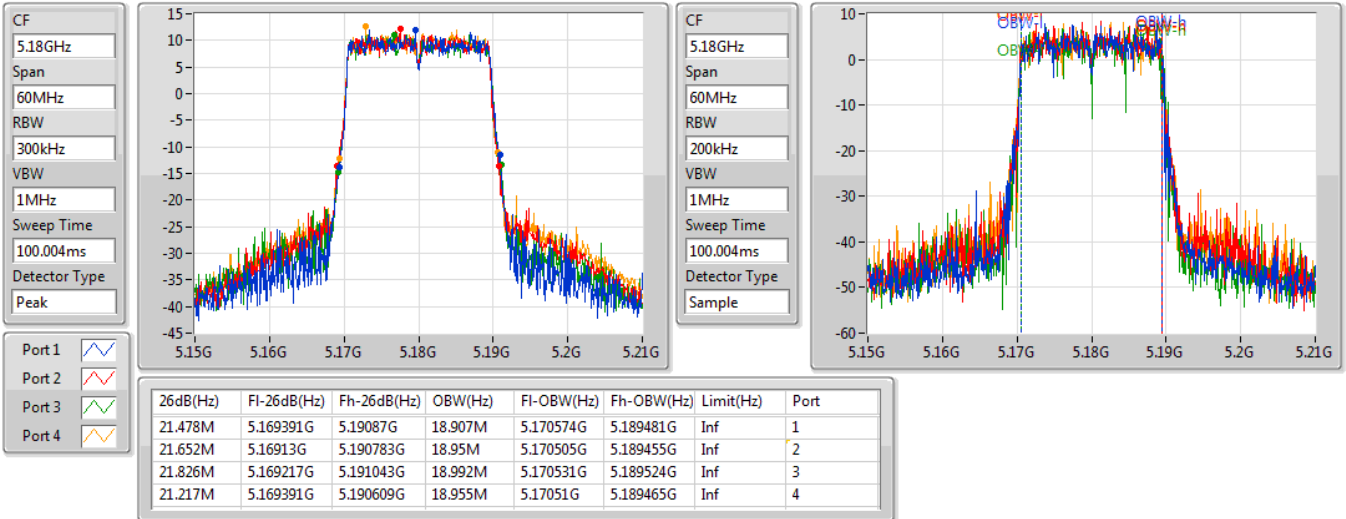

802.11ac VHT80_Nss2,(MCS0)_4TX
EBW
5775MHz

04/09/2019

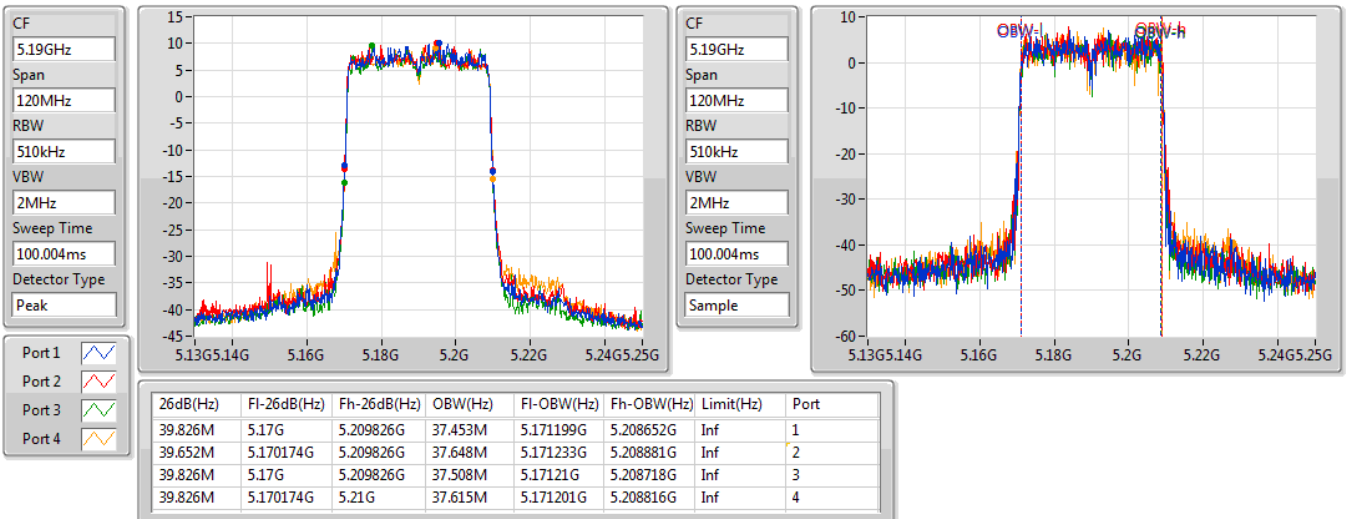


802.11ax HEW20_Nss2,(MCS0)_4TX
EBW
5180MHz

04/09/2019

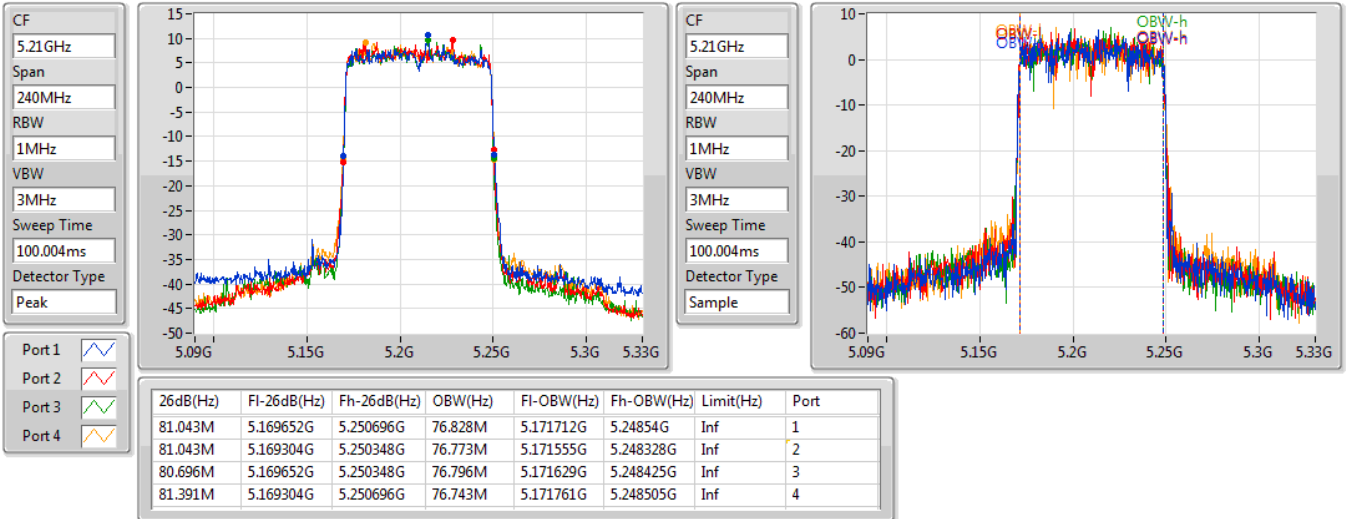

802.11ax HEW40_Nss2,(MCS0)_4TX
EBW
5190MHz

04/09/2019

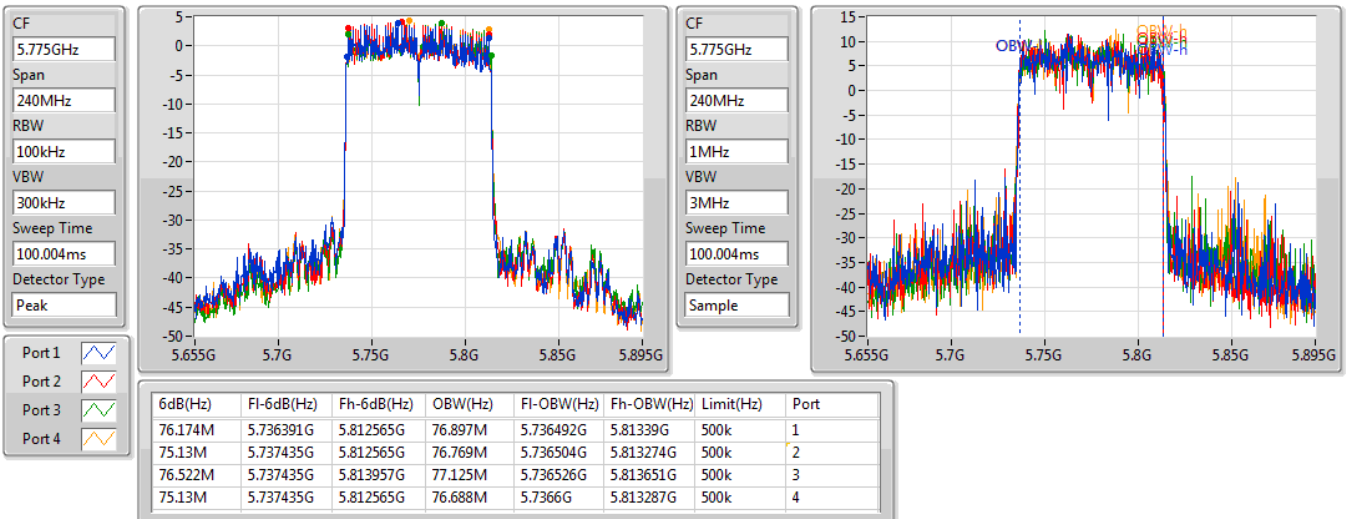


802.11ax HEW80_Nss2,(MCS0)_4TX
EBW
5210MHz

04/09/2019


802.11ax HEW80_Nss2,(MCS0)_4TX
EBW
5775MHz

04/09/2019



**4T3S
Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ac VHT20_Nss3,(MCS0)_4TX	21.478M	17.759M	17M8D1D	21.304M	17.634M
802.11ac VHT40_Nss3,(MCS0)_4TX	40M	36.27M	36M3D1D	39.478M	36.2M
802.11ac VHT80_Nss3,(MCS0)_4TX	81.739M	75.84M	75M8D1D	80.348M	75.659M
802.11ax HEW20_Nss3,(MCS0)_4TX	21.391M	19.032M	19M0D1D	21.043M	18.95M
802.11ax HEW40_Nss3,(MCS0)_4TX	39.826M	37.514M	37M5D1D	39.478M	37.162M
802.11ax HEW80_Nss3,(MCS0)_4TX	81.739M	77.397M	77M4D1D	81.043M	76.597M
5.725-5.85GHz	-	-	-	-	-
802.11ac VHT80_Nss3,(MCS0)_4TX	76.174M	75.97M	76M0D1D	75.13M	75.774M
802.11ax HEW80_Nss3,(MCS0)_4TX	76.174M	76.956M	77M0D1D	75.478M	76.575M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;

Result

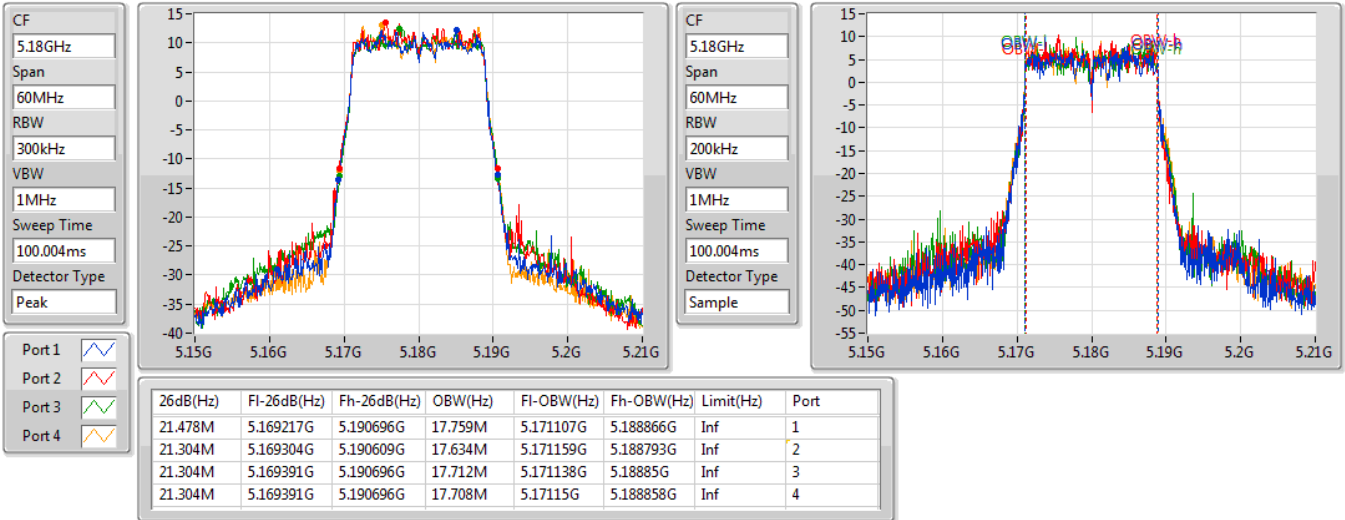
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ac VHT20_Nss3,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.478M	17.759M	21.304M	17.634M	21.304M	17.712M	21.304M	17.708M
802.11ac VHT40_Nss3,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	39.826M	36.27M	39.478M	36.2M	40M	36.229M	39.652M	36.255M
802.11ac VHT80_Nss3,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	81.739M	75.811M	80.348M	75.84M	81.043M	75.659M	80.696M	75.747M
5775MHz	Pass	500k	75.13M	75.884M	75.826M	75.774M	76.174M	75.929M	76.174M	75.97M
802.11ax HEW20_Nss3,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.391M	18.95M	21.13M	19.009M	21.043M	19.032M	21.304M	19.029M
802.11ax HEW40_Nss3,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	39.652M	37.482M	39.652M	37.162M	39.826M	37.486M	39.478M	37.514M
802.11ax HEW80_Nss3,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	81.739M	77.397M	81.391M	76.997M	81.391M	76.597M	81.043M	76.859M
5775MHz	Pass	500k	76.174M	76.956M	76.174M	76.731M	75.478M	76.575M	76.174M	76.81M

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

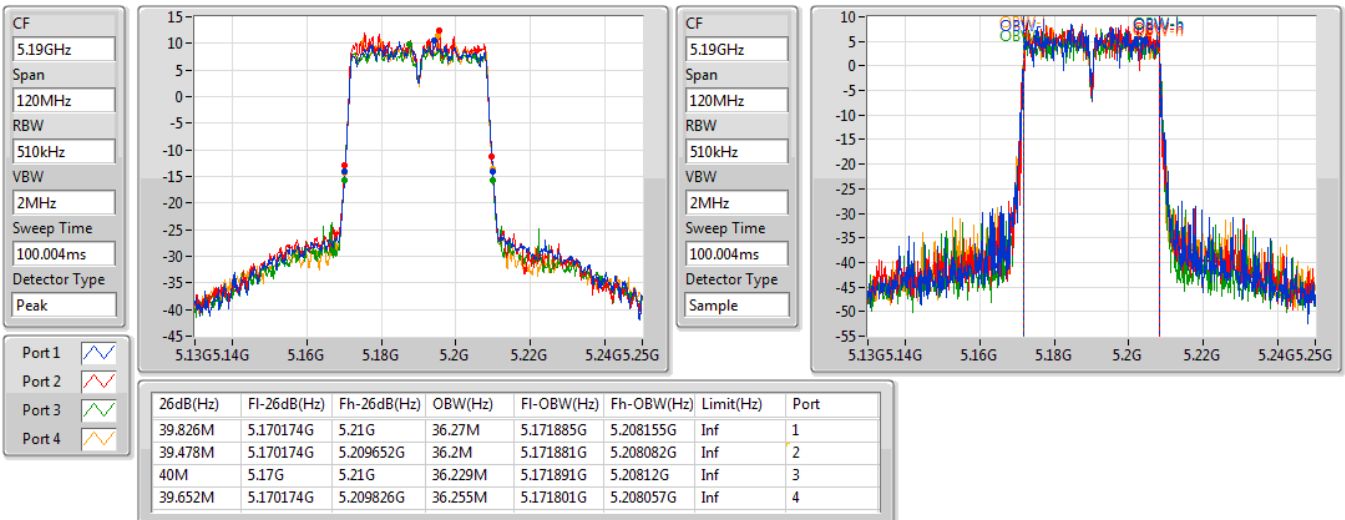
Port X-OBW = Port X 99% occupied bandwidth;

802.11ac VHT20_Nss3,(MCS0)_4TX
EBW
5180MHz

04/09/2019

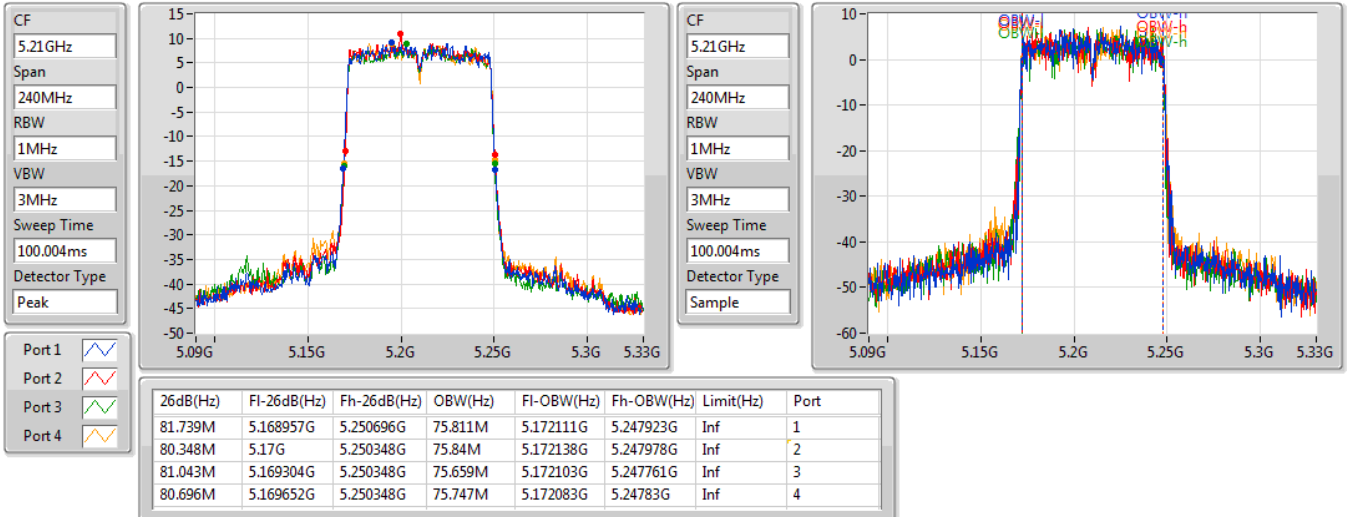

802.11ac VHT40_Nss3,(MCS0)_4TX
EBW
5190MHz

04/09/2019

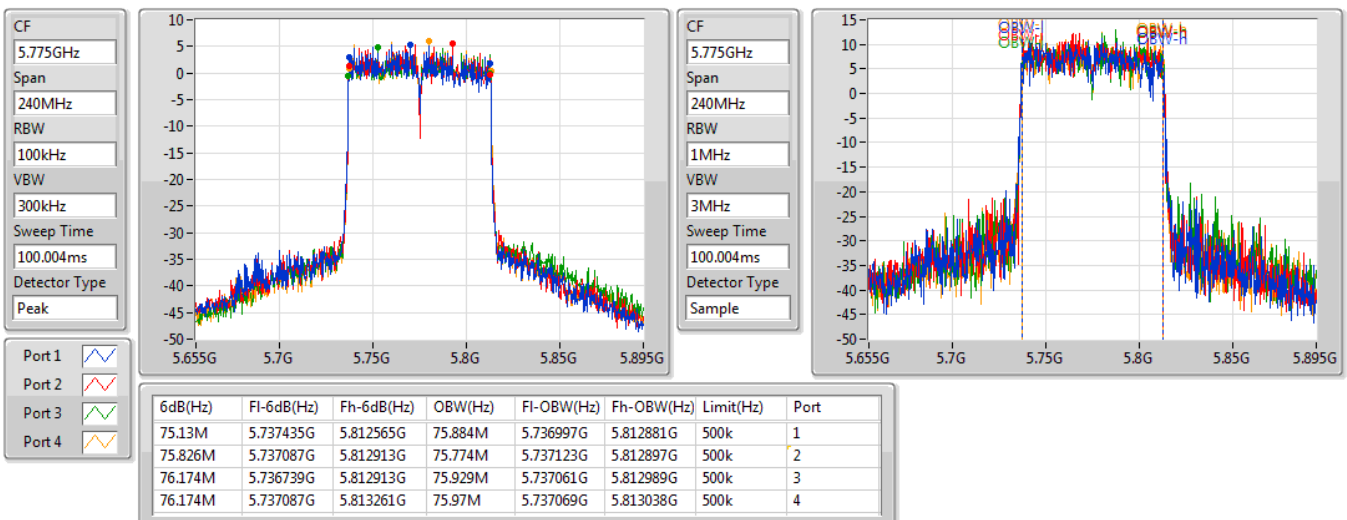


802.11ac VHT80_Nss3,(MCS0)_4TX
EBW
5210MHz

04/09/2019

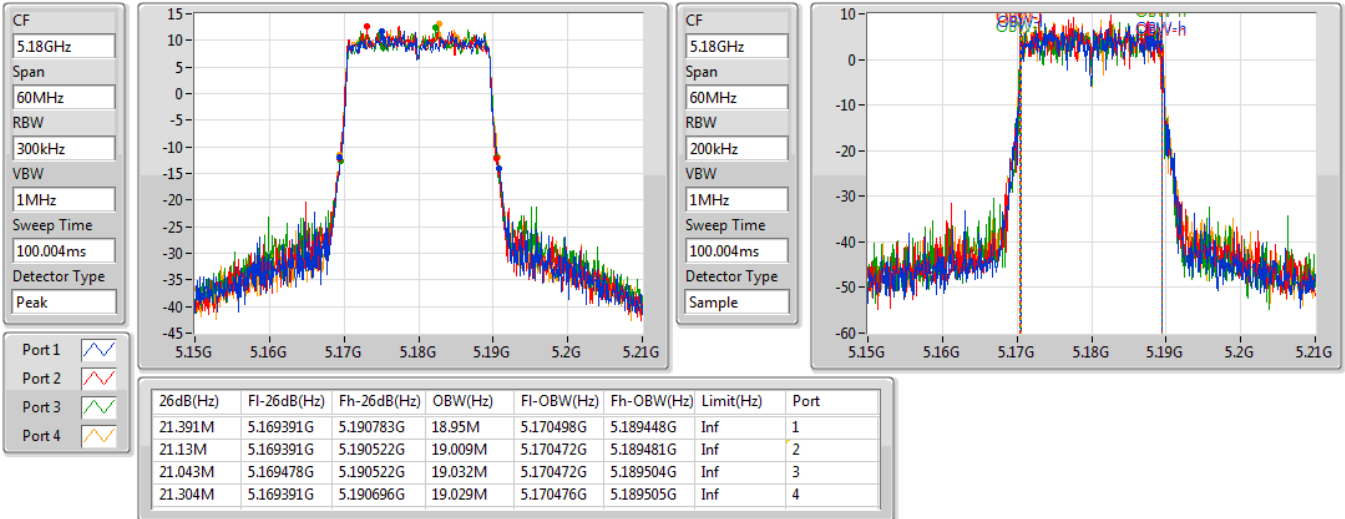

802.11ac VHT80_Nss3,(MCS0)_4TX
EBW
5775MHz

04/09/2019

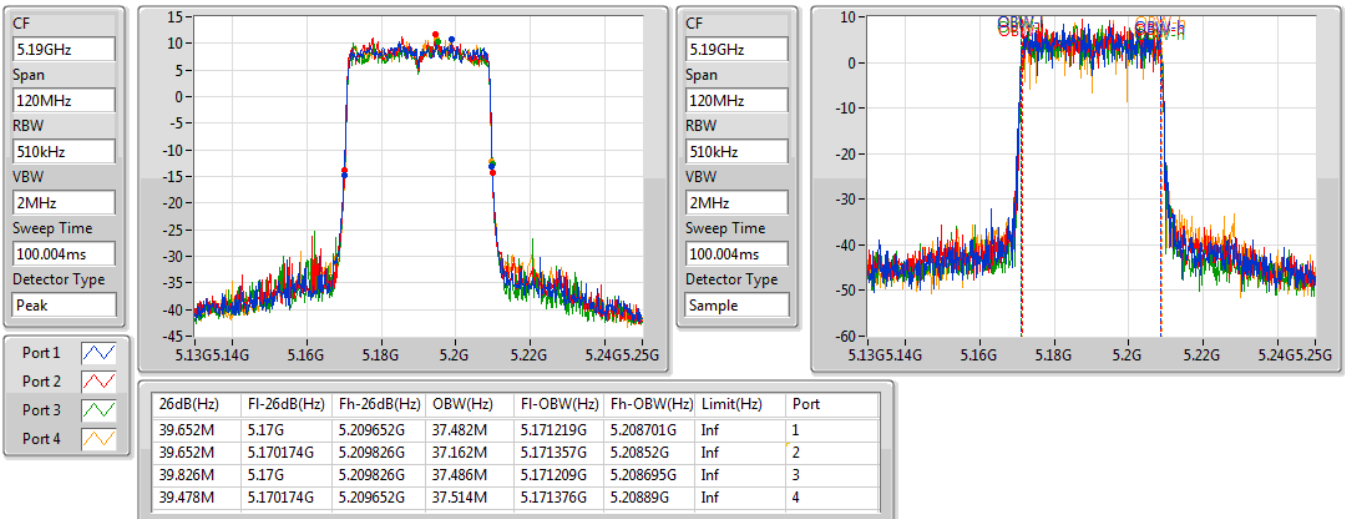


802.11ax HEW20_Nss3,(MCS0)_4TX
EBW
5180MHz

04/09/2019

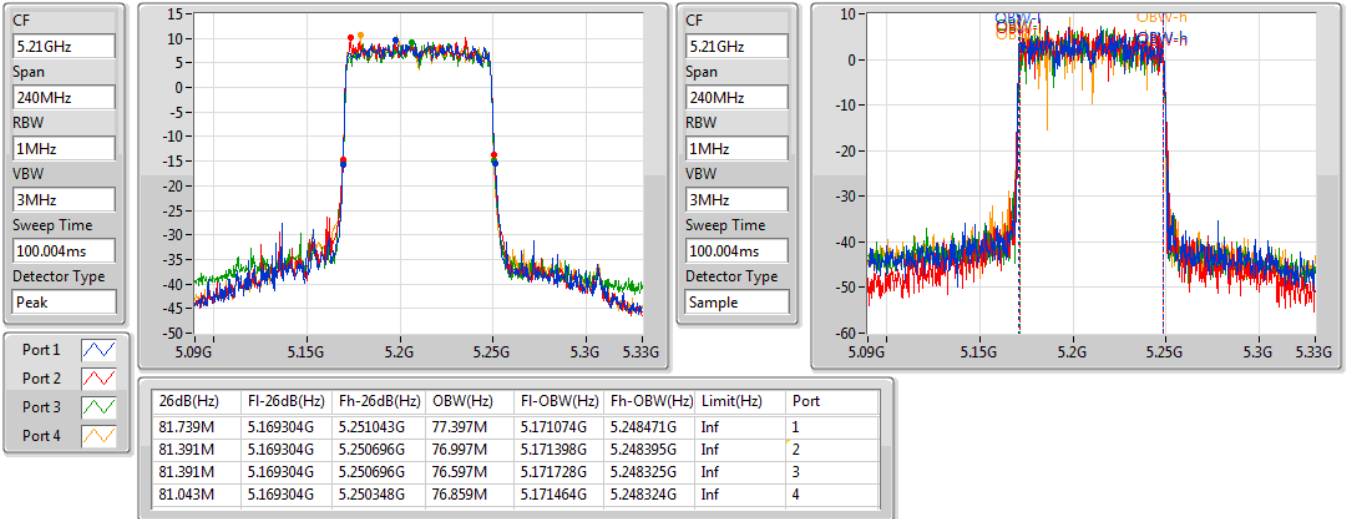

802.11ax HEW40_Nss3,(MCS0)_4TX
EBW
5190MHz

04/09/2019

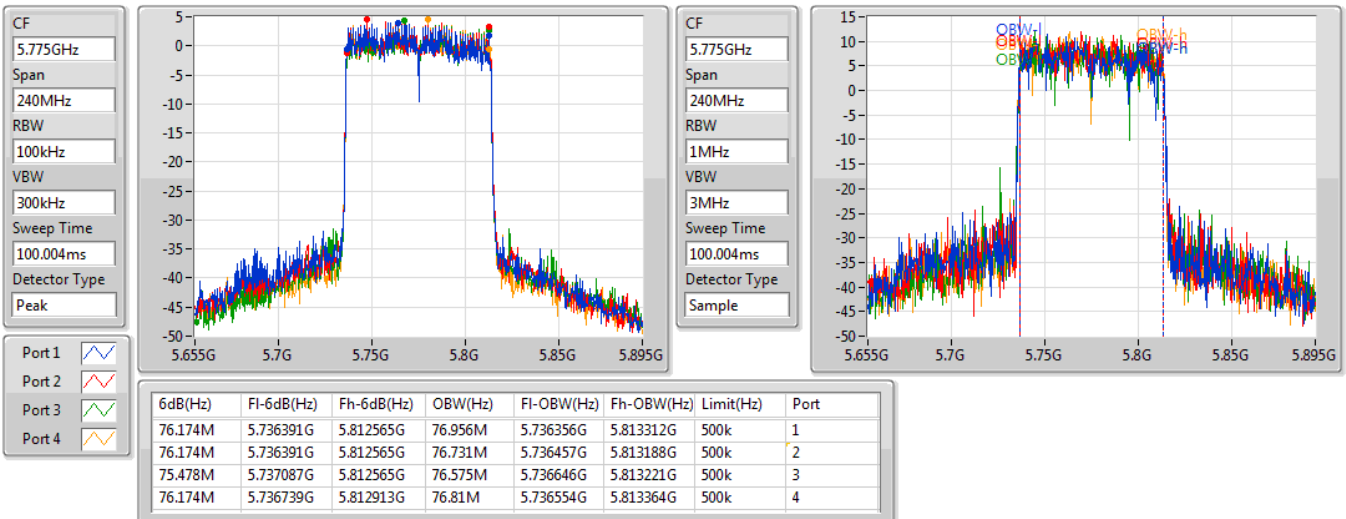


802.11ax HEW80_Nss3,(MCS0)_4TX
EBW
5210MHz

04/09/2019


802.11ax HEW80_Nss3,(MCS0)_4TX
EBW
5775MHz

04/09/2019



<For beamforming mode>

4T1S

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	30.174M	17.858M	17M9D1D	21.391M	17.698M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	44M	36.39M	36M4D1D	39.652M	36.066M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	82.087M	75.716M	75M7D1D	81.043M	75.369M
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	30.783M	19.04M	19M0D1D	21.391M	18.917M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	40.348M	37.673M	37M7D1D	39.652M	37.455M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	81.739M	77.157M	77M2D1D	81.391M	76.747M
5.725-5.85GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	17.565M	17.813M	17M8D1D	17.565M	17.712M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	36.174M	36.383M	36M4D1D	36.174M	36.206M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	76.522M	75.855M	75M9D1D	75.478M	75.478M
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	18.957M	19.042M	19M0D1D	18.87M	18.923M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	37.565M	37.685M	37M7D1D	37.043M	37.511M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	77.217M	77.453M	77M5D1D	76.174M	76.758M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;

Result

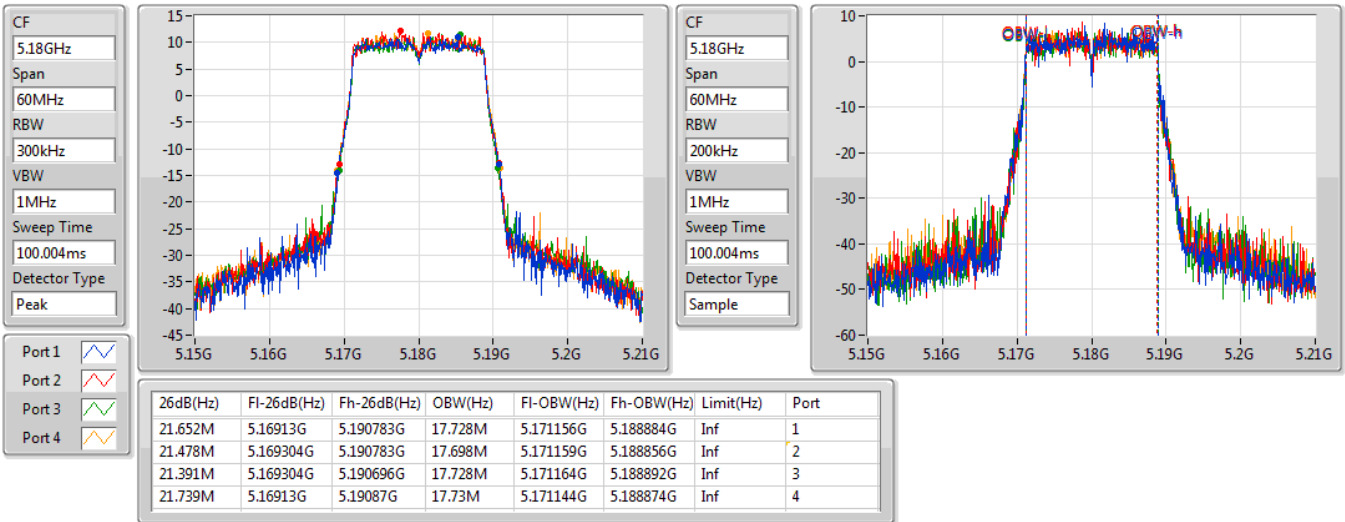
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.652M	17.728M	21.478M	17.698M	21.391M	17.728M	21.739M	17.73M
5200MHz	Pass	Inf	24.435M	17.801M	22M	17.796M	21.739M	17.762M	21.739M	17.748M
5240MHz	Pass	Inf	23.043M	17.809M	22.957M	17.858M	30.174M	17.811M	24.261M	17.752M
5745MHz	Pass	500k	17.565M	17.796M	17.565M	17.802M	17.565M	17.776M	17.565M	17.784M
5785MHz	Pass	500k	17.565M	17.813M	17.565M	17.765M	17.565M	17.726M	17.565M	17.761M
5825MHz	Pass	500k	17.565M	17.712M	17.565M	17.736M	17.565M	17.754M	17.565M	17.775M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	39.826M	36.202M	39.652M	36.066M	39.652M	36.183M	39.652M	36.269M
5230MHz	Pass	Inf	44M	36.249M	40M	36.39M	41.913M	36.224M	39.826M	36.151M
5755MHz	Pass	500k	36.174M	36.237M	36.174M	36.383M	36.174M	36.351M	36.174M	36.206M
5795MHz	Pass	500k	36.174M	36.367M	36.174M	36.317M	36.174M	36.377M	36.174M	36.245M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	82.087M	75.369M	81.391M	75.716M	81.043M	75.716M	81.391M	75.369M
5775MHz	Pass	500k	75.478M	75.478M	76.522M	75.855M	75.478M	75.657M	75.478M	75.675M
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.478M	18.929M	21.652M	18.917M	21.652M	19.014M	21.391M	18.993M
5200MHz	Pass	Inf	22.87M	18.995M	21.652M	19.021M	23.739M	19.008M	23.739M	18.99M
5240MHz	Pass	Inf	25.652M	18.978M	23.13M	18.962M	30.783M	19.04M	24M	19.037M
5745MHz	Pass	500k	18.87M	18.968M	18.957M	18.939M	18.87M	19.017M	18.957M	18.929M
5785MHz	Pass	500k	18.957M	19.032M	18.957M	18.986M	18.957M	18.995M	18.87M	18.923M
5825MHz	Pass	500k	18.957M	19.02M	18.957M	18.982M	18.87M	19.042M	18.957M	19.015M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	39.826M	37.554M	39.826M	37.533M	39.826M	37.455M	40M	37.497M
5230MHz	Pass	Inf	39.652M	37.479M	39.652M	37.671M	40.348M	37.485M	40.174M	37.673M
5755MHz	Pass	500k	37.565M	37.685M	37.565M	37.511M	37.217M	37.685M	37.043M	37.511M
5795MHz	Pass	500k	37.043M	37.685M	37.217M	37.685M	37.391M	37.685M	37.043M	37.685M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	81.739M	76.911M	81.739M	77.157M	81.739M	76.747M	81.391M	77.095M
5775MHz	Pass	500k	76.174M	76.758M	76.87M	77.453M	77.217M	76.758M	76.87M	76.758M

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

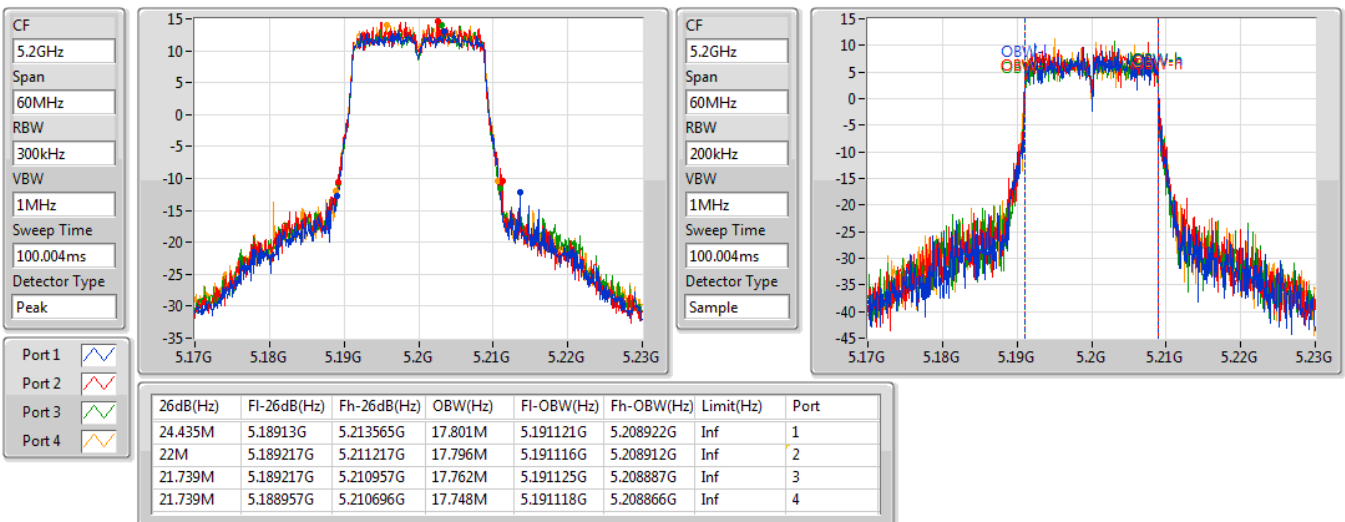
Port X-OBW = Port X 99% occupied bandwidth;

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

03/09/2019

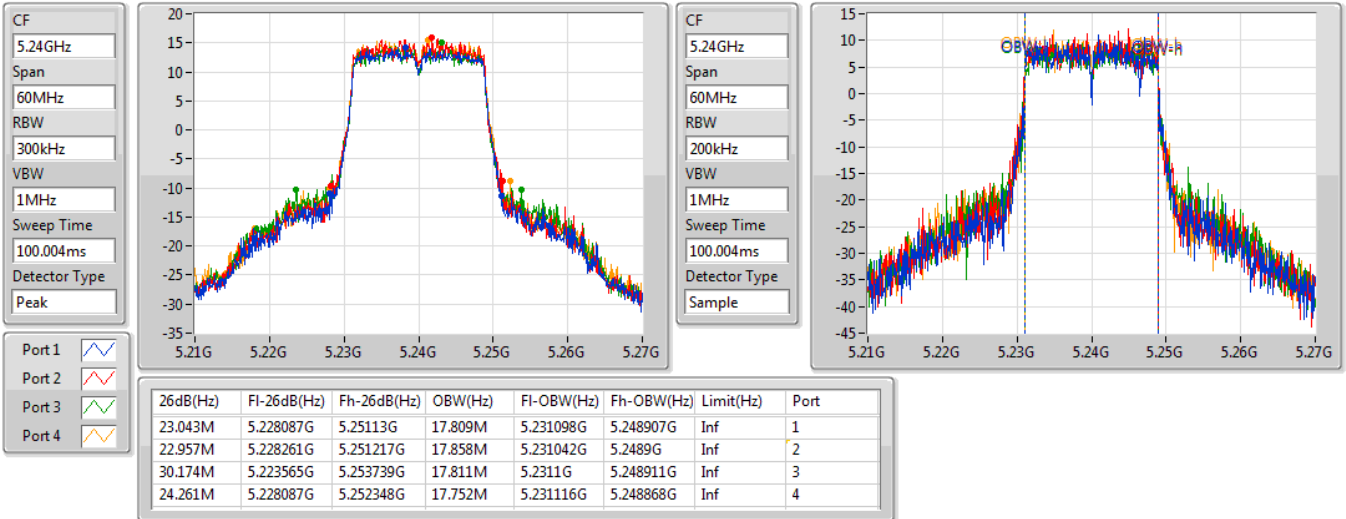

802.11ac VHT20-BF_Nss1,(MCS0)_4TX
EBW
5200MHz

03/09/2019

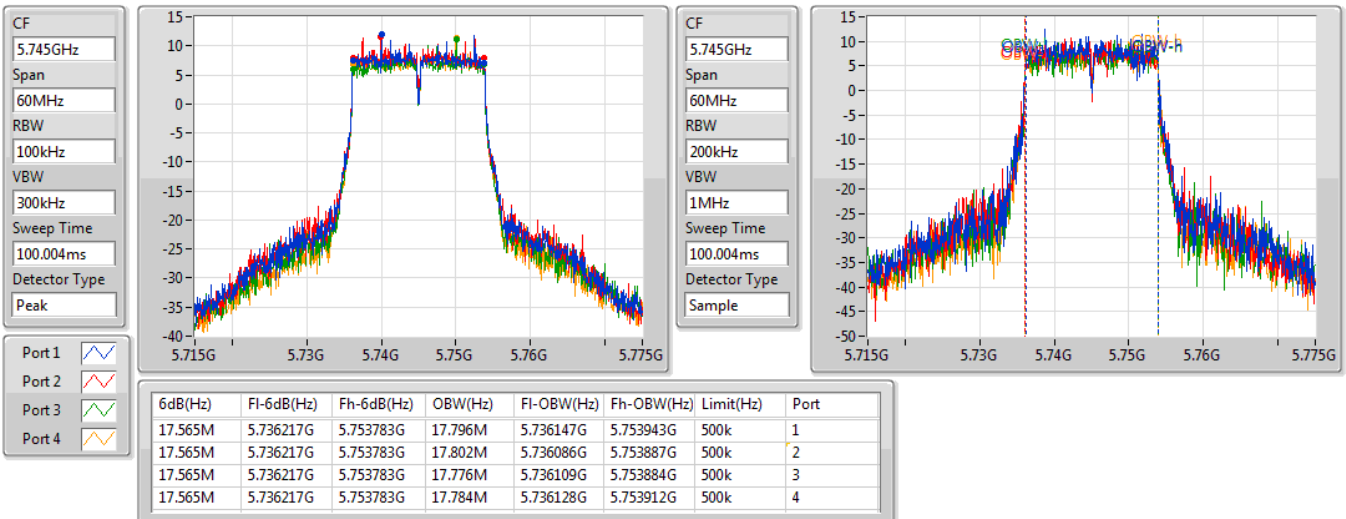


802.11ac VHT20-BF_Nss1,(MCS0)_4TX
EBW
5240MHz

03/09/2019

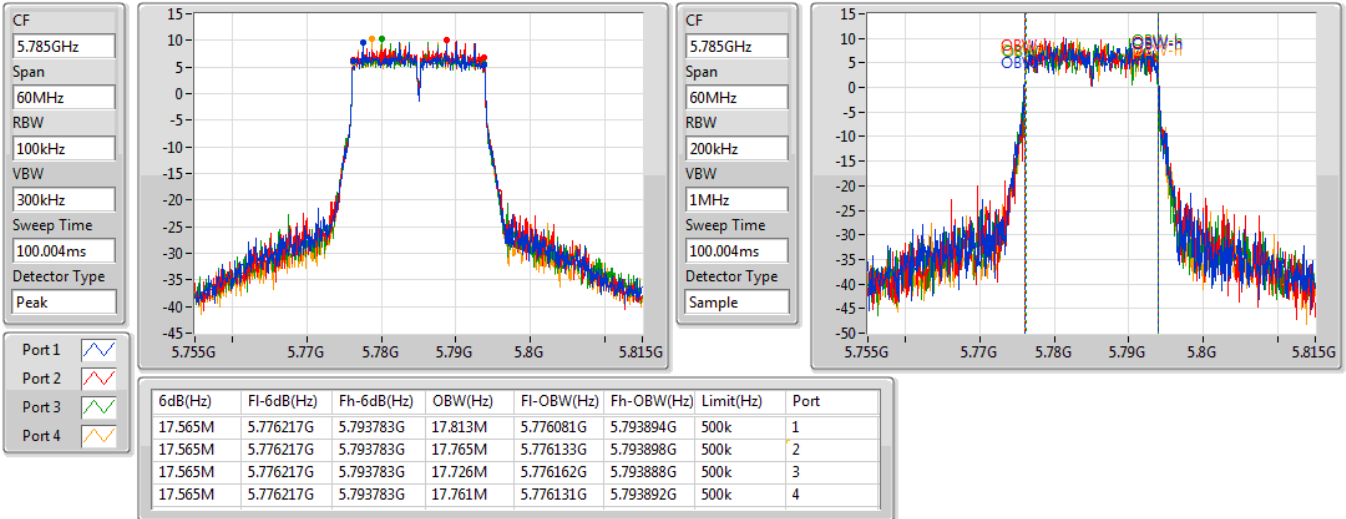

802.11ac VHT20-BF_Nss1,(MCS0)_4TX
EBW
5745MHz

04/09/2019

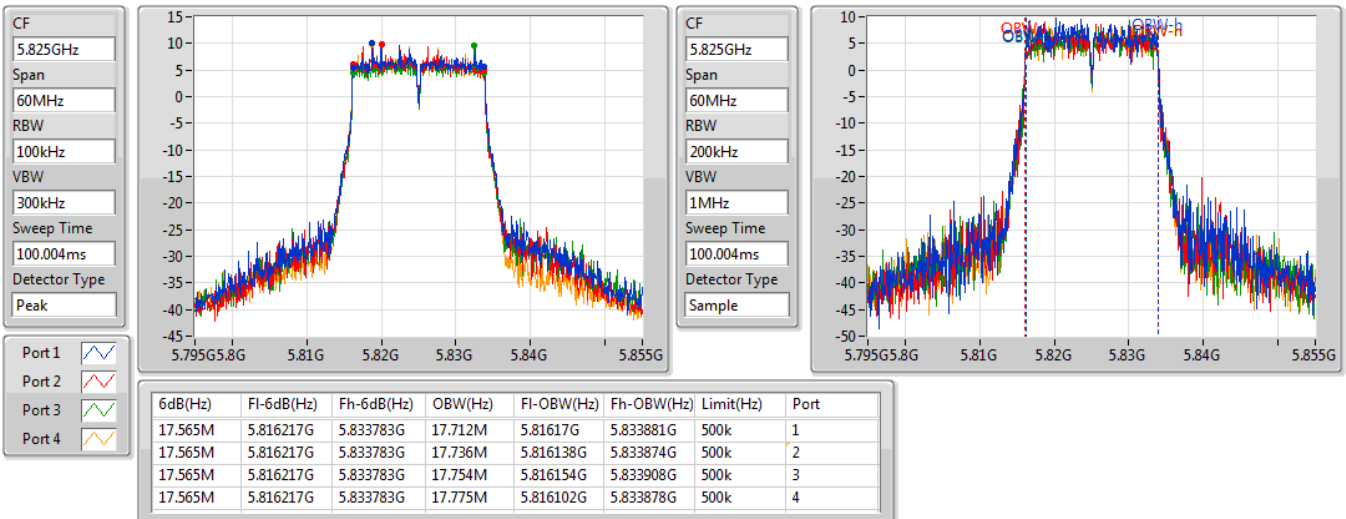


802.11ac VHT20-BF_Nss1,(MCS0)_4TX
EBW
5785MHz

04/09/2019

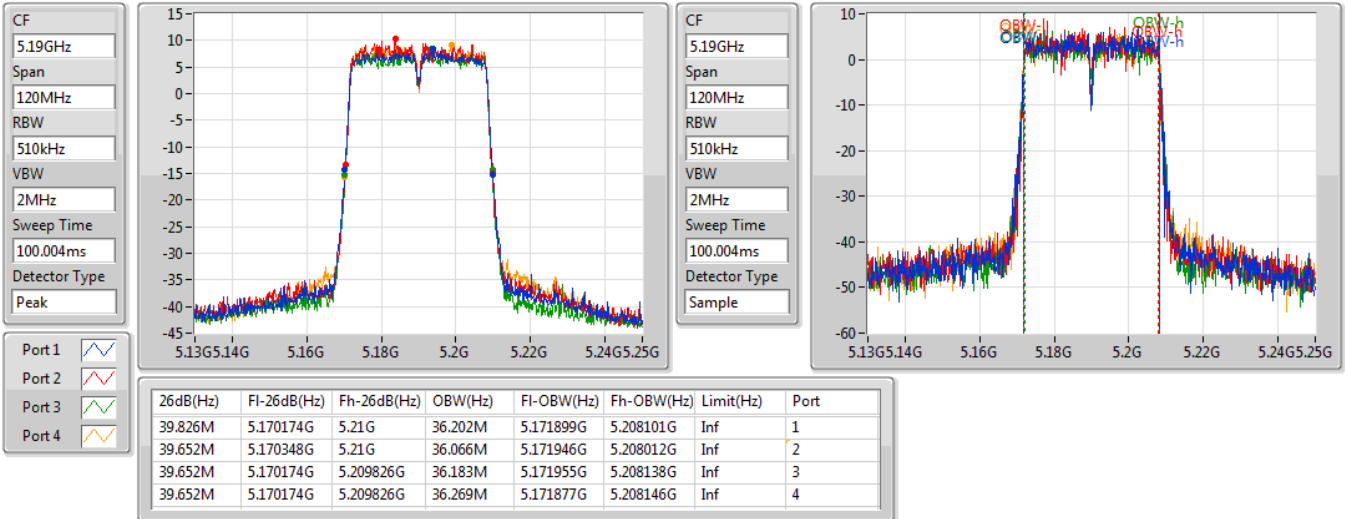

802.11ac VHT20-BF_Nss1,(MCS0)_4TX
EBW
5825MHz

04/09/2019

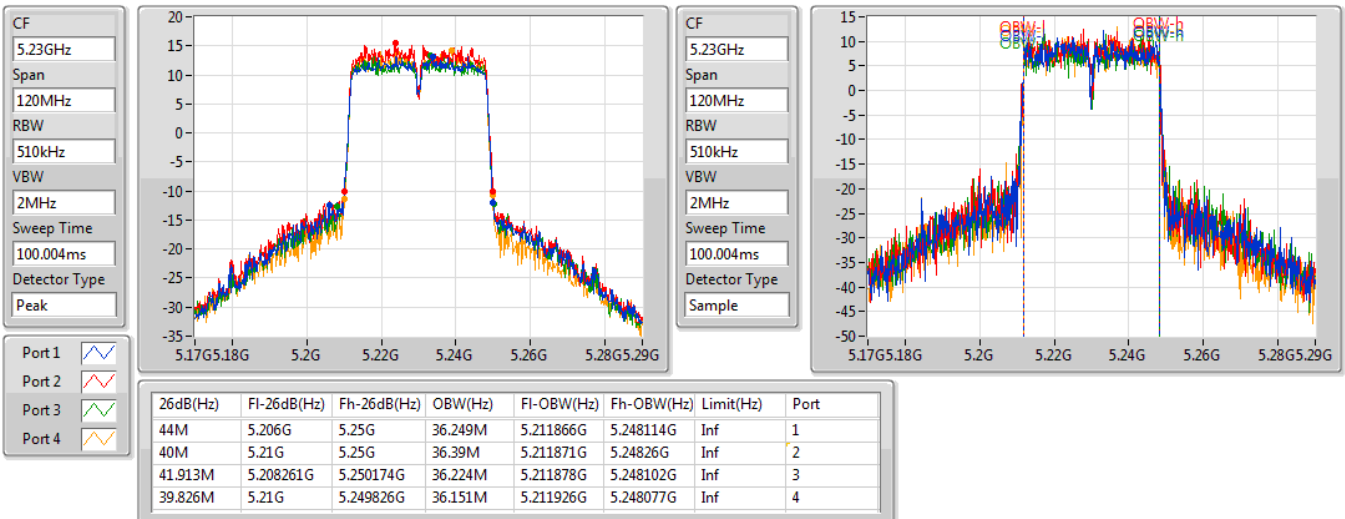


802.11ac VHT40-BF_Nss1,(MCS0)_4TX
EBW
5190MHz

03/09/2019

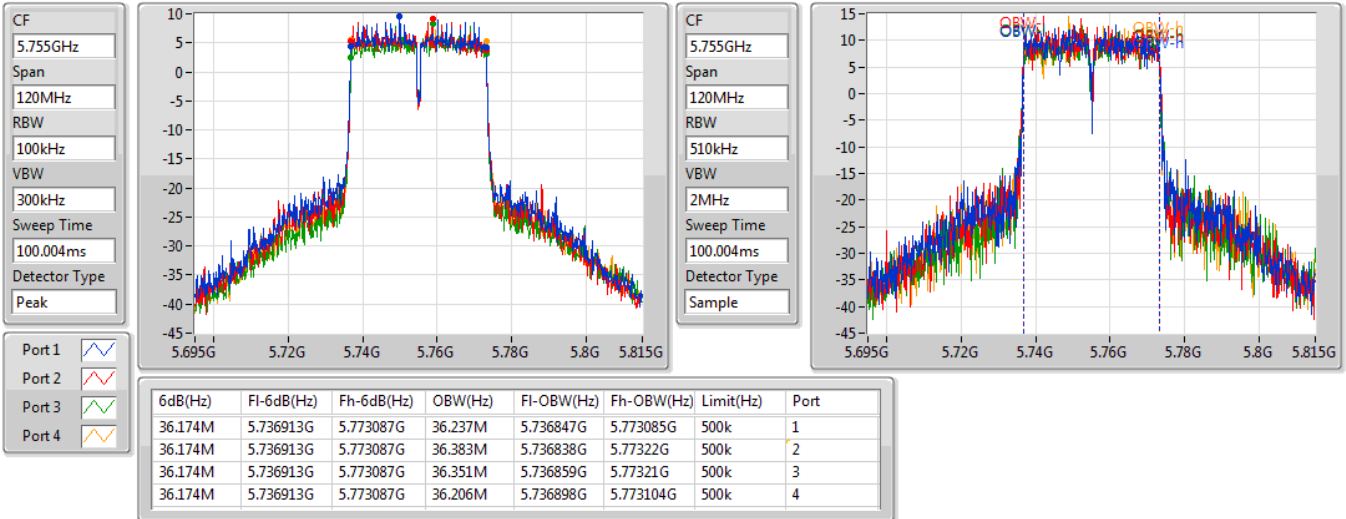

802.11ac VHT40-BF_Nss1,(MCS0)_4TX
EBW
5230MHz

03/09/2019

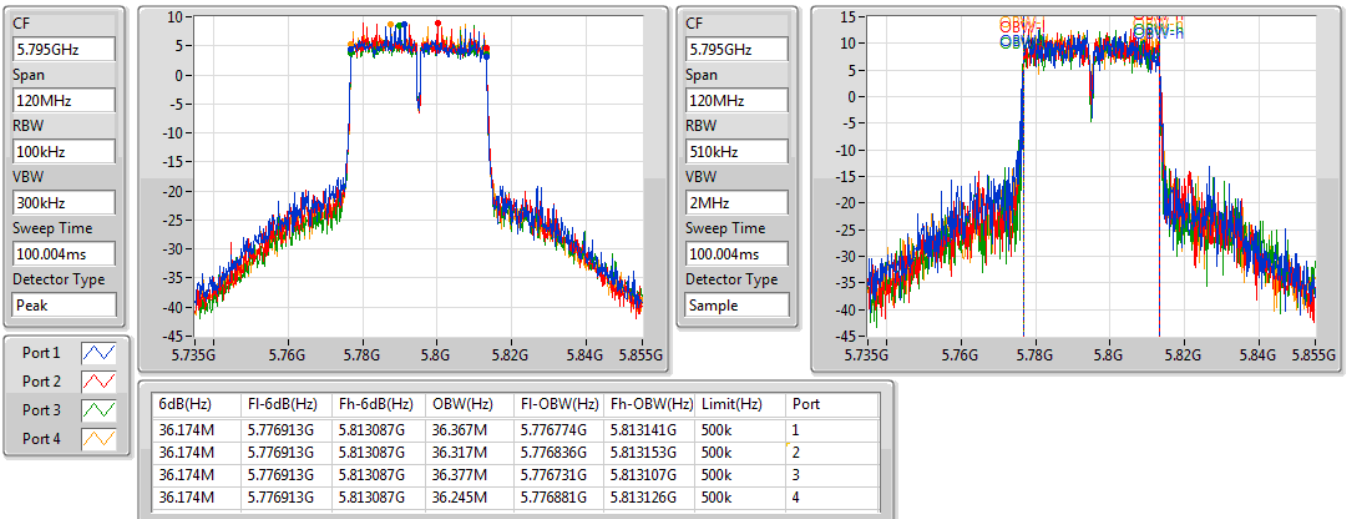


802.11ac VHT40-BF_Nss1,(MCS0)_4TX
EBW
5755MHz

04/09/2019

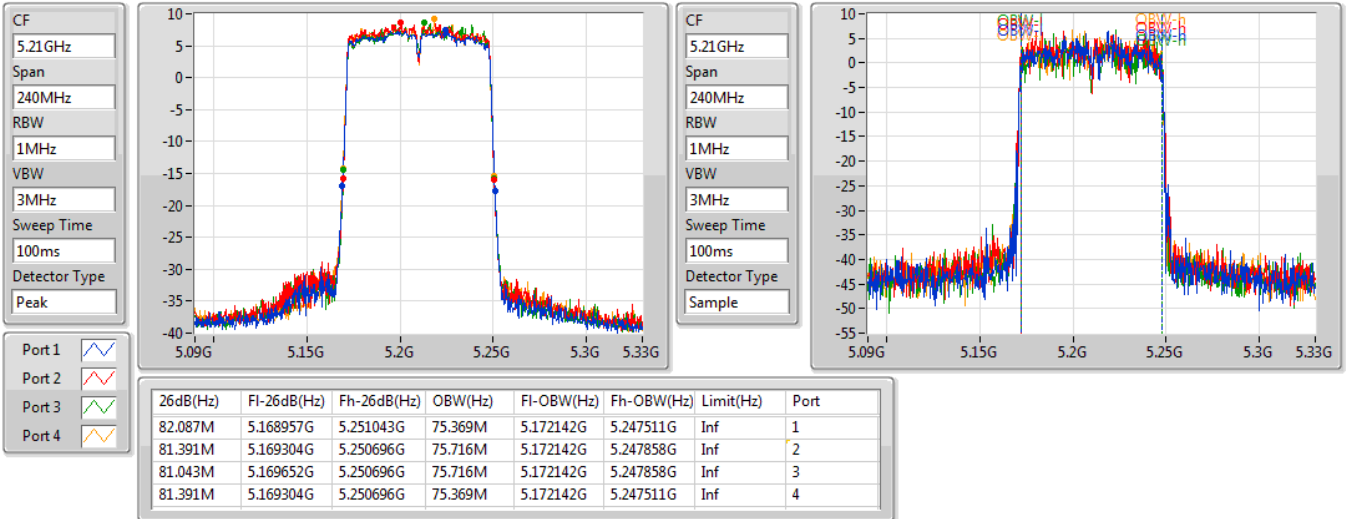

802.11ac VHT40-BF_Nss1,(MCS0)_4TX
EBW
5795MHz

04/09/2019

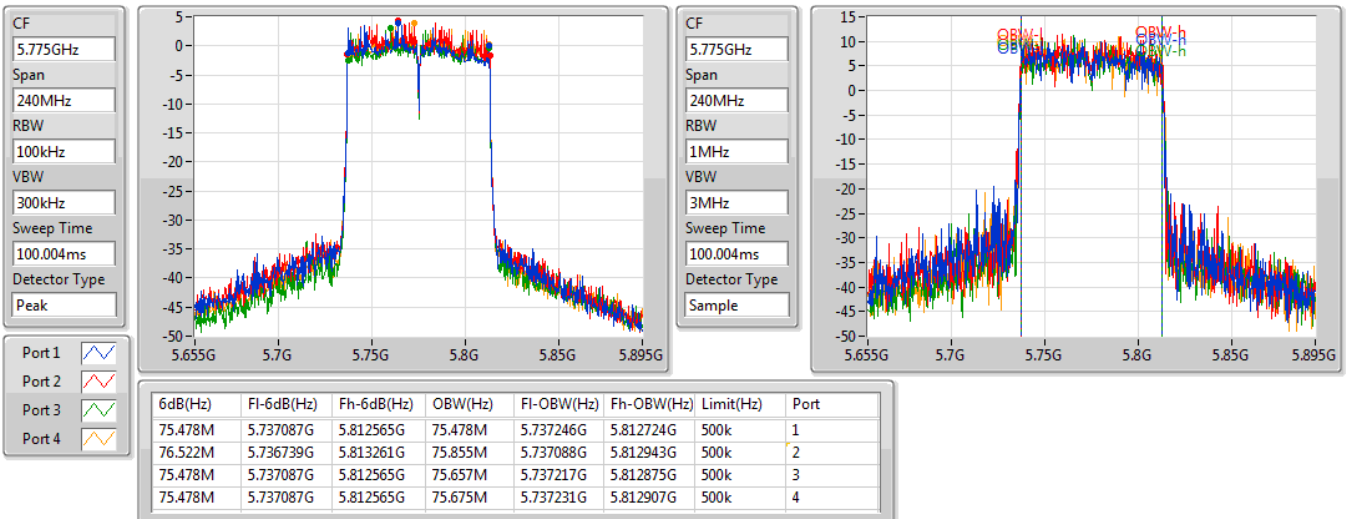


802.11ac VHT80-BF_Nss1,(MCS0)_4TX
EBW
5210MHz

04/09/2019

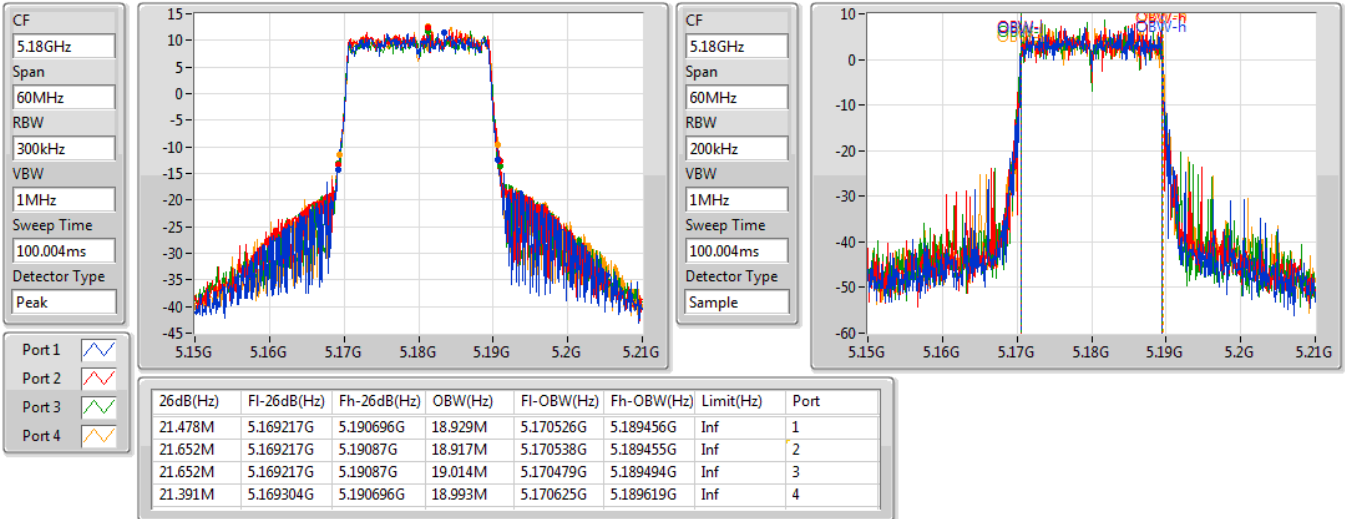

802.11ac VHT80-BF_Nss1,(MCS0)_4TX
EBW
5775MHz

04/09/2019

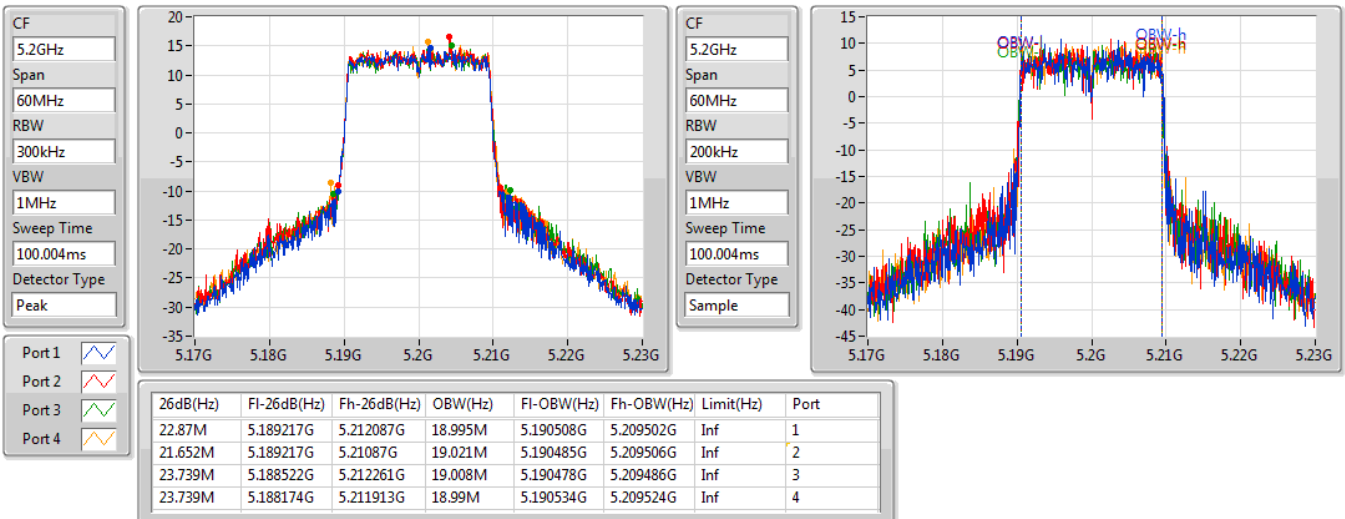


802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5180MHz

03/09/2019

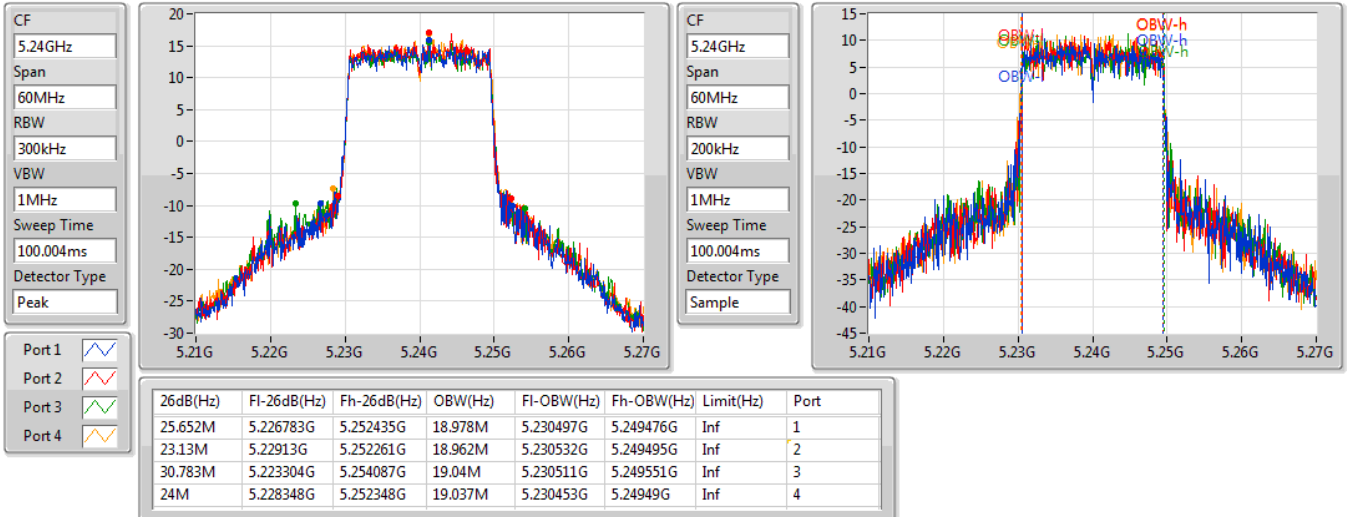

802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5200MHz

03/09/2019

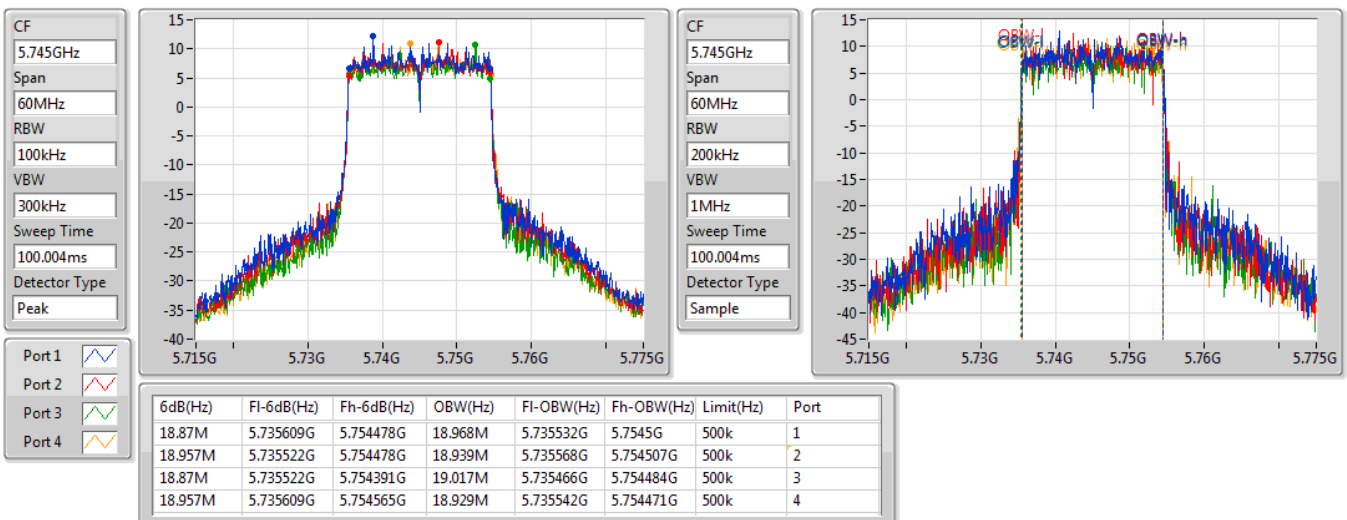


802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5240MHz

03/09/2019

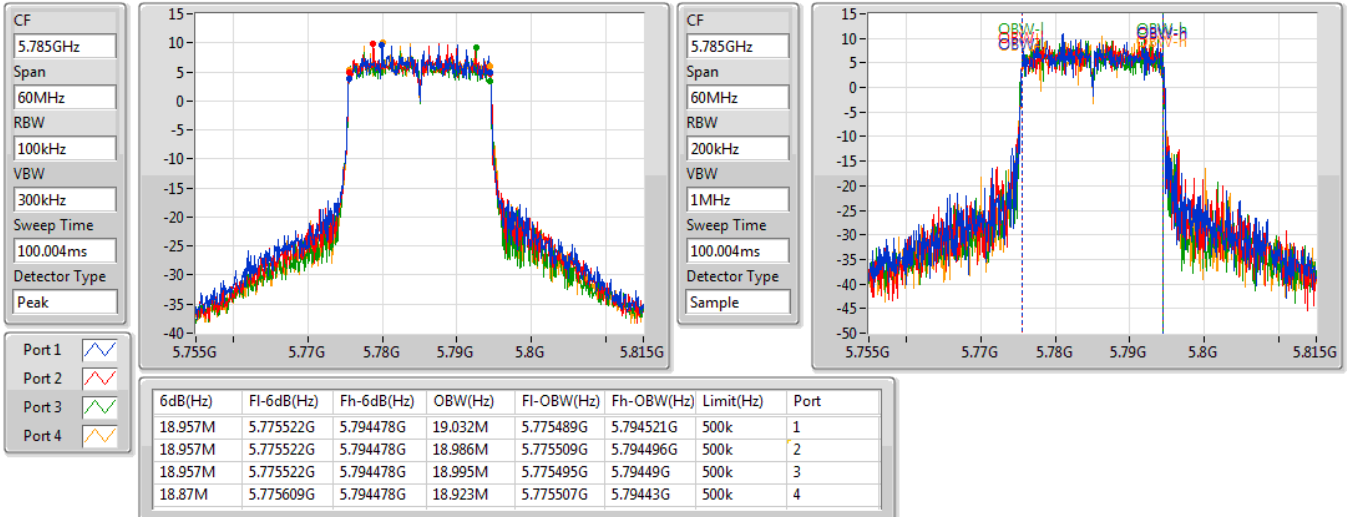

802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5745MHz

04/09/2019

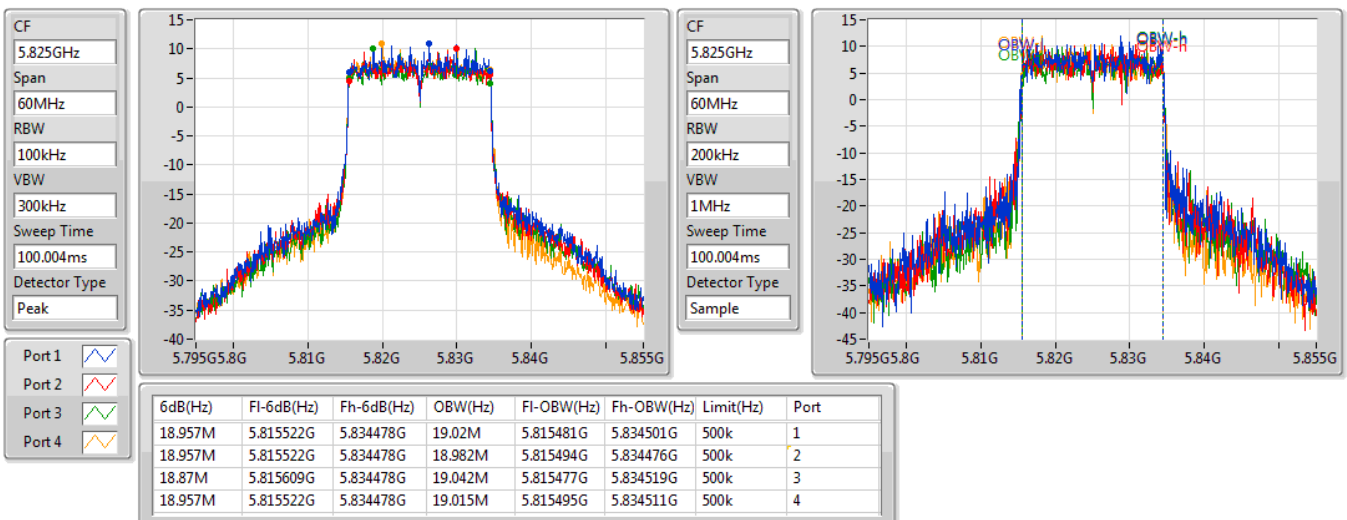


802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5785MHz

04/09/2019

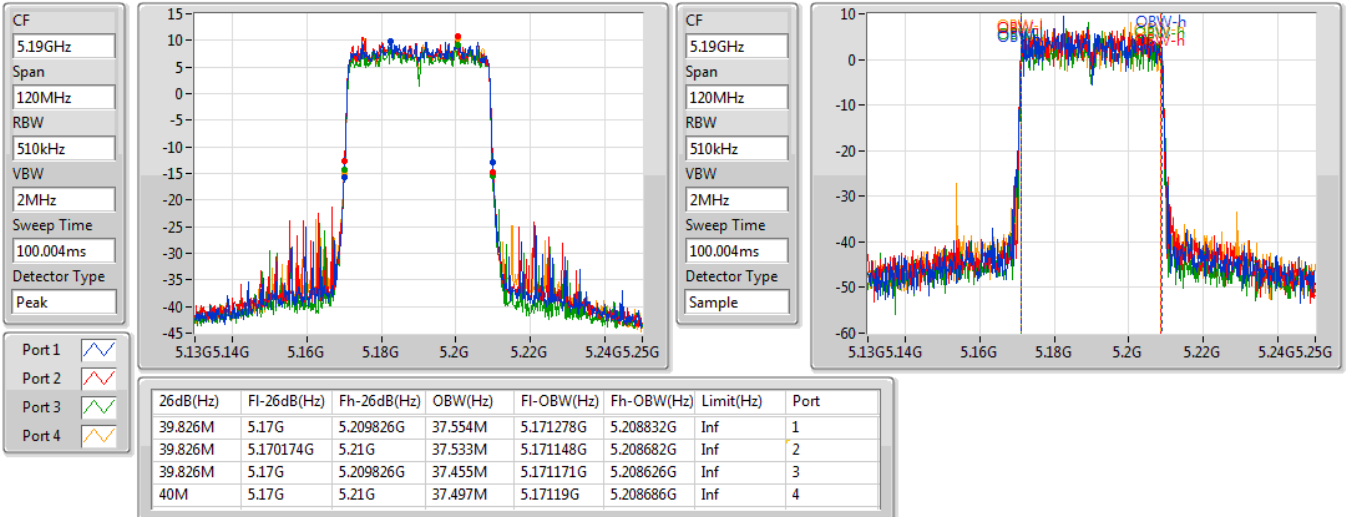

802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5825MHz

04/09/2019

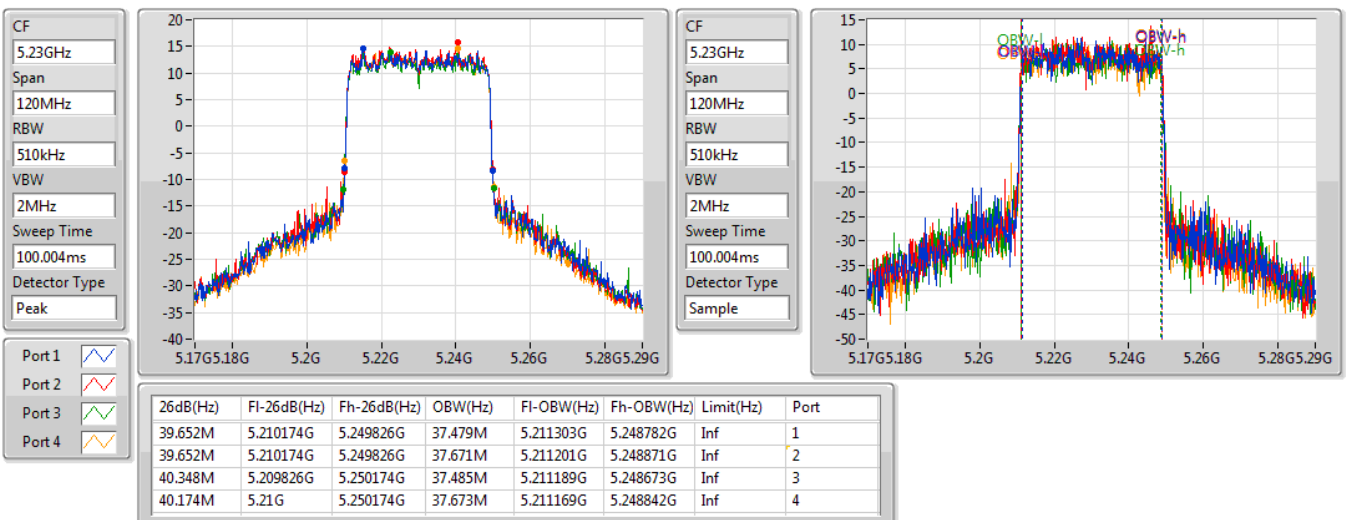


802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
5190MHz

03/09/2019


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

03/09/2019

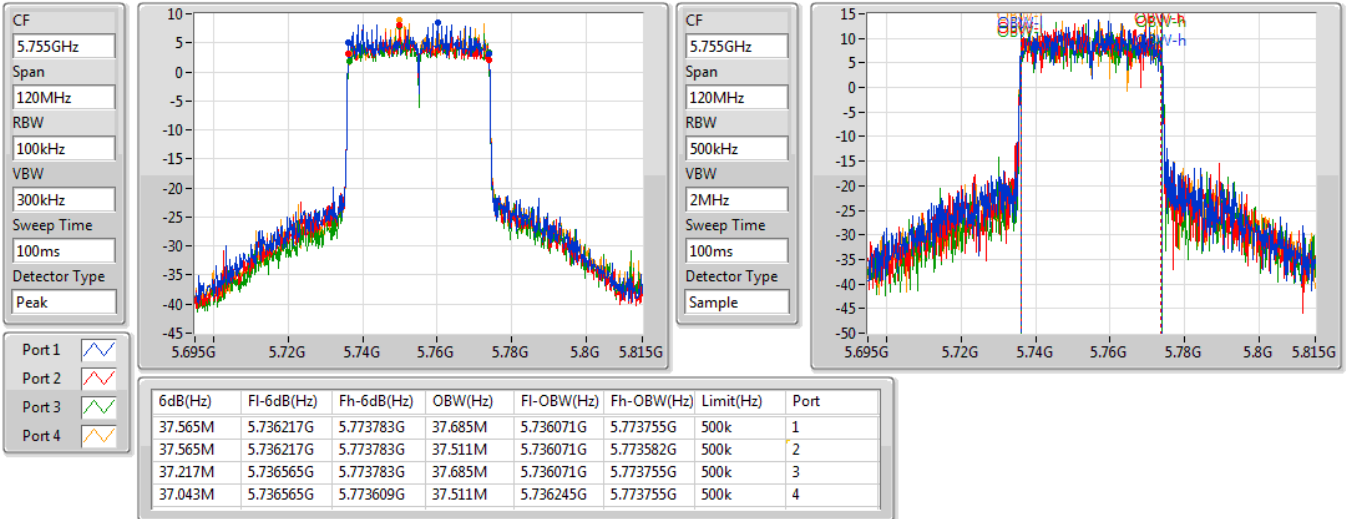


802.11ax HEW40-BF_Nss1,(MCS0)_4TX

EBW

5755MHz

04/09/2019

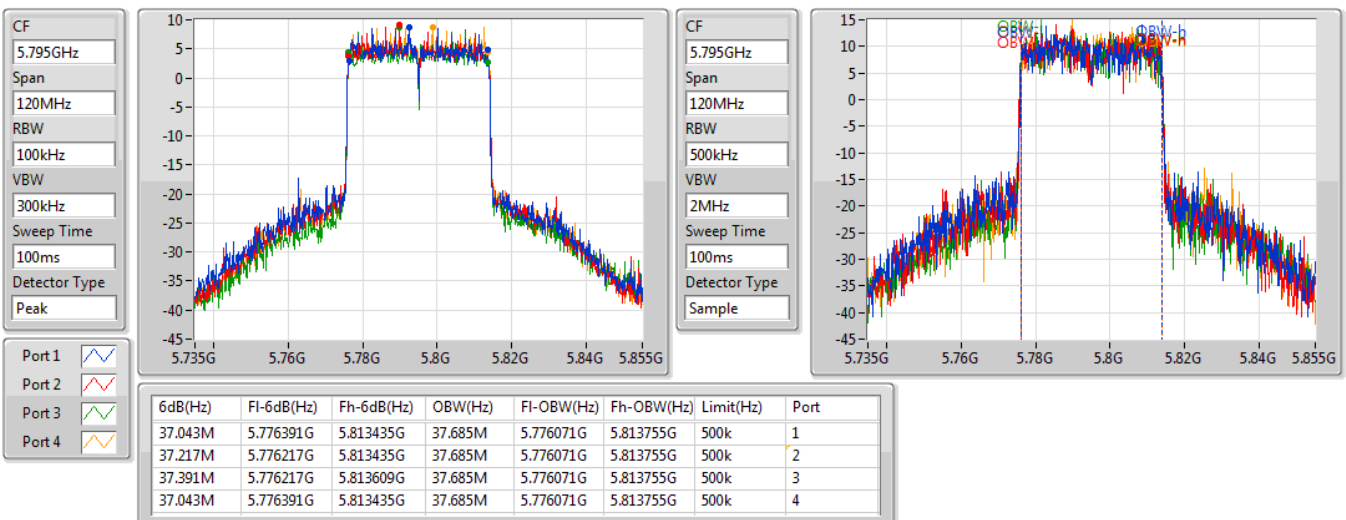


802.11ax HEW40-BF_Nss1,(MCS0)_4TX

EBW

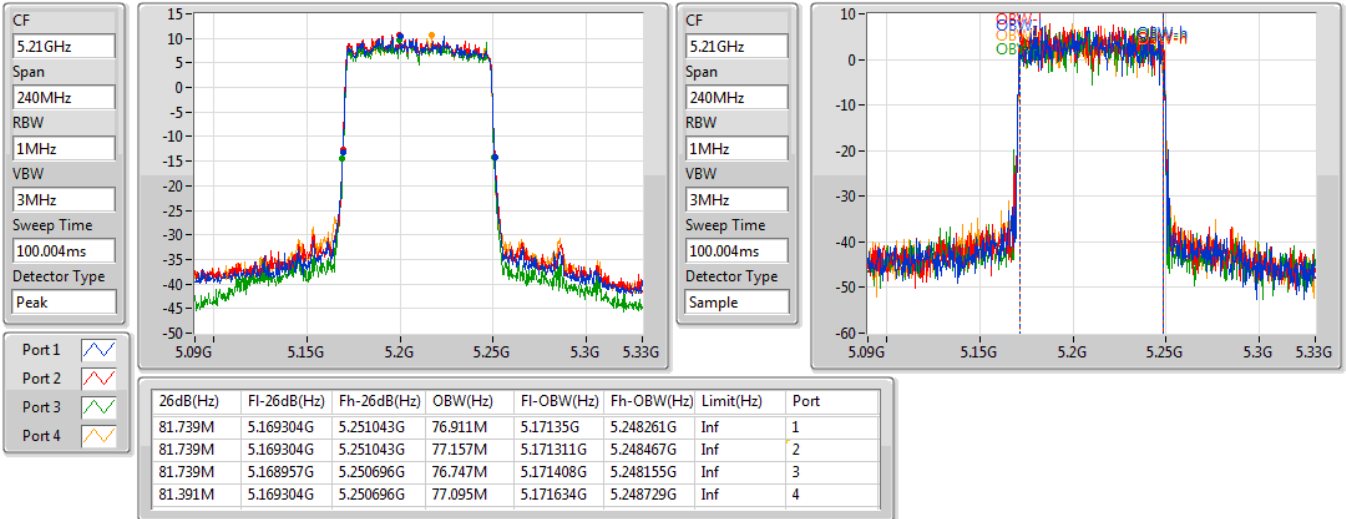
5795MHz

04/09/2019

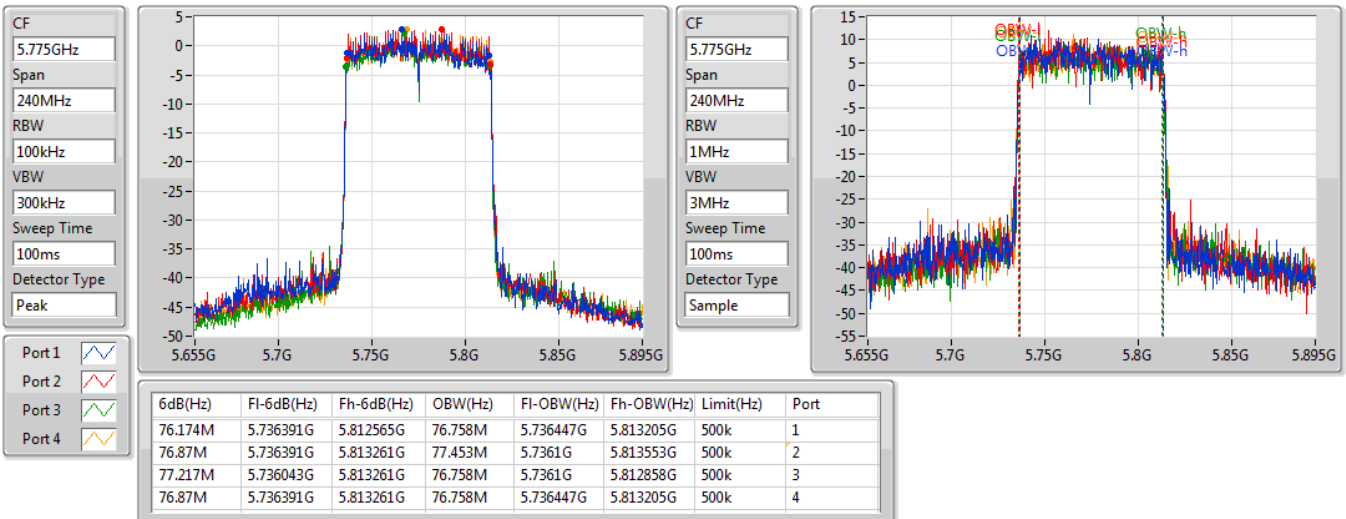


802.11ax HEW80-BF_Nss1,(MCS0)_4TX
EBW
5210MHz

03/09/2019


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

04/09/2019



**4T2S
Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	23.739M	17.772M	17M8D1D	21.304M	17.696M
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	40M	36.377M	36M4D1D	39.478M	36.235M
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	81.739M	75.746M	75M7D1D	81.391M	75.545M
802.11ax HEW20-BF_Nss2,(MCS0)_4TX	21.826M	19.019M	19M0D1D	21.217M	18.924M
802.11ax HEW40-BF_Nss2,(MCS0)_4TX	39.826M	37.825M	37M8D1D	39.652M	37.319M
802.11ax HEW80-BF_Nss2,(MCS0)_4TX	81.391M	76.989M	77M0D1D	80.696M	76.748M
5.725-5.85GHz	-	-	-	-	-
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	76.522M	75.848M	75M8D1D	75.826M	75.339M
802.11ax HEW80-BF_Nss2,(MCS0)_4TX	76.87M	77.072M	77M1D1D	76.174M	76.717M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;

Result

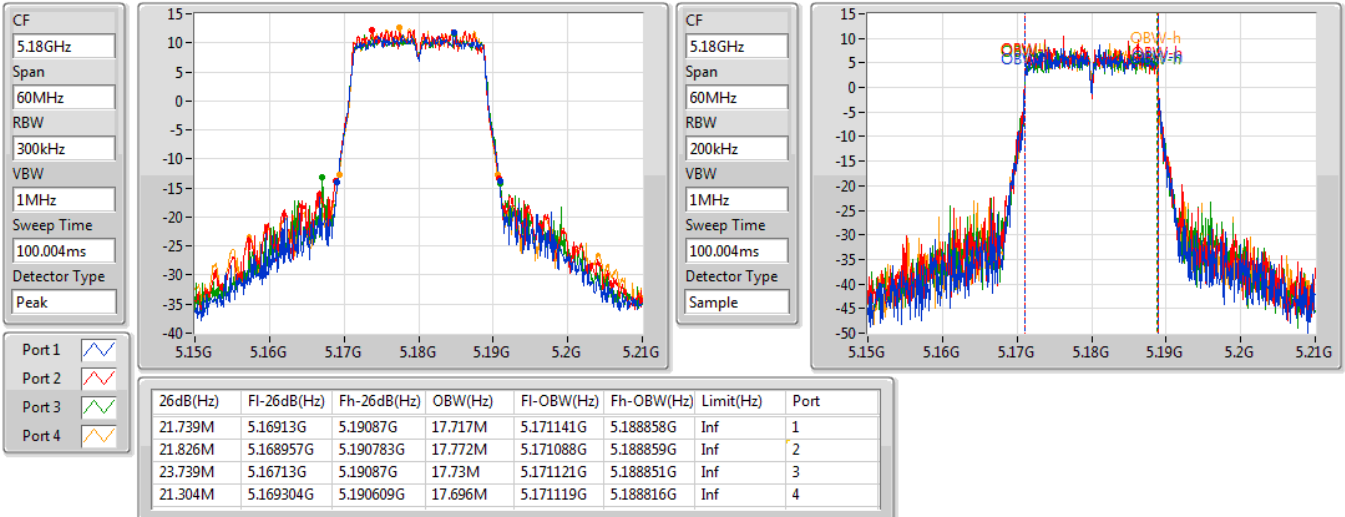
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.739M	17.717M	21.826M	17.772M	23.739M	17.73M	21.304M	17.696M
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	40M	36.246M	39.652M	36.372M	39.826M	36.235M	39.478M	36.377M
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	81.739M	75.603M	81.391M	75.736M	81.739M	75.545M	81.739M	75.746M
5775MHz	Pass	500k	75.826M	75.709M	76.522M	75.848M	75.826M	75.676M	76.522M	75.339M
802.11ax HEW20-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.826M	18.951M	21.652M	18.948M	21.739M	18.924M	21.217M	19.019M
802.11ax HEW40-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	39.652M	37.319M	39.652M	37.825M	39.652M	37.347M	39.826M	37.516M
802.11ax HEW80-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	80.696M	76.914M	81.043M	76.842M	80.696M	76.748M	81.391M	76.989M
5775MHz	Pass	500k	76.174M	76.717M	76.174M	76.937M	76.87M	77.072M	76.522M	76.732M

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

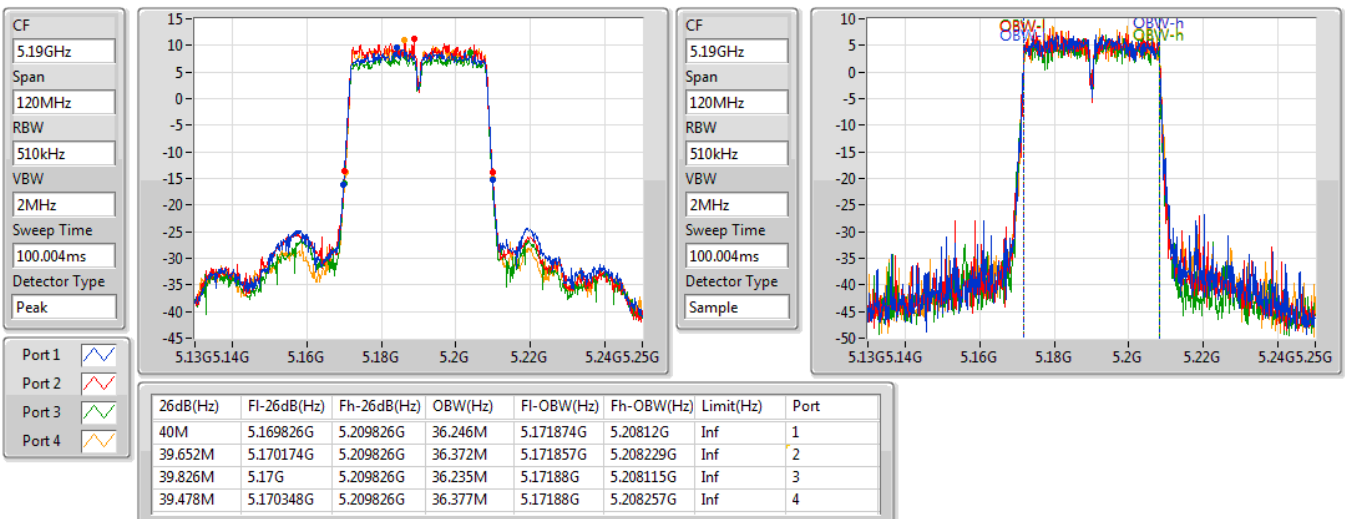
Port X-OBW = Port X 99% occupied bandwidth;

802.11ac VHT20-BF_Nss2,(MCS0)_4TX
EBW
5180MHz

04/09/2019

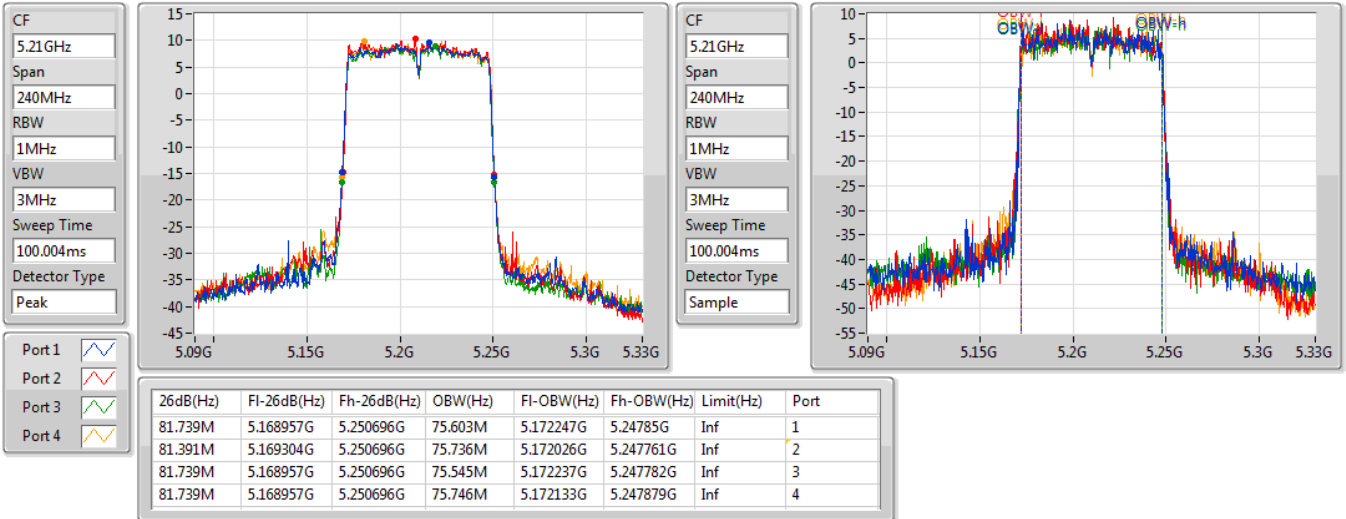

802.11ac VHT40-BF_Nss2,(MCS0)_4TX
EBW
5190MHz

04/09/2019

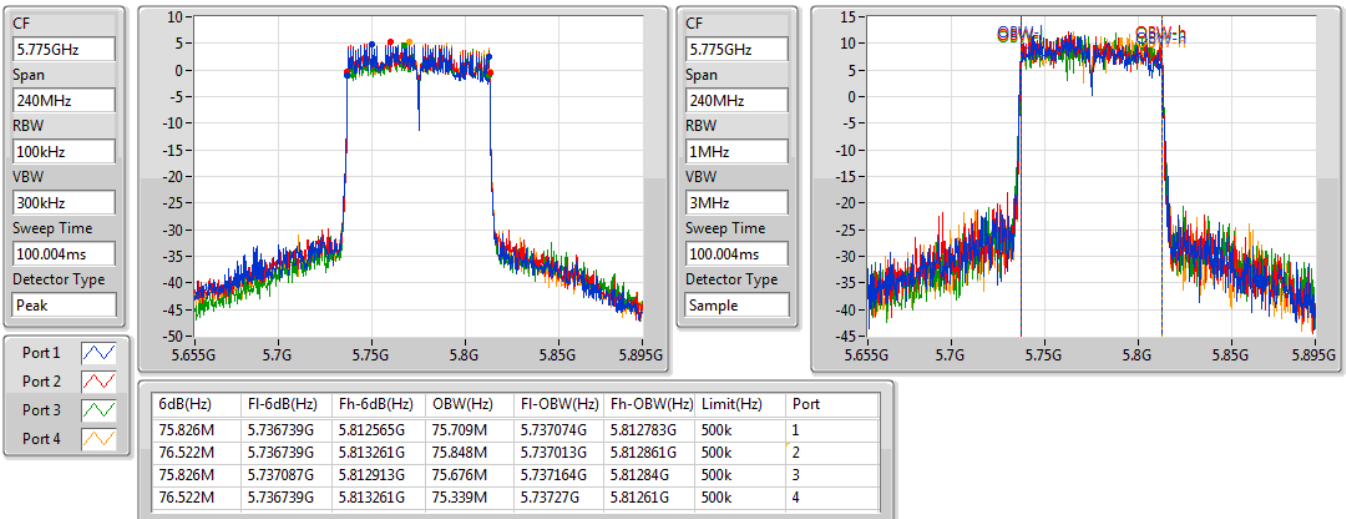


802.11ac VHT80-BF_Nss2,(MCS0)_4TX
EBW
5210MHz

04/09/2019

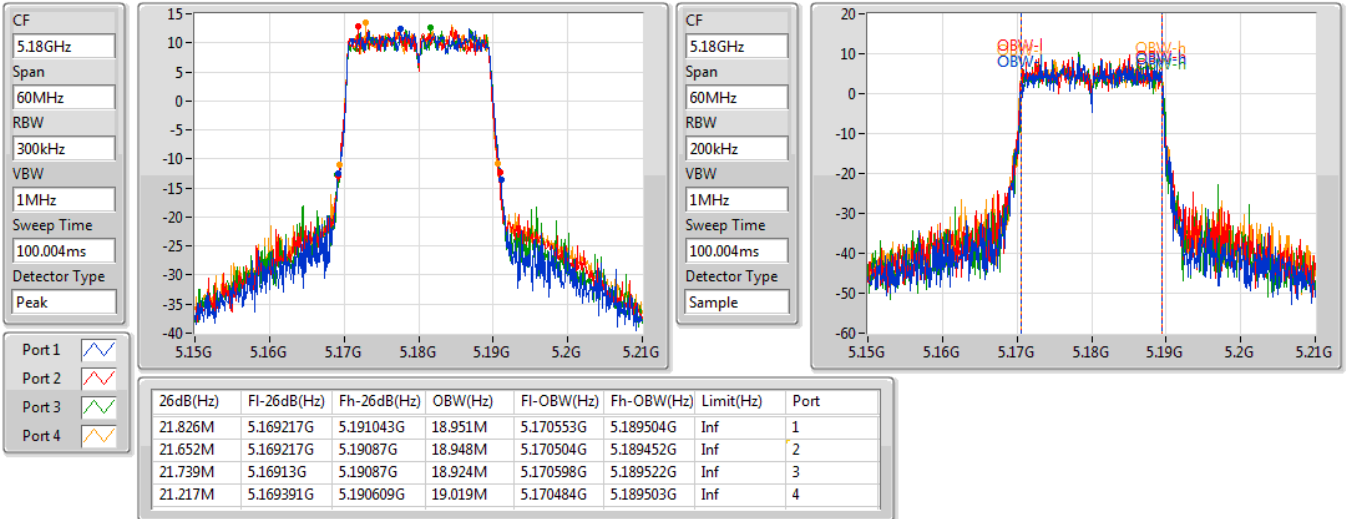

802.11ac VHT80-BF_Nss2,(MCS0)_4TX
EBW
5775MHz

04/09/2019

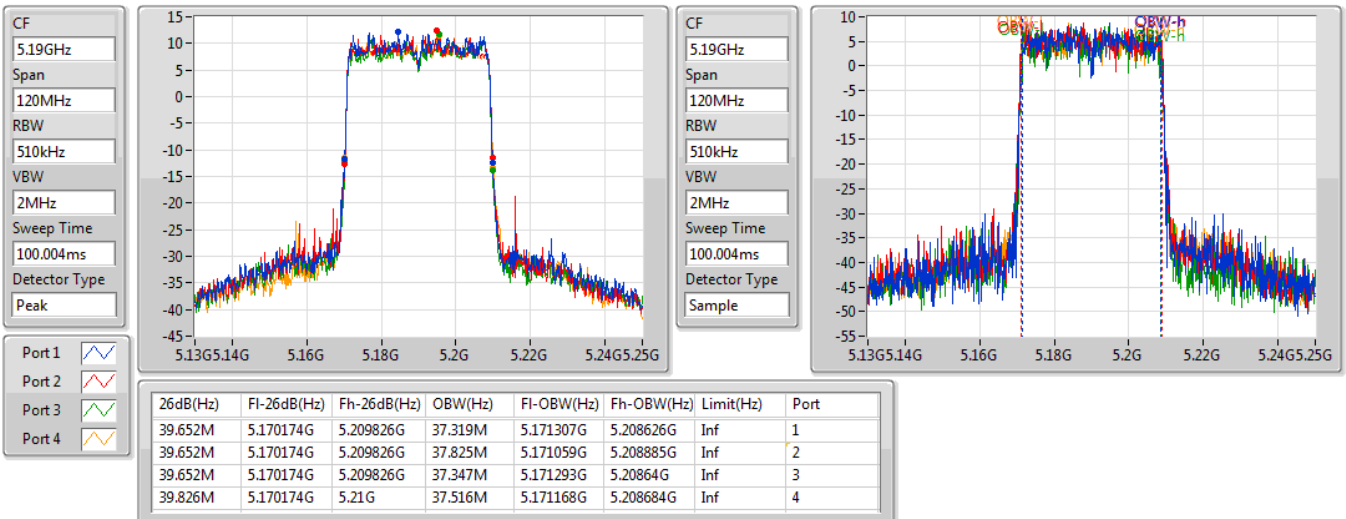


802.11ax HEW20-BF_Nss2,(MCS0)_4TX
EBW
5180MHz

04/09/2019

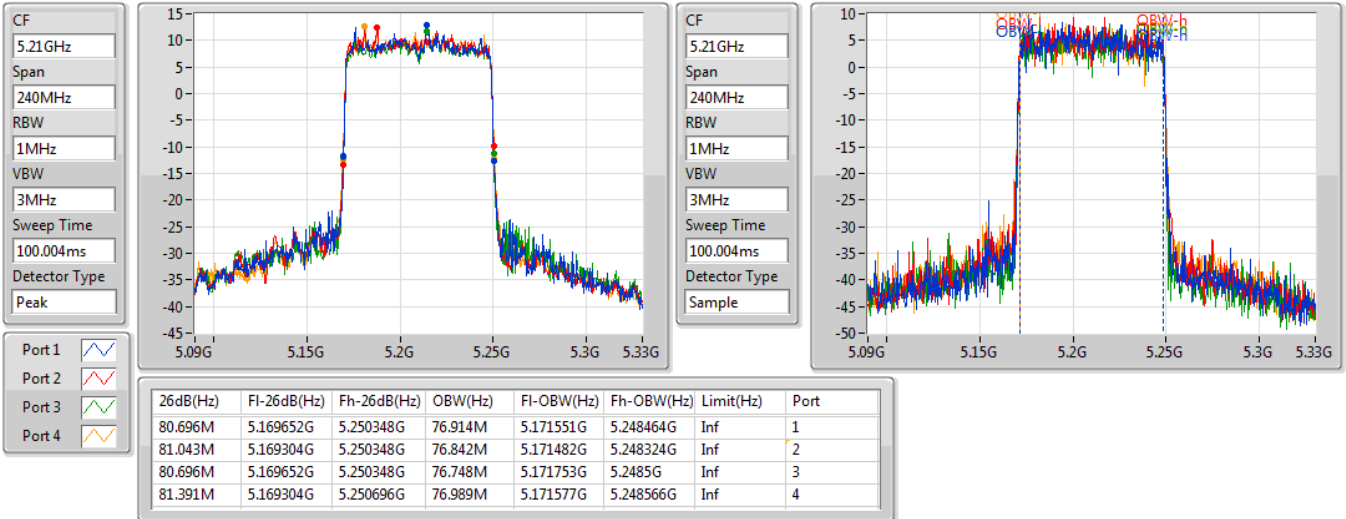

802.11ax HEW40-BF_Nss2,(MCS0)_4TX
EBW
5190MHz

04/09/2019

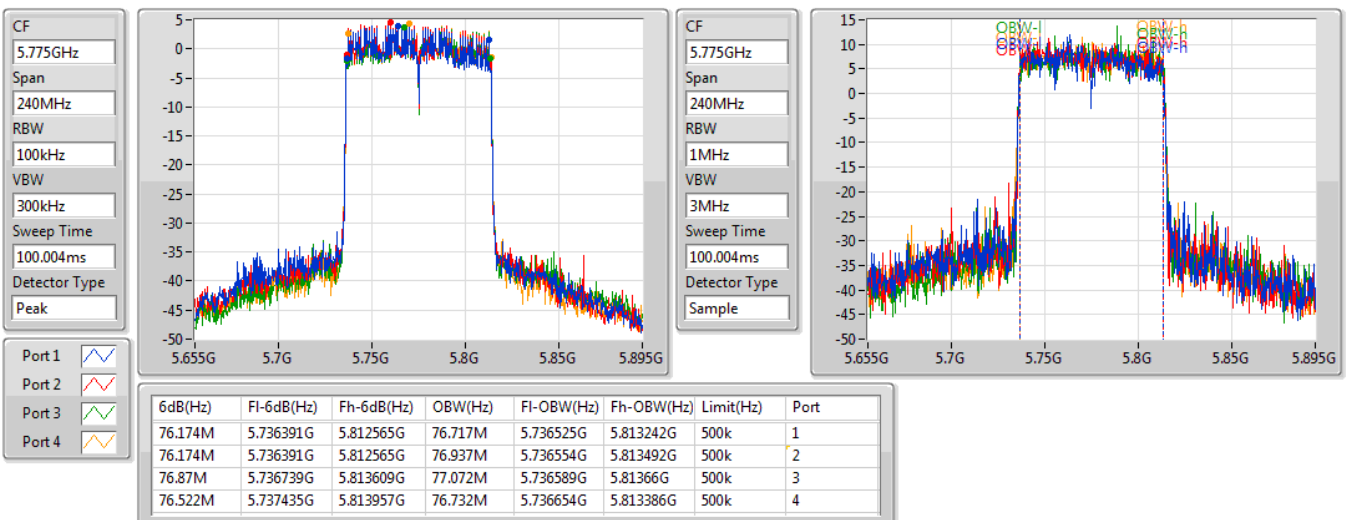


802.11ax HEW80-BF_Nss2,(MCS0)_4TX
EBW
5210MHz

04/09/2019


802.11ax HEW80-BF_Nss2,(MCS0)_4TX
EBW
5775MHz

04/09/2019



**4T3S
Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss3,(MCS0)_4TX	21.391M	17.705M	17M7D1D	21.217M	17.655M
802.11ac VHT40-BF_Nss3,(MCS0)_4TX	40M	36.339M	36M3D1D	39.652M	36.276M
802.11ac VHT80-BF_Nss3,(MCS0)_4TX	81.391M	75.941M	75M9D1D	80.348M	75.591M
802.11ax HEW20-BF_Nss3,(MCS0)_4TX	21.391M	18.997M	19M0D1D	21.13M	18.929M
802.11ax HEW40-BF_Nss3,(MCS0)_4TX	39.826M	37.554M	37M6D1D	39.478M	37.369M
802.11ax HEW80-BF_Nss3,(MCS0)_4TX	81.391M	77.026M	77M0D1D	80.696M	76.577M
5.725-5.85GHz	-	-	-	-	-
802.11ac VHT80-BF_Nss3,(MCS0)_4TX	76.174M	76.037M	76M0D1D	75.13M	75.778M
802.11ax HEW80-BF_Nss3,(MCS0)_4TX	76.174M	76.903M	76M9D1D	75.478M	76.528M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;

Result

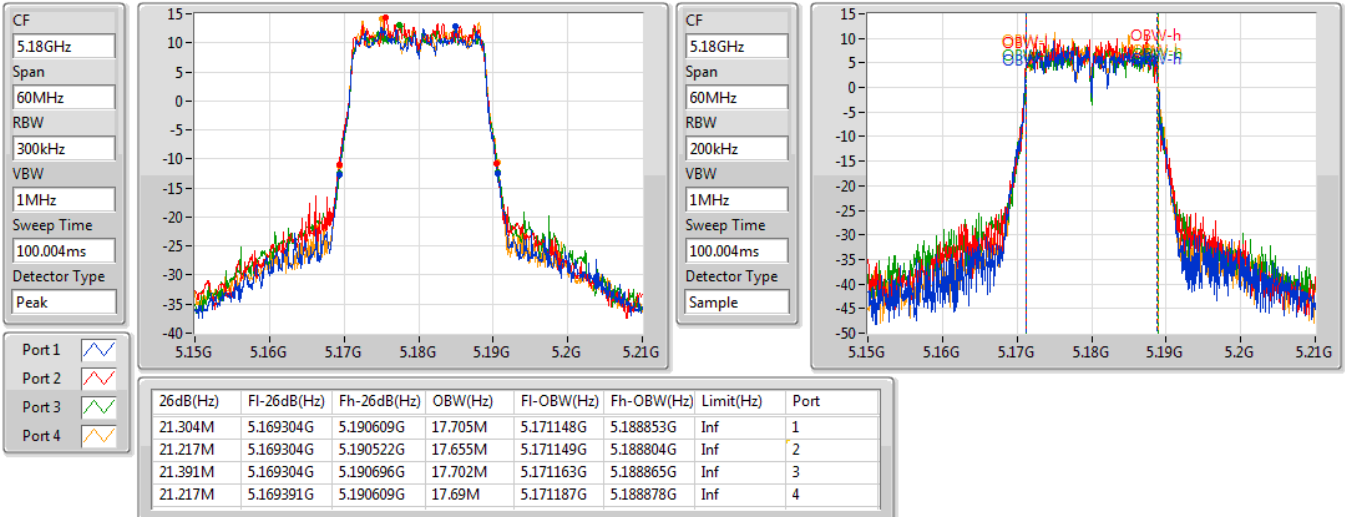
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ac VHT20-BF_Nss3,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.304M	17.705M	21.217M	17.655M	21.391M	17.702M	21.217M	17.69M
802.11ac VHT40-BF_Nss3,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	39.826M	36.276M	39.652M	36.339M	40M	36.282M	39.652M	36.328M
802.11ac VHT80-BF_Nss3,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	81.391M	75.591M	80.348M	75.872M	81.043M	75.941M	80.696M	75.898M
5775MHz	Pass	500k	75.13M	75.925M	75.478M	75.778M	76.174M	75.962M	75.826M	76.037M
802.11ax HEW20-BF_Nss3,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.391M	18.988M	21.391M	18.977M	21.13M	18.997M	21.391M	18.929M
802.11ax HEW40-BF_Nss3,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	39.826M	37.554M	39.478M	37.422M	39.652M	37.505M	39.478M	37.369M
802.11ax HEW80-BF_Nss3,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	81.391M	76.577M	81.391M	77.014M	81.043M	76.888M	80.696M	77.026M
5775MHz	Pass	500k	76.174M	76.903M	76.174M	76.528M	75.478M	76.573M	75.826M	76.884M

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

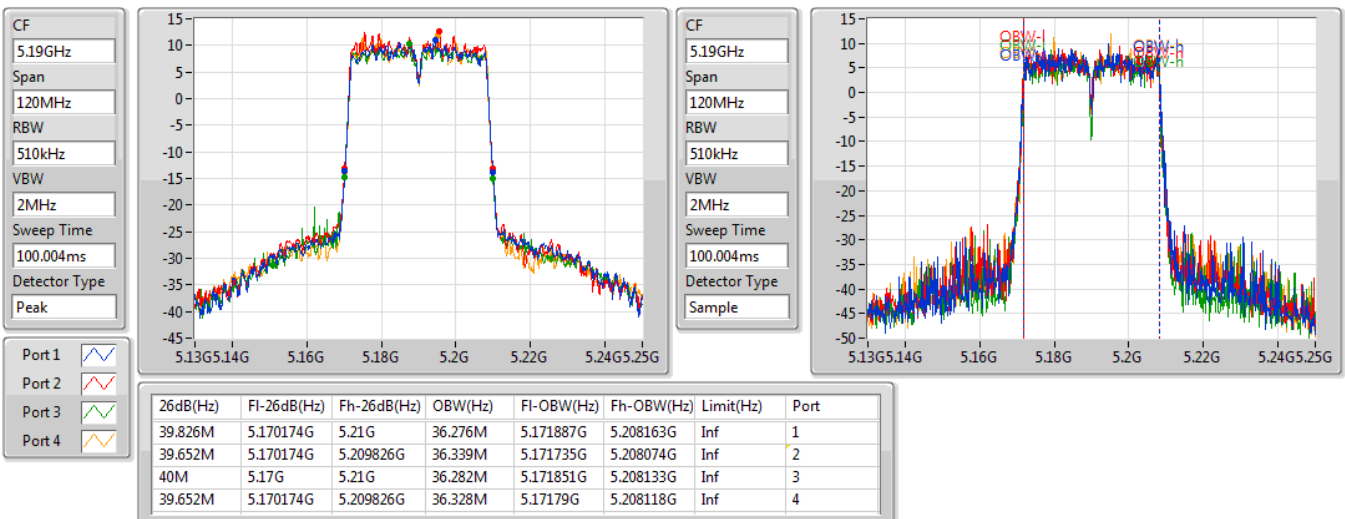
Port X-OBW = Port X 99% occupied bandwidth;

802.11ac VHT20-BF_Nss3,(MCS0)_4TX
EBW
5180MHz

04/09/2019

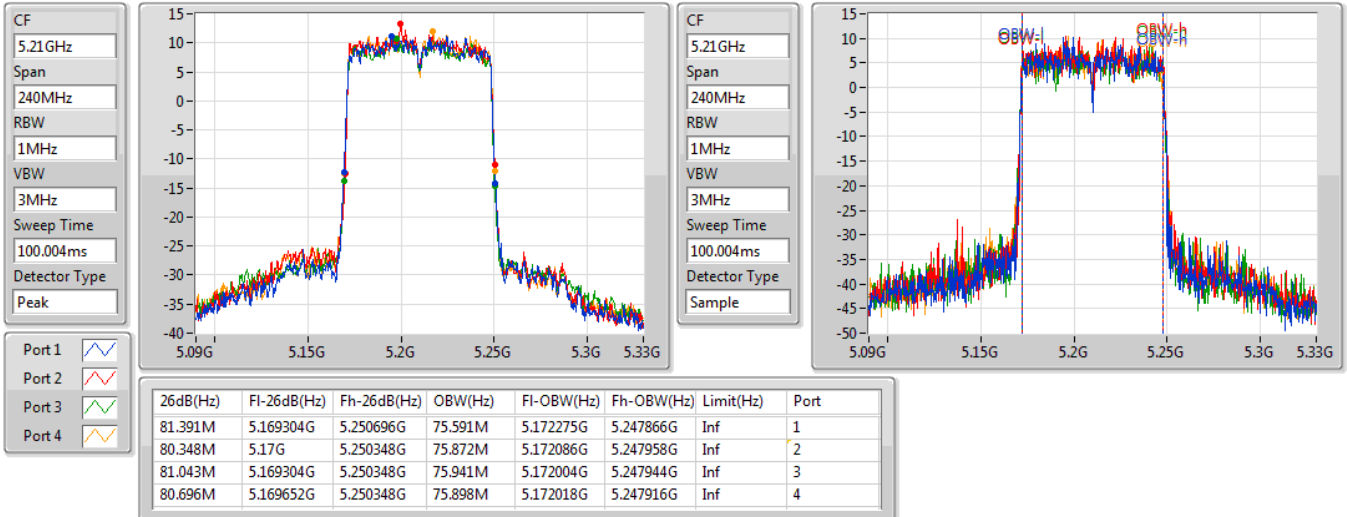

802.11ac VHT40-BF_Nss3,(MCS0)_4TX
EBW
5190MHz

04/09/2019

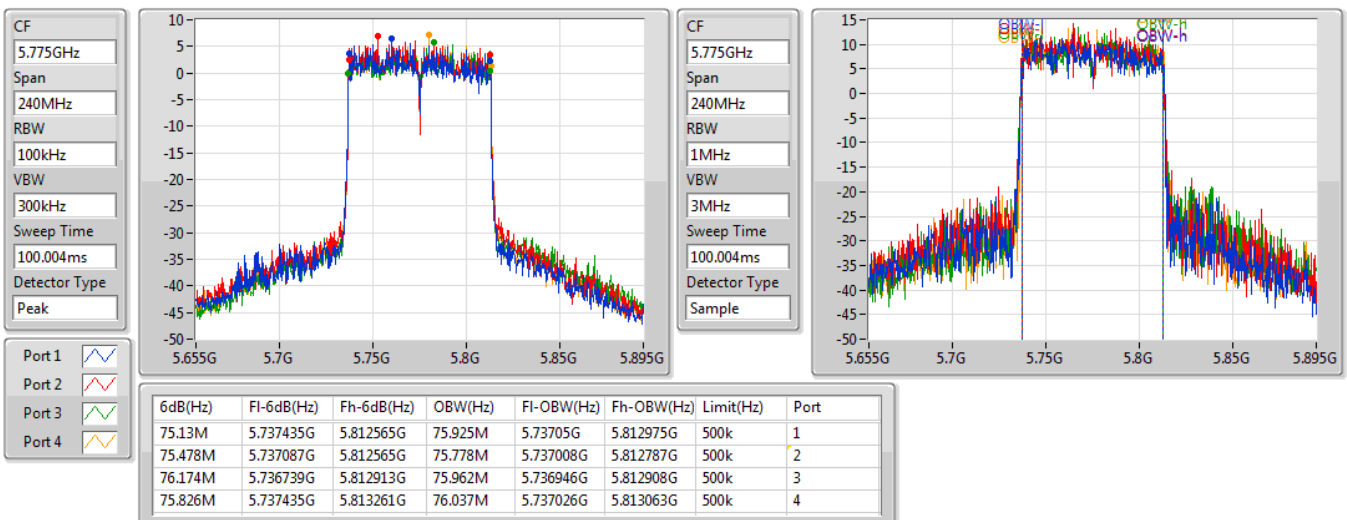


802.11ac VHT80-BF_Nss3,(MCS0)_4TX
EBW
5210MHz

04/09/2019

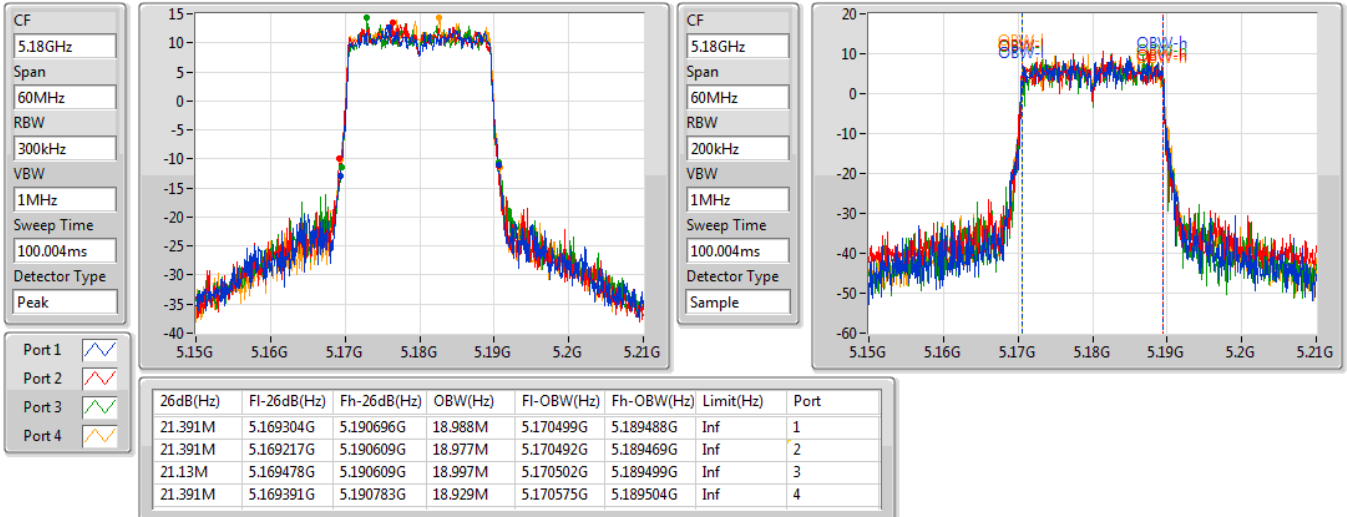

802.11ac VHT80-BF_Nss3,(MCS0)_4TX
EBW
5775MHz

04/09/2019

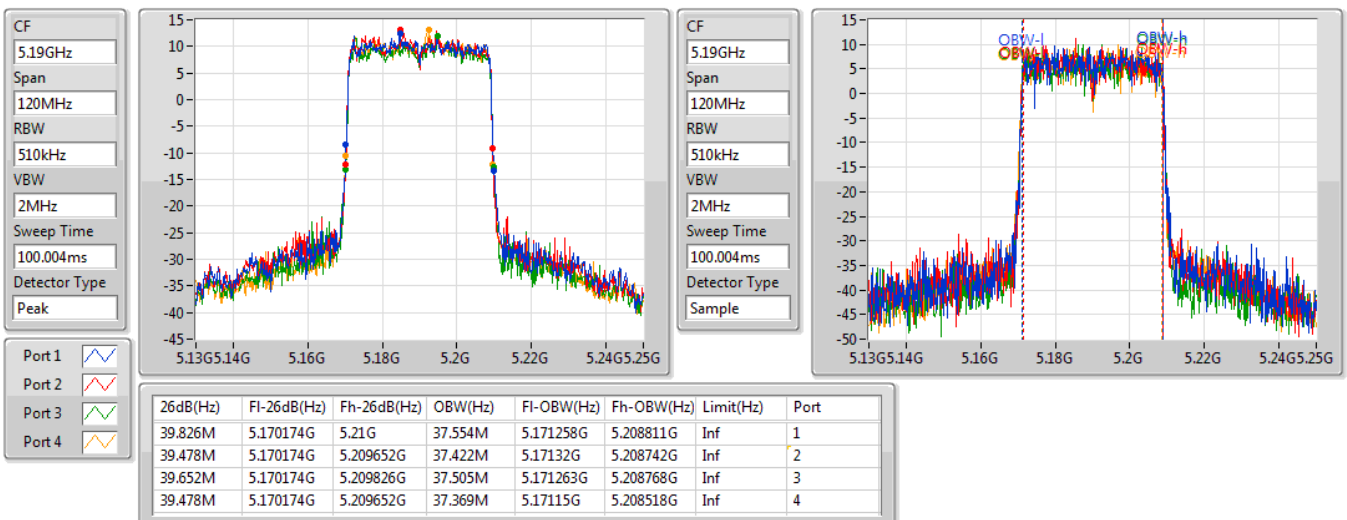


802.11ax HEW20-BF_Nss3,(MCS0)_4TX
EBW
5180MHz

04/09/2019

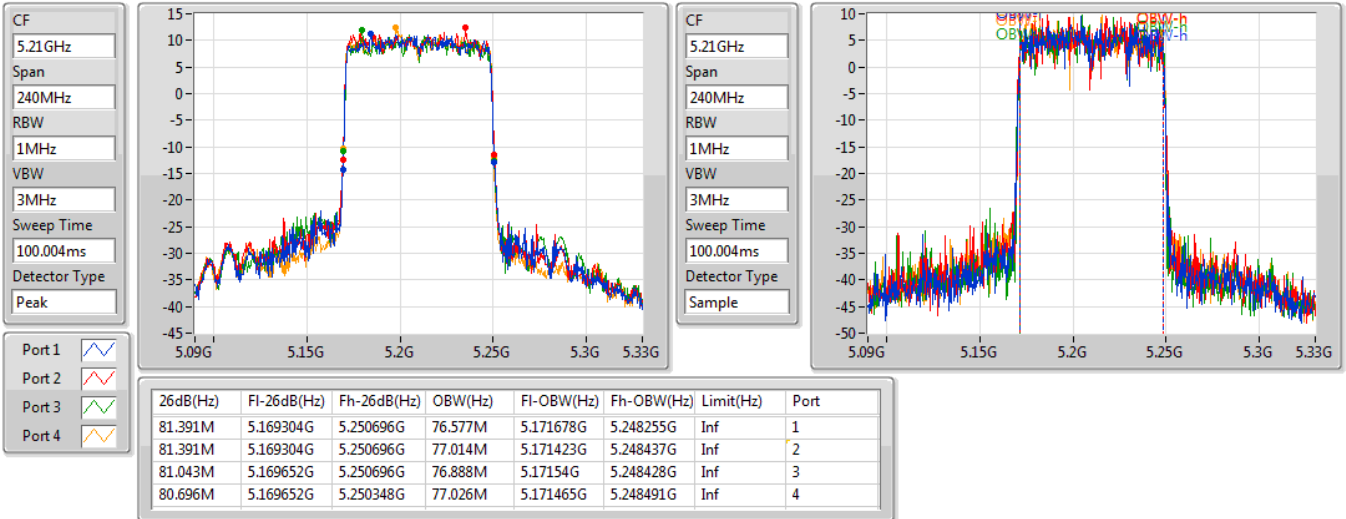

802.11ax HEW40-BF_Nss3,(MCS0)_4TX
EBW
5190MHz

04/09/2019

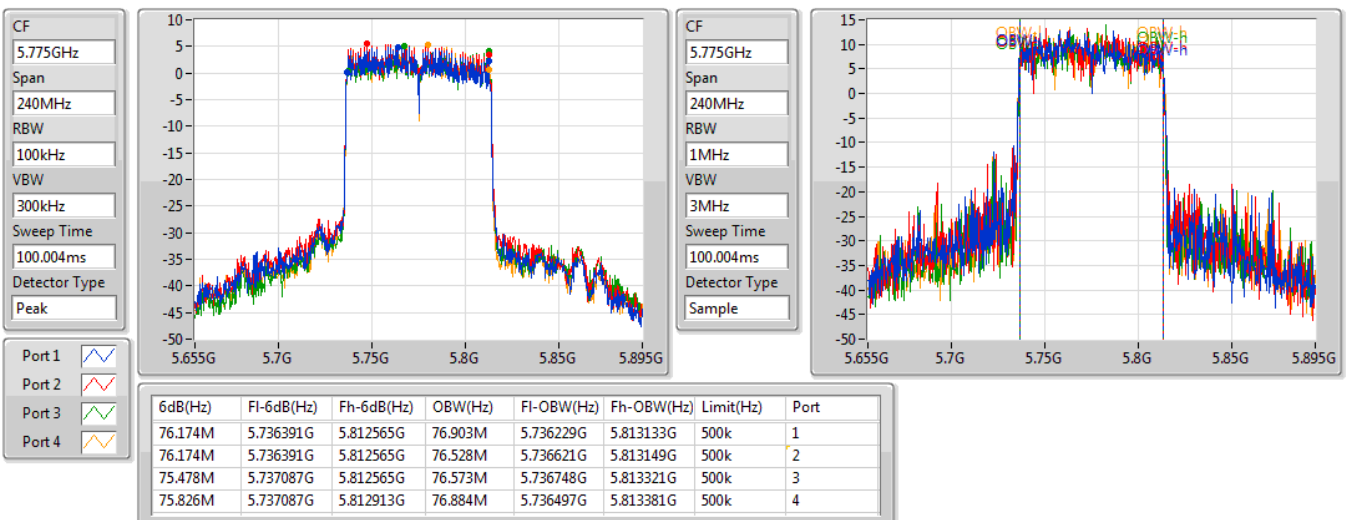


802.11ax HEW80-BF_Nss3,(MCS0)_4TX
EBW
5210MHz

04/09/2019


802.11ax HEW80-BF_Nss3,(MCS0)_4TX
EBW
5775MHz

04/09/2019





<For non-beamforming mode>

4T1S**Summary**

Mode	Total Power (dBm)	Total Power (W)
5.15-5.25GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	29.68	0.92897
802.11ac VHT20_Nss1,(MCS0)_4TX	29.82	0.95940
802.11ac VHT40_Nss1,(MCS0)_4TX	28.52	0.71121
802.11ac VHT80_Nss1,(MCS0)_4TX	23.56	0.22699
802.11ax HEW20_Nss1,(MCS0)_4TX	29.81	0.95719
802.11ax HEW40_Nss1,(MCS0)_4TX	28.68	0.73790
802.11ax HEW80_Nss1,(MCS0)_4TX	23.28	0.21281
5.725-5.85GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	29.99	0.99770
802.11ac VHT20_Nss1,(MCS0)_4TX	29.98	0.99541
802.11ac VHT40_Nss1,(MCS0)_4TX	29.89	0.97499
802.11ac VHT80_Nss1,(MCS0)_4TX	27.85	0.60954
802.11ax HEW20_Nss1,(MCS0)_4TX	29.93	0.98401
802.11ax HEW40_Nss1,(MCS0)_4TX	29.88	0.97275
802.11ax HEW80_Nss1,(MCS0)_4TX	26.64	0.46132



Average Power Result / Non-beamforming mode

Appendix C.1

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	4.60	19.64	19.69	19.57	19.79	25.69	30.00
5200MHz	Pass	4.60	23.02	23.80	23.55	24.04	29.64	30.00
5240MHz	Pass	4.60	23.30	23.91	23.44	23.94	29.68	30.00
5745MHz	Pass	6.00	23.94	24.06	23.71	23.57	29.84	30.00
5785MHz	Pass	6.00	23.67	23.97	23.85	23.97	29.89	30.00
5825MHz	Pass	6.00	24.00	23.82	23.84	24.22	29.99	30.00
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	4.60	19.79	19.88	19.76	20.13	25.91	30.00
5200MHz	Pass	4.60	23.32	23.98	23.65	24.04	29.78	30.00
5240MHz	Pass	4.60	23.25	24.01	23.70	24.17	29.82	30.00
5745MHz	Pass	6.00	24.26	23.51	23.84	23.63	29.84	30.00
5785MHz	Pass	6.00	23.84	23.91	23.68	23.91	29.86	30.00
5825MHz	Pass	6.00	23.94	23.81	23.92	24.15	29.98	30.00
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5190MHz	Pass	4.60	17.94	18.06	17.34	17.61	23.77	30.00
5230MHz	Pass	4.60	22.48	22.82	22.29	22.37	28.52	30.00
5755MHz	Pass	6.00	24.00	23.77	23.43	23.91	29.80	30.00
5795MHz	Pass	6.00	23.74	23.87	23.61	24.22	29.89	30.00
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	4.60	17.37	17.97	17.27	17.50	23.56	30.00
5775MHz	Pass	6.00	21.65	22.08	21.54	22.01	27.85	30.00
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	4.60	19.37	19.88	19.62	20.06	25.76	30.00
5200MHz	Pass	4.60	23.42	23.97	23.81	23.95	29.81	30.00
5240MHz	Pass	4.60	23.40	23.97	23.48	24.12	29.77	30.00
5745MHz	Pass	6.00	24.09	24.01	23.73	23.64	29.89	30.00
5785MHz	Pass	6.00	23.61	23.73	23.72	23.94	29.77	30.00
5825MHz	Pass	6.00	23.97	23.79	24.01	23.86	29.93	30.00
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5190MHz	Pass	4.60	18.05	17.94	17.52	17.66	23.82	30.00
5230MHz	Pass	4.60	22.66	23.13	22.37	22.43	28.68	30.00
5755MHz	Pass	6.00	24.10	23.65	23.55	24.09	29.88	30.00
5795MHz	Pass	6.00	23.85	23.80	23.57	24.21	29.88	30.00
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	4.60	17.29	17.48	17.09	17.16	23.28	30.00
5775MHz	Pass	6.00	20.51	20.89	20.10	20.91	26.64	30.00

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

**4T2S
Summary**

Mode	Total Power (dBm)	Total Power (W)
5.15-5.25GHz	-	-
802.11ac VHT20_Nss2,(MCS0)_4TX	25.89	0.38815
802.11ac VHT40_Nss2,(MCS0)_4TX	23.86	0.24322
802.11ac VHT80_Nss2,(MCS0)_4TX	21.53	0.14223
802.11ax HEW20_Nss2,(MCS0)_4TX	25.42	0.34834
802.11ax HEW40_Nss2,(MCS0)_4TX	23.28	0.21281
802.11ax HEW80_Nss2,(MCS0)_4TX	21.99	0.15812
5.725-5.85GHz	-	-
802.11ac VHT80_Nss2,(MCS0)_4TX	27.61	0.57677
802.11ax HEW80_Nss2,(MCS0)_4TX	27.03	0.50466

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11ac VHT20_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	4.60	19.95	20.03	19.49	19.99	25.89	30.00
802.11ac VHT40_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5190MHz	Pass	4.60	18.03	18.09	17.45	17.77	23.86	30.00
802.11ac VHT80_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	4.60	15.51	15.69	15.28	15.56	21.53	30.00
5775MHz	Pass	6.00	21.34	21.61	21.63	21.75	27.61	30.00
802.11ax HEW20_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	4.60	19.26	19.51	19.21	19.59	25.42	30.00
802.11ax HEW40_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5190MHz	Pass	4.60	17.48	17.50	16.78	17.23	23.28	30.00
802.11ax HEW80_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	4.60	15.94	16.14	15.77	16.02	21.99	30.00
5775MHz	Pass	6.00	20.78	21.09	21.03	21.11	27.03	30.00

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

**4T3S
Summary**

Mode	Total Power (dBm)	Total Power (W)
5.15-5.25GHz	-	-
802.11ac VHT20_Nss3,(MCS0)_4TX	25.87	0.38637
802.11ac VHT40_Nss3,(MCS0)_4TX	24.26	0.26669
802.11ac VHT80_Nss3,(MCS0)_4TX	22.52	0.17865
802.11ax HEW20_Nss3,(MCS0)_4TX	24.89	0.30832
802.11ax HEW40_Nss3,(MCS0)_4TX	23.66	0.23227
802.11ax HEW80_Nss3,(MCS0)_4TX	22.58	0.18113
5.725-5.85GHz	-	-
802.11ac VHT80_Nss3,(MCS0)_4TX	27.57	0.57148
802.11ax HEW80_Nss3,(MCS0)_4TX	27.18	0.52240

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11ac VHT20_Nss3,(MCS0)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	4.60	19.43	20.23	19.86	19.84	25.87	30.00
802.11ac VHT40_Nss3,(MCS0)_4TX	-	-	-	-	-	-	-	-
5190MHz	Pass	4.60	18.31	18.63	17.84	18.12	24.26	30.00
802.11ac VHT80_Nss3,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	4.60	16.47	16.81	16.42	16.27	22.52	30.00
5775MHz	Pass	6.00	21.17	21.77	21.63	21.61	27.57	30.00
802.11ax HEW20_Nss3,(MCS0)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	4.60	18.55	19.04	18.82	19.06	24.89	30.00
802.11ax HEW40_Nss3,(MCS0)_4TX	-	-	-	-	-	-	-	-
5190MHz	Pass	4.60	17.77	17.99	17.28	17.48	23.66	30.00
802.11ax HEW80_Nss3,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	4.60	16.69	16.80	16.38	16.37	22.58	30.00
5775MHz	Pass	6.00	20.94	21.28	21.07	21.33	27.18	30.00

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

<For beamforming mode>

4T1S

Summary

Mode	Total Power (dBm)	Total Power (W)
5.15-5.25GHz	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	29.82	0.95940
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	28.52	0.71121
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	23.21	0.20941
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	29.77	0.94842
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	28.91	0.77804
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	23.72	0.23550
5.725-5.85GHz	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	29.86	0.96828
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	29.89	0.97499
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	27.49	0.56105
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	29.93	0.98401
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	29.88	0.97275
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	26.98	0.49888

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	6.09	19.79	19.88	19.76	20.13	25.91	29.91
5200MHz	Pass	6.09	23.44	23.96	23.63	24.01	29.79	29.91
5240MHz	Pass	6.09	23.25	24.01	23.7	24.17	29.82	29.91
5745MHz	Pass	6.03	24.26	23.51	23.84	23.63	29.84	29.97
5785MHz	Pass	6.03	23.84	23.91	23.68	23.91	29.86	29.97
5825MHz	Pass	6.03	23.79	23.53	23.63	23.93	29.74	29.97
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5190MHz	Pass	6.09	17.64	17.51	16.72	17.38	23.35	29.91
5230MHz	Pass	6.09	22.48	22.82	22.29	22.37	28.52	29.91
5755MHz	Pass	6.03	24	23.77	23.43	23.91	29.80	29.97
5795MHz	Pass	6.03	23.74	23.87	23.61	24.22	29.89	29.97
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	6.09	17.14	17.41	16.99	17.21	23.21	29.91
5775MHz	Pass	6.03	21.45	21.81	20.87	21.67	27.49	29.97
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	6.09	18.72	19.29	18.88	19.26	25.06	29.91
5200MHz	Pass	6.09	22.72	23.15	22.92	23.17	29.01	29.91
5240MHz	Pass	6.09	23.4	23.97	23.48	24.12	29.77	29.91
5745MHz	Pass	6.03	24.09	24.01	23.73	23.64	29.89	29.97
5785MHz	Pass	6.03	23.61	23.73	23.72	23.94	29.77	29.97
5825MHz	Pass	6.03	23.97	23.79	24.01	23.86	29.93	29.97
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5190MHz	Pass	6.09	17.50	17.61	16.58	17.37	23.30	29.91
5230MHz	Pass	6.09	23.06	23.19	22.60	22.69	28.91	29.91
5755MHz	Pass	6.03	24.1	23.65	23.55	24.09	29.88	29.97
5795MHz	Pass	6.03	23.85	23.8	23.57	24.21	29.88	29.97
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	6.09	17.70	18.04	17.46	17.59	23.72	29.91
5775MHz	Pass	6.03	20.90	21.12	20.56	21.23	26.98	29.97

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

**4T2S
Summary**

Mode	Total Power (dBm)	Total Power (W)
5.15-5.25GHz	-	-
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	26.52	0.44875
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	24.53	0.28379
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	24.29	0.26853
802.11ax HEW20-BF_Nss2,(MCS0)_4TX	25.67	0.36898
802.11ax HEW40-BF_Nss2,(MCS0)_4TX	24.49	0.28119
802.11ax HEW80-BF_Nss2,(MCS0)_4TX	24.65	0.29174
5.725-5.85GHz	-	-
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	28.07	0.64121
802.11ax HEW80-BF_Nss2,(MCS0)_4TX	27.31	0.53827

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	6.09	20.34	20.82	20.21	20.61	26.52	29.91
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5190MHz	Pass	6.09	18.73	18.81	18.11	18.36	24.53	29.91
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	6.09	18.30	18.69	17.99	18.05	24.29	29.91
5775MHz	Pass	6.03	21.80	22.12	22.01	22.27	28.07	29.97
802.11ax HEW20-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	6.09	19.51	19.71	19.41	19.94	25.67	29.91
802.11ax HEW40-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5190MHz	Pass	6.09	18.61	18.95	17.99	18.28	24.49	29.91
802.11ax HEW80-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	6.09	18.48	18.91	18.37	18.74	24.65	29.91
5775MHz	Pass	6.03	21.11	21.49	21.27	21.29	27.31	29.97

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

**4T3S
Summary**

Mode	Total Power (dBm)	Total Power (W)
5.15-5.25GHz	-	-
802.11ac VHT20-BF_Nss3,(MCS0)_4TX	26.55	0.45186
802.11ac VHT40-BF_Nss3,(MCS0)_4TX	24.77	0.29992
802.11ac VHT80-BF_Nss3,(MCS0)_4TX	24.93	0.31117
802.11ax HEW20-BF_Nss3,(MCS0)_4TX	26.16	0.41305
802.11ax HEW40-BF_Nss3,(MCS0)_4TX	25.04	0.31915
802.11ax HEW80-BF_Nss3,(MCS0)_4TX	24.77	0.29992
5.725-5.85GHz	-	-
802.11ac VHT80-BF_Nss3,(MCS0)_4TX	28.11	0.64714
802.11ax HEW80-BF_Nss3,(MCS0)_4TX	28.21	0.66222

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11ac VHT20-BF_Nss3,(MCS0)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	6.09	19.98	20.93	20.36	20.78	26.55	29.91
802.11ac VHT40-BF_Nss3,(MCS0)_4TX	-	-	-	-	-	-	-	-
5190MHz	Pass	6.09	18.81	19.18	18.39	18.58	24.77	29.91
802.11ac VHT80-BF_Nss3,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	6.09	18.79	19.31	18.52	18.97	24.93	29.91
5775MHz	Pass	6.03	21.68	22.46	22.02	22.17	28.11	29.97
802.11ax HEW20-BF_Nss3,(MCS0)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	6.09	19.91	20.31	19.93	20.40	26.16	29.91
802.11ax HEW40-BF_Nss3,(MCS0)_4TX	-	-	-	-	-	-	-	-
5190MHz	Pass	6.09	19.23	19.27	18.49	19.06	25.04	29.91
802.11ax HEW80-BF_Nss3,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	6.09	18.68	19.01	18.54	18.74	24.77	29.91
5775MHz	Pass	6.03	21.92	22.30	22.14	22.38	28.21	29.97

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

<For non-beamforming mode>

4T1S

Summary

Mode	PD (dBm/RBW)
5.15-5.25GHz	-
802.11a_Nss1,(6Mbps)_4TX	16.89
802.11ac VHT20_Nss1,(MCS0)_4TX	16.54
802.11ac VHT40_Nss1,(MCS0)_4TX	12.53
802.11ac VHT80_Nss1,(MCS0)_4TX	4.44
802.11ax HEW20_Nss1,(MCS0)_4TX	16.27
802.11ax HEW40_Nss1,(MCS0)_4TX	12.23
802.11ax HEW80_Nss1,(MCS0)_4TX	4.09
5.725-5.85GHz	-
802.11a_Nss1,(6Mbps)_4TX	15.51
802.11ac VHT20_Nss1,(MCS0)_4TX	15.11
802.11ac VHT40_Nss1,(MCS0)_4TX	12.39
802.11ac VHT80_Nss1,(MCS0)_4TX	7.67
802.11ax HEW20_Nss1,(MCS0)_4TX	14.98
802.11ax HEW40_Nss1,(MCS0)_4TX	12.16
802.11ax HEW80_Nss1,(MCS0)_4TX	6.42

RBW = 500 kHz for 5.725-5.85GHz band / 1MHz for other band;

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	6.09	6.69	6.81	6.43	6.85	12.58	16.91
5200MHz	Pass	6.09	10.66	11.11	10.98	11.24	16.89	16.91
5240MHz	Pass	6.09	10.51	11.28	10.48	11.05	16.69	16.91
5745MHz	Pass	6.03	9.99	9.68	9.56	9.50	15.38	29.97
5785MHz	Pass	6.03	9.51	9.37	9.42	9.54	15.36	29.97
5825MHz	Pass	6.03	9.81	9.35	9.44	9.71	15.51	29.97
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	6.09	6.53	7.06	6.62	7.06	12.63	16.91
5200MHz	Pass	6.09	10.15	10.78	10.43	10.77	16.41	16.91
5240MHz	Pass	6.09	10.32	10.94	10.49	10.90	16.54	16.91
5745MHz	Pass	6.03	9.57	9.27	9.01	8.81	14.99	29.97
5785MHz	Pass	6.03	9.17	9.07	9.19	8.87	14.94	29.97
5825MHz	Pass	6.03	9.31	9.09	9.31	9.46	15.11	29.97
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5190MHz	Pass	6.09	1.93	2.08	1.41	1.60	7.68	16.91
5230MHz	Pass	6.09	6.63	7.04	6.35	6.49	12.53	16.91
5755MHz	Pass	6.03	7.03	6.63	6.28	6.60	12.39	29.97
5795MHz	Pass	6.03	6.58	6.43	6.24	6.66	12.29	29.97
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	6.09	-1.51	-1.08	-1.32	-1.33	4.44	16.91
5775MHz	Pass	6.03	1.75	2.01	1.67	1.89	7.67	29.97
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	6.09	6.00	6.42	6.20	6.65	12.24	16.91
5200MHz	Pass	6.09	10.15	10.43	10.41	10.59	16.27	16.91
5240MHz	Pass	6.09	9.80	10.39	10.10	10.37	16.06	16.91
5745MHz	Pass	6.03	9.41	9.20	8.98	8.83	14.83	29.97
5785MHz	Pass	6.03	8.97	8.92	8.80	9.07	14.78	29.97
5825MHz	Pass	6.03	9.18	8.91	9.17	9.27	14.98	29.97
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5190MHz	Pass	6.09	1.87	1.84	1.36	1.36	7.45	16.91
5230MHz	Pass	6.09	6.35	6.83	6.06	6.25	12.23	16.91
5755MHz	Pass	6.03	6.50	6.38	6.16	6.60	12.16	29.97
5795MHz	Pass	6.03	6.27	6.14	6.27	6.46	12.06	29.97
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	6.09	-1.70	-1.54	-1.94	-1.82	4.09	16.91
5775MHz	Pass	6.03	0.53	0.64	0.03	0.68	6.42	29.97

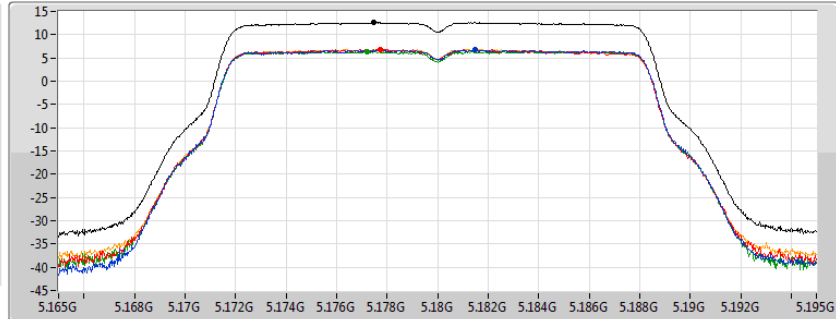
DG = Directional Gain; **RBW** = 500 kHz for 5.725-5.85GHz band / 1MHz for other band;

PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port X power density;

802.11a_Nss1,(6Mbps)_4TX

5180MHz

CF
5.18GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



PSD

16/10/2019

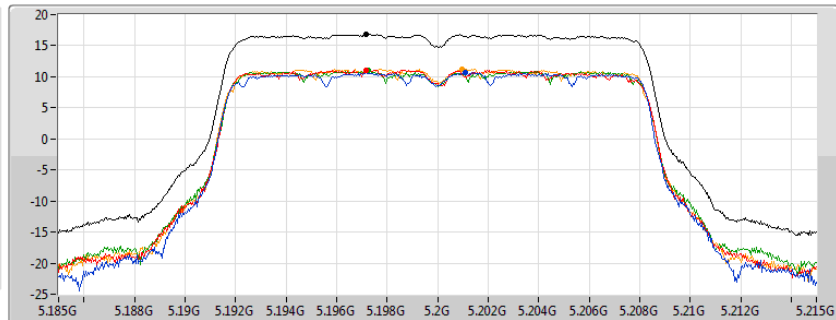
Sum
Port 1
Port 2
Port 3
Port 4

Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
12.58	12.58	6.69	6.81	6.43	6.85

802.11a_Nss1,(6Mbps)_4TX

5200MHz

CF
5.2GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20.01ms
Detector Type
RMS



PSD

03/09/2019

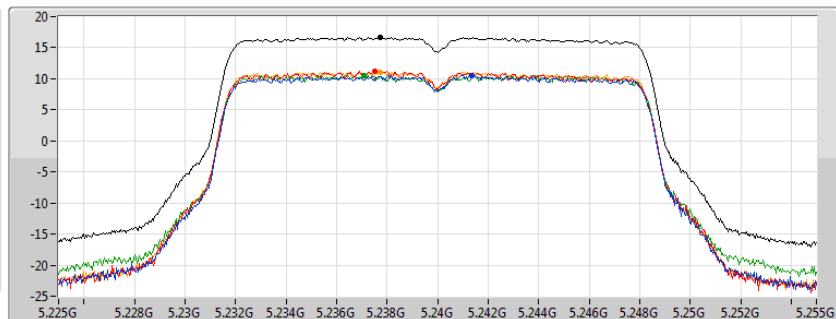
Sum
Port 1
Port 2
Port 3
Port 4

Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
16.89	16.89	10.66	11.11	10.98	11.24

802.11a_Nss1,(6Mbps)_4TX

5240MHz

CF
5.24GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20.01ms
Detector Type
RMS



PSD

03/09/2019

Sum
Port 1
Port 2
Port 3
Port 4

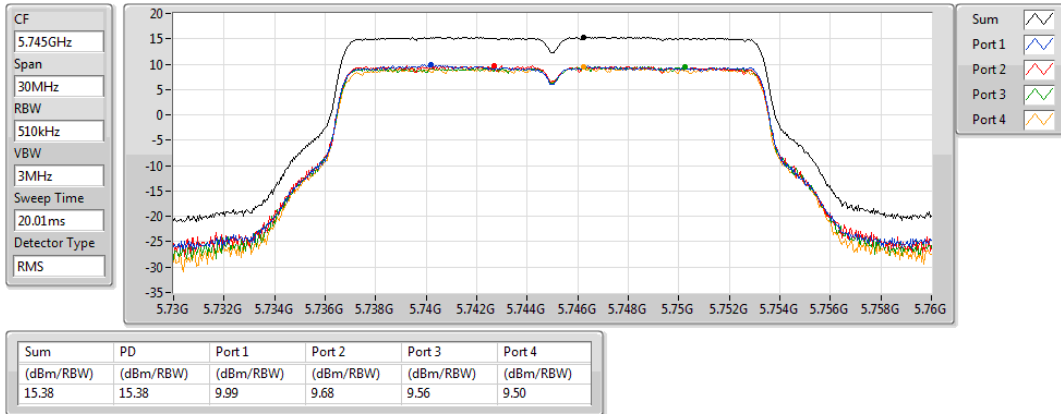
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
16.69	16.69	10.51	11.28	10.48	11.05

802.11a_Nss1,(6Mbps)_4TX

5745MHz

PSD

03/09/2019

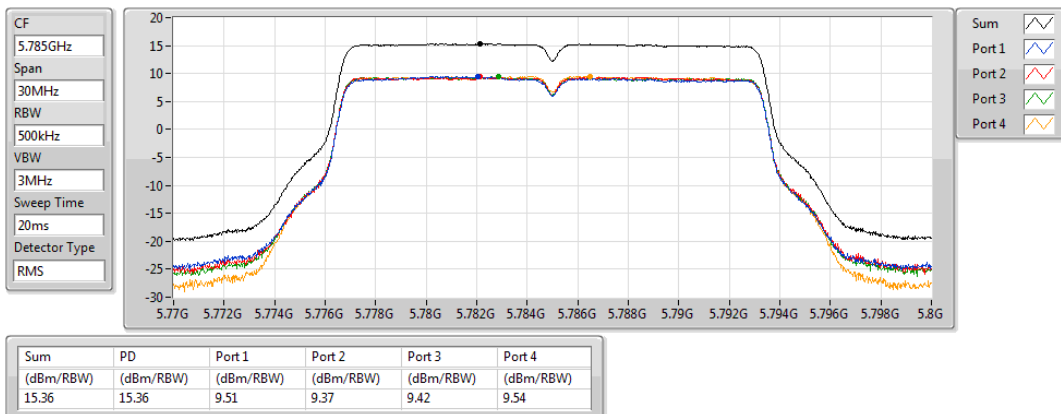


802.11a_Nss1,(6Mbps)_4TX

5785MHz

PSD

16/10/2019

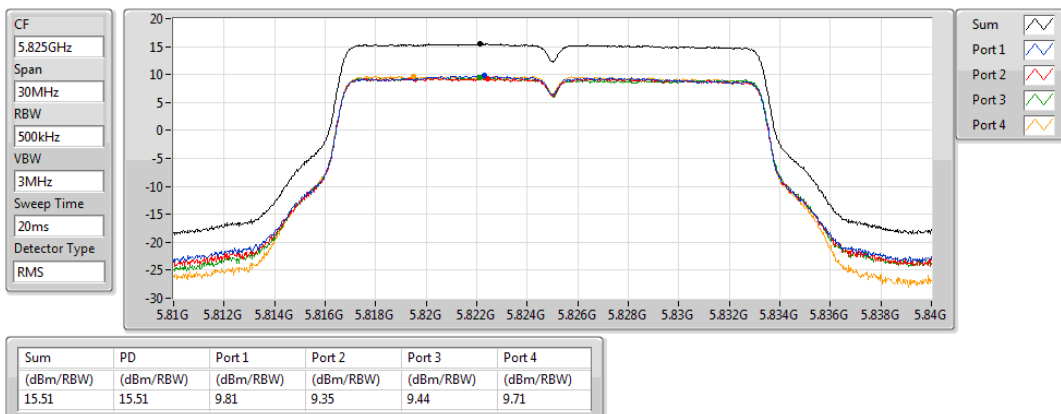


802.11a_Nss1,(6Mbps)_4TX

5825MHz

PSD

16/10/2019



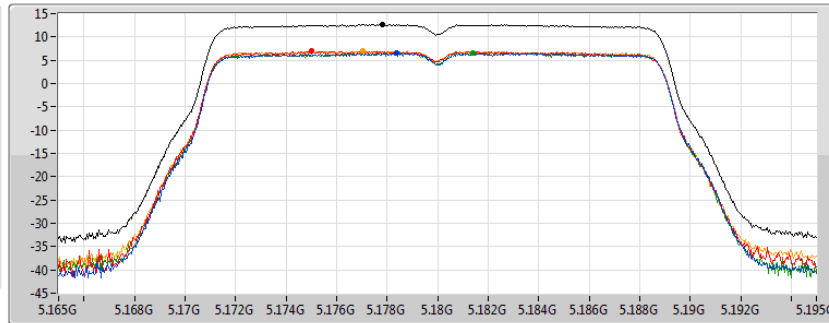
802.11ac VHT20_Nss1,(MCS0)_4TX

PSD

5180MHz

03/09/2019

CF
5.18GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20.01ms
Detector Type
RMS



Sum
Port 1
Port 2
Port 3
Port 4

Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
12.63	12.63	6.53	7.06	6.62	7.06

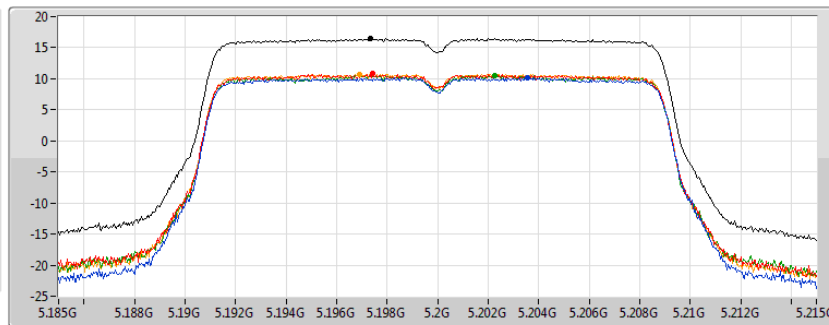
802.11ac VHT20_Nss1,(MCS0)_4TX

PSD

5200MHz

03/09/2019

CF
5.2GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20.01ms
Detector Type
RMS



Sum
Port 1
Port 2
Port 3
Port 4

Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
16.41	16.41	10.15	10.78	10.43	10.77

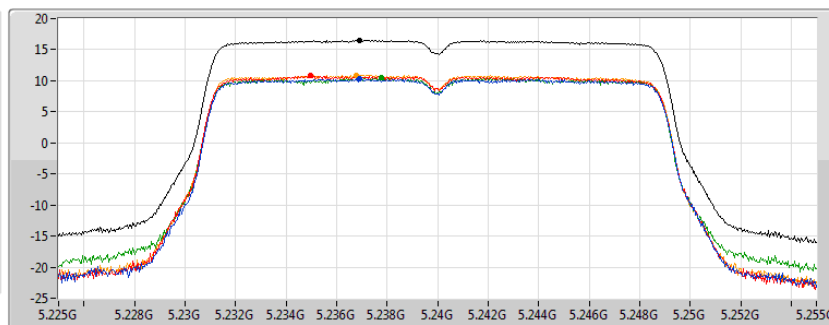
802.11ac VHT20_Nss1,(MCS0)_4TX

PSD

5240MHz

03/09/2019

CF
5.24GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20.01ms
Detector Type
RMS



Sum
Port 1
Port 2
Port 3
Port 4

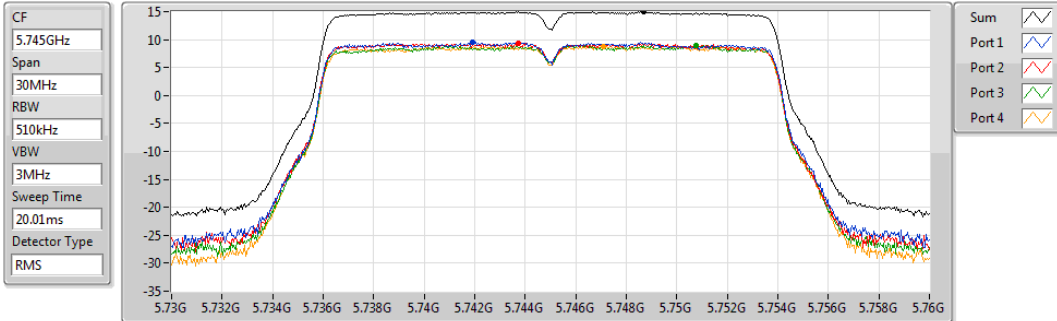
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
16.54	16.54	10.32	10.94	10.49	10.90

802.11ac VHT20_Nss1,(MCS0)_4TX

5745MHz

PSD

03/09/2019



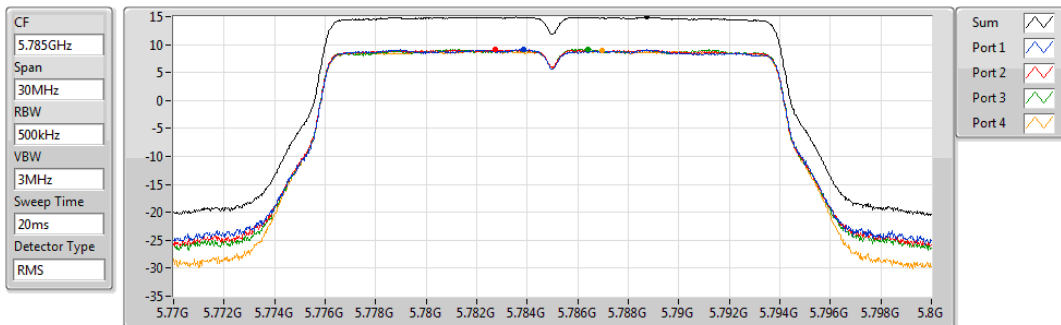
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
14.99	14.99	9.57	9.27	9.01	8.81

802.11ac VHT20_Nss1,(MCS0)_4TX

5785MHz

PSD

16/10/2019



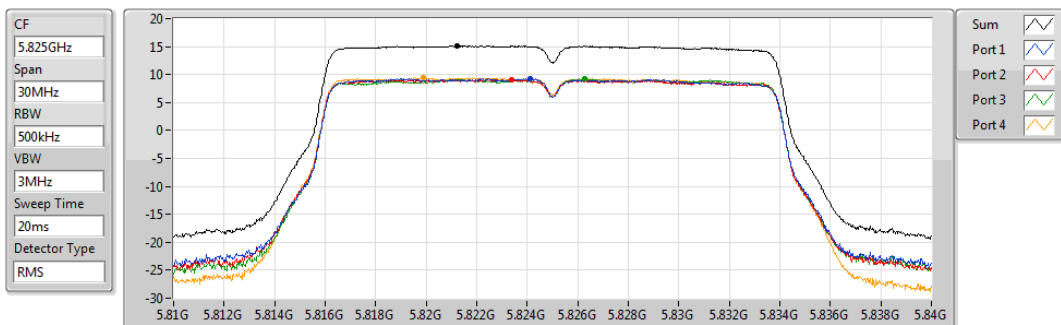
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
14.94	14.94	9.17	9.07	9.19	8.87

802.11ac VHT20_Nss1,(MCS0)_4TX

5825MHz

PSD

16/10/2019



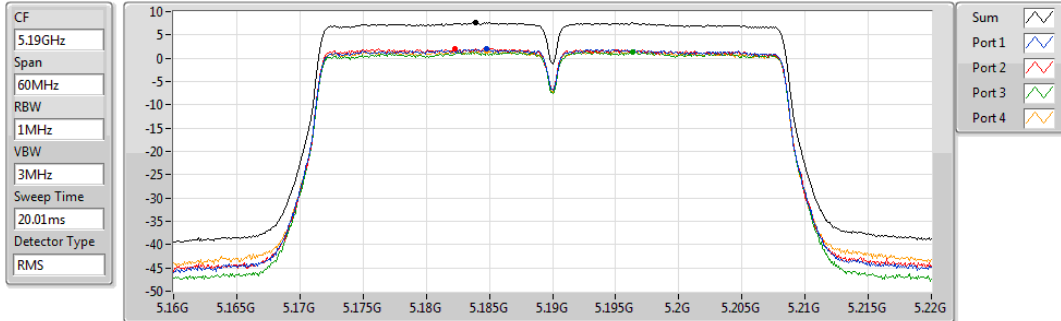
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
15.11	15.11	9.31	9.09	9.31	9.46

802.11ac VHT40_Nss1,(MCS0)_4TX

PSD

5190MHz

03/09/2019



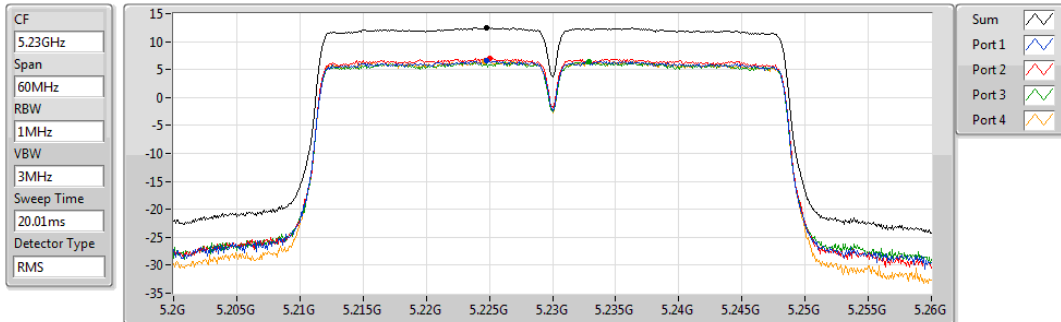
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
7.68	7.68	1.93	2.08	1.41	1.60

802.11ac VHT40_Nss1,(MCS0)_4TX

PSD

5230MHz

03/09/2019



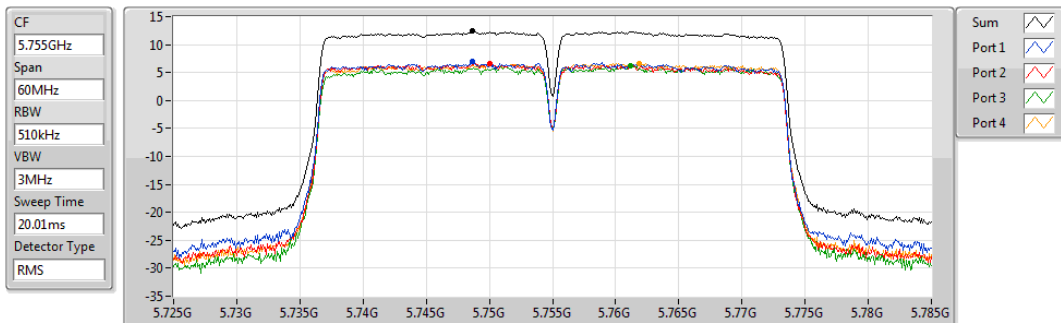
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
12.53	12.53	6.63	7.04	6.35	6.49

802.11ac VHT40_Nss1,(MCS0)_4TX

PSD

5755MHz

03/09/2019



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
12.39	12.39	7.03	6.63	6.28	6.60

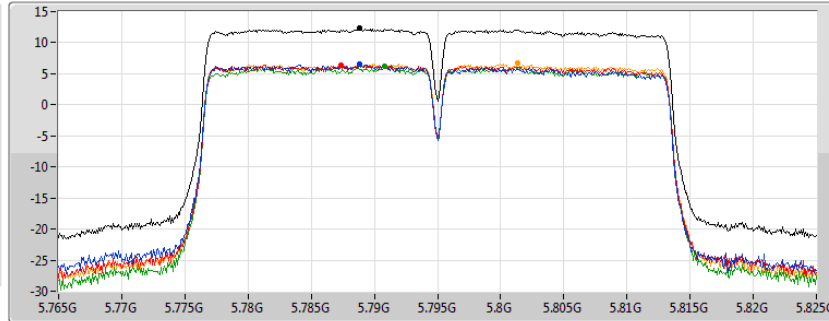
802.11ac VHT40_Nss1,(MCS0)_4TX

PSD

5795MHz

03/09/2019

CF
5.795GHz
Span
60MHz
RBW
510kHz
VBW
3MHz
Sweep Time
20.01ms
Detector Type
RMS



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
12.29	12.29	6.58	6.43	6.24	6.66

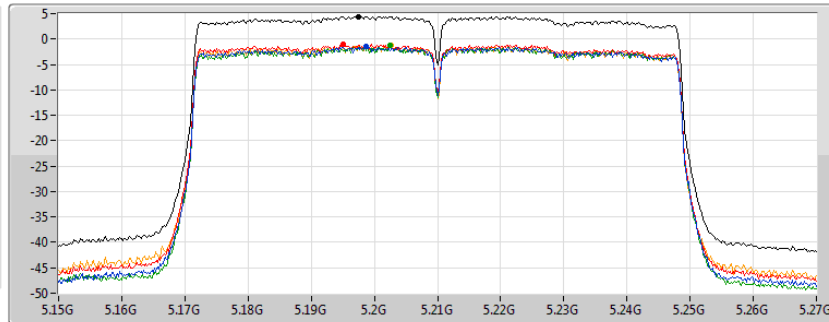
802.11ac VHT80_Nss1,(MCS0)_4TX

PSD

5210MHz

03/09/2019

CF
5.21GHz
Span
120MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20.01ms
Detector Type
RMS



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.44	4.44	-1.51	-1.08	-1.32	-1.33

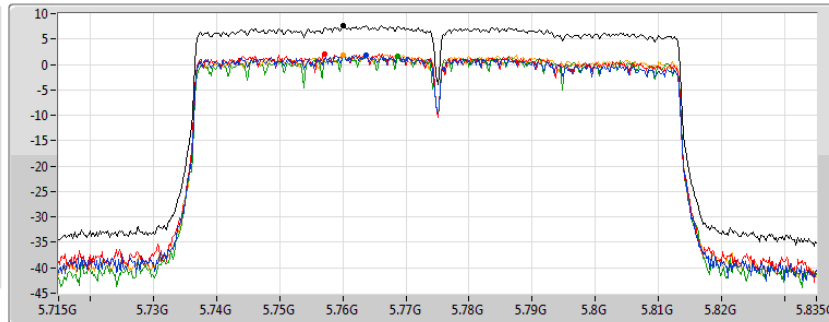
802.11ac VHT80_Nss1,(MCS0)_4TX

PSD

5775MHz

03/09/2019

CF
5.775GHz
Span
120MHz
RBW
510kHz
VBW
3MHz
Sweep Time
20.01ms
Detector Type
RMS



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.67	7.67	1.75	2.01	1.67	1.89

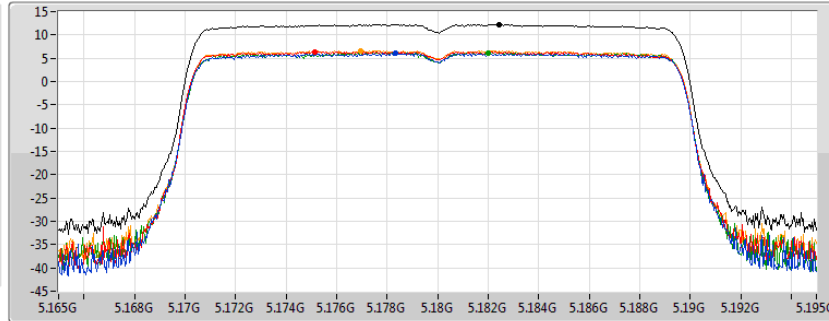
802.11ax HEW20_Nss1,(MCS0)_4TX

PSD

5180MHz

03/09/2019

CF
5.18GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20.01ms
Detector Type
RMS



Sum
Port 1
Port 2
Port 3
Port 4

Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
12.24	12.24	6.00	6.42	6.20	6.65

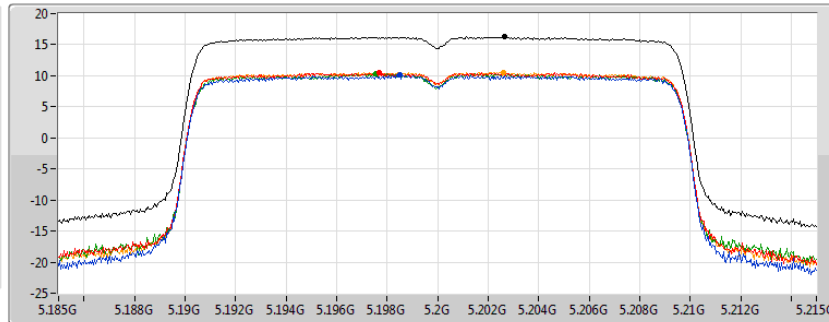
802.11ax HEW20_Nss1,(MCS0)_4TX

PSD

5200MHz

03/09/2019

CF
5.2GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20.01ms
Detector Type
RMS



Sum
Port 1
Port 2
Port 3
Port 4

Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
16.27	16.27	10.15	10.43	10.41	10.59

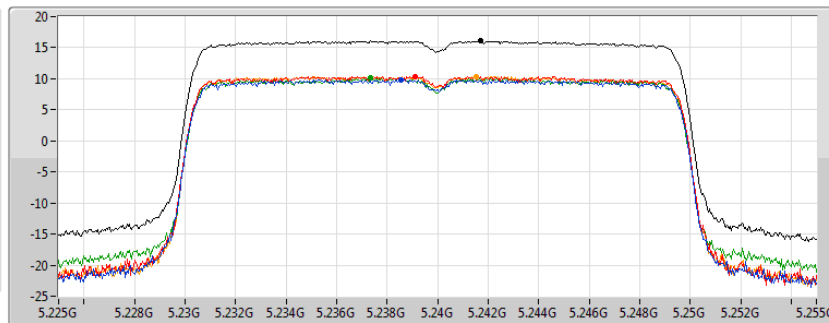
802.11ax HEW20_Nss1,(MCS0)_4TX

PSD

5240MHz

03/09/2019

CF
5.24GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20.01ms
Detector Type
RMS



Sum
Port 1
Port 2
Port 3
Port 4

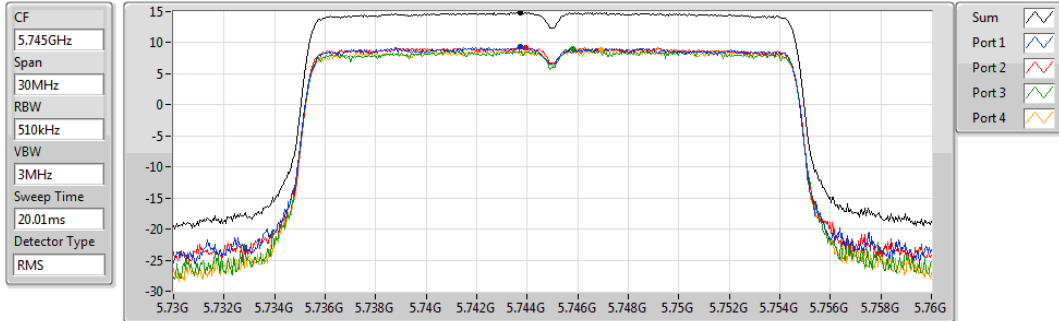
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
16.06	16.06	9.80	10.39	10.10	10.37

802.11ax HEW20_Nss1,(MCS0)_4TX

PSD

5745MHz

03/09/2019



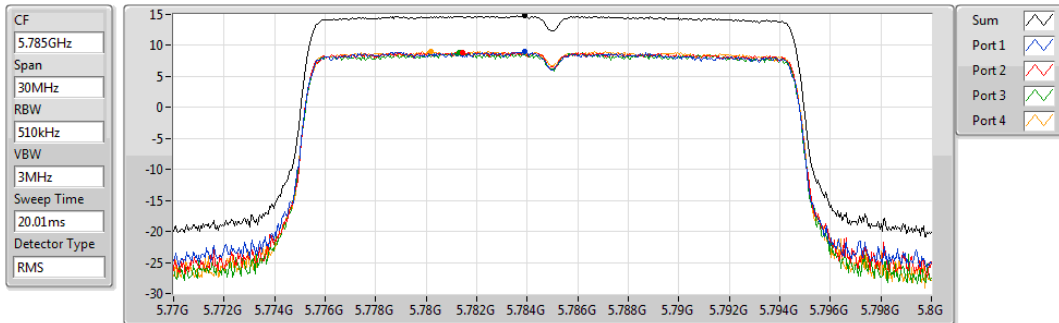
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
14.83	14.83	9.41	9.20	8.98	8.83

802.11ax HEW20_Nss1,(MCS0)_4TX

PSD

5785MHz

03/09/2019



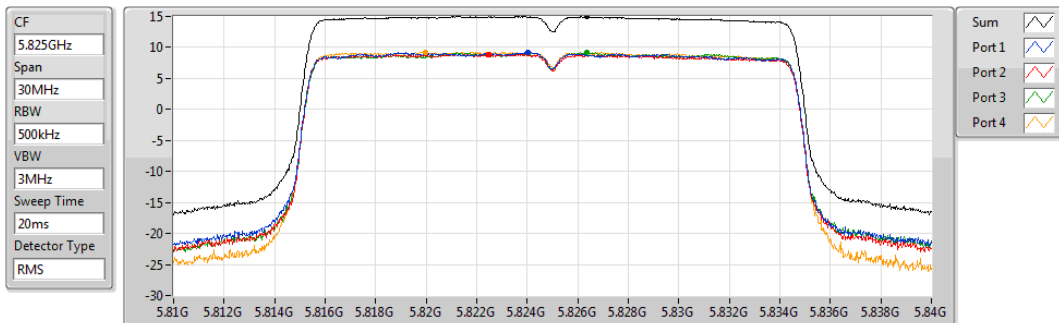
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
14.78	14.78	8.97	8.92	8.80	9.07

802.11ax HEW20_Nss1,(MCS0)_4TX

PSD

5825MHz

16/10/2019



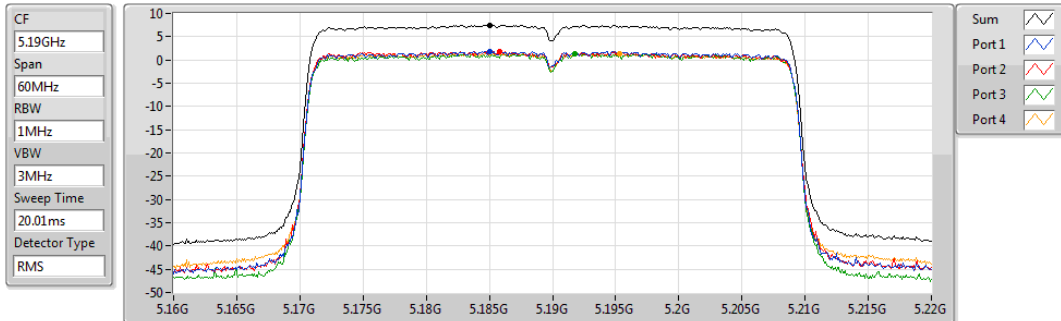
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
14.98	14.98	9.18	8.91	9.17	9.27

802.11ax HEW40_Nss1,(MCS0)_4TX

PSD

5190MHz

03/09/2019



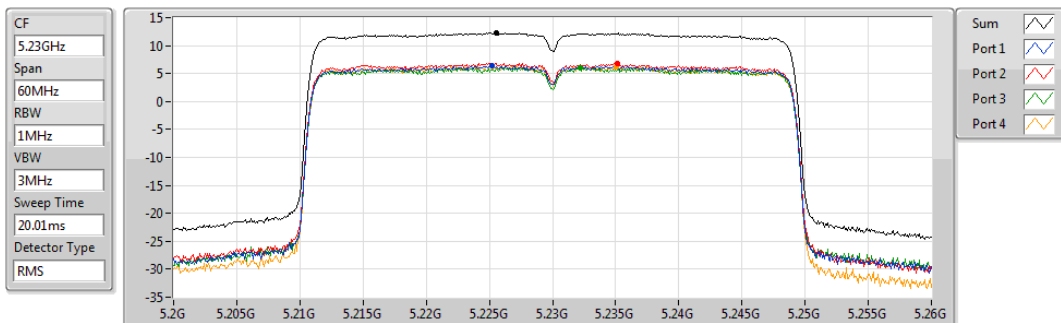
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.45	7.45	1.87	1.84	1.36	1.36

802.11ax HEW40_Nss1,(MCS0)_4TX

PSD

5230MHz

03/09/2019



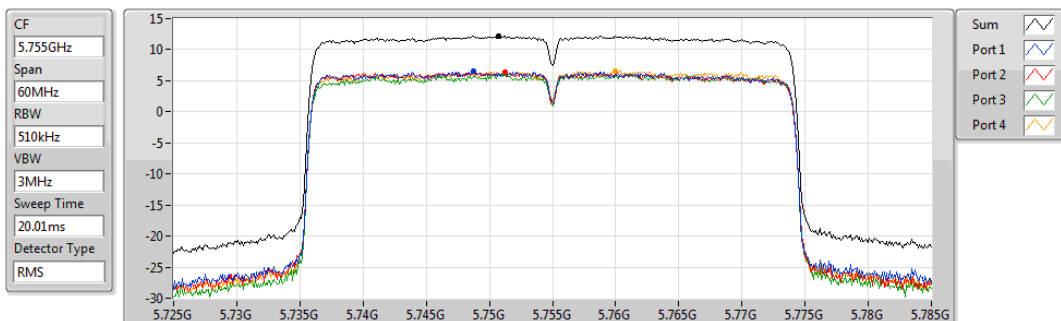
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
12.23	12.23	6.35	6.83	6.06	6.25

802.11ax HEW40_Nss1,(MCS0)_4TX

PSD

5755MHz

03/09/2019



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
12.16	12.16	6.50	6.38	6.16	6.60

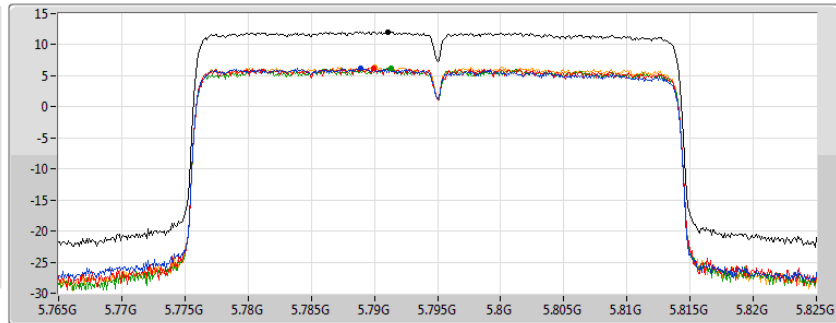
802.11ax HEW40_Nss1,(MCS0)_4TX

PSD

5795MHz

03/09/2019

CF
5.795GHz
Span
60MHz
RBW
510kHz
VBW
3MHz
Sweep Time
20.01ms
Detector Type
RMS



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
12.06	12.06	6.27	6.14	6.27	6.46

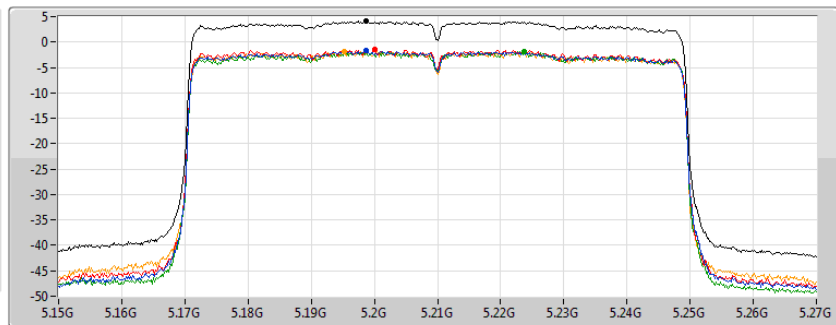
802.11ax HEW80_Nss1,(MCS0)_4TX

PSD

5210MHz

03/09/2019

CF
5.21GHz
Span
120MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20.01ms
Detector Type
RMS



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
4.09	4.09	-1.70	-1.54	-1.94	-1.82

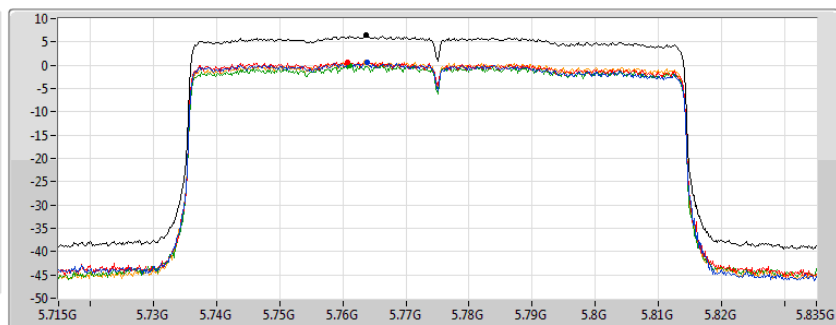
802.11ax HEW80_Nss1,(MCS0)_4TX

PSD

5775MHz

03/09/2019

CF
5.775GHz
Span
120MHz
RBW
510kHz
VBW
3MHz
Sweep Time
20.01ms
Detector Type
RMS



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
6.42	6.42	0.53	0.64	0.03	0.68

**4T2S
Summary**

Mode	PD (dBm/RBW)
5.15-5.25GHz	-
802.11ac VHT20_Nss2,(MCS0)_4TX	12.86
802.11ac VHT40_Nss2,(MCS0)_4TX	7.86
802.11ac VHT80_Nss2,(MCS0)_4TX	2.92
802.11ax HEW20_Nss2,(MCS0)_4TX	12.66
802.11ax HEW40_Nss2,(MCS0)_4TX	7.88
802.11ax HEW80_Nss2,(MCS0)_4TX	4.48
5.725-5.85GHz	-
802.11ac VHT80_Nss2,(MCS0)_4TX	8.32
802.11ax HEW80_Nss2,(MCS0)_4TX	8.58

RBW = 500 kHz for 5.725-5.85GHz band / 1MHz for other band;

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11ac VHT20_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	6.09	6.83	7.06	6.77	7.15	12.86	16.91
802.11ac VHT40_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5190MHz	Pass	6.09	2.17	2.25	1.65	2.21	7.86	16.91
802.11ac VHT80_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	6.09	-2.80	-2.52	-3.05	-2.73	2.92	16.91
5775MHz	Pass	6.03	2.67	3.03	2.24	3.35	8.32	29.97
802.11ax HEW20_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	6.09	6.64	7.10	6.77	7.09	12.66	16.91
802.11ax HEW40_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5190MHz	Pass	6.09	2.02	2.18	2.25	1.75	7.88	16.91
802.11ax HEW80_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	6.09	-1.49	-1.04	-0.36	-0.79	4.48	16.91
5775MHz	Pass	6.03	4.22	2.94	3.50	4.11	8.58	29.97

DG = Directional Gain; **RBW** = 500 kHz for 5.725-5.85GHz band / 1MHz for other band;

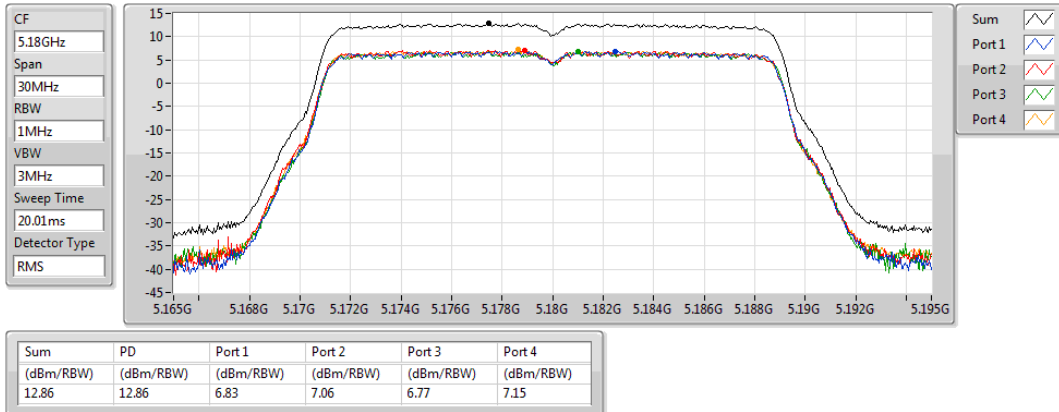
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port X power density;

802.11ac VHT20_Nss2,(MCS0)_4TX

PSD

5180MHz

04/09/2019

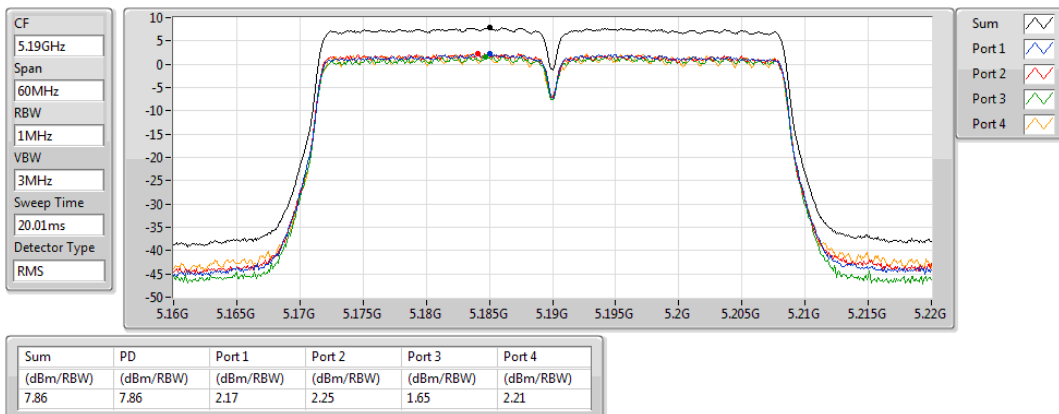


802.11ac VHT40_Nss2,(MCS0)_4TX

PSD

5190MHz

04/09/2019

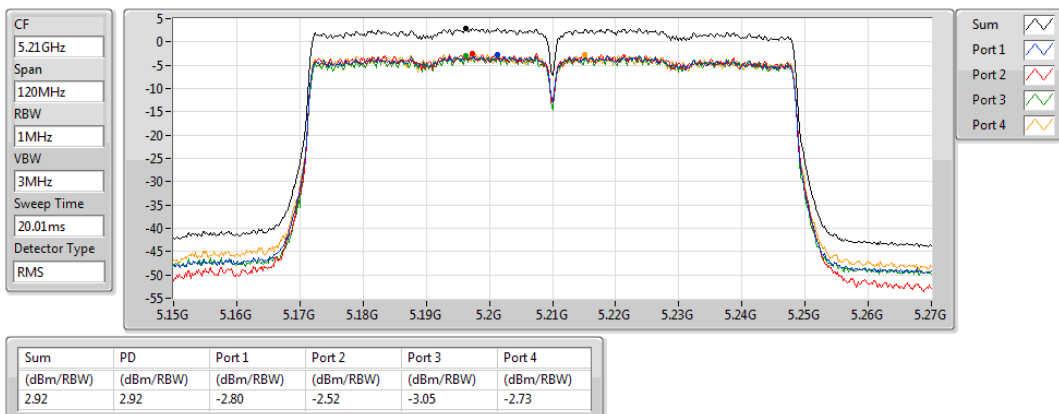


802.11ac VHT80_Nss2,(MCS0)_4TX

PSD

5210MHz

04/09/2019

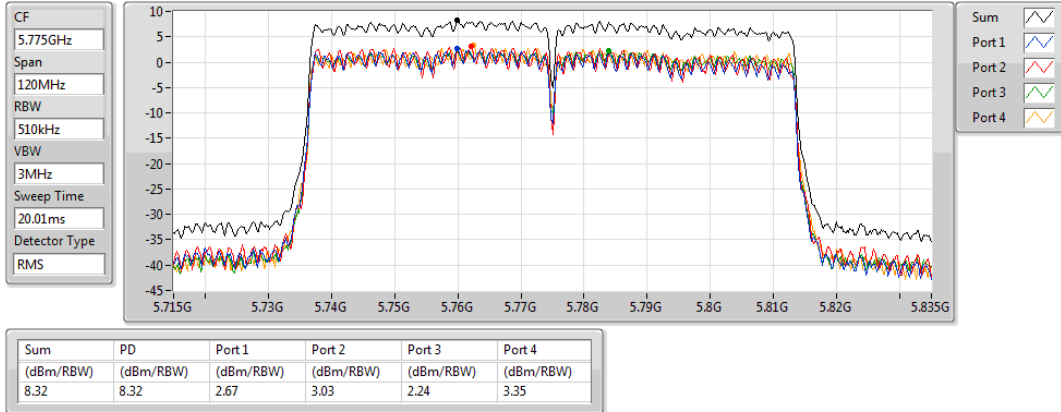


802.11ac VHT80_Nss2,(MCS0)_4TX

PSD

5775MHz

04/09/2019

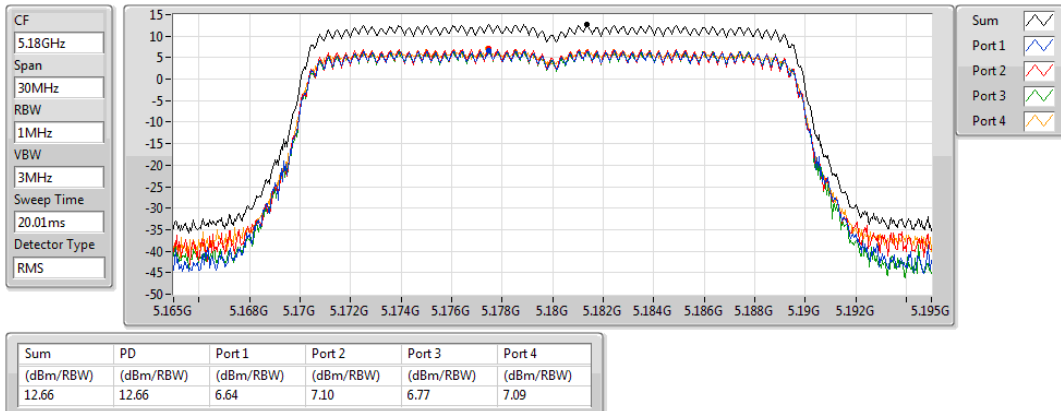


802.11ax HEW20_Nss2,(MCS0)_4TX

PSD

5180MHz

04/09/2019

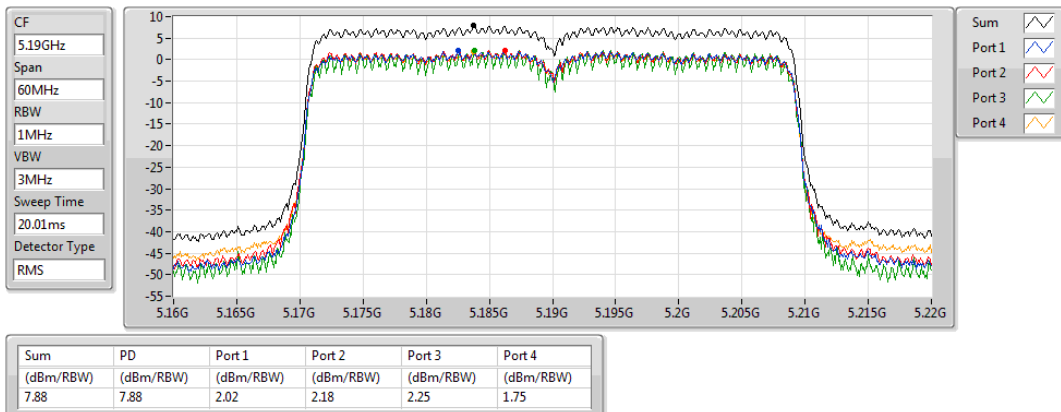


802.11ax HEW40_Nss2,(MCS0)_4TX

PSD

5190MHz

04/09/2019

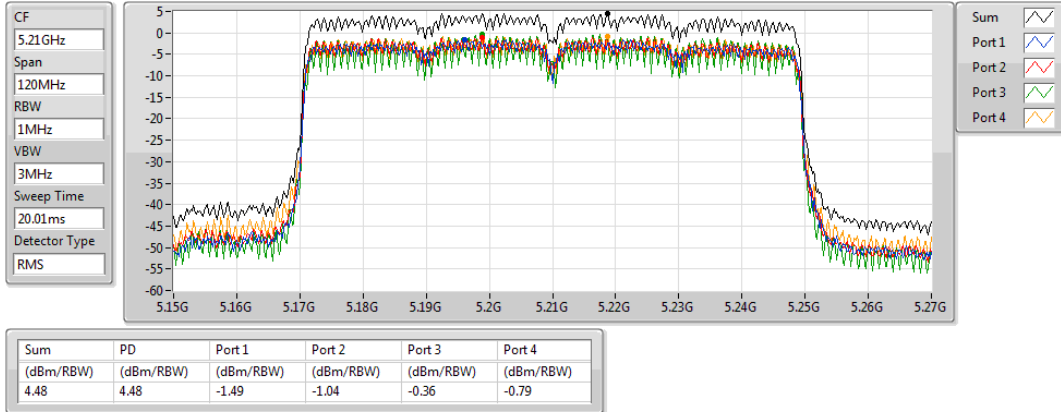


802.11ax HEW80_Nss2,(MCS0)_4TX

PSD

5210MHz

04/09/2019

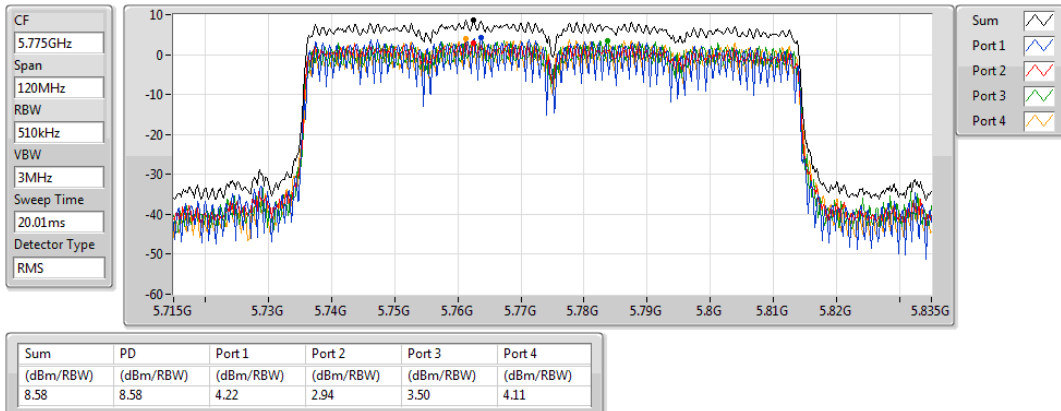


802.11ax HEW80_Nss2,(MCS0)_4TX

PSD

5775MHz

04/09/2019





**4T3S
Summary**

Mode	PD (dBm/RBW)
5.15-5.25GHz	-
802.11ac VHT20_Nss3,(MCS0)_4TX	12.92
802.11ac VHT40_Nss3,(MCS0)_4TX	8.67
802.11ac VHT80_Nss3,(MCS0)_4TX	4.23
802.11ax HEW20_Nss3,(MCS0)_4TX	12.24
802.11ax HEW40_Nss3,(MCS0)_4TX	8.78
802.11ax HEW80_Nss3,(MCS0)_4TX	4.87
5.725-5.85GHz	-
802.11ac VHT80_Nss3,(MCS0)_4TX	8.06
802.11ax HEW80_Nss3,(MCS0)_4TX	8.01

RBW = 500 kHz for 5.725-5.85GHz band / 1MHz for other band;

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11ac VHT20_Nss3,(MCS0)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	6.09	6.94	8.44	7.89	7.55	12.92	16.91
802.11ac VHT40_Nss3,(MCS0)_4TX	-	-	-	-	-	-	-	-
5190MHz	Pass	6.09	3.09	3.94	3.03	2.80	8.67	16.91
802.11ac VHT80_Nss3,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	6.09	-1.12	-0.73	-0.63	-1.37	4.23	16.91
5775MHz	Pass	6.03	2.33	2.62	2.96	2.65	8.06	29.97
802.11ax HEW20_Nss3,(MCS0)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	6.09	6.39	7.12	6.68	6.97	12.24	16.91
802.11ax HEW40_Nss3,(MCS0)_4TX	-	-	-	-	-	-	-	-
5190MHz	Pass	6.09	3.09	3.62	3.26	3.30	8.78	16.91
802.11ax HEW80_Nss3,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	6.09	-0.82	0.09	-1.43	-0.61	4.87	16.91
5775MHz	Pass	6.03	2.16	3.26	2.42	2.75	8.01	29.97

DG = Directional Gain; **RBW** = 500 kHz for 5.725-5.85GHz band / 1MHz for other band;

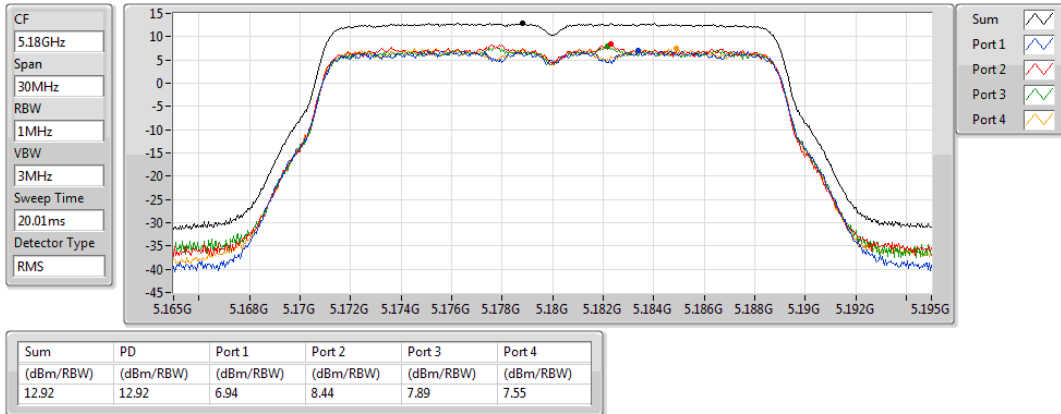
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port X power density;

802.11ac VHT20_Nss3,(MCS0)_4TX

PSD

5180MHz

04/09/2019

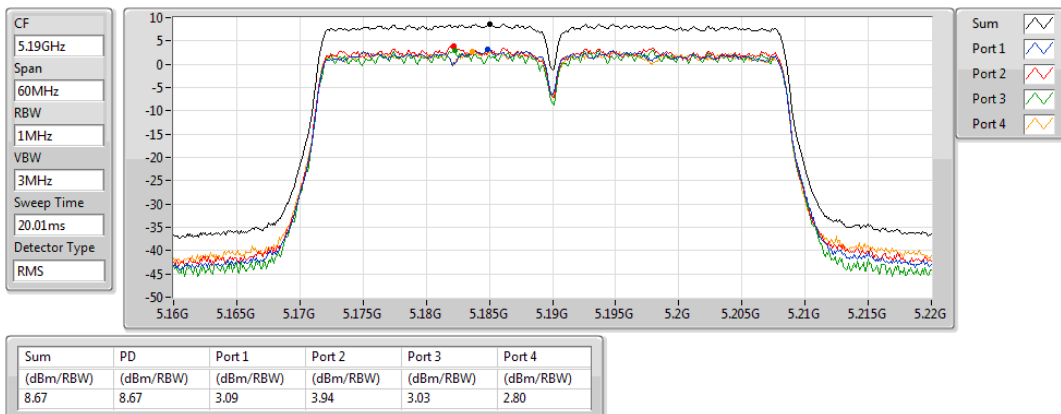


802.11ac VHT40_Nss3,(MCS0)_4TX

PSD

5190MHz

04/09/2019



802.11ac VHT80_Nss3,(MCS0)_4TX

PSD

5210MHz

04/09/2019

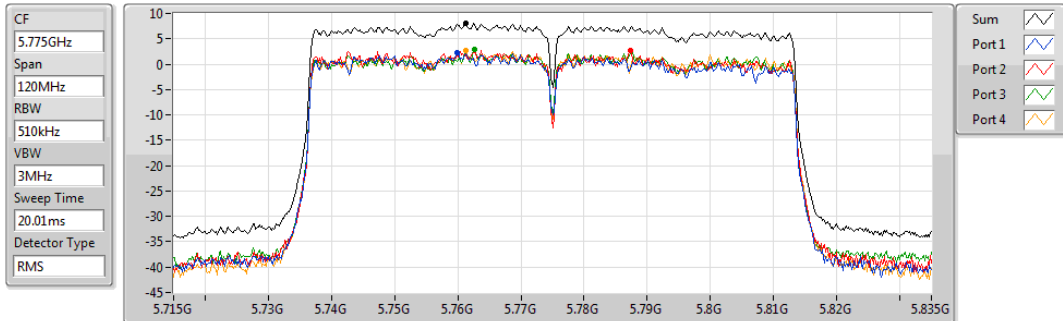


802.11ac VHT80_Nss3,(MCS0)_4TX

PSD

5775MHz

04/09/2019



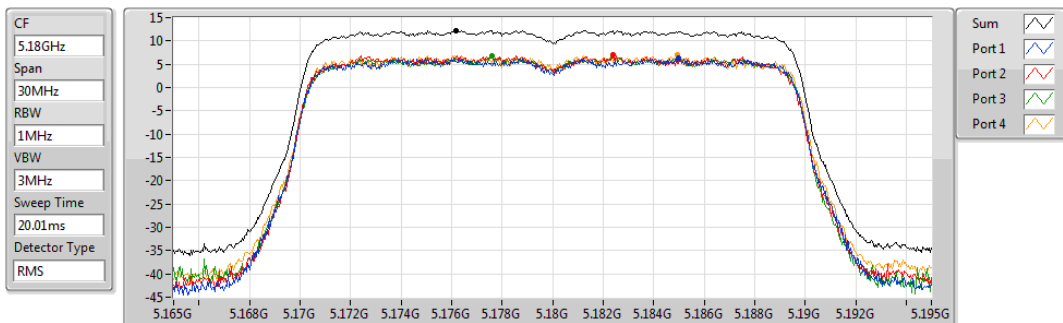
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
8.06	8.06	2.33	2.62	2.96	2.65

802.11ax HEW20_Nss3,(MCS0)_4TX

PSD

5180MHz

04/09/2019



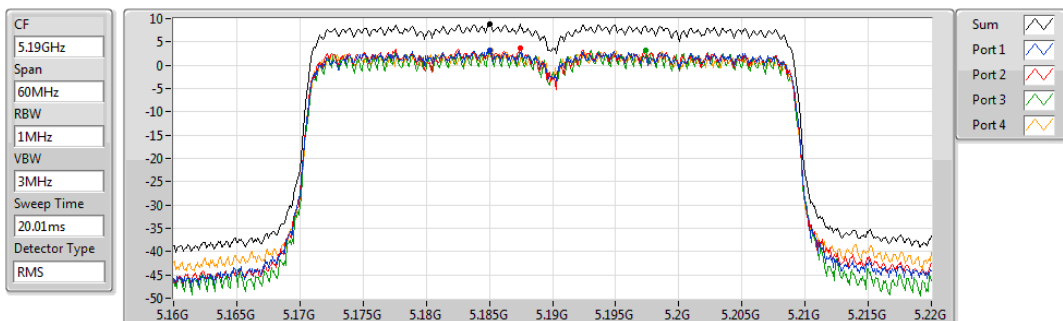
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
12.24	12.24	6.39	7.12	6.68	6.97

802.11ax HEW40_Nss3,(MCS0)_4TX

PSD

5190MHz

04/09/2019



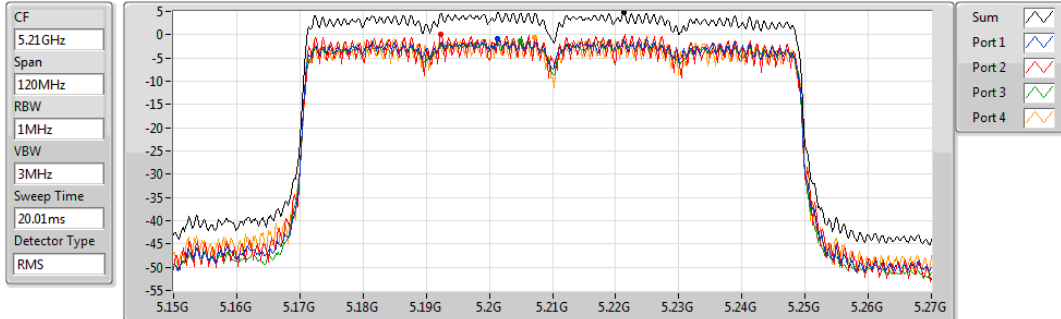
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
8.78	8.78	3.09	3.62	3.26	3.30

802.11ax HEW80_Nss3,(MCS0)_4TX

PSD

5210MHz

04/09/2019



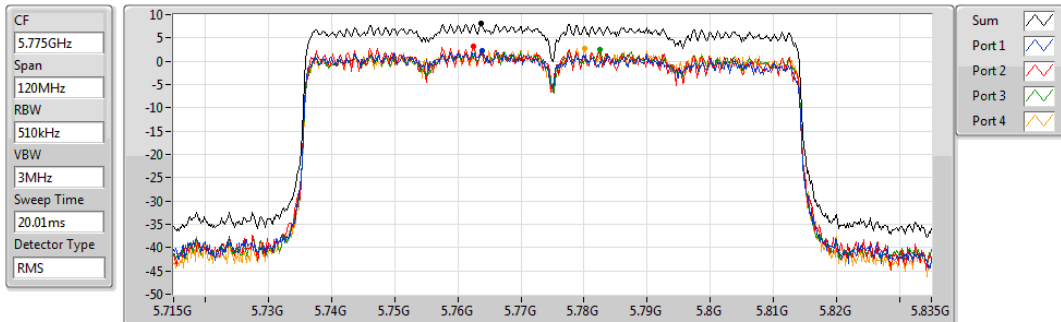
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.87	4.87	-0.82	0.09	-1.43	-0.61

802.11ax HEW80_Nss3,(MCS0)_4TX

PSD

5775MHz

04/09/2019



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
8.01	8.01	2.16	3.26	2.42	2.75

<For non-beamforming mode>

4T1S

Summary

Mode	PD (dBm/RBW)
5.15-5.25GHz	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	16.50
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	12.41
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	4.14
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	15.90
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	11.42
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	4.22
5.725-5.85GHz	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	15.15
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	12.22
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	7.23
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	15.14
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	12.07
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	6.09

RBW = 500 kHz for 5.725-5.85GHz band / 1MHz for other band;



Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	6.09	6.65	7.21	6.56	7.13	12.75	16.91
5200MHz	Pass	6.09	10.45	11.05	10.79	11.19	15.33	16.91
5240MHz	Pass	6.09	10.38	10.84	10.27	11.13	16.50	16.91
5745MHz	Pass	6.03	9.68	9.67	8.91	9.00	15.15	29.97
5785MHz	Pass	6.03	9.18	9.00	9.34	9.13	15.03	29.97
5825MHz	Pass	6.03	9.12	8.89	9.00	9.49	14.99	29.97
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5190MHz	Pass	6.09	1.48	1.59	0.72	1.42	7.19	16.91
5230MHz	Pass	6.09	6.46	7.07	5.75	6.50	12.41	16.91
5755MHz	Pass	6.03	6.76	6.39	6.12	6.60	12.22	29.97
5795MHz	Pass	6.03	6.57	6.21	6.18	6.52	12.16	29.97
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	6.09	-1.68	-1.43	-1.91	-1.76	4.14	16.91
5775MHz	Pass	6.03	1.51	2.00	1.27	1.52	7.23	29.97
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	6.09	5.72	6.06	5.68	6.17	11.75	16.91
5200MHz	Pass	6.09	9.79	10.20	10.06	10.48	15.09	16.91
5240MHz	Pass	6.09	9.74	10.29	9.53	10.43	15.90	16.91
5745MHz	Pass	6.03	9.80	9.42	8.90	9.17	15.14	29.97
5785MHz	Pass	6.03	8.79	8.69	8.73	8.97	14.64	29.97
5825MHz	Pass	6.03	8.99	8.66	8.96	9.48	14.87	29.97
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5190MHz	Pass	6.09	1.07	1.28	0.34	1.03	6.90	16.91
5230MHz	Pass	6.09	7.02	7.26	6.72	6.86	11.42	16.91
5755MHz	Pass	6.03	6.48	6.18	6.02	6.50	12.07	29.97
5795MHz	Pass	6.03	6.33	6.19	6.12	6.52	12.01	29.97
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	6.09	-1.57	-1.28	-2.03	-1.62	4.22	16.91
5775MHz	Pass	6.03	0.43	0.54	-0.15	0.65	6.09	29.97

DG = Directional Gain; **RBW** = 500 kHz for 5.725-5.85GHz band / 1MHz for other band;

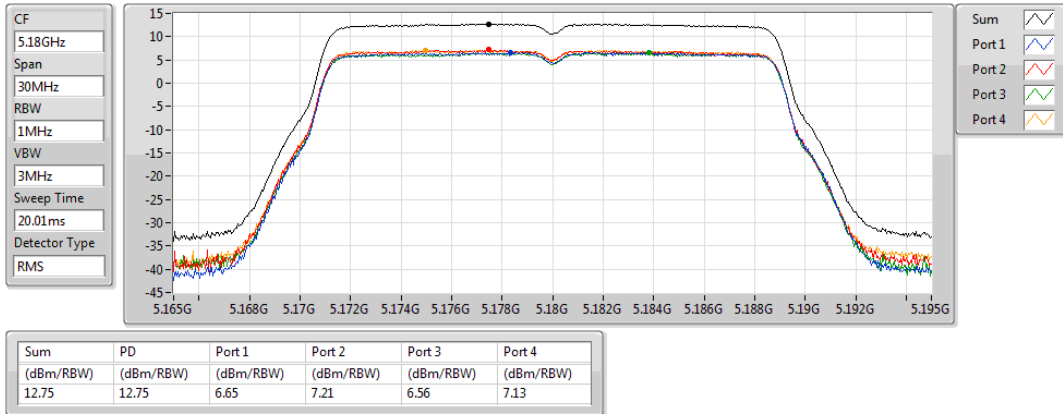
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port X power density;

802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5180MHz

PSD

03/09/2019

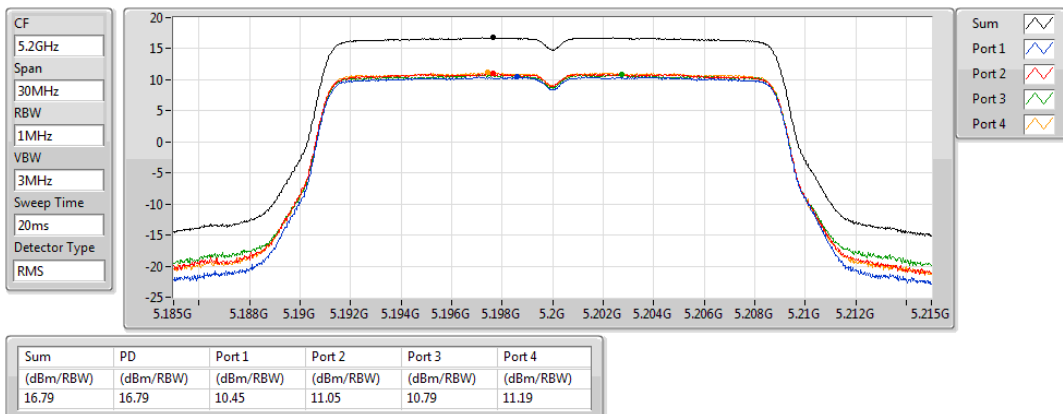


802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5200MHz

PSD

18/10/2019

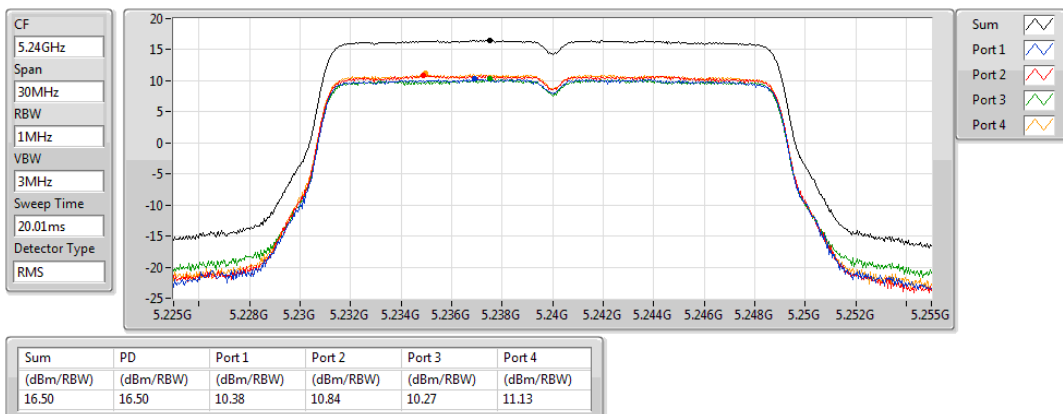


802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5240MHz

PSD

03/09/2019

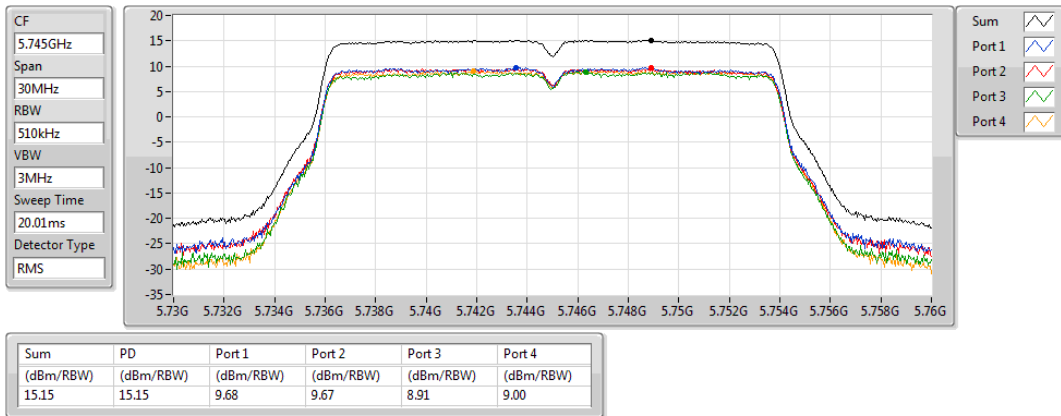


802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5745MHz

PSD

04/09/2019

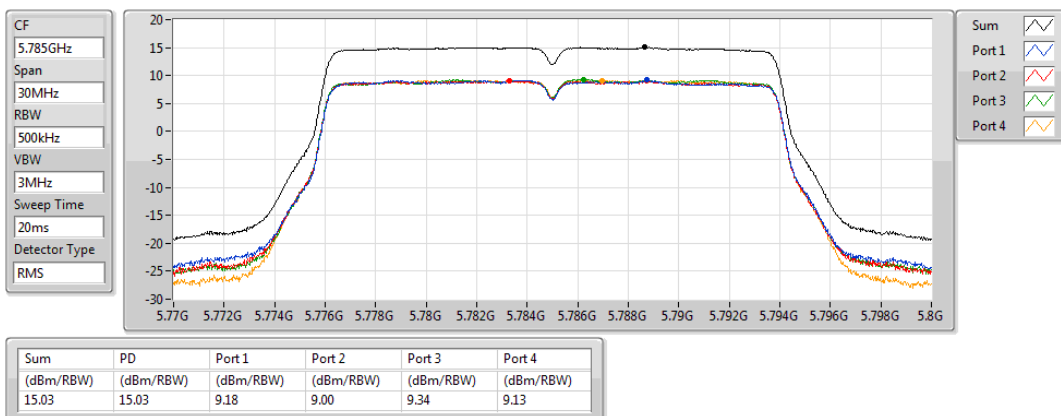


802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5785MHz

PSD

16/10/2019

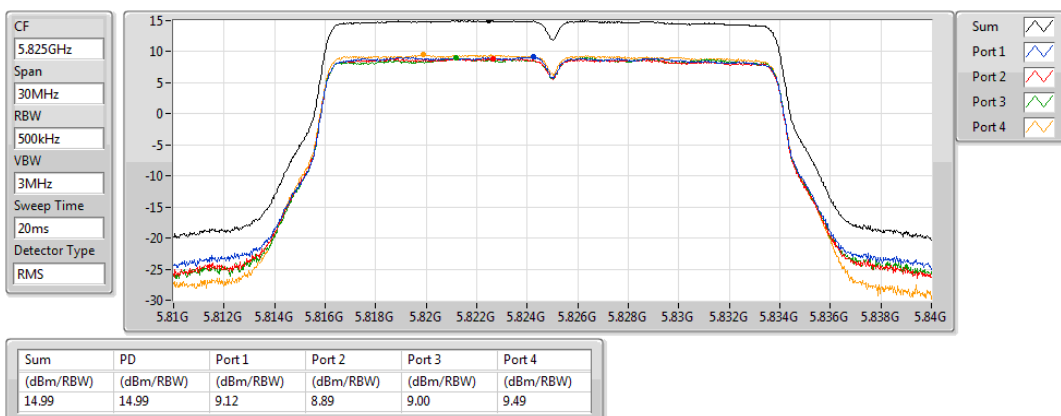


802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5825MHz

PSD

16/10/2019

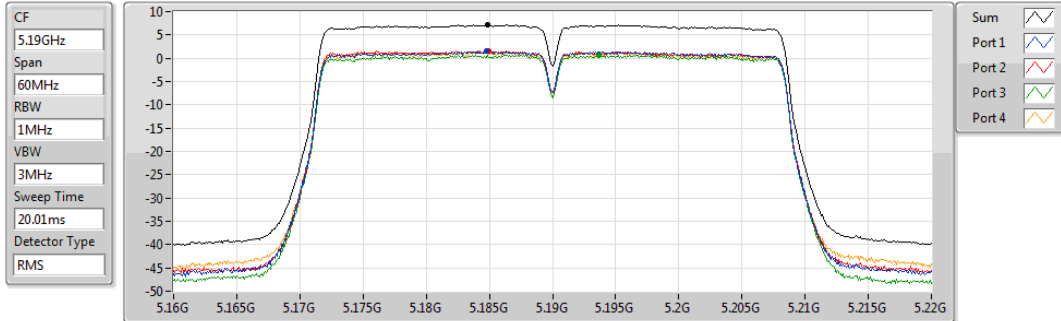


802.11ac VHT40-BF_Nss1,(MCS0)_4TX

PSD

5190MHz

03/09/2019



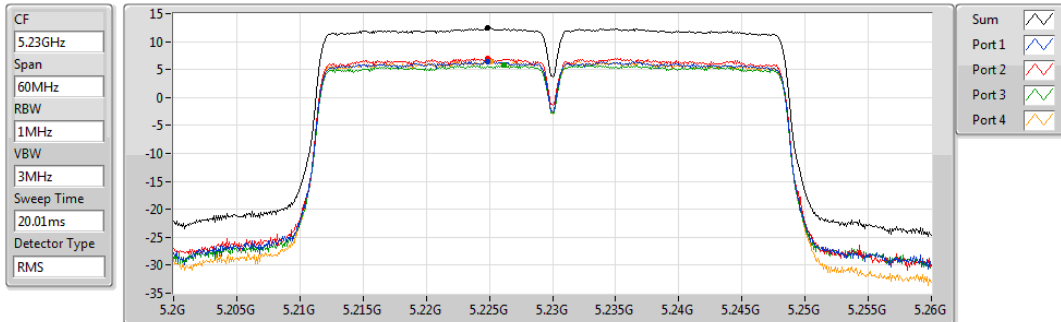
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.19	7.19	1.48	1.59	0.72	1.42

802.11ac VHT40-BF_Nss1,(MCS0)_4TX

PSD

5230MHz

03/09/2019



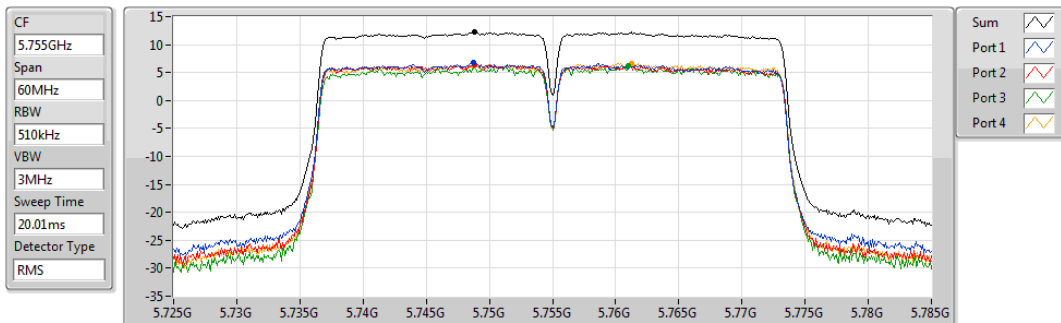
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
12.41	12.41	6.46	7.07	5.75	6.50

802.11ac VHT40-BF_Nss1,(MCS0)_4TX

PSD

5755MHz

04/09/2019



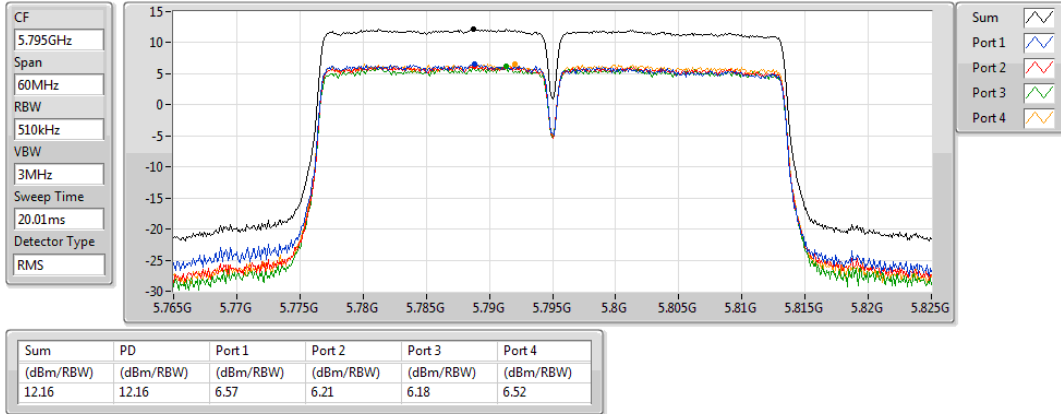
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
12.22	12.22	6.76	6.39	6.12	6.60

802.11ac VHT40-BF_Nss1,(MCS0)_4TX

PSD

5795MHz

04/09/2019

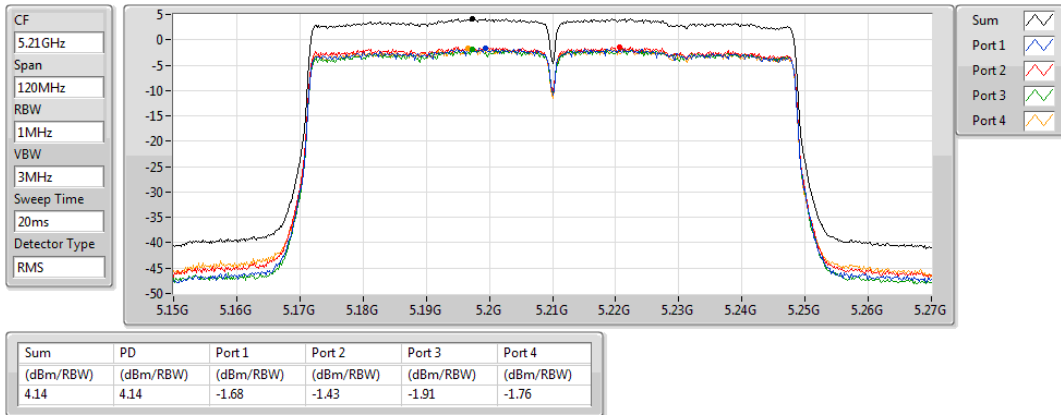


802.11ac VHT80-BF_Nss1,(MCS0)_4TX

PSD

5210MHz

04/09/2019

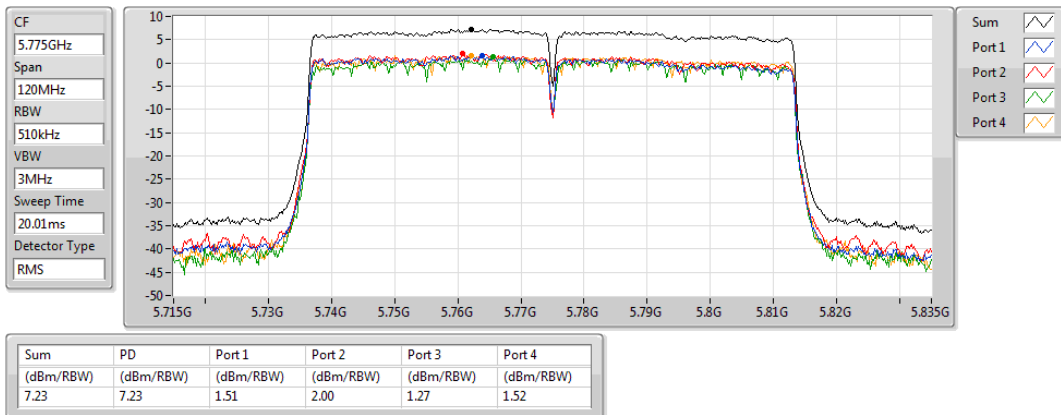


802.11ac VHT80-BF_Nss1,(MCS0)_4TX

PSD

5775MHz

04/09/2019



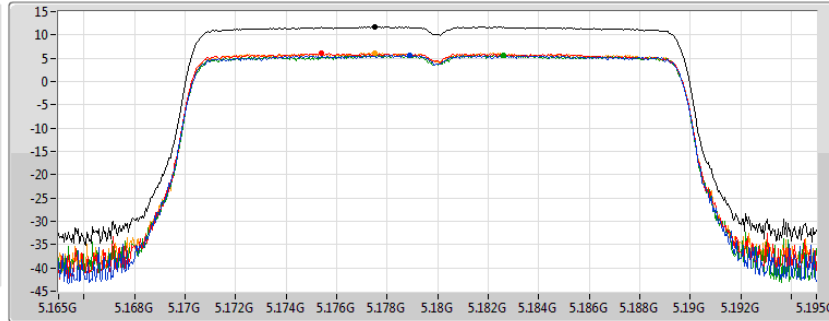
802.11ax HEW20-BF_Nss1,(MCS0)_4TX

PSD

5180MHz

03/09/2019

CF
5.18GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20.01ms
Detector Type
RMS



Sum
Port 1
Port 2
Port 3
Port 4

Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
11.75	11.75	5.72	6.06	5.68	6.17

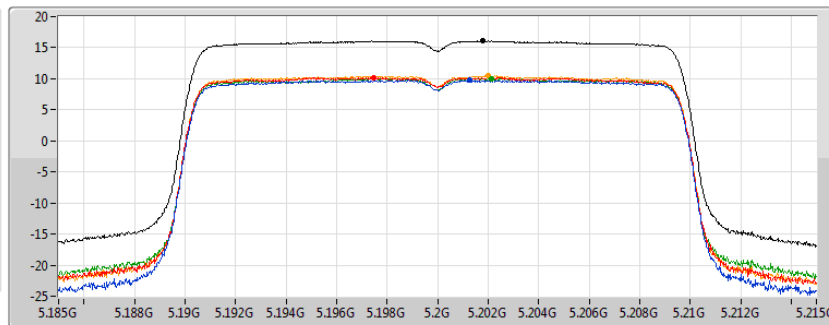
802.11ax HEW20-BF_Nss1,(MCS0)_4TX

PSD

5200MHz

18/10/2019

CF
5.2GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



Sum
Port 1
Port 2
Port 3
Port 4

Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
16.07	16.07	9.79	10.20	10.06	10.48

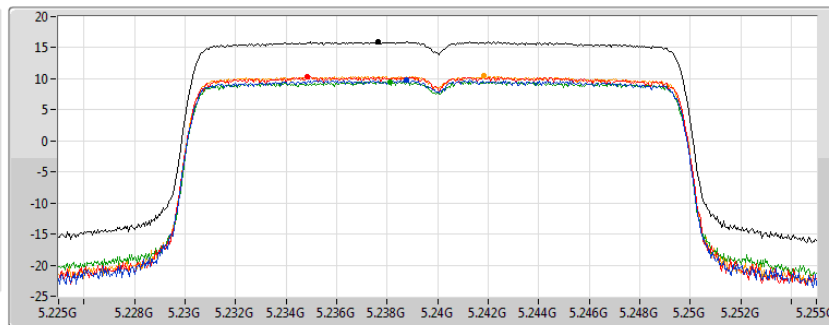
802.11ax HEW20-BF_Nss1,(MCS0)_4TX

PSD

5240MHz

03/09/2019

CF
5.24GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20.01ms
Detector Type
RMS



Sum
Port 1
Port 2
Port 3
Port 4

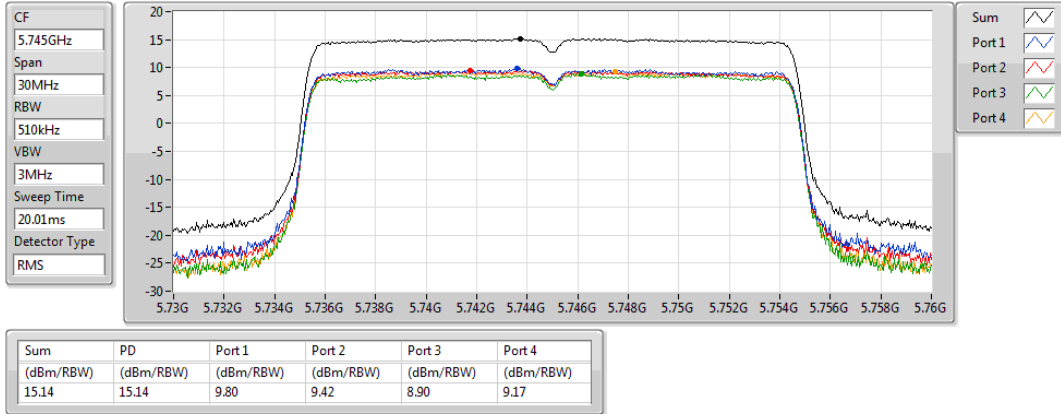
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
15.90	15.90	9.74	10.29	9.53	10.43

802.11ax HEW20-BF_Nss1,(MCS0)_4TX

PSD

5745MHz

04/09/2019

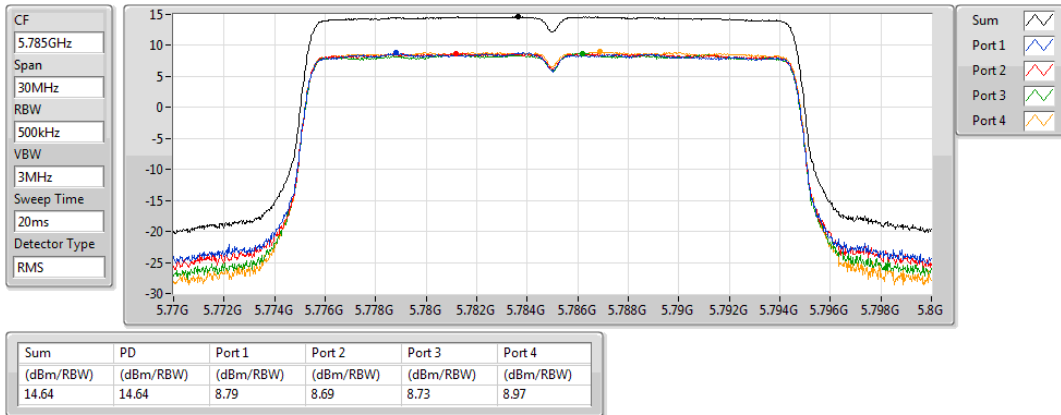


802.11ax HEW20-BF_Nss1,(MCS0)_4TX

PSD

5785MHz

16/10/2019



802.11ax HEW20-BF_Nss1,(MCS0)_4TX

PSD

5825MHz

16/10/2019

