

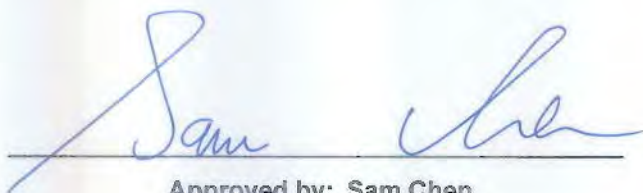


RADIO TEST REPORT

FCC ID : MSQ-RTAX4Q00
Equipment : AX11000 Tri Band WiFi Router
Brand Name : ASUS
Model Name : XT12
Applicant : ASUSTeK COMPUTER INC.
1F., No. 15, Lide Rd., Beitou, Taipei 112, Taiwan
Manufacturer (1) : Compal Networking (KunShan) Co., LTD.
No. 520, Nanbang Rd., Economic & Technical
Development Zone Kunshan, Jiangsu Province China
Manufacturer (2) : ARCADYAN TECHNOLOGY (VIETNAM) CO., LTD.
Ba Thien Industrial Park, Ba Hien commune, Binh
Xuyen district, Vinh Phuc Province
Standard : 47 CFR FCC Part 15.407

The product was received on Jul. 21, 2021, and testing was started from Sep. 15, 2021 and completed on Apr. 07, 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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History of this test report

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

Page Number : 3 of 45
Issued Date : Apr. 18, 2022
Report Version : 01



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	-
3.1	15.207	AC Power-line Conducted Emissions	PASS	-
3.2	15.407(a)	Emission Bandwidth	PASS	-
3.3	15.407(a)	Maximum Output Power	PASS	-
3.4	15.407(a)	Power Spectral Density	PASS	-
3.5	15.407(b)	Unwanted Emissions	PASS	-
Note: Reference to Sporton Project No.: 170127				

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: Jessie Wei**



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]
5725-5895		5845-5885	169-177[3]
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]
5725-5895		5835-5875	167-175[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]
5725-5895		5855	171[1]
5150-5350	ac (VHT160), ax (HEW160)	5250	50 [1]
5470-5725		5570	114 [1]
5725-5895		5815	163[1]

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



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



Band	Mode	BWch (MHz)	Nant
5.47-5.725GHz	802.11ax HEW80	80	4TX
5.47-5.725GHz	802.11ax HEW80-BF	80	4TX
5.47-5.725GHz	802.11ac VHT160	160	4TX
5.47-5.725GHz	802.11ac VHT160-BF	160	4TX
5.47-5.725GHz	802.11ax HEW160	160	4TX
5.47-5.725GHz	802.11ax HEW160-BF	160	4TX
5.725-5.85GHz	802.11a	20	4TX
5.725-5.85GHz	802.11n HT20	20	4TX
5.725-5.85GHz	802.11n HT20-BF	20	4TX
5.725-5.85GHz	802.11ac VHT20	20	4TX
5.725-5.85GHz	802.11ac VHT20-BF	20	4TX
5.725-5.85GHz	802.11ax HEW20	20	4TX
5.725-5.85GHz	802.11ax HEW20-BF	20	4TX
5.725-5.85GHz	802.11n HT40	40	4TX
5.725-5.85GHz	802.11n HT40-BF	40	4TX
5.725-5.85GHz	802.11ac VHT40	40	4TX
5.725-5.85GHz	802.11ac VHT40-BF	40	4TX
5.725-5.85GHz	802.11ax HEW40	40	4TX
5.725-5.85GHz	802.11ax HEW40-BF	40	4TX
5.725-5.85GHz	802.11ac VHT80	80	4TX
5.725-5.85GHz	802.11ac VHT80-BF	80	4TX
5.725-5.85GHz	802.11ax HEW80	80	4TX
5.725-5.85GHz	802.11ax HEW80-BF	80	4TX
5.725-5.895GHz	802.11a	20	4TX
5.725-5.895GHz	802.11n HT20	20	4TX
5.725-5.895GHz	802.11n HT20-BF	20	4TX
5.725-5.895GHz	802.11ac VHT20	20	4TX
5.725-5.895GHz	802.11ac VHT20-BF	20	4TX
5.725-5.895GHz	802.11ax HEW20	20	4TX
5.725-5.895GHz	802.11ax HEW20-BF	20	4TX
5.725-5.895GHz	802.11n HT40	40	4TX
5.725-5.895GHz	802.11n HT40-BF	40	4TX
5.725-5.895GHz	802.11ac VHT40	40	4TX
5.725-5.895GHz	802.11ac VHT40-BF	40	4TX
5.725-5.895GHz	802.11ax HEW40	40	4TX
5.725-5.895GHz	802.11ax HEW40-BF	40	4TX
5.725-5.895GHz	802.11ac VHT80	80	4TX
5.725-5.895GHz	802.11ac VHT80-BF	80	4TX
5.725-5.895GHz	802.11ax HEW80	80	4TX
5.725-5.895GHz	802.11ax HEW80-BF	80	4TX
5.725-5.895GHz	802.11ac VHT160	160	4TX



Band	Mode	BWch (MHz)	Nant
5.725-5.895GHz	802.11ac VHT160-BF	160	4TX
5.725-5.895GHz	802.11ax HEW160	160	4TX
5.725-5.895GHz	802.11ax HEW160-BF	160	4TX

Note:

- ♦ 11a, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- ♦ VHT20, VHT40, VHT80 and VHT160 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 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.	2.4GHz Port	5GHz Port		Blue tooth	Brand Name	Model Name	Antenna Type	Connector	Gain (dBi)
		UNII 1~2A	UNII 2C~4						
1	-	-	1	-	WALSIN	RFDPA110521IM5B901	Dipole	I-PEX	Note 1
2	-	-	2	-	WALSIN	RFDPA110517IM5B901	Dipole	I-PEX	
3	-	-	3	-	WALSIN	RFDPA110521IM5B903	Dipole	I-PEX	
4	-	-	4	-	WALSIN	RFDPA110521IM5B902	Dipole	I-PEX	
5	1	1	-	-	WALSIN	RFDPA200513IMLB901	Dipole	I-PEX	
6	2	2	-	-	WALSIN	RFDPA200513IMLB902	Dipole	I-PEX	
7	3	3	-	-	WALSIN	RFDPA200509IMLB901	Dipole	I-PEX	
8	4	4	-	-	WALSIN	RFDPA200509IMLB902	Dipole	I-PEX	
9	-	-	-	1	YAGEO	ANT3216A063R2400A	Chip	N/A	

Note 1:

Ant.	Gain (dBi)						
	2.4GHz	UNII 1	UNII 2A	UNII 2C	UNII 3	UNII 4	Bluetooth
1	-	-	-	2.6	2.39	1.98	-
2	-	-	-	2.44	1.96	2.12	-
3	-	-	-	1.68	1.72	1.22	-
4	-	-	-	3.09	2.53	2.47	-
5	1.67	2.63	2.74	-	-	-	-
6	1.19	2.82	2.9	-	-	-	-
7	2.93	3.2	2.73	-	-	-	-
8	2.12	3.87	3.16	-	-	-	-
9	-	-	-	-	-	-	1.69
Max Gain (dBi)	2.93	3.87	3.16	3.09	2.53	2.47	-
DG (4T1S) (dBi)	6.34	5.31	5.97	6.05	6.09	5.91	-
DG (4T2S) (dBi)	3.34	3.87	3.16	3.09	3.09	2.91	-
DG (4T4S) (dBi)	0.37	0.09	0.26	0.06	0.19	0.03	-

Note 2: The above information was declared by manufacturer.

Note 3: WLAN 2.4GHz/5GHz: The directional gain is measured which follows the procedure of KDB 662911 D03.

The antenna report is provided in the operational description for this application.

Note 4: For 2.4GHz function:

For IEEE 802.11 b/g/n/VHT/ax mode (4TX/4RX)

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

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

**For 5GHz function:****For IEEE 802.11a/n/ac/ax mode (4TX/4RX)**

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

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

For Bluetooth Function (1TX/1RX):

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

1.1.3 Mode Test Duty Cycle**For UNII 1~2A****4T1S**

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11a	0.993	0.03	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ax HEW20-BF	0.992	0.03	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ax HEW40-BF	0.994	0.03	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ax HEW80-BF	0.983	0.07	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ax HEW160-BF	0.986	0.06	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)

4T4S – UNII 1 (80MHz) and UNII 1~2A (160MHz)

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ax HEW80	0.944	0.25	543.25u	3k
802.11ax HEW160	0.943	0.25	502.75u	3k

For UNII 2C~3**4T1S**

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11a	0.993	0.03	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ax HEW20-BF	0.994	0.03	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ax HEW40-BF	0.992	0.03	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ax HEW80-BF	0.983	0.07	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ax HEW160-BF	0.983	0.07	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)

4T4S – UNII 3 (80MHz) and UNII 2C (160MHz)

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ax HEW80	0.956	0.2	543.5u	3k
802.11ax HEW160	0.944	0.25	502.75u	3k

**For UNII 4****<Non-beamforming Mode>****4T1S**

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11a	0.96	0.18	2.08m	1k

4T4S

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ax HEW80	0.867	0.62	176.25u	10k
802.11ax HEW160	0.86	0.66	177.813u	10k

<Beamforming Mode>**4T1S**

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ax HEW20-BF	0.972	0.12	4.383m	300
802.11ax HEW40-BF	0.987	0.06	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ax HEW80-BF	0.959	0.18	4.152m	300
802.11ax HEW160-BF	0.962	0.17	4.832m	300

4T2S

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ax HEW20-BF	0.967	0.15	5.11m	300
802.11ax HEW40-BF	0.954	0.2	5.091m	300
802.11ax HEW80-BF	0.959	0.18	4.152m	300

Note:

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

**1.1.4 EUT Operational Condition**

EUT Power Type	From Power Adapter			
Beamforming Function	☒	With beamforming	☐	Without beamforming
	The product has beamforming function for 11n/VHT/ax in 2.4GHz and 11n/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
Device Type (UNII 4)	☒	Indoor Access Point	☒	Subordinate
	☐	Indoor Client		
TPC Function	☒	With TPC	☐	Without TPC
Test Software Version	accessMTool v3.2.0.2 、 Mtool 3.2.1.3 、 DOS [ver 6.1.7601]			

Note: The above information was declared by manufacturer.

1.1.5 Table for Components Source Information

Items	Main Source	Second Source
Transceiver (2.5G LAN)	Brand Name: MAXLINEAR Model Name: GPY211	Brand Name: Broadcom Model Name: BCM50991

Note: The above information was declared by manufacturer.

1.1.6 Table for EUT Information

EUT	Transceiver (2.5G LAN)
EUT 1	Main Source (2500 / 1000 / 100 /10 Mbps)
EUT 2	Second Source (2500 / 1000 / 100 Mbps)

Note: After evaluating, EUT 1 was selected to test and recorded in the test report.

1.1.7 Table for EUT supports function

Function	Supports type
AP Router	Master
Bridge	Slave without radar detection
Repeater	Master
Mesh	Master

Note1: After evaluating, only AP Router was selected to test and record in the report.

Note2: 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 D03 v01
- ♦ FCC KDB 412172 D01 v01r01
- ♦ FCC KDB 414788 D01 v01r01
- ♦ FCC KDB 291074 D02 v01

1.3 Testing Location Information

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

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
RF Conducted	TH01-CB	Serway Li	22.3~23.0 / 67~69	Sep. 22, 2021~ Mar. 07, 2022
Radiated below 1GHz	03CH05-CB	Ken Yeh	24.5~25.6 / 56~59	Sep. 15, 2021~ Apr. 07, 2022
	03CH06-CB	Ken Yeh	23.5~24.6 / 55~59	
Radiated above 1GHz	03CH02-CB	Ken Yeh	24.2~26.1 / 55~58	Sep. 15, 2021~ Apr. 07, 2022
	03CH06-CB	Ken Yeh	23.5~24.6 / 55~59	
Radiated Co-location	03CH02-CB	Ken Yeh	24.2~26.1 / 55~58	Sep. 15, 2021~ Apr. 07, 2022
AC Conduction	CO01-CB	Peter Wu	22~24 / 52~53	Mar. 04, 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)	4.2 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	5.5 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	4.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.2 dB	Confidence levels of 95%
Conducted Emission	2.5 dB	Confidence levels of 95%
Output Power Measurement	1.3 dB	Confidence levels of 95%
Power Density Measurement	2.5 dB	Confidence levels of 95%
Bandwidth Measurement	0.9%	Confidence levels of 95%



2 Test Configuration of EUT

2.1 Test Channel Mode

For UNII 1~2A

4T1S

Mode	Power Setting
802.11a_Nss1,(6Mbps)_4TX	-
5180MHz	96
5200MHz	96
5240MHz	97
5260MHz	69
5300MHz	70
5320MHz	74
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-
5180MHz	95
5200MHz	94
5240MHz	95
5260MHz	68
5300MHz	69
5320MHz	73
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-
5190MHz	90
5230MHz	94
5270MHz	67
5310MHz	71
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-
5210MHz	91
5290MHz	72
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-
5250MHz Straddle 5.15-5.25GHz	76
5250MHz Straddle 5.25-5.35GHz	76

4T4S

Mode	Power Setting
802.11ax HEW80_Nss4,(MCS0)_4TX	-
5210MHz	92
802.11ax HEW160_Nss4,(MCS0)_4TX	-
5250MHz Straddle 5.15-5.25GHz	82
5250MHz Straddle 5.25-5.35GHz	82

**For UNII 2C~3
4T1S**

Mode	Power Setting
802.11a_Nss1,(6Mbps)_4TX	-
5500MHz	71
5580MHz	69
5700MHz	71
5720MHz Straddle 5.47-5.725GHz	72
5720MHz Straddle 5.725-5.85GHz	72
5745MHz	96
5785MHz	94
5825MHz	94
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-
5500MHz	71
5580MHz	68
5700MHz	71
5720MHz Straddle 5.47-5.725GHz	71
5720MHz Straddle 5.725-5.85GHz	71
5745MHz	95
5785MHz	91
5825MHz	91
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-
5510MHz	71
5550MHz	69
5670MHz	71
5710MHz Straddle 5.47-5.725GHz	72
5710MHz Straddle 5.725-5.85GHz	72
5755MHz	94
5795MHz	92
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-
5530MHz	72
5610MHz	69
5690MHz Straddle 5.47-5.725GHz	71
5690MHz Straddle 5.725-5.85GHz	71
5775MHz	95
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-
5570MHz	70

**4T4S**

Mode	Power Setting
802.11ax HEW80_Nss4,(MCS0)_4TX	-
5775MHz	95
802.11ax HEW160_Nss4,(MCS0)_4TX	-
5570MHz	69

For UNII 4**<Non-beamforming Mode>****4T1S**

Mode	Power Setting
802.11a_Nss1,(6Mbps)_4TX	-
5845MHz	81
5865MHz	81
5885MHz	81

4T4S

Mode	Power Setting
802.11ax HEW80_Nss4,(MCS0)_4TX	-
5855MHz	103
802.11ax HEW160_Nss4,(MCS0)_4TX	-
5815MHz	77

<Beamforming Mode>**4T1S**

Mode	Power Setting
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-
5845MHz	82
5865MHz	82
5885MHz	63
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-
5835MHz	95
5875MHz	95
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-
5855MHz	95
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-
5815MHz	78

**4T2S**

Mode	Power Setting
802.11ax HEW20-BF_Nss2,(MCS0)_4TX	-
5845MHz	96
5865MHz	96
5885MHz	67
802.11ax HEW40-BF_Nss2,(MCS0)_4TX	-
5835MHz	108
5875MHz	106
802.11ax HEW80-BF_Nss2,(MCS0)_4TX	-
5855MHz	104

Note: Evaluated HEW20/HEW40/HEW80/HEW160 mode only, due to similar modulation. The power setting of HT20/HT40/VHT20/VHT40/VHT80/VHT160 mode are the same or lower than HEW20/HEW40/HEW80/HEW160.

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	AP router – EUT 1 + Adapter 1
2	AP router – EUT 1 + Adapter 2
For operating mode 2 is the worst case and it was record in this test report.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emission Bandwidth Maximum Output Power Power Spectral Density
Test Condition	Conducted measurement at transmit chains
1	EUT 1



The Worst Case Mode for Following Conformance Tests	
Tests Item	Unwanted Emissions
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	CTX
The EUT was performed at X axis, Y axis and Z axis position for Unwanted Emissions above 1GHz test, and the worst case was found at Y axis. So the measurement will follow this same test configuration.	
1	CTX – EUT 1 in Y axis + Adapter 1 – WLAN 2.4GHz
2	CTX – EUT 1 in Y axis + Adapter 2 – WLAN 2.4GHz
Mode 2 has been evaluated to be the worst case among Mode 1~2, thus measurement for Mode 3~5 will follow this same test mode.	
3	CTX – EUT 1 in Y axis + Adapter 2 – Bluetooth
4	CTX – EUT 1 in Y axis + Adapter 2 – WLAN 5GHz (UNII 1~UNII 2A)
5	CTX – EUT 1 in Y axis + Adapter 2 – WLAN 5GHz (UNII 2C~UNII 4)
Mode 2 has been evaluated to be the worst case among Mode 1~5, thus measurement for Mode 6 will follow this same test mode.	
6	CTX – EUT 2 in Y axis + Adapter 2 – WLAN 2.4GHz
For operating mode 2 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX
The EUT was performed at X axis, Y axis and Z axis position, and the worst case was found at Y axis. So the measurement will follow this same test configuration.	
1	EUT 1

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
The EUT was performed at X axis, Y axis and Z axis position for Unwanted Emissions above 1GHz test, and the worst case was found at Y axis. So the measurement will follow this same test configuration.	
1	EUT 1 in Y axis – WLAN 2.4GHz + WLAN 5GHz (UNII 1~UNII 2A)
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	EUT 1 – WLAN 2.4GHz + WLAN 5GHz (UNII 1~UNII 2A) + WLAN 5GHz (UNII 2C~UNII 4) + Bluetooth
Refer to Sporton Test Report No.: FA170127-01 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:

For Conducted Mode:

The EUT was programmed to be in continuously transmitting mode.

For Radiated Mode:

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

The program was executed as follows:

1. During the test, the EUT operation to normal function.
2. Executed command fixed test channel under DOS [ver 6.1.7601].
3. Executed "Lantest.exe" to link with the remote workstation to transmit and receive packet by WLAN AP and transmit duty cycle no less than 98%.

For Normal Link:

During the test, the EUT operation to normal function.

2.4 Accessories

Accessories				
Equipment Name	Brand Name	Model Name	Rating	DC cable
Adapter 1	DELTA	ADP-45FE F	INPUT: 100-240V~1.2A, 50-60Hz OUTPUT: 19.0V, 2.37A, 45.0W	Non-shielded, 1.5m
Adapter 2	AcBel	ADH011	INPUT: 100-240V~1.4A, 50-60Hz OUTPUT: 19.5V, 2.31A, 45.0W MAX.	Non-shielded, 1.5m
Others				
Power cable*2: Non-shielded, 0.9m				
RJ-45 cable*1: Non-shielded, 1.5m				



2.5 Support Equipment

For AC Conduction:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	2.5G WAN PC	DELL	T3400	N/A
B	2.5G LAN PC	DELL	T3400	N/A
C	LAN1 NB	DELL	E6430	N/A
D	LAN2 NB	DELL	E6430	N/A
E	2.4G NB	DELL	E6430	N/A
F	5G-L NB	DELL	E6430	N/A
G	5G-H Client	ASUS	XT12	MSQ-RTAX4Q00
H	5G-H NB	DELL	E6430	N/A

For Radiated (below 1GHz) and RF Conducted:

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

Radiated (above 1GHz)

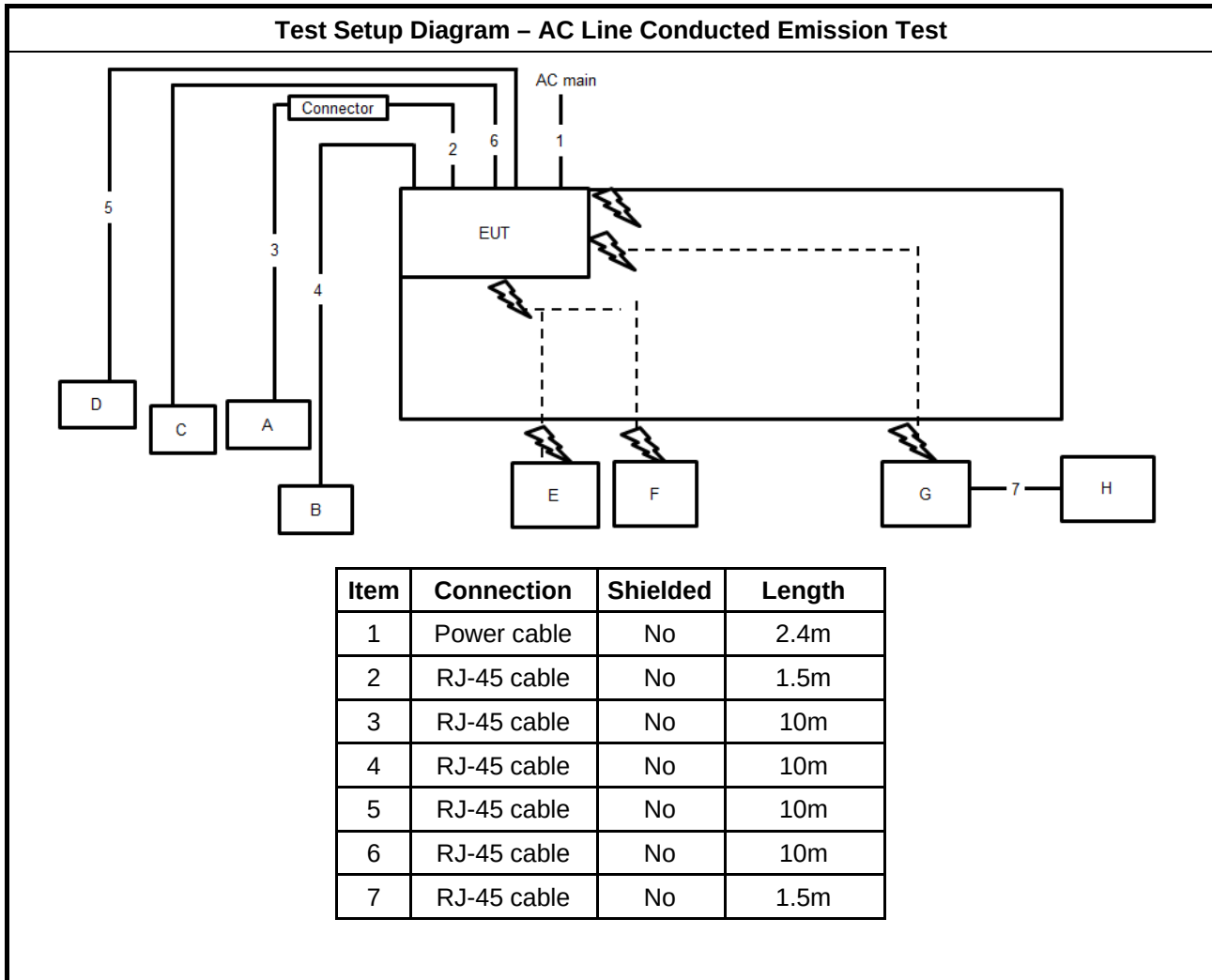
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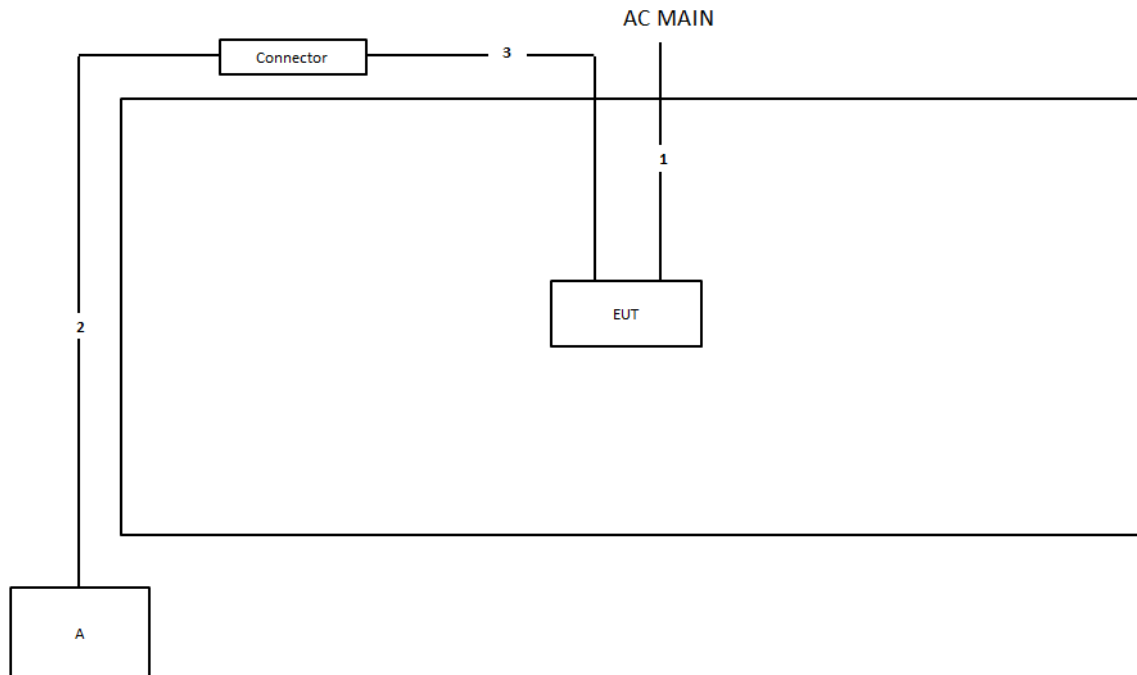
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A

<Beamforming Mode>:

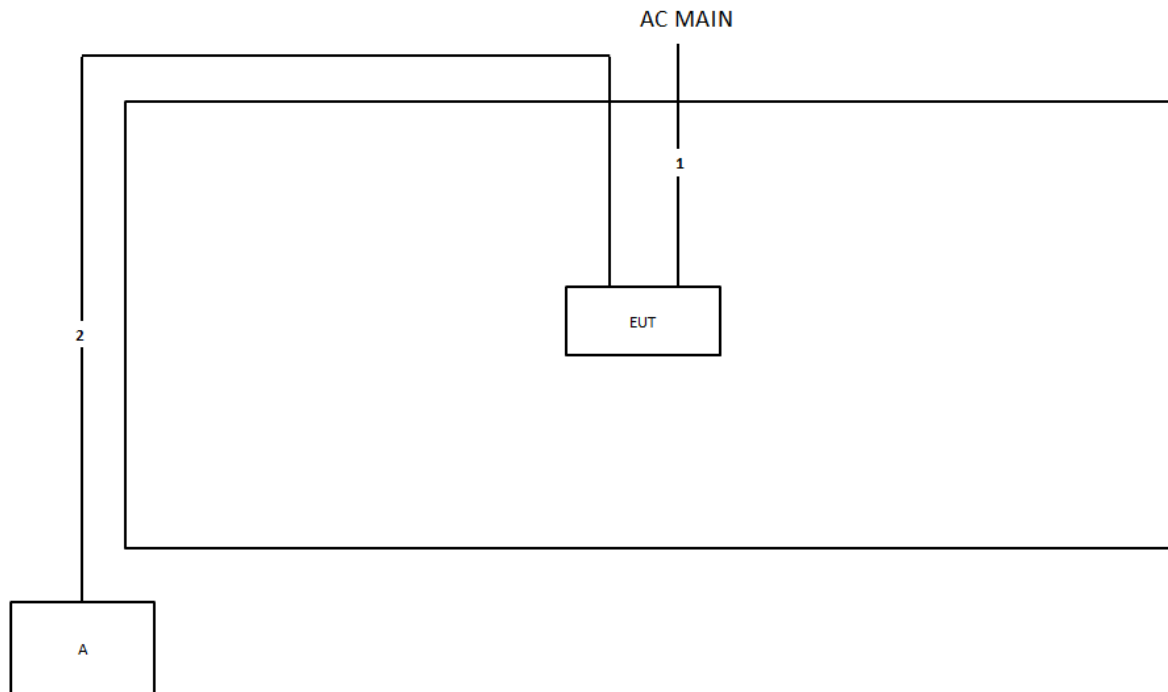
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A
B	Client	ASUS	XT12	MSQ-RTAX4Q00
C	Notebook	DELL	E4300	N/A

2.6 Test Setup Diagram

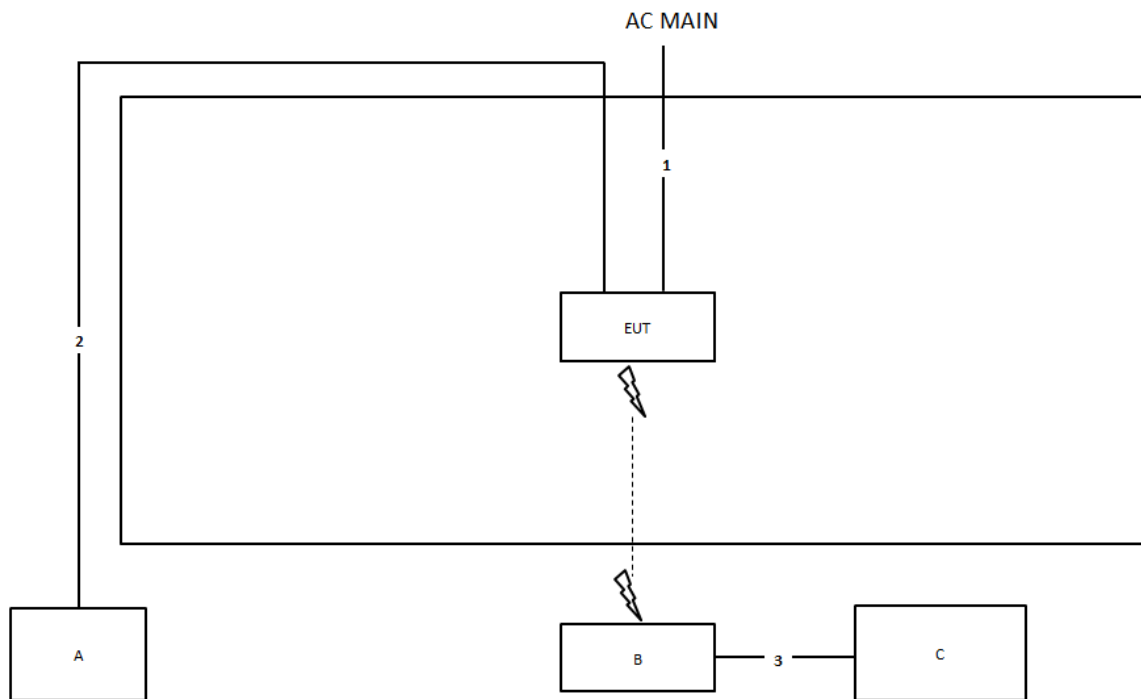


Test Setup Diagram - Radiated Test < 1GHz


Item	Connection	Shielded	Length
1	Power cable	No	2.4m
2	RJ-45 cable	No	10m
3	RJ-45 cable	No	1.5m

Test Setup Diagram - Radiated Test > 1GHz / <Non-beamforming Mode>


Item	Connection	Shielded	Length
1	Power cable	No	2.4m
2	RJ-45 cable	No	10m

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


Item	Connection	Shielded	Length
1	Power cable	No	2.4m
2	RJ-45 cable	No	10m
3	RJ-45 cable	No	10m



3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

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

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

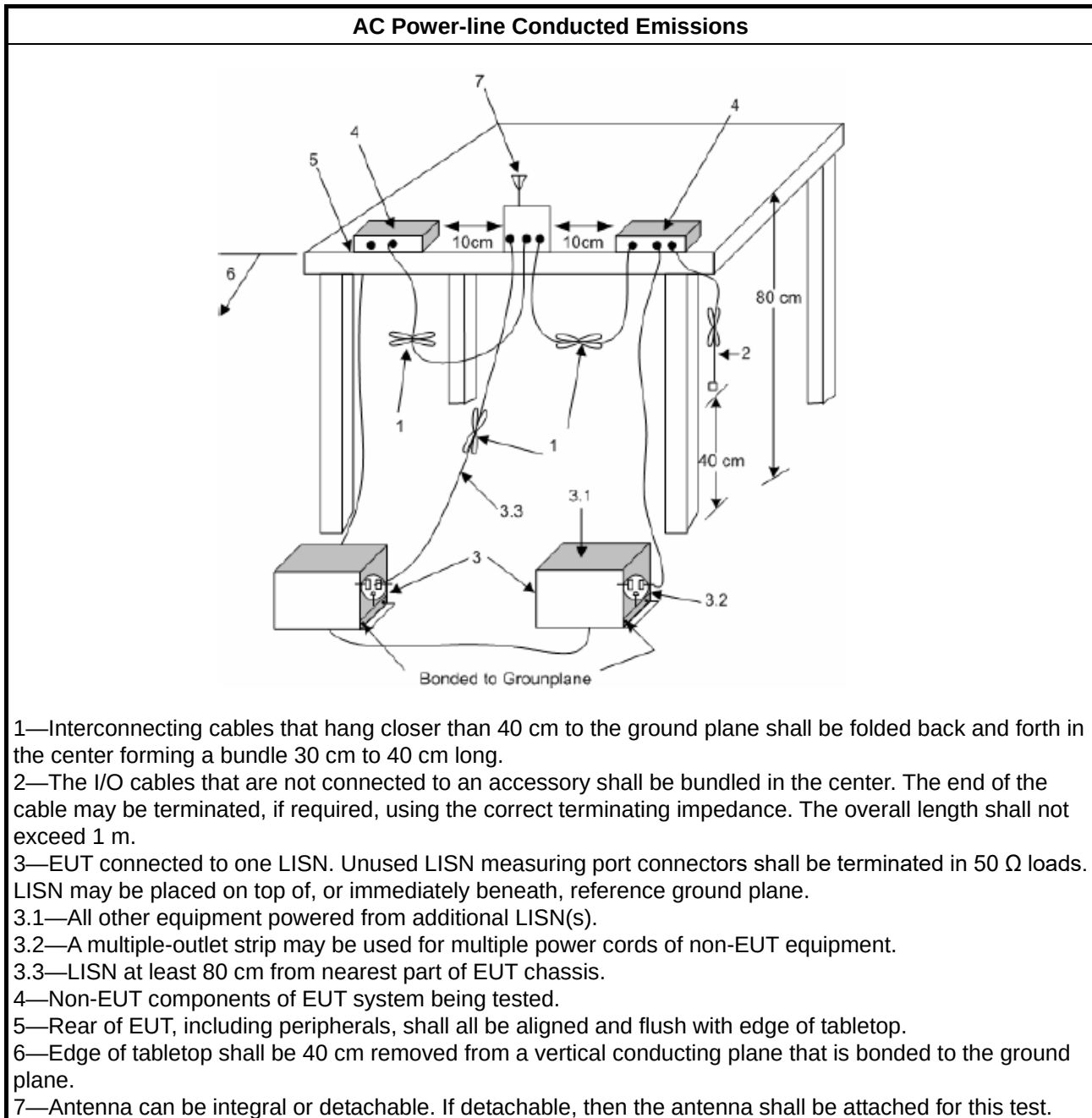
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

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

3.1.4 Test Setup



3.1.5 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 $\geq 500\text{kHz}$.

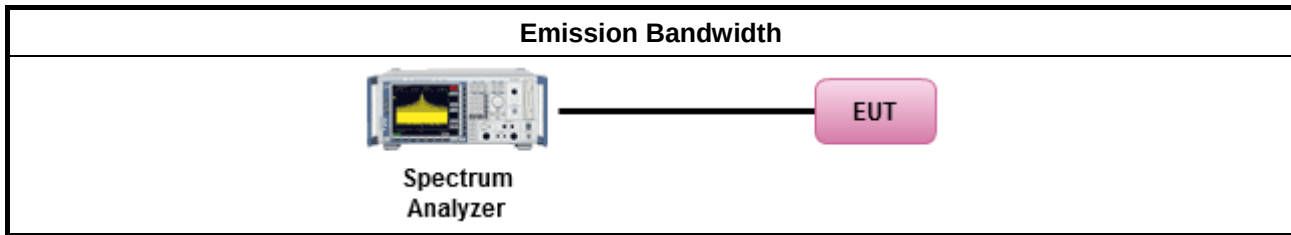
3.2.2 Measuring Instruments

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

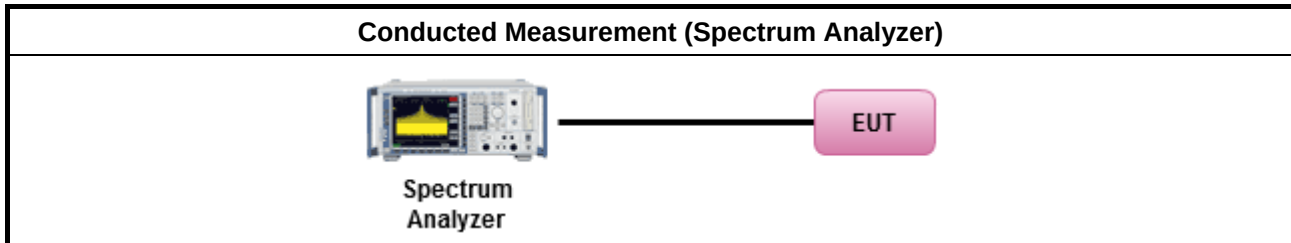
Refer a test equipment and calibration data table in this test report.

3.3.3 Test Procedures

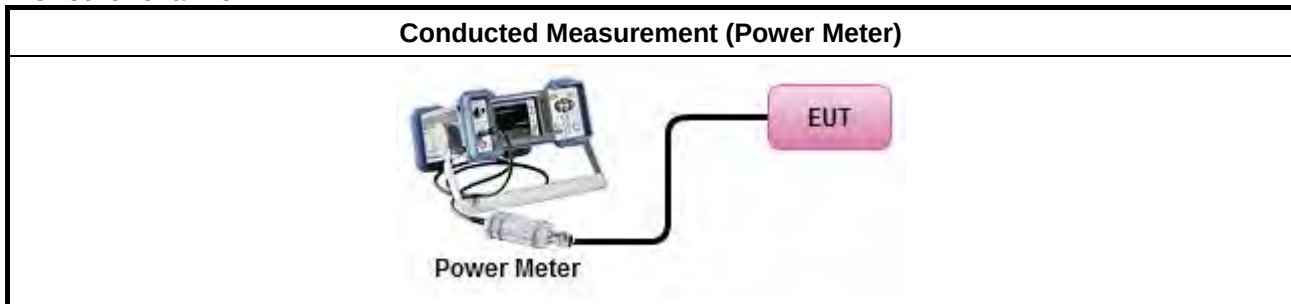
Test Method	
	Average over on/off periods with duty factor
☒	Refer as FCC KDB 789033 D02, clause E Method SA-2 (spectral trace averaging).
☐	Refer as FCC KDB 789033 D02, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
	Wideband RF power meter and average over on/off periods with duty 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: $P_{\text{total}} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $\text{EIRP}_{\text{total}} = P_{\text{total}} + \text{DG}$
☐	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



For other channel



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

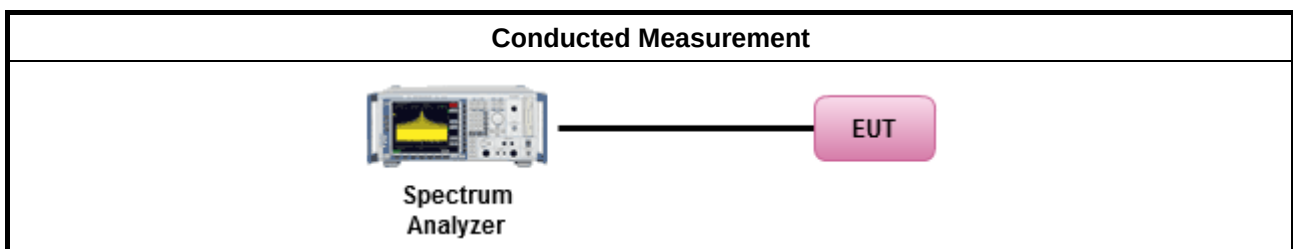
Refer a test equipment and calibration data table in this test report.

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

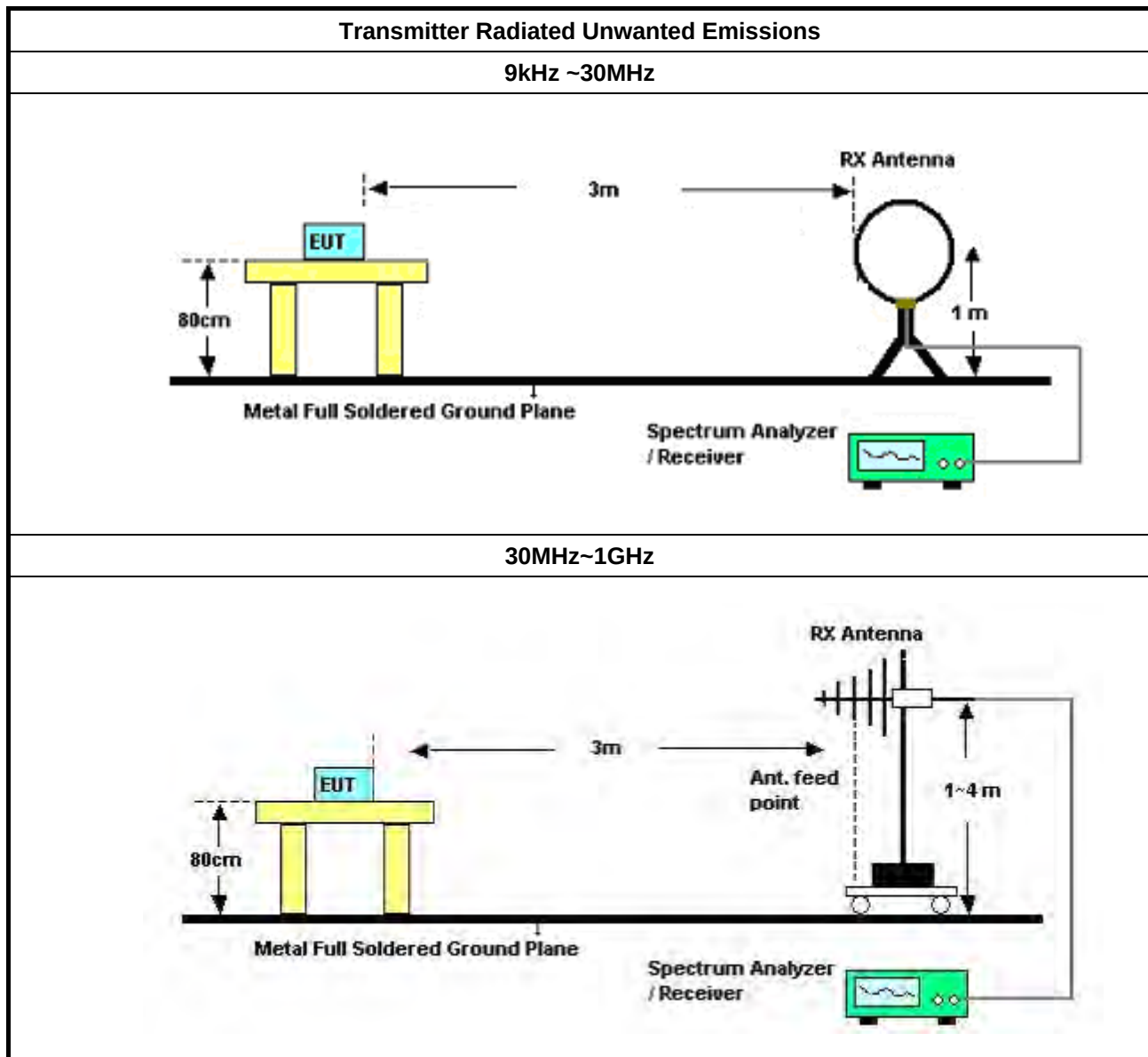
Refer a test equipment and calibration data table in this test report.

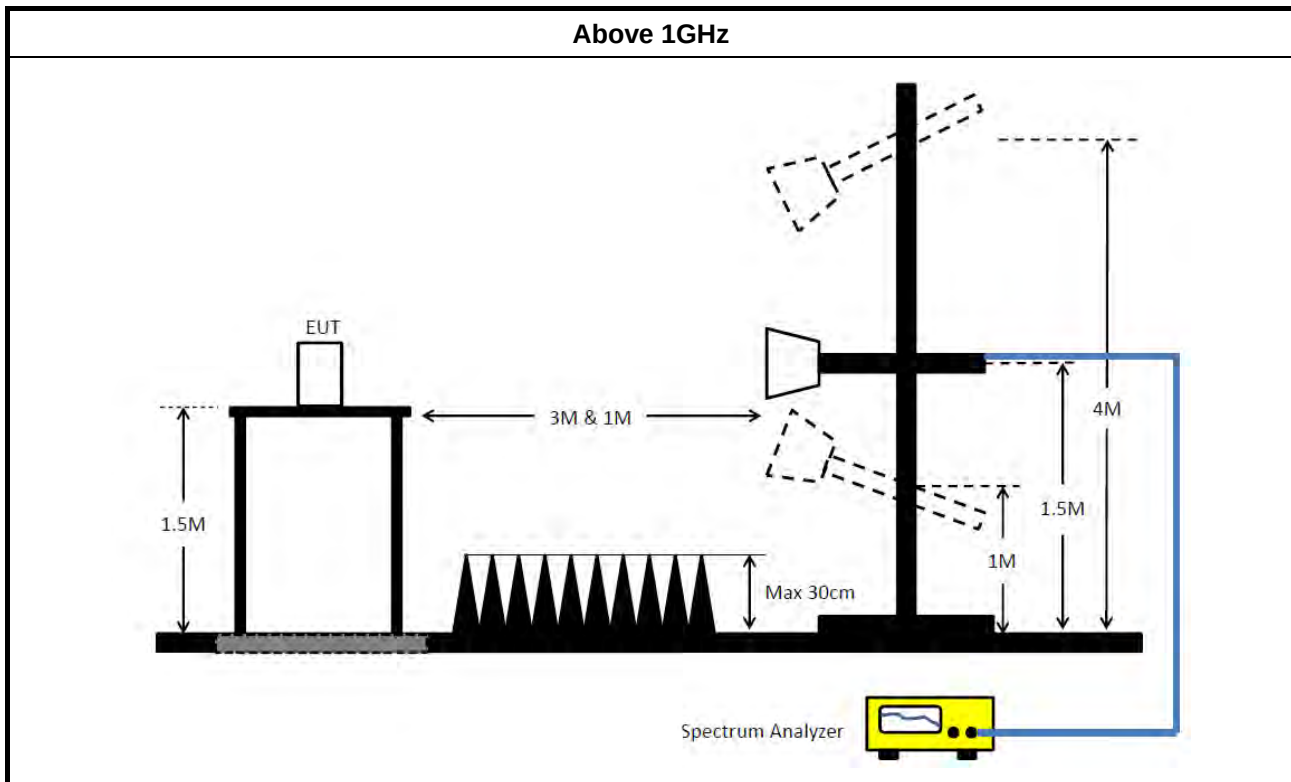


3.5.3 Test Procedures

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:	
	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.
	☐ Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak limit.
For radiated measurement.	
	Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.
	Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.
	Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.
The any unwanted emissions level shall not exceed the fundamental emission level.	
All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.	

3.5.4 Test Setup





3.5.5 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Antenna factor (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
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.4GHz	Feb. 22, 2022	Feb. 21, 2023	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-1 6-2	04083	150kHz ~ 100MHz	Feb. 09, 2022	Feb. 08, 2023	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Mar. 07, 2021	Mar. 06, 2022	Conduction (CO01-CB)
Pulse Limiter	Rohde&Schwarz	ESH3-Z2	100430	9kHz ~ 30MHz	Feb. 10, 2022	Feb. 09, 2023	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	9kHz ~ 30MHz	May 19, 2021	May 18, 2022	Conduction (CO01-CB)
Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Apr. 14, 2021	Apr. 13, 2022	Radiation (03CH05-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH05-CB	30 MHz ~ 1 GHz	Aug. 09, 2021	Aug. 08, 2022	Radiation (03CH05-CB)
Bilog Antenna with 6dB Attenuator	TESEQ & EMCI	CBL 6112D & N-6-06	35236 & AT-N0610	30MHz ~ 2GHz	Mar. 26, 2021	Mar. 25, 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)
Pre-Amplifier	EMCI	EMC330N	980331	20MHz ~ 3GHz	Apr. 27, 2021	Apr. 26, 2022	Radiation (03CH05-CB)
Spectrum Analyzer	R&S	FSP40	100304	9kHz ~ 40GHz	Nov. 10, 2020	Nov. 09, 2021	Radiation (03CH05-CB)
Signal Analyzer	R&S	FSV40	101903	9kHz ~ 40GHz	Mar. 22, 2021	Mar. 21, 2022	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. 21, 2021	Jun. 20, 2022	Radiation (03CH05-CB)
RF Cable-low	Woken	RG402	Low Cable-04+23	30MHz~1GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH05-CB)
RF Cable-low	Woken	RG402	Low Cable-04+23	30MHz~1GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH05-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH05-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Apr. 14, 2021	Apr. 13, 2022	Radiation (03CH06-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH06-CB	30 MHz ~ 1 GHz	Aug. 09, 2021	Aug. 08, 2022	Radiation (03CH06-CB)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH06-CB	1GHz ~18GHz 3m	Oct. 02, 2020	Oct. 01, 2021	Radiation (03CH06-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH06-CB	1GHz ~18GHz 3m	Oct. 01, 2021	Sep. 30, 2022	Radiation (03CH06-CB)
Bilog Antenna with 6 dB attenuator	TESEQ & EMC	CBL6112D & N-6-06	37878 & AT-N0606	20MHz ~ 2GHz	Jul. 31, 2021	Jul. 30, 2022	Radiation (03CH06-CB)
Horn Antenna	SCHWARZBEC K	BBHA9120D	BBHA 9120D-1292	1GHz~18GHz	Aug. 04, 2021	Aug. 03, 2022	Radiation (03CH06-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 05, 2021	Aug. 04, 2022	Radiation (03CH06-CB)
Pre-Amplifier	Agilent	310N	187290	0.1MHz ~ 1GHz	Nov. 05, 2020	Nov. 04, 2021	Radiation (03CH06-CB)
Pre-Amplifier	Agilent	310N	187290	0.1MHz ~ 1GHz	Nov. 04, 2021	Nov. 03, 2022	Radiation (03CH06-CB)
Pre-Amplifier	Agilent	83017A	MY53270064	0.5GHz ~ 26.5GHz	May 06, 2021	May 05, 2022	Radiation (03CH06-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 13, 2021	Jul. 12, 2022	Radiation (03CH06-CB)
Spectrum analyzer	R&S	FSP40	100080	9kHz~40GHz	Dec. 15, 2020	Dec. 14, 2021	Radiation (03CH06-CB)
Signal Analyzer	R&S	FSV40	101903	9kHz ~ 40GHz	Mar. 22, 2021	Mar. 21, 2022	Radiation (03CH06-CB)
Spectrum analyzer	R&S	FSP40	100080	9kHz~40GHz	Dec. 24, 2021	Dec. 23, 2022	Radiation (03CH06-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	Jun. 21, 2021	Jun. 20, 2022	Radiation (03CH06-CB)
RF Cable-low	Woken	RG402	Low Cable-05+24	30MHz~1GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH06-CB)
RF Cable-low	Woken	RG402	Low Cable-05+24	30MHz~1GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-05	1GHz~18GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-05	1GHz~18GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-05+24	1GHz~18GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-05+24	1GHz~18GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 15, 2021	Jul. 14, 2022	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 15, 2021	Jul. 14, 2022	Radiation (03CH06-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH06-CB)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
3m Semi Anechoic Chamber VSWR	RIKEN	SAC-3M	03CH02-CB	1GHz ~18GHz 3m	Mar. 27, 2021	Mar. 26, 2022	Radiation (03CH02-CB)
3m VSWR	RIKEN	SAC-3M	03CH02-CB	1GHz ~18GHz	Mar. 26, 2022	Mar. 25, 2023	Radiation (03CH02-CB)
Horn Antenna	EMCO	3115	9610-4976	1GHz ~ 18GHz	May 04, 2021	May 03, 2022	Radiation (03CH02-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 05, 2021	Aug. 04, 2022	Radiation (03CH02-CB)
Pre-Amplifier	Agilent	83017A	MY39501305	1GHz ~ 26.5GHz	Jul. 12, 2021	Jul. 11, 2022	Radiation (03CH02-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 13, 2021	Jul. 12, 2022	Radiation (03CH02-CB)
Spectrum analyzer	R&S	FSU	100015	9kHz~26GHz	Oct. 15, 2020	Oct. 14, 2021	Radiation (03CH02-CB)
Signal Analyzer	R&S	FSV40	101903	9kHz ~ 40GHz	Mar. 22, 2021	Mar. 21, 2022	Radiation (03CH02-CB)
Spectrum analyzer	R&S	FSU	100015	9kHz~26GHz	Oct. 25, 2021	Oct. 24, 2022	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-18	1GHz ~ 18GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-18	1GHz ~ 18GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-18+19	1GHz ~ 18GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-18+19	1GHz ~ 18GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 15, 2021	Jul. 14, 2022	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 15, 2021	Jul. 14, 2022	Radiation (03CH02-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH02-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	May 21, 2021	May 20, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz ~ 26.5 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz ~ 26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz ~26.5 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz ~26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz ~26.5 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz ~26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz ~26.5 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH01-CB)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-09	1 GHz –26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-30	1 GHz –26.5 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-30	1 GHz –26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
Power Sensor	Anritsu	MA2411B	1339408	300MHz~40GHz	Sep. 06, 2021	Sep. 05, 2022	Conducted (TH01-CB)
Power Meter	Anritsu	ML2495A	1517009	300MHz~40GHz	Sep. 06, 2021	Sep. 05, 2022	Conducted (TH01-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conducted (TH01-CB)

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

NCR means Non-Calibration required.



Conducted Emissions at Powerline

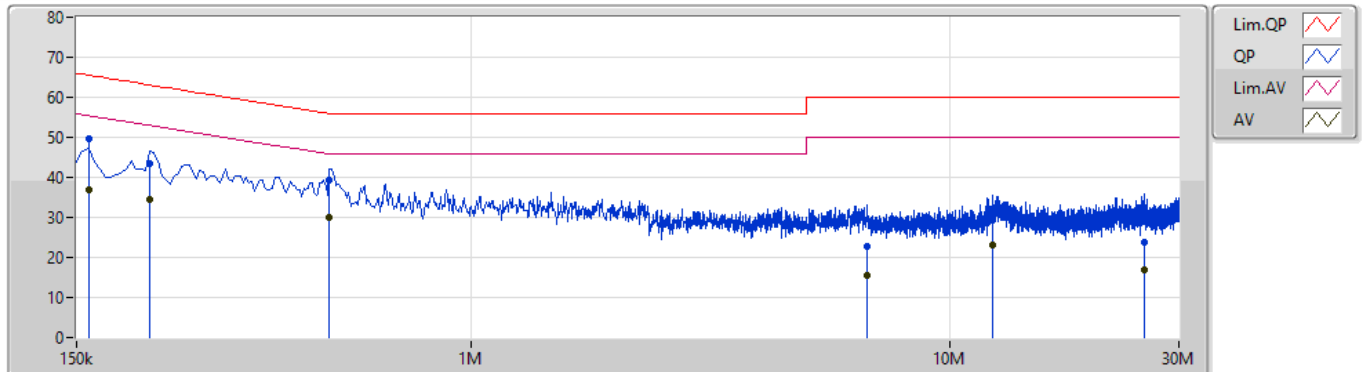
Appendix A

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 2	Pass	AV	510k	31.18	46.00	-14.82	Neutral

Mode 2

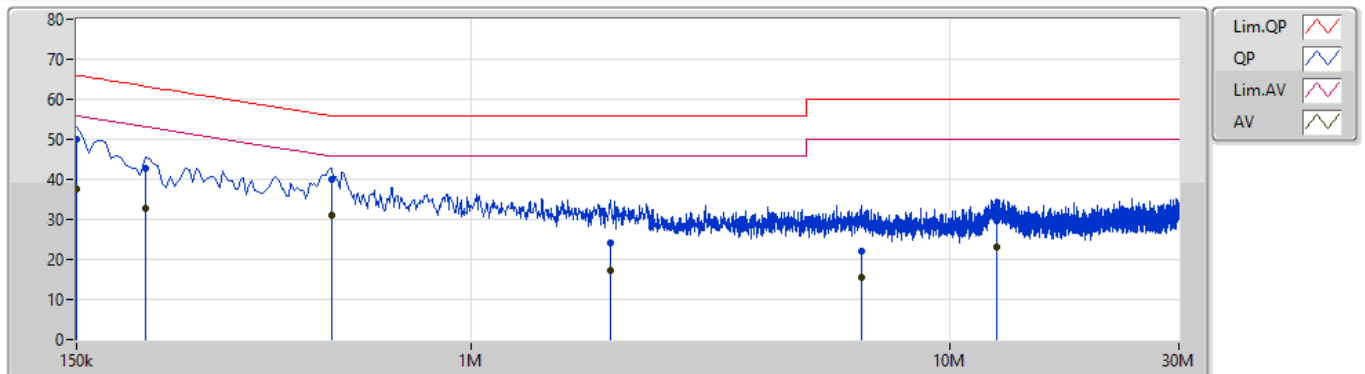
04/03/2022



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	159k	49.58	65.52	-15.94	10.03	Line	"Worst"	39.55	0.12	0.02	9.89			
AV	159k	36.96	55.52	-18.56	10.03	Line	-	26.93	0.12	0.02	9.89			
QP	213k	43.52	63.09	-19.57	10.03	Line	-	33.49	0.12	0.02	9.89			
AV	213k	34.38	53.09	-18.71	10.03	Line	-	24.35	0.12	0.02	9.89			
QP	505.5k	39.21	56.00	-16.79	10.04	Line	-	29.17	0.13	0.02	9.89			
AV	505.5k	30.00	46.00	-16.00	10.04	Line	-	19.96	0.13	0.02	9.89			
QP	6.725M	22.60	60.00	-37.40	10.26	Line	-	12.34	0.29	0.07	9.90			
AV	6.725M	15.60	50.00	-34.40	10.26	Line	-	5.34	0.29	0.07	9.90			
QP	12.273M	29.37	60.00	-30.63	10.37	Line	-	19.00	0.35	0.09	9.93			
AV	12.273M	23.14	50.00	-26.86	10.37	Line	-	12.77	0.35	0.09	9.93			
QP	25.395M	23.79	60.00	-36.21	10.57	Line	-	13.22	0.40	0.20	9.97			
AV	25.395M	16.88	50.00	-33.12	10.57	Line	-	6.31	0.40	0.20	9.97			

Mode 2

04/03/2022



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	150k	50.08	66.00	-15.92	10.07	Neutral	-	40.01	0.16	0.02	9.89			
AV	150k	37.57	56.00	-18.43	10.07	Neutral	-	27.50	0.16	0.02	9.89			
QP	208.5k	42.70	63.27	-20.57	10.07	Neutral	-	32.63	0.16	0.02	9.89			
AV	208.5k	32.75	53.27	-20.52	10.07	Neutral	-	22.68	0.16	0.02	9.89			
QP	510k	40.04	56.00	-15.96	10.07	Neutral	-	29.97	0.16	0.02	9.89			
AV	510k	31.18	46.00	-14.82	10.07	Neutral	"Worst"	21.11	0.16	0.02	9.89			
QP	1.95M	24.05	56.00	-31.95	10.13	Neutral	-	13.92	0.19	0.05	9.89			
AV	1.95M	17.08	46.00	-28.92	10.13	Neutral	-	6.95	0.19	0.05	9.89			
QP	6.509M	22.14	60.00	-37.86	10.23	Neutral	-	11.91	0.26	0.07	9.90			
AV	6.509M	15.49	50.00	-34.51	10.23	Neutral	-	5.26	0.26	0.07	9.90			
QP	12.494M	29.75	60.00	-30.25	10.32	Neutral	-	19.43	0.30	0.09	9.93			
AV	12.494M	23.17	50.00	-26.83	10.32	Neutral	-	12.85	0.30	0.09	9.93			

For UNII 1~2A

4T1S

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	35.61M	17.691M	17M7D1D	25.53M	17.301M
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	32.76M	19.34M	19M3D1D	24.21M	19.19M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	61.02M	38.441M	38M4D1D	41.76M	38.141M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	88.08M	77.961M	78M0D1D	85.8M	77.841M
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	82.48M	78.441M	78M4D1D	82.16M	78.201M
5.25-5.35GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	25.56M	17.391M	17M4D1D	21.45M	16.942M
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	25.95M	19.28M	19M3D1D	21.36M	19.07M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	47.22M	38.201M	38M2D1D	40.38M	37.901M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	86.64M	77.961M	78M0D1D	82.08M	77.721M
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	83.2M	78.361M	78M4D1D	82M	78.281M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth

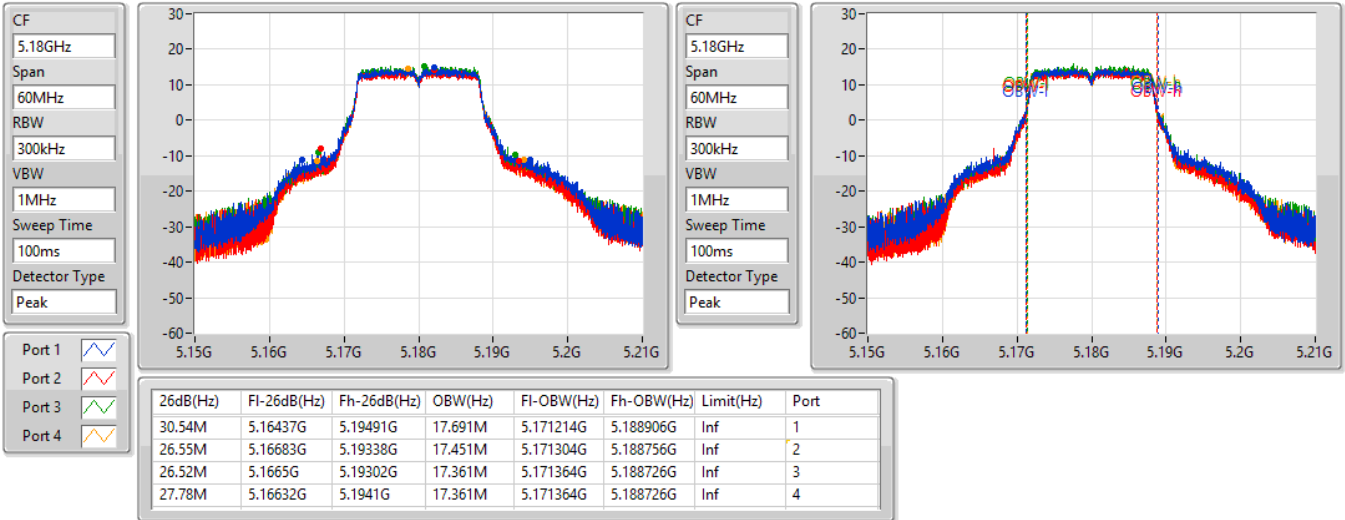
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	30.54M	17.691M	26.55M	17.451M	26.52M	17.361M	27.78M	17.361M
5200MHz	Pass	Inf	25.53M	17.451M	34.14M	17.571M	25.83M	17.301M	28.95M	17.361M
5240MHz	Pass	Inf	26.16M	17.511M	33.36M	17.661M	35.61M	17.511M	35.55M	17.691M
5260MHz	Pass	Inf	21.78M	17.121M	21.51M	17.061M	21.51M	17.001M	21.57M	16.972M
5300MHz	Pass	Inf	21.72M	17.151M	21.57M	17.091M	22.02M	17.001M	21.45M	16.942M
5320MHz	Pass	Inf	23.43M	17.391M	23.49M	17.301M	25.56M	17.241M	23.94M	17.301M
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	24.42M	19.25M	25.92M	19.28M	24.21M	19.22M	26.73M	19.19M
5200MHz	Pass	Inf	27.63M	19.19M	29.4M	19.31M	27.03M	19.19M	27.63M	19.25M
5240MHz	Pass	Inf	24.24M	19.22M	32.76M	19.34M	32.22M	19.22M	31.14M	19.34M
5260MHz	Pass	Inf	21.87M	19.1M	21.57M	19.13M	21.36M	19.1M	21.69M	19.1M
5300MHz	Pass	Inf	21.69M	19.1M	21.66M	19.07M	21.48M	19.13M	21.54M	19.1M
5320MHz	Pass	Inf	24.54M	19.28M	25.74M	19.25M	24.12M	19.22M	25.95M	19.25M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	45.42M	38.201M	45.96M	38.201M	41.76M	38.141M	43.38M	38.141M
5230MHz	Pass	Inf	47.16M	38.141M	55.32M	38.441M	53.04M	38.321M	61.02M	38.381M
5270MHz	Pass	Inf	40.56M	37.901M	40.56M	37.961M	40.38M	38.021M	40.56M	37.961M
5310MHz	Pass	Inf	46.02M	38.201M	44.1M	38.141M	46.14M	38.141M	47.22M	38.201M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	88.08M	77.961M	87.48M	77.961M	86.16M	77.841M	85.8M	77.961M
5290MHz	Pass	Inf	82.08M	77.841M	84M	77.721M	86.64M	77.961M	84.72M	77.961M
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	Inf	82.48M	78.441M	82.16M	78.201M	82.32M	78.201M	82.16M	78.361M
5250MHz Straddle 5.25-5.35GHz	Pass	Inf	82.72M	78.281M	83.2M	78.361M	82M	78.281M	82.48M	78.281M

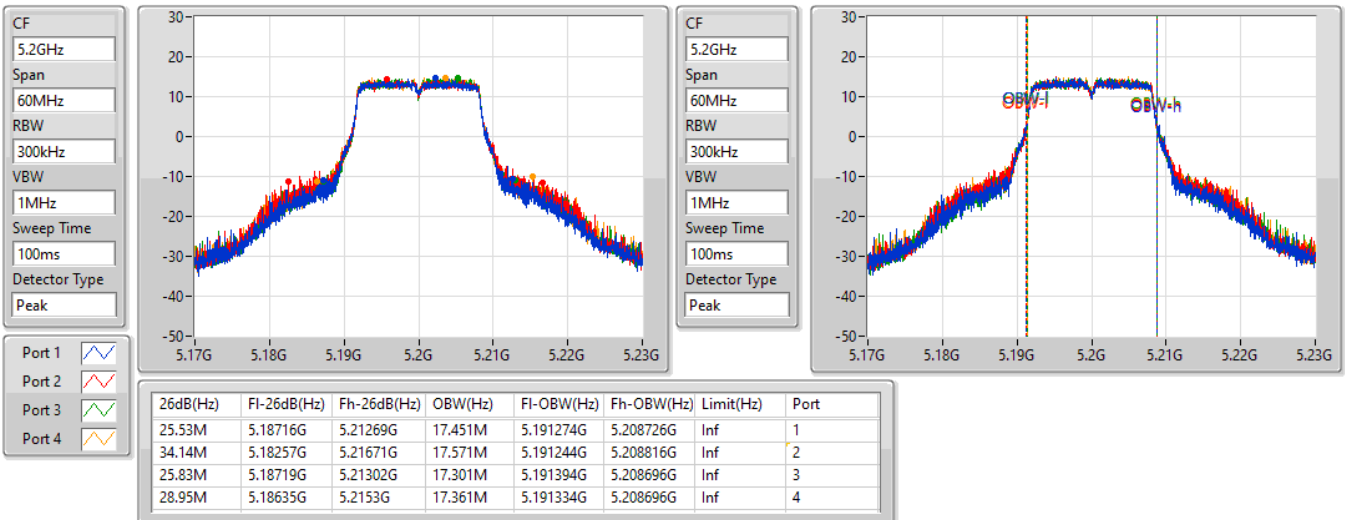
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11a_Nss1,(6Mbps)_4TX
EBW
5180MHz

30/09/2021

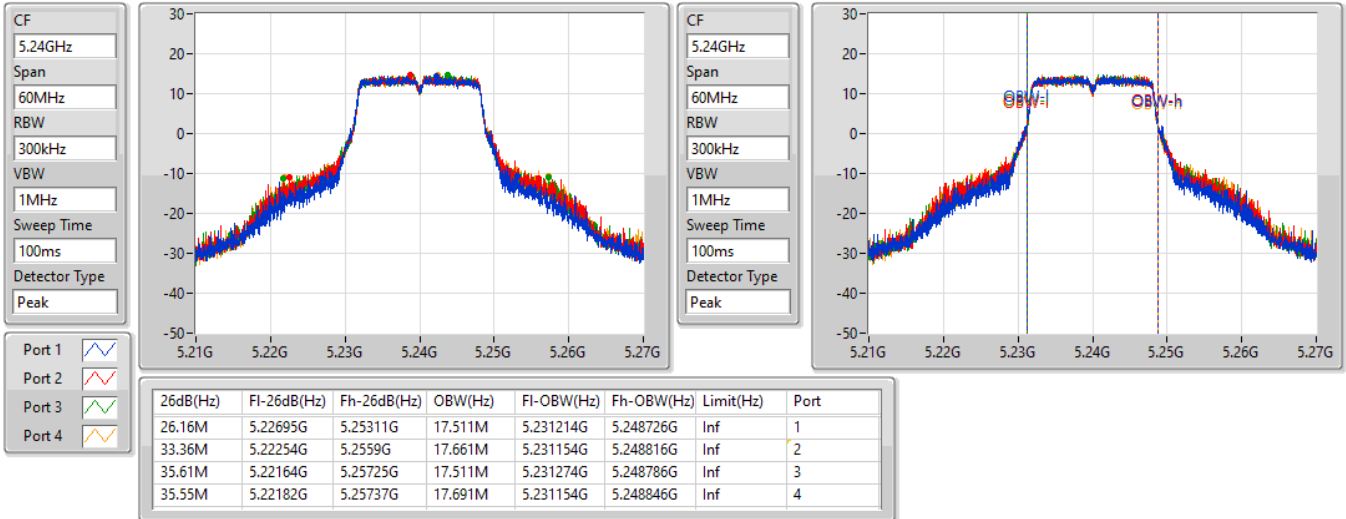

802.11a_Nss1,(6Mbps)_4TX
EBW
5200MHz

22/09/2021

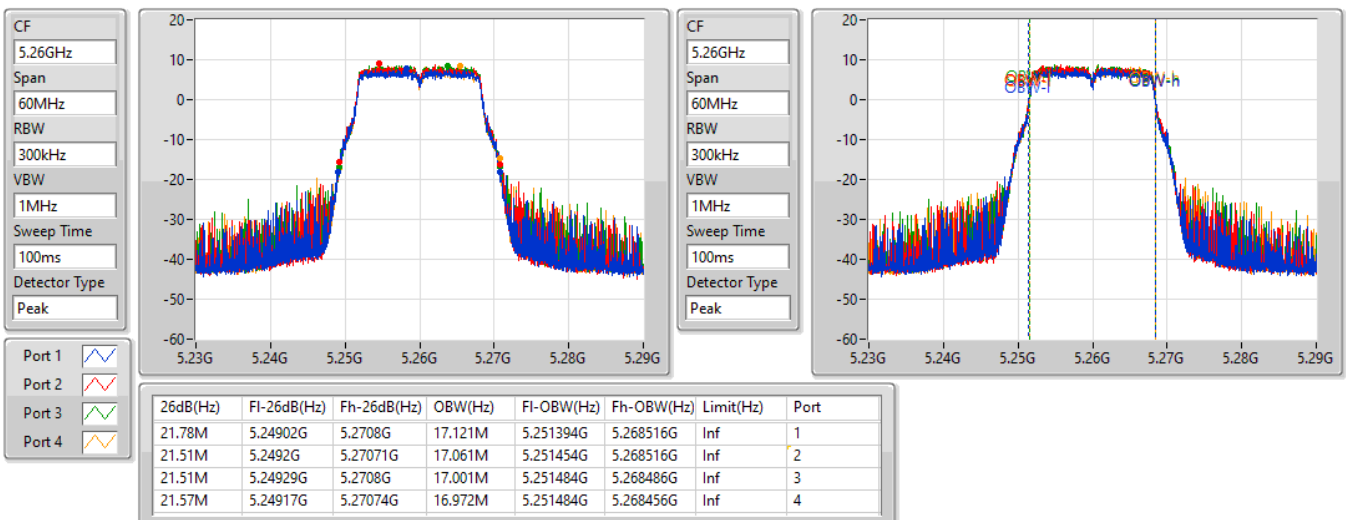


802.11a_Nss1,(6Mbps)_4TX
EBW
5240MHz

22/09/2021

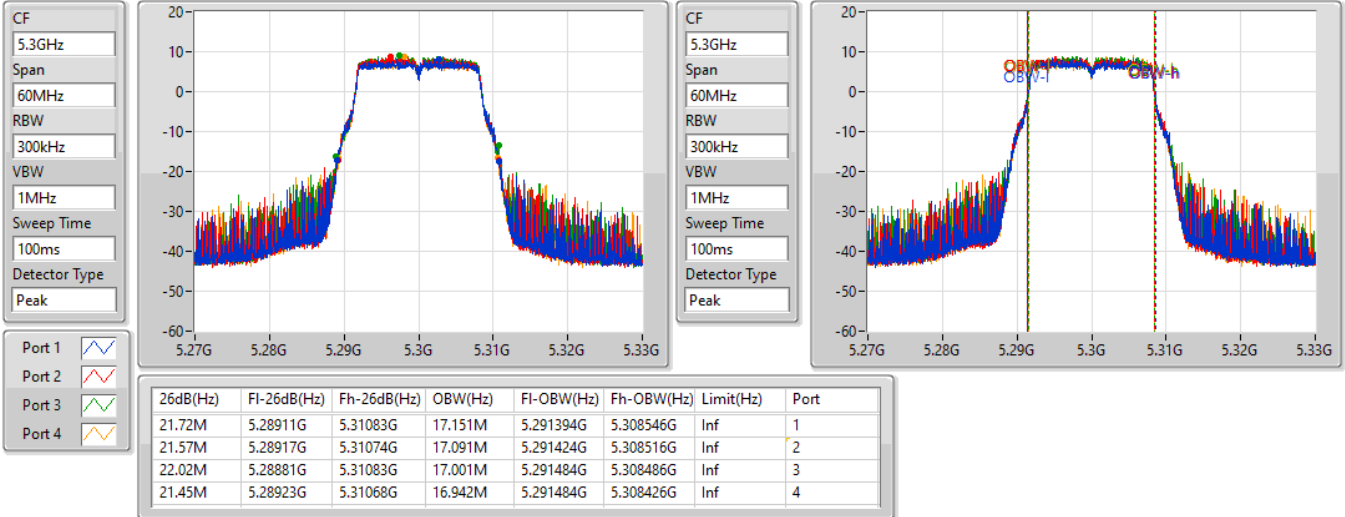

802.11a_Nss1,(6Mbps)_4TX
EBW
5260MHz

22/09/2021

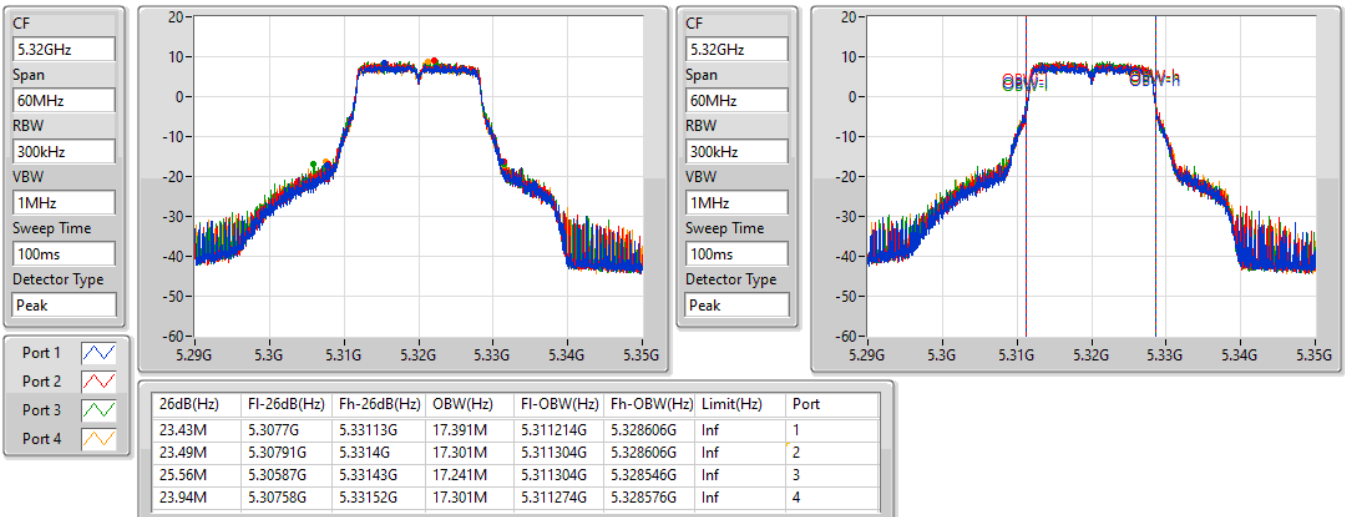


802.11a_Nss1,(6Mbps)_4TX
EBW
5300MHz

22/09/2021

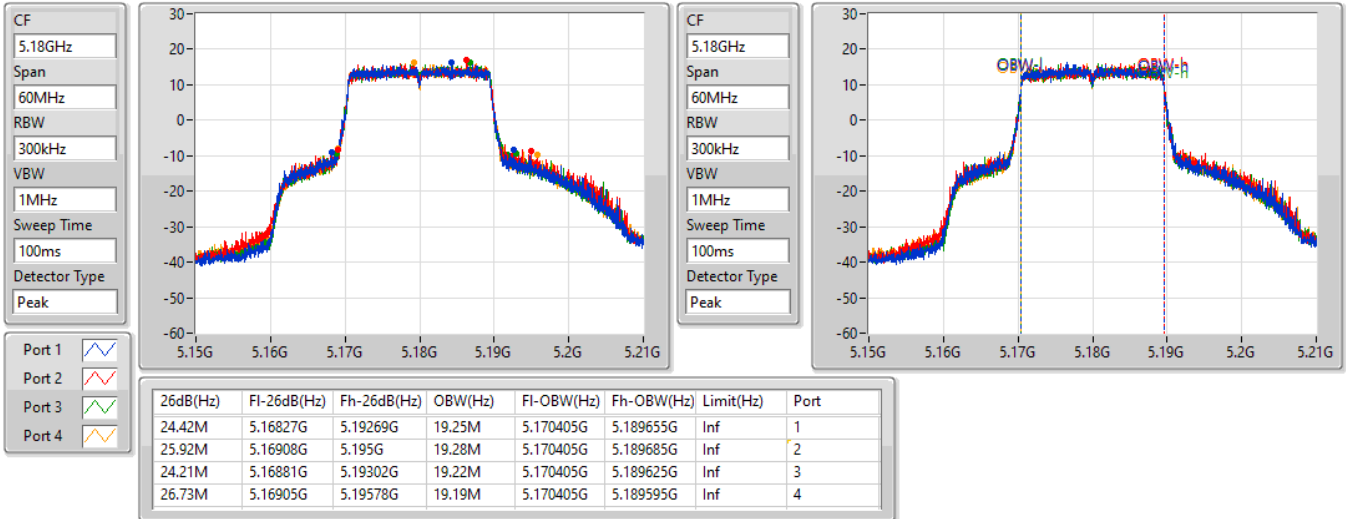

802.11a_Nss1,(6Mbps)_4TX
EBW
5320MHz

22/09/2021

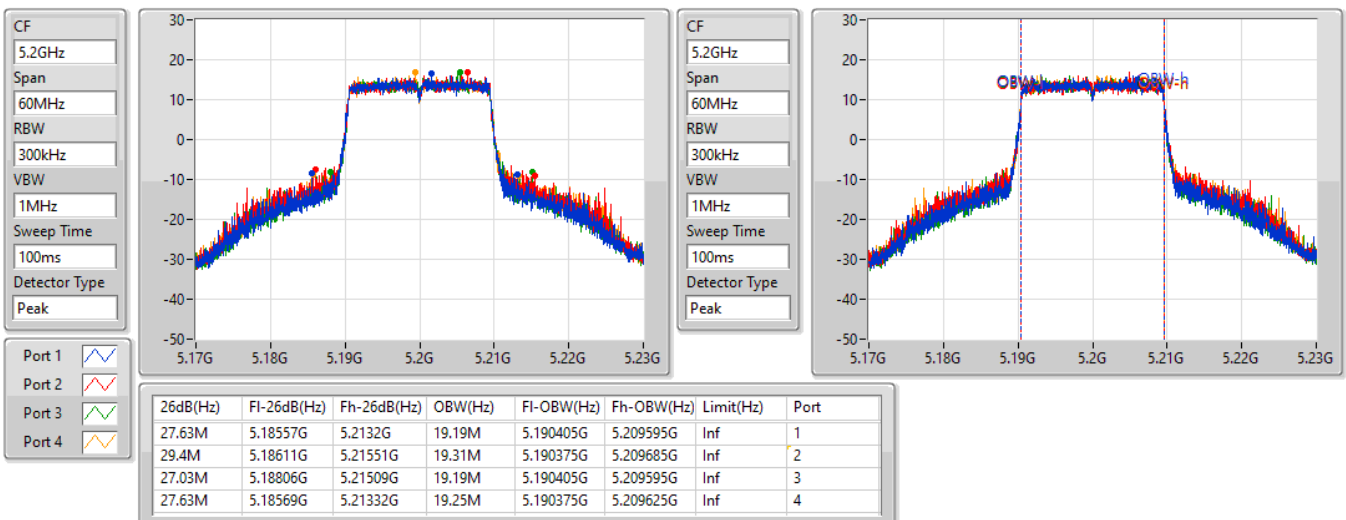


802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5180MHz

22/09/2021

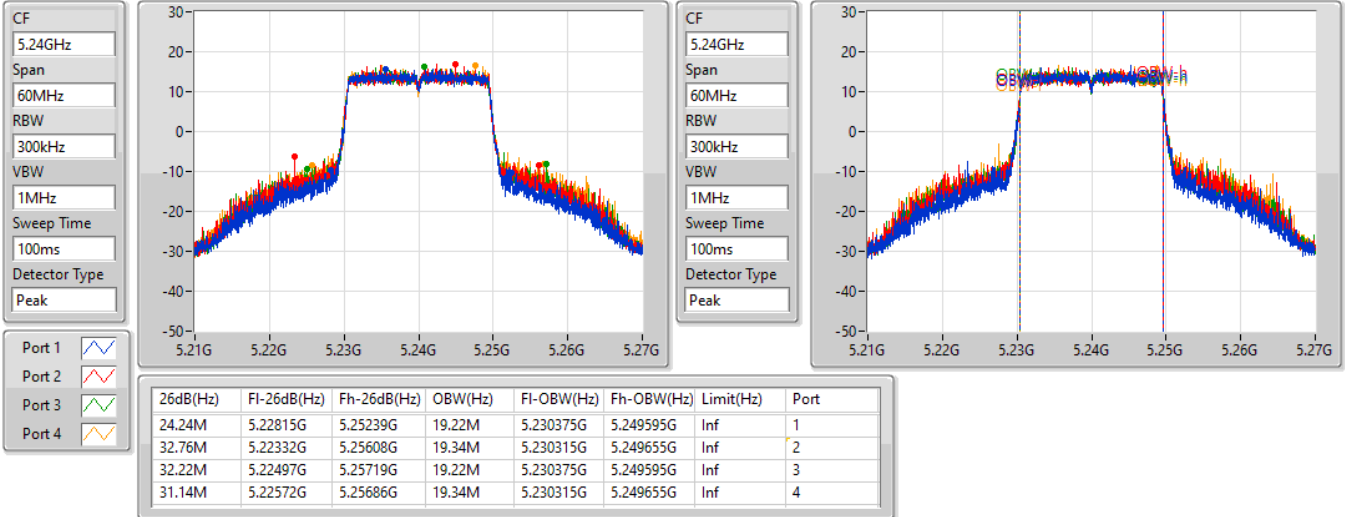

802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5200MHz

22/09/2021

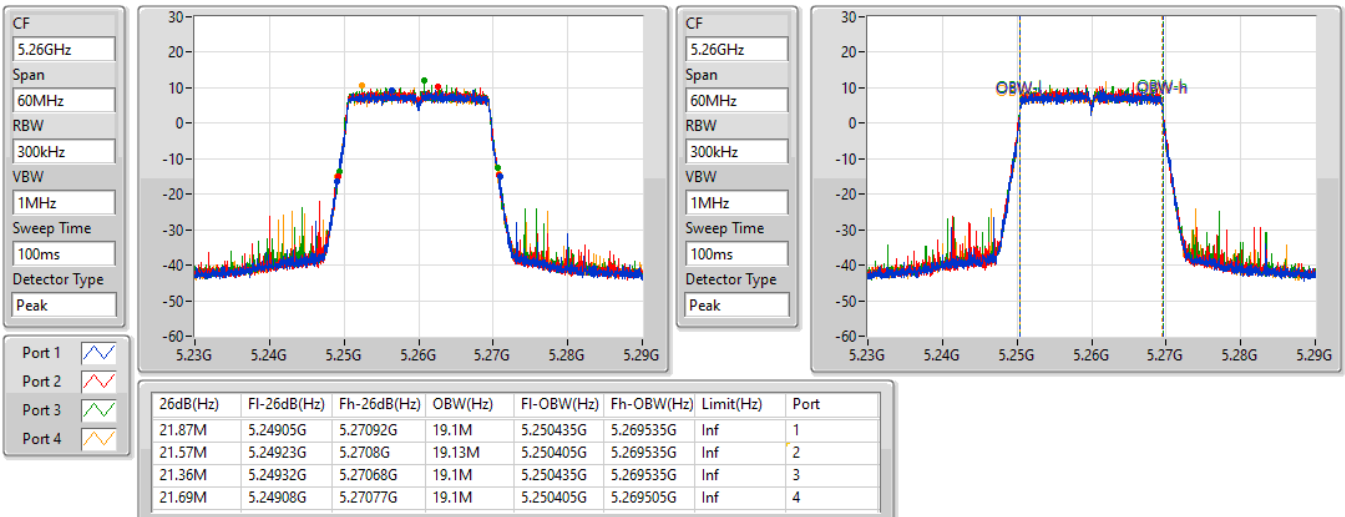


802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5240MHz

22/09/2021

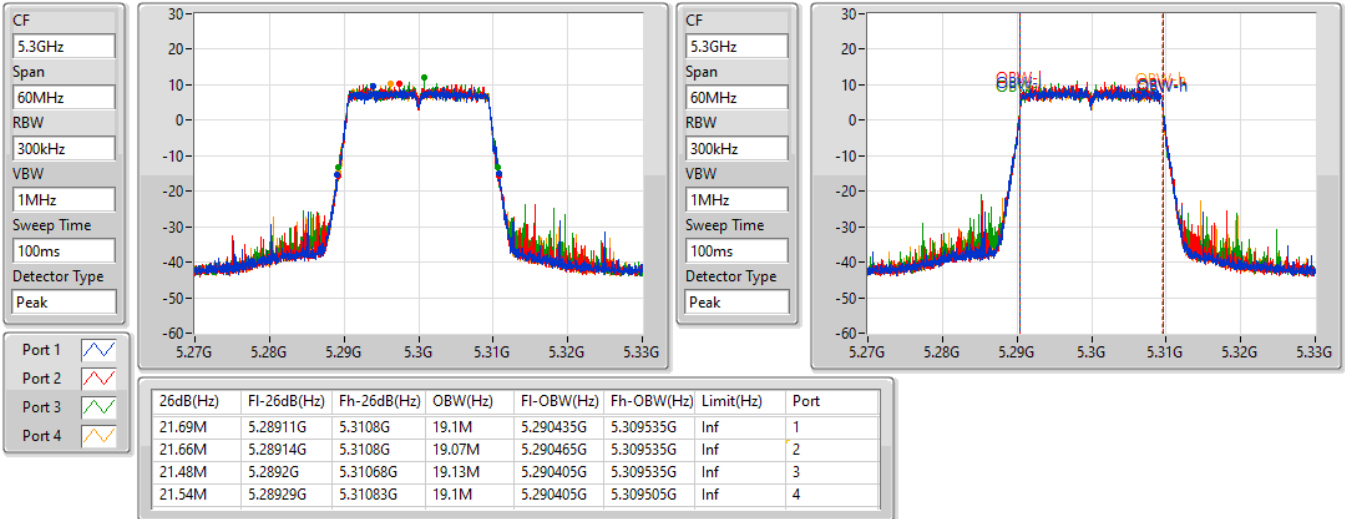

802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5260MHz

22/09/2021

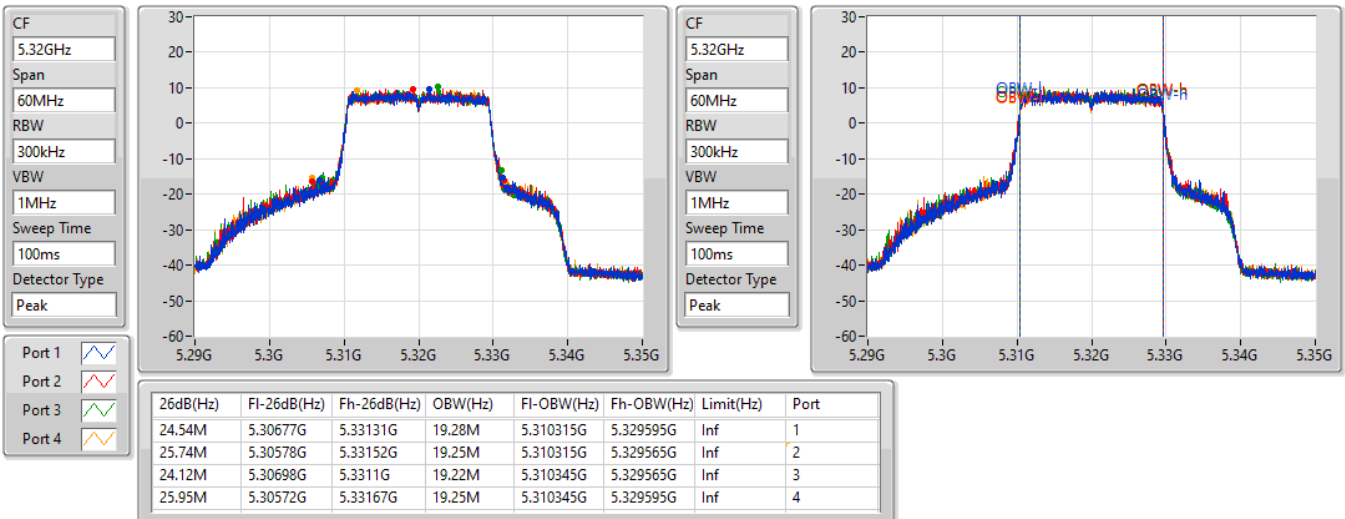


802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5300MHz

22/09/2021

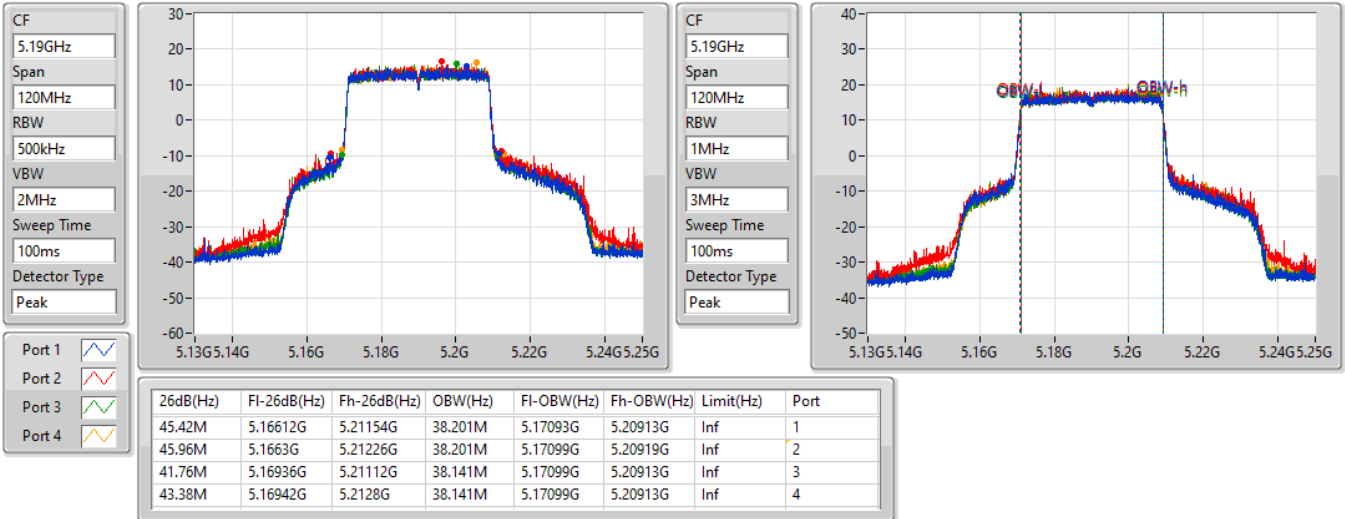

802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5320MHz

22/09/2021

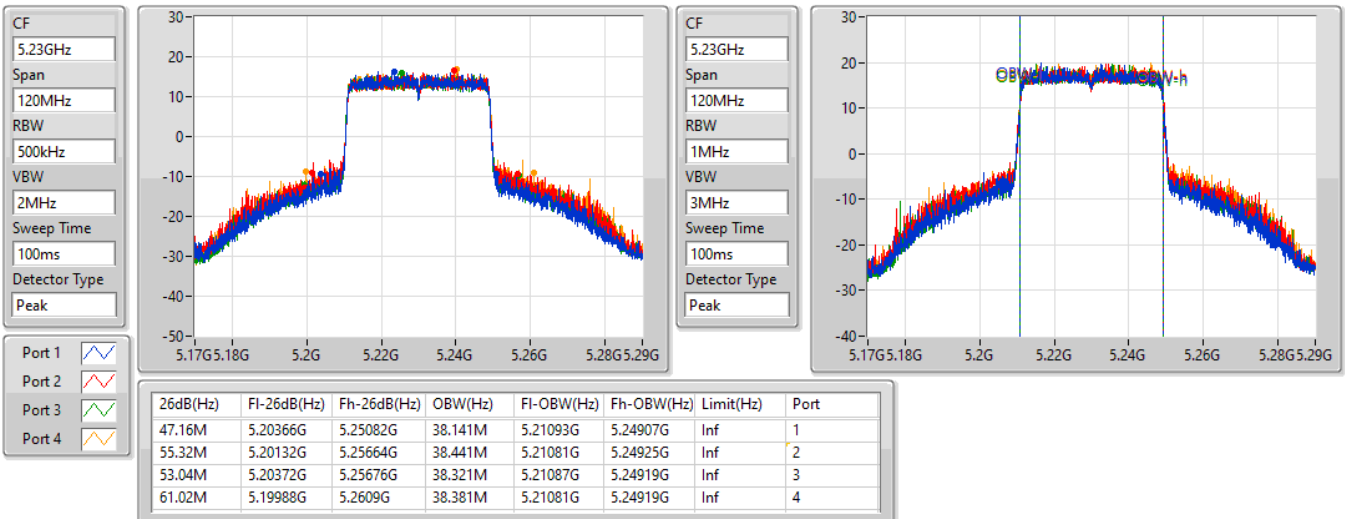


802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
5190MHz

22/09/2021

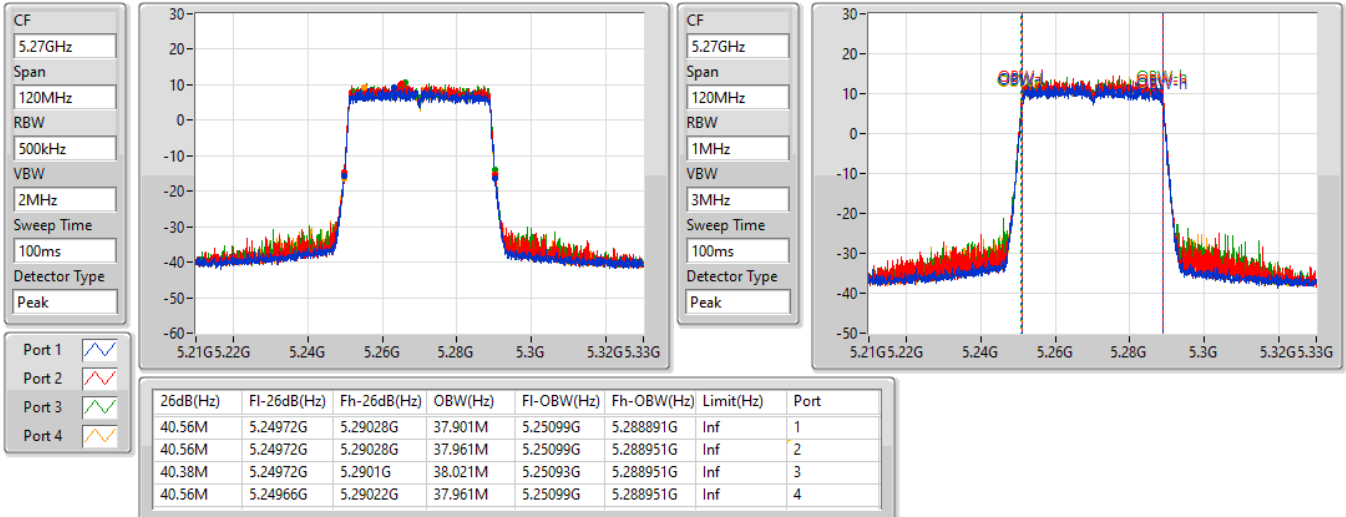

802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
5230MHz

22/09/2021

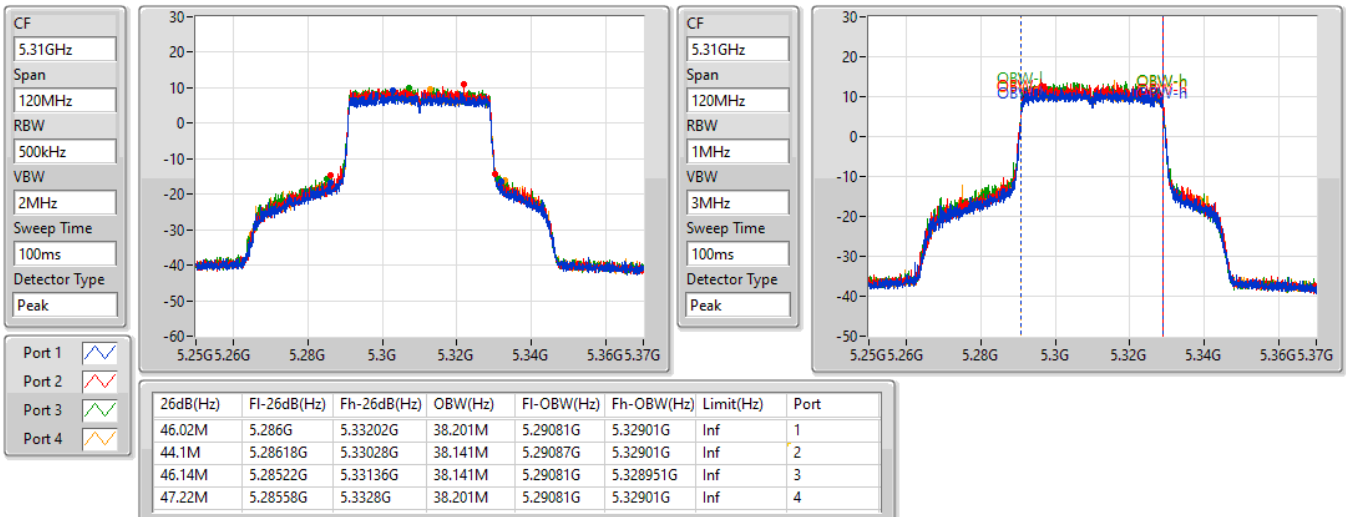


802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
5270MHz

22/09/2021

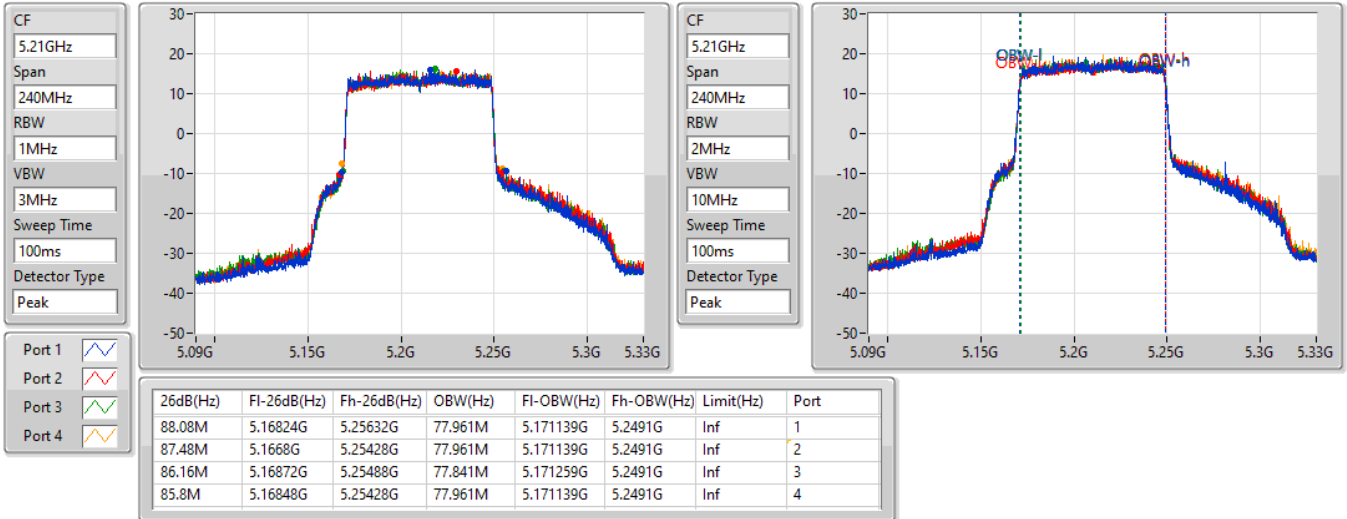

802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
5310MHz

22/09/2021

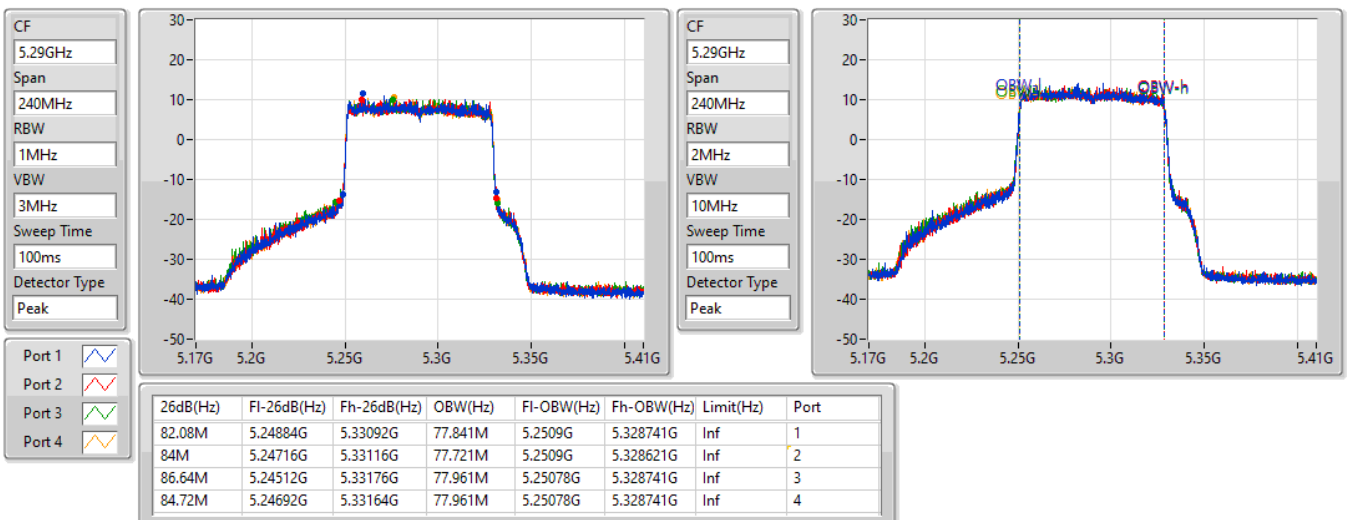


802.11ax HEW80-BF_Nss1,(MCS0)_4TX
EBW
5210MHz

22/09/2021

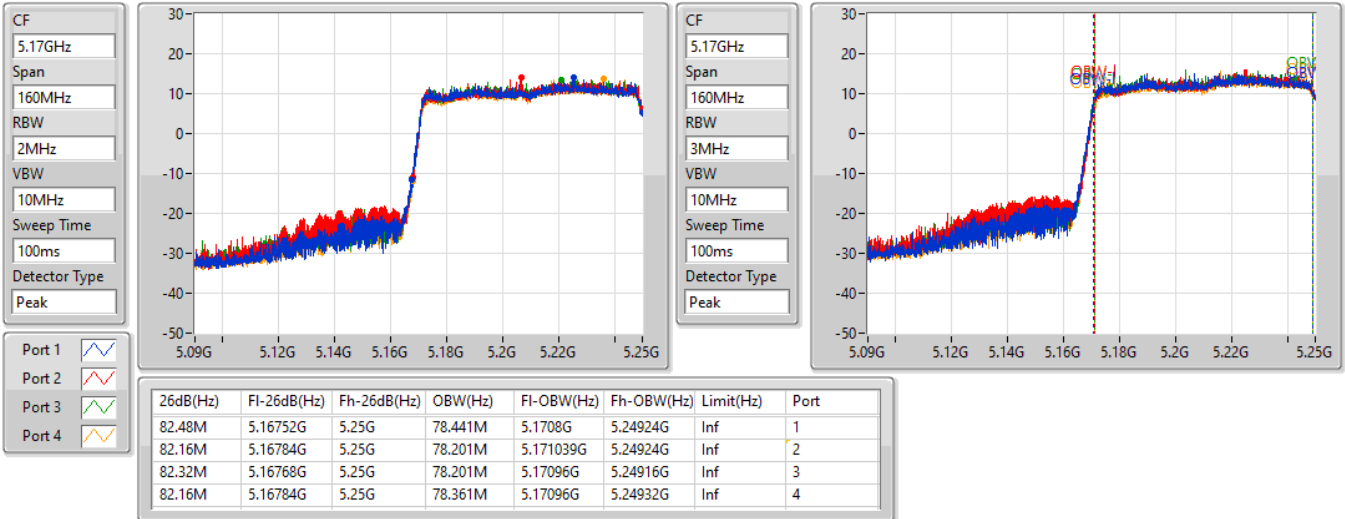

802.11ax HEW80-BF_Nss1,(MCS0)_4TX
EBW
5290MHz

22/09/2021

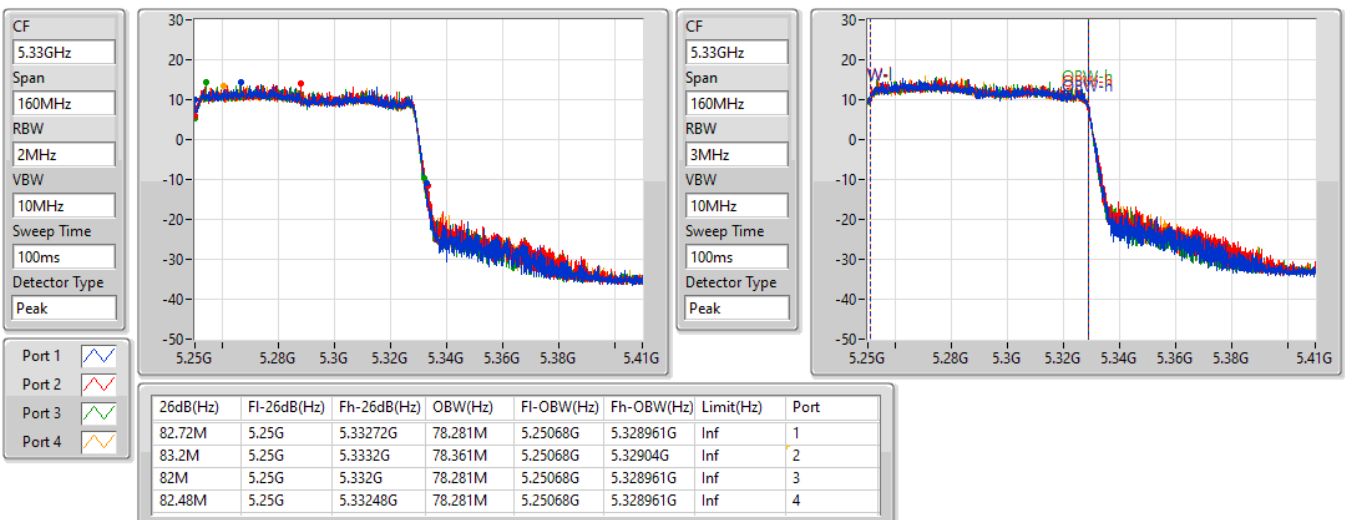


802.11ax HEW160-BF_Nss1,(MCS0)_4TX
EBW
5250MHz Straddle 5.15-5.25GHz

22/09/2021


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

22/09/2021



For UNII 1~2A

4T4S

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ax HEW80_Nss4,(MCS0)_4TX	91.2M	78.081M	78M1D1D	83.28M	77.841M
802.11ax HEW160_Nss4,(MCS0)_4TX	82.8M	78.521M	78M5D1D	81.92M	78.281M
5.25-5.35GHz	-	-	-	-	-
802.11ax HEW160_Nss4,(MCS0)_4TX	84.08M	78.601M	78M6D1D	82.4M	78.281M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth

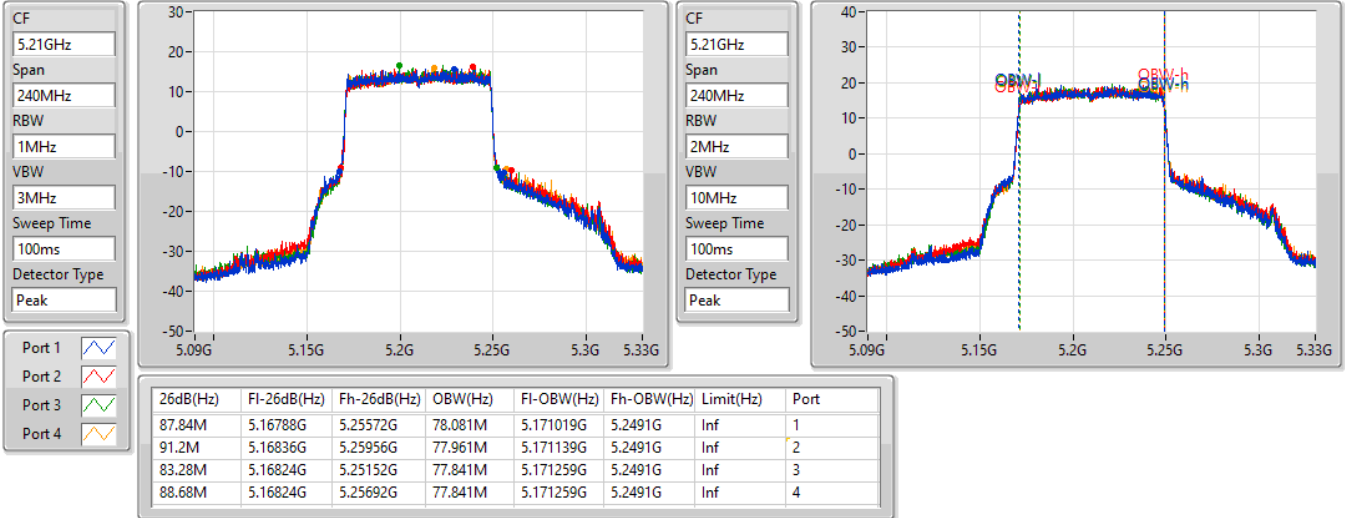
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ax HEW80_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	87.84M	78.081M	91.2M	77.961M	83.28M	77.841M	88.68M	77.841M
802.11ax HEW160_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	Inf	82.8M	78.521M	82.64M	78.281M	82.48M	78.441M	81.92M	78.361M
5250MHz Straddle 5.25-5.35GHz	Pass	Inf	82.96M	78.441M	82.48M	78.601M	82.4M	78.361M	84.08M	78.281M

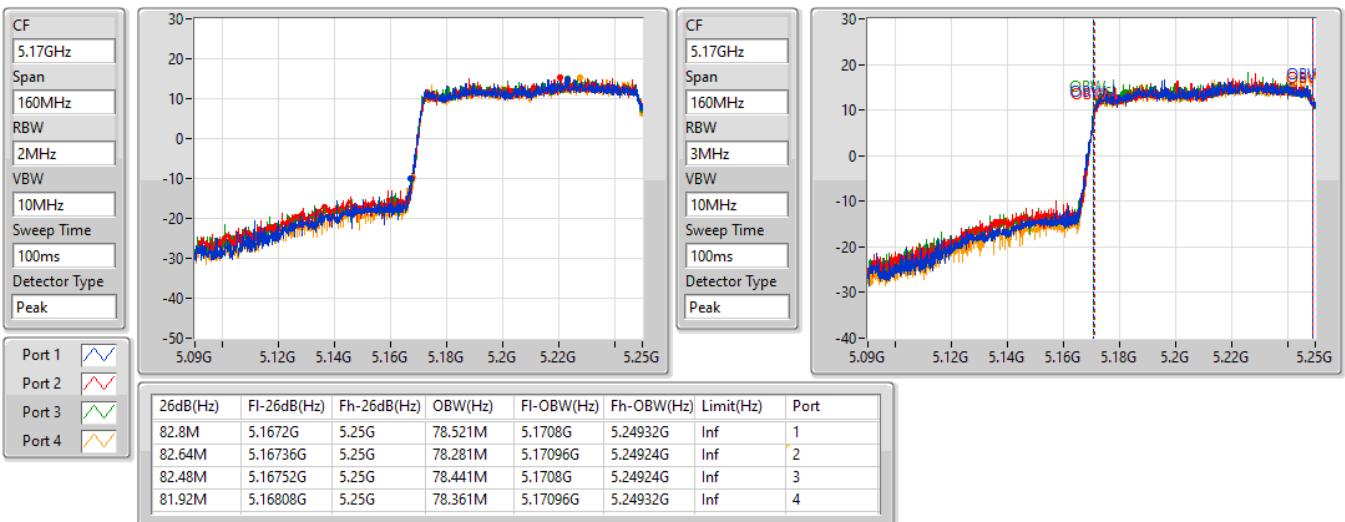
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11ax HEW80_Nss4,(MCS0)_4TX
EBW
5210MHz

22/09/2021


802.11ax HEW160_Nss4,(MCS0)_4TX
EBW
5250MHz Straddle 5.15-5.25GHz

22/09/2021

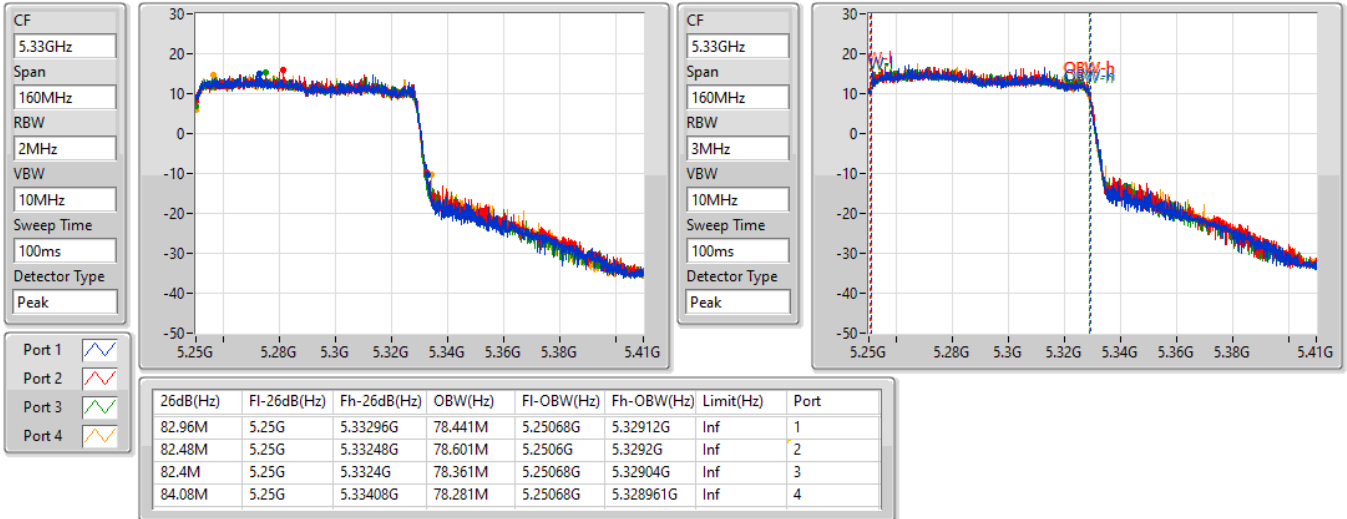


802.11ax HEW160_Nss4,(MCS0)_4TX

EBW

5250MHz Straddle 5.25-5.35GHz

22/09/2021



For UNII 2C~3
4T1S
Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.47-5.725GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	26.1M	17.421M	17M4D1D	15.63M	13.568M
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	28.68M	19.28M	19M3D1D	15.75M	14.558M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	51.36M	38.201M	38M2D1D	35.21M	33.828M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	92.88M	78.081M	78M1D1D	75.75M	73.388M
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	166.08M	156.882M	157MD1D	164.88M	156.642M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	16.35M	17.361M	17M4D1D	3.14M	4.138M
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	18.99M	19.25M	19M2D1D	4.44M	4.658M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	37.74M	38.141M	38M1D1D	3.82M	4.118M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	76.92M	78.081M	78M1D1D	3.72M	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

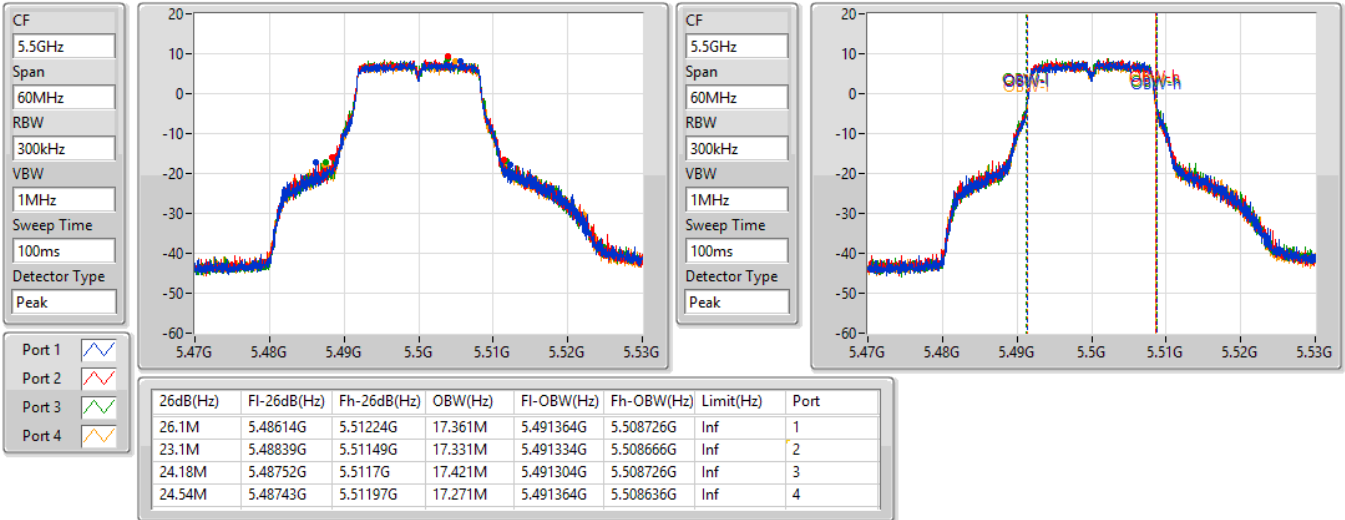
Result

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)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5500MHz	Pass	Inf	26.1M	17.361M	23.1M	17.331M	24.18M	17.421M	24.54M	17.271M
5580MHz	Pass	Inf	21.72M	17.151M	21.93M	17.091M	21.51M	16.972M	21.87M	16.942M
5700MHz	Pass	Inf	21.69M	17.001M	21.6M	17.031M	21.69M	17.121M	21.48M	16.972M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.705M	13.673M	15.63M	13.628M	16.23M	13.568M	15.675M	13.568M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.14M	4.178M	3.14M	4.198M	3.14M	4.178M	3.14M	4.138M
5745MHz	Pass	500k	16.02M	17.331M	16.29M	17.331M	16.29M	17.271M	16.29M	17.241M
5785MHz	Pass	500k	16.29M	17.271M	16.35M	17.271M	16.35M	17.151M	16.35M	17.151M
5825MHz	Pass	500k	16.29M	17.361M	16.29M	17.331M	16.29M	17.301M	16.29M	17.181M
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5500MHz	Pass	Inf	28.68M	19.25M	24.87M	19.28M	23.01M	19.25M	23.85M	19.22M
5580MHz	Pass	Inf	21.87M	19.1M	21.66M	19.1M	21.45M	19.1M	21.84M	19.1M
5700MHz	Pass	Inf	21.87M	19.16M	21.69M	19.13M	21.63M	19.1M	21.81M	19.1M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.78M	14.573M	15.81M	14.558M	15.75M	14.603M	15.84M	14.603M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	4.5M	4.698M	4.44M	4.698M	4.48M	4.658M	4.46M	4.658M
5745MHz	Pass	500k	18.99M	19.25M	18.63M	19.19M	18.66M	19.22M	18.6M	19.22M
5785MHz	Pass	500k	18.99M	19.16M	18.87M	19.19M	18.87M	19.16M	18.9M	19.19M
5825MHz	Pass	500k	18.93M	19.19M	18.96M	19.19M	18.87M	19.19M	18.96M	19.22M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5510MHz	Pass	Inf	44.16M	38.141M	51.36M	38.201M	45.96M	38.201M	46.62M	38.201M
5550MHz	Pass	Inf	40.74M	37.961M	40.5M	37.961M	40.5M	37.961M	40.38M	37.961M
5670MHz	Pass	Inf	40.62M	37.961M	40.32M	37.961M	40.62M	37.961M	40.68M	37.961M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	35.49M	33.898M	35.28M	33.828M	35.21M	33.863M	35.315M	33.863M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.96M	4.138M	4.08M	4.138M	3.82M	4.118M	3.88M	4.118M
5755MHz	Pass	500k	37.74M	38.141M	37.5M	38.081M	37.2M	38.141M	37.62M	38.141M
5795MHz	Pass	500k	37.74M	38.081M	37.02M	38.081M	37.5M	38.081M	37.68M	38.081M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5530MHz	Pass	Inf	90.84M	78.081M	88.2M	78.081M	92.88M	78.081M	86.4M	77.841M
5610MHz	Pass	Inf	81.84M	77.601M	82.08M	77.601M	81.96M	77.601M	82.08M	77.721M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	76.125M	73.463M	76.05M	73.388M	75.75M	73.538M	75.975M	73.613M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.84M	4.158M	3.72M	4.158M	3.82M	4.158M	3.92M	4.138M
5775MHz	Pass	500k	76.92M	77.961M	76.56M	77.961M	76.2M	78.081M	76.92M	78.081M
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5570MHz	Pass	Inf	165.12M	156.642M	166.08M	156.882M	164.88M	156.642M	165.36M	156.882M

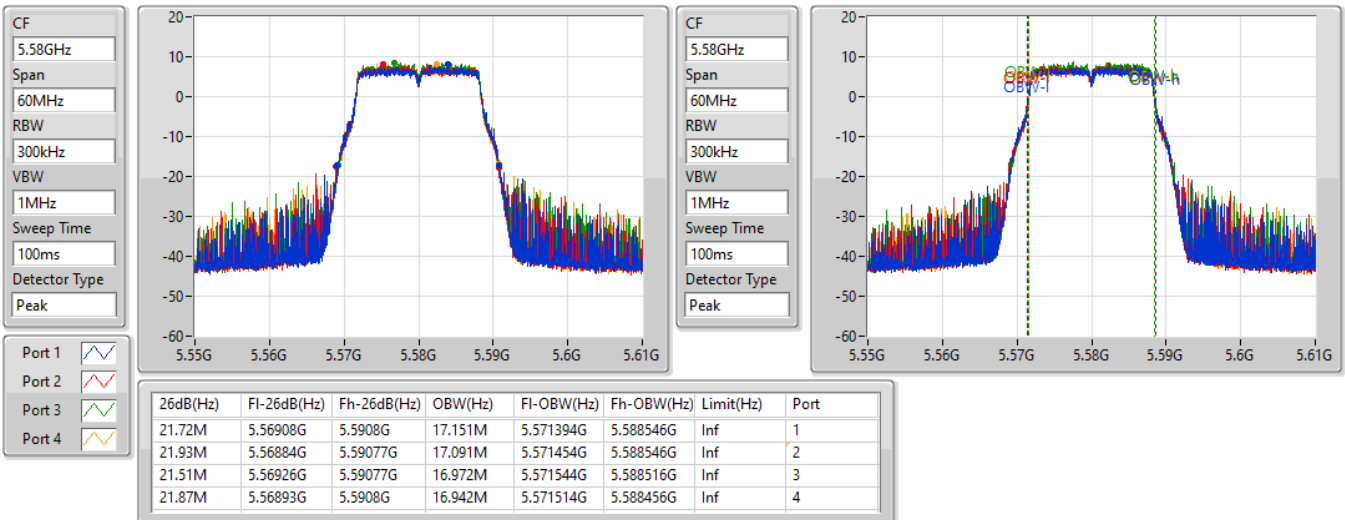
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11a_Nss1,(6Mbps)_4TX
EBW
5500MHz

30/09/2021

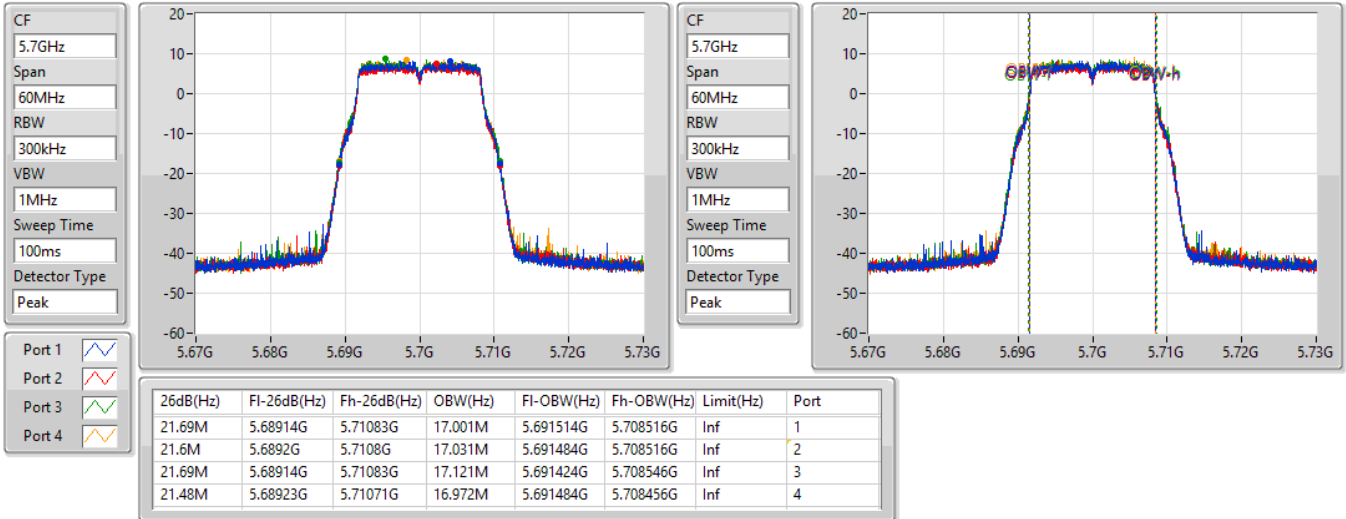

802.11a_Nss1,(6Mbps)_4TX
EBW
5580MHz

23/09/2021

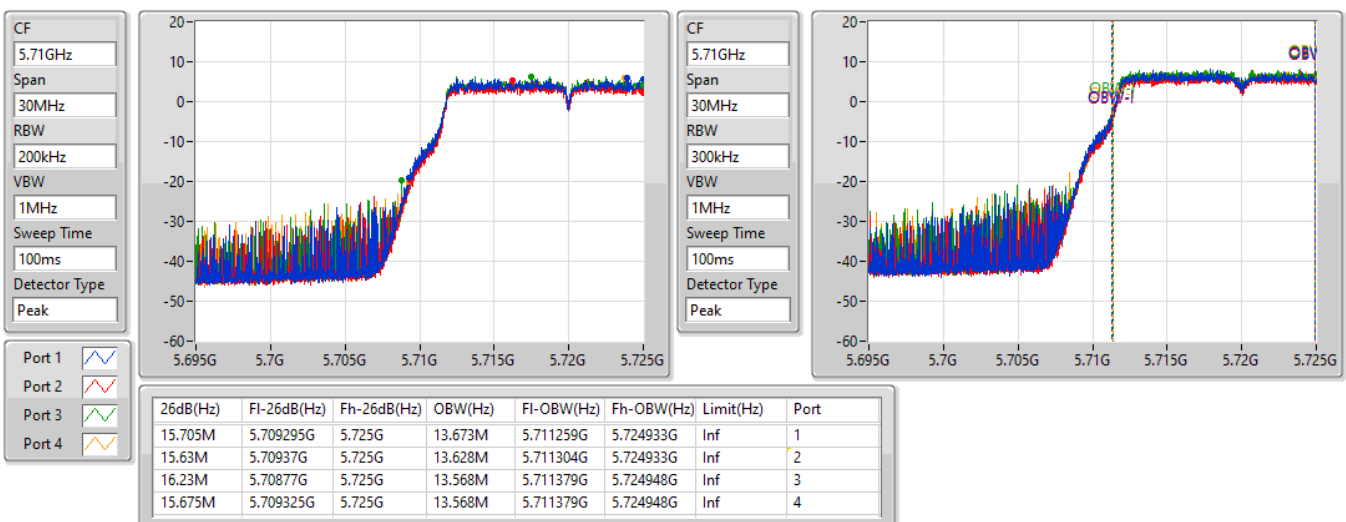


802.11a_Nss1,(6Mbps)_4TX
EBW
5700MHz

30/09/2021


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

23/09/2021

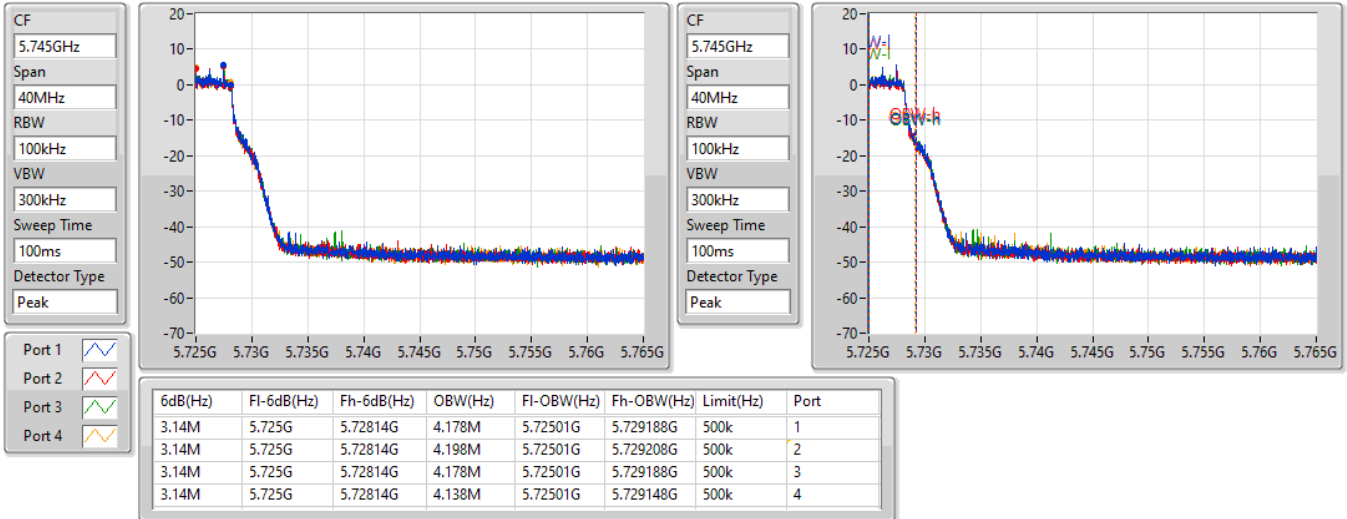


802.11a_Nss1,(6Mbps)_4TX

EBW

5720MHz Straddle 5.725-5.85GHz

02/03/2022

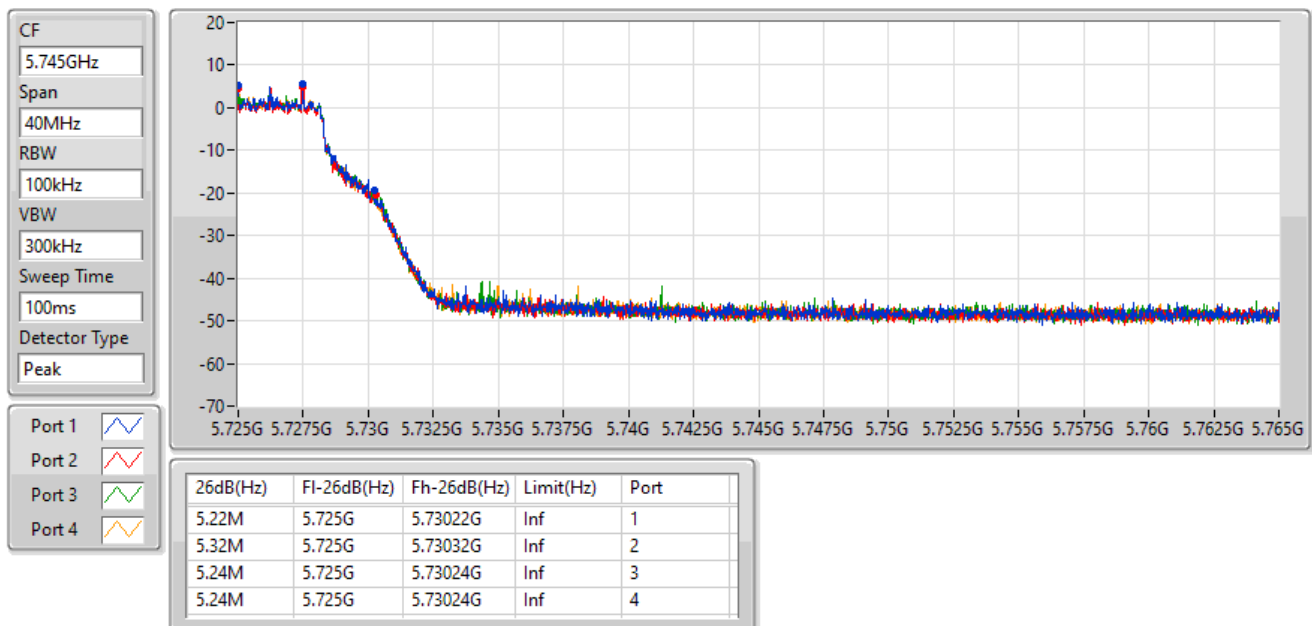


802.11a_Nss1,(6Mbps)_4TX

EBW

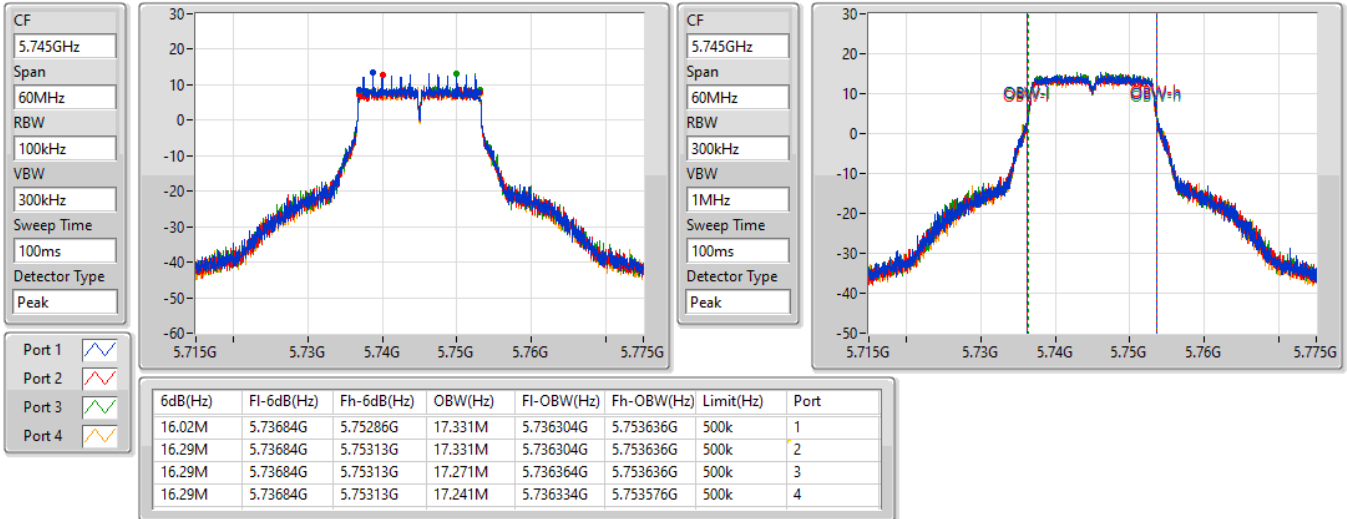
5720MHz Straddle 5.725-5.85GHz

02/03/2022

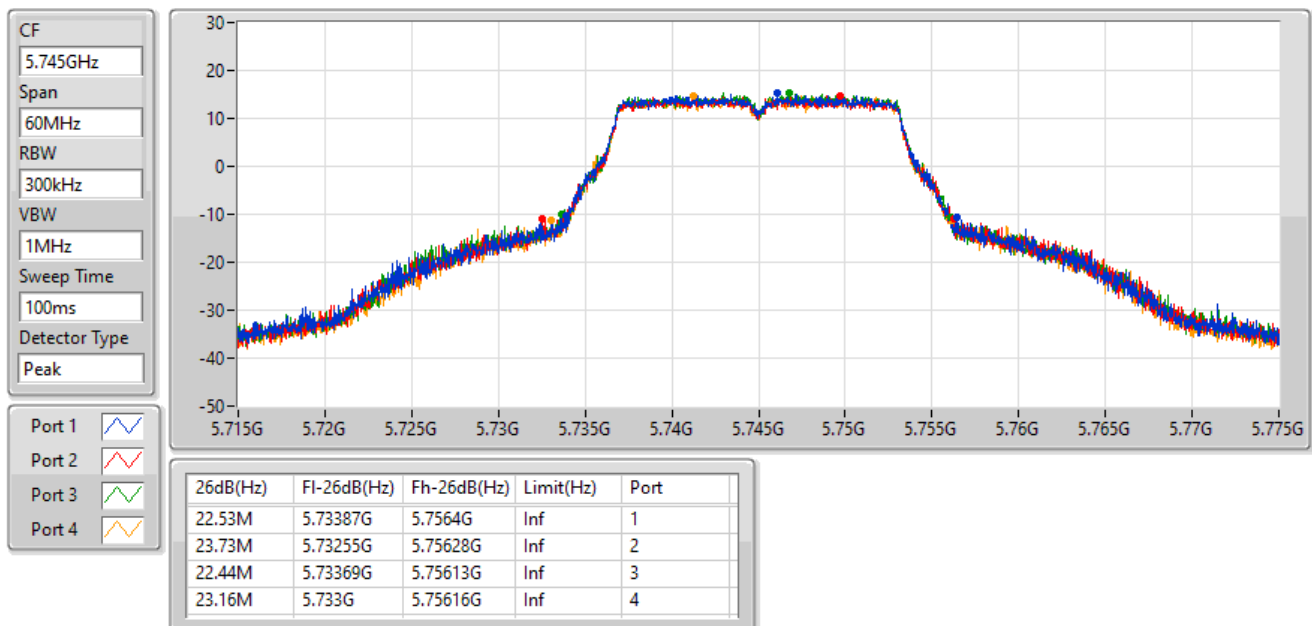


802.11a_Nss1,(6Mbps)_4TX
EBW
5745MHz

02/03/2022


802.11a_Nss1,(6Mbps)_4TX
EBW
5745MHz

02/03/2022

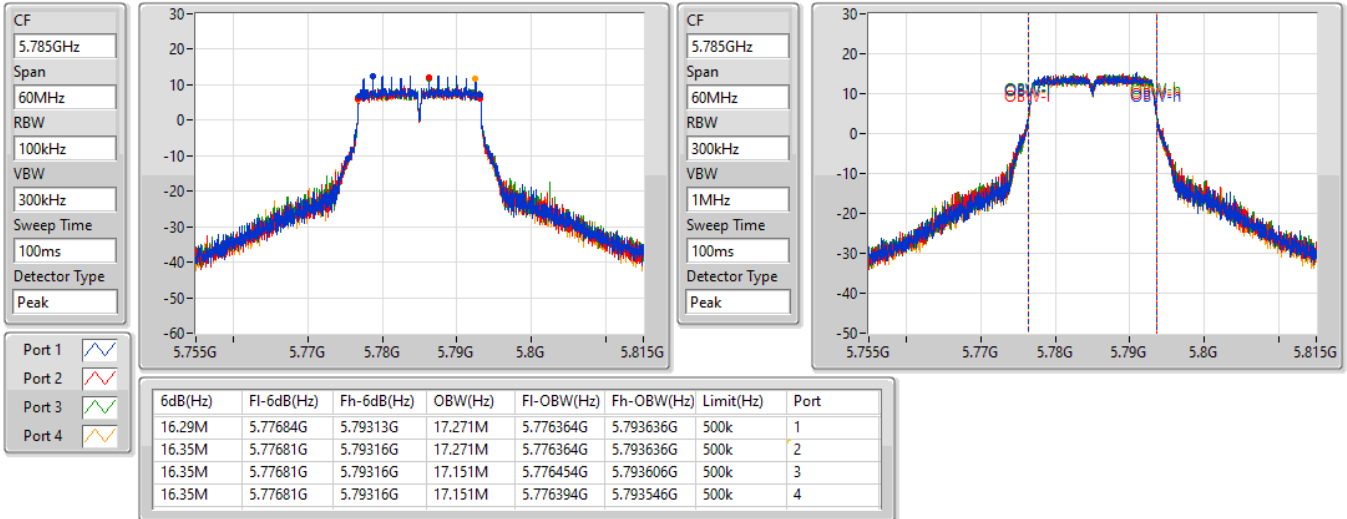


802.11a_Nss1,(6Mbps)_4TX

EBW

5785MHz

02/03/2022

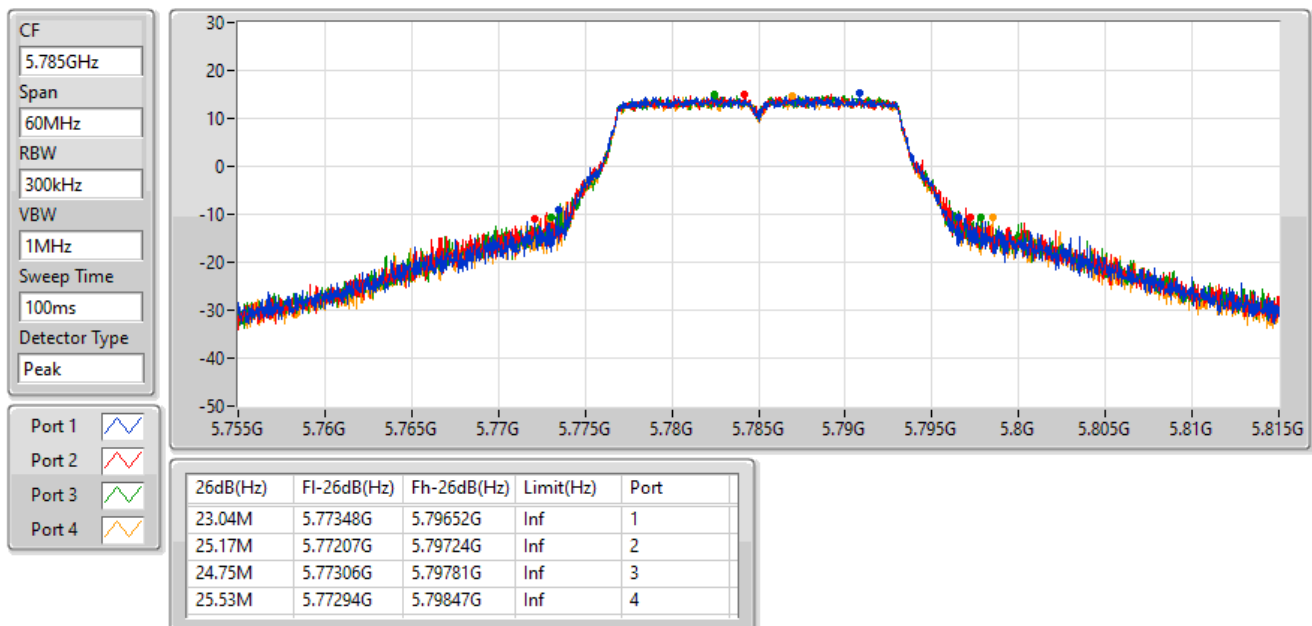


802.11a_Nss1,(6Mbps)_4TX

EBW

5785MHz

02/03/2022

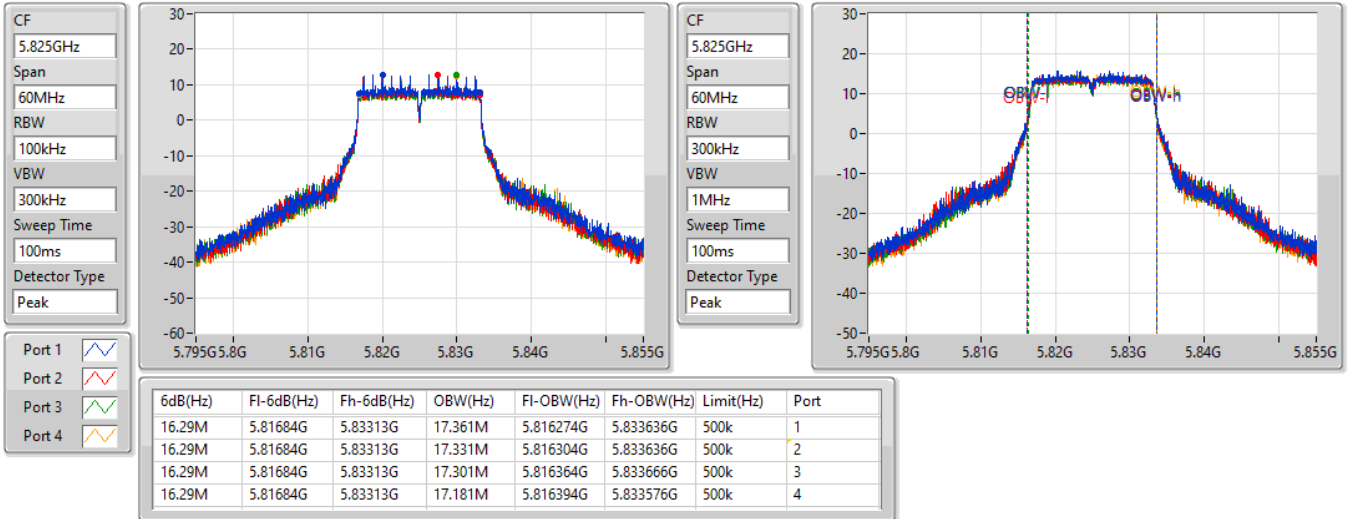


802.11a_Nss1,(6Mbps)_4TX

EBW

5825MHz

02/03/2022

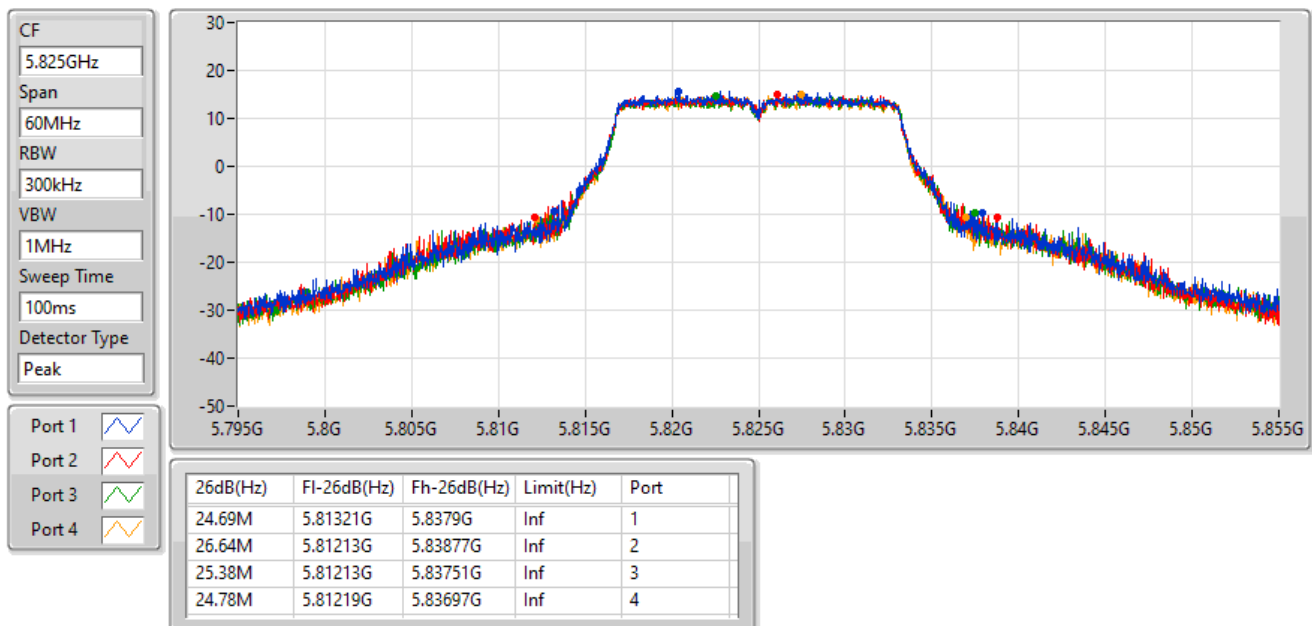


802.11a_Nss1,(6Mbps)_4TX

EBW

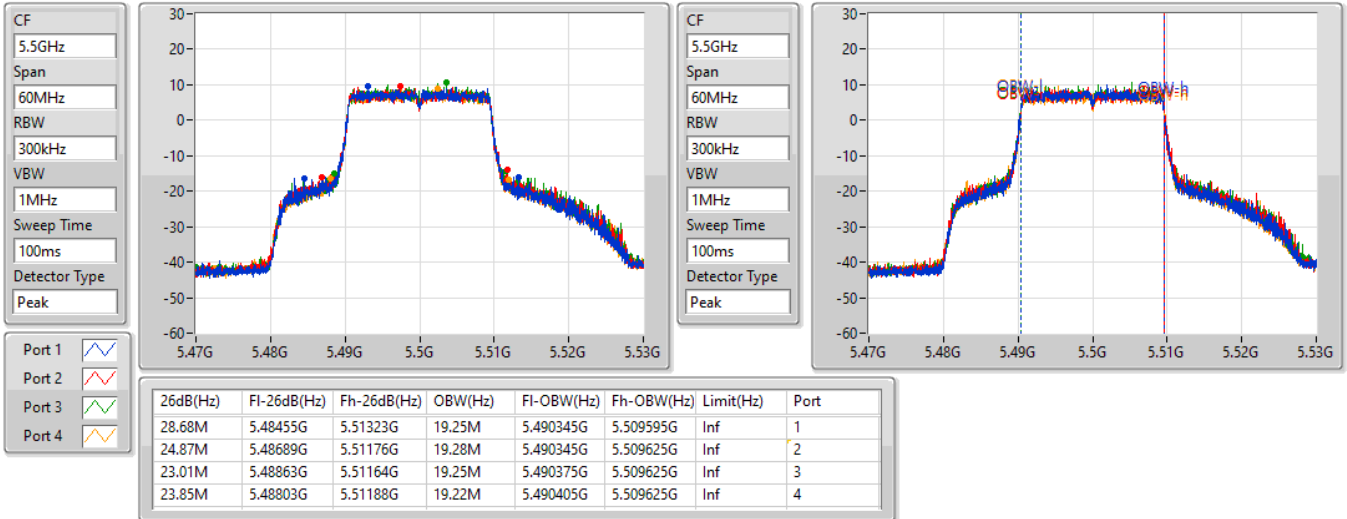
5825MHz

02/03/2022

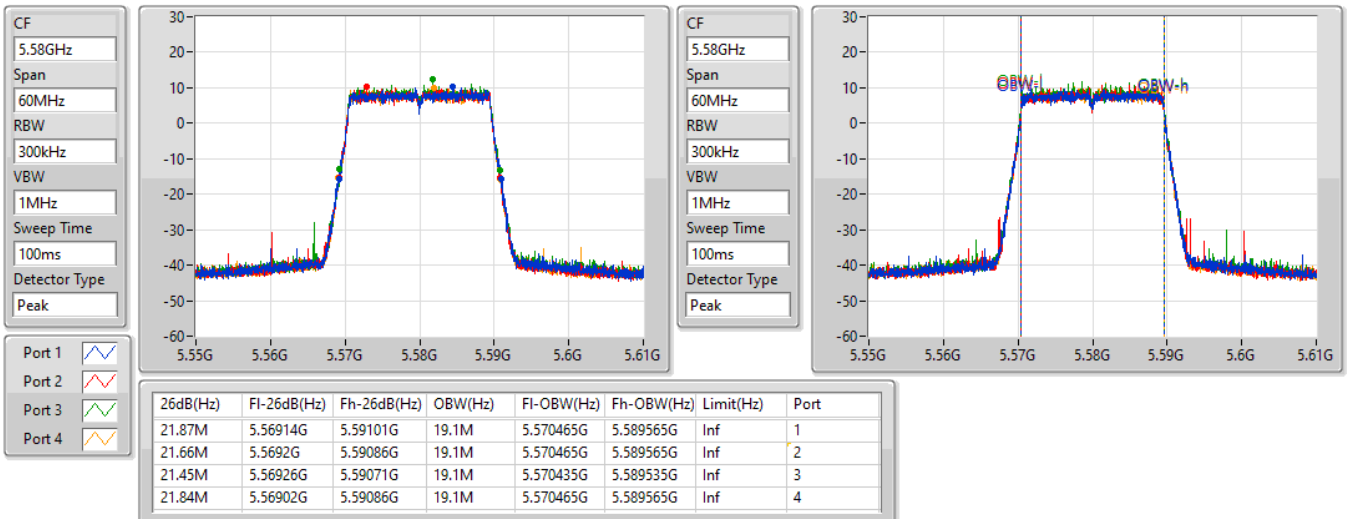


802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5500MHz

23/09/2021


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

23/09/2021

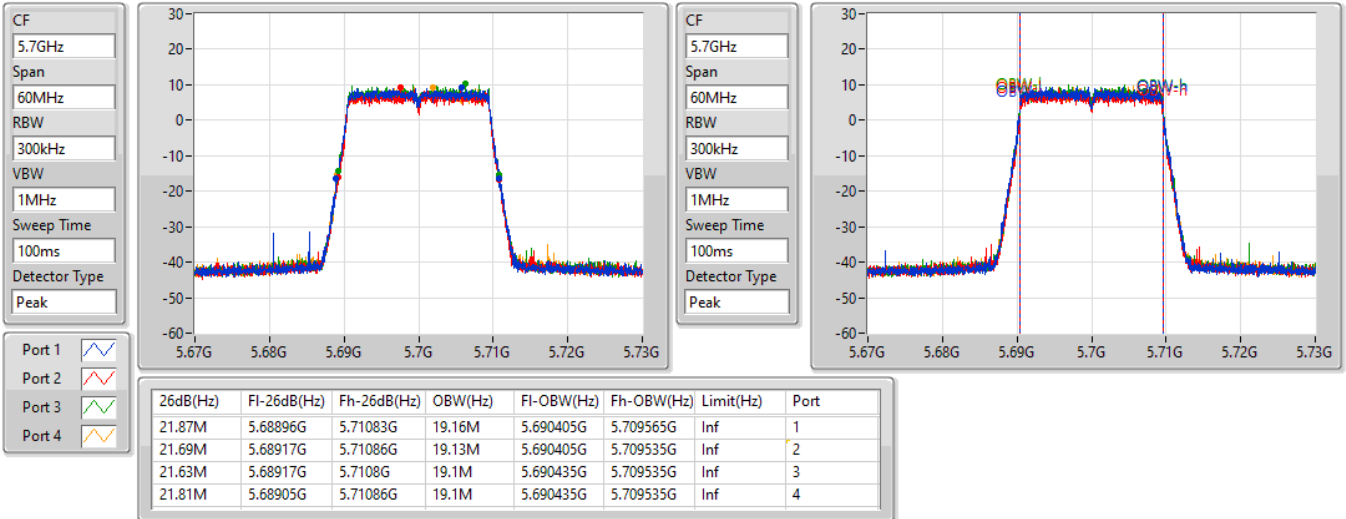


802.11ax HEW20-BF_Nss1,(MCS0)_4TX

EBW

5700MHz

23/09/2021

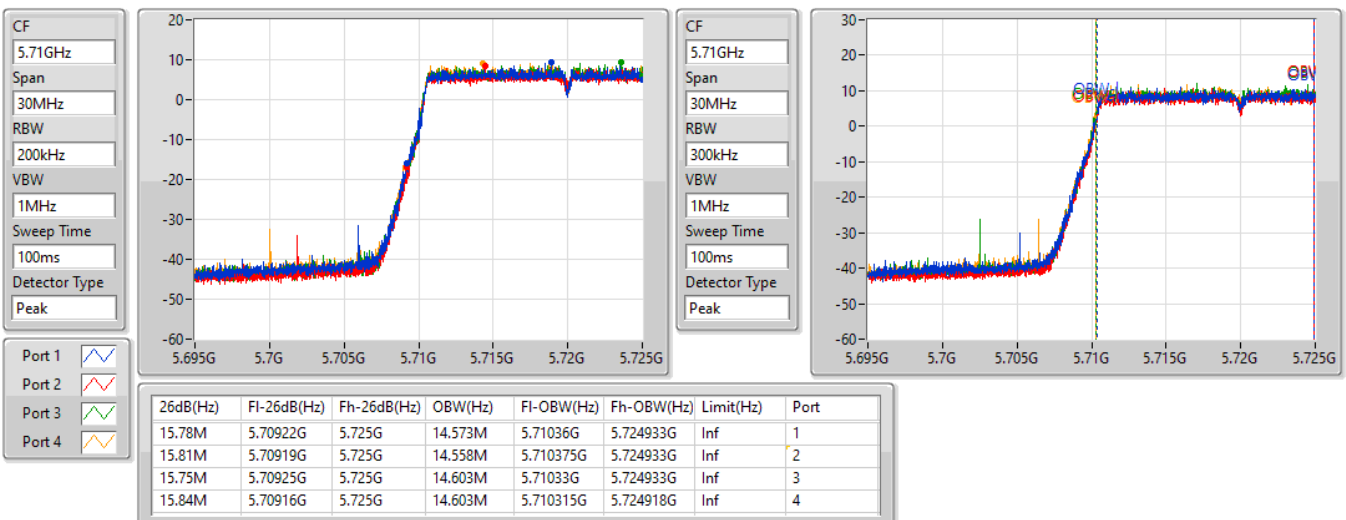


802.11ax HEW20-BF_Nss1,(MCS0)_4TX

EBW

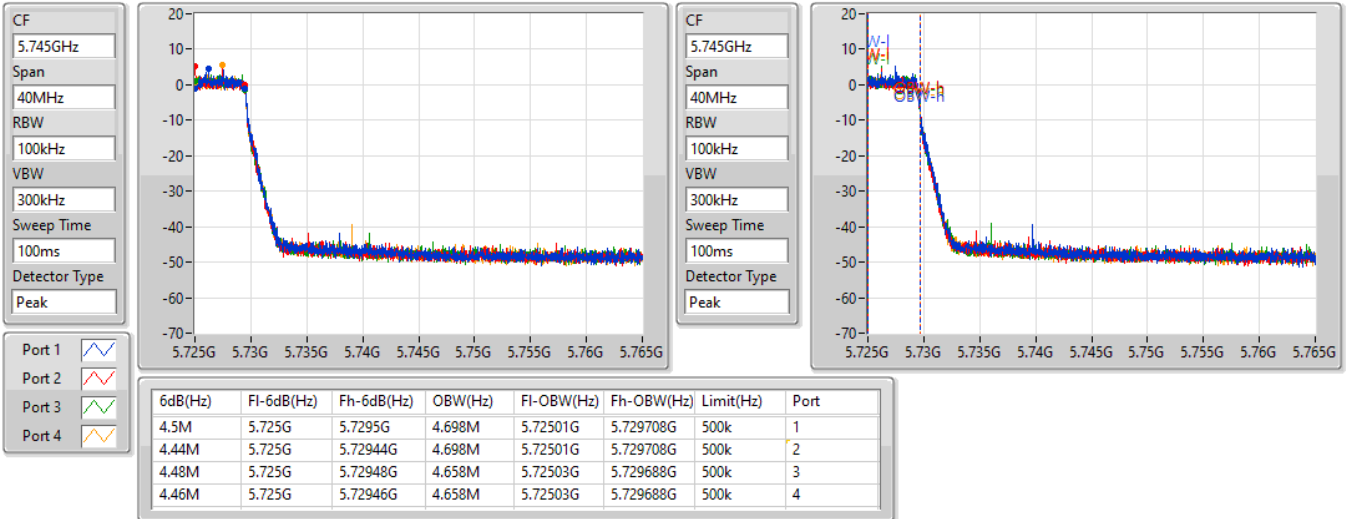
5720MHz Straddle 5.47-5.725GHz

22/02/2022

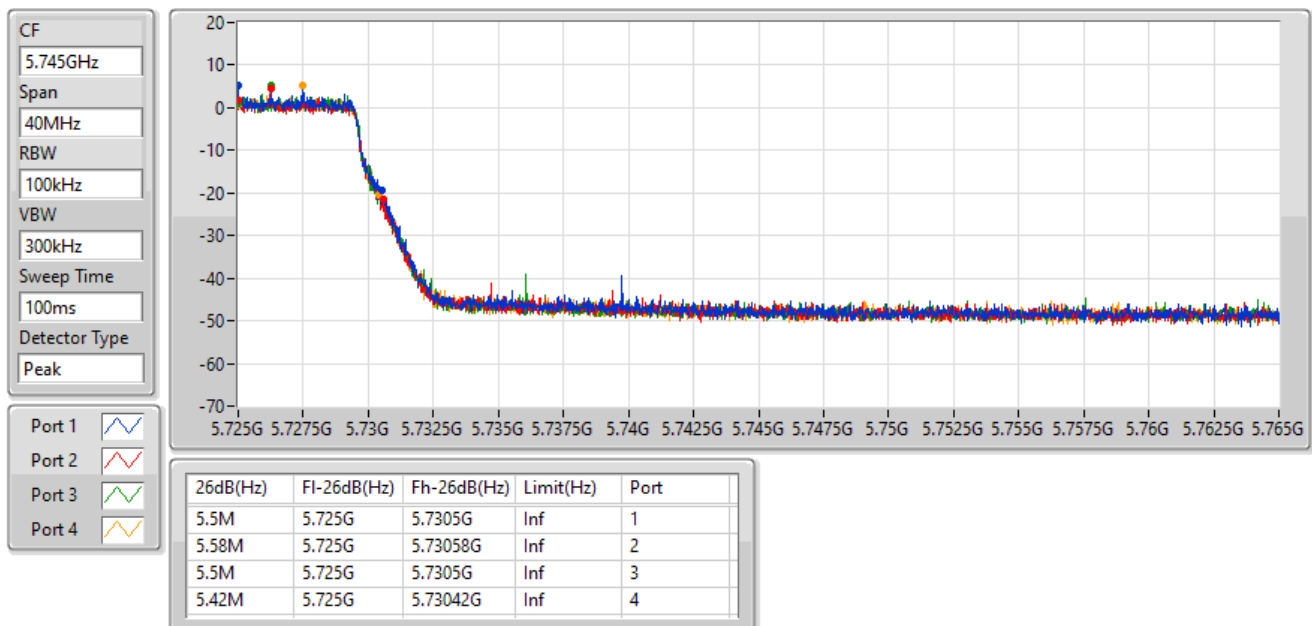


802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5720MHz Straddle 5.725-5.85GHz

02/03/2022


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

02/03/2022

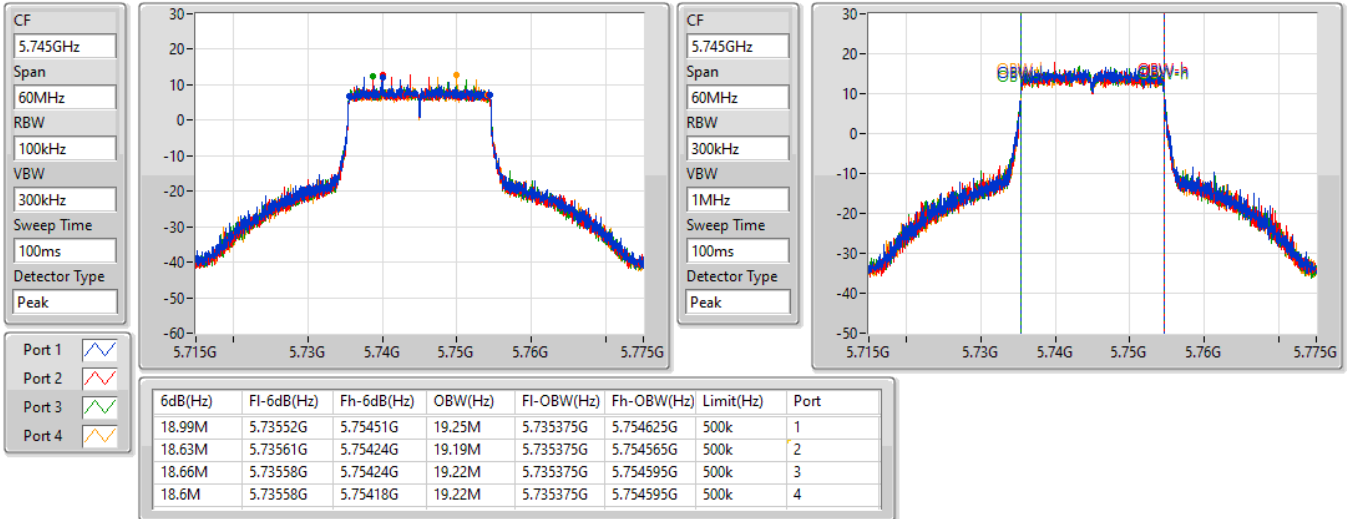


802.11ax HEW20-BF_Nss1,(MCS0)_4TX

EBW

5745MHz

02/03/2022

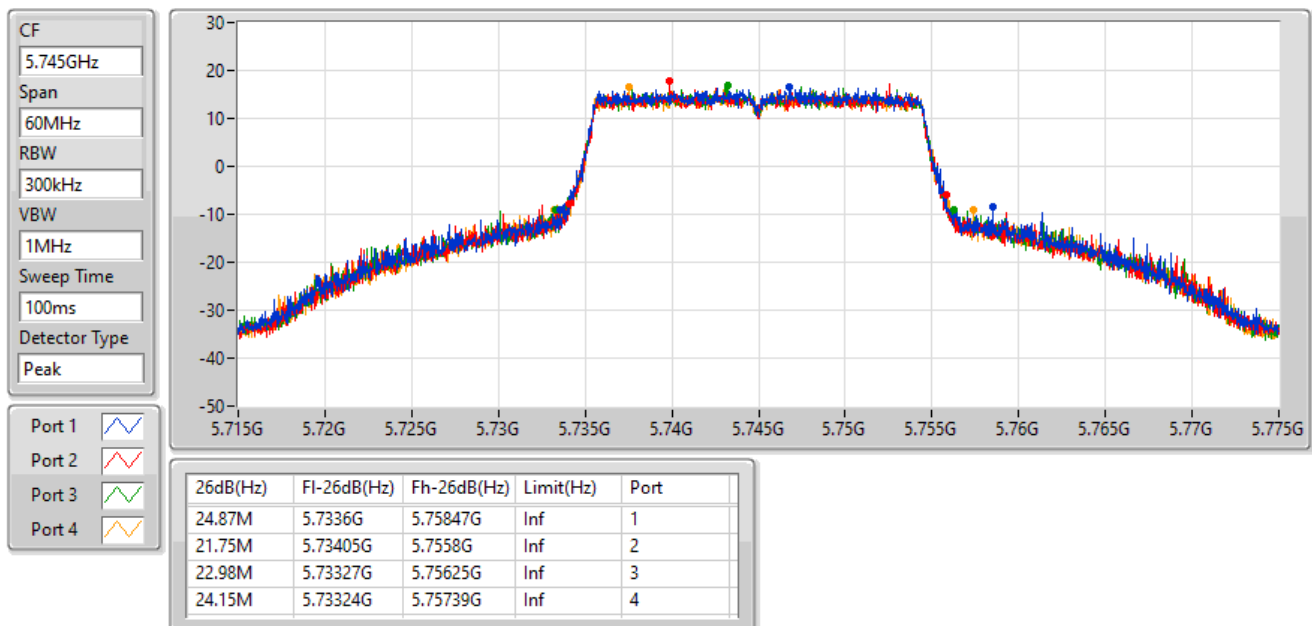


802.11ax HEW20-BF_Nss1,(MCS0)_4TX

EBW

5745MHz

02/03/2022

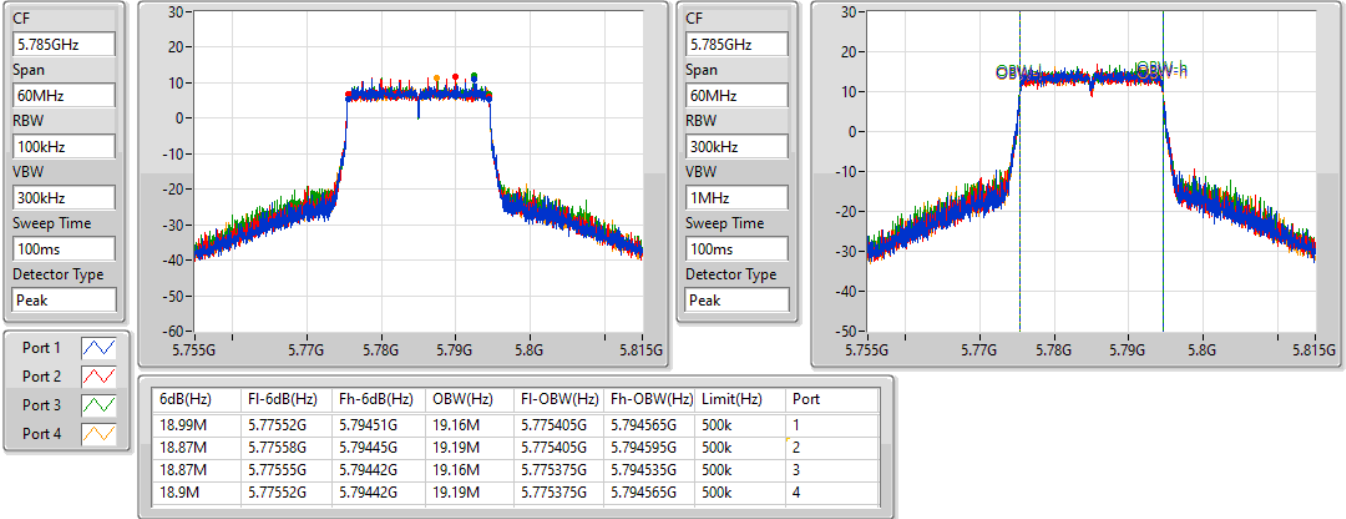


802.11ax HEW20-BF_Nss1,(MCS0)_4TX

EBW

5785MHz

02/03/2022

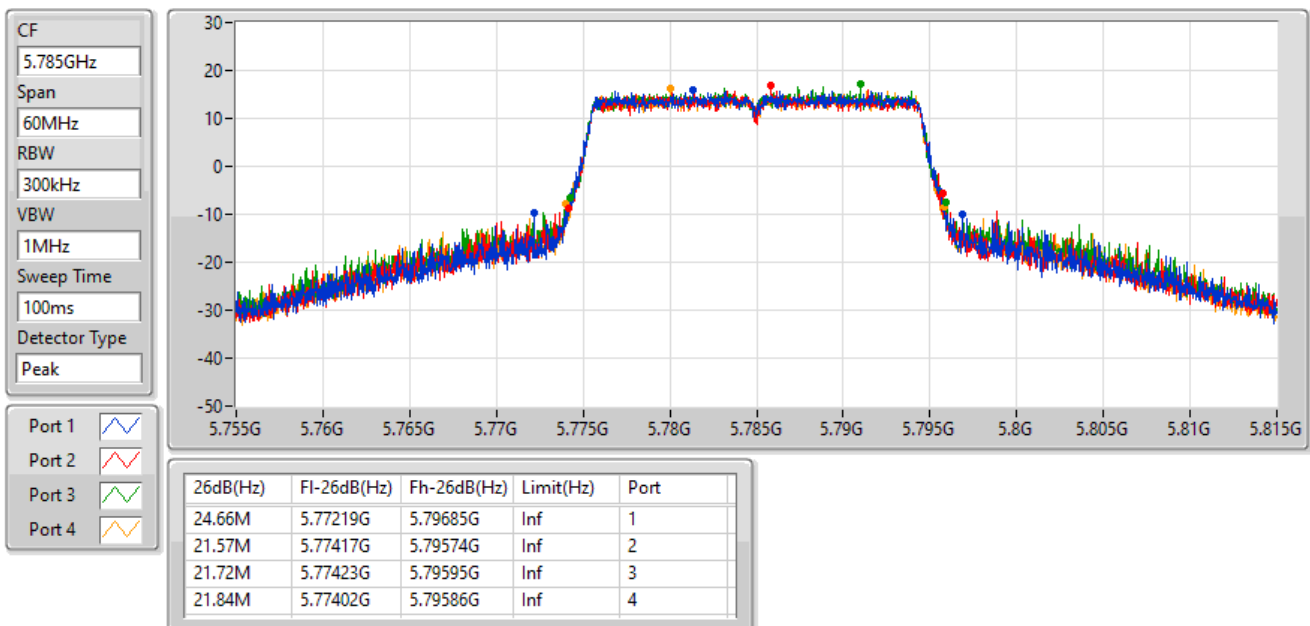


802.11ax HEW20-BF_Nss1,(MCS0)_4TX

EBW

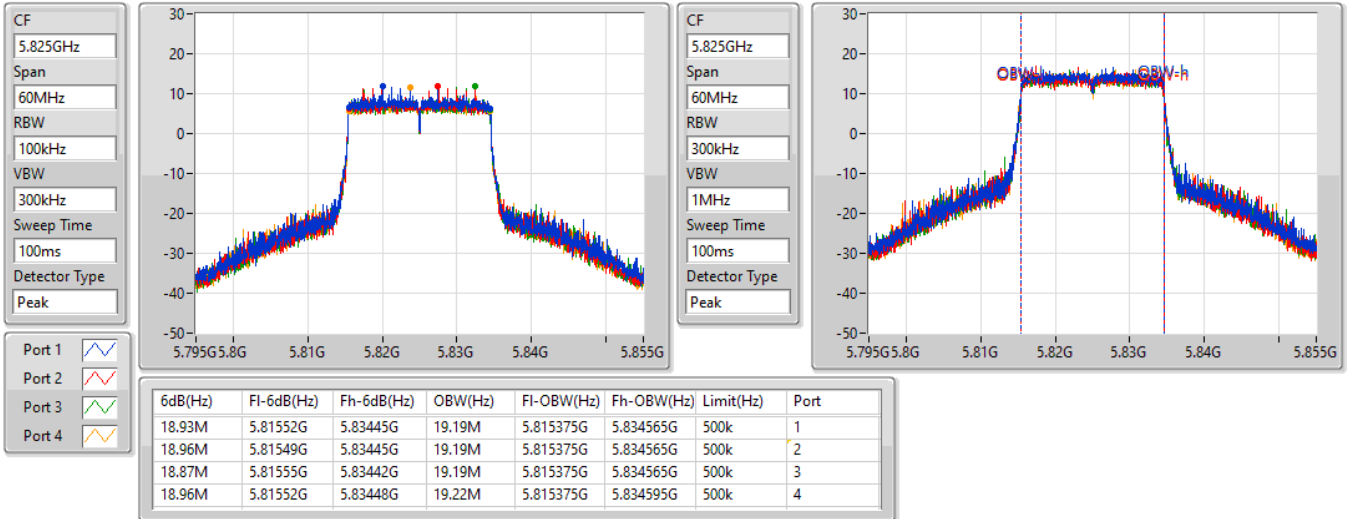
5785MHz

02/03/2022

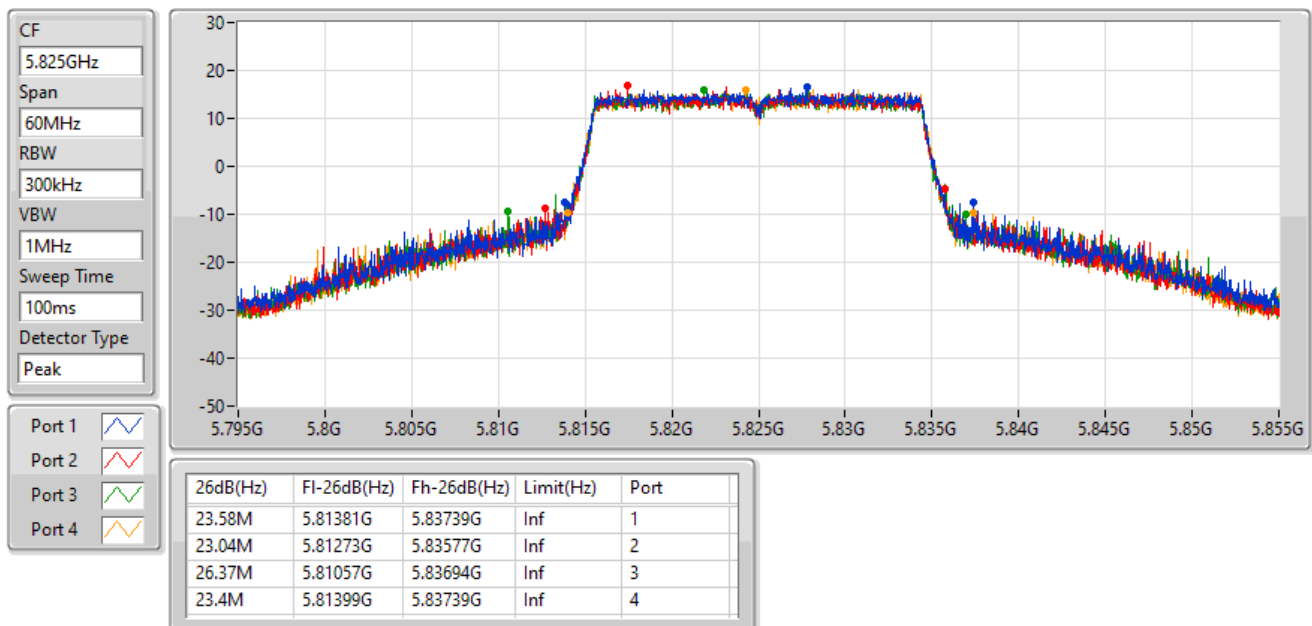


802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5825MHz

02/03/2022


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

02/03/2022

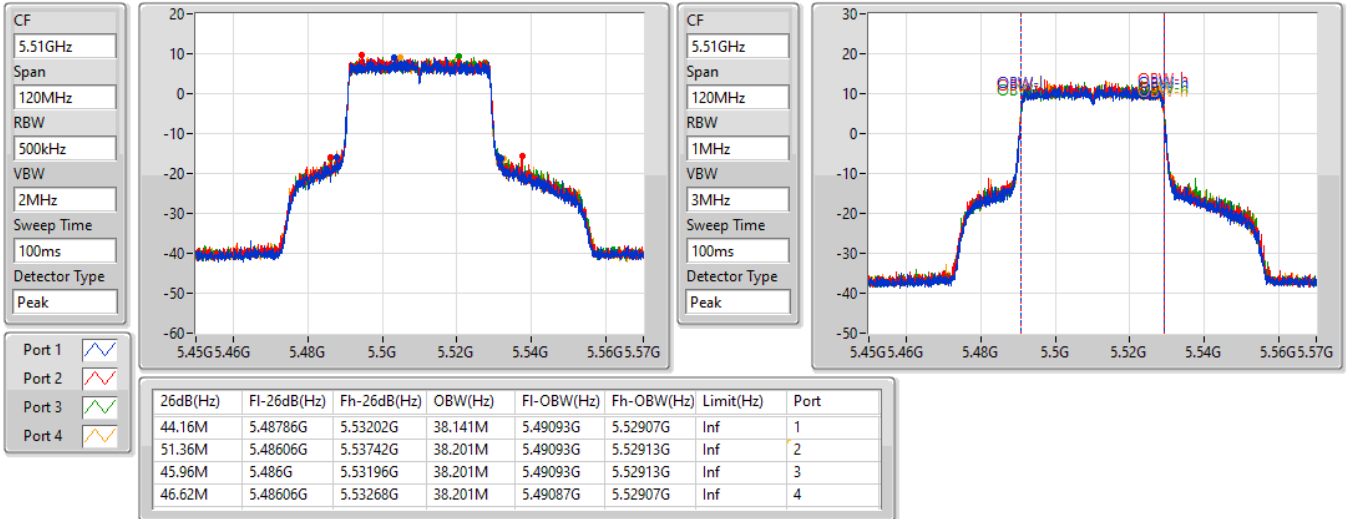


802.11ax HEW40-BF_Nss1,(MCS0)_4TX

EBW

5510MHz

23/09/2021

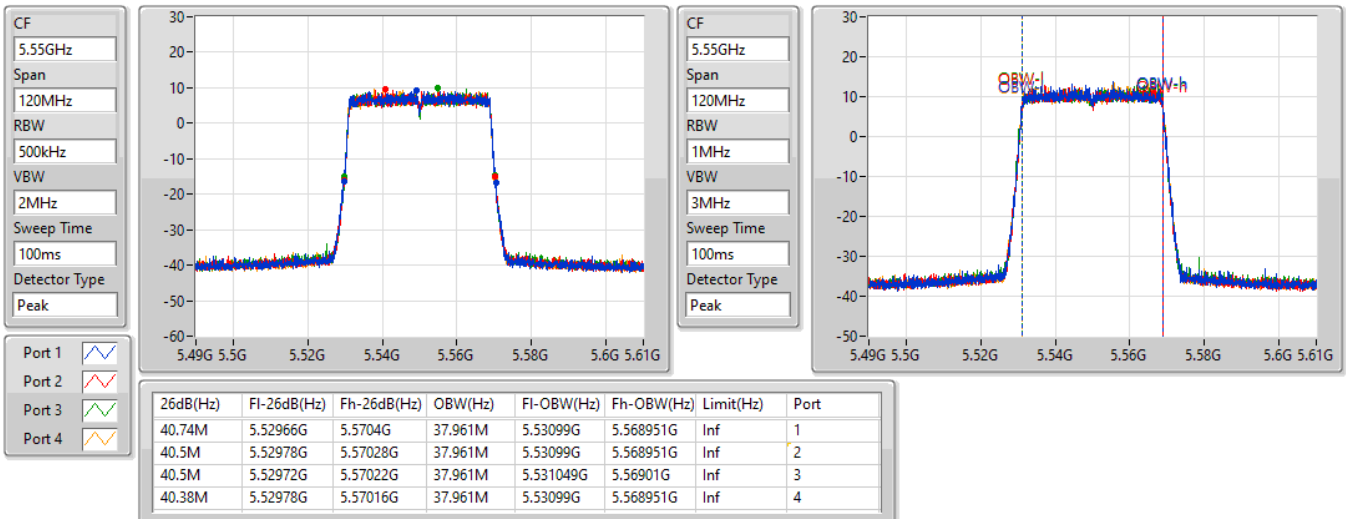


802.11ax HEW40-BF_Nss1,(MCS0)_4TX

EBW

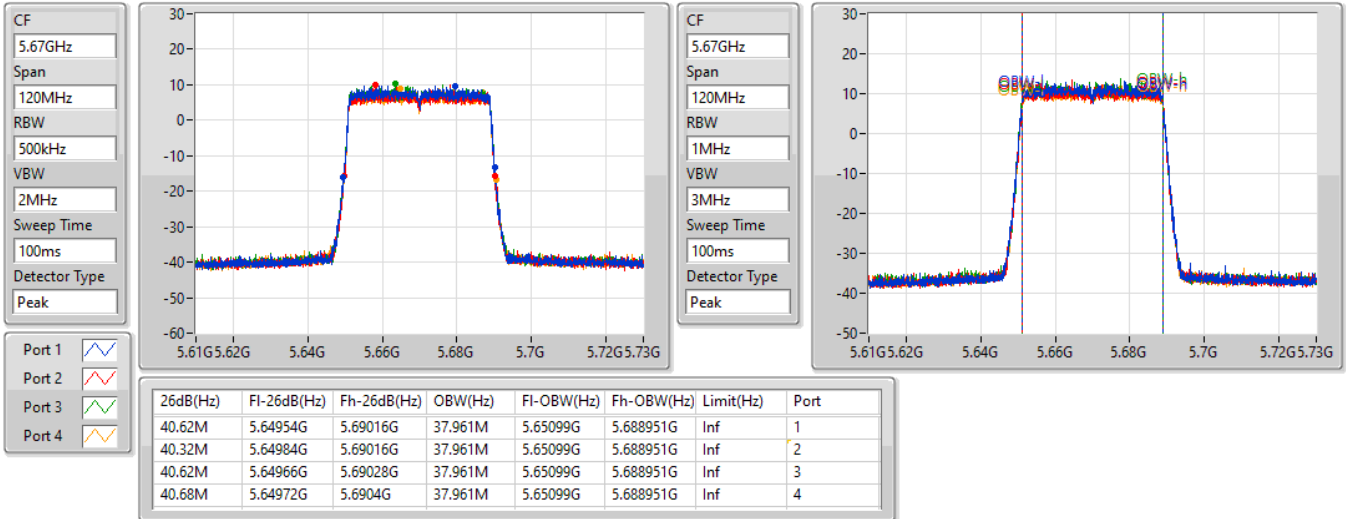
5550MHz

23/09/2021

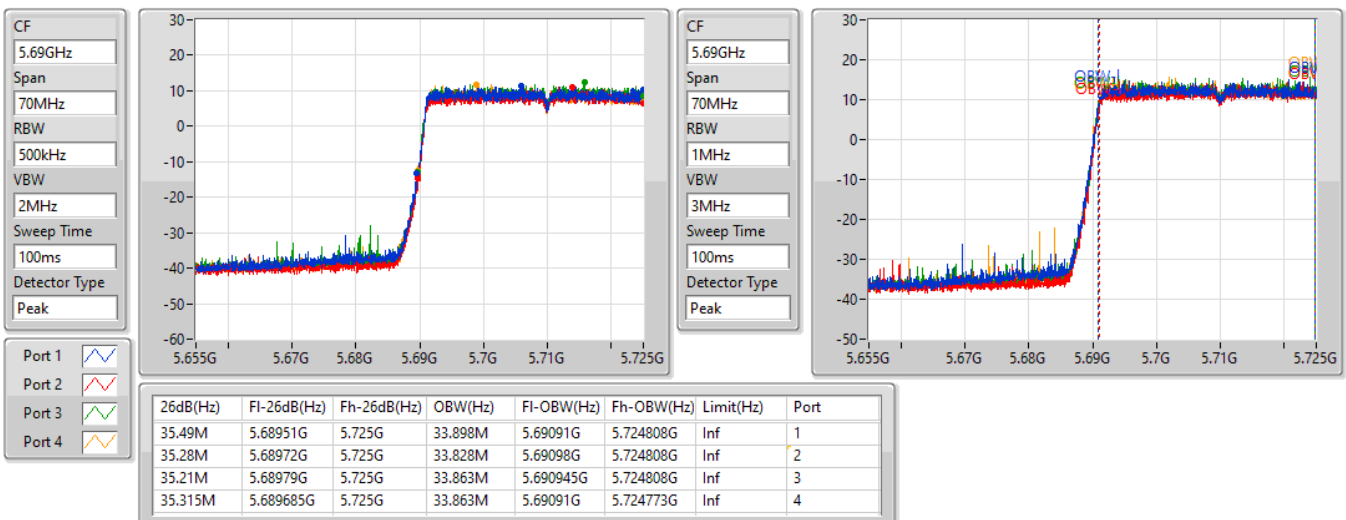


802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
5670MHz

23/09/2021


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

22/02/2022

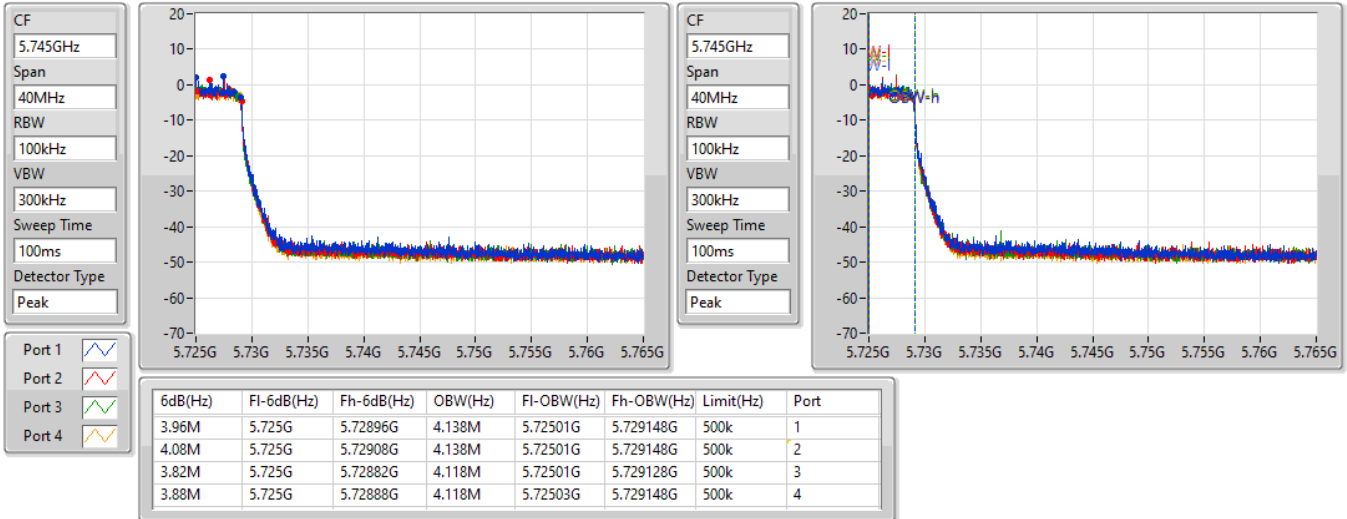


802.11ax HEW40-BF_Nss1,(MCS0)_4TX

EBW

5710MHz Straddle 5.725-5.85GHz

02/03/2022

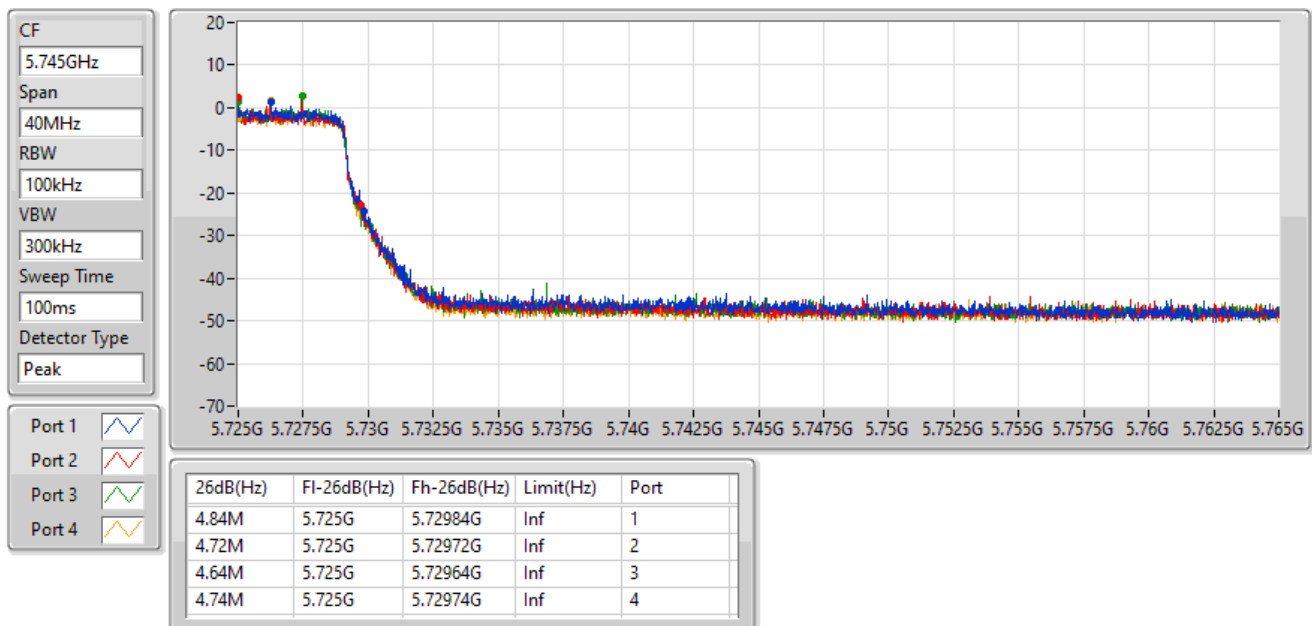


802.11ax HEW40-BF_Nss1,(MCS0)_4TX

EBW

5710MHz Straddle 5.725-5.85GHz

02/03/2022

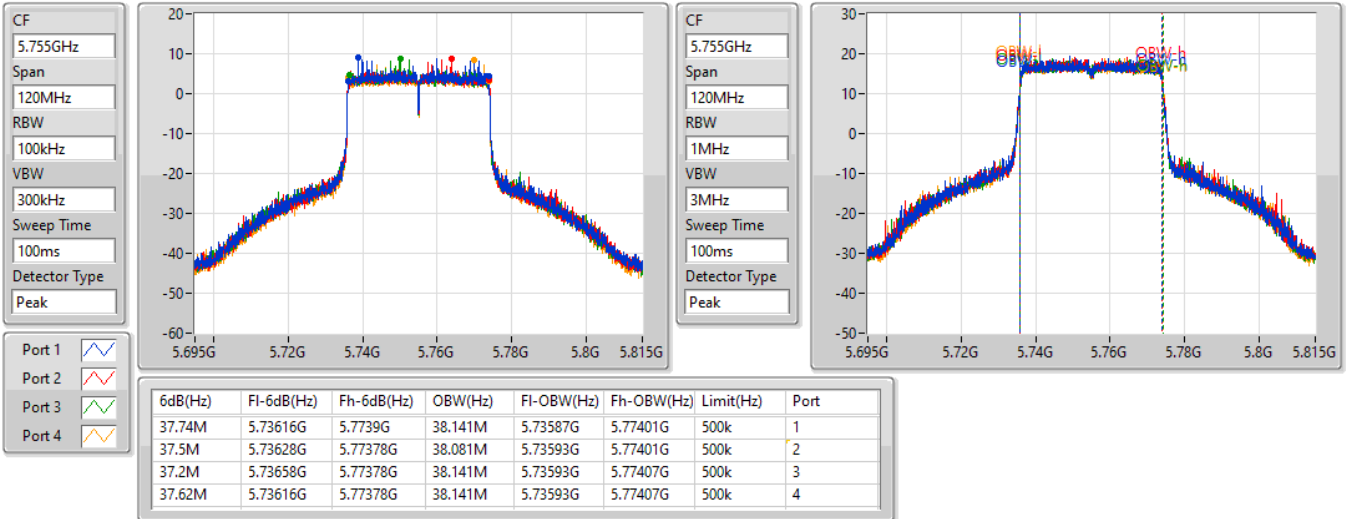


802.11ax HEW40-BF_Nss1,(MCS0)_4TX

EBW

5755MHz

02/03/2022

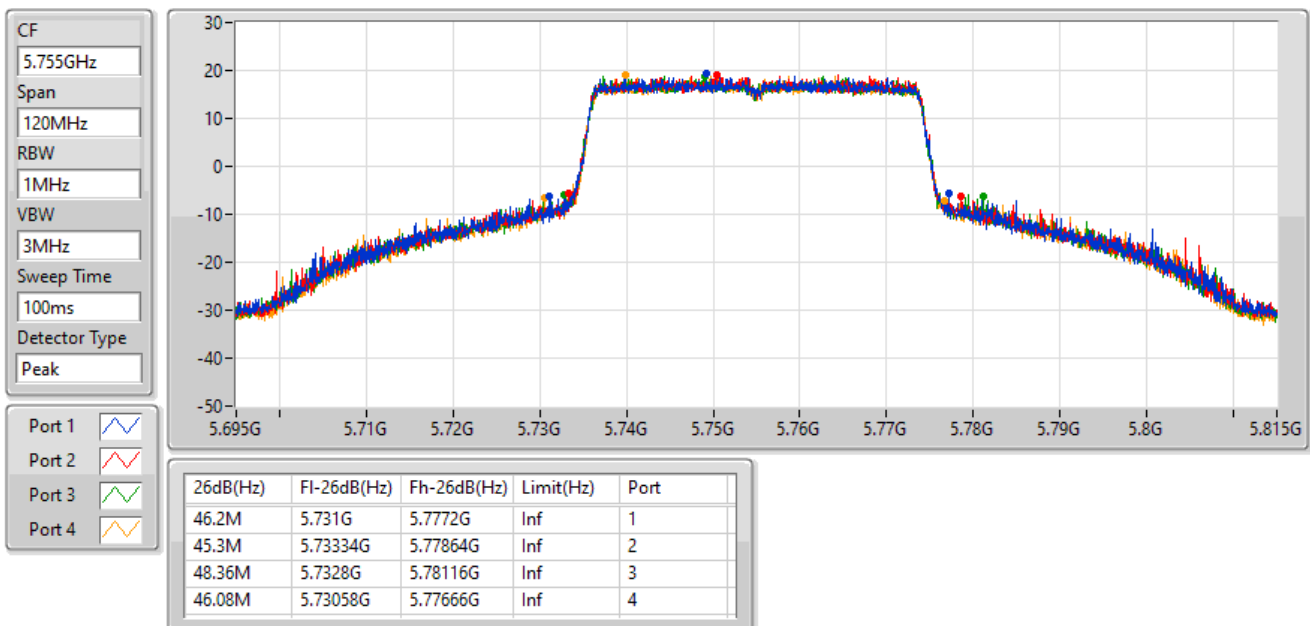


802.11ax HEW40-BF_Nss1,(MCS0)_4TX

EBW

5755MHz

02/03/2022

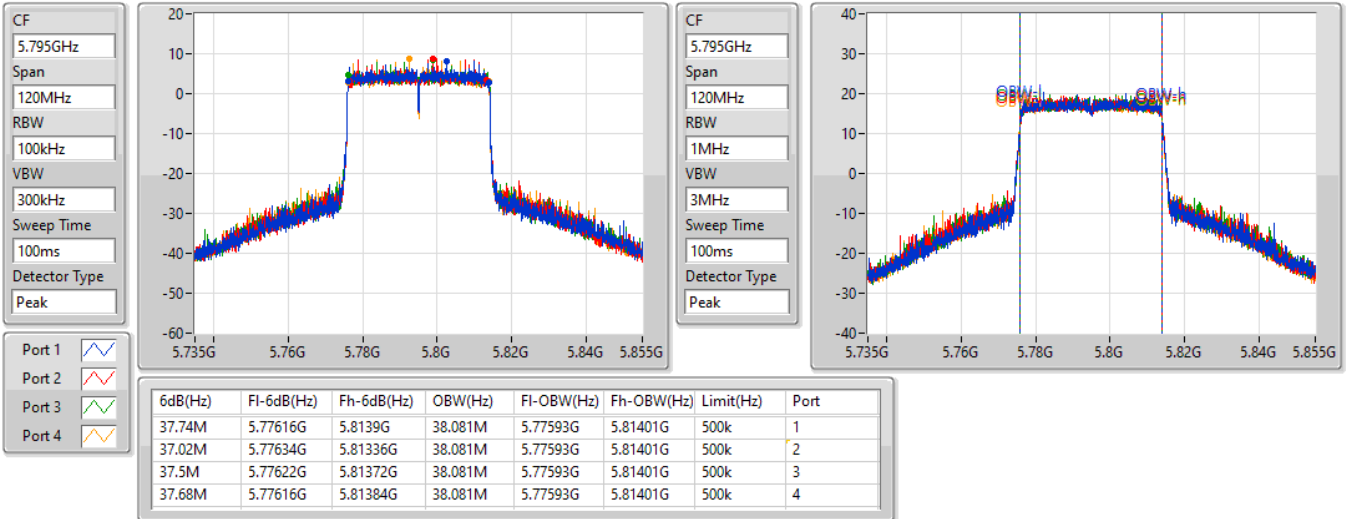


802.11ax HEW40-BF_Nss1,(MCS0)_4TX

EBW

5795MHz

02/03/2022

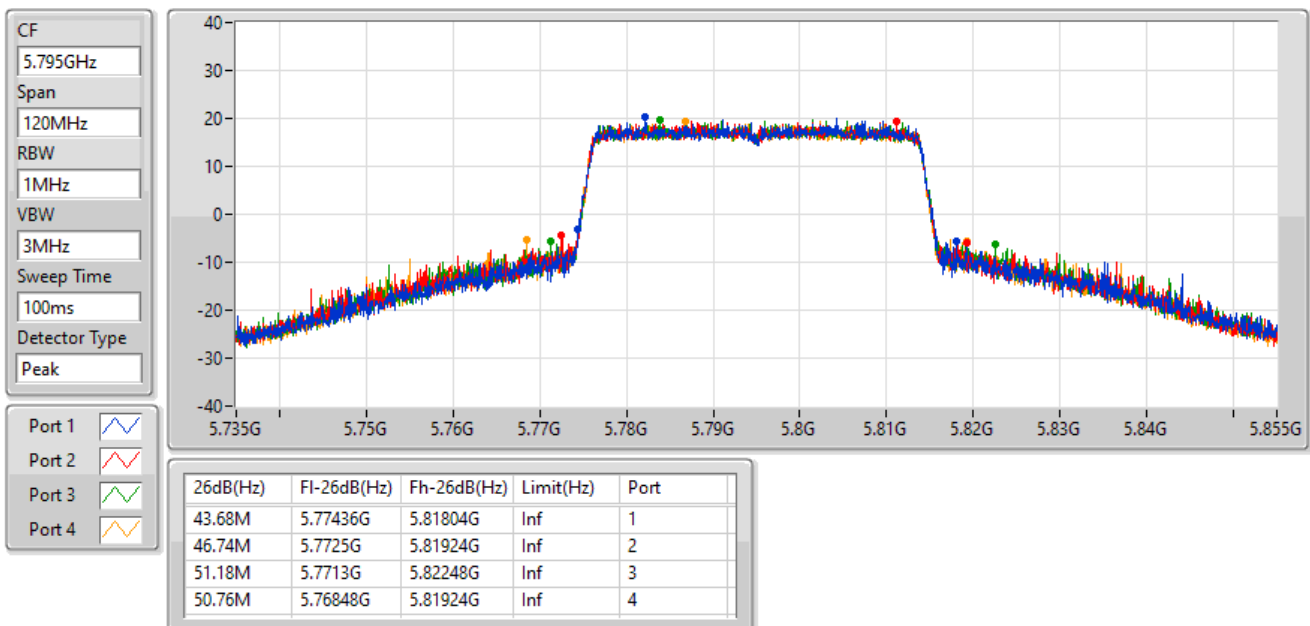


802.11ax HEW40-BF_Nss1,(MCS0)_4TX

EBW

5795MHz

02/03/2022

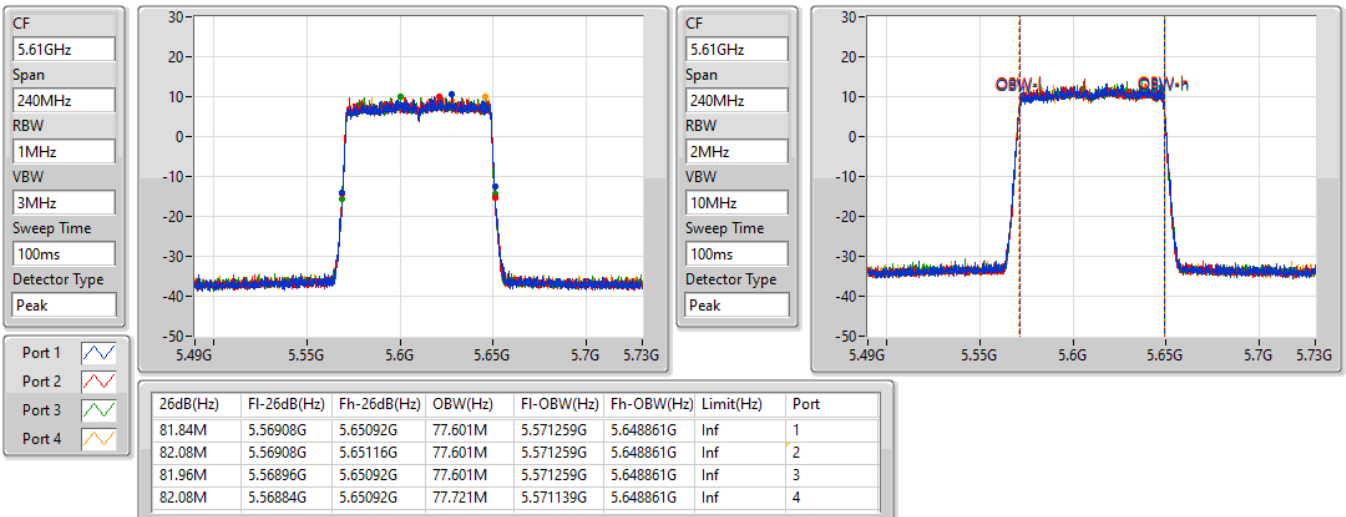


802.11ax HEW80-BF_Nss1,(MCS0)_4TX
EBW
5530MHz

23/09/2021

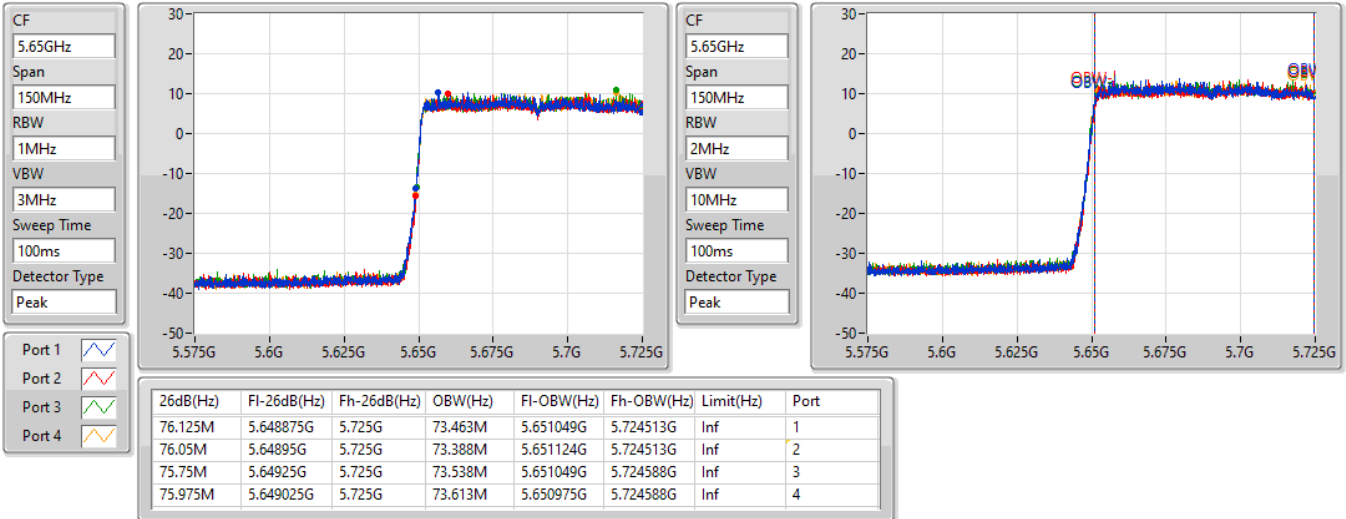

802.11ax HEW80-BF_Nss1,(MCS0)_4TX
EBW
5610MHz

23/09/2021

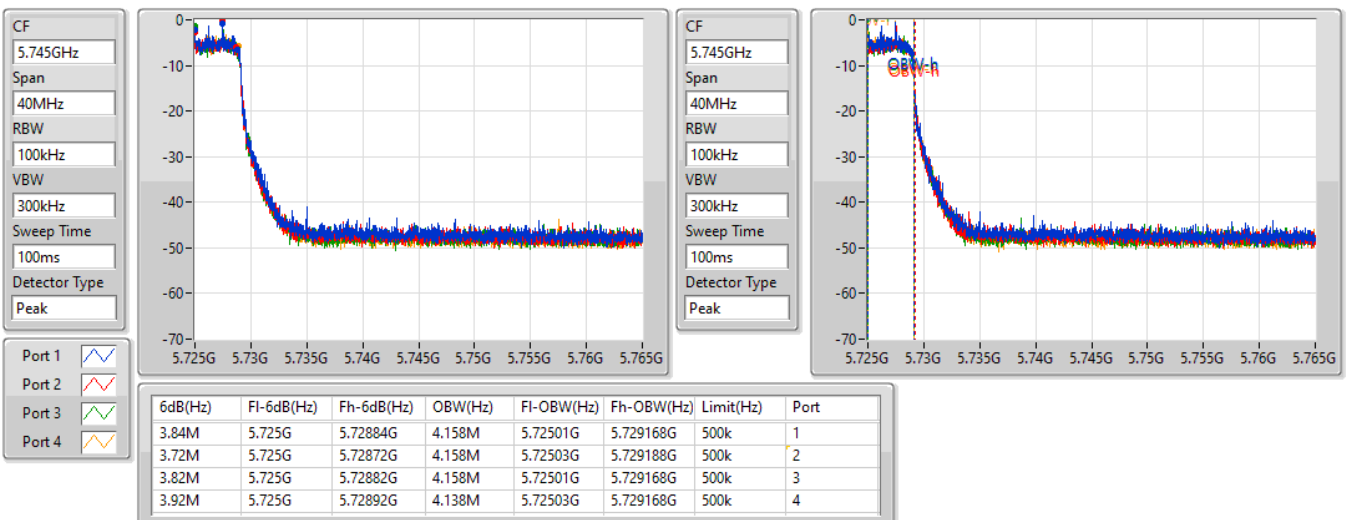


802.11ax HEW80-BF_Nss1,(MCS0)_4TX
EBW
5690MHz Straddle 5.47-5.725GHz

23/09/2021


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

02/03/2022

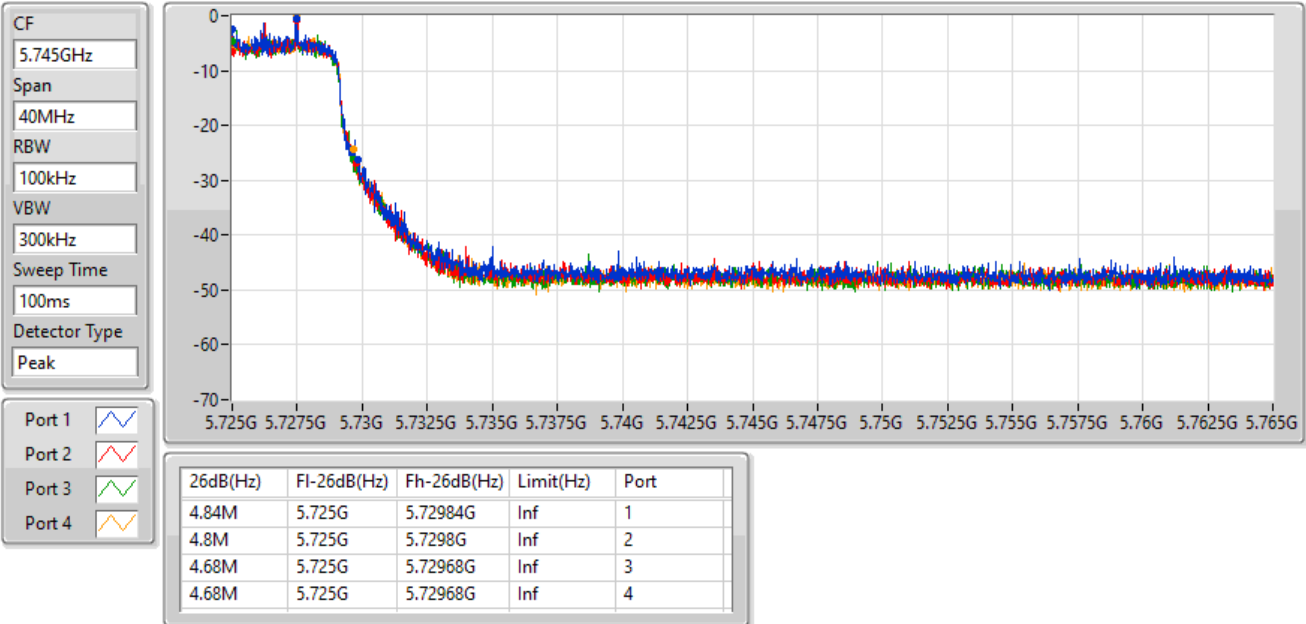


802.11ax HEW80-BF_Nss1,(MCS0)_4TX

EBW

5690MHz Straddle 5.725-5.85GHz

02/03/2022

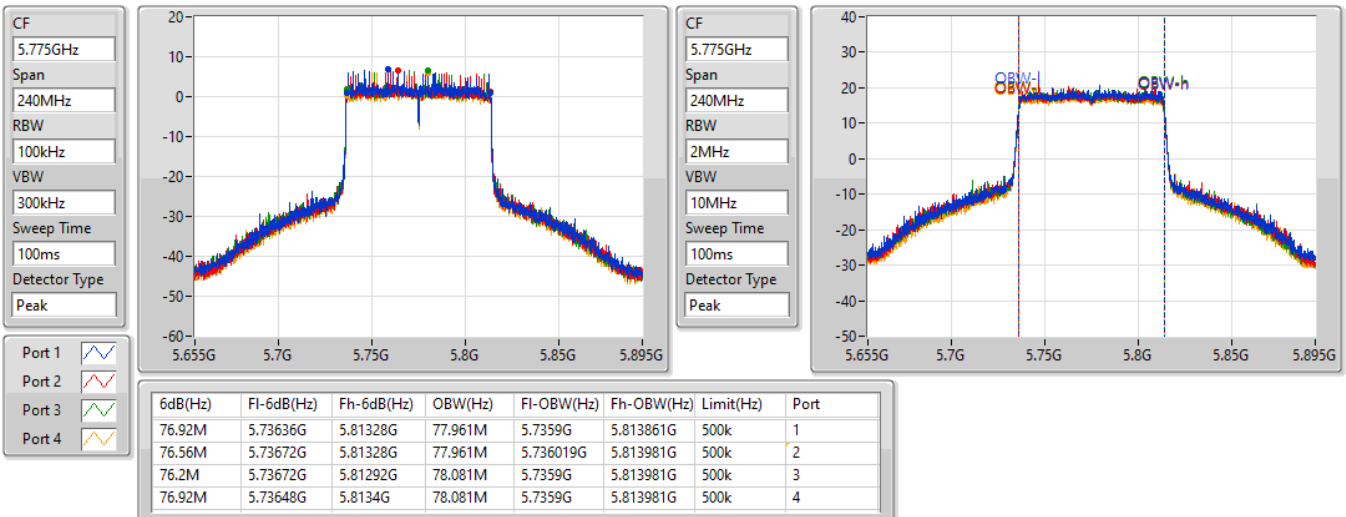


802.11ax HEW80-BF_Nss1,(MCS0)_4TX

EBW

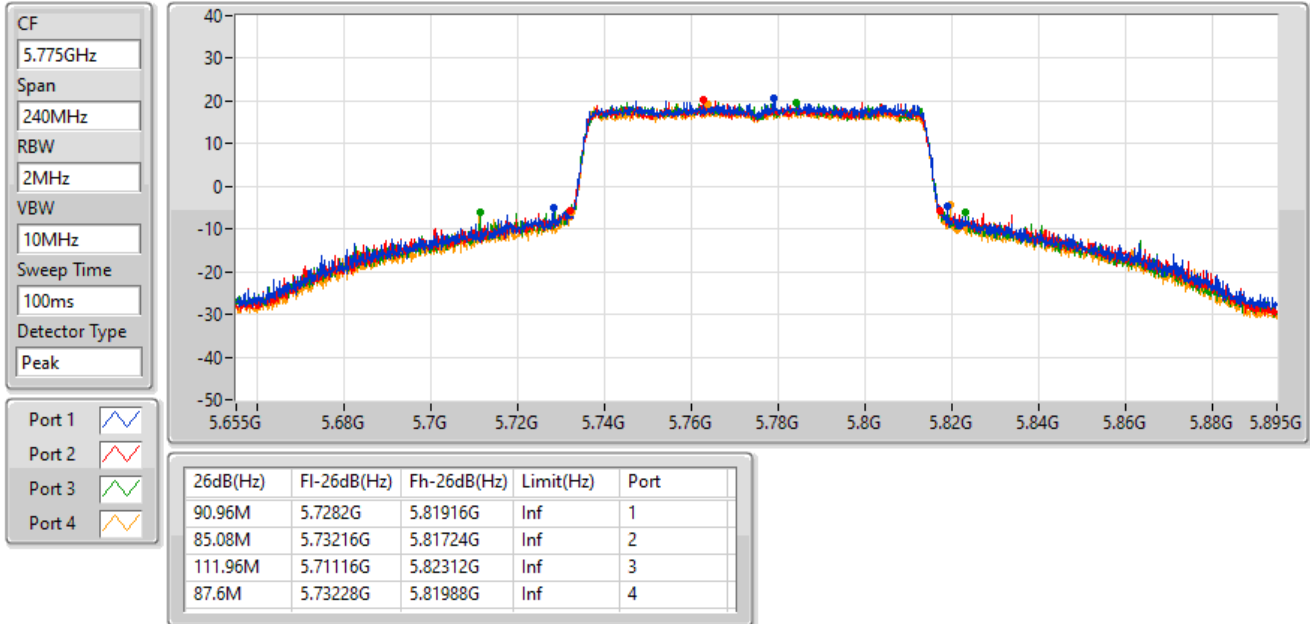
5775MHz

02/03/2022

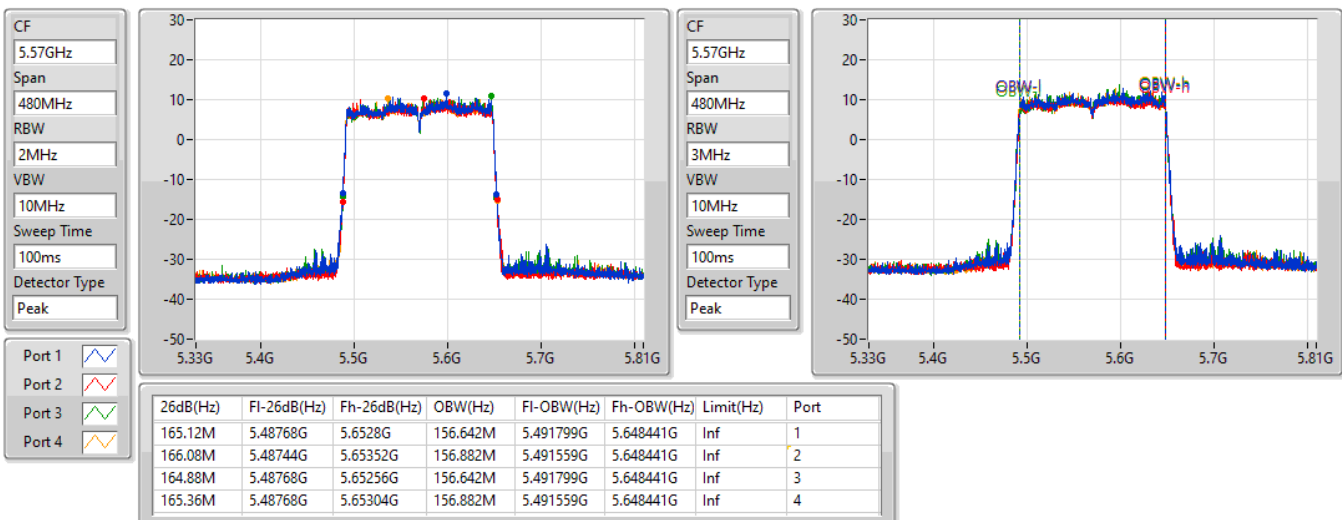


802.11ax HEW80-BF_Nss1,(MCS0)_4TX
EBW
5775MHz

02/03/2022


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

23/09/2021



For UNII 2C~3

4T4S

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.47-5.725GHz	-	-	-	-	-
802.11ax HEW160_Nss4,(MCS0)_4TX	166.08M	156.882M	157MD1D	165.12M	156.642M
5.725-5.85GHz	-	-	-	-	-
802.11ax HEW80_Nss4,(MCS0)_4TX	76.68M	78.081M	78M1D1D	75.24M	77.841M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth

Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ax HEW80_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5775MHz	Pass	500k	75.96M	77.841M	75.24M	77.961M	76.32M	78.081M	76.68M	78.081M
802.11ax HEW160_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5570MHz	Pass	Inf	166.08M	156.882M	165.6M	156.882M	165.12M	156.882M	165.84M	156.642M

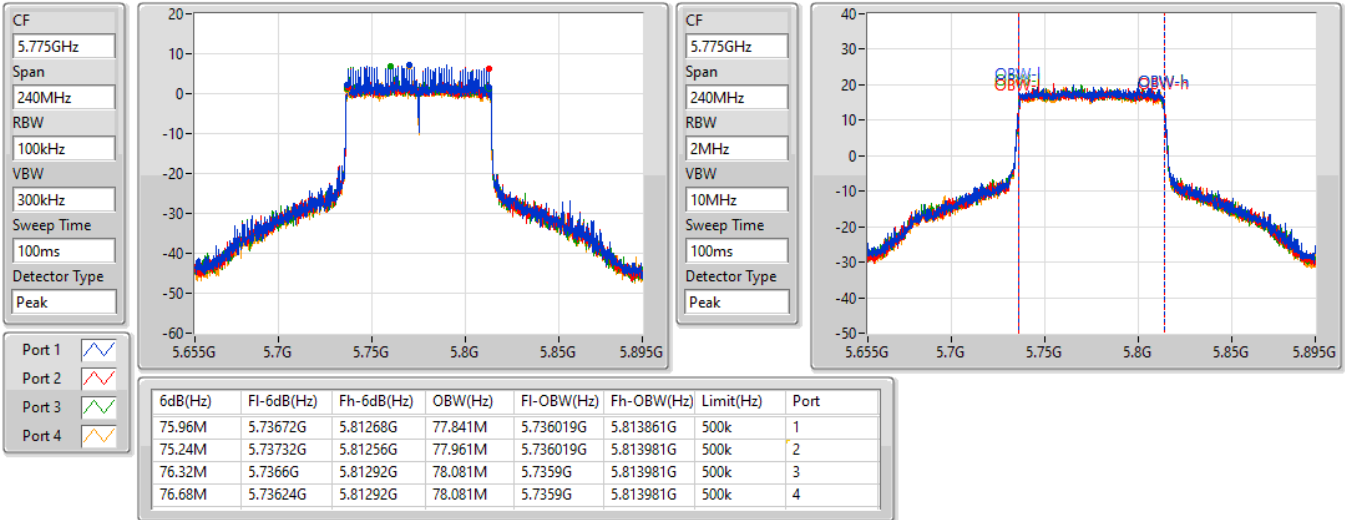
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11ax HEW80_Nss4,(MCS0)_4TX

EBW

5775MHz

02/03/2022

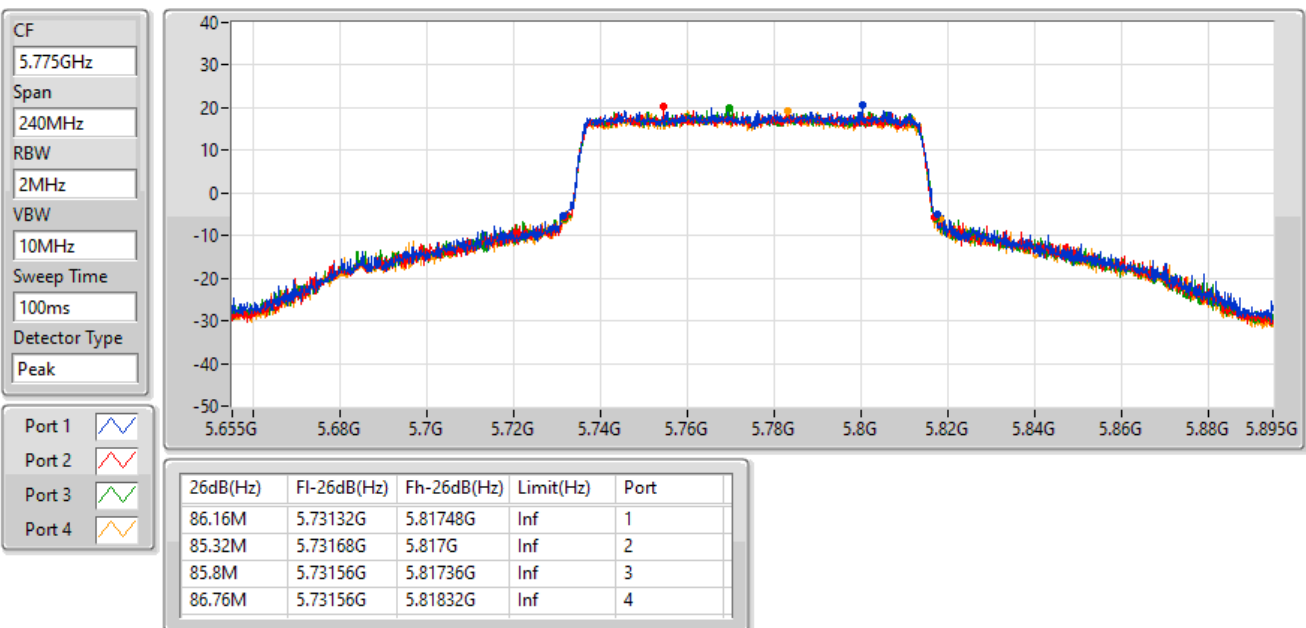


802.11ax HEW80_Nss4,(MCS0)_4TX

EBW

5775MHz

02/03/2022

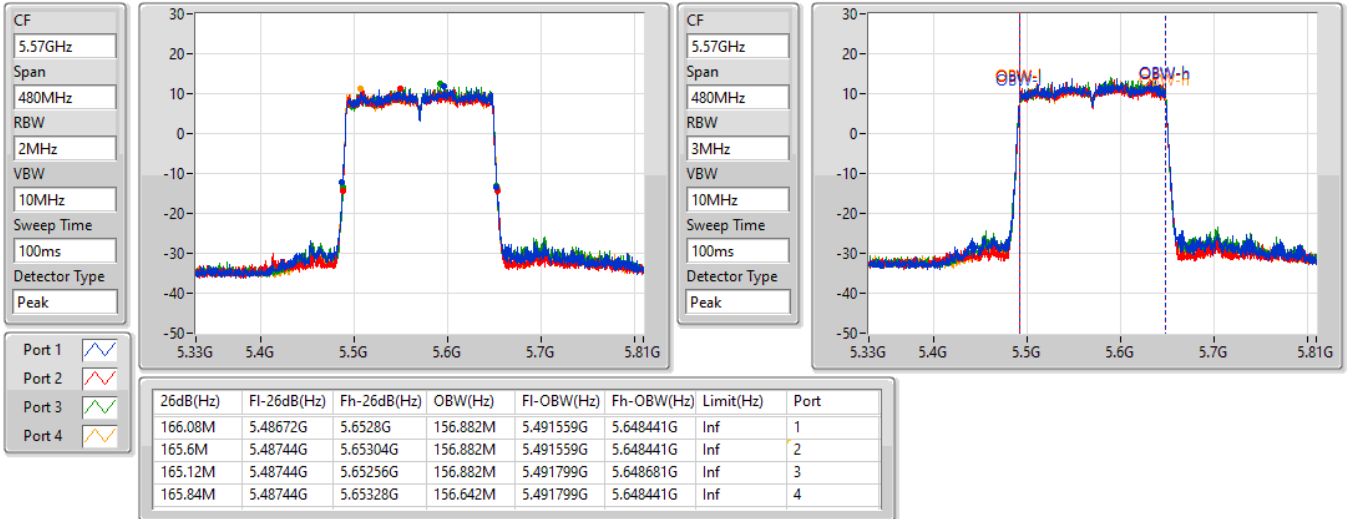


802.11ax HEW160_Nss4,(MCS0)_4TX

EBW

5570MHz

23/09/2021



For UNII 4
4T1S <Non-beamforming Mode>
Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.725-5.895GHz	-	-	-	-	-
802.11a_Nss1_(6Mbps)_4TX	16.35M	17.391M	17M4D1D	16.02M	17.211M

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Max-OBW = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Min-OBW = Minimum 99% occupied bandwidth

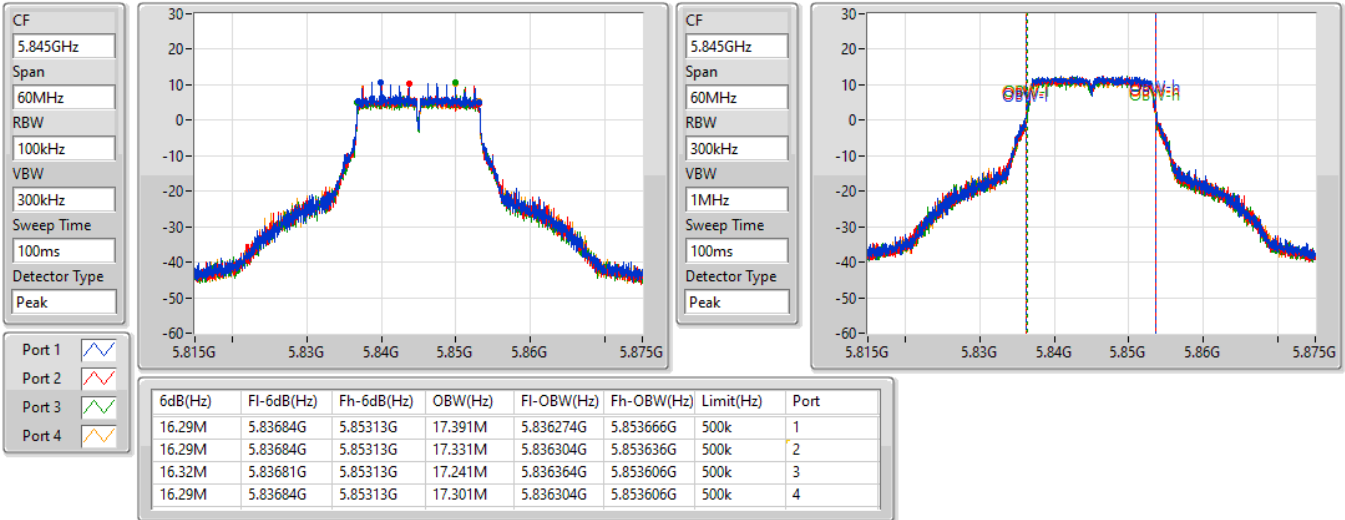
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11a_Nss1.(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5845MHz	Pass	500k	16.29M	17.391M	16.29M	17.331M	16.32M	17.241M	16.29M	17.301M
5865MHz	Pass	500k	16.29M	17.301M	16.02M	17.241M	16.29M	17.211M	16.35M	17.271M
5885MHz	Pass	500k	16.02M	17.271M	16.02M	17.211M	16.29M	17.211M	16.29M	17.241M

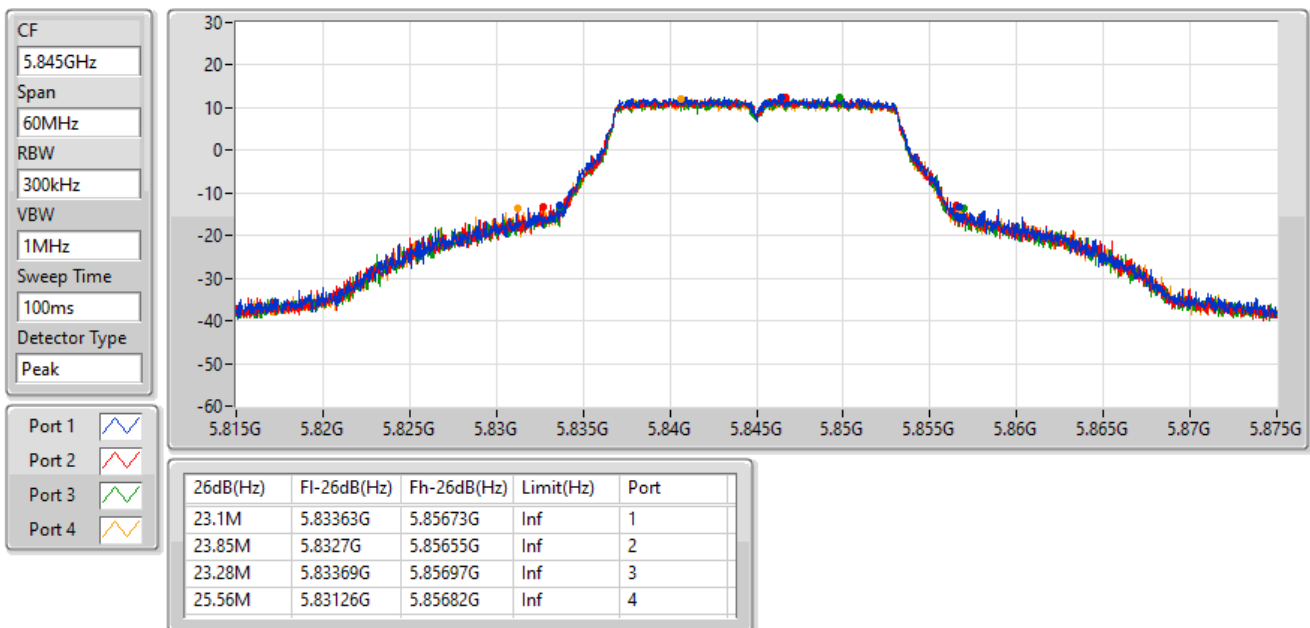
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11a_Nss1,(6Mbps)_4TX
EBW
5845MHz

07/03/2022

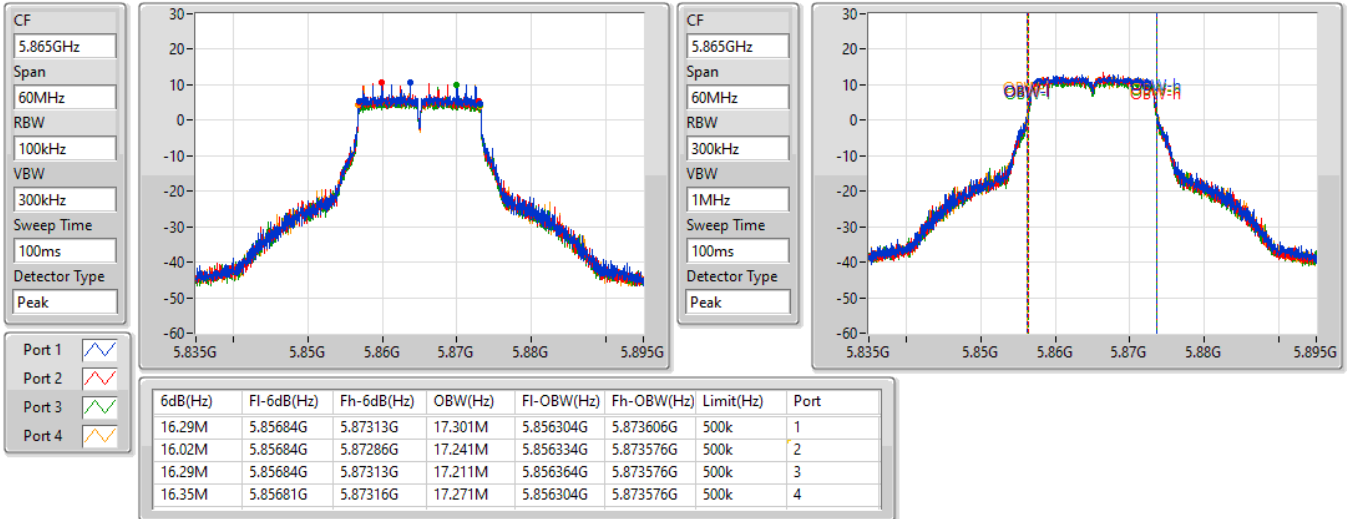

802.11a_Nss1,(6Mbps)_4TX
EBW
5845MHz

07/03/2022

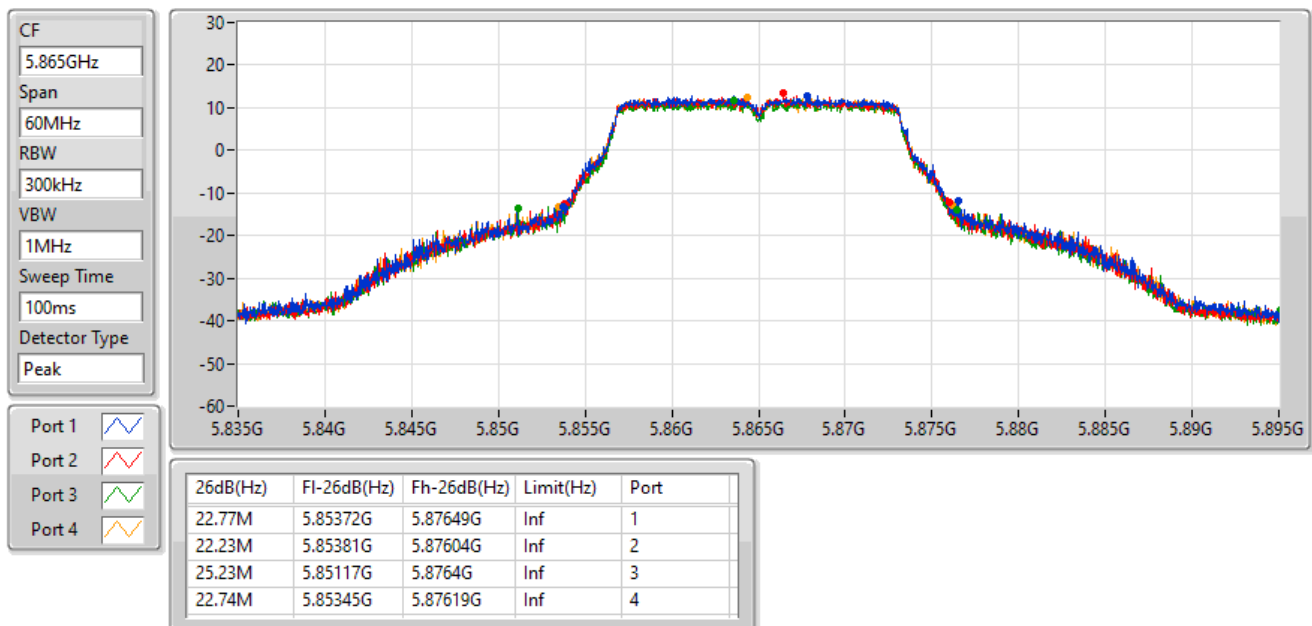


802.11a_Nss1,(6Mbps)_4TX
EBW
5865MHz

07/03/2022

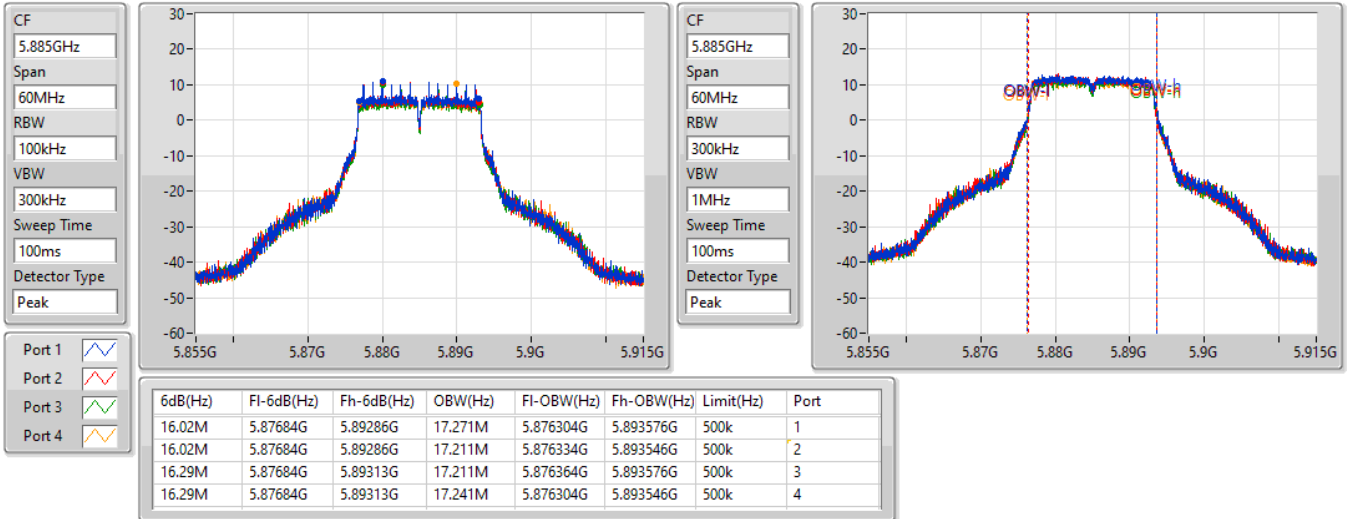

802.11a_Nss1,(6Mbps)_4TX
EBW
5865MHz

07/03/2022

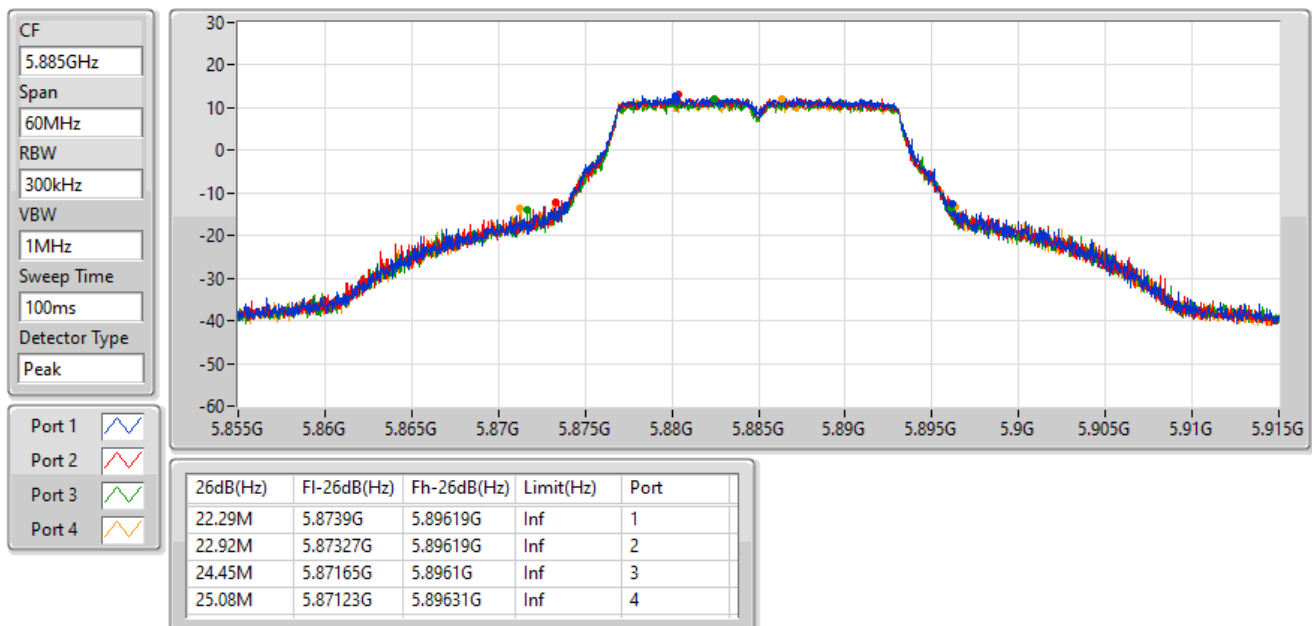


802.11a_Nss1,(6Mbps)_4TX
EBW
5885MHz

07/03/2022


802.11a_Nss1,(6Mbps)_4TX
EBW
5885MHz

07/03/2022



For UNII 4
4T4S <Non-beamforming Mode>
Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW
					(Hz)
5.725-5.895GHz	-	-	-	-	-
802.11ax HEW80_Nss4,(MCS0)_4TX	77.76M	78.921M	78M9D1D	77.4M	78.201M
802.11ax HEW160_Nss4,(MCS0)_4TX	157.44M	156.882M	157MD1D	155.76M	156.642M

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Max-OBW = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Min-OBW = Minimum 99% occupied bandwidth

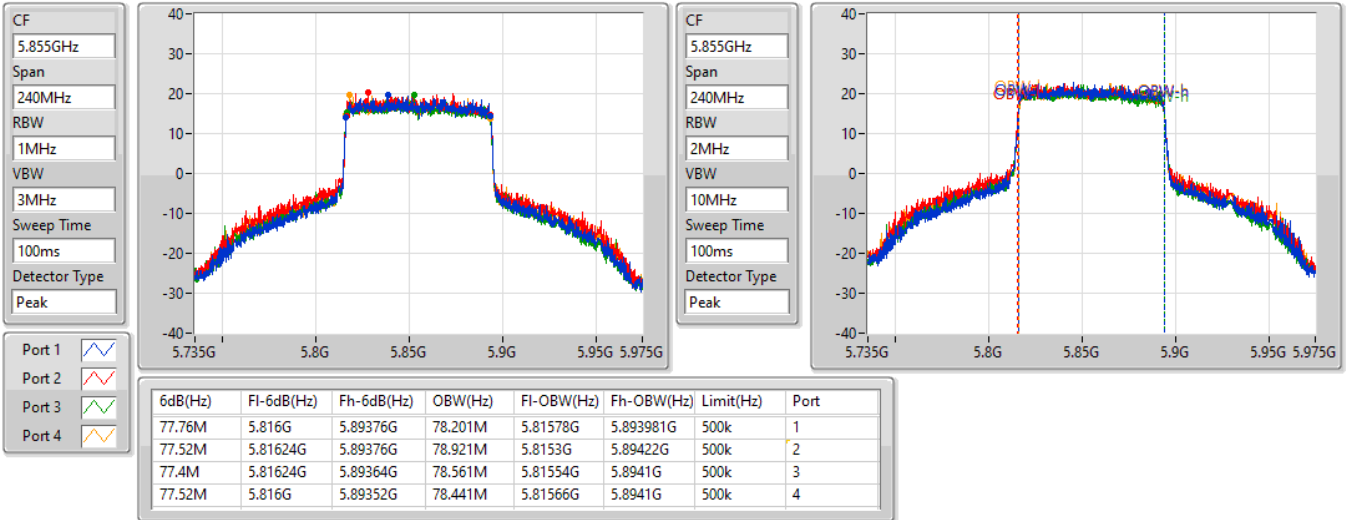
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ax HEW80_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5855MHz	Pass	500k	77.76M	78.201M	77.52M	78.921M	77.4M	78.561M	77.52M	78.441M
802.11ax HEW160_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5815MHz	Pass	500k	157.44M	156.642M	155.76M	156.882M	156.72M	156.882M	157.2M	156.642M

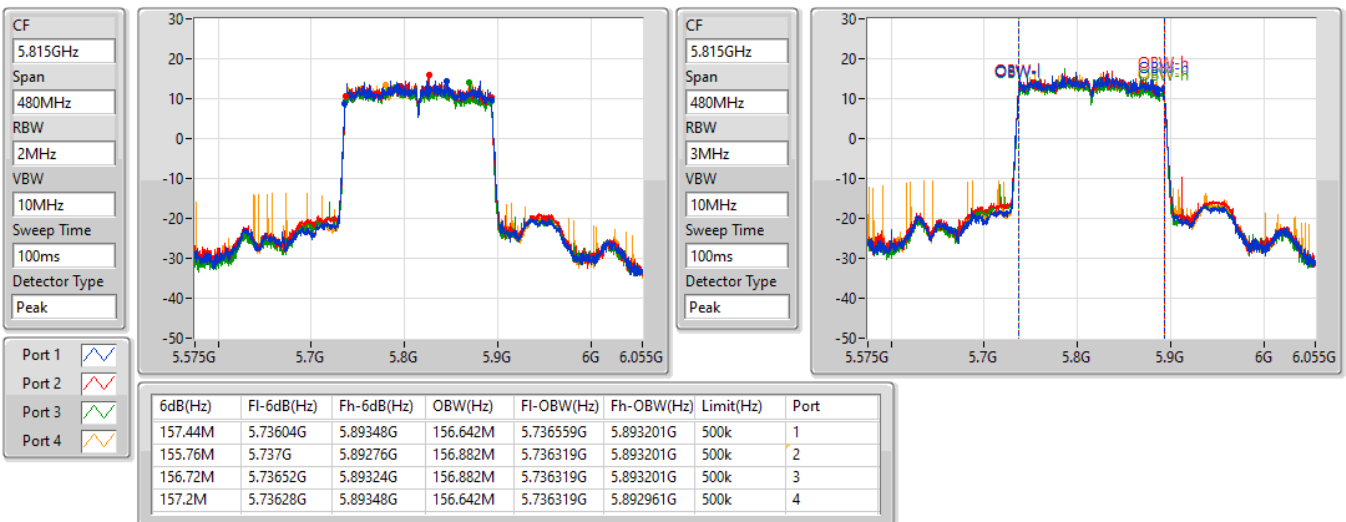
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11ax HEW80_Nss4,(MCS0)_4TX
EBW
5855MHz

07/03/2022


802.11ax HEW160_Nss4,(MCS0)_4TX
EBW
5815MHz

07/03/2022



For UNII 4
4T1S <Beamforming Mode>
Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.725-5.895GHz	-	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	18.87M	19.28M	19M3D1D	18.09M	19.19M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	37.68M	38.201M	38M2D1D	36.9M	38.081M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	76.2M	78.081M	78M1D1D	75.12M	77.841M
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	156.48M	156.882M	157MD1D	155.52M	156.402M

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Max-OBW = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Min-OBW = Minimum 99% occupied bandwidth

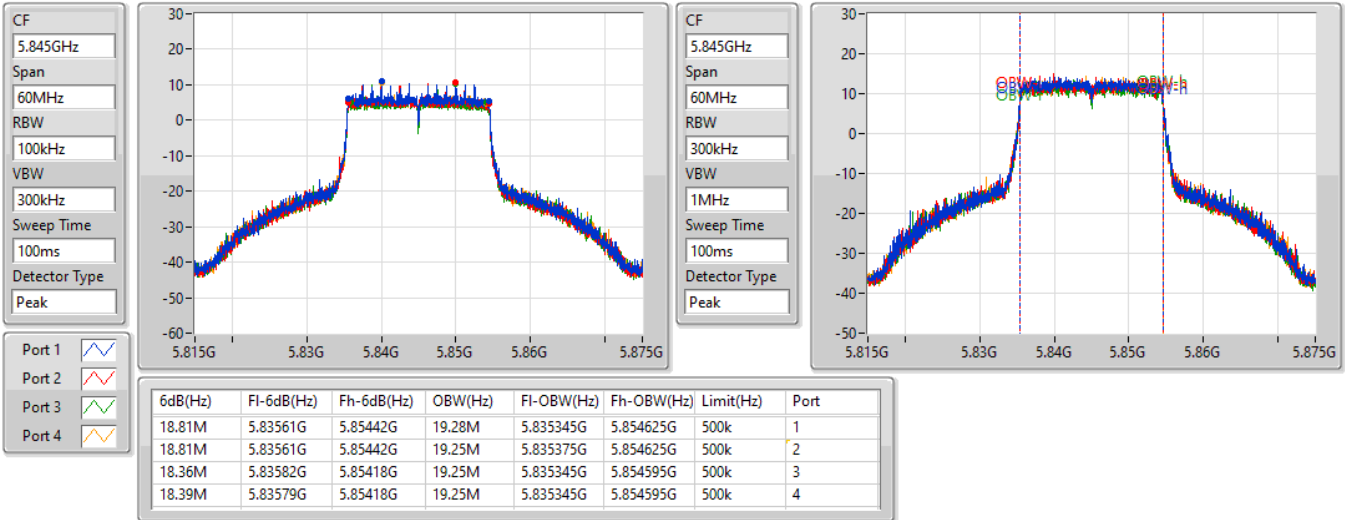
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5845MHz	Pass	500k	18.81M	19.28M	18.81M	19.25M	18.36M	19.25M	18.39M	19.25M
5865MHz	Pass	500k	18.81M	19.22M	18.66M	19.25M	18.27M	19.19M	18.87M	19.22M
5885MHz	Pass	500k	18.84M	19.22M	18.09M	19.19M	18.66M	19.22M	18.69M	19.25M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5835MHz	Pass	500k	37.68M	38.201M	37.2M	38.141M	37.5M	38.141M	37.08M	38.141M
5875MHz	Pass	500k	37.44M	38.141M	36.96M	38.141M	37.5M	38.081M	36.9M	38.141M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5855MHz	Pass	500k	76.2M	77.961M	75.12M	77.841M	75.48M	77.961M	75.48M	78.081M
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5815MHz	Pass	500k	156.48M	156.882M	156M	156.402M	155.52M	156.642M	156.24M	156.882M

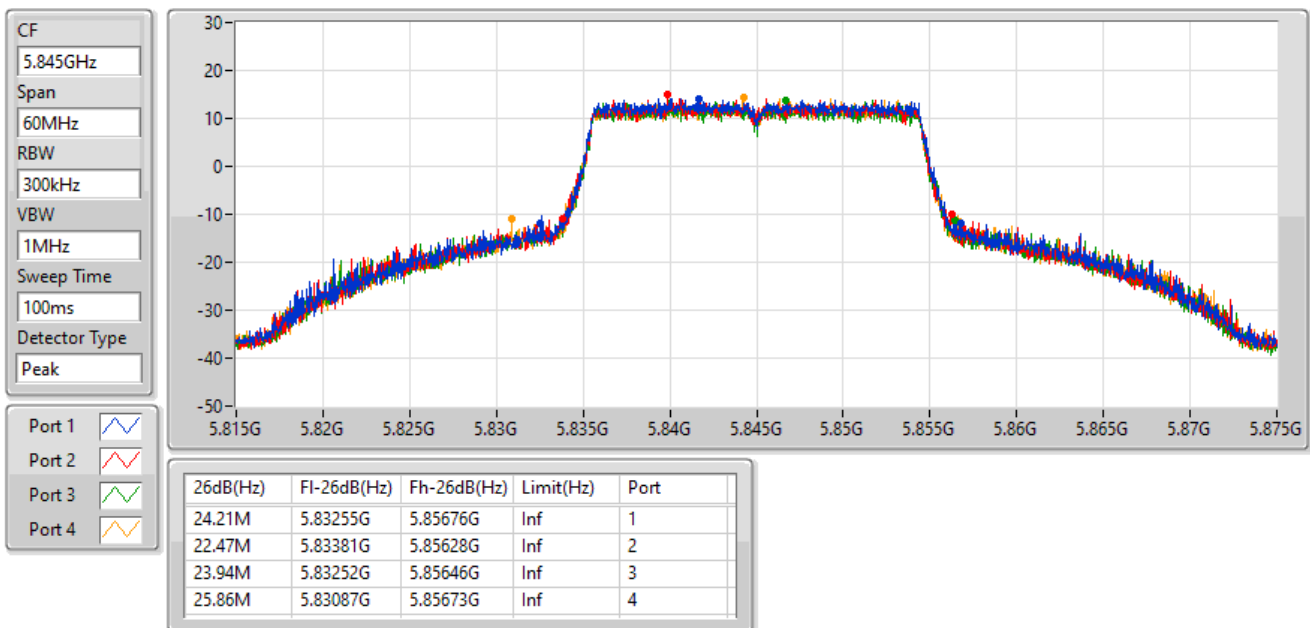
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5845MHz

07/03/2022

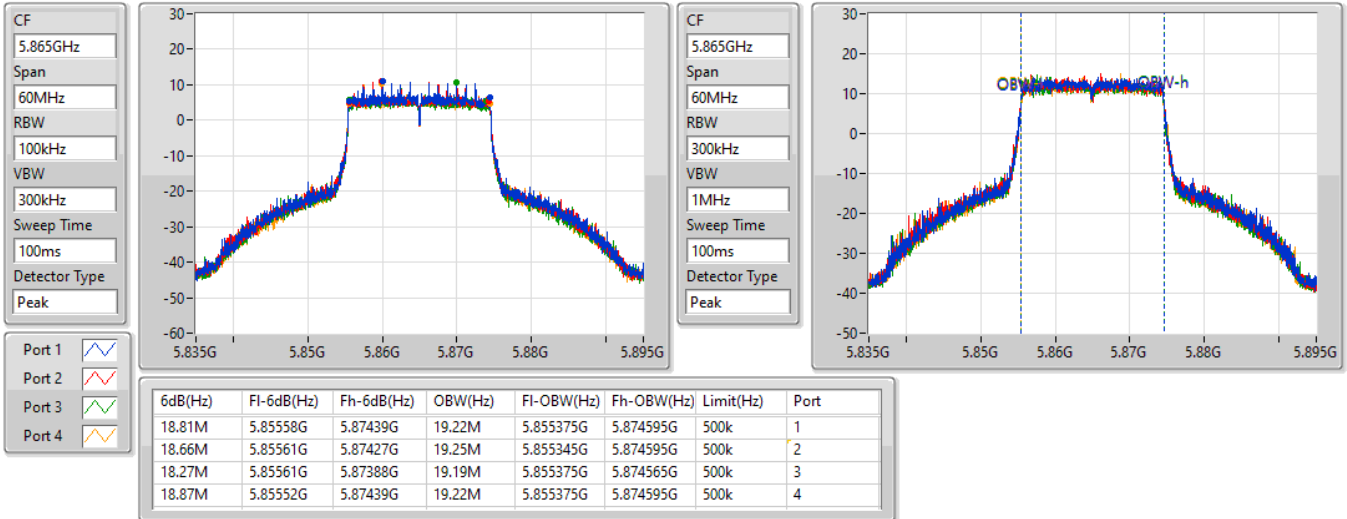

802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5845MHz

07/03/2022

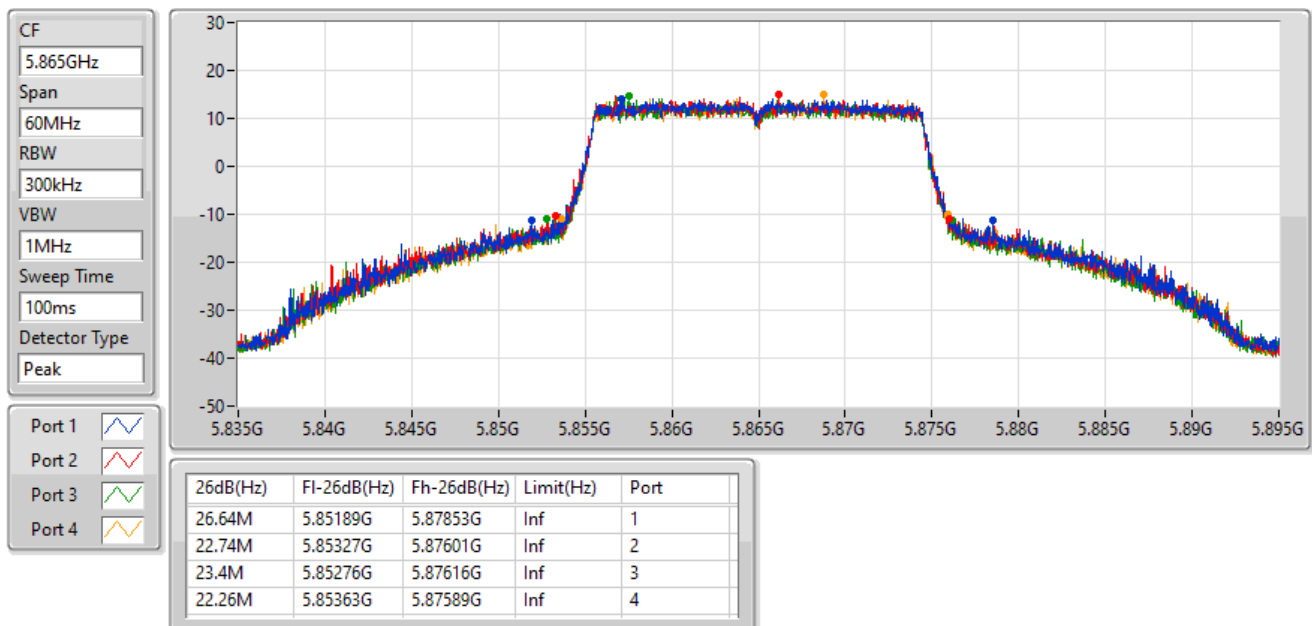


802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5865MHz

07/03/2022

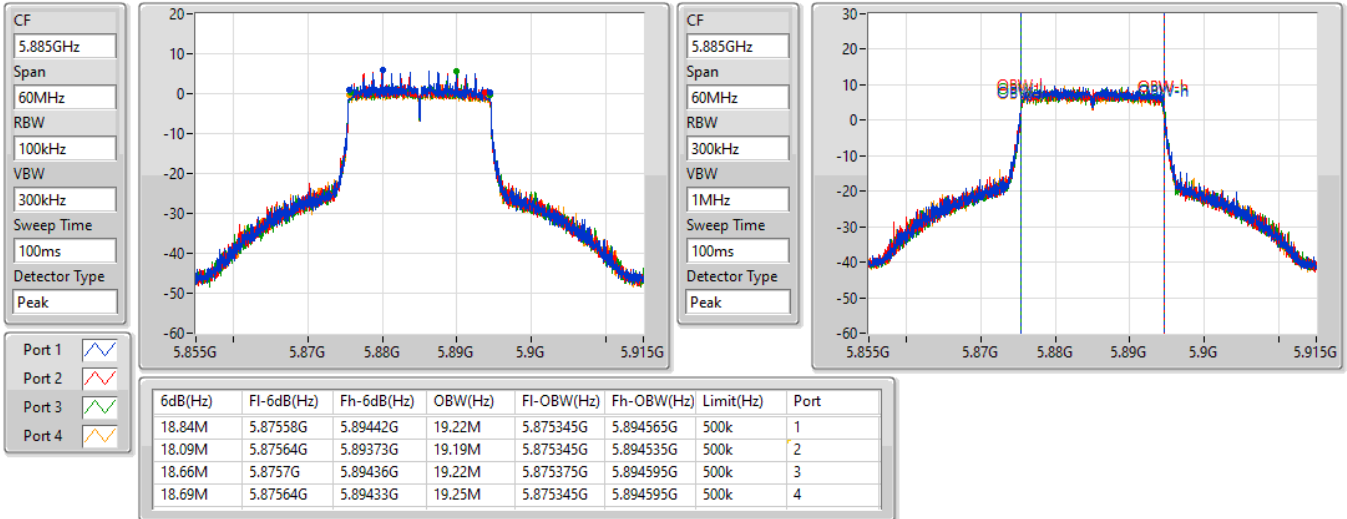

802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5865MHz

07/03/2022

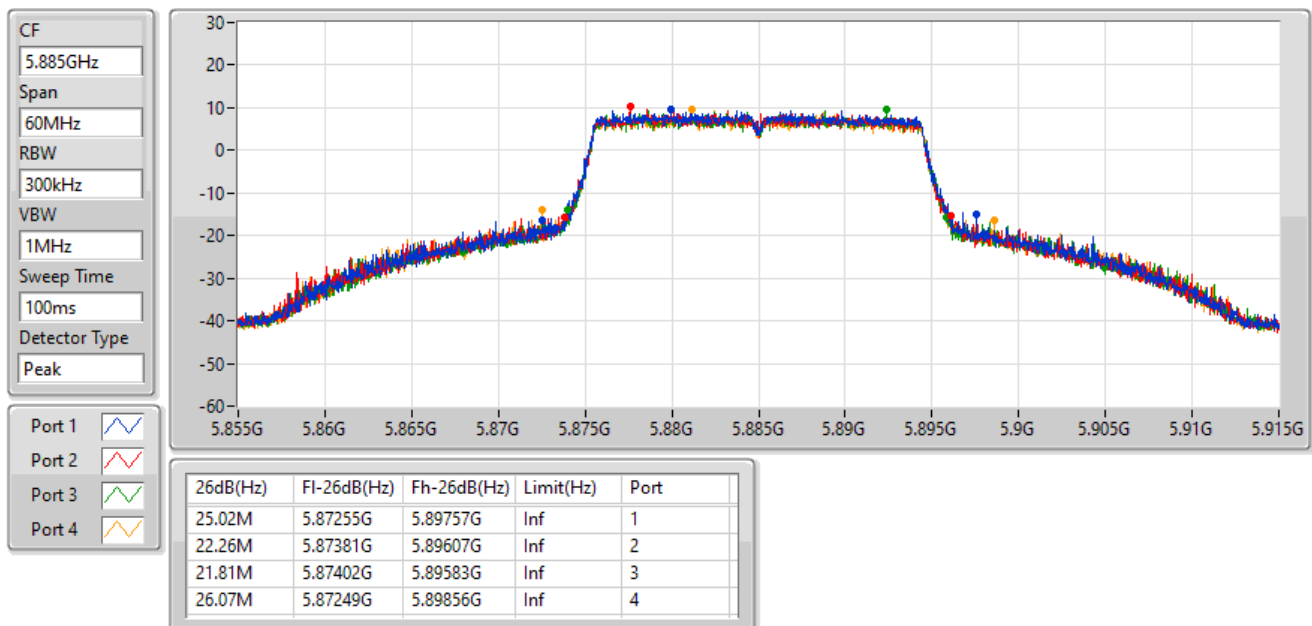


802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5885MHz

07/03/2022

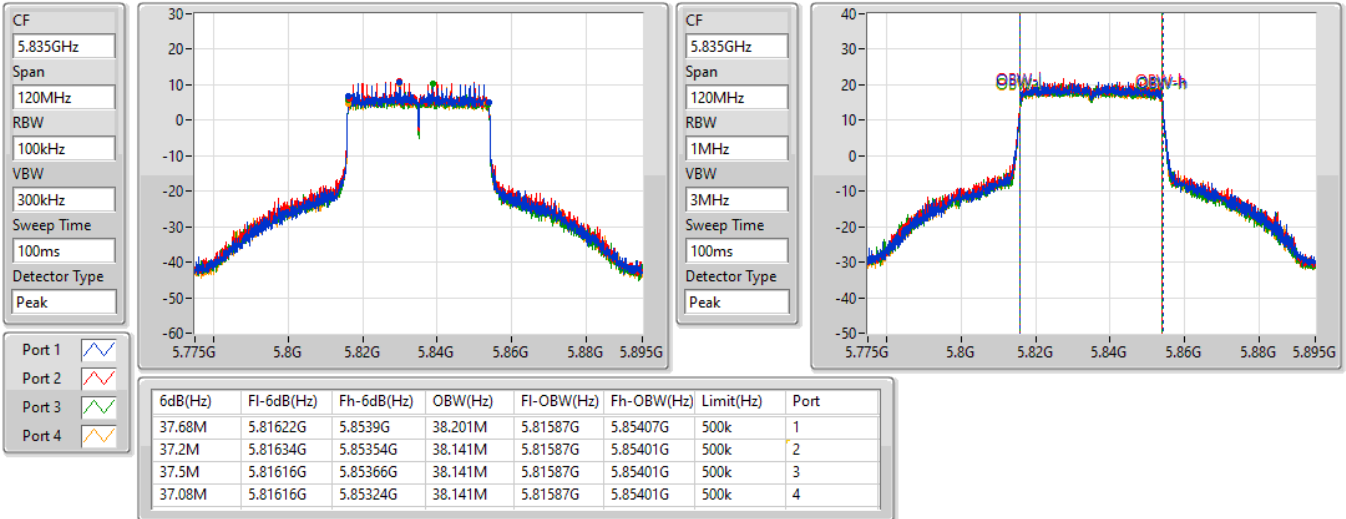

802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5885MHz

07/03/2022

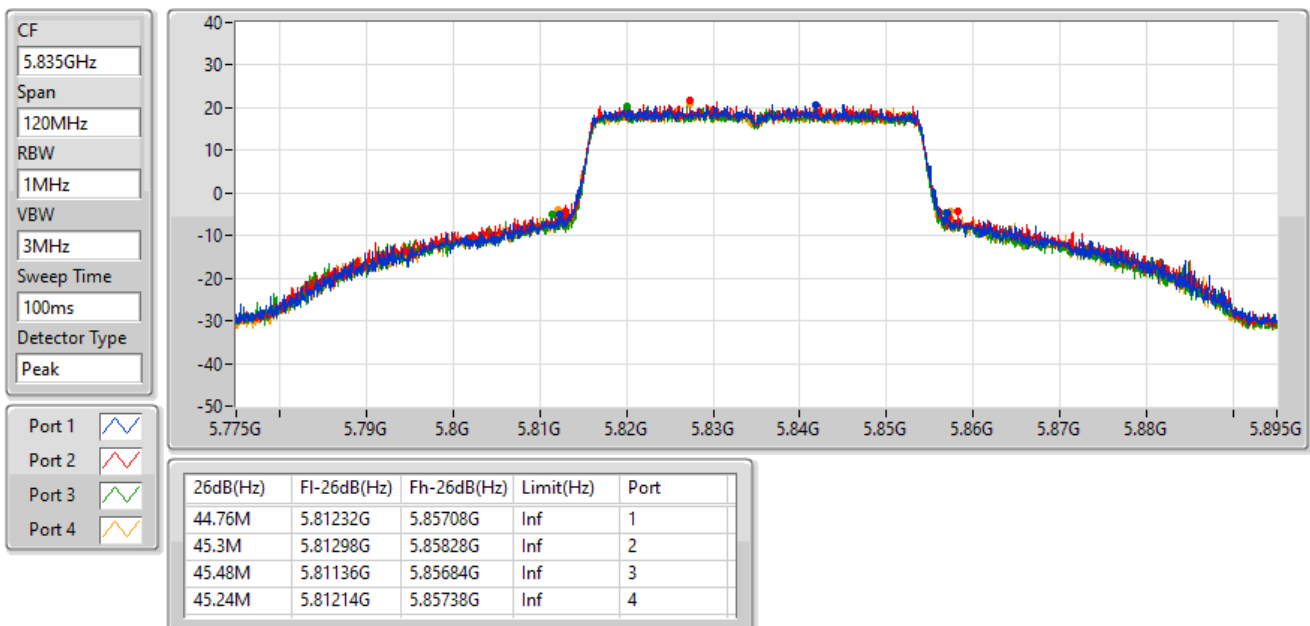


802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
5835MHz

07/03/2022

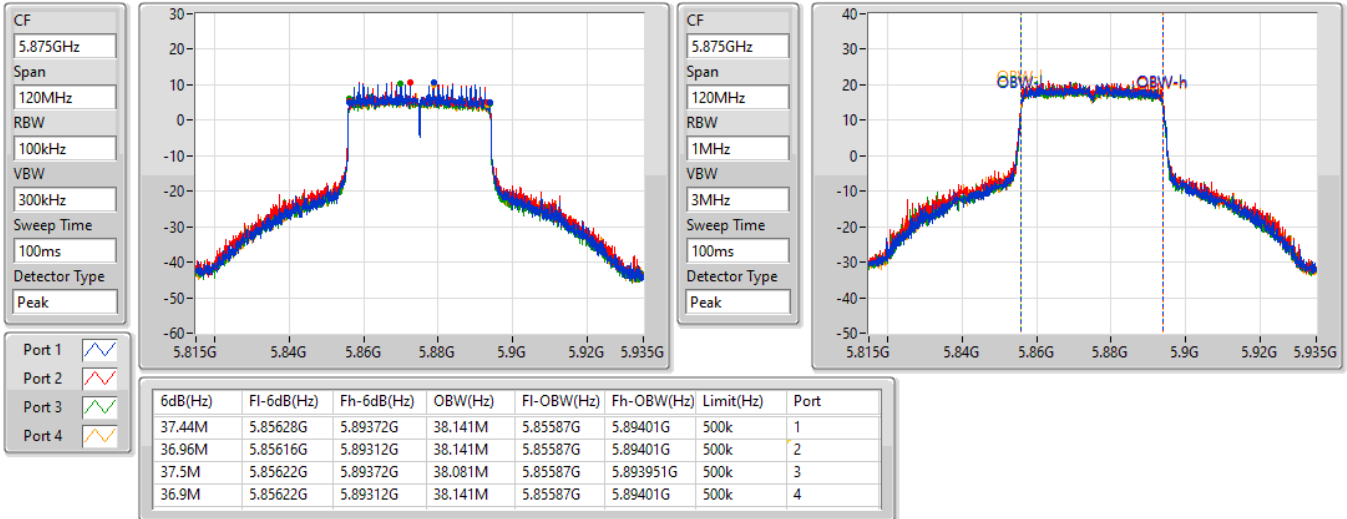

802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
5835MHz

07/03/2022

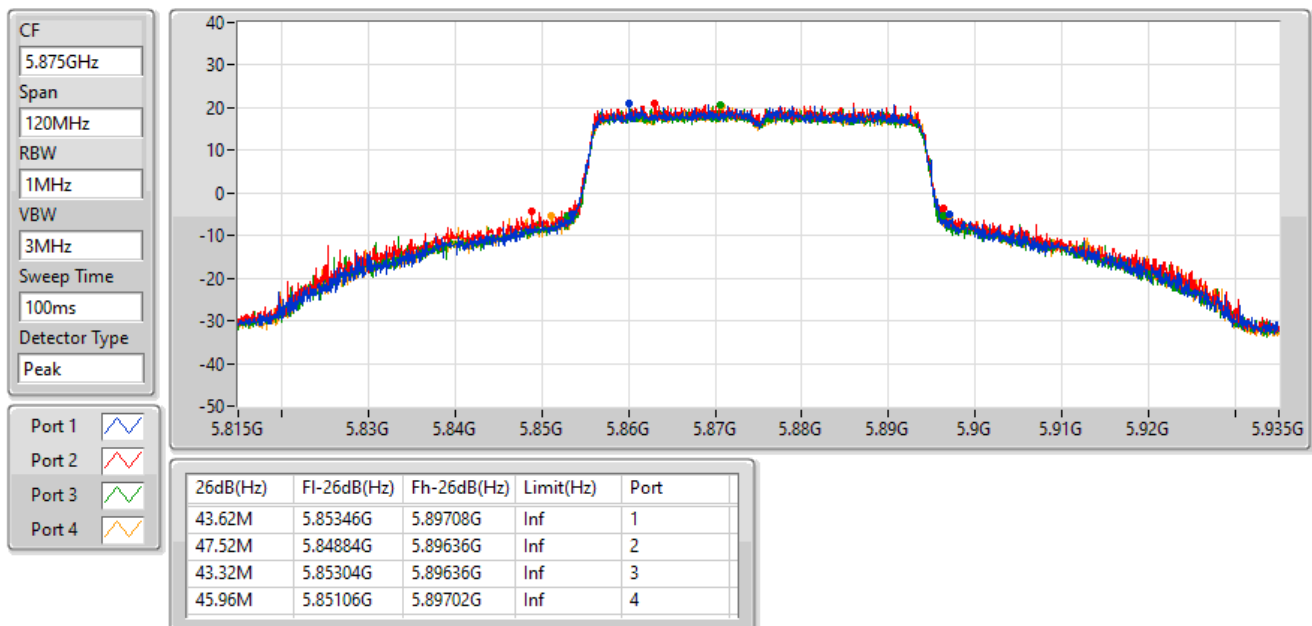


802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
5875MHz

07/03/2022

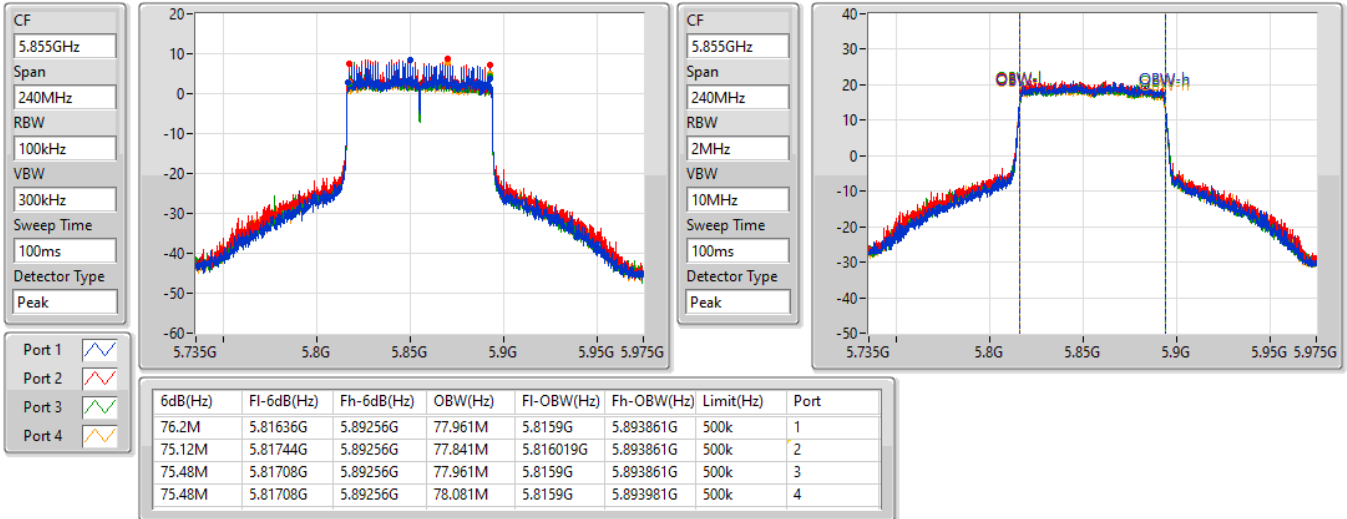

802.11ax HEW40-BF_Nss1,(MCS0)_4TX
EBW
5875MHz

07/03/2022

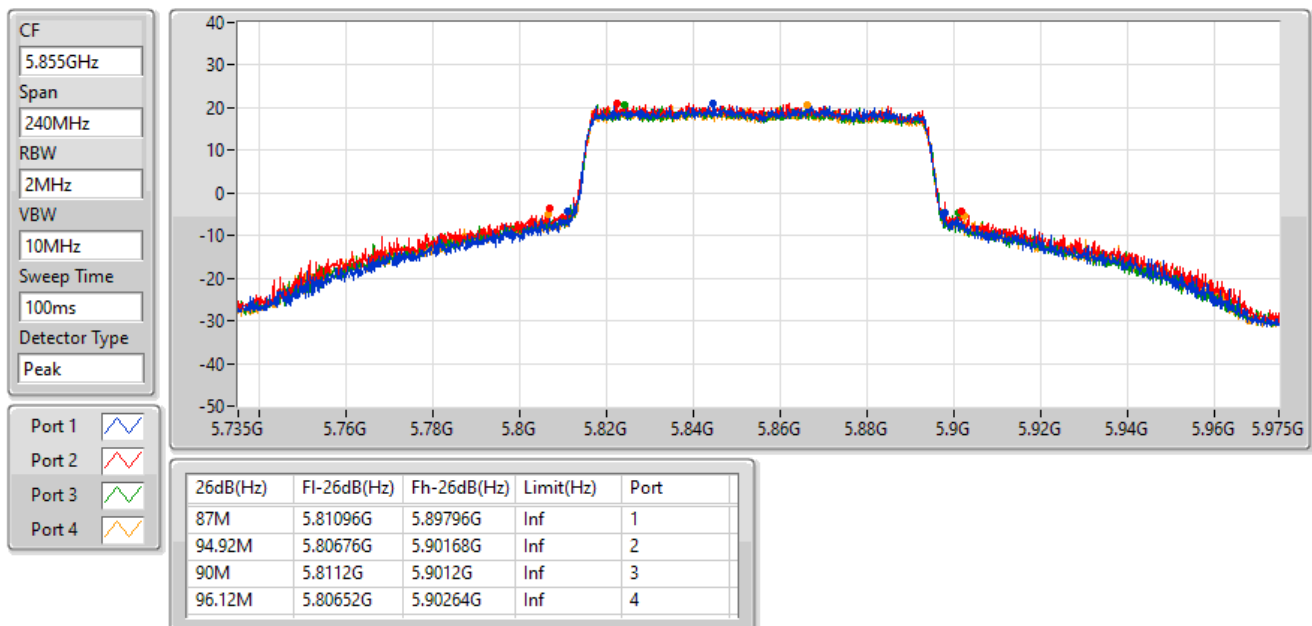


802.11ax HEW80-BF_Nss1,(MCS0)_4TX
EBW
5855MHz

07/03/2022

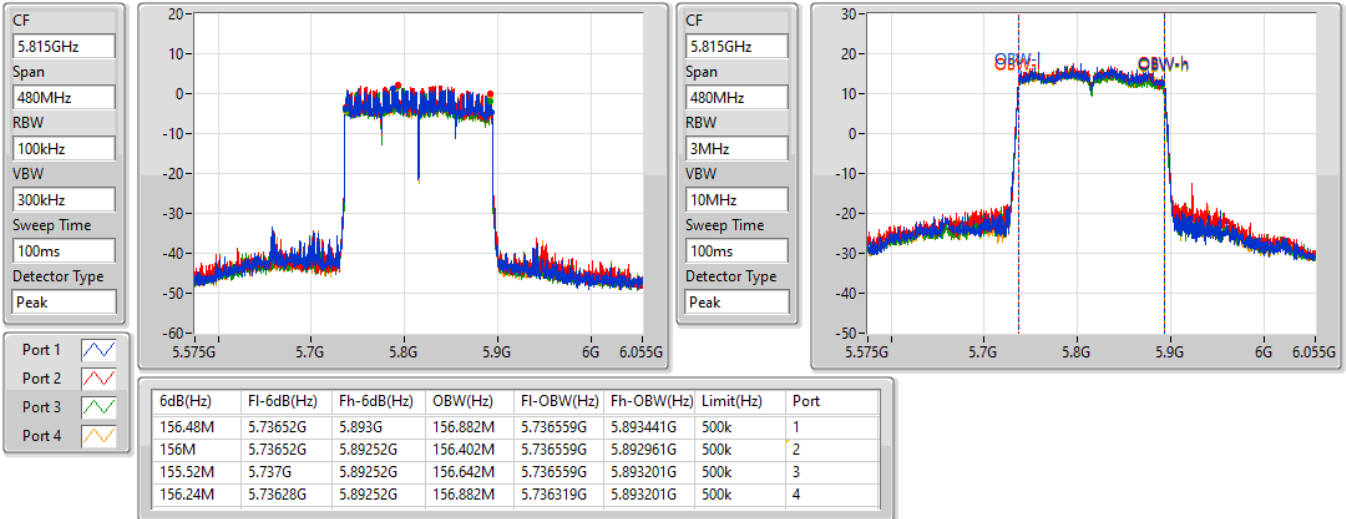

802.11ax HEW80-BF_Nss1,(MCS0)_4TX
EBW
5855MHz

07/03/2022

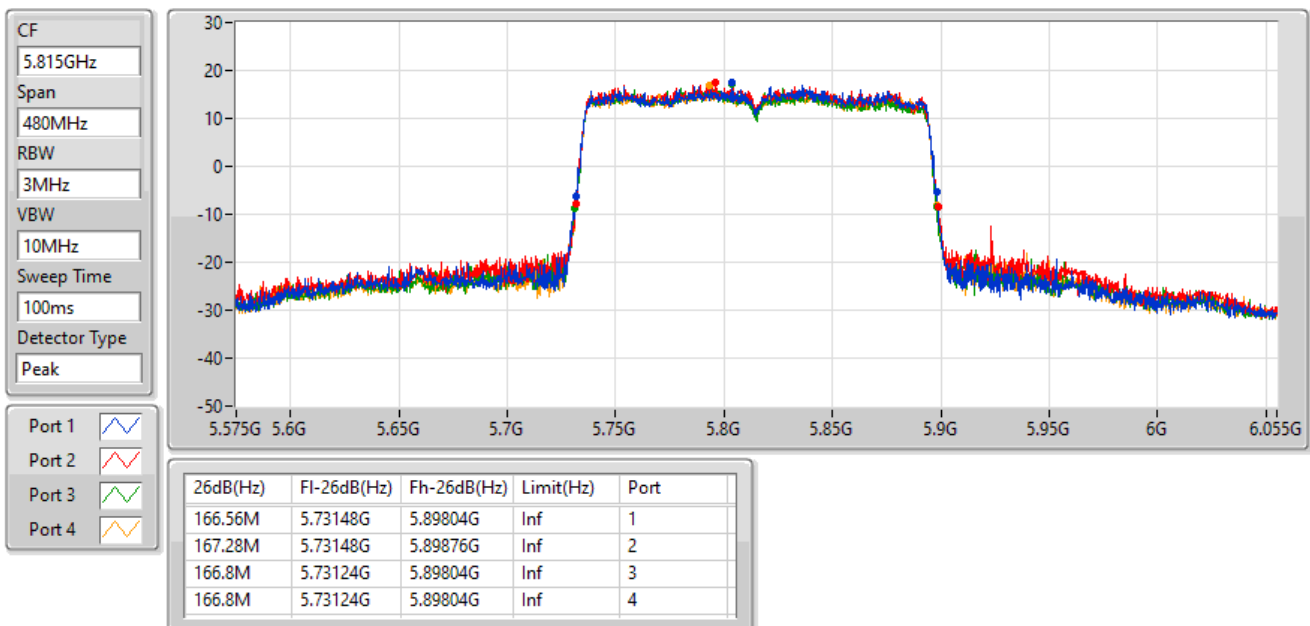


802.11ax HEW160-BF_Nss1,(MCS0)_4TX
EBW
5815MHz

07/03/2022


802.11ax HEW160-BF_Nss1,(MCS0)_4TX
EBW
5815MHz

07/03/2022



For UNII 4
4T2S <Beamforming Mode>
Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.725-5.895GHz	-	-	-	-	-
802.11ax HEW20-BF_Nss2,(MCS0)_4TX	19.08M	19.28M	19M3D1D	18.99M	19.22M
802.11ax HEW40-BF_Nss2,(MCS0)_4TX	37.98M	39.64M	39M6D1D	37.8M	38.861M
802.11ax HEW80-BF_Nss2,(MCS0)_4TX	77.76M	79.04M	79M0D1D	77.52M	78.561M
5.85-5.895GHz	-	-	-	-	-
802.11ax HEW20-BF_Nss2,(MCS0)_4TX	19.02M	19.28M	19M3D1D	18.93M	19.19M
802.11ax HEW40-BF_Nss2,(MCS0)_4TX	38.04M	42.039M	42M0D1D	37.86M	38.981M

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Max-OBW = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Min-OBW = Minimum 99% occupied bandwidth

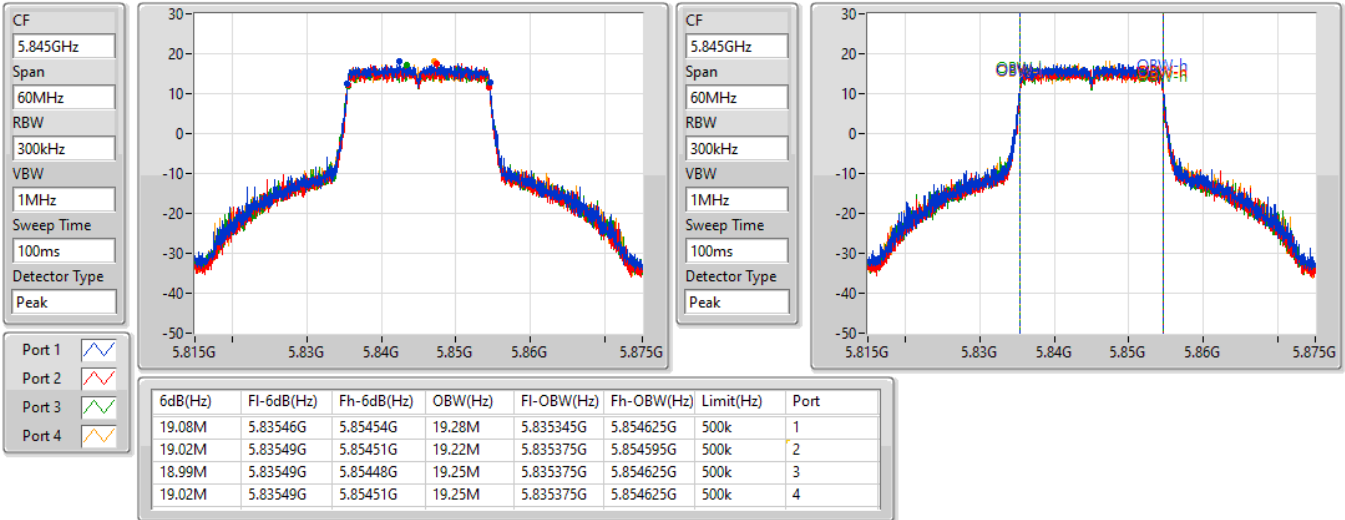
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ax HEW20-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5845MHz	Pass	500k	19.08M	19.28M	19.02M	19.22M	18.99M	19.25M	19.02M	19.25M
5865MHz	Pass	500k	18.96M	19.25M	19.02M	19.19M	19.02M	19.28M	18.99M	19.25M
5885MHz	Pass	500k	19.02M	19.25M	18.99M	19.22M	18.96M	19.19M	18.93M	19.19M
802.11ax HEW40-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5835MHz	Pass	500k	37.92M	38.861M	37.8M	39.64M	37.8M	39.04M	37.98M	38.921M
5875MHz	Pass	500k	38.04M	39.04M	37.86M	42.039M	37.92M	39.04M	37.92M	38.981M
802.11ax HEW80-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5855MHz	Pass	500k	77.76M	78.561M	77.76M	79.04M	77.52M	78.801M	77.64M	78.921M

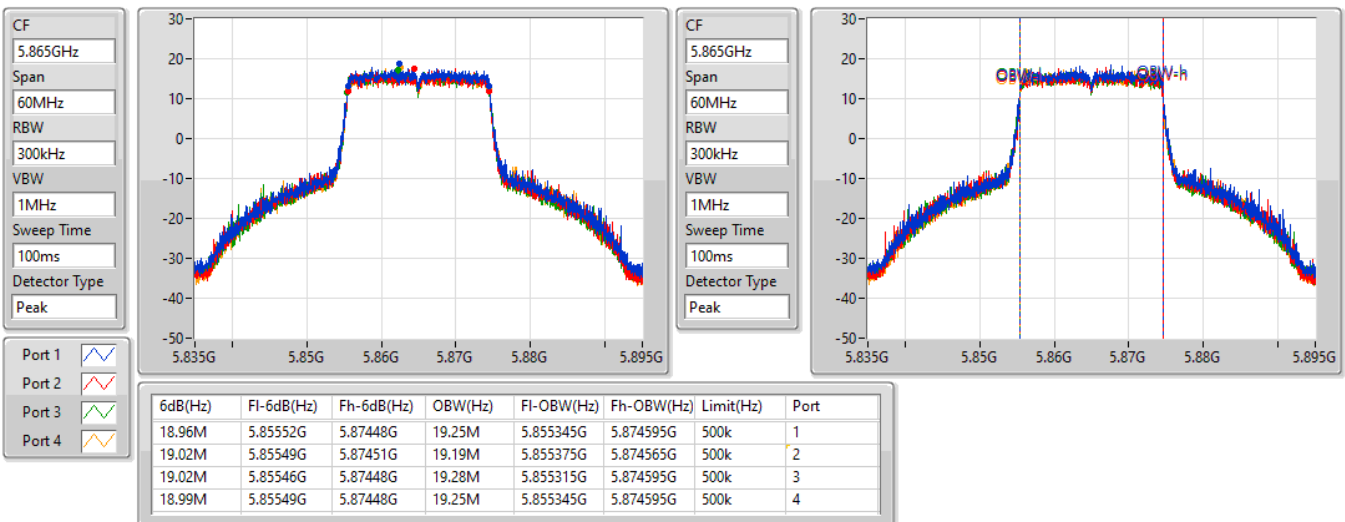
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11ax HEW20-BF_Nss2,(MCS0)_4TX
EBW
5845MHz

05/03/2022

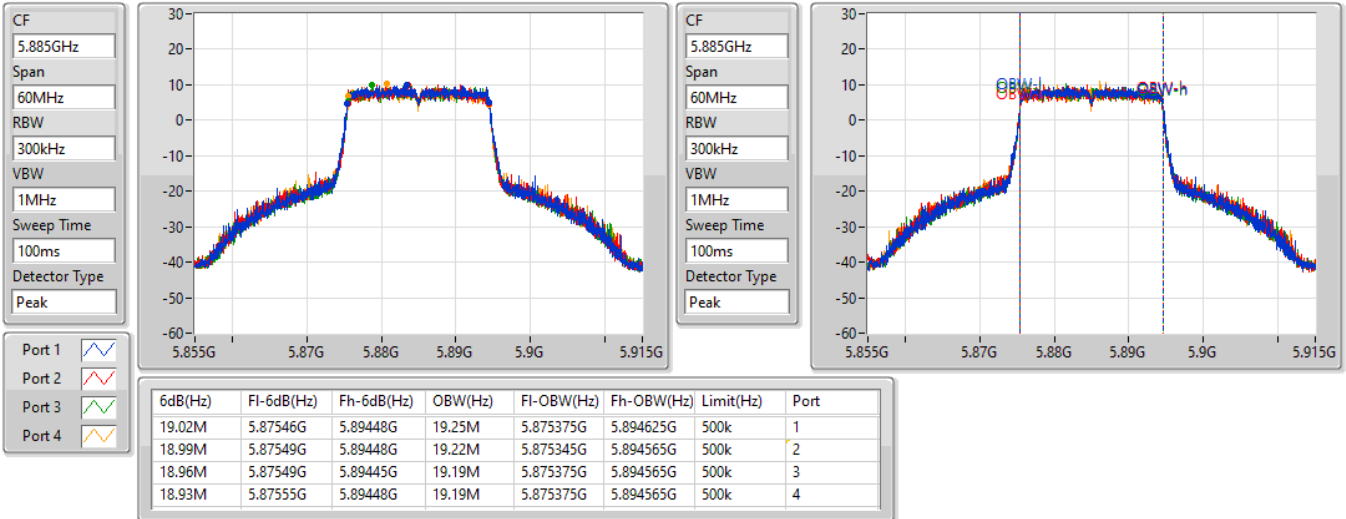

802.11ax HEW20-BF_Nss2,(MCS0)_4TX
EBW
5865MHz

05/03/2022

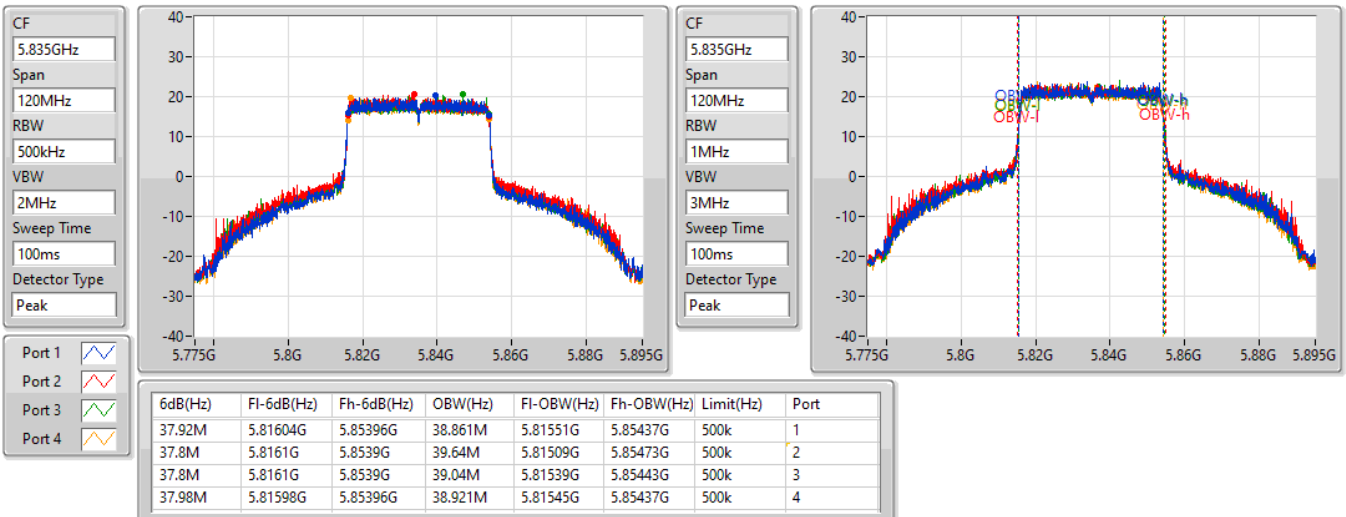


802.11ax HEW20-BF_Nss2,(MCS0)_4TX
EBW
5885MHz

05/03/2022

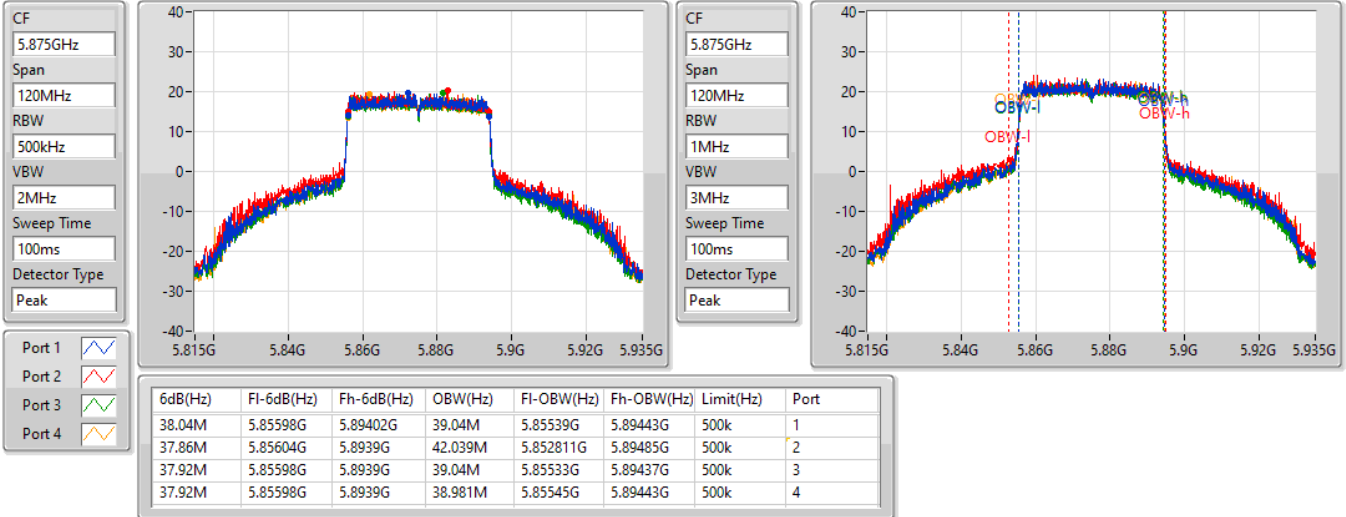

802.11ax HEW40-BF_Nss2,(MCS0)_4TX
EBW
5835MHz

05/03/2022

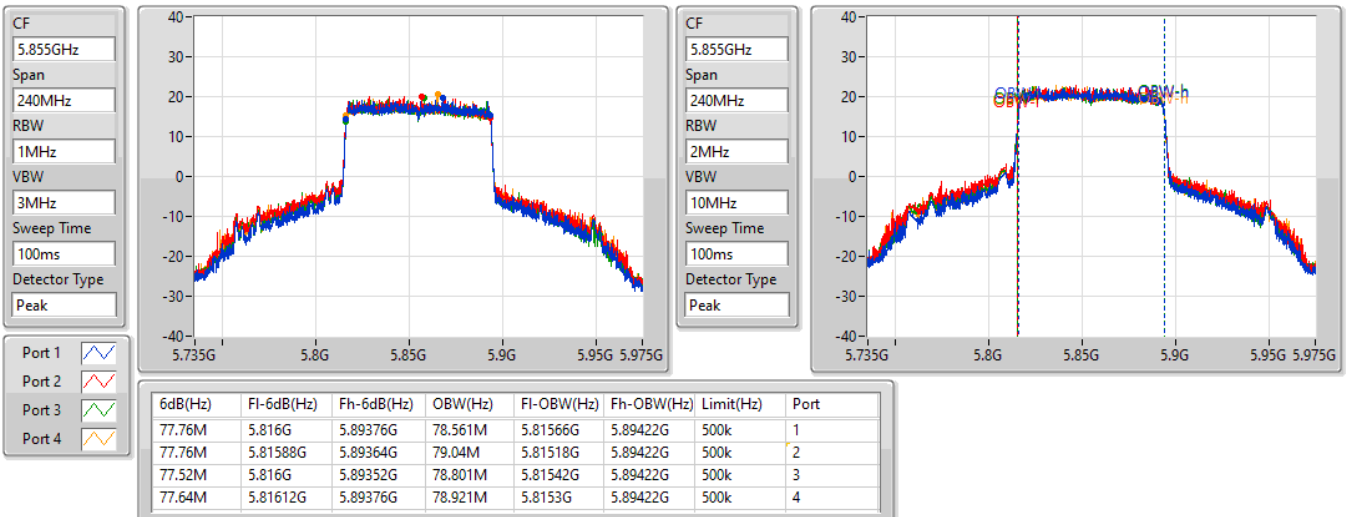


802.11ax HEW40-BF_Nss2,(MCS0)_4TX
EBW
5875MHz

05/03/2022


802.11ax HEW80-BF_Nss2,(MCS0)_4TX
EBW
5855MHz

05/03/2022





For UNII 1~2A
4T1S
Summary

Mode	Total Power (dBm)	Total Power (W)
5.15-5.25GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	29.92	0.98175
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	29.89	0.97499
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	29.91	0.97949
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	28.47	0.70307
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	22.36	0.17219
5.25-5.35GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	23.82	0.24099
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	23.94	0.24774
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	23.87	0.24378
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	23.90	0.24547
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	22.28	0.16904

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	3.87	23.79	23.78	24.07	23.89	29.90	30.00
5200MHz	Pass	3.87	23.80	23.62	24.08	24.07	29.92	30.00
5240MHz	Pass	3.87	23.89	23.73	23.25	24.20	29.80	30.00
5260MHz	Pass	3.16	17.74	17.22	18.25	17.76	23.78	23.98
5300MHz	Pass	3.16	18.08	17.35	18.27	17.44	23.82	23.98
5320MHz	Pass	3.16	17.92	17.30	18.28	17.43	23.77	23.98
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	5.31	23.56	22.96	23.63	23.48	29.44	30.00
5200MHz	Pass	5.31	23.73	23.28	24.01	24.04	29.80	30.00
5240MHz	Pass	5.31	23.72	23.59	24.03	24.12	29.89	30.00
5260MHz	Pass	5.97	17.91	17.45	17.92	18.34	23.94	23.98
5300MHz	Pass	5.97	17.75	17.27	17.86	18.03	23.76	23.98
5320MHz	Pass	5.97	17.64	17.52	17.87	17.98	23.78	23.98
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5190MHz	Pass	5.31	22.33	22.59	22.39	22.42	28.45	30.00
5230MHz	Pass	5.31	23.99	23.30	24.32	23.87	29.91	30.00
5270MHz	Pass	5.97	17.96	17.38	17.88	18.03	23.84	23.98
5310MHz	Pass	5.97	18.00	17.10	18.00	18.20	23.87	23.98
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	5.31	22.47	22.38	22.52	22.43	28.47	30.00
5290MHz	Pass	5.97	17.74	17.75	17.87	18.13	23.90	23.98
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	5.31	16.40	16.42	16.55	15.98	22.36	30.00
5250MHz Straddle 5.25-5.35GHz	Pass	5.97	16.17	16.51	16.22	16.11	22.28	23.98

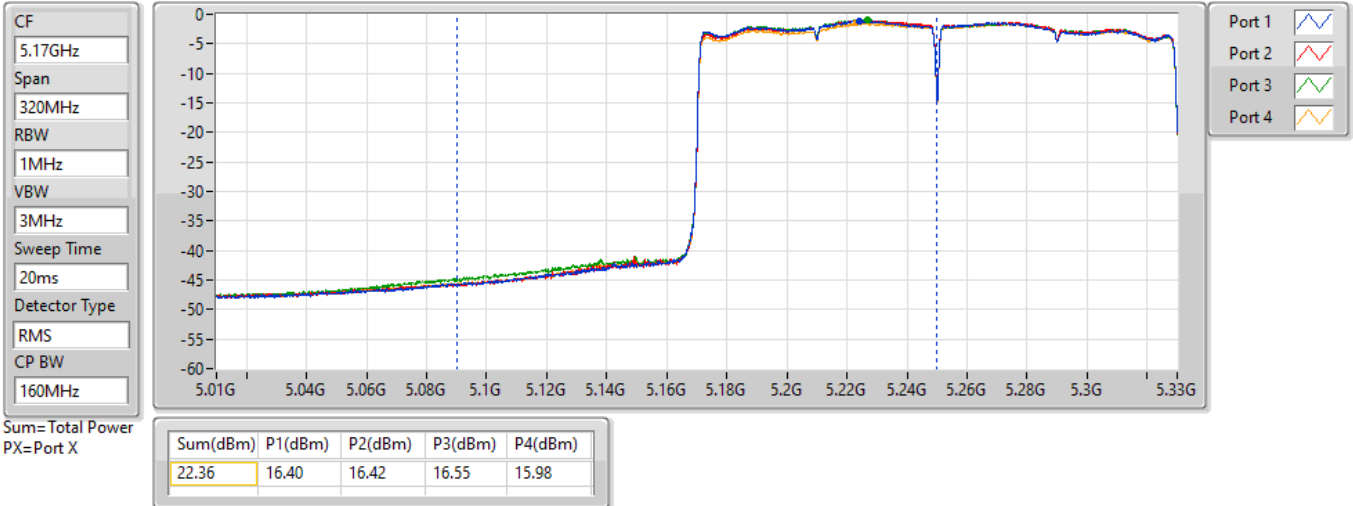
DG = Directional Gain; Port X = Port X output power

802.11ax HEW160-BF_Nss1,(MCS0)_4TX

AV Power

5250MHz Straddle 5.15-5.25GHz_TnomVnom

22/09/2021

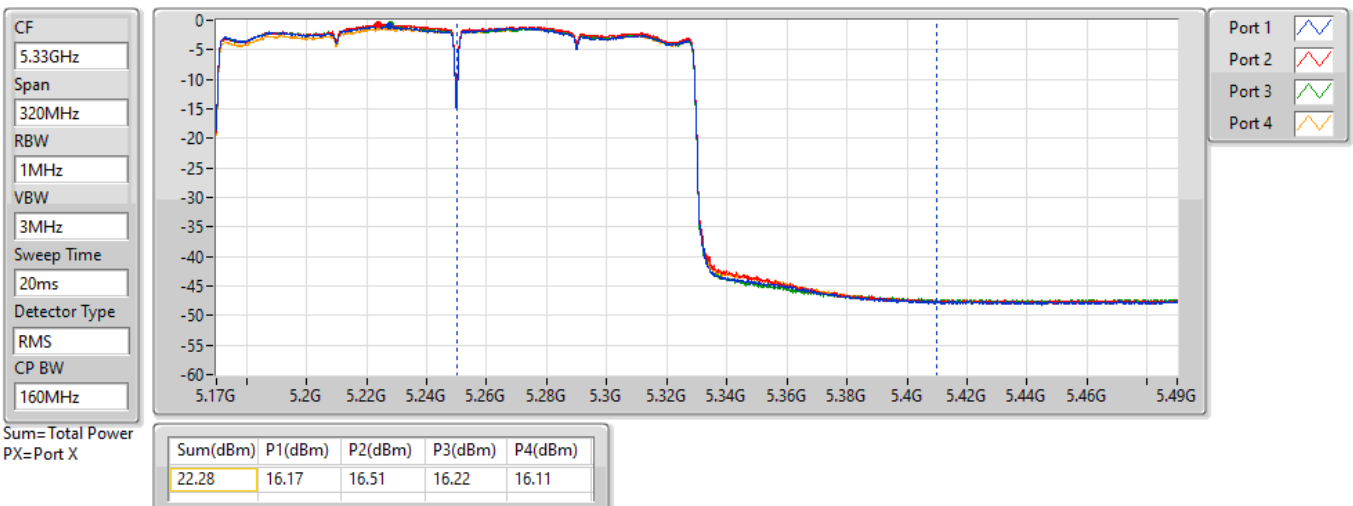


802.11ax HEW160-BF_Nss1,(MCS0)_4TX

AV Power

5250MHz Straddle 5.25-5.35GHz_TnomVnom

22/09/2021





Average Power

Appendix C.2

For UNII 1~2A

4T4S

Summary

Mode	Total Power (dBm)	Total Power (W)
5.15-5.25GHz	-	-
802.11ax HEW80_Nss4,(MCS0)_4TX	28.74	0.74817
802.11ax HEW160_Nss4,(MCS0)_4TX	24.01	0.25177
5.25-5.35GHz	-	-
802.11ax HEW160_Nss4,(MCS0)_4TX	23.87	0.24378



Average Power

Appendix C.2

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11ax HEW80_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	0.09	22.72	22.61	22.76	22.79	28.74	30.00
802.11ax HEW160_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	0.09	18.06	18.06	18.18	17.66	24.01	30.00
5250MHz Straddle 5.25-5.35GHz	Pass	0.26	17.88	17.81	17.91	17.79	23.87	23.98

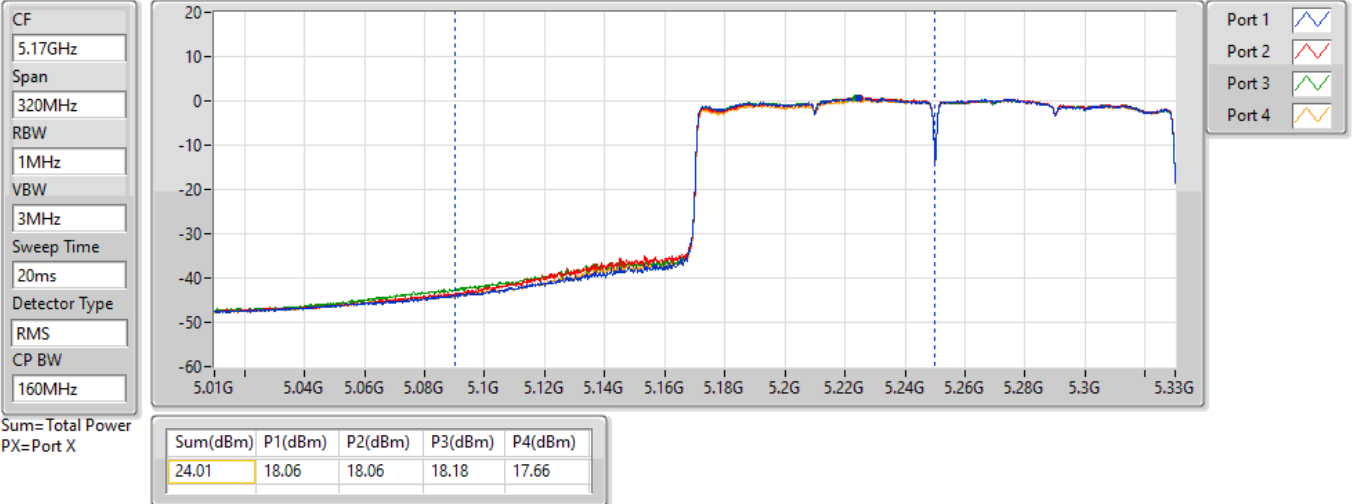
DG = Directional Gain; Port X = Port X output power

802.11ax HEW160_Nss4,(MCS0)_4TX

AV Power

5250MHz Straddle 5.15-5.25GHz_TnomVnom

22/09/2021

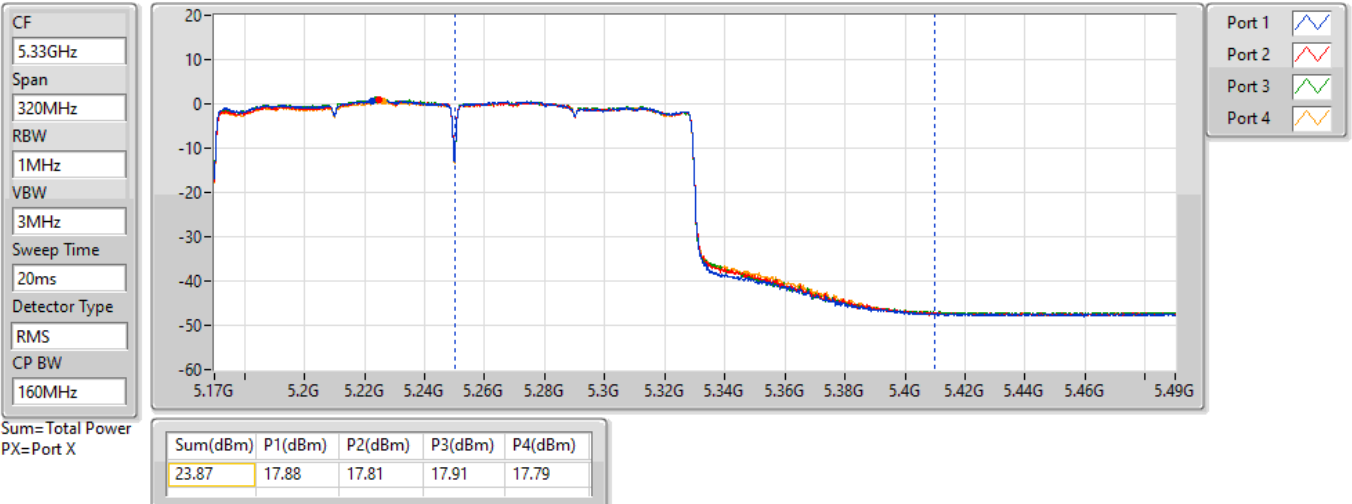


802.11ax HEW160_Nss4,(MCS0)_4TX

AV Power

5250MHz Straddle 5.25-5.35GHz_TnomVnom

22/09/2021





For UNII 2C~3
4T1S
Summary

Mode	Total Power (dBm)	Total Power (W)
5.47-5.725GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	23.85	0.24266
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	23.92	0.24660
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	23.92	0.24660
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	23.92	0.24660
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	23.90	0.24547
5.725-5.85GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	29.97	0.99312
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	29.76	0.94624
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	29.76	0.94624
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	29.72	0.93756

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-
5500MHz	Pass	3.09	18.09	17.57	17.77	17.86	23.85	23.98
5580MHz	Pass	3.09	17.52	17.60	18.01	17.81	23.76	23.98
5700MHz	Pass	3.09	17.80	17.31	17.93	17.97	23.78	23.98
5720MHz Straddle 5.47-5.725GHz	Pass	3.09	16.73	16.33	17.05	17.06	22.82	22.94
5720MHz Straddle 5.725-5.85GHz	Pass	2.53	10.69	10.21	11.07	11.06	16.79	30.00
5745MHz	Pass	2.53	24.11	23.67	24.23	23.78	29.97	30.00
5785MHz	Pass	2.53	23.80	23.89	24.20	23.85	29.96	30.00
5825MHz	Pass	2.53	24.13	23.69	23.55	23.83	29.83	30.00
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5500MHz	Pass	6.05	18.06	17.70	17.78	17.89	23.88	23.93
5580MHz	Pass	6.05	17.80	17.69	18.11	18.00	23.92	23.93
5700MHz	Pass	6.05	17.80	17.31	17.98	18.11	23.83	23.93
5720MHz Straddle 5.47-5.725GHz	Pass	6.05	16.69	16.25	17.02	16.99	22.77	22.92
5720MHz Straddle 5.725-5.85GHz	Pass	6.09	11.38	11.15	11.95	11.87	17.62	29.91
5745MHz	Pass	6.09	23.41	23.71	23.98	23.84	29.76	29.91
5785MHz	Pass	6.09	23.66	23.04	23.83	24.22	29.73	29.91
5825MHz	Pass	6.09	23.51	23.02	24.11	23.98	29.70	29.91
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5510MHz	Pass	6.05	17.71	17.74	18.06	18.08	23.92	23.93
5550MHz	Pass	6.05	17.38	17.65	17.78	18.03	23.74	23.93
5670MHz	Pass	6.05	17.62	17.43	18.19	17.59	23.74	23.93
5710MHz Straddle 5.47-5.725GHz	Pass	6.05	17.75	17.29	18.10	17.71	23.74	23.93
5710MHz Straddle 5.725-5.85GHz	Pass	6.09	8.02	7.66	8.56	8.11	14.12	29.91
5755MHz	Pass	6.09	23.50	23.28	23.94	24.01	29.71	29.91
5795MHz	Pass	6.09	23.46	23.55	24.01	23.91	29.76	29.91
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5530MHz	Pass	6.05	17.73	17.38	18.23	18.10	23.89	23.93
5610MHz	Pass	6.05	17.50	17.53	18.19	18.08	23.86	23.93
5690MHz Straddle 5.47-5.725GHz	Pass	6.05	17.79	17.47	18.21	18.10	23.92	23.93
5690MHz Straddle 5.725-5.85GHz	Pass	6.09	4.50	4.52	5.14	4.97	10.81	29.91
5775MHz	Pass	6.09	23.51	23.17	24.25	23.79	29.72	29.91
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5570MHz	Pass	6.05	17.61	17.42	18.28	18.13	23.90	23.93

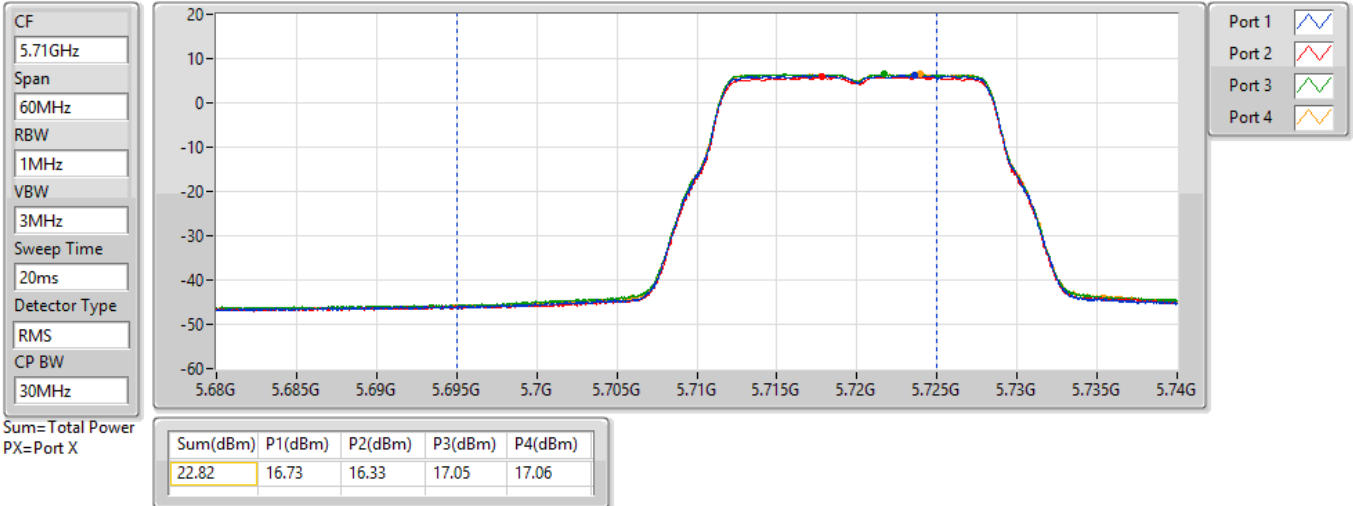
DG = Directional Gain; Port X = Port X output power

802.11a_Nss1,(6Mbps)_4TX

AV Power

5720MHz Straddle 5.47-5.725GHz_TnomVnom

07/10/2021

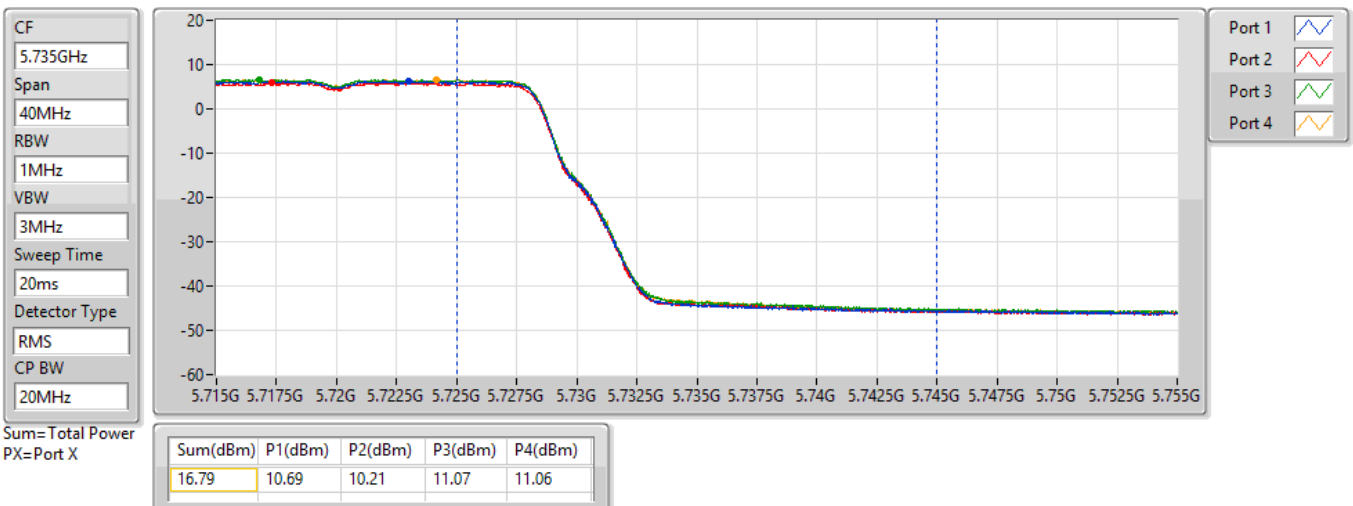


802.11a_Nss1,(6Mbps)_4TX

AV Power

5720MHz Straddle 5.725-5.85GHz_TnomVnom

07/10/2021

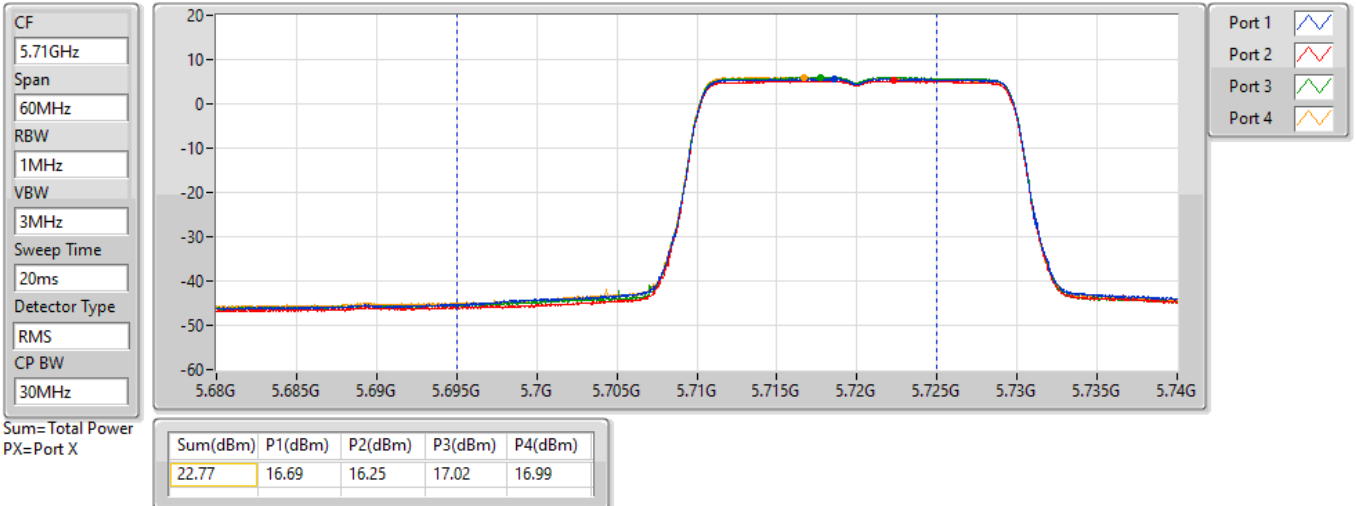


802.11ax HEW20-BF_Nss1,(MCS0)_4TX

AV Power

5720MHz Straddle 5.47-5.725GHz_TnomVnom

22/02/2022

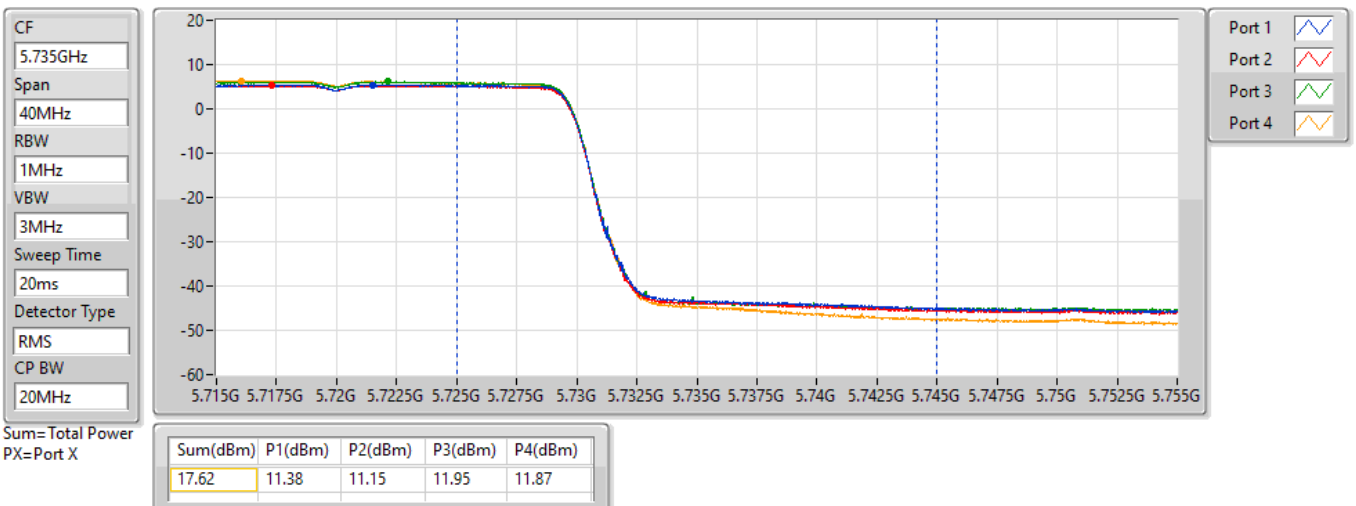


802.11ax HEW20-BF_Nss1,(MCS0)_4TX

AV Power

5720MHz Straddle 5.725-5.85GHz_TnomVnom

22/02/2022



802.11ax HEW40-BF_Nss1,(MCS0)_4TX

AV Power

5710MHz Straddle 5.47-5.725GHz_TnomVnom

22/02/2022

CF
5.69GHz

Span
140MHz

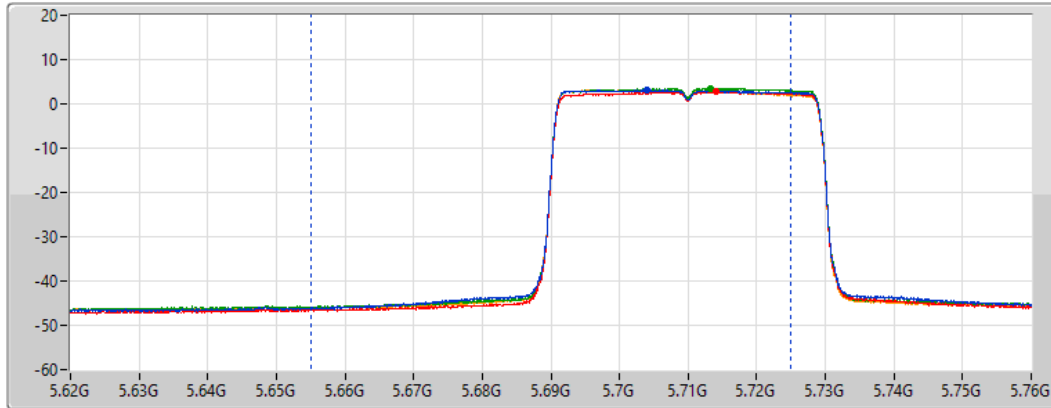
RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS

CP BW
70MHz



Port 1 ☐

Port 2 ☐

Port 3 ☐

Port 4 ☐

Sum= Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
23.74	17.75	17.29	18.10	17.71

802.11ax HEW40-BF_Nss1,(MCS0)_4TX

AV Power

5710MHz Straddle 5.725-5.85GHz_TnomVnom

22/02/2022

CF
5.735GHz

Span
40MHz

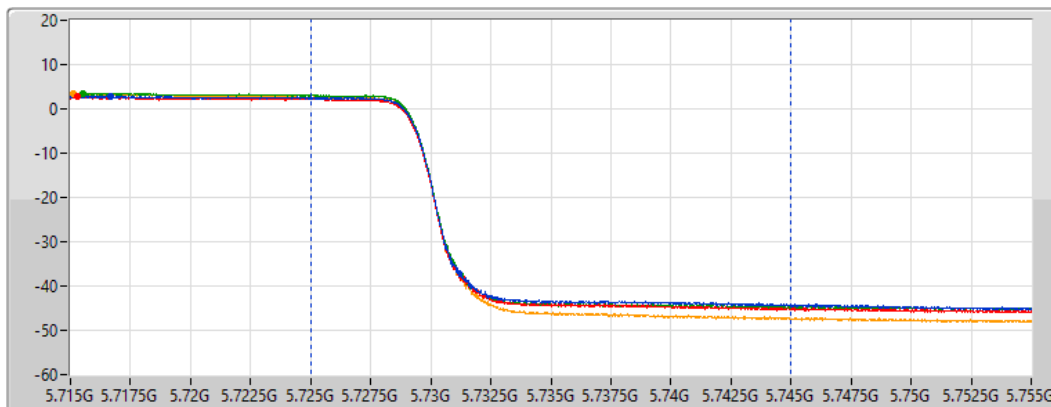
RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS

CP BW
20MHz



Port 1 ☐

Port 2 ☐

Port 3 ☐

Port 4 ☐

Sum= Total Power
PX=Port X

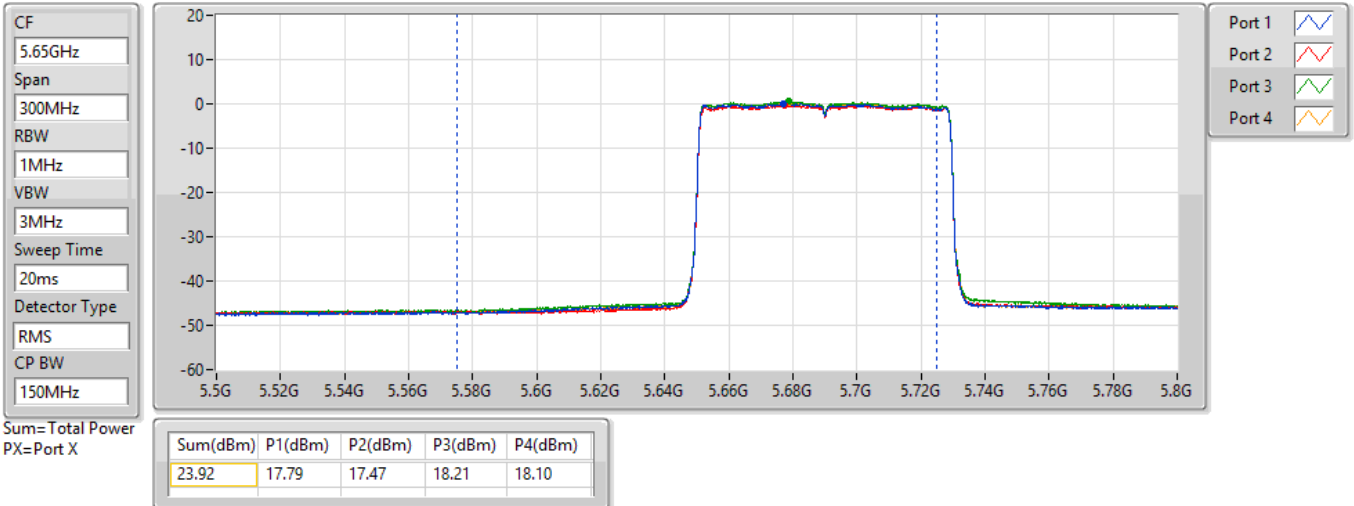
Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
14.12	8.02	7.66	8.56	8.11

802.11ax HEW80-BF_Nss1,(MCS0)_4TX

AV Power

5690MHz Straddle 5.47-5.725GHz_TnomVnom

07/10/2021

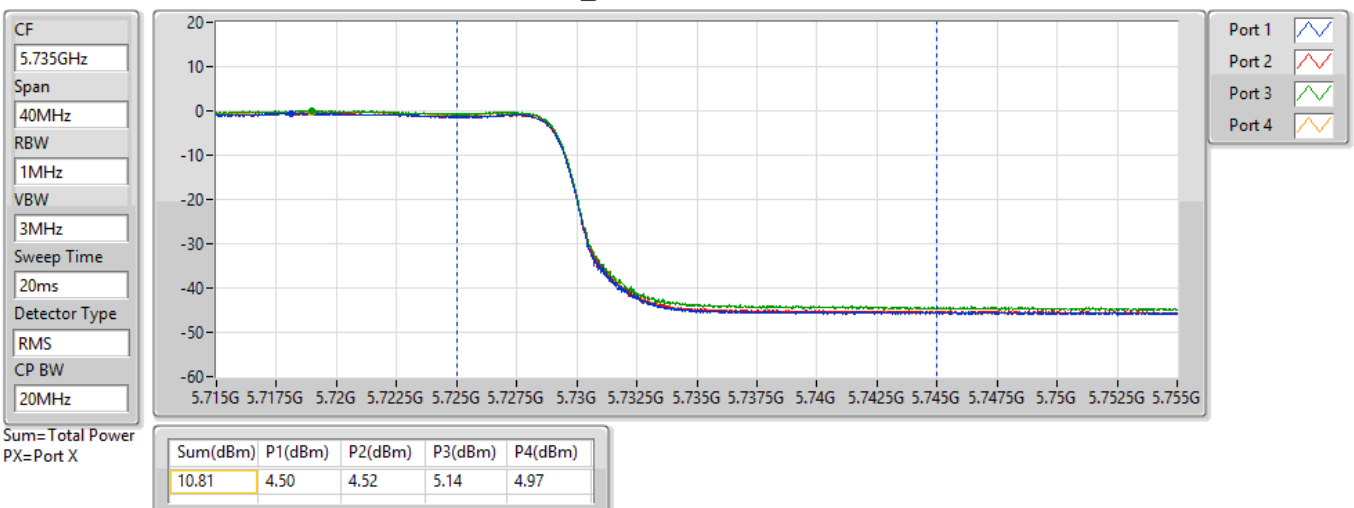


802.11ax HEW80-BF_Nss1,(MCS0)_4TX

AV Power

5690MHz Straddle 5.725-5.85GHz_TnomVnom

07/10/2021





Average Power

Appendix C.4

For UNII 2C~3

4T4S

Summary

Mode	Total Power (dBm)	Total Power (W)
5.47-5.725GHz	-	-
802.11ax HEW160_Nss4,(MCS0)_4TX	23.82	0.24099
5.725-5.85GHz	-	-
802.11ax HEW80_Nss4,(MCS0)_4TX	29.89	0.97499



Average Power

Appendix C.4

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11ax HEW80_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-
5775MHz	Pass	0.19	24.14	23.72	24.02	23.56	29.89	30.00
802.11ax HEW160_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-
5570MHz	Pass	0.06	17.85	17.68	17.89	17.76	23.82	23.98

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



Average Power

Appendix C.5

For UNII 4
4T1S <Non-beamforming Mode>
Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.725-5.895GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	26.69	0.46666	29.16	0.82414



Average Power

Appendix C.5

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-
5845MHz	Pass	2.47	21.12	20.90	20.31	20.29	26.69	29.16	36.00
5865MHz	Pass	2.47	21.04	20.88	20.08	20.50	26.66	29.13	36.00
5885MHz	Pass	2.47	20.83	20.58	20.06	20.11	26.43	28.90	36.00

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



For UNII 4
4T4S <Non-beamforming Mode>
Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP
				(W)
5.725-5.895GHz	-	-	-	-
802.11ax HEW80_Nss4,(MCS0)_4TX	31.75	1.49624	31.78	1.50661
802.11ax HEW160_Nss4,(MCS0)_4TX	26.11	0.40832	26.14	0.41115



Average Power

Appendix C.6

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11ax HEW80_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-
5855MHz	Pass	0.03	25.77	25.73	25.53	25.88	31.75	31.78	36.00
802.11ax HEW160_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-
5815MHz	Pass	0.03	20.12	20.42	19.74	20.07	26.11	26.14	36.00

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



For UNII 4
4T1S <Beamforming Mode>
Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.725-5.895GHz	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	27.29	0.53580	33.20	2.08930
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	29.95	0.98855	35.86	3.85478
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	29.99	0.99770	35.90	3.89045
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	26.79	0.47753	32.70	1.86209

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-
5845MHz	Pass	5.91	21.62	21.50	20.86	21.05	27.29	33.20	36.00
5865MHz	Pass	5.91	21.33	21.36	20.75	20.88	27.11	33.02	36.00
5885MHz	Pass	5.91	16.07	15.49	15.46	16.05	21.80	27.71	36.00
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-
5835MHz	Pass	5.91	23.84	24.38	23.50	23.94	29.95	35.86	36.00
5875MHz	Pass	5.91	23.80	24.22	23.82	23.70	29.91	35.82	36.00
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-
5855MHz	Pass	5.91	23.93	24.14	23.85	23.95	29.99	35.90	36.00
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-
5815MHz	Pass	5.91	20.82	20.98	20.52	20.76	26.79	32.70	36.00

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



For UNII 4
4T2S <Beamforming Mode>
Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.725-5.895GHz	-	-	-	-
802.11ax HEW20-BF_Nss2,(MCS0)_4TX	30.36	1.08643	33.27	2.12324
802.11ax HEW40-BF_Nss2,(MCS0)_4TX	32.78	1.89671	35.69	3.70681
802.11ax HEW80-BF_Nss2,(MCS0)_4TX	31.85	1.53109	34.76	2.99226
5.85-5.895GHz	-	-	-	-
802.11ax HEW20-BF_Nss2,(MCS0)_4TX	30.13	1.03039	33.04	2.01372
802.11ax HEW40-BF_Nss2,(MCS0)_4TX	32.33	1.71002	35.24	3.34195

**Result**

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11ax HEW20-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-
5845MHz	Pass	2.91	24.84	24.14	24.11	24.24	30.36	33.27	36.00
5865MHz	Pass	2.91	24.70	23.91	23.83	23.95	30.13	33.04	36.00
5885MHz	Pass	2.91	16.86	16.43	16.39	16.69	22.62	25.53	36.00
802.11ax HEW40-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-
5835MHz	Pass	2.91	26.93	26.89	26.57	26.64	32.78	35.69	36.00
5875MHz	Pass	2.91	26.36	26.56	26.19	26.12	32.33	35.24	36.00
802.11ax HEW80-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-
5855MHz	Pass	2.91	25.84	26.04	25.68	25.74	31.85	34.76	36.00

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

For UNII 1~2A

4T1S

Summary

Mode	PD (dBm/RBW)
5.15-5.25GHz	-
802.11a_Nss1,(6Mbps)_4TX	16.79
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	16.27
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	13.23
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	9.09
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	3.34
5.25-5.35GHz	-
802.11a_Nss1,(6Mbps)_4TX	10.78
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	10.12
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	7.22
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	4.41
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	3.18

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)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	5.31	10.62	10.47	11.03	10.58	16.59	17.00
5200MHz	Pass	5.31	10.82	10.52	11.15	11.03	16.79	17.00
5240MHz	Pass	5.31	10.81	10.59	11.05	10.86	16.72	17.00
5260MHz	Pass	5.97	4.76	4.17	5.45	4.66	10.65	11.00
5300MHz	Pass	5.97	5.25	4.40	5.18	4.77	10.78	11.00
5320MHz	Pass	5.97	4.82	4.31	5.11	4.37	10.58	11.00
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	5.31	9.93	9.34	10.24	9.97	15.81	17.00
5200MHz	Pass	5.31	10.17	9.56	10.64	10.42	16.12	17.00
5240MHz	Pass	5.31	10.20	9.96	10.48	10.62	16.27	17.00
5260MHz	Pass	5.97	4.28	3.45	4.18	4.57	10.12	11.00
5300MHz	Pass	5.97	4.21	3.31	4.27	4.30	10.01	11.00
5320MHz	Pass	5.97	4.11	3.32	4.22	4.31	9.95	11.00
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5190MHz	Pass	5.31	5.61	6.17	5.82	5.86	11.80	17.00
5230MHz	Pass	5.31	7.37	6.70	7.68	7.37	13.23	17.00
5270MHz	Pass	5.97	1.55	0.27	1.32	1.77	7.22	11.00
5310MHz	Pass	5.97	1.57	0.30	1.25	1.67	7.16	11.00
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	5.31	3.15	3.09	3.18	3.18	9.09	17.00
5290MHz	Pass	5.97	-1.65	-1.82	-1.35	-1.42	4.41	11.00
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	5.31	-2.69	-2.42	-2.39	-3.00	3.34	17.00
5250MHz Straddle 5.25-5.35GHz	Pass	5.97	-2.79	-2.71	-2.74	-2.84	3.18	11.00

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

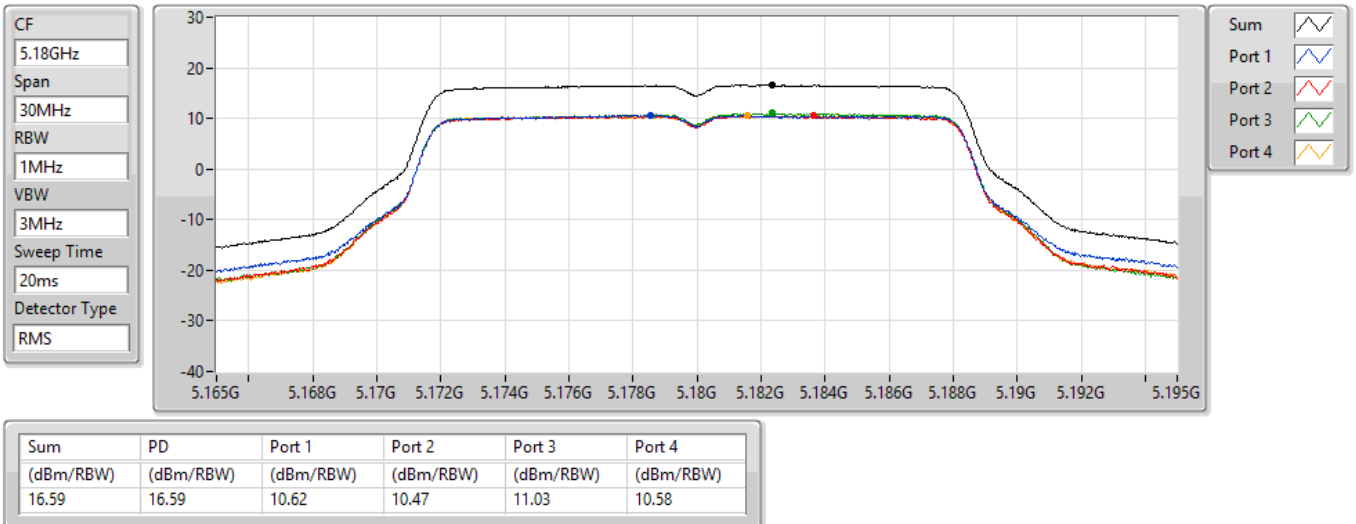
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;

802.11a_Nss1,(6Mbps)_4TX

PSD

5180MHz

07/10/2021

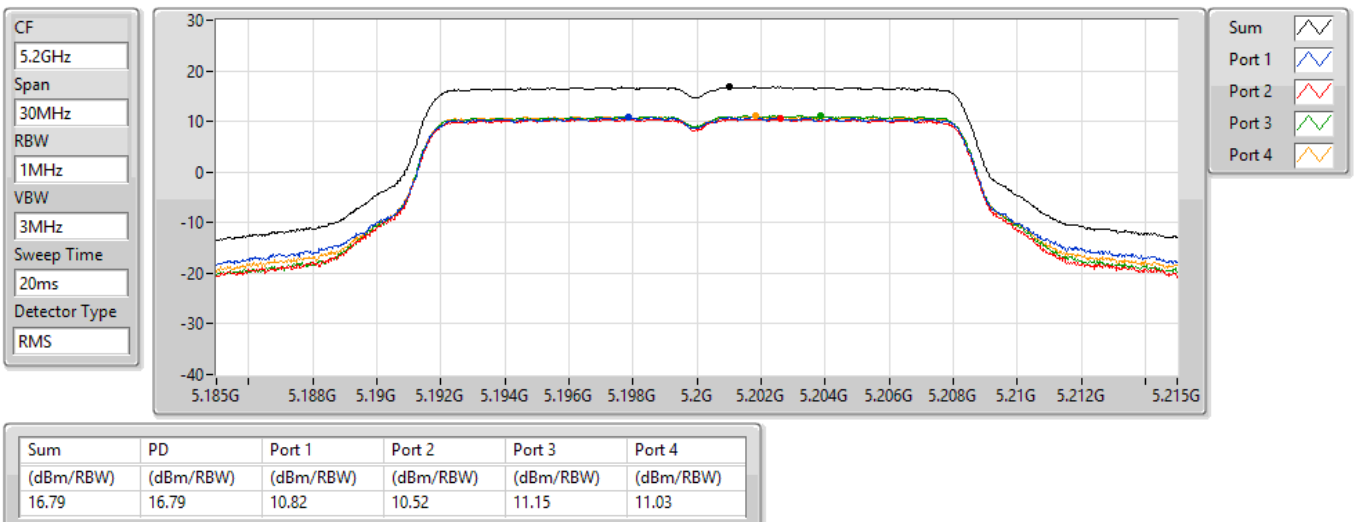


802.11a_Nss1,(6Mbps)_4TX

PSD

5200MHz

07/10/2021

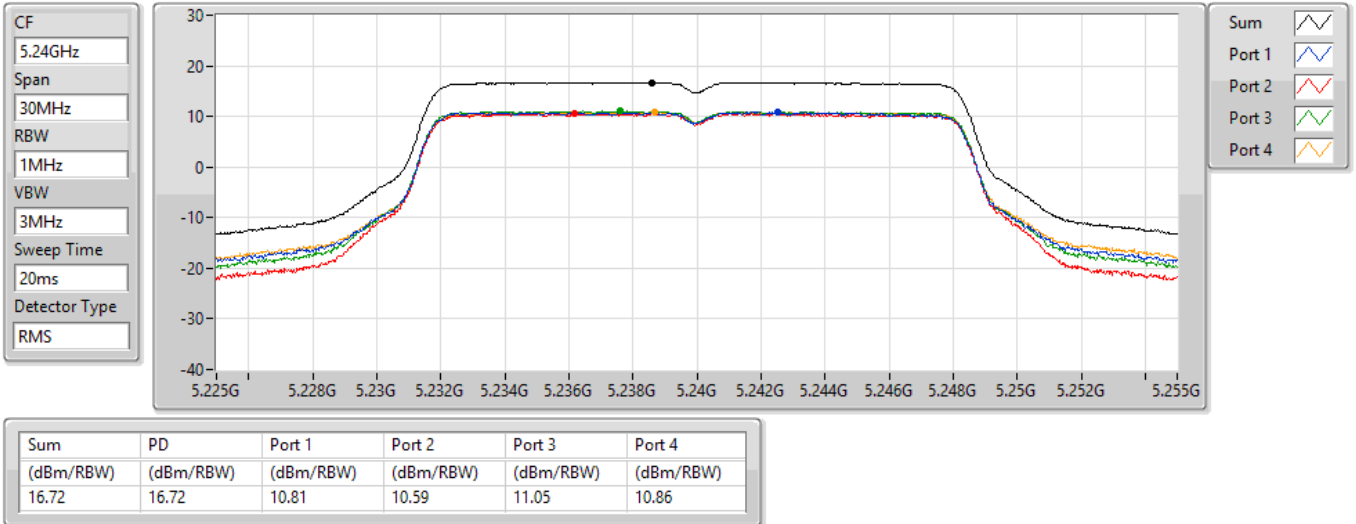


802.11a_Nss1,(6Mbps)_4TX

PSD

5240MHz

07/10/2021

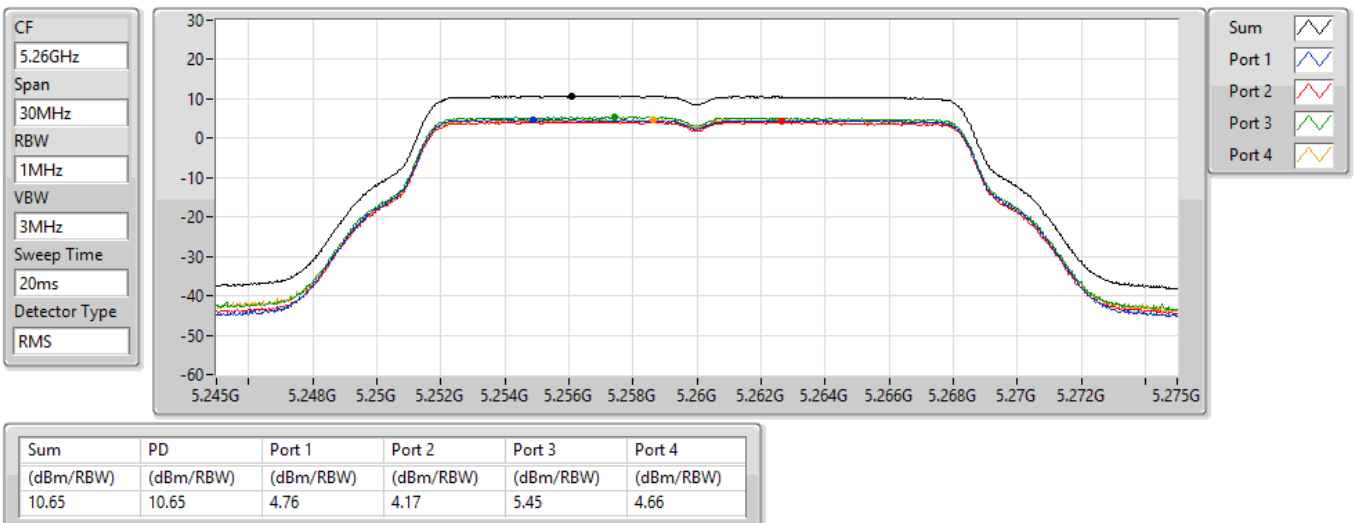


802.11a_Nss1,(6Mbps)_4TX

PSD

5260MHz

07/10/2021

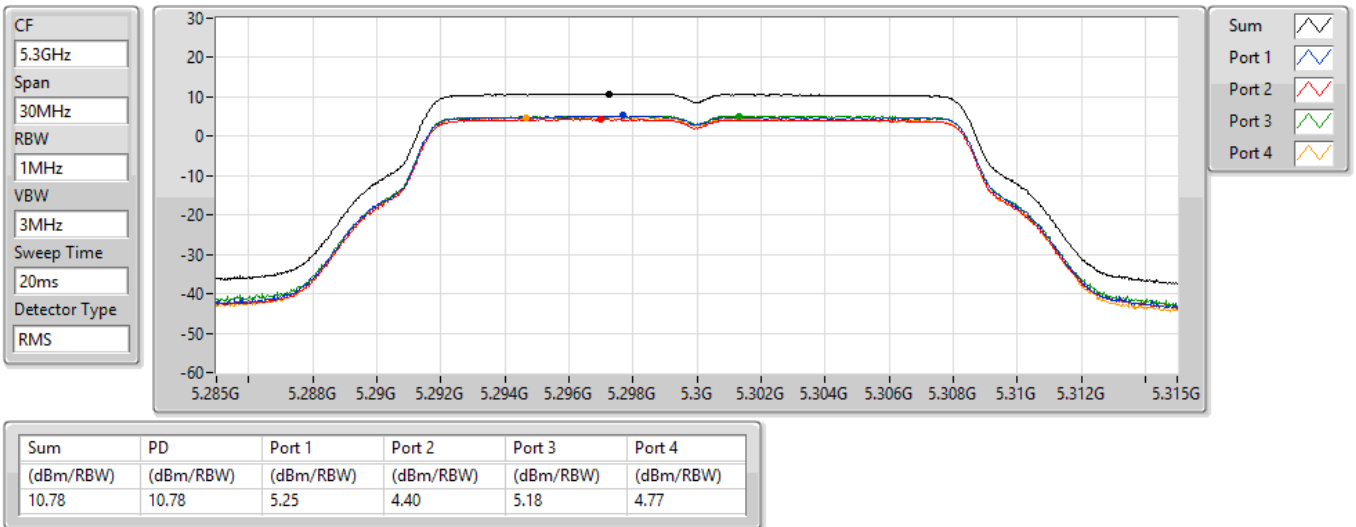


802.11a_Nss1,(6Mbps)_4TX

PSD

5300MHz

07/10/2021

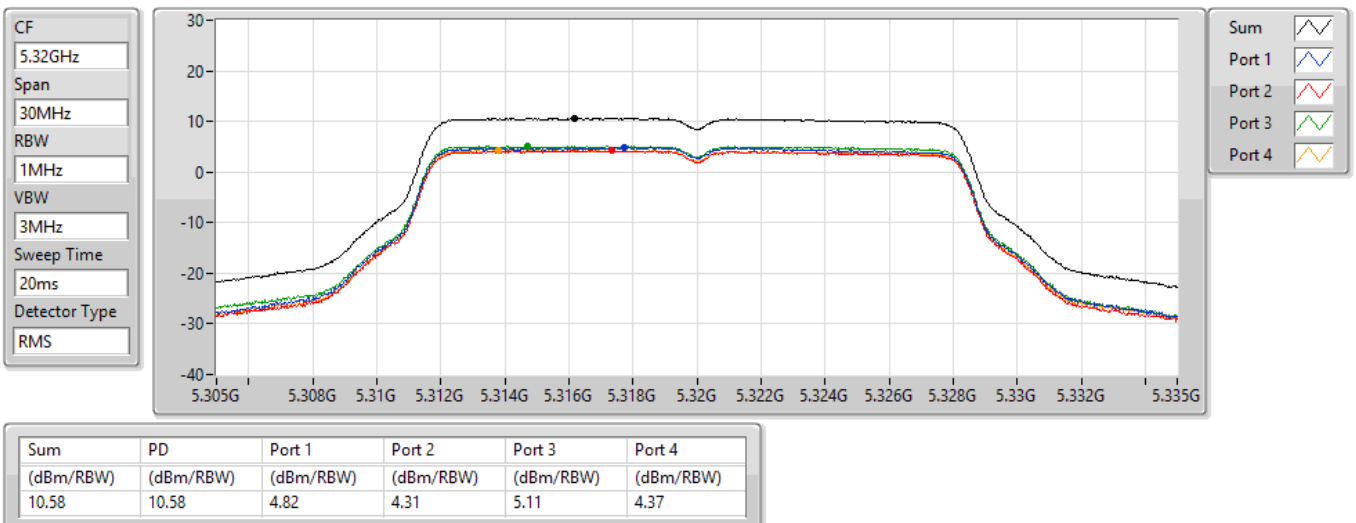


802.11a_Nss1,(6Mbps)_4TX

PSD

5320MHz

07/10/2021

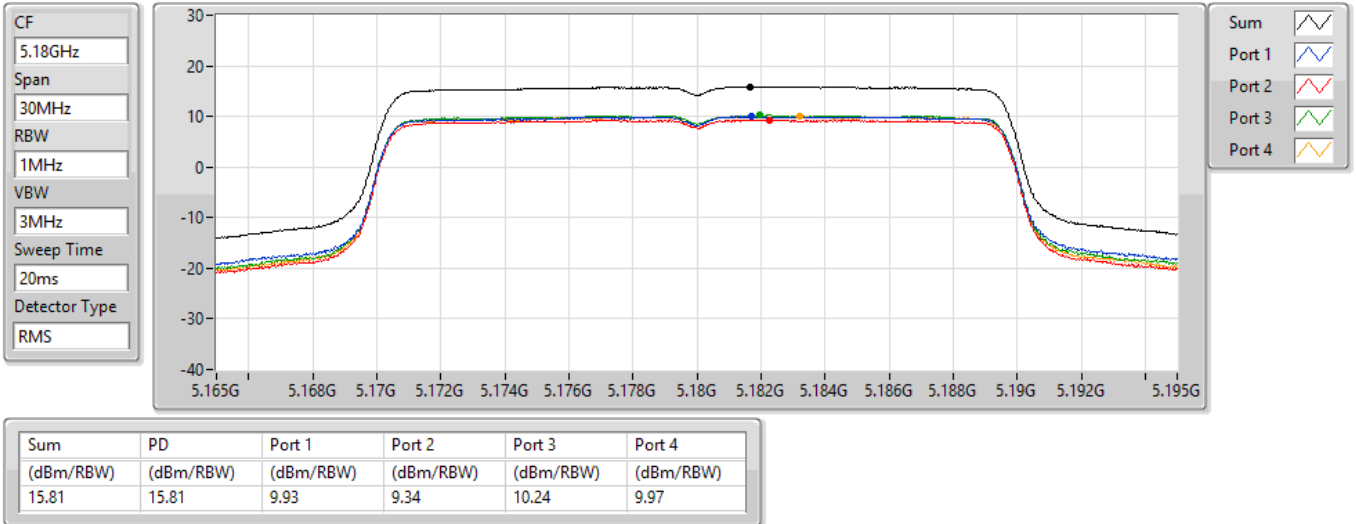


802.11ax HEW20-BF_Nss1,(MCS0)_4TX

PSD

5180MHz

07/10/2021

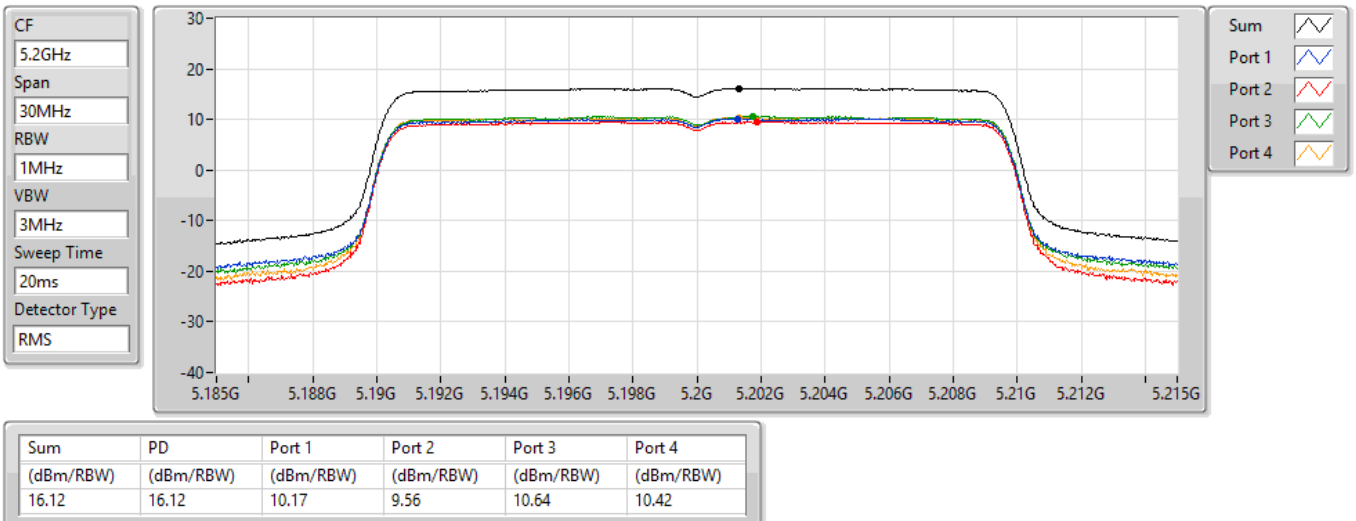


802.11ax HEW20-BF_Nss1,(MCS0)_4TX

PSD

5200MHz

07/10/2021

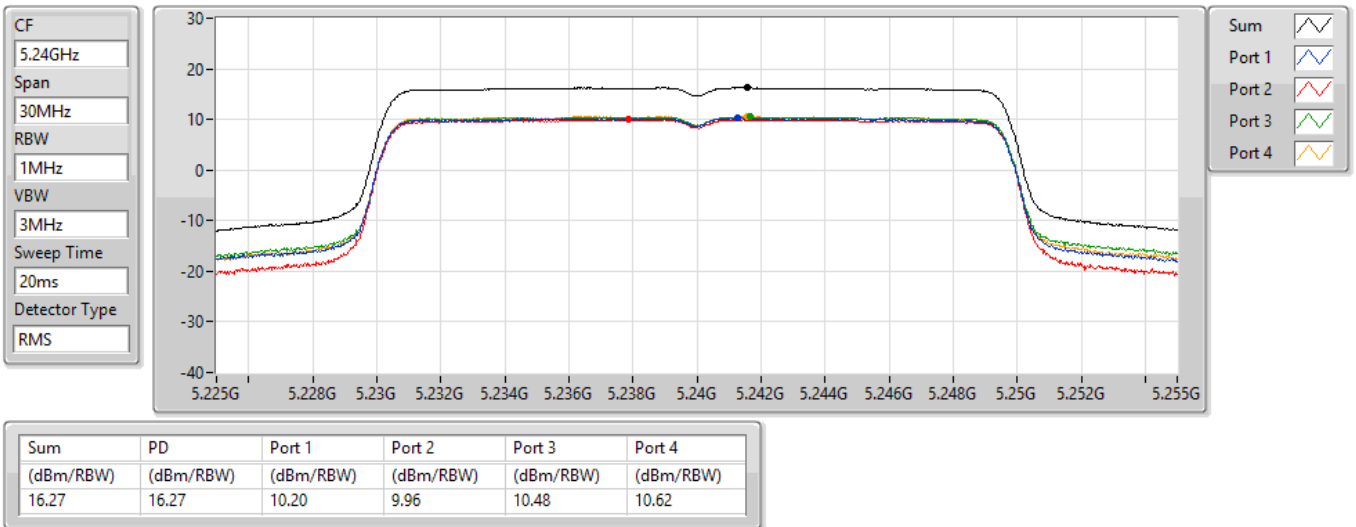


802.11ax HEW20-BF_Nss1,(MCS0)_4TX

PSD

5240MHz

07/10/2021

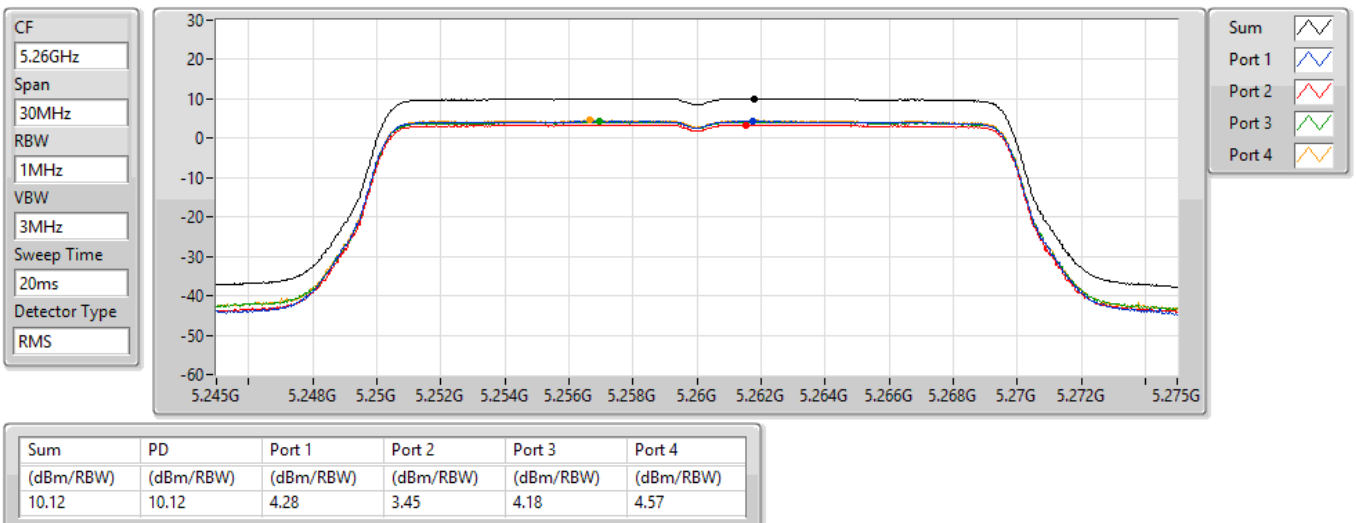


802.11ax HEW20-BF_Nss1,(MCS0)_4TX

PSD

5260MHz

07/10/2021

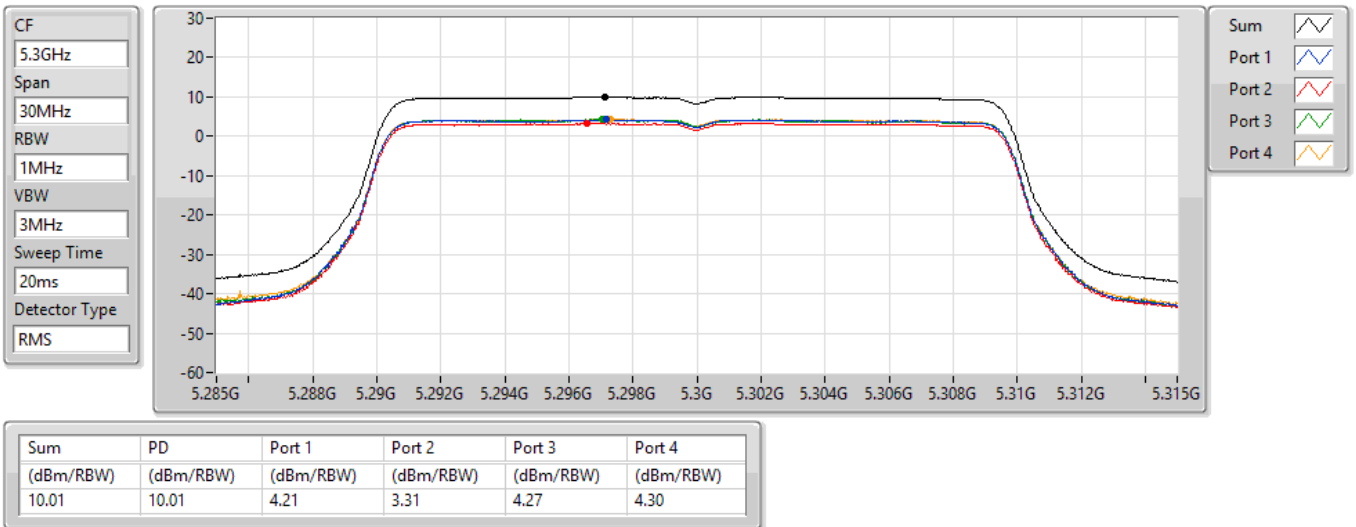


802.11ax HEW20-BF_Nss1,(MCS0)_4TX

PSD

5300MHz

07/10/2021

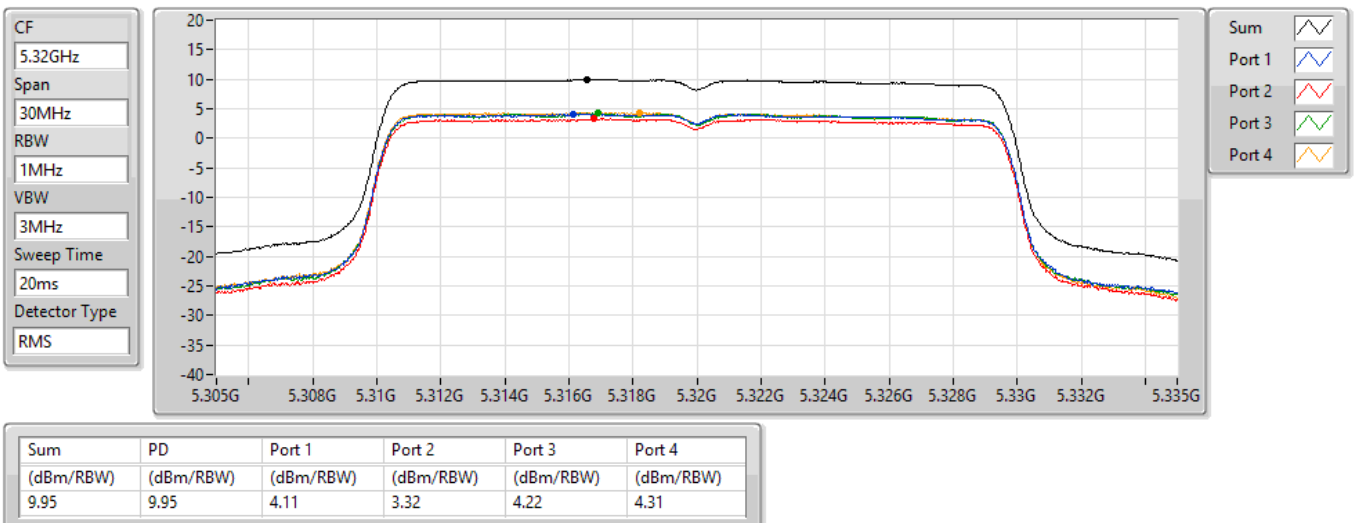


802.11ax HEW20-BF_Nss1,(MCS0)_4TX

PSD

5320MHz

07/10/2021

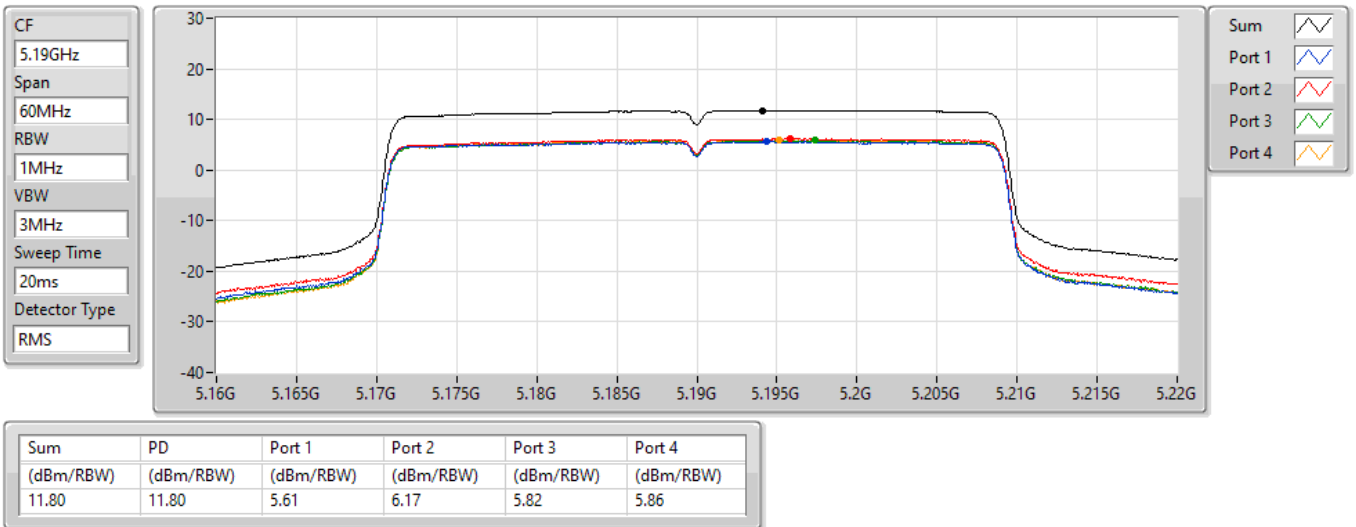


802.11ax HEW40-BF_Nss1,(MCS0)_4TX

PSD

5190MHz

22/09/2021

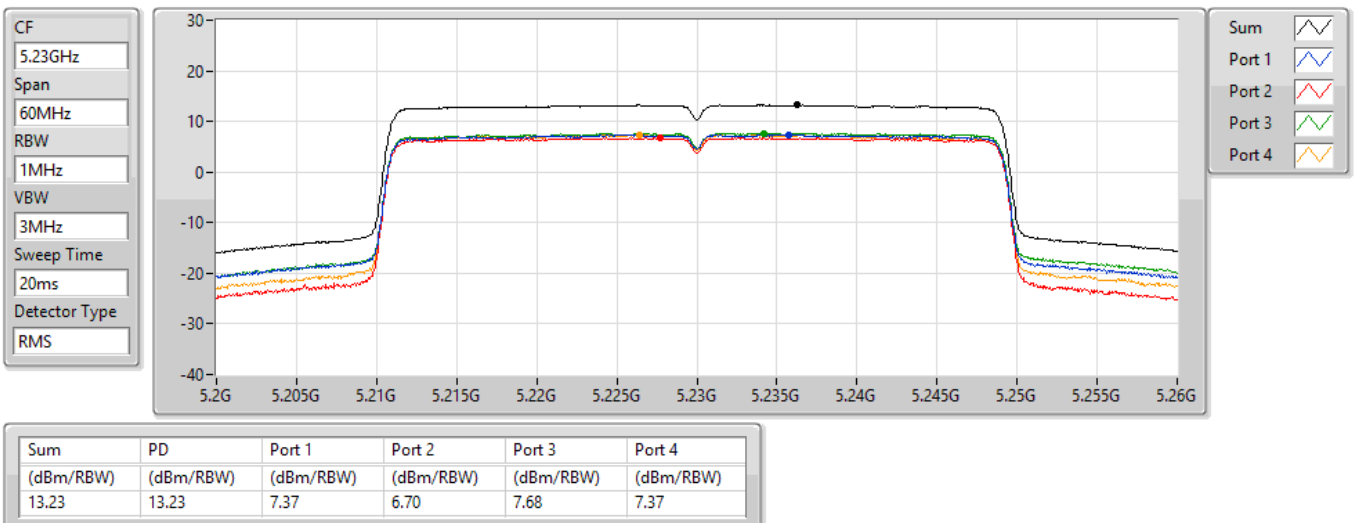


802.11ax HEW40-BF_Nss1,(MCS0)_4TX

PSD

5230MHz

07/10/2021



802.11ax HEW40-BF_Nss1,(MCS0)_4TX

PSD

5270MHz

07/10/2021

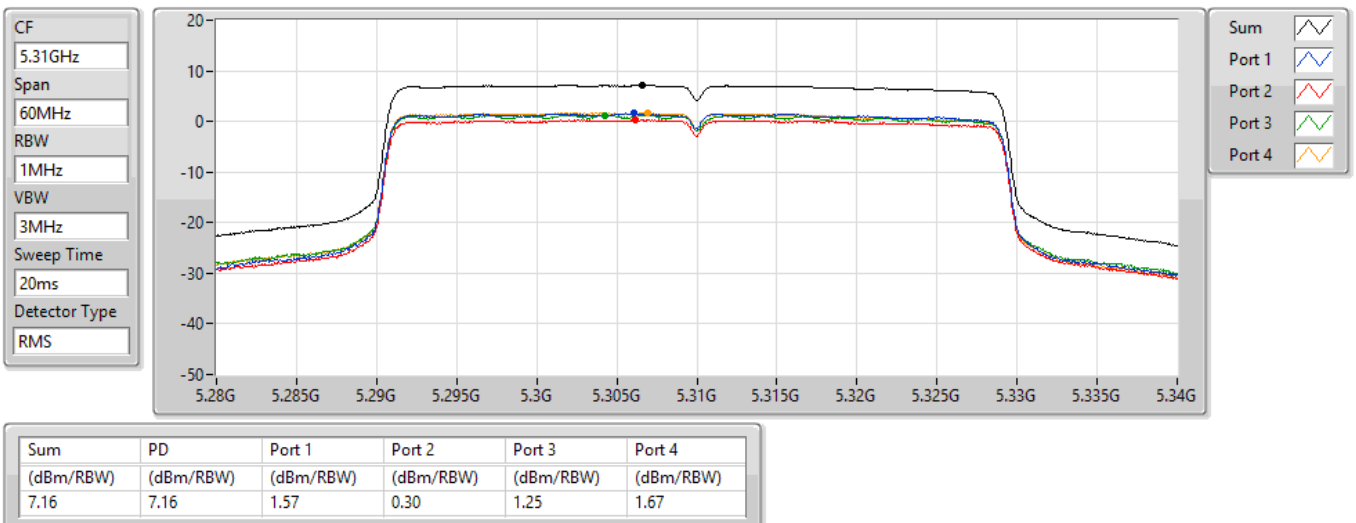


802.11ax HEW40-BF_Nss1,(MCS0)_4TX

PSD

5310MHz

07/10/2021

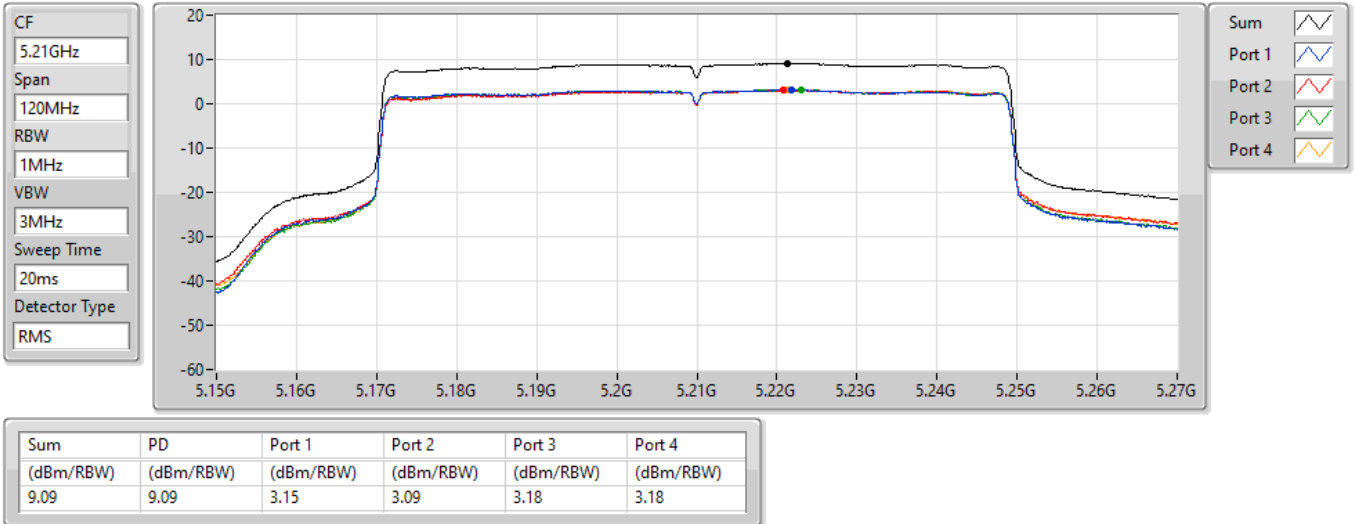


802.11ax HEW80-BF_Nss1,(MCS0)_4TX

PSD

5210MHz

22/09/2021

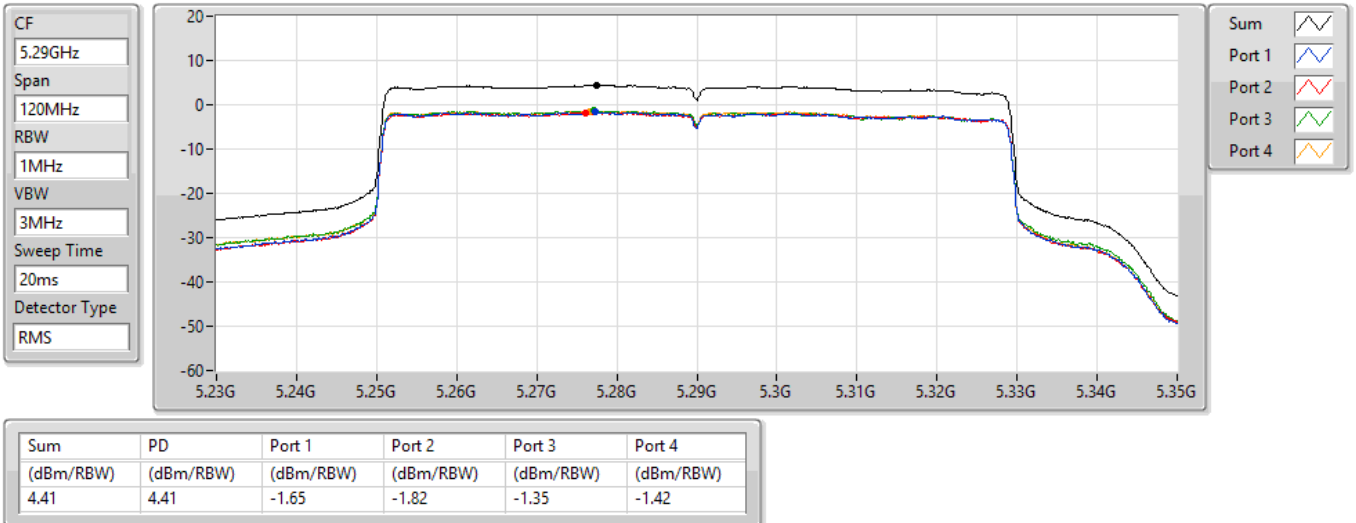


802.11ax HEW80-BF_Nss1,(MCS0)_4TX

PSD

5290MHz

07/10/2021

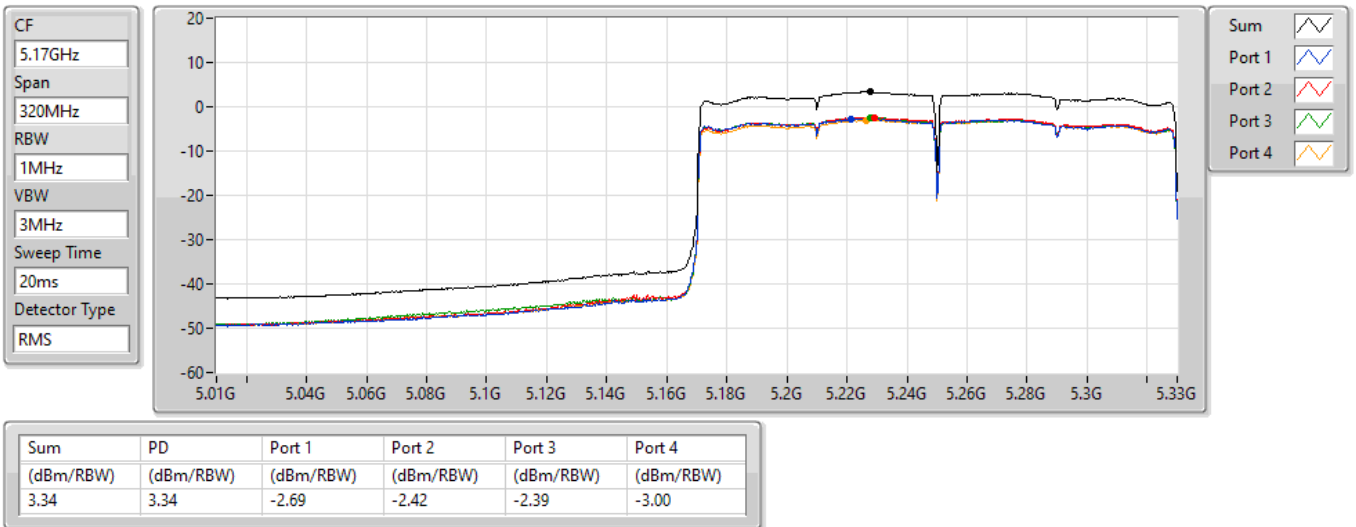


802.11ax HEW160-BF_Nss1,(MCS0)_4TX

PSD

5250MHz Straddle 5.15-5.25GHz

22/09/2021

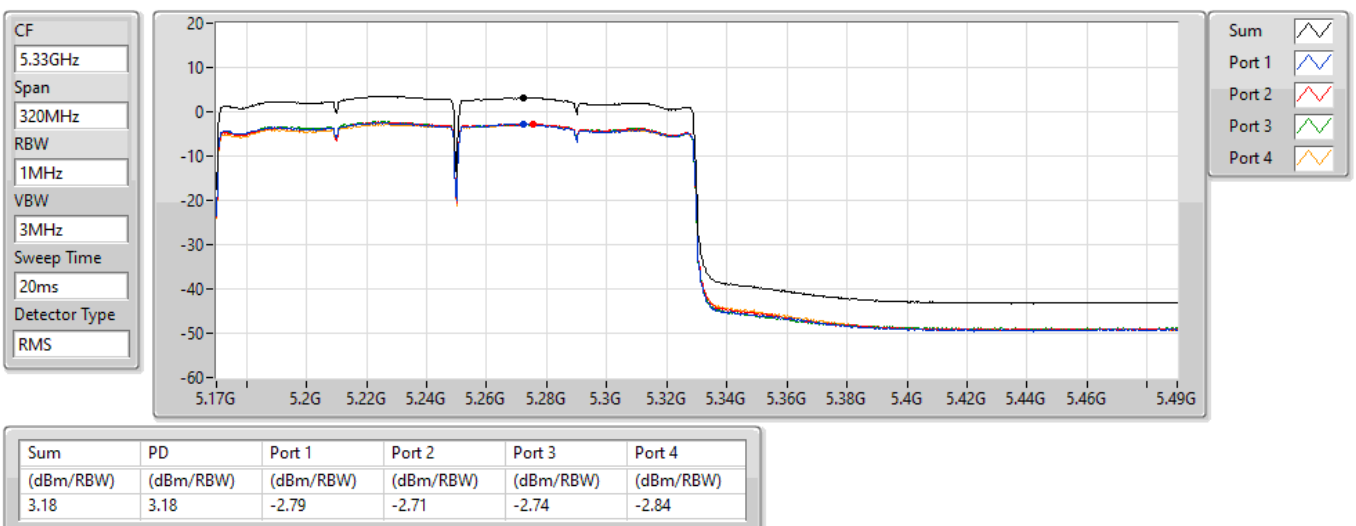


802.11ax HEW160-BF_Nss1,(MCS0)_4TX

PSD

5250MHz Straddle 5.25-5.35GHz

22/09/2021



For UNII 1~2A

4T4S

Summary

Mode	PD (dBm/RBW)
5.15-5.25GHz	-
802.11ax HEW80_Nss4,(MCS0)_4TX	9.48
802.11ax HEW160_Nss4,(MCS0)_4TX	5.09
5.25-5.35GHz	-
802.11ax HEW160_Nss4,(MCS0)_4TX	4.92

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)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11ax HEW80_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	0.09	3.50	3.51	3.76	3.46	9.48	17.00
802.11ax HEW160_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	0.09	-0.81	-0.71	-0.73	-1.27	5.09	17.00
5250MHz Straddle 5.25-5.35GHz	Pass	0.26	-1.12	-1.11	-0.97	-1.09	4.92	11.00

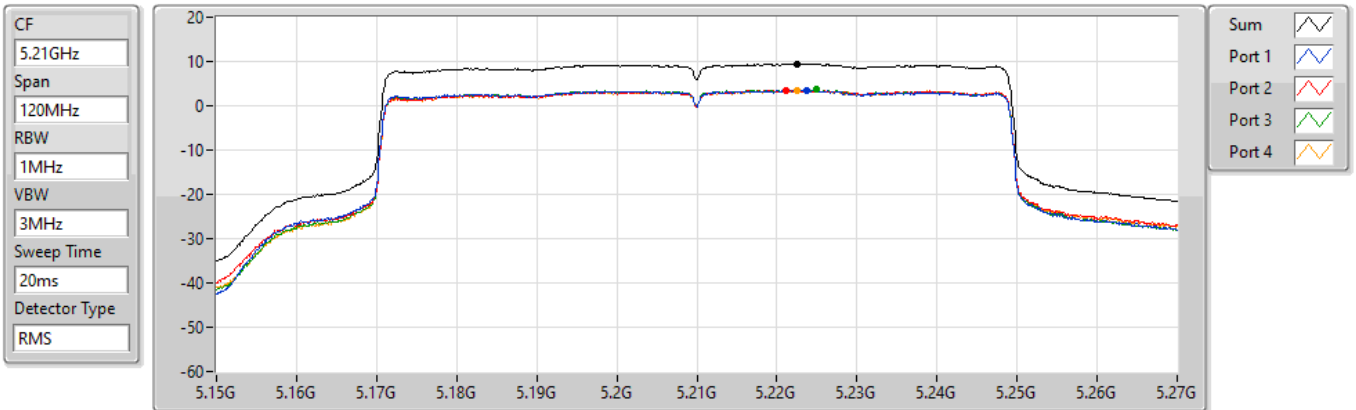
DG = Directional Gain; RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;

802.11ax HEW80_Nss4,(MCS0)_4TX

PSD

5210MHz

22/09/2021



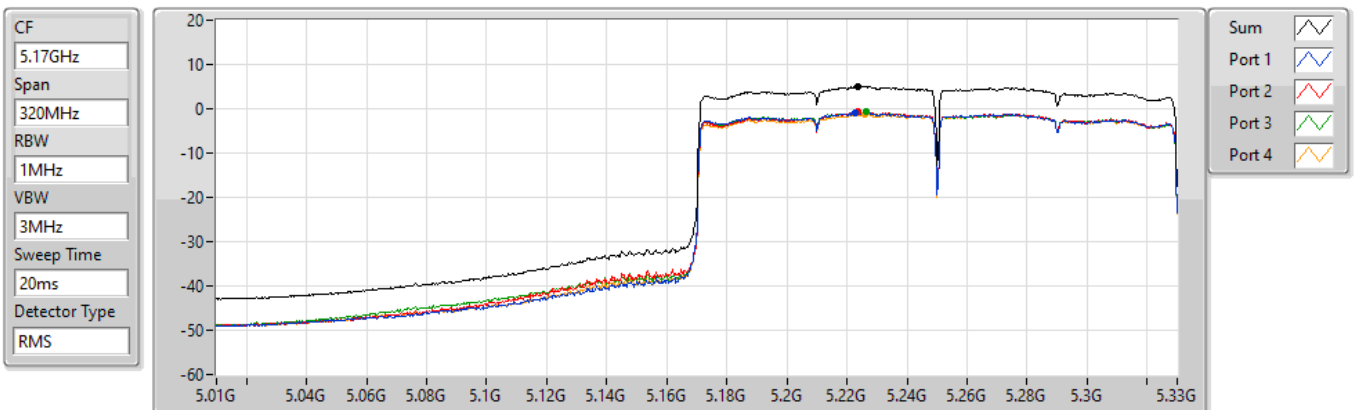
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
9.48	9.48	3.50	3.51	3.76	3.46

802.11ax HEW160_Nss4,(MCS0)_4TX

PSD

5250MHz Straddle 5.15-5.25GHz

22/09/2021



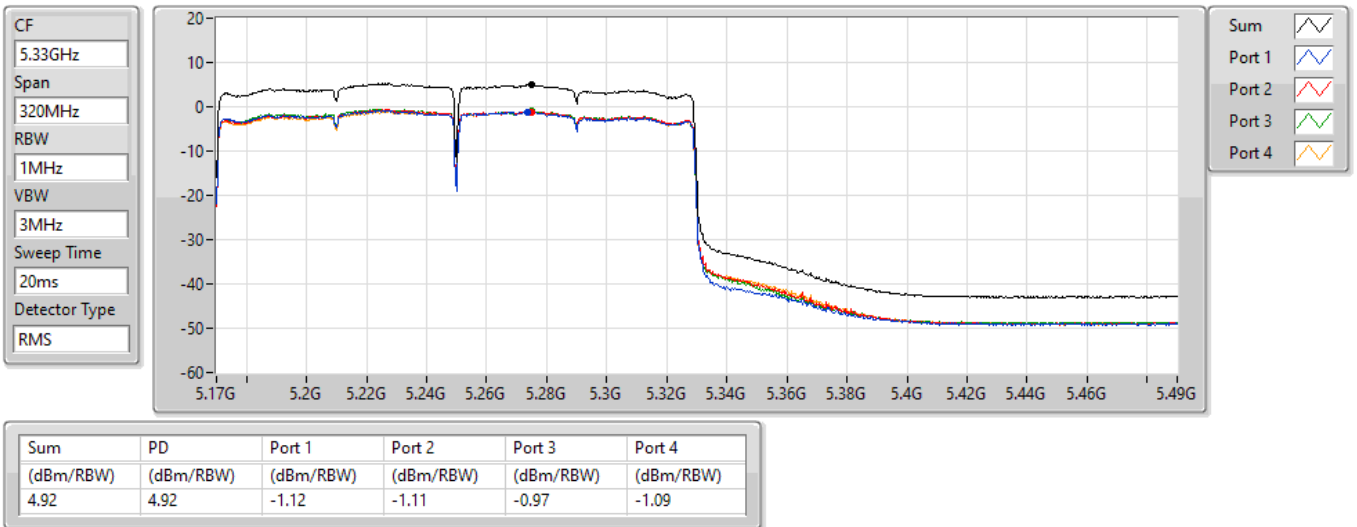
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.09	5.09	-0.81	-0.71	-0.73	-1.27

802.11ax HEW160_Nss4,(MCS0)_4TX

5250MHz Straddle 5.25-5.35GHz

PSD

22/09/2021



For UNII 2C~3

4T1S

Summary

Mode	PD (dBm/RBW)
5.47-5.725GHz	-
802.11a_Nss1,(6Mbps)_4TX	10.77
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	10.46
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	7.55
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	4.64
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	2.18
5.725-5.85GHz	-
802.11a_Nss1,(6Mbps)_4TX	15.27
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	14.37
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	11.54
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	8.64

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)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-
5500MHz	Pass	6.05	4.84	4.55	4.75	4.65	10.57	10.95
5580MHz	Pass	6.05	4.70	4.68	5.05	5.05	10.77	10.95
5700MHz	Pass	6.05	4.72	4.31	4.97	5.01	10.66	10.95
5720MHz Straddle 5.47-5.725GHz	Pass	6.05	4.76	4.28	4.93	4.96	10.65	10.95
5720MHz Straddle 5.725-5.85GHz	Pass	6.09	3.05	2.68	3.38	3.48	9.08	29.91
5745MHz	Pass	6.09	9.42	9.06	9.70	9.08	15.27	29.91
5785MHz	Pass	6.09	9.06	9.29	9.66	9.12	15.23	29.91
5825MHz	Pass	6.09	9.40	9.15	9.32	9.29	15.26	29.91
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5500MHz	Pass	6.05	4.42	4.07	4.26	4.19	10.17	10.95
5580MHz	Pass	6.05	4.43	4.34	4.73	4.68	10.46	10.95
5700MHz	Pass	6.05	4.54	3.90	4.57	4.59	10.35	10.95
5720MHz Straddle 5.47-5.725GHz	Pass	6.05	4.10	3.73	4.51	4.44	10.13	10.95
5720MHz Straddle 5.725-5.85GHz	Pass	6.09	2.26	2.19	2.83	2.84	8.52	29.91
5745MHz	Pass	6.09	8.04	8.20	8.63	8.36	14.21	29.91
5785MHz	Pass	6.09	8.32	7.77	8.57	9.00	14.37	29.91
5825MHz	Pass	6.09	8.21	7.56	8.62	8.53	14.19	29.91
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5510MHz	Pass	6.05	1.12	1.08	1.46	1.47	7.24	10.95
5550MHz	Pass	6.05	1.09	1.18	1.62	1.57	7.29	10.95
5670MHz	Pass	6.05	1.45	0.89	1.98	1.13	7.29	10.95
5710MHz Straddle 5.47-5.725GHz	Pass	6.05	1.52	1.18	1.91	1.85	7.55	10.95
5710MHz Straddle 5.725-5.85GHz	Pass	6.09	-0.49	-0.77	0.06	-0.38	5.59	29.91
5755MHz	Pass	6.09	5.24	4.96	5.71	5.79	11.30	29.91
5795MHz	Pass	6.09	5.18	5.37	5.92	5.82	11.54	29.91
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5530MHz	Pass	6.05	-1.64	-1.70	-1.06	-1.29	4.52	10.95
5610MHz	Pass	6.05	-1.28	-1.53	-1.18	-1.12	4.64	10.95
5690MHz Straddle 5.47-5.725GHz	Pass	6.05	-1.34	-1.82	-1.08	-1.25	4.59	10.95
5690MHz Straddle 5.725-5.85GHz	Pass	6.09	-3.78	-3.79	-3.23	-3.27	2.44	29.91
5775MHz	Pass	6.09	2.59	2.15	3.37	2.93	8.64	29.91
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5570MHz	Pass	6.05	-3.88	-4.25	-3.20	-3.61	2.18	10.95

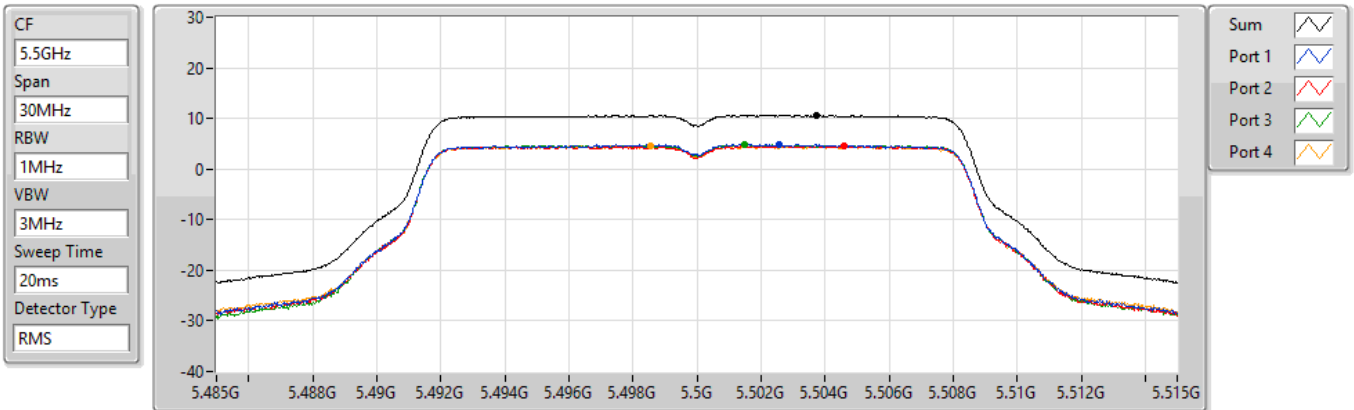
DG = Directional Gain; RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;

802.11a_Nss1,(6Mbps)_4TX

PSD

5500MHz

07/10/2021

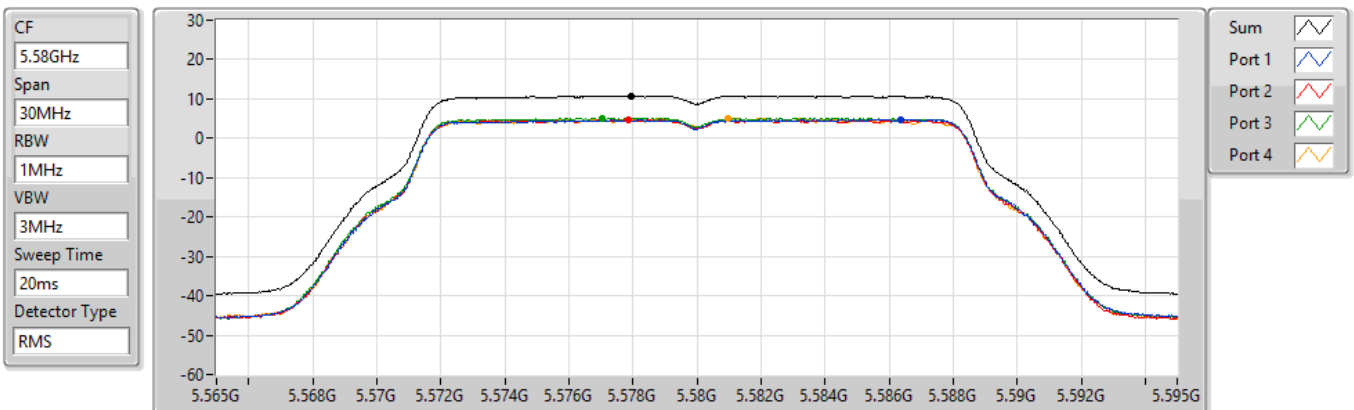


802.11a_Nss1,(6Mbps)_4TX

PSD

5580MHz

07/10/2021

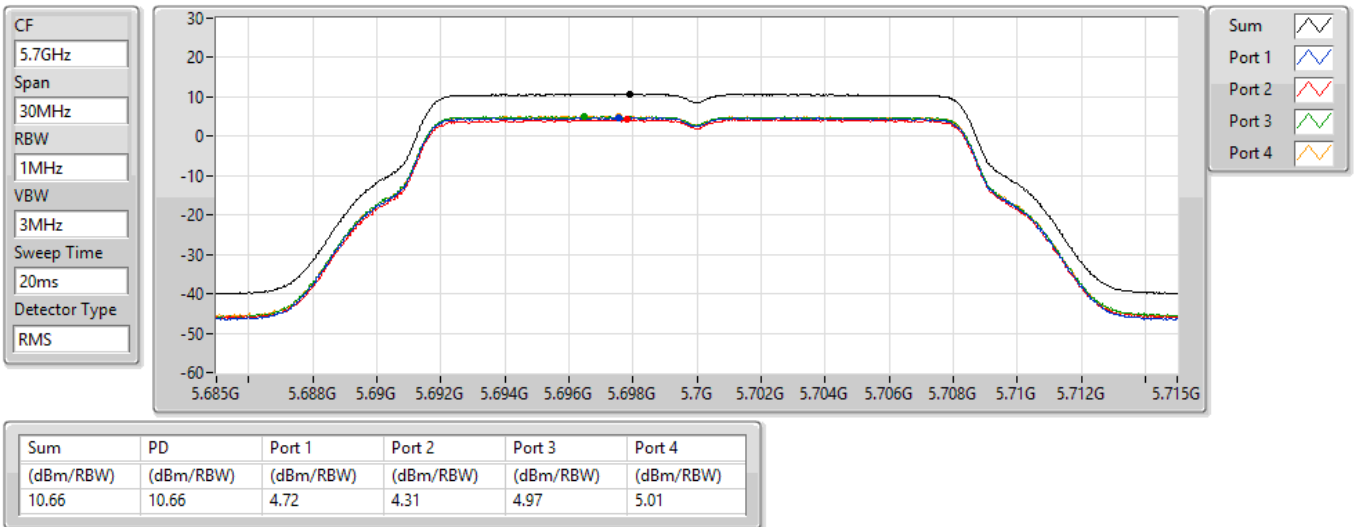


802.11a_Nss1,(6Mbps)_4TX

PSD

5700MHz

07/10/2021

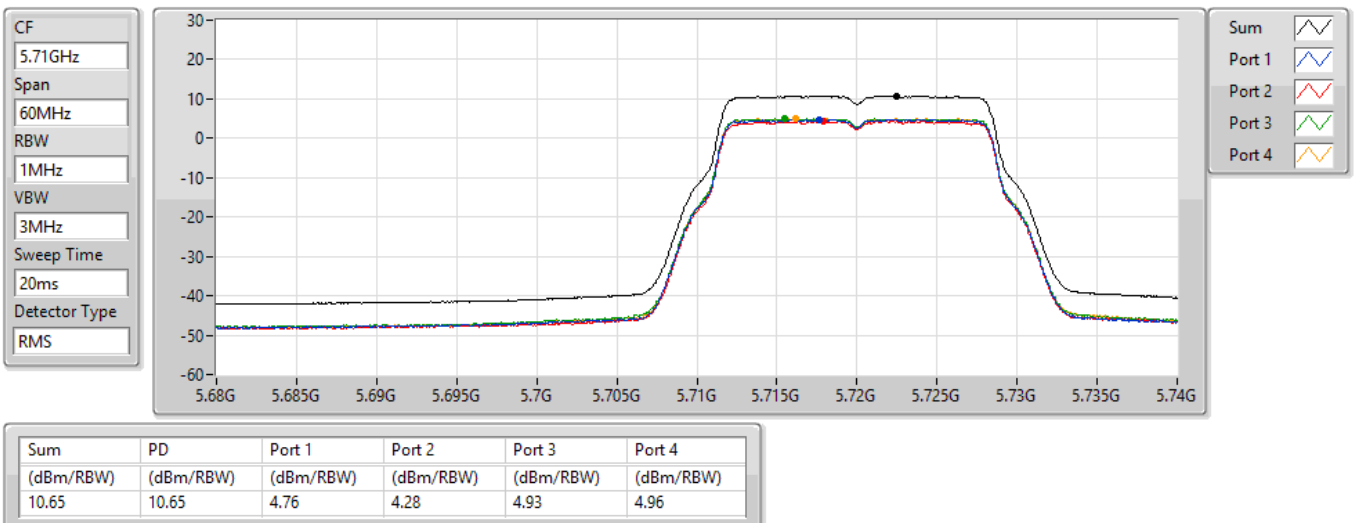


802.11a_Nss1,(6Mbps)_4TX

PSD

5720MHz Straddle 5.47-5.725GHz

07/10/2021

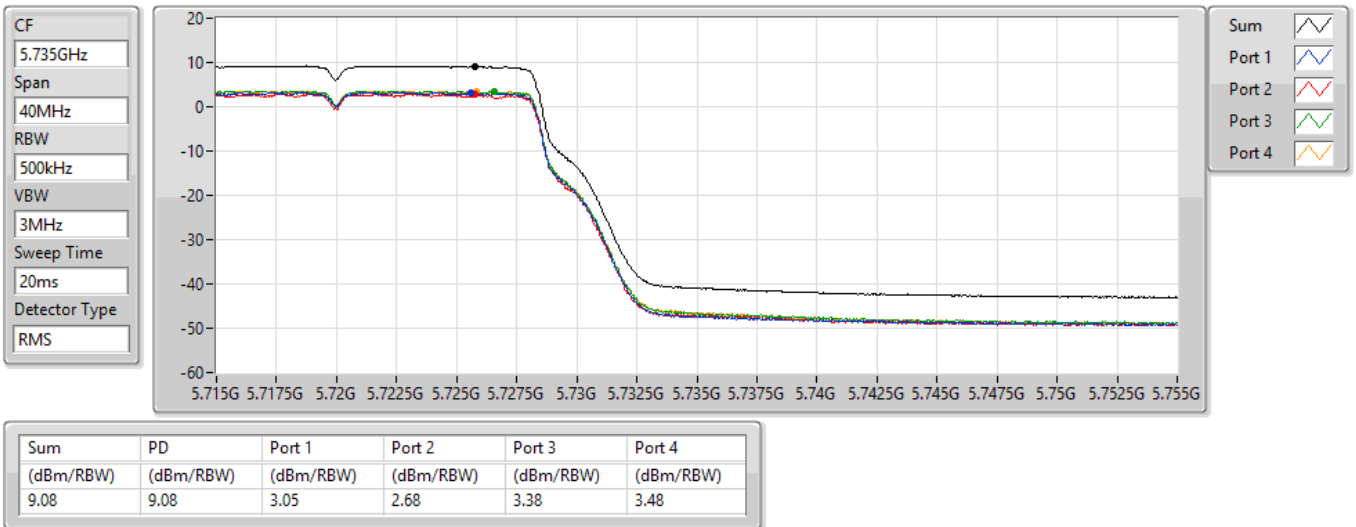


802.11a_Nss1,(6Mbps)_4TX

5720MHz Straddle 5.725-5.85GHz

PSD

07/10/2021

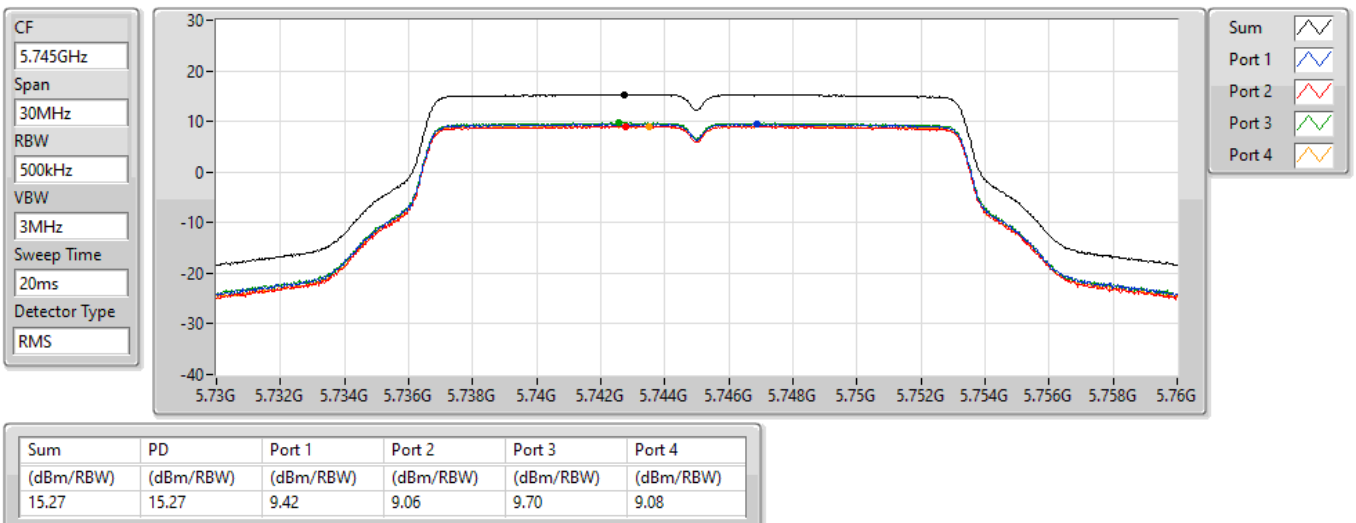


802.11a_Nss1,(6Mbps)_4TX

5745MHz

PSD

23/09/2021

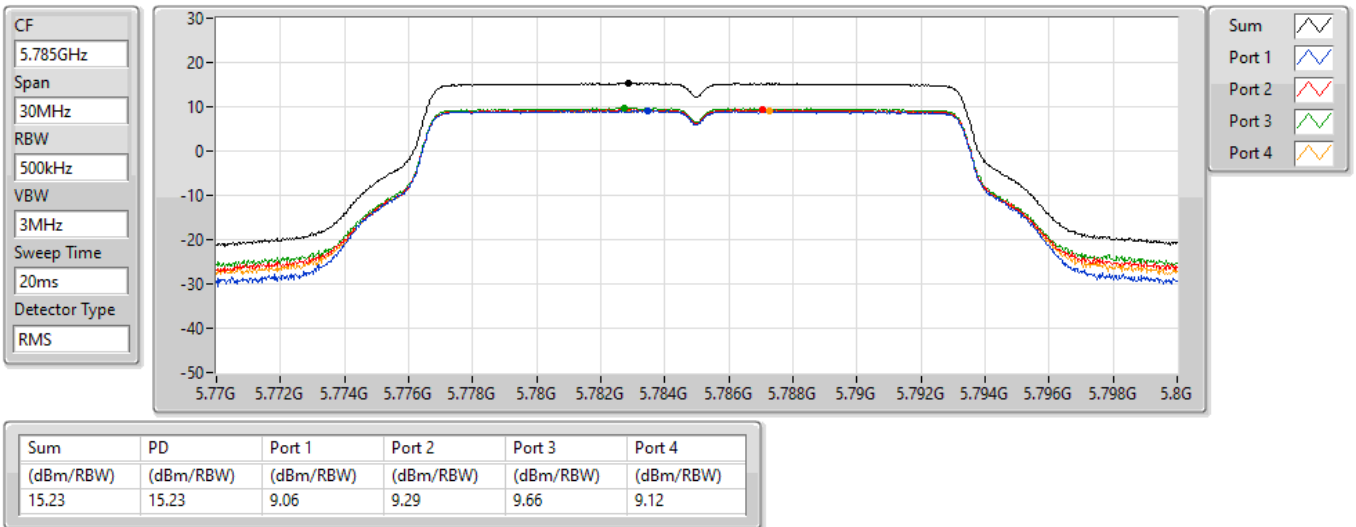


802.11a_Nss1,(6Mbps)_4TX

PSD

5785MHz

23/09/2021

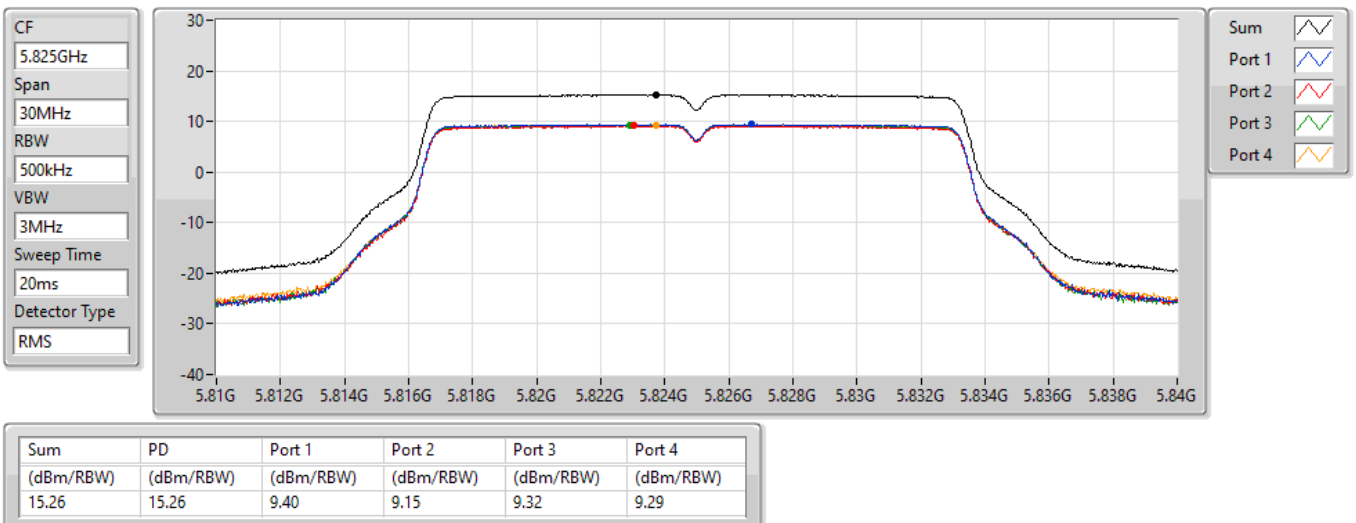


802.11a_Nss1,(6Mbps)_4TX

PSD

5825MHz

23/09/2021

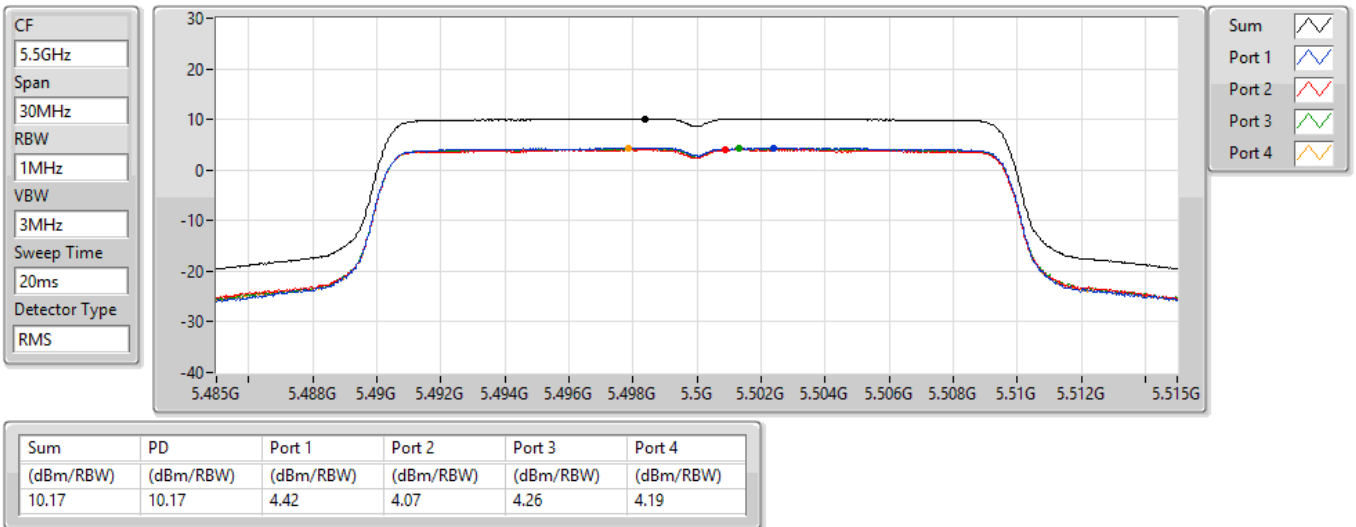


802.11ax HEW20-BF_Nss1,(MCS0)_4TX

PSD

5500MHz

07/10/2021

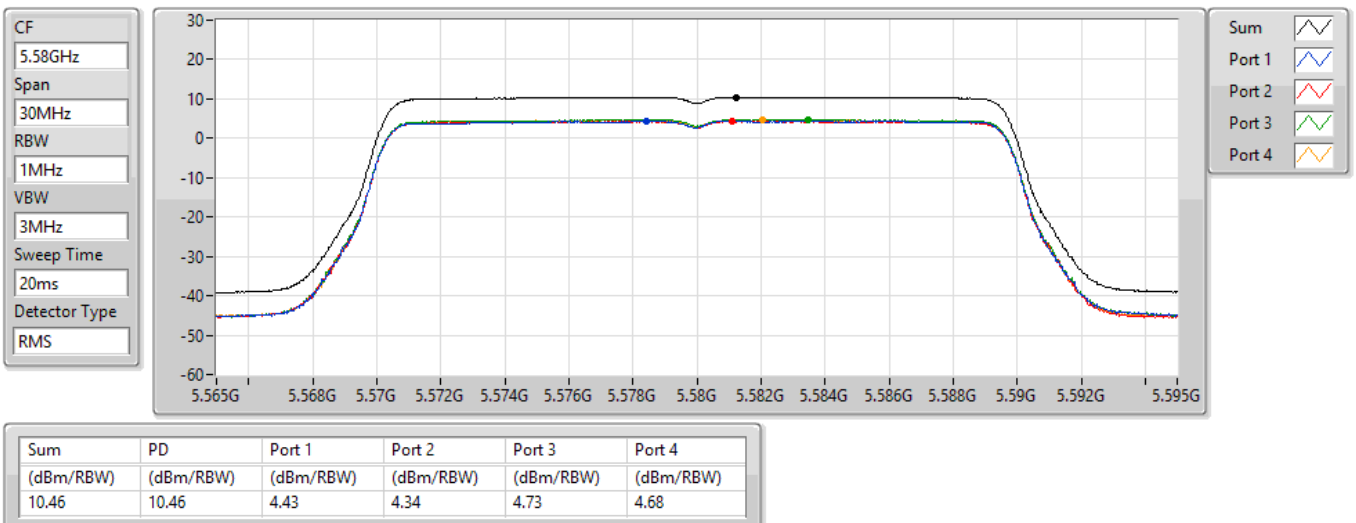


802.11ax HEW20-BF_Nss1,(MCS0)_4TX

PSD

5580MHz

07/10/2021

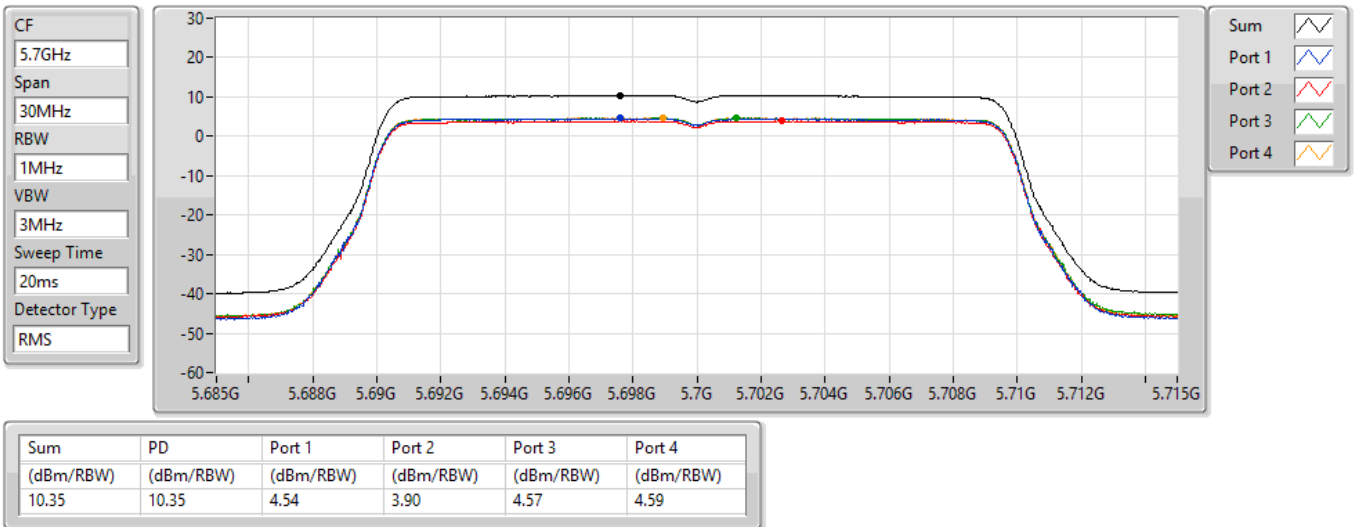


802.11ax HEW20-BF_Nss1,(MCS0)_4TX

PSD

5700MHz

07/10/2021

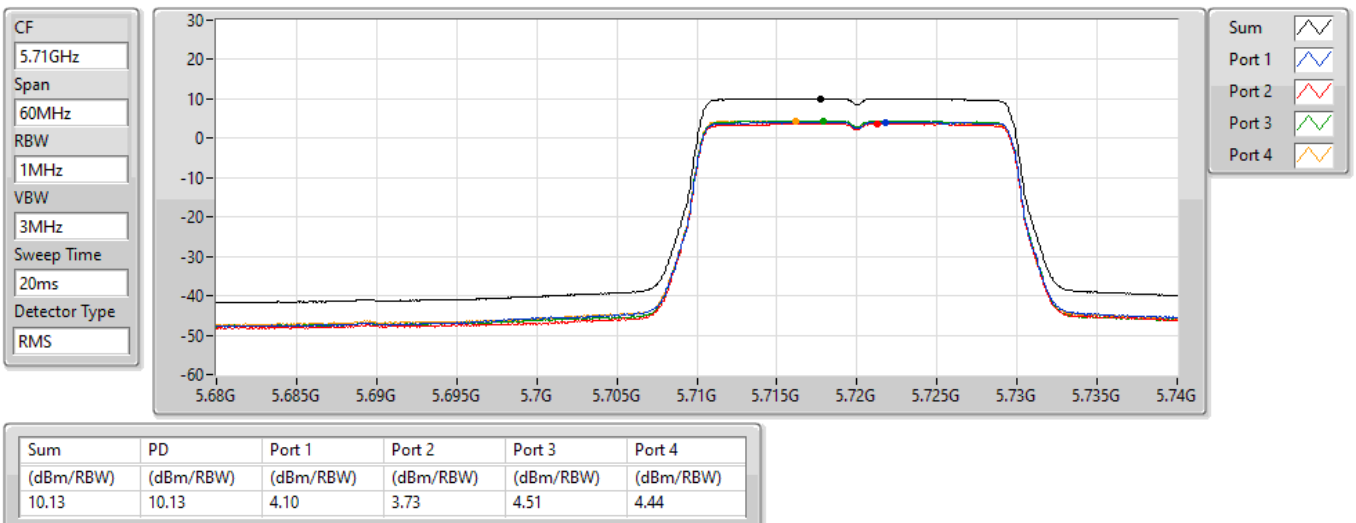


802.11ax HEW20-BF_Nss1,(MCS0)_4TX

PSD

5720MHz Straddle 5.47-5.725GHz

22/02/2022

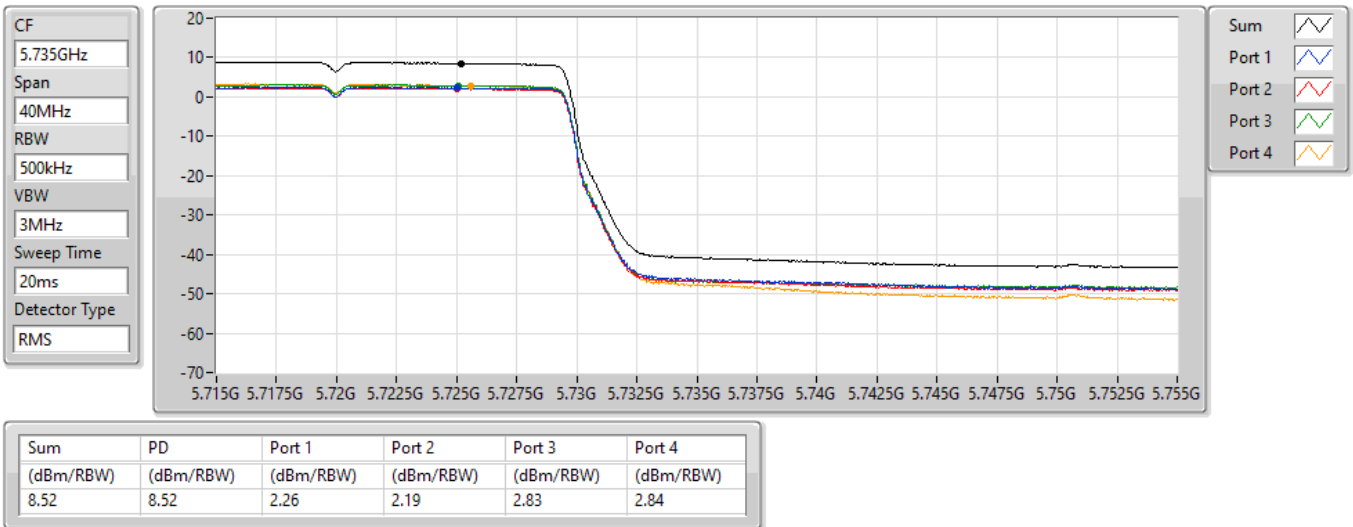


802.11ax HEW20-BF_Nss1,(MCS0)_4TX

PSD

5720MHz Straddle 5.725-5.85GHz

22/02/2022

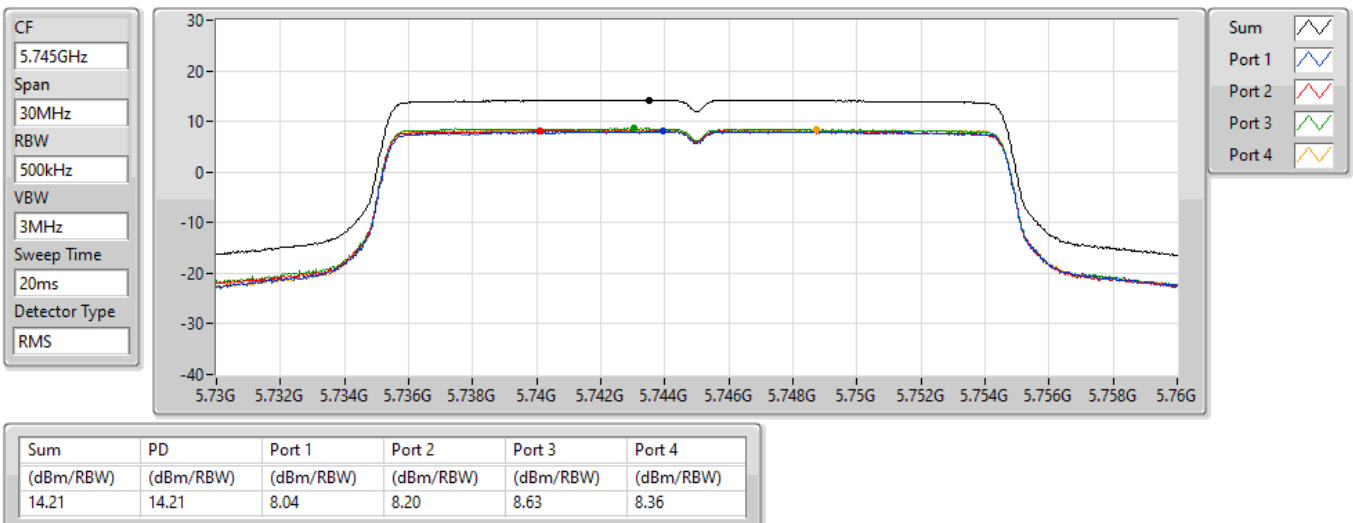


802.11ax HEW20-BF_Nss1,(MCS0)_4TX

PSD

5745MHz

22/02/2022

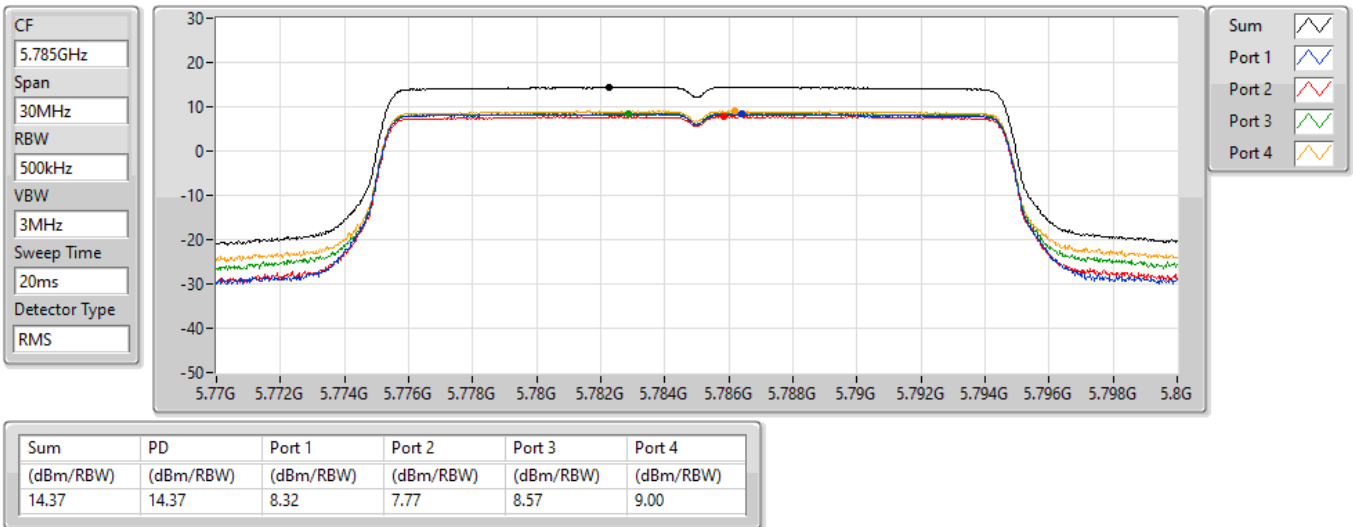


802.11ax HEW20-BF_Nss1,(MCS0)_4TX

PSD

5785MHz

22/02/2022

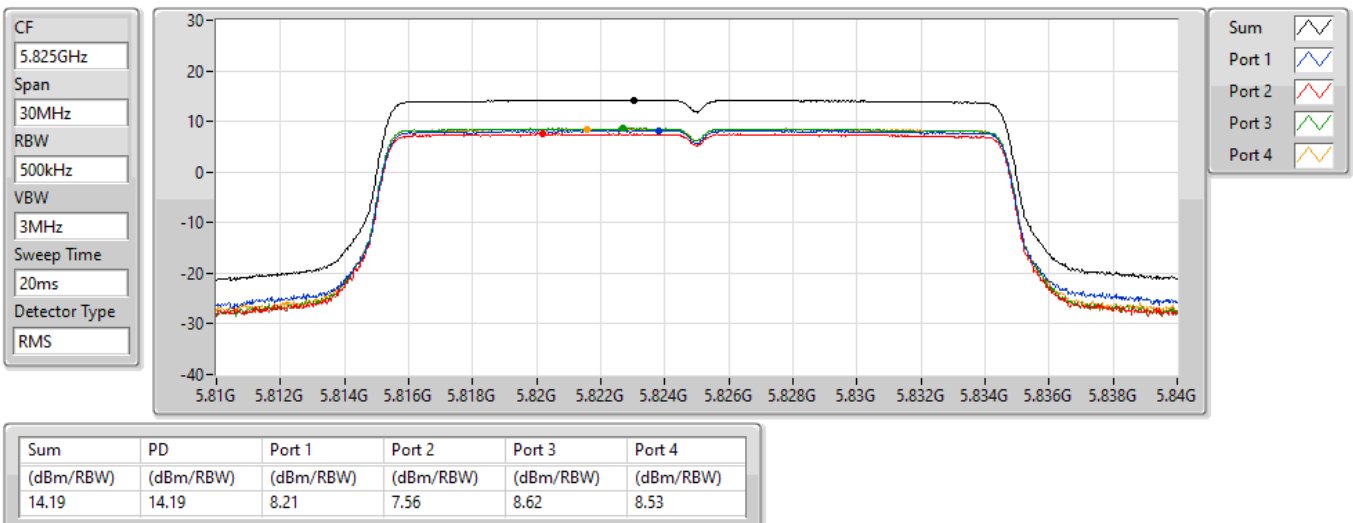


802.11ax HEW20-BF_Nss1,(MCS0)_4TX

PSD

5825MHz

22/02/2022

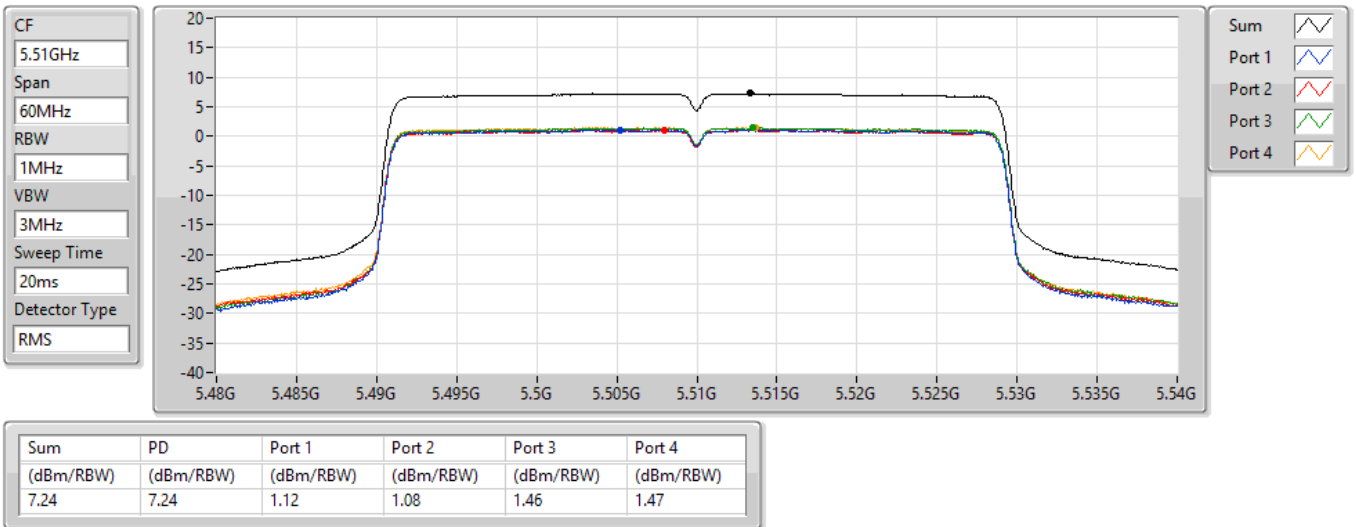


802.11ax HEW40-BF_Nss1,(MCS0)_4TX

PSD

5510MHz

07/10/2021

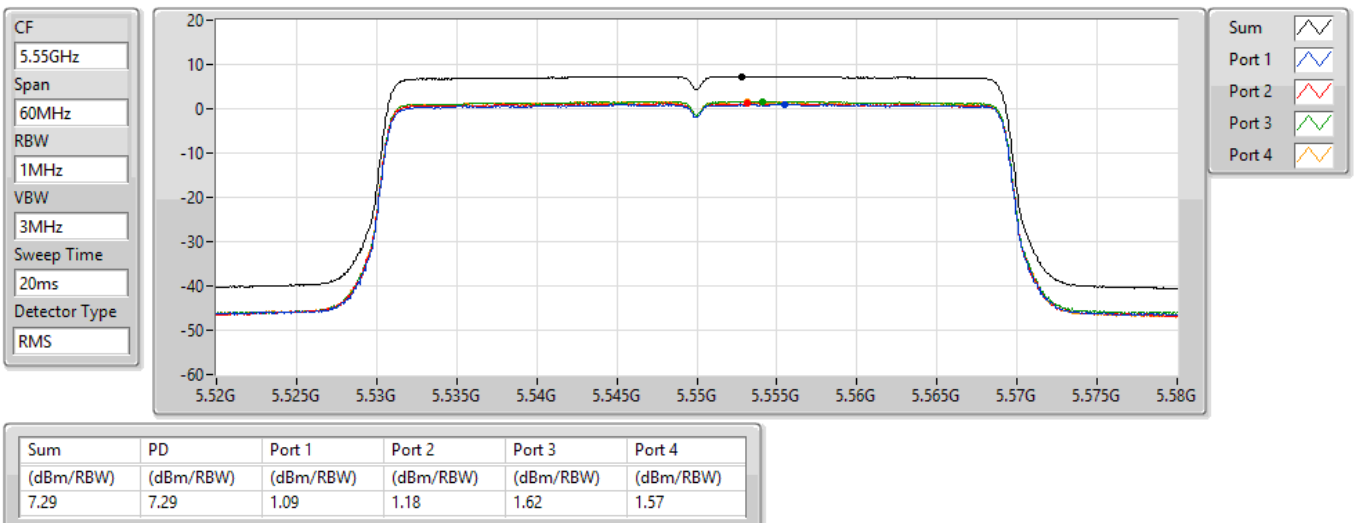


802.11ax HEW40-BF_Nss1,(MCS0)_4TX

PSD

5550MHz

07/10/2021

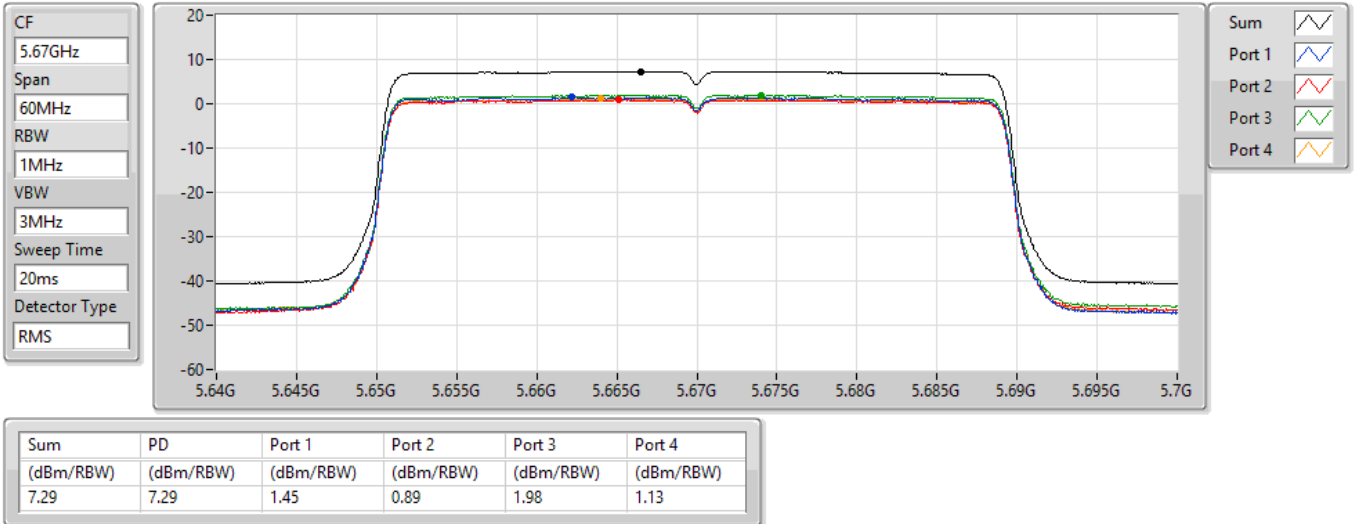


802.11ax HEW40-BF_Nss1,(MCS0)_4TX

PSD

5670MHz

07/10/2021

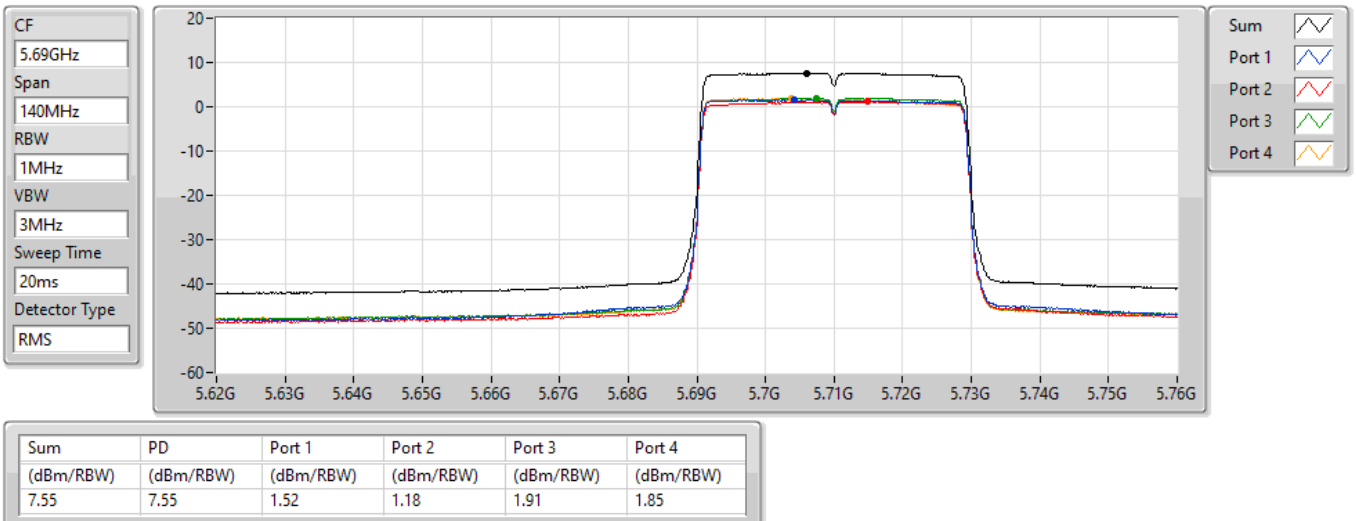


802.11ax HEW40-BF_Nss1,(MCS0)_4TX

PSD

5710MHz Straddle 5.47-5.725GHz

22/02/2022

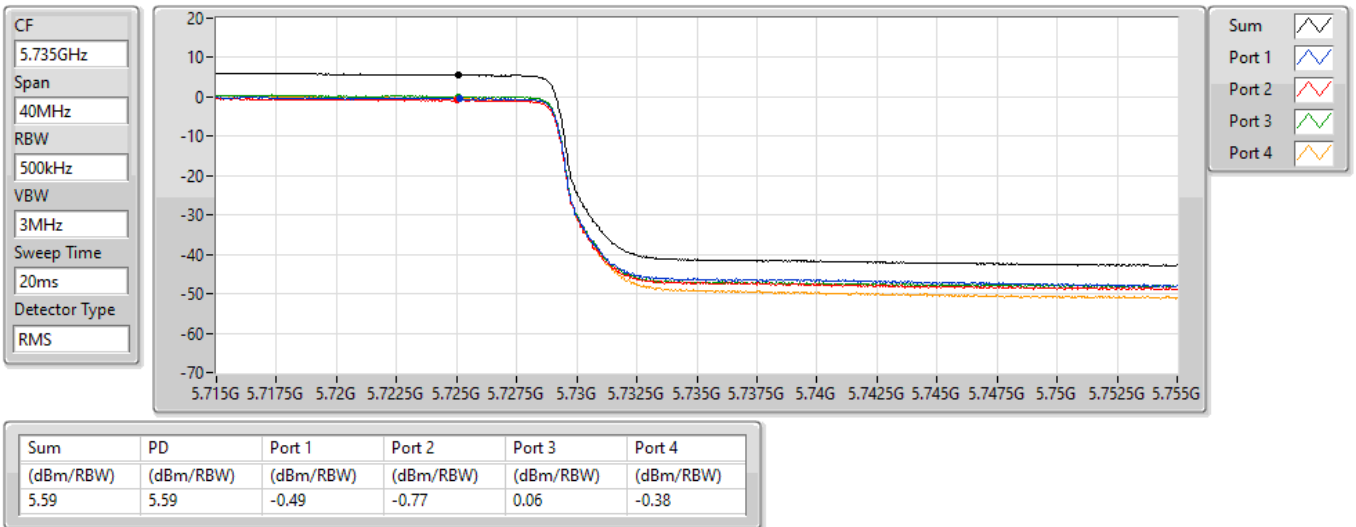


802.11ax HEW40-BF_Nss1,(MCS0)_4TX

PSD

5710MHz Straddle 5.725-5.85GHz

22/02/2022

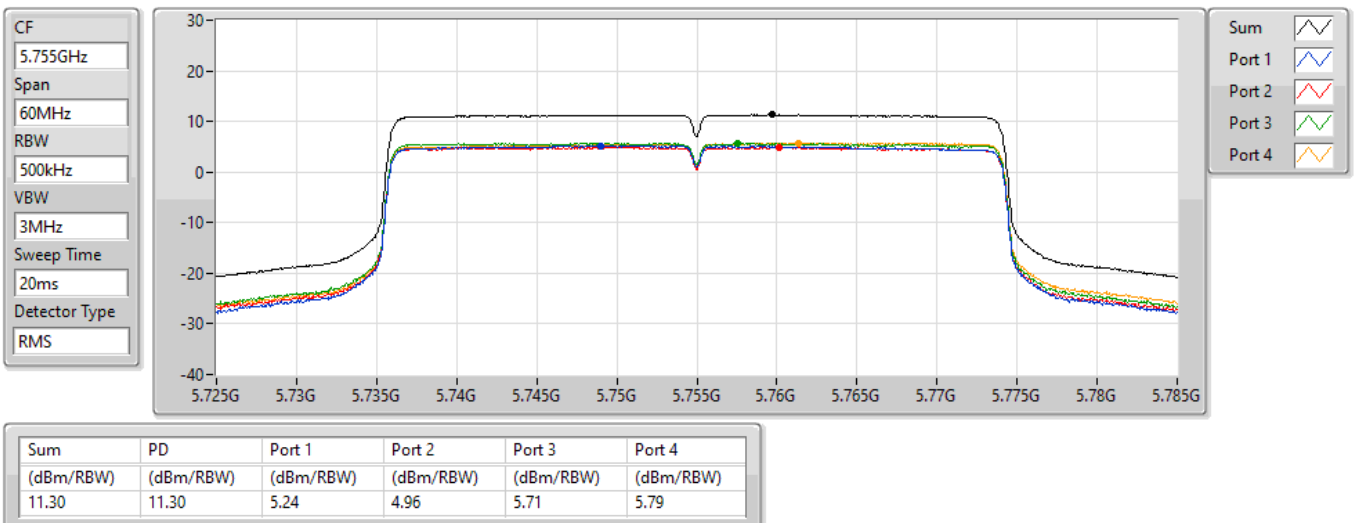


802.11ax HEW40-BF_Nss1,(MCS0)_4TX

PSD

5755MHz

22/02/2022

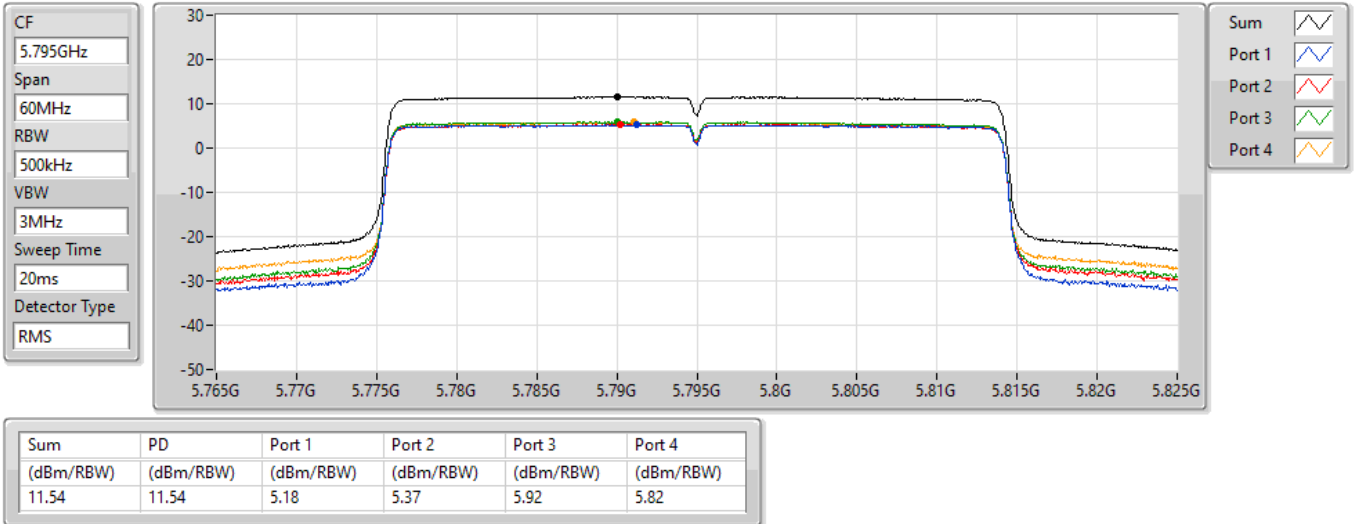


802.11ax HEW40-BF_Nss1,(MCS0)_4TX

PSD

5795MHz

22/02/2022

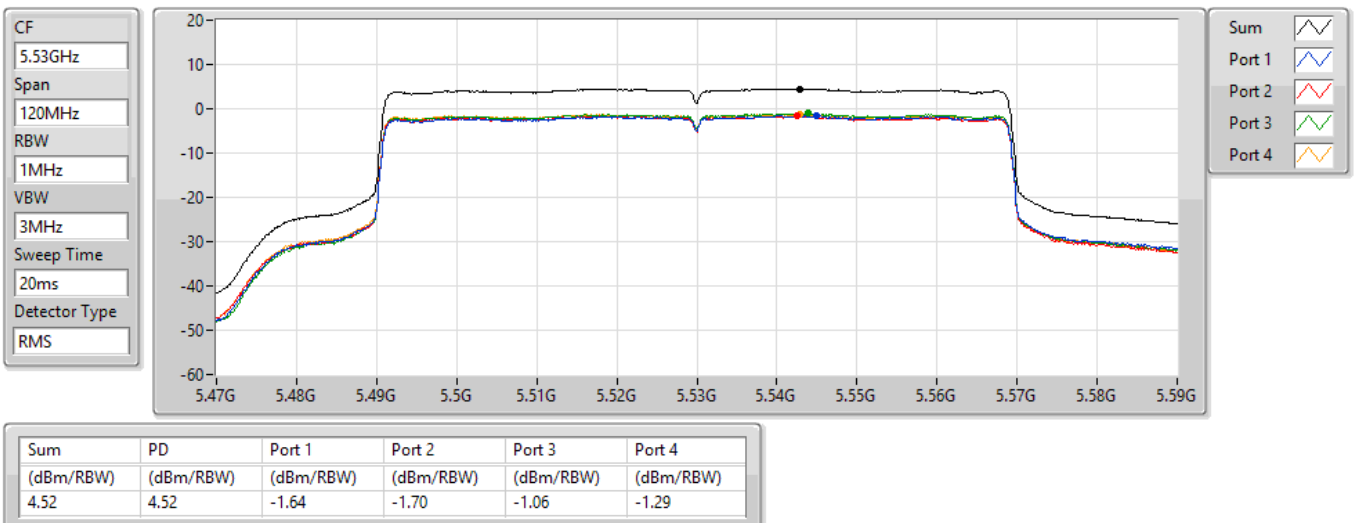


802.11ax HEW80-BF_Nss1,(MCS0)_4TX

PSD

5530MHz

07/10/2021

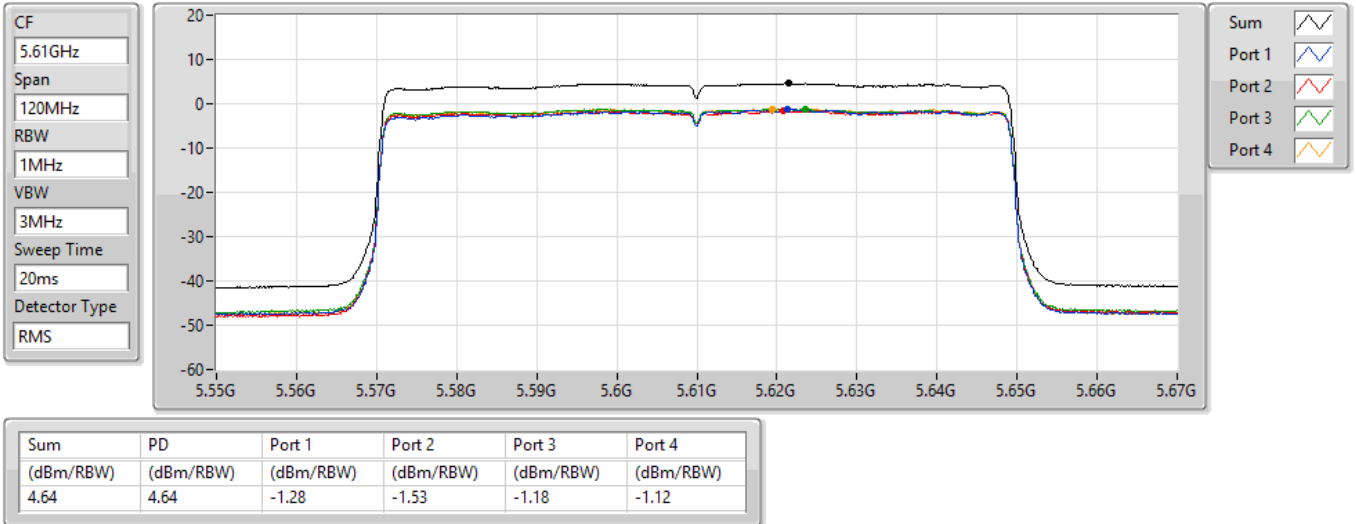


802.11ax HEW80-BF_Nss1,(MCS0)_4TX

PSD

5610MHz

07/10/2021

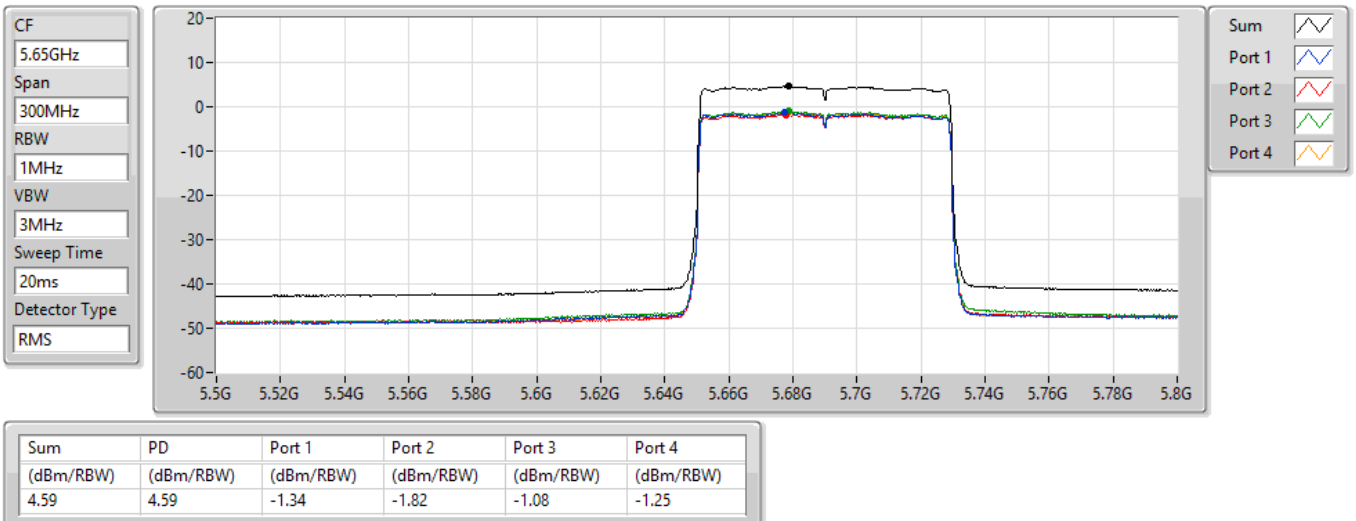


802.11ax HEW80-BF_Nss1,(MCS0)_4TX

PSD

5690MHz Straddle 5.47-5.725GHz

07/10/2021

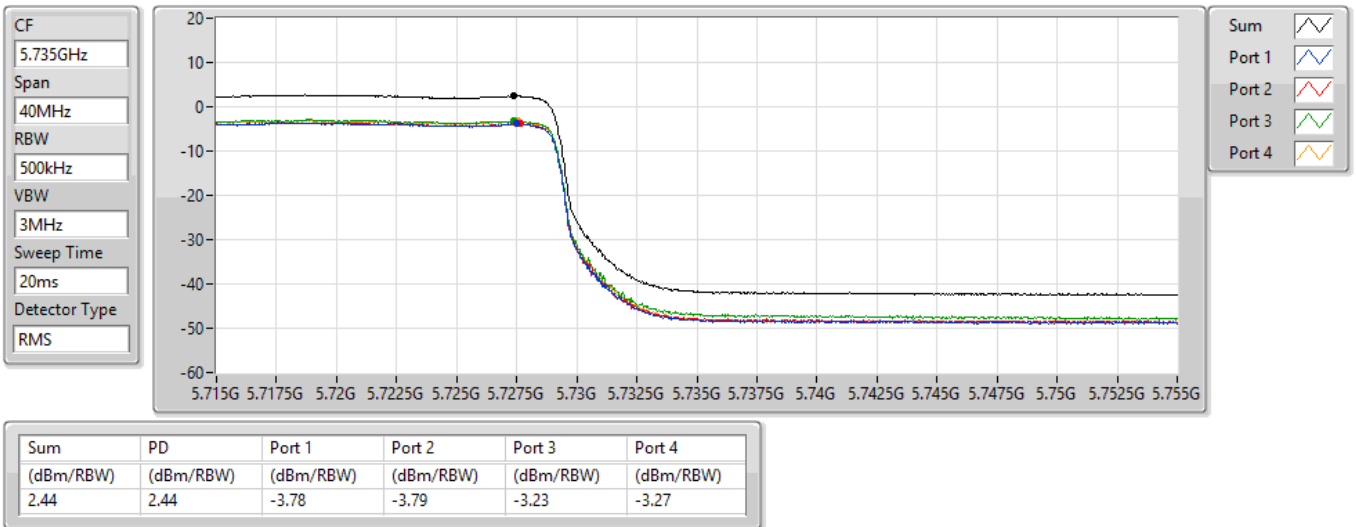


802.11ax HEW80-BF_Nss1,(MCS0)_4TX

PSD

5690MHz Straddle 5.725-5.85GHz

07/10/2021

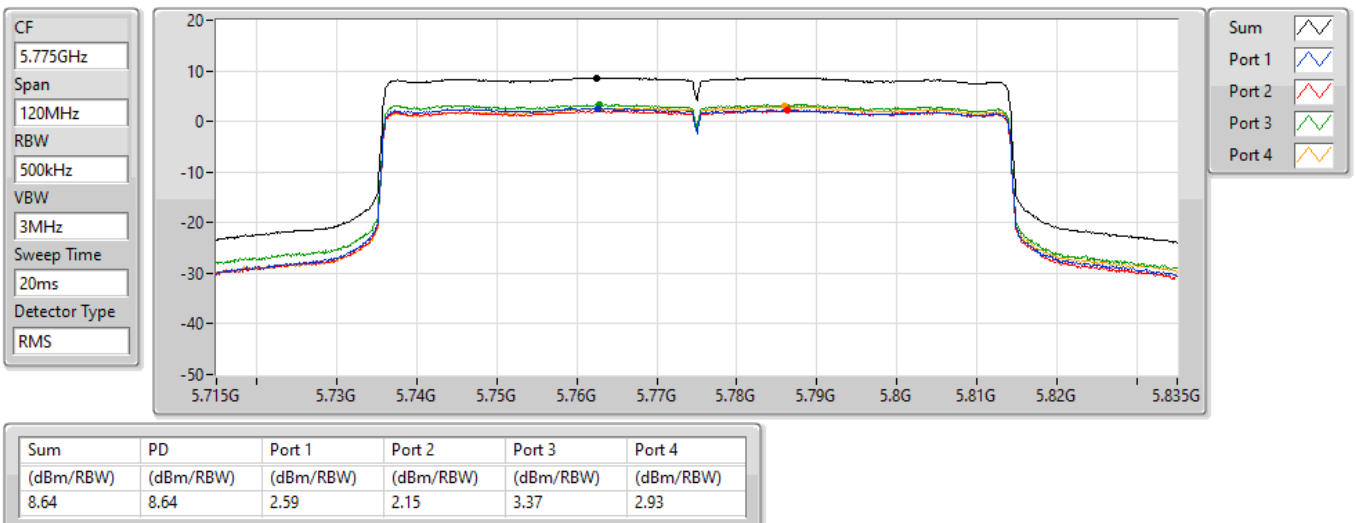


802.11ax HEW80-BF_Nss1,(MCS0)_4TX

PSD

5775MHz

22/02/2022

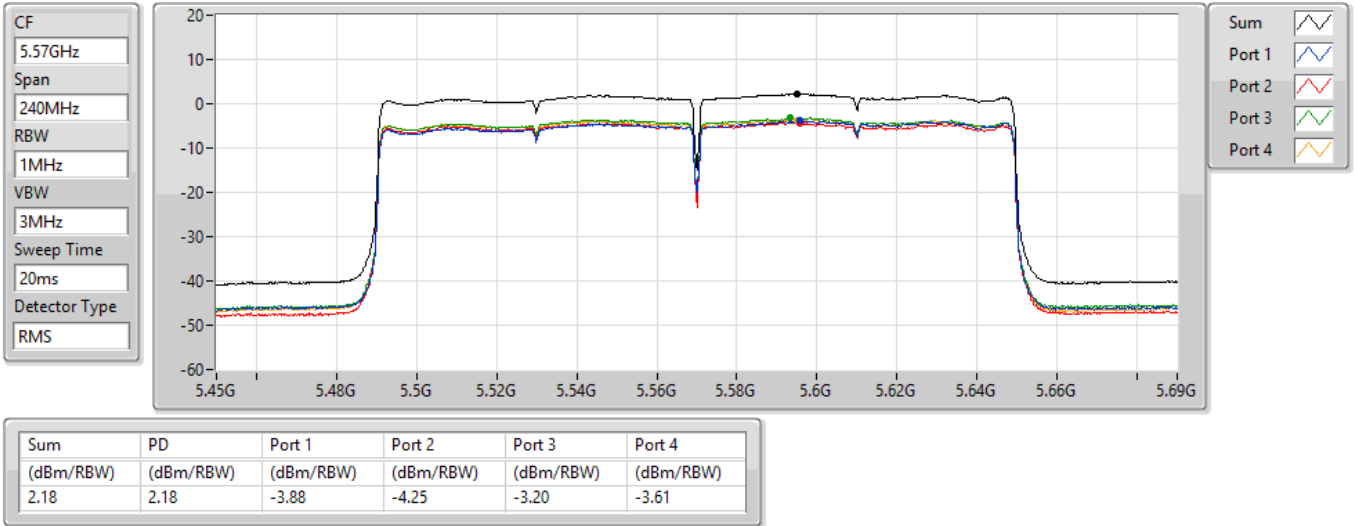


802.11ax HEW160-BF_Nss1,(MCS0)_4TX

PSD

5570MHz

07/10/2021



For UNII 2C~3

4T4S

Summary

Mode	PD (dBm/RBW)
5.47-5.725GHz	-
802.11ax HEW160_Nss4,(MCS0)_4TX	1.78
5.725-5.85GHz	-
802.11ax HEW80_Nss4,(MCS0)_4TX	8.94

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)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11ax HEW80_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-
5775MHz	Pass	0.19	3.28	2.86	3.27	2.76	8.94	30.00
802.11ax HEW160_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-
5570MHz	Pass	0.06	-4.11	-4.48	-3.77	-4.31	1.78	11.00

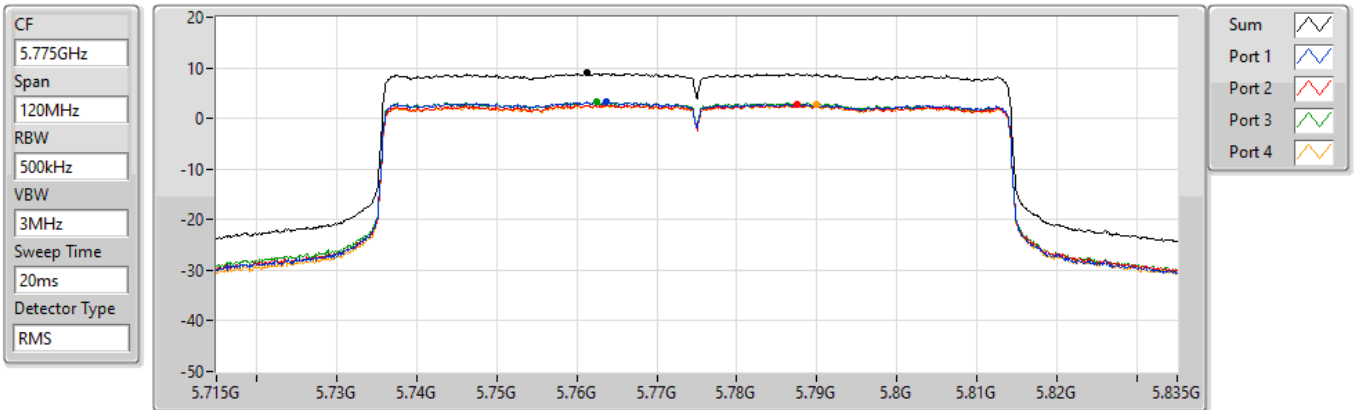
DG = Directional Gain; RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;

802.11ax HEW80_Nss4,(MCS0)_4TX

PSD

5775MHz

23/09/2021

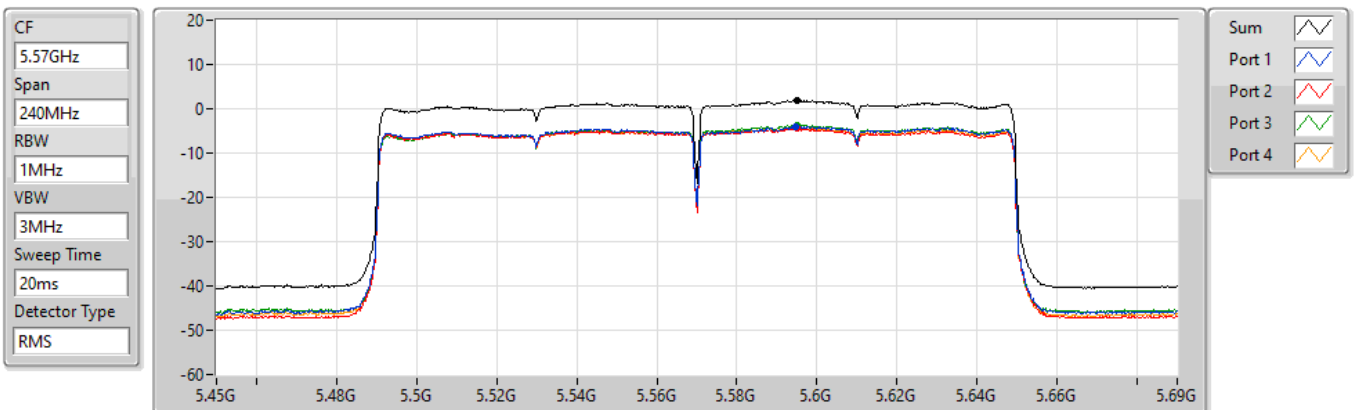


802.11ax HEW160_Nss4,(MCS0)_4TX

PSD

5570MHz

23/09/2021





For UNII 4
4T1S <Non-beamforming Mode>
Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
5.725-5.895GHz	-	-
802.11a_Nss1_(6Mbps)_4TX	13.95	19.86

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)	Port 4 (dBm/RBW)	PD (dBm/RBW)	EIRP PD (dBm/RBW)	EIRP PD Limit (dBm/RBW)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-
5845MHz	Pass	5.91	8.30	8.24	7.69	7.71	13.89	19.80	20.00
5865MHz	Pass	5.91	8.41	8.30	7.54	7.81	13.95	19.86	20.00
5885MHz	Pass	5.91	8.38	8.10	7.48	7.73	13.87	19.78	20.00

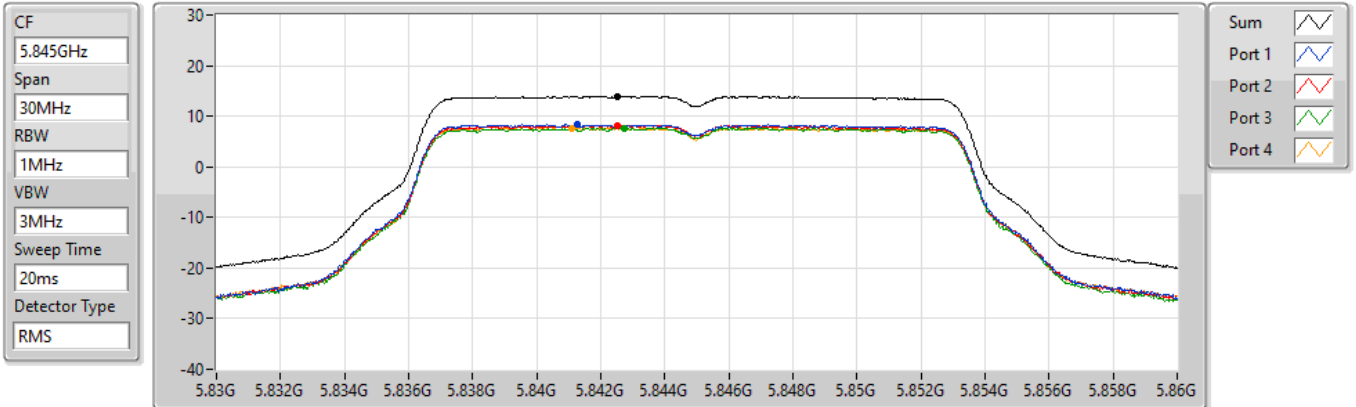
DG = Directional Gain; RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;

802.11a_Nss1,(6Mbps)_4TX

PSD

5845MHz

07/03/2022



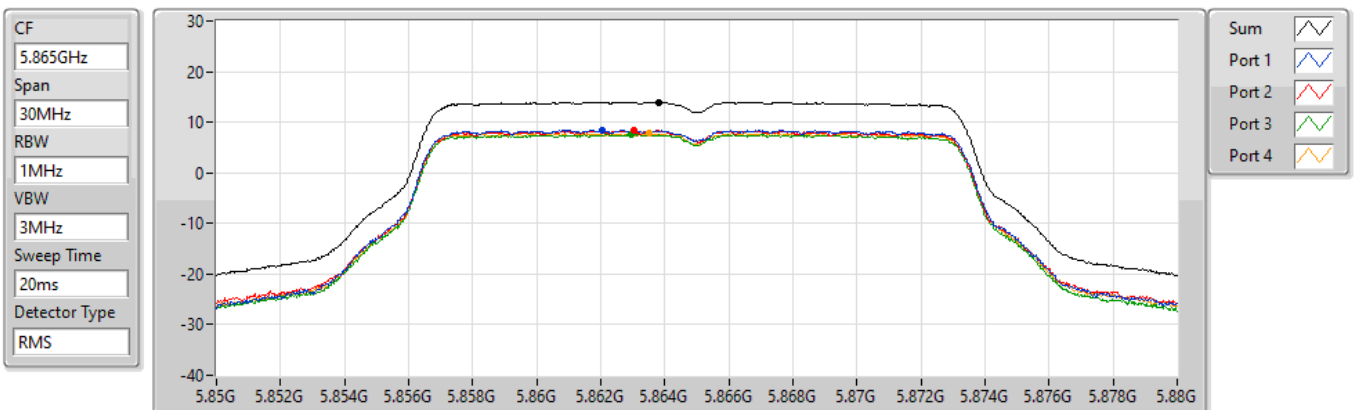
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/100kHz)	(dBm/100kHz)	(dBm/100kHz)	(dBm/100kHz)	(dBm/100kHz)	(dBm/100kHz)
13.89	13.89	8.30	8.24	7.69	7.71

802.11a_Nss1,(6Mbps)_4TX

PSD

5865MHz

07/03/2022



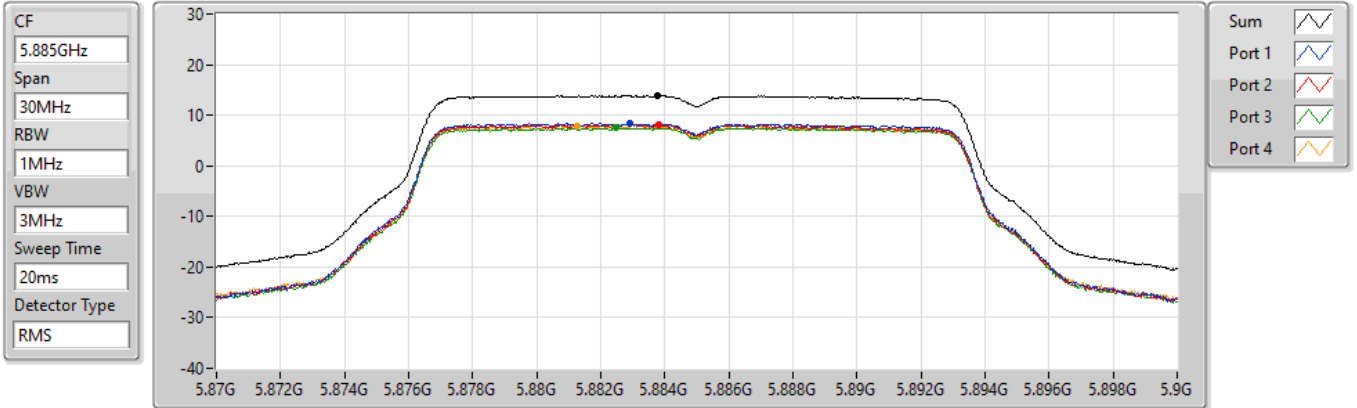
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/100kHz)	(dBm/100kHz)	(dBm/100kHz)	(dBm/100kHz)	(dBm/100kHz)	(dBm/100kHz)
13.95	13.95	8.41	8.30	7.54	7.81

802.11a_Nss1,(6Mbps)_4TX

5885MHz

PSD

07/03/2022



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
13.87	13.87	8.38	8.10	7.48	7.73

For UNII 4
4T4S <Non-beamforming Mode>
Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
5.725-5.895GHz	-	-
802.11ax HEW80_Nss4,(MCS0)_4TX	13.55	13.58
802.11ax HEW160_Nss4,(MCS0)_4TX	4.80	4.83

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)	Port 4 (dBm/RBW)	PD (dBm/RBW)	EIRP PD (dBm/RBW)	EIRP PD Limit (dBm/RBW)
802.11ax HEW80_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-
5855MHz	Pass	0.03	7.80	7.82	7.02	7.79	13.55	13.58	20.00
802.11ax HEW160_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-
5815MHz	Pass	0.03	-0.93	-0.67	-1.89	-1.43	4.80	4.83	20.00

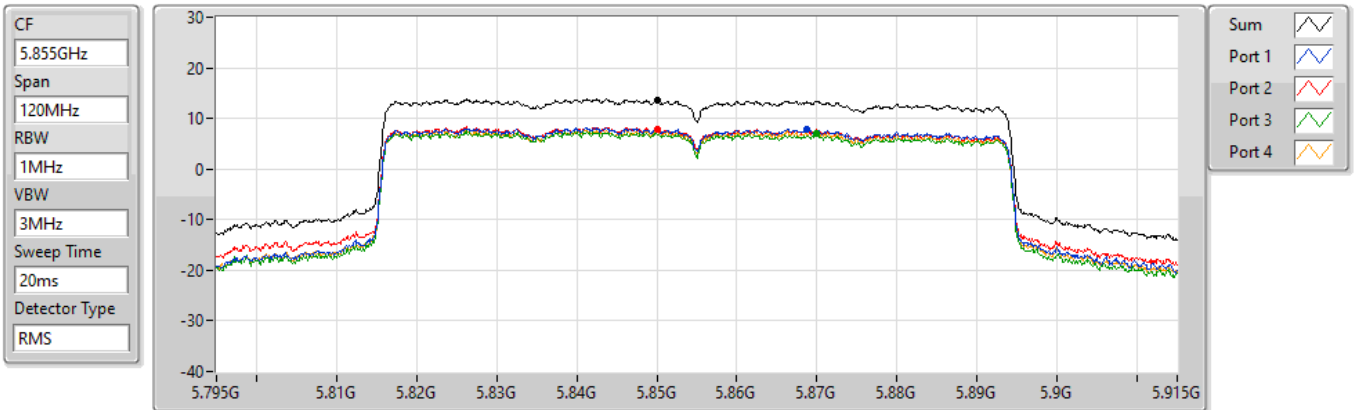
DG = Directional Gain; RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;

802.11ax HEW80_Nss4,(MCS0)_4TX

PSD

5855MHz

07/03/2022



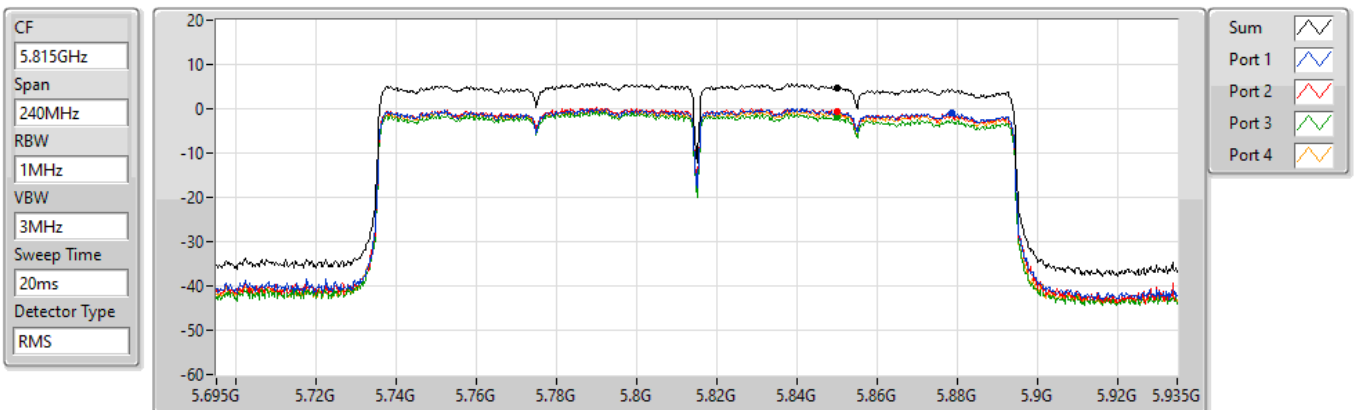
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
13.55	13.55	7.80	7.82	7.02	7.79

802.11ax HEW160_Nss4,(MCS0)_4TX

PSD

5815MHz

07/03/2022



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.80	4.80	-0.93	-0.67	-1.89	-1.43

For UNII 4
4T1S <Beamforming Mode>
Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
5.725-5.895GHz	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	13.92	19.83
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	13.99	19.90
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	11.33	17.24
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	5.17	11.08

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)	Port 4 (dBm/RBW)	PD (dBm/RBW)	EIRP PD (dBm/RBW)	EIRP PD Limit (dBm/RBW)
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-
5845MHz	Pass	5.91	8.28	8.23	7.68	7.84	13.92	19.83	20.00
5865MHz	Pass	5.91	8.31	8.12	7.49	7.73	13.85	19.76	20.00
5885MHz	Pass	5.91	3.33	3.06	2.66	2.63	8.85	14.76	20.00
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-
5835MHz	Pass	5.91	8.26	8.56	7.57	7.65	13.99	19.90	20.00
5875MHz	Pass	5.91	8.23	8.45	7.61	7.77	13.97	19.88	20.00
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-
5855MHz	Pass	5.91	5.38	5.85	5.17	4.95	11.33	17.24	20.00
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-
5815MHz	Pass	5.91	-0.84	-0.37	-0.81	-1.09	5.17	11.08	20.00

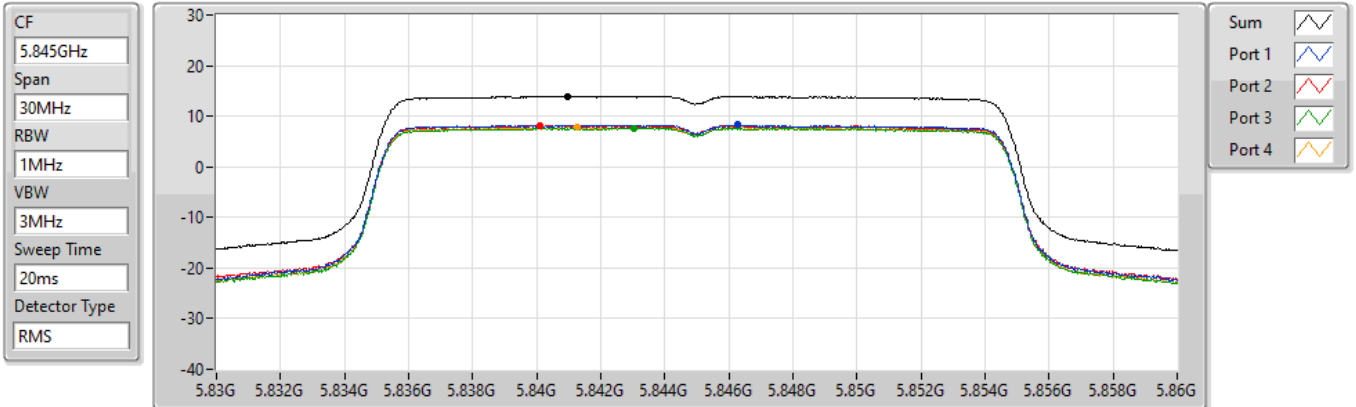
DG = Directional Gain; RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;
 PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;

802.11ax HEW20-BF_Nss1,(MCS0)_4TX

PSD

5845MHz

07/03/2022



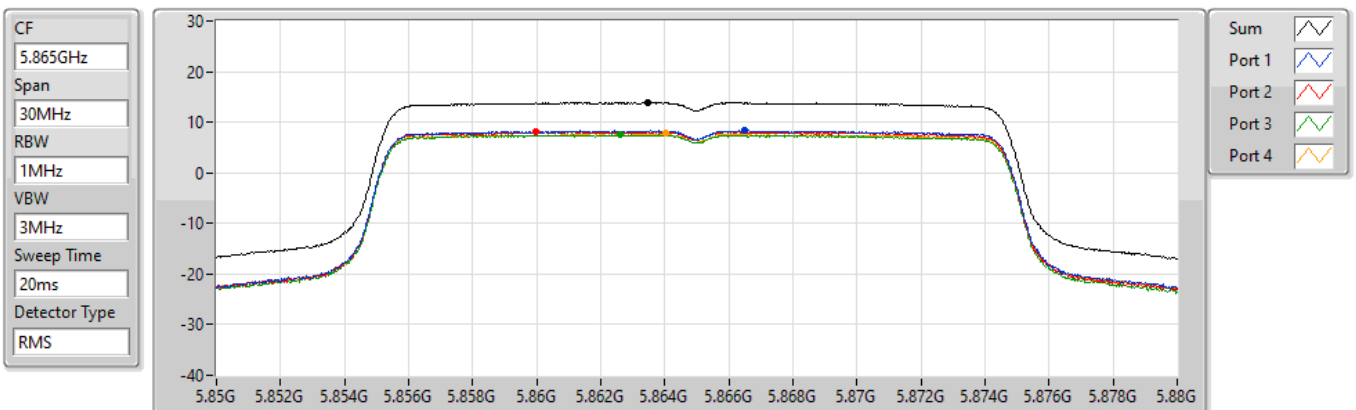
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
13.92	13.92	8.28	8.23	7.68	7.84

802.11ax HEW20-BF_Nss1,(MCS0)_4TX

PSD

5865MHz

07/03/2022



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
13.85	13.85	8.31	8.12	7.49	7.73