



RADIO TEST REPORT

FCC ID : MSQ-RTAX5S00
Equipment : TUF Gaming AX4200 Dual Band WiFi 6 Router
Brand Name : ASUS
Model Name : TUF-AX4200
Applicant : ASUSTeK COMPUTER INC.
1F., No. 15, Lide Rd., Beitou, Taipei City 112, Taiwan
Manufacturer (1) : SHENZHEN GONGJIN ELECTRONICS CO.,LTD
No. 2 Danzi North Road, Kengzi Street, Pingshan District,
Shenzhen, Guangdong, China
Manufacturer (2) : TONG WEI ELECTRONICS (VIETNAM) COMPANY LIMITED
Block C-04 and part C-05 of Lot CN12, An Duong Industrial
Zone, Hong Phong Commune, An Duong District, Hai Phong
City, Vietnam
Standard : 47 CFR FCC Part 15.407

The product was received on Aug. 16, 2022, and testing was started from Aug. 26, 2022 and completed on Oct. 31, 2022. We, Sporton International Inc. Hsinchu Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. Hsinchu Laboratory, the test report shall not be reproduced except in full.



Approved by: Sam Chen

Sporton International Inc. Hsinchu Laboratory
No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)



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TEL : 886-3-656-9065
FAX : 886-3-656-9085
Report Template No.: CB-A12_1 Ver1.4



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 Output Power	PASS	-
3.4	15.407(a)	Power Spectral Density	PASS	-
3.5	15.407(b)	Unwanted Emissions	PASS	-

Declaration of Conformity:

1. The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers. It's means measurement values may risk exceeding the limit of regulation standards, if measurement uncertainty is include in test results.
2. The measurement uncertainty please refer to report "Measurement Uncertainty".

Comments and Explanations:

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

Reviewed by: Sam Chen**Report Producer: Sandy Chuang**



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	3TX
5.15-5.25GHz	802.11n HT20	20	3TX
5.15-5.25GHz	802.11n HT20-BF	20	3TX
5.15-5.25GHz	802.11ac VHT20	20	3TX
5.15-5.25GHz	802.11ac VHT20-BF	20	3TX
5.15-5.25GHz	802.11ax HEW20	20	3TX
5.15-5.25GHz	802.11ax HEW20-BF	20	3TX
5.15-5.25GHz	802.11n HT40	40	3TX
5.15-5.25GHz	802.11n HT40-BF	40	3TX
5.15-5.25GHz	802.11ac VHT40	40	3TX
5.15-5.25GHz	802.11ac VHT40-BF	40	3TX
5.15-5.25GHz	802.11ax HEW40	40	3TX
5.15-5.25GHz	802.11ax HEW40-BF	40	3TX
5.15-5.25GHz	802.11ac VHT80	80	3TX
5.15-5.25GHz	802.11ac VHT80-BF	80	3TX



Band	Mode	BWch (MHz)	Nant
5.15-5.25GHz	802.11ax HEW80	80	3TX
5.15-5.25GHz	802.11ax HEW80-BF	80	3TX
5.15-5.35GHz	802.11ac VHT160	160	3TX
5.15-5.35GHz	802.11ac VHT160-BF	160	3TX
5.15-5.35GHz	802.11ax HEW160	160	3TX
5.15-5.35GHz	802.11ax HEW160-BF	160	3TX
5.25-5.35GHz	802.11a	20	3TX
5.25-5.35GHz	802.11n HT20	20	3TX
5.25-5.35GHz	802.11n HT20-BF	20	3TX
5.25-5.35GHz	802.11ac VHT20	20	3TX
5.25-5.35GHz	802.11ac VHT20-BF	20	3TX
5.25-5.35GHz	802.11ax HEW20	20	3TX
5.25-5.35GHz	802.11ax HEW20-BF	20	3TX
5.25-5.35GHz	802.11n HT40	40	3TX
5.25-5.35GHz	802.11n HT40-BF	40	3TX
5.25-5.35GHz	802.11ac VHT40	40	3TX
5.25-5.35GHz	802.11ac VHT40-BF	40	3TX
5.25-5.35GHz	802.11ax HEW40	40	3TX
5.25-5.35GHz	802.11ax HEW40-BF	40	3TX
5.25-5.35GHz	802.11ac VHT80	80	3TX
5.25-5.35GHz	802.11ac VHT80-BF	80	3TX
5.25-5.35GHz	802.11ax HEW80	80	3TX
5.25-5.35GHz	802.11ax HEW80-BF	80	3TX
5.47-5.725GHz	802.11a	20	3TX
5.47-5.725GHz	802.11n HT20	20	3TX
5.47-5.725GHz	802.11n HT20-BF	20	3TX
5.47-5.725GHz	802.11ac VHT20	20	3TX
5.47-5.725GHz	802.11ac VHT20-BF	20	3TX
5.47-5.725GHz	802.11ax HEW20	20	3TX
5.47-5.725GHz	802.11ax HEW20-BF	20	3TX
5.47-5.725GHz	802.11n HT40	40	3TX
5.47-5.725GHz	802.11n HT40-BF	40	3TX
5.47-5.725GHz	802.11ac VHT40	40	3TX
5.47-5.725GHz	802.11ac VHT40-BF	40	3TX
5.47-5.725GHz	802.11ax HEW40	40	3TX
5.47-5.725GHz	802.11ax HEW40-BF	40	3TX
5.47-5.725GHz	802.11ac VHT80	80	3TX



Band	Mode	BWch (MHz)	Nant
5.47-5.725GHz	802.11ac VHT80-BF	80	3TX
5.47-5.725GHz	802.11ax HEW80	80	3TX
5.47-5.725GHz	802.11ax HEW80-BF	80	3TX
5.47-5.725GHz	802.11ac VHT160	160	3TX
5.47-5.725GHz	802.11ac VHT160-BF	160	3TX
5.47-5.725GHz	802.11ax HEW160	160	3TX
5.47-5.725GHz	802.11ax HEW160-BF	160	3TX
5.725-5.85GHz	802.11a	20	3TX
5.725-5.85GHz	802.11n HT20	20	3TX
5.725-5.85GHz	802.11n HT20-BF	20	3TX
5.725-5.85GHz	802.11ac VHT20	20	3TX
5.725-5.85GHz	802.11ac VHT20-BF	20	3TX
5.725-5.85GHz	802.11ax HEW20	20	3TX
5.725-5.85GHz	802.11ax HEW20-BF	20	3TX
5.725-5.85GHz	802.11n HT40	40	3TX
5.725-5.85GHz	802.11n HT40-BF	40	3TX
5.725-5.85GHz	802.11ac VHT40	40	3TX
5.725-5.85GHz	802.11ac VHT40-BF	40	3TX
5.725-5.85GHz	802.11ax HEW40	40	3TX
5.725-5.85GHz	802.11ax HEW40-BF	40	3TX
5.725-5.85GHz	802.11ac VHT80	80	3TX
5.725-5.85GHz	802.11ac VHT80-BF	80	3TX
5.725-5.85GHz	802.11ax HEW80	80	3TX
5.725-5.85GHz	802.11ax HEW80-BF	80	3TX

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, 1024QAM 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	Antenna Type	Connector	Gain (dBi)
	2.4GHz	5GHz					
1	2	1	Wha Yu	C6319-510334-A SZ2207-064	Dipole	I-PEX	Note 1
2	-	2	Wha Yu	C6319-510335-A SZ2207-065	Dipole	I-PEX	
3	1	-	Wha Yu	C6319-510337-A SZ2208-033	Dipole	I-PEX	
4	-	3	Wha Yu	C6319-510336-A SZ2207-066	Dipole	I-PEX	

Note 1:

Ant.	Gain (dBi)				
	WLAN 2.4GHz	WLAN 5GHz			
		UNII 1	UNII 2A	UNII 2C	UNII 3
1	2.59	3.32	3.32	3.41	3.31
2	-	2.32	2.32	2.16	2.20
3	2.17	-	-	-	-
4	-	2.18	2.18	2.27	2.45

Note 2: The above information was declared by manufacturer.

Note 3: Directional gain information

Type	Maximum Output Power	Power Spectral Density
Non-BF	Directional gain = Max.gain + array gain. For power measurements on IEEE 802.11 devices Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$	$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{ANT}} \left(\sum_{k=1}^{N_{ANT}} g_{j,k} \right)^2}{N_{ANT}} \right]$
BF	$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{ANT}} \left(\sum_{k=1}^{N_{ANT}} g_{j,k} \right)^2}{N_{ANT}} \right]$	$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{ANT}} \left(\sum_{k=1}^{N_{ANT}} g_{j,k} \right)^2}{N_{ANT}} \right]$

Ex.

Directional Gain (NSS1) formula :

$$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{ANT}} \left(\sum_{k=1}^{N_{ANT}} g_{j,k} \right)^2}{N_{ANT}} \right]$$

$$NSS1(g1,1) = 10^{G1/20} ; NSS1(g1,2) = 10^{G2/20} ; NSS1(g1,3) = 10^{G3/20} ;$$

$$g_{j,k} = (NSS1(g1,1) + NSS1(g1,2) + NSS1(g1,3))^2$$

$$DG = 10 \log[(NSS1(g1,1) + NSS1(g1,2) + NSS1(g1,3))^2 / N_{ANT}] \Rightarrow 10 \log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20})^2 / N_{ANT}]$$

Where ;

$$2.4G \ G1 = 2.59 \text{ dBi}; G2 = 2.17 \text{ dBi};$$

$$2T1S \ DG = 5.39 \text{ dBi}; 2T2S \ DG = 2.39 \text{ dBi};$$

$$5G \text{ Band1} \ G1 = 3.32 \text{ dBi}; G2 = 2.32 \text{ dBi}; G3 = 2.18 \text{ dBi};$$

$$3T1S \ DG = 7.39 \text{ dBi}; 3T2S \ DG = 4.93 \text{ dBi}$$

$$5G \text{ Band2} \ G1 = 3.32 \text{ dBi}; G2 = 2.32 \text{ dBi}; G3 = 2.18 \text{ dBi};$$

$$3T1S \ DG = 7.39 \text{ dBi}; 3T2S \ DG = 4.93 \text{ dBi}$$

$$5G \text{ Band3} \ G1 = 3.41 \text{ dBi}; G2 = 2.16 \text{ dBi}; G3 = 2.27 \text{ dBi};$$

$$3T1S \ DG = 7.40 \text{ dBi}; 3T2S \ DG = 4.95 \text{ dBi}$$

$$5G \text{ Band4} \ G1 = 3.31 \text{ dBi}; G2 = 2.20 \text{ dBi}; G3 = 2.45 \text{ dBi};$$

$$3T1S \ DG = 7.44 \text{ dBi}; 3T2S \ DG = 7.98 \text{ dBi}$$

Note 4: <For WLAN 2.4GHz function>

For IEEE 802.11b/g/n/VHT/ax(2TX/2RX):

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

Port 1 and Port 2 could transmit/receive simultaneously.

<For WLAN 5GHz function>

For IEEE 802.11a/n/ac/ax (3TX/3RX):

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

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

**1.1.3 Mode Test Duty Cycle****For Non-beamforming Mode:****<3T1S>**

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11a	0.872	0.59	328.75u	10k

<3T2S>

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11ax HEW20	0.985	0.07	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11ax HEW40	0.972	0.12	1.015m	1k
802.11ax HEW80	0.943	0.25	525.375u	3k
802.11ax HEW160	0.876	0.57	232.5u	10k

For Beamforming Mode:**<3T1S>**

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11ax HEW20-BF	0.931	0.31	3.788m	300
802.11ax HEW40-BF	0.857	0.67	1.921m	1k
802.11ax HEW80-BF	0.758	1.2	946.25u	3k
802.11ax HEW160-BF	0.633	1.99	501u	3k

Note:

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

1.1.4 EUT Operational Condition

EUT Power Type	From Power Adapter			
Beamforming Function	☒	With beamforming	☐	Without beamforming
	The product has beamforming function for n/VHT/ax in 2.4GHz and n/ac/ax in 5GHz.			
Weather Band	☒	With 5600~5650MHz	☐	Without 5600~5650MHz
Function	☐	Outdoor P2M	☒	Indoor P2M
	☐	Fixed P2P	☐	Client
	☒	Point-to-multipoint	☐	Point-to-point
TPC Function	☒	With TPC	☐	Without TPC
Channel Puncturing Function	☐	Supported	☒	Unsupported
Test Software Version	DOS V6.1.7601			

Note: The above information was declared by manufacturer.

**1.1.5 Table for EUT supports functions**

Function	Function Type
AP	Master
Bridge	Slave without radar detection
Repeater	Master
Mesh	Master

Note 1: The AP Router (Master) mode has been tested and recorded in this test report.

Note 2: The above information was declared by manufacturer.



1.2 Applicable Standards

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

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

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 Information	
Test Lab. : Sporton International Inc. Hsinchu Laboratory	
Hsinchu (TAF: 3787)	ADD: No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.) TEL: 886-3-656-9065 FAX: 886-3-656-9085 Test site Designation No. TW3787 with FCC. Conformity Assessment Body Identifier (CABID) TW3787 with ISCED.

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
RF Conducted	TH03-CB	Owen Hsu	23.5~23.9 / 61~63	Sep. 08, 2022~ Sep. 20, 2022
Radiated Emission < 1GHz	03CH05-CB	Stim Sung	22.7~24 / 56~58	Oct. 13, 2022
Radiated Emission > 1GHz	03CH06-CB	Stim Sung	24.8~25.7 / 62~66	Aug. 26, 2022~ Sep. 17, 2022
Radiated Emission Co-location	03CH05-CB	Stim Sung	22.7~24 / 56~58	Oct. 31, 2022
AC Conduction	CO02-CB	Tim Chen	25~26 / 58~59	Oct. 21, 2022

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)	3.4 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	3.4 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	5.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	5.2 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.7 dB	Confidence levels of 95%
Conducted Emission	3.2 dB	Confidence levels of 95%
Output Power Measurement	0.8 dB	Confidence levels of 95%
Power Density Measurement	3.2 dB	Confidence levels of 95%
Bandwidth Measurement	2.0 %	Confidence levels of 95%



2 Test Configuration of EUT

2.1 Test Channel Mode

For Non-beamforming Mode:

<3T1S>

Mode	Power Setting
802.11a_Nss1,(6Mbps)_3TX	-
5180MHz	41
5200MHz	45
5240MHz	46
5260MHz	32
5300MHz	32
5320MHz	32
5500MHz	32
5580MHz	33
5700MHz	32
5720MHz Straddle 5.47-5.725GHz	33
5720MHz Straddle 5.725-5.85GHz	33
5745MHz	49
5785MHz	49
5825MHz	49

<3T2S>

Mode	Power Setting
802.11ax HEW20_Nss2,(MCS0)_3TX	-
5180MHz	41
5200MHz	43
5240MHz	42
5260MHz	29
5300MHz	30
5320MHz	30
5500MHz	30
5580MHz	30
5700MHz	30
5720MHz Straddle 5.47-5.725GHz	30
5720MHz Straddle 5.725-5.85GHz	30
5745MHz	43
5785MHz	43
5825MHz	44
802.11ax HEW40_Nss2,(MCS0)_3TX	-
5190MHz	40



Mode	Power Setting
5230MHz	44
5270MHz	32
5310MHz	33
5510MHz	33
5550MHz	32
5670MHz	32
5710MHz Straddle 5.47-5.725GHz	33
5710MHz Straddle 5.725-5.85GHz	33
5755MHz	45
5795MHz	45
802.11ax HEW80_Nss2,(MCS0)_3TX	-
5210MHz	37
5290MHz	31
5530MHz	33
5610MHz	32
5690MHz Straddle 5.47-5.725GHz	32
5690MHz Straddle 5.725-5.85GHz	32
5775MHz	43
802.11ax HEW160_Nss2,(MCS0)_3TX	-
5250MHz Straddle 5.15-5.25GHz	30
5250MHz Straddle 5.25-5.35GHz	30
5570MHz	33

For Beamforming Mode:**<3T1S>**

Mode	Power Setting
802.11ax HEW20-BF_Nss1,(MCS0)_3TX	-
5180MHz	39
5200MHz	39
5240MHz	39
5260MHz	25
5300MHz	25
5320MHz	25
5500MHz	25
5580MHz	25
5700MHz	25
5720MHz Straddle 5.47-5.725GHz	25
5720MHz Straddle 5.725-5.85GHz	25
5745MHz	40
5785MHz	40



Mode	Power Setting
5825MHz	40
802.11ax HEW40-BF_Nss1,(MCS0)_3TX	-
5190MHz	40
5230MHz	42
5270MHz	29
5310MHz	29
5510MHz	28
5550MHz	28
5670MHz	28
5710MHz Straddle 5.47-5.725GHz	28
5710MHz Straddle 5.725-5.85GHz	28
5755MHz	42
5795MHz	42
802.11ax HEW80-BF_Nss1,(MCS0)_3TX	-
5210MHz	37
5290MHz	29
5530MHz	29
5610MHz	29
5690MHz Straddle 5.47-5.725GHz	29
5690MHz Straddle 5.725-5.85GHz	29
5775MHz	42
802.11ax HEW160-BF_Nss1,(MCS0)_3TX	-
5250MHz Straddle 5.15-5.25GHz	29
5250MHz Straddle 5.25-5.35GHz	29
5570MHz	29

Note:

- ♦ HEW20 / HEW40 / HEW80 / HEW160 covers HT20 / HT40 / VHT20 / VHT40 / VHT80 / VHT160 due to similar modulation. The power setting for HT20 / HT40 / VHT20 / VHT40 / VHT80 / VHT160 is the same or lower than HEW20 / HEW40 / HEW80 / HEW160.
- ♦ For 3T1S: The EUT supports non-beamforming and beamforming modes, after evaluating, the beamforming mode has been evaluated to be the worst case, so it was selected to test.
- ♦ For 3T2S: The EUT supports non-beamforming and beamforming modes, after evaluating, the non-beamforming mode has been evaluated to be the worst case, so it was selected to test.

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 Test Voltage: 120Vac / 60Hz
Operating Mode	Normal Link
1	EUT

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

The Worst Case Mode for Following Conformance Tests	
Tests Item	Unwanted Emissions
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	CTX
	1. After evaluation, EUT in Z axis was the worst case at Emissions in Restricted Frequency Bands test, and it was tested and recorded in this report. 2. The EUT performed testing at 2.4GHz and 5GHz, and the worst case was found at 5GHz. So the measurement will follow this same test configuration.
1	EUT in Z axis / WLAN 5GHz
Operating Mode > 1GHz	CTX
	After evaluation, EUT in Z axis was the worst case at Unwanted Emissions test, and it was tested and recorded in this report.
1	EUT in Z axis



The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Radiated Emission Co-location
Test Condition	Radiated measurement
Operating Mode	Normal Link
	After evaluation, EUT in Z axis was the worst case at Radiated Emissions test, and it was tested and recorded in this report.
1	EUT in Z axis / WLAN 2.4GHz + WLAN 5GHz
Refer to Appendix F for Radiated Emission Co-location.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	WLAN 2.4GHz + WLAN 5GHz
Refer to Sporton Test Report No.: FA232205 for Co-location RF Exposure Evaluation.	

2.3 EUT Operation during Test

For CTX Mode:

non-beamforming mode:

The EUT was programmed to be in continuously transmitting mode.

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 DOS.
3. Executed "Lantest.exe" to link with the remote workstation to transmit and receive packet by Client and transmit duty cycle no less than 98%.

For Normal Link Mode:

During the test, the EUT operation to normal function.



2.4 Accessories

Accessories			
Equipment Name	Brand Name	Model Name	Rating
Adapter	Frecom	F30L10-120250SPAU	Input: 100-240V~50/60Hz, 1.25A Output: 12.0V, 2.5A, 30.0W
Others			
RJ-45 cable*1: Non-Shielded, 1m			

2.5 Support Equipment

For AC Conduction:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	LAN1 NB	DELL	E6430	N/A
B	LAN4 NB	DELL	E6430	N/A
C	2.4G NB	DELL	E6430	N/A
D	5G NB	DELL	E6430	N/A
E	WAN PC	DELL	E6430	N/A
F	HDD 3.0	Transcend	JetFlash-700	N/A

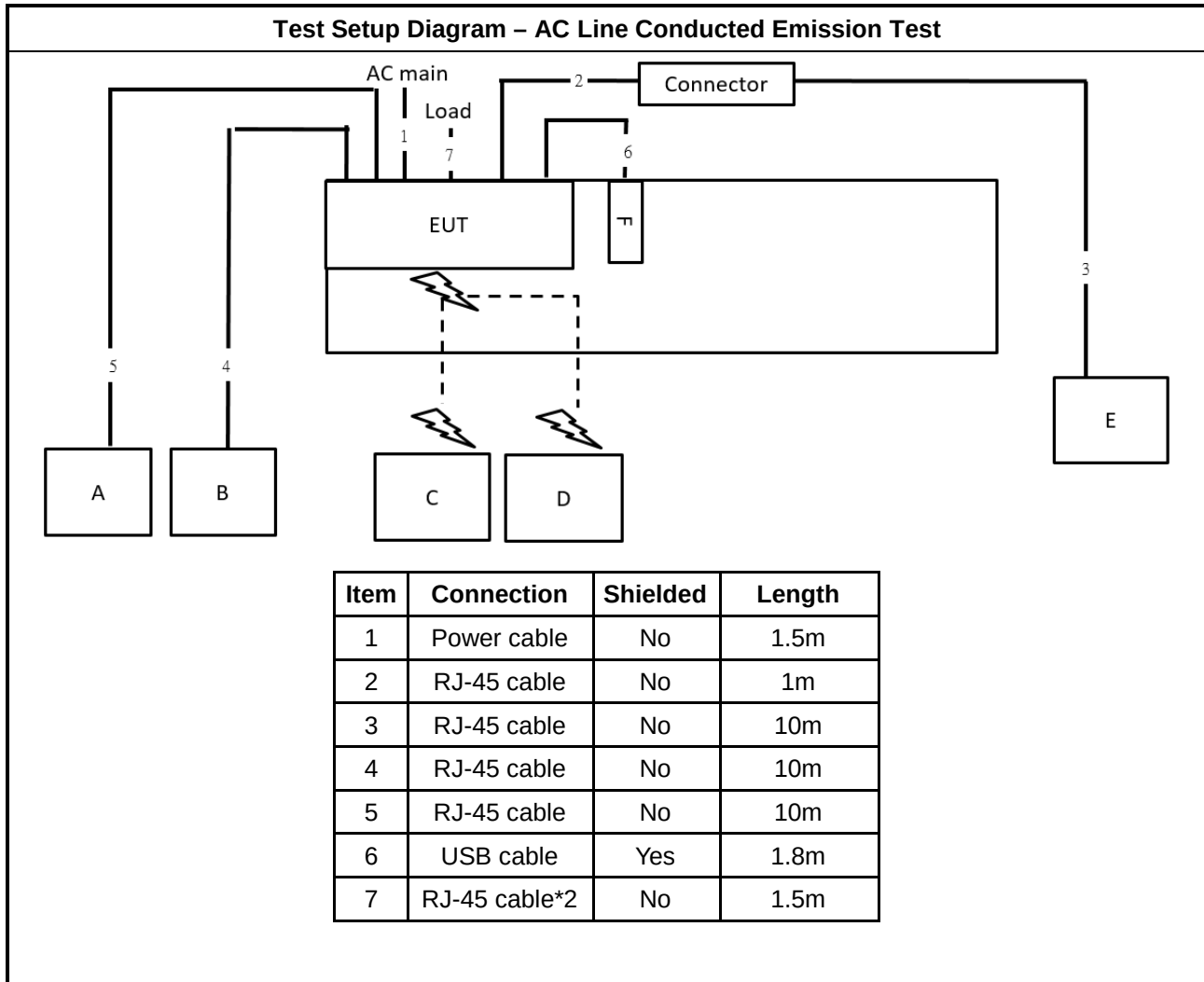
For Radiated below 1GHz, Radiated above 1GHz (Non-beamforming mode) and RF Conducted (Non-beamforming mode):

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

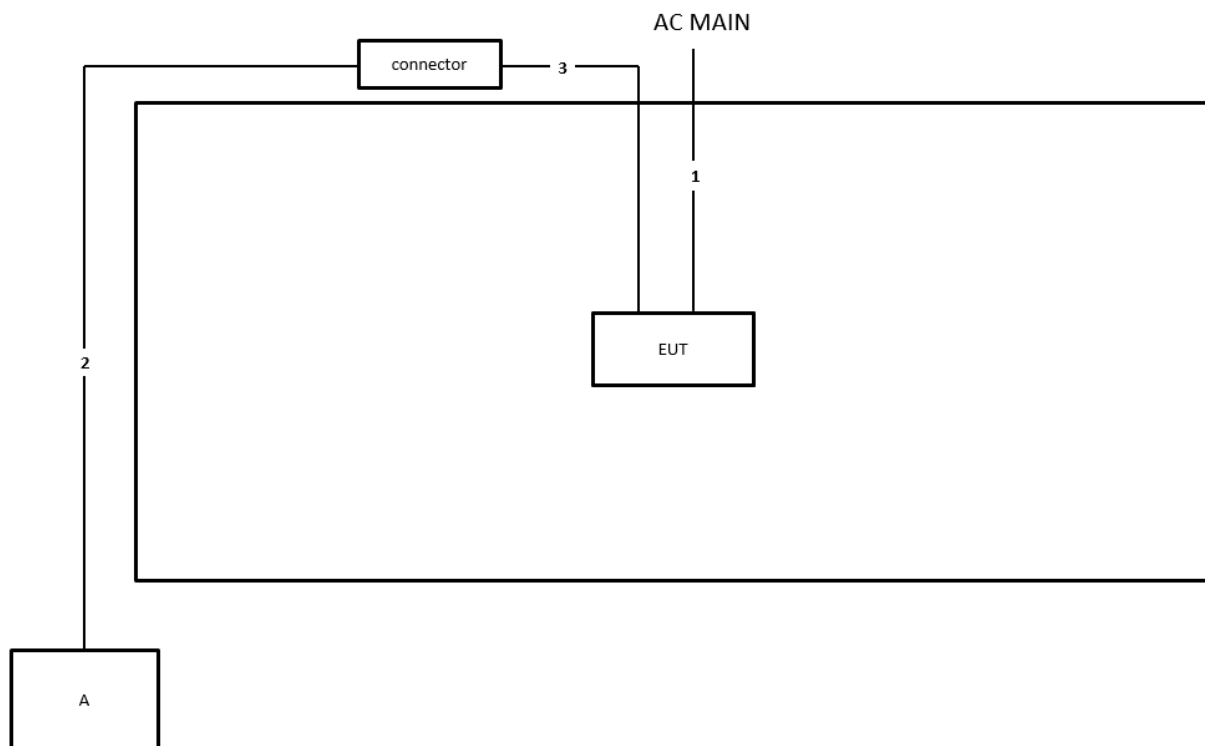
For Radiated above 1GHz (Beamforming mode) and RF Conducted (Beamforming mode):

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	NB	DELL	E4300	N/A
B	NB	DELL	E4300	N/A
C	Client	ASUS	TUF-AX4200	N/A

2.6 Test Setup Diagram

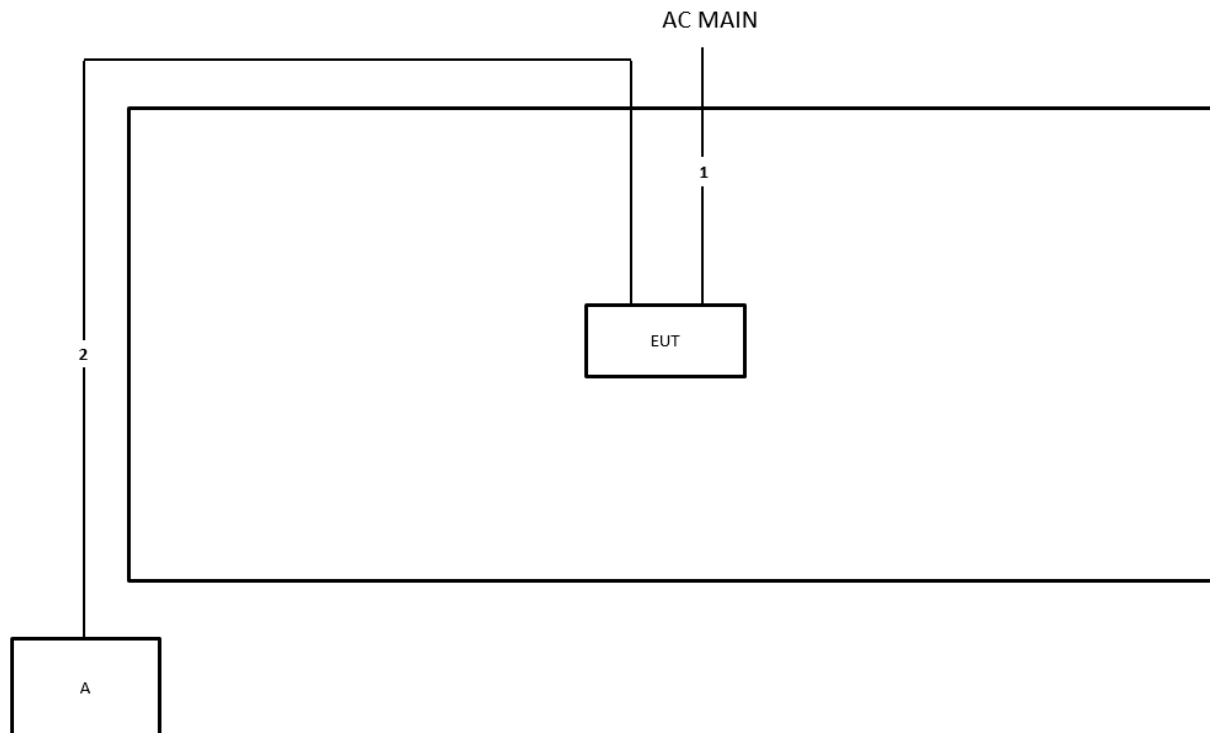


Test Setup Diagram - Radiated Test < 1GHz



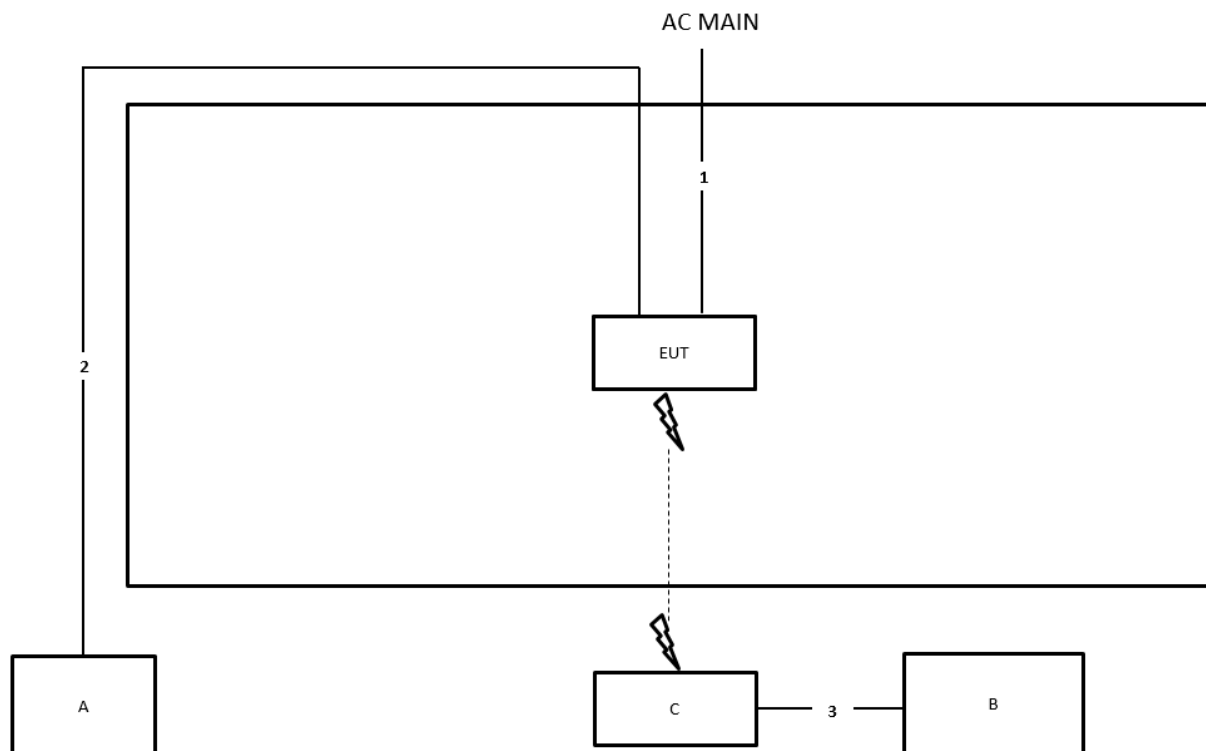
Item	Connection	Shielded	Length
1	Power cable	No	1.5m
2	RJ-45 cable	No	10m
3	RJ-45 cable	No	1m

**Test Setup Diagram - Radiated Test > 1GHz
<Non-beamforming mode>**



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

**Test Setup Diagram - Radiated Test > 1GHz
<Beamforming mode>**



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



3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

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

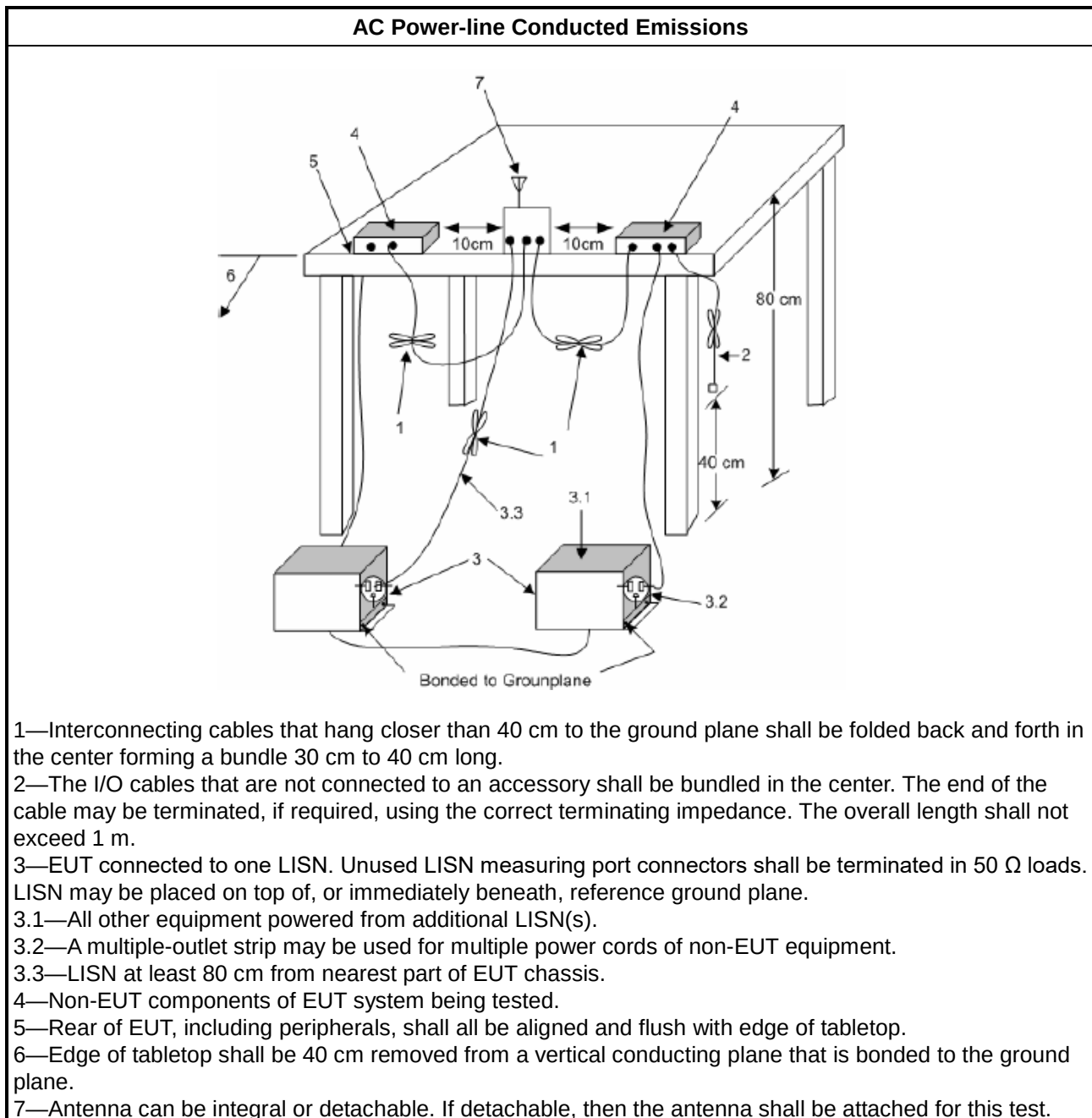
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

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

3.1.4 Test Setup



3.1.5 Measurement Results Calculation

The measured Level is calculated using:

- a. Corrected Reading: LISN Factor (LISN) + Attenuator (AT/AUX) + Cable Loss (CL) + Read Level (Raw) = Level
- b. Margin = -Limit + Level

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, 26 dB emission bandwidth ,N/A. 6 dB emission bandwidth $\geq 500\text{kHz}$.
☐	For the 5.85-5.895 GHz band, 26 dB emission bandwidth ,N/A. 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 $\geq 500\text{kHz}$.

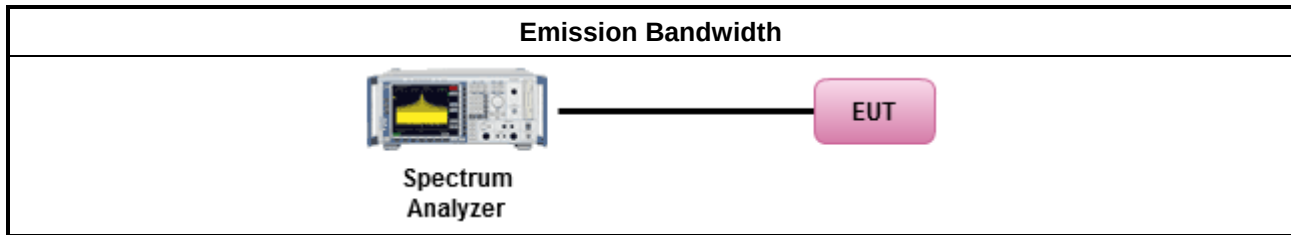
3.2.2 Measuring Instruments

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 D02, 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 Output Power

3.3.1 Limit

Maximum 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.
Maximum EIRP Limit	
☐ For the 5.85-5.895 GHz band:	
☐	- Indoor AP & subordinate device < 36 dBm - Client device < 30 dBm
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

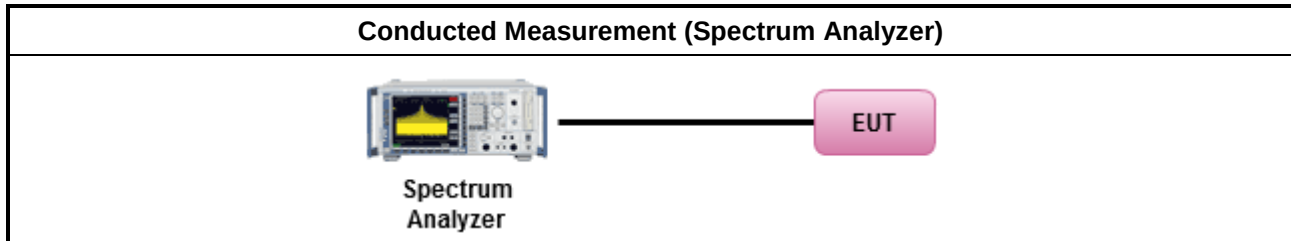
Refer a test equipment and calibration data table in this test report.

3.3.3 Test Procedures

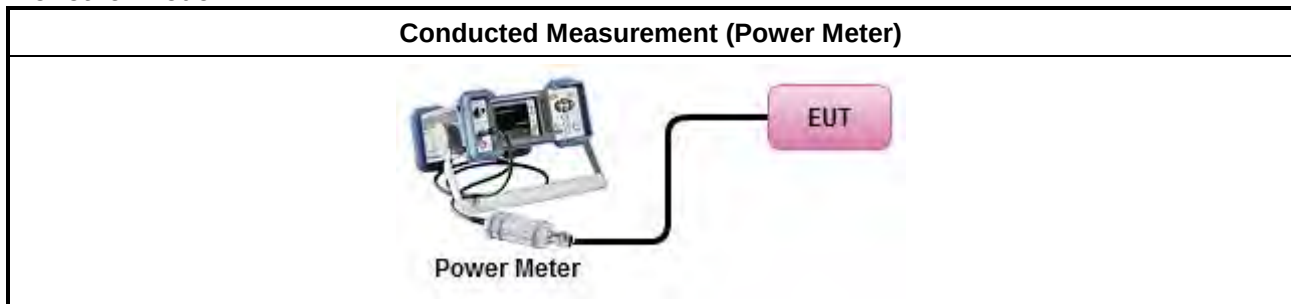
Test Method	
	Average over on/off periods with duty factor
☒	Refer as FCC KDB 789033 D02, clause E Method SA-2 (spectral trace averaging).
☐	Refer as FCC KDB 789033 D02, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
	Wideband RF power meter and average over on/off periods with duty factor
☒	Refer as FCC KDB 789033 D02, 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]) $EIRP_{total} = P_{total} + DG$
☐	For radiated measurement.
	Refer as FCC KDB 789033 D02 clause II A.1.F "Antenna-port Conducted versus Radiated Testing"
	Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.
	Refer as FCC KDB 412172 D01 clause 2.2 for EIRP calculation.

3.3.4 Test Setup

For straddle channel mode:



For other mode:



3.3.5 Test Result of Maximum Output Power

Refer as Appendix C



3.4 Power Spectral Density

3.4.1 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.
EIRP Power Spectral Density Limit	
☐ For the 5.85-5.895 GHz band:	
	- Indoor AP & subordinate device < 20dBm/MHz - Client device < 14dBm/MHz
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

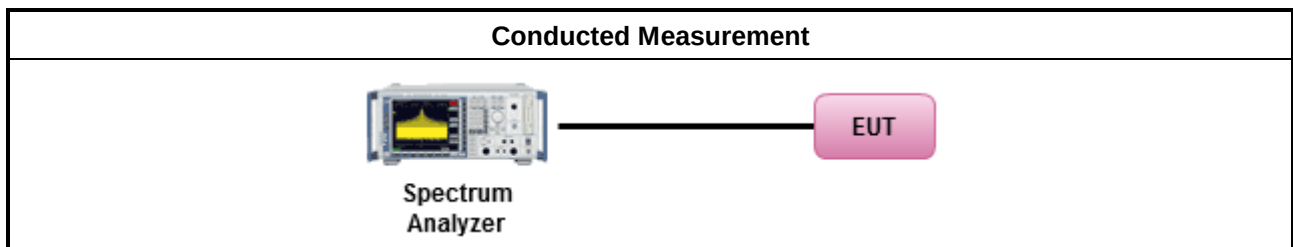
Refer a test equipment and calibration data table in this test report.

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 D02, F)5) power spectral density can be measured using resolution bandwidths < 1 MHz provided that the results are integrated over 1 MHz bandwidth
[duty cycle ≥ 98% or external video / power trigger]	
☒	Refer as FCC KDB 789033 D02, clause E Method SA-1 (spectral trace averaging).
☐	Refer as FCC KDB 789033 D02, 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 D02, clause E Method SA-2 (spectral trace averaging).
☐	Refer as FCC KDB 789033 D02, 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])	

Test Method	
	$EIRP_{total} = PPSD_{total} + DG$
☐	For radiated measurement.
	Refer as FCC KDB 789033 D02 clause II A.1.F "Antenna-port Conducted versus Radiated Testing"
	Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.
	Refer as FCC KDB 412172 D01 clause 2.2 for EIRP calculation.

3.4.4 Test Setup



3.4.5 Test Result of 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.
☐ 5.85 - 5.895 GHz	(i) For an indoor access point or subordinate device, all emissions at or above 5.895 GHz shall not exceed an e.i.r.p. of 15 dBm/MHz and shall decrease linearly to an e.i.r.p. of - 7 dBm/MHz at or above 5.925 GHz. (ii) For a client device, all emissions at or above 5.895 GHz shall not exceed an



	e.i.r.p. of -5 dBm/MHz and shall decrease linearly to an e.i.r.p. of -27 dBm/MHz at or above 5.925 GHz. (iii) For a client device or indoor access point or subordinate device, all emissions below 5.725 GHz shall not exceed an e.i.r.p. of -27 dBm/MHz at 5.65 GHz increasing linearly to 10 dBm/ MHz at 5.7 GHz, and from 5.7 GHz increasing linearly to a level of 15.6 dBm/MHz at 5.72 GHz, and from 5.72 GHz increasing linearly to a level of 27 dBm/MHz at 5.725 GHz.
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:	
For radiated measurement.	Refer as FCC KDB 789033 D02, clause G)2) for unwanted emissions into non-restricted bands.
	Refer as FCC KDB 789033 D02, clause G)1) for unwanted emissions into restricted bands.
	☐ Refer as FCC KDB 789033 D02, G)6) Method AD (Trace Averaging).
	☒ Refer as FCC KDB 789033 D02, 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 D02, clause G)5) measurement procedure peak limit.
The any unwanted emissions level shall not exceed the fundamental emission level.	☐ Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak limit.

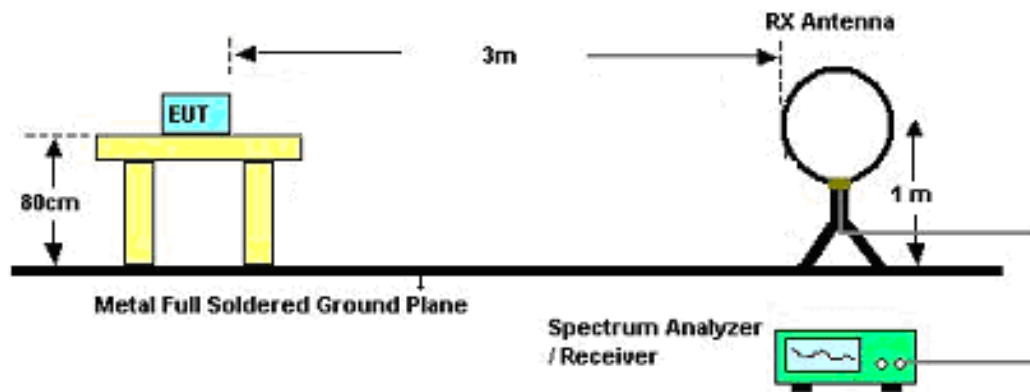
Test Method

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

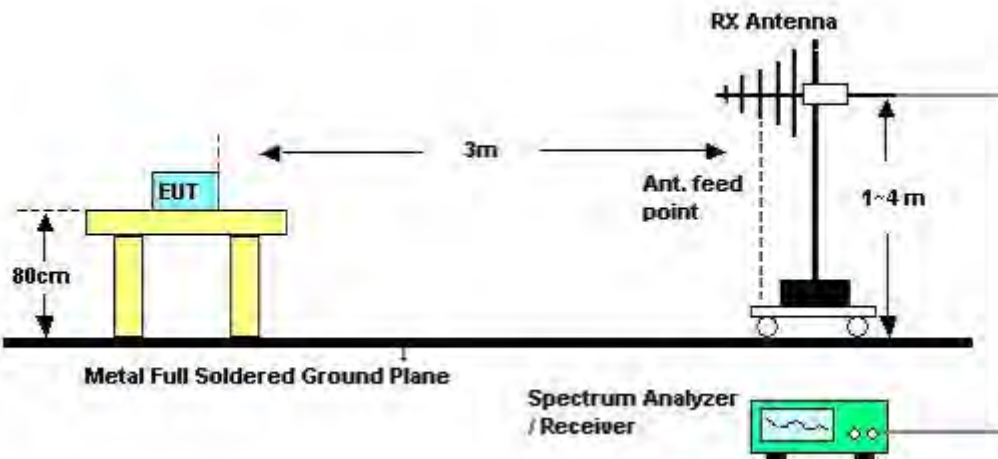
3.5.4 Test Setup

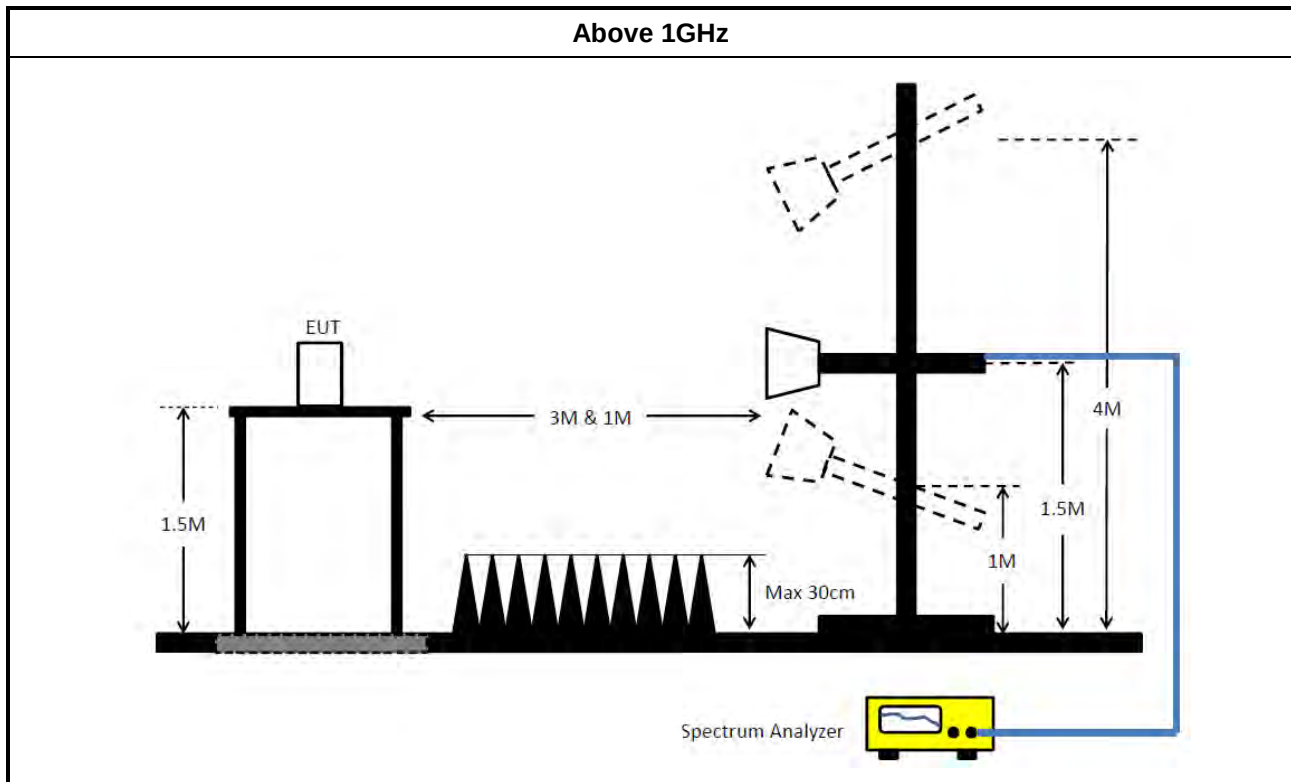
Transmitter Radiated Unwanted Emissions

9kHz ~30MHz



30MHz~1GHz





3.5.5 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Antenna factor (AF) + Cable loss (CL) + Read level (Raw) - Preamp factor (PA)(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	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
LISN	Schwarzbeck	NSLK 8127	8127650	9kHz ~ 30MHz	Jan. 07, 2022	Jan. 06, 2023	Conduction (CO02-CB)
LISN	Schwarzbeck	NSLK 8127	8127478	9kHz ~ 30MHz	Dec. 22, 2021	Dec. 21, 2022	Conduction (CO02-CB)
EMI Receiver	Agilent	N9038A	MY52260140	9kHz ~ 8.4GHz	May 06, 2022	May 05, 2023	Conduction (CO02-CB)
COND Cable	Woken	Cable	2	0.15MHz ~ 30MHz	Oct. 18, 2022	Oct. 17, 2023	Conduction (CO02-CB)
Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conduction (CO02-CB)
Pulse Limiter	Schwarzbeck	VTSD 9561F-N	00378	9kHz ~ 30MHz	Oct. 18, 2022	Oct. 17, 2023	Conduction (CO02-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	May 14, 2022	May 13, 2023	Radiation (03CH05-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH05-CB	30 MHz ~ 1 GHz	Aug. 03, 2022	Aug. 02, 2023	Radiation (03CH05-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH05-CB	1GHz ~18GHz 3m	Nov. 07, 2021	Nov. 06, 2022	Radiation (03CH05-CB)
Bilog Antenna with 6dB Attenuator	TESEQ & EMCI	CBL 6112D & N-6-06	35236 & AT-N0610	30MHz ~ 2GHz	Mar. 25, 2022	Mar. 24, 2023	Radiation (03CH05-CB)
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA 9120 D-1291	1GHz~18GHz	Jun. 23, 2022	Jun. 22, 2023	Radiation (03CH05-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 22, 2022	Aug. 21, 2023	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC330N	980331	20MHz ~ 3GHz	Apr. 26, 2022	Apr. 25, 2023	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC12630SE	980287	1GHz ~ 26.5GHz	Jul. 01, 2022	Jun. 30, 2023	Radiation (03CH05-CB)
Pre-Amplifier	MITEQ	TTA1840-35-H G	1864479	18GHz ~ 40GHz	Jul. 20, 2022	Jul. 19, 2023	Radiation (03CH05-CB)
Spectrum Analyzer	R&S	FSP40	100304	9kHz ~ 40GHz	Mar. 14, 2022	Mar. 13, 2023	Radiation (03CH05-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	Jun. 17, 2022	Jun. 16, 2023	Radiation (03CH05-CB)
RF Cable-low	Woken	RG402	Low Cable-04+23	30MHz~1GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-28	1GHz~18GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-04+28	1GHz~18GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH05-CB)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
High Cable	Woken	WCA0929M	40G#5+7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH05-CB)
High Cable	Woken	WCA0929M	40G#5	1GHz ~ 40 GHz	Dec. 08, 2021	Dec. 07, 2022	Radiation (03CH05-CB)
High Cable	Woken	WCA0929M	40G#7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH05-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH05-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH06-CB	1GHz ~18GHz 3m	Oct. 01, 2021	Sep. 30, 2022	Radiation (03CH06-CB)
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA 9120D-1292	1GHz~18GHz	Aug. 09, 2022	Aug. 08, 2023	Radiation (03CH06-CB)
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170507	15GHz ~ 40GHz	Jul. 05, 2022	Jul. 04, 2023	Radiation (03CH06-CB)
Pre-Amplifier	Agilent	83017A	MY53270064	0.5GHz ~ 26.5GHz	Aug 02, 2022	Aug 01, 2023	Radiation (03CH06-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 20, 2022	Jul. 19, 2023	Radiation (03CH06-CB)
Spectrum analyzer	R&S	FSP40	100080	9kHz~40GHz	Dec. 24, 2021	Dec. 23, 2022	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-67	1GHz~18GHz	Feb. 24, 2022	Feb. 23, 2023	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-05+67	1GHz~18GHz	Feb. 24, 2022	Feb. 23, 2023	Radiation (03CH06-CB)
High Cable	Woken	WCA0929M	40G#5+7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH06-CB)
High Cable	Woken	WCA0929M	40G#5	1GHz ~ 40 GHz	Dec. 08, 2021	Dec. 07, 2022	Radiation (03CH06-CB)
High Cable	Woken	WCA0929M	40G#7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH06-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH06-CB)
Spectrum analyzer	R&S	FSV40	101028	9kHz~40GHz	Jan. 07, 2022	Jan. 06, 2023	Conducted (TH03-CB)
Power Sensor	Anritsu	MA2411B	1531344	300MHz~40GHz	Jul. 31, 2022	Jul. 30, 2023	Conducted (TH03-CB)
Power Meter	Anritsu	ML2495A	1728002	300MHz~40GHz	Jul. 31, 2022	Jul. 30, 2023	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-11	1 GHz ~18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-12	1 GHz ~18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-13	1 GHz ~18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-14	1 GHz –18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-15	1 GHz –18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
Switch	SPTCB	SP-SWI	SWI-03	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH03-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conducted (TH03-CB)

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

NCR means Non-Calibration required.



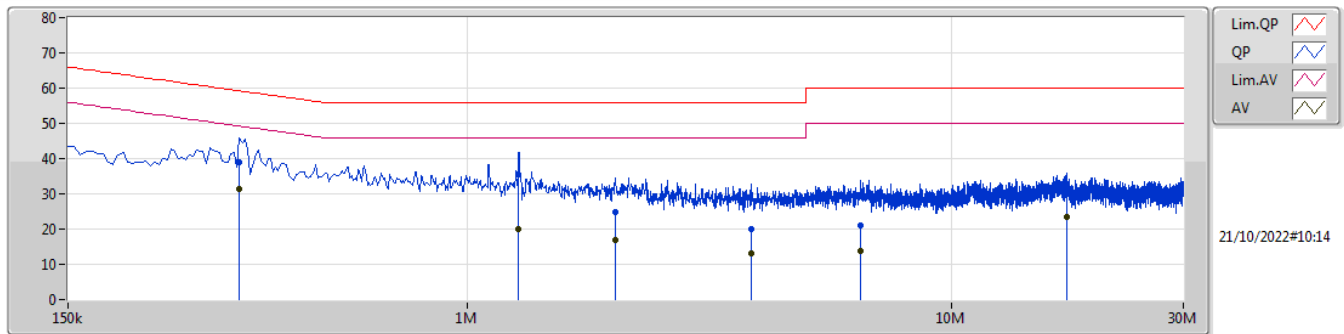
Conducted Emissions at Powerline

Appendix A

Summary

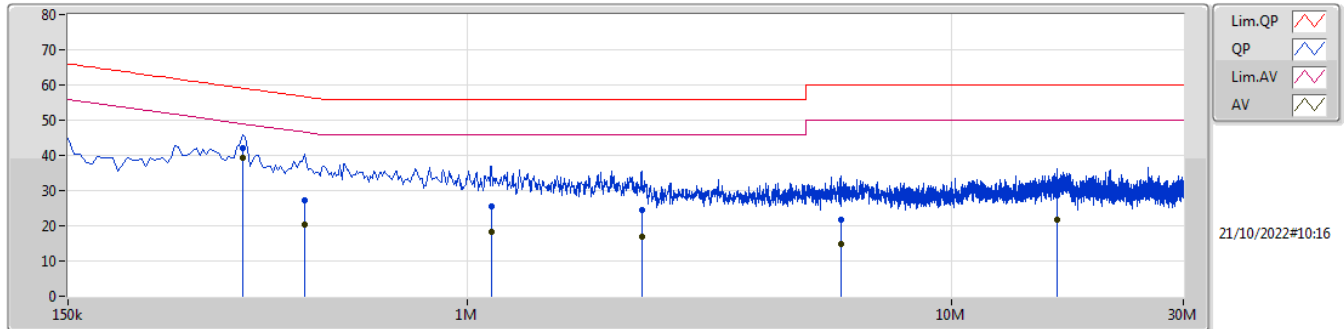
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	AV	343.5k	39.36	49.12	-9.76	Neutral

Mode 1



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)						
QP	339k	39.02	59.23	-20.21	10.36	Line	-	28.66	0.12	0.14	10.10						
AV	339k	31.53	49.23	-17.70	10.36	Line	"Worst"	21.17	0.12	0.14	10.10						
QP	1.275M	35.56	56.00	-20.44	10.47	Line	-	25.09	0.15	0.18	10.14						
AV	1.275M	19.93	46.00	-26.07	10.47	Line	-	9.46	0.15	0.18	10.14						
QP	2.018M	24.98	56.00	-31.02	10.51	Line	-	14.47	0.17	0.19	10.15						
AV	2.018M	16.92	46.00	-29.08	10.51	Line	-	6.41	0.17	0.19	10.15						
QP	3.845M	20.06	56.00	-35.94	10.62	Line	-	9.44	0.23	0.20	10.19						
AV	3.845M	13.16	46.00	-32.84	10.62	Line	-	2.54	0.23	0.20	10.19						
QP	6.468M	20.89	60.00	-39.11	10.69	Line	-	10.20	0.29	0.21	10.19						
AV	6.468M	13.95	50.00	-36.05	10.69	Line	-	3.26	0.29	0.21	10.19						
QP	17.232M	30.15	60.00	-29.85	10.84	Line	-	19.31	0.37	0.25	10.22						
AV	17.232M	23.32	50.00	-26.68	10.84	Line	-	12.48	0.37	0.25	10.22						

Mode 1



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)						
QP	343.5k	42.04	59.12	-17.08	10.40	Neutral	-	31.64	0.16	0.14	10.10						
AV	343.5k	39.36	49.12	-9.76	10.40	Neutral	"Worst"	28.96	0.16	0.14	10.10						
QP	460.5k	27.40	56.69	-29.29	10.42	Neutral	-	16.98	0.16	0.15	10.11						
AV	460.5k	20.21	46.69	-26.48	10.42	Neutral	-	9.79	0.16	0.15	10.11						
QP	1.122M	25.44	56.00	-30.56	10.49	Neutral	-	14.95	0.17	0.18	10.14						
AV	1.122M	18.25	46.00	-27.75	10.49	Neutral	-	7.76	0.17	0.18	10.14						
QP	2.292M	24.55	56.00	-31.45	10.55	Neutral	-	14.00	0.20	0.19	10.16						
AV	2.292M	16.88	46.00	-29.12	10.55	Neutral	-	6.33	0.20	0.19	10.16						
QP	5.888M	21.67	60.00	-38.33	10.64	Neutral	-	11.03	0.25	0.20	10.19						
AV	5.888M	14.90	50.00	-35.10	10.64	Neutral	-	4.26	0.25	0.20	10.19						
QP	16.427M	28.49	60.00	-31.51	10.78	Neutral	-	17.71	0.31	0.25	10.22						
AV	16.427M	21.67	50.00	-28.33	10.78	Neutral	-	10.89	0.31	0.25	10.22						

**Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_3TX	22.92M	16.822M	16M8D1D	20.55M	16.612M
5.25-5.35GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_3TX	21.18M	16.672M	16M7D1D	20.46M	16.612M
5.47-5.725GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_3TX	21.18M	16.702M	16M7D1D	14.97M	13.313M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_3TX	16.44M	17.421M	17M4D1D	3.2M	3.618M

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

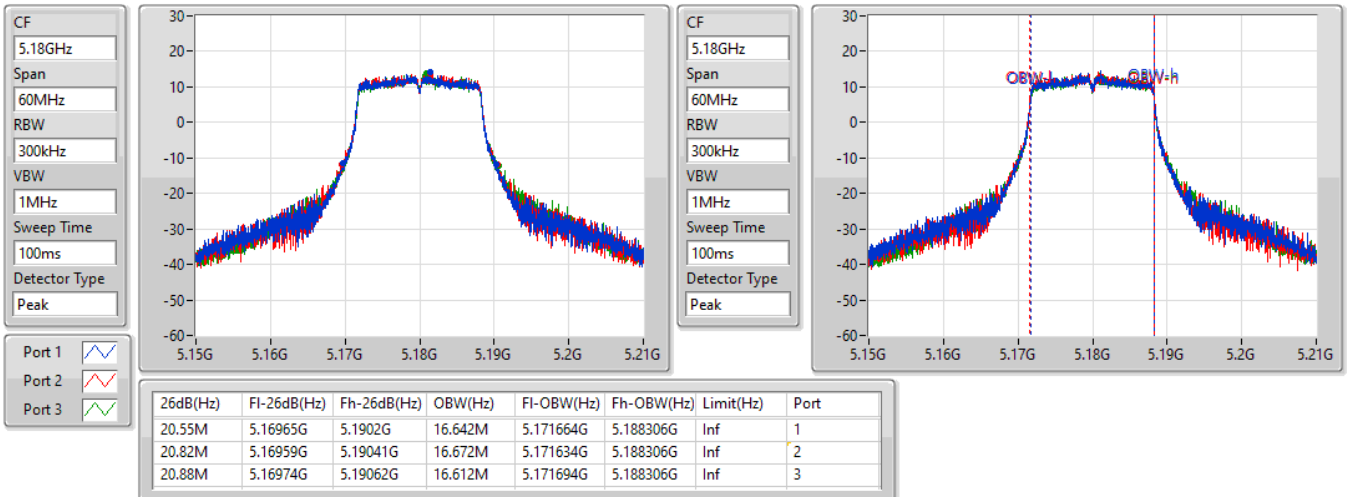
Result

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)
802.11a_Nss1,(6Mbps)_3TX	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	20.55M	16.642M	20.82M	16.672M	20.88M	16.612M
5200MHz	Pass	Inf	21.24M	16.732M	22.44M	16.702M	22.92M	16.702M
5240MHz	Pass	Inf	22.59M	16.792M	21.12M	16.762M	22.35M	16.822M
5260MHz	Pass	Inf	20.76M	16.642M	20.67M	16.642M	20.64M	16.642M
5300MHz	Pass	Inf	20.46M	16.612M	20.7M	16.642M	20.58M	16.612M
5320MHz	Pass	Inf	21.18M	16.672M	20.67M	16.612M	20.79M	16.642M
5500MHz	Pass	Inf	20.7M	16.702M	20.37M	16.642M	20.76M	16.612M
5580MHz	Pass	Inf	20.34M	16.672M	20.13M	16.672M	21.18M	16.672M
5700MHz	Pass	Inf	20.76M	16.672M	20.79M	16.672M	20.79M	16.672M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.09M	13.328M	14.97M	13.313M	15M	13.313M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.2M	3.638M	3.2M	3.658M	3.2M	3.618M
5745MHz	Pass	500k	16.41M	17.421M	16.44M	17.031M	16.38M	17.061M
5785MHz	Pass	500k	16.41M	17.301M	16.41M	17.061M	16.41M	17.121M
5825MHz	Pass	500k	16.41M	17.331M	16.44M	17.061M	16.44M	17.091M

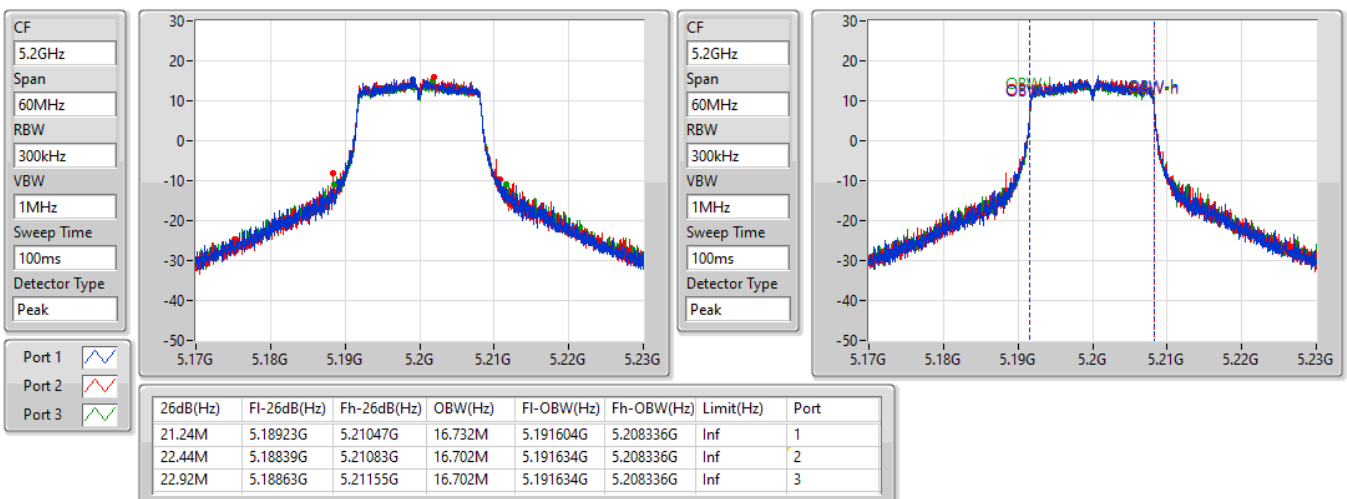
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11a_Nss1,(6Mbps)_3TX
EBW
5180MHz

08/09/2022

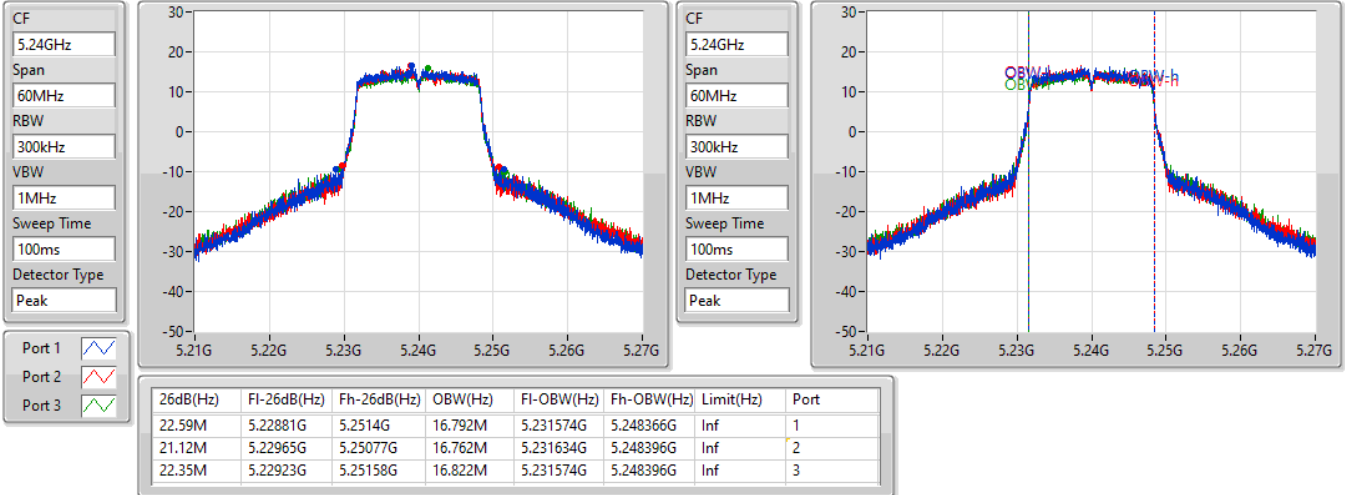

802.11a_Nss1,(6Mbps)_3TX
EBW
5200MHz

08/09/2022

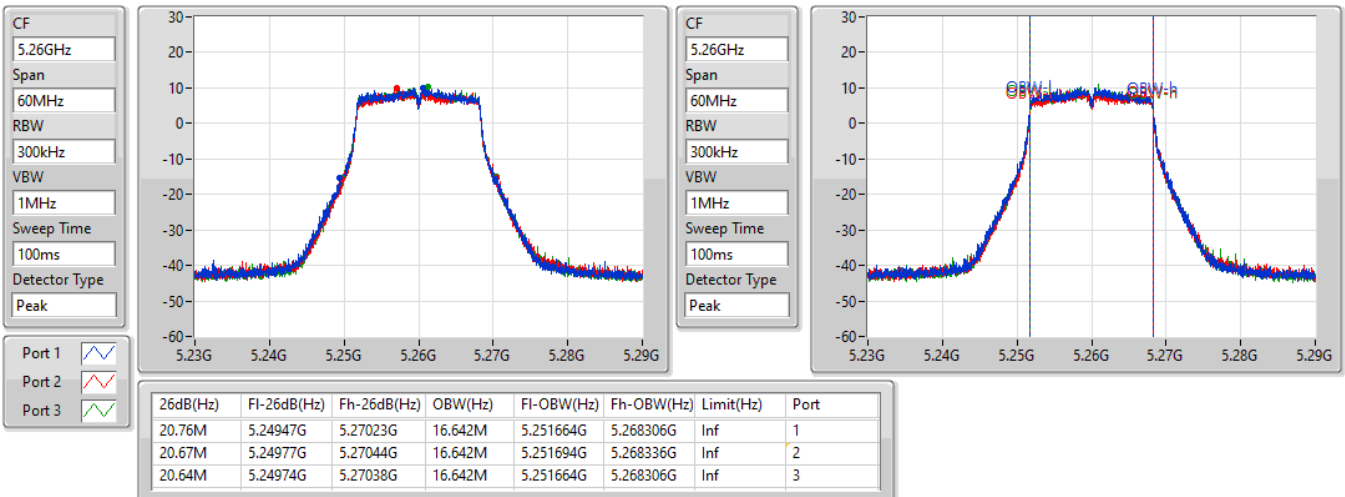


802.11a_Nss1,(6Mbps)_3TX
EBW
5240MHz

08/09/2022

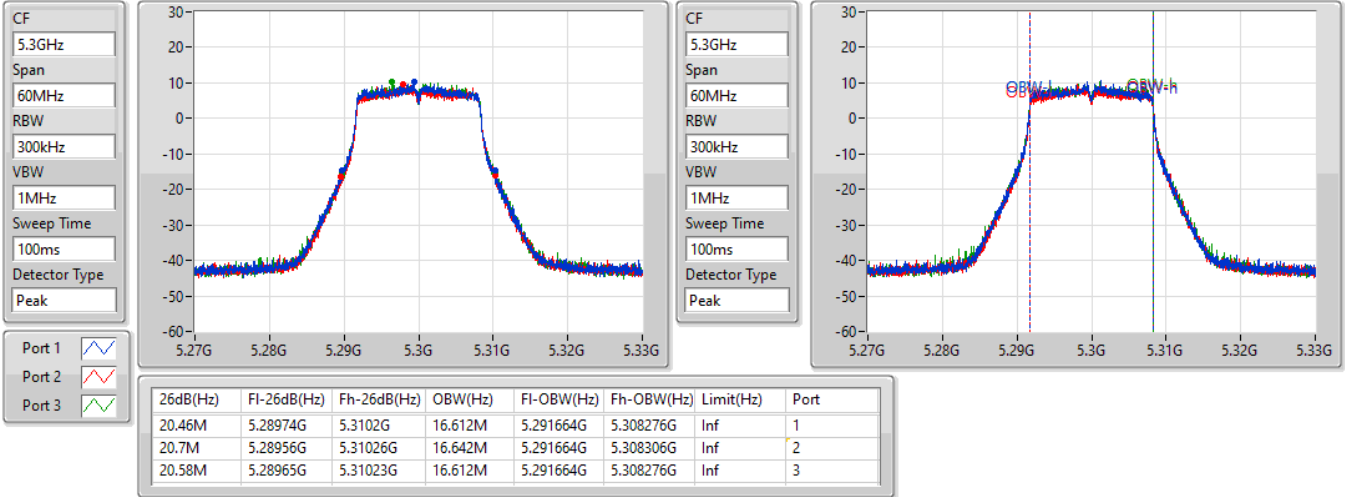

802.11a_Nss1,(6Mbps)_3TX
EBW
5260MHz

08/09/2022

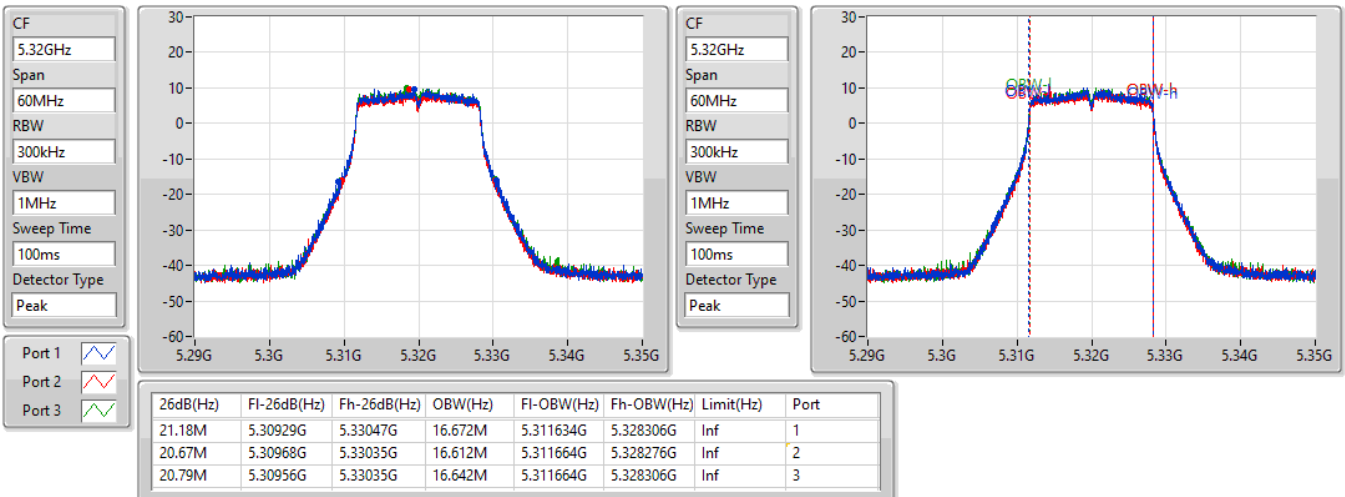


802.11a_Nss1,(6Mbps)_3TX
EBW
5300MHz

08/09/2022

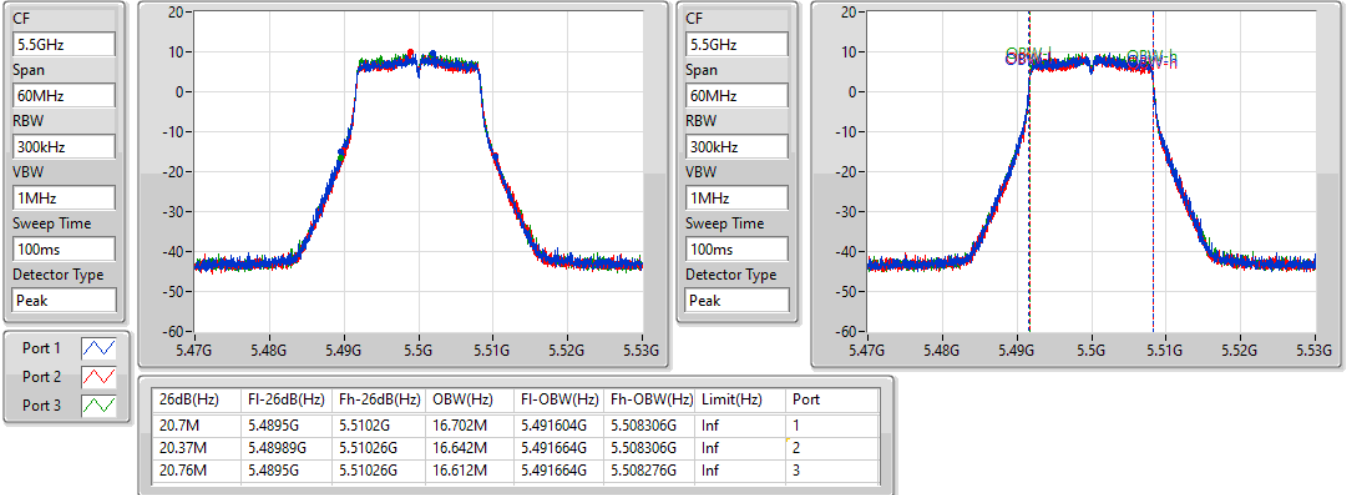

802.11a_Nss1,(6Mbps)_3TX
EBW
5320MHz

08/09/2022

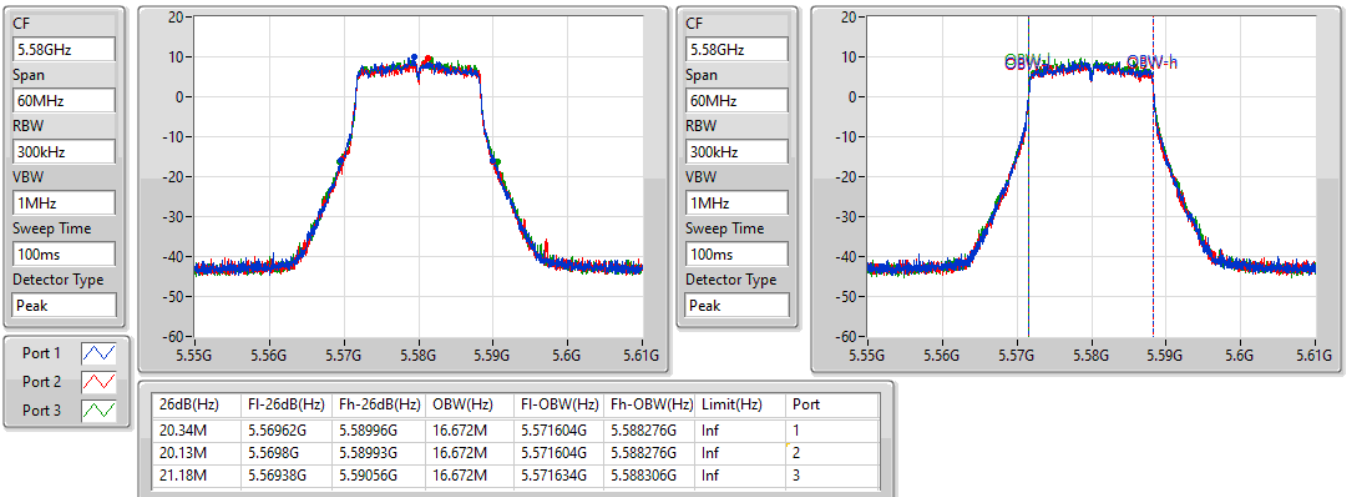


802.11a_Nss1,(6Mbps)_3TX
EBW
5500MHz

08/09/2022

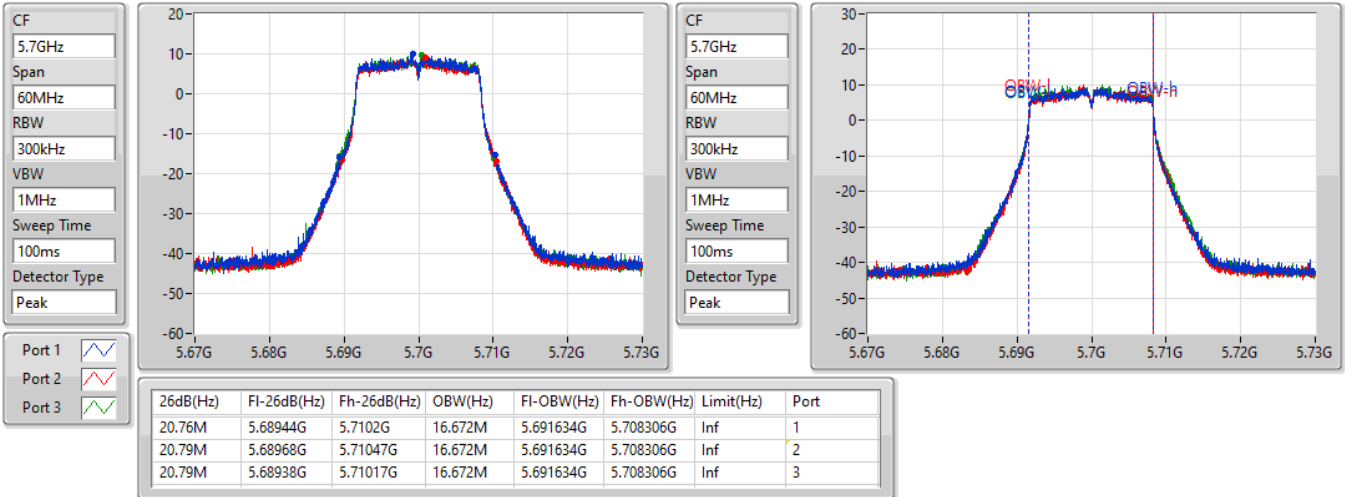

802.11a_Nss1,(6Mbps)_3TX
EBW
5580MHz

08/09/2022

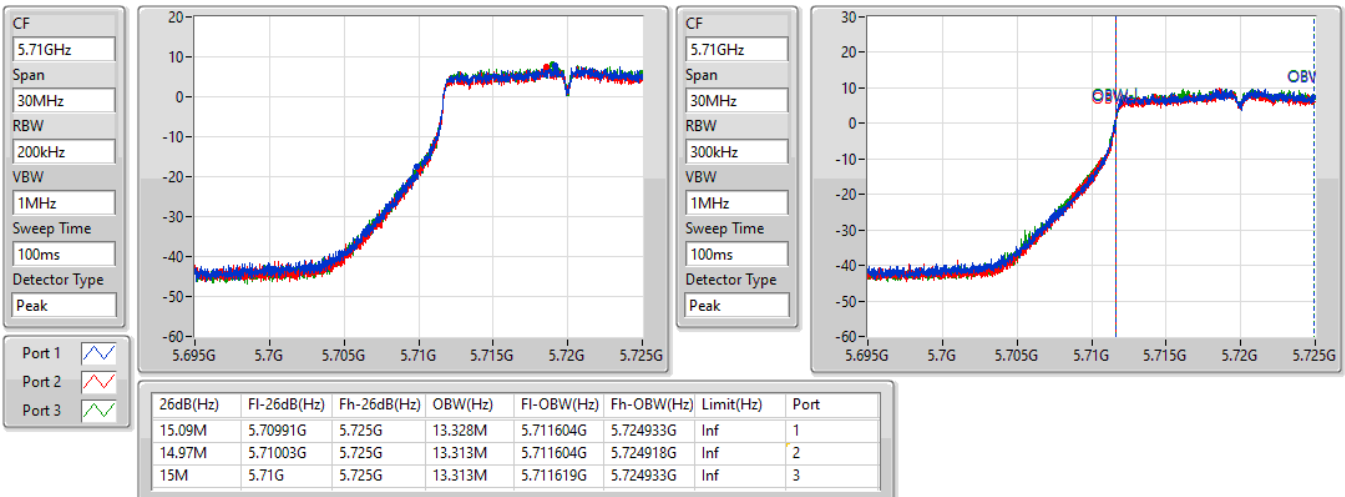


802.11a_Nss1,(6Mbps)_3TX
EBW
5700MHz

08/09/2022


802.11a_Nss1,(6Mbps)_3TX
EBW
5720MHz Straddle 5.47-5.725GHz

08/09/2022

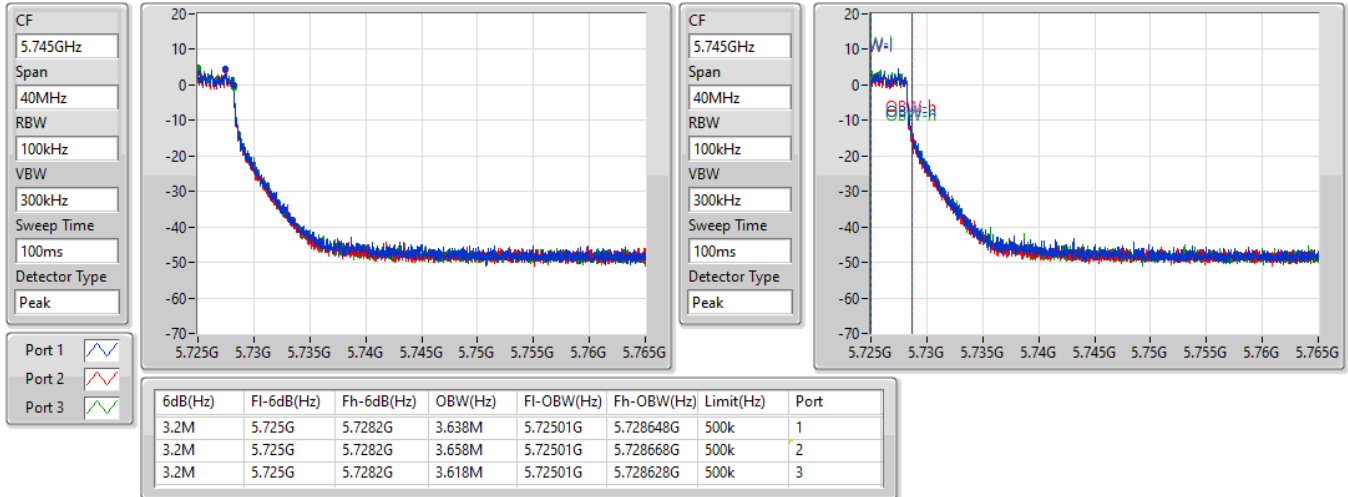


802.11a_Nss1,(6Mbps)_3TX

EBW

5720MHz Straddle 5.725-5.85GHz

08/09/2022

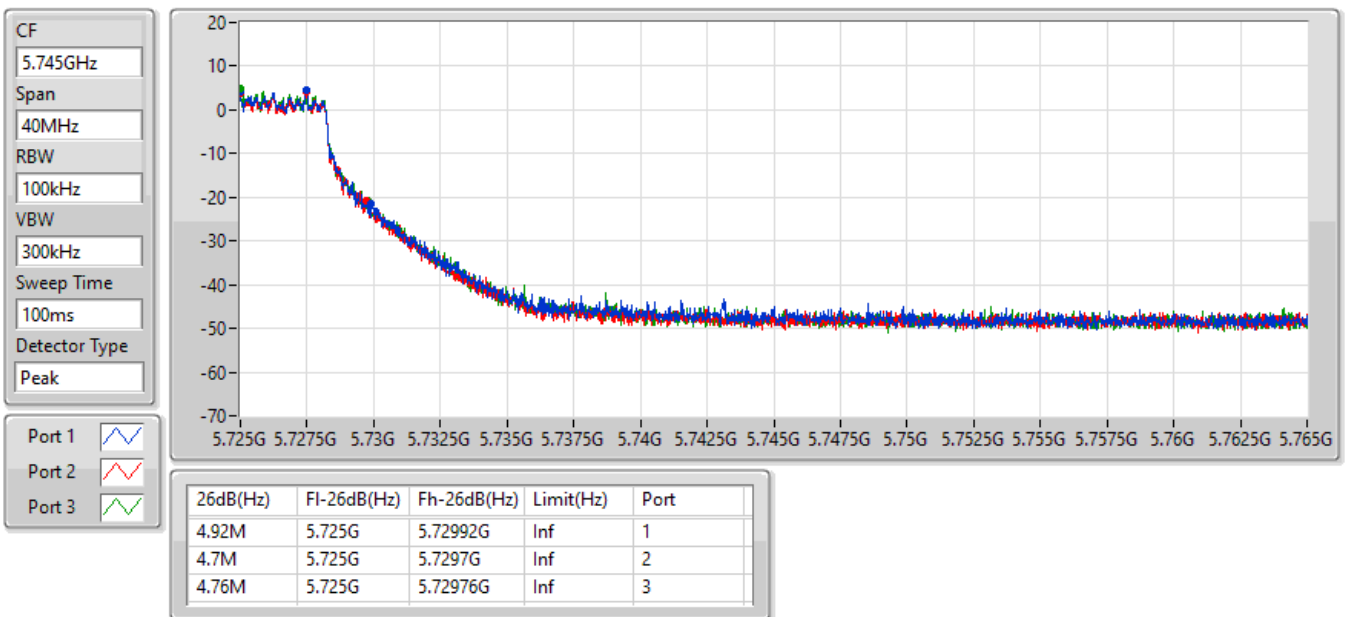


802.11a_Nss1,(6Mbps)_3TX

EBW

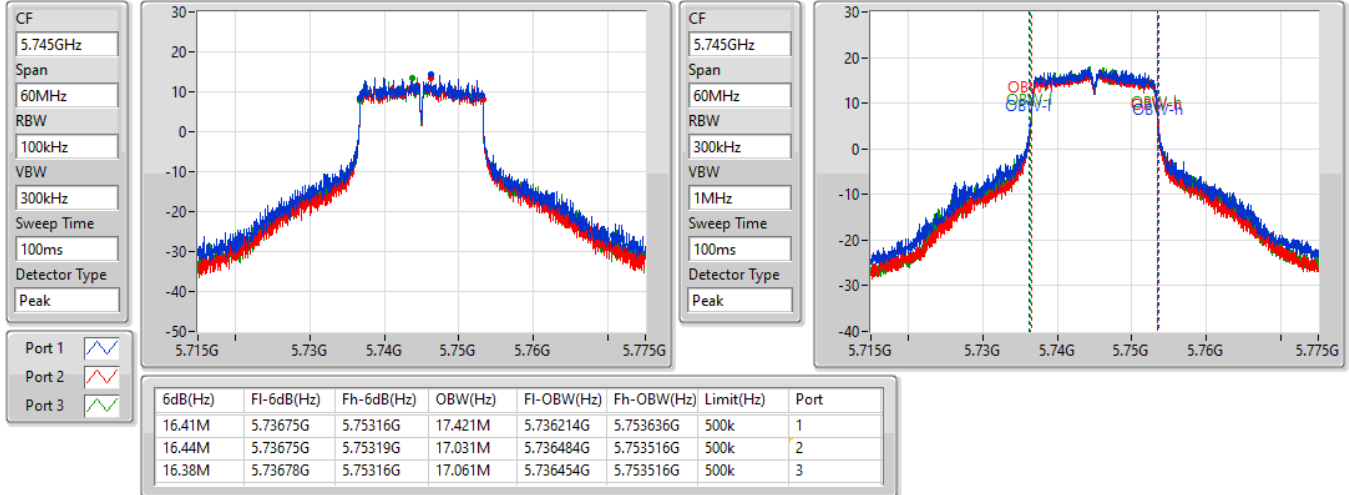
5720MHz Straddle 5.725-5.85GHz

08/09/2022

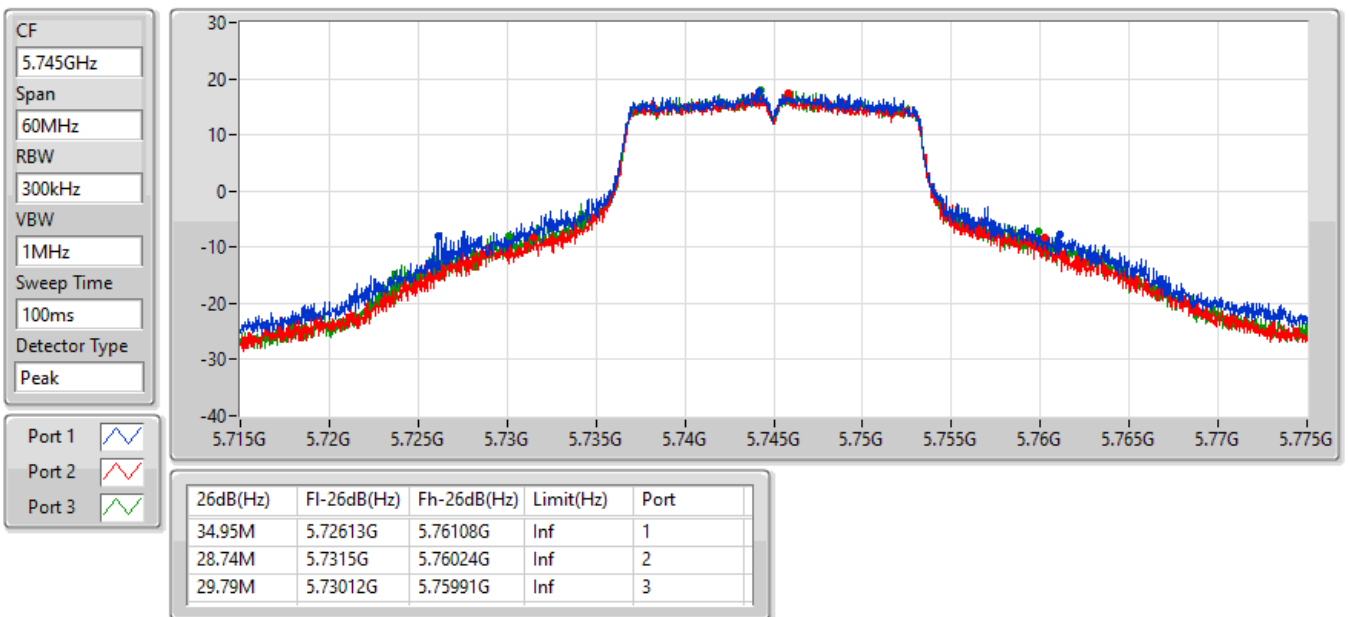


802.11a_Nss1,(6Mbps)_3TX
EBW
5745MHz

08/09/2022

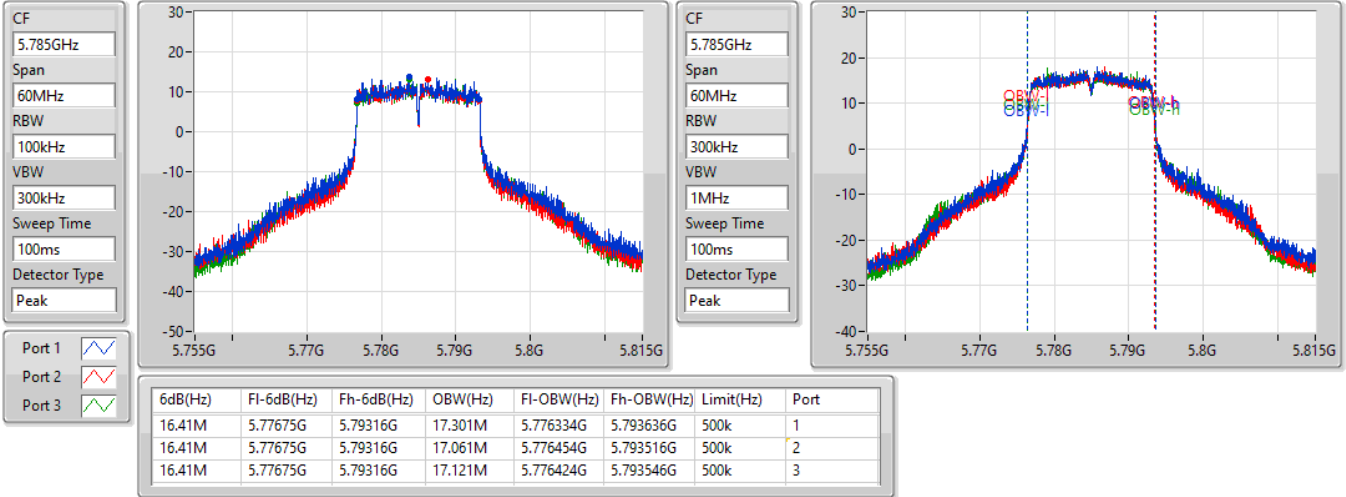

802.11a_Nss1,(6Mbps)_3TX
EBW
5745MHz

08/09/2022

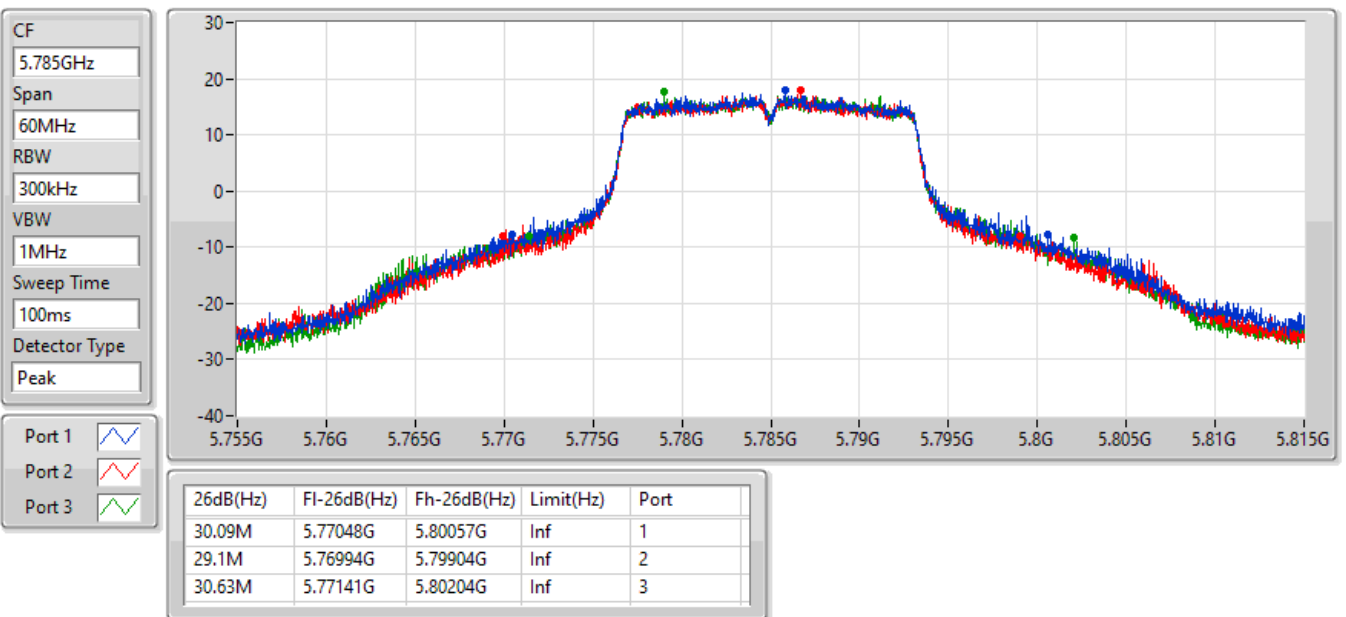


802.11a_Nss1,(6Mbps)_3TX
EBW
5785MHz

08/09/2022

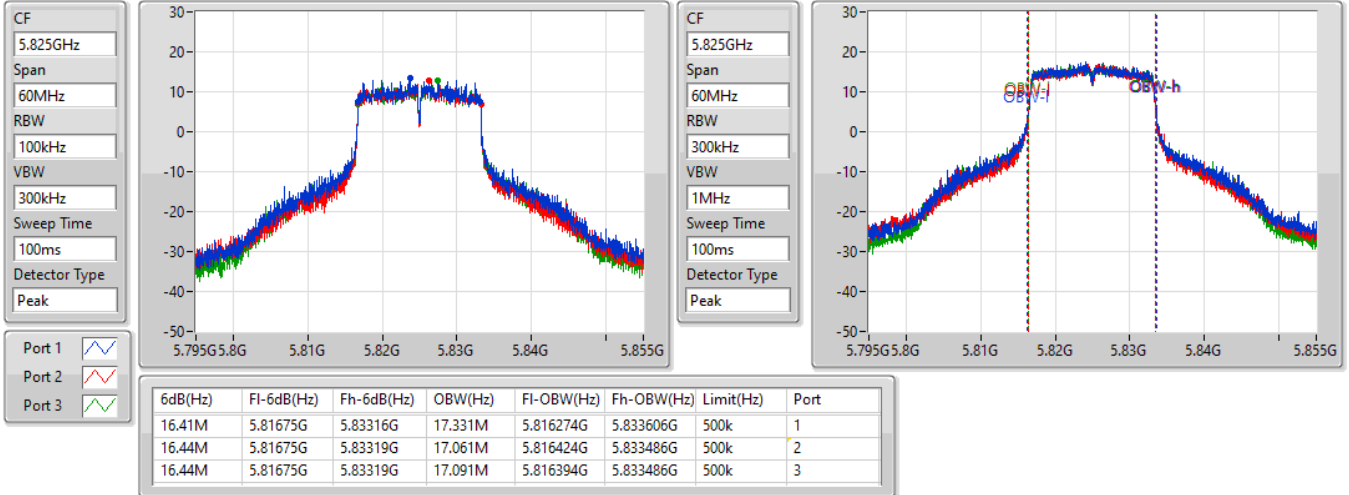

802.11a_Nss1,(6Mbps)_3TX
EBW
5785MHz

08/09/2022

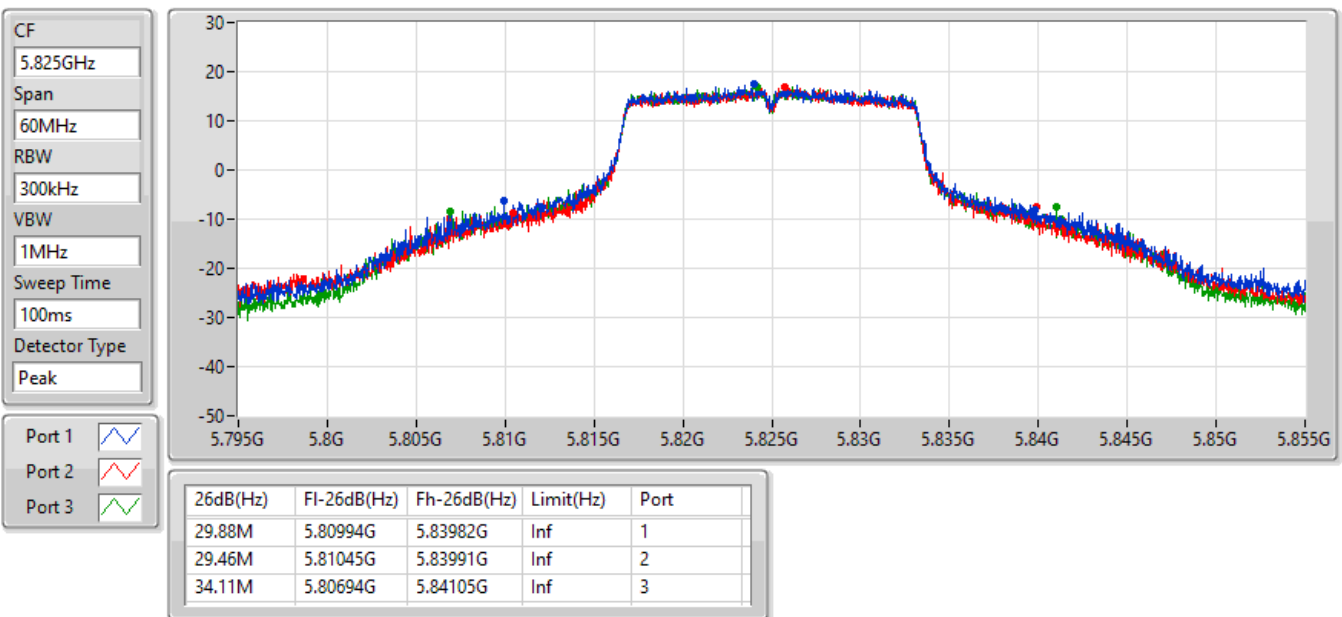


802.11a_Nss1,(6Mbps)_3TX
EBW
5825MHz

08/09/2022


802.11a_Nss1,(6Mbps)_3TX
EBW
5825MHz

08/09/2022



Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ax HEW20_Nss2,(MCS0)_3TX	34.38M	19.25M	19M2D1D	25.32M	18.951M
802.11ax HEW40_Nss2,(MCS0)_3TX	55.86M	37.901M	37M9D1D	42.12M	37.661M
802.11ax HEW80_Nss2,(MCS0)_3TX	90.6M	77.121M	77M1D1D	80.76M	76.882M
802.11ax HEW160_Nss2,(MCS0)_3TX	82.48M	78.201M	78M2D1D	81.2M	78.121M
5.25-5.35GHz	-	-	-	-	-
802.11ax HEW20_Nss2,(MCS0)_3TX	23.58M	18.981M	19M0D1D	21.21M	18.831M
802.11ax HEW40_Nss2,(MCS0)_3TX	41.88M	37.661M	37M7D1D	39.42M	37.301M
802.11ax HEW80_Nss2,(MCS0)_3TX	86.76M	77.001M	77M0D1D	81.96M	76.882M
802.11ax HEW160_Nss2,(MCS0)_3TX	81.92M	78.201M	78M2D1D	80.96M	78.041M
5.47-5.725GHz	-	-	-	-	-
802.11ax HEW20_Nss2,(MCS0)_3TX	22.65M	18.951M	19M0D1D	15.495M	14.423M
802.11ax HEW40_Nss2,(MCS0)_3TX	43.14M	37.601M	37M6D1D	34.72M	33.408M
802.11ax HEW80_Nss2,(MCS0)_3TX	81.24M	76.762M	76M8D1D	75M	72.489M
802.11ax HEW160_Nss2,(MCS0)_3TX	162.48M	155.442M	155MD1D	162M	155.202M
5.725-5.85GHz	-	-	-	-	-
802.11ax HEW20_Nss2,(MCS0)_3TX	18.78M	19.76M	19M8D1D	4.44M	4.558M
802.11ax HEW40_Nss2,(MCS0)_3TX	33.72M	38.201M	38M2D1D	4.02M	4.098M
802.11ax HEW80_Nss2,(MCS0)_3TX	66.24M	77.601M	77M6D1D	3.9M	4.138M

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)
802.11ax HEW20_Nss2,(MCS0)_3TX	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	25.32M	19.04M	26.7M	19.01M	27.66M	19.04M
5200MHz	Pass	Inf	32.4M	19.25M	31.89M	19.16M	34.38M	19.25M
5240MHz	Pass	Inf	30.87M	18.981M	28.35M	18.951M	31.86M	19.01M
5260MHz	Pass	Inf	21.21M	18.891M	21.54M	18.891M	21.9M	18.831M
5300MHz	Pass	Inf	22.8M	18.951M	22.41M	18.951M	23.04M	18.951M
5320MHz	Pass	Inf	23.58M	18.951M	22.53M	18.981M	23.07M	18.921M
5500MHz	Pass	Inf	22.65M	18.951M	22.32M	18.921M	22.02M	18.951M
5580MHz	Pass	Inf	21.63M	18.861M	21.6M	18.891M	21.21M	18.861M
5700MHz	Pass	Inf	22.32M	18.921M	21.84M	18.921M	22.32M	18.951M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.495M	14.423M	15.525M	14.438M	15.735M	14.438M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	4.46M	4.578M	4.44M	4.558M	4.46M	4.578M
5745MHz	Pass	500k	18.54M	19.28M	16.71M	19.1M	18.24M	19.22M
5785MHz	Pass	500k	18.78M	19.4M	17.73M	19.19M	18.66M	19.31M
5825MHz	Pass	500k	18.24M	19.76M	18.24M	19.28M	15.72M	19.37M
802.11ax HEW40_Nss2,(MCS0)_3TX	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	45.72M	37.661M	42.12M	37.721M	43.08M	37.661M
5230MHz	Pass	Inf	52.62M	37.901M	44.64M	37.901M	55.86M	37.901M
5270MHz	Pass	Inf	39.54M	37.421M	39.42M	37.301M	39.48M	37.361M
5310MHz	Pass	Inf	40.2M	37.661M	41.82M	37.541M	41.88M	37.601M
5510MHz	Pass	Inf	39.78M	37.541M	39.78M	37.481M	43.14M	37.541M
5550MHz	Pass	Inf	39.36M	37.361M	39.42M	37.301M	39.3M	37.241M
5670MHz	Pass	Inf	39.6M	37.601M	40.14M	37.541M	40.62M	37.601M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	34.825M	33.443M	34.72M	33.408M	34.825M	33.408M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	4.06M	4.118M	4.02M	4.098M	4.04M	4.118M
5755MHz	Pass	500k	29.94M	38.141M	28.92M	37.841M	27.72M	37.961M
5795MHz	Pass	500k	31.32M	38.201M	28.38M	38.081M	33.72M	38.201M
802.11ax HEW80_Nss2,(MCS0)_3TX	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	80.88M	77.121M	80.76M	76.882M	90.6M	77.001M
5290MHz	Pass	Inf	86.76M	77.001M	84.12M	76.882M	81.96M	77.001M
5530MHz	Pass	Inf	80.28M	76.522M	80.28M	76.762M	81.24M	76.762M
5610MHz	Pass	Inf	80.04M	76.522M	80.16M	76.162M	80.28M	76.402M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	75M	72.564M	75.075M	72.489M	75.15M	72.489M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.9M	4.138M	4M	4.138M	3.94M	4.138M
5775MHz	Pass	500k	61.32M	77.601M	62.52M	77.241M	66.24M	77.241M
802.11ax HEW160_Nss2,(MCS0)_3TX	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	Inf	82.48M	78.201M	81.2M	78.121M	81.2M	78.201M
5250MHz Straddle 5.25-5.35GHz	Pass	Inf	80.96M	78.201M	81.04M	78.041M	81.92M	78.121M
5570MHz	Pass	Inf	162.24M	155.202M	162M	155.442M	162.48M	155.442M

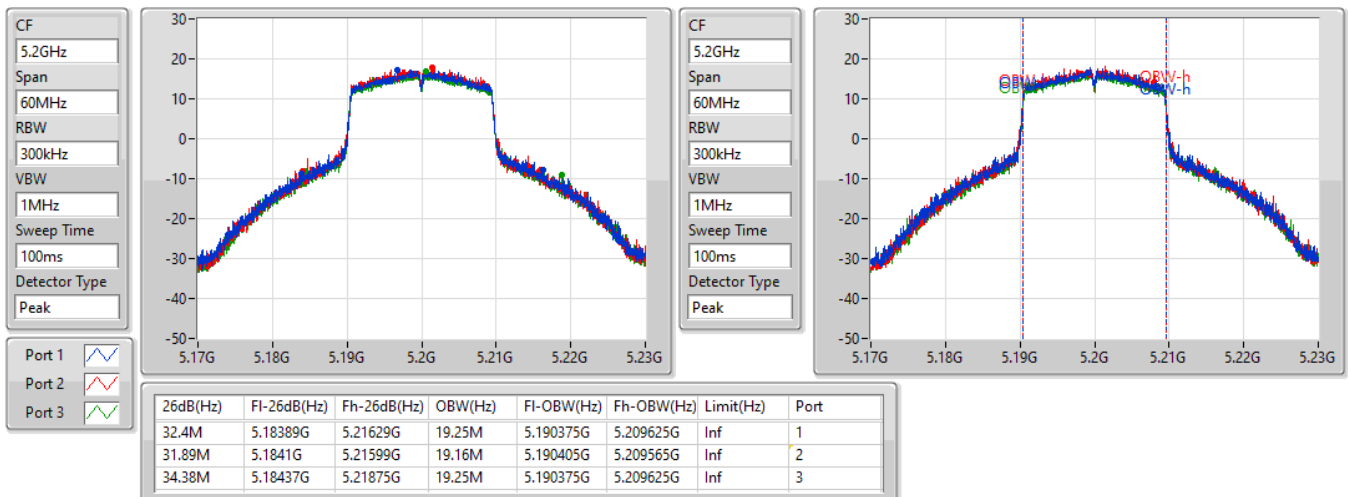
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11ax HEW20_Nss2,(MCS0)_3TX
EBW
5180MHz

08/09/2022

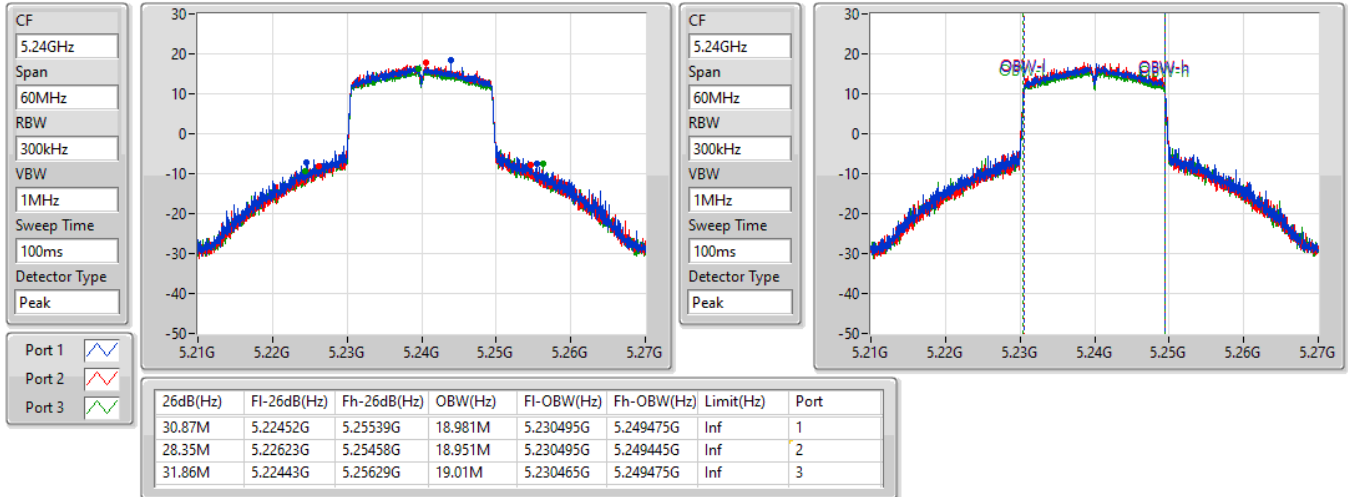

802.11ax HEW20_Nss2,(MCS0)_3TX
EBW
5200MHz

08/09/2022

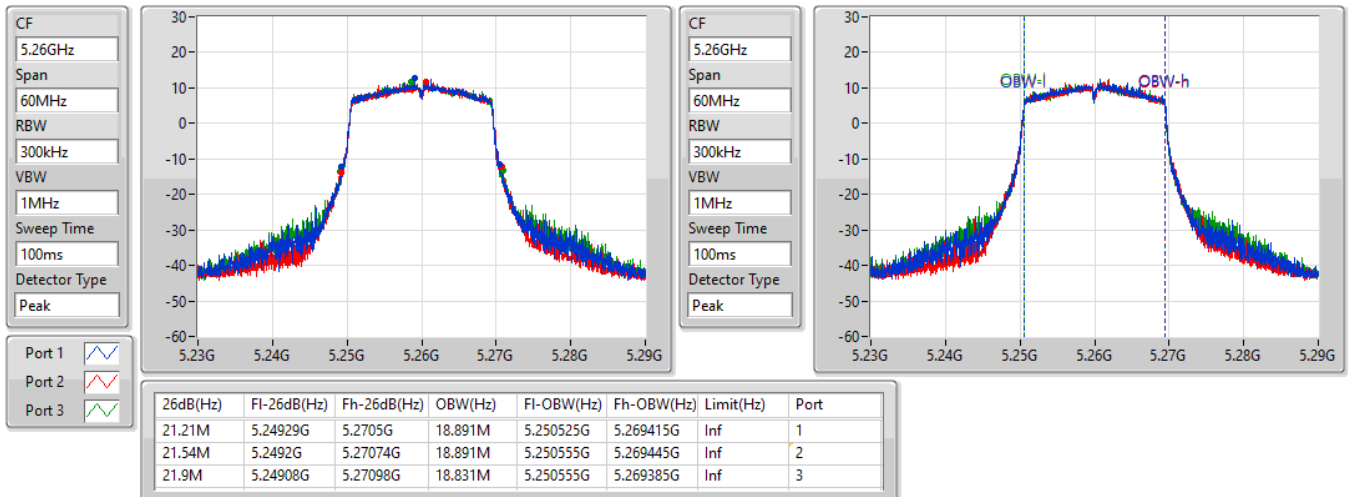


802.11ax HEW20_Nss2,(MCS0)_3TX
EBW
5240MHz

08/09/2022

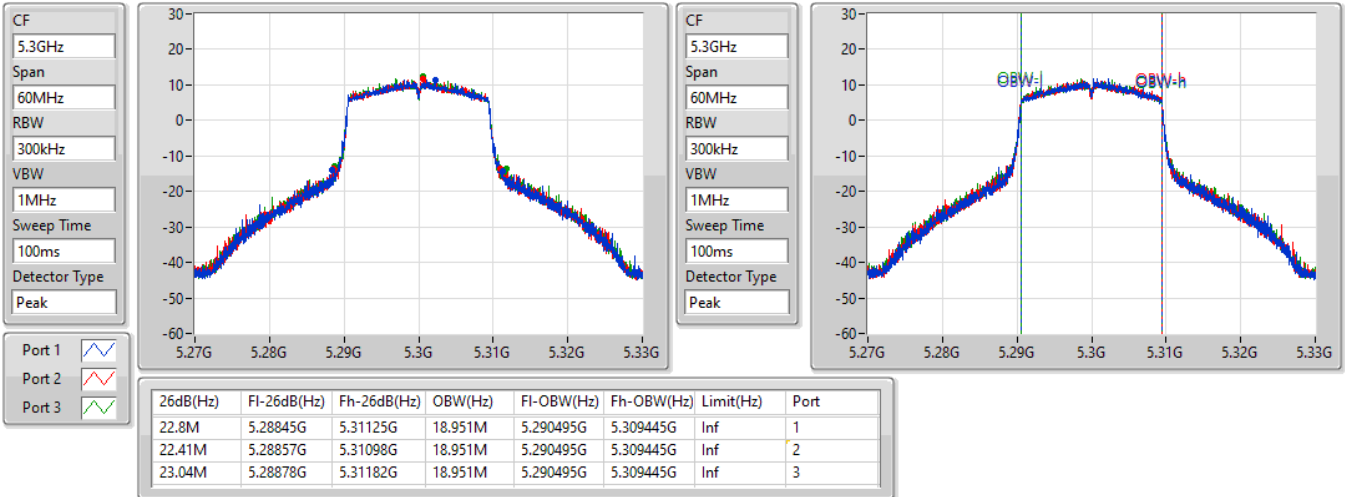

802.11ax HEW20_Nss2,(MCS0)_3TX
EBW
5260MHz

08/09/2022

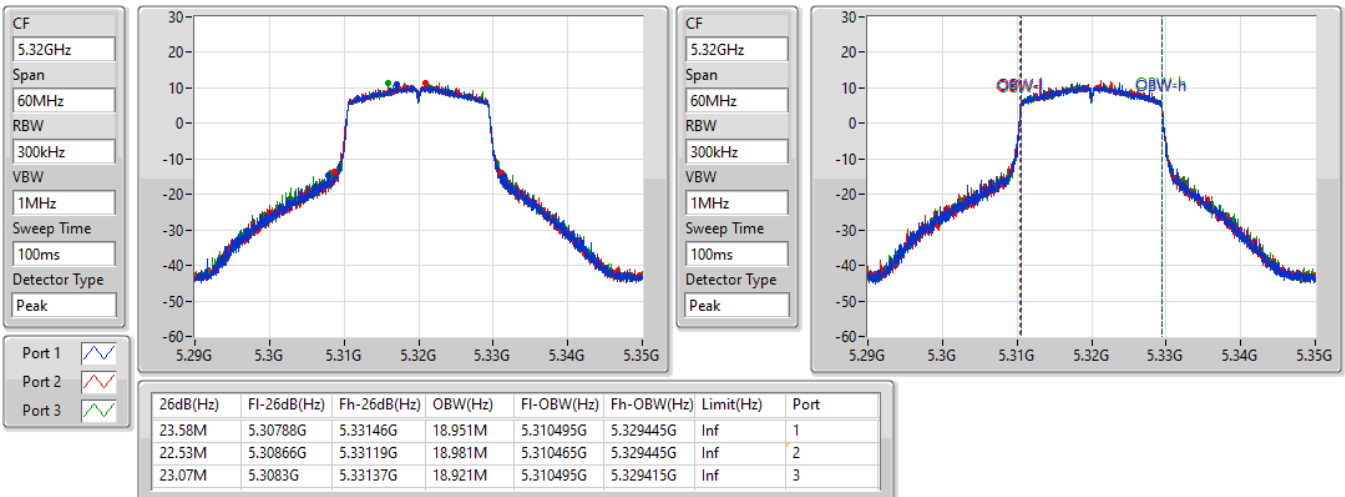


802.11ax HEW20_Nss2,(MCS0)_3TX
EBW
5300MHz

08/09/2022


802.11ax HEW20_Nss2,(MCS0)_3TX
EBW
5320MHz

08/09/2022

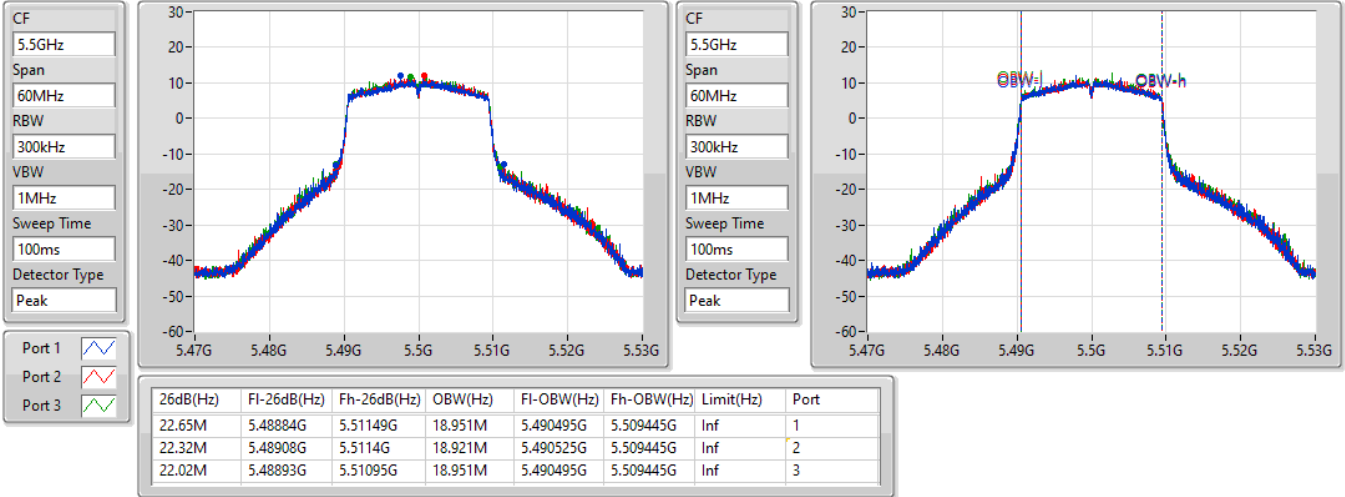


802.11ax HEW20_Nss2,(MCS0)_3TX

EBW

5500MHz

08/09/2022

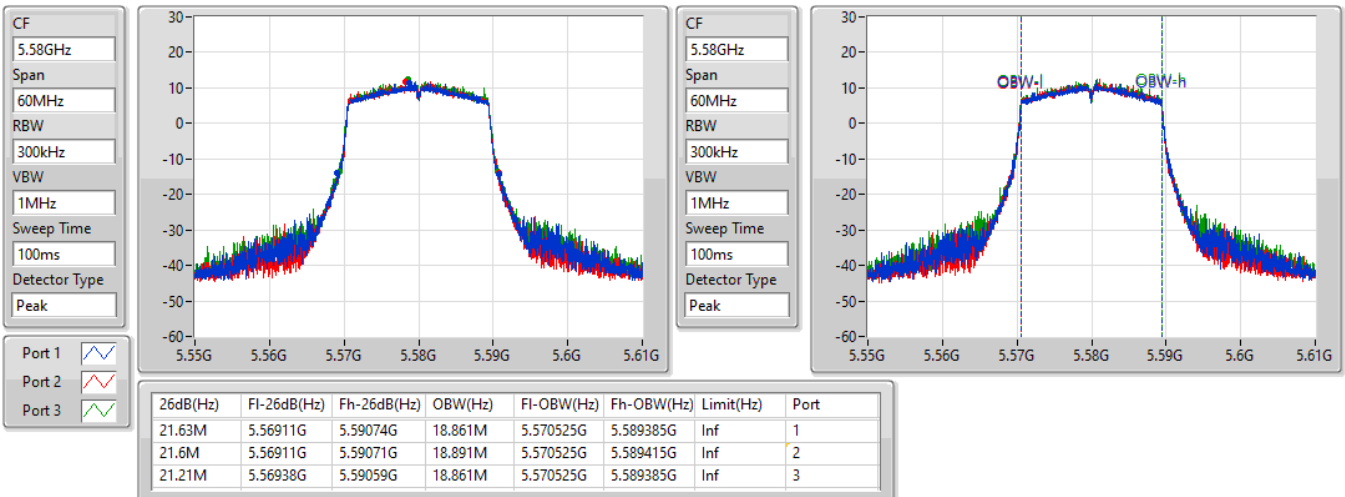


802.11ax HEW20_Nss2,(MCS0)_3TX

EBW

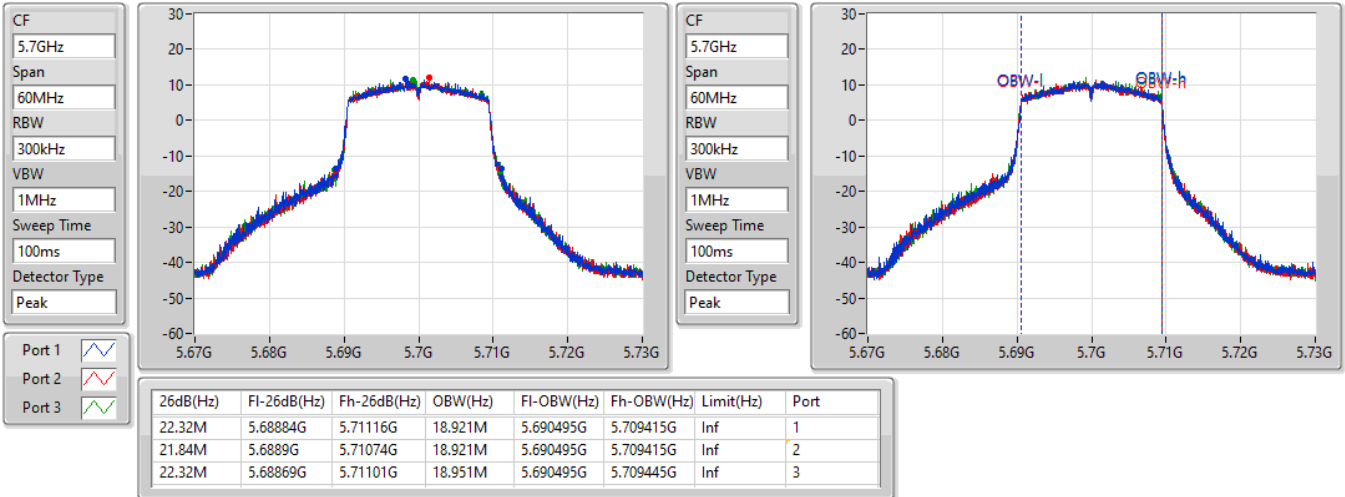
5580MHz

08/09/2022

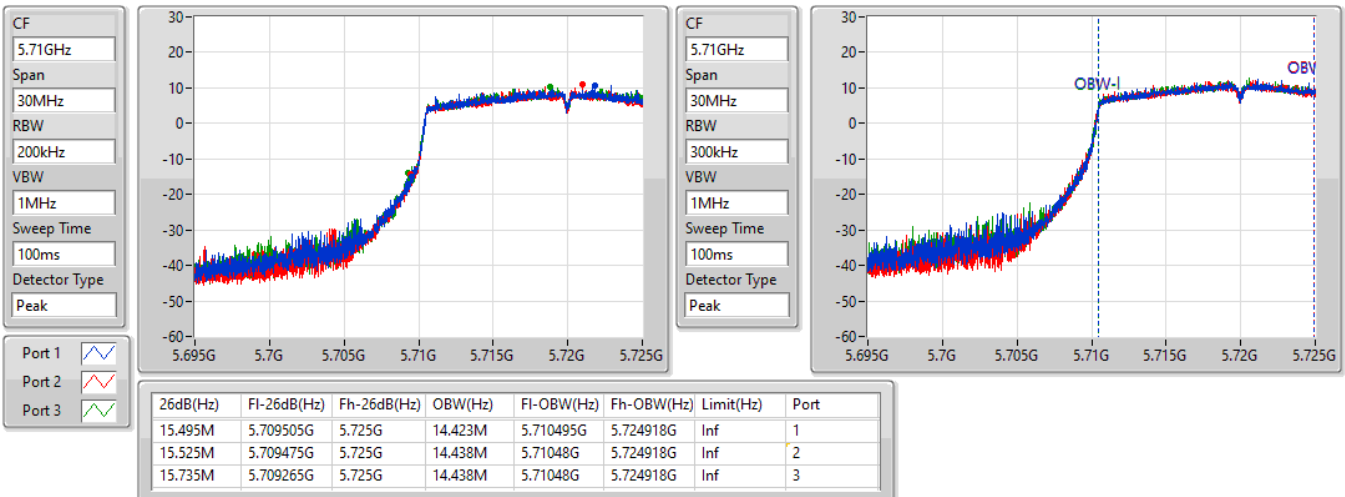


802.11ax HEW20_Nss2,(MCS0)_3TX
EBW
5700MHz

08/09/2022

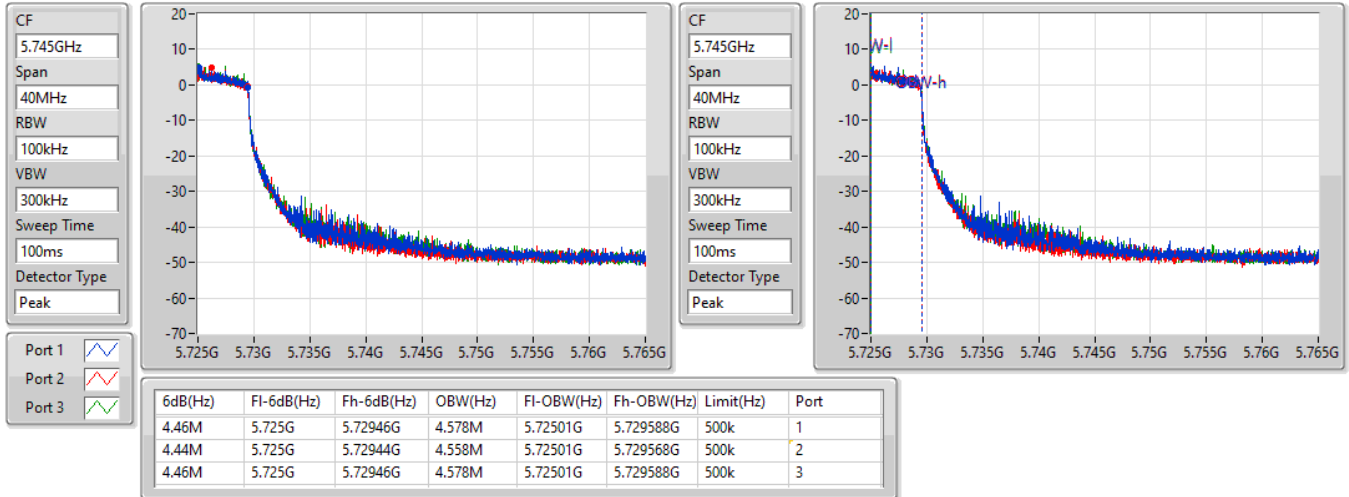

802.11ax HEW20_Nss2,(MCS0)_3TX
EBW
5720MHz Straddle 5.47-5.725GHz

08/09/2022

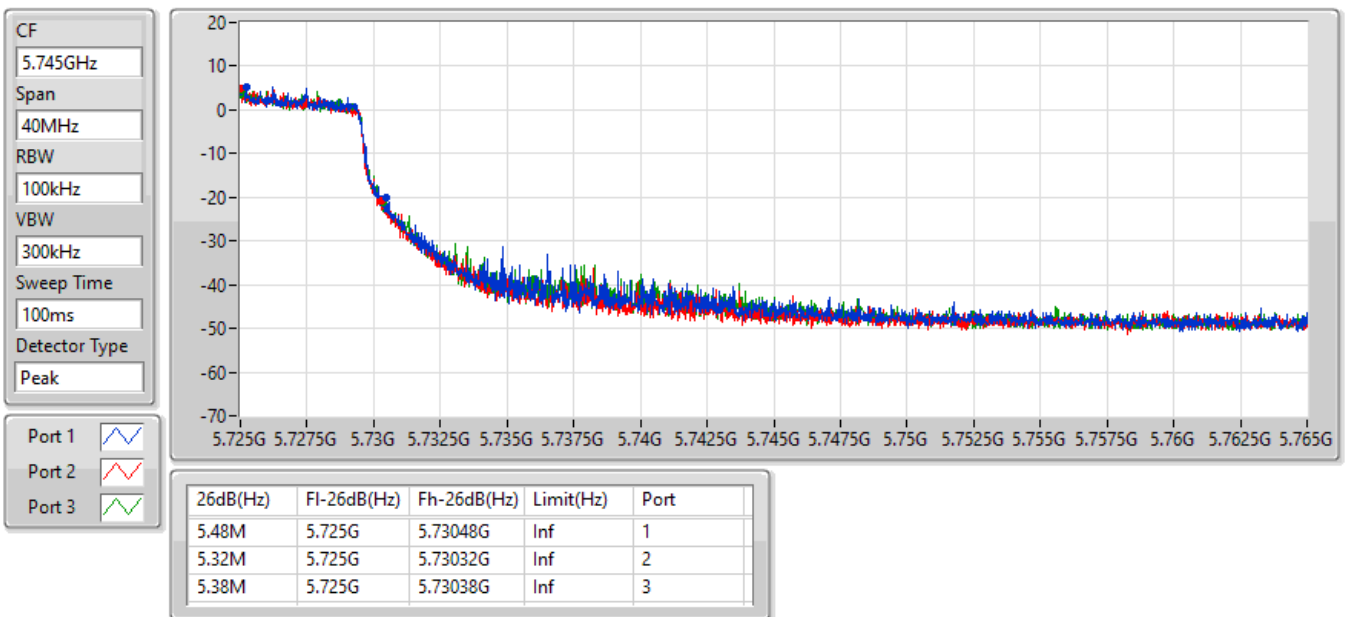


802.11ax HEW20_Nss2,(MCS0)_3TX
EBW
5720MHz Straddle 5.725-5.85GHz

08/09/2022


802.11ax HEW20_Nss2,(MCS0)_3TX
EBW
5720MHz Straddle 5.725-5.85GHz

08/09/2022

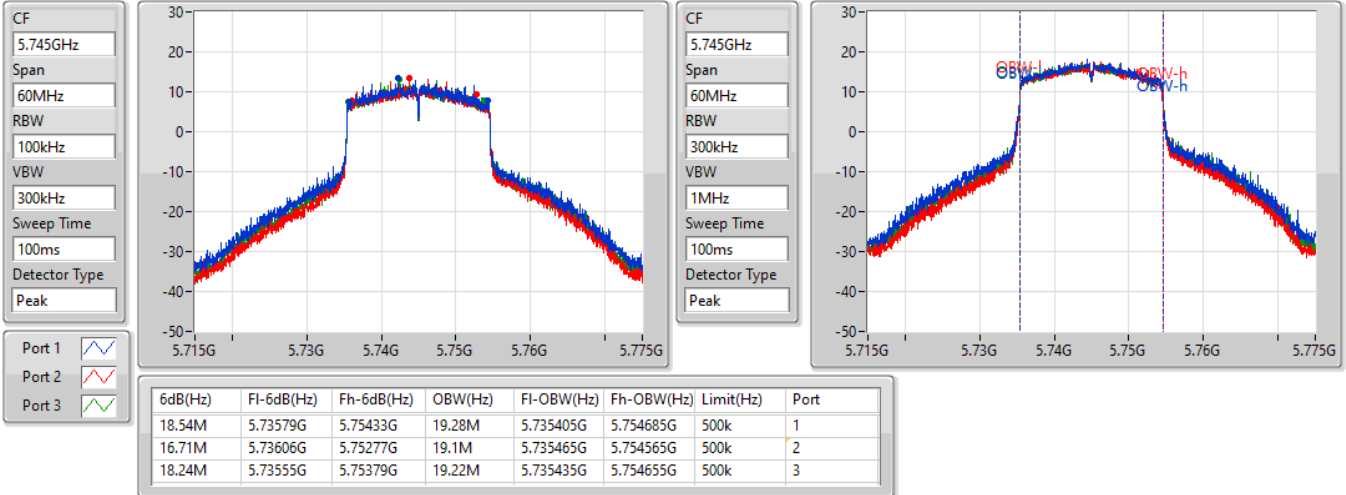


802.11ax HEW20_Nss2,(MCS0)_3TX

EBW

5745MHz

08/09/2022

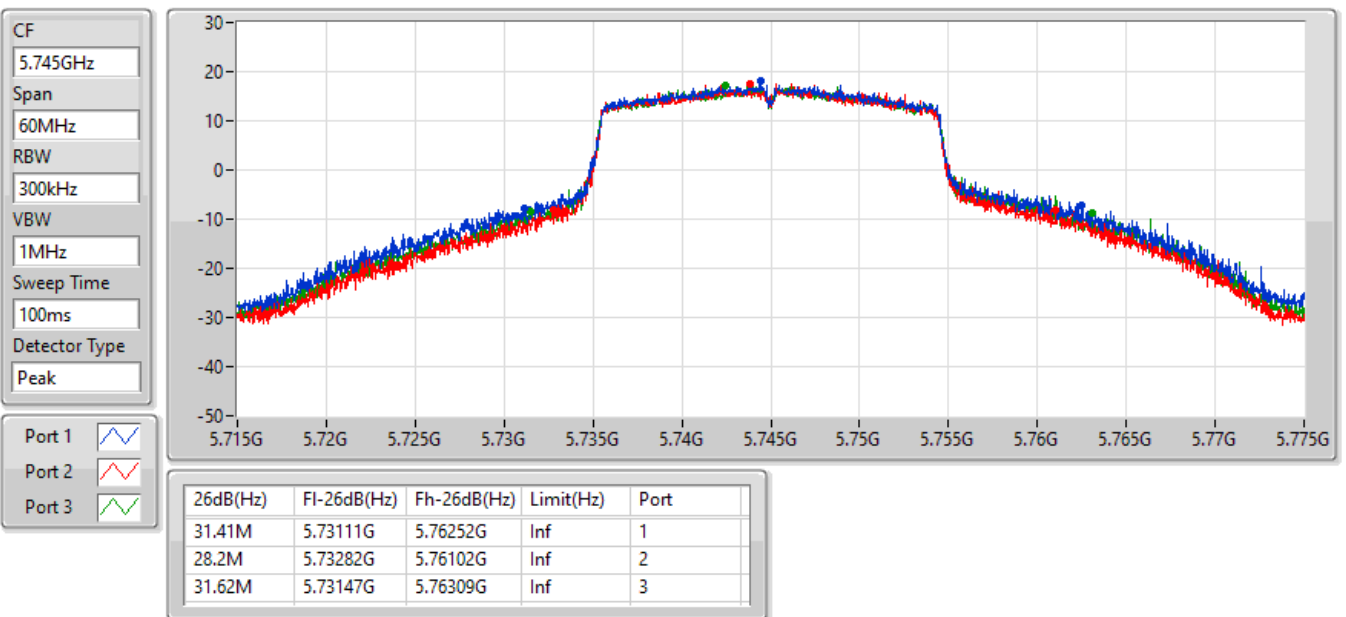


802.11ax HEW20_Nss2,(MCS0)_3TX

EBW

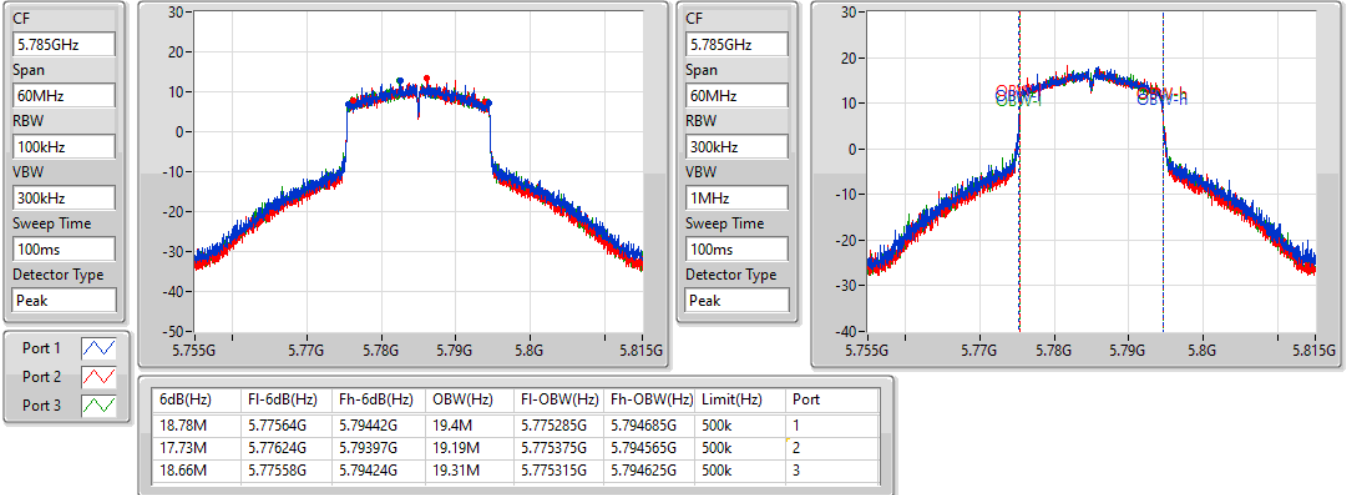
5745MHz

08/09/2022

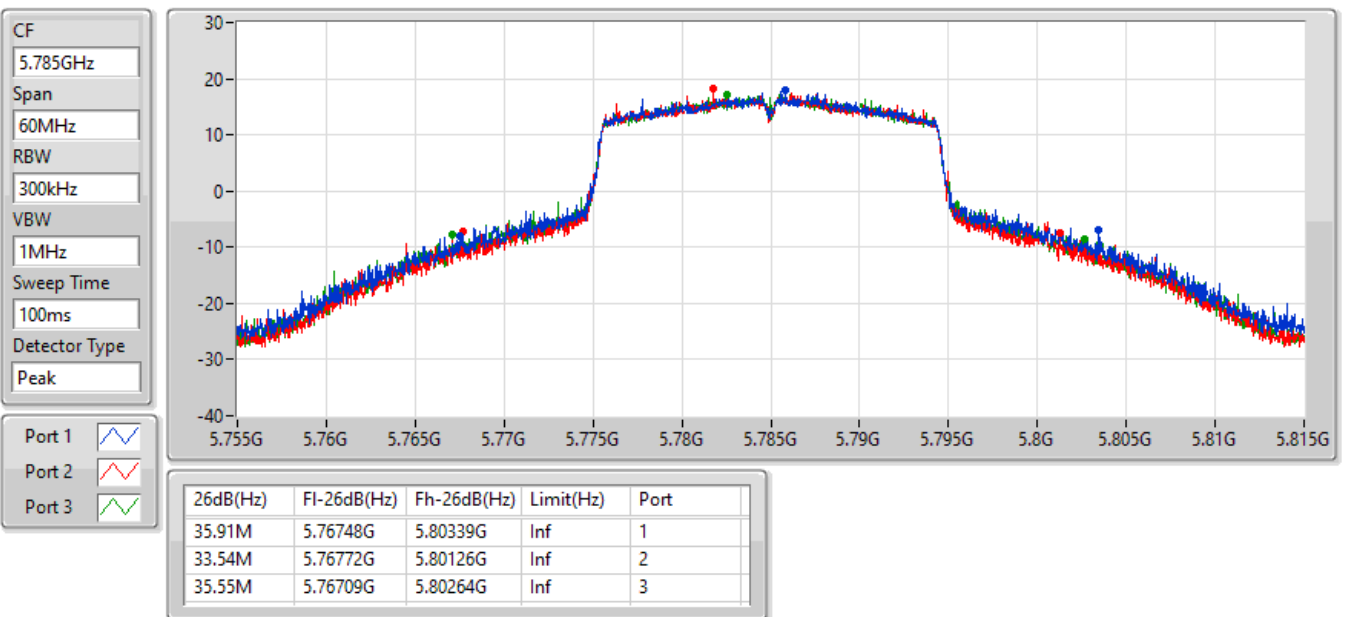


802.11ax HEW20_Nss2,(MCS0)_3TX
EBW
5785MHz

08/09/2022

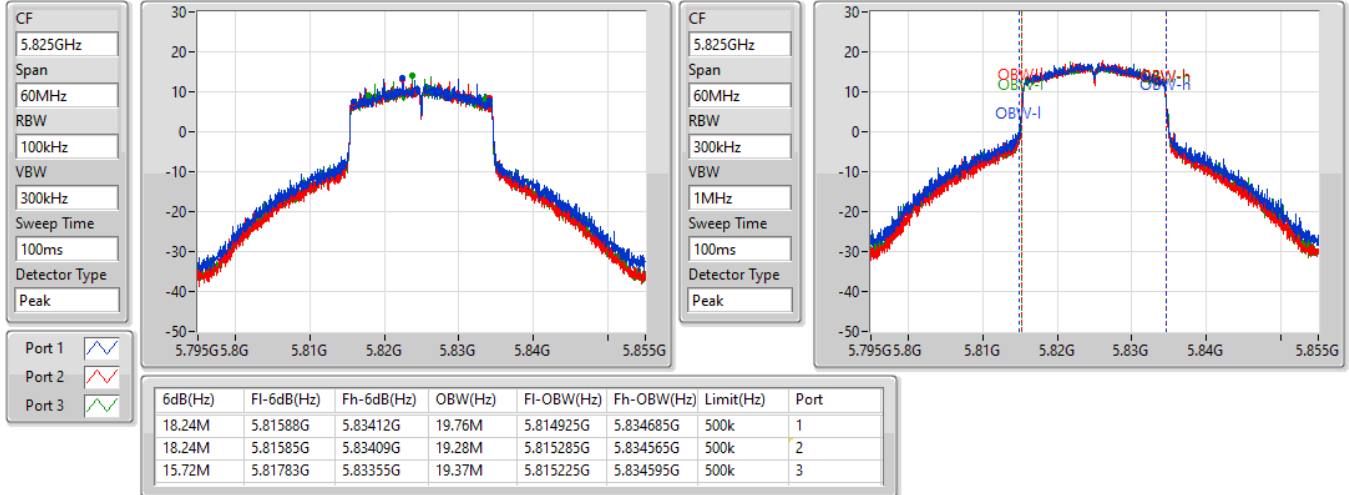

802.11ax HEW20_Nss2,(MCS0)_3TX
EBW
5785MHz

08/09/2022

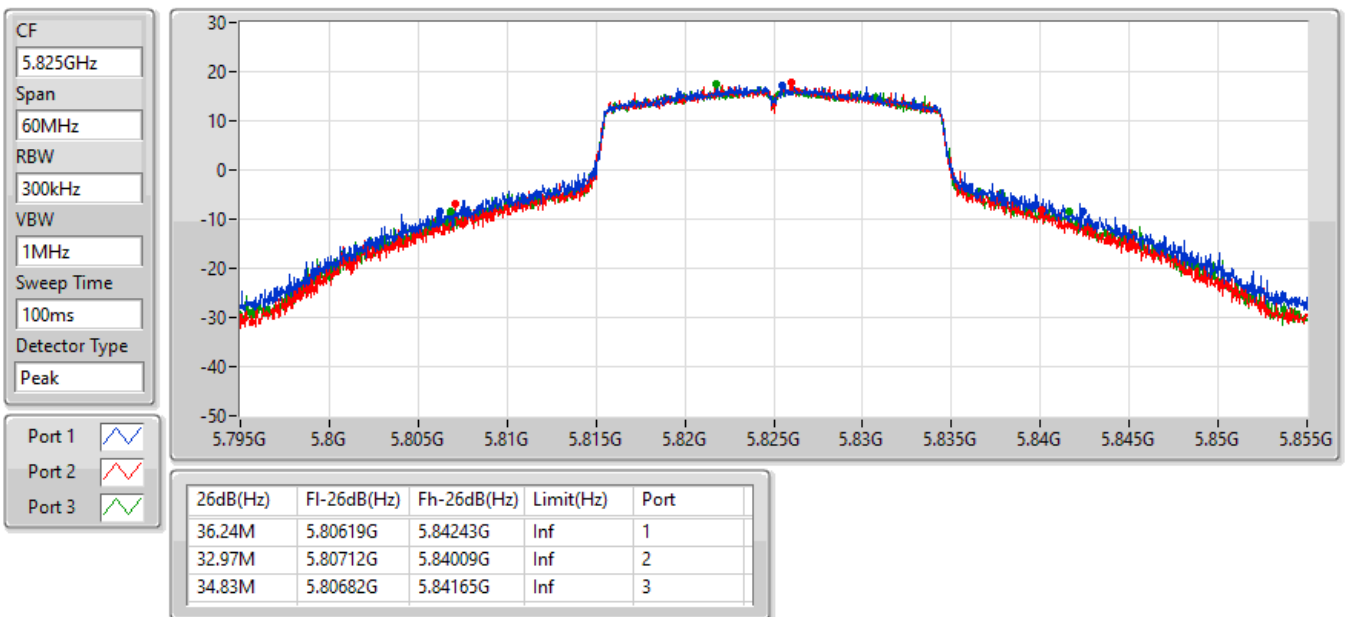


802.11ax HEW20_Nss2,(MCS0)_3TX
EBW
5825MHz

08/09/2022

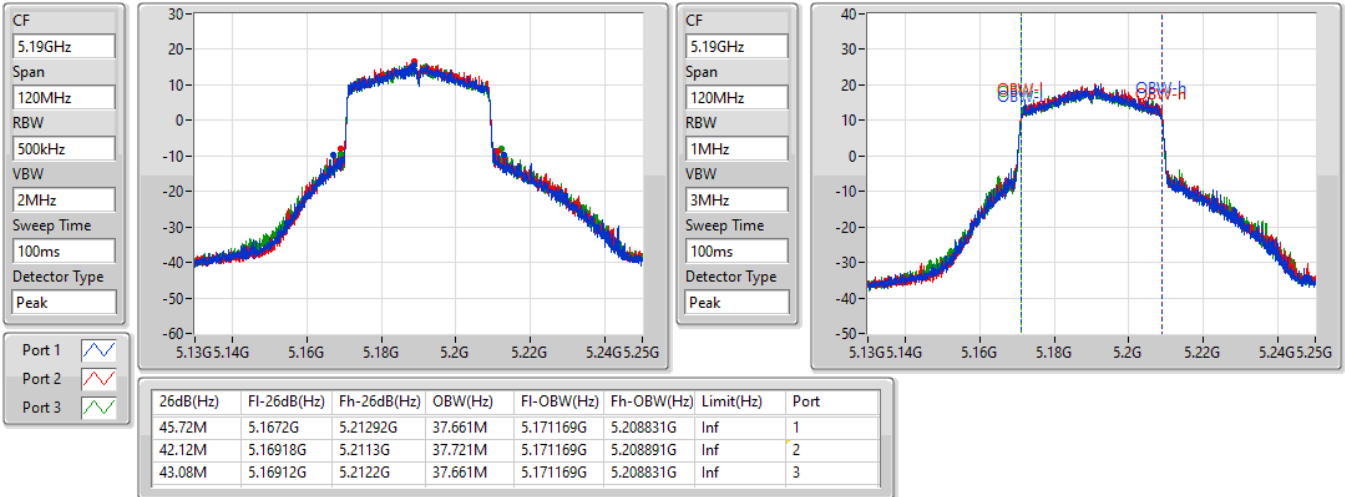

802.11ax HEW20_Nss2,(MCS0)_3TX
EBW
5825MHz

08/09/2022

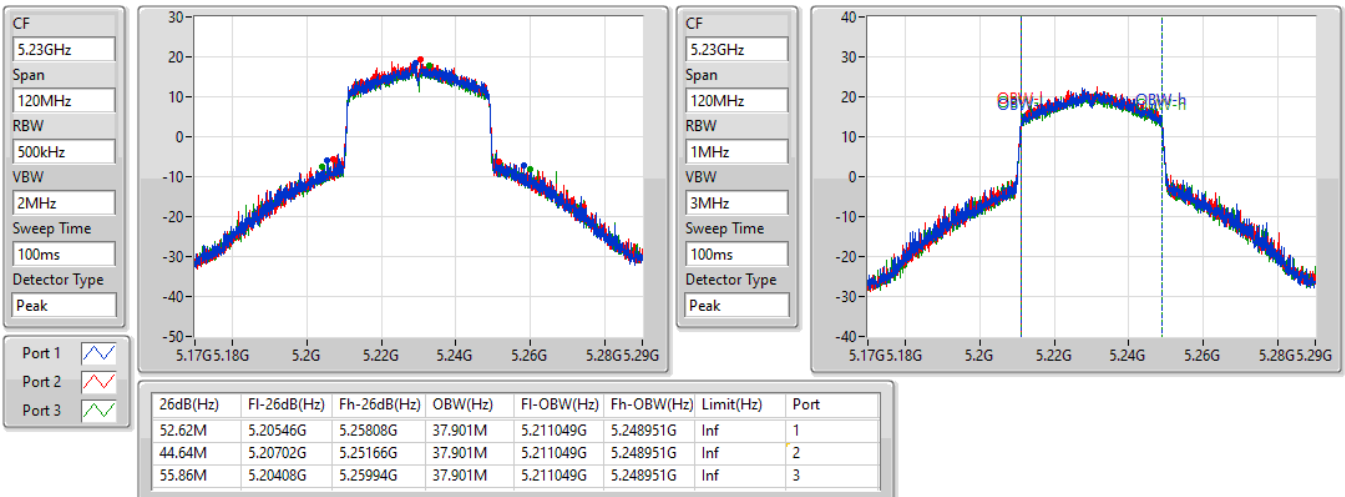


802.11ax HEW40_Nss2,(MCS0)_3TX
EBW
5190MHz

08/09/2022

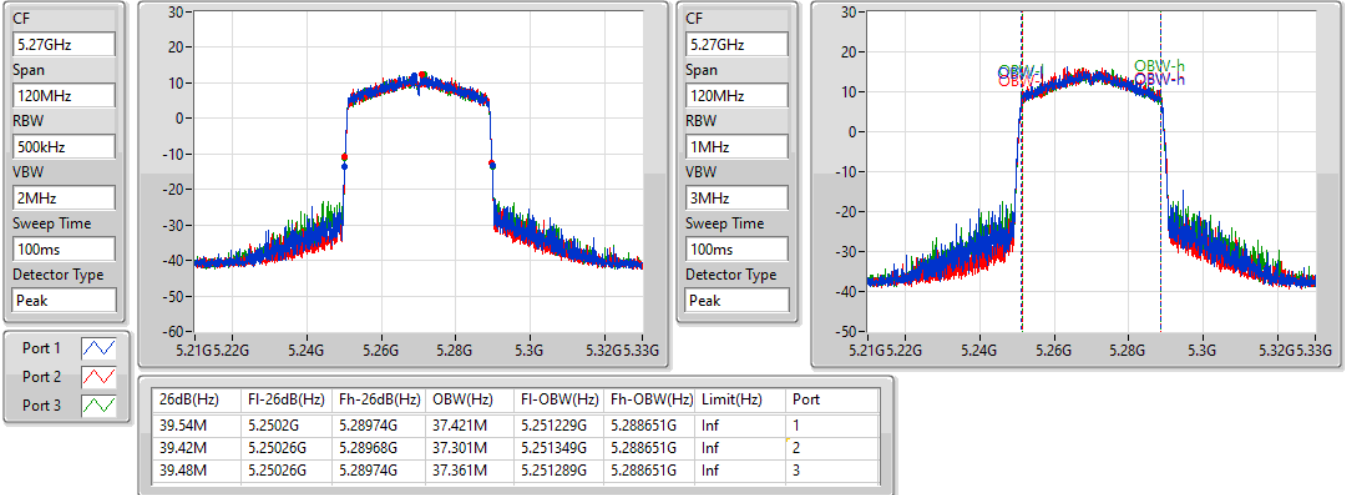

802.11ax HEW40_Nss2,(MCS0)_3TX
EBW
5230MHz

08/09/2022

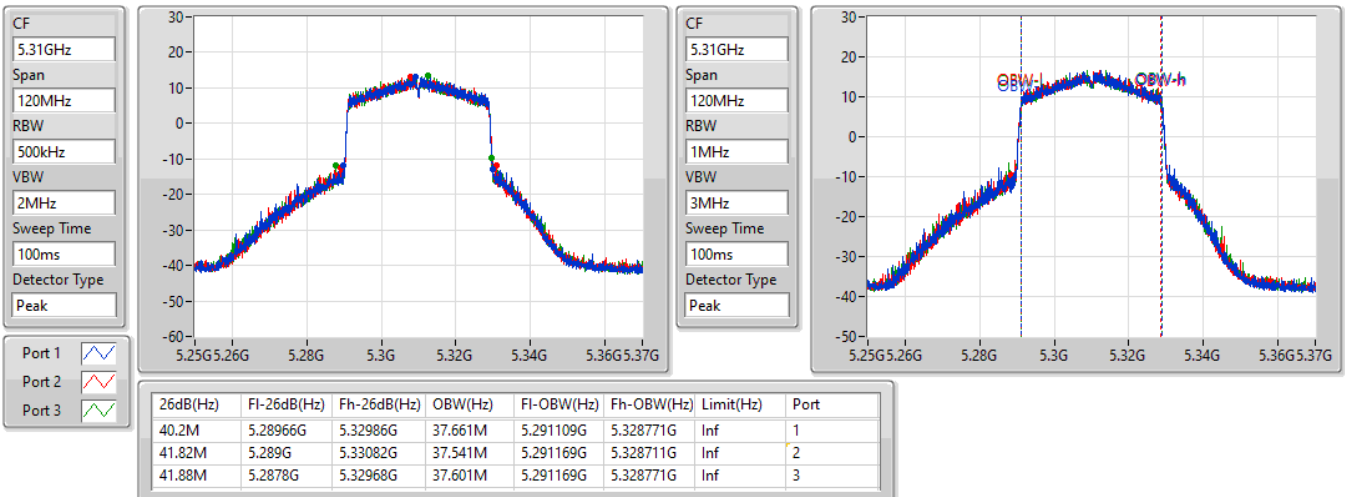


802.11ax HEW40_Nss2,(MCS0)_3TX
EBW
5270MHz

08/09/2022

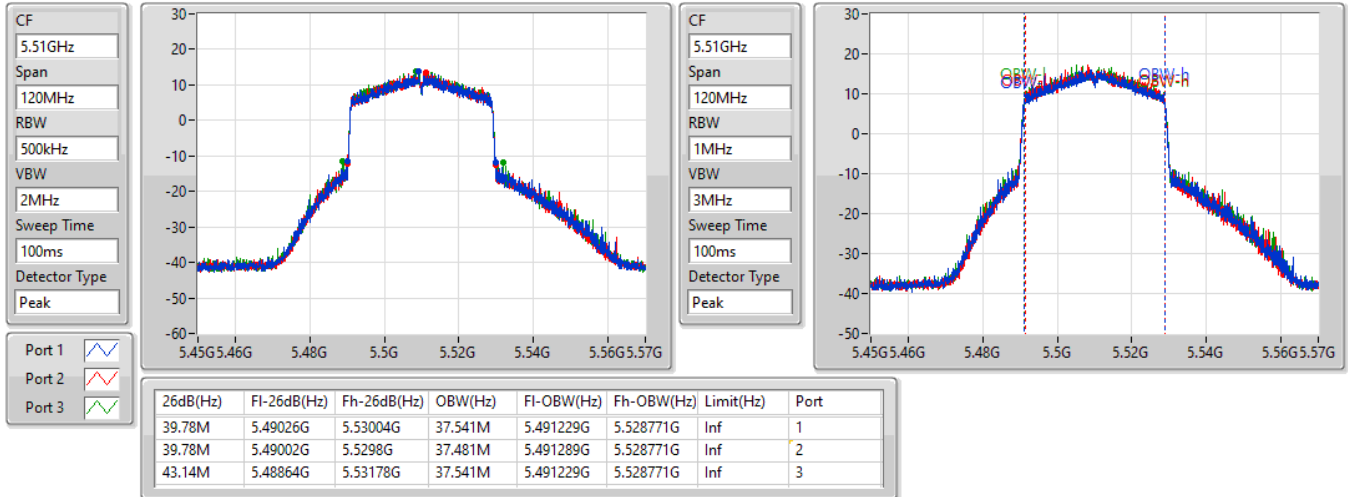

802.11ax HEW40_Nss2,(MCS0)_3TX
EBW
5310MHz

08/09/2022

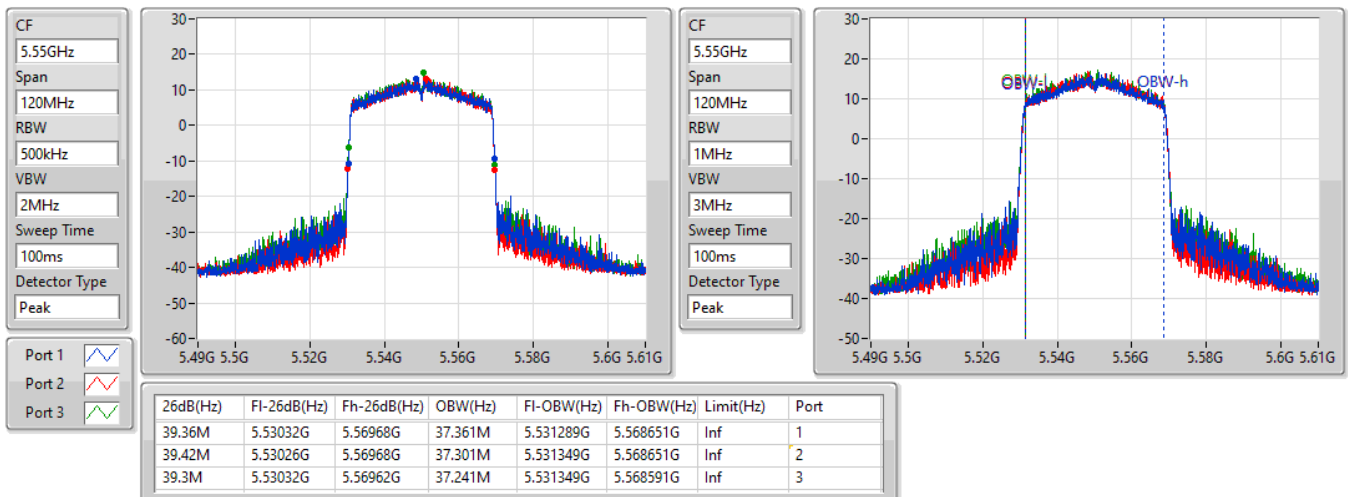


802.11ax HEW40_Nss2,(MCS0)_3TX
EBW
5510MHz

08/09/2022

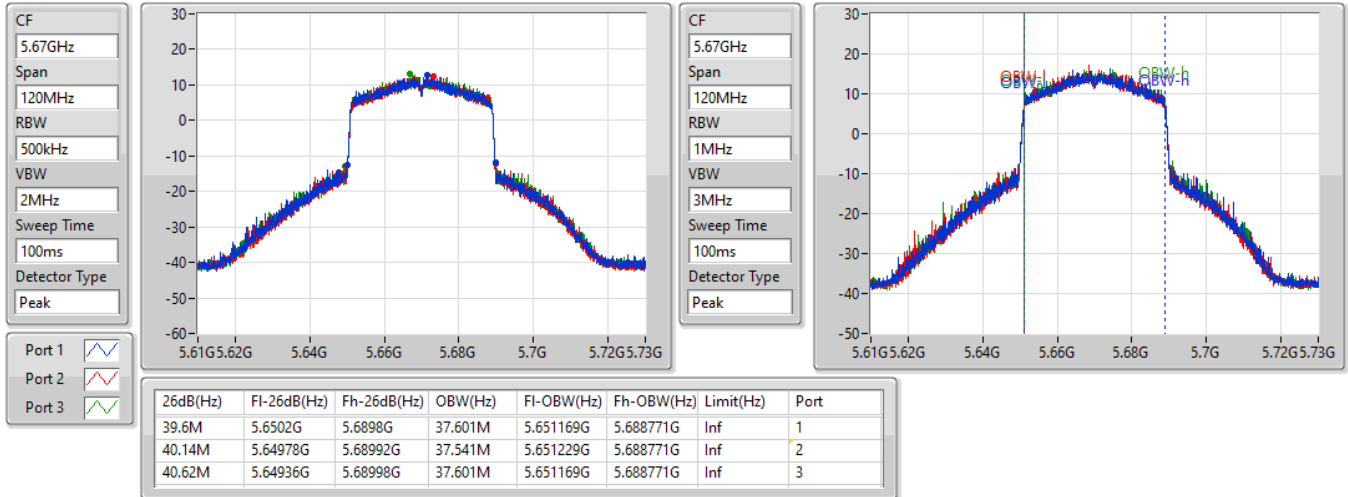

802.11ax HEW40_Nss2,(MCS0)_3TX
EBW
5550MHz

08/09/2022

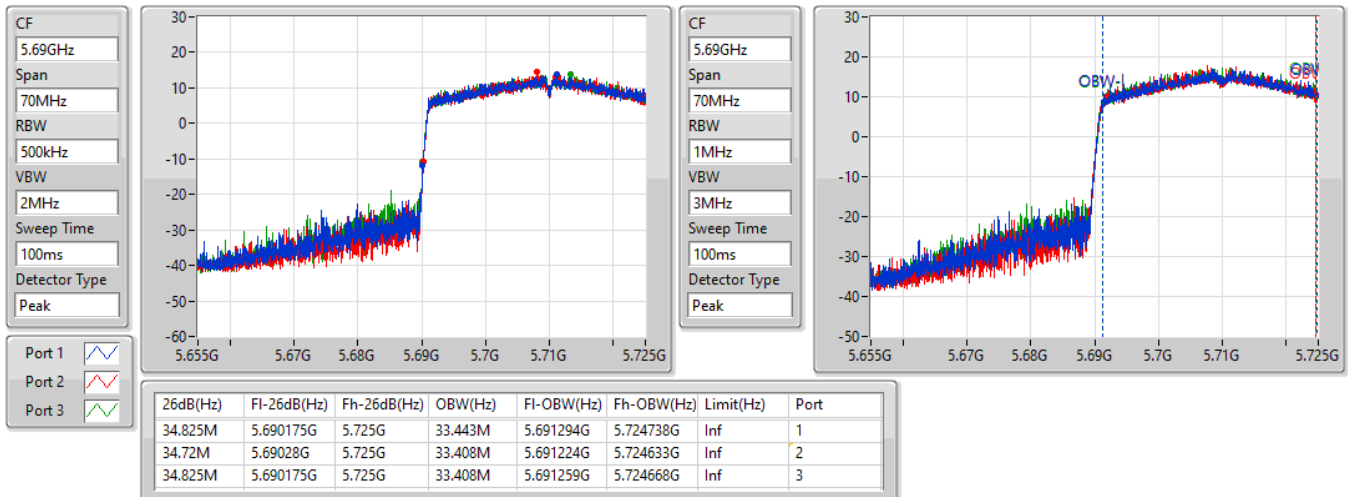


802.11ax HEW40_Nss2,(MCS0)_3TX
EBW
5670MHz

08/09/2022


802.11ax HEW40_Nss2,(MCS0)_3TX
EBW
5710MHz Straddle 5.47-5.725GHz

08/09/2022

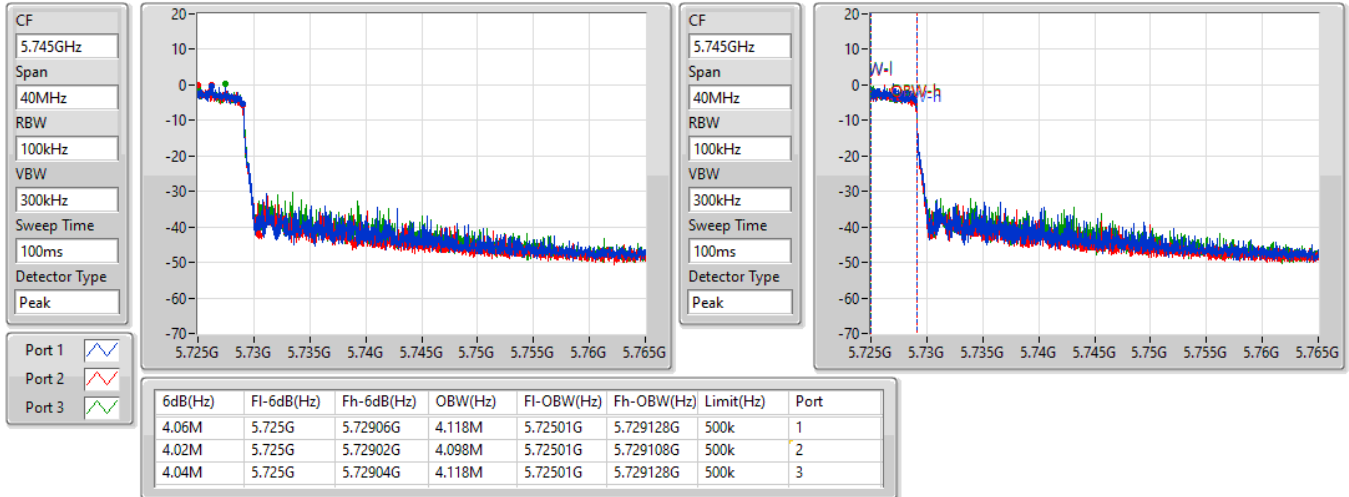


802.11ax HEW40_Nss2,(MCS0)_3TX

EBW

5710MHz Straddle 5.725-5.85GHz

08/09/2022

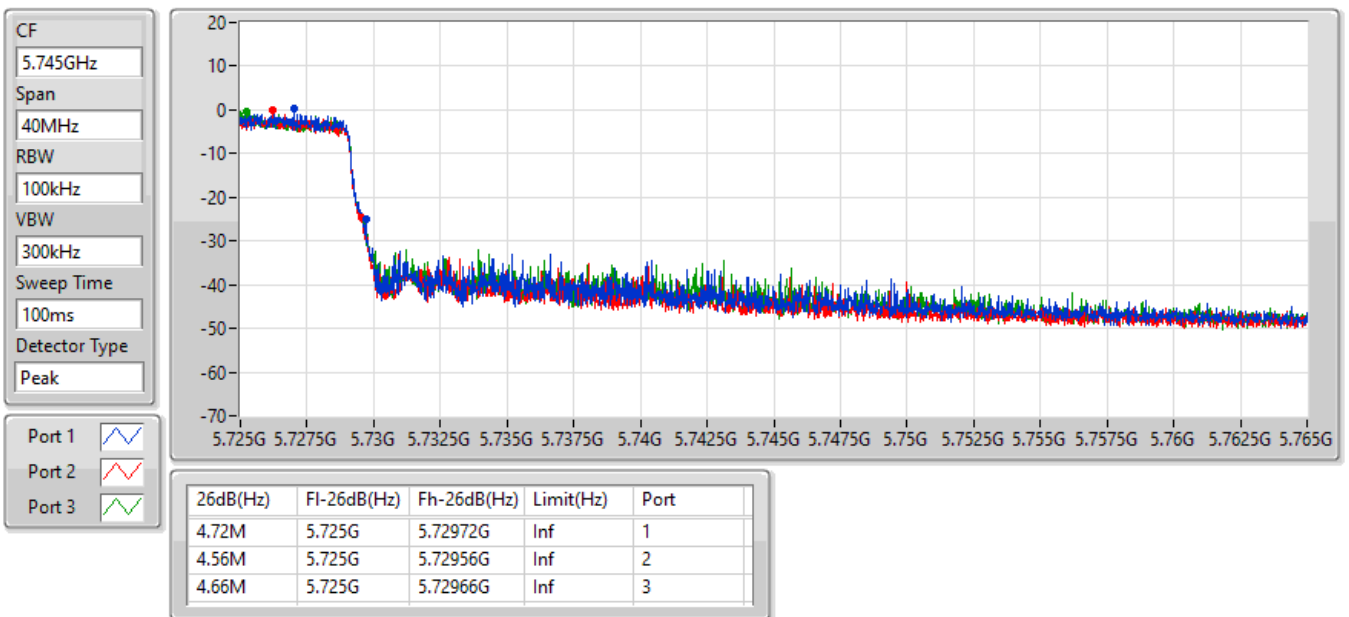


802.11ax HEW40_Nss2,(MCS0)_3TX

EBW

5710MHz Straddle 5.725-5.85GHz

08/09/2022

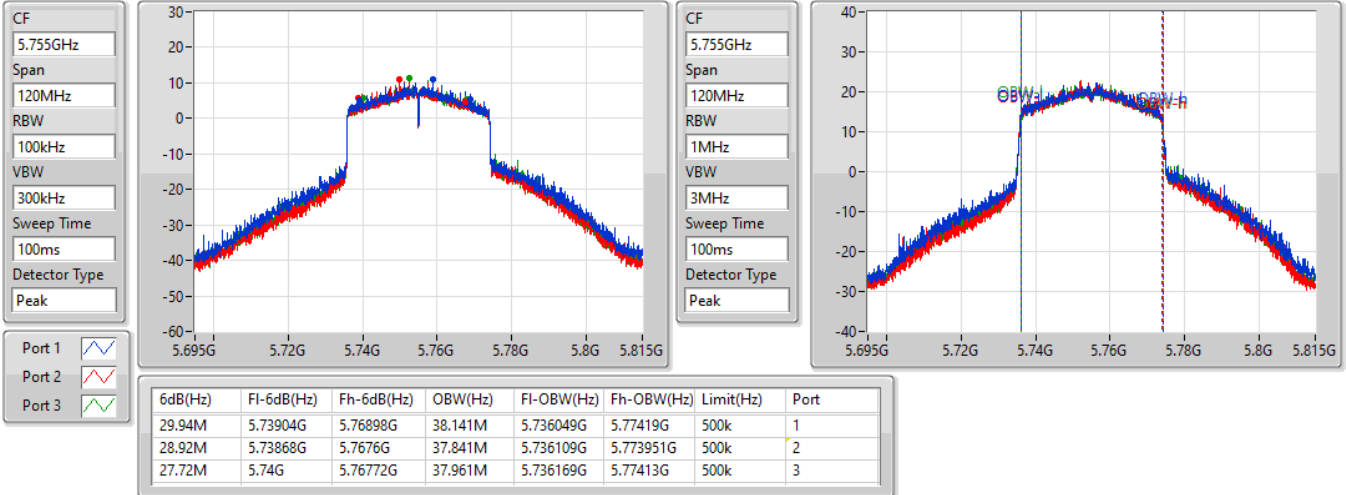


802.11ax HEW40_Nss2,(MCS0)_3TX

EBW

5755MHz

08/09/2022

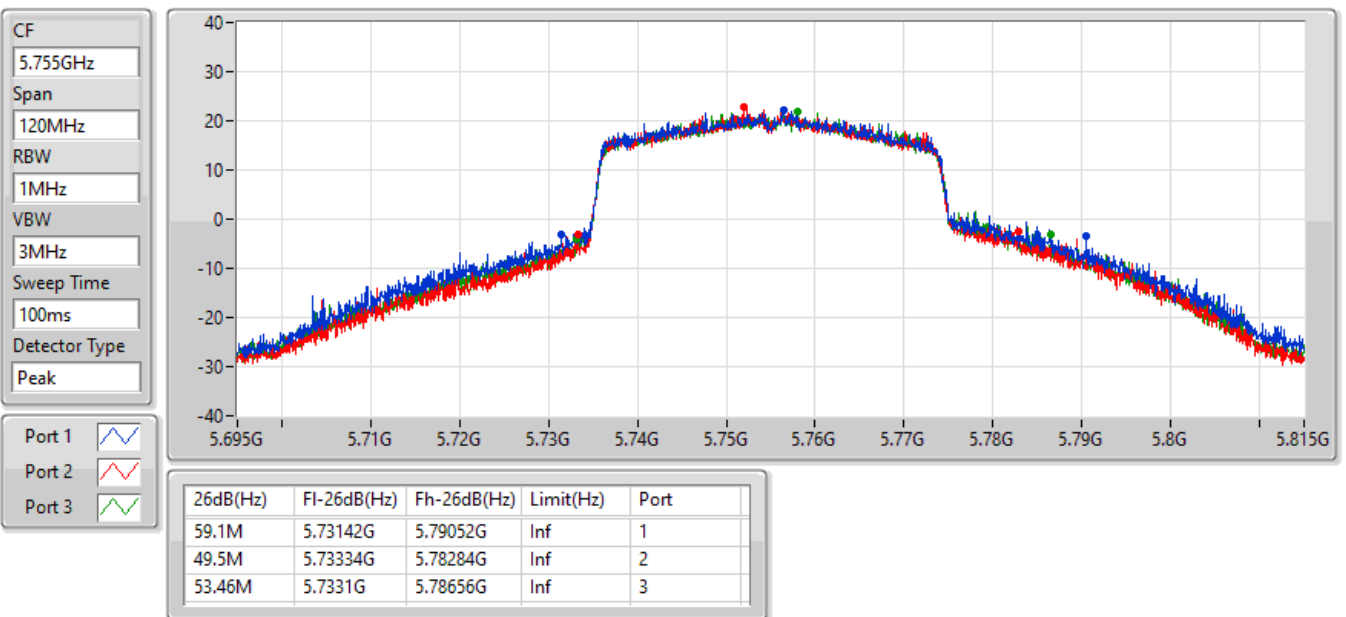


802.11ax HEW40_Nss2,(MCS0)_3TX

EBW

5755MHz

08/09/2022

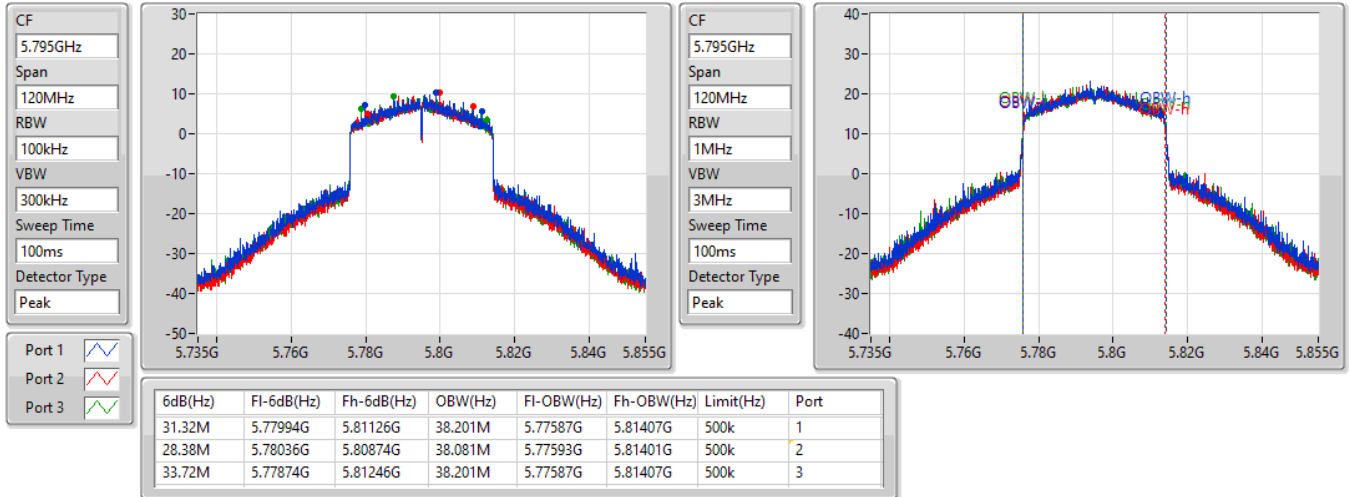


802.11ax HEW40_Nss2,(MCS0)_3TX

EBW

5795MHz

08/09/2022

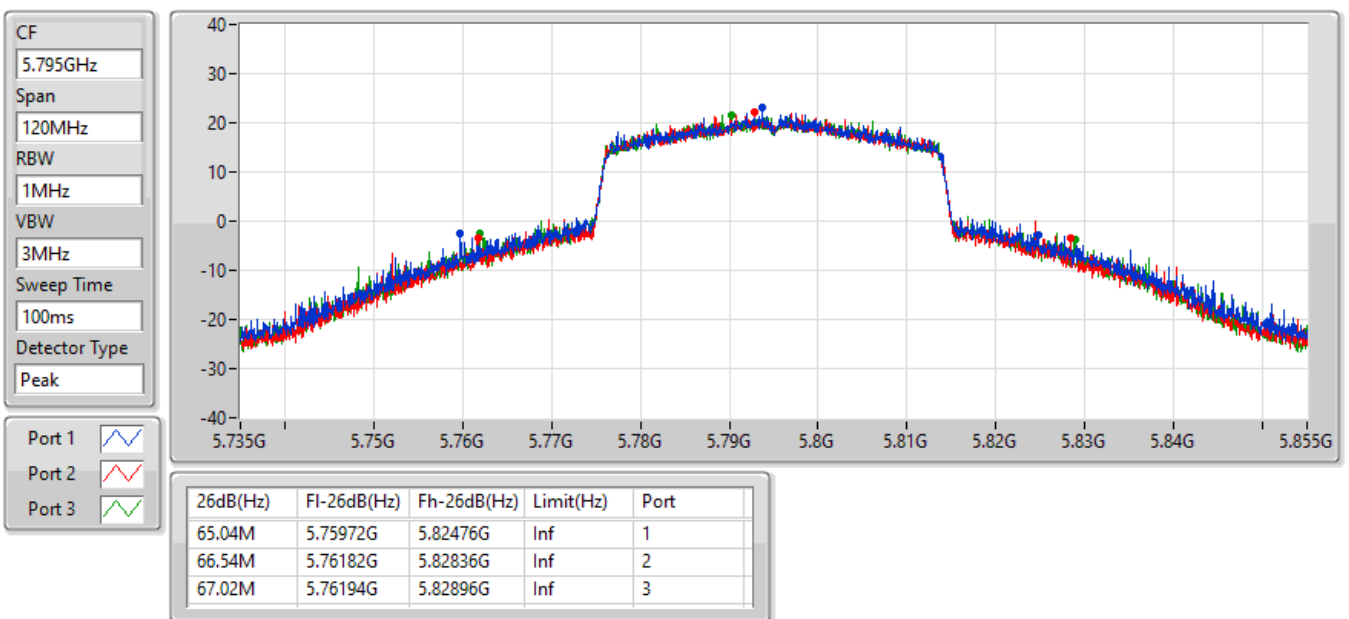


802.11ax HEW40_Nss2,(MCS0)_3TX

EBW

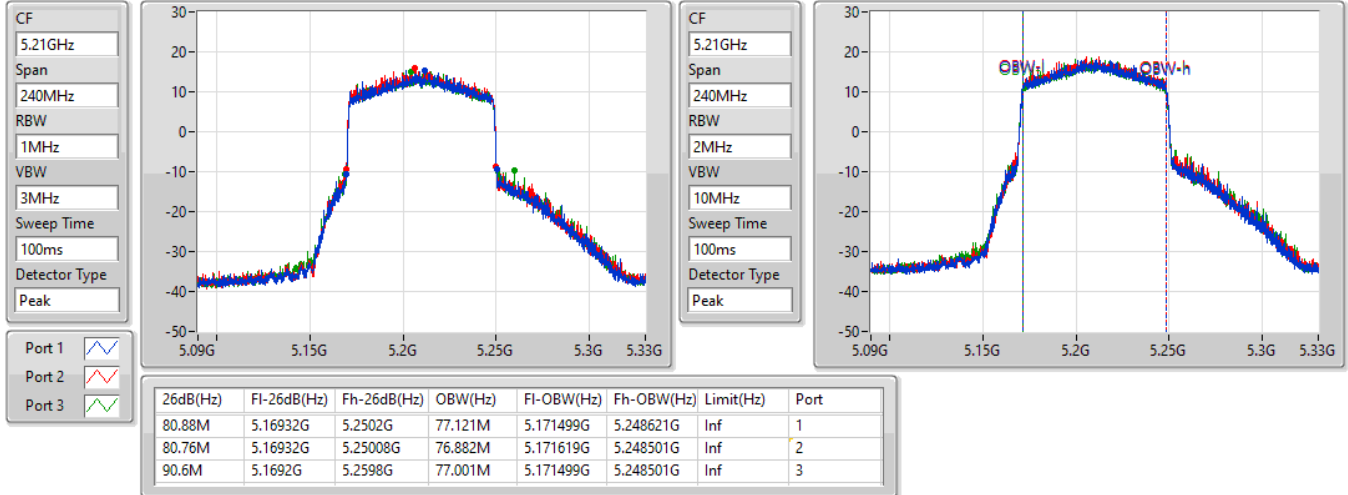
5795MHz

08/09/2022

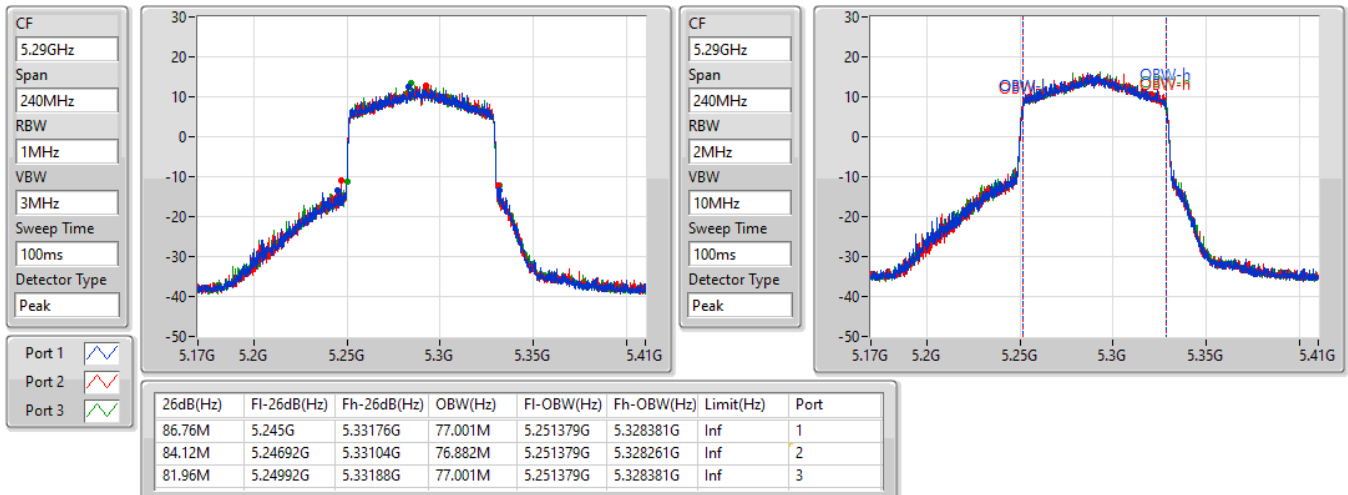


802.11ax HEW80_Nss2,(MCS0)_3TX
EBW
5210MHz

08/09/2022

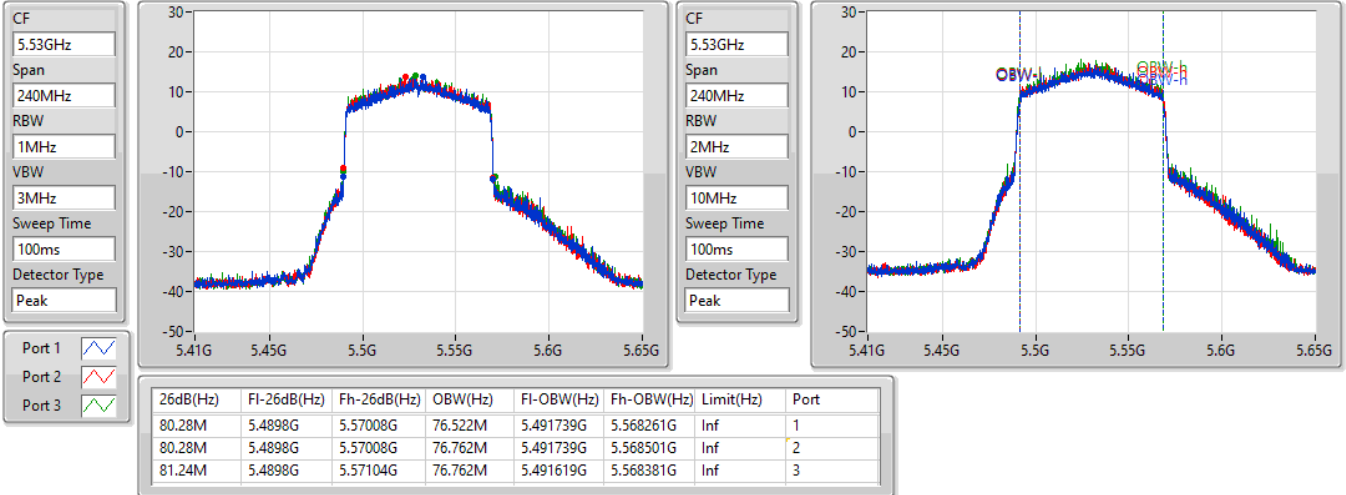

802.11ax HEW80_Nss2,(MCS0)_3TX
EBW
5290MHz

08/09/2022

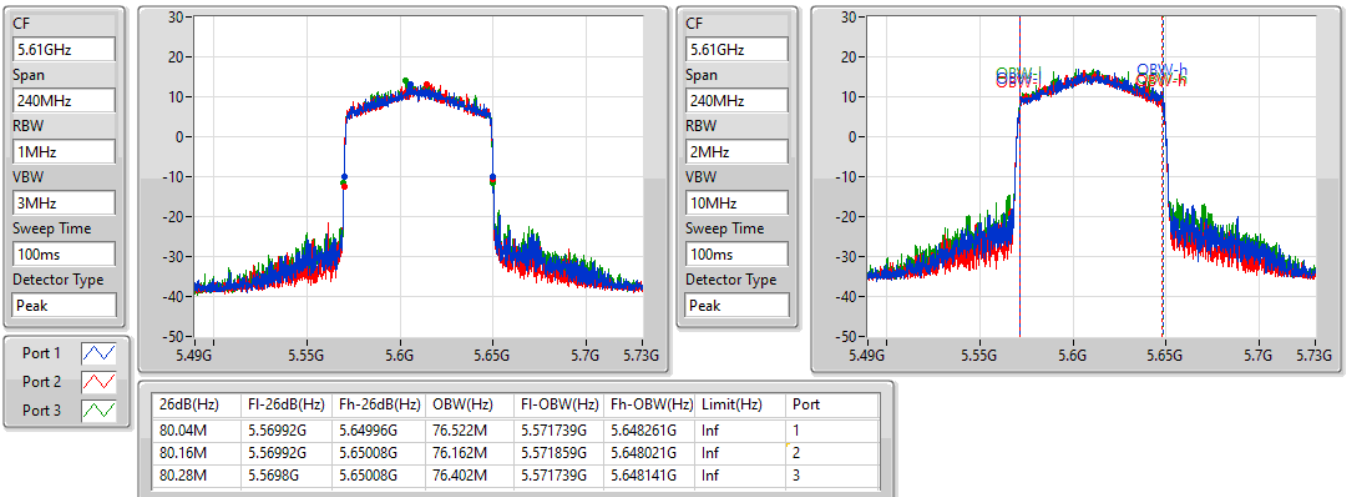


802.11ax HEW80_Nss2,(MCS0)_3TX
EBW
5530MHz

08/09/2022

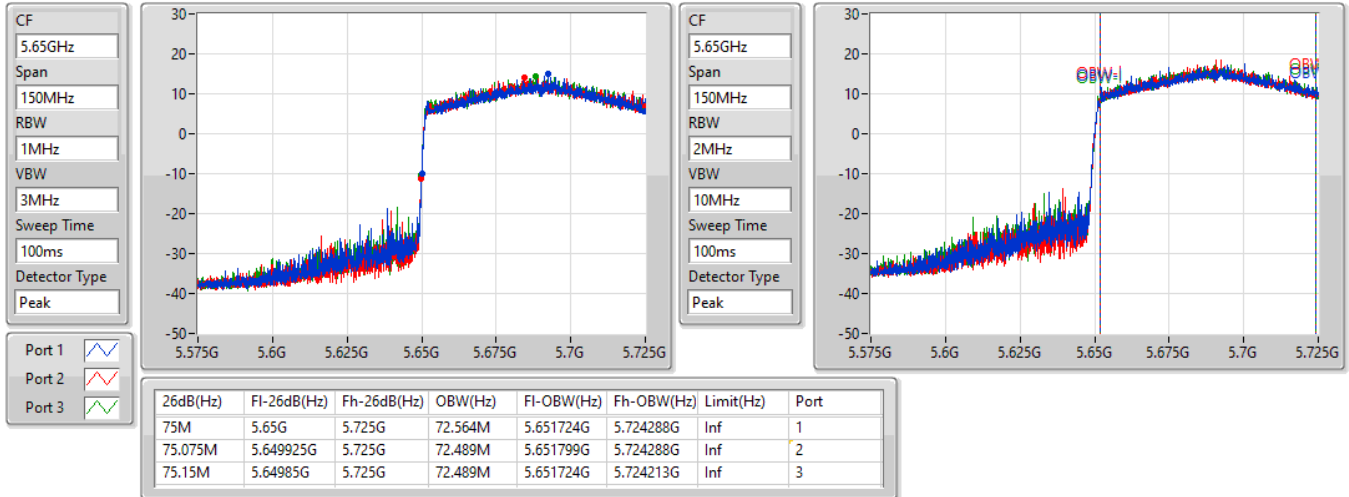

802.11ax HEW80_Nss2,(MCS0)_3TX
EBW
5610MHz

08/09/2022

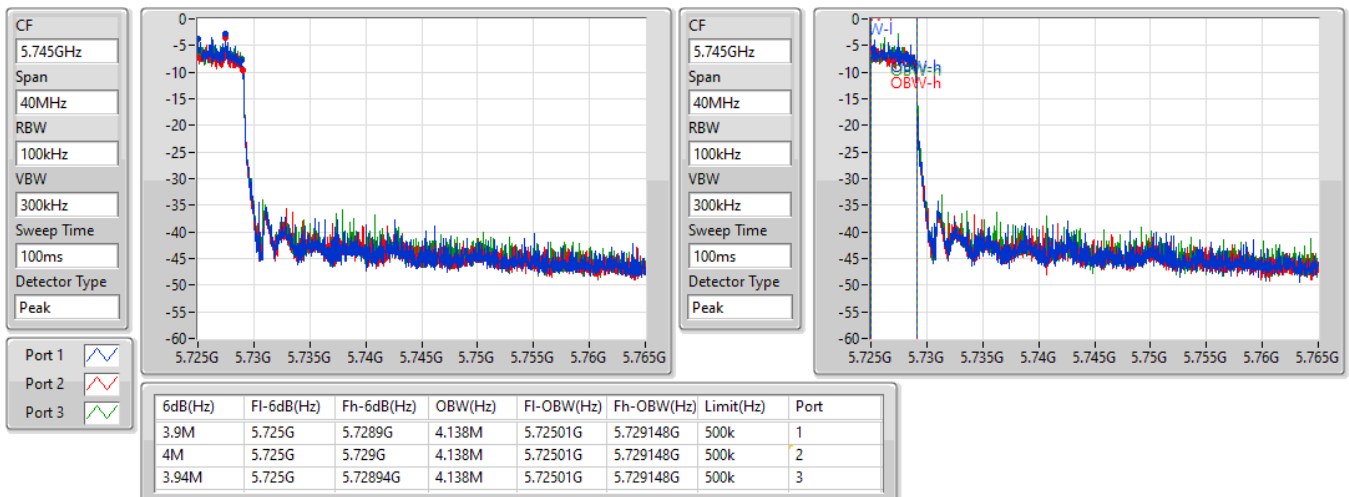


802.11ax HEW80_Nss2,(MCS0)_3TX
EBW
5690MHz Straddle 5.47-5.725GHz

08/09/2022


802.11ax HEW80_Nss2,(MCS0)_3TX
EBW
5690MHz Straddle 5.725-5.85GHz

08/09/2022

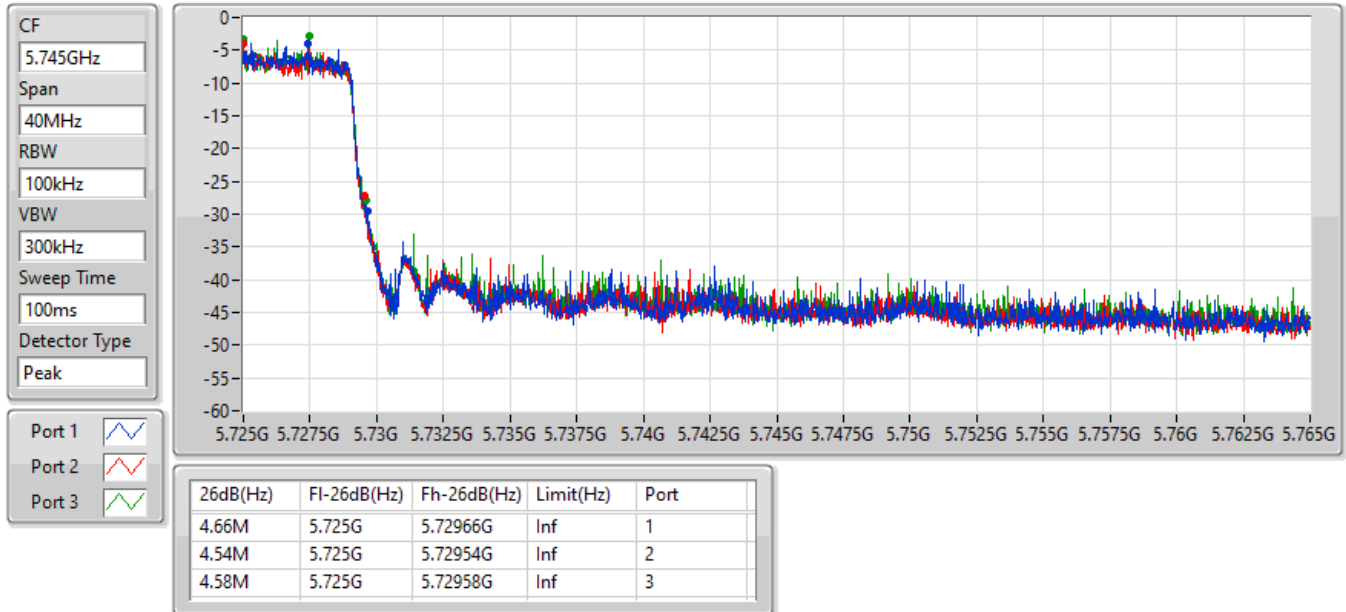


802.11ax HEW80_Nss2,(MCS0)_3TX

EBW

5690MHz Straddle 5.725-5.85GHz

08/09/2022

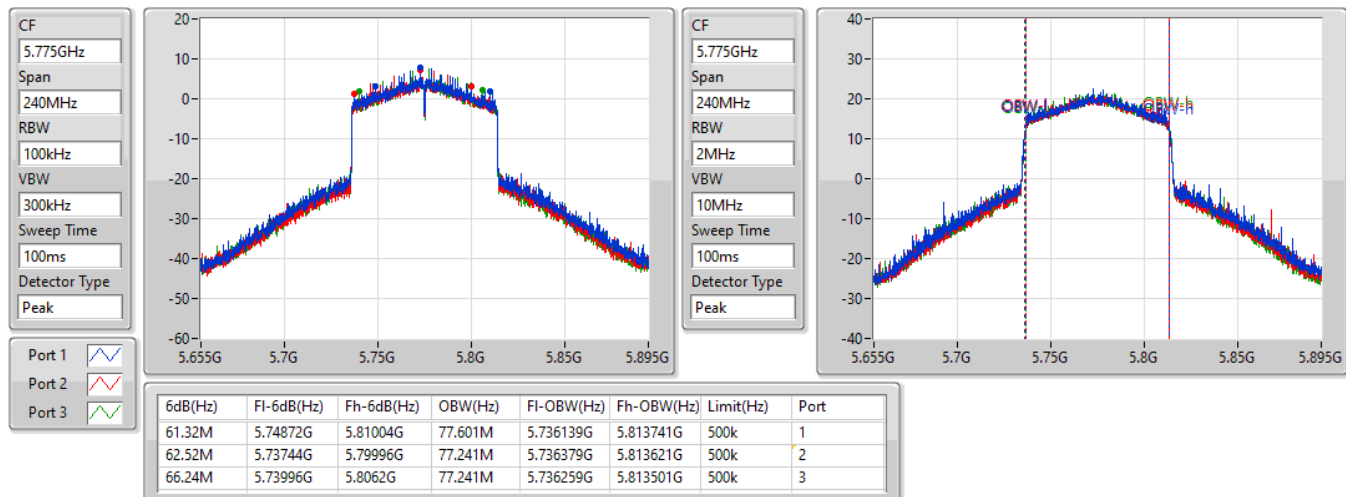


802.11ax HEW80_Nss2,(MCS0)_3TX

EBW

5775MHz

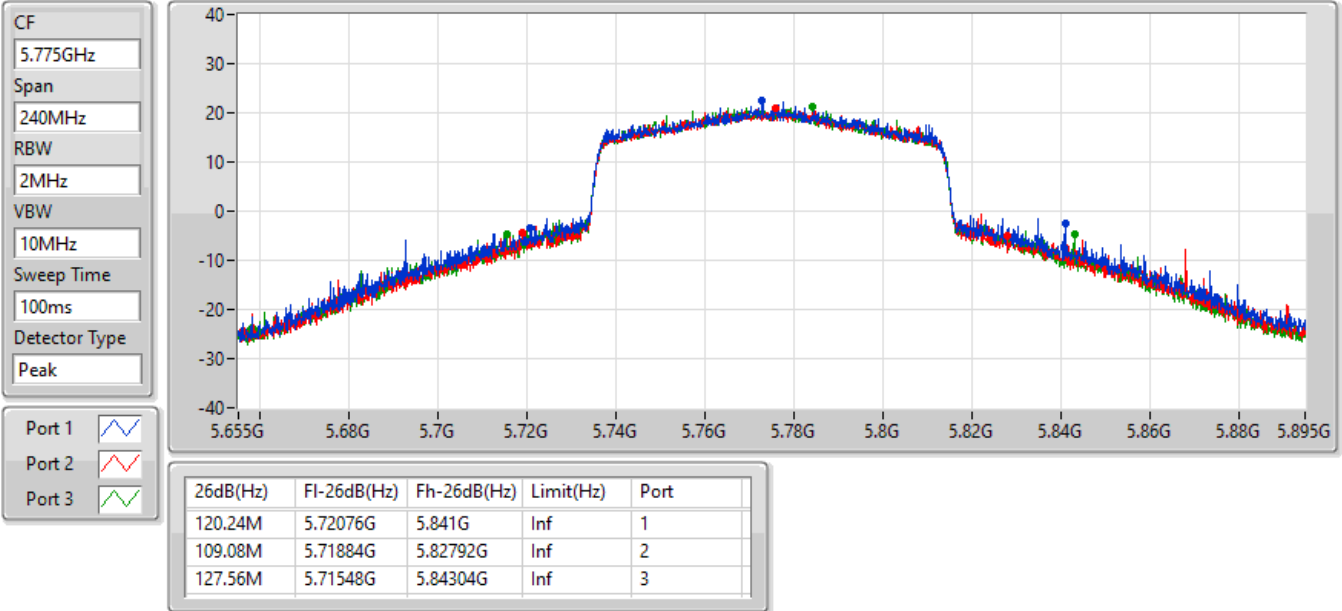
08/09/2022



802.11ax HEW80_Nss2,(MCS0)_3TX

EBW
5775MHz

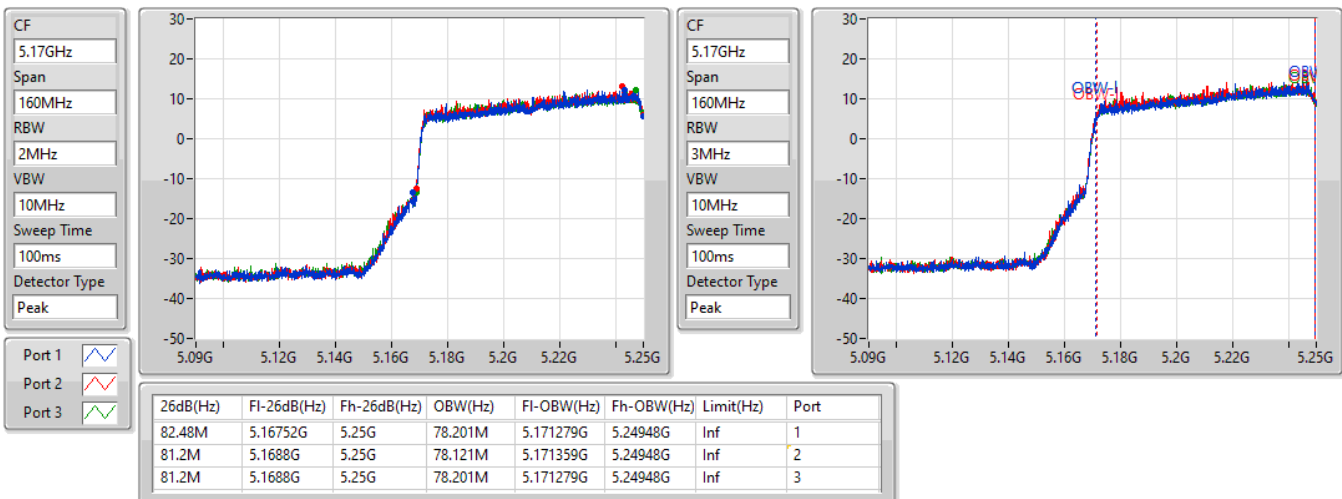
08/09/2022



802.11ax HEW160_Nss2,(MCS0)_3TX

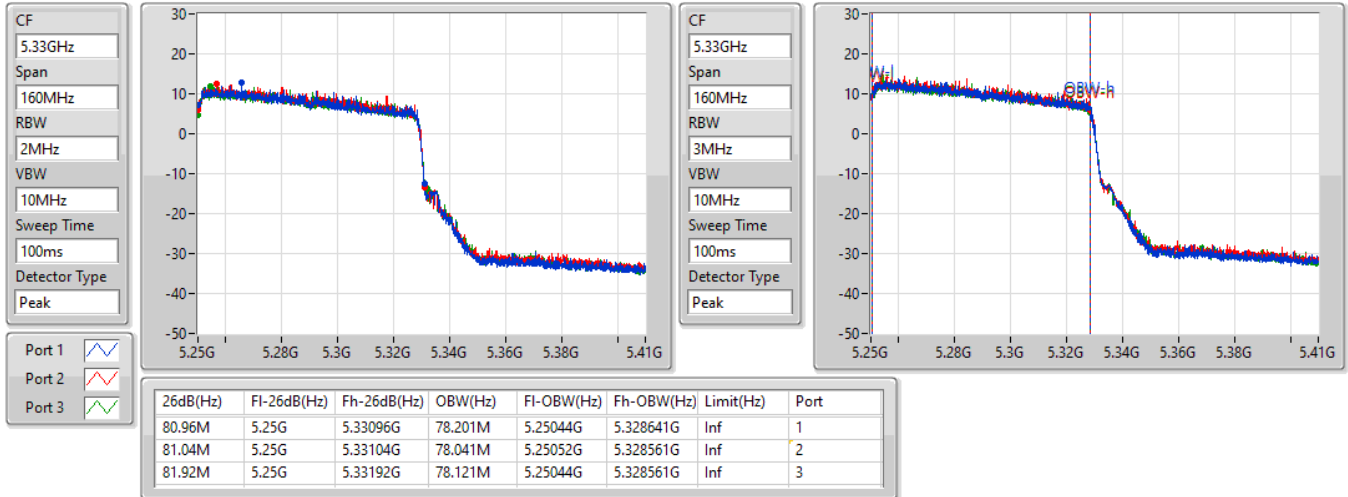
EBW
5250MHz Straddle 5.15-5.25GHz

08/09/2022

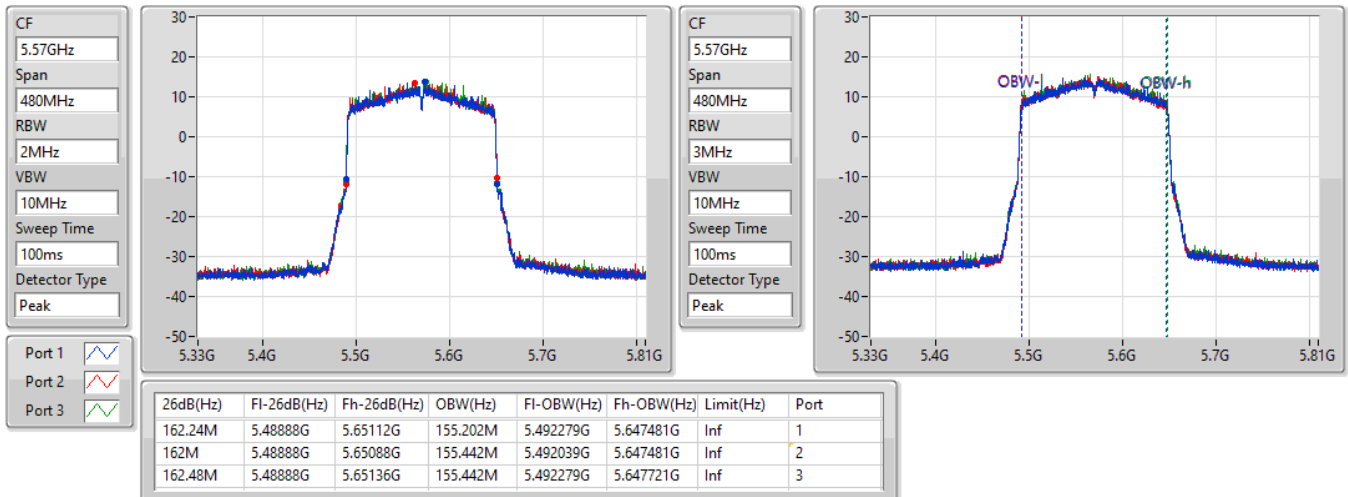


802.11ax HEW160_Nss2,(MCS0)_3TX
EBW
5250MHz Straddle 5.25-5.35GHz

08/09/2022


802.11ax HEW160_Nss2,(MCS0)_3TX
EBW
5570MHz

08/09/2022



Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_3TX	26.1M	18.981M	19M0D1D	21.03M	18.621M
802.11ax HEW40-BF_Nss1,(MCS0)_3TX	50.16M	38.081M	38M1D1D	39.66M	37.661M
802.11ax HEW80-BF_Nss1,(MCS0)_3TX	80.28M	77.241M	77M2D1D	80.28M	77.121M
802.11ax HEW160-BF_Nss1,(MCS0)_3TX	80.96M	78.281M	78M3D1D	80.8M	78.121M
5.25-5.35GHz	-	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_3TX	22.23M	18.981M	19M0D1D	20.94M	18.681M
802.11ax HEW40-BF_Nss1,(MCS0)_3TX	39.66M	37.781M	37M8D1D	39.48M	37.421M
802.11ax HEW80-BF_Nss1,(MCS0)_3TX	92.28M	77.361M	77M4D1D	80.16M	76.882M
802.11ax HEW160-BF_Nss1,(MCS0)_3TX	80.96M	78.201M	78M2D1D	80.88M	78.121M
5.47-5.725GHz	-	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_3TX	23.07M	19.04M	19M0D1D	15.735M	14.378M
802.11ax HEW40-BF_Nss1,(MCS0)_3TX	39.72M	37.901M	37M9D1D	34.79M	33.513M
802.11ax HEW80-BF_Nss1,(MCS0)_3TX	85.68M	77.241M	77M2D1D	75.15M	72.789M
802.11ax HEW160-BF_Nss1,(MCS0)_3TX	164.88M	155.922M	156MD1D	162.48M	155.682M
5.725-5.85GHz	-	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_3TX	18.87M	19.13M	19M1D1D	4.12M	4.598M
802.11ax HEW40-BF_Nss1,(MCS0)_3TX	36.54M	38.921M	38M9D1D	3.9M	4.118M
802.11ax HEW80-BF_Nss1,(MCS0)_3TX	75.12M	77.721M	77M7D1D	3.94M	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)
802.11ax HEW20-BF_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.9M	18.921M	22.14M	18.861M	25.26M	18.981M
5200MHz	Pass	Inf	26.1M	18.981M	24.27M	18.891M	26.04M	18.921M
5240MHz	Pass	Inf	21.48M	18.771M	21.03M	18.621M	24.15M	18.771M
5260MHz	Pass	Inf	22.05M	18.981M	21.3M	18.711M	20.94M	18.831M
5300MHz	Pass	Inf	21.75M	18.861M	21.39M	18.861M	22.23M	18.921M
5320MHz	Pass	Inf	21.39M	18.681M	21.42M	18.711M	21.51M	18.921M
5500MHz	Pass	Inf	22.47M	18.861M	21.51M	18.681M	23.07M	19.04M
5580MHz	Pass	Inf	21.24M	18.861M	21.09M	18.771M	21.39M	18.891M
5700MHz	Pass	Inf	21.27M	18.861M	21.27M	18.921M	21.51M	18.831M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.9M	14.438M	15.93M	14.408M	15.735M	14.378M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	4.12M	4.598M	4.48M	4.638M	4.5M	4.618M
5745MHz	Pass	500k	18.87M	19.13M	17.88M	18.981M	17.67M	18.921M
5785MHz	Pass	500k	14.88M	18.951M	18.3M	18.951M	17.52M	19.01M
5825MHz	Pass	500k	16.92M	18.921M	17.04M	18.951M	16.98M	18.861M
802.11ax HEW40-BF_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	39.9M	37.901M	39.66M	37.781M	40.08M	37.721M
5230MHz	Pass	Inf	40.56M	37.661M	41.16M	37.901M	50.16M	38.081M
5270MHz	Pass	Inf	39.6M	37.661M	39.6M	37.421M	39.48M	37.661M
5310MHz	Pass	Inf	39.66M	37.781M	39.6M	37.541M	39.6M	37.661M
5510MHz	Pass	Inf	39.66M	37.781M	39.6M	37.721M	39.54M	37.601M
5550MHz	Pass	Inf	39.36M	37.361M	39.6M	37.661M	39.72M	37.901M
5670MHz	Pass	Inf	39.6M	37.541M	39.48M	37.361M	39.66M	37.601M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	34.825M	33.583M	34.825M	33.653M	34.79M	33.513M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.9M	4.118M	4M	4.118M	4.02M	4.138M
5755MHz	Pass	500k	35.04M	38.921M	34.32M	38.381M	36.06M	38.501M
5795MHz	Pass	500k	36.36M	37.901M	35.34M	37.841M	36.54M	37.961M
802.11ax HEW80-BF_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	80.28M	77.121M	80.28M	77.241M	80.28M	77.241M
5290MHz	Pass	Inf	80.16M	76.882M	82.32M	77.361M	92.28M	77.241M
5530MHz	Pass	Inf	85.68M	77.001M	82.92M	77.241M	80.64M	77.241M
5610MHz	Pass	Inf	80.28M	76.762M	80.4M	77.121M	80.04M	76.882M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	75.3M	72.939M	75.15M	72.789M	75.15M	72.864M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.98M	4.118M	3.94M	4.118M	4M	4.118M
5775MHz	Pass	500k	75.12M	77.721M	75M	77.481M	75.12M	77.721M
802.11ax HEW160-BF_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	Inf	80.88M	78.281M	80.96M	78.121M	80.8M	78.201M
5250MHz Straddle 5.25-5.35GHz	Pass	Inf	80.88M	78.201M	80.96M	78.201M	80.88M	78.121M
5570MHz	Pass	Inf	162.48M	155.682M	164.88M	155.922M	163.44M	155.682M

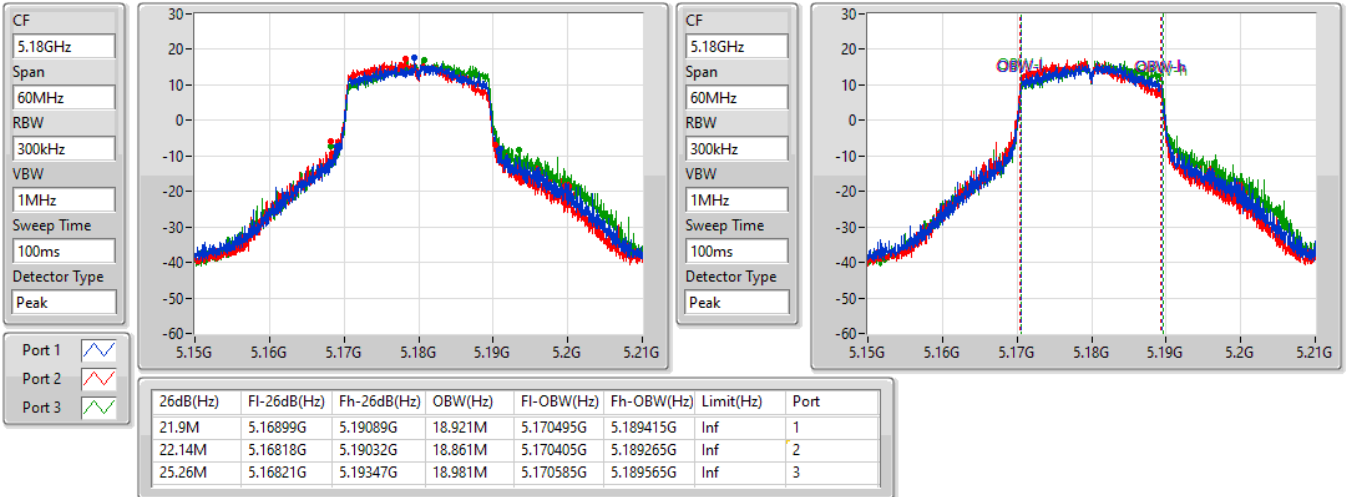
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11ax HEW20-BF_Nss1,(MCS0)_3TX

EBW

5180MHz

14/09/2022

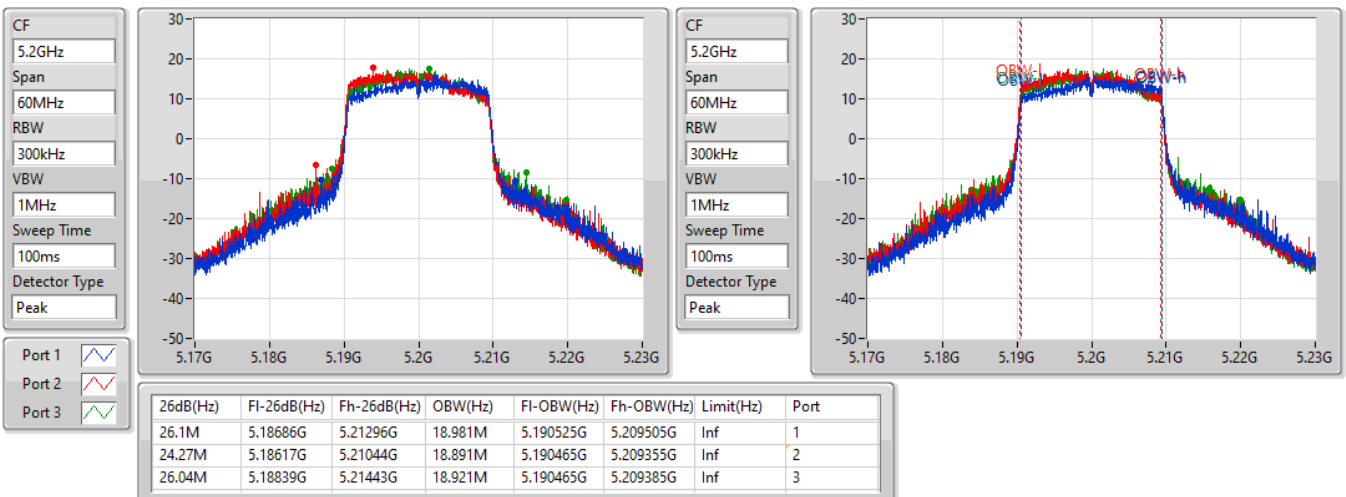


802.11ax HEW20-BF_Nss1,(MCS0)_3TX

EBW

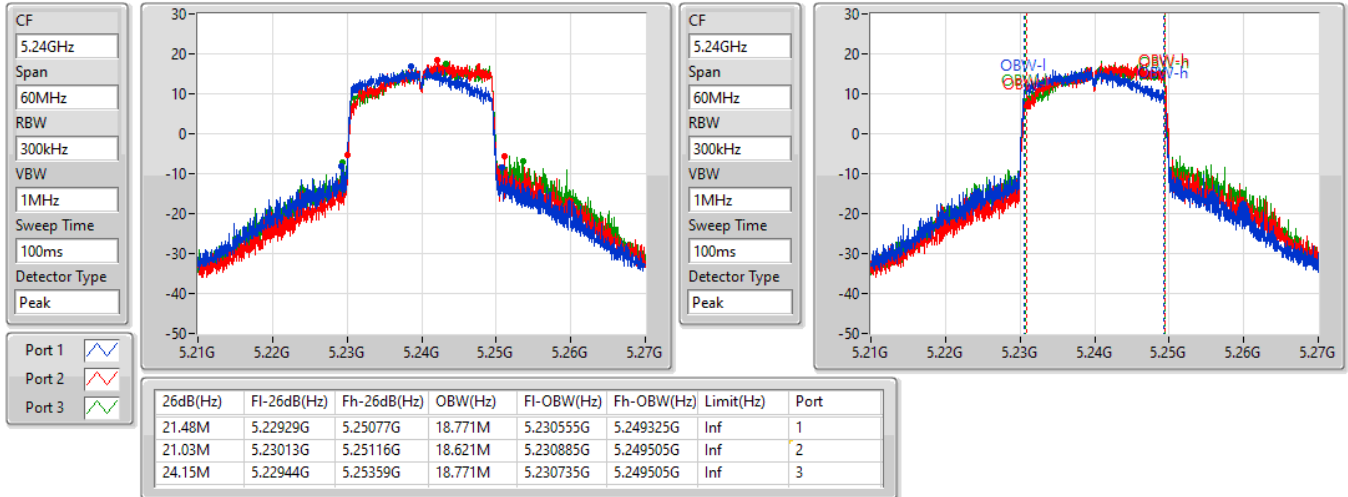
5200MHz

14/09/2022

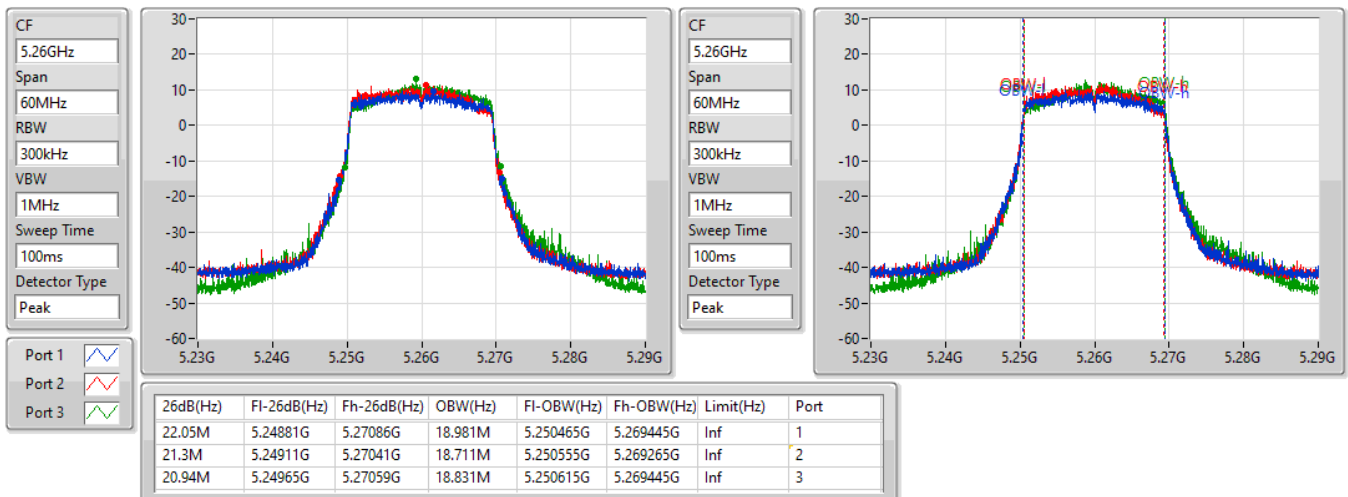


802.11ax HEW20-BF_Nss1,(MCS0)_3TX
EBW
5240MHz

14/09/2022

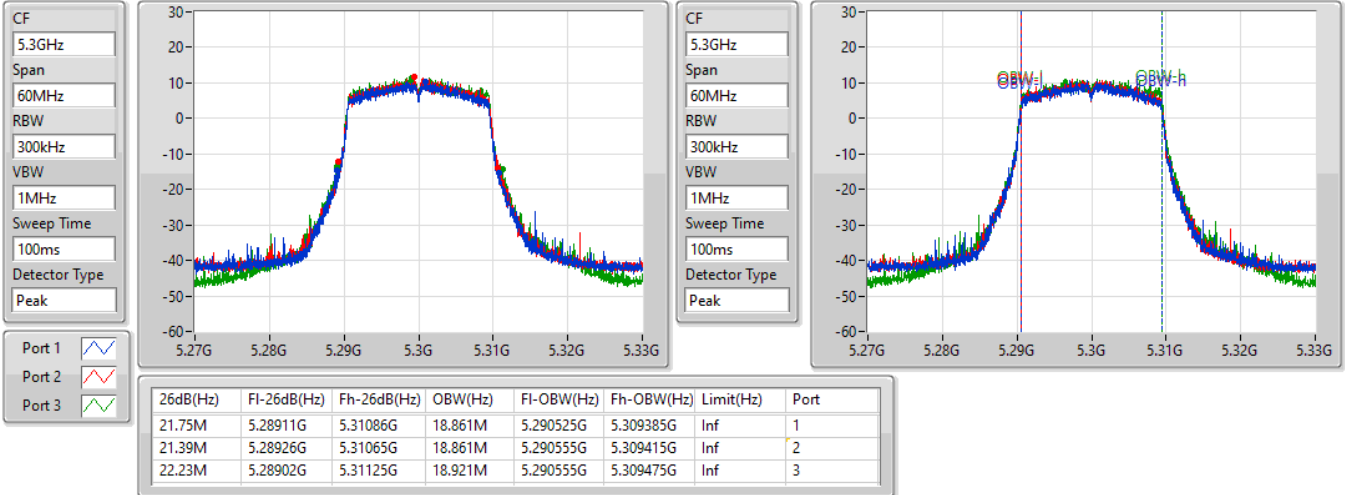

802.11ax HEW20-BF_Nss1,(MCS0)_3TX
EBW
5260MHz

14/09/2022

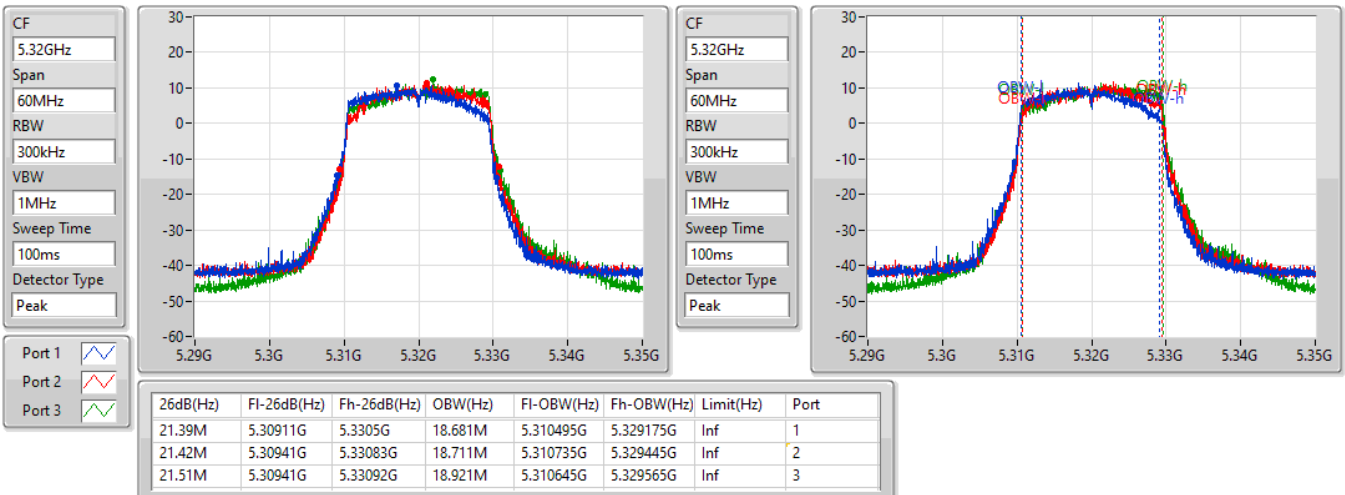


802.11ax HEW20-BF_Nss1,(MCS0)_3TX
EBW
5300MHz

14/09/2022

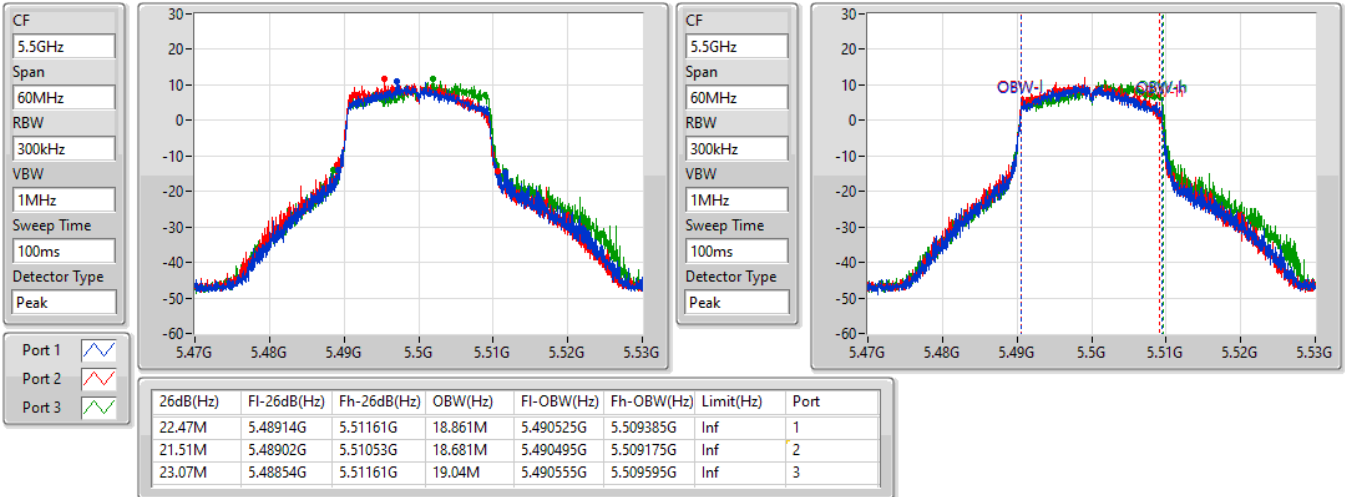

802.11ax HEW20-BF_Nss1,(MCS0)_3TX
EBW
5320MHz

14/09/2022

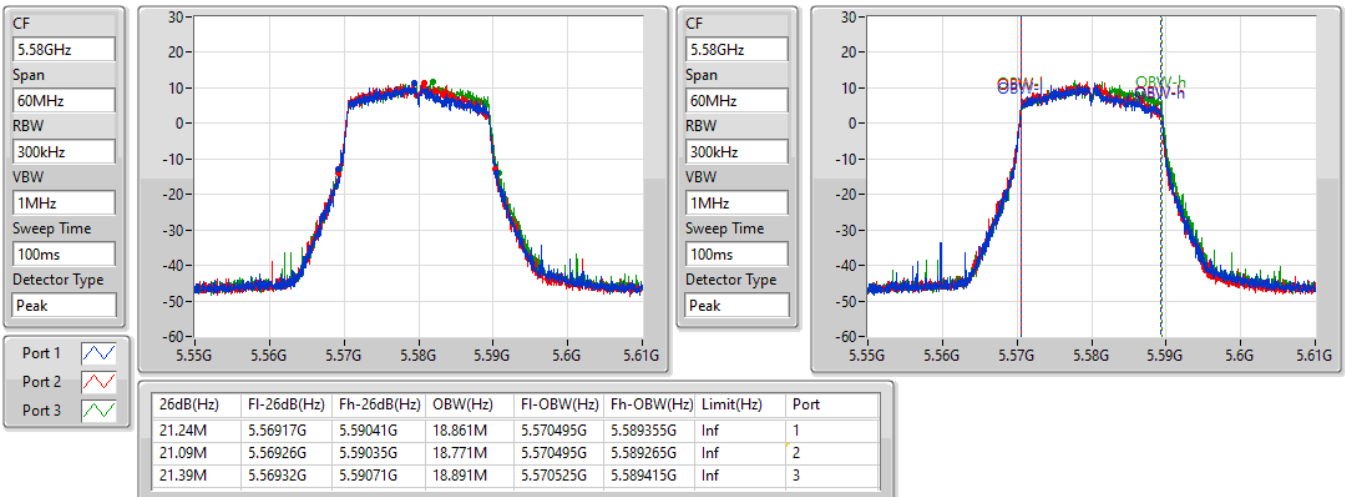


802.11ax HEW20-BF_Nss1,(MCS0)_3TX
EBW
5500MHz

14/09/2022

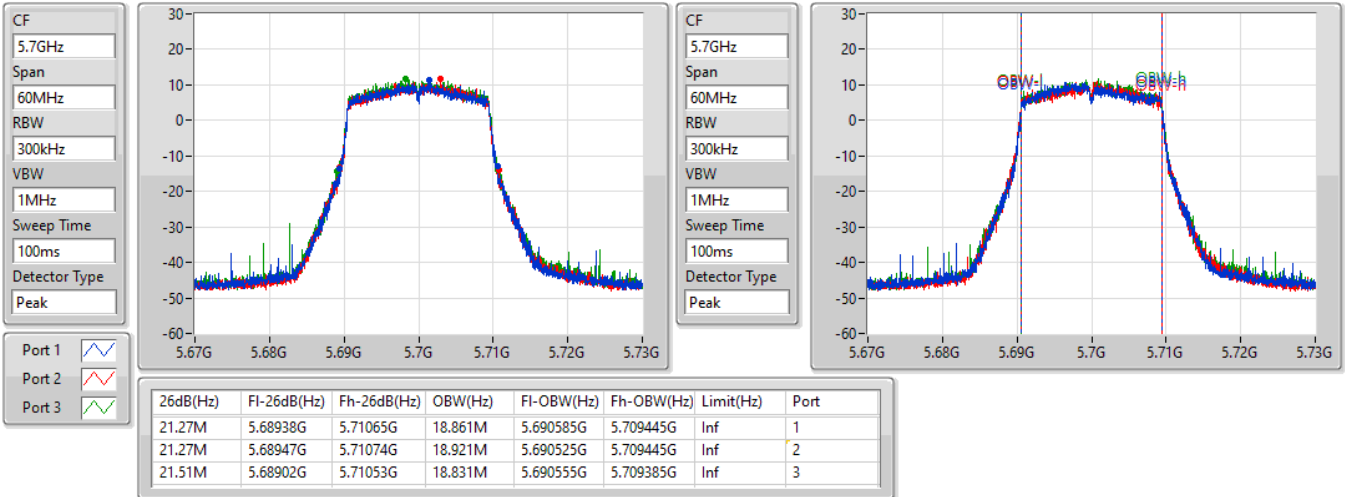

802.11ax HEW20-BF_Nss1,(MCS0)_3TX
EBW
5580MHz

14/09/2022

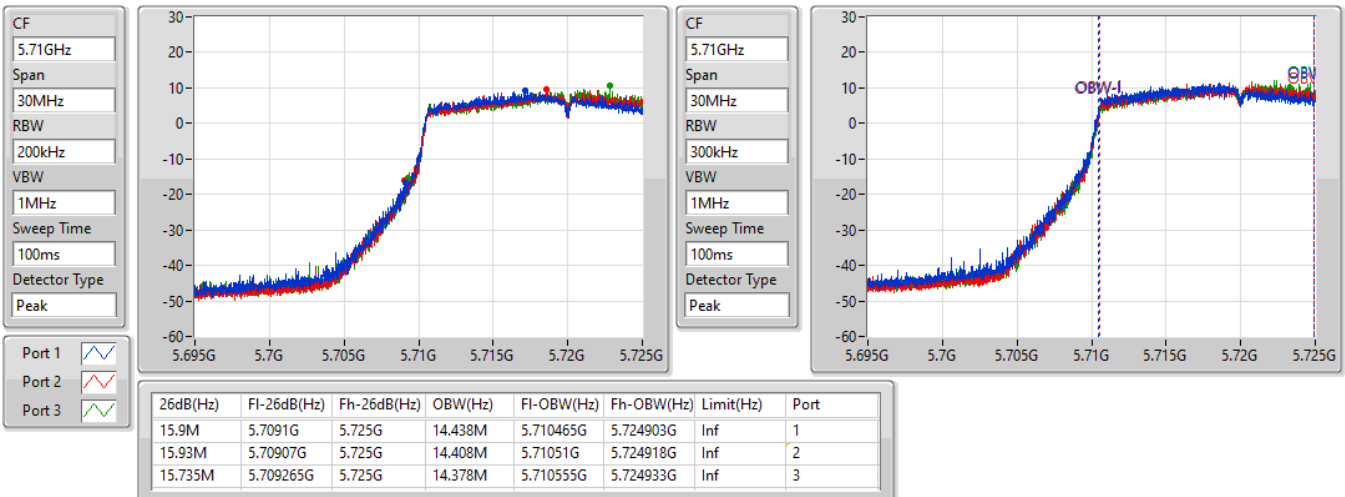


802.11ax HEW20-BF_Nss1,(MCS0)_3TX
EBW
5700MHz

14/09/2022

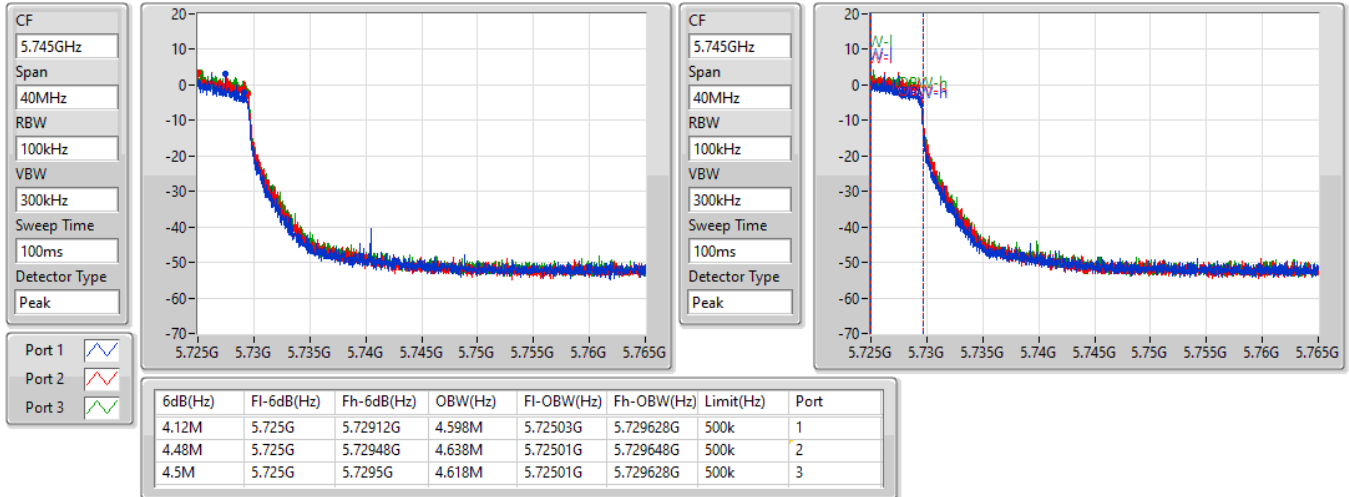

802.11ax HEW20-BF_Nss1,(MCS0)_3TX
EBW
5720MHz Straddle 5.47-5.725GHz

14/09/2022

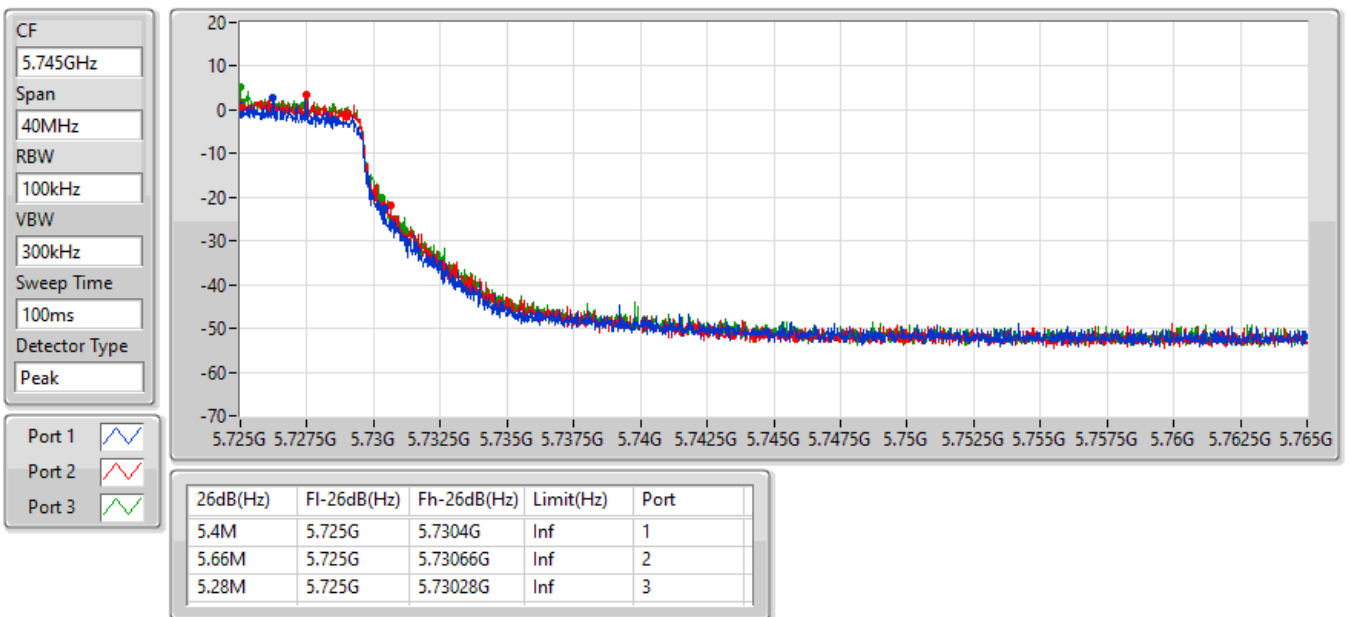


802.11ax HEW20-BF_Nss1,(MCS0)_3TX
EBW
5720MHz Straddle 5.725-5.85GHz

14/09/2022

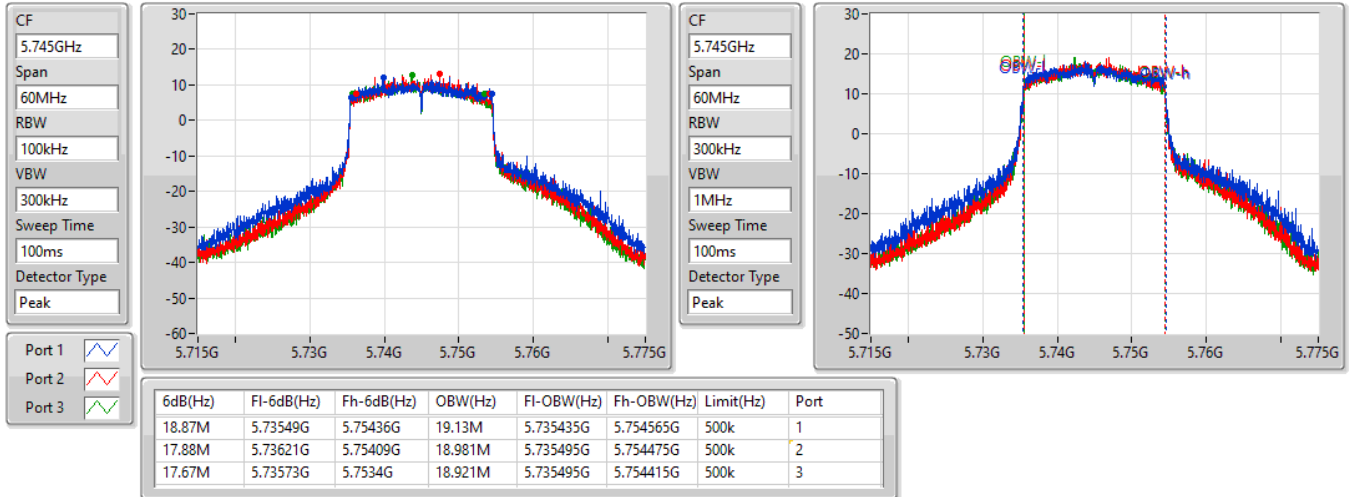

802.11ax HEW20-BF_Nss1,(MCS0)_3TX
EBW
5720MHz Straddle 5.725-5.85GHz

14/09/2022

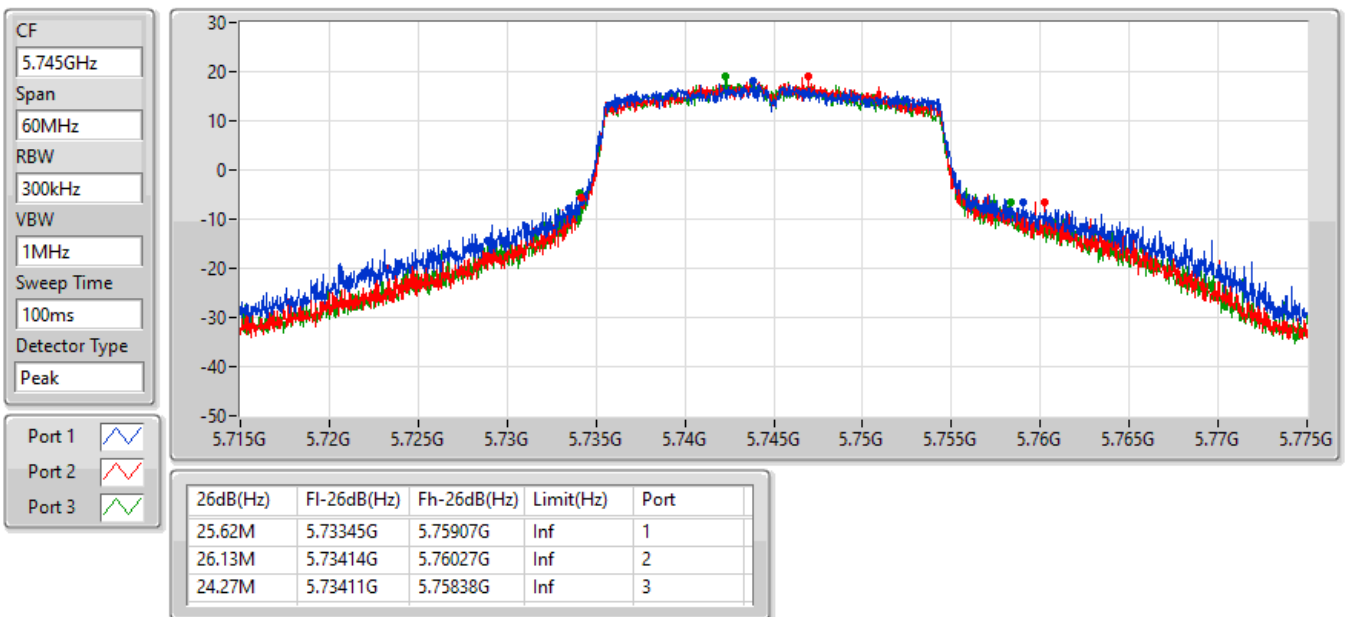


802.11ax HEW20-BF_Nss1,(MCS0)_3TX
EBW
5745MHz

14/09/2022

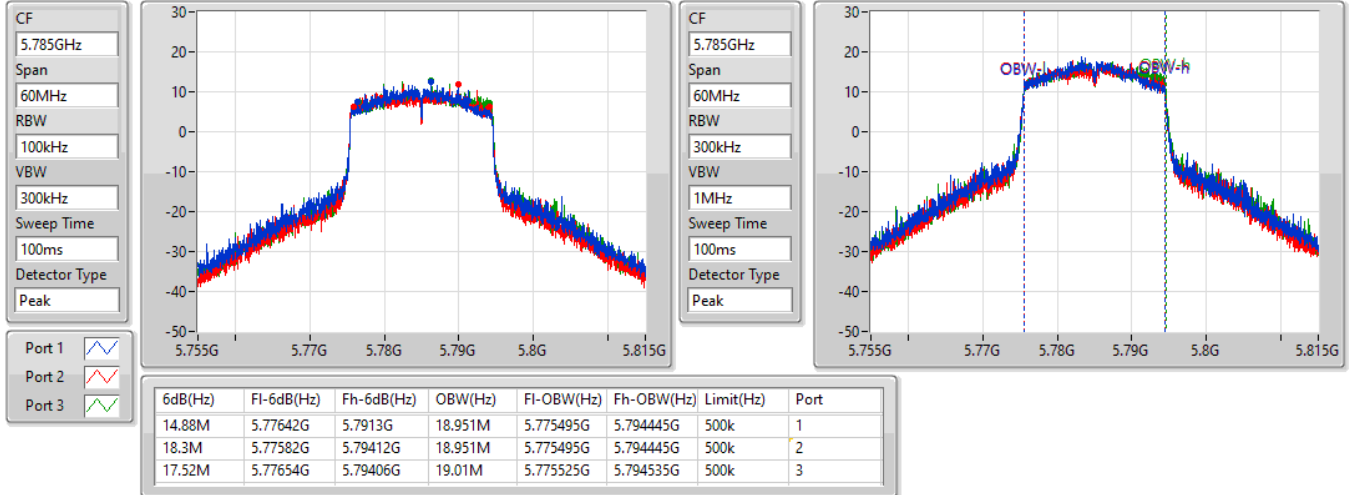

802.11ax HEW20-BF_Nss1,(MCS0)_3TX
EBW
5745MHz

14/09/2022

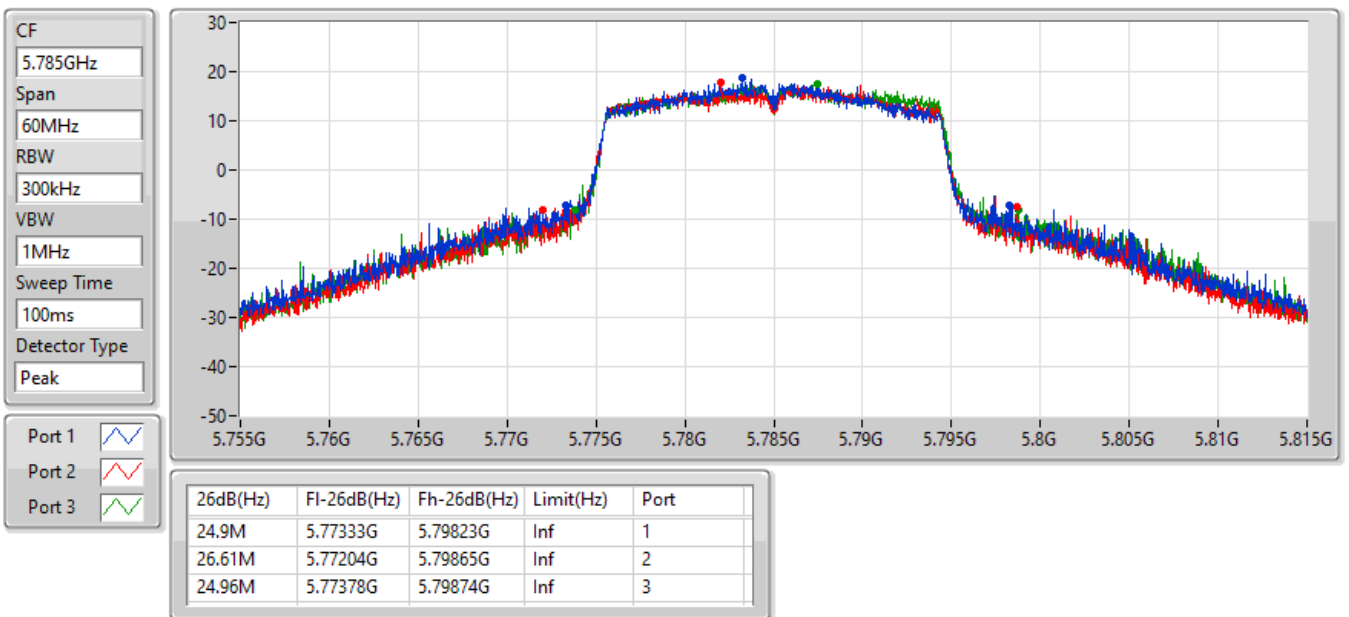


802.11ax HEW20-BF_Nss1,(MCS0)_3TX
EBW
5785MHz

14/09/2022

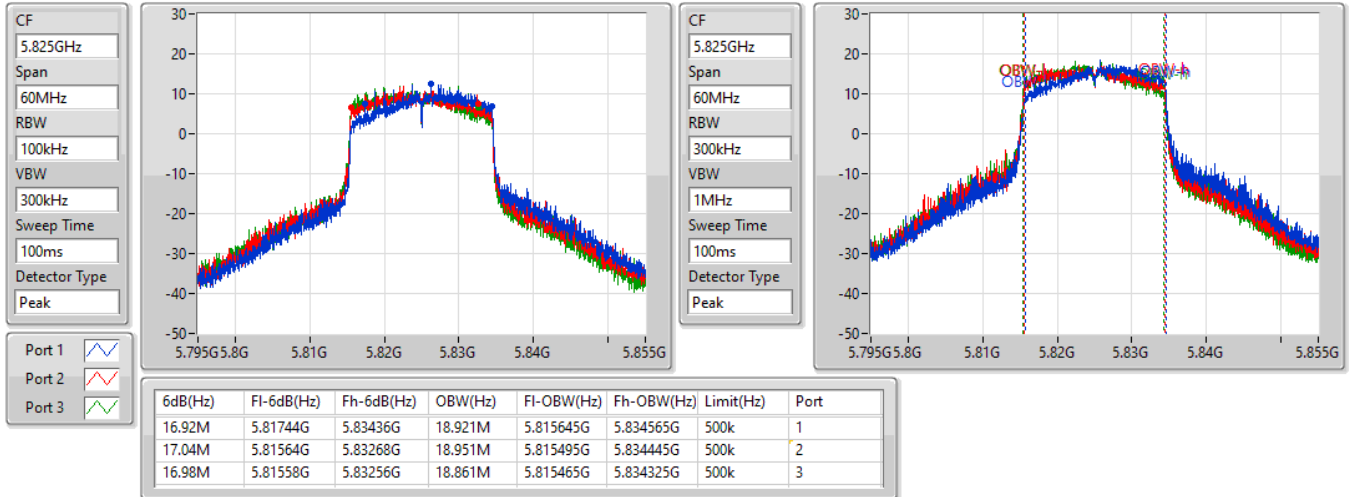

802.11ax HEW20-BF_Nss1,(MCS0)_3TX
EBW
5785MHz

14/09/2022

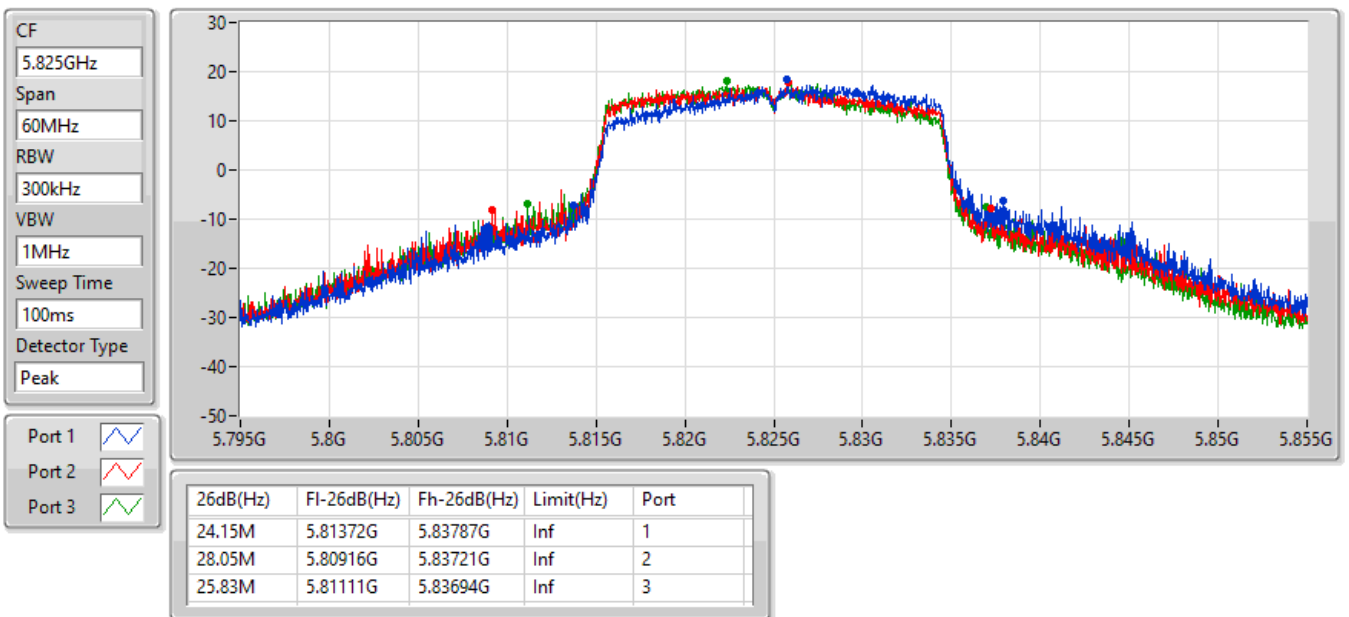


802.11ax HEW20-BF_Nss1,(MCS0)_3TX
EBW
5825MHz

14/09/2022

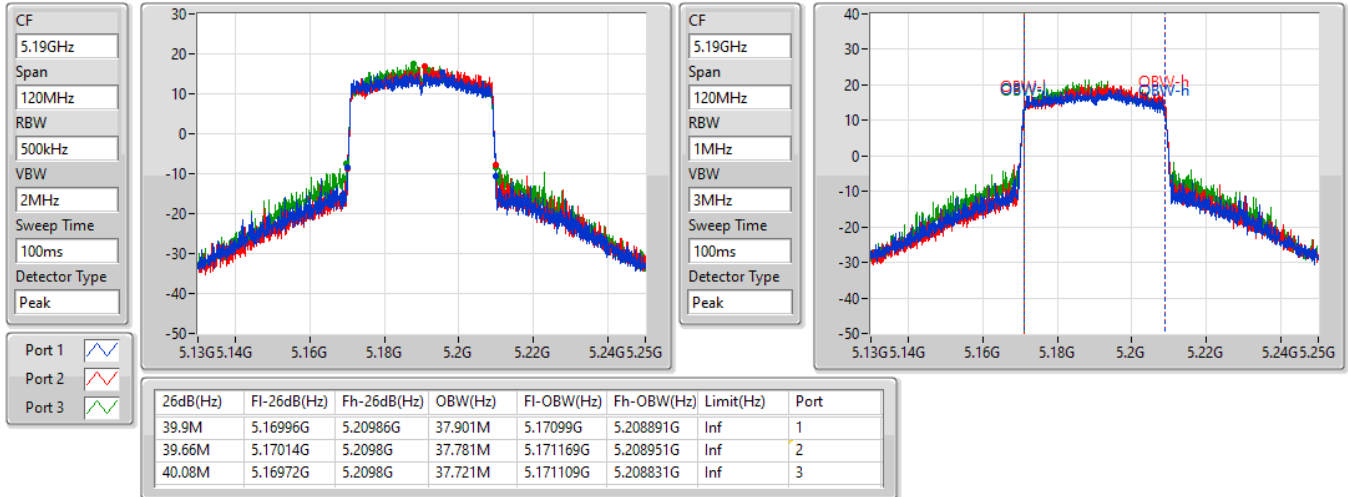

802.11ax HEW20-BF_Nss1,(MCS0)_3TX
EBW
5825MHz

14/09/2022

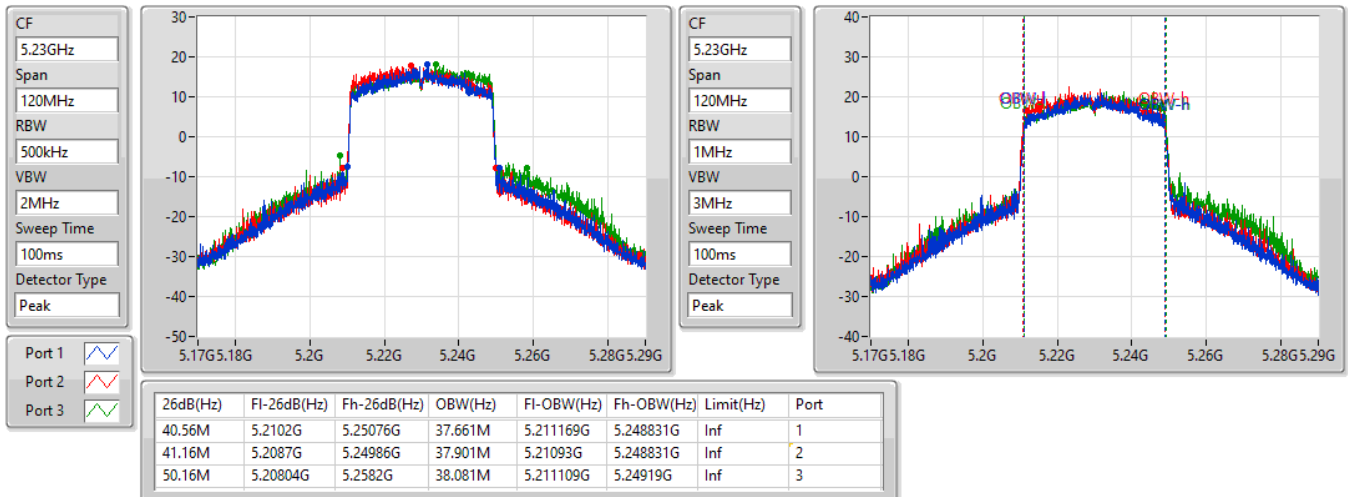


802.11ax HEW40-BF_Nss1,(MCS0)_3TX
EBW
5190MHz

14/09/2022

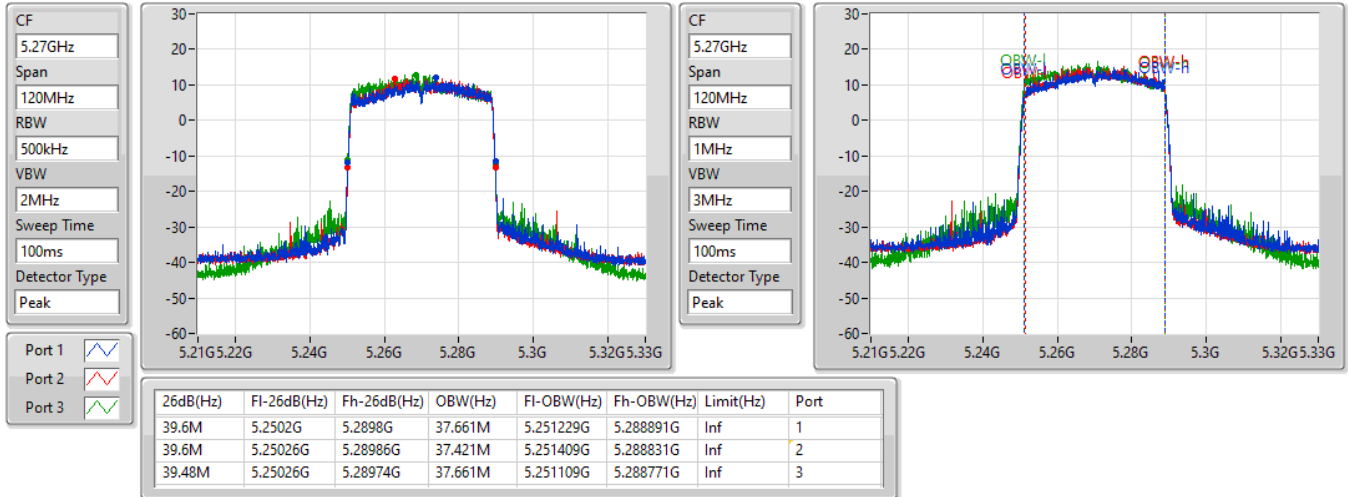

802.11ax HEW40-BF_Nss1,(MCS0)_3TX
EBW
5230MHz

14/09/2022

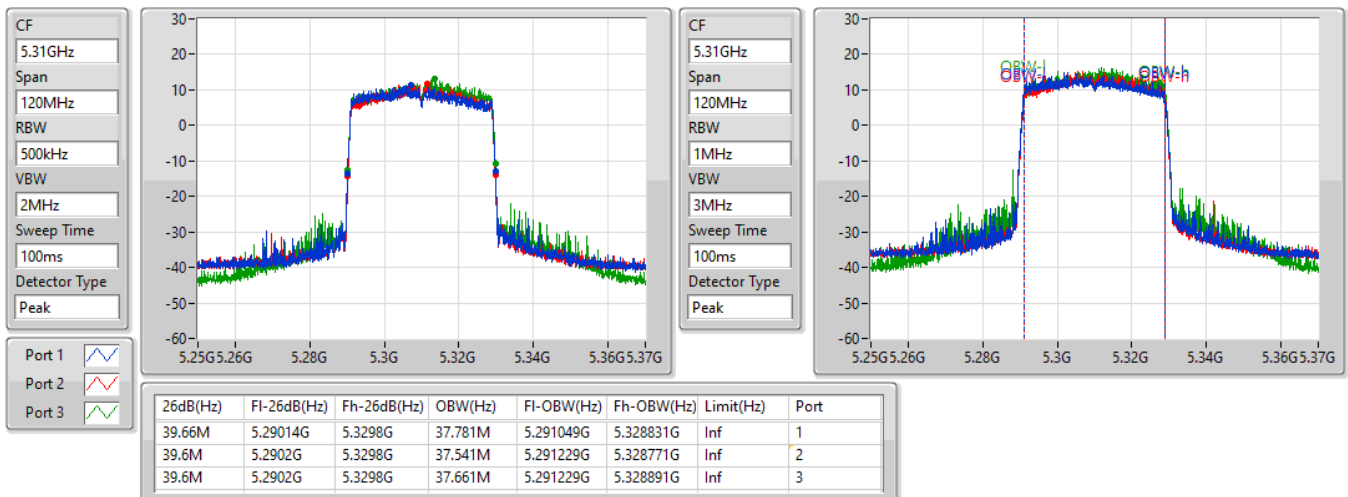


802.11ax HEW40-BF_Nss1,(MCS0)_3TX
EBW
5270MHz

14/09/2022

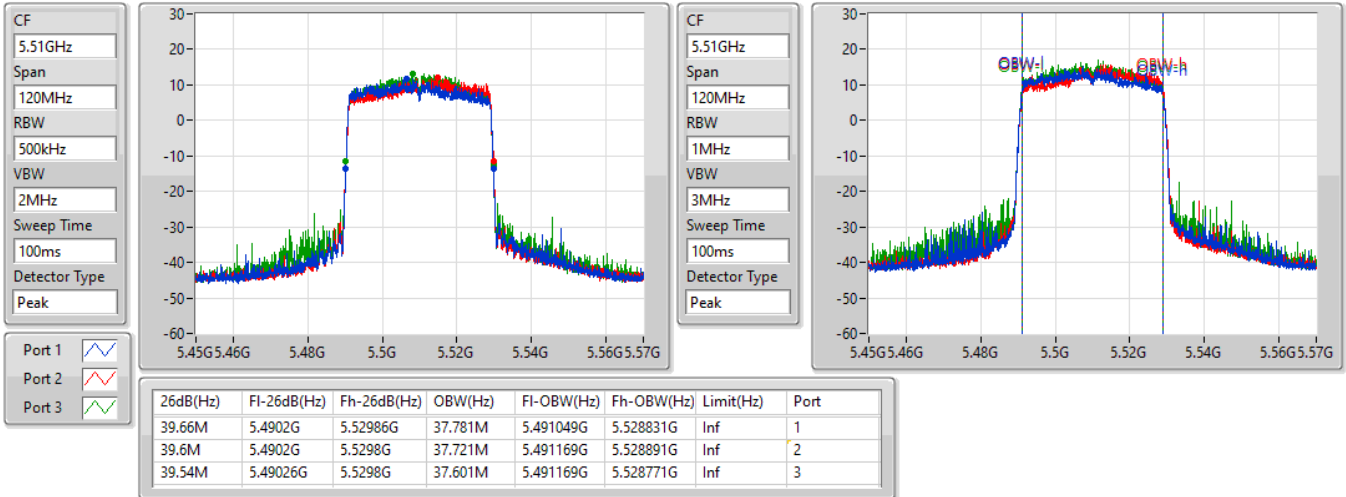

802.11ax HEW40-BF_Nss1,(MCS0)_3TX
EBW
5310MHz

14/09/2022

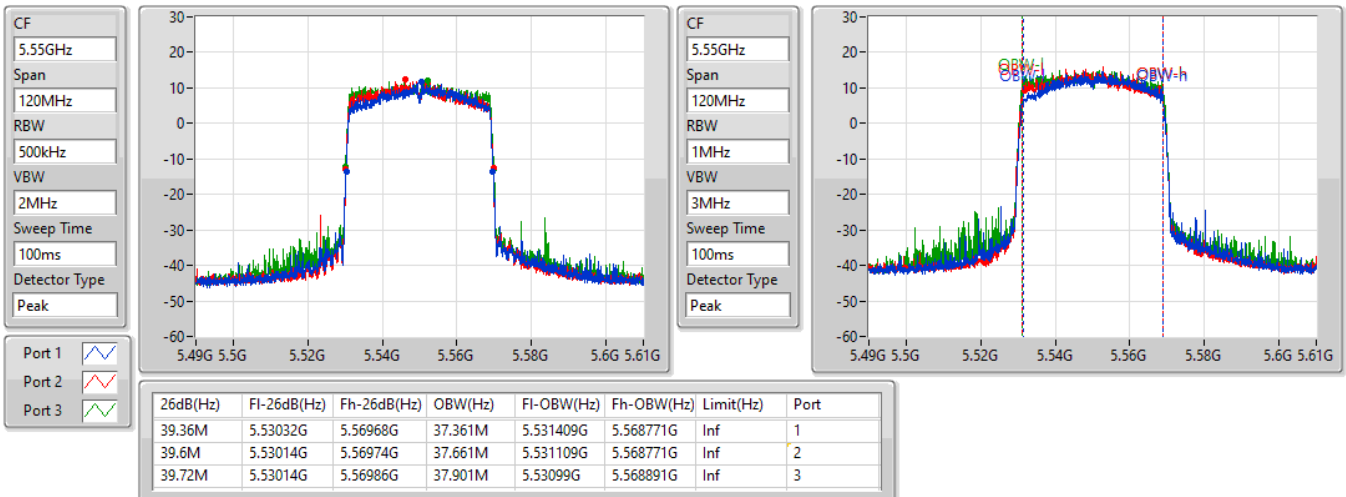


802.11ax HEW40-BF_Nss1,(MCS0)_3TX
EBW
5510MHz

14/09/2022

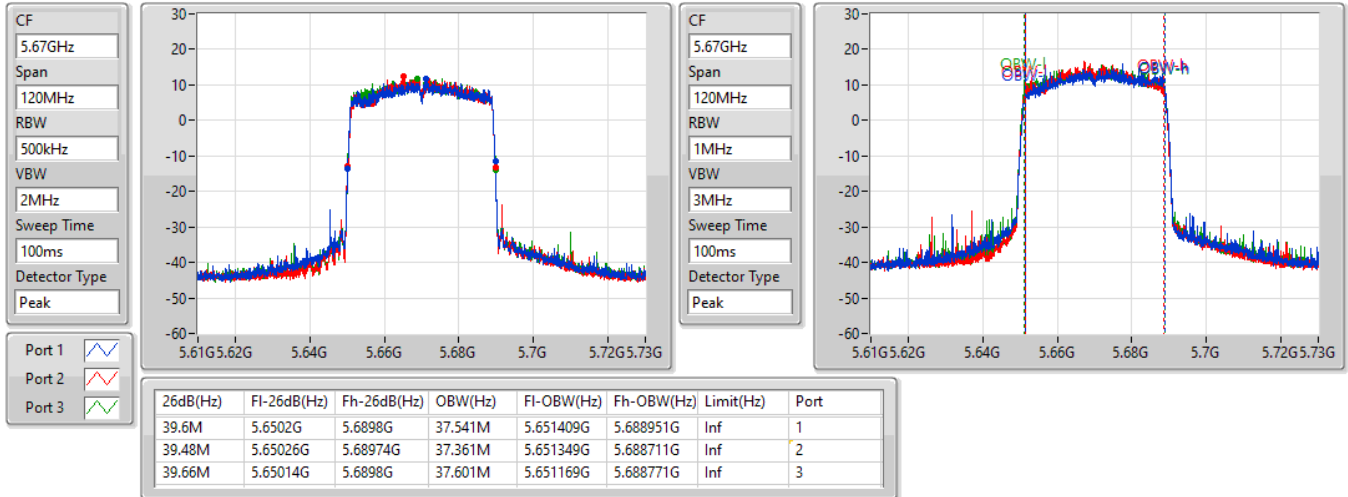

802.11ax HEW40-BF_Nss1,(MCS0)_3TX
EBW
5550MHz

14/09/2022

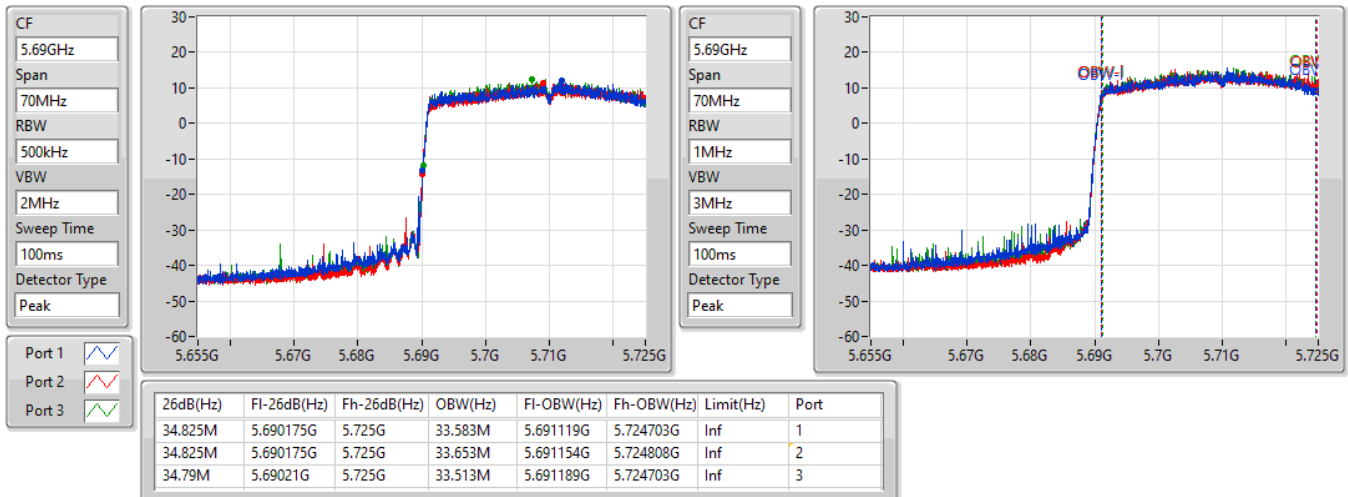


802.11ax HEW40-BF_Nss1,(MCS0)_3TX
EBW
5670MHz

14/09/2022

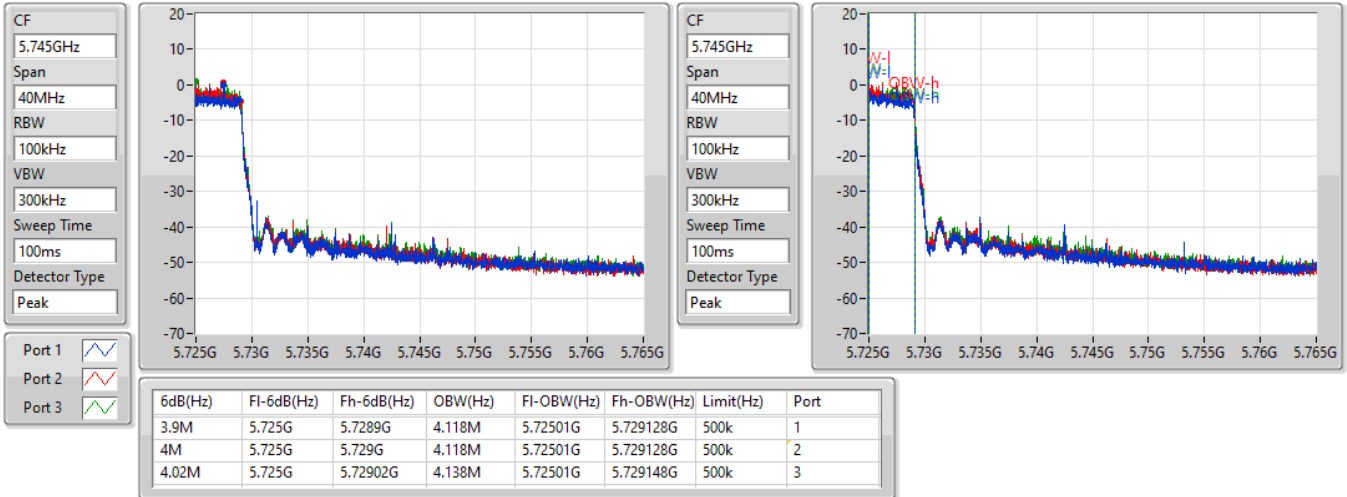

802.11ax HEW40-BF_Nss1,(MCS0)_3TX
EBW
5710MHz Straddle 5.47-5.725GHz

14/09/2022

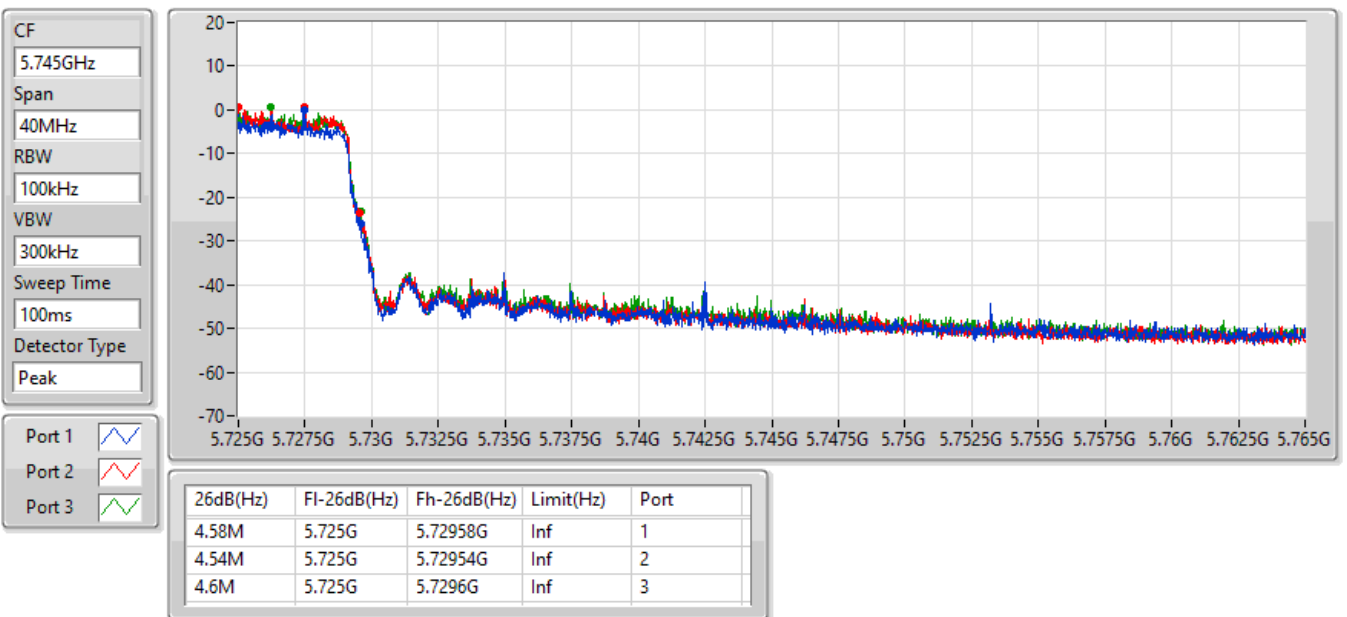


802.11ax HEW40-BF_Nss1,(MCS0)_3TX
EBW
5710MHz Straddle 5.725-5.85GHz

14/09/2022

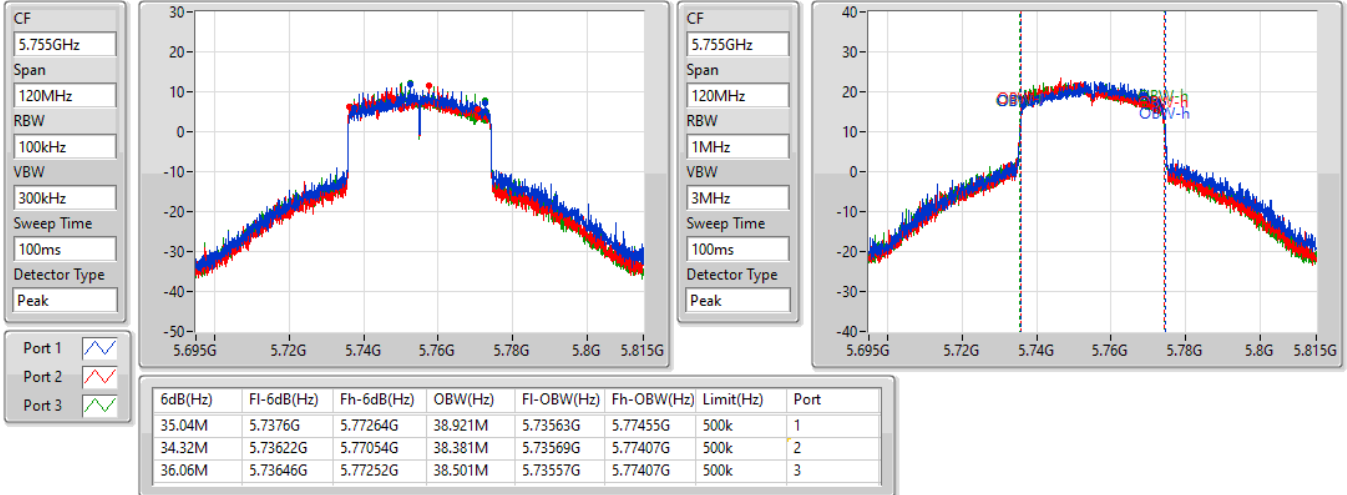

802.11ax HEW40-BF_Nss1,(MCS0)_3TX
EBW
5710MHz Straddle 5.725-5.85GHz

14/09/2022

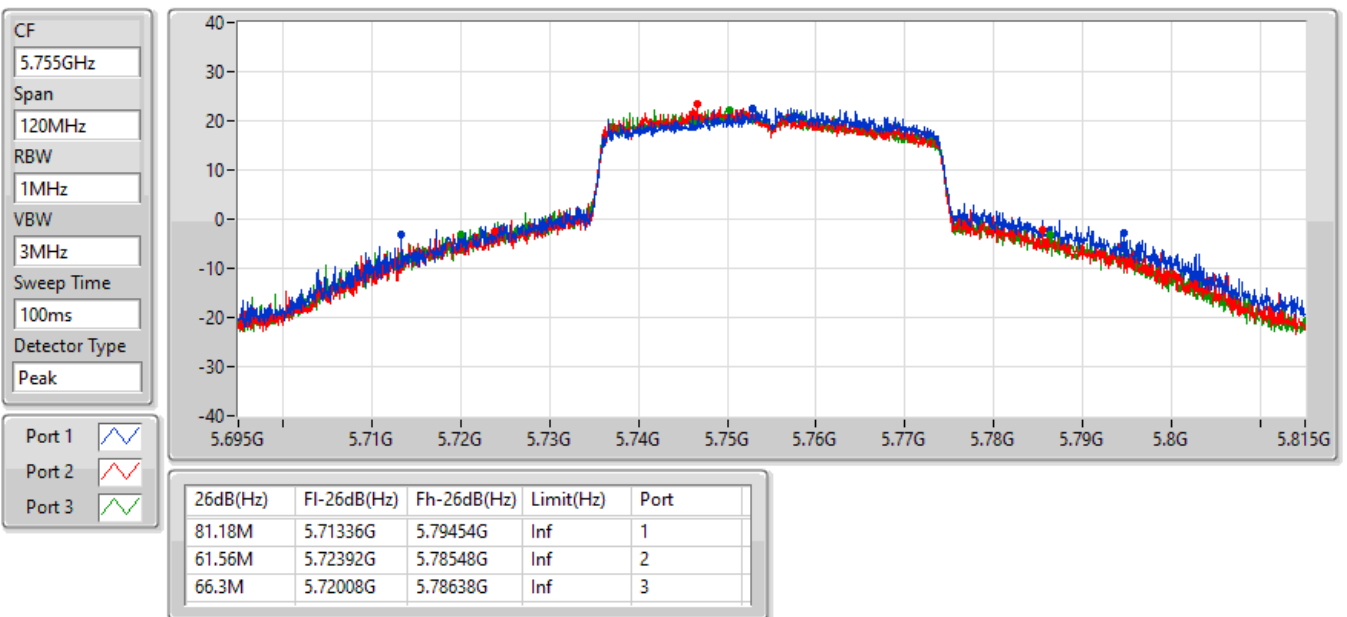


802.11ax HEW40-BF_Nss1,(MCS0)_3TX
EBW
5755MHz

14/09/2022


802.11ax HEW40-BF_Nss1,(MCS0)_3TX
EBW
5755MHz

14/09/2022

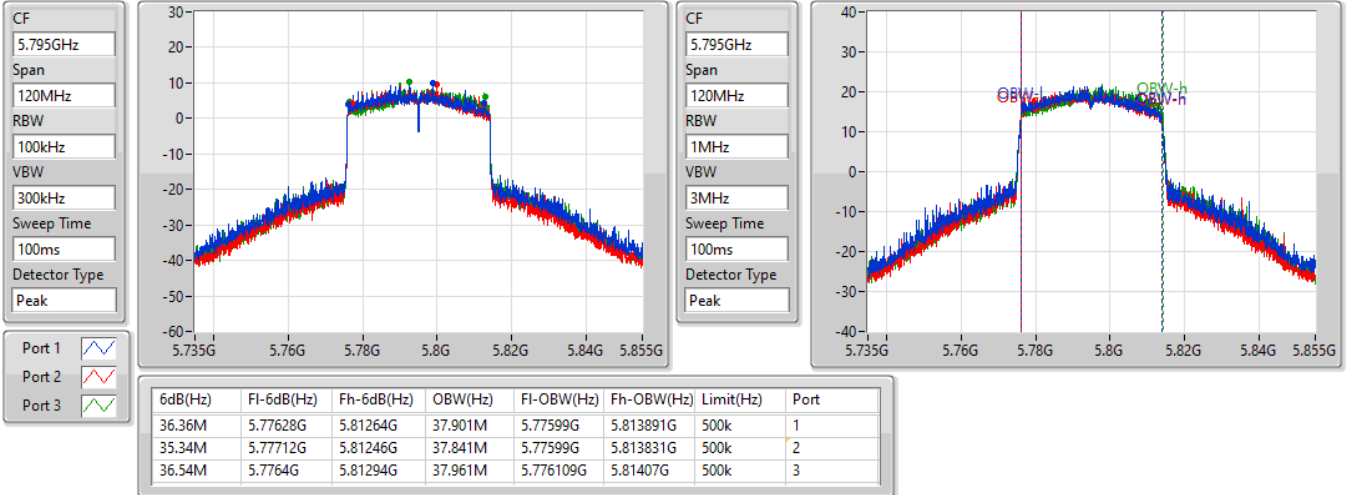


802.11ax HEW40-BF_Nss1,(MCS0)_3TX

EBW

5795MHz

14/09/2022

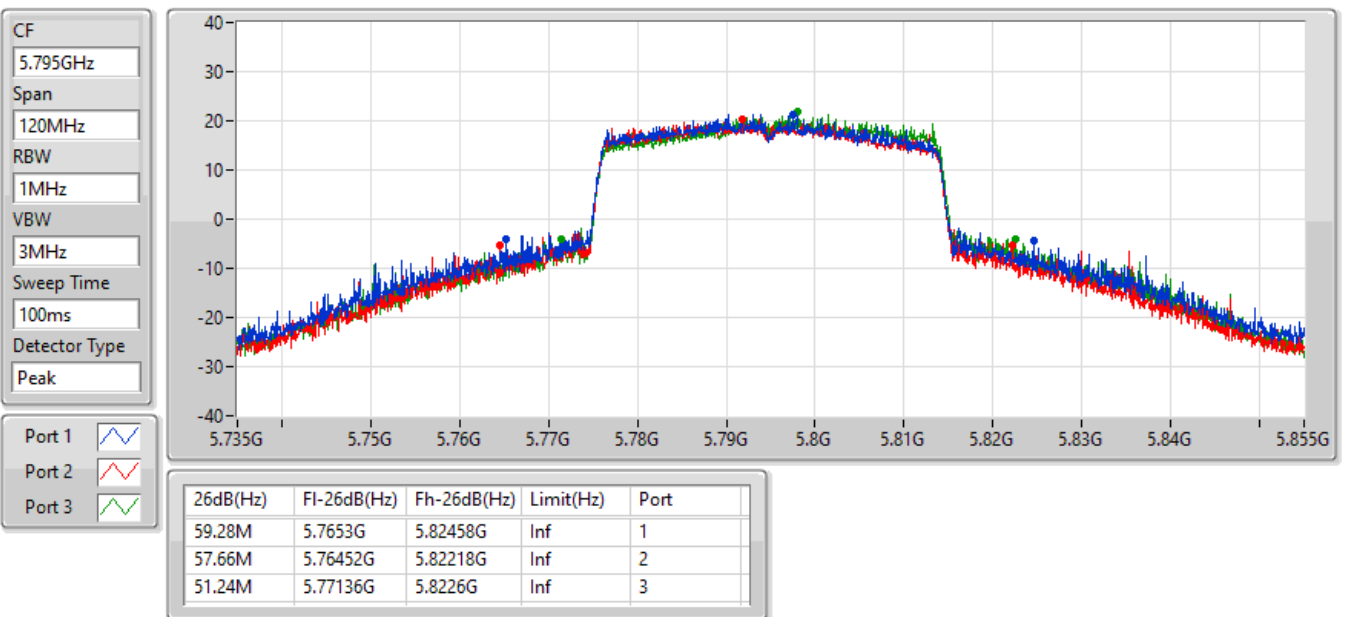


802.11ax HEW40-BF_Nss1,(MCS0)_3TX

EBW

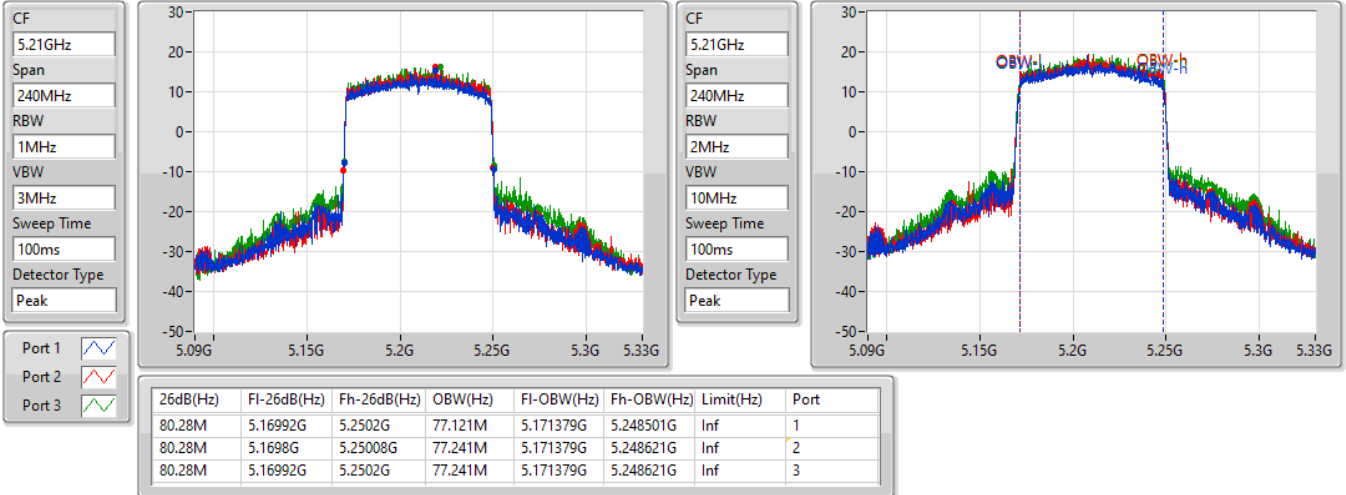
5795MHz

14/09/2022

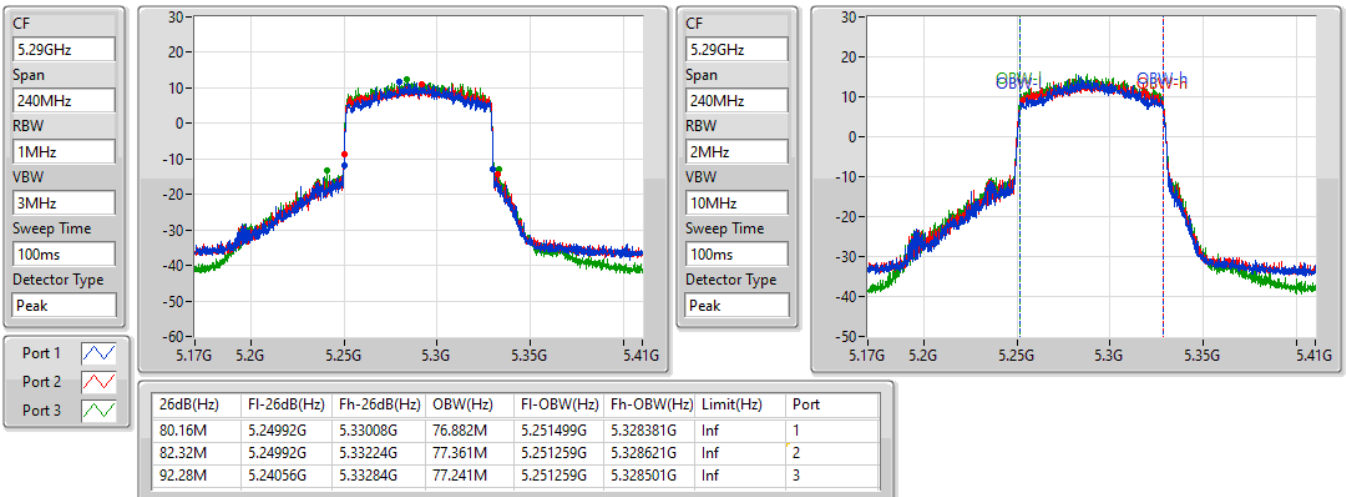


802.11ax HEW80-BF_Nss1,(MCS0)_3TX
EBW
5210MHz

14/09/2022

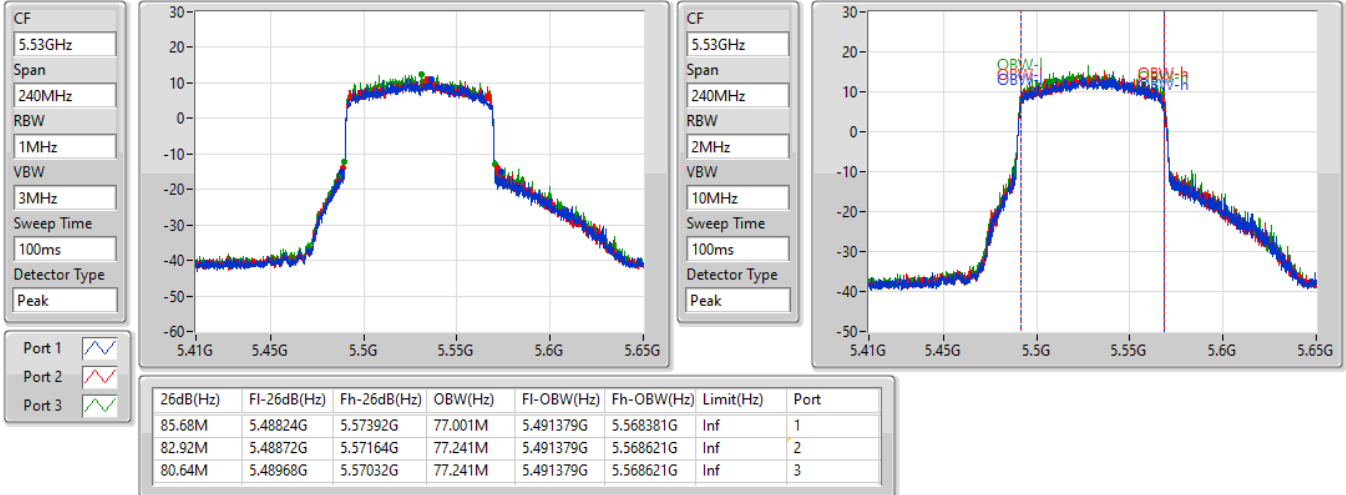

802.11ax HEW80-BF_Nss1,(MCS0)_3TX
EBW
5290MHz

14/09/2022

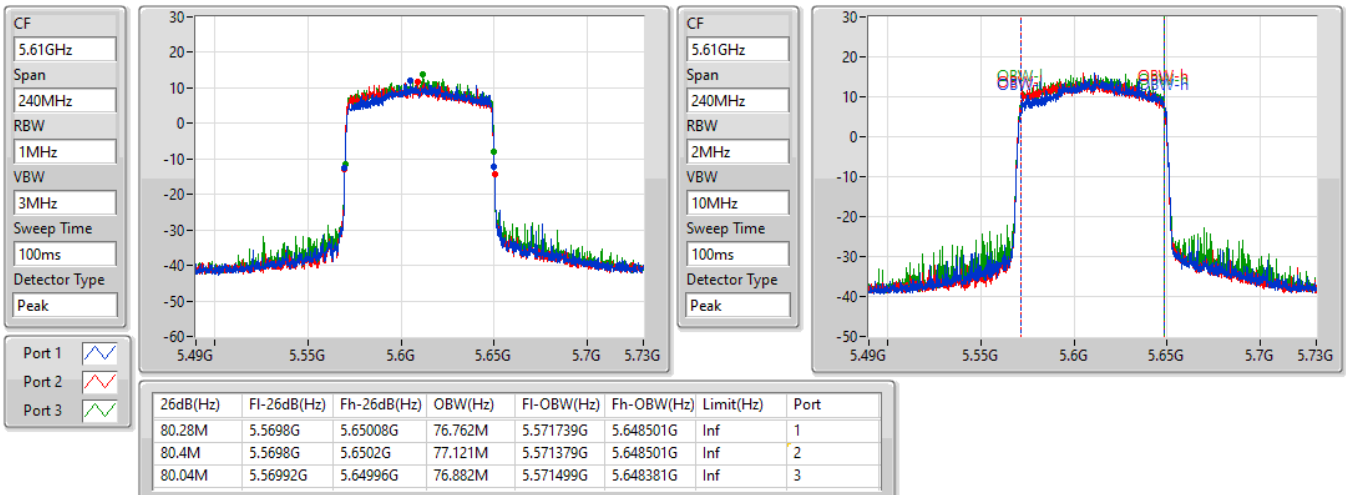


802.11ax HEW80-BF_Nss1,(MCS0)_3TX
EBW
5530MHz

14/09/2022

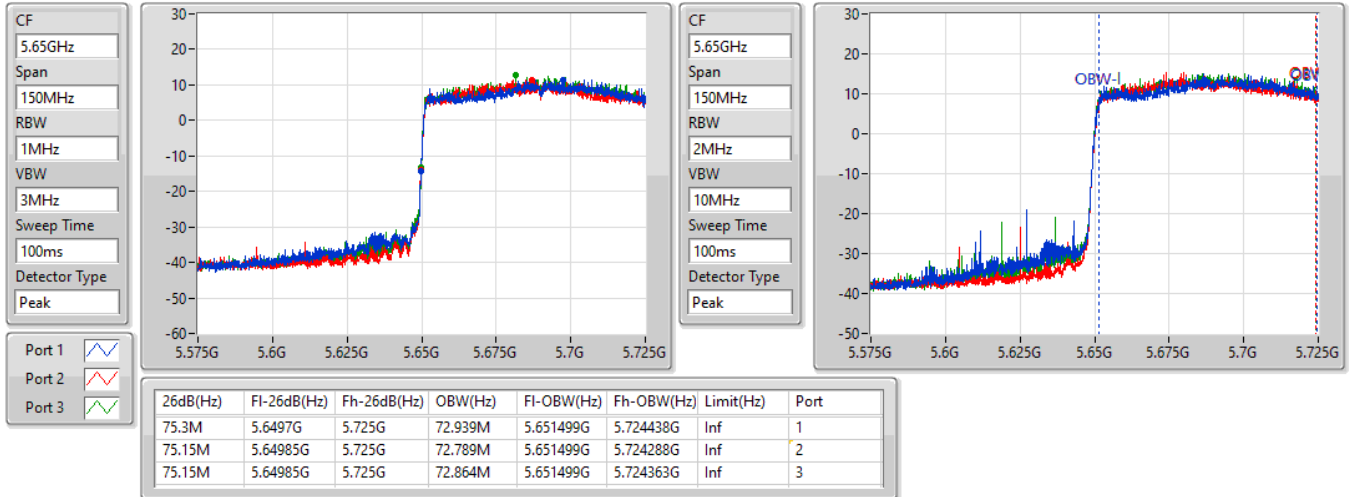

802.11ax HEW80-BF_Nss1,(MCS0)_3TX
EBW
5610MHz

14/09/2022

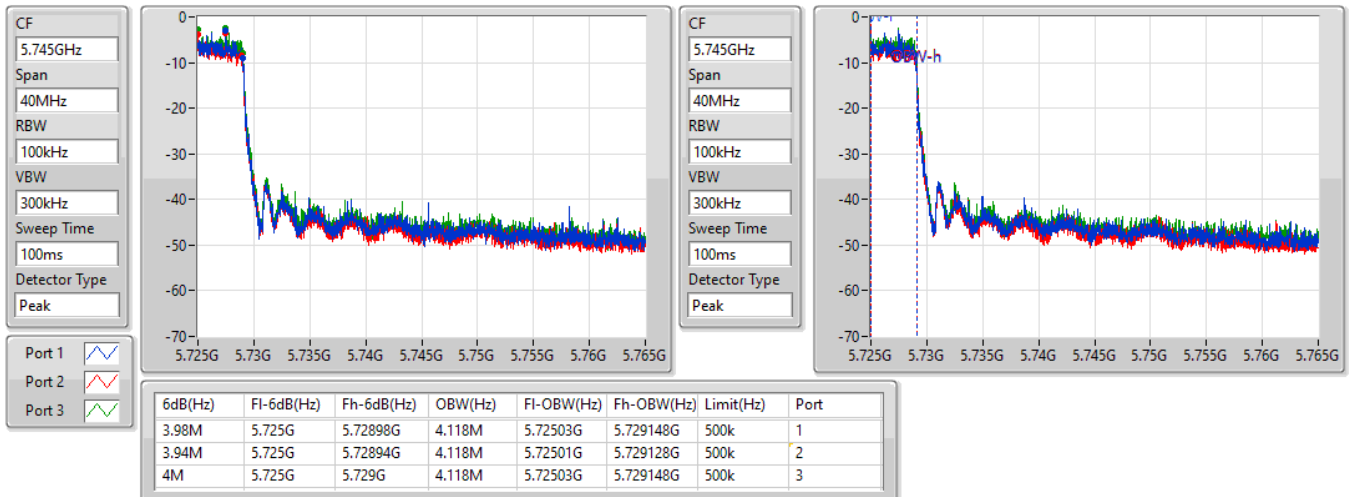


802.11ax HEW80-BF_Nss1,(MCS0)_3TX
EBW
5690MHz Straddle 5.47-5.725GHz

14/09/2022


802.11ax HEW80-BF_Nss1,(MCS0)_3TX
EBW
5690MHz Straddle 5.725-5.85GHz

14/09/2022

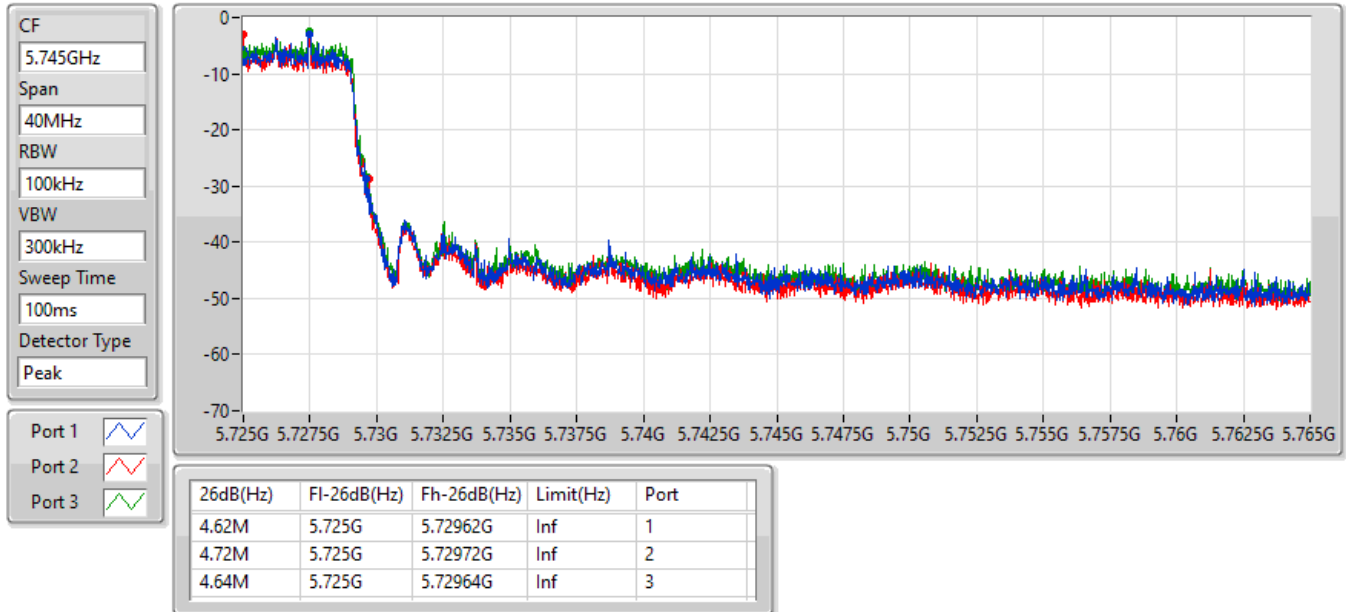


802.11ax HEW80-BF_Nss1,(MCS0)_3TX

EBW

5690MHz Straddle 5.725-5.85GHz

14/09/2022

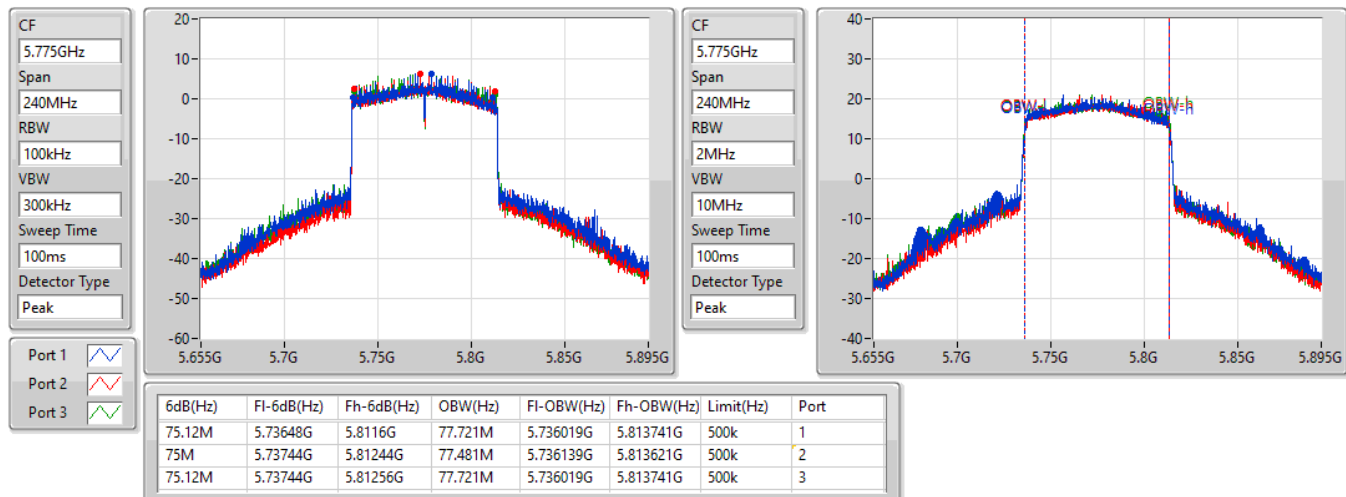


802.11ax HEW80-BF_Nss1,(MCS0)_3TX

EBW

5775MHz

14/09/2022

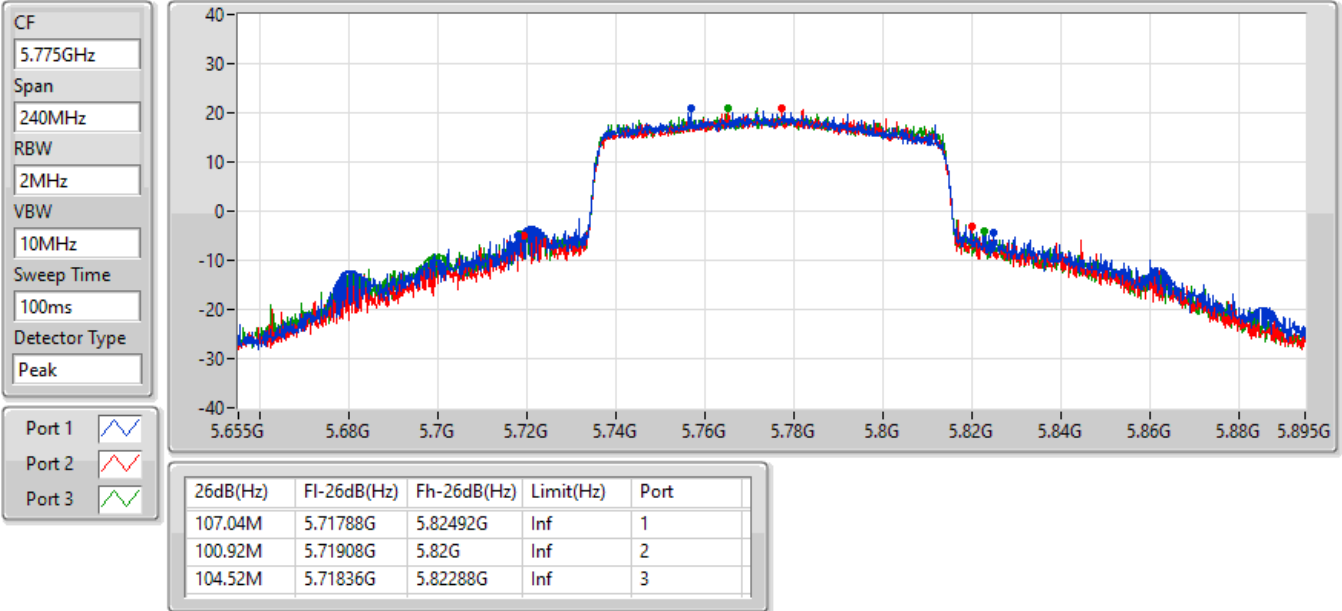


802.11ax HEW80-BF_Nss1,(MCS0)_3TX

EBW

5775MHz

14/09/2022

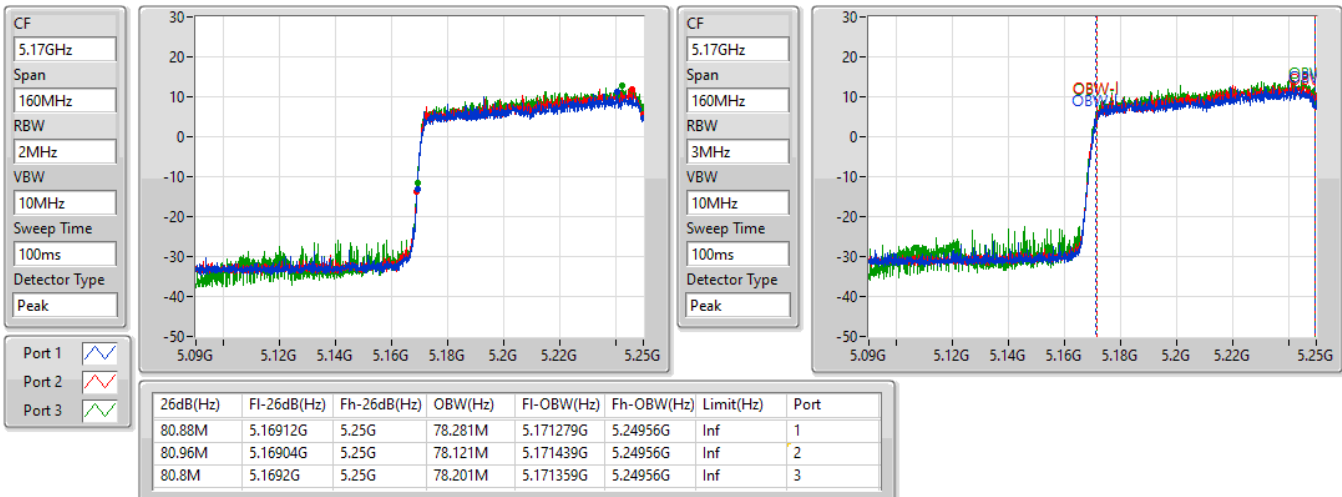


802.11ax HEW160-BF_Nss1,(MCS0)_3TX

EBW

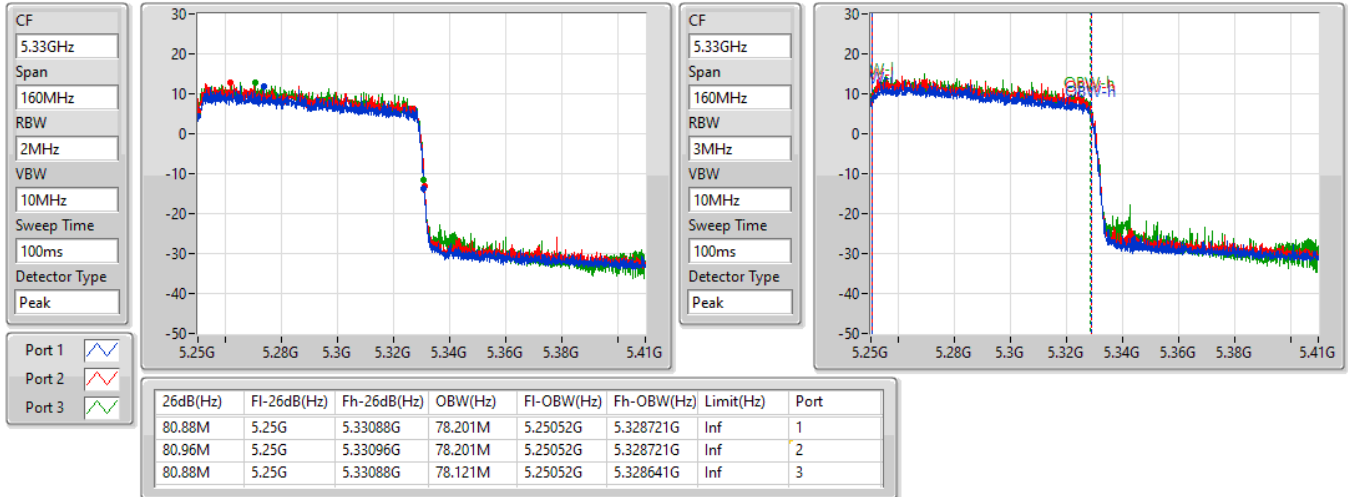
5250MHz Straddle 5.15-5.25GHz

14/09/2022

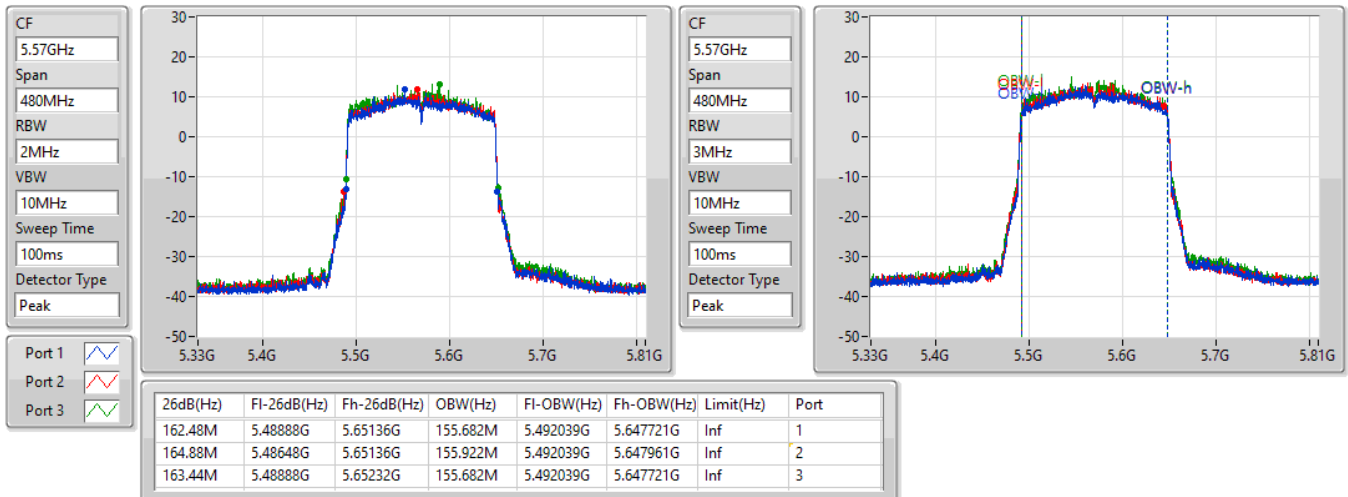


802.11ax HEW160-BF_Nss1,(MCS0)_3TX
EBW
5250MHz Straddle 5.25-5.35GHz

14/09/2022


802.11ax HEW160-BF_Nss1,(MCS0)_3TX
EBW
5570MHz

14/09/2022



Summary

Mode	Total Power (dBm)	Total Power (W)
5.15-5.25GHz	-	-
802.11a_Nss1,(6Mbps)_3TX	28.02	0.63387
5.25-5.35GHz	-	-
802.11a_Nss1,(6Mbps)_3TX	21.74	0.14928
5.47-5.725GHz	-	-
802.11a_Nss1,(6Mbps)_3TX	22.19	0.16558
5.725-5.85GHz	-	-
802.11a_Nss1,(6Mbps)_3TX	29.88	0.97275

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11a_Nss1,(6Mbps)_3TX	-	-	-	-	-	-	-
5180MHz	Pass	3.32	20.87	21.11	20.91	25.74	30.00
5200MHz	Pass	3.32	22.75	23.03	22.63	27.58	30.00
5240MHz	Pass	3.32	23.46	23.39	22.86	28.02	30.00
5260MHz	Pass	3.32	17.33	16.53	17.01	21.74	23.98
5300MHz	Pass	3.32	17.02	16.46	16.97	21.60	23.98
5320MHz	Pass	3.32	17.01	16.42	17.14	21.64	23.98
5500MHz	Pass	3.41	16.97	16.60	17.36	21.76	23.98
5580MHz	Pass	3.41	17.21	17.14	17.86	22.19	23.98
5700MHz	Pass	3.41	16.93	16.63	17.12	21.67	23.98
5720MHz Straddle 5.47-5.725GHz	Pass	3.41	16.43	15.95	16.52	21.08	22.75
5720MHz Straddle 5.725-5.85GHz	Pass	3.31	9.74	9.33	9.84	14.41	30.00
5745MHz	Pass	3.31	25.42	24.90	24.98	29.88	30.00
5785MHz	Pass	3.31	25.22	24.87	24.73	29.72	30.00
5825MHz	Pass	3.31	24.89	24.75	24.76	29.57	30.00

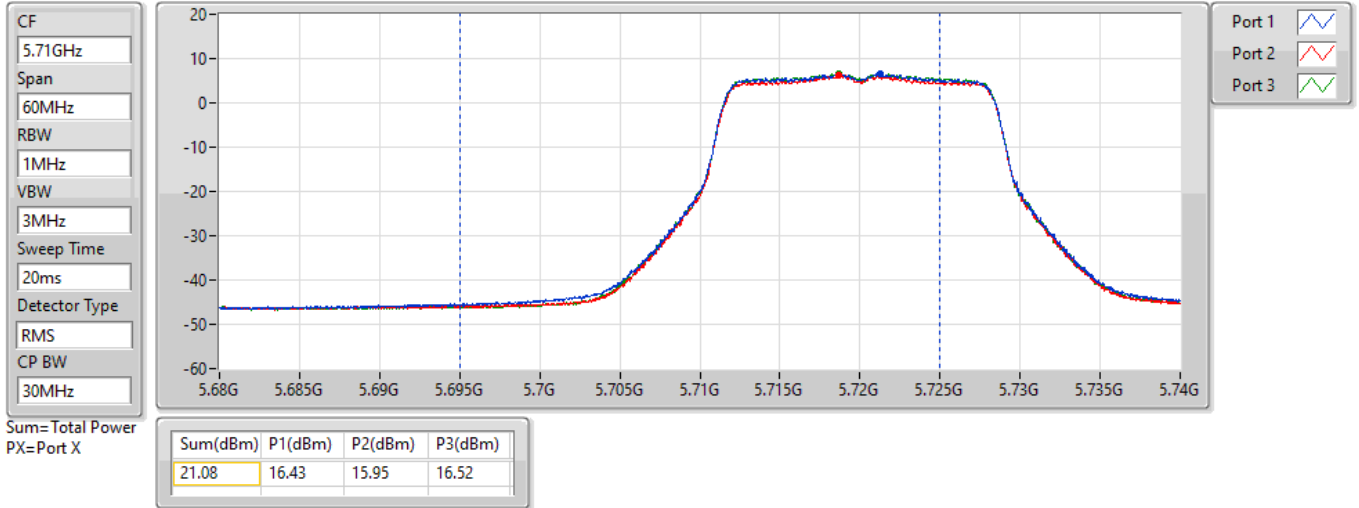
DG = Directional Gain; Port X = Port X output power

802.11a_Nss1,(6Mbps)_3TX

AV Power

5720MHz Straddle 5.47-5.725GHz_TnomVnom

08/09/2022

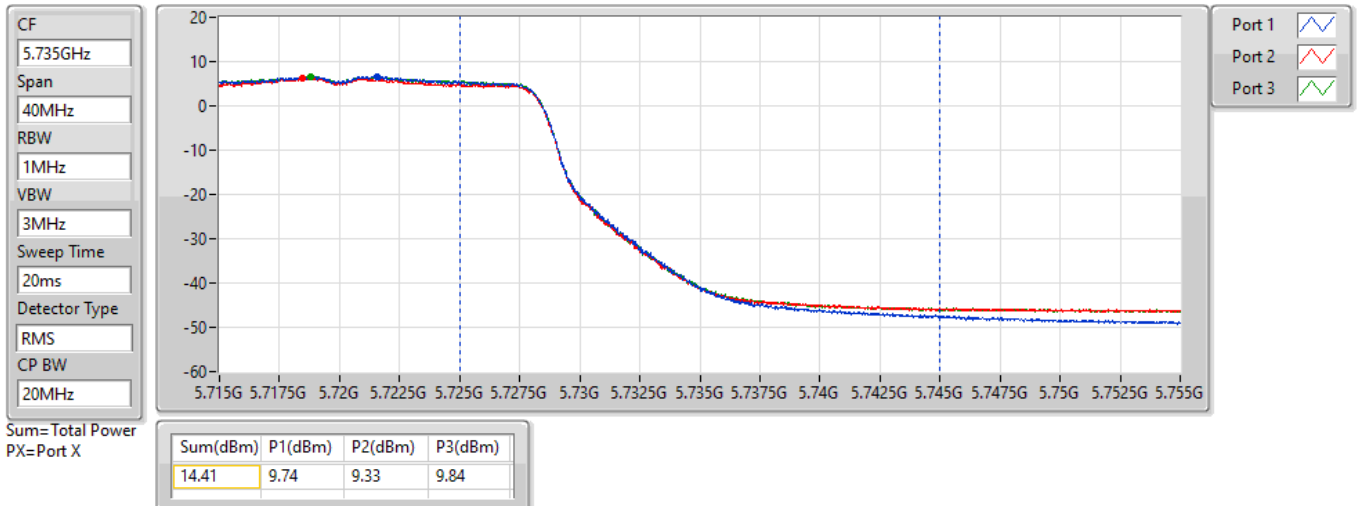


802.11a_Nss1,(6Mbps)_3TX

AV Power

5720MHz Straddle 5.725-5.85GHz_TnomVnom

08/09/2022



Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.15-5.25GHz	-	-	-	-
802.11ax HEW20_Nss2,(MCS0)_3TX	29.72	0.93756	33.04	2.01372
802.11ax HEW40_Nss2,(MCS0)_3TX	29.19	0.82985	32.51	1.78238
802.11ax HEW80_Nss2,(MCS0)_3TX	25.69	0.37068	29.01	0.79616
802.11ax HEW160_Nss2,(MCS0)_3TX	19.48	0.08872	22.80	0.19055
5.25-5.35GHz	-	-	-	-
802.11ax HEW20_Nss2,(MCS0)_3TX	23.53	0.22542	26.85	0.48417
802.11ax HEW40_Nss2,(MCS0)_3TX	23.92	0.24660	27.24	0.52966
802.11ax HEW80_Nss2,(MCS0)_3TX	23.01	0.19999	26.33	0.42954
802.11ax HEW160_Nss2,(MCS0)_3TX	19.42	0.08750	22.74	0.18793
5.47-5.725GHz	-	-	-	-
802.11ax HEW20_Nss2,(MCS0)_3TX	23.97	0.24946	27.38	0.54702
802.11ax HEW40_Nss2,(MCS0)_3TX	23.96	0.24889	27.37	0.54576
802.11ax HEW80_Nss2,(MCS0)_3TX	23.96	0.24889	27.37	0.54576
802.11ax HEW160_Nss2,(MCS0)_3TX	23.73	0.23605	27.14	0.51761
5.725-5.85GHz	-	-	-	-
802.11ax HEW20_Nss2,(MCS0)_3TX	29.95	0.98855	33.26	2.11836
802.11ax HEW40_Nss2,(MCS0)_3TX	29.58	0.90782	32.89	1.94536
802.11ax HEW80_Nss2,(MCS0)_3TX	28.84	0.76560	32.15	1.64059



Average Power (For Non-beamforming Mode)_3T2S

Appendix C.2

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11ax HEW20_Nss2,(MCS0)_3TX	-	-	-	-	-	-	-	-	-
5180MHz	Pass	3.32	23.83	23.92	23.48	28.52	30.00	31.84	36.00
5200MHz	Pass	3.32	24.98	25.35	24.47	29.72	30.00	33.04	36.00
5240MHz	Pass	3.32	24.72	24.92	24.07	29.36	30.00	32.68	36.00
5260MHz	Pass	3.32	18.81	18.72	18.76	23.53	23.98	26.85	30.00
5300MHz	Pass	3.32	18.68	18.72	18.77	23.49	23.98	26.81	30.00
5320MHz	Pass	3.32	18.71	18.78	18.51	23.44	23.98	26.76	30.00
5500MHz	Pass	3.41	18.75	18.84	19.05	23.65	23.98	27.06	30.00
5580MHz	Pass	3.41	19.05	19.01	19.51	23.97	23.98	27.38	30.00
5700MHz	Pass	3.41	18.83	18.62	18.96	23.58	23.98	26.99	30.00
5720MHz Straddle 5.47-5.725GHz	Pass	3.41	17.98	17.84	18.07	22.74	22.90	26.15	28.90
5720MHz Straddle 5.725-5.85GHz	Pass	3.31	11.47	11.32	11.50	16.20	30.00	19.51	36.00
5745MHz	Pass	3.31	25.29	24.90	25.03	29.85	30.00	33.16	36.00
5785MHz	Pass	3.31	25.16	24.97	25.03	29.83	30.00	33.14	36.00
5825MHz	Pass	3.31	25.32	25.05	25.17	29.95	30.00	33.26	36.00
802.11ax HEW40_Nss2,(MCS0)_3TX	-	-	-	-	-	-	-	-	-
5190MHz	Pass	3.32	22.12	22.60	22.08	27.04	30.00	30.36	36.00
5230MHz	Pass	3.32	24.42	24.77	24.04	29.19	30.00	32.51	36.00
5270MHz	Pass	3.32	19.22	19.12	19.01	23.89	23.98	27.21	30.00
5310MHz	Pass	3.32	19.20	19.15	19.10	23.92	23.98	27.24	30.00
5510MHz	Pass	3.41	19.06	19.11	19.39	23.96	23.98	27.37	30.00
5550MHz	Pass	3.41	18.93	19.03	19.34	23.87	23.98	27.28	30.00
5670MHz	Pass	3.41	18.82	18.77	18.96	23.62	23.98	27.03	30.00
5710MHz Straddle 5.47-5.725GHz	Pass	3.41	18.99	18.83	19.09	23.74	23.98	27.15	30.00
5710MHz Straddle 5.725-5.85GHz	Pass	3.31	6.64	6.46	6.62	11.35	30.00	14.66	36.00
5755MHz	Pass	3.31	25.02	24.62	24.77	29.58	30.00	32.89	36.00
5795MHz	Pass	3.31	24.82	24.75	24.69	29.52	30.00	32.83	36.00
802.11ax HEW80_Nss2,(MCS0)_3TX	-	-	-	-	-	-	-	-	-
5210MHz	Pass	3.32	20.75	21.26	20.71	25.69	30.00	29.01	36.00
5290MHz	Pass	3.32	18.33	18.15	18.22	23.01	23.98	26.33	30.00
5530MHz	Pass	3.41	19.02	19.16	19.37	23.96	23.98	27.37	30.00
5610MHz	Pass	3.41	19.06	18.86	19.42	23.89	23.98	27.30	30.00
5690MHz Straddle 5.47-5.725GHz	Pass	3.41	18.82	18.85	18.97	23.65	23.98	27.06	30.00
5690MHz Straddle 5.725-5.85GHz	Pass	3.31	2.90	2.51	2.92	7.55	30.00	10.86	36.00
5775MHz	Pass	3.31	24.12	24.07	24.03	28.84	30.00	32.15	36.00
802.11ax HEW160_Nss2,(MCS0)_3TX	-	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	3.32	14.57	15.00	14.55	19.48	30.00	22.80	36.00
5250MHz Straddle 5.25-5.35GHz	Pass	3.32	14.61	14.86	14.48	19.42	23.98	22.74	30.00
5570MHz	Pass	3.41	18.83	18.87	19.18	23.73	23.98	27.14	30.00

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

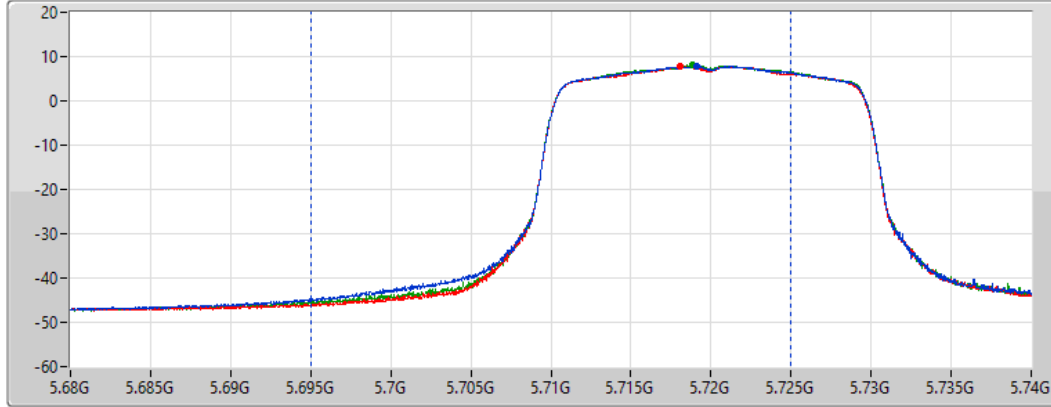
802.11ax HEW20_Nss2,(MCS0)_3TX

AV Power

5720MHz Straddle 5.47-5.725GHz_TnomVnom

08/09/2022

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



Port 1
Port 2
Port 3

Sum= Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)
22.74	17.98	17.84	18.07

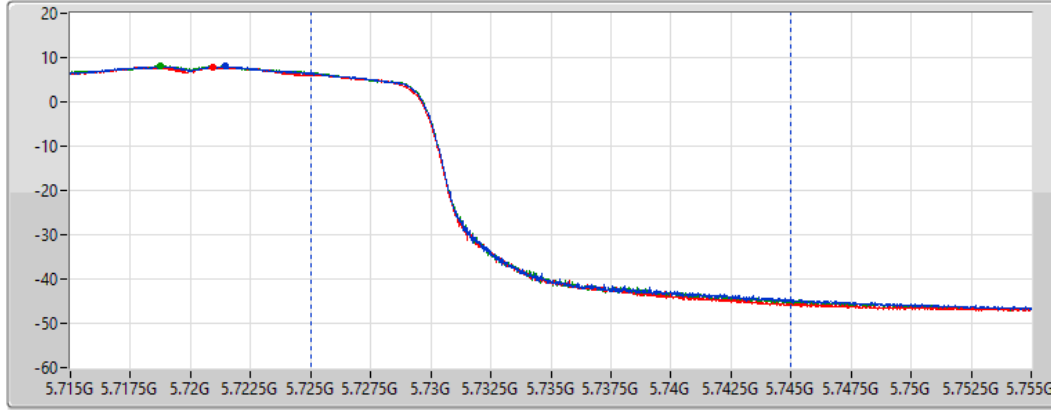
802.11ax HEW20_Nss2,(MCS0)_3TX

AV Power

5720MHz Straddle 5.725-5.85GHz_TnomVnom

08/09/2022

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



Port 1
Port 2
Port 3

Sum= Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)
16.20	11.47	11.32	11.50

802.11ax HEW40_Nss2,(MCS0)_3TX

AV Power

5710MHz Straddle 5.47-5.725GHz_TnomVnom

08/09/2022

CF
5.69GHz

Span
140MHz

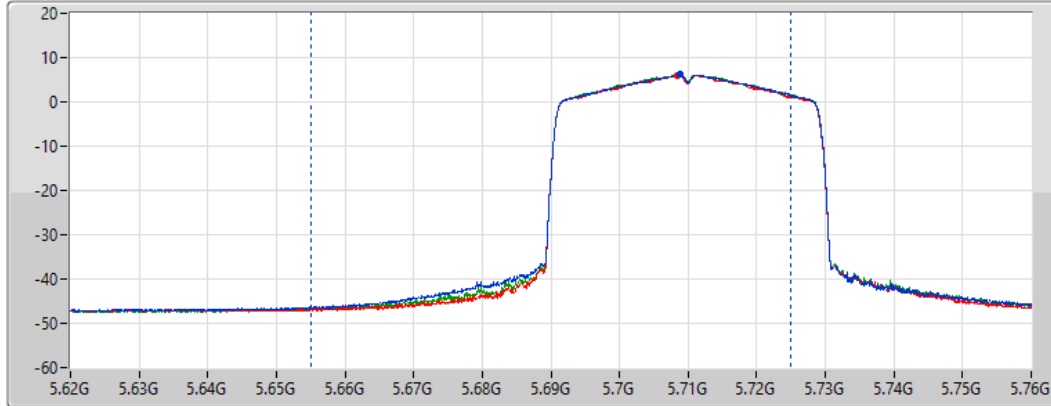
RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS

CP BW
70MHz



Port 1 

Port 2 

Port 3 

Sum= Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)
23.74	18.99	18.83	19.09

802.11ax HEW40_Nss2,(MCS0)_3TX

AV Power

5710MHz Straddle 5.725-5.85GHz_TnomVnom

08/09/2022

CF
5.735GHz

Span
40MHz

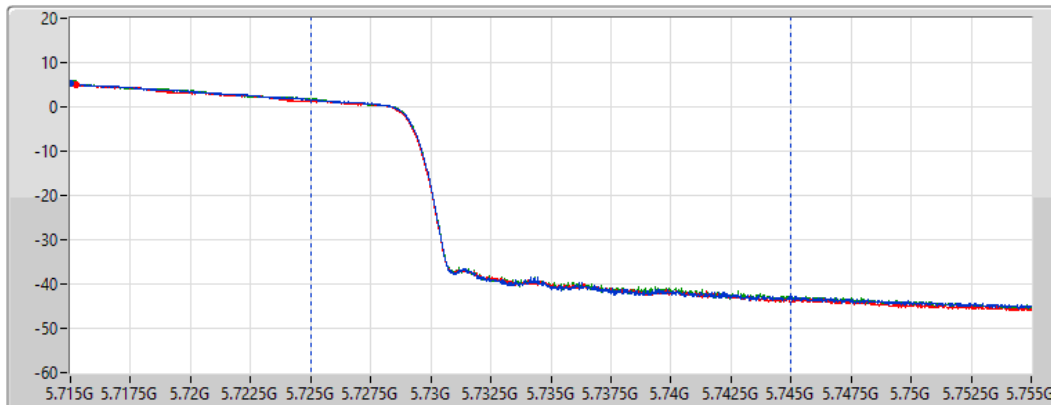
RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS

CP BW
20MHz



Port 1 

Port 2 

Port 3 

Sum= Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)
11.35	6.64	6.46	6.62

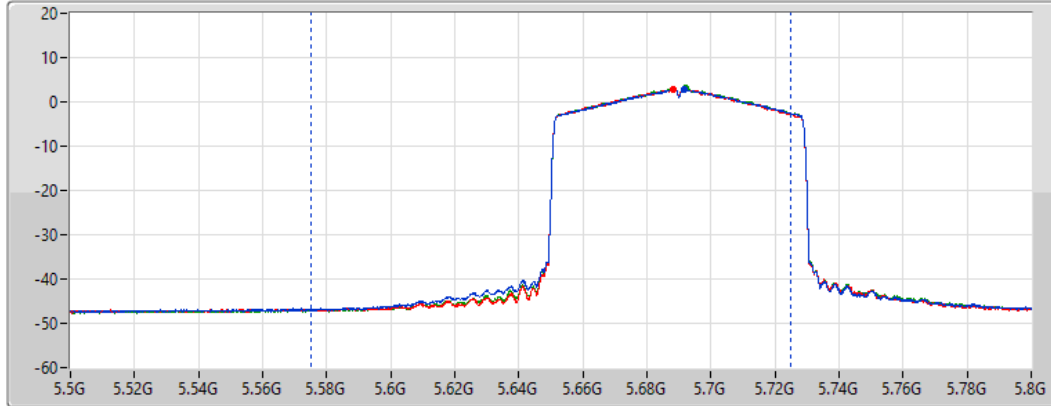
802.11ax HEW80_Nss2,(MCS0)_3TX

AV Power

5690MHz Straddle 5.47-5.725GHz_TnomVnom

08/09/2022

CF
5.65GHz
Span
300MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS
CP BW
150MHz



Port 1 
Port 2 
Port 3 

Sum= Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)
23.65	18.82	18.85	18.97

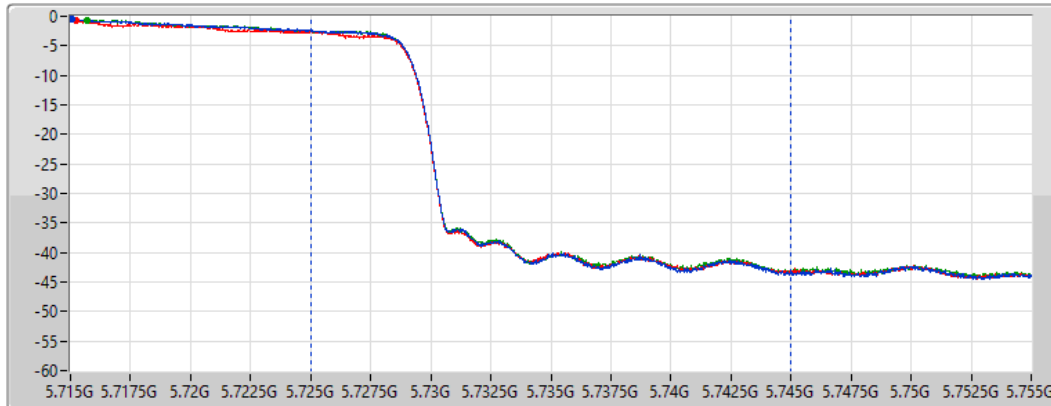
802.11ax HEW80_Nss2,(MCS0)_3TX

AV Power

5690MHz Straddle 5.725-5.85GHz_TnomVnom

08/09/2022

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



Port 1 
Port 2 
Port 3 

Sum= Total Power
PX=Port X

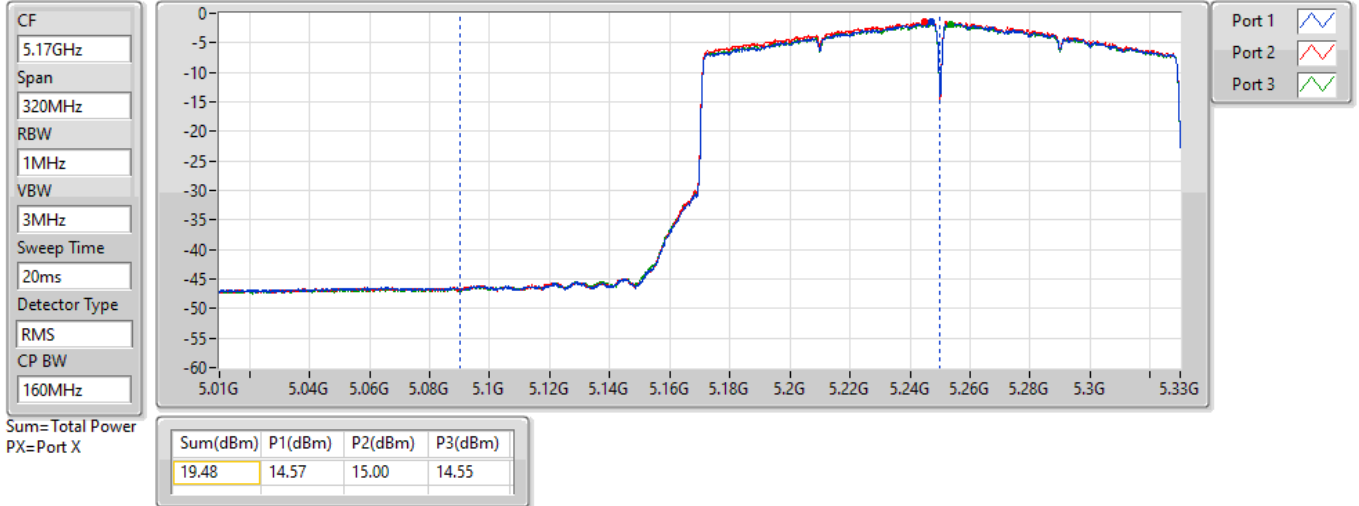
Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)
7.55	2.90	2.51	2.92

802.11ax HEW160_Nss2,(MCS0)_3TX

AV Power

5250MHz Straddle 5.15-5.25GHz_TnomVnom

08/09/2022

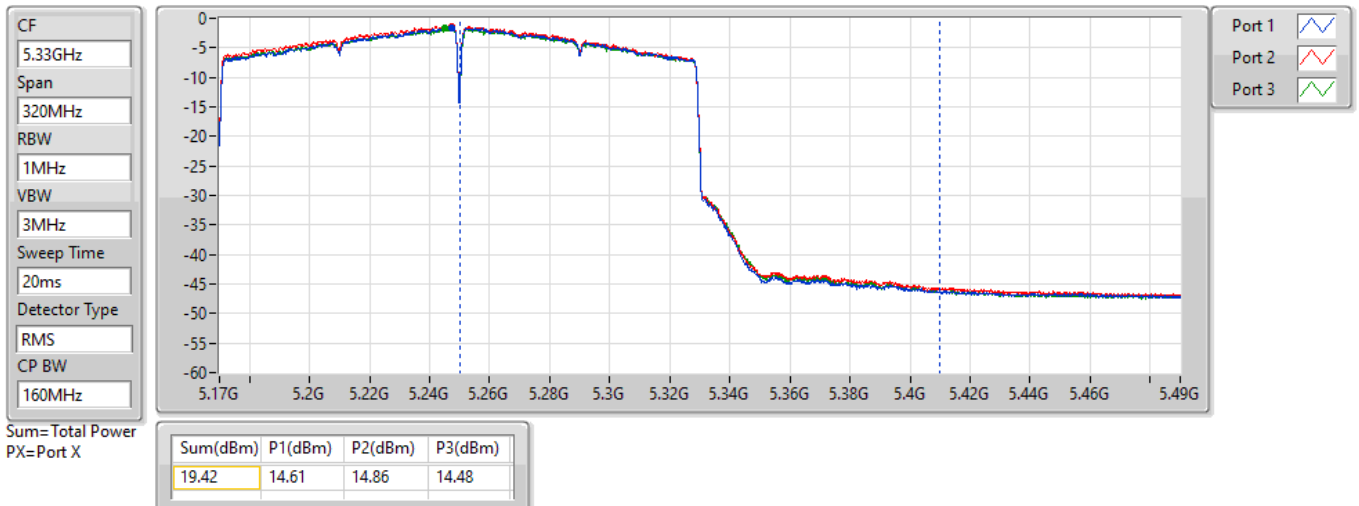


802.11ax HEW160_Nss2,(MCS0)_3TX

AV Power

5250MHz Straddle 5.25-5.35GHz_TnomVnom

08/09/2022



Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.15-5.25GHz	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_3TX	27.93	0.62087	35.32	3.40408
802.11ax HEW40-BF_Nss1,(MCS0)_3TX	28.27	0.67143	35.66	3.68129
802.11ax HEW80-BF_Nss1,(MCS0)_3TX	25.88	0.38726	33.27	2.12324
802.11ax HEW160-BF_Nss1,(MCS0)_3TX	18.71	0.07430	26.10	0.40738
5.25-5.35GHz	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_3TX	22.00	0.15849	29.39	0.86896
802.11ax HEW40-BF_Nss1,(MCS0)_3TX	22.58	0.18113	29.97	0.99312
802.11ax HEW80-BF_Nss1,(MCS0)_3TX	22.13	0.16331	29.52	0.89536
802.11ax HEW160-BF_Nss1,(MCS0)_3TX	19.25	0.08414	26.64	0.46132
5.47-5.725GHz	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_3TX	22.04	0.15996	29.44	0.87902
802.11ax HEW40-BF_Nss1,(MCS0)_3TX	22.51	0.17824	29.91	0.97949
802.11ax HEW80-BF_Nss1,(MCS0)_3TX	22.45	0.17579	29.85	0.96605
802.11ax HEW160-BF_Nss1,(MCS0)_3TX	22.54	0.17947	29.94	0.98628
5.725-5.85GHz	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_3TX	28.54	0.71450	35.98	3.96278
802.11ax HEW40-BF_Nss1,(MCS0)_3TX	28.52	0.71121	35.96	3.94457
802.11ax HEW80-BF_Nss1,(MCS0)_3TX	28.33	0.68077	35.77	3.77572

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11ax HEW20-BF_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-	-	-
5180MHz	Pass	7.39	22.40	22.87	23.03	27.55	28.61	34.94	36.00
5200MHz	Pass	7.39	22.34	23.61	23.42	27.93	28.61	35.32	36.00
5240MHz	Pass	7.39	22.38	23.27	23.33	27.79	28.61	35.18	36.00
5260MHz	Pass	7.39	16.14	17.40	17.80	21.94	22.59	29.33	30.00
5300MHz	Pass	7.39	16.76	17.13	17.75	22.00	22.59	29.39	30.00
5320MHz	Pass	7.39	16.53	17.25	17.41	21.85	22.59	29.24	30.00
5500MHz	Pass	7.40	16.59	17.21	17.49	21.88	22.58	29.28	30.00
5580MHz	Pass	7.40	16.54	17.23	17.92	22.04	22.58	29.44	30.00
5700MHz	Pass	7.40	16.78	17.04	17.57	21.91	22.58	29.31	30.00
5720MHz Straddle 5.47-5.725GHz	Pass	7.40	16.66	16.57	16.72	21.42	21.57	28.82	28.97
5720MHz Straddle 5.725-5.85GHz	Pass	7.44	8.31	9.90	10.50	14.44	28.56	21.88	36.00
5745MHz	Pass	7.44	23.71	23.75	23.57	28.45	28.56	35.89	36.00
5785MHz	Pass	7.44	23.77	23.59	23.83	28.50	28.56	35.94	36.00
5825MHz	Pass	7.44	23.61	23.81	23.87	28.54	28.56	35.98	36.00
802.11ax HEW40-BF_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-	-	-
5190MHz	Pass	7.39	21.92	22.71	23.11	27.38	28.61	34.77	36.00
5230MHz	Pass	7.39	22.99	23.70	23.77	28.27	28.61	35.66	36.00
5270MHz	Pass	7.39	17.21	17.65	18.47	22.58	22.59	29.97	30.00
5310MHz	Pass	7.39	17.05	17.38	18.30	22.38	22.59	29.77	30.00
5510MHz	Pass	7.40	16.68	17.25	18.35	22.25	22.58	29.65	30.00
5550MHz	Pass	7.40	17.11	17.44	18.12	22.35	22.58	29.75	30.00
5670MHz	Pass	7.40	17.40	17.70	18.10	22.51	22.58	29.91	30.00
5710MHz Straddle 5.47-5.725GHz	Pass	7.40	17.54	17.47	18.02	22.45	22.58	29.85	30.00
5710MHz Straddle 5.725-5.85GHz	Pass	7.44	4.27	6.52	6.69	10.73	28.56	18.17	36.00
5755MHz	Pass	7.44	23.81	23.27	23.67	28.36	28.56	35.80	36.00
5795MHz	Pass	7.44	23.72	23.50	24.02	28.52	28.56	35.96	36.00
802.11ax HEW80-BF_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-	-	-
5210MHz	Pass	7.39	20.16	21.28	21.75	25.88	28.61	33.27	36.00
5290MHz	Pass	7.39	16.95	17.09	17.97	22.13	22.59	29.52	30.00
5530MHz	Pass	7.40	17.03	17.29	18.15	22.29	22.58	29.69	30.00
5610MHz	Pass	7.40	17.25	17.39	18.31	22.45	22.58	29.85	30.00
5690MHz Straddle 5.47-5.725GHz	Pass	7.40	17.18	17.24	17.88	22.22	22.58	29.62	30.00
5690MHz Straddle 5.725-5.85GHz	Pass	7.44	2.45	1.76	3.58	7.43	28.56	14.87	36.00
5775MHz	Pass	7.44	23.53	23.46	23.67	28.33	28.56	35.77	36.00
802.11ax HEW160-BF_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	7.39	13.24	13.88	14.59	18.71	28.61	26.10	36.00
5250MHz Straddle 5.25-5.35GHz	Pass	7.39	13.65	14.66	15.02	19.25	22.59	26.64	30.00
5570MHz	Pass	7.40	17.16	17.66	18.39	22.54	22.58	29.94	30.00

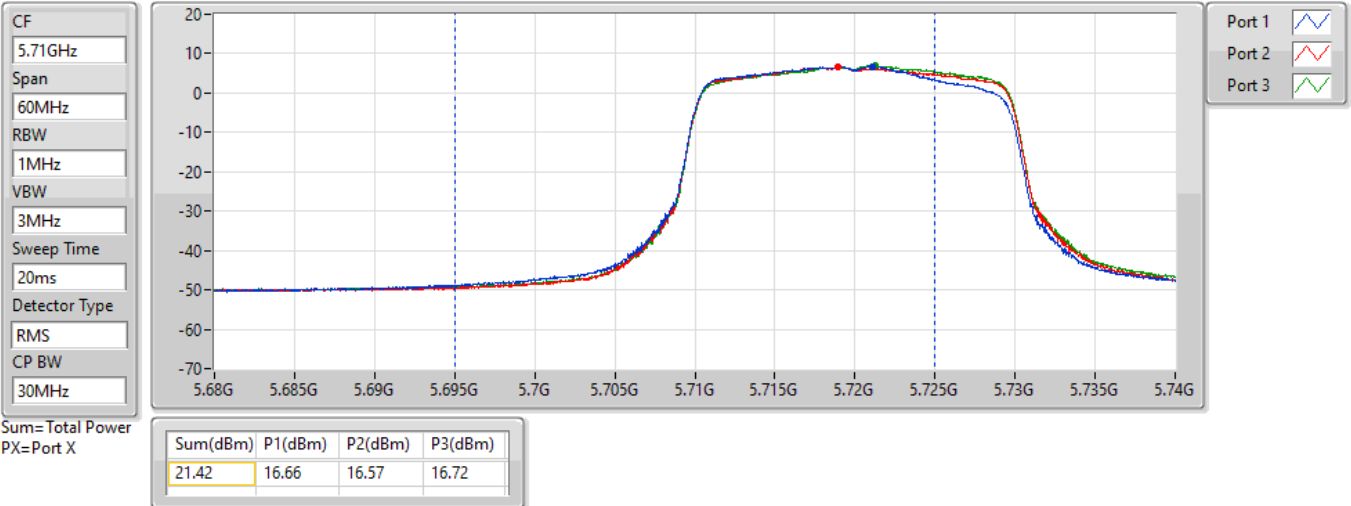
DG = Directional Gain; Port X = Port X output power

802.11ax HEW20-BF_Nss1,(MCS0)_3TX

AV Power

5720MHz Straddle 5.47-5.725GHz_TnomVnom

14/09/2022

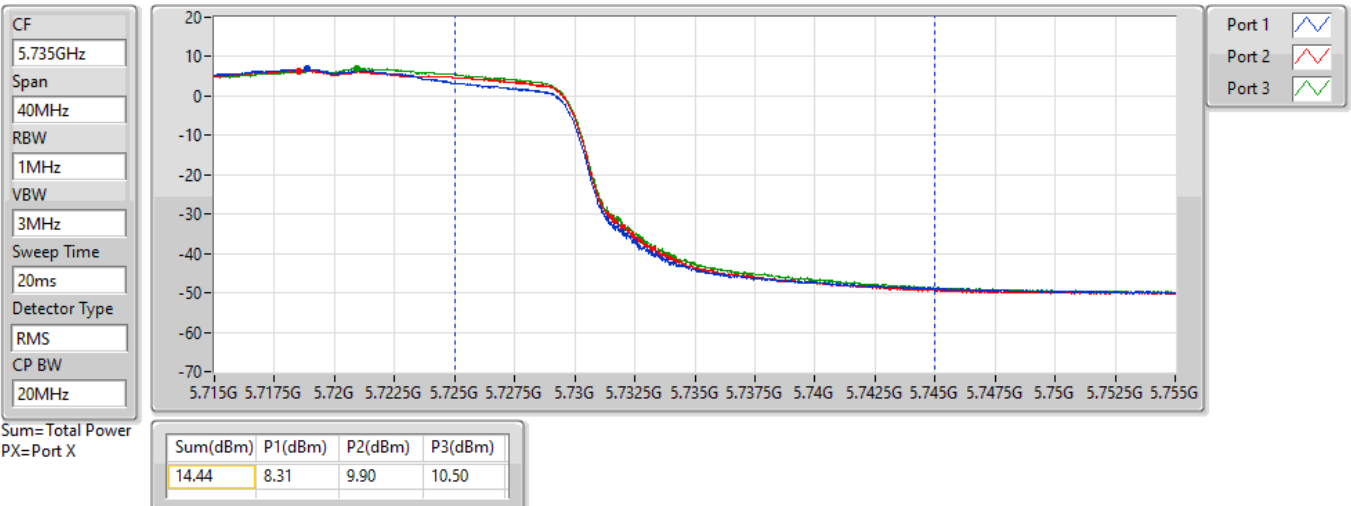


802.11ax HEW20-BF_Nss1,(MCS0)_3TX

AV Power

5720MHz Straddle 5.725-5.85GHz_TnomVnom

14/09/2022



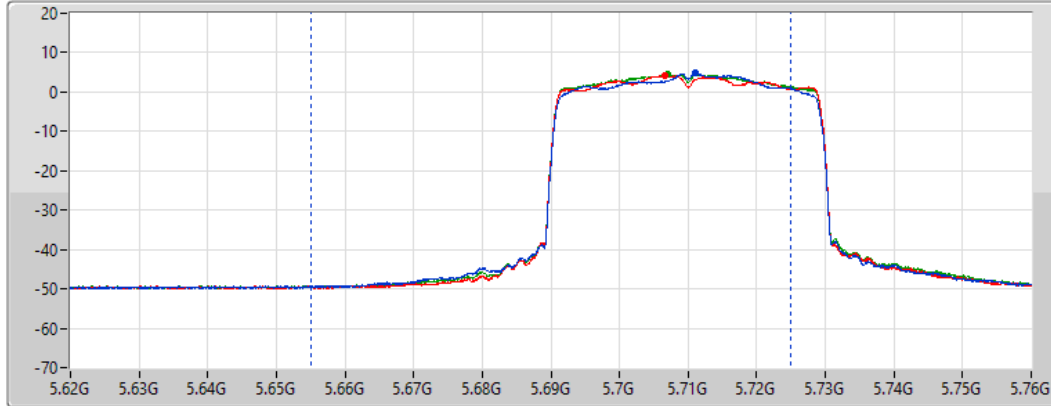
802.11ax HEW40-BF_Nss1,(MCS0)_3TX

AV Power

5710MHz Straddle 5.47-5.725GHz_TnomVnom

14/09/2022

CF
5.69GHz
Span
140MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS
CP BW
70MHz



Port 1
Port 2
Port 3

Sum= Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)
22.45	17.54	17.47	18.02

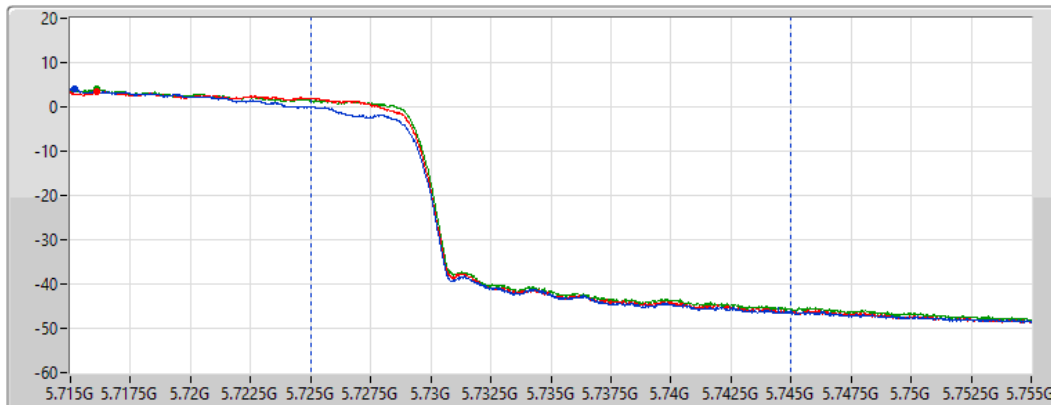
802.11ax HEW40-BF_Nss1,(MCS0)_3TX

AV Power

5710MHz Straddle 5.725-5.85GHz_TnomVnom

14/09/2022

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



Port 1
Port 2
Port 3

Sum= Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)
10.73	4.27	6.52	6.69

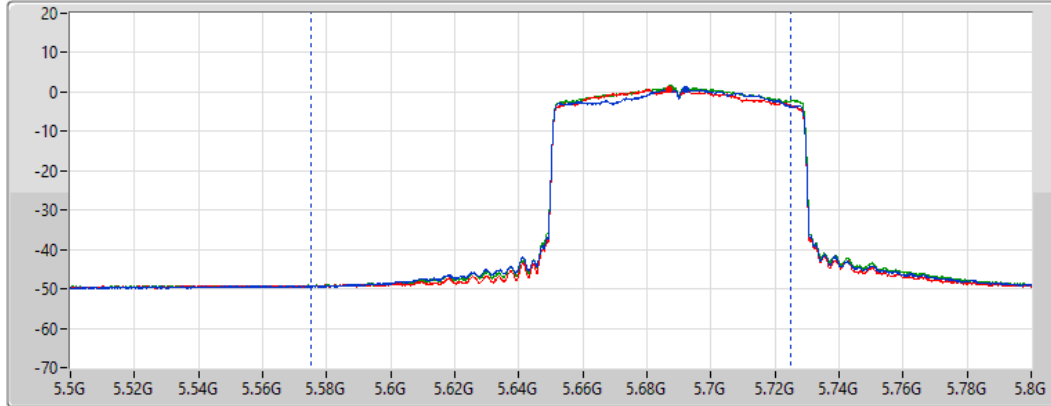
802.11ax HEW80-BF_Nss1,(MCS0)_3TX

AV Power

5690MHz Straddle 5.47-5.725GHz_TnomVnom

14/09/2022

CF
5.65GHz
Span
300MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS
CP BW
150MHz



Port 1 
Port 2 
Port 3 

Sum= Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)
22.22	17.18	17.24	17.88

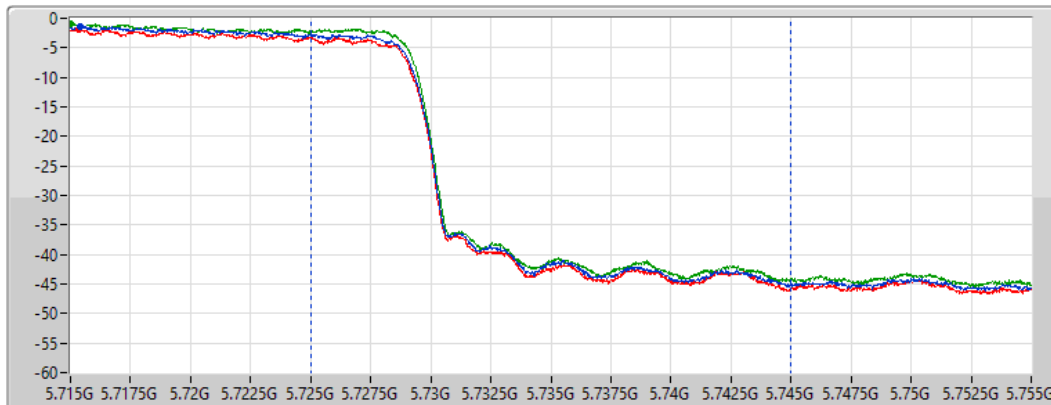
802.11ax HEW80-BF_Nss1,(MCS0)_3TX

AV Power

5690MHz Straddle 5.725-5.85GHz_TnomVnom

14/09/2022

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



Port 1 
Port 2 
Port 3 

Sum= Total Power
PX=Port X

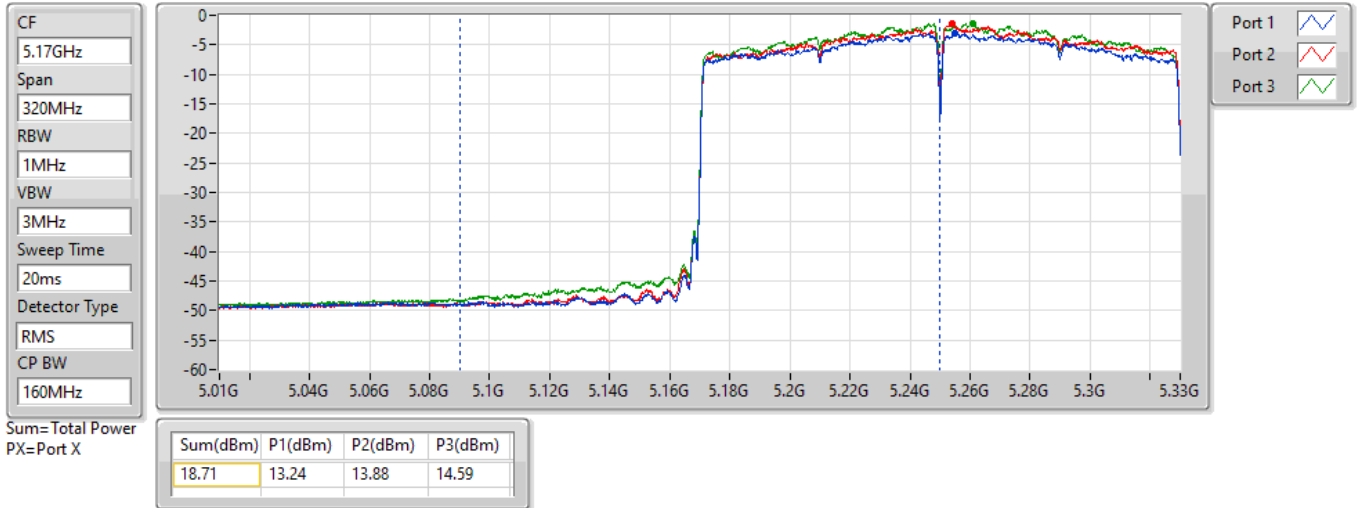
Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)
7.43	2.45	1.76	3.58

802.11ax HEW160-BF_Nss1,(MCS0)_3TX

AV Power

5250MHz Straddle 5.15-5.25GHz_TnomVnom

14/09/2022

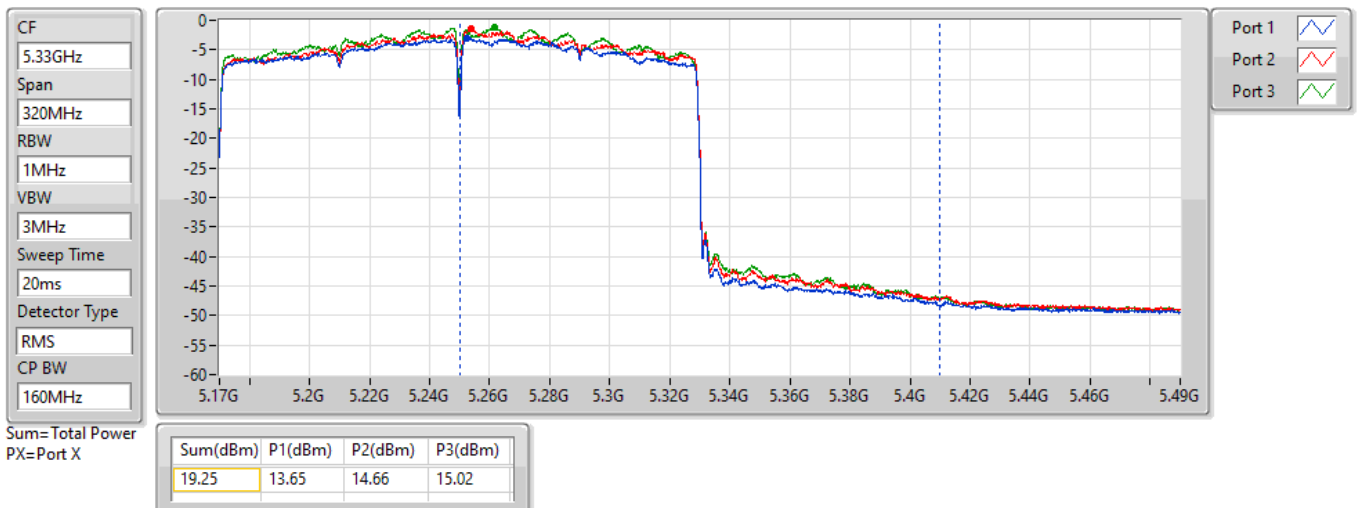


802.11ax HEW160-BF_Nss1,(MCS0)_3TX

AV Power

5250MHz Straddle 5.25-5.35GHz_TnomVnom

14/09/2022



Summary

Mode	PD (dBm/RBW)
5.15-5.25GHz	-
802.11a_Nss1,(6Mbps)_3TX	15.57
5.25-5.35GHz	-
802.11a_Nss1,(6Mbps)_3TX	9.52
5.47-5.725GHz	-
802.11a_Nss1,(6Mbps)_3TX	9.58
5.725-5.85GHz	-
802.11a_Nss1,(6Mbps)_3TX	15.92

RBW = 500kHz 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)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11a_Nss1,(6Mbps)_3TX	-	-	-	-	-	-	-
5180MHz	Pass	7.39	8.65	8.96	8.61	13.36	15.61
5200MHz	Pass	7.39	10.47	10.86	10.46	15.19	15.61
5240MHz	Pass	7.39	11.17	11.11	10.56	15.57	15.61
5260MHz	Pass	7.39	5.38	4.56	4.96	9.52	9.61
5300MHz	Pass	7.39	4.96	4.37	4.76	9.25	9.61
5320MHz	Pass	7.39	4.81	4.20	4.94	9.40	9.61
5500MHz	Pass	7.40	4.50	4.58	4.98	9.34	9.60
5580MHz	Pass	7.40	4.93	4.69	5.24	9.58	9.60
5700MHz	Pass	7.40	4.84	4.53	4.87	9.30	9.60
5720MHz Straddle 5.47-5.725GHz	Pass	7.40	4.94	4.62	4.96	9.46	9.60
5720MHz Straddle 5.725-5.85GHz	Pass	7.44	2.52	1.92	2.47	6.95	28.56
5745MHz	Pass	7.44	11.69	11.08	11.12	15.92	28.56
5785MHz	Pass	7.44	11.16	11.12	10.90	15.59	28.56
5825MHz	Pass	7.44	11.10	10.62	10.43	15.42	28.56

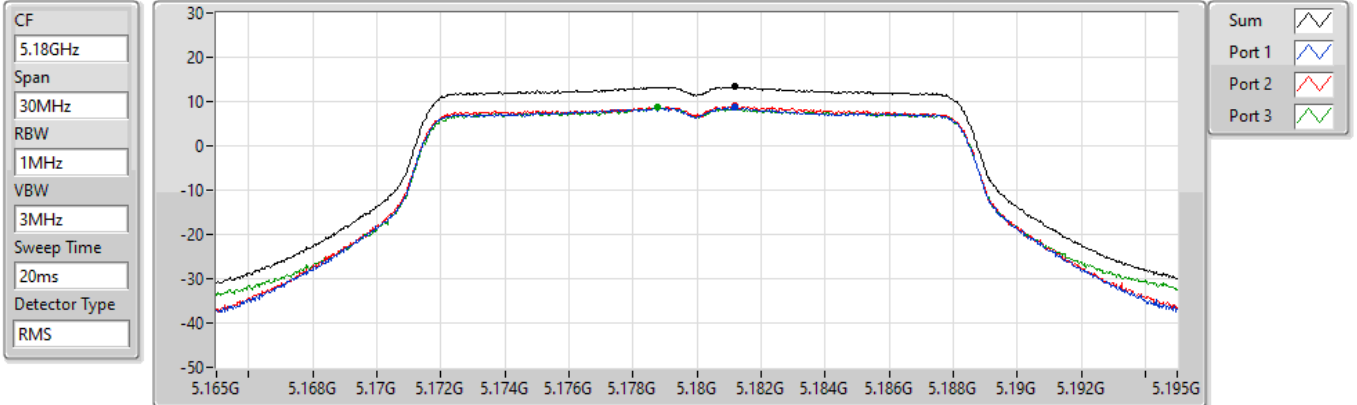
DG = Directional Gain; RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;
 PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;

802.11a_Nss1,(6Mbps)_3TX

PSD

5180MHz

08/09/2022



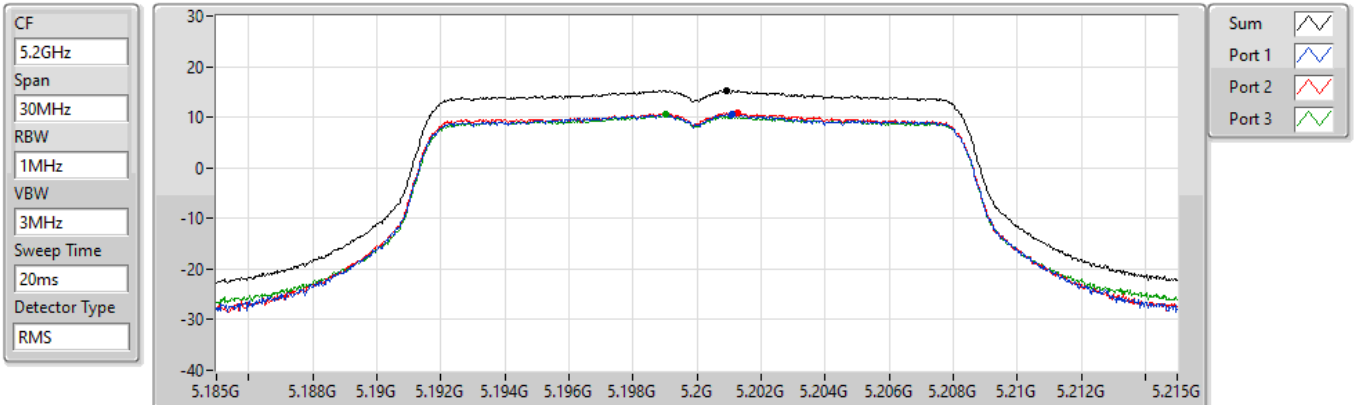
Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
13.36	13.36	8.65	8.96	8.61

802.11a_Nss1,(6Mbps)_3TX

PSD

5200MHz

08/09/2022



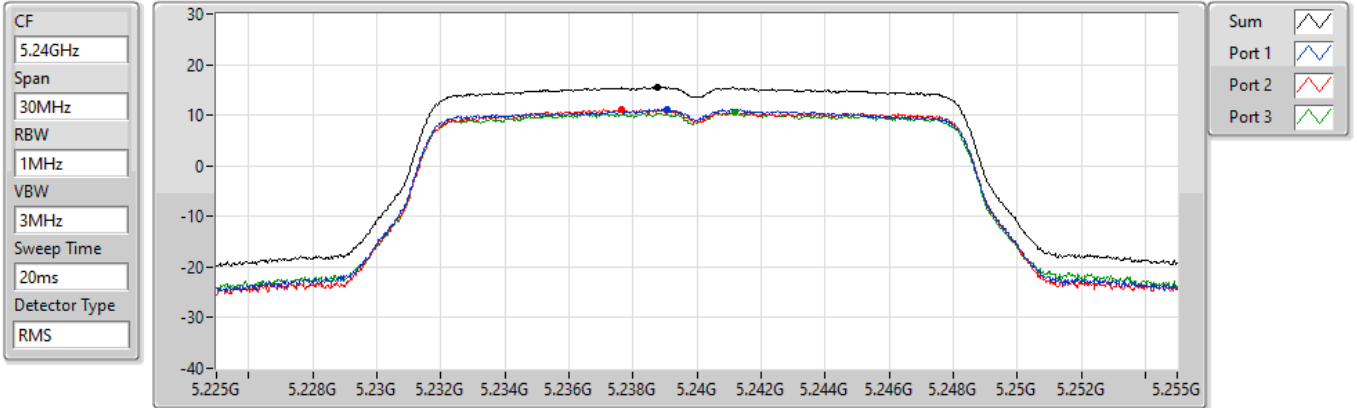
Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
15.19	15.19	10.47	10.86	10.46

802.11a_Nss1,(6Mbps)_3TX

PSD

5240MHz

08/09/2022



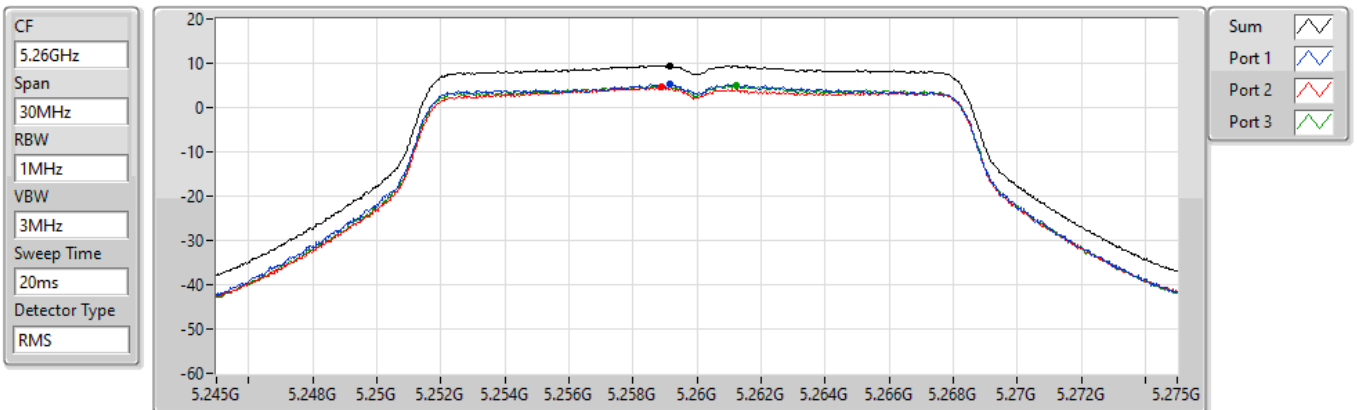
Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
15.57	15.57	11.17	11.11	10.56

802.11a_Nss1,(6Mbps)_3TX

PSD

5260MHz

08/09/2022

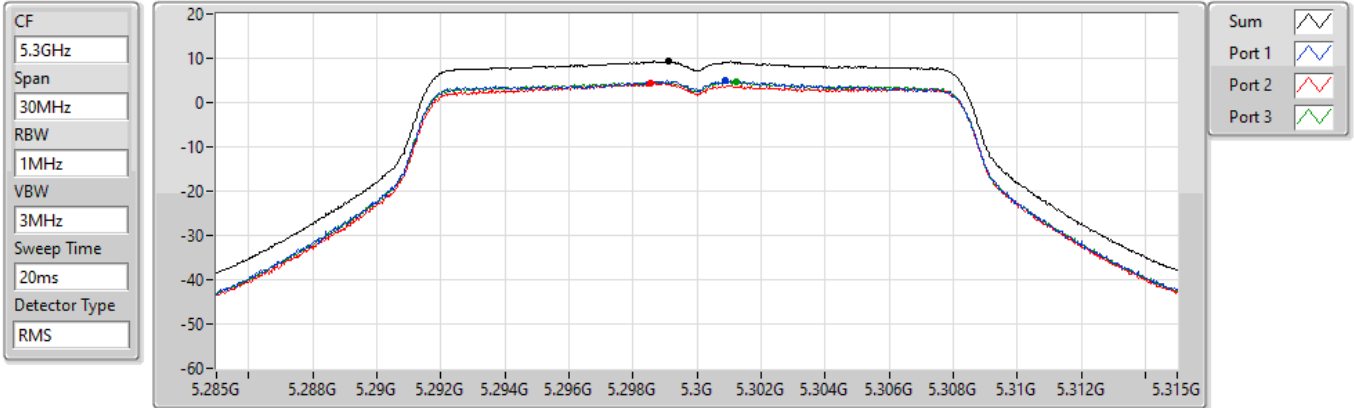


Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
9.52	9.52	5.38	4.56	4.96

802.11a_Nss1,(6Mbps)_3TX

5300MHz

08/09/2022

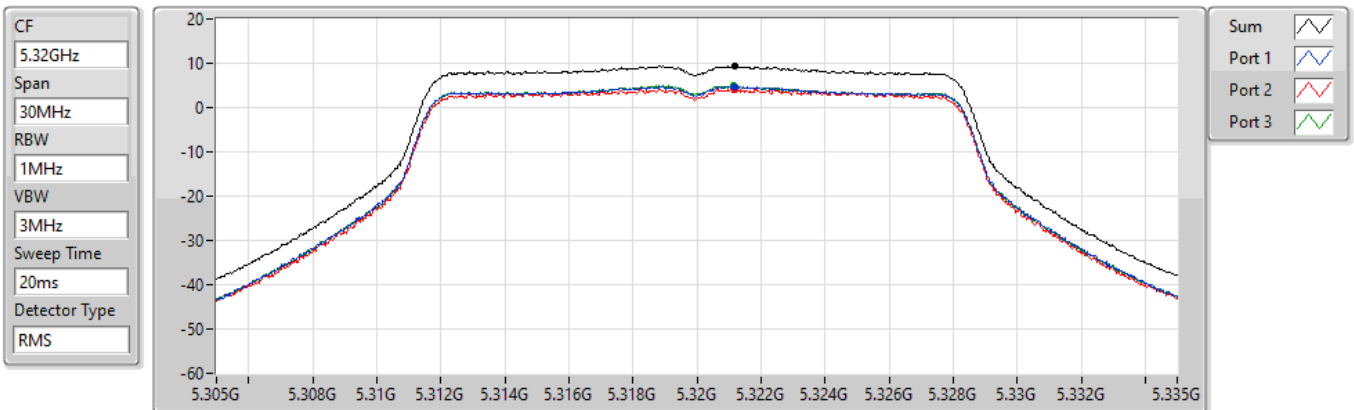


Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
9.25	9.25	4.96	4.37	4.76

802.11a_Nss1,(6Mbps)_3TX

5320MHz

08/09/2022

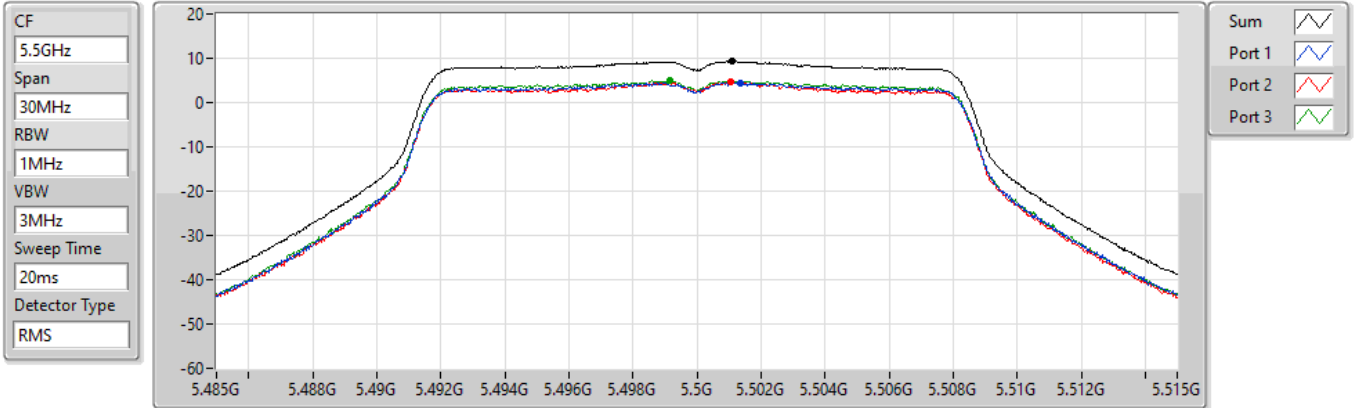


Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
9.40	9.40	4.81	4.20	4.94

802.11a_Nss1,(6Mbps)_3TX

5500MHz

08/09/2022

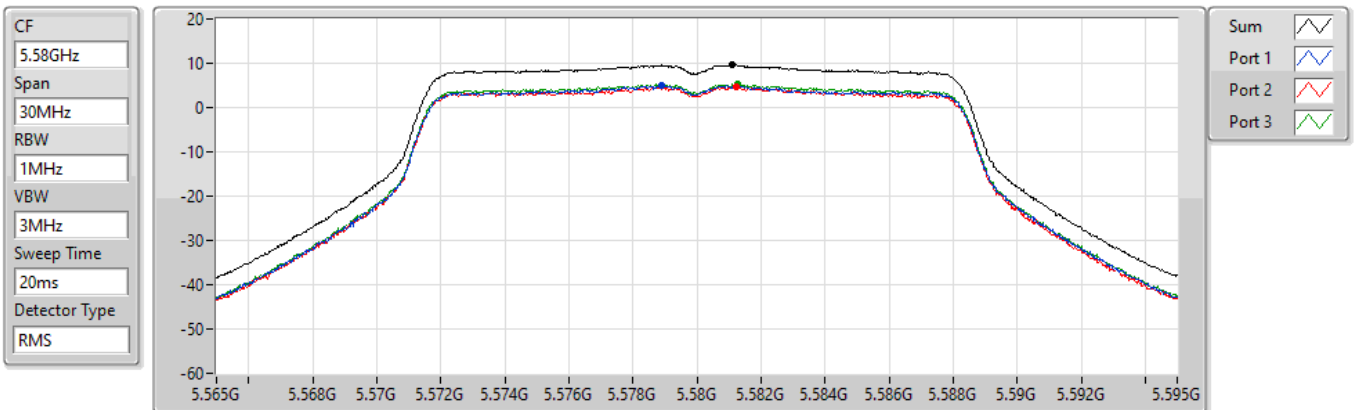


Sum	PD	Port 1	Port 2	Port 3
(dBm/100kHz)	(dBm/100kHz)	(dBm/100kHz)	(dBm/100kHz)	(dBm/100kHz)
9.34	9.34	4.50	4.58	4.98

802.11a_Nss1,(6Mbps)_3TX

5580MHz

08/09/2022



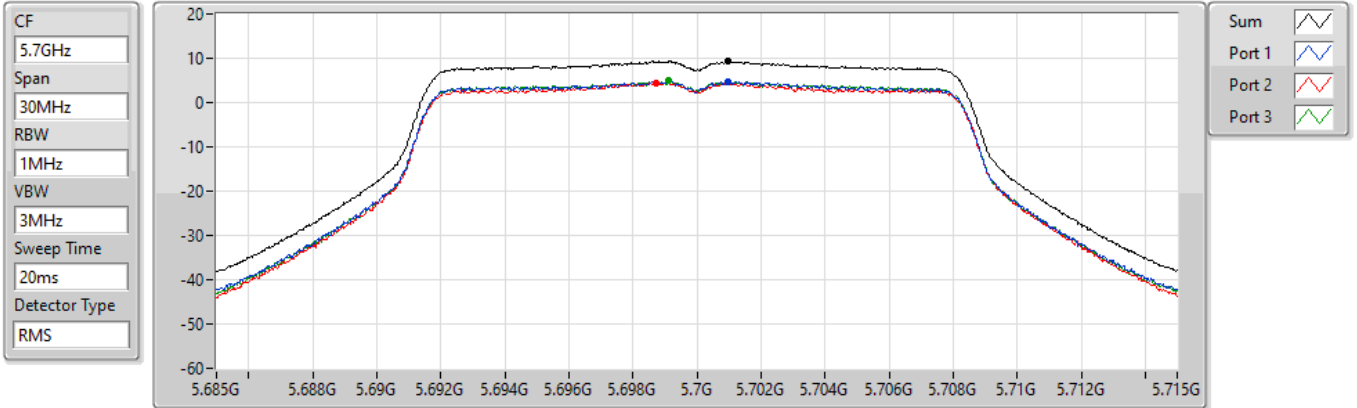
Sum	PD	Port 1	Port 2	Port 3
(dBm/100kHz)	(dBm/100kHz)	(dBm/100kHz)	(dBm/100kHz)	(dBm/100kHz)
9.58	9.58	4.93	4.69	5.24

802.11a_Nss1,(6Mbps)_3TX

PSD

5700MHz

08/09/2022



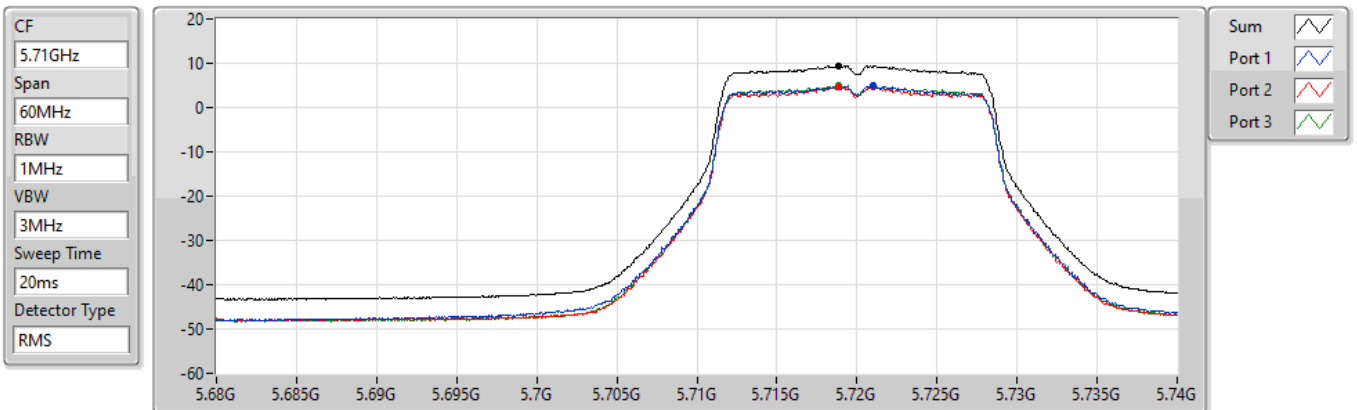
Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
9.30	9.30	4.84	4.53	4.87

802.11a_Nss1,(6Mbps)_3TX

PSD

5720MHz Straddle 5.47-5.725GHz

08/09/2022



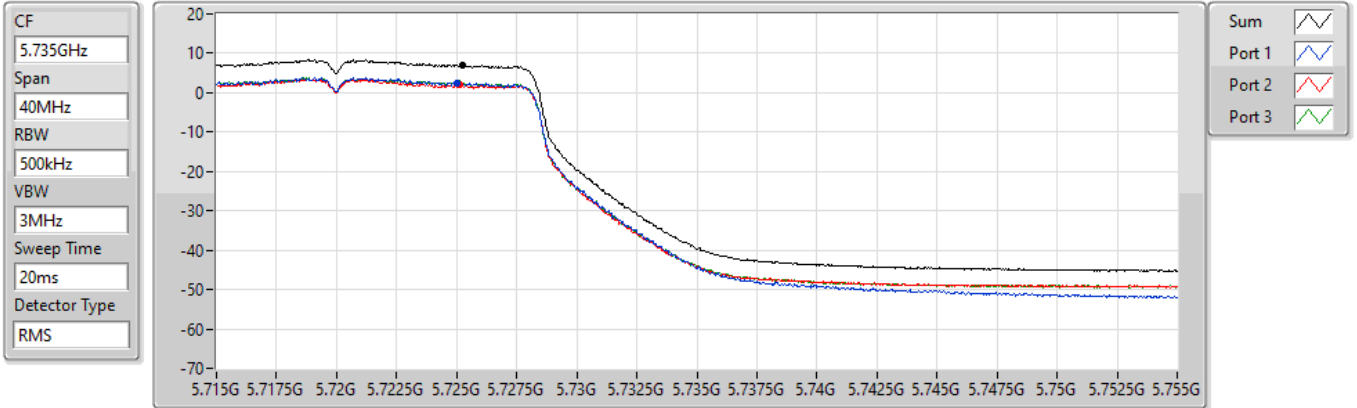
Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
9.46	9.46	4.94	4.62	4.96

802.11a_Nss1,(6Mbps)_3TX

5720MHz Straddle 5.725-5.85GHz

PSD

08/09/2022

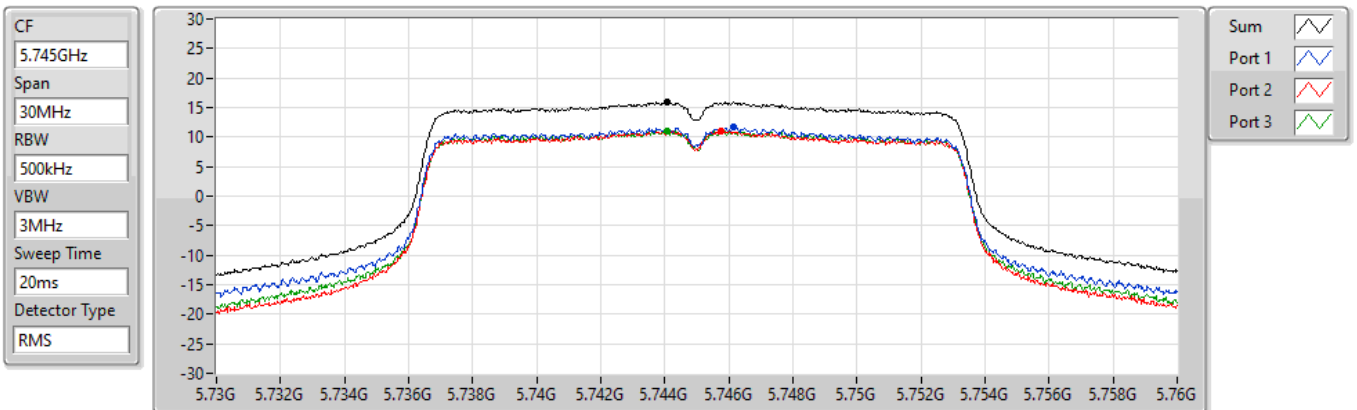


802.11a_Nss1,(6Mbps)_3TX

5745MHz

PSD

08/09/2022

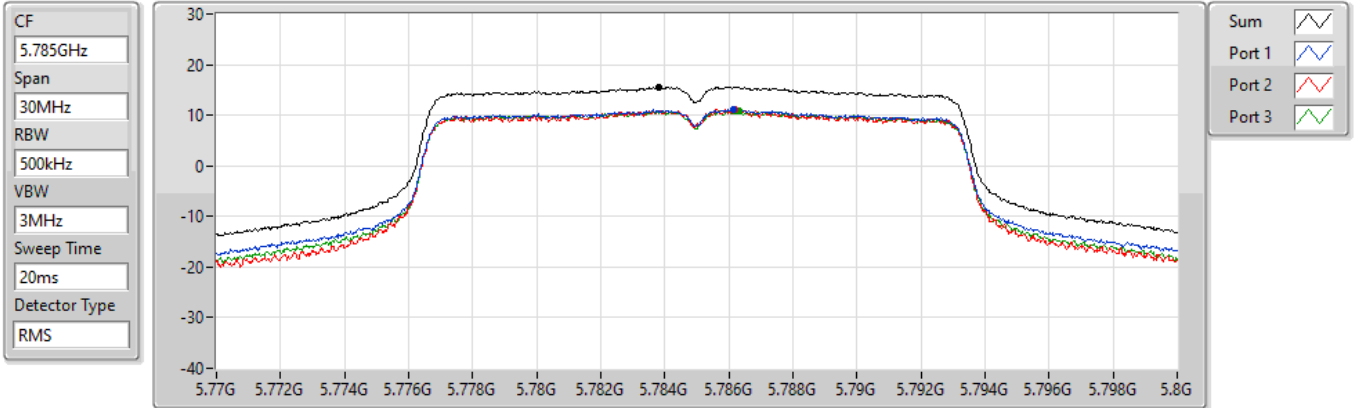


802.11a_Nss1,(6Mbps)_3TX

5785MHz

PSD

08/09/2022

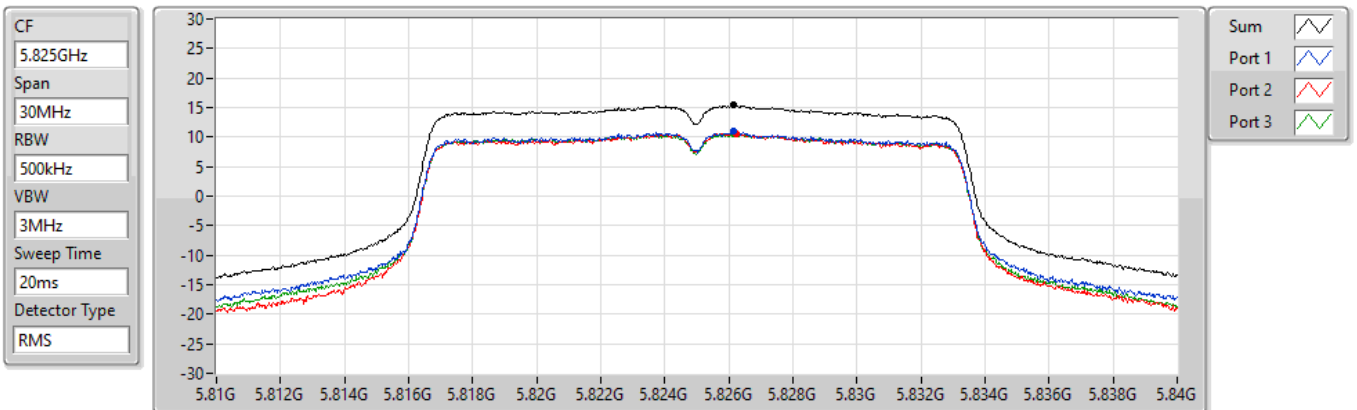


802.11a_Nss1,(6Mbps)_3TX

5825MHz

PSD

08/09/2022



Summary

Mode	PD (dBm/RBW)
5.15-5.25GHz	-
802.11ax HEW20_Nss2,(MCS0)_3TX	16.85
802.11ax HEW40_Nss2,(MCS0)_3TX	14.36
802.11ax HEW80_Nss2,(MCS0)_3TX	8.21
802.11ax HEW160_Nss2,(MCS0)_3TX	1.61
5.25-5.35GHz	-
802.11ax HEW20_Nss2,(MCS0)_3TX	10.90
802.11ax HEW40_Nss2,(MCS0)_3TX	9.21
802.11ax HEW80_Nss2,(MCS0)_3TX	5.43
802.11ax HEW160_Nss2,(MCS0)_3TX	1.62
5.47-5.725GHz	-
802.11ax HEW20_Nss2,(MCS0)_3TX	10.95
802.11ax HEW40_Nss2,(MCS0)_3TX	9.36
802.11ax HEW80_Nss2,(MCS0)_3TX	6.23
802.11ax HEW160_Nss2,(MCS0)_3TX	3.04
5.725-5.85GHz	-
802.11ax HEW20_Nss2,(MCS0)_3TX	15.48
802.11ax HEW40_Nss2,(MCS0)_3TX	13.09
802.11ax HEW80_Nss2,(MCS0)_3TX	9.45

RBW = 500kHz 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)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11ax HEW20_Nss2,(MCS0)_3TX	-	-	-	-	-	-	-
5180MHz	Pass	4.93	11.24	11.35	10.71	15.76	17.00
5200MHz	Pass	4.93	12.21	12.50	11.66	16.85	17.00
5240MHz	Pass	4.93	12.09	12.21	11.43	16.66	17.00
5260MHz	Pass	4.93	6.23	6.29	6.22	10.90	11.00
5300MHz	Pass	4.93	5.99	6.23	6.15	10.86	11.00
5320MHz	Pass	4.93	6.01	6.21	5.98	10.72	11.00
5500MHz	Pass	4.95	5.77	5.96	6.36	10.73	11.00
5580MHz	Pass	4.95	6.03	6.23	6.62	10.95	11.00
5700MHz	Pass	4.95	5.90	5.92	6.18	10.70	11.00
5720MHz Straddle 5.47-5.725GHz	Pass	4.95	6.24	6.12	6.47	10.94	11.00
5720MHz Straddle 5.725-5.85GHz	Pass	4.98	3.40	3.11	3.63	8.12	30.00
5745MHz	Pass	4.98	11.06	10.62	10.78	15.42	30.00
5785MHz	Pass	4.98	10.81	10.68	10.75	15.42	30.00
5825MHz	Pass	4.98	10.82	10.65	10.80	15.48	30.00
802.11ax HEW40_Nss2,(MCS0)_3TX	-	-	-	-	-	-	-
5190MHz	Pass	4.93	7.34	7.77	7.22	12.14	17.00
5230MHz	Pass	4.93	9.63	10.00	9.19	14.36	17.00
5270MHz	Pass	4.93	4.51	4.45	4.42	9.21	11.00
5310MHz	Pass	4.93	4.30	4.44	4.22	9.02	11.00
5510MHz	Pass	4.95	4.15	4.35	4.66	9.11	11.00
5550MHz	Pass	4.95	4.01	4.19	4.49	8.93	11.00
5670MHz	Pass	4.95	3.79	3.84	4.07	8.61	11.00
5710MHz Straddle 5.47-5.725GHz	Pass	4.95	4.67	4.52	4.90	9.36	11.00
5710MHz Straddle 5.725-5.85GHz	Pass	4.98	-1.39	-1.68	-1.21	3.33	30.00
5755MHz	Pass	4.98	8.59	8.30	8.42	13.09	30.00
5795MHz	Pass	4.98	8.45	8.22	8.31	13.00	30.00
802.11ax HEW80_Nss2,(MCS0)_3TX	-	-	-	-	-	-	-
5210MHz	Pass	4.93	3.35	3.86	3.41	8.21	17.00
5290MHz	Pass	4.93	0.59	0.85	0.72	5.43	11.00
5530MHz	Pass	4.95	1.33	1.61	1.83	6.23	11.00
5610MHz	Pass	4.95	1.17	1.20	1.56	6.04	11.00
5690MHz Straddle 5.47-5.725GHz	Pass	4.95	1.33	1.33	1.56	6.05	11.00
5690MHz Straddle 5.725-5.85GHz	Pass	4.98	-5.41	-5.53	-5.55	-0.76	30.00
5775MHz	Pass	4.98	4.80	4.84	4.70	9.45	30.00
802.11ax HEW160_Nss2,(MCS0)_3TX	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	4.93	-3.01	-2.91	-3.36	1.61	17.00
5250MHz Straddle 5.25-5.35GHz	Pass	4.93	-3.09	-2.93	-3.30	1.62	11.00
5570MHz	Pass	4.95	-1.80	-1.81	-1.47	3.04	11.00

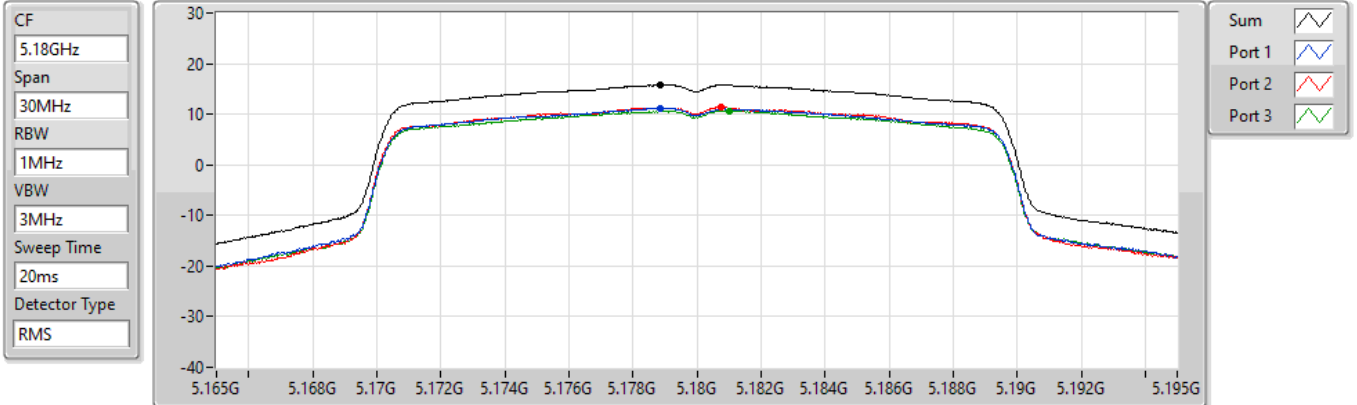
DG = Directional Gain; RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;

802.11ax HEW20_Nss2,(MCS0)_3TX

PSD

5180MHz

08/09/2022

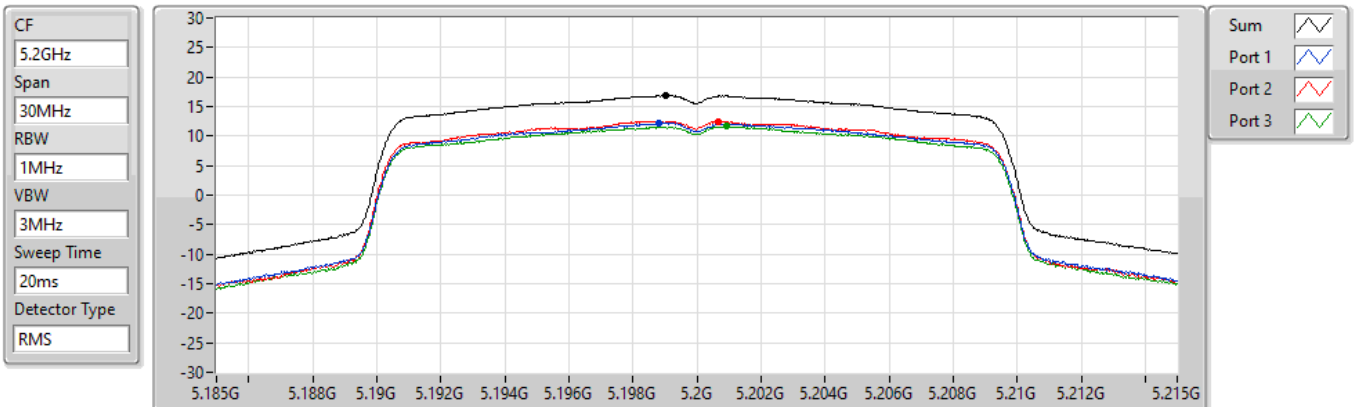


802.11ax HEW20_Nss2,(MCS0)_3TX

PSD

5200MHz

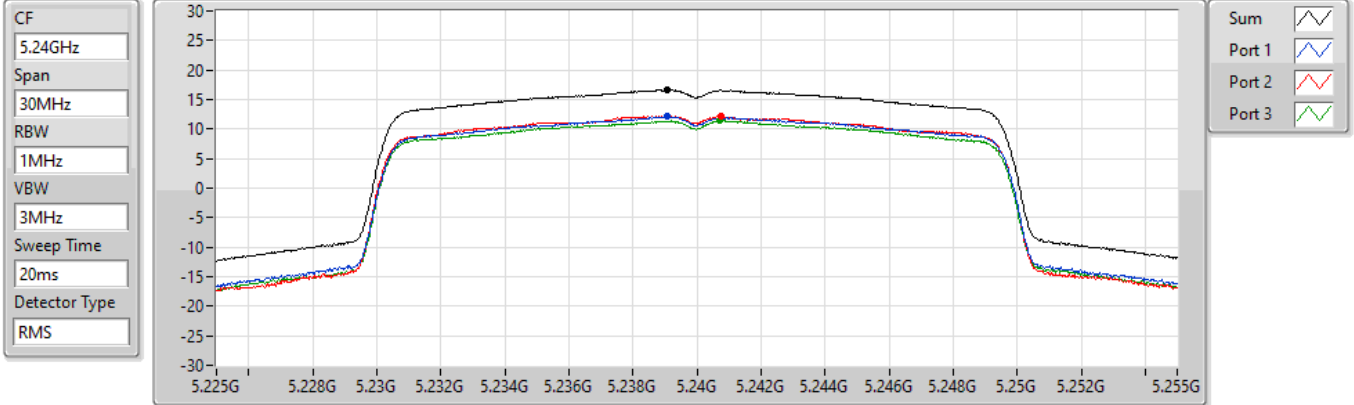
08/09/2022



802.11ax HEW20_Nss2,(MCS0)_3TX

5240MHz

08/09/2022

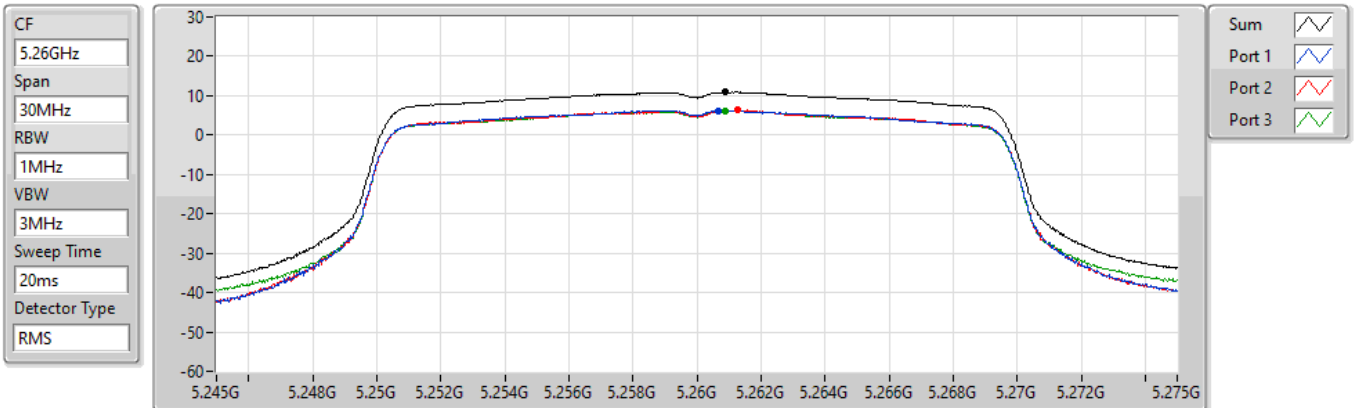


Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
16.66	16.66	12.09	12.21	11.43

802.11ax HEW20_Nss2,(MCS0)_3TX

5260MHz

08/09/2022



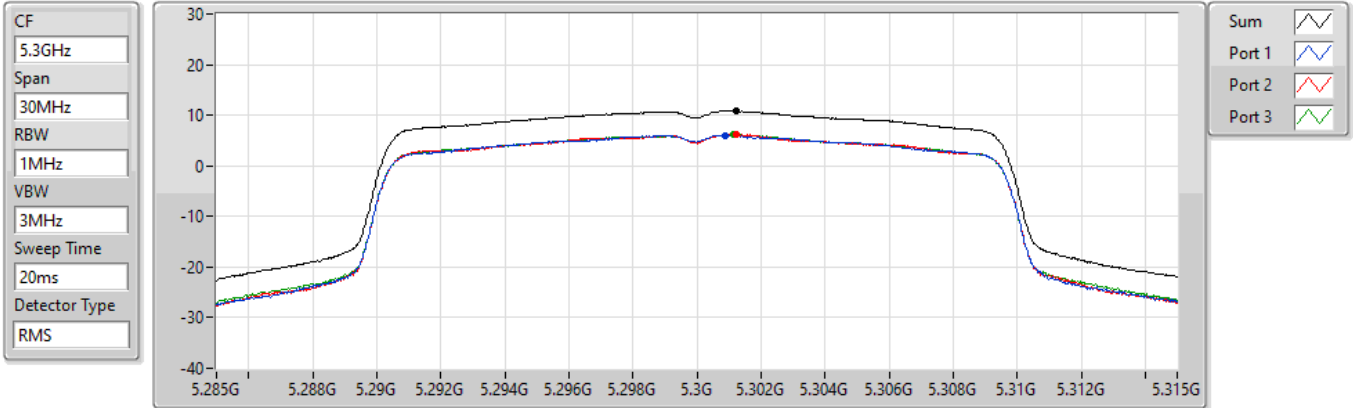
Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
10.90	10.90	6.23	6.29	6.22

802.11ax HEW20_Nss2,(MCS0)_3TX

PSD

5300MHz

08/09/2022



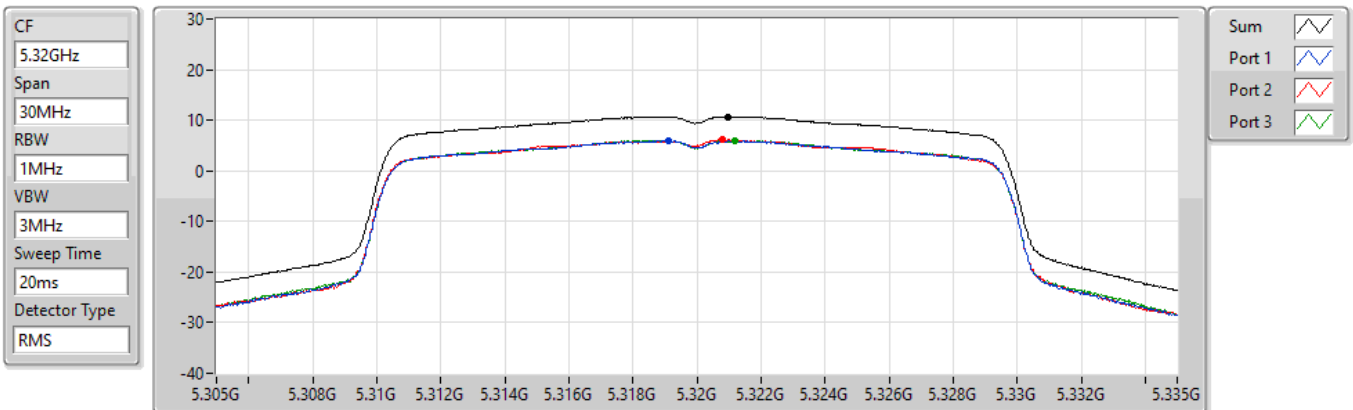
Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
10.86	10.86	5.99	6.23	6.15

802.11ax HEW20_Nss2,(MCS0)_3TX

PSD

5320MHz

08/09/2022



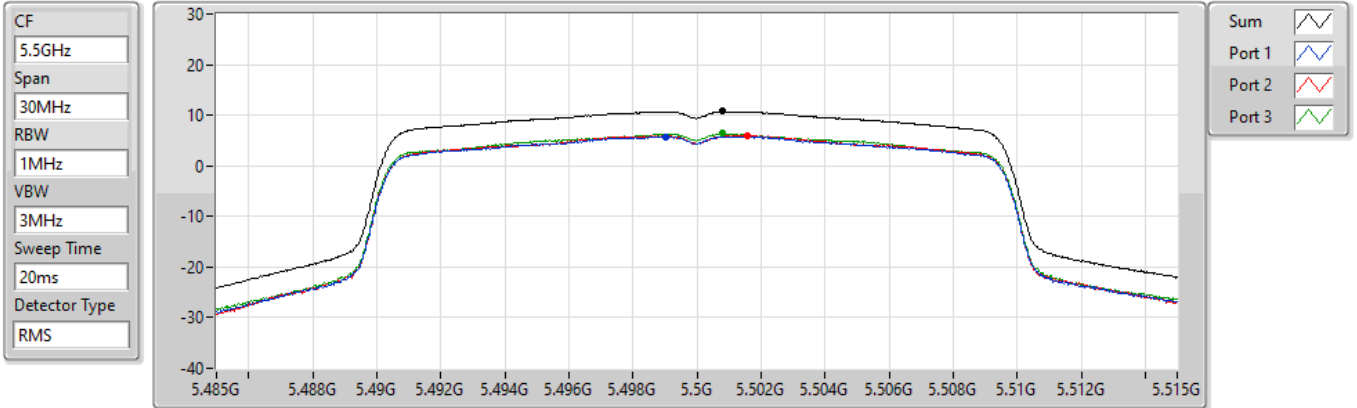
Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
10.72	10.72	6.01	6.21	5.98

802.11ax HEW20_Nss2,(MCS0)_3TX

PSD

5500MHz

08/09/2022



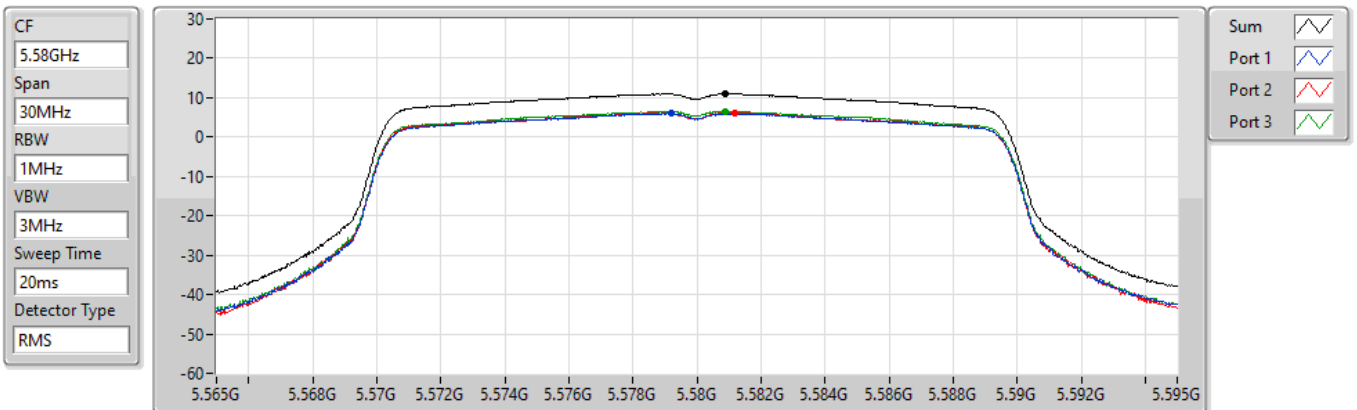
Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
10.73	10.73	5.77	5.96	6.36

802.11ax HEW20_Nss2,(MCS0)_3TX

PSD

5580MHz

08/09/2022

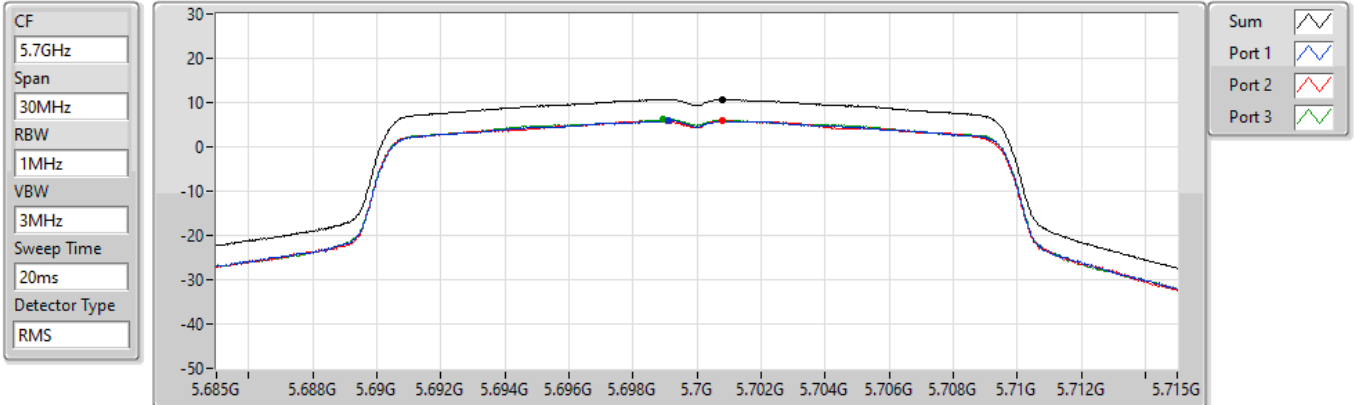


Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
10.95	10.95	6.03	6.23	6.62

802.11ax HEW20_Nss2,(MCS0)_3TX

5700MHz

08/09/2022

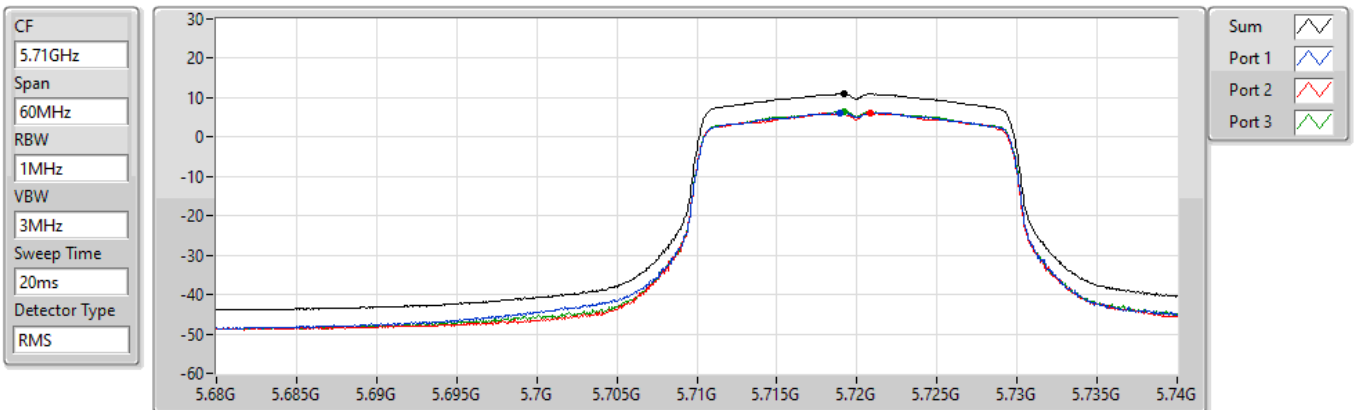


Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
10.70	10.70	5.90	5.92	6.18

802.11ax HEW20_Nss2,(MCS0)_3TX

5720MHz Straddle 5.47-5.725GHz

08/09/2022



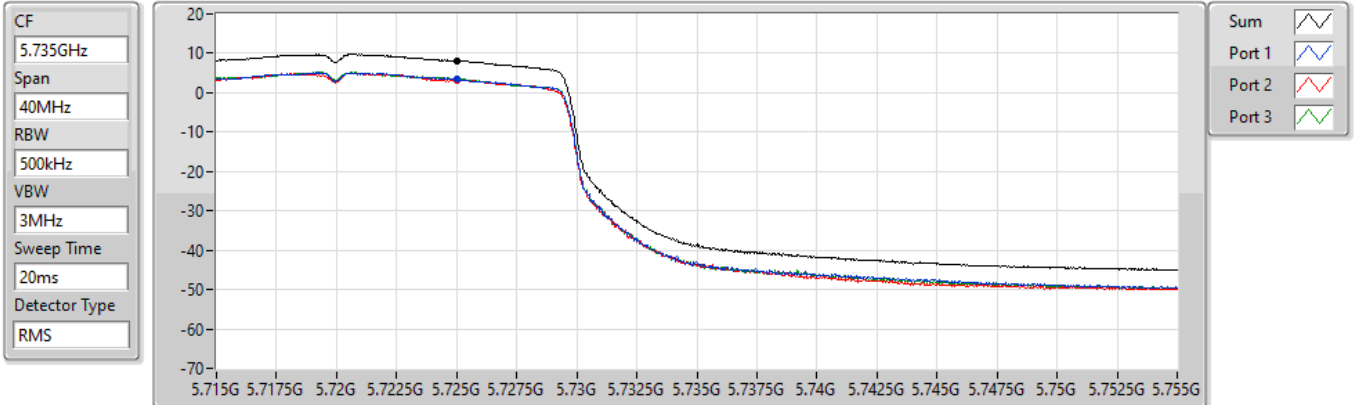
Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
10.94	10.94	6.24	6.12	6.47

802.11ax HEW20_Nss2,(MCS0)_3TX

5720MHz Straddle 5.725-5.85GHz

PSD

08/09/2022

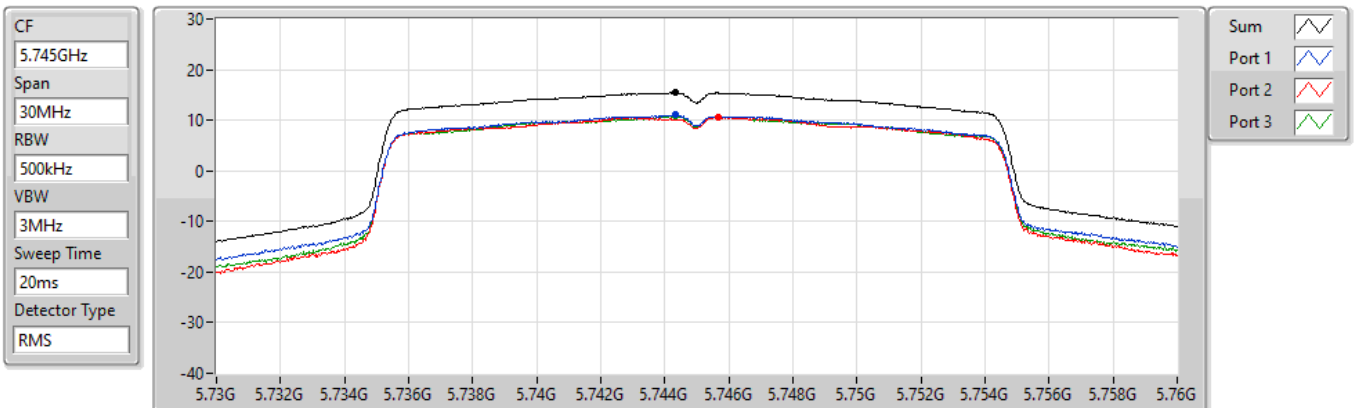


802.11ax HEW20_Nss2,(MCS0)_3TX

5745MHz

PSD

08/09/2022

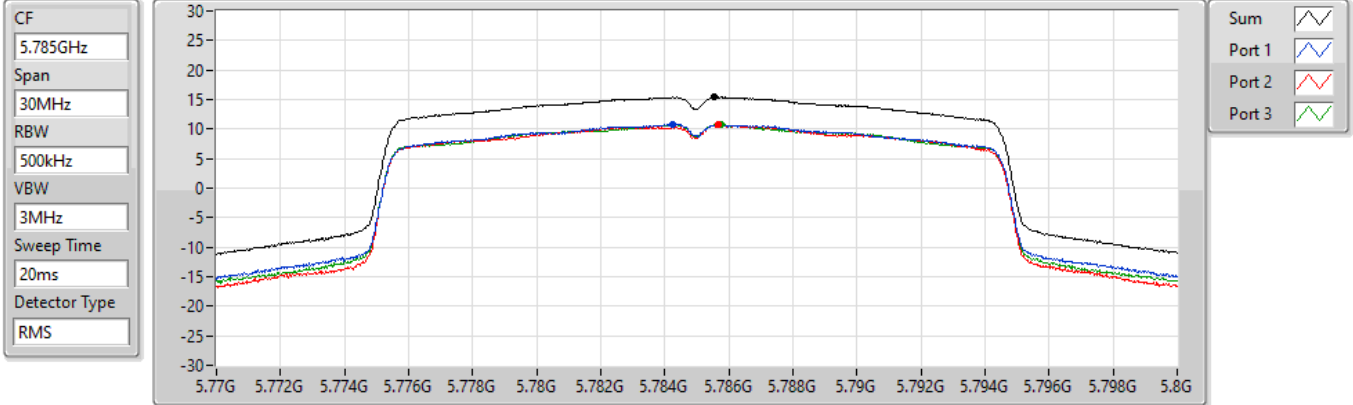


802.11ax HEW20_Nss2,(MCS0)_3TX

5785MHz

PSD

08/09/2022



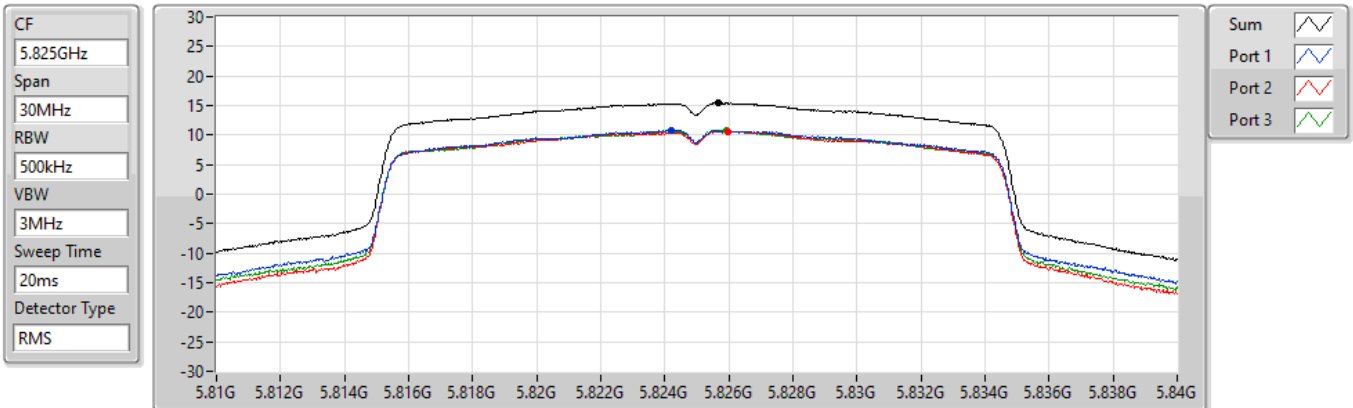
Sum	PD	Port 1	Port 2	Port 3
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
15.42	15.42	10.81	10.68	10.75

802.11ax HEW20_Nss2,(MCS0)_3TX

5825MHz

PSD

08/09/2022



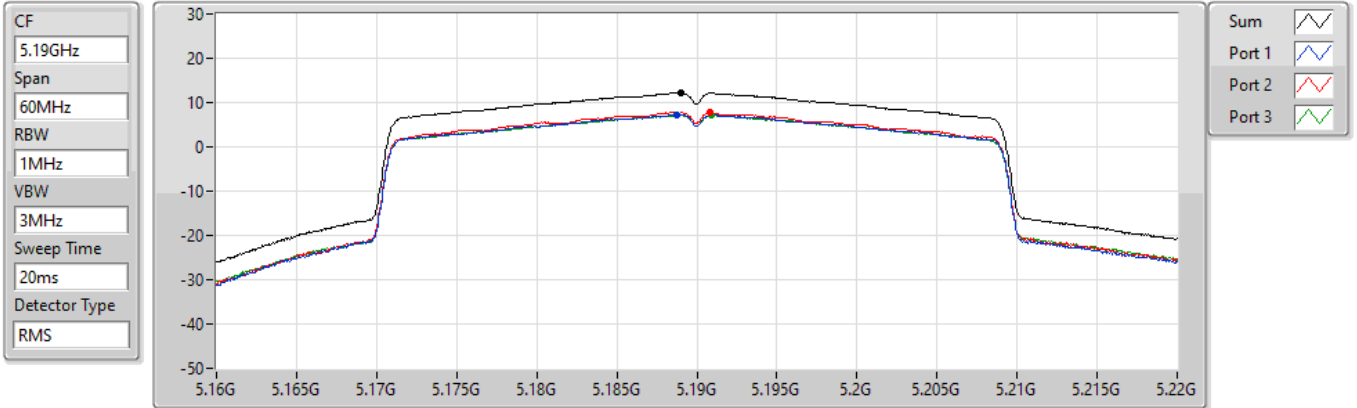
Sum	PD	Port 1	Port 2	Port 3
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
15.48	15.48	10.82	10.65	10.80

802.11ax HEW40_Nss2,(MCS0)_3TX

PSD

5190MHz

08/09/2022

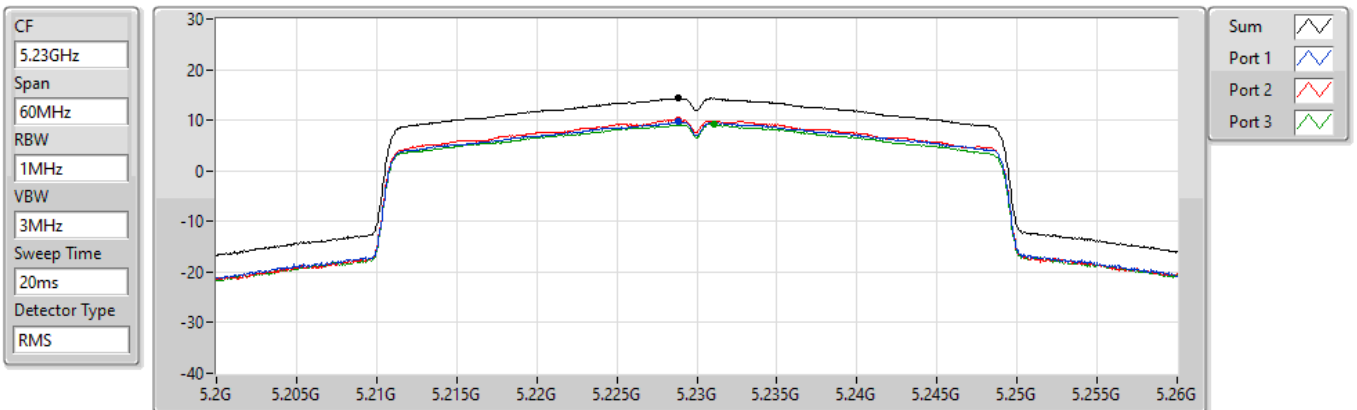


802.11ax HEW40_Nss2,(MCS0)_3TX

PSD

5230MHz

08/09/2022

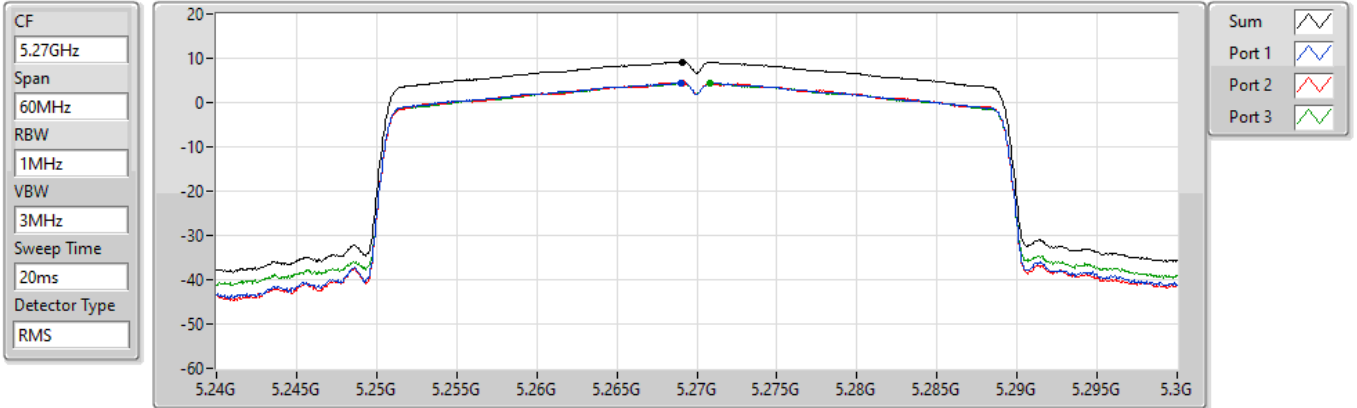


802.11ax HEW40_Nss2,(MCS0)_3TX

5270MHz

PSD

08/09/2022

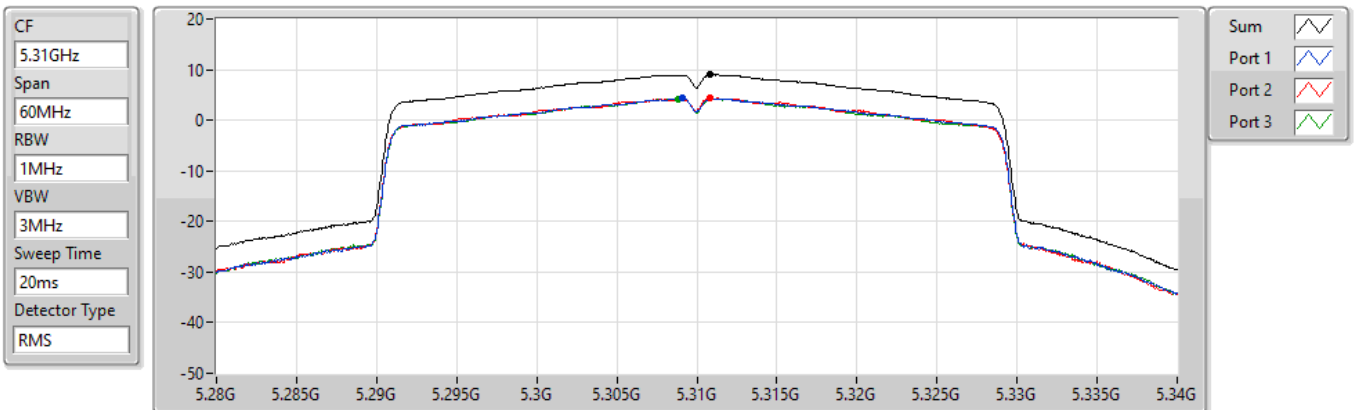


802.11ax HEW40_Nss2,(MCS0)_3TX

5310MHz

PSD

08/09/2022

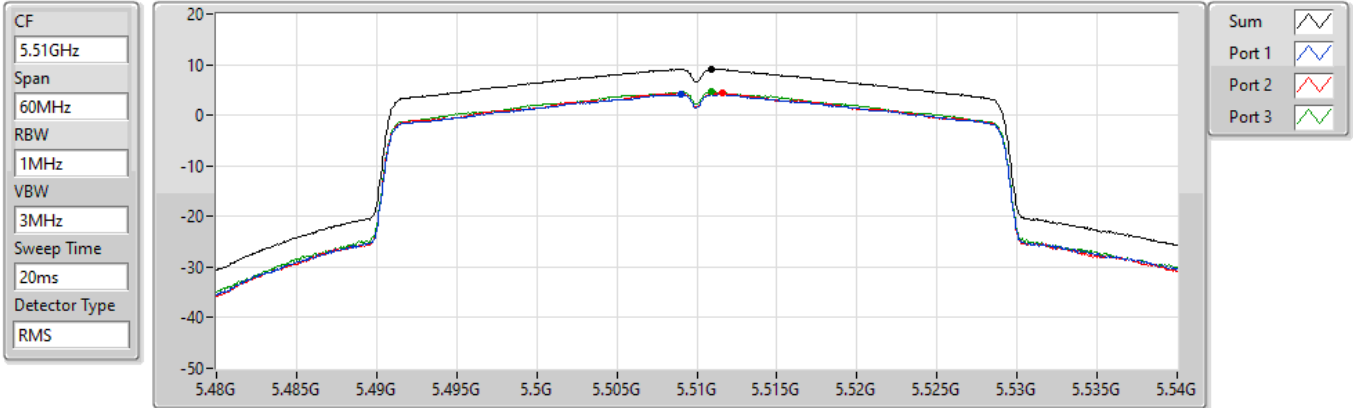


802.11ax HEW40_Nss2,(MCS0)_3TX

PSD

5510MHz

08/09/2022

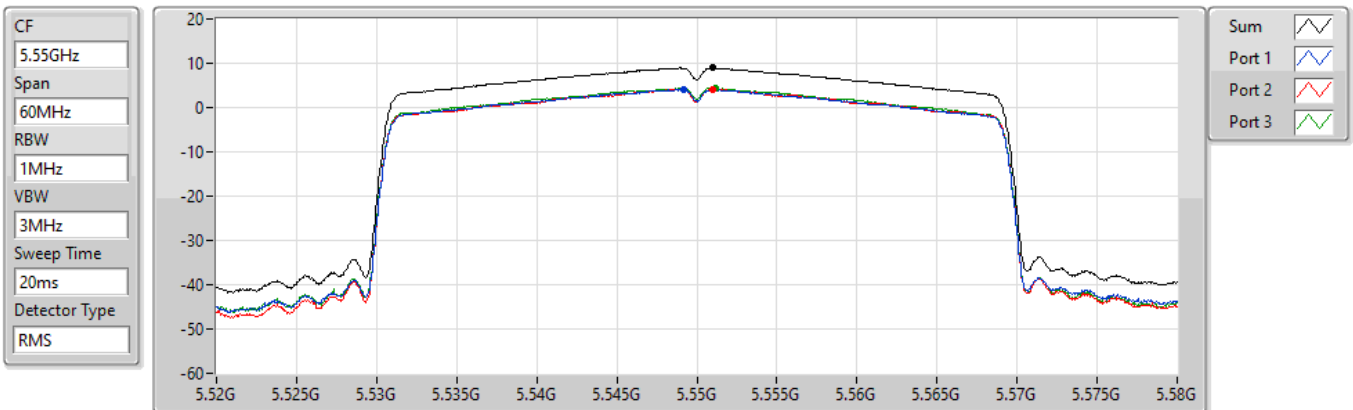


802.11ax HEW40_Nss2,(MCS0)_3TX

PSD

5550MHz

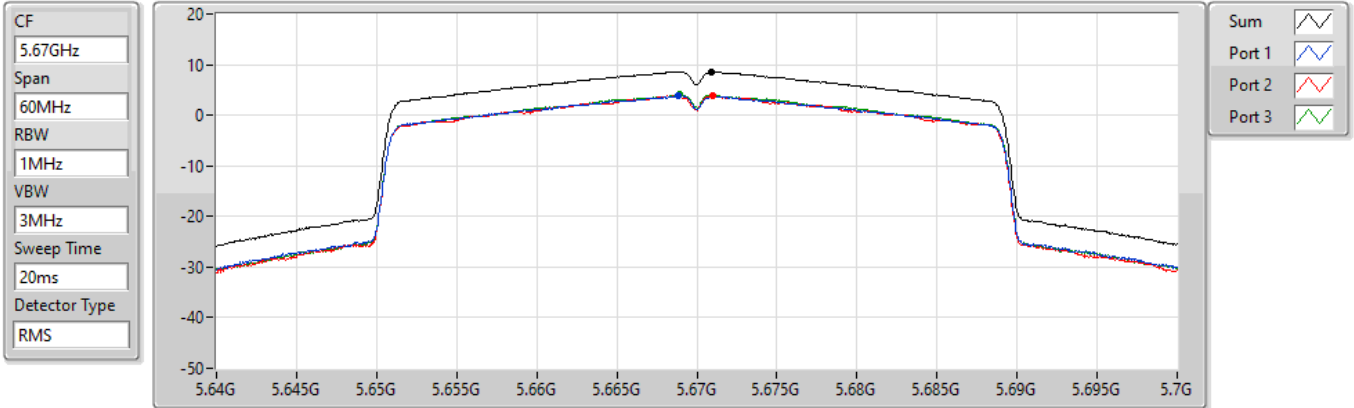
08/09/2022



802.11ax HEW40_Nss2,(MCS0)_3TX

5670MHz

08/09/2022

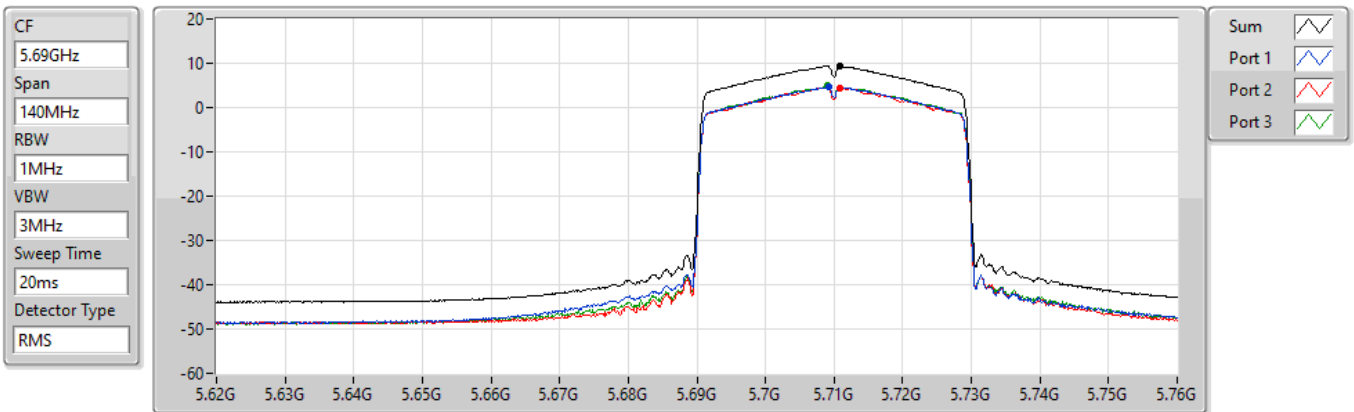


Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
8.61	8.61	3.79	3.84	4.07

802.11ax HEW40_Nss2,(MCS0)_3TX

5710MHz Straddle 5.47-5.725GHz

08/09/2022



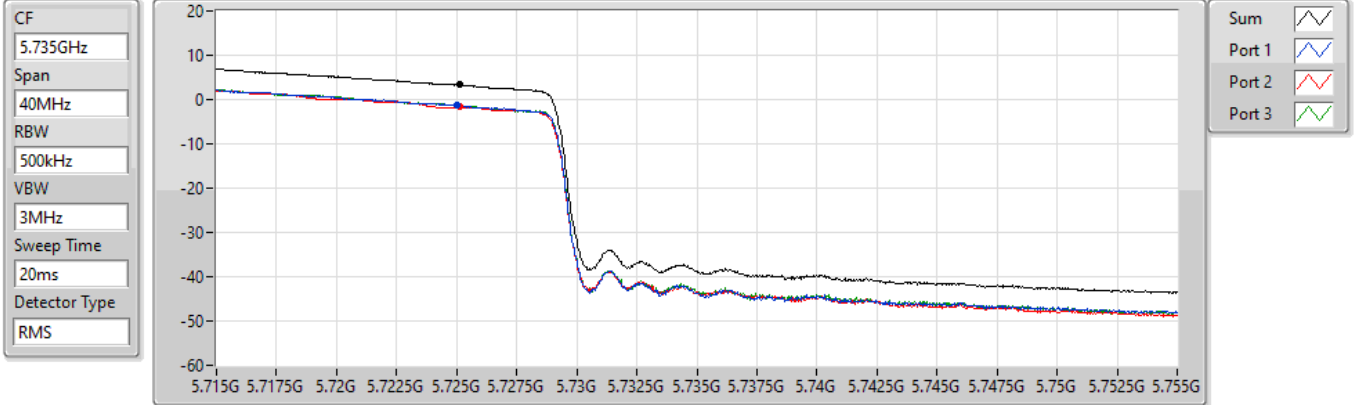
Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
9.36	9.36	4.67	4.52	4.90

802.11ax HEW40_Nss2,(MCS0)_3TX

5710MHz Straddle 5.725-5.85GHz

PSD

08/09/2022



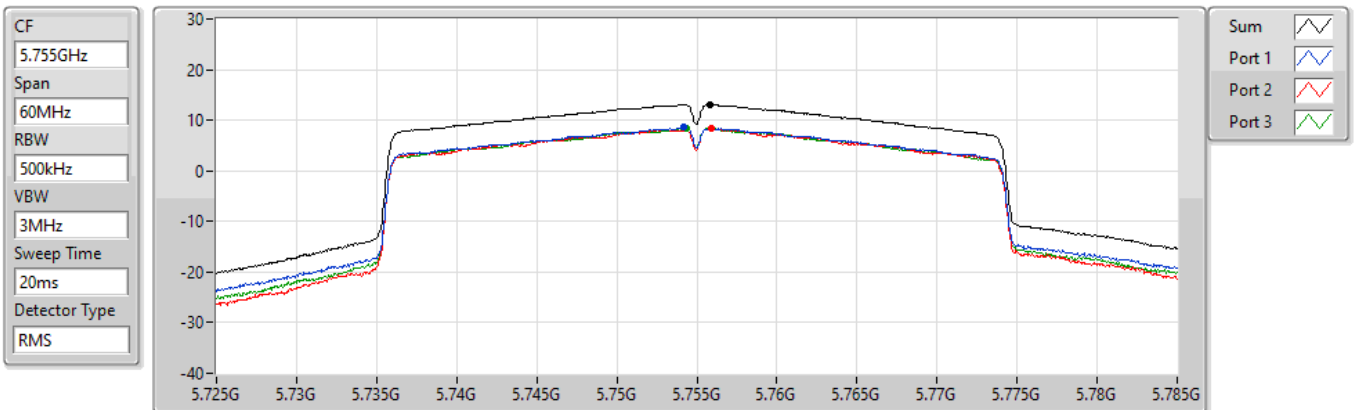
Sum	PD	Port 1	Port 2	Port 3
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
3.33	3.33	-1.39	-1.68	-1.21

802.11ax HEW40_Nss2,(MCS0)_3TX

5755MHz

PSD

08/09/2022



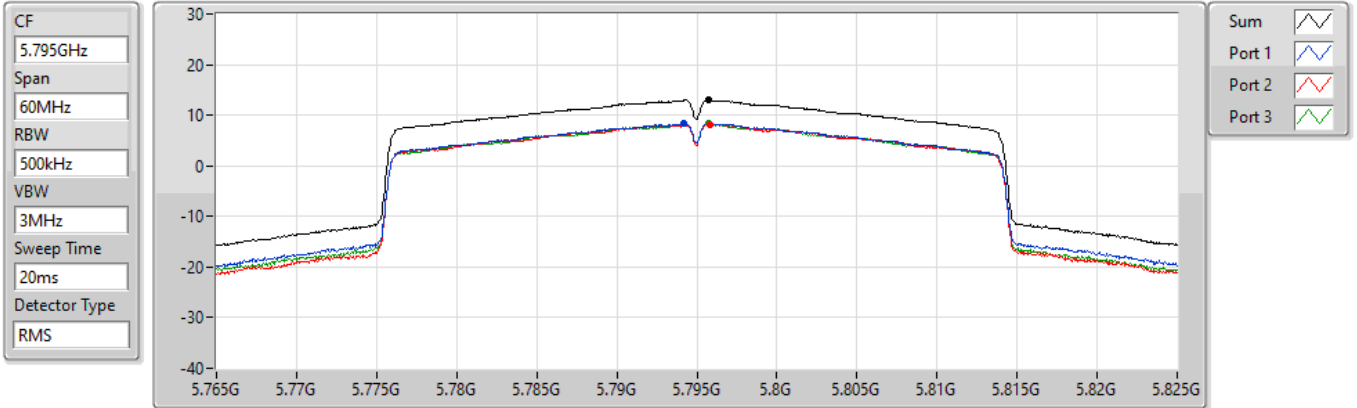
Sum	PD	Port 1	Port 2	Port 3
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
13.09	13.09	8.59	8.30	8.42

802.11ax HEW40_Nss2,(MCS0)_3TX

5795MHz

PSD

08/09/2022



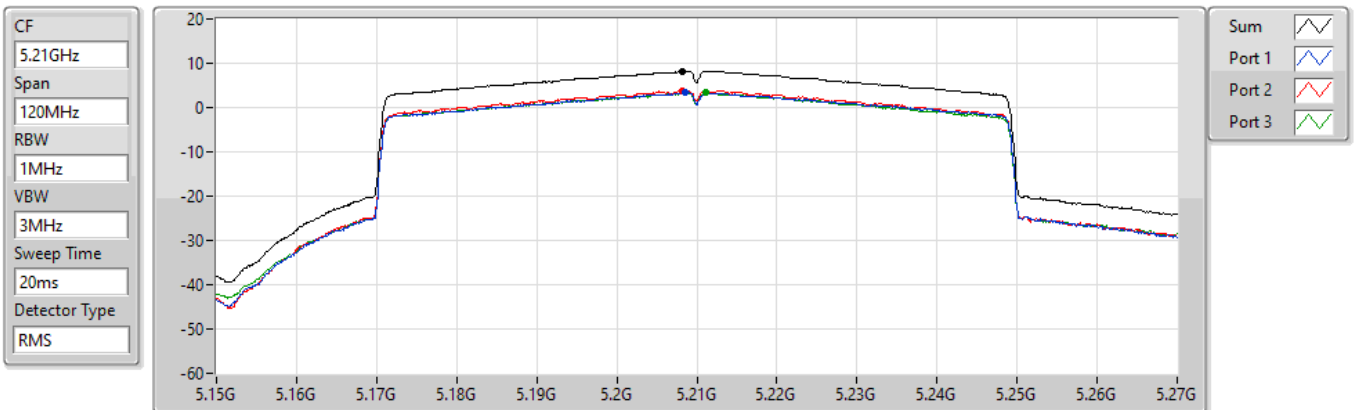
Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
13.00	13.00	8.45	8.22	8.31

802.11ax HEW80_Nss2,(MCS0)_3TX

5210MHz

PSD

08/09/2022



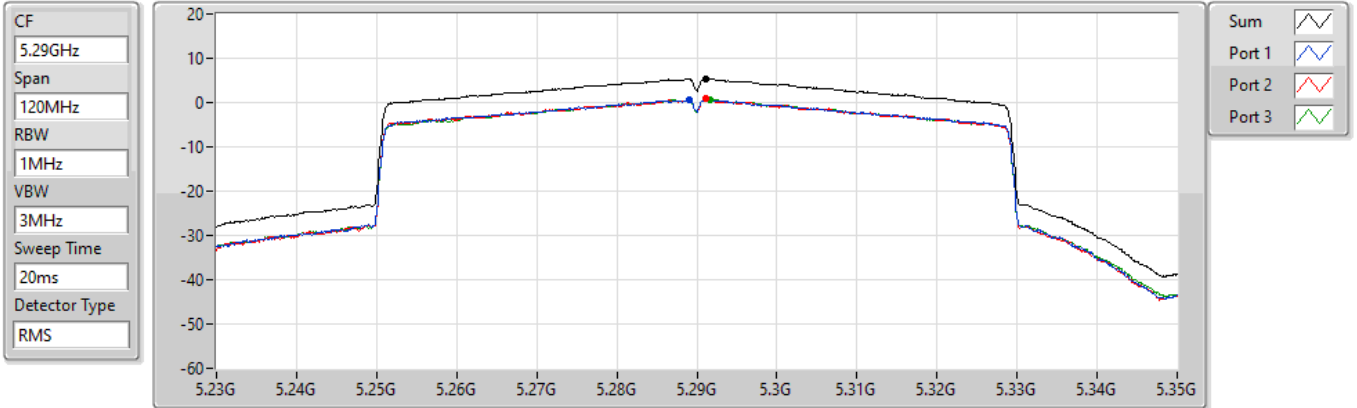
Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
8.21	8.21	3.35	3.86	3.41

802.11ax HEW80_Nss2,(MCS0)_3TX

PSD

5290MHz

08/09/2022

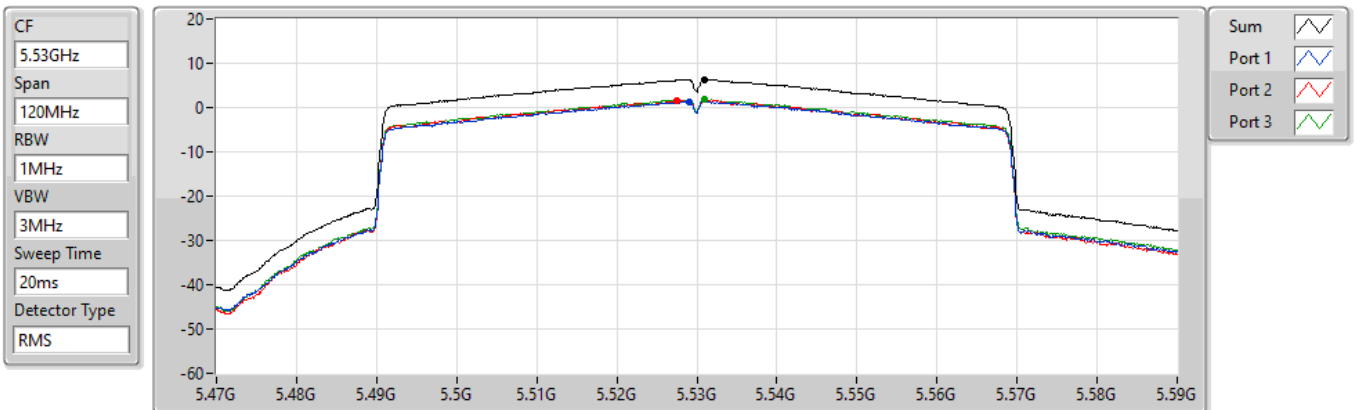


802.11ax HEW80_Nss2,(MCS0)_3TX

PSD

5530MHz

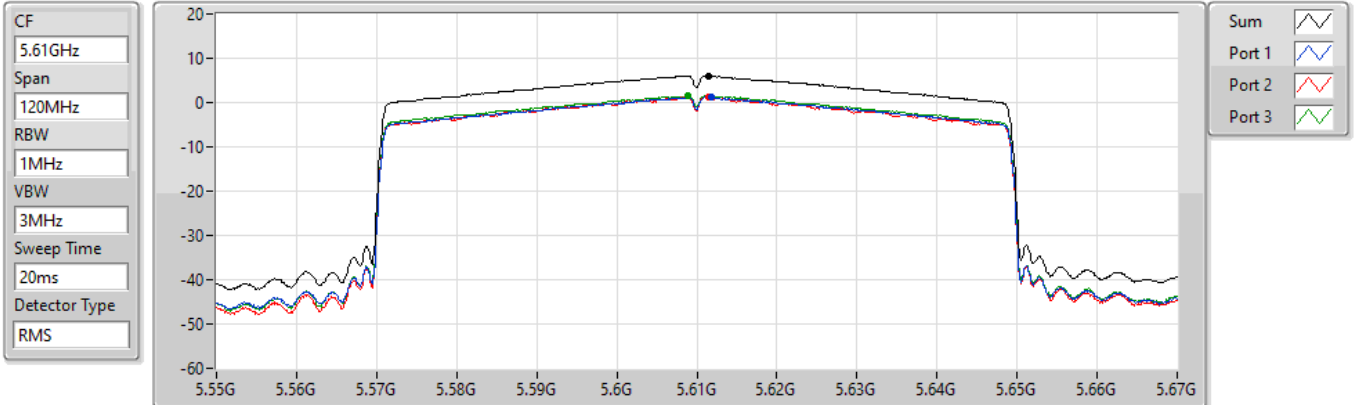
08/09/2022



802.11ax HEW80_Nss2,(MCS0)_3TX

5610MHz

08/09/2022

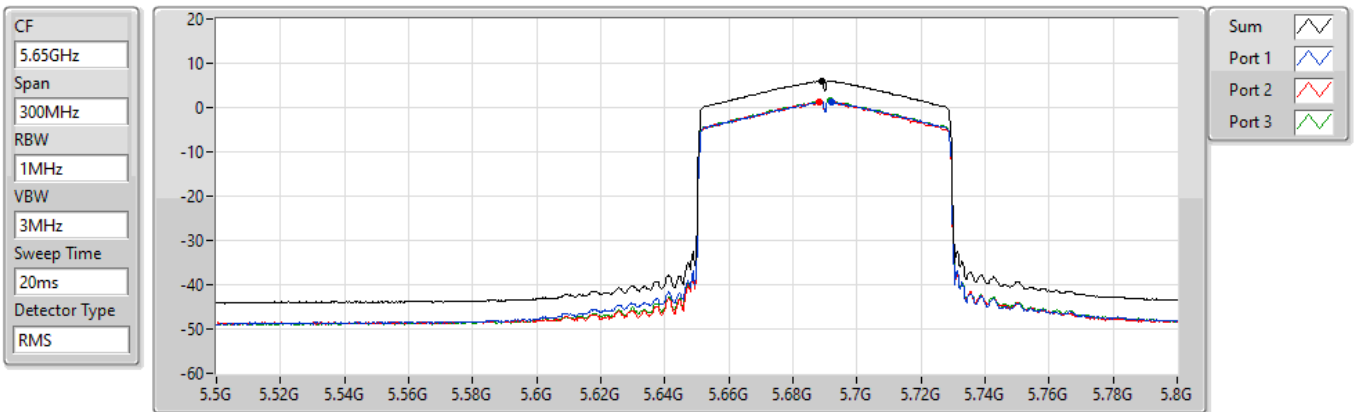


Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.04	6.04	1.17	1.20	1.56

802.11ax HEW80_Nss2,(MCS0)_3TX

5690MHz Straddle 5.47-5.725GHz

08/09/2022



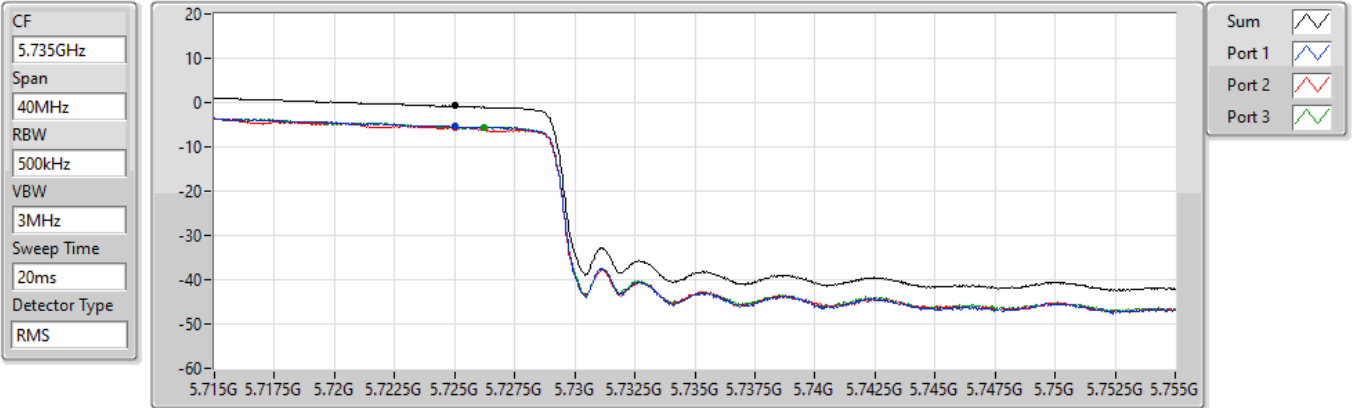
Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.05	6.05	1.33	1.33	1.56

802.11ax HEW80_Nss2,(MCS0)_3TX

5690MHz Straddle 5.725-5.85GHz

PSD

08/09/2022



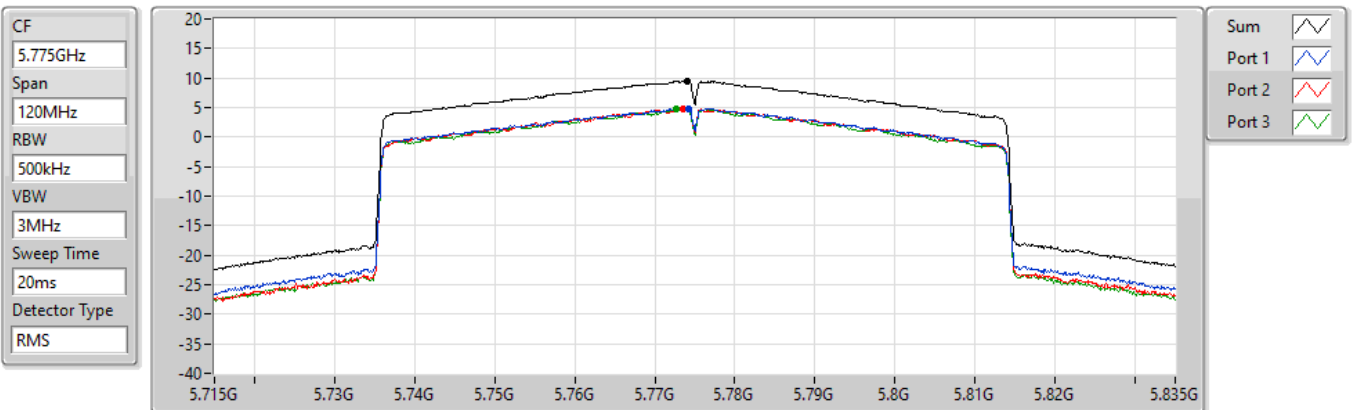
Sum	PD	Port 1	Port 2	Port 3
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
-0.76	-0.76	-5.41	-5.53	-5.55

802.11ax HEW80_Nss2,(MCS0)_3TX

5775MHz

PSD

08/09/2022



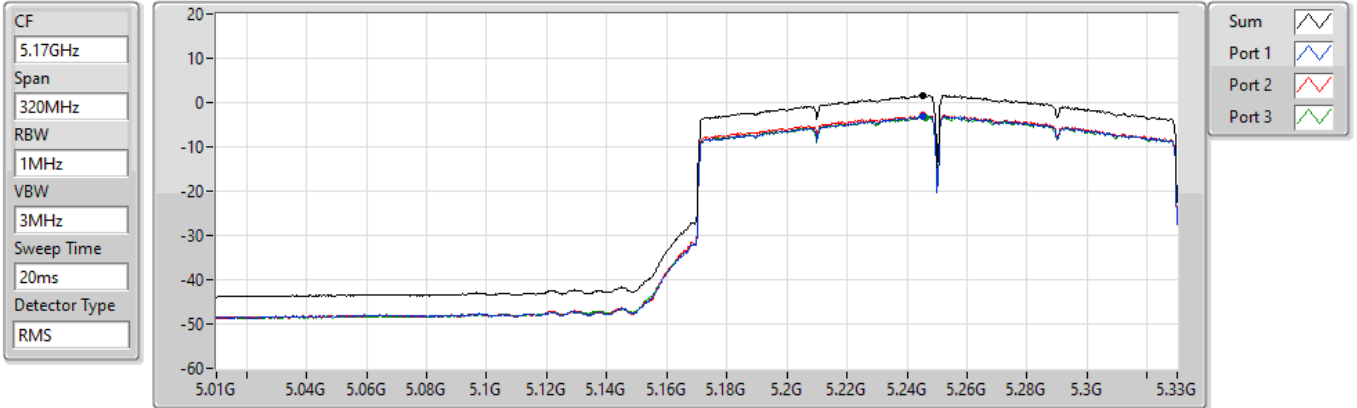
Sum	PD	Port 1	Port 2	Port 3
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
9.45	9.45	4.80	4.84	4.70

802.11ax HEW160_Nss2,(MCS0)_3TX

5250MHz Straddle 5.15-5.25GHz

PSD

08/09/2022

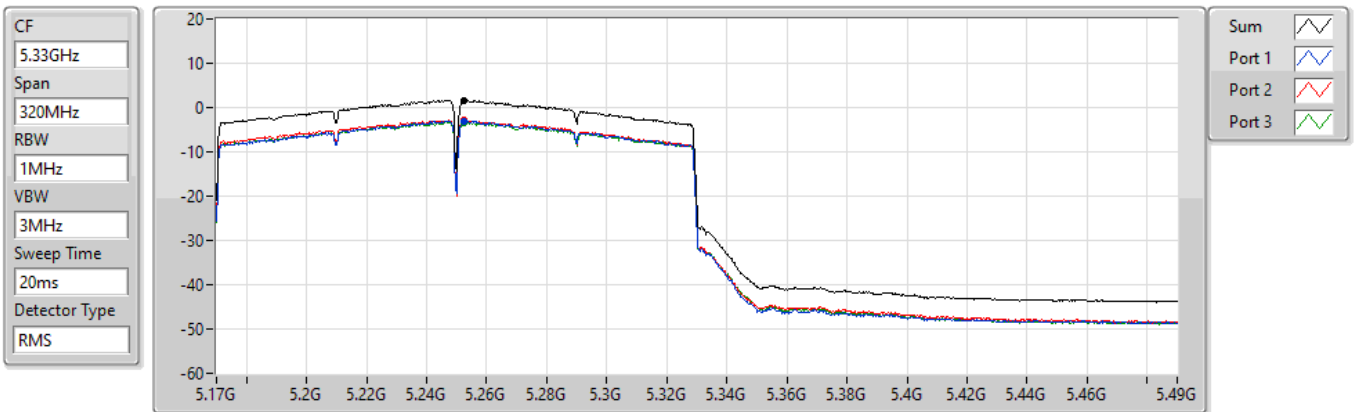


802.11ax HEW160_Nss2,(MCS0)_3TX

5250MHz Straddle 5.25-5.35GHz

PSD

08/09/2022

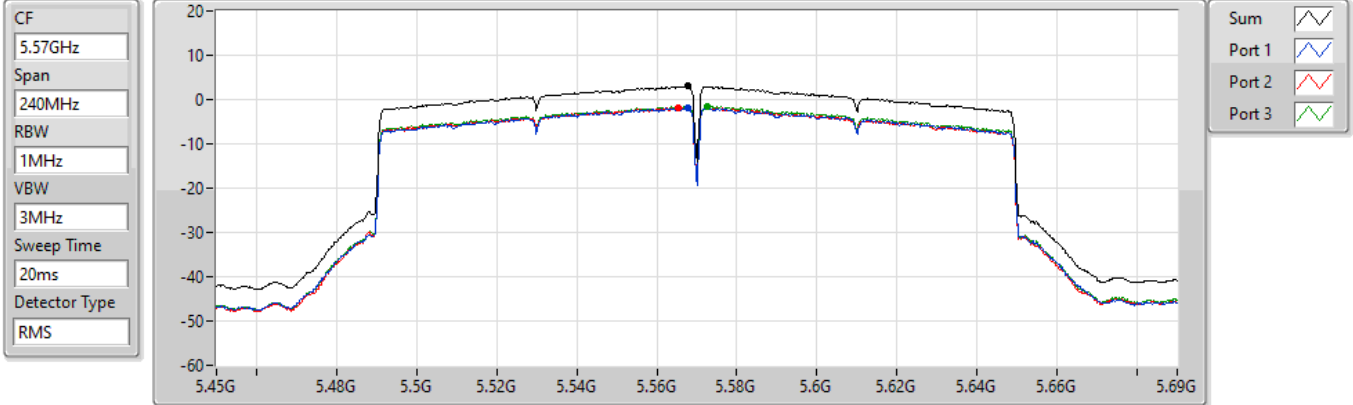


802.11ax HEW160_Nss2,(MCS0)_3TX

5570MHz

PSD

08/09/2022



Sum	PD	Port 1	Port 2	Port 3
(dBm/100kHz)	(dBm/100kHz)	(dBm/100kHz)	(dBm/100kHz)	(dBm/100kHz)
3.04	3.04	-1.80	-1.81	-1.47

Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
5.15-5.25GHz	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_3TX	15.43	22.82
802.11ax HEW40-BF_Nss1,(MCS0)_3TX	13.43	20.82
802.11ax HEW80-BF_Nss1,(MCS0)_3TX	8.00	15.39
802.11ax HEW160-BF_Nss1,(MCS0)_3TX	0.70	8.09
5.25-5.35GHz	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_3TX	9.43	16.82
802.11ax HEW40-BF_Nss1,(MCS0)_3TX	7.81	15.20
802.11ax HEW80-BF_Nss1,(MCS0)_3TX	4.11	11.50
802.11ax HEW160-BF_Nss1,(MCS0)_3TX	1.10	8.49
5.47-5.725GHz	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_3TX	9.59	16.99
802.11ax HEW40-BF_Nss1,(MCS0)_3TX	7.56	14.96
802.11ax HEW80-BF_Nss1,(MCS0)_3TX	4.01	11.41
802.11ax HEW160-BF_Nss1,(MCS0)_3TX	0.81	8.21
5.725-5.85GHz	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_3TX	14.71	22.15
802.11ax HEW40-BF_Nss1,(MCS0)_3TX	12.03	19.47
802.11ax HEW80-BF_Nss1,(MCS0)_3TX	8.04	15.48

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