



FCC Radio Test Report

FCC ID : RX3-WBU058LGA
Equipment : IEEE 802.11 a/b/g/n/ac/ax 2x2+Bluetooth v5.2 Wireless Adapter
Brand Name : Foxconn
Model Name : WBU058-LGA
Applicant : Hon Hai Precision Industry Co., Ltd.
No.151, Sec. 1, Nankan Rd., Lujhu Dist., Taoyuan City 33859, Taiwan
Manufacturer : Hon Hai Precision Industry Co., Ltd.
No.151, Sec. 1, Nankan Rd., Lujhu Dist., Taoyuan City 33859, Taiwan
Standard : 47 CFR FCC Part 15.407

The product was received on Sep. 24, 2021, and testing was started from Oct. 04, 2021 and completed on Feb. 11, 2022. We, SPORTON INTERNATIONAL INC. Hsinhua 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. Hsinhua Laboratory, the test report shall not be reproduced except in full.


Approved by: Jackson Tsai

SPORTON INTERNATIONAL INC. Hsinhua Laboratory

No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)



Table of Contents

History of this test report.....	3
Summary of Test Result.....	4
1 General Description	5
1.1 Information.....	5
1.2 Applicable Standards	9
1.3 Testing Location Information	9
1.4 Measurement Uncertainty	9
2 Test Configuration of EUT	10
2.1 Test Channel Mode	10
2.2 The Worst Case Measurement Configuration	12
2.3 Support Equipment.....	13
2.4 Test Setup Diagram	14
3 Transmitter Test Result	16
3.1 AC Power-line Conducted Emissions	16
3.2 Emission Bandwidth	18
3.3 Maximum Equivalent Isotropically Radiated Power (E.I.R.P.)	19
3.4 Peak Power Spectral Density (E.I.R.P.).....	21
3.5 Unwanted Emissions.....	24
3.6 Contention Based Protocol.....	29
3.7 Frequency Stability	30
4 Test Equipment and Calibration Data	31

APPENDIX A. TEST RESULTS OF AC POWER-LINE CONDUCTED EMISSIONS

APPENDIX B. TEST RESULTS OF EMISSION BANDWIDTH

APPENDIX C. TEST RESULTS OF MAXIMUM EQUIVALENT ISOTOPICALLY RADIATED POWER (E.I.R.P.)

APPENDIX D. TEST RESULTS OF PEAK POWER SPECTRAL DENSITY (E.I.R.P.)

APPENDIX E. TEST RESULTS OF UNWANTED EMISSIONS

APPENDIX F. TEST RESULTS OF CONTENTION-BASED PROTOCOL

APPENDIX G. TEST RESULTS OF FREQUENCY STABILITY

APPENDIX H. TEST PHOTOS

PHOTOGRAPHS OF EUT V01



History of this test report

[illegible]



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	-
3.1	15.207	AC Power-line Conducted Emissions	PASS	-
3.2	15.407(a)	Emission Bandwidth	PASS	-
3.3	15.407(a)	Maximum Equivalent Isotropically 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	-

Declaration of Conformity:

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

Comments and Explanations:

None

Reviewed by: Ben Tseng

Report Producer: Ann Hou



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)	5955 ~ 7095	1 ~ 229 [58]
5925 ~ 7125	ax (HEW40)	5965 ~ 7085	3 ~ 227 [29]
5925 ~ 7125	ax (HEW80)	5985 ~ 7025	7 ~ 215 [14]

Band	Mode	BWch (MHz)	Nant
5.925-6.425GHz	802.11ax HEW20	20	2TX
6.425-6.525GHz	802.11ax HEW20	20	2TX
6.525-6.875GHz	802.11ax HEW20	20	2TX
6.875-7.125GHz	802.11ax HEW20	20	2TX
5.925-6.425GHz	802.11ax HEW40	40	2TX
6.425-6.525GHz	802.11ax HEW40	40	2TX
6.525-6.875GHz	802.11ax HEW40	40	2TX
6.875-7.125GHz	802.11ax HEW40	40	2TX
5.925-6.425GHz	802.11ax HEW80	80	2TX
6.425-6.525GHz	802.11ax HEW80	80	2TX
6.525-6.875GHz	802.11ax HEW80	80	2TX
6.875-7.125GHz	802.11ax HEW80	80	2TX

Note:

- ♦ HEW20, HEW40 and HEW80 use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- ♦ BWch is the nominal channel bandwidth.
- ♦ The channel defined in the IEEE Standard P802.11ax™/D6.1.

**1.1.2 Antenna Information**

Group	Ant.	Brand	Model Name	Antenna Type	Connector
A	1	Foxconn	79012F500-600-G	PIFA	I-PEX
	2	Foxconn	79012F500-600-G	PIFA	I-PEX
B	3	Foxconn	79012F300-600-G	PIFA	I-PEX
	4	Foxconn	79012F300-600-G	PIFA	I-PEX
C	5	Foxconn	79012F400-600-G	PIFA	I-PEX
	6	Foxconn	79012F400-600-G	PIFA	I-PEX

Ant.	Port	Gain (dBi)			
		5925-6425 MHz	6425-6525 MHz	6525-6875 MHz	6875-7125 MHz
1	1	4.34	3.52	4.59	4.95
2	2	4.34	3.52	4.59	4.95
3	1	2.54	2.44	3.35	2.57
4	2	2.54	2.44	3.35	2.57
5	1	3.53	3.21	3.91	4.18
6	2	3.53	3.21	3.91	4.18

Note 1: The EUT has six antennas.

Note 2: EUT can match with above antennas for using. Higher gain (Group A) in each group of antenna was used to perform the worst configuration and result of that was recorded as the final test result.

For 6GHz function:

For IEEE 802.11 ax mode (2TX/2RX)

Port 1 and port 2 could transmit/receive simultaneously.

Note3: Directional gain information

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

Ex.

Directional gain(NSS1) formula :

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

$$N_{SS1}(g1,1) = 10^{G1/20} ; N_{SS1}(g1,2) = 10^{G2/20} ; g_{j,k} = (N_{SS1}(g1,1) + N_{SS1}(g1,2))^2$$

$$DG = 10 \log[(N_{SS1}(g1,1) + N_{SS1}(g1,2))^2 / N_{ANT}] \Rightarrow 10 \log[(10^{G1/20} + 10^{G2/20})^2 / N_{ANT}]$$

$$5925-6425\text{MHz } DG = 10 \log[(10^{4.34/20} + 10^{4.34/20})^2 / N_{ANT}] = 7.35 \text{ dBi}$$

$$6425-6525\text{MHz } DG = 10 \log[(10^{3.52/20} + 10^{3.52/20})^2 / N_{ANT}] = 6.53 \text{ dBi}$$

$$6525-6875\text{MHz } DG = 10 \log[(10^{4.59/20} + 10^{4.59/20})^2 / N_{ANT}] = 7.60 \text{ dBi}$$

$$6875-7125\text{MHz } DG = 10 \log[(10^{4.95/20} + 10^{4.95/20})^2 / N_{ANT}] = 7.96 \text{ dBi}$$



1.1.3 EUT Information

Operational Condition			
EUT Power Type	From DC Power supply		
EUT Function	☐	Indoor Access Point	☐ Subordinate
	☒	Indoor Client	☐ Standard Power Access Point
	☐	Dual Client	☐ Standard Client
	☐	Fixed Client	
Beamforming Function	☐ With beamforming	☒	Without beamforming
Resource Unit(802.11ax)	☒ Full RU	☐	Partial RU
Software / Firmware Version for CBP		2.7.0.0	
Type of EUT			
☒	Stand-alone		
☐	Combined (EUT where the radio part is fully integrated within another device)		
	Combined Equipment - Brand Name / Model No.: ...		
☐	Plug-in radio (EUT intended for a variety of host systems)		
	Host System - Brand Name / Model No.:		
☐	Other:		

Note: The above information was declared by manufacturer.

1.1.4 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ax HEW20_Nss1,(MCS0)_2TX	0.479	3.2	311.25u	10k
802.11ax HEW40_Nss1,(MCS0)_2TX	0.594	2.26	544.375u	3k
802.11ax HEW80_Nss1,(MCS0)_2TX	0.438	3.59	297.5u	10k

Note. If DC < 0.98, the DCF was added while measuring Output power and PSD.



1.2 Applicable Standards

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

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

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

- ♦ KDB 987594 D01 v01r02
- ♦ KDB 987594 D02 v01r01
- ♦ KDB 662911 D01 v02r01
- ♦ KDB 412172 D01 v01r01
- ♦ KDB 414788 D01 v01r01

1.3 Testing Location Information

Test Lab. : Sporton International Inc. Hsinhua Laboratory				
☒ Hsinhua (TAF: 3785)	ADD: No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)			
	TEL: 886-3-327-3456		FAX: 886-3-327-0973	
Test site Designation No. TW3785 with FCC.				
Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
AC Conduction	CO04-HY	Edward Wang	22.3~24.4°C / 54~58%	15/Oct/2021
RF Conducted	TH06-HY	Alan Chien	20.1~26.9°C / 50~60%	04/Oct/2021~11/Feb/2022
Radiated	03CH03-HY	Edward Wang	22.3~24.7°C / 53~60%	10/Oct/2021~15/Oct/2021
Contention-Based Protocol	DFS03-HY	Tony Chang	22.1~24.2°C / 53~59%	26/Jan/2022~08/Feb/2022
☐ Wen 33rd.St. (TAF: 3785)	ADD: No.14-1, Ln. 19, Wen 33rd St., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)			
	TEL: 886-3-318-0787		FAX: 886-3-318-0287	
Test site Designation No. TW0008 with FCC.				

1.4 Measurement Uncertainty

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

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	2.64 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	4.80 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	4.30 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.00 dB	Confidence levels of 95%
Conducted Emission	2.00 dB	Confidence levels of 95%
Output Power Measurement	2.14 dB	Confidence levels of 95%
Power Density Measurement	0.26 dB	Confidence levels of 95%
Bandwidth Measurement	0.68 %	Confidence levels of 95%



2 Test Configuration of EUT

2.1 Test Channel Mode

Test Software Version	QATool_Dbgv0.0.2.39
Mode	Power Setting
802.11ax HEW20_Nss1,(MCS0)_2TX	-
5955MHz	-2
6175MHz	-3.5
6415MHz	-3
6435MHz	-2.5
6475MHz	-2.5
6515MHz	-2.5
6535MHz	-3.5
6695MHz	-3.5
6855MHz	-4
6875MHz	-4
6895MHz	-4.5
6995MHz	-3.5
7095MHz	-3
802.11ax HEW40_Nss1,(MCS0)_2TX	-
5965MHz	2
6165MHz	0.5
6405MHz	1.5
6445MHz	2
6485MHz	2
6525MHz	1.5
6565MHz	0
6685MHz	1
6845MHz	1
6885MHz	0
6925MHz	1
7005MHz	0
7085MHz	0.5
802.11ax HEW80_Nss1,(MCS0)_2TX	-



Mode	Power Setting
5985MHz	4.5
6145MHz	3.5
6385MHz	4
6465MHz	4.5
6545MHz	4
6625MHz	3.5
6705MHz	3.5
6785MHz	4
6865MHz	3.5
6945MHz	3.5
7025MHz	3.5

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	CTX
1	DC Power Supply mode

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emission Bandwidth Maximum Equivalent Isotropically Radiated Power (E.I.R.P.) Peak Power Spectral Density (E.I.R.P.) Contention Based Protocol Frequency Stability
Test Condition	Conducted measurement at transmit chains

The Worst Case Mode for Following Conformance Tests			
Tests Item	Unwanted Emissions		
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.		
Operating Mode < 1GHz	CTX		
1	DC Power Supply mode		
Operating Mode > 1GHz	CTX		
Orthogonal Planes of EUT	X Plane	Y Plane	Z Plane
			
Worst Planes of EUT			V

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis
Operating Mode	CTX
1	2.4GHz WLAN+Bluetooth
2	5GHz WLAN+Bluetooth
3	6GHz WLAN+Bluetooth
Refer to Sporton Test Report No.: FA192341 for Co-location RF Exposure Evaluation.	



2.3 Support Equipment

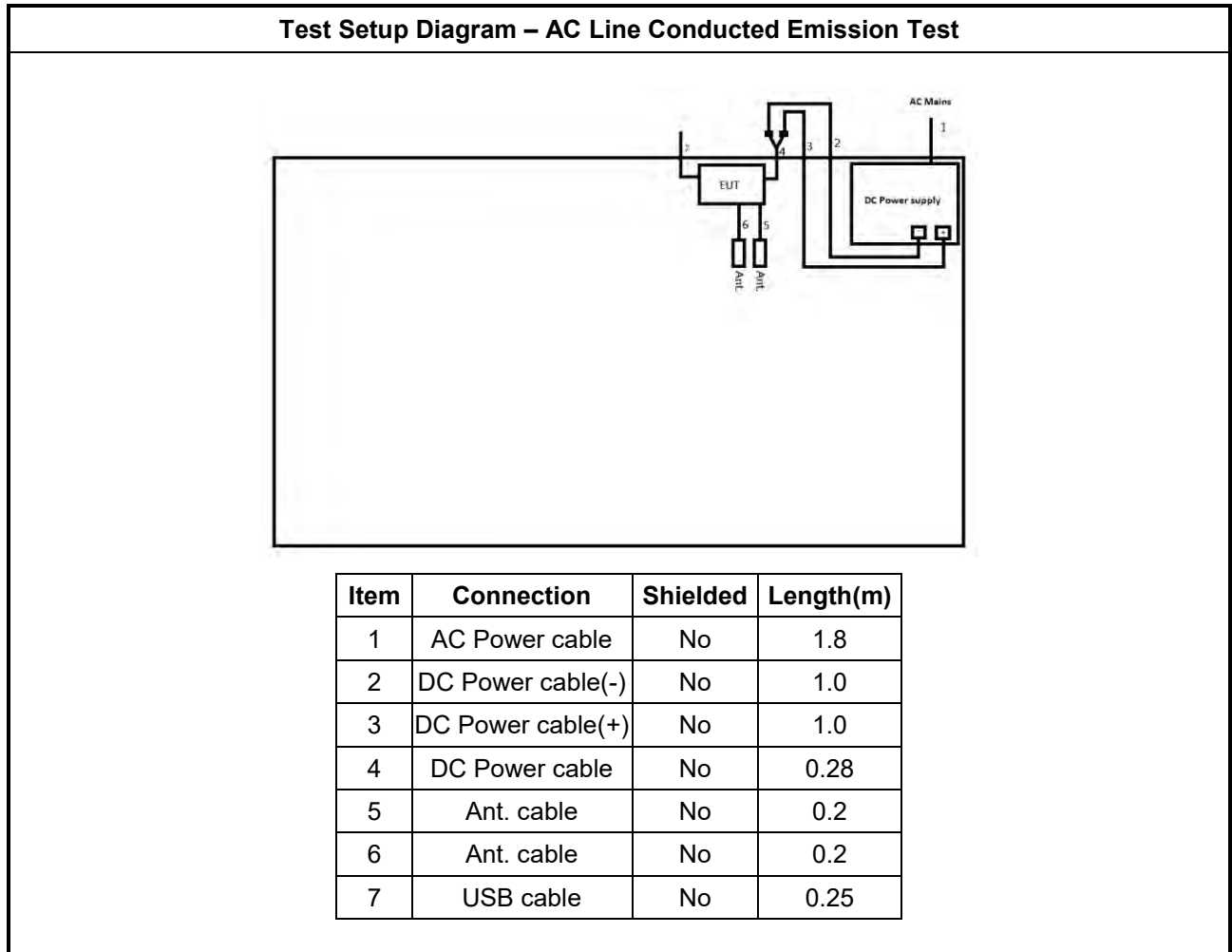
Support Equipment – AC Conduction					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	DC Power Supply	GW	GPS-3030DD	-	-
2	DC Power cable(Red)	MiSUMi	WTN1228-RED	-	-
3	DC Power cable(Black)	MiSUMi	WTN1228-BLACK	-	-

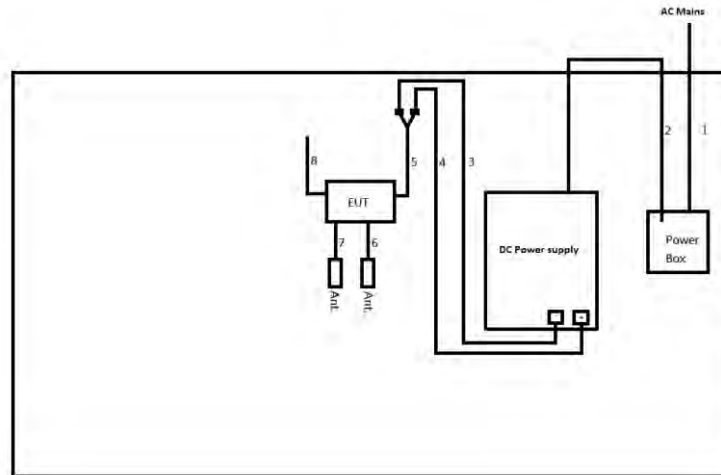
Support Equipment – Conducted					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Notebook	DELL	E5410	-	-
2	Adapter for NB	DELL	HA65NM130	-	-
3	DC Power Supply	GW	GPS-3030DD	-	-
4	DC Power cable(Red)	MiSUMi	WTN1228-RED	-	-
5	DC Power cable(Black)	MiSUMi	WTN1228-BLACK	-	-

Support Equipment – Radiated					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	DC Power Supply	GW	GPS-3030DD	-	-
2	DC Power cable(Red)	MiSUMi	WTN1228-RED	-	-
3	DC Power cable(Black)	MiSUMi	WTN1228-BLACK	-	-

Support Equipment –Contention-Based Protocol					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Notebook	DELL	Latitude E5510	-	-

2.4 Test Setup Diagram



Test Setup Diagram - Radiated Test


Item	Connection	Shielded	Length(m)
1	AC Power cable	No	1.8
2	AC Power cable	No	1.8
3	DC Power cable(-)	No	1.0
4	DC Power cable(+)	No	1.0
5	DC Power cable	Yes	0.28
6	Ant. cable	No	0.2
7	Ant. cable	No	0.2
8	USB cable	No	0.25



3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

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

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

3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

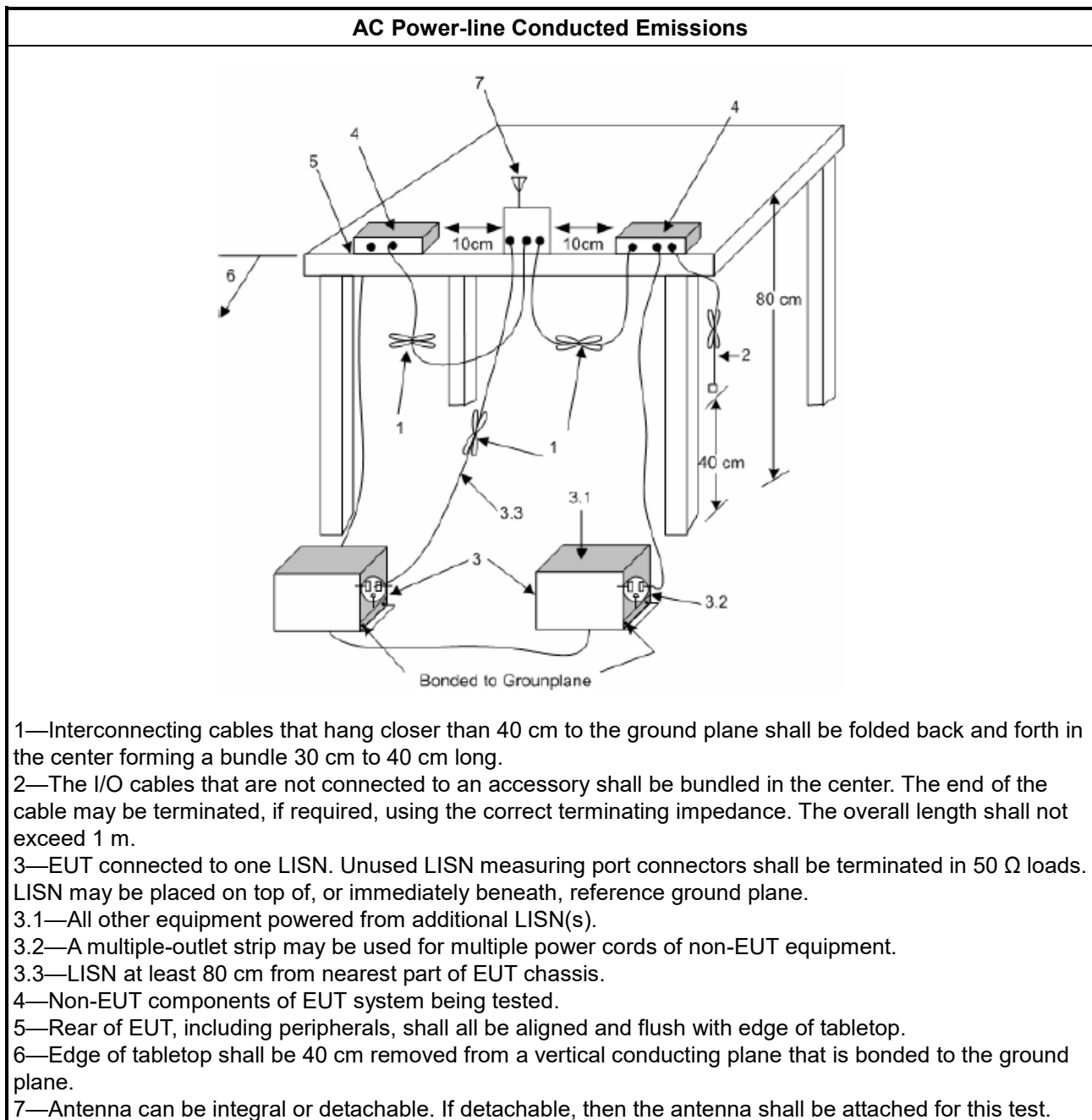
Test Method
☒ Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

3.1.4 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Raw(Read Level) + LISN(LISN Factor) + CL(Cable Loss) + AT(Attenuator).

3.1.5 Test Setup



3.1.6 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 Emission Bandwidth

3.2.1 Emission Bandwidth Limit

Emission Bandwidth Limit	
UNII Devices	
☒	For the 5925-6425 GHz band, N/A
☒	For the 6425-6525 GHz band, N/A
☒	For the 6525-6875 GHz band, N/A
☒	For the 6875-7125 GHz band, N/A

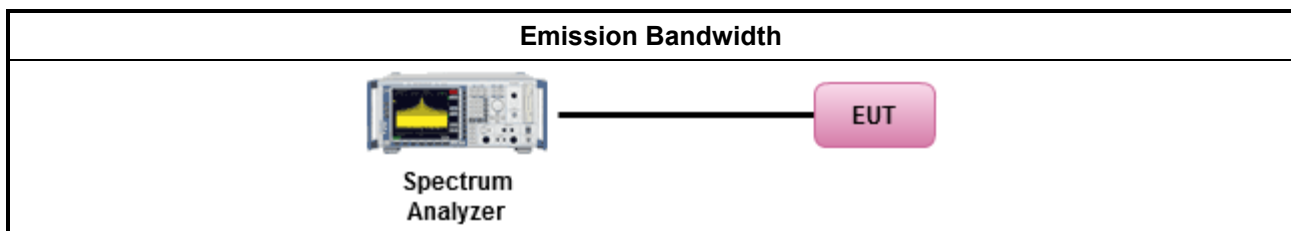
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method	
For the emission bandwidth shall be measured using one of the options below:	
☒	Refer as KDB 789033, clause C for EBW and clause D for OBW measurement.
☐	Refer as ANSI C63.10, clause 6.9.3 for occupied bandwidth testing.
☐	Refer as IC RSS-Gen, clause 6.7 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	
☒ For the 5.925 ~ 6.425 GHz band:	
	■ 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.
☒ For the 6.425 ~ 6.525 GHz band:	
	■ 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.
☒ For the 6.525 ~ 6.875 GHz band:	
	■ 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.
☒ For the 6.875 ~ 7.125 GHz band:	
	■ 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.

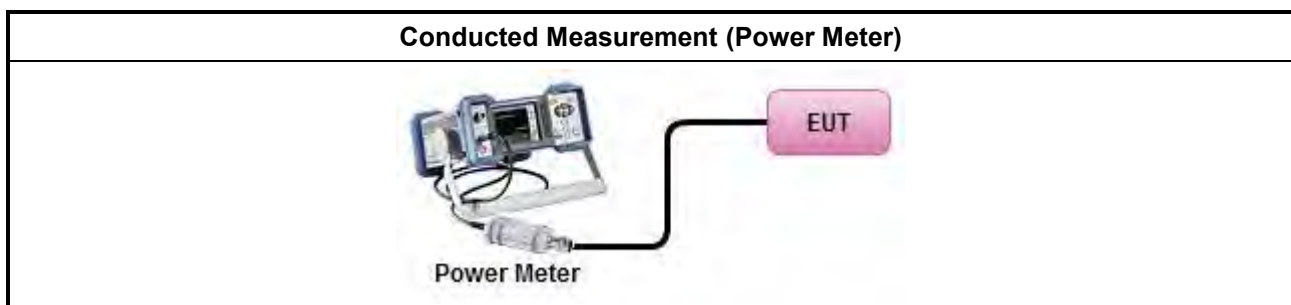
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method	
Maximum Output Power Setting	
	Duty cycle $\geq 98\%$
☐	Refer as KDB 789033, clause E Method SA-2 (spectral trace averaging).
	Duty cycle $< 98\%$
☐	Refer as KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
	Wideband RF power meter and average over on/off periods with duty factor
☒	Refer as KDB 789033, clause E Method PM-G (using an RF average power meter).
☒	For conducted measurement.
	- If the EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them. - If multiple transmit chains, EIRP calculation could be following as methods: $P_{\text{total}} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $\text{EIRP}_{\text{total}} = P_{\text{total}} + \text{DG}$
☐	For radiated measurement.
	- Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz. - Refer as KDB 789033, clause II A.1.F "Antenna-port Conducted versus Radiated Testing" - Refer as KDB 412172, clause 2.2 for EIRP calculation.

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	
☒	For the 5.925 ~ 6.425 GHz band:
☐	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.
☒	For the 6.425 ~ 6.525 GHz band:
☐	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.
☒	For the 6.525 ~ 6.875 GHz band:
☐	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.
☒	For the 6.875 ~ 7.125 GHz band:
☐	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.

3.4.2 Measuring Instruments

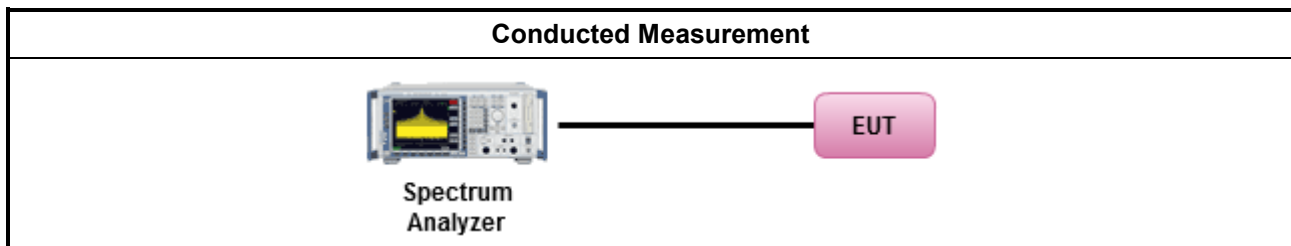
Refer a test equipment and calibration data table in this test report.



3.4.3 Test Procedures

Test Method	
Peak power spectral density procedures that the same method as used to determine the conducted output power shall be used to determine the peak power spectral density and use the peak search function on the spectrum analyzer to find the peak of the spectrum. For the peak power spectral density shall be measured using below options:	
☐	Refer as KDB 789033, F)5) power spectral density can be measured using resolution bandwidths < 1 MHz provided that the results are integrated over 1 MHz bandwidth
☐	Refer as KDB 789033, clause E Method SA-2. (spectral trace averaging)
☒	Refer as KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
☒ For conducted measurement.	
If the EUT supports multiple transmit chains using options given below:	
☒	Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.
☒	Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits,
☒	Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.
If multiple transmit chains, EIRP PPSD calculation could be following as methods: $PPSD_{total} = PPSD_1 + PPSD_2 + \dots + PPSD_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = PPSD_{total} + DG$	
☐ For radiated measurement.	
Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.	
Refer as KDB 789033, clause II A.1.F "Antenna-port Conducted versus Radiated Testing"	
Refer as KDB 412172, clause 2.2 for EIRP calculation.	

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

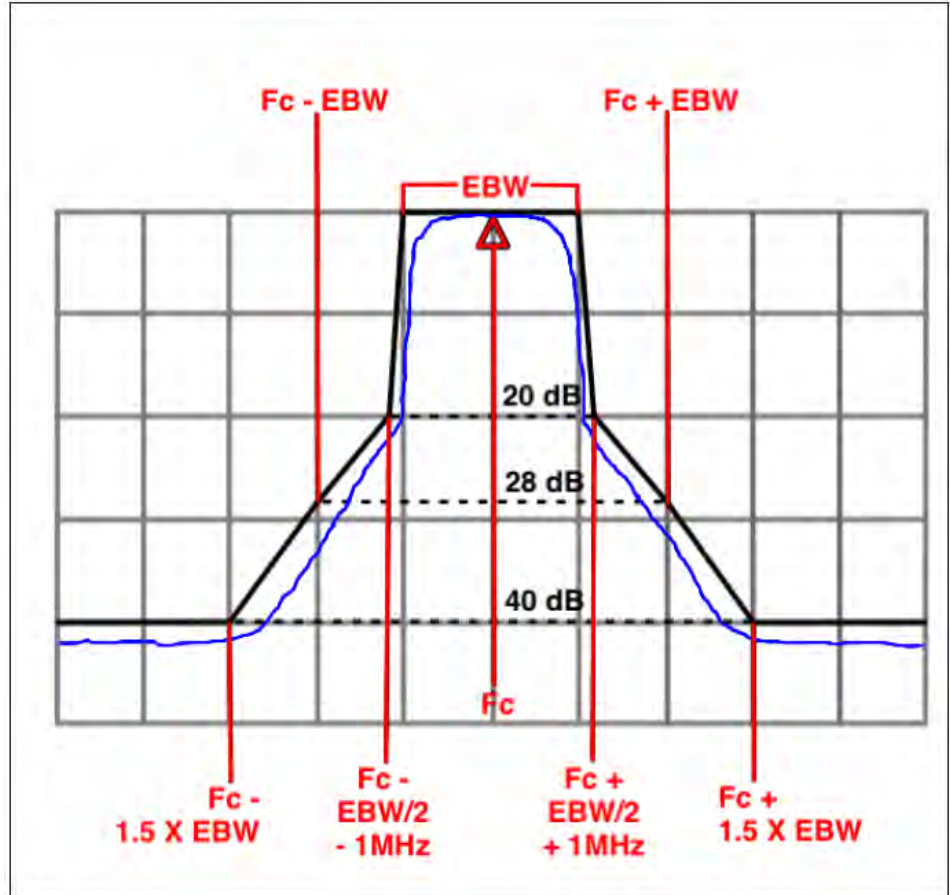
Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance 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	e.i.r.p. -27 dBm [68.2 dBuV/m@3m] 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) = 68.2dBuV/m at 3m + 9.54dB = 77.74 dBuV/m at 1m.
Frequency	Emission MASK Limit
5.945 – 7.125 GHz	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.





3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

Test Method	
Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 m for frequencies above 30 MHz, unless it can be further demonstrated that measurements at a distance of 30 m or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).	
The average emission levels shall be measured in [duty cycle $\geq$ 98 or duty factor].	
For the transmitter unwanted emissions shall be measured using following options below:	
	Refer as KDB 789033, clause G)2) for unwanted emissions into non-restricted bands.
	Refer as KDB 789033, clause G)1) for unwanted emissions into restricted bands.
	☒ Refer as KDB 789033, G)6) Method AD (Trace Averaging). (For unrestricted band measurement)
	☐ Refer as KDB 789033, G)6) Method VB (Reduced VBW).
	☒ Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). $VBW \geq 1/T$, where T is pulse time.(For restricted band average measurement)
	☐ Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions.
	☒ Refer as KDB 789033, clause G)5) measurement procedure peak limit.
	☐ Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak limit.
For emission MASK shall be measured using following options below:	
	☒ Refer as KDB 987594 D02, J) In-Band Emissions
For radiated measurement.	
	Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.
	Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.
	Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.
The any unwanted emissions level shall not exceed the fundamental emission level.	
All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.	

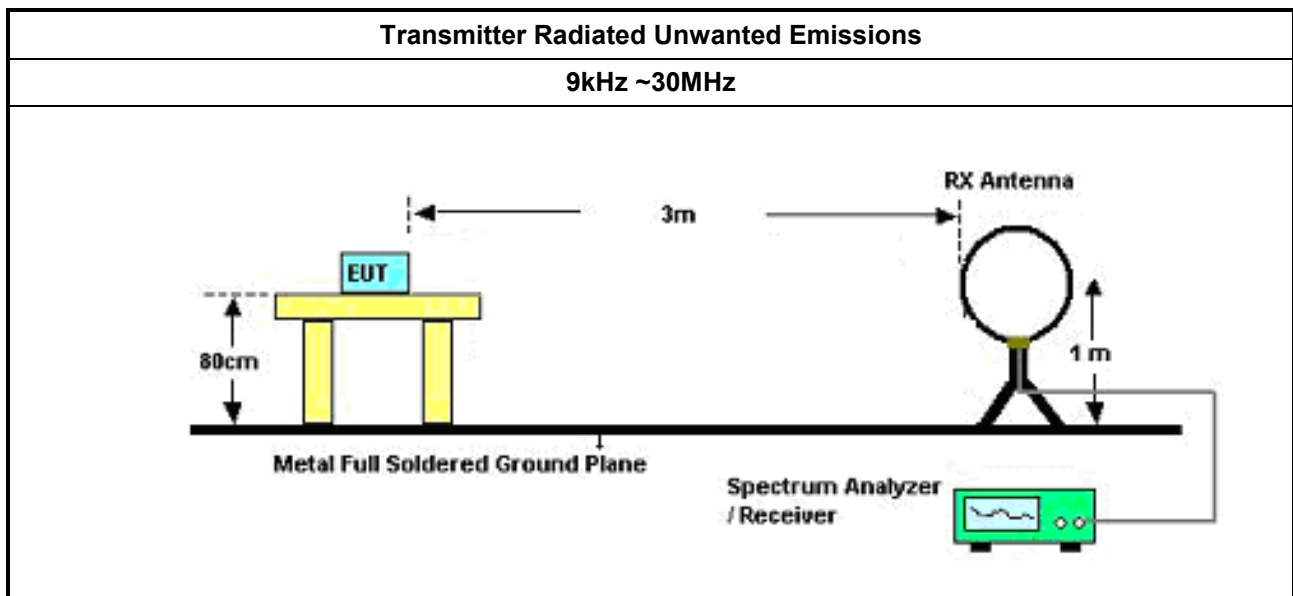
Use the following spectrum analyzer settings:	
	Set RBW=100 kHz for $f < 1$ GHz; VBW=3 * RBW; Sweep = auto; Detector function = peak; Trace = max hold.
	Set RBW = 1 MHz, VBW= 3MHz for $f \geq 1$ GHz for peak measurement. For average measurement, refer as 1.1.4.
KDB 414788 Open-Field Test Sites and Chamber Correlation Justification.	
	Based on FCC 15.31(f)(2): measurements may be performed at a distance closer than that specified in regulations; however, an attempt should be made to avoid making measurements in the near field.
	Open-field site and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

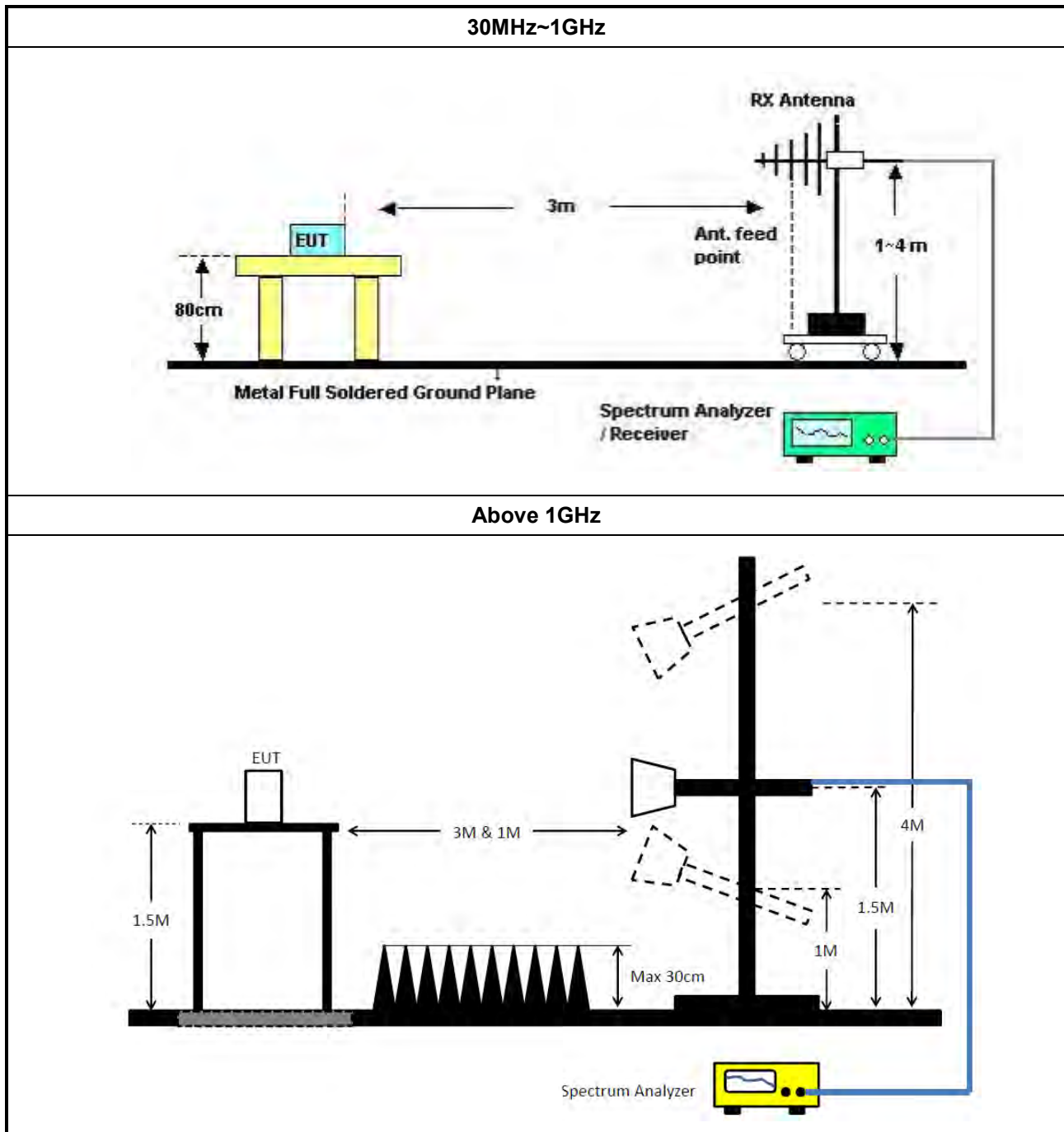
3.5.4 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Raw(Read Level) + AF(Antenna Factor) + CL(Cable Loss) - PA(Preamplifier Factor)

3.5.5 Test Setup





3.5.6 Transmitter Unwanted Emissions (Below 30MHz)

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

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.

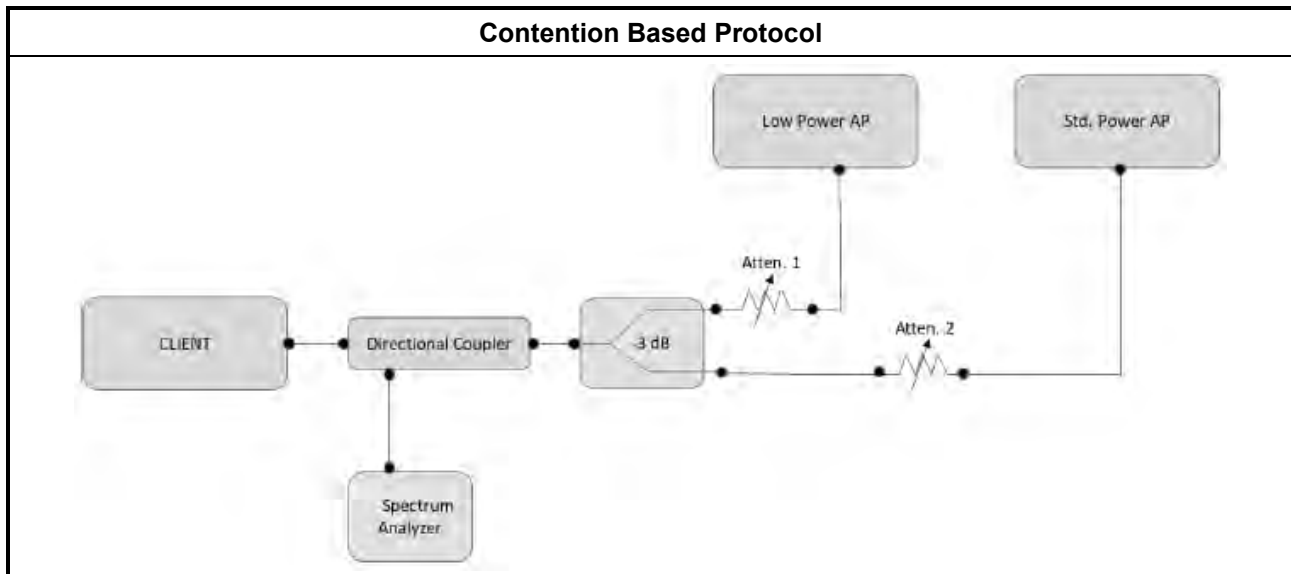
3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

Test Method	
■	For Contention Based Protocol shall be measured using following options below:
☒	Refer as 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.

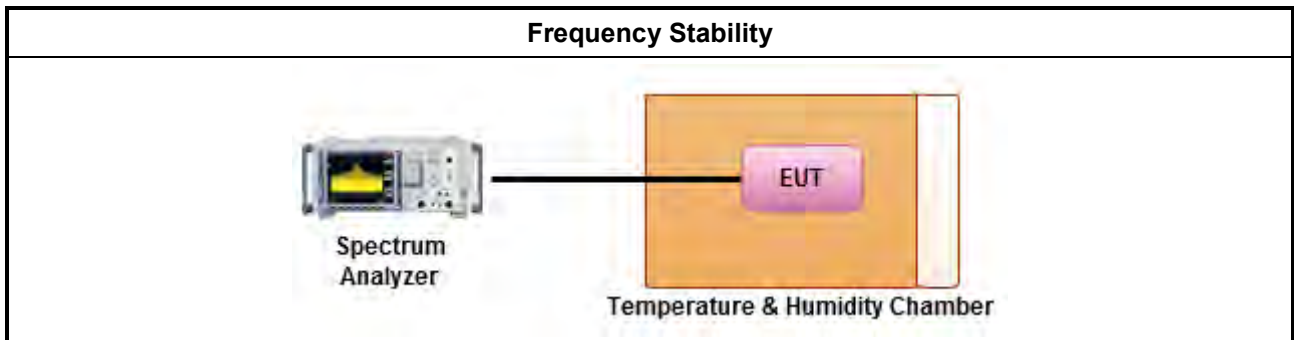
3.7.2 Measuring Instruments

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 for AC Conduction

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
EMI Test Receiver	R&S	ESR3	102051	9kHz ~ 3.6GHz	21/May/2021	20/May/2022
LISN	R&S	ENV216	101295	9kHz ~ 30MHz	11/Nov/2020	10/Nov/2021
RF Cable 5m	TITAN	TITAN	CO04-cable-01	0.1MHz~200MHz	03/Mar/2021	02/Mar/2022
Impuls Begrenzer Pulse Limiter	SCHWARZBECK	VTSD 9561-F	9561-F041	9kHz ~ 30MHz	15/Sep/2021	14/Sep/2022
SENSE-EMI	Sporton	V5.10.7.13	N/A	N/A	N/A	N/A

Instrument for Conducted Test

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Signal Analyzer	R&S	FSV 40	101515	10Hz~40GHz	26/Mar/2021	25/Mar/2022
Pulse Sensor	Anritsu	MA2411B	1027452	300MHz~40GHz	25/Mar/2021	24/Mar/2022
Power Meter	Anritsu	ML2495A	1124009	300MHz~40GHz	25/Mar/2021	24/Mar/2022
Signal Generator	Keysight	N5171B	MY53051240	9kHz~6GHz	23/Nov/2020	22/Nov/2021
Signal Generator	R&S	SMB100A	181147	100kHz~40GHz	21/Oct/2021	20/Oct/2022
SENSE 15407_NII	Sporton	v5.10.7.17	N/A	N/A	N/A	N/A

**Instrument for Radiated Test**

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	30MHz~1GHz 3m	03/Aug/2021	02/Aug/2022
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	1GHz~18GHz 3m	03/Aug/2021	02/Aug/2022
Signal Analyzer	R&S	FSV 40	101515	10Hz~40GHz	26/Mar/2021	25/Mar/2022
Amplifier	HP	8447D	2944A08033	10kHz~1.3GHz	13/Apr/2021	12/Apr/2022
Microwave Preamplifier	Agilent	8449B	3008A02326	1GHz~26.5GHz	15/Jul/2021	14/Jul/2022
Bilog Antenna & 6dB Attenuator	SCHAFFNER / EMCI	CBL6112B / N-6-05	22237 / AT-N-0603	30MHz~1GHz	25/Oct/2020	24/Oct/2021
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1531	1GHz~18GHz	24/Mar/2021	23/Mar/2022
RF Cable-R03m	Jye Bao	RG142	CB021	9kHz~30MHz	16/Jun/2021	15/Jun/2022
RF Cable-R03m	Jye Bao	RG142	MY37335/4+CB0 21-1+CB021-2	30MHz~1GHz	17/Mar/2021	16/Mar/2022
RF CABLE 5+6m	HUBER+SUHNER	SUOFLEX 104	SN MY38596/4+SN 804300/4	1GHz~40GHz	28/Jul/2021	27/Jul/2022
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170221	15GHz~40GHz	11/Mar/2021	10/Mar/2022
Microwave Preamplifier	EMC INSTRUMENTS	EM18G40G	060604	18GHz ~ 40GHz	09/Mar/2021	08/Mar/2022
Loop Antenna	TESEQ	HLA 6120	31244	9kHz~30MHz	16/Mar/2021	15/Mar/2022
EMI Test Receiver	R&S	ESR3	102052	9kHz~3.6GHz	19/Apr/2021	18/Apr/2022
SENSE 15407_NII	Sporton	v5.10.7.13	N/A	N/A	N/A	N/A

Instrument for Contention-Based Protocol Test

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Signal Analyzer	R&S	FSP 30	100792	9 kHz ~ 30GHz	30/Jun/2021	29/Jun/2022
Vector Signal Generator	R&S	SMU200A	102098	100kHz~6GHz	23/Mar/2021	22/Mar/2022
DFS-Adaptivity	Sporton	Ver 2.7	N/A	N/A	N/A	N/A

—THE END—



Conducted Emissions at Powerline

Appendix A

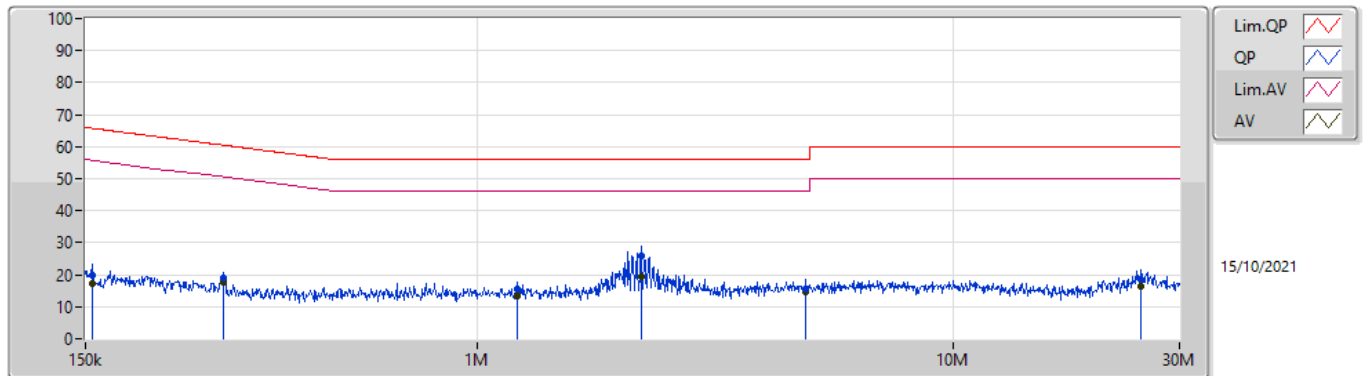
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	AV	2.211M	19.54	46.00	-26.46	Line

Mode Configure

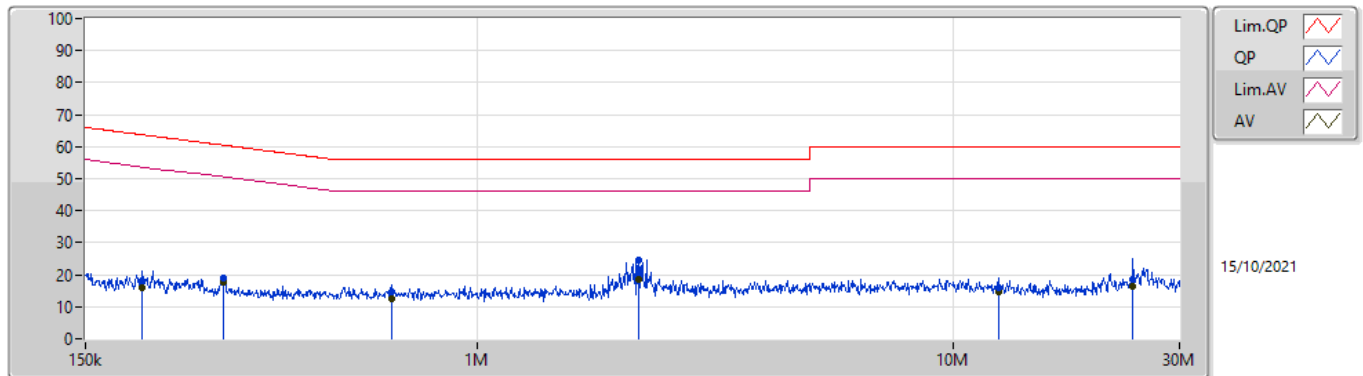
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition	Comments
Mode 1	Pass	QP	154.868k	19.67	65.73	-46.06	Line	-
Mode 1	Pass	AV	154.868k	17.24	55.73	-38.49	Line	-
Mode 1	Pass	QP	293.329k	19.18	60.44	-41.26	Line	-
Mode 1	Pass	AV	293.329k	17.77	50.44	-32.67	Line	-
Mode 1	Pass	QP	1.215M	15.54	56.00	-40.46	Line	-
Mode 1	Pass	AV	1.215M	13.45	46.00	-32.55	Line	-
Mode 1	Pass	QP	2.211M	25.85	56.00	-30.15	Line	-
Mode 1	Pass	AV	2.211M	19.54	46.00	-26.46	Line	-
Mode 1	Pass	QP	4.913M	15.46	56.00	-40.54	Line	-
Mode 1	Pass	AV	4.913M	14.48	46.00	-31.52	Line	-
Mode 1	Pass	QP	24.945M	18.52	60.00	-41.48	Line	-
Mode 1	Pass	AV	24.945M	16.36	50.00	-33.64	Line	-
Mode 1	Pass	QP	197.568k	18.28	63.71	-45.43	Neutral	-
Mode 1	Pass	AV	197.568k	16.13	53.71	-37.58	Neutral	-
Mode 1	Pass	QP	293.329k	19.16	60.44	-41.28	Neutral	-
Mode 1	Pass	AV	293.329k	17.81	50.44	-32.63	Neutral	-
Mode 1	Pass	QP	659.627k	14.45	56.00	-41.55	Neutral	-
Mode 1	Pass	AV	659.627k	12.63	46.00	-33.37	Neutral	-
Mode 1	Pass	QP	2.185M	24.77	56.00	-31.23	Neutral	-
Mode 1	Pass	AV	2.185M	18.53	46.00	-27.47	Neutral	-
Mode 1	Pass	QP	12.504M	15.78	60.00	-44.22	Neutral	-
Mode 1	Pass	AV	12.504M	14.50	50.00	-35.50	Neutral	-
Mode 1	Pass	QP	23.968M	18.61	60.00	-41.39	Neutral	-
Mode 1	Pass	AV	23.968M	16.23	50.00	-33.77	Neutral	-

Conducted Emissions at Powerline_Mode 1



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	154.868k	19.67	65.73	-46.06	19.62	Line	-	0.05	9.69	0.04	9.89			
AV	154.868k	17.24	55.73	-38.49	19.62	Line	-	-2.38	9.69	0.04	9.89			
QP	293.329k	19.18	60.44	-41.26	19.61	Line	-	-0.43	9.67	0.05	9.89			
AV	293.329k	17.77	50.44	-32.67	19.61	Line	-	-1.84	9.67	0.05	9.89			
QP	1.215M	15.54	56.00	-40.46	19.65	Line	-	-4.11	9.67	0.09	9.89			
AV	1.215M	13.45	46.00	-32.55	19.65	Line	-	-6.20	9.67	0.09	9.89			
QP	2.211M	25.85	56.00	-30.15	19.67	Line	-	6.18	9.68	0.11	9.88			
AV	2.211M	19.54	46.00	-26.46	19.67	Line	-	-0.13	9.68	0.11	9.88			
QP	4.913M	15.46	56.00	-40.54	19.74	Line	-	-4.28	9.70	0.15	9.89			
AV	4.913M	14.48	46.00	-31.52	19.74	Line	-	-5.26	9.70	0.15	9.89			
QP	24.945M	18.52	60.00	-41.48	19.80	Line	-	-1.28	9.59	0.32	9.89			
AV	24.945M	16.36	50.00	-33.64	19.80	Line	-	-3.44	9.59	0.32	9.89			

Conducted Emissions at Powerline_Mode 1



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	197.568k	18.28	63.71	-45.43	19.61	Neutral	-	-1.33	9.68	0.04	9.89			
AV	197.568k	16.13	53.71	-37.58	19.61	Neutral	-	-3.48	9.68	0.04	9.89			
QP	293.329k	19.16	60.44	-41.28	19.61	Neutral	-	-0.45	9.67	0.05	9.89			
AV	293.329k	17.81	50.44	-32.63	19.61	Neutral	-	-1.80	9.67	0.05	9.89			
QP	659.627k	14.45	56.00	-41.55	19.63	Neutral	-	-5.18	9.67	0.07	9.89			
AV	659.627k	12.63	46.00	-33.37	19.63	Neutral	-	-7.00	9.67	0.07	9.89			
QP	2.185M	24.77	56.00	-31.23	19.67	Neutral	-	5.10	9.68	0.11	9.88			
AV	2.185M	18.53	46.00	-27.47	19.67	Neutral	-	-1.14	9.68	0.11	9.88			
QP	12.504M	15.78	60.00	-44.22	19.86	Neutral	-	-4.08	9.74	0.23	9.89			
AV	12.504M	14.50	50.00	-35.50	19.86	Neutral	-	-5.36	9.74	0.23	9.89			
QP	23.968M	18.61	60.00	-41.39	19.94	Neutral	-	-1.33	9.73	0.32	9.89			
AV	23.968M	16.23	50.00	-33.77	19.94	Neutral	-	-3.71	9.73	0.32	9.89			

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)_2TX	26.1M	19.13M	19M1D1D	23.37M	19.07M
802.11ax HEW40_Nss1,(MCS0)_2TX	39.66M	37.721M	37M7D1D	39.48M	37.541M
802.11ax HEW80_Nss1,(MCS0)_2TX	80.28M	77.121M	77M1D1D	80.16M	76.762M
6.425-6.525GHz	-	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_2TX	31.62M	19.1M	19M1D1D	23.25M	19.04M
802.11ax HEW40_Nss1,(MCS0)_2TX	39.6M	37.601M	37M6D1D	39.54M	37.541M
802.11ax HEW80_Nss1,(MCS0)_2TX	80.28M	77.001M	77M0D1D	80.04M	76.882M
6.525-6.875GHz	-	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_2TX	34.89M	19.1M	19M1D1D	23.52M	19.07M
802.11ax HEW40_Nss1,(MCS0)_2TX	39.6M	37.661M	37M7D1D	39.42M	37.541M
802.11ax HEW80_Nss1,(MCS0)_2TX	80.4M	77.241M	77M2D1D	80.04M	76.882M
6.875-7.125GHz	-	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_2TX	34.41M	19.13M	19M1D1D	22.05M	19.07M
802.11ax HEW40_Nss1,(MCS0)_2TX	39.66M	37.661M	37M7D1D	39.42M	37.541M
802.11ax HEW80_Nss1,(MCS0)_2TX	80.4M	77.121M	77M1D1D	80.04M	76.762M

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

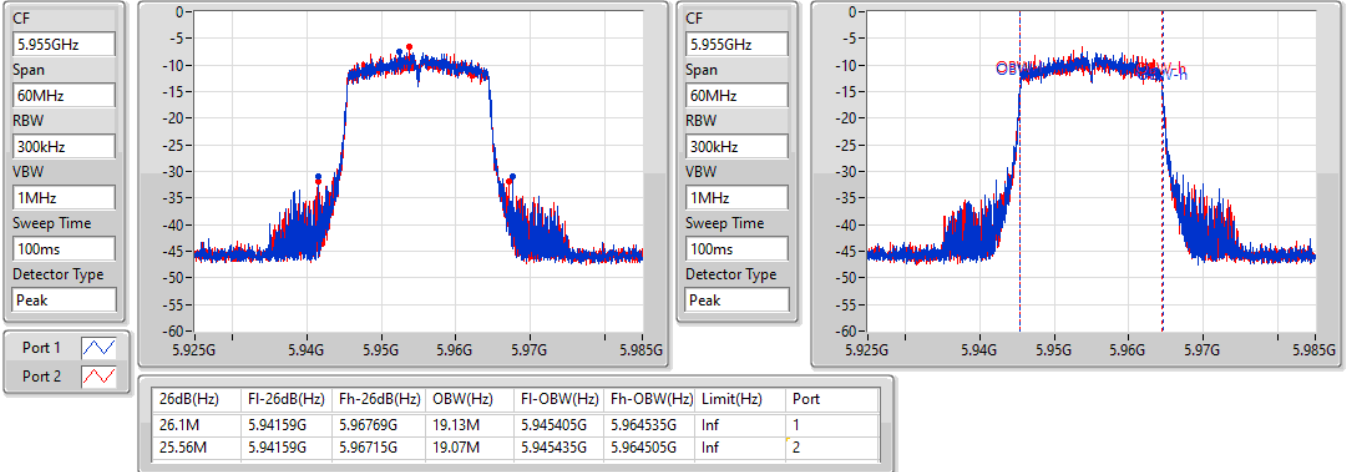
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11ax HEW20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5955MHz	Pass	Inf	26.1M	19.13M	25.56M	19.07M
6175MHz	Pass	Inf	25.71M	19.07M	23.37M	19.07M
6415MHz	Pass	Inf	24.66M	19.07M	24.06M	19.07M
6435MHz	Pass	Inf	28.83M	19.04M	24.39M	19.07M
6475MHz	Pass	Inf	31.62M	19.1M	24.36M	19.07M
6515MHz	Pass	Inf	24.45M	19.07M	23.25M	19.1M
6535MHz	Pass	Inf	27.63M	19.07M	23.52M	19.07M
6695MHz	Pass	Inf	28.53M	19.07M	27.18M	19.1M
6855MHz	Pass	Inf	34.89M	19.1M	29.07M	19.1M
6875MHz	Pass	Inf	32.46M	19.1M	28.65M	19.07M
6895MHz	Pass	Inf	34.41M	19.13M	28.53M	19.1M
6995MHz	Pass	Inf	29.16M	19.1M	22.05M	19.07M
7095MHz	Pass	Inf	26.64M	19.07M	25.56M	19.1M
802.11ax HEW40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5965MHz	Pass	Inf	39.54M	37.601M	39.54M	37.541M
6165MHz	Pass	Inf	39.6M	37.661M	39.48M	37.541M
6405MHz	Pass	Inf	39.54M	37.601M	39.66M	37.721M
6445MHz	Pass	Inf	39.6M	37.601M	39.54M	37.541M
6485MHz	Pass	Inf	39.6M	37.601M	39.54M	37.601M
6525MHz	Pass	Inf	39.54M	37.601M	39.6M	37.601M
6565MHz	Pass	Inf	39.42M	37.601M	39.42M	37.541M
6685MHz	Pass	Inf	39.6M	37.601M	39.48M	37.601M
6845MHz	Pass	Inf	39.54M	37.601M	39.6M	37.661M
6885MHz	Pass	Inf	39.42M	37.601M	39.54M	37.601M
6925MHz	Pass	Inf	39.6M	37.661M	39.54M	37.541M
7005MHz	Pass	Inf	39.66M	37.661M	39.48M	37.601M
7085MHz	Pass	Inf	39.42M	37.601M	39.6M	37.541M
802.11ax HEW80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5985MHz	Pass	Inf	80.28M	76.882M	80.16M	77.001M
6145MHz	Pass	Inf	80.28M	77.001M	80.28M	77.121M
6385MHz	Pass	Inf	80.28M	76.882M	80.16M	76.762M
6465MHz	Pass	Inf	80.28M	77.001M	80.16M	77.001M
6545MHz	Pass	Inf	80.16M	77.001M	80.04M	76.882M
6625MHz	Pass	Inf	80.04M	77.001M	80.28M	77.241M
6705MHz	Pass	Inf	80.16M	77.121M	80.28M	77.001M
6785MHz	Pass	Inf	80.28M	77.001M	80.16M	76.882M
6865MHz	Pass	Inf	80.28M	77.001M	80.4M	77.121M
6945MHz	Pass	Inf	80.4M	77.121M	80.16M	76.762M
7025MHz	Pass	Inf	80.04M	77.001M	80.16M	76.882M

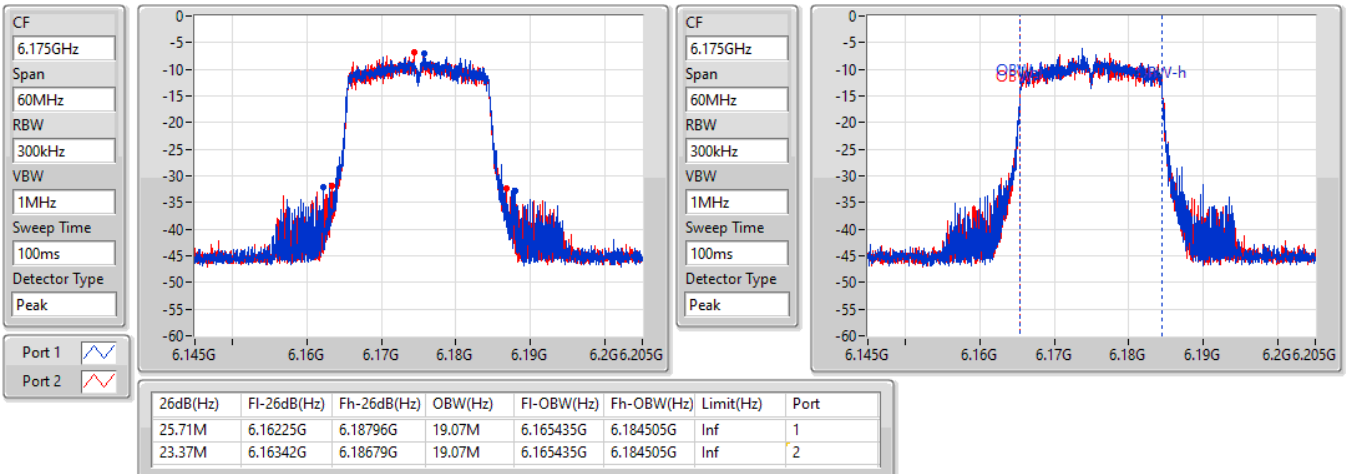
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
5955MHz

04/11/2021


802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
6175MHz

04/11/2021

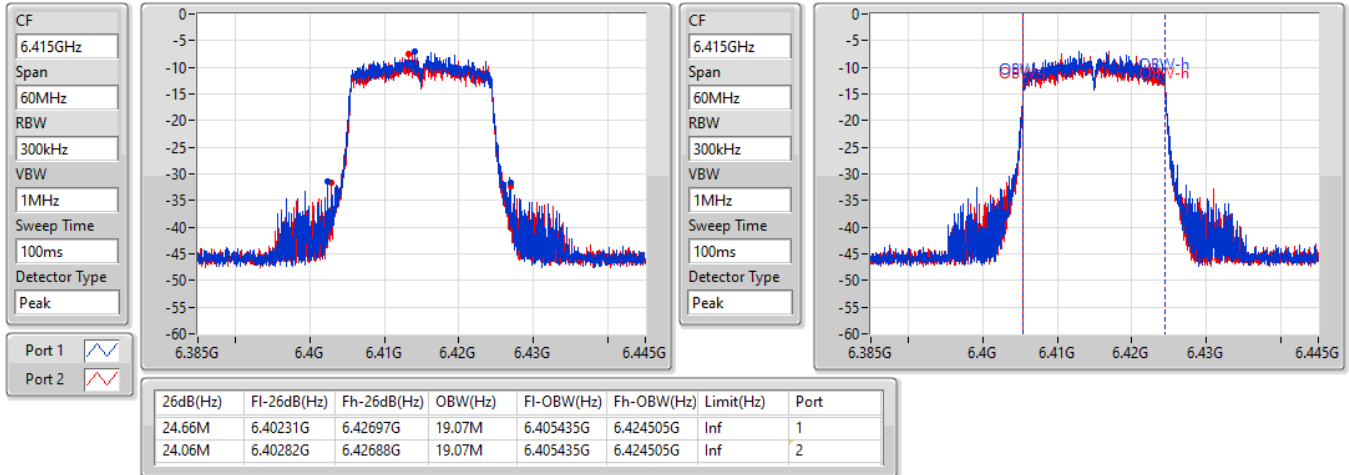


802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

6415MHz

04/11/2021

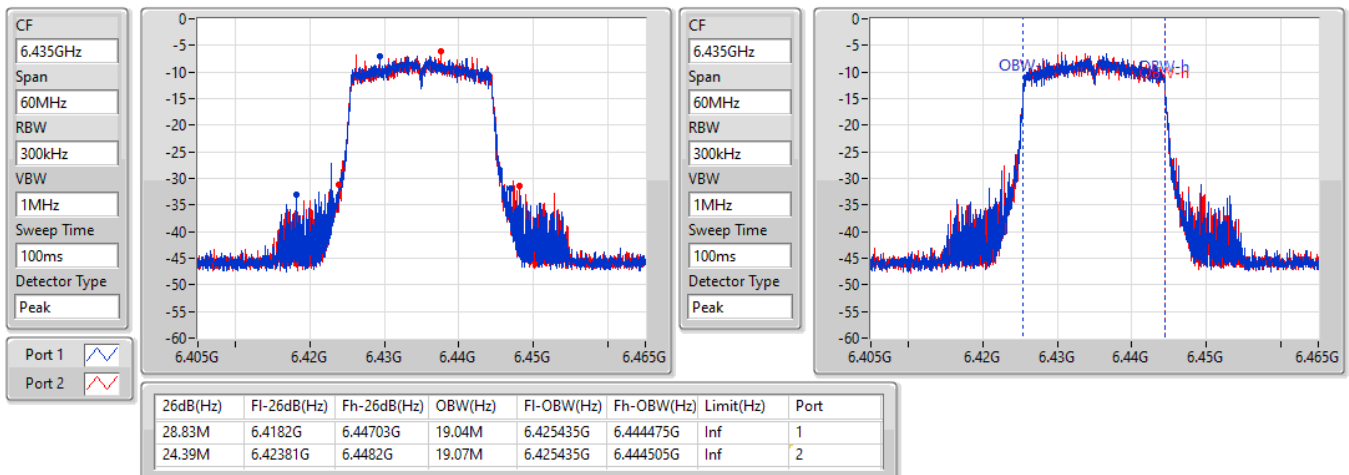


802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

6435MHz

04/11/2021

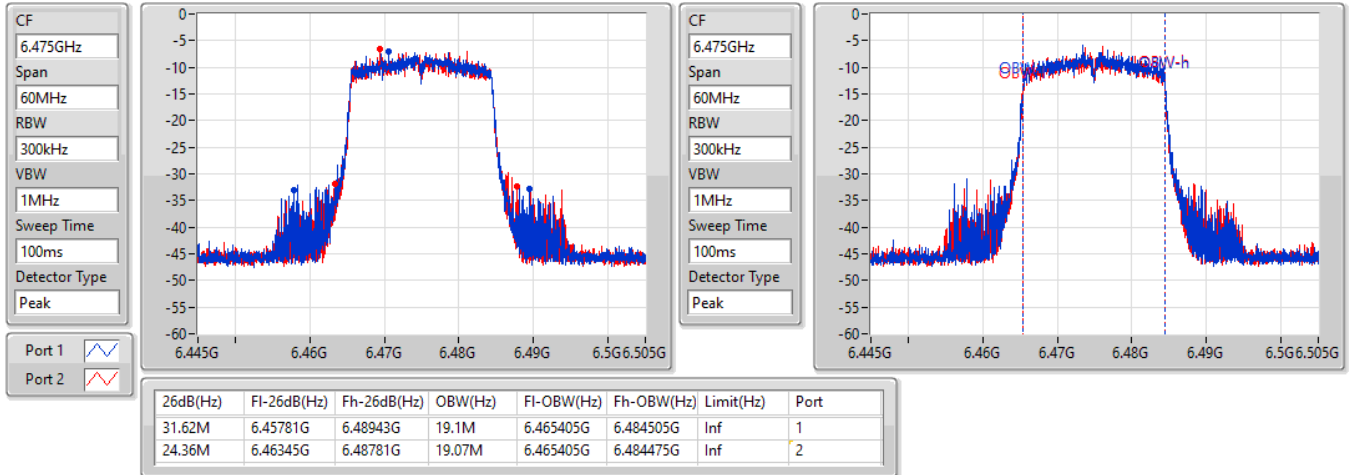


802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

6475MHz

04/11/2021

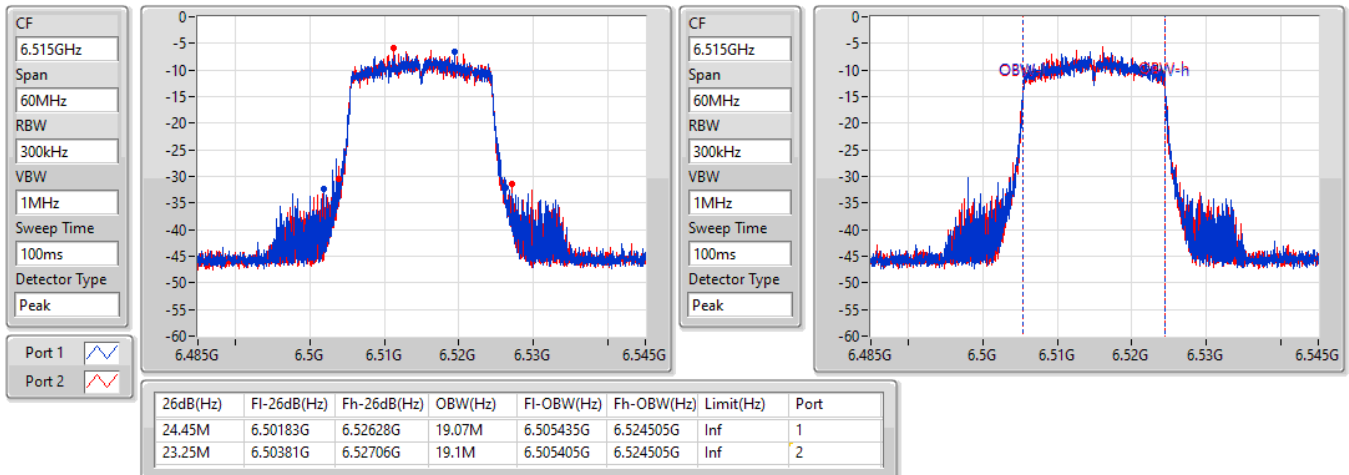


802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

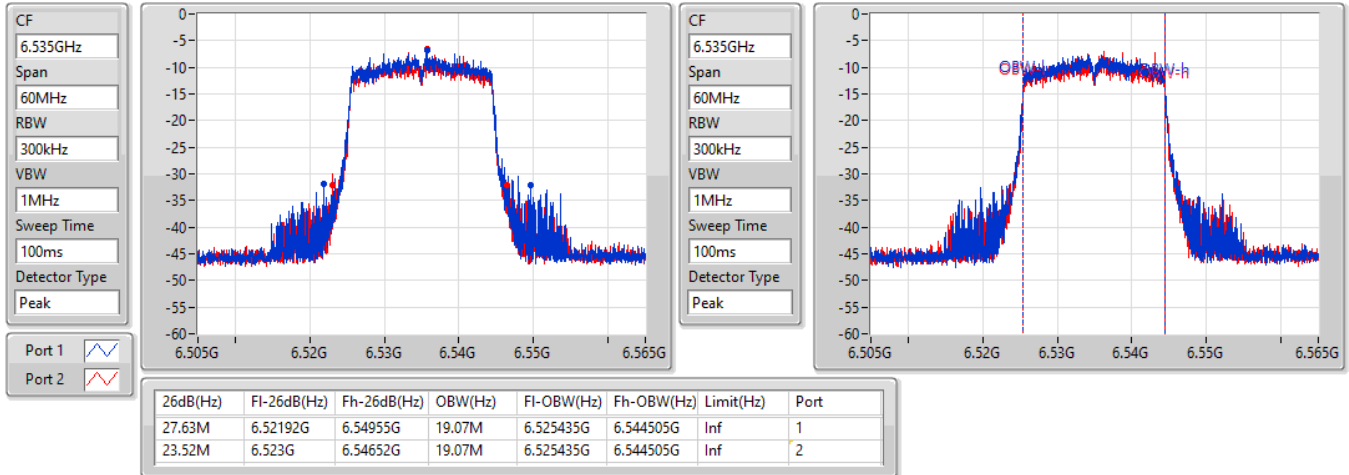
6515MHz

04/11/2021

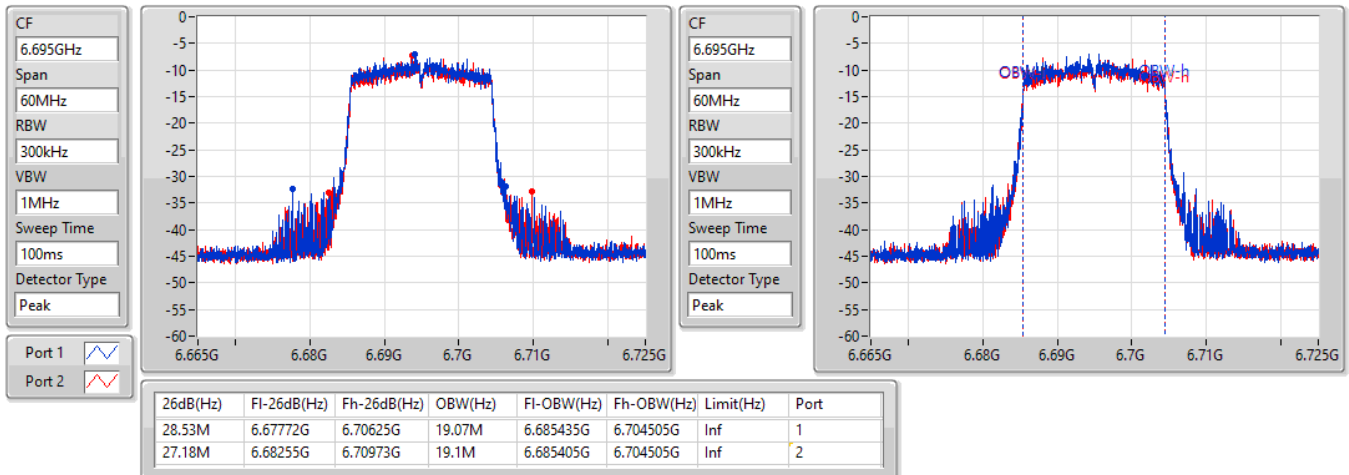


802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
6535MHz

04/11/2021


802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
6695MHz

04/11/2021

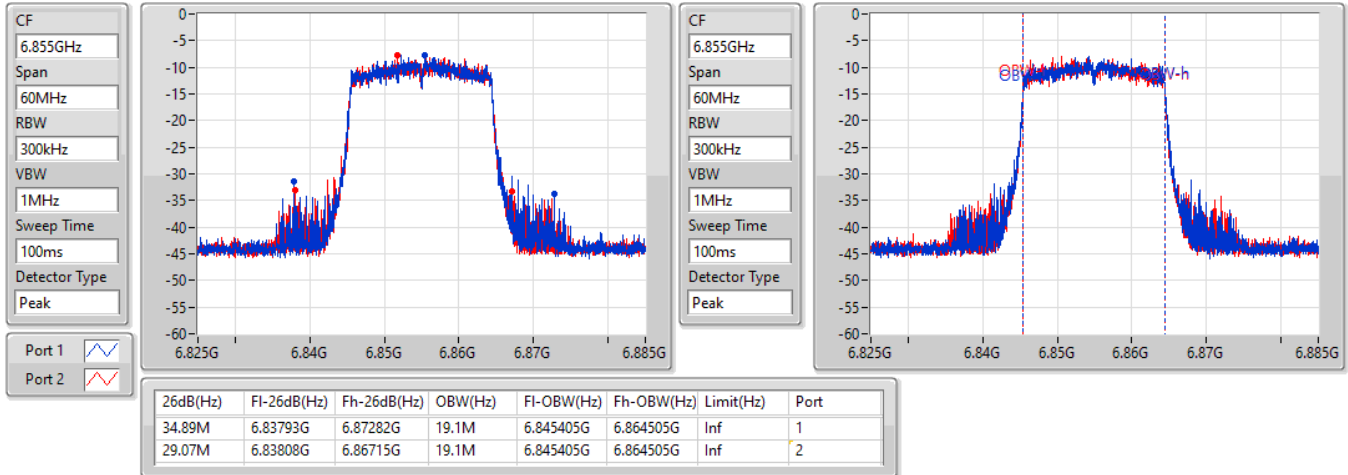


802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

6855MHz

04/11/2021

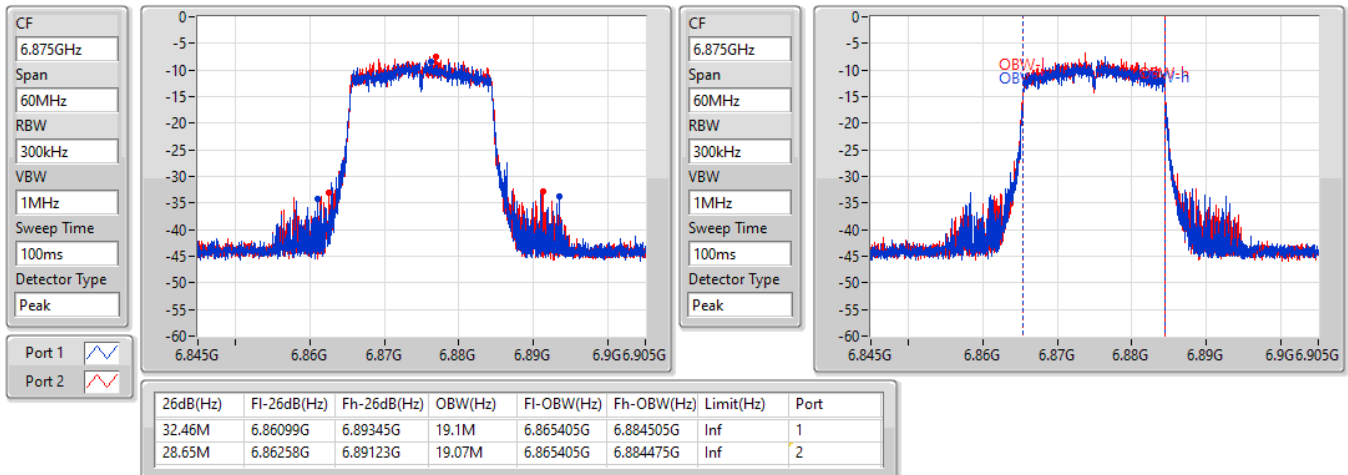


802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

6875MHz

04/11/2021

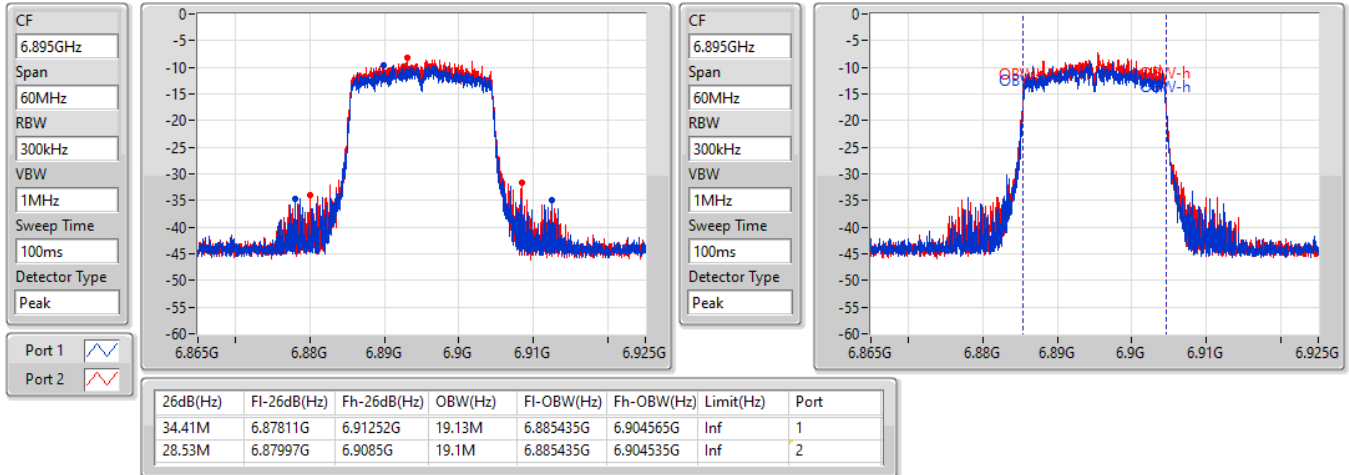


802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

6895MHz

04/11/2021

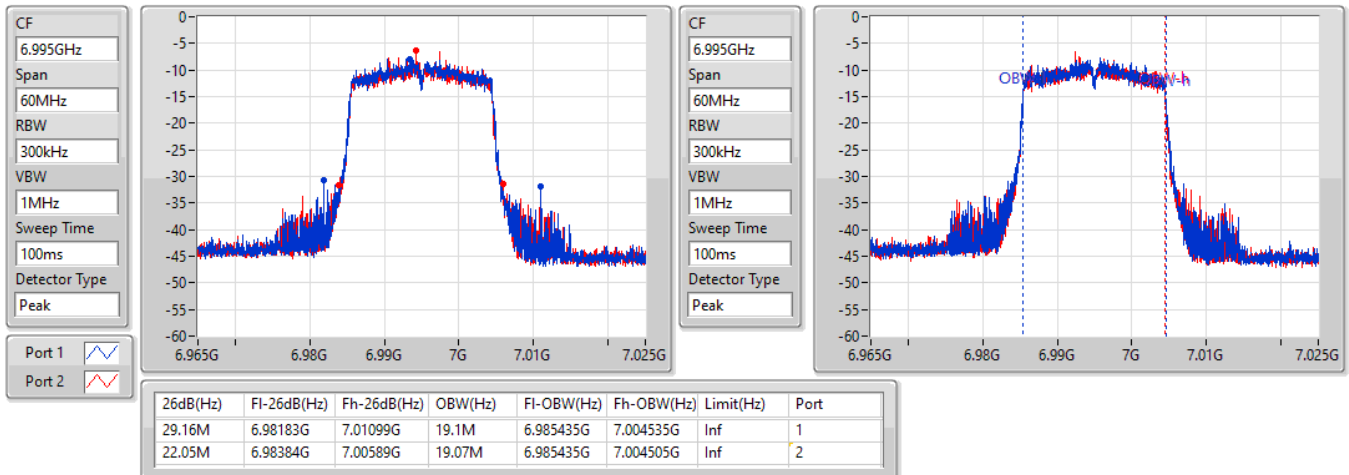


802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

6995MHz

04/11/2021

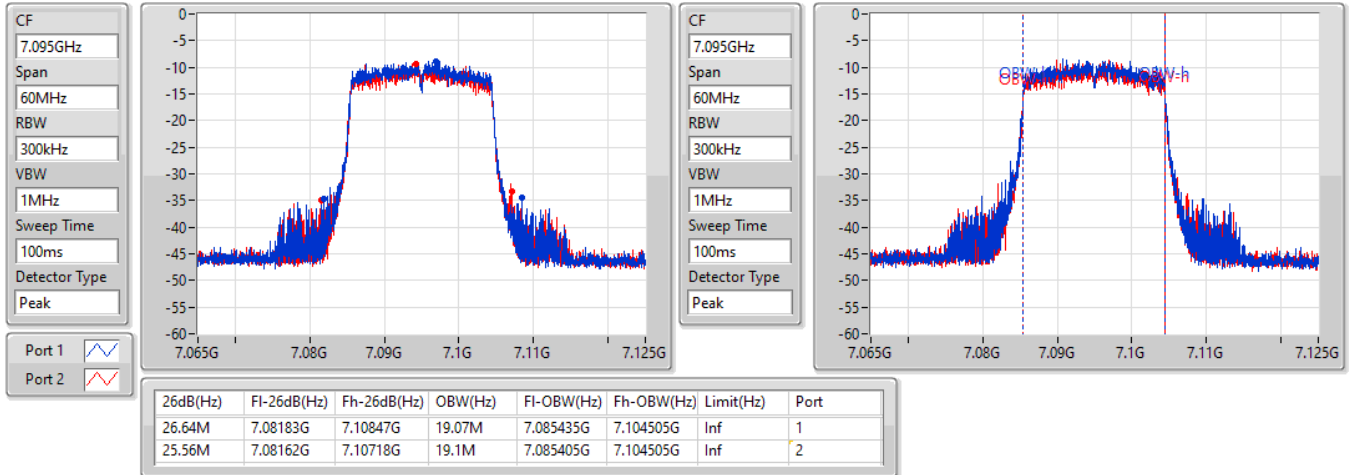


802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

7095MHz

04/11/2021

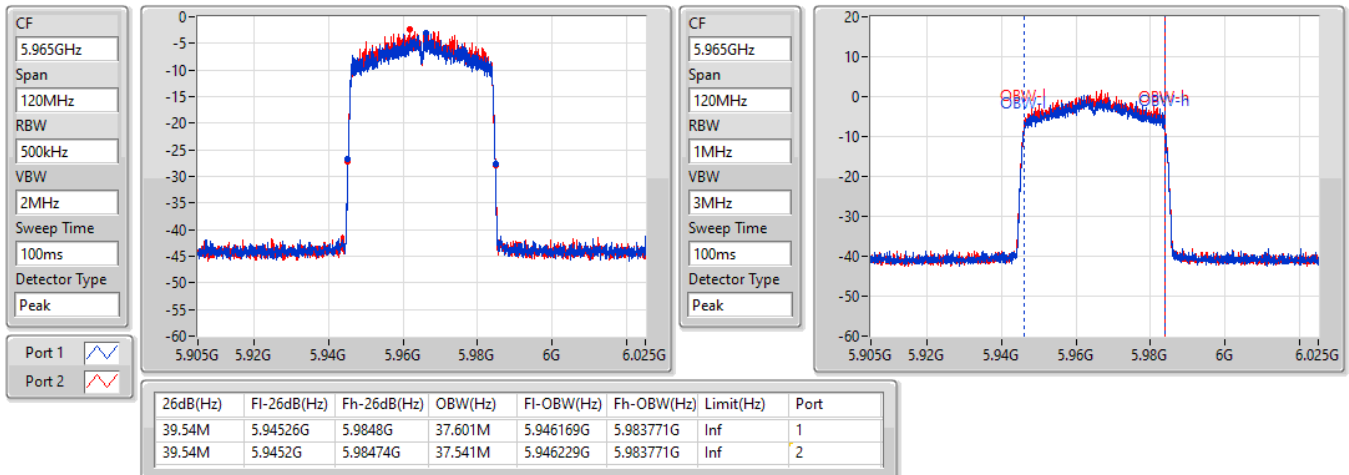


802.11ax HEW40_Nss1,(MCS0)_2TX

EBW

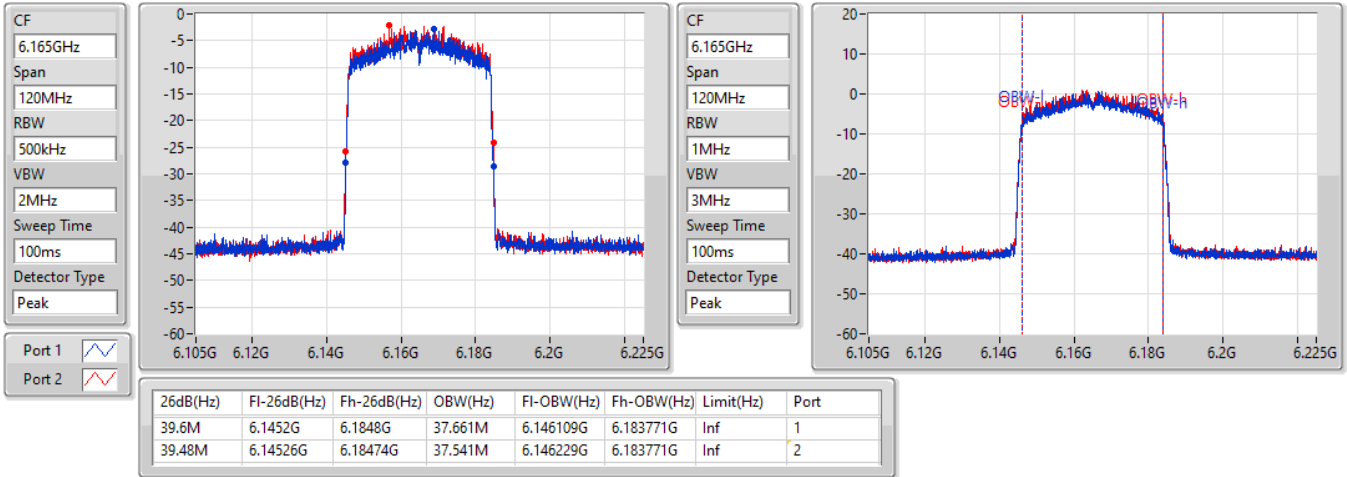
5965MHz

04/11/2021

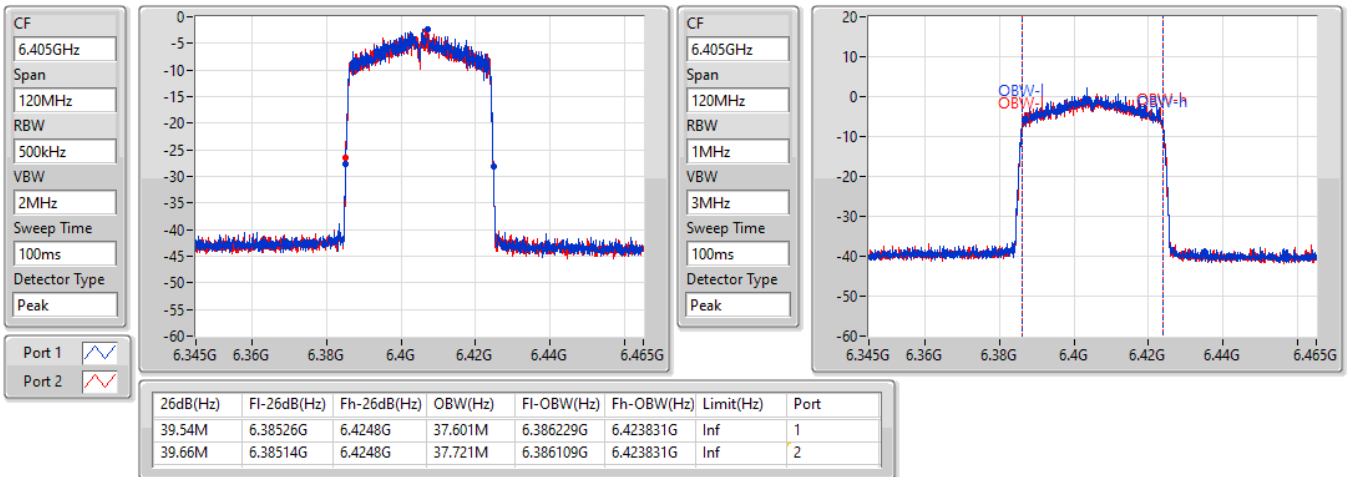


802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
6165MHz

04/11/2021


802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
6405MHz

04/11/2021

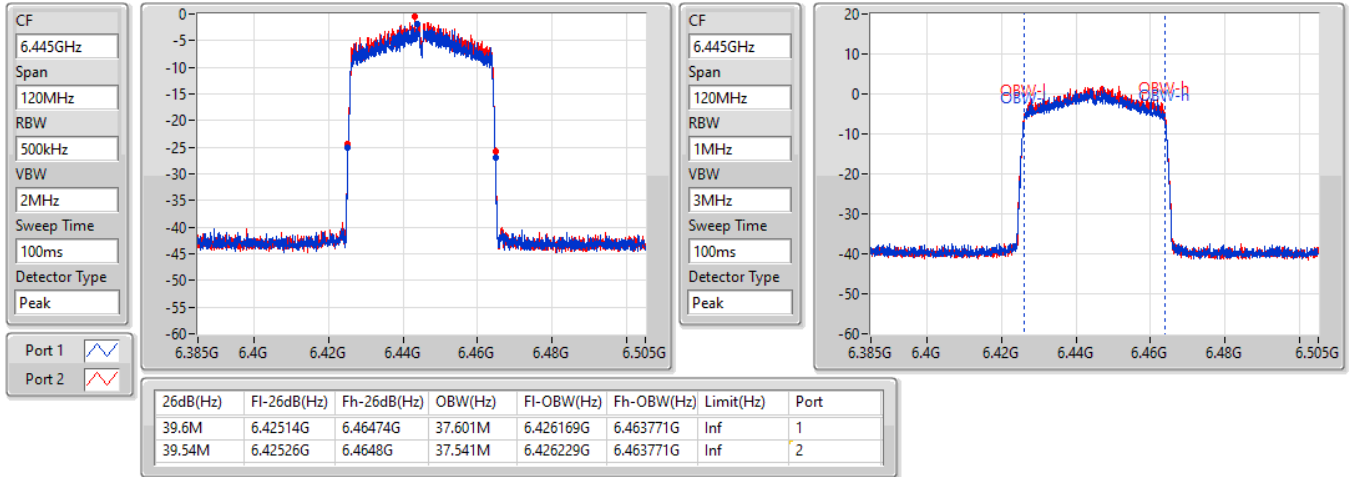


802.11ax HEW40_Nss1,(MCS0)_2TX

EBW

6445MHz

04/11/2021

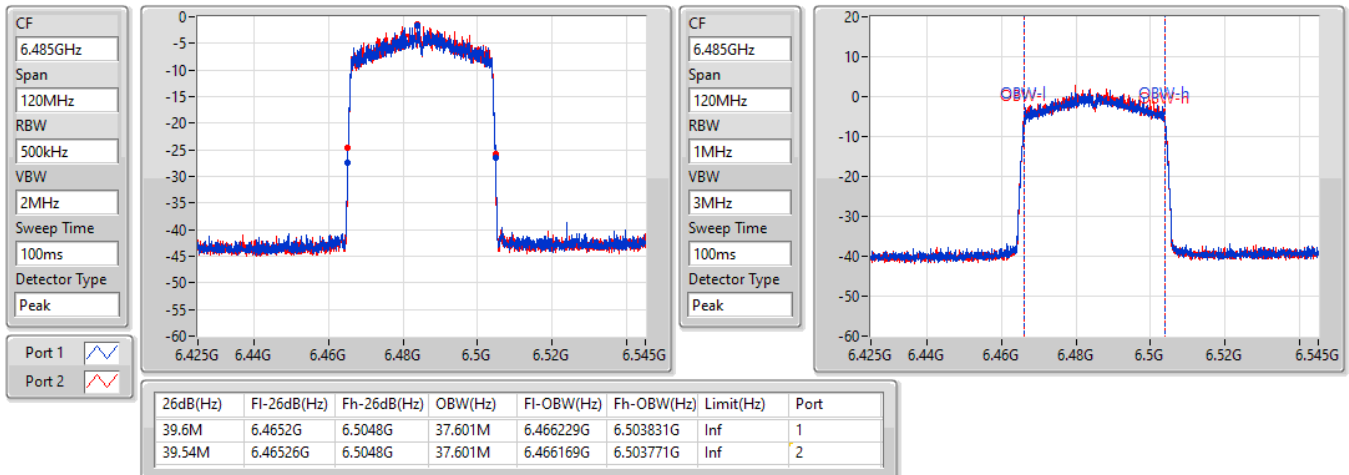


802.11ax HEW40_Nss1,(MCS0)_2TX

EBW

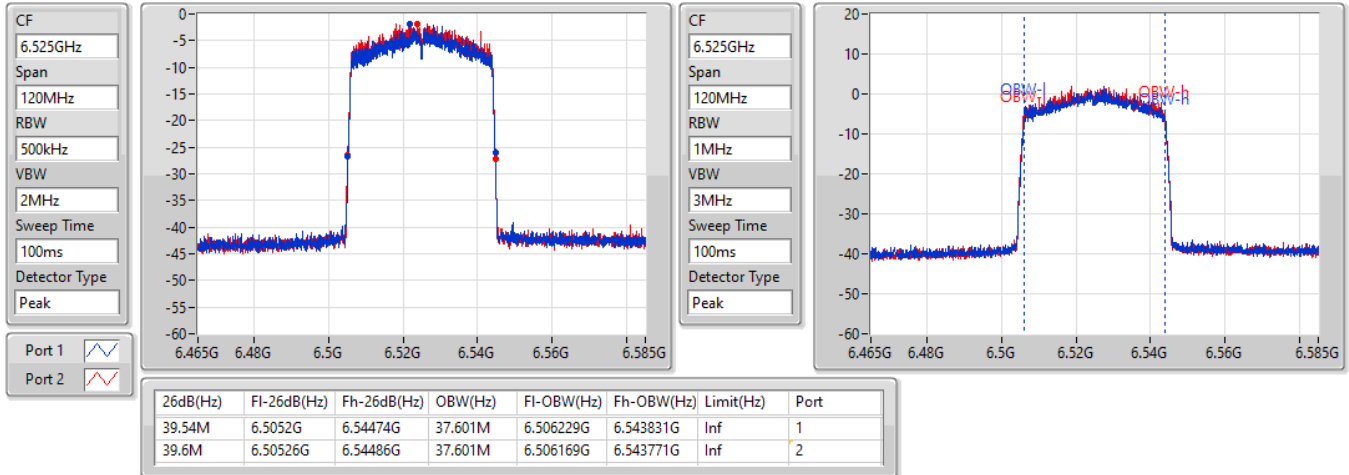
6485MHz

04/11/2021

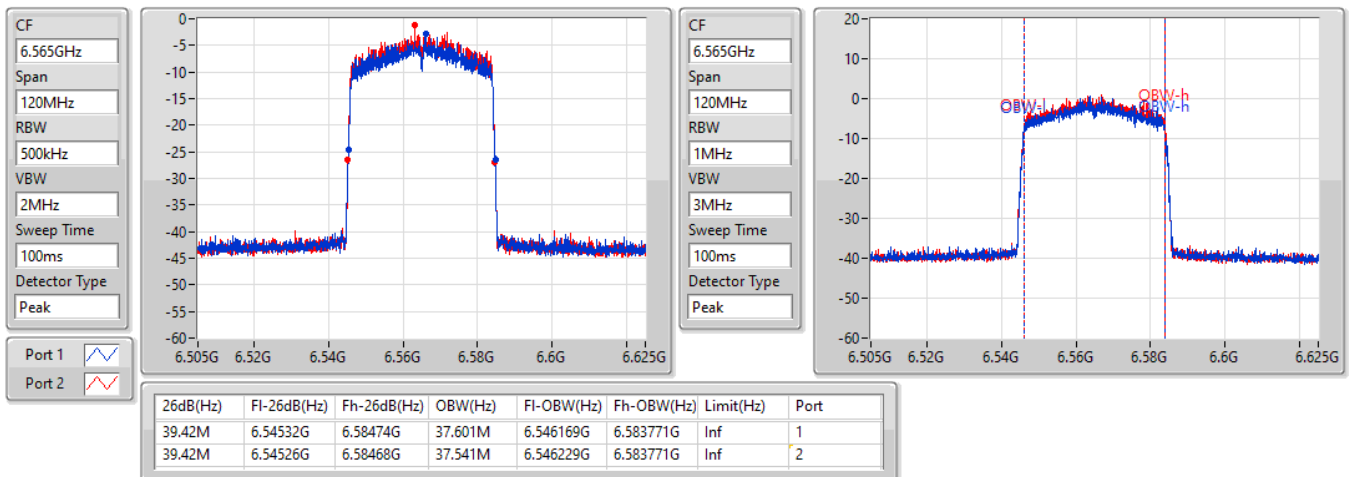


802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
6525MHz

04/11/2021

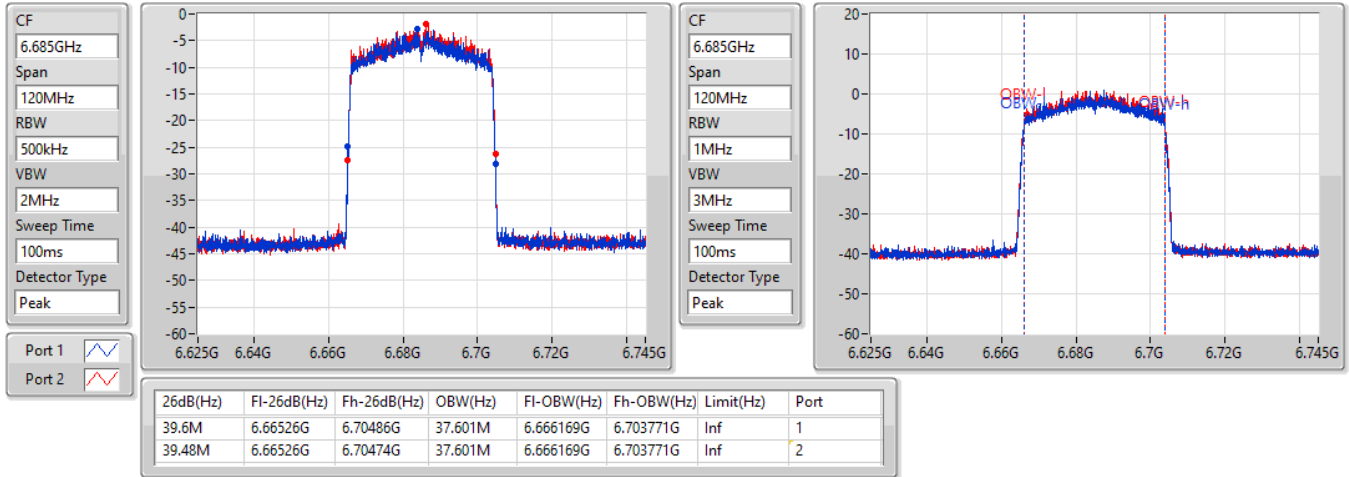

802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
6565MHz

04/11/2021

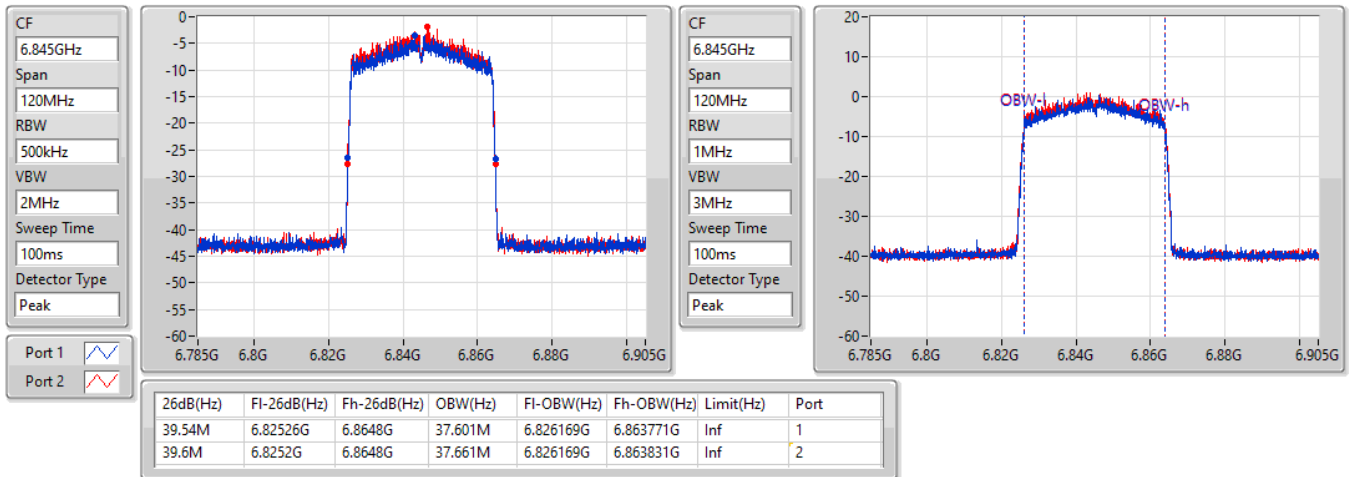


802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
6685MHz

04/11/2021

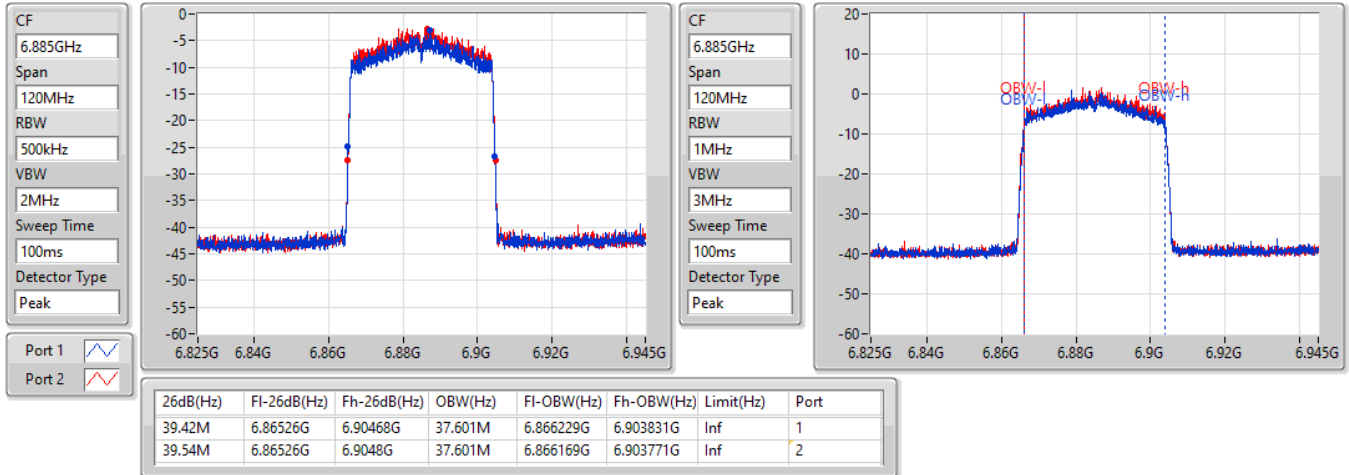

802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
6845MHz

04/11/2021

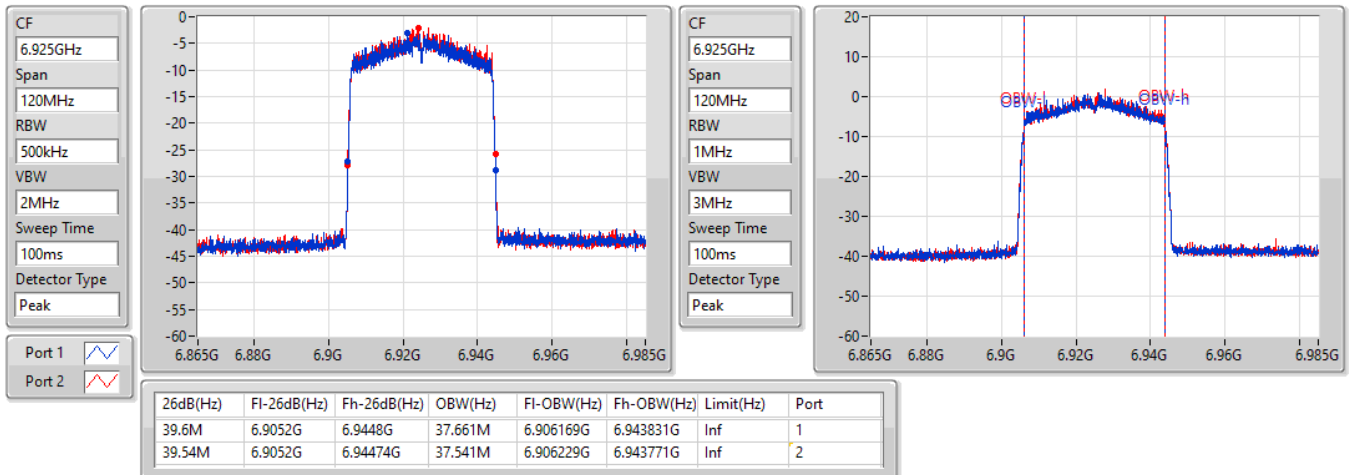


802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
6885MHz

04/11/2021


802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
6925MHz

04/11/2021

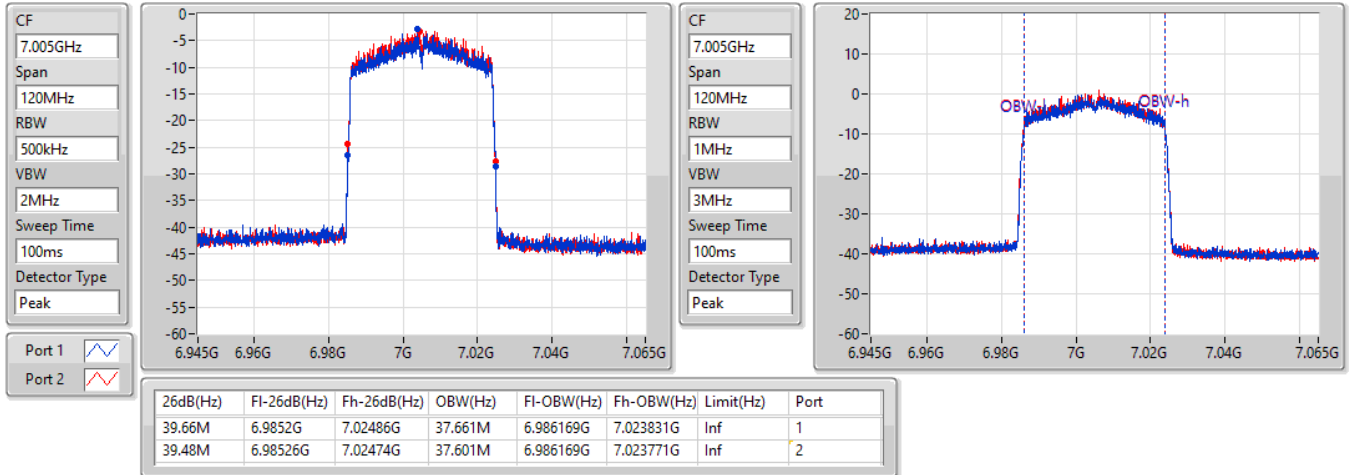


802.11ax HEW40_Nss1,(MCS0)_2TX

EBW

7005MHz

04/11/2021

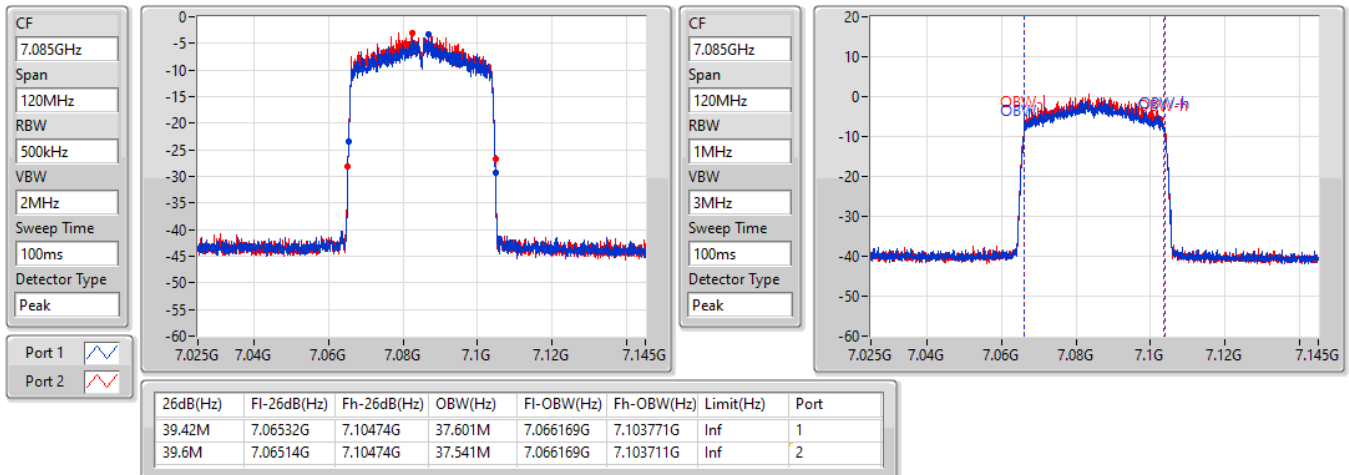


802.11ax HEW40_Nss1,(MCS0)_2TX

EBW

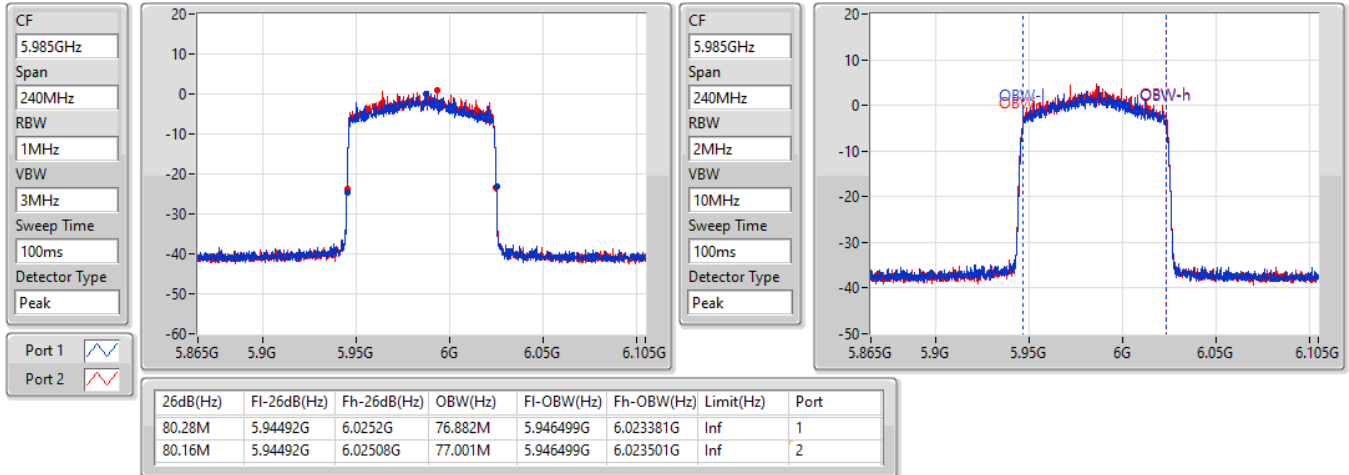
7085MHz

04/11/2021

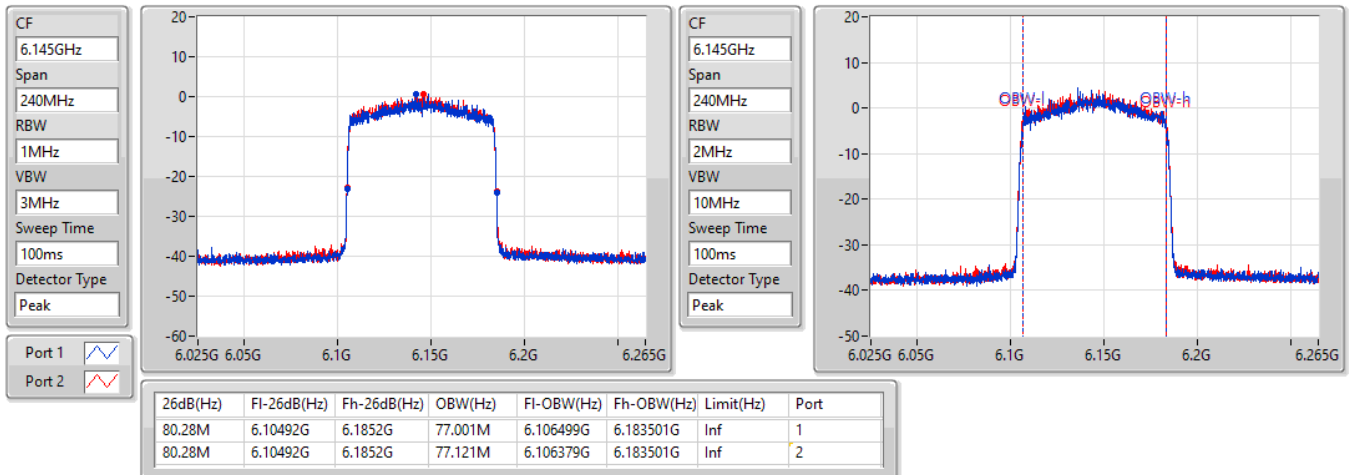


802.11ax HEW80_Nss1,(MCS0)_2TX
EBW
5985MHz

04/11/2021

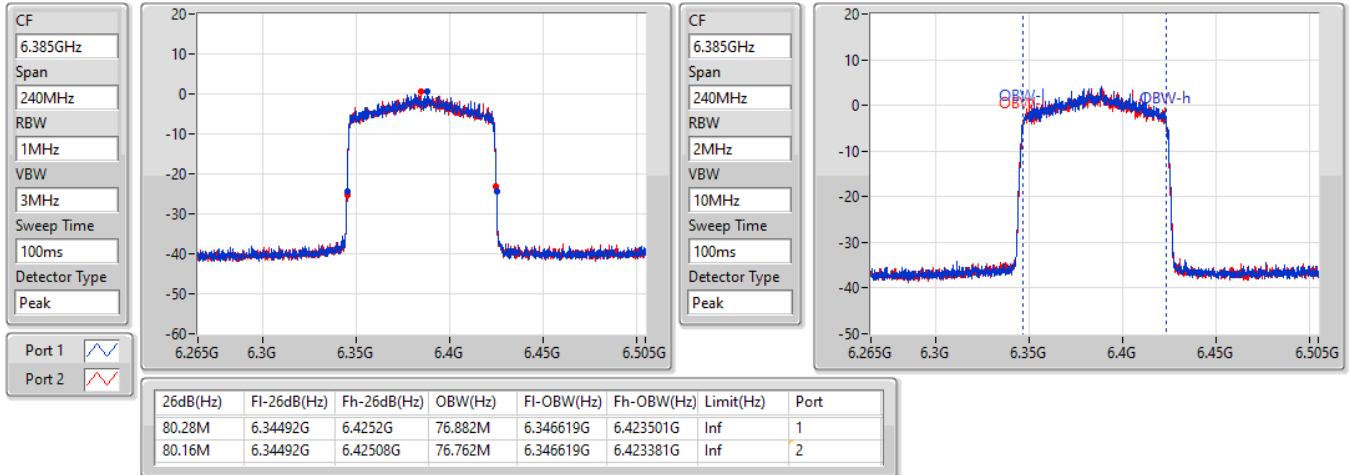

802.11ax HEW80_Nss1,(MCS0)_2TX
EBW
6145MHz

04/11/2021

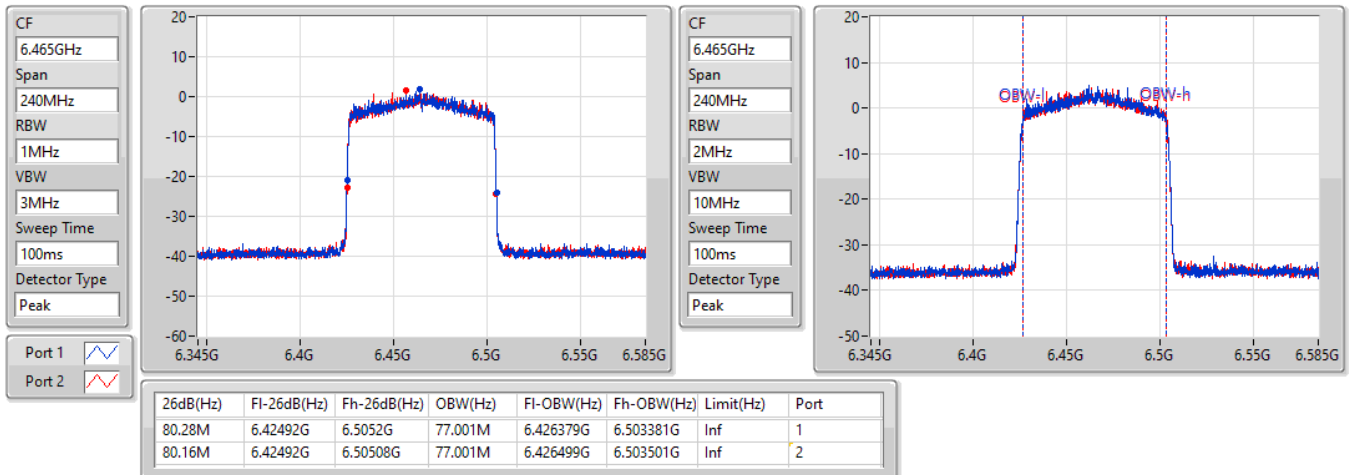


802.11ax HEW80_Nss1,(MCS0)_2TX
EBW
6385MHz

04/11/2021

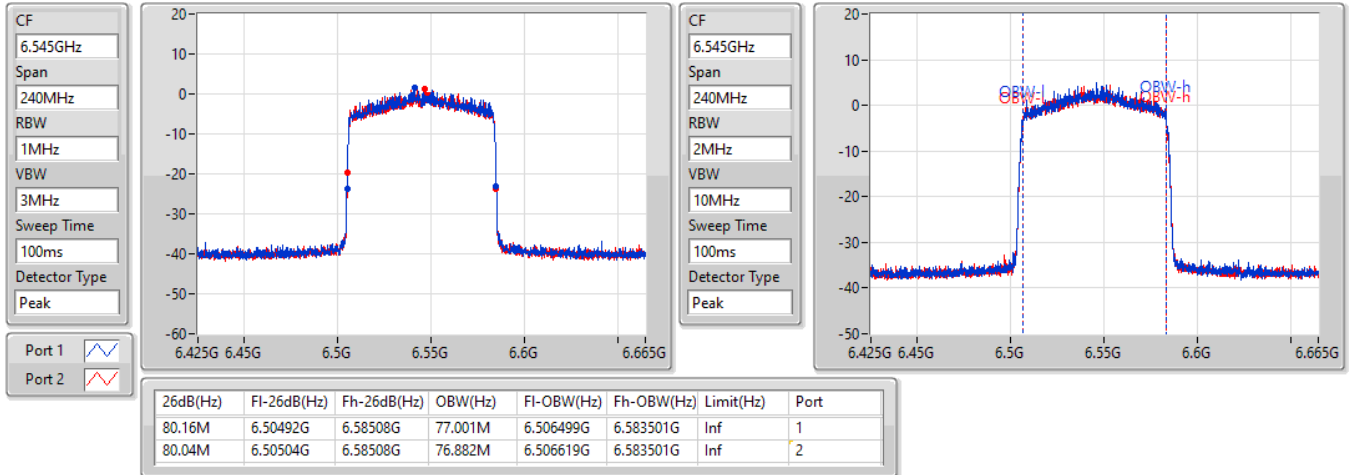

802.11ax HEW80_Nss1,(MCS0)_2TX
EBW
6465MHz

04/11/2021

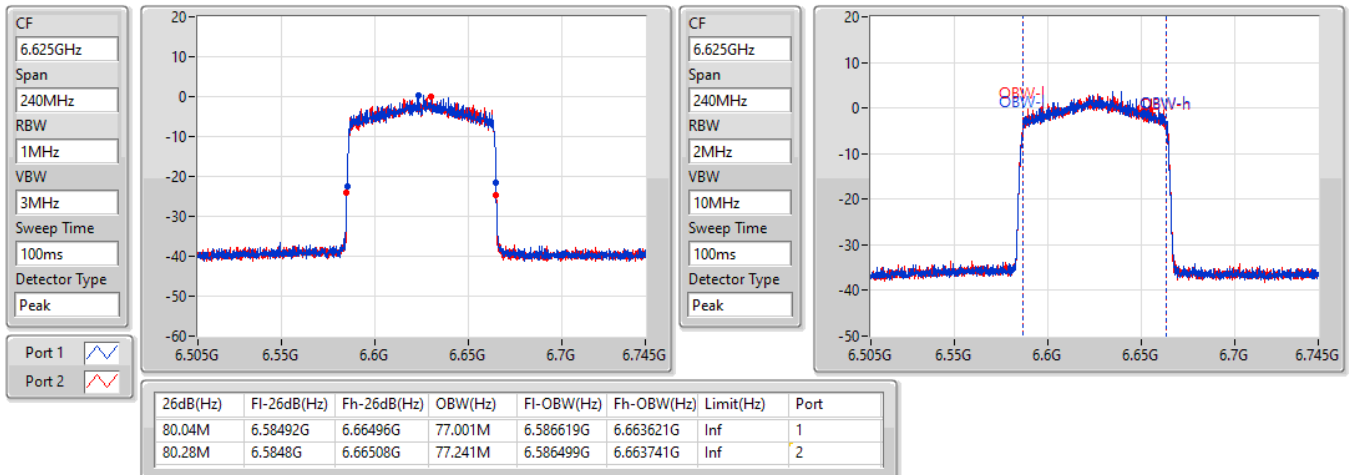


802.11ax HEW80_Nss1,(MCS0)_2TX
EBW
6545MHz

04/11/2021

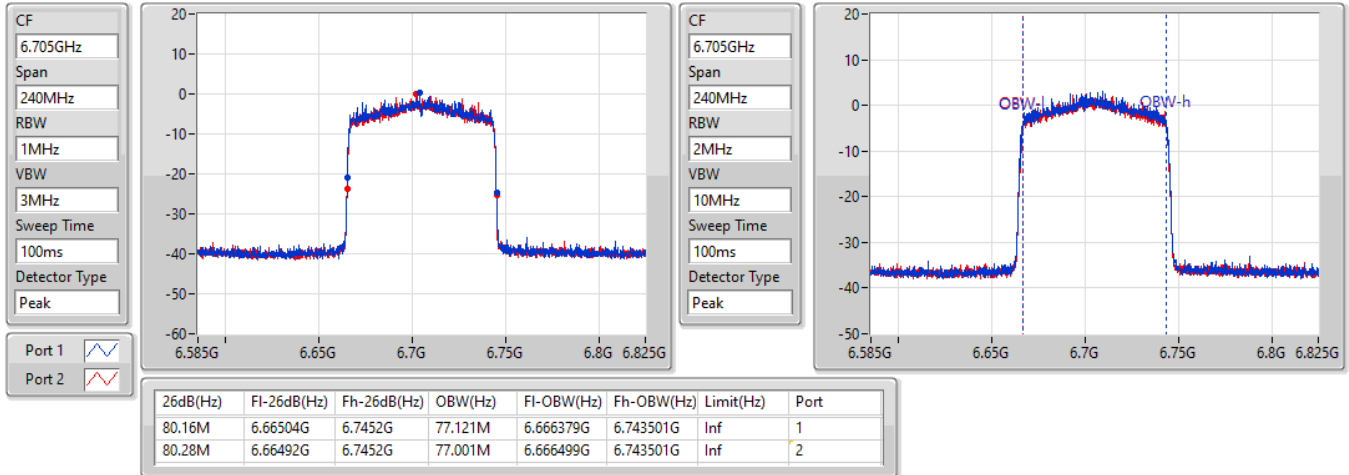

802.11ax HEW80_Nss1,(MCS0)_2TX
EBW
6625MHz

04/11/2021

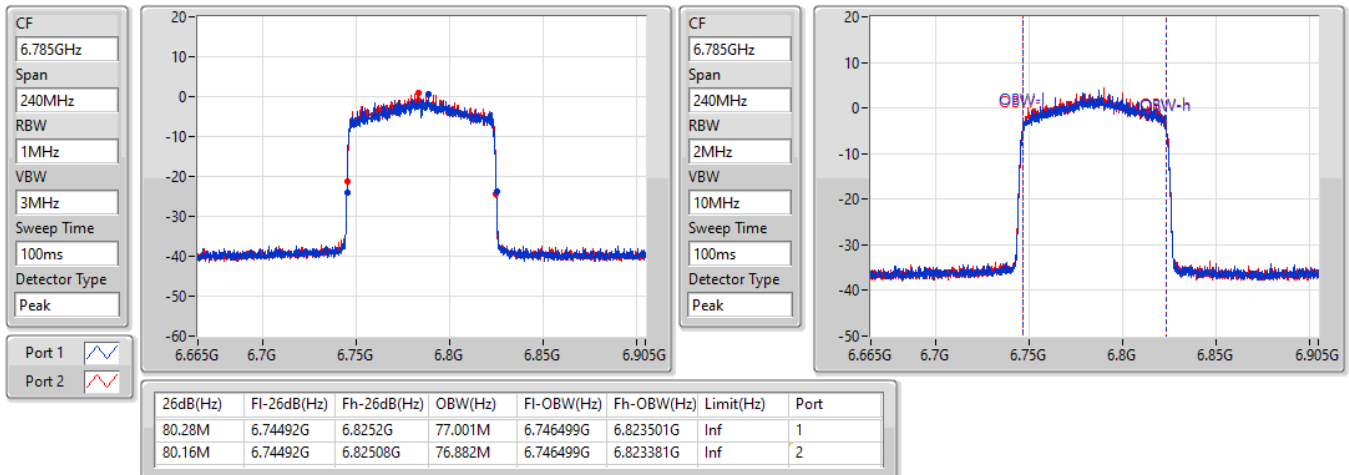


802.11ax HEW80_Nss1,(MCS0)_2TX
EBW
6705MHz

04/11/2021

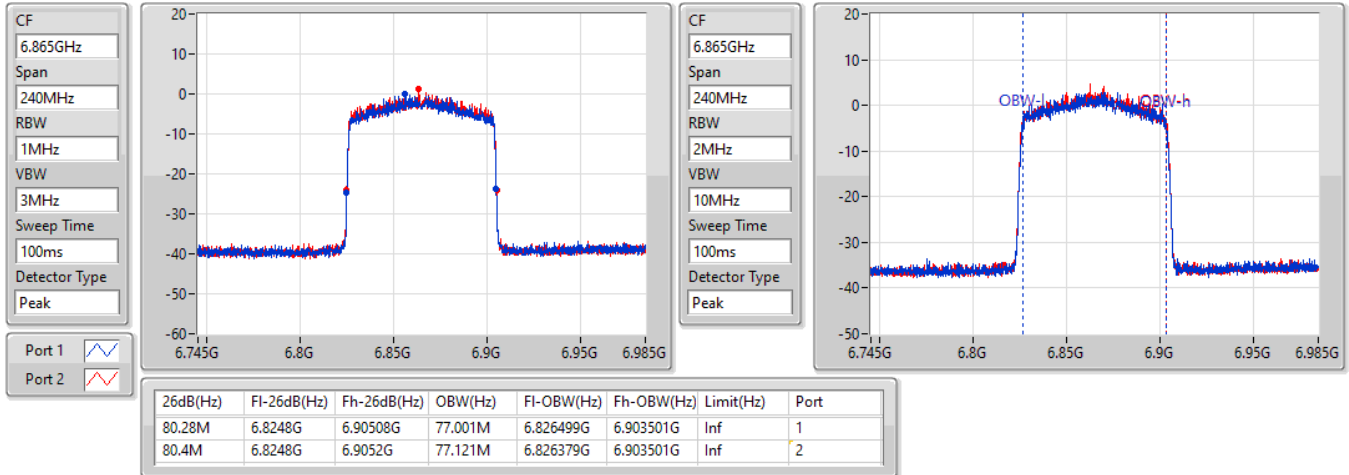

802.11ax HEW80_Nss1,(MCS0)_2TX
EBW
6785MHz

04/11/2021

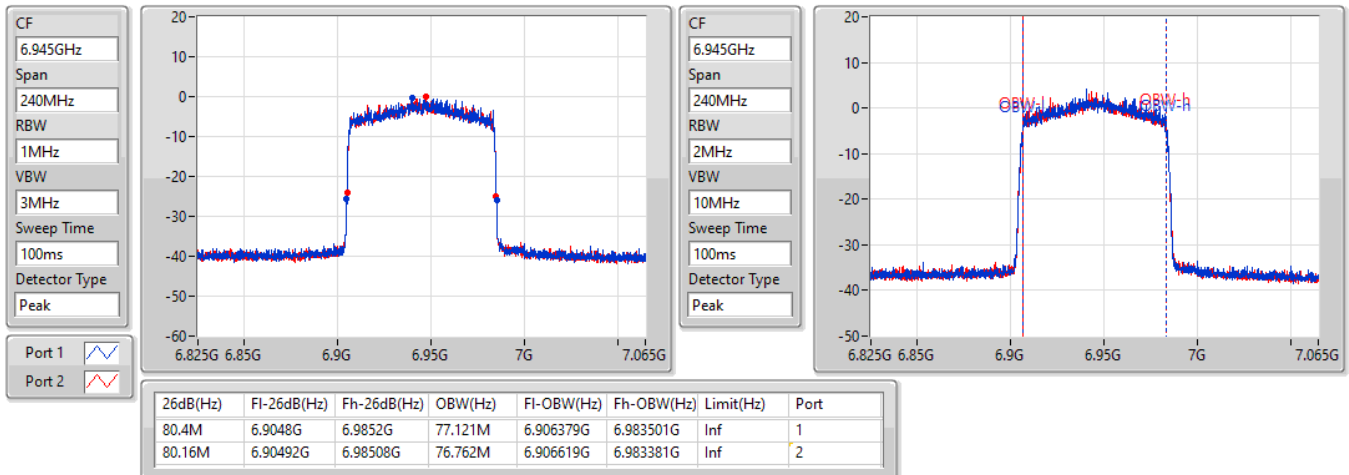


802.11ax HEW80_Nss1,(MCS0)_2TX
EBW
6865MHz

04/11/2021


802.11ax HEW80_Nss1,(MCS0)_2TX
EBW
6945MHz

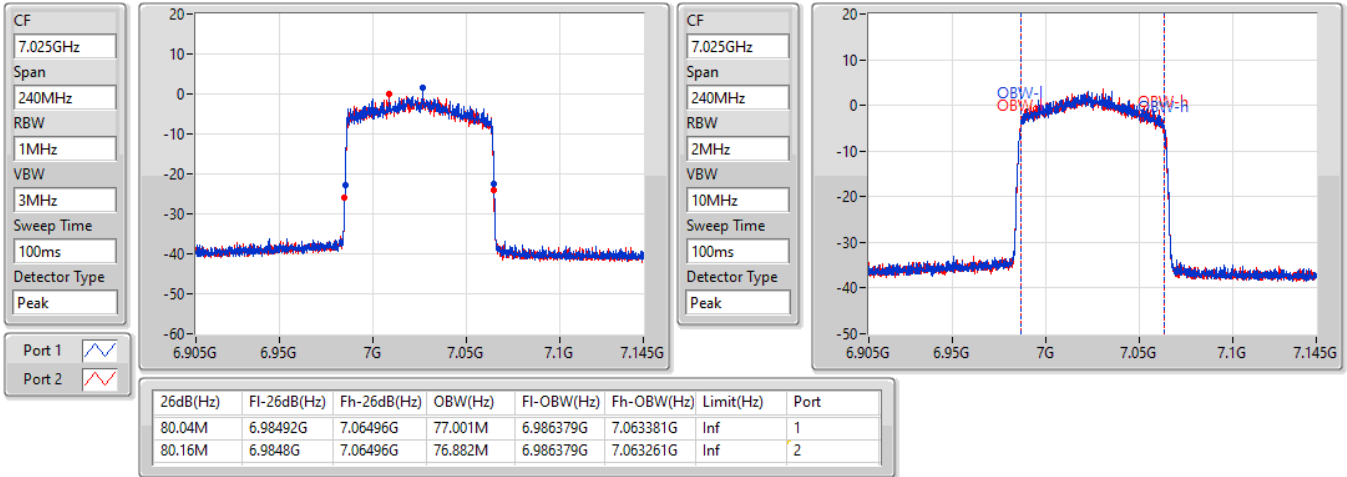
04/11/2021



802.11ax HEW80_Nss1,(MCS0)_2TX

7025MHz

04/11/2021



Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.925-6.425GHz	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_2TX	2.79	0.00190	7.13	0.00516
802.11ax HEW40_Nss1,(MCS0)_2TX	6.33	0.00430	10.67	0.01167
802.11ax HEW80_Nss1,(MCS0)_2TX	9.10	0.00813	13.44	0.02208
6.425-6.525GHz	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_2TX	3.33	0.00215	6.85	0.00484
802.11ax HEW40_Nss1,(MCS0)_2TX	7.24	0.00530	10.76	0.01191
802.11ax HEW80_Nss1,(MCS0)_2TX	9.91	0.00979	13.43	0.02203
6.525-6.875GHz	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_2TX	2.45	0.00176	7.04	0.00506
802.11ax HEW40_Nss1,(MCS0)_2TX	5.99	0.00397	10.58	0.01143
802.11ax HEW80_Nss1,(MCS0)_2TX	8.95	0.00785	13.54	0.02259
6.875-7.125GHz	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_2TX	2.37	0.00173	7.32	0.00540
802.11ax HEW40_Nss1,(MCS0)_2TX	6.27	0.00424	11.22	0.01324
802.11ax HEW80_Nss1,(MCS0)_2TX	8.85	0.00767	13.80	0.02399

**Result**

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11ax HEW20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5955MHz	Pass	4.34	-0.21	-0.23	2.79	Inf	7.13	24.00
6175MHz	Pass	4.34	-0.23	-0.52	2.64	Inf	6.98	24.00
6415MHz	Pass	4.34	-0.50	-0.97	2.28	Inf	6.62	24.00
6435MHz	Pass	3.52	0.29	0.34	3.33	Inf	6.85	24.00
6475MHz	Pass	3.52	-0.65	0.03	2.71	Inf	6.23	24.00
6515MHz	Pass	3.52	0.17	0.15	3.17	Inf	6.69	24.00
6535MHz	Pass	4.59	-0.27	-0.88	2.45	Inf	7.04	24.00
6695MHz	Pass	4.59	-0.43	-0.89	2.36	Inf	6.95	24.00
6855MHz	Pass	4.59	-0.84	-1.91	1.67	Inf	6.26	24.00
6875MHz	Pass	4.59	-0.97	-0.47	2.30	Inf	6.89	24.00
6895MHz	Pass	4.95	-2.11	-1.05	1.46	Inf	6.41	24.00
6995MHz	Pass	4.95	-0.85	-0.95	2.11	Inf	7.06	24.00
7095MHz	Pass	4.95	-0.43	-0.87	2.37	Inf	7.32	24.00
802.11ax HEW40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5965MHz	Pass	4.34	2.48	3.50	6.03	Inf	10.37	24.00
6165MHz	Pass	4.34	3.06	3.56	6.33	Inf	10.67	24.00
6405MHz	Pass	4.34	3.36	3.11	6.25	Inf	10.59	24.00
6445MHz	Pass	3.52	4.05	4.41	7.24	Inf	10.76	24.00
6485MHz	Pass	3.52	4.05	4.28	7.18	Inf	10.70	24.00
6525MHz	Pass	3.52	3.59	4.30	6.97	Inf	10.49	24.00
6565MHz	Pass	4.59	2.49	3.32	5.94	Inf	10.53	24.00
6685MHz	Pass	4.59	2.69	3.12	5.92	Inf	10.51	24.00
6845MHz	Pass	4.59	2.52	3.40	5.99	Inf	10.58	24.00
6885MHz	Pass	4.59	2.47	3.16	5.84	Inf	10.43	24.00
6925MHz	Pass	4.95	3.14	3.38	6.27	Inf	11.22	24.00
7005MHz	Pass	4.95	2.04	2.71	5.40	Inf	10.35	24.00
7085MHz	Pass	4.95	2.70	3.63	6.20	Inf	11.15	24.00
802.11ax HEW80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5985MHz	Pass	4.34	5.89	6.20	9.06	Inf	13.40	24.00
6145MHz	Pass	4.34	5.92	6.26	9.10	Inf	13.44	24.00
6385MHz	Pass	4.34	6.06	6.02	9.05	Inf	13.39	24.00
6465MHz	Pass	3.52	7.00	6.80	9.91	Inf	13.43	24.00
6545MHz	Pass	3.52	6.66	6.40	9.54	Inf	13.06	24.00
6625MHz	Pass	4.59	5.71	5.45	8.59	Inf	13.18	24.00
6705MHz	Pass	4.59	5.38	5.00	8.20	Inf	12.79	24.00
6785MHz	Pass	4.59	5.70	5.99	8.86	Inf	13.45	24.00
6865MHz	Pass	4.59	5.74	6.14	8.95	Inf	13.54	24.00
6945MHz	Pass	4.95	5.47	5.48	8.49	Inf	13.44	24.00
7025MHz	Pass	4.95	5.89	5.79	8.85	Inf	13.80	24.00

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

Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
5.925-6.425GHz	-	-
802.11ax HEW20_Nss1,(MCS0)_2TX	-8.41	-1.06
802.11ax HEW40_Nss1,(MCS0)_2TX	-8.68	-1.33
802.11ax HEW80_Nss1,(MCS0)_2TX	-8.49	-1.14
6.425-6.525GHz	-	-
802.11ax HEW20_Nss1,(MCS0)_2TX	-7.76	-1.23
802.11ax HEW40_Nss1,(MCS0)_2TX	-7.75	-1.22
802.11ax HEW80_Nss1,(MCS0)_2TX	-7.82	-1.29
6.525-6.875GHz	-	-
802.11ax HEW20_Nss1,(MCS0)_2TX	-8.74	-1.14
802.11ax HEW40_Nss1,(MCS0)_2TX	-8.76	-1.16
802.11ax HEW80_Nss1,(MCS0)_2TX	-8.84	-1.24
6.875-7.125GHz	-	-
802.11ax HEW20_Nss1,(MCS0)_2TX	-9.08	-1.12
802.11ax HEW40_Nss1,(MCS0)_2TX	-9.06	-1.10
802.11ax HEW80_Nss1,(MCS0)_2TX	-9.02	-1.06

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

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)	EIRP PD (dBm/RBW)	EIRP PD Limit (dBm/RBW)
802.11ax HEW20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5955MHz	Pass	7.35	-11.51	-11.66	-8.70	Inf	-1.35	-1.00
6175MHz	Pass	7.35	-11.33	-11.40	-8.41	Inf	-1.06	-1.00
6415MHz	Pass	7.35	-11.59	-11.89	-8.80	Inf	-1.45	-1.00
6435MHz	Pass	6.53	-10.60	-10.44	-7.77	Inf	-1.24	-1.00
6475MHz	Pass	6.53	-10.84	-11.10	-8.12	Inf	-1.59	-1.00
6515MHz	Pass	6.53	-10.83	-10.66	-7.76	Inf	-1.23	-1.00
6535MHz	Pass	7.60	-11.32	-11.97	-8.74	Inf	-1.14	-1.00
6695MHz	Pass	7.60	-11.51	-11.93	-8.74	Inf	-1.14	-1.00
6855MHz	Pass	7.60	-11.84	-11.76	-8.86	Inf	-1.26	-1.00
6875MHz	Pass	7.60	-11.96	-11.54	-8.86	Inf	-1.26	-1.00
6895MHz	Pass	7.96	-13.08	-12.05	-9.58	Inf	-1.62	-1.00
6995MHz	Pass	7.96	-12.12	-12.06	-9.08	Inf	-1.12	-1.00
7095MHz	Pass	7.96	-12.17	-12.67	-9.54	Inf	-1.58	-1.00
802.11ax HEW40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5965MHz	Pass	7.35	-12.36	-10.93	-8.88	Inf	-1.53	-1.00
6165MHz	Pass	7.35	-11.77	-11.25	-8.68	Inf	-1.33	-1.00
6405MHz	Pass	7.35	-11.60	-12.16	-8.87	Inf	-1.52	-1.00
6445MHz	Pass	6.53	-10.79	-10.48	-7.75	Inf	-1.22	-1.00
6485MHz	Pass	6.53	-10.50	-10.99	-7.81	Inf	-1.28	-1.00
6525MHz	Pass	6.53	-10.78	-10.91	-8.13	Inf	-1.60	-1.00
6565MHz	Pass	7.60	-12.12	-11.49	-8.78	Inf	-1.18	-1.00
6685MHz	Pass	7.60	-12.18	-11.30	-8.80	Inf	-1.20	-1.00
6845MHz	Pass	7.60	-11.69	-11.63	-8.76	Inf	-1.16	-1.00
6885MHz	Pass	7.60	-11.99	-11.52	-8.86	Inf	-1.26	-1.00
6925MHz	Pass	7.96	-11.80	-12.25	-9.06	Inf	-1.10	-1.00
7005MHz	Pass	7.96	-12.81	-11.92	-9.38	Inf	-1.42	-1.00
7085MHz	Pass	7.96	-12.45	-12.11	-9.32	Inf	-1.36	-1.00
802.11ax HEW80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5985MHz	Pass	7.35	-11.62	-11.34	-8.49	Inf	-1.14	-1.00
6145MHz	Pass	7.35	-11.61	-11.22	-8.49	Inf	-1.14	-1.00
6385MHz	Pass	7.35	-11.61	-11.86	-8.82	Inf	-1.47	-1.00
6465MHz	Pass	6.53	-10.81	-10.74	-7.82	Inf	-1.29	-1.00
6545MHz	Pass	6.53	-10.81	-11.03	-7.91	Inf	-1.38	-1.00
6625MHz	Pass	7.60	-11.87	-11.79	-8.86	Inf	-1.26	-1.00
6705MHz	Pass	7.60	-11.58	-12.33	-9.10	Inf	-1.50	-1.00
6785MHz	Pass	7.60	-11.98	-11.71	-8.90	Inf	-1.30	-1.00
6865MHz	Pass	7.60	-11.91	-11.60	-8.84	Inf	-1.24	-1.00
6945MHz	Pass	7.96	-12.00	-11.89	-9.02	Inf	-1.06	-1.00
7025MHz	Pass	7.96	-12.05	-12.25	-9.14	Inf	-1.18	-1.00

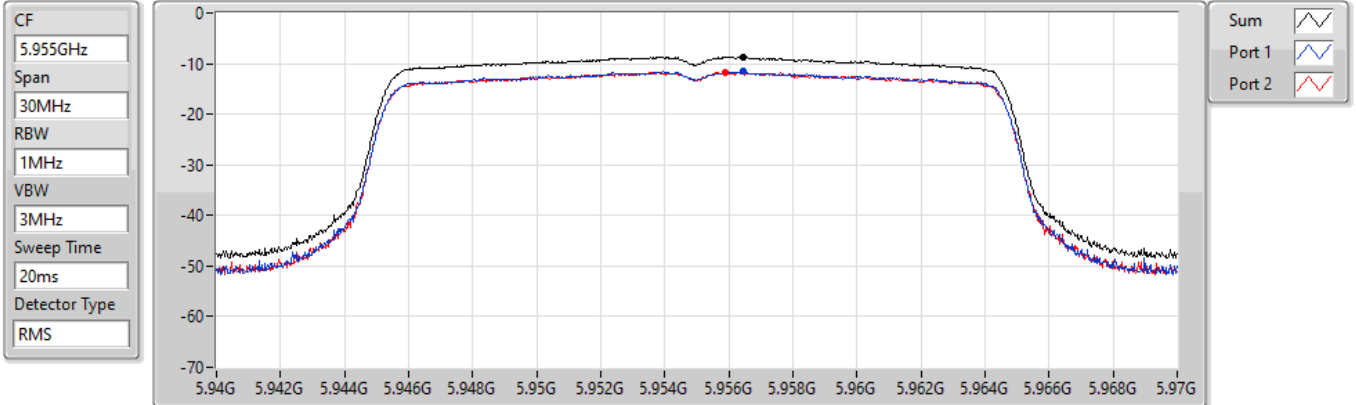
DG = Directional Gain; RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;
 PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;

802.11ax HEW20_Nss1,(MCS0)_2TX

PSD

5955MHz

04/11/2021



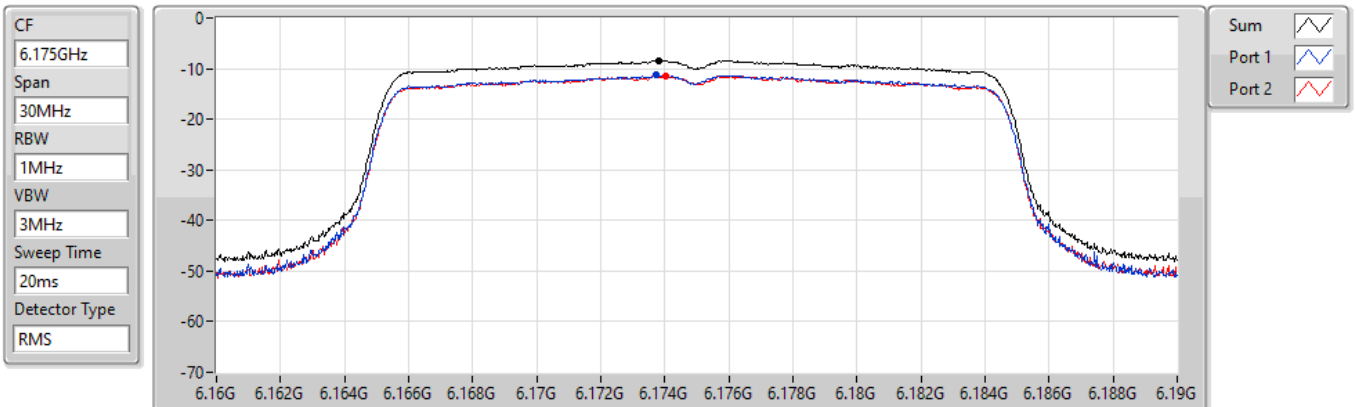
Sum	PD	Port 1	Port 2
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
-8.70	-8.70	-11.51	-11.66

802.11ax HEW20_Nss1,(MCS0)_2TX

PSD

6175MHz

04/11/2021



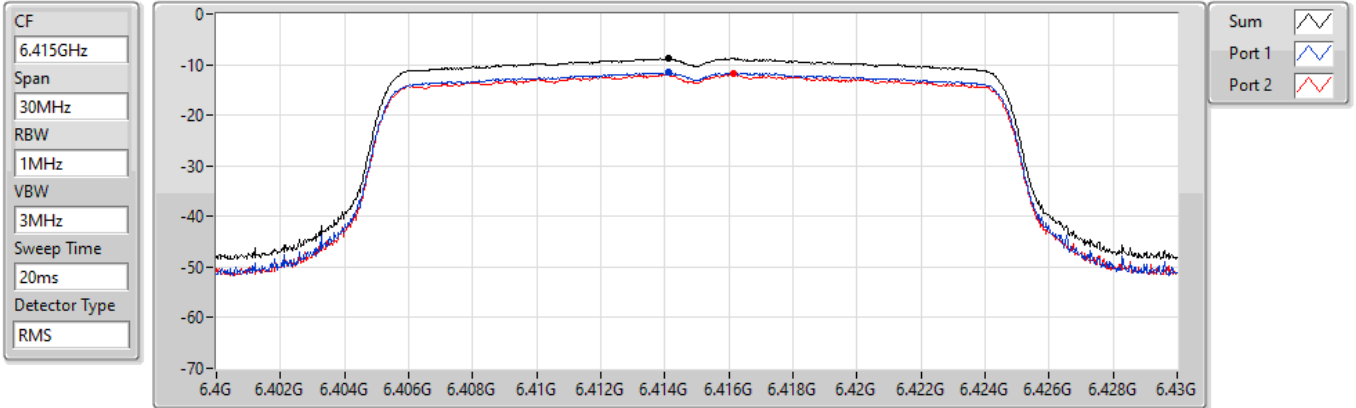
Sum	PD	Port 1	Port 2
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
-8.41	-8.41	-11.33	-11.40

802.11ax HEW20_Nss1,(MCS0)_2TX

PSD

6415MHz

04/11/2021

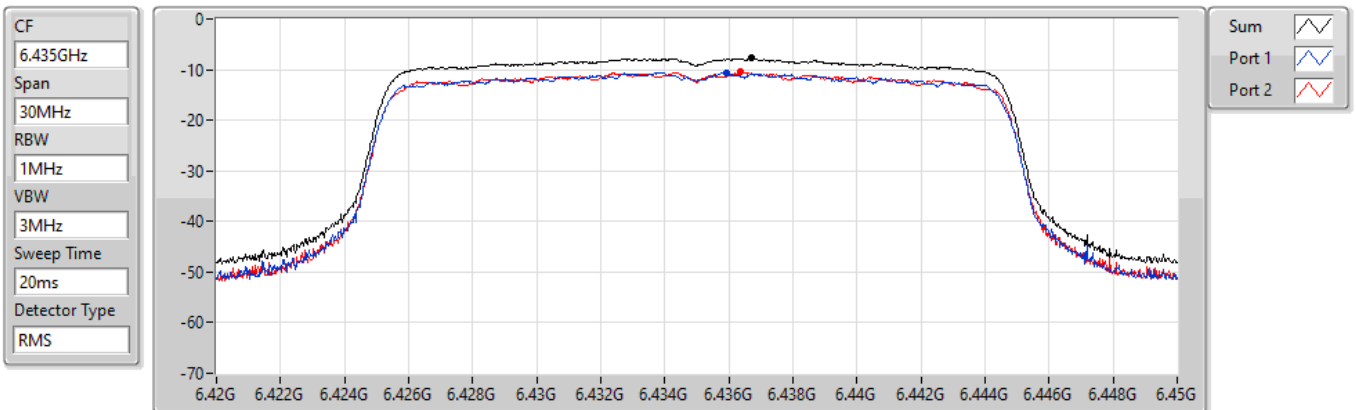


802.11ax HEW20_Nss1,(MCS0)_2TX

PSD

6435MHz

04/11/2021

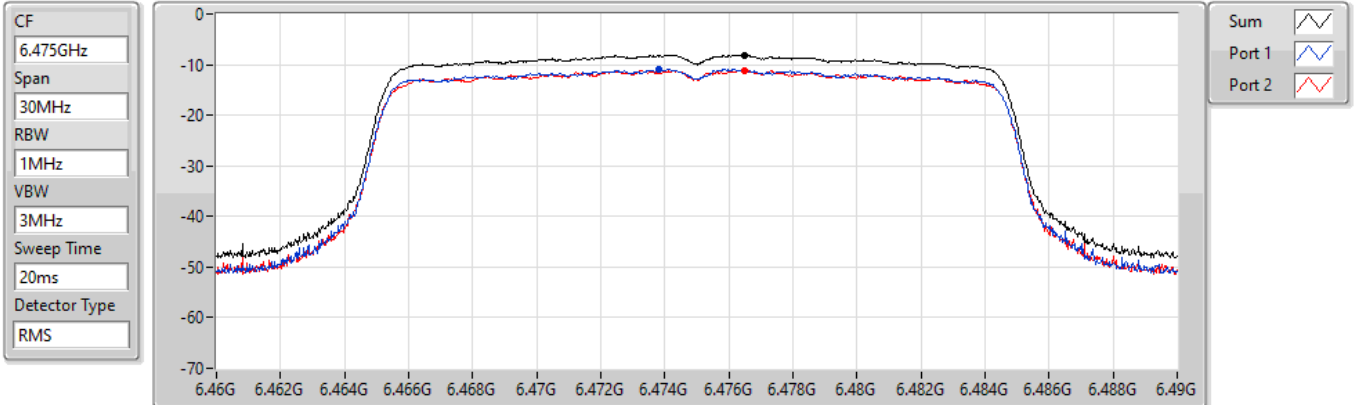


802.11ax HEW20_Nss1,(MCS0)_2TX

PSD

6475MHz

04/11/2021

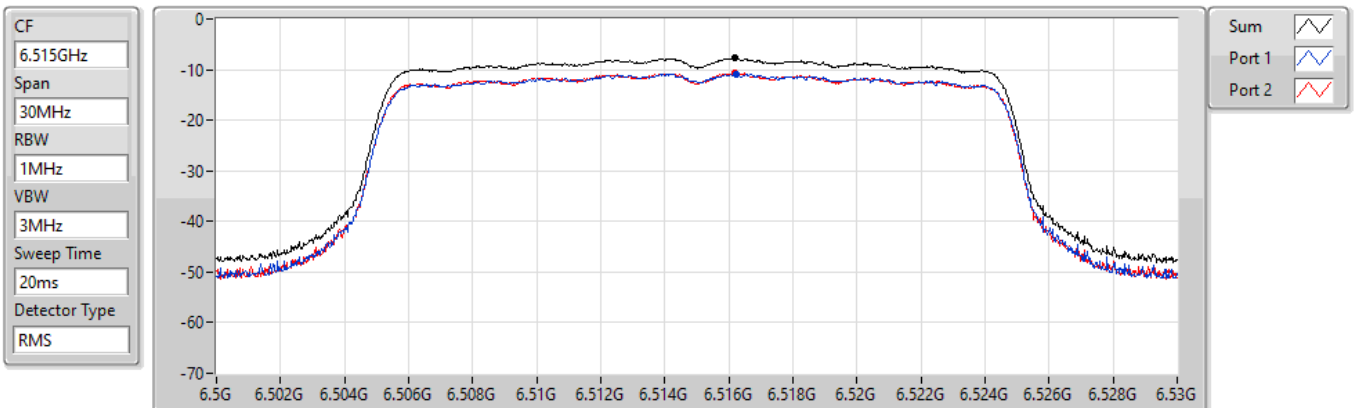


802.11ax HEW20_Nss1,(MCS0)_2TX

PSD

6515MHz

04/11/2021

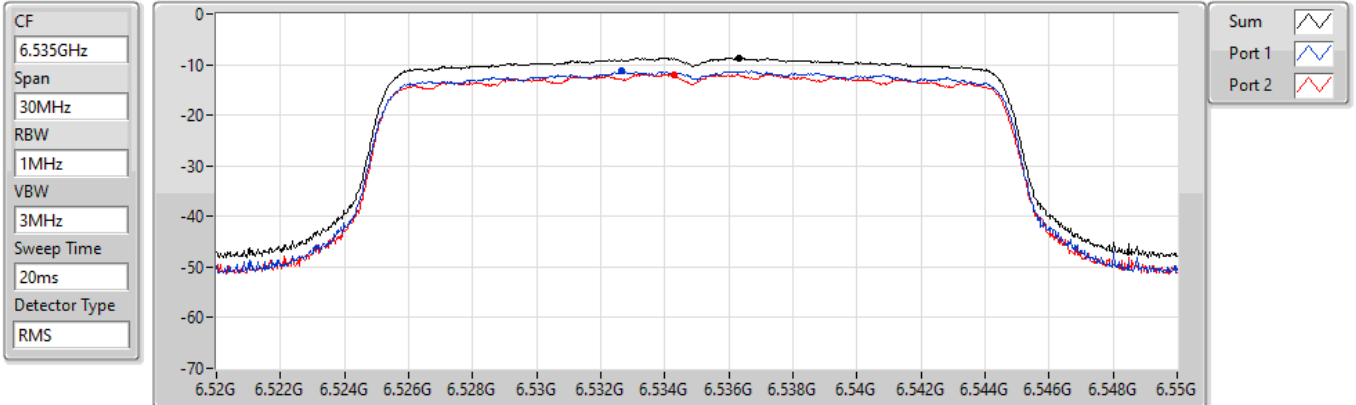


802.11ax HEW20_Nss1,(MCS0)_2TX

PSD

6535MHz

04/11/2021

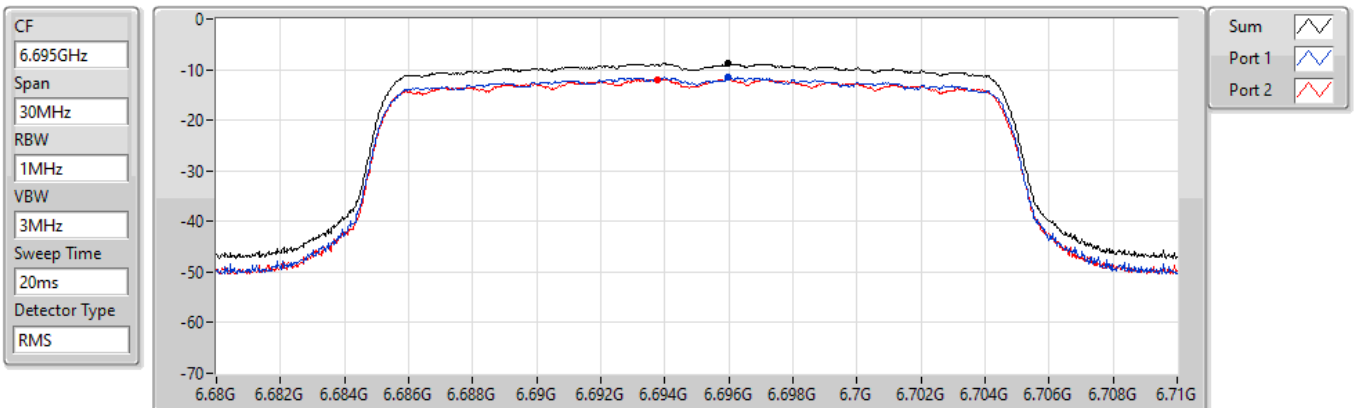


802.11ax HEW20_Nss1,(MCS0)_2TX

PSD

6695MHz

04/11/2021

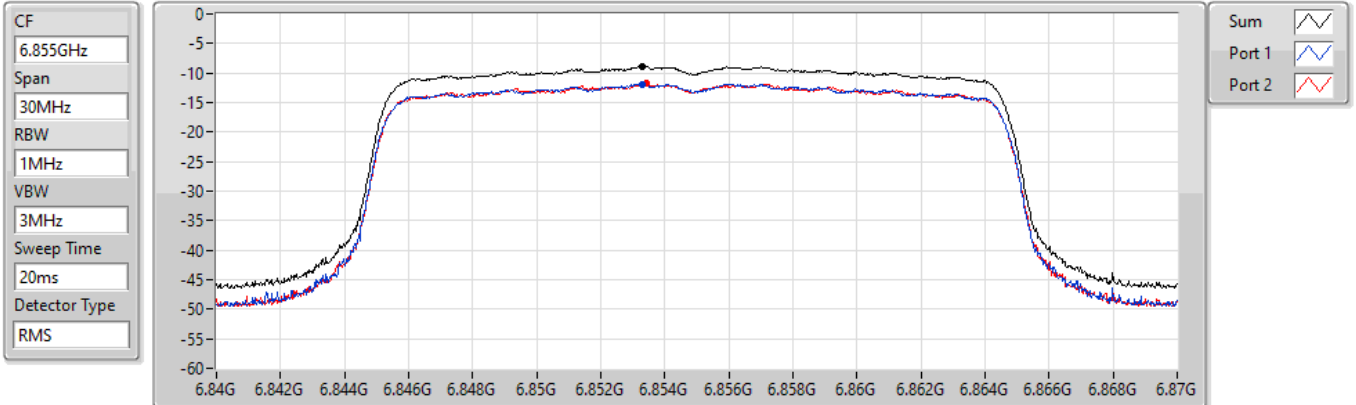


802.11ax HEW20_Nss1,(MCS0)_2TX

PSD

6855MHz

04/11/2021



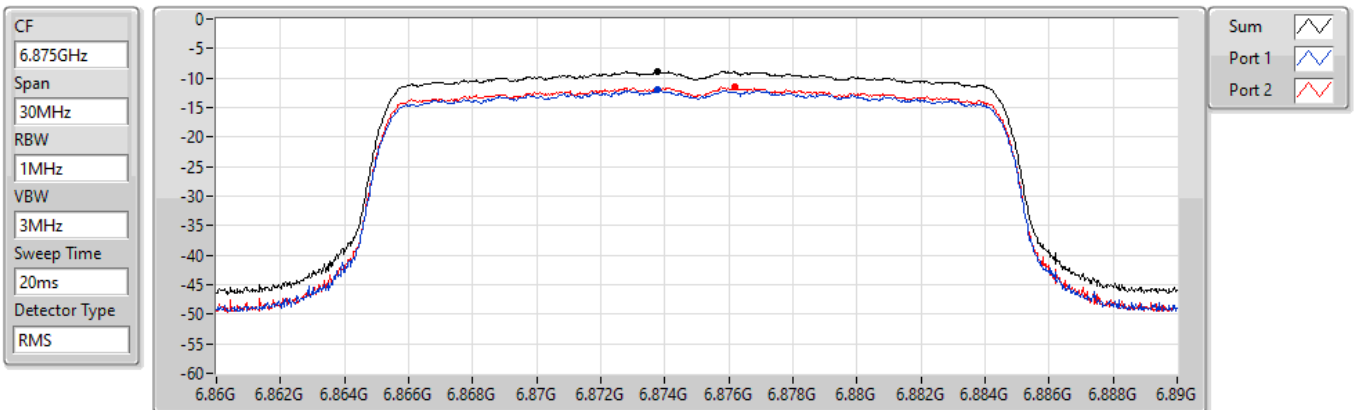
Sum	PD	Port 1	Port 2
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
-8.86	-8.86	-11.84	-11.76

802.11ax HEW20_Nss1,(MCS0)_2TX

PSD

6875MHz

04/11/2021



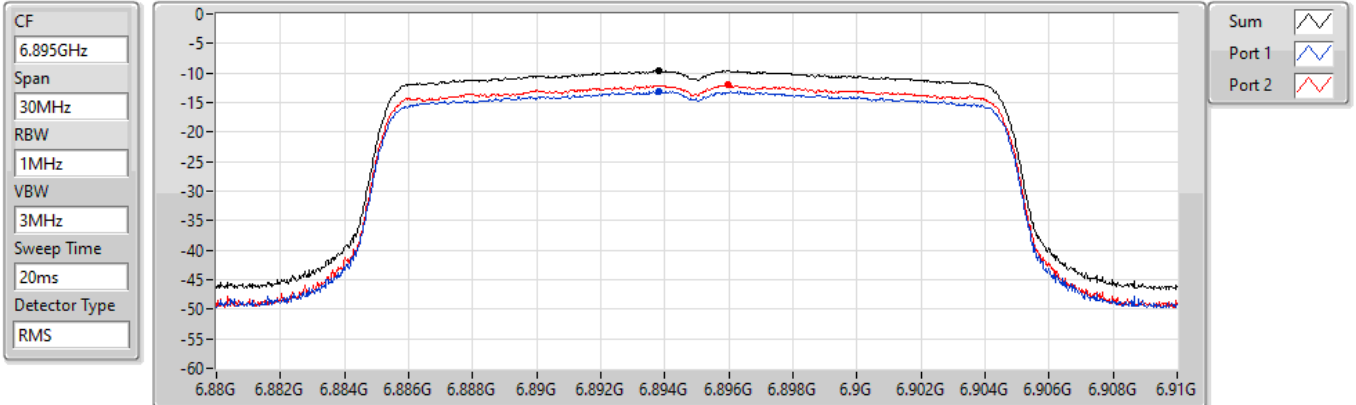
Sum	PD	Port 1	Port 2
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
-8.86	-8.86	-11.96	-11.54

802.11ax HEW20_Nss1,(MCS0)_2TX

PSD

6895MHz

04/11/2021

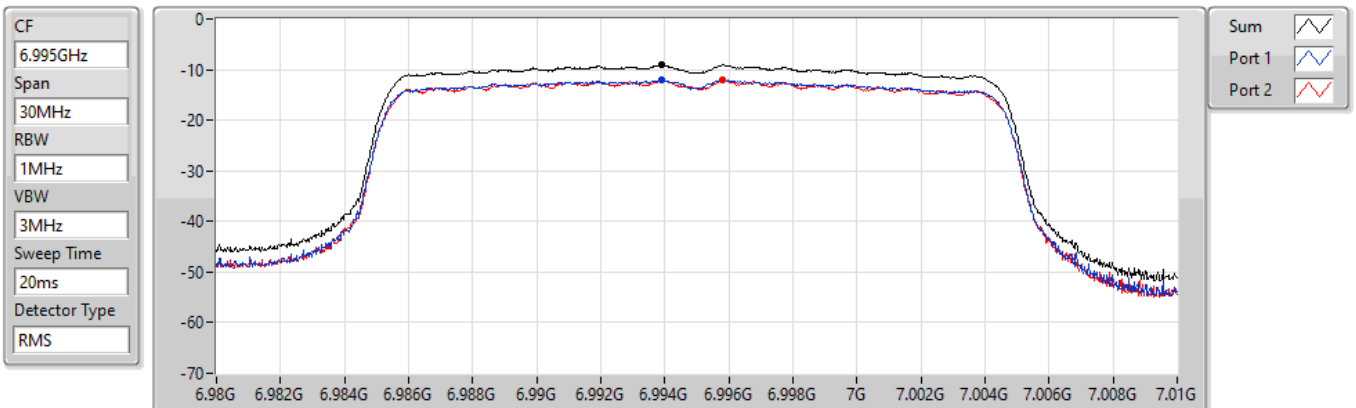


802.11ax HEW20_Nss1,(MCS0)_2TX

PSD

6995MHz

04/11/2021

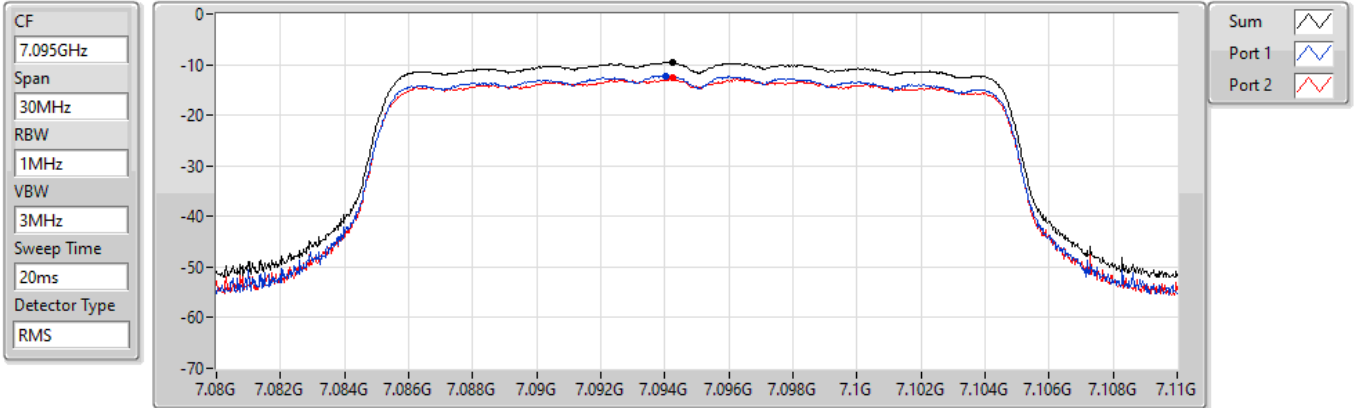


802.11ax HEW20_Nss1,(MCS0)_2TX

PSD

7095MHz

04/11/2021

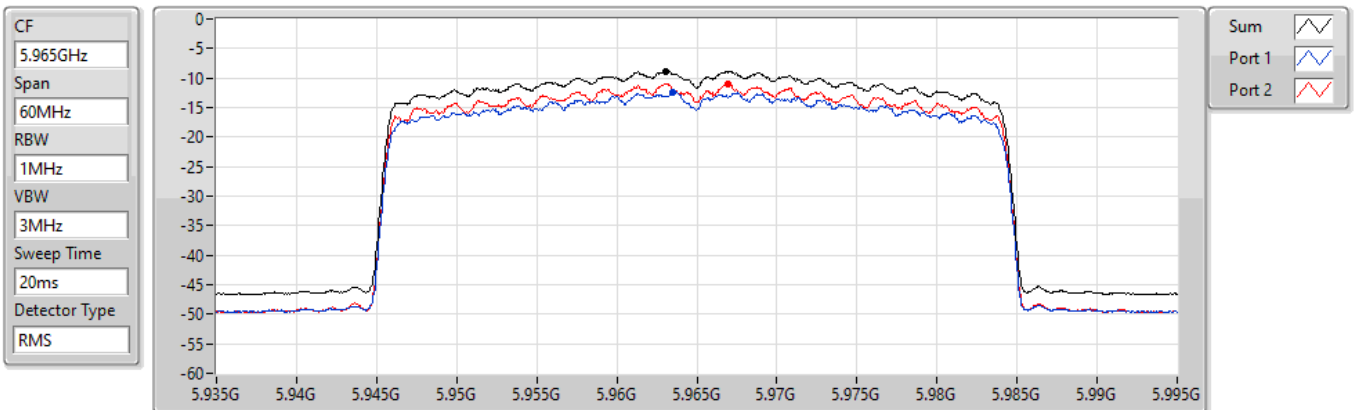


802.11ax HEW40_Nss1,(MCS0)_2TX

PSD

5965MHz

04/11/2021

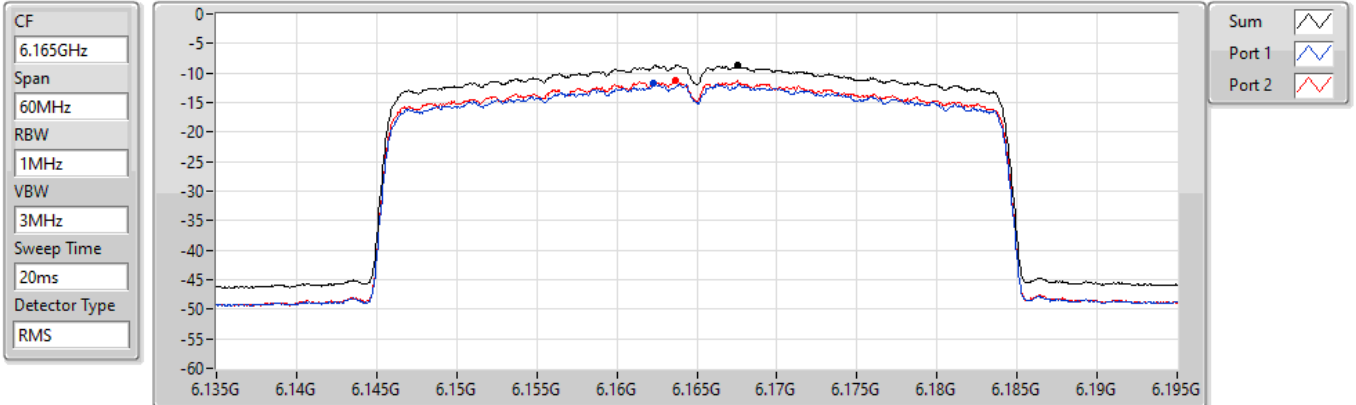


802.11ax HEW40_Nss1,(MCS0)_2TX

PSD

6165MHz

04/11/2021



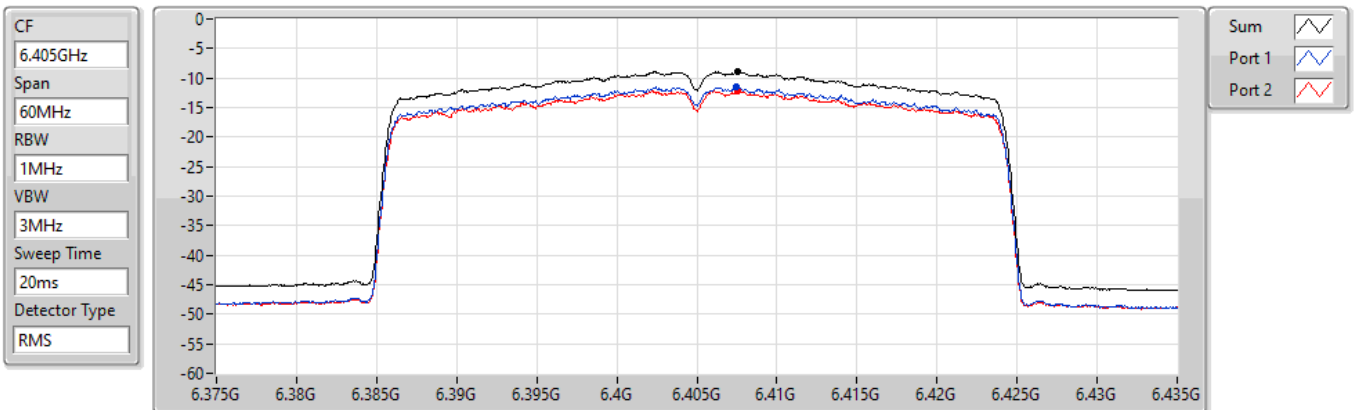
Sum	PD	Port 1	Port 2
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
-8.68	-8.68	-11.77	-11.25

802.11ax HEW40_Nss1,(MCS0)_2TX

PSD

6405MHz

04/11/2021



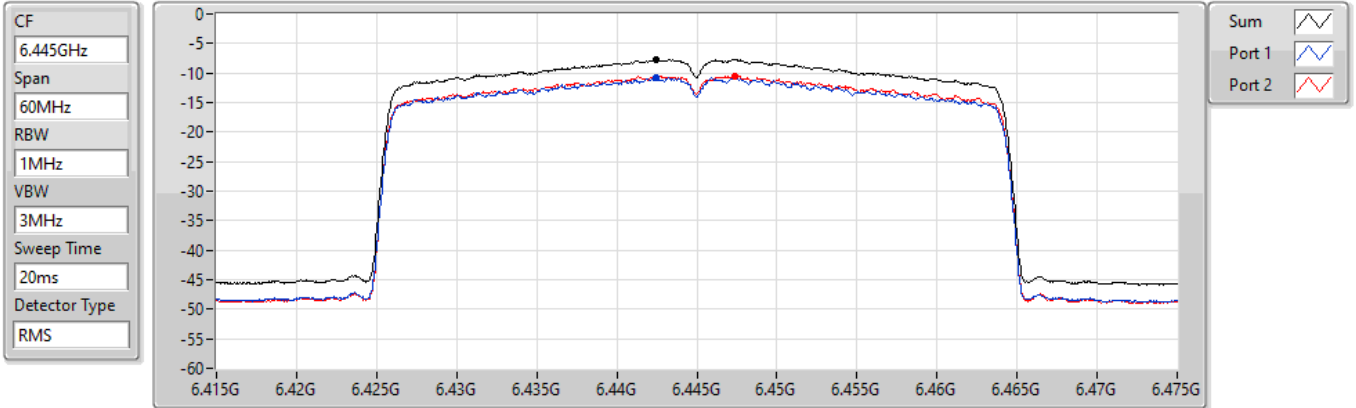
Sum	PD	Port 1	Port 2
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
-8.87	-8.87	-11.60	-12.16

802.11ax HEW40_Nss1,(MCS0)_2TX

PSD

6445MHz

04/11/2021

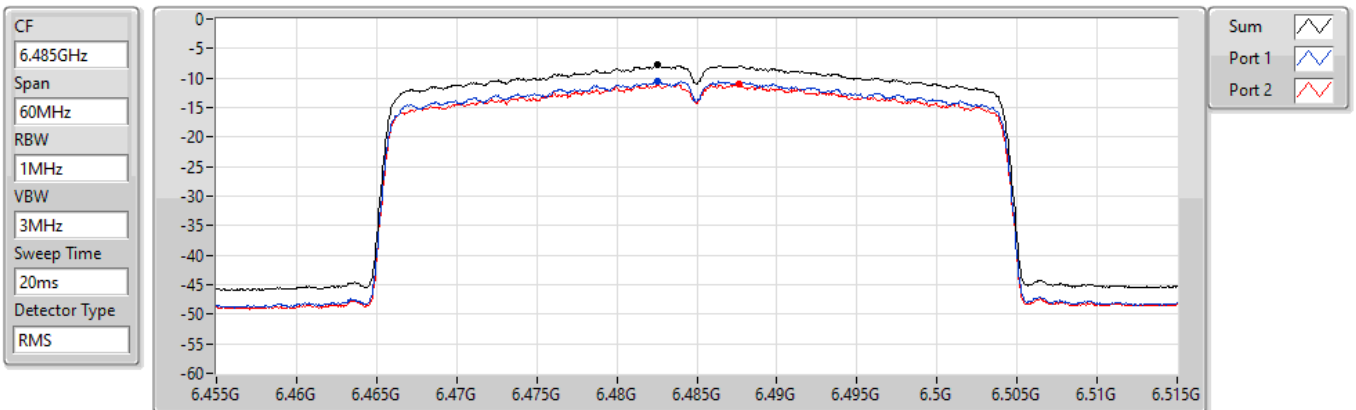


802.11ax HEW40_Nss1,(MCS0)_2TX

PSD

6485MHz

04/11/2021

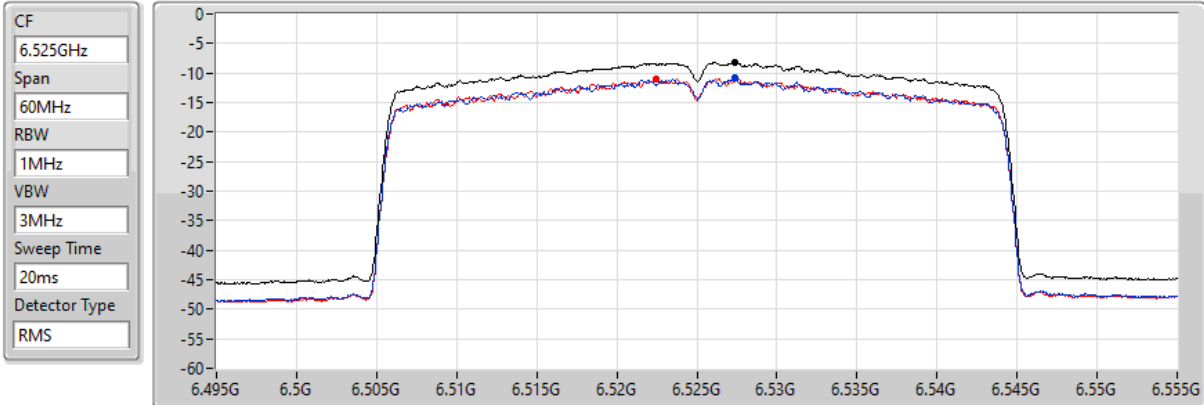


802.11ax HEW40_Nss1,(MCS0)_2TX

PSD

6525MHz

04/11/2021

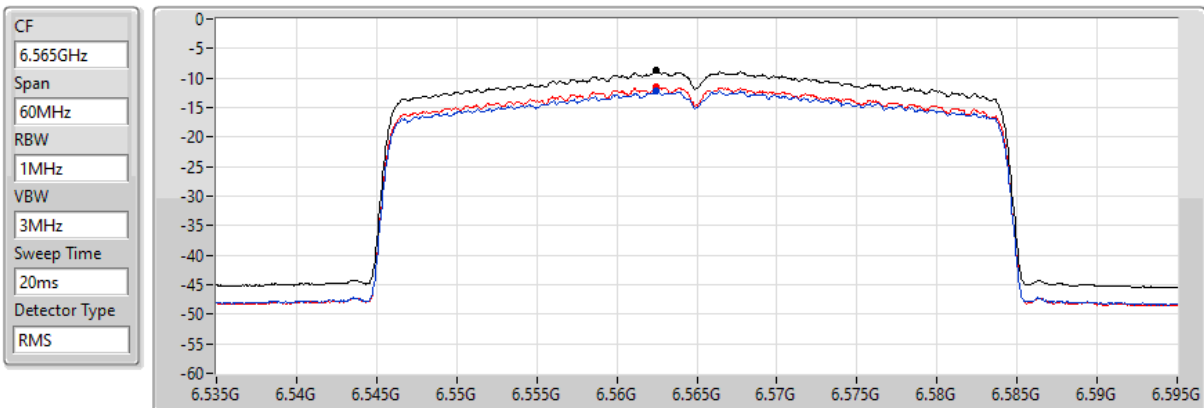


802.11ax HEW40_Nss1,(MCS0)_2TX

PSD

6565MHz

04/11/2021

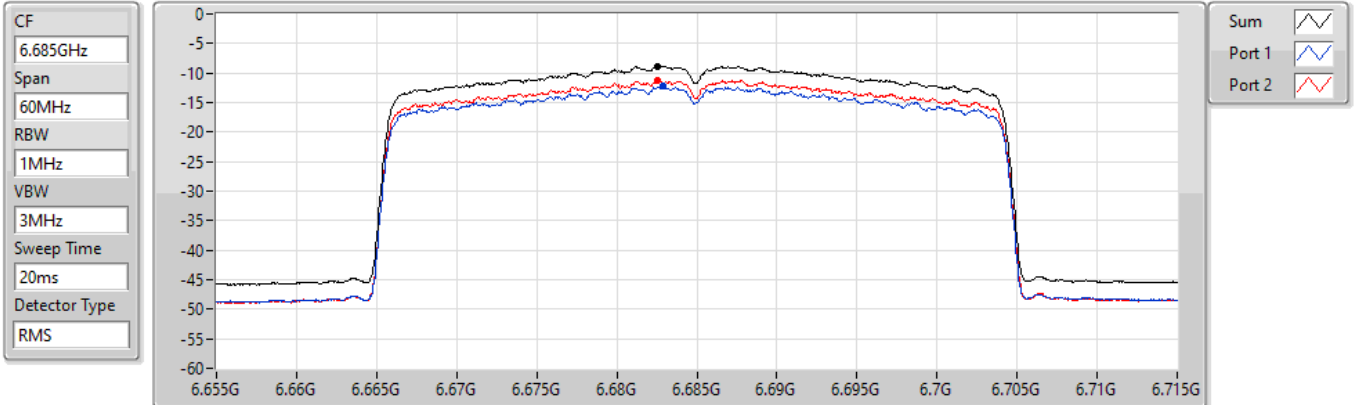


802.11ax HEW40_Nss1,(MCS0)_2TX

PSD

6685MHz

04/11/2021

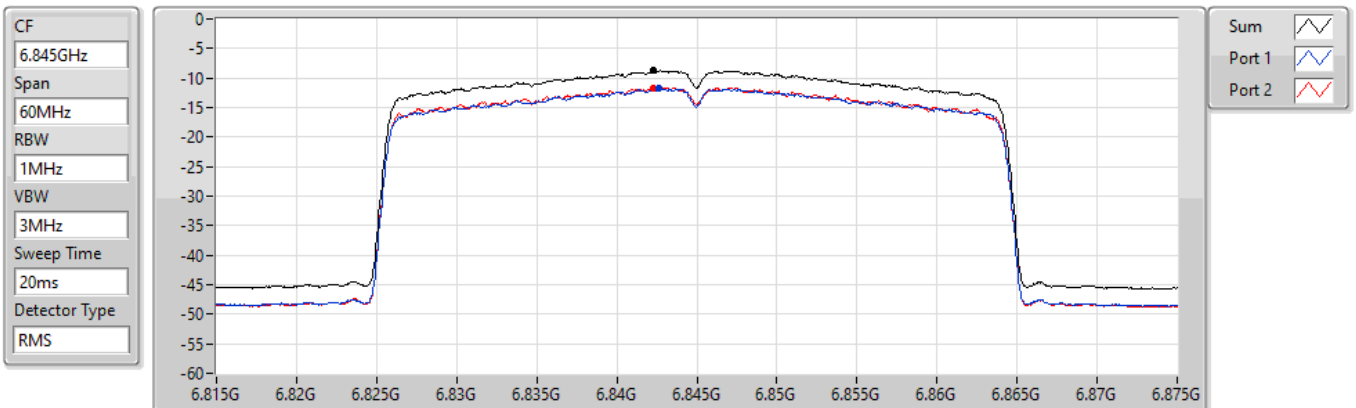


802.11ax HEW40_Nss1,(MCS0)_2TX

PSD

6845MHz

04/11/2021

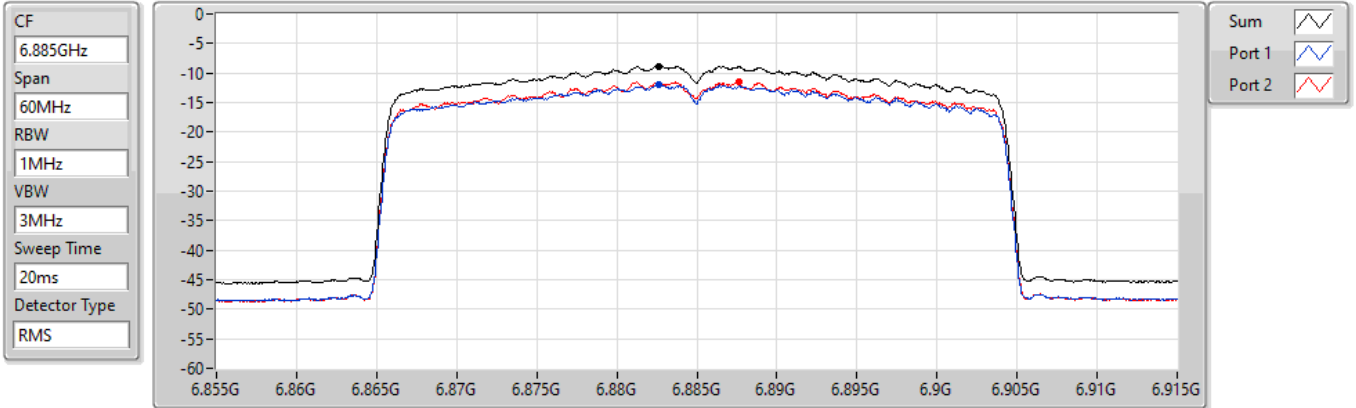


802.11ax HEW40_Nss1,(MCS0)_2TX

PSD

6885MHz

04/11/2021



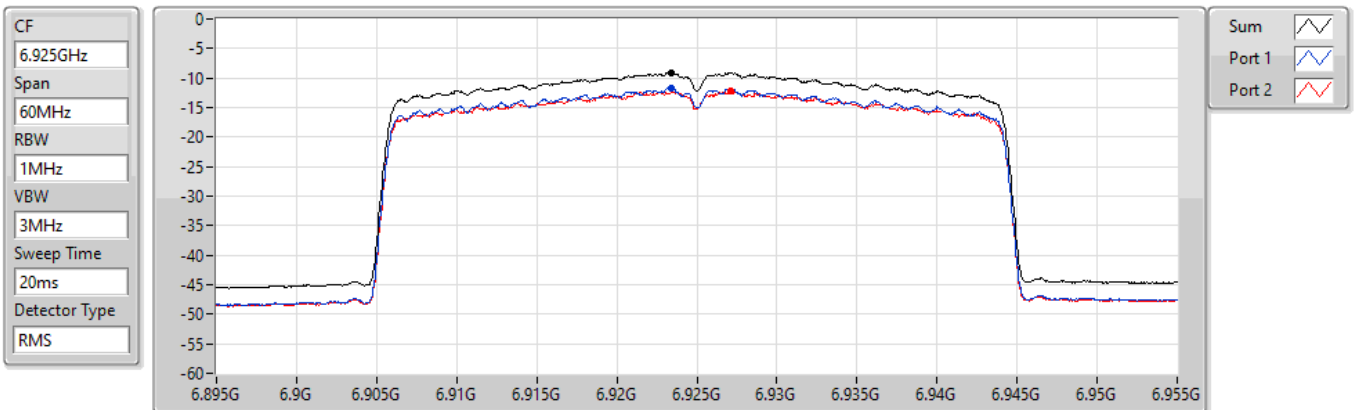
Sum	PD	Port 1	Port 2
(dBm/100kHz)	(dBm/100kHz)	(dBm/100kHz)	(dBm/100kHz)
-8.86	-8.86	-11.99	-11.52

802.11ax HEW40_Nss1,(MCS0)_2TX

PSD

6925MHz

04/11/2021



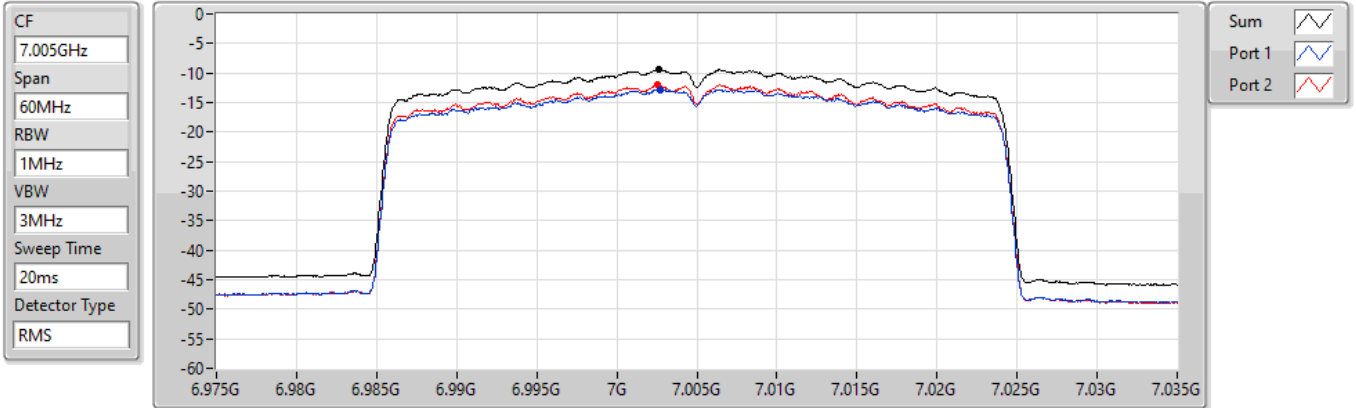
Sum	PD	Port 1	Port 2
(dBm/100kHz)	(dBm/100kHz)	(dBm/100kHz)	(dBm/100kHz)
-9.06	-9.06	-11.80	-12.25

802.11ax HEW40_Nss1,(MCS0)_2TX

PSD

7005MHz

04/11/2021

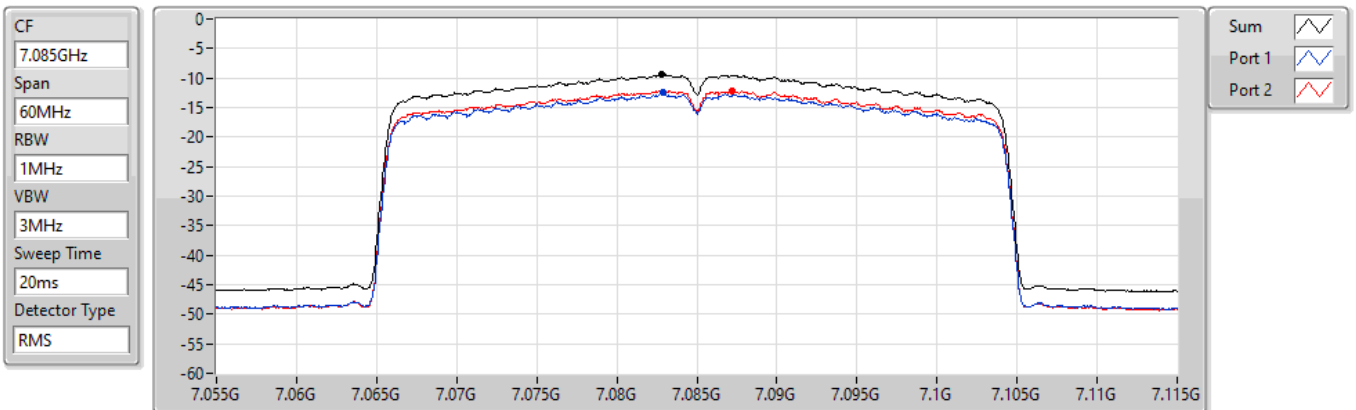


802.11ax HEW40_Nss1,(MCS0)_2TX

PSD

7085MHz

04/11/2021

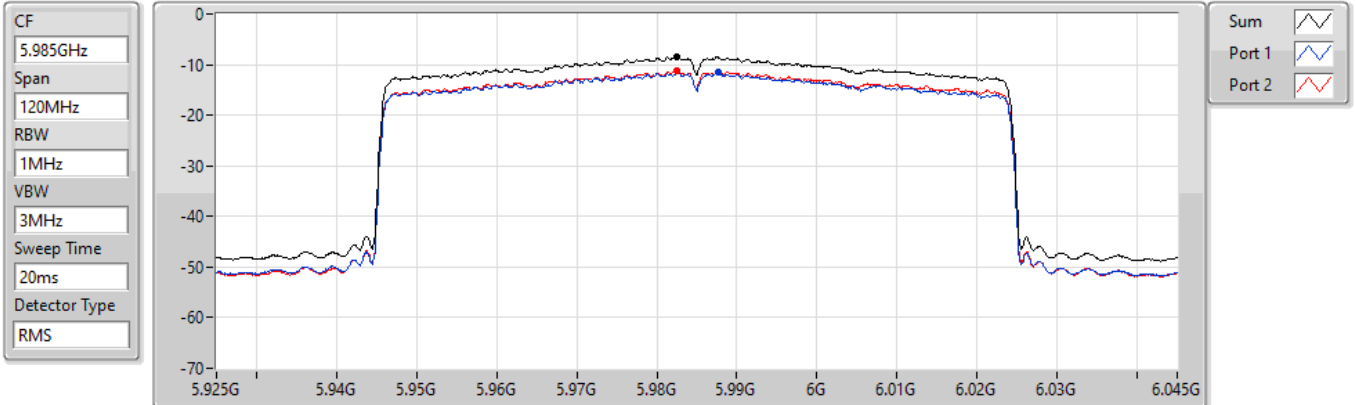


802.11ax HEW80_Nss1,(MCS0)_2TX

PSD

5985MHz

04/11/2021



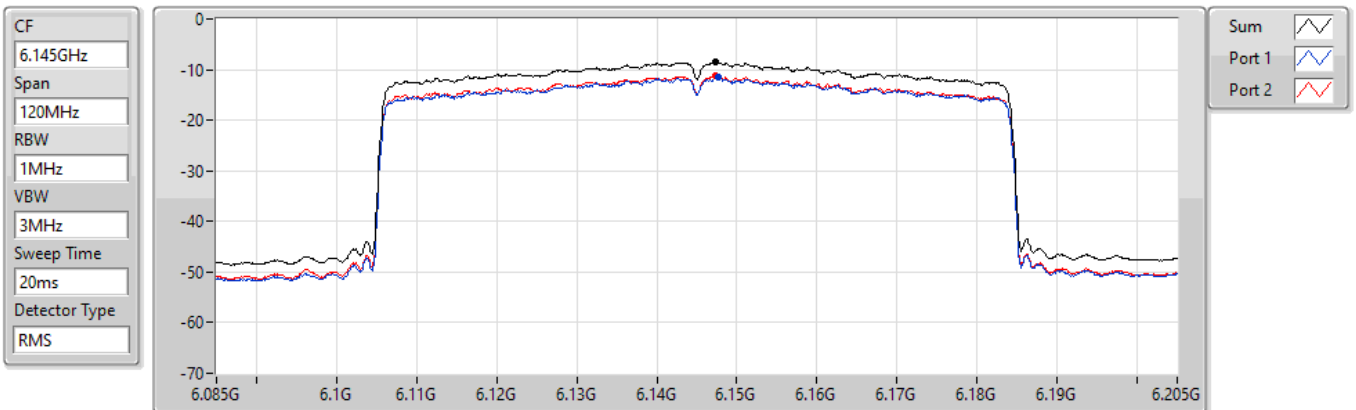
Sum	PD	Port 1	Port 2
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
-8.49	-8.49	-11.62	-11.34

802.11ax HEW80_Nss1,(MCS0)_2TX

PSD

6145MHz

04/11/2021



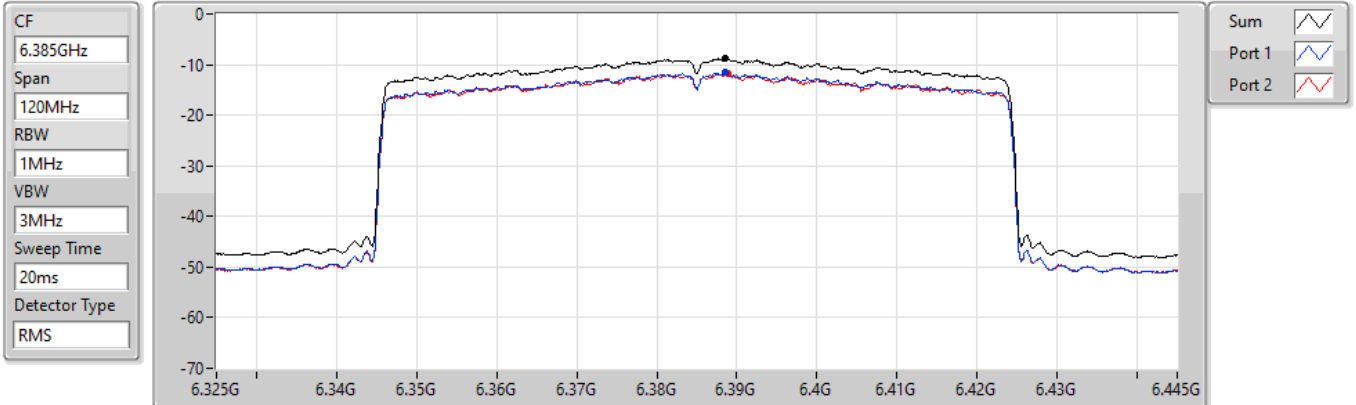
Sum	PD	Port 1	Port 2
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
-8.49	-8.49	-11.61	-11.22

802.11ax HEW80_Nss1,(MCS0)_2TX

PSD

6385MHz

04/11/2021

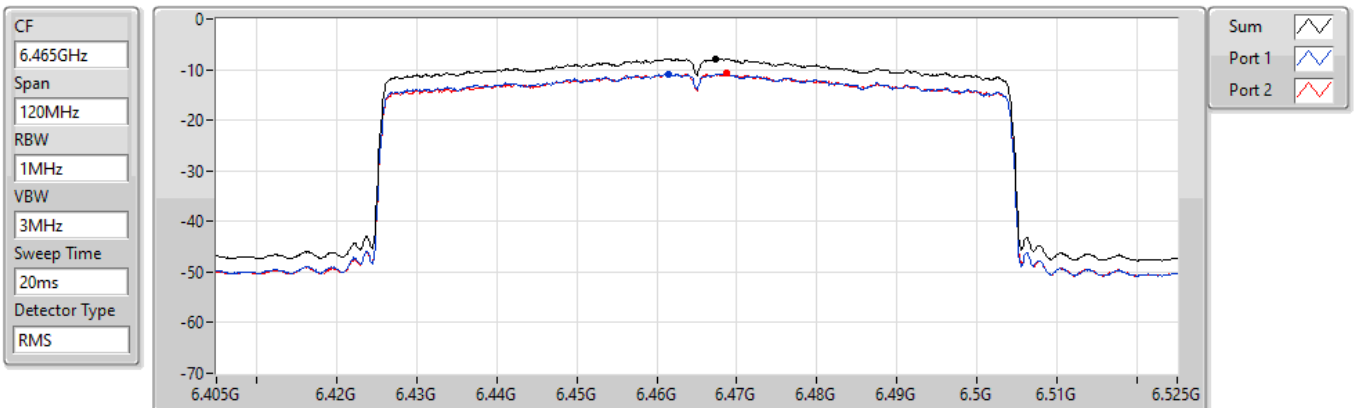


802.11ax HEW80_Nss1,(MCS0)_2TX

PSD

6465MHz

04/11/2021

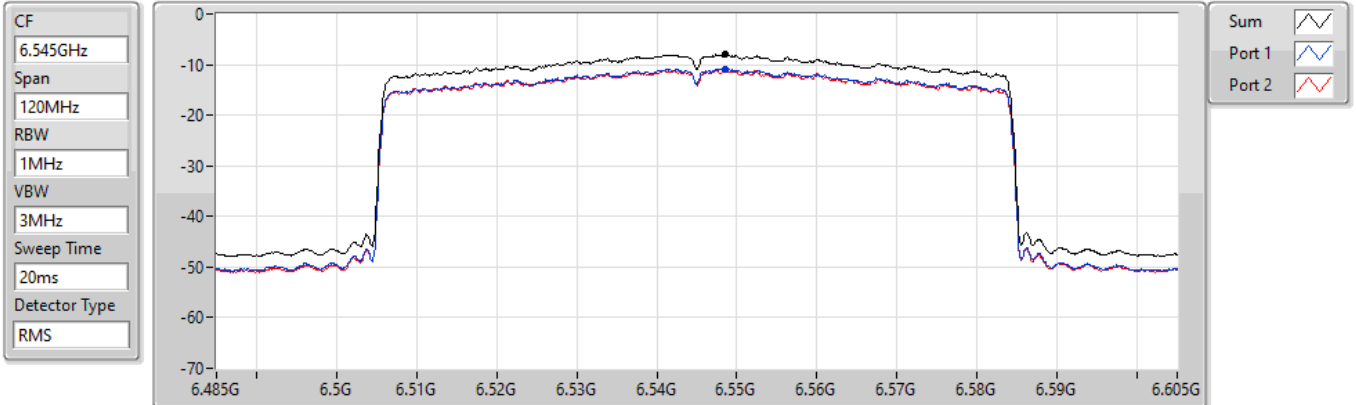


802.11ax HEW80_Nss1,(MCS0)_2TX

PSD

6545MHz

04/11/2021

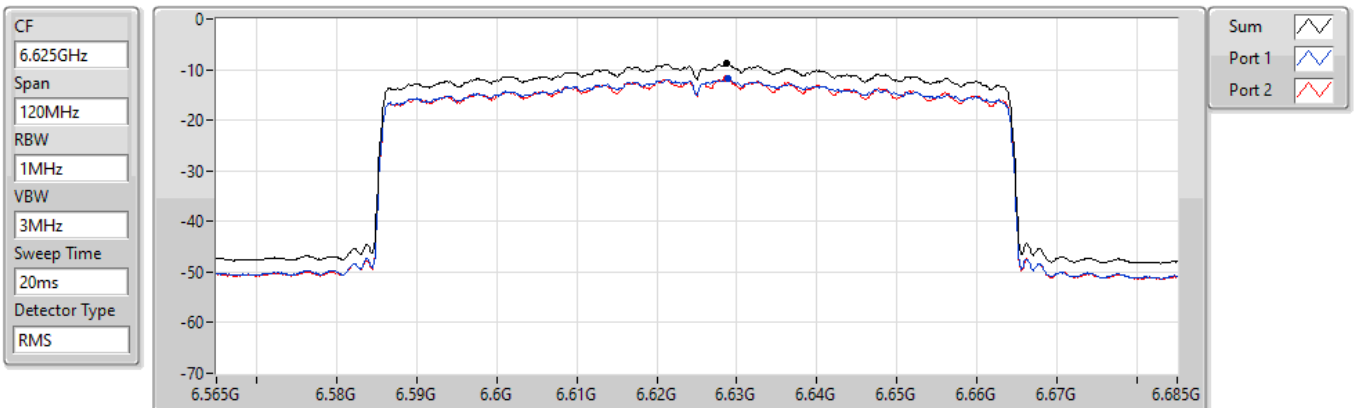


802.11ax HEW80_Nss1,(MCS0)_2TX

PSD

6625MHz

04/11/2021

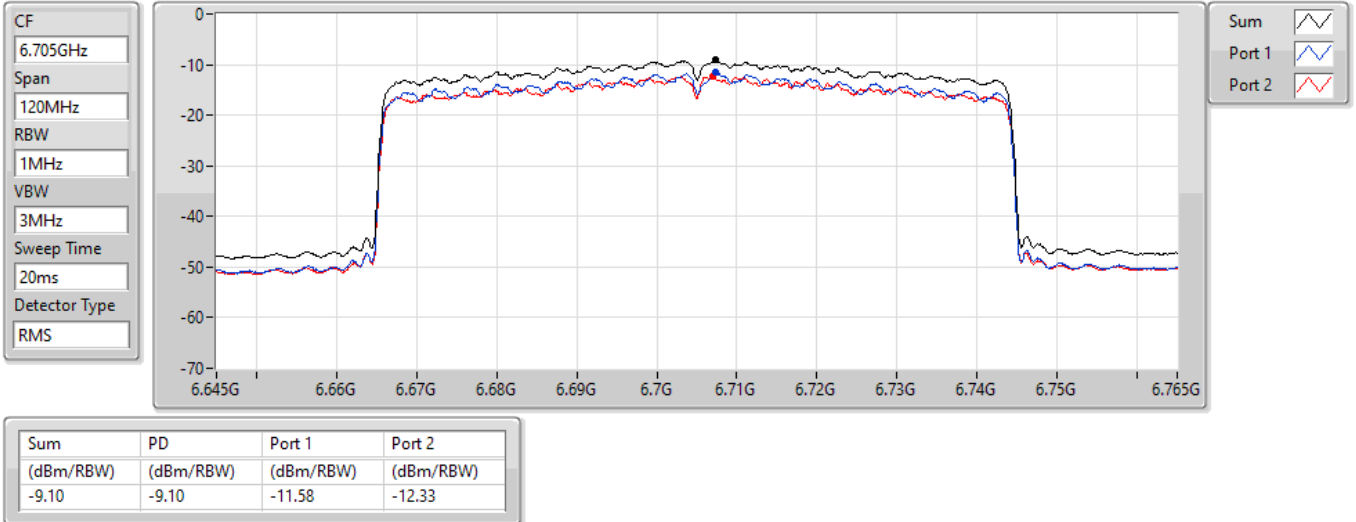


802.11ax HEW80_Nss1,(MCS0)_2TX

PSD

6705MHz

04/11/2021

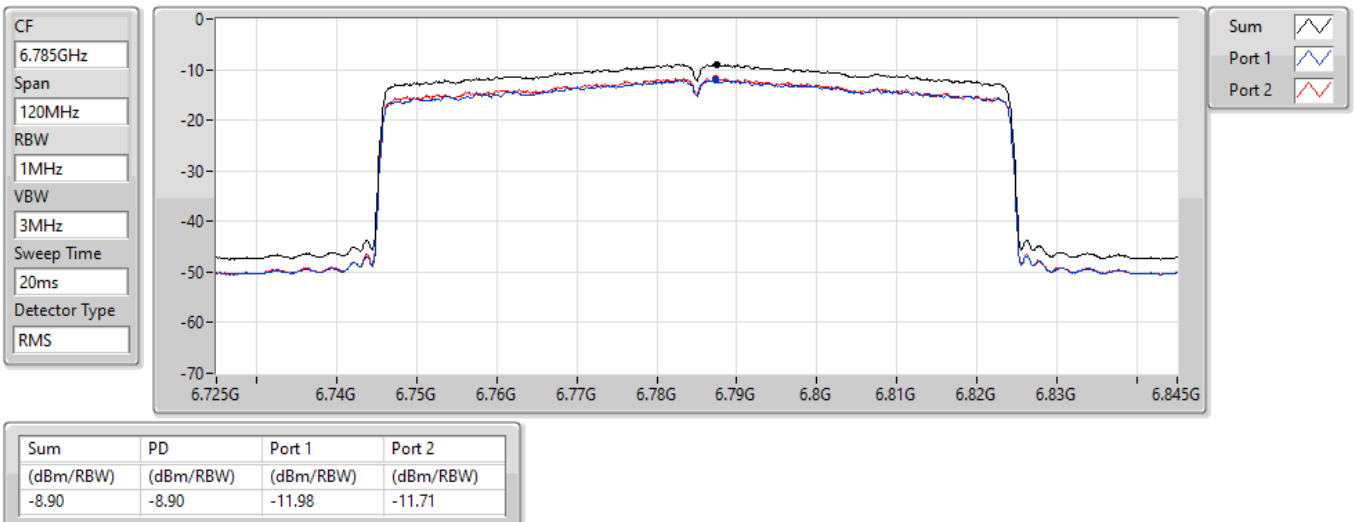


802.11ax HEW80_Nss1,(MCS0)_2TX

PSD

6785MHz

04/11/2021

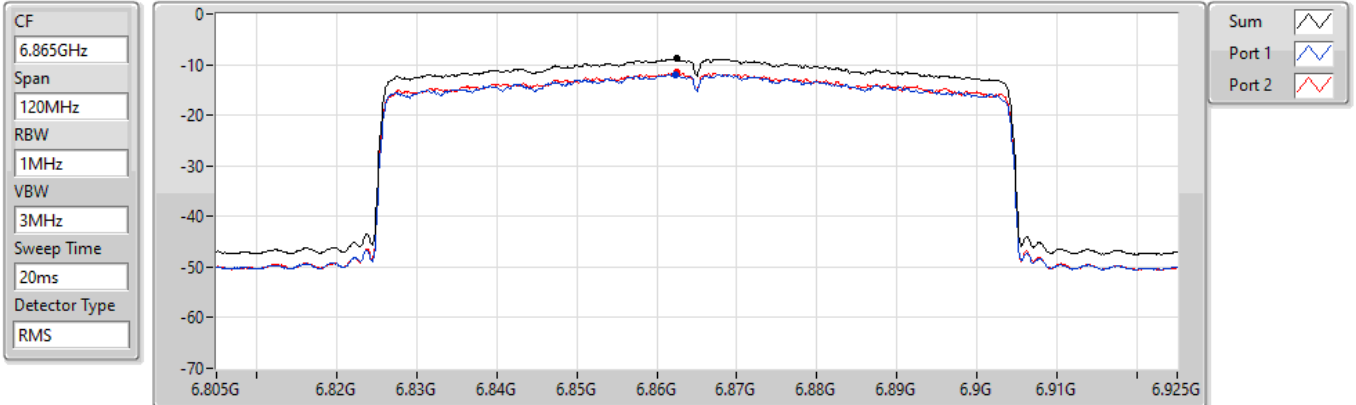


802.11ax HEW80_Nss1,(MCS0)_2TX

PSD

6865MHz

04/11/2021

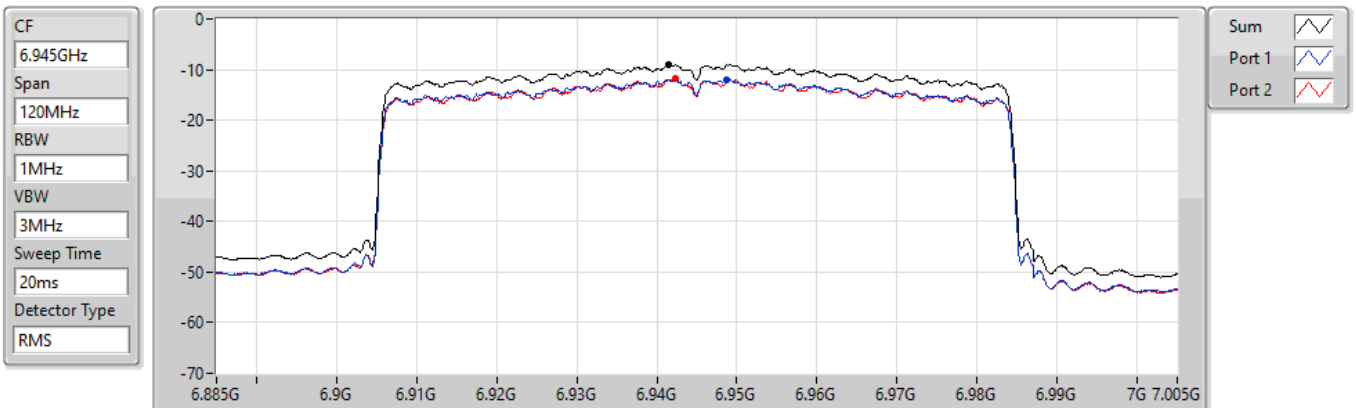


802.11ax HEW80_Nss1,(MCS0)_2TX

PSD

6945MHz

04/11/2021

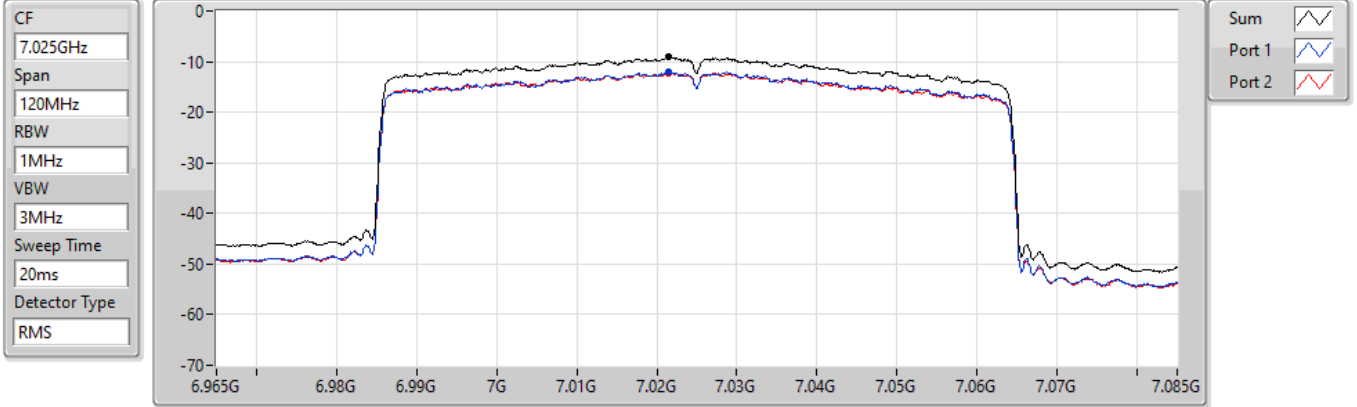


802.11ax HEW80_Nss1,(MCS0)_2TX

7025MHz

PSD

04/11/2021



Sum	PD	Port 1	Port 2
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
-9.14	-9.14	-12.05	-12.25

Summary

Mode	Result	Ref (Hz)	Ref (dBm)	Freq (Hz)	Level (dBm)	Limit (dBm)	Margin (dB)	Port
5.925-6.425GHz	-	-	-	-	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_2TX	Pass	6.4142G	-17.46	6.3696G	-61.26	-57.46	-3.80	2
802.11ax HEW40_Nss1,(MCS0)_2TX	Pass	6.4026G	-14.11	6.343G	-59.88	-54.11	-5.77	1
802.11ax HEW80_Nss1,(MCS0)_2TX	Pass	6.3886G	-11.57	6.5638G	-56.21	-51.57	-4.64	2
6.425-6.525GHz	-	-	-	-	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_2TX	Pass	6.4358G	-16.07	6.3911G	-61.00	-56.07	-4.93	1
802.11ax HEW40_Nss1,(MCS0)_2TX	Pass	6.5278G	-14.05	6.5852G	-59.39	-54.05	-5.34	1
802.11ax HEW80_Nss1,(MCS0)_2TX	Pass	6.5422G	-11.17	6.395G	-56.31	-51.17	-5.14	2
6.525-6.875GHz	-	-	-	-	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_2TX	Pass	6.6944G	-17.64	6.7384G	-61.18	-57.64	-3.54	2
802.11ax HEW40_Nss1,(MCS0)_2TX	Pass	6.8826G	-15.06	6.9648G	-59.12	-55.06	-4.06	1
802.11ax HEW80_Nss1,(MCS0)_2TX	Pass	6.8674G	-11.76	6.9854G	-55.67	-51.75	-3.92	1
6.875-7.125GHz	-	-	-	-	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_2TX	Pass	6.9964G	-17.57	6.9464G	-60.63	-57.57	-3.06	1
802.11ax HEW40_Nss1,(MCS0)_2TX	Pass	7.0866G	-16.03	6.9878G	-59.38	-56.03	-3.35	1
802.11ax HEW80_Nss1,(MCS0)_2TX	Pass	7.01781G	-12.25	6.9002G	-56.03	-52.25	-3.78	1

Result

Mode	Result	Ref (Hz)	Ref (dBm)	Freq (Hz)	Level (dBm)	Limit (dBm)	Margin (dB)	Port
802.11ax HEW20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5955MHz	Pass	5.9537G	-16.37	5.9132G	-62.11	-56.37	-5.74	1
5955MHz	Pass	5.9555G	-16.76	5.9963G	-62.34	-56.76	-5.58	2
6175MHz	Pass	6.1738G	-16.85	6.2139G	-61.75	-56.85	-4.90	1
6175MHz	Pass	6.1741G	-16.17	6.2157G	-61.90	-56.17	-5.73	2
6415MHz	Pass	6.4155G	-16.58	6.3771G	-61.03	-56.58	-4.45	1
6415MHz	Pass	6.4142G	-17.46	6.3696G	-61.26	-57.46	-3.80	2
6435MHz	Pass	6.4358G	-16.07	6.3911G	-61.00	-56.07	-4.93	1
6435MHz	Pass	6.4363G	-16.10	6.387G	-61.16	-56.10	-5.06	2
6475MHz	Pass	6.4755G	-15.95	6.5232G	-61.27	-55.95	-5.32	1
6475MHz	Pass	6.4762G	-16.30	6.5192G	-61.29	-56.30	-4.99	2
6515MHz	Pass	6.5138G	-15.65	6.5554G	-60.62	-55.65	-4.97	1
6515MHz	Pass	6.5159G	-15.71	6.5566G	-60.88	-55.71	-5.17	2
6535MHz	Pass	6.5364G	-16.61	6.5799G	-60.70	-56.61	-4.09	1
6535MHz	Pass	6.5363G	-17.25	6.5717G	-60.89	-57.25	-3.64	2
6695MHz	Pass	6.6937G	-17.41	6.7429G	-61.24	-57.41	-3.83	1
6695MHz	Pass	6.6944G	-17.64	6.7384G	-61.18	-57.64	-3.54	2
6855MHz	Pass	6.8561G	-17.36	6.805G	-61.39	-55.75	-5.64	1
6855MHz	Pass	6.8534G	-17.38	6.8082G	-61.37	-57.38	-3.99	2
6875MHz	Pass	6.8755G	-16.88	6.9245G	-61.28	-56.88	-4.40	1
6875MHz	Pass	6.8736G	-17.19	6.8259G	-61.39	-57.19	-4.20	2
6895MHz	Pass	6.8946G	-17.56	6.945G	-61.24	-56.43	-4.81	1
6895MHz	Pass	6.8945G	-17.06	6.945G	-61.06	-57.06	-4.00	2
6995MHz	Pass	6.9964G	-17.57	6.9464G	-60.63	-57.57	-3.06	1
6995MHz	Pass	6.994G	-17.09	6.9562G	-60.64	-57.09	-3.55	2
7095MHz	Pass	7.0938G	-17.69	7.0474G	-61.68	-57.69	-3.99	1
7095MHz	Pass	7.0933G	-17.95	7.0453G	-61.95	-57.95	-4.00	2
802.11ax HEW40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5965MHz	Pass	5.9658G	-14.69	5.9034G	-60.56	-54.69	-5.87	1
5965MHz	Pass	5.9626G	-13.63	5.9048G	-60.56	-53.63	-6.93	2
6165MHz	Pass	6.1664G	-14.29	6.2244G	-60.26	-54.29	-5.97	1
6165MHz	Pass	6.1642G	-14.31	6.2452G	-60.45	-54.31	-6.14	2
6405MHz	Pass	6.4026G	-14.11	6.343G	-59.88	-54.11	-5.77	1
6405MHz	Pass	6.4056G	-14.16	6.3456G	-60.02	-54.11	-5.91	2
6445MHz	Pass	6.4474G	-13.54	6.3804G	-59.03	-53.54	-5.49	1
6445MHz	Pass	6.4468G	-12.96	6.3792G	-59.59	-52.96	-6.63	2
6485MHz	Pass	6.4876G	-12.99	6.5488G	-59.16	-52.99	-6.17	1
6485MHz	Pass	6.4876G	-13.37	6.5632G	-59.39	-53.37	-6.02	2
6525MHz	Pass	6.5278G	-14.05	6.5852G	-59.39	-54.05	-5.34	1
6525MHz	Pass	6.5226G	-13.60	6.5846G	-59.49	-53.60	-5.89	2
6565MHz	Pass	6.566G	-15.05	6.505G	-59.85	-55.05	-4.80	1
6565MHz	Pass	6.5664G	-14.82	6.6252G	-60.07	-54.82	-5.25	2
6685MHz	Pass	6.6842G	-14.60	6.746G	-59.59	-54.60	-4.99	1
6685MHz	Pass	6.6876G	-14.79	6.5854G	-59.80	-54.79	-5.01	2
6845MHz	Pass	6.8438G	-14.71	6.9418G	-59.53	-54.71	-4.82	1
6845MHz	Pass	6.841G	-13.63	6.7796G	-59.15	-53.63	-5.52	2
6885MHz	Pass	6.8826G	-15.06	6.9648G	-59.12	-55.06	-4.06	1
6885MHz	Pass	6.8826G	-14.20	6.97G	-59.23	-54.20	-5.03	2
6925MHz	Pass	6.9236G	-14.79	6.9886G	-59.02	-54.79	-4.23	1
6925MHz	Pass	6.9276G	-14.26	6.9906G	-59.16	-54.26	-4.90	2
7005MHz	Pass	7.0034G	-15.62	6.9456G	-59.05	-55.57	-3.48	1
7005MHz	Pass	7.0072G	-15.36	6.9442G	-59.39	-55.36	-4.03	2
7085MHz	Pass	7.0866G	-16.03	6.9878G	-59.38	-56.03	-3.35	1
7085MHz	Pass	7.0864G	-15.39	6.9896G	-59.53	-55.39	-4.14	2
802.11ax HEW80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-

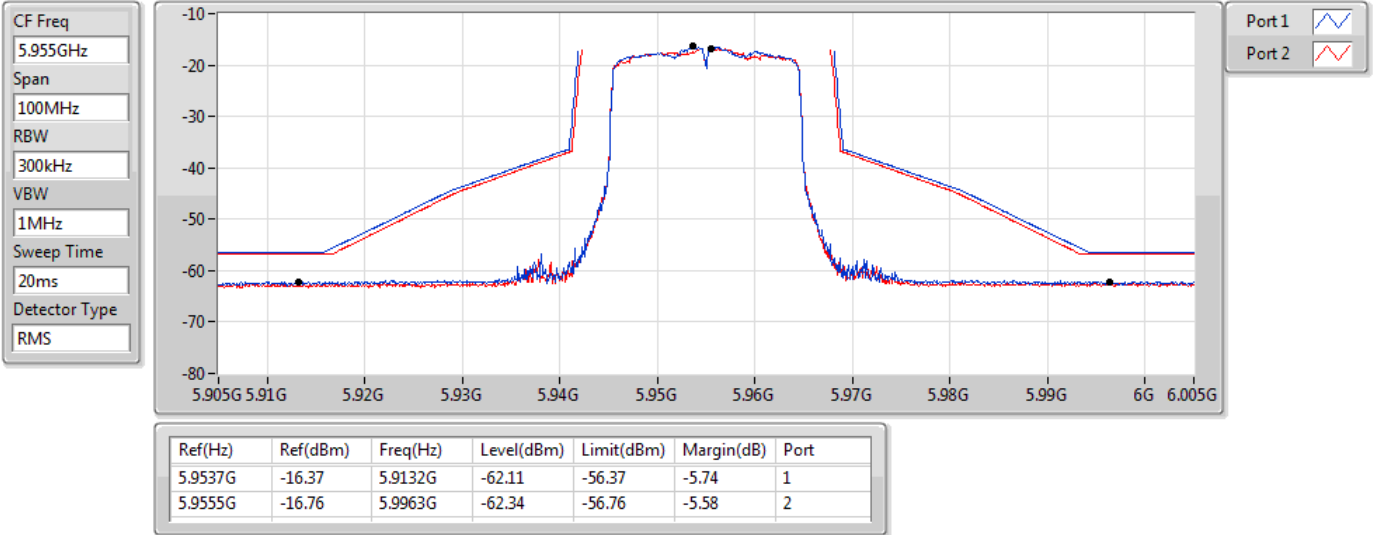
Mode	Result	Ref (Hz)	Ref (dBm)	Freq (Hz)	Level (dBm)	Limit (dBm)	Margin (dB)	Port
5985MHz	Pass	5.9874G	-11.44	5.865G	-56.65	-51.31	-5.34	1
5985MHz	Pass	5.987G	-11.19	6.1826G	-57.33	-51.19	-6.14	2
6145MHz	Pass	6.1426G	-11.46	6.343G	-57.07	-51.46	-5.61	1
6145MHz	Pass	6.1474G	-10.70	6.3446G	-57.00	-50.70	-6.30	2
6385MHz	Pass	6.3806G	-11.46	6.5578G	-56.27	-51.46	-4.81	1
6385MHz	Pass	6.3886G	-11.57	6.5638G	-56.21	-51.57	-4.64	2
6465MHz	Pass	6.4686G	-10.34	6.595G	-56.14	-50.34	-5.80	1
6465MHz	Pass	6.4686G	-10.54	6.5858G	-55.84	-50.54	-5.30	2
6545MHz	Pass	6.549G	-10.71	6.3998G	-56.12	-50.71	-5.41	1
6545MHz	Pass	6.5422G	-11.17	6.395G	-56.31	-51.17	-5.14	2
6625MHz	Pass	6.629G	-11.90	6.7566G	-56.53	-51.90	-4.63	1
6625MHz	Pass	6.6226G	-11.48	6.7498G	-56.59	-51.48	-5.11	2
6705MHz	Pass	6.7014G	-11.73	6.5574G	-56.15	-51.73	-4.42	1
6705MHz	Pass	6.7078G	-12.15	6.5546G	-56.24	-52.15	-4.09	2
6785MHz	Pass	6.7898G	-11.13	6.9738G	-55.70	-51.13	-4.57	1
6785MHz	Pass	6.7878G	-11.38	6.9638G	-55.95	-51.38	-4.57	2
6865MHz	Pass	6.8674G	-11.76	6.9854G	-55.67	-51.75	-3.92	1
6865MHz	Pass	6.8602G	-11.56	6.993G	-55.92	-51.56	-4.36	2
6945MHz	Pass	6.943G	-11.99	6.8238G	-56.03	-51.99	-4.04	1
6945MHz	Pass	6.9434G	-12.24	6.8186G	-56.21	-52.24	-3.97	2
7025MHz	Pass	7.01781G	-12.25	6.9002G	-56.03	-52.25	-3.78	1
7025MHz	Pass	7.01901G	-12.14	6.9042G	-56.18	-52.14	-4.04	2

802.11ax HEW20_Nss1,(MCS0)_2TX

MASK

5955MHz_TnomVnom

11/02/2022

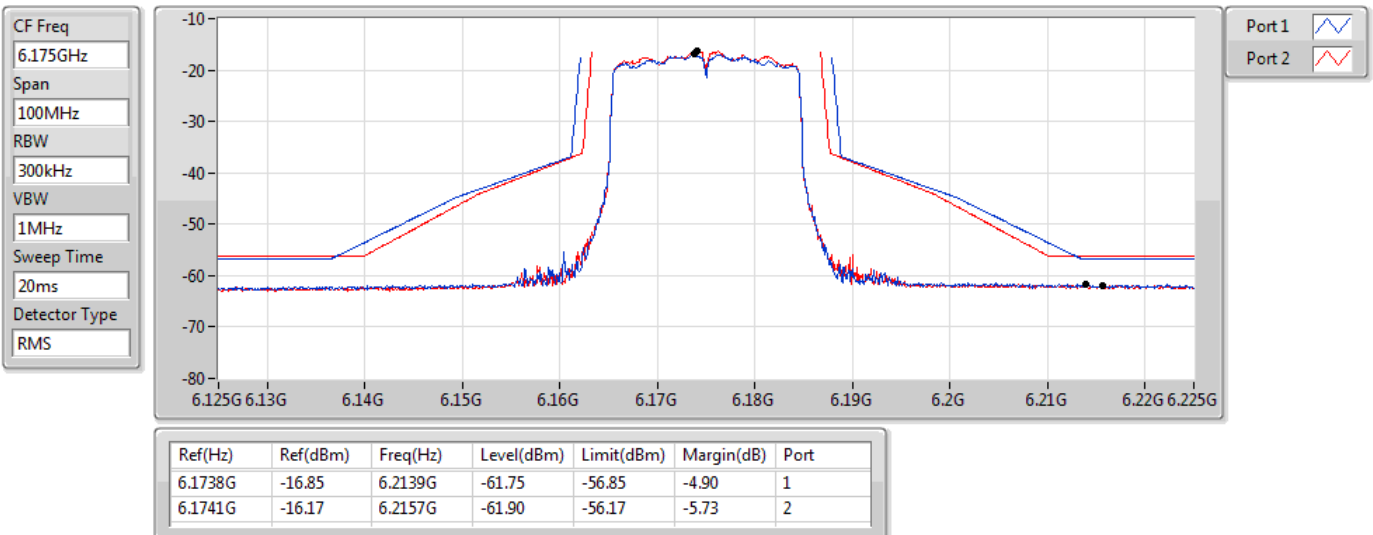


802.11ax HEW20_Nss1,(MCS0)_2TX

MASK

6175MHz_TnomVnom

11/02/2022

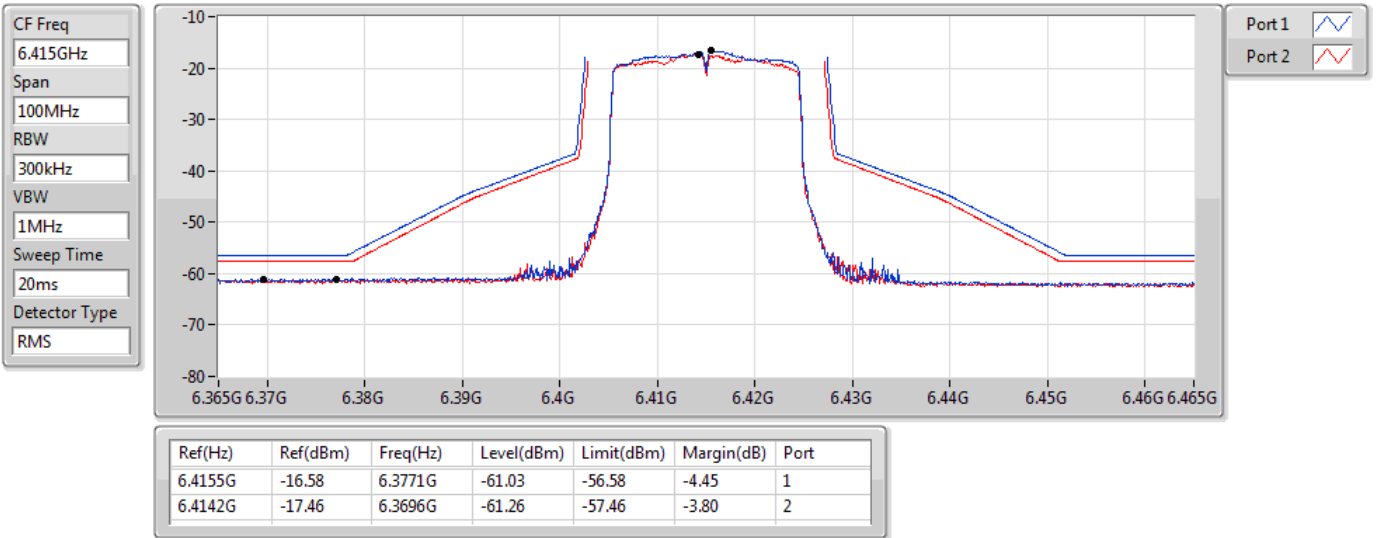


802.11ax HEW20_Nss1,(MCS0)_2TX

MASK

6415MHz_TnomVnom

11/02/2022

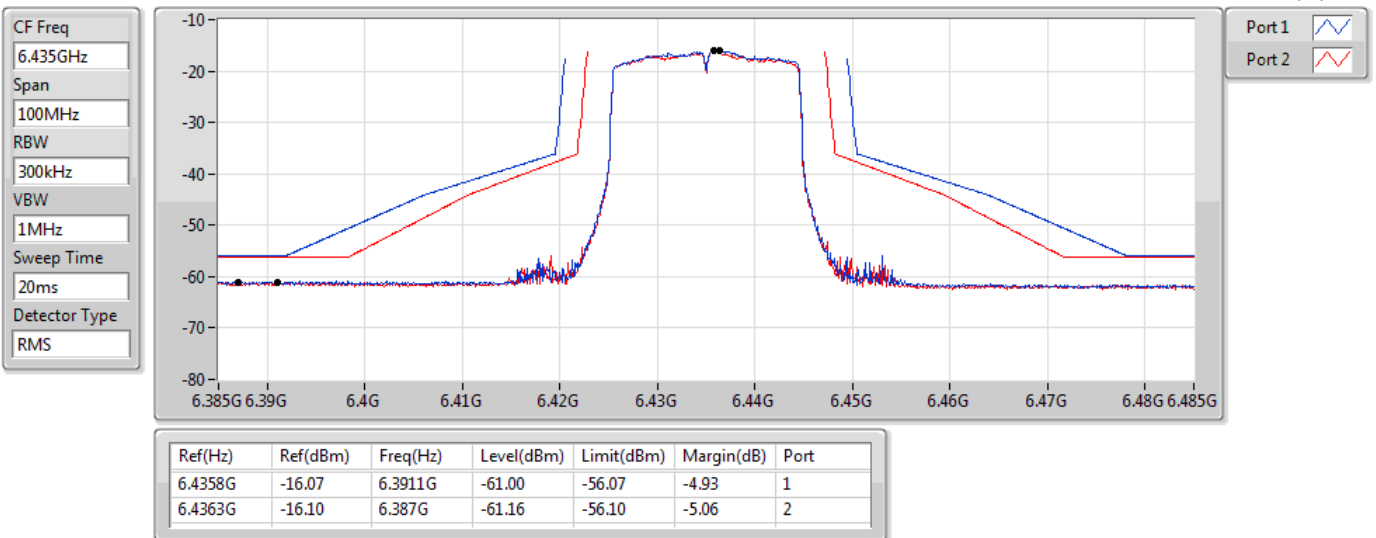


802.11ax HEW20_Nss1,(MCS0)_2TX

MASK

6435MHz_TnomVnom

11/02/2022

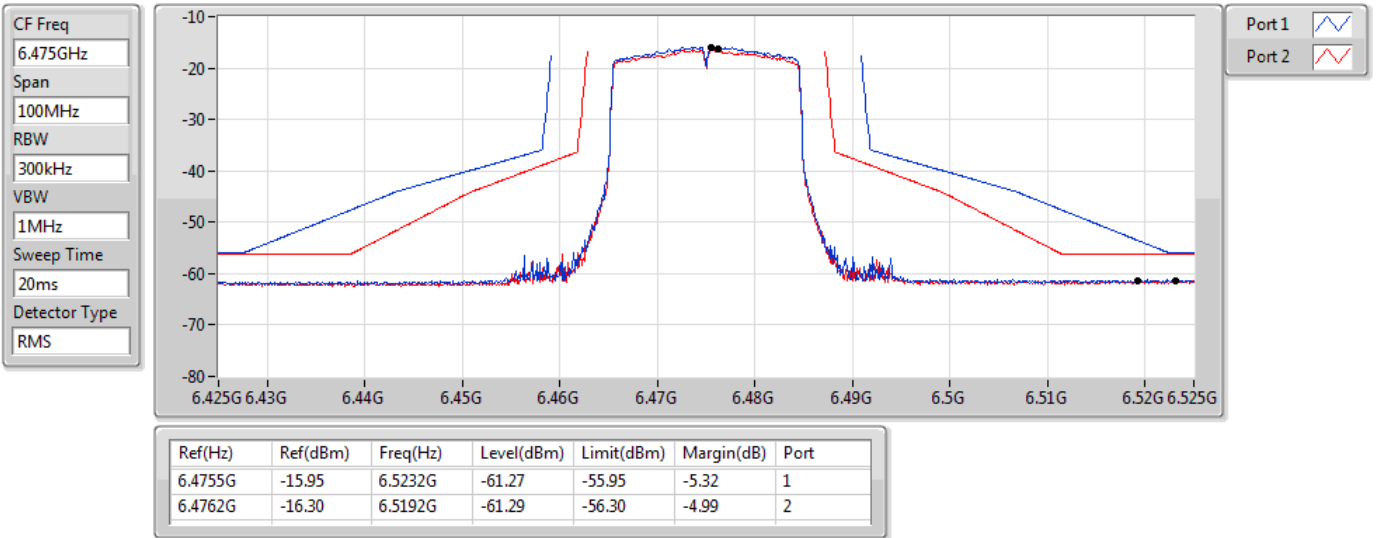


802.11ax HEW20_Nss1,(MCS0)_2TX

MASK

6475MHz_TnomVnom

11/02/2022

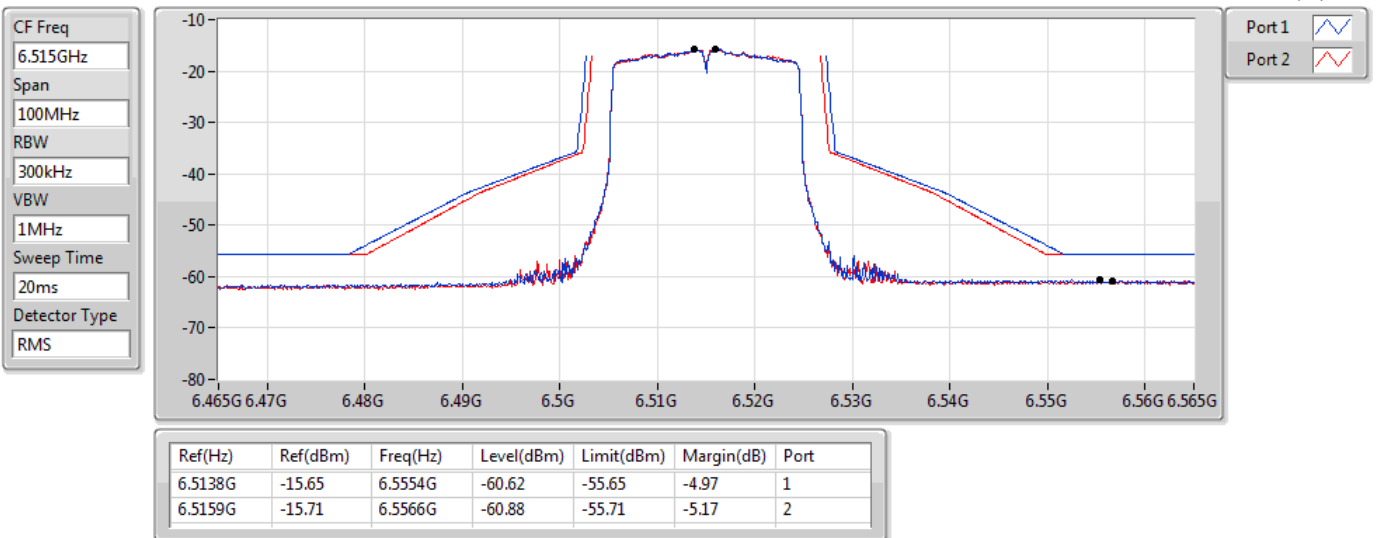


802.11ax HEW20_Nss1,(MCS0)_2TX

MASK

6515MHz_TnomVnom

11/02/2022

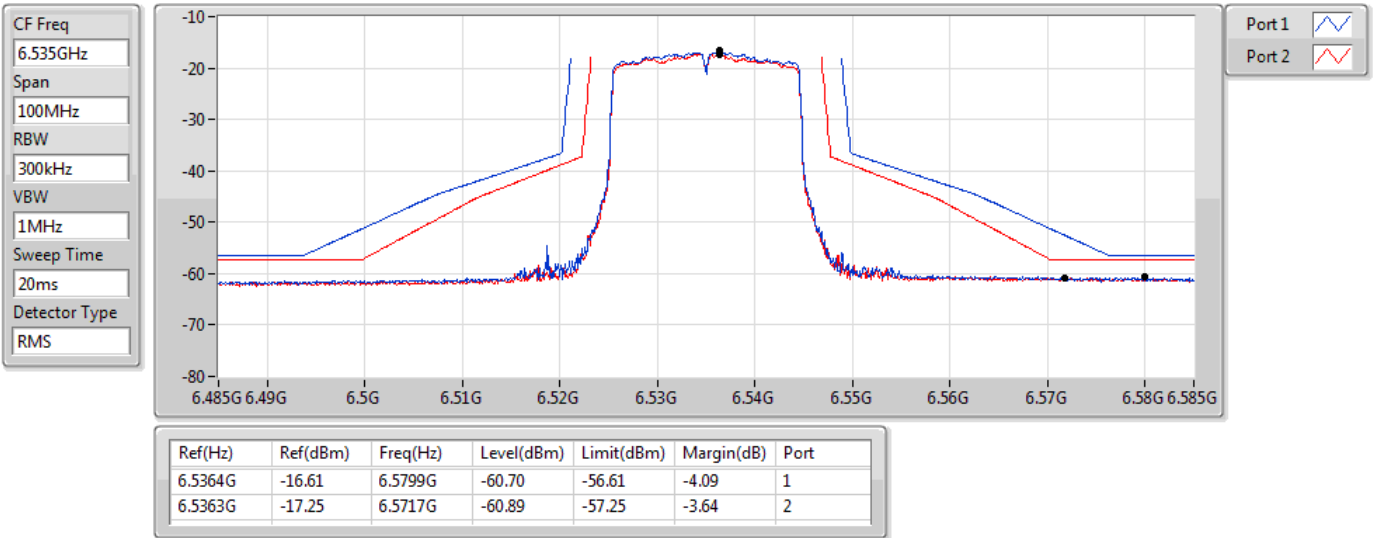


802.11ax HEW20_Nss1,(MCS0)_2TX

MASK

6535MHz_TnomVnom

11/02/2022

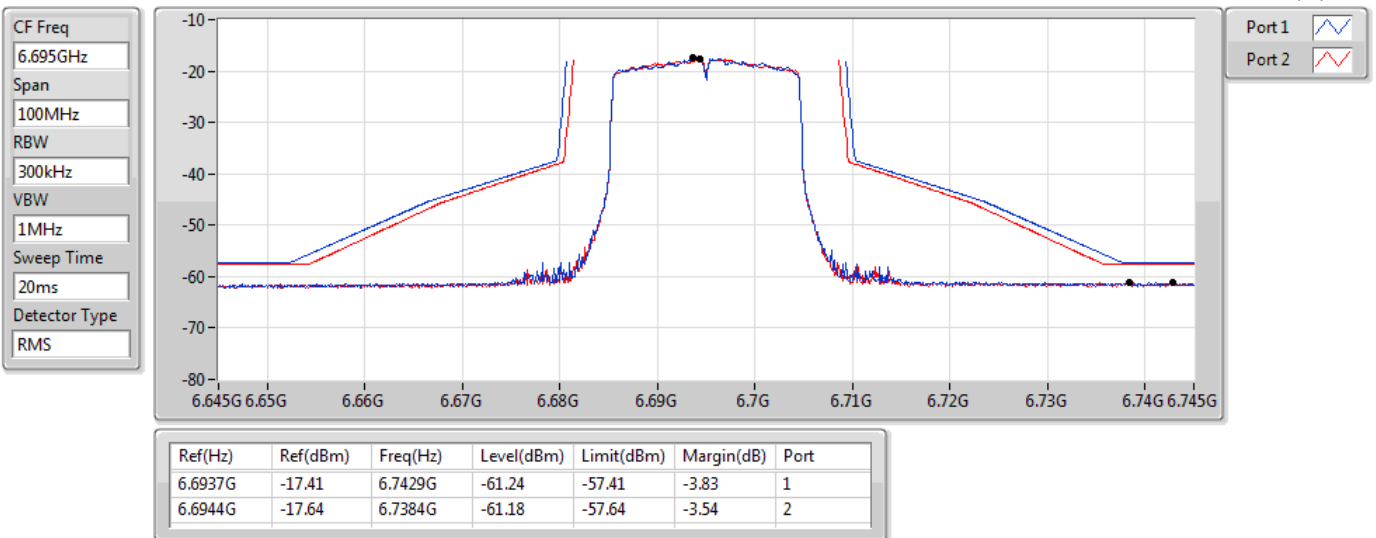


802.11ax HEW20_Nss1,(MCS0)_2TX

MASK

6695MHz_TnomVnom

11/02/2022

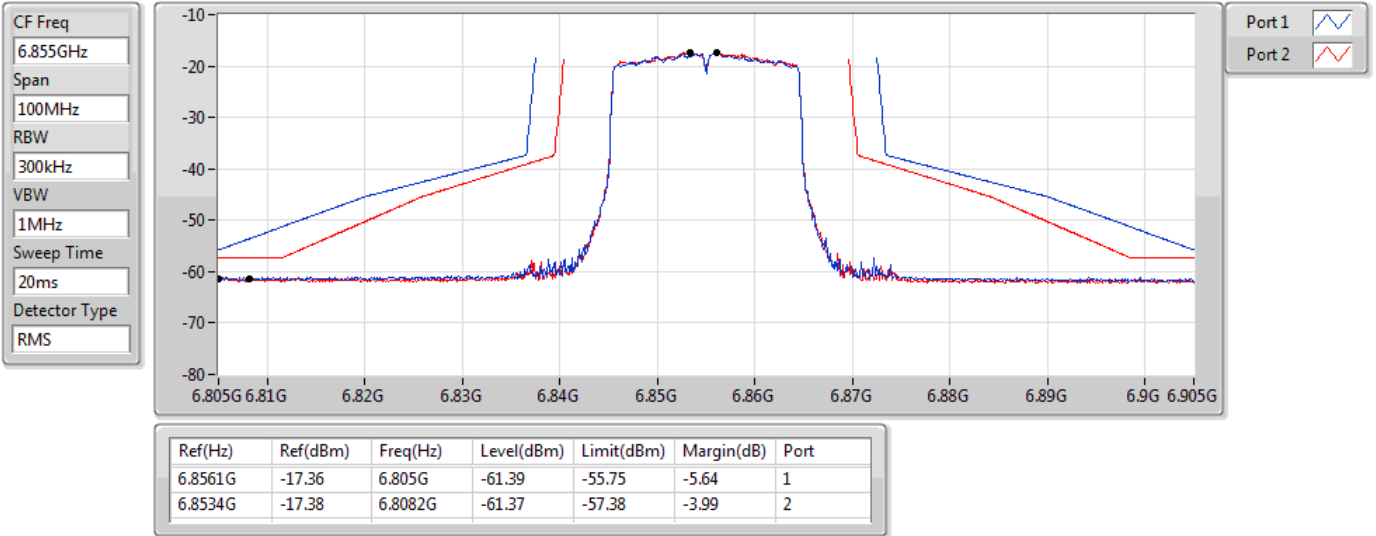


802.11ax HEW20_Nss1,(MCS0)_2TX

MASK

6855MHz_TnomVnom

11/02/2022

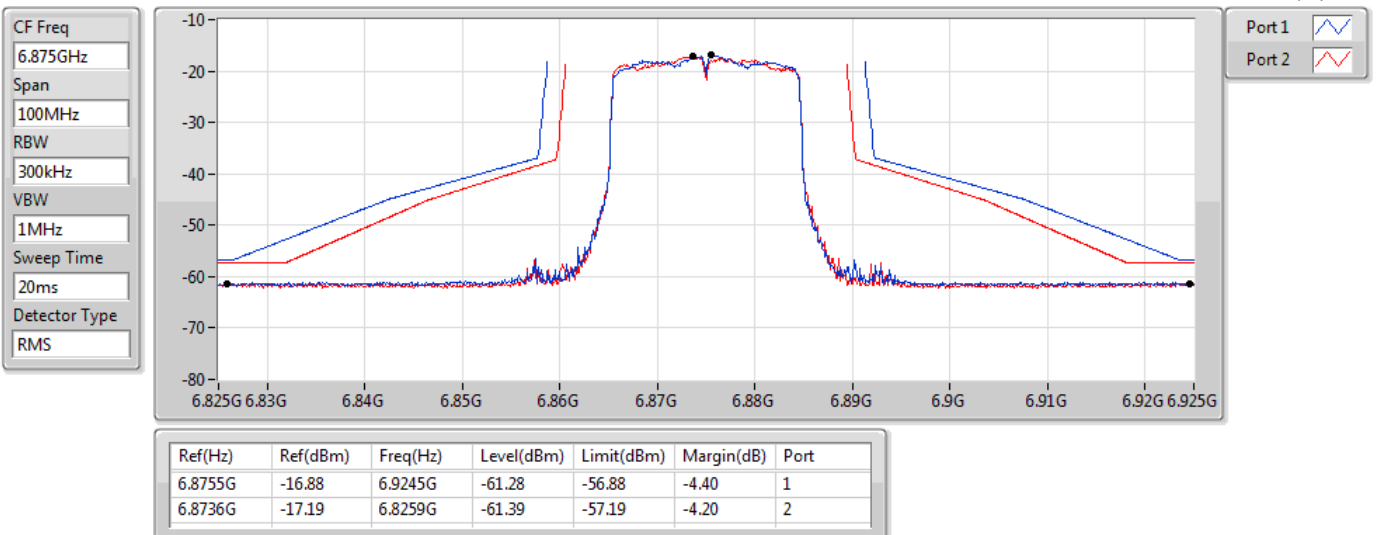


802.11ax HEW20_Nss1,(MCS0)_2TX

MASK

6875MHz_TnomVnom

11/02/2022

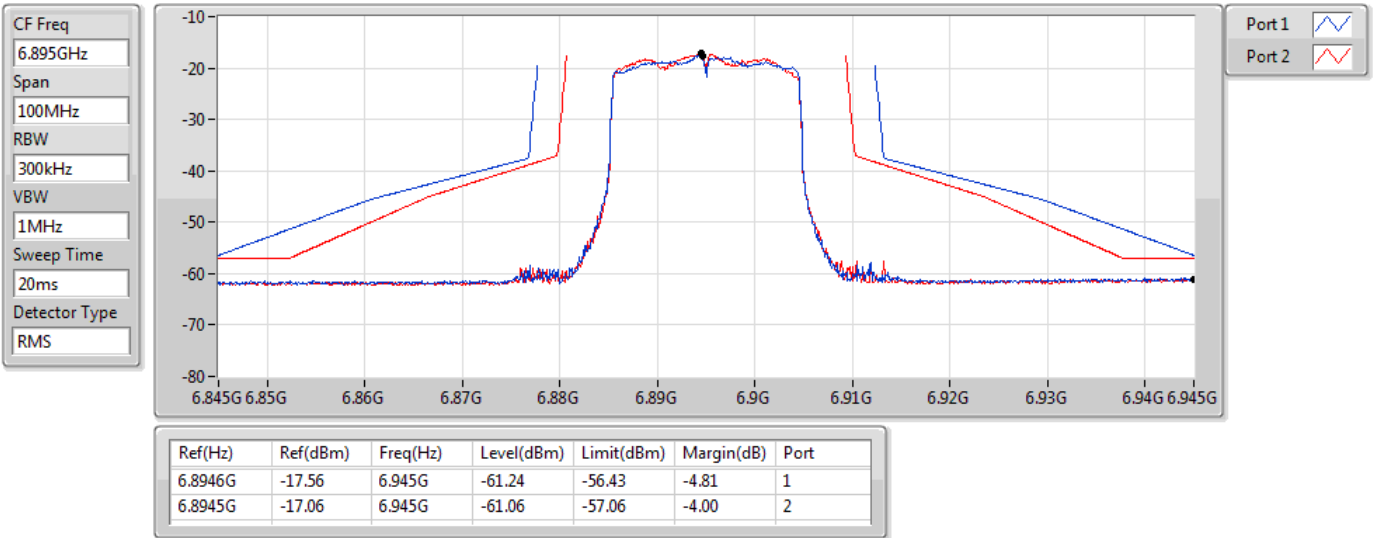


802.11ax HEW20_Nss1,(MCS0)_2TX

MASK

6895MHz_TnomVnom

11/02/2022

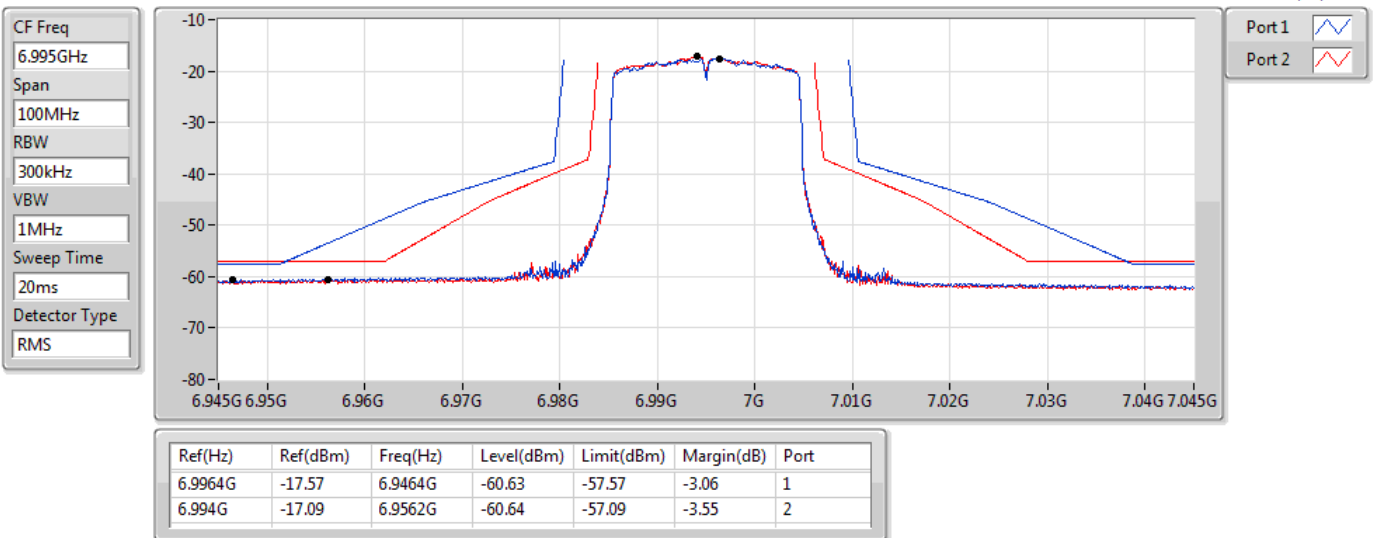


802.11ax HEW20_Nss1,(MCS0)_2TX

MASK

6995MHz_TnomVnom

11/02/2022

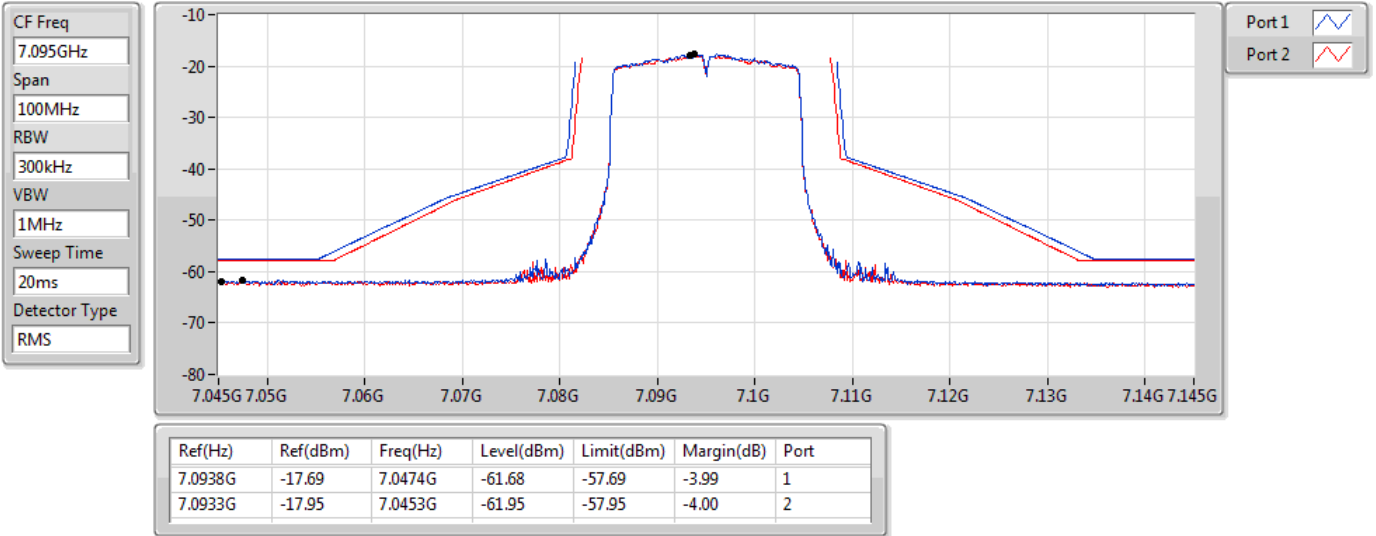


802.11ax HEW20_Nss1,(MCS0)_2TX

MASK

7095MHz_TnomVnom

11/02/2022

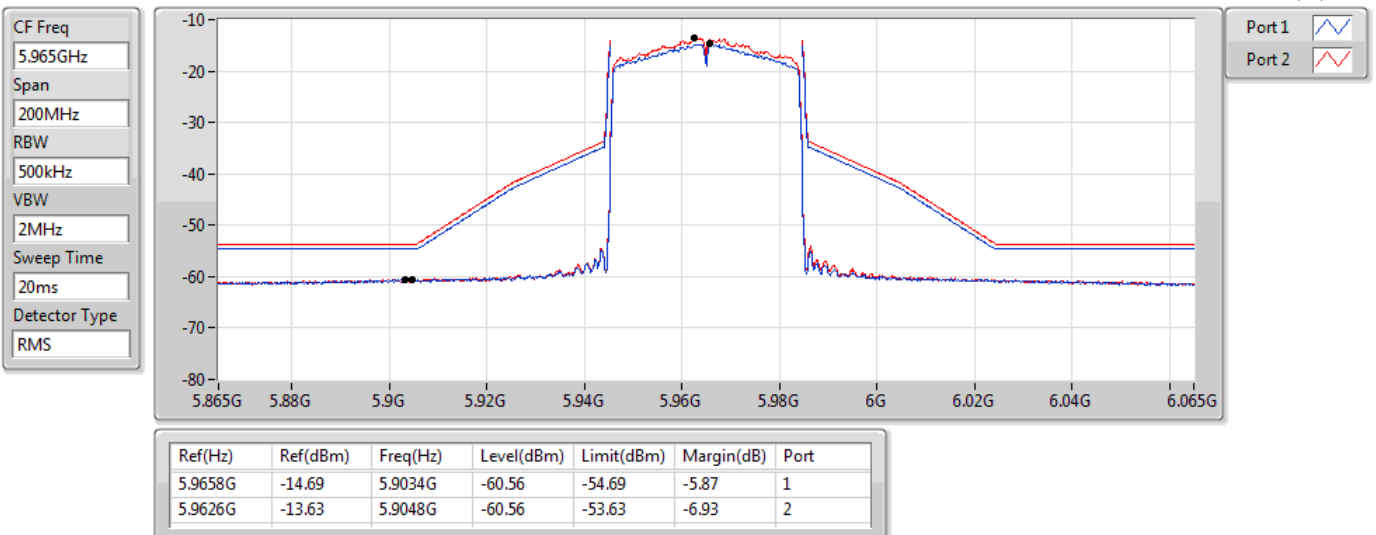


802.11ax HEW40_Nss1,(MCS0)_2TX

MASK

5965MHz_TnomVnom

11/02/2022

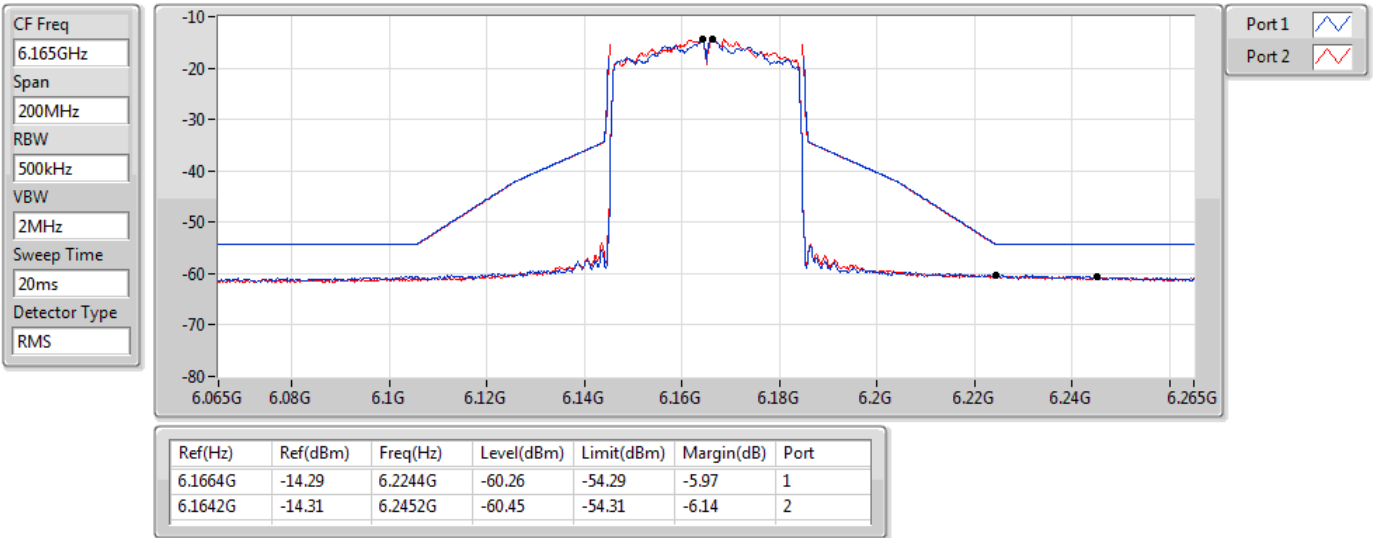


802.11ax HEW40_Nss1,(MCS0)_2TX

MASK

6165MHz_TnomVnom

11/02/2022

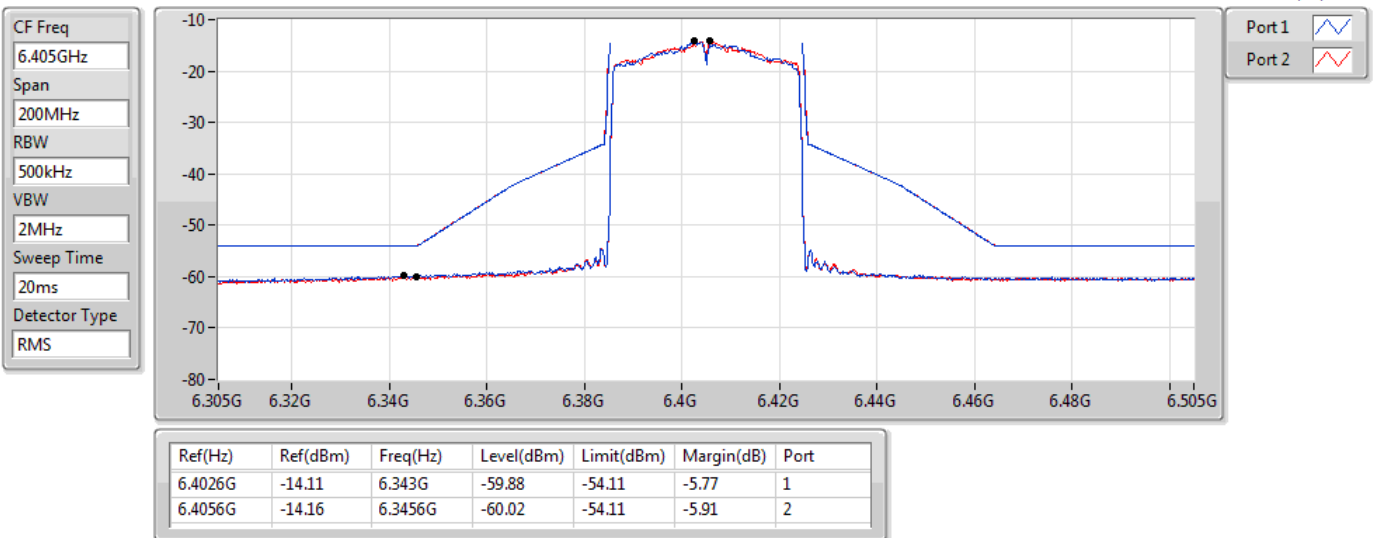


802.11ax HEW40_Nss1,(MCS0)_2TX

MASK

6405MHz_TnomVnom

11/02/2022

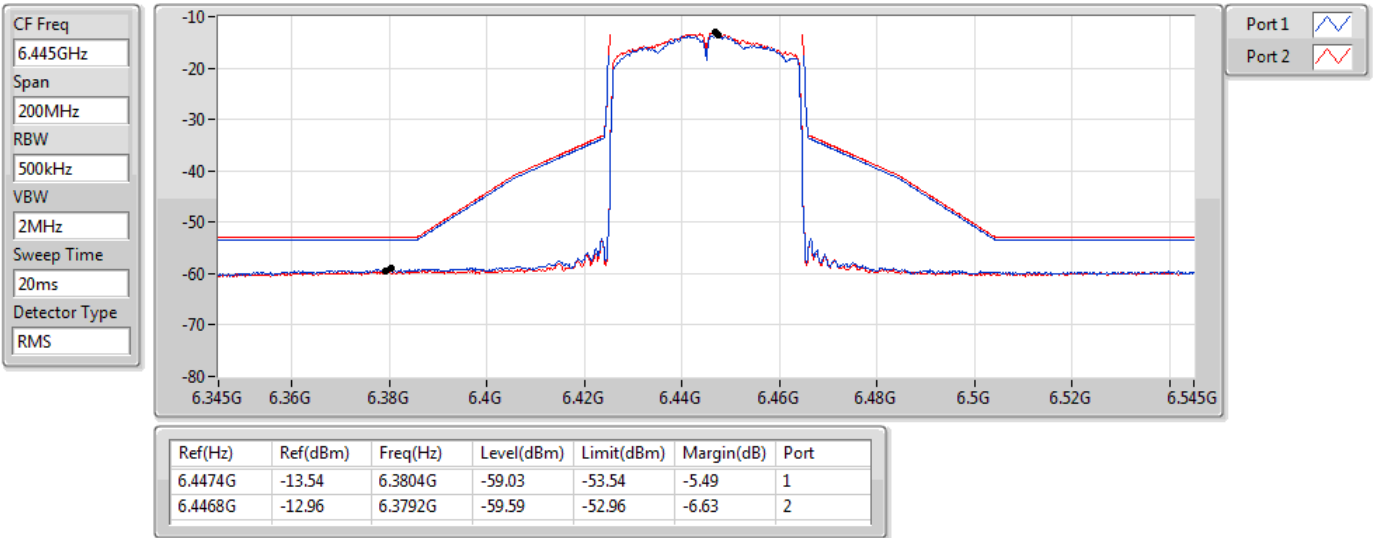


802.11ax HEW40_Nss1,(MCS0)_2TX

MASK

6445MHz_TnomVnom

11/02/2022

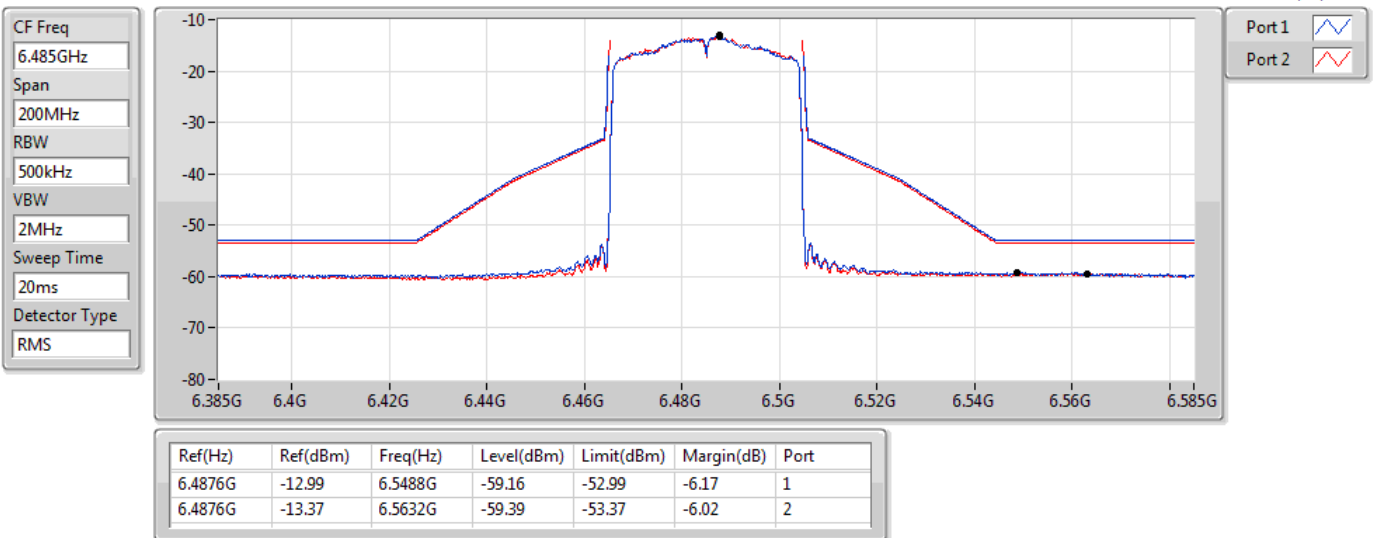


802.11ax HEW40_Nss1,(MCS0)_2TX

MASK

6485MHz_TnomVnom

11/02/2022

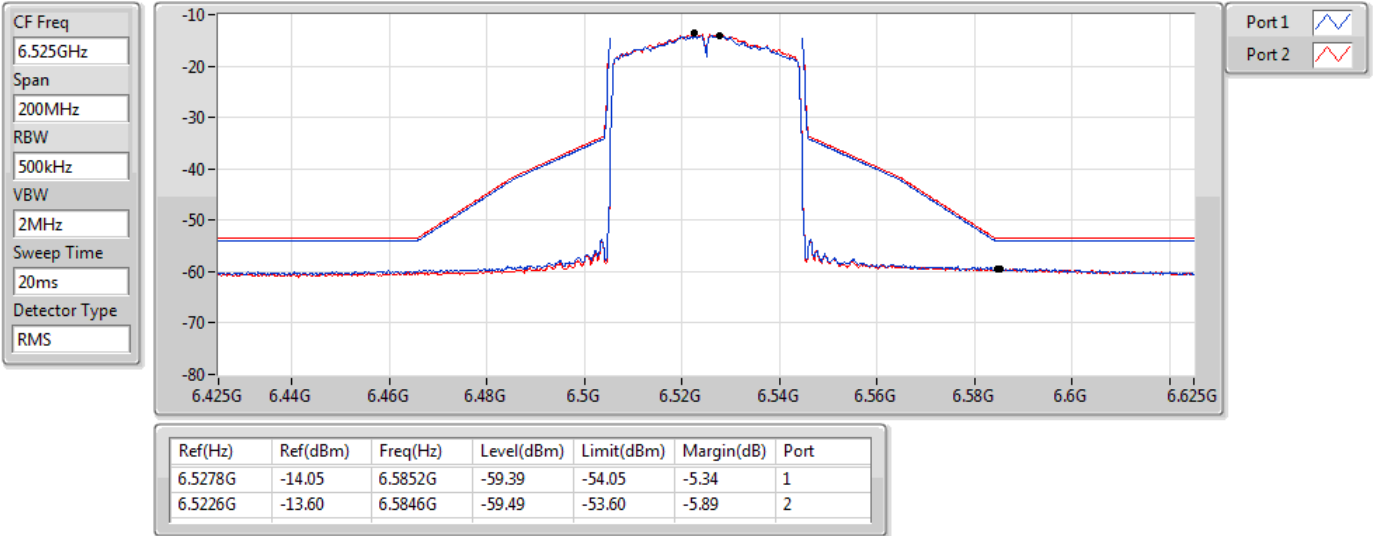


802.11ax HEW40_Nss1,(MCS0)_2TX

MASK

6525MHz_TnomVnom

11/02/2022

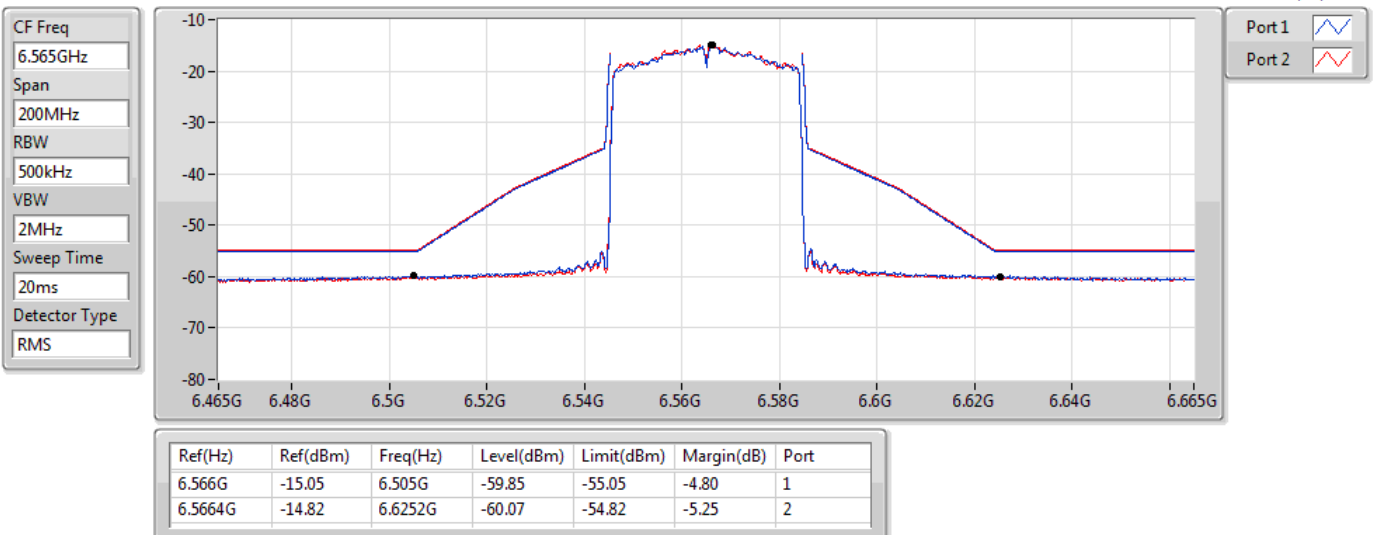


802.11ax HEW40_Nss1,(MCS0)_2TX

MASK

6565MHz_TnomVnom

11/02/2022

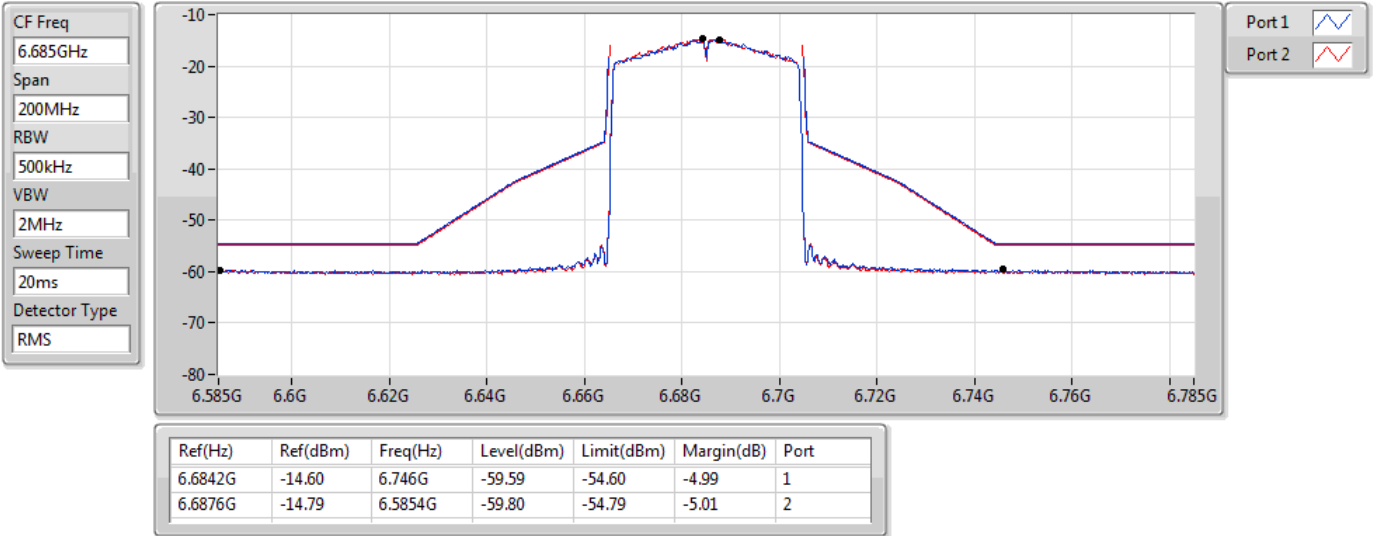


802.11ax HEW40_Nss1,(MCS0)_2TX

MASK

6685MHz_TnomVnom

11/02/2022

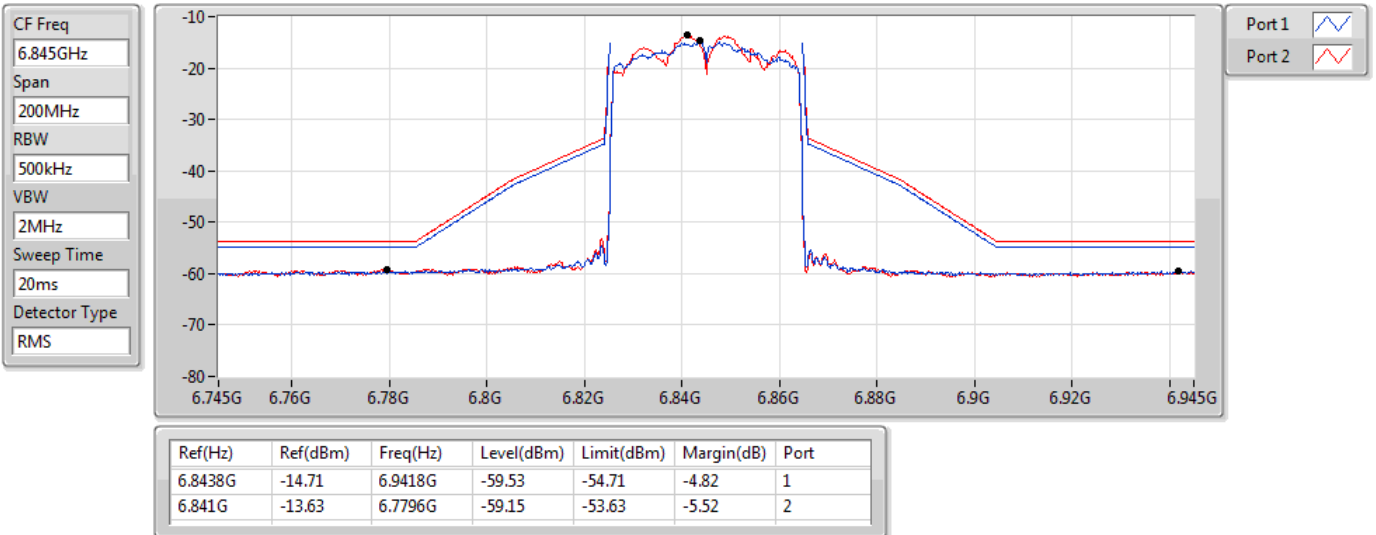


802.11ax HEW40_Nss1,(MCS0)_2TX

MASK

6845MHz_TnomVnom

11/02/2022

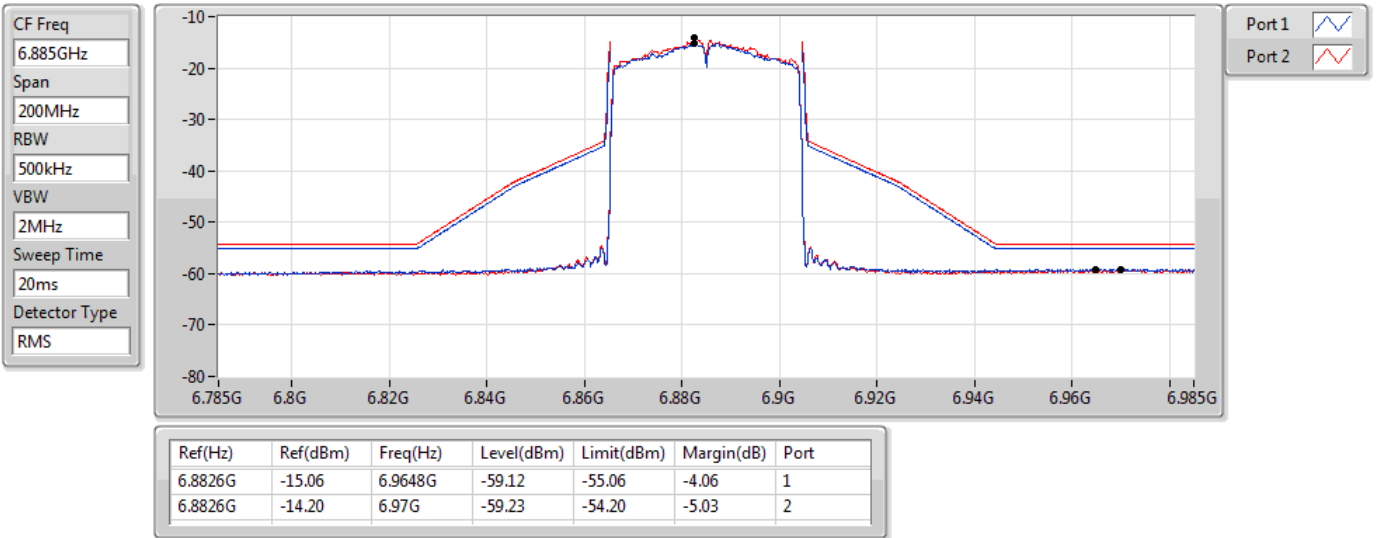


802.11ax HEW40_Nss1,(MCS0)_2TX

MASK

6885MHz_TnomVnom

11/02/2022

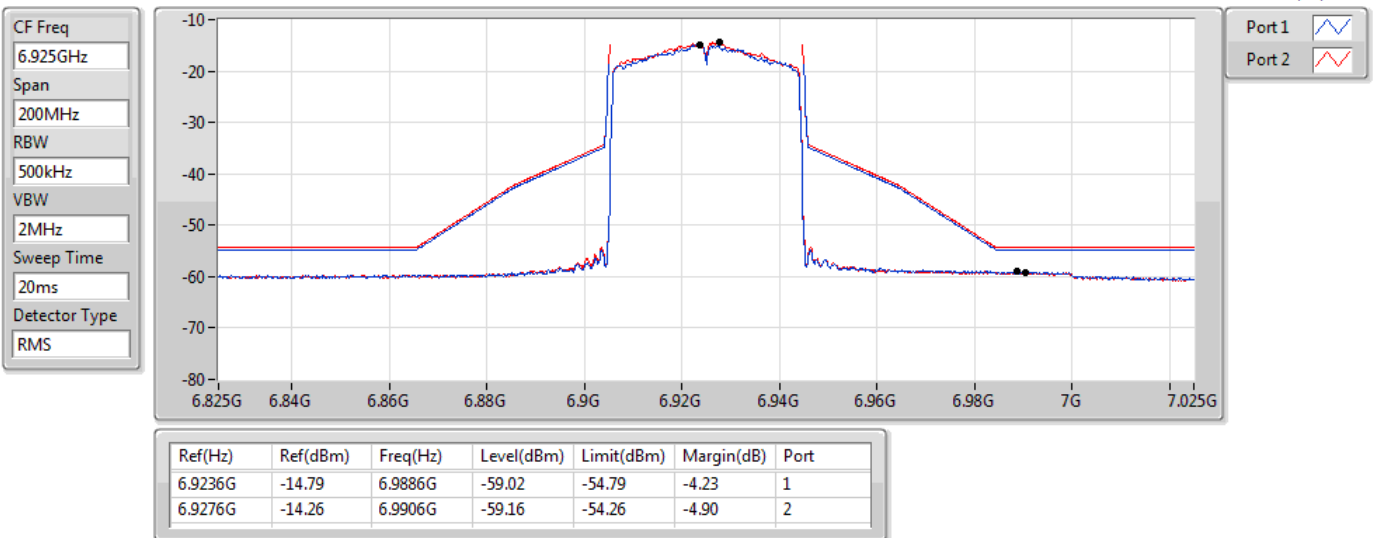


802.11ax HEW40_Nss1,(MCS0)_2TX

MASK

6925MHz_TnomVnom

11/02/2022

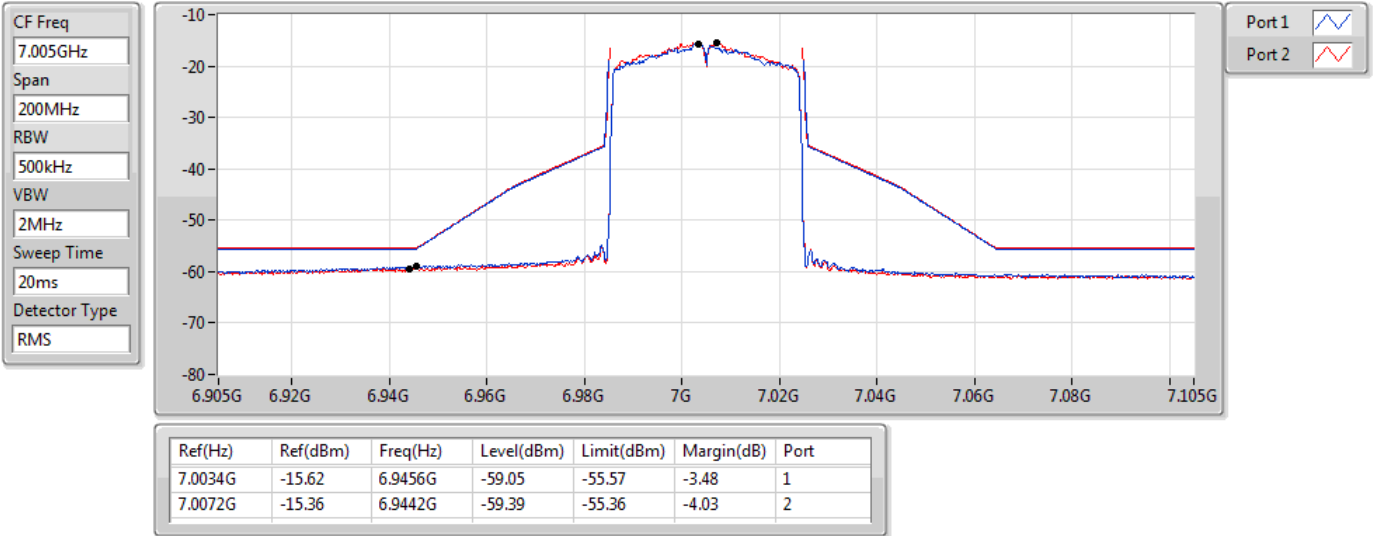


802.11ax HEW40_Nss1,(MCS0)_2TX

MASK

7005MHz_TnomVnom

11/02/2022

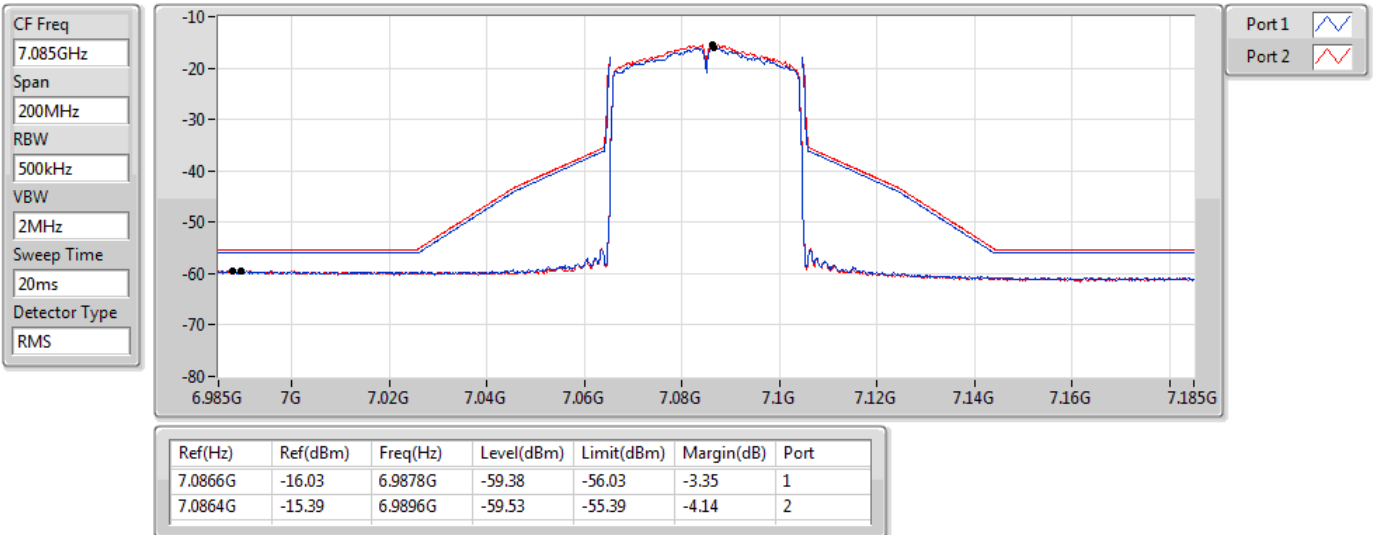


802.11ax HEW40_Nss1,(MCS0)_2TX

MASK

7085MHz_TnomVnom

11/02/2022

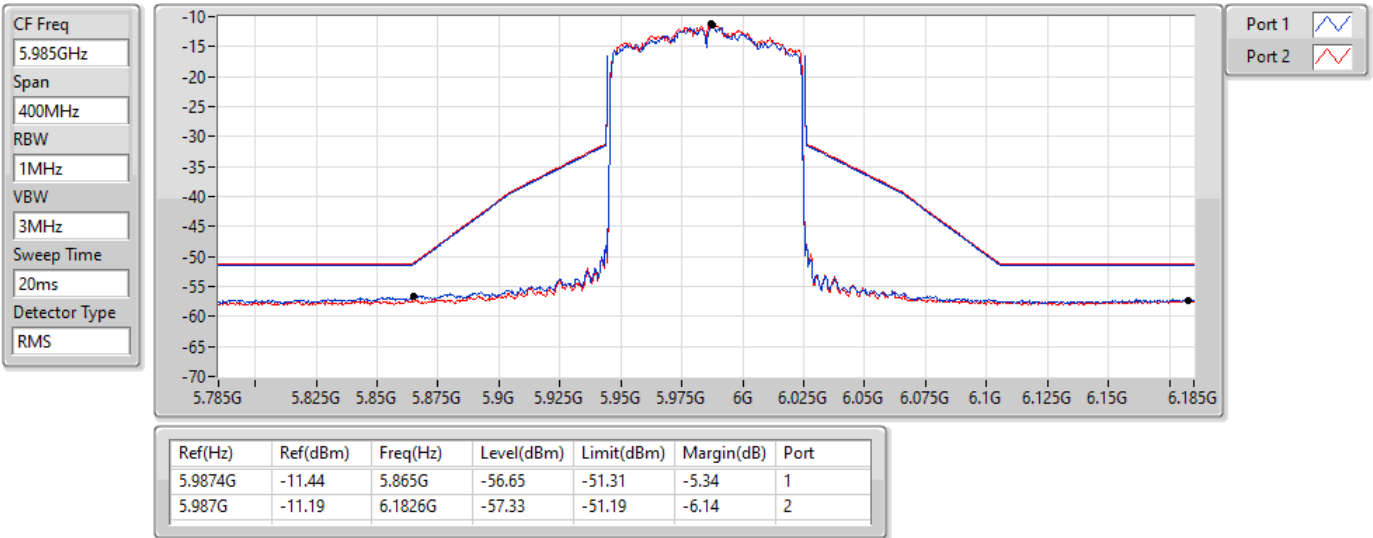


802.11ax HEW80_Nss1,(MCS0)_2TX

MASK

5985MHz_TnomVnom

04/11/2021

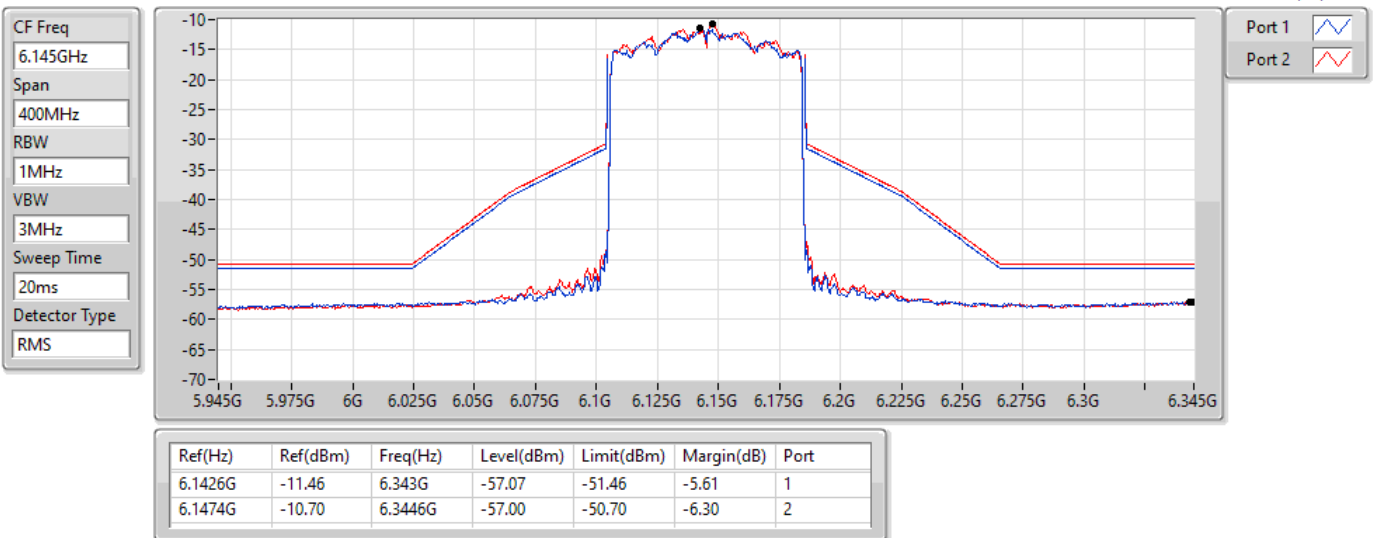


802.11ax HEW80_Nss1,(MCS0)_2TX

MASK

6145MHz_TnomVnom

04/11/2021

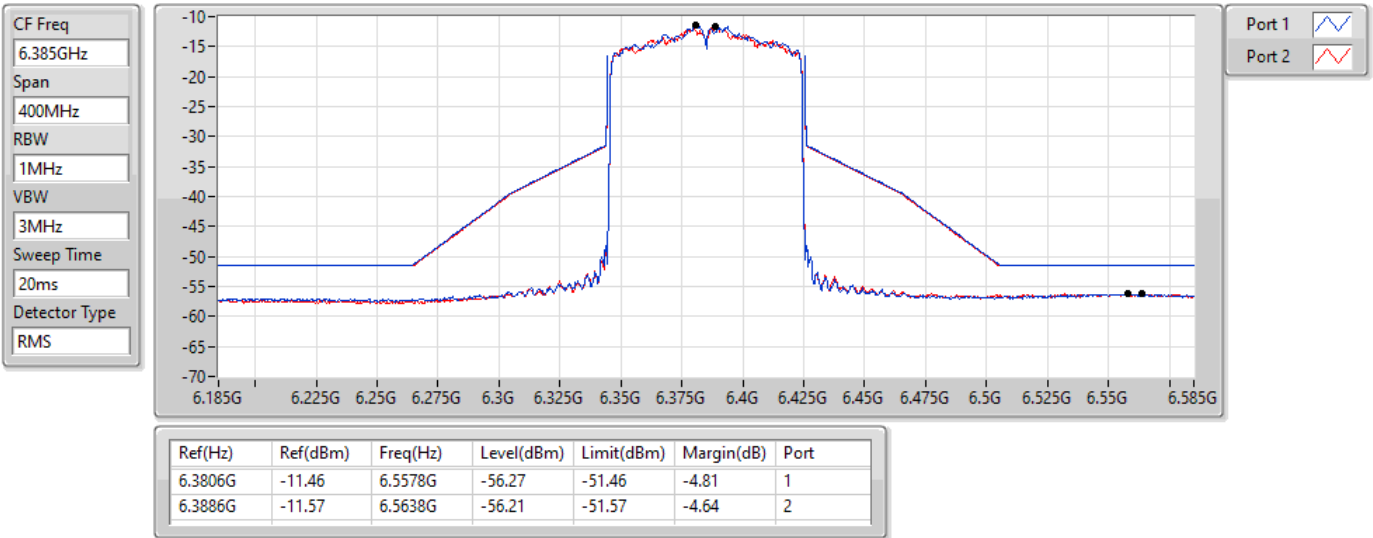


802.11ax HEW80_Nss1,(MCS0)_2TX

MASK

6385MHz_TnomVnom

04/11/2021

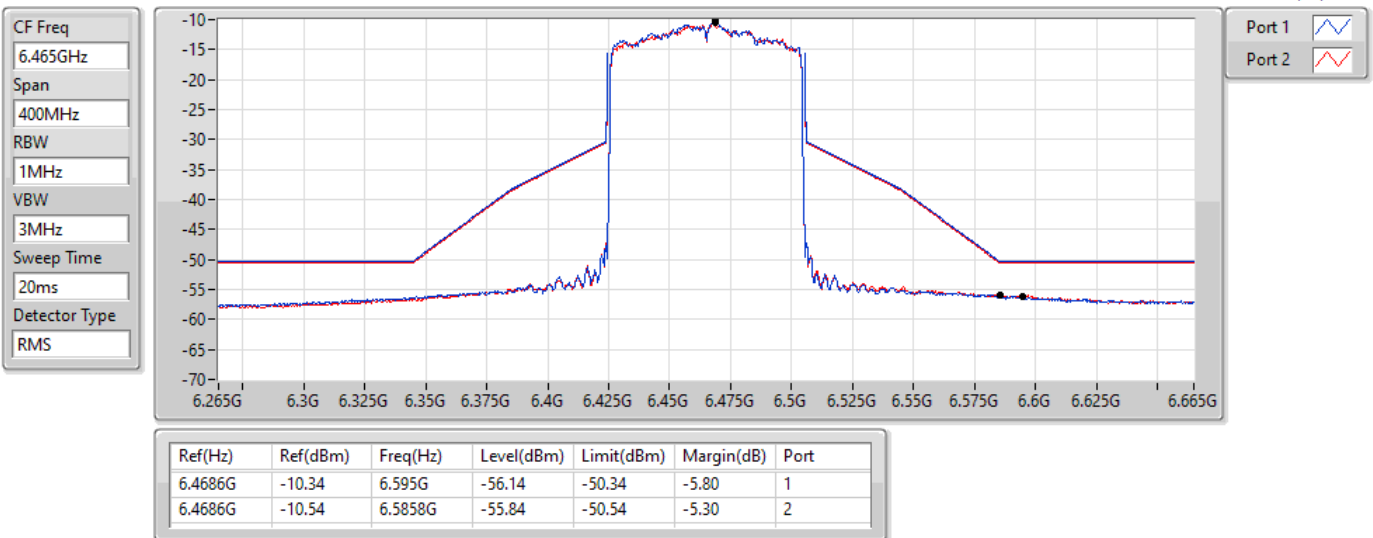


802.11ax HEW80_Nss1,(MCS0)_2TX

MASK

6465MHz_TnomVnom

04/11/2021

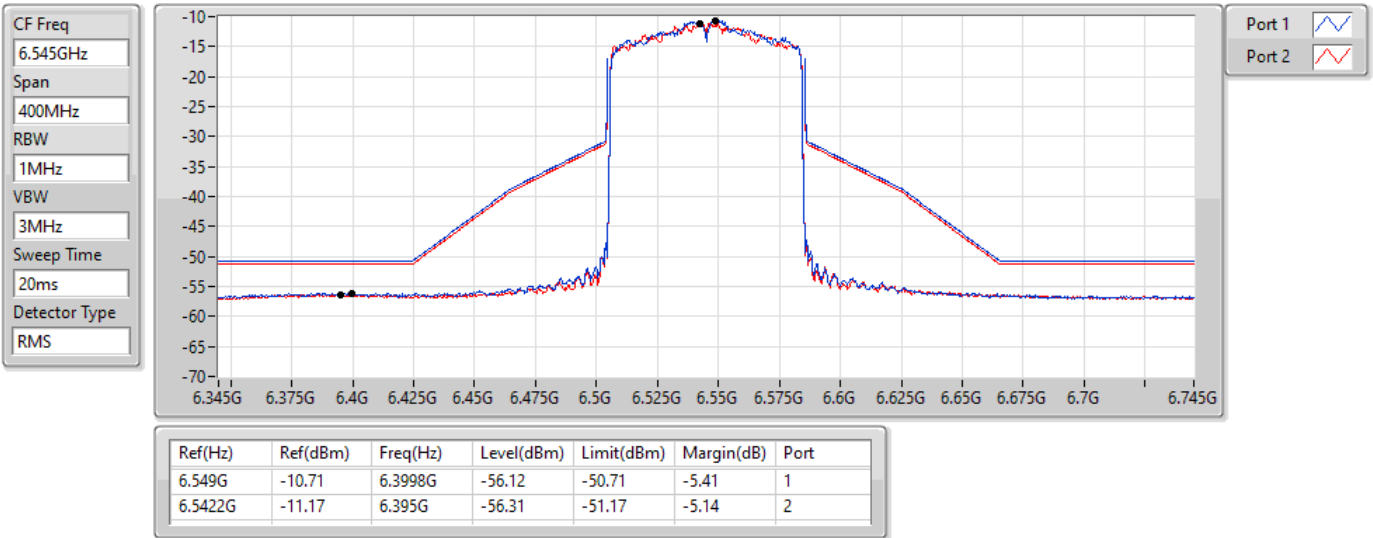


802.11ax HEW80_Nss1,(MCS0)_2TX

MASK

6545MHz_TnomVnom

04/11/2021

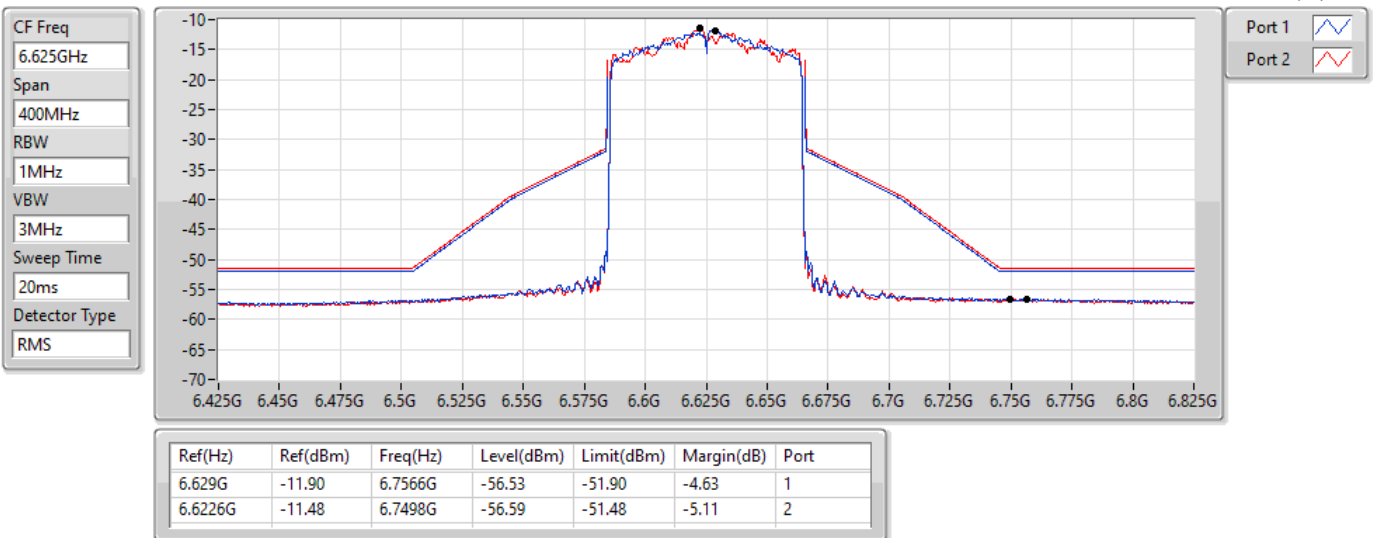


802.11ax HEW80_Nss1,(MCS0)_2TX

MASK

6625MHz_TnomVnom

04/11/2021

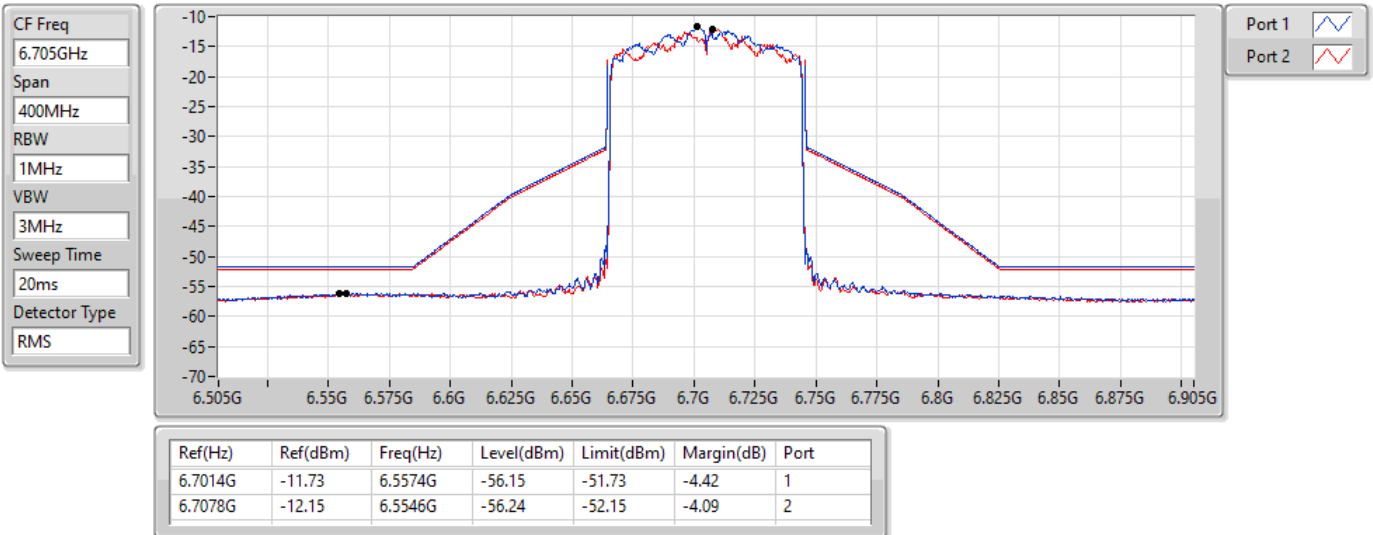


802.11ax HEW80_Nss1,(MCS0)_2TX

MASK

6705MHz_TnomVnom

04/11/2021

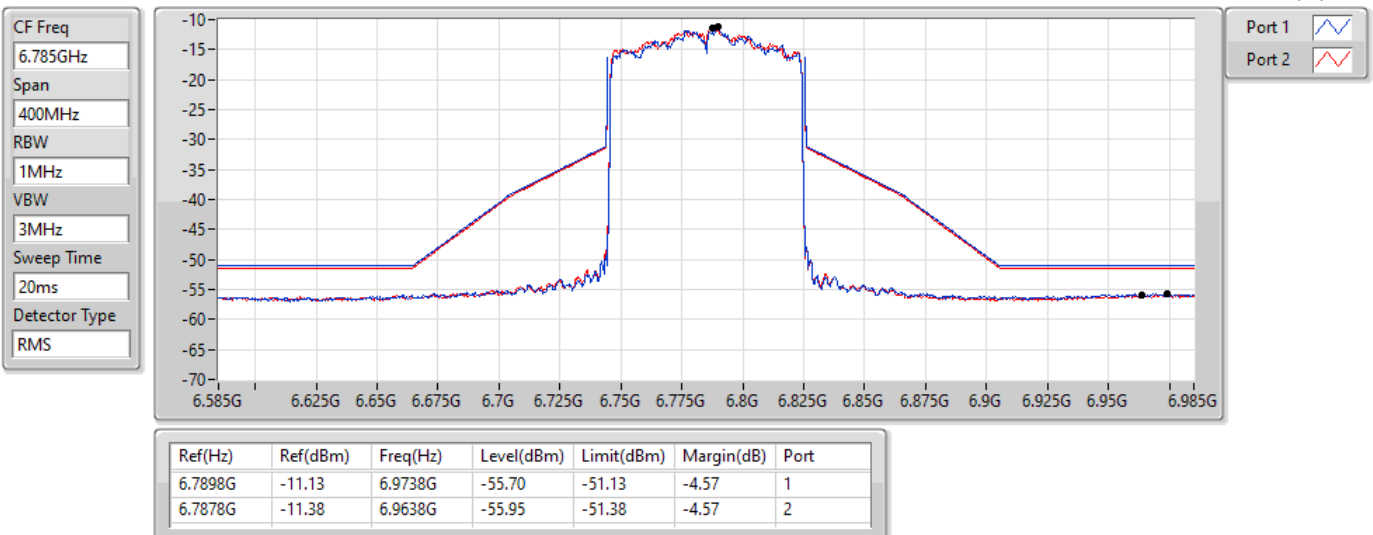


802.11ax HEW80_Nss1,(MCS0)_2TX

MASK

6785MHz_TnomVnom

04/11/2021

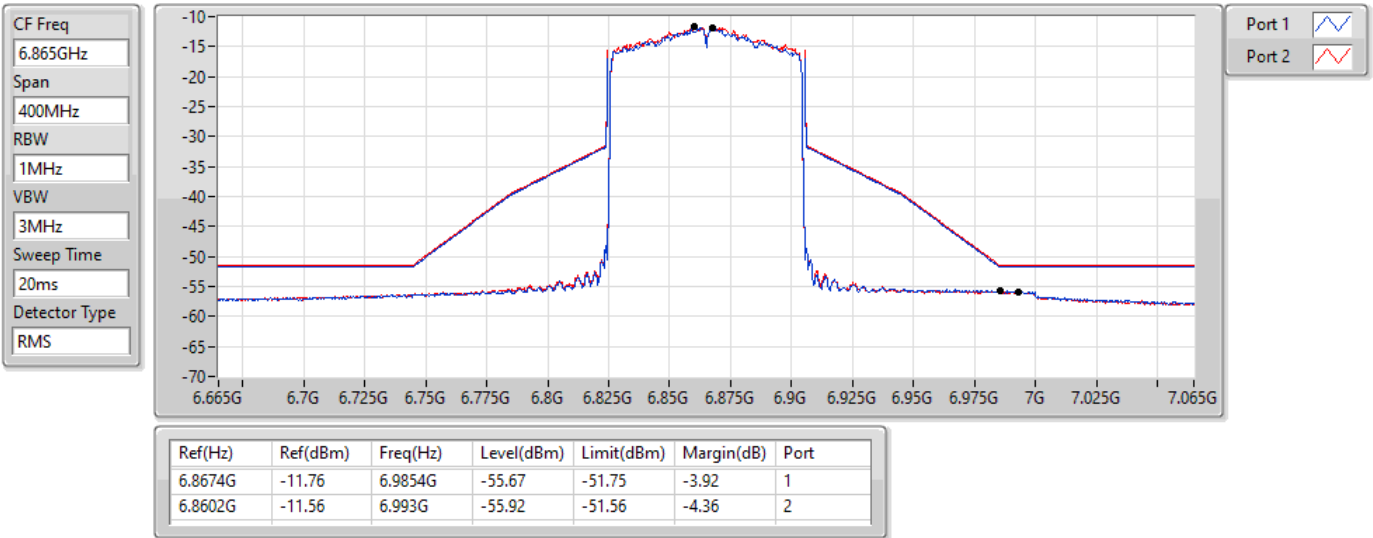


802.11ax HEW80_Nss1,(MCS0)_2TX

MASK

6865MHz_TnomVnom

04/11/2021

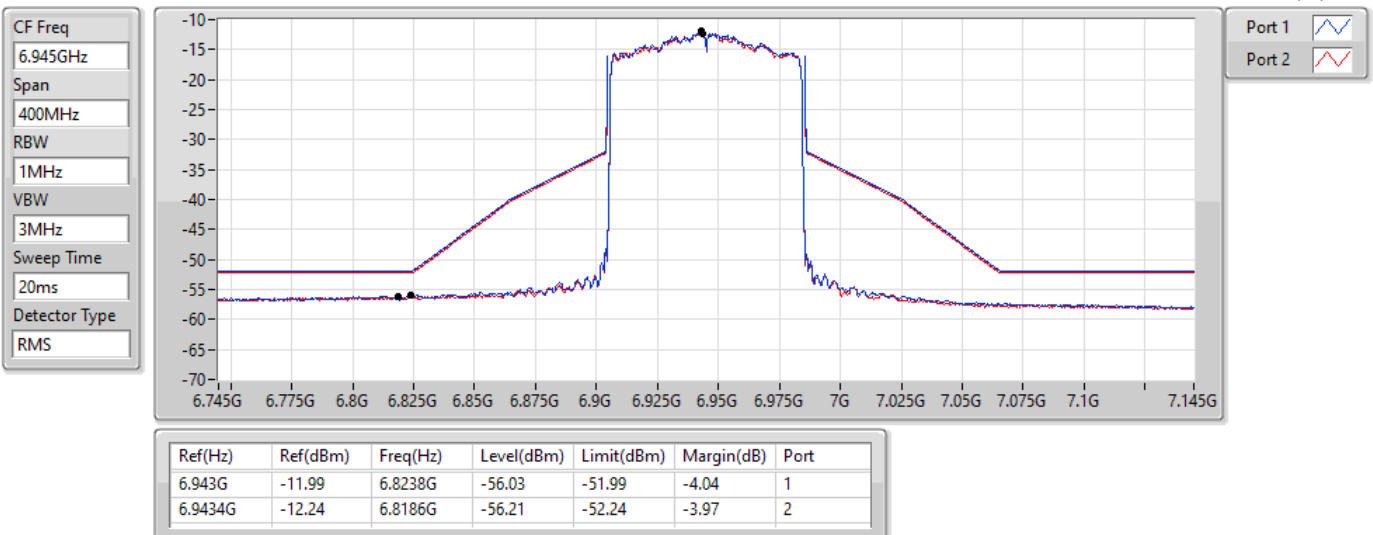


802.11ax HEW80_Nss1,(MCS0)_2TX

MASK

6945MHz_TnomVnom

04/11/2021

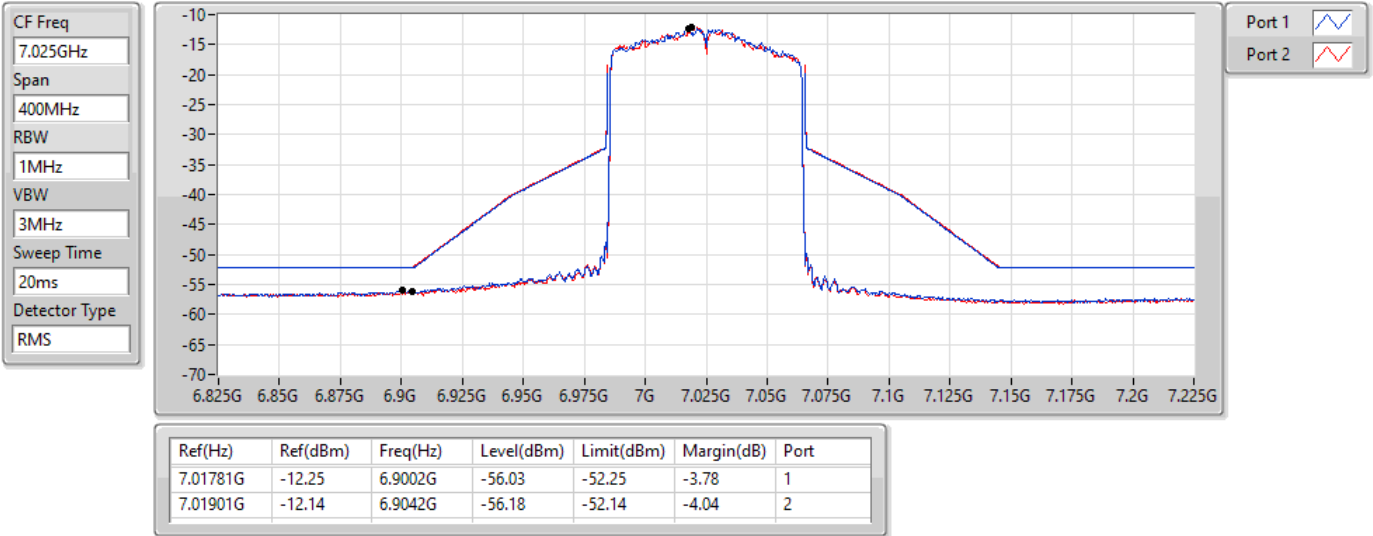


802.11ax HEW80_Nss1,(MCS0)_2TX

MASK

7025MHz_TnomVnom

04/11/2021





Summary

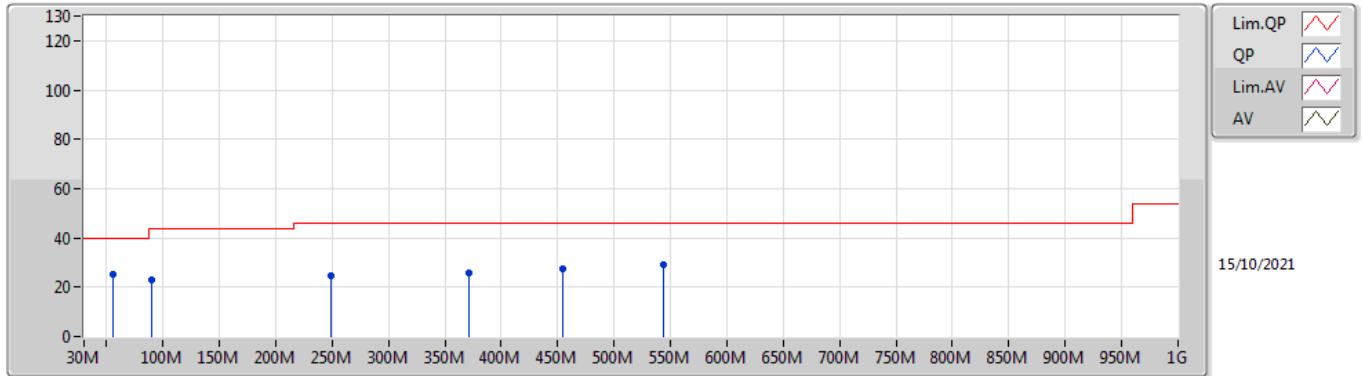
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
6.875-7.125GHz	-	-	-	-	-	-	-	-	-	-	-
802.11ax HEW80_Nss1,(MCS0)_2TX	Pass	PK	55.22M	25.48	40.00	-14.52	3	Vertical	0	1.00	-

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
802.11ax HEW80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-
7025MHz	Pass	PK	55.22M	25.48	40.00	-14.52	3	Vertical	0	1.00	-
7025MHz	Pass	PK	90.14M	22.99	43.50	-20.51	3	Vertical	0	1.00	-
7025MHz	Pass	PK	249.22M	24.51	46.00	-21.49	3	Vertical	0	1.00	-
7025MHz	Pass	PK	371.44M	25.96	46.00	-20.04	3	Vertical	0	1.00	-
7025MHz	Pass	PK	454.86M	27.59	46.00	-18.41	3	Vertical	0	1.00	-
7025MHz	Pass	PK	544.1M	29.24	46.00	-16.76	3	Vertical	0	1.00	-
7025MHz	Pass	PK	30M	23.64	40.00	-16.36	3	Horizontal	360	1.00	-
7025MHz	Pass	PK	99.84M	25.13	43.50	-18.37	3	Horizontal	360	1.00	-
7025MHz	Pass	PK	249.22M	25.00	46.00	-21.00	3	Horizontal	360	1.00	-
7025MHz	Pass	PK	352.04M	23.76	46.00	-22.24	3	Horizontal	360	1.00	-
7025MHz	Pass	PK	466.5M	26.93	46.00	-19.07	3	Horizontal	360	1.00	-
7025MHz	Pass	PK	544.1M	28.49	46.00	-17.51	3	Horizontal	360	1.00	-

802.11ax HEW80_Nss1,(MCS0)_2TX

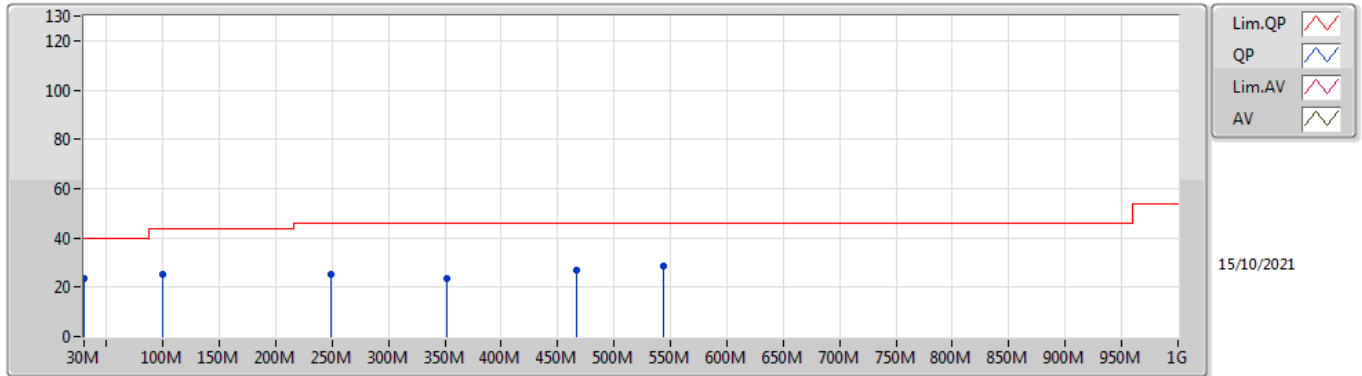
7025MHz_DC Power Supply



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	55.22M	25.48	40.00	-14.52	-14.23	3	Vertical	0	1.00	-	39.71	12.17	1.21	27.61
PK	90.14M	22.99	43.50	-20.51	-11.65	3	Vertical	0	1.00	-	34.64	14.24	1.58	27.47
PK	249.22M	24.51	46.00	-21.49	-6.41	3	Vertical	0	1.00	-	30.92	17.65	2.67	26.73
PK	371.44M	25.96	46.00	-20.04	-3.63	3	Vertical	0	1.00	-	29.59	20.12	3.34	27.09
PK	454.86M	27.59	46.00	-18.41	-1.77	3	Vertical	0	1.00	-	29.36	22.26	3.70	27.73
PK	544.1M	29.24	46.00	-16.76	0.52	3	Vertical	0	1.00	-	28.72	24.55	4.06	28.09

802.11ax HEW80_Nss1,(MCS0)_2TX

7025MHz_DC Power Supply



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
PK	30M	23.64	40.00	-16.36	-3.23	3	Horizontal	360	1.00	-	26.87	23.51	0.90	27.64
PK	99.84M	25.13	43.50	-18.37	-9.49	3	Horizontal	360	1.00	-	34.62	16.20	1.70	27.39
PK	249.22M	25.00	46.00	-21.00	-6.41	3	Horizontal	360	1.00	-	31.41	17.65	2.67	26.73
PK	352.04M	23.76	46.00	-22.24	-4.02	3	Horizontal	360	1.00	-	27.78	19.69	3.27	26.98
PK	466.5M	26.93	46.00	-19.07	-1.38	3	Horizontal	360	1.00	-	28.31	22.60	3.74	27.72
PK	544.1M	28.49	46.00	-17.51	0.52	3	Horizontal	360	1.00	-	27.97	24.55	4.06	28.09