



RADIO TEST REPORT

FCC ID : UDX-600155010
Equipment : Catalyst Wireless 9162I Series Wi-Fi 6E Access Point
Brand Name : CISCO
Model Name : CW9162I-B, CW9162I-MR
Applicant : Cisco Systems, Inc.
170 West Tasman Drive, San Jose, CA 95134 USA
Manufacturer : Cisco Systems, Inc.
170 West Tasman Drive, San Jose, CA 95134 USA
Standard : 47 CFR FCC Part 15.407

The product was received on Mar. 03, 2022, and testing was started from Mar. 24, 2022 and completed on Jul. 19, 2022. We, Sporton International Inc. Hsinchu Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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



Approved by: Sam Chen

Sporton International Inc. Hsinchu Laboratory

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



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TEL : 886-3-656-9065
FAX : 886-3-656-9085
Report Template No.: CB-A12_5 Ver1.1



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: Viola Huang**



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)	5955-7115	1-233 [59]
5925-7125	ax (HEW40)	5965-7085	3-227 [29]
5925-7125	ax (HEW80)	5985-7025	7-215 [14]
5925-7125	ax (HEW160)	6025-6985	15-207 [7]

For Radio 2

Band	Mode	BWch (MHz)	Nant
5.925-7.125GHz	802.11ax HEW20	20	1, 2
5.925-7.125GHz	802.11ax HEW20-BF	20	2
5.925-7.125GHz	802.11ax HEW40	40	1, 2
5.925-7.125GHz	802.11ax HEW40-BF	40	2
5.925-7.125GHz	802.11ax HEW80	80	1, 2
5.925-7.125GHz	802.11ax HEW80-BF	80	2
5.925-7.125GHz	802.11ax HEW160	160	1, 2
5.925-7.125GHz	802.11ax HEW160-BF	160	2

For Scanning Radio 3

Band	Mode	BWch (MHz)	Nant
5.925-7.125GHz	802.11ax HEW20	20	1

Note:

- HEW20, HEW40, HEW80 and HEW160 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

Ant.	Port								Brand Name	Model Name	Antenna Type	Connector	Gain (dBi)
	WLAN 2.4GHz (Radio 1)		WLAN 5GHz (Radio 1)		WLAN 6E (Radio 2)		WLAN 2.4GHz / WLAN 5GHz / WLAN 6GHz (Scanning Radio 3)	BT (Radio 4)					
	1TX	2TX	1TX	2TX	1TX	2TX							
1	1	2	1	2	-	-	-	-	WNC	95XEAJ15.G19	PIFA	I-PEX	Note 1
2	-	1	-	1	-	-	-	-	WNC	95XEAJ15.G20	PIFA	I-PEX	
3	-	-	-	-	1	2	-	-	WNC	95XEAJ15.G21	Dipole	I-PEX	
4	-	-	-	-	-	1	-	-	WNC	95XEAJ15.G22	Dipole	I-PEX	
5	-	-	-	-	-	-	-	1	WNC	95XEAJ15.G23	PIFA	I-PEX	
6	-	-	-	-	-	-	1	-	WNC	95XEAJ15.G24	PIFA	I-PEX	

Note 1:

Ant.	Antenna Gain (dBi)																
	WLAN 2.4GHz (Radio 1)	WLAN 5GHz (Radio 1)					WLAN 6GHz (Radio 2)				WLAN 2.4GHz (Scanning Radio 3)	WLAN 5GHz (Scanning Radio 3)	WLAN 6GHz (Scanning Radio 3)				BT (Radio 4)
		UNII 1	UNII 2A	UNII 2C	UNII 3	UNII 4	UNII 5	UNII 6	UNII 7	UNII 8			UNII 1~UNII 3	UNII 5	UNII 6	UNII 7	
1	2.74	1.75	1.67	1.80	1.64	1.45	-	-	-	-	-	-	-	-	-	-	-
2	2.51	2.13	2.37	1.82	1.50	2.06	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	4.38	3.62	3.78	4.08	-	-	-	-	-	-	-
4	-	-	-	-	-	-	4.33	3.72	3.95	4.11	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.85
6	-	-	-	-	-	-	-	-	-	-	3.80	5.54	5.43	5.23	5.50	5.40	-

Ant.	Directional Gain (dBi)											
	WLAN 2.4GHz (Radio 1)		WLAN 5GHz (Radio 1)									
			UNII 1		UNII 2A		UNII 2C		UNII 3		UNII 4	
	2T1S	2T2S	2T1S	2T2S	2T1S	2T2S	2T1S	2T2S	2T1S	2T2S	2T1S	2T2S
1	5.12	2.74	4.19	2.13	4.07	2.37	4.41	1.82	4.08	1.64	3.96	2.06
2												

Note 2: The EUT has six antennas.

Note 3: The above information (excepting antenna gain of Radio 1 2.4GHz, 5GHz UNII 1~UNII 4) was declared by manufacturer.

Note 4: Radio 1 2.4GHz, 5GHz UNII 1~UNII 4: Maximum Directional Gain following KDB662911 D03.

Note 5: The EUT doesn't enable the DFS band.

**For Radio 1****For 2.4GHz:****For IEEE 802.11b/g/n/VHT/ax mode (1TX/2RX):**

Only Port 1 can be use as transmitting antenna.
Port 1, Port 2 can be used as receiving antennas.
Port 1, Port 2 could receive simultaneously.

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

Port 1, Port 2 can be use as transmitting antenna.
Port 1, Port 2 could transmitting simultaneously.
Port 1, Port 2 can be used as receiving antennas.
Port 1, Port 2 could receive simultaneously.

For 5GHz UNII 1, UNII 3, 5.9GHz UNII 4:**For IEEE 802.11a/n/ac/ax mode (1TX/2RX):**

Only Port 1 can be use as transmitting antenna.
Port 1, Port 2 can be used as receiving antennas.
Port 1, Port 2 could receive simultaneously.

For IEEE 802.11a/n/ac/ax mode (2TX/2RX):

Port 1, Port 2 can be use as transmitting antenna.
Port 1, Port 2 could transmitting simultaneously.
Port 1, Port 2 can be used as receiving antennas.
Port 1, Port 2 could receive simultaneously.

For Radio 2**For 6GHz UNII 5~UNII 8:****For IEEE 802.11ax mode (1TX/2RX):**

Only Port 1 can be use as transmitting antenna.
Port 1, Port 2 can be used as receiving antennas.
Port 1, Port 2 could receive simultaneously.

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

Port 1, Port 2 can be use as transmitting antenna.
Port 1, Port 2 could transmitting simultaneously.
Port 1, Port 2 can be used as receiving antennas.
Port 1, Port 2 could receive simultaneously.

For Radio 4**Bluetooth (1TX/1RX):**

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

For Scanning Radio 3**For 2.4GHz:****For IEEE 802.11b/g/n/VHT/ax mode (1TX/1RX):**

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

For 5GHz UNII 1, UNII 3:**For IEEE 802.11a/n/ac/ax mode (1TX/1RX):**

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

For 6GHz UNII 5~UNII 8:**For IEEE 802.11ax mode (1TX/1RX):**

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

**1.1.3 Mode Test Duty Cycle****For Radio 2****For 1TX**

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ax HEW20	0.869	0.61	5.453m	300
802.11ax HEW40	0.935	0.29	5.455m	300
802.11ax HEW80	0.916	0.38	5.455m	300
802.11ax HEW160	0.931	0.31	5.456m	300

For 2TX**Non beamforming mode**

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ax HEW20	0.939	0.27	5.455m	300
802.11ax HEW40	0.939	0.27	5.452m	300
802.11ax HEW80	0.924	0.34	5.456m	300
802.11ax HEW160	0.931	0.31	5.456m	300

For Beamforming mode

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ax HEW20-BF	1	0	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ax HEW40-BF	0.944	0.25	1.978m	1k
802.11ax HEW80-BF	0.929	0.32	1.895m	1k
802.11ax HEW160-BF	0.931	0.31	1.943m	1k

For Scanning Radio 3

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ax HEW20	0.824	0.84	5.452m	300

Note:

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


1.1.4 EUT Operational Condition

EUT Power Type	From Power Adapter or PoE			
Beamforming Function	☒	With beamforming	☐	Without beamforming
	The product has beamforming function for 11n/VHT/ax in radio 1 2.4GHz, 11n/11ac/ax in radio 1 5GHz UNII 1, UNII 3, 5.9GHz UNII 4 and 11ax in radio 2 6GHz.			
Device Type	☒	Indoor Access Point	☐	Subordinate
	☐	Indoor Client	☐	Standard Power Access Point
	☐	Dual Client	☐	Standard Client
	☐	Fixed Client		
Test Software Version	QSPR 5.0-00199 / v0.1.8.0			
Software / Firmware Version for CBP	For EUT 1: Radio 2 lot_Bld] Software, (ap1g6b), [build-lnx-026:/san2/BUILD/workspace/CM66_MFG_PrePi--More-- Technical Support: http://www.cisco.com/techsupport Copyright (c) 1986-2022 by Cisco Systems, Inc. Compiled Mon May 2 17:25:45 PDT 2022 ROM: Bootstrap program is U-Boot boot loader BOOTLDR: U-Boot boot loader Version 2022042019 AP Running Image : 8.8.1.10 For Scanning Radio 3 mfg] Software, (ap1g6b), [sjc-ads-4384:/nobackup/andchen2/master-cisco-cm62---More-- Technical Support: http://www.cisco.com/techsupport Copyright (c) 1986-2022 by Cisco Systems, Inc. Compiled Fri Jun 10 12:34:28 PDT 2022 ROM: Bootstrap program is U-Boot boot loader BOOTLDR: U-Boot boot loader Version 2022042019 AP Running Image : 8.8.1.10 For EUT 2: T-202206152058-Gbb4d5c9f-Lf92dae17-jenkins-aporter-newspaper			

Note: The above information was declared by manufacturer.

1.1.5 Table for Multiple Listing

Model Name	EUT No.	SW
CW9162I-B	1	Cisco
CW9162I-MR	2	Meraki

Note 1: From the above models, model: CW9162I-B (EUT 1) was selected for all test items; CW9162I-MR (EUT 2) was selected for Contention Based Protocol test.

Note 2: The above information was declared by manufacturer.

1.1.6 Table for Radio function

Radio (R)	WLAN 2.4GHz	5GHz UNII 1~4	6GHz UNII 5~8	Bluetooth
R1	V	V	-	-
R2	-	-	V	-
R3 (Scanning radio)	V	V	V	-
R4	-	-	-	V

Note: 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	TH01-CB	Owen Hsu	24.7~25.6 / 64~70	Mar. 25, 2022~May 25, 2022
Radiated below 1GHz	10CH01-CB	Ryan Huang	22~23 / 56~57	May 17, 2022
Radiated above 1GHz	03CH01-CB	Stim Sung	For Radio 2: 23.8~24.9 / 55~58	Mar. 24, 2022~May 14, 2022
	03CH04-CB		For Scanning Radio 3: 24.4~25.5 / 55~58	
RF Conducted (Contention-Based Protocol test)	DF02-CB	Jeff Wu	For Radio 2 (Mode 1): 25~26.2 / 68~69	Jun. 22, 2022
			For Scanning Radio 3 (Mode 2): 24.5~25.8 / 65~68	Jun. 24, 2022~Jun. 25, 2022
			For Radio 2 (Mode 3): 24.7~27.1 / 68~72	Jun. 24, 2022~Jul. 14, 2022
			For Scanning Radio 3 (Mode 4): 25.6~26.4 / 66~68	Jul. 18, 2022~Jul. 19, 2022
AC Conduction	CO01-CB	Bob Chang	25~26.2 / 68~69	May 16, 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 Date: Before Jun. 01, 2022

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.4 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	5.0 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	4.9 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	4.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.2 dB	Confidence levels of 95%
Conducted Emission	2.5 dB	Confidence levels of 95%
Output Power Measurement	1.3 dB	Confidence levels of 95%
Power Density Measurement	2.5 dB	Confidence levels of 95%
Bandwidth Measurement	0.9%	Confidence levels of 95%

Test Data: After May 31, 2022

Test Items	Uncertainty	Remark
Conducted Emission	3.2 dB	Confidence levels of 95%



2 Test Configuration of EUT

2.1 Test Channel Mode

For Radio 2
1TX

Mode	Power Setting
802.11ax HEW20_Nss1,(MCS0)_1TX	-
5955MHz	13
6175MHz	13.5
6415MHz	15
6435MHz	15
6475MHz	15
6515MHz	16
6535MHz	16
6695MHz	15.5
6855MHz	14
6875MHz Straddle 6.525-6.875GHz	14.5
6895MHz	15.5
6995MHz	14.5
7095MHz	16
7115MHz	11.5
802.11ax HEW40_Nss1,(MCS0)_1TX	-
5965MHz	15.5
6165MHz	17
6405MHz	18
6445MHz	18
6485MHz	19
6525MHz Straddle 6.425-6.525GHz	18.5
6565MHz	18.5
6685MHz	19
6845MHz	17.5
6885MHz Straddle 6.525-6.875GHz	19
6925MHz	18.5
7005MHz	18
7085MHz	20
802.11ax HEW80_Nss1,(MCS0)_1TX	-
5985MHz	19.5
6145MHz	21
6385MHz	20.5



Mode	Power Setting
6465MHz	21.5
6545MHz Straddle 6.425-6.525GHz	20.5
6625MHz	20.5
6705MHz	21
6785MHz	20.5
6865MHz Straddle 6.525-6.875GHz	20.5
6945MHz	21.5
7025MHz	21.5
802.11ax HEW160_Nss1,(MCS0)_1TX	-
6025MHz	21
6185MHz	22
6345MHz	23
6505MHz Straddle 6.425-6.525GHz	24
6665MHz	23.5
6825MHz Straddle 6.525-6.875GHz	23
6985MHz	20.5

2TX**Non beamforming mode**

Mode	Power Setting
802.11ax HEW20_Nss1,(MCS0)_2TX	-
5955MHz	7.5
6175MHz	7
6415MHz	10
6435MHz	10.5
6475MHz	11
6515MHz	11
6535MHz	11
6695MHz	11
6855MHz	9.5
6875MHz Straddle 6.525-6.875GHz	10
6895MHz	10.5
6995MHz	10.5
7095MHz	11.5
7115MHz	7.5
802.11ax HEW40_Nss1,(MCS0)_2TX	-
5965MHz	10.5
6165MHz	10.5
6405MHz	12.5
6445MHz	13.5
6485MHz	14



Mode	Power Setting
6525MHz Straddle 6.425-6.525GHz	14
6565MHz	13.5
6685MHz	14
6845MHz	13
6885MHz Straddle 6.525-6.875GHz	14
6925MHz	14
7005MHz	13
7085MHz	14.5
802.11ax HEW80_Nss1,(MCS0)_2TX	-
5985MHz	13
6145MHz	13.5
6385MHz	15
6465MHz	17
6545MHz Straddle 6.425-6.525GHz	15.5
6625MHz	15.5
6705MHz	17
6785MHz	15.5
6865MHz Straddle 6.525-6.875GHz	16
6945MHz	16
7025MHz	17
802.11ax HEW160_Nss1,(MCS0)_2TX	-
6025MHz	16.5
6185MHz	17
6345MHz	18
6505MHz Straddle 6.425-6.525GHz	19.5
6665MHz	19
6825MHz Straddle 6.525-6.875GHz	19
6985MHz	19

**Beamforming mode**

Mode	Power Setting
802.11ax HEW20-BF_Nss1,(MCS3)_2TX	-
5955MHz	10
6175MHz	11
6415MHz	12
6435MHz	13
6475MHz	12
6515MHz	13
6535MHz	13
6695MHz	13
6855MHz	13
6875MHz Straddle 6.525-6.875GHz	14
6895MHz	13
6995MHz	14
7095MHz	12
7115MHz	4
802.11ax HEW40-BF_Nss1,(MCS3)_2TX	-
5965MHz	13
6165MHz	14
6405MHz	15
6445MHz	15
6485MHz	17
6525MHz Straddle 6.425-6.525GHz	17
6565MHz	16
6685MHz	17
6845MHz	17
6885MHz Straddle 6.525-6.875GHz	16
6925MHz	17
7005MHz	16
7085MHz	16
802.11ax HEW80-BF_Nss1,(MCS3)_2TX	-
5985MHz	16
6145MHz	16
6385MHz	17
6465MHz	19
6545MHz Straddle 6.425-6.525GHz	19
6625MHz	19
6705MHz	20
6785MHz	20



Mode	Power Setting
6865MHz Straddle 6.525-6.875GHz	20
6945MHz	20
7025MHz	20
802.11ax HEW160-BF_Nss1,(MCS3)_2TX	-
6025MHz	20
6185MHz	20
6345MHz	20
6505MHz Straddle 6.425-6.525GHz	20
6665MHz	20
6825MHz Straddle 6.525-6.875GHz	20
6985MHz	20

For Scanning Radio 3

Mode	Power Setting
802.11ax HEW20_Nss1,(MCS0)_1TX	-
5955MHz	11
6175MHz	10.5
6415MHz	11.5
6435MHz	11.5
6475MHz	12
6515MHz	11.5
6535MHz	11.5
6695MHz	11.5
6855MHz	12
6875MHz Straddle 6.525-6.875GHz	12
6895MHz	11.5
6995MHz	11.5
7095MHz	11.5
7115MHz	12

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	Normal Link-EUT 1 (R1: 2.4GHz + 5GHz + R2: 6GHz + R4: Bluetooth) + (Scanning R3: 2.4GHz) + Adapter
2	Normal Link-EUT 1 (R1: 2.4GHz + 5GHz + R2: 6GHz + R4: Bluetooth) + (Scanning R3: 5GHz) + Adapter
3	Normal Link-EUT 1 (R1: 2.4GHz + 5GHz + R2: 6GHz + R4: Bluetooth) + (Scanning R3: 6GHz) + Adapter
Mode 1 has been evaluated to be the worst case among Mode 1~3, thus measurement for Mode 4~9 will follow this same test mode.	
4	Normal Link-EUT 1 (R1: 2.4GHz + 5GHz + R2: 6GHz + R4: Bluetooth) + (Scanning R3: 2.4GHz) + PoE 1
5	Normal Link-EUT 1 (R1: 2.4GHz + 5GHz + R2: 6GHz + R4: Bluetooth) + (Scanning R3: 2.4GHz) + PoE 2
6	Normal Link-EUT 1 (R1: 2.4GHz + 5GHz + R2: 6GHz + R4: Bluetooth) + (Scanning R3: 2.4GHz) + PoE 3
7	Normal Link-EUT 1 (R1: 2.4GHz + 5GHz + R2: 6GHz + R4: Bluetooth) + (Scanning R3: 2.4GHz) + PoE 4
8	Normal Link-EUT 1 (R1: 2.4GHz + 5GHz + R2: 6GHz + R4: Bluetooth) + (Scanning R3: 2.4GHz) + PoE 5
9	Normal Link-EUT 1 (R1: 2.4GHz + 5GHz + R2: 6GHz + R4: Bluetooth) + (Scanning R3: 2.4GHz) + PoE 6
For operating mode 8 is the worst case and it was record in this test report.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emission Bandwidth
Test Condition	Conducted measurement at transmit chains
1	EUT 1_R2 6GHz UNII 5~UNII 8_1TX
2	EUT 1_R2 6GHz UNII 5~UNII 8_2TX_Non beamforming mode
3	EUT 1_R2 6GHz UNII 5~UNII 8_2TX_Beamforming mode
4	EUT 1_Scanning R3 6GHz UNII 5~UNII 8_1TX

The Worst Case Mode for Following Conformance Tests	
Tests Item	Frequency Stability
Test Condition	Conducted measurement at transmit chains
1	EUT 1_R2 6GHz UNII 5~UNII 8_2TX
2	EUT 1_Scanning R3 6GHz UNII 5~UNII 8_1TX

The Worst Case Mode for Following Conformance Tests	
Tests Item	Contention Based Protocol
Test Condition	Conducted measurement at transmit chains
1	EUT 1_R2 6GHz UNII 5~UNII 8
2	EUT 1_Scanning R3 6GHz UNII 5~UNII 8
3	EUT 2_R2 6GHz UNII 5~UNII 8
4	EUT 2_Scanning R3 6GHz UNII 5~UNII 8

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 The EUT was performed at X axis, Y axis and Z axis position for Unwanted Emissions above 1GHz test, and the worst case was found at Y axis. So the measurement will follow this same test configuration.
1	EUT 1 in Y axis_R2 6GHz UNII 5~UNII 8_1TX
2	EUT 1 in Y axis_R2 6GHz UNII 5~UNII 8_2TX_Non beamforming mode
3	EUT 1 in Y axis_R2 6GHz UNII 5~UNII 8_2TX_Beamforming mode
Test Condition	Conducted measurement at transmit chains
4	EUT 1_Scanning R3 6GHz UNII 5~UNII 8_1TX

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
1	EUT 1 in Z axis (R1: 2.4GHz + 5GHz + R2: 6GHz + R4: Bluetooth) + (Scanning R3: 2.4GHz) + Adapter
2	EUT 1 in Y axis (R1: 2.4GHz + 5GHz + R2: 6GHz + R4: Bluetooth) + (Scanning R3: 2.4GHz) + Adapter
3	EUT 1 in Z axis (R1: 2.4GHz + 5GHz + R2: 6GHz + R4: Bluetooth) + (Scanning R3: 2.4GHz) + Adapter
Mode 1 has been evaluated to be the worst case among Mode 1~3, thus measurement for Mode 4~5 will follow this same test mode.	
4	EUT 1 in Z axis (R1: 2.4GHz + 5GHz + R2: 6GHz + R4: Bluetooth) + (Scanning R3: 5GHz) + Adapter
5	EUT 1 in Z axis (R1: 2.4GHz + 5GHz + R2: 6GHz + R4: Bluetooth) + (Scanning R3: 6GHz) + Adapter
Mode 1 has been evaluated to be the worst case among Mode 1~3, thus measurement for Mode 6~11 will follow this same test mode.	
6	EUT 1 in Z axis (R1: 2.4GHz + 5GHz + R2: 6GHz + R4: Bluetooth) + (Scanning R3: 2.4GHz) + PoE 1
7	EUT 1 in Z axis (R1: 2.4GHz + 5GHz + R2: 6GHz + R4: Bluetooth) + (Scanning R3: 2.4GHz) + PoE 2
8	EUT 1 in Z axis (R1: 2.4GHz + 5GHz + R2: 6GHz + R4: Bluetooth) + (Scanning R3: 2.4GHz) + PoE 3
9	EUT 1 in Z axis (R1: 2.4GHz + 5GHz + R2: 6GHz + R4: Bluetooth)+ (Scanning R3: 2.4GHz) + PoE 4
10	EUT 1 in Z axis (R1: 2.4GHz + 5GHz + R2: 6GHz + R4: Bluetooth) + (Scanning R3: 2.4GHz) + PoE 5
11	EUT 1 in Z axis (R1: 2.4GHz + 5GHz + R2: 6GHz + R4: Bluetooth) + (Scanning R3: 2.4GHz) + PoE 6
For operating mode 1 and Mode 8 are the worst case and they were record in this test report.	



Operating Mode > 1GHz	CTX
	For Radio 2 The EUT was performed at X axis, Y axis and Z axis position test, and the worst case was found at Y axis. So the measurement will follow this same test configuration. For Scanning Radio 3 The EUT was performed at X axis, Y axis and Z axis position test, and the worst case was found at X axis. So the measurement will follow this same test configuration.
1	EUT 1 in Y axis_R2 6GHz UNII 5~UNII 8_1TX
2	EUT 1 in Y axis_R2 6GHz UNII 5~UNII 8_2TX_Non beamforming mode
3	EUT 1 in Y axis_R2 6GHz UNII 5~UNII 8_2TX_Beamforming mode
4	EUT 1 in X axis_Scanning R3 6GHz UNII 5~UNII 8_1TX

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emission MASK
Test Condition	Conducted measurement at transmit chains
1	EUT 1_R2 6GHz UNII 5~UNII 8_1TX
2	EUT 1_R2 6GHz UNII 5~UNII 8_2TX_Non beamforming
3	EUT 1_R2 6GHz UNII 5~UNII 8_2TX_Beamforming mode
4	EUT 1_Scanning R3 6GHz UNII 5~UNII 8_1TX

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	EUT 1 (R1: 2.4GHz + 5GHz + R2: 6GHz + R4: Bluetooth) + (Scanning R3: 2.4GHz)
2	EUT 1 (R1: 2.4GHz + 5GHz + R2: 6GHz + R4: Bluetooth) + (Scanning R3: 5GHz)
3	EUT 1 (R1: 2.4GHz + 5GHz + R2: 6GHz + R4: Bluetooth)+ (Scanning R3: 6GHz)
Refer to Sporton Test Report No.: FA230306 for Co-location RF Exposure Evaluation.	



Note: The Adapter and PoEs are for measurement only, would not be marketed.

Adapter and PoEs information as below:

Power	Brand	Model
Adapter	CISCO	MA-PWR-30W-US (MA-PWR-30W)
PoE 1	CISCO	POE16U-1AF (AIR-PWRINJ5)
PoE 2	CISCO	SB-PWR-INJ2 (AIR-PWRINJ6)
PoE 3	PHIHONG	POE29U-1AT(PL) (AIR-PWRINJ6)
PoE 4	Delta	ADH-65AR B (AIR-PWRINJ7)
PoE 5	PHIHONG	POEA33U-1ATE (MA-INJ-4)
PoE 6	PHIHONG	POE60U-1BT-X (MA-INJ-6)

According to the manufacturer's declaration, the console port is not used for end-users.

2.3 EUT Operation during Test

For CTX Mode:

non-beamforming mode:

The EUT was programmed to be in continuously transmitting mode.

beamforming mode:

For Conducted Mode:

The EUT was programmed to be in continuously transmitting mode.

For Radiated Mode:

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

The program was executed as follows:

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

For Normal Link:

During the test, the EUT operation to normal function.

2.4 Accessories

Accessories
Bracket*1



2.5 Support Equipment

For AC Conduction:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	PoE 5	PHIHONG	POEA33U-1ATE (MA-INJ-4)	N/A
B	2.5G LAN NB	DELL	E6430	N/A
C	2.4G NB	DELL	E6430	N/A
D	5G NB	DELL	E6430	N/A
E	6E device	JUNIPER	B-Q3AP-2	N/A
F	6E NB	DELL	E6430	N/A
G	Flash disk3.0	Transcend	JetFlash-700	N/A

For Radiated (below 1GHz):

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	PoE 3	PHIHONG	POE29U-1AT(PL) (AIR-PWRINJ6)	N/A
B	2.5G LAN NB	DELL	E6430	N/A
C	2.4G NB	DELL	E6430	N/A
D	5G NB	DELL	E6430	N/A
E	6E device	JUNIPER	B-Q3AP-2	N/A
F	6E NB	DELL	E6430	N/A
G	Flash disk3.0	Transcend	JetFlash-700	N/A

For Radiated (above 1GHz):

For non beamforming mode

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	PoE 5	PHIHONG	POEA33U-1ATE (MA-INJ-4)	N/A
B	Notebook	DELL	E4300	N/A

**For beamforming mode**

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	PoE 5	PHIHONG	POEA33U-1ATE (MA-INJ-4)	N/A
B	Notebook	DELL	E4300	N/A
C	Client	CISCO	RXAQ-MR2	N/A
D	Notebook	DELL	E4300	N/A

For RF Conducted (Other tests):

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A
B	PoE 5	PHIHONG	POEA33U-1ATE (MA-INJ-4)	N/A

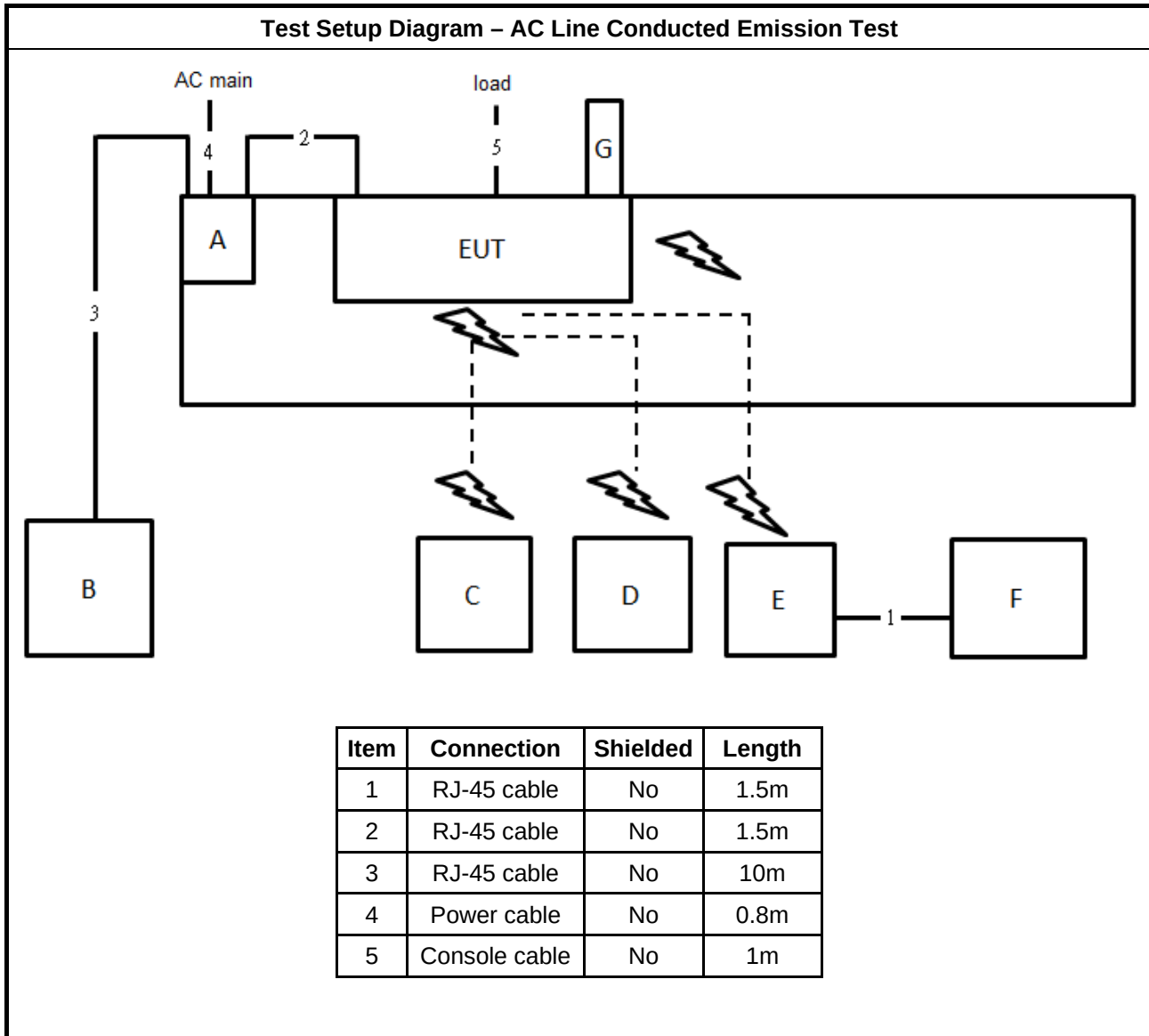
For RF Conducted (Contention Based Protocol test):**Test Mode 1 and Mode 3**

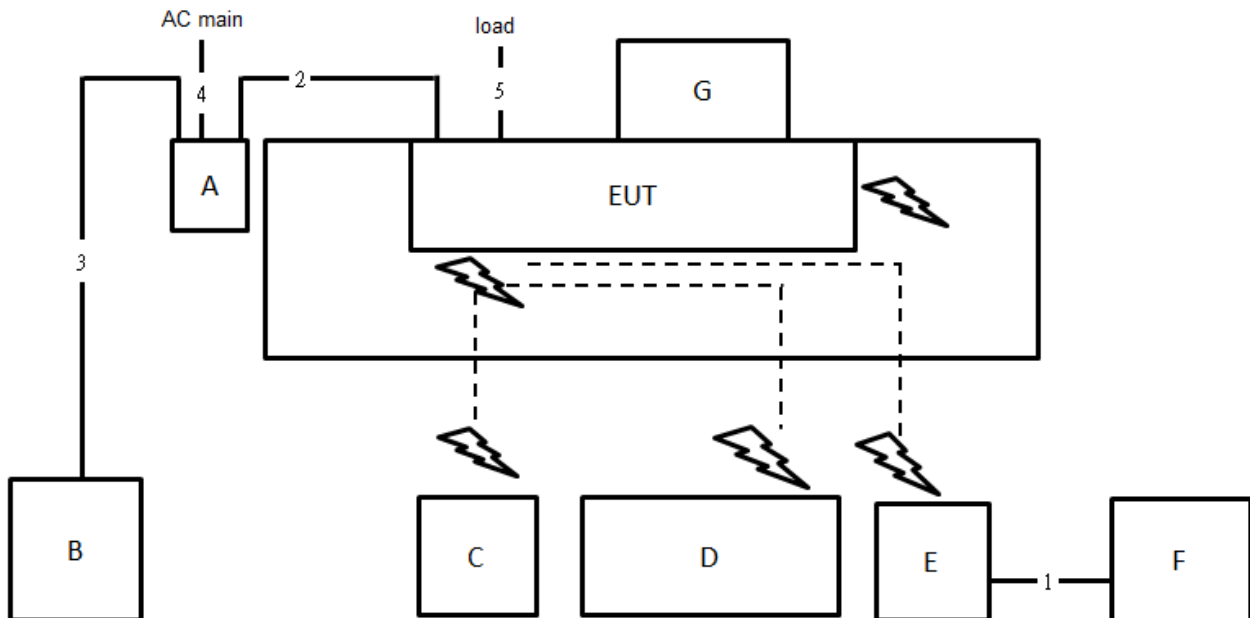
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A
B	Notebook	DELL	E4300	N/A
C	WLAN module	Intel	AX210NGW	PD9AX210NG
D	Adapter	CISCO	MA-PWR-30W-US (MA-PWR-30W)	Adapter

Test Mode 2 and Mode 4

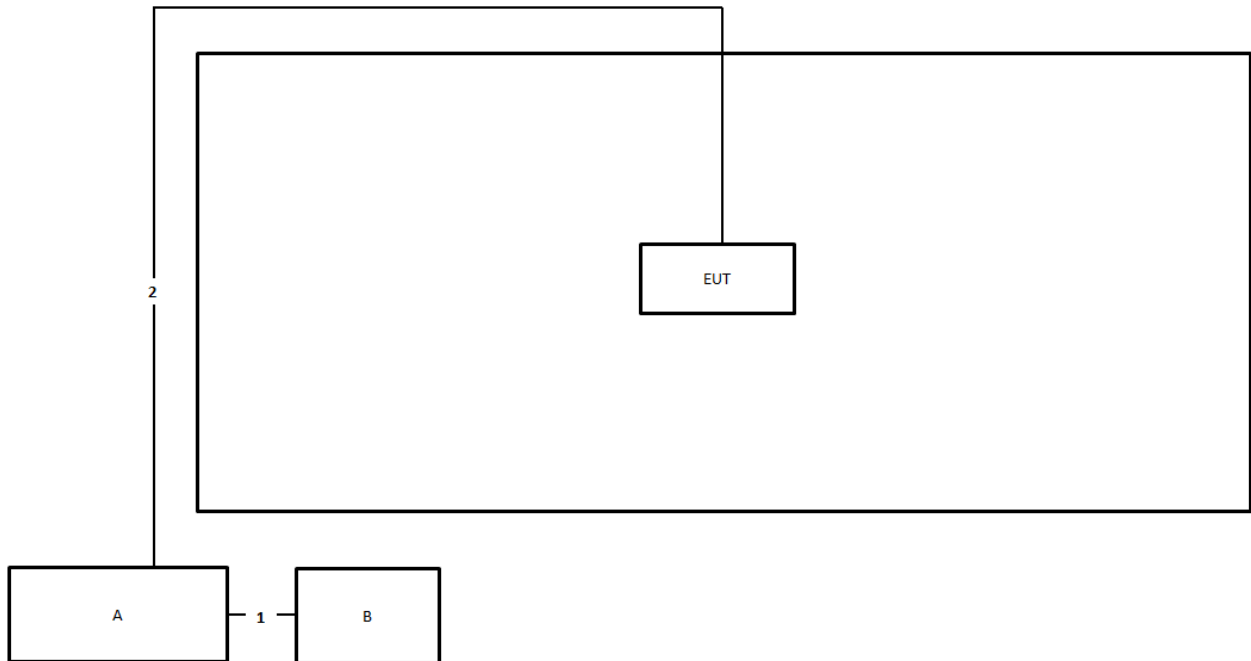
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A
B	Adapter	CISCO	MA-PWR-30W-US (MA-PWR-30W)	Adapter

2.6 Test Setup Diagram



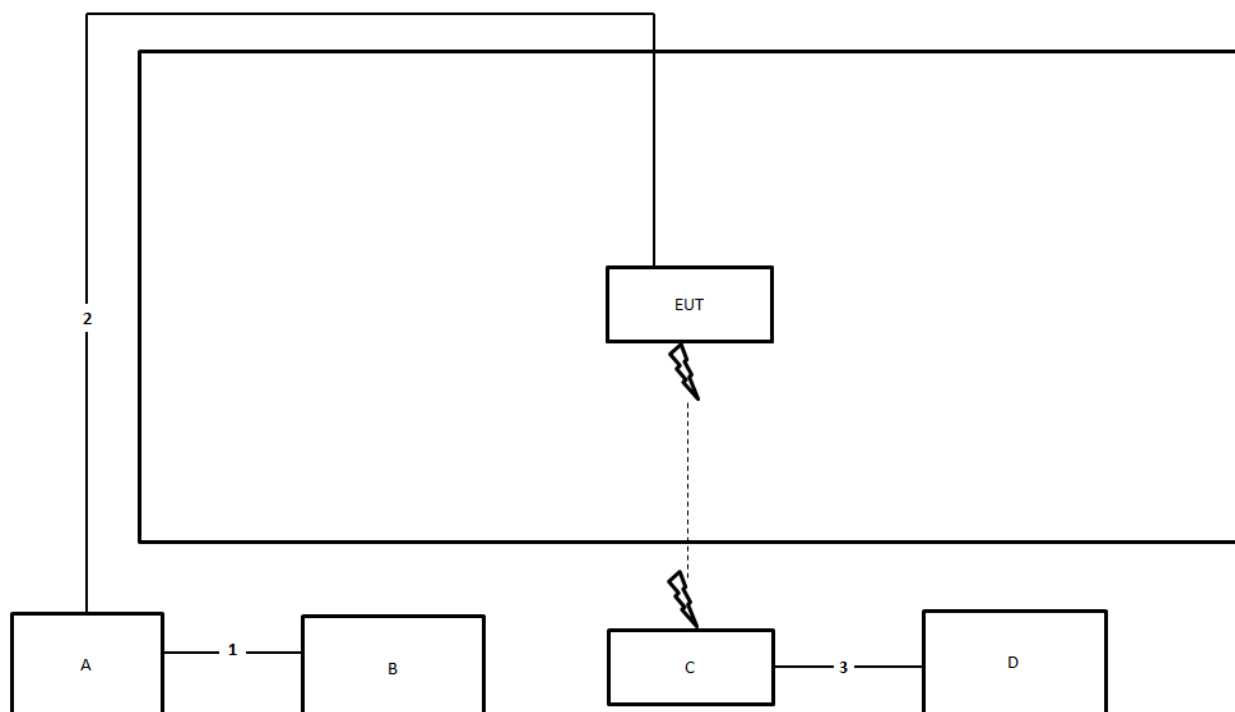
Test Setup Diagram - Radiated Test < 1GHz


Item	Connection	Shielded	Length
1	RJ-45 cable	No	1.5m
2	RJ-45 cable	No	1.5m
3	RJ-45 cable	No	10m
4	Power cable	No	0.8m
5	Console cable	No	1m

Test Setup Diagram - Radiated Test > 1GHz / For non beamforming mode


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

Test Setup Diagram - Radiated Test > 1GHz / For beamforming mode



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

3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

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

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

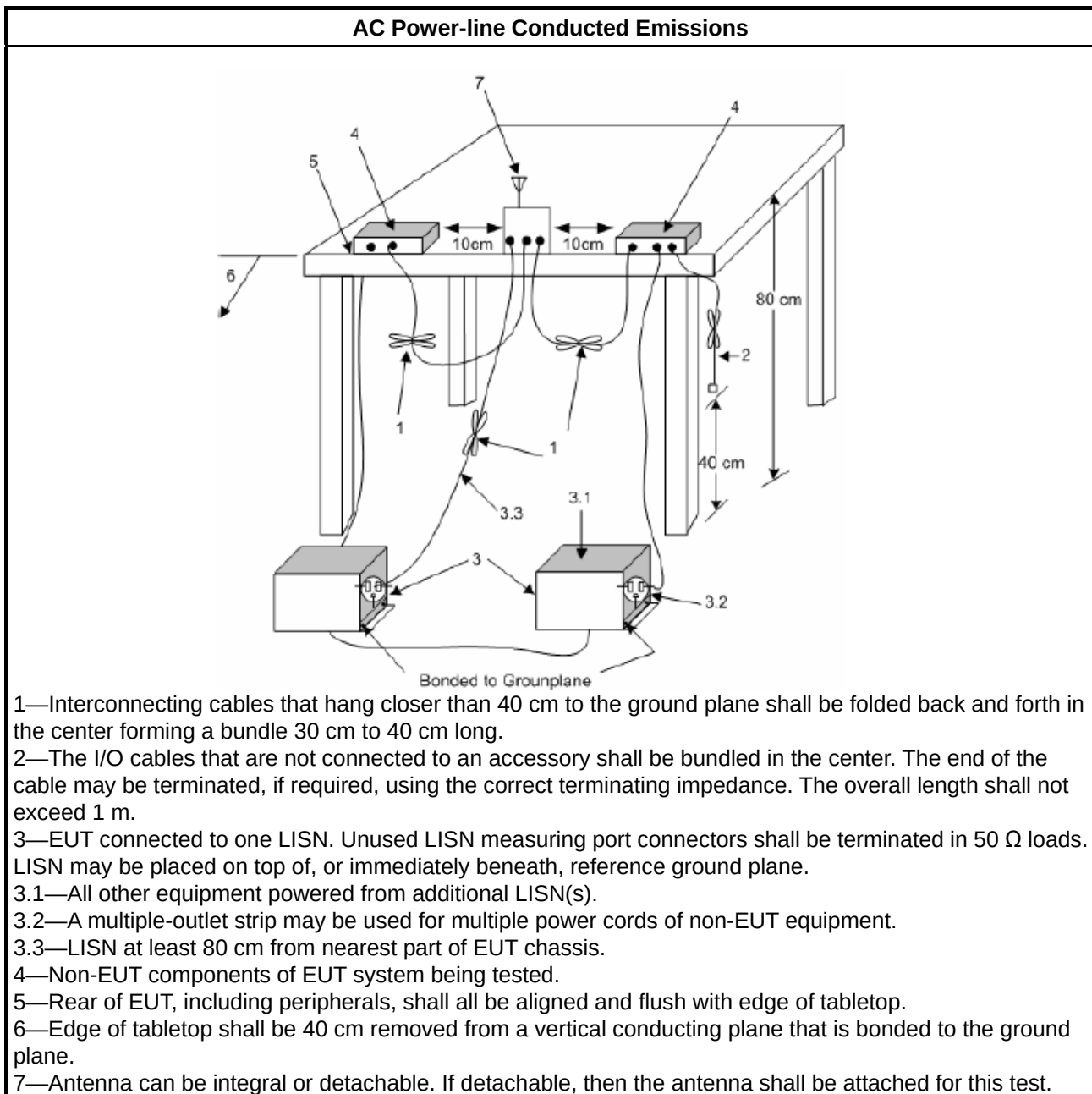
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

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

3.1.4 Test Setup



3.1.5 Measurement Results Calculation

The measured Level is calculated using:

- Corrected Reading (dBuV) = LISN Factor + Cable Loss + Read Level = Level
- 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	
☒	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
RLAN 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

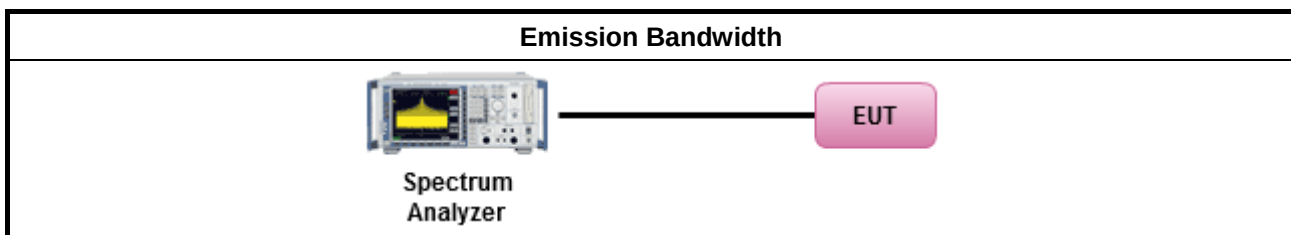
3.2.2 Measuring Instruments

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:	
☒	According to 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.
☐	Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.
☐	Refer as IC RSS-Gen, clause 4.6 for bandwidth testing.

3.2.4 Test Setup



3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B



3.3 Maximum Equivalent Isotopically Radiated Power (E.I.R.P.)

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

Maximum Equivalent Isotopically 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.
RLAN Devices	
☐ For the 5.925 ~ 7.125 GHz band:	
	■ 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	
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	
☒	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.
☐	Refer as FCC KDB 789033 D02, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
Wideband RF power meter and average over on/off periods with duty factor	
☒	Refer as FCC KDB 789033 D02, clause E Method PM-G (using an RF average power meter).
☒ For conducted measurement.	
If the EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.	
If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$	
☒ For radiated measurement.	
Refer as FCC KDB 789033 D02 clause II A.1.F "Antenna-port Conducted versus Radiated Testing"	
Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.	
Refer as FCC KDB 412172 D01 clause 2.2 for EIRP calculation.	

**For Radio 1**

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 :

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

where;

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

LP : Free Space Loss(dB)

PR Formula :

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

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 :

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

where;

F(MHz) : EUT center frequency

D(m) : Measurement distance

For Example:

Test mode HE20 Non BF 1T1S 5955MHz EIRP measurement

PR Formula :

$$\text{PR(dBm)} = -35.12 - 10.59 + 5.32 = -40.39$$

LP(FSL factor) Formula :

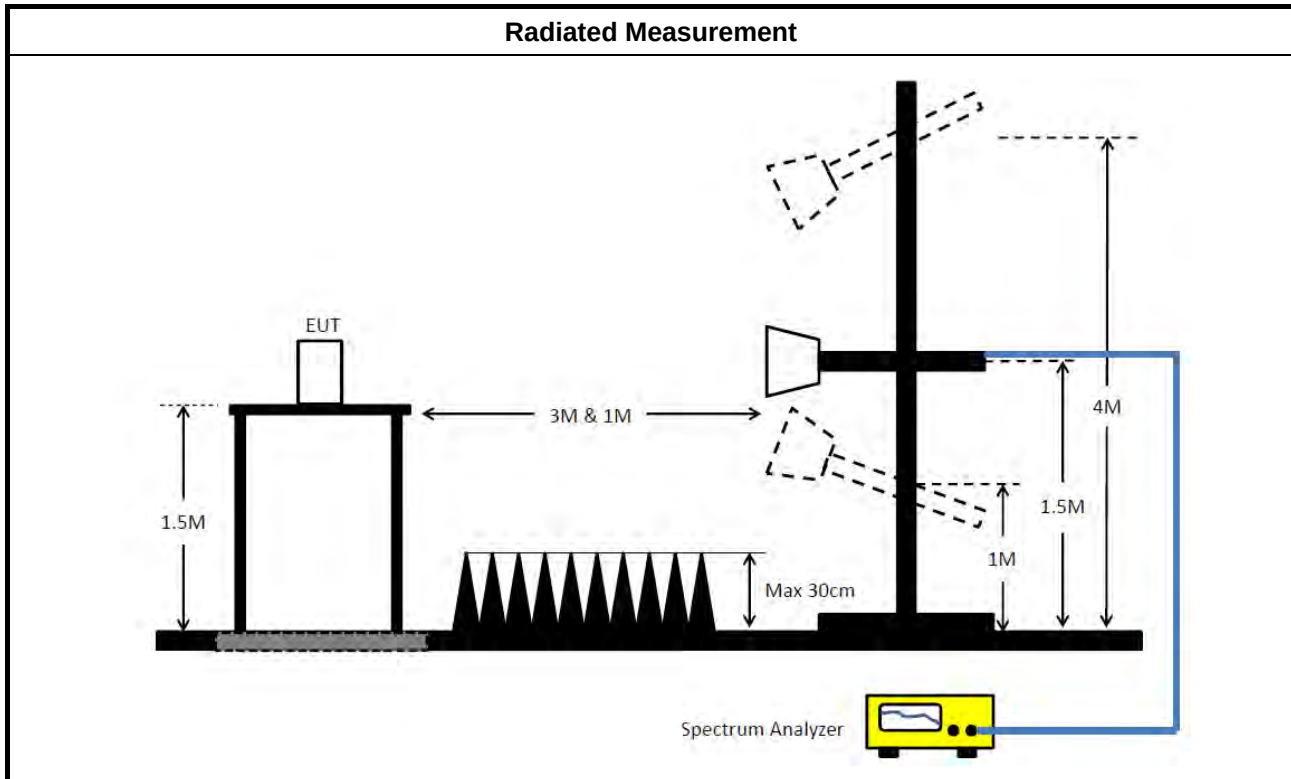
$$\text{LP(dB)} = 20 \log(5955) + 20 \log(3) - 27.5 = 57.54$$

EIRP Formula :

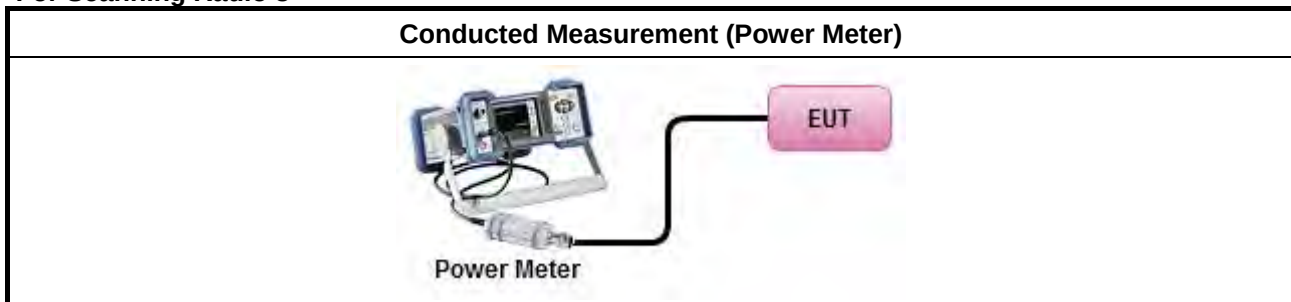
$$\text{EIRP(dBm)} = -40.39 + 57.54 = 17.15$$

3.3.4 Test Setup

For Radio 2



For Scanning Radio 3



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.
RLAN Devices	
☐	For the 5.925 ~ 7.125 GHz band:
☐	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	
According to 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:	
☐	Refer as FCC KDB 789033 D02, F)5) power spectral density can be measured using resolution bandwidths < 1 MHz provided that the results are integrated over 1 MHz bandwidth
[duty cycle ≥ 98% or external video / power trigger]	
☒	Refer as FCC KDB 789033 D02, clause E Method SA-1 (spectral trace averaging).
☐	Refer as FCC KDB 789033 D02, clause E Method SA-1 Alt. (RMS detection with slow sweep speed)
duty cycle < 98% and average over on/off periods with duty factor	
☒	Refer as FCC KDB 789033 D02, clause E Method SA-2 (spectral trace averaging).
☐	Refer as FCC KDB 789033 D02, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
☒	For conducted measurement.
If the EUT supports multiple transmit chains using options given below:	
☒	Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.
☐	Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits,
☐	Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.
If multiple transmit chains, EIRP PPSD calculation could be following as methods: $PPSD_{total} = PPSD_1 + PPSD_2 + \dots + PPSD_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = PPSD_{total} + DG$	
☒	For radiated measurement.
Refer as FCC KDB 789033 D02 clause II A.1.F "Antenna-port Conducted versus Radiated Testing"	
Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.	

**Test Method**

- Refer as FCC KDB 412172 D01 clause 2.2 for EIRP calculation.

For Radio 1

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 :

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

where;

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

LP : Free Space Loss(dB)

PR Formula :

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

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 :

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

where;

F(MHz) : EUT center frequency

D(m) : Measurement distance

For Example:

Test mode HE20 Non BF 1T1S 5955MHz EIRP PSD measurement

PR Formula :

$PR(dBm/MHz) = -47.71 - 10.56 + 5.32 = -52.95$

LP(FSL factor) Formula :

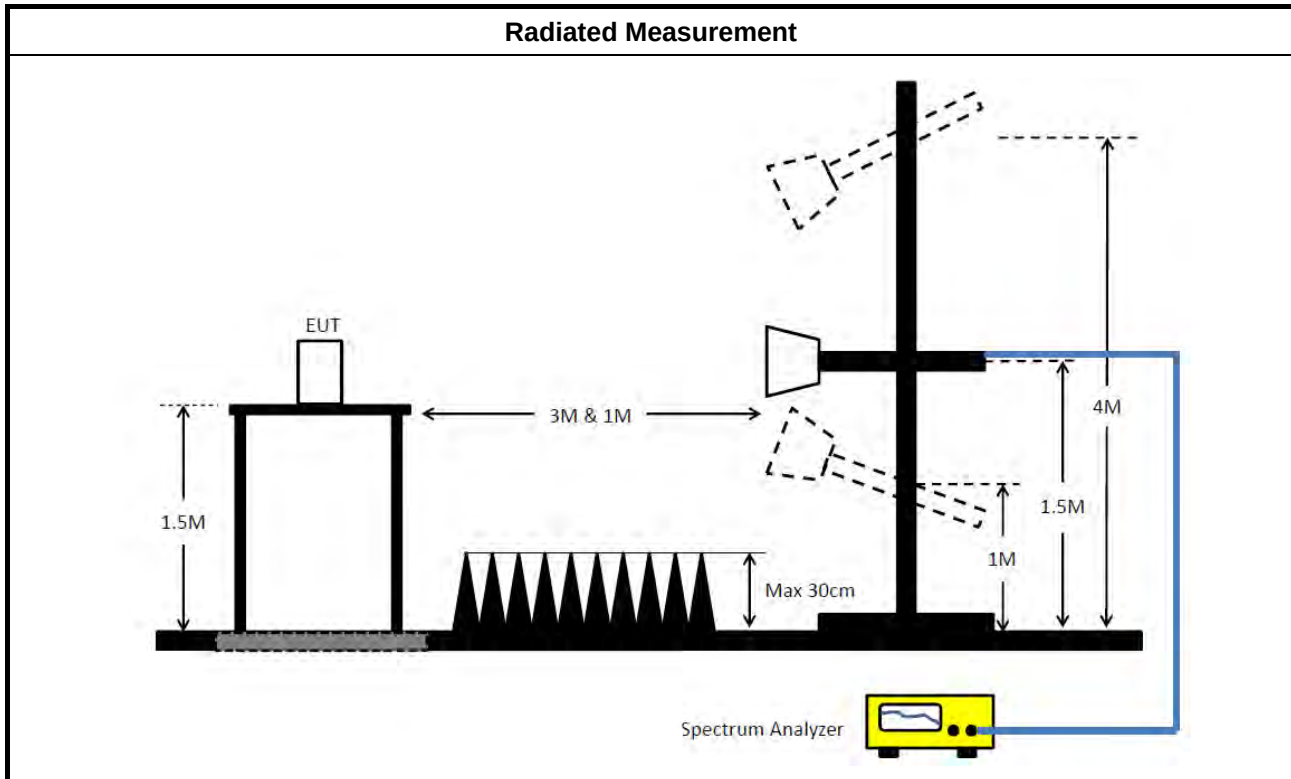
$LP(dB) = 20 \log(5955) + 20 \log(3) - 27.5 = 57.55$

EIRP PSD Formula

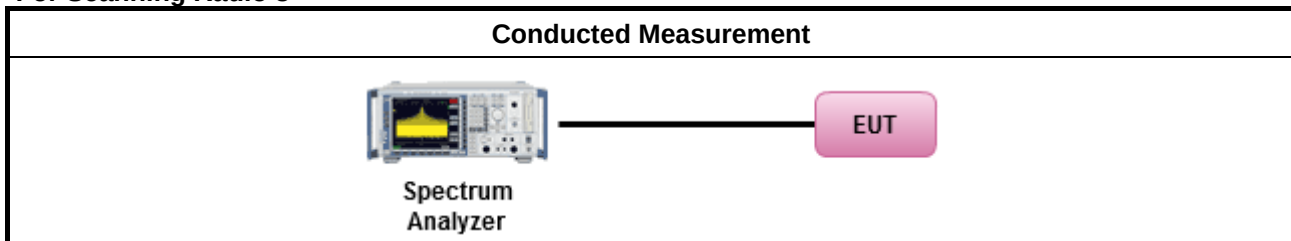
$EIRP\ PSD(dBm/MHz) = -52.95 + 57.55 = 4.60$

3.4.4 Test Setup

For Radio 2



For Scanning Radio 3



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).

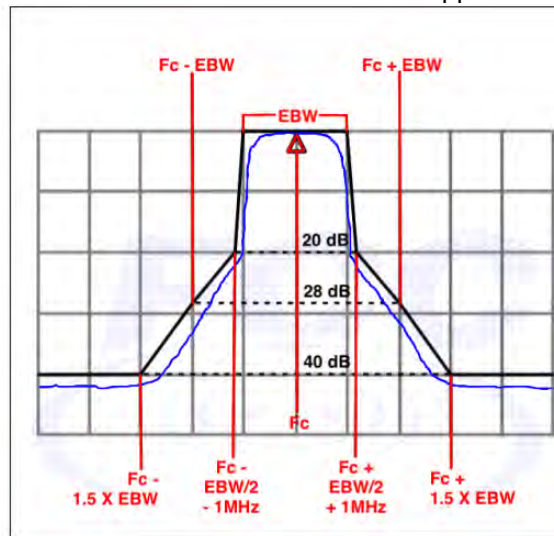
Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, 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) = $54\text{dBuV/m at 3m} + 9.54\text{dB} = 63.54\text{dBuV/m at 1m}$.

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) = $68.2\text{dBuV/m at 3m} + 9.54\text{dB} = 77.74\text{dBuV/m at 1m}$.
	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.
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.





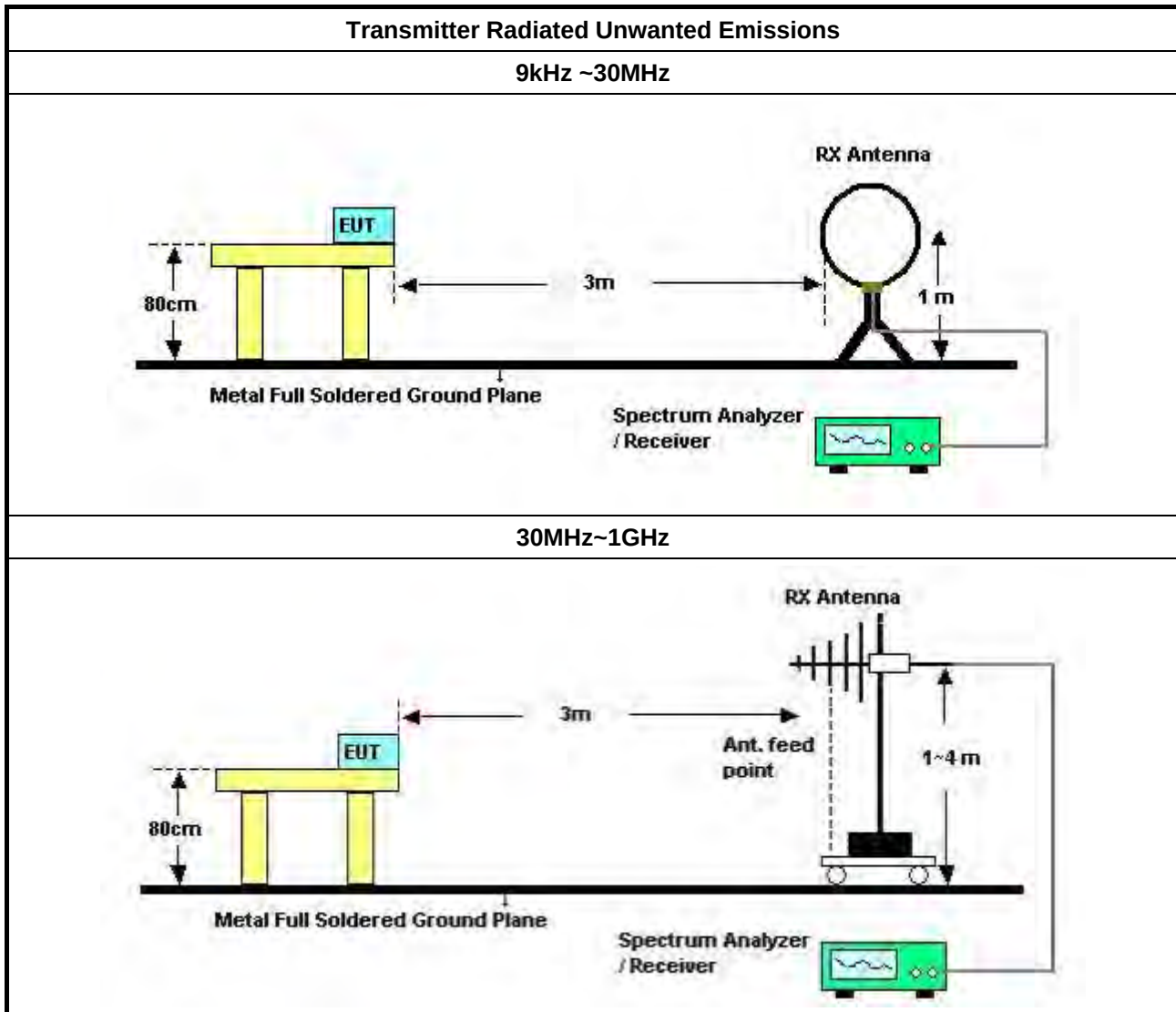
3.5.2 Measuring Instruments

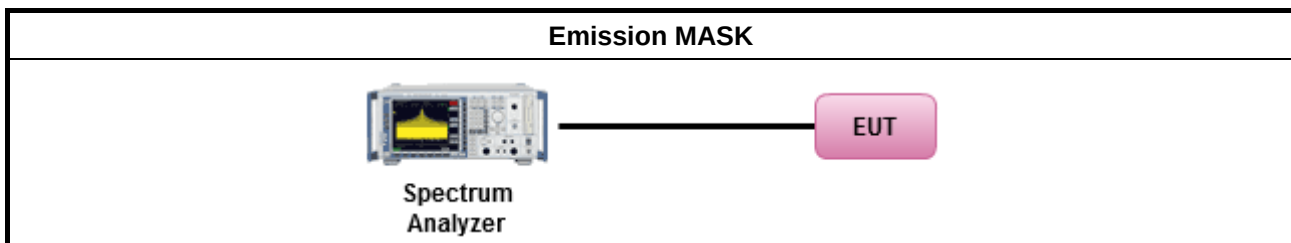
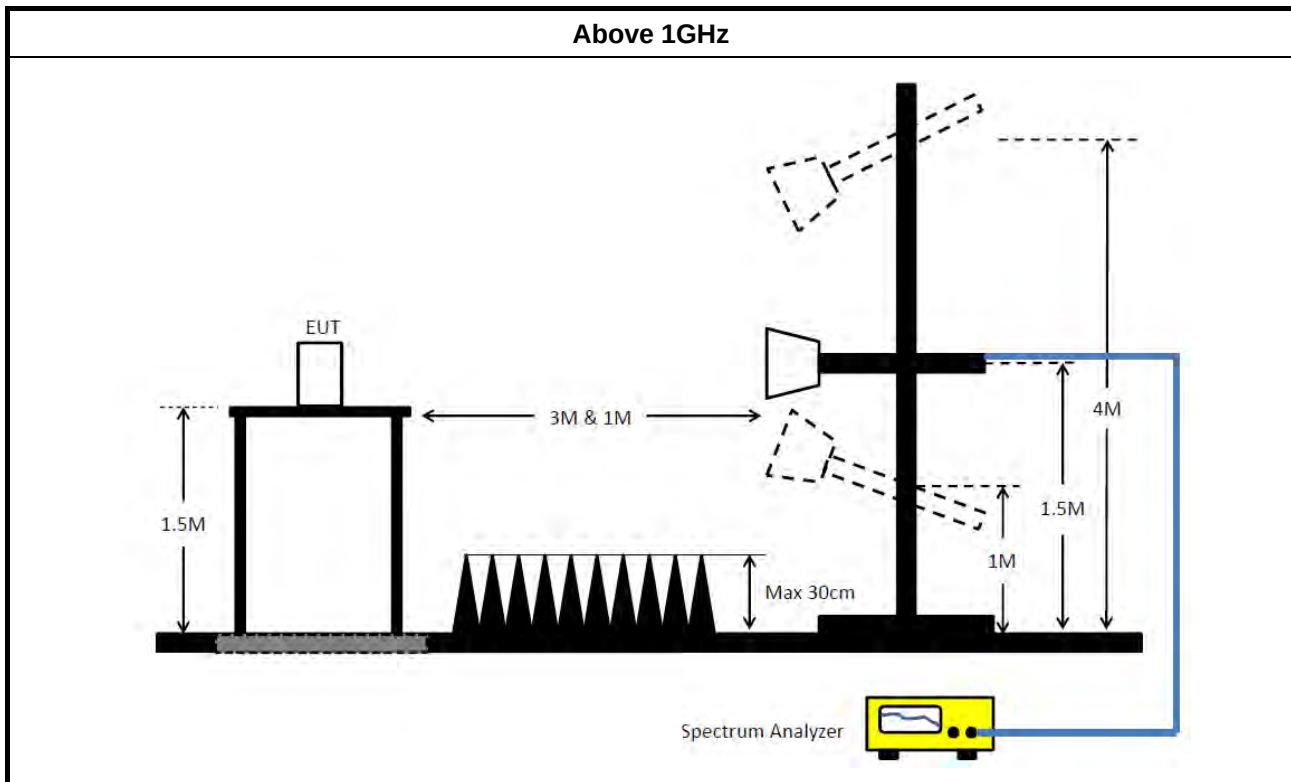
Refer a test equipment and calibration data table in this test report.

3.5.3 Test Procedures

Test Method	
According to 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).	
The average emission levels shall be measured in [duty cycle $\geq$ 98 or duty factor].	
For the transmitter unwanted emissions shall be measured using following options below:	
	Refer as FCC KDB 789033 D02, clause G)2) for unwanted emissions into non-restricted bands.
	Refer as FCC KDB 789033 D02, clause G)1) for unwanted emissions into restricted bands.
	☒ Refer as FCC KDB 789033 D02, G)6) Method AD (Trace Averaging). (For unrestricted band measurement)
	☐ Refer as FCC KDB 789033 D02, G)6) Method VB (Reduced VBW).
	☒ Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW $\geq$ 1/T, where T is pulse time.(For restricted band average measurement)
	☐ Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions.
	☒ Refer as FCC KDB 789033 D02, clause G)5) measurement procedure peak limit.
	☐ Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak limit.
Refer as FCC KDB 789033 D02, clause G)3)d)ii) for Band edge Integration measurements.	
For emission MASK shall be measured using following options below:	
	☒ Refer as FCC draft 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.	

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.

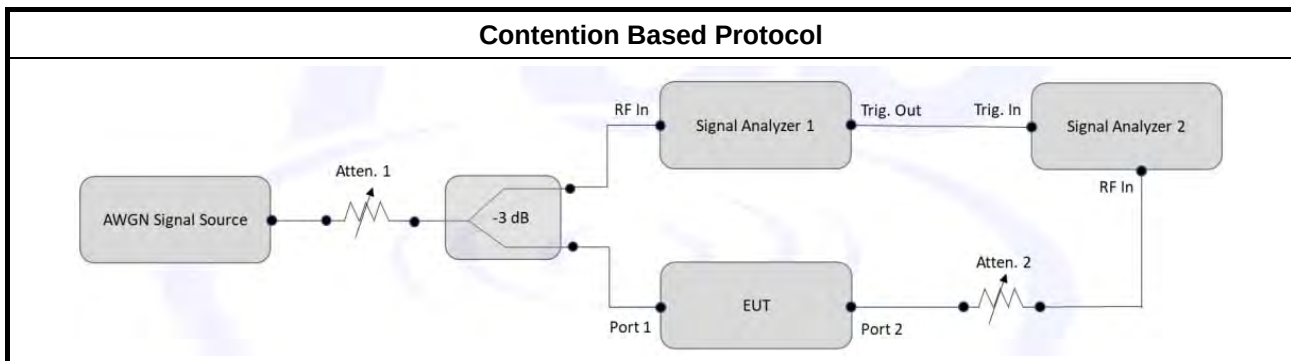
3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

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

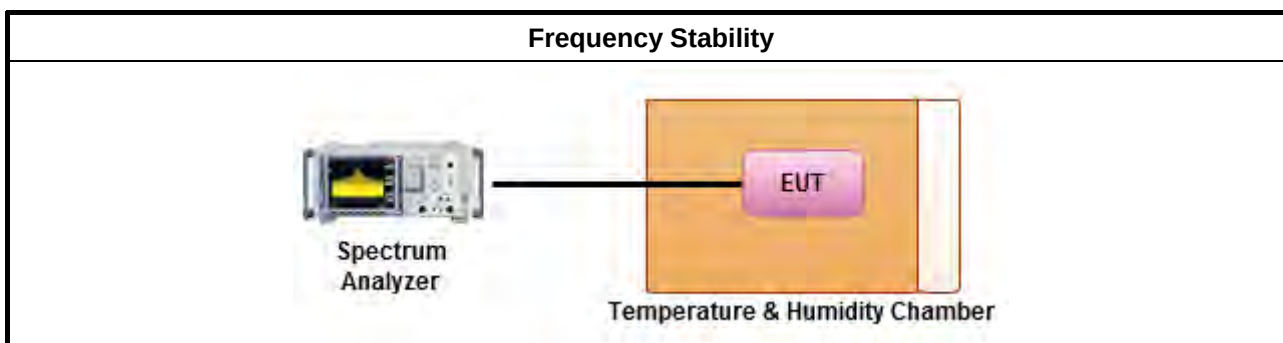
3.7.2 Measuring Instruments

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
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.4GHz	Feb. 22, 2022	Feb. 21, 2023	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Feb. 09, 2022	Feb. 08, 2023	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Apr. 12, 2022	Apr. 11, 2023	Conduction (CO01-CB)
Pulse Limiter	Rohde&Schwarz	ESH3-Z2	100430	9kHz ~ 30MHz	Feb. 10, 2022	Feb. 09, 2023	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	9kHz ~ 30MHz	May 19, 2021	May 18, 2022	Conduction (CO01-CB)
Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	May 14, 2022	May 13, 2023	Radiation (10CH01-CB)
10m Semi Anechoic Chamber NSA	TDK	SAC-10M	10CH01-CB	30MHz~1GHz 10m,3m	Jan. 27, 2022	Jan. 26, 2023	Radiation (10CH01-CB)
Amplifier	Agilent	8447D	2944A10783	9kHz ~ 1.3GHz	Mar. 11, 2022	Mar. 10, 2023	Radiation (10CH01-CB)
Amplifier	Agilent	8447D	2944A10784	9kHz ~ 1.3GHz	Mar. 11, 2022	Mar. 10, 2023	Radiation (10CH01-CB)
Low Cable	Woken	SUCOFLEX 104	low cable-01	25MHz ~ 1GHz	Oct. 19, 2021	Oct. 18, 2022	Radiation (10CH01-CB)
Low Cable	Woken	SUCOFLEX 104	low cable-02	25MHz ~ 1GHz	Oct. 19, 2021	Oct. 18, 2022	Radiation (10CH01-CB)
EMI Test Receiver	Rohde&Schwarz	ESCI	100186	9kHz ~ 3GHz	Jul. 12, 2021	Jul. 11, 2022	Radiation (10CH01-CB)
Spectrum Analyzer	Rohde&Schwarz	FSV30	101026	9kHz ~ 30GHz	Apr. 22, 2022	Apr. 21, 2023	Radiation (10CH01-CB)
Bilog Antenna with 6dB Attenuator	Chase & EMCI	CBL6111A &N-6-06	1543 &AT-N0609	30MHz ~ 1GHz	Jul. 01, 2021	Jun. 30, 2022	Radiation (10CH01-CB)
Amplifier	EM	EM101	060703	10MHz ~ 1GHz	Oct. 20, 2021	Oct. 19, 2022	Radiation (10CH01-CB)
Low Cable	TITAN	T318E	low cable-03	30MHz ~ 1GHz	Jun. 17, 2021	Jun. 16, 2023	Radiation (10CH01-CB)
Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (10CH01-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH01-CB	1GHz ~18GHz 3m	May 07, 2021	May 06, 2022	Radiation (03CH01-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH01-CB	1GHz ~18GHz 3m	May 06, 2022	May 05, 2023	Radiation (03CH01-CB)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Horn Antenna	ETS-LINDGREN	3115	00075790	750MHz ~ 18GHz	Nov. 06, 2021	Nov. 05, 2022	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 05, 2021	Aug. 04, 2022	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02121	1GHz ~ 26.5GHz	May 20, 2021	May 19, 2022	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02121	1GHz ~ 26.5GHz	May 19, 2022	May 18, 2023	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 13, 2021	Jul. 12, 2022	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	May 03, 2021	May 02, 2022	Radiation (03CH01-CB)
Signal Analyzer	R&S	FSV40	101904	9kHz ~ 40GHz	Apr. 26, 2022	Apr. 25, 2023	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-16	1 GHz ~ 18 GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-16+17	1 GHz ~ 18 GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH01-CB)
High Cable	Woken	WCA0929M	40G#5+7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH01-CB)
High Cable	Woken	WCA0929M	40G#5	1GHz ~ 40 GHz	Dec. 08, 2021	Dec. 07, 2022	Radiation (03CH01-CB)
High Cable	Woken	WCA0929M	40G#7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH01-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH01-CB)
Band Rejector	MTJ	6G Band Rejector	CB6G-BRJ-01	1GHz ~ 7.4GHz	Jan. 11, 2022	Jan. 10, 2023	Radiation (03CH01-CB)
Band Rejector	MTJ	6G Band Rejector	CB6G-BRJ-02	1GHz ~ 8GHz	Jan. 11, 2022	Jan. 10, 2023	Radiation (03CH01-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	Oct. 25, 2021	Oct. 24, 2022	Radiation (03CH04-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 05, 2021	Aug. 04, 2022	Radiation (03CH04-CB)
Pre-Amplifier	Agilent	83017A	MY53270063	0.5GHz ~ 26.5GHz	Jul. 12, 2021	Jul. 11, 2022	Radiation (03CH04-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 13, 2021	Jul. 12, 2022	Radiation (03CH04-CB)
Signal Analyzer	R&S	FSV40	101904	9kHz ~ 40GHz	Apr. 15, 2021	Apr. 14, 2022	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)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-21+67	1GHz - 18GHz	Oct. 04, 2021	Oct. 03, 2022	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)
Band Rejector	MTJ	6G Band Rejector	CB6G-BRJ-01	1GHz ~ 7.4GHz	Jan. 11, 2022	Jan. 10, 2023	Radiation (03CH04-CB)
Band Rejector	MTJ	6G Band Rejector	CB6G-BRJ-02	1GHz ~ 8GHz	Jan. 11, 2022	Jan. 10, 2023	Radiation (03CH04-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH04-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	May 21, 2021	May 20, 2022	Conducted (TH01-CB)
Signal Analyzer	R&S	FSV40	101904	9kHz ~ 40GHz	Apr. 26, 2022	Apr. 25, 2023	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz – 26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz –26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz –26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz –26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-30	1 GHz –26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
Switch	SPTCB	SP-SWI	SWI-01	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	SWI-01-P1	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	SWI-01-P2	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	SWI-01-P3	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	SWI-01-P4	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	SWI-01-P5	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH01-CB)
Power Sensor	Agilent	E9327A	US40442088	50MHz~18GHz	Feb. 21, 2022	Feb. 20, 2023	Conducted (TH01-CB)
Power Meter	Agilent	E4416A	GB41291199	50MHz~18GHz	Feb. 21, 2022	Feb. 20, 2023	Conducted (TH01-CB)
Band Rejector	MTJ	6G Band Rejector	CB6G-BRJ-01	1GHz ~ 7.4GHz	Jan. 11, 2022	Jan. 10, 2023	Conducted (TH01-CB)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Band Rejector	MTJ	6G Band Rejector	CB6G-BRJ-02	1GHz ~ 8GHz	Jan. 11, 2022	Jan. 10, 2023	Conducted (TH01-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conducted (TH01-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.



Conducted Emissions at Powerline

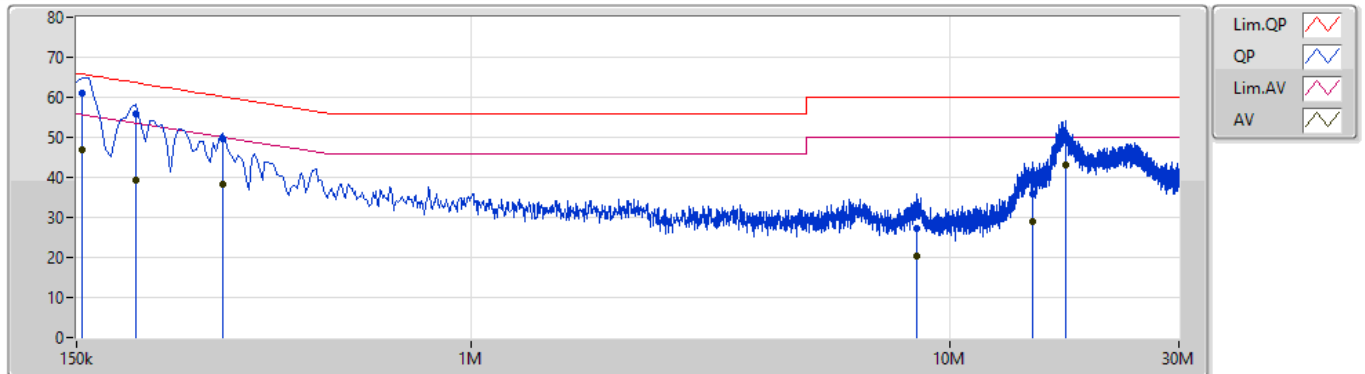
Appendix A

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 8	Pass	QP	163.5k	60.68	65.27	-4.59	Neutral

Mode 8

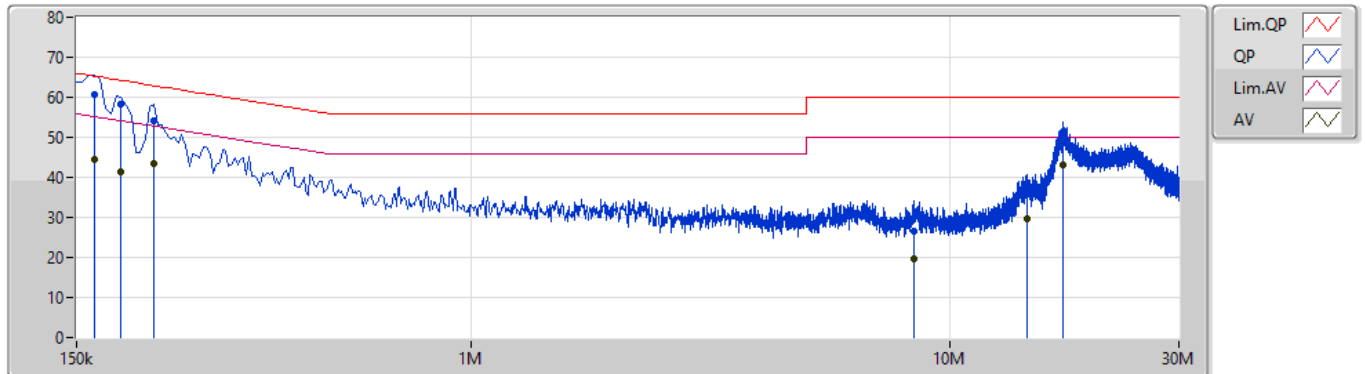
16/05/2022



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	154.5k	60.97	65.75	-4.78	9.97	Line	"Worst"	51.00	0.06	0.02	9.89			
AV	154.5k	46.88	55.75	-8.87	9.97	Line	-	36.91	0.06	0.02	9.89			
QP	199.5k	55.88	63.63	-7.75	9.97	Line	-	45.91	0.06	0.02	9.89			
AV	199.5k	39.21	53.63	-14.42	9.97	Line	-	29.24	0.06	0.02	9.89			
QP	303k	49.76	60.17	-10.41	9.97	Line	-	39.79	0.06	0.02	9.89			
AV	303k	38.27	50.17	-11.90	9.97	Line	-	28.30	0.06	0.02	9.89			
QP	8.538M	27.33	60.00	-32.67	10.18	Line	-	17.15	0.20	0.07	9.91			
AV	8.538M	20.45	50.00	-29.55	10.18	Line	-	10.27	0.20	0.07	9.91			
QP	14.807M	35.72	60.00	-24.28	10.32	Line	-	25.40	0.27	0.11	9.94			
AV	14.807M	28.99	50.00	-21.01	10.32	Line	-	18.67	0.27	0.11	9.94			
QP	17.394M	49.20	60.00	-10.80	10.35	Line	-	38.85	0.28	0.12	9.95			
AV	17.394M	42.94	50.00	-7.06	10.35	Line	-	32.59	0.28	0.12	9.95			

Mode 8

16/05/2022



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)			
QP	163.5k	60.68	65.27	-4.59	9.98	Neutral	"Worst"	50.70	0.07	0.02	9.89			
AV	163.5k	44.47	55.27	-10.80	9.98	Neutral	-	34.49	0.07	0.02	9.89			
QP	186k	58.35	64.20	-5.85	9.98	Neutral	-	48.37	0.07	0.02	9.89			
AV	186k	41.31	54.20	-12.89	9.98	Neutral	-	31.33	0.07	0.02	9.89			
QP	217.5k	54.12	62.92	-8.80	9.98	Neutral	-	44.14	0.07	0.02	9.89			
AV	217.5k	43.38	52.92	-9.54	9.98	Neutral	-	33.40	0.07	0.02	9.89			
QP	8.403M	26.55	60.00	-33.45	10.20	Neutral	-	16.35	0.22	0.07	9.91			
AV	8.403M	19.63	50.00	-30.37	10.20	Neutral	-	9.43	0.22	0.07	9.91			
QP	14.492M	36.27	60.00	-23.73	10.32	Neutral	-	25.95	0.27	0.11	9.94			
AV	14.492M	29.52	50.00	-20.48	10.32	Neutral	-	19.20	0.27	0.11	9.94			
QP	17.21M	49.44	60.00	-10.56	10.35	Neutral	-	39.09	0.29	0.11	9.95			
AV	17.21M	43.17	50.00	-6.83	10.35	Neutral	-	32.82	0.29	0.11	9.95			

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)_1TX	22.11M	19.13M	19M1D1D	21.9M	19.1M
802.11ax HEW40_Nss1,(MCS0)_1TX	40.5M	37.841M	37M8D1D	40.44M	37.781M
802.11ax HEW80_Nss1,(MCS0)_1TX	83.52M	77.841M	77M8D1D	82.08M	77.361M
802.11ax HEW160_Nss1,(MCS0)_1TX	308.88M	163.598M	164MD1D	165.36M	155.202M
6.425-6.525GHz	-	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_1TX	21.72M	19.16M	19M2D1D	21.54M	19.13M
802.11ax HEW40_Nss1,(MCS0)_1TX	40.44M	37.841M	37M8D1D	40.14M	37.721M
802.11ax HEW80_Nss1,(MCS0)_1TX	83.28M	77.601M	77M6D1D	82.2M	77.481M
802.11ax HEW160_Nss1,(MCS0)_1TX	339.84M	180.15M	180MD1D	339.84M	180.15M
6.525-6.875GHz	-	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_1TX	22.02M	19.16M	19M2D1D	21.9M	19.13M
802.11ax HEW40_Nss1,(MCS0)_1TX	40.8M	37.841M	37M8D1D	40.26M	37.841M
802.11ax HEW80_Nss1,(MCS0)_1TX	105.72M	78.201M	78M2D1D	83.04M	77.721M
802.11ax HEW160_Nss1,(MCS0)_1TX	347.76M	211.574M	212MD1D	340.08M	209.415M
6.875-7.125GHz	-	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_1TX	21.93M	19.16M	19M2D1D	21.75M	19.1M
802.11ax HEW40_Nss1,(MCS0)_1TX	51.36M	38.141M	38M1D1D	40.38M	37.781M
802.11ax HEW80_Nss1,(MCS0)_1TX	140.04M	79.28M	79M3D1D	126.24M	79.16M
802.11ax HEW160_Nss1,(MCS0)_1TX	208.56M	156.642M	157MD1D	208.56M	156.642M

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

Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-
5955MHz	Pass	Inf	21.9M	19.1M
6175MHz	Pass	Inf	22.02M	19.13M
6415MHz	Pass	Inf	22.11M	19.13M
6435MHz	Pass	Inf	21.6M	19.13M
6475MHz	Pass	Inf	21.72M	19.13M
6515MHz	Pass	Inf	21.54M	19.16M
6535MHz	Pass	Inf	21.96M	19.13M
6695MHz	Pass	Inf	21.9M	19.16M
6855MHz	Pass	Inf	22.02M	19.16M
6875MHz Straddle 6.525-6.875GHz	Pass	Inf	21.99M	19.13M
6875MHz Straddle 6.875-7.125GHz				
6895MHz	Pass	Inf	21.75M	19.13M
6995MHz	Pass	Inf	21.93M	19.16M
7095MHz	Pass	Inf	21.78M	19.1M
7115MHz	Pass	Inf	21.84M	19.1M
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-	-	-
5965MHz	Pass	Inf	40.44M	37.841M
6165MHz	Pass	Inf	40.5M	37.781M
6405MHz	Pass	Inf	40.44M	37.841M
6445MHz	Pass	Inf	40.44M	37.721M
6485MHz	Pass	Inf	40.14M	37.781M
6525MHz Straddle 6.425-6.525GHz	Pass	Inf	40.44M	37.841M
6525MHz Straddle 6.525-6.875GHz				
6565MHz	Pass	Inf	40.74M	37.841M
6685MHz	Pass	Inf	40.32M	37.841M
6845MHz	Pass	Inf	40.8M	37.841M
6885MHz Straddle 6.525-6.875GHz	Pass	Inf	40.26M	37.841M
6885MHz Straddle 6.875-7.125GHz				
6925MHz	Pass	Inf	40.38M	37.841M
7005MHz	Pass	Inf	40.62M	37.781M
7085MHz	Pass	Inf	51.36M	38.141M
802.11ax HEW80_Nss1,(MCS0)_1TX	-	-	-	-
5985MHz	Pass	Inf	83.52M	77.361M
6145MHz	Pass	Inf	82.08M	77.601M
6385MHz	Pass	Inf	83.04M	77.841M
6465MHz	Pass	Inf	83.28M	77.601M
6545MHz Straddle 6.425-6.525GHz	Pass	Inf	82.2M	77.481M
6545MHz Straddle 6.525-6.875GHz				
6625MHz	Pass	Inf	83.04M	77.721M
6705MHz	Pass	Inf	91.2M	78.201M
6785MHz	Pass	Inf	83.76M	77.841M
6865MHz Straddle 6.525-6.875GHz	Pass	Inf	105.72M	78.081M
6865MHz Straddle 6.875-7.125GHz				
6945MHz	Pass	Inf	126.24M	79.16M
7025MHz	Pass	Inf	140.04M	79.28M
802.11ax HEW160_Nss1,(MCS0)_1TX	-	-	-	-
6025MHz	Pass	Inf	165.36M	155.202M
6185MHz	Pass	Inf	175.68M	156.402M
6345MHz	Pass	Inf	308.88M	163.598M
6505MHz Straddle 6.425-6.525GHz	Pass	Inf	339.84M	180.15M
6505MHz Straddle 6.525-6.875GHz				
6665MHz	Pass	Inf	347.76M	211.574M
6825MHz Straddle 6.525-6.875GHz	Pass	Inf	340.08M	209.415M
6825MHz Straddle 6.875-7.125GHz				



EBW_Radio 2_UNII 5~UNII 8_1TX

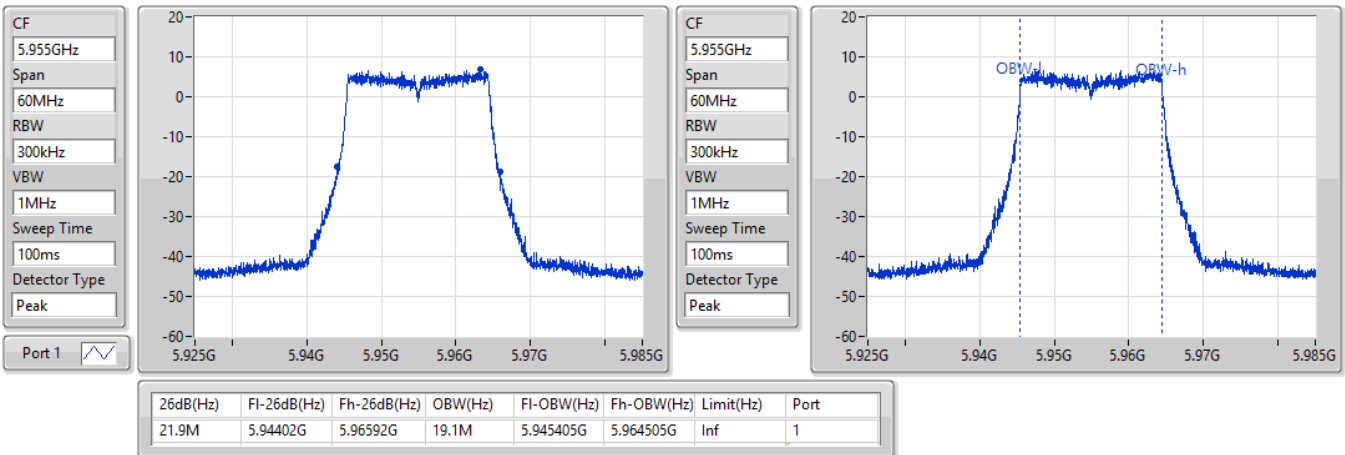
Appendix B.1

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
6985MHz	Pass	Inf	208.56M	156.642M

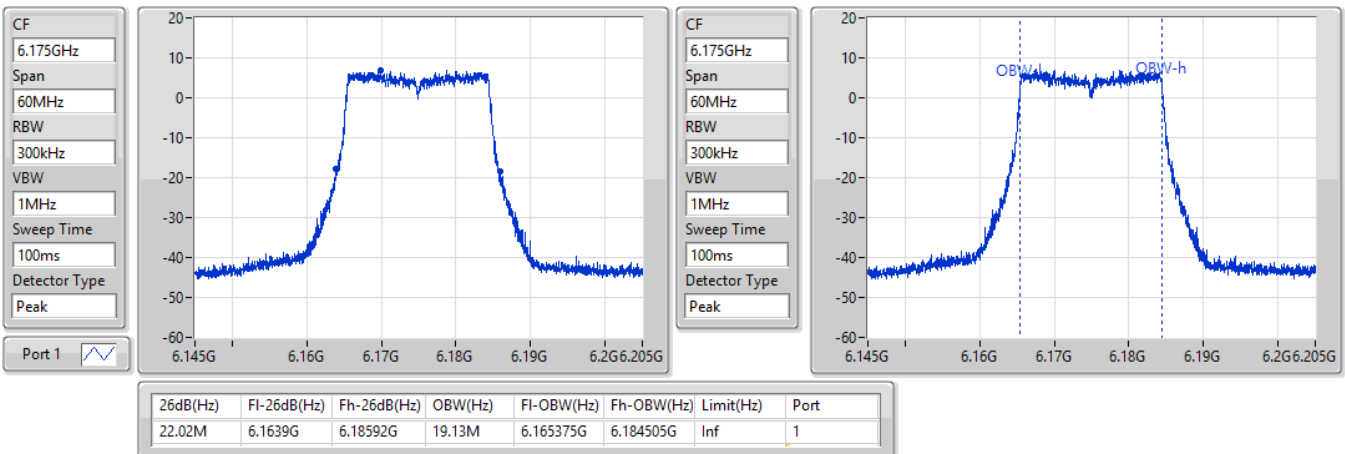
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
5955MHz

14/04/2022

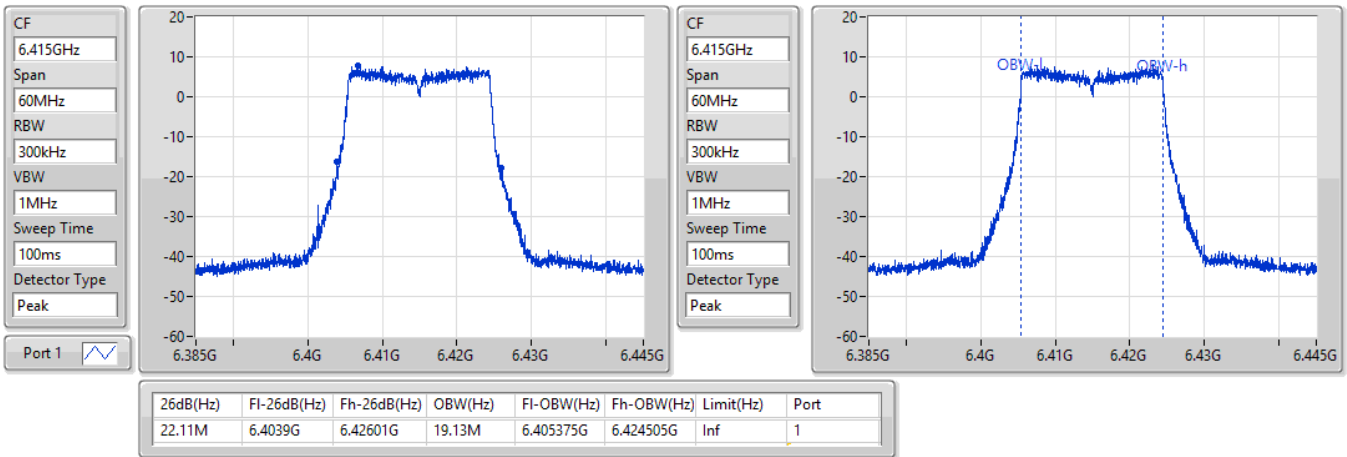

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
6175MHz

14/04/2022

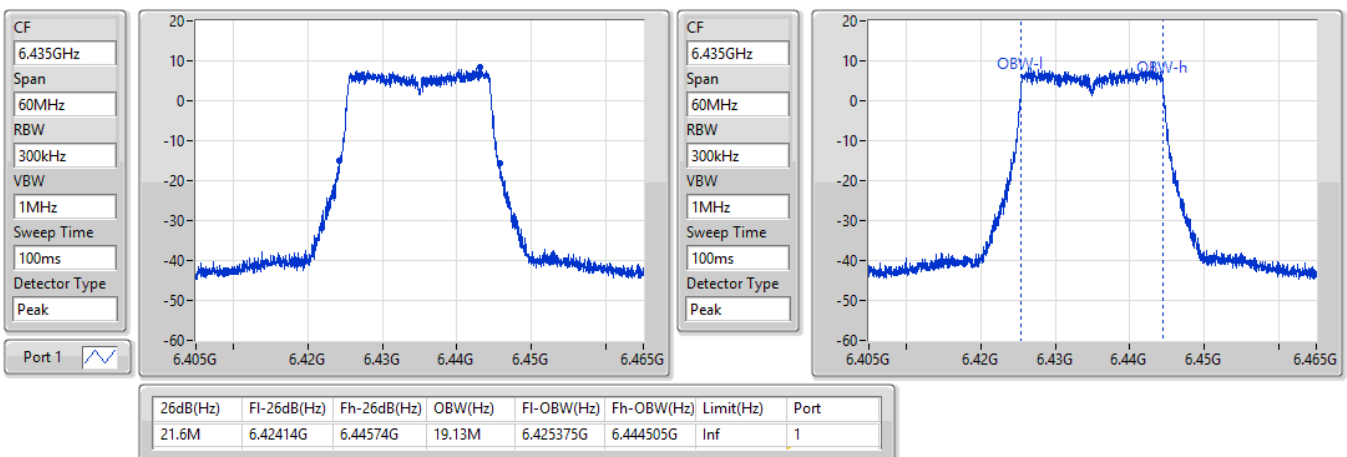


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
6415MHz

14/04/2022

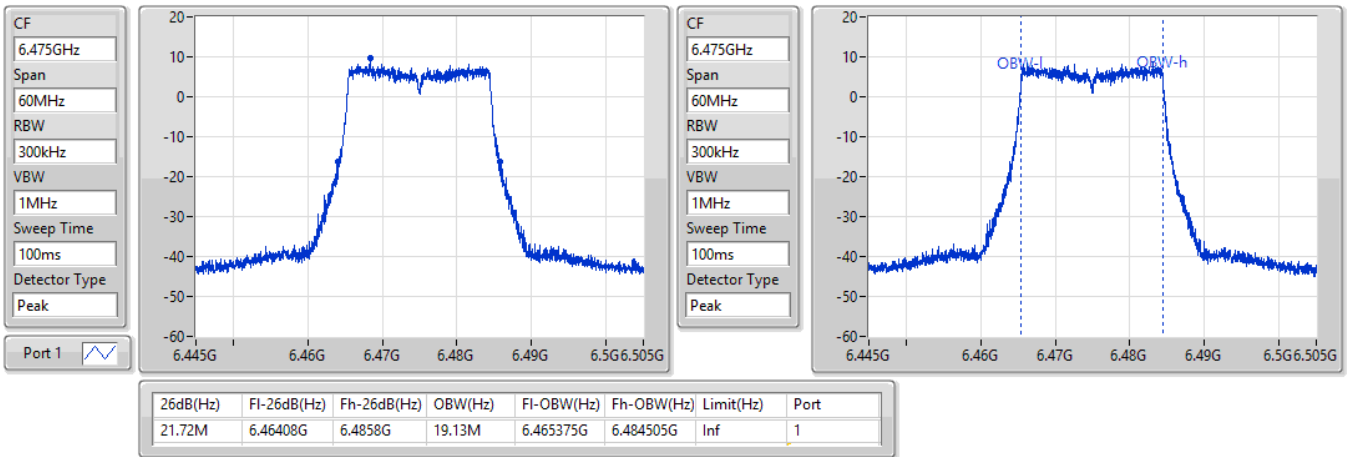

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
6435MHz

14/04/2022

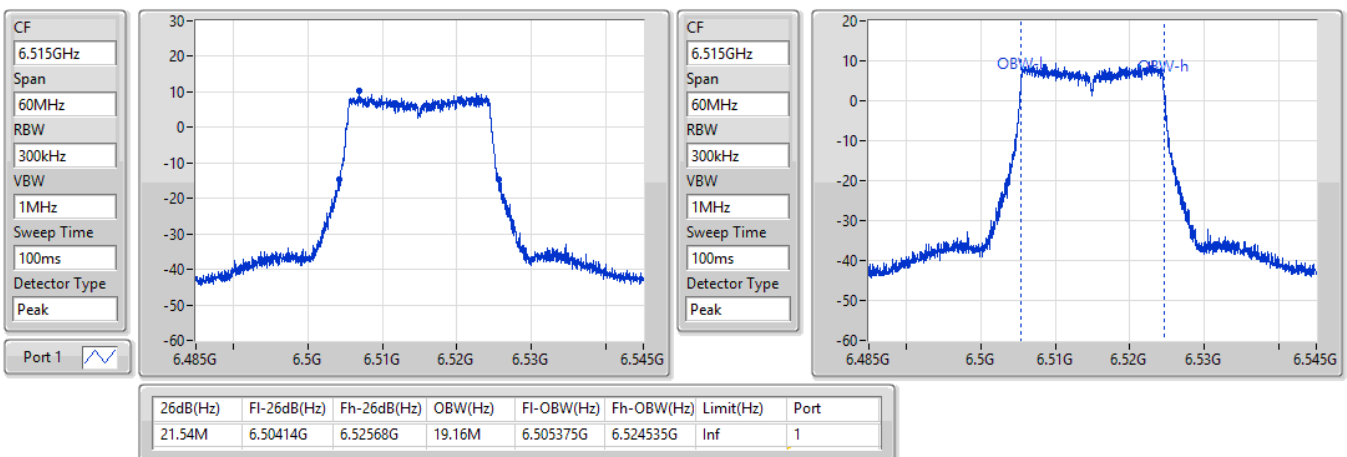


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
6475MHz

14/04/2022

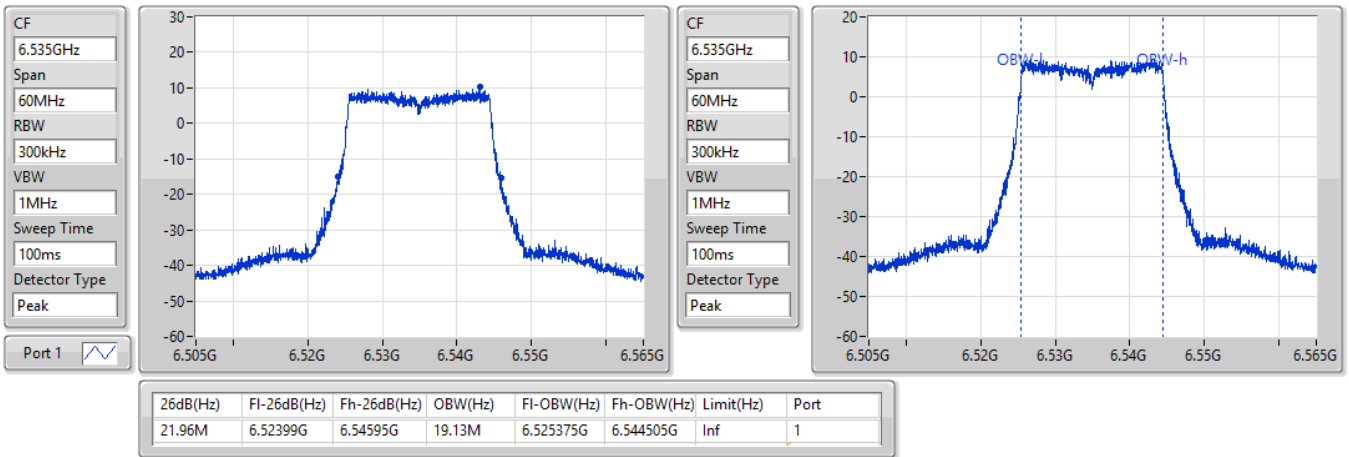

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
6515MHz

14/04/2022

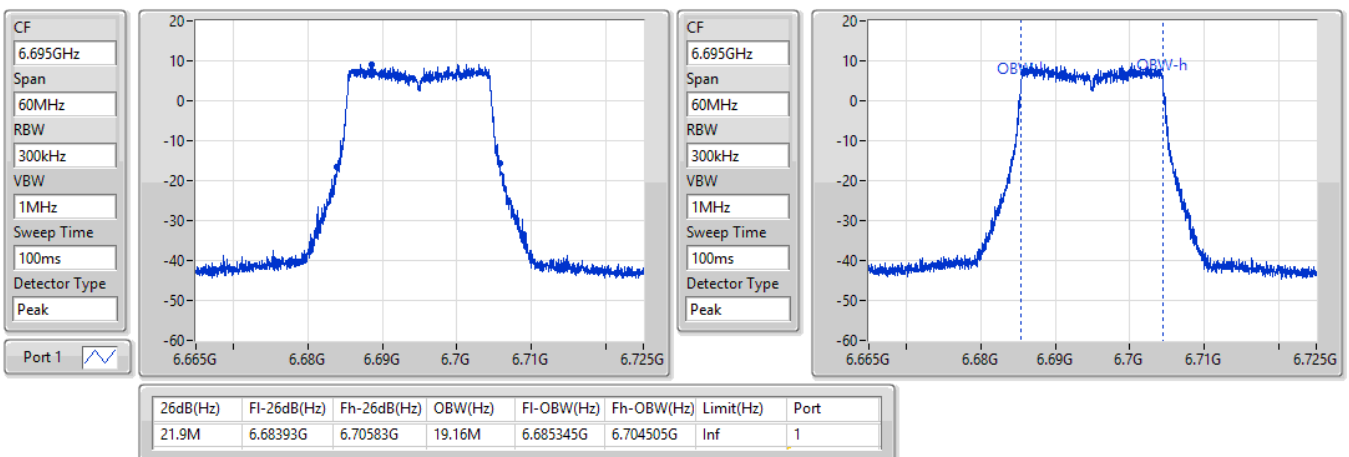


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
6535MHz

14/04/2022

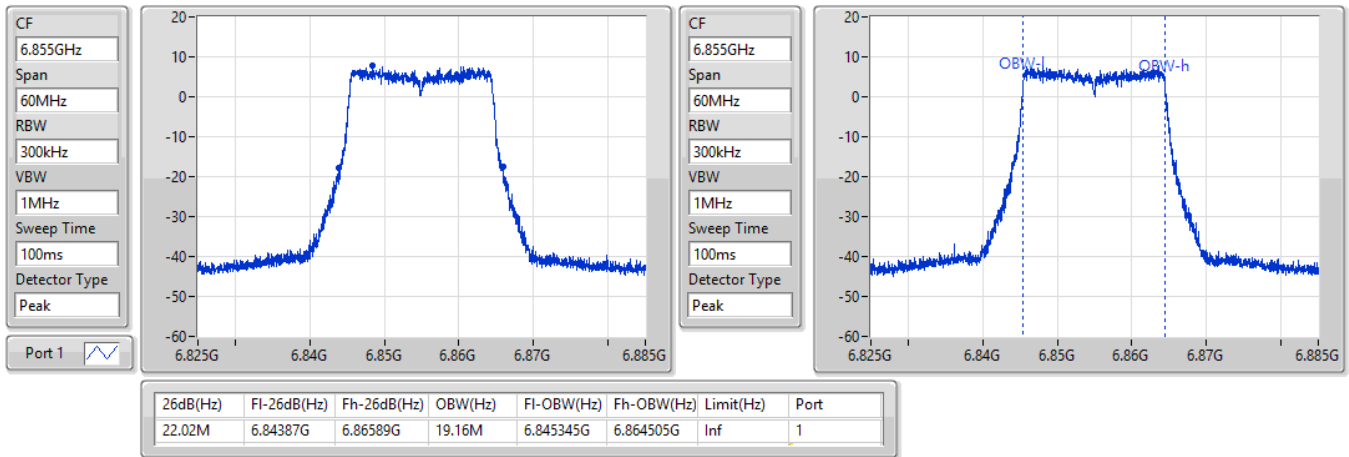

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
6695MHz

14/04/2022

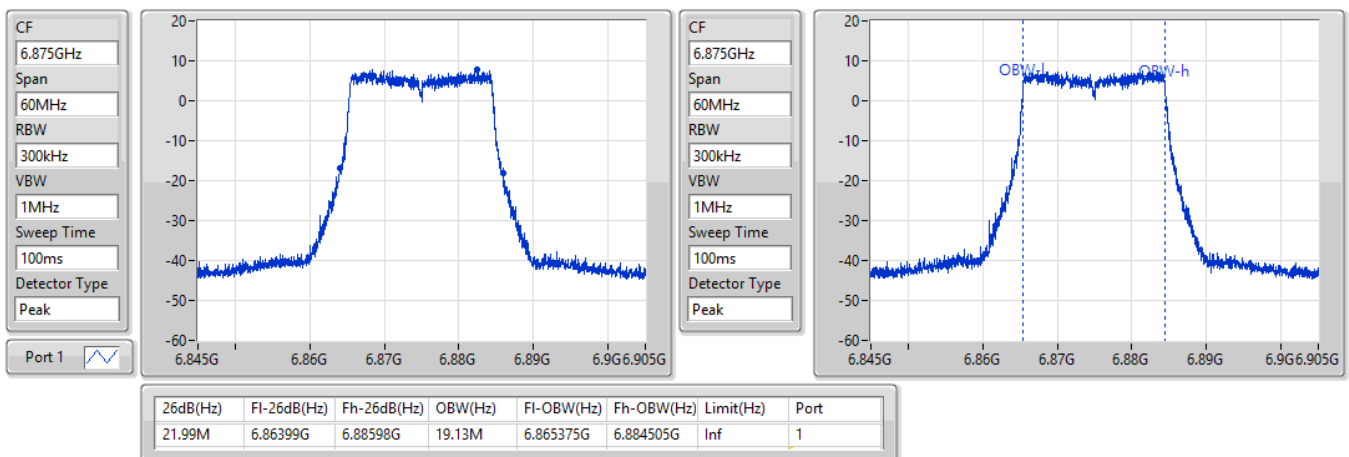


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
6855MHz

14/04/2022

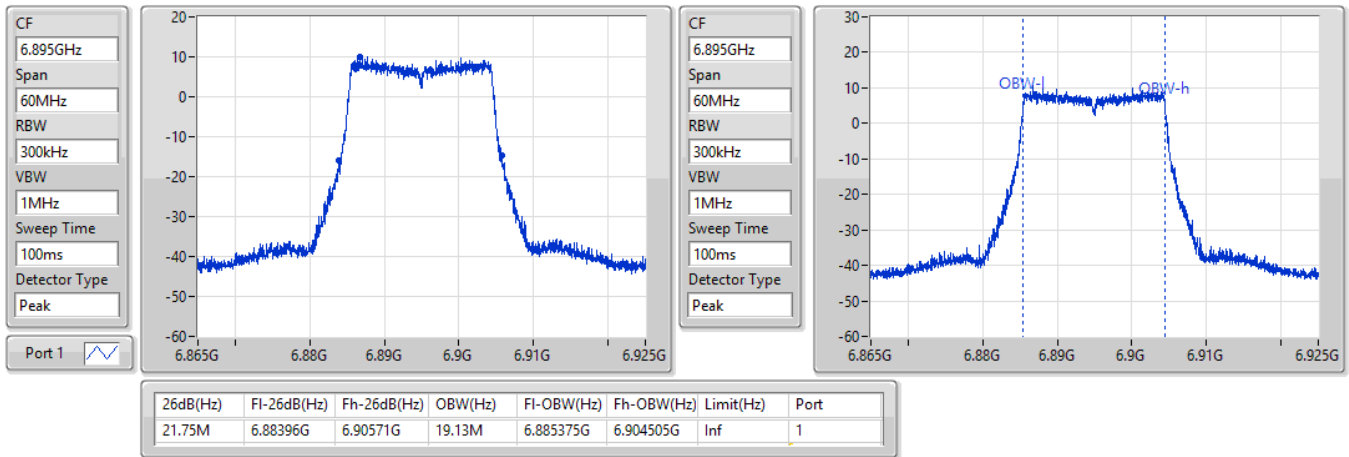

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
6875MHz Straddle 6.525-6.875GHz

14/04/2022

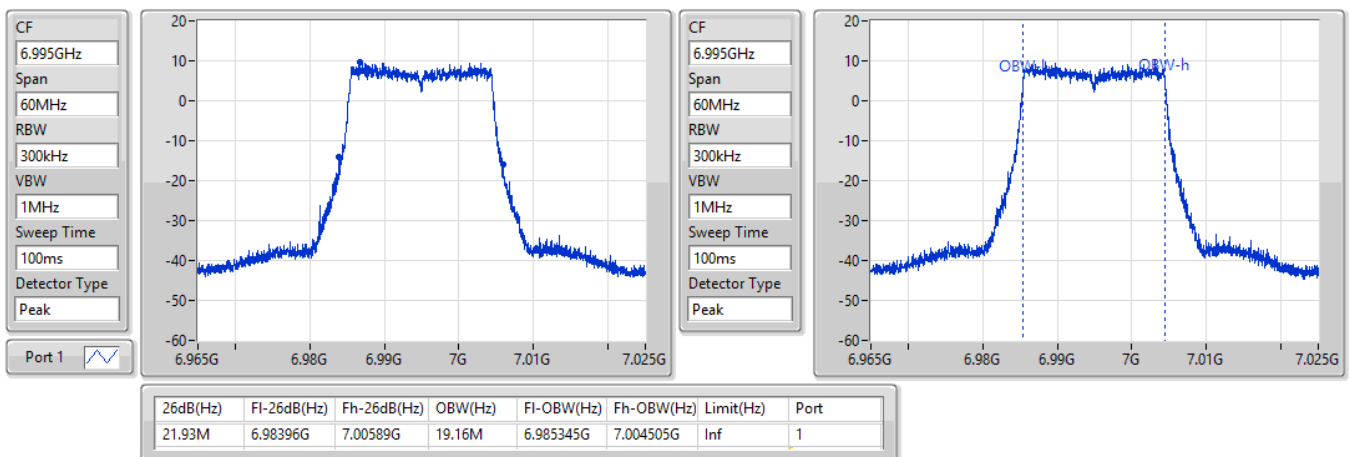


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
6895MHz

14/04/2022

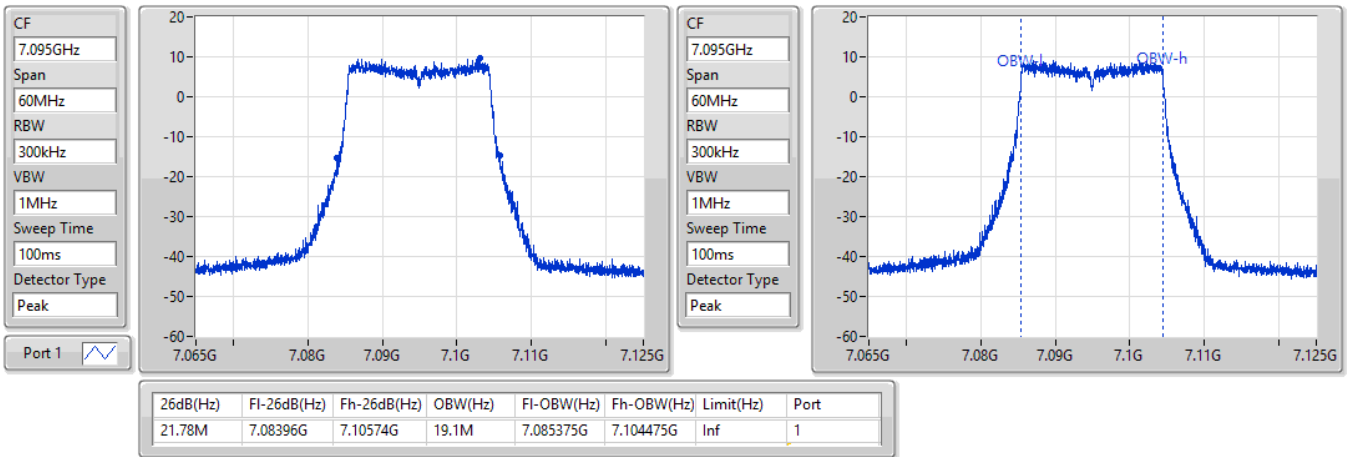

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
6995MHz

14/04/2022

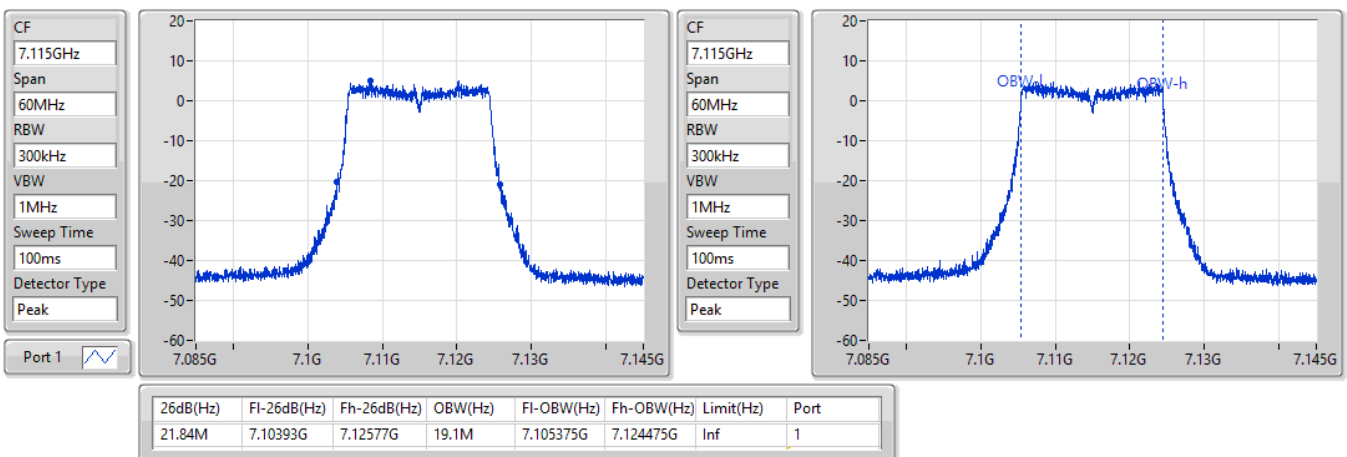


802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
7095MHz

14/04/2022

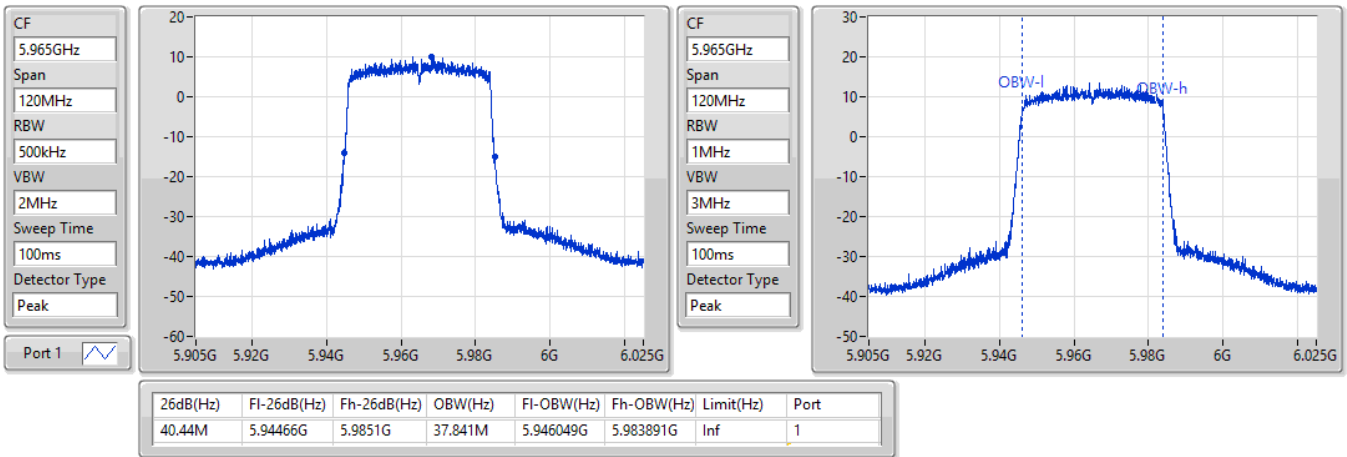

802.11ax HEW20_Nss1,(MCS0)_1TX
EBW
7115MHz

14/04/2022

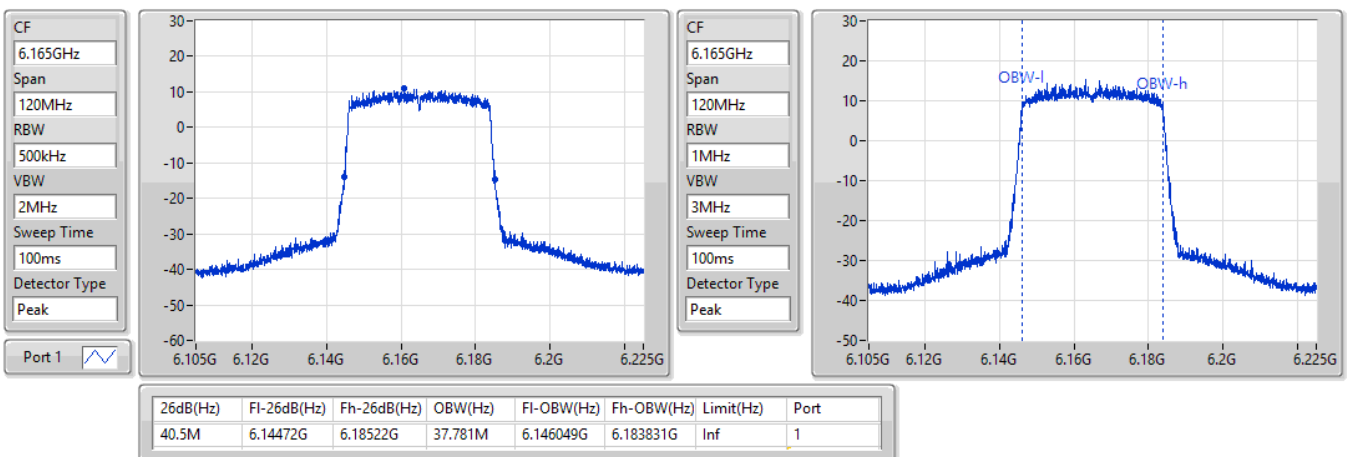


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
5965MHz

14/04/2022

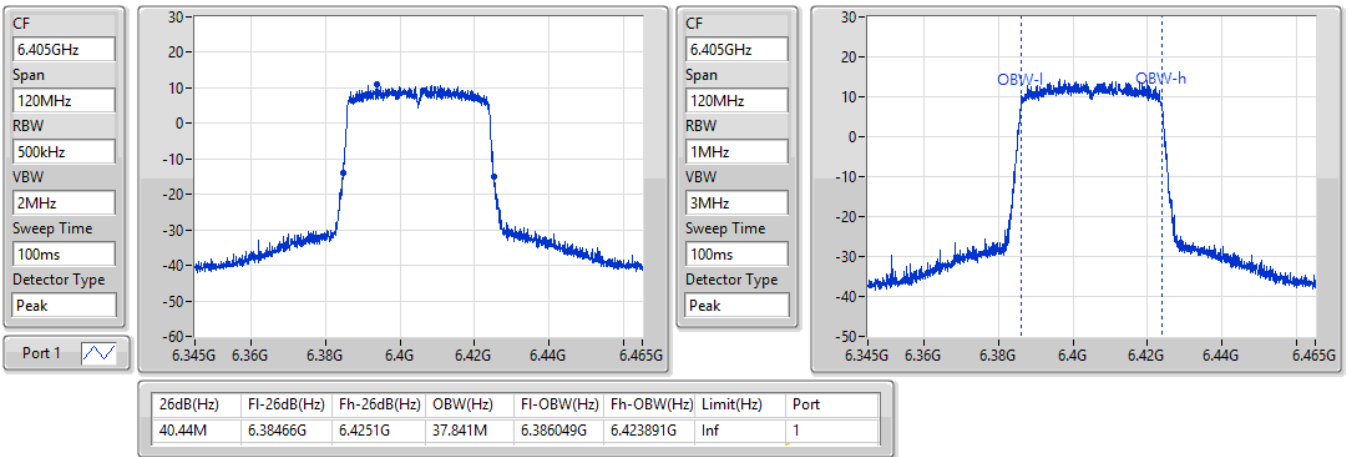

802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
6165MHz

14/04/2022

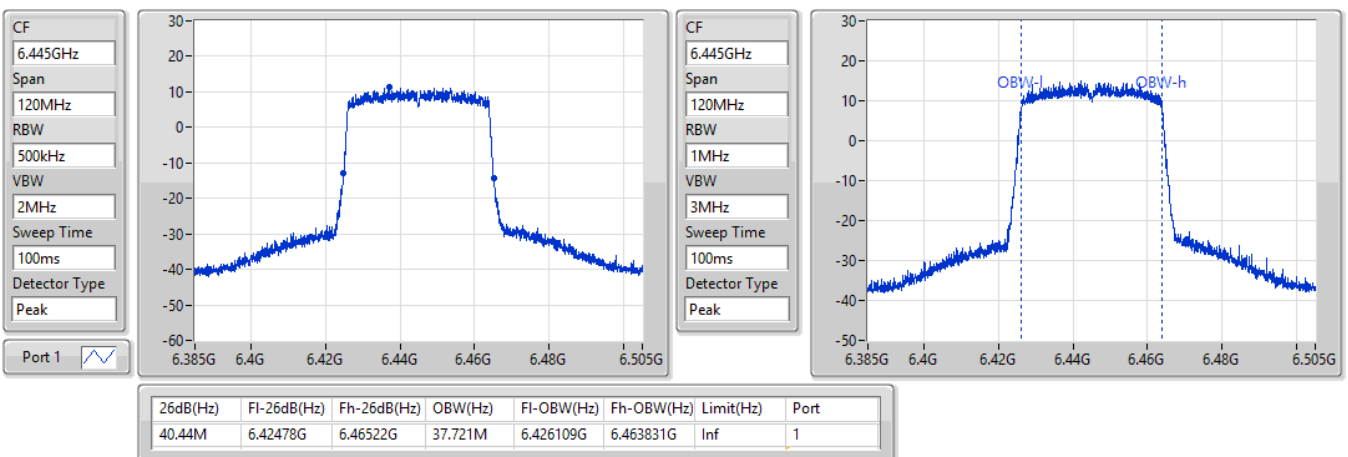


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
6405MHz

14/04/2022

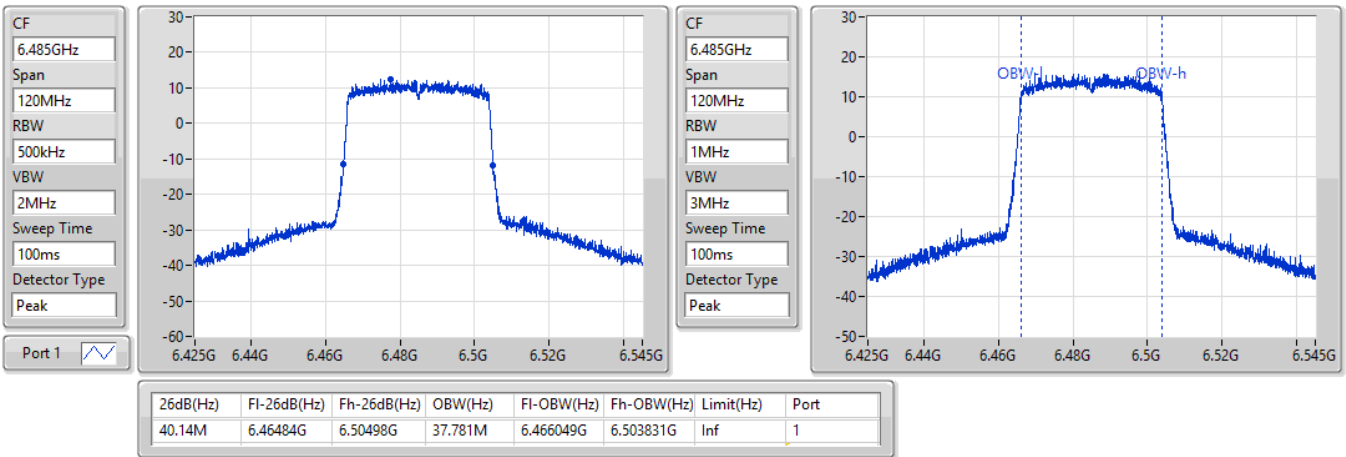

802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
6445MHz

14/04/2022

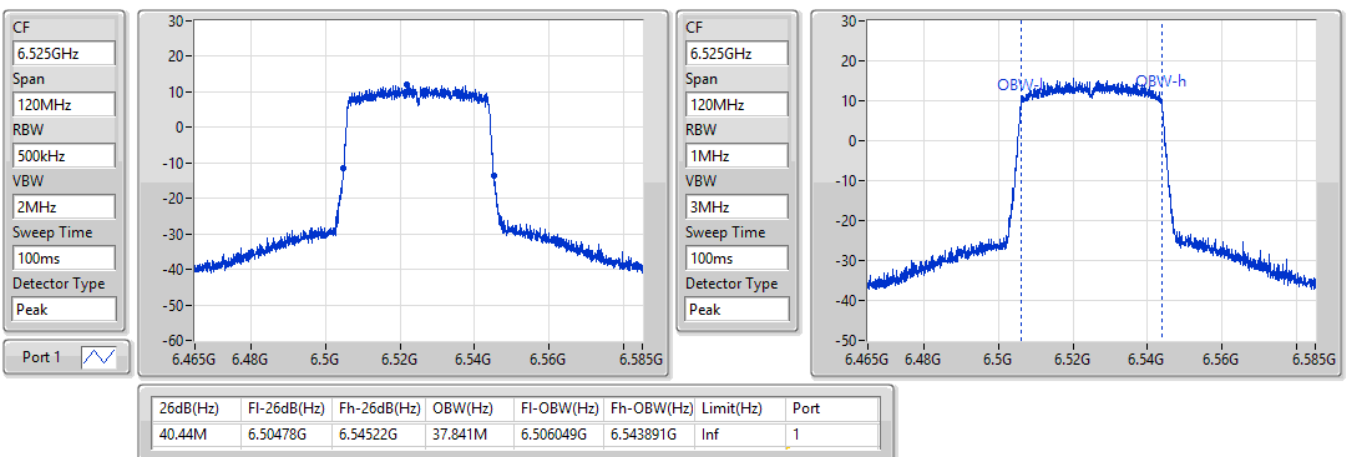


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
6485MHz

14/04/2022

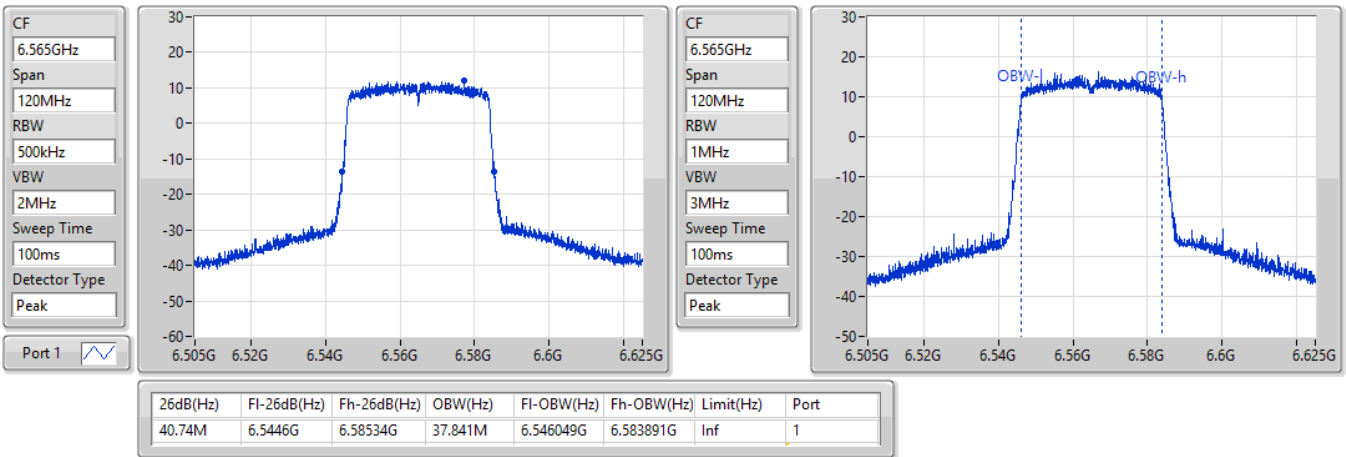

802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
6525MHz Straddle 6.425-6.525GHz

14/04/2022

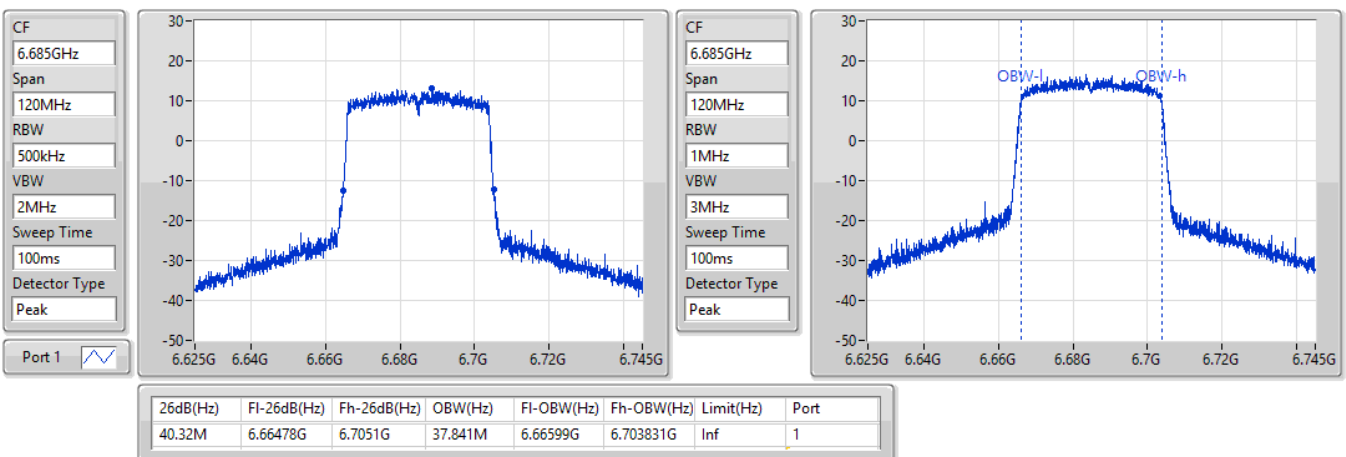


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
6565MHz

14/04/2022

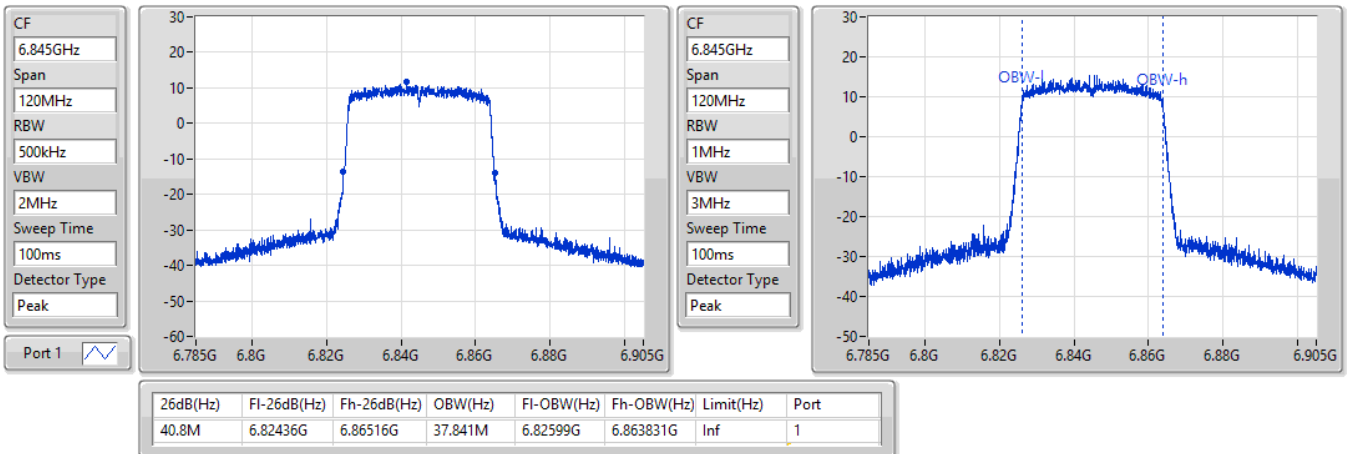

802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
6685MHz

14/04/2022

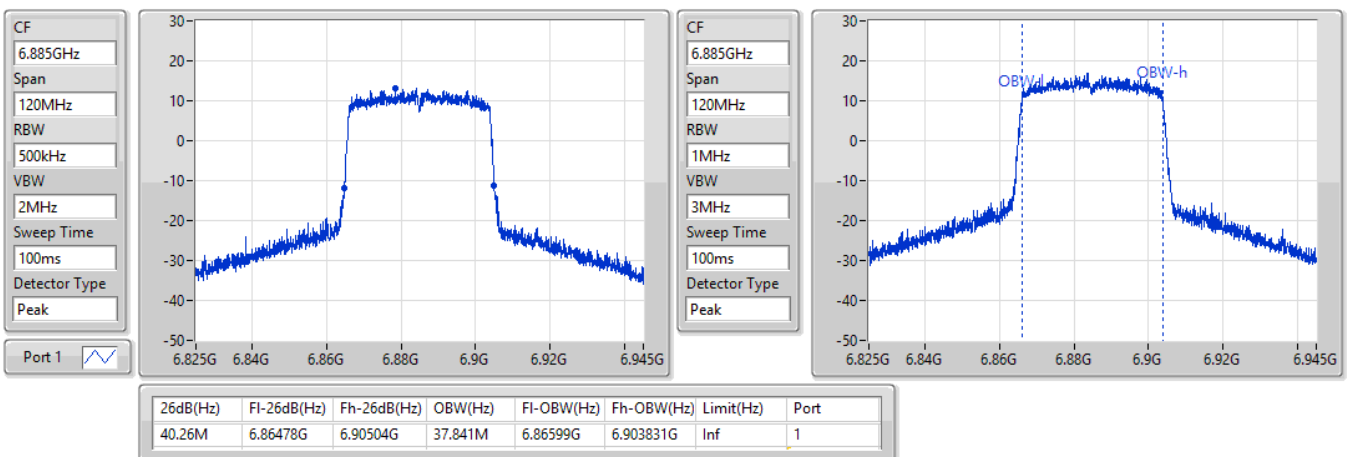


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
6845MHz

14/04/2022

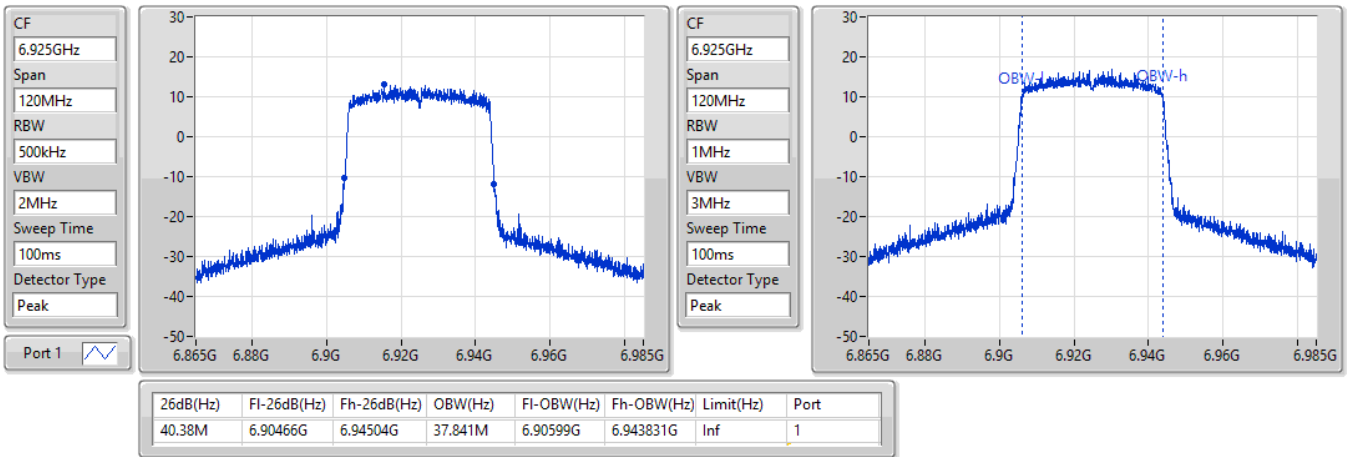

802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
6885MHz Straddle 6.525-6.875GHz

14/04/2022

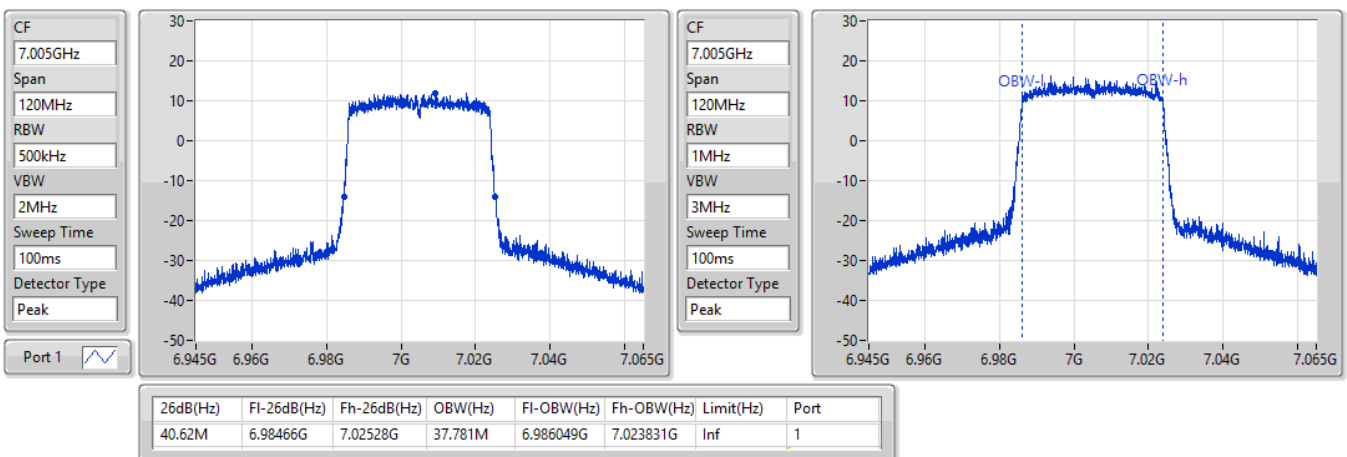


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
6925MHz

14/04/2022

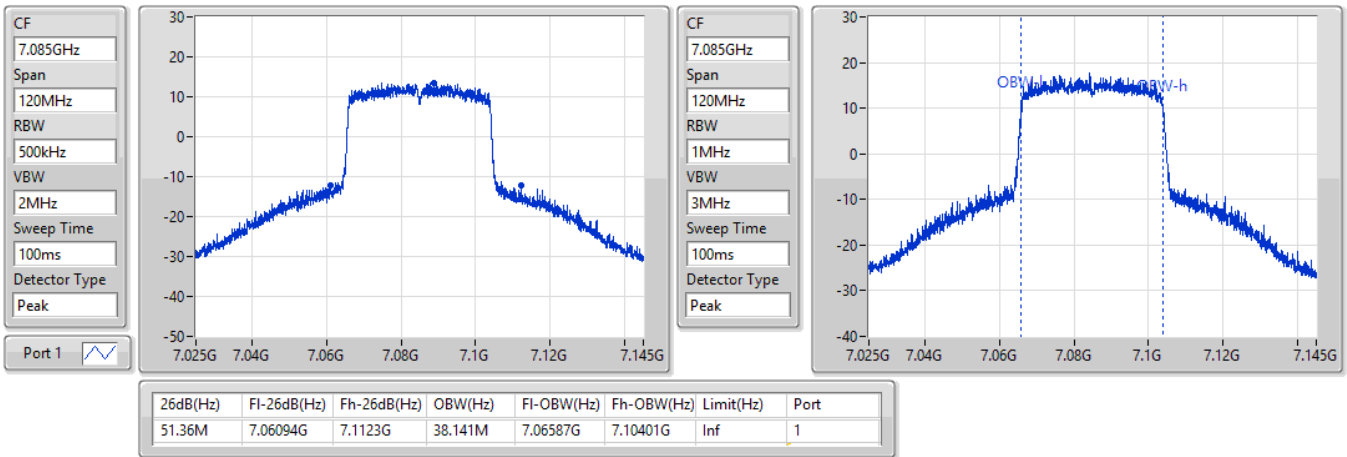

802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
7005MHz

14/04/2022

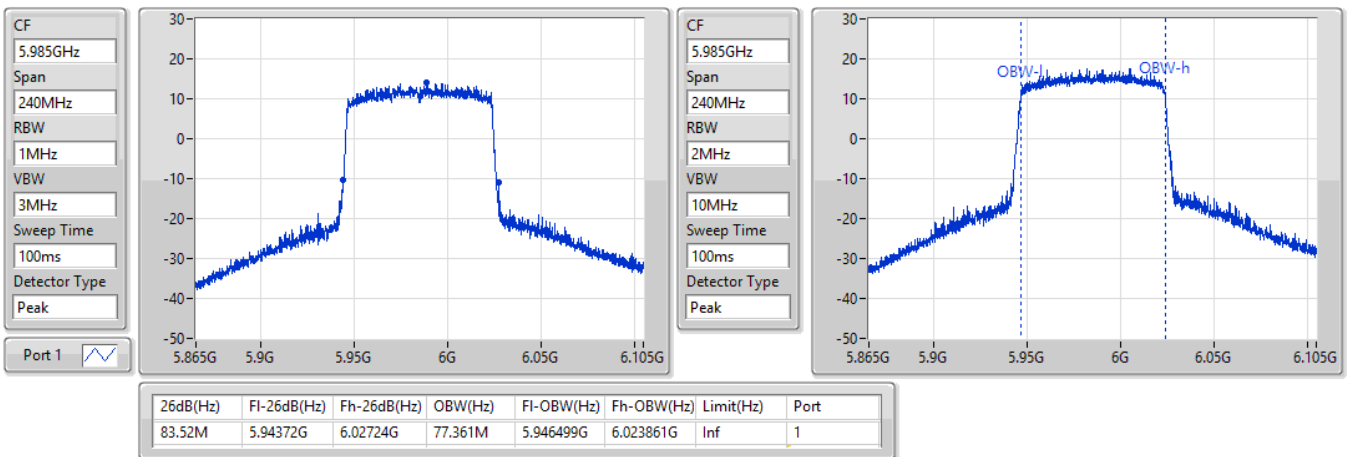


802.11ax HEW40_Nss1,(MCS0)_1TX
EBW
7085MHz

14/04/2022

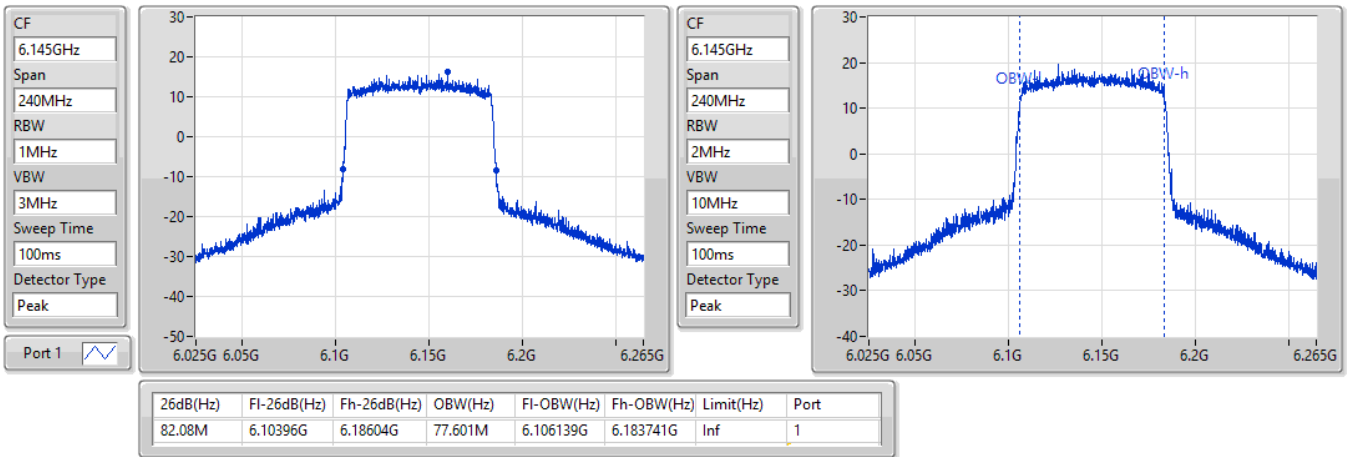

802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
5985MHz

14/04/2022

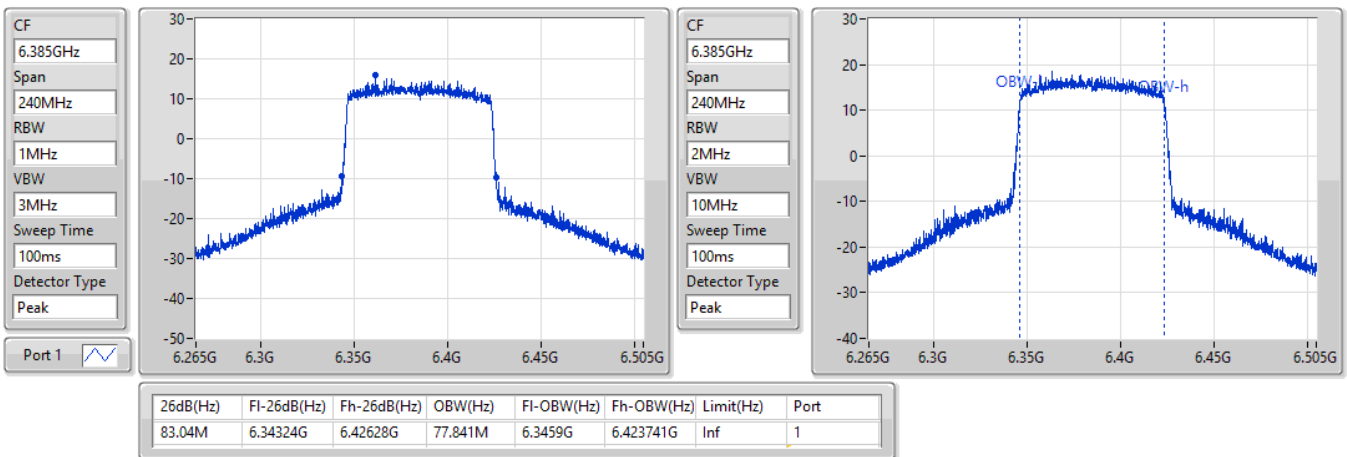


802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
6145MHz

14/04/2022

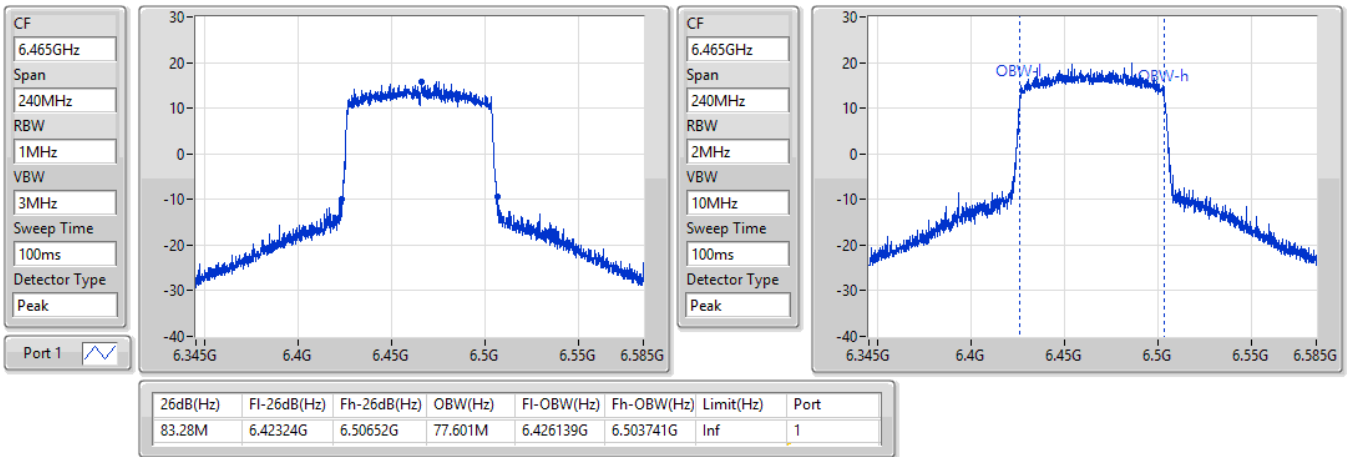

802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
6385MHz

14/04/2022

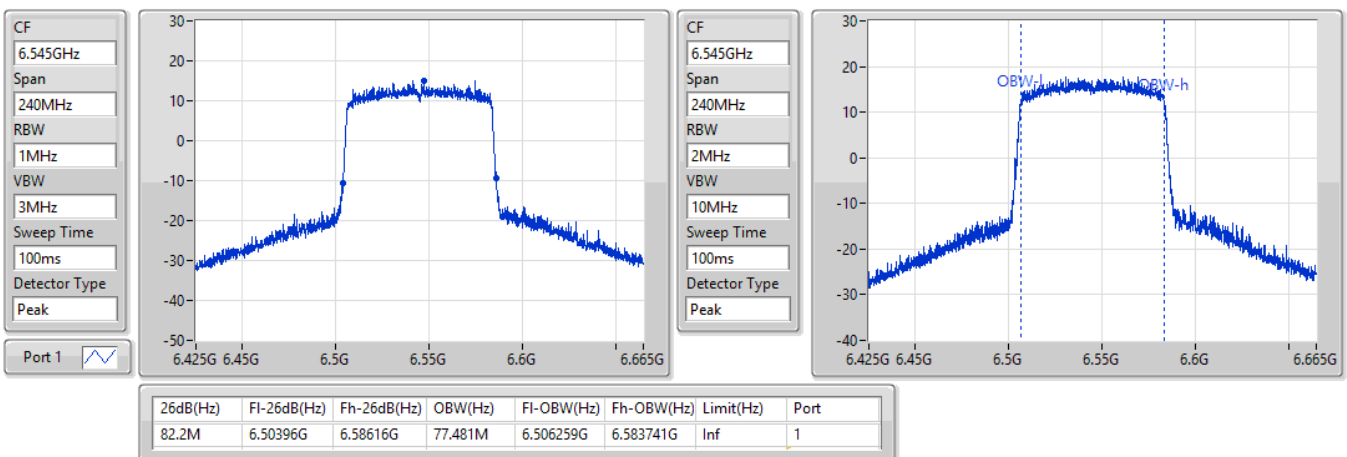


802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
6465MHz

14/04/2022

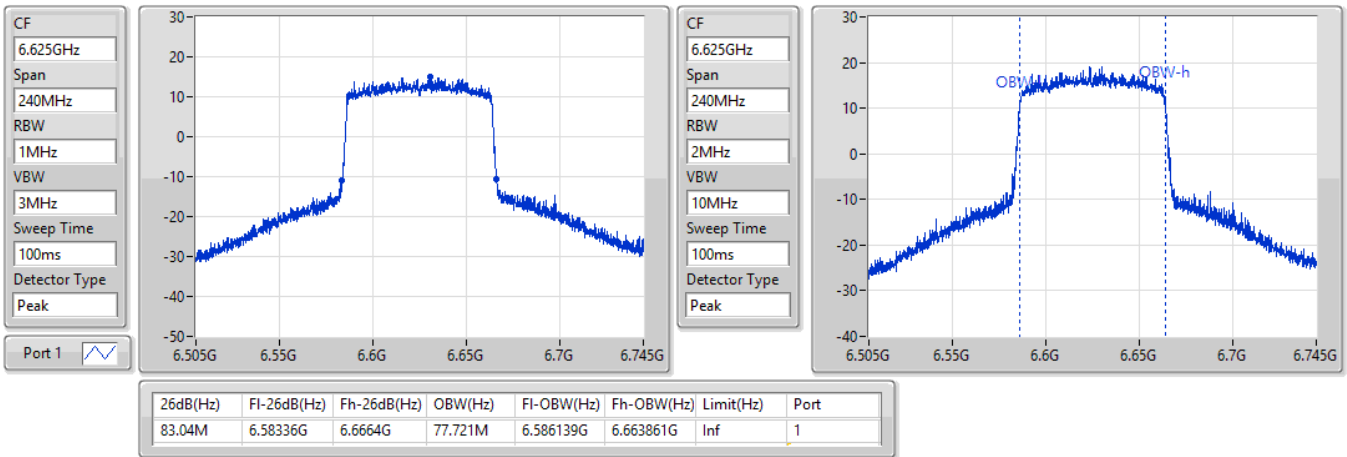

802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
6545MHz Straddle 6.425-6.525GHz

14/04/2022

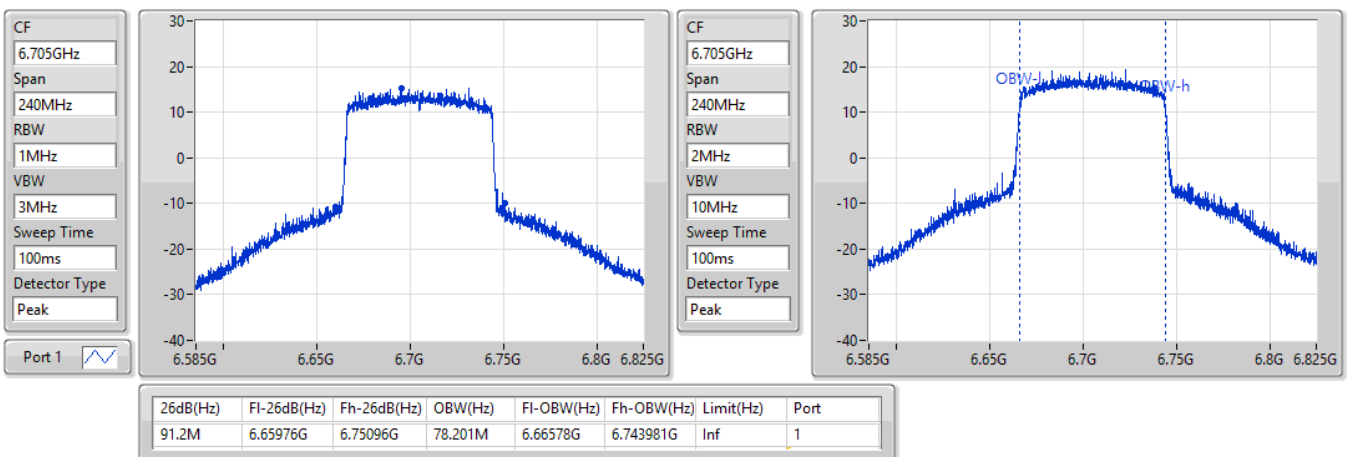


802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
6625MHz

14/04/2022

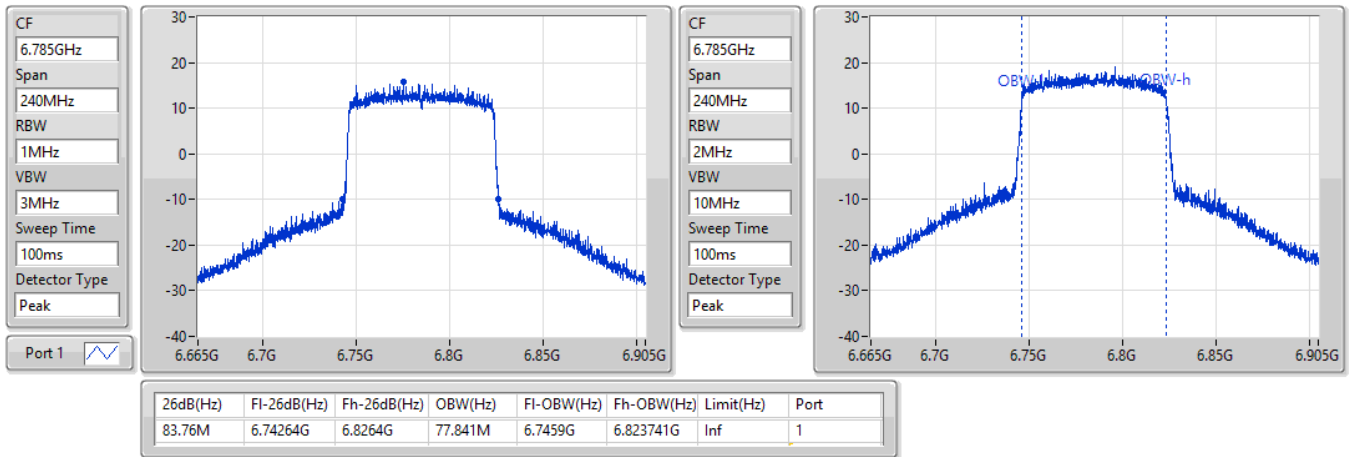

802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
6705MHz

14/04/2022

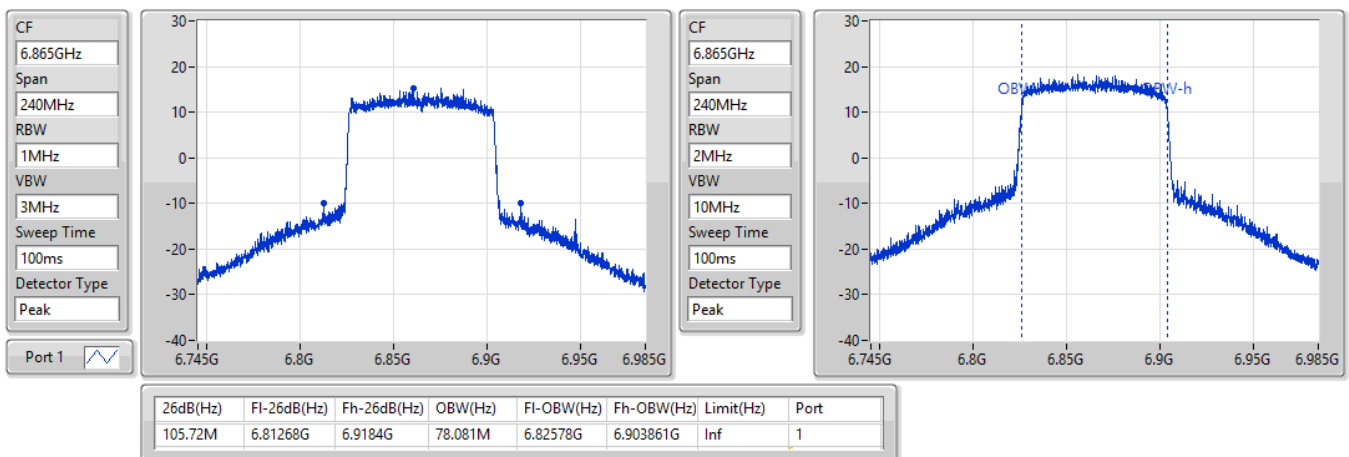


802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
6785MHz

14/04/2022

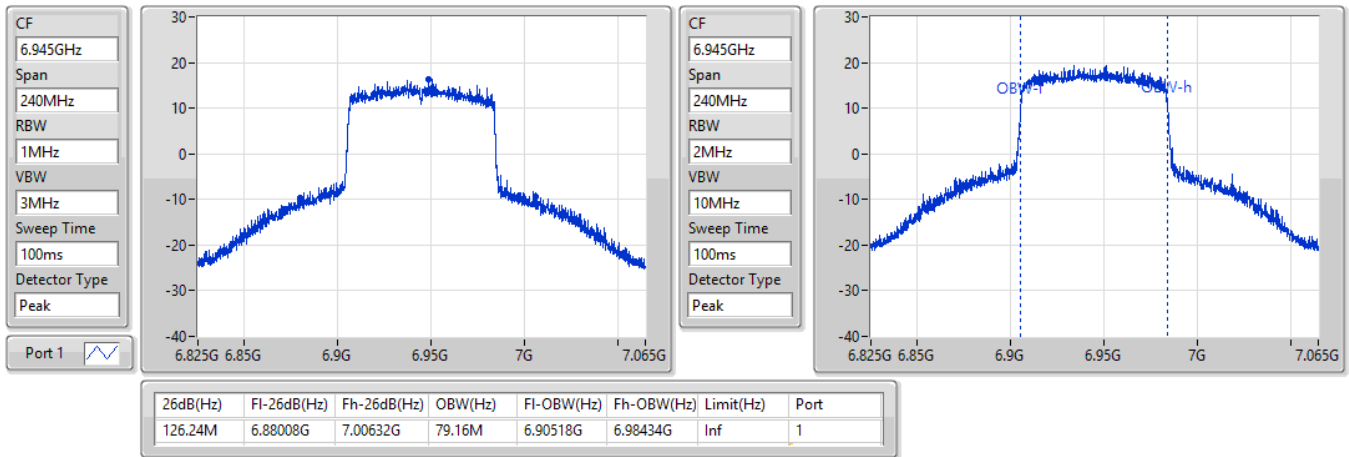

802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
6865MHz Straddle 6.525-6.875GHz

14/04/2022

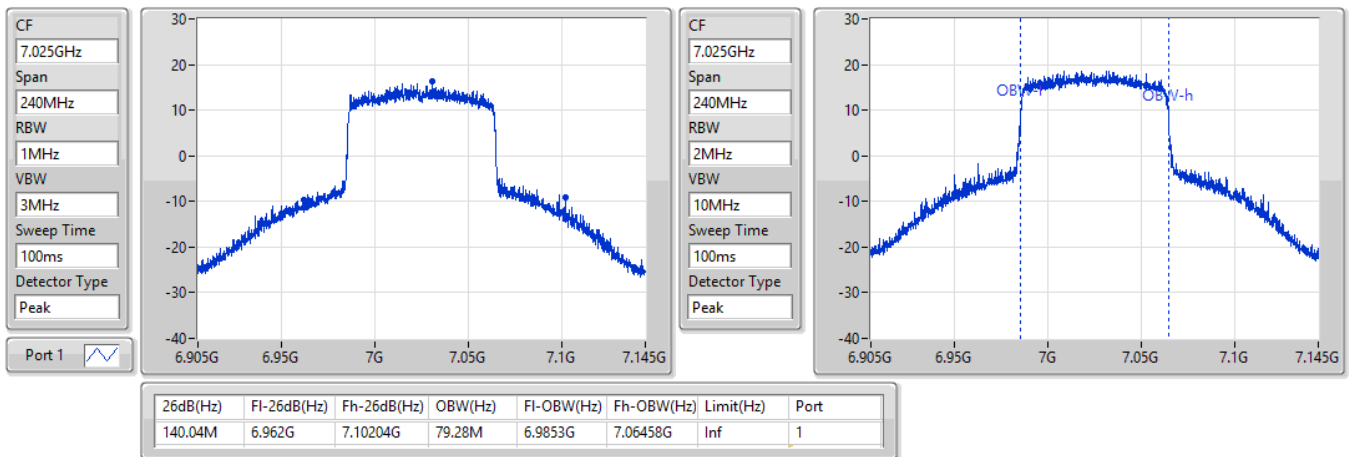


802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
6945MHz

14/04/2022

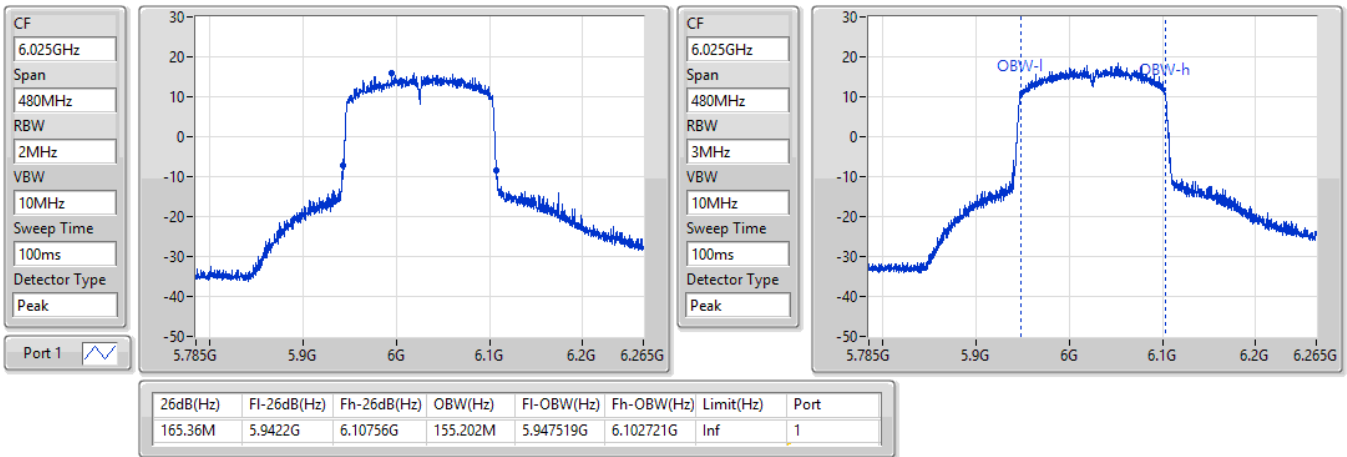

802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
7025MHz

14/04/2022

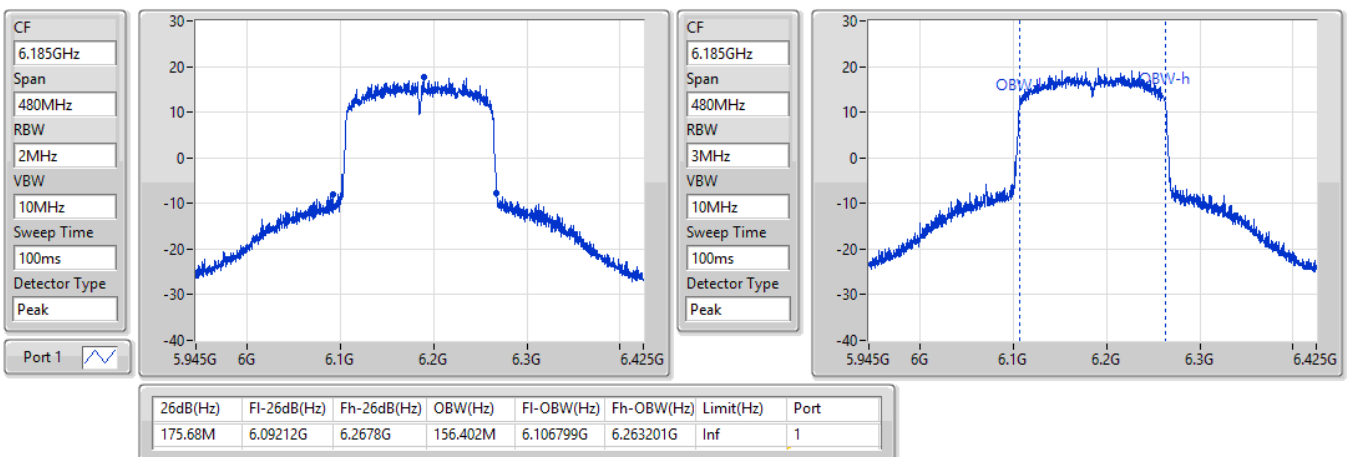


802.11ax HEW160_Nss1,(MCS0)_1TX
EBW
6025MHz

14/04/2022

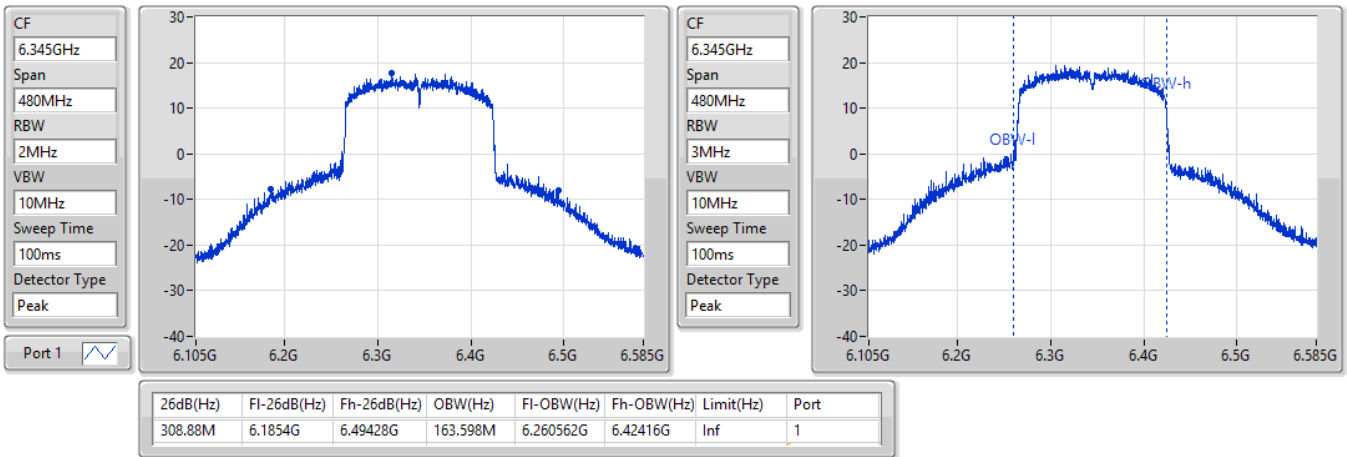

802.11ax HEW160_Nss1,(MCS0)_1TX
EBW
6185MHz

14/04/2022

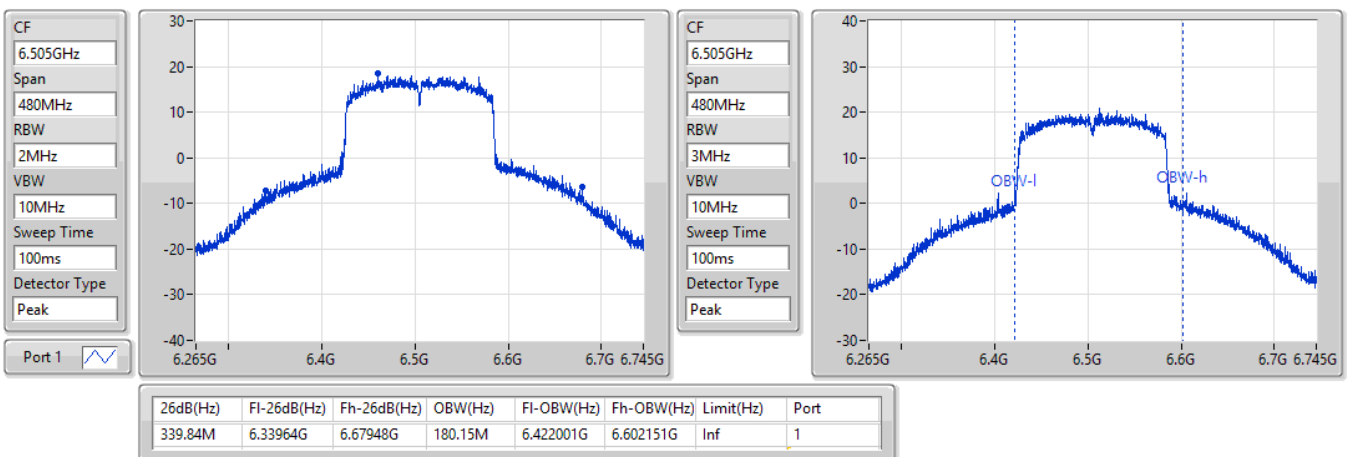


802.11ax HEW160_Nss1,(MCS0)_1TX
EBW
6345MHz

14/04/2022

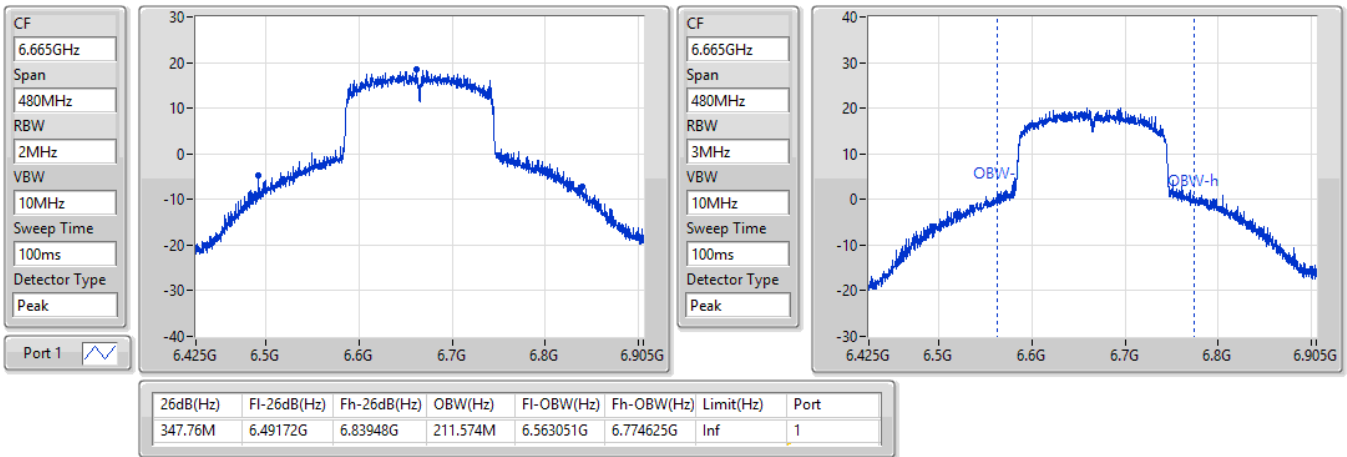

802.11ax HEW160_Nss1,(MCS0)_1TX
EBW
6505MHz Straddle 6.425-6.525GHz

14/04/2022

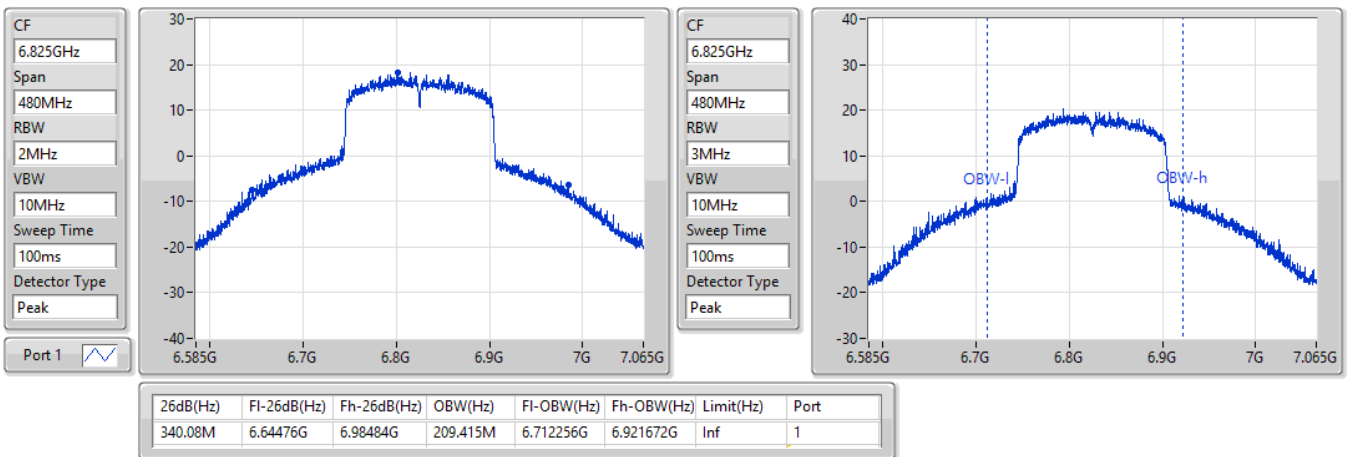


802.11ax HEW160_Nss1,(MCS0)_1TX
EBW
6665MHz

14/04/2022


802.11ax HEW160_Nss1,(MCS0)_1TX
EBW
6825MHz Straddle 6.525-6.875GHz

14/04/2022

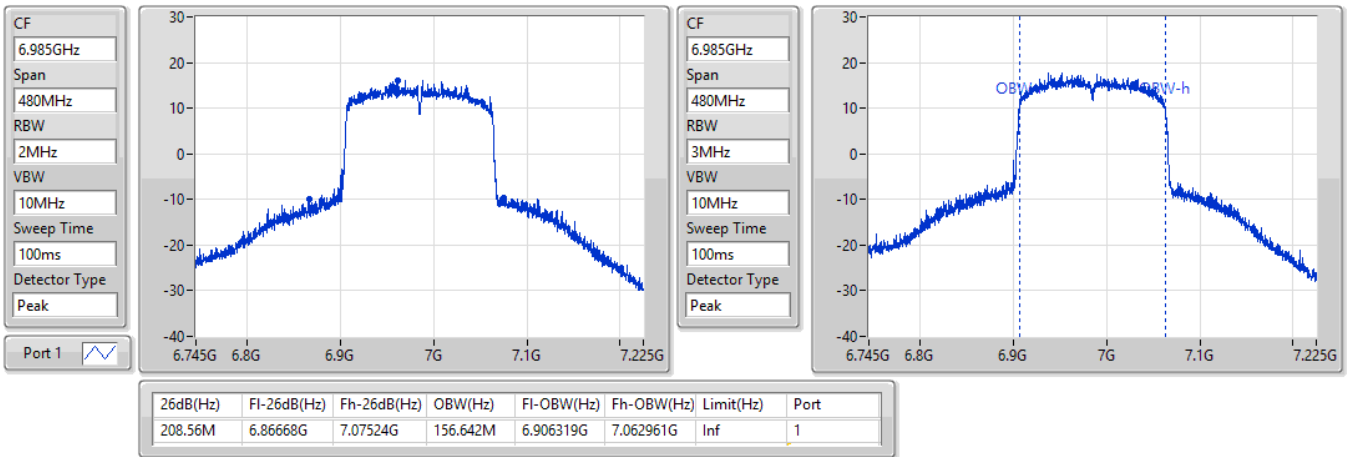


802.11ax HEW160_Nss1,(MCS0)_1TX

EBW

6985MHz

14/04/2022



For non beamforming mode

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	22.35M	19.13M	19M1D1D	21.78M	19.13M
802.11ax HEW40_Nss1,(MCS0)_2TX	40.62M	37.841M	37M8D1D	40.38M	37.781M
802.11ax HEW80_Nss1,(MCS0)_2TX	82.8M	77.601M	77M6D1D	81.6M	77.241M
802.11ax HEW160_Nss1,(MCS0)_2TX	164.64M	154.963M	155MD1D	163.44M	154.483M
6.425-6.525GHz	-	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_2TX	22.08M	19.13M	19M1D1D	21.51M	19.1M
802.11ax HEW40_Nss1,(MCS0)_2TX	40.62M	37.901M	37M9D1D	40.14M	37.781M
802.11ax HEW80_Nss1,(MCS0)_2TX	82.68M	77.361M	77M4D1D	81.96M	77.121M
802.11ax HEW160_Nss1,(MCS0)_2TX	165.12M	155.202M	155MD1D	164.88M	155.202M
6.525-6.875GHz	-	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_2TX	22.26M	19.13M	19M1D1D	21.87M	19.1M
802.11ax HEW40_Nss1,(MCS0)_2TX	40.68M	37.901M	37M9D1D	40.2M	37.781M
802.11ax HEW80_Nss1,(MCS0)_2TX	82.32M	77.481M	77M5D1D	81.96M	77.241M
802.11ax HEW160_Nss1,(MCS0)_2TX	165.36M	154.963M	155MD1D	164.16M	154.483M
6.875-7.125GHz	-	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_2TX	22.23M	19.16M	19M2D1D	21.6M	19.1M
802.11ax HEW40_Nss1,(MCS0)_2TX	40.62M	37.901M	37M9D1D	40.2M	37.781M
802.11ax HEW80_Nss1,(MCS0)_2TX	82.8M	77.481M	77M5D1D	82.08M	77.241M
802.11ax HEW160_Nss1,(MCS0)_2TX	166.08M	155.442M	155MD1D	164.64M	155.202M

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	22.2M	19.13M	21.78M	19.13M
6175MHz	Pass	Inf	21.96M	19.13M	22.02M	19.13M
6415MHz	Pass	Inf	22.35M	19.13M	21.87M	19.13M
6435MHz	Pass	Inf	21.84M	19.13M	21.87M	19.1M
6475MHz	Pass	Inf	21.69M	19.1M	22.08M	19.1M
6515MHz	Pass	Inf	22.05M	19.13M	21.51M	19.13M
6535MHz	Pass	Inf	22.26M	19.13M	21.96M	19.1M
6695MHz	Pass	Inf	21.93M	19.1M	21.99M	19.1M
6855MHz	Pass	Inf	21.93M	19.1M	21.87M	19.13M
6875MHz Straddle 6.525-6.875GHz	Pass	Inf	22.02M	19.1M	21.93M	19.13M
6875MHz Straddle 6.875-7.125GHz						
6895MHz	Pass	Inf	21.72M	19.1M	21.6M	19.1M
6995MHz	Pass	Inf	22.02M	19.13M	21.9M	19.16M
7095MHz	Pass	Inf	22.08M	19.13M	21.78M	19.16M
7115MHz	Pass	Inf	22.23M	19.1M	21.93M	19.1M
802.11ax HEW40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5965MHz	Pass	Inf	40.62M	37.841M	40.38M	37.781M
6165MHz	Pass	Inf	40.5M	37.781M	40.44M	37.781M
6405MHz	Pass	Inf	40.38M	37.781M	40.56M	37.781M
6445MHz	Pass	Inf	40.5M	37.781M	40.44M	37.841M
6485MHz	Pass	Inf	40.14M	37.841M	40.56M	37.781M
6525MHz Straddle 6.425-6.525GHz	Pass	Inf	40.26M	37.901M	40.62M	37.781M
6525MHz Straddle 6.525-6.875GHz						
6565MHz	Pass	Inf	40.5M	37.781M	40.38M	37.781M
6685MHz	Pass	Inf	40.2M	37.781M	40.5M	37.841M
6845MHz	Pass	Inf	40.68M	37.901M	40.32M	37.841M
6885MHz Straddle 6.525-6.875GHz	Pass	Inf	40.68M	37.781M	40.26M	37.841M
6885MHz Straddle 6.875-7.125GHz						
6925MHz	Pass	Inf	40.44M	37.841M	40.62M	37.781M
7005MHz	Pass	Inf	40.2M	37.841M	40.5M	37.841M
7085MHz	Pass	Inf	40.44M	37.901M	40.5M	37.841M
802.11ax HEW80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5985MHz	Pass	Inf	82.2M	77.361M	81.6M	77.241M
6145MHz	Pass	Inf	82.8M	77.361M	82.32M	77.361M
6385MHz	Pass	Inf	82.08M	77.601M	82.32M	77.481M
6465MHz	Pass	Inf	81.96M	77.241M	82.56M	77.241M
6545MHz Straddle 6.425-6.525GHz	Pass	Inf	82.32M	77.361M	82.68M	77.121M
6545MHz Straddle 6.525-6.875GHz						
6625MHz	Pass	Inf	81.96M	77.361M	82.2M	77.481M
6705MHz	Pass	Inf	82.08M	77.241M	82.32M	77.241M
6785MHz	Pass	Inf	82.2M	77.241M	82.2M	77.241M
6865MHz Straddle 6.525-6.875GHz	Pass	Inf	81.96M	77.241M	82.32M	77.481M
6865MHz Straddle 6.875-7.125GHz						
6945MHz	Pass	Inf	82.56M	77.241M	82.8M	77.481M
7025MHz	Pass	Inf	82.44M	77.361M	82.08M	77.241M
802.11ax HEW160_Nss1,(MCS0)_2TX	-	-	-	-	-	-
6025MHz	Pass	Inf	164.64M	154.483M	163.44M	154.483M
6185MHz	Pass	Inf	164.64M	154.963M	164.16M	154.723M
6345MHz	Pass	Inf	164.64M	154.963M	164.4M	154.963M
6505MHz Straddle 6.425-6.525GHz	Pass	Inf	165.12M	155.202M	164.88M	155.202M
6505MHz Straddle 6.525-6.875GHz						
6665MHz	Pass	Inf	165.36M	154.483M	165.36M	154.723M
6825MHz Straddle 6.525-6.875GHz	Pass	Inf	164.64M	154.723M	164.16M	154.963M
6825MHz Straddle 6.875-7.125GHz						



EBW_ Radio 2_UNII 5~UNII 8_2TX

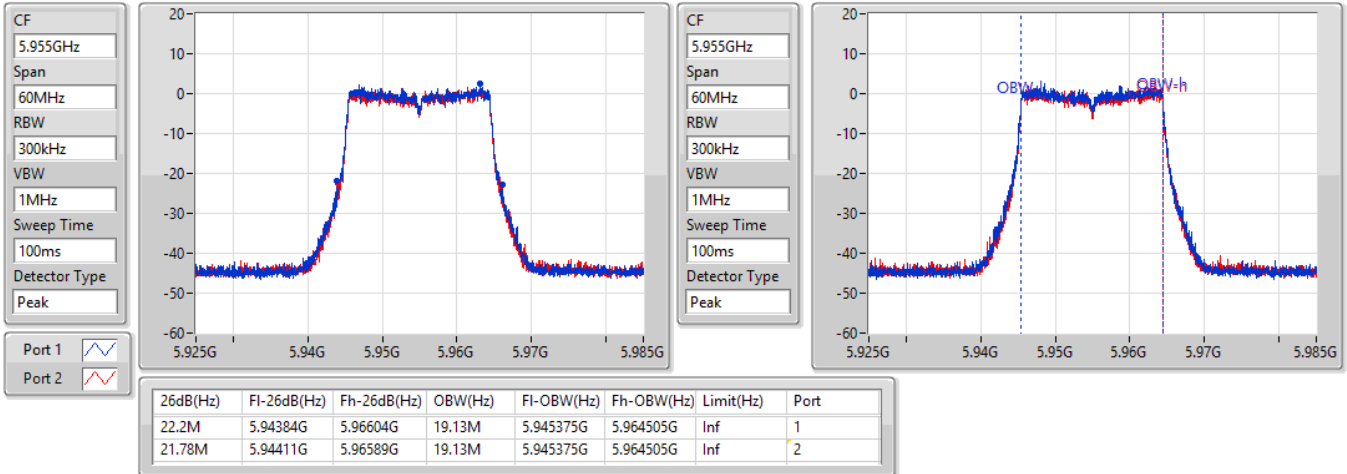
Appendix B.2

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
6985MHz	Pass	Inf	164.64M	155.442M	166.08M	155.202M

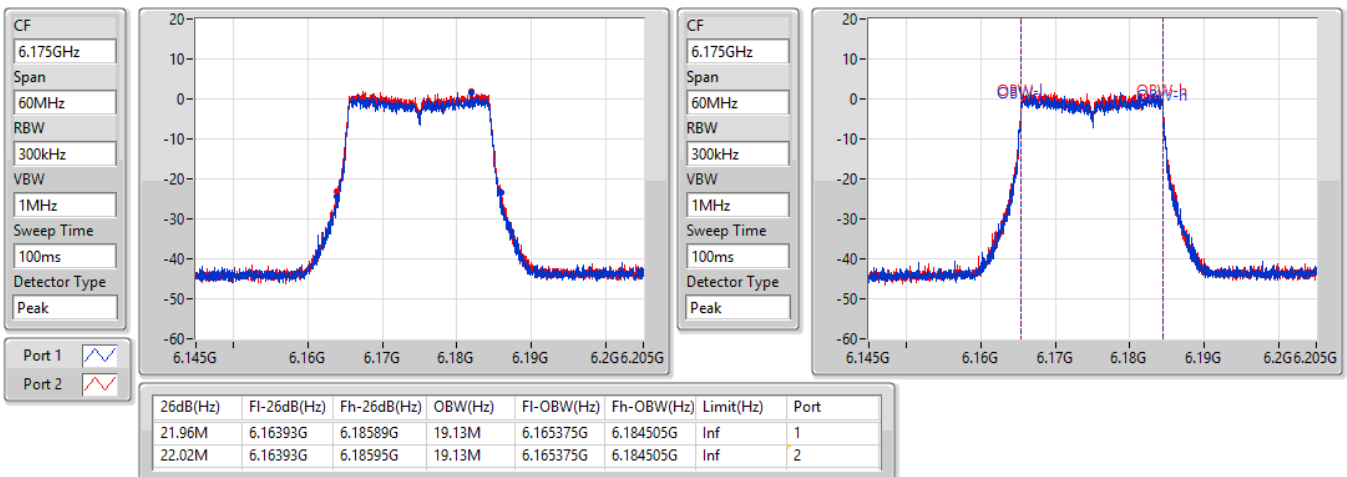
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
5955MHz

14/04/2022

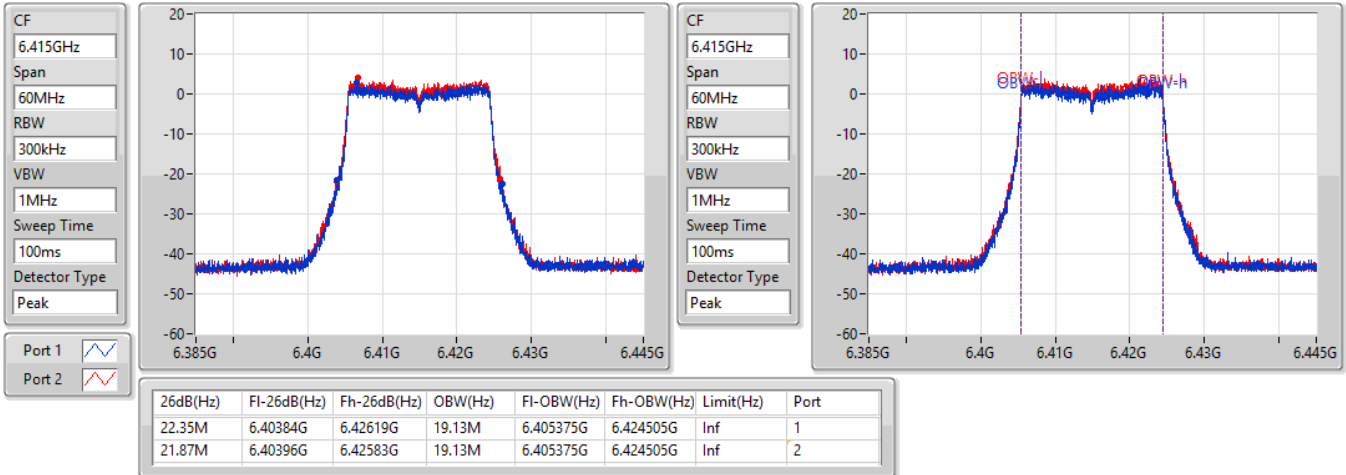

802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
6175MHz

14/04/2022

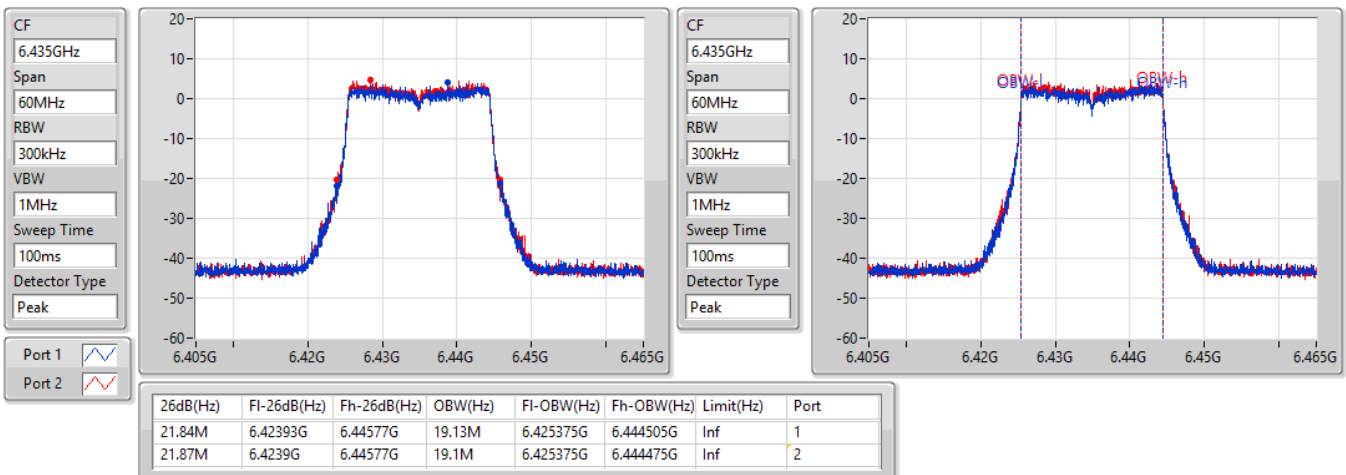


802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
6415MHz

14/04/2022

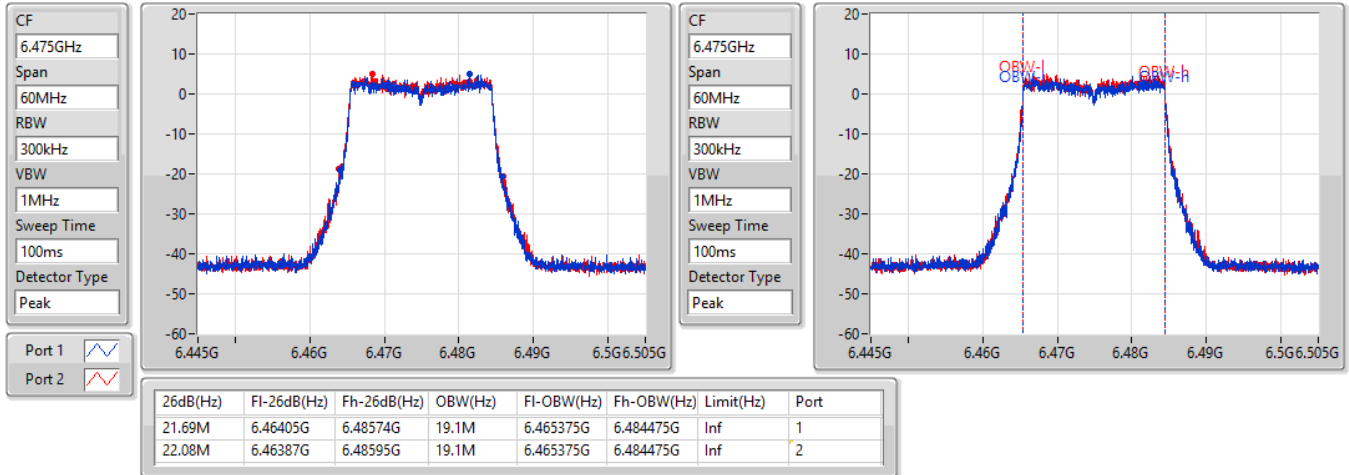

802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
6435MHz

14/04/2022

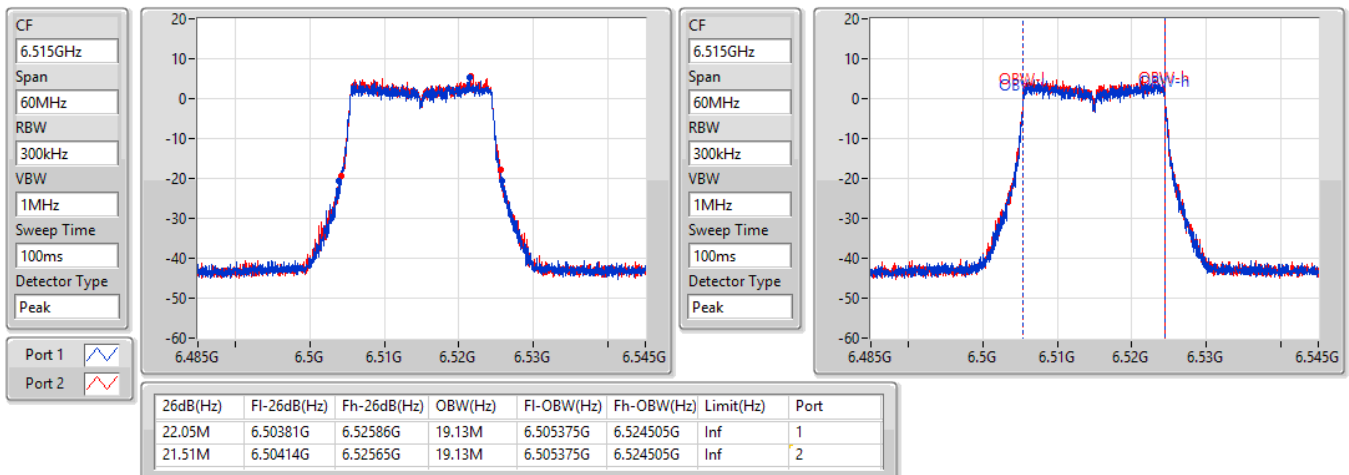


802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
6475MHz

14/04/2022


802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
6515MHz

14/04/2022

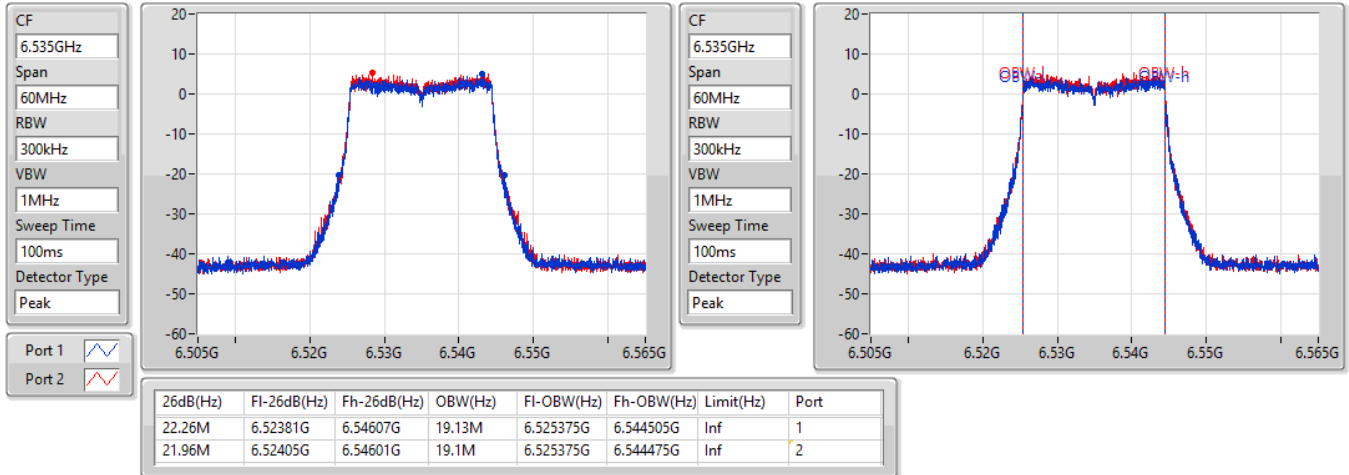


802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

6535MHz

14/04/2022

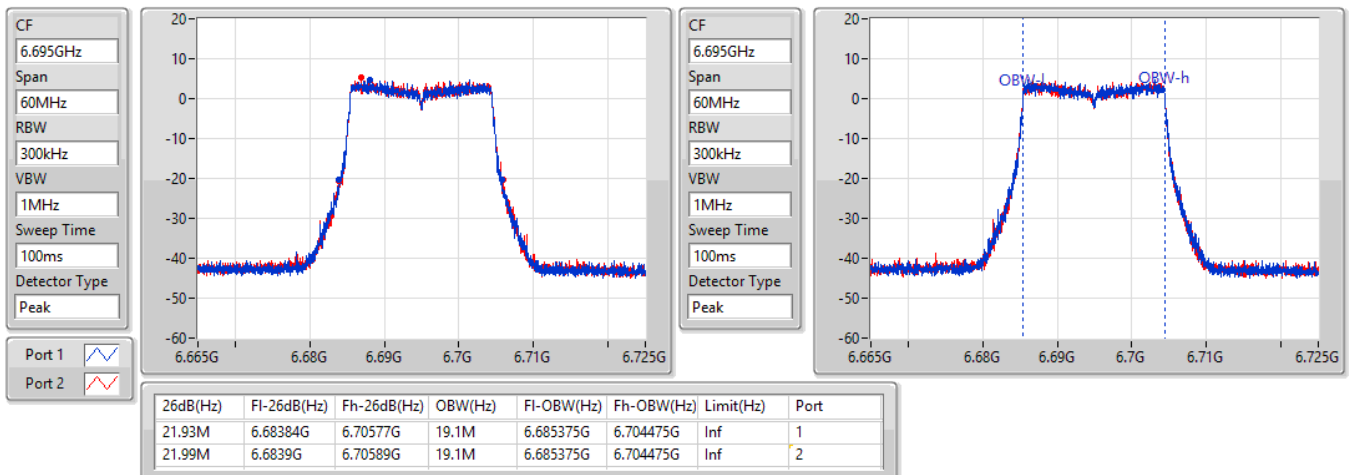


802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

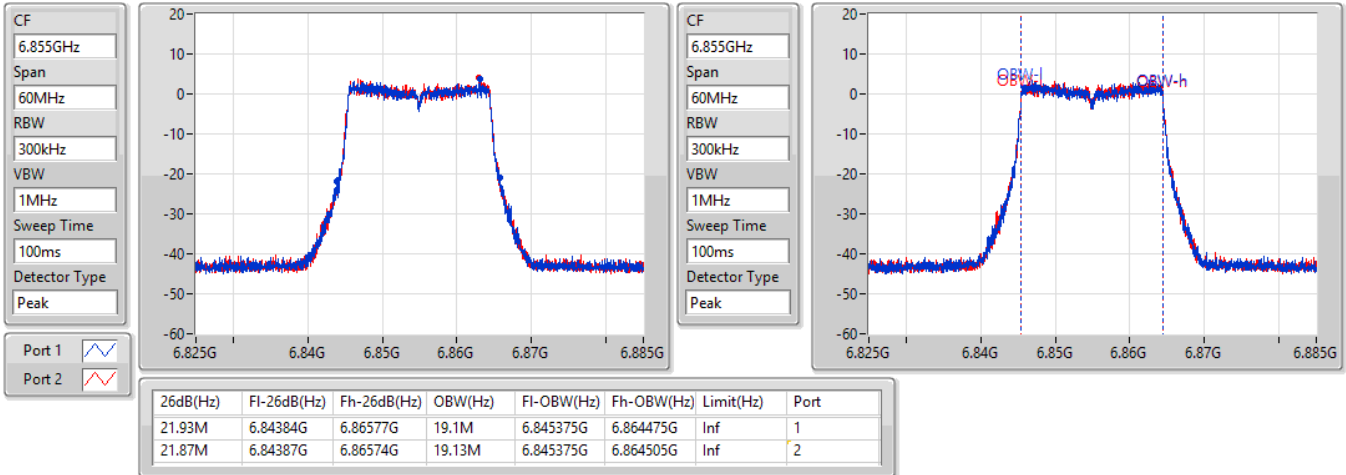
6695MHz

14/04/2022

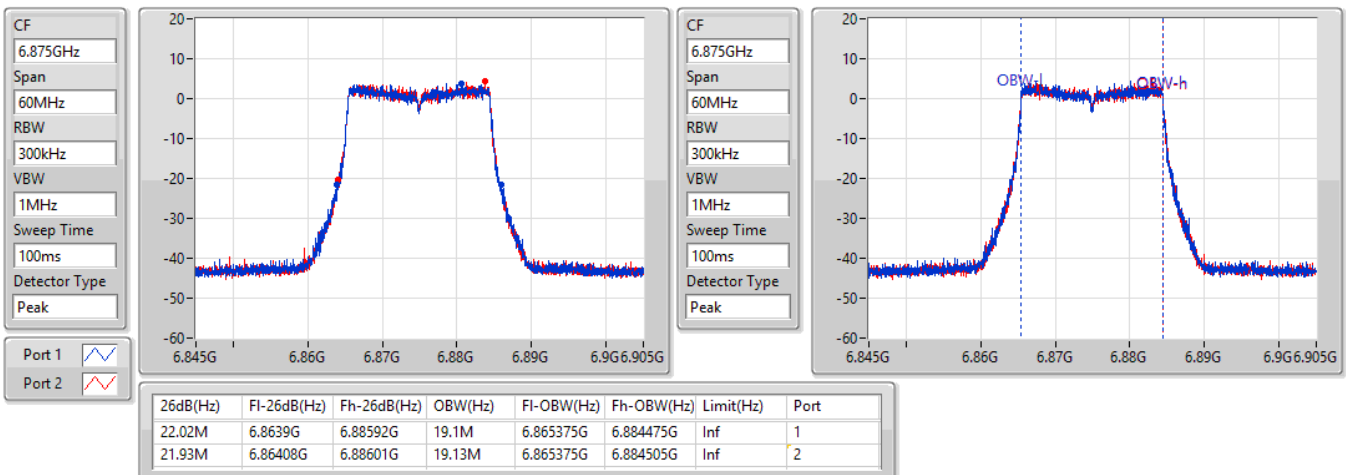


802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
6855MHz

14/04/2022

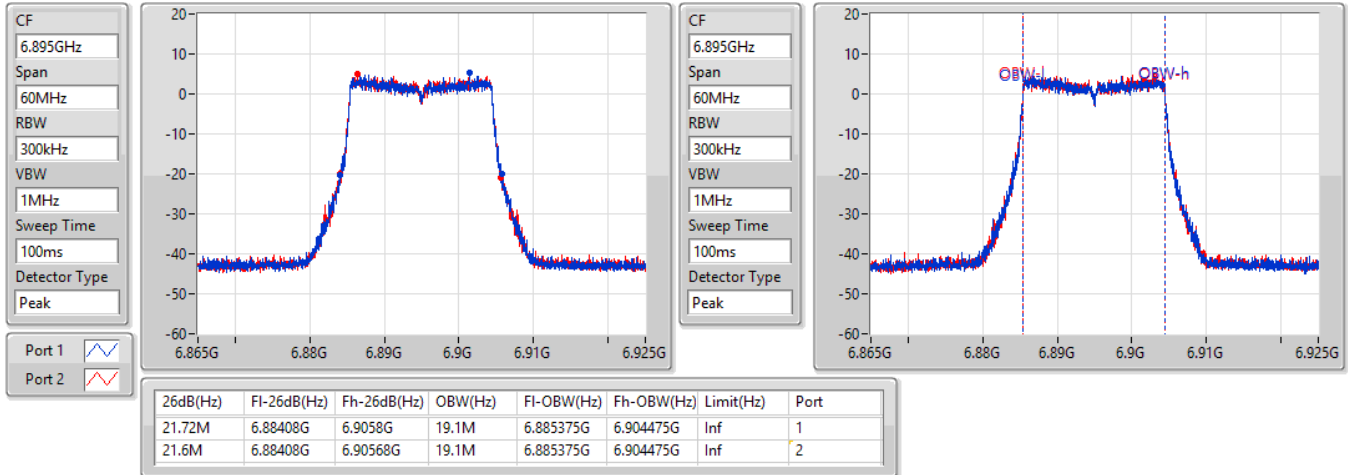

802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
6875MHz Straddle 6.525-6.875GHz

14/04/2022

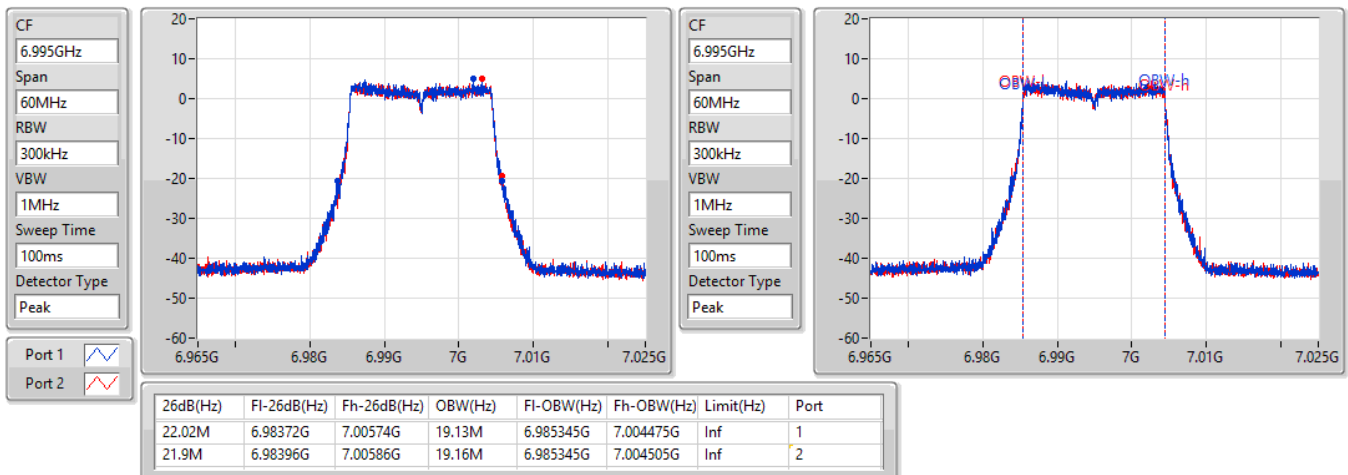


802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
6895MHz

14/04/2022


802.11ax HEW20_Nss1,(MCS0)_2TX
EBW
6995MHz

14/04/2022

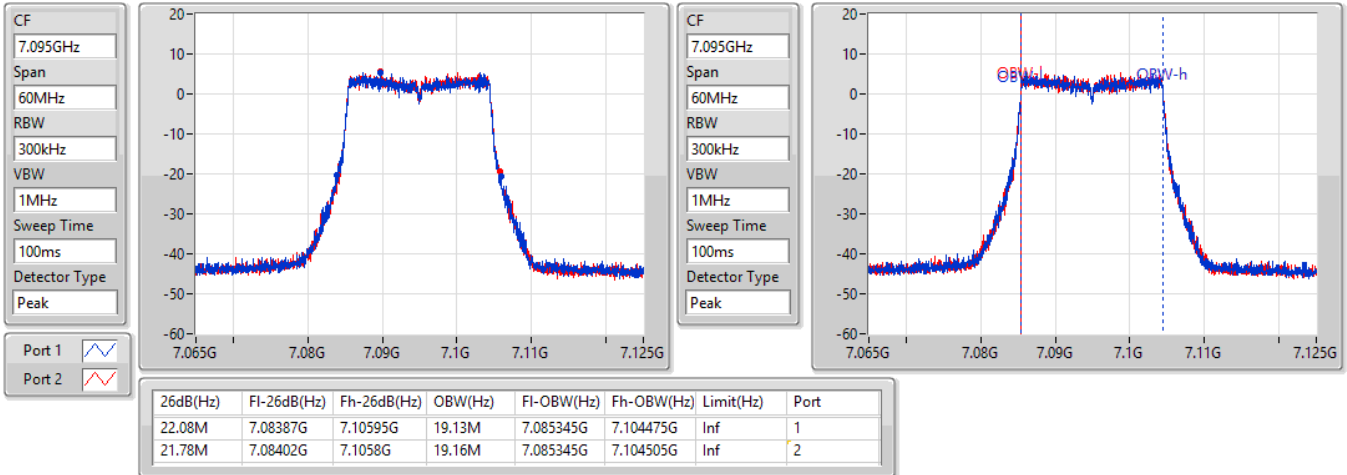


802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

7095MHz

14/04/2022

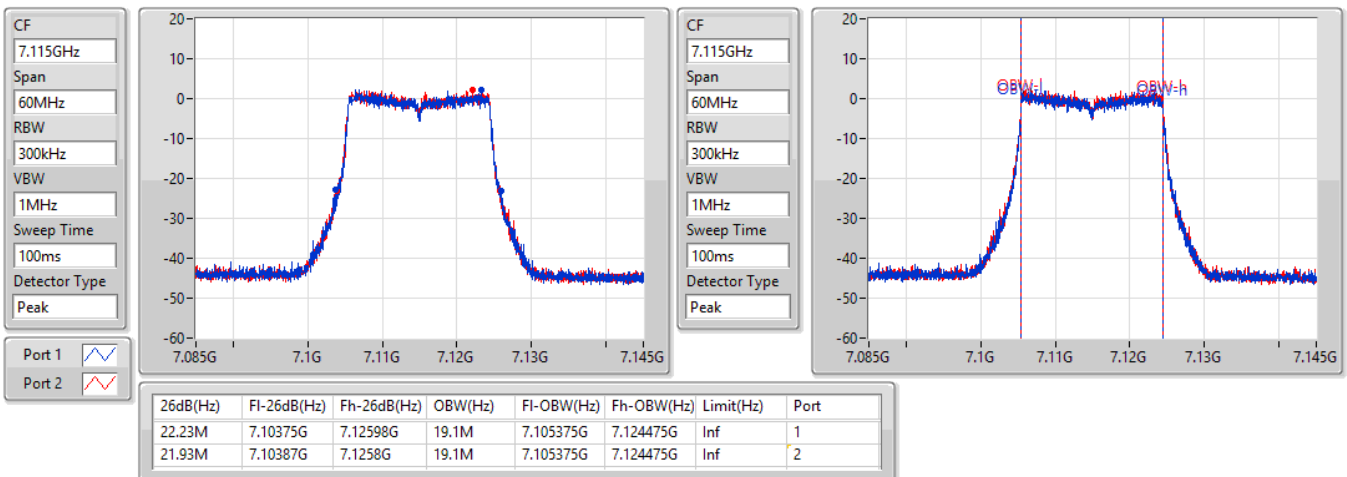


802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

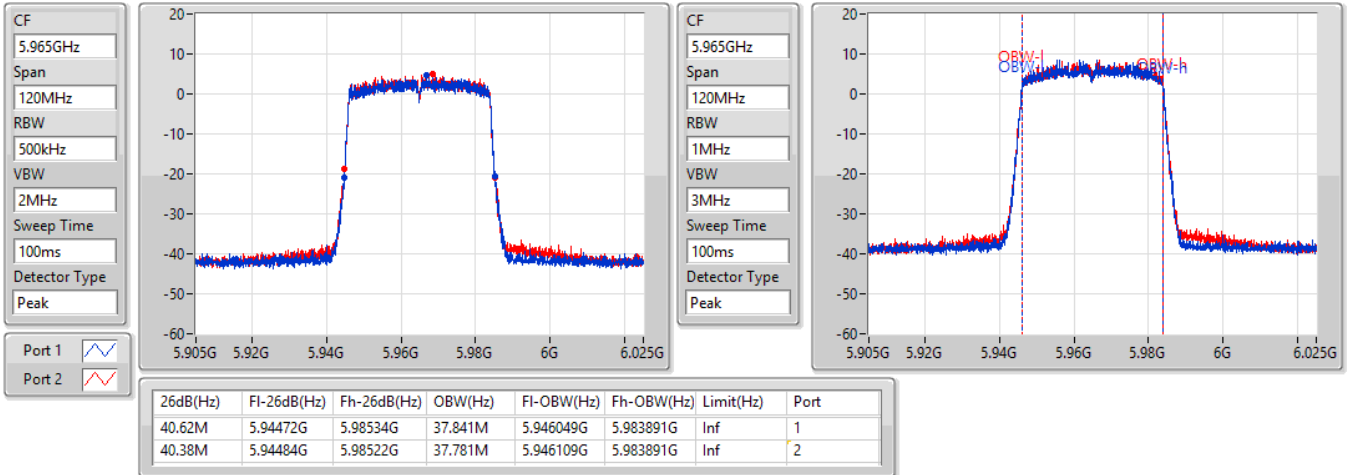
7115MHz

14/04/2022

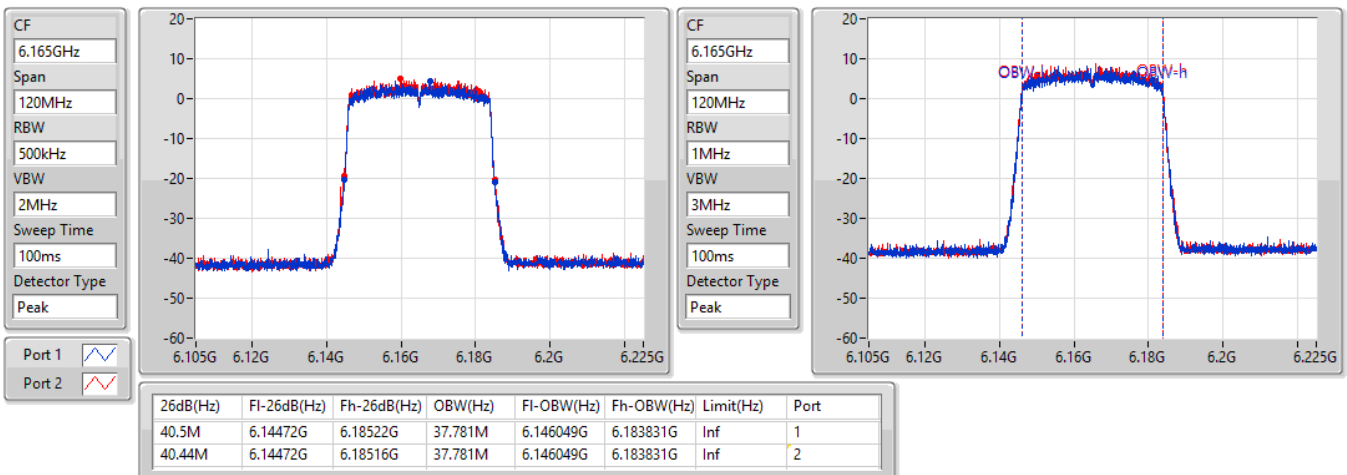


802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
5965MHz

14/04/2022

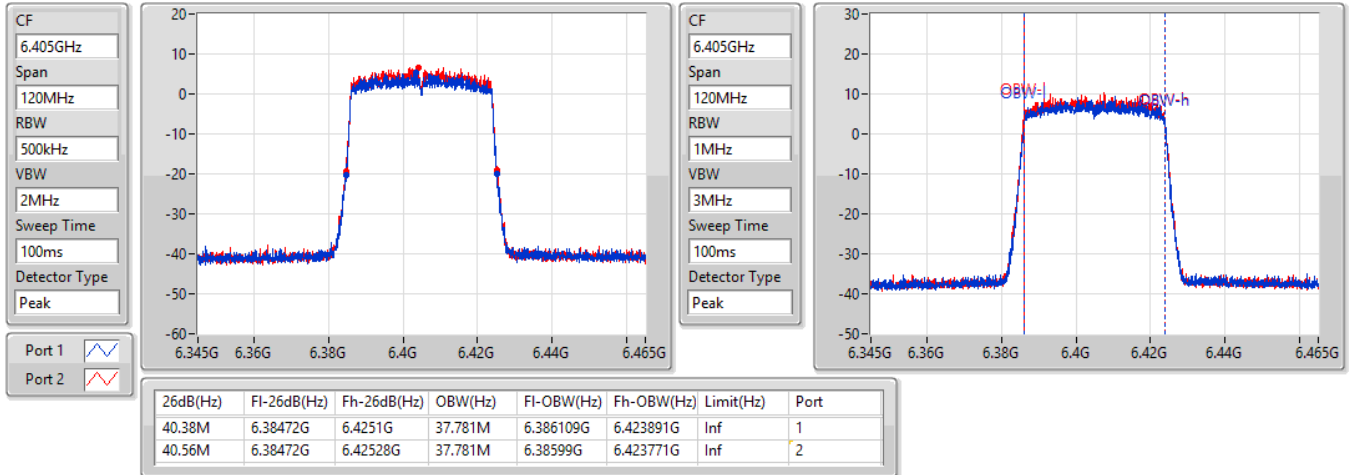

802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
6165MHz

14/04/2022

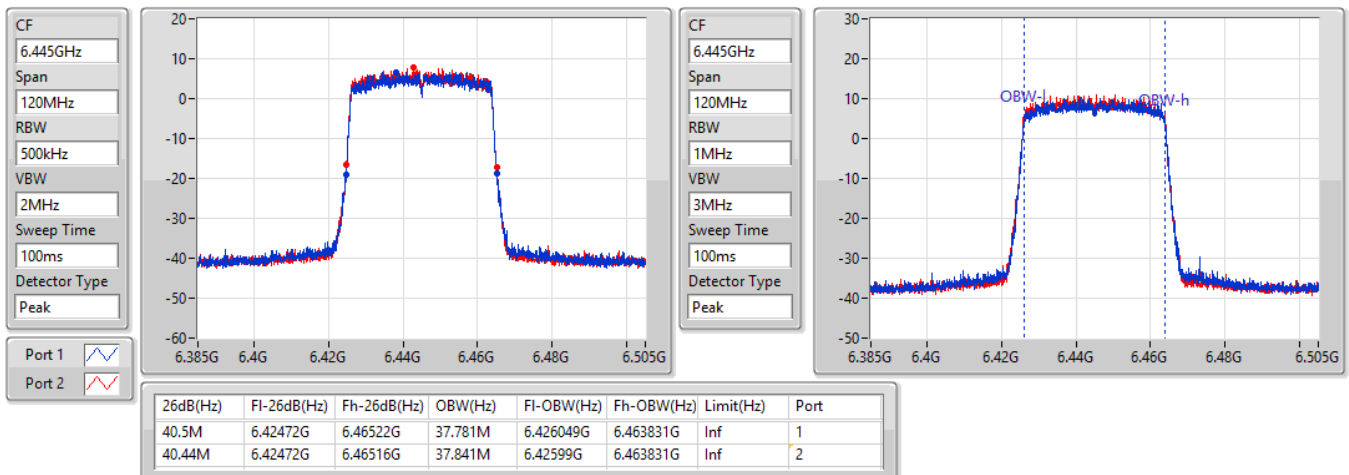


802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
6405MHz

14/04/2022

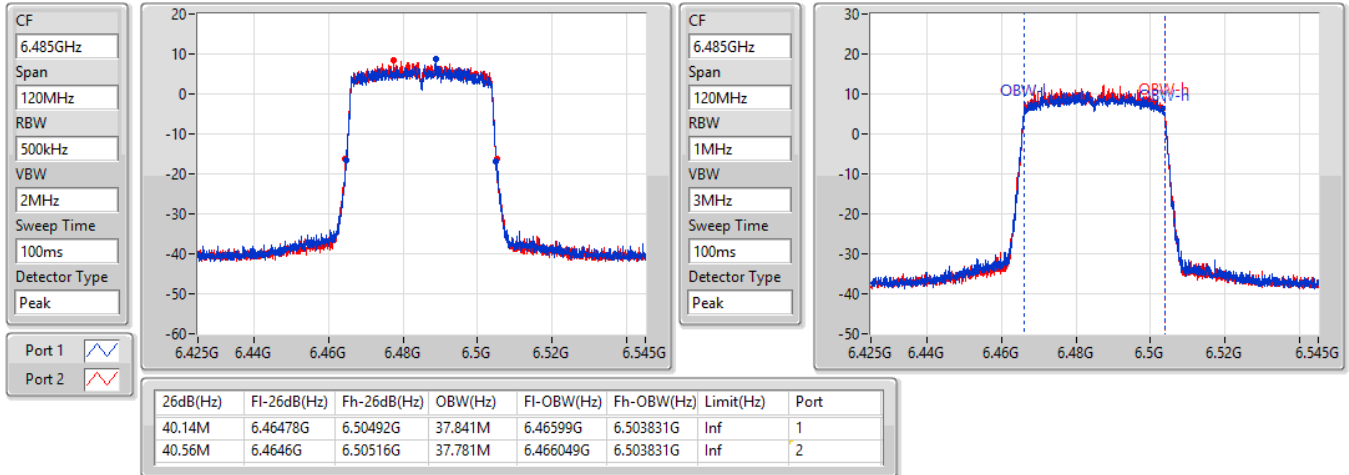

802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
6445MHz

14/04/2022

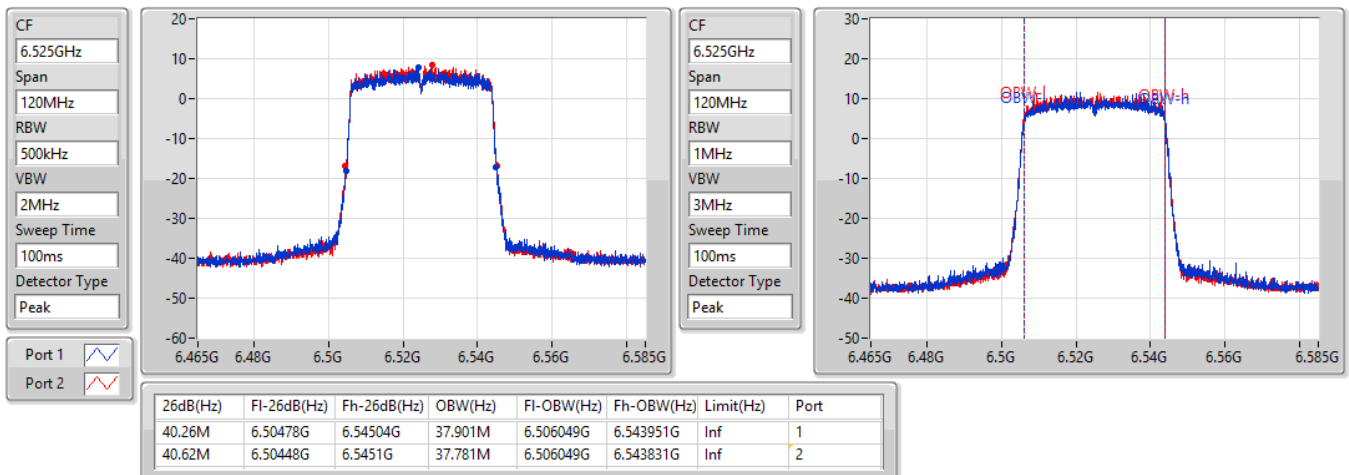


802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
6485MHz

14/04/2022

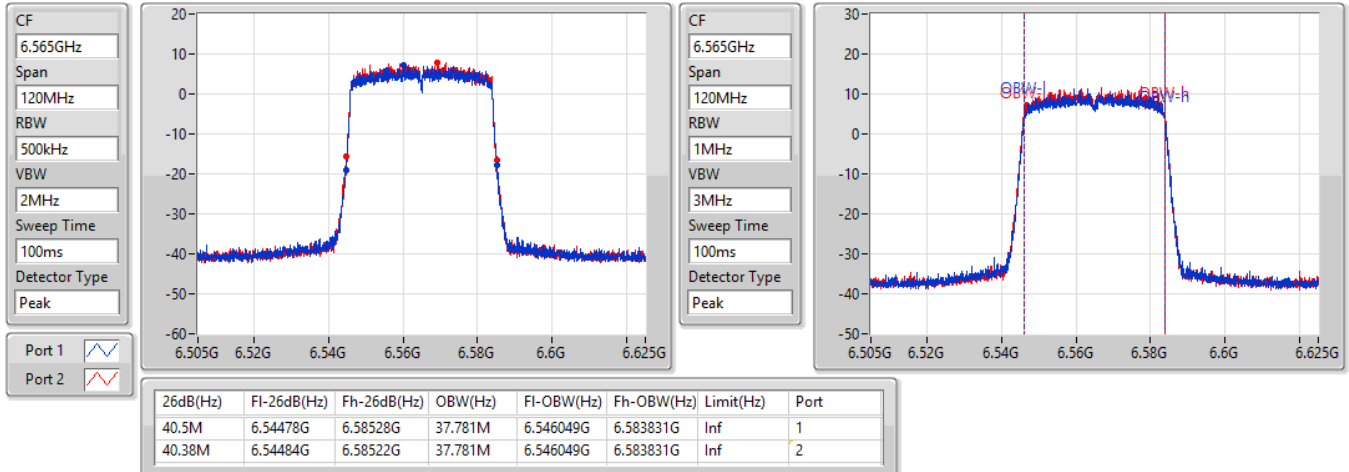

802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
6525MHz Straddle 6.425-6.525GHz

14/04/2022

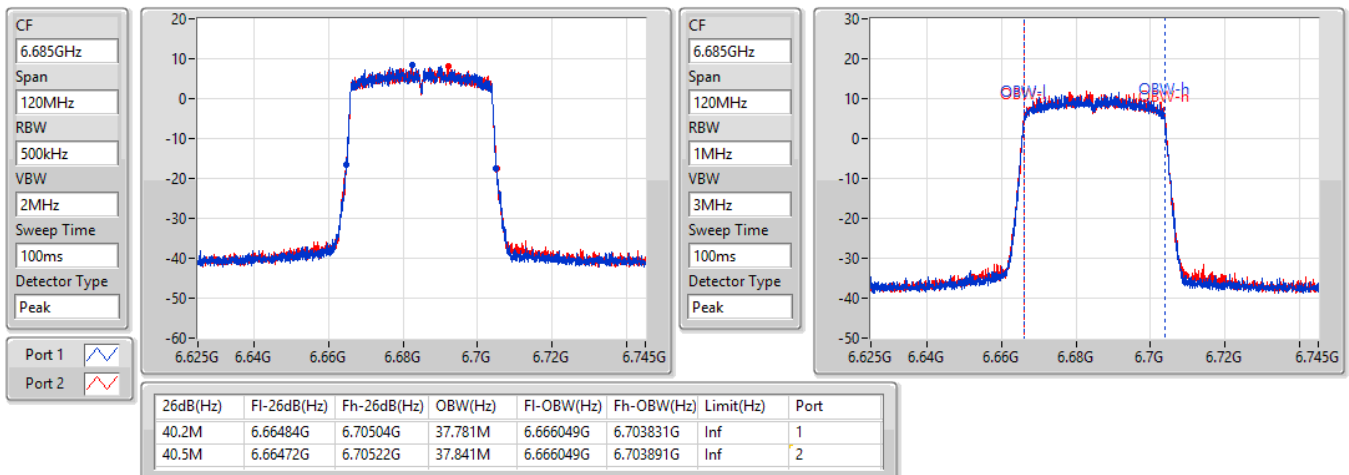


802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
6565MHz

14/04/2022

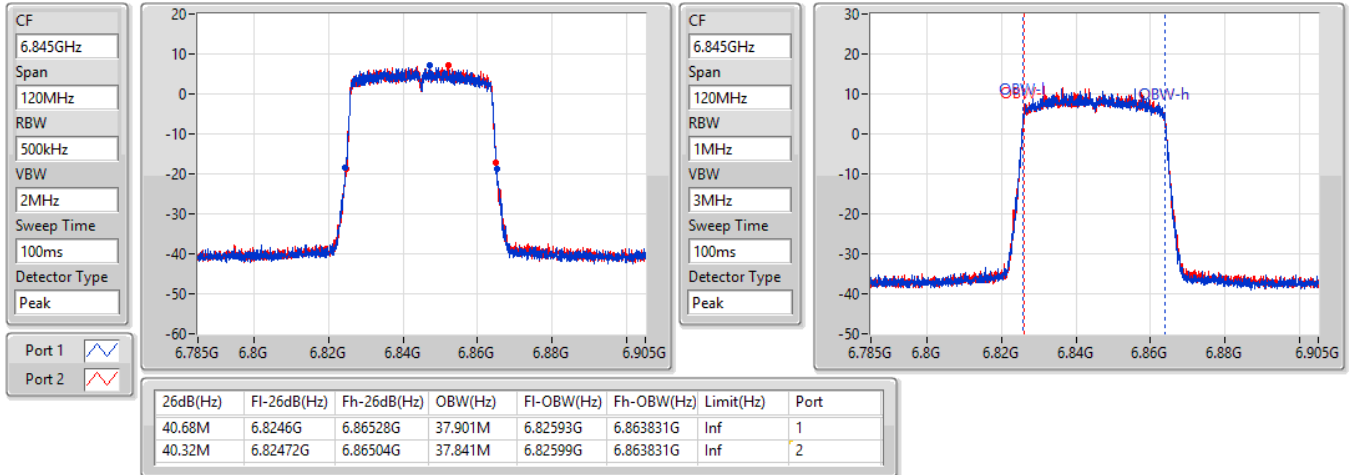

802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
6685MHz

14/04/2022

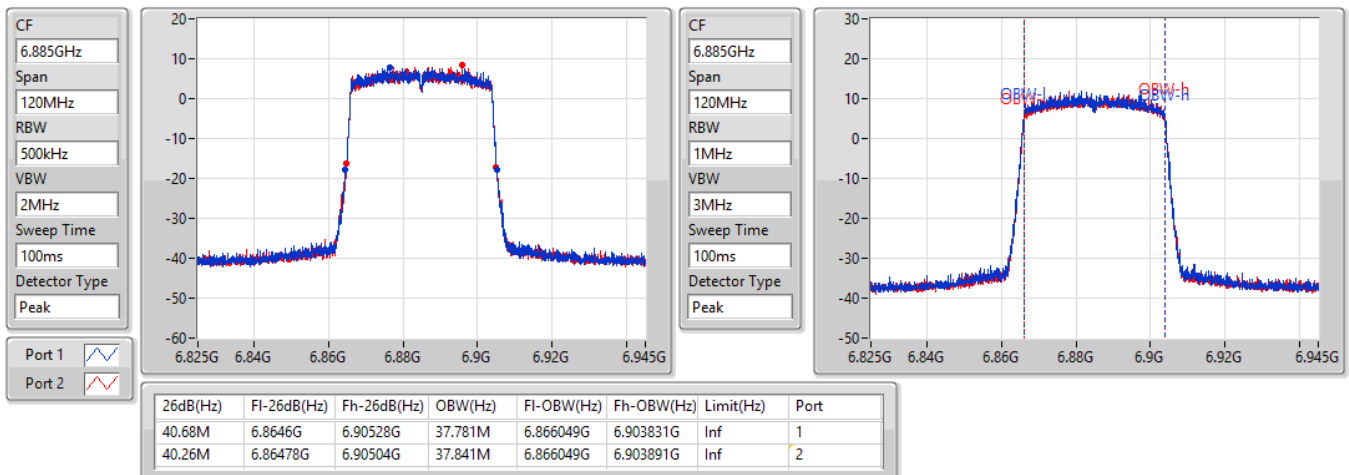


802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
6845MHz

14/04/2022

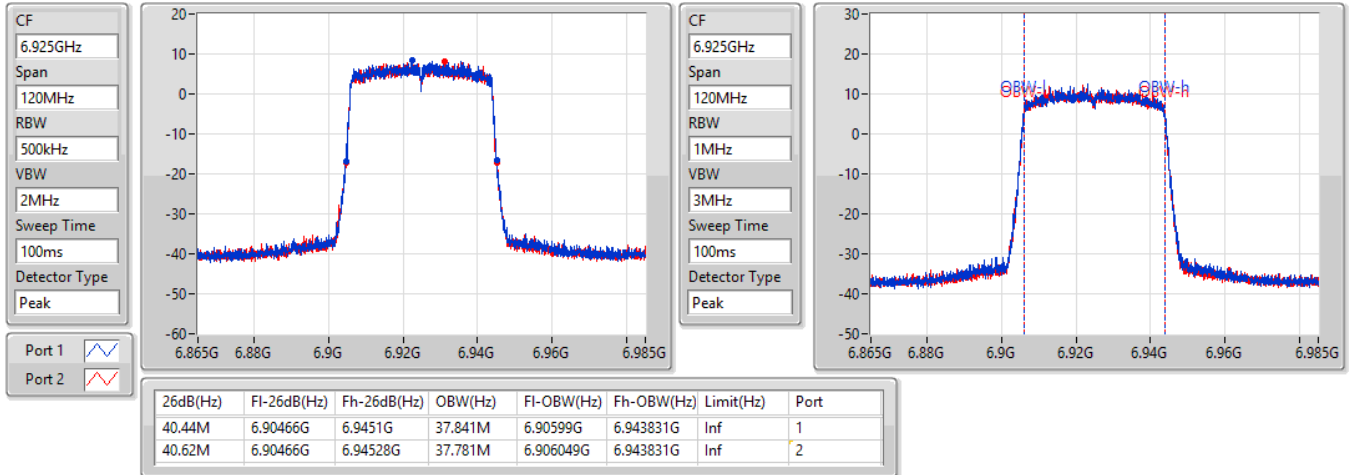

802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
6885MHz Straddle 6.525-6.875GHz

14/04/2022

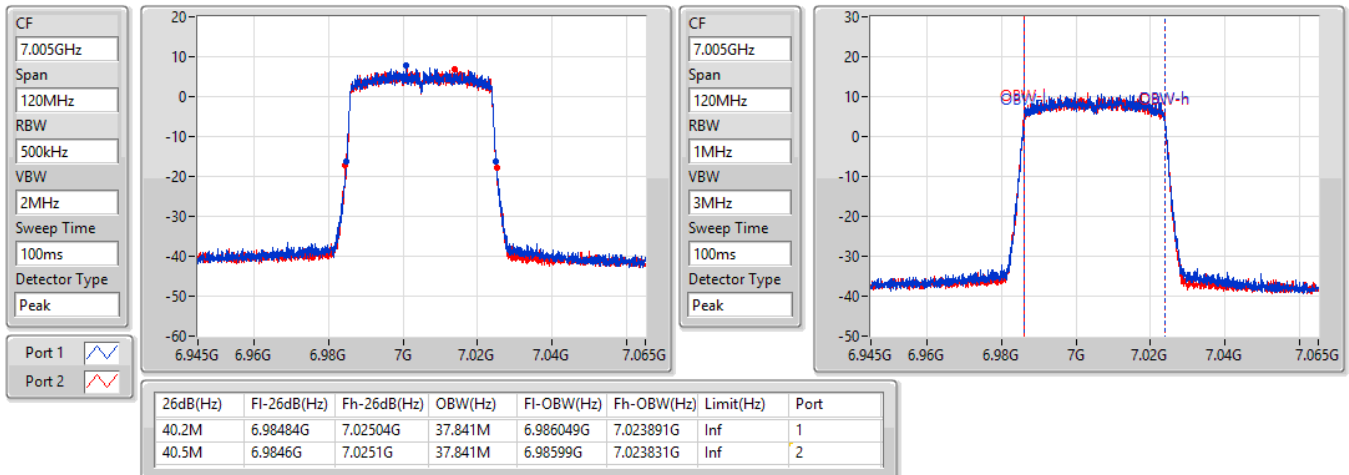


802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
6925MHz

14/04/2022

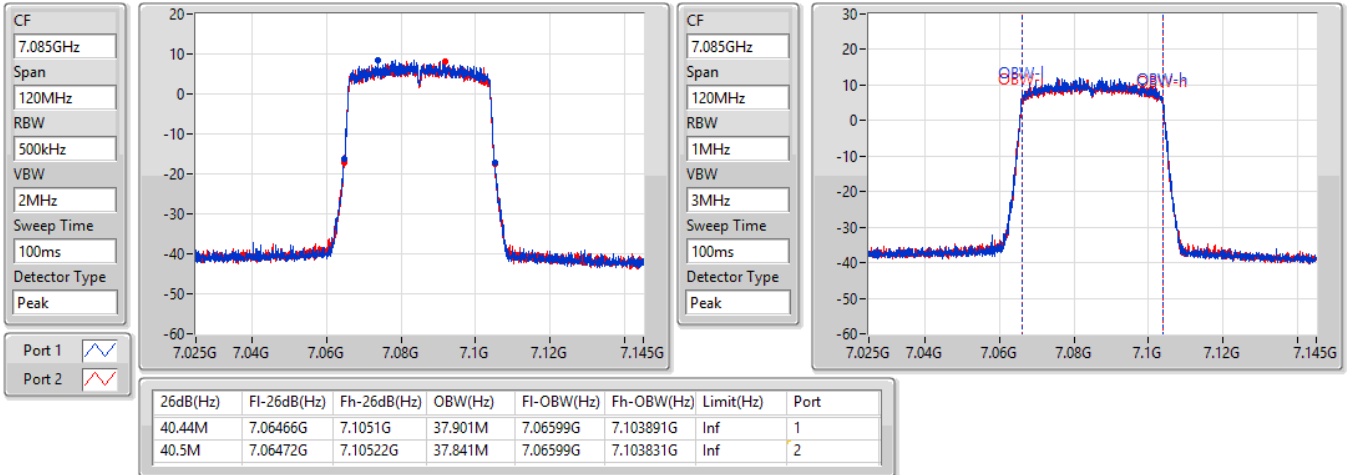

802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
7005MHz

14/04/2022

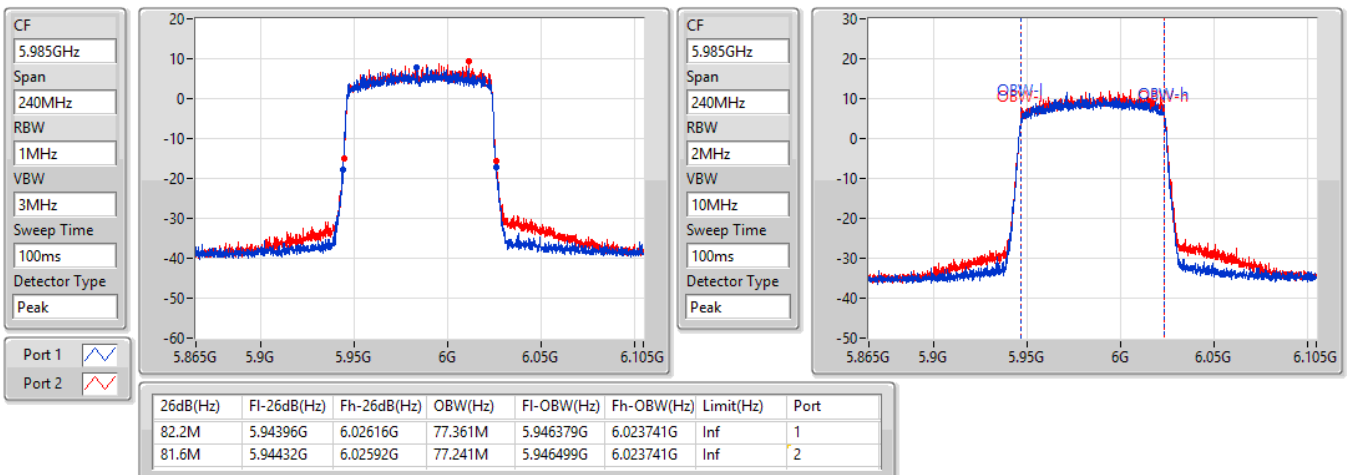


802.11ax HEW40_Nss1,(MCS0)_2TX
EBW
7085MHz

14/04/2022

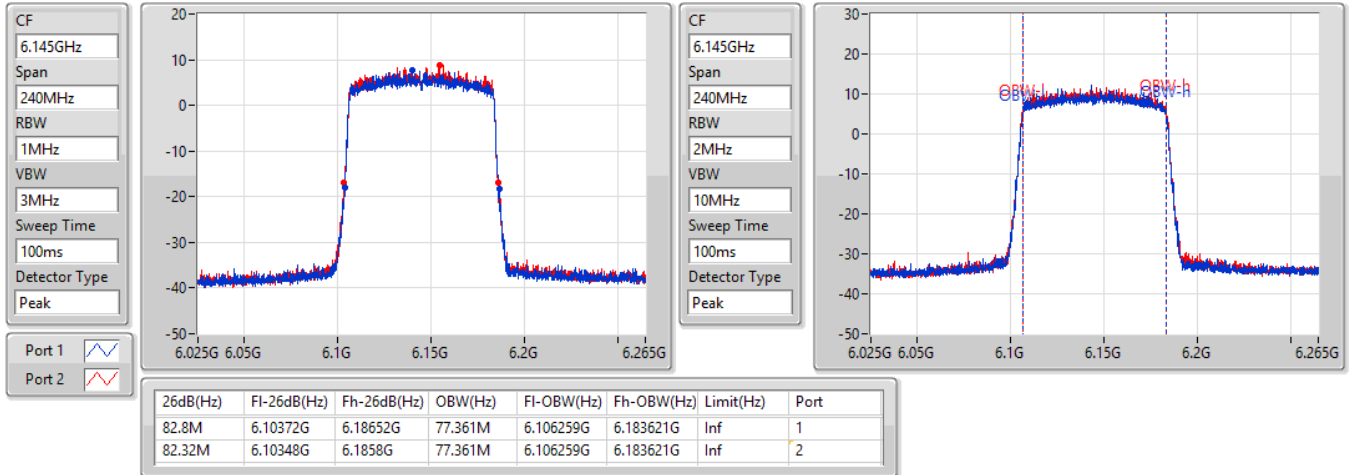

802.11ax HEW80_Nss1,(MCS0)_2TX
EBW
5985MHz

14/04/2022

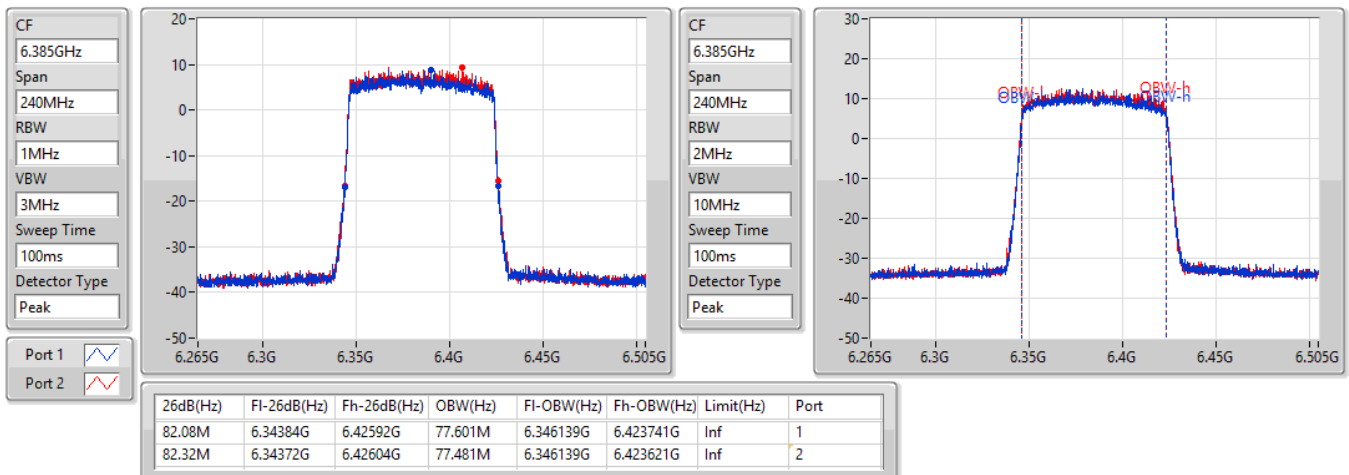


802.11ax HEW80_Nss1,(MCS0)_2TX
EBW
6145MHz

14/04/2022

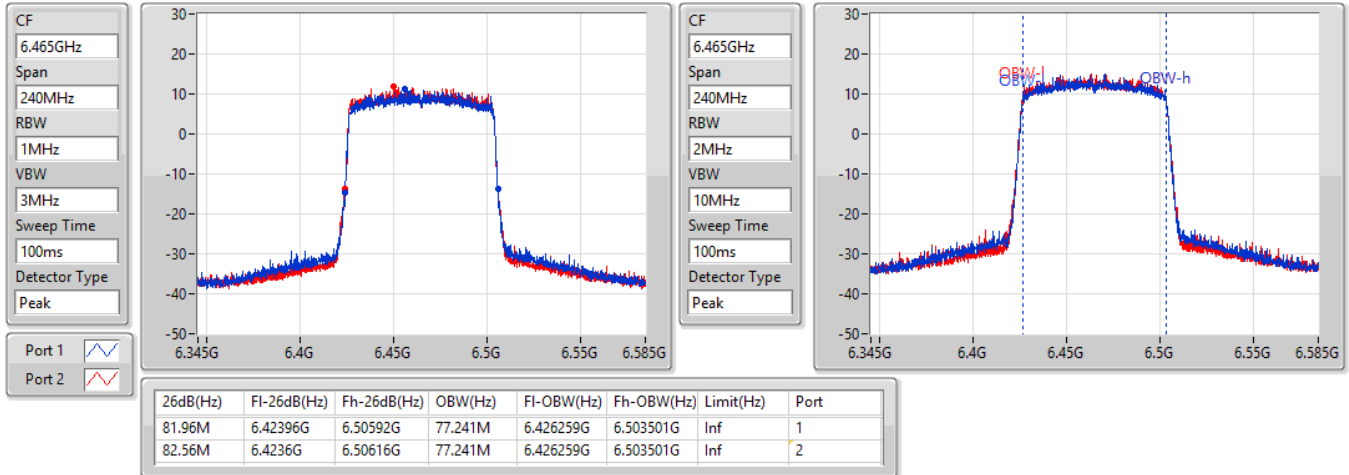

802.11ax HEW80_Nss1,(MCS0)_2TX
EBW
6385MHz

14/04/2022

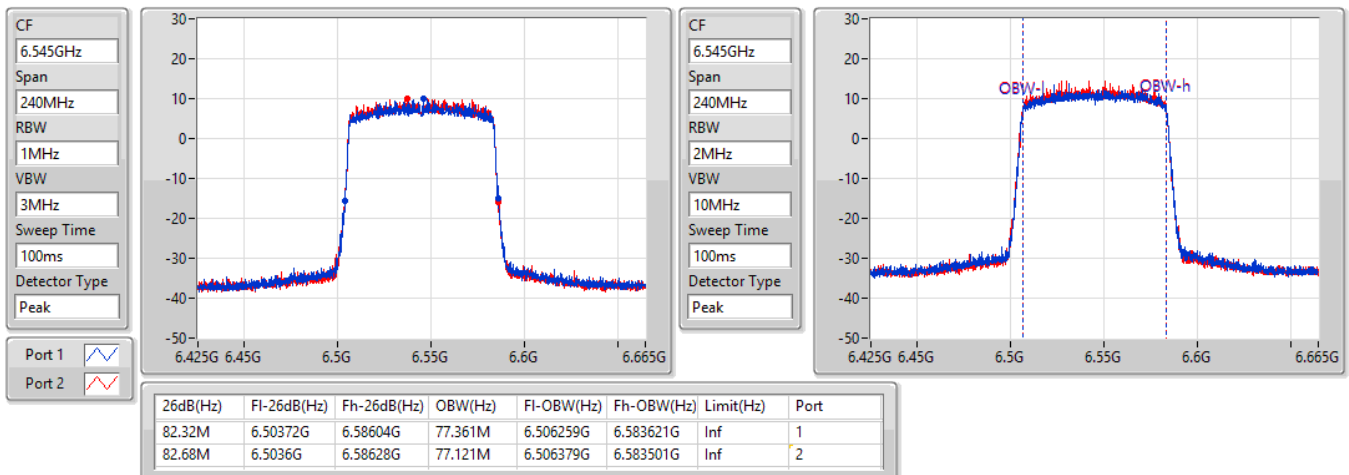


802.11ax HEW80_Nss1,(MCS0)_2TX
EBW
6465MHz

14/04/2022

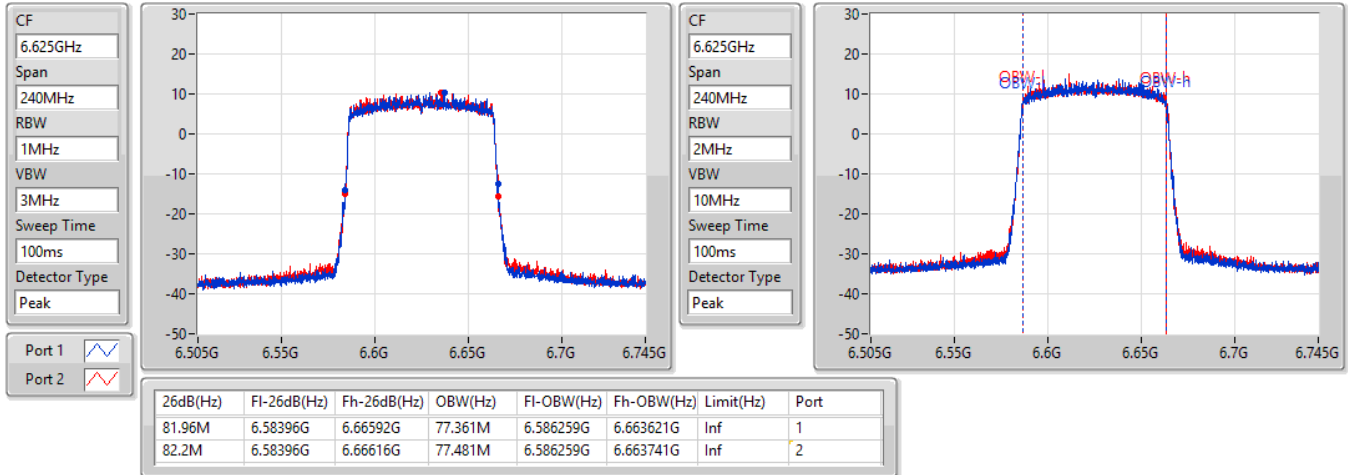

802.11ax HEW80_Nss1,(MCS0)_2TX
EBW
6545MHz Straddle 6.425-6.525GHz

14/04/2022

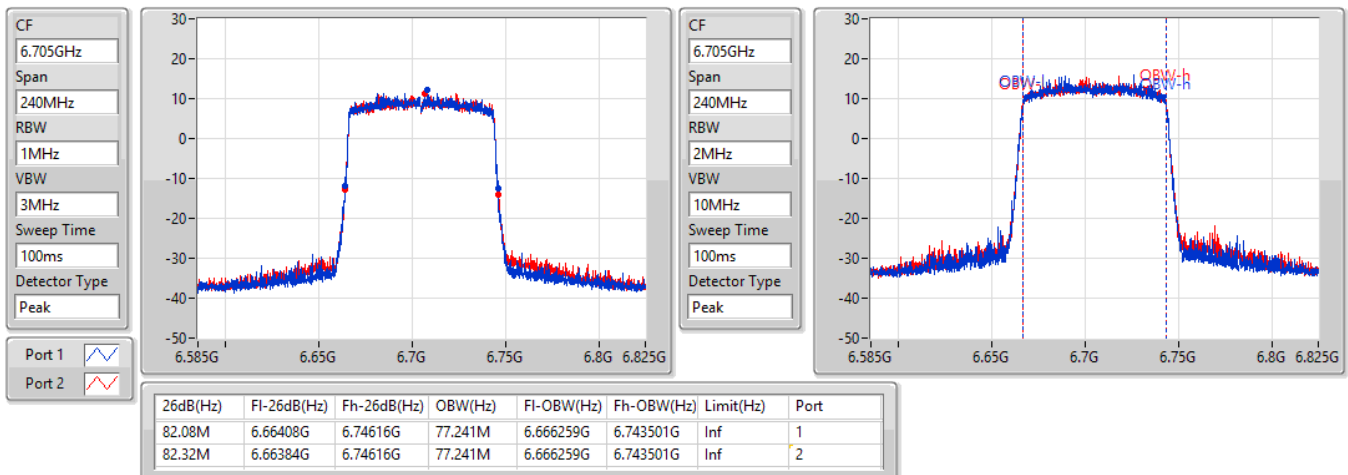


802.11ax HEW80_Nss1,(MCS0)_2TX
EBW
6625MHz

14/04/2022

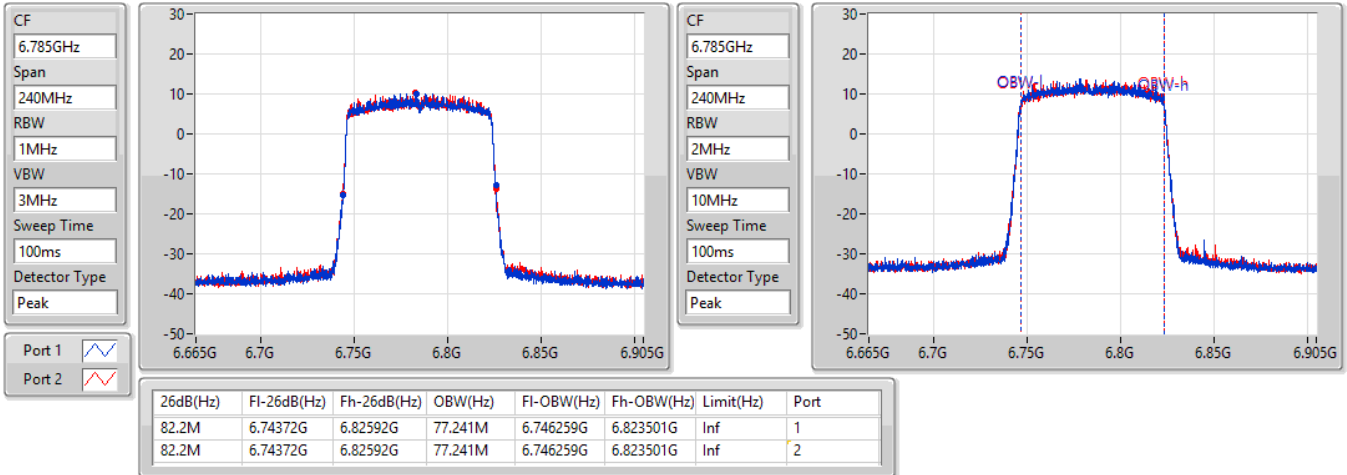

802.11ax HEW80_Nss1,(MCS0)_2TX
EBW
6705MHz

14/04/2022

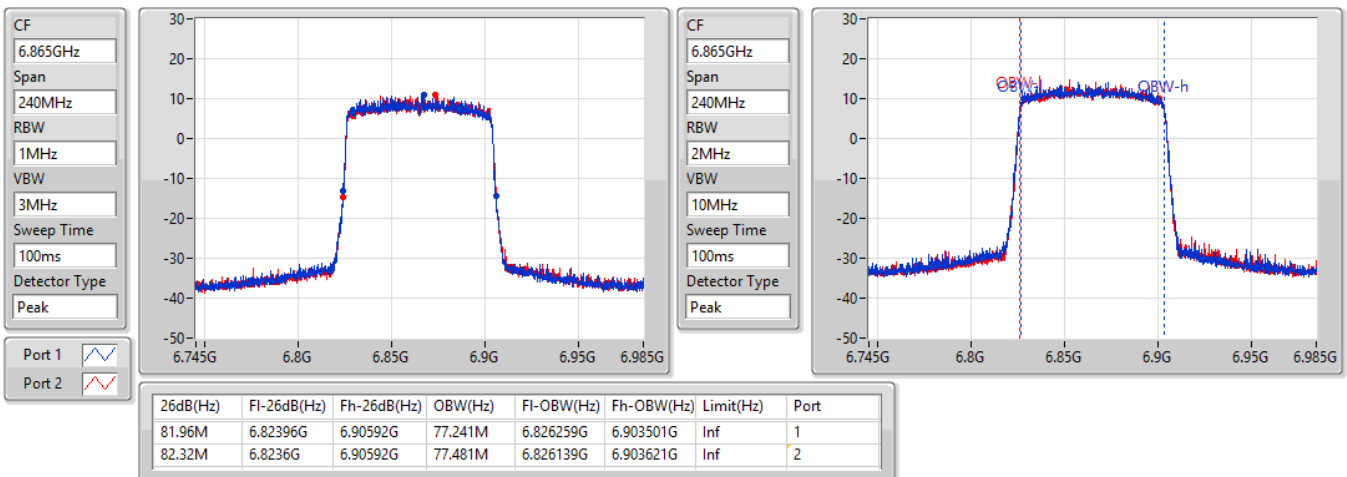


802.11ax HEW80_Nss1,(MCS0)_2TX
EBW
6785MHz

14/04/2022

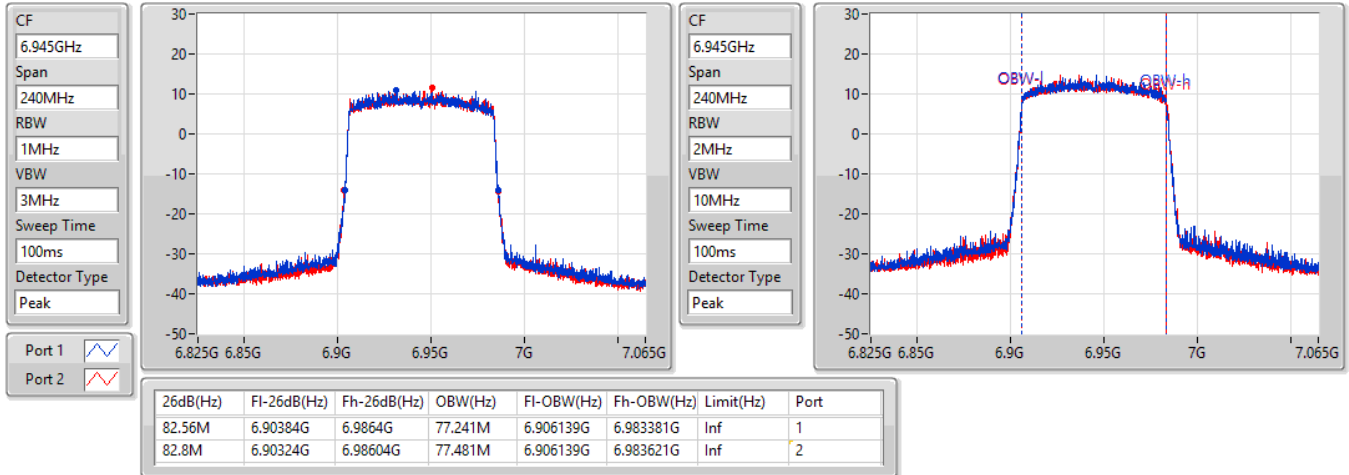

802.11ax HEW80_Nss1,(MCS0)_2TX
EBW
6865MHz Straddle 6.525-6.875GHz

14/04/2022

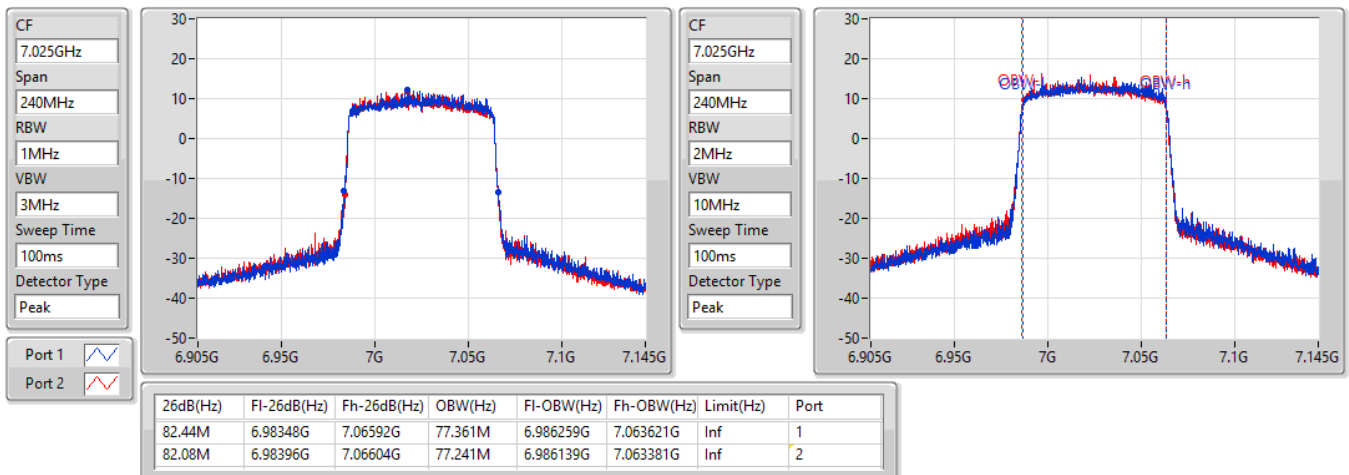


802.11ax HEW80_Nss1,(MCS0)_2TX
EBW
6945MHz

14/04/2022


802.11ax HEW80_Nss1,(MCS0)_2TX
EBW
7025MHz

14/04/2022

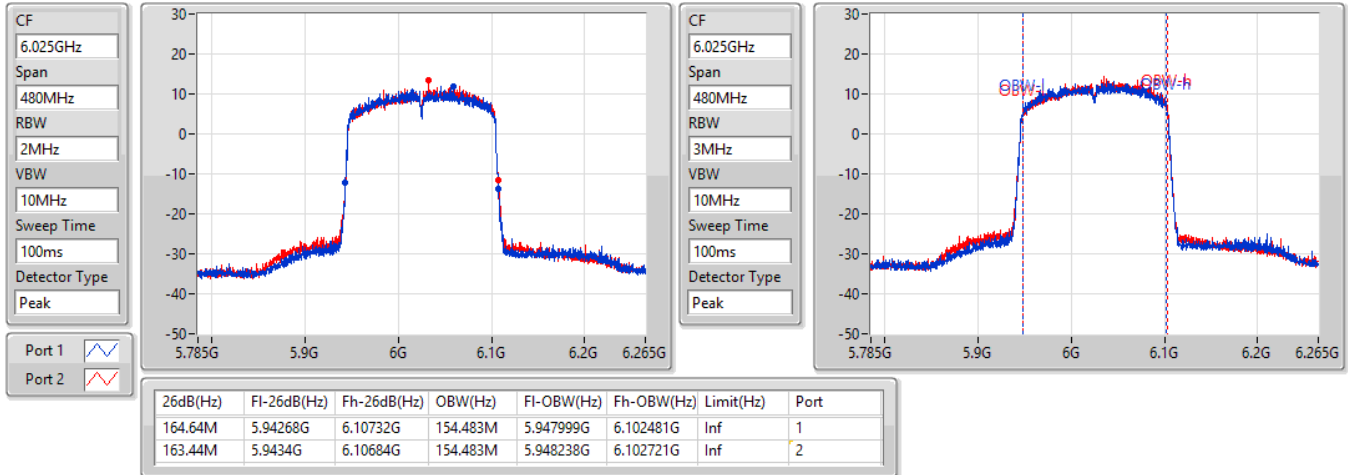


802.11ax HEW160_Nss1,(MCS0)_2TX

EBW

6025MHz

14/04/2022

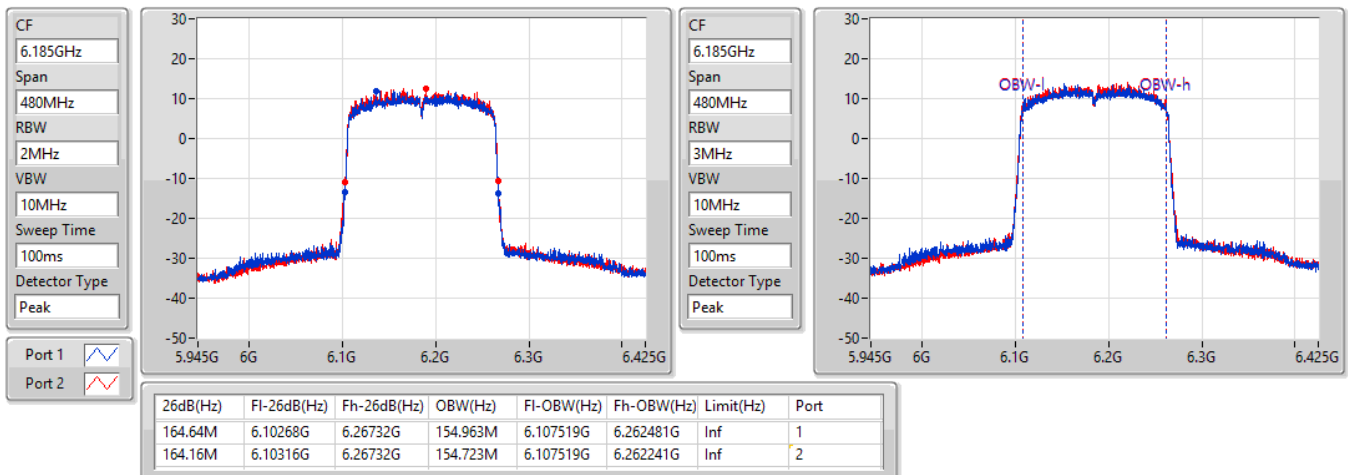


802.11ax HEW160_Nss1,(MCS0)_2TX

EBW

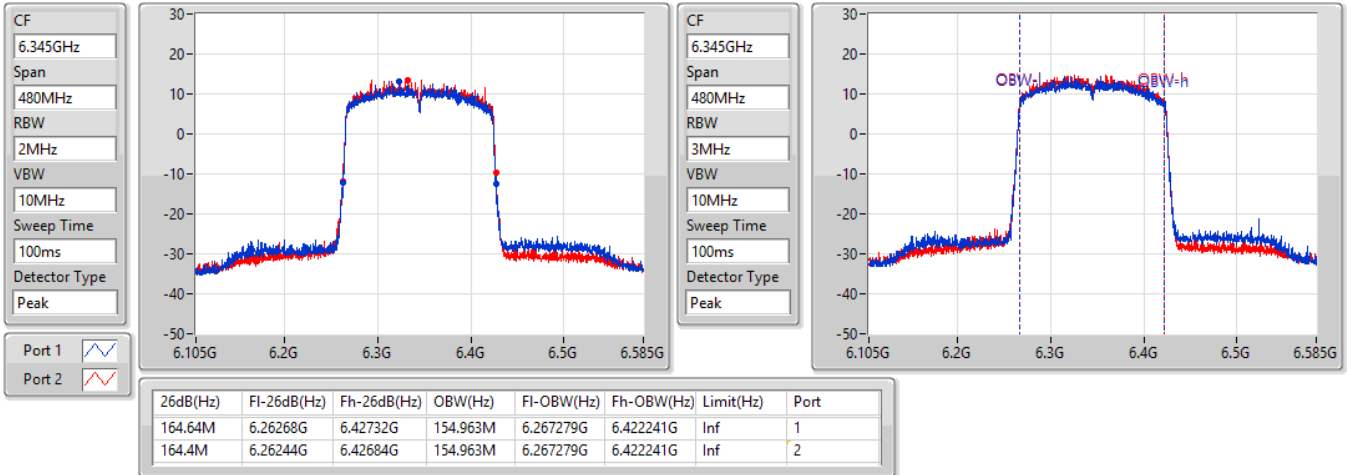
6185MHz

14/04/2022

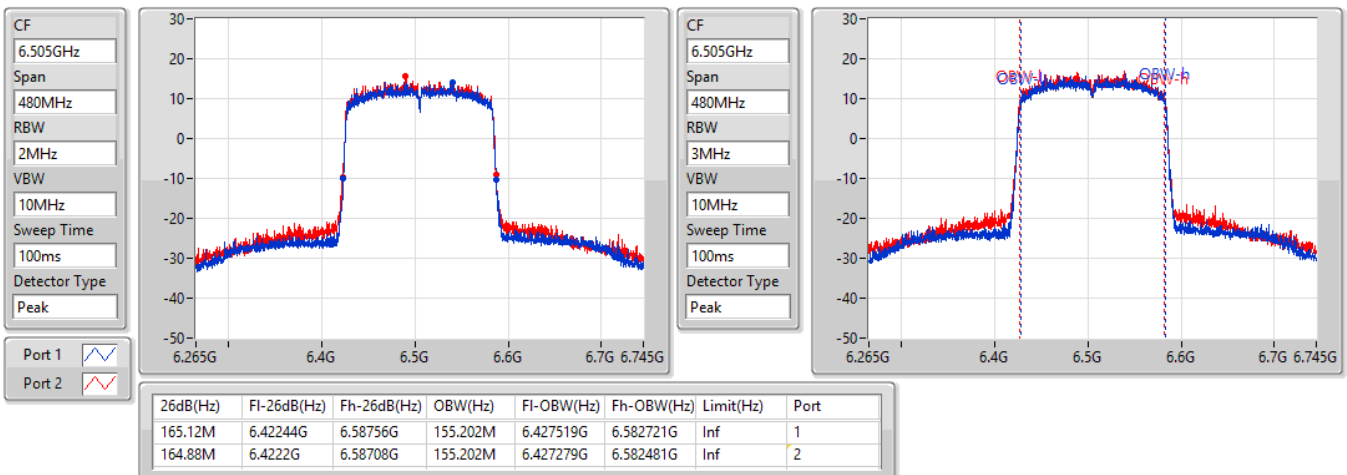


802.11ax HEW160_Nss1,(MCS0)_2TX
EBW
6345MHz

14/04/2022

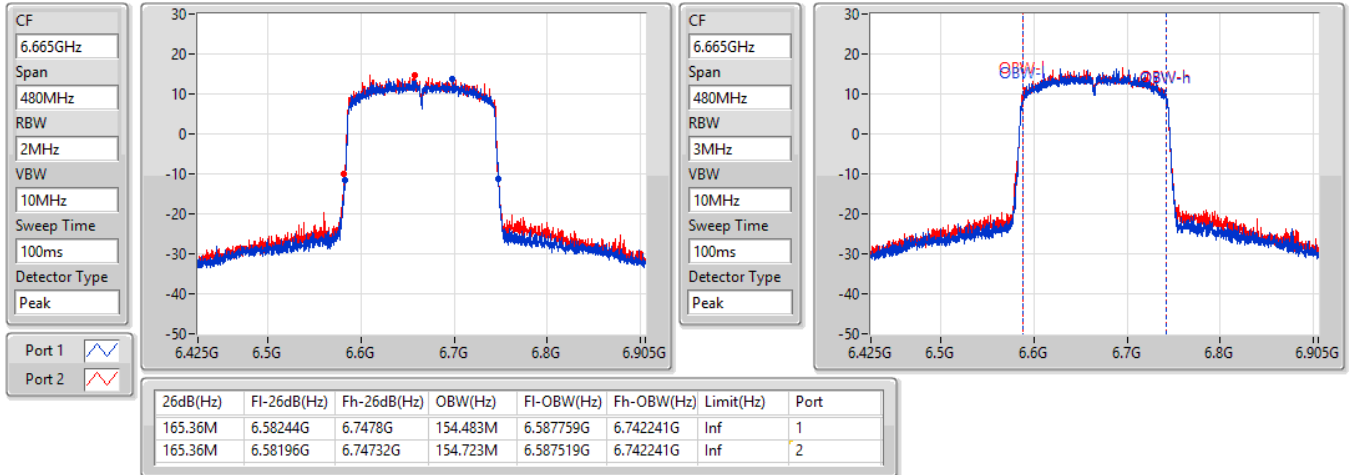

802.11ax HEW160_Nss1,(MCS0)_2TX
EBW
6505MHz Straddle 6.425-6.525GHz

14/04/2022

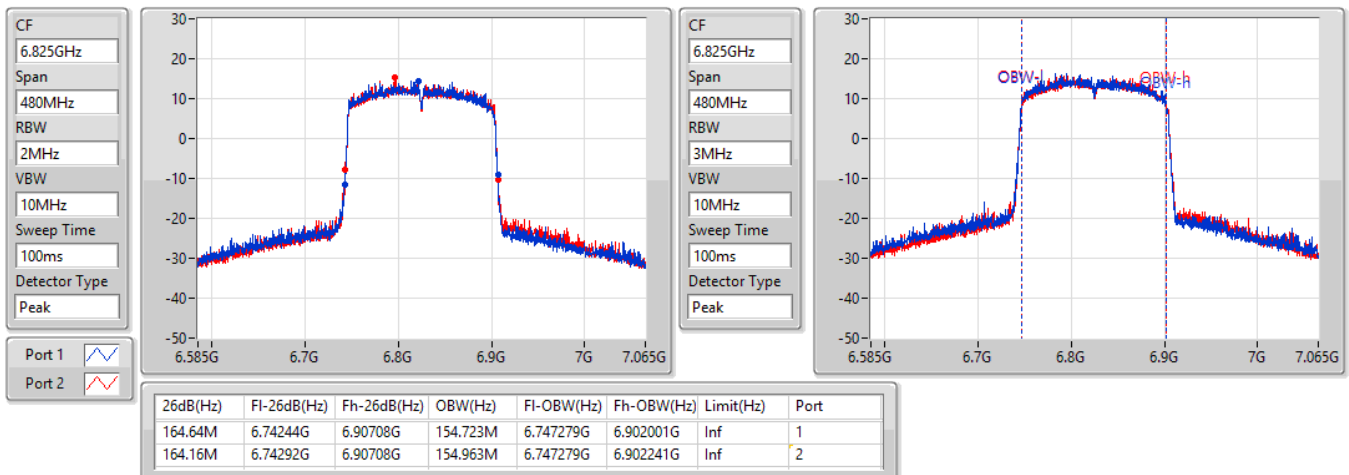


802.11ax HEW160_Nss1,(MCS0)_2TX
EBW
6665MHz

14/04/2022


802.11ax HEW160_Nss1,(MCS0)_2TX
EBW
6825MHz Straddle 6.525-6.875GHz

14/04/2022

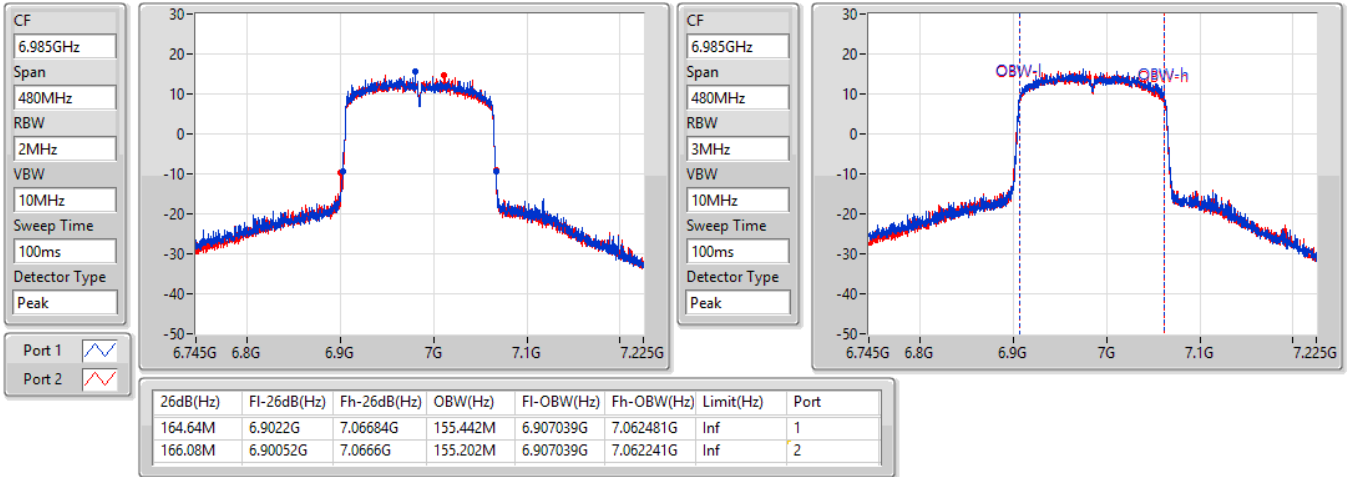


802.11ax HEW160_Nss1,(MCS0)_2TX

EBW

6985MHz

14/04/2022



For beamforming mode

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,(MCS3)_2TX	22.08M	19.13M	19M1D1D	21.75M	19.1M
802.11ax HEW40-BF_Nss1,(MCS3)_2TX	40.92M	37.841M	37M8D1D	40.26M	37.781M
802.11ax HEW80-BF_Nss1,(MCS3)_2TX	84.6M	77.361M	77M4D1D	82.2M	77.241M
802.11ax HEW160-BF_Nss1,(MCS3)_2TX	166.8M	155.202M	155MD1D	164.4M	154.483M
6.425-6.525GHz	-	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS3)_2TX	22.02M	19.13M	19M1D1D	21.75M	19.1M
802.11ax HEW40-BF_Nss1,(MCS3)_2TX	40.62M	37.841M	37M8D1D	40.08M	37.781M
802.11ax HEW80-BF_Nss1,(MCS3)_2TX	82.68M	77.361M	77M4D1D	81.6M	77.241M
802.11ax HEW160-BF_Nss1,(MCS3)_2TX	164.64M	155.202M	155MD1D	164.4M	155.202M
6.525-6.875GHz	-	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS3)_2TX	22.05M	19.13M	19M1D1D	21.57M	19.1M
802.11ax HEW40-BF_Nss1,(MCS3)_2TX	40.62M	37.841M	37M8D1D	40.2M	37.721M
802.11ax HEW80-BF_Nss1,(MCS3)_2TX	82.56M	77.481M	77M5D1D	81M	77.121M
802.11ax HEW160-BF_Nss1,(MCS3)_2TX	218.4M	155.202M	155MD1D	163.68M	154.723M
6.875-7.125GHz	-	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS3)_2TX	22.05M	19.13M	19M1D1D	21.51M	19.07M
802.11ax HEW40-BF_Nss1,(MCS3)_2TX	43.86M	37.781M	37M8D1D	40.26M	37.721M
802.11ax HEW80-BF_Nss1,(MCS3)_2TX	82.44M	77.241M	77M2D1D	81.6M	77.001M
802.11ax HEW160-BF_Nss1,(MCS3)_2TX	180M	154.963M	155MD1D	162M	154.723M

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-BF_Nss1,(MCS3)_2TX	-	-	-	-	-	-
5955MHz	Pass	Inf	21.9M	19.13M	21.75M	19.1M
6175MHz	Pass	Inf	21.78M	19.1M	21.81M	19.13M
6415MHz	Pass	Inf	21.87M	19.13M	22.08M	19.13M
6435MHz	Pass	Inf	22.02M	19.13M	21.9M	19.13M
6475MHz	Pass	Inf	21.78M	19.1M	21.99M	19.1M
6515MHz	Pass	Inf	21.75M	19.1M	21.75M	19.1M
6535MHz	Pass	Inf	22.05M	19.1M	21.78M	19.13M
6695MHz	Pass	Inf	21.81M	19.13M	21.78M	19.13M
6855MHz	Pass	Inf	21.78M	19.1M	21.57M	19.13M
6875MHz Straddle 6.525-6.875GHz	Pass	Inf	21.6M	19.1M	21.99M	19.1M
6875MHz Straddle 6.875-7.125GHz						
6895MHz	Pass	Inf	21.75M	19.07M	21.84M	19.13M
6995MHz	Pass	Inf	21.54M	19.13M	21.75M	19.13M
7095MHz	Pass	Inf	21.69M	19.13M	21.72M	19.13M
7115MHz	Pass	Inf	21.51M	19.1M	22.05M	19.13M
802.11ax HEW40-BF_Nss1,(MCS3)_2TX	-	-	-	-	-	-
5965MHz	Pass	Inf	40.5M	37.781M	40.32M	37.841M
6165MHz	Pass	Inf	40.32M	37.781M	40.92M	37.841M
6405MHz	Pass	Inf	40.26M	37.781M	40.38M	37.781M
6445MHz	Pass	Inf	40.08M	37.781M	40.38M	37.781M
6485MHz	Pass	Inf	40.2M	37.841M	40.14M	37.781M
6525MHz Straddle 6.425-6.525GHz	Pass	Inf	40.62M	37.781M	40.2M	37.781M
6525MHz Straddle 6.525-6.875GHz						
6565MHz	Pass	Inf	40.2M	37.781M	40.5M	37.841M
6685MHz	Pass	Inf	40.62M	37.781M	40.32M	37.781M
6845MHz	Pass	Inf	40.44M	37.781M	40.44M	37.781M
6885MHz Straddle 6.525-6.875GHz	Pass	Inf	40.44M	37.721M	40.38M	37.841M
6885MHz Straddle 6.875-7.125GHz						
6925MHz	Pass	Inf	43.86M	37.721M	40.56M	37.781M
7005MHz	Pass	Inf	40.44M	37.781M	40.5M	37.781M
7085MHz	Pass	Inf	40.26M	37.781M	40.32M	37.781M
802.11ax HEW80-BF_Nss1,(MCS3)_2TX	-	-	-	-	-	-
5985MHz	Pass	Inf	82.2M	77.361M	82.8M	77.361M
6145MHz	Pass	Inf	82.56M	77.241M	82.8M	77.241M
6385MHz	Pass	Inf	82.44M	77.241M	84.6M	77.361M
6465MHz	Pass	Inf	82.68M	77.241M	82.44M	77.361M
6545MHz Straddle 6.425-6.525GHz	Pass	Inf	81.6M	77.241M	82.68M	77.361M
6545MHz Straddle 6.525-6.875GHz						
6625MHz	Pass	Inf	82.56M	77.241M	82.2M	77.121M
6705MHz	Pass	Inf	82.2M	77.241M	82.56M	77.121M
6785MHz	Pass	Inf	81M	77.481M	81.6M	77.121M
6865MHz Straddle 6.525-6.875GHz	Pass	Inf	82.44M	77.361M	82.2M	77.361M
6865MHz Straddle 6.875-7.125GHz						
6945MHz	Pass	Inf	81.6M	77.241M	82.44M	77.241M
7025MHz	Pass	Inf	82.44M	77.001M	82.08M	77.121M
802.11ax HEW160-BF_Nss1,(MCS3)_2TX	-	-	-	-	-	-
6025MHz	Pass	Inf	164.88M	154.483M	165.36M	154.483M
6185MHz	Pass	Inf	164.4M	155.202M	166.8M	154.963M
6345MHz	Pass	Inf	164.64M	154.723M	164.64M	154.963M
6505MHz Straddle 6.425-6.525GHz	Pass	Inf	164.64M	155.202M	164.4M	155.202M
6505MHz Straddle 6.525-6.875GHz						
6665MHz	Pass	Inf	165.36M	154.963M	163.68M	154.723M
6825MHz Straddle 6.525-6.875GHz	Pass	Inf	218.4M	155.202M	166.08M	154.963M
6825MHz Straddle 6.875-7.125GHz						

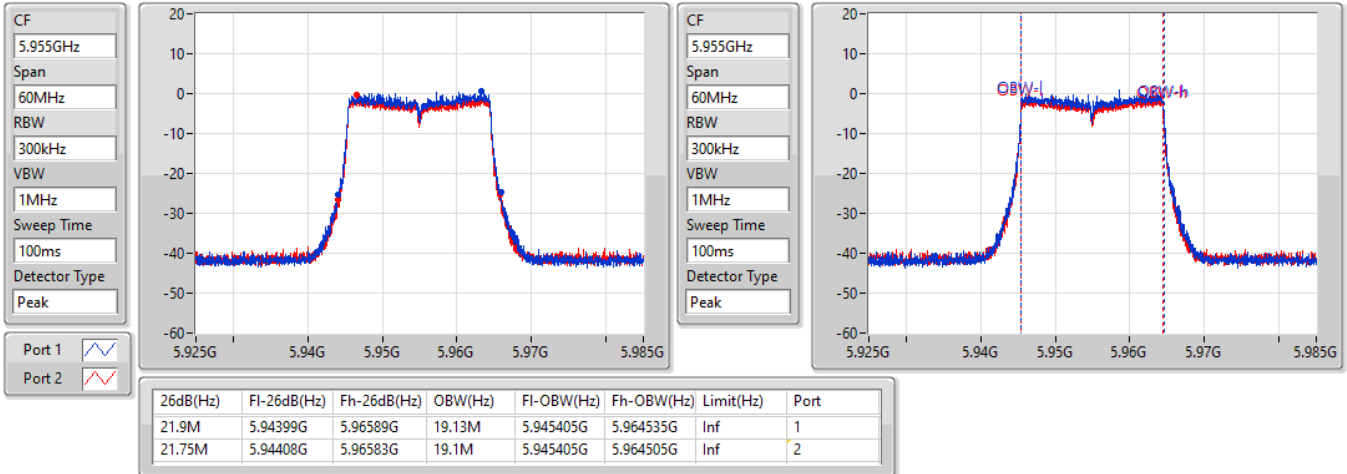


Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
6985MHz	Pass	Inf	162M	154.723M	180M	154.963M

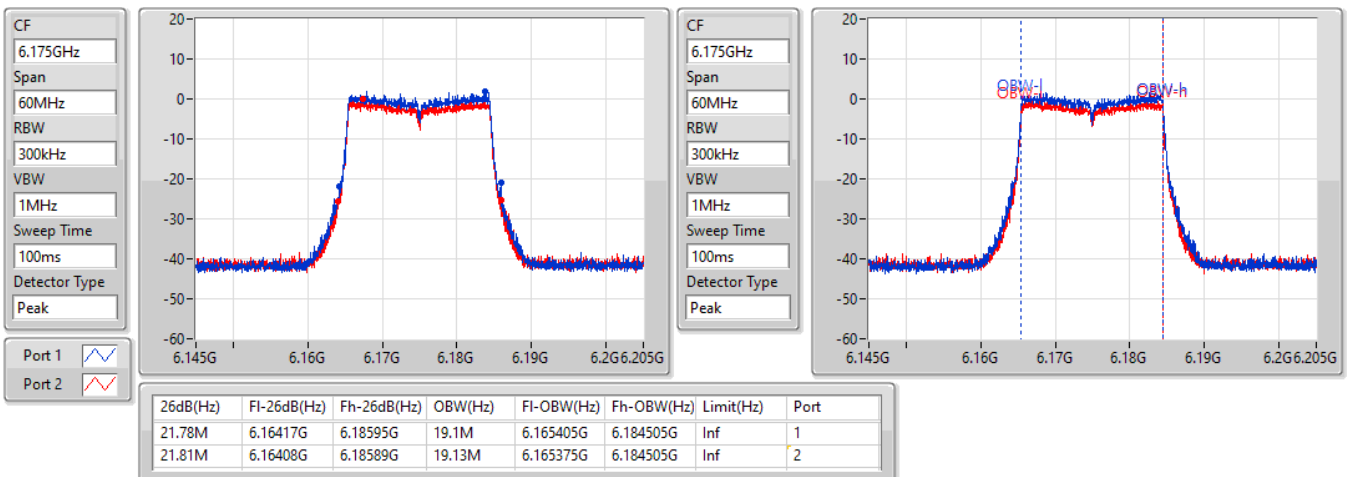
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11ax HEW20-BF_Nss1,(MCS3)_2TX
EBW
5955MHz

24/05/2022

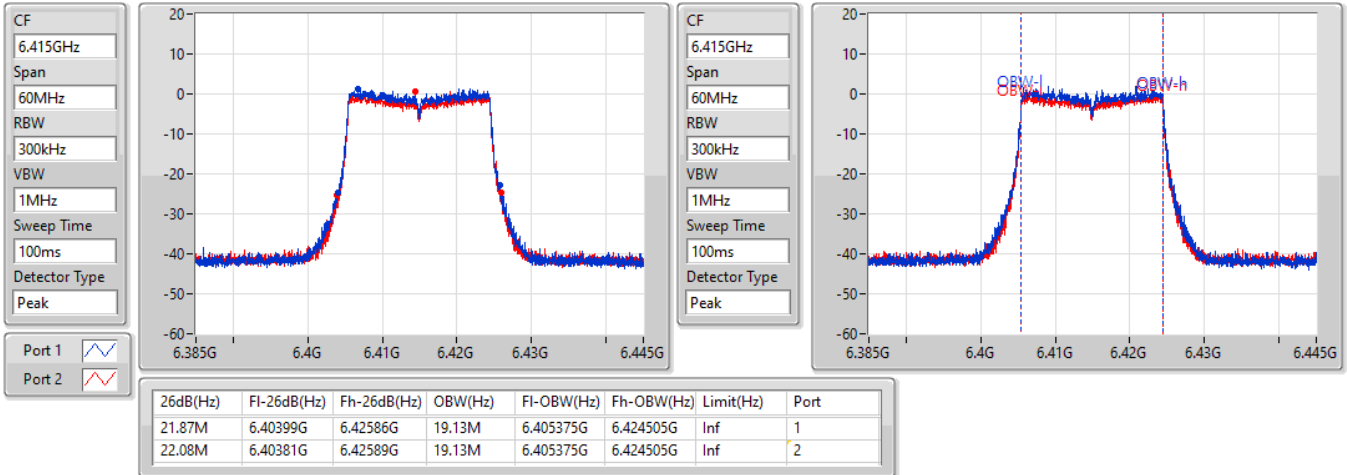

802.11ax HEW20-BF_Nss1,(MCS3)_2TX
EBW
6175MHz

24/05/2022

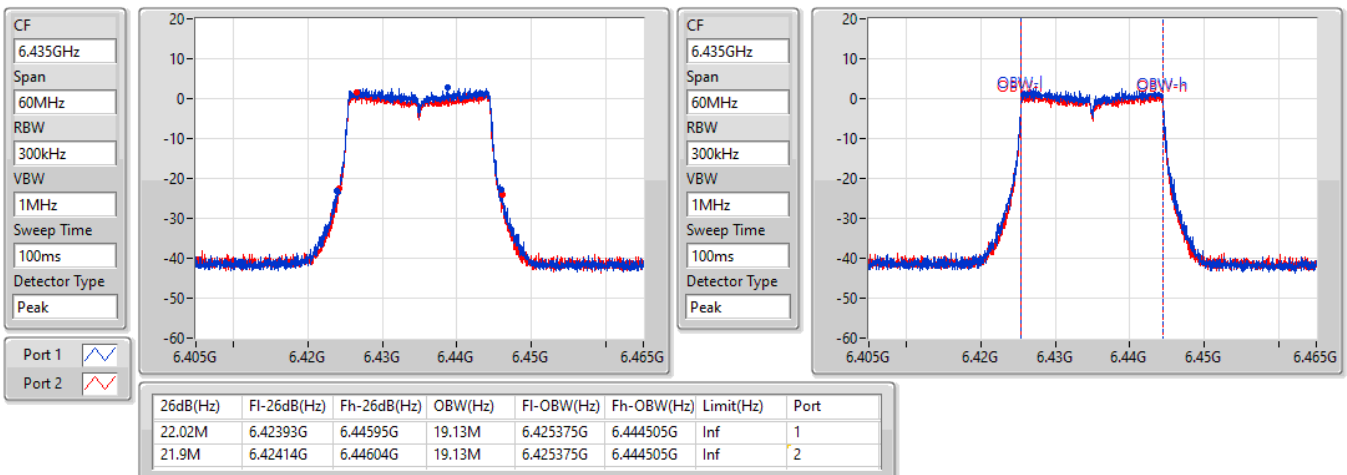


802.11ax HEW20-BF_Nss1,(MCS3)_2TX
EBW
6415MHz

24/05/2022

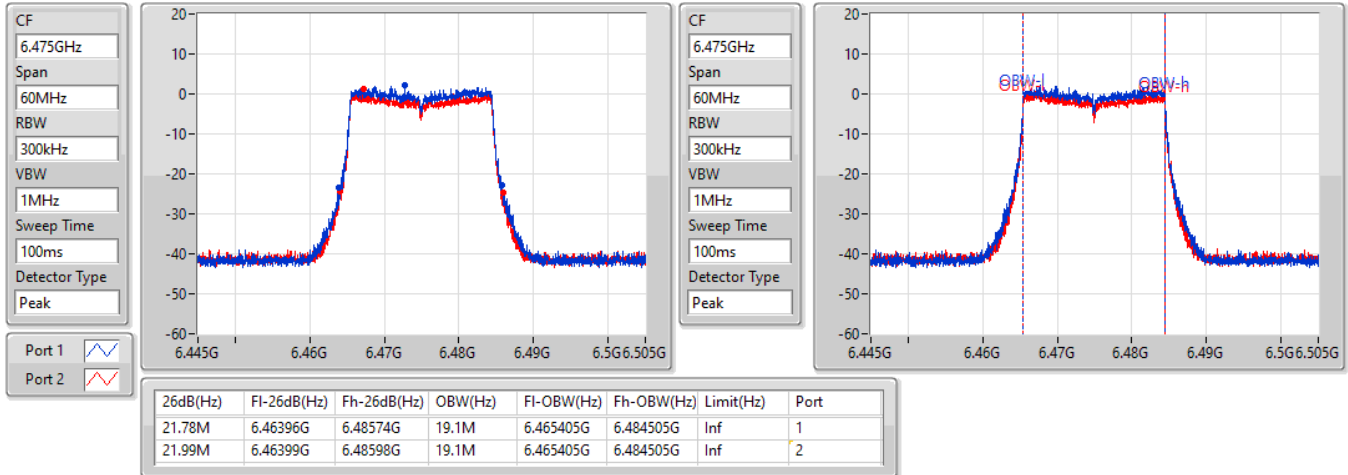

802.11ax HEW20-BF_Nss1,(MCS3)_2TX
EBW
6435MHz

24/05/2022

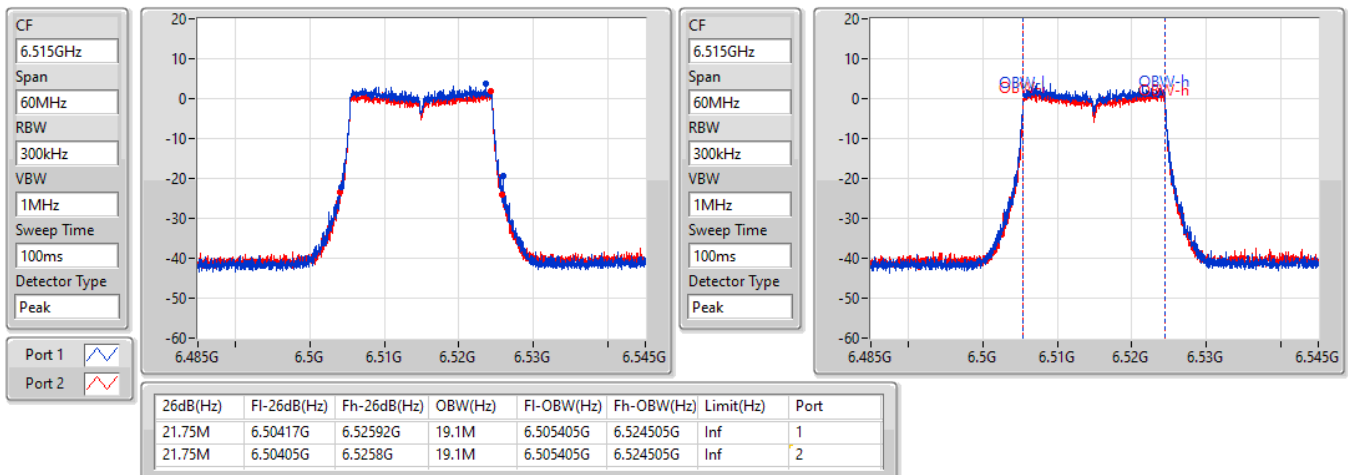


802.11ax HEW20-BF_Nss1,(MCS3)_2TX
EBW
6475MHz

24/05/2022

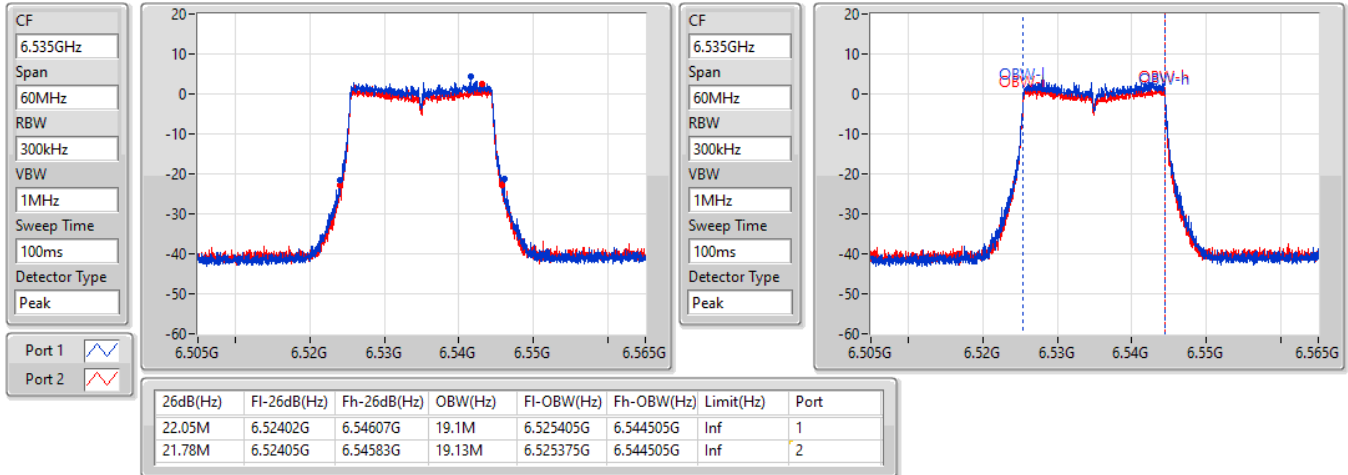

802.11ax HEW20-BF_Nss1,(MCS3)_2TX
EBW
6515MHz

24/05/2022

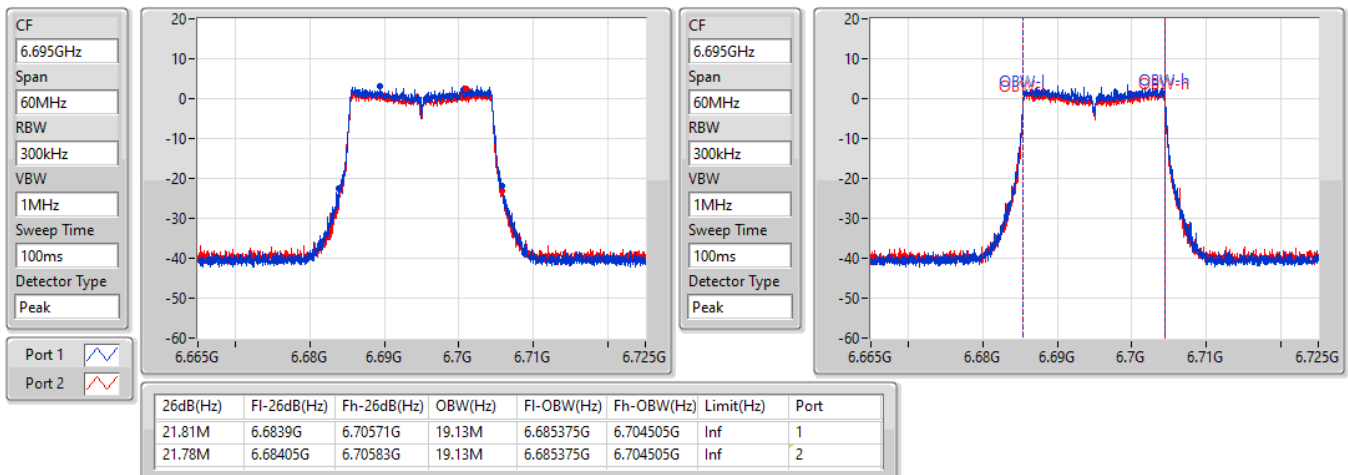


802.11ax HEW20-BF_Nss1,(MCS3)_2TX
EBW
6535MHz

24/05/2022

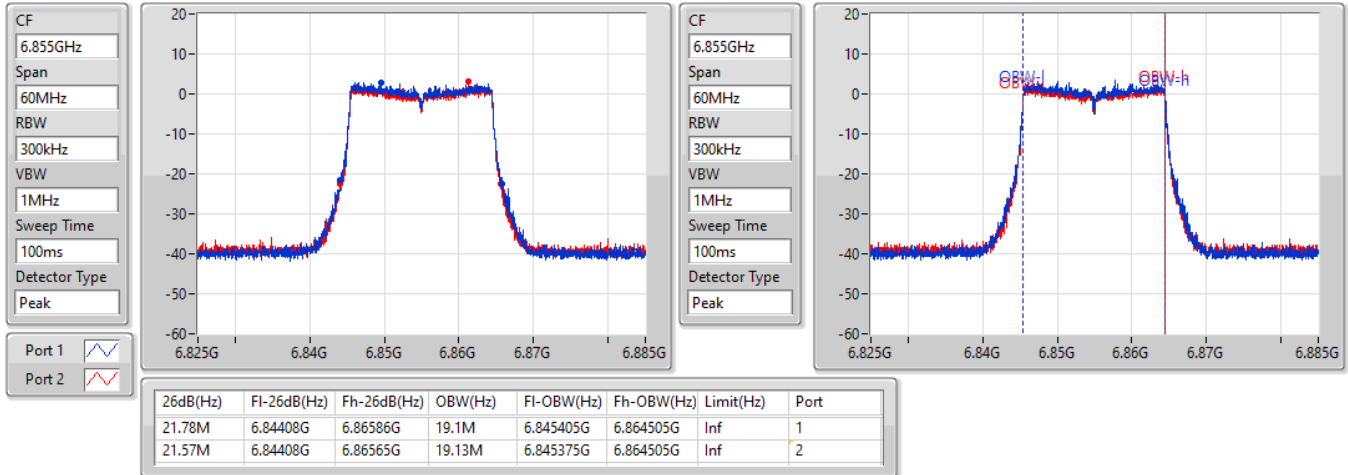

802.11ax HEW20-BF_Nss1,(MCS3)_2TX
EBW
6695MHz

24/05/2022

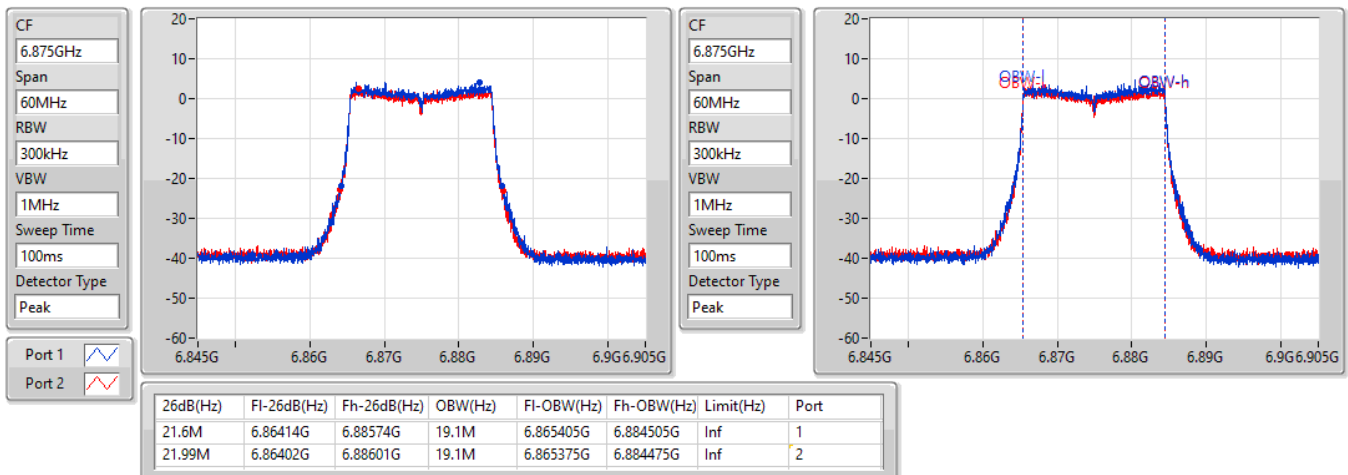


802.11ax HEW20-BF_Nss1,(MCS3)_2TX
EBW
6855MHz

24/05/2022


802.11ax HEW20-BF_Nss1,(MCS3)_2TX
EBW
6875MHz Straddle 6.525-6.875GHz

24/05/2022

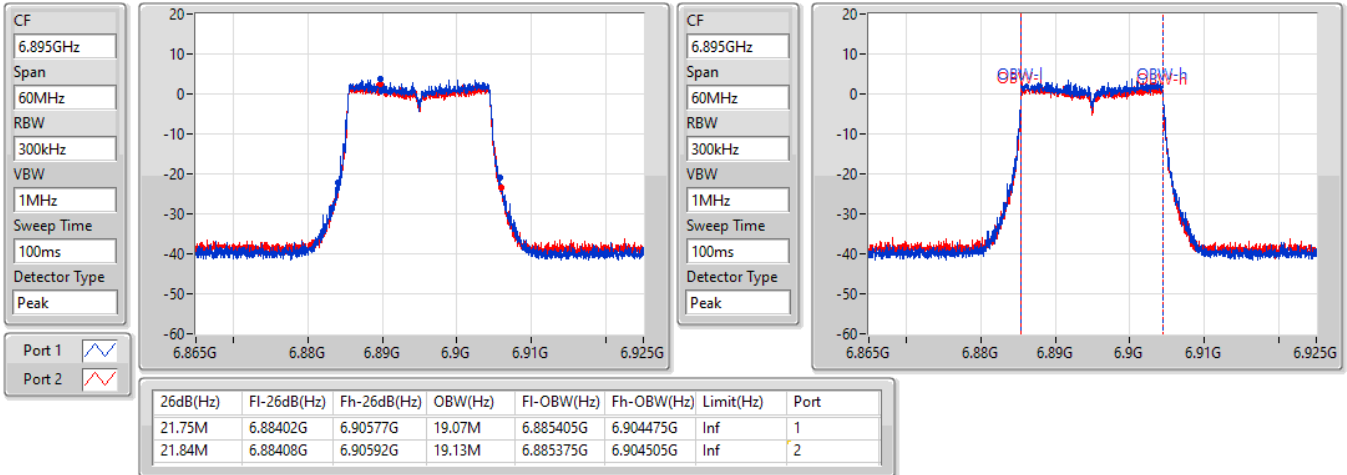


802.11ax HEW20-BF_Nss1,(MCS3)_2TX

EBW

6895MHz

24/05/2022

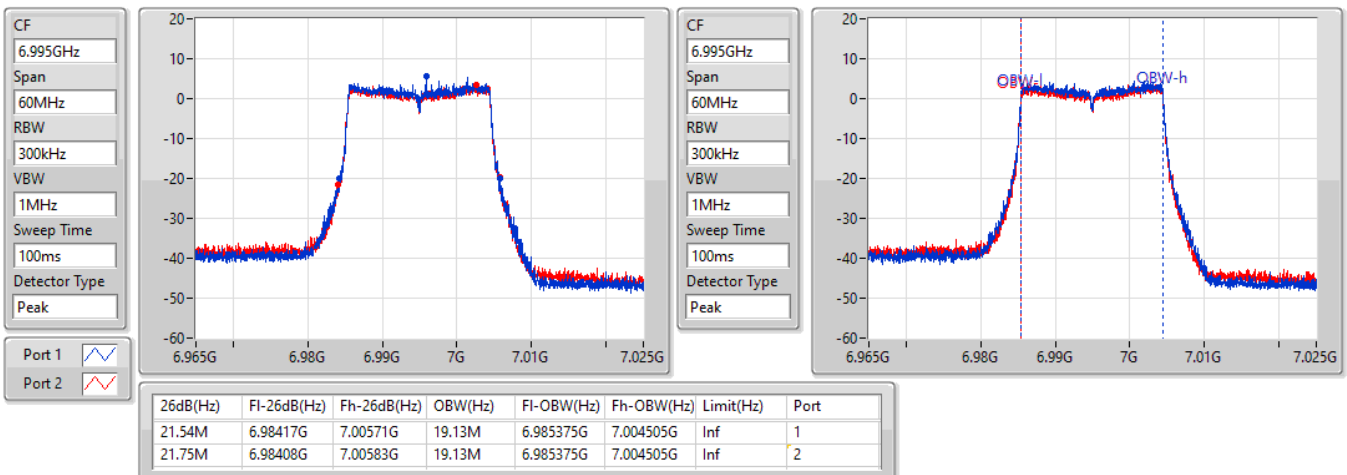


802.11ax HEW20-BF_Nss1,(MCS3)_2TX

EBW

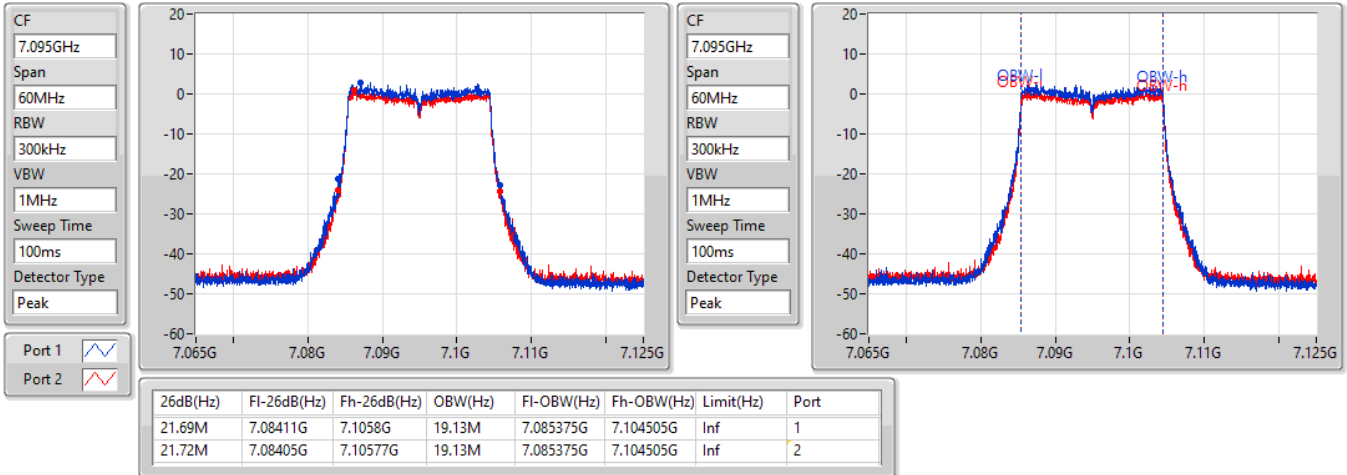
6995MHz

24/05/2022

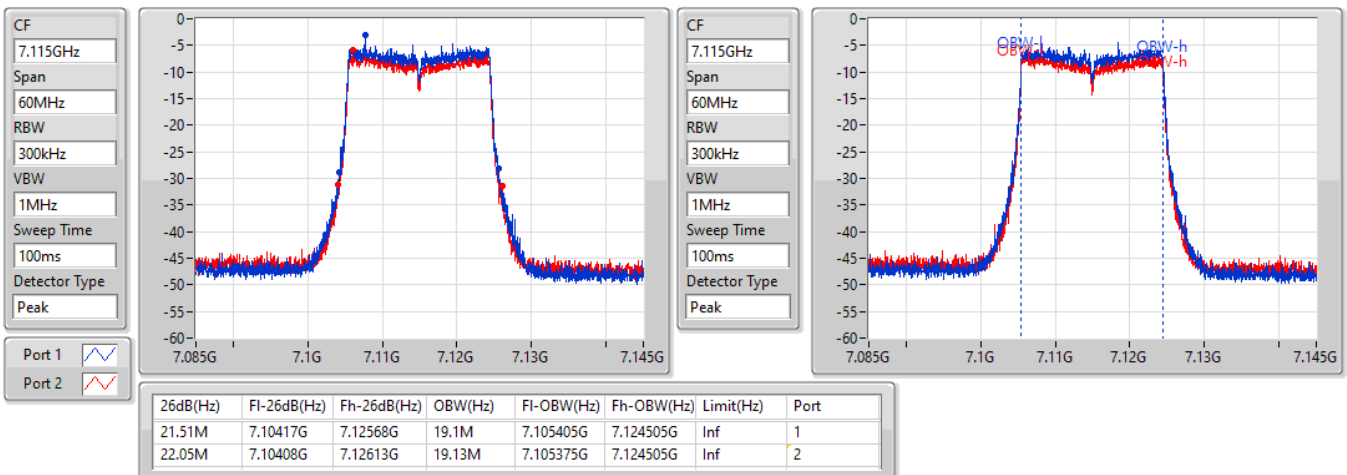


802.11ax HEW20-BF_Nss1,(MCS3)_2TX
EBW
7095MHz

24/05/2022

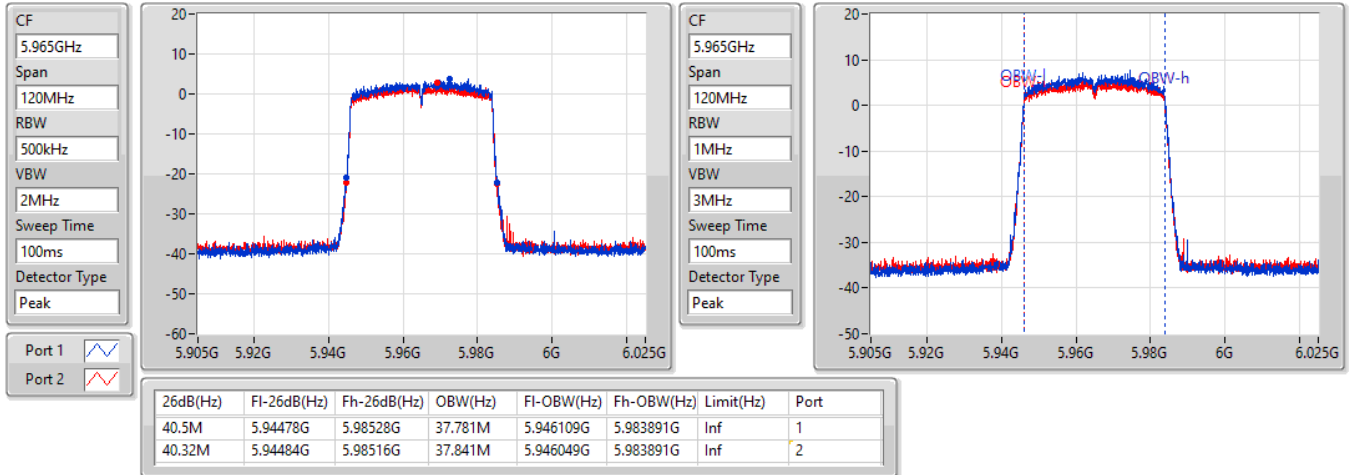

802.11ax HEW20-BF_Nss1,(MCS3)_2TX
EBW
7115MHz

24/05/2022

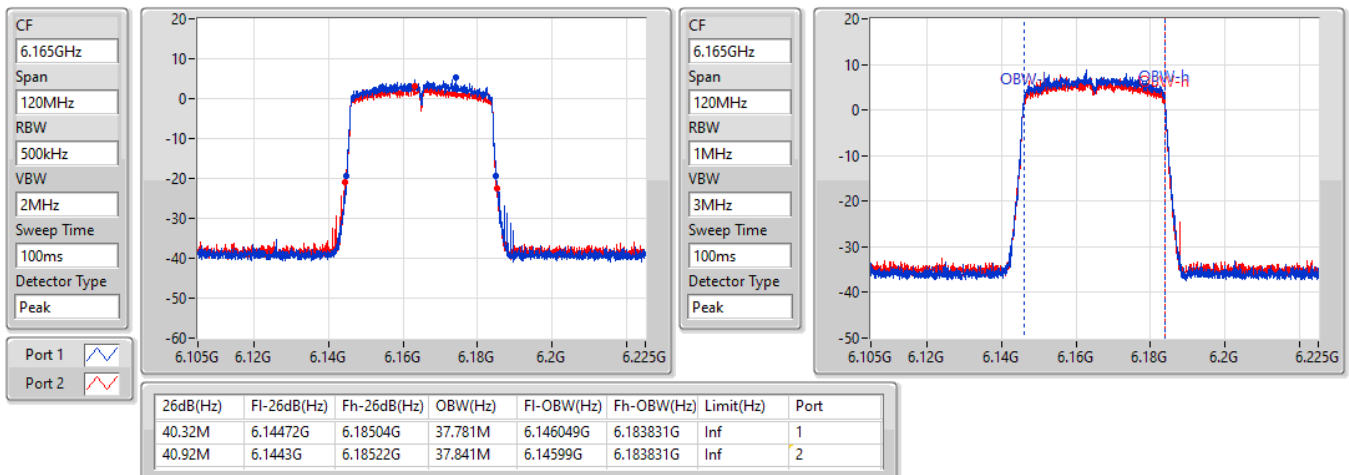


802.11ax HEW40-BF_Nss1,(MCS3)_2TX
EBW
5965MHz

24/05/2022

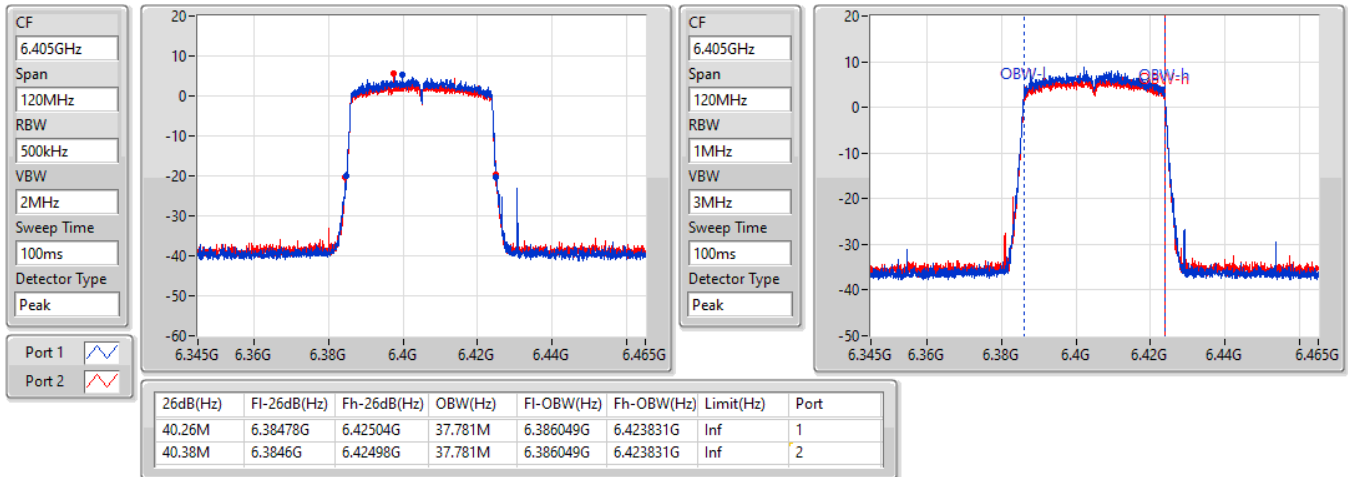

802.11ax HEW40-BF_Nss1,(MCS3)_2TX
EBW
6165MHz

24/05/2022

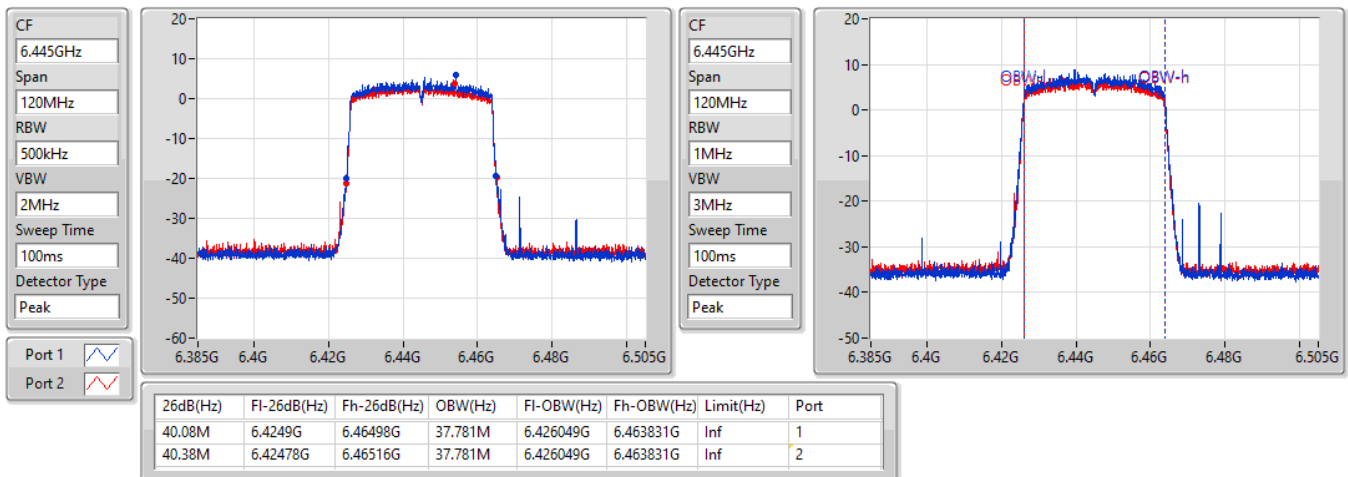


802.11ax HEW40-BF_Nss1,(MCS3)_2TX
EBW
6405MHz

24/05/2022

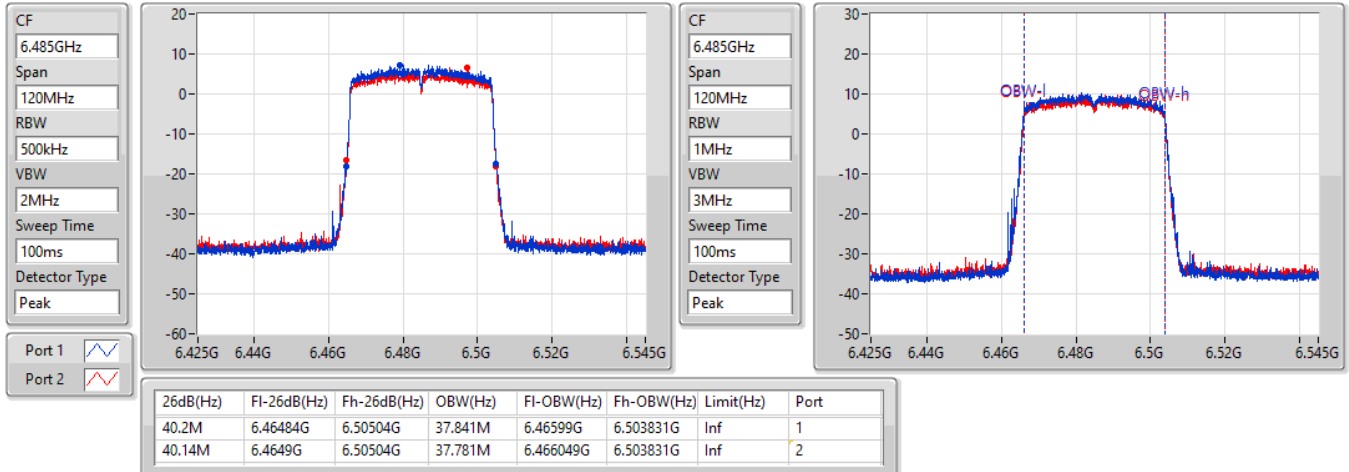

802.11ax HEW40-BF_Nss1,(MCS3)_2TX
EBW
6445MHz

24/05/2022

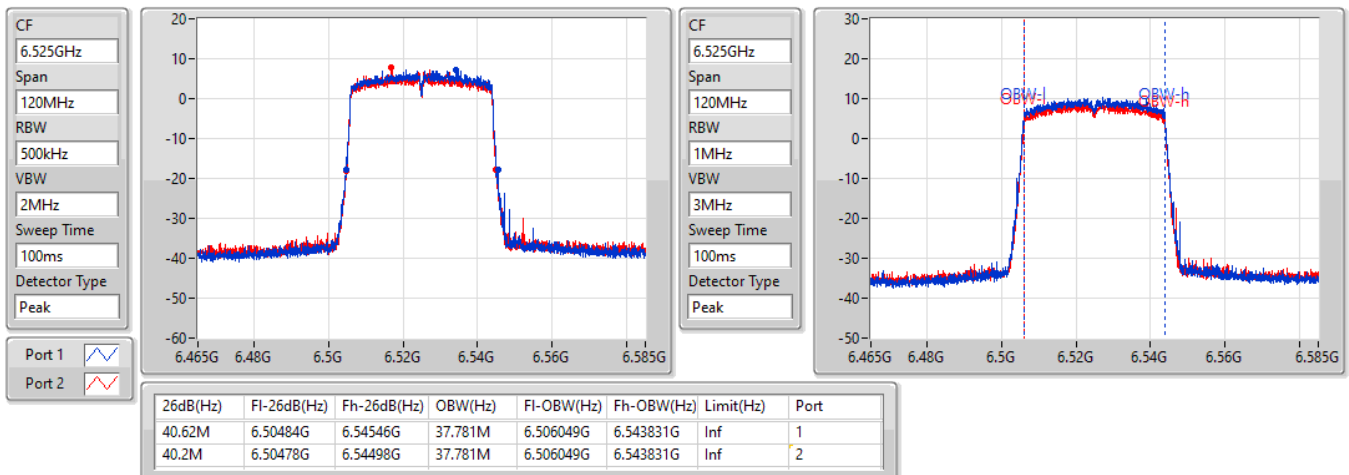


802.11ax HEW40-BF_Nss1,(MCS3)_2TX
EBW
6485MHz

24/05/2022

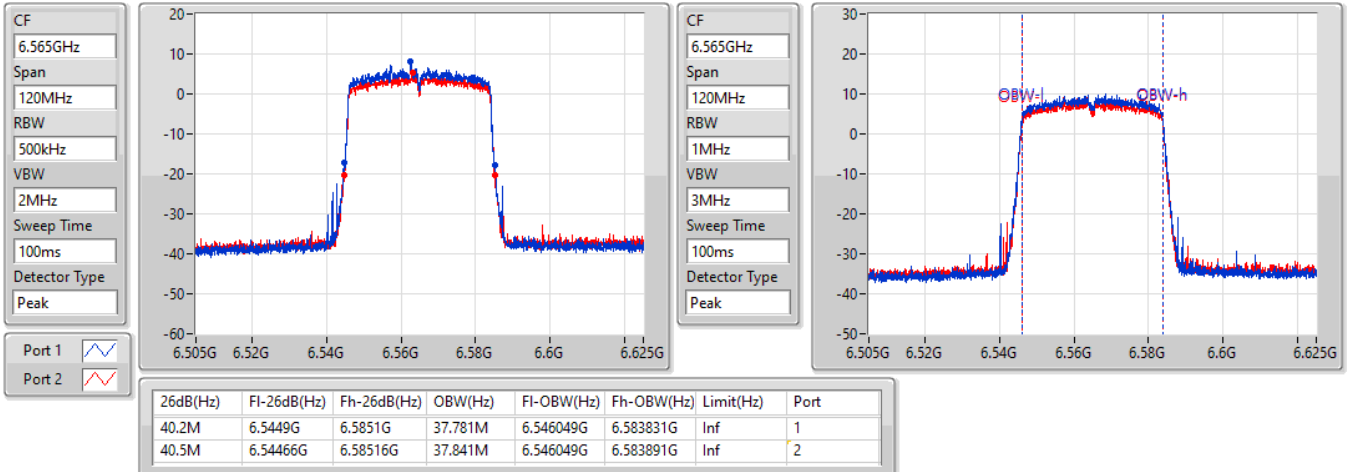

802.11ax HEW40-BF_Nss1,(MCS3)_2TX
EBW
6525MHz Straddle 6.425-6.525GHz

24/05/2022

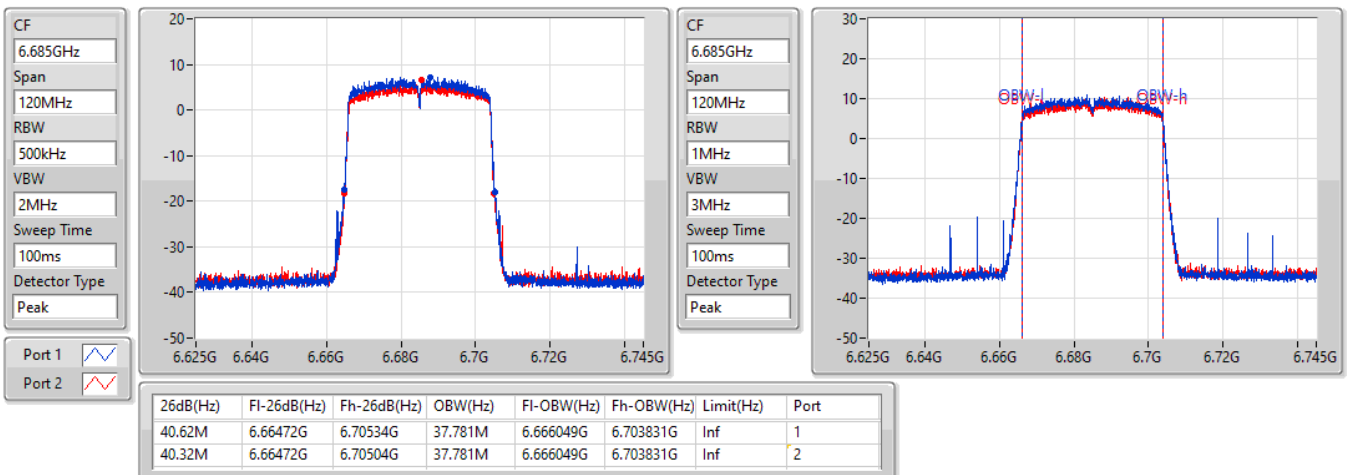


802.11ax HEW40-BF_Nss1,(MCS3)_2TX
EBW
6565MHz

24/05/2022

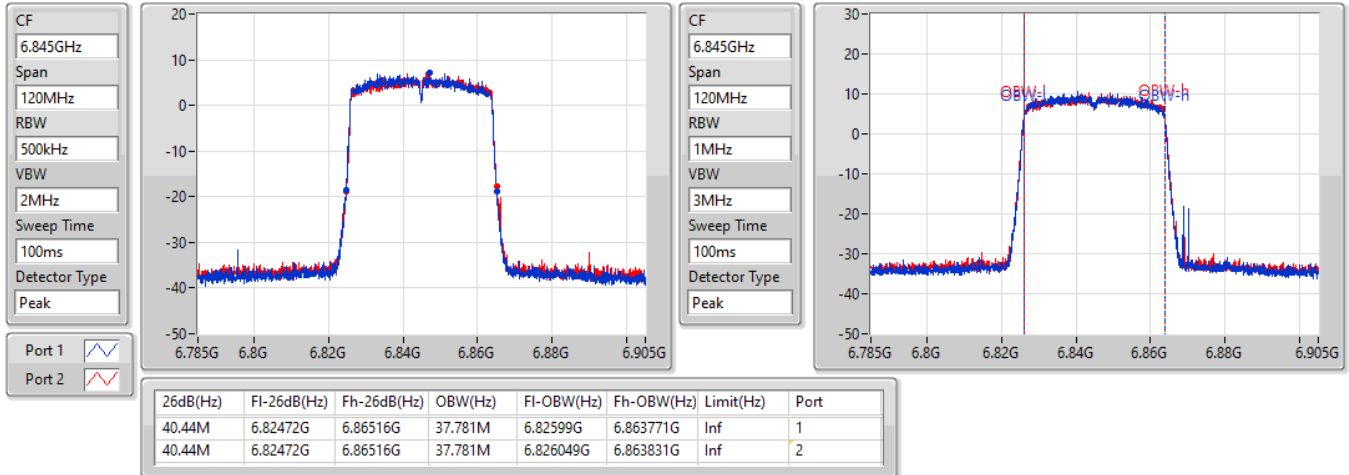

802.11ax HEW40-BF_Nss1,(MCS3)_2TX
EBW
6685MHz

24/05/2022

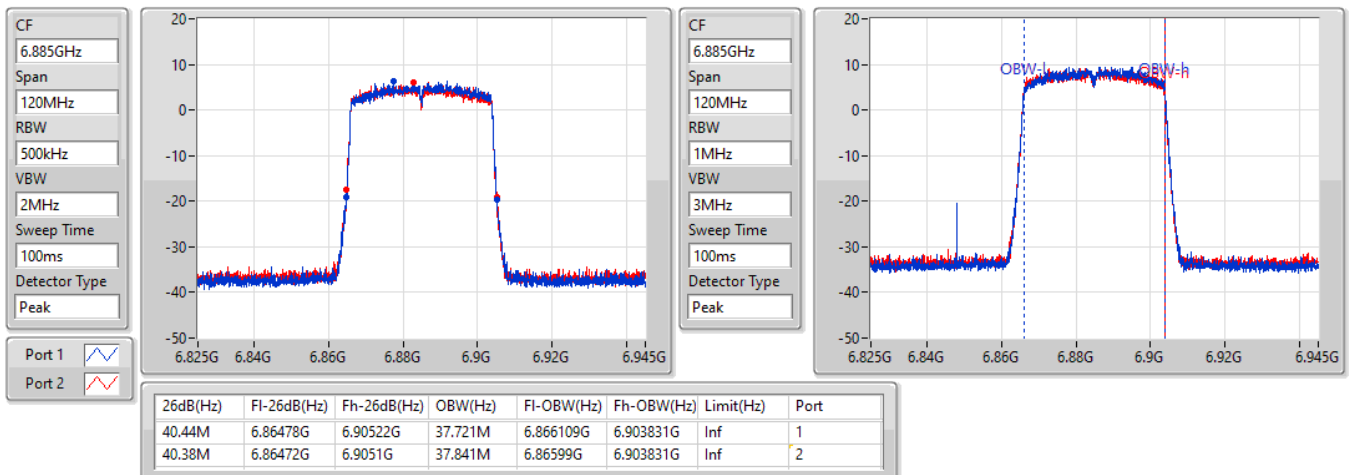


802.11ax HEW40-BF_Nss1,(MCS3)_2TX
EBW
6845MHz

24/05/2022

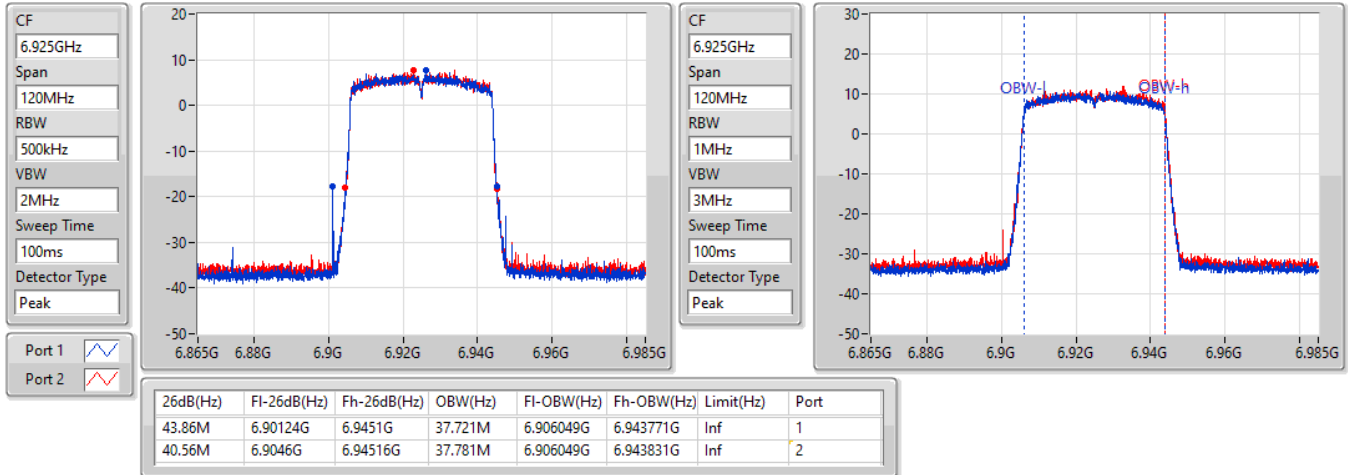

802.11ax HEW40-BF_Nss1,(MCS3)_2TX
EBW
6885MHz Straddle 6.525-6.875GHz

24/05/2022

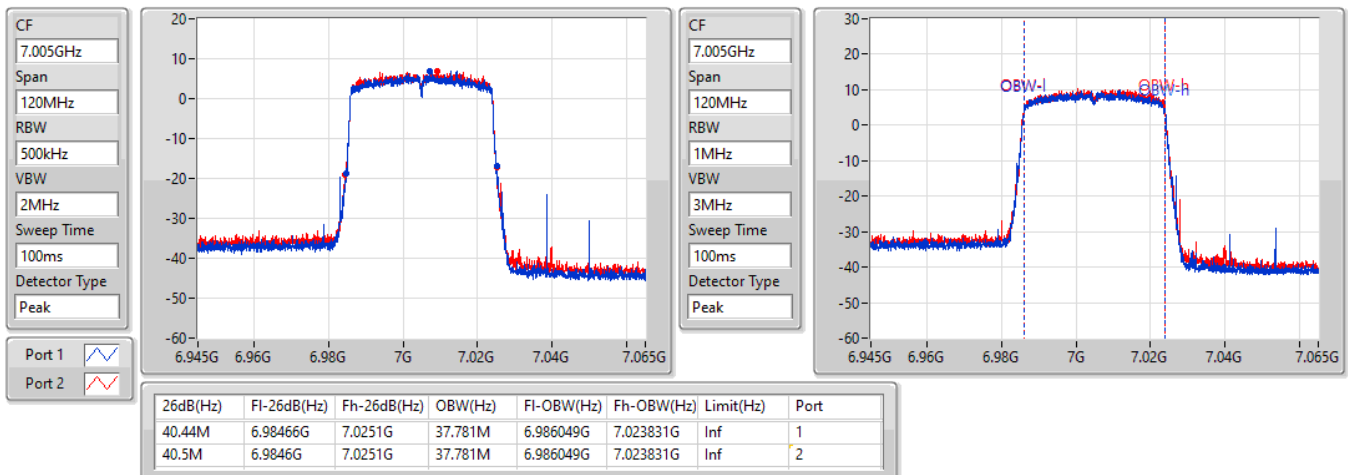


802.11ax HEW40-BF_Nss1,(MCS3)_2TX
EBW
6925MHz

24/05/2022

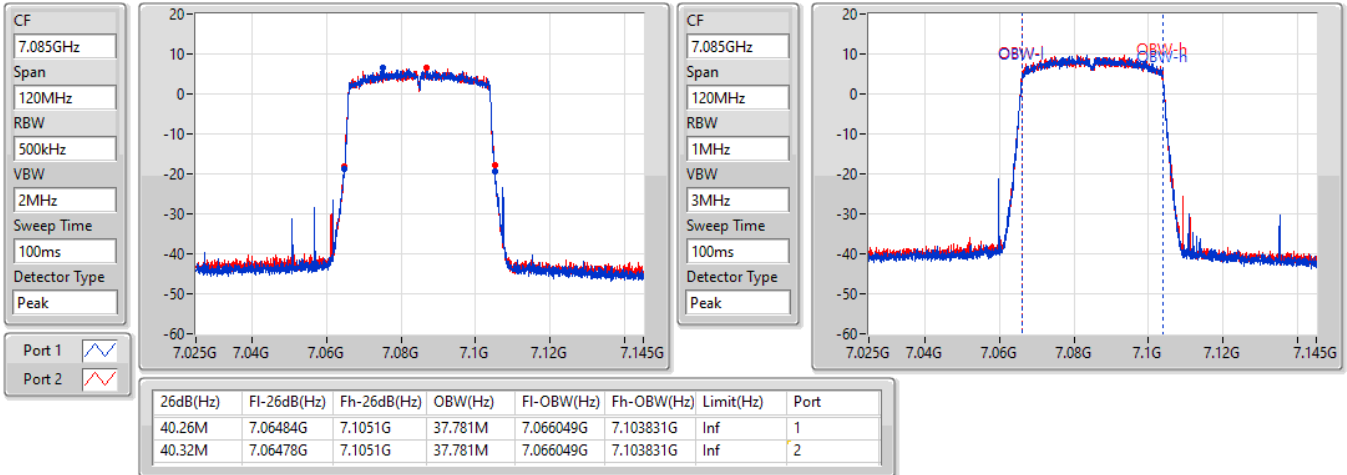

802.11ax HEW40-BF_Nss1,(MCS3)_2TX
EBW
7005MHz

24/05/2022

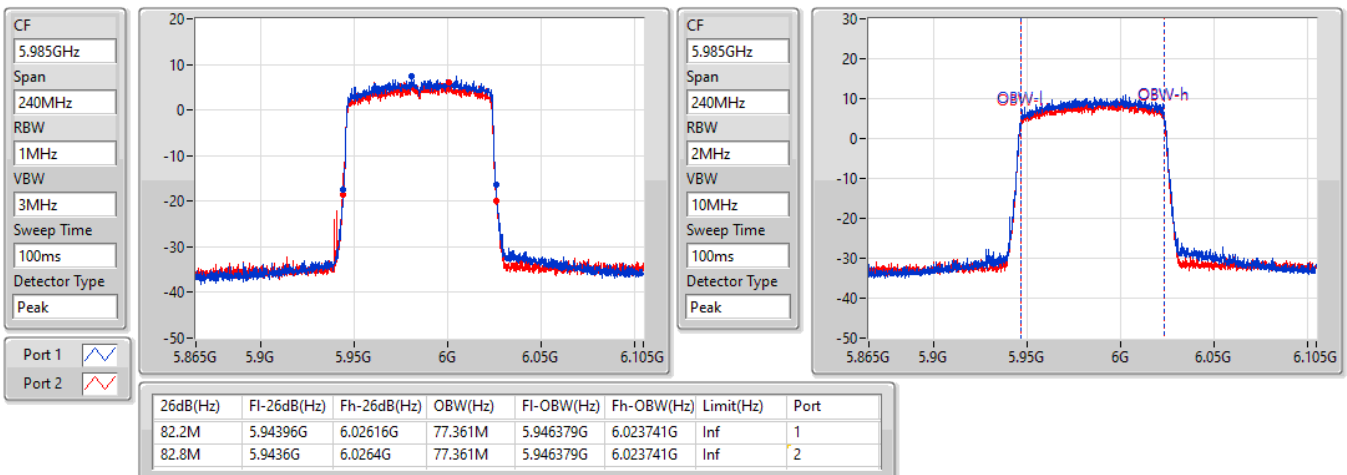


802.11ax HEW40-BF_Nss1,(MCS3)_2TX
EBW
7085MHz

24/05/2022

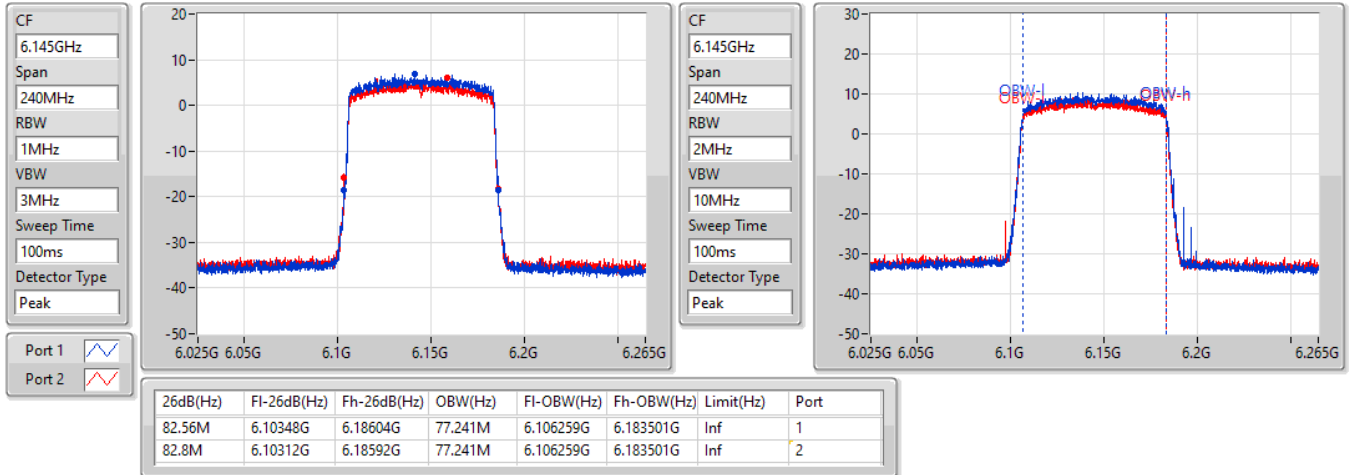

802.11ax HEW80-BF_Nss1,(MCS3)_2TX
EBW
5985MHz

24/05/2022

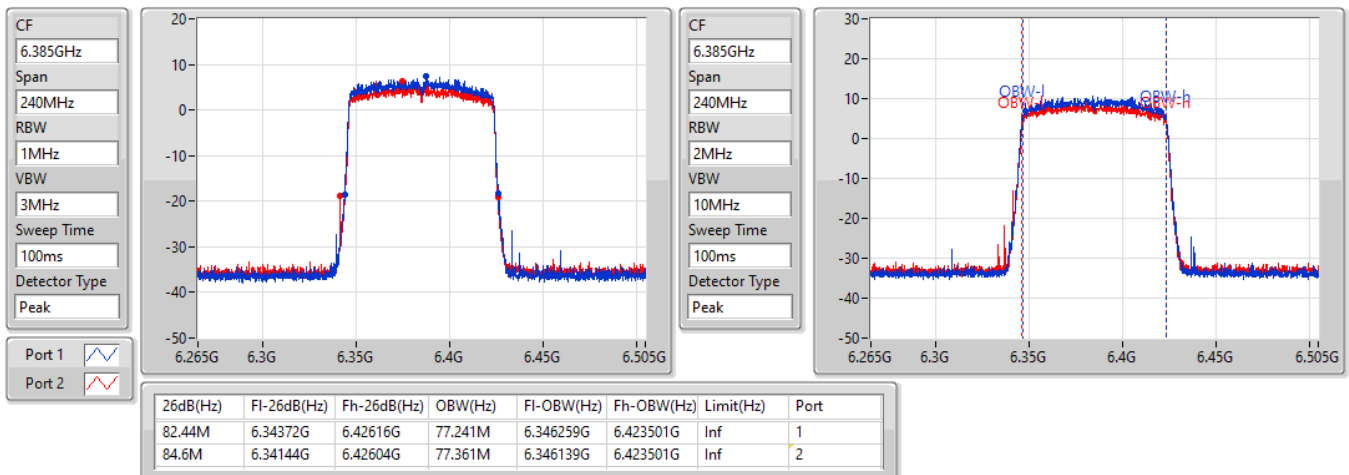


802.11ax HEW80-BF_Nss1,(MCS3)_2TX
EBW
6145MHz

24/05/2022

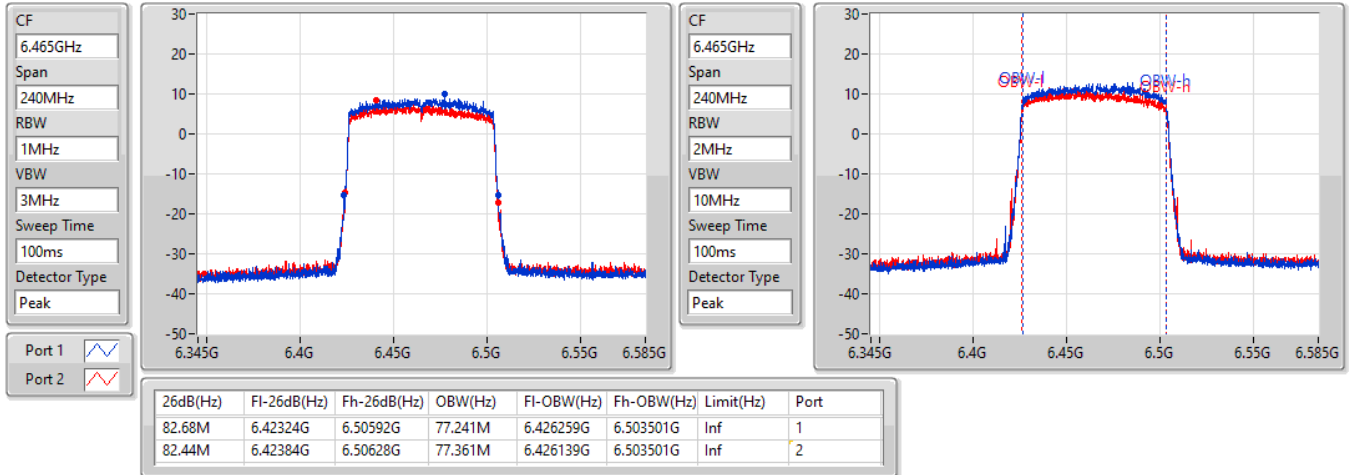

802.11ax HEW80-BF_Nss1,(MCS3)_2TX
EBW
6385MHz

24/05/2022

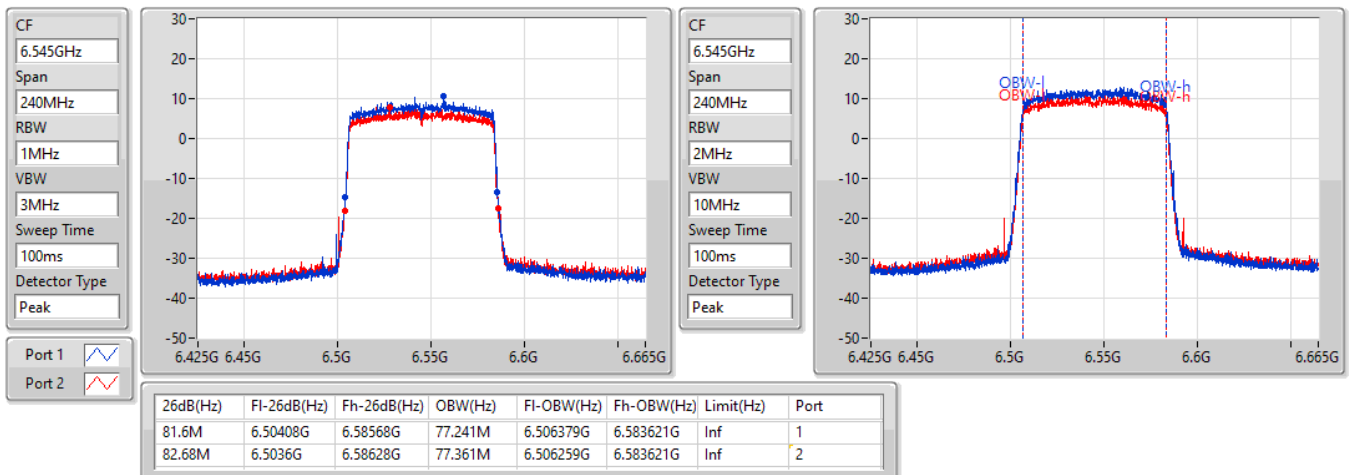


802.11ax HEW80-BF_Nss1,(MCS3)_2TX
EBW
6465MHz

24/05/2022

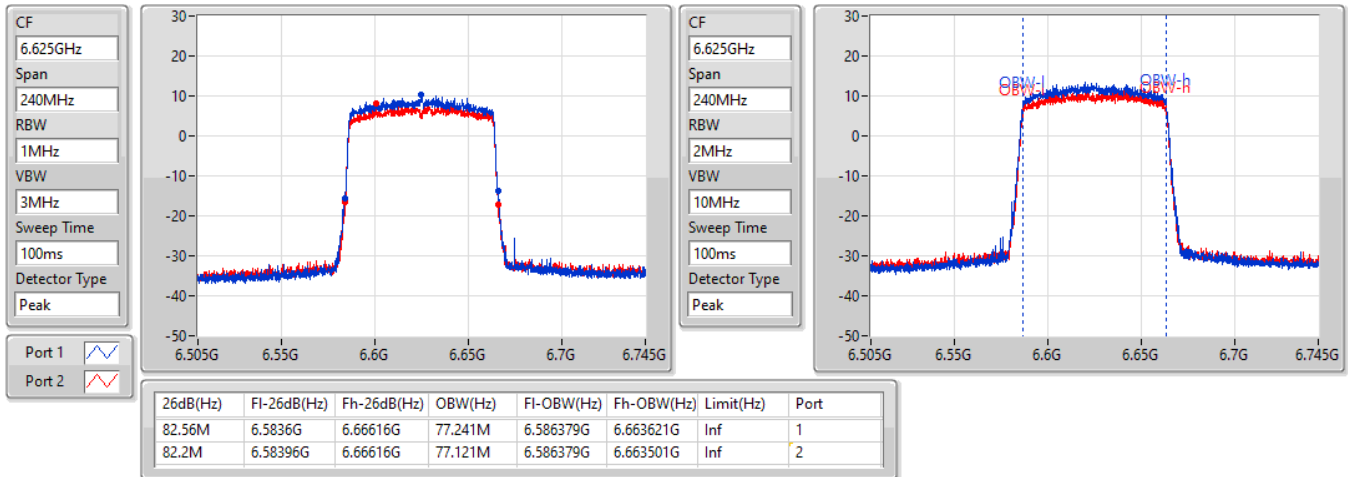

802.11ax HEW80-BF_Nss1,(MCS3)_2TX
EBW
6545MHz Straddle 6.425-6.525GHz

24/05/2022

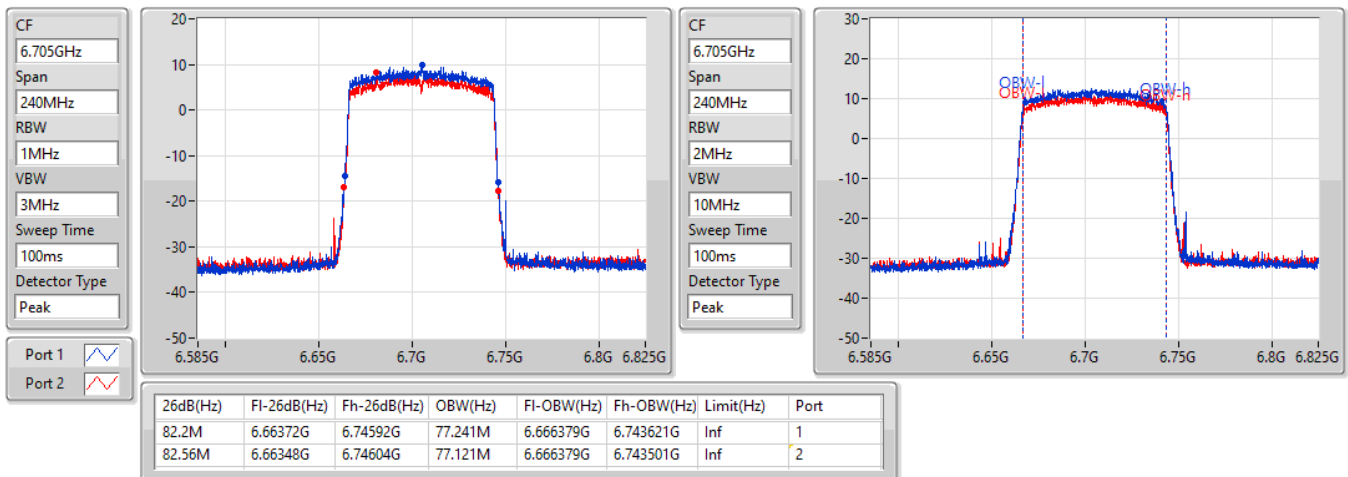


802.11ax HEW80-BF_Nss1,(MCS3)_2TX
EBW
6625MHz

24/05/2022

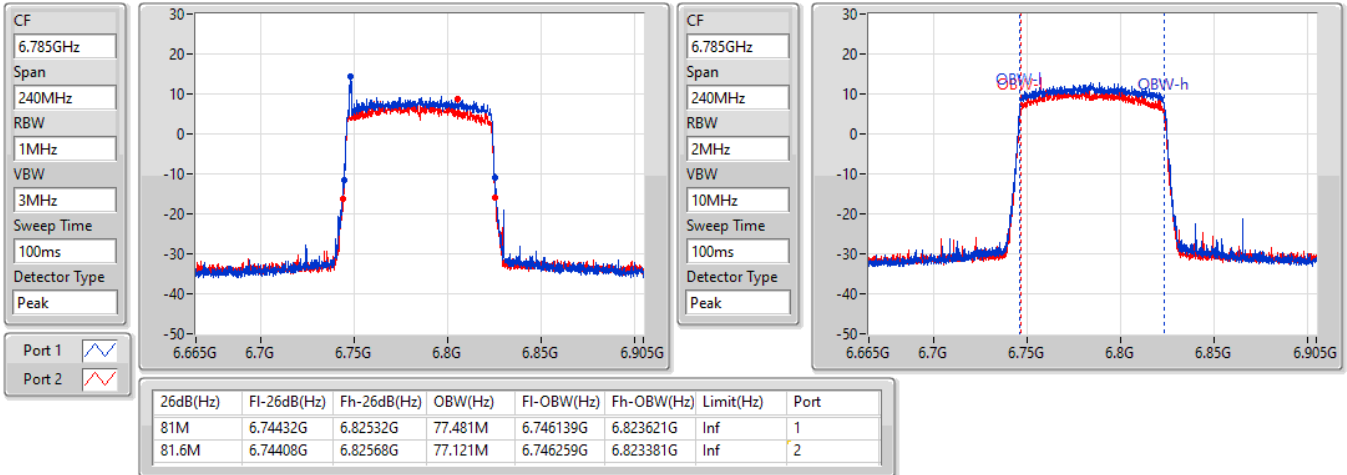

802.11ax HEW80-BF_Nss1,(MCS3)_2TX
EBW
6705MHz

24/05/2022

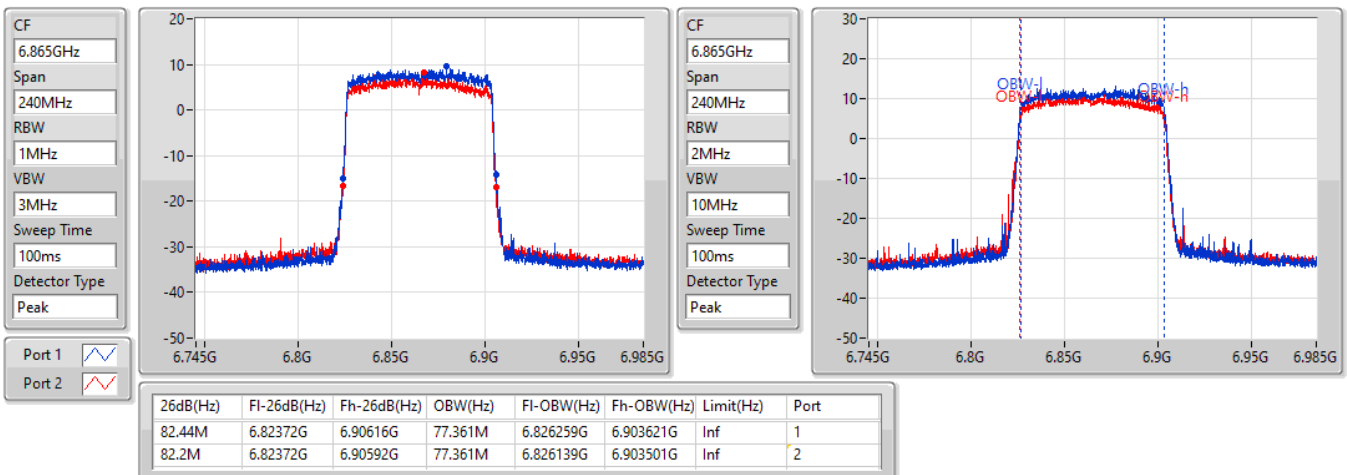


802.11ax HEW80-BF_Nss1,(MCS3)_2TX
EBW
6785MHz

24/05/2022

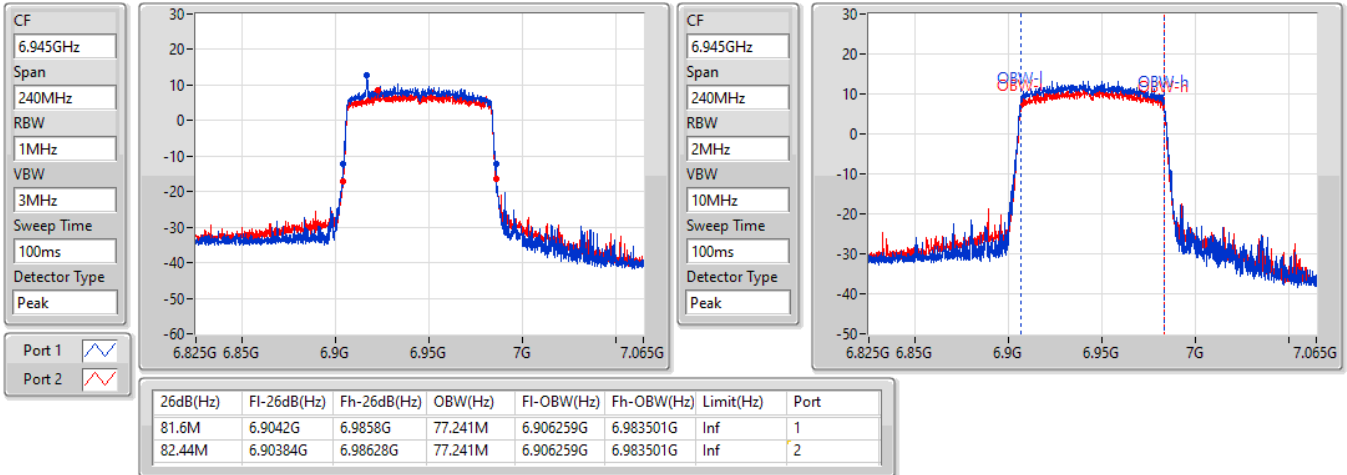

802.11ax HEW80-BF_Nss1,(MCS3)_2TX
EBW
6865MHz Straddle 6.525-6.875GHz

24/05/2022

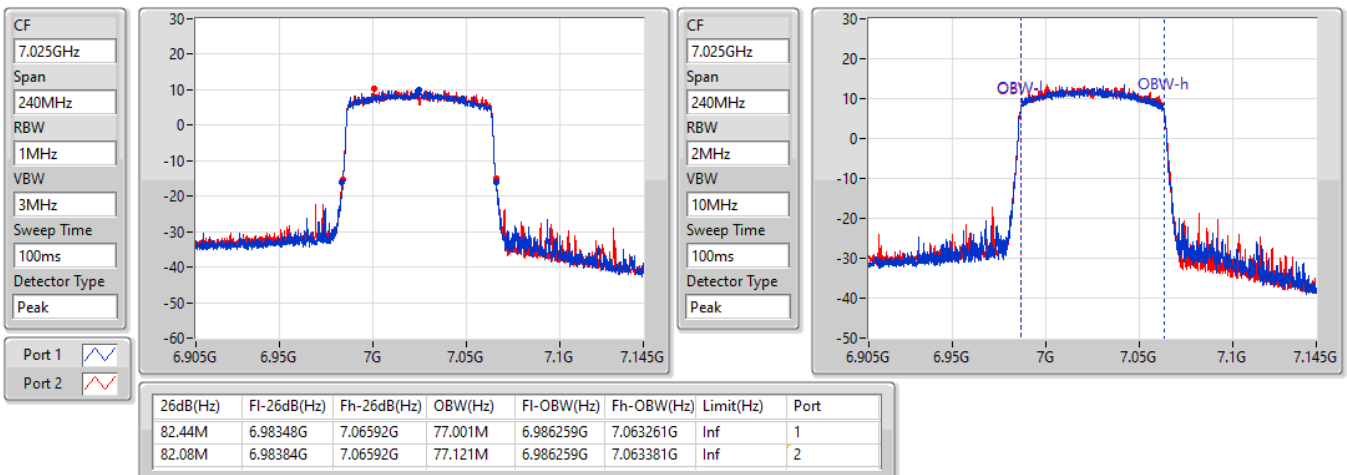


802.11ax HEW80-BF_Nss1,(MCS3)_2TX
EBW
6945MHz

24/05/2022

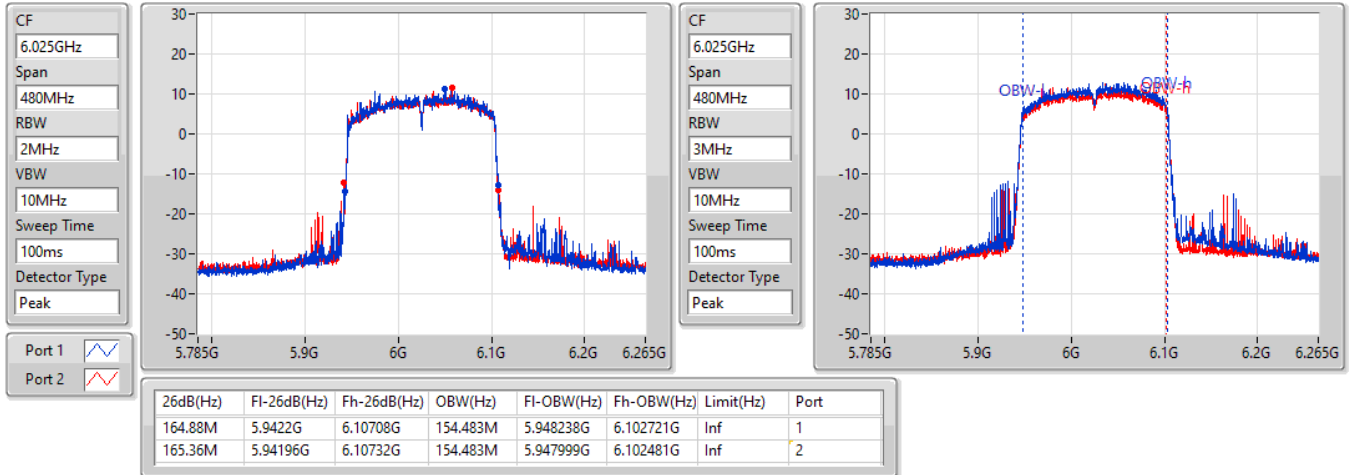

802.11ax HEW80-BF_Nss1,(MCS3)_2TX
EBW
7025MHz

24/05/2022

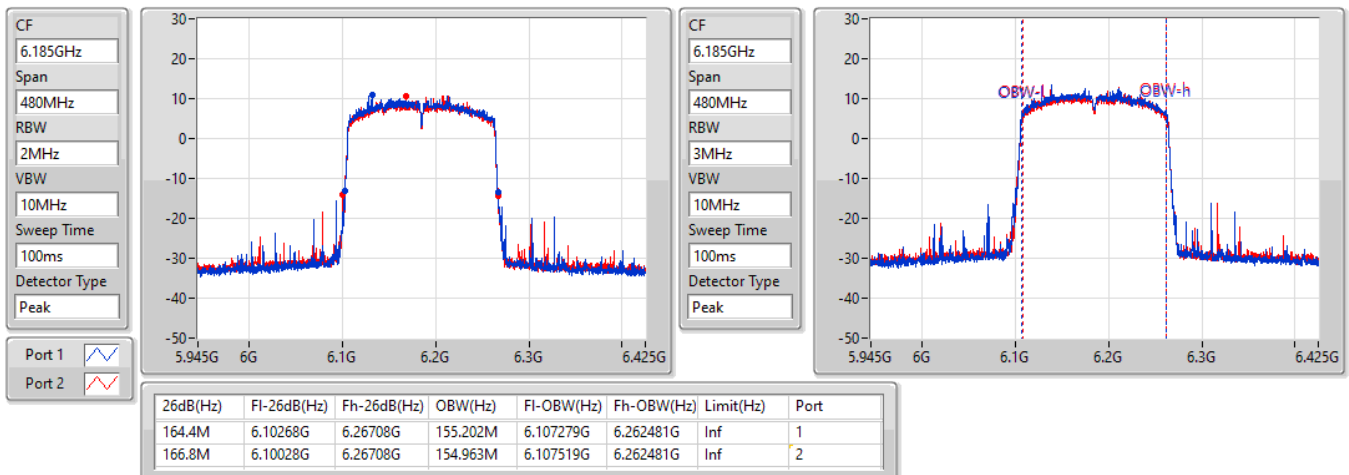


802.11ax HEW160-BF_Nss1,(MCS3)_2TX
EBW
6025MHz

24/05/2022

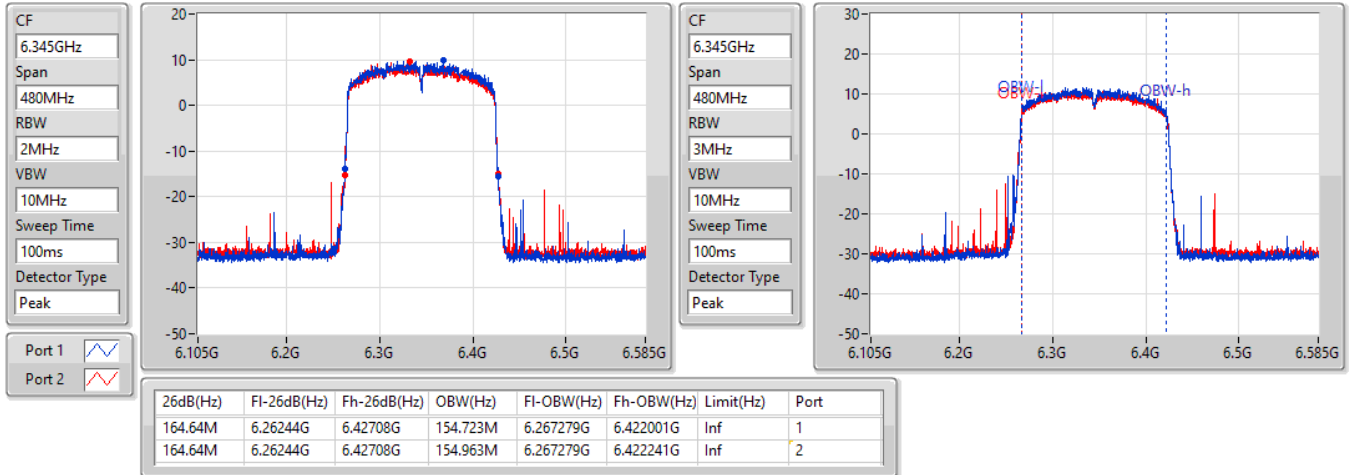

802.11ax HEW160-BF_Nss1,(MCS3)_2TX
EBW
6185MHz

24/05/2022

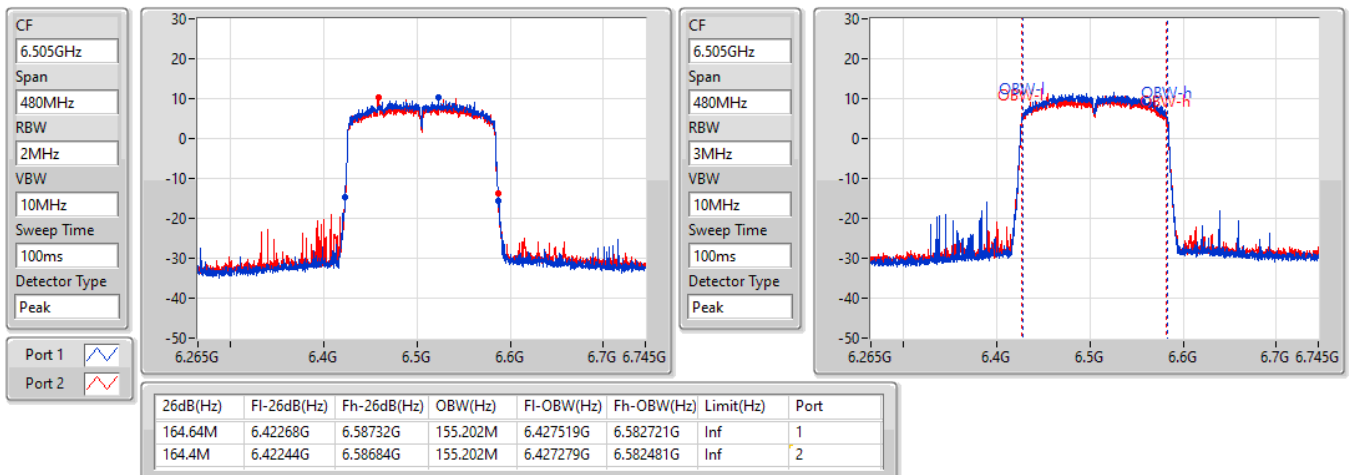


802.11ax HEW160-BF_Nss1,(MCS3)_2TX
EBW
6345MHz

24/05/2022

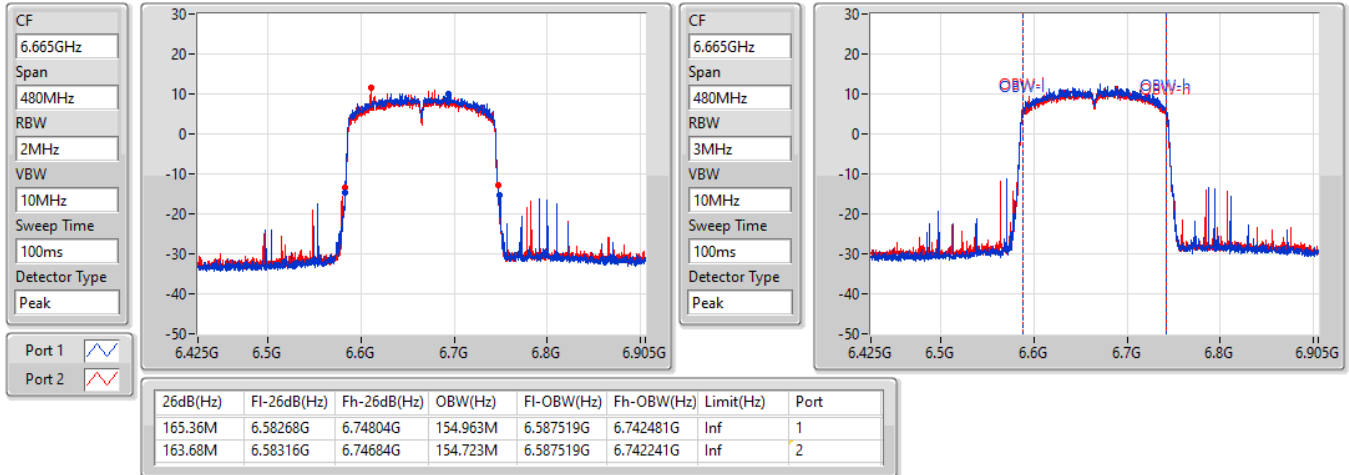

802.11ax HEW160-BF_Nss1,(MCS3)_2TX
EBW
6505MHz Straddle 6.425-6.525GHz

24/05/2022

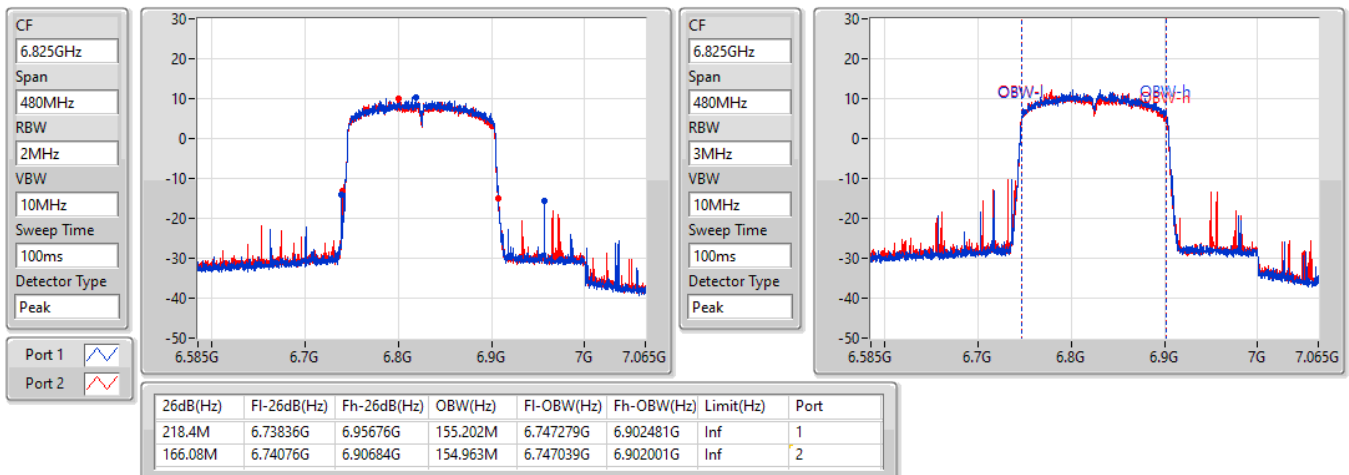


802.11ax HEW160-BF_Nss1,(MCS3)_2TX
EBW
6665MHz

24/05/2022


802.11ax HEW160-BF_Nss1,(MCS3)_2TX
EBW
6825MHz Straddle 6.525-6.875GHz

24/05/2022

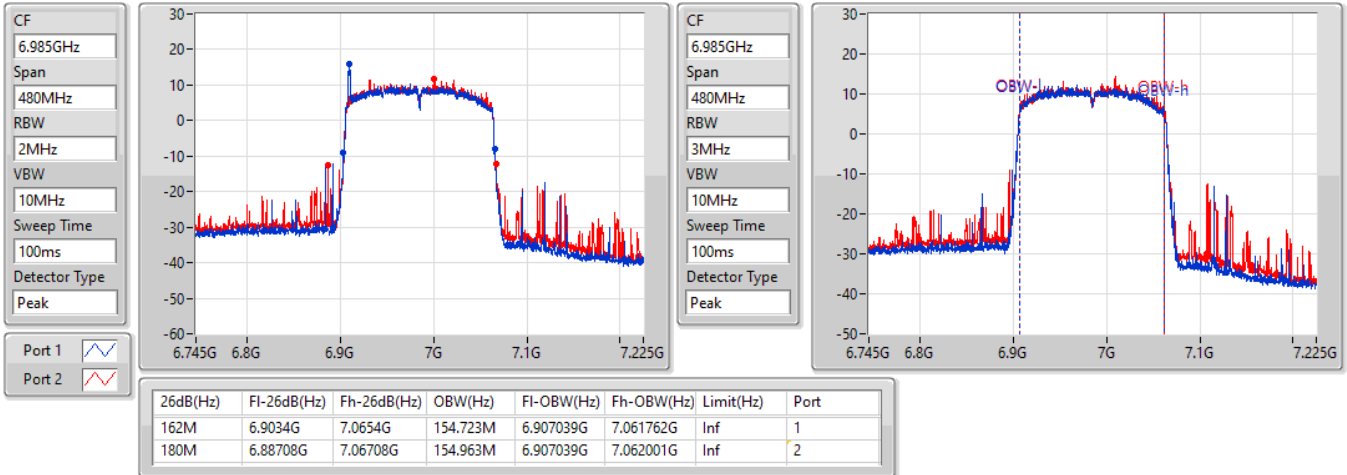


802.11ax HEW160-BF_Nss1,(MCS3)_2TX

EBW

6985MHz

24/05/2022



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_Nss1,(MCS0)_1TX	22.11M	19.13M	19M1D1D	21.93M	19.1M
6.425-6.525GHz	-	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_1TX	22.23M	19.13M	19M1D1D	21.96M	19.1M
6.525-6.875GHz	-	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_1TX	22.08M	19.16M	19M2D1D	21.84M	19.1M
6.875-7.125GHz	-	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_1TX	22.17M	19.23M	19M2D1D	21.96M	19.1M

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)
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-
5955MHz	Pass	Inf	22.05M	19.13M
6175MHz	Pass	Inf	21.93M	19.1M
6415MHz	Pass	Inf	22.11M	19.13M
6435MHz	Pass	Inf	21.96M	19.1M
6475MHz	Pass	Inf	22.11M	19.13M
6515MHz	Pass	Inf	22.23M	19.13M
6535MHz	Pass	Inf	22.02M	19.13M
6695MHz	Pass	Inf	21.84M	19.16M
6855MHz	Pass	Inf	22.08M	19.13M
6875MHz Straddle 6.525-6.875GHz	Pass	Inf	22.05M	19.1M
6895MHz	Pass	Inf	22.05M	19.13M
6995MHz	Pass	Inf	22.17M	19.13M
7095MHz	Pass	Inf	21.96M	19.1M
7115MHz	Pass	Inf	21.96M	19.23M

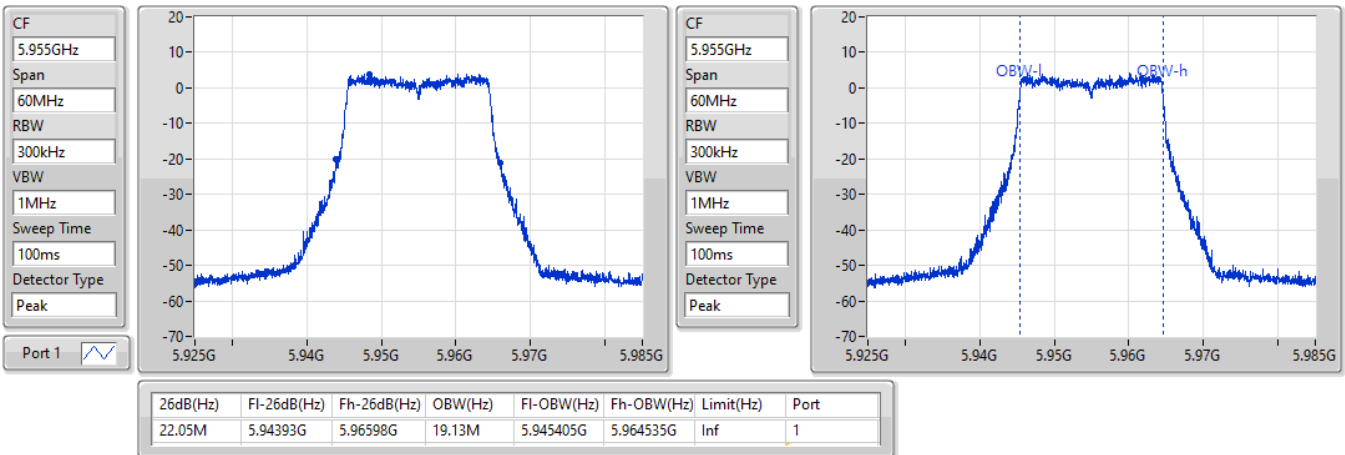
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

802.11ax HEW20_Nss1,(MCS0)_1TX

EBW

5955MHz

01/04/2022

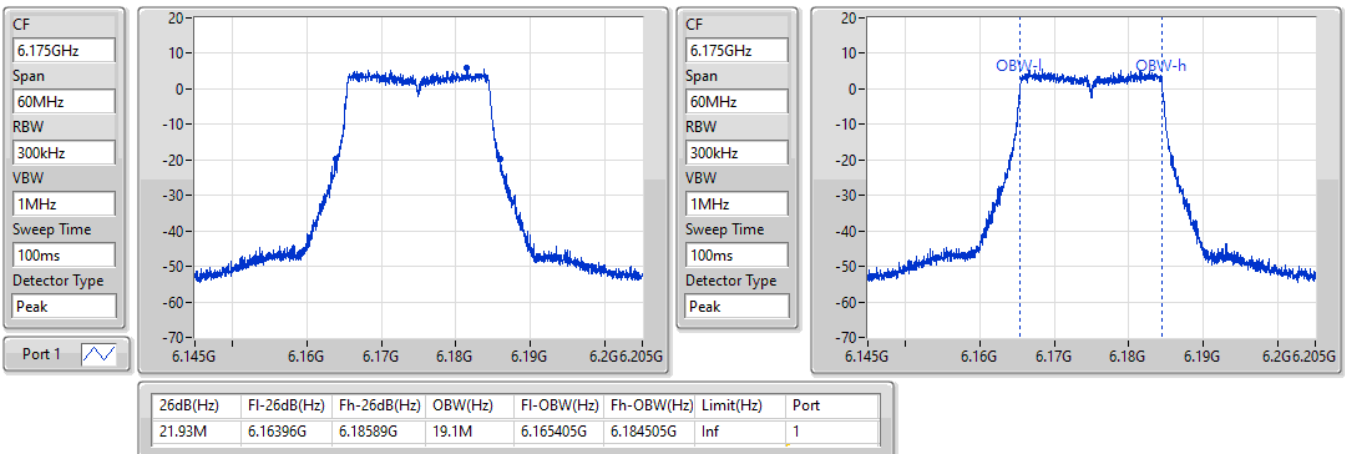


802.11ax HEW20_Nss1,(MCS0)_1TX

EBW

6175MHz

01/04/2022

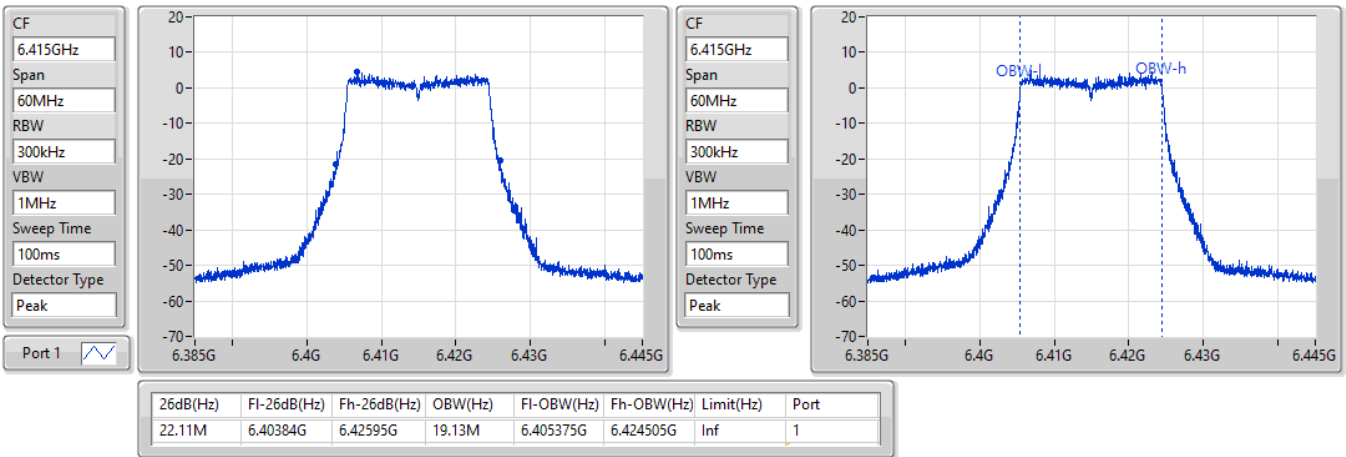


802.11ax HEW20_Nss1,(MCS0)_1TX

EBW

6415MHz

01/04/2022

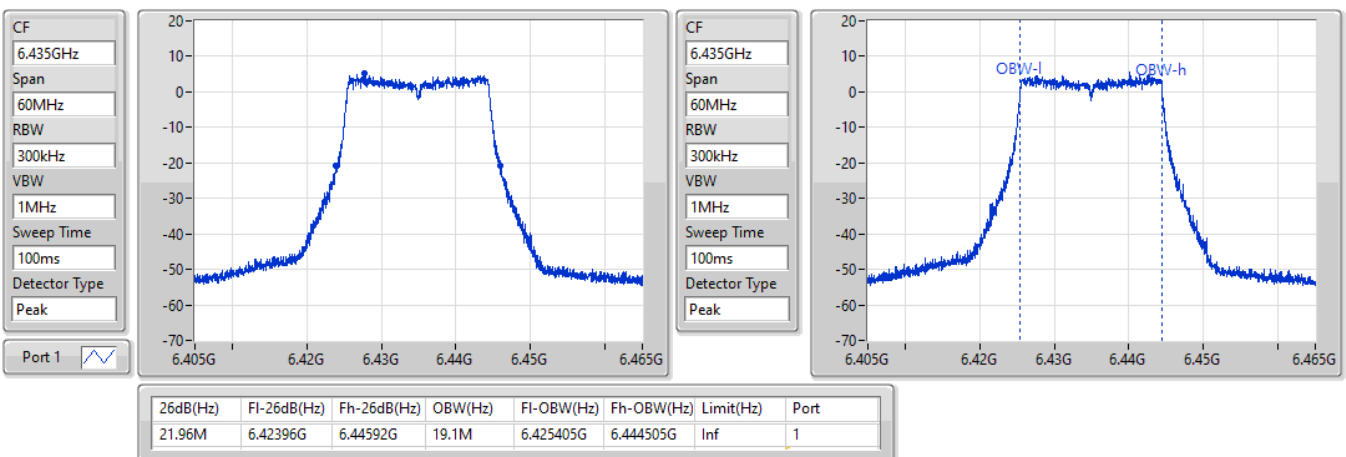


802.11ax HEW20_Nss1,(MCS0)_1TX

EBW

6435MHz

01/04/2022

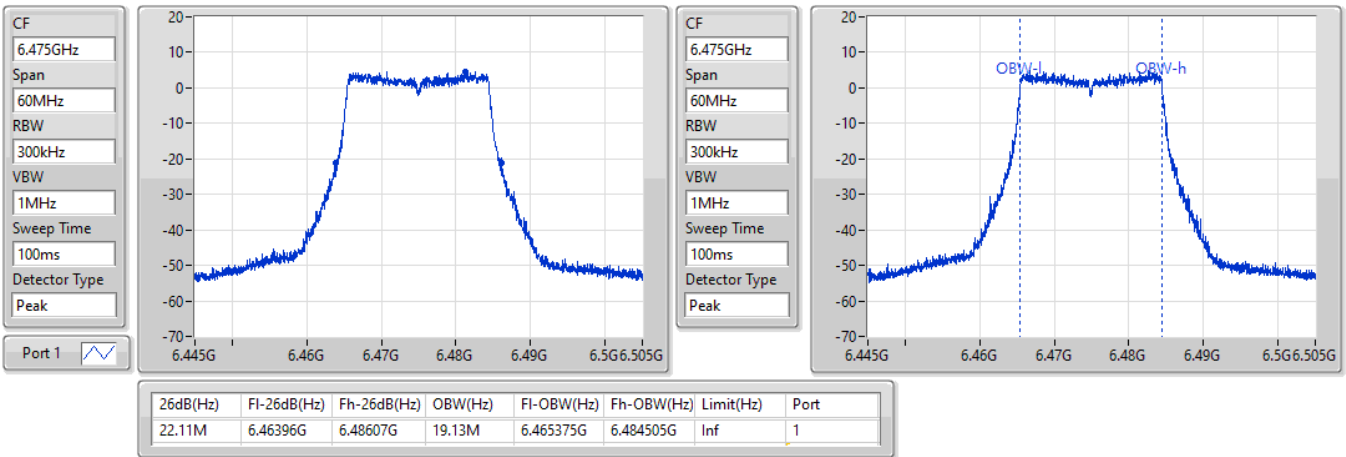


802.11ax HEW20_Nss1,(MCS0)_1TX

EBW

6475MHz

01/04/2022

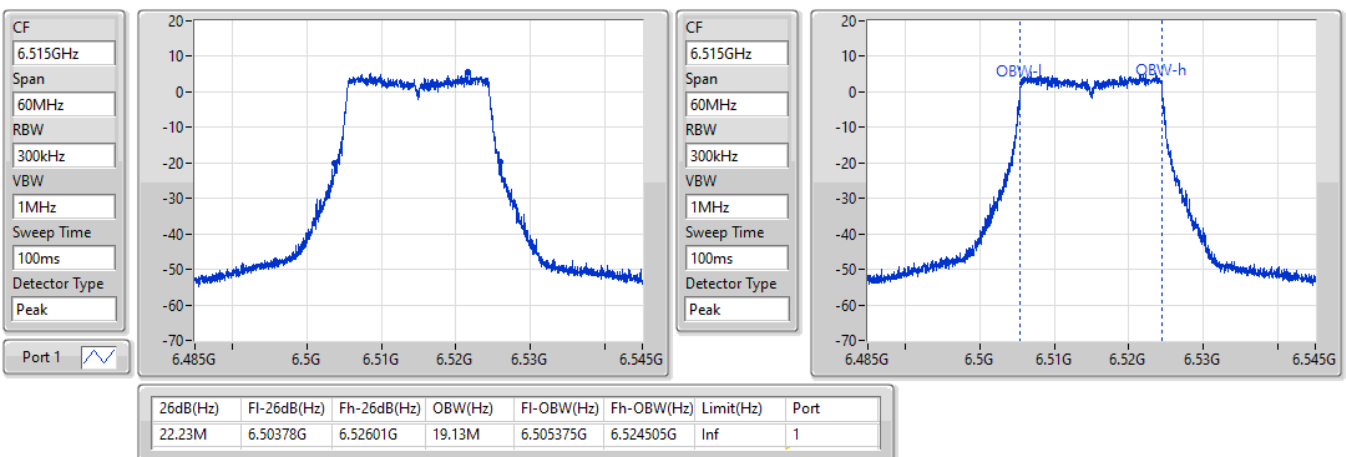


802.11ax HEW20_Nss1,(MCS0)_1TX

EBW

6515MHz

01/04/2022

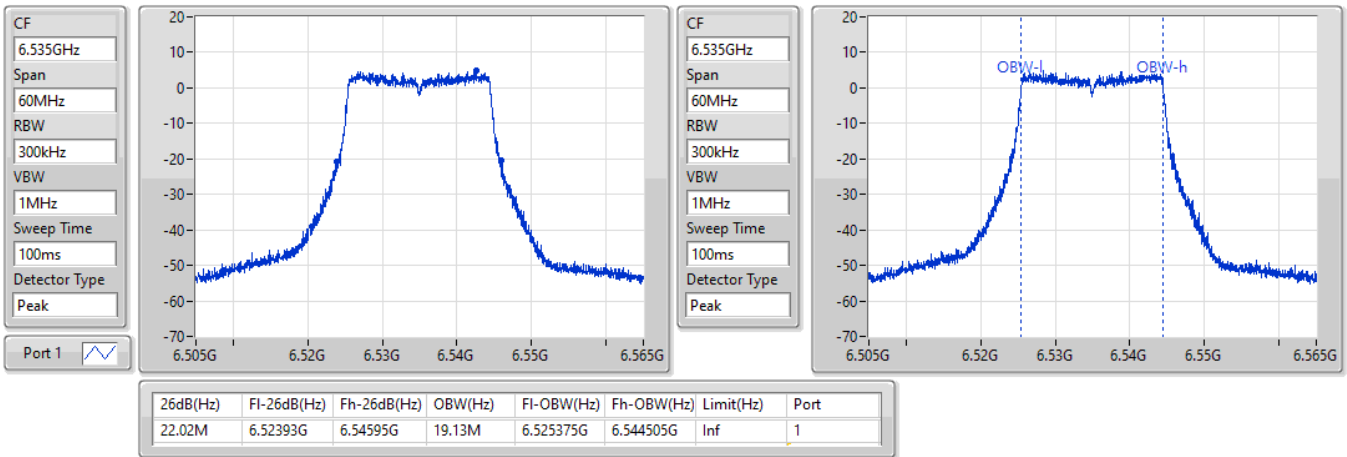


802.11ax HEW20_Nss1,(MCS0)_1TX

EBW

6535MHz

01/04/2022

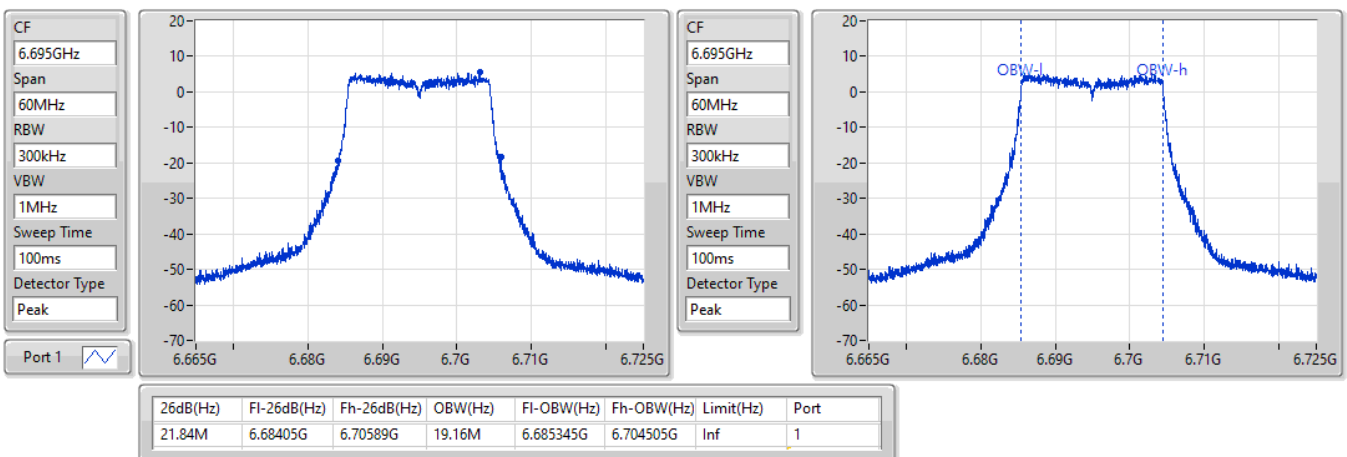


802.11ax HEW20_Nss1,(MCS0)_1TX

EBW

6695MHz

01/04/2022

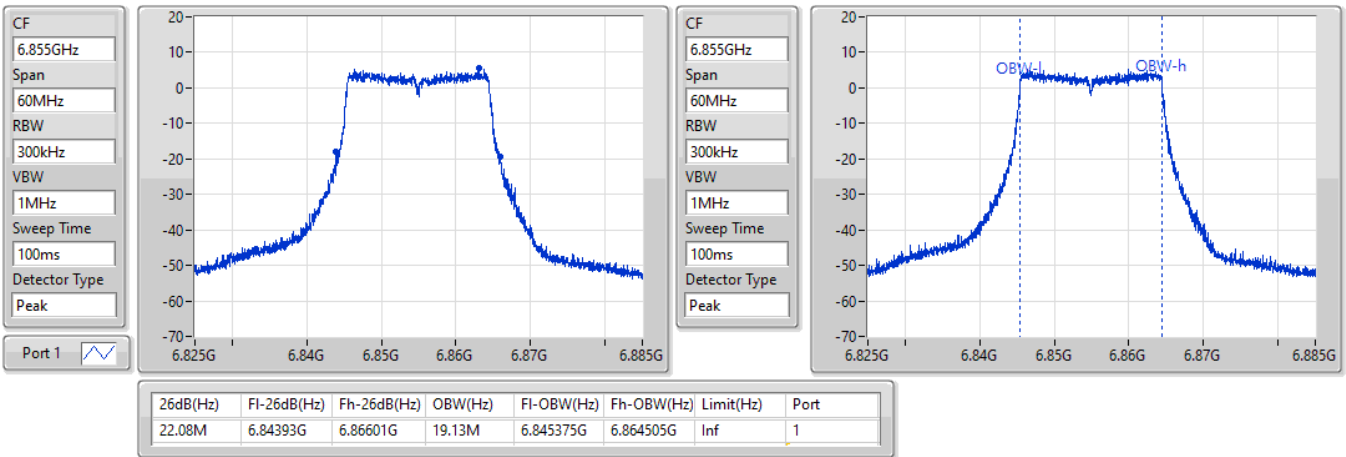


802.11ax HEW20_Nss1,(MCS0)_1TX

EBW

6855MHz

01/04/2022

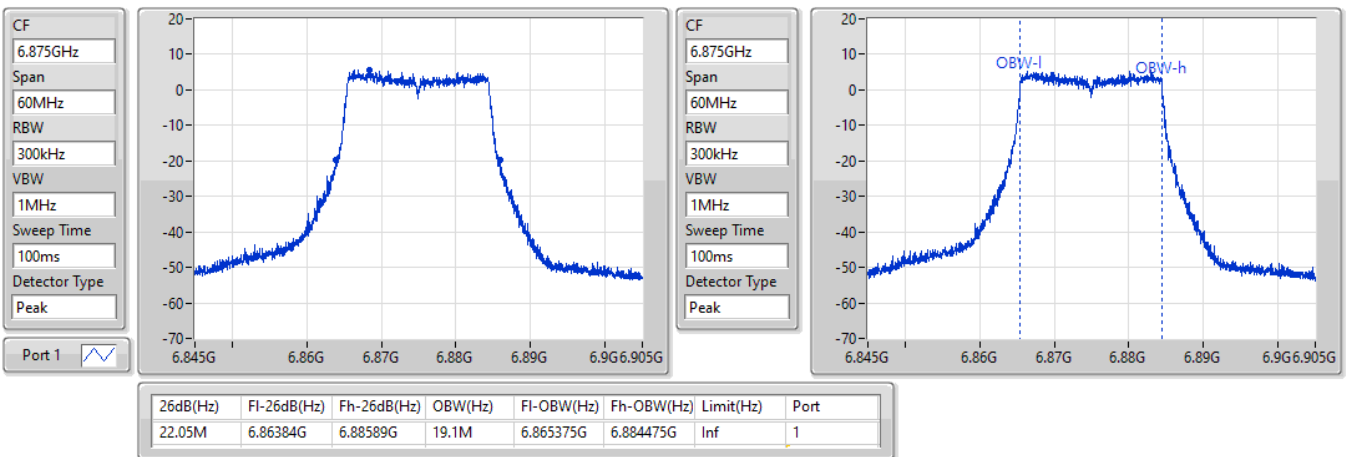


802.11ax HEW20_Nss1,(MCS0)_1TX

EBW

6875MHz Straddle 6.525-6.875GHz

01/04/2022

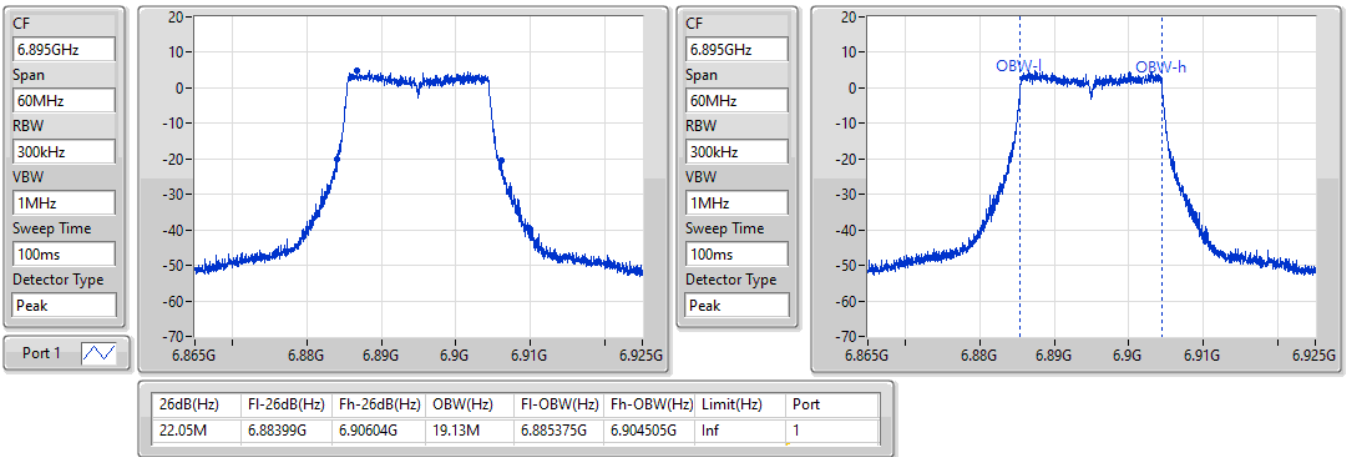


802.11ax HEW20_Nss1,(MCS0)_1TX

EBW

6895MHz

01/04/2022

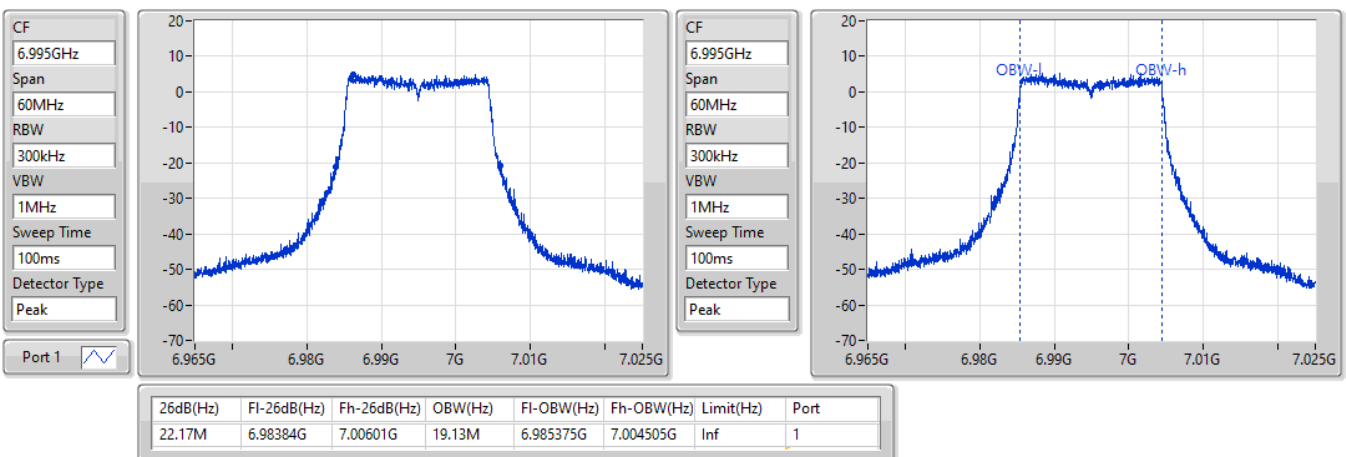


802.11ax HEW20_Nss1,(MCS0)_1TX

EBW

6995MHz

01/04/2022

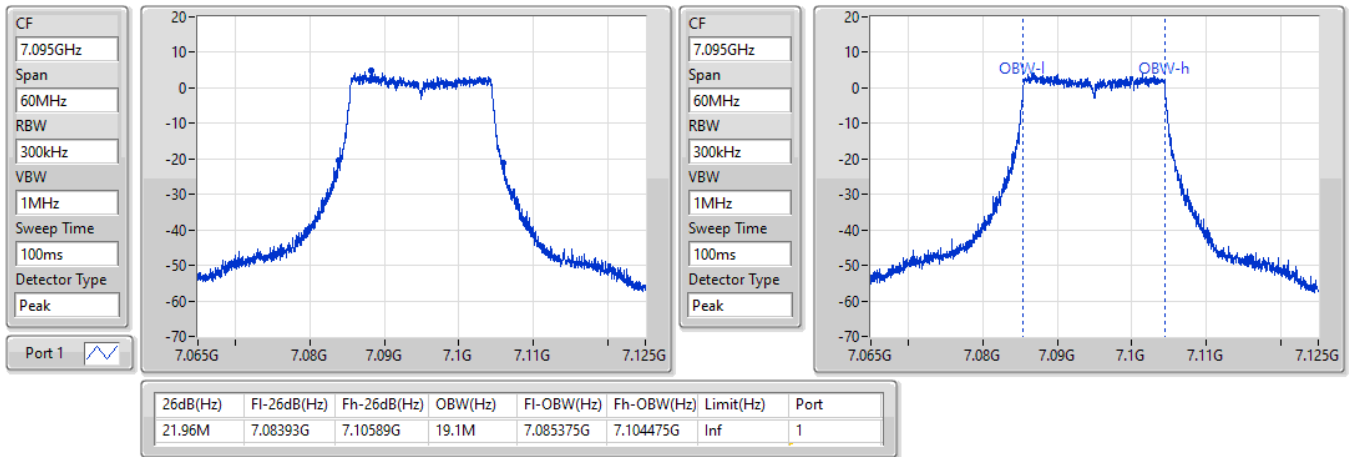


802.11ax HEW20_Nss1,(MCS0)_1TX

EBW

7095MHz

01/04/2022

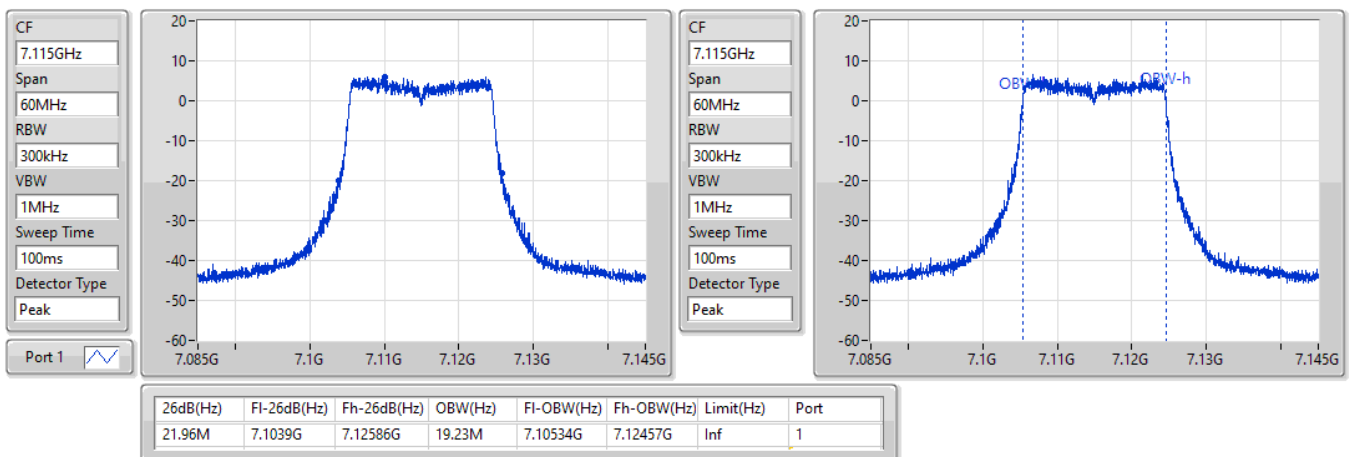


802.11ax HEW20_Nss1,(MCS0)_1TX

EBW

7115MHz

11/04/2022



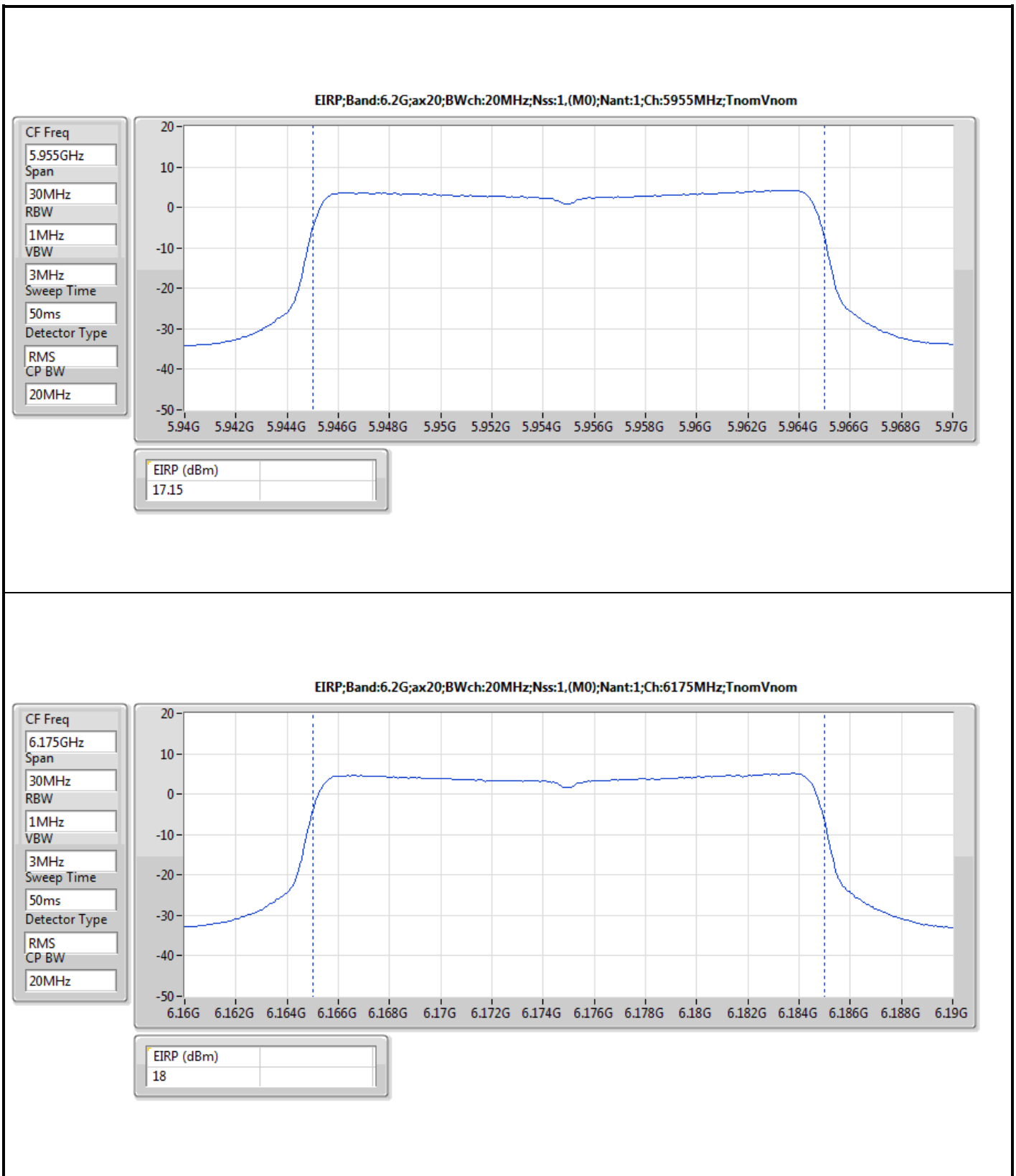
Summary

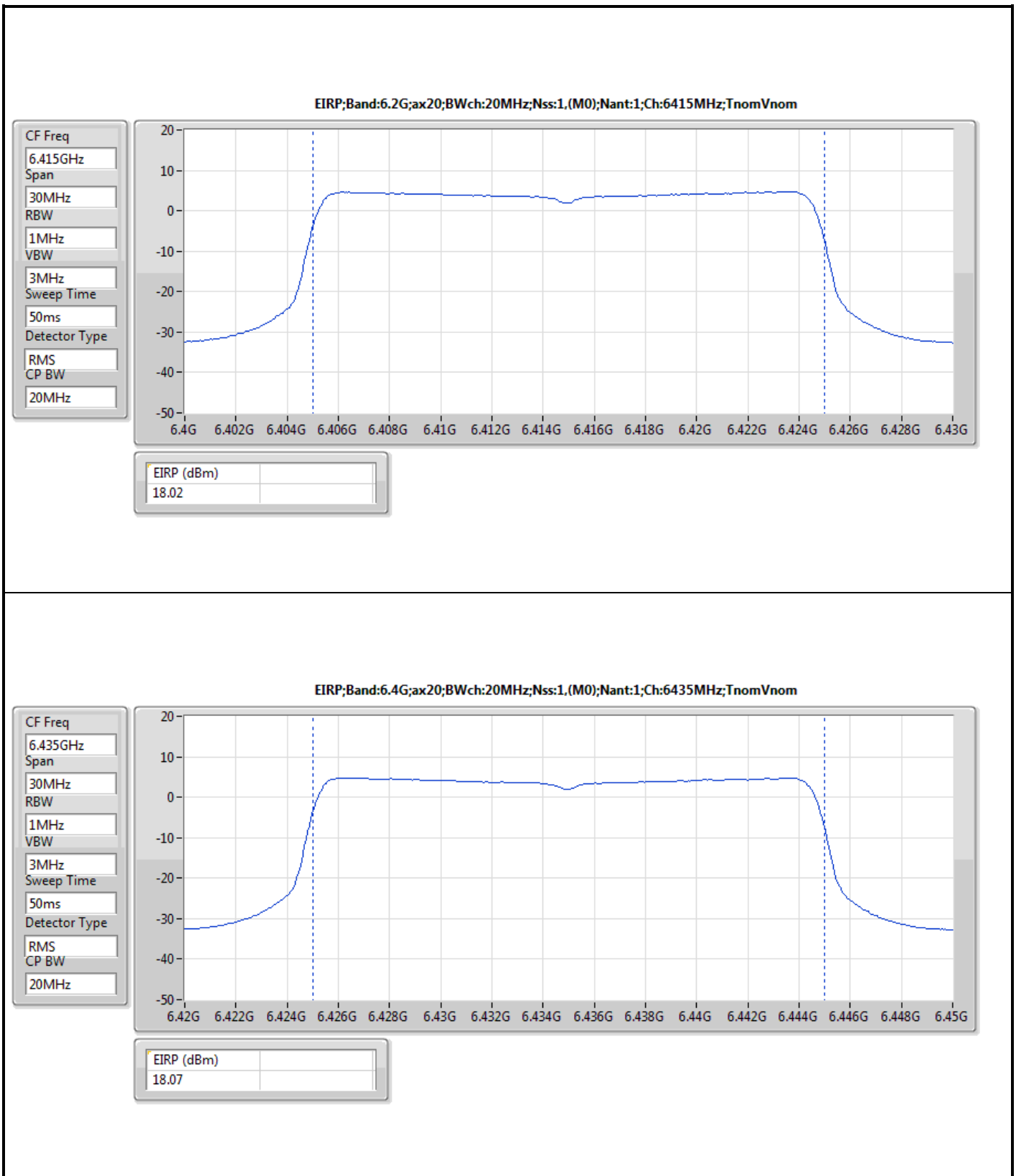
Mode	EIRP (dBm)	EIRP (W)
5.925-6.425GHz	-	-
802.11ax HEW20_Nss1,(MCS0)_1TX	18.02	0.06339
802.11ax HEW40_Nss1,(MCS0)_1TX	22.05	0.16032
802.11ax HEW80_Nss1,(MCS0)_1TX	25.43	0.34914
802.11ax HEW160_Nss1,(MCS0)_1TX	27.69	0.58749
6.425-6.525GHz	-	-
802.11ax HEW20_Nss1,(MCS0)_1TX	18.07	0.06412
802.11ax HEW40_Nss1,(MCS0)_1TX	22.48	0.17701
802.11ax HEW80_Nss1,(MCS0)_1TX	24.79	0.30130
802.11ax HEW160_Nss1,(MCS0)_1TX	26.54	0.45082
6.525-6.875GHz	-	-
802.11ax HEW20_Nss1,(MCS0)_1TX	19.10	0.08128
802.11ax HEW40_Nss1,(MCS0)_1TX	21.98	0.15776
802.11ax HEW80_Nss1,(MCS0)_1TX	24.35	0.27227
802.11ax HEW160_Nss1,(MCS0)_1TX	26.69	0.46666
6.875-7.125GHz	-	-
802.11ax HEW20_Nss1,(MCS0)_1TX	19.48	0.08872
802.11ax HEW40_Nss1,(MCS0)_1TX	22.20	0.16596
802.11ax HEW80_Nss1,(MCS0)_1TX	24.54	0.28445
802.11ax HEW160_Nss1,(MCS0)_1TX	23.79	0.23933

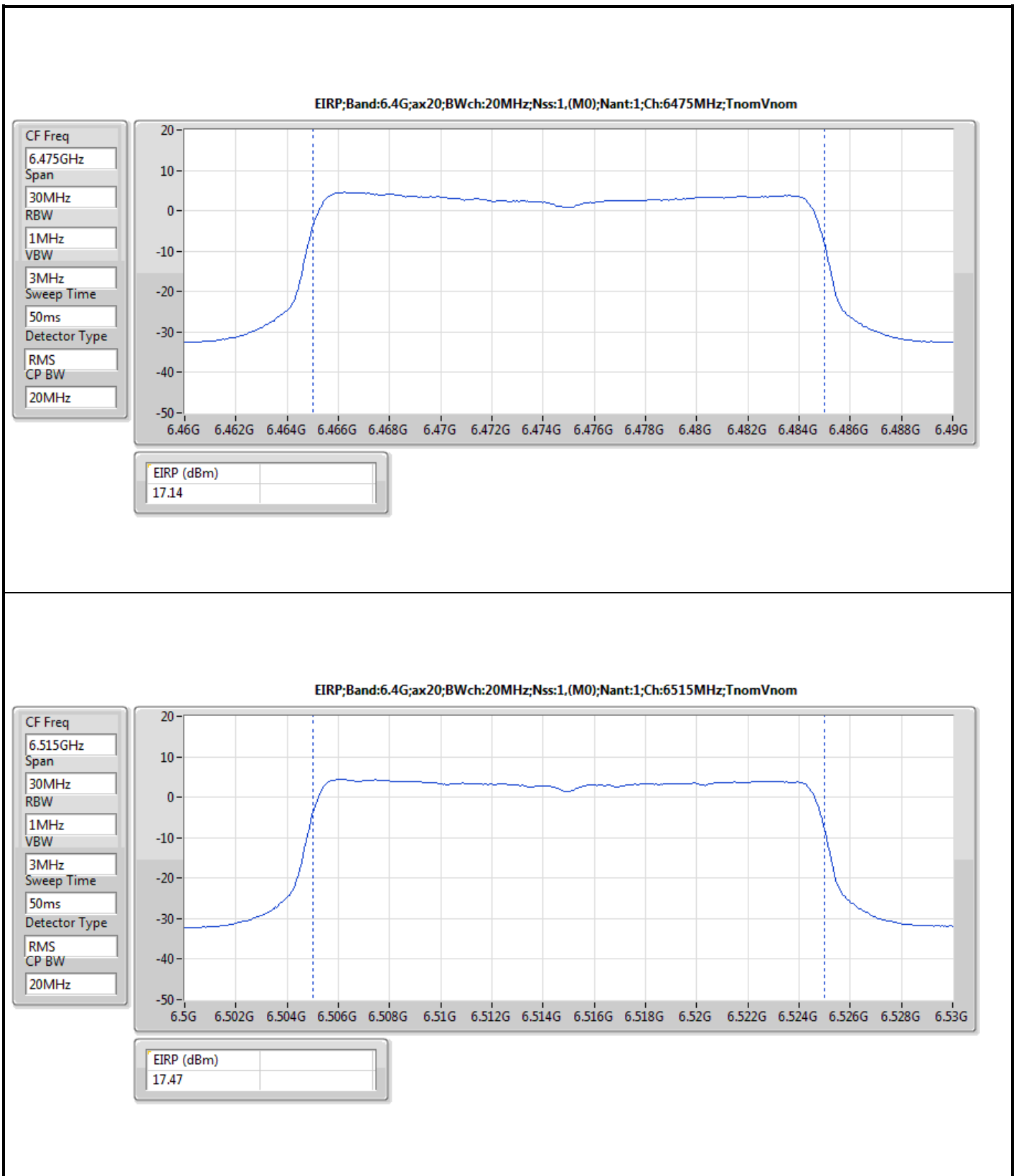
Result

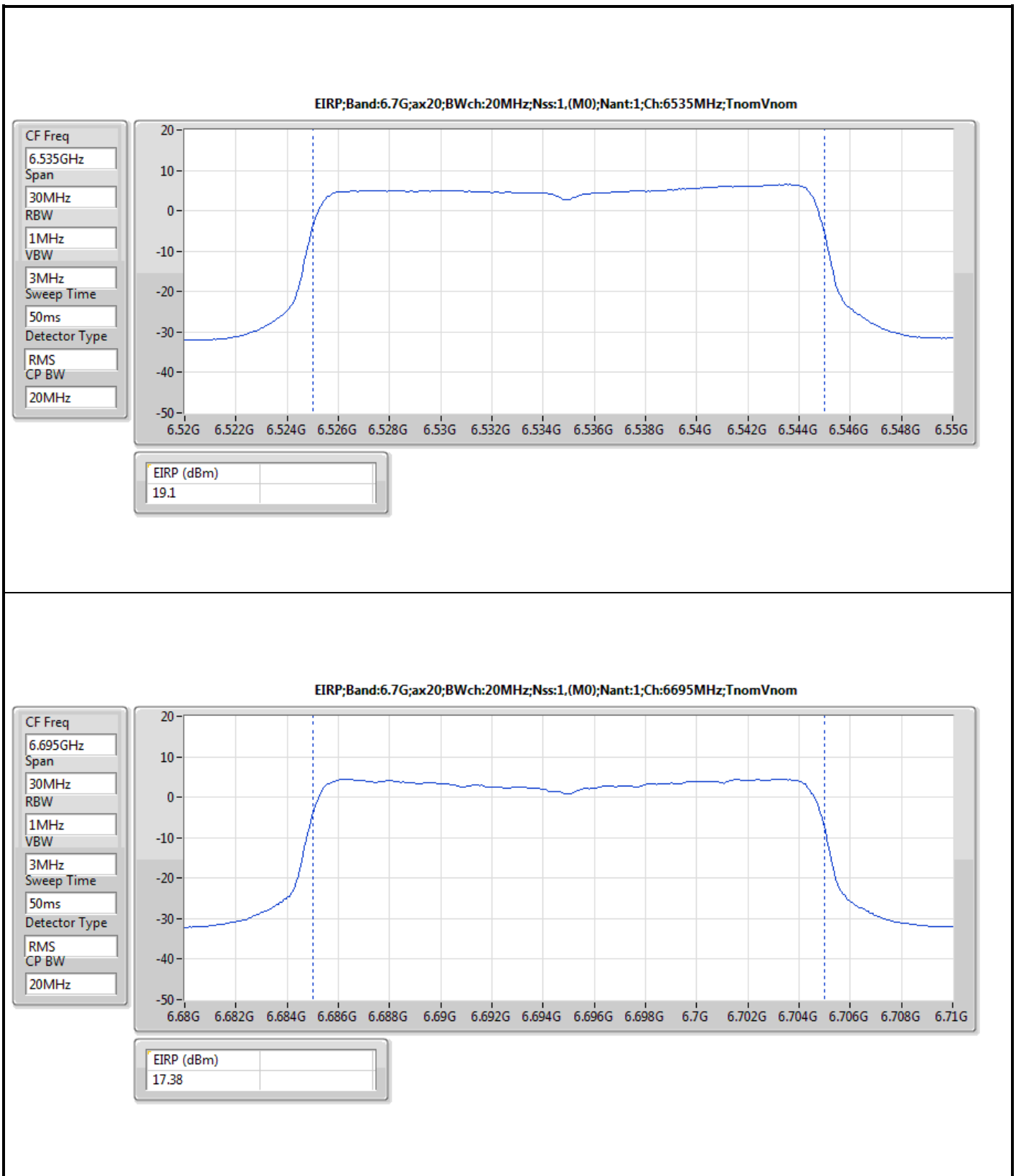
Mode	Result	EIRP (dBm)	EIRP Limit (dBm)
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-
5955MHz	Pass	17.15	30.00
6175MHz	Pass	18.00	30.00
6415MHz	Pass	18.02	30.00
6435MHz	Pass	18.07	30.00
6475MHz	Pass	17.14	30.00
6515MHz	Pass	17.47	30.00
6535MHz	Pass	19.10	30.00
6695MHz	Pass	17.38	30.00
6855MHz	Pass	17.30	30.00
6875MHz Straddle 6.525-6.875GHz	Pass	16.84	30.00
6895MHz	Pass	18.85	30.00
6995MHz	Pass	18.42	30.00
7095MHz	Pass	19.48	30.00
7115MHz	Pass	14.80	30.00
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-	-
5965MHz	Pass	20.95	30.00
6165MHz	Pass	22.05	30.00
6405MHz	Pass	21.85	30.00
6445MHz	Pass	21.57	30.00
6485MHz	Pass	22.48	30.00
6525MHz Straddle 6.425-6.525GHz	Pass	20.80	30.00
6565MHz	Pass	21.52	30.00
6685MHz	Pass	21.98	30.00
6845MHz	Pass	21.18	30.00
6885MHz Straddle 6.525-6.875GHz	Pass	21.73	30.00
6925MHz	Pass	21.24	30.00
7005MHz	Pass	21.59	30.00
7085MHz	Pass	22.20	30.00
802.11ax HEW80_Nss1,(MCS0)_1TX	-	-	-
5985MHz	Pass	24.67	30.00
6145MHz	Pass	25.43	30.00
6385MHz	Pass	24.73	30.00
6465MHz	Pass	24.79	30.00
6545MHz Straddle 6.425-6.525GHz	Pass	22.92	30.00
6625MHz	Pass	23.71	30.00
6705MHz	Pass	24.23	30.00
6785MHz	Pass	24.35	30.00
6865MHz Straddle 6.525-6.875GHz	Pass	23.74	30.00
6945MHz	Pass	24.54	30.00
7025MHz	Pass	24.02	30.00
802.11ax HEW160_Nss1,(MCS0)_1TX	-	-	-
6025MHz	Pass	25.45	30.00
6185MHz	Pass	27.05	30.00
6345MHz	Pass	27.69	30.00
6505MHz Straddle 6.425-6.525GHz	Pass	26.54	30.00
6665MHz	Pass	26.69	30.00
6825MHz Straddle 6.525-6.875GHz	Pass	26.66	30.00
6985MHz	Pass	23.79	30.00

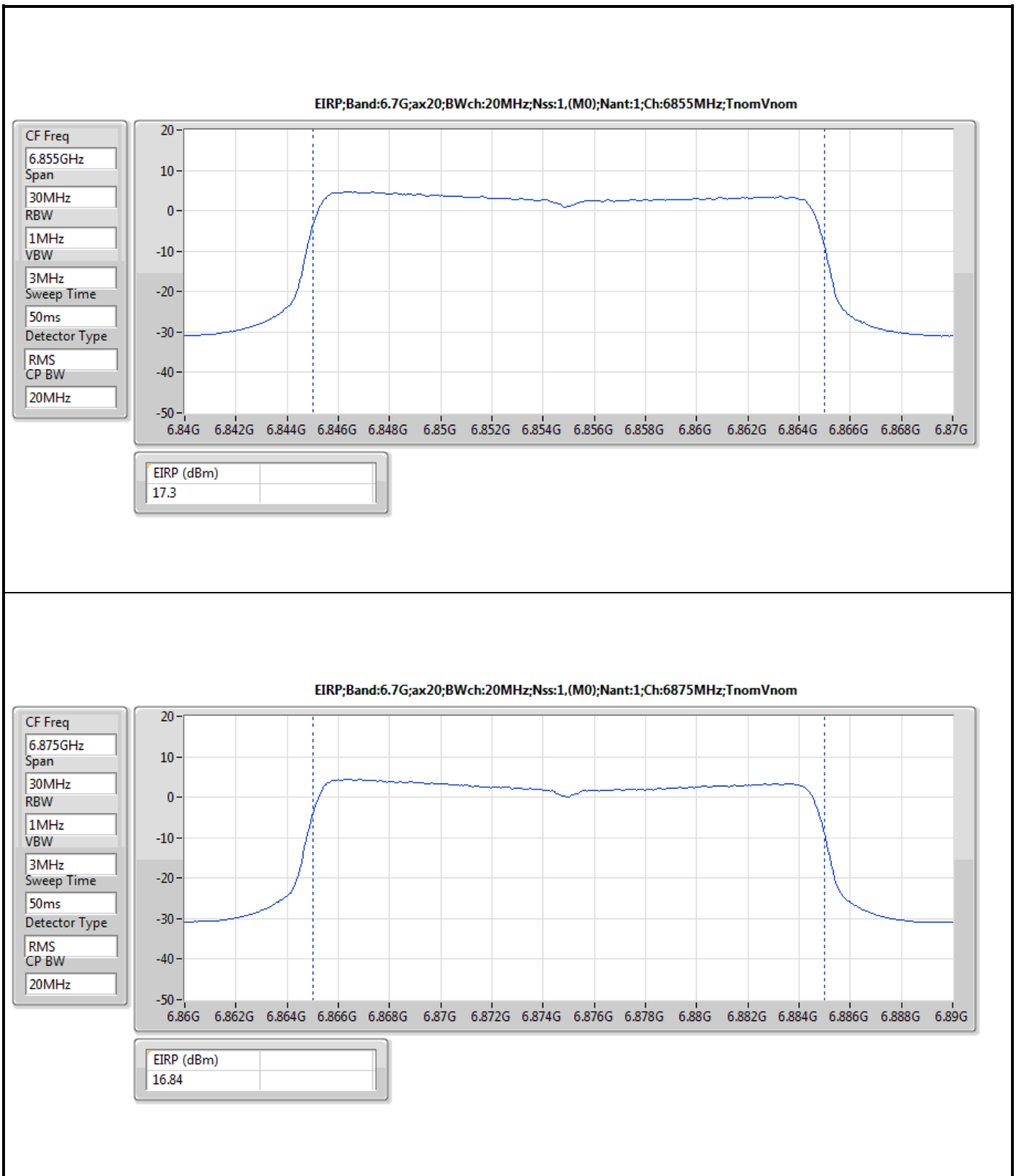
DG = Directional Gain; Port X = Port X output power

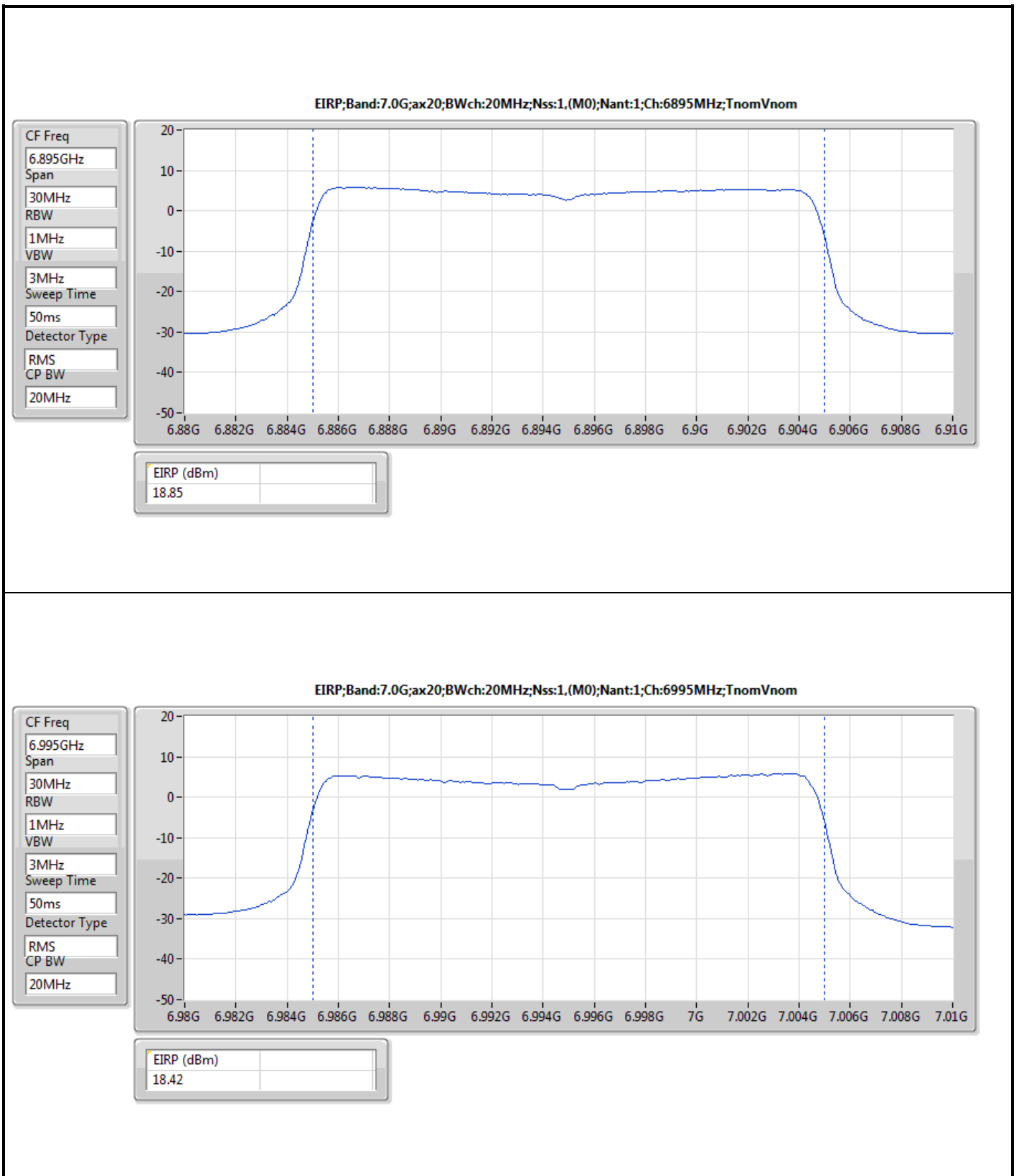


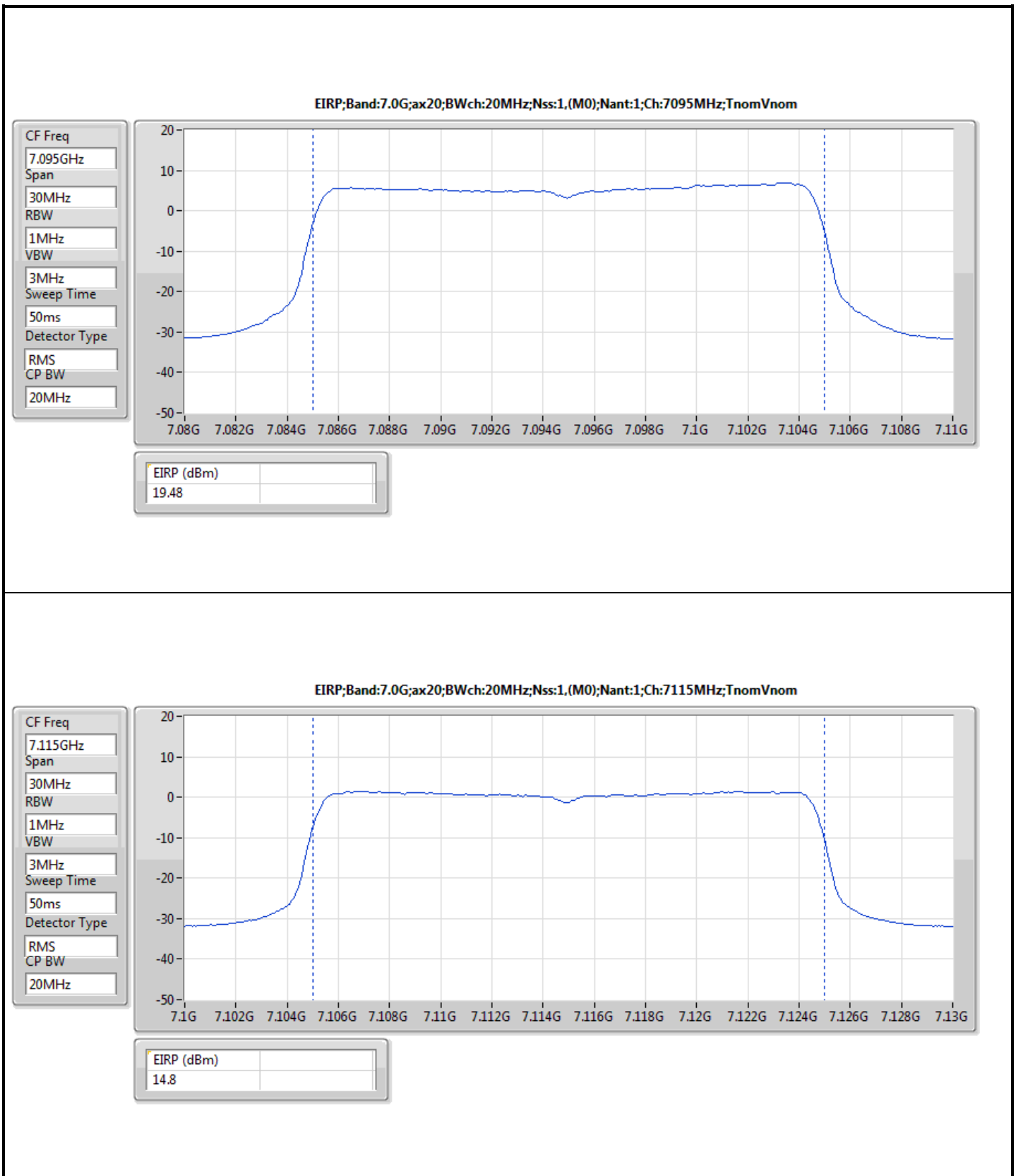


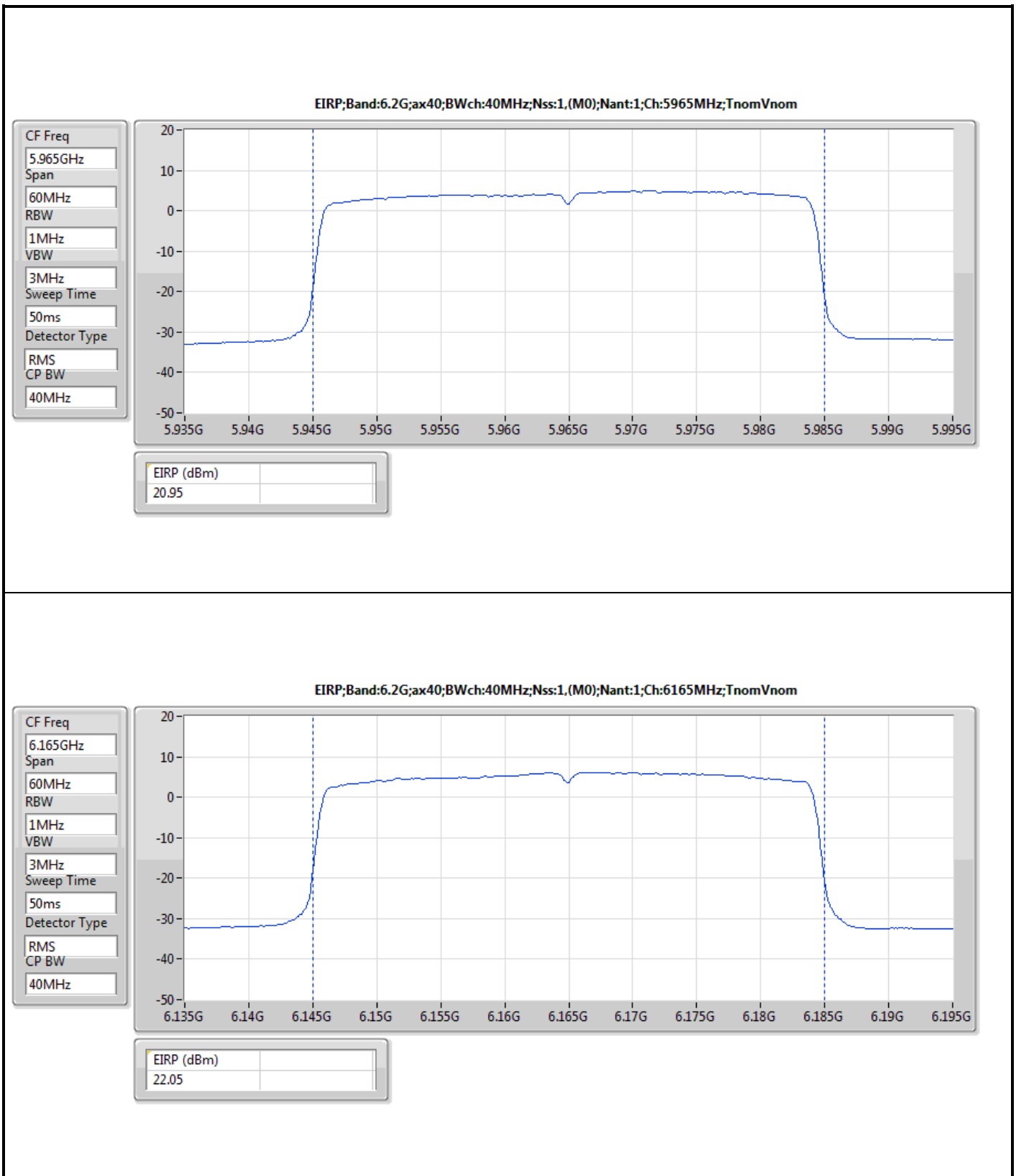


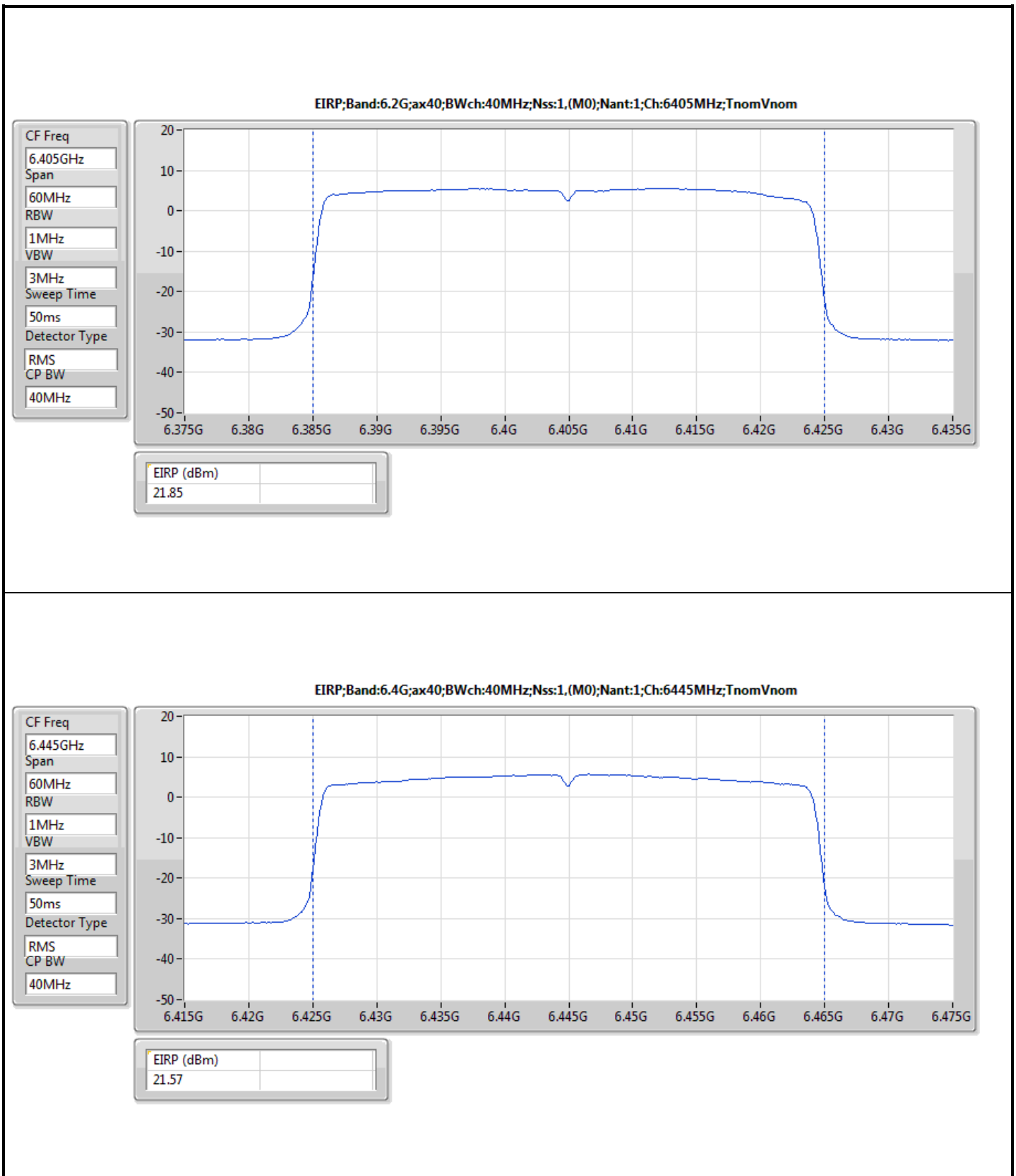


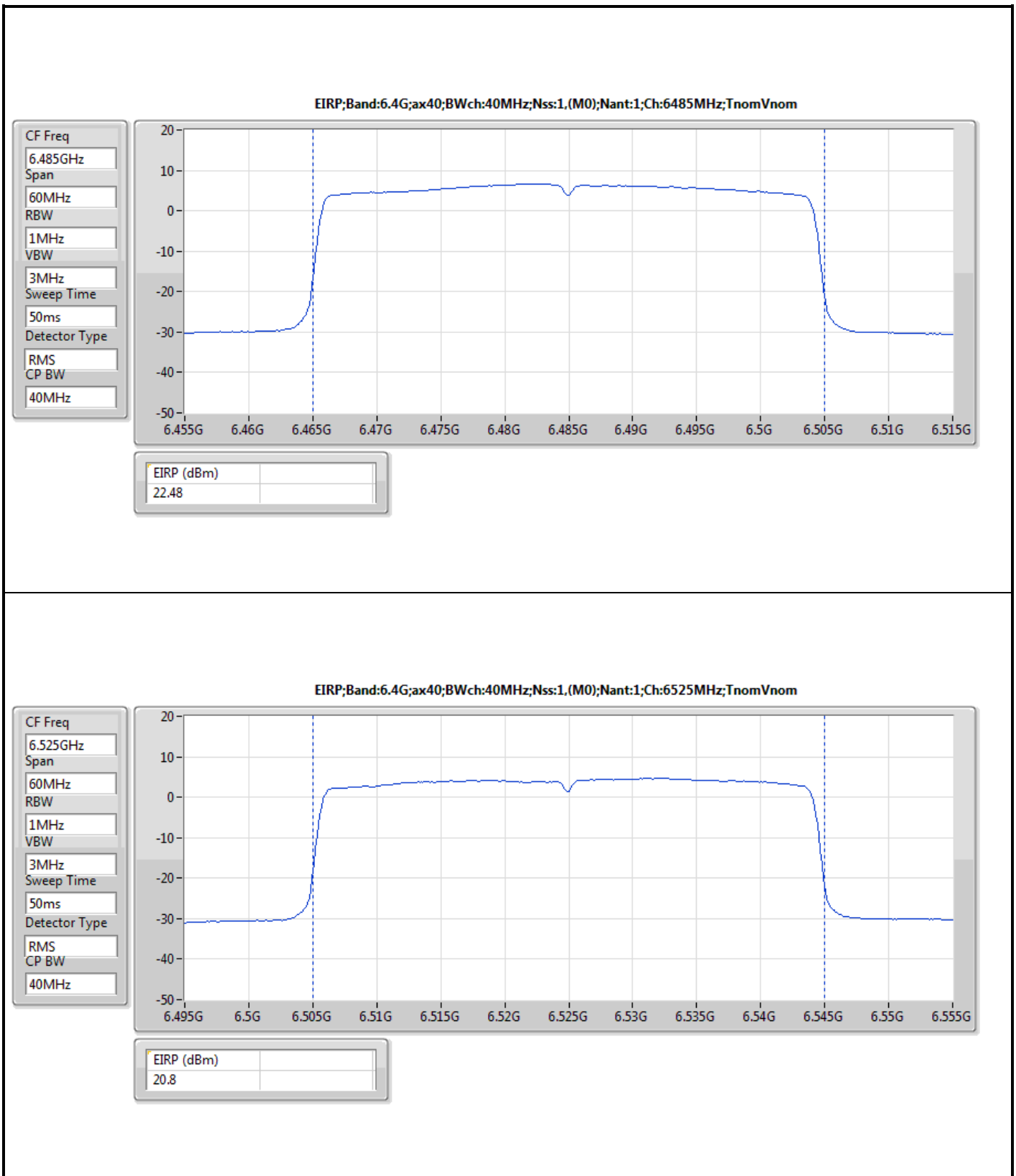


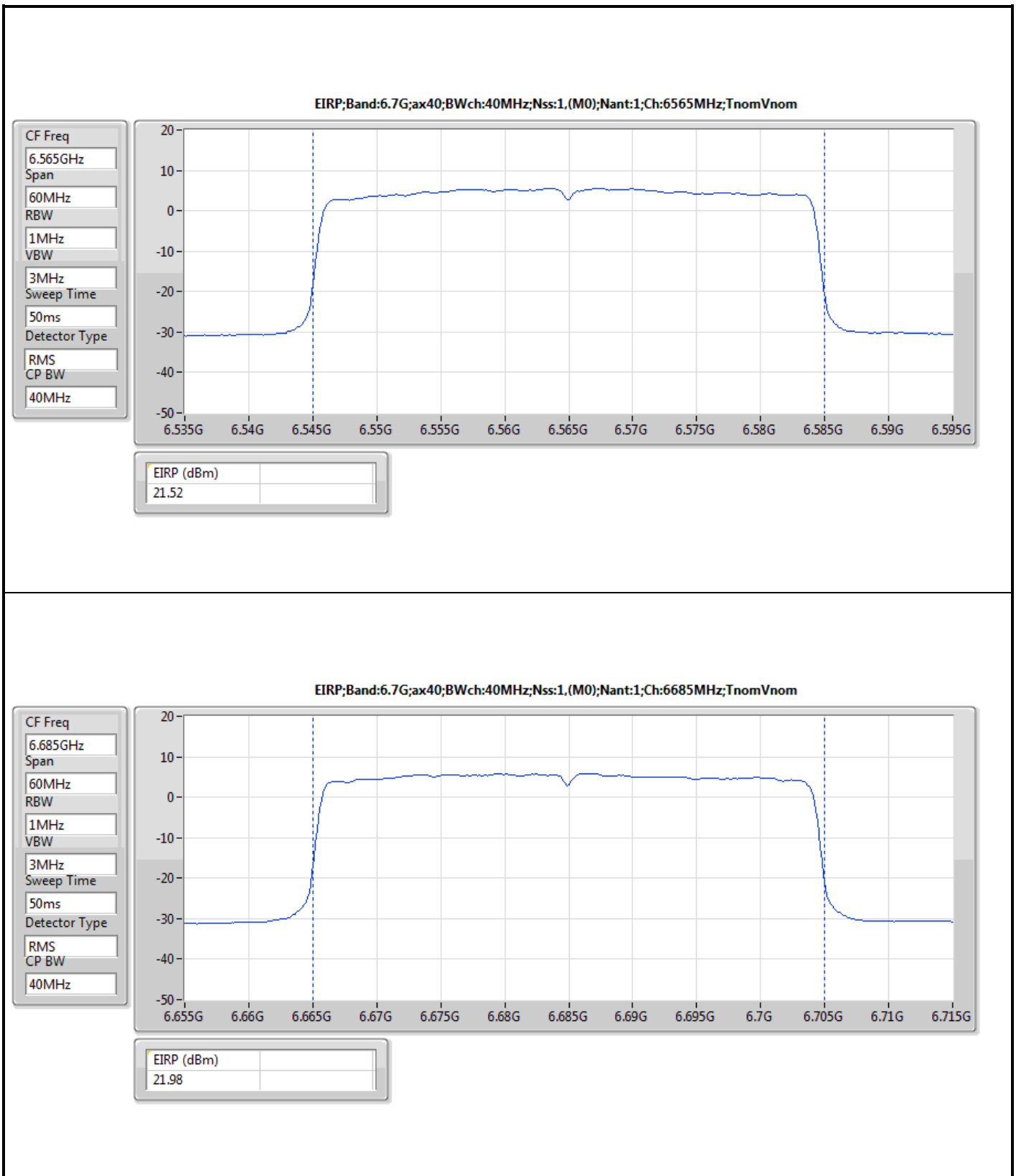


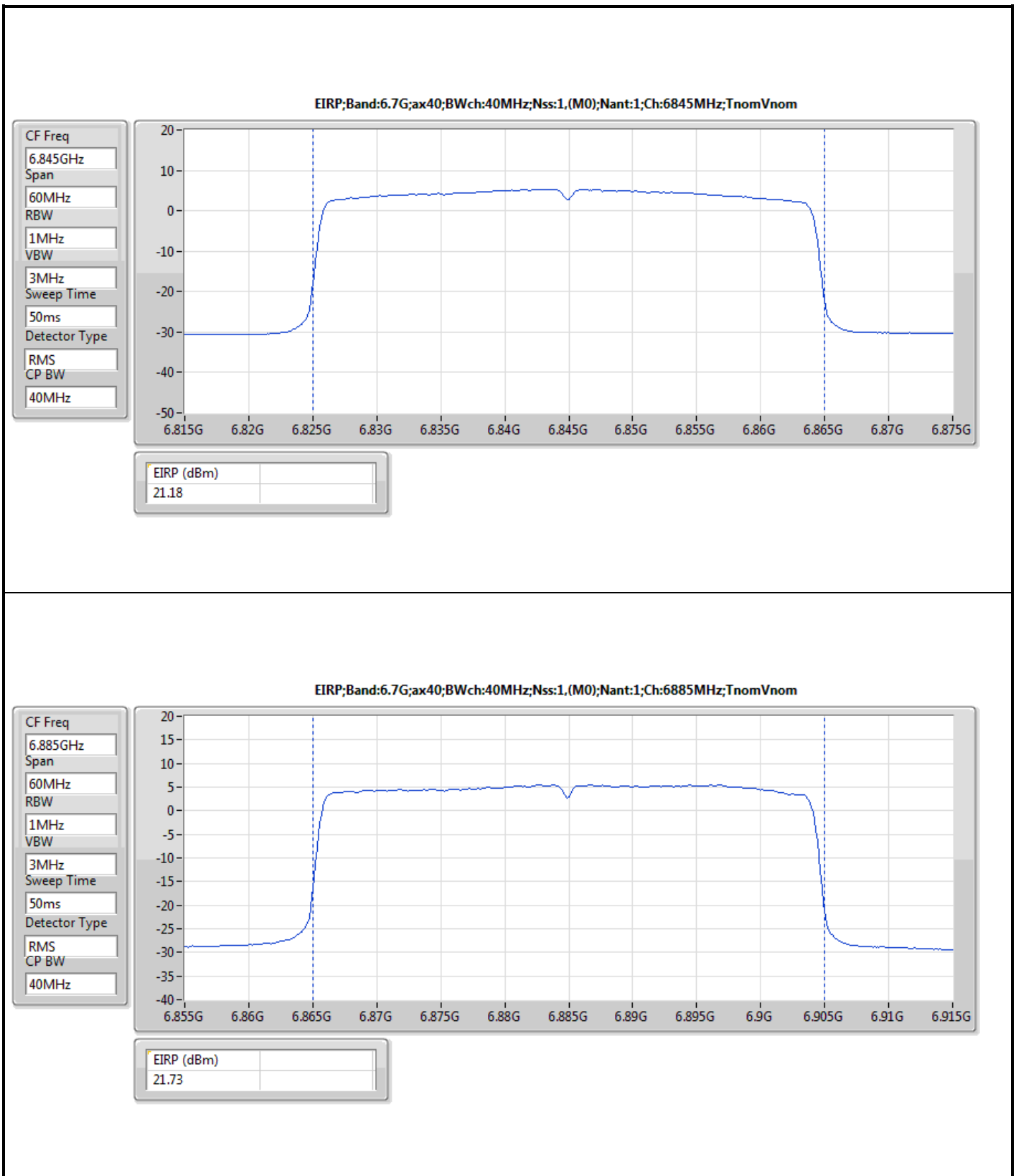


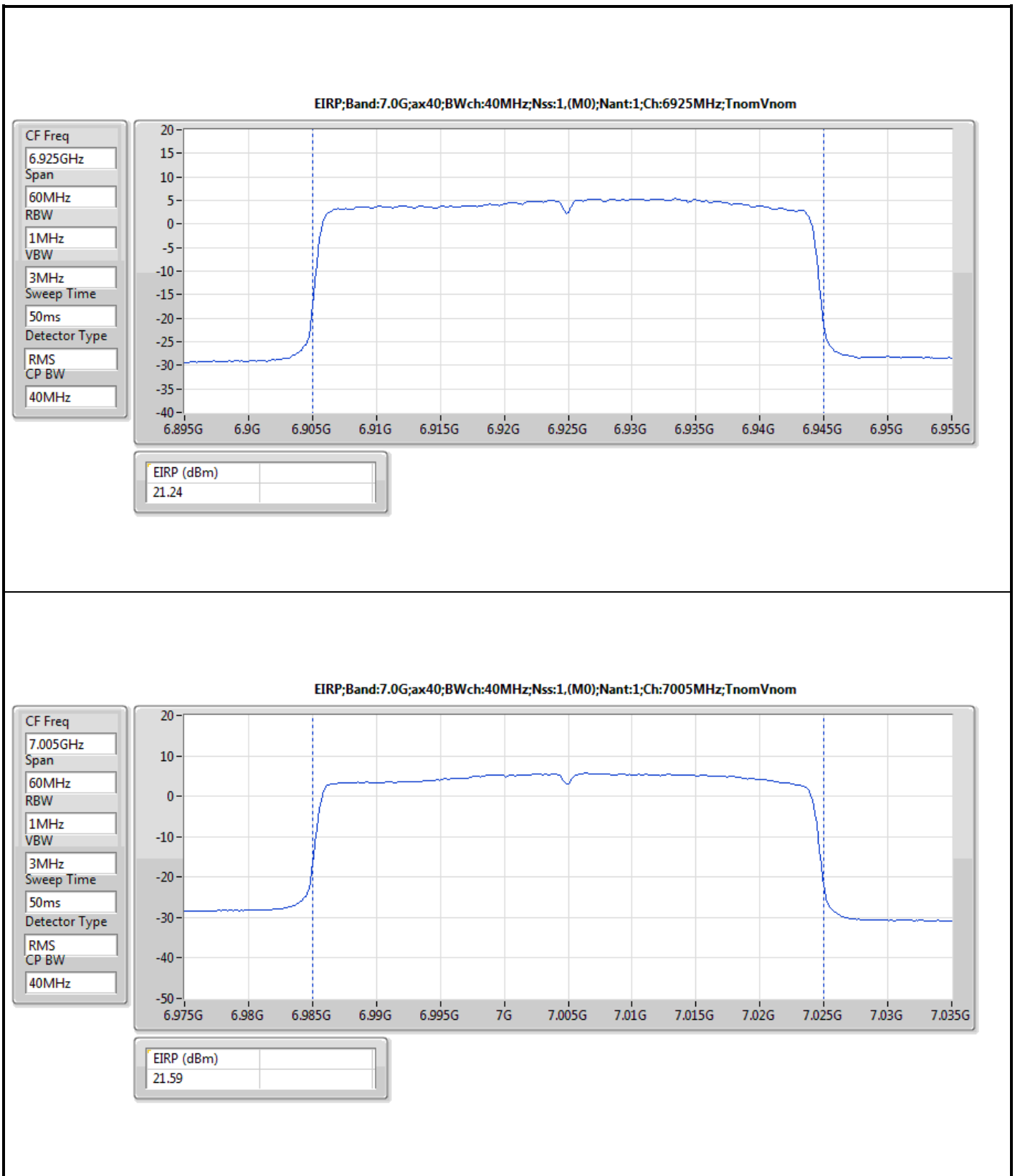


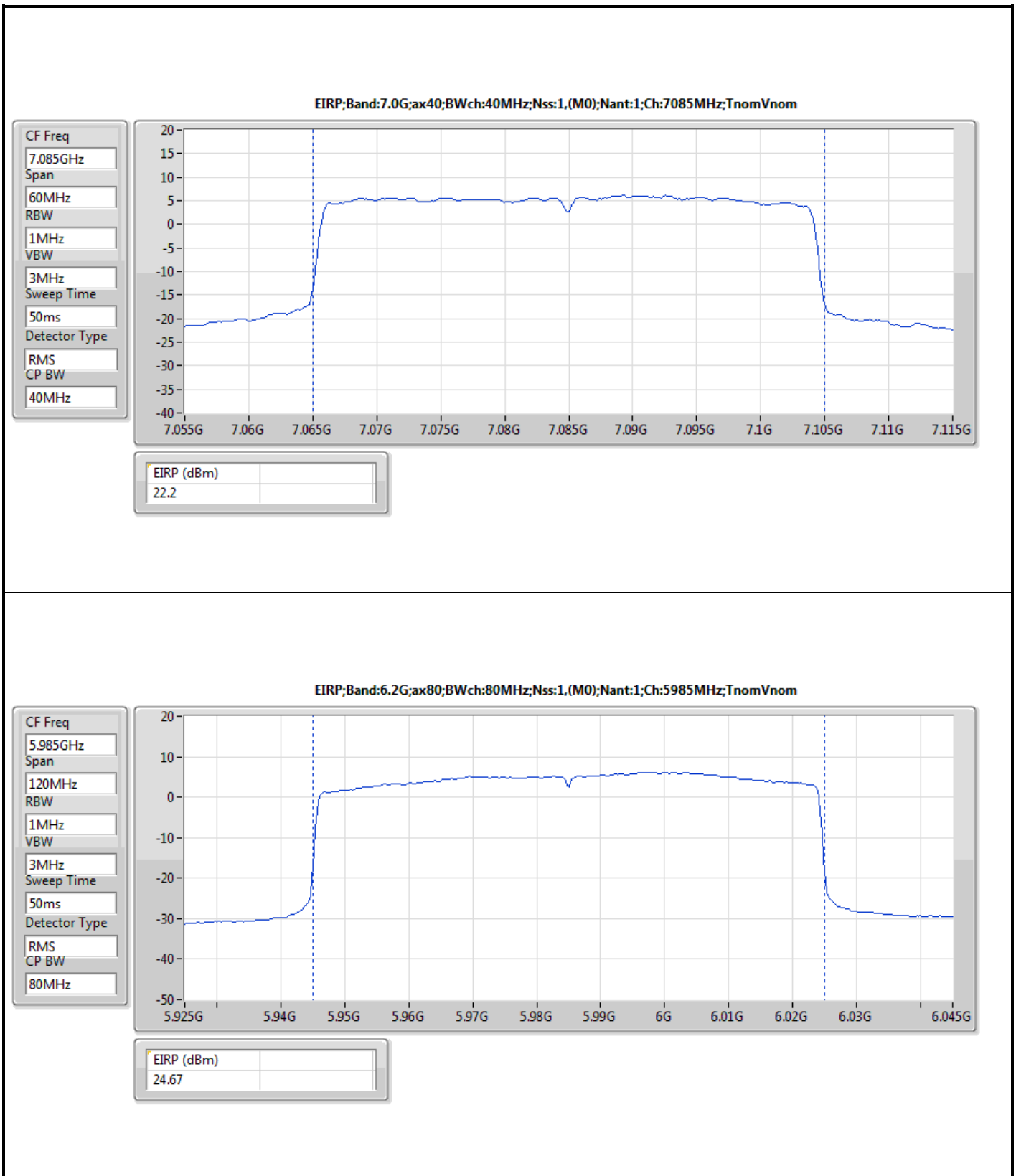


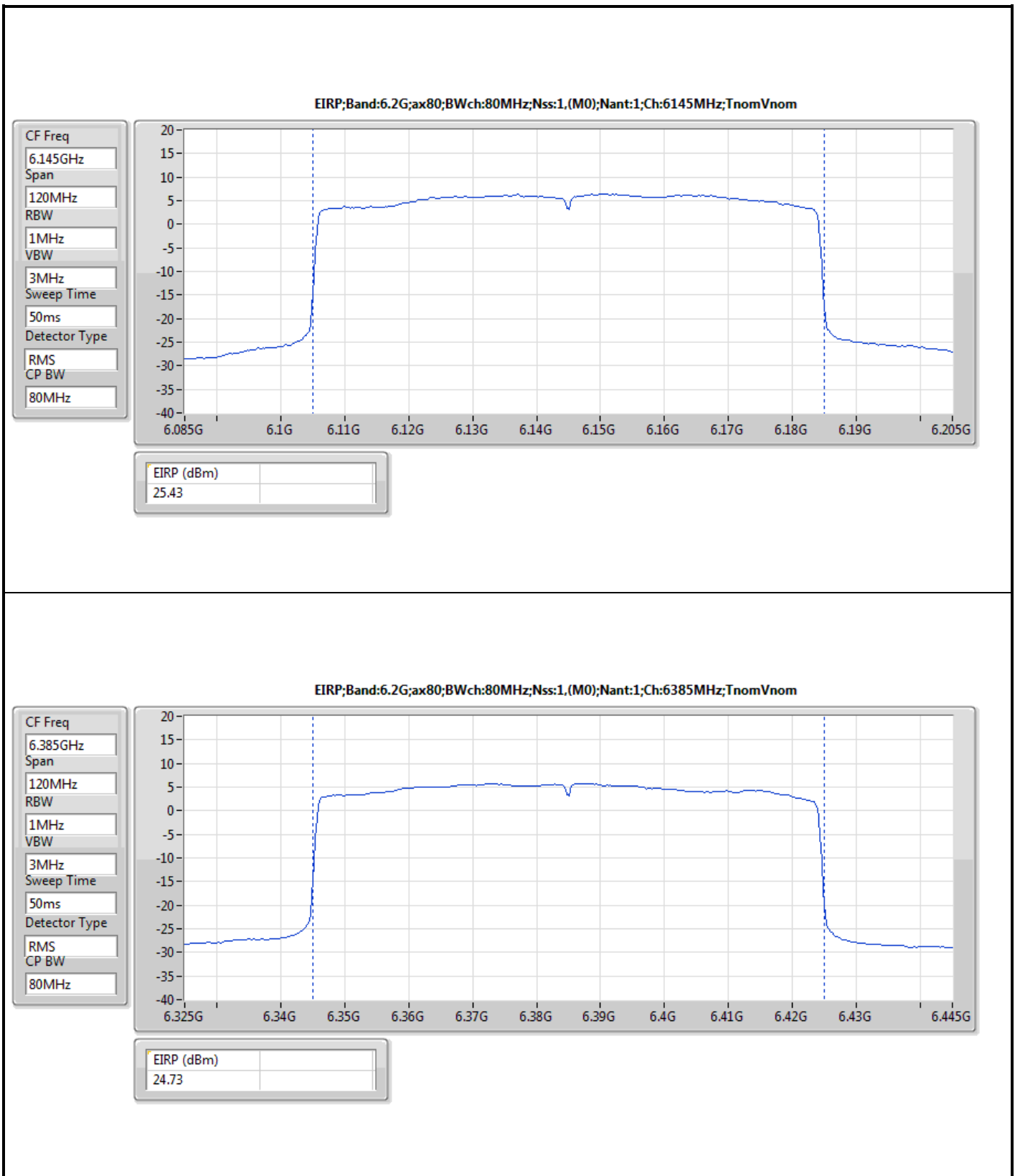


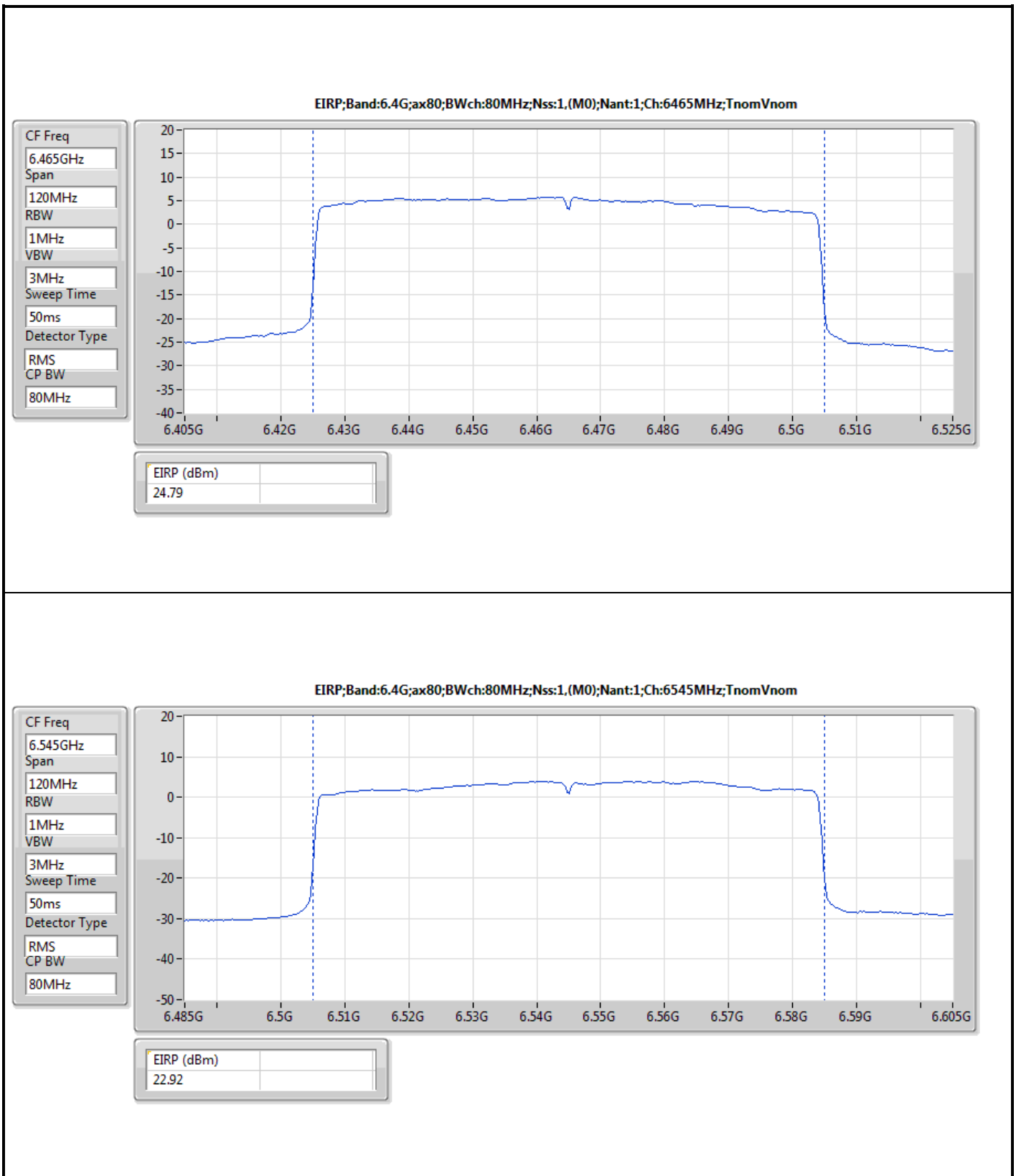


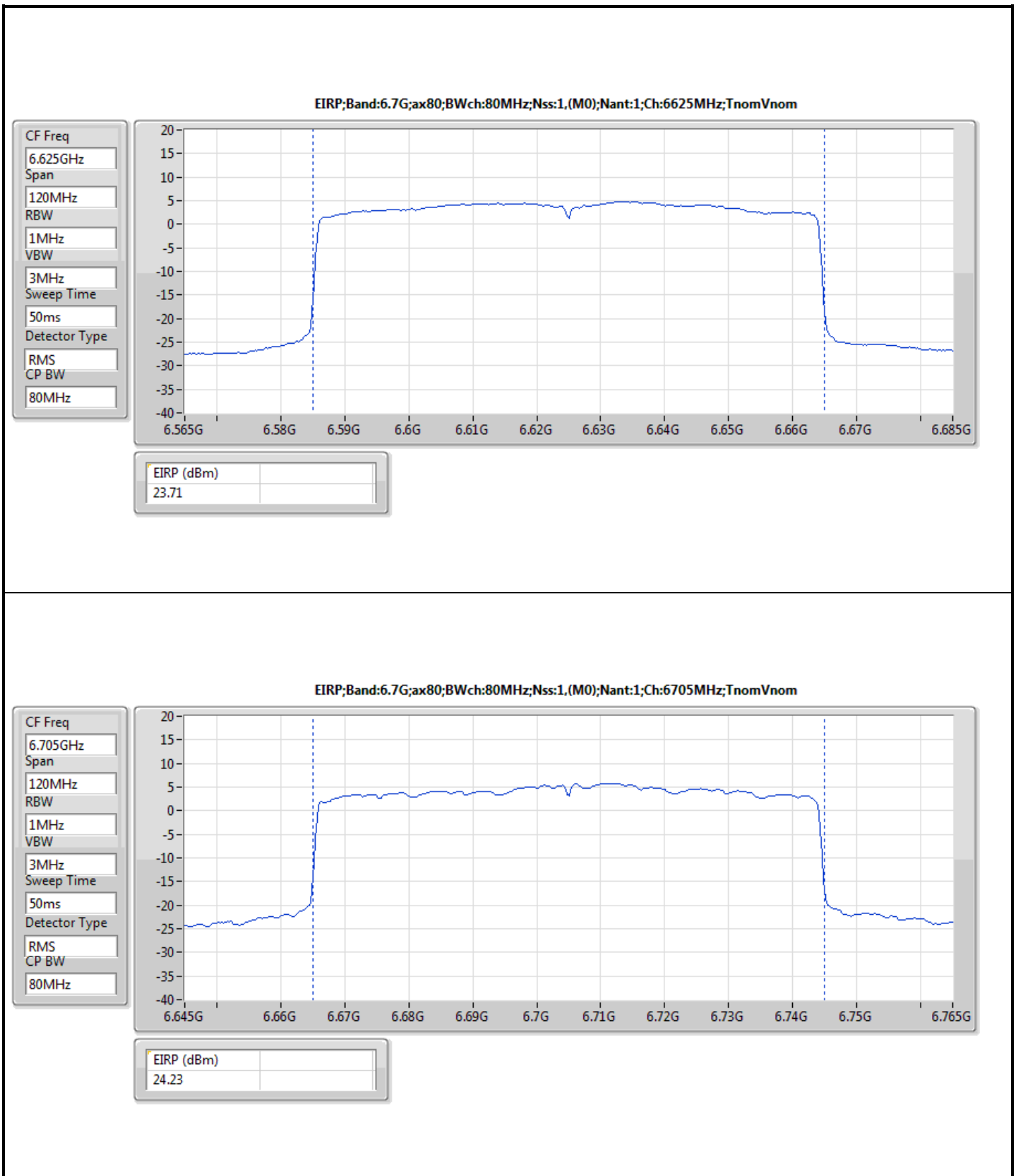


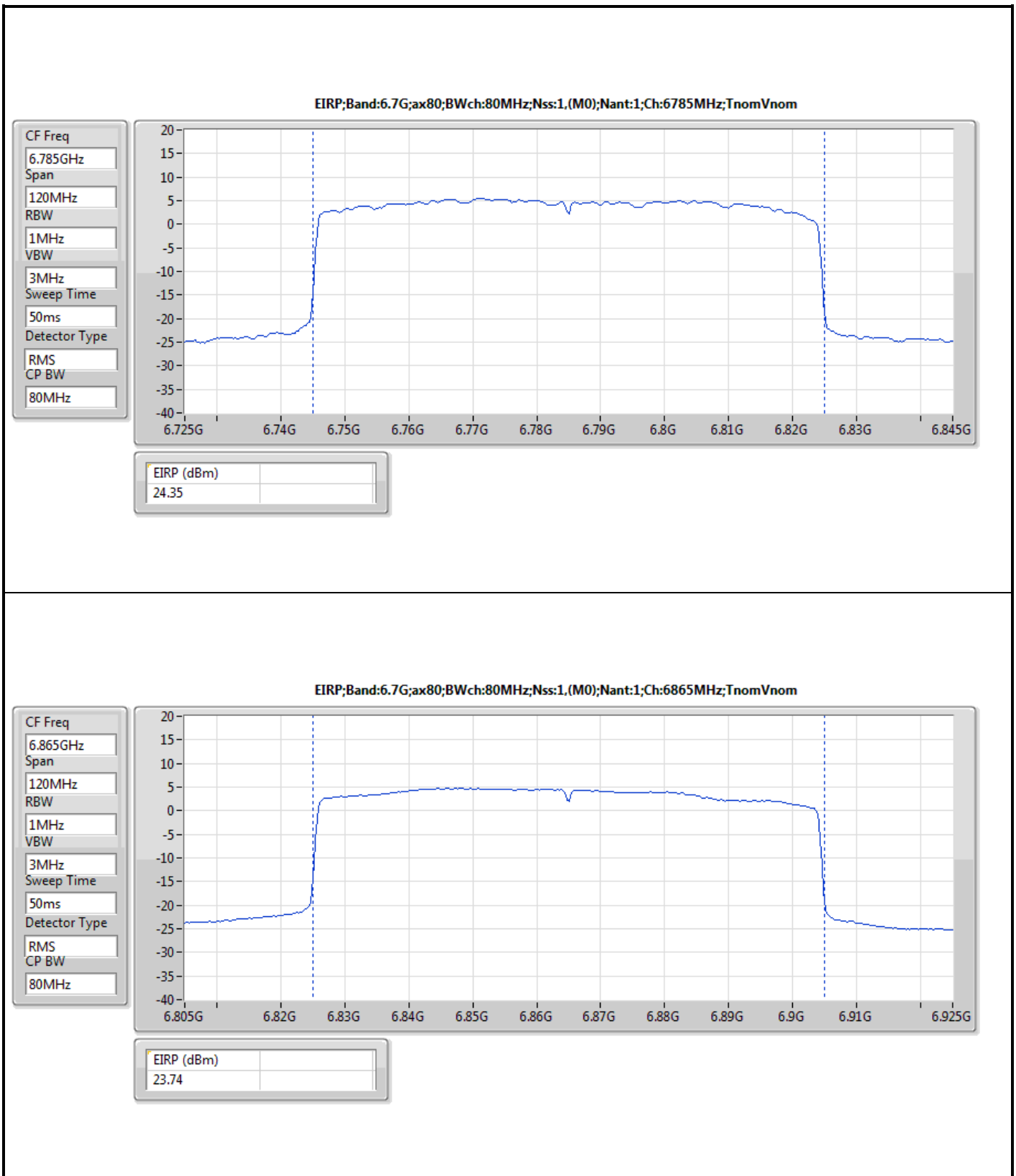










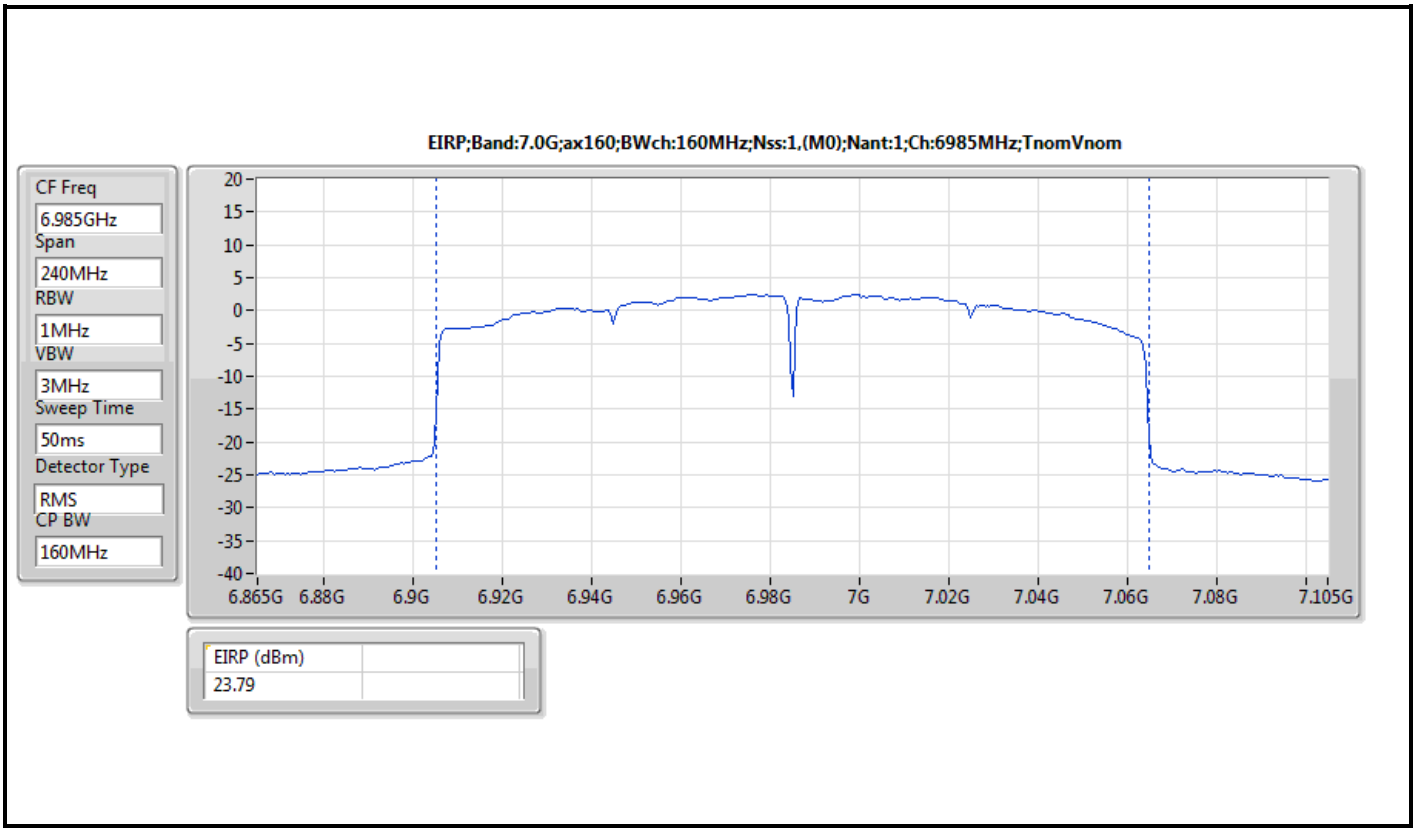












For non beamforming mode

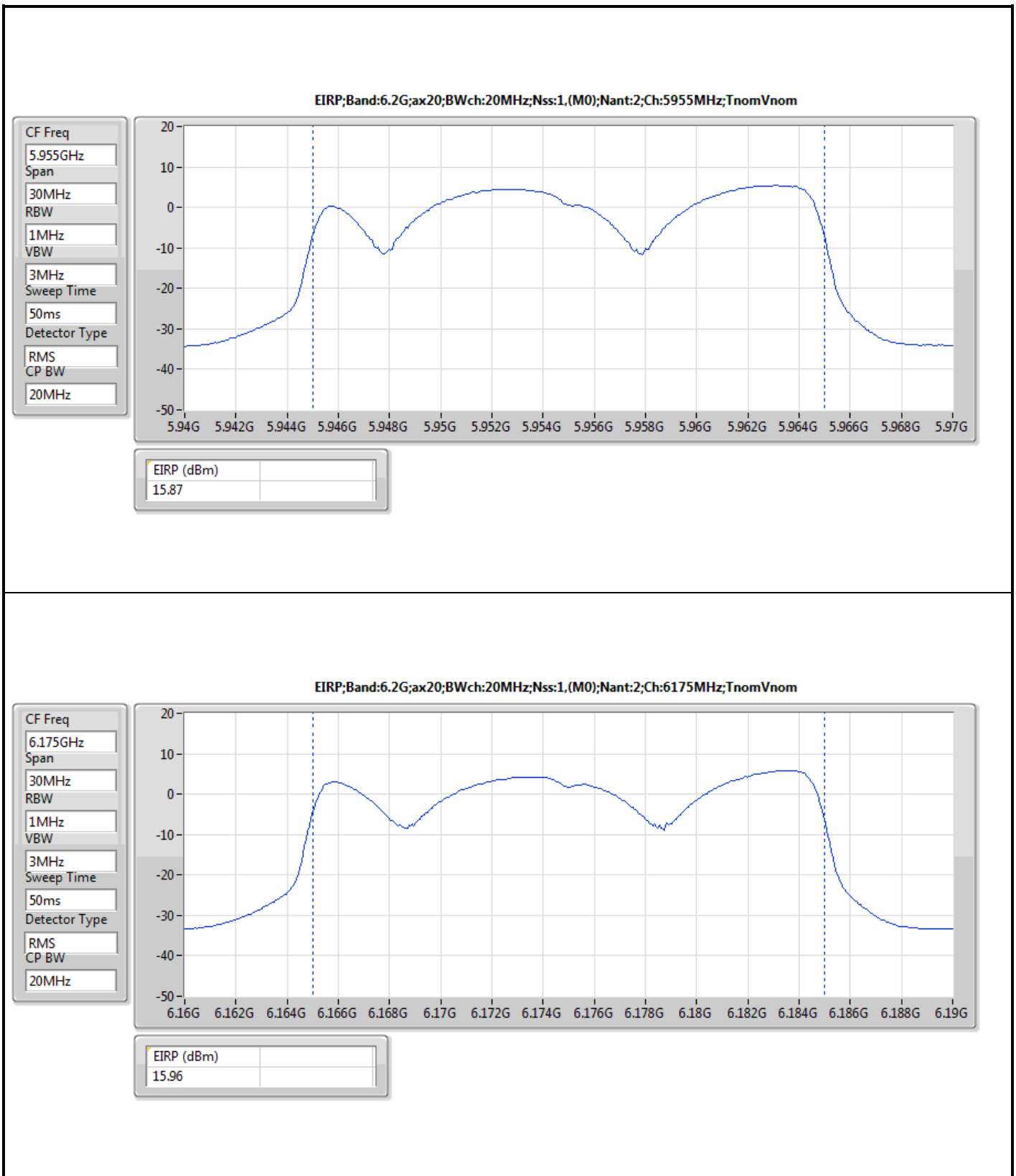
Summary

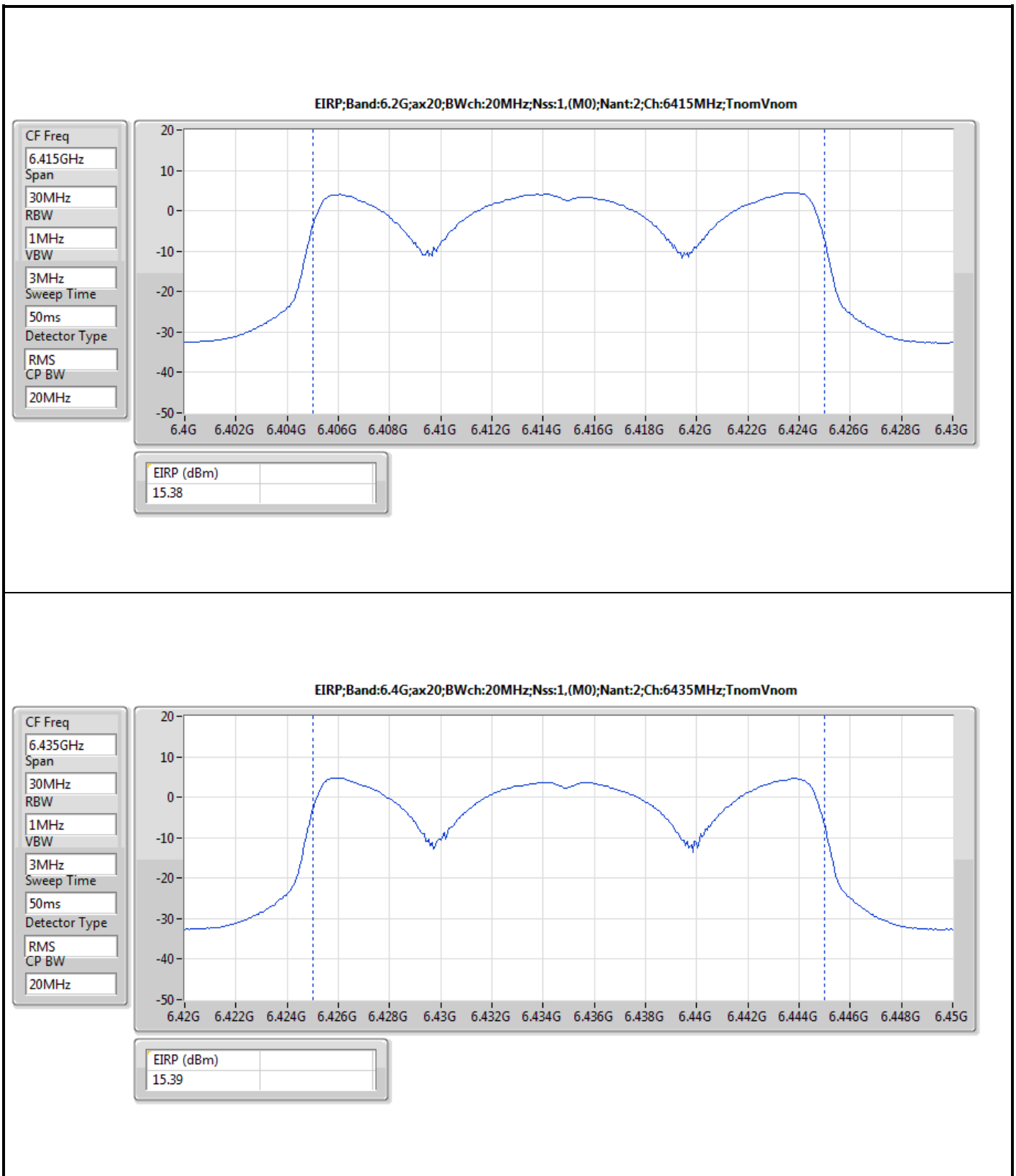
Mode	EIRP (dBm)	EIRP (W)
5.925-6.425GHz	-	-
802.11ax HEW20_Nss1,(MCS0)_2TX	15.96	0.03945
802.11ax HEW40_Nss1,(MCS0)_2TX	18.62	0.07278
802.11ax HEW80_Nss1,(MCS0)_2TX	21.36	0.13677
802.11ax HEW160_Nss1,(MCS0)_2TX	24.52	0.28314
6.425-6.525GHz	-	-
802.11ax HEW20_Nss1,(MCS0)_2TX	15.62	0.03648
802.11ax HEW40_Nss1,(MCS0)_2TX	19.07	0.08072
802.11ax HEW80_Nss1,(MCS0)_2TX	21.90	0.15488
802.11ax HEW160_Nss1,(MCS0)_2TX	24.34	0.27164
6.525-6.875GHz	-	-
802.11ax HEW20_Nss1,(MCS0)_2TX	15.85	0.03846
802.11ax HEW40_Nss1,(MCS0)_2TX	18.62	0.07278
802.11ax HEW80_Nss1,(MCS0)_2TX	21.50	0.14125
802.11ax HEW160_Nss1,(MCS0)_2TX	24.16	0.26062
6.875-7.125GHz	-	-
802.11ax HEW20_Nss1,(MCS0)_2TX	16.04	0.04018
802.11ax HEW40_Nss1,(MCS0)_2TX	18.94	0.07834
802.11ax HEW80_Nss1,(MCS0)_2TX	21.68	0.14723
802.11ax HEW160_Nss1,(MCS0)_2TX	23.76	0.23768

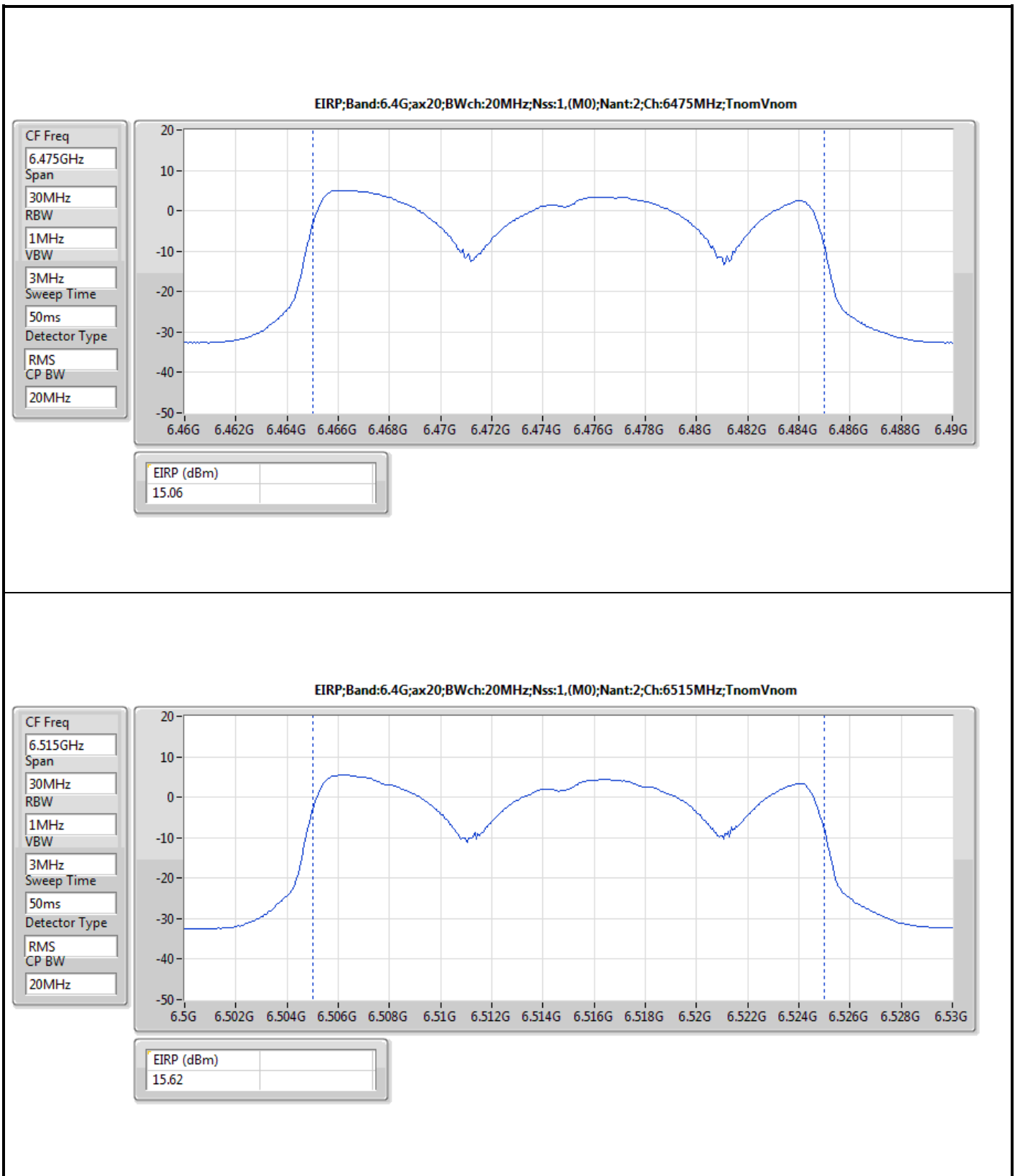
Result

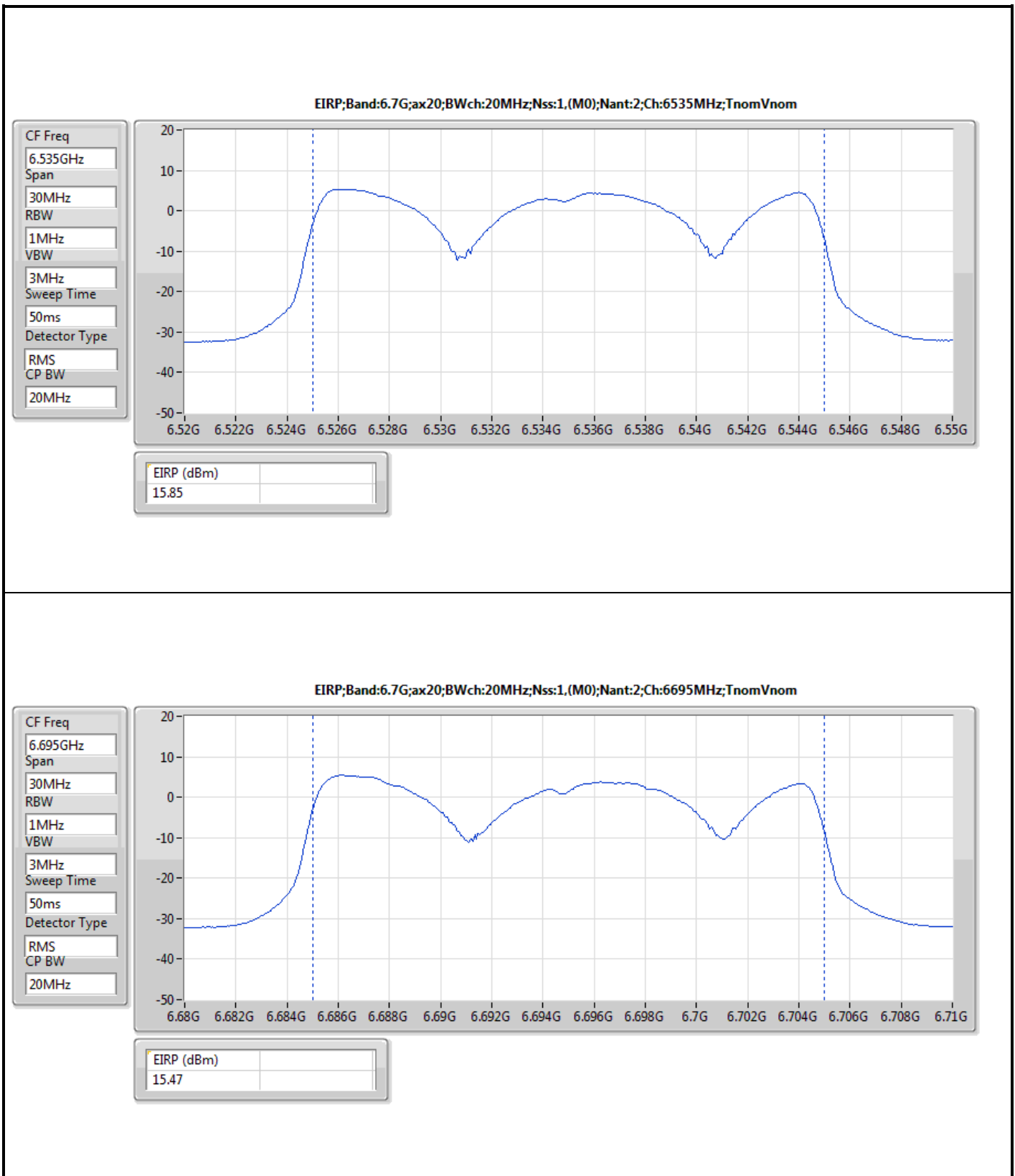
Mode	Result	EIRP (dBm)	EIRP Limit (dBm)
802.11ax HEW20_Nss1,(MCS0)_2TX	-	-	-
5955MHz	Pass	15.87	30.00
6175MHz	Pass	15.96	30.00
6415MHz	Pass	15.38	30.00
6435MHz	Pass	15.39	30.00
6475MHz	Pass	15.06	30.00
6515MHz	Pass	15.62	30.00
6535MHz	Pass	15.85	30.00
6695MHz	Pass	15.47	30.00
6855MHz	Pass	14.56	30.00
6875MHz Straddle 6.525-6.875GHz	Pass	14.75	30.00
6895MHz	Pass	15.04	30.00
6995MHz	Pass	15.01	30.00
7095MHz	Pass	16.04	30.00
7115MHz	Pass	13.01	30.00
802.11ax HEW40_Nss1,(MCS0)_2TX	-	-	-
5965MHz	Pass	18.62	30.00
6165MHz	Pass	17.73	30.00
6405MHz	Pass	18.26	30.00
6445MHz	Pass	18.45	30.00
6485MHz	Pass	19.07	30.00
6525MHz Straddle 6.425-6.525GHz	Pass	18.49	30.00
6565MHz	Pass	18.62	30.00
6685MHz	Pass	17.87	30.00
6845MHz	Pass	17.54	30.00
6885MHz Straddle 6.525-6.875GHz	Pass	18.55	30.00
6925MHz	Pass	18.30	30.00
7005MHz	Pass	18.15	30.00
7085MHz	Pass	18.94	30.00
802.11ax HEW80_Nss1,(MCS0)_2TX	-	-	-
5985MHz	Pass	21.13	30.00
6145MHz	Pass	21.10	30.00
6385MHz	Pass	21.36	30.00
6465MHz	Pass	21.90	30.00
6545MHz Straddle 6.425-6.525GHz	Pass	20.70	30.00
6625MHz	Pass	20.73	30.00
6705MHz	Pass	21.50	30.00
6785MHz	Pass	20.76	30.00
6865MHz Straddle 6.525-6.875GHz	Pass	20.94	30.00
6945MHz	Pass	20.98	30.00
7025MHz	Pass	21.68	30.00
802.11ax HEW160_Nss1,(MCS0)_2TX	-	-	-
6025MHz	Pass	23.91	30.00
6185MHz	Pass	24.04	30.00
6345MHz	Pass	24.52	30.00
6505MHz Straddle 6.425-6.525GHz	Pass	24.34	30.00
6665MHz	Pass	24.16	30.00
6825MHz Straddle 6.525-6.875GHz	Pass	24.00	30.00
6985MHz	Pass	23.76	30.00

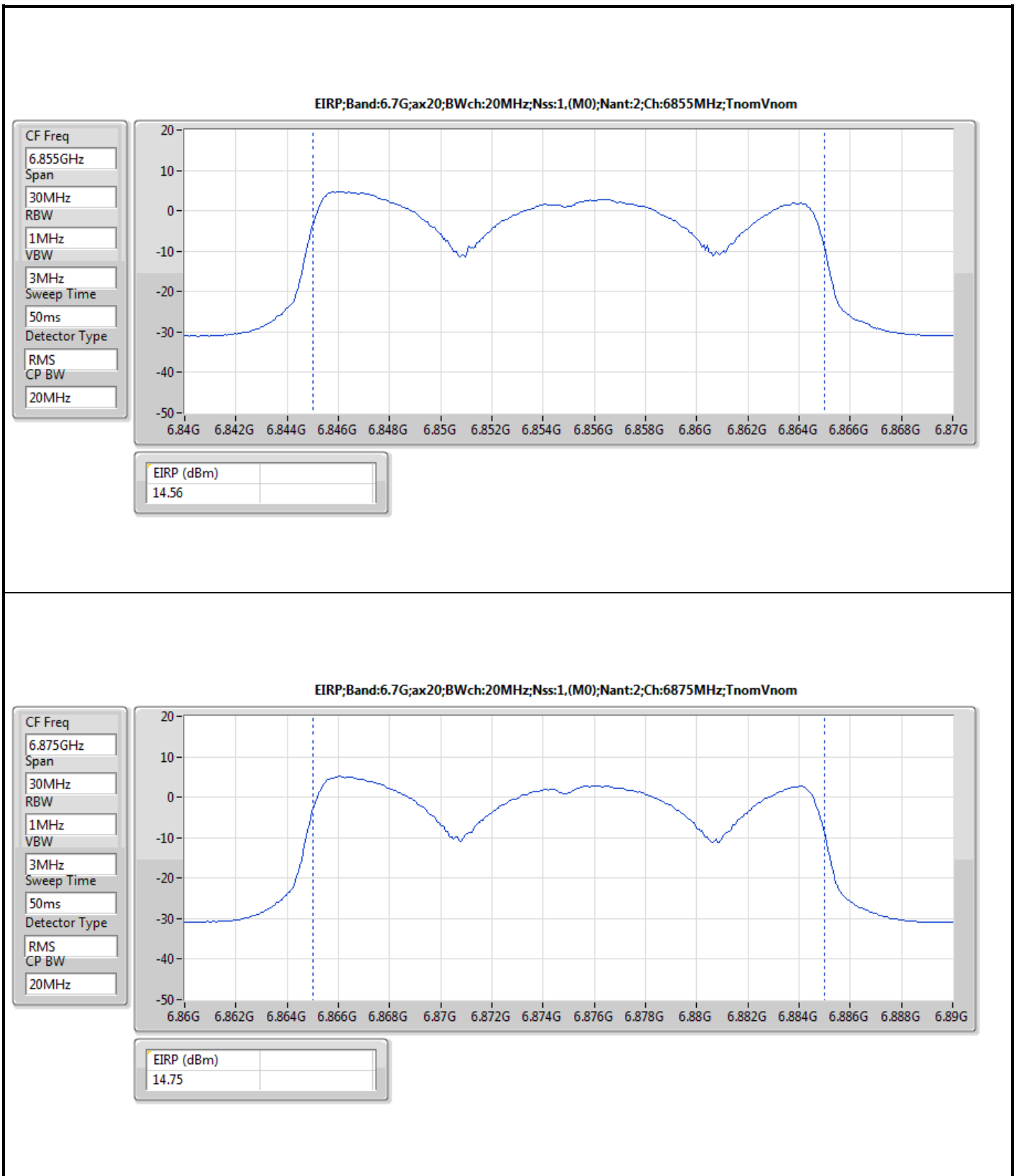
DG = Directional Gain; Port X = Port X output power

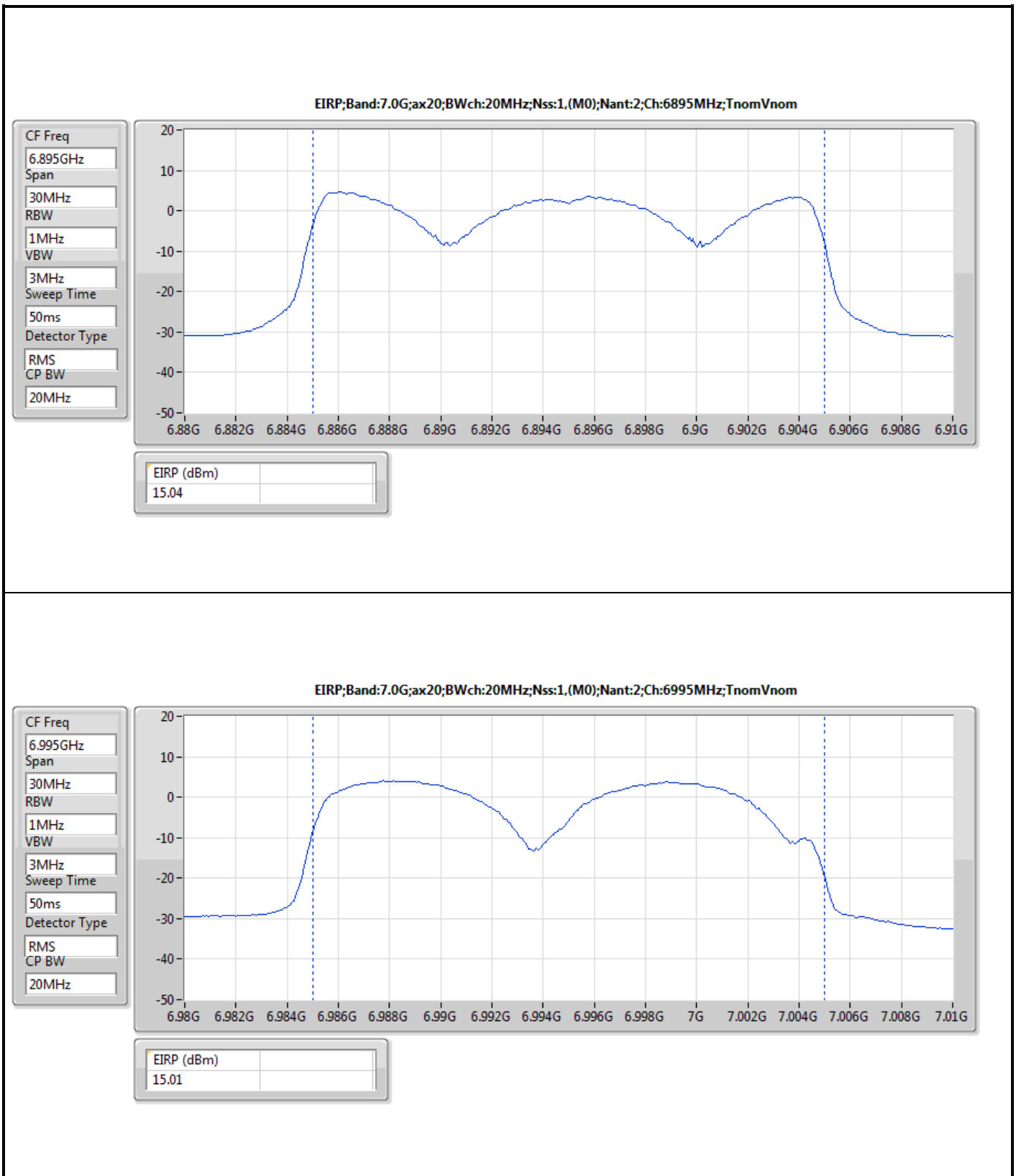


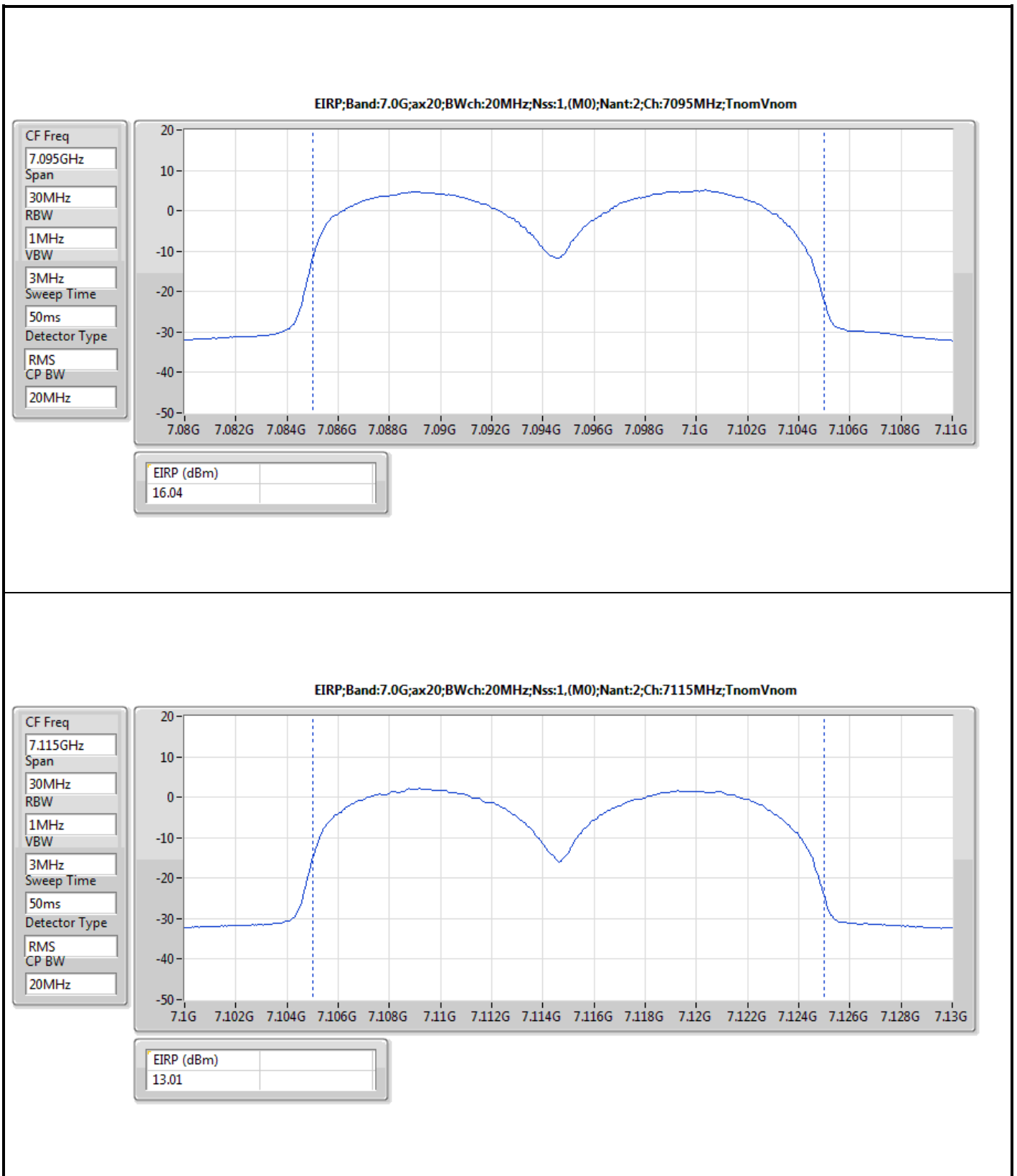


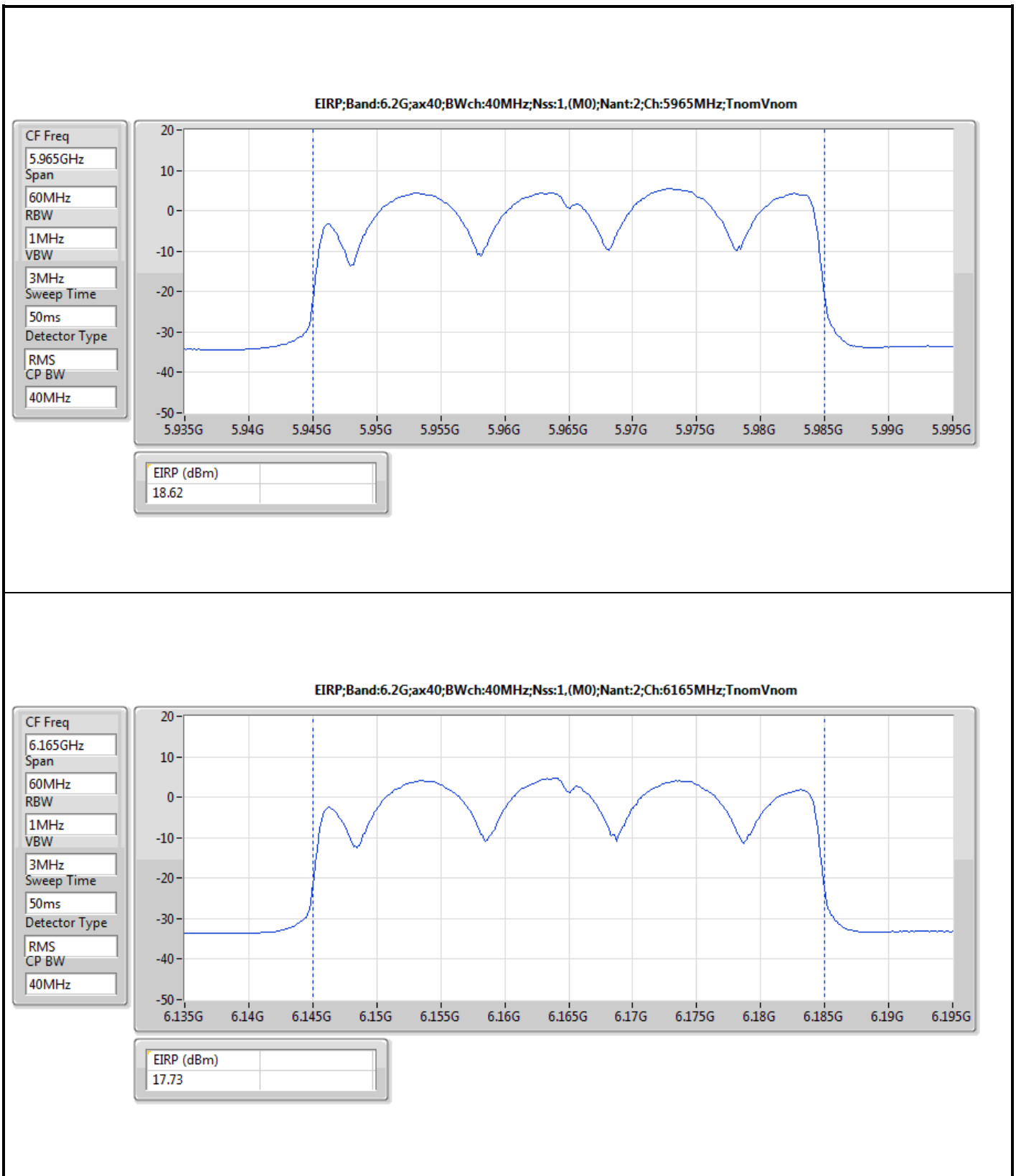


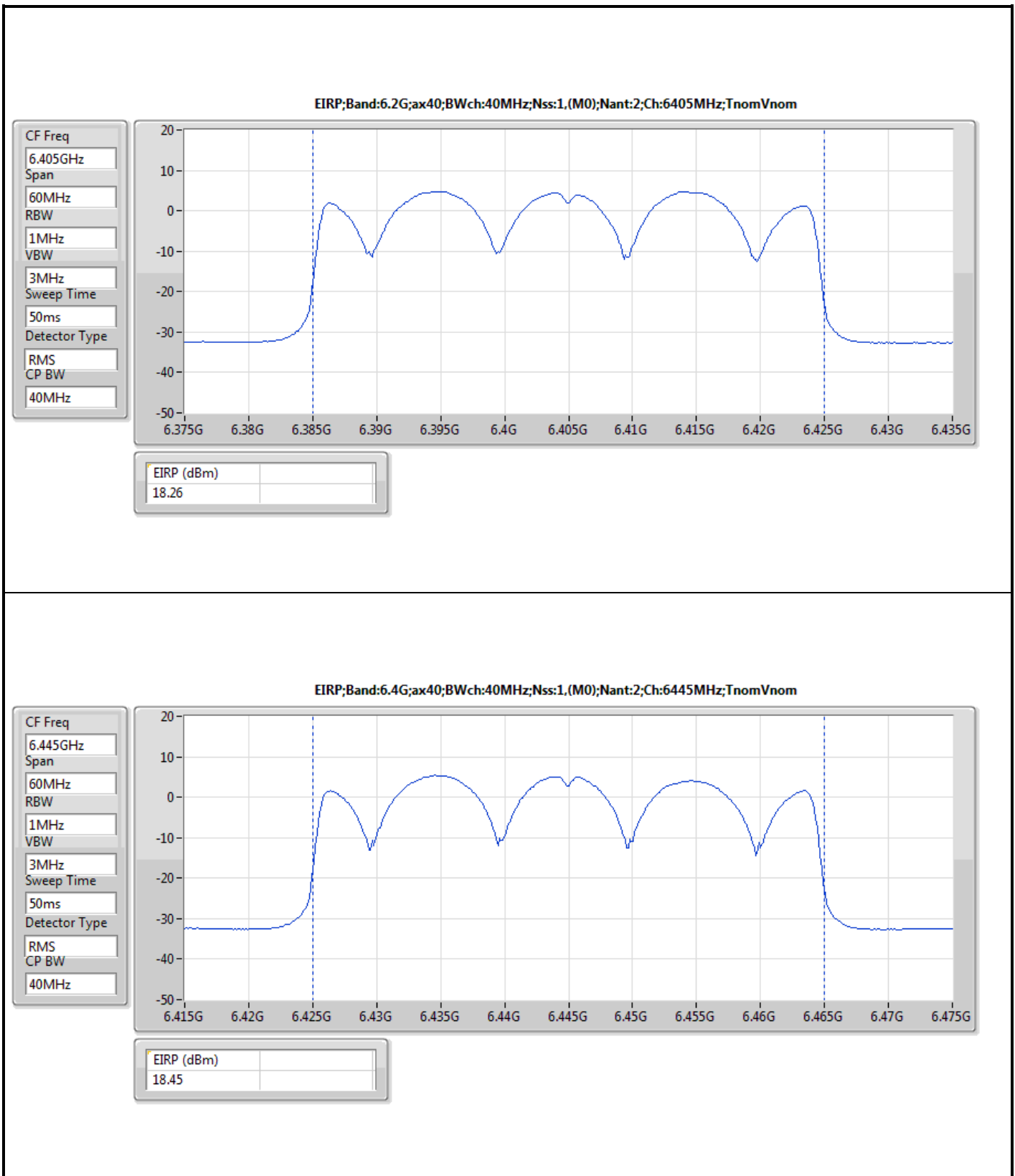


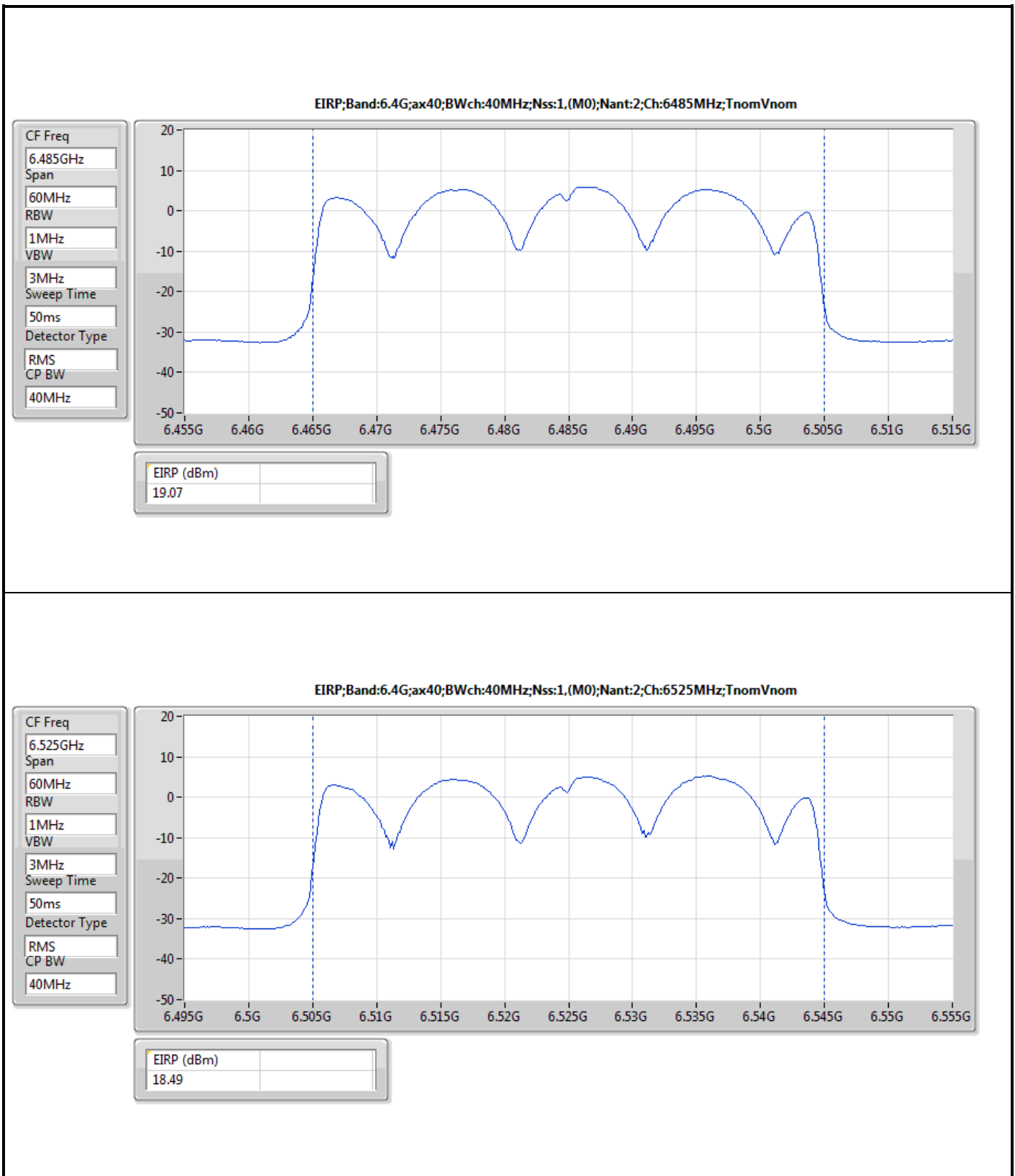


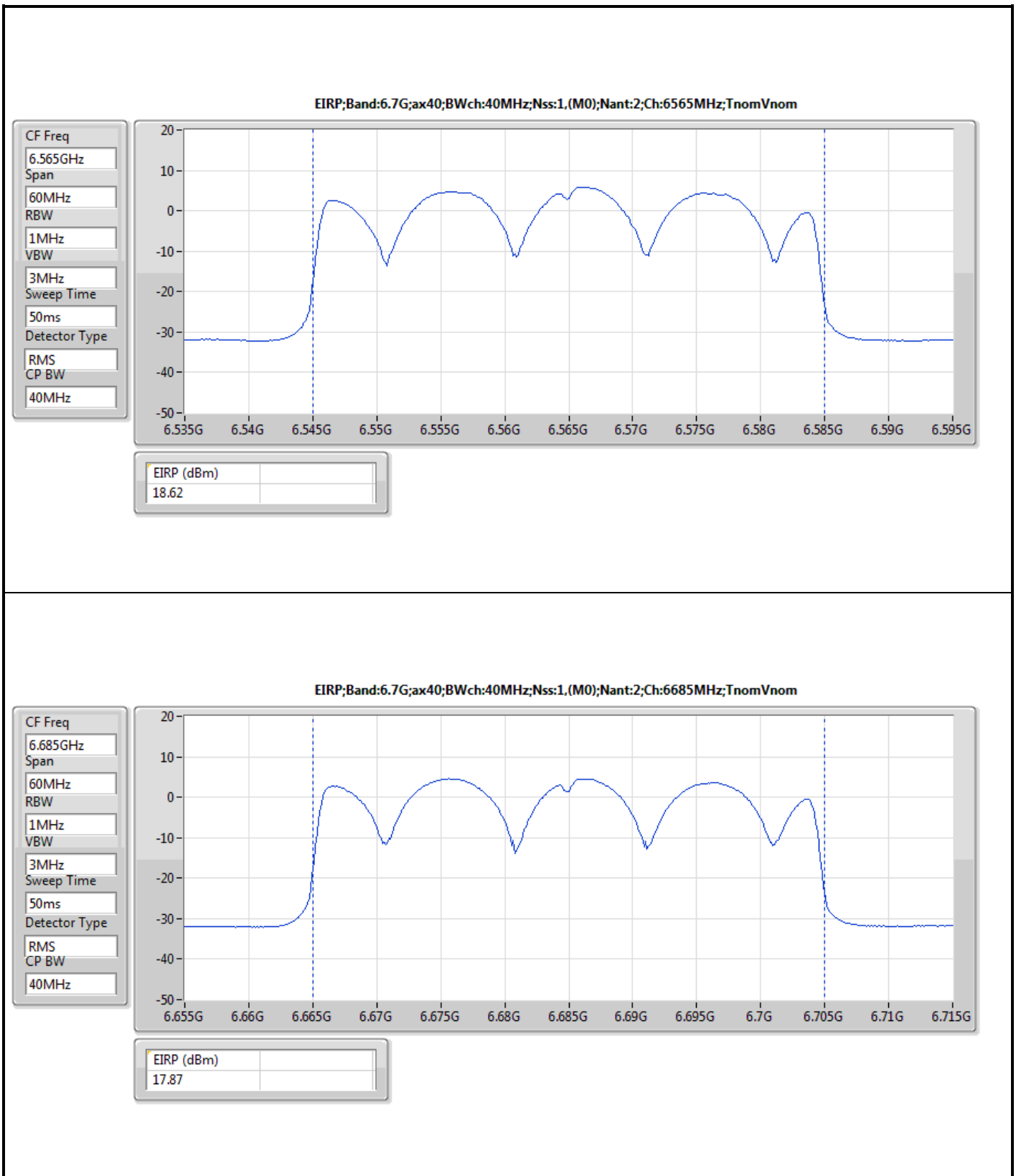


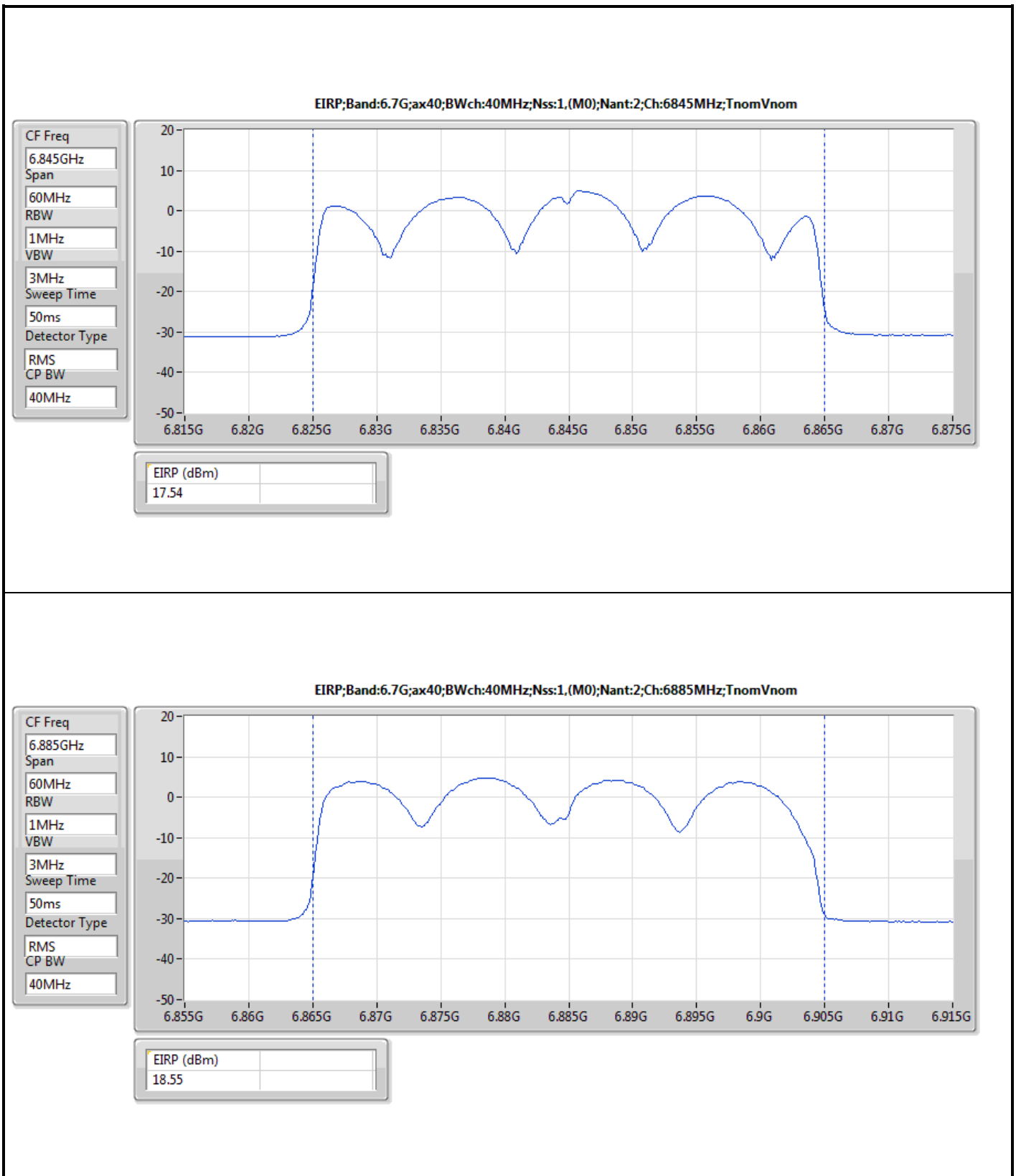


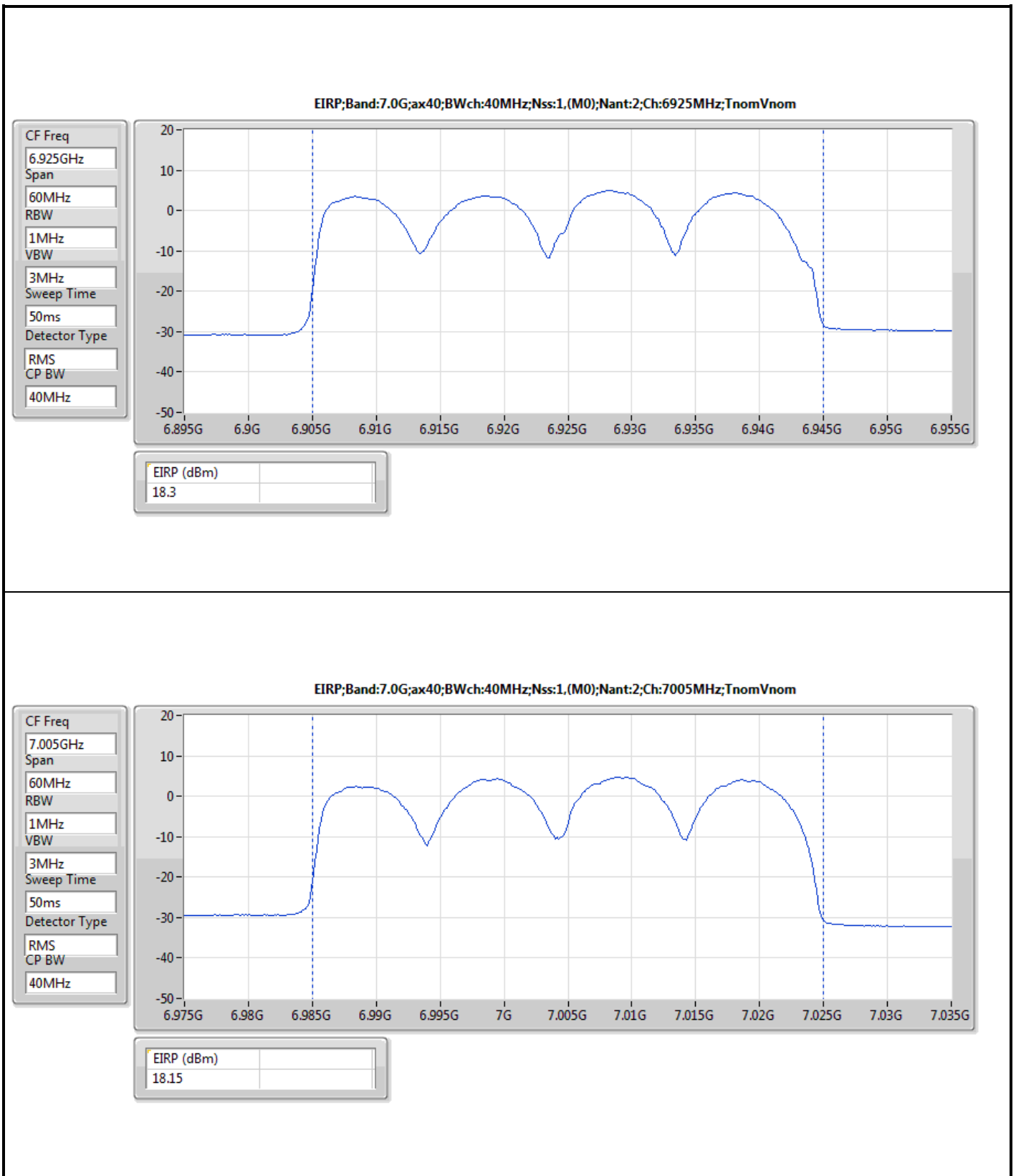


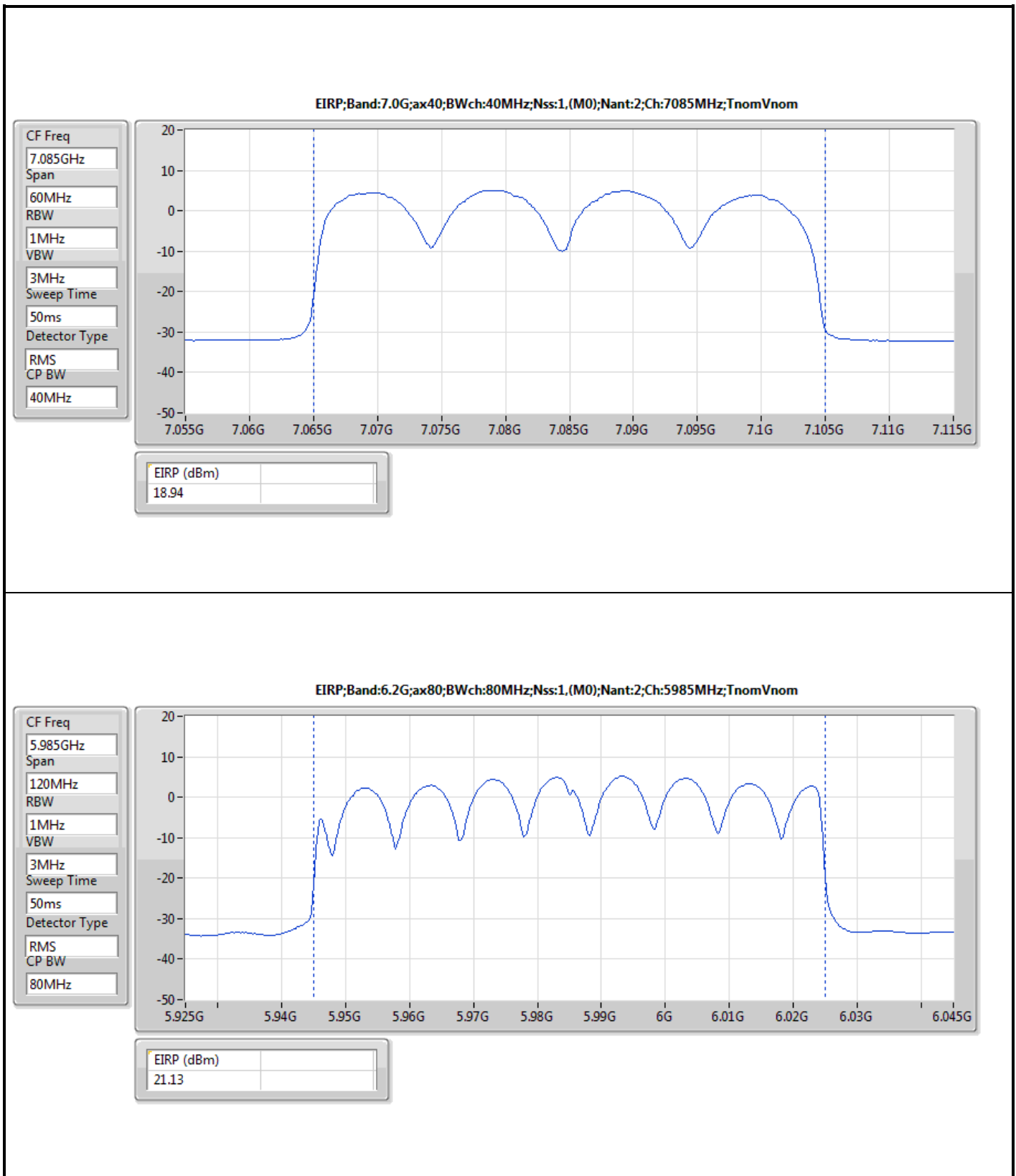


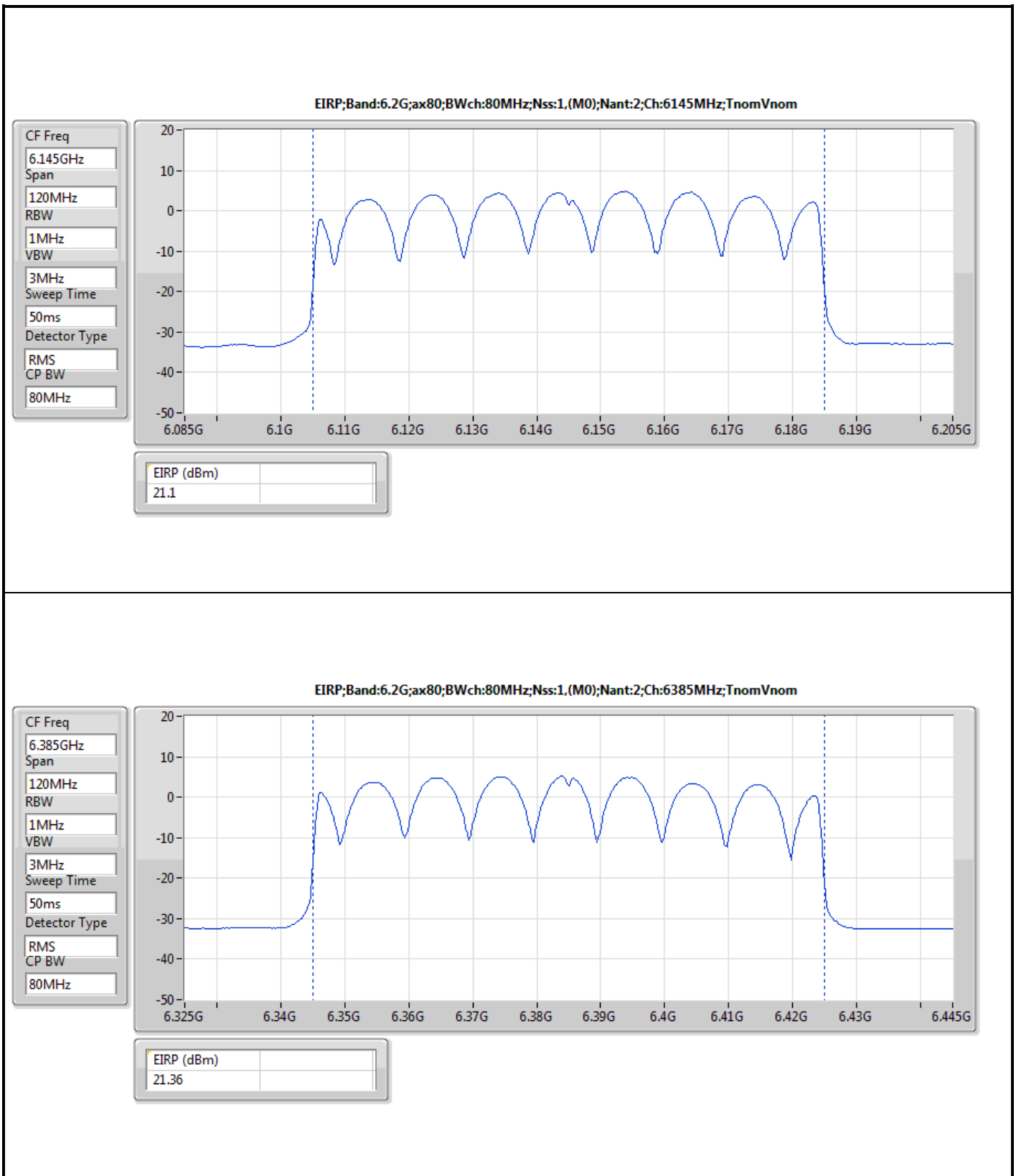


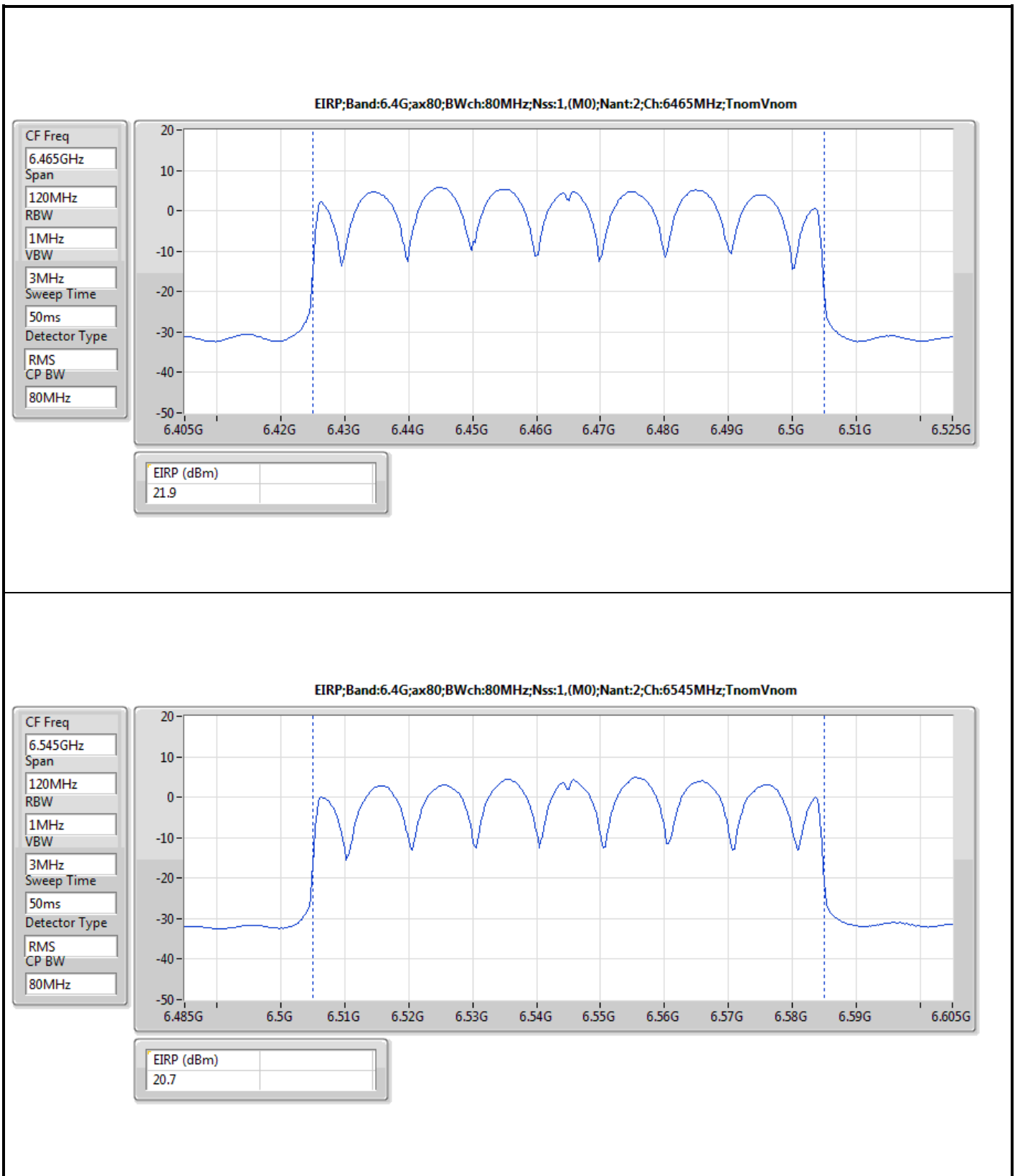


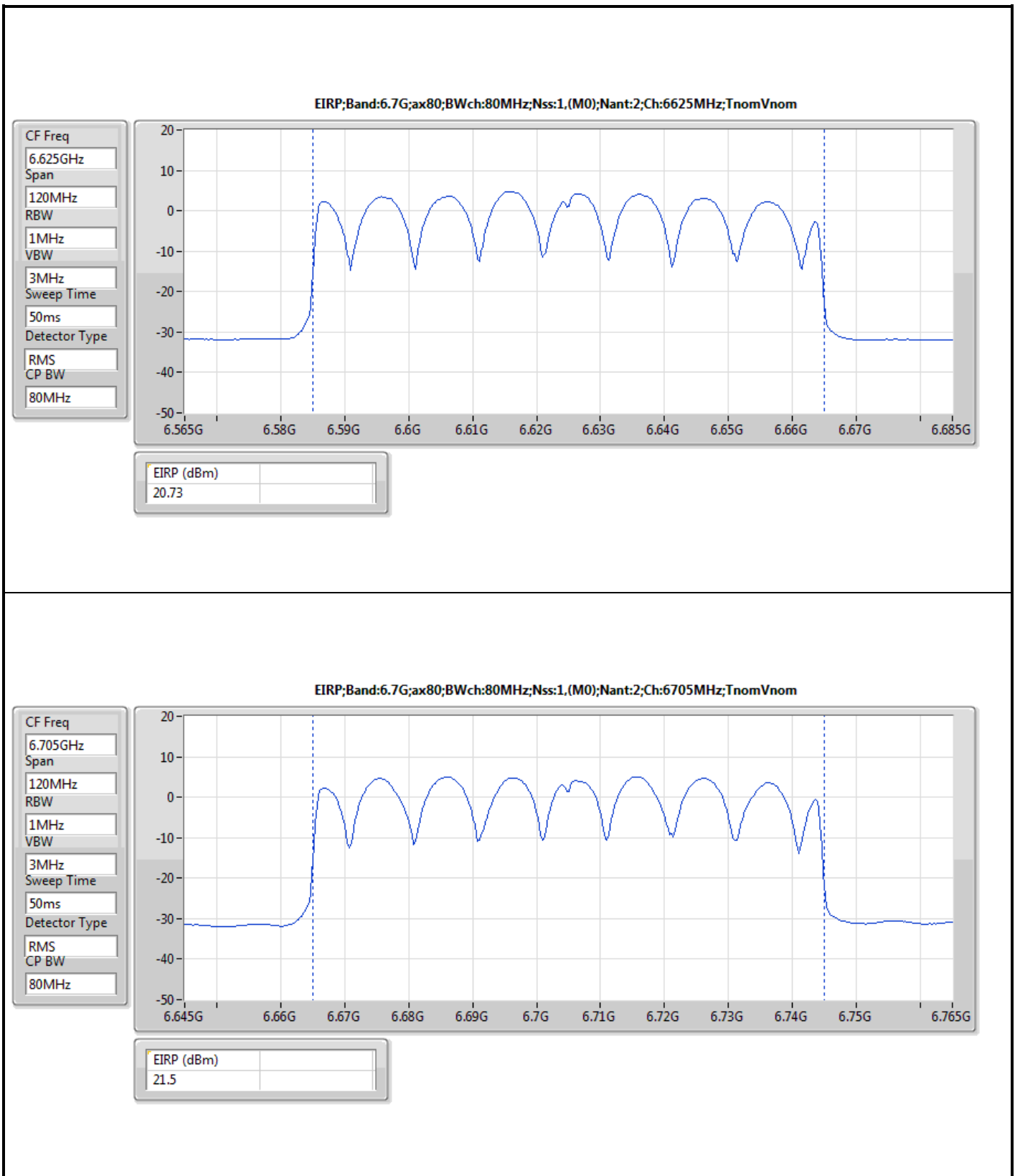


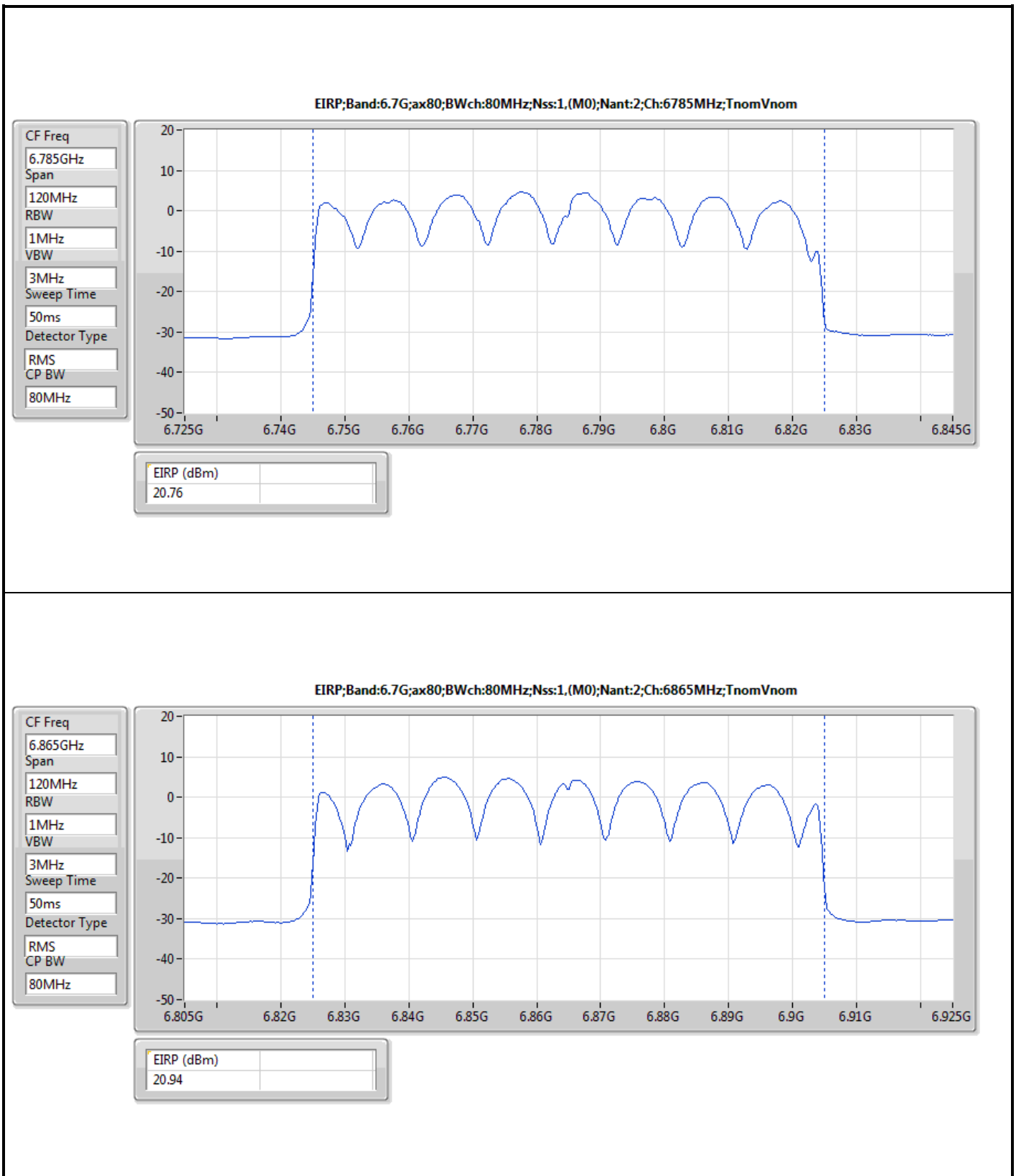


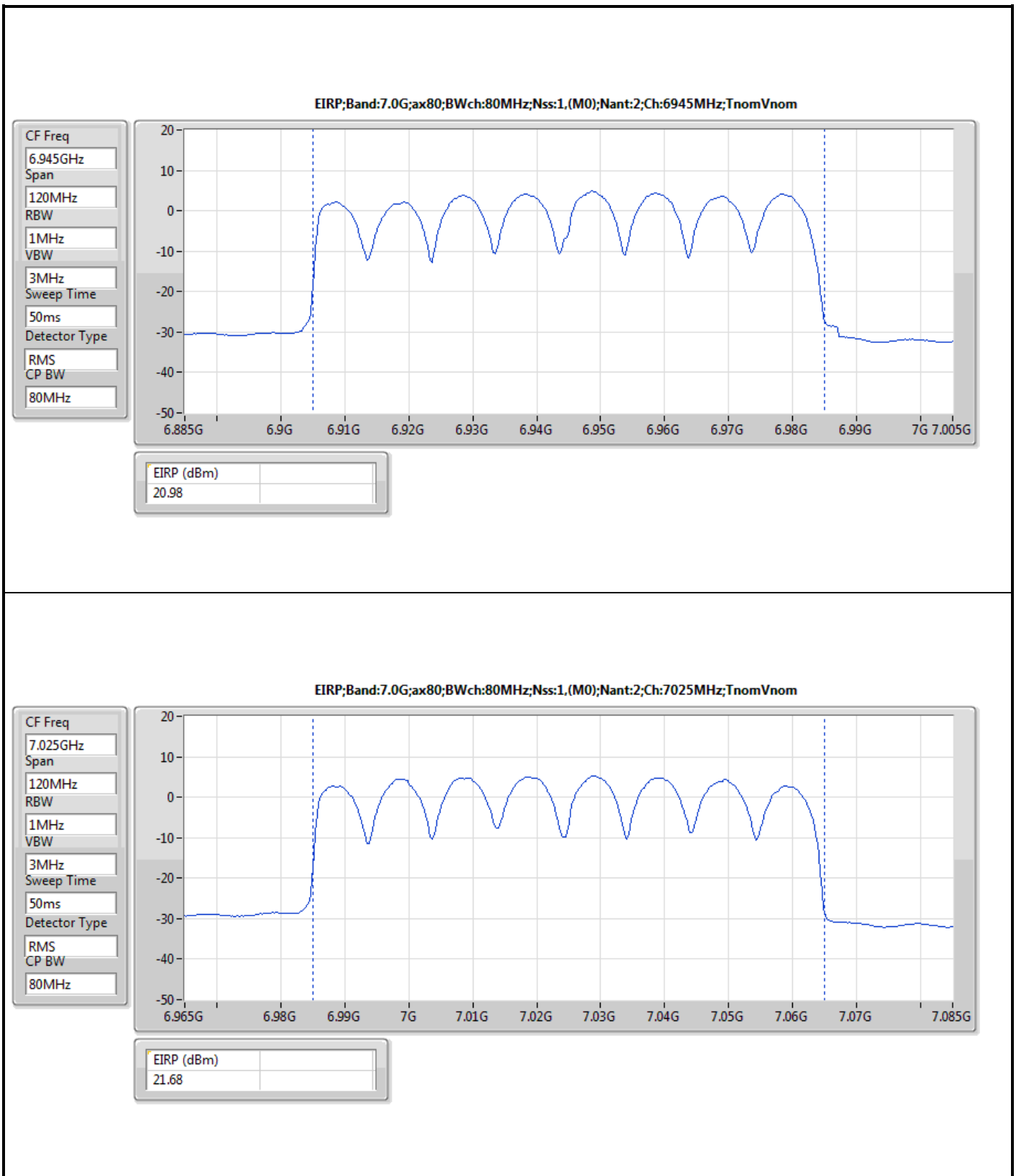


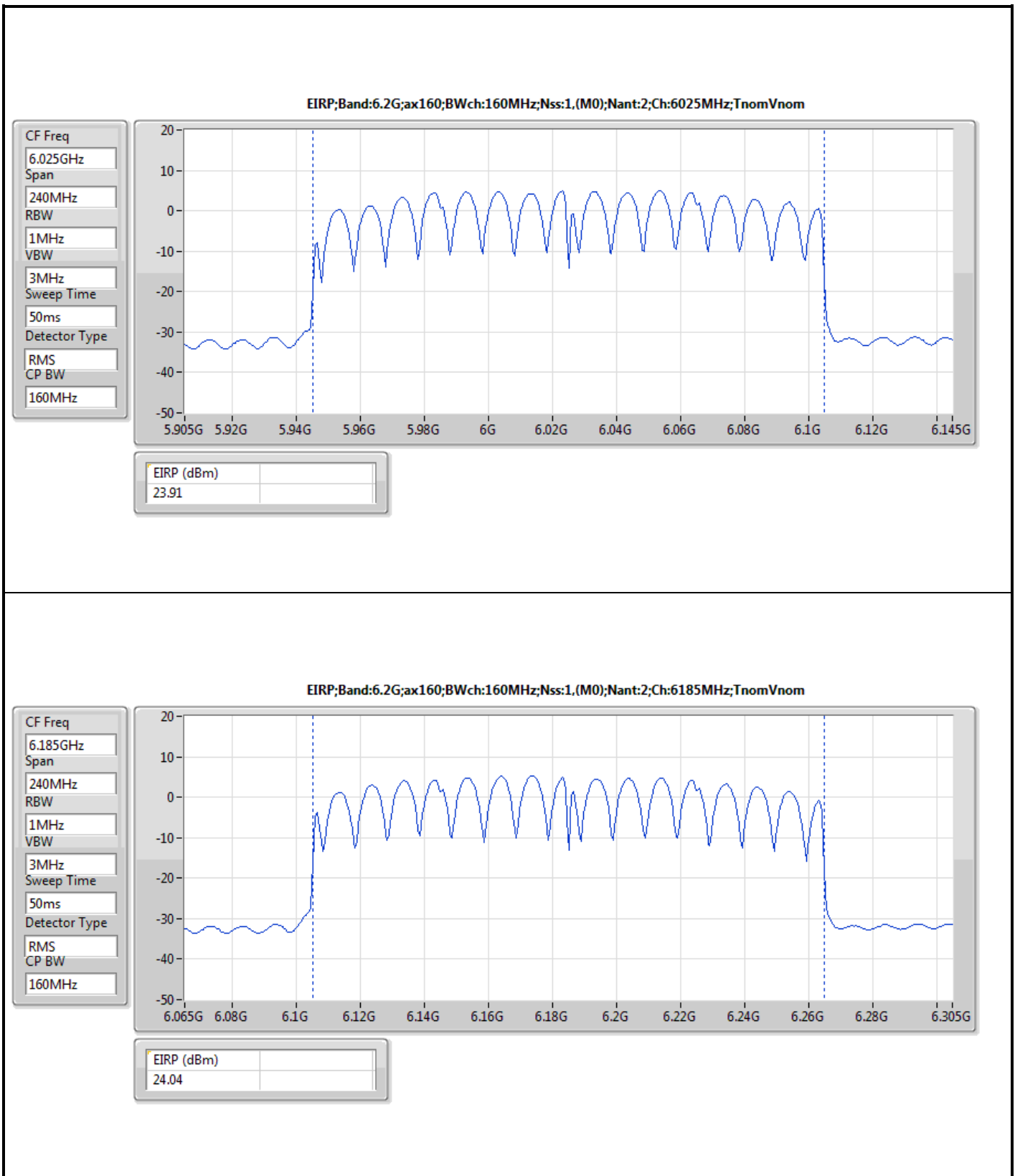


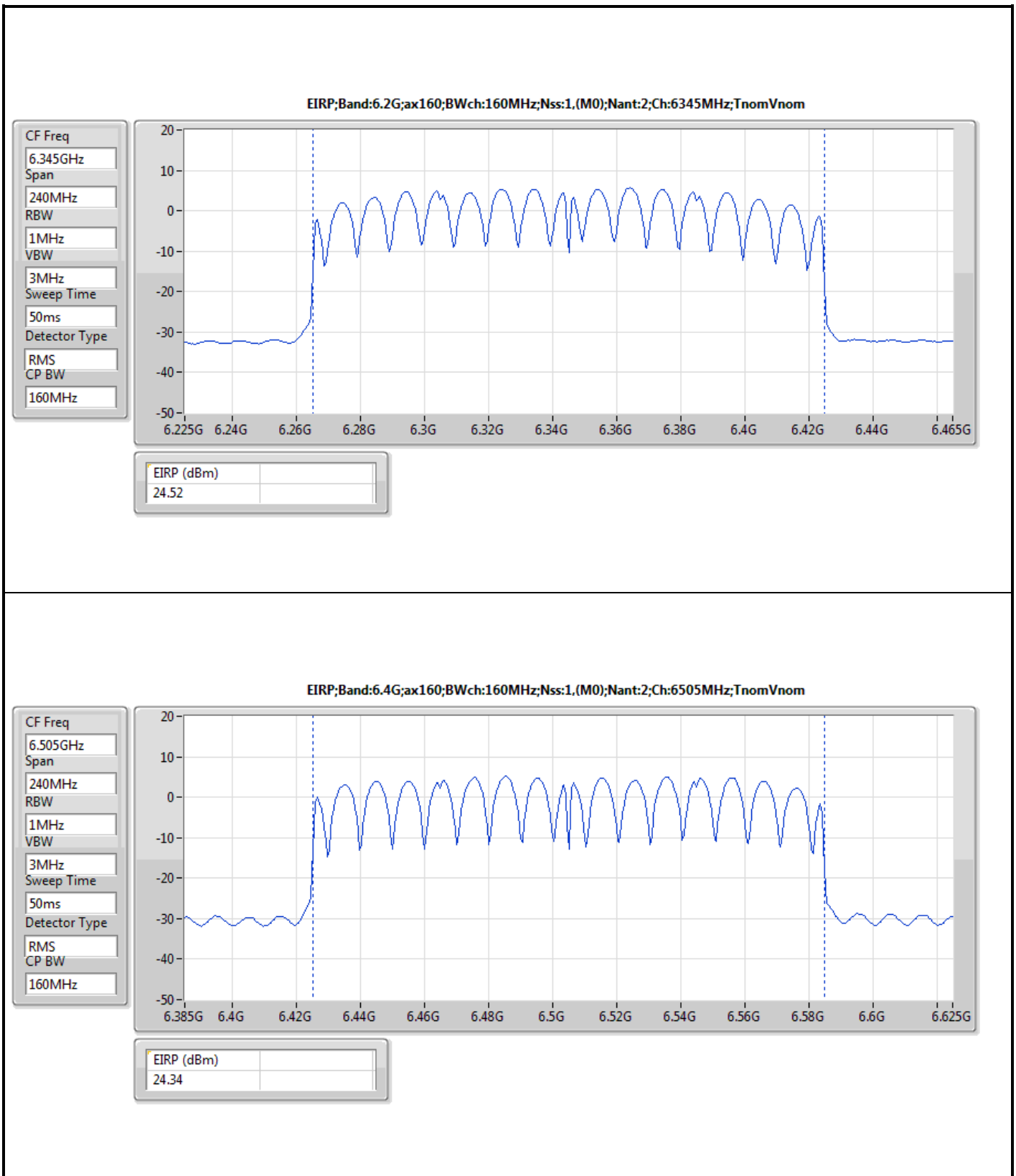


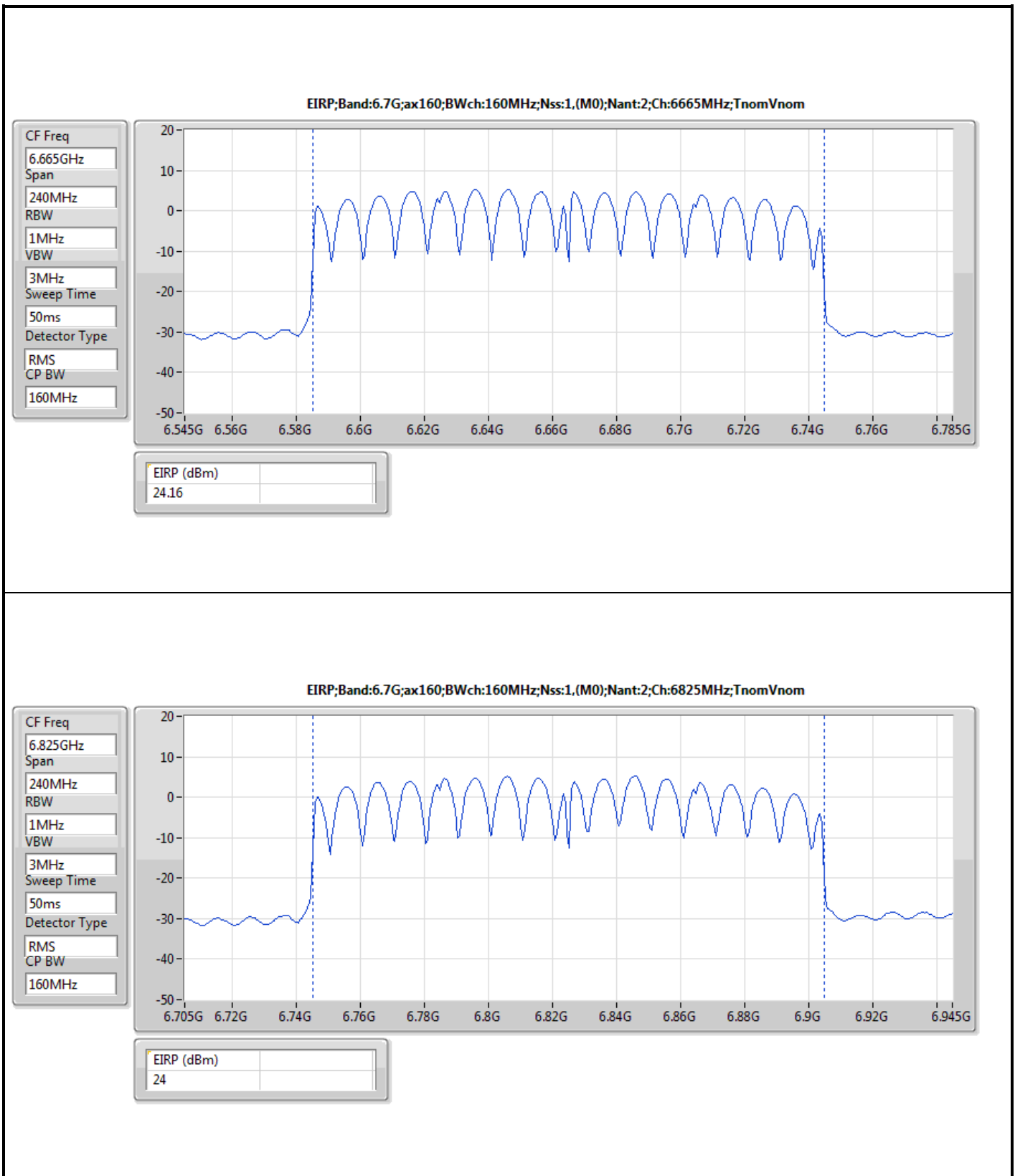


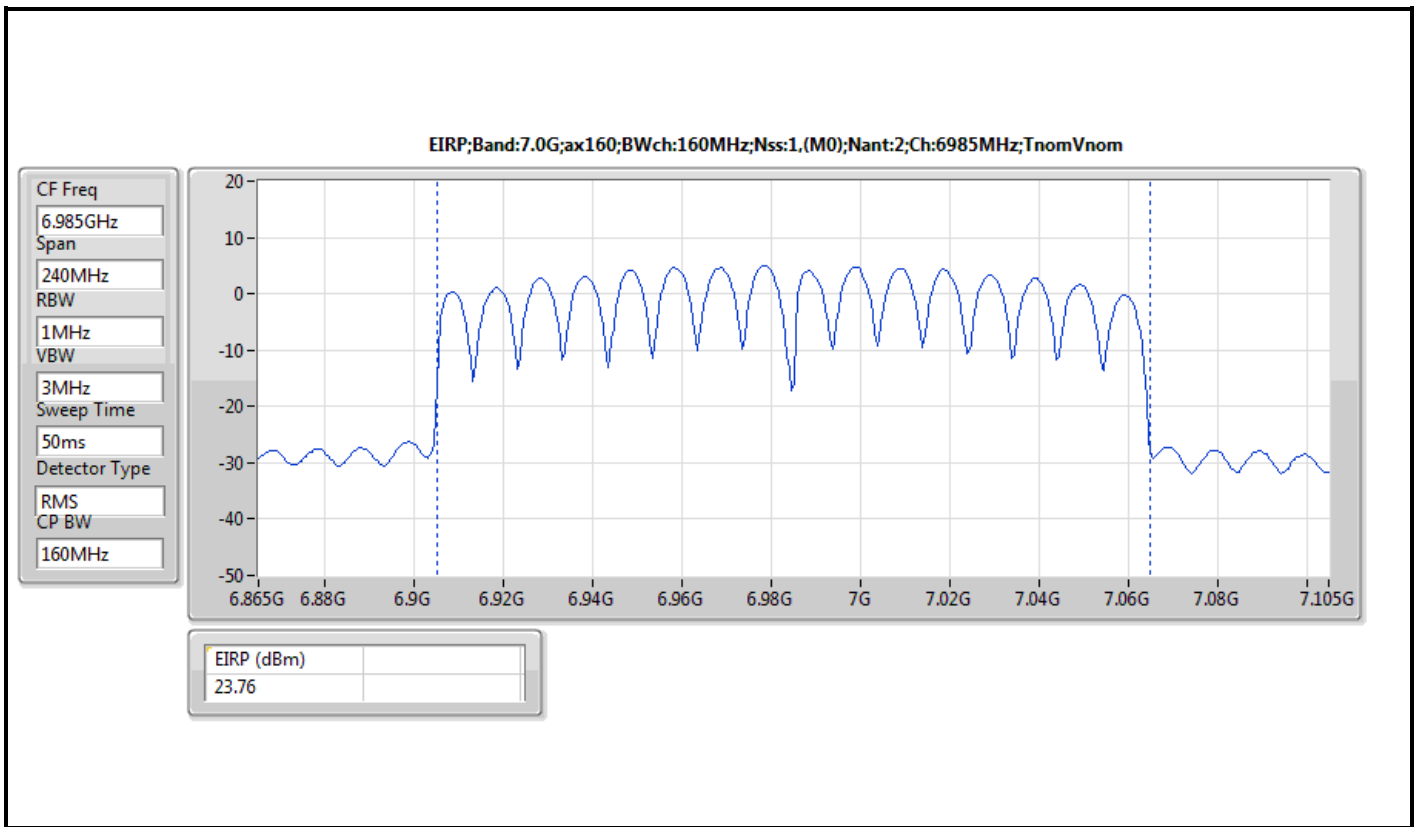












For beamforming mode
Summary

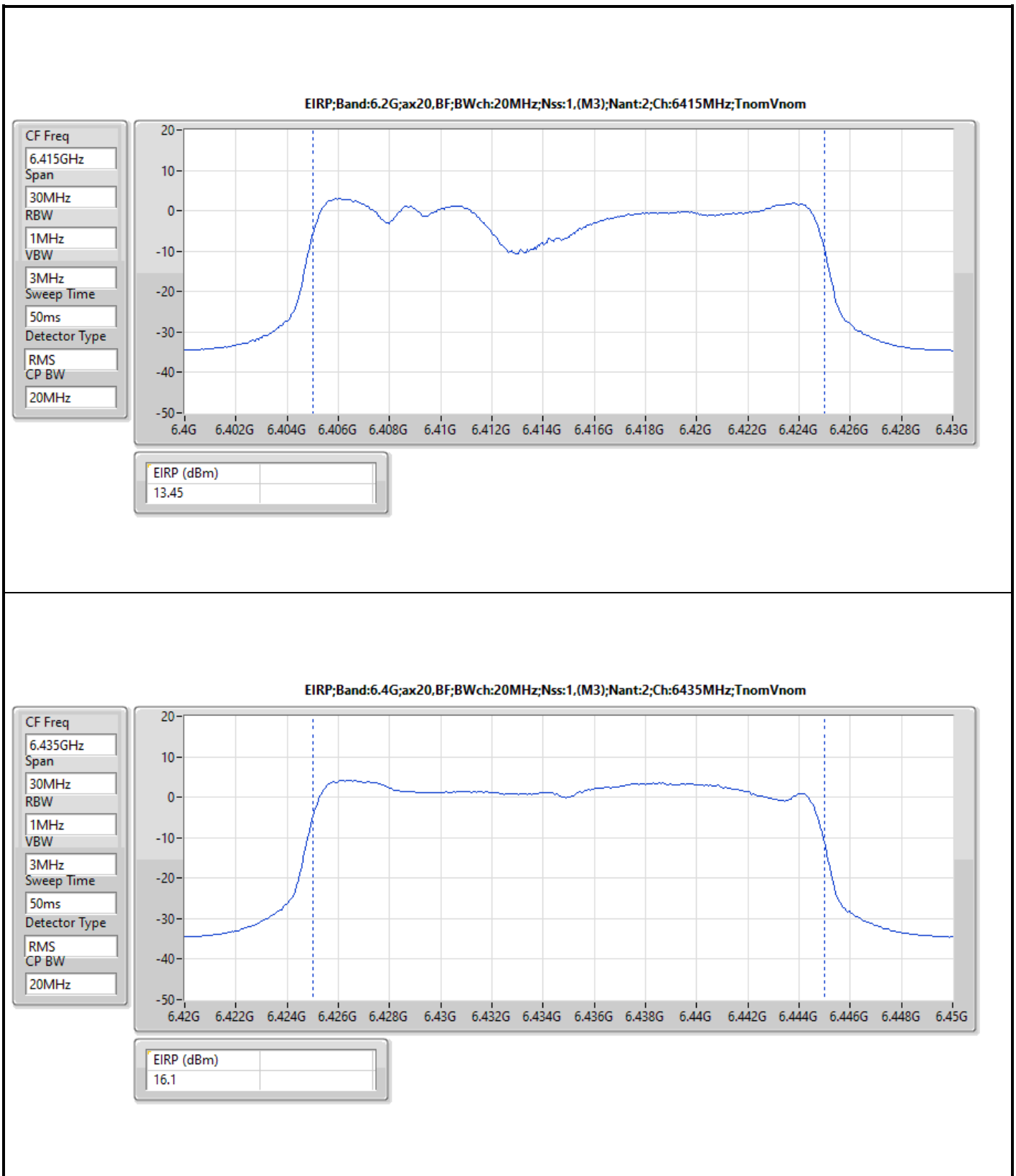
Mode	EIRP (dBm)	EIRP (W)
5.925-6.425GHz	-	-
802.11ax HEW20-BF_Nss1,(MCS3)_2TX	15.23	0.03334
802.11ax HEW40-BF_Nss1,(MCS3)_2TX	19.29	0.08492
802.11ax HEW80-BF_Nss1,(MCS3)_2TX	22.24	0.16749
802.11ax HEW160-BF_Nss1,(MCS3)_2TX	25.34	0.34198
6.425-6.525GHz	-	-
802.11ax HEW20-BF_Nss1,(MCS3)_2TX	16.10	0.04074
802.11ax HEW40-BF_Nss1,(MCS3)_2TX	21.09	0.12853
802.11ax HEW80-BF_Nss1,(MCS3)_2TX	23.99	0.25061
802.11ax HEW160-BF_Nss1,(MCS3)_2TX	21.35	0.13646
6.525-6.875GHz	-	-
802.11ax HEW20-BF_Nss1,(MCS3)_2TX	15.22	0.03327
802.11ax HEW40-BF_Nss1,(MCS3)_2TX	19.79	0.09528
802.11ax HEW80-BF_Nss1,(MCS3)_2TX	23.31	0.21429
802.11ax HEW160-BF_Nss1,(MCS3)_2TX	22.09	0.16181
6.875-7.125GHz	-	-
802.11ax HEW20-BF_Nss1,(MCS3)_2TX	16.16	0.04130
802.11ax HEW40-BF_Nss1,(MCS3)_2TX	19.69	0.09311
802.11ax HEW80-BF_Nss1,(MCS3)_2TX	23.30	0.21380
802.11ax HEW160-BF_Nss1,(MCS3)_2TX	23.11	0.20464

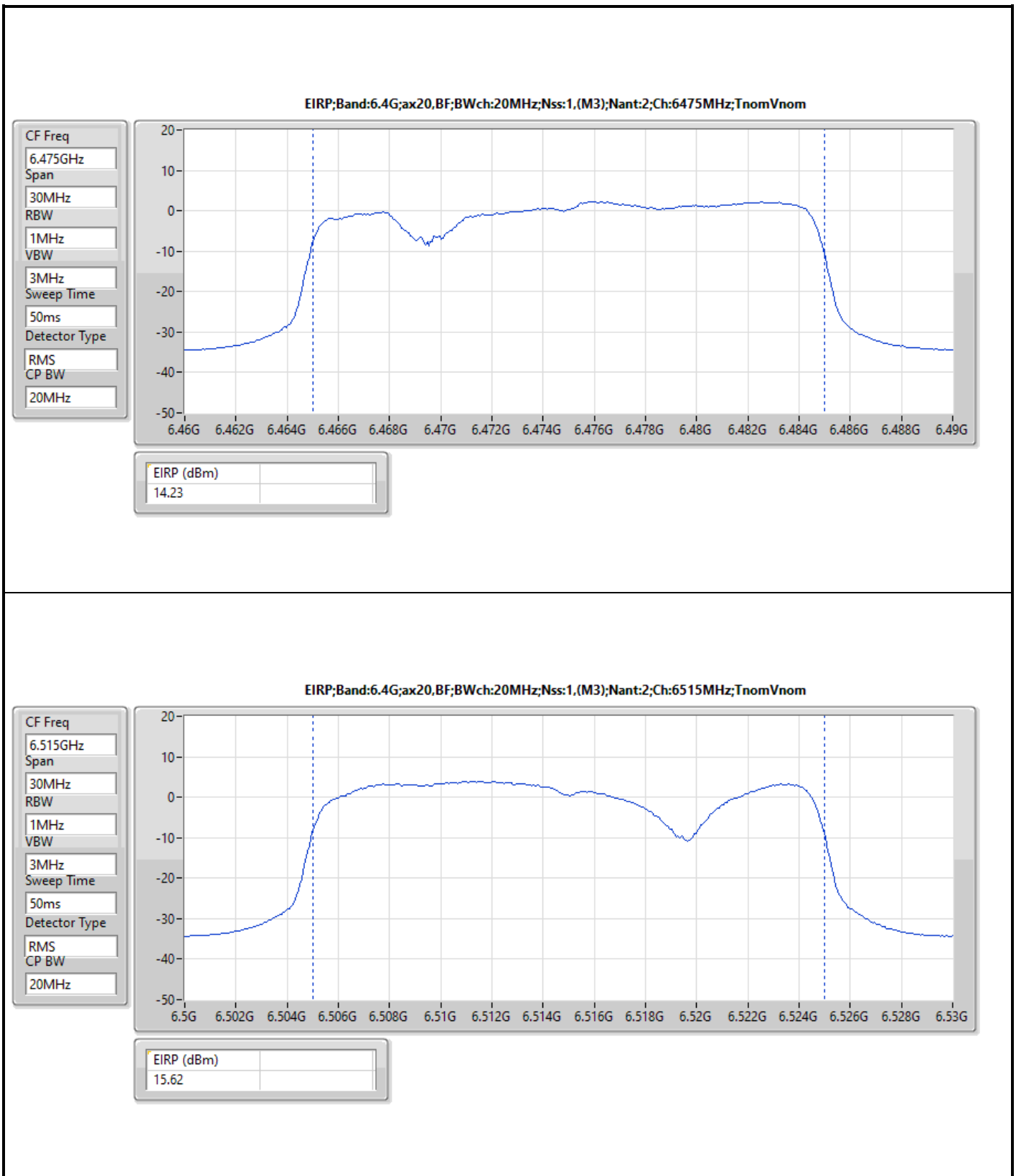
Result

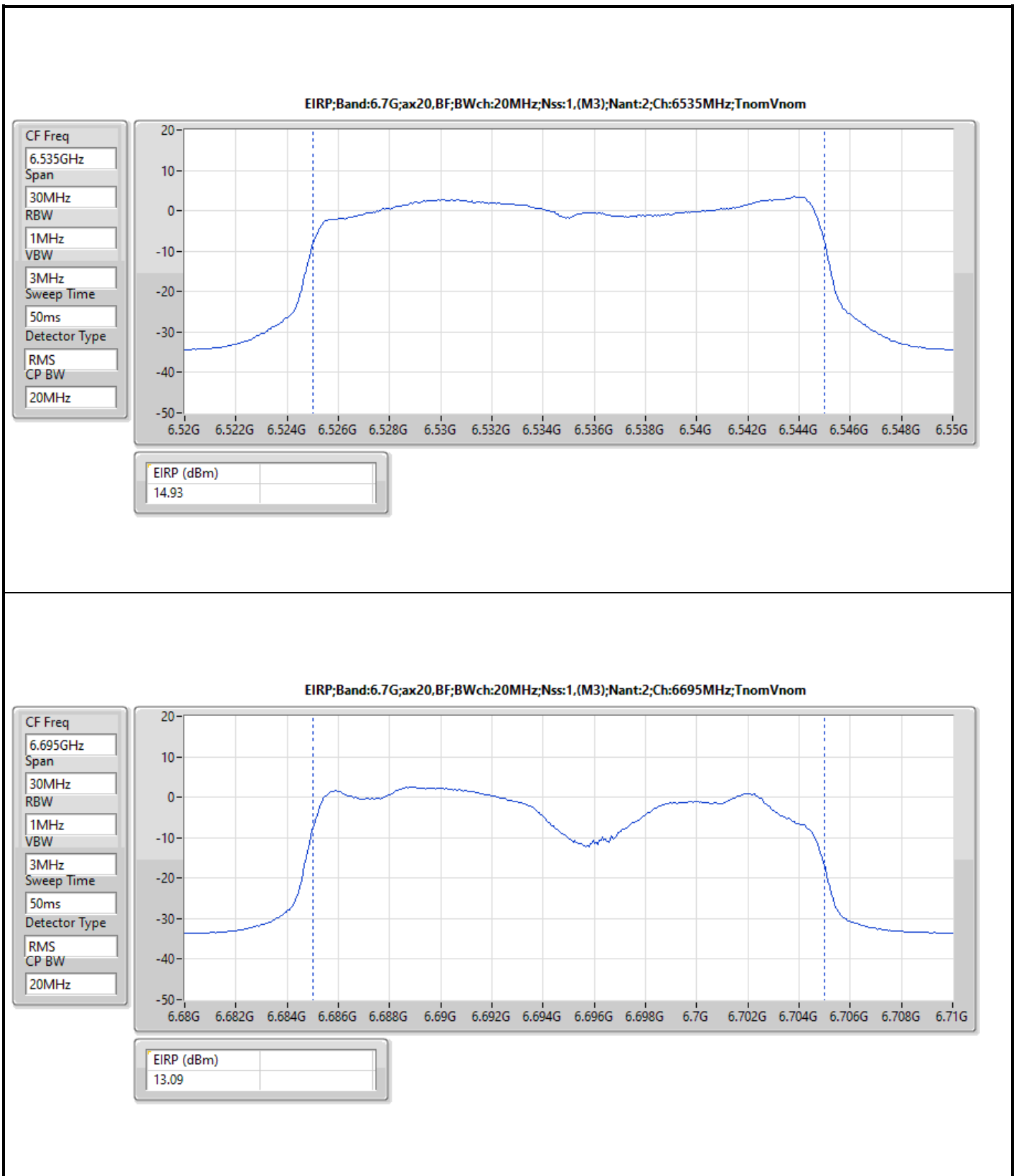
Mode	Result	EIRP (dBm)	EIRP Limit (dBm)
802.11ax HEW20-BF_Nss1,(MCS3)_2TX	-	-	-
5955MHz	Pass	13.58	30.00
6175MHz	Pass	15.23	30.00
6415MHz	Pass	13.45	30.00
6435MHz	Pass	16.10	30.00
6475MHz	Pass	14.23	30.00
6515MHz	Pass	15.62	30.00
6535MHz	Pass	14.93	30.00
6695MHz	Pass	13.09	30.00
6855MHz	Pass	13.43	30.00
6875MHz Straddle 6.525-6.875GHz	Pass	15.22	30.00
6895MHz	Pass	13.28	30.00
6995MHz	Pass	16.16	30.00
7095MHz	Pass	13.17	30.00
7115MHz	Pass	7.72	30.00
802.11ax HEW40-BF_Nss1,(MCS3)_2TX	-	-	-
5965MHz	Pass	17.76	30.00
6165MHz	Pass	19.29	30.00
6405MHz	Pass	17.23	30.00
6445MHz	Pass	17.44	30.00
6485MHz	Pass	21.09	30.00
6525MHz Straddle 6.425-6.525GHz	Pass	20.33	30.00
6565MHz	Pass	19.79	30.00
6685MHz	Pass	18.72	30.00
6845MHz	Pass	17.29	30.00
6885MHz Straddle 6.525-6.875GHz	Pass	18.62	30.00
6925MHz	Pass	19.69	30.00
7005MHz	Pass	18.99	30.00
7085MHz	Pass	17.55	30.00
802.11ax HEW80-BF_Nss1,(MCS3)_2TX	-	-	-
5985MHz	Pass	21.18	30.00
6145MHz	Pass	22.24	30.00
6385MHz	Pass	22.00	30.00
6465MHz	Pass	23.06	30.00
6545MHz Straddle 6.425-6.525GHz	Pass	23.99	30.00
6625MHz	Pass	23.31	30.00
6705MHz	Pass	21.72	30.00
6785MHz	Pass	22.55	30.00
6865MHz Straddle 6.525-6.875GHz	Pass	20.57	30.00
6945MHz	Pass	22.44	30.00
7025MHz	Pass	23.30	30.00
802.11ax HEW160-BF_Nss1,(MCS3)_2TX	-	-	-
6025MHz	Pass	25.11	30.00
6185MHz	Pass	25.34	30.00
6345MHz	Pass	24.80	30.00
6505MHz Straddle 6.425-6.525GHz	Pass	21.35	30.00
6665MHz	Pass	22.09	30.00
6825MHz Straddle 6.525-6.875GHz	Pass	20.91	30.00
6985MHz	Pass	23.11	30.00

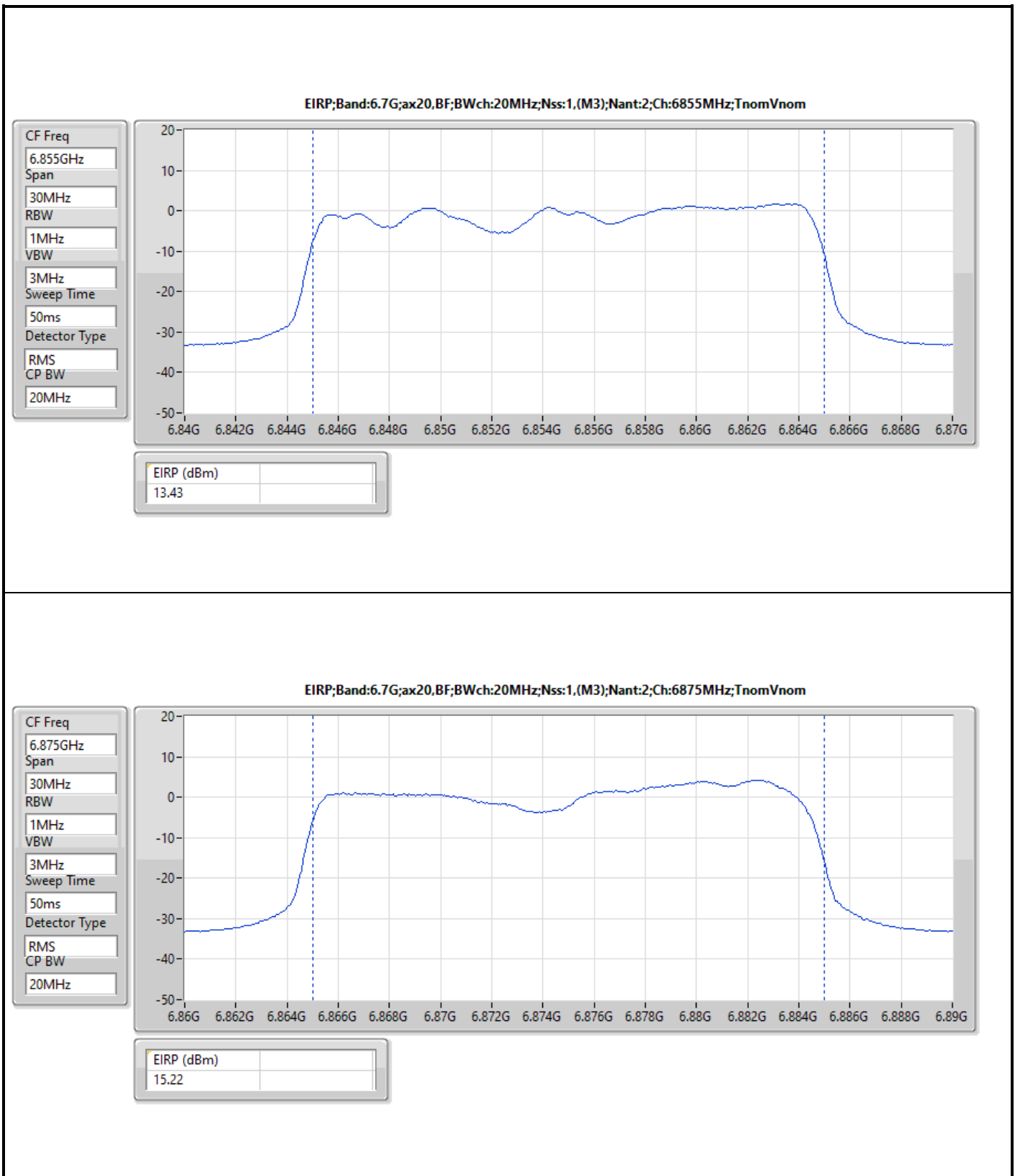
DG = Directional Gain; Port X = Port X output power

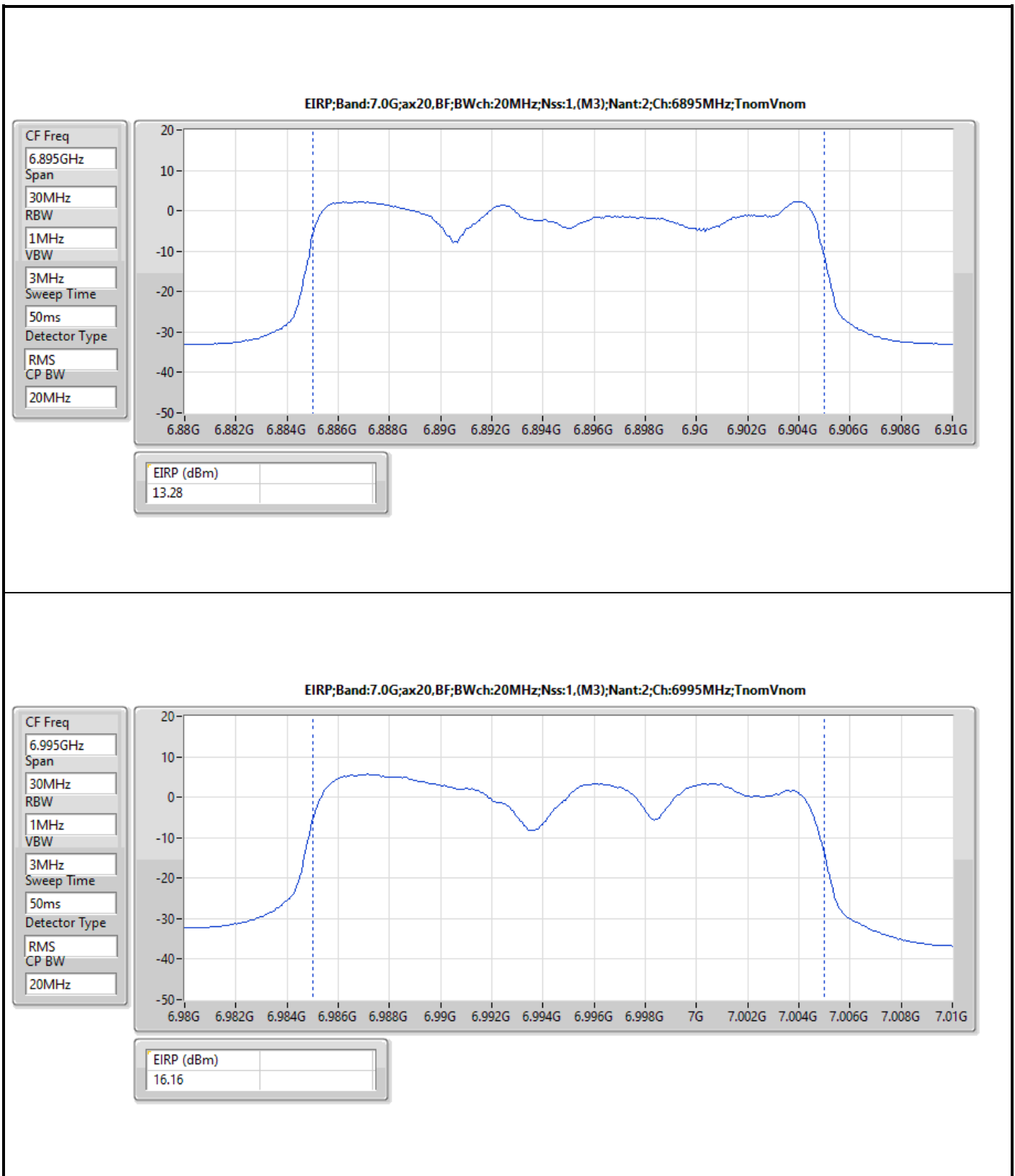


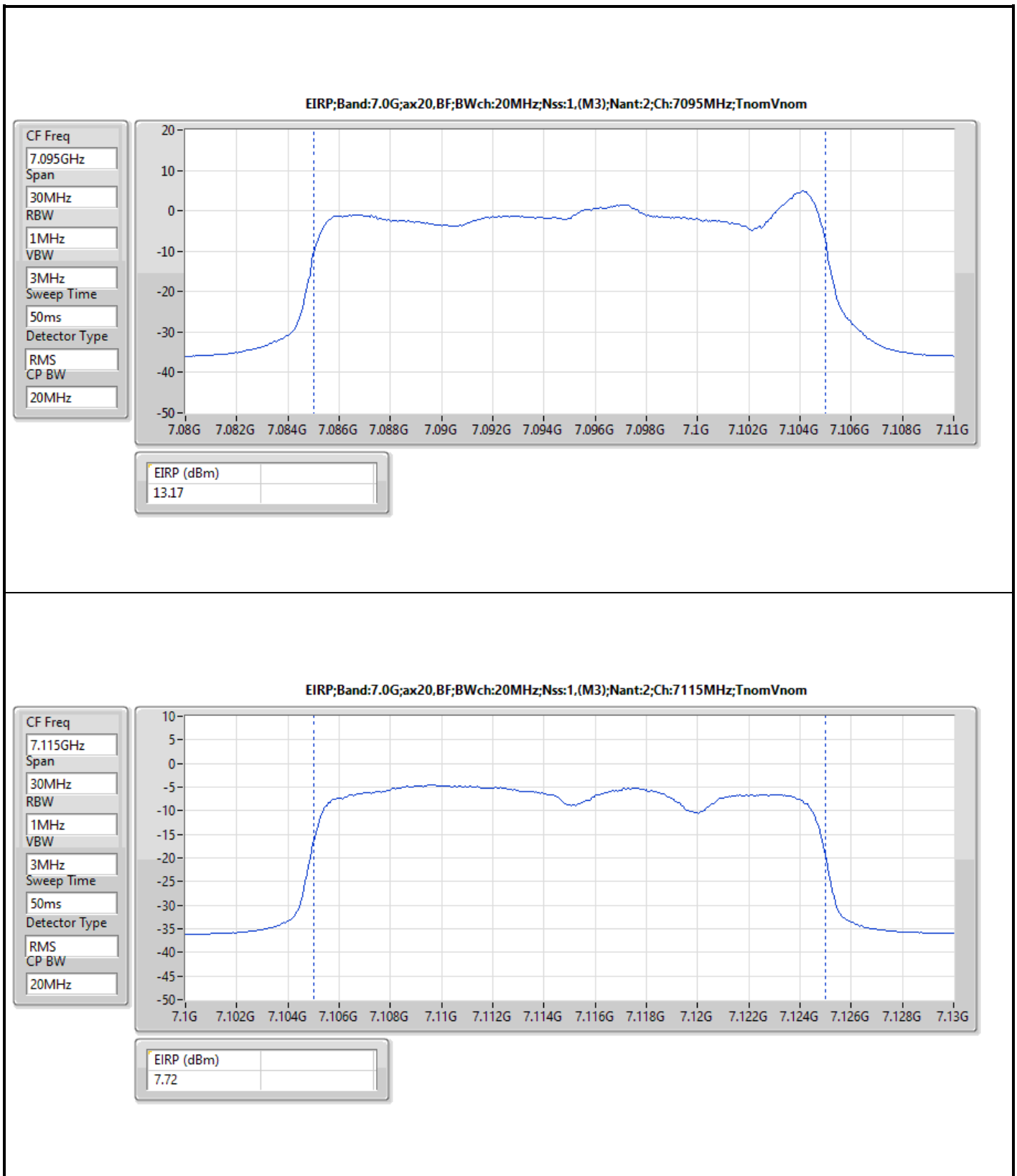


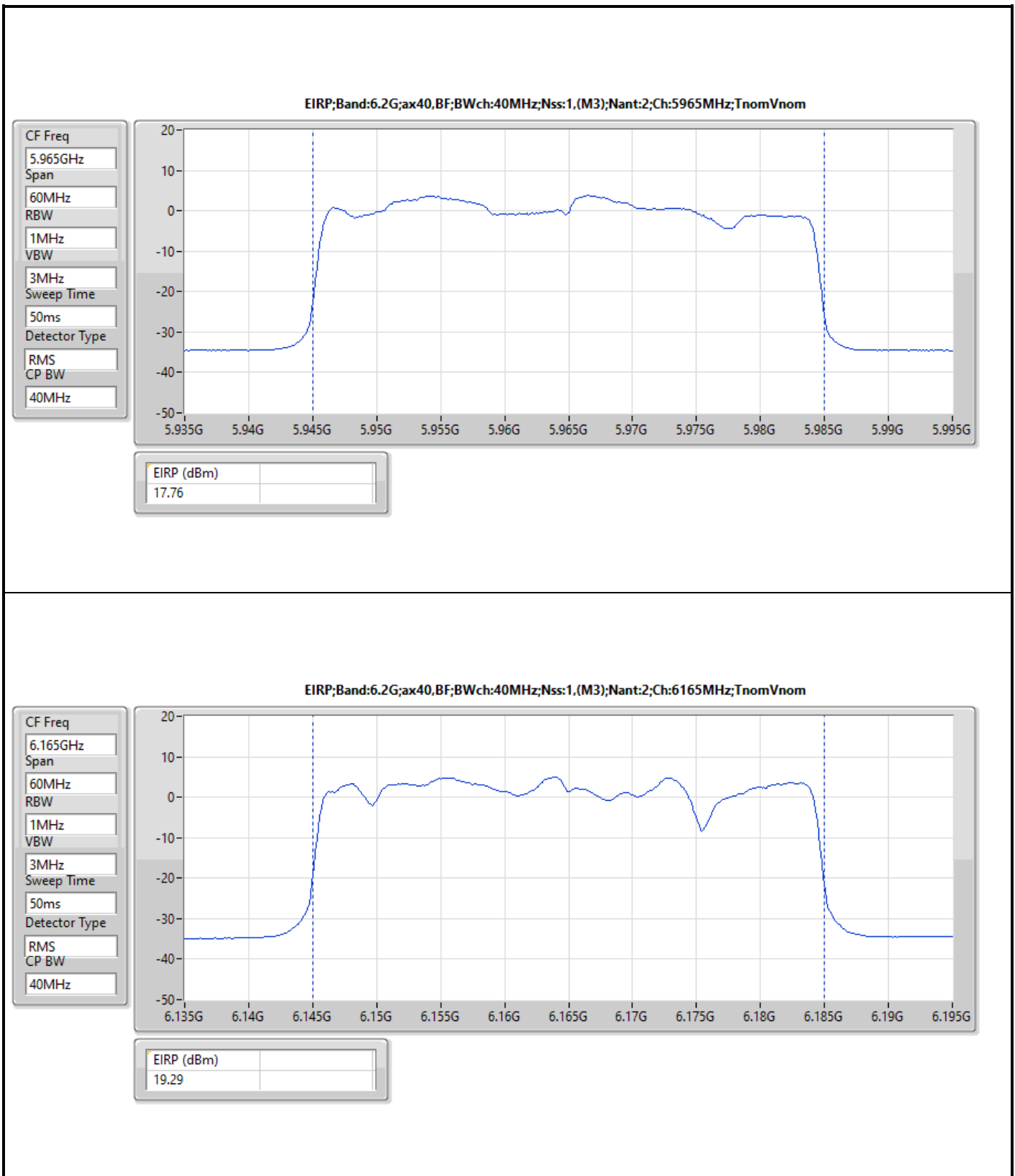




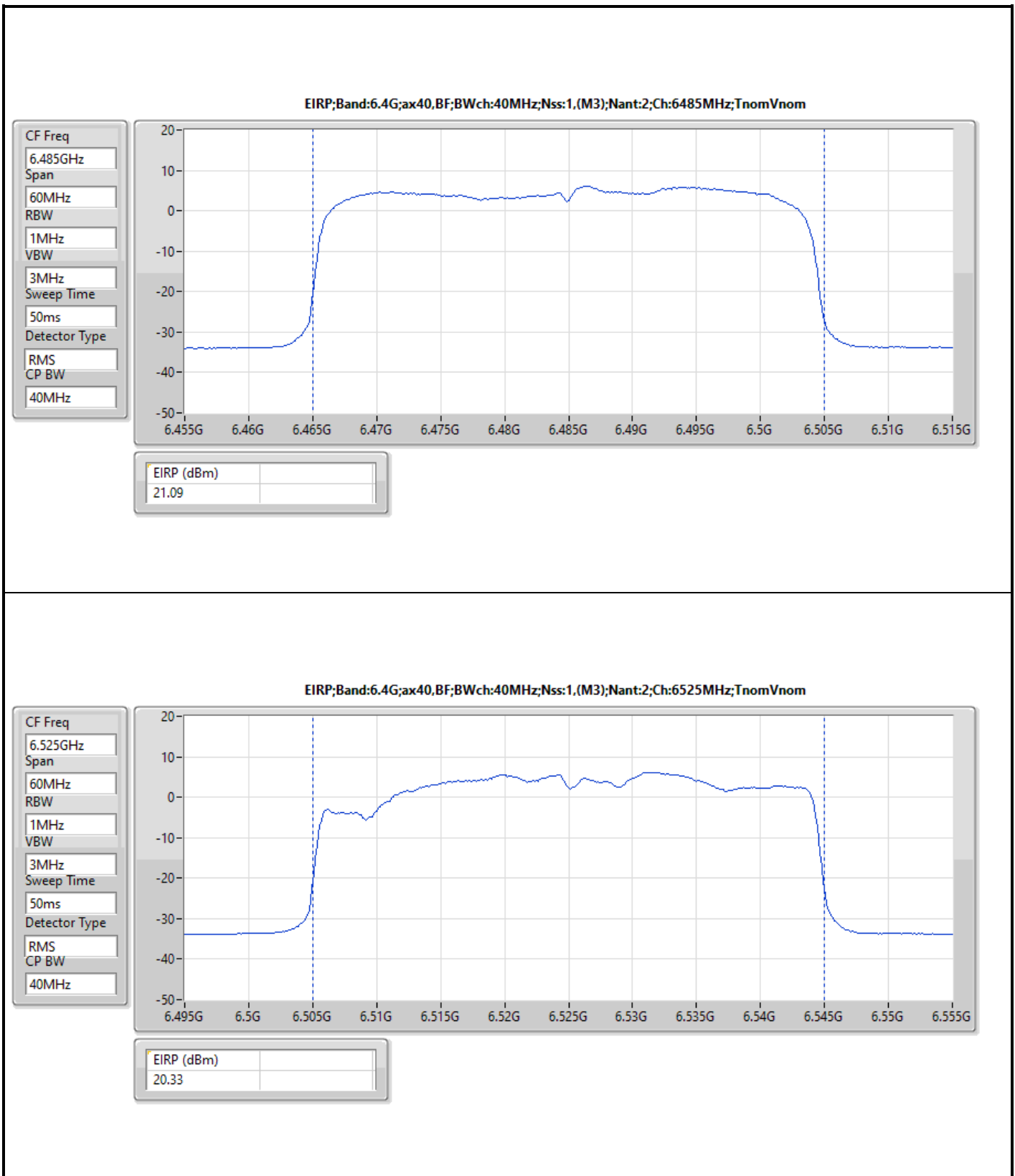


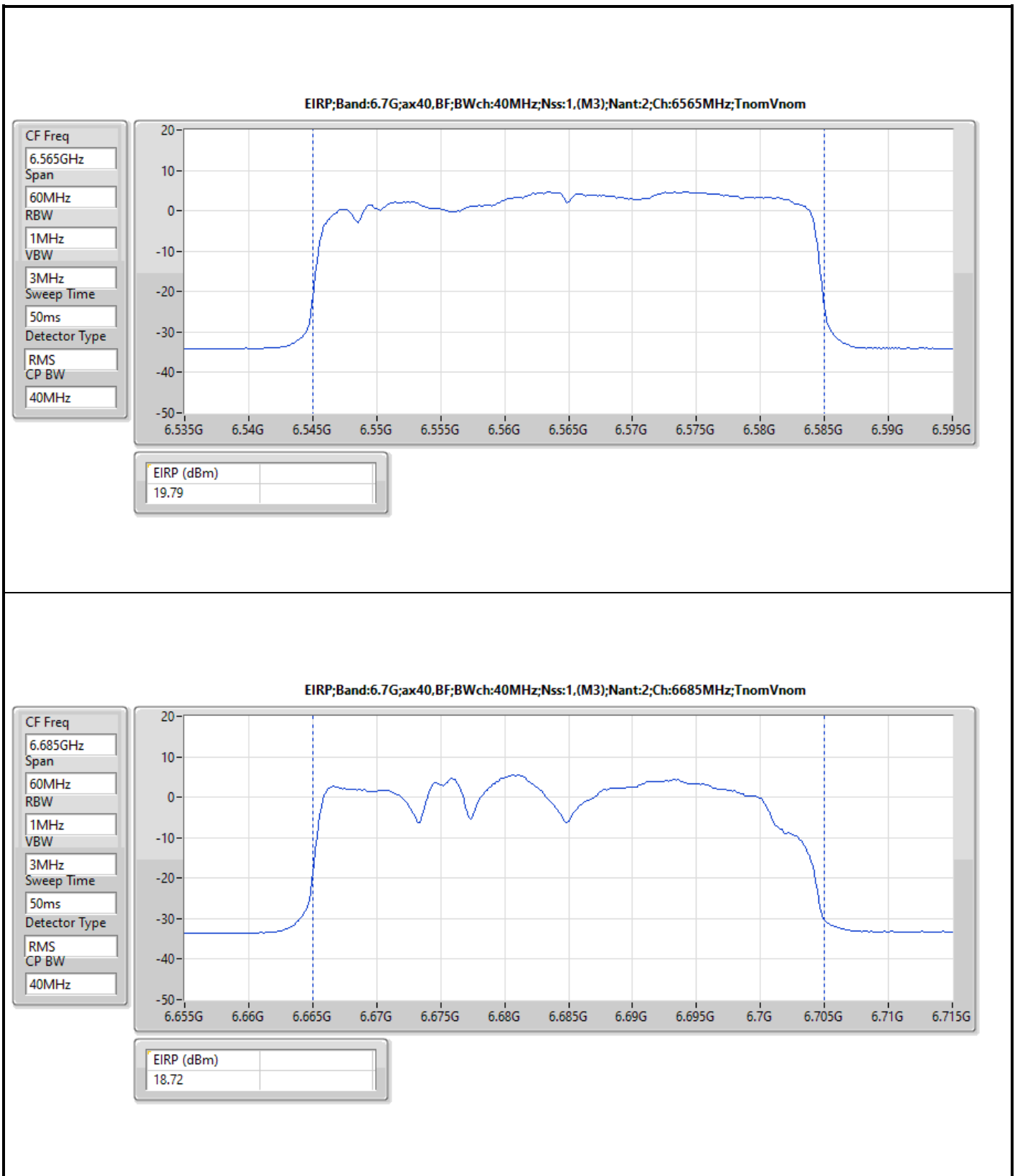


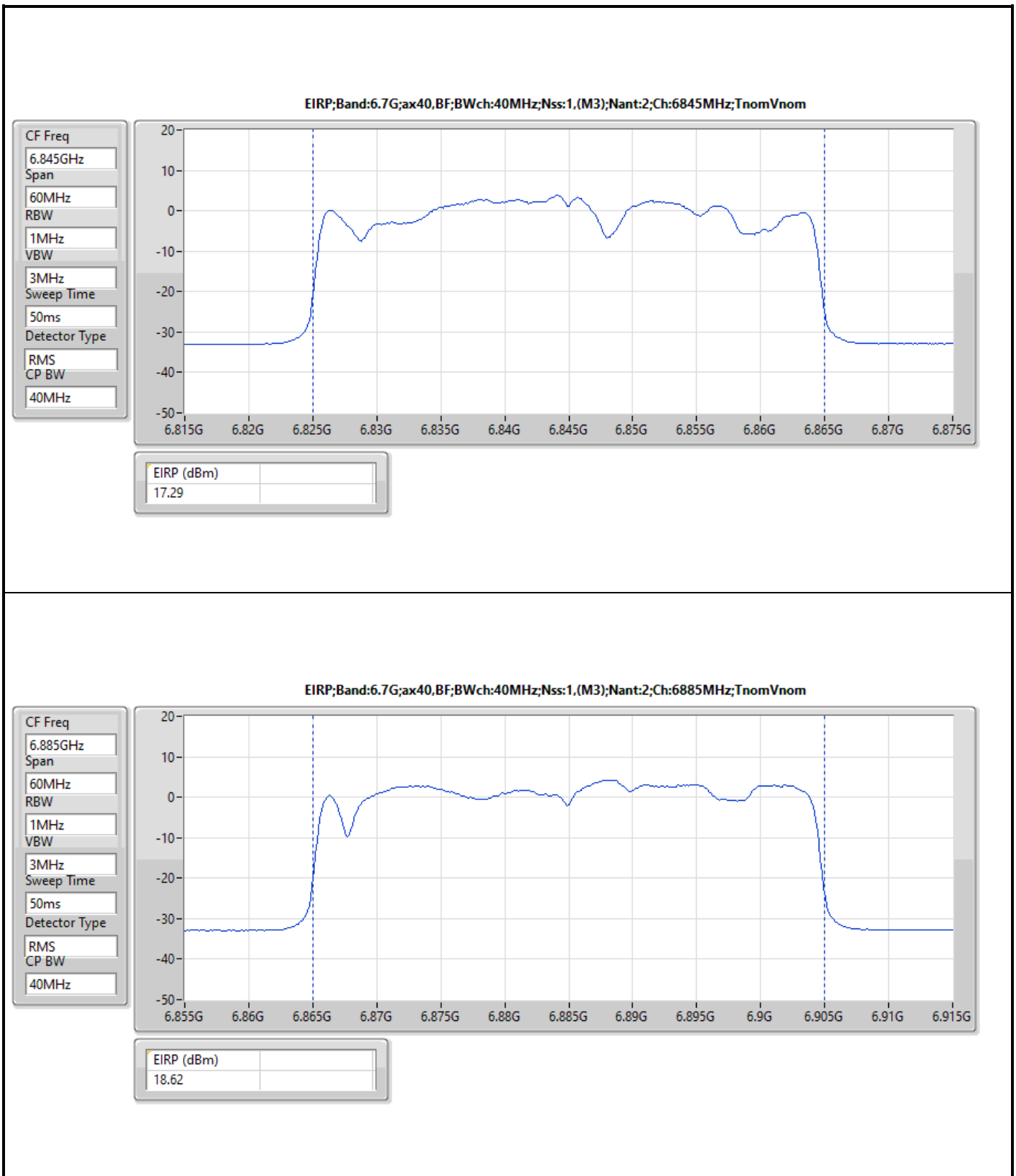




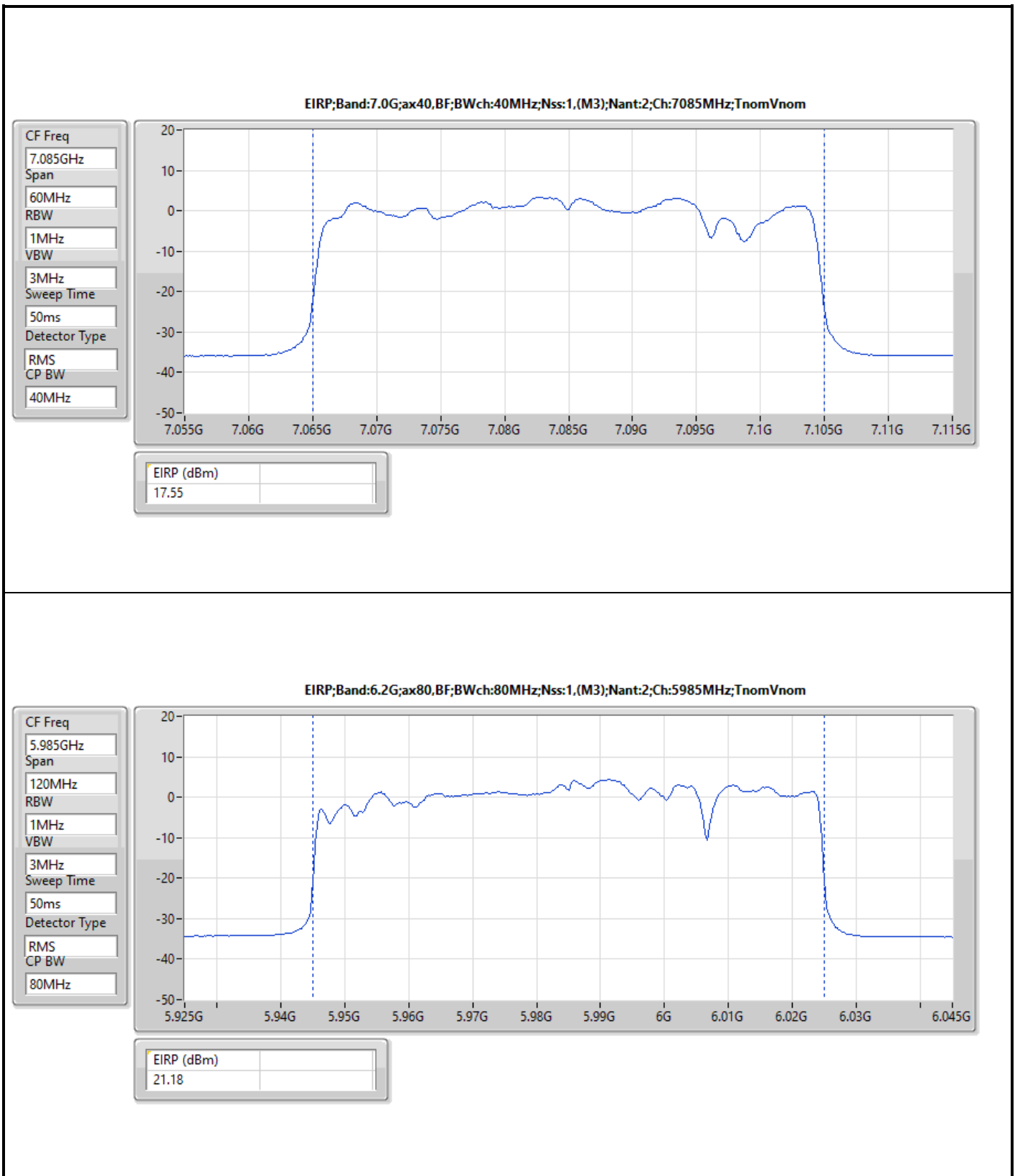


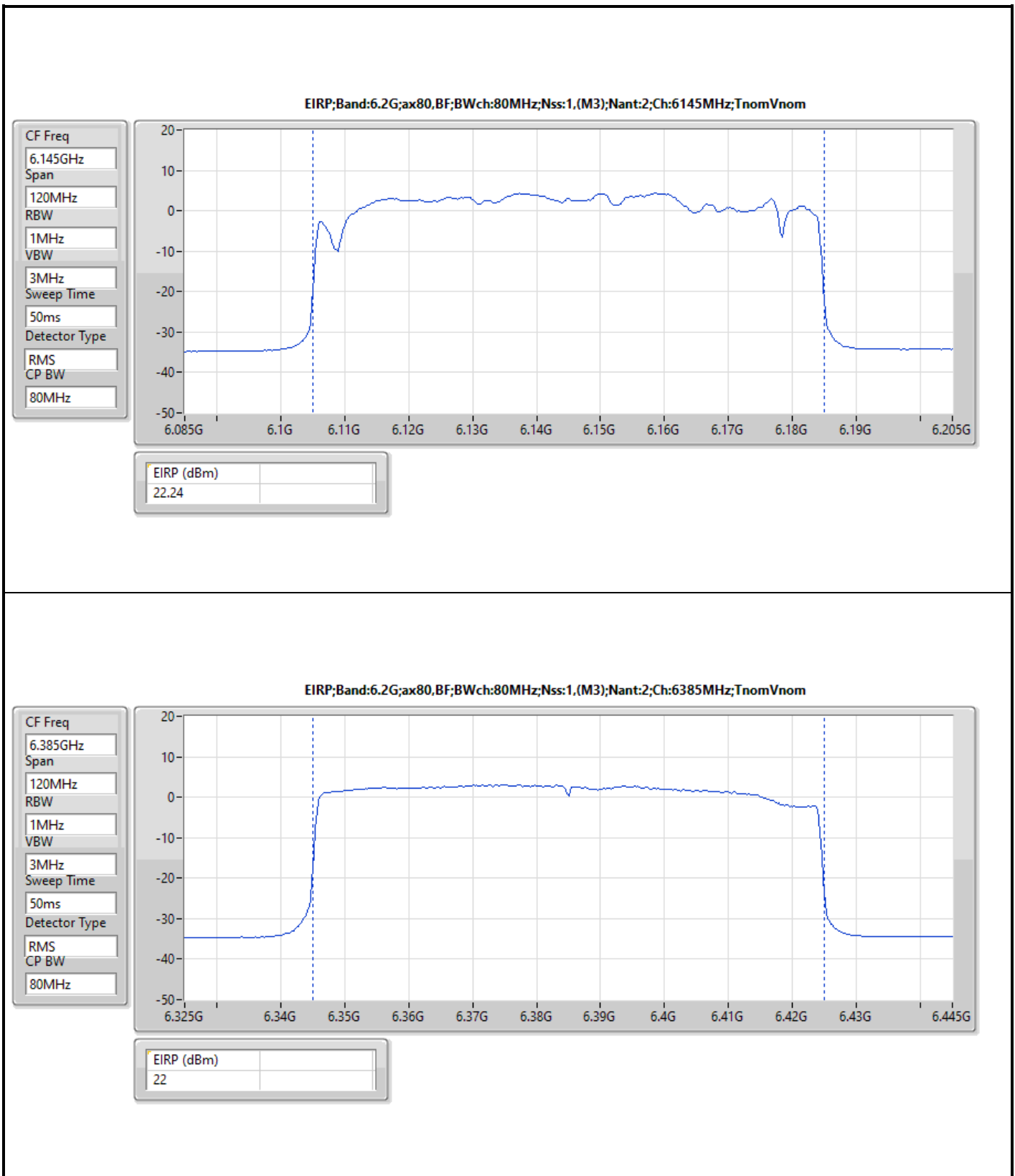


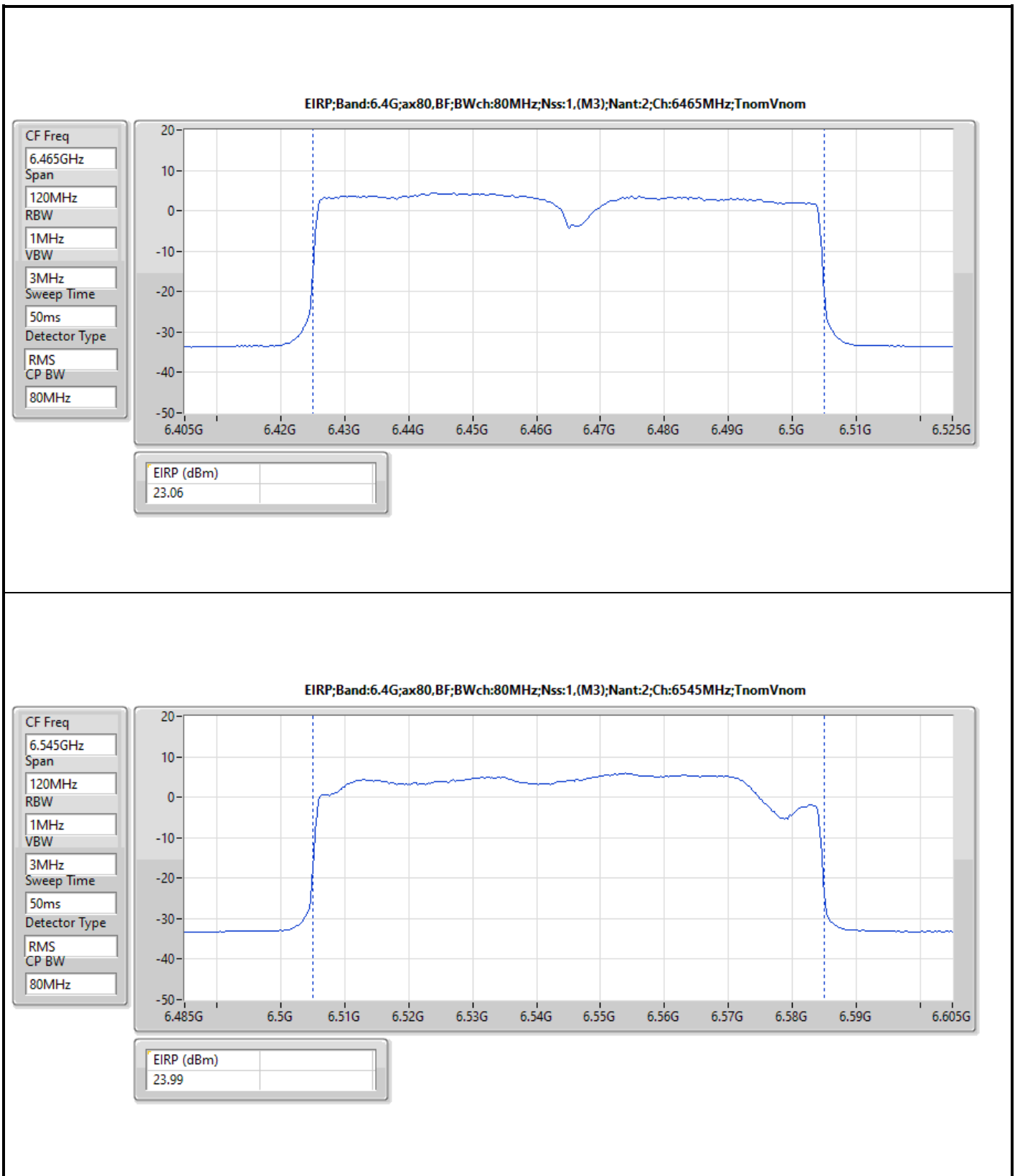


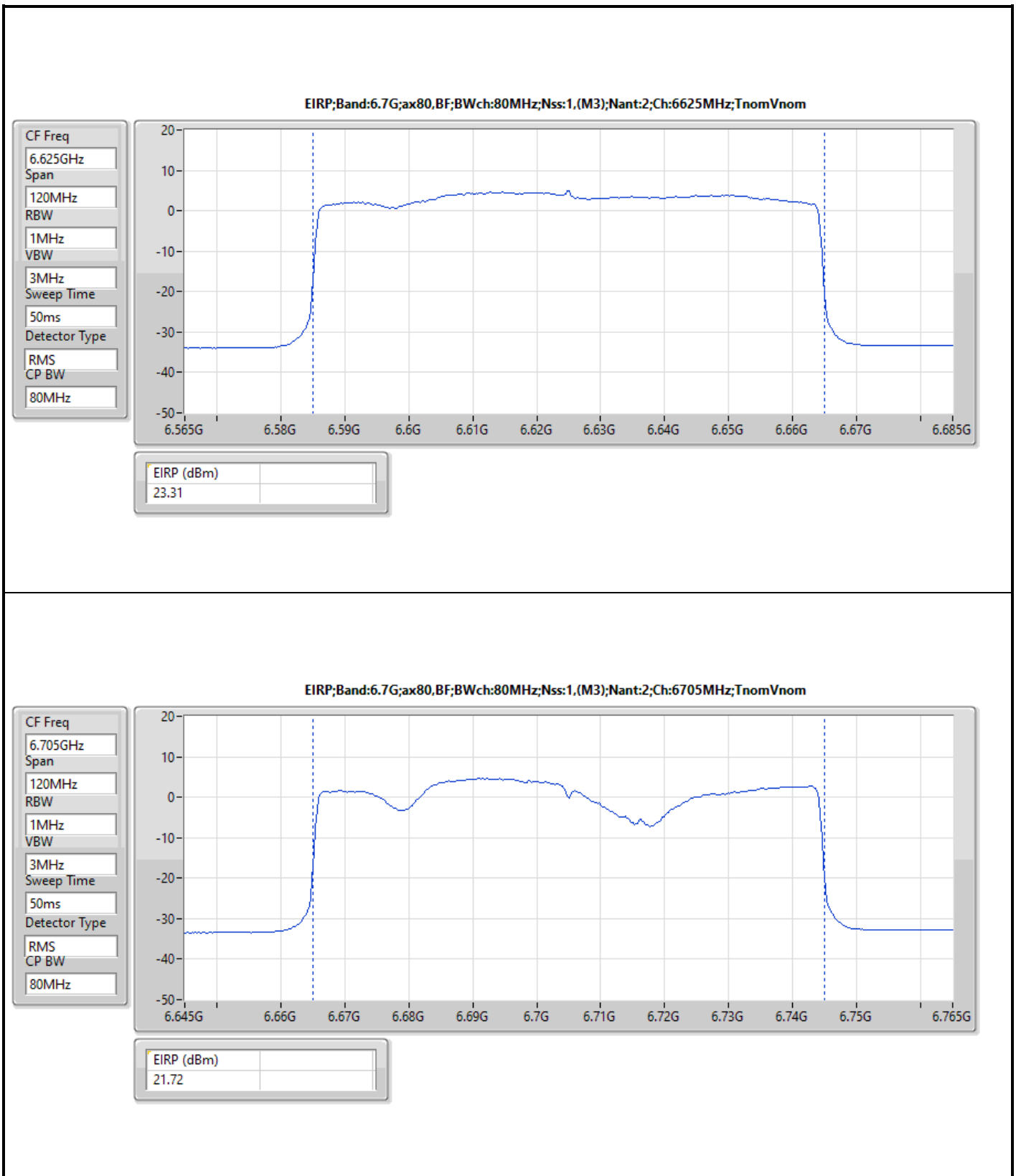


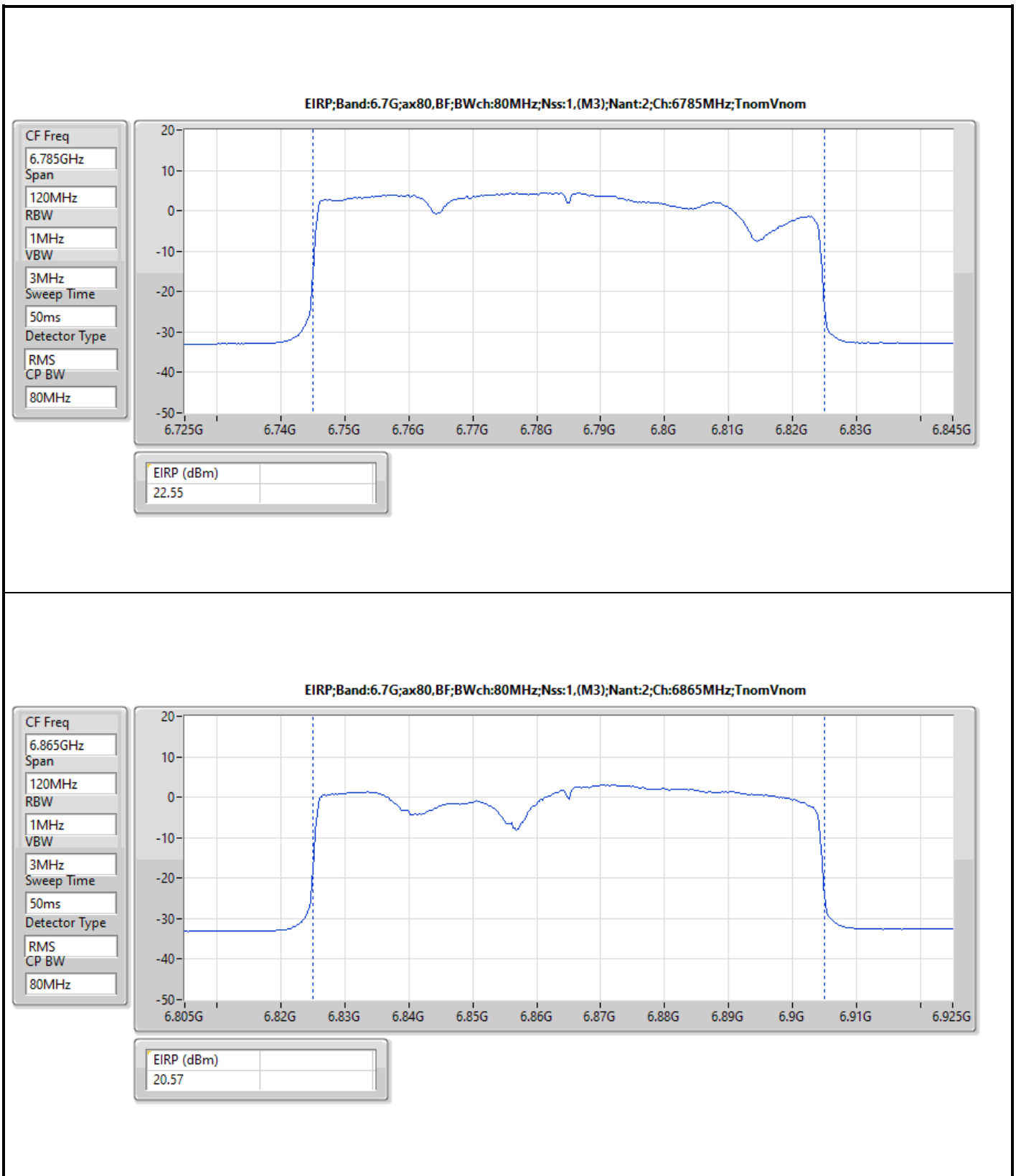










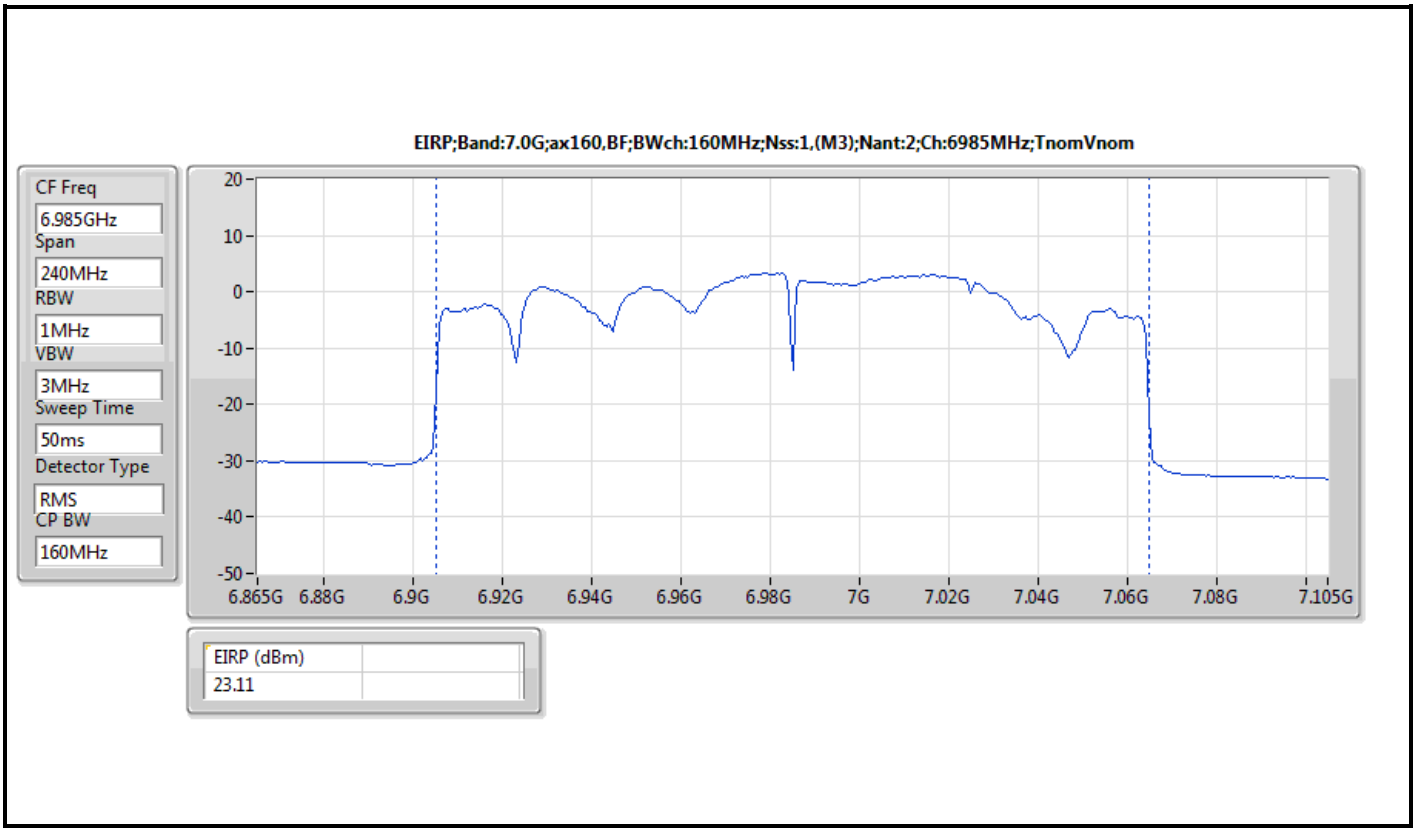












Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.925-6.425GHz	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_1TX	11.74	0.01493	17.24	0.05297
6.425-6.525GHz	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_1TX	12.07	0.01611	17.57	0.05715
6.525-6.875GHz	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_1TX	11.80	0.01514	17.30	0.05370
6.875-7.125GHz	-	-	-	-
802.11ax HEW20_Nss1,(MCS0)_1TX	12.23	0.01671	17.73	0.05929

**Result**

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-	-	-
5955MHz	Pass	5.50	11.74	11.74	17.24	30.00
6175MHz	Pass	5.50	11.54	11.54	17.04	30.00
6415MHz	Pass	5.50	11.64	11.64	17.14	30.00
6435MHz	Pass	5.50	11.53	11.53	17.03	30.00
6475MHz	Pass	5.50	12.07	12.07	17.57	30.00
6515MHz	Pass	5.50	11.45	11.45	16.95	30.00
6535MHz	Pass	5.50	11.52	11.52	17.02	30.00
6695MHz	Pass	5.50	11.80	11.80	17.30	30.00
6855MHz	Pass	5.50	11.65	11.65	17.15	30.00
6875MHz Straddle 6.525-6.875GHz	Pass	5.50	11.71	11.71	17.21	30.00
6895MHz	Pass	5.50	12.17	12.17	17.67	30.00
6995MHz	Pass	5.50	11.87	11.87	17.37	30.00
7095MHz	Pass	5.50	11.55	11.55	17.05	30.00
7115MHz	Pass	5.50	12.23	12.23	17.73	30.00

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

Summary

Mode	EIRP PD (dBm/RBW)
5.925-6.425GHz	-
802.11ax HEW20_Nss1,(MCS0)_1TX	4.80
802.11ax HEW40_Nss1,(MCS0)_1TX	4.84
802.11ax HEW80_Nss1,(MCS0)_1TX	4.97
802.11ax HEW160_Nss1,(MCS0)_1TX	4.66
6.425-6.525GHz	-
802.11ax HEW20_Nss1,(MCS0)_1TX	4.96
802.11ax HEW40_Nss1,(MCS0)_1TX	4.89
802.11ax HEW80_Nss1,(MCS0)_1TX	4.95
802.11ax HEW160_Nss1,(MCS0)_1TX	4.72
6.525-6.875GHz	-
802.11ax HEW20_Nss1,(MCS0)_1TX	4.97
802.11ax HEW40_Nss1,(MCS0)_1TX	4.92
802.11ax HEW80_Nss1,(MCS0)_1TX	4.95
802.11ax HEW160_Nss1,(MCS0)_1TX	4.93
6.875-7.125GHz	-
802.11ax HEW20_Nss1,(MCS0)_1TX	4.98
802.11ax HEW40_Nss1,(MCS0)_1TX	4.75
802.11ax HEW80_Nss1,(MCS0)_1TX	4.87
802.11ax HEW160_Nss1,(MCS0)_1TX	2.59

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

Result

Mode	Result	EIRP PD (dBm/RBW)	EIRP PD Limit (dBm/RBW)
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-
5955MHz	Pass	4.60	5.00
6175MHz	Pass	4.80	5.00
6415MHz	Pass	4.70	5.00
6435MHz	Pass	4.96	5.00
6475MHz	Pass	4.72	5.00
6515MHz	Pass	4.84	5.00
6535MHz	Pass	4.69	5.00
6695MHz	Pass	4.97	5.00
6855MHz	Pass	4.85	5.00
6875MHz Straddle 6.525-6.875GHz	Pass	4.92	5.00
6895MHz	Pass	4.87	5.00
6995MHz	Pass	4.98	5.00
7095MHz	Pass	4.87	5.00
7115MHz	Pass	0.25	5.00
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-	-
5965MHz	Pass	4.84	5.00
6165MHz	Pass	4.55	5.00
6405MHz	Pass	4.57	5.00
6445MHz	Pass	4.55	5.00
6485MHz	Pass	4.42	5.00
6525MHz Straddle 6.425-6.525GHz	Pass	4.89	5.00
6565MHz	Pass	4.40	5.00
6685MHz	Pass	4.76	5.00
6845MHz	Pass	4.92	5.00
6885MHz Straddle 6.525-6.875GHz	Pass	4.86	5.00
6925MHz	Pass	4.73	5.00
7005MHz	Pass	4.75	5.00
7085MHz	Pass	4.60	5.00
802.11ax HEW80_Nss1,(MCS0)_1TX	-	-	-
5985MHz	Pass	4.97	5.00
6145MHz	Pass	4.75	5.00
6385MHz	Pass	4.76	5.00
6465MHz	Pass	4.95	5.00
6545MHz Straddle 6.425-6.525GHz	Pass	4.72	5.00
6625MHz	Pass	4.46	5.00
6705MHz	Pass	4.46	5.00
6785MHz	Pass	4.83	5.00
6865MHz Straddle 6.525-6.875GHz	Pass	4.95	5.00
6945MHz	Pass	4.63	5.00
7025MHz	Pass	4.87	5.00
802.11ax HEW160_Nss1,(MCS0)_1TX	-	-	-
6025MHz	Pass	4.01	5.00
6185MHz	Pass	4.66	5.00
6345MHz	Pass	4.66	5.00
6505MHz Straddle 6.425-6.525GHz	Pass	4.72	5.00
6665MHz	Pass	4.93	5.00
6825MHz Straddle 6.525-6.875GHz	Pass	4.91	5.00
6985MHz	Pass	2.59	5.00

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;

