



RADIO TEST REPORT

FCC ID : 2AHKM-CODA5834
Equipment : DOCSIS 3.1 Wi-Fi 6E Tri-Band EMTA Gateway
Brand Name : Hitron
Model Name : CODA5X3X
(Please refer to section 1.1.5 of the test report for detailed information.)
Applicant : Hitron Technologies Inc.
No. 1-8, Li-Hsin 1st Rd. Hsinchu Science Park,
Hsinchu 30078, Taiwan
Manufacturer : Hitron Technologies Inc.
No. 1-8, Li-Hsin 1st Rd. Hsinchu Science Park,
Hsinchu 30078, Taiwan
Standard : 47 CFR FCC Part 15.407

The product was received on May 05, 2022, and testing was started from Aug. 20, 2022 and completed on Dec. 01, 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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Photographs of EUT v01



History of this test report

Report No.	Version	Description	Issued Date
FR250531AC	01	Initial issue of report	Dec. 21, 2022



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 Equivalent Isotopically Radiated Power (E.I.R.P.)	PASS	-
3.4	15.407(a)	Peak Power Spectral Density (E.I.R.P.)	PASS	-
3.5	15.407(b)	Unwanted Emissions	PASS	-
3.6	15.407(d)	Contention-Based Protocol	PASS	-
3.7	15.407(g)	Frequency Stability	PASS	-

Declaration of Conformity:

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

Comments and Explanations:

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

Reviewed by: **Sam Chen**

Report Producer: **Wendy Pan**



1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
5925-7125	ax (HEW20)	6115-7115	33-233 [51]
5925-7125	ax (HEW40)	6125-7085	35-227 [25]
5925-7125	ax (HEW80)	6145-7025	39-215 [12]
5925-7125	ax (HEW160)	6185-6985	47-207 [6]

Band	Mode	BWch (MHz)	Nant
UNII 5-8	ax (HEW20)	20	4TX
UNII 5-8	ax (HEW20)-BF	20	4TX
UNII 5-8	ax (HEW40)	40	4TX
UNII 5-8	ax (HEW40)-BF	40	4TX
UNII 5-8	ax (HEW80)	80	4TX
UNII 5-8	ax (HEW80)-BF	80	4TX
UNII 5-8	ax (HEW160)	160	4TX
UNII 5-8	ax (HEW160)-BF	160	4TX

Note:

- HEW20, HEW40, HEW80 and HEW160 use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- BWch is the nominal channel bandwidth.



1.1.2 Antenna Information

Ant.	Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	1	SPEED	S-D5-49-6003-004-00	Dipole	I-PEX	Note
2	2	SPEED	S-D5-49-6003-003-00	Dipole	I-PEX	
3	3	SPEED	S-D5-49-6003-002-00	Dipole	I-PEX	
4	4	SPEED	S-D5-49-6003-001-00	Dipole	I-PEX	
5	1	SPEED	S-D5-49-6003-008-00	Dipole	I-PEX	
6	2	SPEED	S-D5-49-6003-007-00	Dipole	I-PEX	
7	3	SPEED	S-D5-49-6003-006-00	Dipole	I-PEX	
8	4	SPEED	S-D5-49-6003-005-00	Dipole	I-PEX	

Note

<Antenna Gain>

Ant.	Antenna Gain (dBi)				
	WLAN 2.4GHz	WLAN 5GHz			
		UNII 1	UNII 2A	UNII 2C	UNII 3
1	3.55	2.97	2.91	2.09	2.15
2	4.09	3.07	3.49	2.73	3.31
3	3.16	3.19	4	3.11	2.83
4	2.17	2.4	3.04	2.44	2.25

Frequency (MHz)	WLAN 6GHz Antenna Gain (dBi)			
	Ant.5	Ant.6	Ant.7	Ant.8
5925	4.4	5.8	5.3	3.1
6125	4.2	5.3	4.1	2.5
6225	5.0	5.6	4.8	2.9
6325	3.5	3.6	2.8	1.6
6425	3.7	5.1	4.6	3.2
6525	2.3	3.6	4.7	2.5
6625	3.4	5.9	5.4	3.8
6725	3.0	5.0	5.1	3.5
6875	4.1	5.8	5.6	3.2
6925	3.6	4.5	5.8	3.2
7125	3.8	5.0	5.3	3.1

< Directional Gain>

Item	Directional Gain (dBi)				
	WLAN 2.4GHz	WLAN 5GHz			
		UNII 1	UNII 2A	UNII 2C	UNII 3
4T1S	5.17	4.87	4.61	3.59	4
4T2S	4.09	3.19	4	3.11	3.31
4T4S	4.09	3.19	4	3.11	3.31

Note: The above information (except gain of Ant.1~4) was declared by manufacturer.

The antenna gain and directional gain of the 2.4GHz/5GHz are measured which follow the procedure of KDB 662911 D03.

For WLAN 2.4GHz function:

For 802.11b/g/n/VHT/ax (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 WLAN 5GHz function:

For 802.11a/n/ac/ax (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 6GHz function:

For 802.11ax (4TX/4RX):

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

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

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11ax HEW20	0.867	0.62	5.445m	300
802.11ax HEW20-BF	0.782	1.07	3.463m	300
802.11ax HEW40	0.864	0.63	5.445m	300
802.11ax HEW40-BF	0.792	1.01	3.438m	300
802.11ax HEW80	0.859	0.66	5.448m	300
802.11ax HEW80-BF	0.802	0.96	3.708m	300
802.11ax HEW160	0.916	0.38	5.445m	300
802.11ax HEW160-BF	0.873	0.59	3.914m	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	<input checked="" type="checkbox"/>	With beamforming	<input type="checkbox"/>	Without beamforming
	The product has beamforming function for ax in 2.4GHz, n/ac/ax in 5GHz and ax in 6GHz.			
Device Type	<input checked="" type="checkbox"/>	Indoor Access Point	<input type="checkbox"/>	Subordinate
	<input type="checkbox"/>	Indoor Client	<input type="checkbox"/>	Standard Power Access Point
	<input type="checkbox"/>	Dual Client	<input type="checkbox"/>	Standard Client
	<input type="checkbox"/>	Fixed Client		
Channel Puncturing Function	<input type="checkbox"/>	Supported	<input checked="" type="checkbox"/>	Unsupported
Support RU	<input checked="" type="checkbox"/>	Full RU	<input type="checkbox"/>	Partial RU
Test Software Version	QSPR.exe Version 5.0-00197			
Software / Firmware Version for CBP	7.2.4.7.1b1			

Note: The above information was declared by manufacturer.



1.1.5 Table for Multiple Listing

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

Model Name	Description
CODA5X3X	CODA5X3X : The X in model name can be 0 to 9, A to Z or blank, for marketing purpose.

Note 1: From the above model: CODA5834 was selected as representative model for the test and its data was recorded in this report.

Note 2: The above information was declared by manufacturer.



1.2 Applicable Standards

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

- ♦ 47 CFR FCC Part 15.407
- ♦ 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 987594 D02 v01r01
- ♦ FCC KDB 412172 D01 v01r01
- ♦ FCC KDB 414788 D01 v01r01

1.3 Testing Location Information

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

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
RF Conducted	TH03-CB	Brian Sun	24.2-24.6 / 57-62	Aug. 23, 2022~ Nov. 07, 2022
Radiated<1GHz	03CH05-CB	Simmon Zheng	24.2-25.3 / 56-59	Nov. 30, 2022
Radiated>1GHz	03CH02-CB	Gordon Hung	23.8-24.9 / 55-58	Aug. 20, 2022~ Nov. 30, 2022
	03CH03-CB		22.5~23.9 / 57~62	
	03CH04-CB		24.4-25.5 / 55-58	
Radiated Co-location	03CH05-CB	Gordon Hung	24.2-25.3 / 56-59	Aug. 20, 2022~ Nov. 30, 2022
AC Conduction	CO02-CB	Joe Chu	23~24 / 56~57	Dec. 01, 2022
RF Conducted <Contention-Based Protocol test>	DF02-CB	Jeff Wu	22.4~23.7 / 55~60	Sep. 05, 2022~ Sep. 22, 2022



1.4 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.4 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	3.4 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	5.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	5.2 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.7 dB	Confidence levels of 95%
Conducted Emission	3.2 dB	Confidence levels of 95%
Output Power Measurement	0.8 dB	Confidence levels of 95%
Power Density Measurement	3.2 dB	Confidence levels of 95%
Bandwidth Measurement	2.0 %	Confidence levels of 95%



2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
802.11ax HEW20_Nss1,(MCS0)_4TX	-
6115MHz	9
6255MHz	8.5
6415MHz	7
6435MHz	7
6475MHz	7.5
6515MHz	7.5
6535MHz	7
6695MHz	8
6855MHz	7
6875MHz Straddle 6.525-6.875GHz	7
6895MHz	7
6995MHz	7.5
7095MHz	7.5
7115MHz	6
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-
6115MHz	14
6255MHz	14
6415MHz	13
6435MHz	12
6475MHz	13
6515MHz	14
6535MHz	13
6695MHz	14
6855MHz	12
6875MHz Straddle 6.525-6.875GHz	12
6895MHz	13
6995MHz	12
7095MHz	11
7115MHz	8
802.11ax HEW40_Nss1,(MCS0)_4TX	-
6125MHz	11.5
6245MHz	10.5
6405MHz	8
6445MHz	8.5



Mode	Power Setting
6485MHz	8
6525MHz Straddle 6.425-6.525GHz	8
6565MHz	8
6725MHz	8
6845MHz	9
6885MHz Straddle 6.525-6.875GHz	9
6925MHz	9
7005MHz	9.5
7085MHz	9
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-
6125MHz	16
6245MHz	16
6405MHz	15
6445MHz	15
6485MHz	15
6525MHz Straddle 6.425-6.525GHz	15
6565MHz	16
6725MHz	15
6845MHz	16
6885MHz Straddle 6.525-6.875GHz	16
6925MHz	16
7005MHz	15
7085MHz	14
802.11ax HEW80_Nss1,(MCS0)_4TX	-
6145MHz	14
6225MHz	13.5
6385MHz	11.5
6465MHz	12
6545MHz Straddle 6.425-6.525GHz	12
6625MHz	11.5
6705MHz	12
6785MHz	11.5
6865MHz Straddle 6.525-6.875GHz	11.5
6945MHz	12
7025MHz	13
802.11ax HEW80_Nss4,(MCS0)_4TX	-
6145MHz	19
6225MHz	18
6385MHz	17



Mode	Power Setting
6465MHz	16
6545MHz Straddle 6.425-6.525GHz	17
6545MHz Straddle 6.525-6.875GHz	
6625MHz	16.5
6705MHz	16.5
6785MHz	17
6865MHz Straddle 6.525-6.875GHz	16.5
6865MHz Straddle 6.875-7.125GHz	
6945MHz	16.5
7025MHz	17
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-
6145MHz	18
6225MHz	19
6385MHz	17
6465MHz	17
6545MHz Straddle 6.425-6.525GHz	17
6625MHz	17
6705MHz	17
6785MHz	17
6865MHz Straddle 6.525-6.875GHz	18
6945MHz	19
7025MHz	19
802.11ax HEW160_Nss1,(MCS0)_4TX	-
6185MHz	17
6345MHz	16
6505MHz Straddle 6.425-6.525GHz	16
6665MHz	15.5
6825MHz Straddle 6.525-6.875GHz	16
6985MHz	16.5
802.11ax HEW160_Nss4,(MCS0)_4TX	-
6185MHz	19.5
6345MHz	18
6505MHz Straddle 6.425-6.525GHz	18.5
6505MHz Straddle 6.525-6.875GHz	
6665MHz	19
6825MHz Straddle 6.525-6.875GHz	19.5
6825MHz Straddle 6.875-7.125GHz	
6985MHz	19
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-



Mode	Power Setting
6185MHz	22
6345MHz	20
6505MHz Straddle 6.425-6.525GHz	21
6665MHz	20
6825MHz Straddle 6.525-6.875GHz	23
6985MHz	23



2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral Test Voltage: 120Vac / 60Hz
Operating Mode	Normal Link
1	EUT + Adapter

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emission Bandwidth Contention Based Protocol Frequency Stability
Test Condition	Conducted measurement at transmit chains

The Worst Case Mode for Following Conformance Tests	
Tests Item	Maximum Equivalent Isotropically Radiated Power (E.I.R.P.) Peak Power Spectral Density (E.I.R.P.)
Test Condition	Radiated measurement After evaluating, the worst axis was found as below. So the measurement will follow this same test configuration.
1	EUT in Y axis

The Worst Case Mode for Following Conformance Tests	
Tests Item	Unwanted Emissions
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	Normal Link After evaluating, the worst axis was found as below. So the measurement will follow this same test configuration.
1	EUT in Z axis + Adapter
Operating Mode > 1GHz	CTX After evaluating, the worst axis was found as below. So the measurement will follow this same test configuration.
1	EUT in Y axis + Adapter



The Worst Case Mode for Following Conformance Tests	
Tests Item	Emission MASK
Test Condition	Conducted measurement at transmit chains

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	WLAN 2.4GHz + WLAN 5GHz + WLAN 6GHz
Refer to Sporton Test Report No.: FA250531 for Co-location RF Exposure Evaluation.	

2.3 EUT Operation during Test

For CTX Mode:

The EUT was programmed to be in continuously transmitting mode.

For Normal Link Mode:

During the test, the EUT operation to normal function.

2.4 Accessories

Accessories				
Equipment Name	Brand Name	Model Name	Rating	DC cable
Adapter	Frecom	F60X-120450SPA	INPUT: 100-240~50/60Hz, 1.6A OUTPUT: 12.0V, 4.5A, 54.0W	Non-shielding, 1.5m
Others				
Power cable*1: Non-shielding, 1.2m RJ-45 cable*1: Non-shielding, 1.5m				



2.5 Support Equipment

For AC Conduction:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	2.5G WAN NB	DELL	E6430	N/A
B	Phone 1	SAMPO	HT-B 907WL	N/A
C	Phone 2	SAMPO	HT-B 907WL	N/A
D	CO	Jinghong	JH-HE3416B	N/A
F	2.4G NB	DELL	E6430	N/A
G	5G NB	DELL	E6430	N/A
H	1G LAN NB	DELL	E6430	N/A
I	6G NB	DELL	E6430	N/A
J	CO NB	lenov	7458	N/A

For Radiated (below 1GHz):

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Terminal System	Jinghong	JH-HE3416B	N/A
B	Notebook(6G WIFI)	DELL	E4300	N/A
C	Notebook(2.4G WIFI)	DELL	E4300	N/A
D	Notebook(5G WIFI)	DELL	E4300	N/A
E	Notebook	DELL	E4300	N/A
F	Phone	SAMPO	HT-B 907WL	N/A
G	Phone	SAMPO	HT-B 907WL	N/A
H	WAN Notebook	DELL	E4300	N/A
I	LAN Notebook	DELL	E4300	N/A

For RF Conducted <Contention-Based Protocol test>

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A
B	Notebook	DELL	E4300	N/A
C	WLAN module	Intel	AX210NGW	PD9AX210NG



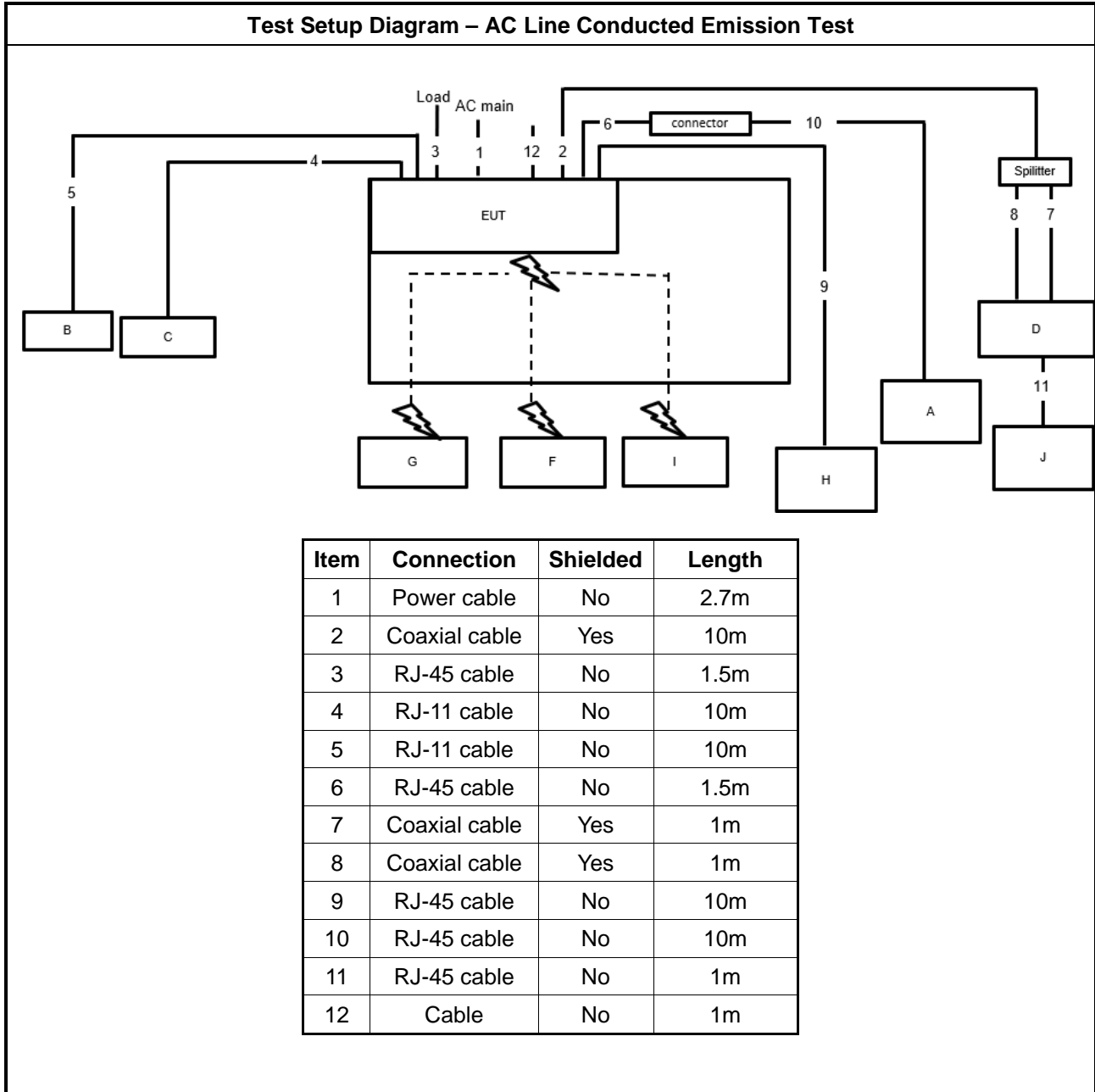
For RF Conducted and Radiated (above 1GHz / Non-Beamforming mode):

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

For Radiated (above 1GHz / Beamforming mode):

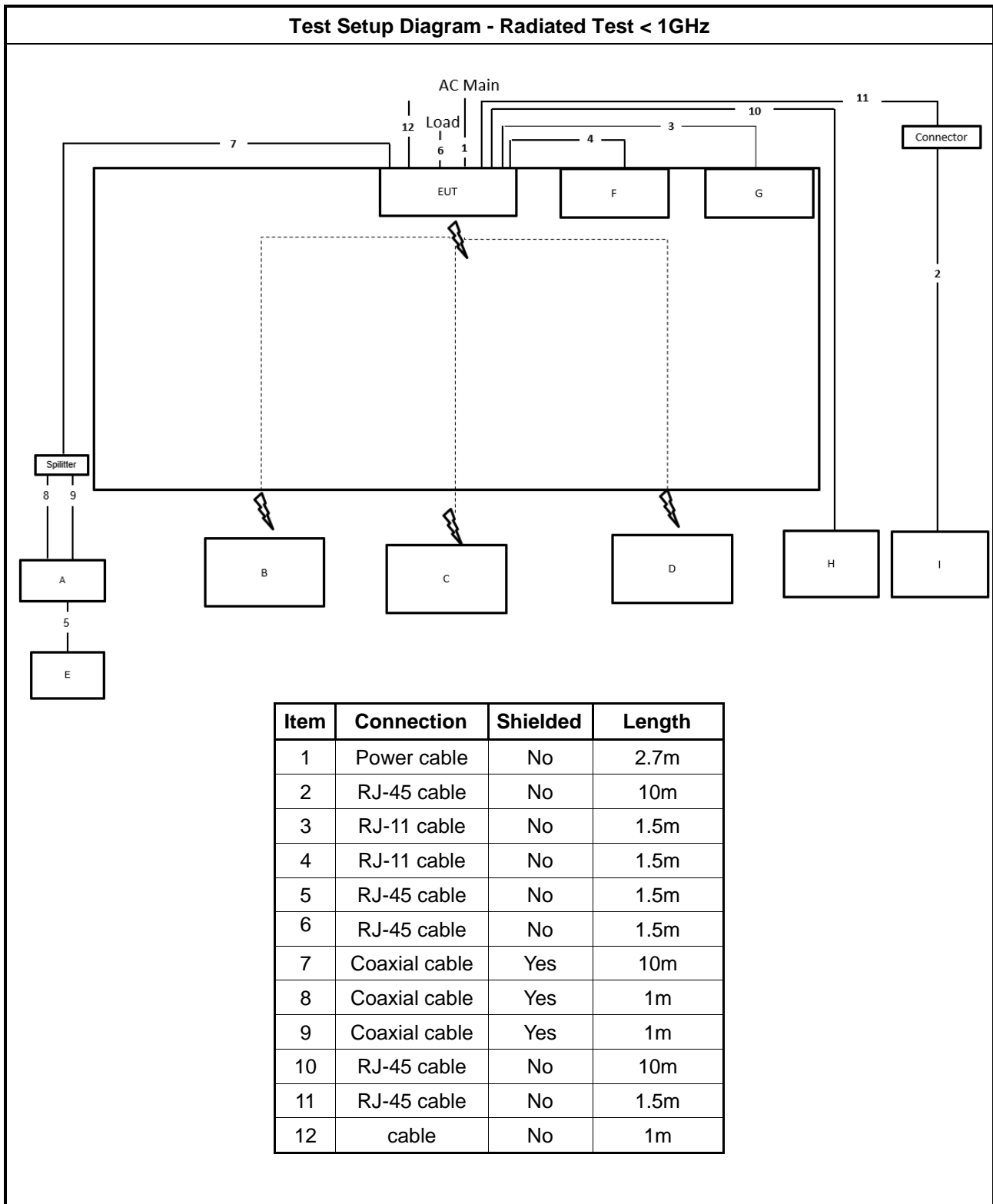
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A
B	Notebook	DELL	E4300	N/A
C	Client	Hitron	CODA5834	2AHKM-CODA5834

2.6 Test Setup Diagram



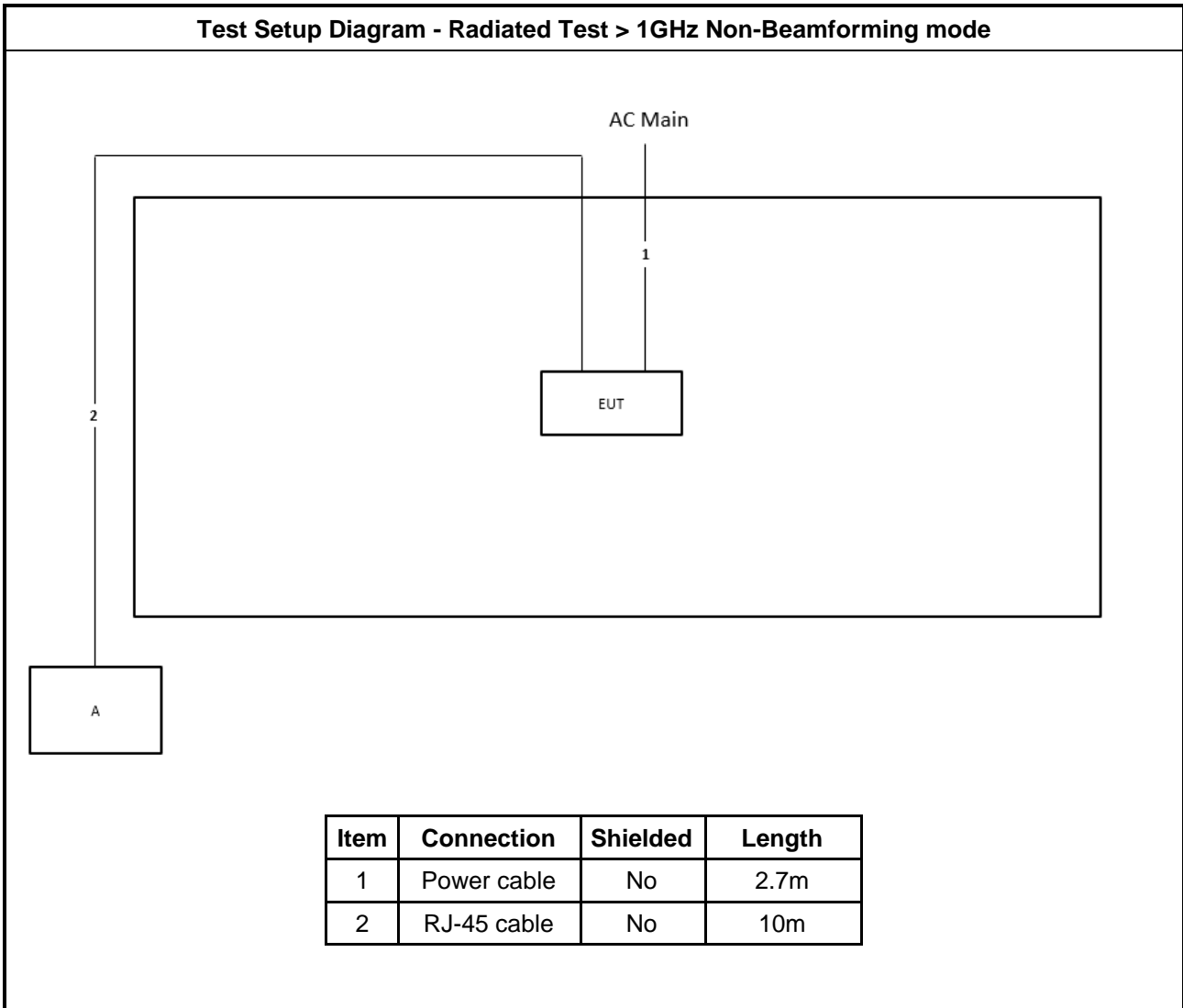


Test Setup Diagram - Radiated Test < 1GHz

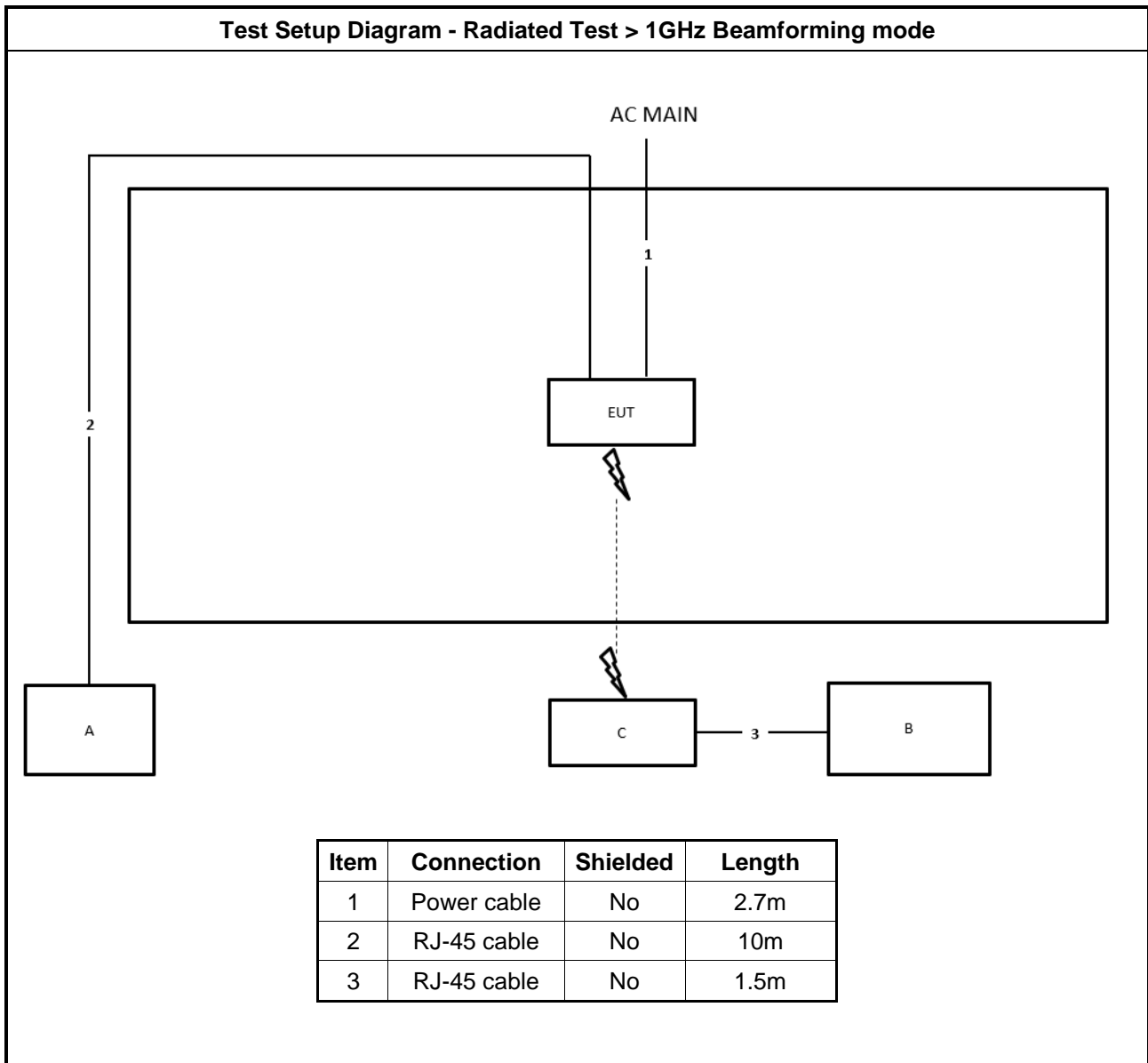




Test Setup Diagram - Radiated Test > 1GHz Non-Beamforming mode



Item	Connection	Shielded	Length
1	Power cable	No	2.7m
2	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.

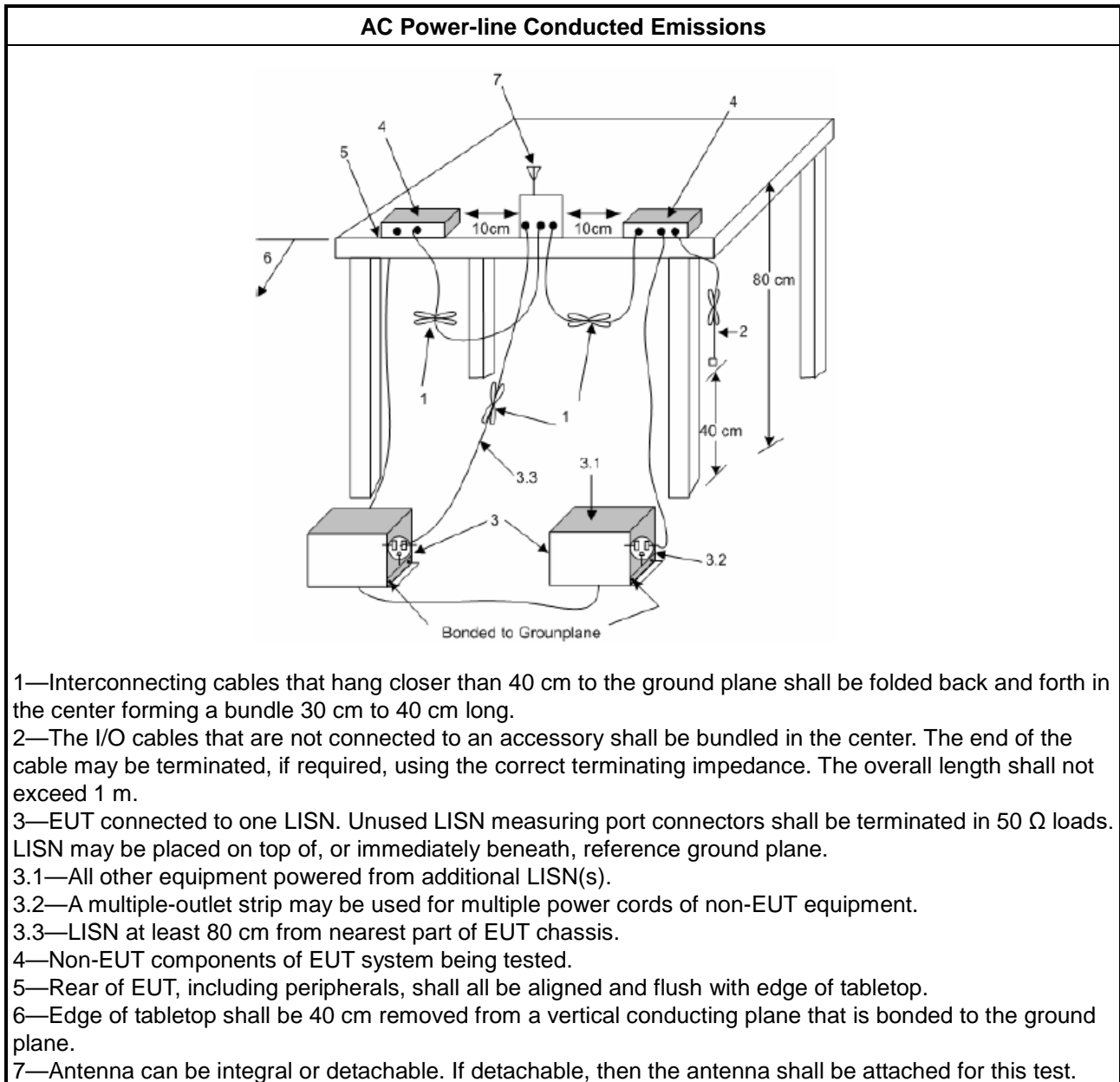
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

Test Method
<input checked="" type="checkbox"/> 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 (dBuV) = LISN Factor + Cable Loss + Read Level = Level
- b. Margin = - Limit + (Read Level + LISN Factor + Cable Loss)

3.1.6 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 Emission Bandwidth

3.2.1 Emission Bandwidth Limit

Emission Bandwidth Limit	
UNII Devices	
<input checked="" type="checkbox"/>	For the 5925-6425 GHz band, N/A
<input checked="" type="checkbox"/>	For the 6425-6525 GHz band, N/A
<input checked="" type="checkbox"/>	For the 6525-6875 GHz band, N/A
<input checked="" type="checkbox"/>	For the 6875-7125 GHz band, N/A
RLAN Devices	
<input type="checkbox"/>	For the 5925-6425 GHz band, N/A
<input type="checkbox"/>	For the 6425-6525 GHz band, N/A
<input type="checkbox"/>	For the 6525-6875 GHz band, N/A
<input type="checkbox"/>	For the 6875-7125 GHz band, N/A

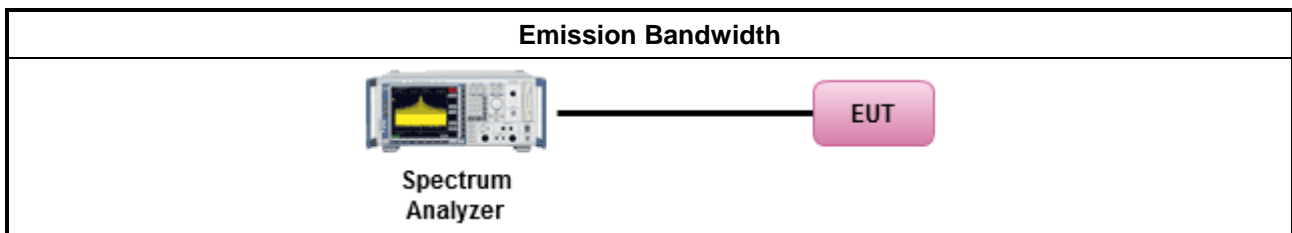
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method							
<ul style="list-style-type: none"> ▪ For the emission bandwidth shall be measured using one of the options below: <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;"><input checked="" type="checkbox"/></td> <td>According to FCC KDB 987594 D02 clause II.C, measurement procedure shall refer to FCC KDB 789033 D02, clause C for EBW and clause D for OBW measurement.</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Refer as IC RSS-Gen, clause 4.6 for bandwidth testing.</td> </tr> </table> 		<input checked="" type="checkbox"/>	According to FCC KDB 987594 D02 clause II.C, measurement procedure shall refer to FCC KDB 789033 D02, clause C for EBW and clause D for OBW measurement.	<input type="checkbox"/>	Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.	<input type="checkbox"/>	Refer as IC RSS-Gen, clause 4.6 for bandwidth testing.
<input checked="" type="checkbox"/>	According to FCC KDB 987594 D02 clause II.C, measurement procedure shall refer to FCC KDB 789033 D02, clause C for EBW and clause D for OBW measurement.						
<input type="checkbox"/>	Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.						
<input type="checkbox"/>	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 Equivalent Isotropically Radiated Power (E.I.R.P.)

3.3.1 Maximum Equivalent Isotropically Radiated Power (E.I.R.P.) Limit

Maximum Equivalent Isotropically Radiated Power (E.I.R.P.) Limit	
UNII Devices	
<input checked="" type="checkbox"/> For the 5.925 ~ 6.425 GHz band:	
<input type="checkbox"/>	<ul style="list-style-type: none"> ▪ For standard power access point and fixed client device : e.i.r.p < 36 dBm , For outdoor devices, the maximum e.i.r.p. at any elevation angle above 30 degrees not exceed 125 mW (21 dBm). ▪ For indoor access point : e.i.r.p < 30 dBm. ▪ For subordinate device control of an indoor access point : e.i.r.p < 30 dBm. ▪ For client device control of a standard power access point : e.i.r.p < 30 dBm. ▪ For client device control of an indoor access point : e.i.r.p < 24 dBm.
<input checked="" type="checkbox"/> For the 6.425 ~ 6.525 GHz band:	
<input type="checkbox"/>	<ul style="list-style-type: none"> ▪ For indoor access point : e.i.r.p < 30 dBm. ▪ For client device control of an indoor access point : e.i.r.p < 24 dBm.
<input checked="" type="checkbox"/> For the 6.525 ~ 6.875 GHz band:	
<input type="checkbox"/>	<ul style="list-style-type: none"> ▪ For standard power access point and fixed client device : e.i.r.p < 36 dBm , For outdoor devices, the maximum e.i.r.p. at any elevation angle above 30 degrees not exceed 125 mW (21 dBm). ▪ For indoor access point : e.i.r.p < 30 dBm. ▪ For subordinate device control of an indoor access point : e.i.r.p < 30 dBm. ▪ For client device control of a standard power access point : e.i.r.p < 30 dBm. ▪ For client device control of an indoor access point : e.i.r.p < 24 dBm.
<input checked="" type="checkbox"/> For the 6.875 ~ 7.125 GHz band:	
<input type="checkbox"/>	<ul style="list-style-type: none"> ▪ For indoor access point : e.i.r.p < 30 dBm. ▪ For client device control of an indoor access point : e.i.r.p < 24 dBm.
RLAN Devices	
<input type="checkbox"/> For the 5.925 ~ 7.125 GHz band:	
<input type="checkbox"/>	<ul style="list-style-type: none"> ▪ For RLAN devices(Indoor) other than client devices < 30 dBm / occupied bandwidth. ▪ For client devices(Indoor) < 24 dBm / occupied bandwidth.



3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method	
<input type="checkbox"/>	According to FCC KDB 987594 D02 clause II.E, the test measurement procedure shall refer to KDB 789033.
Average over on/off periods with duty factor	
<input type="checkbox"/>	Refer as FCC KDB 789033 D02, clause E Method SA-2 (spectral trace averaging). Spectrum analyzer setting: RBW/VBW : 1/3MHz ; Detector : RMS ; Trace mode : Average ; Sweep Count 100.
<input type="checkbox"/>	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	
<input type="checkbox"/>	Refer as FCC KDB 789033 D02, clause E Method PM-G (using an RF average power meter).
<input type="checkbox"/>	For conducted measurement.
<ul style="list-style-type: none"> ▪ If the EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them. ▪ If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$ 	
<input checked="" type="checkbox"/>	For radiated measurement.
<ul style="list-style-type: none"> ▪ 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. 	

Note :

The test is the final test result, It includes antenna /cable loss factor & FSL factor.

The EIRP calculation refer to "KDB 412172 D01 Determining ERP and EIRP v01r01"

EIRP Formula :

$$EIRP(dBm) = PR(dBm) + LP(FSL \text{ factor})$$

where;

PR(dBm) : Power measurement level include antenna/cable loss

LP : Free Space Loss(dB)

PR Formula :

$$PR(dBm) = P \text{ Meas}(dBm) - GR(dBi) + LC(dB)$$

where;

P Meas(dBm) : Power measurement level

GR(dBi) : Gain of the receive(measurement) antenna (dBi)

LC(dB) : Measurement cable loss (dB)

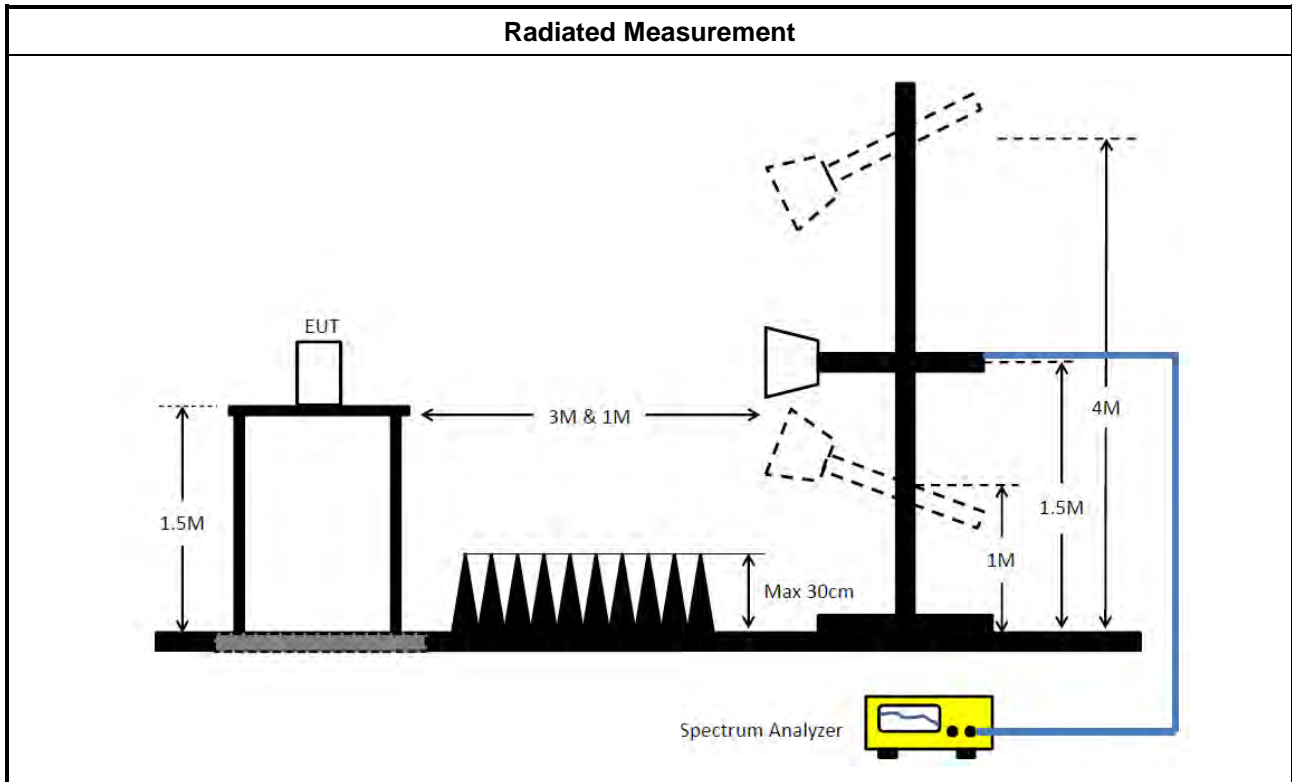
LP(FSL factor) Formula :
 $LP(dB) = 20 \log F + 20 \log D - 27.54$
 where;
 F(MHz) : EUT center frequency
 D(m) : Measurement distance

For Example:
 Test mode HE20 Non BF 4T1S 6115MHz EIRP measurement
 PR Formula :
 $PR(dBm) = -36.99 - 13.31 + 6.12 = -44.18$

LP(FSL factor) Formula :
 $LP(dB) = 20 \log(5955) + 20 \log(3) - 27.5 = 57.77$

EIRP Formula :
 $EIRP(dBm) = -44.18 + 57.77 = 13.59$

3.3.4 Test Setup



3.3.5 Test Result of Maximum Equivalent Isotropically Radiated Power (E.I.R.P)

Refer as Appendix C



3.4 Peak Power Spectral Density (E.I.R.P.)

3.4.1 Peak Power Spectral Density (E.I.R.P.) Limit

Peak Power Spectral Density (E.I.R.P.) Limit	
UNII Devices	
<input checked="" type="checkbox"/> For the 5.925 ~ 6.425 GHz band:	
<input type="checkbox"/>	<ul style="list-style-type: none"> ▪ For standard power access point and fixed client device : e.i.r.p PSD < 23 dBm/MHz. ▪ For indoor access point : e.i.r.p PSD < 5 dBm/MHz. ▪ For subordinate device control of an indoor access point : e.i.r.p PSD < 5 dBm/MHz. ▪ For client device control of a standard power access point : e.i.r.p PSD < 17 dBm/MHz. ▪ For client device control of an indoor access point : e.i.r.p PSD < -1 dBm/MHz.
<input checked="" type="checkbox"/> For the 6.425 ~ 6.525 GHz band:	
<input type="checkbox"/>	<ul style="list-style-type: none"> ▪ For indoor access point : e.i.r.p PSD < 5 dBm/MHz. ▪ For client device control of an indoor access point : e.i.r.p PSD < -1 dBm/MHz.
<input checked="" type="checkbox"/> For the 6.525 ~ 6.875 GHz band:	
<input type="checkbox"/>	<ul style="list-style-type: none"> ▪ For standard power access point and fixed client device : e.i.r.p PSD < 23 dBm/MHz. ▪ For indoor access point : e.i.r.p PSD < 5 dBm/MHz. ▪ For subordinate device control of an indoor access point : e.i.r.p PSD < 5 dBm/MHz. ▪ For client device control of a standard power access point : e.i.r.p PSD < 17 dBm/MHz. ▪ For client device control of an indoor access point : e.i.r.p PSD < -1 dBm/MHz.
<input checked="" type="checkbox"/> For the 6.875 ~ 7.125 GHz band:	
<input type="checkbox"/>	<ul style="list-style-type: none"> ▪ For indoor access point : e.i.r.p PSD < 5 dBm/MHz. ▪ For client device control of an indoor access point : e.i.r.p PSD < -1 dBm/MHz.
RLAN Devices	
<input type="checkbox"/> For the 5.925 ~ 7.125 GHz band:	
<input type="checkbox"/>	<ul style="list-style-type: none"> ▪ For RLAN devices(Indoor) other than client devices < 5 dBm / MHz. ▪ For client devices(Indoor) < -1 dBm / MHz.

3.4.2 Measuring Instruments

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



3.4.3 Test Procedures

Test Method	
	<ul style="list-style-type: none"> ▪ According to FCC KDB 987594 D02 clause II.F, the measurement procedure shall refer to KDB 789033. 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:
<input type="checkbox"/>	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]
<input checked="" type="checkbox"/>	Refer as FCC KDB 789033 D02, clause E Method SA-1 (spectral trace averaging).
<input type="checkbox"/>	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
<input checked="" type="checkbox"/>	Refer as FCC KDB 789033 D02, clause E Method SA-2 (spectral trace averaging).
<input type="checkbox"/>	Refer as FCC KDB 789033 D02, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
<input type="checkbox"/>	For conducted measurement.
	<ul style="list-style-type: none"> ▪ If the EUT supports multiple transmit chains using options given below: <ul style="list-style-type: none"> <input checked="" type="checkbox"/> 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. <input type="checkbox"/> 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, <input type="checkbox"/> Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit. ▪ If multiple transmit chains, EIRP PPSD calculation could be following as methods: $PPSD_{total} = PPSD_1 + PPSD_2 + \dots + PPSD_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = PPSD_{total} + DG$
<input checked="" type="checkbox"/>	For radiated measurement.
	<ul style="list-style-type: none"> ▪ 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.



Test Method	
	▪ Refer as FCC KDB 412172 D01 clause 2.2 for EIRP calculation.

Note :

The test is the final test result, It includes antenna /cable loss factor & FSL factor.
The EIRP PSD calculation refer to "KDB 412172 D01 Determining ERP and EIRP v01r01"

EIRP PSD Formula :

$$\text{EIRP PSD(dBm/MHz)} = \text{PR(dBm/MHz)} + \text{LP(FSL factor)}$$

where;

PR(dBm/MHz) : Power measurement level include antenna/cable loss

LP : Free Space Loss(dB)

PR Formula :

$$\text{PR(dBm/MHz)} = \text{P Meas(dBm/MHz)} - \text{GR(dBi)} + \text{LC(dB)}$$

where;

P Meas(dBm/MHz) : PSD measurement level

GR(dBi) : Gain of the receive(measurement) antenna (dBi)

LC(dB) : Measurement cable loss (dB)

LP(FSL factor) Formula :

$$\text{LP(dB)} = 20 \log F + 20 \log D - 27.54$$

where;

F(MHz) : EUT center frequency

D(m) : Measurement distance

For Example:

Test mode HE20 Non BF 4T1S 6115MHz EIRP PSD measurement

PR Formula :

$$\text{PR(dBm/MHz)} = -46.52 - 11.81 + 5.55 = -52.78$$

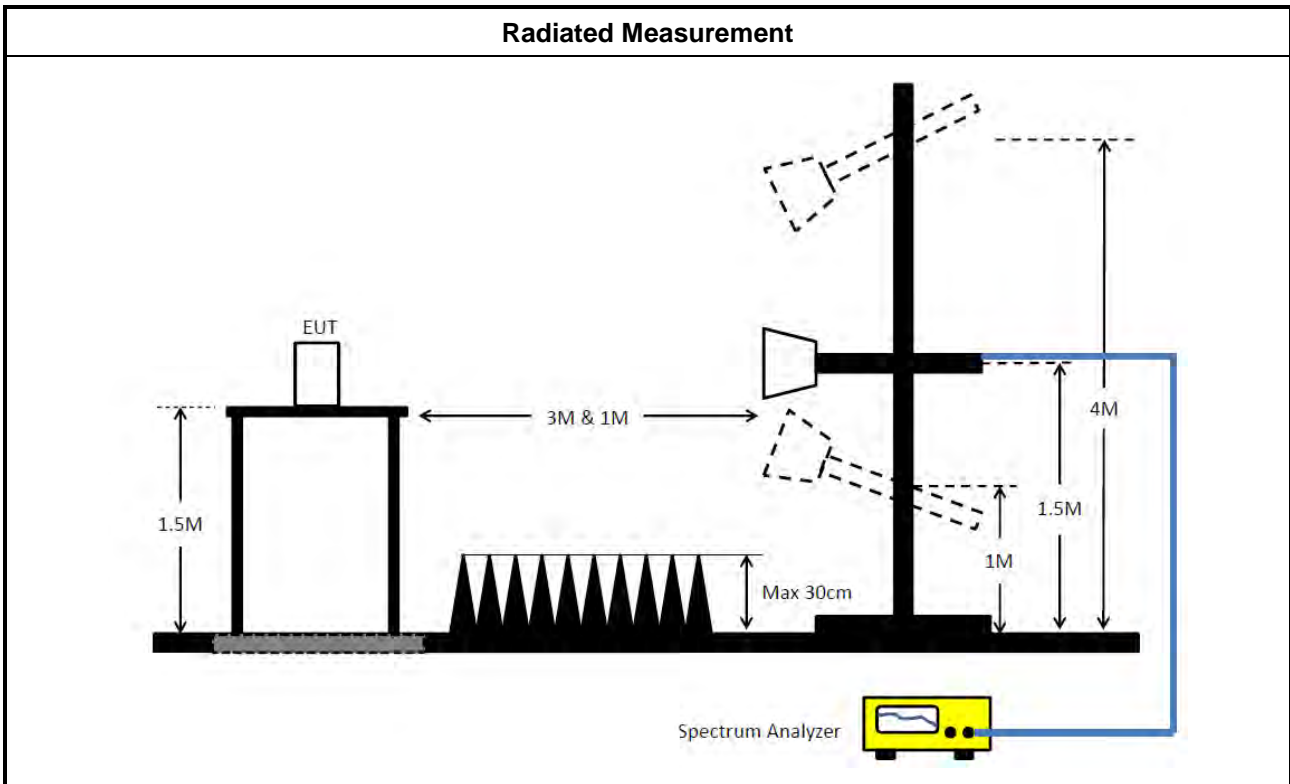
LP(FSL factor) Formula :

$$\text{LP(dB)} = 20 \log(5953.5) + 20 \log(3) - 27.5 = 57.76$$

EIRP PSD Formula

$$\text{EIRP PSD(dBm/MHz)} = -52.78 + 57.76 = 4.98$$

3.4.4 Test Setup



3.4.5 Test Result of Peak Power Spectral Density (E.I.R.P.)

Refer as Appendix D



3.5 Unwanted Emissions

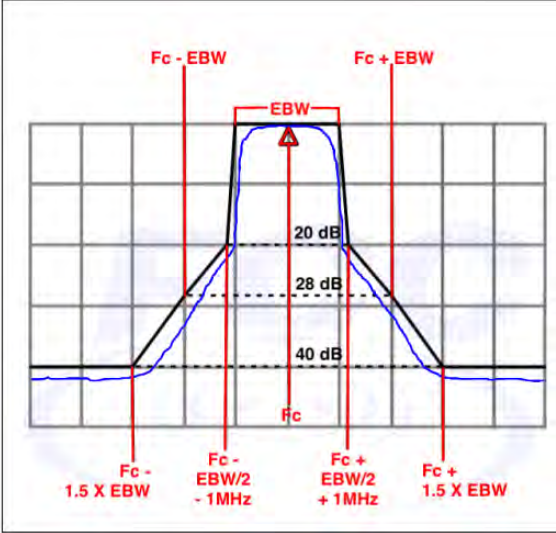
3.5.1 Transmitter Unwanted Emissions Limit

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($20 \times \log(\text{standard distance}/ \text{test distance}) = 20\log(3/1) = 9.54\text{dB}$).
 EX. Above 18GHz emission limit calculation (3m to 1m) = 54dBuV/m at 3m + 9.54dB = 63.54 dBuV/m at 1m.

Un-restricted band emissions above 1GHz Limit	
Frequency	Limit
Any outside the 5.945 – 7.125 GHz emission	<p>e.i.r.p. -27 dBm [68.2 dBuV/m@3m]</p> <p>Note 1: Using the distance of 1m during the test for above 18 GHz, and the test value to correct for the distance factor at 3m($20 \times \log(\text{standard distance}/\text{test distance}) = 20\log(3/1) = 9.54\text{dB}$. EX. Above 18GHz emission limit calculation (3m to 1m) = $68.2\text{dBuV/m at } 3\text{m} + 9.54\text{dB} = 77.74 \text{ dBuV/m at } 1\text{m}$.</p> <p>Note 2:-27 dBm EIRP OOBE is measured RMS which is a deviation from the current 15E rules for 5 GHz bands. In addition, 15.35(b) applies where the peak emissions must be limited to no more than 20 dB above the average limit.</p>
Frequency	Emission MASK Limit
5.945 – 7.125 GHz	<p>Power spectral density must be suppressed by 20 dB at 1 MHz outside of channel edge, by 28 dB at one channel bandwidth from the channel center, and by 40 dB at one- and one-half times the channel bandwidth away from channel center. At frequencies between one megahertz outside an unlicensed device's channel edge and one channel bandwidth from the center of the channel, the limits must be linearly interpolated between 20 dB and 28 dB suppression, and at frequencies between one and one- and one-half times an unlicensed device's channel bandwidth, the limits must be linearly interpolated between 28 dB and 40 dB suppression. Emissions removed from the channel center by more than one- and one-half times the channel bandwidth must be suppressed by at least 40 dB.</p> <div style="text-align: center;">  </div>



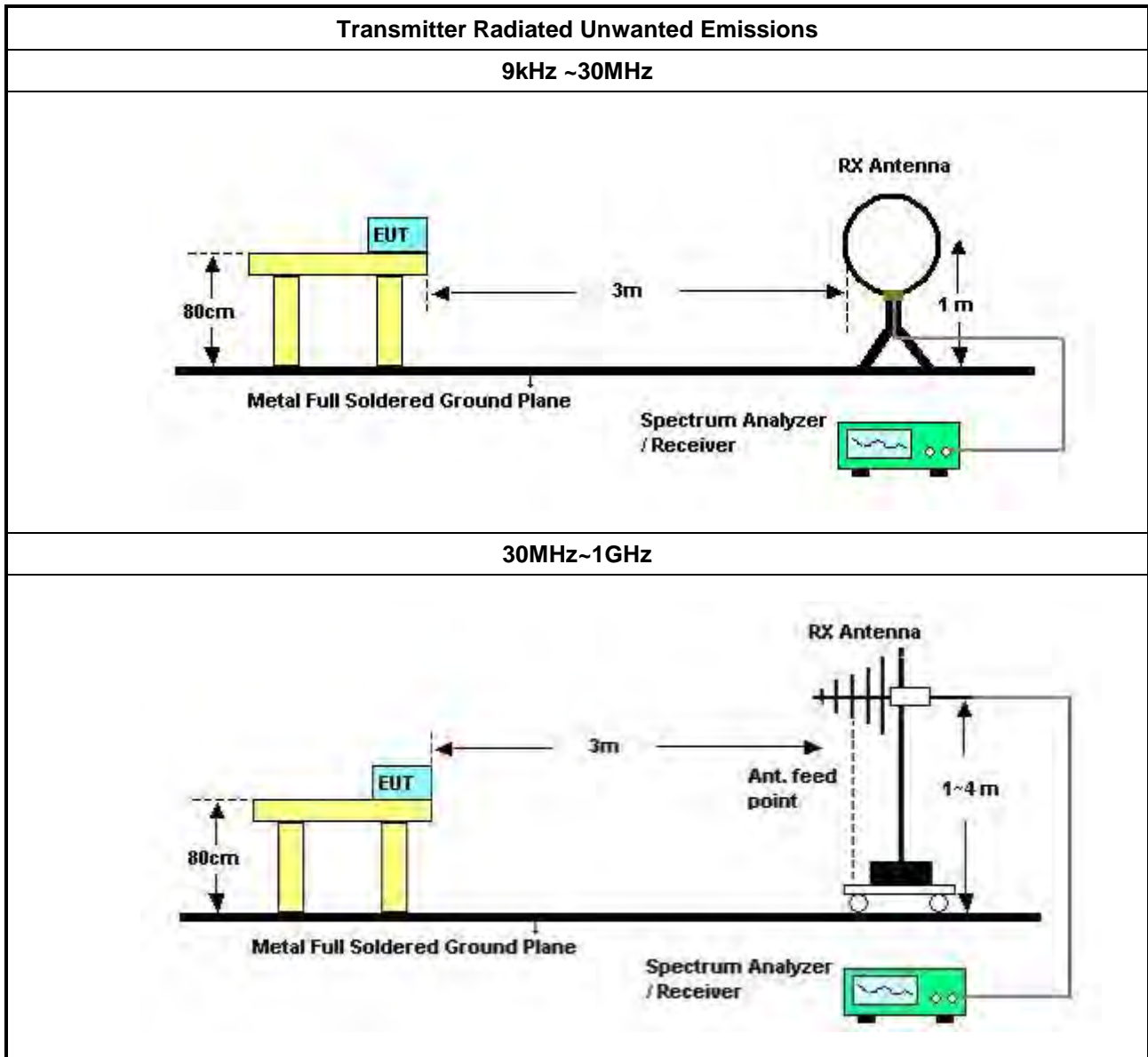
3.5.2 Measuring Instruments

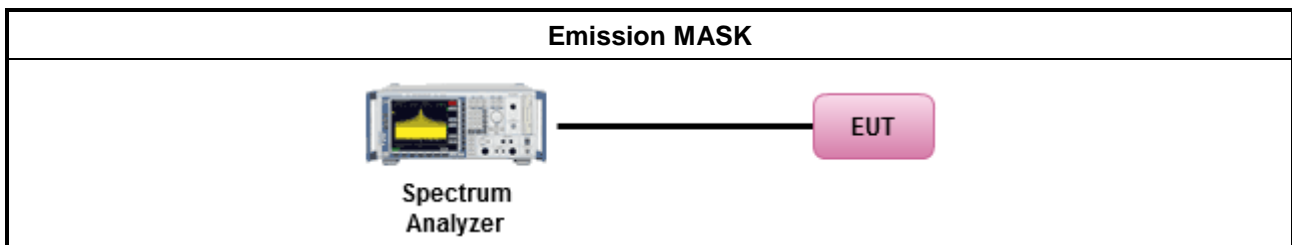
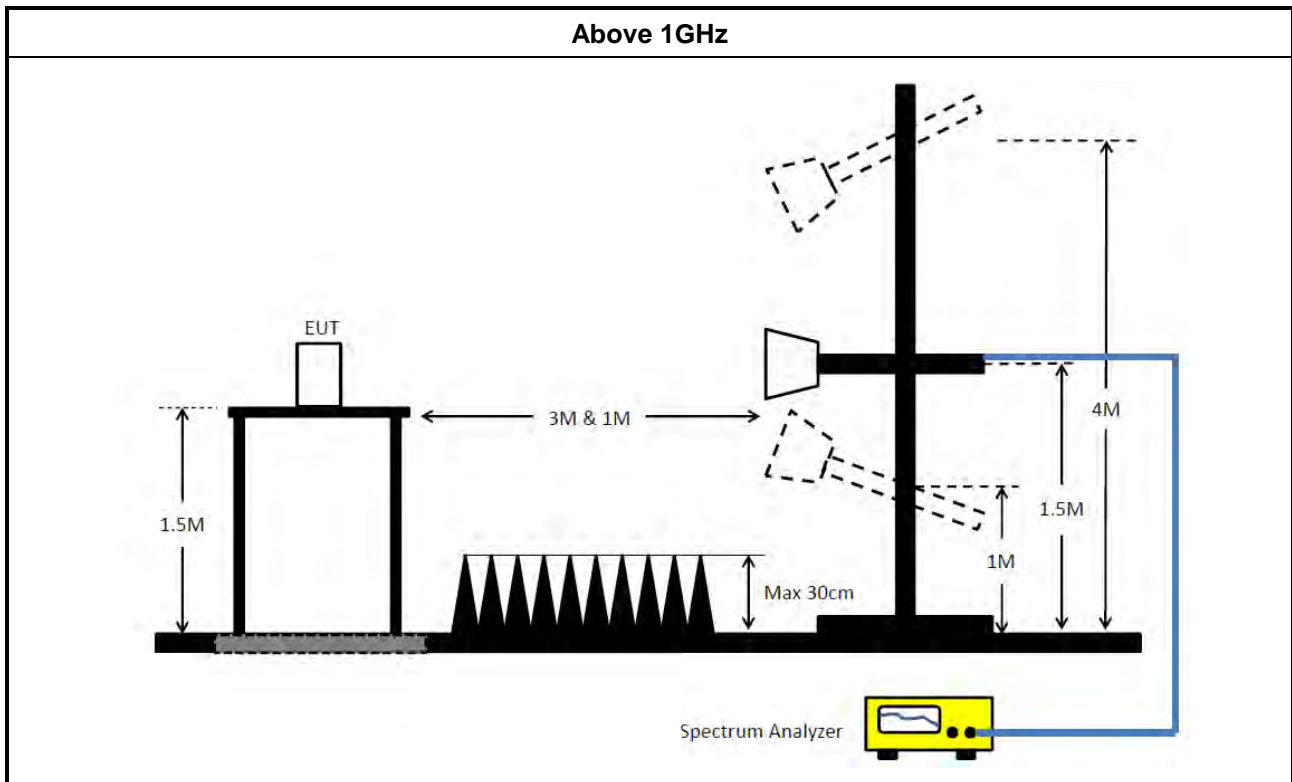
Refer a test equipment and calibration data table in this test report.

3.5.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> ▪ According to FCC KDB 987594 D02 II.G. the unwanted emission measurement procedure shall refer to KDB 789300(except emission MASK). 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). 	
<ul style="list-style-type: none"> ▪ The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor]. 	
<ul style="list-style-type: none"> ▪ For the transmitter unwanted emissions shall be measured using following options below: 	
	<ul style="list-style-type: none"> ▪ Refer as FCC KDB 789033 D02, clause G)2) for unwanted emissions into non-restricted bands.
	<ul style="list-style-type: none"> ▪ Refer as FCC KDB 789033 D02, clause G)1) for unwanted emissions into restricted bands.
	<input checked="" type="checkbox"/> Refer as FCC KDB 789033 D02, G)6) Method AD (Trace Averaging). (For unrestricted band measurement)
	<input type="checkbox"/> Refer as FCC KDB 789033 D02, G)6) Method VB (Reduced VBW).
	<input checked="" type="checkbox"/> Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time.(For restricted band average measurement)
	<input type="checkbox"/> Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions.
	<input checked="" type="checkbox"/> Refer as FCC KDB 789033 D02, clause G)5) measurement procedure peak limit.
	<input type="checkbox"/> Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak limit.
<ul style="list-style-type: none"> ▪ Refer as FCC KDB 789033 D02, clause G)3)d)ii) for Band edge Integration measurements. 	
<ul style="list-style-type: none"> ▪ For emission MASK shall be measured using following options below: 	
	<input checked="" type="checkbox"/> Refer as FCC KDB 987594 D02, J) In-Band Emissions
<ul style="list-style-type: none"> ▪ For radiated measurement. 	
	<ul style="list-style-type: none"> ▪ Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.
	<ul style="list-style-type: none"> ▪ Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.
	<ul style="list-style-type: none"> ▪ Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.
<ul style="list-style-type: none"> ▪ The any unwanted emissions level shall not exceed the fundamental emission level. 	
<ul style="list-style-type: none"> ▪ 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

3.6 Contention Based Protocol

3.6.1 Contention Based Protocol Limit

EUT can detect an AWGN signal with 90% (or better) level of certainty.

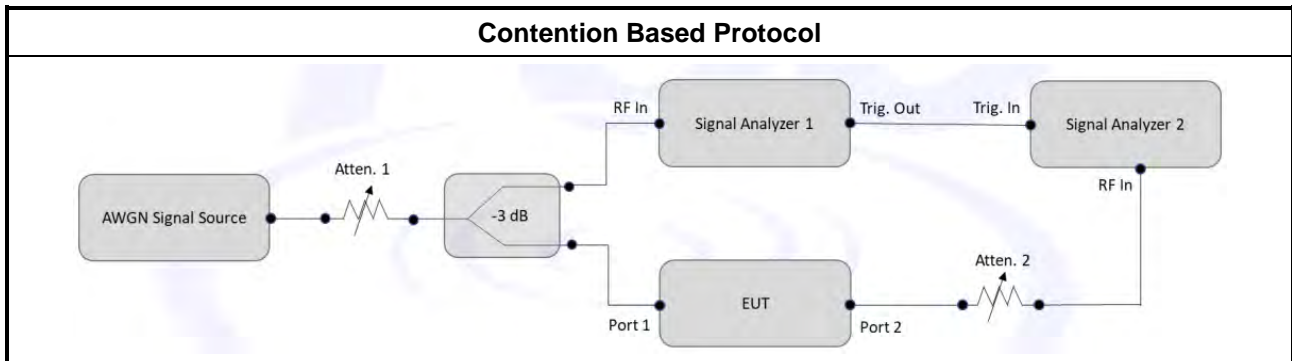
3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

Test Method	
<input type="checkbox"/>	For Contention Based Protocol shall be measured using following options below:
<input checked="" type="checkbox"/>	Refer as FCC KDB 987594 D02, I) In-Band Emissions

3.6.4 Test Setup



3.6.5 Test Result of Contention Based Protocol

Refer as Appendix F

3.7 Frequency Stability

3.7.1 Frequency Stability Limit

Frequency Stability Limit	
▪	In-band emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

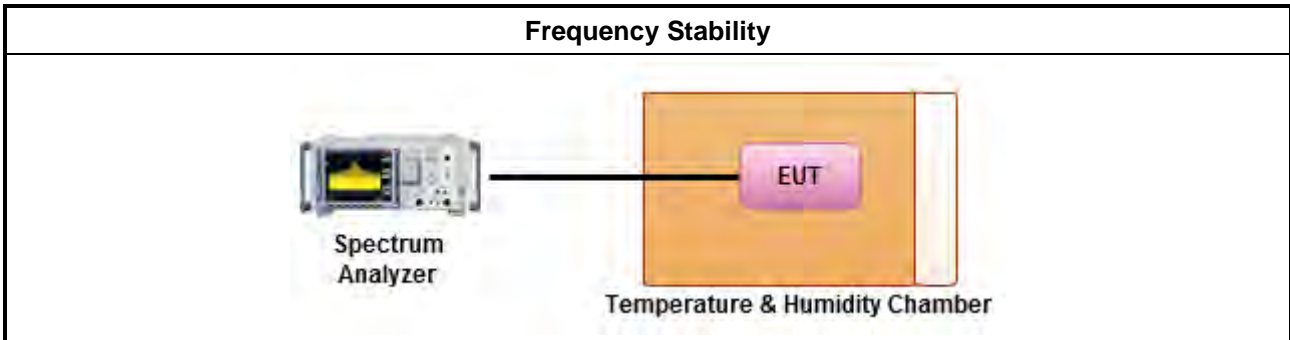
3.7.2 Measuring Instruments

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

3.7.3 Test Procedures

Test Method	
▪	Refer as ANSI C63.10, clause 6.8 for frequency stability tests
▪	Frequency stability with respect to ambient temperature
▪	Frequency stability when varying supply voltage
▪	Extreme temperature is -30°C~50°C.

3.7.4 Test Setup



3.7.5 Test Result of Frequency Stability

Refer as Appendix G



4 Test Equipment and Calibration Data

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
LISN	Schwarzbeck	NSLK 8127	8127650	9kHz ~ 30MHz	Jan. 07, 2022	Jan. 06, 2023	Conduction (CO02-CB)
LISN	Schwarzbeck	NSLK 8127	8127478	9kHz ~ 30MHz	Dec. 22, 2021	Dec. 21, 2022	Conduction (CO02-CB)
EMI Receiver	Agilent	N9038A	MY52260140	9kHz ~ 8.4GHz	May 06, 2022	May 05, 2023	Conduction (CO02-CB)
COND Cable	Woken	Cable	2	0.15MHz ~ 30MHz	Oct. 18, 2022	Oct. 17, 2023	Conduction (CO02-CB)
Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conduction (CO02-CB)
Pulse Limiter	Schwarzbeck	VTSD 9561F-N	00378	9kHz ~ 30MHz	Oct. 18, 2022	Oct. 17, 2023	Conduction (CO02-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	May 14, 2022	May 13, 2023	Radiation (03CH05-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH05-CB	30 MHz ~ 1 GHz	Aug. 03, 2022	Aug. 02, 2023	Radiation (03CH05-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH05-CB	1GHz ~18GHz 3m	Nov. 07, 2021	Nov. 06, 2022	Radiation (03CH05-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH05-CB	1GHz ~18GHz 3m	Nov. 06, 2022	Nov. 05, 2023	Radiation (03CH05-CB)
Bilog Antenna with 6dB Attenuator	TESEQ & EMCI	CBL 6112D & N-6-06	35236 & AT-N0610	30MHz ~ 2GHz	Mar. 25, 2022	Mar. 24, 2023	Radiation (03CH05-CB)
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA 9120 D-1291	1GHz~18GHz	Jun. 23, 2022	Jun. 22, 2023	Radiation (03CH05-CB)
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170507	15GHz ~ 40GHz	Jul. 05, 2022	Jul. 04, 2023	Radiation (03CH05-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 22, 2022	Aug. 21, 2023	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC330N	980331	20MHz ~ 3GHz	Apr. 26, 2022	Apr. 25, 2023	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC12630SE	980287	1GHz – 26.5GHz	Jul. 01, 2022	Jun. 30, 2023	Radiation (03CH05-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 20, 2022	Jul. 19, 2023	Radiation (03CH05-CB)
Pre-Amplifier	SGH	SGH184	20221107-3	18GHz ~ 40GHz	Nov. 16, 2022	Nov. 15, 2023	Radiation (03CH05-CB)
Spectrum Analyzer	R&S	FSP40	100304	9kHz ~ 40GHz	Mar. 14, 2022	Mar. 13, 2023	Radiation (03CH05-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	Jun. 17, 2022	Jun. 16, 2023	Radiation (03CH05-CB)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-low	Woken	RG402	Low Cable-04+23	30MHz~1GHz	Oct. 13, 2021	Oct. 12, 2022	Radiation (03CH05-CB)
RF Cable-low	Woken	RG402	Low Cable-04+23	30MHz~1GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-28	1GHz~18GHz	Oct. 13, 2021	Oct. 12, 2022	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-28	1GHz~18GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-04+28	1GHz~18GHz	Oct. 13, 2021	Oct. 12, 2022	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-04+28	1GHz~18GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH05-CB)
High Cable	Woken	WCA0929M	40G#5+7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH05-CB)
High Cable	Woken	WCA0929M	40G#5	1GHz ~ 40 GHz	Dec. 08, 2021	Dec. 07, 2022	Radiation (03CH05-CB)
High Cable	Woken	WCA0929M	40G#7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH05-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH05-CB)
3m Semi Anechoic Chamber VSWR	RIKEN	SAC-3M	03CH02-CB	1GHz ~18GHz	Mar. 26, 2022	Mar. 25, 2023	Radiation (03CH02-CB)
Horn Antenna	EMCO	3115	9610-4976	1GHz ~ 18GHz	Apr. 19, 2022	Apr. 18, 2023	Radiation (03CH02-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 22, 2022	Aug. 21, 2023	Radiation (03CH02-CB)
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170507	15GHz ~ 40GHz	Jul. 05, 2022	Jul. 04, 2023	Radiation (03CH02-CB)
Pre-Amplifier	Agilent	83017A	MY39501305	1GHz ~ 26.5GHz	Jul. 01, 2022	Jun. 30, 2023	Radiation (03CH02-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 20, 2022	Jul. 19, 2023	Radiation (03CH02-CB)
Spectrum analyzer	R&S	FSP	100593	9kHz~40GHz	Apr. 08, 2022	Apr. 07, 2023	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	1GHz ~ 18GHz	Oct. 03, 2022	Oct. 02, 2023	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-18+19	1GHz ~ 18GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH02-CB)
High Cable	Woken	WCA0929M	40G#5+7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH02-CB)
High Cable	Woken	WCA0929M	40G#5	1GHz ~ 40 GHz	Dec. 08, 2021	Dec. 07, 2022	Radiation (03CH02-CB)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
High Cable	Woken	WCA0929M	40G#7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH02-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH02-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH03-CB	1GHz ~18GHz 3m	May 05, 2022	May 04, 2023	Radiation (03CH03-CB)
Horn Antenna	ETS-Lindgren	3115	6821	750MHz~18GHz z	Jan. 21, 2022	Jan. 20, 2023	Radiation (03CH03-CB)
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170507	15GHz ~ 40GHz	Jul. 05, 2022	Jul. 04, 2023	Radiation (03CH03-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 22, 2022	Aug. 21, 2023	Radiation (03CH03-CB)
Pre-Amplifier	Agilent	8449B	3008A02097	1GHz ~ 26.5GHz	Jul. 01, 2022	Jun. 30, 2023	Radiation (03CH03-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 20, 2022	Jul. 19, 2023	Radiation (03CH03-CB)
Spectrum Analyzer	R&S	FSP40	100019	9kHz ~ 40GHz	Jun. 10, 2022	Jun. 09, 2023	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-20+29	1GHz ~ 18GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-20+29	1GHz ~ 18GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-29	1GHz ~ 18GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-29	1GHz ~ 18GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH03-CB)
High Cable	Woken	WCA0929M	40G#5+7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH03-CB)
High Cable	Woken	WCA0929M	40G#5	1GHz ~ 40 GHz	Dec. 08, 2021	Dec. 07, 2022	Radiation (03CH03-CB)
High Cable	Woken	WCA0929M	40G#7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH03-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH03-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH04-CB	1GHz ~18GHz 3m	Feb. 24, 2022	Feb. 23, 2023	Radiation (03CH04-CB)
Horn Antenna	ETS-Lindgren	3115	00143147	750MHz~18GHz z	Oct. 25, 2021	Oct. 24, 2022	Radiation (03CH04-CB)
Horn Antenna	ETS-Lindgren	3115	00143147	750MHz~18GHz z	Oct. 12, 2022	Oct. 11, 2023	Radiation (03CH04-CB)
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170507	15GHz ~ 40GHz	Jul. 05, 2022	Jul. 04, 2023	Radiation (03CH04-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 22, 2022	Aug. 21, 2023	Radiation (03CH04-CB)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Pre-Amplifier	Agilent	83017A	MY53270063	0.5GHz ~ 26.5GHz	Jul. 01, 2022	Jun. 30, 2023	Radiation (03CH04-CB)
Spectrum Analyzer	R&S	FSP40	100142	9kHz~40GHz	Mar. 28, 2022	Mar. 27, 2023	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-21	1GHz - 18GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-21	1GHz - 18GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-21+67	1GHz - 18GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-21+67	1GHz - 18GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH04-CB)
High Cable	Woken	WCA0929M	40G#5+7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH04-CB)
High Cable	Woken	WCA0929M	40G#5	1GHz ~ 40 GHz	Dec. 08, 2021	Dec. 07, 2022	Radiation (03CH04-CB)
High Cable	Woken	WCA0929M	40G#7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH04-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH04-CB)
Spectrum analyzer	R&S	FSV40	101028	9kHz~40GHz	Jan. 07, 2022	Jan. 06, 2023	Conducted (TH03-CB)
Temp. and Humidity Chamber	Gaint Force	GTH-408-40-C P-AR	MAA1410-011	-40~100 degree	Sep. 02, 2022	Sep. 01, 2023	Conducted (TH03-CB)
Power Sensor	Anritsu	MA2411B	1531344	300MHz~40GHz	Jul. 31, 2022	Jul. 30, 2023	Conducted (TH03-CB)
Power Meter	Anritsu	ML2495A	1728002	300MHz~40GHz	Jul. 31, 2022	Jul. 30, 2023	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-11	1 GHz ~18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-11	1 GHz ~18 GHz	Oct. 03, 2022	Oct. 02, 2023	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-12	1 GHz ~18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-12	1 GHz ~18 GHz	Oct. 03, 2022	Oct. 02, 2023	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-13	1 GHz ~18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-13	1 GHz ~18 GHz	Oct. 03, 2022	Oct. 02, 2023	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-14	1 GHz ~18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-14	1 GHz ~18 GHz	Oct. 03, 2022	Oct. 02, 2023	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-15	1 GHz ~18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH03-CB)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-15	1 GHz –18 GHz	Oct. 03, 2022	Oct. 02, 2023	Conducted (TH03-CB)
Switch	SPTCB	SP-SWI	SWI-03	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH03-CB)
Switch	SPTCB	SP-SWI	SWI-03	1 GHz –26.5 GHz	Oct. 04, 2022	Oct. 03, 2023	Conducted (TH03-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conducted (TH03-CB)
Spectrum Analyzer	R&S	FSV40	101025	9kHz ~ 40GHz	Nov. 06, 2021	Nov. 05, 2022	Conducted (DF02-CB)
Vector Signal generator	R&S	SMW200A	109426	100kHz- 7.5GHz	Dec. 28, 2021	Dec. 27, 2022	Conducted (DF02-CB)
RF Power Divider	STI	2 Way	DV-2way -07	1GHz ~ 8GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (DF02-CB)
RF Power Divider	STI	2 Way	DV-2way -08	1GHz ~ 8GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (DF02-CB)
RF Cable-high	Woken	RG402	High Cable-61	1 GHz – 18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (DF02-CB)
RF Cable-high	Woken	RG402	High Cable-62	1 GHz – 18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (DF02-CB)
RF Cable-high	Woken	RG402	High Cable-63	1 GHz – 18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (DF02-CB)
RF Cable-high	Woken	RG402	High Cable-66	1 GHz – 18 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (DF02-CB)
100MS/s Digitizer	N.I	USB-5133	F65206	N/A	Nov. 25, 2021	Nov. 24, 2022	Conducted (DF02-CB)

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

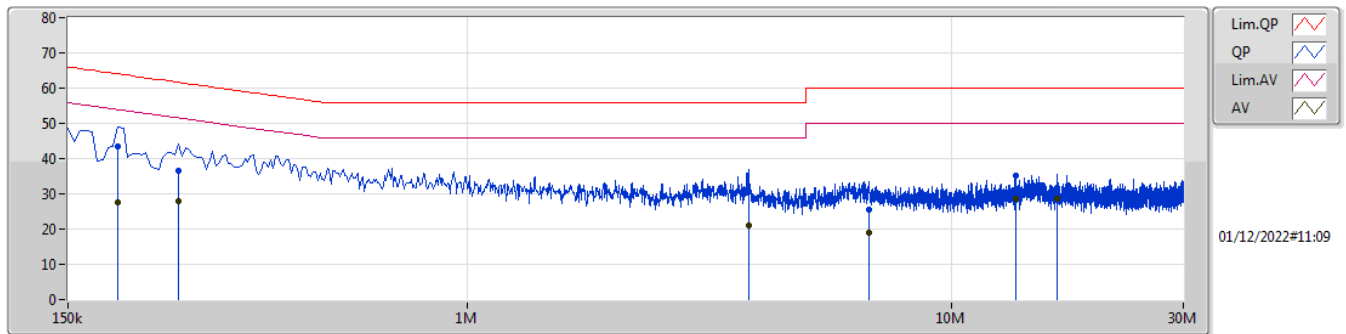
N.C.R. means Non-Calibration required.



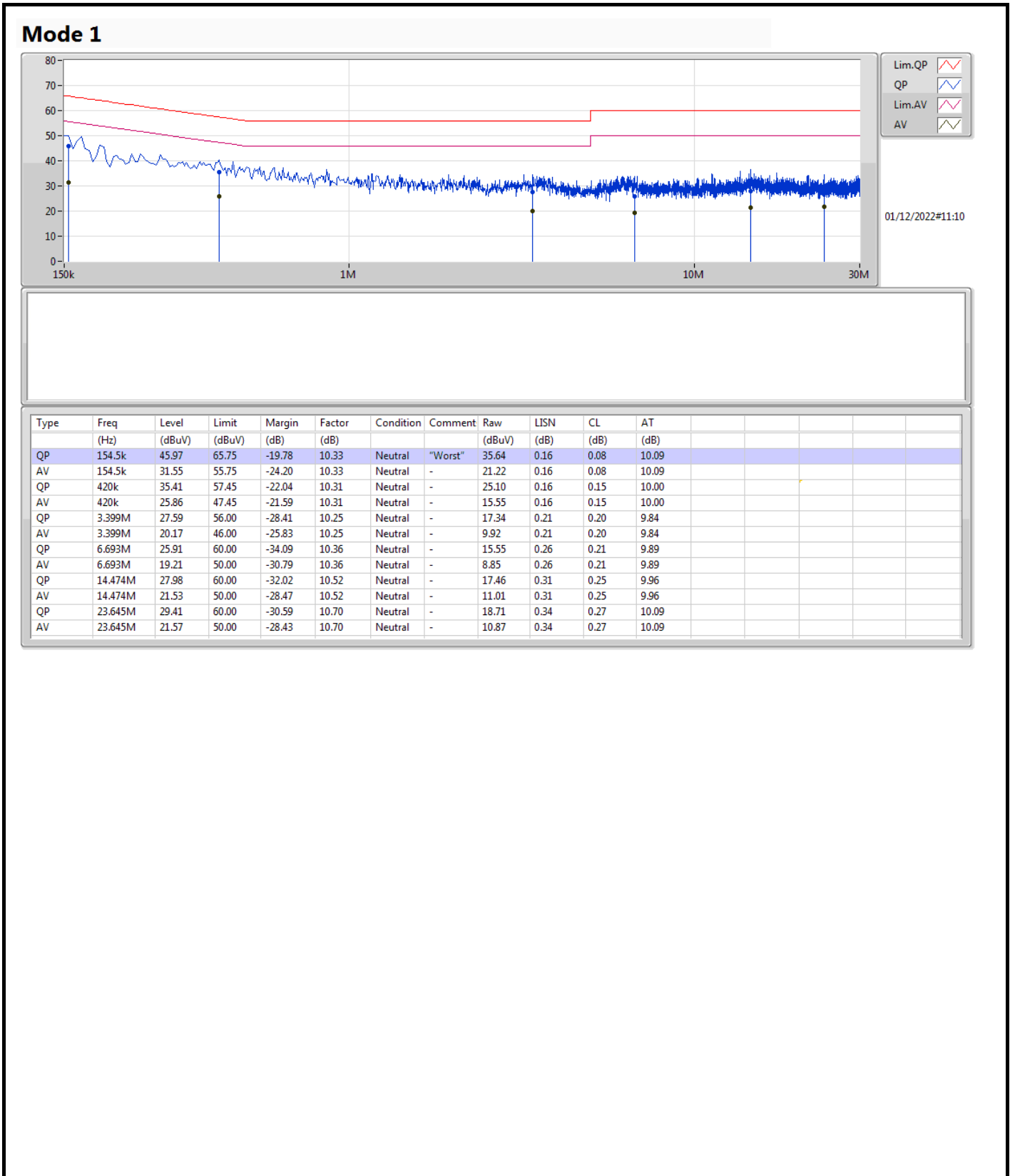
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	154.5k	45.97	65.75	-19.78	Neutral

Mode 1



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)
QP	190.5k	43.48	64.01	-20.53	10.30	Line	"Worst"	33.18	0.12	0.11	10.07
AV	190.5k	27.59	54.01	-26.42	10.30	Line	-	17.29	0.12	0.11	10.07
QP	253.5k	36.47	61.64	-25.17	10.28	Line	-	26.19	0.12	0.12	10.04
AV	253.5k	27.89	51.64	-23.75	10.28	Line	-	17.61	0.12	0.12	10.04
QP	3.804M	30.77	56.00	-25.23	10.27	Line	-	20.50	0.23	0.20	9.84
AV	3.804M	20.94	46.00	-25.06	10.27	Line	-	10.67	0.23	0.20	9.84
QP	6.725M	25.67	60.00	-34.33	10.39	Line	-	15.28	0.29	0.21	9.89
AV	6.725M	18.82	50.00	-31.18	10.39	Line	-	8.43	0.29	0.21	9.89
QP	13.56M	35.11	60.00	-24.89	10.55	Line	-	24.56	0.36	0.24	9.95
AV	13.56M	28.79	50.00	-21.21	10.55	Line	-	18.24	0.36	0.24	9.95
QP	16.467M	31.57	60.00	-28.43	10.61	Line	-	20.96	0.37	0.25	9.99
AV	16.467M	28.45	50.00	-21.55	10.61	Line	-	17.84	0.37	0.25	9.99



Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.925-6.425GHz	-	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_4TX	22.41M	19.071M	19M1D1D	21.9M	19.012M
802.11ax HEW40_Nss1,(MCS0)_4TX	40.62M	37.731M	37M7D1D	40.26M	37.613M
802.11ax HEW80_Nss1,(MCS0)_4TX	83.04M	77.225M	77M2D1D	81.96M	76.99M
802.11ax HEW160_Nss1,(MCS0)_4TX	166.56M	154.919M	155MD1D	165.84M	154.919M
6.425-6.525GHz	-	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_4TX	22.47M	19.1M	19M1D1D	21.84M	19.012M
802.11ax HEW40_Nss1,(MCS0)_4TX	40.74M	37.731M	37M7D1D	40.32M	37.613M
802.11ax HEW80_Nss1,(MCS0)_4TX	82.68M	77.121M	77M1D1D	81.72M	76.872M
802.11ax HEW160_Nss1,(MCS0)_4TX	167.04M	154.723M	155MD1D	165.84M	154.483M
6.525-6.875GHz	-	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_4TX	22.59M	19.1M	19M1D1D	21.93M	19.04M
802.11ax HEW40_Nss1,(MCS0)_4TX	40.56M	37.731M	37M7D1D	40.26M	37.601M
802.11ax HEW80_Nss1,(MCS0)_4TX	82.8M	77.241M	77M2D1D	81M	76.282M
802.11ax HEW160_Nss1,(MCS0)_4TX	167.28M	155.442M	155MD1D	165.12M	154.243M
6.875-7.125GHz	-	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_4TX	22.47M	19.071M	19M1D1D	21.93M	19.042M
802.11ax HEW40_Nss1,(MCS0)_4TX	40.68M	37.731M	37M7D1D	40.26M	37.554M
802.11ax HEW80_Nss1,(MCS0)_4TX	82.56M	77.225M	77M2D1D	81.96M	76.99M
802.11ax HEW160_Nss1,(MCS0)_4TX	166.8M	155.39M	155MD1D	165.84M	154.214M

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

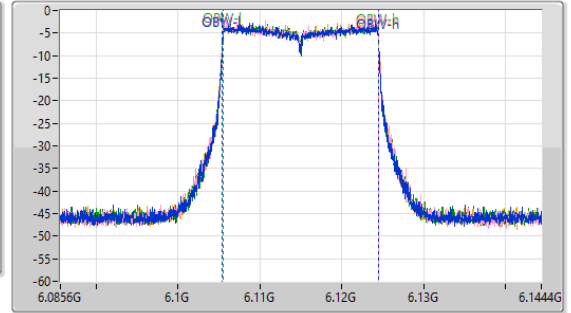
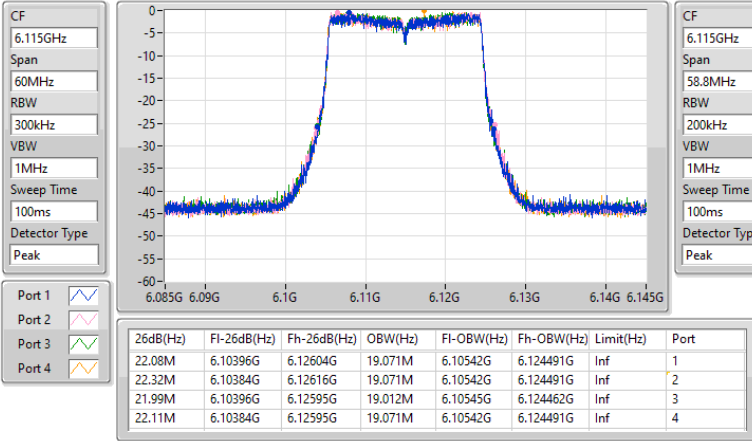
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
6115MHz	Pass	Inf	22.08M	19.071M	22.32M	19.071M	21.99M	19.012M	22.11M	19.071M
6255MHz	Pass	Inf	21.9M	19.012M	22.29M	19.071M	22.14M	19.042M	22.41M	19.071M
6415MHz	Pass	Inf	22.23M	19.042M	22.35M	19.071M	22.32M	19.071M	22.05M	19.071M
6435MHz	Pass	Inf	21.84M	19.071M	22.29M	19.071M	22.47M	19.042M	22.14M	19.071M
6475MHz	Pass	Inf	21.9M	19.071M	22.35M	19.1M	22.14M	19.012M	22.2M	19.071M
6515MHz	Pass	Inf	22.02M	19.042M	22.14M	19.1M	22.35M	19.071M	22.38M	19.1M
6535MHz	Pass	Inf	22.17M	19.071M	22.35M	19.071M	22.17M	19.042M	22.44M	19.071M
6695MHz	Pass	Inf	22.32M	19.071M	22.59M	19.1M	22.23M	19.071M	22.26M	19.071M
6855MHz	Pass	Inf	22.05M	19.071M	22.08M	19.071M	21.99M	19.042M	21.93M	19.1M
6875MHz Straddle 6.525-6.875GHz	Pass	Inf	22.14M	19.04M	22.5M	19.1M	22.44M	19.04M	22.11M	19.07M
6895MHz	Pass	Inf	22.05M	19.042M	22.47M	19.071M	21.93M	19.042M	22.32M	19.042M
6995MHz	Pass	Inf	21.93M	19.071M	22.35M	19.071M	22.02M	19.042M	21.96M	19.071M
7095MHz	Pass	Inf	22.14M	19.042M	22.44M	19.071M	21.99M	19.042M	22.29M	19.042M
7115MHz	Pass	Inf	21.93M	19.042M	22.29M	19.071M	22.05M	19.071M	22.11M	19.071M
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
6125MHz	Pass	Inf	40.56M	37.672M	40.56M	37.672M	40.26M	37.731M	40.44M	37.613M
6245MHz	Pass	Inf	40.44M	37.613M	40.38M	37.613M	40.5M	37.613M	40.38M	37.613M
6405MHz	Pass	Inf	40.44M	37.672M	40.56M	37.731M	40.62M	37.672M	40.5M	37.613M
6445MHz	Pass	Inf	40.32M	37.672M	40.38M	37.672M	40.32M	37.613M	40.32M	37.613M
6485MHz	Pass	Inf	40.74M	37.672M	40.44M	37.731M	40.32M	37.672M	40.5M	37.672M
6525MHz Straddle 6.425-6.525GHz	Pass	Inf	40.5M	37.661M	40.44M	37.661M	40.44M	37.661M	40.32M	37.661M
6565MHz	Pass	Inf	40.5M	37.672M	40.44M	37.613M	40.5M	37.672M	40.5M	37.672M
6725MHz	Pass	Inf	40.5M	37.672M	40.26M	37.672M	40.26M	37.731M	40.56M	37.672M
6845MHz	Pass	Inf	40.44M	37.672M	40.38M	37.613M	40.44M	37.672M	40.38M	37.731M
6885MHz Straddle 6.525-6.875GHz	Pass	Inf	40.32M	37.601M	40.38M	37.601M	40.5M	37.601M	40.32M	37.661M
6925MHz	Pass	Inf	40.68M	37.613M	40.26M	37.672M	40.26M	37.672M	40.56M	37.672M
7005MHz	Pass	Inf	40.44M	37.613M	40.26M	37.672M	40.5M	37.613M	40.56M	37.613M
7085MHz	Pass	Inf	40.5M	37.554M	40.38M	37.672M	40.38M	37.672M	40.56M	37.731M
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
6145MHz	Pass	Inf	82.68M	76.99M	82.08M	76.99M	82.2M	77.107M	83.04M	76.99M
6225MHz										
6385MHz	Pass	Inf	81.96M	76.99M	82.32M	77.225M	81.96M	77.107M	82.2M	76.99M
6465MHz	Pass	Inf	82.32M	76.872M	81.72M	76.99M	82.32M	76.99M	81.72M	76.99M
6545MHz Straddle 6.425-6.525GHz	Pass	Inf	82.68M	77.001M	81.96M	77.121M	82.2M	77.121M	82.44M	77.121M
6625MHz	Pass	Inf	82.08M	76.99M	81.72M	76.99M	82.8M	77.225M	81.72M	76.99M
6705MHz	Pass	Inf	82.2M	77.107M	81.96M	76.99M	82.08M	77.225M	82.68M	76.99M
6785MHz	Pass	Inf	81.96M	77.225M	82.8M	77.107M	82.56M	77.225M	81.72M	77.107M
6865MHz Straddle 6.525-6.875GHz	Pass	Inf	82.2M	76.522M	81.48M	77.121M	82.08M	77.241M	81M	76.282M
6945MHz	Pass	Inf	82.08M	76.99M	82.56M	76.99M	81.96M	77.107M	82.2M	76.99M
7025MHz	Pass	Inf	82.32M	76.99M	82.32M	76.99M	82.2M	77.107M	82.2M	77.225M
802.11ax HEW160_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
6185MHz	Pass	Inf	166.56M	154.919M	166.32M	154.919M	166.08M	154.919M	165.84M	154.919M
6345MHz										
6505MHz Straddle 6.425-6.525GHz	Pass	Inf	166.32M	154.483M	165.84M	154.483M	166.08M	154.723M	167.04M	154.723M
6665MHz	Pass	Inf	166.08M	155.154M	165.12M	154.684M	167.04M	155.154M	166.08M	154.919M
6825MHz Straddle 6.525-6.875GHz	Pass	Inf	167.28M	154.963M	166.08M	154.243M	166.8M	155.442M	165.36M	154.723M
6985MHz	Pass	Inf	166.08M	154.919M	165.84M	154.684M	166.8M	155.39M	166.8M	154.214M

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

5.925-6.425GHz_802.11ax HEW20_Nss1,(MCS0)_4TX
6115MHz

EBW

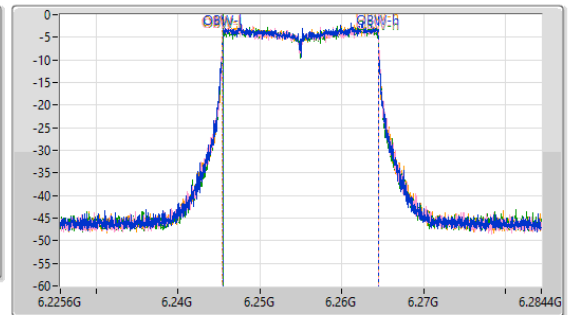
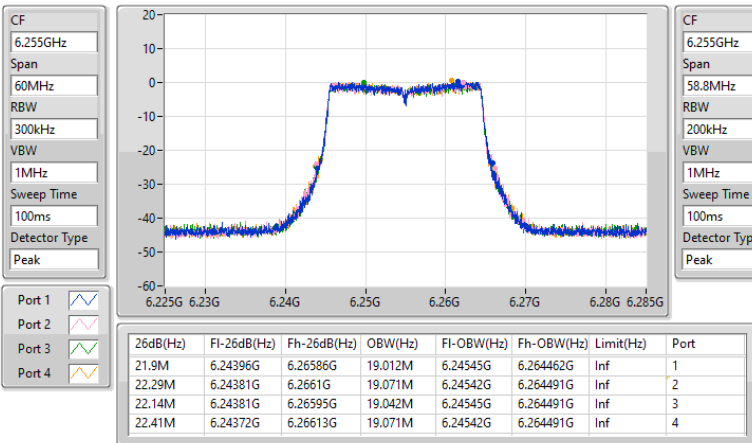
07/11/2022



5.925-6.425GHz_802.11ax HEW20_Nss1,(MCS0)_4TX
6255MHz

EBW

07/11/2022

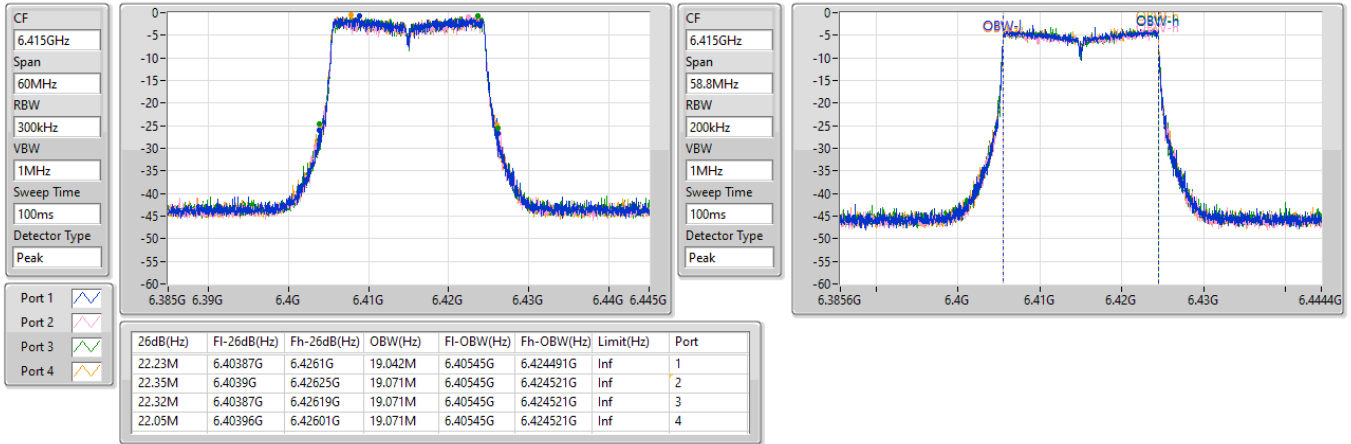


5.925-6.425GHz_802.11ax HEW20_Nss1,(MCS0)_4TX

EBW

6415MHz

07/11/2022

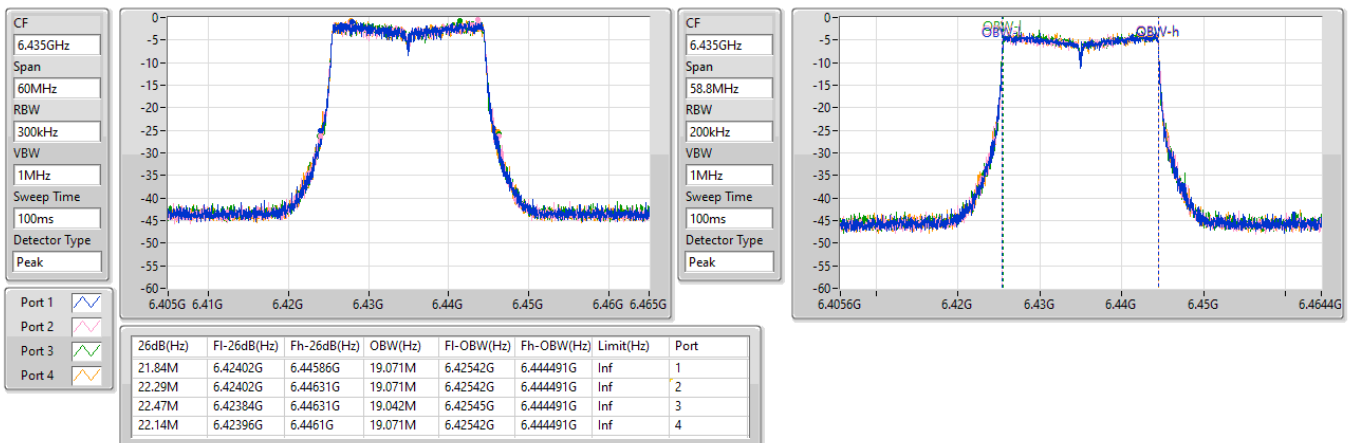


6.425-6.525GHz_802.11ax HEW20_Nss1,(MCS0)_4TX

EBW

6435MHz

07/11/2022

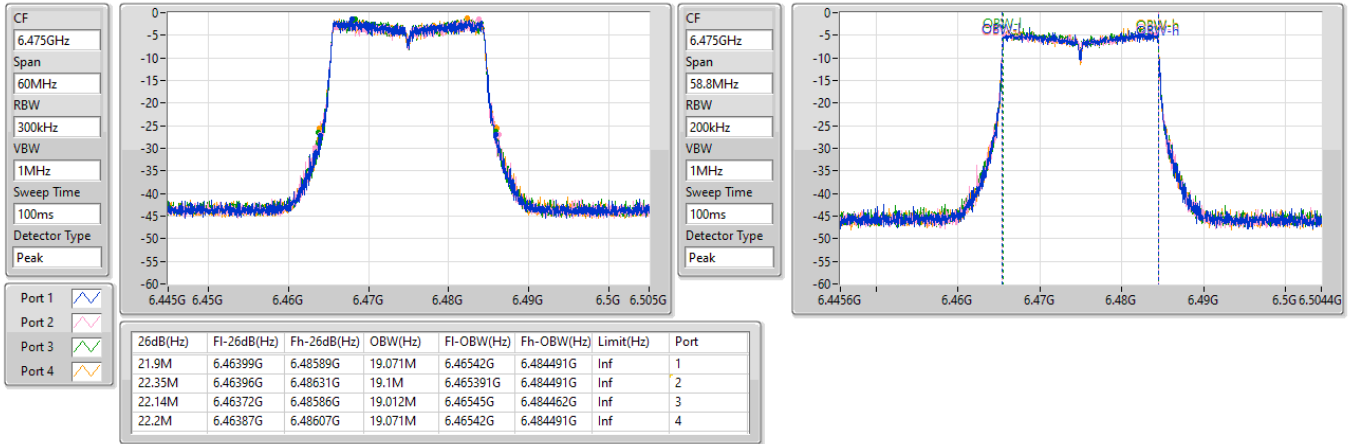


6.425-6.525GHz_802.11ax HEW20_Nss1,(MCS0)_4TX

EBW

6475MHz

07/11/2022

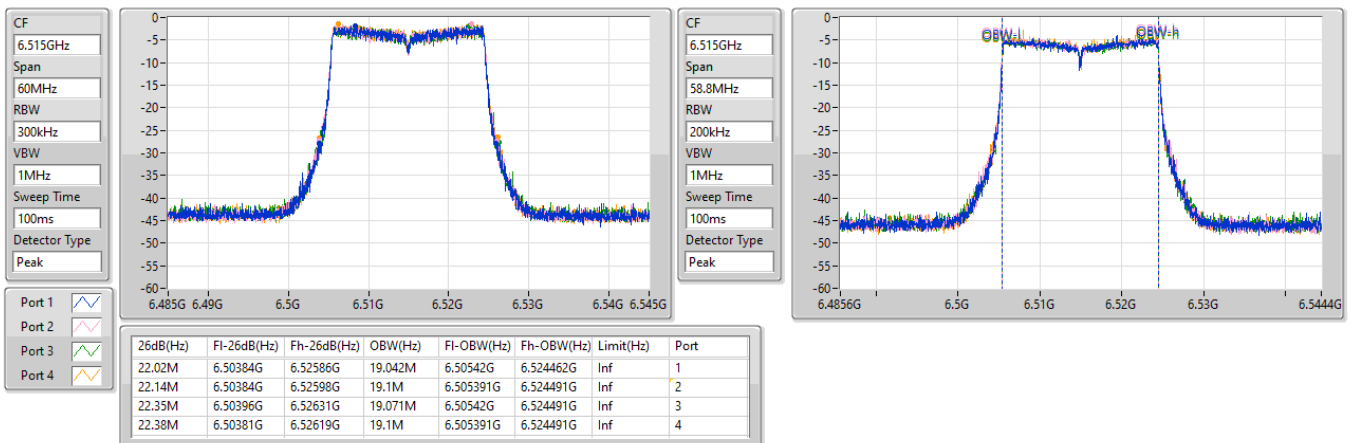


6.425-6.525GHz_802.11ax HEW20_Nss1,(MCS0)_4TX

EBW

6515MHz

07/11/2022

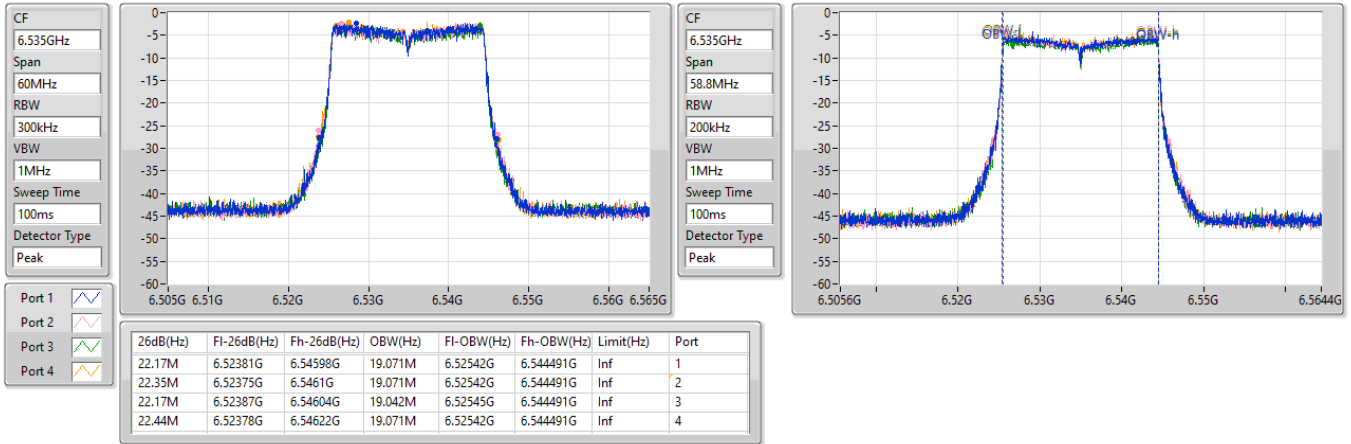


6.525-6.875GHz_802.11ax HEW20_Nss1,(MCS0)_4TX

EBW

6535MHz

07/11/2022

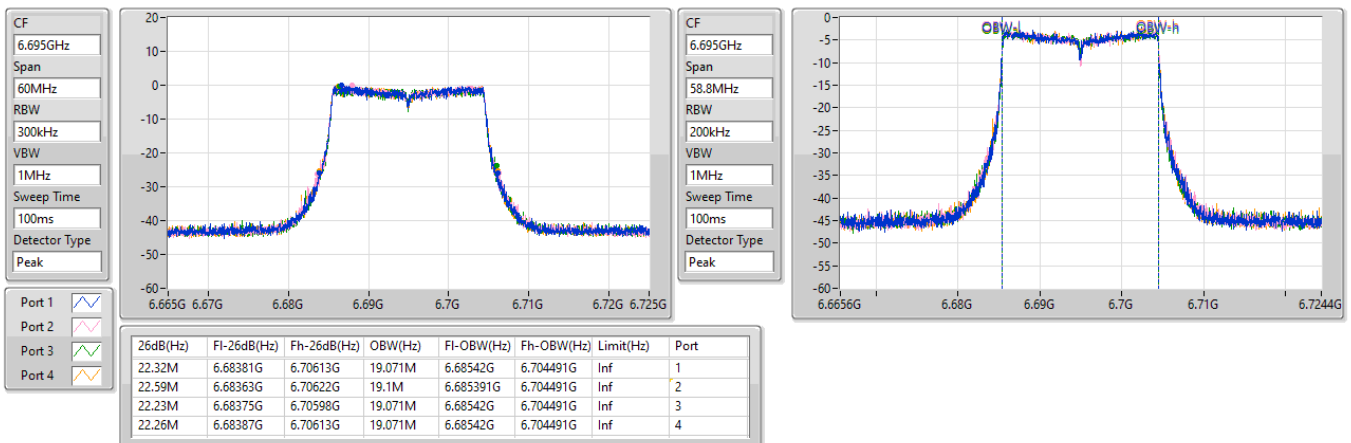


6.525-6.875GHz_802.11ax HEW20_Nss1,(MCS0)_4TX

EBW

6695MHz

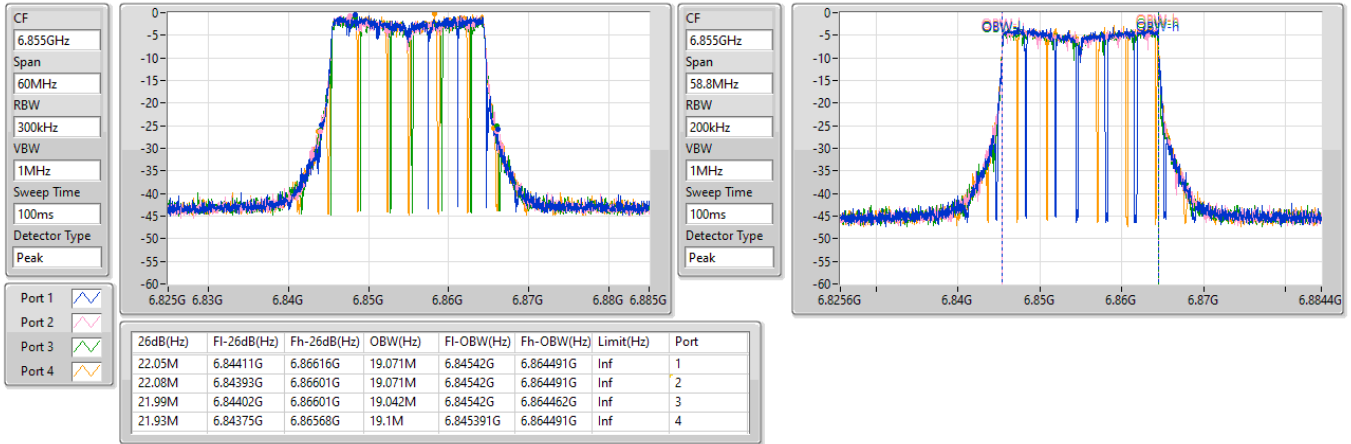
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6.525-6.875GHz_802.11ax HEW20_Nss1,(MCS0)_4TX
6855MHz

EBW

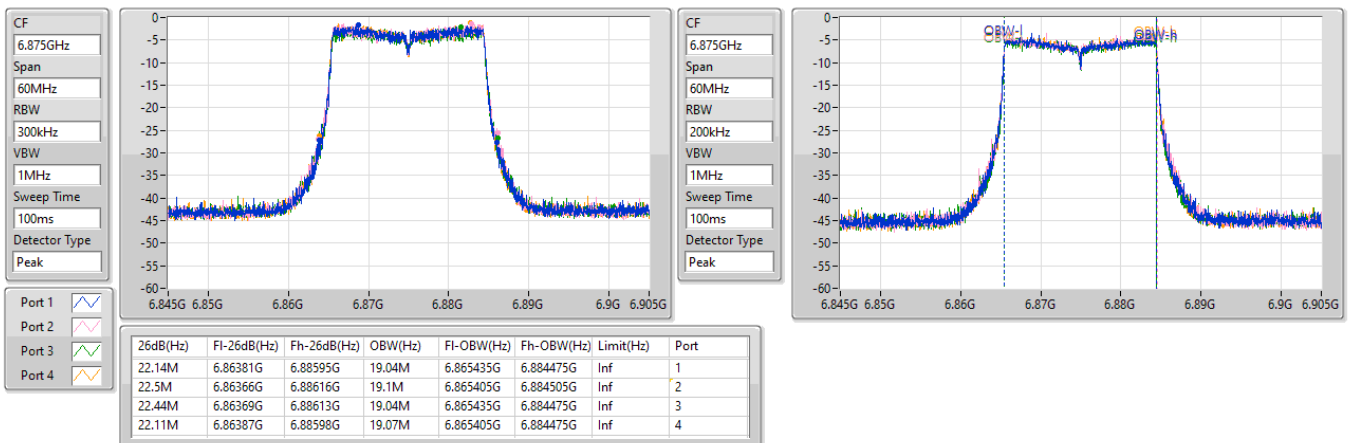
07/11/2022



6.525-6.875GHz_802.11ax HEW20_Nss1,(MCS0)_4TX
6875MHz Straddle 6.525-6.875GHz

EBW

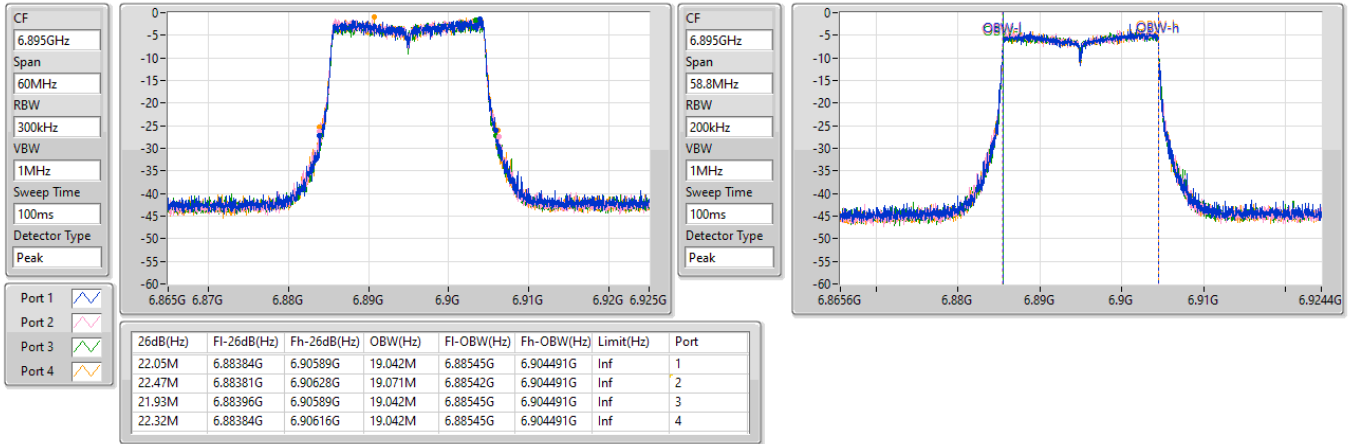
07/11/2022



6.875-7.125GHz_802.11ax HEW20_Nss1,(MCS0)_4TX
6895MHz

EBW

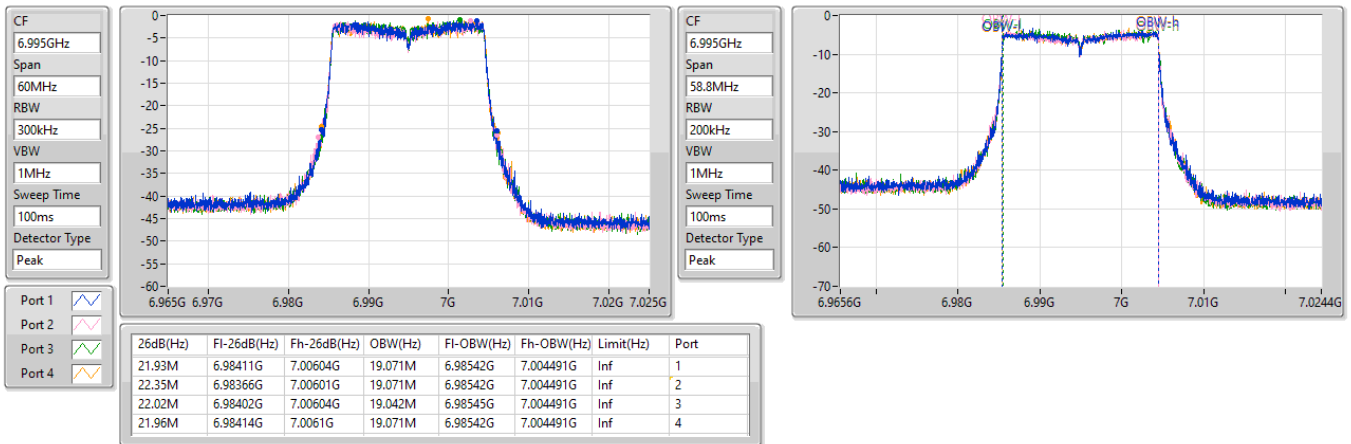
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6.875-7.125GHz_802.11ax HEW20_Nss1,(MCS0)_4TX
6995MHz

EBW

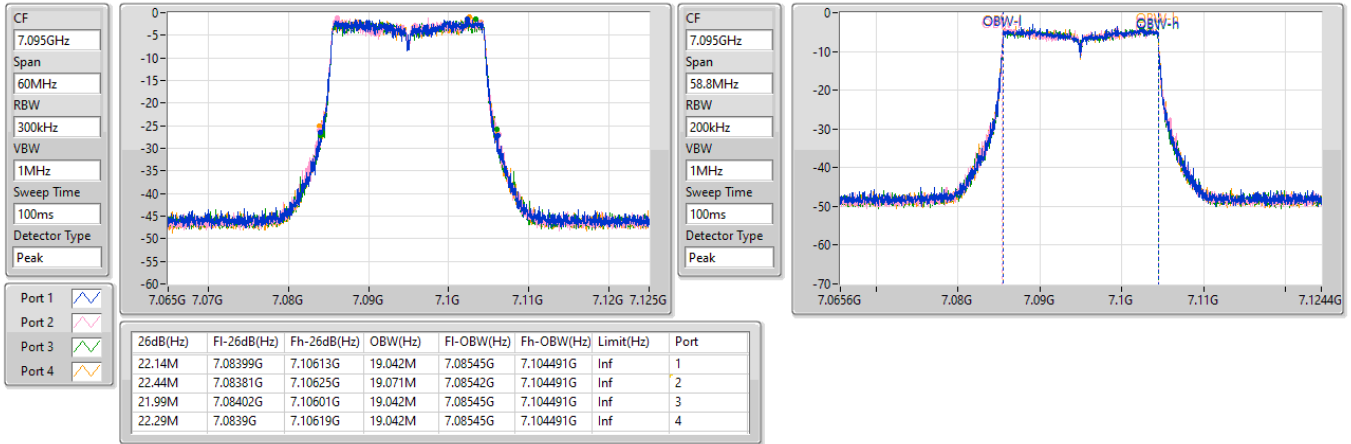
07/11/2022



6.875-7.125GHz_802.11ax HEW20_Nss1,(MCS0)_4TX
7095MHz

EBW

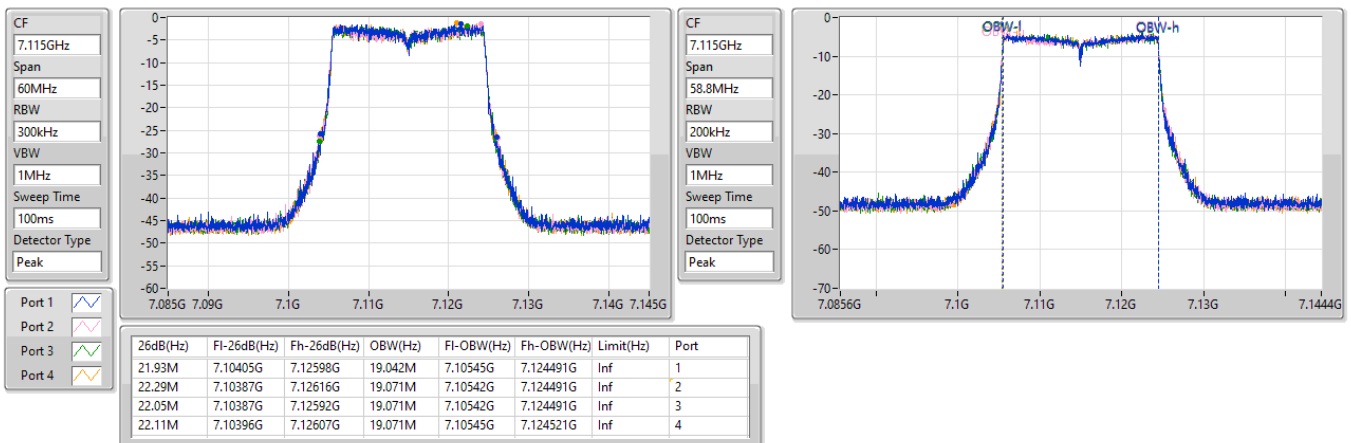
07/11/2022



6.875-7.125GHz_802.11ax HEW20_Nss1,(MCS0)_4TX
7115MHz

EBW

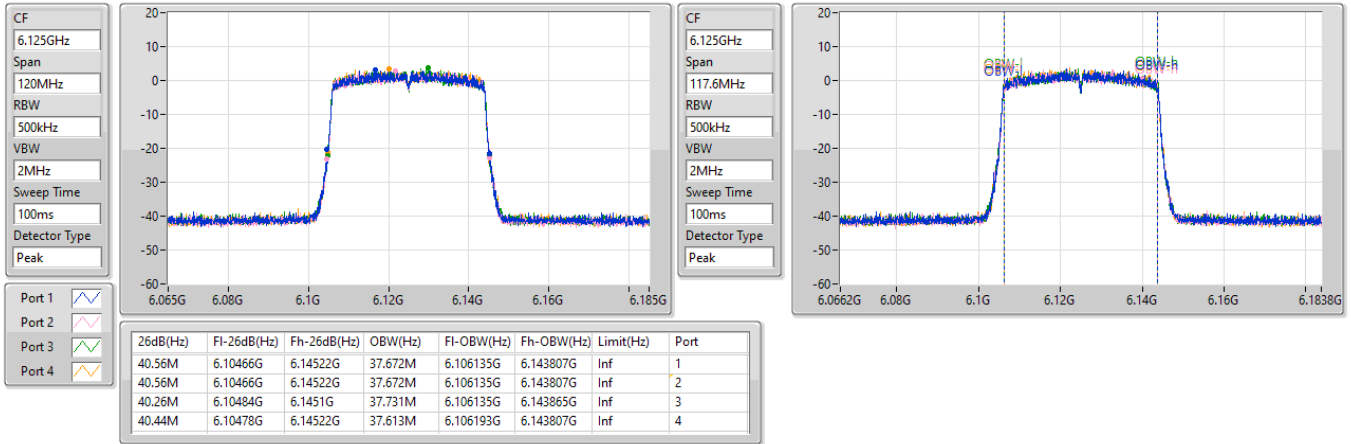
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5.925-6.425GHz_802.11ax HEW40_Nss1,(MCS0)_4TX
6125MHz

EBW

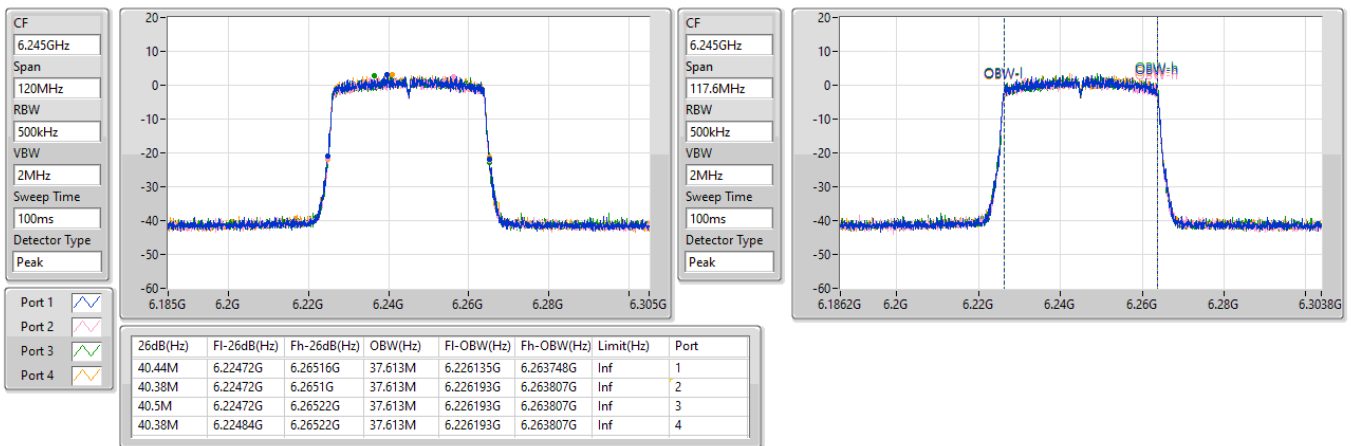
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5.925-6.425GHz_802.11ax HEW40_Nss1,(MCS0)_4TX
6245MHz

EBW

07/11/2022

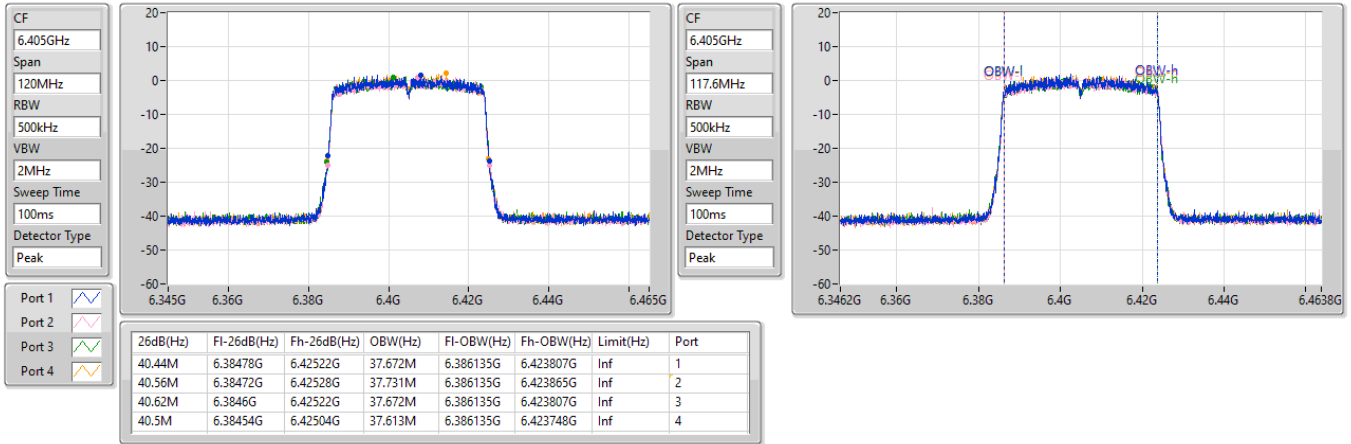


5.925-6.425GHz_802.11ax HEW40_Nss1,(MCS0)_4TX

EBW

6405MHz

07/11/2022

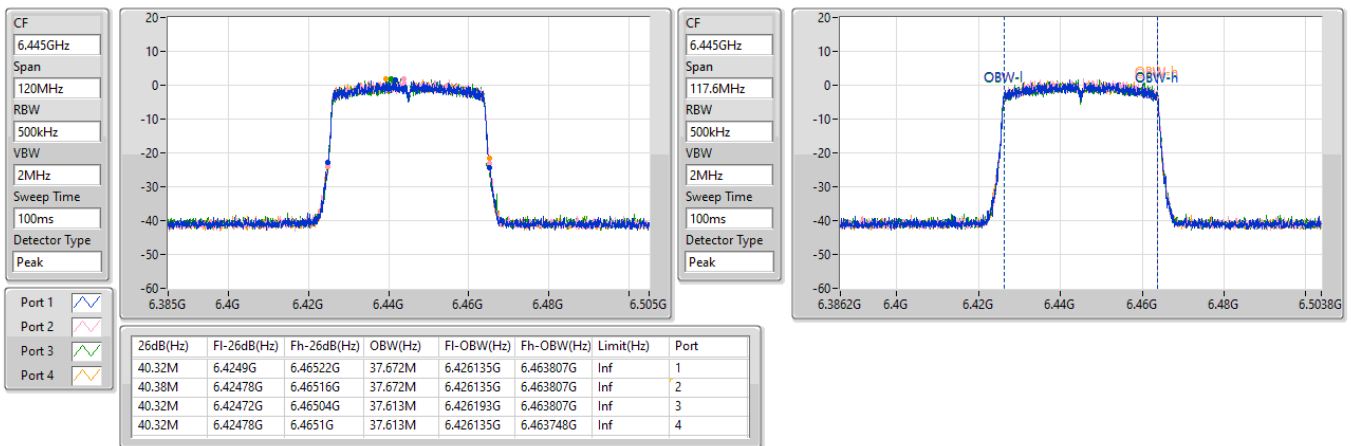


6.425-6.525GHz_802.11ax HEW40_Nss1,(MCS0)_4TX

EBW

6445MHz

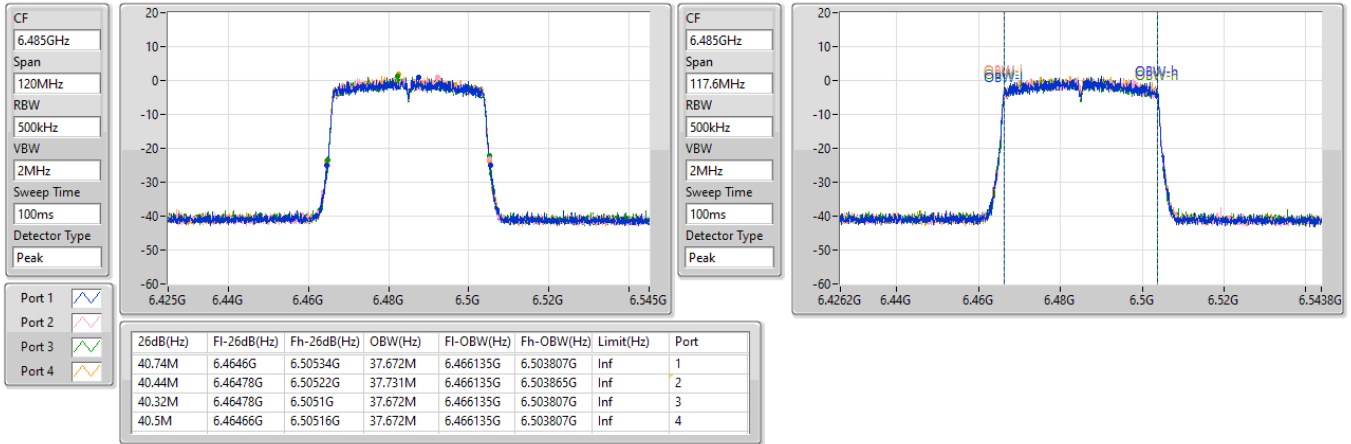
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6.425-6.525GHz_802.11ax HEW40_Nss1,(MCS0)_4TX
6485MHz

EBW

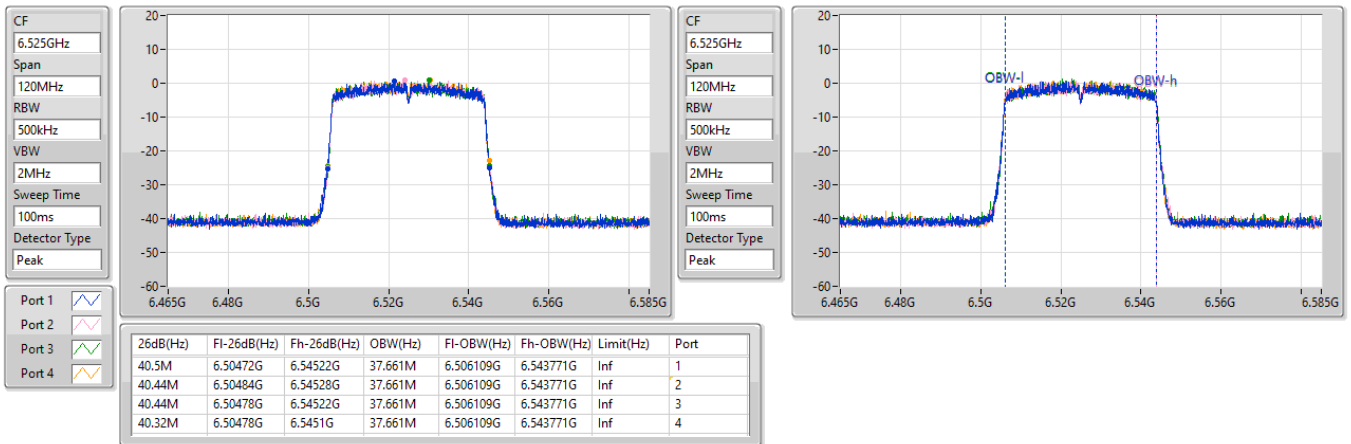
07/11/2022



6.425-6.525GHz_802.11ax HEW40_Nss1,(MCS0)_4TX
6525MHz Straddle 6.425-6.525GHz

EBW

07/11/2022

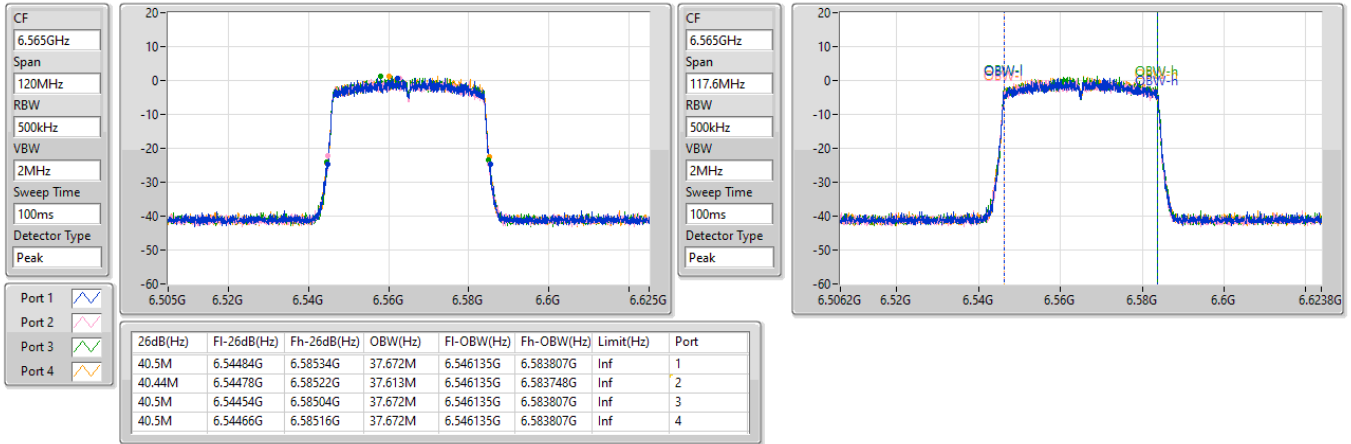


6.525-6.875GHz_802.11ax HEW40_Nss1,(MCS0)_4TX

EBW

6565MHz

07/11/2022

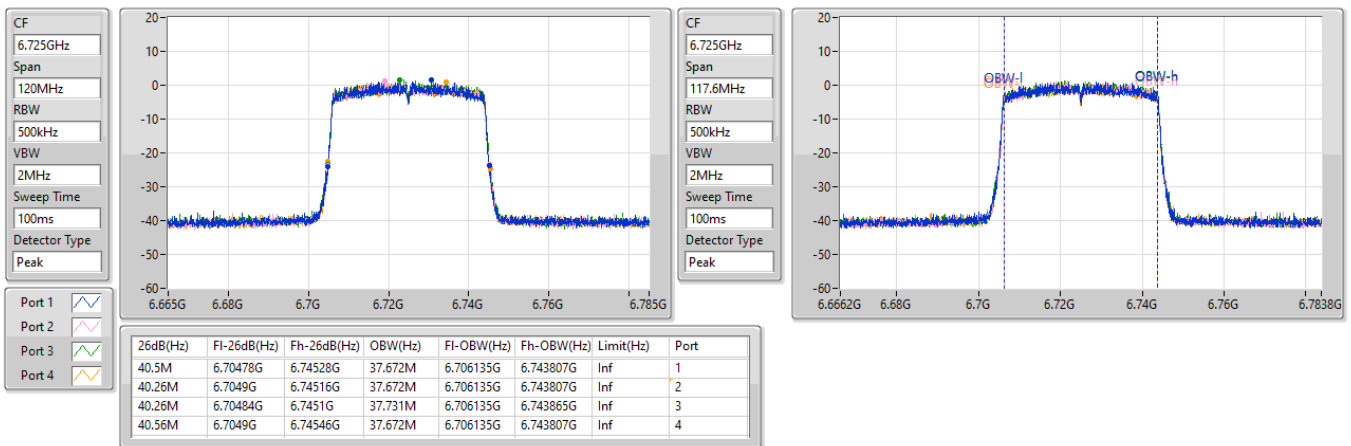


6.525-6.875GHz_802.11ax HEW40_Nss1,(MCS0)_4TX

EBW

6725MHz

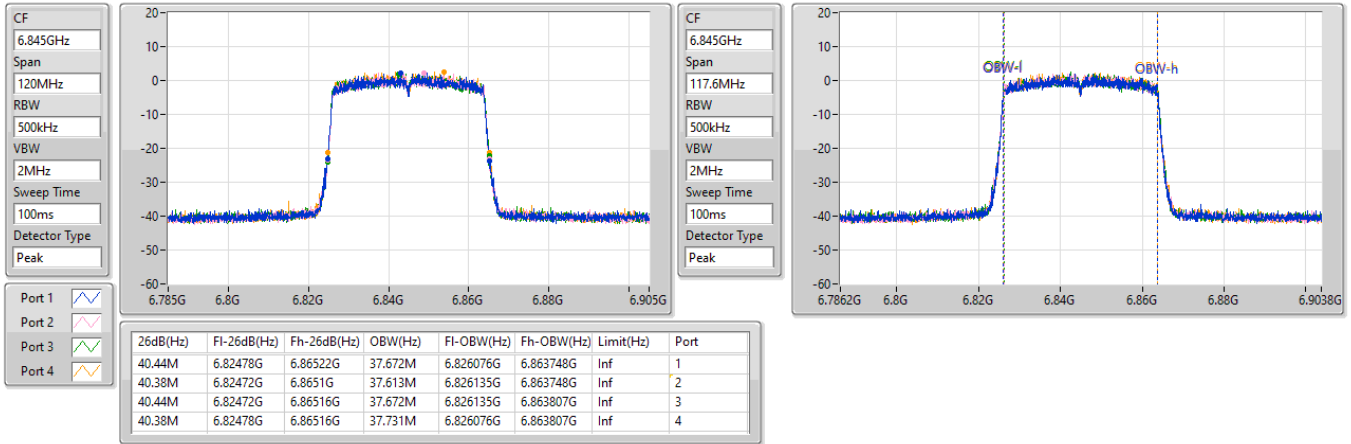
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6.525-6.875GHz_802.11ax HEW40_Nss1,(MCS0)_4TX
6845MHz

EBW

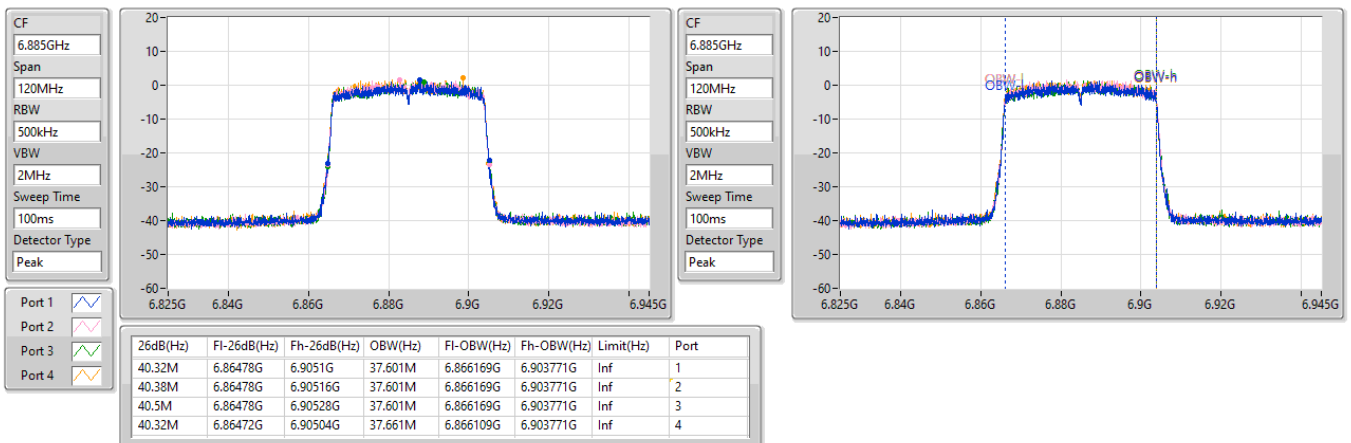
07/11/2022



6.525-6.875GHz_802.11ax HEW40_Nss1,(MCS0)_4TX
6885MHz Straddle 6.525-6.875GHz

EBW

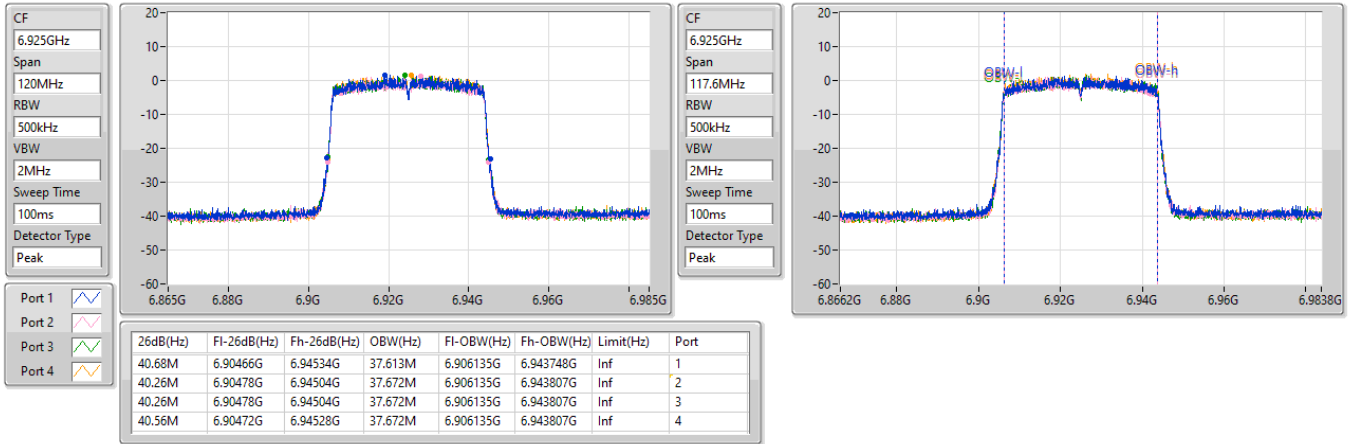
07/11/2022



6.875-7.125GHz_802.11ax HEW40_Nss1,(MCS0)_4TX
6925MHz

EBW

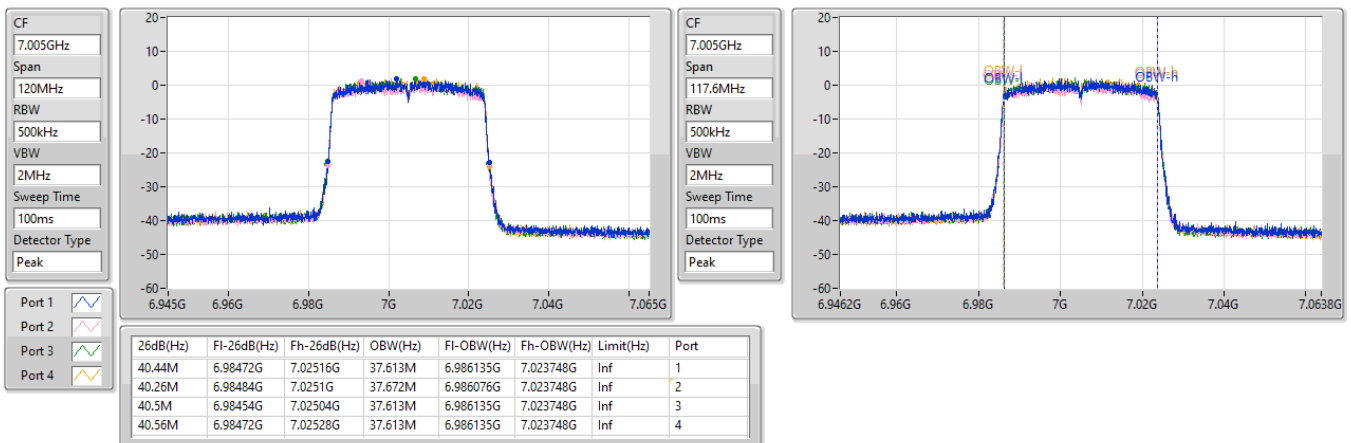
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6.875-7.125GHz_802.11ax HEW40_Nss1,(MCS0)_4TX
7005MHz

EBW

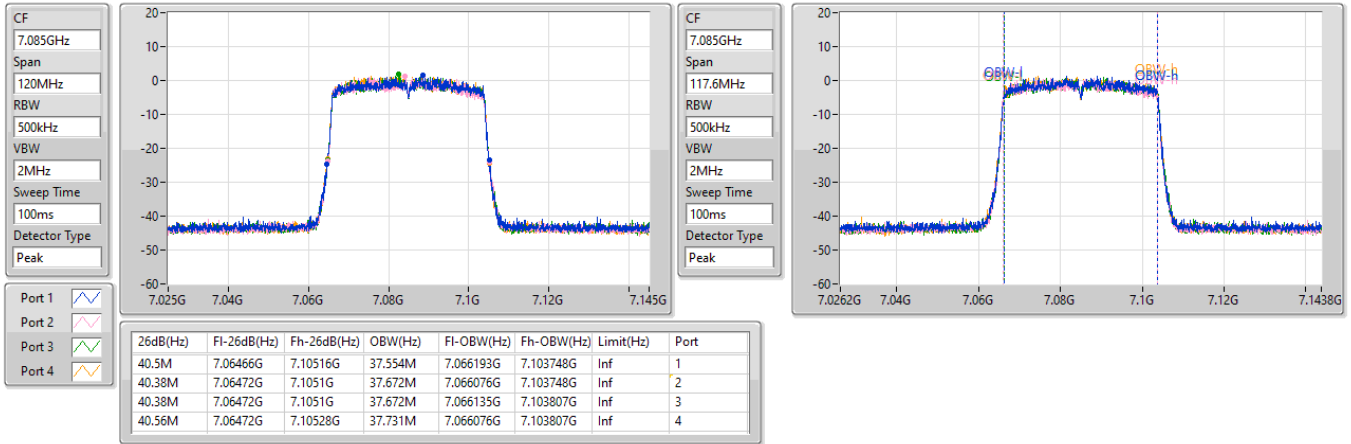
07/11/2022



6.875-7.125GHz_802.11ax HEW40_Nss1,(MCS0)_4TX
7085MHz

EBW

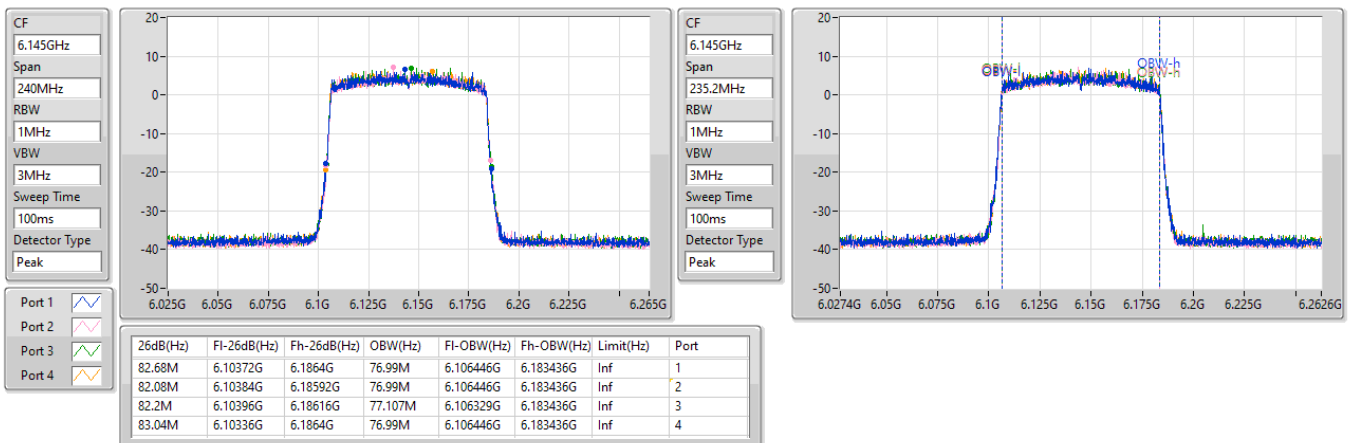
07/11/2022



5.925-6.425GHz_802.11ax HEW80_Nss1,(MCS0)_4TX
6145MHz

EBW

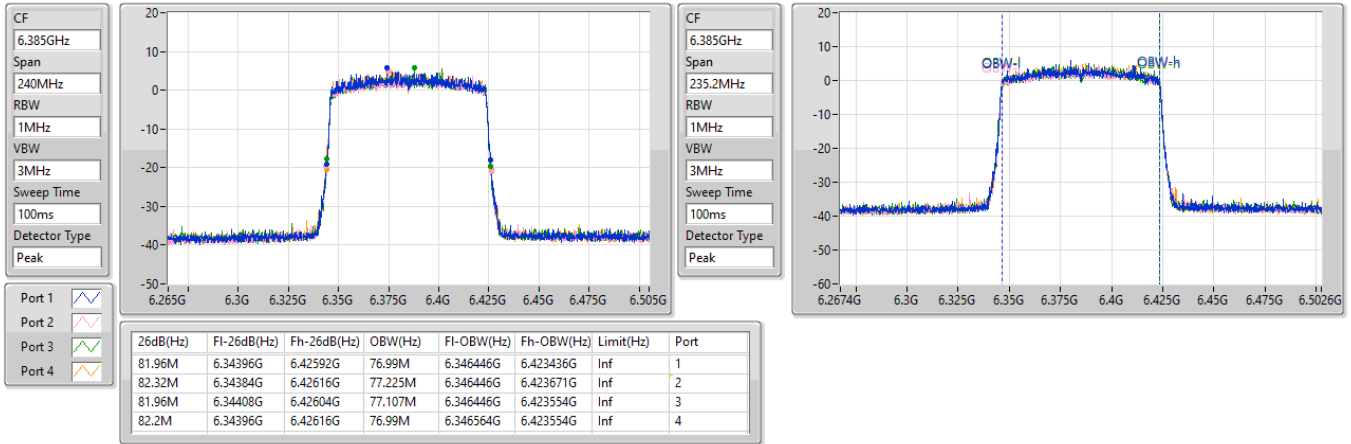
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5.925-6.425GHz_802.11ax HEW80_Nss1,(MCS0)_4TX
6385MHz

EBW

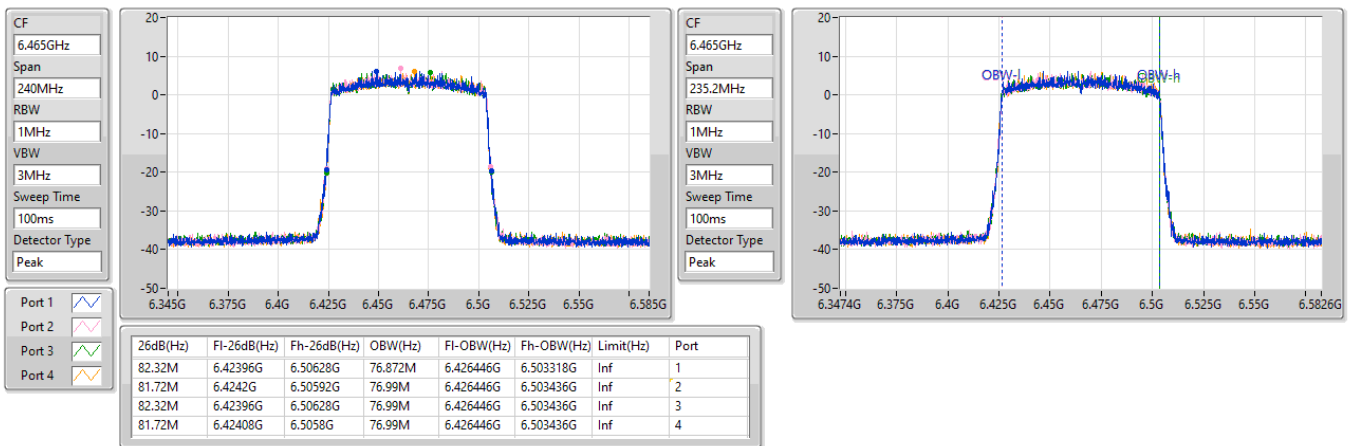
07/11/2022



6.425-6.525GHz_802.11ax HEW80_Nss1,(MCS0)_4TX
6465MHz

EBW

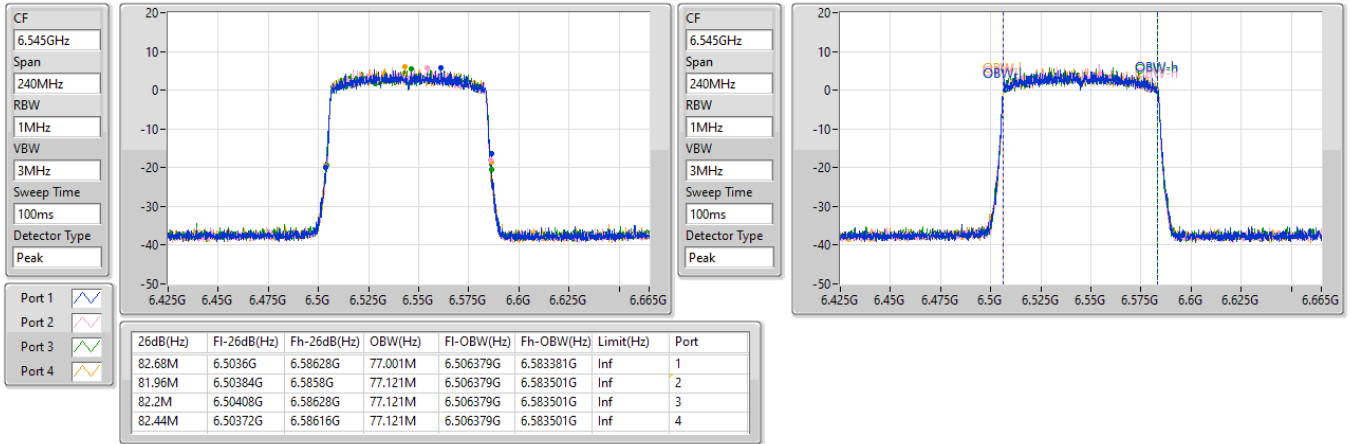
07/11/2022



6.425-6.525GHz_802.11ax HEW80_Nss1,(MCS0)_4TX
6545MHz Straddle 6.425-6.525GHz

EBW

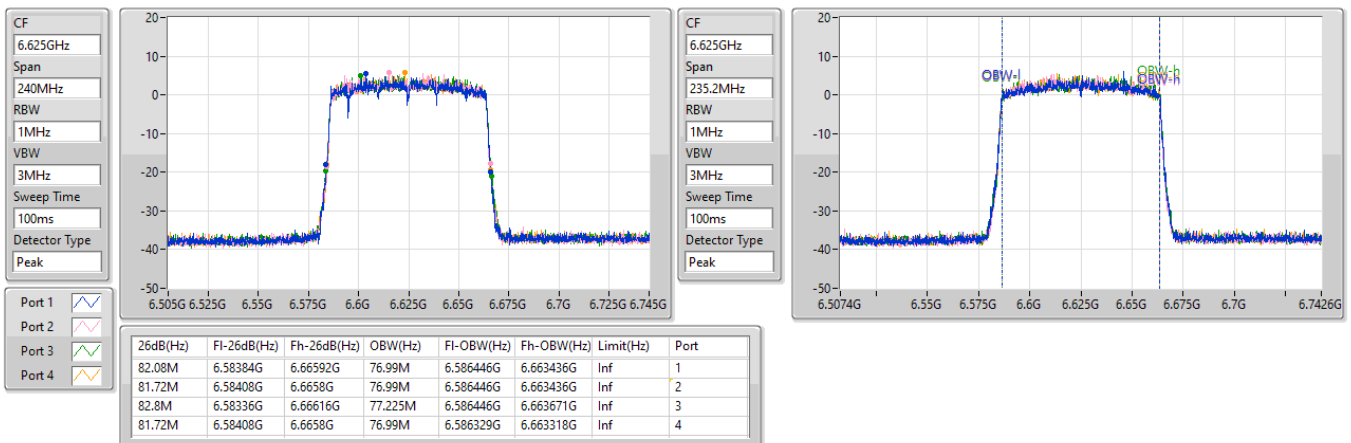
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6.525-6.875GHz_802.11ax HEW80_Nss1,(MCS0)_4TX
6625MHz

EBW

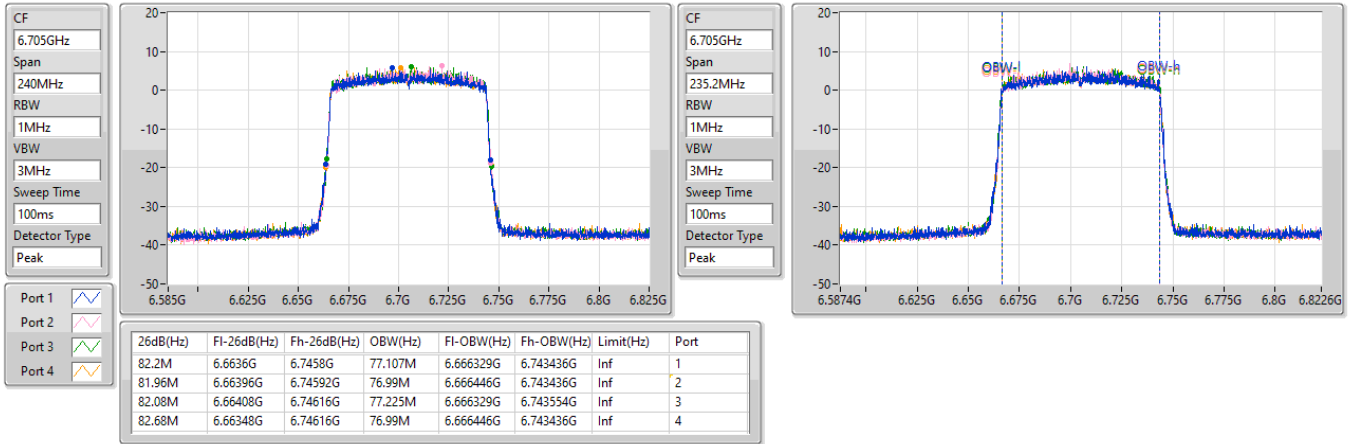
07/11/2022



6.525-6.875GHz_802.11ax HEW80_Nss1,(MCS0)_4TX
6705MHz

EBW

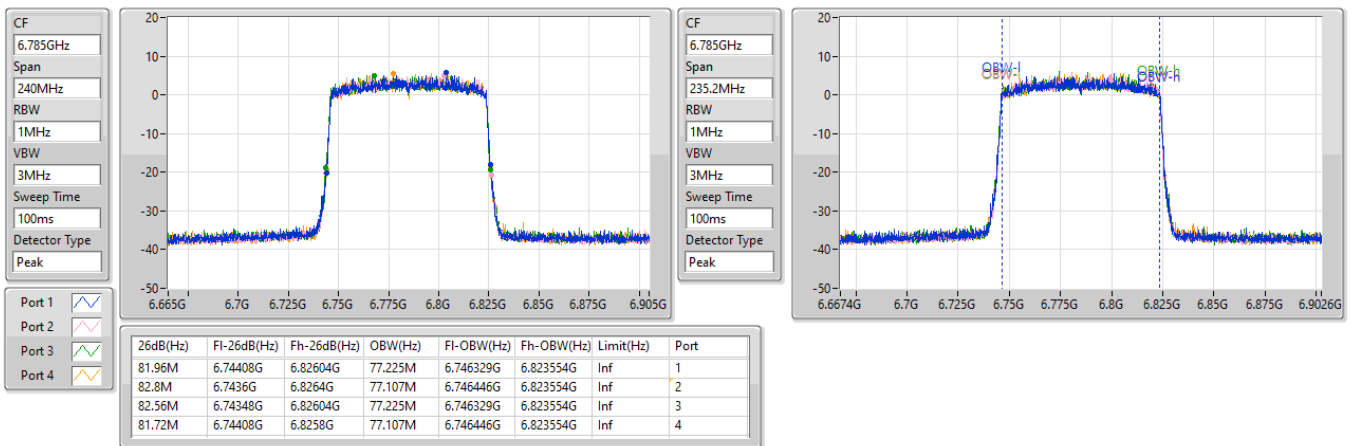
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6.525-6.875GHz_802.11ax HEW80_Nss1,(MCS0)_4TX
6785MHz

EBW

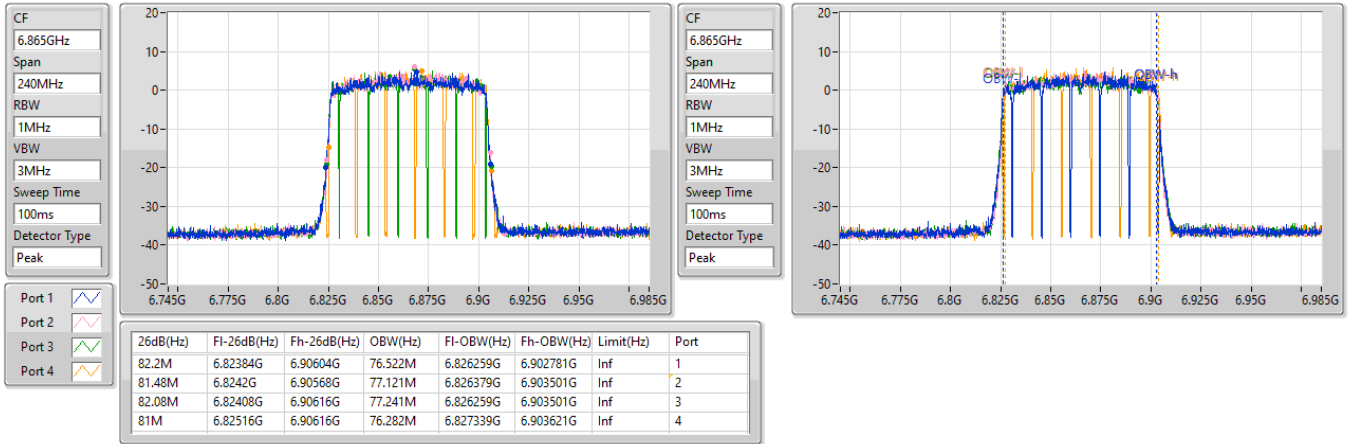
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6.525-6.875GHz_802.11ax HEW80_Nss1,(MCS0)_4TX
6865MHz Straddle 6.525-6.875GHz

EBW

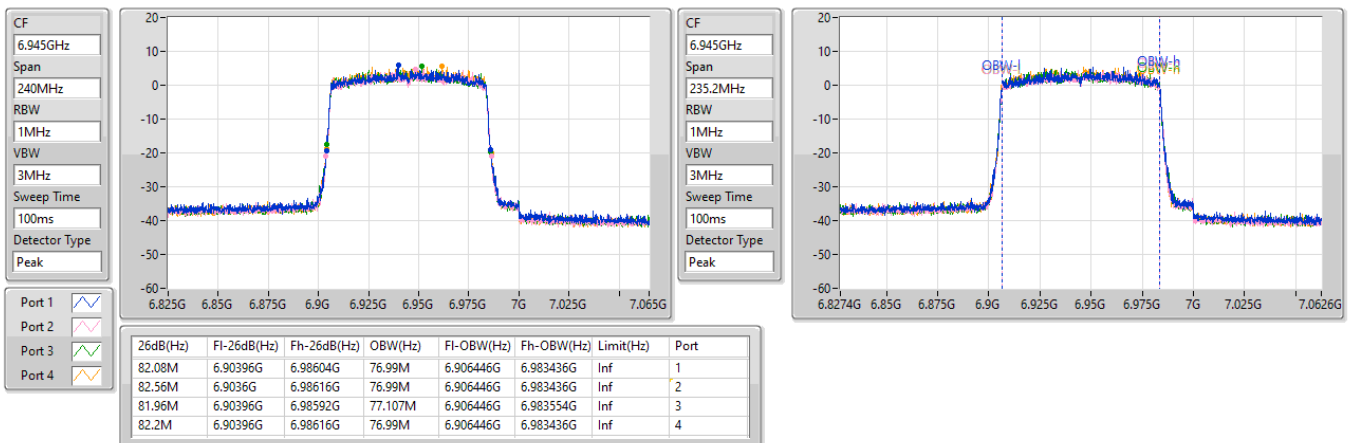
07/11/2022



6.875-7.125GHz_802.11ax HEW80_Nss1,(MCS0)_4TX
6945MHz

EBW

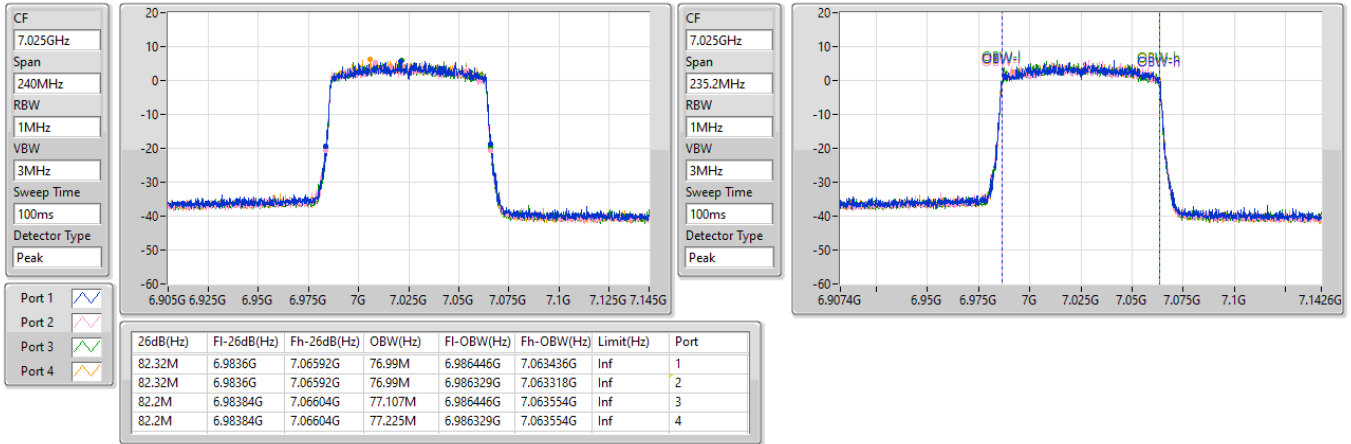
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6.875-7.125GHz_802.11ax HEW80_Nss1,(MCS0)_4TX
7025MHz

EBW

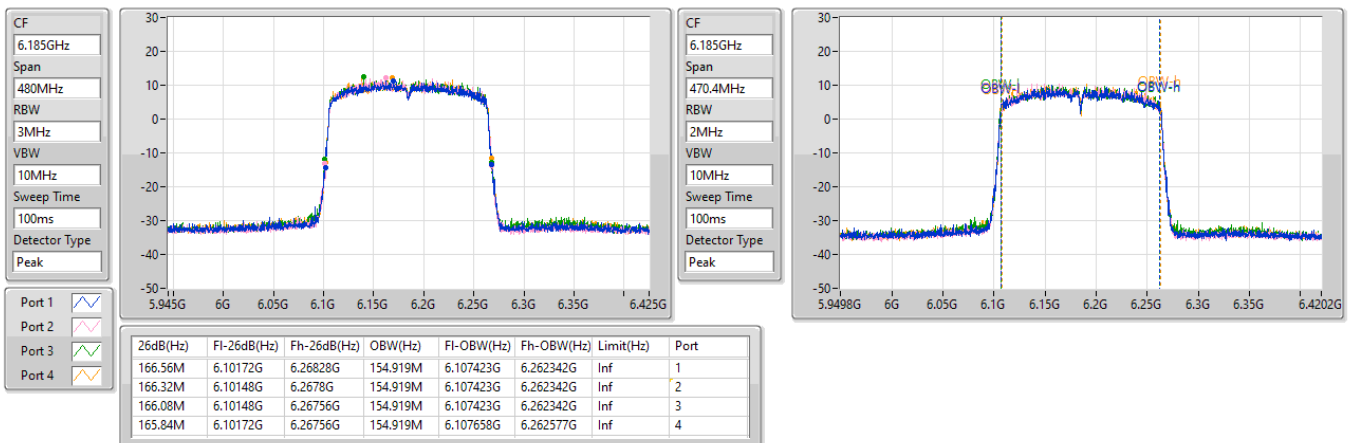
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5.925-6.425GHz_802.11ax HEW160_Nss1,(MCS0)_4TX
6185MHz

EBW

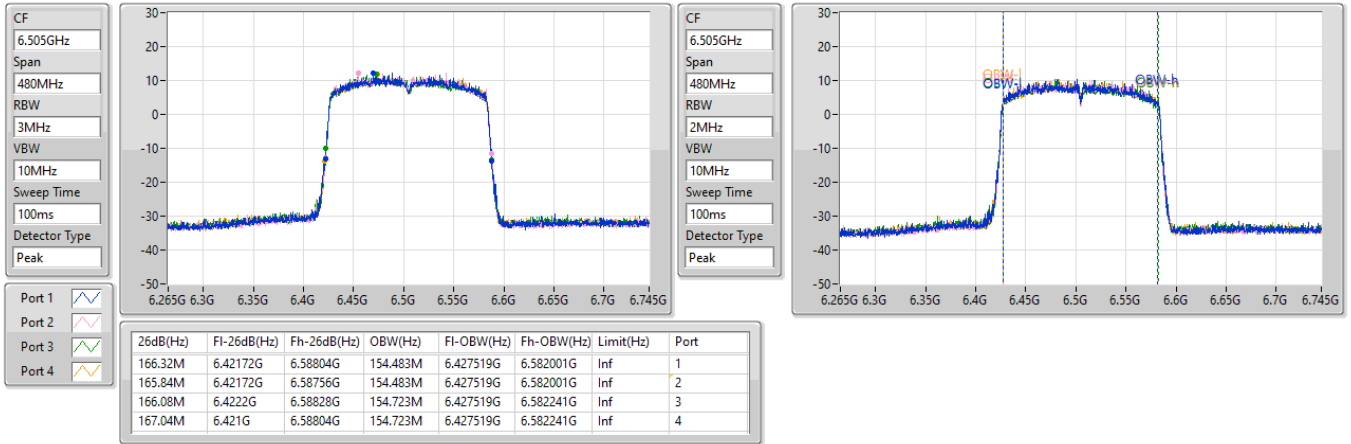
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6.425-6.525GHz_802.11ax HEW160_Nss1,(MCS0)_4TX
6505MHz Straddle 6.425-6.525GHz

EBW

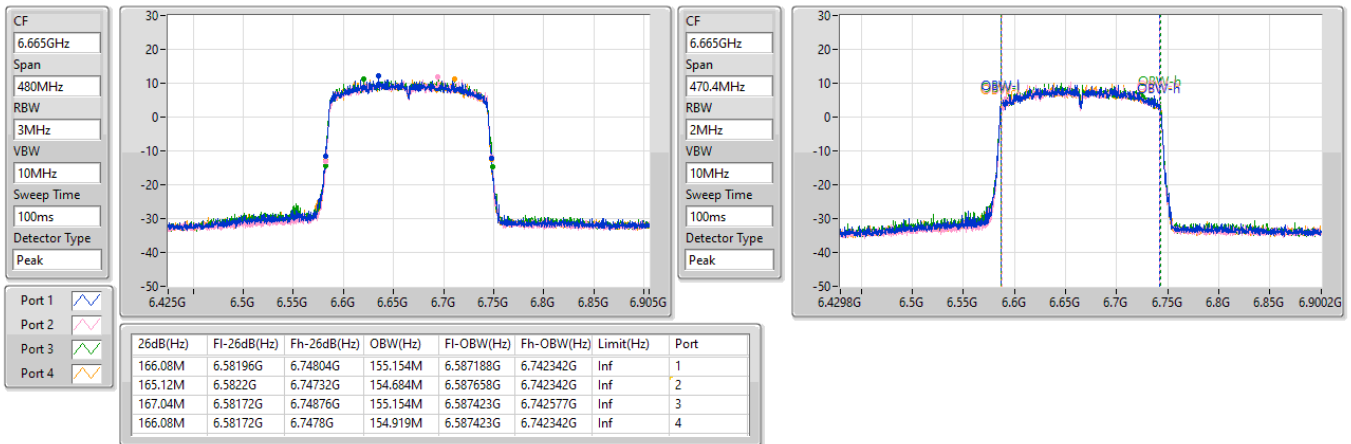
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6.525-6.875GHz_802.11ax HEW160_Nss1,(MCS0)_4TX
6665MHz

EBW

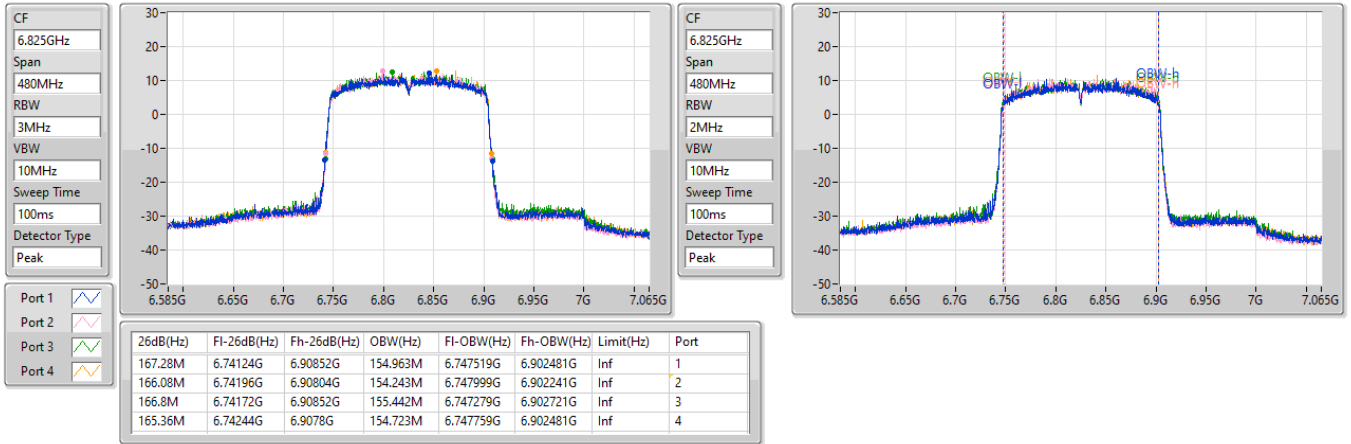
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6.525-6.875GHz_802.11ax HEW160_Nss1,(MCS0)_4TX
6825MHz Straddle 6.525-6.875GHz

EBW

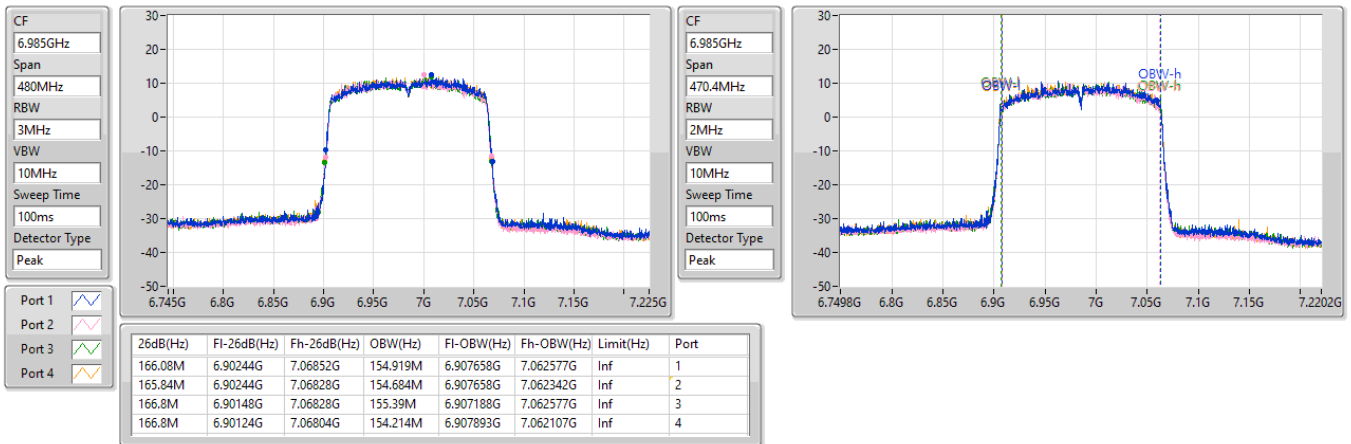
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6.875-7.125GHz_802.11ax HEW160_Nss1,(MCS0)_4TX
6985MHz

EBW

07/11/2022



Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.925-6.425GHz	-	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	22.41M	19.12M	19M1D1D	21.69M	19.062M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	40.62M	37.817M	37M8D1D	40.14M	37.723M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	82.68M	77.422M	77M4D1D	81.84M	77.087M
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	165.84M	155.391M	155MD1D	164.16M	154.834M
6.425-6.525GHz	-	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	22.59M	19.138M	19M1D1D	21.99M	19.065M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	40.5M	37.849M	37M8D1D	40.14M	37.667M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	82.68M	77.288M	77M3D1D	81.72M	77.139M
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	165.36M	155.348M	155MD1D	164.4M	154.748M
6.525-6.875GHz	-	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	22.5M	19.137M	19M1D1D	21.9M	19.055M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	40.74M	37.841M	37M8D1D	40.2M	37.657M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	82.68M	77.41M	77M4D1D	81.72M	77.003M
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	165.12M	155.161M	155MD1D	163.92M	154.736M
6.875-7.125GHz	-	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	22.41M	19.133M	19M1D1D	21.81M	19.05M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	40.74M	37.913M	37M9D1D	40.26M	37.73M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	82.56M	77.458M	77M5D1D	81.84M	77.149M
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	164.88M	155.02M	155MD1D	163.44M	154.68M

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	-	-	-	-	-	-	-	-	-	-
6115MHz	Pass	Inf	22.08M	19.062M	22.41M	19.12M	22.2M	19.09M	21.99M	19.096M
6255MHz	Pass	Inf	22.05M	19.081M	22.2M	19.111M	21.99M	19.07M	22.32M	19.113M
6415MHz	Pass	Inf	21.84M	19.076M	22.02M	19.107M	21.69M	19.065M	22.32M	19.118M
6435MHz	Pass	Inf	22.14M	19.135M	22.32M	19.138M	22.32M	19.075M	22.29M	19.111M
6475MHz	Pass	Inf	22.11M	19.085M	22.35M	19.111M	22.5M	19.077M	22.14M	19.088M
6515MHz	Pass	Inf	21.99M	19.076M	22.59M	19.115M	22.2M	19.065M	22.2M	19.099M
6535MHz	Pass	Inf	22.08M	19.067M	22.14M	19.094M	22.08M	19.08M	21.9M	19.097M
6695MHz	Pass	Inf	21.99M	19.101M	22.14M	19.109M	22.29M	19.085M	22.08M	19.103M
6855MHz	Pass	Inf	22.26M	19.06M	22.02M	19.137M	22.05M	19.075M	22.5M	19.1M
6875MHz Straddle 6.525-6.875GHz	Pass	Inf	22.05M	19.077M	22.44M	19.098M	22.26M	19.055M	22.29M	19.132M
6895MHz	Pass	Inf	22.23M	19.088M	22.41M	19.121M	22.05M	19.059M	22.38M	19.104M
6995MHz	Pass	Inf	21.81M	19.08M	22.23M	19.133M	21.96M	19.053M	22.29M	19.106M
7095MHz	Pass	Inf	22.02M	19.073M	22.35M	19.118M	22.11M	19.055M	22.2M	19.096M
7115MHz	Pass	Inf	21.81M	19.078M	22.17M	19.119M	22.02M	19.05M	22.08M	19.095M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
6125MHz	Pass	Inf	40.5M	37.765M	40.62M	37.754M	40.2M	37.774M	40.26M	37.723M
6245MHz	Pass	Inf	40.14M	37.806M	40.44M	37.771M	40.56M	37.744M	40.32M	37.731M
6405MHz	Pass	Inf	40.26M	37.758M	40.38M	37.817M	40.44M	37.779M	40.44M	37.796M
6445MHz	Pass	Inf	40.2M	37.792M	40.2M	37.75M	40.2M	37.705M	40.14M	37.716M
6485MHz	Pass	Inf	40.32M	37.797M	40.44M	37.839M	40.38M	37.849M	40.44M	37.73M
6525MHz Straddle 6.425-6.525GHz	Pass	Inf	40.32M	37.667M	40.44M	37.727M	40.5M	37.741M	40.2M	37.734M
6565MHz	Pass	Inf	40.44M	37.801M	40.5M	37.809M	40.44M	37.787M	40.68M	37.802M
6725MHz	Pass	Inf	40.56M	37.773M	40.38M	37.772M	40.2M	37.803M	40.32M	37.731M
6845MHz	Pass	Inf	40.5M	37.763M	40.68M	37.767M	40.44M	37.806M	40.26M	37.679M
6885MHz Straddle 6.525-6.875GHz	Pass	Inf	40.74M	37.776M	40.5M	37.657M	40.38M	37.841M	40.56M	37.687M
6925MHz	Pass	Inf	40.62M	37.767M	40.5M	37.73M	40.56M	37.913M	40.44M	37.801M
7005MHz	Pass	Inf	40.38M	37.751M	40.38M	37.784M	40.32M	37.808M	40.38M	37.812M
7085MHz	Pass	Inf	40.32M	37.784M	40.44M	37.797M	40.26M	37.779M	40.74M	37.84M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
6145MHz	Pass	Inf	82.32M	77.164M	82.56M	77.087M	82.56M	77.276M	82.44M	77.119M
6225MHz	Pass	Inf	81.84M	77.292M	82.56M	77.233M	82.68M	77.422M	81.96M	77.232M
6385MHz	Pass	Inf	82.44M	77.38M	82.56M	77.367M	82.2M	77.295M	81.96M	77.256M
6465MHz	Pass	Inf	82.44M	77.205M	82.08M	77.217M	82.08M	77.139M	81.72M	77.175M
6545MHz Straddle 6.425-6.525GHz	Pass	Inf	82.08M	77.249M	82.2M	77.278M	82.68M	77.288M	82.2M	77.229M
6625MHz	Pass	Inf	82.2M	77.075M	81.84M	77.195M	81.72M	77.202M	81.72M	77.072M
6705MHz	Pass	Inf	82.56M	77.171M	81.84M	77.198M	82.08M	77.4M	81.72M	77.375M
6785MHz	Pass	Inf	81.84M	77.256M	81.96M	77.187M	82.68M	77.329M	81.96M	77.003M
6865MHz Straddle 6.525-6.875GHz	Pass	Inf	82.44M	77.307M	82.2M	77.201M	82.32M	77.41M	82.32M	77.259M
6945MHz	Pass	Inf	81.96M	77.293M	81.96M	77.157M	82.56M	77.276M	82.08M	77.245M
7025MHz	Pass	Inf	81.96M	77.149M	81.84M	77.174M	81.96M	77.458M	81.96M	77.229M
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
6185MHz	Pass	Inf	165.36M	154.987M	164.4M	154.947M	164.88M	155.391M	164.88M	155.156M
6345MHz	Pass	Inf	165.84M	155.048M	164.16M	154.937M	164.64M	155.166M	165.12M	154.834M
6505MHz Straddle 6.425-6.525GHz	Pass	Inf	164.4M	155.348M	164.64M	155.11M	165.36M	154.812M	164.4M	154.748M
6665MHz	Pass	Inf	164.4M	154.736M	164.4M	155.161M	164.4M	154.872M	164.4M	155.029M
6825MHz Straddle 6.525-6.875GHz	Pass	Inf	165.12M	154.821M	164.16M	154.823M	164.88M	154.865M	163.92M	154.874M
6985MHz	Pass	Inf	163.44M	155.02M	164.64M	154.68M	164.88M	154.864M	164.4M	154.994M

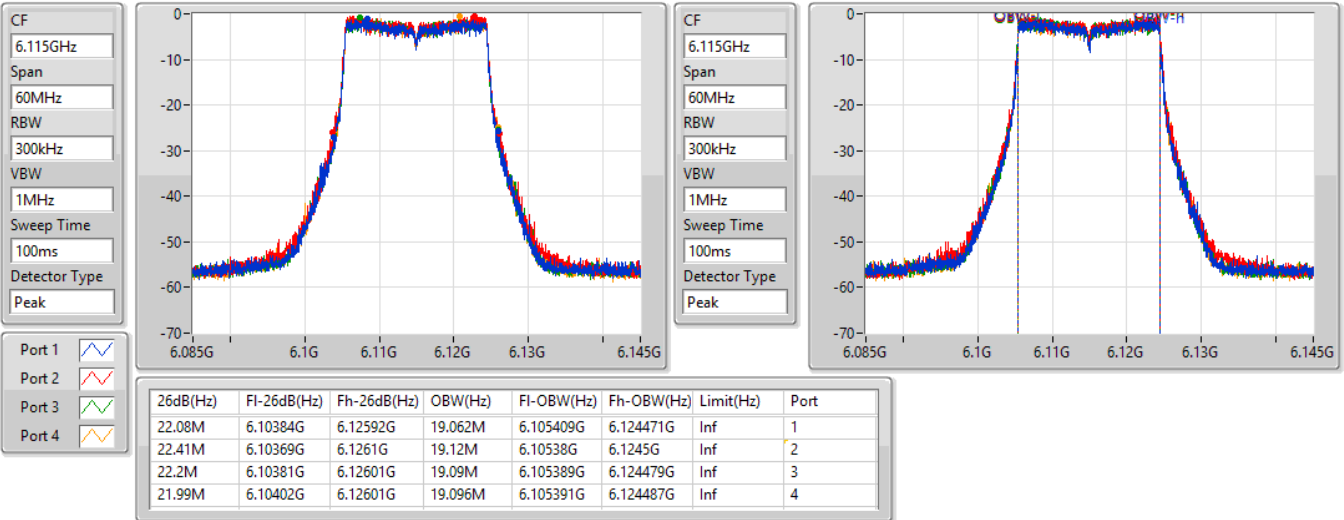
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
 Port X-OBW = Port X 99% occupied bandwidth

802.11ax HEW20-BF_Nss1,(MCS0)_4TX

EBW

6115MHz

06/10/2022

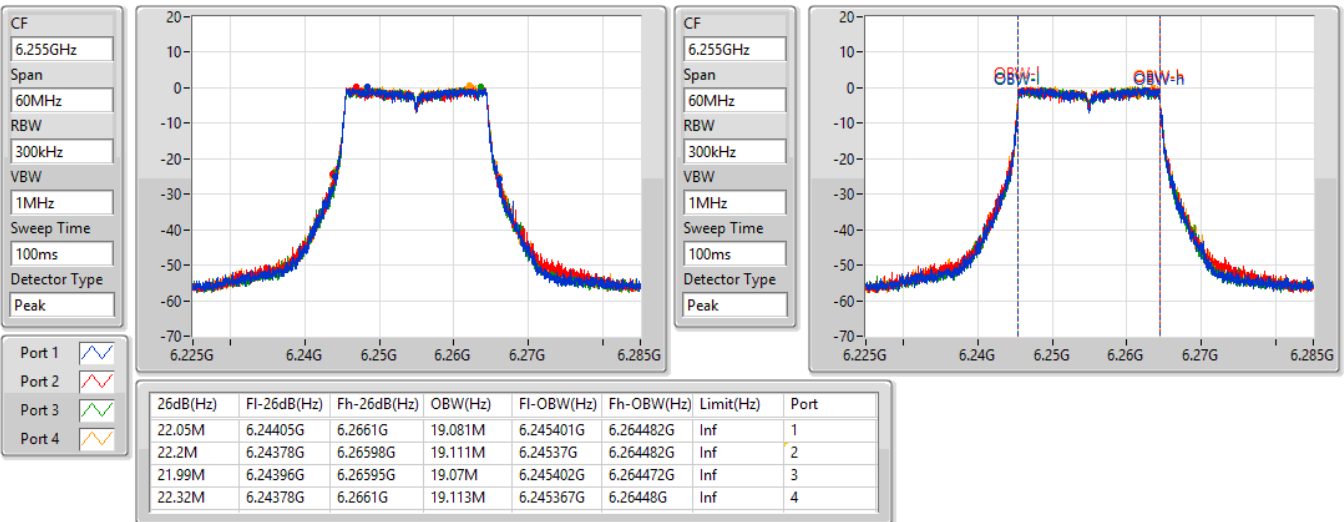


802.11ax HEW20-BF_Nss1,(MCS0)_4TX

EBW

6255MHz

06/10/2022

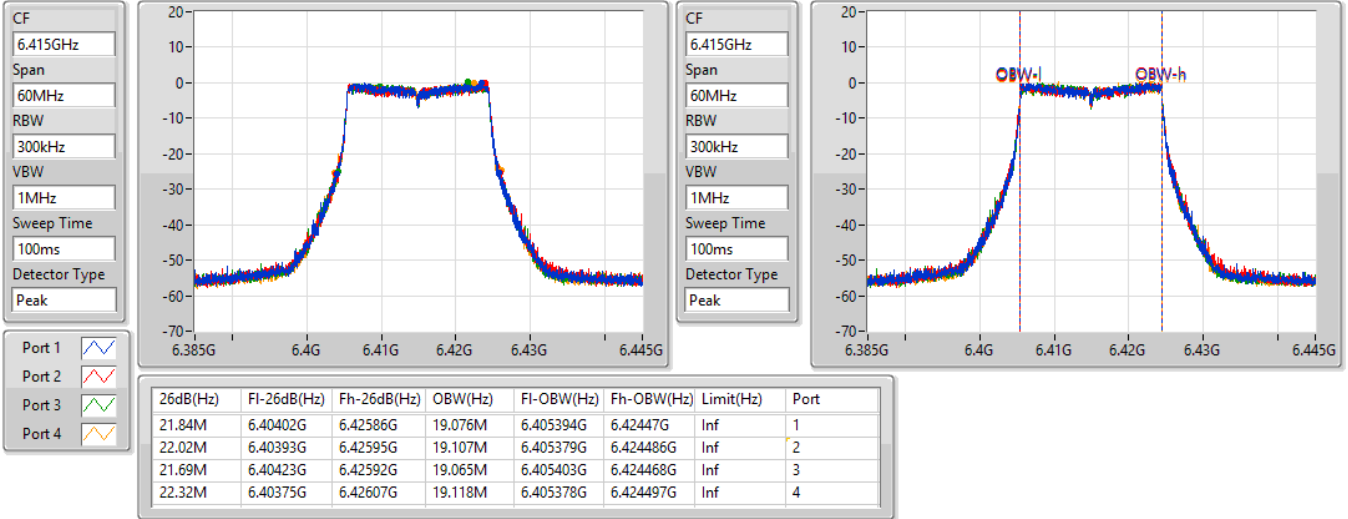


802.11ax HEW20-BF_Nss1,(MCS0)_4TX

EBW

6415MHz

06/10/2022

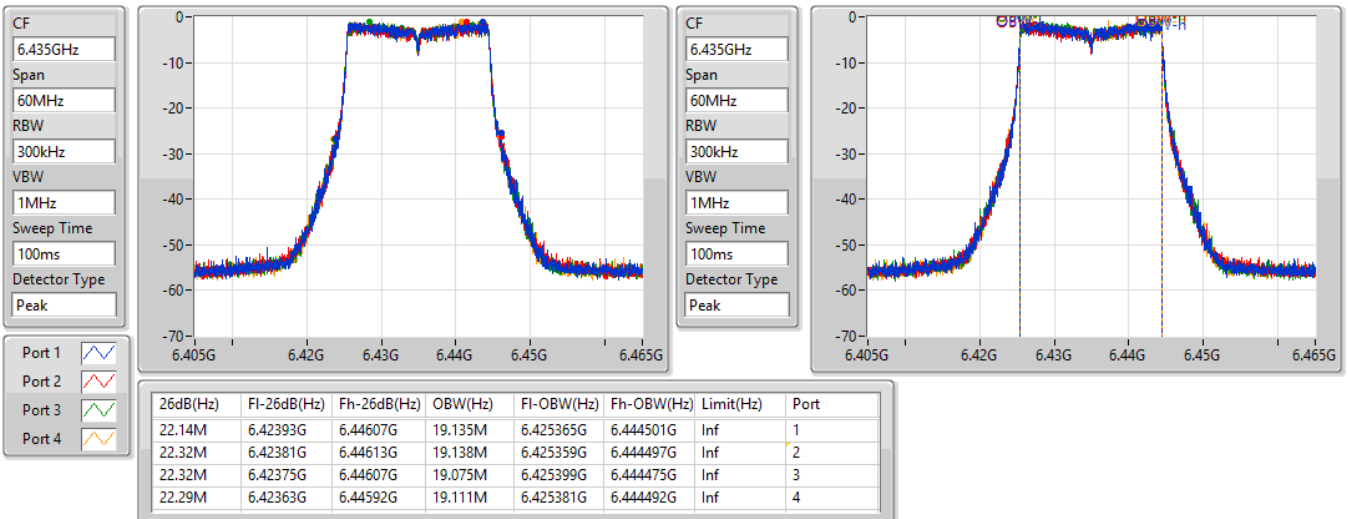


802.11ax HEW20-BF_Nss1,(MCS0)_4TX

EBW

6435MHz

06/10/2022

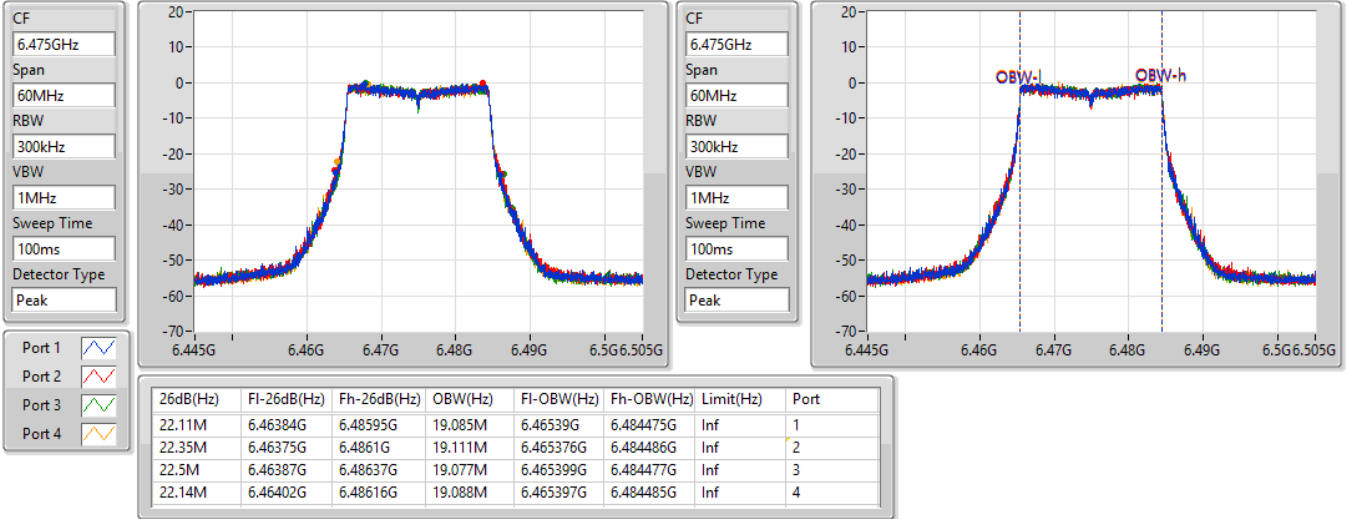


802.11ax HEW20-BF_Nss1,(MCS0)_4TX

EBW

6475MHz

06/10/2022

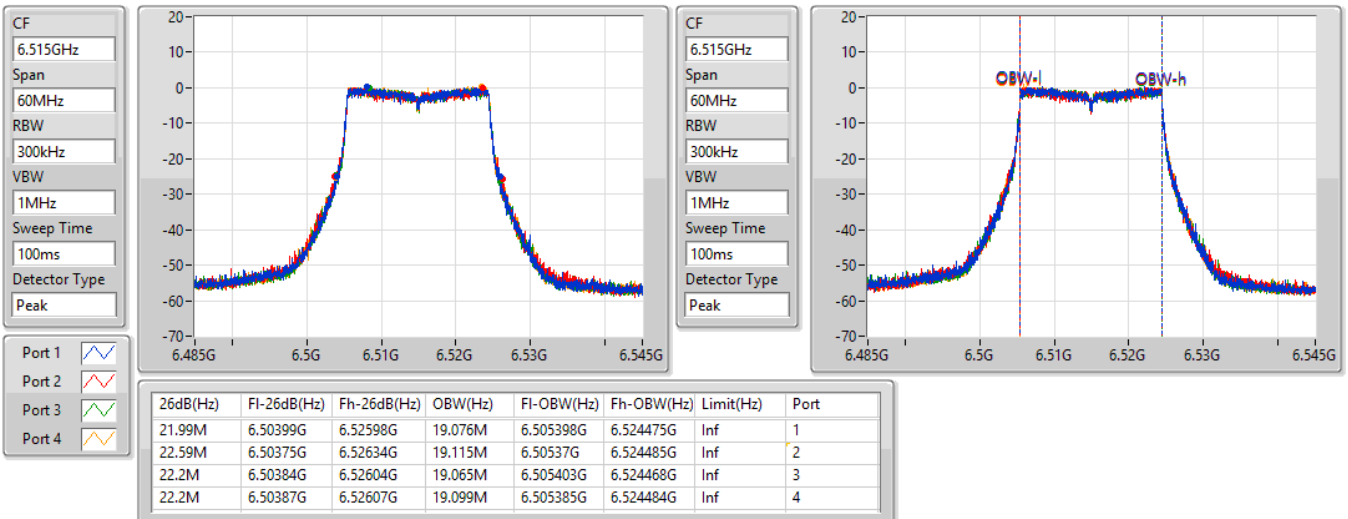


802.11ax HEW20-BF_Nss1,(MCS0)_4TX

EBW

6515MHz

06/10/2022



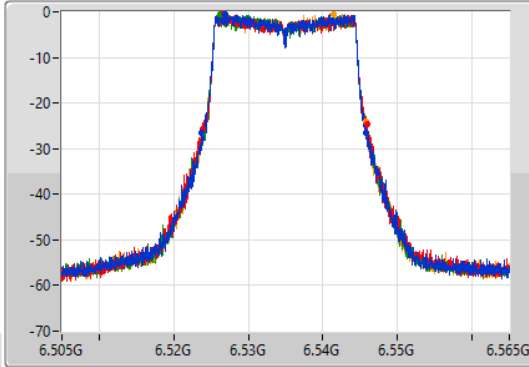
802.11ax HEW20-BF_Nss1,(MCS0)_4TX

EBW

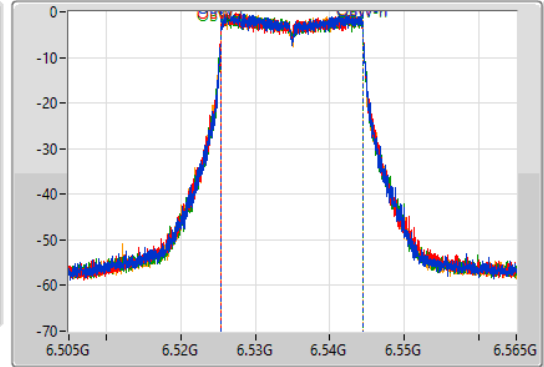
6535MHz

06/10/2022

CF
6.535GHz
Span
60MHz
RBW
300kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Peak



CF
6.535GHz
Span
60MHz
RBW
300kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Peak



Port 1
Port 2
Port 3
Port 4

26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
22.08M	6.52378G	6.54586G	19.067M	6.525397G	6.544465G	Inf	1
22.14M	6.52384G	6.54598G	19.094M	6.525373G	6.544468G	Inf	2
22.08M	6.5239G	6.54598G	19.08M	6.525384G	6.544464G	Inf	3
21.9M	6.5239G	6.5458G	19.097M	6.525376G	6.544474G	Inf	4

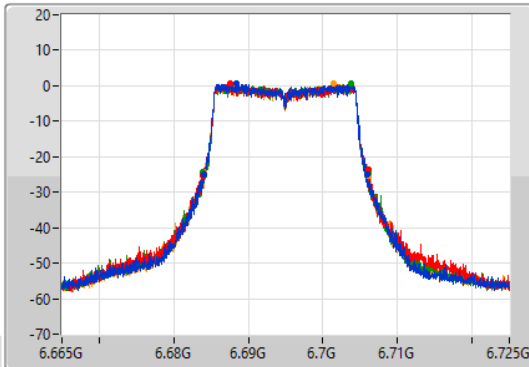
802.11ax HEW20-BF_Nss1,(MCS0)_4TX

EBW

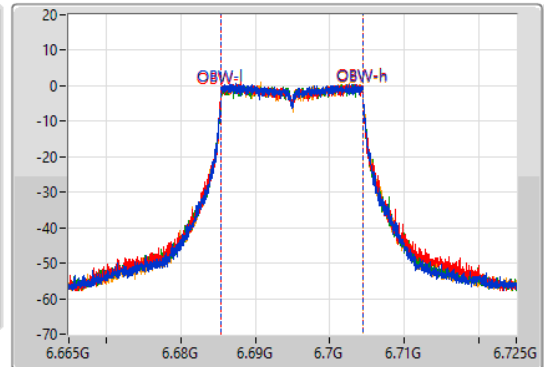
6695MHz

06/10/2022

CF
6.695GHz
Span
60MHz
RBW
300kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Peak



CF
6.695GHz
Span
60MHz
RBW
300kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Peak



Port 1
Port 2
Port 3
Port 4

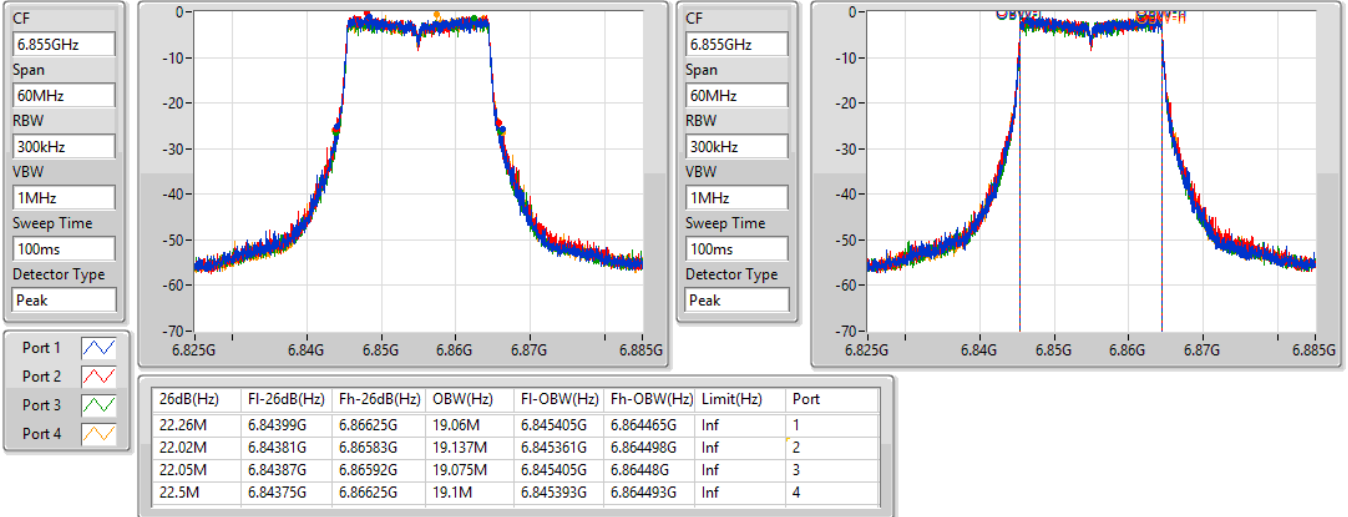
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.99M	6.68399G	6.70598G	19.101M	6.685386G	6.704487G	Inf	1
22.14M	6.68396G	6.7061G	19.109M	6.685369G	6.704479G	Inf	2
22.29M	6.68384G	6.70613G	19.085M	6.68539G	6.704475G	Inf	3
22.08M	6.68399G	6.70607G	19.103M	6.685386G	6.704489G	Inf	4

802.11ax HEW20-BF_Nss1,(MCS0)_4TX

EBW

6855MHz

06/10/2022

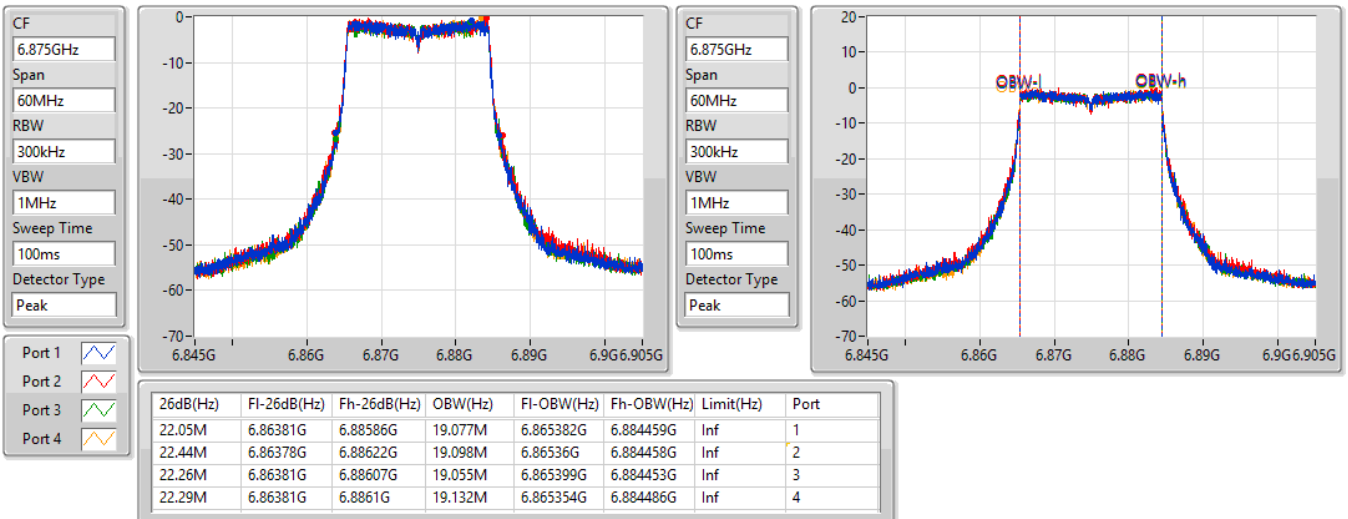


802.11ax HEW20-BF_Nss1,(MCS0)_4TX

EBW

6875MHz Straddle 6.525-6.875GHz

06/10/2022

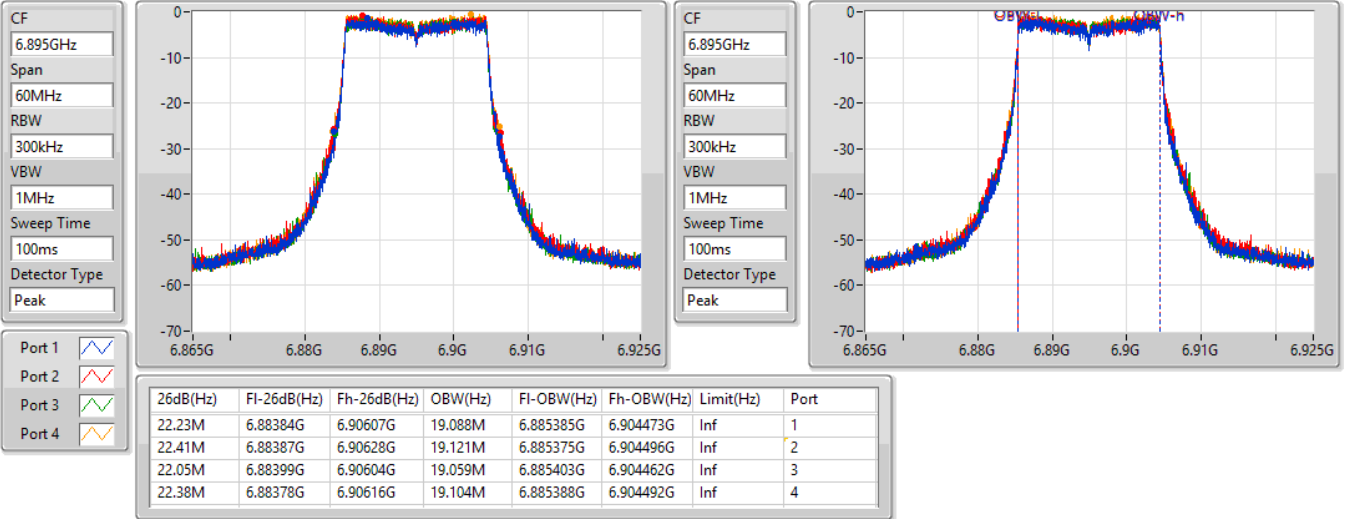


802.11ax HEW20-BF_Nss1,(MCS0)_4TX

EBW

6895MHz

06/10/2022

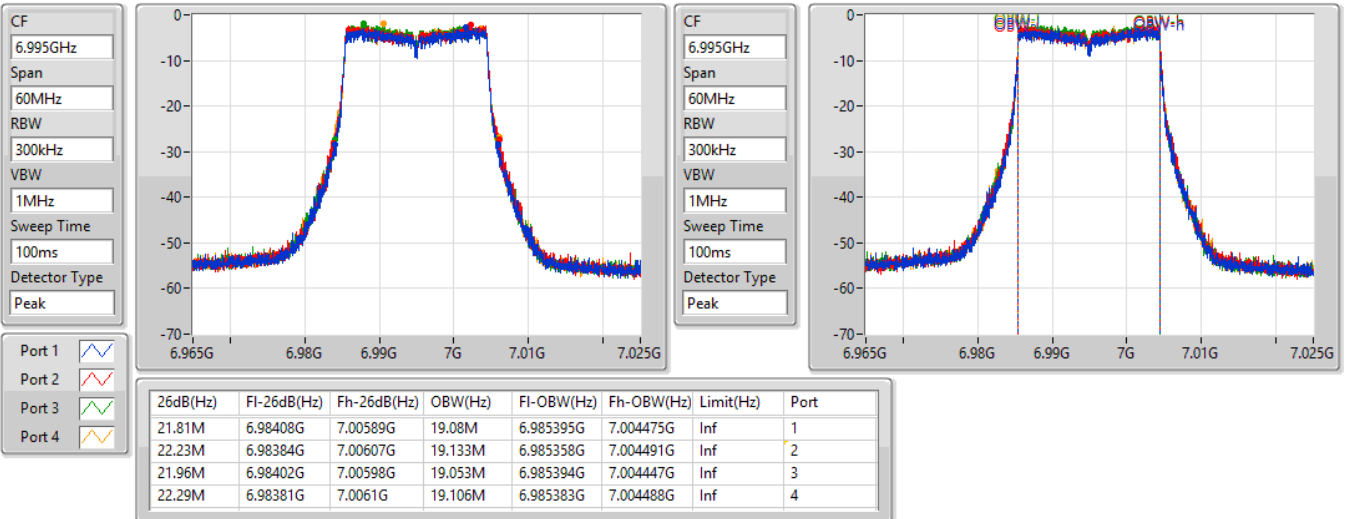


802.11ax HEW20-BF_Nss1,(MCS0)_4TX

EBW

6995MHz

06/10/2022

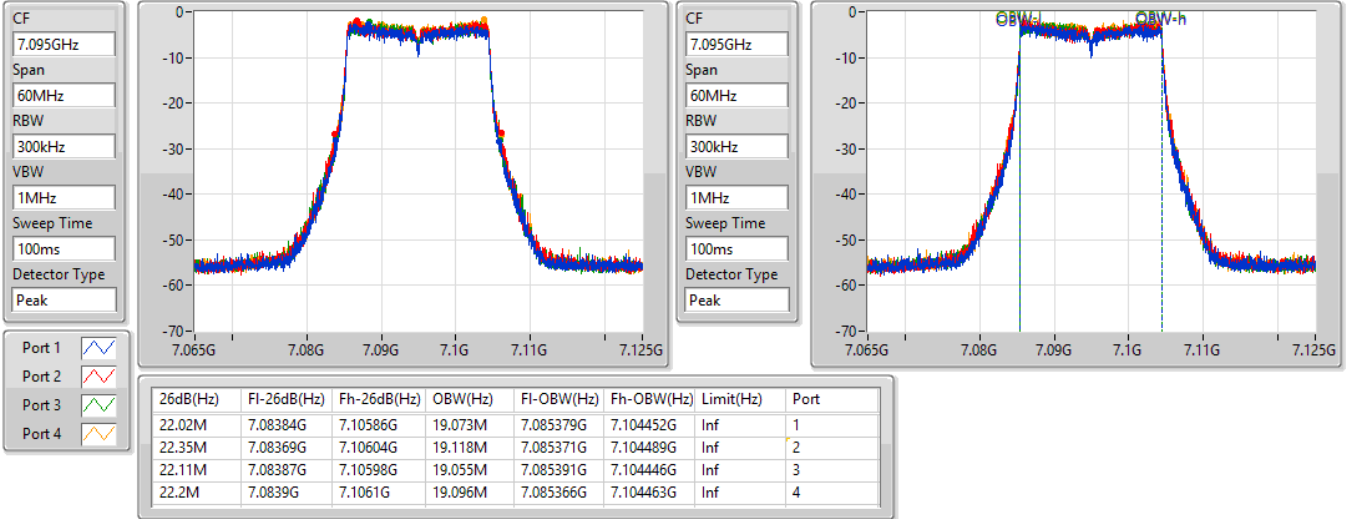


802.11ax HEW20-BF_Nss1,(MCS0)_4TX

EBW

7095MHz

06/10/2022

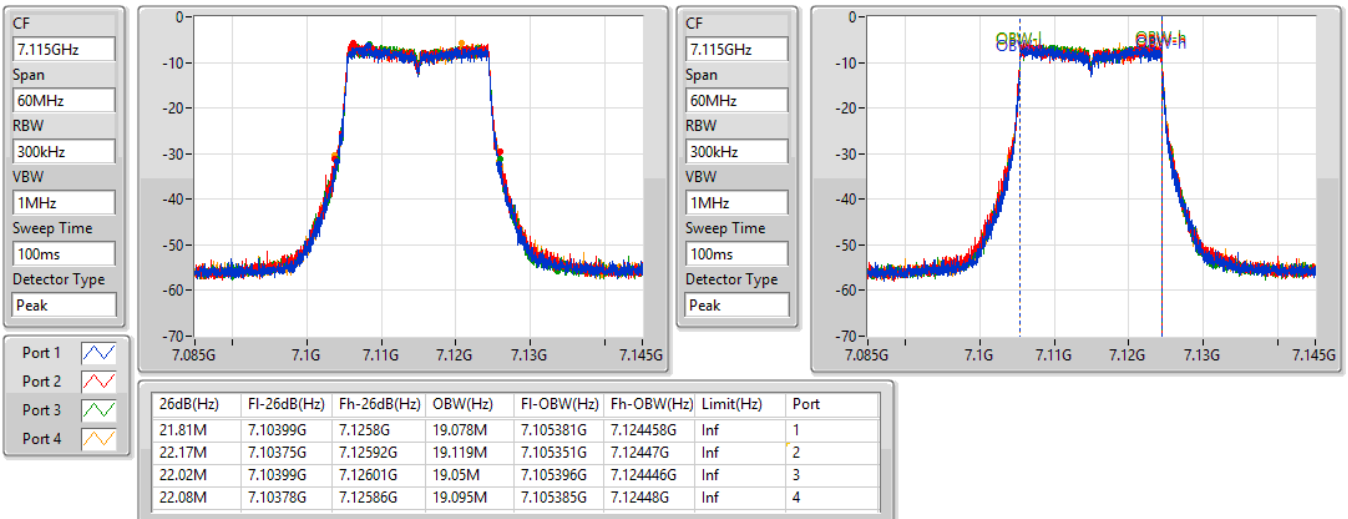


802.11ax HEW20-BF_Nss1,(MCS0)_4TX

EBW

7115MHz

06/10/2022

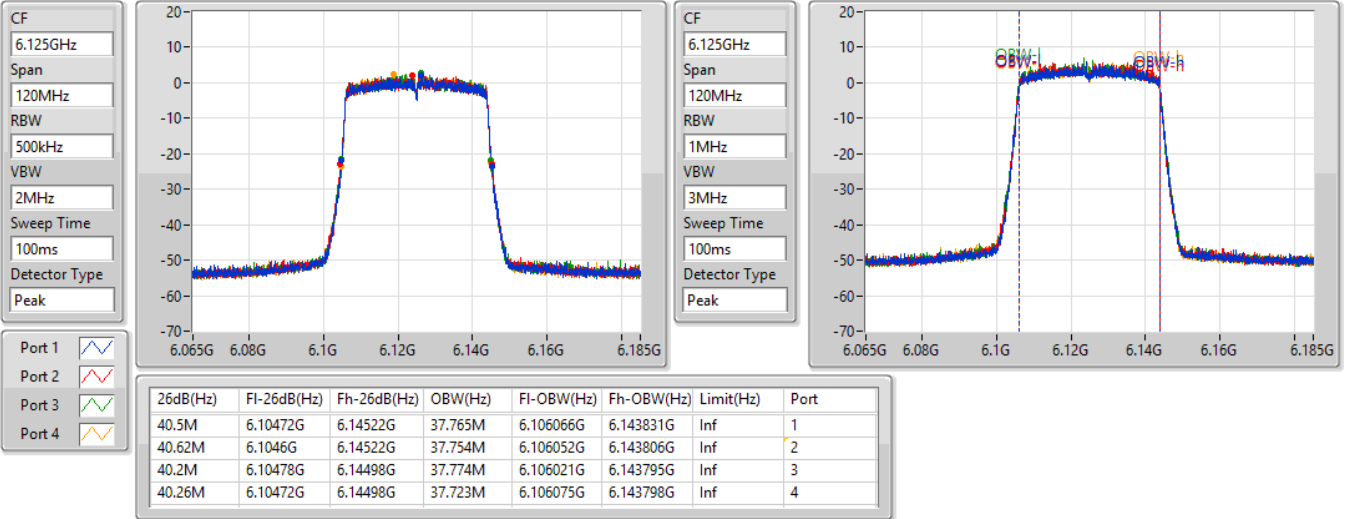


802.11ax HEW40-BF_Nss1,(MCS0)_4TX

EBW

6125MHz

06/10/2022

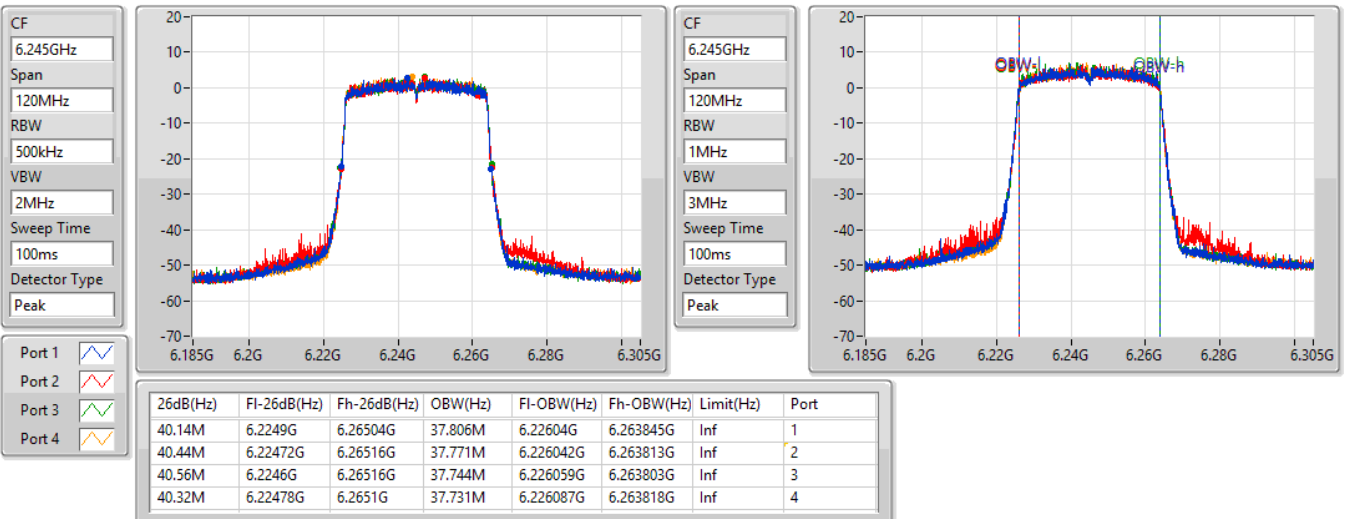


802.11ax HEW40-BF_Nss1,(MCS0)_4TX

EBW

6245MHz

06/10/2022

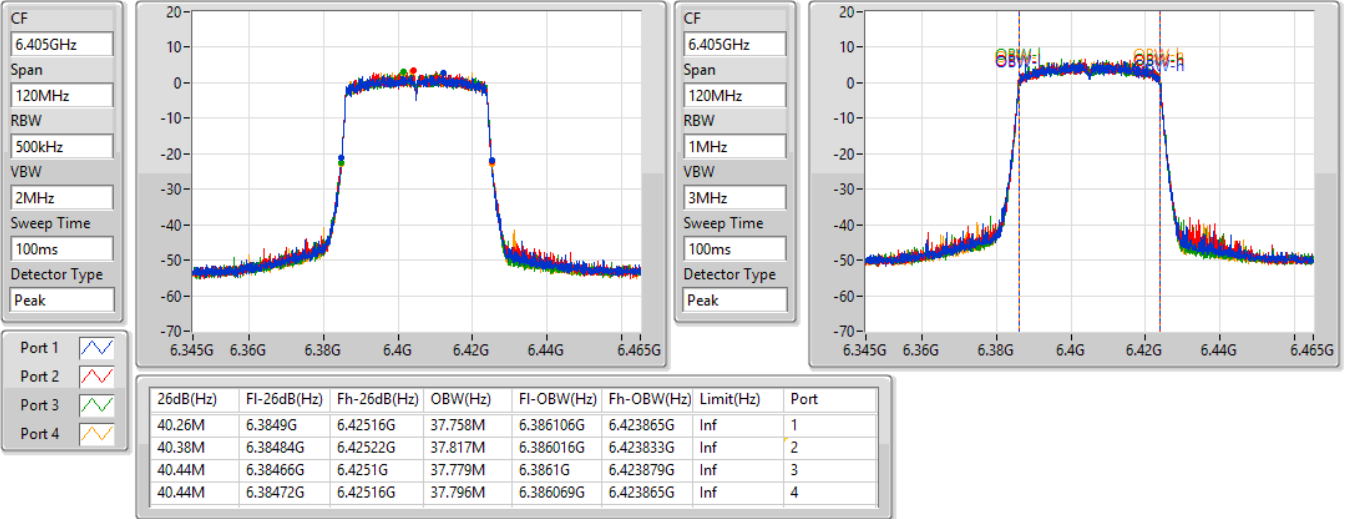


802.11ax HEW40-BF_Nss1,(MCS0)_4TX

EBW

6405MHz

06/10/2022

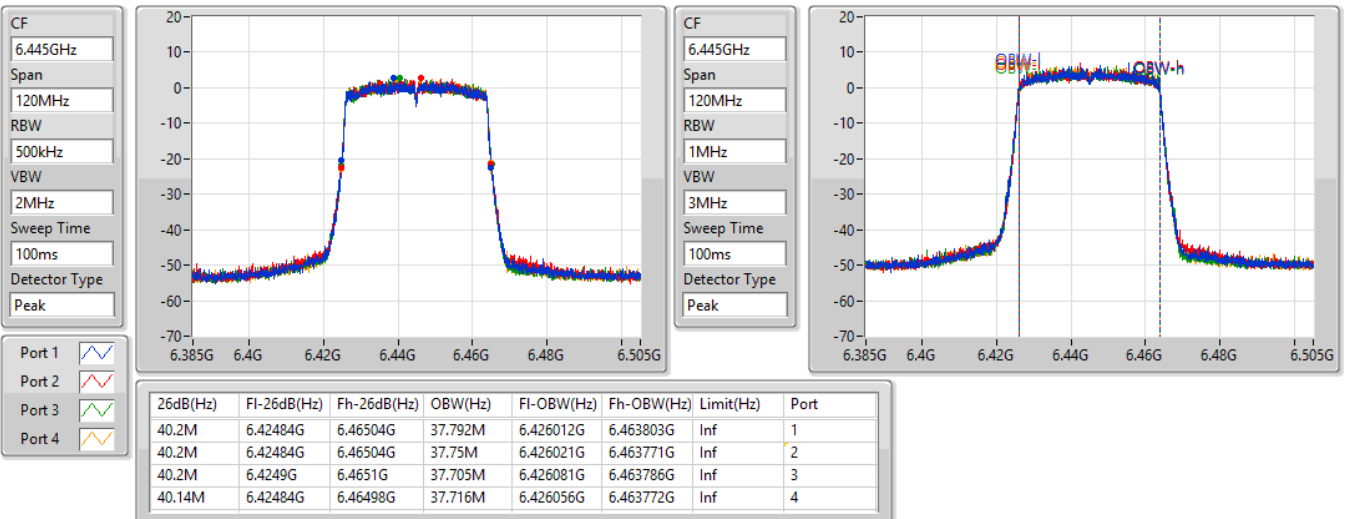


802.11ax HEW40-BF_Nss1,(MCS0)_4TX

EBW

6445MHz

06/10/2022

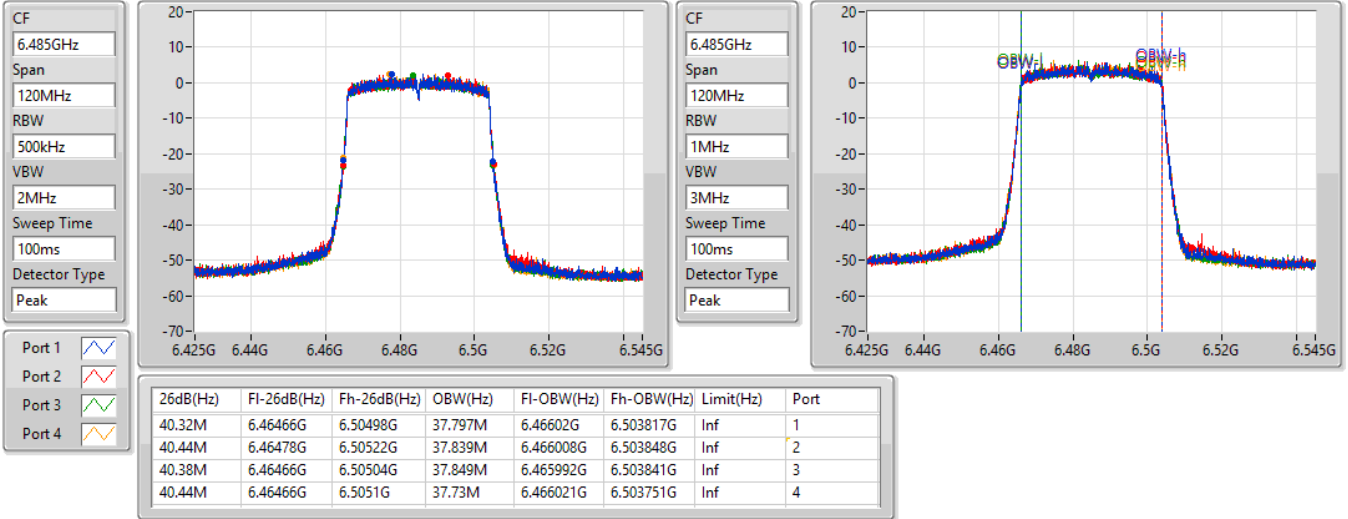


802.11ax HEW40-BF_Nss1,(MCS0)_4TX

EBW

6485MHz

06/10/2022

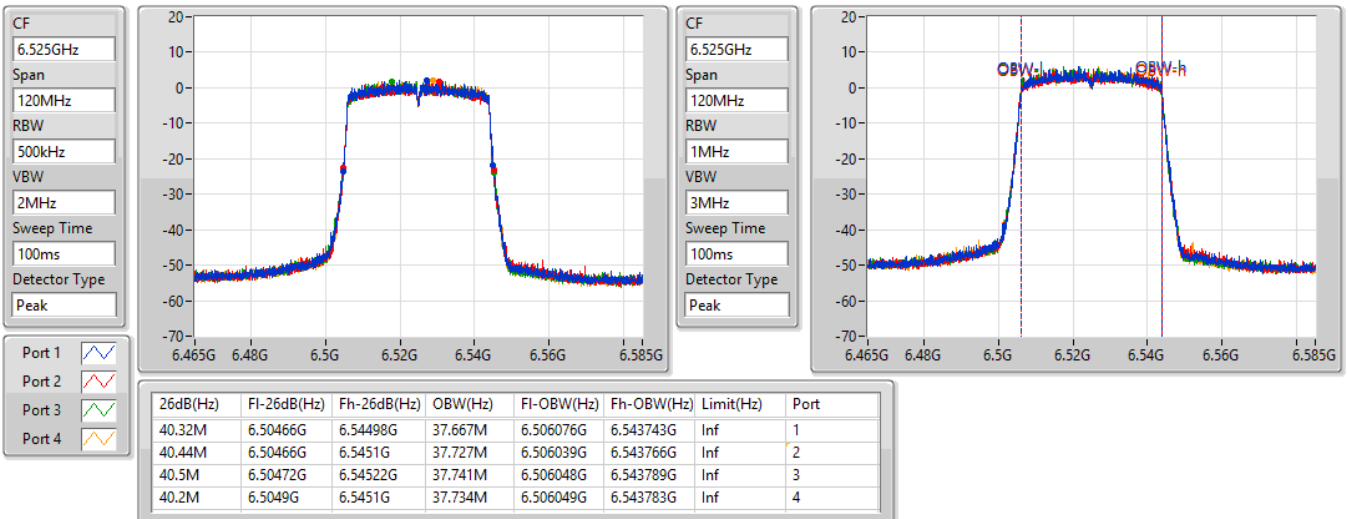


802.11ax HEW40-BF_Nss1,(MCS0)_4TX

EBW

6525MHz Straddle 6.425-6.525GHz

06/10/2022

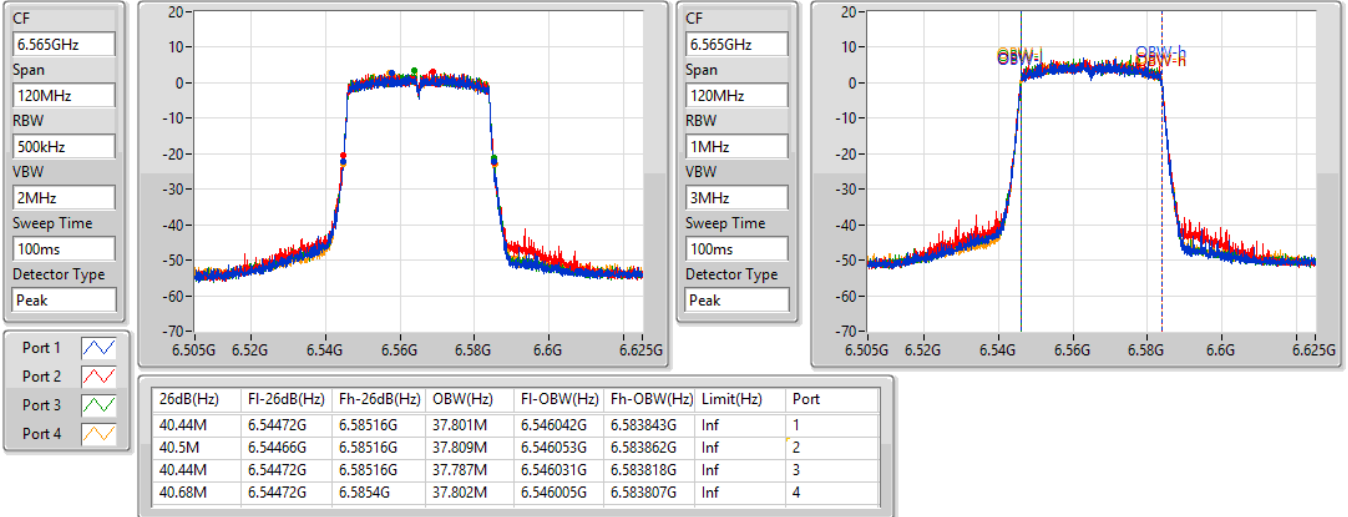


802.11ax HEW40-BF_Nss1,(MCS0)_4TX

EBW

6565MHz

06/10/2022

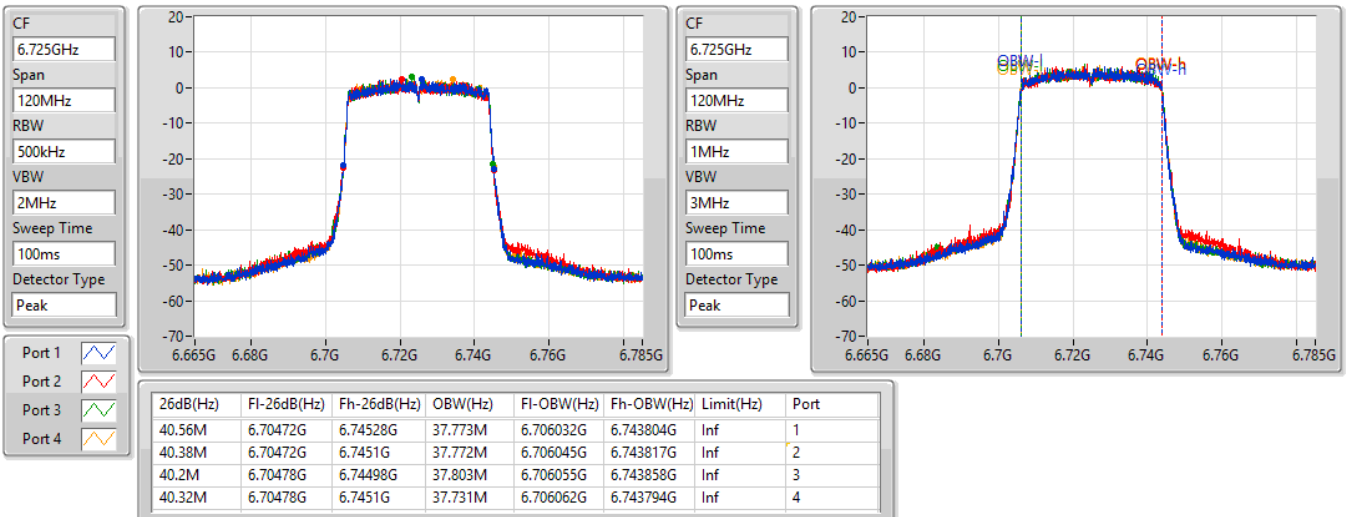


802.11ax HEW40-BF_Nss1,(MCS0)_4TX

EBW

6725MHz

06/10/2022

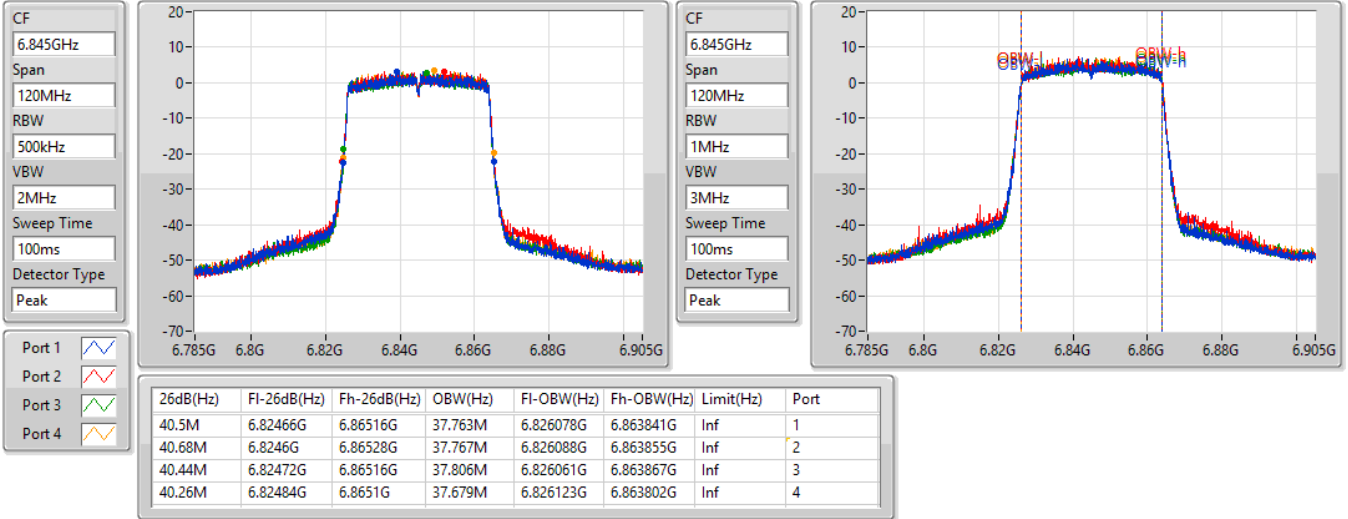


802.11ax HEW40-BF_Nss1,(MCS0)_4TX

EBW

6845MHz

06/10/2022

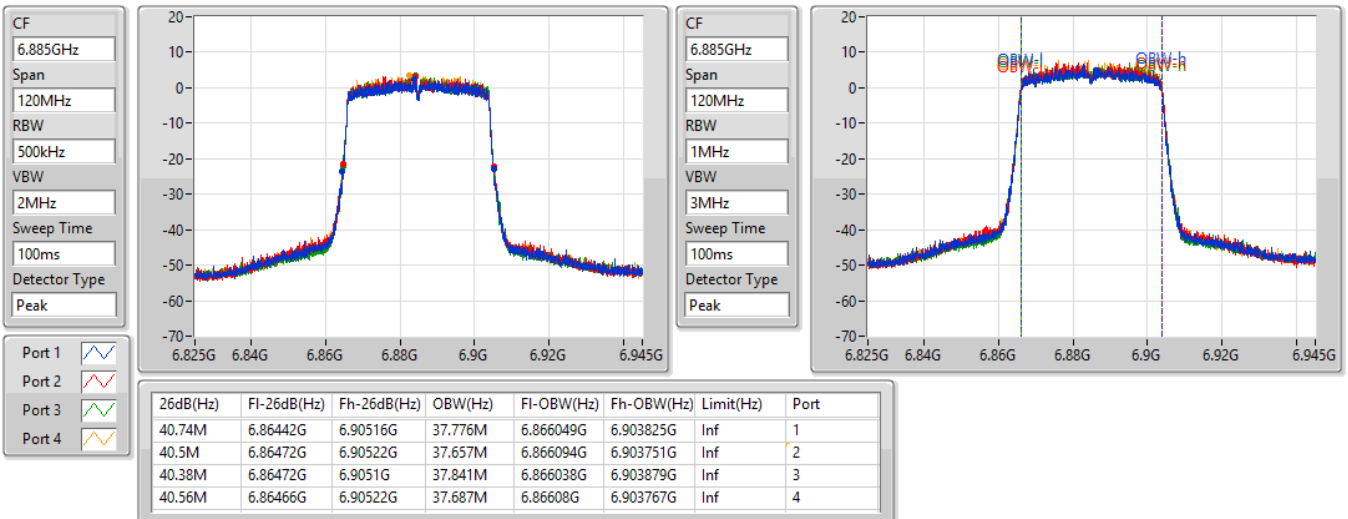


802.11ax HEW40-BF_Nss1,(MCS0)_4TX

EBW

6885MHz Straddle 6.525-6.875GHz

06/10/2022

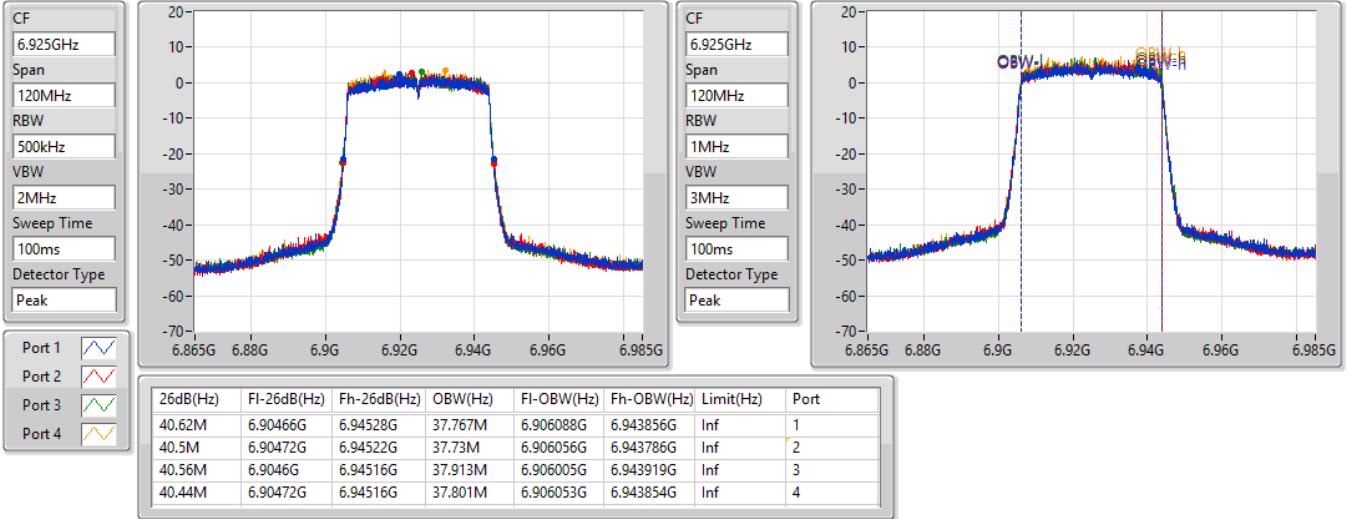


802.11ax HEW40-BF_Nss1,(MCS0)_4TX

EBW

6925MHz

06/10/2022

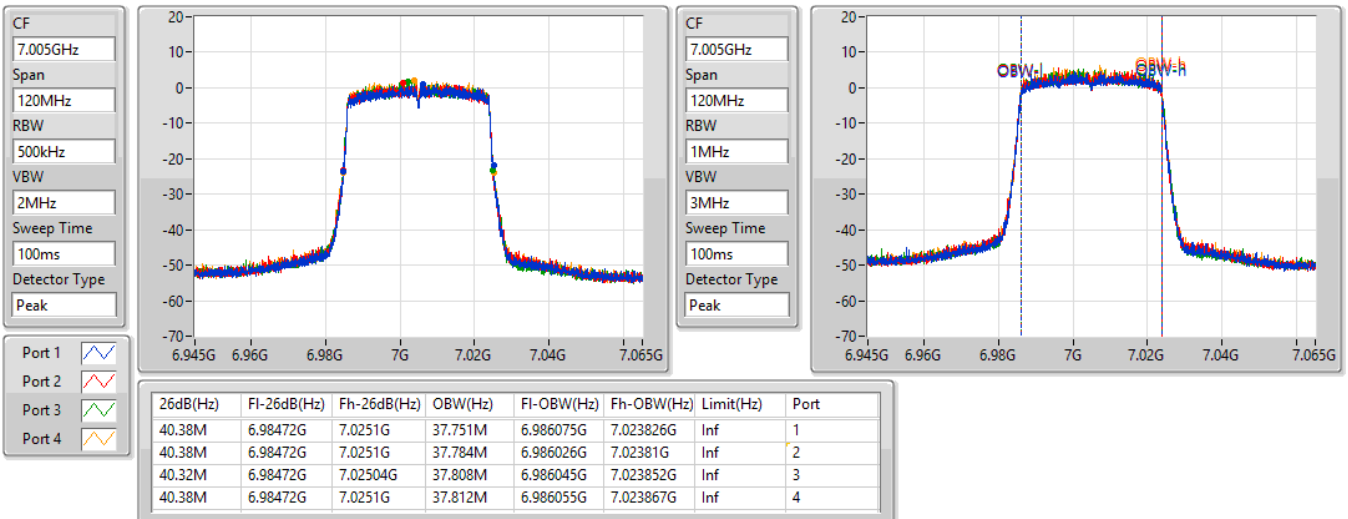


802.11ax HEW40-BF_Nss1,(MCS0)_4TX

EBW

7005MHz

06/10/2022

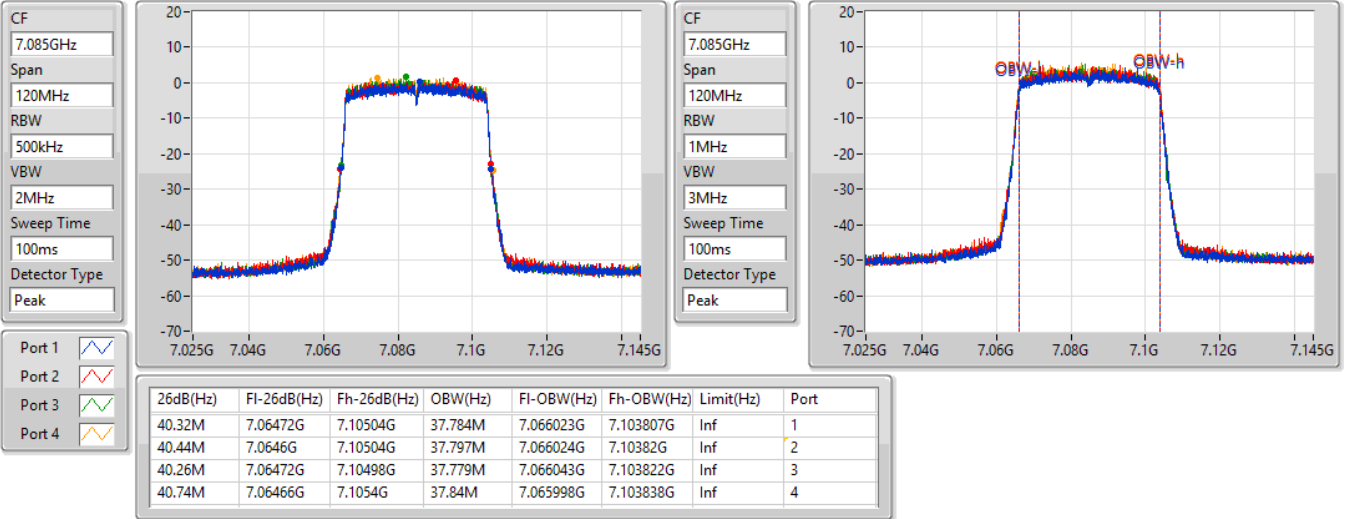


802.11ax HEW40-BF_Nss1,(MCS0)_4TX

EBW

7085MHz

06/10/2022

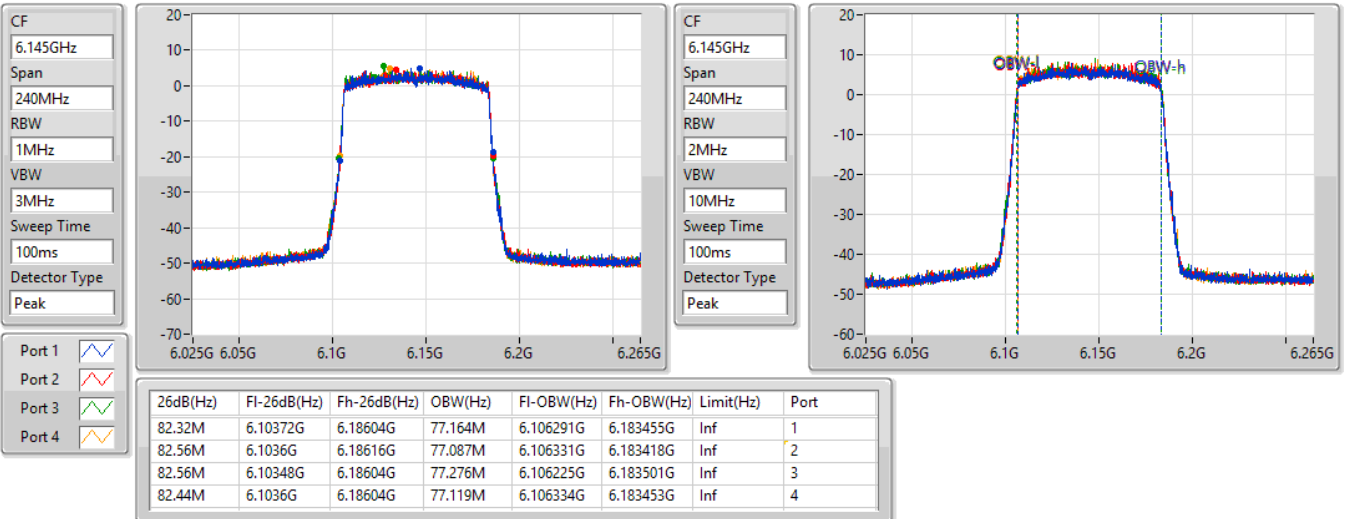


802.11ax HEW80-BF_Nss1,(MCS0)_4TX

EBW

6145MHz

06/10/2022

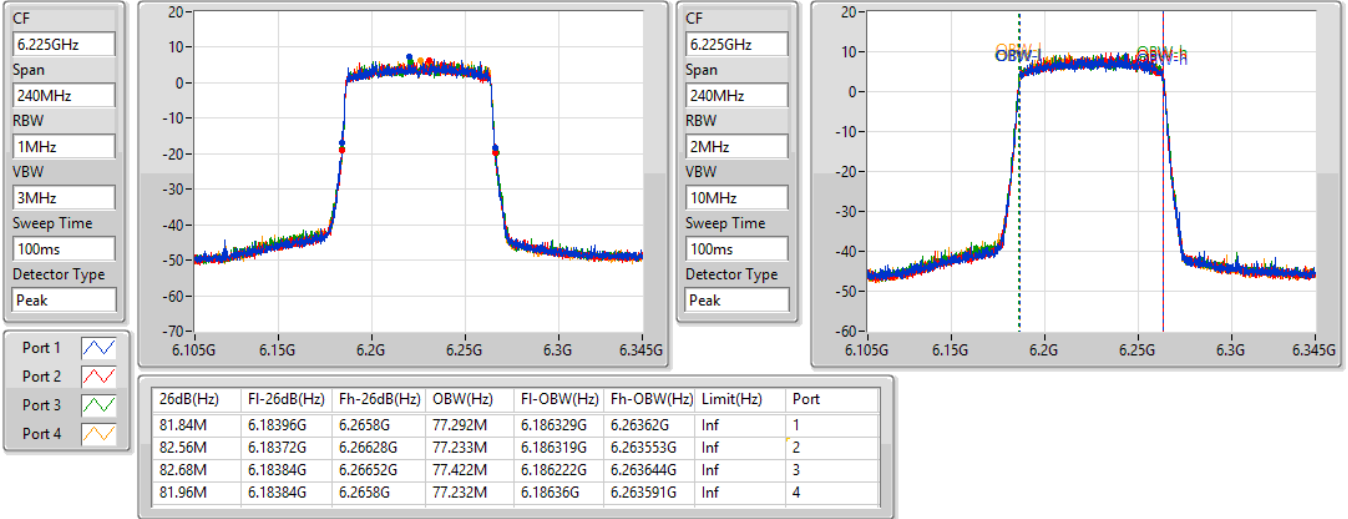


802.11ax HEW80-BF_Nss1,(MCS0)_4TX

EBW

6225MHz

06/10/2022

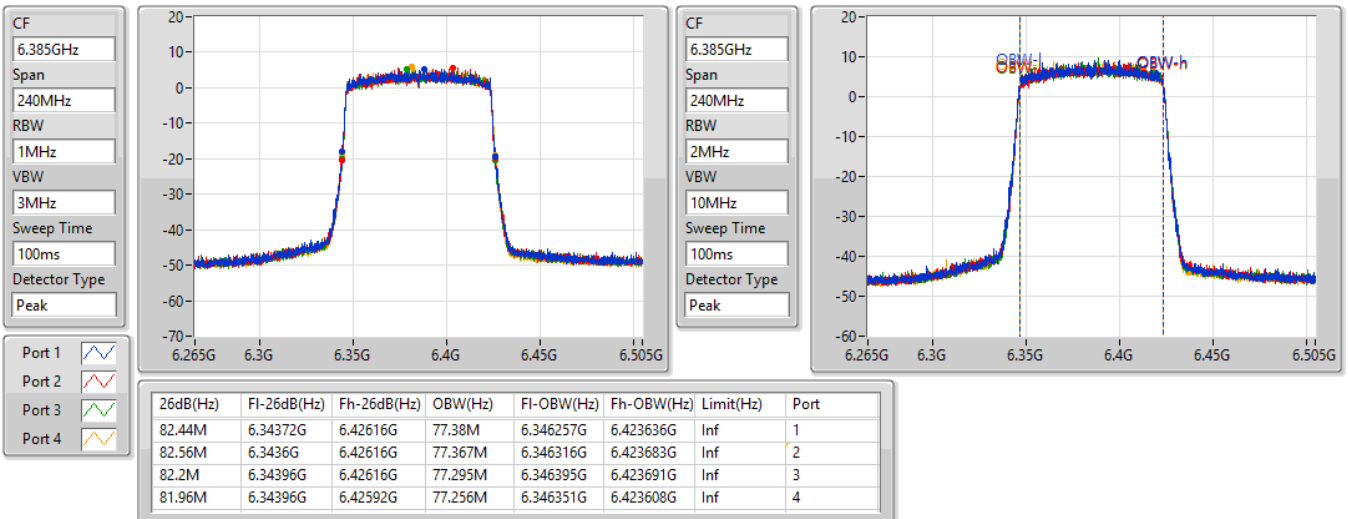


802.11ax HEW80-BF_Nss1,(MCS0)_4TX

EBW

6385MHz

06/10/2022

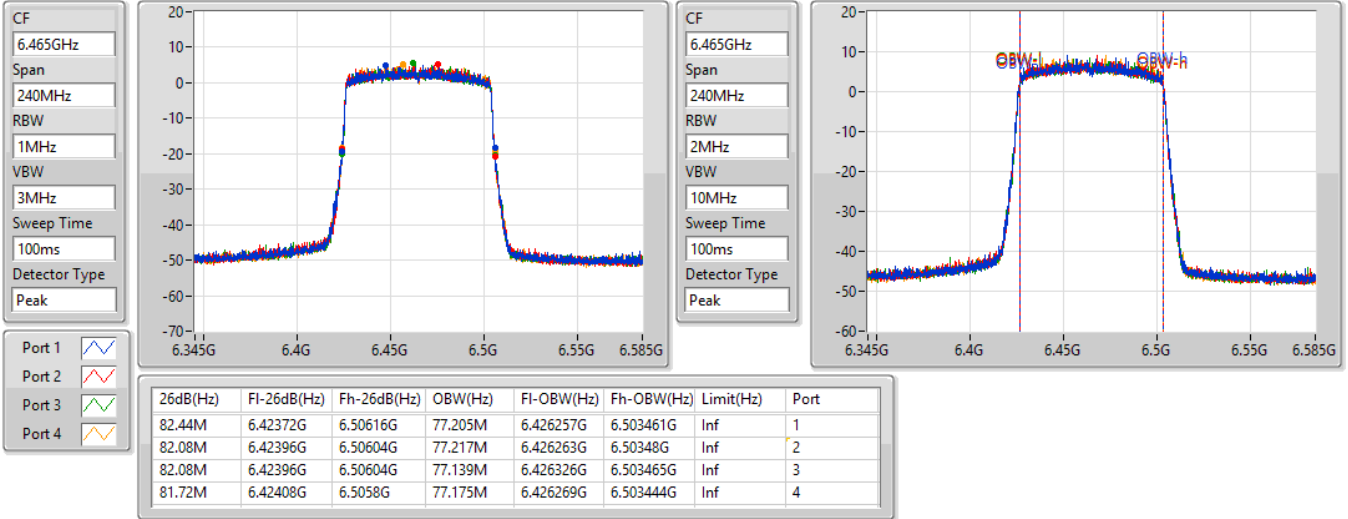


802.11ax HEW80-BF_Nss1,(MCS0)_4TX

EBW

6465MHz

06/10/2022

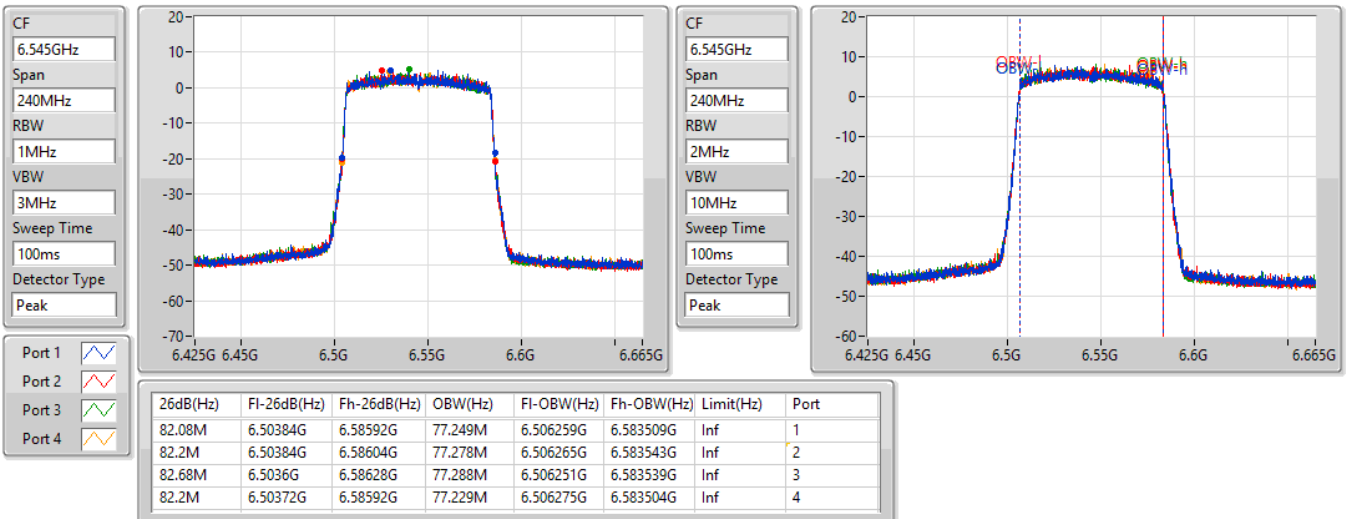


802.11ax HEW80-BF_Nss1,(MCS0)_4TX

EBW

6545MHz Straddle 6.425-6.525GHz

06/10/2022

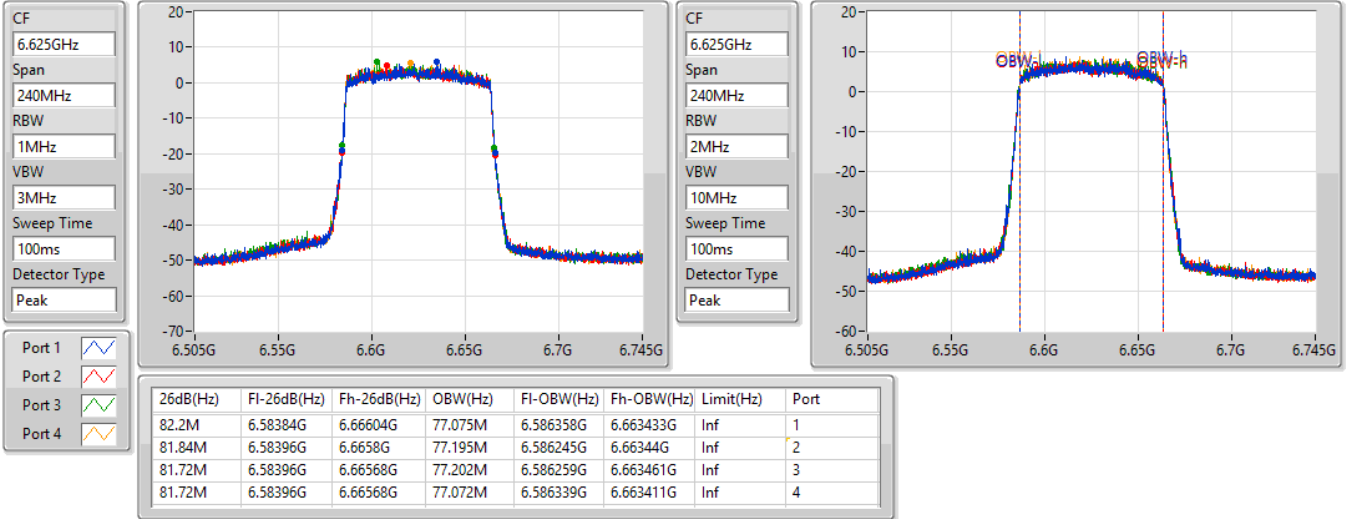


802.11ax HEW80-BF_Nss1,(MCS0)_4TX

EBW

6625MHz

06/10/2022

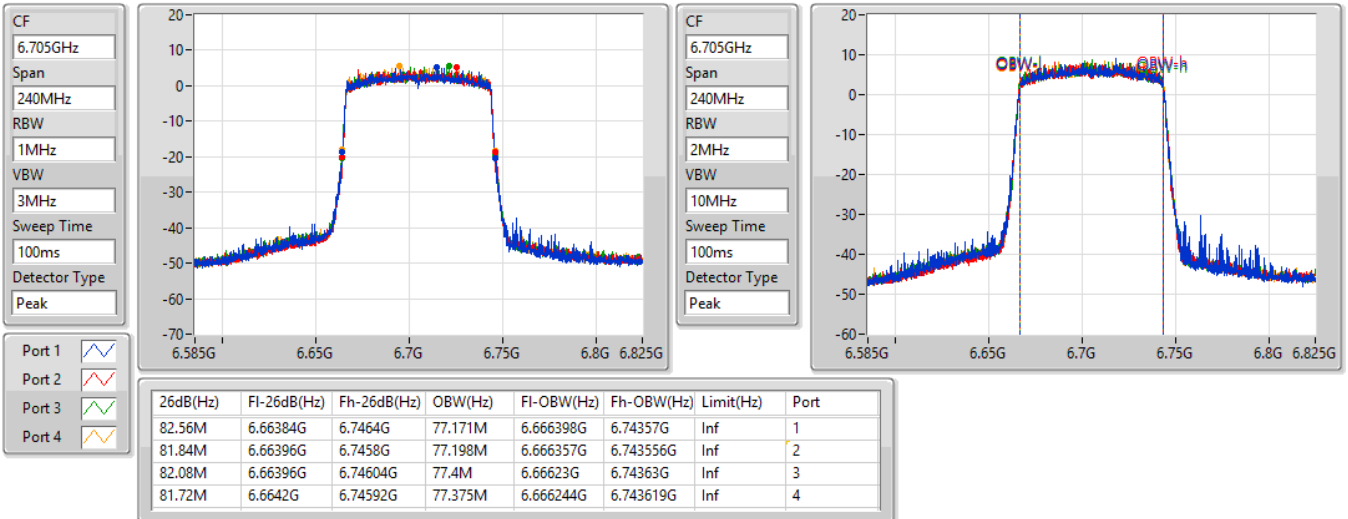


802.11ax HEW80-BF_Nss1,(MCS0)_4TX

EBW

6705MHz

06/10/2022

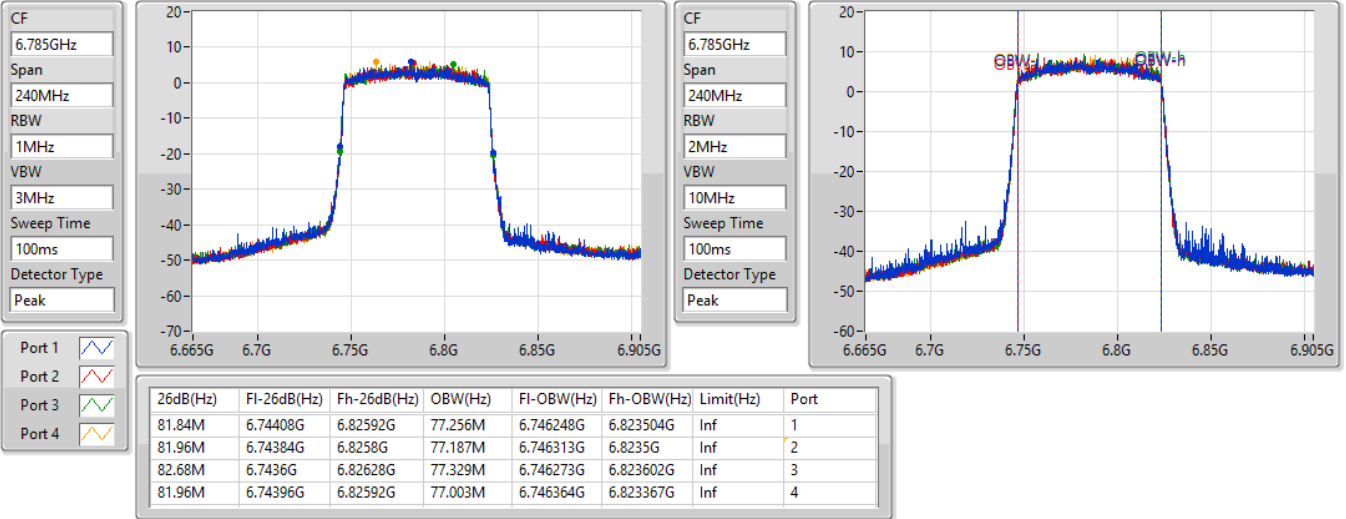


802.11ax HEW80-BF_Nss1,(MCS0)_4TX

EBW

6785MHz

06/10/2022

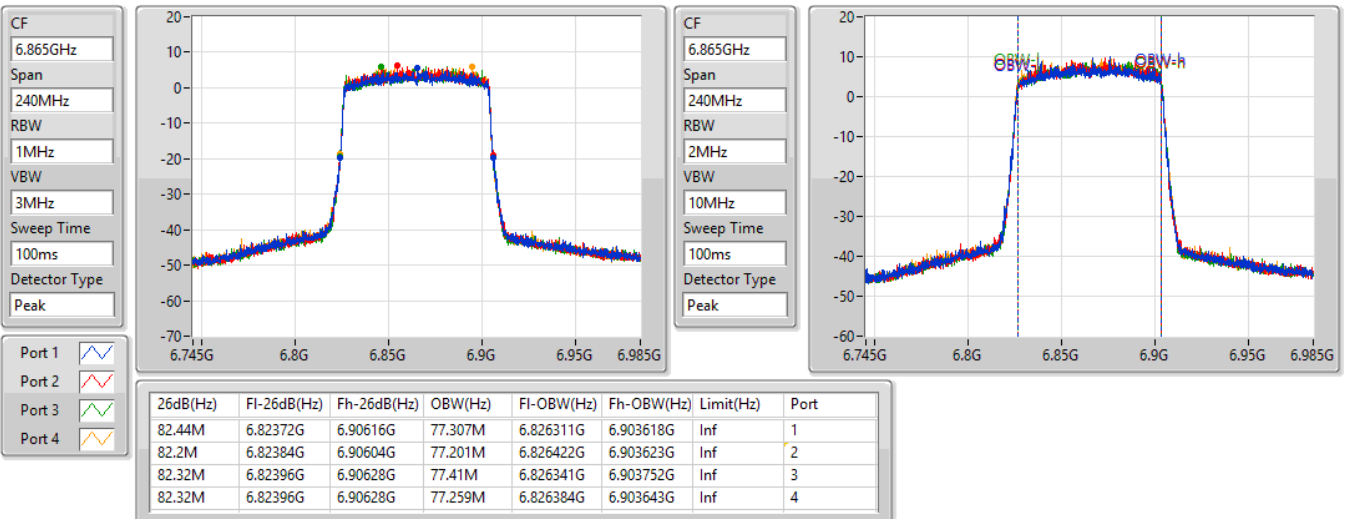


802.11ax HEW80-BF_Nss1,(MCS0)_4TX

EBW

6865MHz Straddle 6.525-6.875GHz

06/10/2022

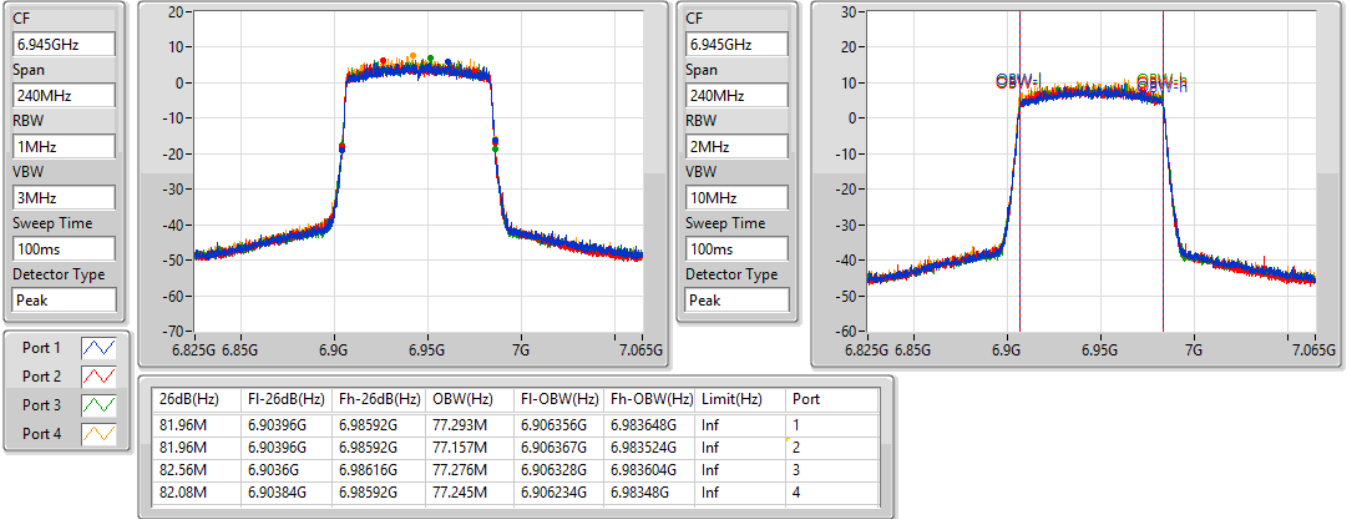


802.11ax HEW80-BF_Nss1,(MCS0)_4TX

EBW

6945MHz

06/10/2022

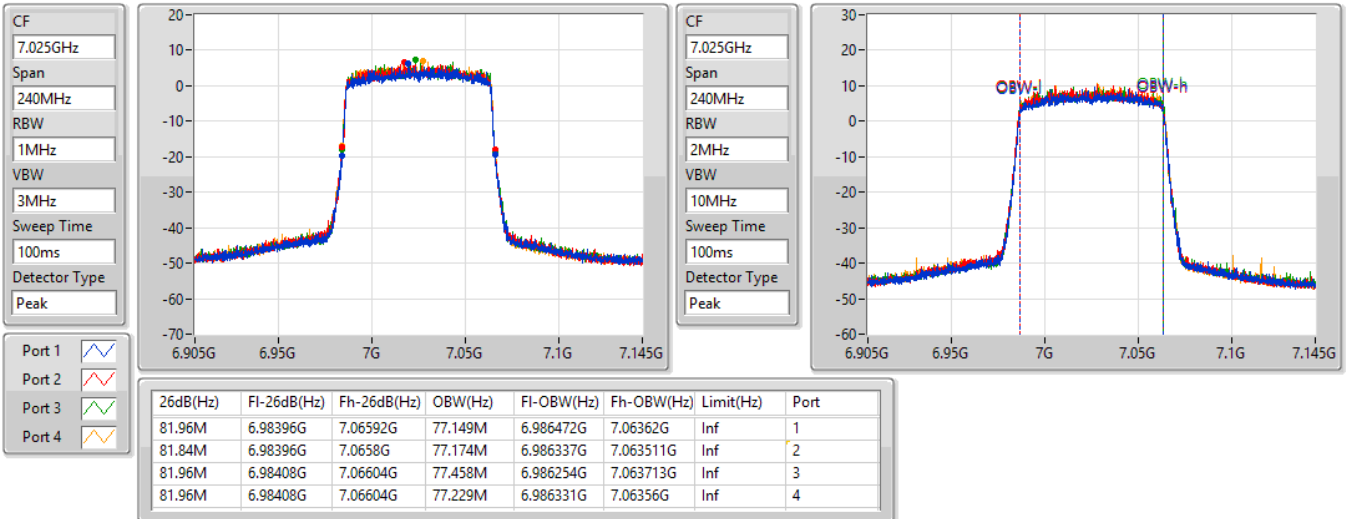


802.11ax HEW80-BF_Nss1,(MCS0)_4TX

EBW

7025MHz

06/10/2022

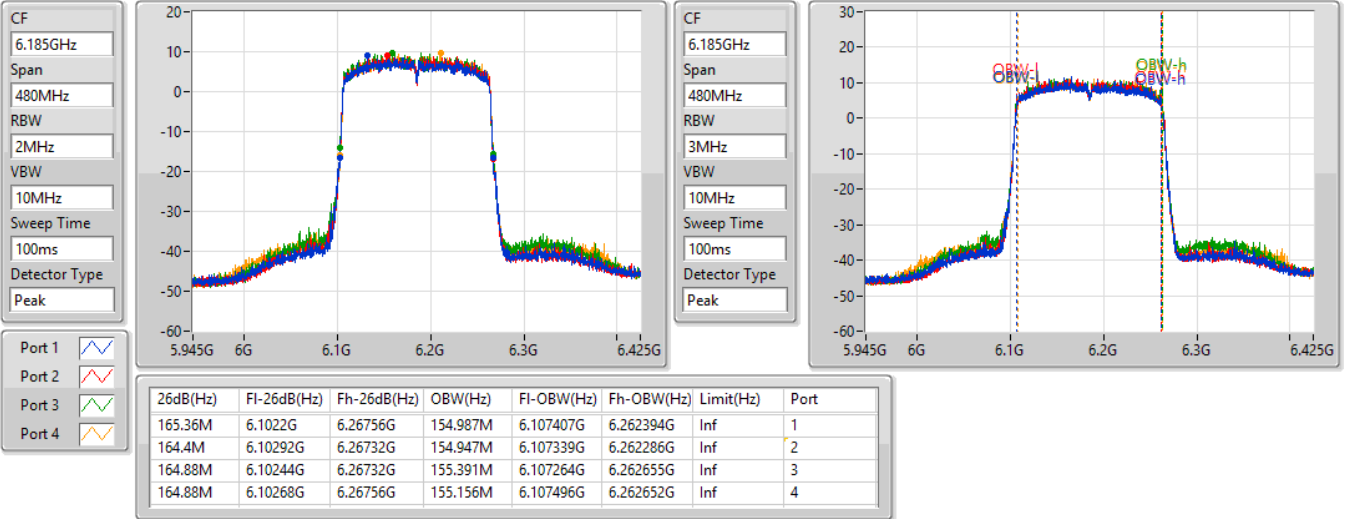


802.11ax HEW160-BF_Nss1,(MCS0)_4TX

EBW

6185MHz

06/10/2022

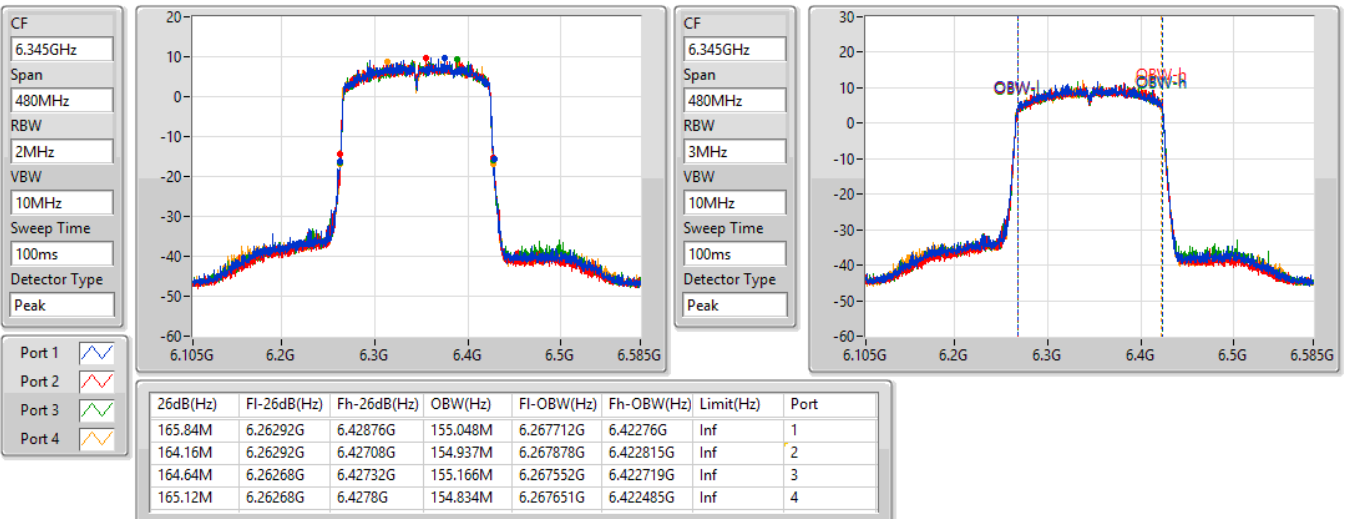


802.11ax HEW160-BF_Nss1,(MCS0)_4TX

EBW

6345MHz

06/10/2022

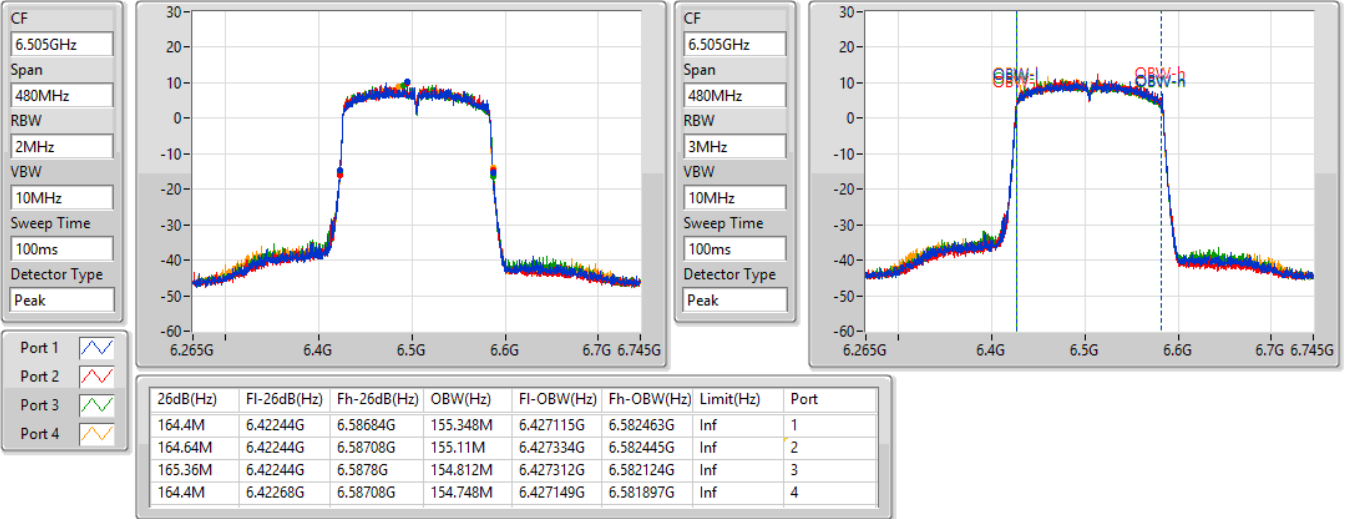


802.11ax HEW160-BF_Nss1,(MCS0)_4TX

EBW

6505MHz Straddle 6.425-6.525GHz

06/10/2022

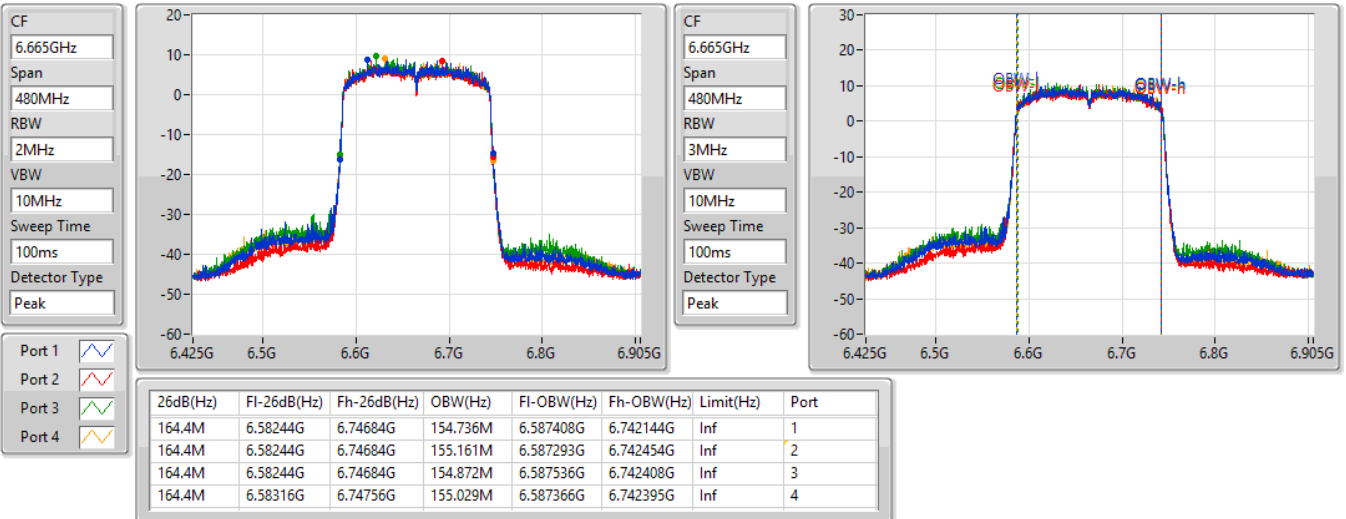


802.11ax HEW160-BF_Nss1,(MCS0)_4TX

EBW

6665MHz

06/10/2022

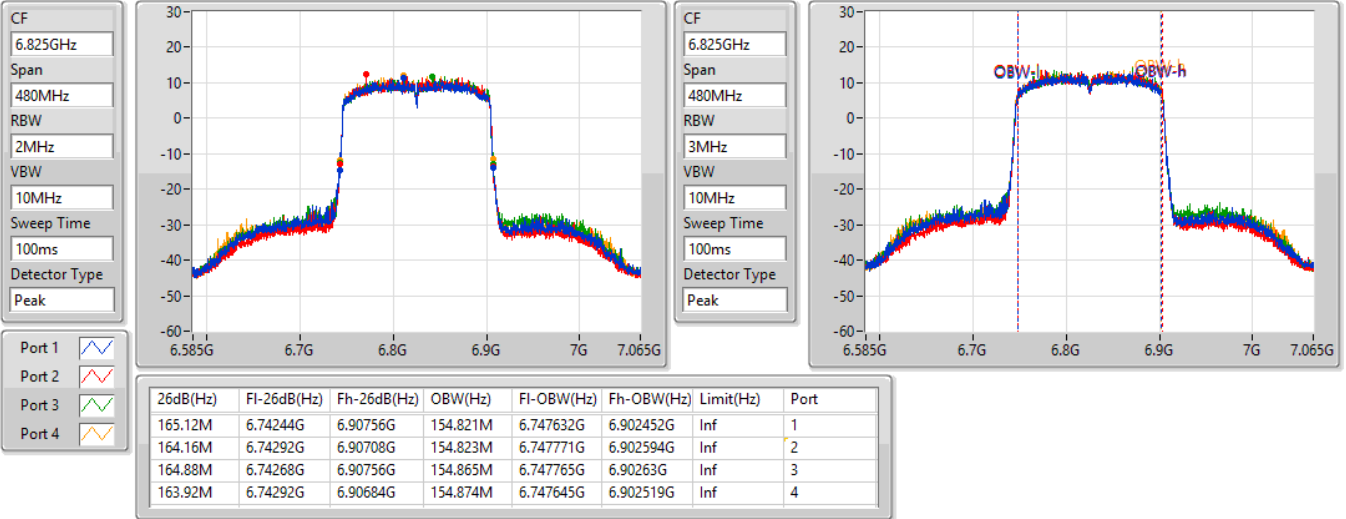


802.11ax HEW160-BF_Nss1,(MCS0)_4TX

EBW

6825MHz Straddle 6.525-6.875GHz

06/10/2022

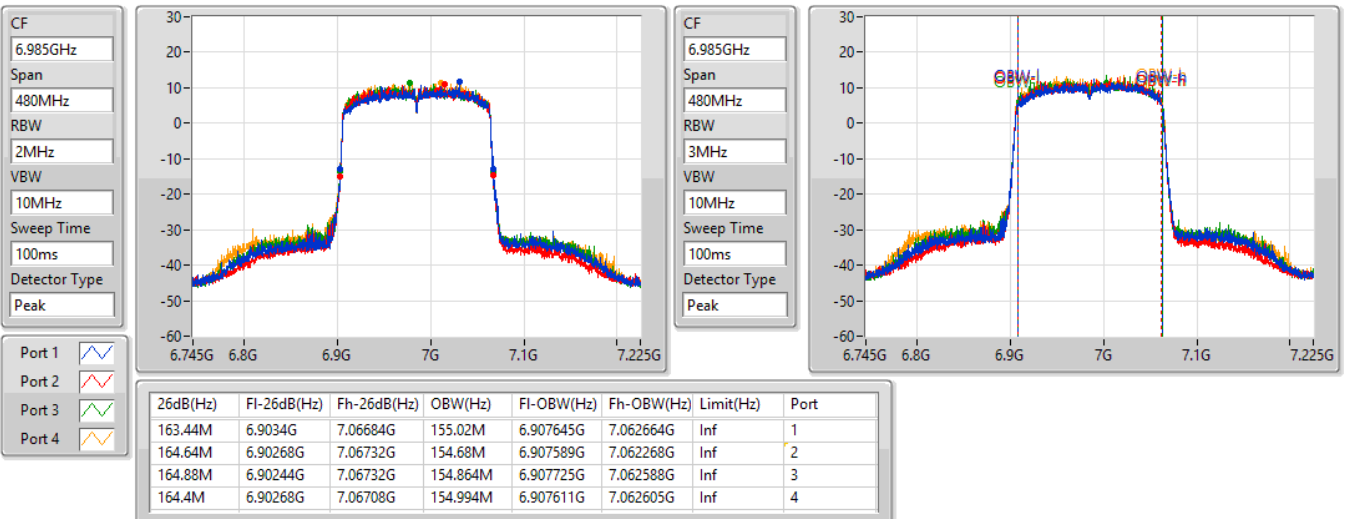


802.11ax HEW160-BF_Nss1,(MCS0)_4TX

EBW

6985MHz

06/10/2022



Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.925-6.425GHz	-	-	-	-	-
802.11ax HEW80_Nss4,(MCS0)_4TX	82.56M	77.225M	77M2D1D	81.96M	76.99M
802.11ax HEW160_Nss4,(MCS0)_4TX	167.52M	155.39M	155MD1D	164.88M	154.919M
6.425-6.525GHz	-	-	-	-	-
802.11ax HEW80_Nss4,(MCS0)_4TX	82.56M	77.121M	77M1D1D	81.48M	76.872M
802.11ax HEW160_Nss4,(MCS0)_4TX	166.32M	154.963M	155MD1D	165.36M	154.483M
6.525-6.875GHz	-	-	-	-	-
802.11ax HEW80_Nss4,(MCS0)_4TX	83.16M	77.342M	77M3D1D	81.84M	76.99M
802.11ax HEW160_Nss4,(MCS0)_4TX	167.52M	155.202M	155MD1D	165.12M	154.723M
6.875-7.125GHz	-	-	-	-	-
802.11ax HEW80_Nss4,(MCS0)_4TX	82.8M	77.225M	77M2D1D	82.08M	76.99M
802.11ax HEW160_Nss4,(MCS0)_4TX	166.8M	154.684M	155MD1D	165.6M	154.449M

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

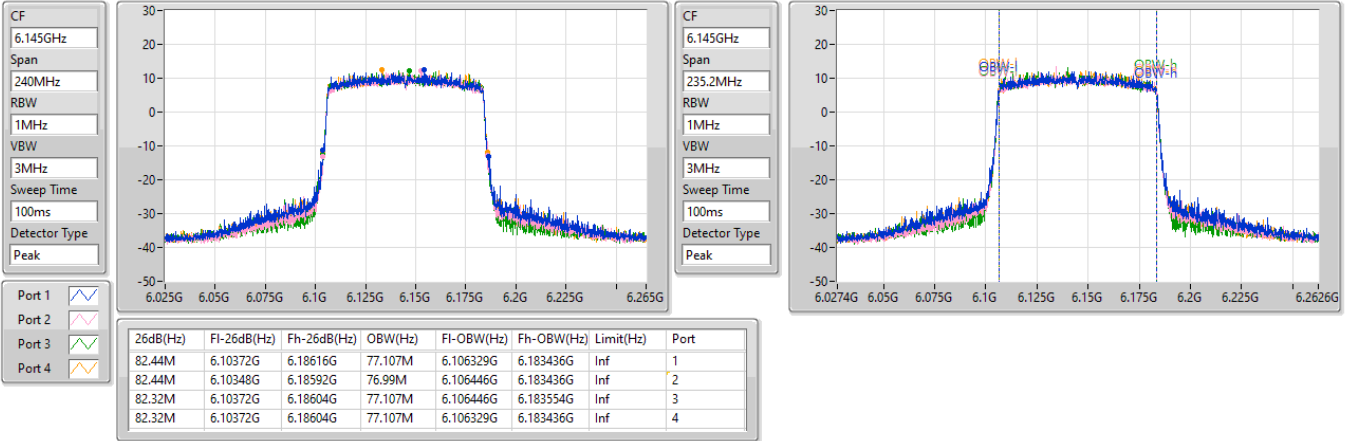
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ax HEW80_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
6145MHz	Pass	Inf	82.44M	77.107M	82.44M	76.99M	82.32M	77.107M	82.32M	77.107M
6225MHz	Pass	Inf	82.32M	77.225M	82.32M	77.107M	82.44M	77.225M	82.32M	77.107M
6385MHz	Pass	Inf	82.08M	77.107M	82.56M	77.225M	82.32M	77.107M	81.96M	76.99M
6465MHz	Pass	Inf	82.08M	77.107M	81.96M	77.107M	82.44M	76.872M	82.08M	76.99M
6545MHz Straddle 6.425-6.525GHz	Pass	Inf	82.56M	77.001M	81.84M	76.882M	81.48M	77.001M	82.2M	77.121M
6545MHz Straddle 6.525-6.875GHz										
6625MHz	Pass	Inf	82.56M	77.107M	81.96M	76.99M	82.44M	77.107M	82.32M	77.107M
6705MHz	Pass	Inf	82.2M	76.99M	82.44M	76.99M	82.56M	77.342M	81.84M	77.225M
6785MHz	Pass	Inf	82.44M	77.107M	81.84M	77.107M	83.16M	77.225M	81.96M	76.99M
6865MHz Straddle 6.525-6.875GHz	Pass	Inf	82.8M	77.121M	82.2M	77.001M	82.44M	77.241M	82.32M	77.001M
6865MHz Straddle 6.875-7.125GHz										
6945MHz	Pass	Inf	82.8M	77.107M	82.56M	77.107M	82.68M	77.225M	82.44M	76.99M
7025MHz	Pass	Inf	82.32M	76.99M	82.08M	77.107M	82.32M	77.107M	82.08M	76.99M
802.11ax HEW160_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
6185MHz	Pass	Inf	167.52M	155.154M	166.08M	155.154M	166.08M	155.39M	165.84M	154.919M
6345MHz	Pass	Inf	165.84M	155.154M	167.04M	154.919M	165.84M	154.919M	164.88M	154.919M
6505MHz Straddle 6.425-6.525GHz	Pass	Inf	166.32M	154.723M	165.84M	154.483M	165.36M	154.963M	165.6M	154.723M
6505MHz Straddle 6.525-6.875GHz										
6665MHz	Pass	Inf	166.56M	155.154M	166.08M	154.919M	167.04M	154.919M	165.12M	154.919M
6825MHz Straddle 6.525-6.875GHz	Pass	Inf	166.08M	155.202M	167.52M	154.723M	166.8M	155.202M	166.8M	154.963M
6825MHz Straddle 6.875-7.125GHz										
6985MHz	Pass	Inf	166.56M	154.684M	165.6M	154.449M	166.8M	154.684M	166.56M	154.449M

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

5.925-6.425GHz_802.11ax HEW80_Nss4,(MCS0)_4TX
6145MHz

EBW

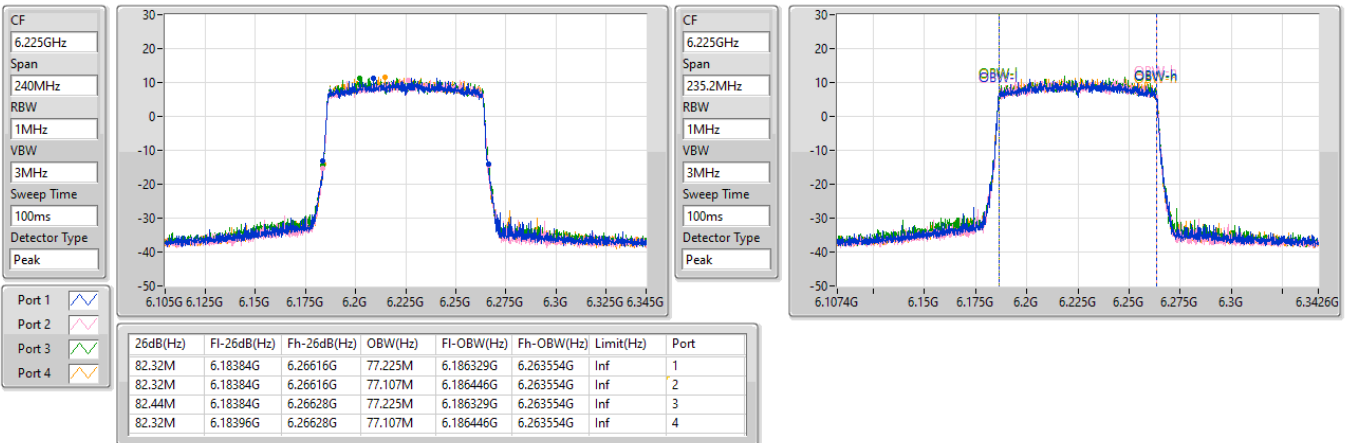
07/11/2022



5.925-6.425GHz_802.11ax HEW80_Nss4,(MCS0)_4TX
6225MHz

EBW

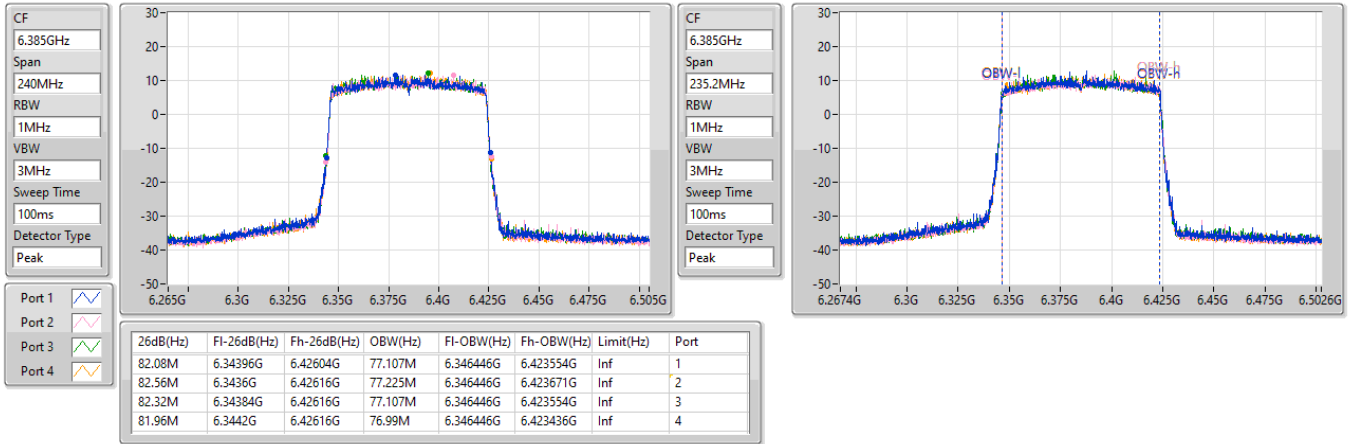
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5.925-6.425GHz_802.11ax HEW80_Nss4,(MCS0)_4TX
6385MHz

EBW

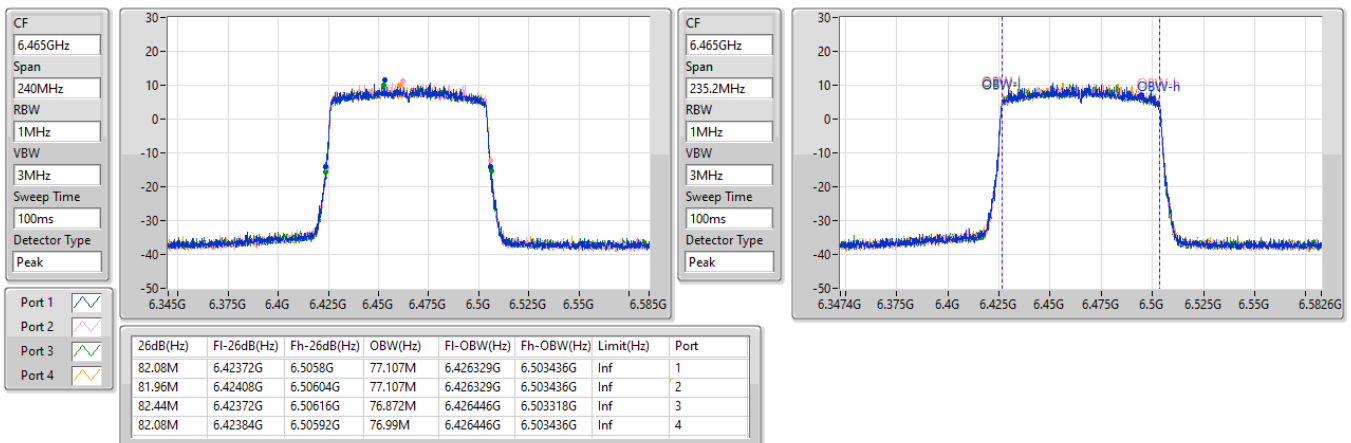
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6.425-6.525GHz_802.11ax HEW80_Nss4,(MCS0)_4TX
6465MHz

EBW

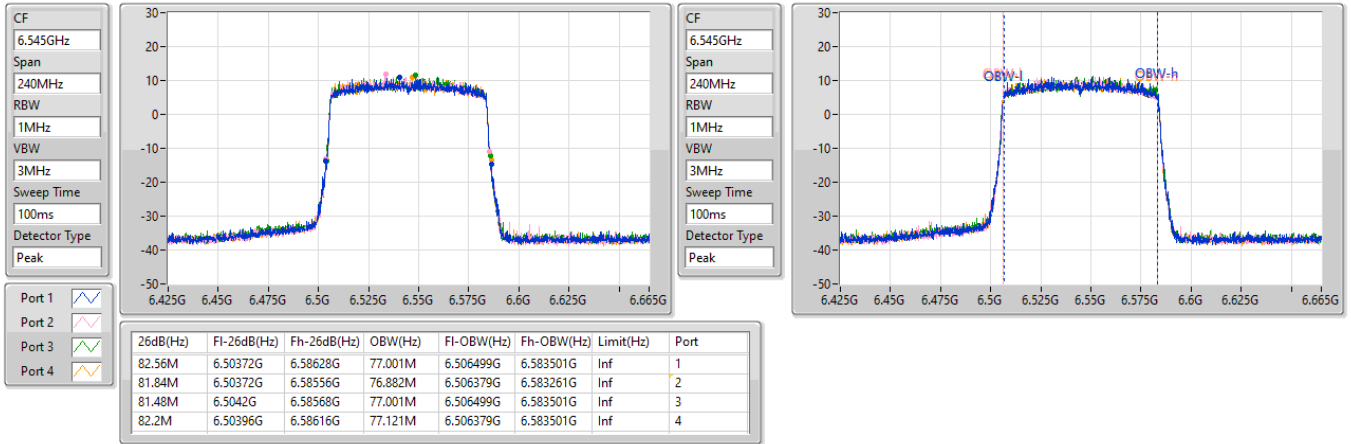
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6.425-6.525GHz_802.11ax HEW80_Nss4,(MCS0)_4TX
6545MHz Straddle 6.425-6.525GHz

EBW

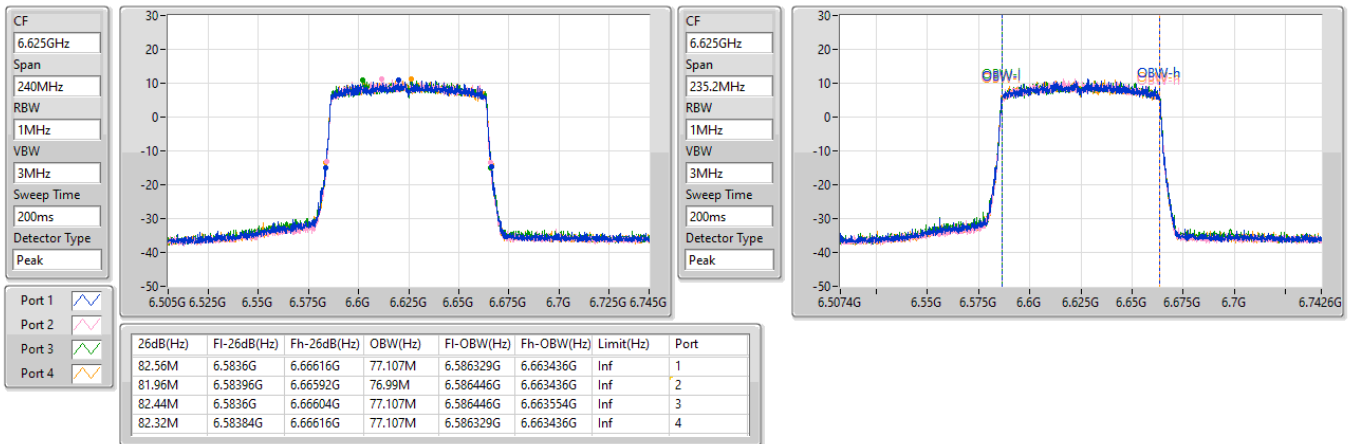
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6.525-6.875GHz_802.11ax HEW80_Nss4,(MCS0)_4TX
6625MHz

EBW

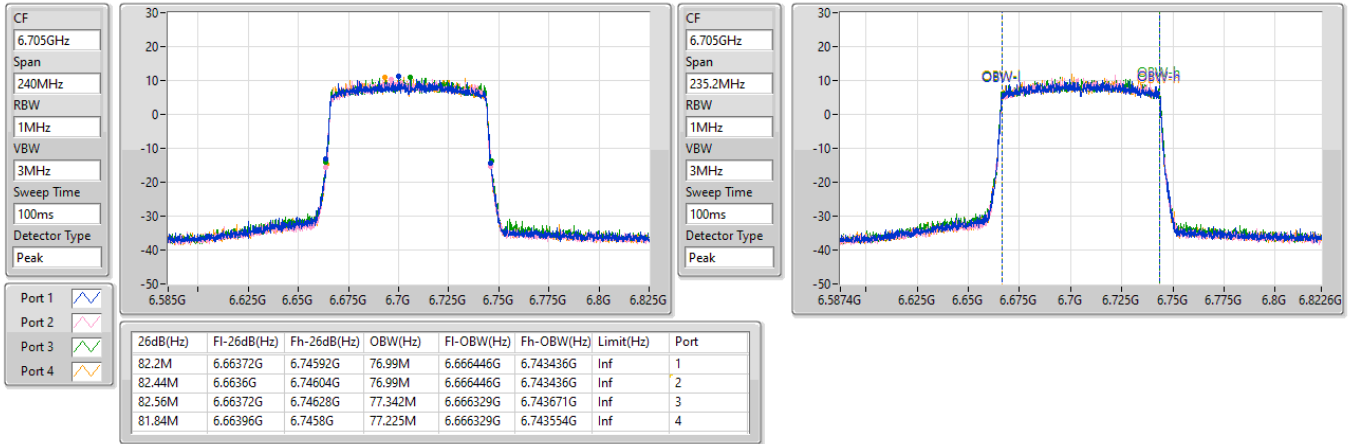
07/11/2022



6.525-6.875GHz_802.11ax HEW80_Nss4,(MCS0)_4TX
6705MHz

EBW

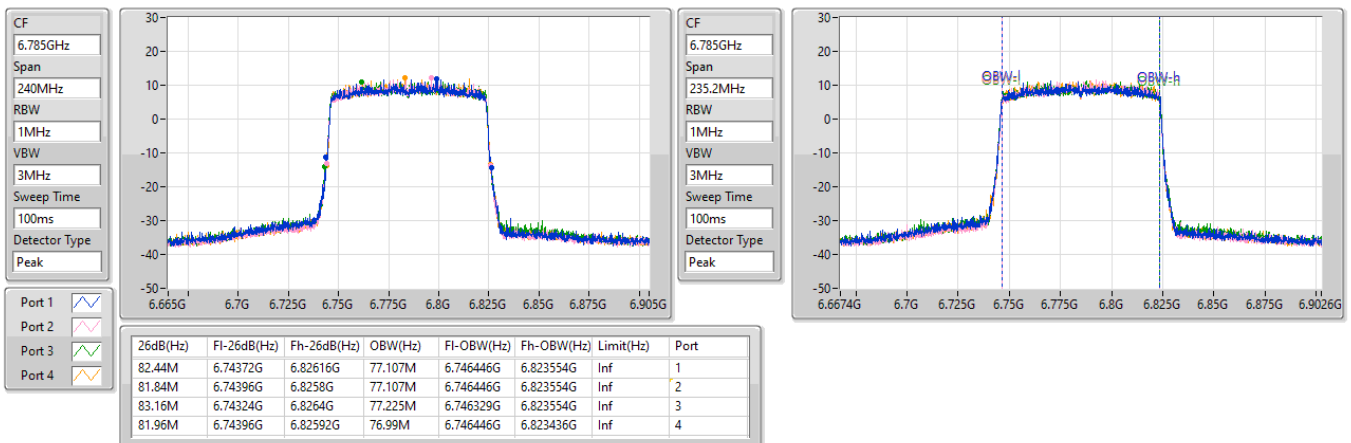
07/11/2022



6.525-6.875GHz_802.11ax HEW80_Nss4,(MCS0)_4TX
6785MHz

EBW

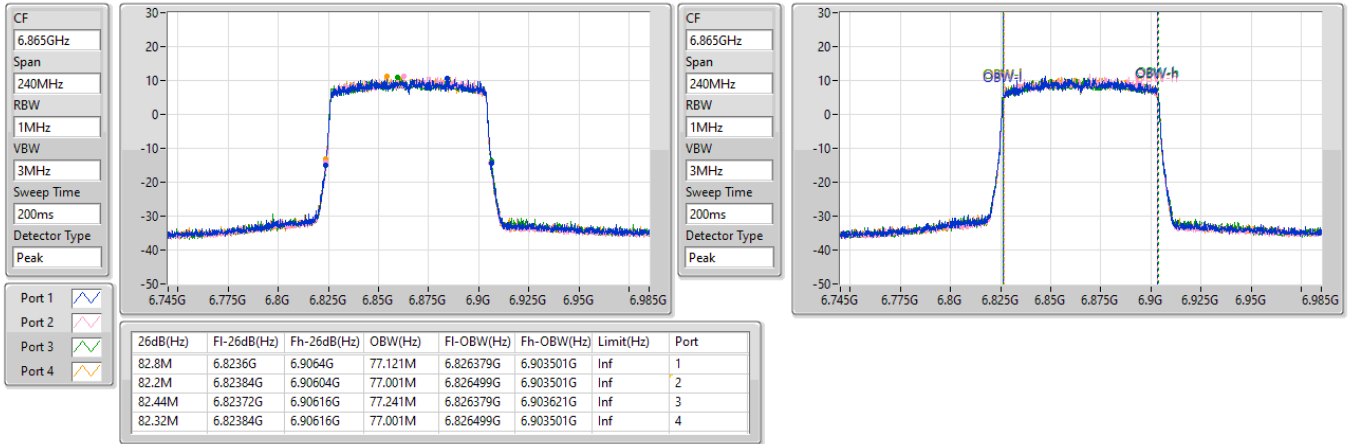
07/11/2022



6.525-6.875GHz_802.11ax HEW80_Nss4,(MCS0)_4TX
6865MHz Straddle 6.525-6.875GHz

EBW

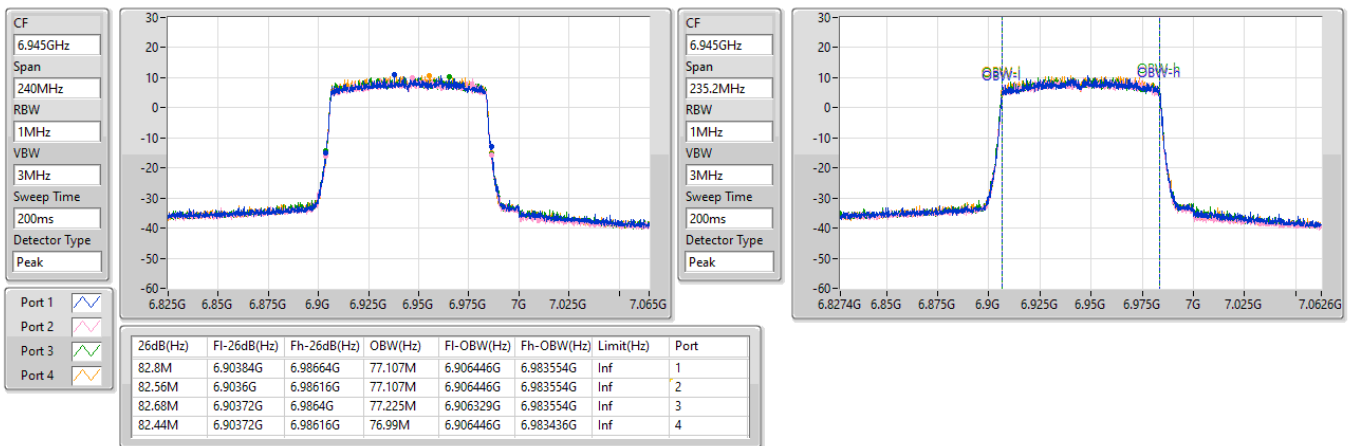
07/11/2022



6.875-7.125GHz_802.11ax HEW80_Nss4,(MCS0)_4TX
6945MHz

EBW

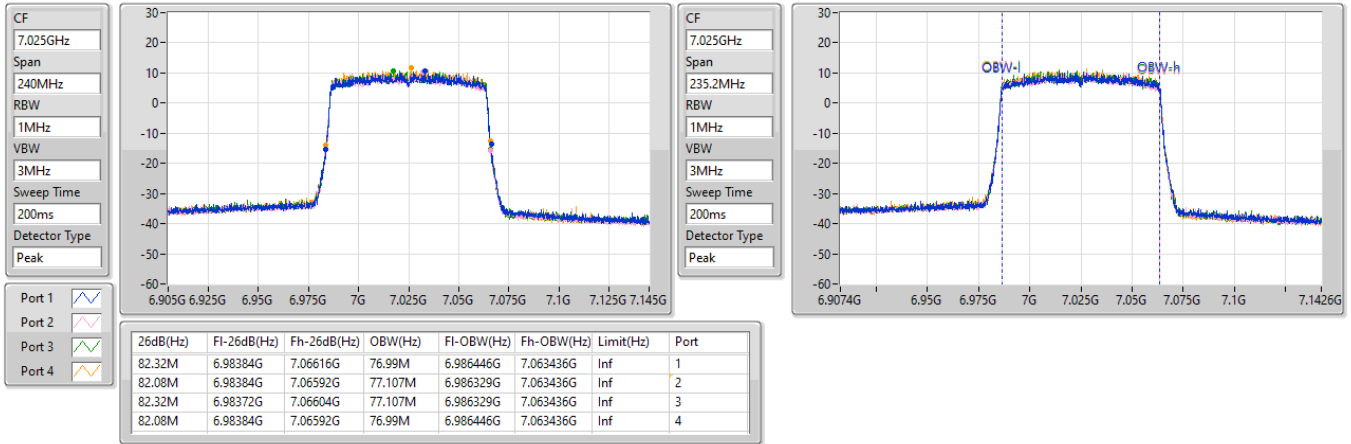
07/11/2022



6.875-7.125GHz_802.11ax HEW80_Nss4,(MCS0)_4TX
7025MHz

EBW

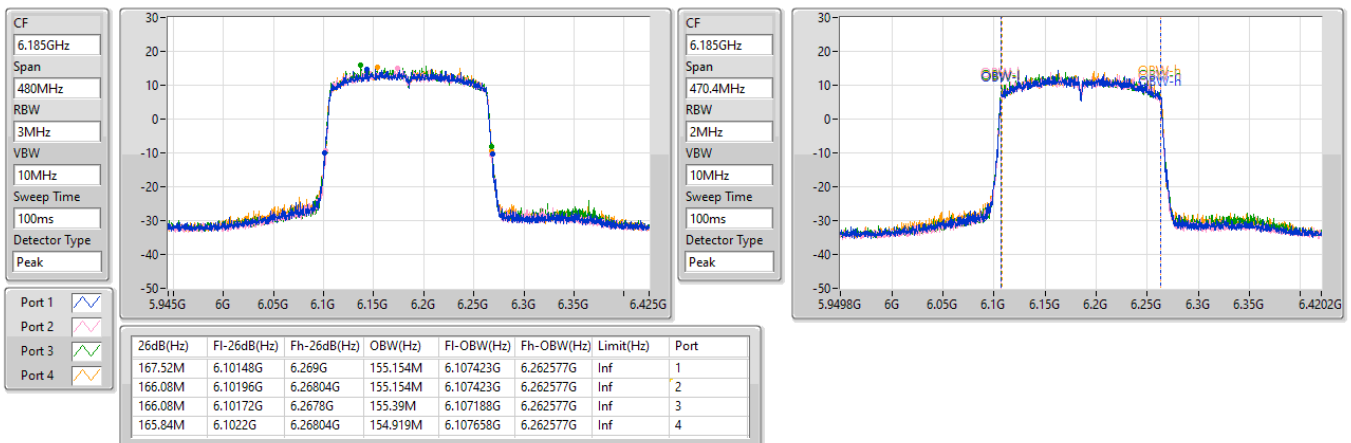
07/11/2022



5.925-6.425GHz_802.11ax HEW160_Nss4,(MCS0)_4TX
6185MHz

EBW

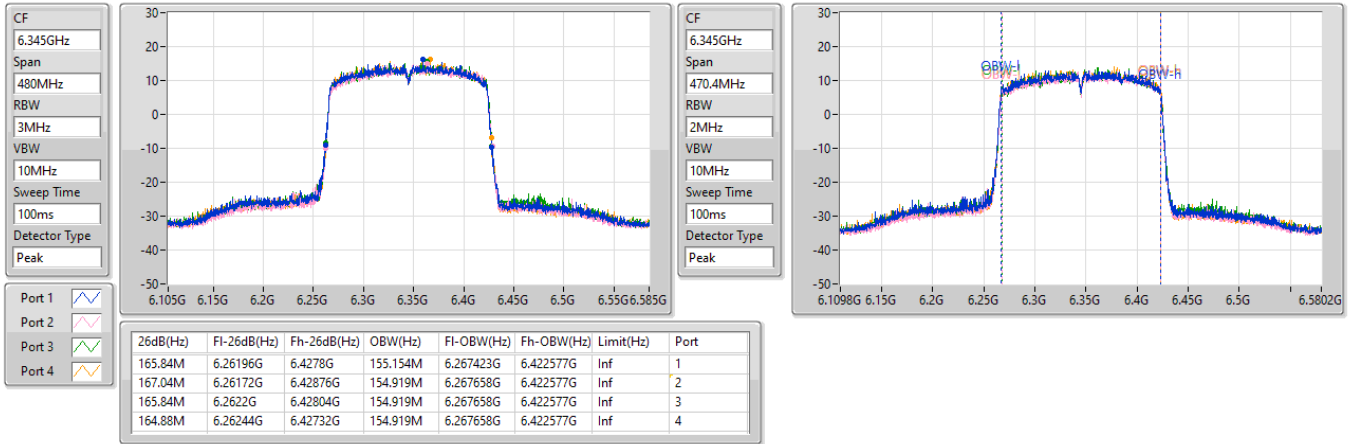
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5.925-6.425GHz_802.11ax HEW160_Nss4,(MCS0)_4TX
6345MHz

EBW

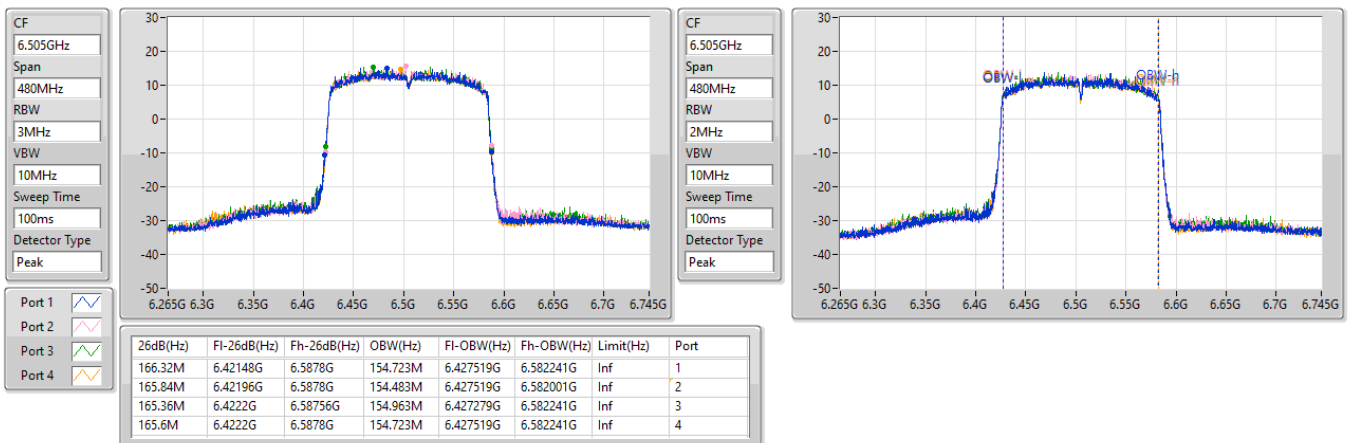
07/11/2022



6.425-6.525GHz_802.11ax HEW160_Nss4,(MCS0)_4TX
6505MHz Straddle 6.425-6.525GHz

EBW

07/11/2022

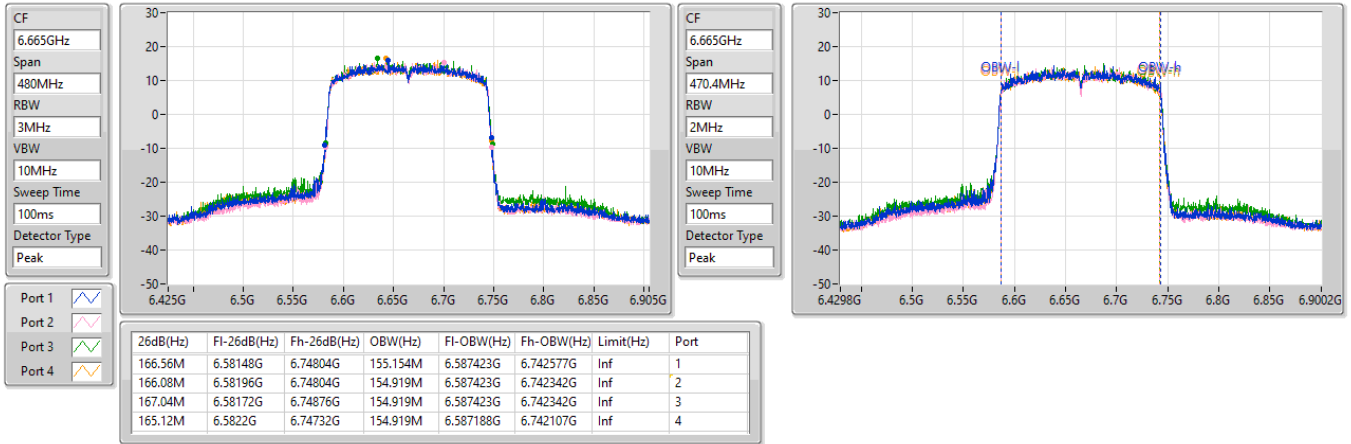


6.525-6.875GHz_802.11ax HEW160_Nss4,(MCS0)_4TX

EBW

6665MHz

07/11/2022

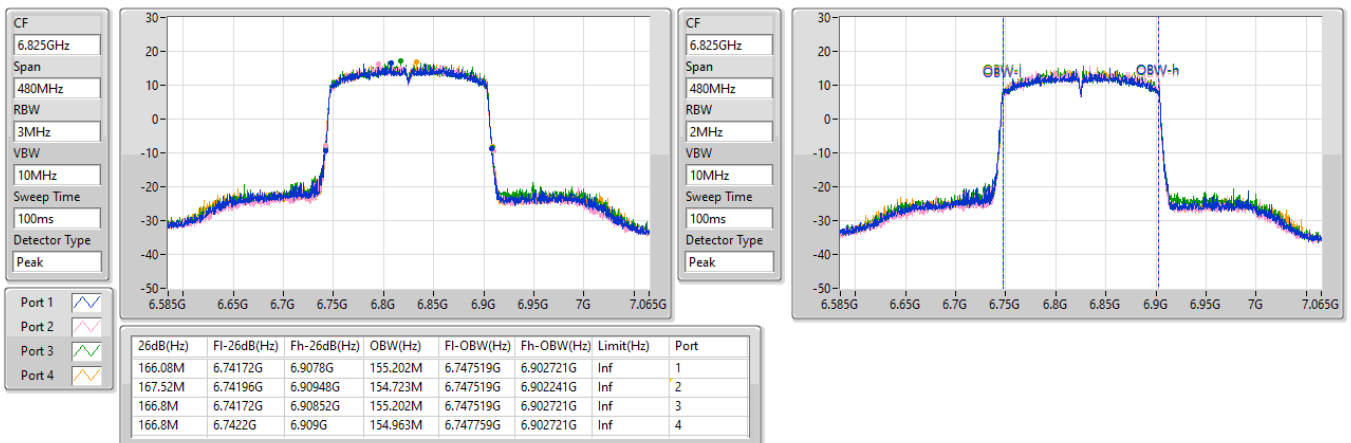


6.525-6.875GHz_802.11ax HEW160_Nss4,(MCS0)_4TX

EBW

6825MHz Straddle 6.525-6.875GHz

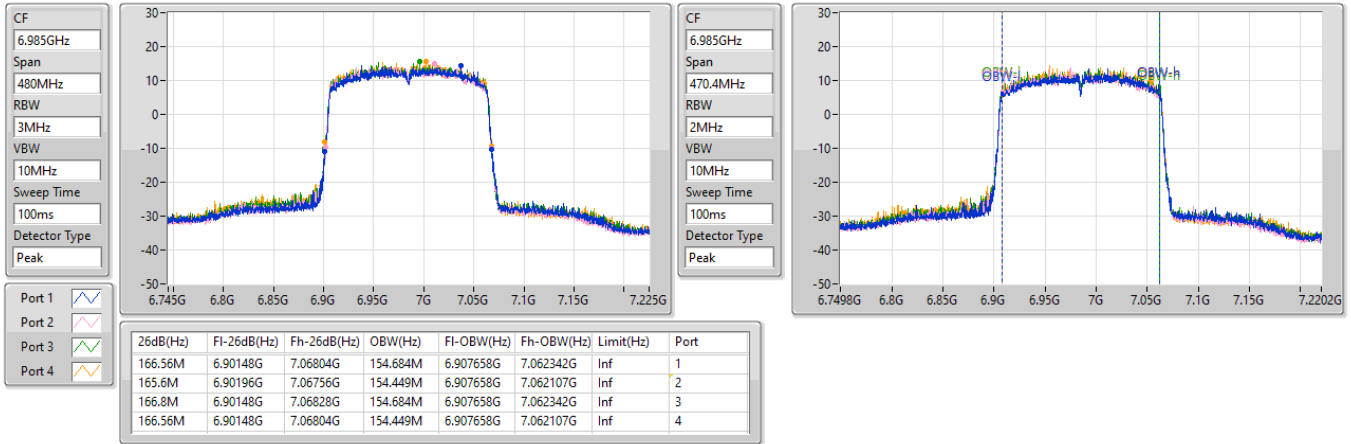
07/11/2022



6.875-7.125GHz_802.11ax HEW160_Nss4,(MCS0)_4TX
6985MHz

EBW

07/11/2022





Summary

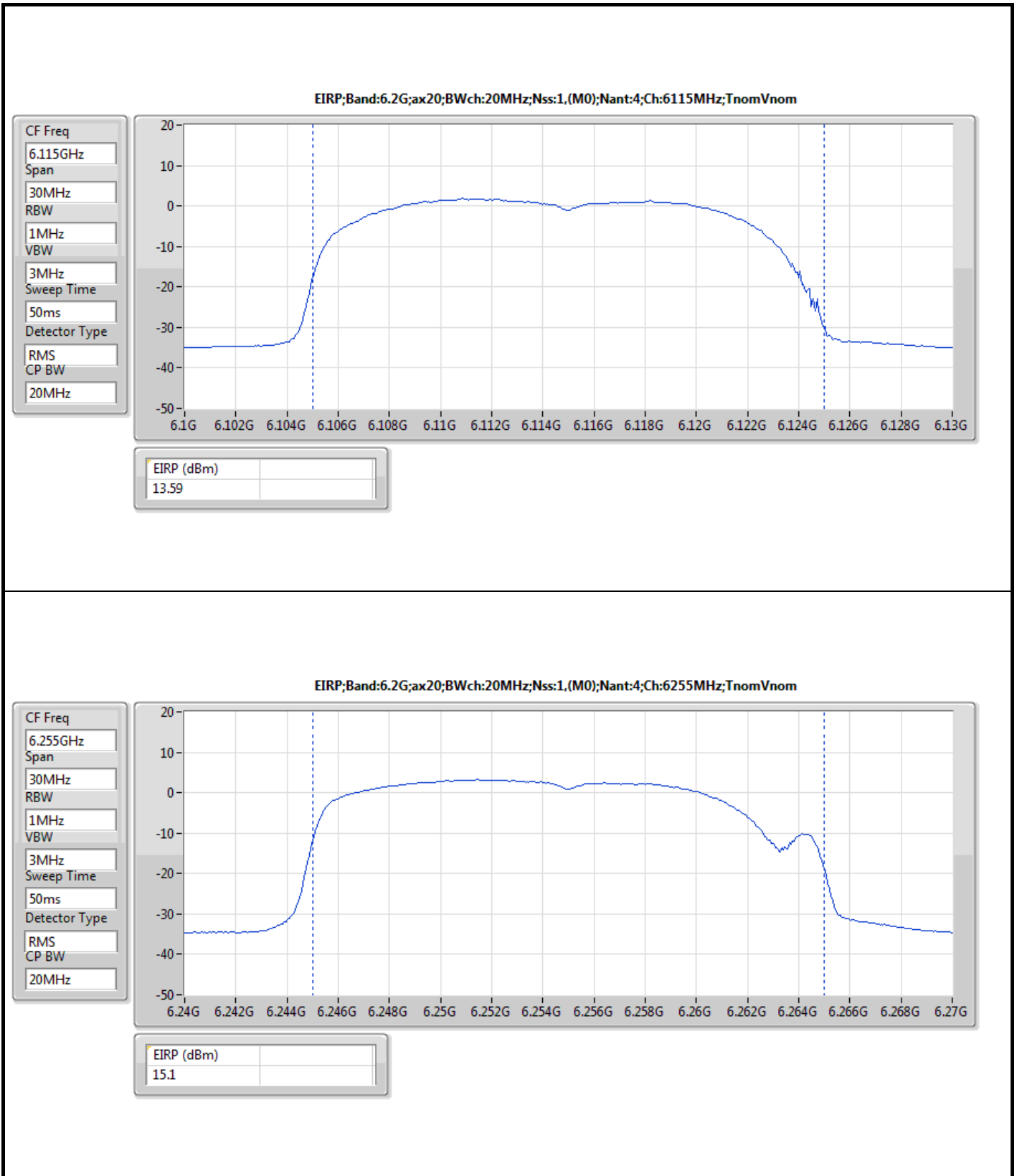
Mode	EIRP (dBm)	EIRP (W)
5.925-6.425GHz	-	-
802.11ax HEW20_Nss1,(MCS0)_4TX	15.10	0.03236
802.11ax HEW40_Nss1,(MCS0)_4TX	16.81	0.04797
802.11ax HEW80_Nss1,(MCS0)_4TX	19.36	0.08630
802.11ax HEW160_Nss1,(MCS0)_4TX	23.21	0.20941
6.425-6.525GHz	-	-
802.11ax HEW20_Nss1,(MCS0)_4TX	14.81	0.03027
802.11ax HEW40_Nss1,(MCS0)_4TX	16.26	0.04227
802.11ax HEW80_Nss1,(MCS0)_4TX	18.84	0.07656
802.11ax HEW160_Nss1,(MCS0)_4TX	20.96	0.12474
6.525-6.875GHz	-	-
802.11ax HEW20_Nss1,(MCS0)_4TX	15.11	0.03243
802.11ax HEW40_Nss1,(MCS0)_4TX	16.32	0.04285
802.11ax HEW80_Nss1,(MCS0)_4TX	18.86	0.07691
802.11ax HEW160_Nss1,(MCS0)_4TX	20.54	0.11324
6.875-7.125GHz	-	-
802.11ax HEW20_Nss1,(MCS0)_4TX	14.60	0.02884
802.11ax HEW40_Nss1,(MCS0)_4TX	16.62	0.04592
802.11ax HEW80_Nss1,(MCS0)_4TX	19.58	0.09078
802.11ax HEW160_Nss1,(MCS0)_4TX	20.50	0.11220

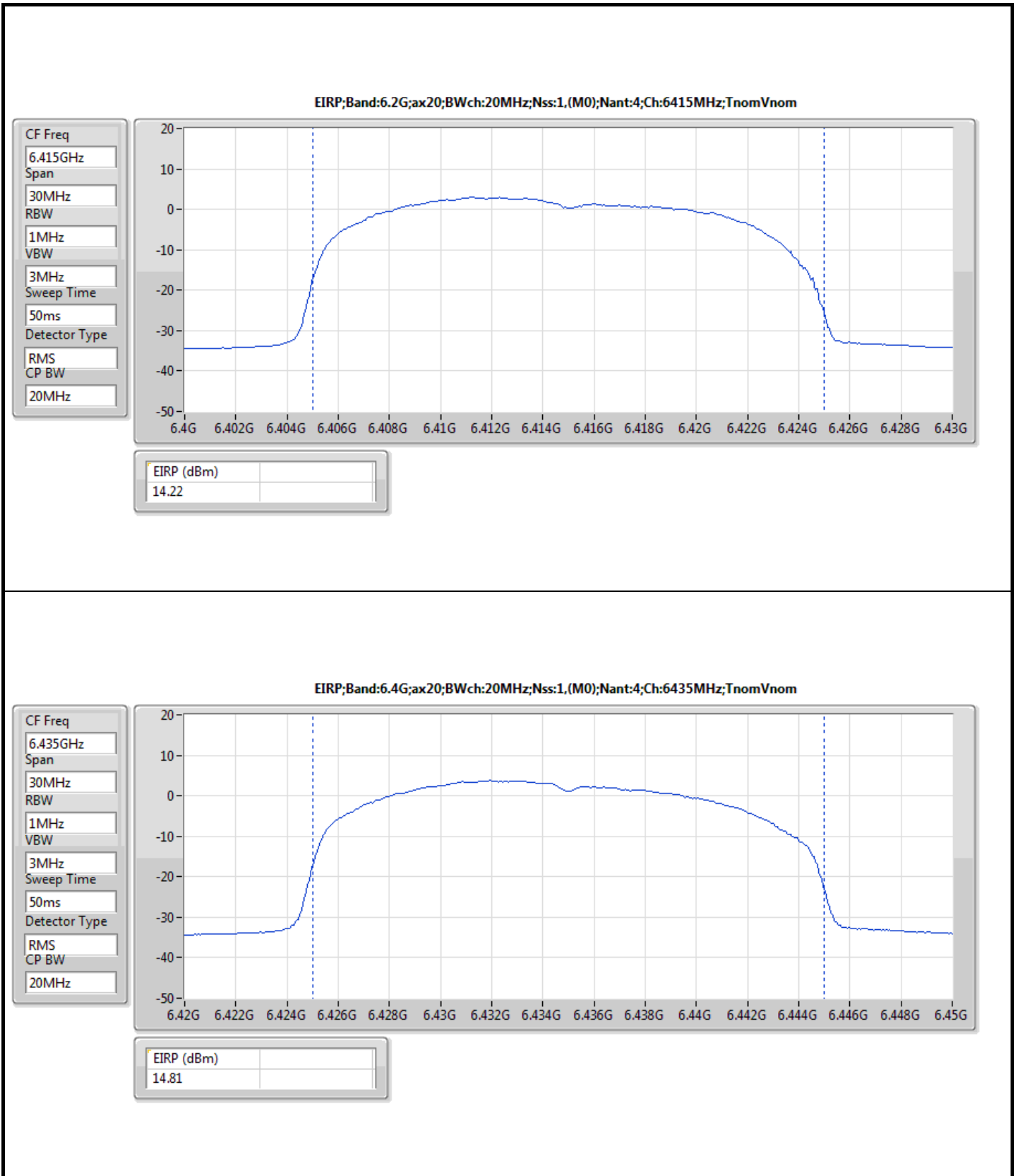


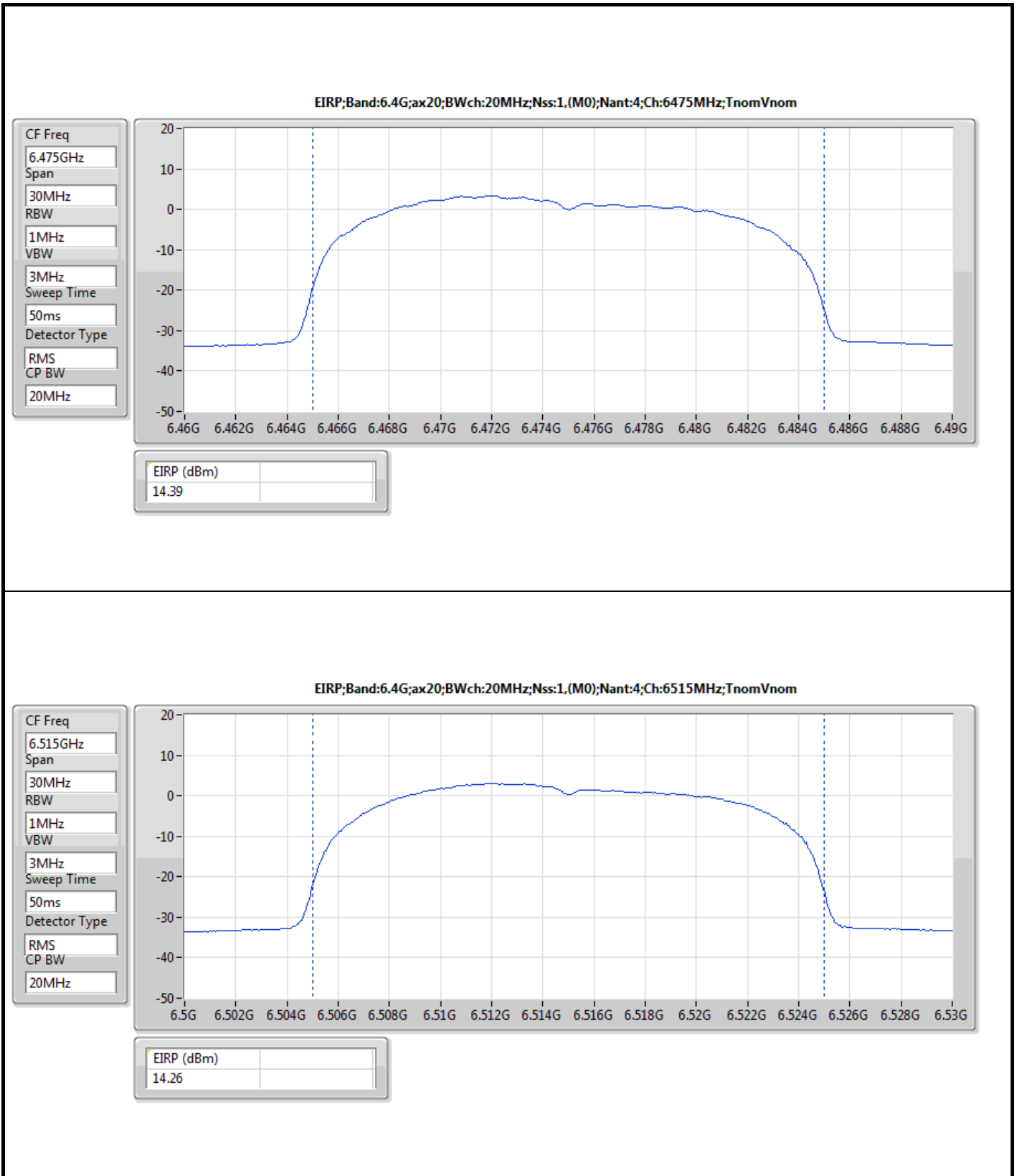
Result

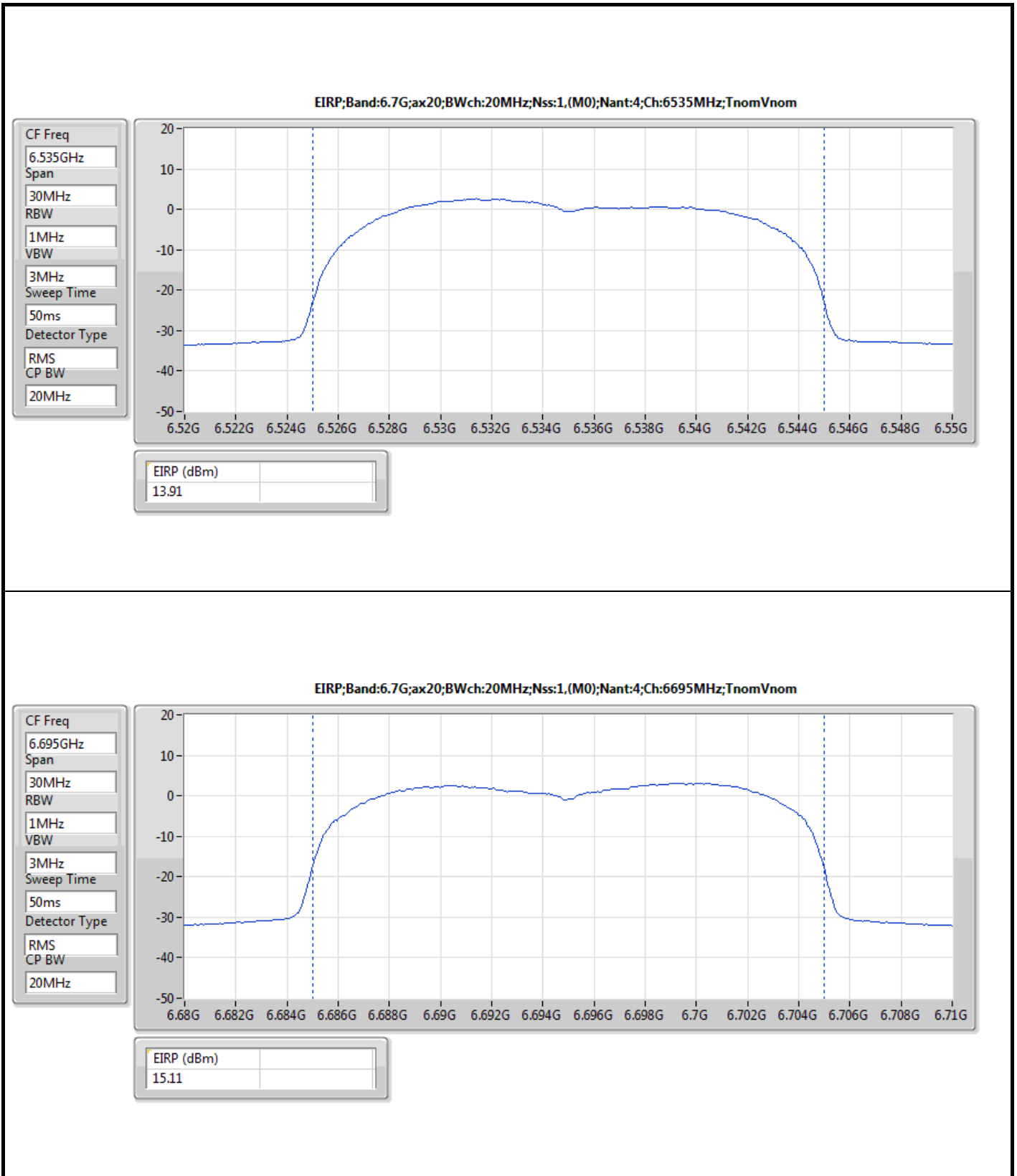
Mode	Result	EIRP (dBm)	EIRP Limit (dBm)
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-
6115MHz	Pass	13.59	30.00
6255MHz	Pass	15.10	30.00
6415MHz	Pass	14.22	30.00
6435MHz	Pass	14.81	30.00
6475MHz	Pass	14.39	30.00
6515MHz	Pass	14.26	30.00
6535MHz	Pass	13.91	30.00
6695MHz	Pass	15.11	30.00
6855MHz	Pass	14.37	30.00
6875MHz Straddle 6.525-6.875GHz	Pass	14.11	30.00
6895MHz	Pass	13.73	30.00
6995MHz	Pass	14.60	30.00
7095MHz	Pass	14.22	30.00
7115MHz	Pass	12.99	30.00
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-
6125MHz	Pass	16.30	30.00
6245MHz	Pass	16.81	30.00
6405MHz	Pass	16.16	30.00
6445MHz	Pass	16.26	30.00
6485MHz	Pass	15.79	30.00
6525MHz Straddle 6.425-6.525GHz	Pass	15.82	30.00
6565MHz	Pass	16.00	30.00
6725MHz	Pass	15.74	30.00
6845MHz	Pass	15.68	30.00
6885MHz Straddle 6.525-6.875GHz	Pass	16.32	30.00
6925MHz	Pass	16.25	30.00
7005MHz	Pass	16.62	30.00
7085MHz	Pass	16.30	30.00
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-	-
6145MHz	Pass	18.78	30.00
6225MHz	Pass	19.36	30.00
6385MHz	Pass	18.47	30.00
6465MHz	Pass	18.57	30.00
6545MHz Straddle 6.425-6.525GHz	Pass	18.84	30.00
6625MHz	Pass	18.86	30.00
6705MHz	Pass	18.37	30.00
6785MHz	Pass	18.28	30.00
6865MHz Straddle 6.525-6.875GHz	Pass	18.29	30.00
6945MHz	Pass	19.07	30.00
7025MHz	Pass	19.58	30.00
802.11ax HEW160_Nss1,(MCS0)_4TX	-	-	-
6185MHz	Pass	23.21	30.00
6345MHz	Pass	20.34	30.00
6505MHz Straddle 6.425-6.525GHz	Pass	20.96	30.00
6665MHz	Pass	20.54	30.00
6825MHz Straddle 6.875-7.125GHz	Pass	19.33	30.00
6985MHz	Pass	20.50	30.00

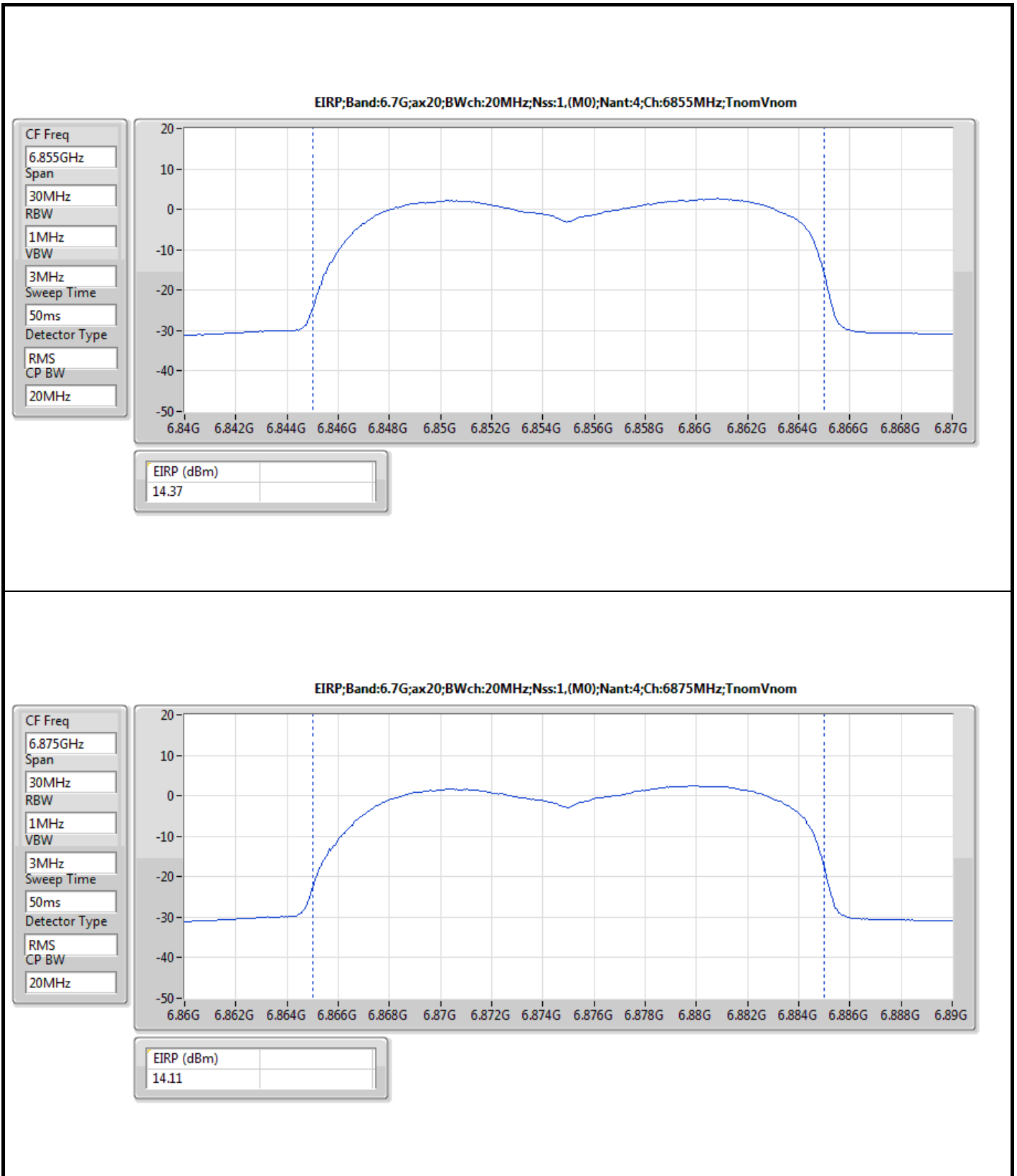
DG = Directional Gain; Port X = Port X output power

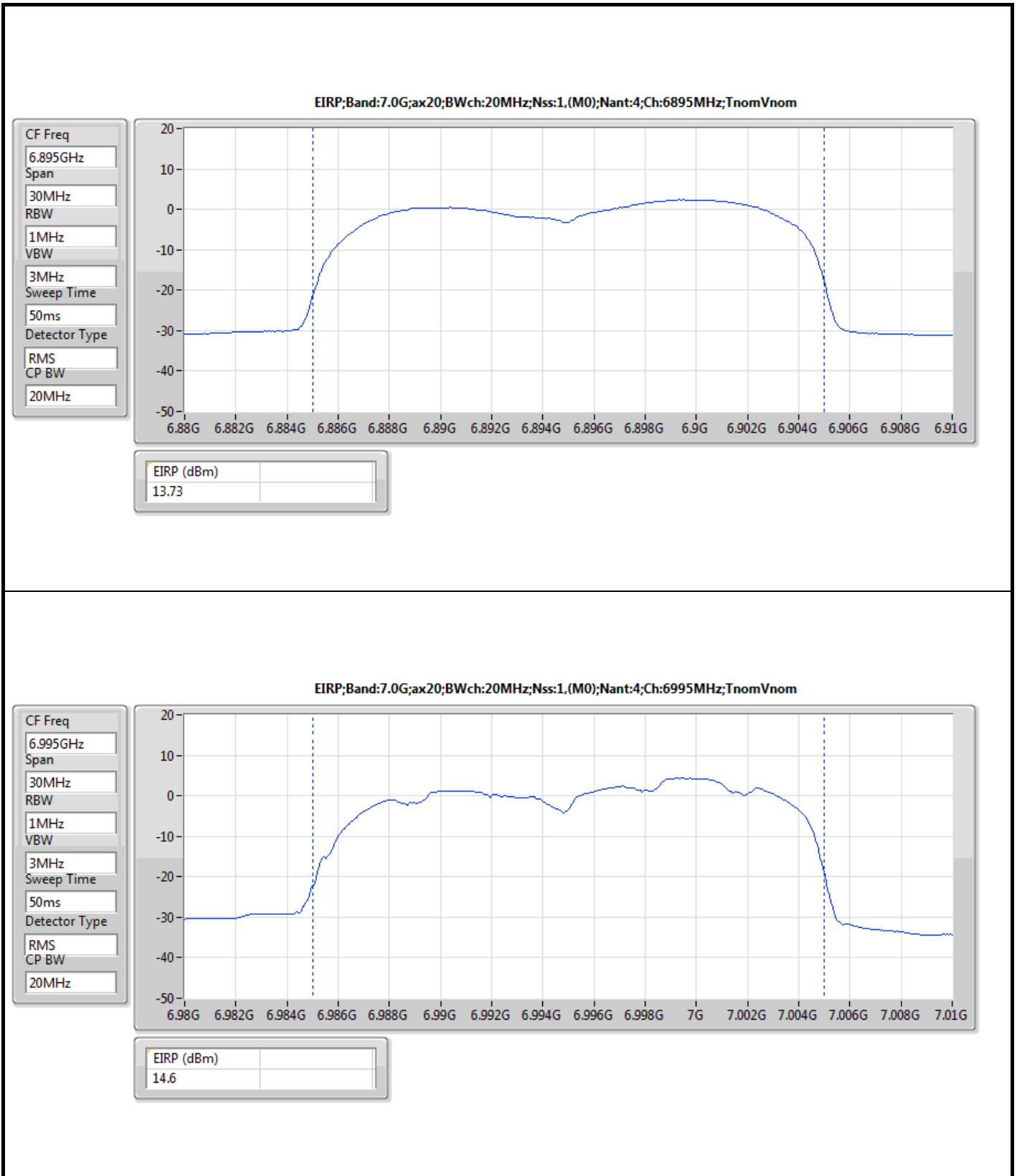


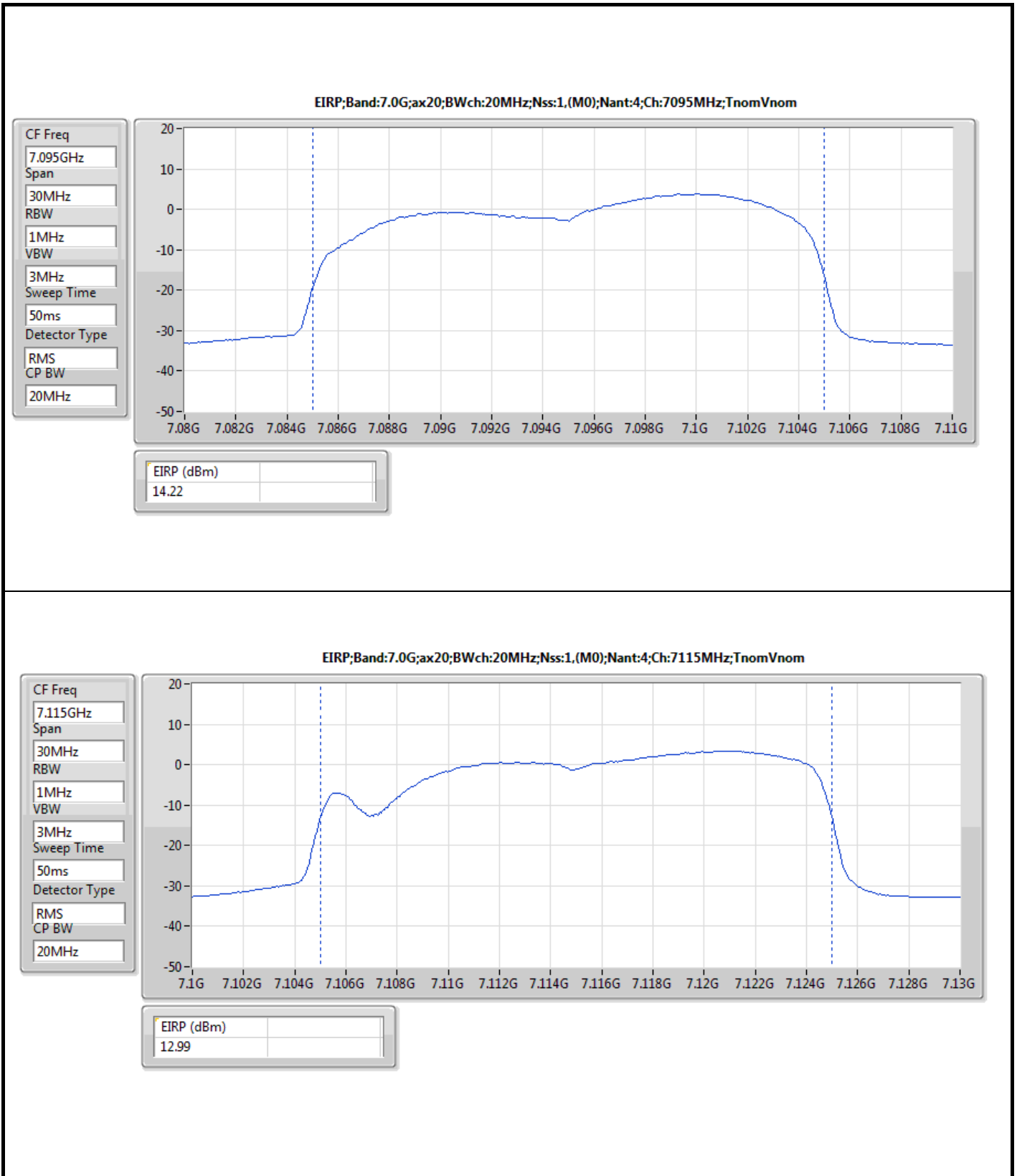


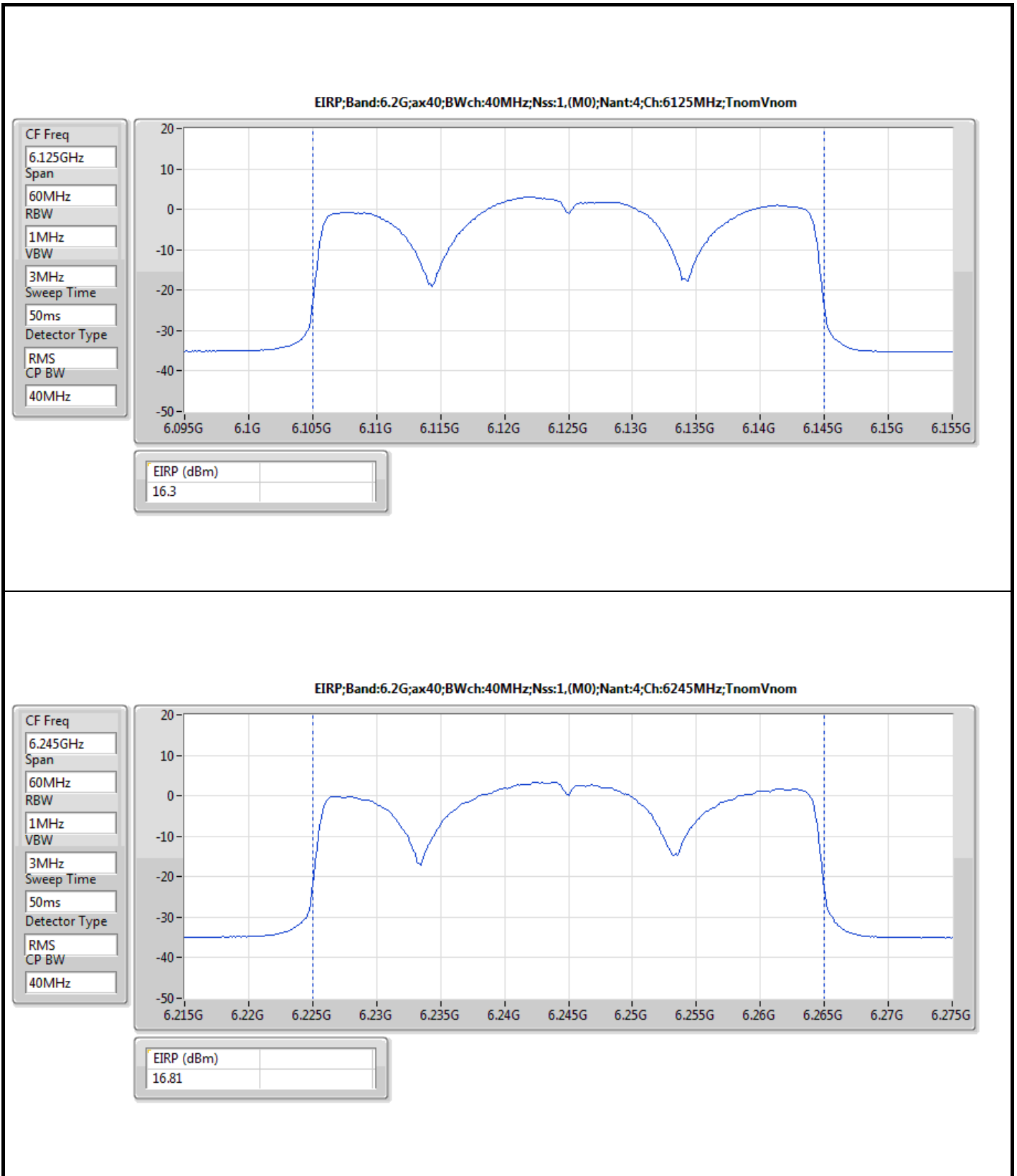




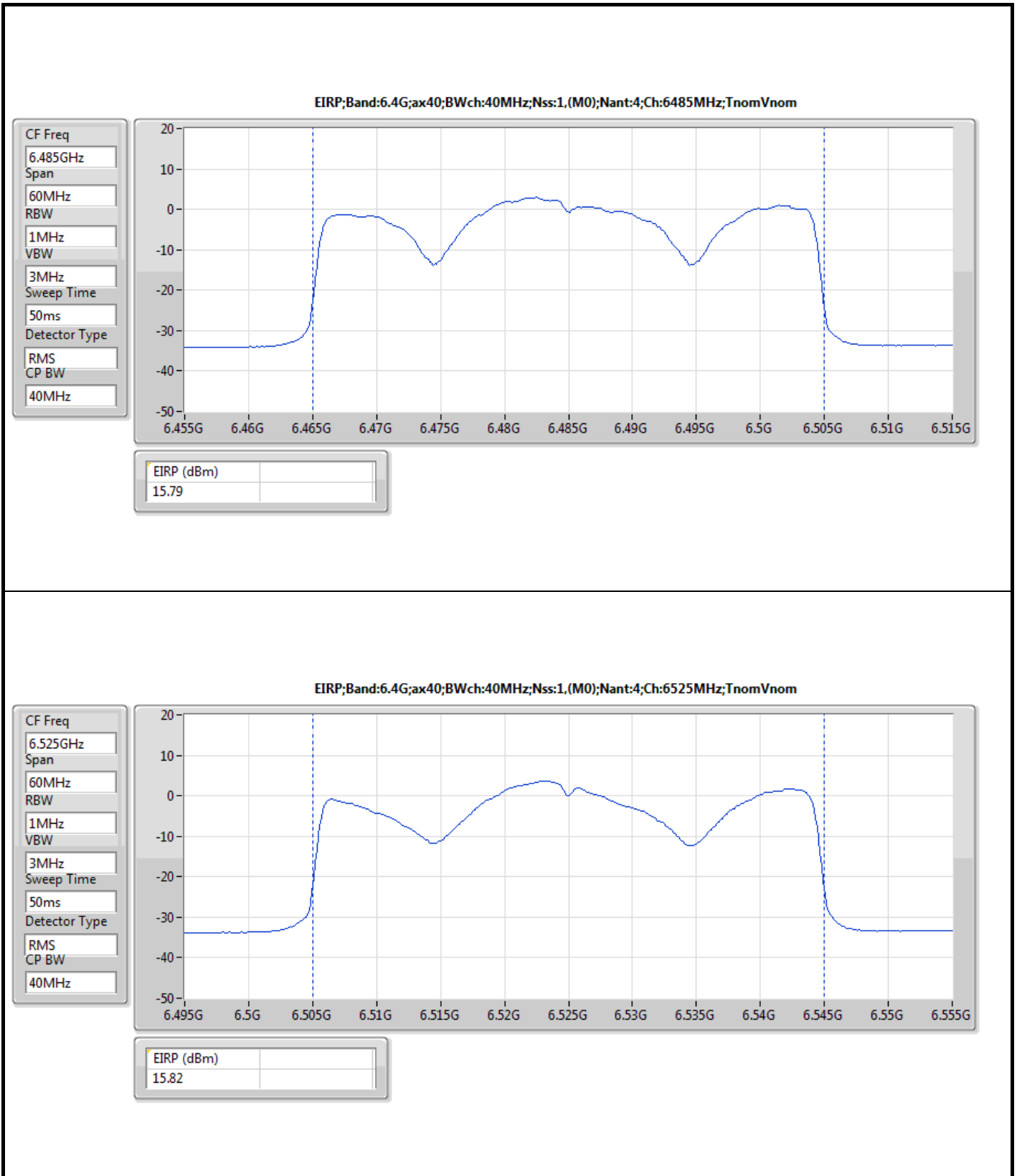


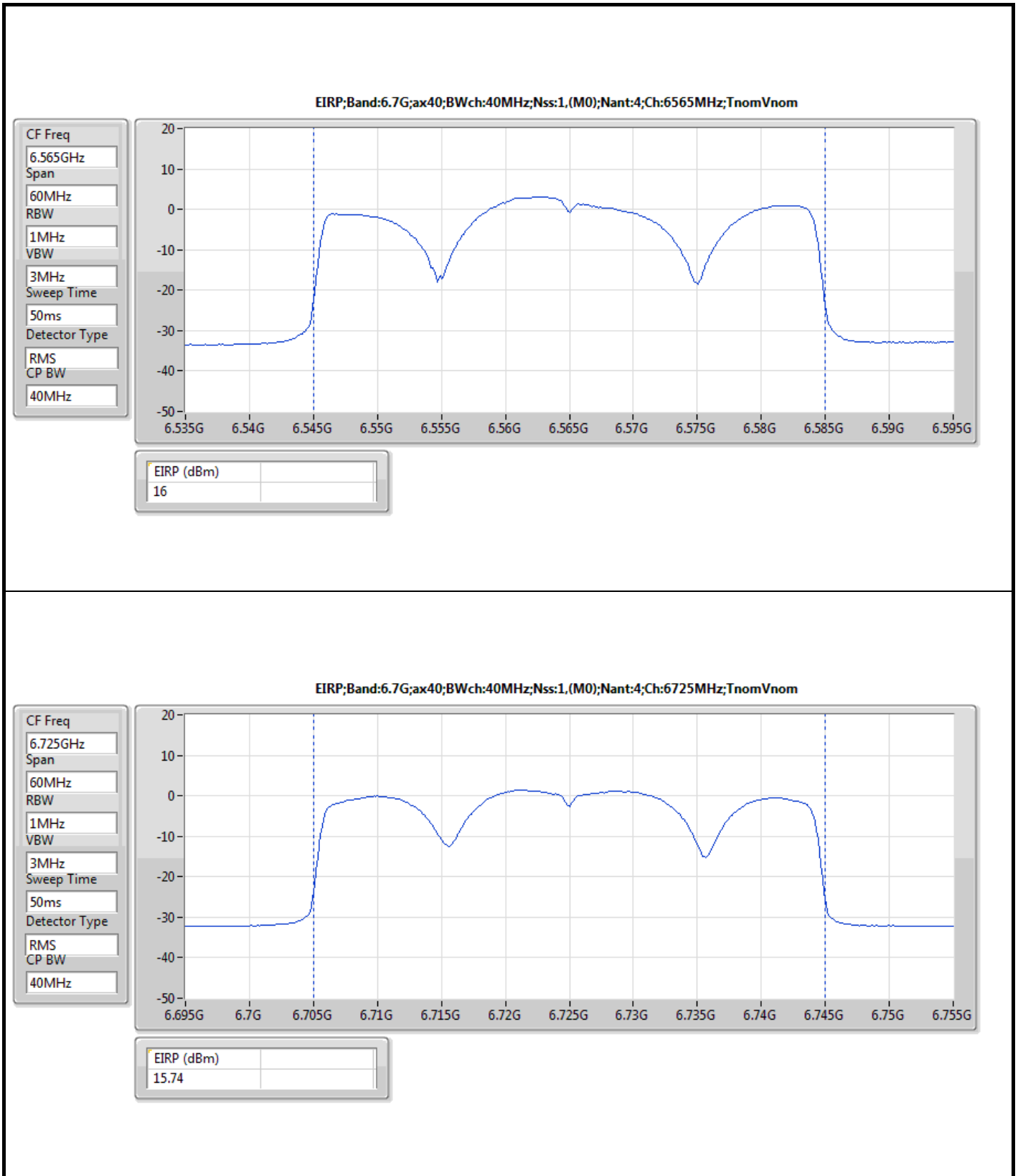


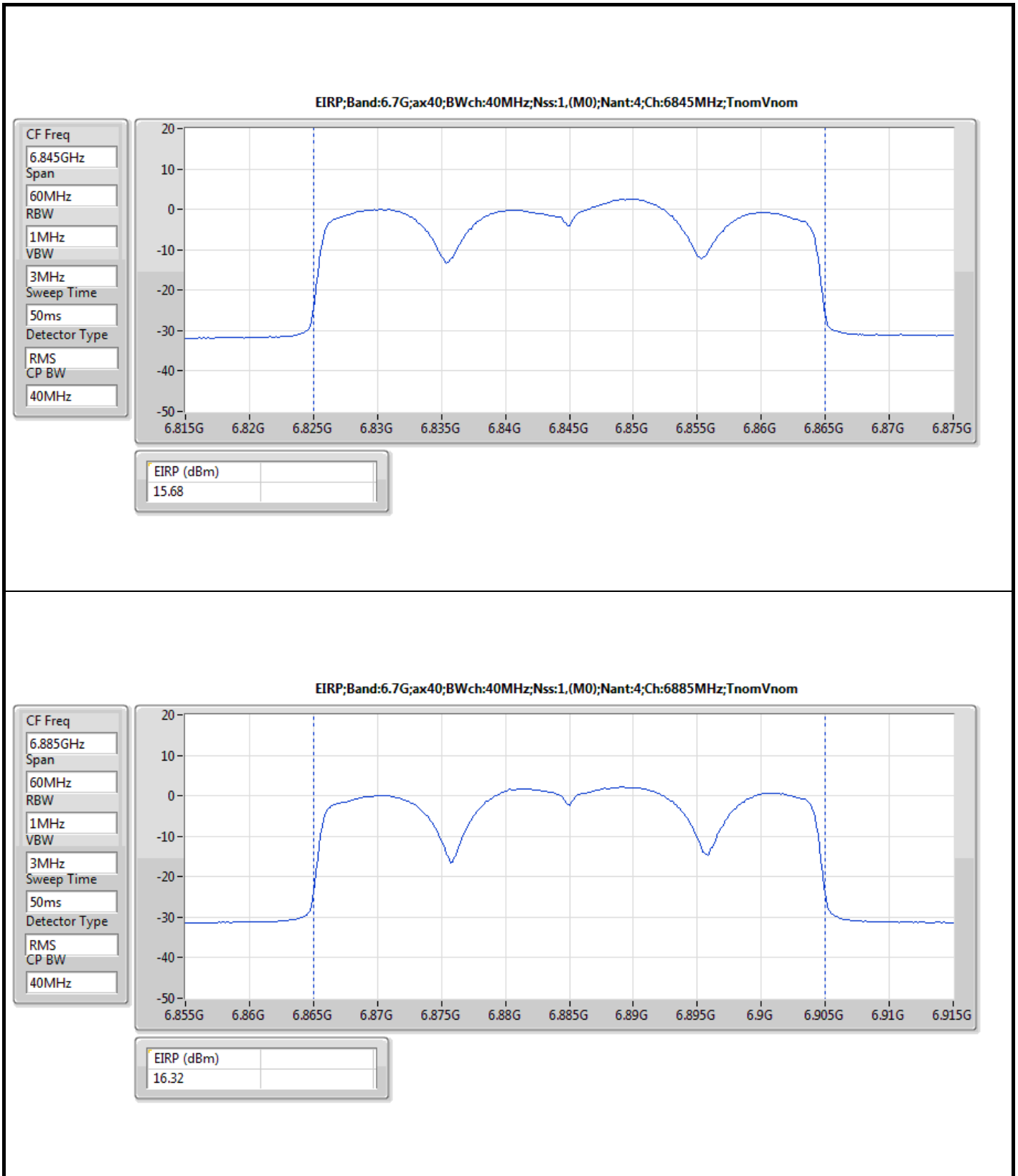


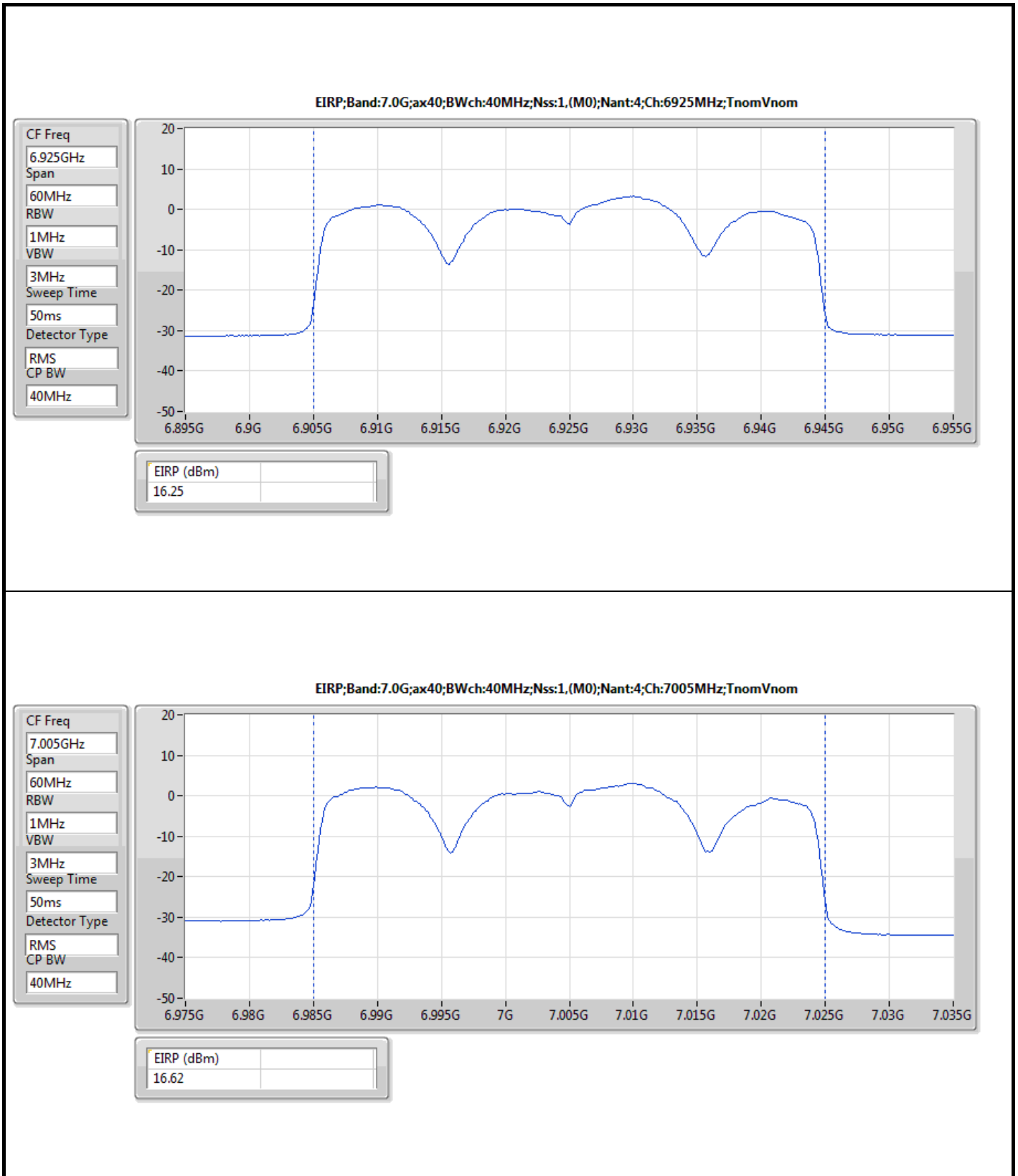


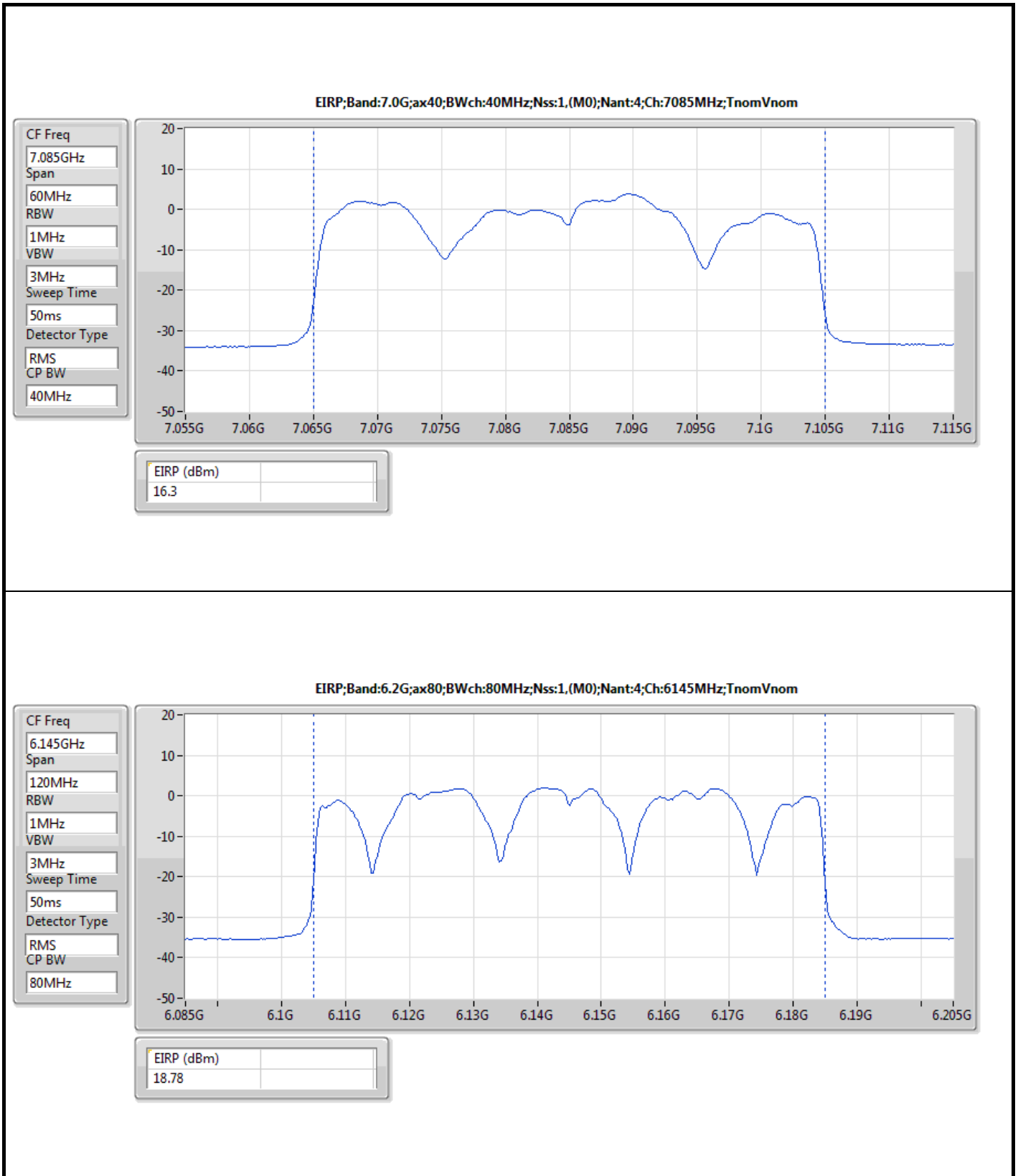


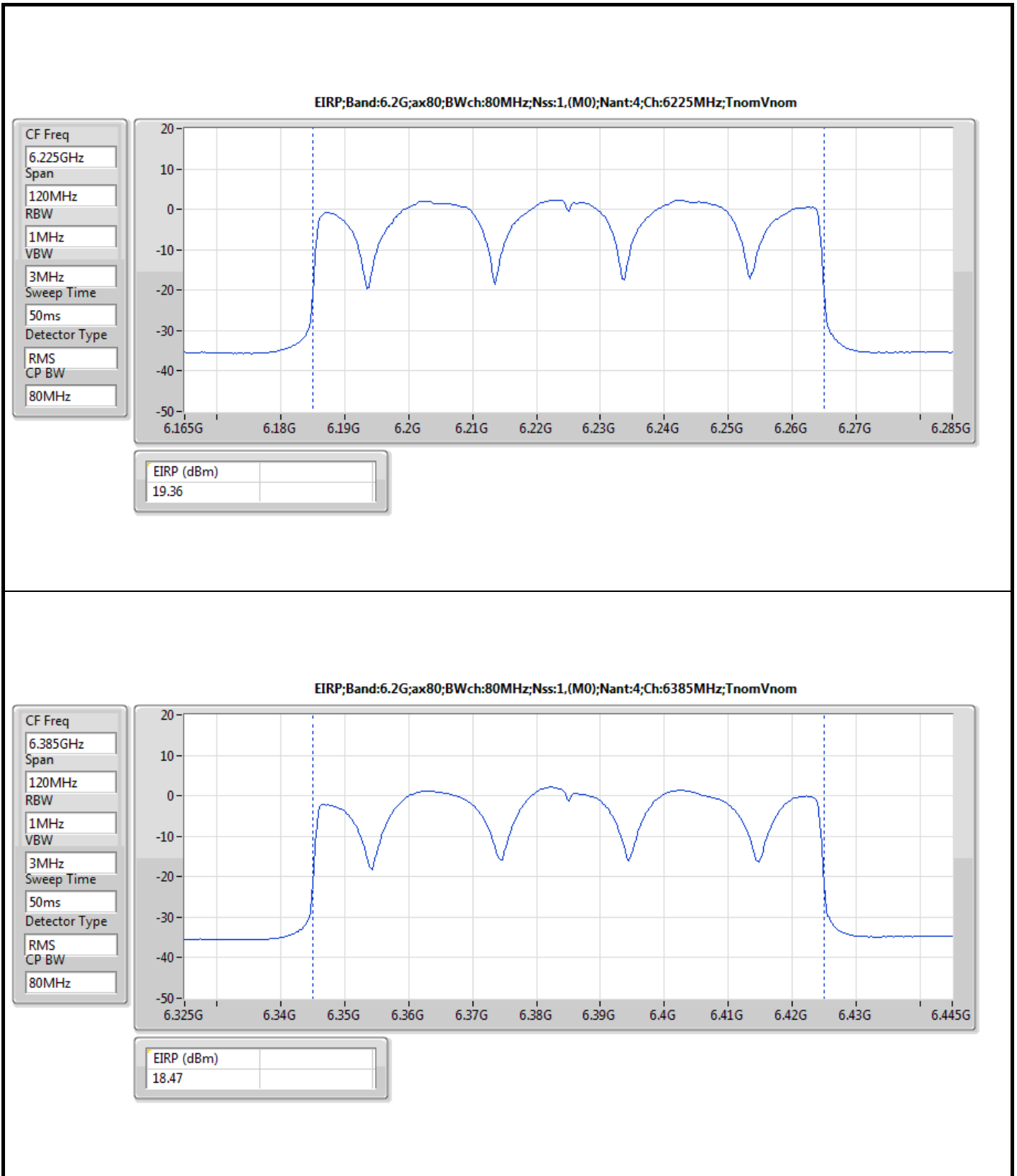


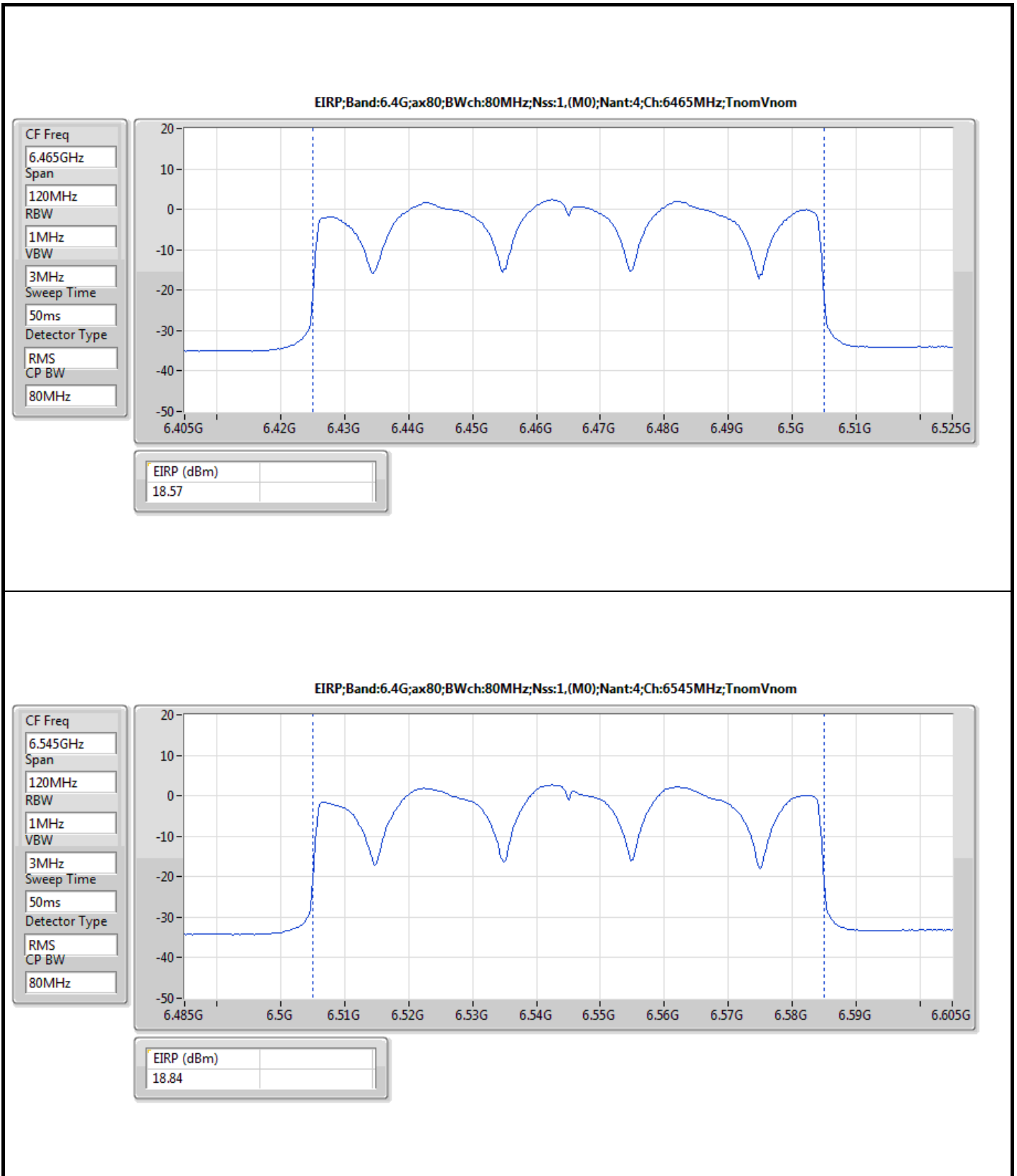


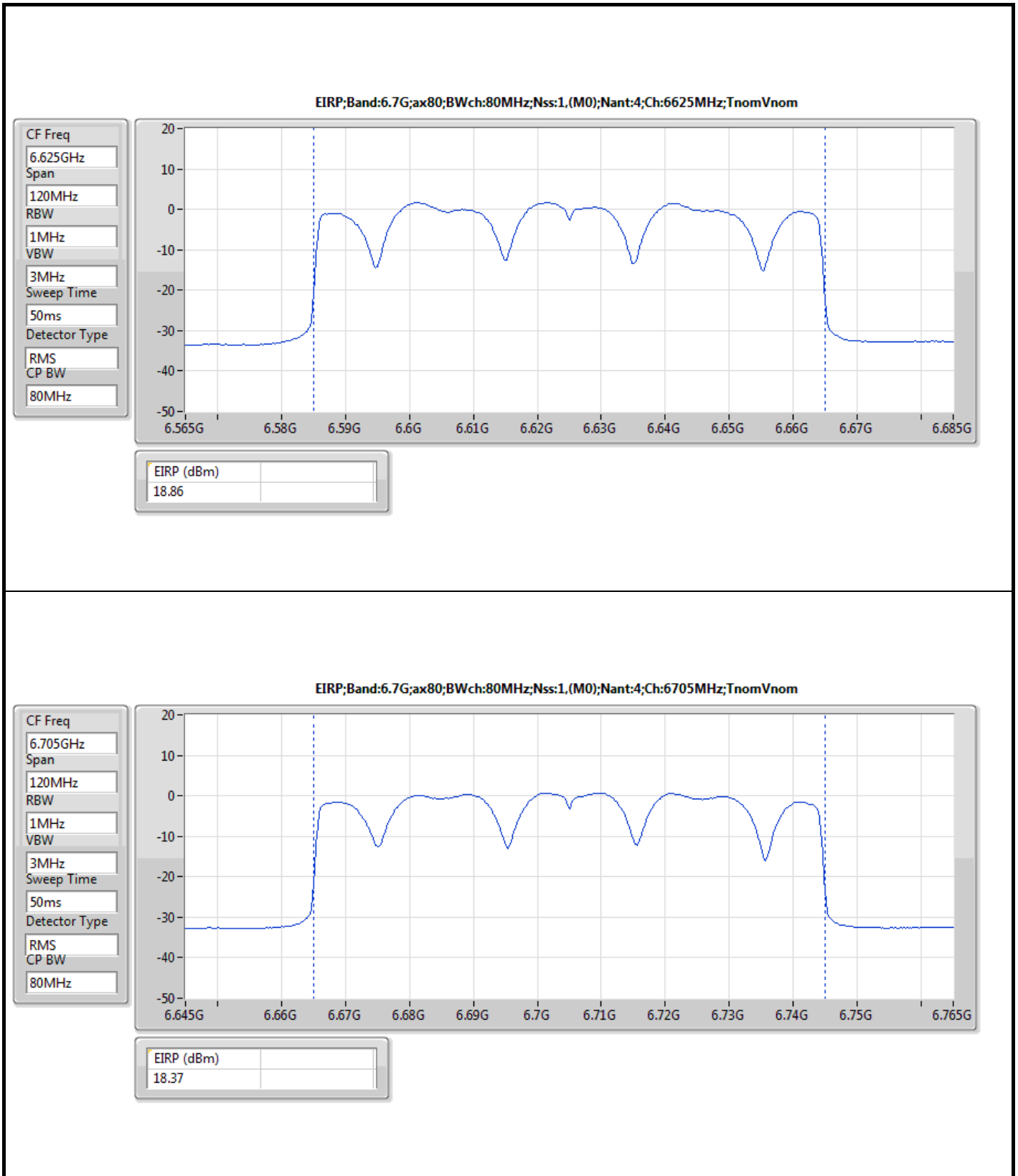


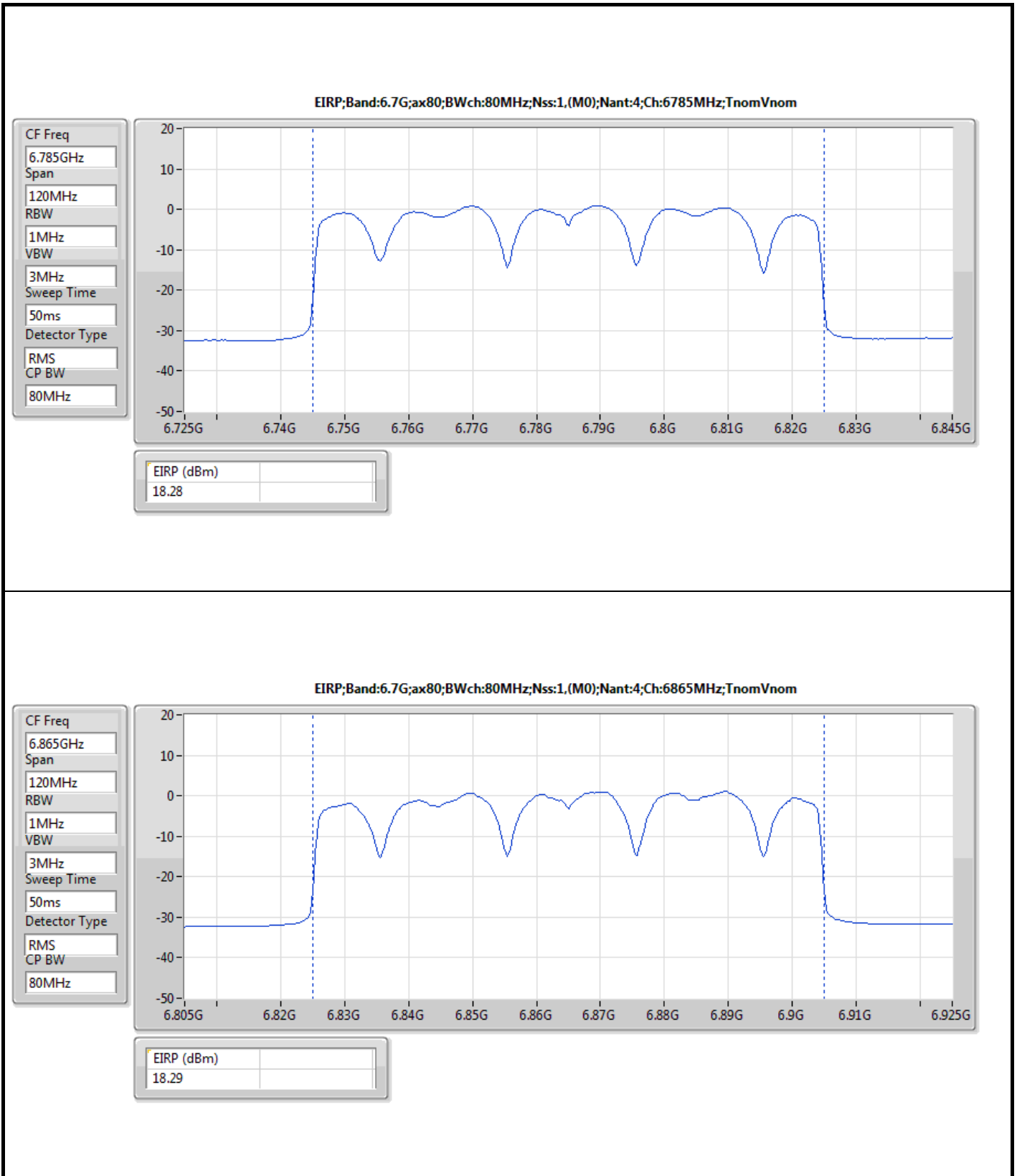


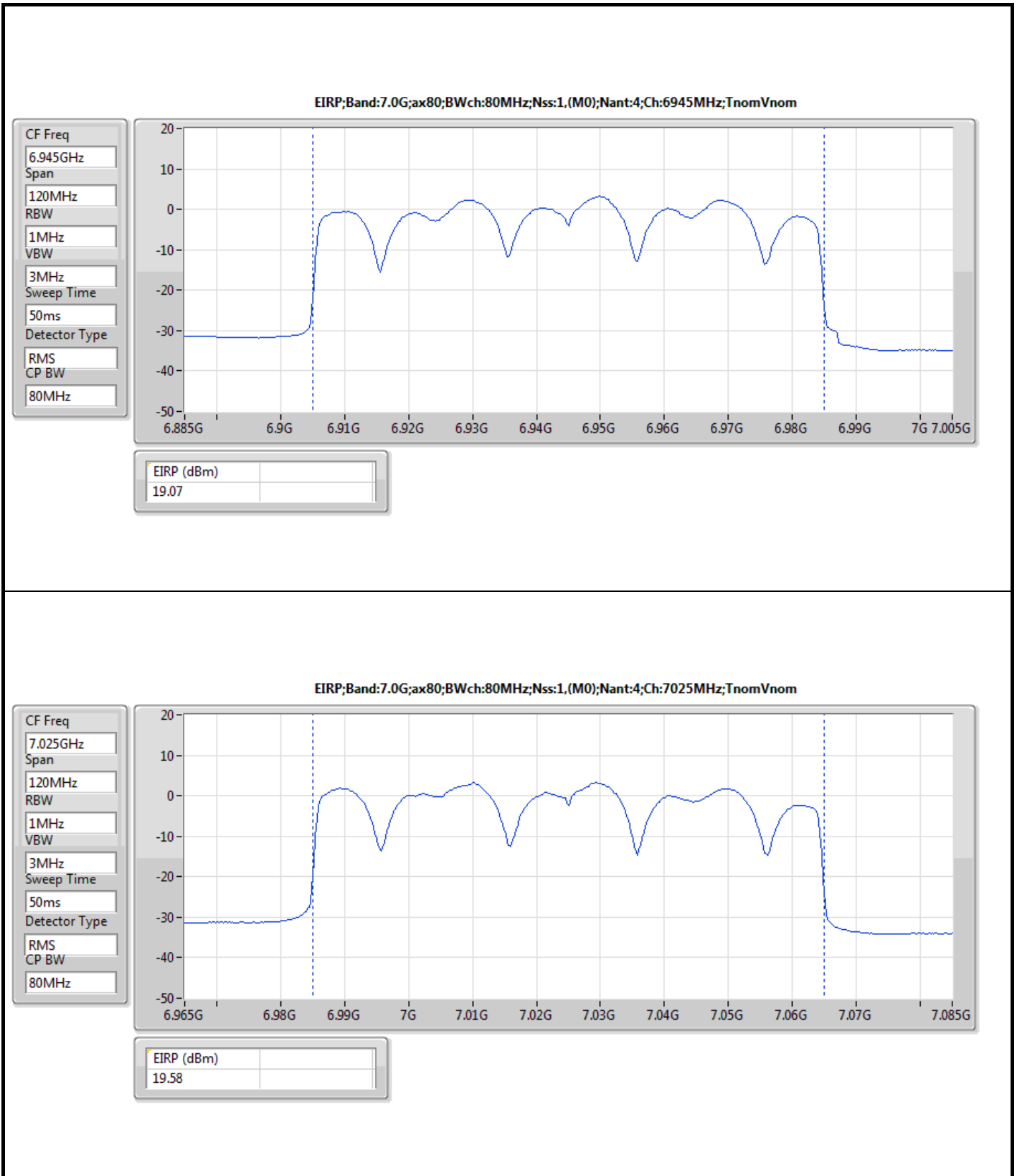


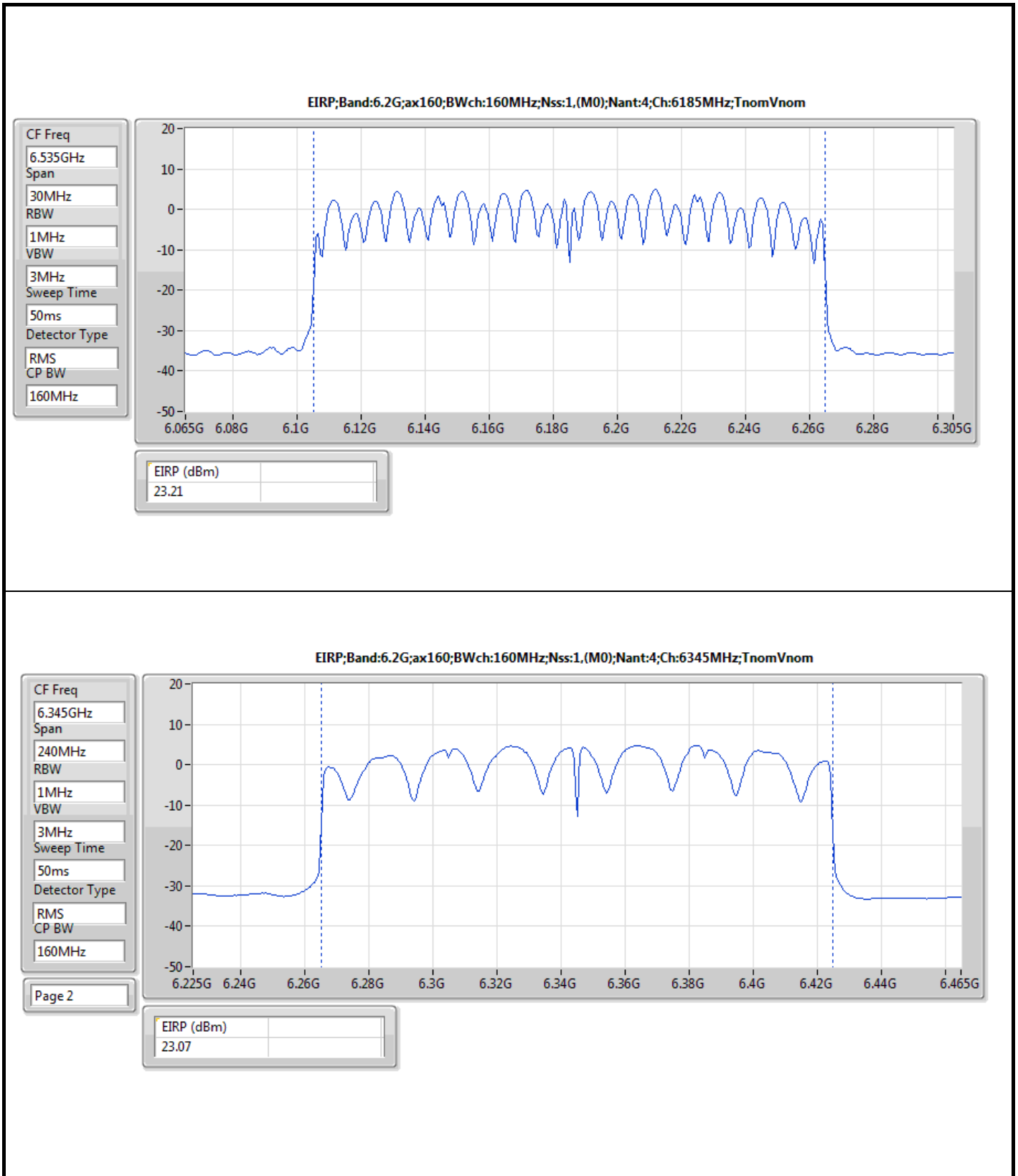


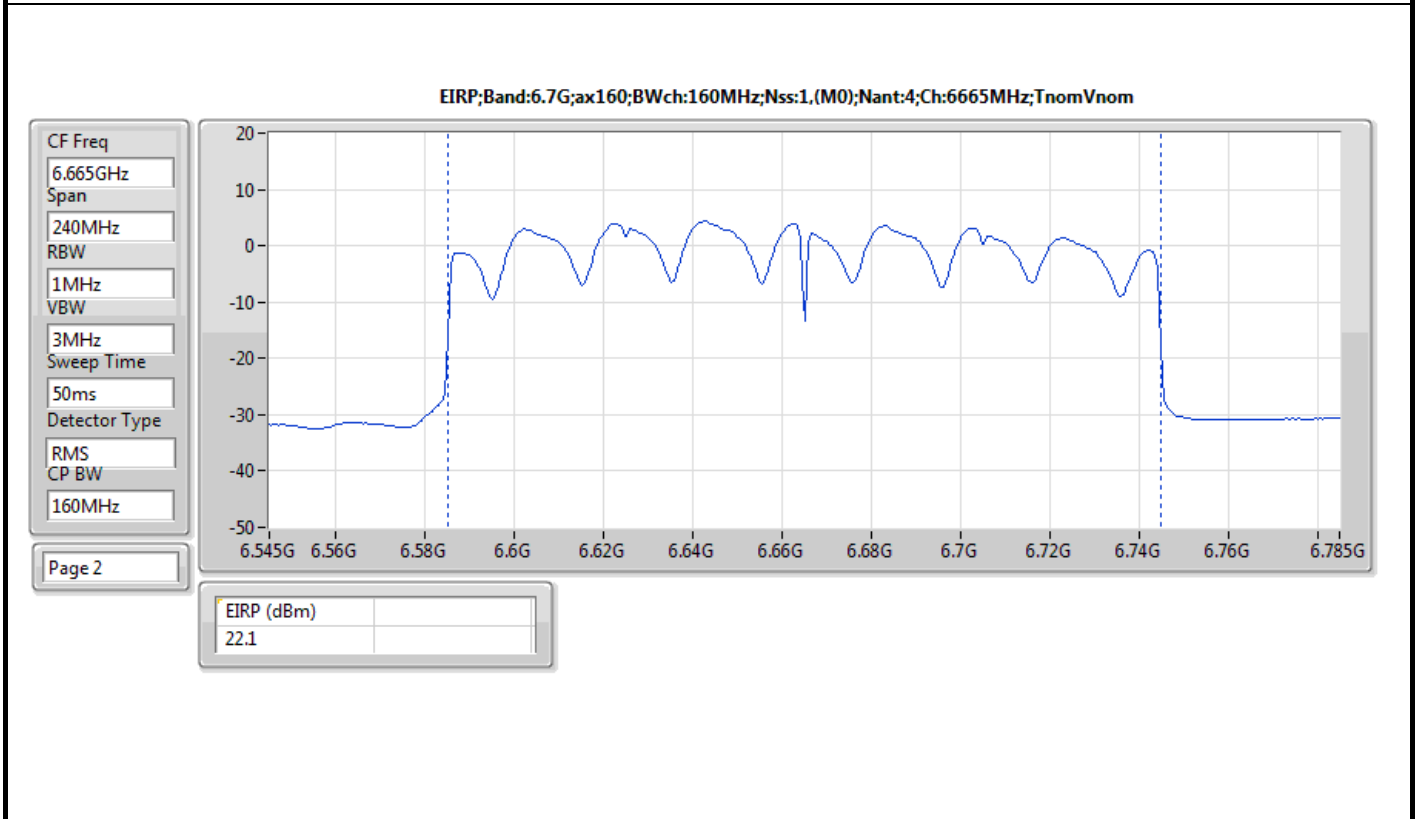
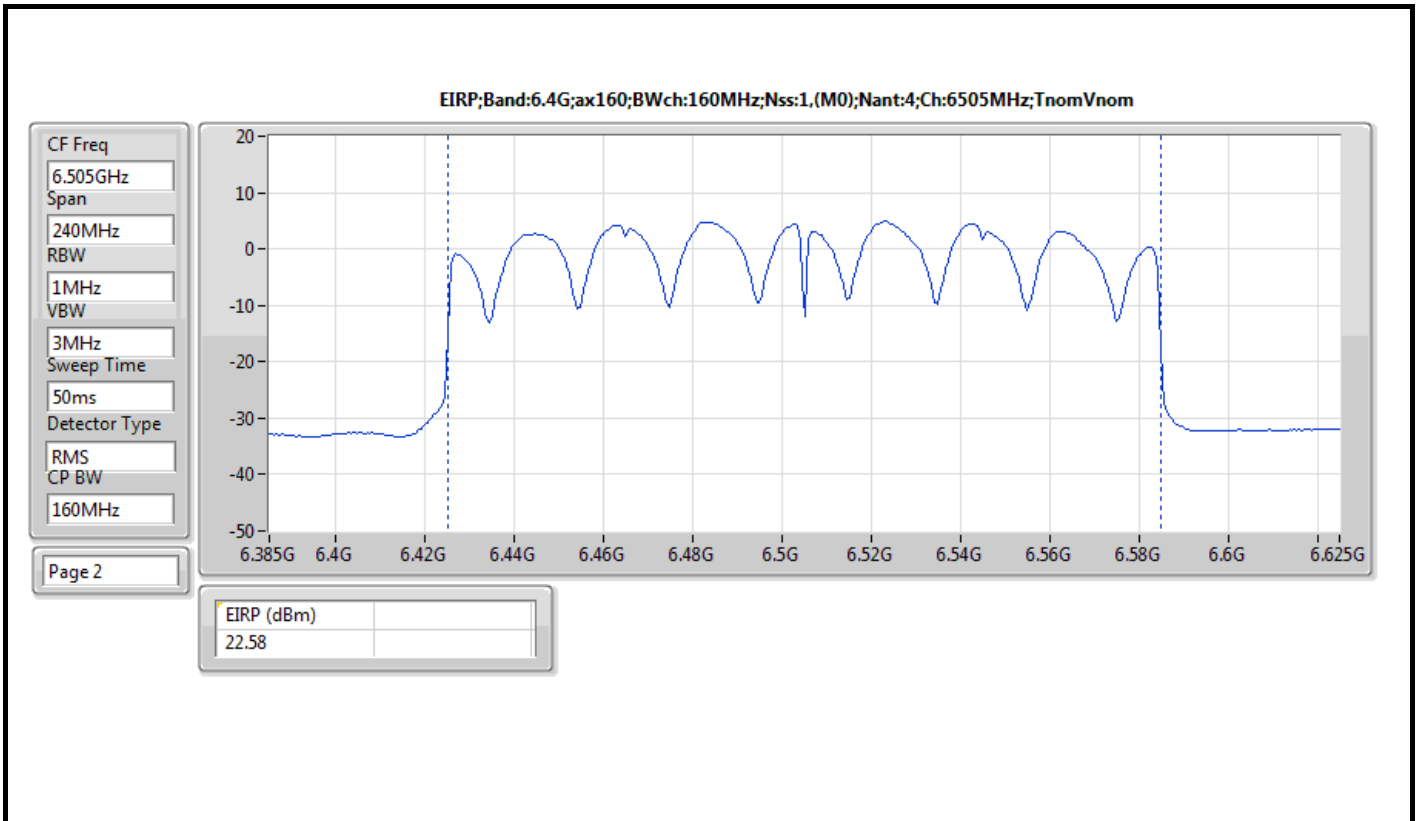


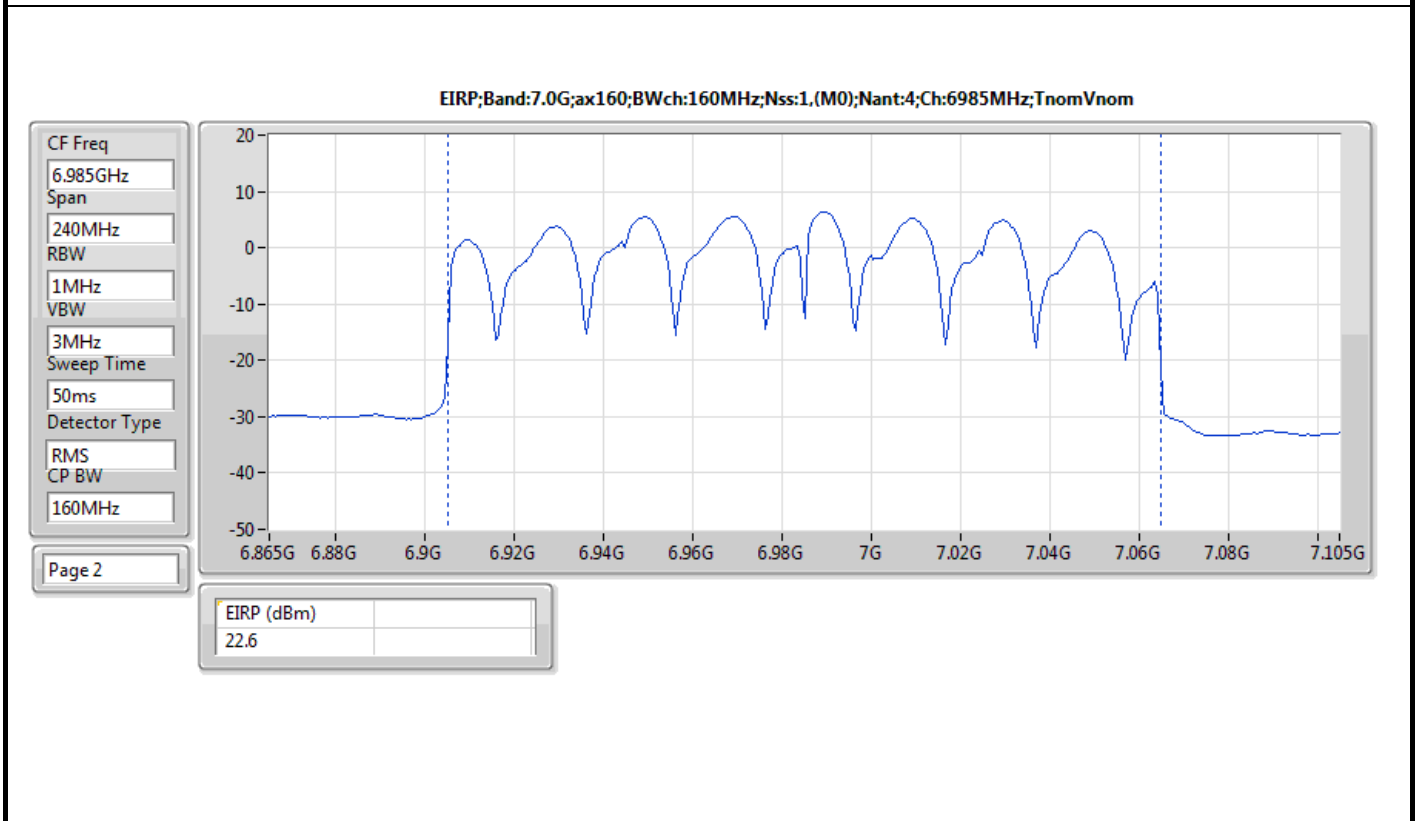
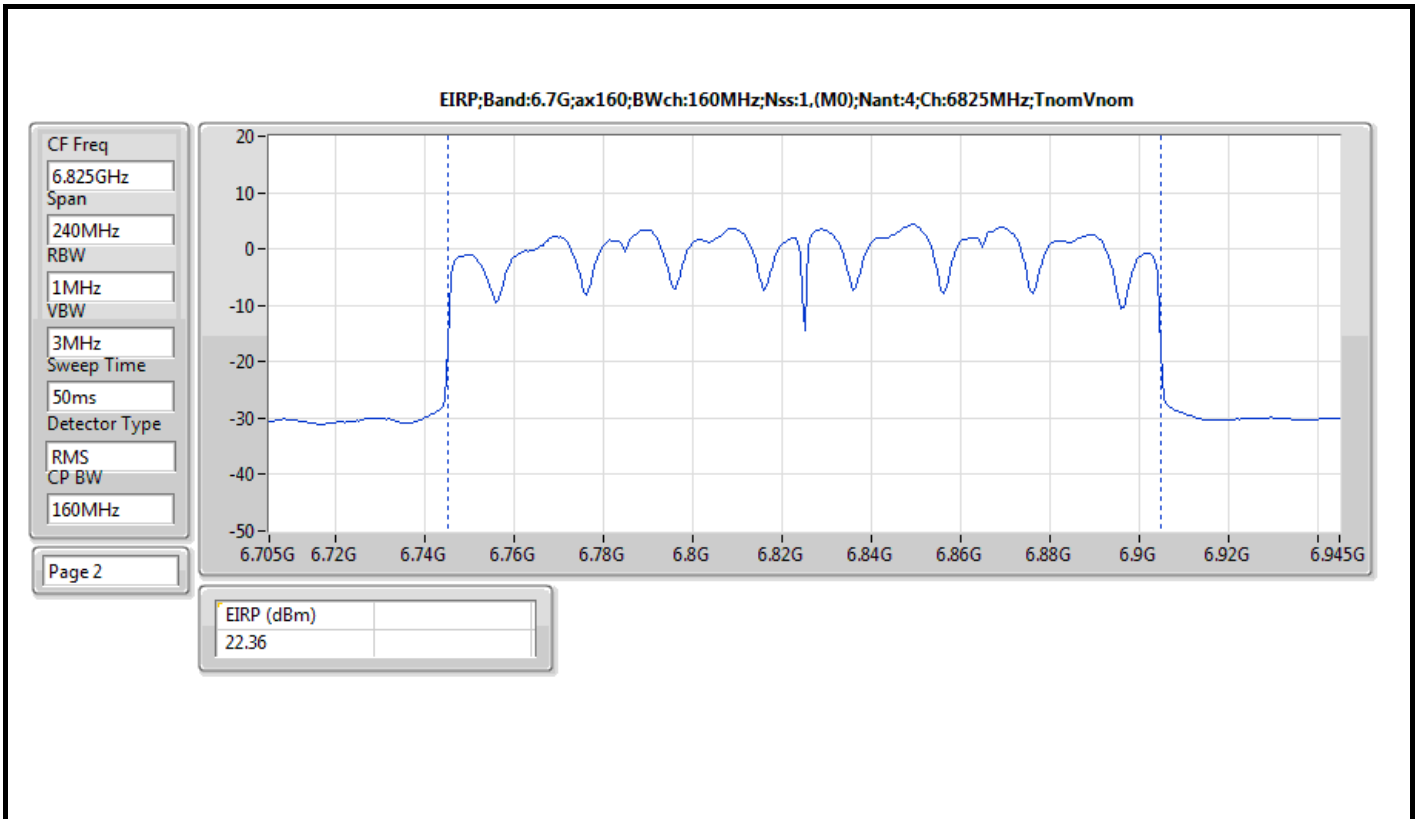














Summary

Mode	EIRP (dBm)	EIRP (W)
5.925-6.425GHz	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	19.40	0.08710
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	21.34	0.13614
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	22.41	0.17418
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	25.92	0.39084
6.425-6.525GHz	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	19.66	0.09247
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	22.02	0.15922
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	23.20	0.20893
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	26.64	0.46132
6.525-6.875GHz	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	19.90	0.09772
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	23.80	0.23988
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	23.06	0.20230
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	26.60	0.45709
6.875-7.125GHz	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	17.10	0.05129
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	18.93	0.07816
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	22.02	0.15922
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	26.17	0.41400



Result

Mode	Result	EIRP (dBm)	EIRP Limit (dBm)
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-	-
6115MHz	Pass	17.21	30.00
6255MHz	Pass	17.99	30.00
6415MHz	Pass	19.40	30.00
6435MHz	Pass	18.20	30.00
6475MHz	Pass	19.66	30.00
6515MHz	Pass	18.50	30.00
6535MHz	Pass	19.36	30.00
6695MHz	Pass	19.90	30.00
6855MHz	Pass	17.15	30.00
6875MHz Straddle 6.525-6.875GHz	Pass	17.42	30.00
6895MHz	Pass	17.10	30.00
6995MHz	Pass	17.02	30.00
7095MHz	Pass	16.70	30.00
7115MHz	Pass	13.67	30.00
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-	-
6125MHz	Pass	20.10	30.00
6245MHz	Pass	20.30	30.00
6405MHz	Pass	21.34	30.00
6445MHz	Pass	21.71	30.00
6485MHz	Pass	22.02	30.00
6525MHz Straddle 6.425-6.525GHz	Pass	21.97	30.00
6565MHz	Pass	23.80	30.00
6725MHz	Pass	20.54	30.00
6845MHz	Pass	19.33	30.00
6885MHz Straddle 6.525-6.875GHz	Pass	19.36	30.00
6925MHz	Pass	18.93	30.00
7005MHz	Pass	18.58	30.00
7085MHz	Pass	18.78	30.00
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-	-
6145MHz	Pass	22.41	30.00
6225MHz	Pass	22.22	30.00
6385MHz	Pass	21.77	30.00
6465MHz	Pass	22.35	30.00
6545MHz Straddle 6.425-6.525GHz	Pass	23.20	30.00
6625MHz	Pass	22.82	30.00
6705MHz	Pass	22.10	30.00
6785MHz	Pass	21.40	30.00
6865MHz Straddle 6.525-6.875GHz	Pass	23.06	30.00
6945MHz	Pass	22.02	30.00
7025MHz	Pass	21.52	30.00
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-	-	-
6185MHz	Pass	25.92	30.00
6345MHz	Pass	25.07	30.00
6505MHz Straddle 6.425-6.525GHz	Pass	26.64	30.00
6665MHz	Pass	24.49	30.00
6825MHz Straddle 6.525-6.875GHz	Pass	26.60	30.00
6985MHz	Pass	26.17	30.00

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

