

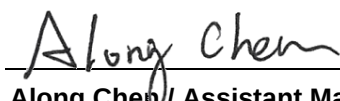
FCC C2PC Test Report

FCC ID : 2AVVV-MW09
Equipment : Outdoor Wireless Access Point
Model No. : MW09
Brand Name : meter
Applicant : Meter, Inc
Address : 548 Market St San Francisco CA 94104 USA
Standard : 47 CFR FCC Part 15.407
Received Date : Nov. 05, 2024
Tested Date : Nov. 08 ~ Dec. 06, 2024

We, International Certification Corporation, would like to declare that the tested sample has been evaluated and in compliance with the requirement of the above standards. The test results contained in this report refer exclusively to the product. It shall not be reproduced except in full without the written approval of our laboratory.

Reviewed by:

Approved by:



Along Chen / Assistant Manager



Gary Chang / Manager

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Release Record

Report No.	Version	Description	Issued Date
FR4N0501AN	Rev. 01	Initial issue	Dec. 25, 2024

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	AC Power Line Conducted Emissions	[dBuV]: 0.466MHz 35.66 (Margin -10.92dB) - AV	Pass
15.407(b) 15.209	Unwanted Emissions	[dBuV/m at 3m]: 5925.00MHz 67.11 (Margin -1.09dB) - PK	Pass
15.407(a)	Emission Bandwidth	Meet the requirement of limit	Pass
15.407(e)	6dB bandwidth	Meet the requirement of limit	Pass
15.407(a)	Conducted Output Power	Max Power [dBm]: Non-beamforming mode 5150~5250MHz: 16.52 5250~5350MHz: 16.85 5470~5725MHz: 16.70 5725~5850MHz: 26.90 Beamforming mode 5150~5250MHz: 13.37 5250~5350MHz: 13.84 5470~5725MHz: 13.69 5725~5850MHz: 23.89	Pass
15.407(a)	Power Spectral Density	Meet the requirement of limit	Pass
15.203	Antenna Requirement	Meet the requirement of limit	Pass

Declaration of Conformity:

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

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

1 General Description

1.1 Information

This is a Class II Permissive Change report (C2PC).

The modifications are concerned with the following items:

- Changing product name.
- Adding new antenna and reduced output power by software setting.

1.1.1 Specification of the Equipment under Test (EUT)

RF General Information					
Frequency Range (MHz)	IEEE Std. 802.11	Ch. Freq. (MHz)	Channel Number	Transmit Chains (N _{TX})	Data Rate / MCS
5150-5250 5250-5350 5470-5725 5725-5850	a	5180-5240 5260-5320 5500-5720 5745-5825	36-48 [4] 52-64 [4] 100-144 [12] 149-165 [5]	2	6-54 Mbps
5150-5250 5250-5350 5470-5725 5725-5850	n (HT20) ac (VHT20) ax (HE20)	5180-5240 5260-5320 5500-5720 5745-5825	36-48 [4] 52-64 [4] 100-144 [12] 149-165 [5]	2	MCS 0-15 MCS 0-9 MCS 0-11
5150-5250 5250-5350 5470-5725 5725-5850	n (HT40) ac (VHT40) ax (HE40)	5190-5230 5270-5310 5510-5710 5755-5795	38-46 [2] 54-62 [2] 102-142 [6] 151-159 [2]	2	MCS 0-15 MCS 0-9 MCS 0-11
5150-5250 5250-5350 5470-5725 5725-5850	ac (VHT80) ax (HE80)	5210 5290 5530-5690 5775	42 [1] 58 [1] 106-138 [3] 155 [1]	2	MCS 0-9 MCS 0-11

Note: BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.

1.1.2 Antenna Details

Brand	Model	Type	Connector	Operating Frequencies (MHz) / Antenna Gain (dBi)				
				2400~2483.5	5150~5250	5250~5350	5470~5725	5725~5850
AccelTex	ATS-OP-2 45-13-6NP -36	ATS-195	RPSMA Plug	13	13	13	13	13

1.1.3 Configuration of Equipment under Test (EUT)

Power Supply Type	54Vdc from PoE	
TPC	☒ Support	☐ Not support
Beamforming	☒ Support	☐ Not support
RU Configuration	☒ Full RU	☐ Partial RU
Channel Puncturing	☐ Support	☒ Not support

1.1.4 Accessories

Accessories		
No.	Equipment	Description
1	AC adapter	Brand: EnGenius Model: EPA5006GR I/P: 100-240Vac, 50-60Hz, 0.8A O/P: 54Vdc, 0.6A Power Line: 0.5m non-shielded without core
2	Ground Cable	1.75m non-shielded without core

1.1.5 Channel List

802.11a / n HT20 / ac VHT20 / ax HE20		802.11n HT40 / ac VHT40 / ax HE40	
Channel	Frequency(MHz)	Channel	Frequency(MHz)
36	5180	38	5190
40	5200	46	5230
44	5220	54	5270
48	5240	62	5310
52	5260	102	5510
56	5280	110	5550
60	5300	118	5590
64	5320	126	5630
100	5500	134	5670
104	5520	142	5710
108	5540	151	5755
112	5560	159	5795
116	5580	802.11ac VHT80 / ax HE80	
120	5600	42	5210
124	5620	58	5290
128	5640	106	5530
132	5660	122	5610
136	5680	138	5690
140	5700	155	5775
144	5720	---	---
149	5745	---	---
153	5765	---	---
157	5785	---	---
161	5805	---	---
165	5825	---	---

1.1.6 Test Tool and Duty Cycle

Test Tool	QDART, V5.14.00227.1		
Duty Cycle and Duty Factor	Mode	Duty Cycle (%)	Duty Factor (dB)
	11a	93.33%	0.30
	ax HE20	94.60%	0.24
	ax HE40	94.89%	0.23
	ax HE80	84.93%	0.71

1.1.7 Power Index of Test Tool

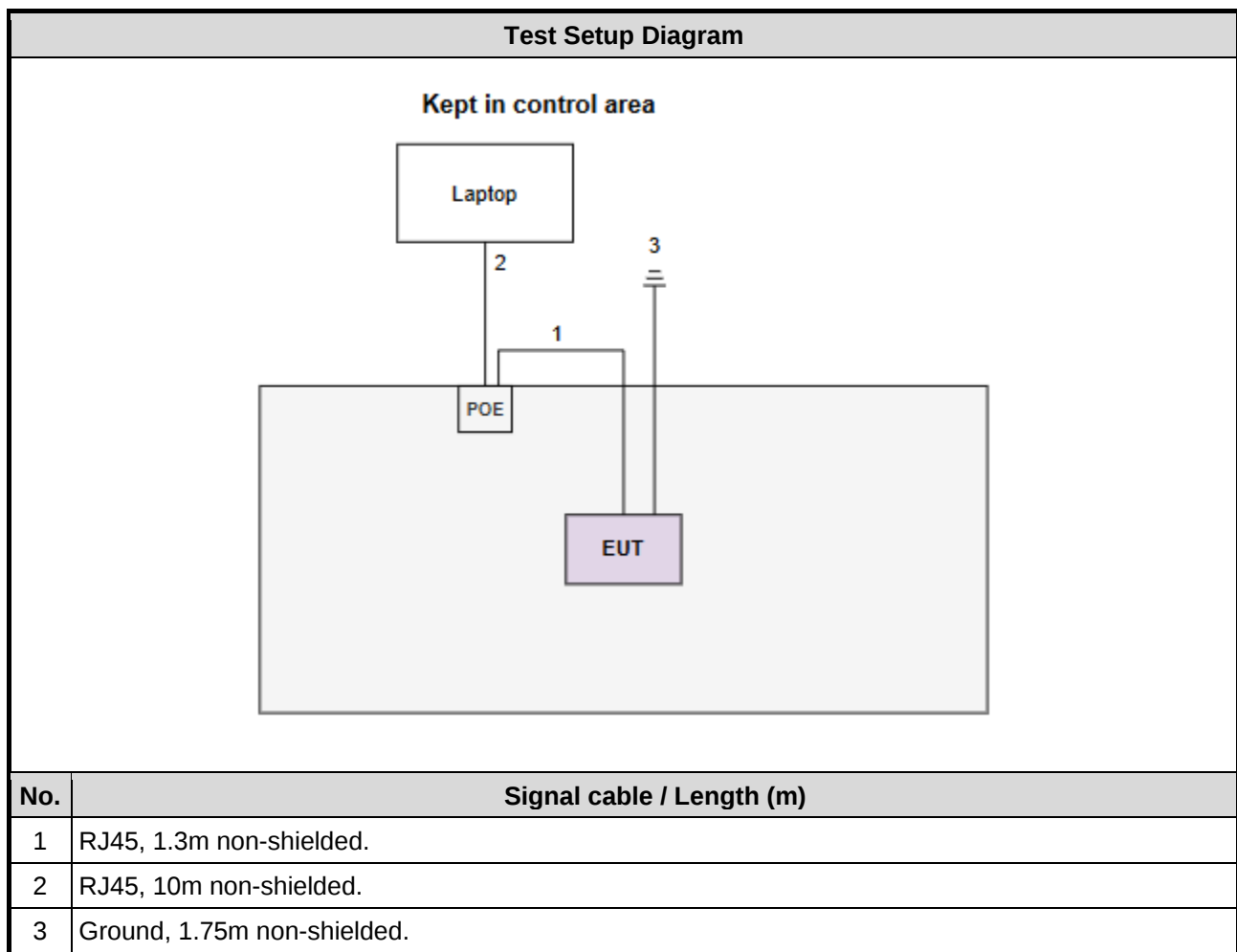
Modulation Mode	Test Frequency (MHz)	Power Index
11a	5180	13
11a	5200	13
11a	5240	13
11a	5260	10
11a	5300	10
11a	5320	10
11a	5500	10
11a	5580	10
11a	5700	10
11a	5720	10
11a	5745	24
11a	5785	24
11a	5825	21
ax HE20	5180	13.5
ax HE20	5200	13.5
ax HE20	5240	13.5
ax HE20	5260	11
ax HE20	5300	11
ax HE20	5320	11
ax HE20	5500	11
ax HE20	5580	11
ax HE20	5700	11
ax HE20	5720	11
ax HE20	5745	23.5
ax HE20	5785	23.5
ax HE20	5825	21

ax HE40	5190	13
ax HE40	5230	13
ax HE40	5270	13.5
ax HE40	5310	13.5
ax HE40	5510	13.5
ax HE40	5590	13.5
ax HE40	5670	13.5
ax HE40	5710	13.5
ax HE40	5755	24
ax HE40	5795	24
ax HE80	5210	13
ax HE80	5290	13.5
ax HE80	5530	13.5
ax HE80	5610	13.5
ax HE80	5690	13.5
ax HE80	5775	20.5

1.2 Local Support Equipment List

Support Equipment List					
No.	Equipment	Brand	Model	FCC ID	Remarks
1	Laptop	DELL	Vostro 5410	DoC	---

1.3 Test Setup Chart



1.4 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Tested Date	Nov. 18, 2024				
Instrument	Brand	Model No.	Serial No.	Calibration Date	Calibration Until
Receiver	R&S	ESR3	101658	Feb. 23, 2024	Feb. 22, 2025
LISN	R&S	ENV216	101579	May 09, 2024	May 08, 2025
LISN (Support Unit)	SCHWARZBECK	Schwarzbeck 8127	8127667	Jan. 10, 2024	Jan. 09, 2025
RF Cable-CON	Woken	CFD200-NL	CFD200-NL-001	Oct. 07, 2024	Oct. 08, 2025
50 ohm terminal	NA	50	01	Jun. 19, 2024	Jun. 18, 2025
Measurement Software	AUDIX	e3	6.120210k	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	Radiated Emission				
Test Site	966 chamber3 / (03CH03-WS)				
Tested Date	Nov. 08 ~ Dec. 02, 2024				
Instrument	Brand	Model No.	Serial No.	Calibration Date	Calibration Until
Receiver	R&S	ESR3	101657	Mar. 05, 2024	Mar. 04, 2025
Spectrum Analyzer	R&S	FSV40	101499	Apr. 02, 2024	Apr. 01, 2025
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 05, 2024	Nov. 04, 2025
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-685	Jul. 02, 2024	Jul. 01, 2025
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1206	Dec. 14, 2023	Dec. 13, 2024
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170508	Dec. 28, 2023	Dec. 27, 2024
Preamplifier	EMC	EMC02325	980187	Jun. 27, 2024	Jun. 26, 2025
Preamplifier	EMC	EMC118A45SE	980897	Aug. 05, 2024	Aug. 04, 2025
Preamplifier	EMC	EMC184045SE	980903	Jul. 30, 2024	Jul. 29, 2025
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Oct. 02, 2024	Oct. 01, 2025
LF cable-0.8M	EMC	EMC8D-NM-NM-800	EMC8D-NM-NM-800-001	Sep. 20, 2024	Sep. 19, 2025
LF cable-3M	EMC	EMC8D-NM-NM-3000	131103	Sep. 20, 2024	Sep. 19, 2025
LF cable-13M	EMC	EMC8D-NM-NM-13000	131104	Sep. 20, 2024	Sep. 19, 2025
RF cable-3M	HUBER+SUHNER	SUCOFLEX104	MY22620/4	Sep. 20, 2024	Sep. 19, 2025
RF cable-8M	EMC	EMC104-SM-SM-8000	181107	Sep. 20, 2024	Sep. 19, 2025
Attenuator	Pasternack	PE7005-10	10-3	Sep. 20, 2024	Sep. 19, 2025
HIGHPASS FILTER	K&L	11SH10-7000/T18000-O/OP	21	Sep. 20, 2024	Sep. 19, 2025
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Tested Date	Dec. 04 ~ Dec. 06, 2024				
Instrument	Brand	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	R&S	FSV40	101910	Apr. 18, 2024	Apr. 17, 2025
Power Meter	Anritsu	ML2495A	1241002	Nov. 26, 2024	Nov. 25, 2025
Power Sensor	Anritsu	MA2411B	1207366	Nov. 26, 2024	Nov. 25, 2025
Attenuator	Pasternack	PE7005-10	10-2	Oct. 04, 2024	Oct. 03, 2025
Measurement Software	Sporton	SENSE-15247_DTS	V5.11	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

1.5 Test Standards

47 CFR FCC Part 15.407
ANSI C63.10-2013

1.6 Reference Guidance

FCC KDB 412172 D01 Determining ERP and EIRP v01r01
FCC KDB 662911 D01 Multiple Transmitter Output v02r01
FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01

1.7 Deviation from Test Standard and Measurement Procedure

None

1.8 Measurement Uncertainty

The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor ($k=2$)).

Measurement Uncertainty	
Parameters	Uncertainty
Bandwidth	± 34.130 Hz
Conducted power	± 0.808 dB
Power density	± 0.583 dB
Conducted emission	± 2.715 dB
AC conducted emission	± 2.92 dB
Unwanted Emission ≤ 1 GHz	± 3.96 dB
Unwanted Emission > 1 GHz	± 4.51 dB
Time	$\pm 0.1\%$
Temperature	± 0.4 °C

2 Test Configuration

2.1 Testing Facility

Test Laboratory	International Certification Corporation
Test Site	CO01-WS, TH01-WS
Address of Test Site	No.3-1, Lane 6, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 33381, Taiwan (R.O.C.)
Test Site	03CH03-WS
Address of Test Site	No.14-1, Lane 19, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 33381, Taiwan (R.O.C.)

- FCC Designation No.: TW0009
- FCC site registration No.: 207696
- ISED#: 10807C
- CAB identifier: TW2732

2.2 The Worst Test Modes and Channel Details

Non-beamforming mode

Frequency band 5150~5350 MHz / 5470~5725 MHz				
Test item	Modulation Mode	Test Frequency (MHz)	Data Rate	Test Configuration
AC Power Line Conducted Emissions	ax HE40	5310	MCS 0	---
Unwanted Emissions ≤1GHz	ax HE40	5310	MCS 0	---
Unwanted Emissions >1GHz Conducted Output Power Emission Bandwidth Power Spectral Density	11a	5180 / 5200 / 5240 / 5260 / 5300 5320 / 5500 / 5580 / 5700 / 5720	6 Mbps	---
	ax HE20	5180 / 5200 / 5240 / 5260 / 5300 5320 / 5500 / 5580 / 5700 / 5720	MCS 0	
	ax HE40	5190 / 5230 / 5270 / 5310 / 5510 5590 / 5670 / 5710	MCS 0	
	ax HE80	5210 / 5290 / 5530 / 5610 / 5690	MCS 0	
Frequency band 5725-5850 MHz				
Test item	Modulation Mode	Test Frequency (MHz)	Data Rate	Test Configuration
AC Power Line Conducted Emissions	ax HE40	5795	MCS 0	---
Unwanted Emissions ≤1GHz	ax HE40	5795	MCS 0	---
Unwanted Emissions >1GHz Conducted Output Power Emission Bandwidth 6dB bandwidth Power Spectral Density	11a	5745 / 5785 / 5825	6 Mbps	---
	ax HE20	5745 / 5785 / 5825	MCS 0	
	ax HE40	5755 / 5795	MCS 0	
	ax HE80	5775	MCS 0	

Beamforming mode

Frequency band 5150~5350 MHz / 5470~5725 MHz				
Test item	Modulation Mode	Test Frequency (MHz)	Data Rate	Test Configuration
Conducted Output Power	ax HE20	5180 / 5200 / 5240 / 5260 / 5300 5320 / 5500 / 5580 / 5700 / 5720	MCS 0	---
	ax HE40	5190 / 5230 / 5270 / 5310 / 5510 5590 / 5670 / 5710	MCS 0	
	ax HE80	5210 / 5290 / 5530 / 5610 / 5690	MCS 0	
Frequency band 5725-5850 MHz				
Test item	Modulation Mode	Test Frequency (MHz)	Data Rate	Test Configuration
Conducted Output Power	ax HE20	5745 / 5785 / 5825	MCS 0	---
	ax HE40	5755 / 5795	MCS 0	
	ax HE80	5775	MCS 0	

3 Transmitter Test Results

3.1 Emission Bandwidth

3.1.1 Limit of Emission Bandwidth

Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

3.1.2 Test Procedures

26dB Bandwidth

1. Set RBW = approximately 1% of the emission bandwidth.
2. Set the VBW > RBW, Detector = Peak.
3. Trace mode = max hold.
4. Measure the maximum width of the emission that is 26 dB down from the peak of the emission.

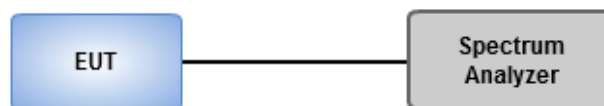
Occupied Bandwidth

1. Set RBW = 1 % to 5 % of the OBW.
2. Set VBW $\geq$ 3 RBW.
3. Sample detection and single sweep mode shall be used.
4. Use the 99 % power bandwidth function of the instrument.

6dB Bandwidth

1. Set RBW = 100kHz, VBW = 300kHz.
2. Detector = Peak, Trace mode = max hold.
3. Allow the trace to stabilize.
4. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

3.1.3 Test Setup



3.1.4 Test Results

Ambient Condition	24-26°C / 62-68%	Tested By	Akun Chung
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Refer to Appendix A.

3.2 Conducted Output Power

3.2.1 Limit of Conducted Output Power

Frequency band 5150-5250 MHz		
Operating Mode		Limit
☐	Outdoor access point	Conducted Power: 1 W The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm)
☐	Indoor access point	Conducted Power: 1 W
☒	Fixed point-to-point access points	Conducted Power: 1 W Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density.
☐	Client devices	Conducted Power: 250 mW

Frequency Band (MHz)	Limit
☒ 5250 ~ 5350	Conducted Power: 250mW or 11dBm+10 log B
☒ 5470 ~ 5725	Conducted Power: 250mW or 11dBm+10 log B
☒ 5725 ~ 5850	Conducted Power: 1 W Fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power.

Note: "B" is the 26dB emission bandwidth in MHz.

3.2.2 Test Procedures

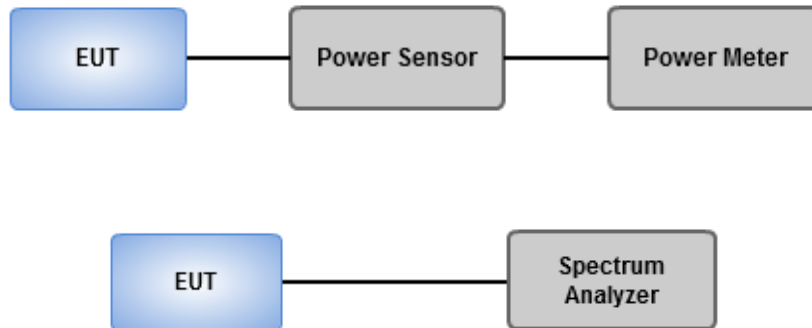
Method PM-G (Measurement using a gated RF average power meter)

Measurements is performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

Spectrum analyzer (For channel that extends across the 5.725 GHz boundary)

1. Set RBW = 1MHz, VBW = 3MHz, Sweep time = Auto, Detector = RMS.
2. Trace average at least 100 traces in power averaging mode.
3. Compute power by integrating the spectrum across the 26 dB EBW.
4. Add 10 log(1/X, X:duty cycle) if duty cycle is <98%.

3.2.3 Test Setup



3.2.4 Test Results

Ambient Condition	24-26°C / 62-68%	Tested By	Akun Chung
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Refer to Appendix B.

3.3 Power Spectral Density

3.3.1 Limit of Power Spectral Density

Frequency band 5150-5250 MHz		
Operating Mode		Limit
☐	Outdoor access point	17 dBm / MHz
☐	Indoor access point	17 dBm / MHz
☒	Fixed point-to-point access points	17 dBm / MHz Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density.
☐	Client devices	11 dBm / MHz

Frequency Band (MHz)	Limit
☒ 5250 ~ 5350	11 dBm / MHz
☒ 5470 ~ 5725	11 dBm / MHz
☒ 5725 ~ 5850	30 dBm / 500 kHz

3.3.2 Test Procedures

For 5150 ~ 5250 MHz / 5250 ~ 5350 MHz / 5470 ~ 5725 MHz

Duty cycle $\geq 98\%$

1. Set RBW = 1 MHz, VBW = 3 MHz, Sweep time = auto, Detector = RMS.
2. Trace average 100 traces.
3. Use the peak marker function to determine the maximum amplitude level.

Duty cycle $< 98\%$

1. Set RBW = 1 MHz, VBW = 3 MHz, Detector = RMS.
2. Set sweep time $\geq 10 \times (\text{number of points in sweep}) \times (\text{total on/off period of the transmitted signal})$.
3. Perform a single sweep.
4. Use the peak marker function to determine the maximum amplitude level.
5. Add $10 \log(1/x)$, where x is the duty cycle.

For 5725 ~ 5850 MHz

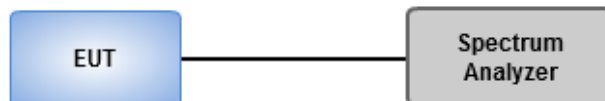
Duty cycle $\geq 98\%$

1. Set RBW = 500 kHz, VBW = 3 MHz, Sweep time = auto, Detector = RMS.
2. Trace average 100 traces.
3. Use the peak marker function to determine the maximum amplitude level.

Duty cycle $< 98\%$

1. Set RBW = 500 kHz, VBW = 3 MHz, Detector = RMS.
2. Set sweep time $\geq 10 \times (\text{number of points in sweep}) \times (\text{total on/off period of the transmitted signal})$.
3. Perform a single sweep.
4. Use the peak marker function to determine the maximum amplitude level.
5. Add $10 \log(1/x)$, where x is the duty cycle.

3.3.3 Test Setup



3.3.4 Test Results

Ambient Condition	24-26°C / 62-68%	Tested By	Akun Chung
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Refer to Appendix C.

3.4 Unwanted Emissions

3.4.1 Limit of Unwanted Emissions

Restricted Band Emissions 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:
Qusai-Peak value is measured for frequency below 1GHz except for 9–90 kHz, 110–490 kHz frequency band. Peak and average value are measured for frequency above 1GHz. The limit on average radio frequency emission is as above table. The limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit

Note 2:
Measurements may be performed at a distance other than what is specified provided. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor as below, Frequency at or above 30 MHz: 20 dB/decade Frequency below 30 MHz: 40 dB/decade.

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 - 5.850 GHz	All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

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

3.4.2 Test Procedures

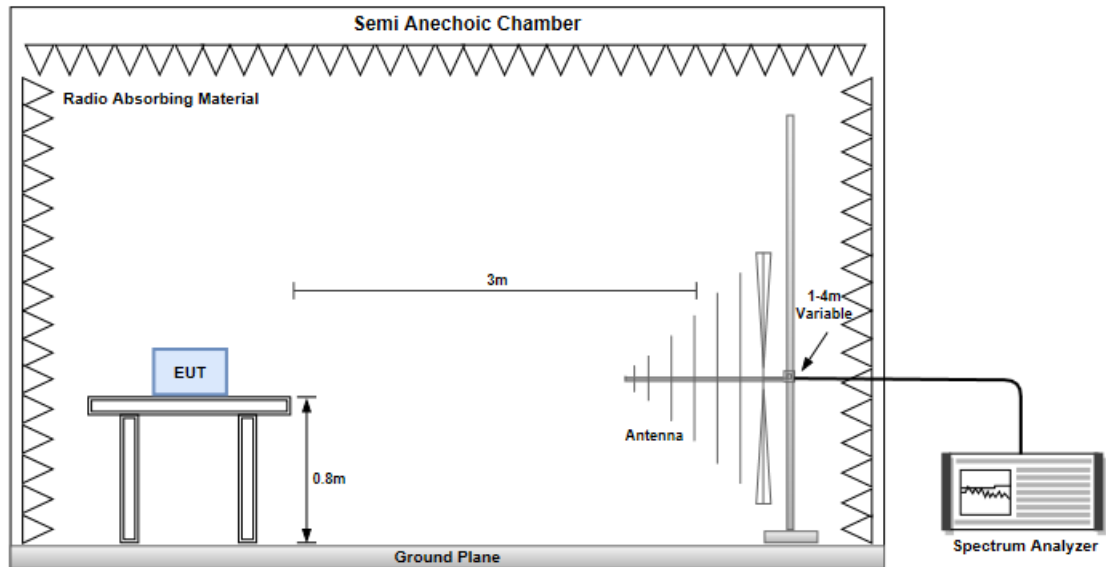
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission frequency. The EUT is placed at test table. For emissions testing at or below 1 GHz, the table height is 80 cm above the reference ground plane. For emission measurements above 1 GHz, the table height is 1.5 m
2. Measurement is made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna is varied in height (1m ~ 4m) above the reference ground plane to obtain the maximum signal strength. Distance between EUT and antenna is 3 m.
3. This investigation is performed with the EUT rotated 360°, the antenna height scanned between 1 m and 4 m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations.

Note:

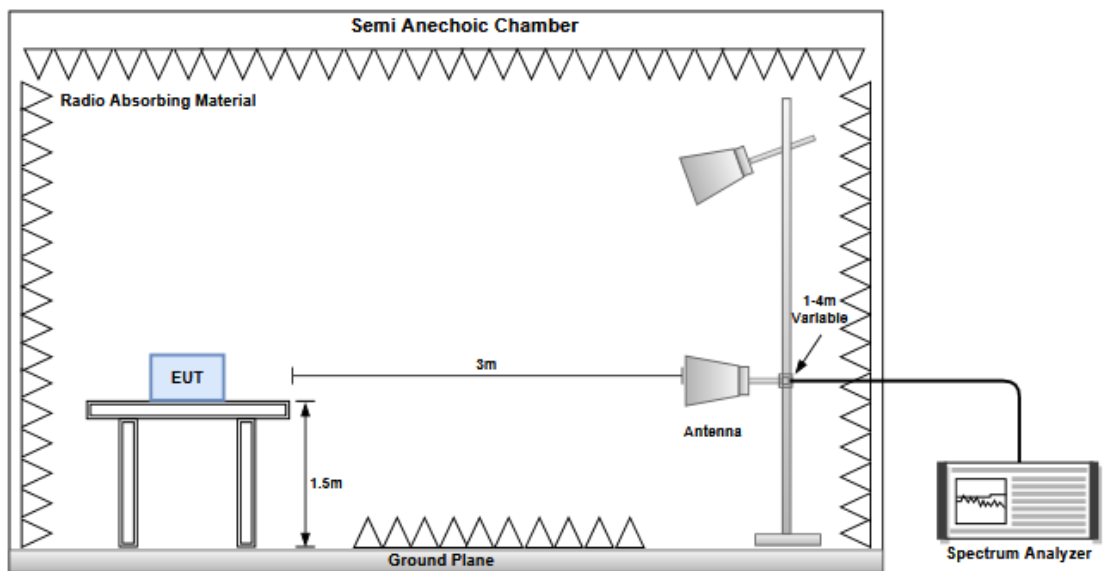
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above 1GHz.

3.4.3 Test Setup

Unwanted Emissions below 1 GHz



Unwanted Emissions above 1 GHz



3.4.4 Test Results

Refer to Appendix D.

3.5 AC Power Line Conducted Emissions

3.5.1 Limit of AC Power Line Conducted Emissions

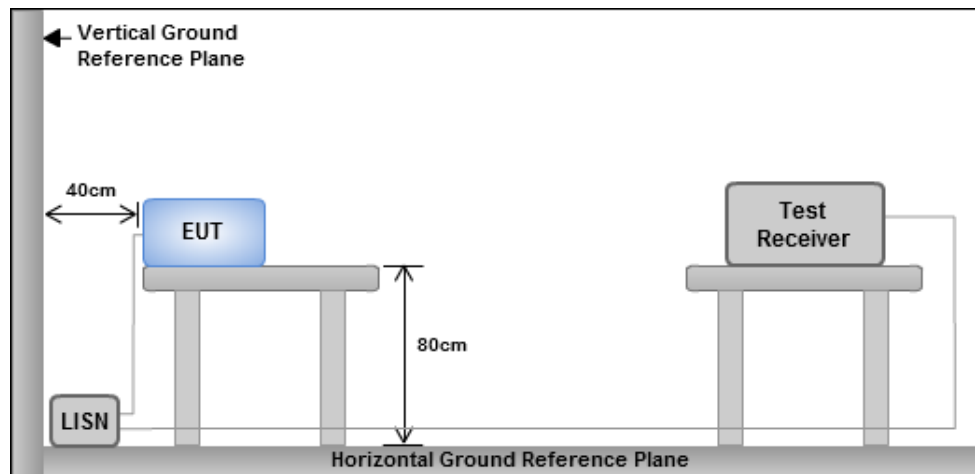
Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

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

3.5.2 Test Procedures

1. The device is placed on a test table, raised 80 cm above the reference ground plane. The vertical conducting plane is located 40 cm to the rear of the device.
2. The device is connected to line impedance stabilization network (LISN) and other accessories are connected to other LISN. Measured levels of AC power line conducted emission are across the 50 Ω LISN port.
3. AC conducted emission measurements is made over frequency range from 150 kHz to 30 MHz.
4. This measurement was performed with AC 120V/60Hz

3.5.3 Test Setup



- Note: 1. Support units were connected to second LISN.
 2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

3.5.4 Test Results

Refer to Appendix E.

4 Test laboratory information

Established in 2012, ICC provides foremost EMC & RF Testing and advisory consultation services by our skilled engineers and technicians. Our services employ a wide variety of advanced edge test equipment and one of the widest certification extents in the business.

International Certification Corporation (EMC and Wireless Communication Laboratory), it is our definitive objective is to institute long term, trust-based associations with our clients. The expectation we set up with our clients is based on outstanding service, practical expertise and devotion to a certified value structure. Our passion is to grant our clients with best EMC / RF services by oriented knowledgeable and accommodating staff.

Our Test sites are located at Linkou District and Kwei Shan District. Location map can be found on our website <http://www.icertifi.com.tw>.

Linkou

Tel: 886-2-2601-1640

No.30-2, Ding Fwu Tsuen, Lin Kou
District, New Taipei City, Taiwan
(R.O.C.)

Kwei Shan

Tel: 886-3-271-8666

No.3-1, Lane 6, Wen San 3rd
St., Kwei Shan Dist., Tao Yuan
City 33381, Taiwan (R.O.C.)
No.2-1, Lane 6, Wen San 3rd
St., Kwei Shan Dist., Tao Yuan
City 33381, Taiwan (R.O.C.)

Kwei Shan Site II

Tel: 886-3-271-8640

No.14-1, Lane 19, Wen San 3rd
St., Kwei Shan Dist., Tao Yuan
City 33381, Taiwan (R.O.C.)

If you have any suggestion, please feel free to contact us as below information.

Tel: 886-3-271-8666

Fax: 886-3-318-0345

Email: ICC_Service@icertifi.com.tw

==END==

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)_2TX	20.724M	16.386M	16M4D1D	19.998M	16.36M
802.11ax HEW20_Nss1,(MCS0)_2TX	21.714M	18.921M	18M9D1D	21.318M	18.921M
802.11ax HEW40_Nss1,(MCS0)_2TX	40.92M	37.781M	37M8D1D	40.524M	37.721M
802.11ax HEW80_Nss1,(MCS0)_2TX	82.368M	77.121M	77M1D1D	81.84M	77.001M
5.25-5.35GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	20.592M	16.386M	16M4D1D	20.196M	16.36M
802.11ax HEW20_Nss1,(MCS0)_2TX	21.648M	18.951M	19M0D1D	21.252M	18.891M
802.11ax HEW40_Nss1,(MCS0)_2TX	41.184M	37.781M	37M8D1D	40.92M	37.721M
802.11ax HEW80_Nss1,(MCS0)_2TX	82.632M	77.121M	77M1D1D	82.104M	77.001M
5.47-5.725GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	20.592M	16.386M	16M4D1D	15.21M	13.178M
802.11ax HEW20_Nss1,(MCS0)_2TX	21.912M	18.921M	18M9D1D	15.84M	14.438M
802.11ax HEW40_Nss1,(MCS0)_2TX	41.184M	37.781M	37M8D1D	35.14M	33.688M
802.11ax HEW80_Nss1,(MCS0)_2TX	82.632M	77.121M	77M1D1D	76.05M	73.013M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	16.038M	16.386M	16M4D1D	3.12M	3.698M
802.11ax HEW20_Nss1,(MCS0)_2TX	17.886M	18.951M	19M0D1D	4.1M	4.598M
802.11ax HEW40_Nss1,(MCS0)_2TX	37.752M	37.841M	37M8D1D	4.06M	4.198M
802.11ax HEW80_Nss1,(MCS0)_2TX	77.88M	77.121M	77M1D1D	4.06M	4.438M

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 / Minimum 26dB down bandwidth for other band;

Min-OBW = Minimum 99% occupied bandwidth

Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	20.13M	16.36M	20.724M	16.36M
5200MHz	Pass	Inf	20.262M	16.36M	20.724M	16.386M
5240MHz	Pass	Inf	19.998M	16.36M	20.526M	16.36M
5260MHz	Pass	Inf	20.262M	16.386M	20.592M	16.386M
5300MHz	Pass	Inf	20.196M	16.386M	20.46M	16.386M
5320MHz	Pass	Inf	20.46M	16.386M	20.592M	16.36M
5500MHz	Pass	Inf	20.46M	16.386M	20.592M	16.386M
5580MHz	Pass	Inf	20.262M	16.386M	20.592M	16.386M
5700MHz	Pass	Inf	19.932M	16.386M	20.592M	16.386M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.21M	13.178M	15.21M	13.193M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.12M	3.698M	3.14M	3.698M
5745MHz	Pass	500k	15.576M	16.333M	16.038M	16.386M
5785MHz	Pass	500k	15.642M	16.386M	15.642M	16.386M
5825MHz	Pass	500k	16.038M	16.36M	15.048M	16.386M
802.11ax HEW20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	21.648M	18.921M	21.714M	18.921M
5200MHz	Pass	Inf	21.318M	18.921M	21.648M	18.921M
5240MHz	Pass	Inf	21.45M	18.921M	21.45M	18.921M
5260MHz	Pass	Inf	21.516M	18.921M	21.318M	18.951M
5300MHz	Pass	Inf	21.516M	18.921M	21.648M	18.891M
5320MHz	Pass	Inf	21.318M	18.921M	21.252M	18.921M
5500MHz	Pass	Inf	21.186M	18.921M	21.648M	18.921M
5580MHz	Pass	Inf	21.912M	18.921M	21.45M	18.921M
5700MHz	Pass	Inf	21.714M	18.921M	21.384M	18.921M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.915M	14.438M	15.84M	14.438M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	4.24M	4.598M	4.1M	4.598M
5745MHz	Pass	500k	15.972M	18.891M	17.754M	18.921M
5785MHz	Pass	500k	17.622M	18.891M	16.632M	18.951M
5825MHz	Pass	500k	16.83M	18.891M	17.886M	18.951M
802.11ax HEW40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	Inf	40.92M	37.721M	40.524M	37.781M
5230MHz	Pass	Inf	40.788M	37.781M	40.92M	37.721M
5270MHz	Pass	Inf	41.184M	37.721M	40.92M	37.721M
5310MHz	Pass	Inf	41.052M	37.781M	41.052M	37.781M
5510MHz	Pass	Inf	40.92M	37.781M	40.92M	37.781M
5590MHz	Pass	Inf	41.052M	37.661M	41.184M	37.721M
5670MHz	Pass	Inf	41.052M	37.721M	40.788M	37.721M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	35.49M	33.688M	35.14M	33.688M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	4.06M	4.198M	4.14M	4.218M
5755MHz	Pass	500k	35.772M	37.781M	37.752M	37.841M
5795MHz	Pass	500k	37.62M	37.781M	37.488M	37.841M



Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11ax HEW80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	Inf	82.368M	77.121M	81.84M	77.001M
5290MHz	Pass	Inf	82.632M	77.121M	82.104M	77.001M
5530MHz	Pass	Inf	82.632M	77.121M	82.104M	77.121M
5610MHz	Pass	Inf	82.632M	77.121M	82.632M	77.121M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	76.05M	73.013M	76.125M	73.088M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	4.06M	4.438M	4.06M	4.458M
5775MHz	Pass	500k	76.56M	77.121M	77.88M	77.121M

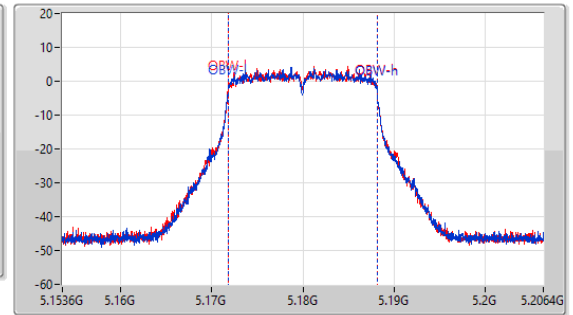
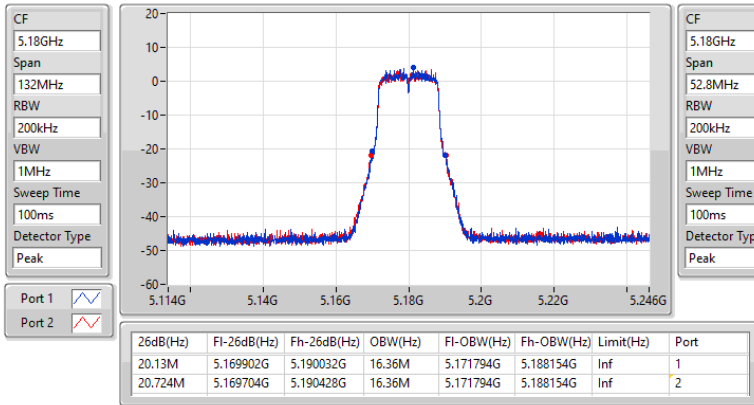
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band

Port X-OBW = Port X 99% occupied bandwidth

5.15-5.25GHz_802.11a_Nss1,(6Mbps)_2TX

EBW

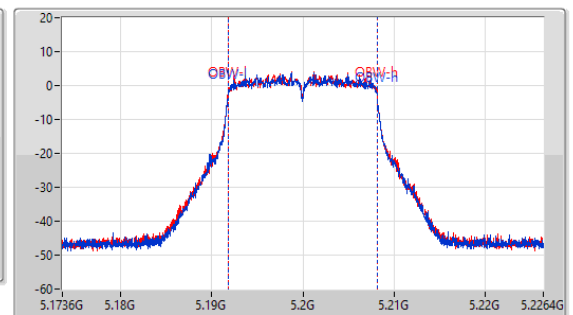
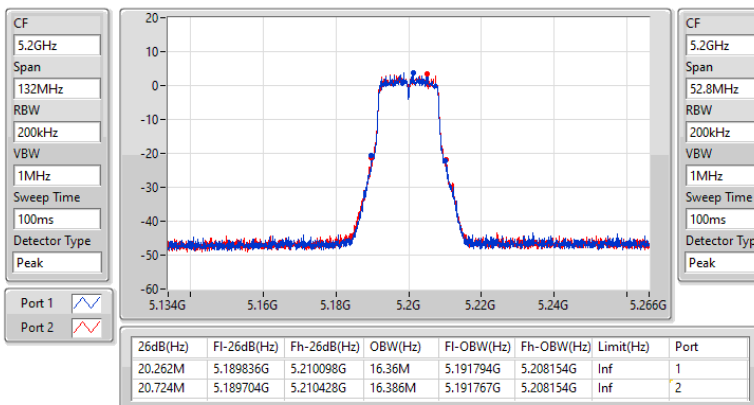
5180MHz



5.15-5.25GHz_802.11a_Nss1,(6Mbps)_2TX

EBW

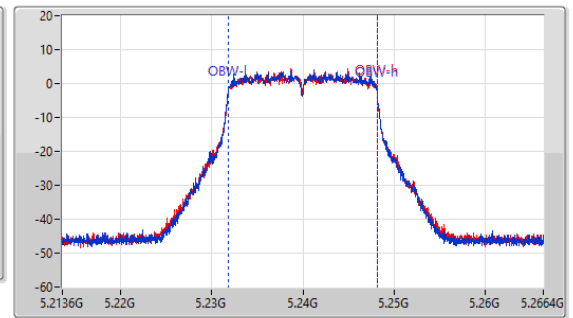
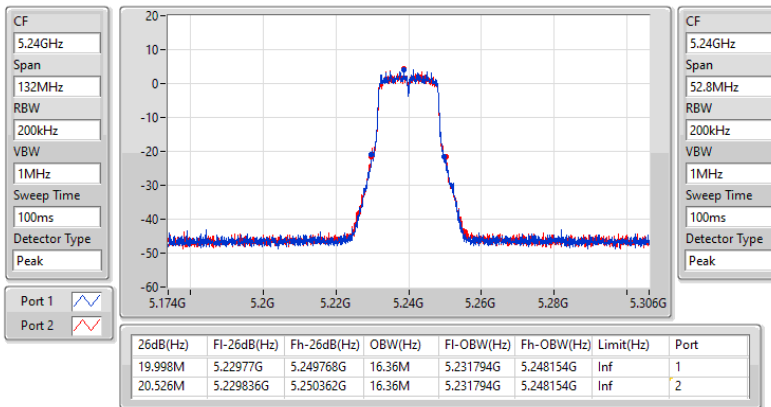
5200MHz



5.15-5.25GHz_802.11a_Nss1,(6Mbps)_2TX

EBW

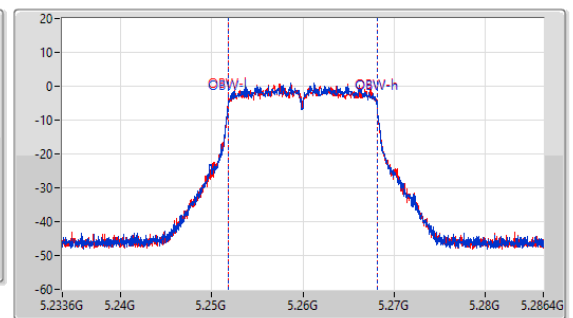
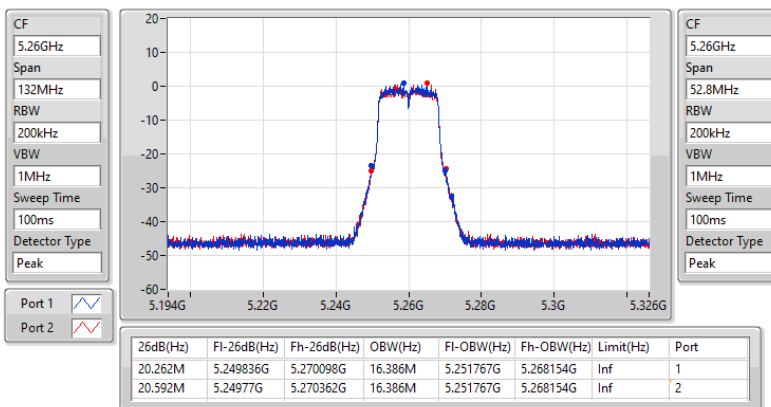
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5.25-5.35GHz_802.11a_Nss1,(6Mbps)_2TX

EBW

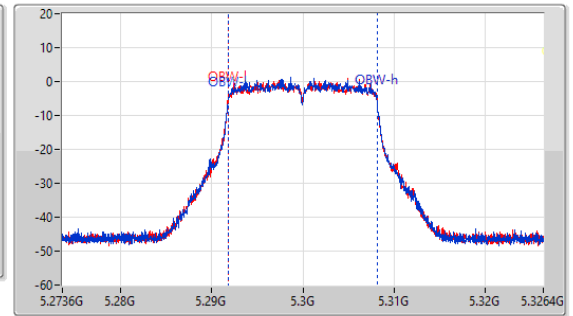
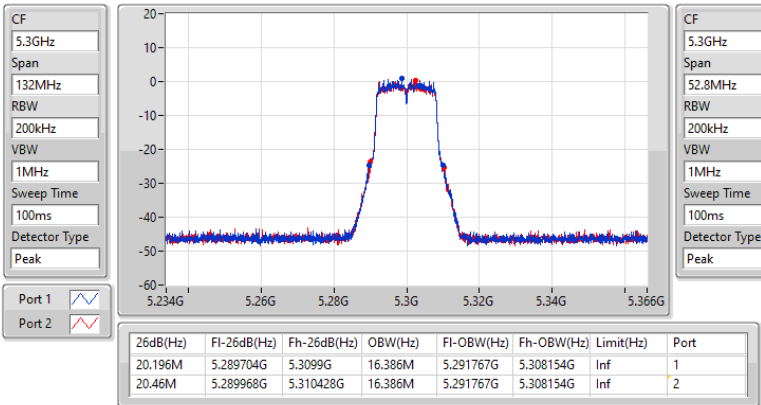
5260MHz



5.25-5.35GHz_802.11a_Nss1,(6Mbps)_2TX

EBW

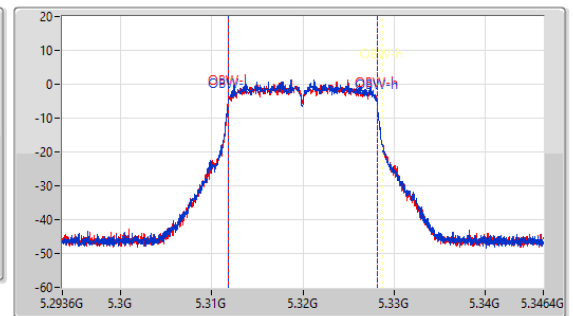
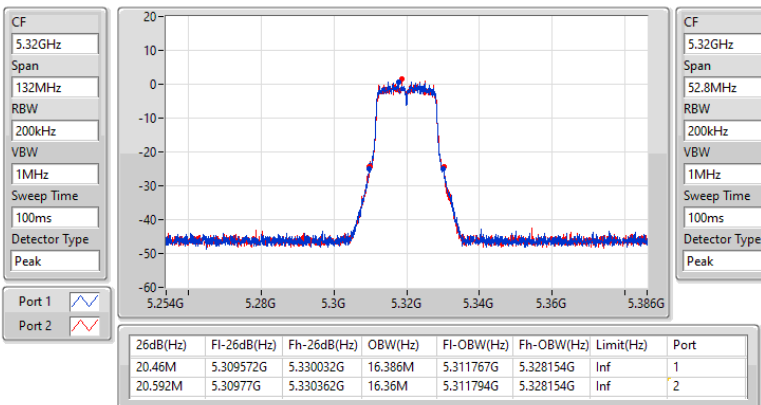
5300MHz



5.25-5.35GHz_802.11a_Nss1,(6Mbps)_2TX

EBW

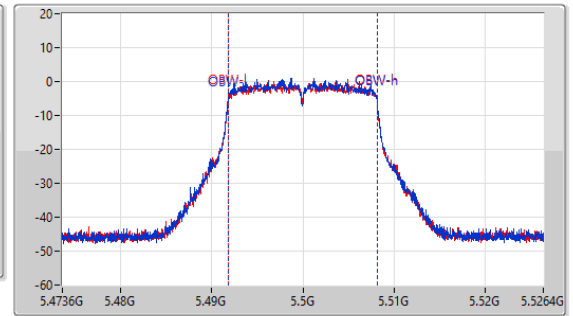
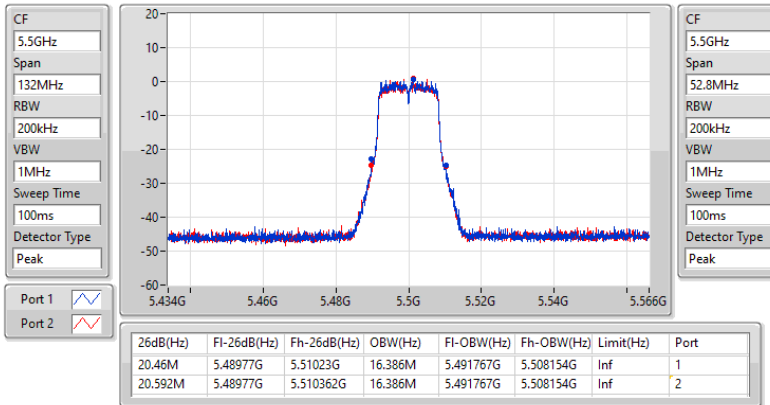
5320MHz



5.47-5.725GHz_802.11a_Nss1,(6Mbps)_2TX

EBW

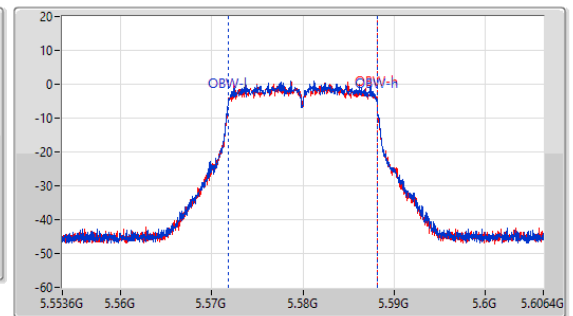
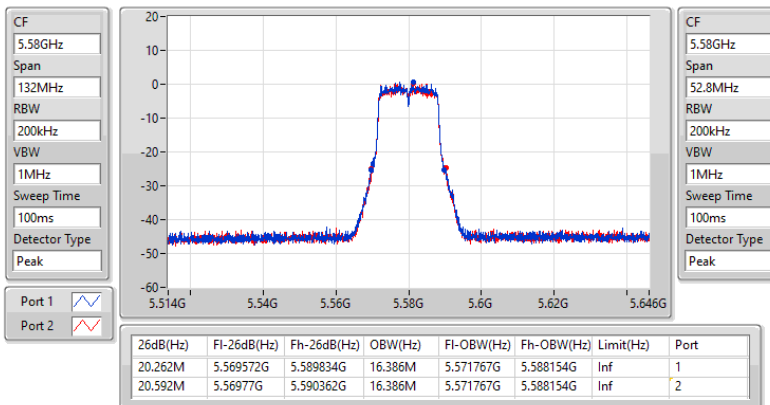
5500MHz



5.47-5.725GHz_802.11a_Nss1,(6Mbps)_2TX

EBW

5580MHz

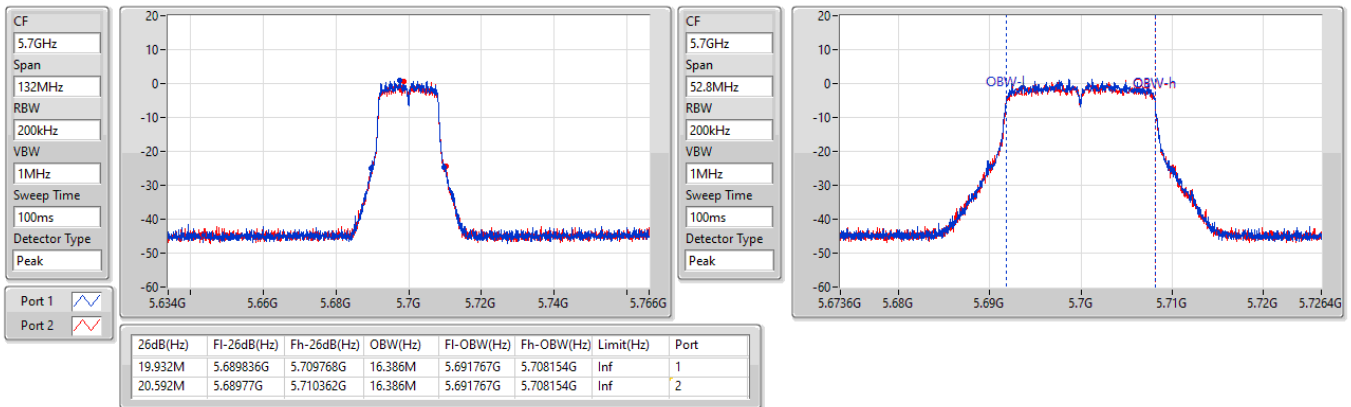




5.47-5.725GHz_802.11a_Nss1,(6Mbps)_2TX

EBW

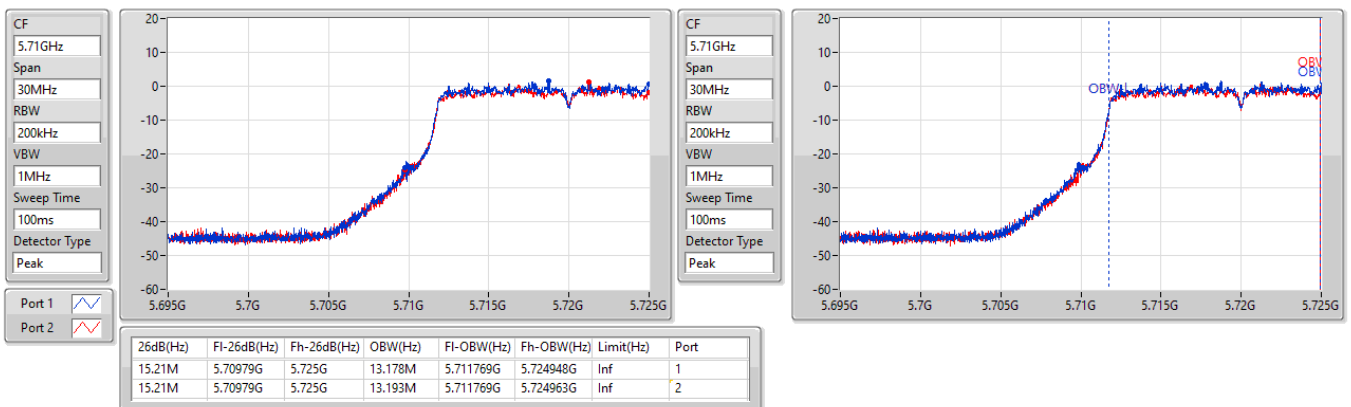
5700MHz



5.47-5.725GHz_802.11a_Nss1,(6Mbps)_2TX

EBW

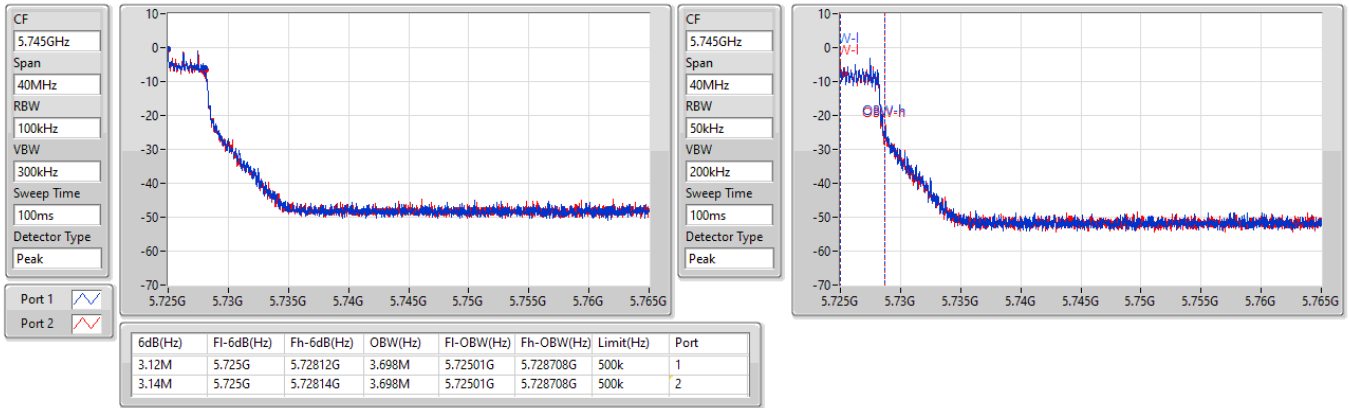
5720MHz Straddle 5.47-5.725GHz



5.725-5.85GHz_802.11a_Nss1,(6Mbps)_2TX

EBW

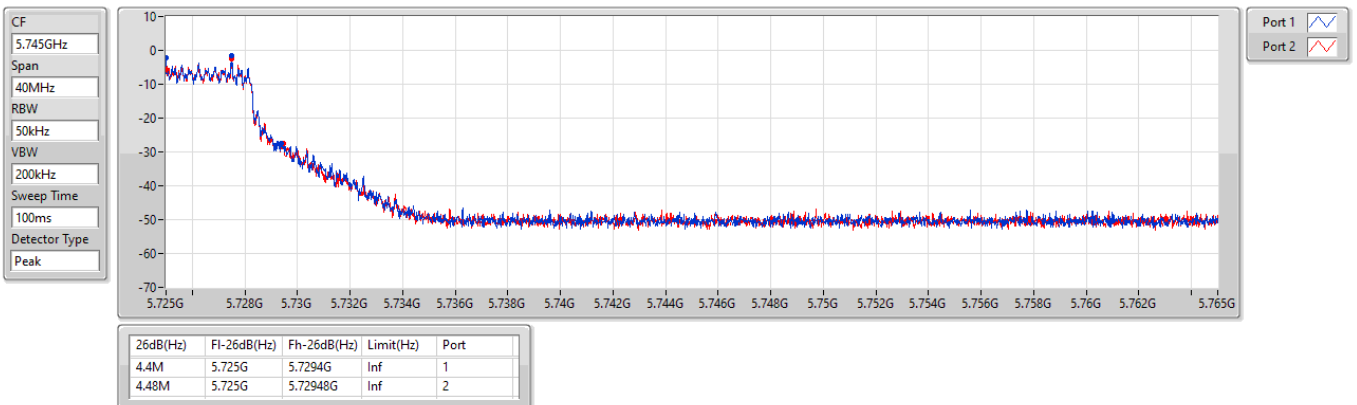
5720MHz Straddle 5.725-5.85GHz



5.725-5.85GHz_802.11a_Nss1,(6Mbps)_2TX

EBW

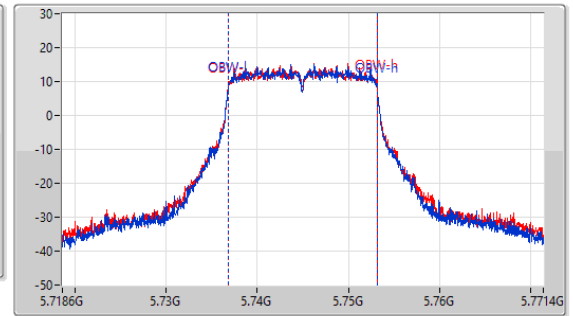
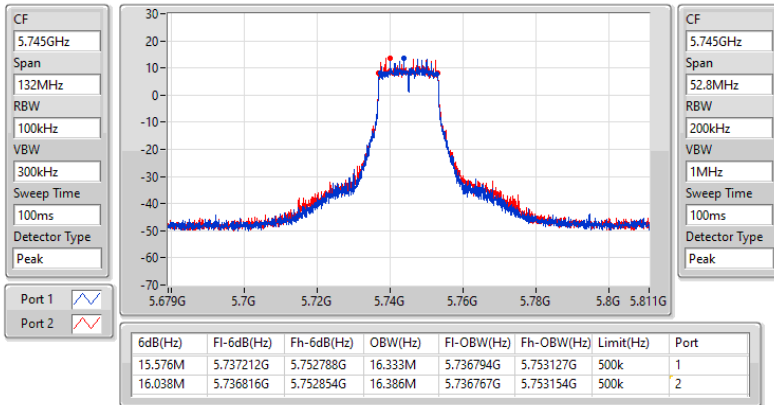
5720MHz Straddle 5.725-5.85GHz



5.725-5.85GHz_802.11a_Nss1,(6Mbps)_2TX

EBW

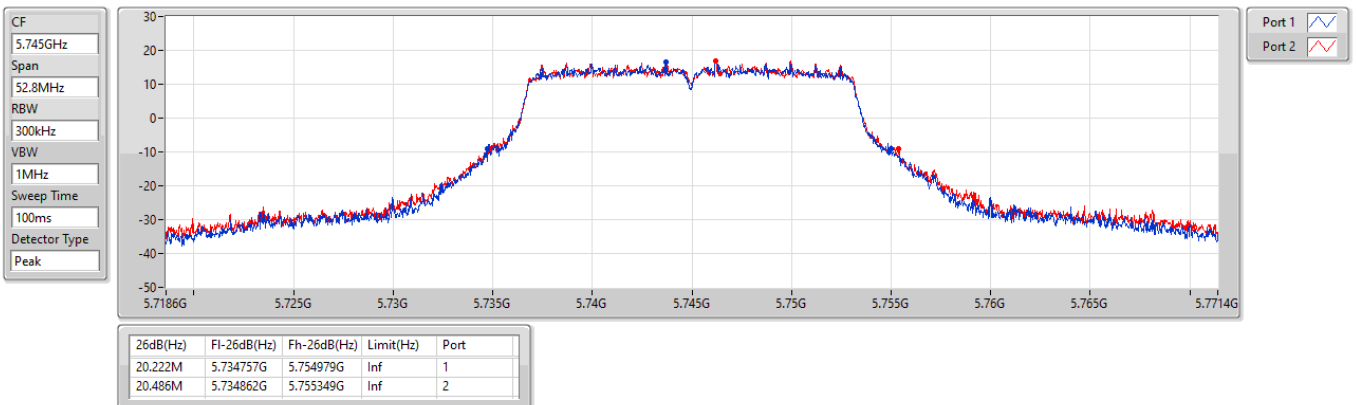
5745MHz



5.725-5.85GHz_802.11a_Nss1,(6Mbps)_2TX

EBW

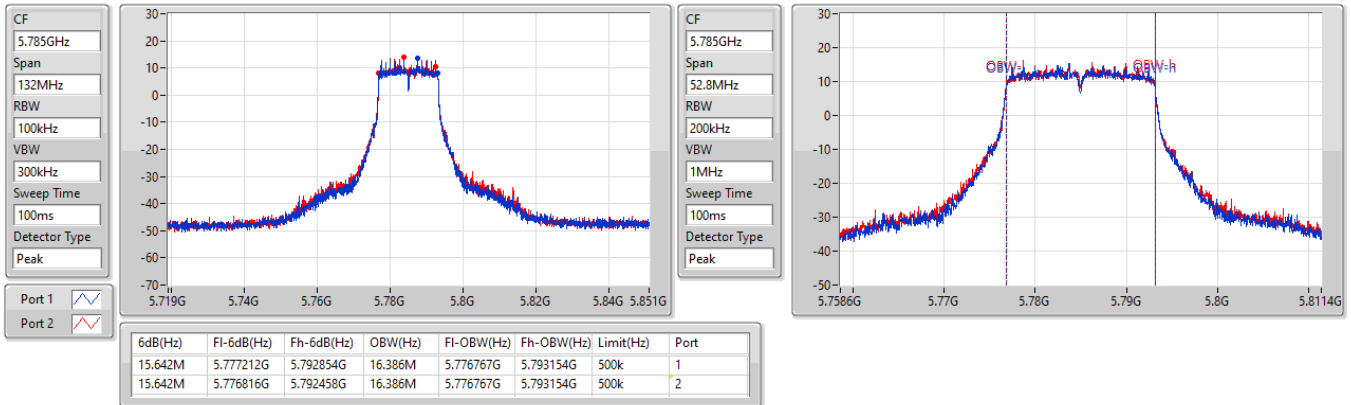
5745MHz



5.725-5.85GHz_802.11a_Nss1,(6Mbps)_2TX

EBW

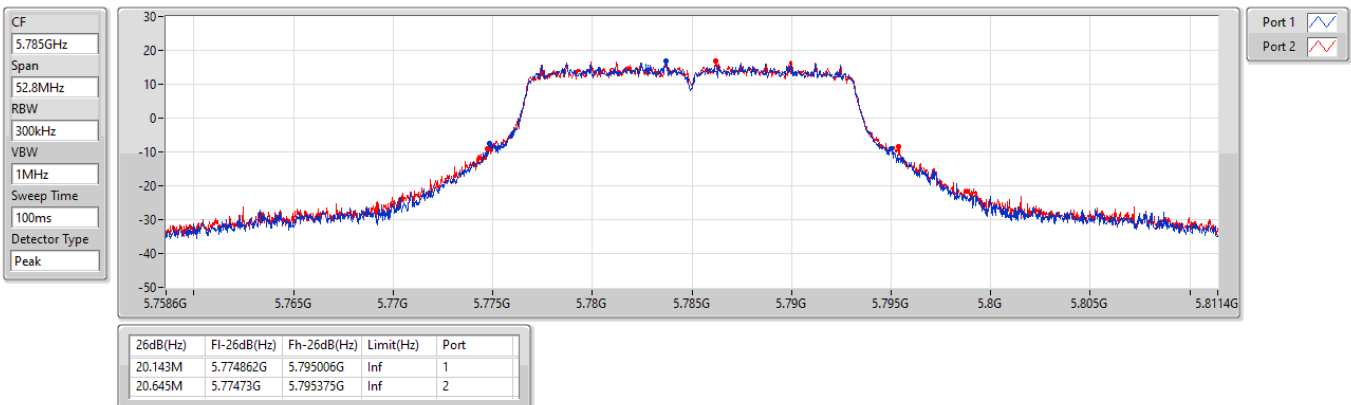
5785MHz



5.725-5.85GHz_802.11a_Nss1,(6Mbps)_2TX

EBW

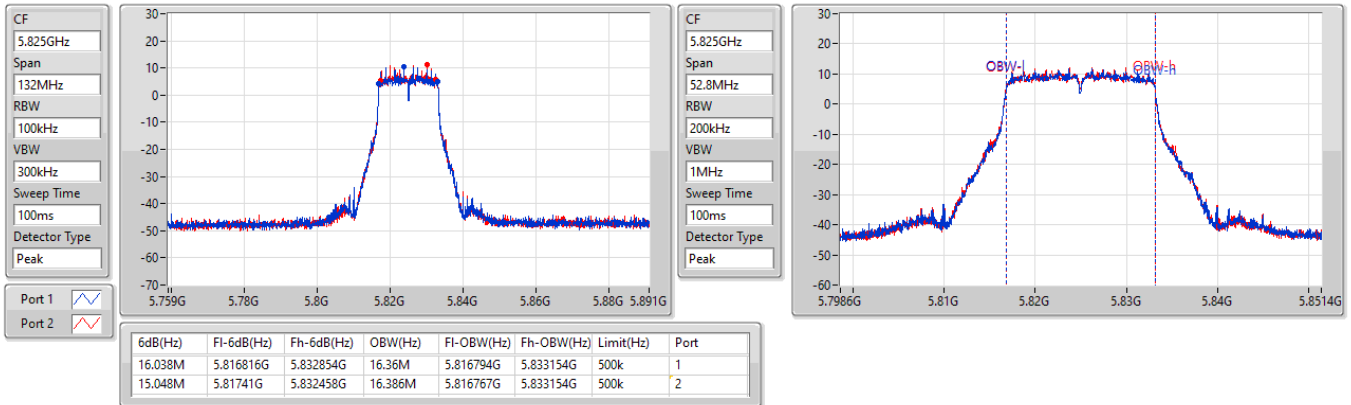
5785MHz



5.725-5.85GHz_802.11a_Nss1,(6Mbps)_2TX

EBW

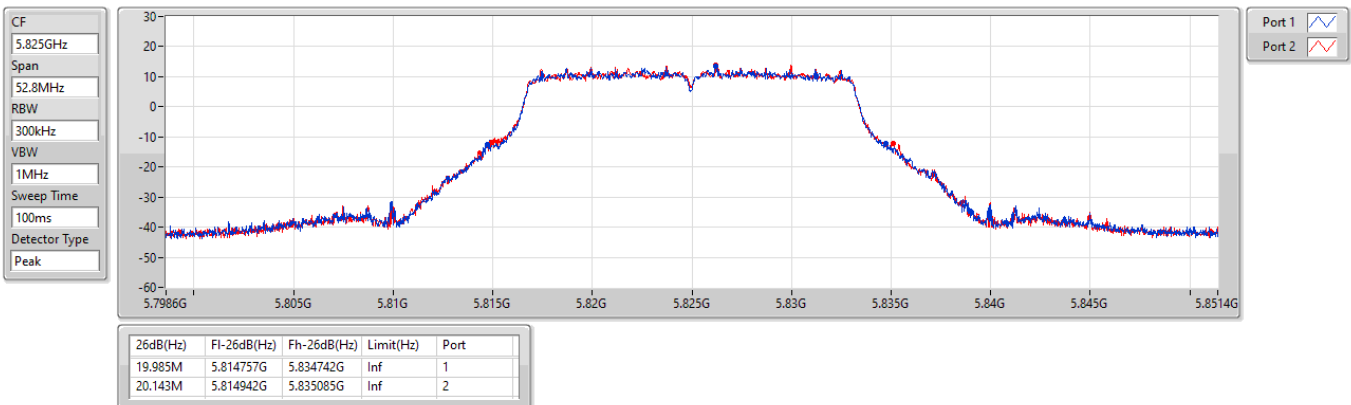
5825MHz



5.725-5.85GHz_802.11a_Nss1,(6Mbps)_2TX

EBW

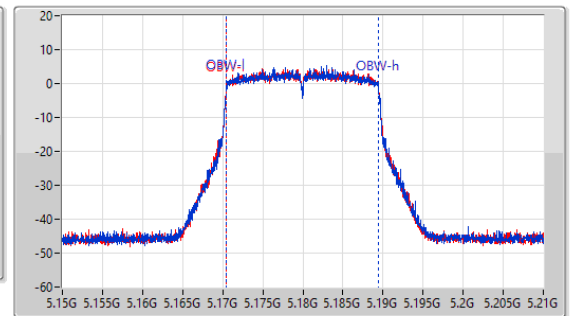
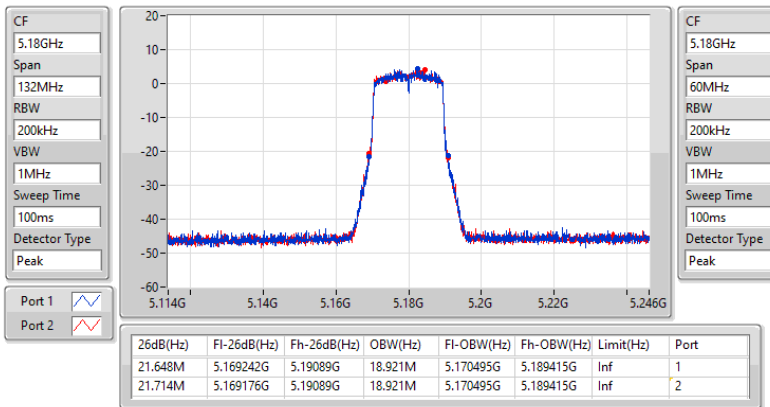
5825MHz



5.15-5.25GHz_802.11ax_HEW20_Nss1,(MCS0)_2TX

EBW

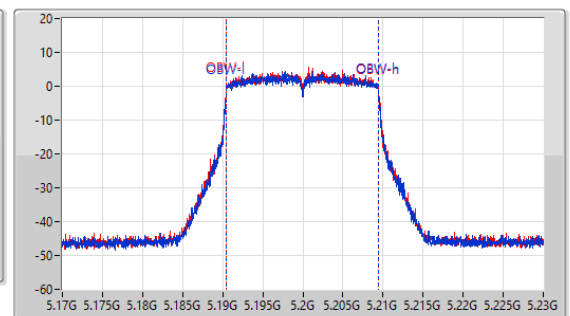
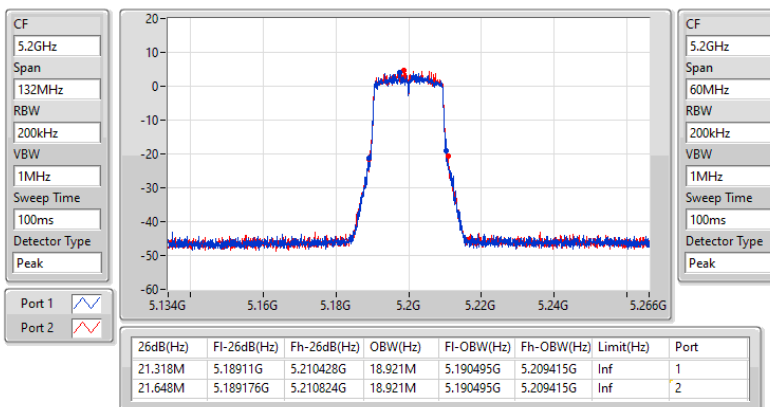
5180MHz



5.15-5.25GHz_802.11ax_HEW20_Nss1,(MCS0)_2TX

EBW

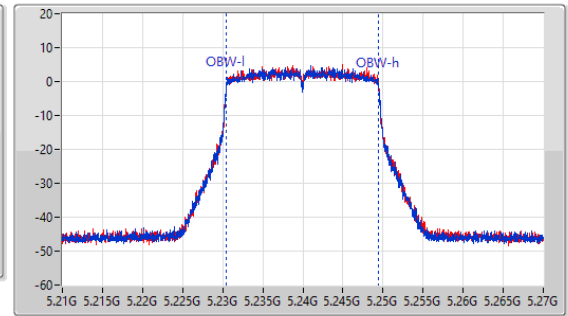
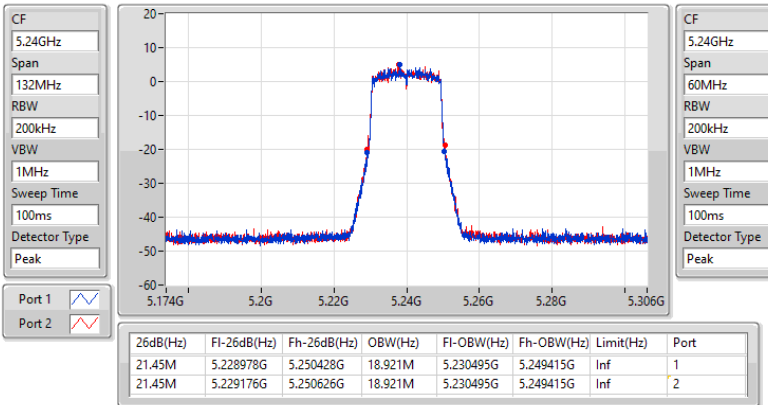
5200MHz



5.15-5.25GHz_802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

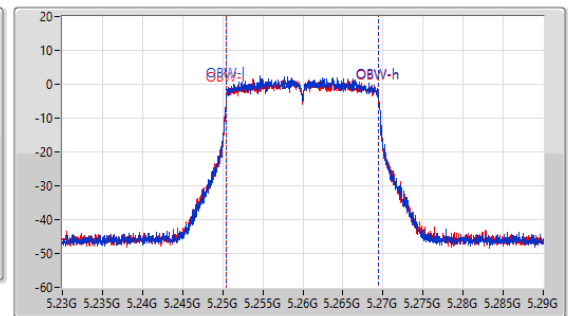
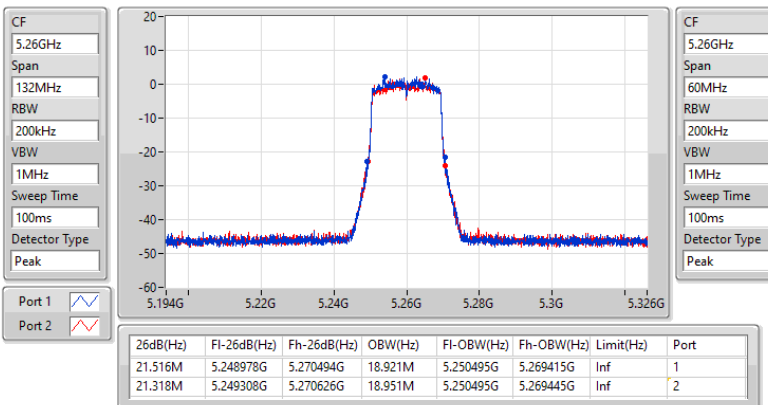
5240MHz



5.25-5.35GHz_802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

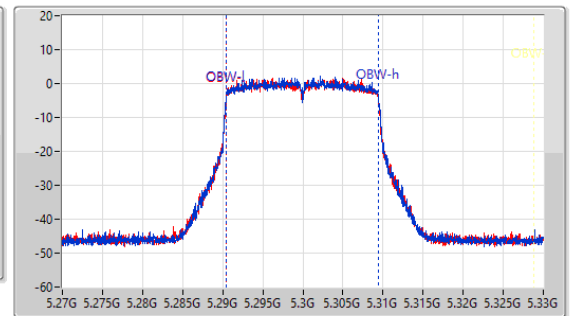
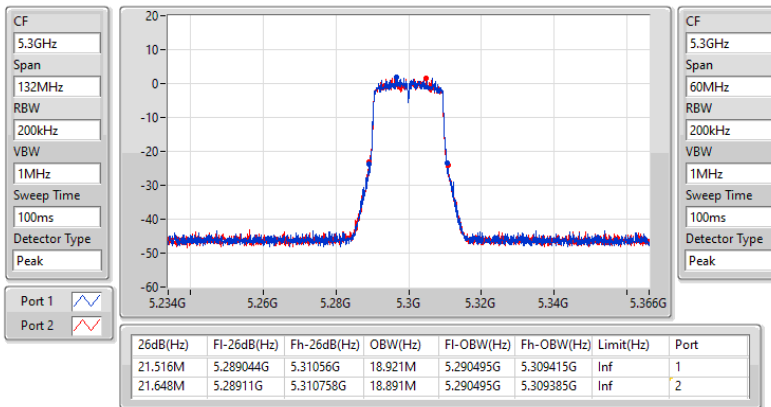
5260MHz



5.25-5.35GHz_802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

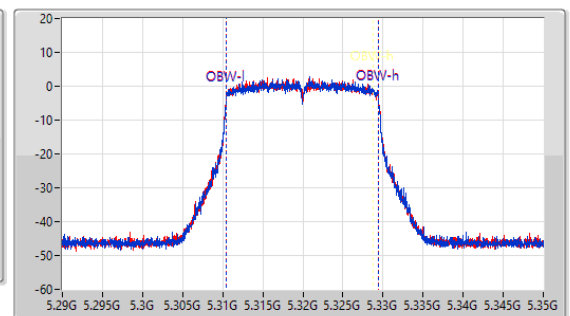
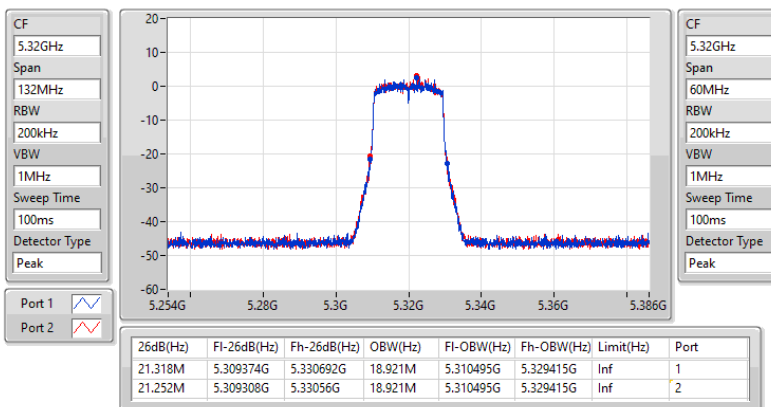
5300MHz



5.25-5.35GHz_802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

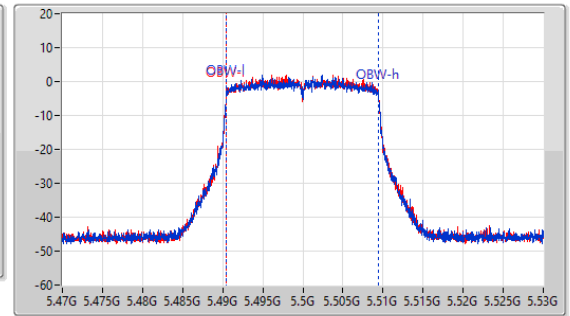
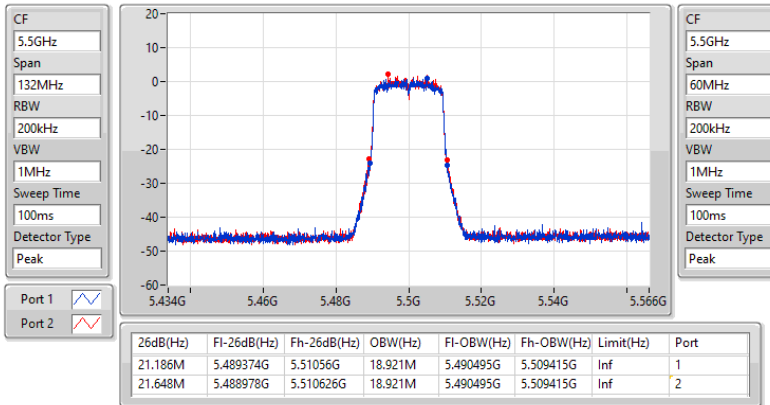
5320MHz



5.47-5.725GHz_802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

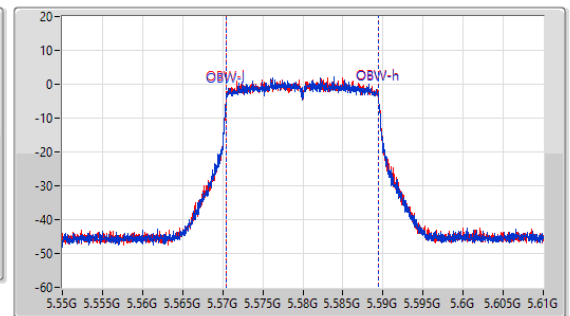
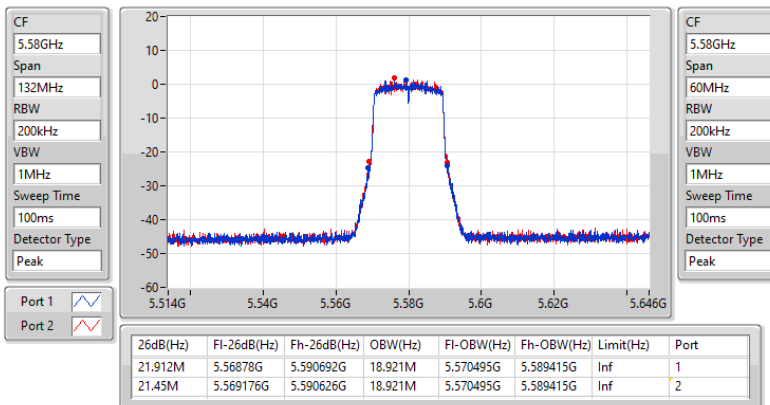
5500MHz



5.47-5.725GHz_802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

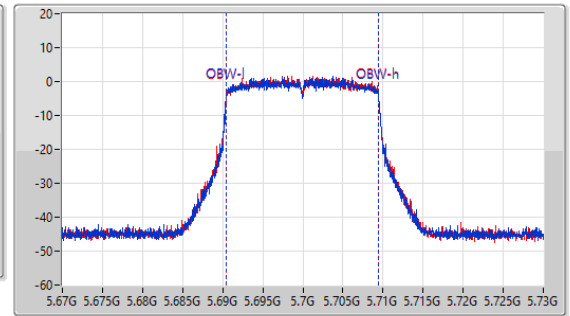
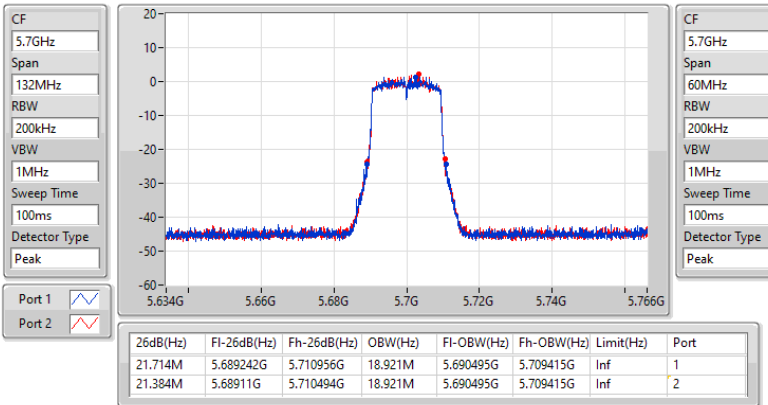
5580MHz



5.47-5.725GHz_802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

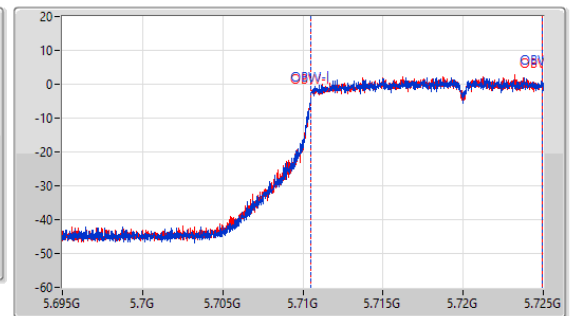
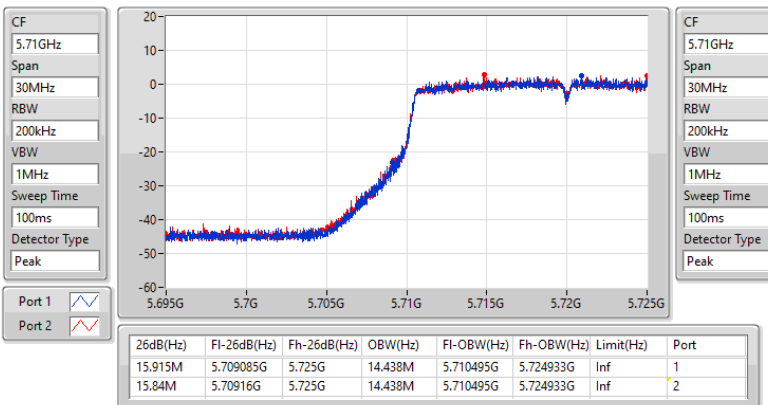
5700MHz



5.47-5.725GHz_802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

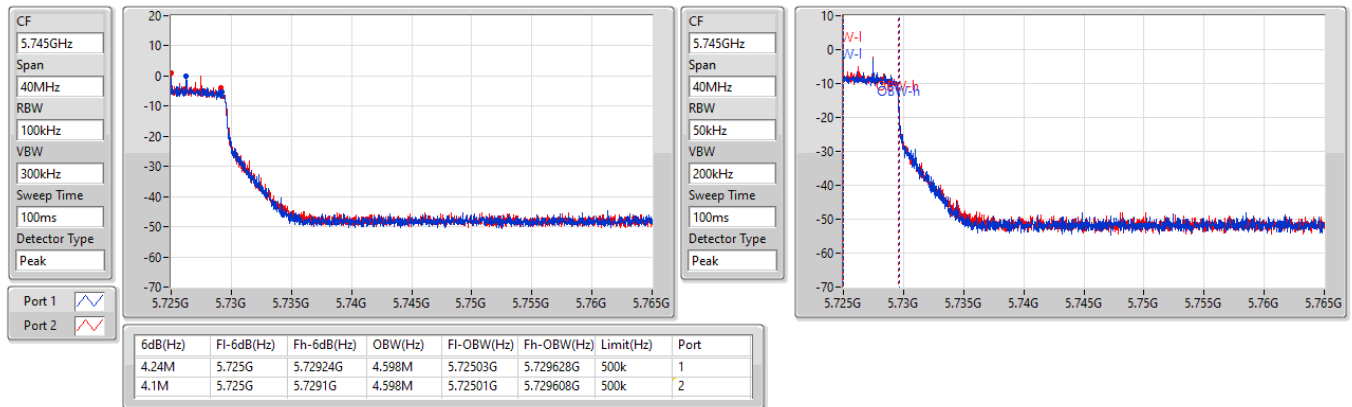
5720MHz Straddle 5.47-5.725GHz



5.725-5.85GHz_802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

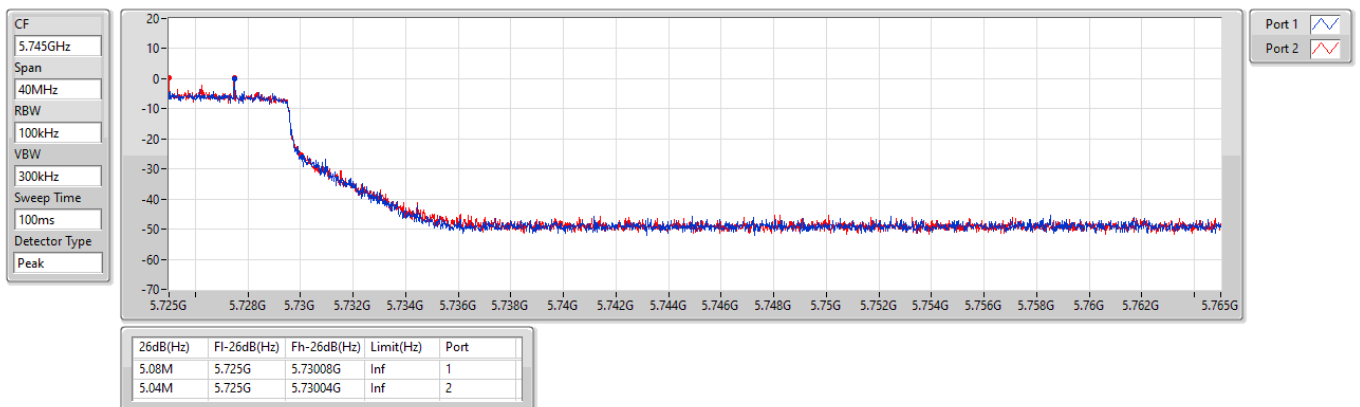
5720MHz Straddle 5.725-5.85GHz



5.725-5.85GHz_802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

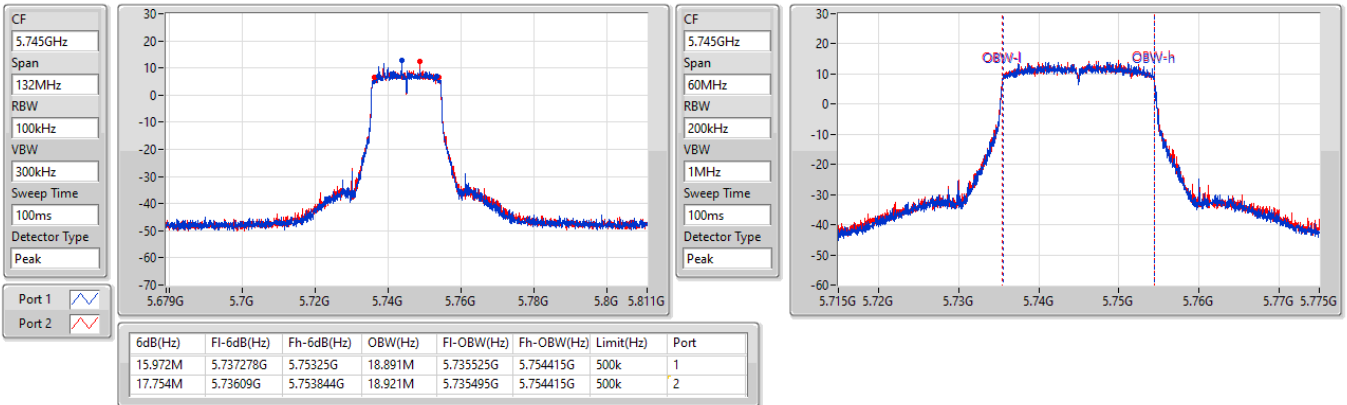
5720MHz Straddle 5.725-5.85GHz



5.725-5.85GHz_802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

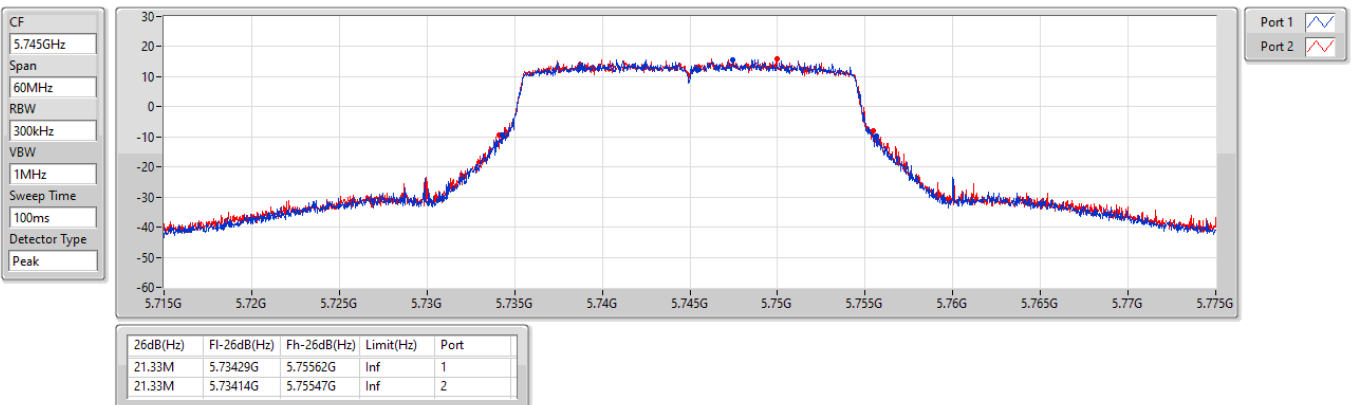
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5.725-5.85GHz_802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

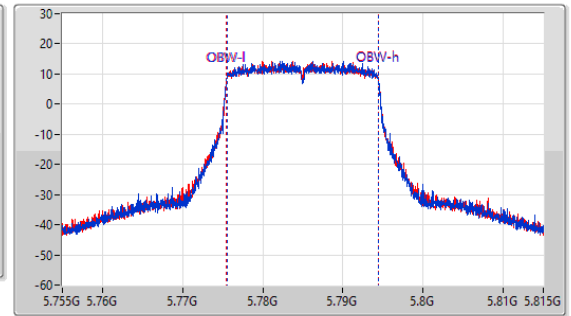
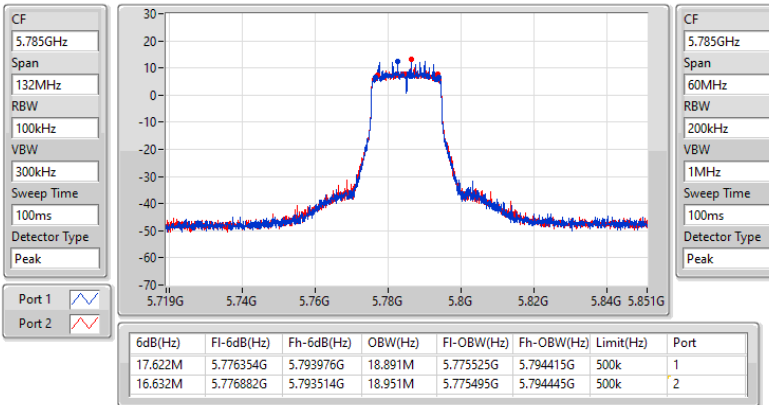
5745MHz



5.725-5.85GHz_802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

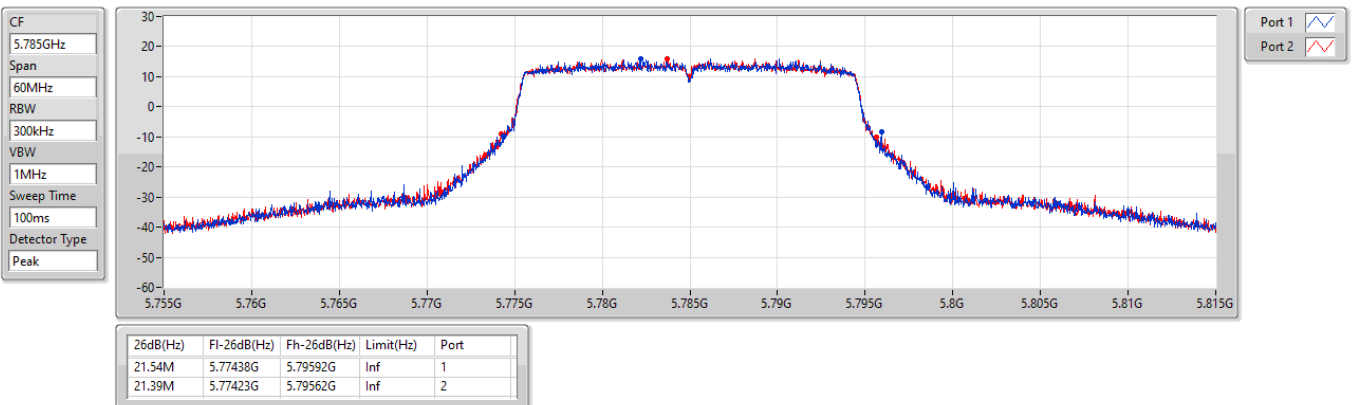
5785MHz



5.725-5.85GHz_802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

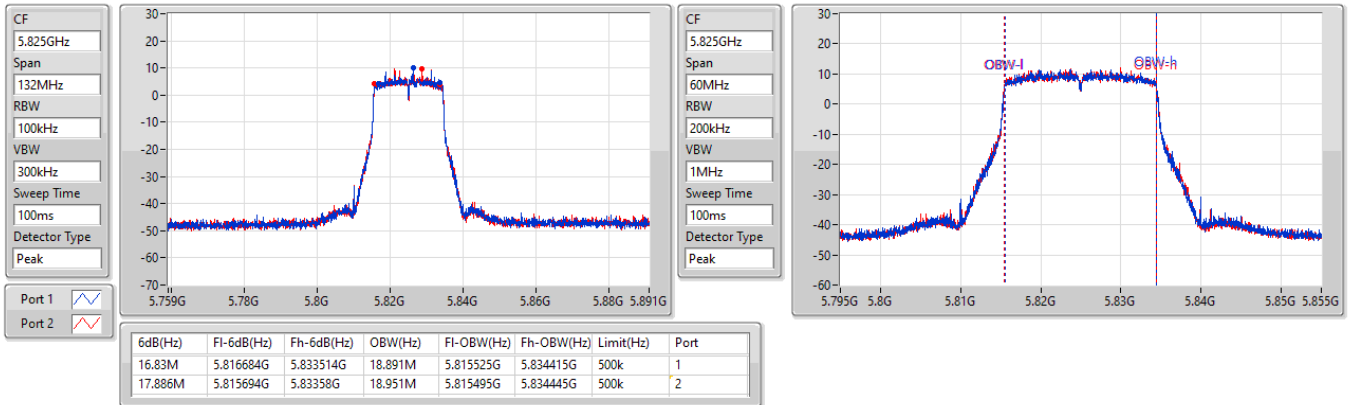
5785MHz



5.725-5.85GHz_802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

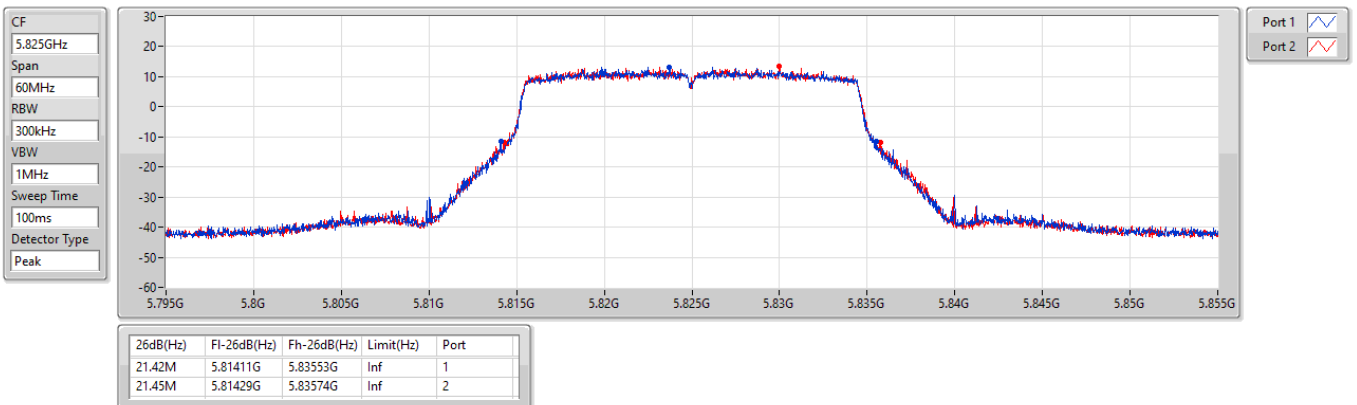
5825MHz



5.725-5.85GHz_802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

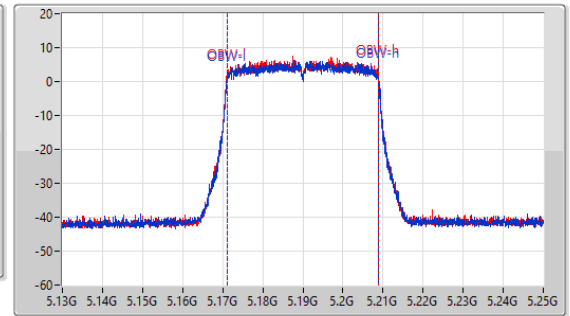
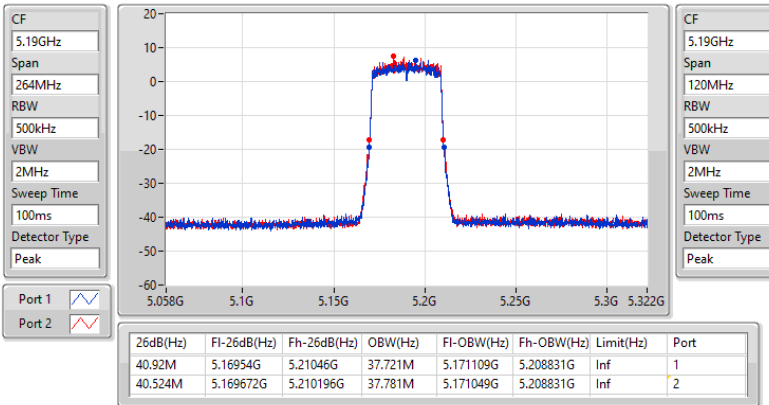
5825MHz



5.15-5.25GHz_802.11ax HEW40_Nss1,(MCS0)_2TX

EBW

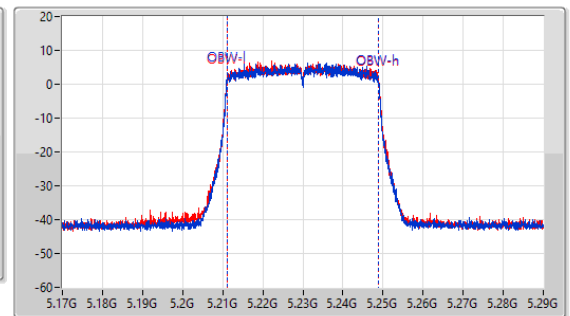
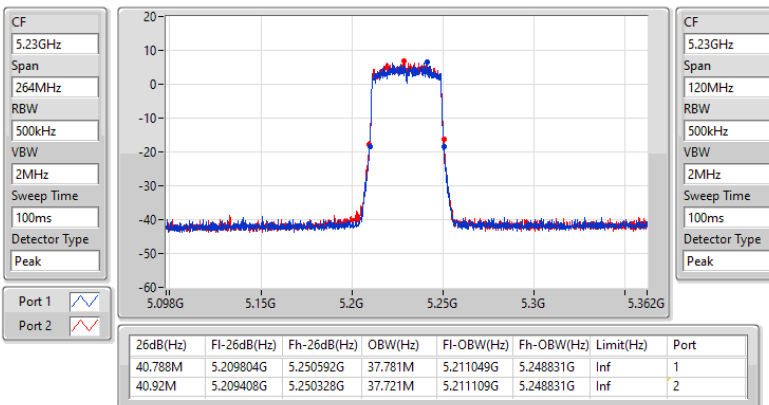
5190MHz



5.15-5.25GHz_802.11ax HEW40_Nss1,(MCS0)_2TX

EBW

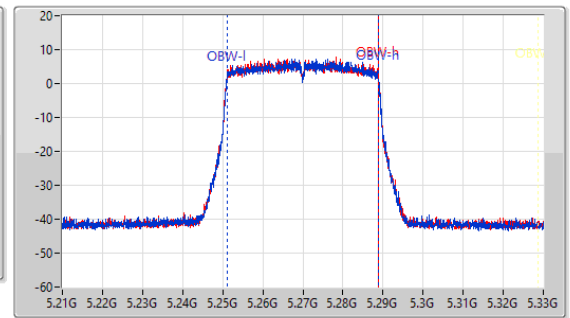
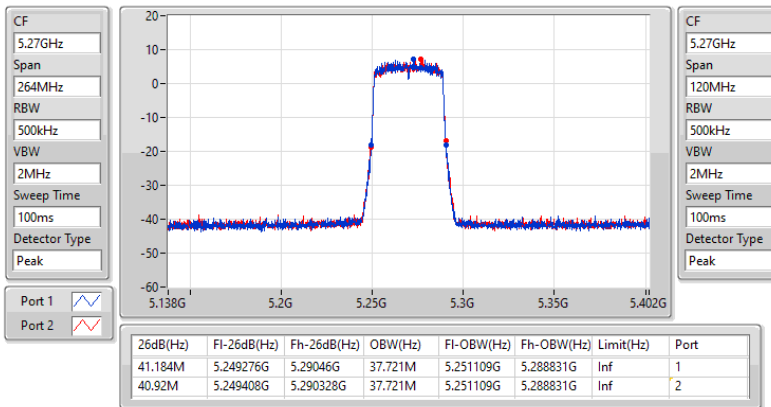
5230MHz



5.25-5.35GHz_802.11ax_HEW40_Nss1,(MCS0)_2TX

EBW

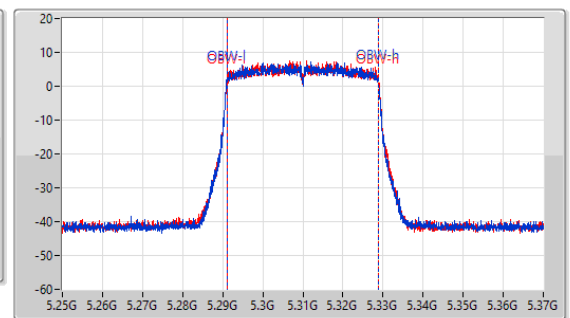
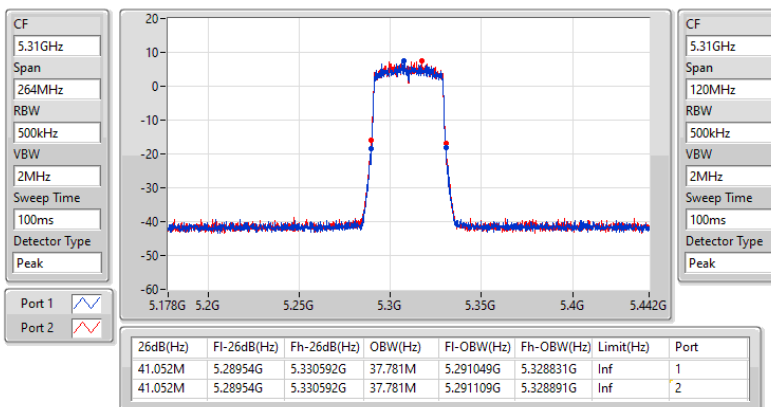
5270MHz



5.25-5.35GHz_802.11ax_HEW40_Nss1,(MCS0)_2TX

EBW

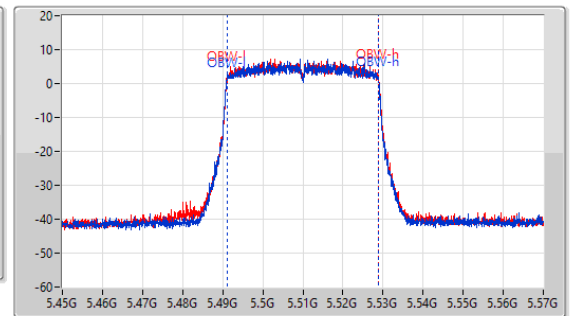
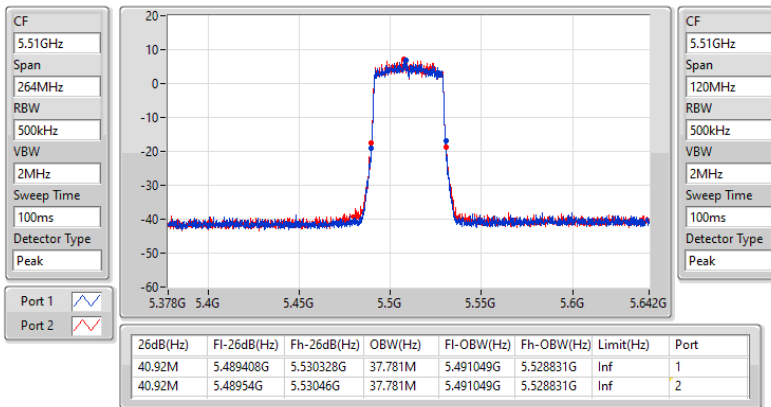
5310MHz



5.47-5.725GHz_802.11ax HEW40_Nss1,(MCS0)_2TX

EBW

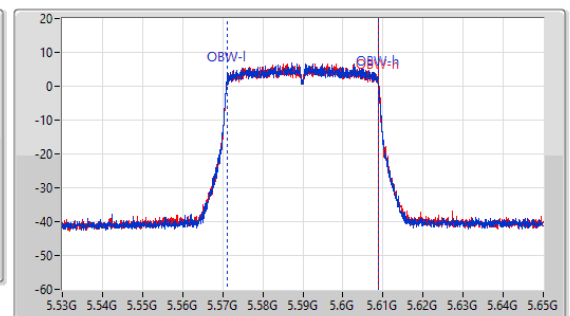
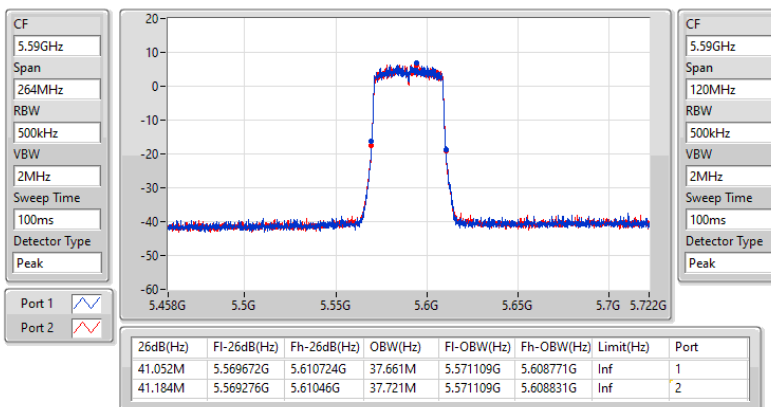
5510MHz



5.47-5.725GHz_802.11ax HEW40_Nss1,(MCS0)_2TX

EBW

5590MHz

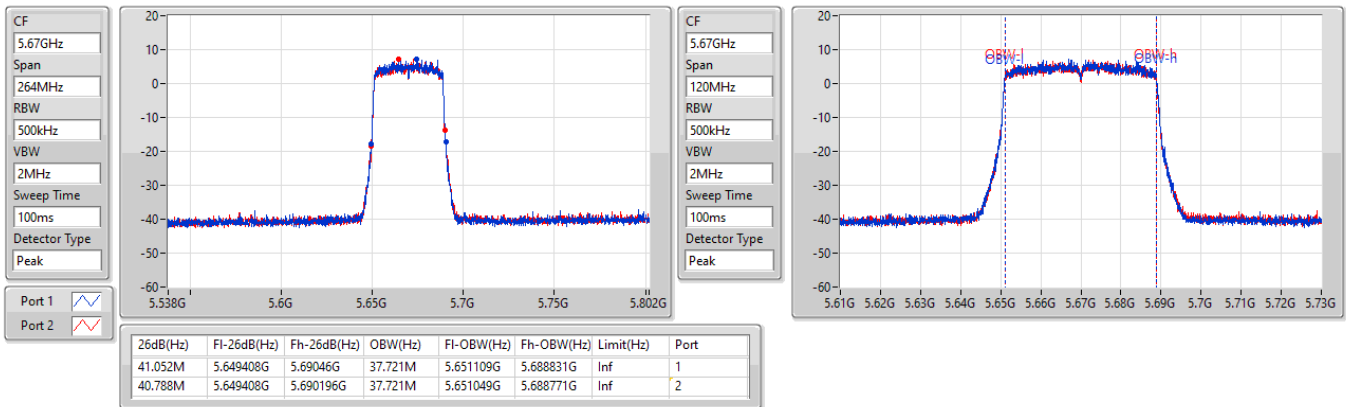




5.47-5.725GHz_802.11ax HEW40_Nss1,(MCS0)_2TX

EBW

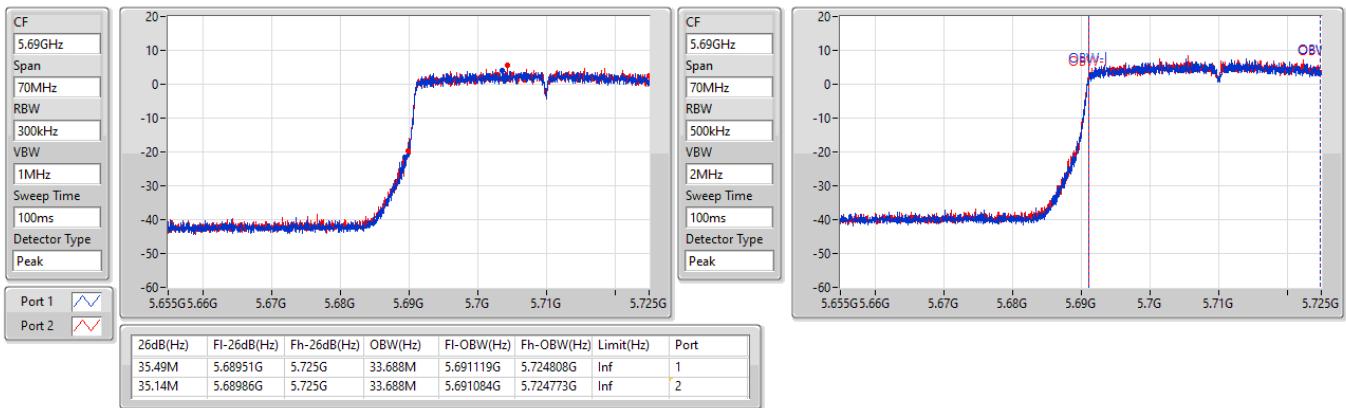
5670MHz



5.47-5.725GHz_802.11ax HEW40_Nss1,(MCS0)_2TX

EBW

5710MHz Straddle 5.47-5.725GHz

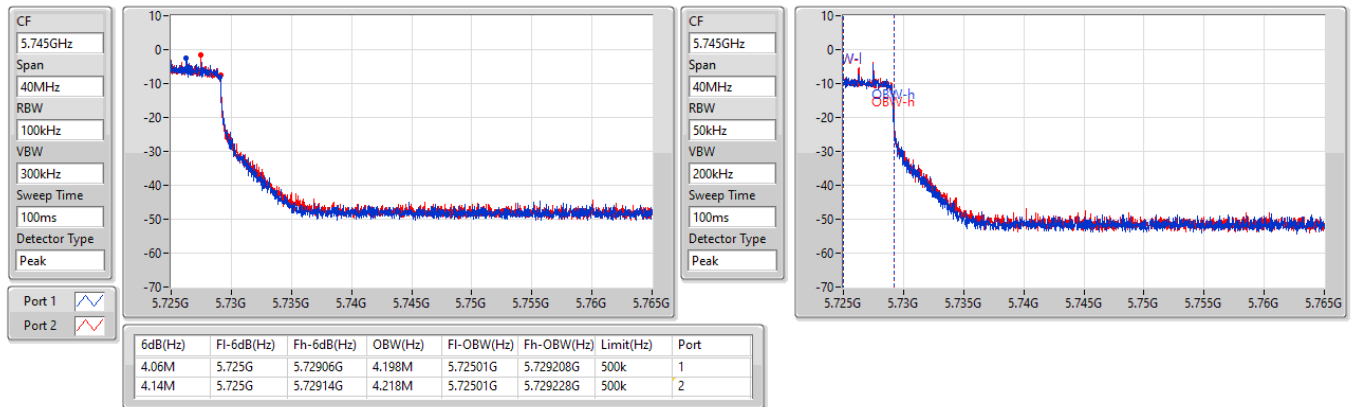




5.725-5.85GHz_802.11ax HEW40_Nss1,(MCS0)_2TX

EBW

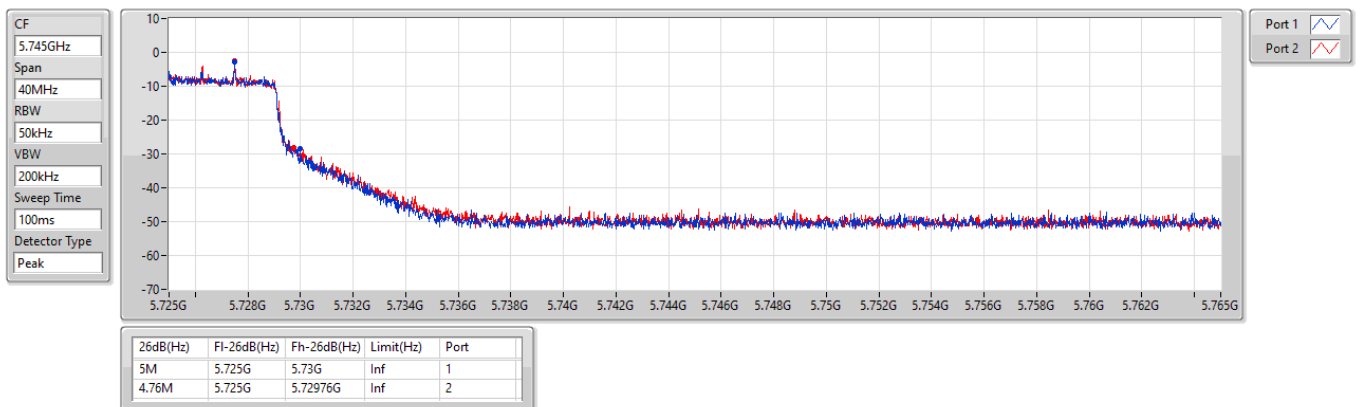
5710MHz Straddle 5.725-5.85GHz



5.725-5.85GHz_802.11ax HEW40_Nss1,(MCS0)_2TX

EBW

5710MHz Straddle 5.725-5.85GHz

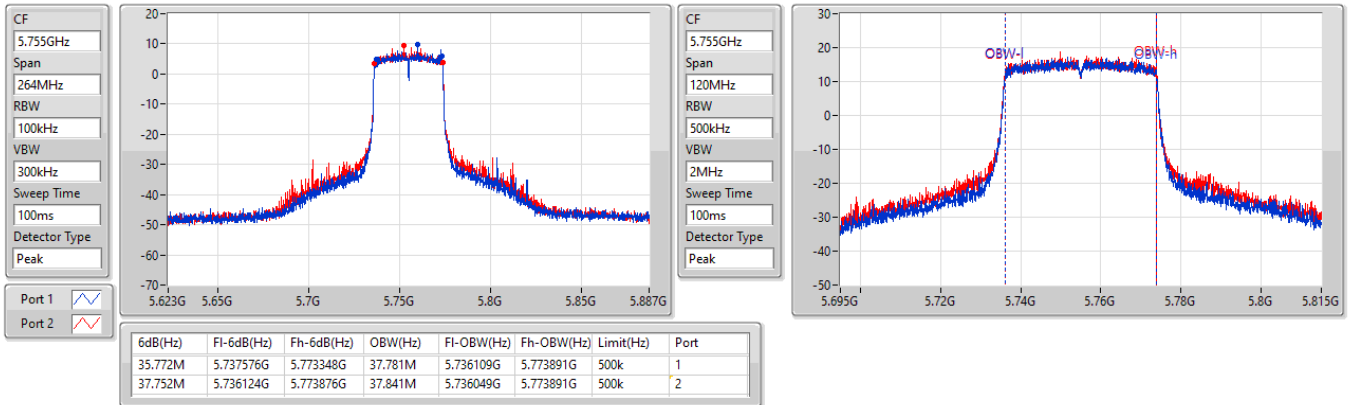




5.725-5.85GHz_802.11ax HEW40_Nss1,(MCS0)_2TX

EBW

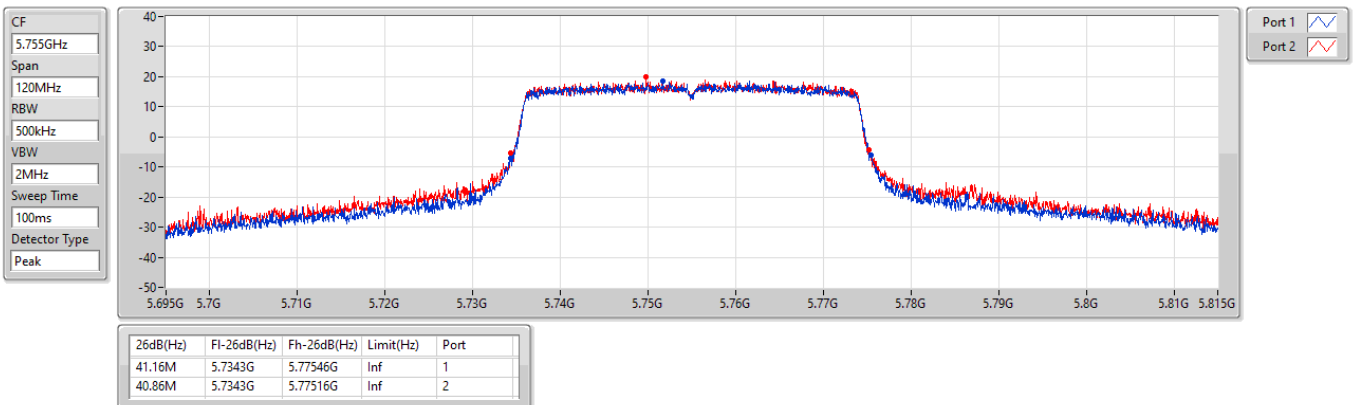
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5.725-5.85GHz_802.11ax HEW40_Nss1,(MCS0)_2TX

EBW

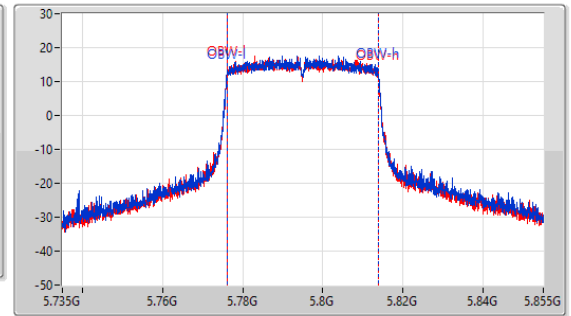
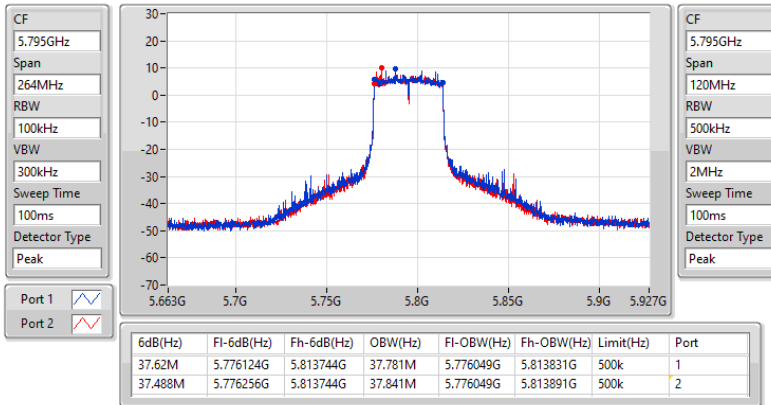
5755MHz



5.725-5.85GHz_802.11ax HEW40_Nss1,(MCS0)_2TX

EBW

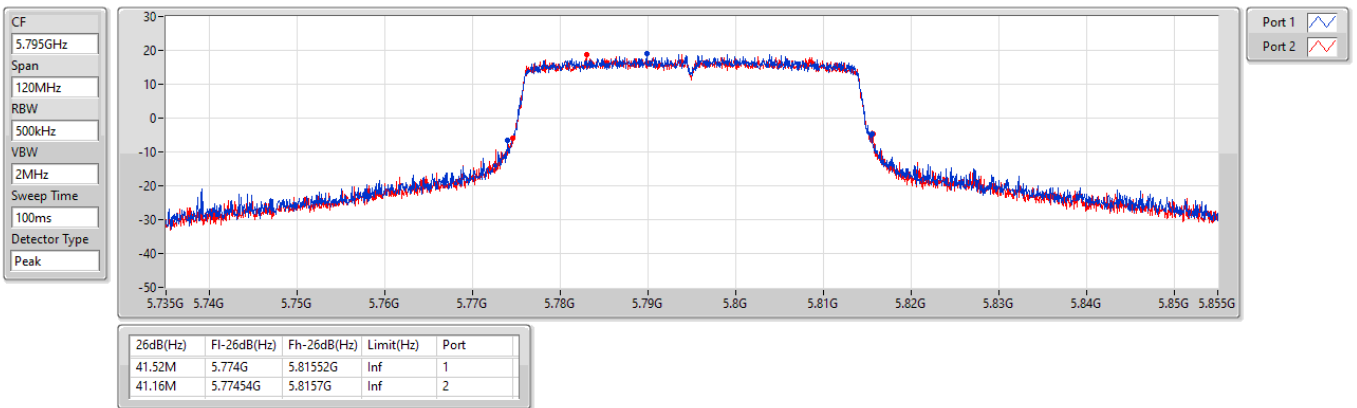
5795MHz



5.725-5.85GHz_802.11ax HEW40_Nss1,(MCS0)_2TX

EBW

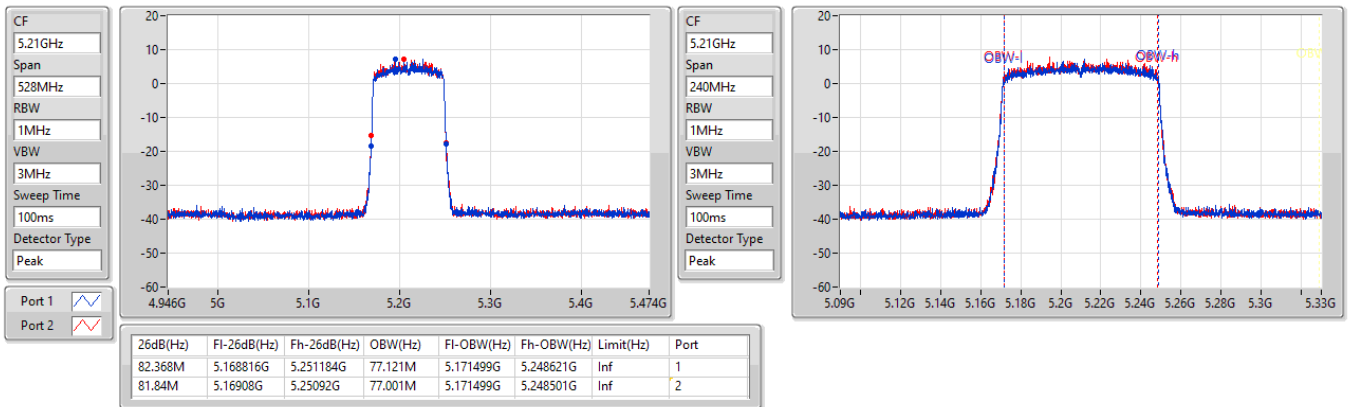
5795MHz



5.15-5.25GHz_802.11ax HEW80_Nss1,(MCS0)_2TX

EBW

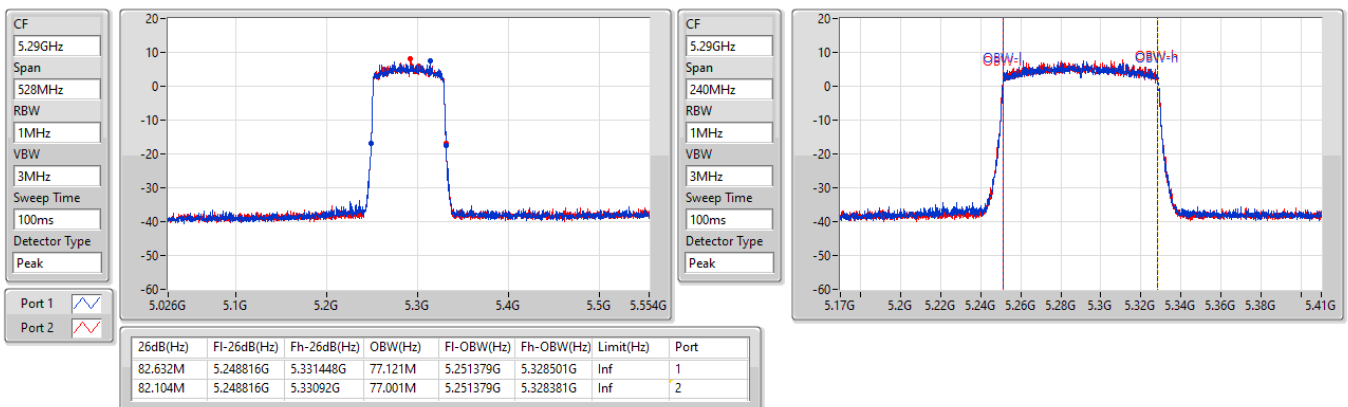
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5.25-5.35GHz_802.11ax HEW80_Nss1,(MCS0)_2TX

EBW

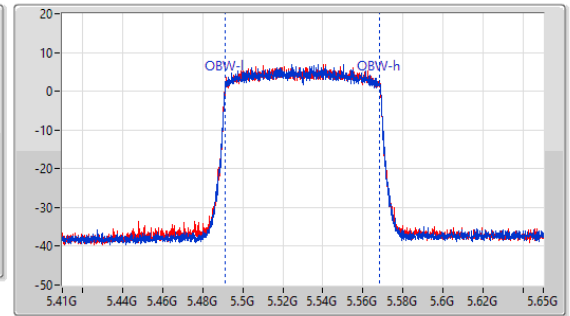
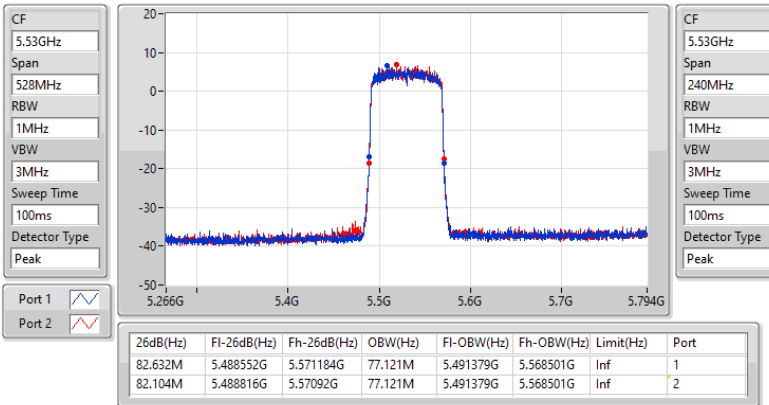
5290MHz



5.47-5.725GHz_802.11ax_HEW80_Nss1,(MCS0)_2TX

EBW

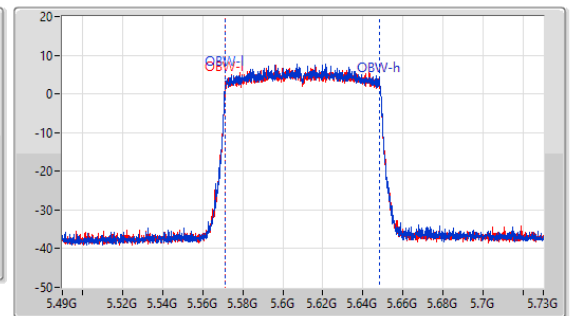
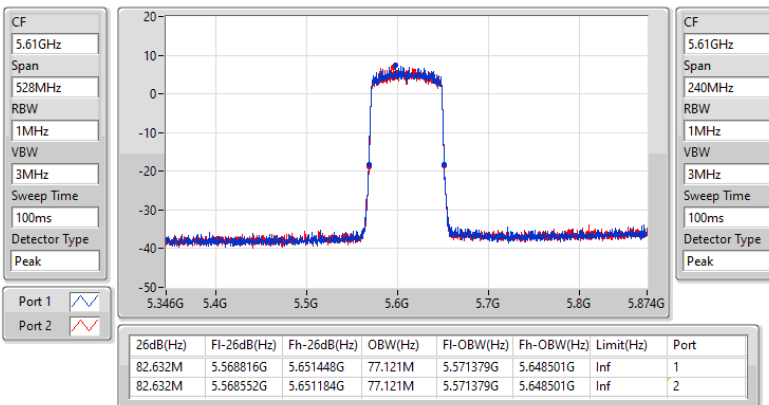
5530MHz



5.47-5.725GHz_802.11ax_HEW80_Nss1,(MCS0)_2TX

EBW

5610MHz

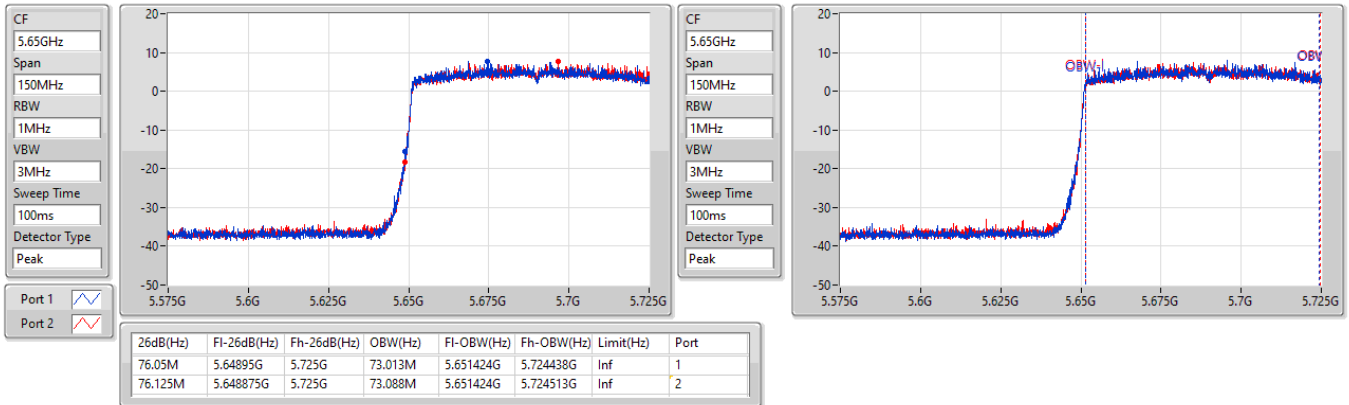




5.47-5.725GHz_802.11ax HEW80_Nss1,(MCS0)_2TX

EBW

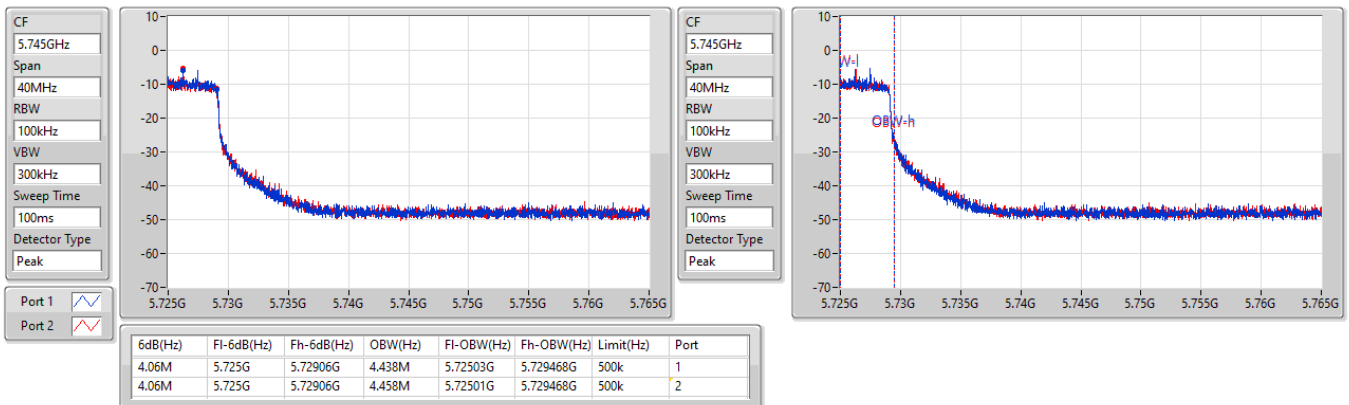
5690MHz Straddle 5.47-5.725GHz



5.725-5.85GHz_802.11ax HEW80_Nss1,(MCS0)_2TX

EBW

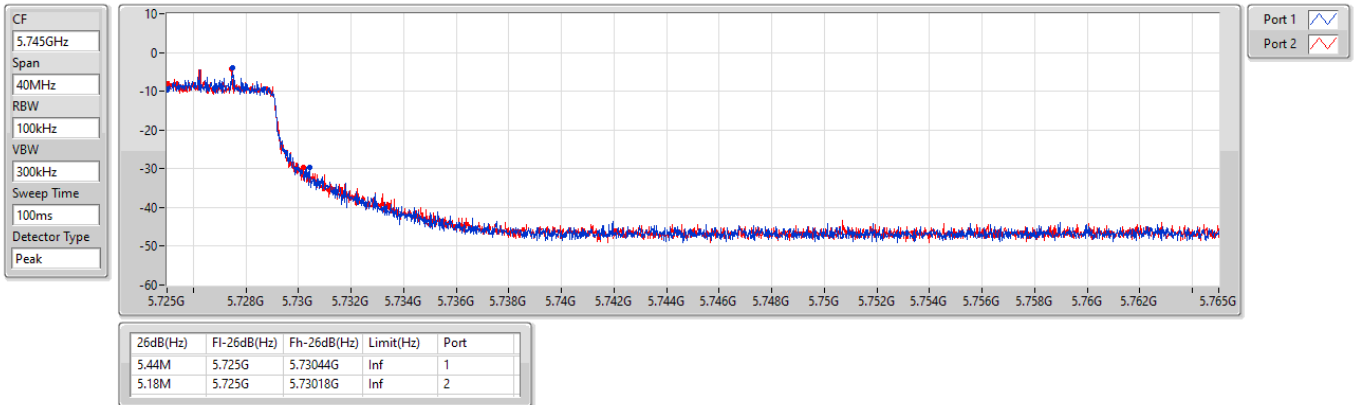
5690MHz Straddle 5.725-5.85GHz



5.725-5.85GHz_802.11ax HEW80_Nss1,(MCS0)_2TX

EBW

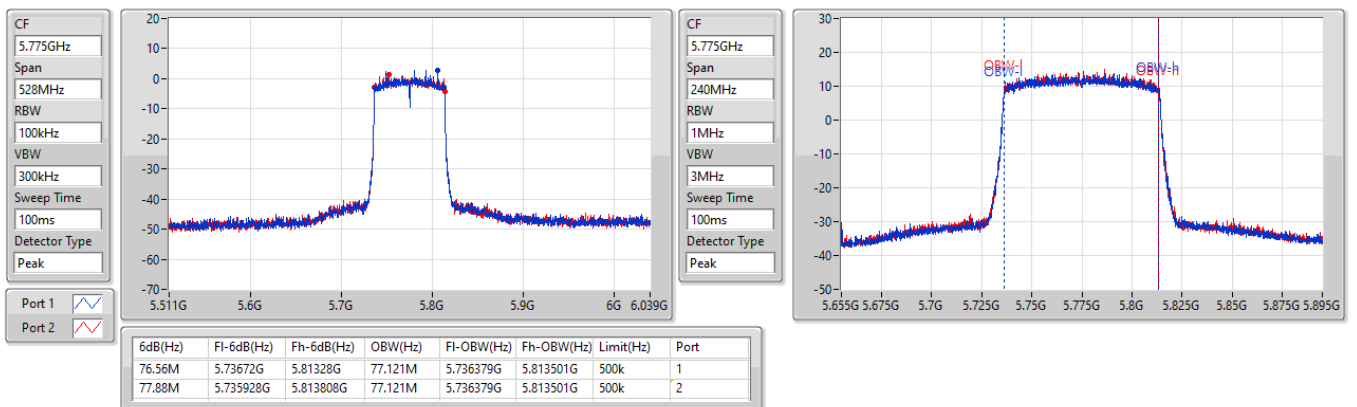
5690MHz Straddle 5.725-5.85GHz

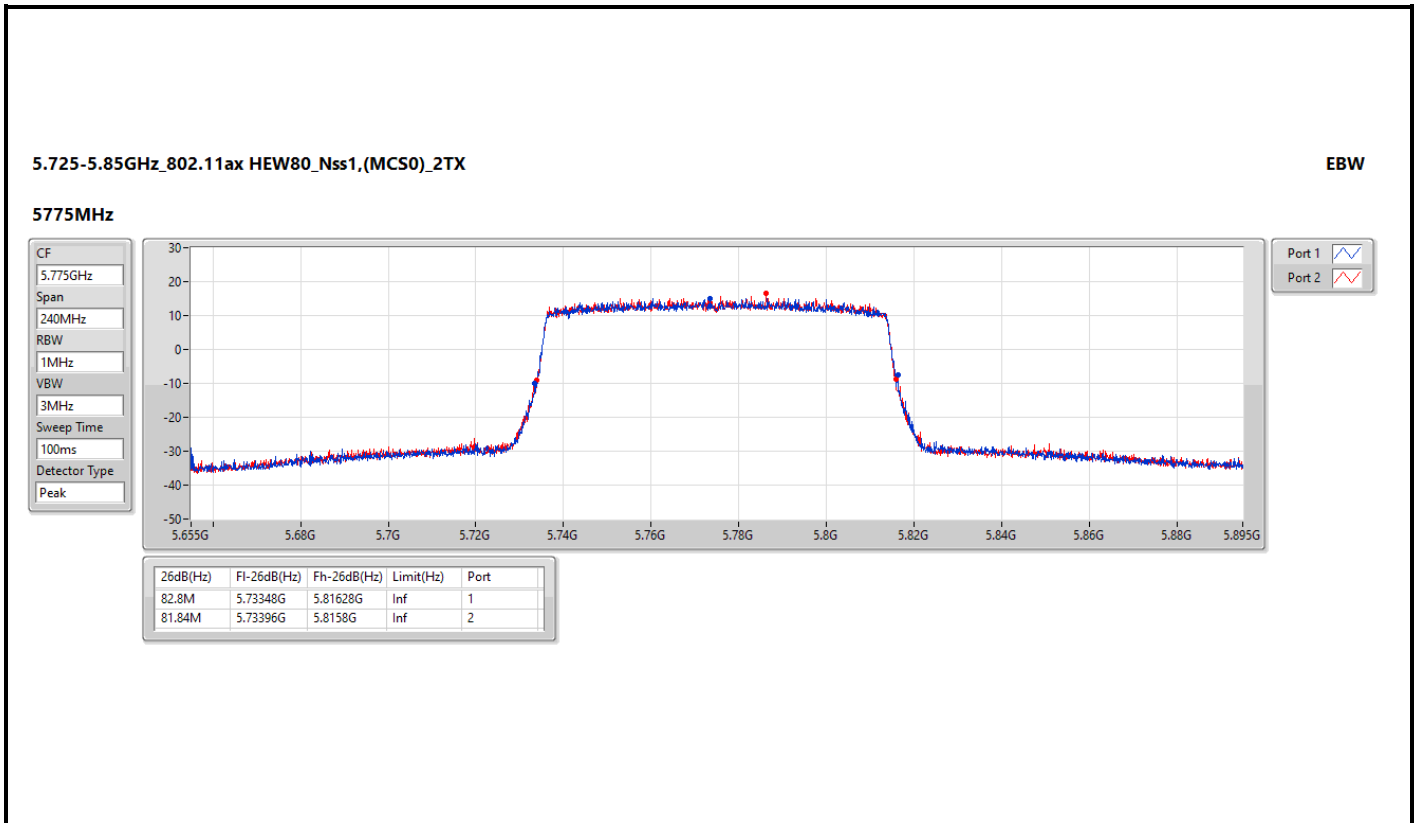


5.725-5.85GHz_802.11ax HEW80_Nss1,(MCS0)_2TX

EBW

5775MHz





Non-beamforming mode
Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.15-5.25GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	16.52	0.04487	29.52	0.89536
802.11ax HEW20_Nss1,(MCS0)_2TX	16.38	0.04345	29.38	0.86696
802.11ax HEW40_Nss1,(MCS0)_2TX	16.38	0.04345	29.38	0.86696
802.11ax HEW80_Nss1,(MCS0)_2TX	16.12	0.04093	29.12	0.81658
5.25-5.35GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	13.29	0.02133	26.29	0.42560
802.11ax HEW20_Nss1,(MCS0)_2TX	14.00	0.02512	27.00	0.50119
802.11ax HEW40_Nss1,(MCS0)_2TX	16.85	0.04842	29.85	0.96605
802.11ax HEW80_Nss1,(MCS0)_2TX	16.76	0.04742	29.76	0.94624
5.47-5.725GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	13.21	0.02094	26.21	0.41783
802.11ax HEW20_Nss1,(MCS0)_2TX	13.75	0.02371	26.75	0.47315
802.11ax HEW40_Nss1,(MCS0)_2TX	16.70	0.04677	29.70	0.93325
802.11ax HEW80_Nss1,(MCS0)_2TX	16.56	0.04529	29.56	0.90365
5.725-5.85GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	26.80	0.47863	39.80	9.54993
802.11ax HEW20_Nss1,(MCS0)_2TX	25.82	0.38194	38.82	7.62079
802.11ax HEW40_Nss1,(MCS0)_2TX	26.90	0.48978	39.90	9.77237
802.11ax HEW80_Nss1,(MCS0)_2TX	23.22	0.20989	36.22	4.18794

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	13.00	13.36	13.53	16.46	30.00	29.46	53.00
5200MHz	Pass	13.00	13.24	13.67	16.47	30.00	29.47	53.00
5240MHz	Pass	13.00	13.36	13.65	16.52	30.00	29.52	53.00
5260MHz	Pass	13.00	10.21	10.18	13.21	17.00	26.21	30.00
5300MHz	Pass	13.00	10.23	10.25	13.25	17.00	26.25	30.00
5320MHz	Pass	13.00	10.24	10.32	13.29	17.00	26.29	30.00
5500MHz	Pass	13.00	10.24	10.11	13.19	17.00	26.19	30.00
5580MHz	Pass	13.00	10.23	9.84	13.05	17.00	26.05	30.00
5700MHz	Pass	13.00	10.29	10.1	13.21	17.00	26.21	30.00
5720MHz Straddle 5.47-5.725GHz	Pass	13.00	9.92	9.46	12.71	15.82	25.71	28.82
5720MHz Straddle 5.725-5.85GHz	Pass	13.00	3.44	3.12	6.29	30.00	19.29	Inf
5745MHz	Pass	13.00	23.62	23.73	26.69	30.00	39.69	Inf
5785MHz	Pass	13.00	23.7	23.88	26.80	30.00	39.80	Inf
5825MHz	Pass	13.00	20.76	20.88	23.83	30.00	36.83	Inf
802.11ax HEW20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	13.00	13.16	13.36	16.27	30.00	29.27	53.00
5200MHz	Pass	13.00	13.15	13.42	16.30	30.00	29.30	53.00
5240MHz	Pass	13.00	13.26	13.47	16.38	30.00	29.38	53.00
5260MHz	Pass	13.00	11.02	10.61	13.83	17.00	26.83	30.00
5300MHz	Pass	13.00	10.73	10.77	13.76	17.00	26.76	30.00
5320MHz	Pass	13.00	10.86	11.11	14.00	17.00	27.00	30.00
5500MHz	Pass	13.00	10.48	10.9	13.71	17.00	26.71	30.00
5580MHz	Pass	13.00	10.55	10.66	13.62	17.00	26.62	30.00
5700MHz	Pass	13.00	10.65	10.83	13.75	17.00	26.75	30.00
5720MHz Straddle 5.47-5.725GHz	Pass	13.00	10.05	10.05	13.06	16.00	26.06	29.00
5720MHz Straddle 5.725-5.85GHz	Pass	13.00	4.49	4.68	7.60	30.00	20.60	Inf
5745MHz	Pass	13.00	22.66	22.96	25.82	30.00	38.82	Inf
5785MHz	Pass	13.00	22.69	22.93	25.82	30.00	38.82	Inf
5825MHz	Pass	13.00	20.12	20.46	23.30	30.00	36.30	Inf
802.11ax HEW40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5190MHz	Pass	13.00	13.16	13.46	16.32	30.00	29.32	53.00
5230MHz	Pass	13.00	13.12	13.61	16.38	30.00	29.38	53.00
5270MHz	Pass	13.00	13.72	13.95	16.85	17.00	29.85	30.00
5310MHz	Pass	13.00	13.8	13.88	16.85	17.00	29.85	30.00
5510MHz	Pass	13.00	13.59	13.73	16.67	17.00	29.67	30.00
5590MHz	Pass	13.00	13.59	13.58	16.60	17.00	29.60	30.00
5670MHz	Pass	13.00	13.83	13.55	16.70	17.00	29.70	30.00
5710MHz Straddle 5.47-5.725GHz	Pass	13.00	13.58	13.77	16.69	17.00	29.69	30.00
5710MHz Straddle 5.725-5.85GHz	Pass	13.00	3.25	3.29	6.28	30.00	19.28	Inf
5755MHz	Pass	13.00	23.78	23.86	26.83	30.00	39.83	Inf
5795MHz	Pass	13.00	23.82	23.96	26.90	30.00	39.90	Inf

**Conducted Output Power(Average)****Appendix B.1**

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11ax HEW80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5210MHz	Pass	13.00	12.96	13.26	16.12	30.00	29.12	53.00
5290MHz	Pass	13.00	13.63	13.87	16.76	17.00	29.76	30.00
5530MHz	Pass	13.00	13.52	13.51	16.53	17.00	29.53	30.00
5610MHz	Pass	13.00	13.73	13.36	16.56	17.00	29.56	30.00
5690MHz Straddle 5.47-5.725GHz	Pass	13.00	13.55	13.53	16.55	17.00	29.55	30.00
5690MHz Straddle 5.725-5.85GHz	Pass	13.00	-0.7	-0.75	2.29	30.00	15.29	Inf
5775MHz	Pass	13.00	20.16	20.25	23.22	30.00	36.22	Inf

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

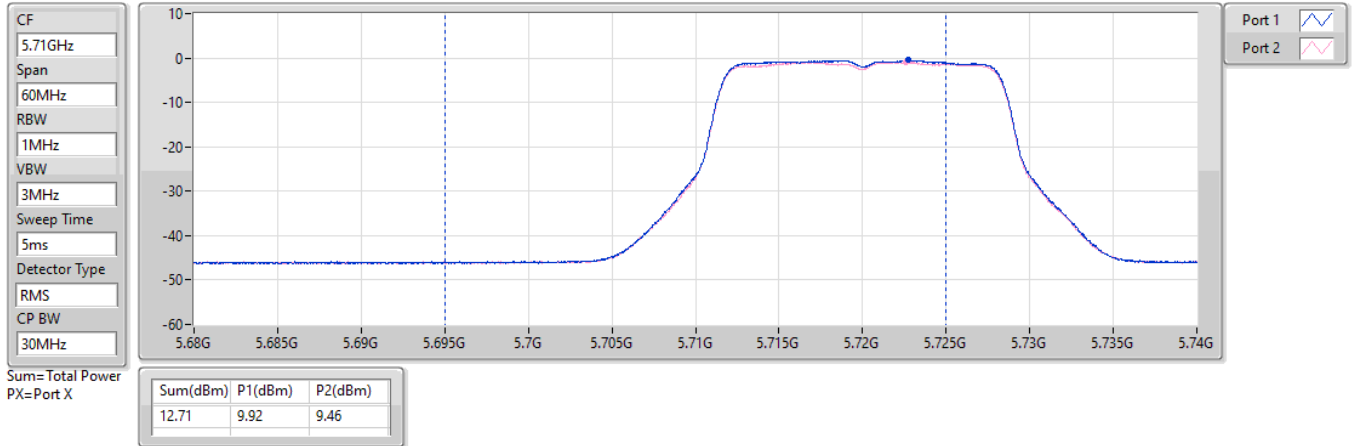
For 5250 MHz ~ 5350 MHz / 5470 MHz ~ 5725MHz

Directional gain = 13 dBi > 6 dBi , Power limit shall be reduced to 24 dBm – (13 dBi -6 dBi) = 17 dBm

5.47-5.725GHz_802.11a_Nss1,(6Mbps)_2TX

AV Power

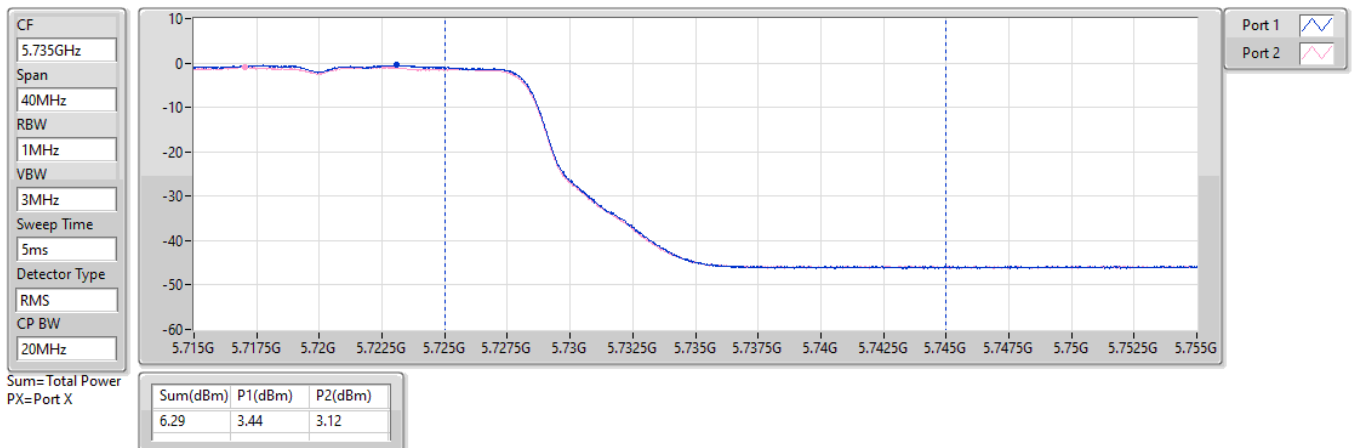
5720MHz Straddle 5.47-5.725GHz_TX



5.725-5.85GHz_802.11a_Nss1,(6Mbps)_2TX

AV Power

5720MHz Straddle 5.725-5.85GHz_TX

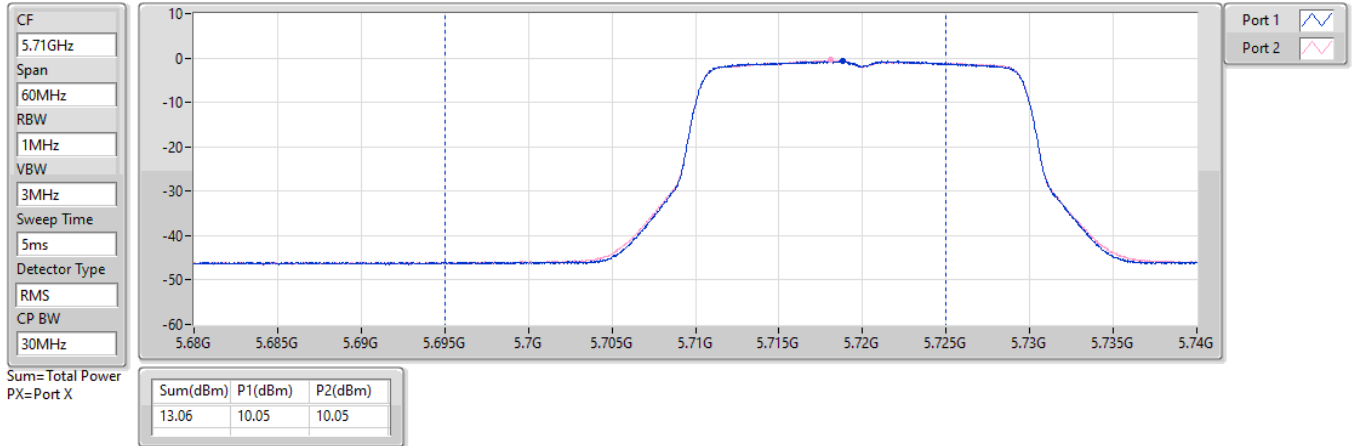




5.47-5.725GHz_802.11ax HEW20_Nss1,(MCS0)_2TX

AV Power

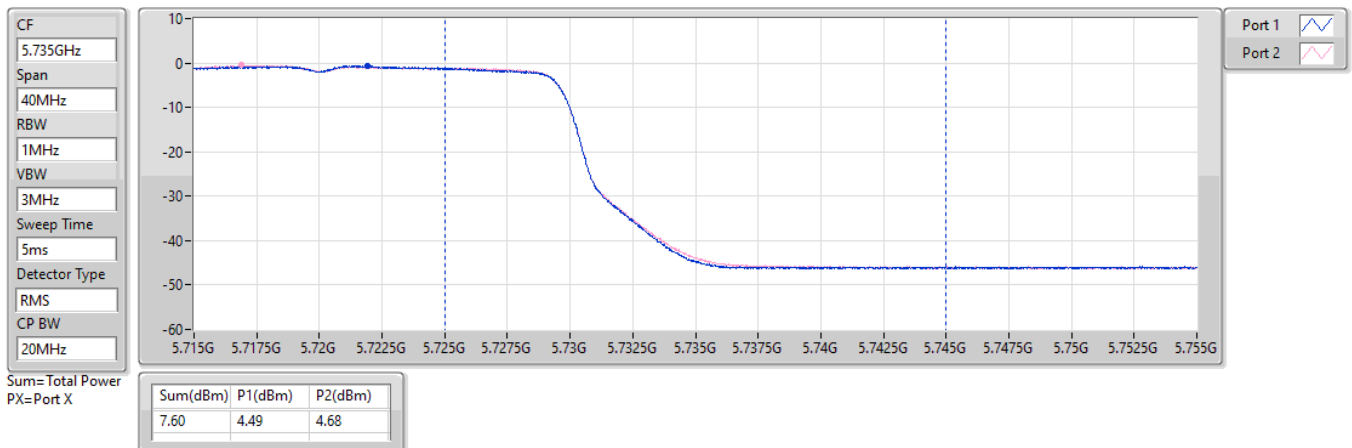
5720MHz Straddle 5.47-5.725GHz_TX



5.725-5.85GHz_802.11ax HEW20_Nss1,(MCS0)_2TX

AV Power

5720MHz Straddle 5.725-5.85GHz_TX

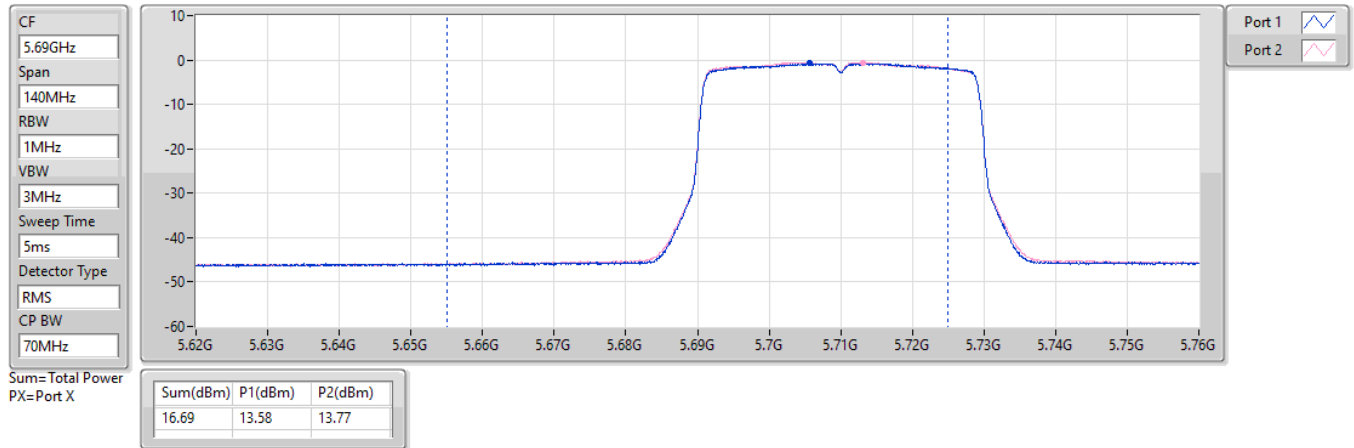




5.47-5.725GHz_802.11ax HEW40_Nss1,(MCS0)_2TX

AV Power

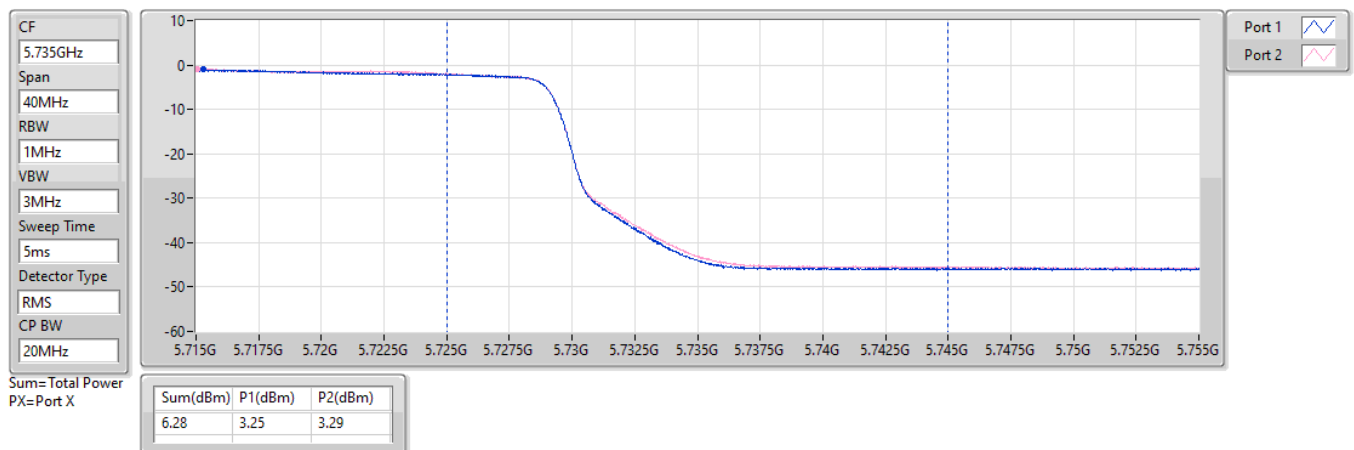
5710MHz Straddle 5.47-5.725GHz_TX



5.725-5.85GHz_802.11ax HEW40_Nss1,(MCS0)_2TX

AV Power

5710MHz Straddle 5.725-5.85GHz_TX

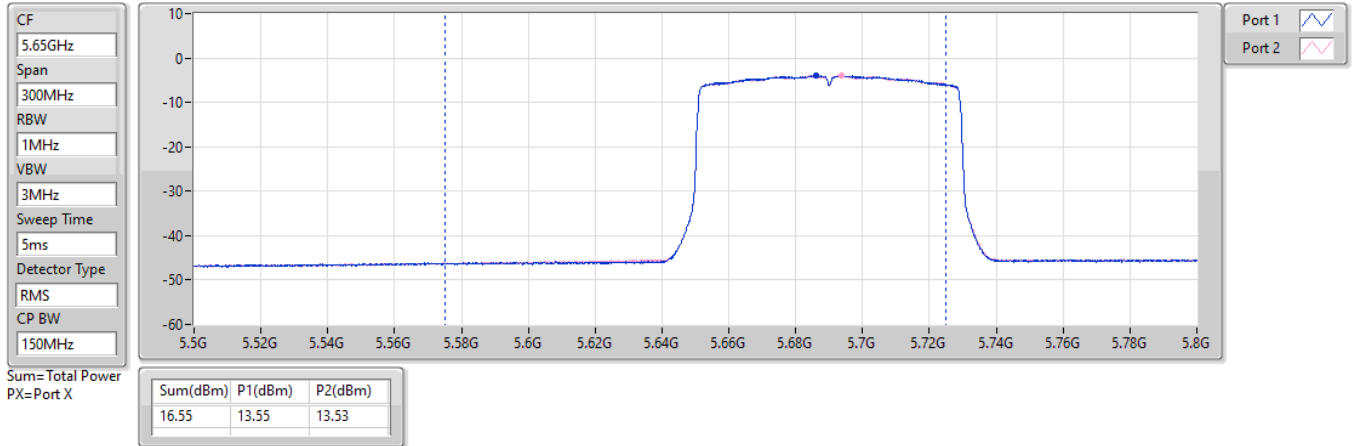




5.47-5.725GHz_802.11ax HEW80_Nss1,(MCS0)_2TX

AV Power

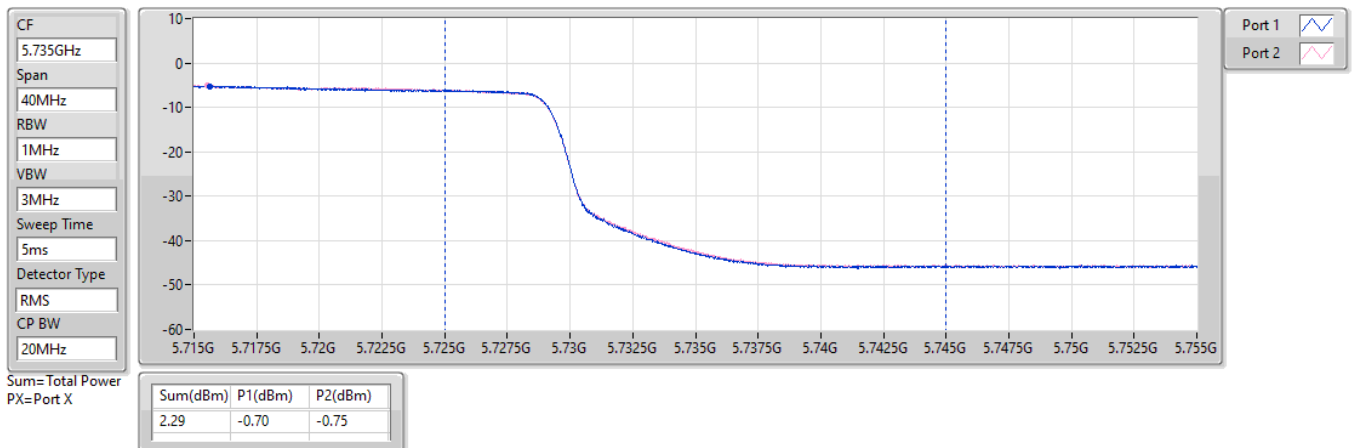
5690MHz Straddle 5.47-5.725GHz_TX



5.725-5.85GHz_802.11ax HEW80_Nss1,(MCS0)_2TX

AV Power

5690MHz Straddle 5.725-5.85GHz_TX



Beamforming mode
Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.15-5.25GHz	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	13.37	0.02173	29.38	0.86696
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	13.37	0.02173	29.38	0.86696
802.11ax HEW80-BF_Nss1,(MCS0)_2TX	13.11	0.02046	29.12	0.81658
5.25-5.35GHz	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	10.99	0.01256	27.00	0.50119
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	13.84	0.02421	29.85	0.96605
802.11ax HEW80-BF_Nss1,(MCS0)_2TX	13.75	0.02371	29.76	0.94624
5.47-5.725GHz	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	10.74	0.01186	26.75	0.47315
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	13.69	0.02339	29.70	0.93325
802.11ax HEW80-BF_Nss1,(MCS0)_2TX	13.55	0.02265	29.56	0.90365
5.725-5.85GHz	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	22.81	0.19099	38.82	7.62079
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	23.89	0.24491	39.90	9.77237
802.11ax HEW80-BF_Nss1,(MCS0)_2TX	20.21	0.10495	36.22	4.18794

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	16.01	10.15	10.35	13.26	30.00	29.27	53.00
5200MHz	Pass	16.01	10.14	10.41	13.29	30.00	29.30	53.00
5240MHz	Pass	16.01	10.25	10.46	13.37	30.00	29.38	53.00
5260MHz	Pass	16.01	8.01	7.6	10.82	13.99	26.83	30.00
5300MHz	Pass	16.01	7.72	7.76	10.75	13.99	26.76	30.00
5320MHz	Pass	16.01	7.85	8.1	10.99	13.99	27.00	30.00
5500MHz	Pass	16.01	7.47	7.89	10.70	13.99	26.71	30.00
5580MHz	Pass	16.01	7.54	7.65	10.61	13.99	26.62	30.00
5700MHz	Pass	16.01	7.64	7.82	10.74	13.99	26.75	30.00
5720MHz Straddle 5.47-5.725GHz	Pass	16.01	7.04	7.04	10.05	12.99	26.06	29.00
5720MHz Straddle 5.725-5.85GHz	Pass	16.01	1.48	1.67	4.59	30.00	20.60	Inf
5745MHz	Pass	16.01	19.65	19.95	22.81	30.00	38.82	Inf
5785MHz	Pass	16.01	19.68	19.92	22.81	30.00	38.82	Inf
5825MHz	Pass	16.01	17.11	17.45	20.29	30.00	36.30	Inf
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5190MHz	Pass	16.01	10.15	10.45	13.31	30.00	29.32	53.00
5230MHz	Pass	16.01	10.11	10.6	13.37	30.00	29.38	53.00
5270MHz	Pass	16.01	10.71	10.94	13.84	13.99	29.85	30.00
5310MHz	Pass	16.01	10.79	10.87	13.84	13.99	29.85	30.00
5510MHz	Pass	16.01	10.58	10.72	13.66	13.99	29.67	30.00
5590MHz	Pass	16.01	10.58	10.57	13.59	13.99	29.60	30.00
5670MHz	Pass	16.01	10.82	10.54	13.69	13.99	29.70	30.00
5710MHz Straddle 5.47-5.725GHz	Pass	16.01	10.57	10.76	13.68	13.99	29.69	30.00
5710MHz Straddle 5.725-5.85GHz	Pass	16.01	0.24	0.28	3.27	30.00	19.28	Inf
5755MHz	Pass	16.01	20.77	20.85	23.82	30.00	39.83	Inf
5795MHz	Pass	16.01	20.81	20.95	23.89	30.00	39.90	Inf
802.11ax HEW80-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5210MHz	Pass	16.01	9.95	10.25	13.11	30.00	29.12	53.00
5290MHz	Pass	16.01	10.62	10.86	13.75	13.99	29.76	30.00
5530MHz	Pass	16.01	10.51	10.5	13.52	13.99	29.53	30.00
5610MHz	Pass	16.01	10.72	10.35	13.55	13.99	29.56	30.00
5690MHz Straddle 5.47-5.725GHz	Pass	16.01	10.54	10.52	13.54	13.99	29.55	30.00
5690MHz Straddle 5.725-5.85GHz	Pass	16.01	-3.71	-3.76	-0.72	30.00	15.29	Inf
5775MHz	Pass	16.01	17.15	17.24	20.21	30.00	36.22	Inf

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

For 5250 MHz ~ 5350 MHz / 5470 MHz ~ 5725MHz

Directional gain = $13 + 10 \cdot \log(2) = 16.01 \text{ dBi} > 6 \text{ dBi}$, Power limit shall be reduced to $24 \text{ dBm} - (16.01 \text{ dBi} - 6 \text{ dBi}) = 13.99 \text{ dBm}$

Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
5.15-5.25GHz	-	-
802.11a_Nss1,(6Mbps)_2TX	3.93	19.94
802.11ax HEW20_Nss1,(MCS0)_2TX	3.22	19.23
802.11ax HEW40_Nss1,(MCS0)_2TX	0.36	16.37
802.11ax HEW80_Nss1,(MCS0)_2TX	-2.80	13.21
5.25-5.35GHz	-	-
802.11a_Nss1,(6Mbps)_2TX	0.71	16.72
802.11ax HEW20_Nss1,(MCS0)_2TX	0.82	16.83
802.11ax HEW40_Nss1,(MCS0)_2TX	0.85	16.86
802.11ax HEW80_Nss1,(MCS0)_2TX	-2.19	13.82
5.47-5.725GHz	-	-
802.11a_Nss1,(6Mbps)_2TX	0.88	16.89
802.11ax HEW20_Nss1,(MCS0)_2TX	0.88	16.89
802.11ax HEW40_Nss1,(MCS0)_2TX	0.82	16.83
802.11ax HEW80_Nss1,(MCS0)_2TX	-2.48	13.53
5.725-5.85GHz	-	-
802.11a_Nss1,(6Mbps)_2TX	12.87	28.88
802.11ax HEW20_Nss1,(MCS0)_2TX	11.16	27.17
802.11ax HEW40_Nss1,(MCS0)_2TX	9.72	25.73
802.11ax HEW80_Nss1,(MCS0)_2TX	2.86	18.87

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)	PD (dBm/RBW)	PD Limit (dBm/RBW)	EIRP PD (dBm/RBW)	EIRP PD Limit (dBm/RBW)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	16.01	0.67	1.10	3.75	17.00	19.76	40.00
5200MHz	Pass	16.01	0.49	1.16	3.75	17.00	19.76	40.00
5240MHz	Pass	16.01	0.96	1.19	3.93	17.00	19.94	40.00
5260MHz	Pass	16.01	-2.24	-2.50	0.60	0.99	16.61	17.00
5300MHz	Pass	16.01	-2.30	-2.31	0.71	0.99	16.72	17.00
5320MHz	Pass	16.01	-2.19	-2.27	0.66	0.99	16.67	17.00
5500MHz	Pass	16.01	-2.07	-1.93	0.88	0.99	16.89	17.00
5580MHz	Pass	16.01	-1.71	-2.68	0.75	0.99	16.76	17.00
5700MHz	Pass	16.01	-2.12	-2.39	0.55	0.99	16.56	17.00
5720MHz Straddle 5.47-5.725GHz	Pass	16.01	-1.82	-2.26	0.82	0.99	16.83	17.00
5720MHz Straddle 5.725-5.85GHz	Pass	16.01	-3.90	-4.10	-0.99	30.00	15.02	Inf
5745MHz	Pass	16.01	9.67	10.16	12.87	30.00	28.88	Inf
5785MHz	Pass	16.01	10.07	9.99	12.86	30.00	28.87	Inf
5825MHz	Pass	16.01	6.81	7.08	9.74	30.00	25.75	Inf
802.11ax HEW20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	16.01	0.23	0.55	3.22	17.00	19.23	40.00
5200MHz	Pass	16.01	0.12	0.63	3.22	17.00	19.23	40.00
5240MHz	Pass	16.01	0.17	0.37	3.17	17.00	19.18	40.00
5260MHz	Pass	16.01	-2.03	-2.48	0.63	0.99	16.64	17.00
5300MHz	Pass	16.01	-2.24	-2.51	0.53	0.99	16.54	17.00
5320MHz	Pass	16.01	-1.97	-2.13	0.82	0.99	16.83	17.00
5500MHz	Pass	16.01	-2.33	-1.92	0.70	0.99	16.71	17.00
5580MHz	Pass	16.01	-2.03	-2.75	0.51	0.99	16.52	17.00
5700MHz	Pass	16.01	-2.21	-2.62	0.54	0.99	16.55	17.00
5720MHz Straddle 5.47-5.725GHz	Pass	16.01	-2.10	-1.92	0.88	0.99	16.89	17.00
5720MHz Straddle 5.725-5.85GHz	Pass	16.01	-4.16	-3.74	-1.00	30.00	15.01	Inf
5745MHz	Pass	16.01	8.02	8.35	11.09	30.00	27.10	Inf
5785MHz	Pass	16.01	8.17	8.42	11.16	30.00	27.17	Inf
5825MHz	Pass	16.01	5.67	6.08	8.68	30.00	24.69	Inf
802.11ax HEW40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5190MHz	Pass	16.01	-2.64	-2.34	0.36	17.00	16.37	40.00
5230MHz	Pass	16.01	-2.91	-2.32	0.30	17.00	16.31	40.00
5270MHz	Pass	16.01	-2.18	-2.20	0.69	0.99	16.70	17.00
5310MHz	Pass	16.01	-2.21	-1.89	0.85	0.99	16.86	17.00
5510MHz	Pass	16.01	-2.15	-2.14	0.66	0.99	16.67	17.00
5590MHz	Pass	16.01	-2.14	-2.42	0.59	0.99	16.60	17.00

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)	EIRP PD (dBm/RBW)	EIRP PD Limit (dBm/RBW)
5670MHz	Pass	16.01	-2.07	-2.29	0.66	0.99	16.67	17.00
5710MHz Straddle 5.47-5.725GHz	Pass	16.01	-2.18	-1.91	0.82	0.99	16.83	17.00
5710MHz Straddle 5.725-5.85GHz	Pass	16.01	-4.87	-4.87	-1.88	30.00	14.13	Inf
5755MHz	Pass	16.01	6.53	6.90	9.72	30.00	25.73	Inf
5795MHz	Pass	16.01	6.68	6.49	9.44	30.00	25.45	Inf
802.11ax HEW80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5210MHz	Pass	16.01	-5.86	-5.42	-2.80	17.00	13.21	40.00
5290MHz	Pass	16.01	-5.05	-4.88	-2.19	0.99	13.82	17.00
5530MHz	Pass	16.01	-5.52	-5.26	-2.51	0.99	13.50	17.00
5610MHz	Pass	16.01	-5.36	-5.51	-2.49	0.99	13.52	17.00
5690MHz Straddle 5.47-5.725GHz	Pass	16.01	-5.39	-5.38	-2.48	0.99	13.53	17.00
5690MHz Straddle 5.725-5.85GHz	Pass	16.01	-9.17	-9.03	-6.09	30.00	9.92	Inf
5775MHz	Pass	16.01	-0.11	0.20	2.86	30.00	18.87	Inf

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;

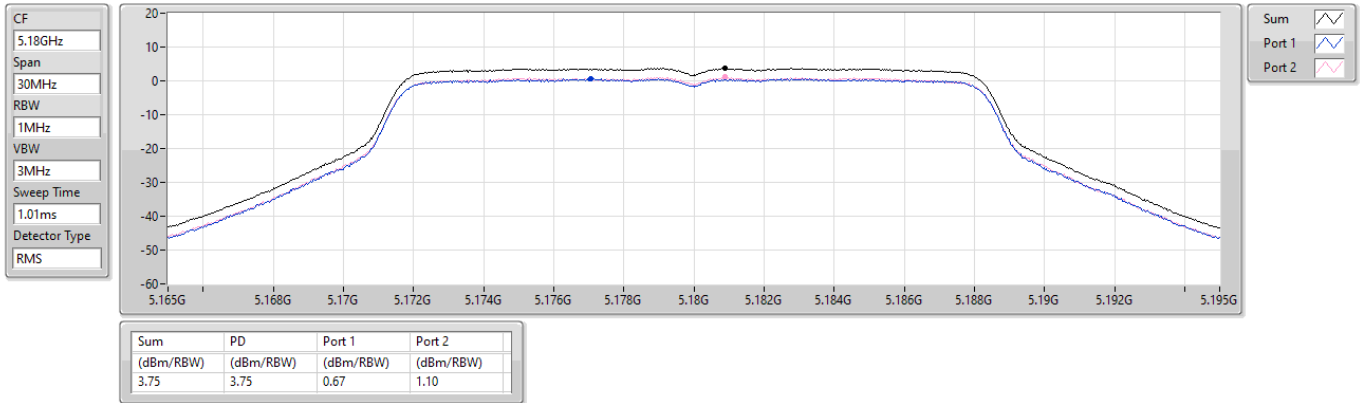
For 5250 MHz ~ 5350 MHz / 5470 MHz ~ 5725MHz

Directional gain = $13 + 10 \cdot \log(2) = 16.01 \text{ dBi} > 6 \text{ dBi}$, Power limit shall be reduced to $11 \text{ dBm} - (16.01 \text{ dBi} - 6 \text{ dBi}) = 0.99 \text{ dBm}$

5.15-5.25GHz_802.11a_Nss1,(6Mbps)_2TX

PSD

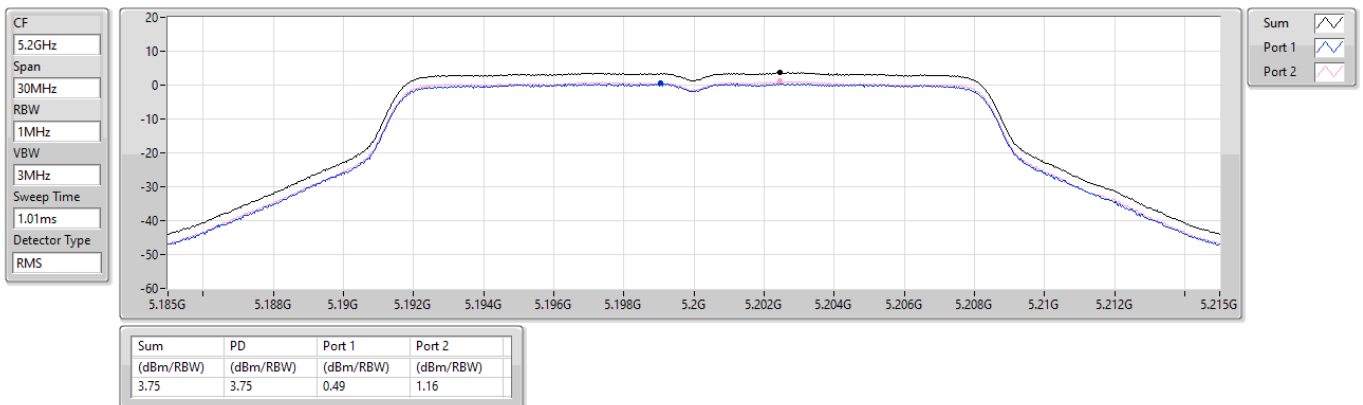
5180MHz



5.15-5.25GHz_802.11a_Nss1,(6Mbps)_2TX

PSD

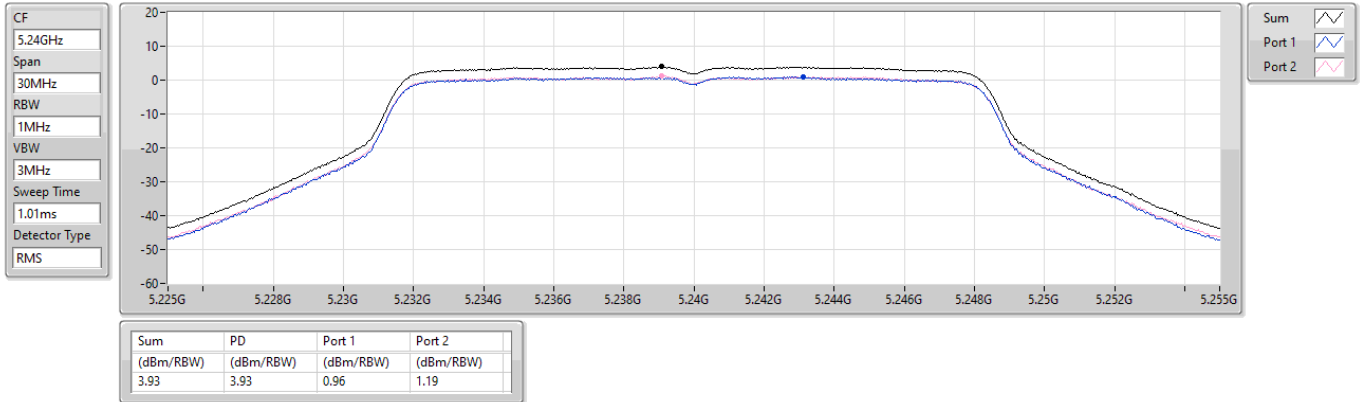
5200MHz



5.15-5.25GHz_802.11a_Nss1,(6Mbps)_2TX

PSD

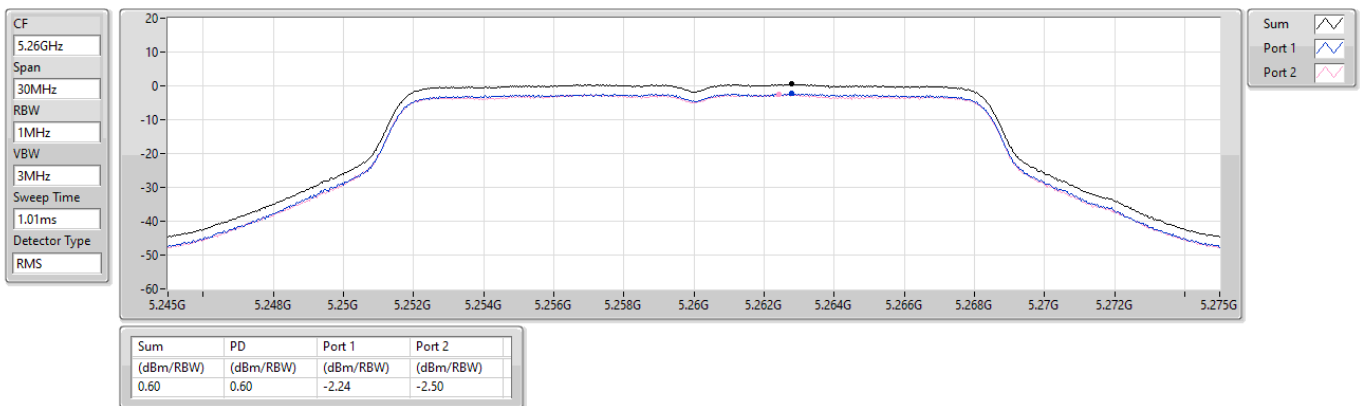
5240MHz



5.25-5.35GHz_802.11a_Nss1,(6Mbps)_2TX

PSD

5260MHz

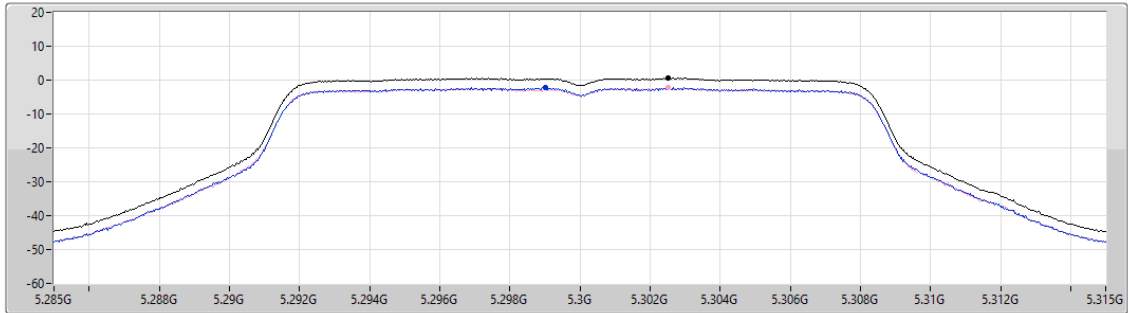


5.25-5.35GHz_802.11a_Nss1,(6Mbps)_2TX

PSD

5300MHz

CF
5.3GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
1.01ms
Detector Type
RMS



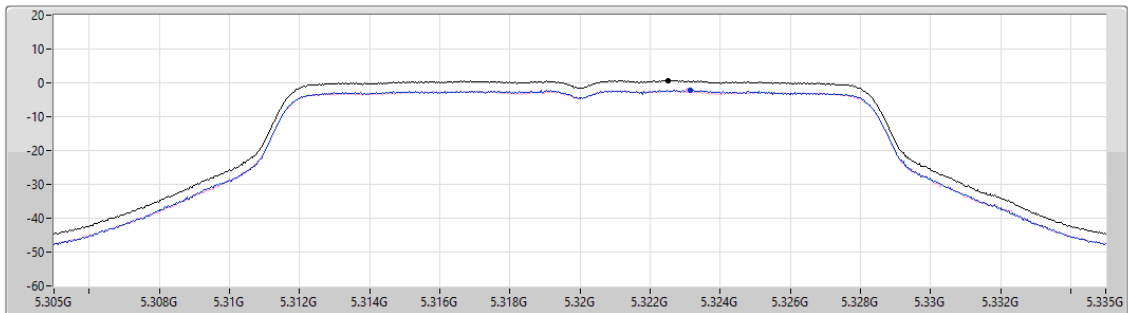
Sum (dBm/RBW)	PD (dBm/RBW)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)
0.71	0.71	-2.30	-2.31

5.25-5.35GHz_802.11a_Nss1,(6Mbps)_2TX

PSD

5320MHz

CF
5.32GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
1.01ms
Detector Type
RMS



Sum (dBm/RBW)	PD (dBm/RBW)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)
0.66	0.66	-2.19	-2.27