



FCC RADIO TEST REPORT

FCC ID : 2AHKM-CODA5519
Equipment : DOCSIS 3.1 Wi-Fi 6 EMTA Gateway
Brand Name : hitron
Model Name : CODA-5519, CODA-5512, CODA-5719, CODA-5712, CODA-5610, CODA-5810, CODA-5814, CODA5610
Applicant : Hitron Technologies Inc.
No. 1-8, Li-Hsin 1st Rd. Hsinchu Science Park,
Hsinchu 30078, Taiwan
Manufacturer : Hitron Technologies Inc.
No. 1-8, Li-Hsin 1st Rd. Hsinchu Science Park,
Hsinchu 30078, Taiwan
Standard : 47 CFR FCC Part 15.407

The product was received on Nov. 28, 2019, and testing was started from Nov. 28, 2019 and completed on Jul. 23, 2020. 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 test results in this variant report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Approved by: Sam Chen

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

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



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History of this test report

[illegible]



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	-
3.1	15.207	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]
5250-5350		5260-5320	52-64 [4]
5470-5725		5500-5720	100-144 [12]
5725-5850		5745-5825	149-165 [5]
5150-5250	n (HT40), ac (VHT40), ax (HEW40)	5190-5230	38-46 [2]
5250-5350		5270-5310	54-62 [2]
5470-5725		5510-5710	102-142 [6]
5725-5850		5755-5795	151-159 [2]
5150-5250	ac (VHT80), ax (HEW80)	5210	42 [1]
5250-5350		5290	58 [1]
5470-5725		5530-5690	106-138 [3]
5725-5850		5775	155 [1]
5150-5350	ac (VHT160), ax (HEW160)	5250	50 [1]
5470-5725		5570	114 [1]

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



Band	Mode	BWch (MHz)	Nant
5.15-5.25GHz	802.11ac VHT80	80	4TX
5.15-5.25GHz	802.11ac VHT80-BF	80	4TX
5.15-5.25GHz	802.11ax HEW80	80	4TX
5.15-5.25GHz	802.11ax HEW80-BF	80	4TX
5.25-5.35GHz	802.11a	20	4TX
5.25-5.35GHz	802.11n HT20	20	4TX
5.25-5.35GHz	802.11n HT20-BF	20	4TX
5.25-5.35GHz	802.11ac VHT20	20	4TX
5.25-5.35GHz	802.11ac VHT20-BF	20	4TX
5.25-5.35GHz	802.11ax HEW20	20	4TX
5.25-5.35GHz	802.11ax HEW20-BF	20	4TX
5.25-5.35GHz	802.11n HT40	40	4TX
5.25-5.35GHz	802.11n HT40-BF	40	4TX
5.25-5.35GHz	802.11ac VHT40	40	4TX
5.25-5.35GHz	802.11ac VHT40-BF	40	4TX
5.25-5.35GHz	802.11ax HEW40	40	4TX
5.25-5.35GHz	802.11ax HEW40-BF	40	4TX
5.25-5.35GHz	802.11ac VHT80	80	4TX
5.25-5.35GHz	802.11ac VHT80-BF	80	4TX
5.25-5.35GHz	802.11ax HEW80	80	4TX
5.25-5.35GHz	802.11ax HEW80-BF	80	4TX
5.15-5.35GHz	802.11ac VHT160	160	4TX
5.15-5.35GHz	802.11ac VHT160-BF	160	4TX
5.15-5.35GHz	802.11ax HEW160	160	4TX
5.15-5.35GHz	802.11ax HEW160-BF	160	4TX
5.47-5.725GHz	802.11a	20	4TX
5.47-5.725GHz	802.11n HT20	20	4TX
5.47-5.725GHz	802.11n HT20-BF	20	4TX
5.47-5.725GHz	802.11ac VHT20	20	4TX
5.47-5.725GHz	802.11ac VHT20-BF	20	4TX
5.47-5.725GHz	802.11ax HEW20	20	4TX
5.47-5.725GHz	802.11ax HEW20-BF	20	4TX
5.47-5.725GHz	802.11n HT40	40	4TX
5.47-5.725GHz	802.11n HT40-BF	40	4TX
5.47-5.725GHz	802.11ac VHT40	40	4TX
5.47-5.725GHz	802.11ac VHT40-BF	40	4TX
5.47-5.725GHz	802.11ax HEW40	40	4TX

Band	Mode	BWch (MHz)	Nant
5.47-5.725GHz	802.11ax HEW40-BF	40	4TX
5.47-5.725GHz	802.11ac VHT80	80	4TX
5.47-5.725GHz	802.11ac VHT80-BF	80	4TX
5.47-5.725GHz	802.11ax HEW80	80	4TX
5.47-5.725GHz	802.11ax HEW80-BF	80	4TX
5.47-5.725GHz	802.11ac VHT160	160	4TX
5.47-5.725GHz	802.11ac VHT160-BF	160	4TX
5.47-5.725GHz	802.11ax HEW160	160	4TX
5.47-5.725GHz	802.11ax HEW160-BF	160	4TX
5.725-5.85GHz	802.11a	20	4TX
5.725-5.85GHz	802.11n HT20	20	4TX
5.725-5.85GHz	802.11n HT20-BF	20	4TX
5.725-5.85GHz	802.11ac VHT20	20	4TX
5.725-5.85GHz	802.11ac VHT20-BF	20	4TX
5.725-5.85GHz	802.11ax HEW20	20	4TX
5.725-5.85GHz	802.11ax HEW20-BF	20	4TX
5.725-5.85GHz	802.11n HT40	40	4TX
5.725-5.85GHz	802.11n HT40-BF	40	4TX
5.725-5.85GHz	802.11ac VHT40	40	4TX
5.725-5.85GHz	802.11ac VHT40-BF	40	4TX
5.725-5.85GHz	802.11ax HEW40	40	4TX
5.725-5.85GHz	802.11ax HEW40-BF	40	4TX
5.725-5.85GHz	802.11ac VHT80	80	4TX
5.725-5.85GHz	802.11ac VHT80-BF	80	4TX
5.725-5.85GHz	802.11ax HEW80	80	4TX
5.725-5.85GHz	802.11ax HEW80-BF	80	4TX

Note:

- ♦ 11a, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- ♦ VHT20, VHT40, VHT80 and VHT160 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.
- ♦ HEW20, HEW40, HEW80 and HEW160 use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- ♦ BWch is the nominal channel bandwidth.

**1.1.2 Antenna Information**

Ant.	Port	Brand	Model Name	Type	Connector	Gain (dBi)				
						2.4GHz	5GHz Band 1	5GHz Band 2	5GHz Band 3	5GHz Band 4
1	3	WIESON	GY196HC112-011	PCB	MHF	2.8	2.6	3	3.4	3
2	2	WIESON	GY196HC112-012	PCB	MHF	2.8	2.6	3	3.4	3
3	1	WIESON	GY196HC112-013	PCB	MHF	2.8	2.6	3	3.4	3
4	4	WIESON	GY196HC112-014	PCB	MHF	2.8	2.6	3	3.4	3

Note: The above information was declared by manufacturer.

For 2.4GHz function:**For IEEE 802.11b mode (1TX/1RX)**

The EUT supports the antenna with TX and RX diversity functions.

Port 1, Port 2, Port 3 and Port 4 support transmit and receive functions, but only one of them will be used at one time.

For IEEE 802.11g/n/ax mode (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 5GHz function:**For IEEE 802.11a/n/ac/ax mode (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.

**1.1.3 Mode Test Duty Cycle**

For non-beamforming mode:

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11a	1	0	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ac VHT20	1	0	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ac VHT40	1	0	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ac VHT80	1	0	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ac VHT160	1	0	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ax HEW20	1	0	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ax HEW40	1	0	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ax HEW80	1	0	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ax HEW160	1	0	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)

For beamforming mode:

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ac VHT20-BF	0.953	0.21	3.844m	300
802.11ac VHT40-BF	0.967	0.15	4.706m	300
802.11ac VHT80-BF	0.96	0.18	5.104m	300
802.11ac VHT160-BF	0.964	0.16	1.755m	1k
802.11ax HEW20-BF	0.96	0.18	5.344m	300
802.11ax HEW40-BF	0.961	0.17	5.385m	300
802.11ax HEW80-BF	0.96	0.18	5.4m	300
802.11ax HEW160-BF	0.964	0.16	5.404m	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 802.11n/ac/ax in 5GHz.		
Weather Band	☒ With 5600~5650MHz	☐ Without 5600~5650MHz	
Function	☐ Outdoor P2M	☒ Indoor P2M	
	☐ Fixed P2P	☐ Client	
TPC Function	☒ With TPC	☐ Without TPC	
Test Software Version	DUT GUI V610.23		

Note: The above information was declared by manufacturer.

1.1.5 Table for Multiple Listing

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

EUT	Model Name	Frequency Configuration	MoCA	Voice (SLIC)	LAN	Wi-Fi	BBU	USB
1	CODA-5519	5~85 US	Yes	PEF42078	PHY: GPY212	WAV614+	Yes	Yes
		108 ~ 1002 DS			Switch: PEF7085	Wave624		
2	CODA-5512	5~85 US	Yes	No	PHY: GPY212	WAV614+	No	Yes
		108 ~ 1002 DS			Switch: PEF7085	Wave624		
3	CODA-5719	5-85/ 5~204MHz US	Yes	PEF42078	PHY: GPY212	WAV614+	Yes	Yes
		108 ~ 1002 / 258 ~ 1002Mhz DS			Switch: PEF7085	Wave624		
4	CODA-5712	5-85/ 5~204MHz US	Yes	No	PHY: GPY212	WAV614+	No	Yes
		108 ~ 1002 / 258 ~ 1002Mhz DS			Switch: PEF7085	Wave624		
5	CODA-5610	5-42/ 5~85MHz US	No	No	PHY: GPY212	WAV614+	No	Yes
		108 ~ 1002 DS			Switch: PEF7085	Wave624		
6	CODA-5810	5-85/ 5~204MHz US	No	No	PHY: GPY212	WAV614+	No	Yes
		108 ~ 1218 / 258 ~ 1218Mhz DS			Switch: PEF7085	Wave624		
7	CODA-5814	5-85/ 5~204MHz US	No	PEF42078	PHY: GPY212	WAV614+	Yes	Yes
					Switch: PEF7085	Wave624		
-	CODA5610	5-42/ 5~85MHz US	No	No	PHY: GPY212	WAV614+	No	Yes
		108 ~ 1002 DS			Switch: PEF7085	Wave624		

Note: The model "CODA-5610" and "CODA5610" are identical, different model names serve as marketing strategy.



1.1.6 Table for Class II Change

This product is an extension of original one reported under Sporton project number: FR020705AB

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

Modifications	Performance Checking
1. Changing the color of RJ-45 cable to “orange” from “yellow”. 2. Removing one adapter (Brand Name: APD, Model Name: DA-60Y12).	It does not affect the test result.
3. Changing the hardware of model names: CODA-5512, CODA-5719, CODA-5712, CODA-5610, the detail please refer to the section 1.1.5. 4. Adding three model names: CODA-5810, CODA-5814, CODA5610.	1. AC Power-line Conducted Emissions. 2. Unwanted Emissions Below 1GHz.
5. Adding 5GHz band 2 and band 3 (5250~5350 MHz, 5470~5725 MHz). 6. Adding the 160MHz bandwidth.	1. Emission Bandwidth. 2. Maximum Conducted Output Power. 3. Peak Power Spectral Density. 4. Unwanted Emissions Above 1GHz.



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

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

- ♦ 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	Remark
RF Conducted	TH01-CB	Owen Hsu	22.9~24.8°C / 59~63%	Nov. 28, 2019~Jul. 20, 2020	-
Radiated Below 1GHz	03CH04-CB	Paul Chen	25.4~26°C / 58~62%	May 28, 2020~Jul. 23, 2020	Mode 1~Mode 4
	03CH05-CB	Paul Chen	25.1~26.9°C / 58~60%	May 28, 2020~Jul. 23, 2020	Mode 5~Mode 6
Radiated Above 1GHz	03CH05-CB	Mason Chen	22.6~23.7°C / 59~64%	Mar. 02, 2020~Jun. 18, 2020	-
AC Conduction	CO02-CB	GN Hou	22~23°C / 58~62%	Jun. 08, 2020	Mode 1~Mode 6

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)	5.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	4.9 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.6 dB	Confidence levels of 95%
Conducted Emission	2.8 dB	Confidence levels of 95%
Output Power Measurement	1.4 dB	Confidence levels of 95%
Power Density Measurement	2.8 dB	Confidence levels of 95%
Bandwidth Measurement	0.39%	Confidence levels of 95%



2 Test Configuration of EUT

2.1 Test Channel Mode

For non-beamforming mode:

Mode	Power Setting
802.11a_Nss1,(6Mbps)_4TX	-
5260MHz	51
5300MHz	51
5320MHz	51
5500MHz	50
5580MHz	51
5700MHz	51
5720MHz Straddle 5.47-5.725GHz	53
5720MHz Straddle 5.725-5.85GHz	53
802.11ac VHT20_Nss1,(MCS0)_4TX	-
5260MHz	51
5300MHz	52
5320MHz	51
5500MHz	51
5580MHz	51
5700MHz	52
5720MHz Straddle 5.47-5.725GHz	52
5720MHz Straddle 5.725-5.85GHz	52
802.11ac VHT40_Nss1,(MCS0)_4TX	-
5270MHz	55
5310MHz	55
5510MHz	56
5550MHz	56
5670MHz	58
5710MHz Straddle 5.47-5.725GHz	58
5710MHz Straddle 5.725-5.85GHz	58
802.11ac VHT80_Nss1,(MCS0)_4TX	-
5290MHz	54
5530MHz	51
5610MHz	57



Mode	Power Setting
5690MHz Straddle 5.47-5.725GHz	59
5690MHz Straddle 5.725-5.85GHz	59
802.11ac VHT160_Nss1,(MCS0)_4TX	-
5250MHz	55
5250MHz	55
5570MHz	53
802.11ax HEW20_Nss1,(MCS0)_4TX	-
5260MHz	52
5300MHz	53
5320MHz	52
5500MHz	53
5580MHz	52
5700MHz	53
5720MHz Straddle 5.47-5.725GHz	51
5720MHz Straddle 5.725-5.85GHz	51
802.11ax HEW40_Nss1,(MCS0)_4TX	-
5270MHz	56
5310MHz	55
5510MHz	53
5550MHz	56
5670MHz	58
5710MHz Straddle 5.47-5.725GHz	57
5710MHz Straddle 5.725-5.85GHz	57
802.11ax HEW80_Nss1,(MCS0)_4TX	-
5290MHz	55
5530MHz	50
5610MHz	55
5690MHz Straddle 5.47-5.725GHz	58
5690MHz Straddle 5.725-5.85GHz	58
802.11ax HEW160_Nss1,(MCS0)_4TX	-
5250MHz	51
5250MHz	51
5570MHz	50



For beamforming mode:

Mode	Power Setting
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-
5260MHz	44
5300MHz	45
5320MHz	44
5500MHz	43
5580MHz	44
5700MHz	38
5720MHz Straddle 5.47-5.725GHz	47
5720MHz Straddle 5.725-5.85GHz	47
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-
5270MHz	44
5310MHz	44
5510MHz	44
5550MHz	44
5670MHz	45
5710MHz Straddle 5.47-5.725GHz	46
5710MHz Straddle 5.725-5.85GHz	46
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-
5290MHz	44
5530MHz	44
5610MHz	38
5690MHz Straddle 5.47-5.725GHz	45
5690MHz Straddle 5.725-5.85GHz	45
802.11ac VHT160-BF_Nss1,(MCS0)_4TX	-
5250MHz Straddle 5.15-5.25GHz	47
5250MHz Straddle 5.25-5.35GHz	47
5570MHz	33
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-
5260MHz	44
5300MHz	44
5320MHz	44
5500MHz	43
5580MHz	43
5700MHz	39



Mode	Power Setting
5720MHz Straddle 5.47-5.725GHz	47
5720MHz Straddle 5.725-5.85GHz	47
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-
5270MHz	44
5310MHz	44
5510MHz	43
5550MHz	43
5670MHz	44
5710MHz Straddle 5.47-5.725GHz	46
5710MHz Straddle 5.725-5.85GHz	46
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-
5290MHz	43
5530MHz	43
5610MHz	38
5690MHz Straddle 5.47-5.725GHz	45
5690MHz Straddle 5.725-5.85GHz	45
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-
5250MHz Straddle 5.15-5.25GHz	47
5250MHz Straddle 5.25-5.35GHz	47
5570MHz	42

Note:

There are two functions of EUT, one is beamforming function, and the other is non-beamforming function for 802.11n/ac/ax in 5GHz band. All test results were recorded in the 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	Normal Link
1	EUT 2 + Adapter
2	EUT 3 + Adapter
3	EUT 4 + Adapter
4	EUT 5 + Adapter
5	EUT 6 + Adapter
6	EUT 7 + Adapter

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
Operating Mode	
1	EUT 1

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



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
Refer to Sporton Test Report No.: FA020705-01 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:

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

The program was executed as follows:

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

For Normal Link:

During the test, the EUT operation to normal function.



2.4 Accessories

Accessories				
Equipment Name	Brand Name	Model Name	Rating	DC Power Line
Adapter	Frecom	F60X-120450SPA	Input: 100-240~50/60Hz 1.6A Output: 12V, 4.5A	Non-Shielded, 1.5m
Others				
AC power cable*1: Non-Shielded, 1.2m				
RJ-45 cable*1:Non-Shielded 1.5m				



2.5 Support Equipment

For AC Conduction:

Mode 1, Mode 3, Mode 4 and Mode 5

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	2.5G LAN PC	DELL	T3400	N/A
B	LAN NB	DELL	E6430	N/A
C	CO (Terminal System)	Jinghong	D3 CMTS JH-HE3416B	N/A
D	Flash disk3.0	Transcend	C55210 2808	N/A
E	2.4G NB	DELL	E6430	N/A
F	5G NB	DELL	E6430	N/A

Mode 2 and Mode 6

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	2.5G LAN PC	DELL	T3400	N/A
B	LAN NB	DELL	E6430	N/A
C	Phone	SAMPO	HT-B 907WL	N/A
D	Phone	SAMPO	HT-B 907WL	N/A
E	CO (Terminal System)	Jinghong	D3 CMTS JH-HE3416B	N/A
F	Flash disk3.0	Transcend	C55210 2808	N/A
G	2.4G NB	DELL	E6430	N/A
H	5G NB	DELL	E6430	N/A

For Radiated (below 1GHz):

Mode 1, Mode 3, Mode 4 and Mode 5

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	PC	DELL	T3400	N/A
B	NB	DELL	E4300	N/A
C	NB	DELL	E4300	N/A
D	Flash disk3.0	Transcend	C55210 2808	N/A
G	CO (Terminal System)	Jinghong	D3 CMTS JH-HE3416B	N/A
H	NB	DELL	E4300	N/A

**Mode 2 and Mode 6**

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	PC	DELL	T3400	N/A
B	NB	DELL	E4300	N/A
C	NB	DELL	E4300	N/A
D	Flash disk3.0	Transcend	C55210 2808	N/A
E	Phone	PHILIPS	M20	N/A
F	Phone	PHILIPS	M20	N/A
G	CO (Terminal System)	Jinghong	D3 CMTS JH-HE3416B	N/A
H	NB	DELL	E4300	N/A

For Radiated (above 1GHz) and RF Conducted:

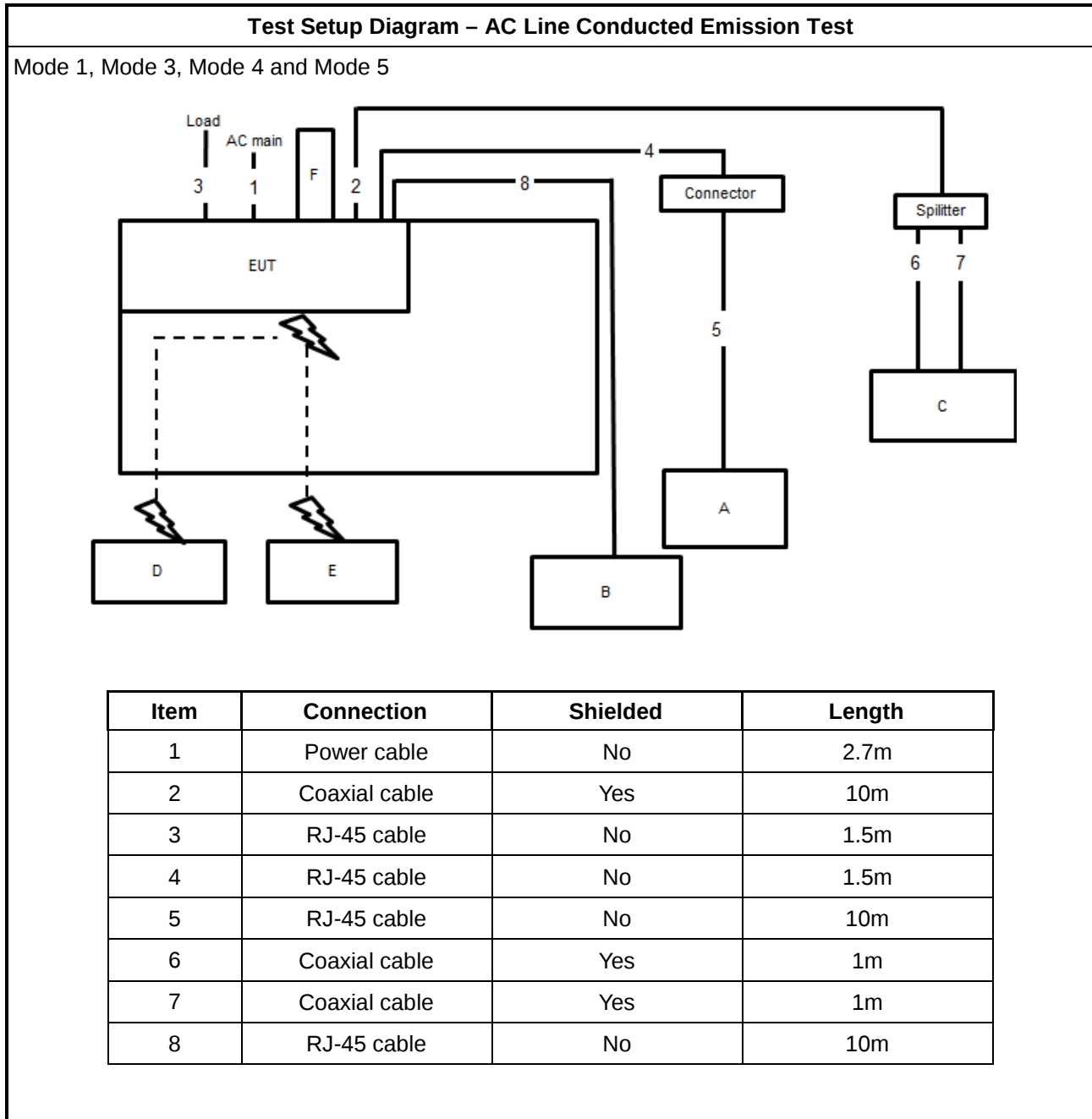
For non-beamforming mode:

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

For beamforming mode:

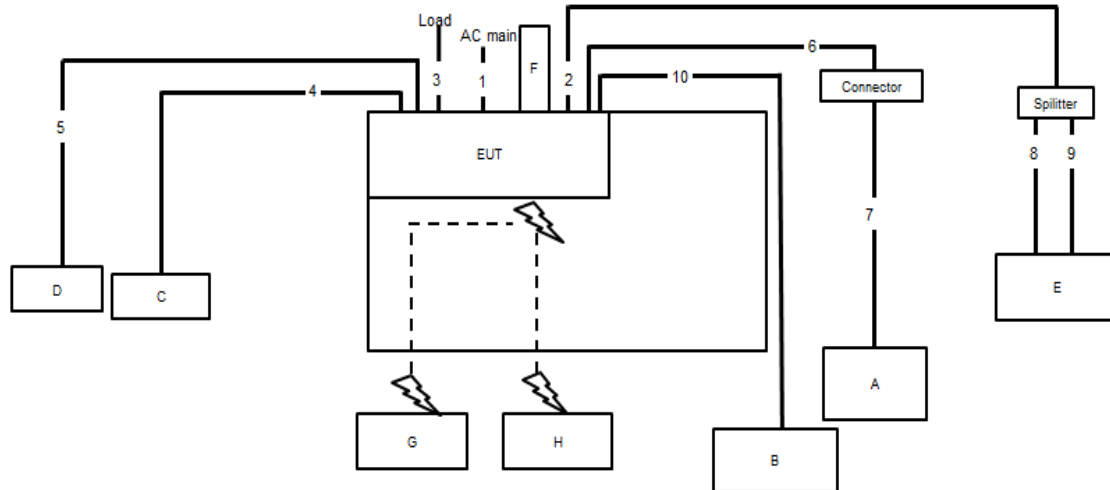
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	NB	DELL	E4300	N/A
B	NB	DELL	E4300	N/A
C	WLAN module	Intel	AX200NGW	N/A

2.6 Test Setup Diagram



Test Setup Diagram – AC Line Conducted Emission Test

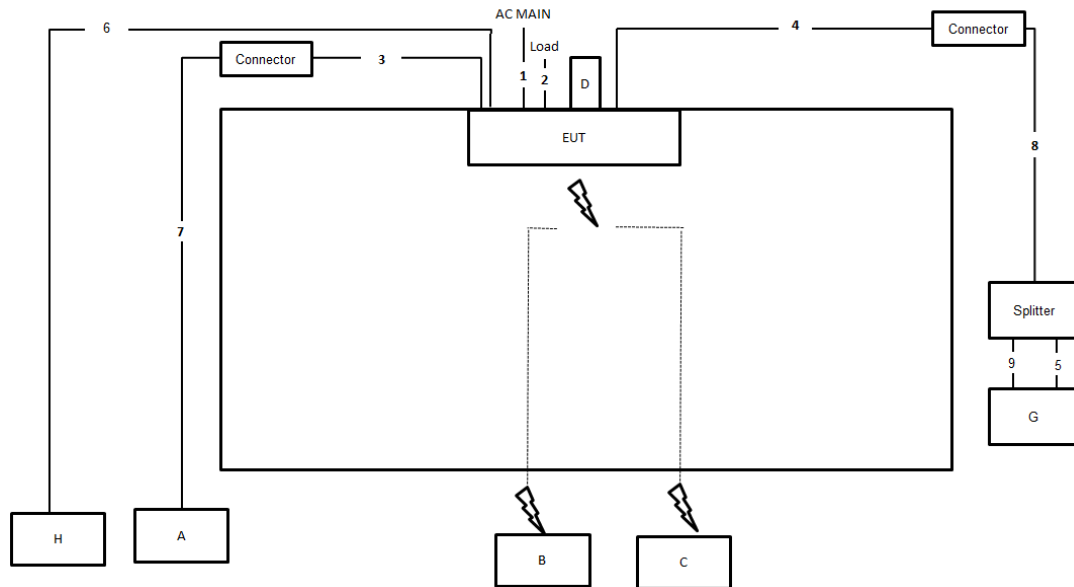
Mode 2 and Mode 6



Item	Connection	Shielded	Length
1	Power cable	No	2.7m
2	Coaxial cable	Yes	10m
3	RJ-45 cable	No	1.5m
4	RJ-11 cable	No	10m
5	RJ-11 cable	No	10m
6	RJ-45 cable	No	1.5m
7	RJ-45 cable	No	10m
8	Coaxial cable	Yes	1m
9	Coaxial cable	Yes	1m
10	RJ-45 cable	No	10m

Test Setup Diagram - Radiated Test < 1GHz

Mode 1, Mode 3, Mode 4 and Mode 5



Item	Connection	Shielded	Length
1	Power cable	No	2.7m
2	RJ-45 cable	No	1.5m
3	RJ-45 cable	No	1.5m
4	Coaxial cable	Yes	10m
5	Coaxial cable	Yes	1.1m
6	RJ-45 cable	No	10m
7	RJ-45 cable	No	10m
8	Coaxial cable	Yes	1.7m
9	Coaxial cable	Yes	1.0m

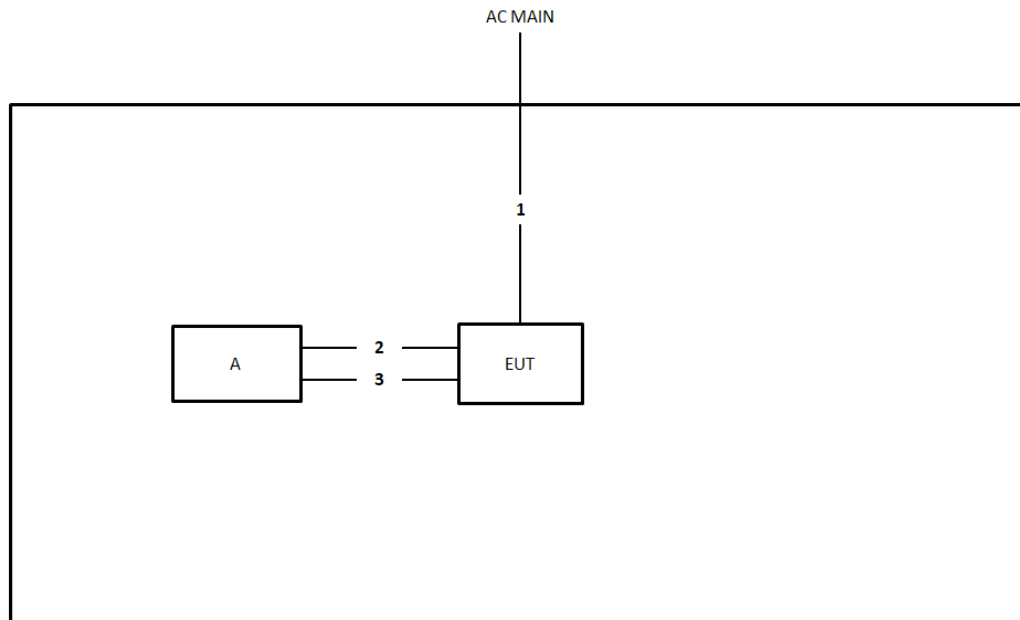


The diagram illustrates a system architecture with a central 'EUT' (End User Terminal) block. Above 'EUT' is an 'AC MAIN' block containing 'Load' and 'D' components. To the left, a 'Connector' block is connected to 'EUT' via line 3. To the right, another 'Connector' block is connected to 'EUT' via line 4. Below 'EUT', there are blocks 'E' and 'F'. To the far left, blocks 'H' and 'A' are connected to the system via lines 6 and 7. To the far right, a 'Splitter' block is connected to the system via line 8, which then splits into lines 9 and 5 leading to block 'G'. The diagram also includes a lightning bolt symbol and a dashed box indicating a specific area of interest.

Item	Connection	Shielded	Length
1	Power cable	No	2.7m
2	RJ-45 cable	No	1.5m
3	RJ-45 cable	No	1.5m
4	Coaxial cable	Yes	10m
5	Coaxial cable	Yes	1.1m
6	RJ-45 cable	No	10m
7	RJ-45 cable	No	10m
8	Coaxial cable	Yes	1.7m
9	Coaxial cable	Yes	1.0m
10	RJ-11 cable	No	1.5m
11	RJ-11 cable	No	1.5m

Test Setup Diagram - Radiated Test > 1GHz

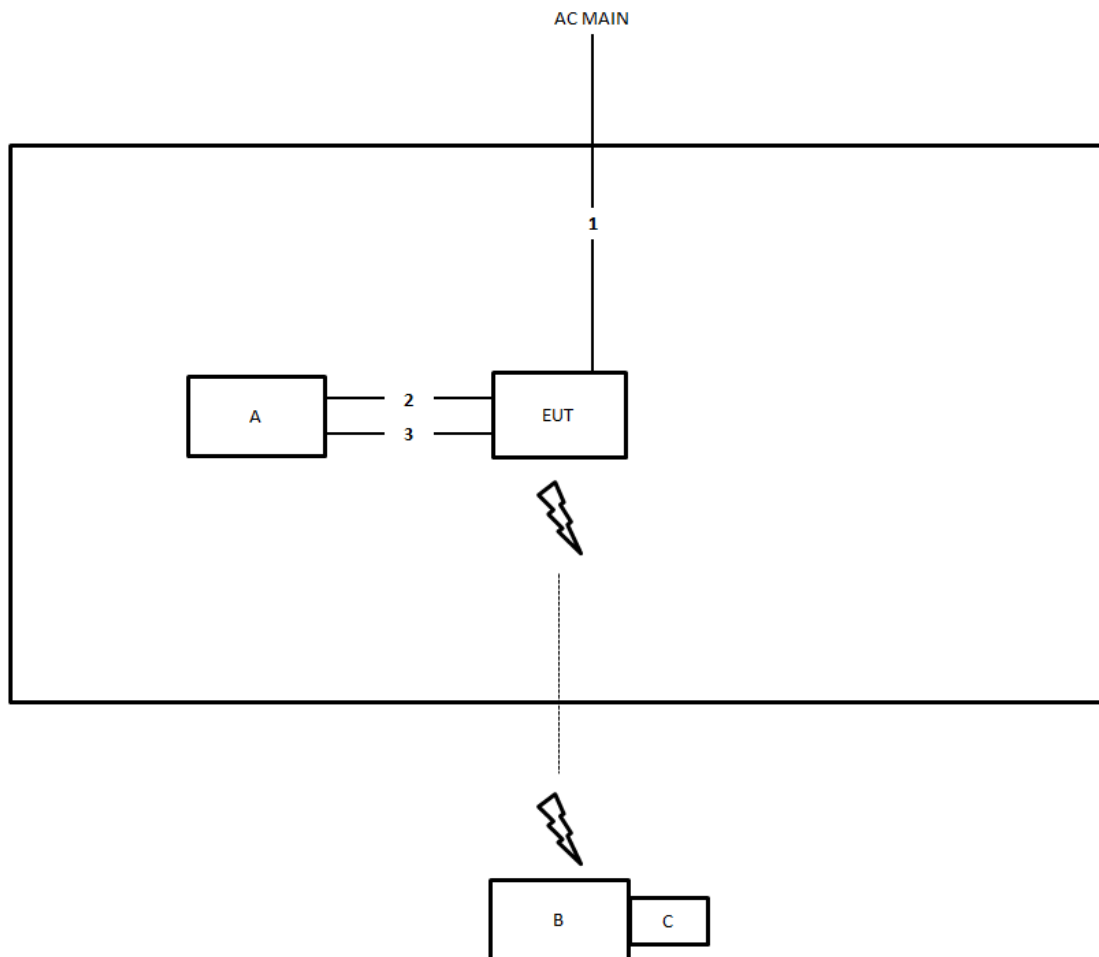
For non-beamforming mode:



Item	Connection	Shielded	Length
1	Power cable	No	2.7m
2	Console cable	Yes	1m
3	RJ-45 cable	No	1m

Test Setup Diagram - Radiated Test > 1GHz

For beamforming mode:



Item	Connection	Shielded	Length
1	Power cable	No	2.7m
2	Console cable	Yes	1m
3	RJ-45 cable	No	1m



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.		

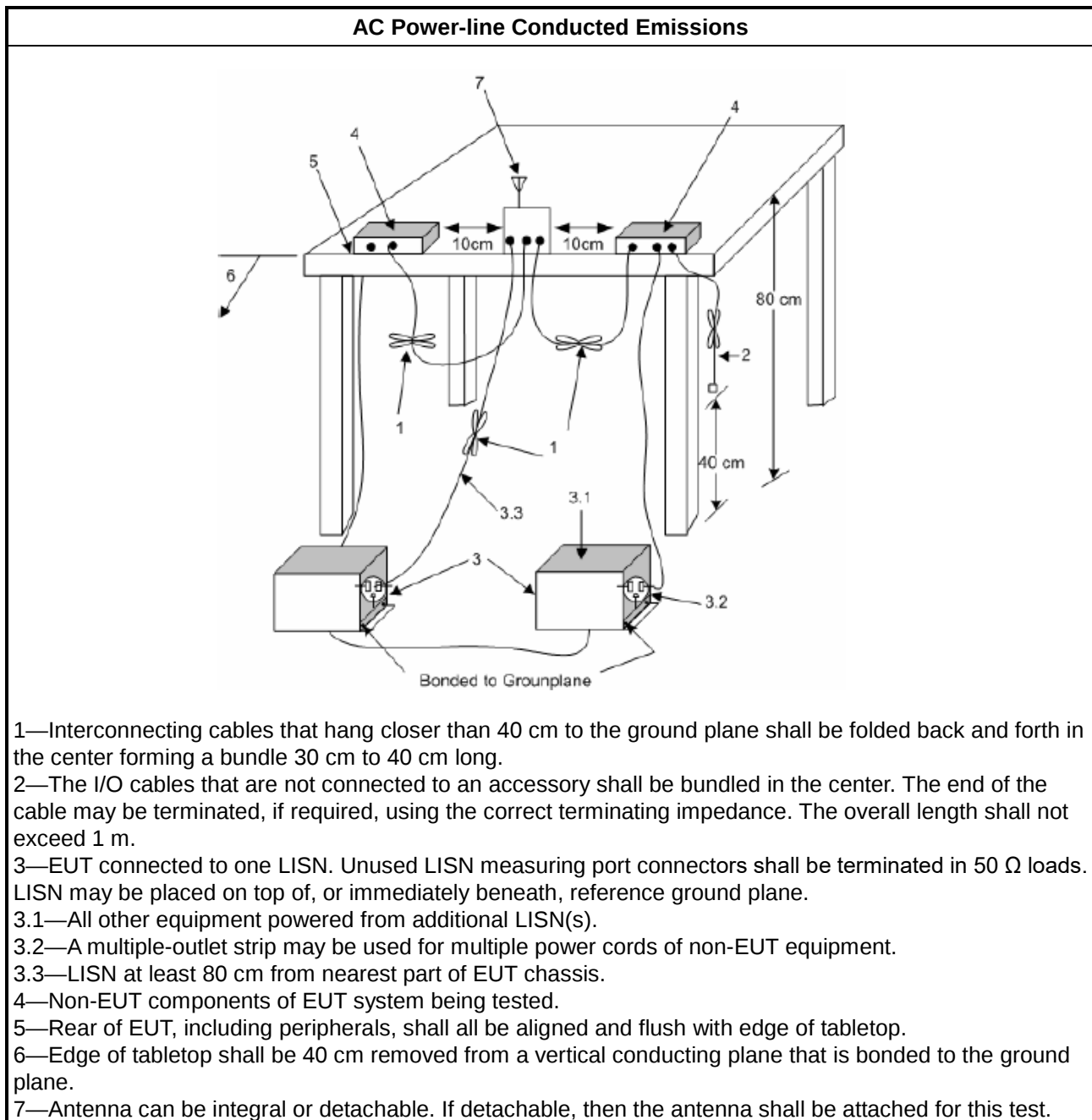
3.1.2 Measuring Instruments

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 Measurement Results Calculation

The measured Level is calculated using:

- Corrected Reading (dBuV) = LISN Factor + Cable Loss + Read Level = Level
- Margin = - Limit + (Read Level + LISN Factor + Cable Loss)

3.1.6 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 Emission Bandwidth

3.2.1 Emission Bandwidth Limit

Emission Bandwidth Limit	
UNII Devices	
☒	For the 5.15-5.25 GHz band, N/A
☒	For the 5.25-5.35 GHz band, the maximum conducted output power shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, 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 $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in MHz.
☒	For the 5.725-5.85 GHz band, 6 dB emission bandwidth $\geq 500\text{kHz}$.
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 $\geq 500\text{kHz}$.

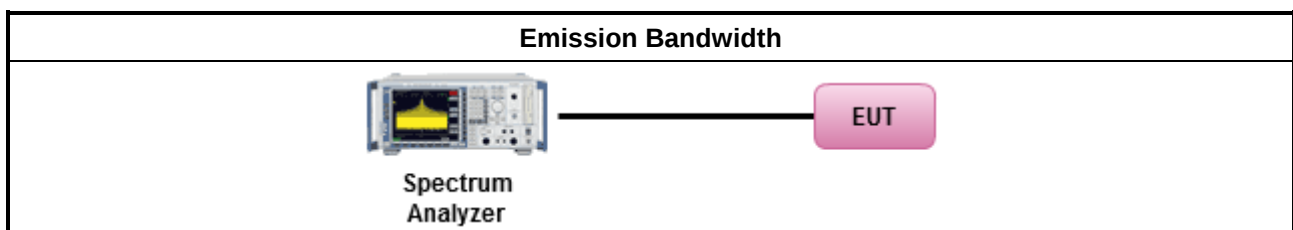
3.2.2 Measuring Instruments

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

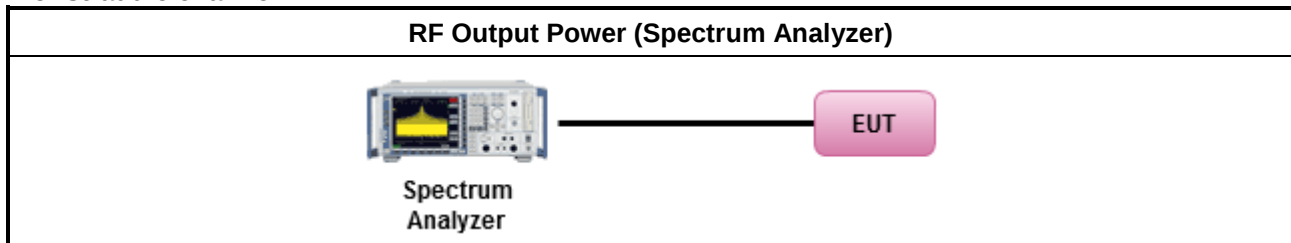
Refer a test equipment and calibration data table in this test report.

3.3.3 Test Procedures

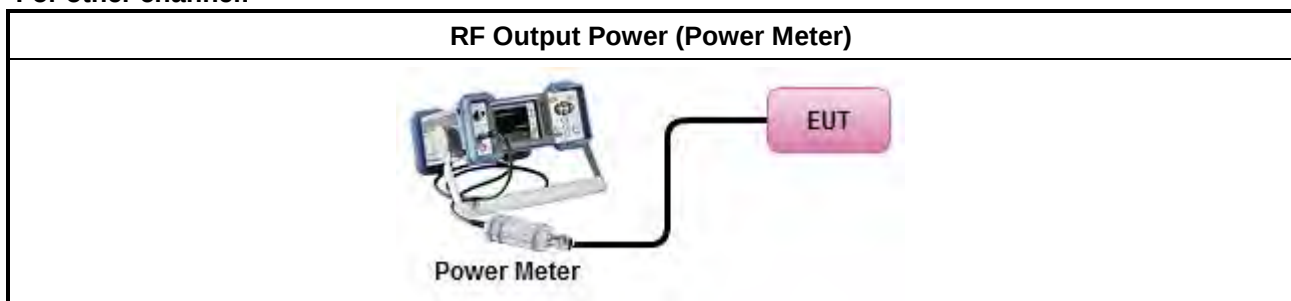
Test Method	
Maximum Conducted Output Power	
	Average over on/off periods with duty factor
☒	Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging).
☐	Refer as FCC KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
	Wideband RF power meter and average over on/off 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

For straddle channel:



For other channel:



3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C



3.4 Peak Power Spectral Density

3.4.1 Peak Power Spectral Density Limit

Peak Power Spectral Density Limit	
UNII Devices	
☒ For the 5.15-5.25 GHz band:	
	- Outdoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$. - Indoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$. - Point-to-point AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 23$ dBi, then $P_{Out} = 17 - (G_{TX} - 23)$. - Mobile or Portable Client: the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.
☒ For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.	
☒ For the 5.47-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.	
☒ For the 5.725-5.85 GHz band:	
	- Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If $G_{TX} > 6$ dBi, then $PPSD = 30 - (G_{TX} - 6)$. - Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.
LE-LAN Devices	
☐ For the 5.15-5.25 GHz band, the e.i.r.p. peak power spectral density (PPSD) ≤ 10 dBm/MHz.	
☐ For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz.	
	e.i.r.p. greater than 200 mW shall comply with the following e.i.r.p. at different elevations, where θ is the angle above the local horizontal plane (of the Earth) as shown below: -13 dBW/MHz for $0^\circ \leq \theta < 8^\circ$; -13 - 0.716 (θ-8) dBW/MHz for $8^\circ \leq \theta < 40^\circ$ -35.9 - 1.22 (θ-40) dBW/MHz for $40^\circ \leq \theta \leq 45^\circ$; -42 dBW/MHz for $\theta > 45^\circ$
☐ For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz.	
☐ For the 5.725-5.85 GHz band:	
	- Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If $G_{TX} > 6$ dBi, then $PPSD = 30 - (G_{TX} - 6)$. - Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.
PPSD = peak power spectral density that he same method as used to determine the conducted output power shall be used to determine the power spectral density. And power spectral density in dBm/MHz G_{TX} = the maximum transmitting antenna directional gain in dBi.	

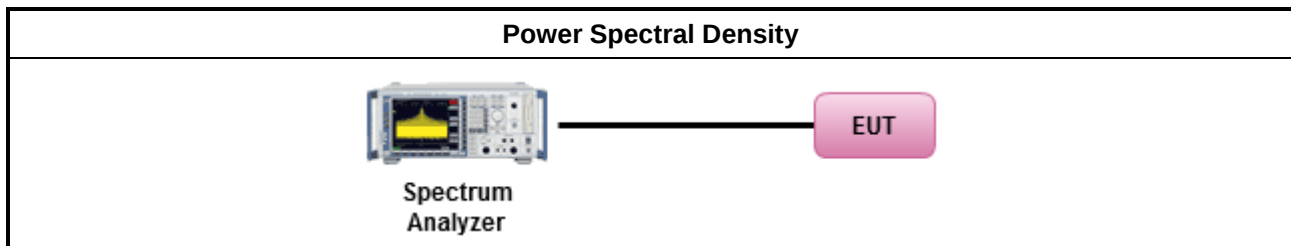
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

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

3.4.4 Test Setup



3.4.5 Test Result of Peak Power Spectral Density

Refer as Appendix D



3.5 Unwanted Emissions

3.5.1 Transmitter Unwanted Emissions Limit

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

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

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

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

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

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



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

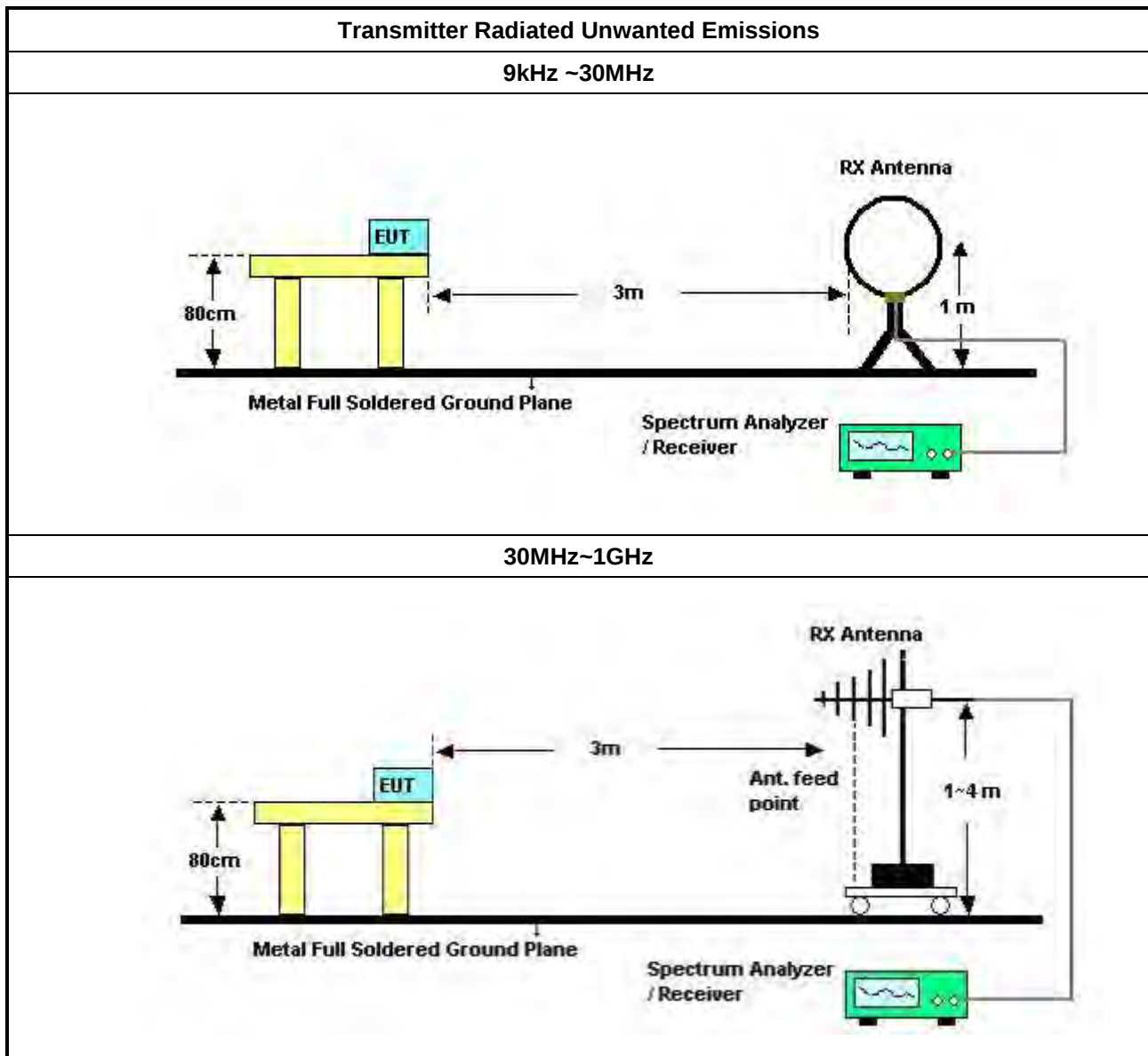
3.5.2 Measuring Instruments

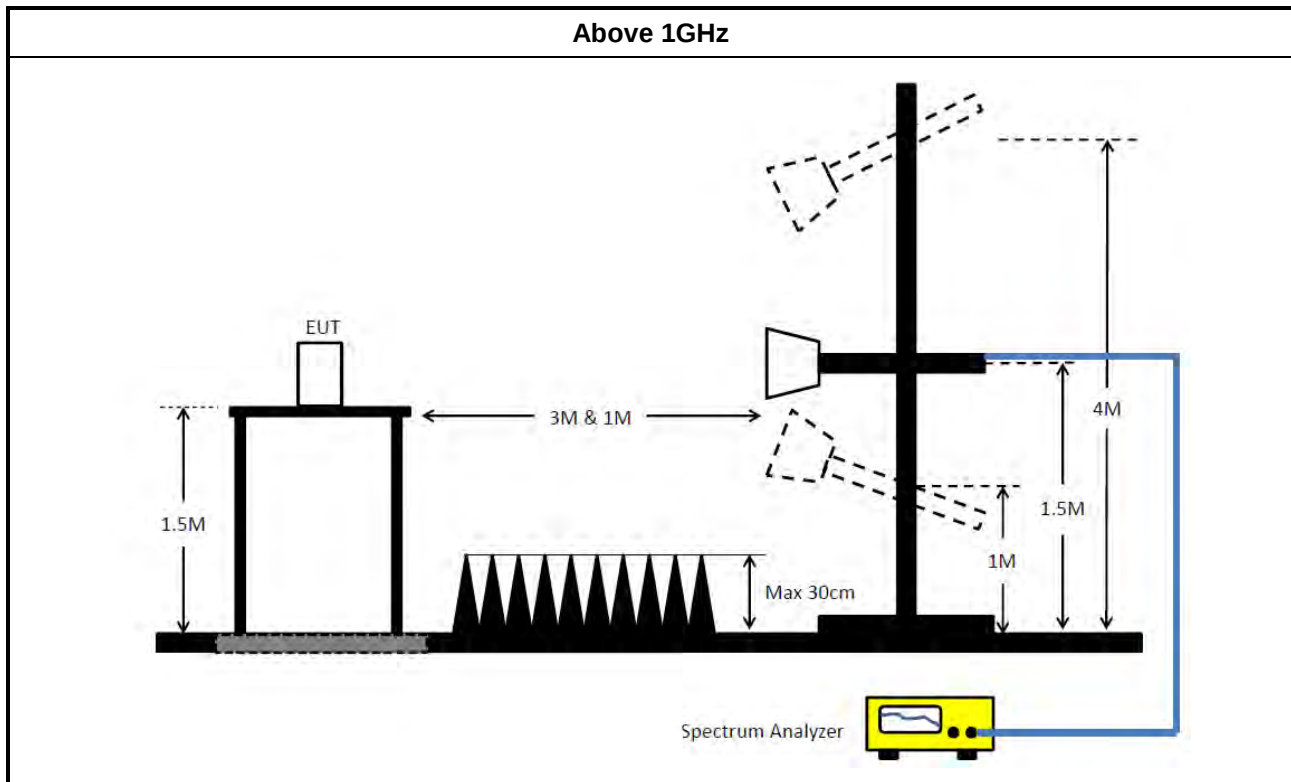
Refer a test equipment and calibration data table in this test report.

3.5.3 Test Procedures

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

3.5.4 Test Setup





3.5.5 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor (if applicable) = 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 10th 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
LISN	Schwarzbeck	NSLK 8127	8127650	9kHz ~ 30MHz	Nov. 21, 2019	Nov. 20, 2020	Conduction (CO02-CB)
LISN	Schwarzbeck	NSLK 8127	8127478	9kHz ~ 30MHz	Oct. 30, 2019	Oct. 29, 2020	Conduction (CO02-CB)
EMI Receiver	Agilent	N9038A	MY52260140	9kHz ~ 8.4GHz	Mar. 10, 2020	Mar. 09, 2021	Conduction (CO02-CB)
Pulse Limiter	Schwarzbeck	VTSD 9561F-N	00378	9kHz ~ 30MHz	Mar. 19, 2020	Mar. 18, 2021	Conduction (CO02-CB)
COND Cable	Woken	Cable	2	0.15MHz ~ 30MHz	Oct. 21, 2019	Oct. 20, 2020	Conduction (CO02-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	N.C.R.	Conduction (CO02-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 29, 2019	Mar. 28, 2020	Radiation (03CH05-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Apr. 13, 2020	Apr. 12, 2021	Radiation (03CH05-CB)
Bilog Antenna with 6dB Attenuator	TESEQ & EMC1	CBL 6112D & N-6-06	35236 & AT-N0610	30MHz ~ 2GHz	Mar. 28, 2019	Mar. 27, 2020	Radiation (03CH05-CB)
Bilog Antenna with 6dB Attenuator	TESEQ & EMC1	CBL 6112D & N-6-06	35236 & AT-N0610	30MHz ~ 2GHz	Mar. 27, 2020	Mar. 26, 2021	Radiation (03CH05-CB)
Horn Antenna	SCHWARZBEC K	BBHA9120D	BBHA 9120D-1291	1GHz~18GHz	Oct. 05, 2019	Oct. 04, 2020	Radiation (03CH05-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jun. 27, 2019	Jun. 26, 2020	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC330N	980331	20MHz ~ 3GHz	May 01, 2019	Apr. 30, 2020	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC330N	980331	20MHz ~ 3GHz	Apr. 28, 2020	Apr. 27, 2021	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC12630SE	980287	1GHz ~ 26.5GHz	Apr. 16, 2019	Apr. 15, 2020	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC12630SE	980287	1GHz ~ 26.5GHz	Apr. 15, 2020	Apr. 14, 2021	Radiation (03CH05-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 03, 2019	Jul. 02, 2020	Radiation (03CH05-CB)
Spectrum Analyzer	R&S	FSP40	100304	9kHz ~ 40GHz	Aug. 15, 2019	Aug. 14, 2020	Radiation (03CH05-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	May 15, 2019	May 14, 2020	Radiation (03CH05-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	May 13, 2020	May 12, 2021	Radiation (03CH05-CB)
RF Cable-low	Woken	RG402	LOW Cable-04+23	30MHz~1GHz	Oct. 07, 2019	Oct. 06, 2020	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-28	1GHz~18GHz	Oct. 07, 2019	Oct. 06, 2020	Radiation (03CH05-CB)



Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-04+28	1GHz~18GHz	Oct. 07, 2019	Oct. 06, 2020	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 24, 2019	Jul. 23, 2020	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 24, 2019	Jul. 23, 2020	Radiation (03CH05-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Apr. 13, 2020	Apr. 12, 2021	Radiation (03CH04-CB)
BILOG ANTENNA with 6 dB attenuator	Schaffner & EMCI	CBL6112B & N-6-06	22021&AT-N06 07	30MHz ~ 1GHz	Oct. 12, 2019	Oct. 11, 2020	Radiation (03CH04-CB)
Pre-Amplifier	Agilent	83017A	MY53270063	0.5GHz ~ 26.5GHz	Mar. 11, 2020	Mar. 10, 2021	Radiation (03CH04-CB)
Spectrum Analyzer	R&S	FSP40	100142	9kHz~40GHz	Dec. 18, 2019	Dec. 17, 2020	Radiation (03CH04-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	May 13, 2020	May 12, 2021	Radiation (03CH04-CB)
RF Cable-low	Woken	RG402	Low Cable-03+22	30MHz ~ 1GHz	Oct. 07, 2019	Oct. 06, 2020	Radiation (03CH04-CB)
Spectrum analyzer	R&S	FSV40	101027	9kHz~40GHz	Jul. 02, 2019	Jul. 01, 2020	Conducted (TH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	May 05, 2020	May 04, 2021	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz ~ 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz ~ 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz ~ 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz ~ 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz ~ 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-28	1 GHz ~ 26.5 GHz	Nov. 18, 2019	Nov. 17, 2020	Conducted (TH01-CB)
Power Sensor	Anritsu	MA2411B	1126203	300MHz~40GHz	Sep. 11, 2019	Sep. 10, 2020	Conducted (TH01-CB)
Power Meter	Anritsu	ML2495A	1210004	300MHz~40GHz	Sep. 11, 2019	Sep. 10, 2020	Conducted (TH01-CB)

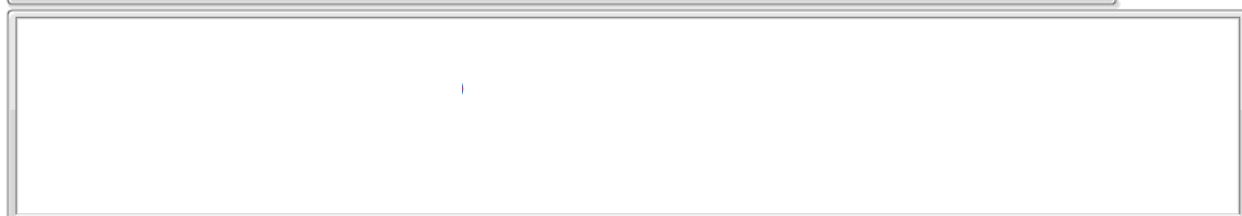
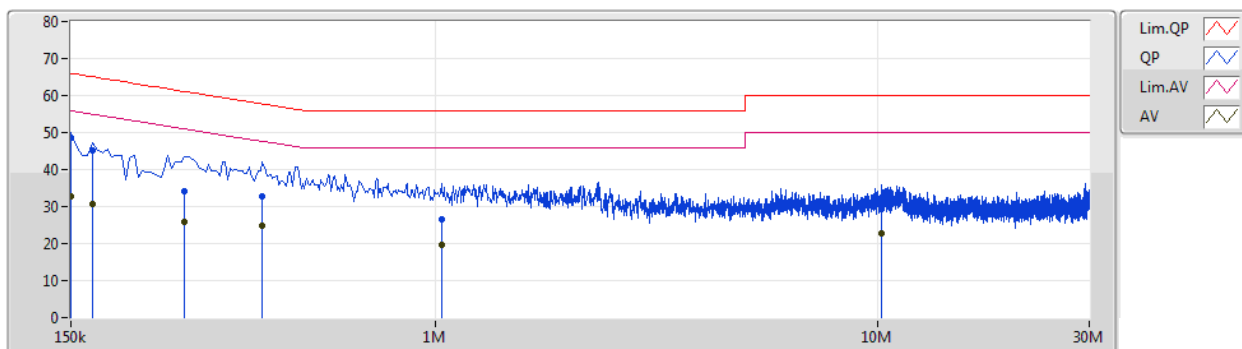
Note: Calibration Interval of instruments listed above is one year.

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

Test Mode	Mode 1	Frequency Range	0.15 MHz to 30 MHz
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Line

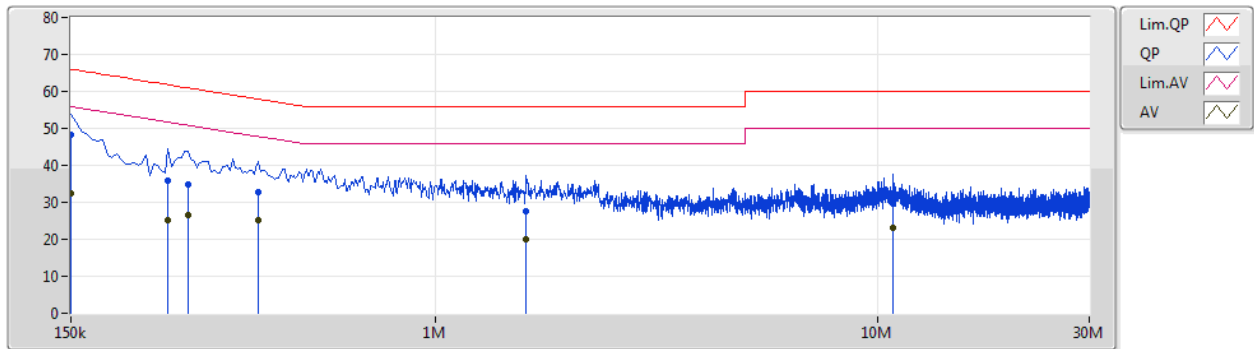
08/06/2020



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	AF (dB)	CL (dB)	AT (dB)			
QP	150k	48.69	66.00	-17.31	10.20	Line	"Worst"	38.49	0.05	0.05	10.10			
AV	150k	32.88	56.00	-23.12	10.20	Line	-	22.68	0.05	0.05	10.10			
QP	168k	45.17	65.06	-19.89	10.21	Line	-	34.96	0.05	0.06	10.10			
AV	168k	30.62	55.06	-24.44	10.21	Line	-	20.41	0.05	0.06	10.10			
QP	271.5k	34.30	61.07	-26.77	10.22	Line	-	24.08	0.05	0.07	10.10			
AV	271.5k	25.85	51.07	-25.22	10.22	Line	-	15.63	0.05	0.07	10.10			
QP	406.5k	32.82	57.72	-24.90	10.23	Line	-	22.59	0.05	0.08	10.10			
AV	406.5k	24.76	47.72	-22.96	10.23	Line	-	14.53	0.05	0.08	10.10			
QP	1.032M	26.63	56.00	-29.37	10.28	Line	-	16.35	0.06	0.12	10.10			
AV	1.032M	19.66	46.00	-26.34	10.28	Line	-	9.38	0.06	0.12	10.10			
QP	10.167M	29.21	60.00	-30.79	10.50	Line	-	18.71	0.23	0.16	10.11			
AV	10.167M	22.60	50.00	-27.40	10.50	Line	-	12.10	0.23	0.16	10.11			

Neutral

08/06/2020

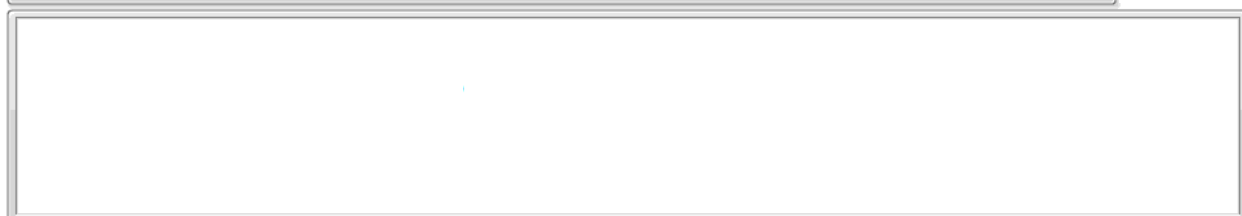
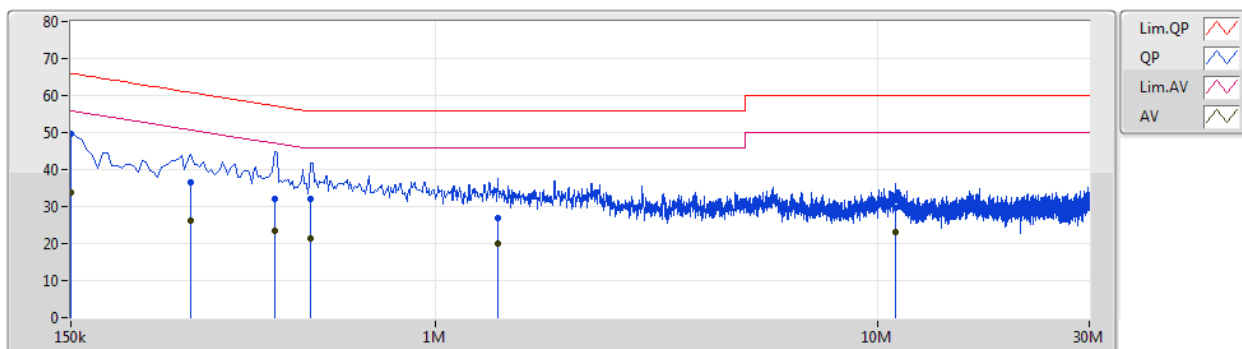


Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor	Condition	Comment	Raw (dBuV)	AF (dB)	CL (dB)	AT (dB)			
QP	150k	48.31	66.00	-17.69	10.20	Neutral	"Worst"	38.11	0.05	0.05	10.10			
AV	150k	32.43	56.00	-23.57	10.20	Neutral	-	22.23	0.05	0.05	10.10			
QP	249k	35.95	61.79	-25.84	10.22	Neutral	-	25.73	0.05	0.07	10.10			
AV	249k	25.10	51.79	-26.69	10.22	Neutral	-	14.88	0.05	0.07	10.10			
QP	276k	34.94	60.93	-25.99	10.22	Neutral	-	24.72	0.05	0.07	10.10			
AV	276k	26.47	50.93	-24.46	10.22	Neutral	-	16.25	0.05	0.07	10.10			
QP	397.5k	32.72	57.91	-25.19	10.23	Neutral	-	22.49	0.05	0.08	10.10			
AV	397.5k	25.07	47.91	-22.84	10.23	Neutral	-	14.84	0.05	0.08	10.10			
QP	1.604M	27.62	56.00	-28.38	10.32	Neutral	-	17.30	0.07	0.15	10.10			
AV	1.604M	20.15	46.00	-25.85	10.32	Neutral	-	9.83	0.07	0.15	10.10			
QP	10.829M	29.65	60.00	-30.35	10.48	Neutral	-	19.17	0.20	0.17	10.11			
AV	10.829M	22.95	50.00	-27.05	10.48	Neutral	-	12.47	0.20	0.17	10.11			

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

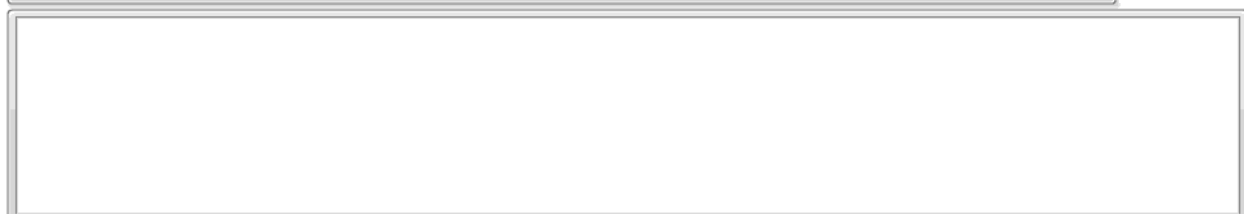
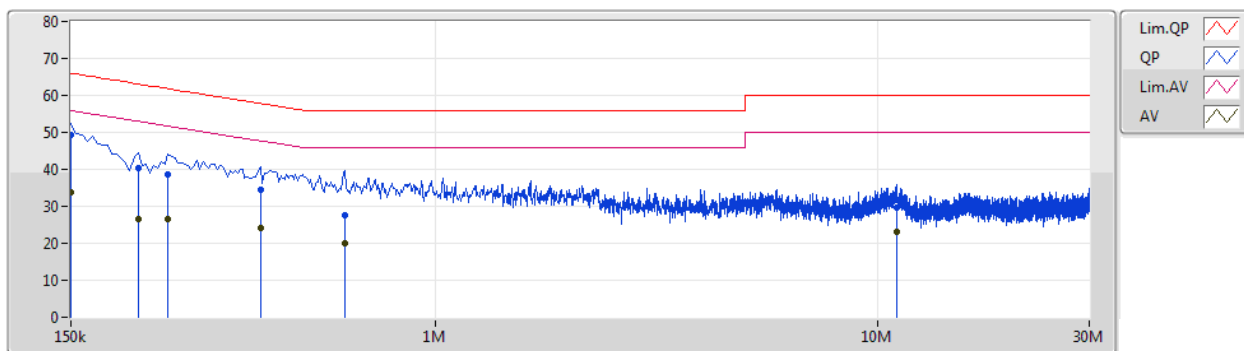
08/06/2020



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	AF (dB)	CL (dB)	AT (dB)			
QP	150k	49.56	66.00	-16.44	10.20	Line	"Worst"	39.36	0.05	0.05	10.10			
AV	150k	33.73	56.00	-22.27	10.20	Line	-	23.53	0.05	0.05	10.10			
QP	280.5k	36.58	60.80	-24.22	10.22	Line	-	26.36	0.05	0.07	10.10			
AV	280.5k	26.32	50.80	-24.48	10.22	Line	-	16.10	0.05	0.07	10.10			
QP	433.5k	32.10	57.19	-25.09	10.23	Line	-	21.87	0.05	0.08	10.10			
AV	433.5k	23.35	47.19	-23.84	10.23	Line	-	13.12	0.05	0.08	10.10			
QP	523.5k	31.93	56.00	-24.07	10.24	Line	-	21.69	0.05	0.09	10.10			
AV	523.5k	21.28	46.00	-24.72	10.24	Line	-	11.04	0.05	0.09	10.10			
QP	1.383M	27.01	56.00	-28.99	10.31	Line	-	16.70	0.07	0.14	10.10			
AV	1.383M	20.06	46.00	-25.94	10.31	Line	-	9.75	0.07	0.14	10.10			
QP	10.946M	29.70	60.00	-30.30	10.53	Line	-	19.17	0.25	0.17	10.11			
AV	10.946M	23.09	50.00	-26.91	10.53	Line	-	12.56	0.25	0.17	10.11			

Neutral

08/06/2020

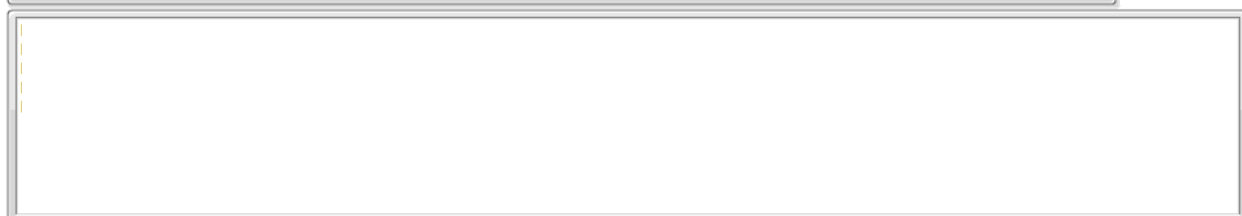
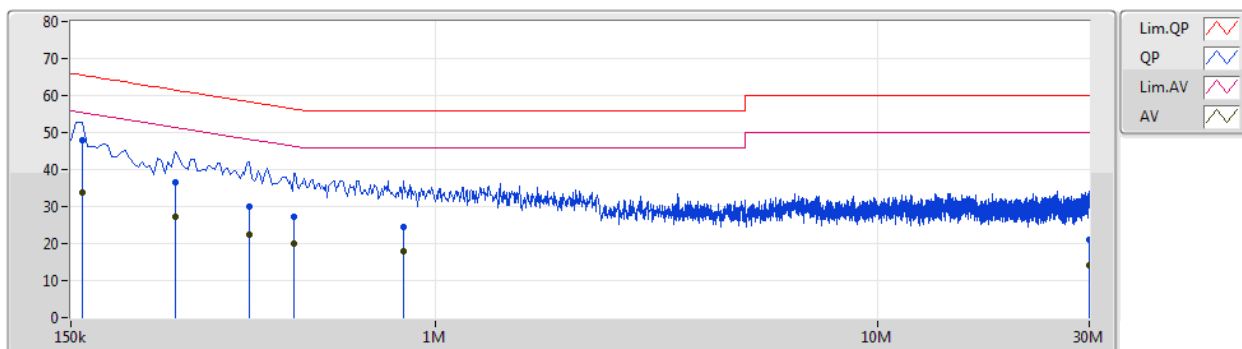


Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor	Condition	Comment	Raw (dBuV)	AF (dB)	CL (dB)	AT (dB)			
QP	150k	49.32	66.00	-16.68	10.20	Neutral	"Worst"	39.12	0.05	0.05	10.10			
AV	150k	33.70	56.00	-22.30	10.20	Neutral	-	23.50	0.05	0.05	10.10			
QP	213k	40.51	63.09	-22.58	10.22	Neutral	-	30.29	0.05	0.07	10.10			
AV	213k	26.65	53.09	-26.44	10.22	Neutral	-	16.43	0.05	0.07	10.10			
QP	249k	38.77	61.79	-23.02	10.22	Neutral	-	28.55	0.05	0.07	10.10			
AV	249k	26.41	51.79	-25.38	10.22	Neutral	-	16.19	0.05	0.07	10.10			
QP	402k	34.45	57.82	-23.37	10.23	Neutral	-	24.22	0.05	0.08	10.10			
AV	402k	24.14	47.82	-23.68	10.23	Neutral	-	13.91	0.05	0.08	10.10			
QP	622.5k	27.74	56.00	-28.26	10.25	Neutral	-	17.49	0.05	0.10	10.10			
AV	622.5k	20.06	46.00	-25.94	10.25	Neutral	-	9.81	0.05	0.10	10.10			
QP	11.036M	29.64	60.00	-30.36	10.48	Neutral	-	19.16	0.20	0.17	10.11			
AV	11.036M	23.10	50.00	-26.90	10.48	Neutral	-	12.62	0.20	0.17	10.11			

Test Mode	Mode 3	Frequency Range	0.15 MHz to 30 MHz
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Line

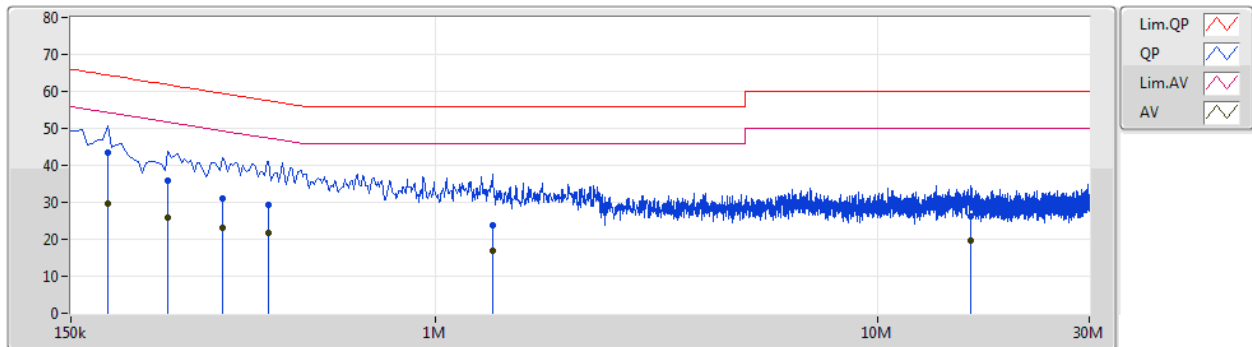
08/06/2020



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	AF (dB)	CL (dB)	AT (dB)			
QP	159k	48.09	65.52	-17.43	10.21	Line	"Worst"	37.88	0.05	0.06	10.10			
AV	159k	33.95	55.52	-21.57	10.21	Line	-	23.74	0.05	0.06	10.10			
QP	258k	36.61	61.49	-24.88	10.22	Line	-	26.39	0.05	0.07	10.10			
AV	258k	27.21	51.49	-24.28	10.22	Line	-	16.99	0.05	0.07	10.10			
QP	379.5k	30.06	58.29	-28.23	10.23	Line	-	19.83	0.05	0.08	10.10			
AV	379.5k	22.36	48.29	-25.93	10.23	Line	-	12.13	0.05	0.08	10.10			
QP	478.5k	27.40	56.36	-28.96	10.24	Line	-	17.16	0.05	0.09	10.10			
AV	478.5k	20.03	46.36	-26.33	10.24	Line	-	9.79	0.05	0.09	10.10			
QP	847.5k	24.62	56.00	-31.38	10.27	Line	-	14.35	0.06	0.11	10.10			
AV	847.5k	17.96	46.00	-28.04	10.27	Line	-	7.69	0.06	0.11	10.10			
QP	29.985M	21.06	60.00	-38.94	11.00	Line	-	10.06	0.63	0.24	10.13			
AV	29.985M	14.21	50.00	-35.79	11.00	Line	-	3.21	0.63	0.24	10.13			

Neutral

08/06/2020

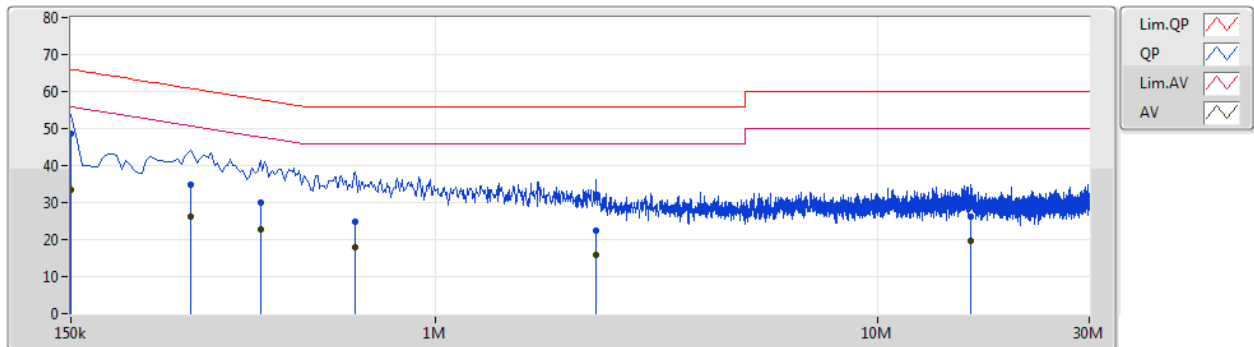


Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor	Condition	Comment	Raw (dBuV)	AF (dB)	CL (dB)	AT (dB)			
QP	181.5k	43.47	64.41	-20.94	10.21	Neutral	"Worst"	33.26	0.05	0.06	10.10			
AV	181.5k	29.65	54.41	-24.76	10.21	Neutral	-	19.44	0.05	0.06	10.10			
QP	249k	35.96	61.79	-25.83	10.22	Neutral	-	25.74	0.05	0.07	10.10			
AV	249k	25.73	51.79	-26.06	10.22	Neutral	-	15.51	0.05	0.07	10.10			
QP	330k	30.99	59.44	-28.45	10.23	Neutral	-	20.76	0.05	0.08	10.10			
AV	330k	23.15	49.44	-26.29	10.23	Neutral	-	12.92	0.05	0.08	10.10			
QP	420k	29.40	57.45	-28.05	10.23	Neutral	-	19.17	0.05	0.08	10.10			
AV	420k	21.66	47.45	-25.79	10.23	Neutral	-	11.43	0.05	0.08	10.10			
QP	1.343M	23.71	56.00	-32.29	10.31	Neutral	-	13.40	0.07	0.14	10.10			
AV	1.343M	16.82	46.00	-29.18	10.31	Neutral	-	6.51	0.07	0.14	10.10			
QP	16.184M	26.37	60.00	-33.63	10.56	Neutral	-	15.81	0.24	0.21	10.11			
AV	16.184M	19.62	50.00	-30.38	10.56	Neutral	-	9.06	0.24	0.21	10.11			

Test Mode	Mode 4	Frequency Range	0.15 MHz to 30 MHz
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Line

08/06/2020



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	AF (dB)	CL (dB)	AT (dB)
QP	150k	48.58	66.00	-17.42	10.20	Line	"Worst"	38.38	0.05	0.05	10.10
AV	150k	33.60	56.00	-22.40	10.20	Line	-	23.40	0.05	0.05	10.10
QP	280.5k	34.87	60.80	-25.93	10.22	Line	-	24.65	0.05	0.07	10.10
AV	280.5k	26.16	50.80	-24.64	10.22	Line	-	15.94	0.05	0.07	10.10
QP	402k	30.10	57.82	-27.72	10.23	Line	-	19.87	0.05	0.08	10.10
AV	402k	22.61	47.82	-25.21	10.23	Line	-	12.38	0.05	0.08	10.10
QP	658.5k	24.69	56.00	-31.31	10.26	Line	-	14.43	0.06	0.10	10.10
AV	658.5k	17.78	46.00	-28.22	10.26	Line	-	7.52	0.06	0.10	10.10
QP	2.301M	22.54	56.00	-33.46	10.36	Line	-	12.18	0.10	0.16	10.10
AV	2.301M	15.80	46.00	-30.20	10.36	Line	-	5.44	0.10	0.16	10.10
QP	16.22M	26.26	60.00	-33.74	10.67	Line	-	15.59	0.35	0.21	10.11
AV	16.22M	19.52	50.00	-30.48	10.67	Line	-	8.85	0.35	0.21	10.11

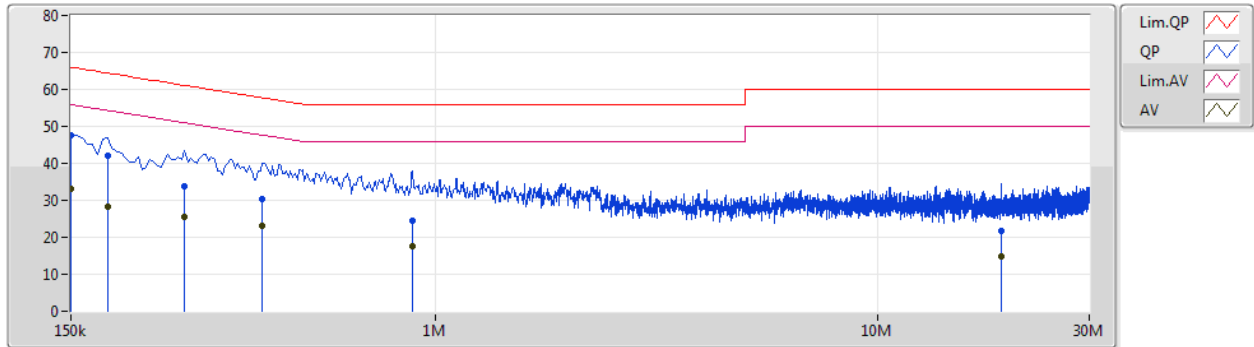


AC Power Port Conducted Emission Result

Appendix A

Neutral

08/06/2020



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor	Condition	Comment	Raw (dBuV)	AF (dB)	CL (dB)	AT (dB)			
QP	150k	47.73	66.00	-18.27	10.20	Neutral	"Worst"	37.53	0.05	0.05	10.10			
AV	150k	33.12	56.00	-22.88	10.20	Neutral	-	22.92	0.05	0.05	10.10			
QP	181.5k	42.16	64.41	-22.25	10.21	Neutral	-	31.95	0.05	0.06	10.10			
AV	181.5k	28.35	54.41	-26.06	10.21	Neutral	-	18.14	0.05	0.06	10.10			
QP	271.5k	33.85	61.07	-27.22	10.22	Neutral	-	23.63	0.05	0.07	10.10			
AV	271.5k	25.44	51.07	-25.63	10.22	Neutral	-	15.22	0.05	0.07	10.10			
QP	406.5k	30.41	57.72	-27.31	10.23	Neutral	-	20.18	0.05	0.08	10.10			
AV	406.5k	22.97	47.72	-24.75	10.23	Neutral	-	12.74	0.05	0.08	10.10			
QP	888k	24.55	56.00	-31.45	10.27	Neutral	-	14.28	0.06	0.11	10.10			
AV	888k	17.69	46.00	-28.31	10.27	Neutral	-	7.42	0.06	0.11	10.10			
QP	18.951M	21.68	60.00	-38.32	10.57	Neutral	-	11.11	0.25	0.21	10.11			
AV	18.951M	14.90	50.00	-35.10	10.57	Neutral	-	4.33	0.25	0.21	10.11			



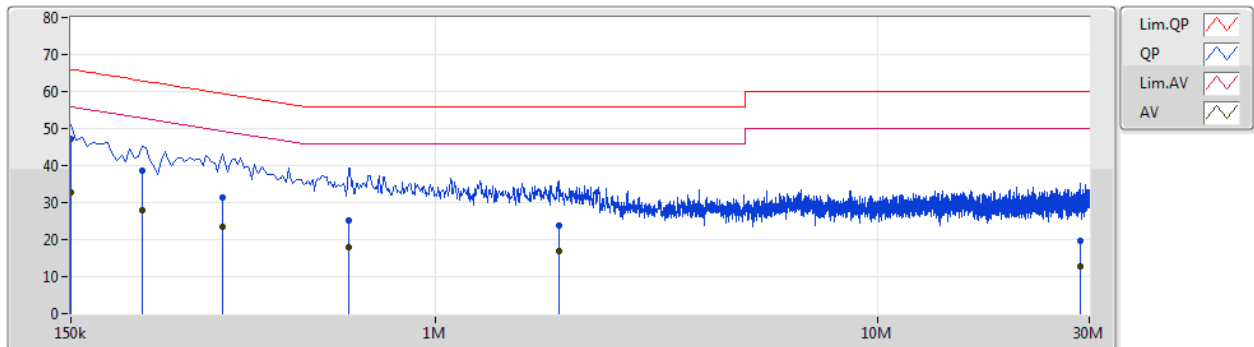
AC Power Port Conducted Emission Result

Appendix A

Test Mode	Mode 5	Frequency Range	0.15 MHz to 30 MHz
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Line

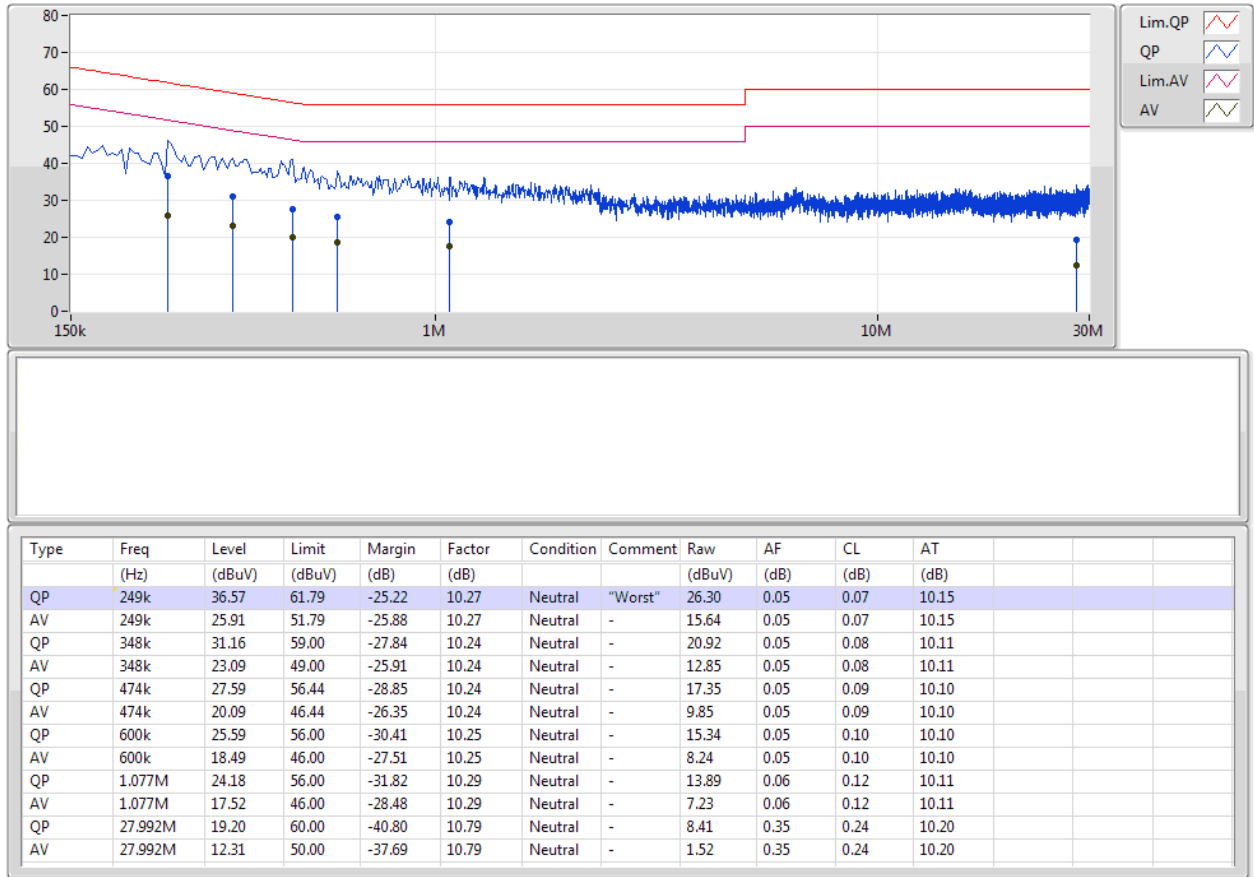
24/07/2020



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	AF (dB)	CL (dB)	AT (dB)			
QP	150k	47.37	66.00	-18.63	10.25	Line	"Worst"	37.12	0.05	0.05	10.15			
AV	150k	32.84	56.00	-23.16	10.25	Line	-	22.59	0.05	0.05	10.15			
QP	217.5k	38.57	62.92	-24.35	10.28	Line	-	28.29	0.05	0.07	10.16			
AV	217.5k	27.92	52.92	-25.00	10.28	Line	-	17.64	0.05	0.07	10.16			
QP	330k	31.45	59.44	-27.99	10.25	Line	-	21.20	0.05	0.08	10.12			
AV	330k	23.36	49.44	-26.08	10.25	Line	-	13.11	0.05	0.08	10.12			
QP	636k	25.25	56.00	-30.75	10.27	Line	-	14.98	0.06	0.10	10.11			
AV	636k	18.08	46.00	-27.92	10.27	Line	-	7.81	0.06	0.10	10.11			
QP	1.905M	23.75	56.00	-32.25	10.38	Line	-	13.37	0.09	0.16	10.13			
AV	1.905M	17.00	46.00	-29.00	10.38	Line	-	6.62	0.09	0.16	10.13			
QP	28.617M	19.69	60.00	-40.31	11.04	Line	-	8.65	0.60	0.24	10.20			
AV	28.617M	12.84	50.00	-37.16	11.04	Line	-	1.80	0.60	0.24	10.20			

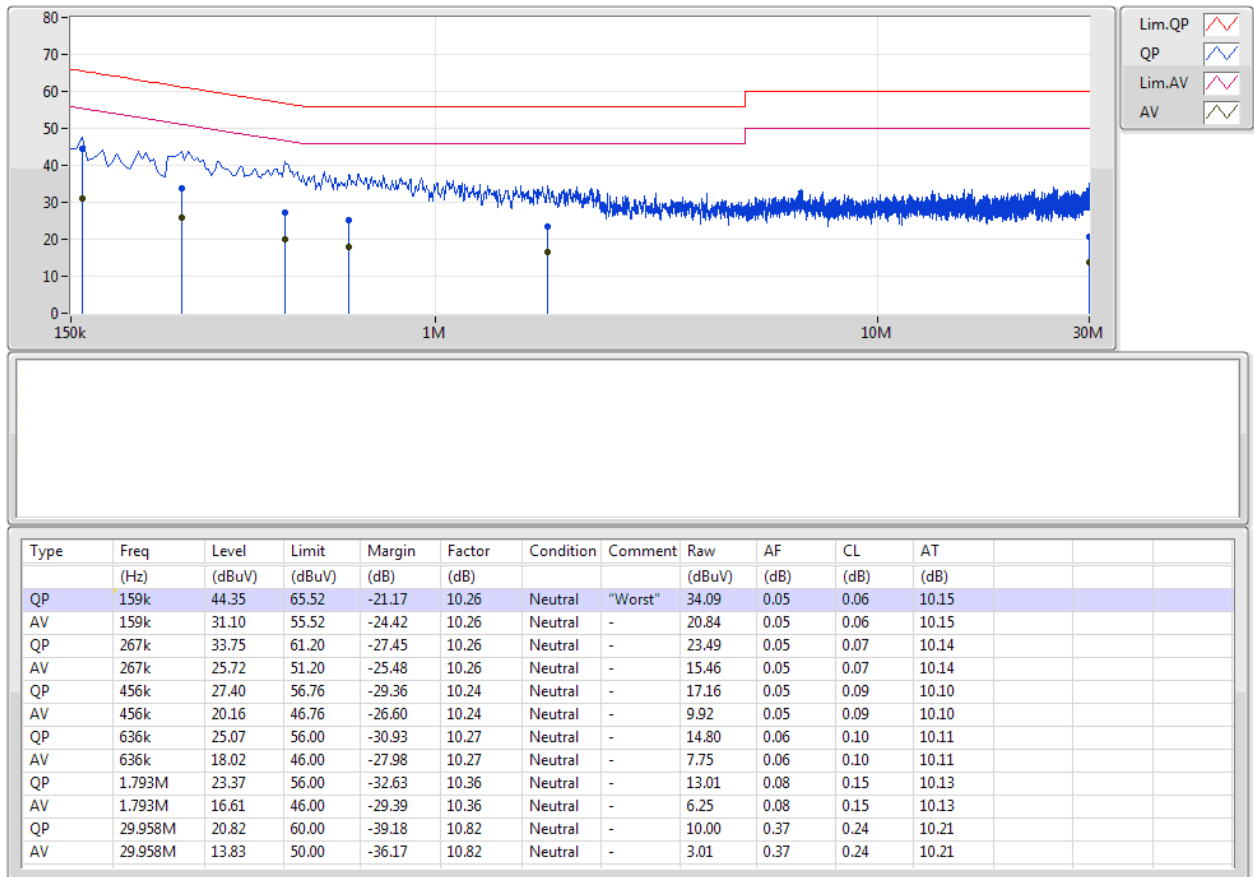
Neutral

24/07/2020



Neutral

24/07/2020



For non-beamforming mode:

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ac VHT160_Nss1,(MCS0)_4TX	86.24M	76.202M	76M2D1D	84.32M	75.882M
802.11ax HEW160_Nss1,(MCS0)_4TX	81.68M	77.801M	77M8D1D	80.88M	77.561M
5.25-5.35GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	26.325M	16.692M	16M7D1D	24.525M	16.567M
802.11ac VHT20_Nss1,(MCS0)_4TX	28.775M	17.916M	17M9D1D	26.1M	17.841M
802.11ac VHT40_Nss1,(MCS0)_4TX	49.85M	36.532M	36M5D1D	47.3M	36.382M
802.11ac VHT80_Nss1,(MCS0)_4TX	93.3M	75.962M	76M0D1D	89.9M	75.762M
802.11ac VHT160_Nss1,(MCS0)_4TX	85.44M	76.202M	76M2D1D	83.68M	75.802M
802.11ax HEW20_Nss1,(MCS0)_4TX	23.05M	19.14M	19M1D1D	21M	18.916M
802.11ax HEW40_Nss1,(MCS0)_4TX	44.55M	37.981M	38M0D1D	41.95M	37.831M
802.11ax HEW80_Nss1,(MCS0)_4TX	83.8M	77.561M	77M6D1D	82.8M	77.361M
802.11ax HEW160_Nss1,(MCS0)_4TX	82.32M	77.321M	77M3D1D	81.12M	77.161M
5.47-5.725GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	26.025M	16.692M	16M7D1D	16.38M	13.283M
802.11ac VHT20_Nss1,(MCS0)_4TX	29.525M	17.916M	17M9D1D	17.73M	13.943M
802.11ac VHT40_Nss1,(MCS0)_4TX	55.55M	36.482M	36M5D1D	38.115M	33.058M
802.11ac VHT80_Nss1,(MCS0)_4TX	94.8M	76.062M	76M1D1D	79.5M	72.639M
802.11ac VHT160_Nss1,(MCS0)_4TX	174.2M	155.322M	155MD1D	171.8M	154.523M
802.11ax HEW20_Nss1,(MCS0)_4TX	26.3M	19.215M	19M2D1D	16.485M	14.528M
802.11ax HEW40_Nss1,(MCS0)_4TX	44.75M	38.181M	38M2D1D	35.91M	33.828M
802.11ax HEW80_Nss1,(MCS0)_4TX	84.9M	77.461M	77M5D1D	75.975M	73.388M
802.11ax HEW160_Nss1,(MCS0)_4TX	165.6M	156.522M	157MD1D	164.2M	156.322M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	3.26M	4.958M	4M96D1D	3.24M	4.438M
802.11ac VHT20_Nss1,(MCS0)_4TX	3.88M	4.978M	4M98D1D	3.86M	4.858M
802.11ac VHT40_Nss1,(MCS0)_4TX	3.26M	5.357M	5M36D1D	3.24M	4.518M
802.11ac VHT80_Nss1,(MCS0)_4TX	3.24M	7.316M	7M32D1D	3.24M	4.518M
802.11ax HEW20_Nss1,(MCS0)_4TX	4.5M	4.498M	4M50D1D	4.48M	4.478M
802.11ax HEW40_Nss1,(MCS0)_4TX	4.14M	5.897M	5M90D1D	4.12M	4.418M
802.11ax HEW80_Nss1,(MCS0)_4TX	4.04M	4.418M	4M42D1D	4.02M	4.118M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;

Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	24.525M	16.592M	25.875M	16.692M	25.375M	16.617M	26.325M	16.667M
5300MHz	Pass	Inf	24.775M	16.617M	25.75M	16.692M	25.175M	16.592M	26.2M	16.692M
5320MHz	Pass	Inf	25M	16.567M	25.775M	16.692M	25.2M	16.592M	26.25M	16.692M
5500MHz	Pass	Inf	25.725M	16.642M	25.75M	16.692M	25.1M	16.667M	25.725M	16.692M
5580MHz	Pass	Inf	25.475M	16.617M	25.625M	16.642M	25.325M	16.642M	26.025M	16.692M
5700MHz	Pass	Inf	24.875M	16.592M	25.575M	16.642M	25.025M	16.642M	25.925M	16.567M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	16.62M	13.313M	17.025M	13.343M	17.28M	13.388M	16.38M	13.283M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.24M	4.438M	3.24M	4.818M	3.24M	4.518M	3.26M	4.958M
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	28.25M	17.891M	28.7M	17.866M	27.675M	17.841M	26.375M	17.841M
5300MHz	Pass	Inf	28.075M	17.891M	28.6M	17.891M	27.475M	17.866M	26.1M	17.866M
5320MHz	Pass	Inf	28.25M	17.916M	28.775M	17.841M	27.75M	17.841M	26.1M	17.916M
5500MHz	Pass	Inf	28.5M	17.916M	29.525M	17.916M	27.775M	17.916M	26.5M	17.866M
5580MHz	Pass	Inf	28.65M	17.866M	29.125M	17.891M	27.4M	17.866M	25.825M	17.816M
5700MHz	Pass	Inf	28.475M	17.866M	29.025M	17.916M	27.5M	17.916M	25.4M	17.766M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	18.63M	14.018M	19.635M	14.033M	19.17M	14.018M	17.73M	13.943M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.88M	4.858M	3.88M	4.858M	3.88M	4.978M	3.86M	4.938M
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5270MHz	Pass	Inf	48M	36.432M	47.95M	36.482M	49.65M	36.382M	47.7M	36.432M
5310MHz	Pass	Inf	49.6M	36.532M	48.3M	36.432M	49.85M	36.382M	47.3M	36.482M
5510MHz	Pass	Inf	47.65M	36.382M	47.6M	36.332M	47.2M	36.432M	47.75M	36.432M
5550MHz	Pass	Inf	49.15M	36.382M	47.7M	36.382M	49.35M	36.432M	49.7M	36.332M
5670MHz	Pass	Inf	55.55M	36.432M	49.05M	36.382M	49.45M	36.482M	48.2M	36.432M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	40.075M	33.058M	38.115M	33.093M	39.445M	33.058M	38.22M	33.163M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.26M	4.958M	3.24M	4.778M	3.24M	5.357M	3.26M	4.518M
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5290MHz	Pass	Inf	93.3M	75.862M	91.8M	75.962M	90.3M	75.762M	89.9M	75.862M
5530MHz	Pass	Inf	94.3M	76.062M	91.9M	75.962M	90.3M	75.862M	90M	75.762M
5610MHz	Pass	Inf	94.8M	76.062M	92.3M	76.062M	90.4M	75.862M	90.2M	75.962M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	82.2M	72.639M	80.175M	72.639M	79.8M	72.639M	79.5M	72.714M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.24M	7.316M	3.24M	6.177M	3.24M	6.497M	3.24M	4.518M
802.11ac VHT160_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5250MHz	Pass	Inf	86M	76.042M	84.32M	75.882M	85.84M	76.042M	86.24M	76.202M
5250MHz	Pass	Inf	83.68M	75.802M	84.32M	76.202M	85.44M	76.122M	84.48M	75.882M
5570MHz	Pass	Inf	171.8M	154.523M	172.4M	155.322M	174.2M	155.122M	173.8M	155.122M
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	22.85M	18.941M	22.9M	18.966M	21.525M	18.916M	21M	18.941M
5300MHz	Pass	Inf	22.525M	19.09M	21.475M	19.09M	21.575M	19.04M	21.725M	19.14M
5320MHz	Pass	Inf	23.05M	19.04M	22.6M	19.065M	21.9M	18.991M	21.45M	19.015M
5500MHz	Pass	Inf	23.525M	19.215M	24.225M	19.19M	23.85M	19.165M	23.75M	19.165M
5580MHz	Pass	Inf	26.3M	19.19M	24.425M	19.065M	23.525M	19.065M	22.975M	19.015M
5700MHz	Pass	Inf	22.3M	18.941M	22.025M	18.941M	21.325M	18.916M	22.45M	18.941M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	17.76M	14.633M	16.92M	14.558M	16.485M	14.528M	16.695M	14.528M

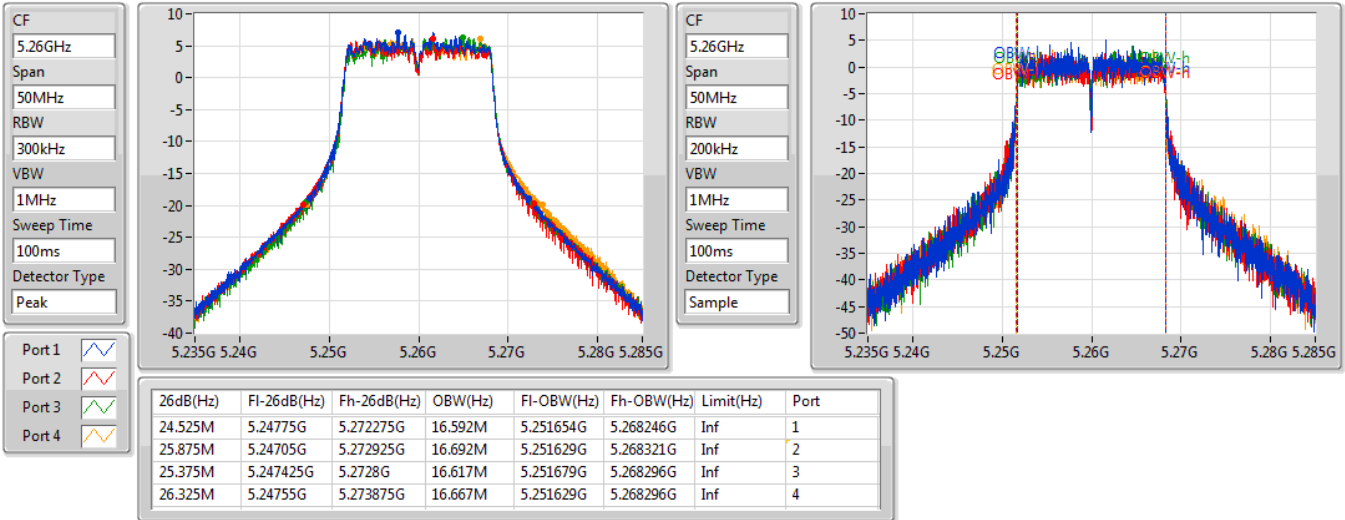
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
5720MHz Straddle 5.725-5.85GHz	Pass	500k	4.48M	4.478M	4.5M	4.478M	4.48M	4.478M	4.5M	4.498M
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5270MHz	Pass	Inf	44.25M	37.931M	43.85M	37.831M	43.45M	37.931M	44.25M	37.981M
5310MHz	Pass	Inf	44M	37.931M	44.55M	37.931M	43.65M	37.831M	41.95M	37.831M
5510MHz	Pass	Inf	44.75M	38.131M	44.2M	38.181M	43.5M	38.131M	43.5M	38.131M
5550MHz	Pass	Inf	43.8M	37.981M	42.5M	38.031M	40.4M	38.031M	40.45M	37.931M
5670MHz	Pass	Inf	41.9M	38.081M	41.25M	38.081M	41.2M	38.031M	43.35M	38.031M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	37.03M	33.828M	36.155M	33.828M	36.295M	33.863M	35.91M	33.898M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	4.14M	5.897M	4.12M	4.958M	4.12M	4.438M	4.12M	4.418M
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5290MHz	Pass	Inf	83M	77.361M	82.8M	77.561M	82.9M	77.361M	83.8M	77.461M
5530MHz	Pass	Inf	83.7M	77.461M	84.9M	77.361M	84.4M	77.361M	84.1M	77.361M
5610MHz	Pass	Inf	83.4M	77.361M	83.2M	77.461M	81.5M	77.461M	82.6M	77.461M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	77.625M	73.388M	77.175M	73.388M	75.975M	73.388M	76.05M	73.388M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	4.04M	4.418M	4.04M	4.138M	4.02M	4.138M	4.02M	4.118M
802.11ax HEW160_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5250MHz	Pass	Inf	80.88M	77.801M	81.36M	77.561M	81.68M	77.721M	81.44M	77.721M
5250MHz	Pass	Inf	82.32M	77.321M	81.36M	77.161M	81.12M	77.241M	81.36M	77.321M
5570MHz	Pass	Inf	165.6M	156.522M	164.2M	156.522M	164.2M	156.522M	165M	156.322M

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

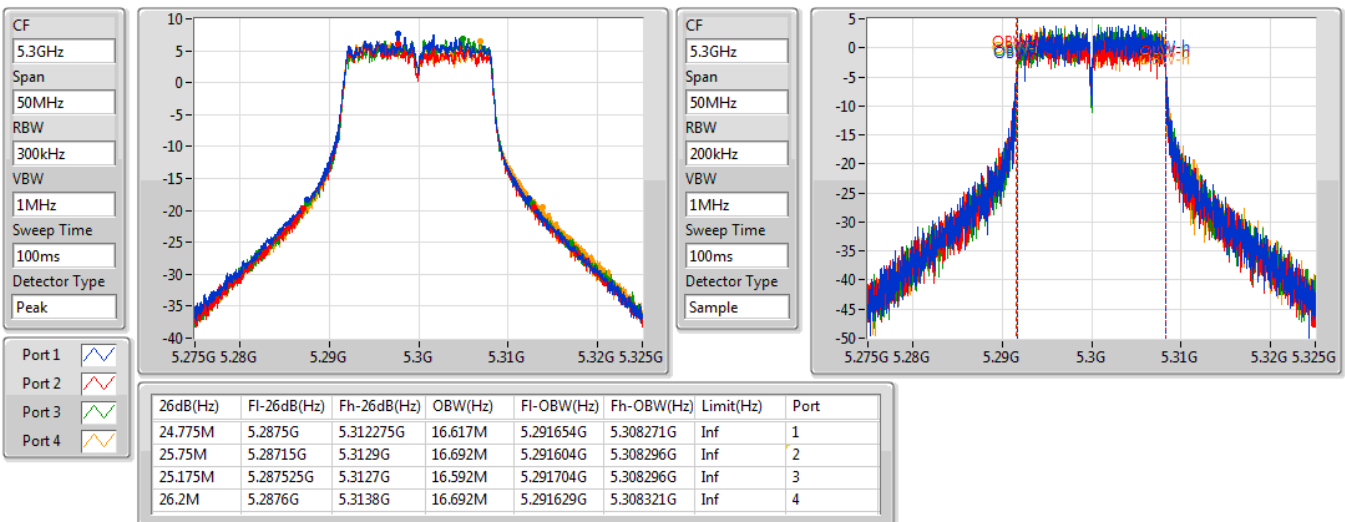
Port X-OBW = Port X 99% occupied bandwidth;

802.11a_Nss1,(6Mbps)_4TX
EBW
5260MHz

28/11/2019

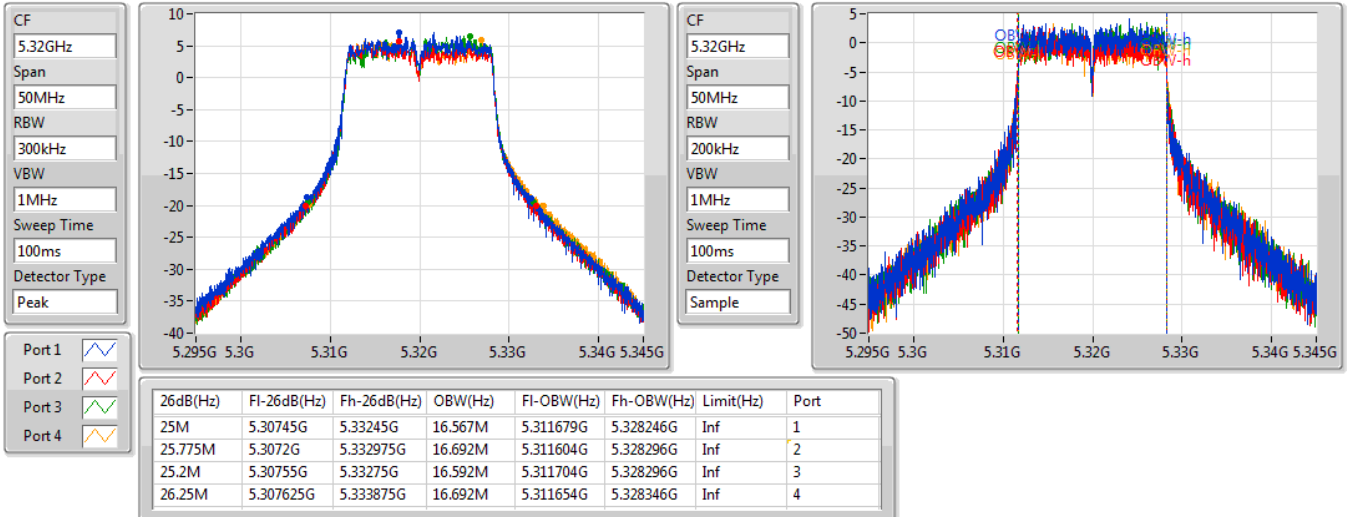

802.11a_Nss1,(6Mbps)_4TX
EBW
5300MHz

28/11/2019

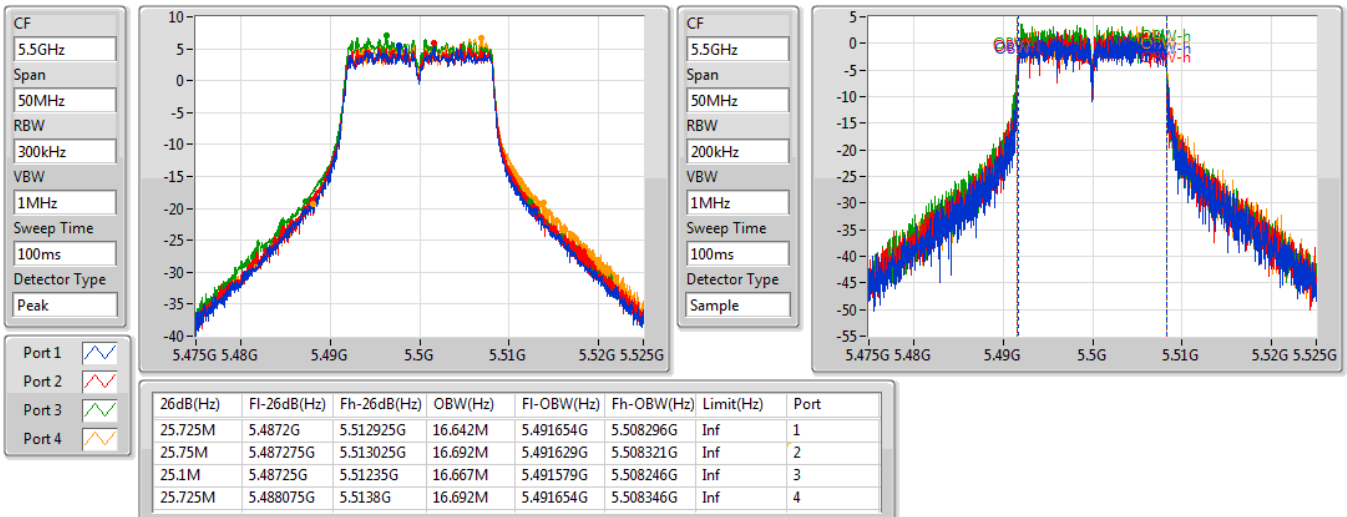


802.11a_Nss1,(6Mbps)_4TX
EBW
5320MHz

28/11/2019

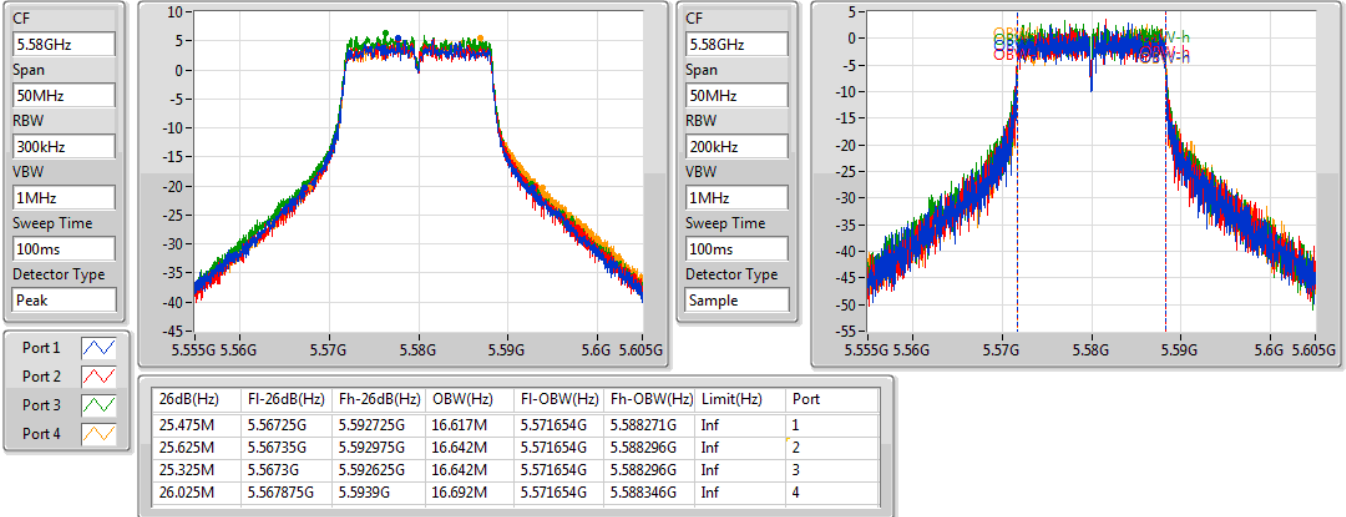

802.11a_Nss1,(6Mbps)_4TX
EBW
5500MHz

28/11/2019

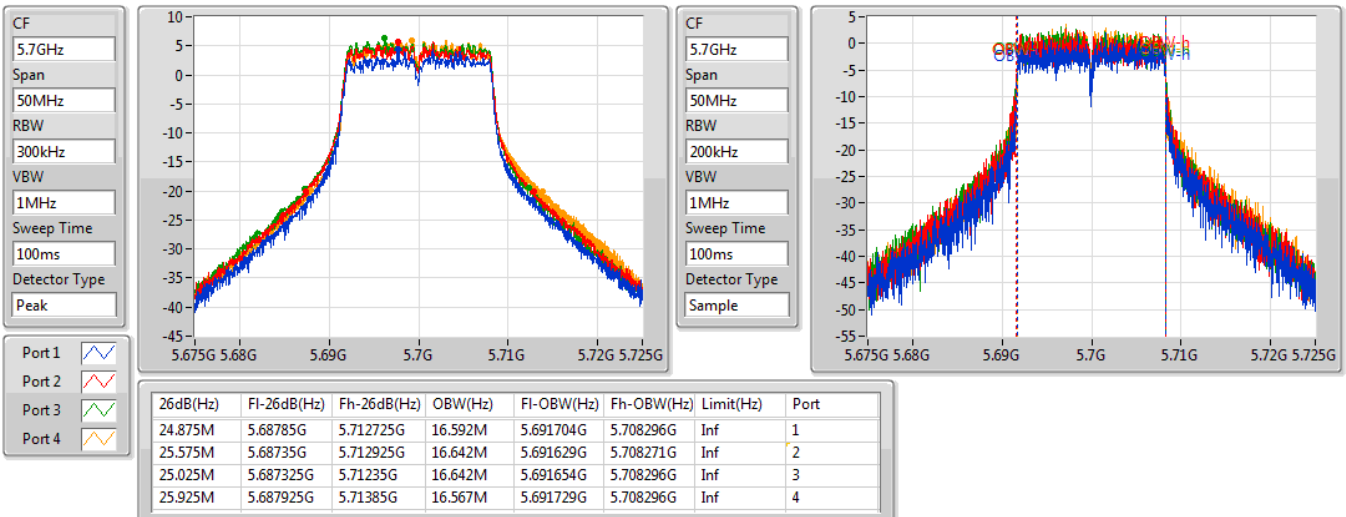


802.11a_Nss1,(6Mbps)_4TX
EBW
5580MHz

28/11/2019

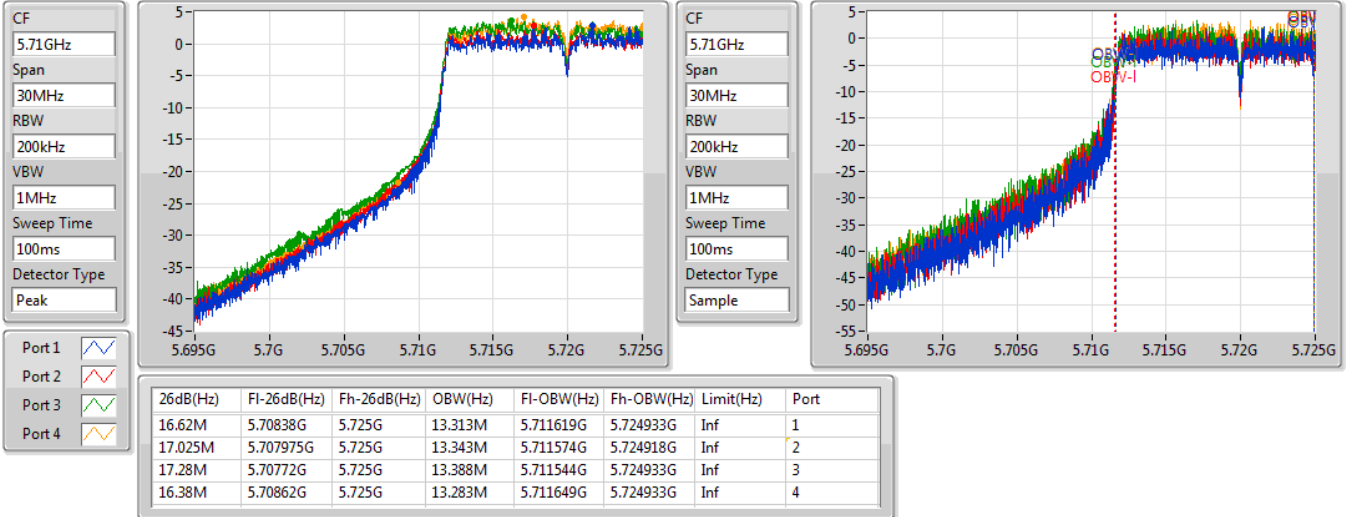

802.11a_Nss1,(6Mbps)_4TX
EBW
5700MHz

28/11/2019

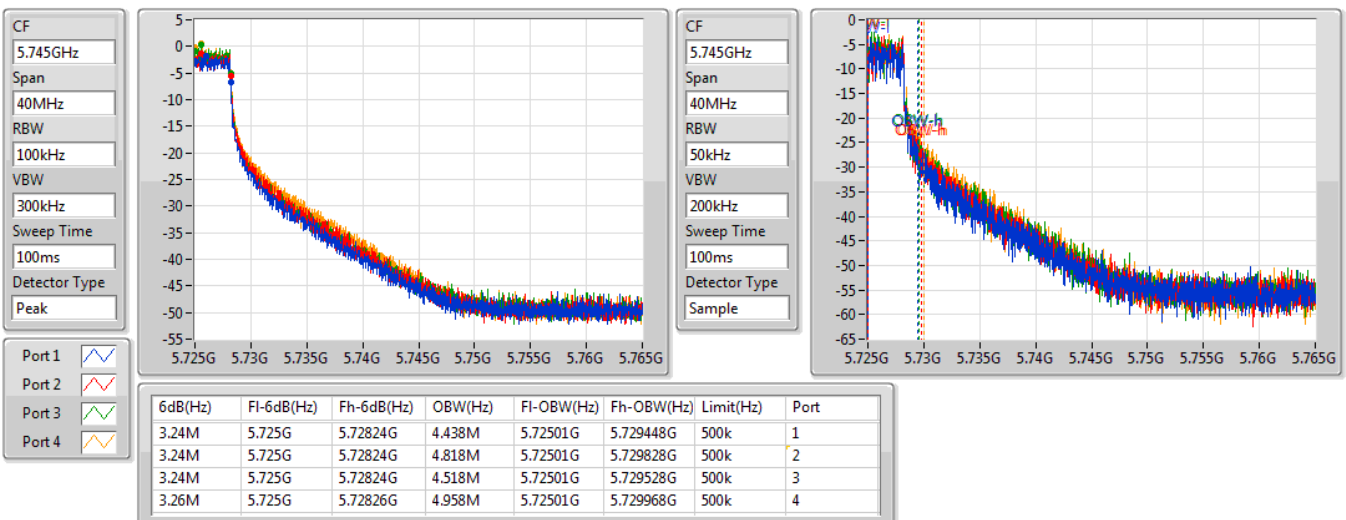


802.11a_Nss1,(6Mbps)_4TX
EBW
5720MHz Straddle 5.47-5.725GHz

28/11/2019

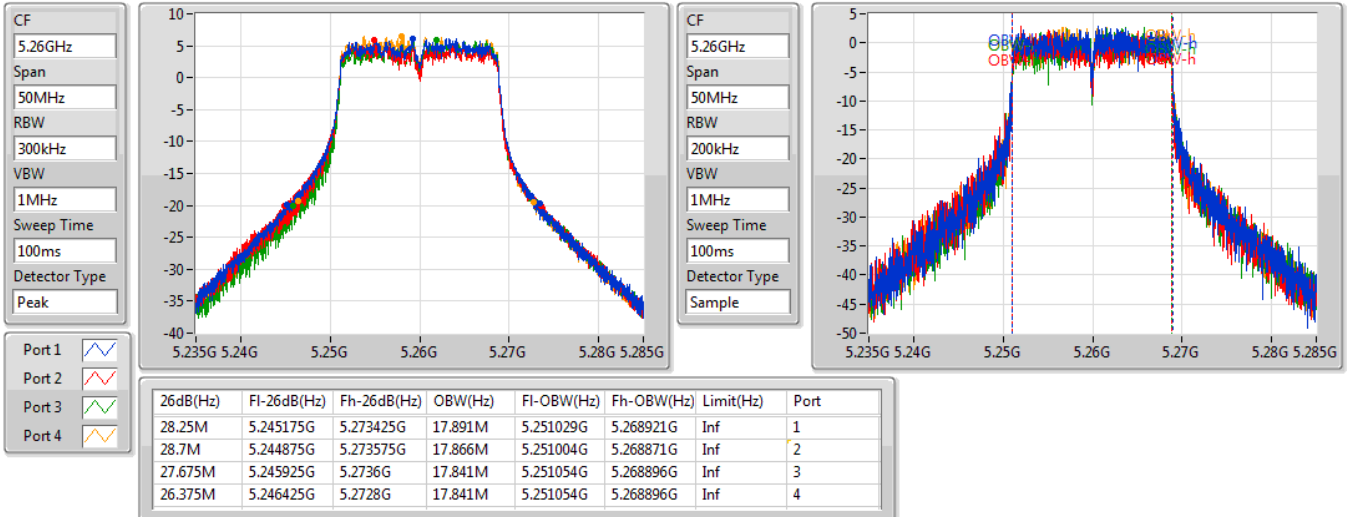

802.11a_Nss1,(6Mbps)_4TX
EBW
5720MHz Straddle 5.725-5.85GHz

28/11/2019

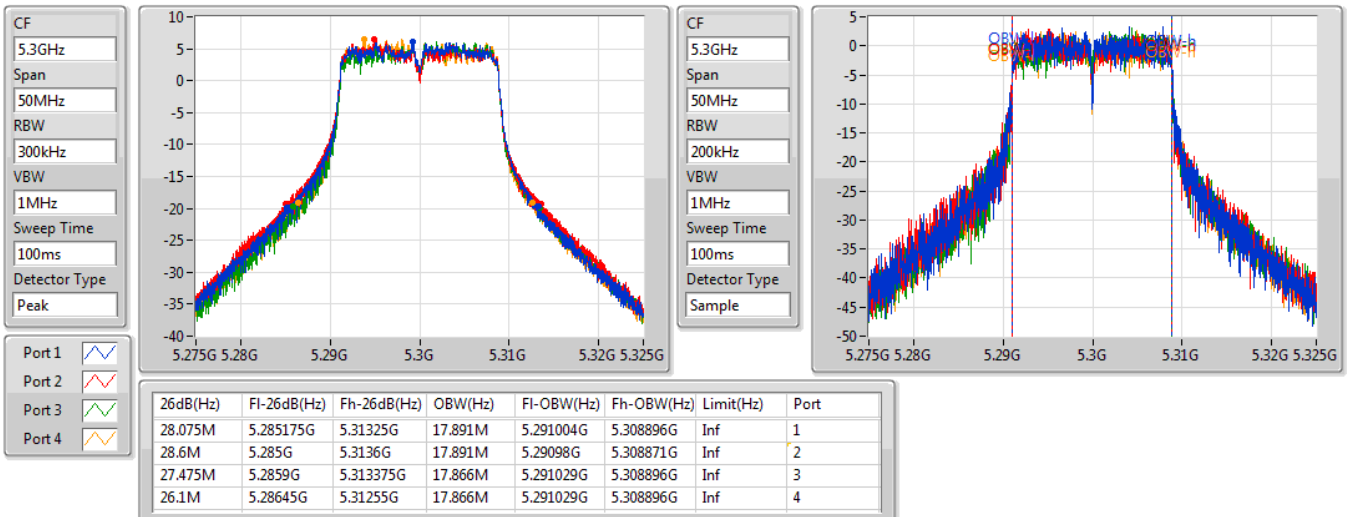


802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5260MHz

28/11/2019

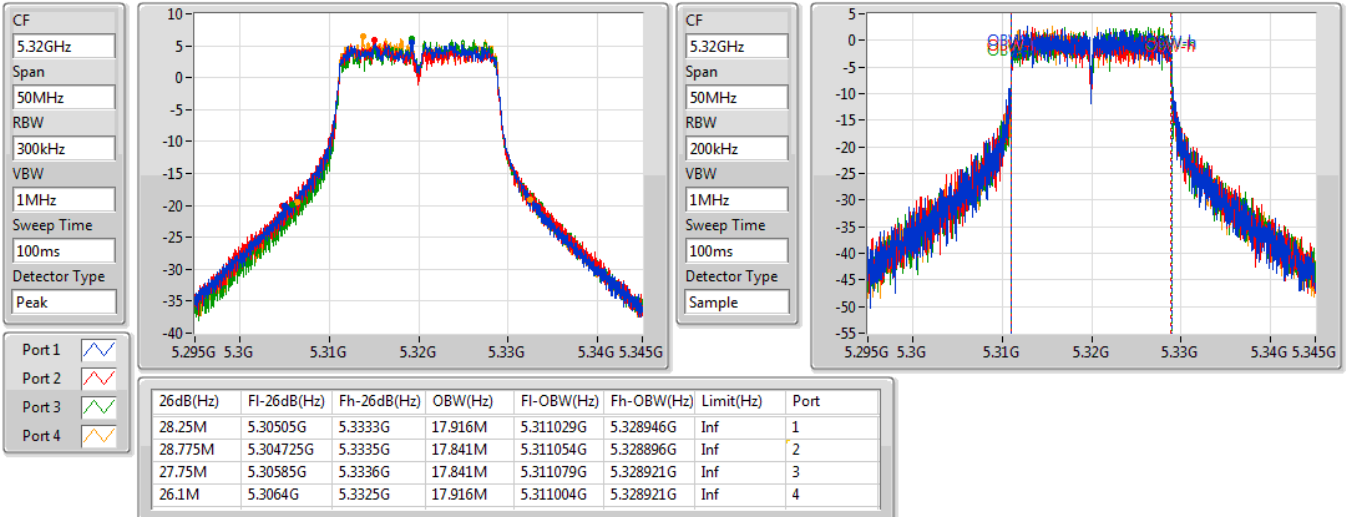

802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5300MHz

28/11/2019

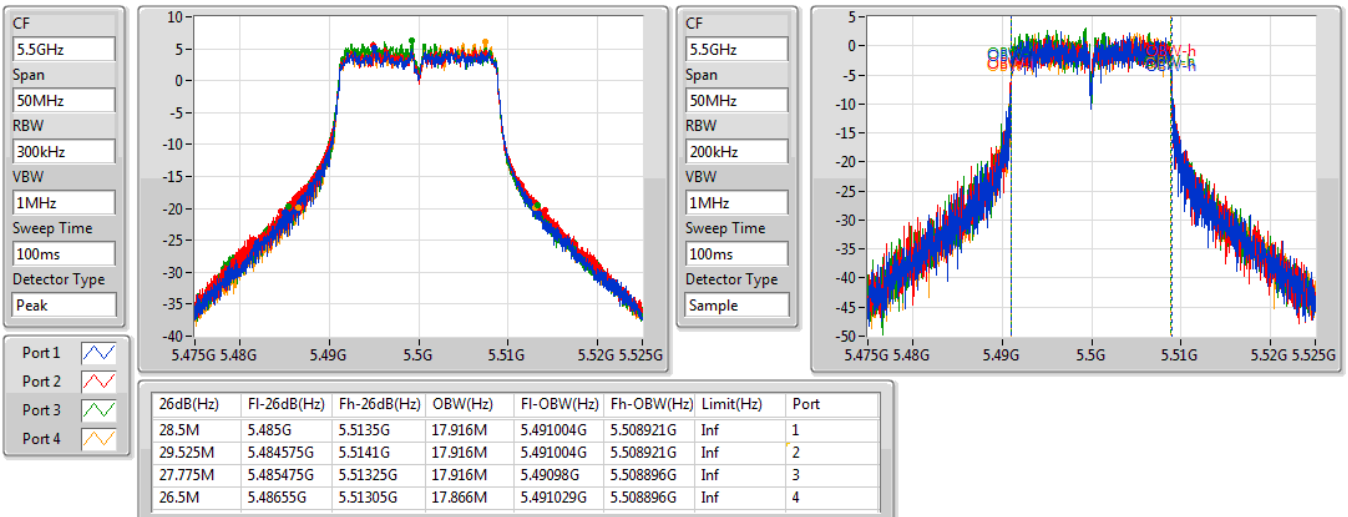


802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5320MHz

28/11/2019

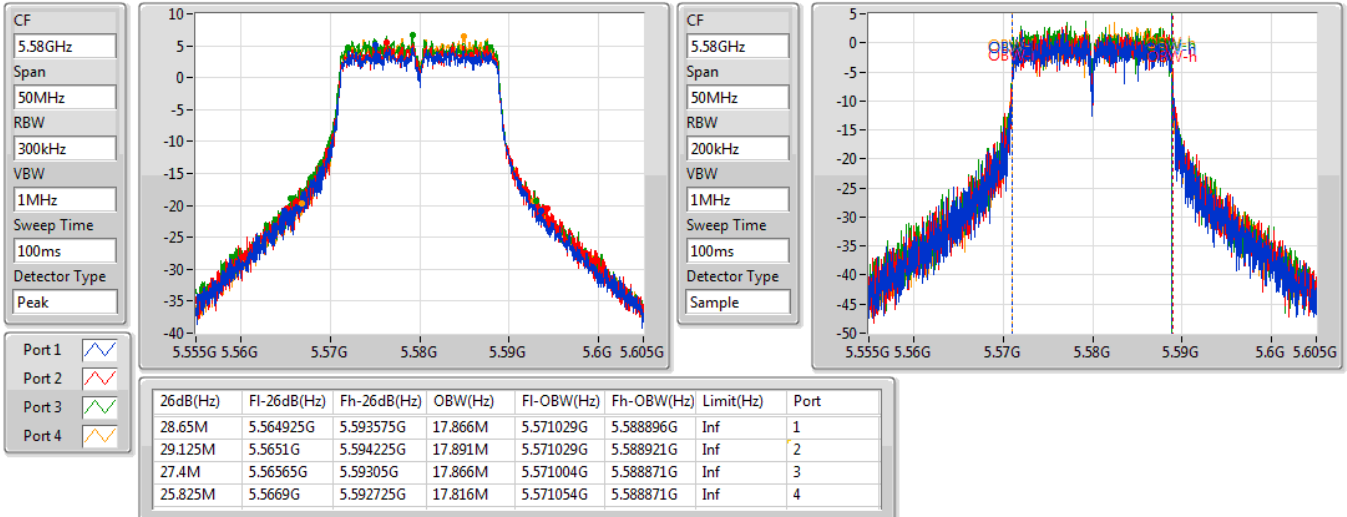

802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5500MHz

28/11/2019

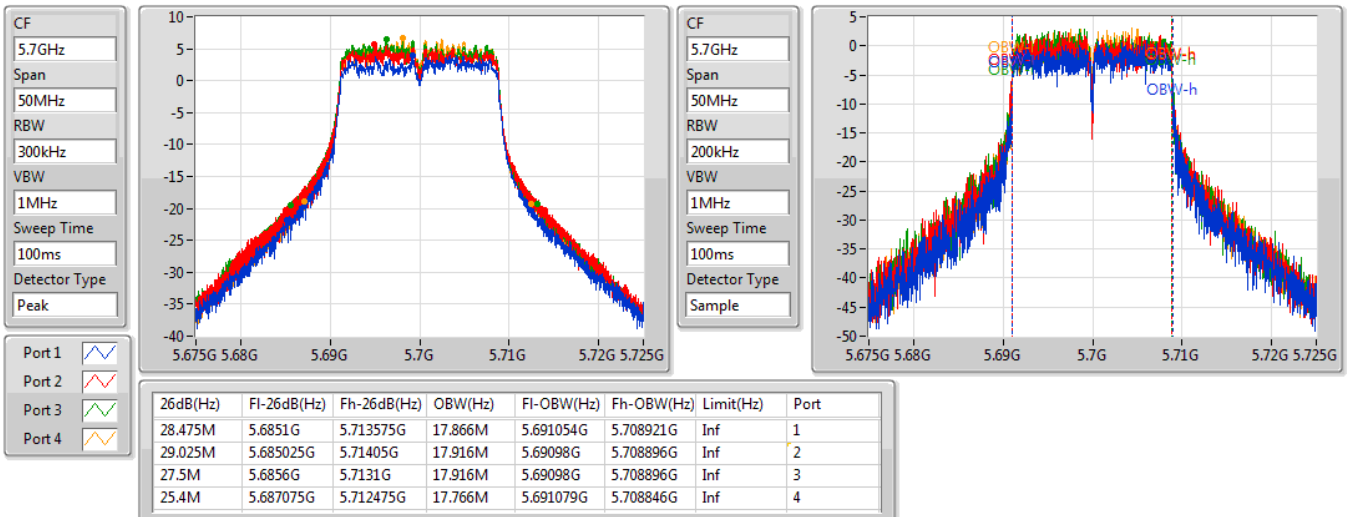


802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5580MHz

28/11/2019

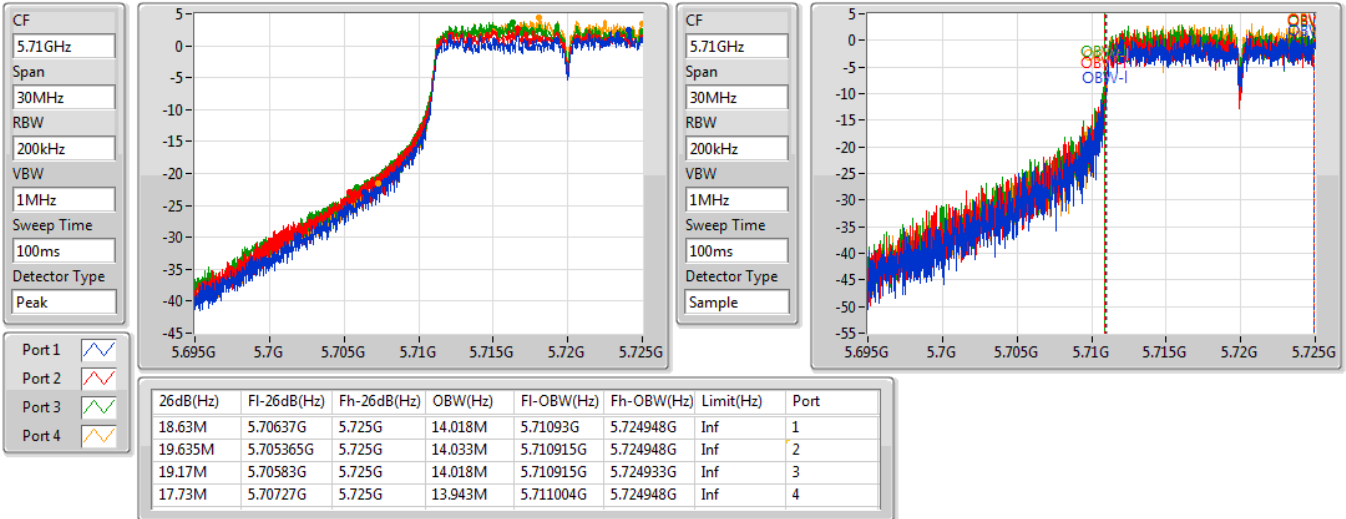

802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5700MHz

28/11/2019

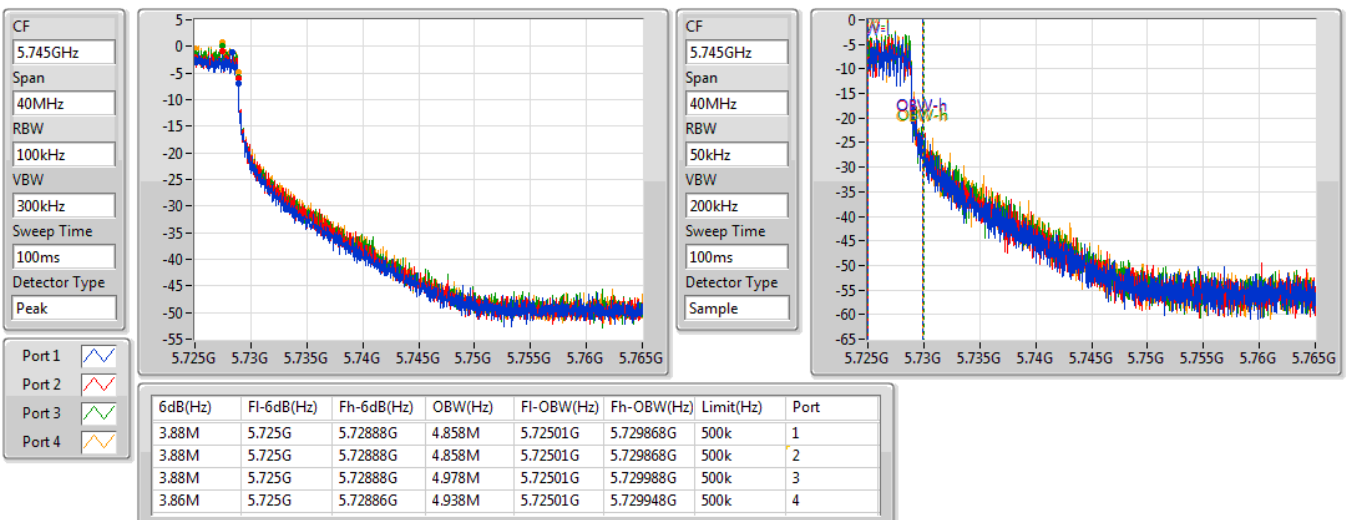


802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5720MHz Straddle 5.47-5.725GHz

28/11/2019

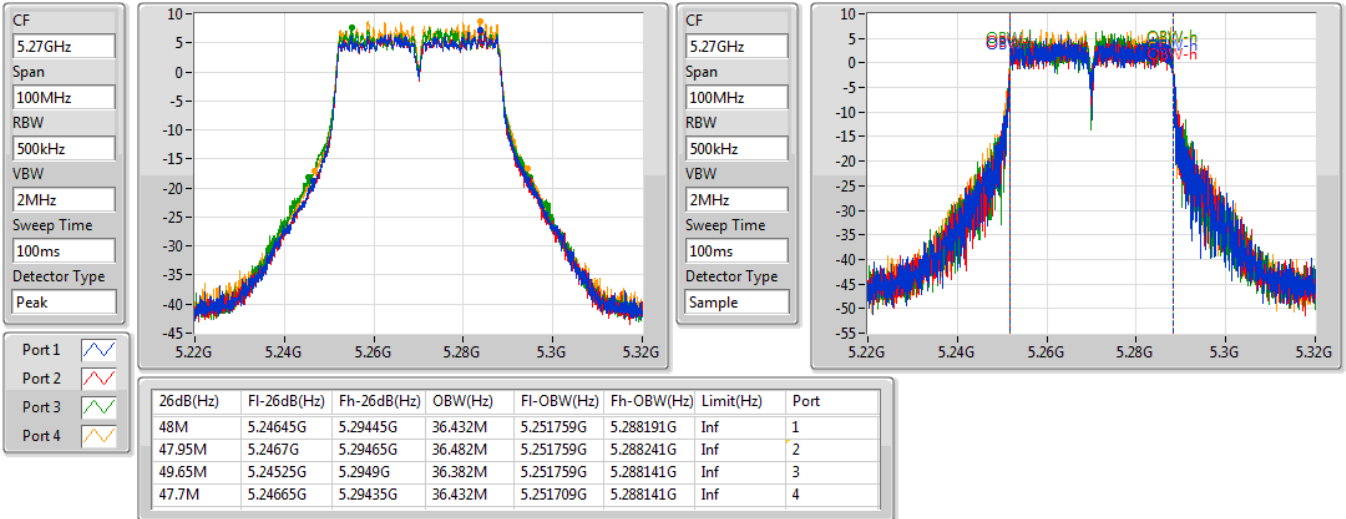

802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5720MHz Straddle 5.725-5.85GHz

28/11/2019

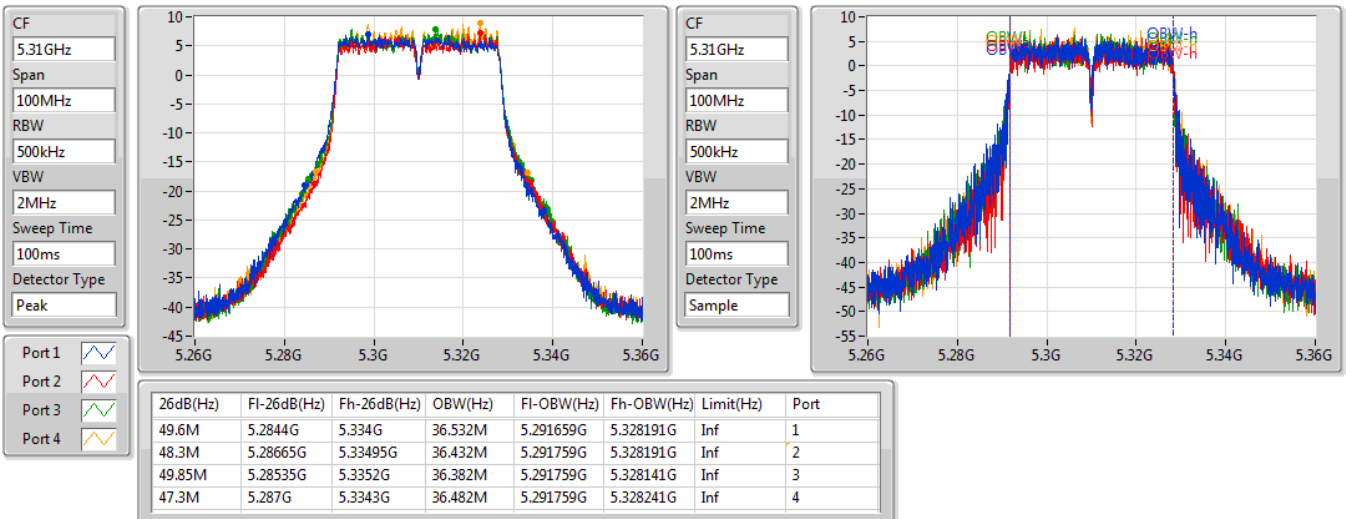


802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5270MHz

28/11/2019

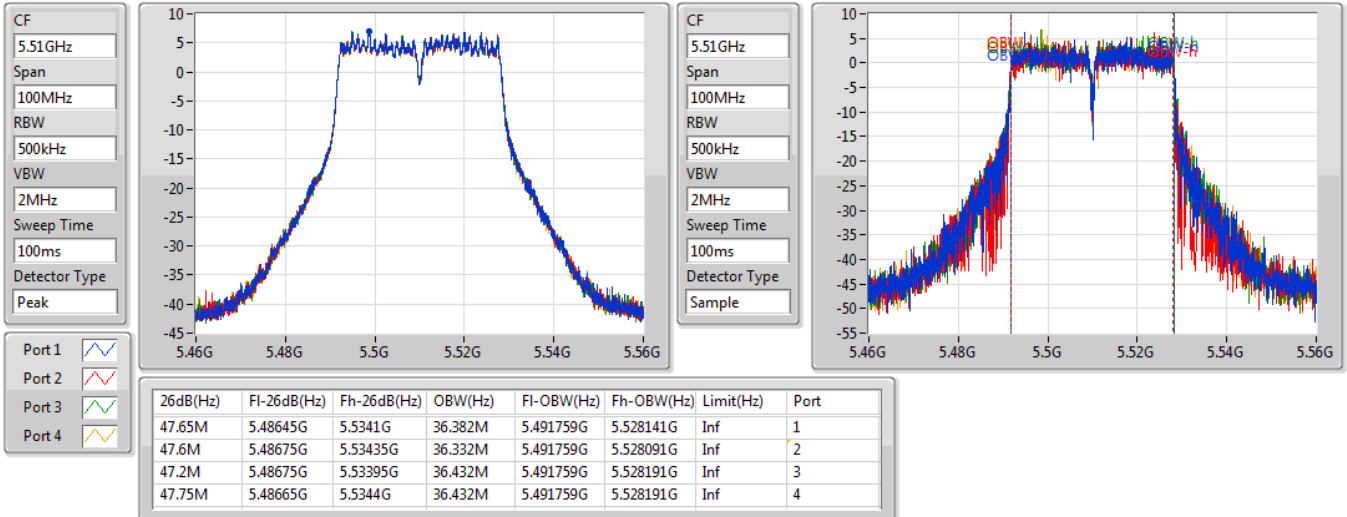

802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5310MHz

28/11/2019

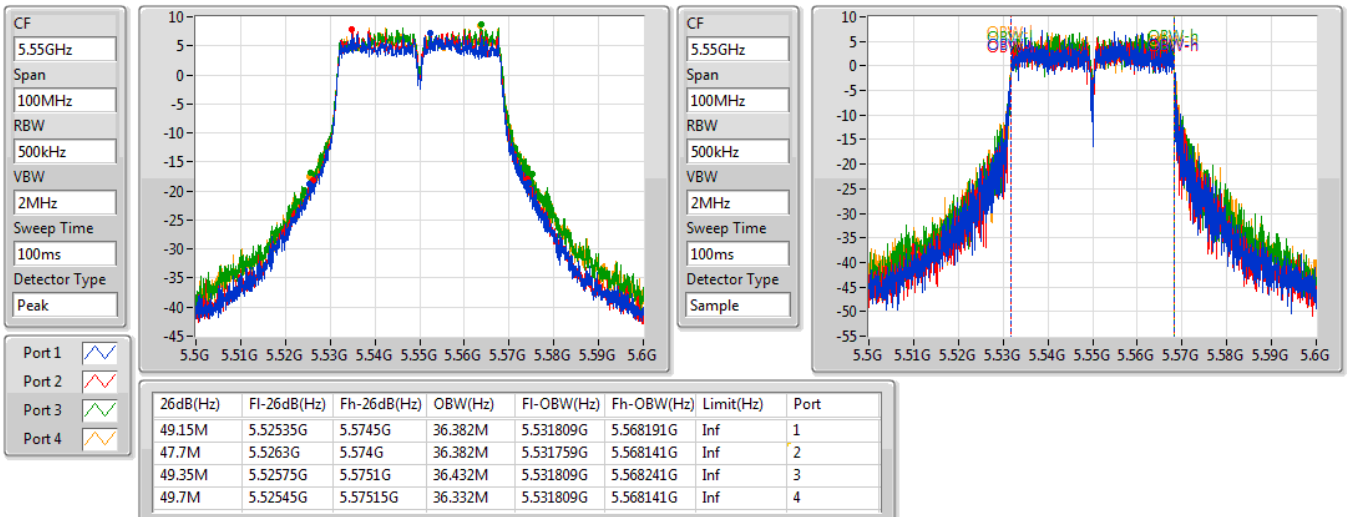


802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5510MHz

28/11/2019

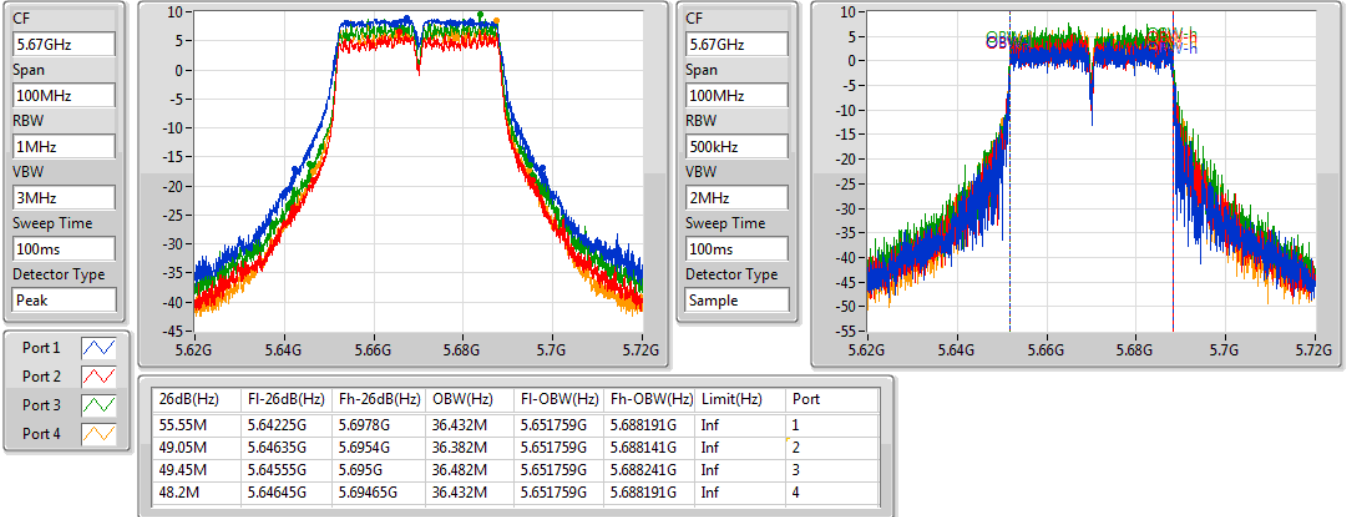

802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5550MHz

28/11/2019

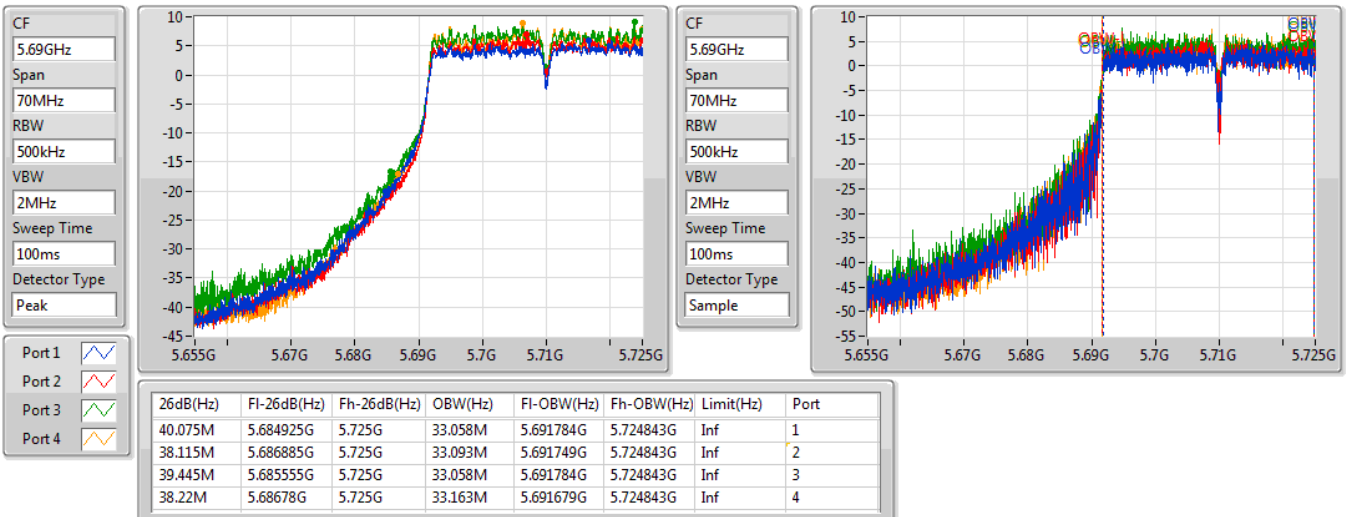


802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5670MHz

28/11/2019

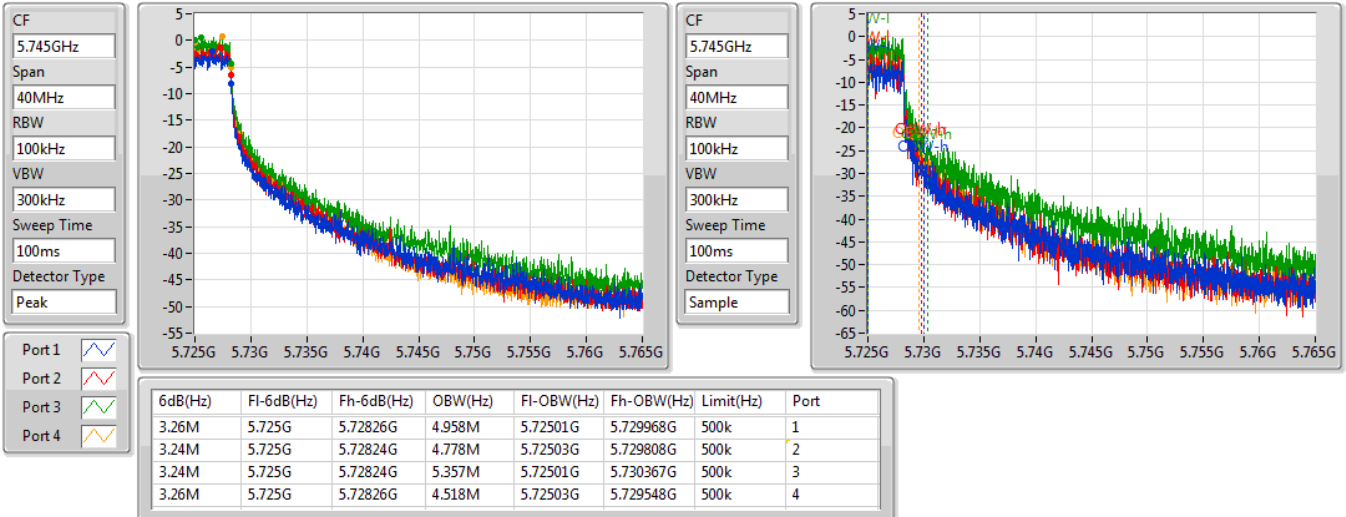

802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5710MHz Straddle 5.47-5.725GHz

28/11/2019

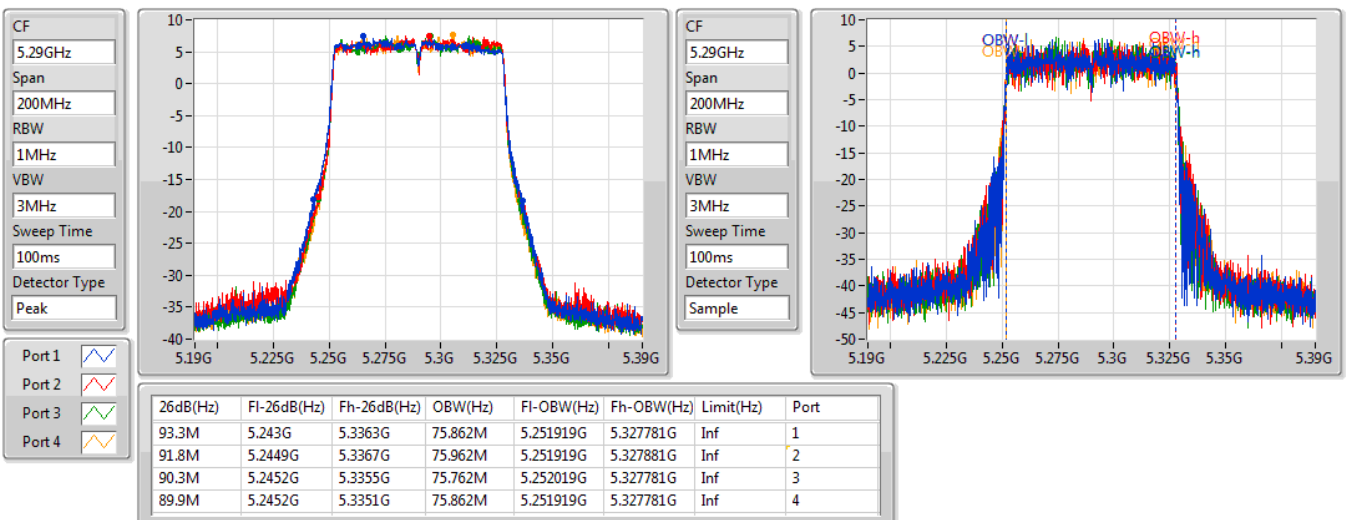


802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5710MHz Straddle 5.725-5.85GHz

28/11/2019

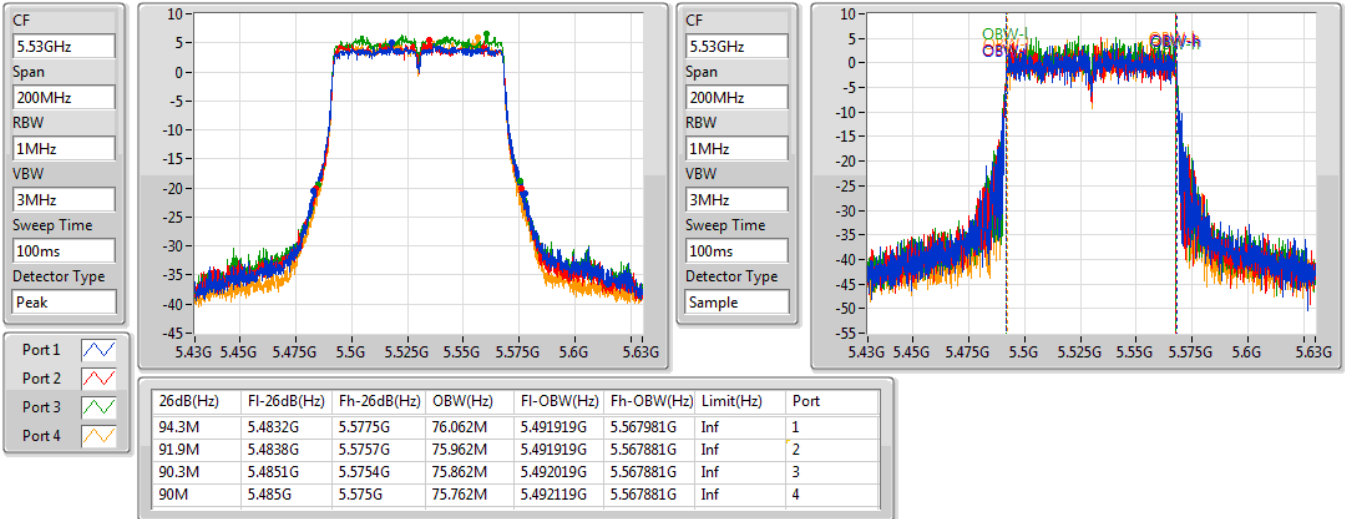

802.11ac VHT80_Nss1,(MCS0)_4TX
EBW
5290MHz

28/11/2019

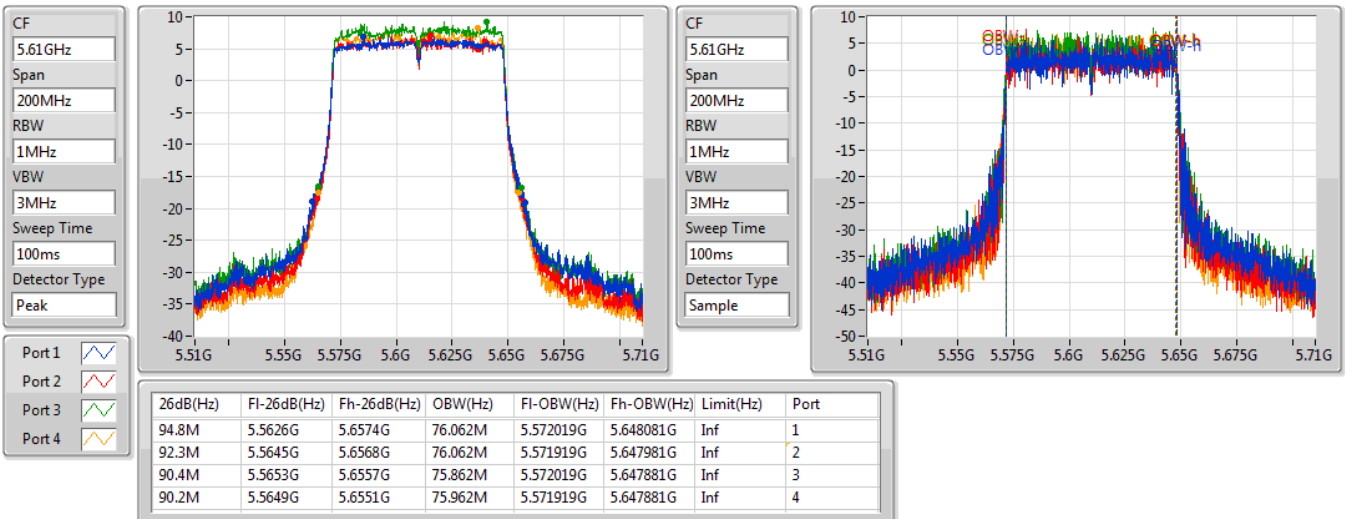


802.11ac VHT80_Nss1,(MCS0)_4TX
EBW
5530MHz

28/11/2019

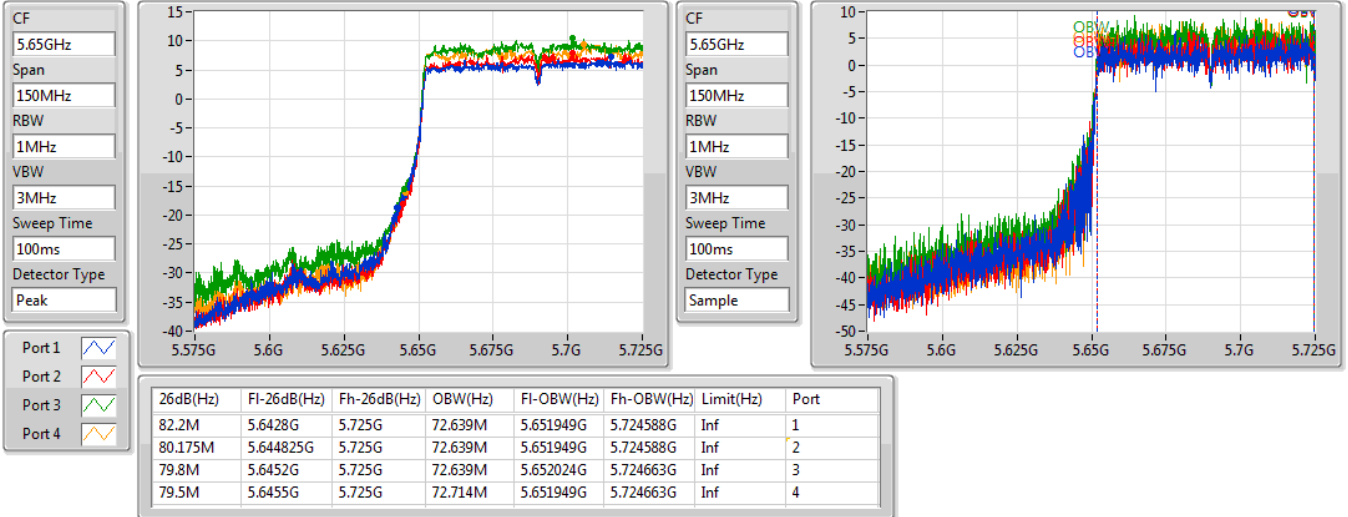

802.11ac VHT80_Nss1,(MCS0)_4TX
EBW
5610MHz

28/11/2019

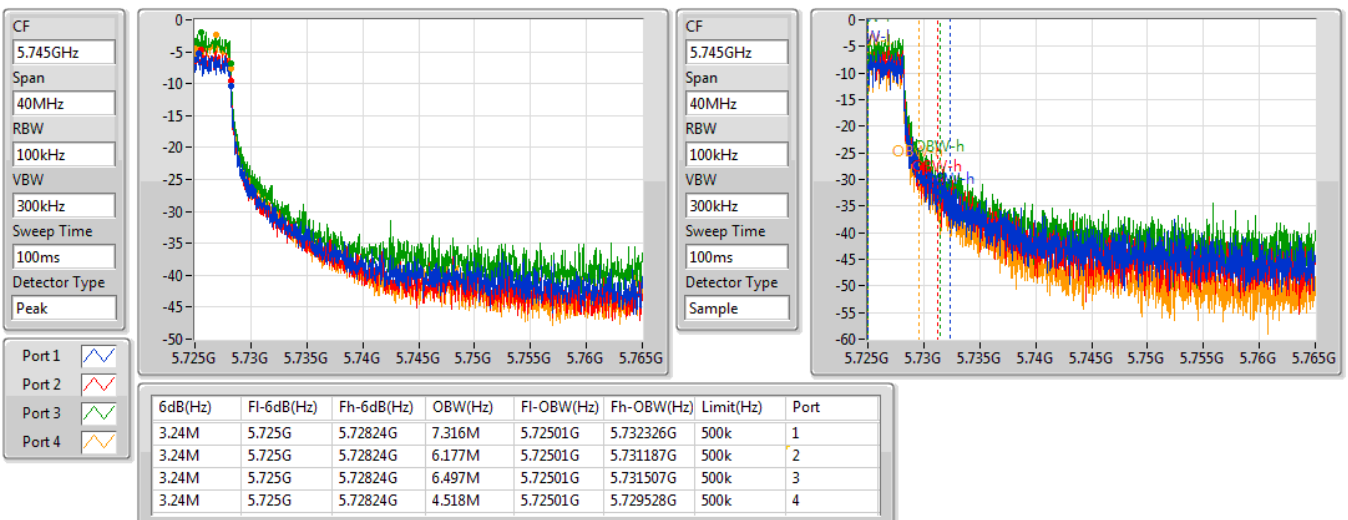


802.11ac VHT80_Nss1,(MCS0)_4TX
EBW
5690MHz Straddle 5.47-5.725GHz

28/11/2019

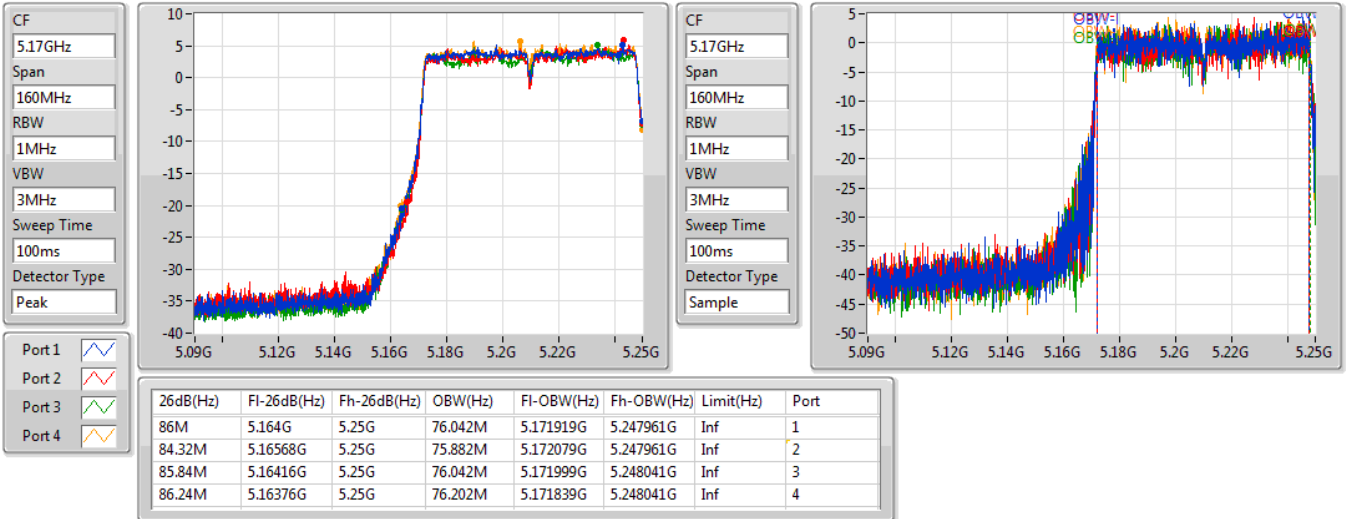

802.11ac VHT80_Nss1,(MCS0)_4TX
EBW
5690MHz Straddle 5.725-5.85GHz

28/11/2019

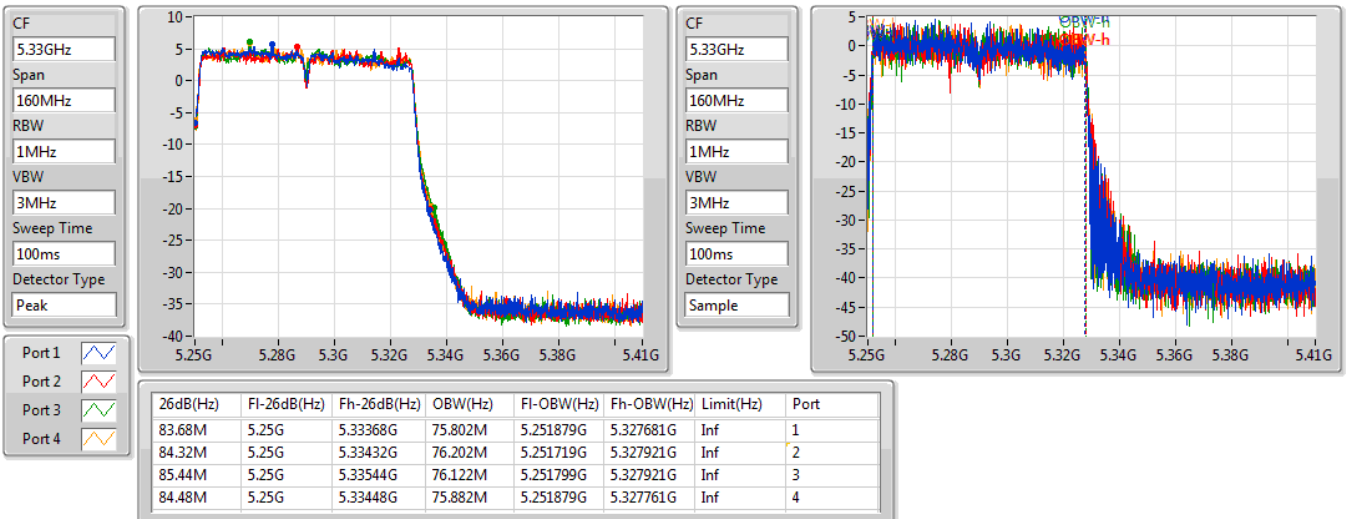


802.11ac VHT160_Nss1,(MCS0)_4TX
EBW
5250MHz

28/11/2019

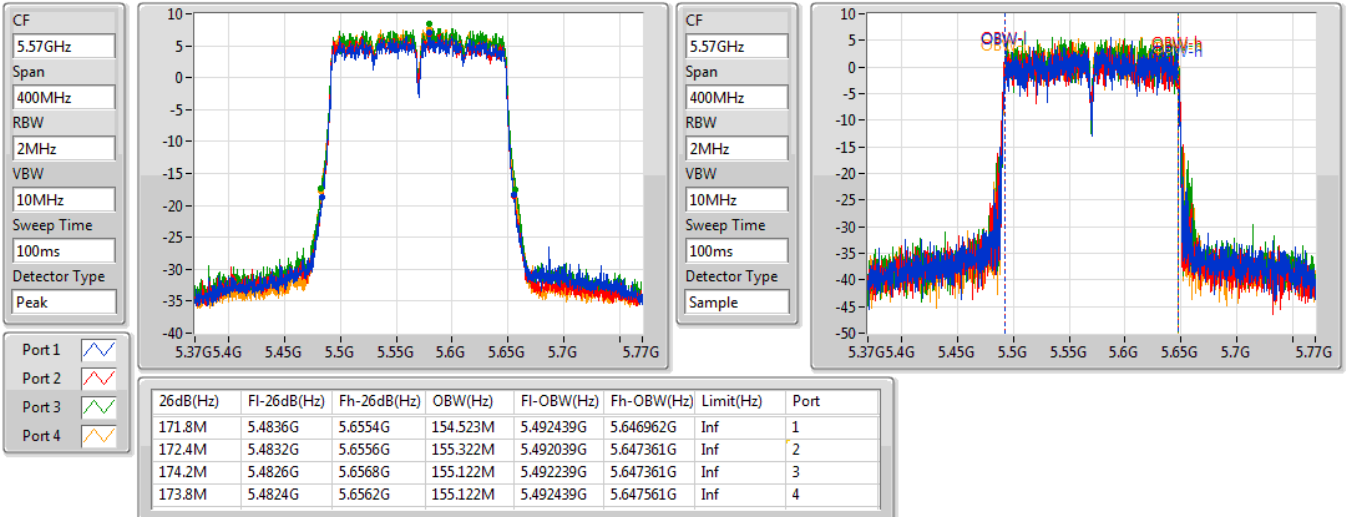

802.11ac VHT160_Nss1,(MCS0)_4TX
EBW
5250MHz

28/11/2019

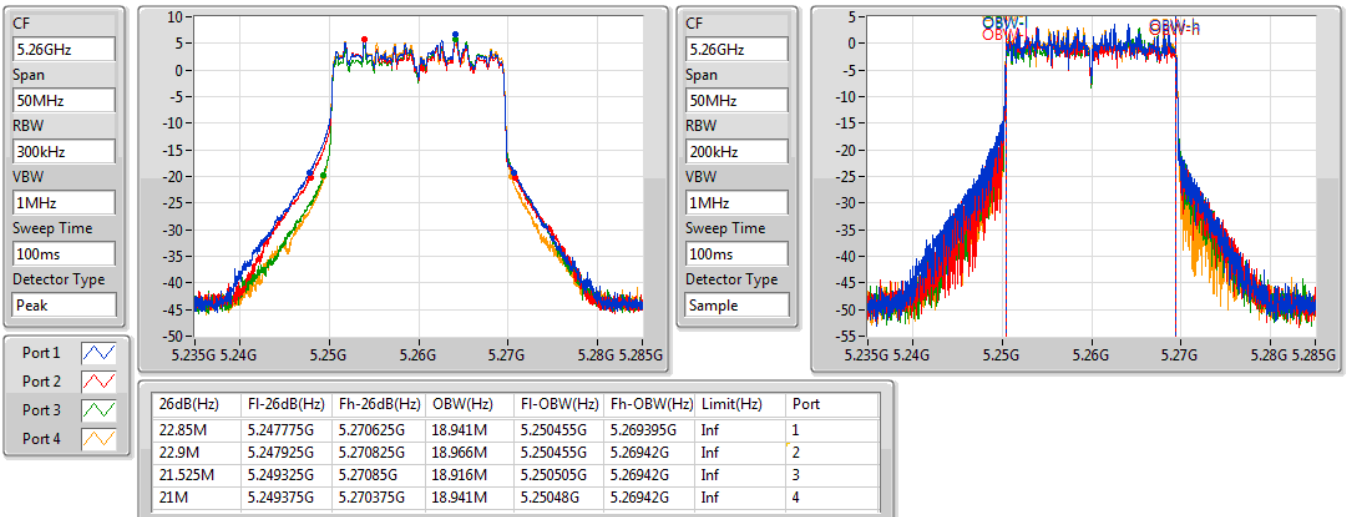


802.11ac VHT160_Nss1,(MCS0)_4TX
EBW
5570MHz

28/11/2019

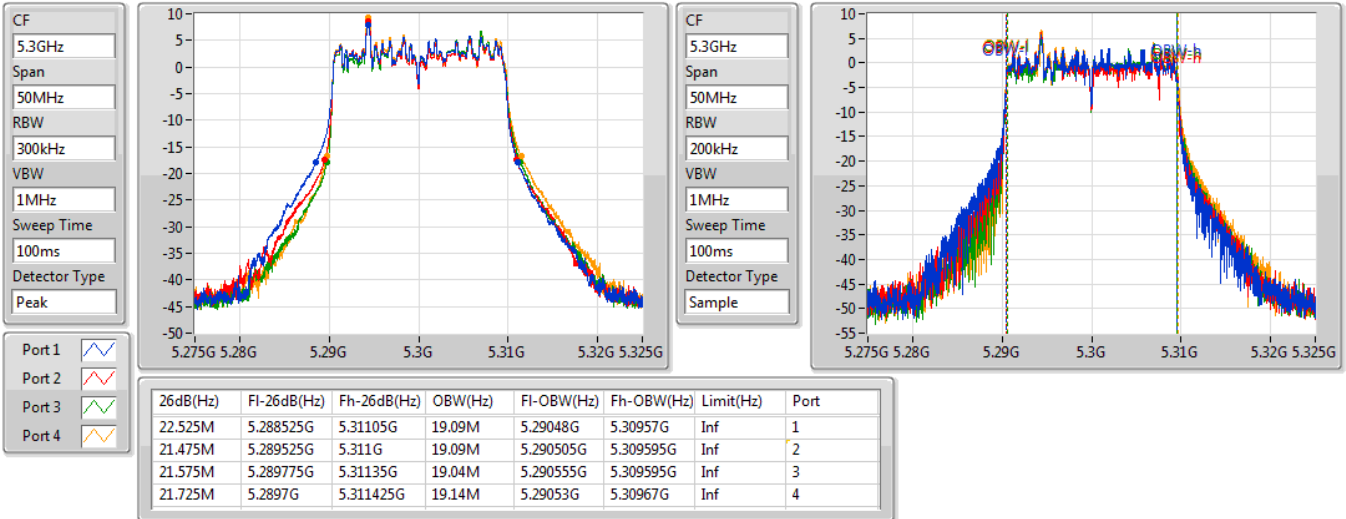

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5260MHz

28/11/2019

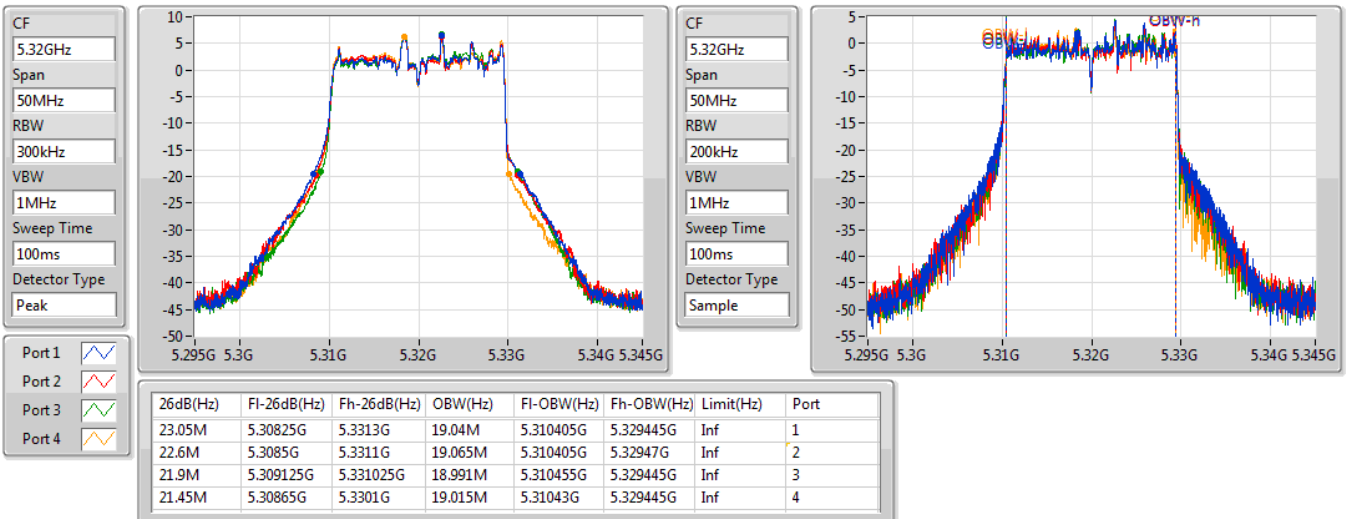


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5300MHz

28/11/2019

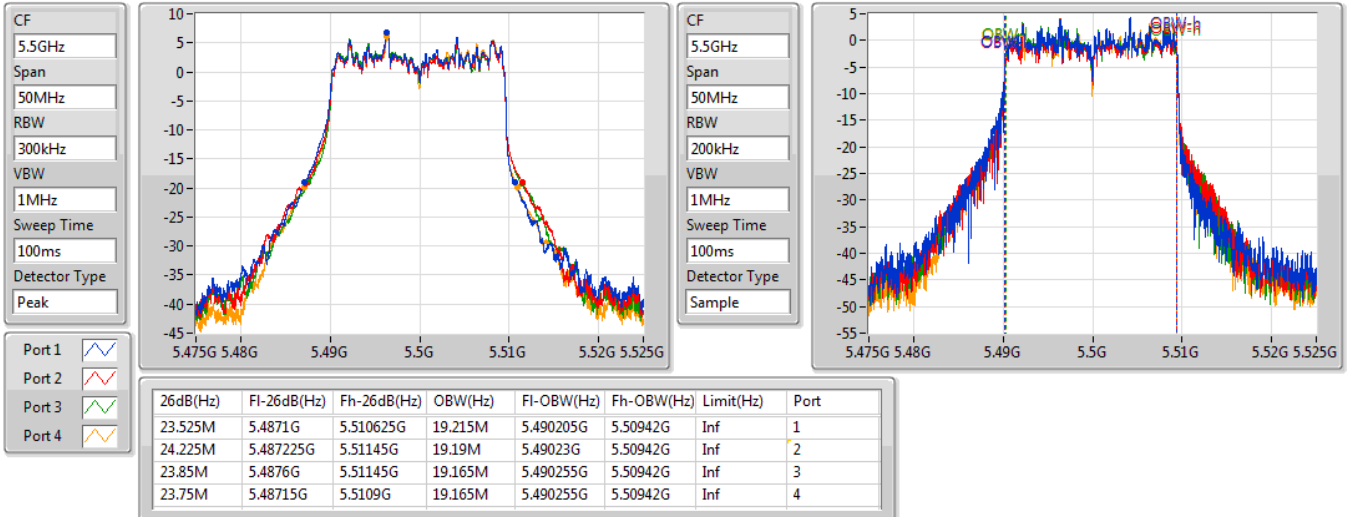

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5320MHz

28/11/2019

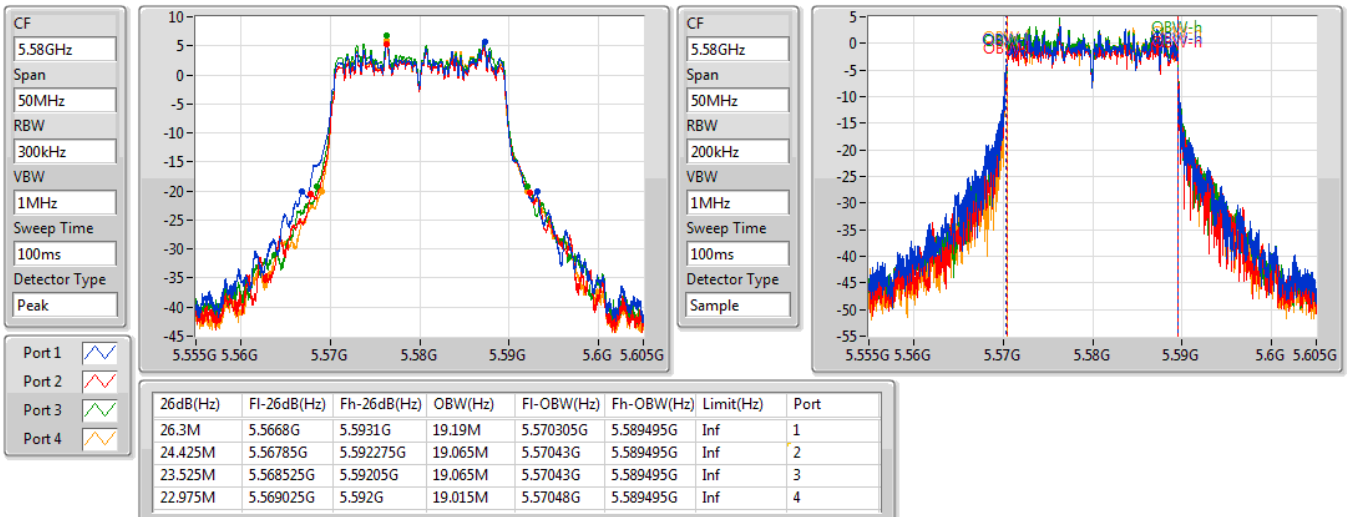


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5500MHz

28/11/2019

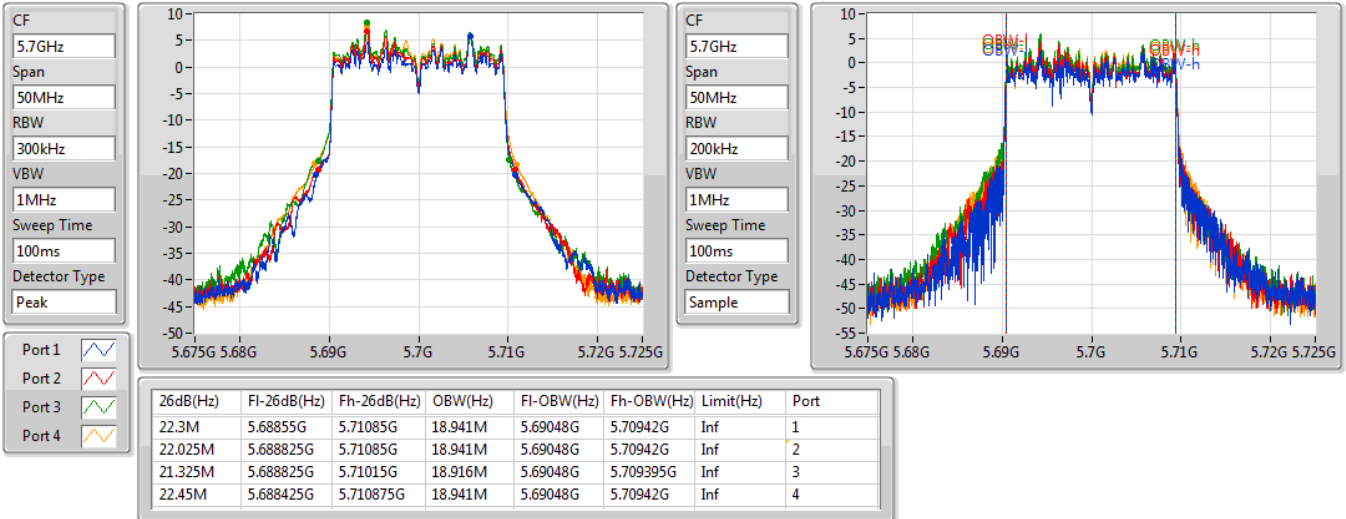

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5580MHz

28/11/2019

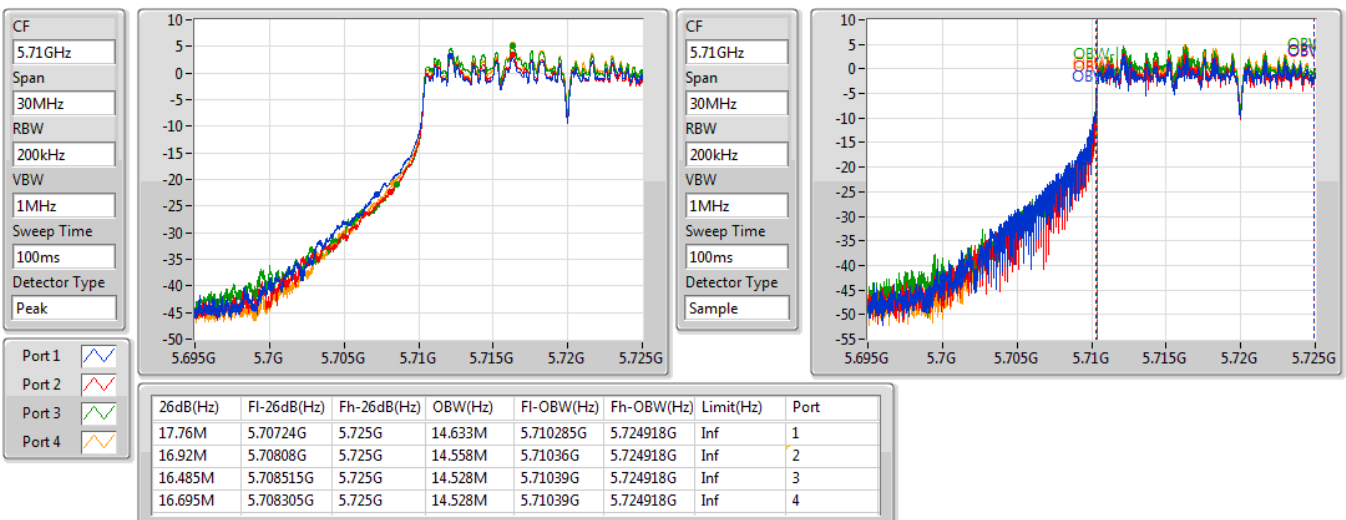


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5700MHz

28/11/2019

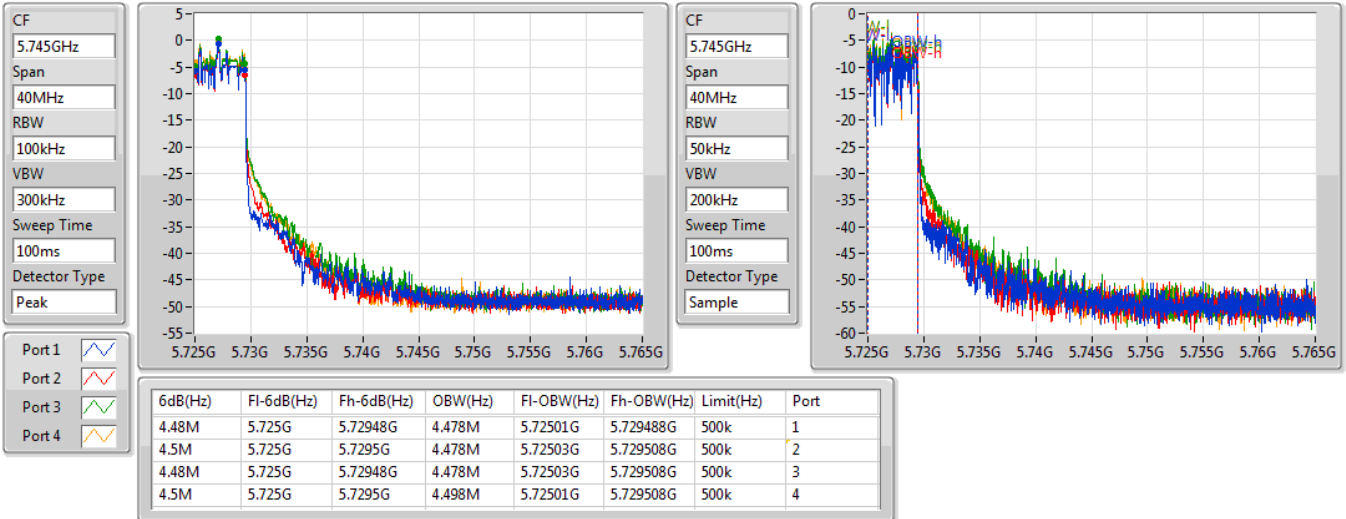

802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5720MHz Straddle 5.47-5.725GHz

28/11/2019

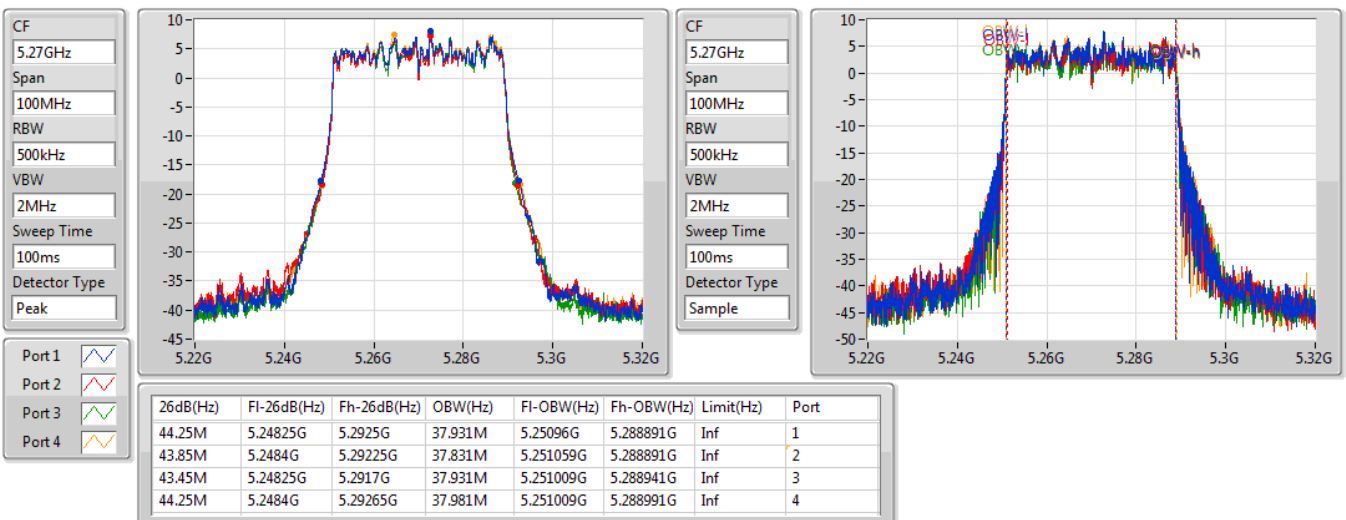


802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5720MHz Straddle 5.725-5.85GHz

28/11/2019

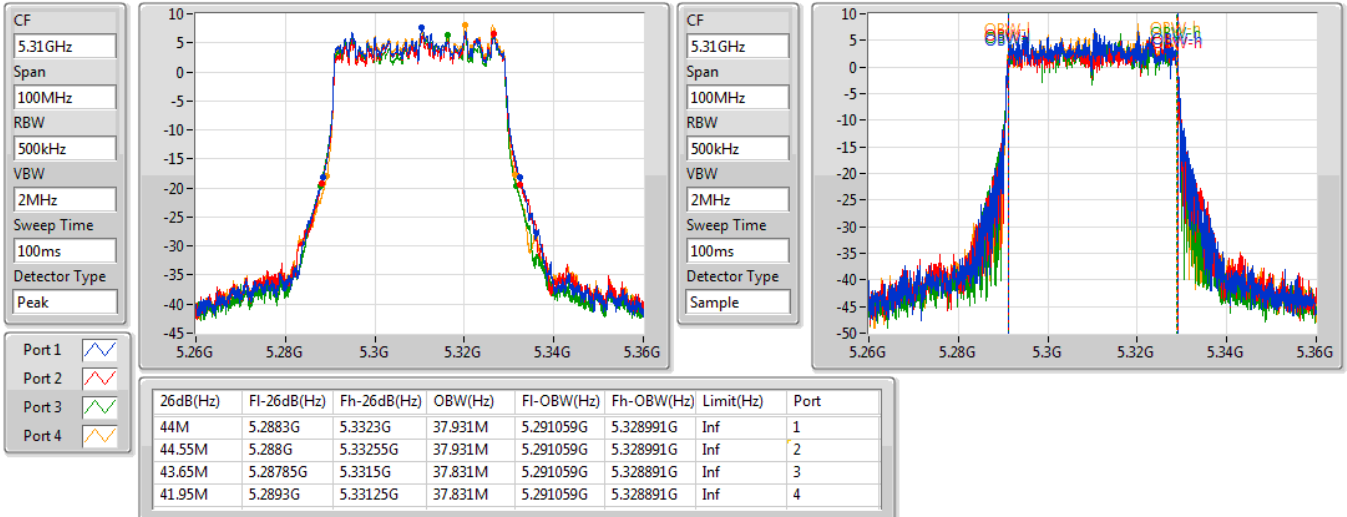

802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5270MHz

29/11/2019

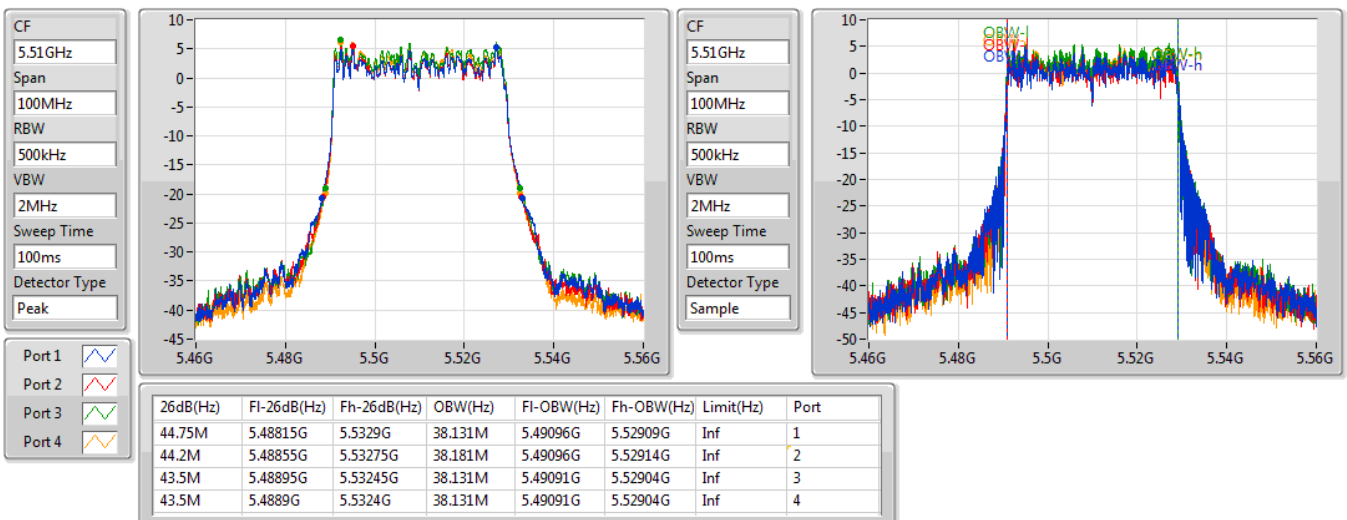


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5310MHz

29/11/2019

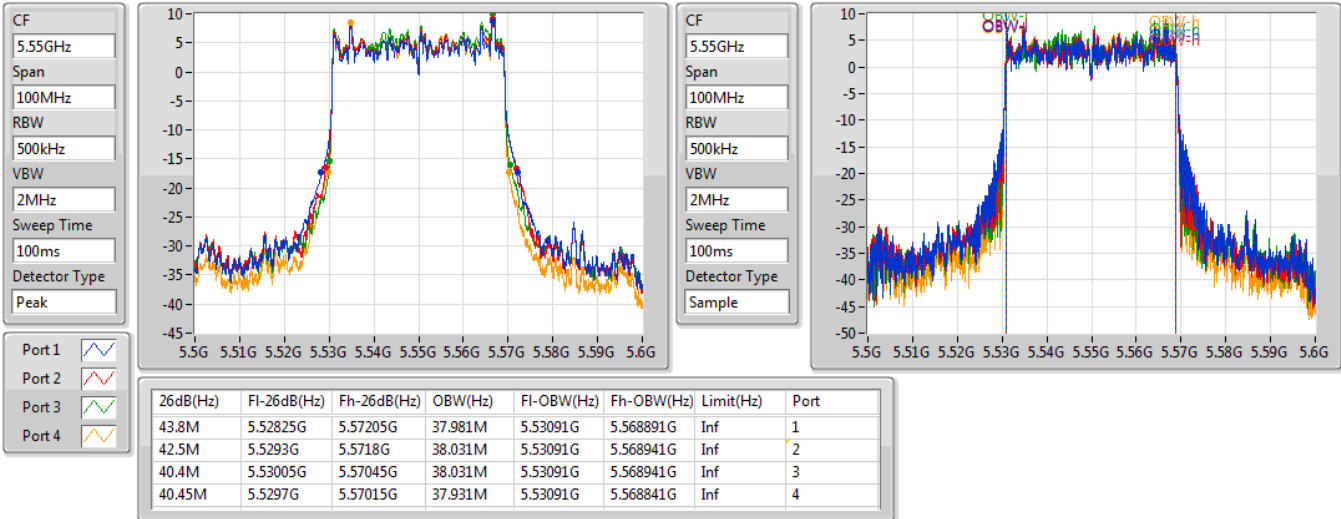

802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5510MHz

29/11/2019

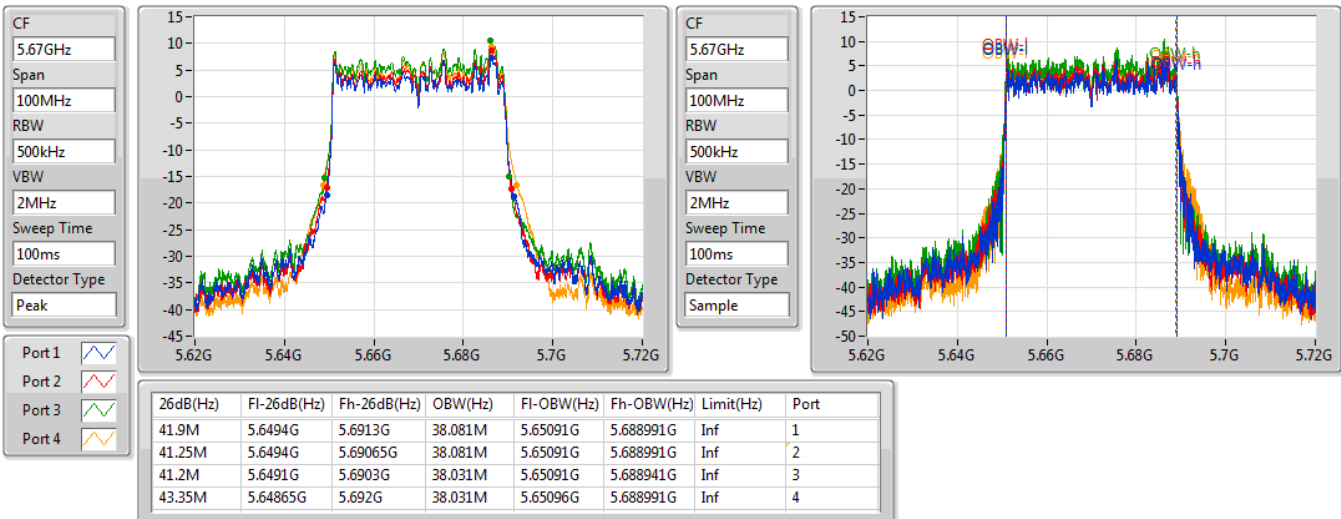


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5550MHz

29/11/2019

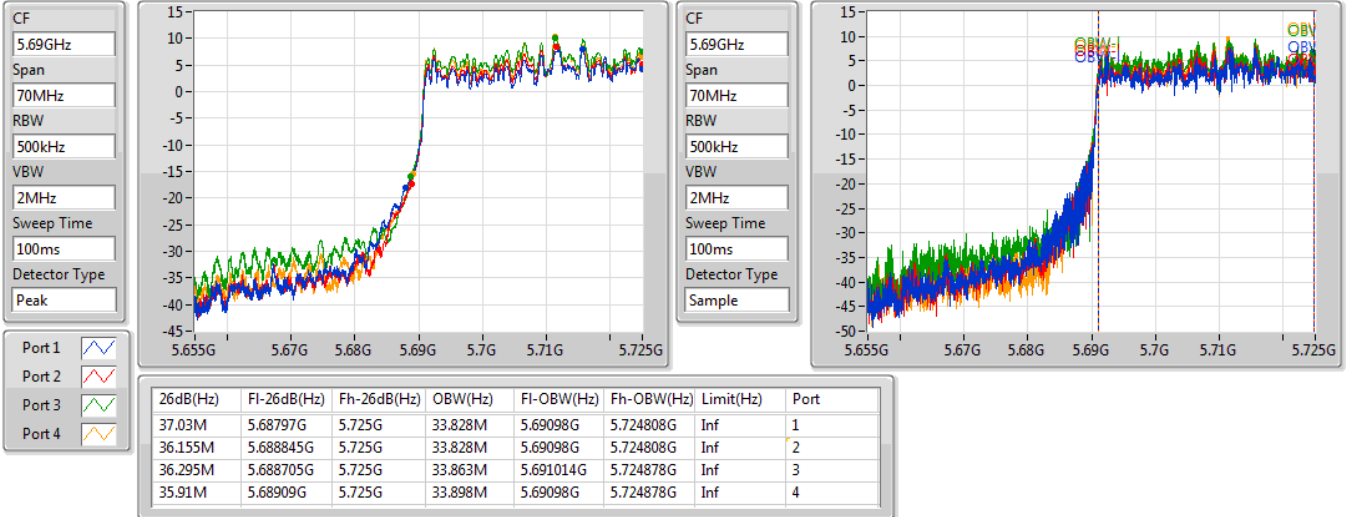

802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5670MHz

29/11/2019

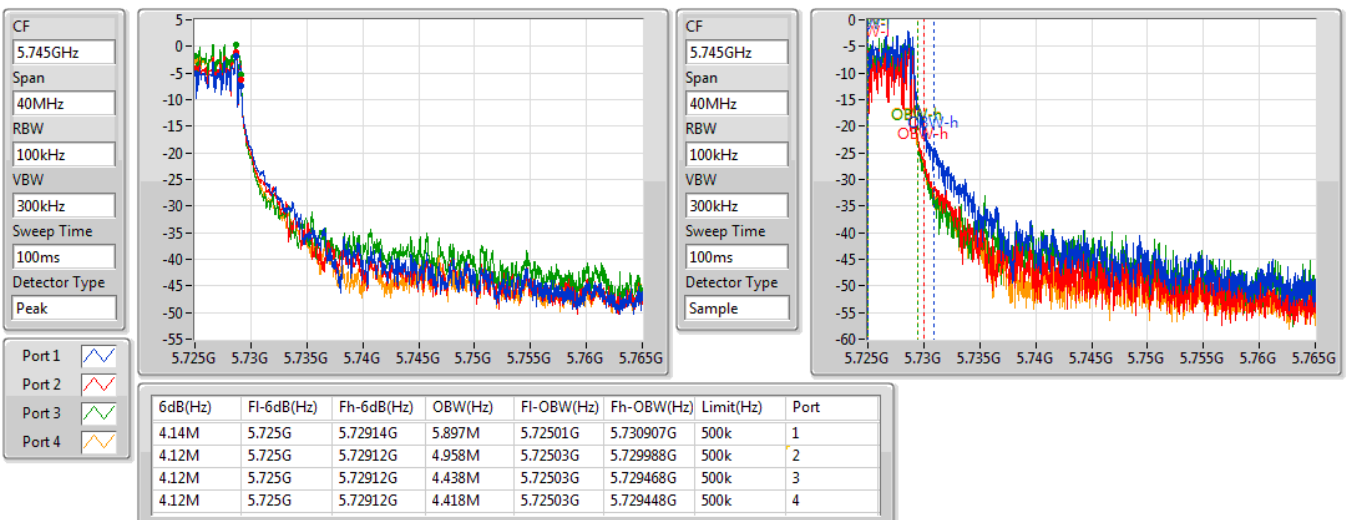


802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5710MHz Straddle 5.47-5.725GHz

29/11/2019

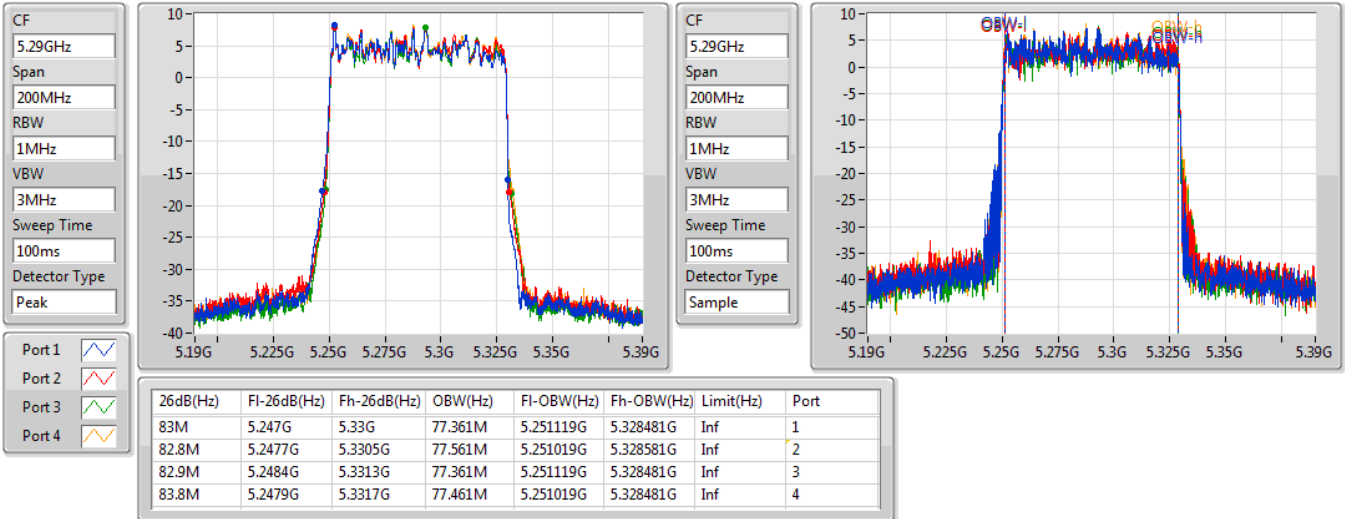

802.11ax HEW40_Nss1,(MCS0)_4TX
EBW
5710MHz Straddle 5.725-5.85GHz

29/11/2019

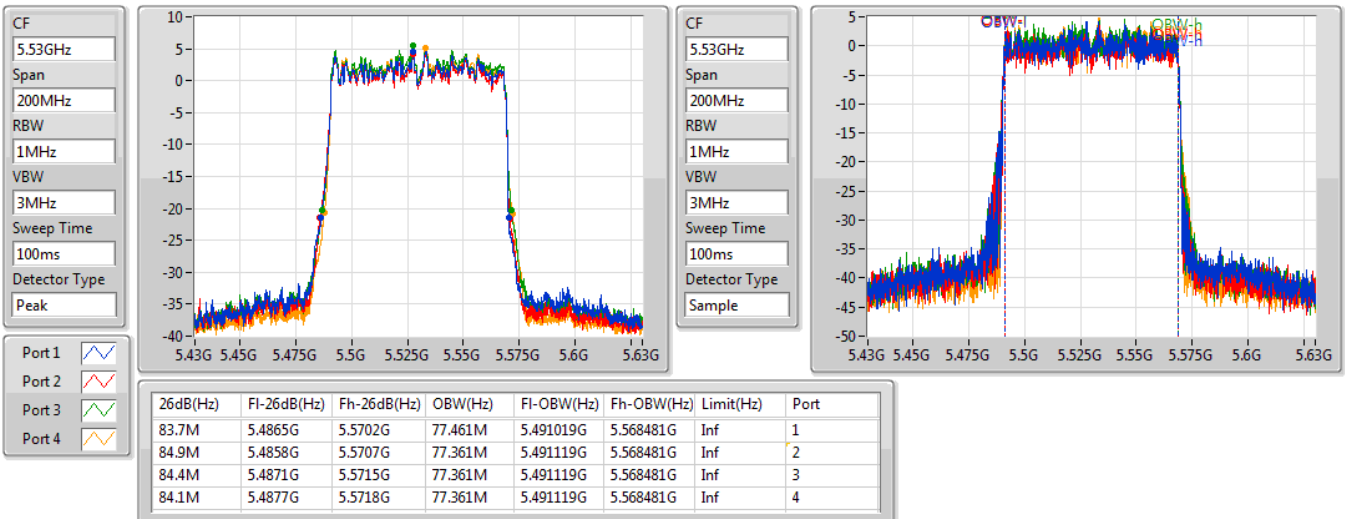


802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5290MHz

29/11/2019

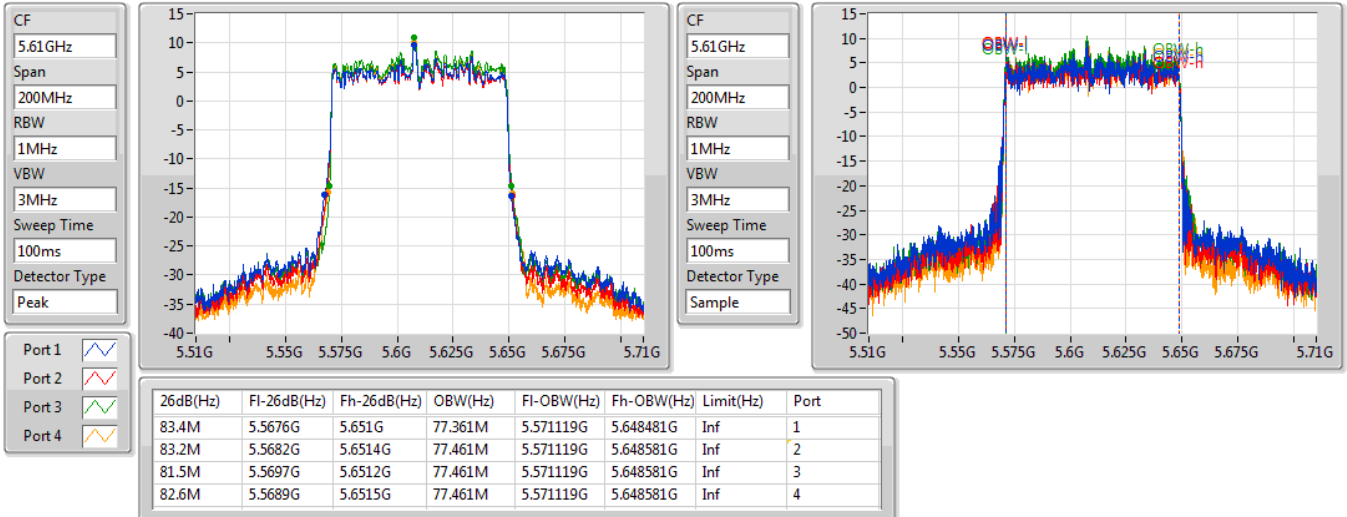

802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5530MHz

29/11/2019

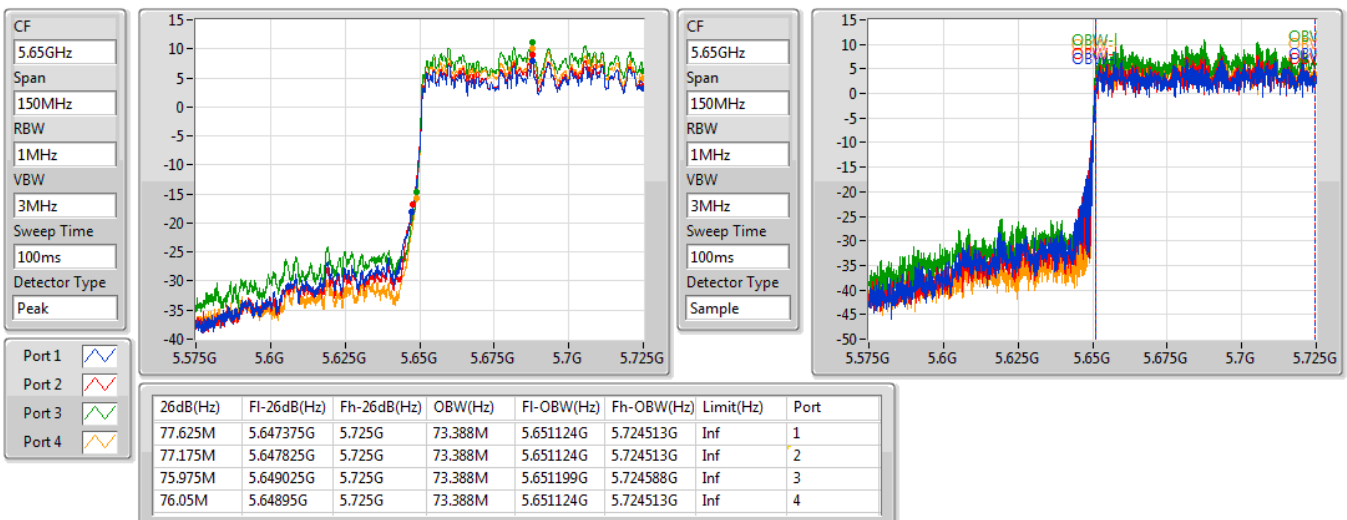


802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5610MHz

29/11/2019

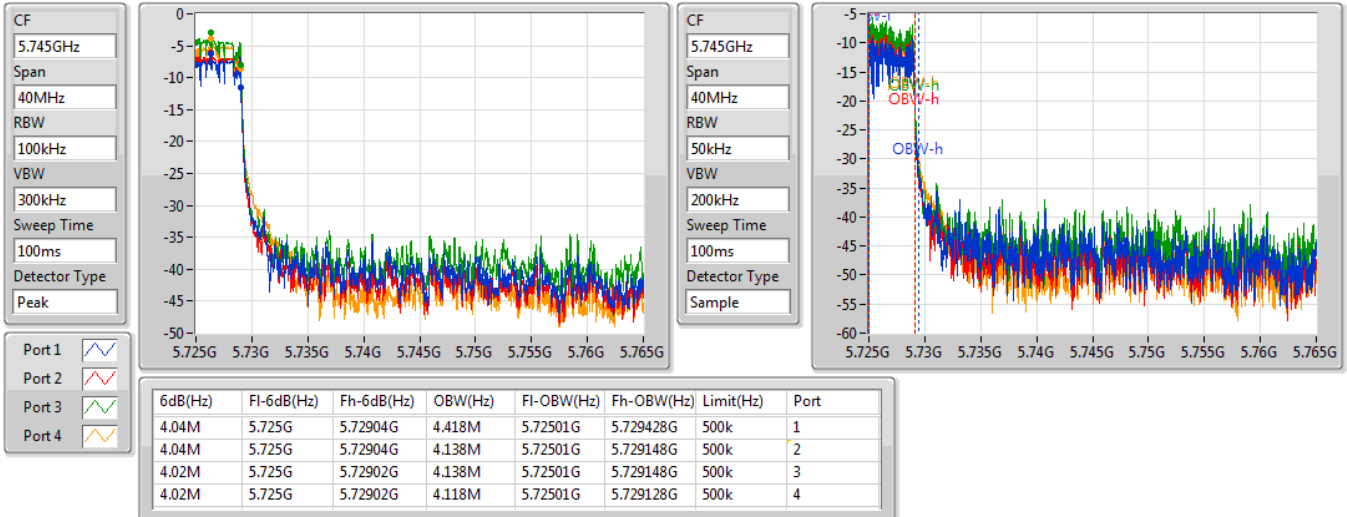

802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5690MHz Straddle 5.47-5.725GHz

29/11/2019

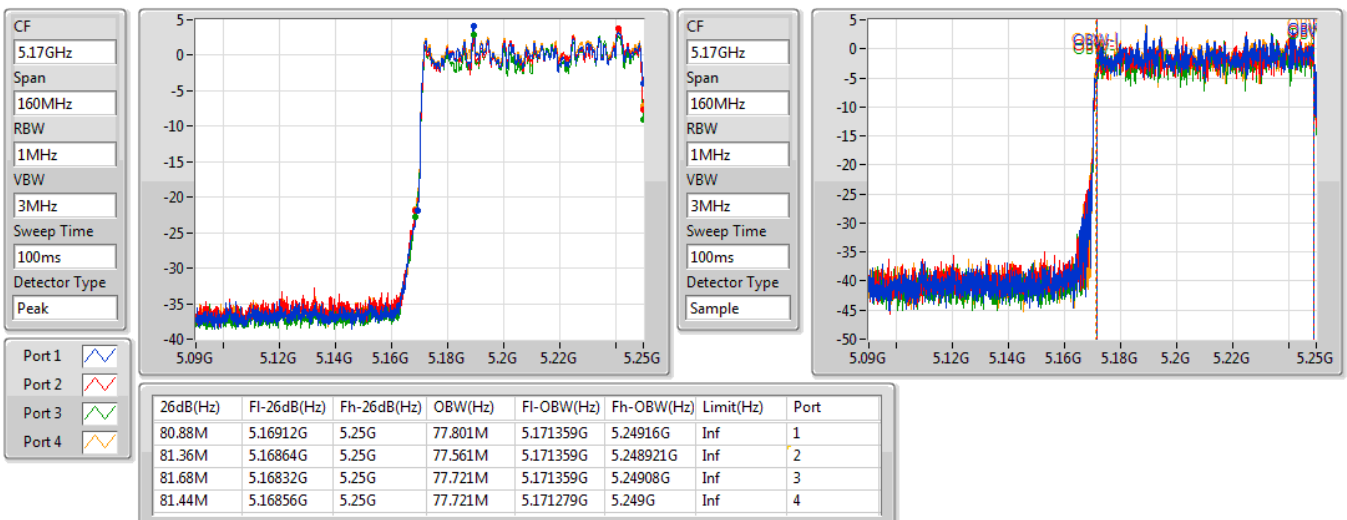


802.11ax HEW80_Nss1,(MCS0)_4TX
EBW
5690MHz Straddle 5.725-5.85GHz

29/11/2019

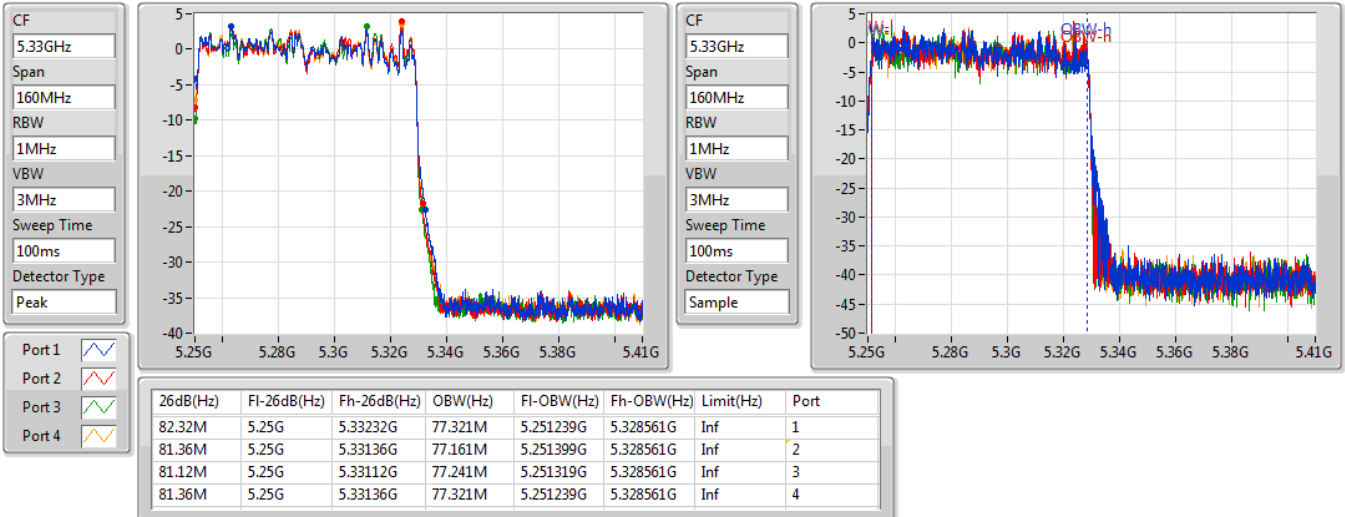

802.11ax HEW160_Nss1,(MCS0)_4TX
EBW
5250MHz

29/11/2019

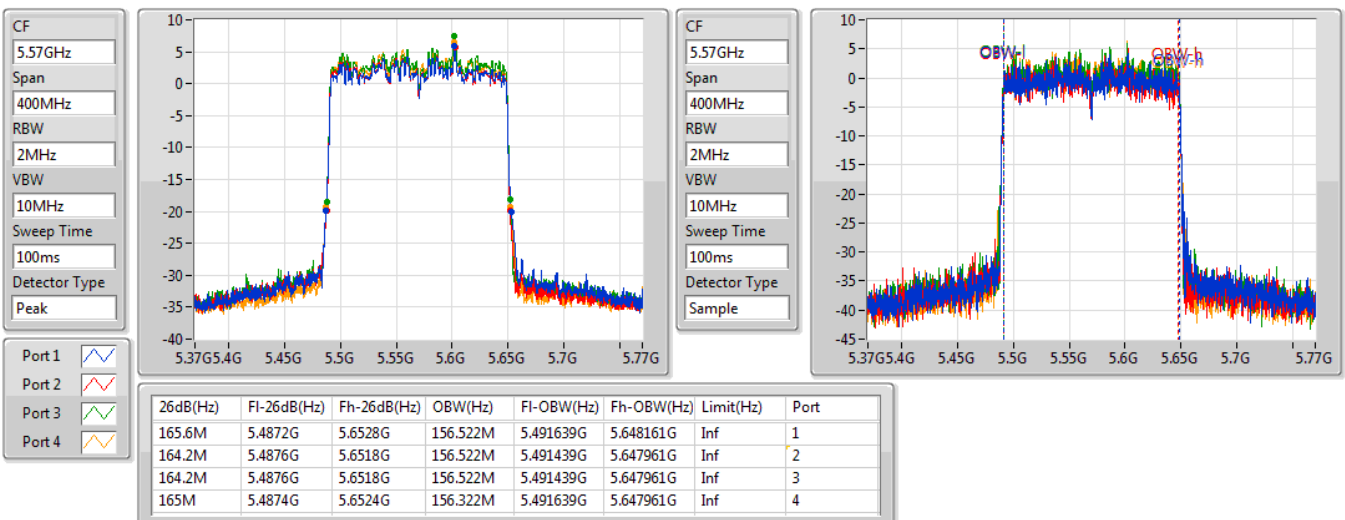


802.11ax HEW160_Nss1,(MCS0)_4TX
EBW
5250MHz

29/11/2019


802.11ax HEW160_Nss1,(MCS0)_4TX
EBW
5570MHz

29/11/2019



For beamforming mode:

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ac VHT160-BF_Nss1,(MCS0)_4TX	88.44M	78.561M	78M6D1D	81.72M	77.961M
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	87.24M	79.64M	79M6D1D	81.84M	78.441M
5.25-5.35GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	27.99M	18.231M	18M2D1D	18.21M	17.871M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	49.56M	37.181M	37M2D1D	46.44M	36.822M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	93.72M	76.642M	76M6D1D	87.96M	76.282M
802.11ac VHT160-BF_Nss1,(MCS0)_4TX	151.08M	78.441M	78M4D1D	86.16M	78.201M
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	27.21M	19.34M	19M3D1D	23.88M	19.07M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	46.32M	38.141M	38M1D1D	44.64M	38.021M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	86.88M	77.721M	77M7D1D	85.44M	77.721M
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	84.48M	78.441M	78M4D1D	83.76M	78.081M
5.47-5.725GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	28.26M	18.261M	18M3D1D	15.418M	13.678M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	52.95M	37.181M	37M2D1D	36.375M	33.208M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	90.24M	76.522M	76M5D1D	78.74M	72.659M
802.11ac VHT160-BF_Nss1,(MCS0)_4TX	161.04M	156.882M	157MD1D	160.32M	154.483M
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	26.43M	19.25M	19M2D1D	15.89M	14.413M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	46.613M	38.141M	38M1D1D	35.475M	33.771M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	86.4M	77.961M	78M0D1D	76.958M	73.356M
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	165.84M	157.361M	157MD1D	160.8M	156.162M
5.725-5.85GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	3.12M	4.573M	4M57D1D	2.88M	4.183M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	3.15M	5.712M	5M71D1D	3.105M	5.592M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	3.27M	6.207M	6M21D1D	3.135M	5.772M
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	2.91M	4.813M	4M81D1D	2.685M	4.588M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	3.09M	18.966M	19M0D1D	2.445M	5.277M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	4.095M	4.648M	4M65D1D	3.975M	4.603M

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	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	24.57M	17.931M	24.75M	17.871M	24.93M	17.901M	23.97M	17.871M
5300MHz	Pass	Inf	27.99M	18.231M	26.7M	18.201M	25.92M	18.021M	27.24M	18.081M
5320MHz	Pass	Inf	27.03M	18.201M	26.4M	18.141M	25.8M	18.051M	18.21M	18.051M
5500MHz	Pass	Inf	28.26M	18.201M	26.28M	18.171M	25.83M	17.991M	26.85M	18.111M
5580MHz	Pass	Inf	27M	18.201M	26.16M	18.141M	25.47M	18.021M	26.58M	18.141M
5700MHz	Pass	Inf	27.54M	18.261M	26.67M	18.171M	25.53M	18.111M	26.7M	18.201M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	17.605M	13.818M	16.555M	13.871M	15.418M	13.818M	17.185M	13.678M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.12M	4.468M	2.88M	4.183M	3.105M	4.378M	3.075M	4.573M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5270MHz	Pass	Inf	49.56M	37.061M	46.86M	36.882M	48.6M	36.882M	48.72M	36.822M
5310MHz	Pass	Inf	48.36M	37.181M	47.76M	36.822M	46.44M	37.001M	48.54M	36.882M
5510MHz	Pass	Inf	49.5M	37.181M	46.56M	36.882M	47.7M	36.882M	48.66M	36.942M
5550MHz	Pass	Inf	49.62M	37.121M	47.7M	36.882M	49.2M	36.882M	48.78M	36.762M
5670MHz	Pass	Inf	47.82M	37.121M	47.82M	36.882M	47.22M	36.882M	47.7M	36.642M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	38.1M	33.283M	36.75M	33.208M	36.375M	33.396M	52.95M	34.895M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.15M	5.592M	3.135M	5.712M	3.15M	5.622M	3.105M	5.622M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5290MHz	Pass	Inf	93.72M	76.642M	87.96M	76.642M	90.12M	76.642M	89.64M	76.282M
5530MHz	Pass	Inf	90.24M	76.402M	84.48M	76.282M	88.68M	76.402M	87.36M	76.402M
5610MHz	Pass	Inf	83.76M	76.522M	83.76M	76.162M	84.12M	76.162M	86.52M	76.162M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	79.903M	72.814M	78.74M	72.736M	79.36M	72.814M	78.818M	72.659M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.165M	6.207M	3.27M	5.952M	3.135M	5.802M	3.165M	5.772M
802.11ac VHT160-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	Inf	81.72M	78.561M	85.68M	78.441M	88.44M	78.321M	85.08M	77.961M
5250MHz Straddle 5.25-5.35GHz	Pass	Inf	86.16M	78.201M	151.08M	78.441M	86.4M	78.321M	86.52M	78.201M
5570MHz	Pass	Inf	160.32M	154.483M	161.04M	155.442M	161.04M	155.922M	160.32M	156.882M
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	24.3M	19.16M	25.74M	19.19M	24.72M	19.07M	24.87M	19.16M
5300MHz	Pass	Inf	24.15M	19.13M	27.21M	19.34M	24.66M	19.1M	24.27M	19.19M
5320MHz	Pass	Inf	24.57M	19.16M	25.29M	19.28M	23.88M	19.1M	24.48M	19.13M
5500MHz	Pass	Inf	24.63M	19.13M	26.43M	19.25M	24.57M	19.13M	24.78M	19.16M
5580MHz	Pass	Inf	24.12M	19.16M	26.04M	19.25M	24.84M	19.07M	24.66M	19.13M
5700MHz	Pass	Inf	24.51M	19.13M	26.13M	19.25M	24.51M	19.19M	24.81M	19.13M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	16.608M	14.518M	16.363M	14.553M	15.978M	14.518M	15.89M	14.413M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	2.91M	4.588M	2.865M	4.813M	2.685M	4.648M	2.715M	4.768M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5270MHz	Pass	Inf	46.32M	38.141M	45.36M	38.081M	45.3M	38.141M	44.64M	38.081M
5310MHz	Pass	Inf	46.14M	38.141M	45.42M	38.141M	45M	38.081M	46.26M	38.021M
5510MHz	Pass	Inf	45.54M	38.141M	45.06M	38.081M	44.46M	38.081M	45.84M	38.081M
5550MHz	Pass	Inf	45.66M	38.141M	46.56M	38.141M	39.3M	38.081M	46.2M	38.021M
5670MHz	Pass	Inf	45.36M	38.081M	46.32M	38.021M	44.58M	38.021M	43.5M	37.901M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	37.95M	33.846M	39.563M	33.771M	35.475M	33.808M	46.613M	33.996M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	2.445M	7.121M	2.61M	5.277M	2.565M	5.457M	3.09M	18.966M

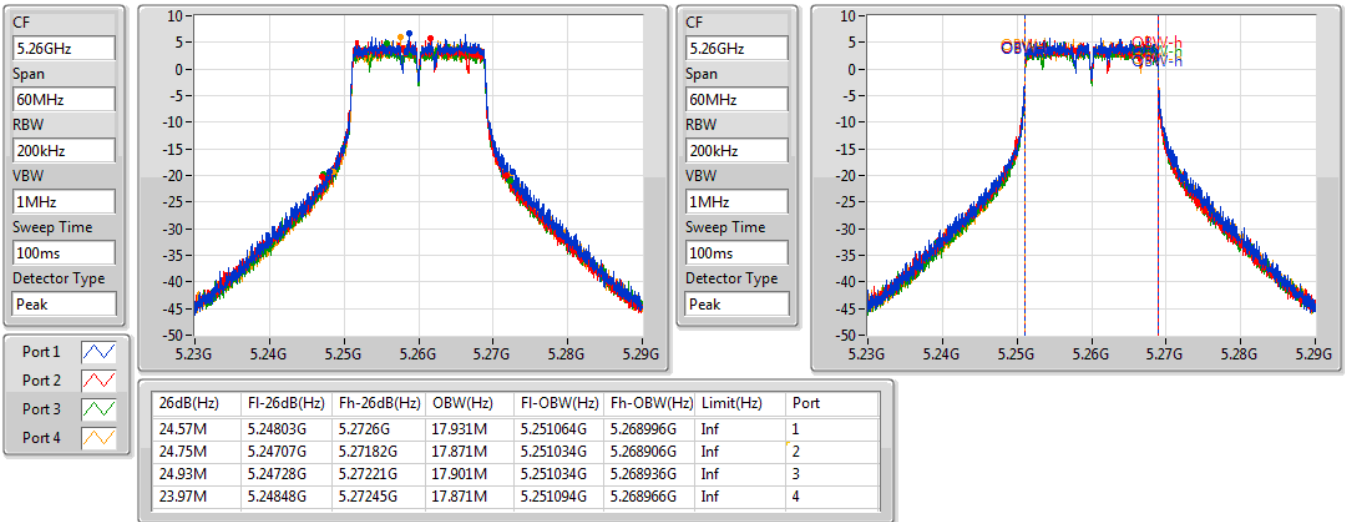
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5290MHz	Pass	Inf	85.44M	77.721M	86.28M	77.721M	85.44M	77.721M	86.88M	77.721M
5530MHz	Pass	Inf	85.08M	77.961M	84.48M	77.601M	86.4M	77.841M	85.08M	77.841M
5610MHz	Pass	Inf	83.76M	77.481M	84.6M	77.721M	83.64M	77.001M	83.4M	77.601M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	77.19M	73.356M	80.135M	73.511M	76.958M	73.511M	79.593M	73.356M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	4.065M	4.633M	4.05M	4.648M	4.095M	4.603M	3.975M	4.603M
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	Inf	83.76M	78.561M	87.24M	79.64M	82.32M	78.561M	81.84M	78.441M
5250MHz Straddle 5.25-5.35GHz	Pass	Inf	83.88M	78.201M	84.36M	78.441M	84.48M	78.441M	83.76M	78.081M
5570MHz	Pass	Inf	161.04M	156.402M	160.8M	156.162M	162M	157.121M	165.84M	157.361M

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

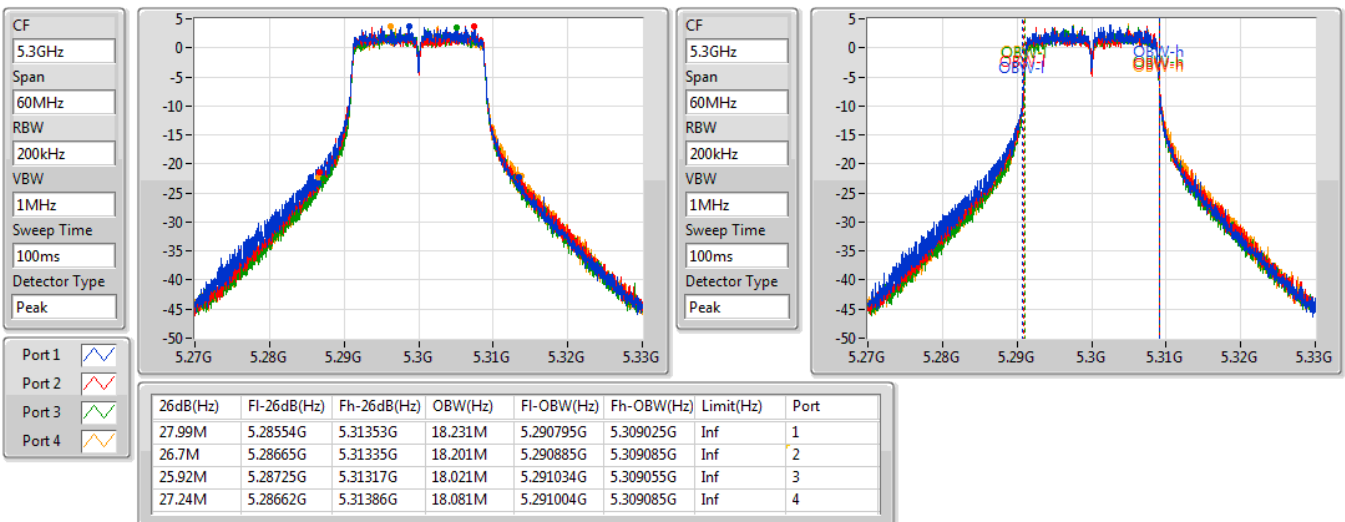
Port X-OBW = Port X 99% occupied bandwidth;

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

22/06/2020

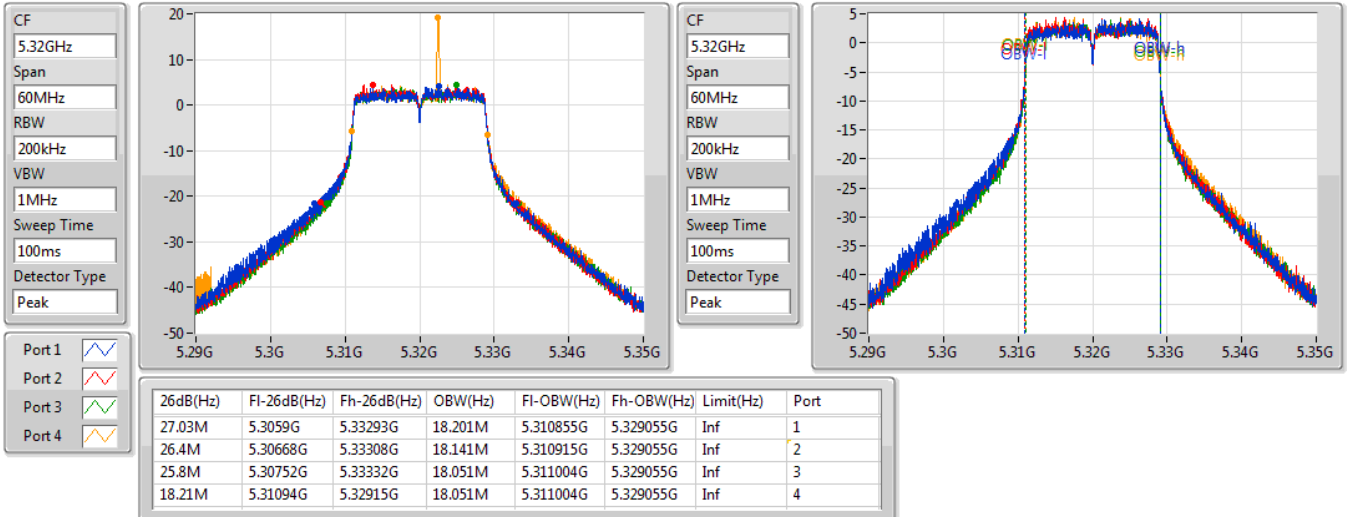

802.11ac VHT20-BF_Nss1,(MCS0)_4TX
EBW
5300MHz

22/06/2020

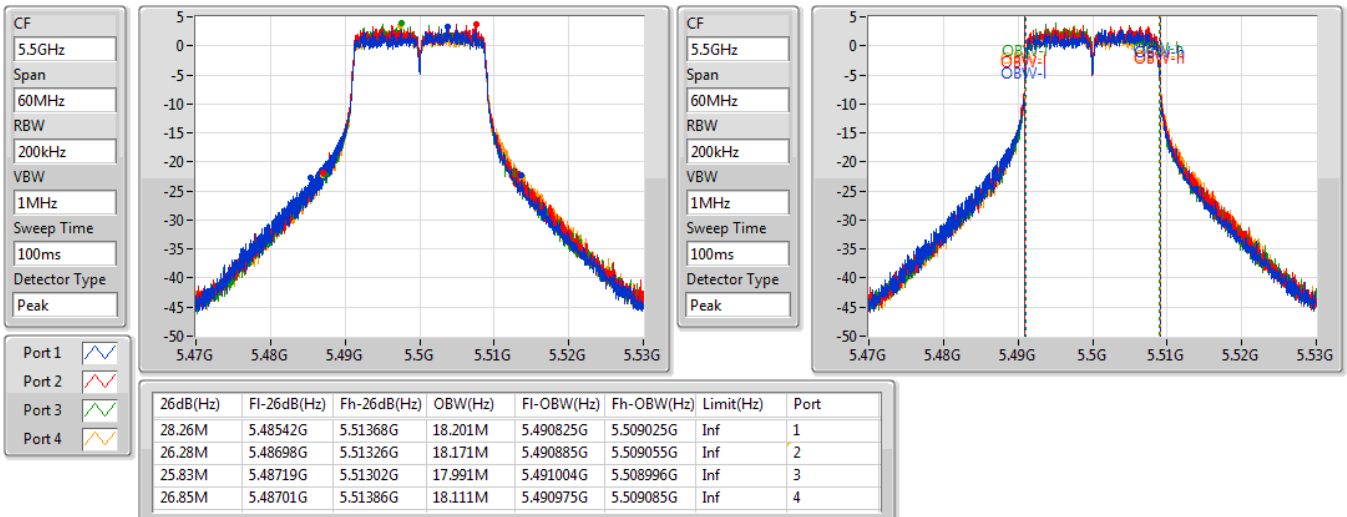


802.11ac VHT20-BF_Nss1,(MCS0)_4TX
EBW
5320MHz

22/06/2020

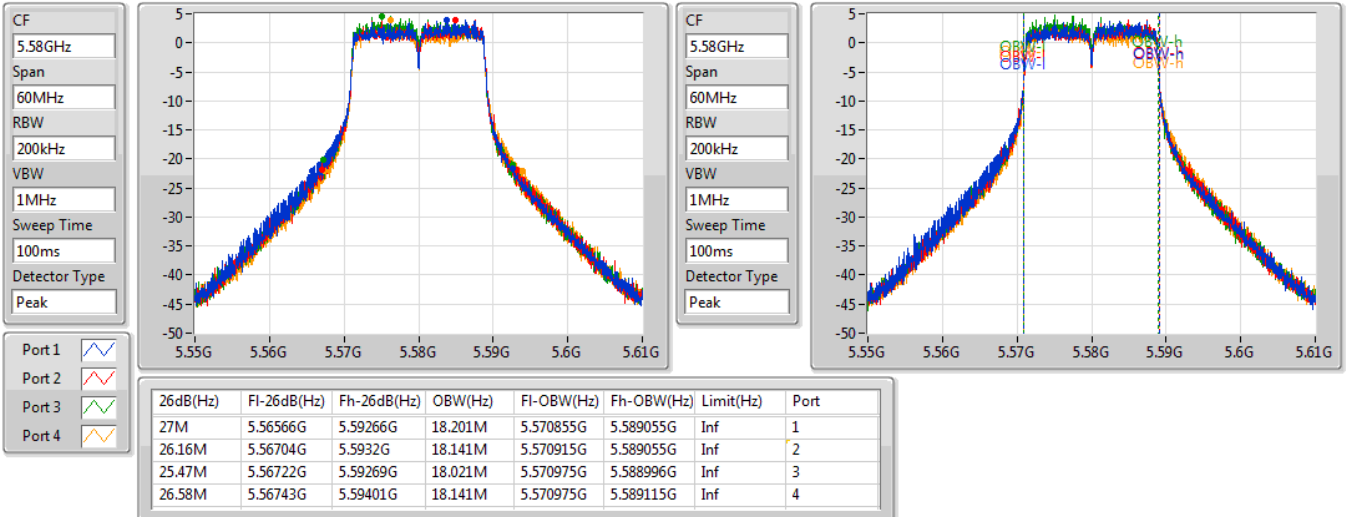

802.11ac VHT20-BF_Nss1,(MCS0)_4TX
EBW
5500MHz

22/06/2020

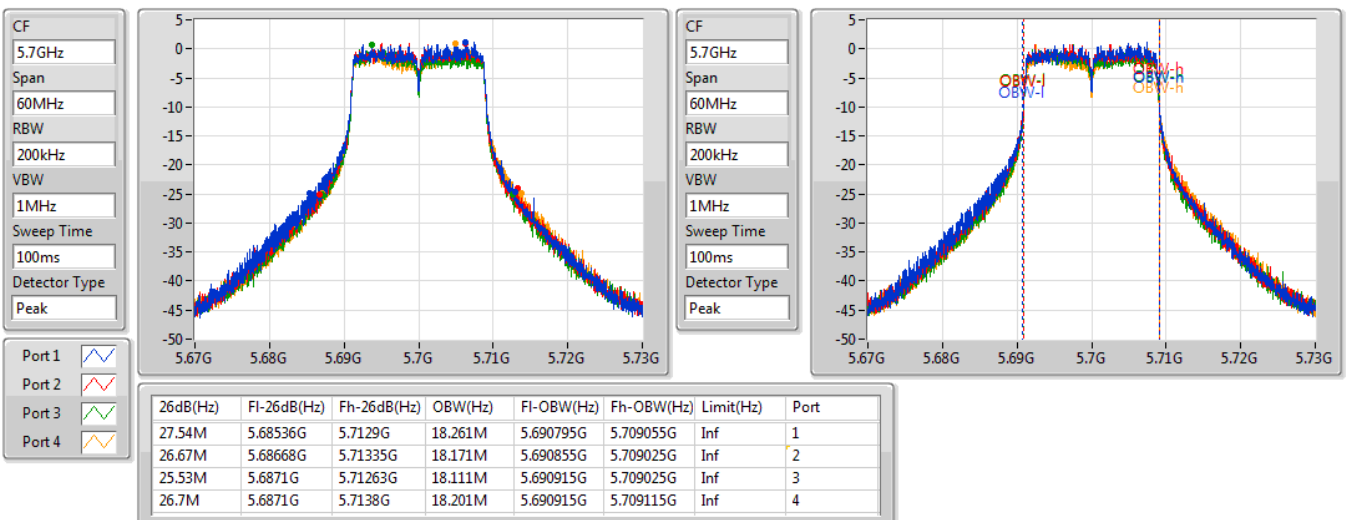


802.11ac VHT20-BF_Nss1,(MCS0)_4TX
EBW
5580MHz

22/06/2020

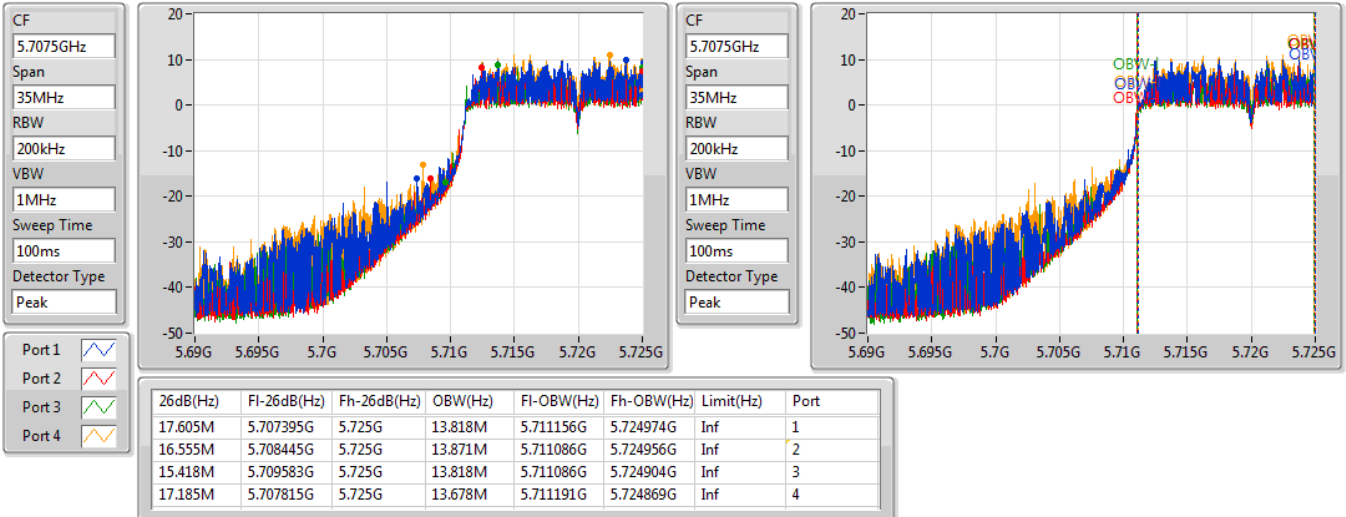

802.11ac VHT20-BF_Nss1,(MCS0)_4TX
EBW
5700MHz

22/06/2020

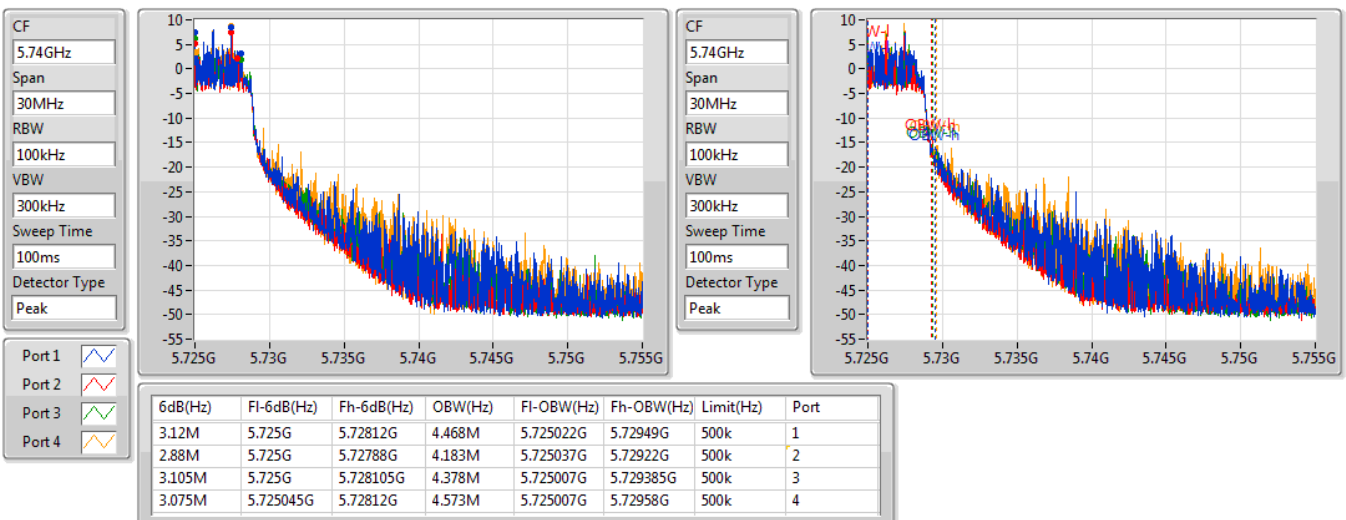


802.11ac VHT20-BF_Nss1,(MCS0)_4TX
EBW
5720MHz Straddle 5.47-5.725GHz

20/07/2020

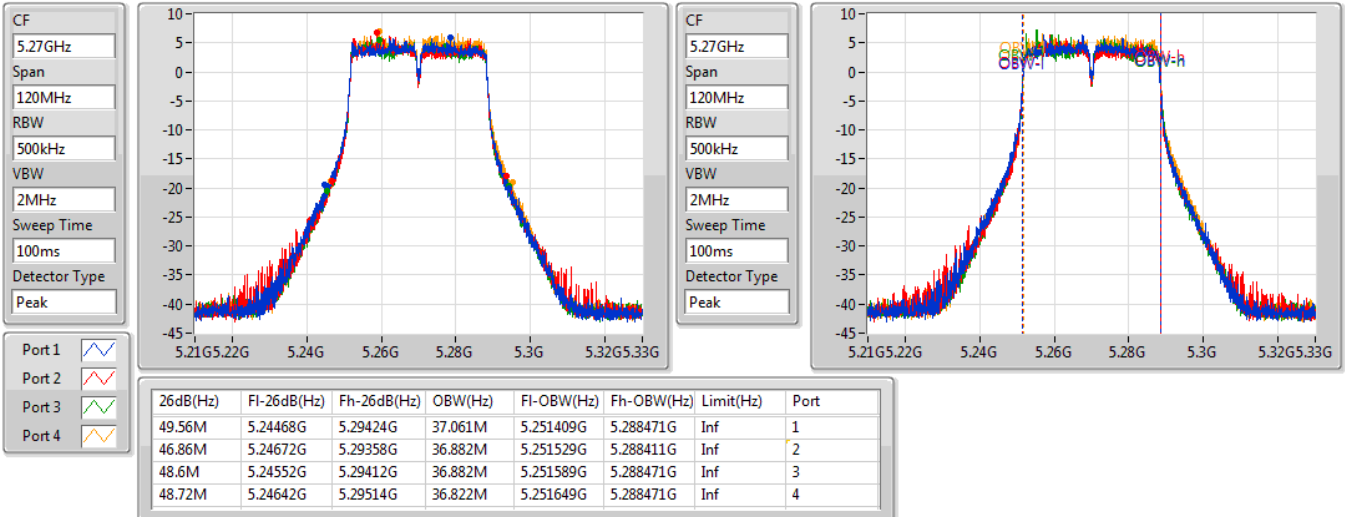

802.11ac VHT20-BF_Nss1,(MCS0)_4TX
EBW
5720MHz Straddle 5.725-5.85GHz

20/07/2020

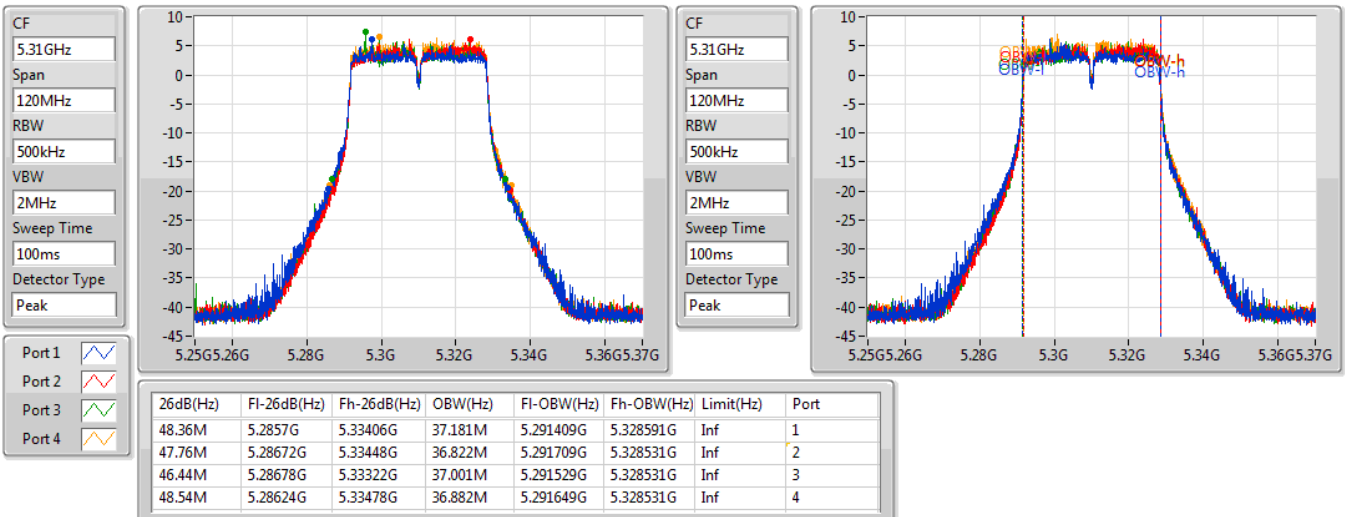


802.11ac VHT40-BF_Nss1,(MCS0)_4TX
EBW
5270MHz

22/06/2020

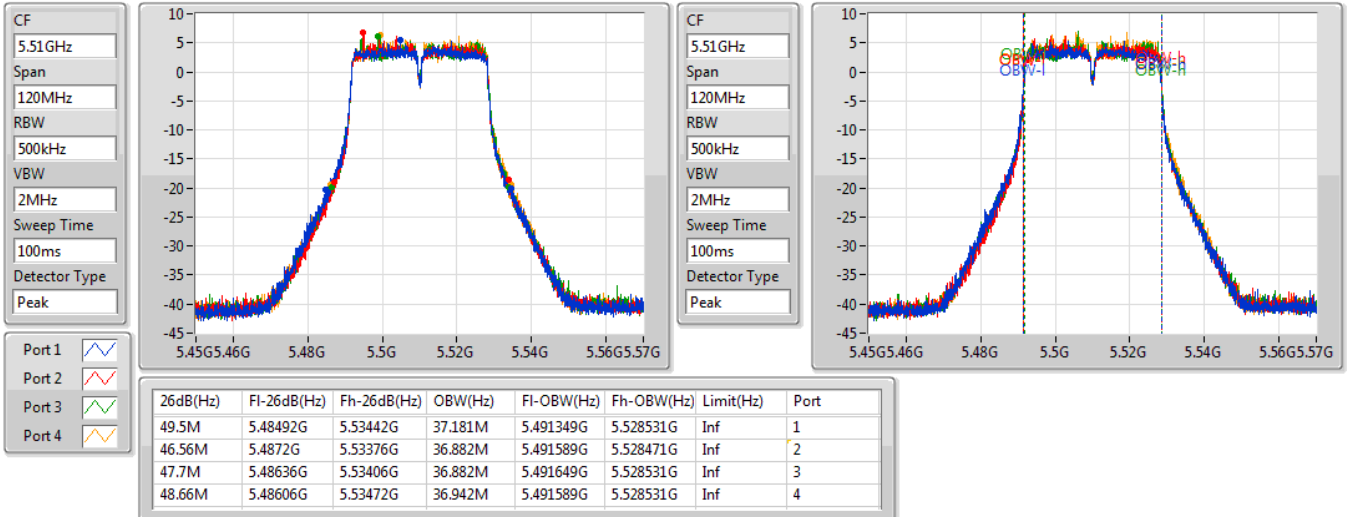

802.11ac VHT40-BF_Nss1,(MCS0)_4TX
EBW
5310MHz

22/06/2020

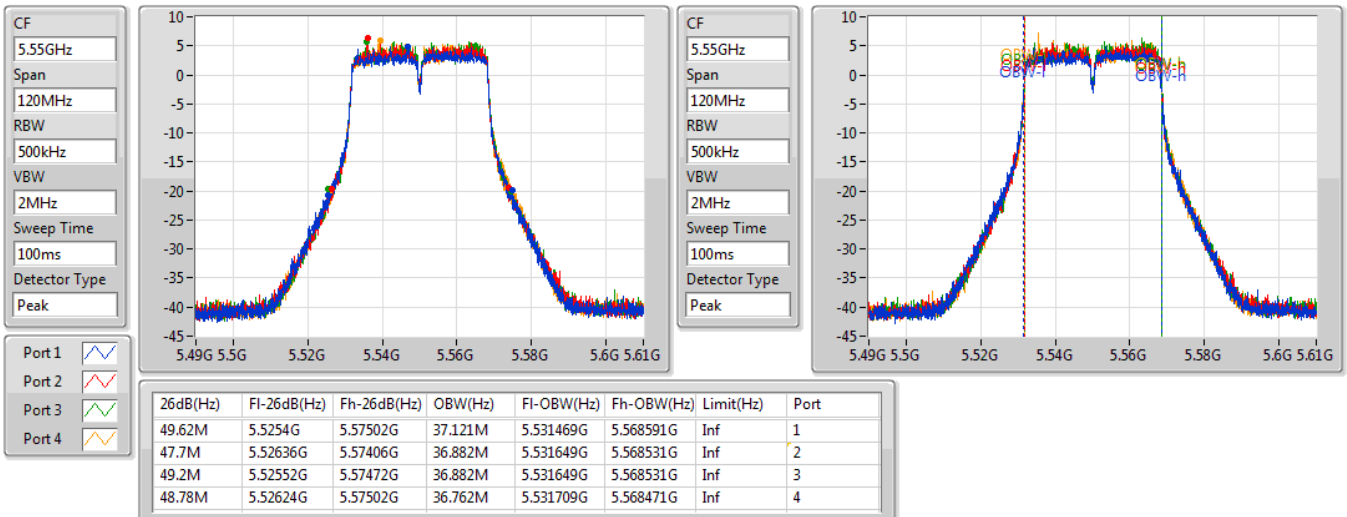


802.11ac VHT40-BF_Nss1,(MCS0)_4TX
EBW
5510MHz

22/06/2020

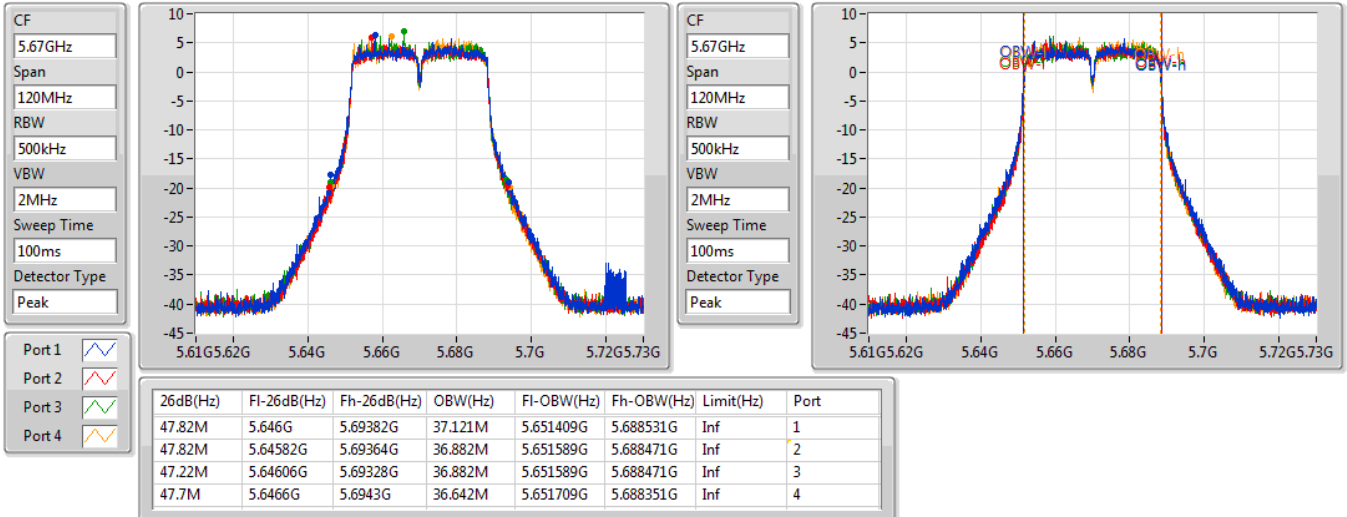

802.11ac VHT40-BF_Nss1,(MCS0)_4TX
EBW
5550MHz

22/06/2020

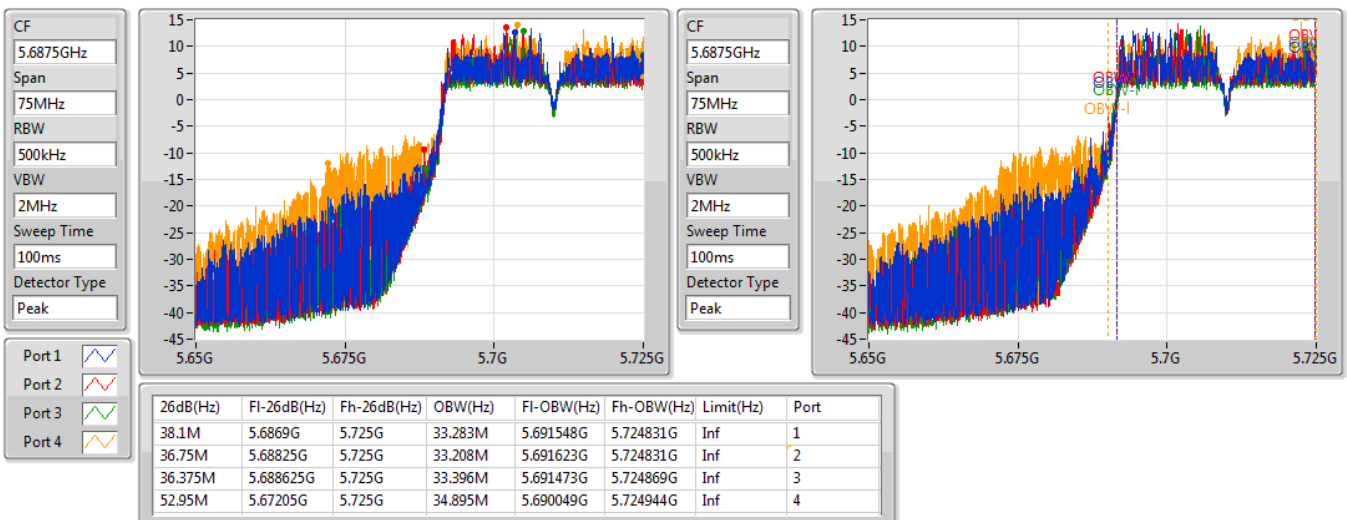


802.11ac VHT40-BF_Nss1,(MCS0)_4TX
EBW
5670MHz

22/06/2020

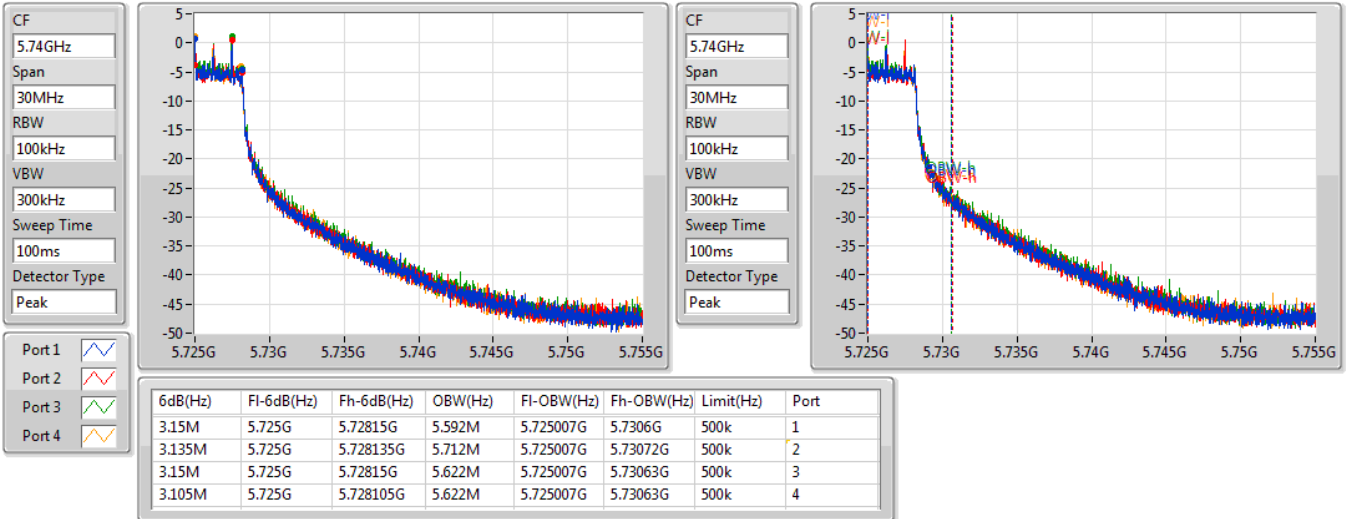

802.11ac VHT40-BF_Nss1,(MCS0)_4TX
EBW
5710MHz Straddle 5.47-5.725GHz

20/07/2020

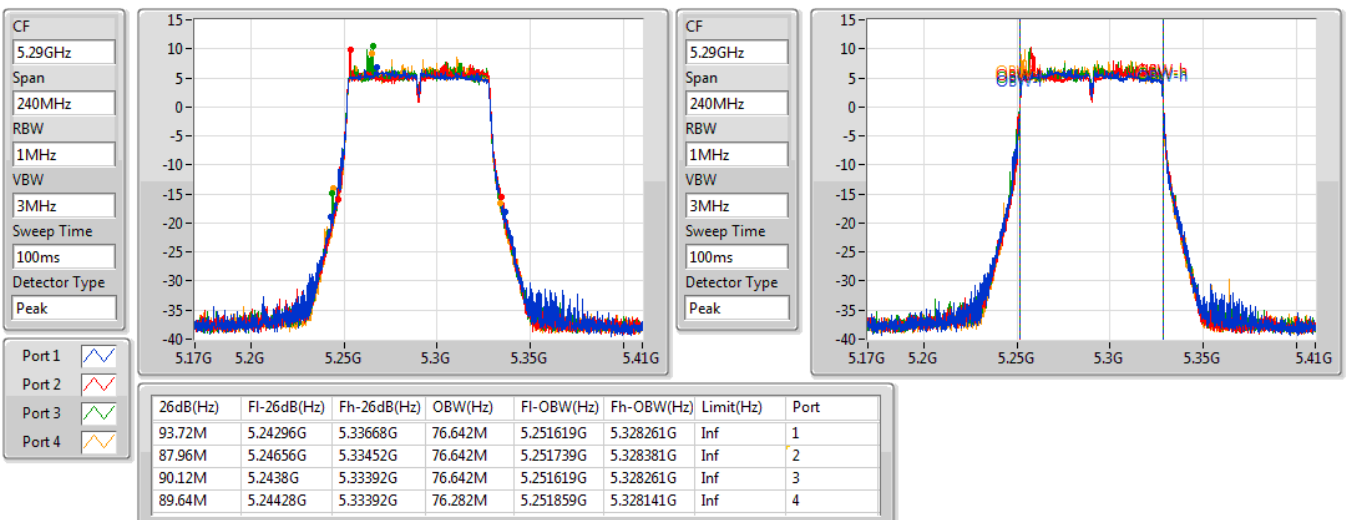


802.11ac VHT40-BF_Nss1,(MCS0)_4TX
EBW
5710MHz Straddle 5.725-5.85GHz

22/06/2020

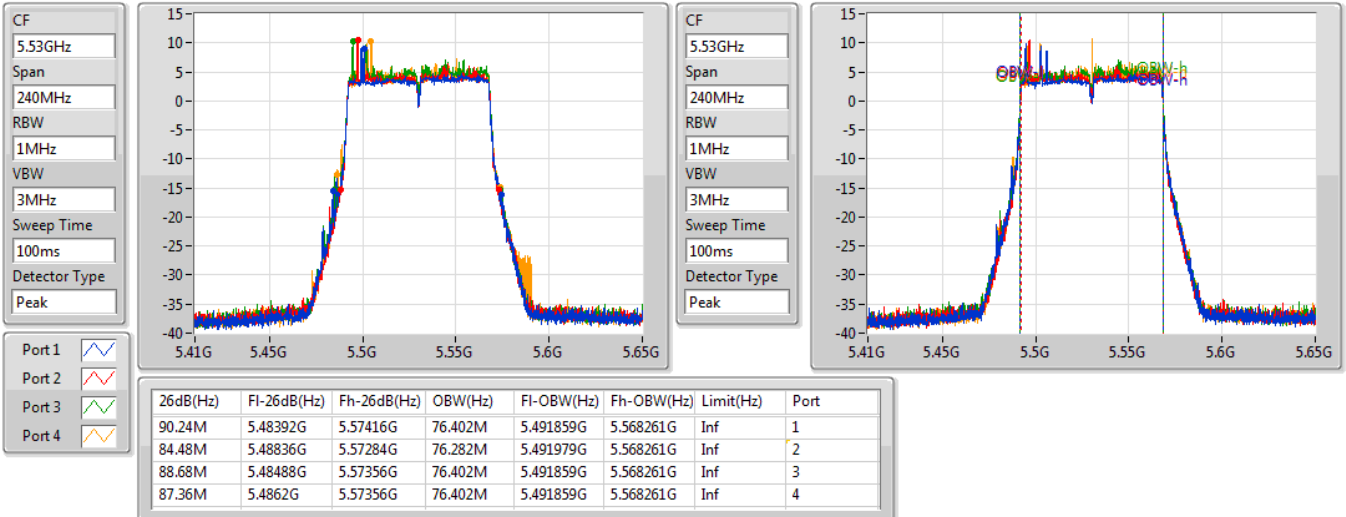

802.11ac VHT80-BF_Nss1,(MCS0)_4TX
EBW
5290MHz

22/06/2020

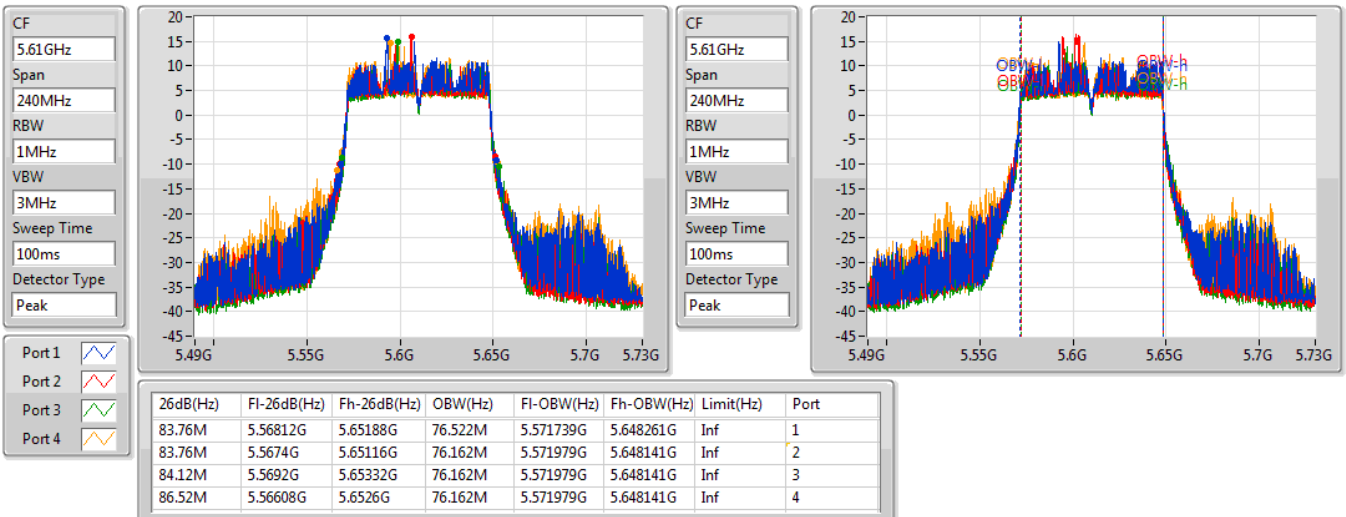


802.11ac VHT80-BF_Nss1,(MCS0)_4TX
EBW
5530MHz

22/06/2020

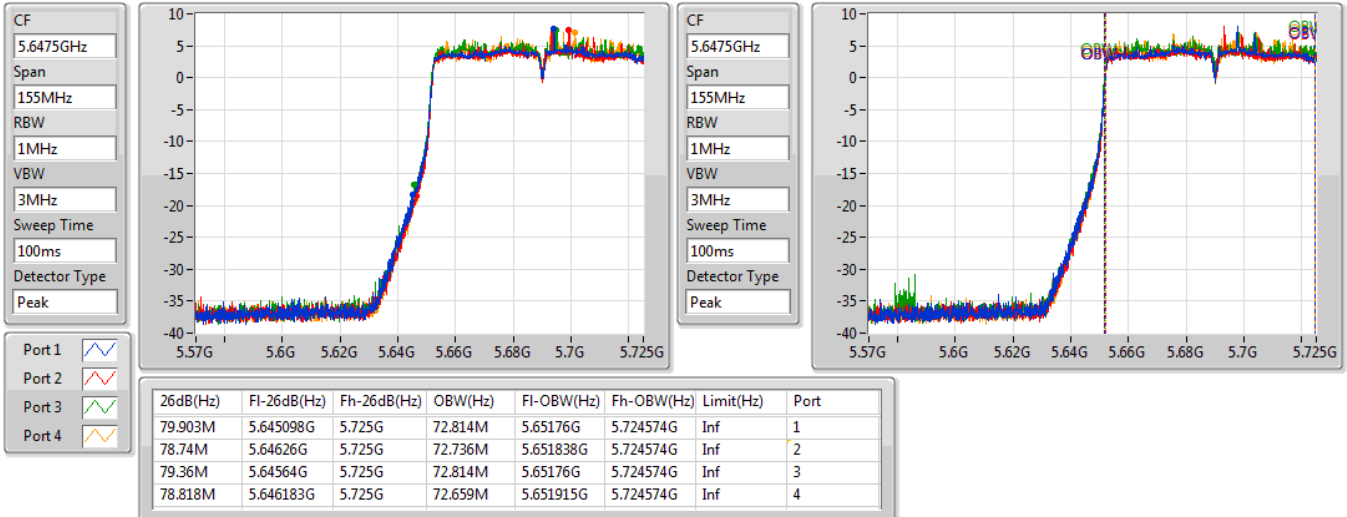

802.11ac VHT80-BF_Nss1,(MCS0)_4TX
EBW
5610MHz

20/07/2020

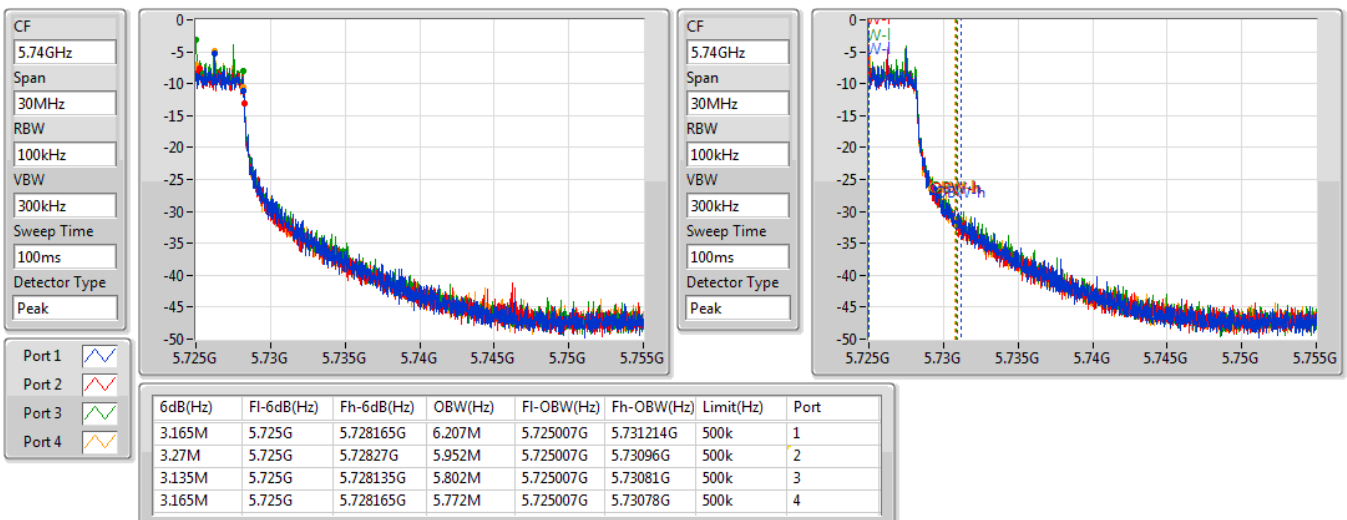


802.11ac VHT80-BF_Nss1,(MCS0)_4TX
EBW
5690MHz Straddle 5.47-5.725GHz

22/06/2020

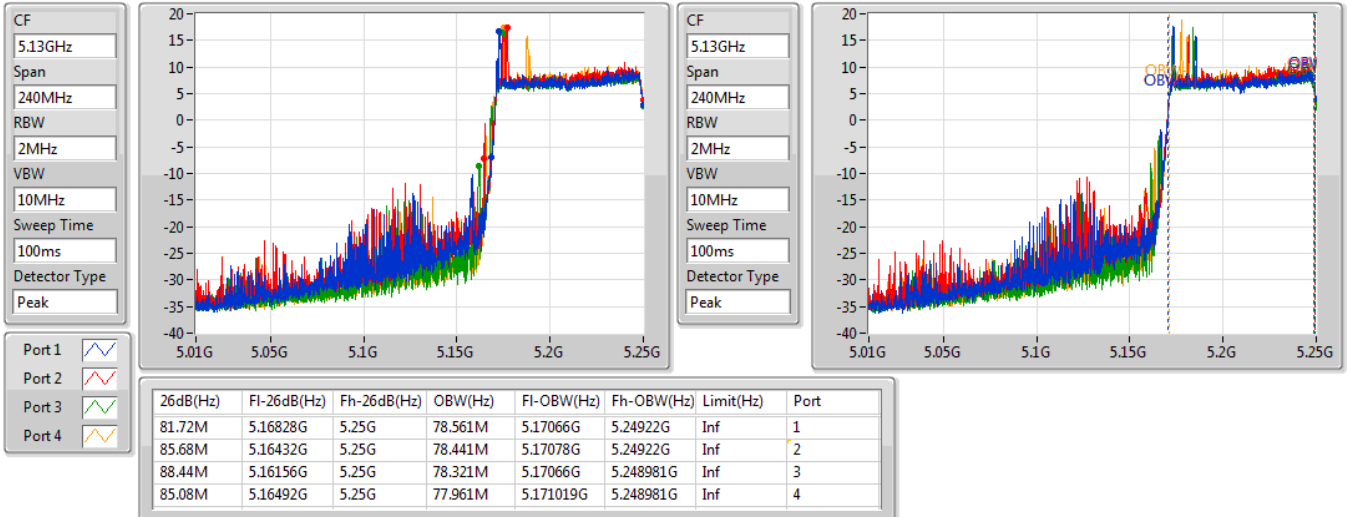

802.11ac VHT80-BF_Nss1,(MCS0)_4TX
EBW
5690MHz Straddle 5.725-5.85GHz

22/06/2020

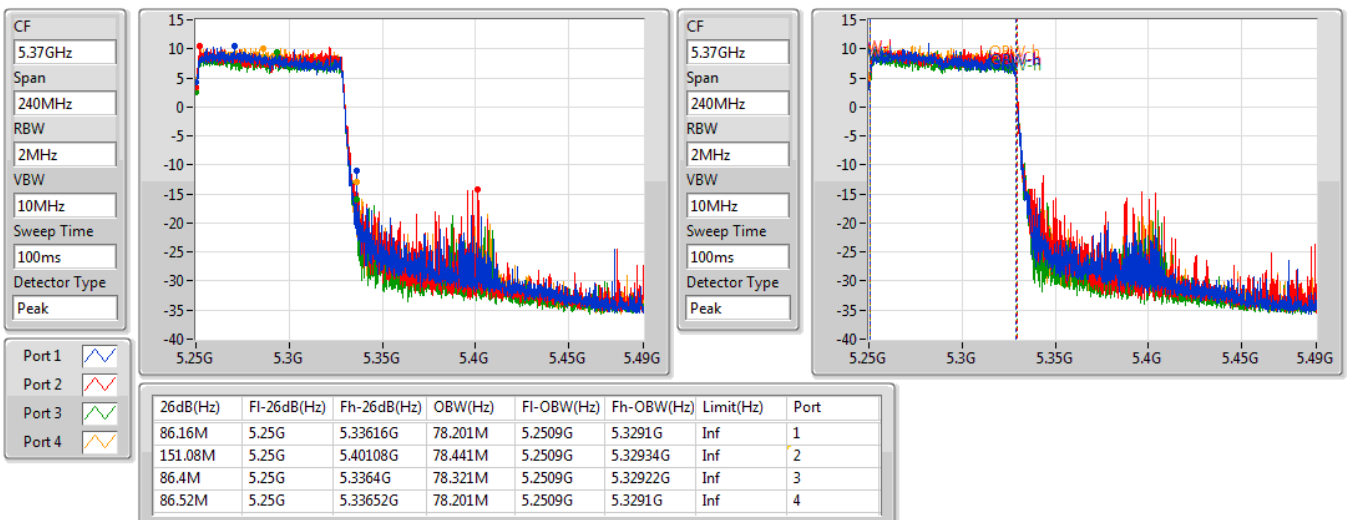


802.11ac VHT160-BF_Nss1,(MCS0)_4TX
EBW
5250MHz Straddle 5.15-5.25GHz

22/06/2020

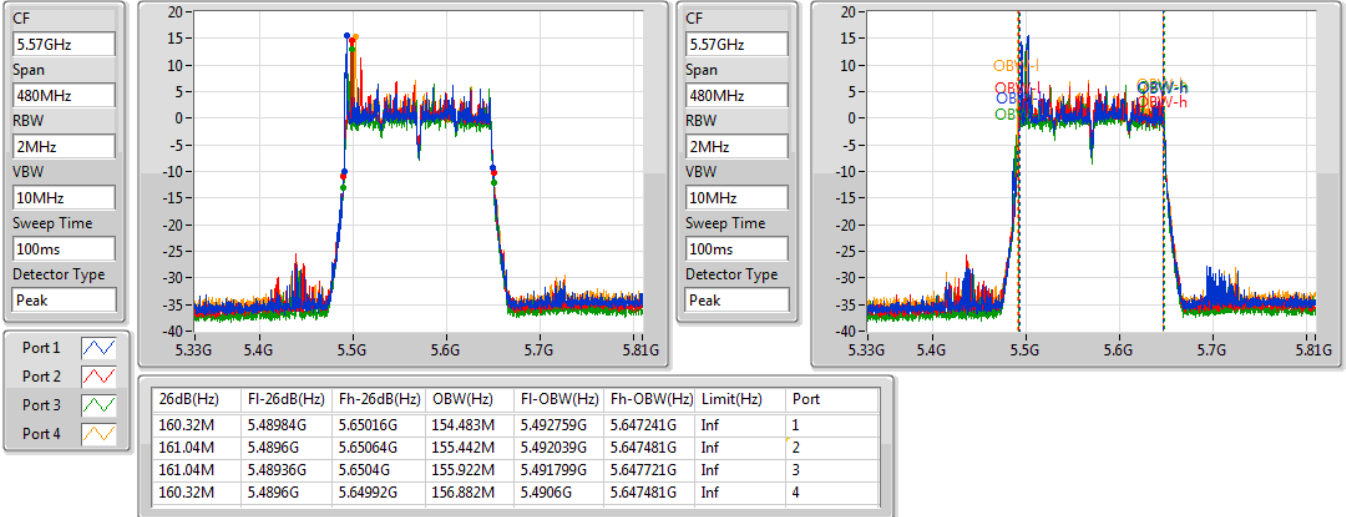

802.11ac VHT160-BF_Nss1,(MCS0)_4TX
EBW
5250MHz Straddle 5.25-5.35GHz

22/06/2020

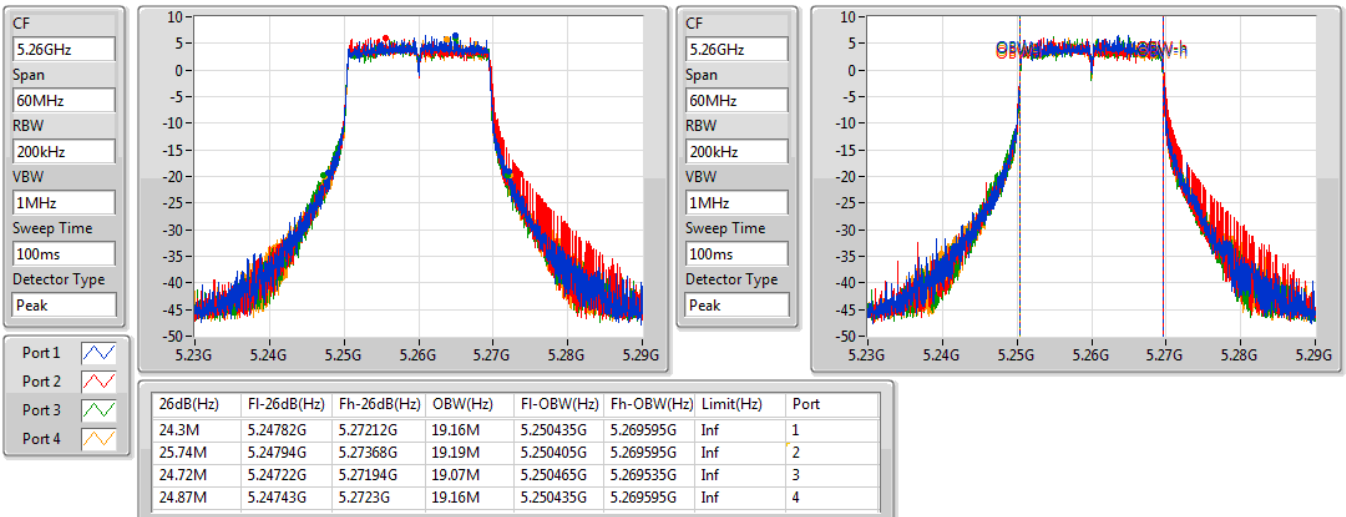


802.11ac VHT160-BF_Nss1,(MCS0)_4TX
EBW
5570MHz

20/07/2020

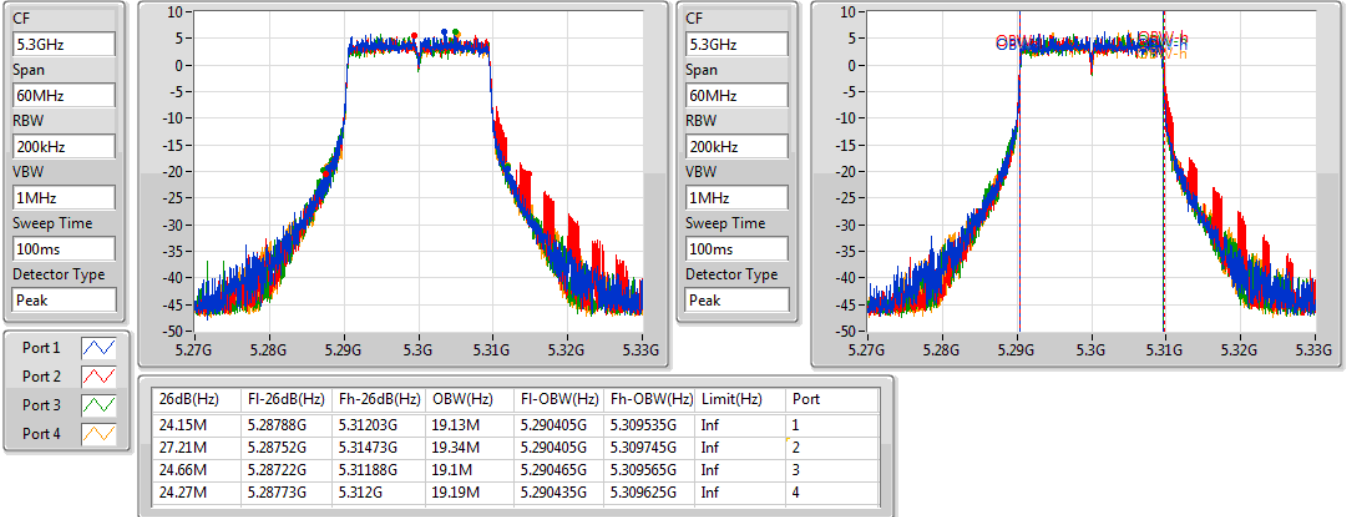

802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5260MHz

20/06/2020

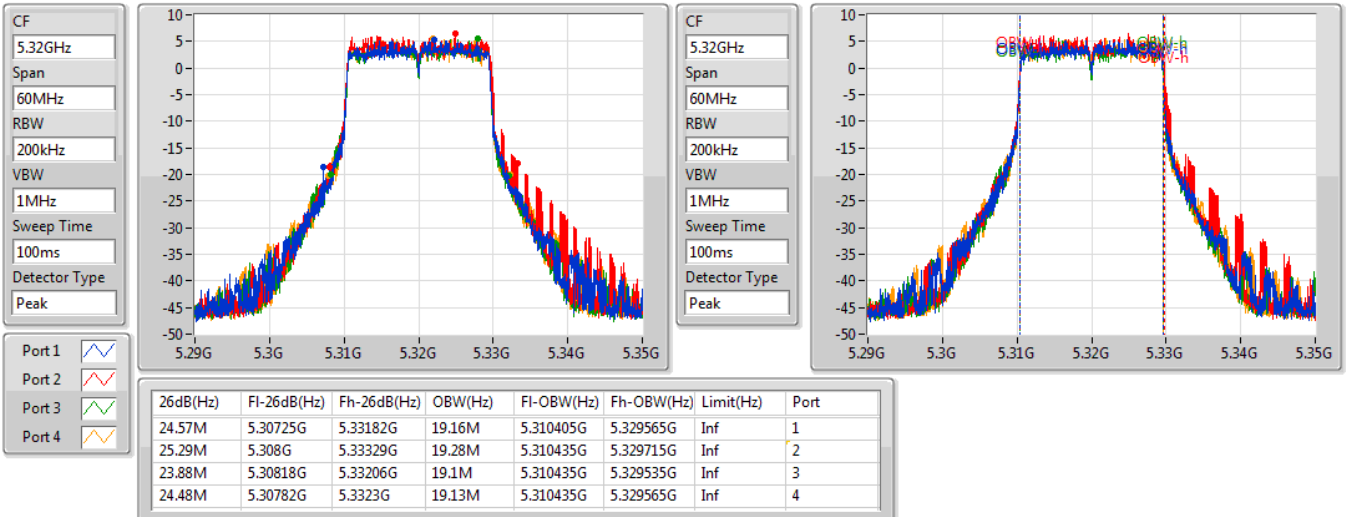


802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5300MHz

20/06/2020

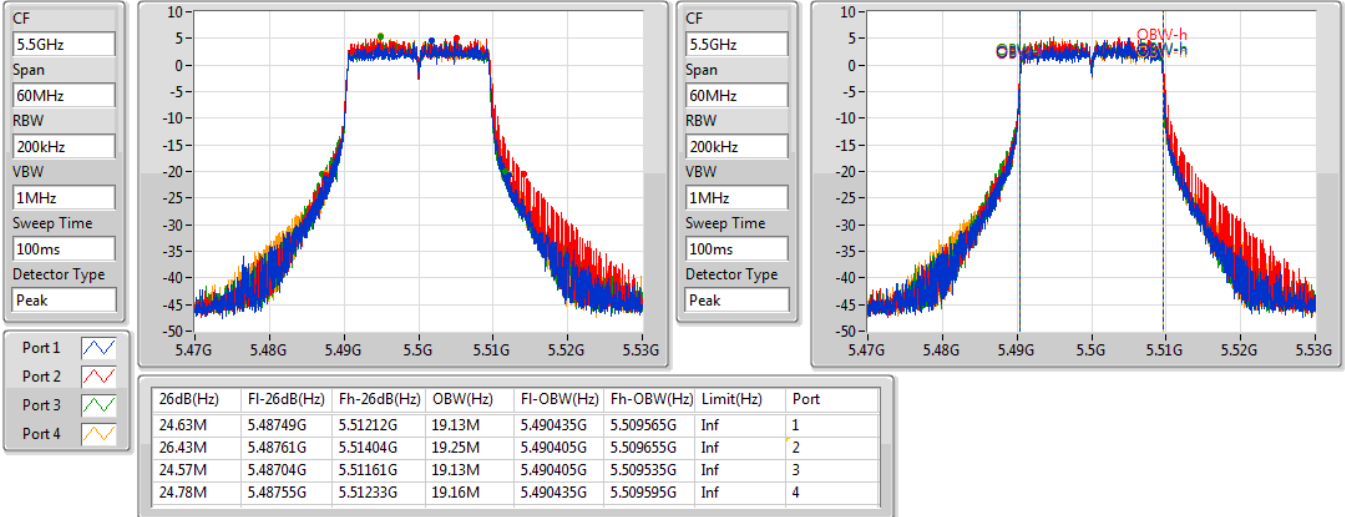

802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5320MHz

20/06/2020

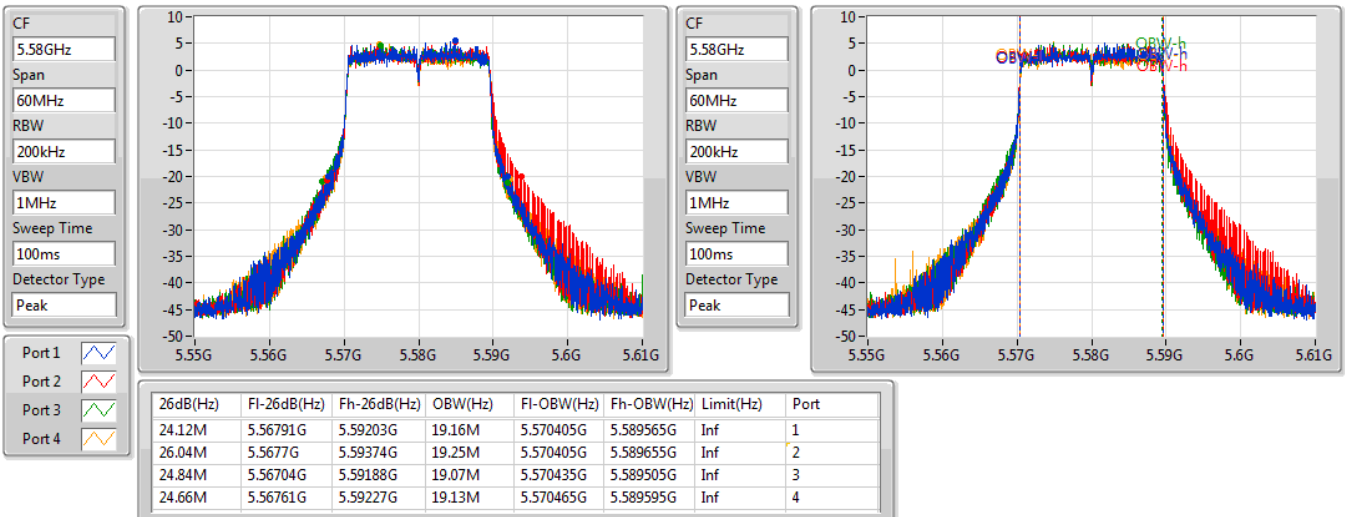


802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5500MHz

20/06/2020

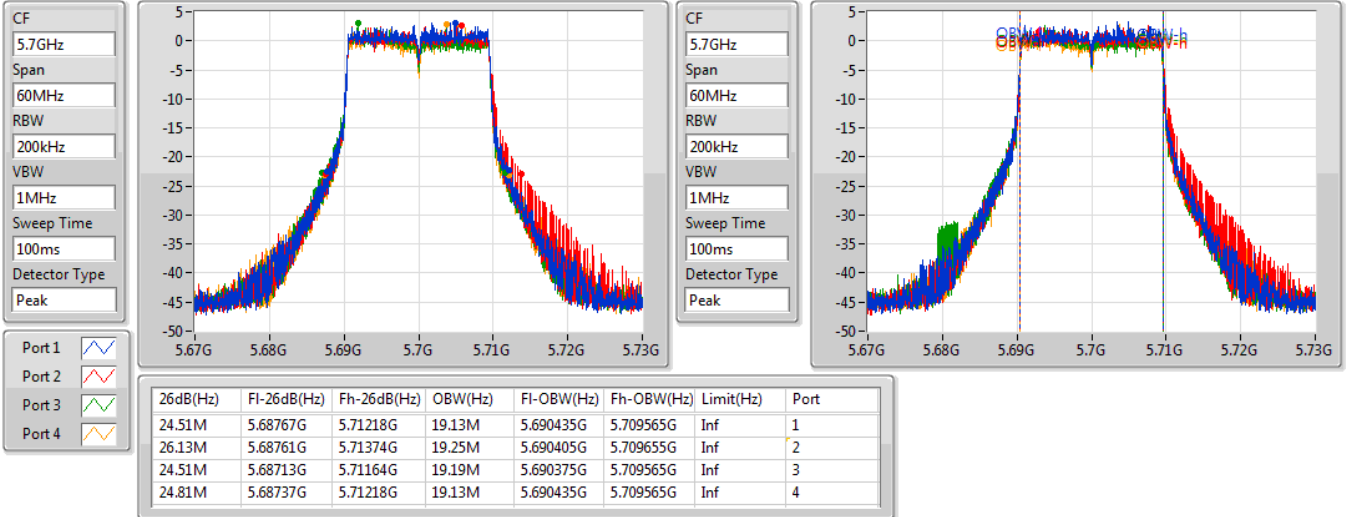

802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5580MHz

20/06/2020

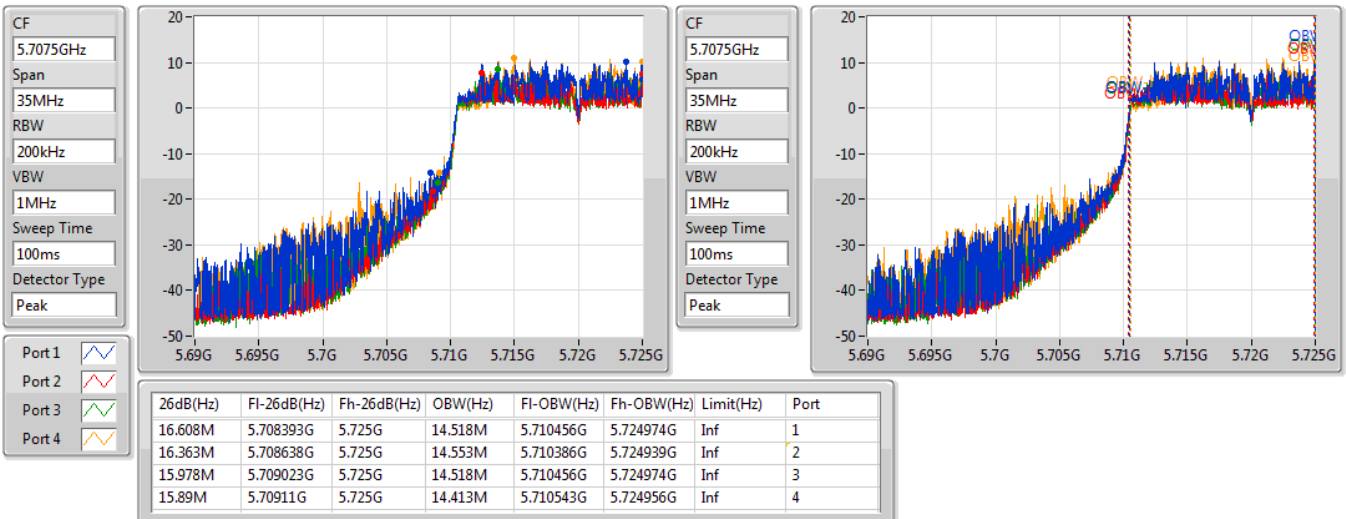


802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5700MHz

20/06/2020

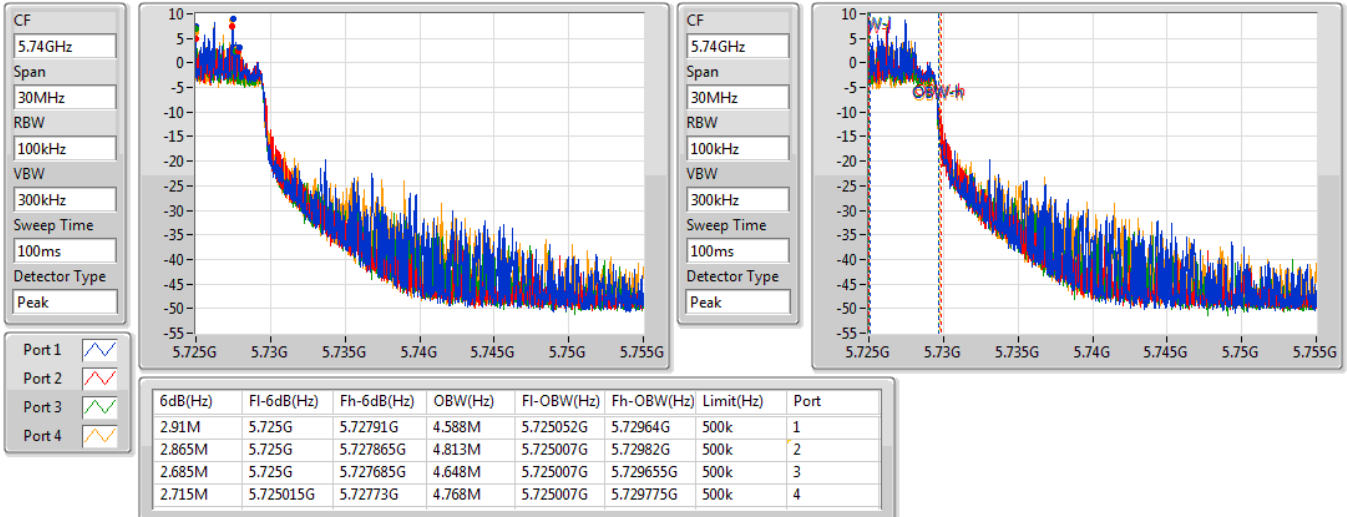

802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5720MHz Straddle 5.47-5.725GHz

20/07/2020

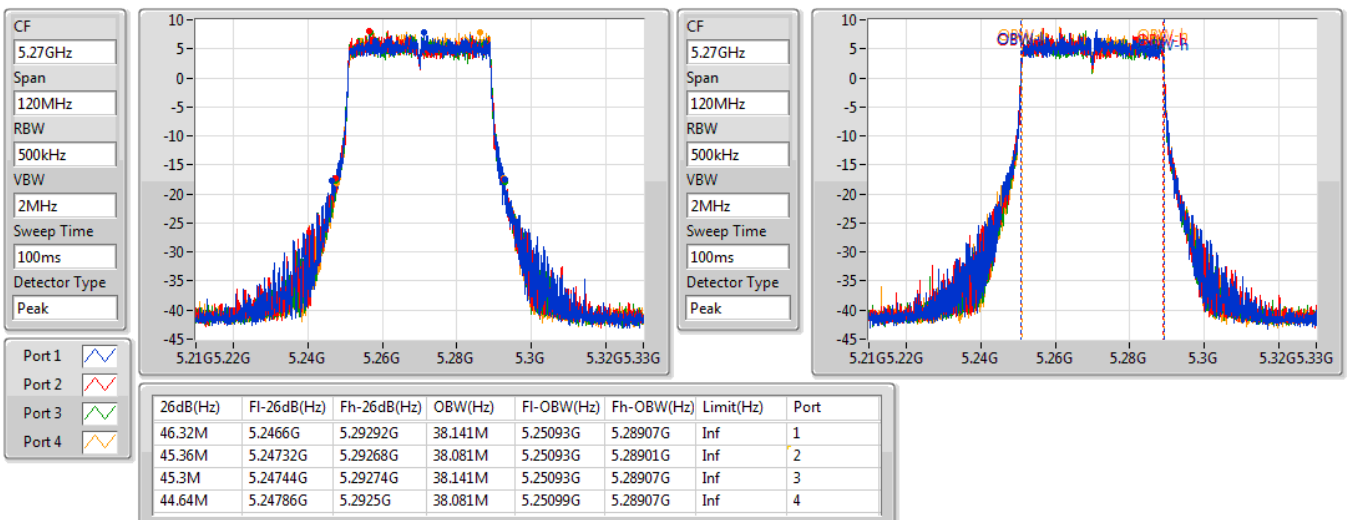


802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5720MHz Straddle 5.725-5.85GHz

20/07/2020

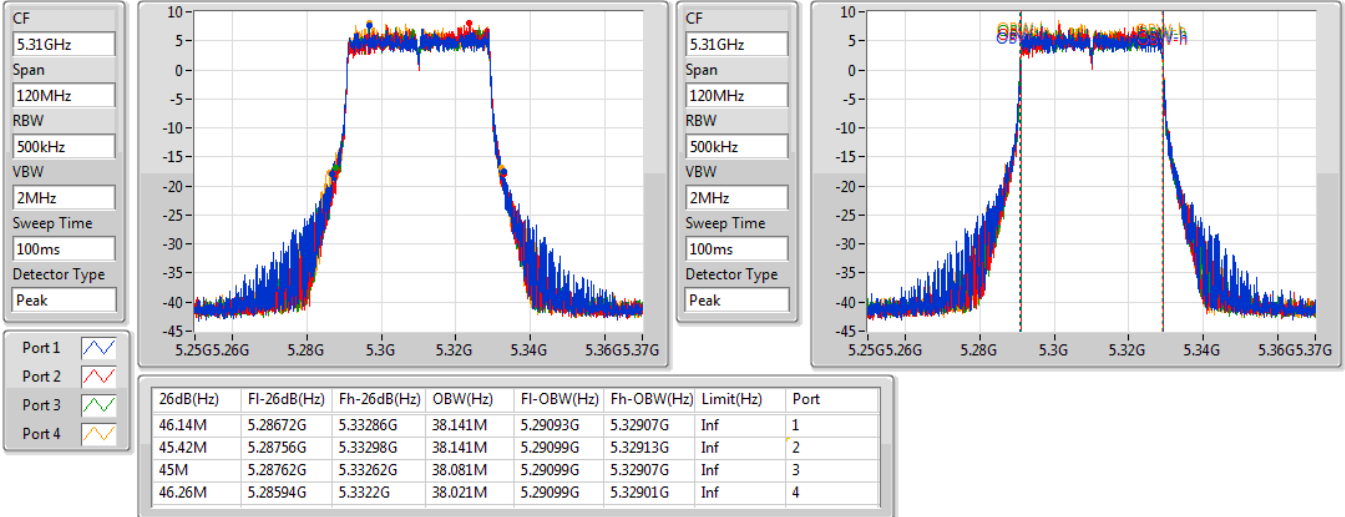

802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
5270MHz

20/06/2020

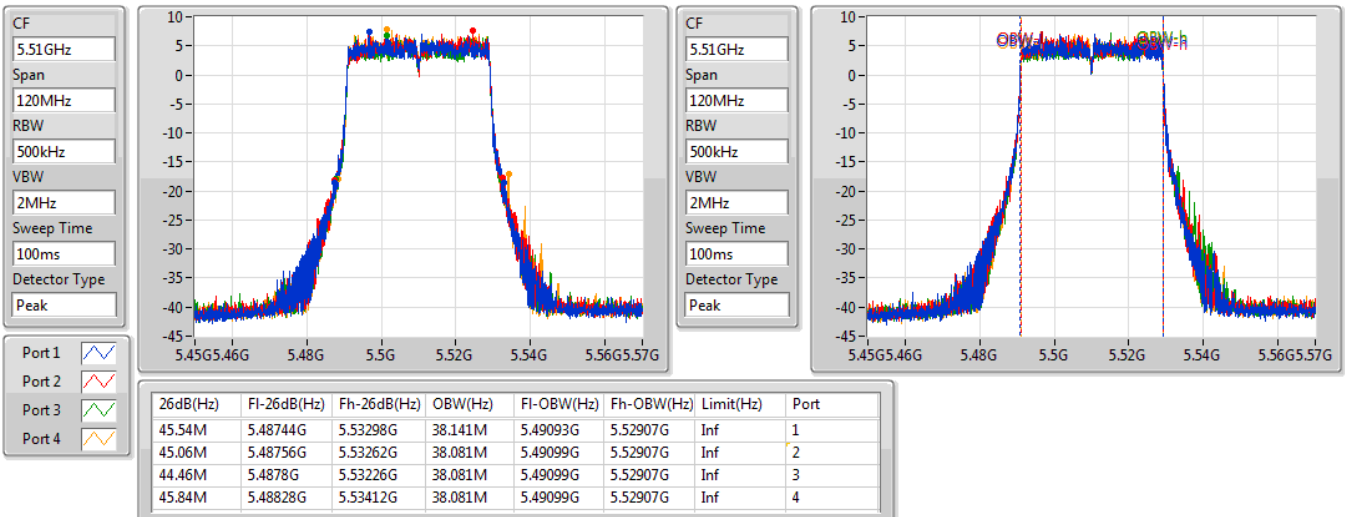


802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
5310MHz

20/06/2020

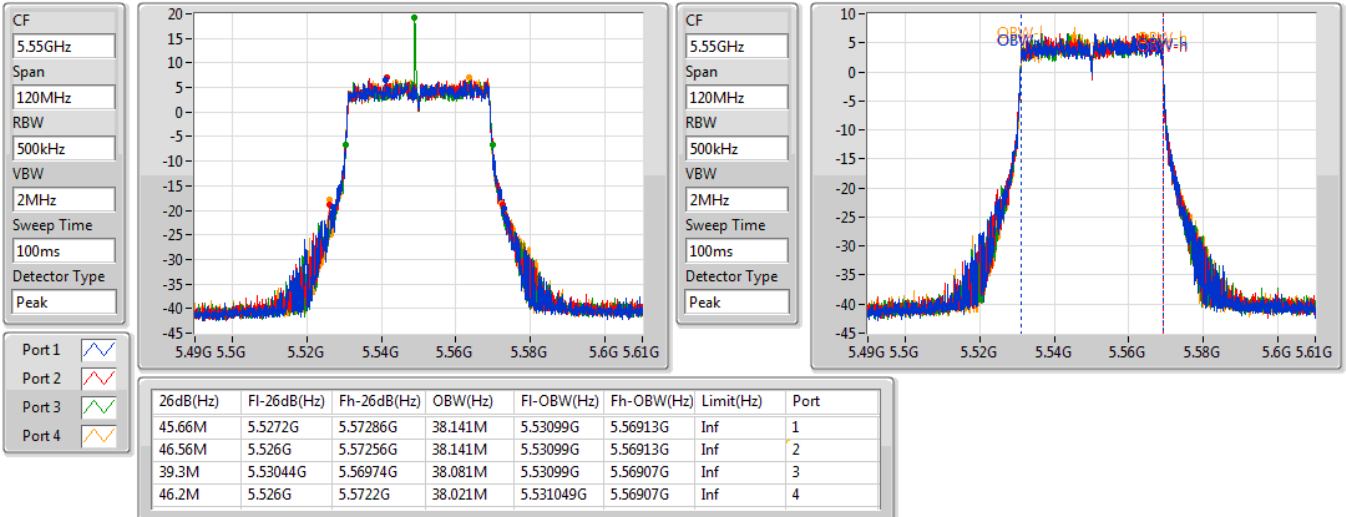

802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
5510MHz

20/06/2020

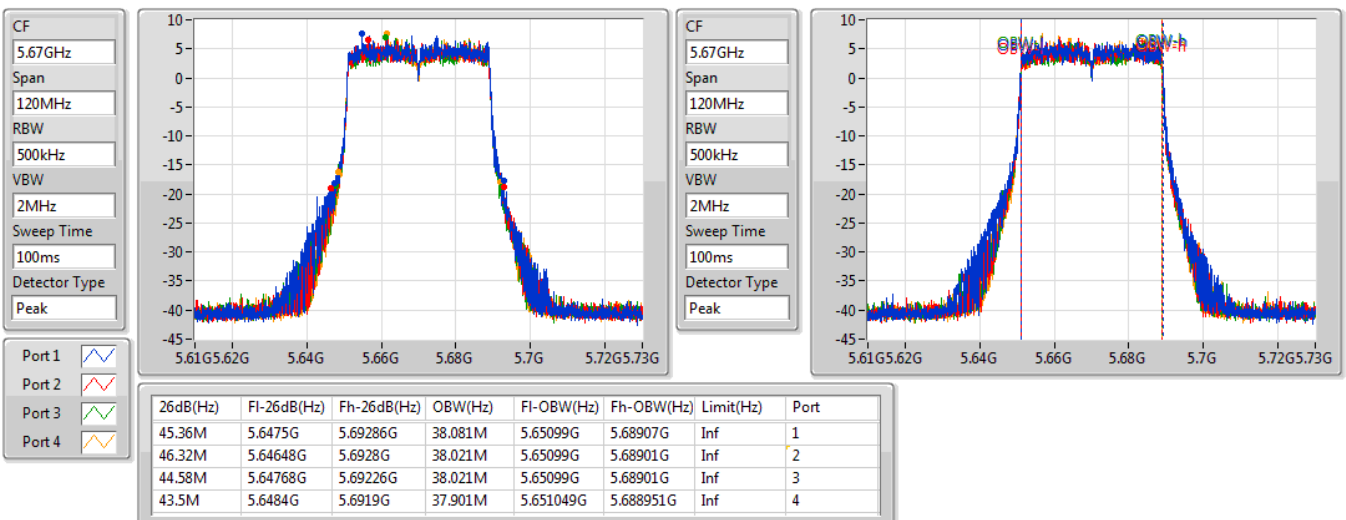


802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
5550MHz

20/06/2020

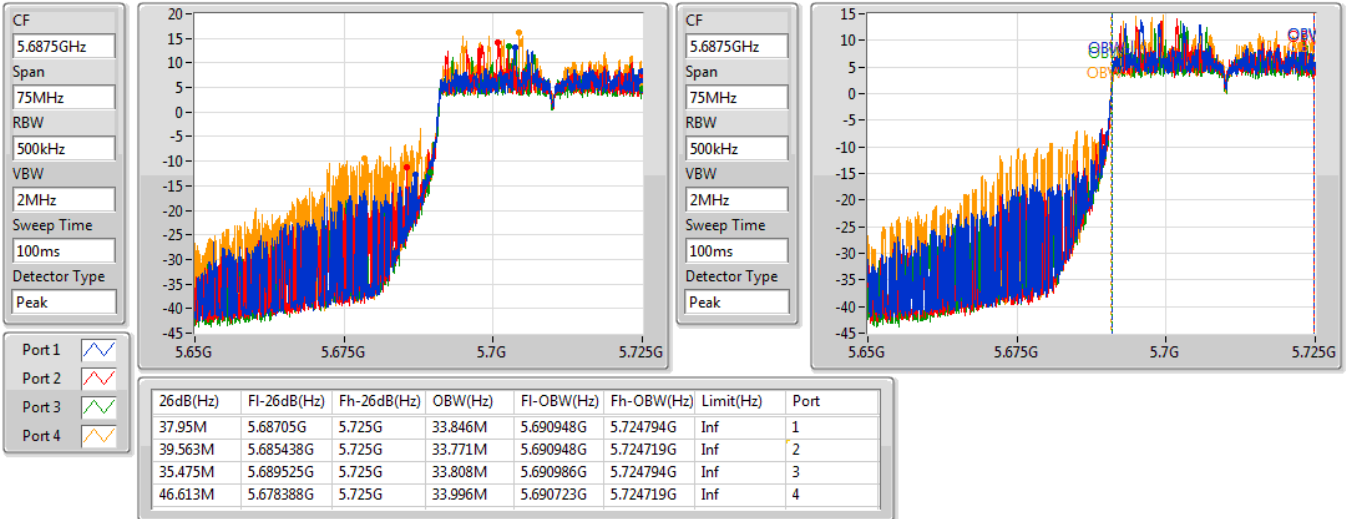

802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
5670MHz

20/06/2020

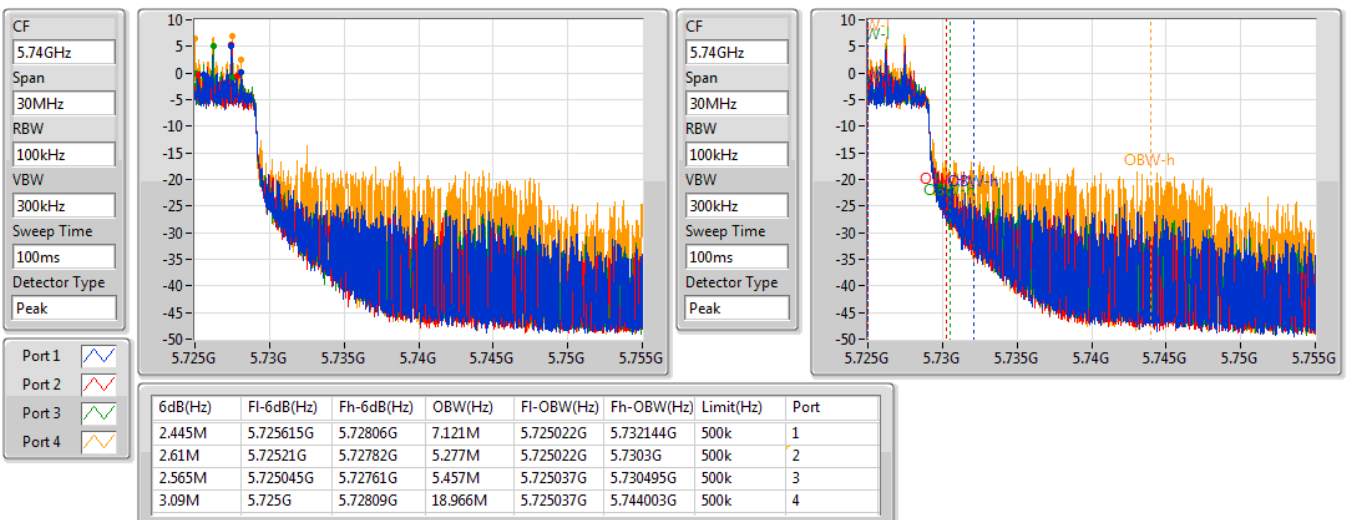


802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
5710MHz Straddle 5.47-5.725GHz

20/07/2020

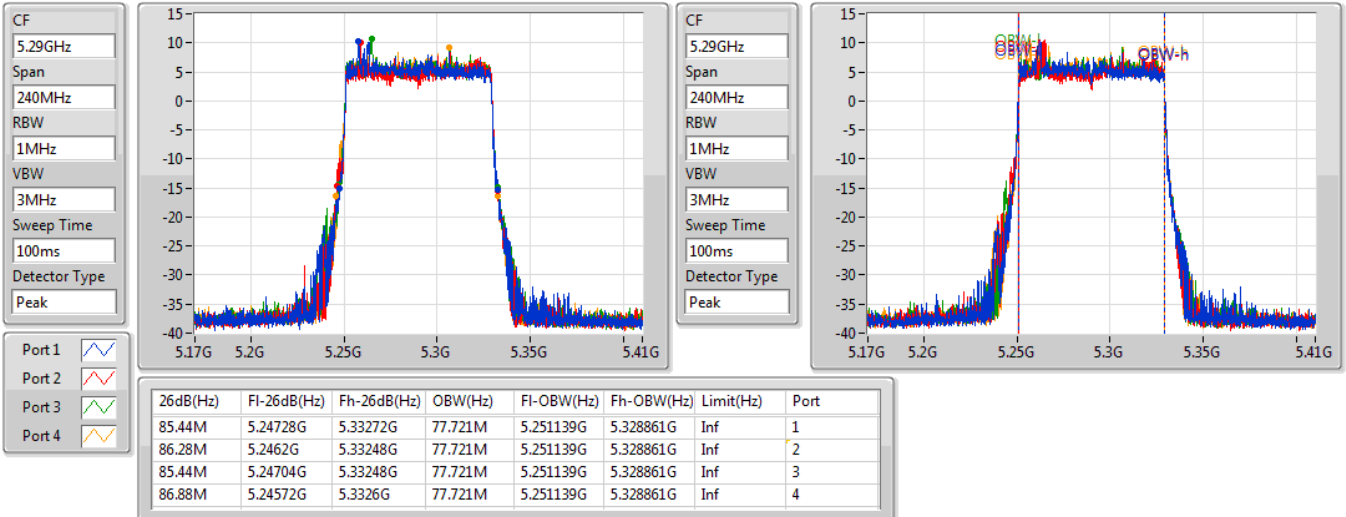

802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
5710MHz Straddle 5.725-5.85GHz

20/07/2020

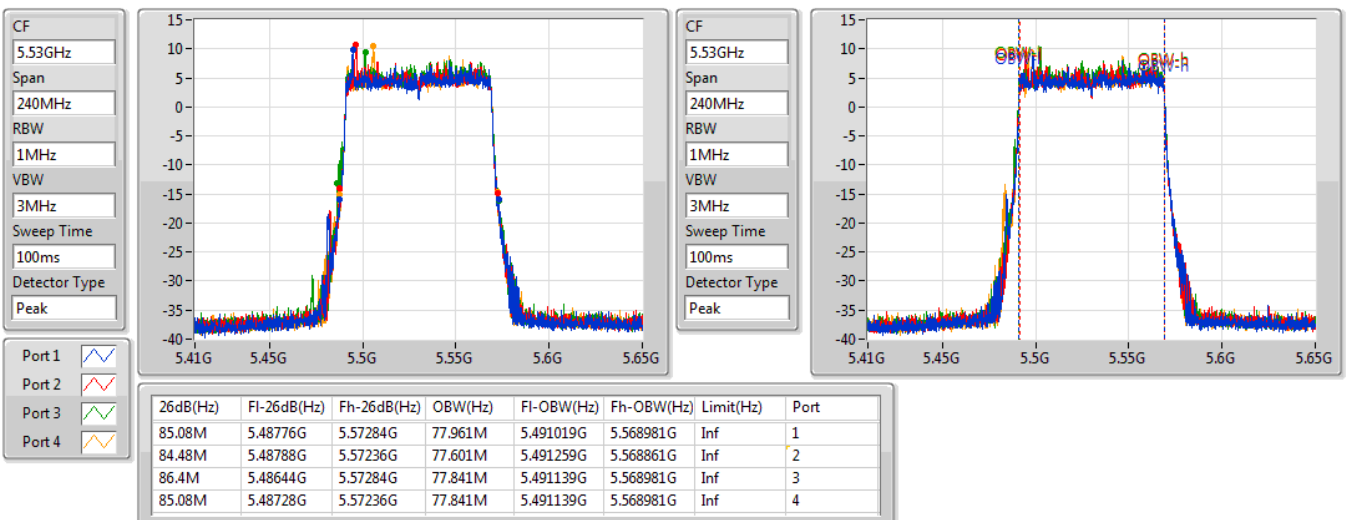


802.11ax HEW80-BF_Nss1,(MCS0)_4TX
EBW
5290MHz

20/06/2020

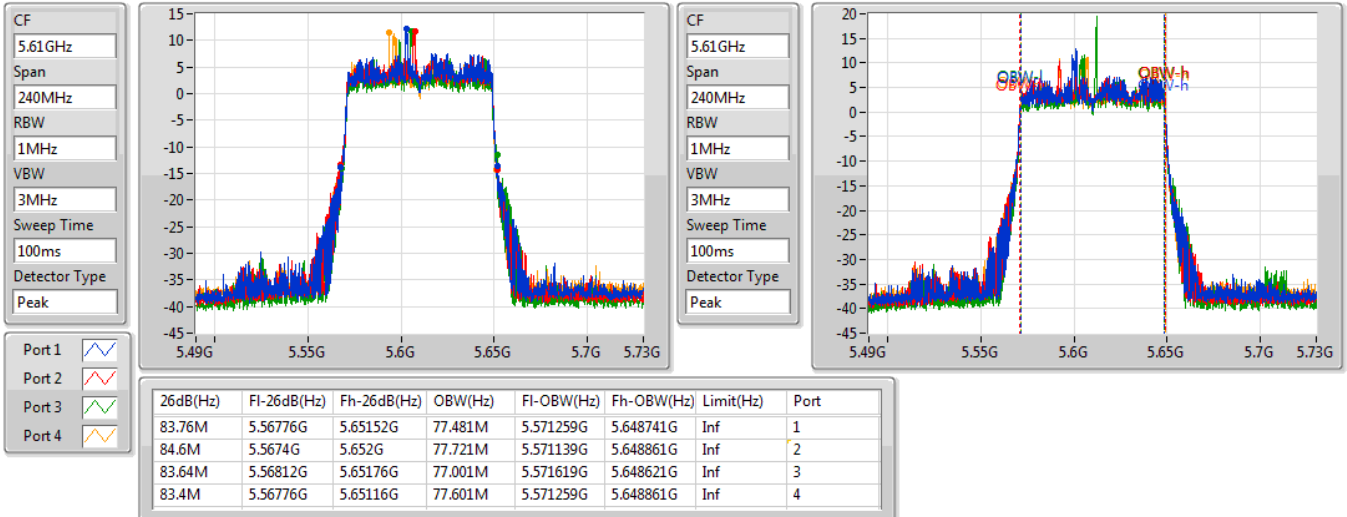

802.11ax HEW80-BF_Nss1,(MCS0)_4TX
EBW
5530MHz

22/06/2020

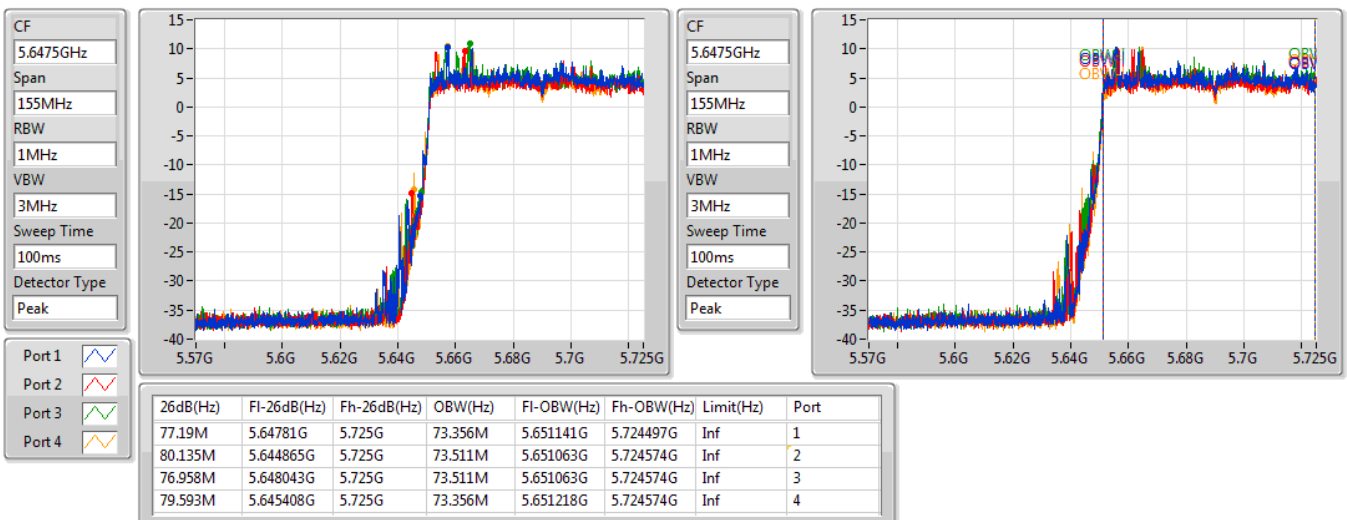


802.11ax HEW80-BF_Nss1,(MCS0)_4TX
EBW
5610MHz

20/07/2020

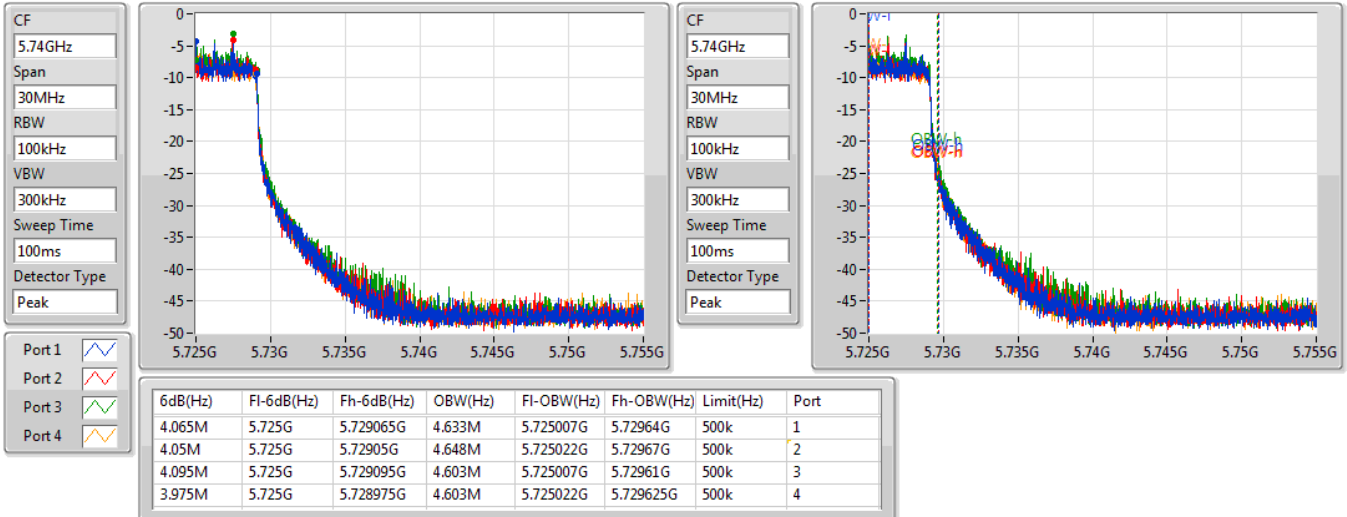

802.11ax HEW80-BF_Nss1,(MCS0)_4TX
EBW
5690MHz Straddle 5.47-5.725GHz

22/06/2020

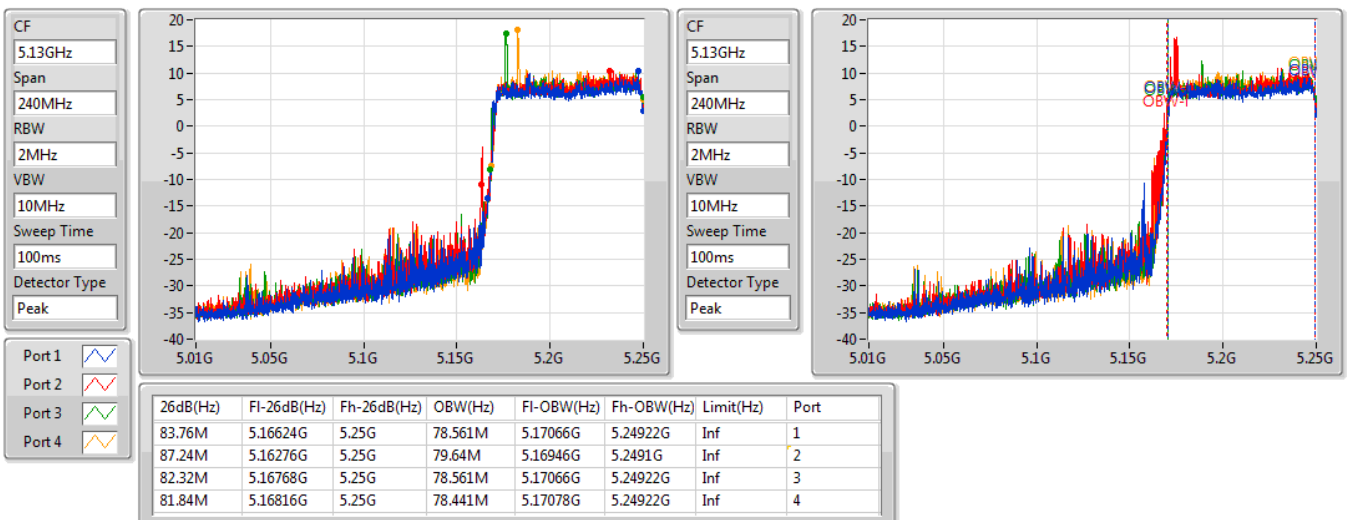


802.11ax HEW80-BF_Nss1,(MCS0)_4TX
EBW
5690MHz Straddle 5.725-5.85GHz

22/06/2020

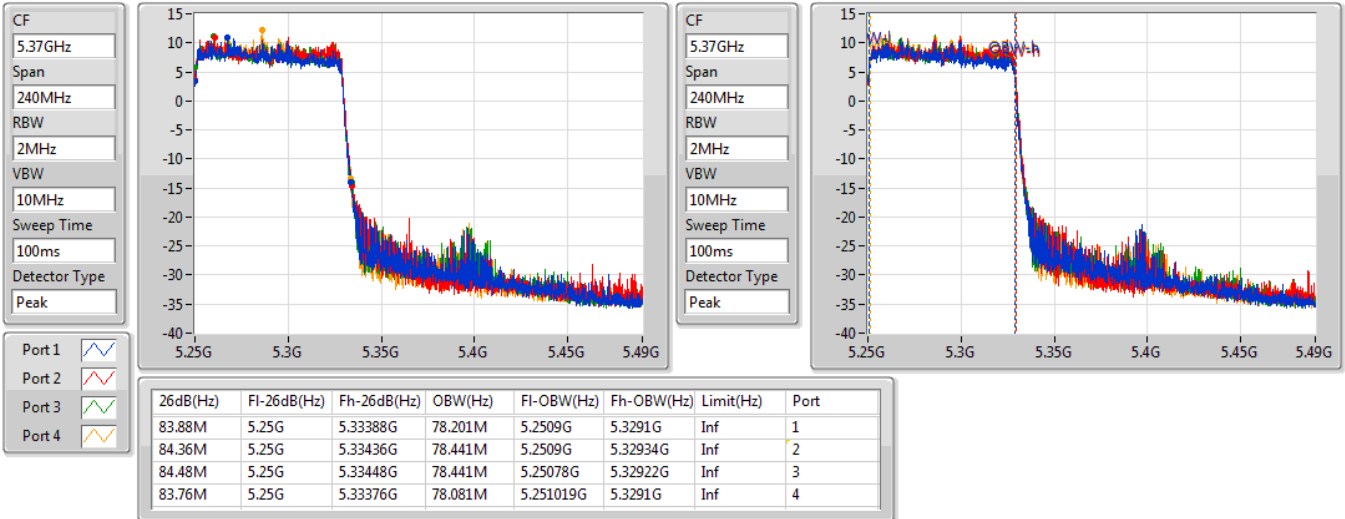

802.11ax HEW160-BF_Nss1,(MCS0)_4TX
EBW
5250MHz Straddle 5.15-5.25GHz

20/06/2020

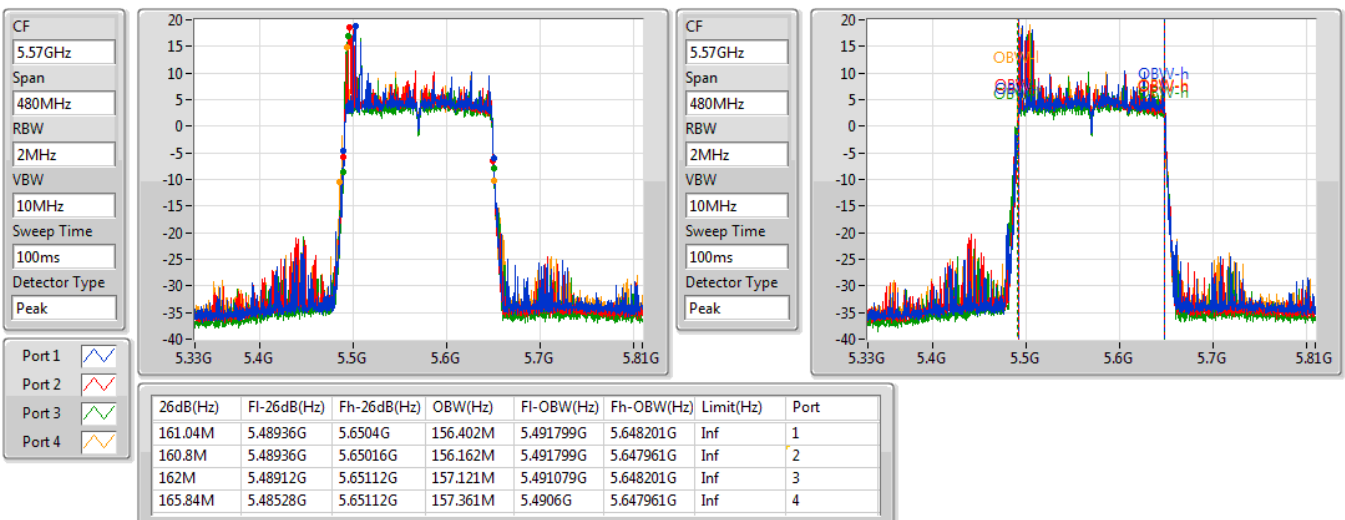


802.11ax HEW160-BF_Nss1,(MCS0)_4TX
EBW
5250MHz Straddle 5.25-5.35GHz

20/06/2020


802.11ax HEW160-BF_Nss1,(MCS0)_4TX
EBW
5570MHz

20/07/2020





Average Power Result

Appendix C

For non-beamforming mode:

Summary

Mode	Total Power (dBm)	Total Power (W)
5.15-5.25GHz	-	-
802.11ac VHT160_Nss1,(MCS0)_4TX	20.08	0.10186
802.11ax HEW160_Nss1,(MCS0)_4TX	18.20	0.06607
5.25-5.35GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	21.73	0.14894
802.11ac VHT20_Nss1,(MCS0)_4TX	21.72	0.14859
802.11ac VHT40_Nss1,(MCS0)_4TX	23.72	0.23550
802.11ac VHT80_Nss1,(MCS0)_4TX	23.11	0.20464
802.11ac VHT160_Nss1,(MCS0)_4TX	20.19	0.10447
802.11ax HEW20_Nss1,(MCS0)_4TX	22.10	0.16218
802.11ax HEW40_Nss1,(MCS0)_4TX	23.74	0.23659
802.11ax HEW80_Nss1,(MCS0)_4TX	23.27	0.21232
802.11ax HEW160_Nss1,(MCS0)_4TX	18.33	0.06808
5.47-5.725GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	21.03	0.12677
802.11ac VHT20_Nss1,(MCS0)_4TX	21.37	0.13709
802.11ac VHT40_Nss1,(MCS0)_4TX	23.67	0.23281
802.11ac VHT80_Nss1,(MCS0)_4TX	23.62	0.23014
802.11ac VHT160_Nss1,(MCS0)_4TX	21.72	0.14859
802.11ax HEW20_Nss1,(MCS0)_4TX	21.84	0.15276
802.11ax HEW40_Nss1,(MCS0)_4TX	23.69	0.23388
802.11ax HEW80_Nss1,(MCS0)_4TX	23.93	0.24717
802.11ax HEW160_Nss1,(MCS0)_4TX	20.37	0.10889
5.725-5.85GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	13.23	0.02104
802.11ac VHT20_Nss1,(MCS0)_4TX	13.98	0.02500
802.11ac VHT40_Nss1,(MCS0)_4TX	13.53	0.02254
802.11ac VHT80_Nss1,(MCS0)_4TX	10.47	0.01114
802.11ax HEW20_Nss1,(MCS0)_4TX	14.15	0.02600
802.11ax HEW40_Nss1,(MCS0)_4TX	14.29	0.02685
802.11ax HEW80_Nss1,(MCS0)_4TX	11.64	0.01459



Average Power Result

Appendix C

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-
5260MHz	Pass	3.00	16.03	15.47	15.64	15.66	21.73	23.98
5300MHz	Pass	3.00	15.90	15.07	15.75	15.47	21.58	23.98
5320MHz	Pass	3.00	16.12	15.06	15.78	15.30	21.61	23.98
5500MHz	Pass	3.40	14.70	14.33	15.38	14.94	20.87	23.98
5580MHz	Pass	3.40	14.59	14.70	15.74	14.93	21.03	23.98
5700MHz	Pass	3.40	13.49	14.90	15.41	15.39	20.88	23.98
5720MHz Straddle 5.47-5.725GHz	Pass	3.40	12.32	13.05	13.96	14.36	19.51	23.14
5720MHz Straddle 5.725-5.85GHz	Pass	3.00	6.53	6.85	7.61	7.73	13.23	30.00
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5260MHz	Pass	3.00	15.99	15.08	15.31	15.84	21.59	23.98
5300MHz	Pass	3.00	15.92	15.68	15.47	15.70	21.72	23.98
5320MHz	Pass	3.00	15.45	15.13	15.43	15.46	21.39	23.98
5500MHz	Pass	3.40	14.80	14.93	15.50	15.09	21.11	23.98
5580MHz	Pass	3.40	14.61	15.16	15.92	15.60	21.37	23.98
5700MHz	Pass	3.40	13.67	15.06	15.57	15.56	21.05	23.98
5720MHz Straddle 5.47-5.725GHz	Pass	3.40	12.55	13.27	14.18	14.61	19.75	23.49
5720MHz Straddle 5.725-5.85GHz	Pass	3.00	7.31	7.61	8.32	8.48	13.98	30.00
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5270MHz	Pass	3.00	17.96	17.15	17.70	17.74	23.67	23.98
5310MHz	Pass	3.00	17.74	17.21	17.76	18.05	23.72	23.98
5510MHz	Pass	3.40	15.81	15.35	16.69	16.31	22.09	23.98
5550MHz	Pass	3.40	17.22	17.14	18.35	17.31	23.55	23.98
5670MHz	Pass	3.40	16.26	17.04	18.95	17.89	23.67	23.98
5710MHz Straddle 5.47-5.725GHz	Pass	3.40	15.98	16.64	18.22	17.47	23.18	23.98
5710MHz Straddle 5.725-5.85GHz	Pass	3.00	5.96	6.66	8.59	8.28	13.53	30.00
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5290MHz	Pass	3.00	17.17	17.06	17.07	17.05	23.11	23.98
5530MHz	Pass	3.40	14.87	14.90	16.07	15.21	21.31	23.98
5610MHz	Pass	3.40	16.87	16.68	18.61	17.66	23.54	23.98
5690MHz Straddle 5.47-5.725GHz	Pass	3.40	16.08	16.58	18.99	18.13	23.62	23.98
5690MHz Straddle 5.725-5.85GHz	Pass	3.00	2.75	3.21	5.81	5.26	10.47	30.00
802.11ac VHT160_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5250MHz	Pass	2.60	14.27	13.92	13.69	14.32	20.08	30.00
5250MHz	Pass	3.00	14.24	14.09	14.19	14.14	20.19	23.98
5570MHz	Pass	3.40	15.09	15.15	16.37	16.05	21.72	23.98
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5260MHz	Pass	3.00	16.20	15.70	15.79	16.38	22.05	23.98
5300MHz	Pass	3.00	16.59	15.68	15.84	16.17	22.10	23.98
5320MHz	Pass	3.00	15.52	15.65	15.80	15.92	21.75	23.98
5500MHz	Pass	3.40	15.88	15.46	15.93	16.00	21.84	23.98
5580MHz	Pass	3.40	14.66	15.67	16.42	15.96	21.74	23.98
5700MHz	Pass	3.40	14.13	15.10	16.01	15.92	21.37	23.98
5720MHz Straddle 5.47-5.725GHz	Pass	3.40	12.19	12.49	13.85	14.27	19.31	23.17



Average Power Result

Appendix C

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
5720MHz Straddle 5.725-5.85GHz	Pass	3.00	7.47	7.40	8.63	8.83	14.15	30.00
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5270MHz	Pass	3.00	17.79	17.37	17.49	18.00	23.69	23.98
5310MHz	Pass	3.00	17.99	17.44	17.56	17.85	23.74	23.98
5510MHz	Pass	3.40	15.19	15.25	16.60	16.23	21.88	23.98
5550MHz	Pass	3.40	17.13	17.60	18.31	17.54	23.69	23.98
5670MHz	Pass	3.40	16.13	16.98	18.86	17.86	23.60	23.98
5710MHz Straddle 5.47-5.725GHz	Pass	3.40	15.69	16.39	17.97	17.32	22.95	23.98
5710MHz Straddle 5.725-5.85GHz	Pass	3.00	6.59	7.44	9.36	9.09	14.29	30.00
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5290MHz	Pass	3.00	17.09	17.41	16.98	17.49	23.27	23.98
5530MHz	Pass	3.40	14.52	14.11	15.28	14.90	20.74	23.98
5610MHz	Pass	3.40	17.38	17.18	18.66	17.76	23.80	23.98
5690MHz Straddle 5.47-5.725GHz	Pass	3.40	16.48	17.02	19.43	18.10	23.93	23.98
5690MHz Straddle 5.725-5.85GHz	Pass	3.00	4.03	4.52	7.10	6.14	11.64	30.00
802.11ax HEW160_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5250MHz	Pass	2.60	12.23	12.15	11.71	12.59	18.20	30.00
5250MHz	Pass	3.00	12.22	12.35	12.25	12.43	18.33	23.98
5570MHz	Pass	3.40	13.75	13.84	14.96	14.72	20.37	23.98

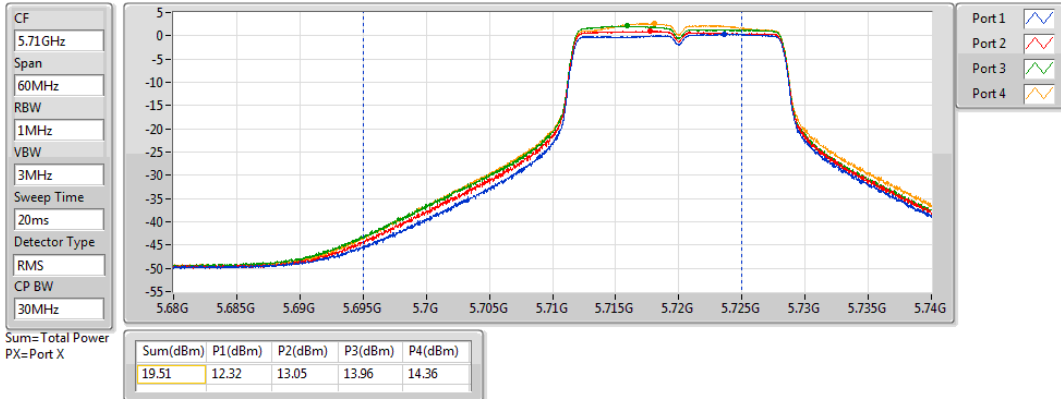
DG = Directional Gain; **Port X** = Port X output power

802.11a_Nss1,(6Mbps)_4TX

AV Power

5720MHz Straddle 5.47-5.725GHz

28/11/2019

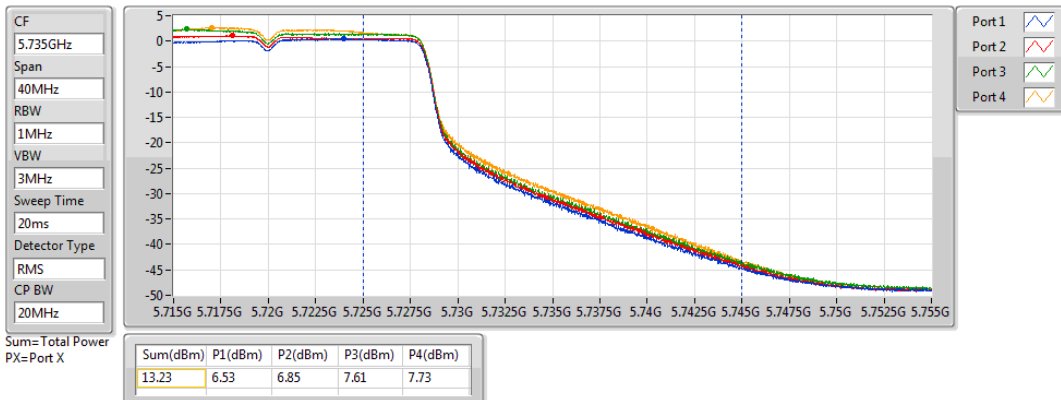


802.11a_Nss1,(6Mbps)_4TX

AV Power

5720MHz Straddle 5.725-5.85GHz

28/11/2019

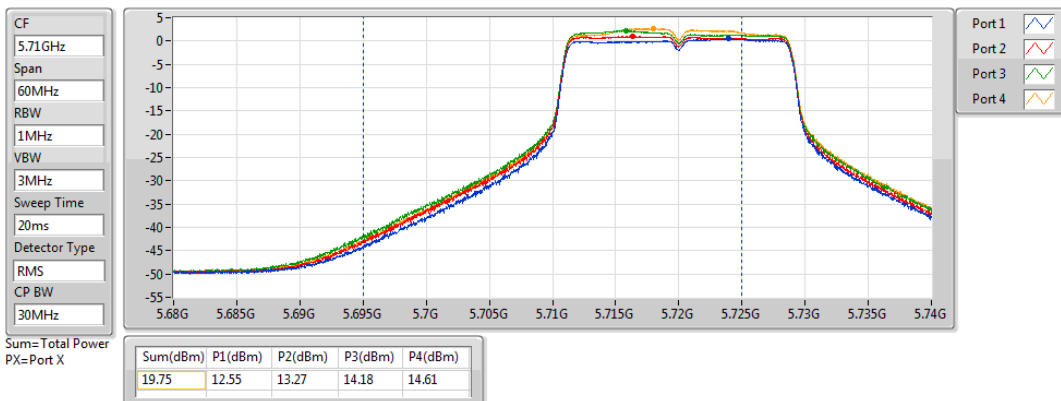


802.11ac VHT20_Nss1,(MCS0)_4TX

AV Power

5720MHz Straddle 5.47-5.725GHz

28/11/2019

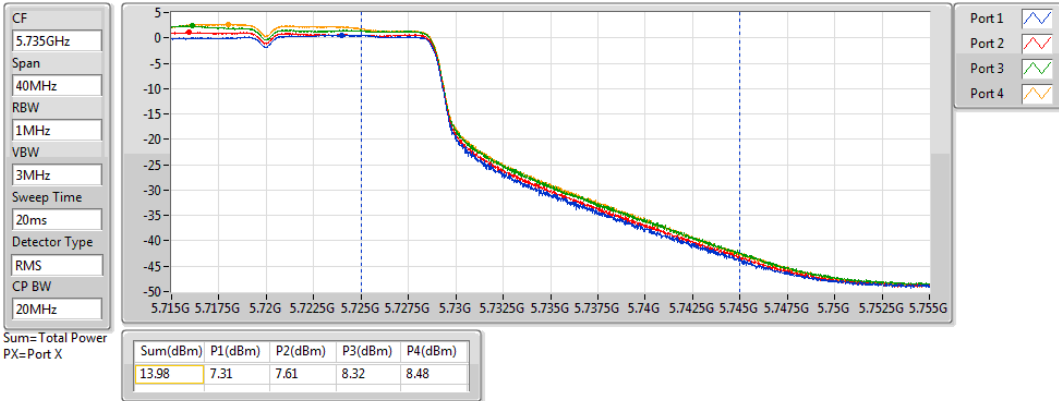


802.11ac VHT20_Nss1,(MCS0)_4TX

AV Power

5720MHz Straddle 5.725-5.85GHz

28/11/2019

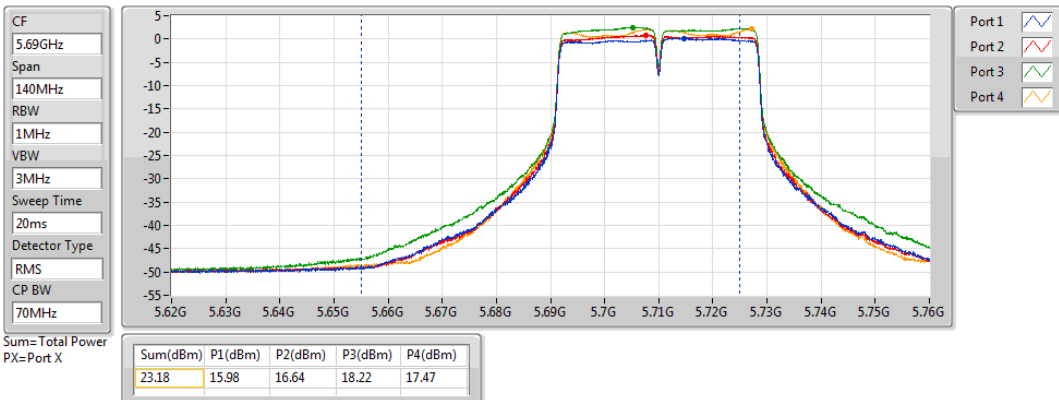


802.11ac VHT40_Nss1,(MCS0)_4TX

AV Power

5710MHz Straddle 5.47-5.725GHz

28/11/2019

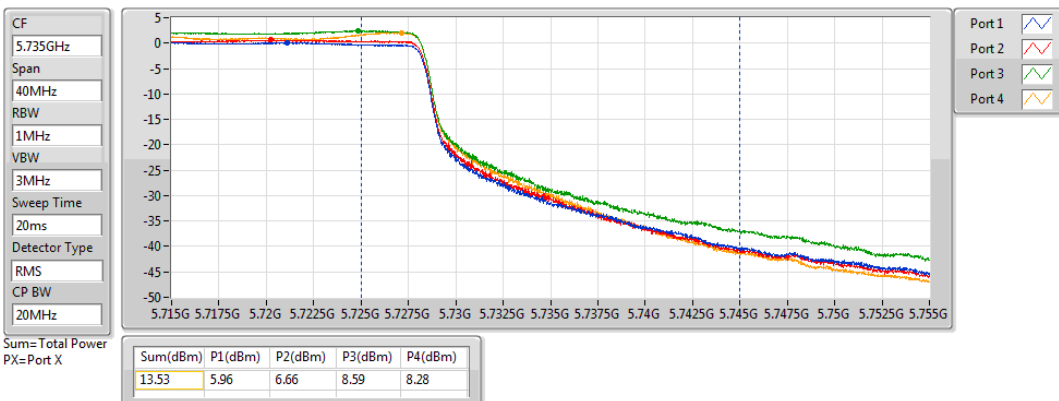


802.11ac VHT40_Nss1,(MCS0)_4TX

AV Power

5710MHz Straddle 5.725-5.85GHz

28/11/2019

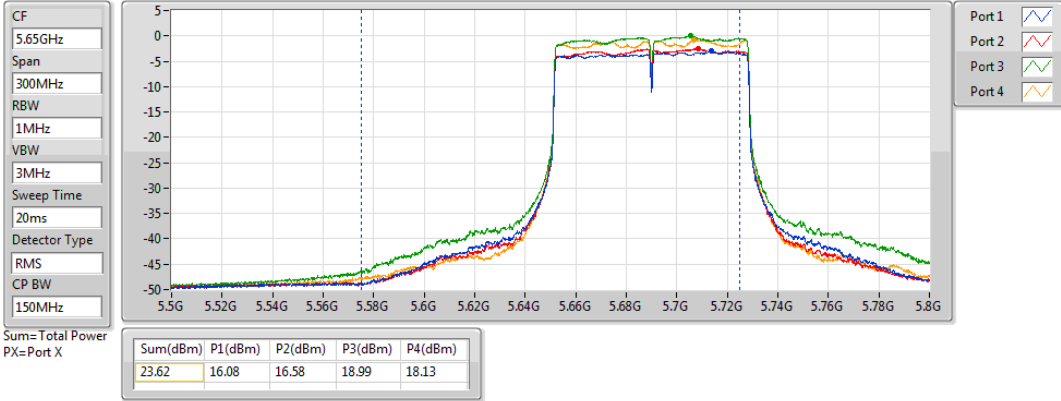


802.11ac VHT80_Nss1,(MCS0)_4TX

AV Power

5690MHz Straddle 5.47-5.725GHz

28/11/2019

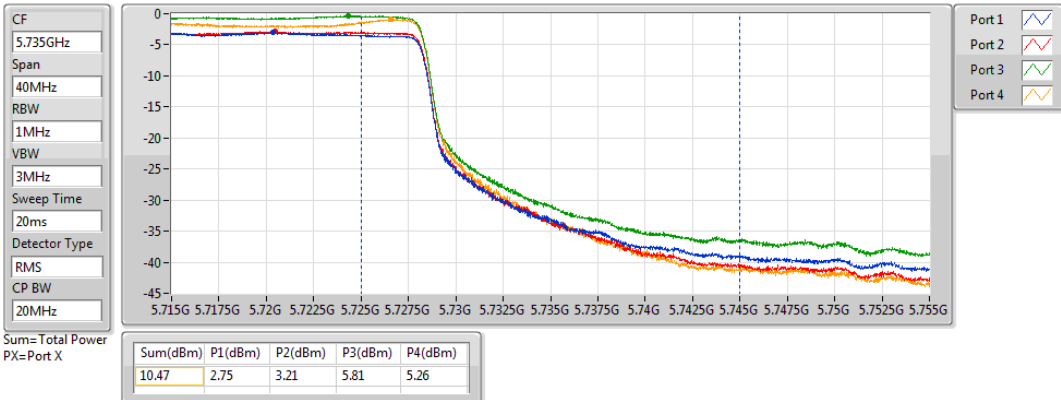


802.11ac VHT80_Nss1,(MCS0)_4TX

AV Power

5690MHz Straddle 5.725-5.85GHz

28/11/2019

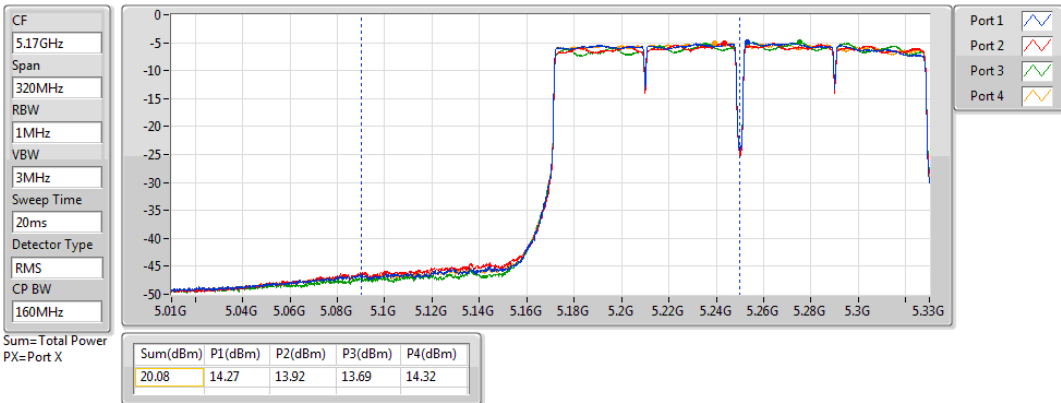


802.11ac VHT160_Nss1,(MCS0)_4TX

AV Power

5250MHz

28/11/2019



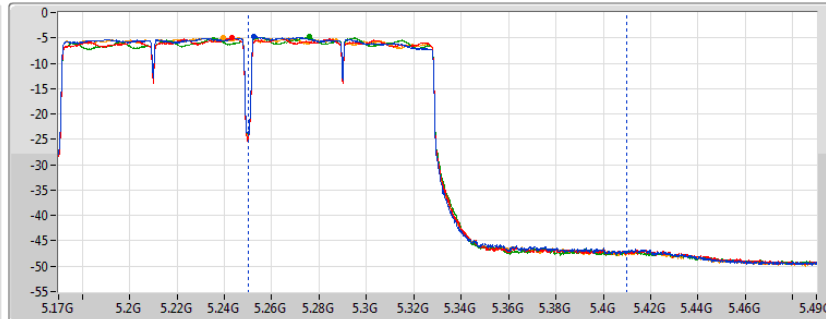
802.11ac VHT160_Nss1,(MCS0)_4TX

AV Power

5250MHz

28/11/2019

CF
5.33GHz
Span
320MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS
CP BW
160MHz



Port 1
Port 2
Port 3
Port 4

Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
20.19	14.24	14.09	14.19	14.14

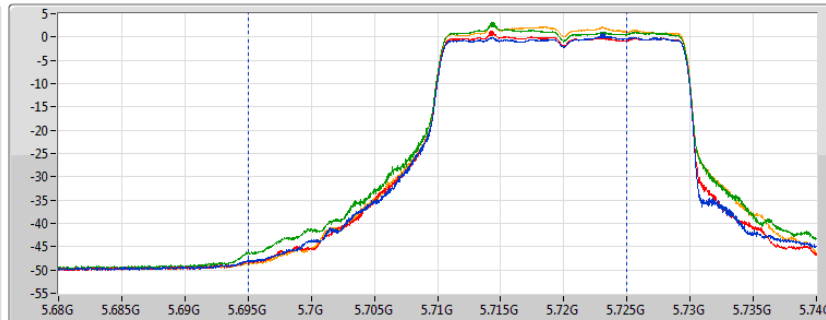
802.11ax HEW20_Nss1,(MCS0)_4TX

AV Power

5720MHz Straddle 5.47-5.725GHz

28/11/2019

CF
5.71GHz
Span
60MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS
CP BW
30MHz



Port 1
Port 2
Port 3
Port 4

Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
19.31	12.19	12.49	13.85	14.27

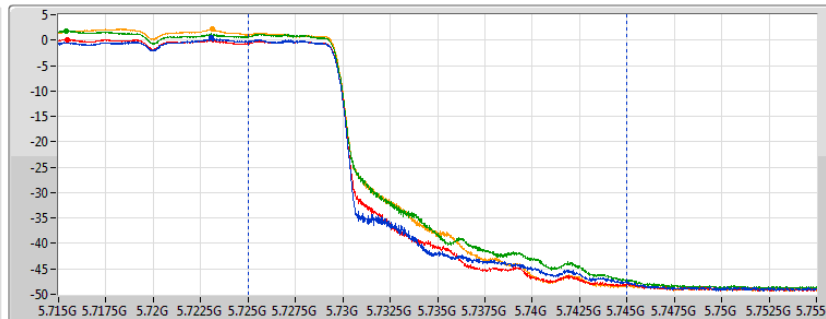
802.11ax HEW20_Nss1,(MCS0)_4TX

AV Power

5720MHz Straddle 5.725-5.85GHz

29/11/2019

CF
5.735GHz
Span
40MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS
CP BW
20MHz



Port 1
Port 2
Port 3
Port 4

Sum=Total Power
PX=Port X

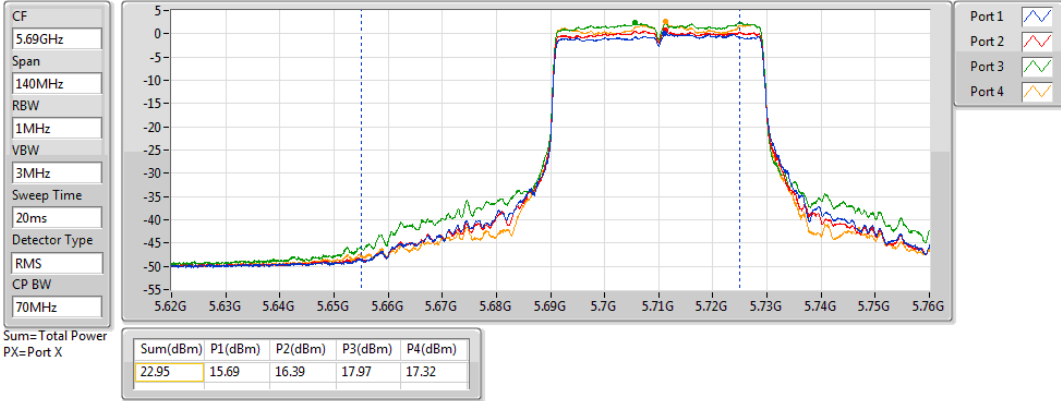
Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
14.15	7.47	7.40	8.63	8.83

802.11ax HEW40_Nss1,(MCS0)_4TX

AV Power

5710MHz Straddle 5.47-5.725GHz

29/11/2019

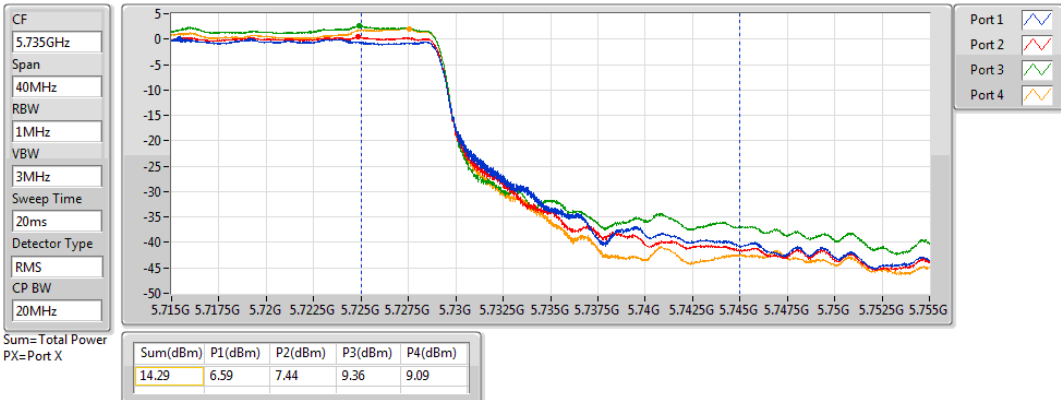


802.11ax HEW40_Nss1,(MCS0)_4TX

AV Power

5710MHz Straddle 5.725-5.85GHz

29/11/2019

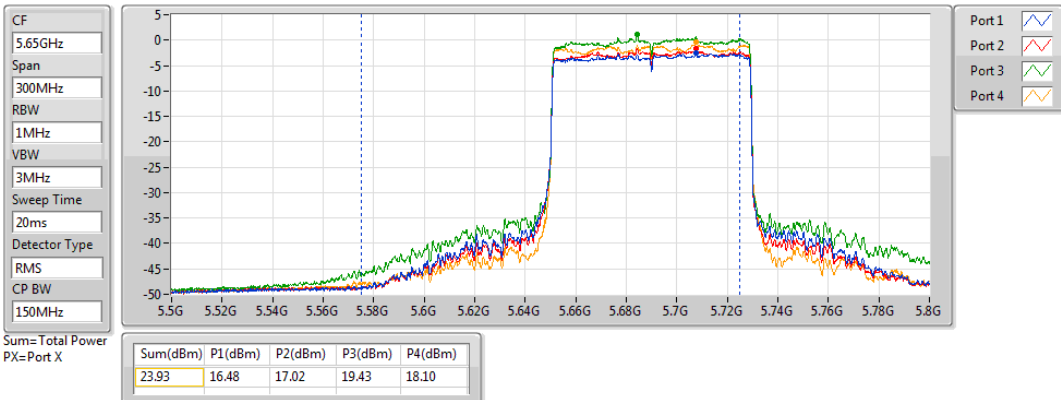


802.11ax HEW80_Nss1,(MCS0)_4TX

AV Power

5690MHz Straddle 5.47-5.725GHz

29/11/2019

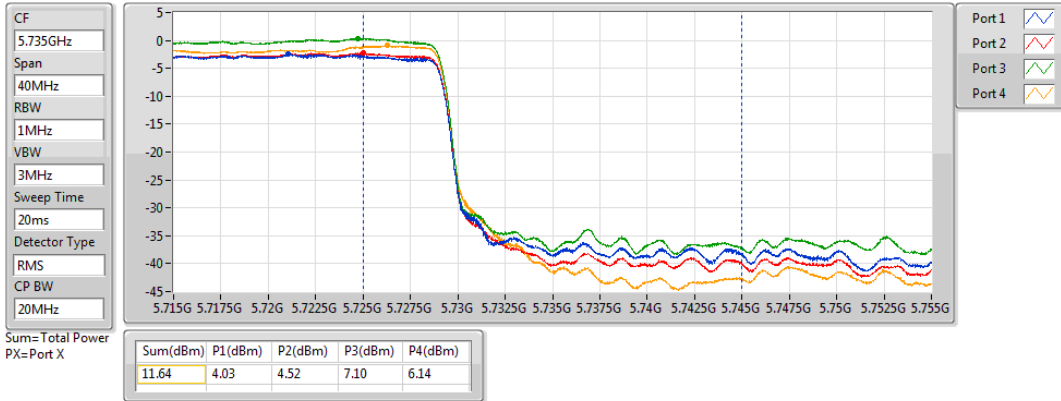


802.11ax HEW80_Nss1,(MCS0)_4TX

AV Power

5690MHz Straddle 5.725-5.85GHz

29/11/2019

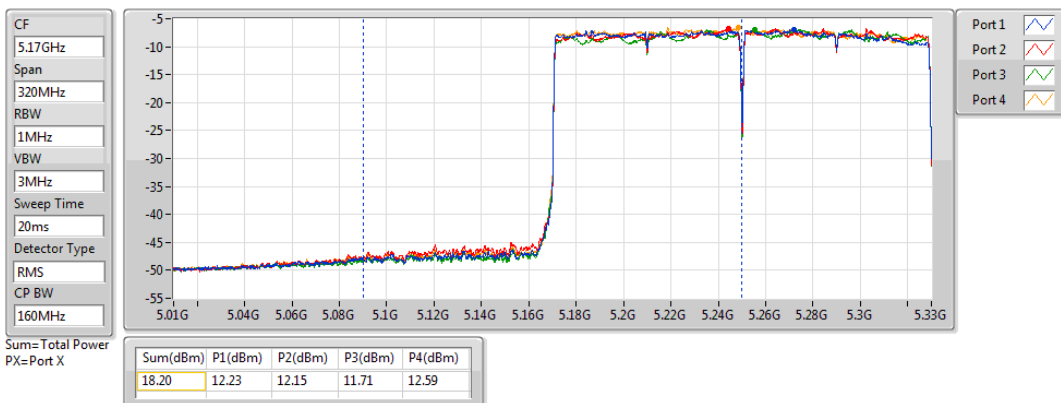


802.11ax HEW160_Nss1,(MCS0)_4TX

AV Power

5250MHz

29/11/2019

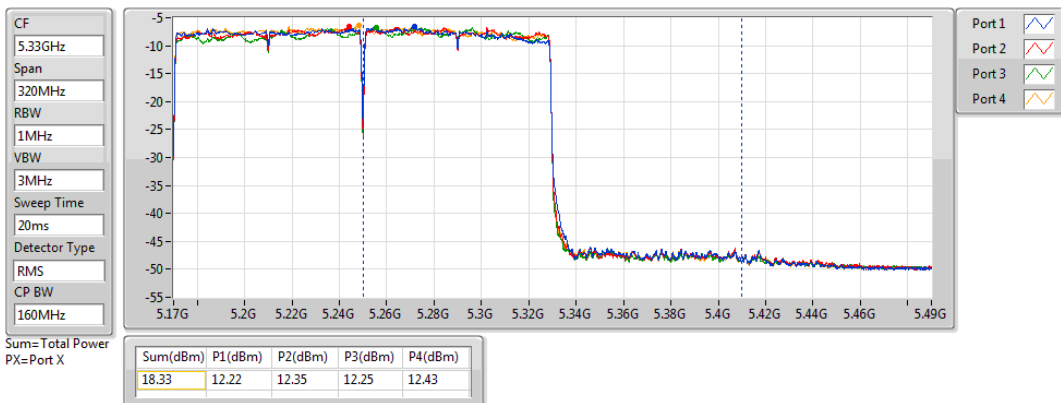


802.11ax HEW160_Nss1,(MCS0)_4TX

AV Power

5250MHz

29/11/2019





Average Power Result

Appendix C

For beamforming mode:

Summary

Mode	Total Power (dBm)	Total Power (W)
5.15-5.25GHz	-	-
802.11ac VHT160-BF_Nss1,(MCS0)_4TX	19.72	0.09376
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	19.93	0.09840
5.25-5.35GHz	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	20.85	0.12162
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	20.52	0.11272
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	20.92	0.12359
802.11ac VHT160-BF_Nss1,(MCS0)_4TX	19.97	0.09931
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	20.91	0.12331
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	20.94	0.12417
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	20.68	0.11695
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	20.14	0.10328
5.47-5.725GHz	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	20.28	0.10666
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	20.37	0.10889
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	20.33	0.10789
802.11ac VHT160-BF_Nss1,(MCS0)_4TX	16.58	0.04550
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	20.37	0.10889
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	20.42	0.11015
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	20.45	0.11092
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	19.40	0.08710
5.725-5.85GHz	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	13.13	0.02056
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	10.00	0.01000
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	6.34	0.00431
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	13.61	0.02296
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	11.00	0.01259
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	7.44	0.00555



Average Power Result

Appendix C

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	-	-	-	-	-	-	-	-
5260MHz	Pass	9.02	14.88	14.66	14.20	14.69	20.64	20.96
5300MHz	Pass	9.02	14.69	14.72	14.93	14.96	20.85	20.96
5320MHz	Pass	9.02	14.35	14.50	14.39	14.33	20.41	20.58
5500MHz	Pass	9.42	14.05	14.38	14.33	14.14	20.25	20.56
5580MHz	Pass	9.42	14.07	14.17	14.74	14.02	20.28	20.56
5700MHz	Pass	9.42	11.49	11.37	11.39	10.93	17.32	20.56
5720MHz Straddle 5.47-5.725GHz	Pass	9.42	13.13	12.25	12.29	12.76	18.64	19.46
5720MHz Straddle 5.725-5.85GHz	Pass	9.02	7.29	6.89	7.39	6.85	13.13	26.98
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5270MHz	Pass	9.02	14.62	14.52	14.11	14.71	20.52	20.96
5310MHz	Pass	9.02	14.38	14.45	14.52	14.55	20.50	20.96
5510MHz	Pass	9.42	14.10	14.27	14.09	14.26	20.20	20.56
5550MHz	Pass	9.42	13.83	14.32	14.40	13.98	20.16	20.56
5670MHz	Pass	9.42	14.39	14.35	14.45	14.22	20.37	20.56
5710MHz Straddle 5.47-5.725GHz	Pass	9.42	14.45	14.24	13.65	14.53	20.25	20.56
5710MHz Straddle 5.725-5.85GHz	Pass	9.02	3.93	3.69	4.37	3.89	10.00	26.98
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5290MHz	Pass	9.02	14.82	14.83	15.12	14.83	20.92	20.96
5530MHz	Pass	9.42	13.75	14.07	14.57	14.14	20.16	20.56
5610MHz	Pass	9.42	12.85	14.90	14.34	14.85	20.33	20.56
5690MHz Straddle 5.47-5.725GHz	Pass	9.42	14.25	13.95	14.35	14.16	20.20	20.56
5690MHz Straddle 5.725-5.85GHz	Pass	9.02	0.12	-0.03	0.79	0.36	6.34	26.98
802.11ac VHT160-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	8.62	13.37	13.95	13.47	13.96	19.72	27.38
5250MHz Straddle 5.25-5.35GHz	Pass	9.02	13.77	14.23	13.52	14.25	19.97	20.96
5570MHz	Pass	9.42	9.74	10.17	8.72	12.62	16.58	20.56
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5260MHz	Pass	9.02	15.19	14.93	14.63	14.77	20.91	20.96
5300MHz	Pass	9.02	15.11	14.77	14.54	14.89	20.85	20.96
5320MHz	Pass	9.02	14.56	15.26	14.55	14.91	20.85	20.96
5500MHz	Pass	9.42	14.05	14.61	14.30	14.41	20.37	20.56
5580MHz	Pass	9.42	14.04	14.16	14.51	14.09	20.22	20.56
5700MHz	Pass	9.42	12.23	12.29	11.60	11.52	17.94	20.56
5720MHz Straddle 5.47-5.725GHz	Pass	9.42	13.24	12.44	12.31	13.00	18.79	19.59
5720MHz Straddle 5.725-5.85GHz	Pass	9.02	8.16	7.74	7.36	7.01	13.61	26.98
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5270MHz	Pass	9.02	14.92	14.89	14.64	15.15	20.92	20.96
5310MHz	Pass	9.02	14.81	15.02	14.62	15.21	20.94	20.96
5510MHz	Pass	9.42	14.16	14.80	14.35	14.27	20.42	20.56
5550MHz	Pass	9.42	14.14	14.19	14.05	14.30	20.19	20.56
5670MHz	Pass	9.42	14.26	14.16	14.02	14.07	20.15	20.56
5710MHz Straddle 5.47-5.725GHz	Pass	9.42	14.62	14.20	13.98	14.74	20.42	20.56
5710MHz Straddle 5.725-5.85GHz	Pass	9.02	4.80	4.88	5.22	5.01	11.00	26.98



Average Power Result

Appendix C

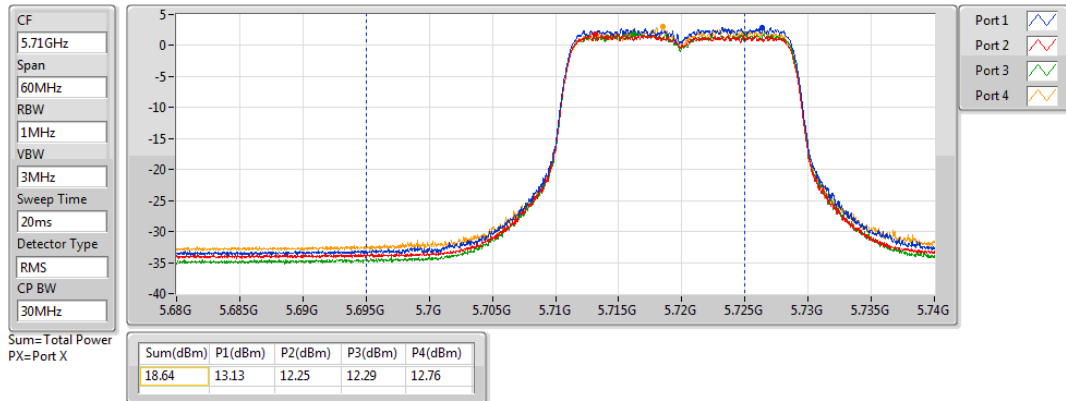
Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5290MHz	Pass	9.02	14.76	14.47	14.51	14.89	20.68	20.96
5530MHz	Pass	9.42	13.79	14.11	14.63	14.16	20.20	20.56
5610MHz	Pass	9.42	14.56	15.16	13.89	12.57	20.17	20.56
5690MHz Straddle 5.47-5.725GHz	Pass	9.42	14.47	14.19	14.64	14.42	20.45	20.56
5690MHz Straddle 5.725-5.85GHz	Pass	9.02	1.17	1.09	2.12	1.23	7.44	26.98
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	8.62	13.53	14.29	13.59	14.16	19.93	27.38
5250MHz Straddle 5.25-5.35GHz	Pass	9.02	13.77	14.32	13.97	14.39	20.14	20.96
5570MHz	Pass	9.42	13.66	13.62	12.73	13.46	19.40	20.56

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

802.11ac VHT20-BF_Nss1,(MCS0)_4TX

AV Power

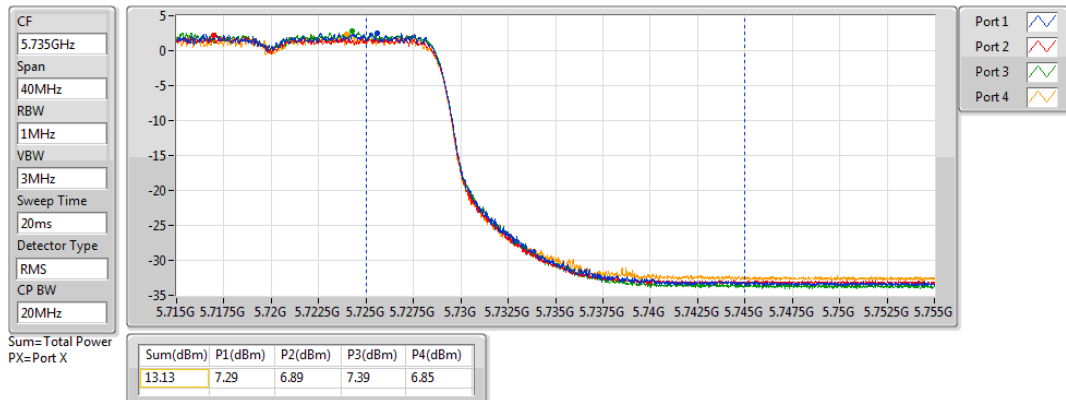
5720MHz Straddle 5.47-5.725GHz



802.11ac VHT20-BF_Nss1,(MCS0)_4TX

AV Power

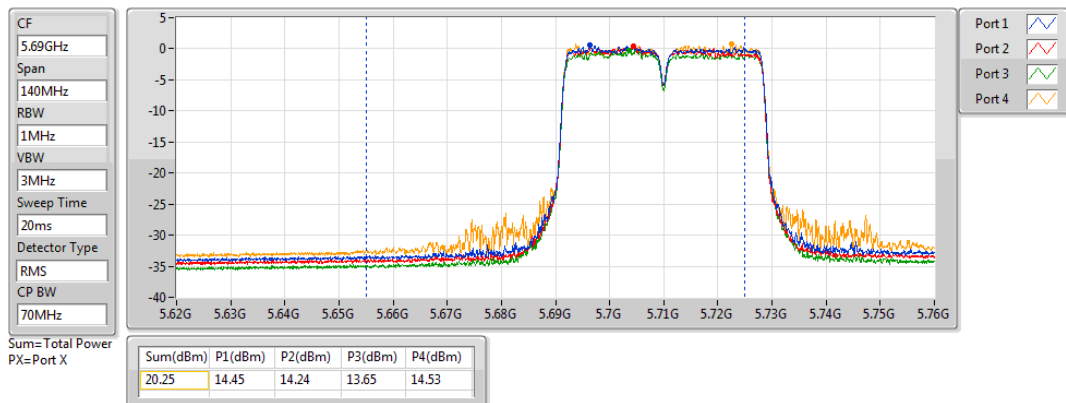
5720MHz Straddle 5.725-5.85GHz



802.11ac VHT40-BF_Nss1,(MCS0)_4TX

AV Power

5710MHz Straddle 5.47-5.725GHz

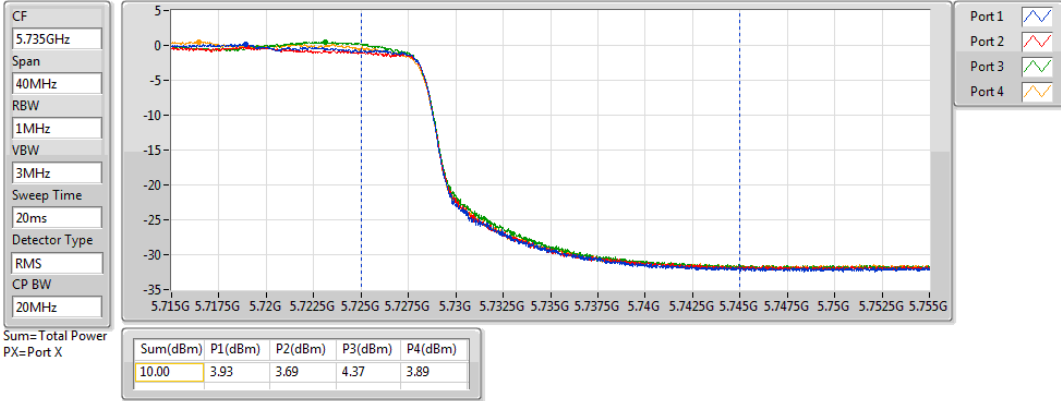


802.11ac VHT40-BF_Nss1,(MCS0)_4TX

AV Power

5710MHz Straddle 5.725-5.85GHz

22/06/2020

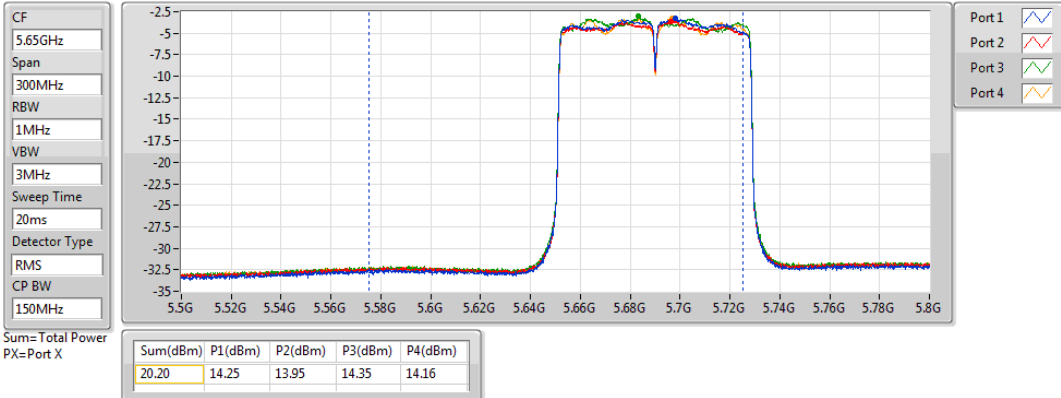


802.11ac VHT80-BF_Nss1,(MCS0)_4TX

AV Power

5690MHz Straddle 5.47-5.725GHz

22/06/2020

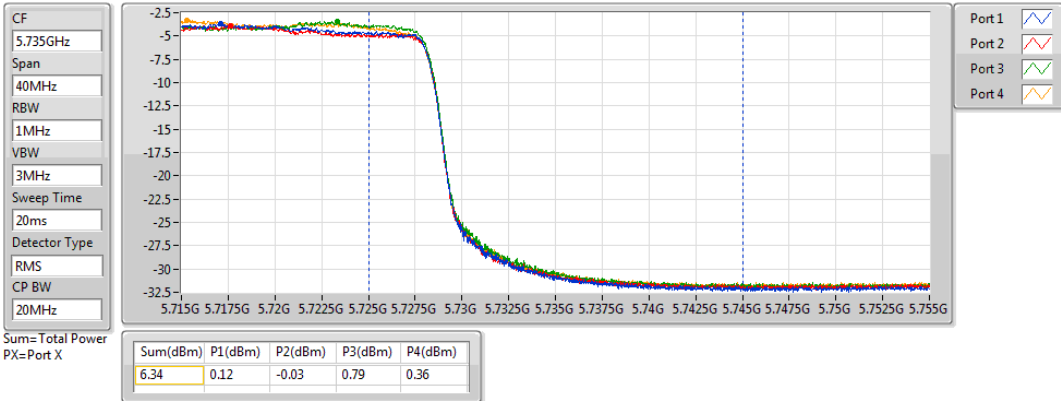


802.11ac VHT80-BF_Nss1,(MCS0)_4TX

AV Power

5690MHz Straddle 5.725-5.85GHz

22/06/2020

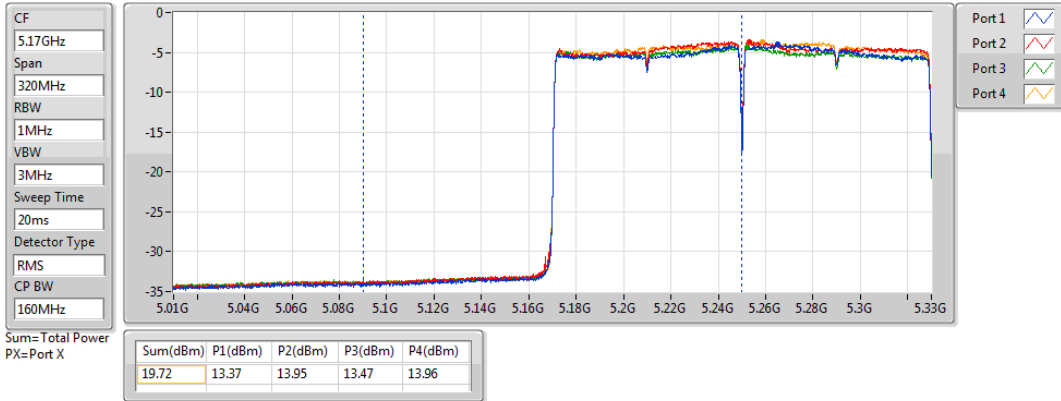


802.11ac VHT160-BF_Nss1,(MCS0)_4TX

AV Power

5250MHz Straddle 5.15-5.25GHz

22/06/2020

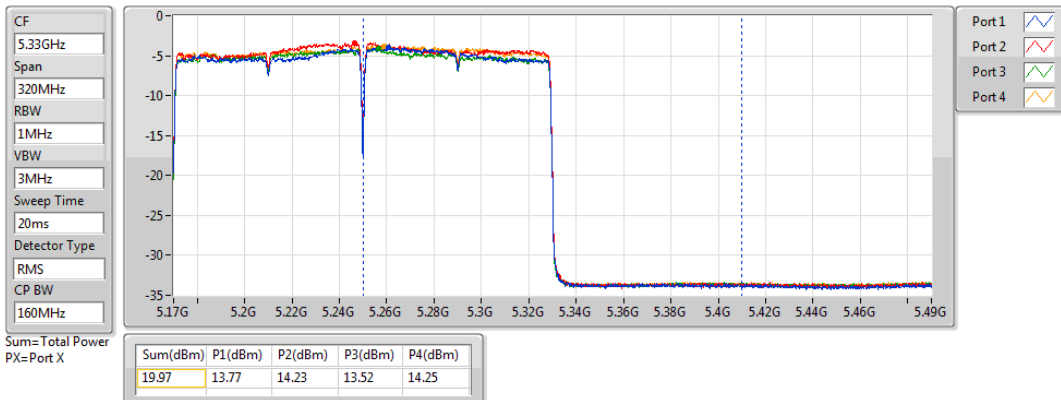


802.11ac VHT160-BF_Nss1,(MCS0)_4TX

AV Power

5250MHz Straddle 5.25-5.35GHz

22/06/2020

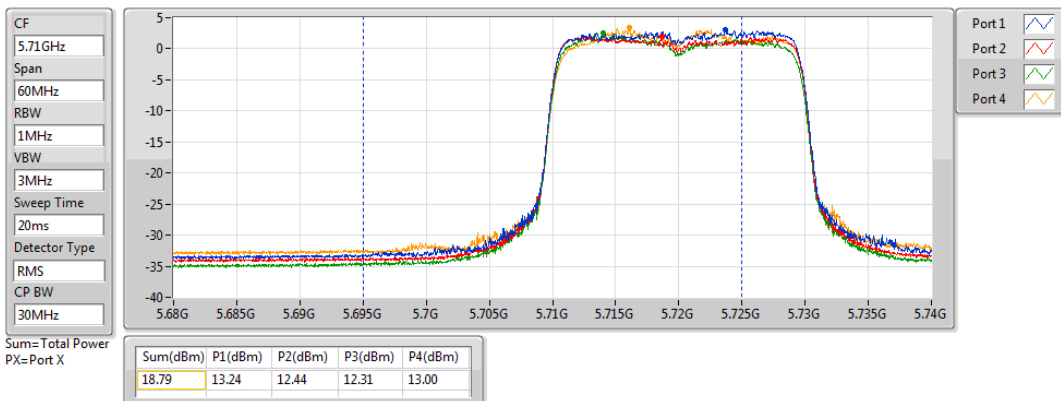


802.11ax HEW20-BF_Nss1,(MCS0)_4TX

AV Power

5720MHz Straddle 5.47-5.725GHz

20/07/2020

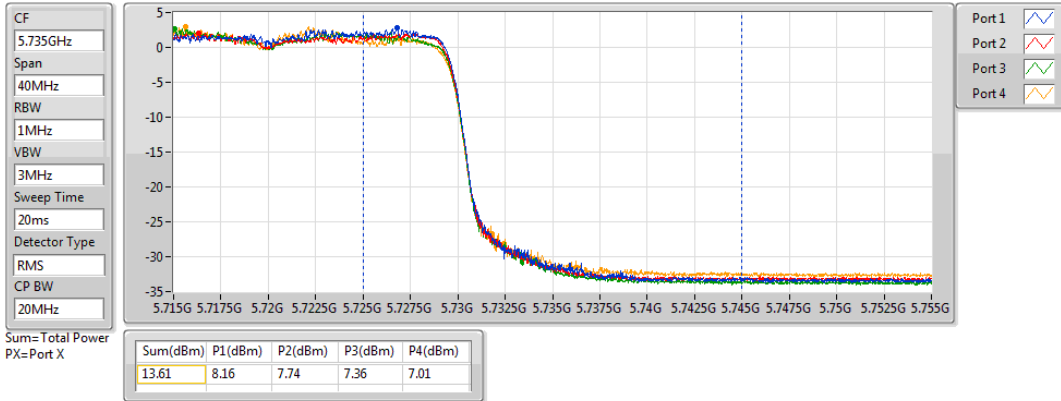


802.11ax HEW20-BF_Nss1,(MCS0)_4TX

AV Power

5720MHz Straddle 5.725-5.85GHz

20/07/2020

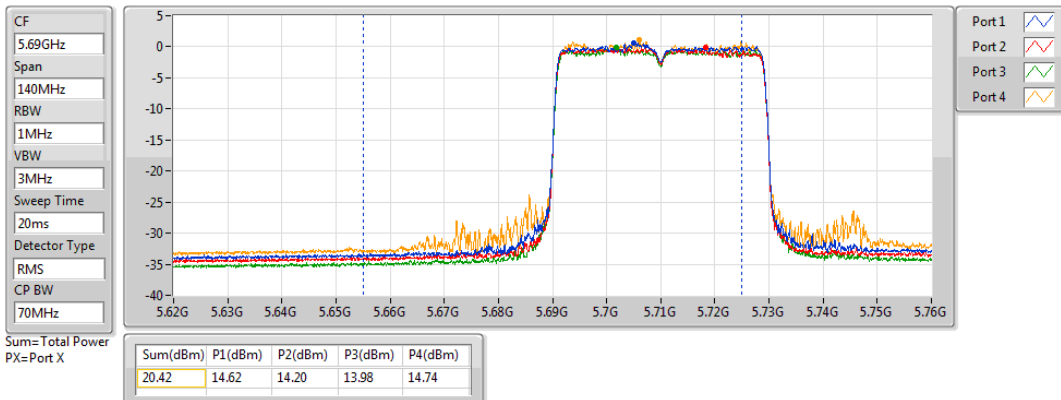


802.11ax HEW40-BF_Nss1,(MCS0)_4TX

AV Power

5710MHz Straddle 5.47-5.725GHz

20/07/2020

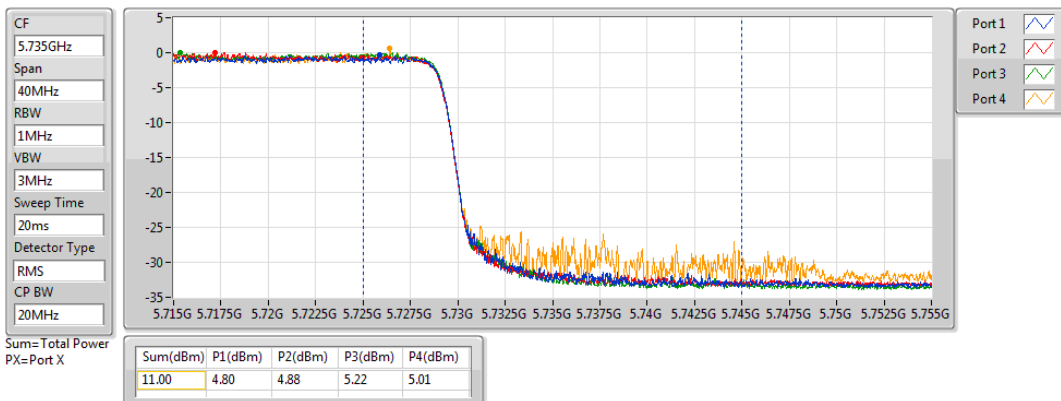


802.11ax HEW40-BF_Nss1,(MCS0)_4TX

AV Power

5710MHz Straddle 5.725-5.85GHz

20/07/2020

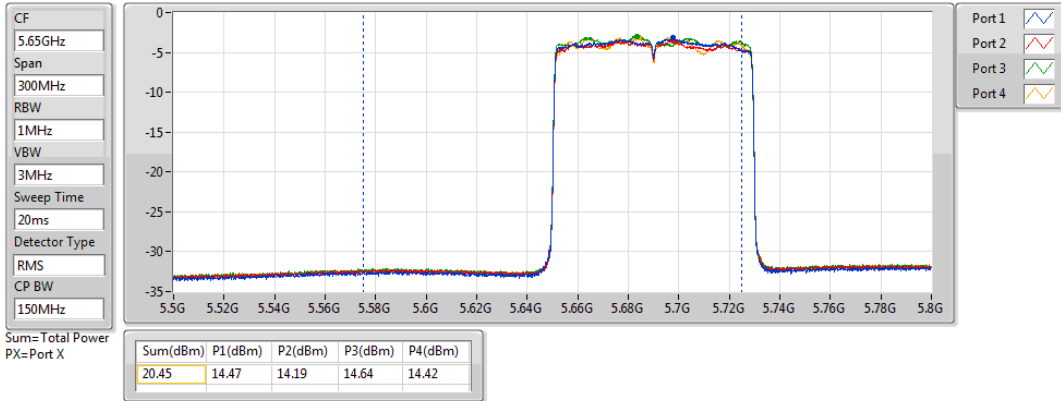


802.11ax HEW80-BF_Nss1,(MCS0)_4TX

AV Power

5690MHz Straddle 5.47-5.725GHz

22/06/2020

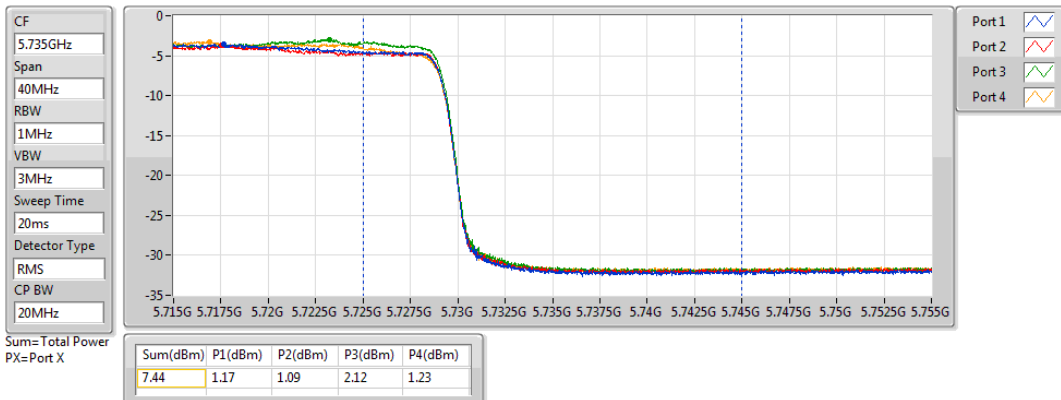


802.11ax HEW80-BF_Nss1,(MCS0)_4TX

AV Power

5690MHz Straddle 5.725-5.85GHz

22/06/2020

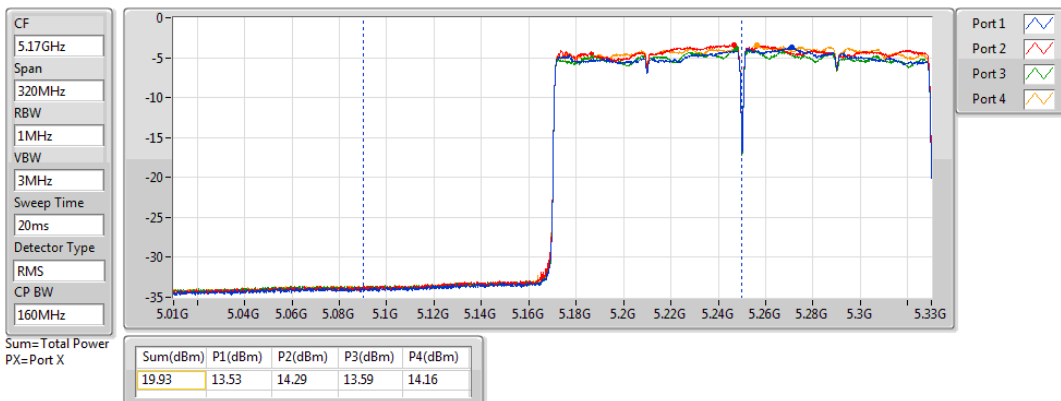


802.11ax HEW160-BF_Nss1,(MCS0)_4TX

AV Power

5250MHz Straddle 5.15-5.25GHz

20/06/2020

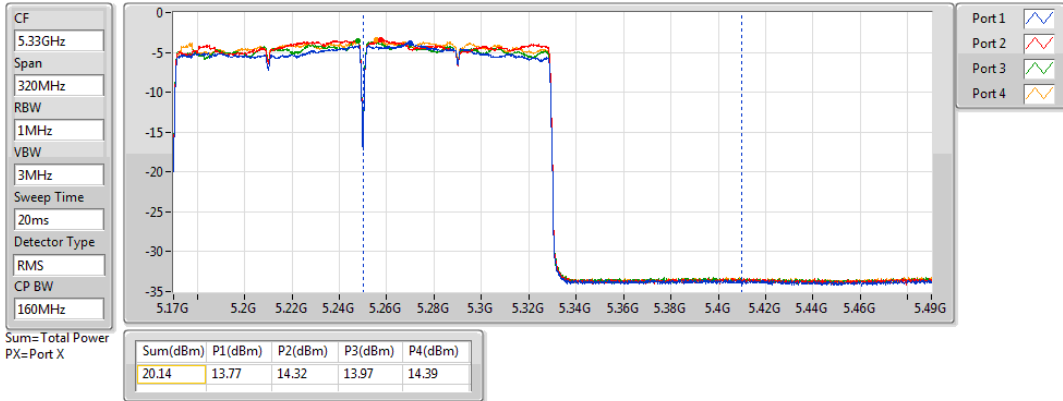


802.11ax HEW160-BF_Nss1,(MCS0)_4TX

AV Power

5250MHz Straddle 5.25-5.35GHz

20/06/2020



For non-beamforming mode:

Summary

Mode	PD (dBm/RBW)
5.15-5.25GHz	-
802.11ac VHT160_Nss1,(MCS0)_4TX	0.55
802.11ax HEW160_Nss1,(MCS0)_4TX	-1.25
5.25-5.35GHz	-
802.11a_Nss1,(6Mbps)_4TX	7.96
802.11ac VHT20_Nss1,(MCS0)_4TX	7.78
802.11ac VHT40_Nss1,(MCS0)_4TX	6.68
802.11ac VHT80_Nss1,(MCS0)_4TX	2.79
802.11ac VHT160_Nss1,(MCS0)_4TX	0.77
802.11ax HEW20_Nss1,(MCS0)_4TX	7.94
802.11ax HEW40_Nss1,(MCS0)_4TX	6.46
802.11ax HEW80_Nss1,(MCS0)_4TX	3.51
802.11ax HEW160_Nss1,(MCS0)_4TX	-0.93
5.47-5.725GHz	-
802.11a_Nss1,(6Mbps)_4TX	7.35
802.11ac VHT20_Nss1,(MCS0)_4TX	7.52
802.11ac VHT40_Nss1,(MCS0)_4TX	7.31
802.11ac VHT80_Nss1,(MCS0)_4TX	4.41
802.11ac VHT160_Nss1,(MCS0)_4TX	-1.45
802.11ax HEW20_Nss1,(MCS0)_4TX	7.57
802.11ax HEW40_Nss1,(MCS0)_4TX	7.47
802.11ax HEW80_Nss1,(MCS0)_4TX	4.79
802.11ax HEW160_Nss1,(MCS0)_4TX	-2.26
5.725-5.85GHz	-
802.11a_Nss1,(6Mbps)_4TX	5.43
802.11ac VHT20_Nss1,(MCS0)_4TX	5.55
802.11ac VHT40_Nss1,(MCS0)_4TX	5.67
802.11ac VHT80_Nss1,(MCS0)_4TX	2.61
802.11ax HEW20_Nss1,(MCS0)_4TX	5.29
802.11ax HEW40_Nss1,(MCS0)_4TX	5.68
802.11ax HEW80_Nss1,(MCS0)_4TX	3.17

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	-	-	-	-	-	-	-	-
5260MHz	Pass	9.02	2.25	1.93	2.27	1.96	7.77	7.98
5300MHz	Pass	9.02	2.37	1.89	2.59	2.20	7.90	7.98
5320MHz	Pass	9.02	2.56	1.85	2.67	2.14	7.96	7.98
5500MHz	Pass	9.42	1.16	1.30	1.85	1.71	7.29	7.58
5580MHz	Pass	9.42	0.88	1.14	2.05	1.54	7.22	7.58
5700MHz	Pass	9.42	0.05	1.43	2.09	2.17	7.35	7.58
5720MHz Straddle 5.47-5.725GHz	Pass	9.42	0.35	0.44	2.16	2.62	7.35	7.58
5720MHz Straddle 5.725-5.85GHz	Pass	9.02	-1.15	-1.01	-0.10	0.07	5.43	26.98
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5260MHz	Pass	9.02	2.18	1.49	1.97	2.18	7.65	7.98
5300MHz	Pass	9.02	2.07	2.05	2.10	2.16	7.78	7.98
5320MHz	Pass	9.02	1.62	1.54	2.11	2.00	7.49	7.98
5500MHz	Pass	9.42	1.01	1.25	1.86	1.66	7.26	7.58
5580MHz	Pass	9.42	0.76	1.38	2.18	2.21	7.46	7.58
5700MHz	Pass	9.42	0.11	1.44	2.16	2.28	7.34	7.58
5720MHz Straddle 5.47-5.725GHz	Pass	9.42	0.45	0.96	2.22	2.63	7.52	7.58
5720MHz Straddle 5.725-5.85GHz	Pass	9.02	-1.07	-0.93	-0.07	0.24	5.55	26.98
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5270MHz	Pass	9.02	1.11	0.42	1.29	0.87	6.61	7.98
5310MHz	Pass	9.02	0.86	0.58	1.29	1.34	6.68	7.98
5510MHz	Pass	9.42	-1.21	-1.46	-0.17	-0.25	5.02	7.58
5550MHz	Pass	9.42	0.18	0.05	1.44	0.74	6.35	7.58
5670MHz	Pass	9.42	-0.90	0.14	2.01	1.09	6.53	7.58
5710MHz Straddle 5.47-5.725GHz	Pass	9.42	0.08	0.71	2.47	2.05	7.31	7.58
5710MHz Straddle 5.725-5.85GHz	Pass	9.02	-1.88	-1.18	0.89	0.49	5.67	26.98
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5290MHz	Pass	9.02	-2.79	-2.86	-2.66	-2.88	2.79	7.98
5530MHz	Pass	9.42	-5.39	-5.22	-4.01	-4.63	0.99	7.58
5610MHz	Pass	9.42	-3.31	-3.35	-1.37	-2.11	3.29	7.58
5690MHz Straddle 5.47-5.725GHz	Pass	9.42	-3.09	-2.57	-0.02	-0.82	4.41	7.58
5690MHz Straddle 5.725-5.85GHz	Pass	9.02	-4.97	-4.56	-1.89	-2.47	2.61	26.98
802.11ac VHT160_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5250MHz	Pass	8.62	-5.27	-5.07	-5.10	-5.12	0.55	14.38
5250MHz	Pass	9.02	-4.82	-5.11	-4.85	-5.09	0.77	7.98
5570MHz	Pass	9.42	-7.90	-7.76	-6.54	-6.52	-1.45	7.58
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5260MHz	Pass	9.02	1.96	1.46	1.83	1.89	7.53	7.98
5300MHz	Pass	9.02	2.39	1.45	2.23	1.91	7.94	7.98
5320MHz	Pass	9.02	1.72	1.32	2.16	1.70	7.60	7.98
5500MHz	Pass	9.42	1.57	1.18	1.69	2.02	7.52	7.58
5580MHz	Pass	9.42	0.16	1.09	2.34	1.66	7.32	7.58
5700MHz	Pass	9.42	0.44	1.44	2.69	2.05	7.56	7.58
5720MHz Straddle 5.47-5.725GHz	Pass	9.42	0.08	0.61	2.63	2.56	7.57	7.58

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)
5720MHz Straddle 5.725-5.85GHz	Pass	9.02	-1.39	-1.54	-0.25	0.12	5.29	26.98
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5270MHz	Pass	9.02	0.80	0.66	0.76	0.70	6.46	7.98
5310MHz	Pass	9.02	0.81	0.13	0.95	0.74	6.41	7.98
5510MHz	Pass	9.42	-2.03	-1.57	-0.50	-0.24	4.89	7.58
5550MHz	Pass	9.42	0.11	1.00	1.44	1.30	6.84	7.58
5670MHz	Pass	9.42	-0.93	-0.08	1.84	1.04	6.41	7.58
5710MHz Straddle 5.47-5.725GHz	Pass	9.42	-0.04	0.69	2.40	2.54	7.47	7.58
5710MHz Straddle 5.725-5.85GHz	Pass	9.02	-1.80	-1.19	0.99	0.66	5.68	26.98
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5290MHz	Pass	9.02	-2.84	-1.89	-2.73	-1.99	3.51	7.98
5530MHz	Pass	9.42	-4.90	-5.96	-4.28	-5.24	0.79	7.58
5610MHz	Pass	9.42	-2.51	-2.56	-0.86	-1.87	4.10	7.58
5690MHz Straddle 5.47-5.725GHz	Pass	9.42	-2.60	-2.12	0.47	-0.90	4.79	7.58
5690MHz Straddle 5.725-5.85GHz	Pass	9.02	-4.38	-3.85	-1.16	-2.43	3.17	26.98
802.11ax HEW160_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5250MHz	Pass	8.62	-7.22	-6.80	-7.09	-6.70	-1.25	14.38
5250MHz	Pass	9.02	-6.70	-6.80	-6.86	-6.89	-0.93	7.98
5570MHz	Pass	9.42	-9.07	-8.70	-7.49	-7.58	-2.26	7.58

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

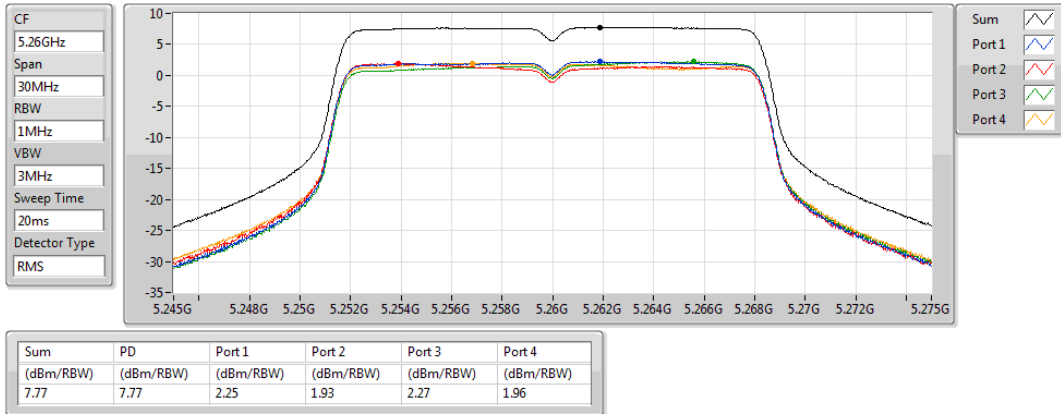
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port X power density;

802.11a_Nss1,(6Mbps)_4TX

PSD

5260MHz

28/11/2019

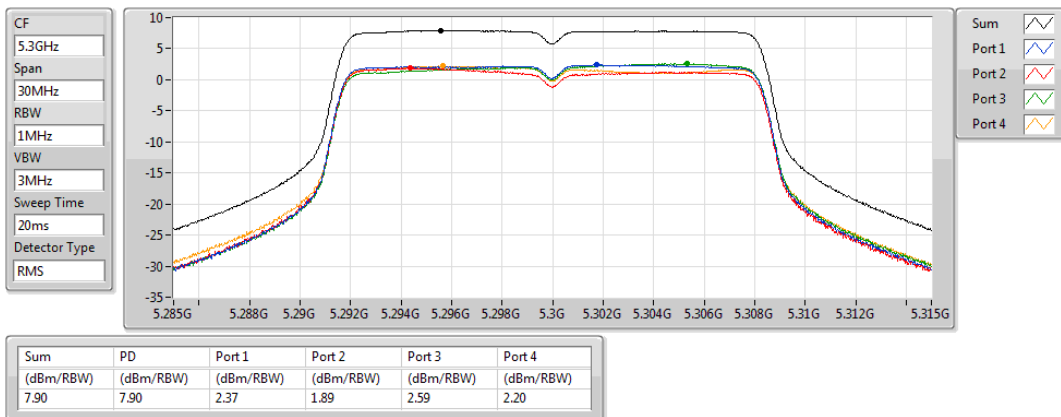


802.11a_Nss1,(6Mbps)_4TX

PSD

5300MHz

28/11/2019

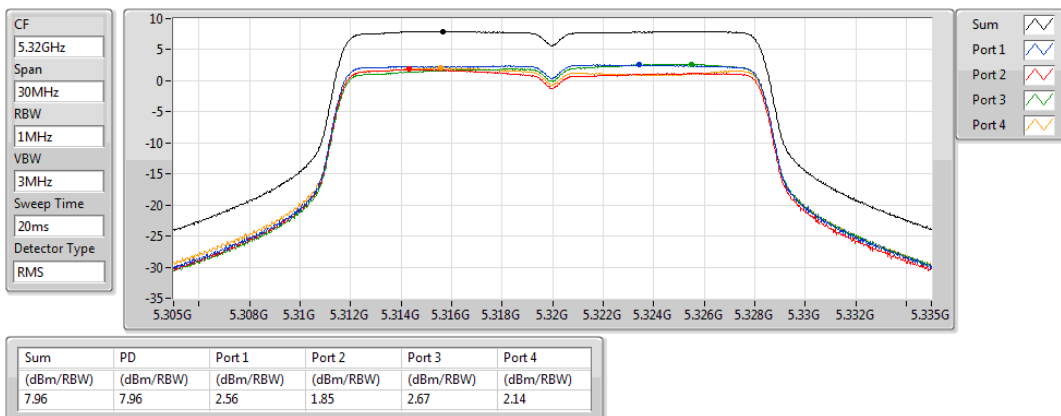


802.11a_Nss1,(6Mbps)_4TX

PSD

5320MHz

28/11/2019

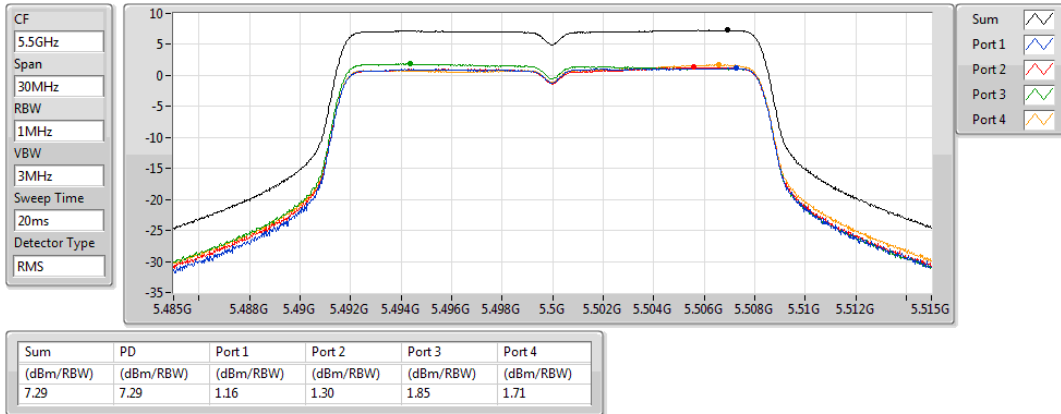


802.11a_Nss1,(6Mbps)_4TX

PSD

5500MHz

28/11/2019

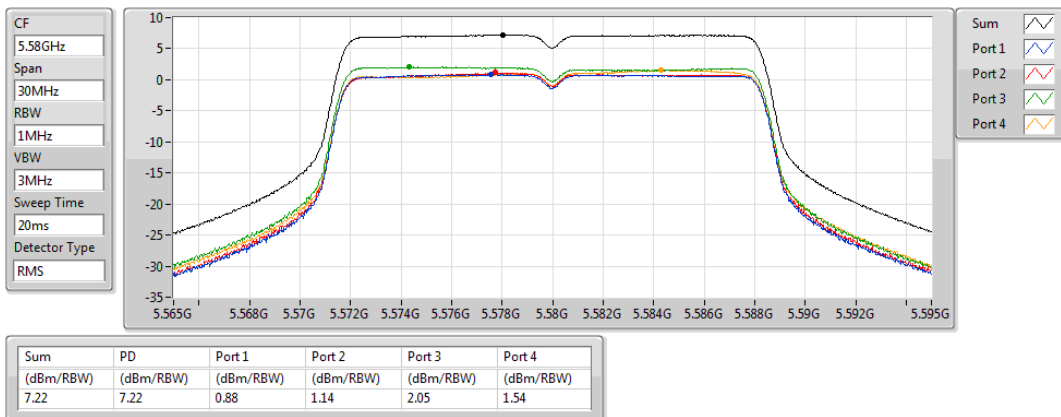


802.11a_Nss1,(6Mbps)_4TX

PSD

5580MHz

28/11/2019

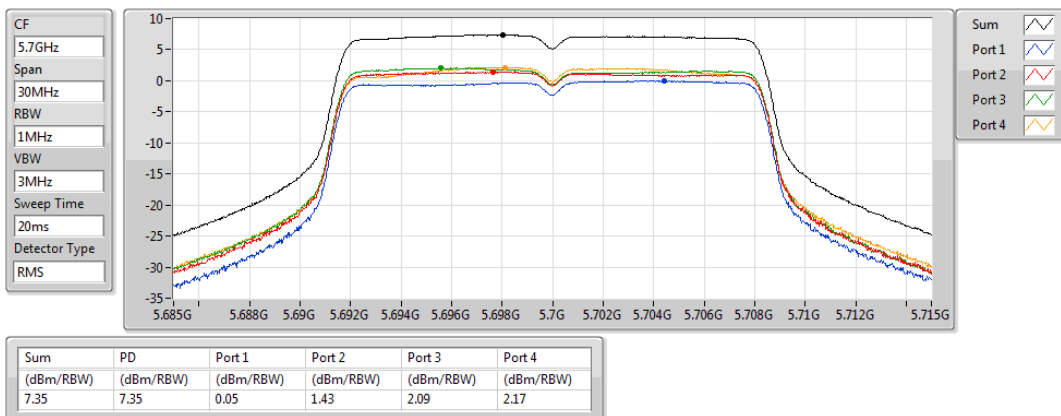


802.11a_Nss1,(6Mbps)_4TX

PSD

5700MHz

28/11/2019

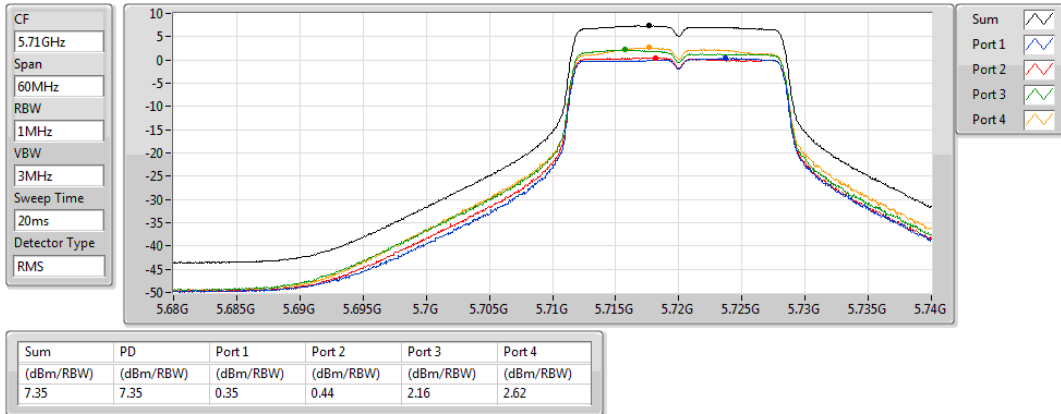


802.11a_Nss1,(6Mbps)_4TX

PSD

5720MHz Straddle 5.47-5.725GHz

28/11/2019

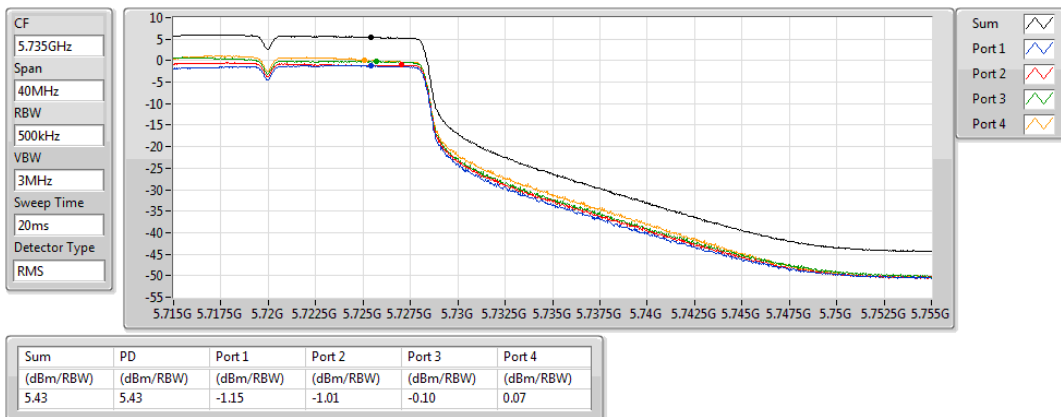


802.11a_Nss1,(6Mbps)_4TX

PSD

5720MHz Straddle 5.725-5.85GHz

28/11/2019

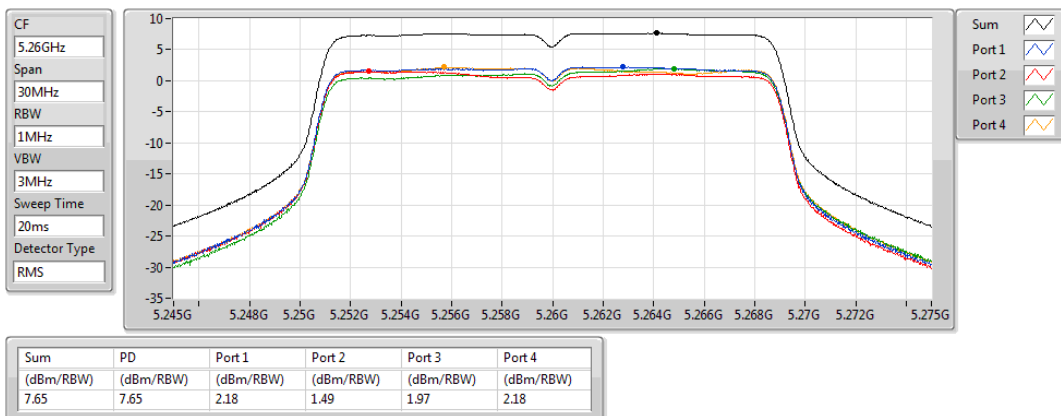


802.11ac VHT20_Nss1,(MCS0)_4TX

PSD

5260MHz

28/11/2019

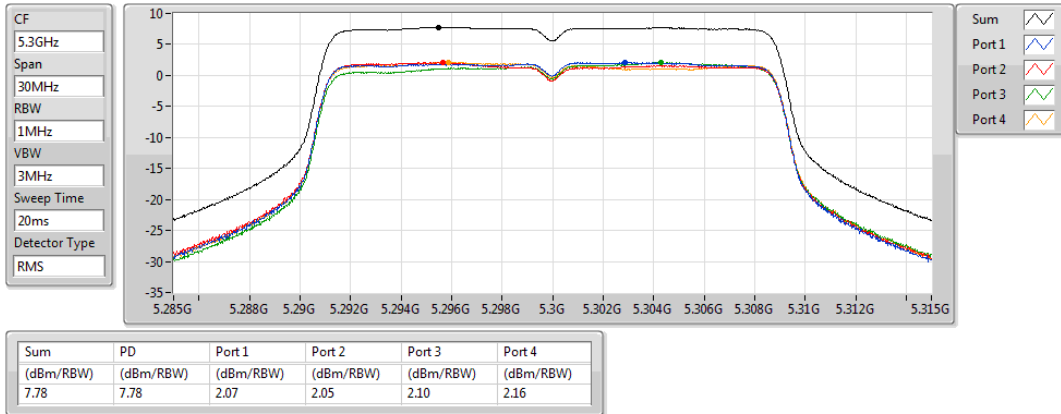


802.11ac VHT20_Nss1,(MCS0)_4TX

PSD

5300MHz

28/11/2019

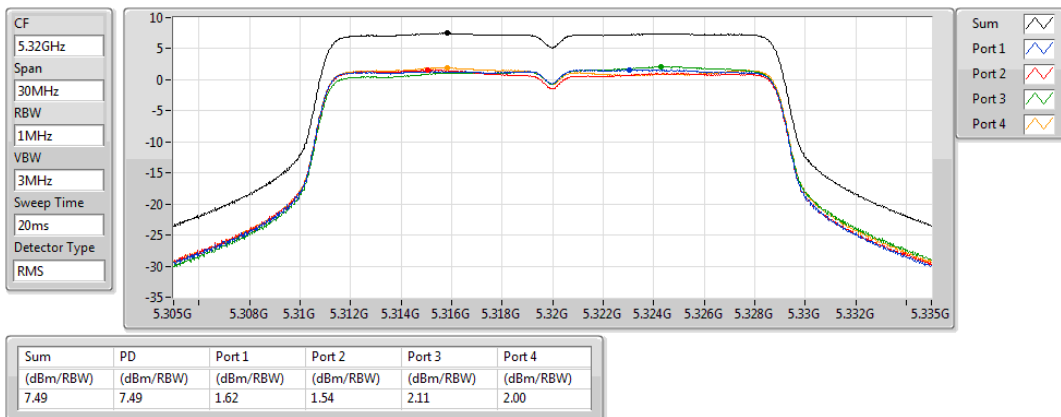


802.11ac VHT20_Nss1,(MCS0)_4TX

PSD

5320MHz

28/11/2019

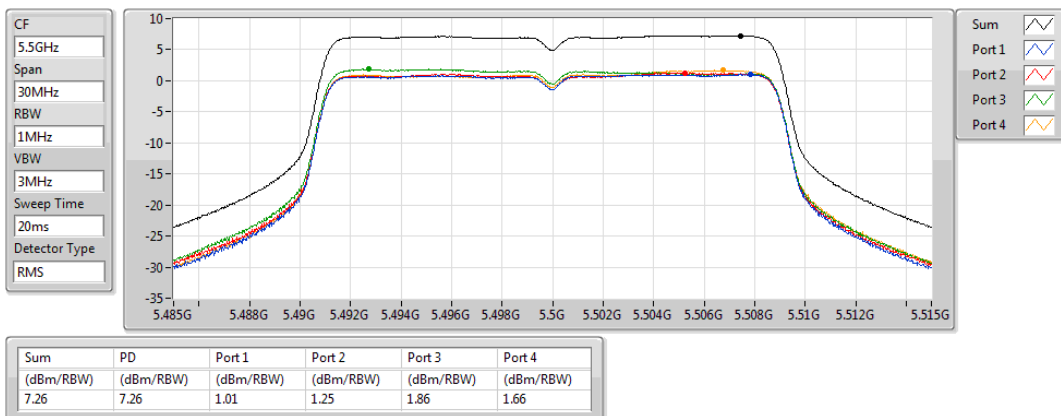


802.11ac VHT20_Nss1,(MCS0)_4TX

PSD

5500MHz

28/11/2019

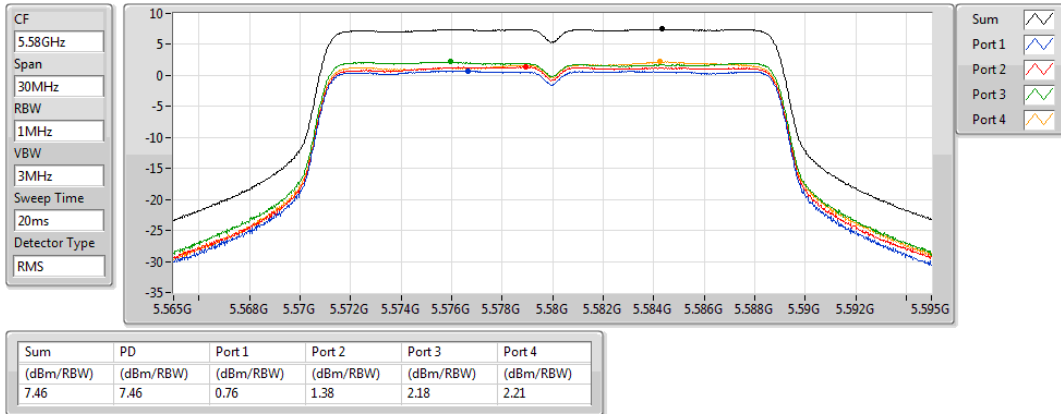


802.11ac VHT20_Nss1,(MCS0)_4TX

PSD

5580MHz

28/11/2019

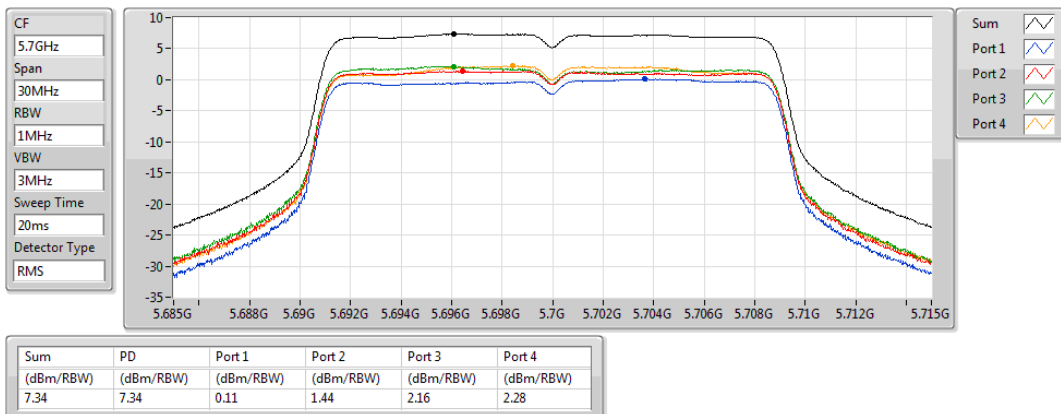


802.11ac VHT20_Nss1,(MCS0)_4TX

PSD

5700MHz

28/11/2019



802.11ac VHT20_Nss1,(MCS0)_4TX

PSD

5720MHz Straddle 5.47-5.725GHz

28/11/2019

