



FCC RADIO TEST REPORT

FCC ID : MSQ-RTAX2D00

Equipment : Wireless AX6100 Tri Band Gigabit Router

Brand Name : ASUS

Model Name : RT-AX92U,RT-AX6100, RT-AX92P, RT-AX92R, RT-AX92A

Applicant : ASUSTeK COMPUTER INC.
4F, No. 150, Li-Te Rd., Peitou, Taipei 112, Taiwan

Manufacturer (1) : Compal Networking (KunShan) Co., LTD.
No. 520, Nanbang Rd., Economic & Technical
Development Zone Kunshan, Jiangsu Province China

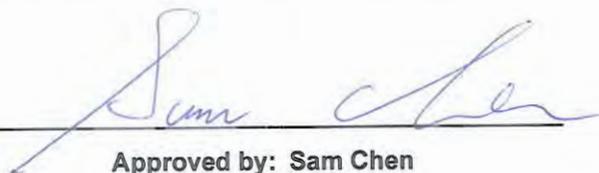
Manufacturer (2) : ASKEY TECHNOLOGY (JIANG SU) LTD
NO1388, Jiao Tong Road, Wujiang Economic
Technological Development Area Jiangsu Province
215200 China

Standard : 47 CFR FCC Part 15.407

The product was received on Sep. 20, 2017, and testing was started from Jun. 11, 2018 and completed on Aug. 27, 2018. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications 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 report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.



Approved by: Sam Chen

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Table of Contents

History of this test report.....3

Summary of Test Result.....4

1 General Description5

1.1 Information.....5

1.2 Testing Applied Standards11

1.3 Testing Location Information.....11

1.4 Measurement Uncertainty12

2 Test Configuration of EUT13

2.1 Test Channel Mode13

2.2 The Worst Case Measurement Configuration.....18

2.3 EUT Operation during Test20

2.4 Accessories20

2.5 Support Equipment.....21

2.6 Test Setup Diagram22

3 Transmitter Test Result26

3.1 AC Power-line Conducted Emissions26

3.2 Emission Bandwidth.....28

3.3 Maximum Conducted Output Power29

3.4 Peak Power Spectral Density.....31

3.5 Unwanted Emissions.....34

4 Test Equipment and Calibration Data38

Appendix A. Test Results of AC Power-line Conducted Emissions

Appendix B. Test Results of Emission Bandwidth

Appendix C. Test Results of Maximum Conducted Output Power

Appendix D. Test Results of Peak Power Spectral Density

Appendix E. Test Results of Unwanted Emissions

Appendix F. Test Results of Radiated Emission Co-location

Appendix G. Test Photos

Photographs of EUT v01



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 Conducted Output Power	PASS	-
3.4	15.407(a)	Peak Power Spectral Density	PASS	-
3.5	15.407(b)	Unwanted Emissions	PASS	-

Reviewed by: Sam Chen

Report Producer: Cindy Peng



1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
5150-5250	a, n (HT20), ac (VHT20)	5180-5240	36-48 [4]
5470-5725	a, n (HT20), ac (VHT20), ax (HEW20)	5500-5720	100-144 [12]
5725-5850		5745-5825	149-165 [5]
5150-5250	n (HT40), ac (VHT40)	5190-5230	38-46 [2]
5470-5725	n (HT40), ac (VHT40), ax (HEW40)	5510-5710	102-142 [6]
5725-5850		5755-5795	151-159 [2]
5150-5250	ac (VHT80)	5210	42 [1]
5470-5725	ac (VHT80), ax (HEW80)	5530-5690	106-138 [3]
5725-5850		5775	155 [1]
5470-5725	ac (VHT160), ax (HEW160)	5570	114 [1]

Band	Mode	BWch (MHz)	Nant
5.15-5.25GHz	802.11a	20	2TX
5.15-5.25GHz	802.11n HT20	20	2TX
5.15-5.25GHz	802.11n HT20-BF	20	2TX
5.15-5.25GHz	802.11ac VHT20	20	2TX
5.15-5.25GHz	802.11ac VHT20-BF	20	2TX
5.15-5.25GHz	802.11n HT40	40	2TX
5.15-5.25GHz	802.11n HT40-BF	40	2TX
5.15-5.25GHz	802.11ac VHT40	40	2TX
5.15-5.25GHz	802.11ac VHT40-BF	40	2TX
5.15-5.25GHz	802.11ac VHT80	80	2TX
5.15-5.25GHz	802.11ac VHT80-BF	80	2TX
5.47-5.725GHz	802.11a	20	4TX
5.47-5.725GHz	802.11n HT20	20	4TX
5.47-5.725GHz	802.11n HT20-BF	20	4TX
5.47-5.725GHz	802.11ac VHT20	20	4TX
5.47-5.725GHz	802.11ac VHT20-BF	20	4TX



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



Note:

For 5GHz Band 1:

- ♦ 11a, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- ♦ VHT20, VHT400 and VHT80 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.
- ♦ BWch is the nominal channel bandwidth.
- ♦ Nss-Min is the minimum number of spatial streams.
- ♦ Nant is the number of outputs. e.g., 2(2,3) means have 2 outputs for port 2 and port 3. 2 means have 2 outputs for port 1 and port 2.

For 5GHz Band 3:

- ♦ 11a, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- ♦ VHT20, VHT40, VHT80 and VHT160 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- ♦ HEW20, HEW40, HEW80 and HEW160 use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- ♦ BWch is the nominal channel bandwidth.
- ♦ Nss-Min is the minimum number of spatial streams.
- ♦ Nant is the number of outputs. e.g., 2(2,3) means have 2 outputs for port 2 and port 3. 2 means have 2 outputs for port 1 and port 2.

For 5GHz Band 4:

- ♦ 11a, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- ♦ VHT20, VHT40 and VHT80 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- ♦ HEW20, HEW40 and HEW80 use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- ♦ BWch is the nominal channel bandwidth.
- ♦ Nss-Min is the minimum number of spatial streams.
- ♦ Nant is the number of outputs. e.g., 2(2,3) means have 2 outputs for port 2 and port 3. 2 means have 2 outputs for port 1 and port 2.



1.1.2 Antenna Information

For Radio 1 (2.4GHz) and Radio 2 (5GHz Band 1):

Ant.	Port	Brand	Model Name	Type	Connector	Un-correlated Gain (dBi)		Correlated Gain (dBi)	
						2.4GHz	5GHz Band 1	2.4GHz	5GHz Band 1
1	1	WHA YU	C660-510426-A	Dipole	I-PEX	1.77	2.00	4.71	4.93
2	2	WHA YU	C660-510427-A	Dipole	I-PEX	1.77	2.00	4.71	4.93

For Radio 3 (5GHz Band 3~Band 4):

Ant.	Port	Brand	Model Name	Type	Connector	Un-correlated Gain (dBi)	Correlated Gain (dBi)	
							4T1S	4T2S
3	1	WHA YU	C660-510428-A	Dipole	I-PEX	1.65	7.13	4.55
4	2	WHA YU	C660-510429-A	Dipole	I-PEX	1.65	7.13	4.55
5	3	WHA YU	C660-510430-A	Dipole	I-PEX	1.65	7.13	4.55
6	4	WHA YU	C660-510430-A	Dipole	I-PEX	1.65	7.13	4.55

Note: 1. The EUT has three Radios (Radio 1 supports 2.4GHz, Radio 2 supports 5GHz Band 1 and Radio 3 supports 5GHz Band 3~Band 4).
 2. The EUT has six antennas.
 For Radio 1 (2.4GHz) and Radio 2 (5GHz Band 1): <2TX/2RX>:
 Port 1 and Port 2 will transmit/receive the same signal simultaneously.
 For Radio 3 (5GHz Band 3~Band 4) <4TX/4RX>:
 Port 1, Port 2, Port 3 and Port 4 will transmit/receive the same signal simultaneously.



1.1.3 Mode Test Duty Cycle

For Nss1:

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11a	0.981	0.083	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11ac VHT20-BF	0.909	0.414	1.945m	1k
802.11ac VHT40-BF	0.927	0.329	2.79m	1k
802.11ac VHT80-BF	0.936	0.287	3.421	300
802.11ac VHT160-BF	0.909	0.414	3.421m	300
802.11ax HEW20-BF	0.844	0.737	1.499m	1k
802.11ax HEW40-BF	0.914	0.391	2.215m	1k
802.11ax HEW80-BF	0.912	0.4	3.833m	300
802.11ax HEW160-BF	0.93	0.315	3.834m	300

For Nss2:

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11ac VHT20-BF	0.93	0.315	2.898m	1k
802.11ac VHT40-BF	0.936	0.287	3.705m	300
802.11ac VHT80-BF	0.928	0.325	3.425m	300
802.11ac VHT160-BF	0.708	1.5	0.365m	3k
802.11ax HEW20-BF	0.823	0.846	2.223m	1k
802.11ax HEW40-BF	0.924	0.343	2.939m	1k
802.11ax HEW80-BF	0.946	0.241	4.515m	300
802.11ax HEW160-BF	0.704	1.524	0.325625m	300

Note:

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



1.1.4 EUT Operational Condition

EUT Power Type	From power adapter			
Beamforming Function	<input checked="" type="checkbox"/>	With beamforming	<input type="checkbox"/>	Without beamforming
	The product has beamforming function for 802.11n/ac in 2400-2483.5MHz, 802.11n/ac in 5150-5250MHz and 802.11n/ac/ax in 5470-5725MHz, 5725-5850MHz.			
Weather Band	<input checked="" type="checkbox"/>	With 5600~5650MHz	<input type="checkbox"/>	Without 5600~5650MHz
Function	<input type="checkbox"/>	Outdoor P2M	<input checked="" type="checkbox"/>	Indoor P2M
	<input type="checkbox"/>	Fixed P2P	<input type="checkbox"/>	Client
TPC Function	<input checked="" type="checkbox"/>	With TPC	<input type="checkbox"/>	Without TPC
Test Software Version	accessMTool_3_0_0_7			

1.1.5 Table for Multiple Listing

1. The EUT has five model names which are identical to each other in all aspects except for the following table:

Model Name	Description
RT-AX92U	All the models are identical, the different model names served as marketing strategy.
RT-AX6100	
RT-AX92P	
RT-AX92R	
RT-AX92A	

From the above models, model: RT-AX92U was selected as representative model for the test and its data was recorded in this report.

2. The EUT has two SKU which are identical to each other in all aspects except for the following table:

SKU	SKU 1	SKU 2
LAN port transformer (Brand Name/Model Name)	SWAPnet/NS773602	Mingtek/HN36201CG
WAN port transformer (Brand Name/Model Name)	SWAPnet/NS892402	BOTHHAND/GST5009W

Note: The SKU does not affect the test result of RF tests, so only SKU 1 was tested and recorded in this report.



1.2 Testing Applied Standards

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

- ◆ 47 CFR FCC Part 15
- ◆ ANSI C63.10-2013
- ◆ FCC KDB 789033 D02 v02r01
- ◆ FCC KDB 662911 D01 v02r01
- ◆ FCC KDB 412172 D01 v01r01

1.3 Testing Location Information

Testing Location		
<input type="checkbox"/>	HWA YA	ADD : No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL : 886-3-327-3456 FAX : 886-3-327-0973
<input checked="" type="checkbox"/>	JHUBEI	ADD : No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C. TEL : 886-3-656-9065 FAX : 886-3-656-9085

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH01-CB	Serway Li	22°C / 54%	Aug. 07, 2018~Aug. 21, 2018
Radiated	03CH01-CB	Lance Hsieh	25.6°C / 54%	Jun. 11, 2018~Aug. 27, 2018
AC Conduction	CO02-CB	Wei Li	26°C / 60%	Jul. 20, 2018~Jul. 21, 2018

Test site Designation No. TW0006 with FCC
Test site registered number IC 4086D with Industry Canada.



1.4 Measurement Uncertainty

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

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.2 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.7 dB	Confidence levels of 95%
Output Power Measurement	1.33 dB	Confidence levels of 95%
Power Density Measurement	1.27 dB	Confidence levels of 95%
Bandwidth Measurement	9.74×10^{-8}	Confidence levels of 95%



2 Test Configuration of EUT

2.1 Test Channel Mode

For Nss1:

Mode	PowerSetting
802.11a_Nss1,(6Mbps)_2TX	-
5180MHz	88
5200MHz	102
5240MHz	103
802.11a_Nss1,(6Mbps)_4TX	-
5500MHz	62
5580MHz	61
5700MHz	60
5720MHz Straddle 5.47-5.725GHz	60
5720MHz Straddle 5.725-5.85GHz	60
5745MHz	89
5785MHz	89
5825MHz	89
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	-
5180MHz	87
5200MHz	102
5240MHz	102
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-
5500MHz	60
5580MHz	59
5700MHz	59
5720MHz Straddle 5.47-5.725GHz	58
5720MHz Straddle 5.725-5.85GHz	58
5745MHz	83
5785MHz	83
5825MHz	83
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-
5190MHz	75
5230MHz	96
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-



Mode	PowerSetting
5510MHz	59
5550MHz	59
5670MHz	59
5710MHz Straddle 5.47-5.725GHz	62
5710MHz Straddle 5.725-5.85GHz	62
5755MHz	84
5795MHz	84
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-
5210MHz	70
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-
5530MHz	58
5610MHz	58
5690MHz Straddle 5.47-5.725GHz	59
5690MHz Straddle 5.725-5.85GHz	59
5775MHz	84
802.11ac VHT160-BF_Nss1,(MCS0)_4TX	-
5570MHz	59
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-
5500MHz	58
5580MHz	57
5700MHz	57
5720MHz Straddle 5.47-5.725GHz	57
5720MHz Straddle 5.725-5.85GHz	57
5745MHz	82
5785MHz	82
5825MHz	82
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-
5510MHz	59
5550MHz	59
5670MHz	59
5710MHz Straddle 5.47-5.725GHz	61
5710MHz Straddle 5.725-5.85GHz	61
5755MHz	84
5795MHz	84
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-



Mode	PowerSetting
5530MHz	58
5610MHz	58
5690MHz Straddle 5.47-5.725GHz	58
5690MHz Straddle 5.725-5.85GHz	58
5775MHz	82
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-
5570MHz	58

**For Nss2:**

Mode	PowerSetting
802.11ac VHT20_Nss2,(MCS0)_2TX	-
5180MHz	90
5200MHz	102
5240MHz	102
802.11ac VHT40_Nss2,(MCS0)_2TX	-
5190MHz	76
5230MHz	98
802.11ac VHT80_Nss2,(MCS0)_2TX	-
5210MHz	75
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	-
5500MHz	64
5580MHz	63
5700MHz	64
5720MHz Straddle 5.47-5.725GHz	62
5720MHz Straddle 5.725-5.85GHz	62
5745MHz	88
5785MHz	89
5825MHz	89
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	-
5510MHz	64
5550MHz	64
5670MHz	64
5710MHz Straddle 5.47-5.725GHz	66
5710MHz Straddle 5.725-5.85GHz	66
5755MHz	89
5795MHz	89
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	-
5530MHz	63
5610MHz	63
5690MHz Straddle 5.47-5.725GHz	63
5690MHz Straddle 5.725-5.85GHz	63
5775MHz	85
802.11ac VHT160-BF_Nss2,(MCS0)_4TX	-
5570MHz	62



Mode	PowerSetting
802.11ax HEW20-BF_Nss2,(MCS0)_4TX	-
5500MHz	63
5580MHz	62
5700MHz	62
5720MHz Straddle 5.47-5.725GHz	62
5720MHz Straddle 5.725-5.85GHz	62
5745MHz	87
5785MHz	87
5825MHz	87
802.11ax HEW40-BF_Nss2,(MCS0)_4TX	-
5510MHz	63
5550MHz	63
5670MHz	63
5710MHz Straddle 5.47-5.725GHz	66
5710MHz Straddle 5.725-5.85GHz	66
5755MHz	88
5795MHz	88
802.11ax HEW80-BF_Nss2,(MCS0)_4TX	-
5530MHz	62
5610MHz	62
5690MHz Straddle 5.47-5.725GHz	63
5690MHz Straddle 5.725-5.85GHz	63
5775MHz	85
802.11ax HEW160-BF_Nss2,(MCS0)_4TX	-
5570MHz	56

Note:

- ♦ VHT20/VHT40 covers HT20/HT40, due to same modulation. The power setting for 802.11n HT20 and HT40 are the same or lower than 802.11ac VHT20 and VHT40.
- ♦ There are two modes of EUT for 802.11n/ac in 2400-2483.5MHz, 802.11n/ac in 5150-5250MHz and 802.11n/ac/ax in 5470-5725MHz, 5725-5850MHz. One is beamforming mode, and the other is non-beamforming mode, after evaluating, beamforming mode has been evaluated to be the worst case, so it was selected to test and record in this test report for Nss1.



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
Operating Mode	CTX
The output power of WLAN 5GHz Band 1 is higher than the WLAN 5GHz Band 3~Band 4, so it was selected to perform test and its test result was written in the report.	
1	CTX mode - SKU 1 + Adapter 1 (WLAN 2.4GHz)
2	CTX mode - SKU 1 + Adapter 1 (WLAN 5GHz Band 1)
Mode 1 has been evaluated to be the worst case among Mode 1~2, thus measurement for Mode 3~5 will follow this same test mode.	
3	CTX mode - SKU 1 + Adapter 2 (WLAN 2.4GHz)
4	CTX mode - SKU 1 + Adapter 3 (WLAN 2.4GHz)
5	CTX mode - SKU 1 + Adapter 4 (WLAN 2.4GHz)
For operating mode 4 is the worst case and it was record in this test report.	

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



The Worst Case Mode for Following Conformance Tests	
Tests Item	Unwanted Emissions
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	CTX
The output power of WLAN 5GHz Band 1 is higher than the WLAN 5GHz Band 3~Band 4, so it was selected to perform test and its test result was written in the report.	
1	CTX mode - SKU 1 + Adapter 1 (WLAN 2.4GHz)
2	CTX mode - SKU 1 + Adapter 1 (WLAN 5GHz Band 1)
Mode 2 has been evaluated to be the worst case among Mode 1~2, thus measurement for Mode 3~5 will follow this same test mode.	
3	CTX mode - SKU 1 + Adapter 2 (WLAN 5GHz Band 1)
4	CTX mode - SKU 1 + Adapter 3 (WLAN 5GHz Band 1)
5	CTX mode - SKU 1 + Adapter 4 (WLAN 5GHz Band 1)
Mode 2 has been evaluated to be the worst case among Mode 1~5, thus measurement for Mode 6 will follow this same test mode.	
6	CTX mode - SKU 2 + Adapter 1 (WLAN 5GHz Band 1)
For operating mode 2 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Radiated Emission Co-location
Test Condition	Radiated measurement
Operating Mode	Normal Link
The EUT supports Master (AP Router, Extender and Mesh) and Client without radar detection functions. For customer's request, use the Master (AP Router) and Master (Mesh) for Normal Link. After evaluated, Master (AP Router) generated the worst test result, thus the measurement test will follow this same test configuration.	
1	Master (AP Router) - SKU 1 (WLAN 2.4GHz + WLAN 5GHz Band 1)
Refer to Appendix F for Radiated Emission Co-location.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	WLAN 2.4GHz + WLAN 5GHz Band 1 + WLAN 5GHz Band 3~Band 4
Refer to Sporton Test Report No.: FA791525 for Co-location RF Exposure Evaluation.	

Note: The EUT only be used at Z axis.



2.3 EUT Operation during Test

For CTX Mode:

For non-beamforming mode:

The EUT was programmed to be in continuously transmitting mode.

For 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、LanTest20.
3. Executed "Lantest.exe" to link with the remote workstation to transmit and receive packet by RX Device and transmit duty cycle no less than 98%.

For Normal Link:

During the test, the EUT operation to normal function.

2.4 Accessories

Accessories					
No.	Power	Brand	Model	Type	Rating
1	Adapter 1	PI	AD890326	010-2LF	INPUT: 100-240V ~ 50/60Hz, 0.8A OUTPUT: 19V, 1.75A
2	Adapter 2	DELTA	ADP-33AW B	-	INPUT: 100-240V ~ 1A, 50-60Hz OUTPUT: 19V, 1.75A
3	Adapter 3	PI	AD2088320	010LF	INPUT: 100-240V ~ 50/60Hz, 0.8A OUTPUT: 19V, 1.75A
4	Adapter 4	DELTA	ADP-33AW Y	-	INPUT: 100-240V ~ 1A, 50-60Hz OUTPUT: 19V, 1.75A
No.	Other				
5	RJ-45 cable*1: Non-shielded, 1.5m				

Note: The adapter does not affect the test result of RF tests, so only adapter 1 was tested and recorded in this report.



2.5 Support Equipment

For Test Site No: CO02-CB

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E6430	N/A
2	Flash disk3.0	Transcend	JetFlash-700	N/A
3	Flash disk	Kingston	DTSE9H	N/A

For Test Site No: 03CH01-CB (below 1GHz) and TH01-CB

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

For Test Site No: 03CH01-CB (above 1GHz)

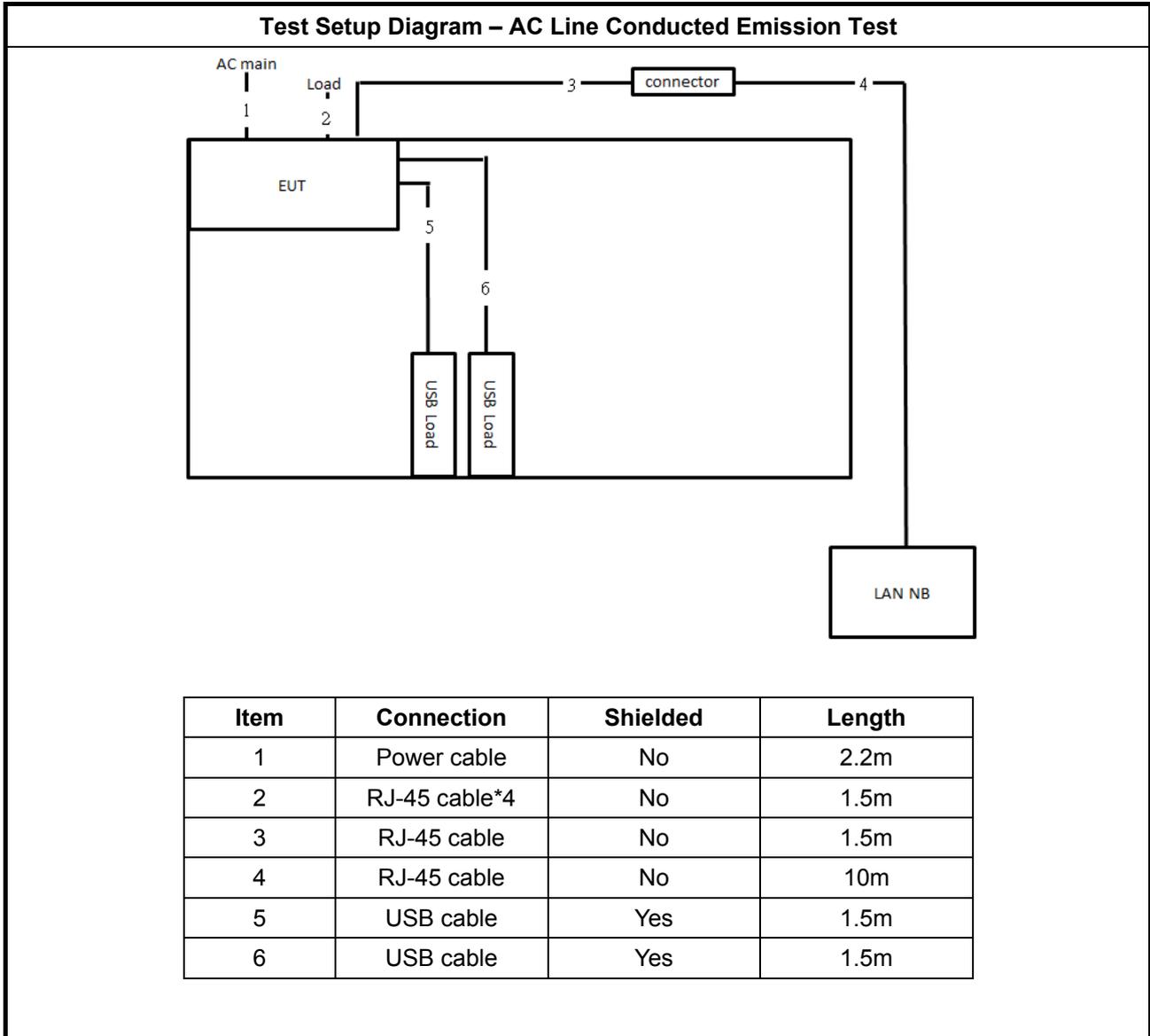
For non-beamforming mode:

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

For beamforming mode:

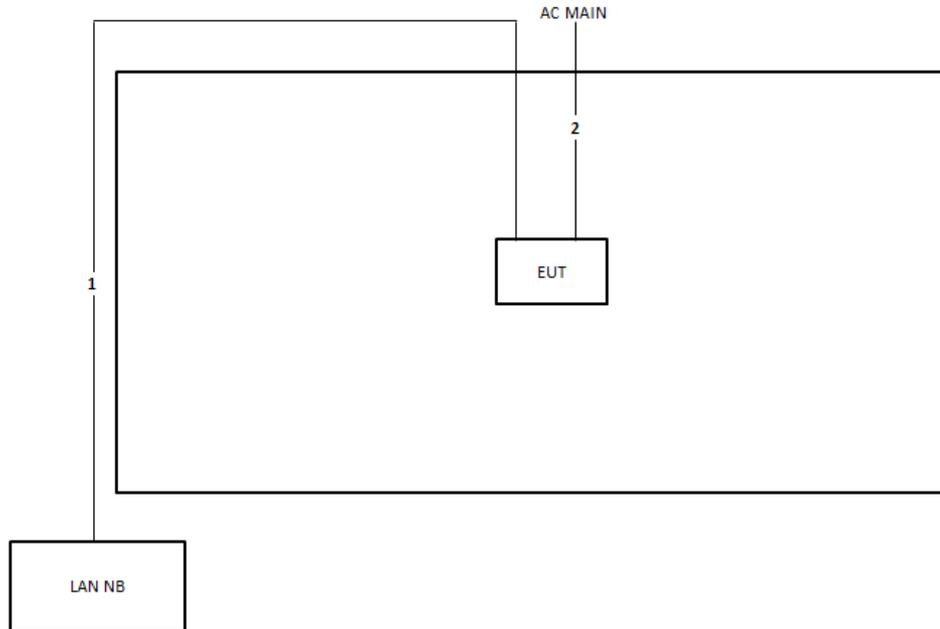
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB*2	DELL	E4300	N/A
2	RX Device	ASUS	RT-AX88U	MSQ-RTAXHP00

2.6 Test Setup Diagram





Test Setup Diagram - Radiated Test < 1GHz

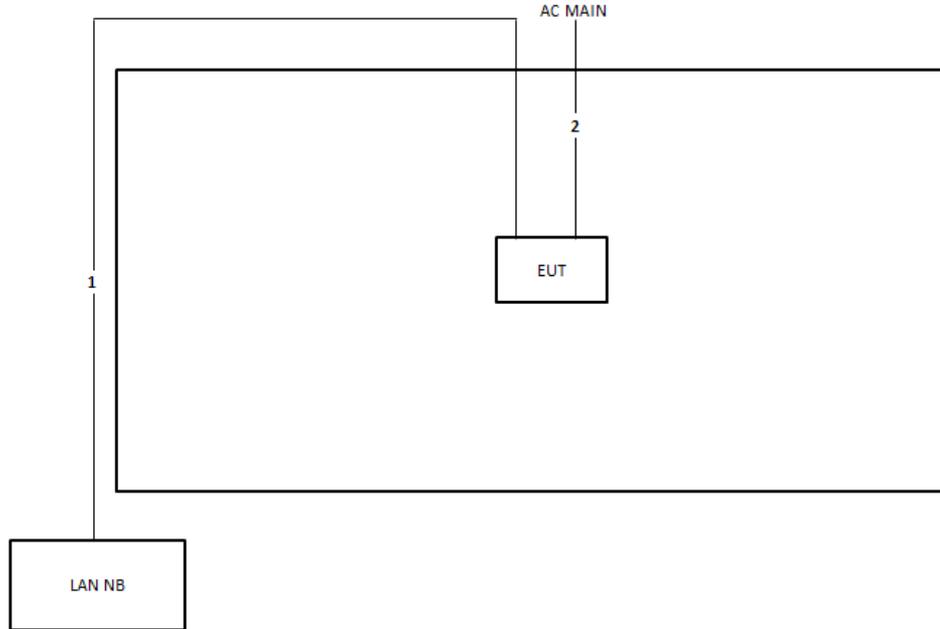


Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	Power cable	No	2.2m



Test Setup Diagram - Radiated Test > 1GHz

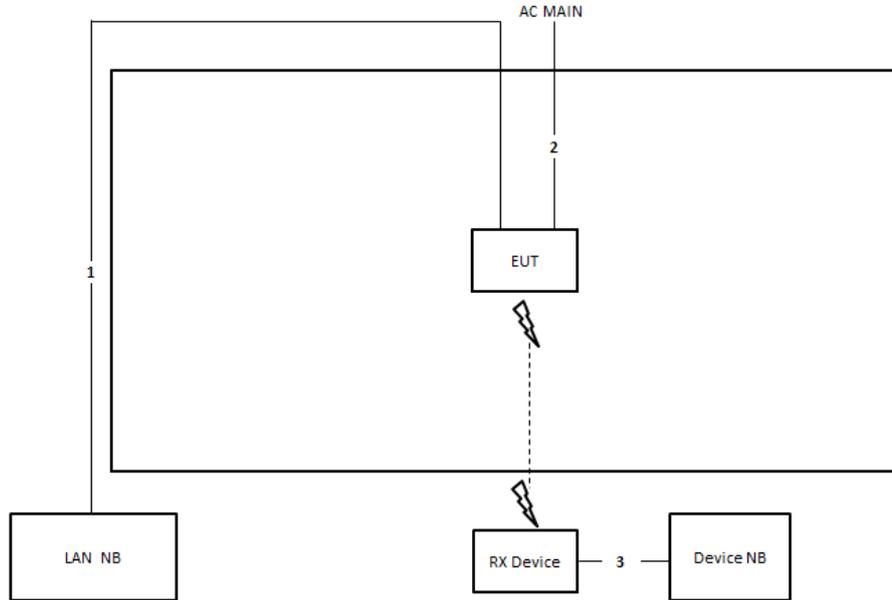
For non-beamforming mode:



Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	Power cable	No	2.2m

Test Setup Diagram - Radiated Test > 1GHz

For beamforming mode:



Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	Power cable	No	2.2m
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.

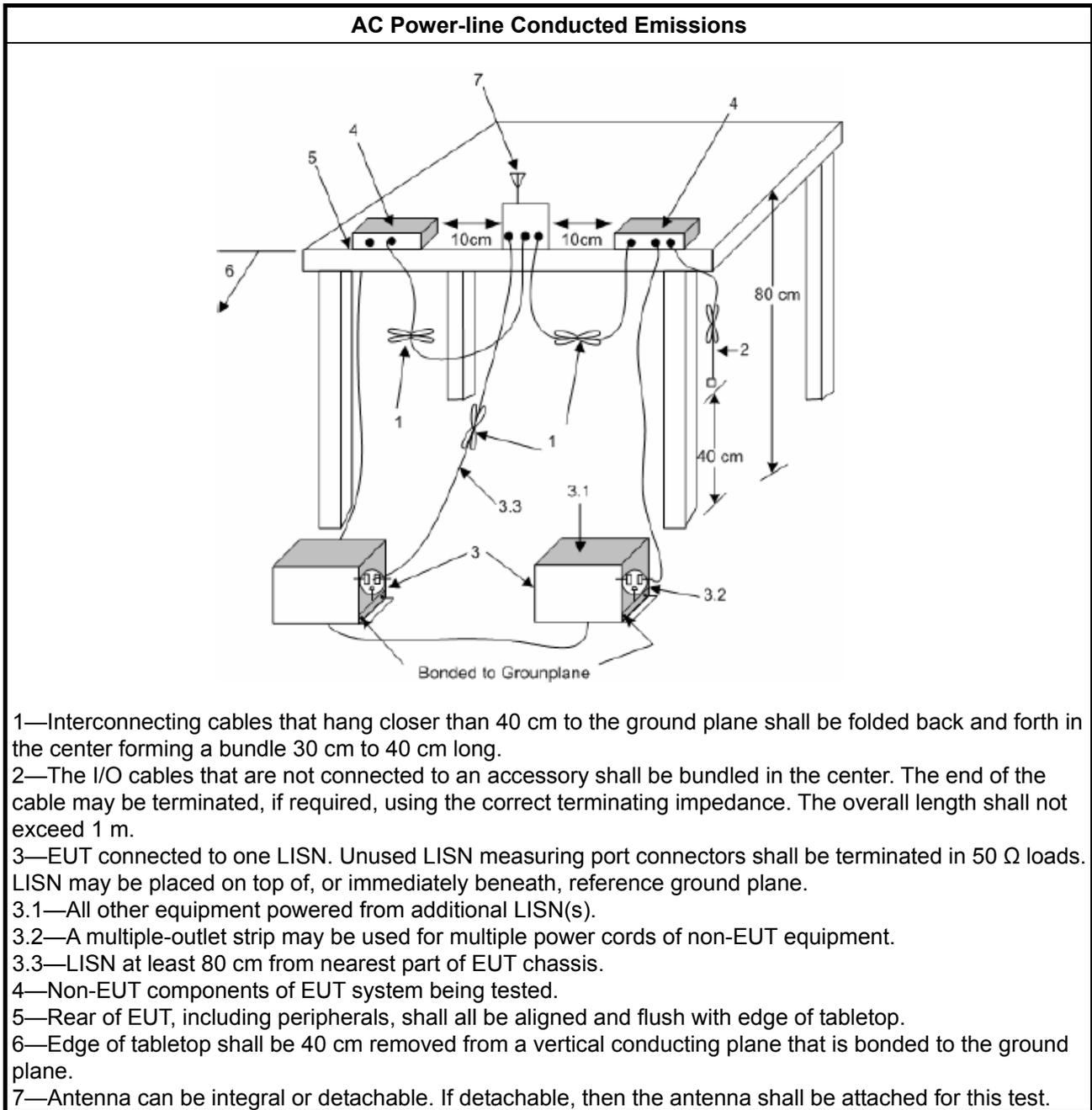
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

Test Method
<input checked="" type="checkbox"/> Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

3.1.4 Test Setup



3.1.5 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 Emission Bandwidth

3.2.1 Emission Bandwidth Limit

Emission Bandwidth Limit	
UNII Devices	
<input checked="" type="checkbox"/>	For the 5.15-5.25 GHz band, N/A
<input type="checkbox"/>	For the 5.25-5.35 GHz band, the maximum conducted output power shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz.
<input checked="" type="checkbox"/>	For the 5.47-5.725 GHz band, the maximum conducted output power shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz.
<input checked="" type="checkbox"/>	For the 5.725-5.85 GHz band, 6 dB emission bandwidth \geq 500kHz.
LE-LAN Devices	
<input type="checkbox"/>	For the band 5.15-5.25 GHz, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.
<input type="checkbox"/>	For the 5.25-5.35 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz
<input type="checkbox"/>	For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz
<input type="checkbox"/>	For the 5.725-5.85 GHz band, 6 dB emission bandwidth \geq 500kHz.

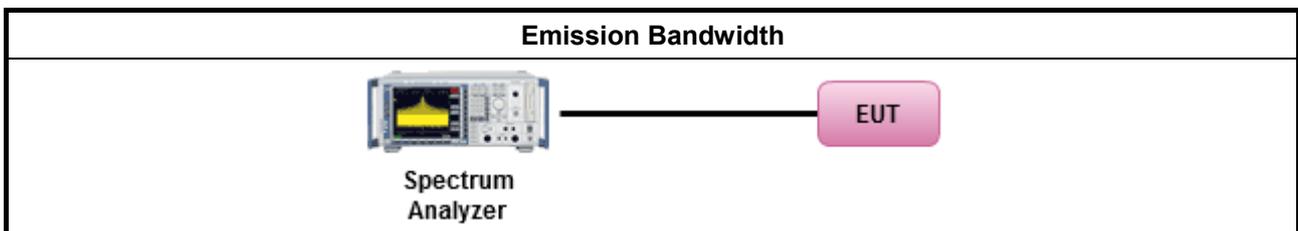
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method							
<ul style="list-style-type: none"> ▪ For the emission bandwidth shall be measured using one of the options below: <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30px;"><input checked="" type="checkbox"/></td> <td>Refer as FCC KDB 789033, clause C for EBW and clause D for OBW measurement.</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Refer as IC RSS-Gen, clause 4.6 for bandwidth testing.</td> </tr> </table> 		<input checked="" type="checkbox"/>	Refer as FCC KDB 789033, clause C for EBW and clause D for OBW measurement.	<input type="checkbox"/>	Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.	<input type="checkbox"/>	Refer as IC RSS-Gen, clause 4.6 for bandwidth testing.
<input checked="" type="checkbox"/>	Refer as FCC KDB 789033, clause C for EBW and clause D for OBW measurement.						
<input type="checkbox"/>	Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.						
<input type="checkbox"/>	Refer as IC RSS-Gen, clause 4.6 for bandwidth testing.						

3.2.4 Test Setup



3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B



3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit	
UNII Devices	
<input checked="" type="checkbox"/> For the 5.15-5.25 GHz band:	
	<ul style="list-style-type: none"> ▪ Outdoor AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$. e.i.r.p. at any elevation angle above 30 degrees ≤ 125mW [21dBm] ▪ Indoor AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$ ▪ Point-to-point AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 23$ dBi, then $P_{Out} = 30 - (G_{TX} - 23)$. ▪ Mobile or Portable Client: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$.
<input type="checkbox"/> For the 5.25-5.35 GHz band, the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$.	
<input checked="" type="checkbox"/> For the 5.47-5.725 GHz band, the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$.	
<input checked="" type="checkbox"/> For the 5.725-5.85 GHz band:	
	<ul style="list-style-type: none"> ▪ Point-to-multipoint systems (P2M): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$. ▪ Point-to-point systems (P2P): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W.
LE-LAN Devices	
<input type="checkbox"/> For the 5.15-5.25 GHz band, the maximum e.i.r.p. shall not exceed 200 mW or $10 + 10 \log B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.	
<input type="checkbox"/> For the 5.25-5.35 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or $17 + 10 \log B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz	
<input type="checkbox"/> For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or $17 + 10 \log B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz	
<input type="checkbox"/> For the 5.725-5.85 GHz band:	
	<ul style="list-style-type: none"> ▪ Point-to-multipoint systems (P2M): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$. ▪ Point-to-point systems (P2P): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W.
P_{Out} = maximum conducted output power in dBm, G_{TX} = the maximum transmitting antenna directional gain in dBi.	

3.3.2 Measuring Instruments

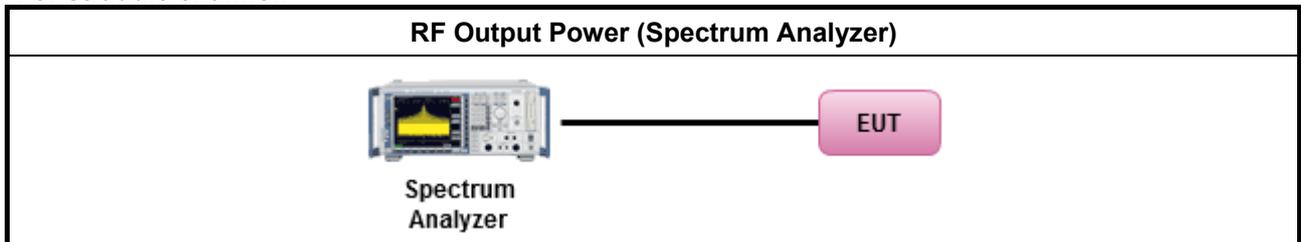
Refer a test equipment and calibration data table in this test report.

3.3.3 Test Procedures

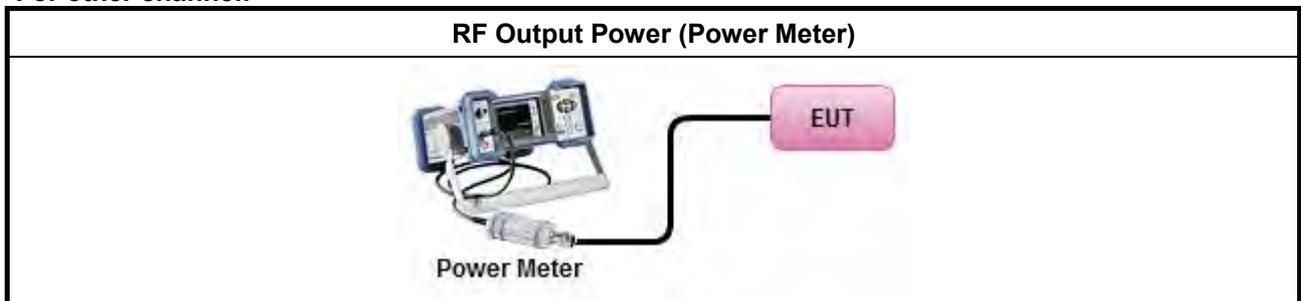
Test Method	
<ul style="list-style-type: none"> ▪ Maximum Conducted Output Power 	
Average over on/off periods with duty factor	
<input checked="" type="checkbox"/>	Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging).
<input type="checkbox"/>	Refer as FCC KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
Wideband RF power meter and average over on/off periods with duty factor	
<input checked="" type="checkbox"/>	Refer as FCC KDB 789033, clause E Method PM-G (using an RF average power meter).
<ul style="list-style-type: none"> ▪ For conducted measurement. 	
<ul style="list-style-type: none"> ▪ If the EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them. 	
<ul style="list-style-type: none"> ▪ 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]) $EIRP_{total} = P_{total} + DG$ 	

3.3.4 Test Setup

For straddle channel:



For other channel:



3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C



3.4 Peak Power Spectral Density

3.4.1 Peak Power Spectral Density Limit

Peak Power Spectral Density Limit	
UNII Devices	
<input checked="" type="checkbox"/>	For the 5.15-5.25 GHz band:
	<ul style="list-style-type: none"> ▪ Outdoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$. ▪ Indoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$. ▪ Point-to-point AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 23$ dBi, then $P_{Out} = 17 - (G_{TX} - 23)$. ▪ Mobile or Portable Client: the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.
<input type="checkbox"/>	For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.
<input checked="" type="checkbox"/>	For the 5.47-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.
<input checked="" type="checkbox"/>	For the 5.725-5.85 GHz band:
	<ul style="list-style-type: none"> ▪ Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If $G_{TX} > 6$ dBi, then $PPSD = 30 - (G_{TX} - 6)$. ▪ Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.
LE-LAN Devices	
<input type="checkbox"/>	For the 5.15-5.25 GHz band, the e.i.r.p. peak power spectral density (PPSD) ≤ 10 dBm/MHz.
<input type="checkbox"/>	For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz.
	<ul style="list-style-type: none"> ▪ e.i.r.p. greater than 200 mW shall comply with the following e.i.r.p. at different elevations, where θ is the angle above the local horizontal plane (of the Earth) as shown below: -13 dBW/MHz for $0^\circ \leq \theta < 8^\circ$; $-13 - 0.716(\theta - 8)$ dBW/MHz for $8^\circ \leq \theta < 40^\circ$ -35.9 - 1.22 $(\theta - 40)$ dBW/MHz for $40^\circ \leq \theta \leq 45^\circ$; -42 dBW/MHz for $\theta > 45^\circ$
<input type="checkbox"/>	For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz.
<input type="checkbox"/>	For the 5.725-5.85 GHz band:
	<ul style="list-style-type: none"> ▪ Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If $G_{TX} > 6$ dBi, then $PPSD = 30 - (G_{TX} - 6)$. ▪ Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.
<p>PPSD = peak power spectral density that he same method as used to determine the conducted output power shall be used to determine the power spectral density. And power spectral density in dBm/MHz G_{TX} = the maximum transmitting antenna directional gain in dBi.</p>	

3.4.2 Measuring Instruments

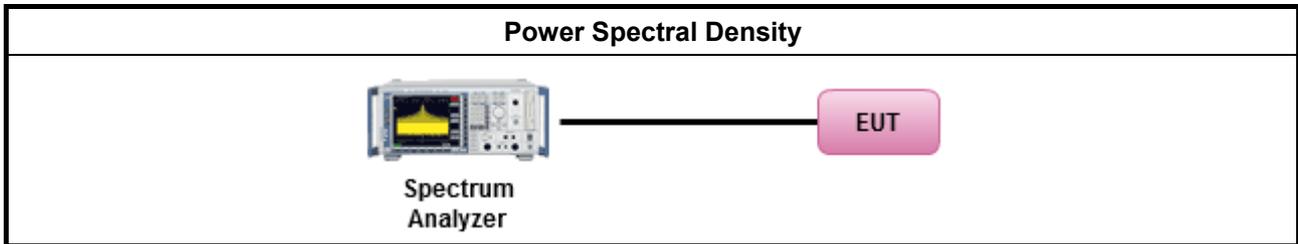
Refer a test equipment and calibration data table in this test report.



3.4.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> ▪ Peak power spectral density procedures that the same method as used to determine the conducted output power shall be used to determine the peak power spectral density and use the peak search function on the spectrum analyzer to find the peak of the spectrum. For the peak power spectral density shall be measured using below options: 	
<input type="checkbox"/>	Refer as FCC KDB 789033, F)5) power spectral density can be measured using resolution bandwidths < 1 MHz provided that the results are integrated over 1 MHz bandwidth
[duty cycle ≥ 98% or external video / power trigger]	
<input checked="" type="checkbox"/>	Refer as FCC KDB 789033, clause E Method SA-1 (spectral trace averaging).
<input type="checkbox"/>	Refer as FCC KDB 789033, clause E Method SA-1 Alt. (RMS detection with slow sweep speed)
duty cycle < 98% and average over on/off periods with duty factor	
<input checked="" type="checkbox"/>	Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging).
<input type="checkbox"/>	Refer as FCC KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
<ul style="list-style-type: none"> ▪ For conducted measurement. 	
<ul style="list-style-type: none"> ▪ If the EUT supports multiple transmit chains using options given below: 	
<input checked="" type="checkbox"/>	Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.
<input type="checkbox"/>	Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits,
<input type="checkbox"/>	Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.
<ul style="list-style-type: none"> ▪ 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]) $EIRP_{total} = PPSD_{total} + DG$ 	

3.4.4 Test Setup



3.4.5 Test Result of Peak Power Spectral Density

Refer as Appendix D



3.5 Unwanted Emissions

3.5.1 Transmitter Radiated Unwanted Emissions Limit

Unwanted emissions below 1 GHz and restricted band emissions above 1GHz limit			
Frequency Range (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measure Distance (m)
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

Note 3: Using the distance of 1m during the test for above 18 GHz, and the test value to correct for the distance factor at 3m.

Un-restricted band emissions above 1GHz Limit	
Operating Band	Limit
<input checked="" type="checkbox"/> 5.15 - 5.25 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
<input type="checkbox"/> 5.25 - 5.35 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
<input checked="" type="checkbox"/> 5.47 - 5.725 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
<input checked="" type="checkbox"/> 5.725 - 5.85 GHz	all emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

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



linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

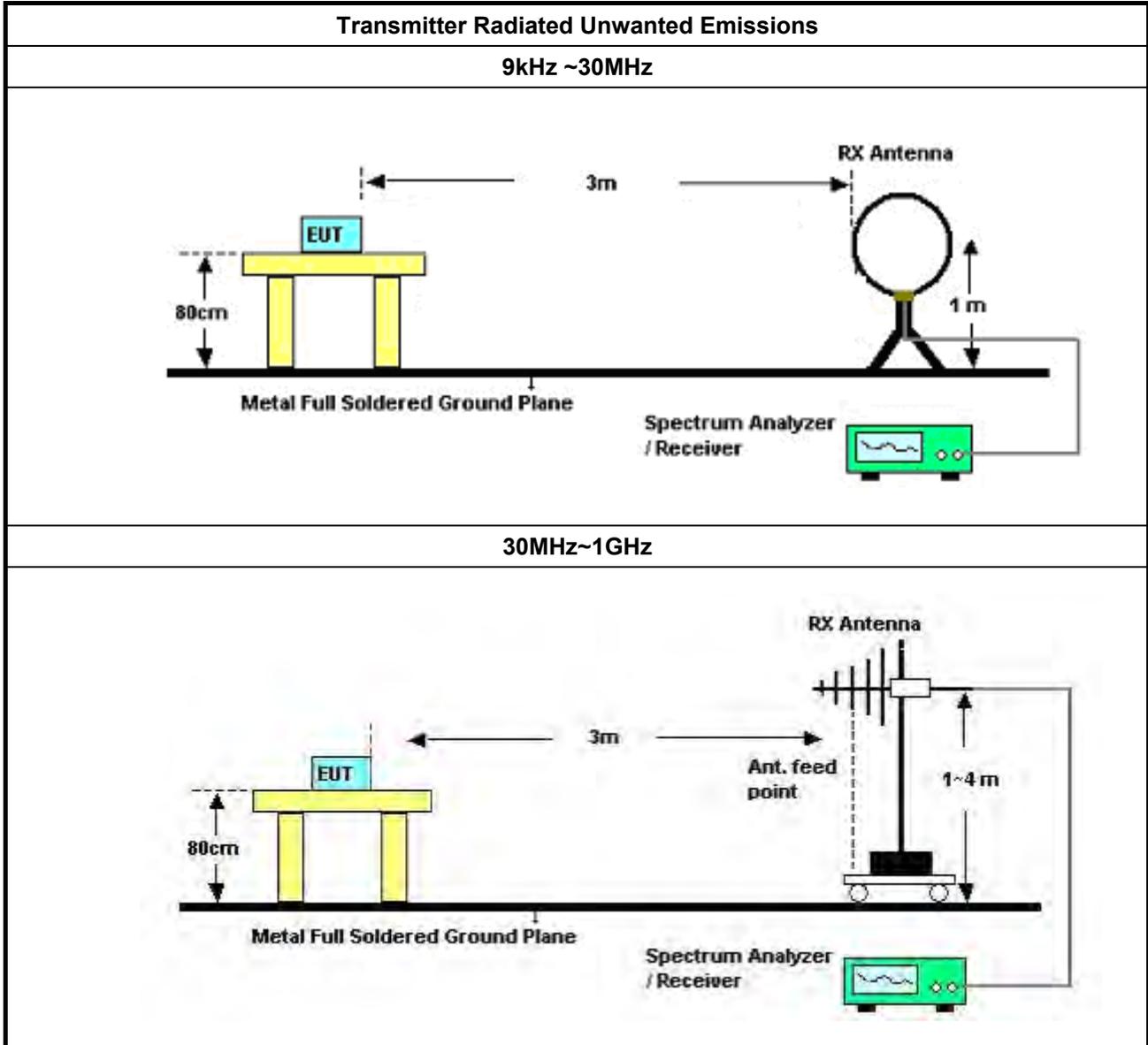
3.5.2 Measuring Instruments

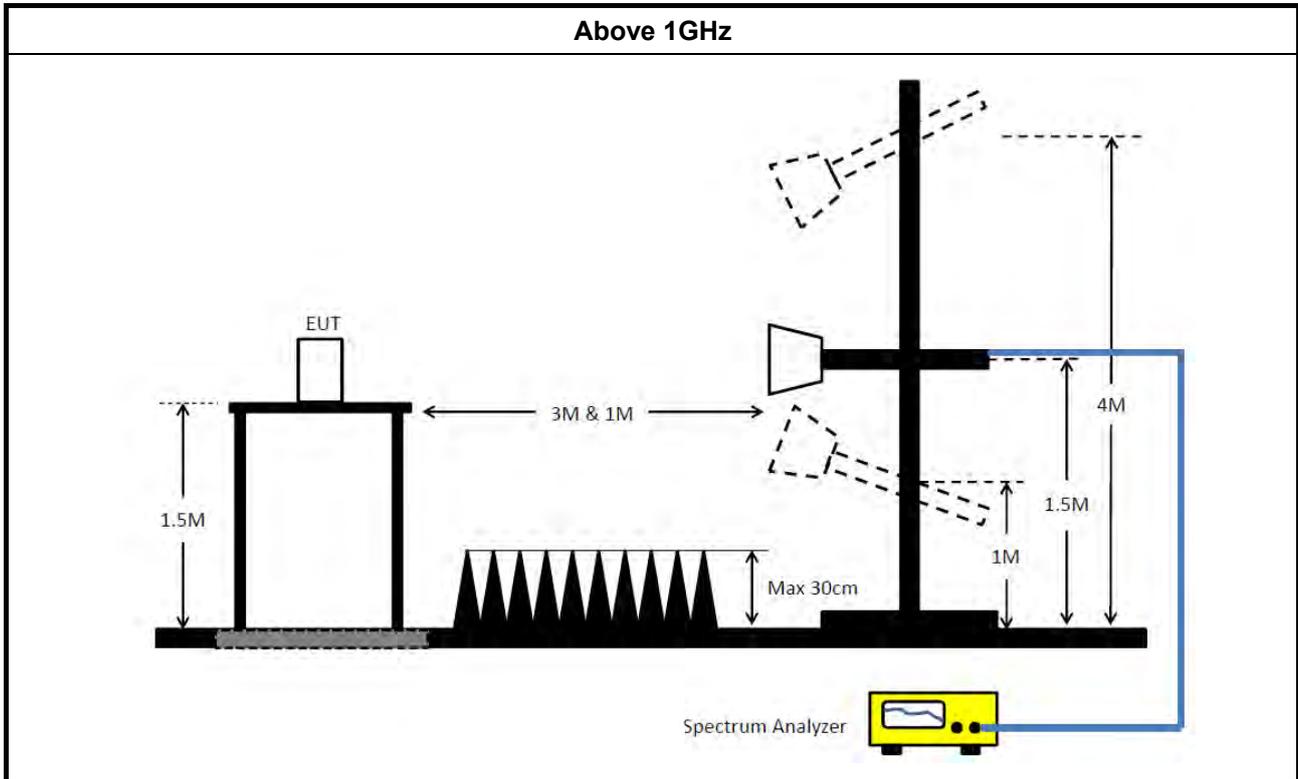
Refer a test equipment and calibration data table in this test report.

3.5.3 Test Procedures

Test Method	
	<ul style="list-style-type: none"> ▪ Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 m for frequencies above 30 MHz, unless it can be further demonstrated that measurements at a distance of 30 m or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).
	<ul style="list-style-type: none"> ▪ The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].
	<ul style="list-style-type: none"> ▪ For the transmitter unwanted emissions shall be measured using following options below: <ul style="list-style-type: none"> ▪ Refer as FCC KDB 789033, clause H)2) for unwanted emissions into non-restricted bands. ▪ Refer as FCC KDB 789033, clause H)1) for unwanted emissions into restricted bands. <ul style="list-style-type: none"> <input type="checkbox"/> Refer as FCC KDB 789033, H)6) Method AD (Trace Averaging). <input checked="" type="checkbox"/> Refer as FCC KDB 789033, H)6) Method VB (Reduced VBW). <input type="checkbox"/> Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time. <input type="checkbox"/> Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions. <input checked="" type="checkbox"/> Refer as FCC KDB 789033, clause H)5) measurement procedure peak limit. <input type="checkbox"/> Refer as ANSI C63.10, clause 4.2.3.2.2 measurement procedure peak limit.
	<ul style="list-style-type: none"> ▪ For radiated measurement. <ul style="list-style-type: none"> ▪ Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m. ▪ 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.
	<ul style="list-style-type: none"> ▪ The any unwanted emissions level shall not exceed the fundamental emission level.
	<ul style="list-style-type: none"> ▪ All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

3.5.4 Test Setup





3.5.5 Transmitter Unwanted Emissions (Below 30MHz)

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 10 harmonic or 40 GHz, whichever is appropriate.

3.5.6 Test Result of Transmitter Unwanted Emissions

Refer as Appendix E



4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
LISN	Schwarzbeck	NSLK 8127	8127650	9kHz ~ 30MHz	Nov. 24, 2017	Nov. 23, 2018	Conduction (CO02-CB)
LISN	Schwarzbeck	NSLK 8127	8127478	9kHz ~ 30MHz	Nov. 13, 2017	Nov. 12, 2018	Conduction (CO02-CB)
EMI Receiver	Agilent	N9038A	MY52260140	9kHz ~ 8.4GHz	Jan. 17, 2018	Jan. 16, 2019	Conduction (CO02-CB)
COND Cable	Woken	Cable	2	0.15MHz ~ 30MHz	Nov. 10, 2017	Nov. 09, 2018	Conduction (CO02-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	N.C.R.	Conduction (CO02-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2018	Mar. 15, 2019	Radiation (03CH01-CB)
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Aug. 30, 2017	Aug. 29, 2018	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 20, 2017	Nov. 19, 2018	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 05, 2017	Jul. 04, 2018	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jun. 28, 2018	Jun. 27, 2019	Radiation (03CH01-CB)
Pre-Amplifier	EMCI	EMC330N	980332	20MHz ~ 3GHz	May 02, 2018	May 01, 2019	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 09, 2018	Jan. 08, 2019	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 10, 2017	Jul. 09, 2018	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 04, 2018	Jul. 03, 2019	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Nov. 23, 2017	Nov. 22, 2018	Radiation (03CH01-CB)
EMI Test	R&S	ESCS	100354	9kHz ~ 2.75GHz	Dec. 08, 2017	Dec. 07, 2018	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~ 1 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)



Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz ~ 40 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 21, 2017	Dec. 20, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz ~ 26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz ~ 26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz ~ 26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz ~ 26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz ~ 26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 20, 2017	Nov. 19, 2018	Conducted (TH01-CB)

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

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



AC Power-line Conducted Emissions Result

Appendix A

AC Power-line Conducted Emissions Result																																																																																																																																																																																								
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	<table border="1"> <thead> <tr> <th>Freq</th> <th>Level</th> <th>Over</th> <th>Limit</th> <th>Read</th> <th>LISN</th> <th>Cable</th> <th>Remark</th> <th>Pol/Phase</th> </tr> <tr> <th>MHz</th> <th>dBuV</th> <th>dB</th> <th>dBuV</th> <th>dBuV</th> <th>dB</th> <th>dB</th> <th></th> <th></th> </tr> </thead> <tbody> <tr><td>1</td><td>0.1500</td><td>36.04</td><td>-19.96</td><td>56.00</td><td>25.99</td><td>10.04</td><td>Average</td><td>NEUTRAL</td></tr> <tr><td>2</td><td>0.1500</td><td>53.43</td><td>-12.57</td><td>66.00</td><td>43.38</td><td>10.04</td><td>QP</td><td>NEUTRAL</td></tr> <tr><td>3</td><td>0.1616</td><td>31.57</td><td>-23.81</td><td>55.38</td><td>21.54</td><td>10.02</td><td>Average</td><td>NEUTRAL</td></tr> <tr><td>4</td><td>0.1616</td><td>49.06</td><td>-16.32</td><td>65.38</td><td>39.03</td><td>10.02</td><td>QP</td><td>NEUTRAL</td></tr> <tr><td>5</td><td>0.1677</td><td>32.75</td><td>-22.33</td><td>55.08</td><td>22.73</td><td>10.01</td><td>Average</td><td>NEUTRAL</td></tr> <tr><td>6</td><td>0.1677</td><td>50.54</td><td>-14.54</td><td>65.08</td><td>40.52</td><td>10.01</td><td>QP</td><td>NEUTRAL</td></tr> <tr><td>7</td><td>0.1844</td><td>31.57</td><td>-22.71</td><td>54.28</td><td>21.58</td><td>9.98</td><td>Average</td><td>NEUTRAL</td></tr> <tr><td>8</td><td>0.1844</td><td>47.62</td><td>-16.66</td><td>64.28</td><td>37.63</td><td>9.98</td><td>QP</td><td>NEUTRAL</td></tr> <tr><td>9</td><td>0.1945</td><td>27.44</td><td>-26.40</td><td>53.84</td><td>17.46</td><td>9.97</td><td>Average</td><td>NEUTRAL</td></tr> <tr><td>10</td><td>0.1945</td><td>41.97</td><td>-21.87</td><td>63.84</td><td>31.99</td><td>9.97</td><td>QP</td><td>NEUTRAL</td></tr> <tr><td>11</td><td>0.2040</td><td>28.59</td><td>-24.86</td><td>53.45</td><td>18.62</td><td>9.96</td><td>Average</td><td>NEUTRAL</td></tr> <tr><td>12</td><td>0.2040</td><td>44.60</td><td>-18.85</td><td>63.45</td><td>34.63</td><td>9.96</td><td>QP</td><td>NEUTRAL</td></tr> <tr><td>13</td><td>0.2128</td><td>27.17</td><td>-25.93</td><td>53.10</td><td>17.20</td><td>9.96</td><td>Average</td><td>NEUTRAL</td></tr> <tr><td>14</td><td>0.2128</td><td>41.01</td><td>-22.09</td><td>63.10</td><td>31.04</td><td>9.96</td><td>QP</td><td>NEUTRAL</td></tr> <tr><td>15</td><td>0.3771</td><td>24.03</td><td>-24.31</td><td>48.34</td><td>14.06</td><td>9.94</td><td>Average</td><td>NEUTRAL</td></tr> <tr><td>16</td><td>0.3771</td><td>35.77</td><td>-22.57</td><td>58.34</td><td>25.80</td><td>9.94</td><td>QP</td><td>NEUTRAL</td></tr> <tr><td>17</td><td>0.4061</td><td>37.49</td><td>-10.24</td><td>47.73</td><td>27.52</td><td>9.94</td><td>Average</td><td>NEUTRAL</td></tr> <tr><td>18</td><td>0.4061</td><td>42.59</td><td>-15.14</td><td>57.73</td><td>32.62</td><td>9.94</td><td>QP</td><td>NEUTRAL</td></tr> </tbody> </table>	Freq	Level	Over	Limit	Read	LISN	Cable	Remark	Pol/Phase	MHz	dBuV	dB	dBuV	dBuV	dB	dB			1	0.1500	36.04	-19.96	56.00	25.99	10.04	Average	NEUTRAL	2	0.1500	53.43	-12.57	66.00	43.38	10.04	QP	NEUTRAL	3	0.1616	31.57	-23.81	55.38	21.54	10.02	Average	NEUTRAL	4	0.1616	49.06	-16.32	65.38	39.03	10.02	QP	NEUTRAL	5	0.1677	32.75	-22.33	55.08	22.73	10.01	Average	NEUTRAL	6	0.1677	50.54	-14.54	65.08	40.52	10.01	QP	NEUTRAL	7	0.1844	31.57	-22.71	54.28	21.58	9.98	Average	NEUTRAL	8	0.1844	47.62	-16.66	64.28	37.63	9.98	QP	NEUTRAL	9	0.1945	27.44	-26.40	53.84	17.46	9.97	Average	NEUTRAL	10	0.1945	41.97	-21.87	63.84	31.99	9.97	QP	NEUTRAL	11	0.2040	28.59	-24.86	53.45	18.62	9.96	Average	NEUTRAL	12	0.2040	44.60	-18.85	63.45	34.63	9.96	QP	NEUTRAL	13	0.2128	27.17	-25.93	53.10	17.20	9.96	Average	NEUTRAL	14	0.2128	41.01	-22.09	63.10	31.04	9.96	QP	NEUTRAL	15	0.3771	24.03	-24.31	48.34	14.06	9.94	Average	NEUTRAL	16	0.3771	35.77	-22.57	58.34	25.80	9.94	QP	NEUTRAL	17	0.4061	37.49	-10.24	47.73	27.52	9.94	Average	NEUTRAL	18	0.4061	42.59	-15.14	57.73	32.62	9.94	QP	NEUTRAL			
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AC Power-line Conducted Emissions Result

Appendix A

AC Power-line Conducted Emissions Result									
Operating Mode	4			Power Phase	Line				
Operating Function	CTX								
<p>The graph displays the AC power-line conducted emissions. The y-axis represents the level in dBuV, ranging from 0 to 80. The x-axis represents the frequency in MHz, ranging from 0.1502 to 30. Two red lines indicate the CISPR limits: CISPR_B_QP (Quasi-Peak) and CISPR_B_AV (Average). The test data is shown as a blue line with several peaks labeled with their corresponding frequency and level values.</p>									
	Freq	Level	Over	Limit	Read	LISN	Cable	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1500	34.28	-21.72	56.00	24.27	10.00	0.01	Average	LINE
2	0.1500	51.16	-14.84	66.00	41.15	10.00	0.01	QP	LINE
3	0.1607	30.73	-24.70	55.43	20.74	9.98	0.01	Average	LINE
4	0.1607	47.37	-18.06	65.43	37.38	9.98	0.01	QP	LINE
5	0.1677	31.76	-23.32	55.08	21.79	9.96	0.01	Average	LINE
6	0.1677	49.56	-15.52	65.08	39.59	9.96	0.01	QP	LINE
7	0.1864	30.25	-23.95	54.20	20.31	9.93	0.01	Average	LINE
8	0.1864	46.23	-17.97	64.20	36.29	9.93	0.01	QP	LINE
9	0.2007	27.80	-25.78	53.58	17.88	9.91	0.01	Average	LINE
10	0.2007	42.78	-20.80	63.58	32.86	9.91	0.01	QP	LINE
11	0.2139	26.87	-26.18	53.05	16.95	9.91	0.01	Average	LINE
12	0.2139	40.66	-22.39	63.05	30.74	9.91	0.01	QP	LINE
13	0.3832	22.06	-26.15	48.21	12.16	9.87	0.03	Average	LINE
14	0.3832	35.35	-22.86	58.21	25.45	9.87	0.03	QP	LINE
15	0.4127	27.31	-20.28	47.59	17.41	9.87	0.03	Average	LINE
16	0.4127	40.32	-17.27	57.59	30.42	9.87	0.03	QP	LINE
17	0.4282	31.79	-15.50	47.29	21.88	9.88	0.03	Average	LINE
18	0.4282	40.82	-16.47	57.29	30.91	9.88	0.03	QP	LINE

Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.
 Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

**For Nss1:
Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	38.925M	18.35M	18M3D1D	20.4M	16.775M
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	45.75M	19.225M	19M2D1D	20.85M	17.825M
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	86.7M	37M	37M0D1D	41.05M	36.55M
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	83.3M	76M	76M0D1D	82.3M	75.7M
5.47-5.725GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	21.775M	16.85M	16M8D1D	15.555M	13.328M
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	21.8M	17.975M	18M0D1D	15.75M	13.913M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	41.55M	36.6M	36M6D1D	34.755M	33.023M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	82.2M	76M	76M0D1D	75.75M	72.414M
802.11ac VHT160-BF_Nss1,(MCS0)_4TX	166.2M	154M	154MD1D	164.8M	153.8M
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	21.85M	19.075M	19M1D1D	15.57M	14.513M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	41.4M	38M	38M0D1D	34.965M	33.688M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	82.8M	77.3M	77M3D1D	75.9M	73.163M
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	165.8M	155.2M	155MD1D	165.2M	155M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	16.35M	16.717M	16M7D1D	3.1M	3.818M
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	17.6M	17.816M	17M8D1D	3.7M	4.158M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	36.35M	36.332M	36M3D1D	3.08M	3.418M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	76.3M	75.962M	76M0D1D	3.06M	3.418M
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	19M	19.015M	19M0D1D	4.38M	4.478M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	37.6M	37.581M	37M6D1D	3.68M	3.978M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	77.6M	77.261M	77M3D1D	3.7M	3.978M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;



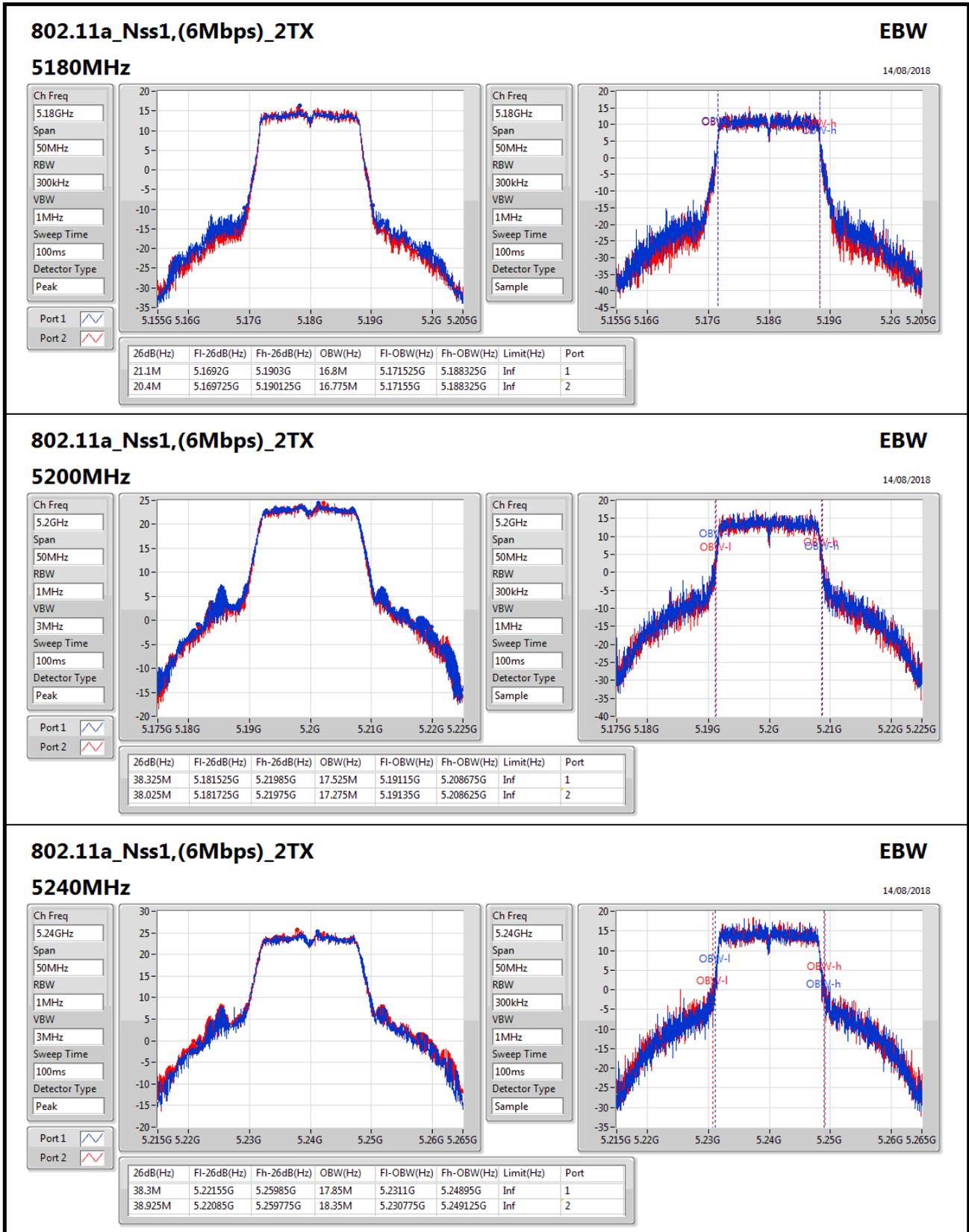
Result

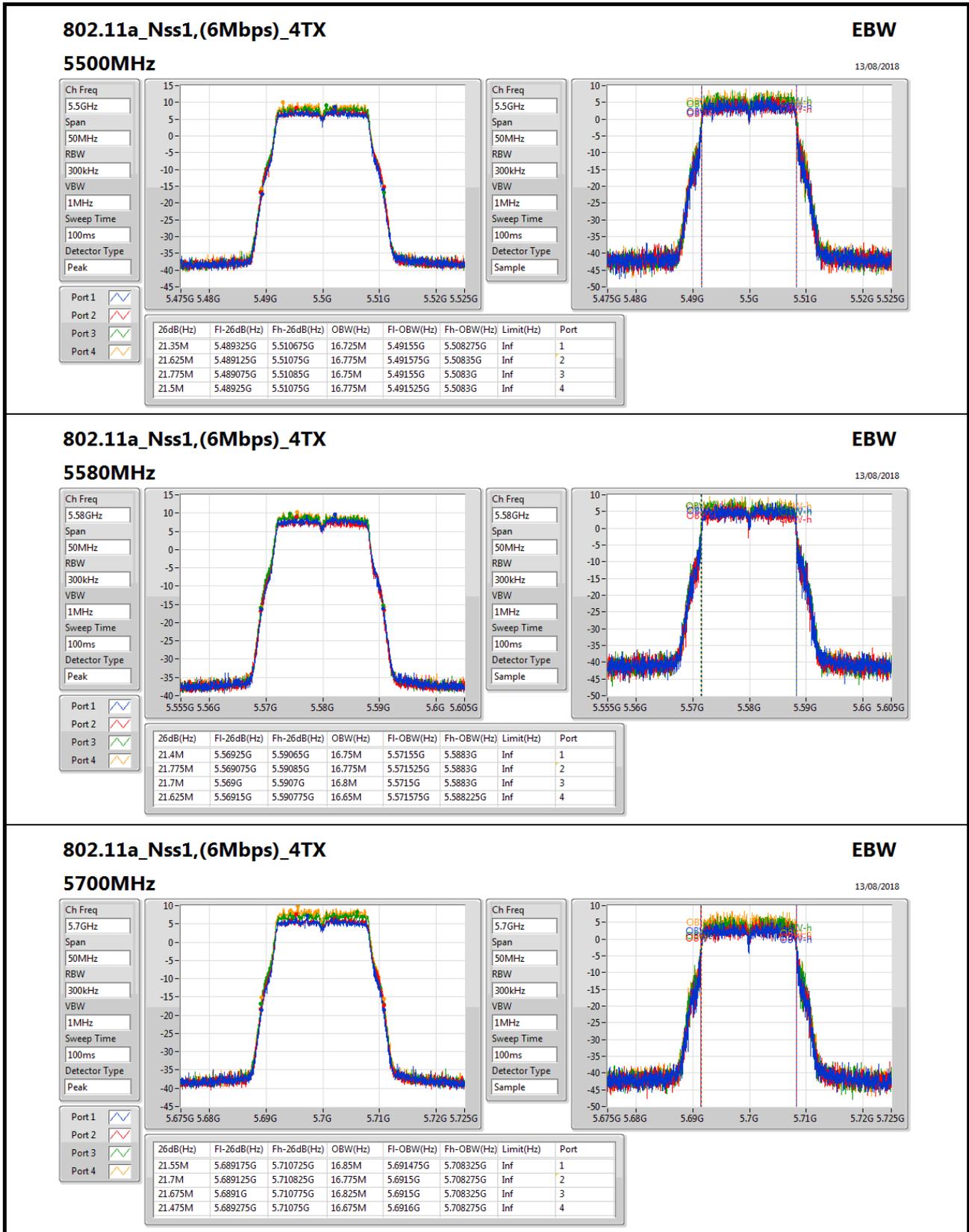
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.1M	16.8M	20.4M	16.775M				
5200MHz	Pass	Inf	38.325M	17.525M	38.025M	17.275M				
5240MHz	Pass	Inf	38.3M	17.85M	38.925M	18.35M				
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5500MHz	Pass	Inf	21.35M	16.725M	21.625M	16.775M	21.775M	16.75M	21.5M	16.775M
5580MHz	Pass	Inf	21.4M	16.75M	21.775M	16.775M	21.7M	16.8M	21.625M	16.65M
5700MHz	Pass	Inf	21.55M	16.85M	21.7M	16.775M	21.675M	16.825M	21.475M	16.675M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.555M	13.358M	15.735M	13.358M	15.825M	13.328M	15.675M	13.343M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.1M	3.818M	3.1M	3.818M	3.1M	3.858M	3.1M	3.818M
5745MHz	Pass	500k	16.325M	16.642M	16.325M	16.642M	16.325M	16.667M	16.35M	16.642M
5785MHz	Pass	500k	16.35M	16.617M	16.35M	16.617M	16.35M	16.717M	16.325M	16.642M
5825MHz	Pass	500k	16.35M	16.567M	16.35M	16.667M	16.35M	16.667M	16.325M	16.617M
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	24.525M	17.825M	20.85M	17.825M				
5200MHz	Pass	Inf	44.675M	18.275M	43.875M	18.225M				
5240MHz	Pass	Inf	45.75M	19.225M	45.3M	19.125M				
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5500MHz	Pass	Inf	21.775M	17.925M	21.525M	17.925M	21.475M	17.9M	21.75M	17.9M
5580MHz	Pass	Inf	21.8M	17.925M	21.525M	17.9M	21.6M	17.95M	21.75M	17.925M
5700MHz	Pass	Inf	21.7M	17.975M	21.6M	17.9M	21.55M	17.9M	21.75M	17.95M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.75M	13.913M	15.75M	13.928M	15.795M	13.958M	15.87M	13.943M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.72M	4.238M	3.7M	4.218M	3.74M	4.158M	3.72M	4.198M
5745MHz	Pass	500k	17.55M	17.766M	17.6M	17.766M	17.6M	17.791M	17.575M	17.816M
5785MHz	Pass	500k	17.575M	17.816M	17.575M	17.741M	17.575M	17.816M	17.55M	17.816M
5825MHz	Pass	500k	17.575M	17.766M	17.575M	17.741M	17.575M	17.791M	17.6M	17.791M
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	41.65M	36.55M	41.05M	36.65M				
5230MHz	Pass	Inf	86.7M	37M	82.65M	37M				
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5510MHz	Pass	Inf	41.45M	36.55M	41.3M	36.55M	41.4M	36.55M	40.95M	36.5M
5550MHz	Pass	Inf	41.55M	36.6M	41.5M	36.5M	41.25M	36.55M	40.95M	36.6M
5670MHz	Pass	Inf	41.5M	36.55M	41.3M	36.6M	41.4M	36.55M	41M	36.6M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	35.28M	33.093M	34.93M	33.023M	35.035M	33.093M	34.755M	33.058M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.1M	3.458M	3.1M	3.478M	3.1M	3.478M	3.08M	3.418M
5755MHz	Pass	500k	36.35M	36.182M	36.35M	36.232M	36.35M	36.282M	36.35M	36.282M
5795MHz	Pass	500k	36.35M	36.332M	36.35M	36.232M	36.3M	36.282M	36.35M	36.332M
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	83.3M	76M	82.3M	75.7M				
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5530MHz	Pass	Inf	82M	75.8M	81.7M	75.8M	81.6M	75.9M	82.1M	75.6M
5610MHz	Pass	Inf	82.2M	75.7M	81.7M	75.8M	82M	76M	82.1M	75.9M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	76.125M	72.414M	75.75M	72.789M	75.75M	72.639M	75.9M	72.489M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.08M	3.578M	3.08M	3.498M	3.1M	3.458M	3.06M	3.418M

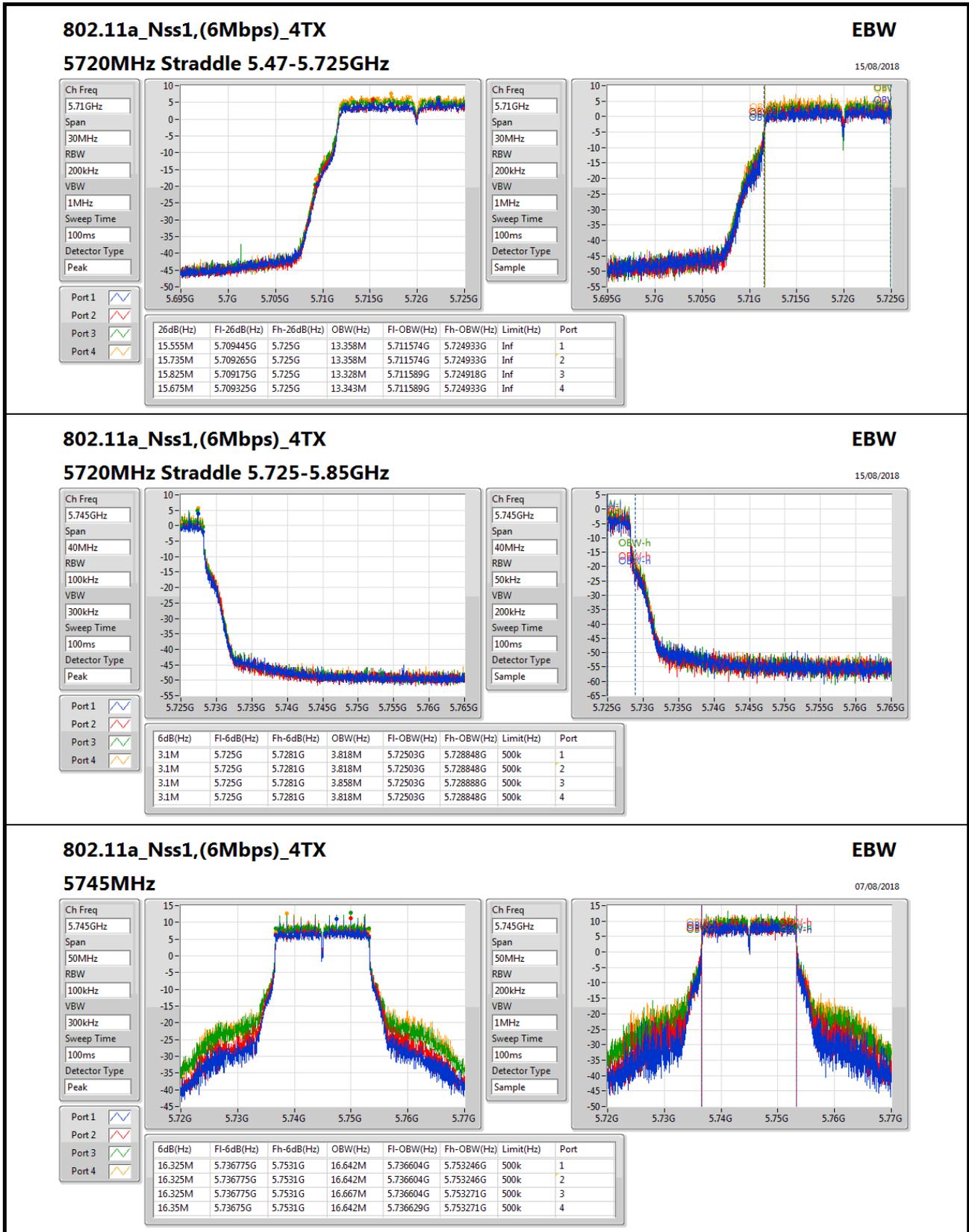


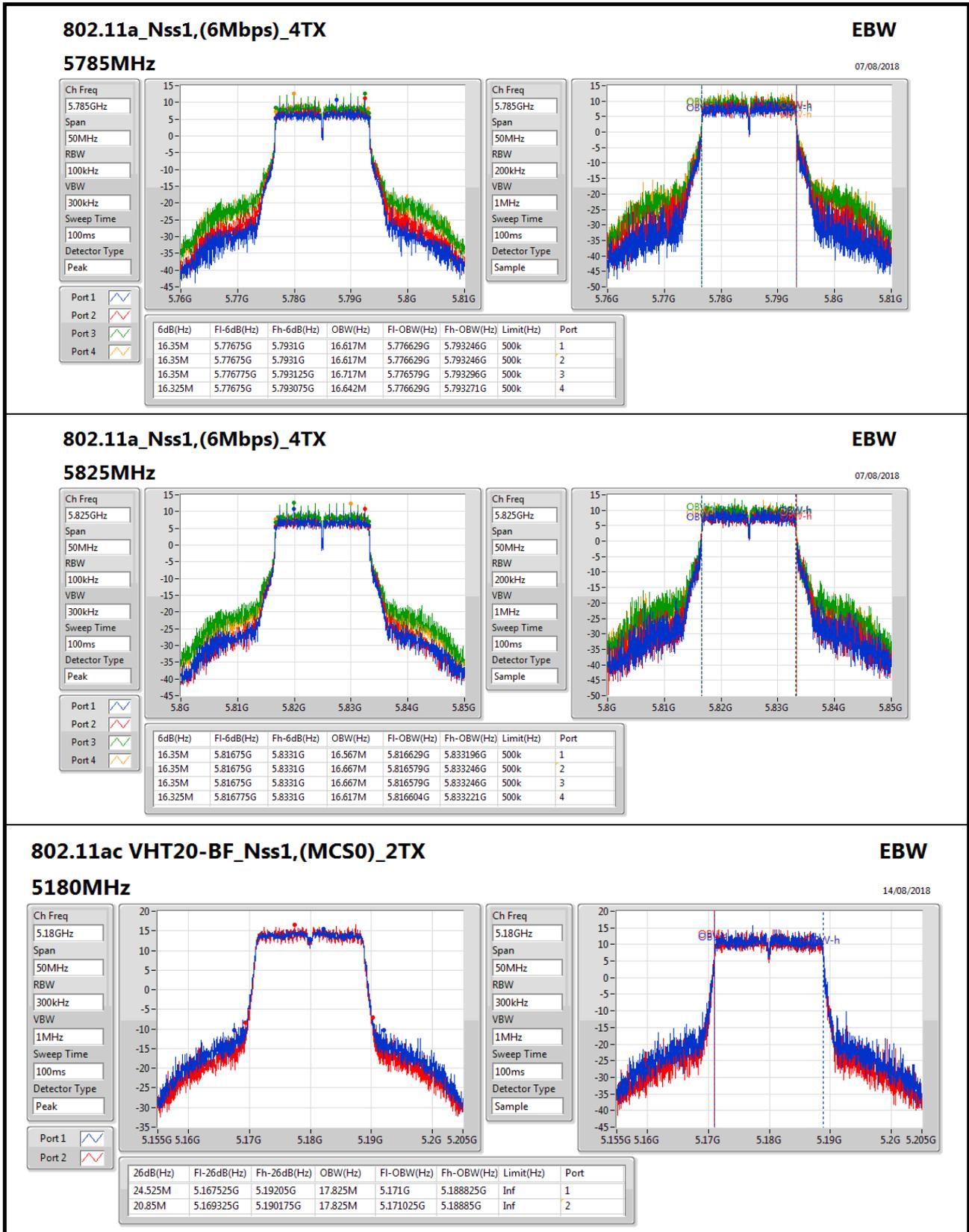
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
5775MHz	Pass	500k	75.5M	75.762M	76.3M	75.962M	76.3M	75.862M	76.3M	75.862M
802.11ac VHT160-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5570MHz	Pass	Inf	164.8M	154M	166.2M	153.8M	165.4M	154M	165.2M	153.8M
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5500MHz	Pass	Inf	21.7M	19.075M	21.725M	19.05M	21.7M	19.025M	21.7M	19M
5580MHz	Pass	Inf	21.65M	19.075M	21.575M	19.05M	21.8M	19.025M	21.775M	19.025M
5700MHz	Pass	Inf	21.775M	19.075M	21.775M	19M	21.775M	19.05M	21.85M	19.05M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.705M	14.513M	15.57M	14.513M	15.81M	14.558M	15.66M	14.513M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	4.4M	4.478M	4.4M	4.478M	4.38M	4.478M	4.52M	4.478M
5745MHz	Pass	500k	18.975M	18.991M	18.975M	18.966M	18.925M	19.015M	18.95M	19.015M
5785MHz	Pass	500k	19M	18.966M	18.95M	18.991M	18.9M	18.991M	18.9M	18.991M
5825MHz	Pass	500k	19M	19.015M	18.95M	18.991M	18.95M	19.015M	18.95M	18.991M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5510MHz	Pass	Inf	41.2M	37.85M	41.15M	37.85M	41.35M	37.75M	41.4M	37.85M
5550MHz	Pass	Inf	41.25M	37.85M	41.25M	37.85M	41.4M	37.85M	41.3M	37.85M
5670MHz	Pass	Inf	41.1M	37.8M	41.05M	37.85M	41.35M	38M	41.35M	37.75M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	35M	33.688M	34.965M	33.688M	35M	33.723M	35.035M	33.723M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.72M	3.978M	3.78M	3.998M	3.68M	3.998M	3.8M	3.978M
5755MHz	Pass	500k	37.55M	37.531M	37.3M	37.581M	37.5M	37.581M	37.35M	37.581M
5795MHz	Pass	500k	37.6M	37.531M	36.85M	37.581M	37.5M	37.581M	37.35M	37.581M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5530MHz	Pass	Inf	82.6M	77.1M	82.3M	77.2M	82.3M	77.3M	82.1M	77.2M
5610MHz	Pass	Inf	82.2M	77.1M	82.5M	77.3M	82.6M	77.2M	82.8M	77.1M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	75.975M	73.238M	75.975M	73.163M	76.2M	73.313M	75.9M	73.313M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.7M	3.998M	3.76M	3.978M	3.78M	3.978M	3.72M	3.978M
5775MHz	Pass	500k	76.7M	77.161M	77.6M	77.061M	75.8M	77.261M	77.5M	77.061M
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5570MHz	Pass	Inf	165.4M	155.2M	165.2M	155.2M	165.6M	155M	165.8M	155.2M

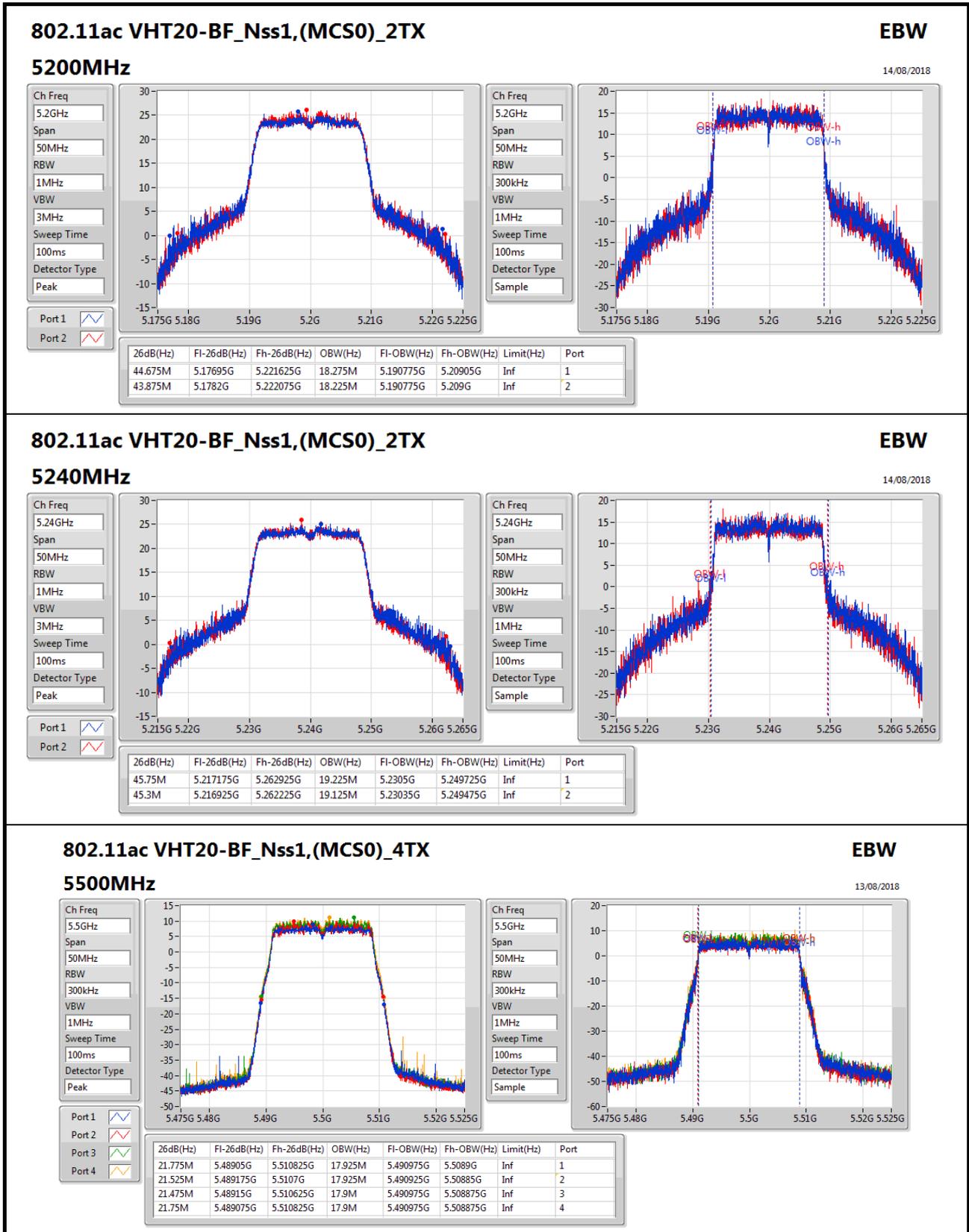
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth;

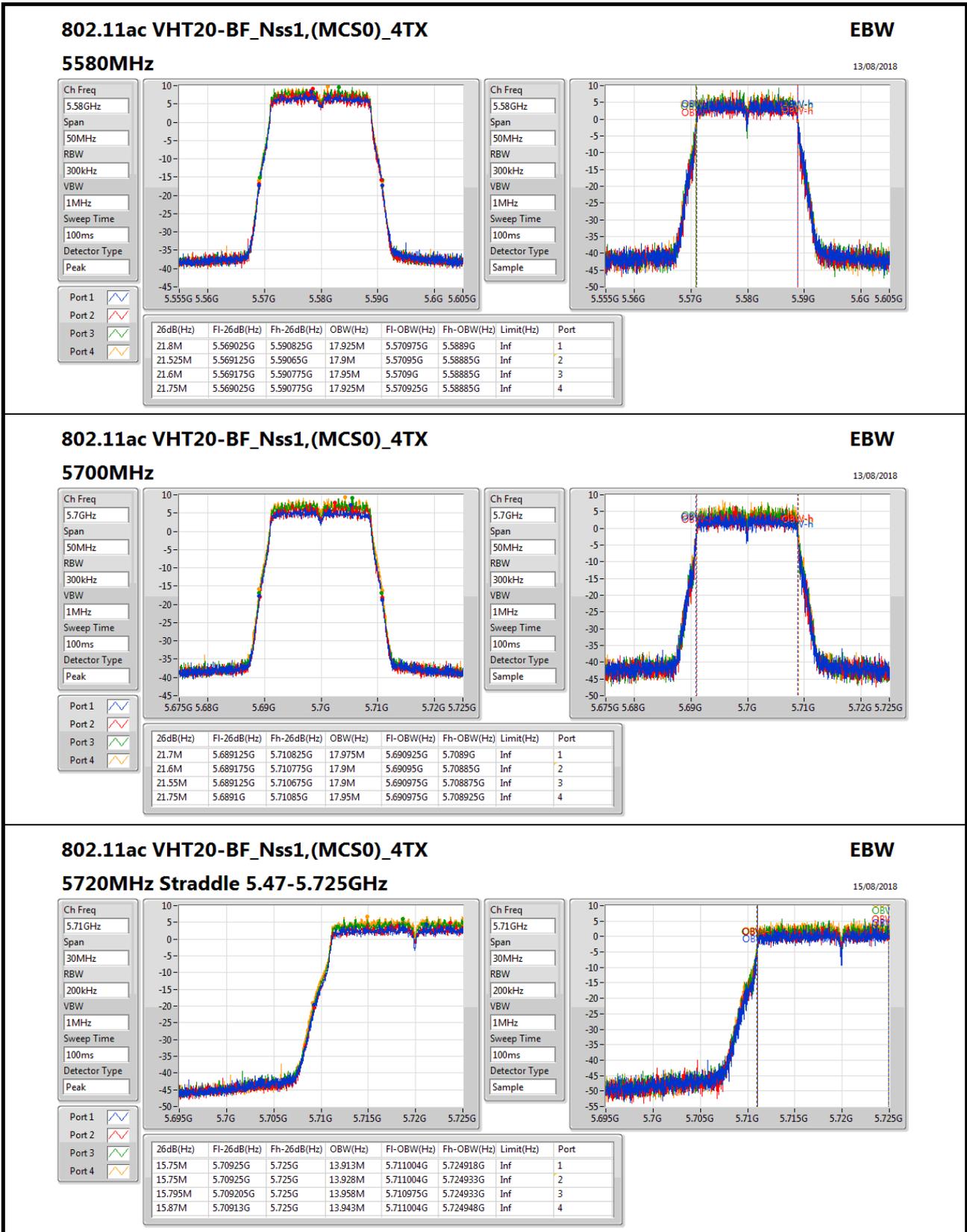


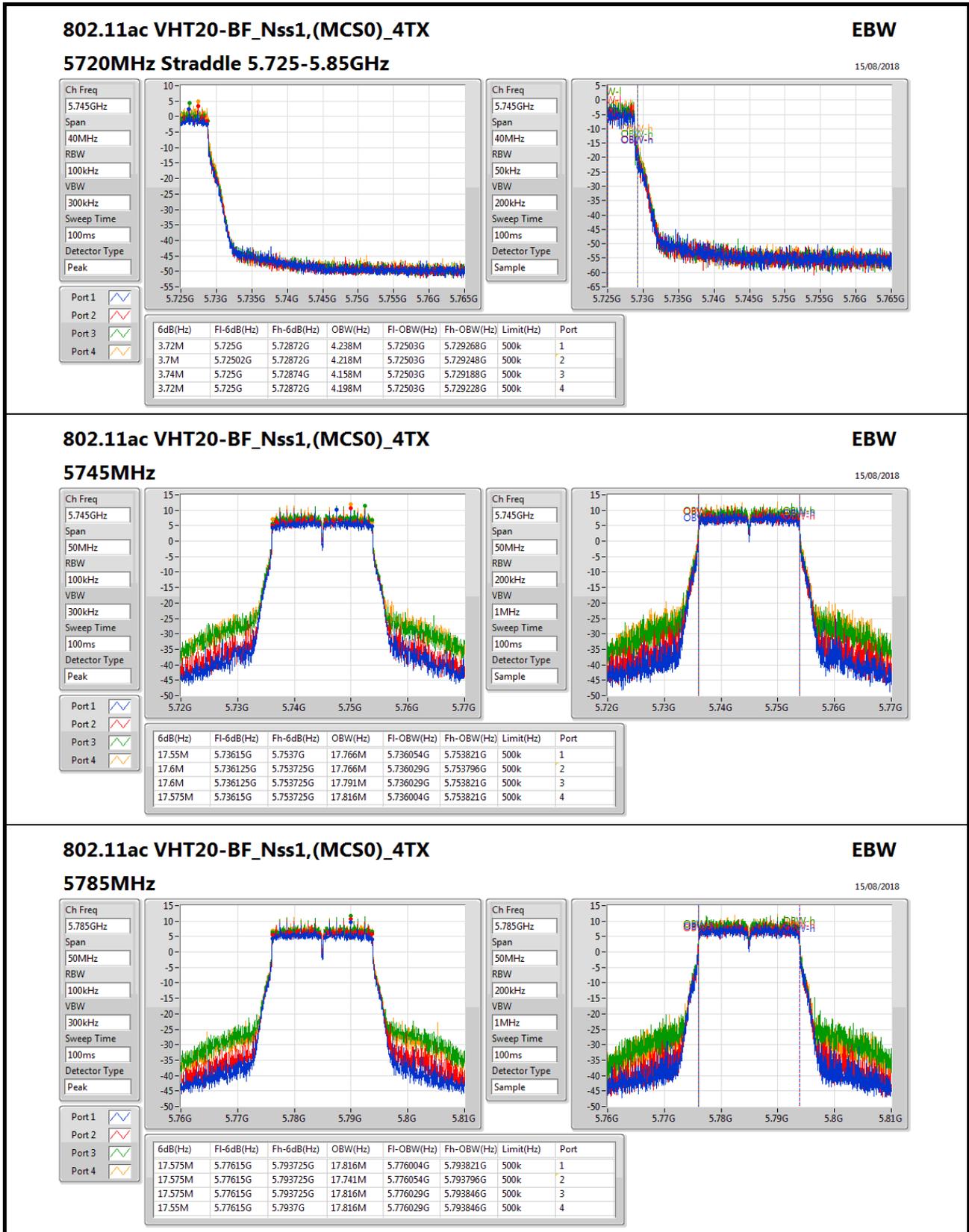


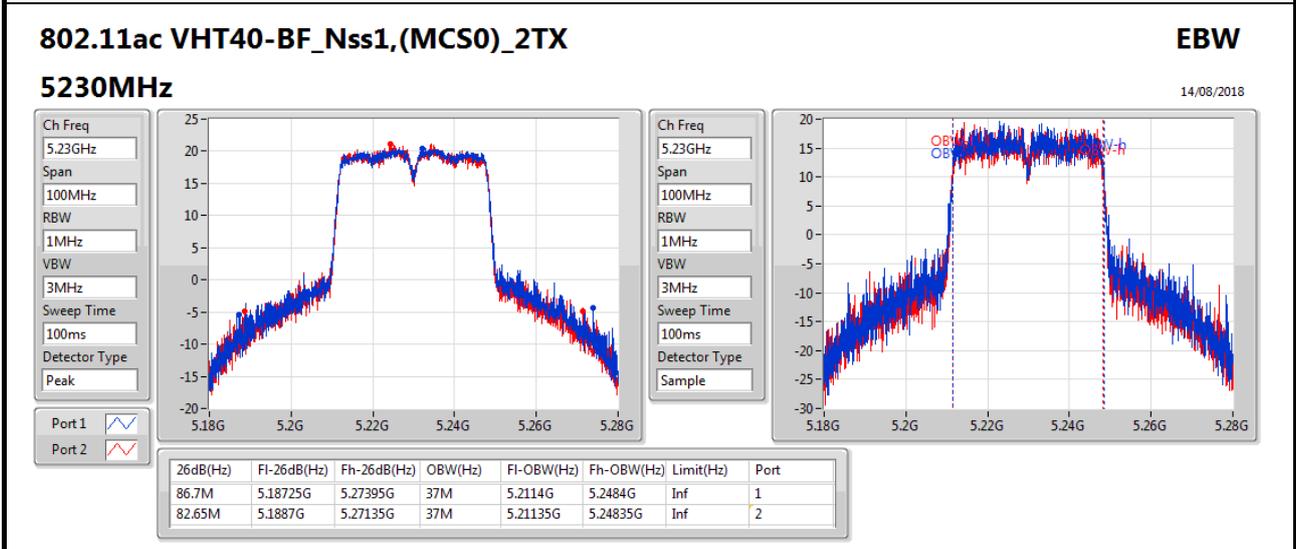
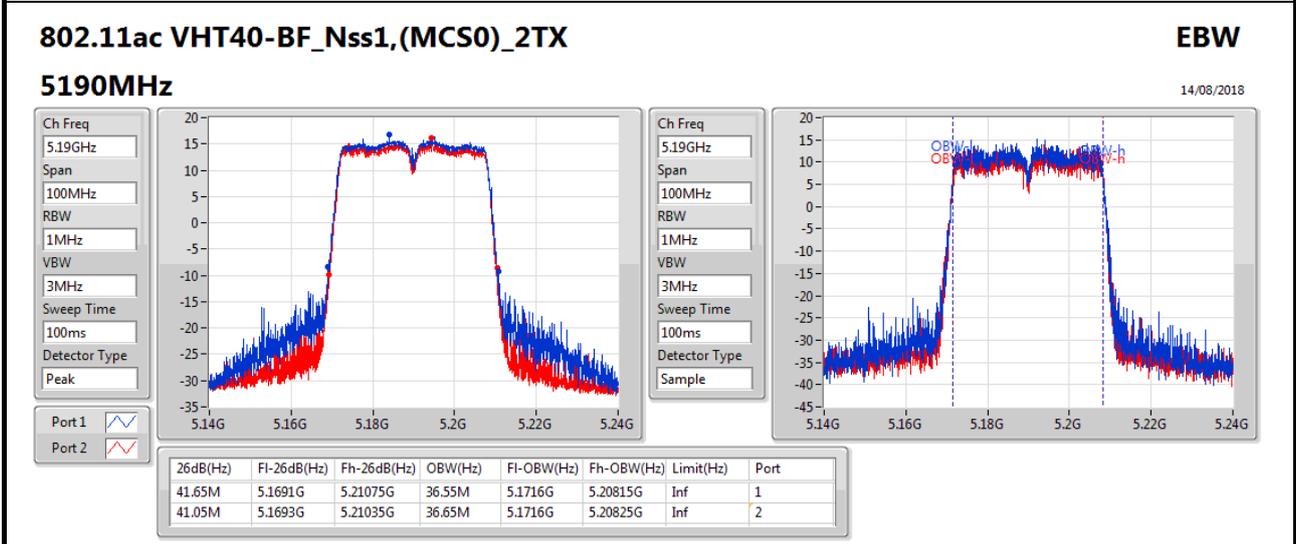
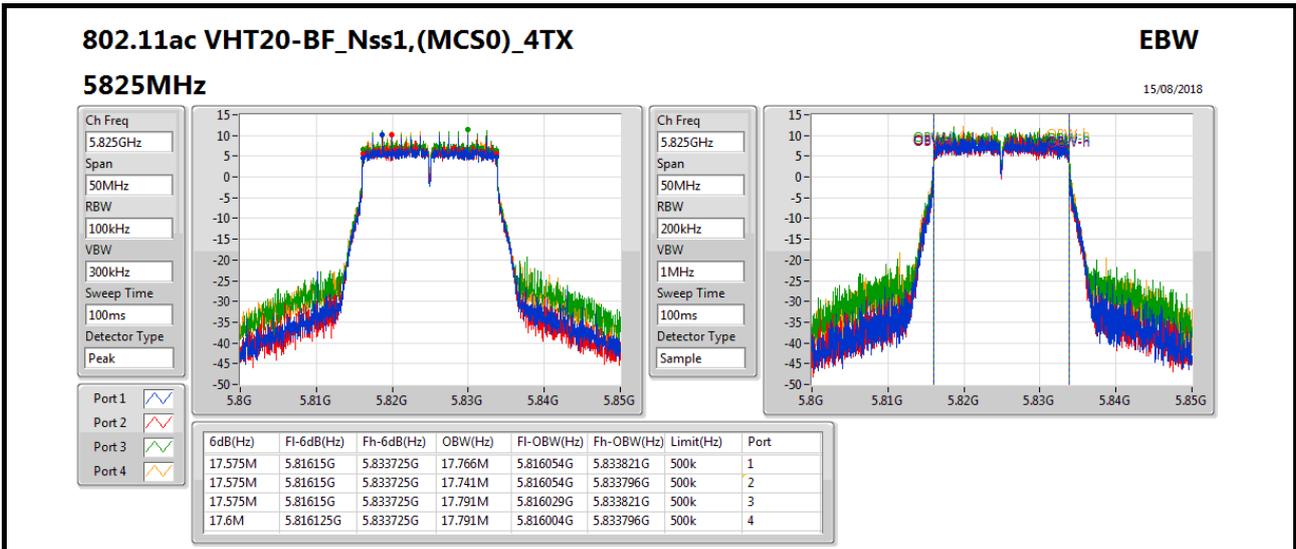


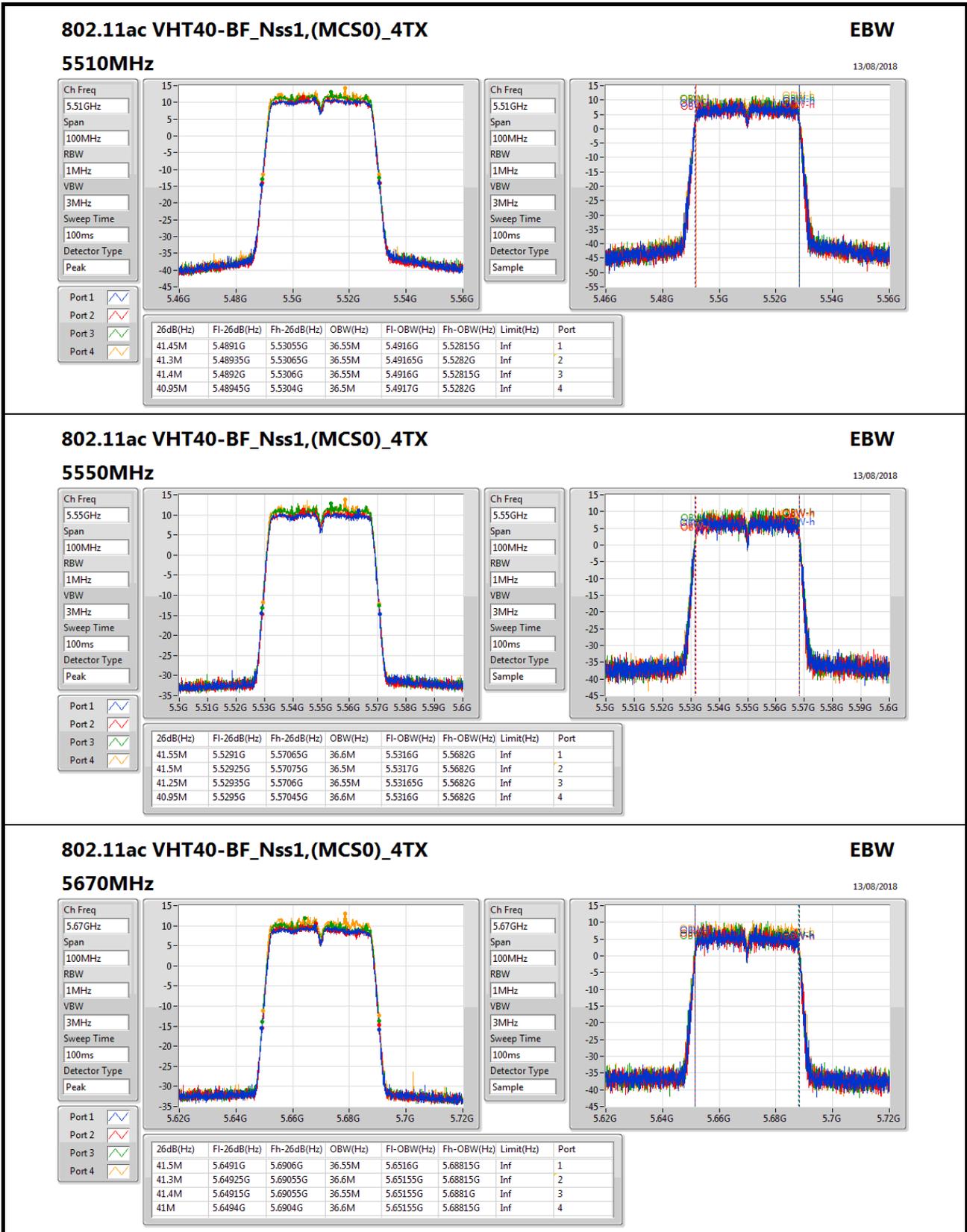






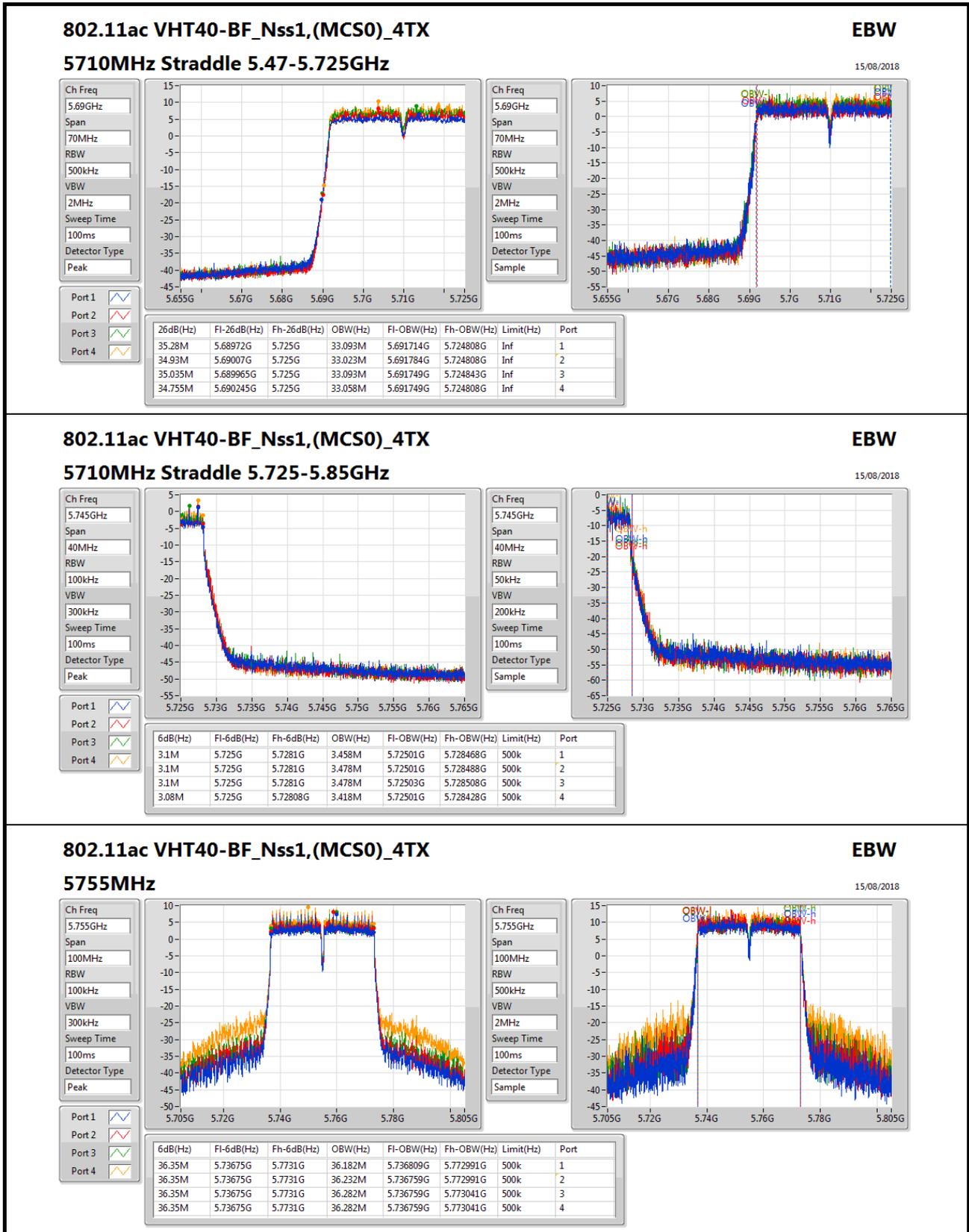


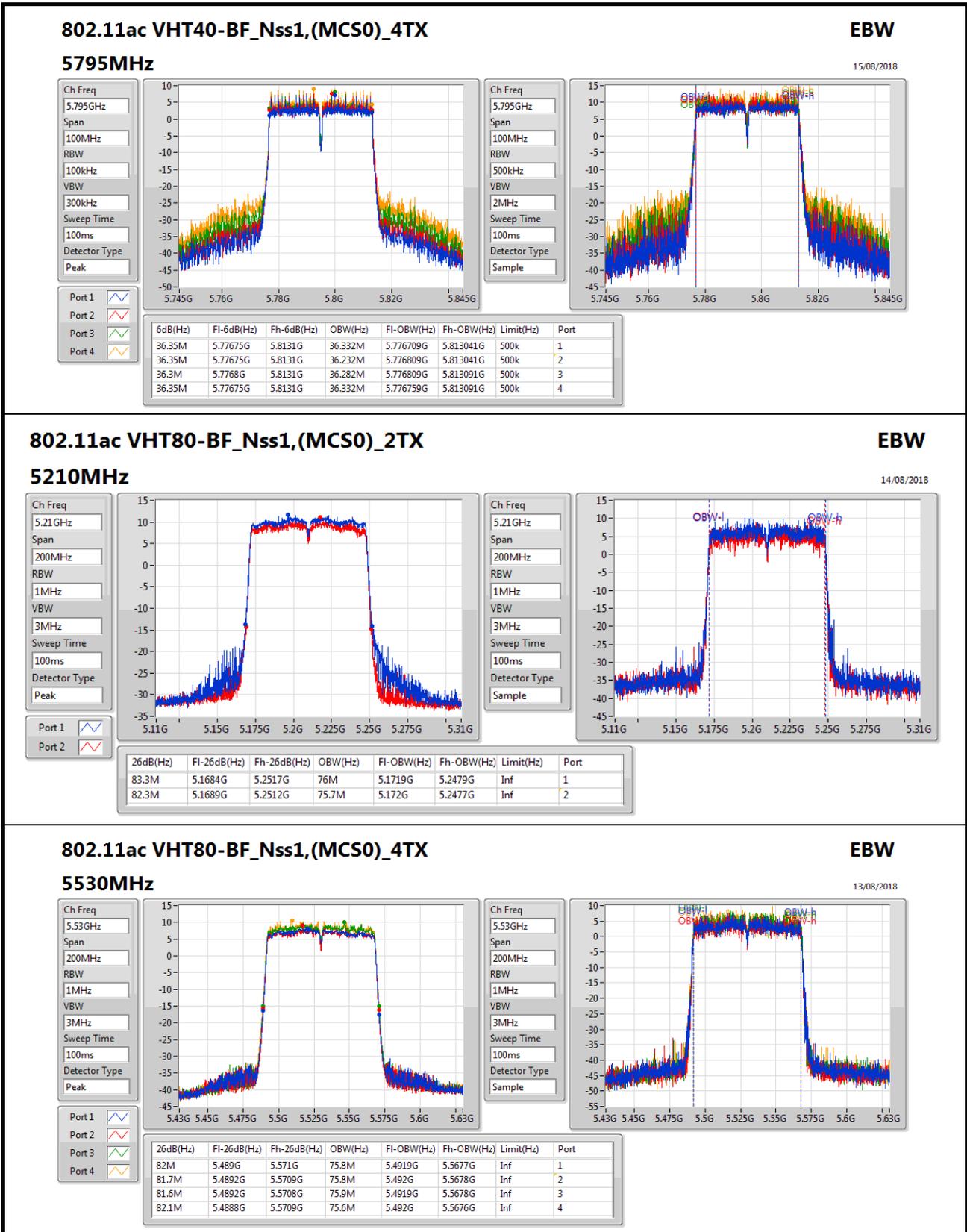


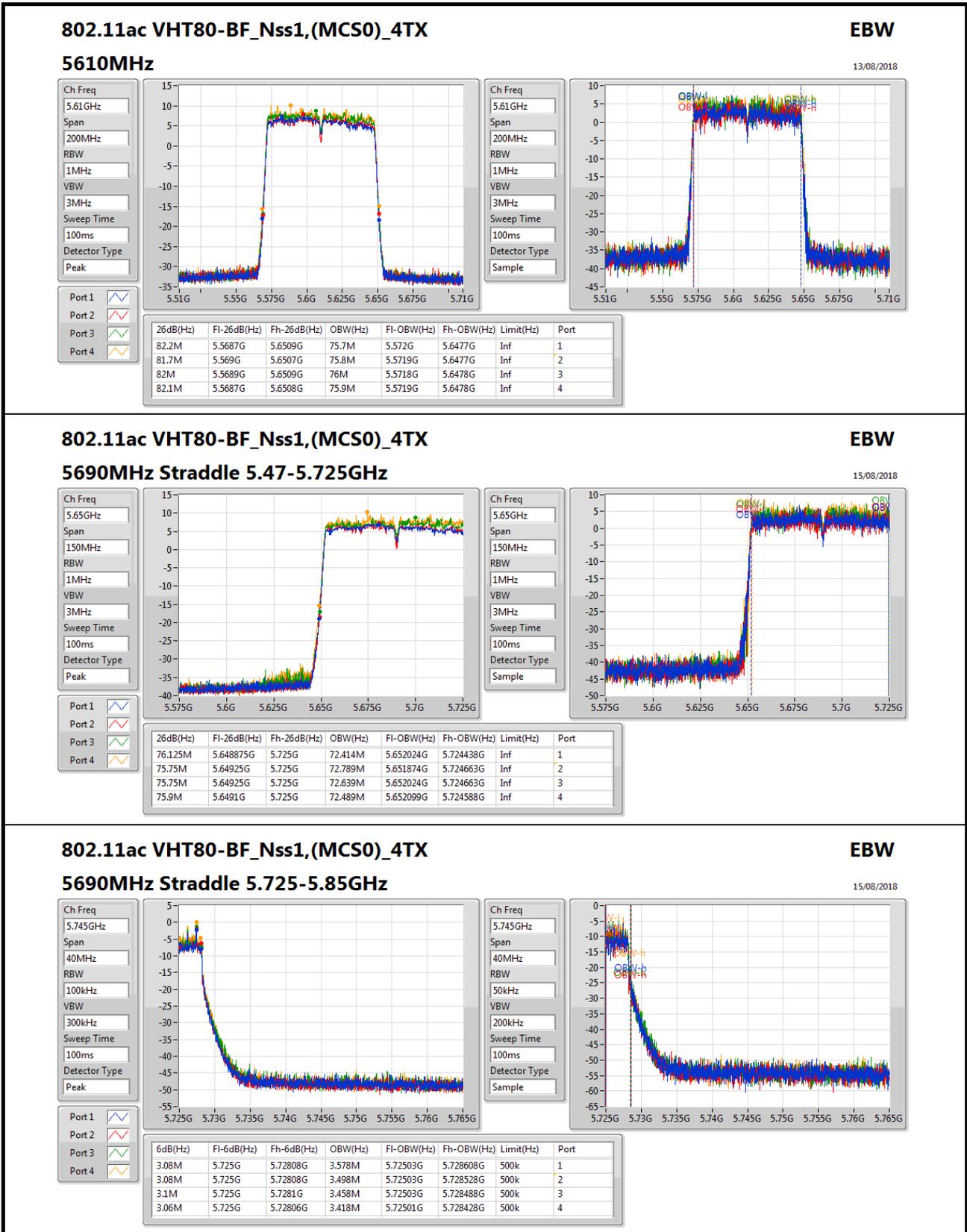

802.11ac VHT40-BF_Nss1,(MCS0)_4TX
EBW
5670MHz
13/08/2018

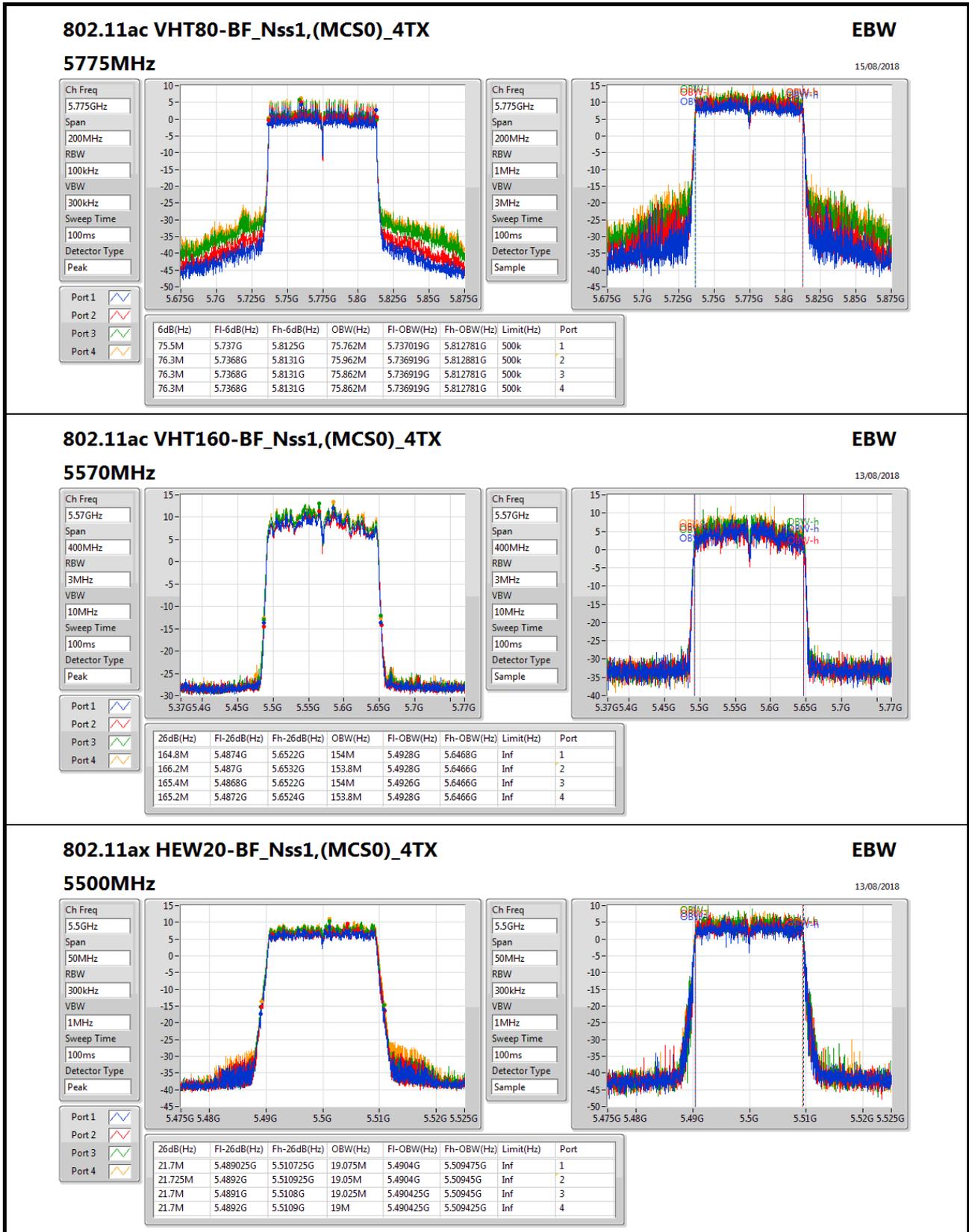
Ch Freq: 5.67GHz
Span: 100MHz
RBW: 1MHz
VBW: 3MHz
Sweep Time: 100ms
Detector Type: Peak

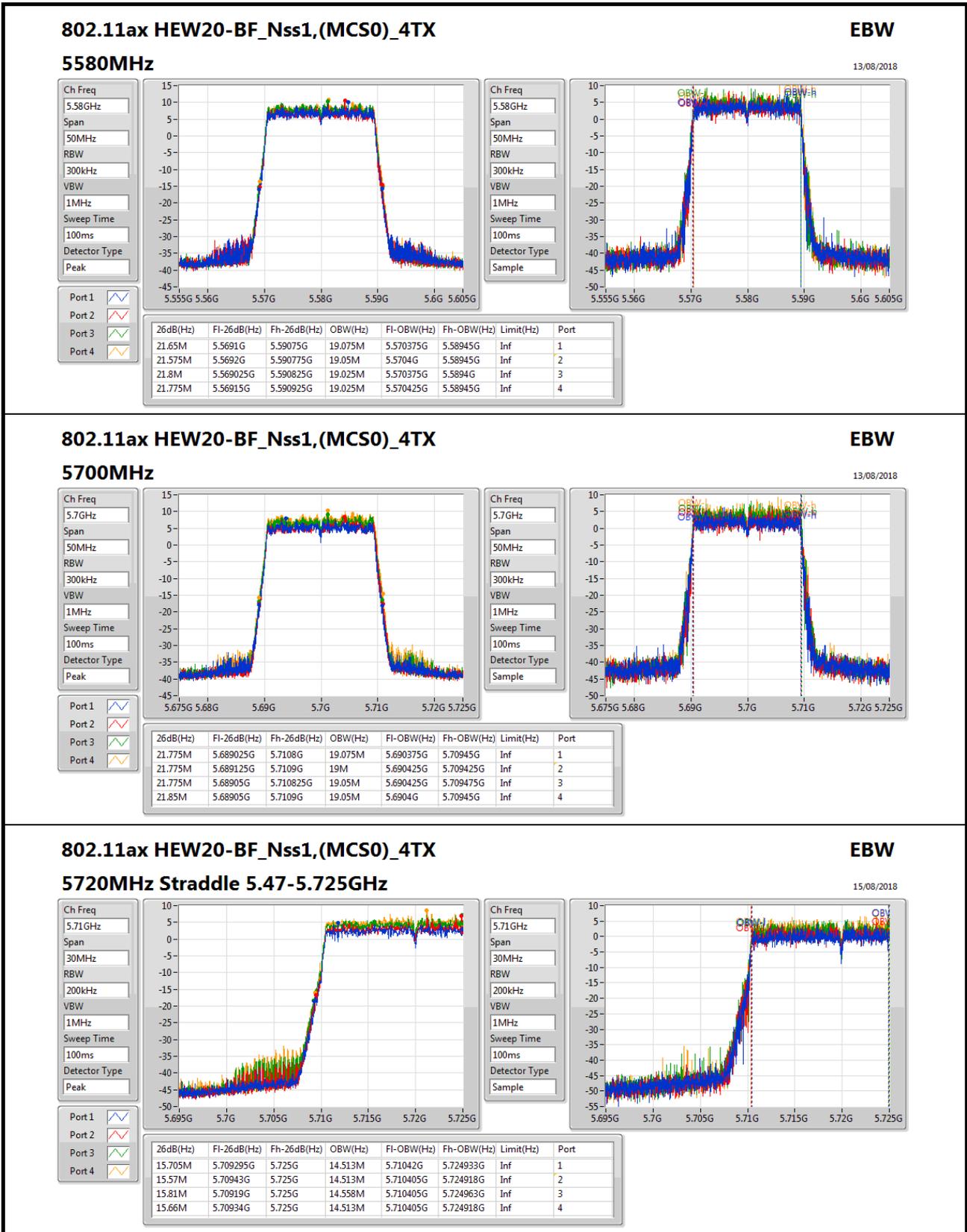
Ch Freq: 5.67GHz
Span: 100MHz
RBW: 1MHz
VBW: 3MHz
Sweep Time: 100ms
Detector Type: Sample

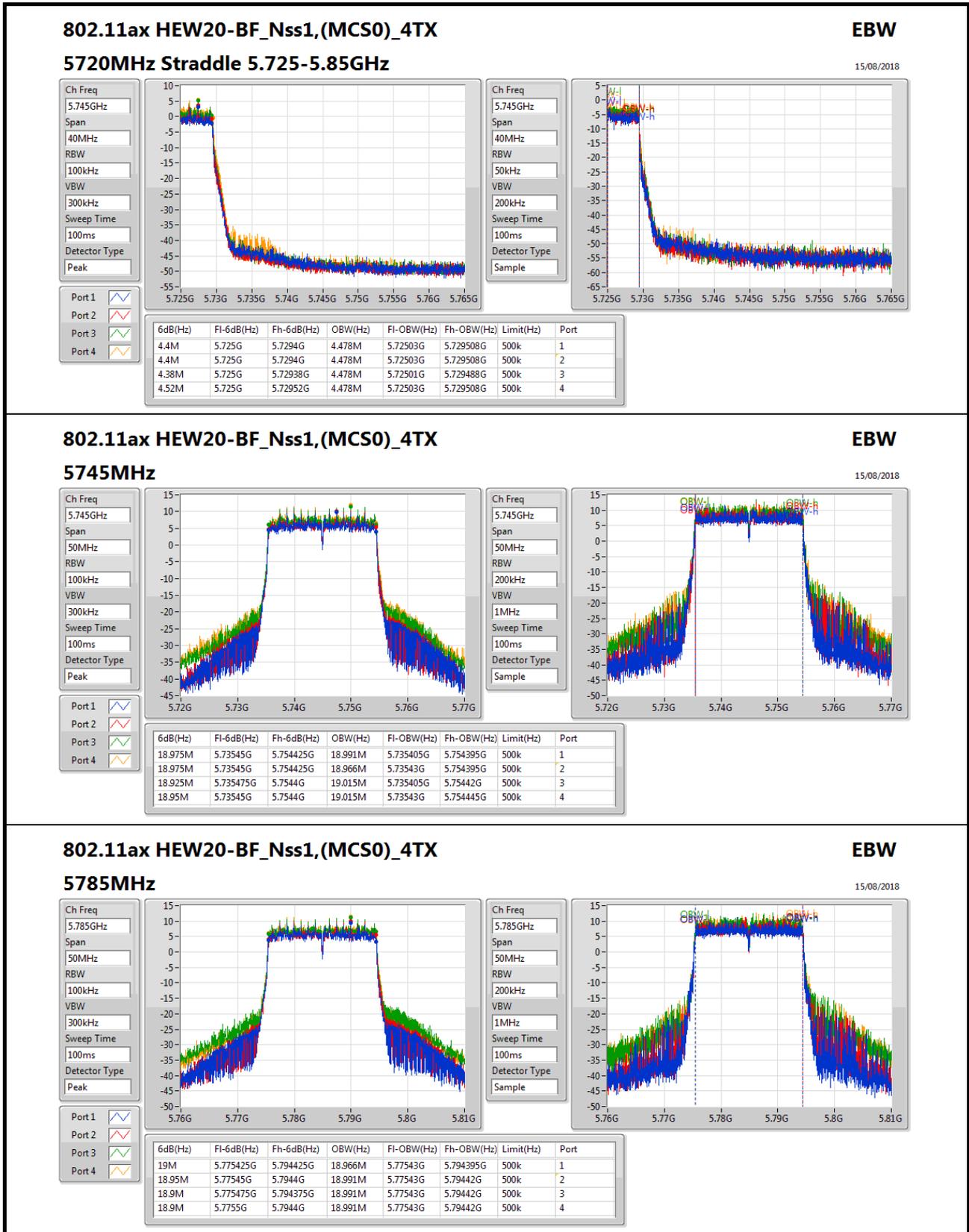












802.11ax HEW20-BF_Nss1,(MCS0)_4TX

EBW

5825MHz

15/08/2018

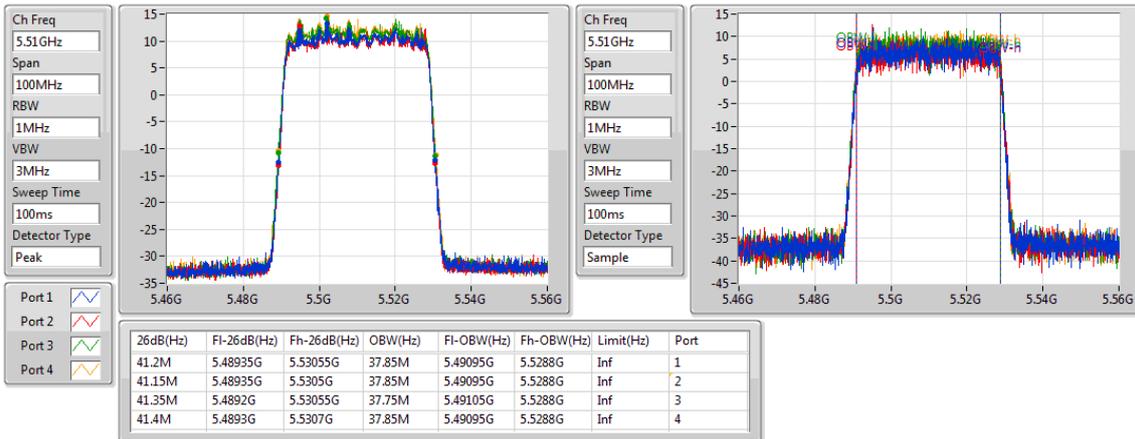


802.11ax HEW40-BF_Nss1,(MCS0)_4TX

EBW

5510MHz

13/08/2018

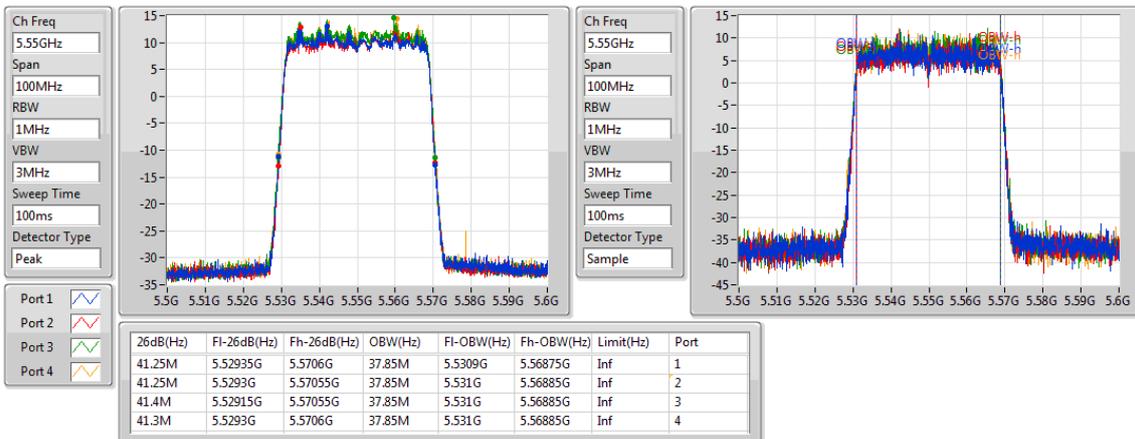


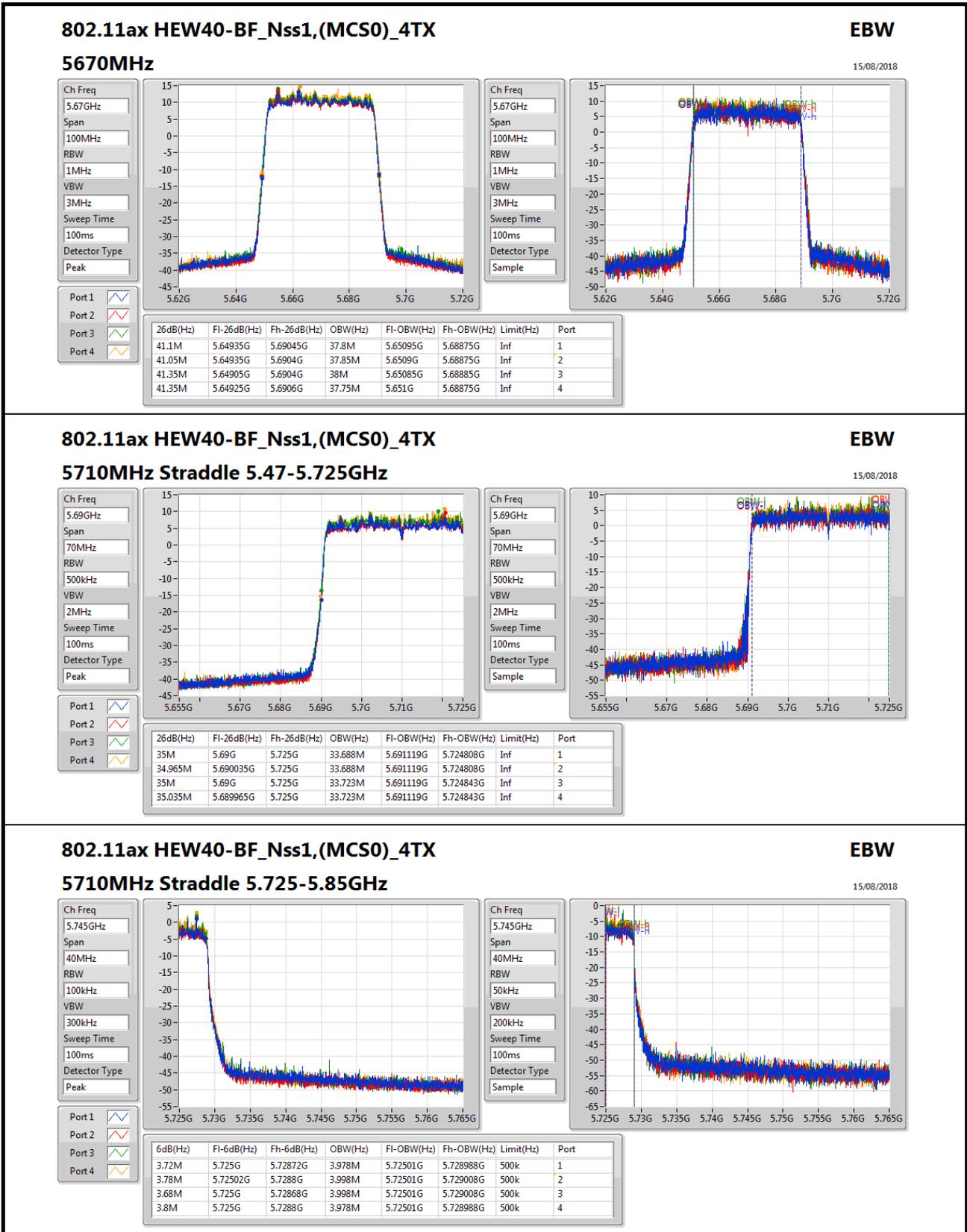
802.11ax HEW40-BF_Nss1,(MCS0)_4TX

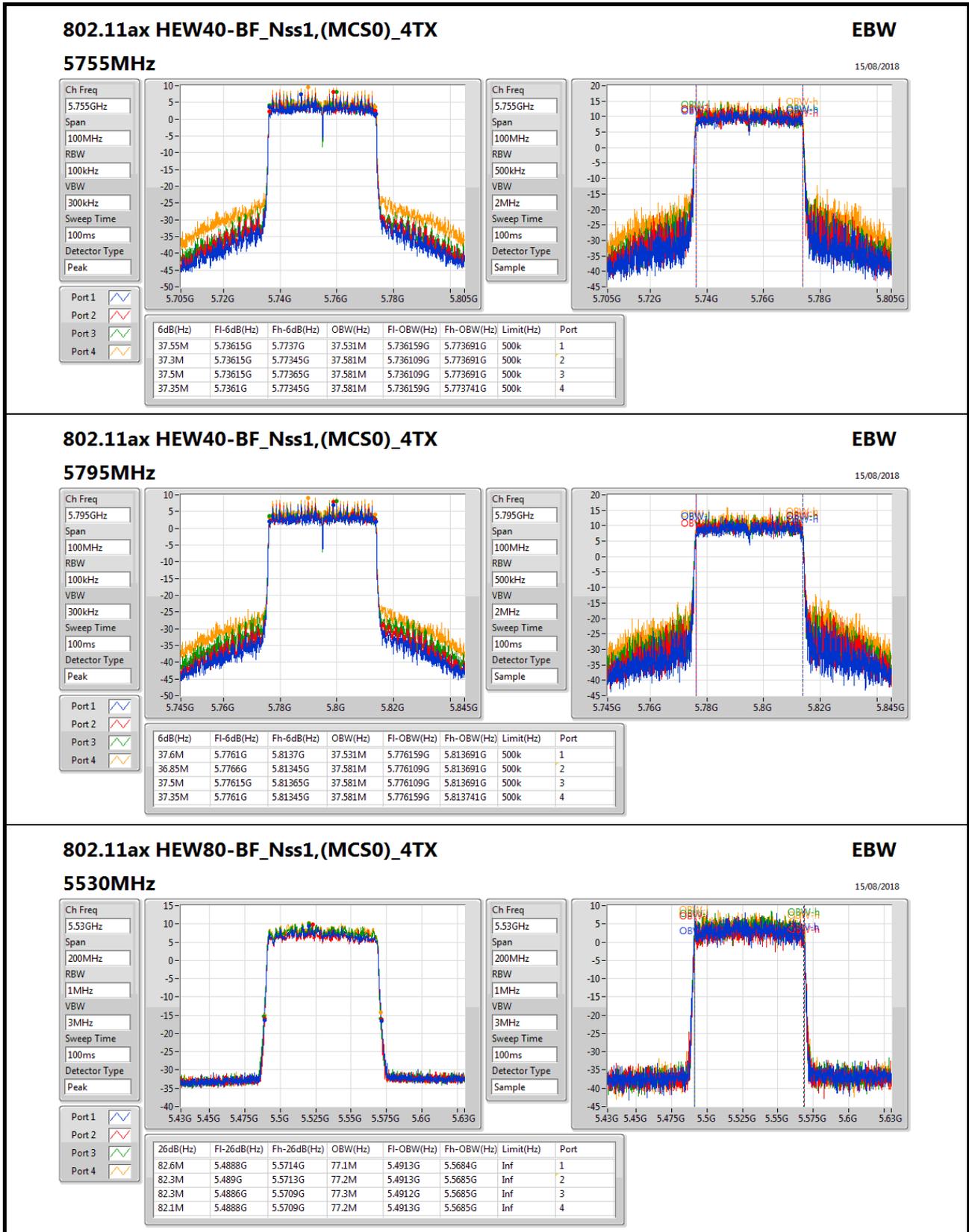
EBW

5550MHz

15/08/2018






802.11ax HEW80-BF_Nss1,(MCS0)_4TX
EBW

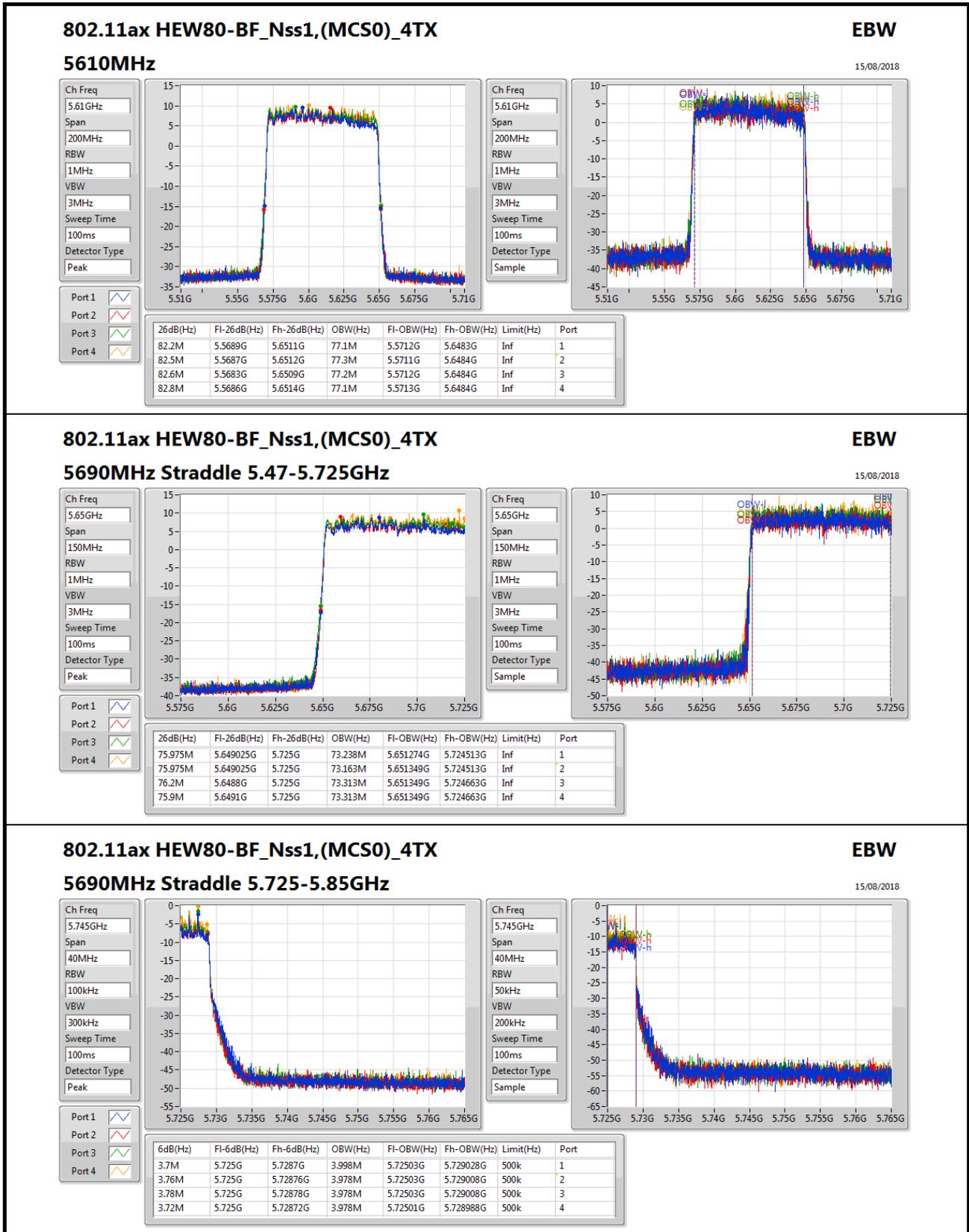
15/08/2018

5530MHz

Ch Freq: 5.53GHz
Span: 200MHz
RBW: 1MHz
VBW: 3MHz
Sweep Time: 100ms
Detector Type: Peak

Ch Freq: 5.53GHz
Span: 200MHz
RBW: 1MHz
VBW: 3MHz
Sweep Time: 100ms
Detector Type: Sample

26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
82.6M	5.4888G	5.5714G	77.1M	5.4913G	5.5684G	Inf	1
82.3M	5.489G	5.5713G	77.2M	5.4913G	5.5685G	Inf	2
82.3M	5.4886G	5.5709G	77.3M	5.4912G	5.5685G	Inf	3
82.1M	5.4888G	5.5709G	77.2M	5.4913G	5.5685G	Inf	4

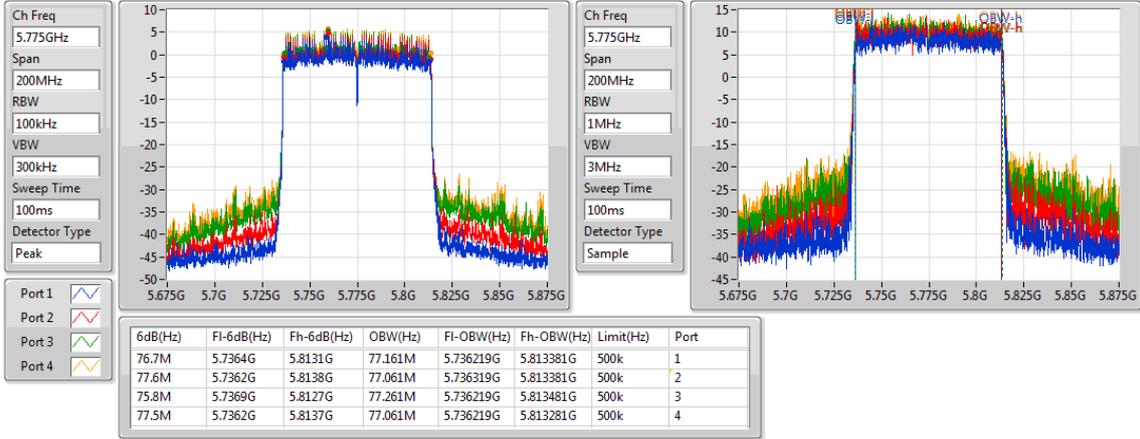


802.11ax HEW80-BF_Nss1,(MCS0)_4TX

EBW

5775MHz

15/08/2018

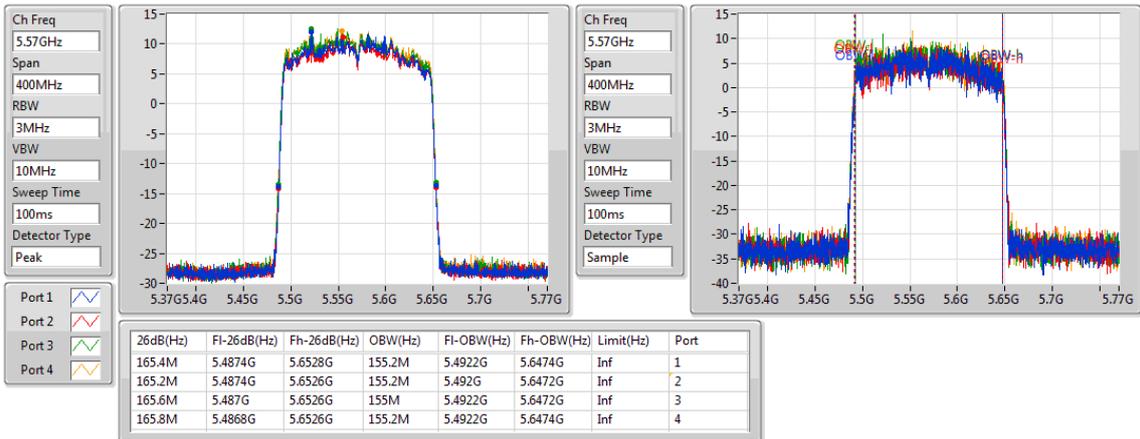


802.11ax HEW160-BF_Nss1,(MCS0)_4TX

EBW

5570MHz

15/08/2018



**For Nss2:
Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ac VHT20_Nss2,(MCS0)_2TX	47.575M	19.85M	19M8D1D	27.9M	17.8M
802.11ac VHT40_Nss2,(MCS0)_2TX	89.2M	37.25M	37M2D1D	41M	36.6M
802.11ac VHT80_Nss2,(MCS0)_2TX	83.6M	75.9M	75M9D1D	82.2M	75.8M
5.47-5.725GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	21.875M	17.816M	17M8D1D	15.78M	13.943M
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	40.35M	36.332M	36M3D1D	34.86M	33.023M
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	82.2M	75.862M	75M9D1D	75.675M	72.489M
802.11ac VHT160-BF_Nss2,(MCS0)_4TX	163.6M	153.723M	154MD1D	162.4M	153.523M
802.11ax HEW20-BF_Nss2,(MCS0)_4TX	21.775M	19.015M	19M0D1D	15.705M	14.513M
802.11ax HEW40-BF_Nss2,(MCS0)_4TX	40.15M	37.631M	37M6D1D	34.93M	33.653M
802.11ax HEW80-BF_Nss2,(MCS0)_4TX	82.2M	77.161M	77M2D1D	75.825M	73.238M
802.11ax HEW160-BF_Nss2,(MCS0)_4TX	164M	154.923M	155MD1D	163.2M	154.323M
5.725-5.85GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	17.6M	17.866M	17M9D1D	3.7M	4.158M
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	36.35M	36.382M	36M4D1D	3.1M	3.458M
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	76.3M	75.862M	75M9D1D	3.06M	3.438M
802.11ax HEW20-BF_Nss2,(MCS0)_4TX	19.025M	19.065M	19M1D1D	4.4M	4.478M
802.11ax HEW40-BF_Nss2,(MCS0)_4TX	37.7M	37.631M	37M6D1D	3.66M	3.958M
802.11ax HEW80-BF_Nss2,(MCS0)_4TX	77.3M	77.261M	77M3D1D	3.7M	3.998M

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



Result

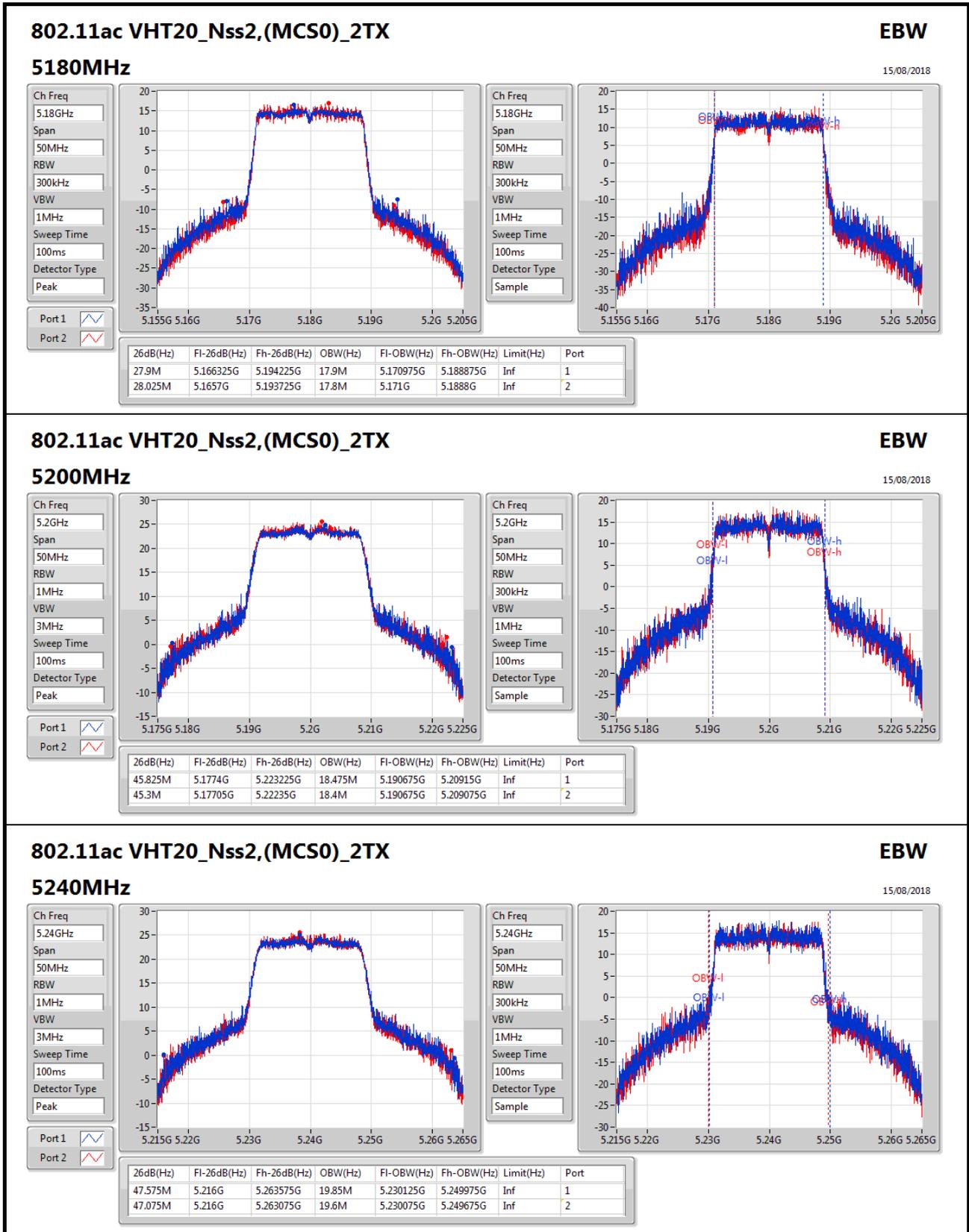
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ac VHT20_Nss2,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	27.9M	17.9M	28.025M	17.8M				
5200MHz	Pass	Inf	45.825M	18.475M	45.3M	18.4M				
5240MHz	Pass	Inf	47.575M	19.85M	47.075M	19.6M				
802.11ac VHT40_Nss2,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	41.35M	36.6M	41M	36.6M				
5230MHz	Pass	Inf	89.2M	37.25M	87.5M	37.1M				
802.11ac VHT80_Nss2,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	83.6M	75.9M	82.2M	75.8M				
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5500MHz	Pass	Inf	21.75M	17.791M	21.675M	17.791M	21.55M	17.766M	21.775M	17.766M
5580MHz	Pass	Inf	21.725M	17.791M	21.475M	17.766M	21.475M	17.766M	21.775M	17.791M
5700MHz	Pass	Inf	21.875M	17.816M	21.7M	17.791M	21.525M	17.766M	21.775M	17.816M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.84M	13.958M	15.78M	13.943M	15.795M	13.958M	15.84M	13.988M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.7M	4.238M	3.74M	4.198M	3.72M	4.178M	3.72M	4.158M
5745MHz	Pass	500k	17.55M	17.791M	17.6M	17.766M	17.575M	17.841M	17.55M	17.816M
5785MHz	Pass	500k	17.575M	17.791M	17.575M	17.766M	17.575M	17.866M	17.6M	17.866M
5825MHz	Pass	500k	17.575M	17.841M	17.6M	17.816M	17.6M	17.866M	17.6M	17.816M
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5510MHz	Pass	Inf	40.25M	36.232M	39.9M	36.282M	40M	36.282M	39.8M	36.232M
5550MHz	Pass	Inf	40.35M	36.232M	40.05M	36.332M	40.05M	36.282M	39.9M	36.332M
5670MHz	Pass	Inf	40.15M	36.232M	39.9M	36.282M	40.05M	36.282M	39.95M	36.282M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	35.28M	33.128M	34.895M	33.023M	35.035M	33.058M	34.86M	33.093M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.1M	3.498M	3.1M	3.518M	3.12M	3.458M	3.1M	3.458M
5755MHz	Pass	500k	36.3M	36.282M	36.3M	36.282M	36.35M	36.382M	36.3M	36.382M
5795MHz	Pass	500k	36.3M	36.232M	36.3M	36.382M	36.3M	36.382M	36.3M	36.382M
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5530MHz	Pass	Inf	81.9M	75.662M	81.4M	75.762M	81.3M	75.562M	81.9M	75.562M
5610MHz	Pass	Inf	81.9M	75.762M	81.5M	75.862M	81.8M	75.862M	82.2M	75.762M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	76.05M	72.564M	75.675M	72.639M	75.825M	72.639M	76.05M	72.489M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.08M	3.618M	3.1M	3.598M	3.08M	3.518M	3.06M	3.438M
5775MHz	Pass	500k	75.6M	75.762M	76.3M	75.862M	75.7M	75.762M	76.1M	75.862M
802.11ac VHT160-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5570MHz	Pass	Inf	162.4M	153.523M	163.6M	153.523M	163M	153.723M	162.6M	153.723M
802.11ax HEW20-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5500MHz	Pass	Inf	21.675M	18.966M	21.6M	18.991M	21.725M	18.966M	21.75M	18.991M
5580MHz	Pass	Inf	21.575M	18.966M	21.525M	19.015M	21.775M	19.015M	21.775M	18.941M
5700MHz	Pass	Inf	21.725M	18.991M	21.5M	18.991M	21.775M	18.941M	21.7M	18.991M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.765M	14.558M	15.705M	14.543M	15.9M	14.558M	15.765M	14.513M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	4.42M	4.478M	4.42M	4.498M	4.4M	4.498M	4.5M	4.498M
5745MHz	Pass	500k	18.975M	18.991M	18.925M	18.991M	18.925M	18.991M	18.925M	19.04M
5785MHz	Pass	500k	19M	18.991M	18.95M	18.991M	18.925M	19.065M	19.025M	18.991M
5825MHz	Pass	500k	18.975M	18.991M	18.975M	18.991M	18.925M	19.015M	18.95M	19.04M
802.11ax HEW40-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-

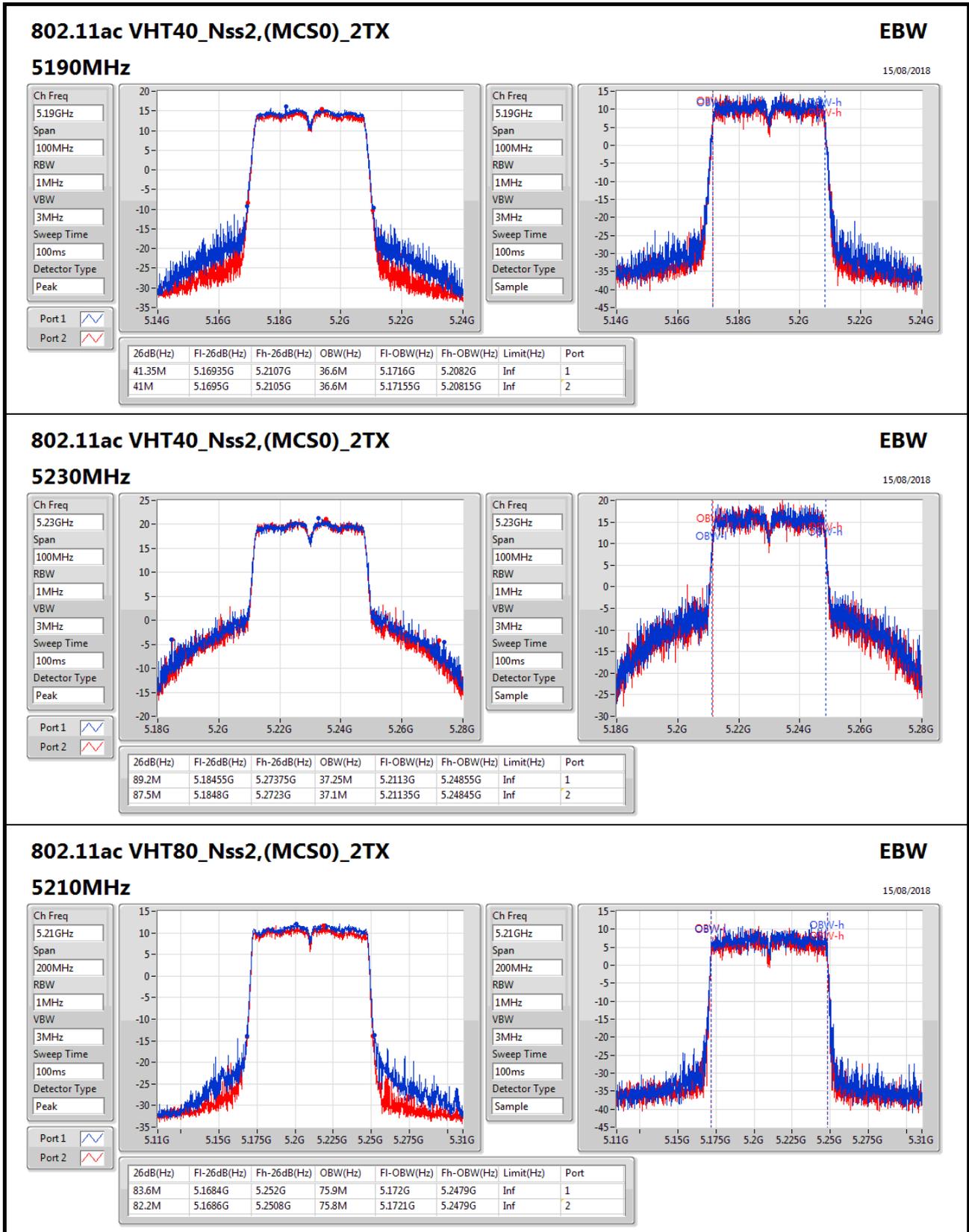


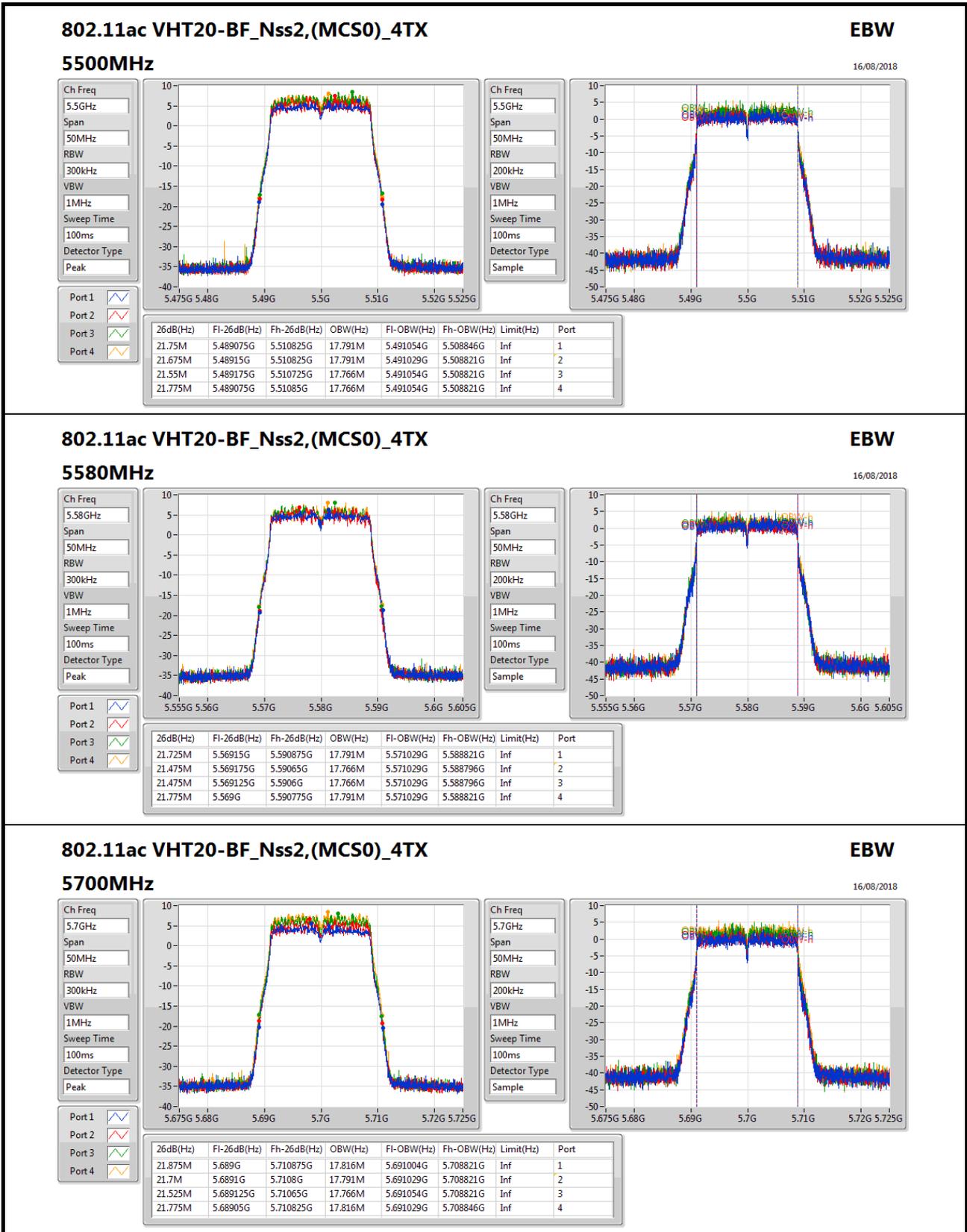
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
5510MHz	Pass	Inf	40.05M	37.481M	39.9M	37.581M	40M	37.531M	40.15M	37.581M
5550MHz	Pass	Inf	40M	37.631M	39.9M	37.531M	40.05M	37.581M	40.1M	37.531M
5670MHz	Pass	Inf	40.05M	37.531M	39.95M	37.531M	40M	37.581M	40.15M	37.531M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	35.035M	33.653M	34.93M	33.688M	35.105M	33.688M	35.035M	33.688M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.7M	3.958M	3.8M	3.978M	3.66M	3.998M	3.78M	3.998M
5755MHz	Pass	500k	37.65M	37.631M	37.2M	37.581M	37.6M	37.631M	37.5M	37.631M
5795MHz	Pass	500k	37.7M	37.631M	37.05M	37.531M	37.2M	37.631M	37.55M	37.631M
802.11ax HEW80-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5530MHz	Pass	Inf	82M	77.061M	82.1M	77.161M	81.8M	76.862M	81.7M	77.061M
5610MHz	Pass	Inf	82.2M	76.962M	82.1M	77.161M	82.1M	77.161M	82M	77.161M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	75.975M	73.313M	75.975M	73.388M	76.2M	73.313M	75.825M	73.238M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.78M	4.018M	3.76M	4.018M	3.7M	3.998M	3.72M	3.998M
5775MHz	Pass	500k	77.1M	77.161M	77.3M	77.161M	77.3M	77.261M	76.4M	76.862M
802.11ax HEW160-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5570MHz	Pass	Inf	163.2M	154.323M	163.4M	154.923M	164M	154.323M	163.8M	154.723M

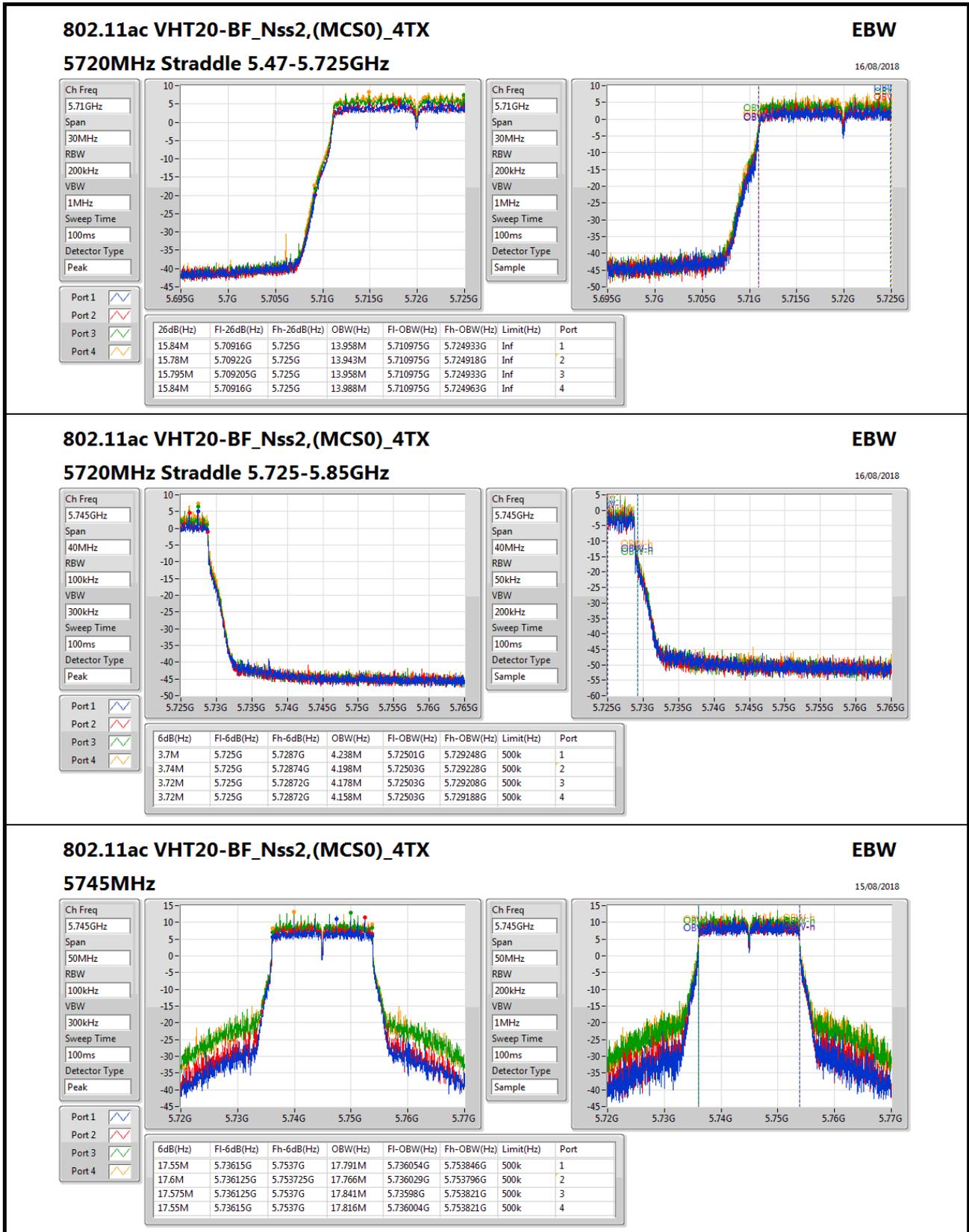
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band

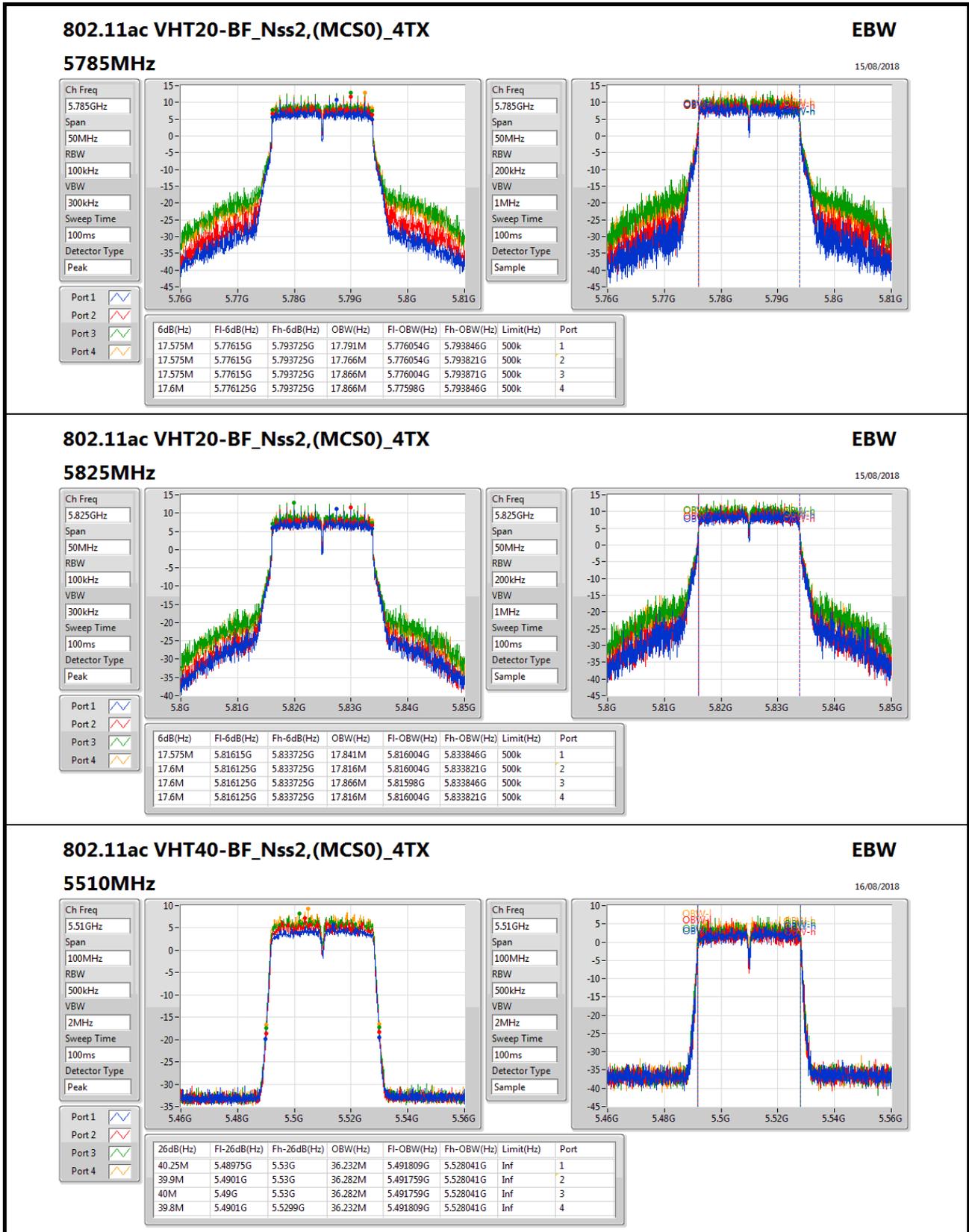
Port X-OBW = Port X 99% occupied bandwidth;

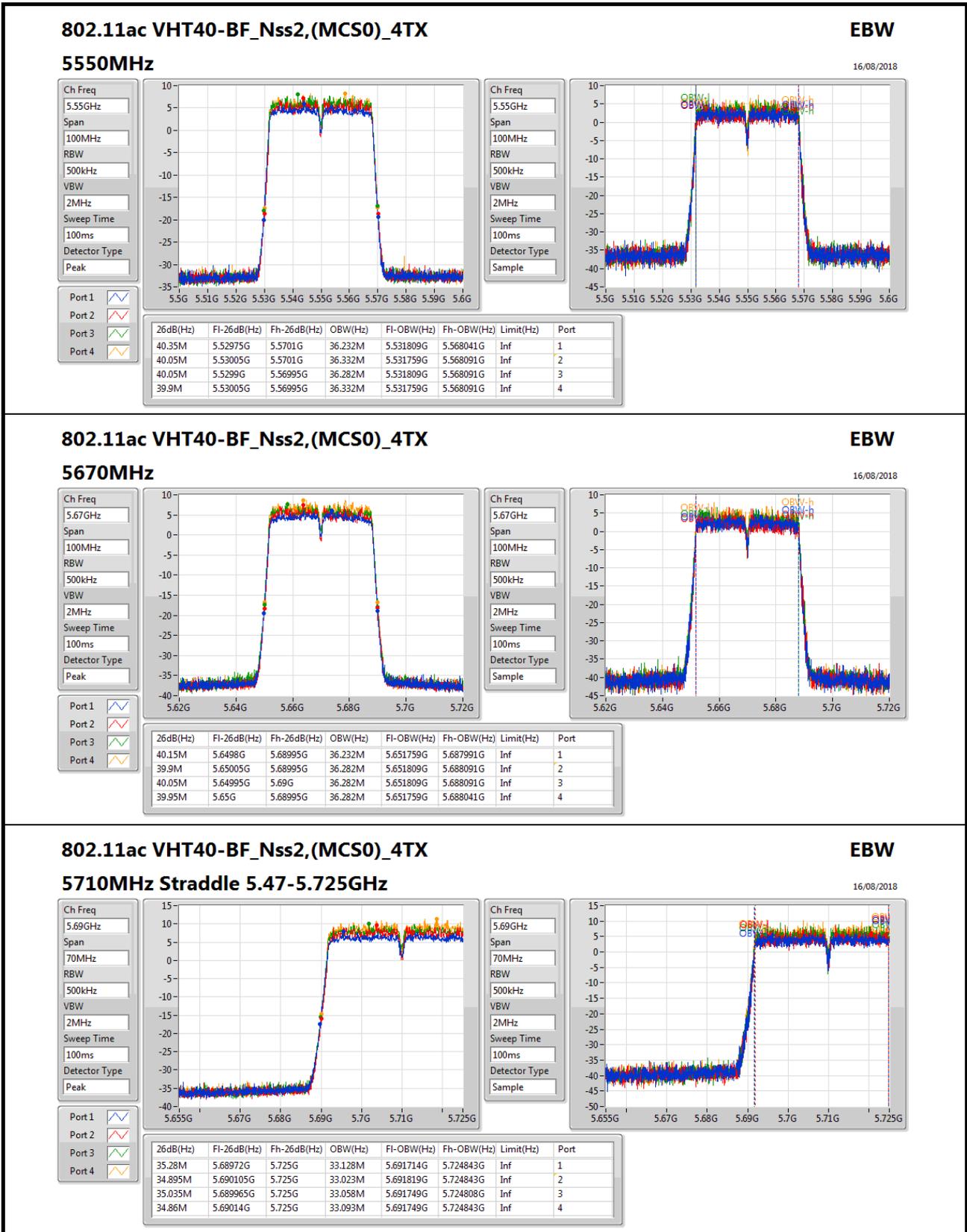


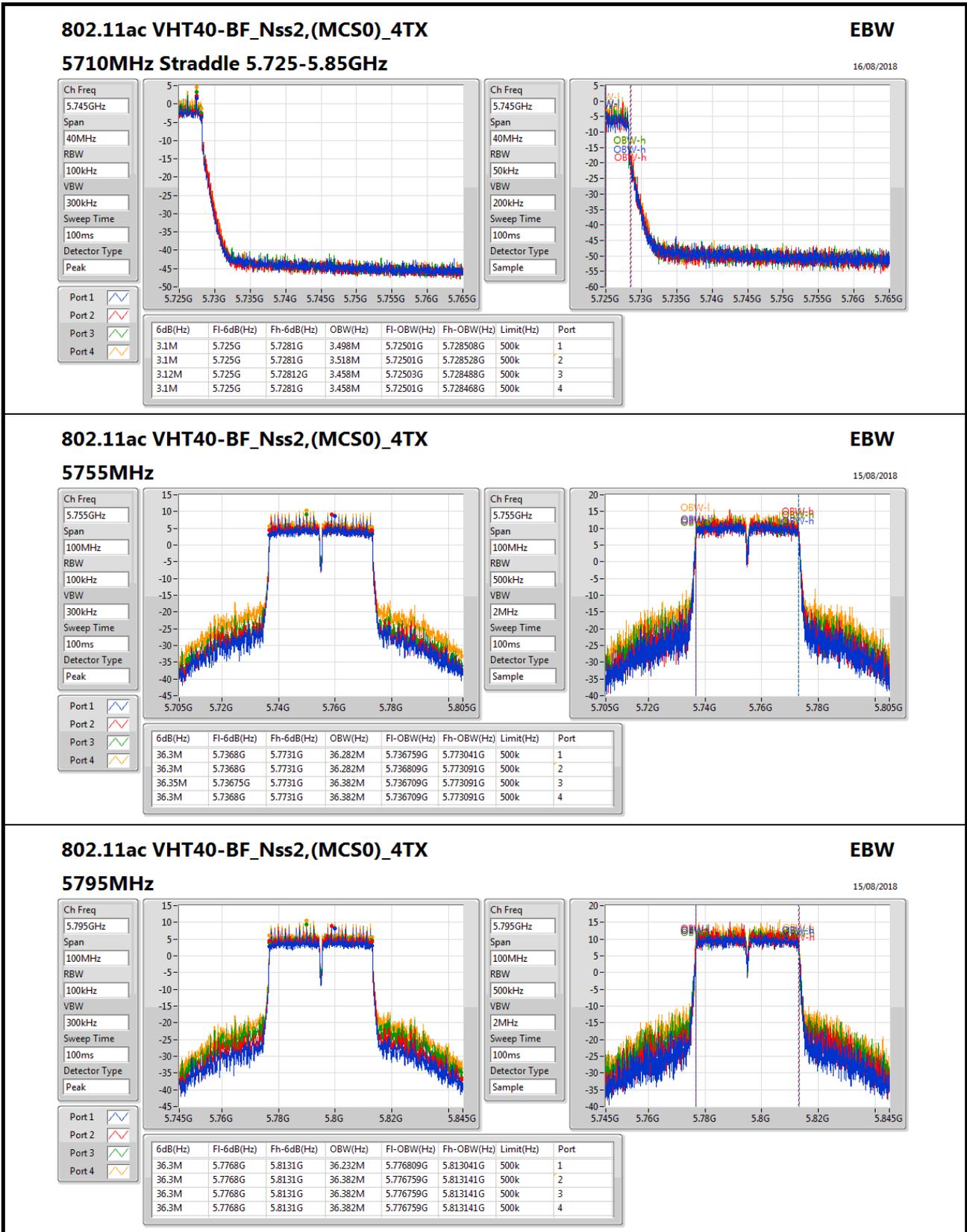












802.11ac VHT40-BF_Nss2,(MCS0)_4TX

5795MHz

15/08/2018

EBW

Ch Freq: 5.795GHz
Span: 100MHz
RBW: 100kHz
VBW: 300kHz
Sweep Time: 100ms
Detector Type: Peak

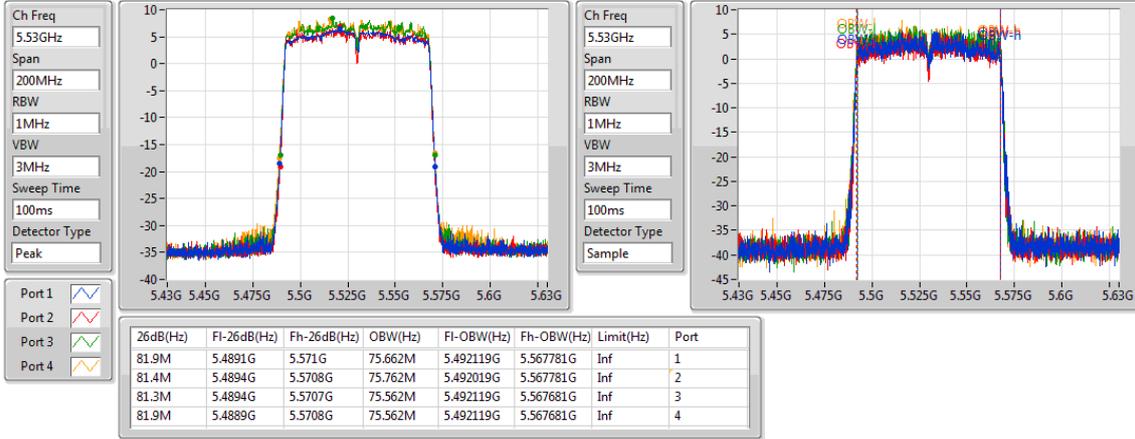
Ch Freq: 5.795GHz
Span: 100MHz
RBW: 500kHz
VBW: 2MHz
Sweep Time: 100ms
Detector Type: Sample

802.11ac VHT80-BF_Nss2,(MCS0)_4TX

EBW

5530MHz

16/08/2018

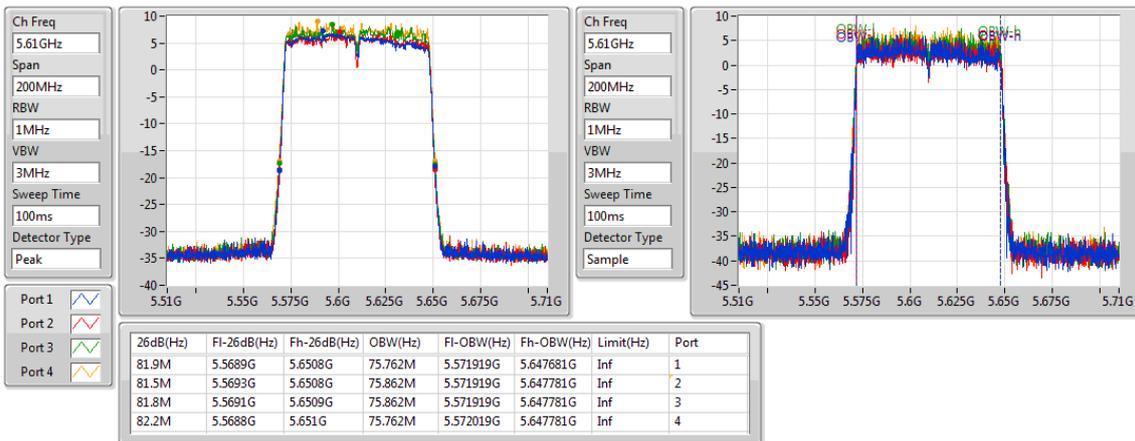


802.11ac VHT80-BF_Nss2,(MCS0)_4TX

EBW

5610MHz

16/08/2018

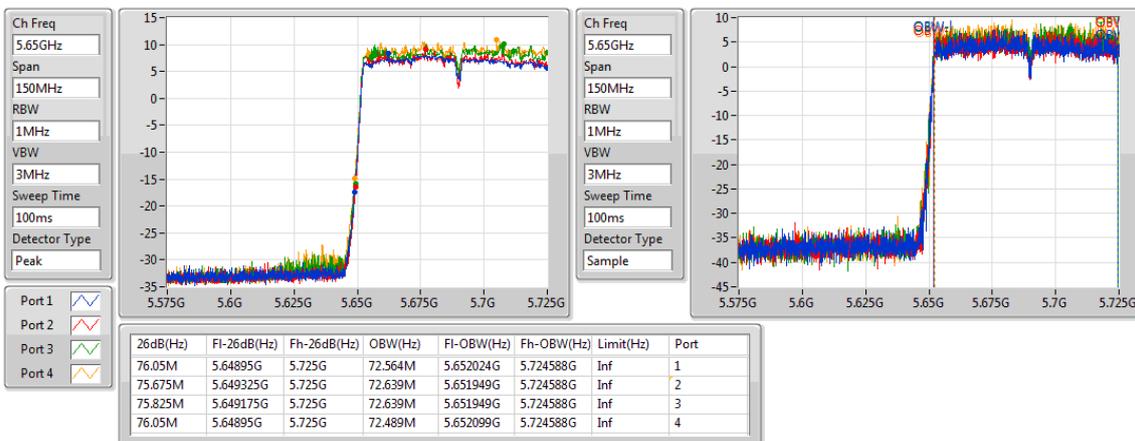


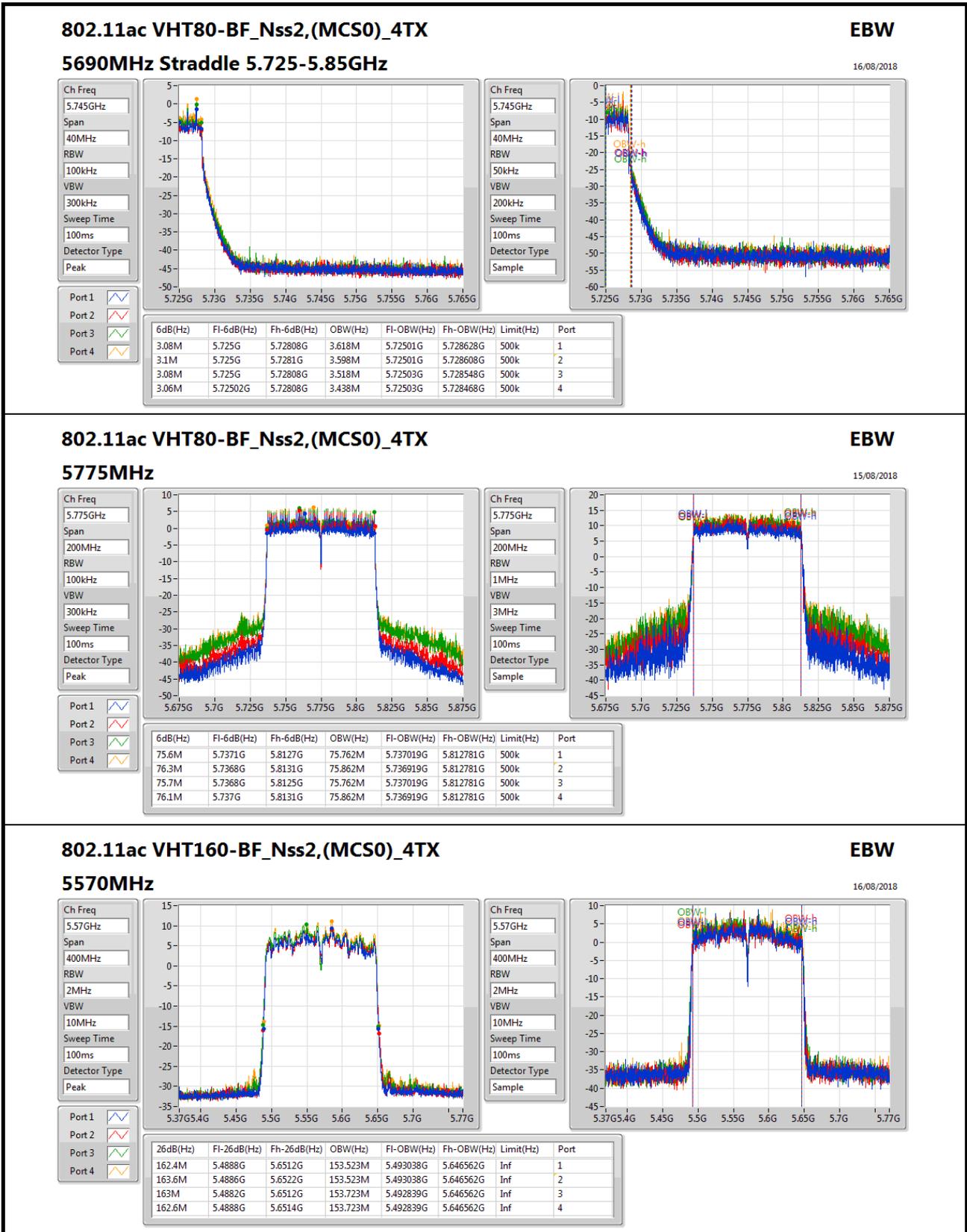
802.11ac VHT80-BF_Nss2,(MCS0)_4TX

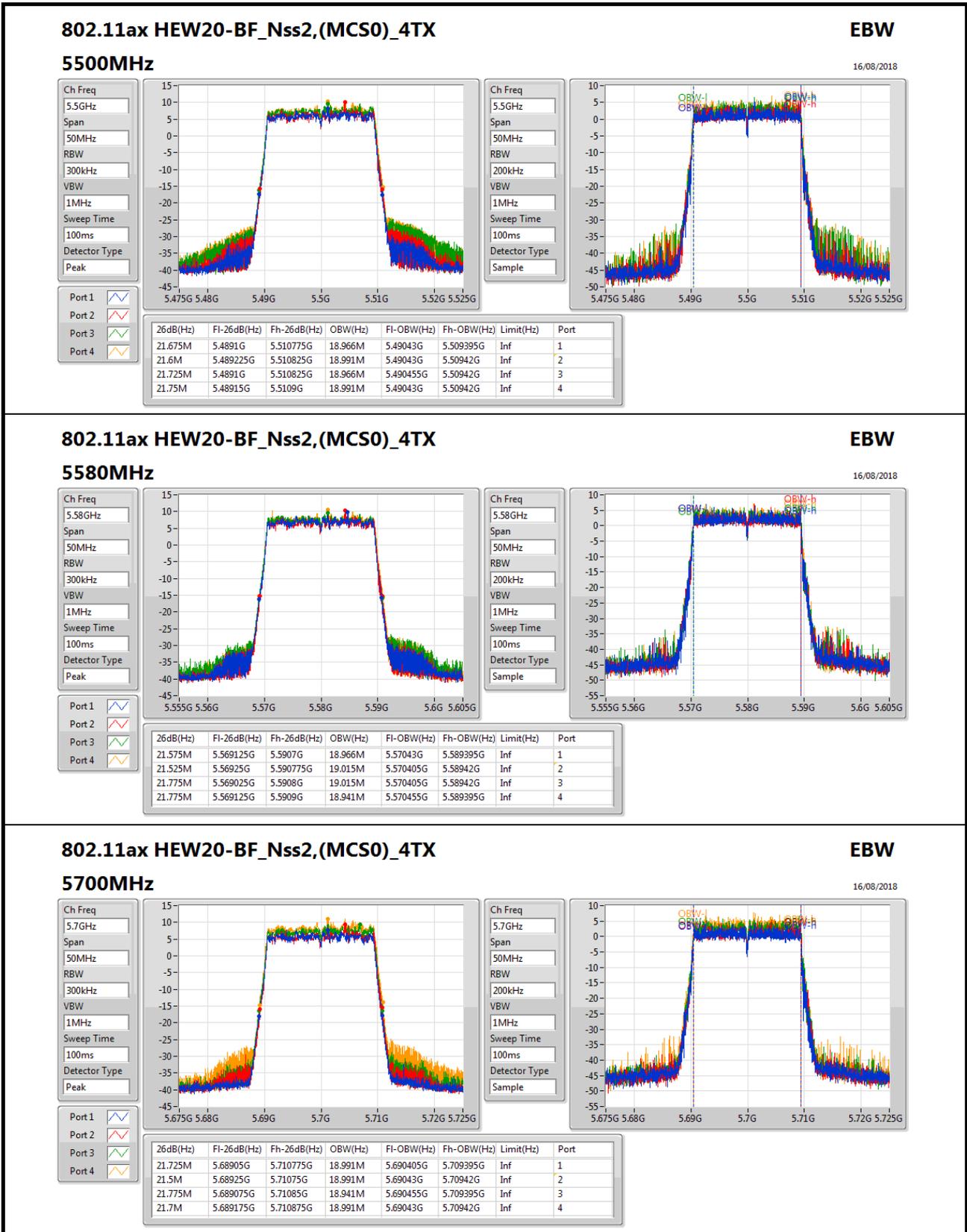
EBW

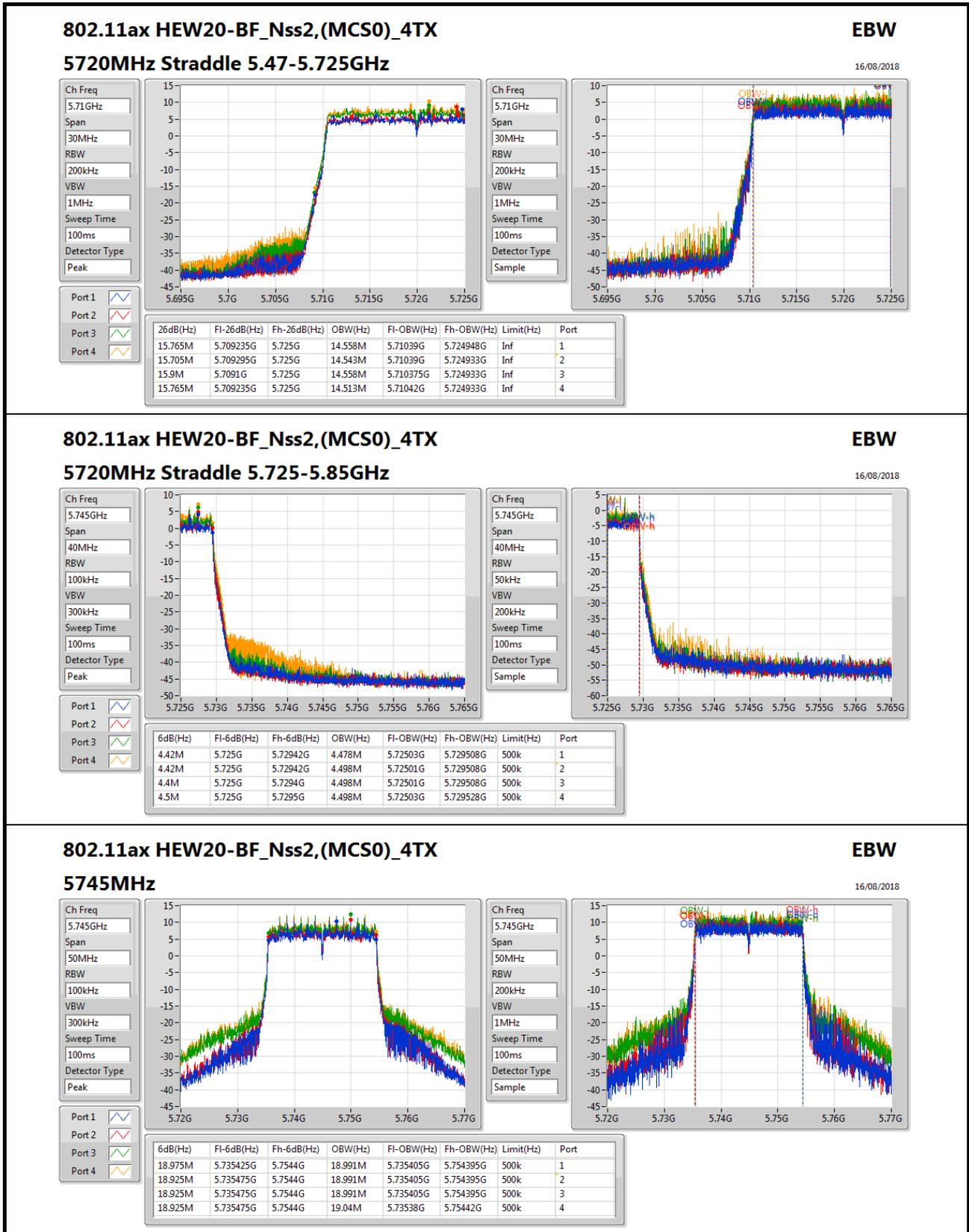
5690MHz Straddle 5.47-5.725GHz

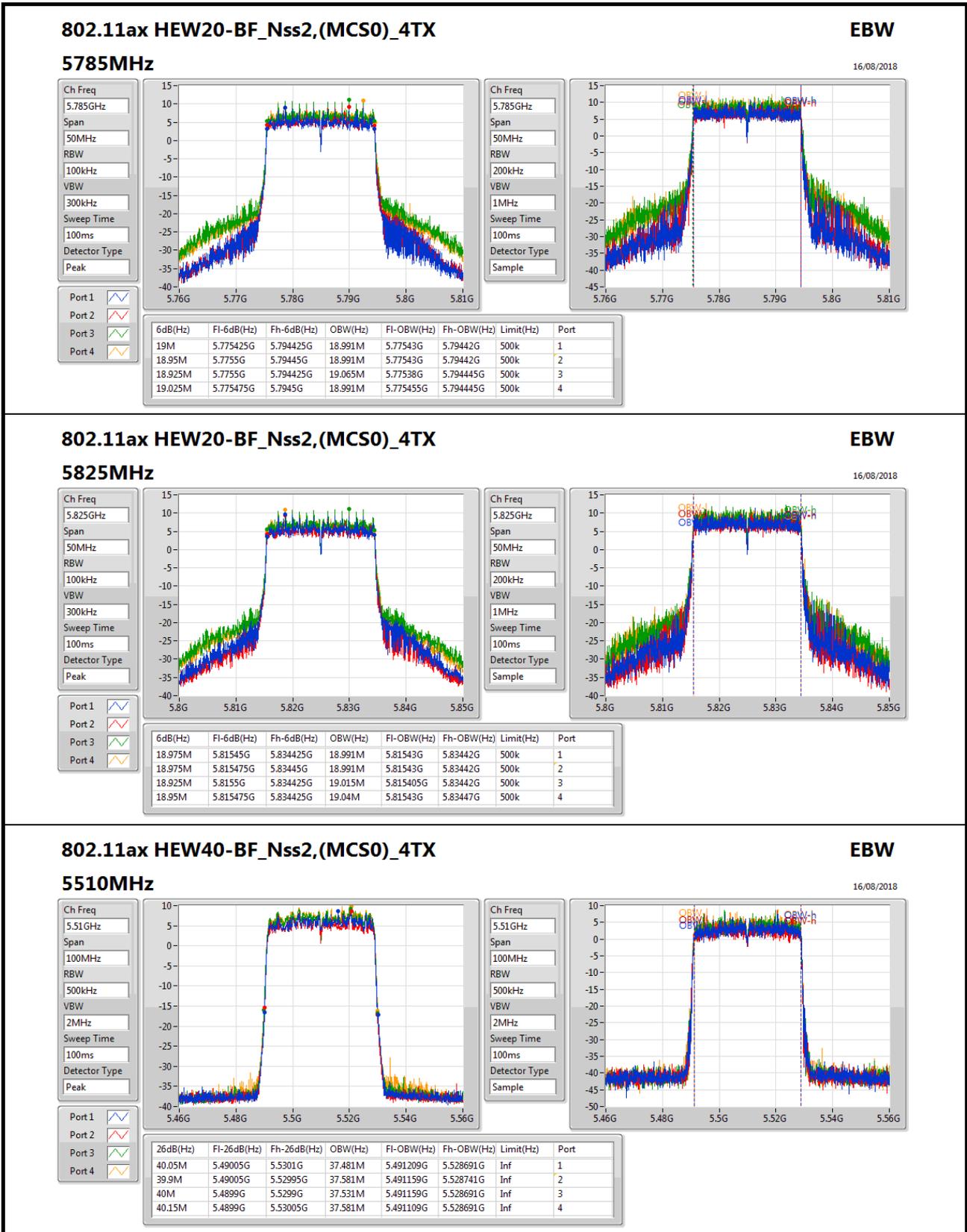
16/08/2018

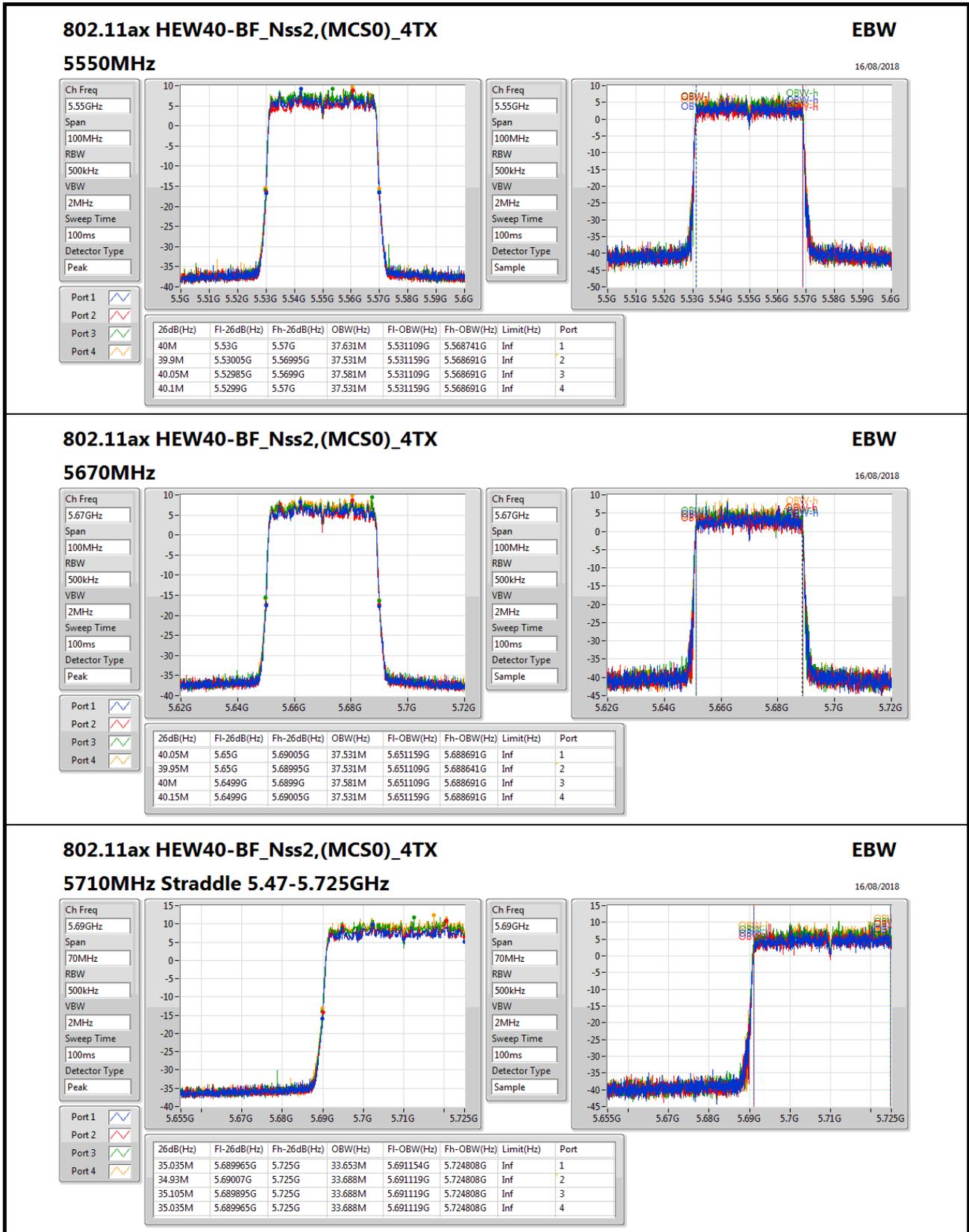






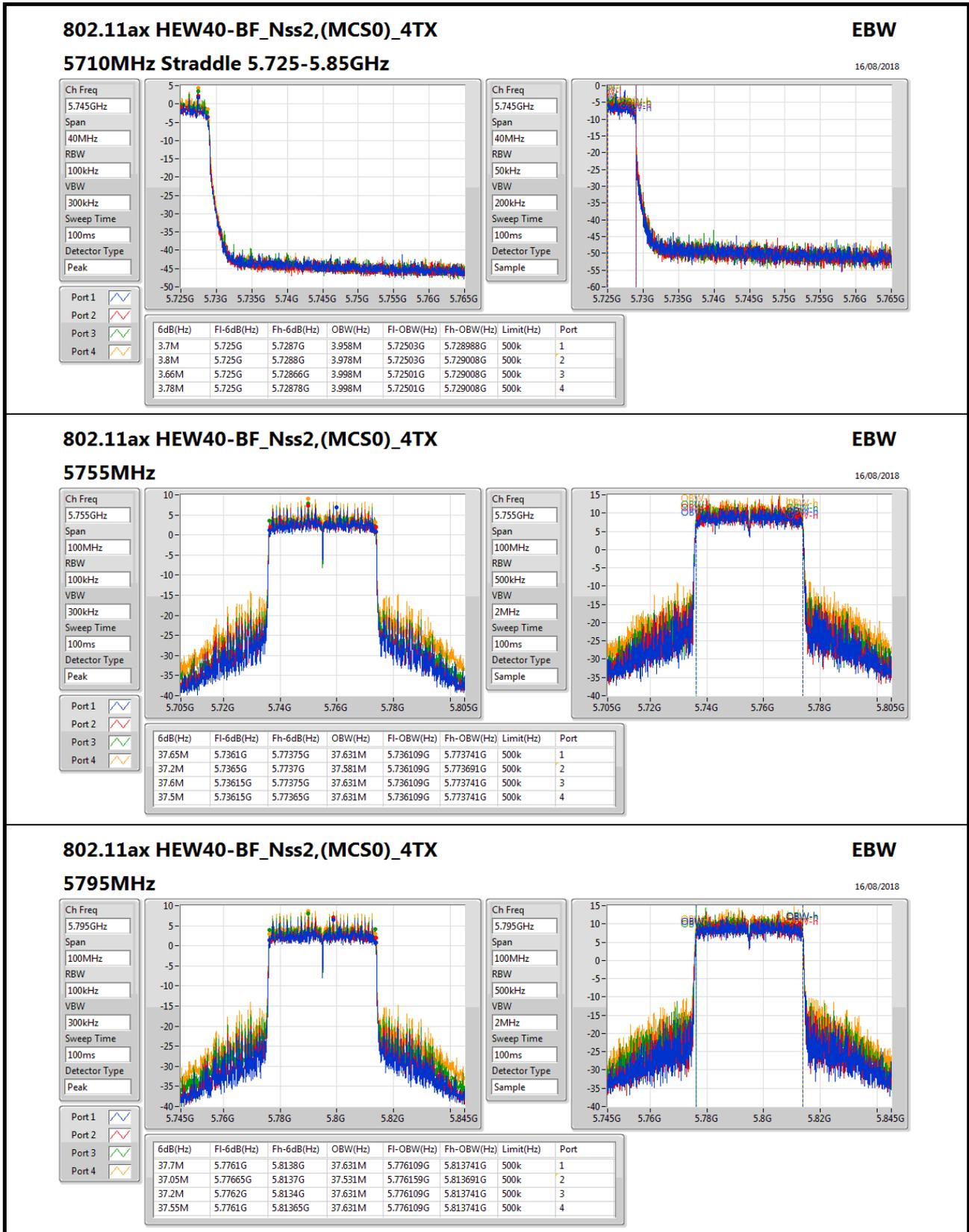


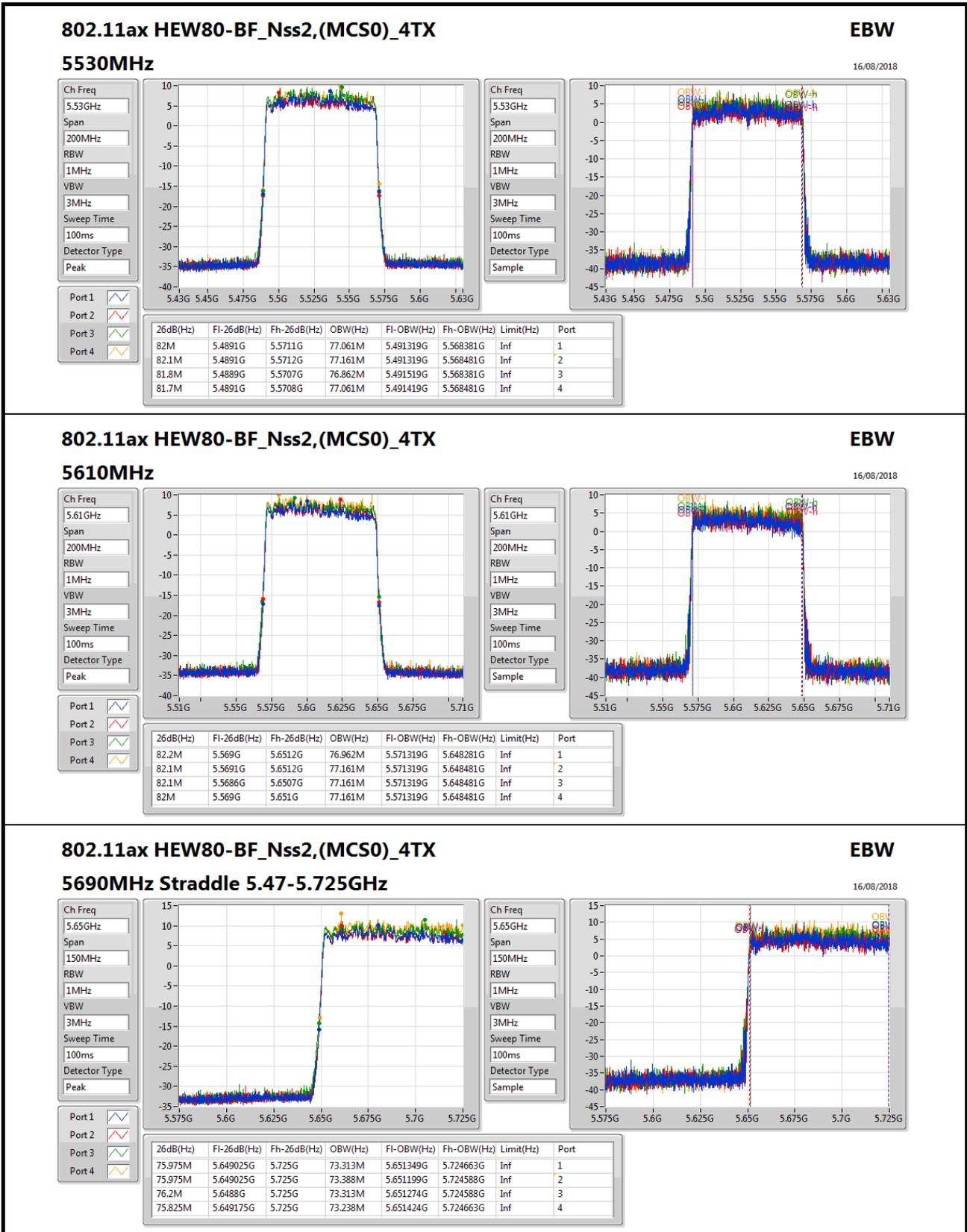


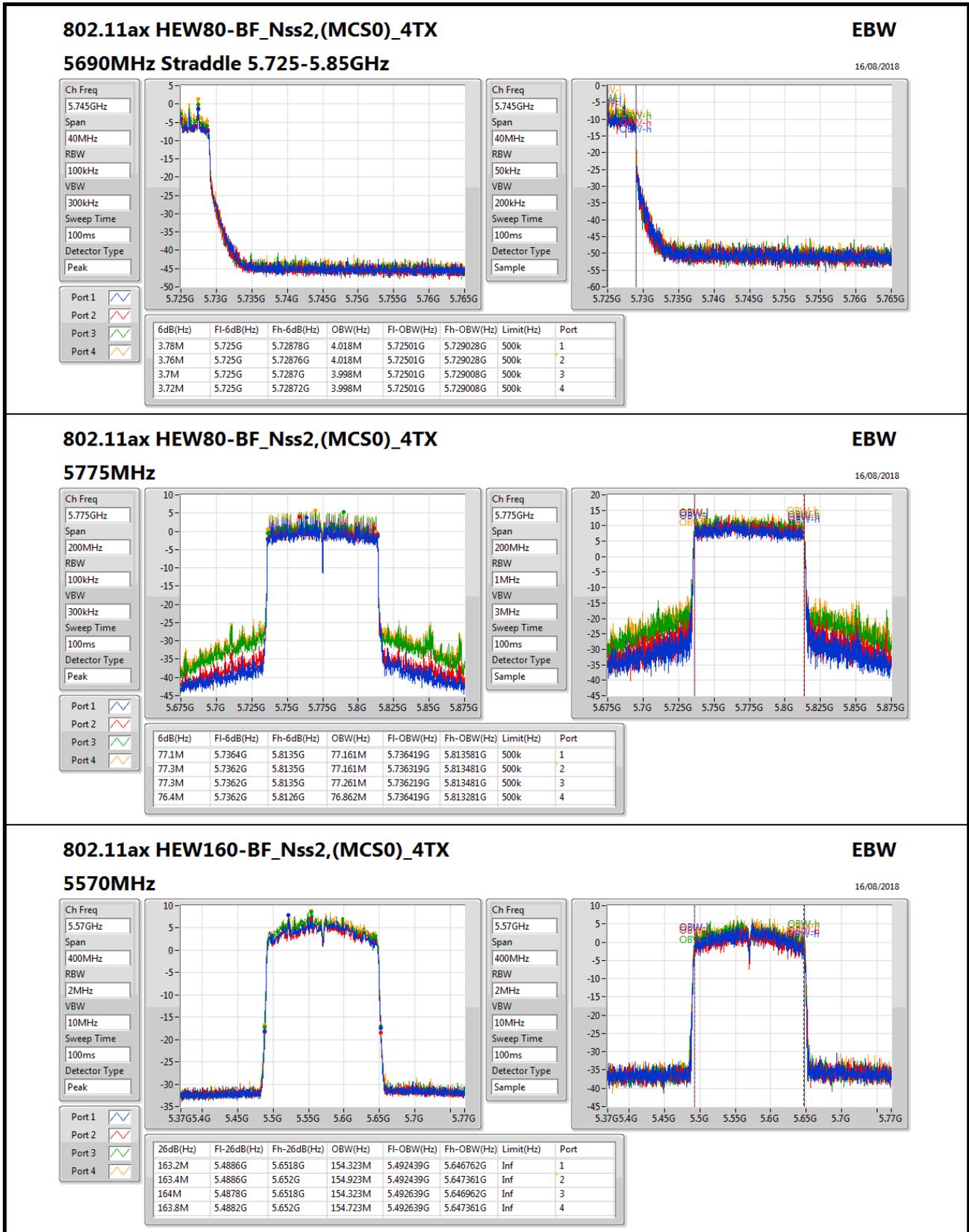

802.11ax HEW40-BF_Nss2,(MCS0)_4TX
EBW
5710MHz Straddle 5.47-5.725GHz
16/08/2018

Ch Freq: 5.69GHz
Span: 70MHz
RBW: 500kHz
VBW: 2MHz
Sweep Time: 100ms
Detector Type: Peak

Ch Freq: 5.69GHz
Span: 70MHz
RBW: 500kHz
VBW: 2MHz
Sweep Time: 100ms
Detector Type: Sample









**For Nss1:
Summary**

Mode	Total Power (dBm)	Total Power (W)
5.15-5.25GHz	-	-
802.11a_Nss1,(6Mbps)_2TX	29.92	0.98175
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	29.83	0.96161
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	28.69	0.73961
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	22.04	0.15996
5.47-5.725GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	23.15	0.20654
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	22.82	0.19143
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	22.81	0.19099
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	22.78	0.18967
802.11ac VHT160-BF_Nss1,(MCS0)_4TX	22.82	0.19143
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	22.73	0.18750
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	22.75	0.18836
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	22.83	0.19187
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	22.74	0.18793
5.725-5.85GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	29.97	0.99312
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	28.84	0.76560
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	28.77	0.75336
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	28.80	0.75858
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	28.81	0.76033
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	28.85	0.76736
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	28.71	0.74302



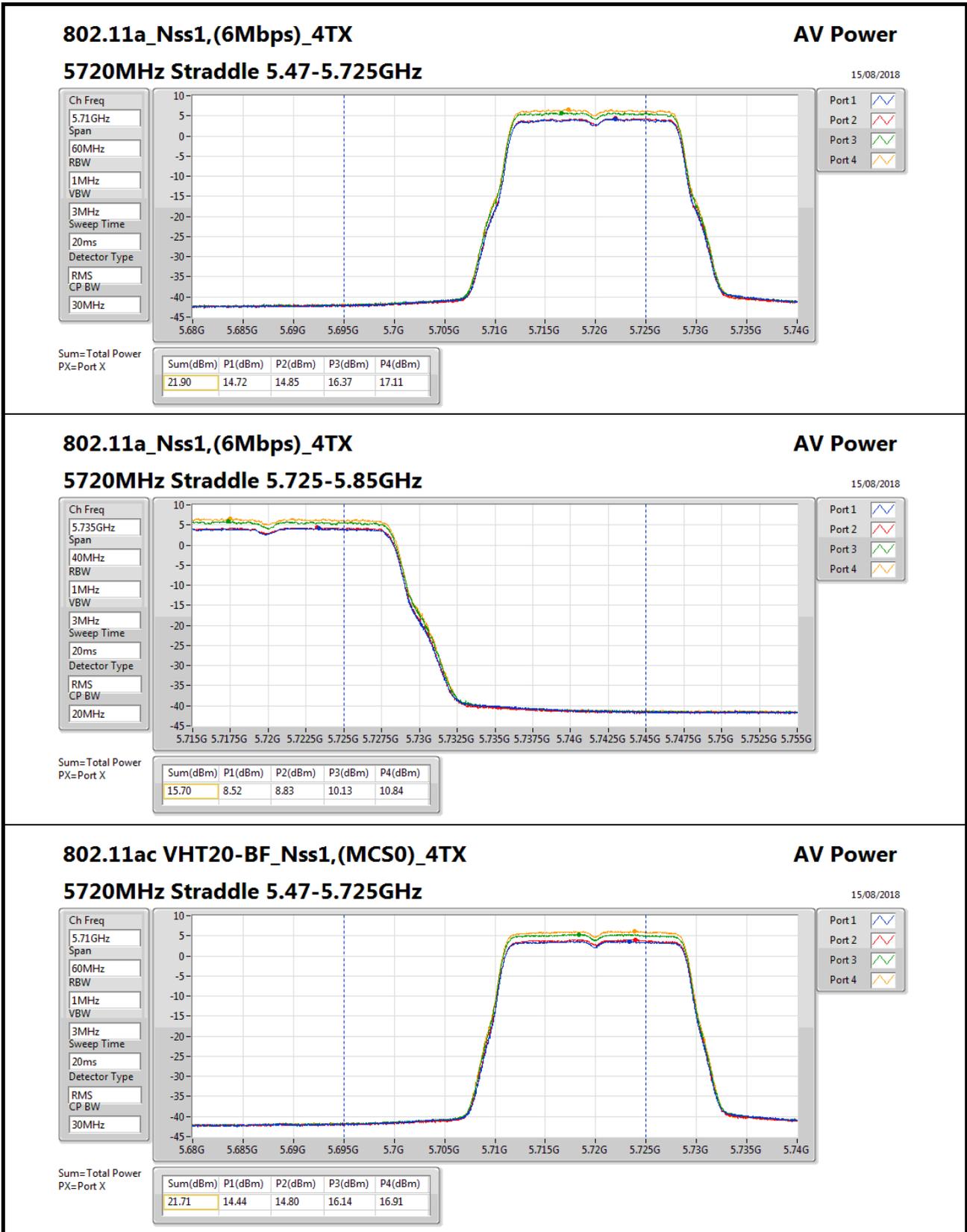
Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	2.00	23.63	23.32			26.49	30.00
5200MHz	Pass	2.00	26.94	26.87			29.92	30.00
5240MHz	Pass	2.00	26.89	26.76			29.84	30.00
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-
5500MHz	Pass	1.65	16.45	16.69	17.31	17.88	23.14	23.98
5580MHz	Pass	1.65	16.78	16.62	17.41	17.62	23.15	23.98
5700MHz	Pass	1.65	16.07	16.09	17.46	17.92	22.98	23.98
5720MHz Straddle 5.47-5.725GHz	Pass	1.65	14.72	14.85	16.37	17.11	21.90	22.92
5720MHz Straddle 5.725-5.85GHz	Pass	1.65	8.52	8.83	10.13	10.84	15.70	30.00
5745MHz	Pass	1.65	23.03	23.39	24.64	24.53	29.97	30.00
5785MHz	Pass	1.65	23.01	23.34	24.63	24.56	29.96	30.00
5825MHz	Pass	1.65	23.04	23.15	24.59	24.33	29.85	30.00
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	4.93	23.34	23.13			26.25	30.00
5200MHz	Pass	4.93	26.85	26.78			29.83	30.00
5240MHz	Pass	4.93	26.82	26.71			29.78	30.00
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5500MHz	Pass	7.13	15.92	15.96	17.21	17.58	22.75	22.85
5580MHz	Pass	7.13	16.24	16.02	17.29	17.48	22.82	22.85
5700MHz	Pass	7.13	15.83	15.94	17.25	17.79	22.80	22.85
5720MHz Straddle 5.47-5.725GHz	Pass	7.13	14.44	14.80	16.14	16.91	21.71	21.84
5720MHz Straddle 5.725-5.85GHz	Pass	7.13	8.51	8.75	10.14	10.79	15.67	28.87
5745MHz	Pass	7.13	21.85	22.03	23.47	23.62	28.84	28.87
5785MHz	Pass	7.13	21.64	21.88	23.43	23.49	28.71	28.87
5825MHz	Pass	7.13	21.82	21.76	23.41	23.33	28.67	28.87
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5190MHz	Pass	4.93	20.45	19.62			23.07	30.00
5230MHz	Pass	4.93	25.87	25.49			28.69	30.00
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5510MHz	Pass	7.13	16.43	16.05	16.94	17.46	22.77	22.85
5550MHz	Pass	7.13	16.28	16.21	17.29	17.14	22.78	22.85
5670MHz	Pass	7.13	16.26	15.95	16.87	17.38	22.67	22.85
5710MHz Straddle 5.47-5.725GHz	Pass	7.13	16.00	15.96	17.27	17.67	22.81	22.85
5710MHz Straddle 5.725-5.85GHz	Pass	7.13	5.59	5.50	6.80	7.53	12.46	28.87
5755MHz	Pass	7.13	22.07	22.19	22.63	23.76	28.74	28.87
5795MHz	Pass	7.13	21.91	22.25	22.88	23.73	28.77	28.87
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5210MHz	Pass	4.93	19.56	18.42			22.04	30.00
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5530MHz	Pass	7.13	16.12	15.69	17.22	17.38	22.68	22.85
5610MHz	Pass	7.13	16.19	15.97	17.12	17.51	22.76	22.85
5690MHz Straddle 5.47-5.725GHz	Pass	7.13	16.20	15.88	16.98	17.74	22.78	22.85
5690MHz Straddle 5.725-5.85GHz	Pass	7.13	1.58	1.59	2.70	3.63	8.48	28.87



Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
5775MHz	Pass	7.13	21.63	22.28	23.32	23.59	28.80	28.87
802.11ac VHT160-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5570MHz	Pass	7.13	16.25	16.13	17.24	17.42	22.82	22.85
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5500MHz	Pass	7.13	16.02	16.09	17.18	17.35	22.72	22.85
5580MHz	Pass	7.13	16.16	16.04	16.97	17.27	22.66	22.85
5700MHz	Pass	7.13	15.72	15.86	17.07	17.82	22.73	22.85
5720MHz Straddle 5.47-5.725GHz	Pass	7.13	14.59	14.87	16.22	16.86	21.76	21.79
5720MHz Straddle 5.725-5.85GHz	Pass	7.13	8.85	9.11	10.47	11.18	16.03	28.87
5745MHz	Pass	7.13	21.76	21.84	23.52	23.67	28.81	28.87
5785MHz	Pass	7.13	21.69	21.97	23.36	23.43	28.70	28.87
5825MHz	Pass	7.13	21.87	21.68	23.29	23.39	28.65	28.87
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5510MHz	Pass	7.13	16.15	16.02	17.11	17.32	22.71	22.85
5550MHz	Pass	7.13	16.27	16.04	17.03	17.15	22.67	22.85
5670MHz	Pass	7.13	16.38	16.07	16.98	17.36	22.75	22.85
5710MHz Straddle 5.47-5.725GHz	Pass	7.13	15.98	15.95	17.01	17.49	22.68	22.85
5710MHz Straddle 5.725-5.85GHz	Pass	7.13	6.16	6.22	7.24	8.03	13.00	28.87
5755MHz	Pass	7.13	22.12	22.54	22.67	23.81	28.85	28.87
5795MHz	Pass	7.13	22.08	22.49	22.63	23.77	28.81	28.87
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5530MHz	Pass	7.13	16.42	16.03	17.21	17.29	22.79	22.85
5610MHz	Pass	7.13	16.38	16.11	17.18	17.42	22.83	22.85
5690MHz Straddle 5.47-5.725GHz	Pass	7.13	16.14	15.84	16.97	17.57	22.70	22.85
5690MHz Straddle 5.725-5.85GHz	Pass	7.13	2.18	2.17	3.36	4.29	9.11	28.87
5775MHz	Pass	7.13	21.71	22.24	23.06	23.51	28.71	28.87
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5570MHz	Pass	7.13	16.22	16.07	17.17	17.29	22.74	22.85

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



802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5720MHz Straddle 5.47-5.725GHz

AV Power

15/08/2018

Ch Freq
5.71GHz

Span
60MHz

RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS

CP BW
30MHz

Port 1

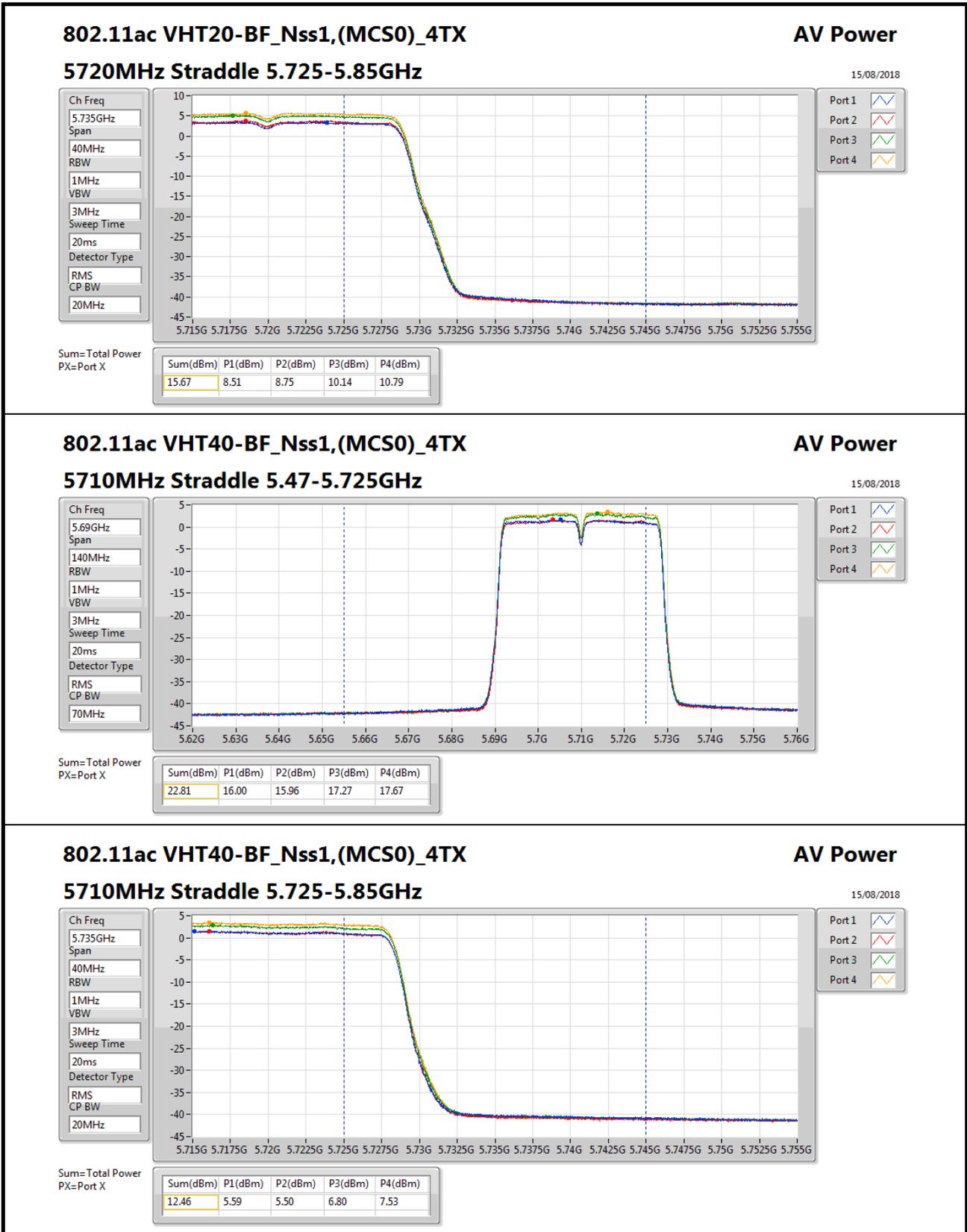
Port 2

Port 3

Port 4

Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
21.71	14.44	14.80	16.14	16.91



802.11ac VHT40-BF_Nss1,(MCS0)_4TX

5710MHz Straddle 5.725-5.85GHz

AV Power

15/08/2018

Ch Freq
5.735GHz

Span
40MHz

RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS

CP BW
20MHz

Port 1

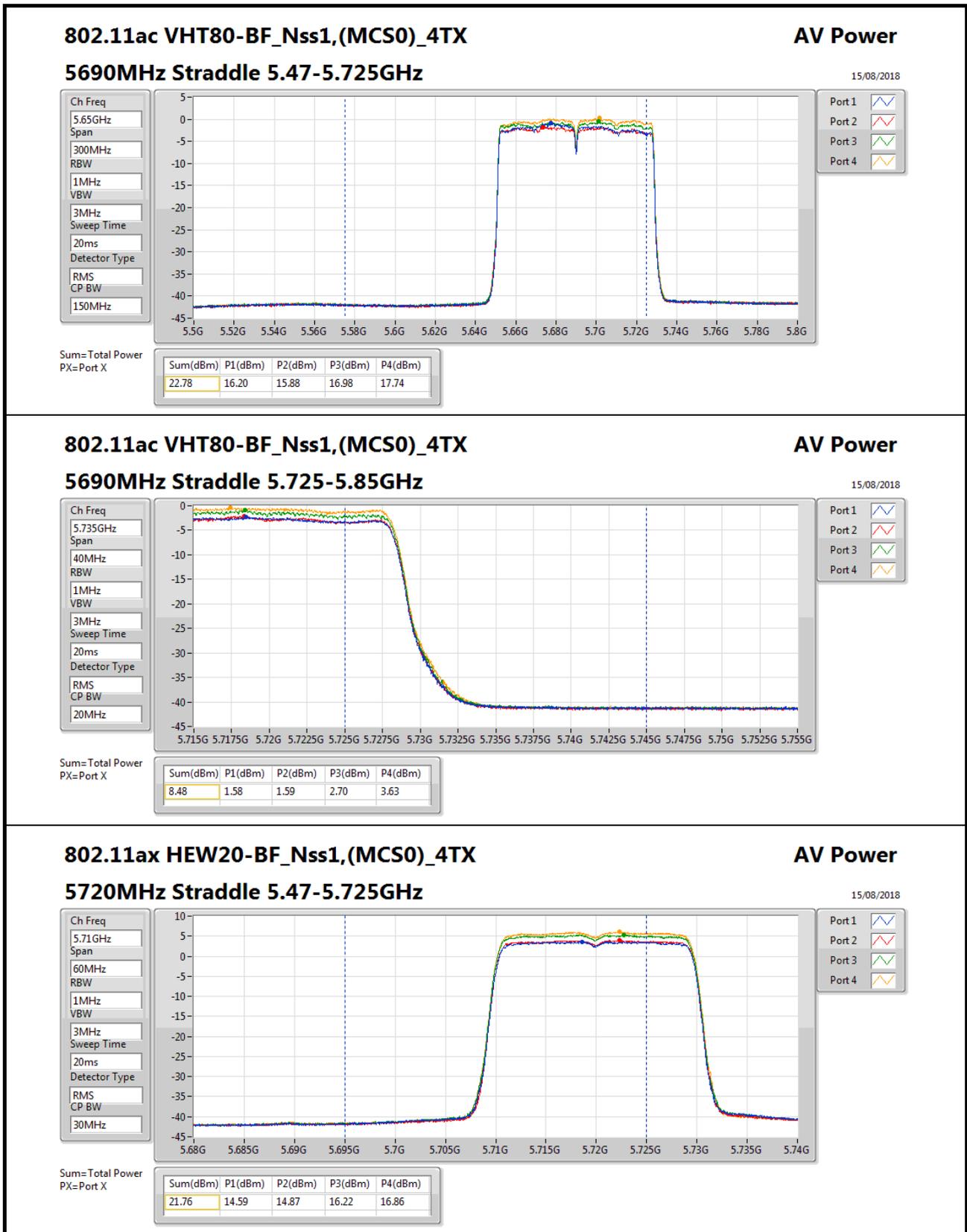
Port 2

Port 3

Port 4

Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
12.46	5.59	5.50	6.80	7.53



802.11ax HEW20-BF_Nss1,(MCS0)_4TX

5720MHz Straddle 5.47-5.725GHz

AV Power

15/08/2018

Ch Freq
5.71GHz

Span
60MHz

RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS

CP BW
30MHz

Port 1

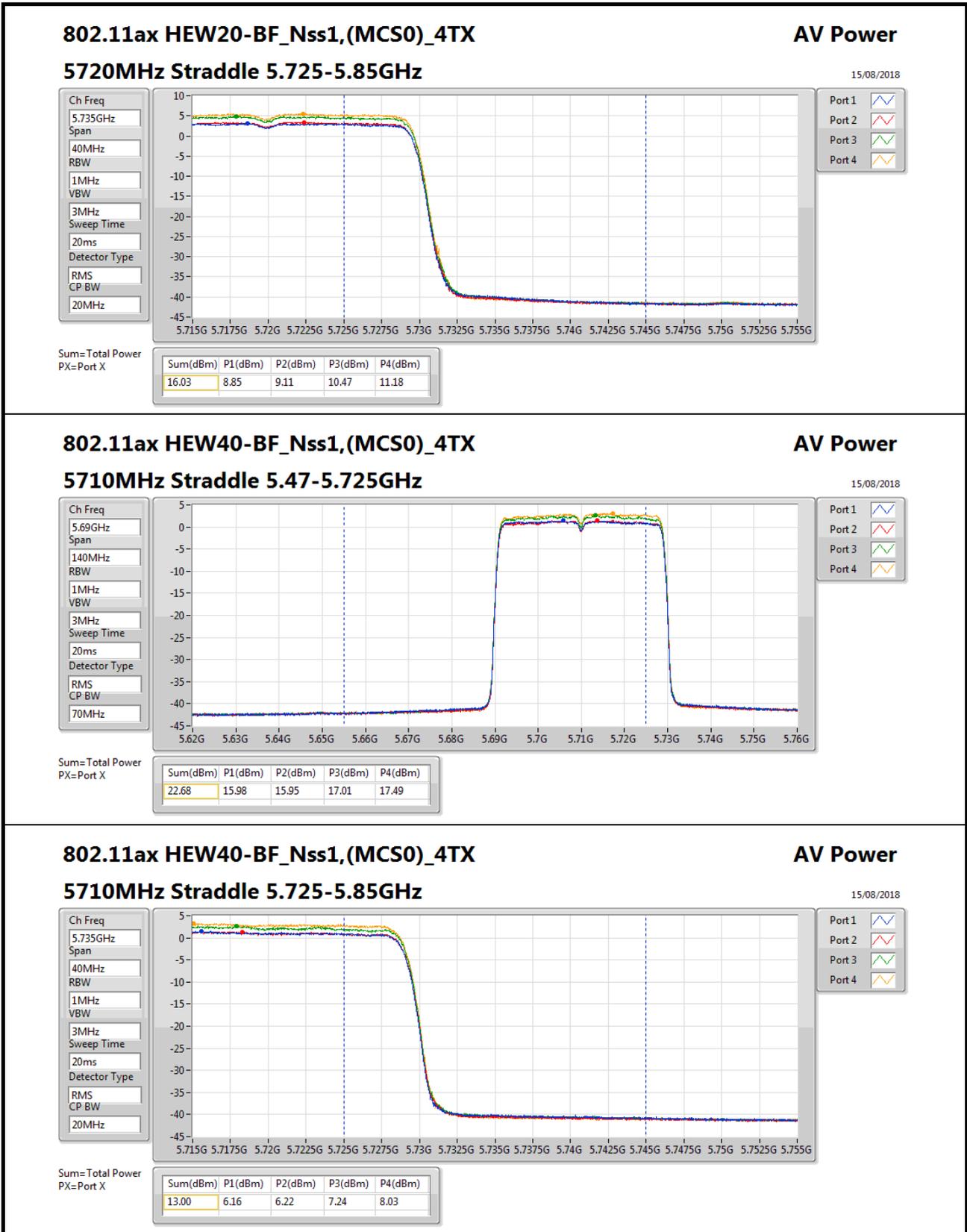
Port 2

Port 3

Port 4

Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
21.76	14.59	14.87	16.22	16.86



802.11ax HEW40-BF_Nss1,(MCS0)_4TX

5710MHz Straddle 5.725-5.85GHz

AV Power

15/08/2018

Ch Freq
5.735GHz

Span
40MHz

RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS

CP BW
20MHz

Port 1

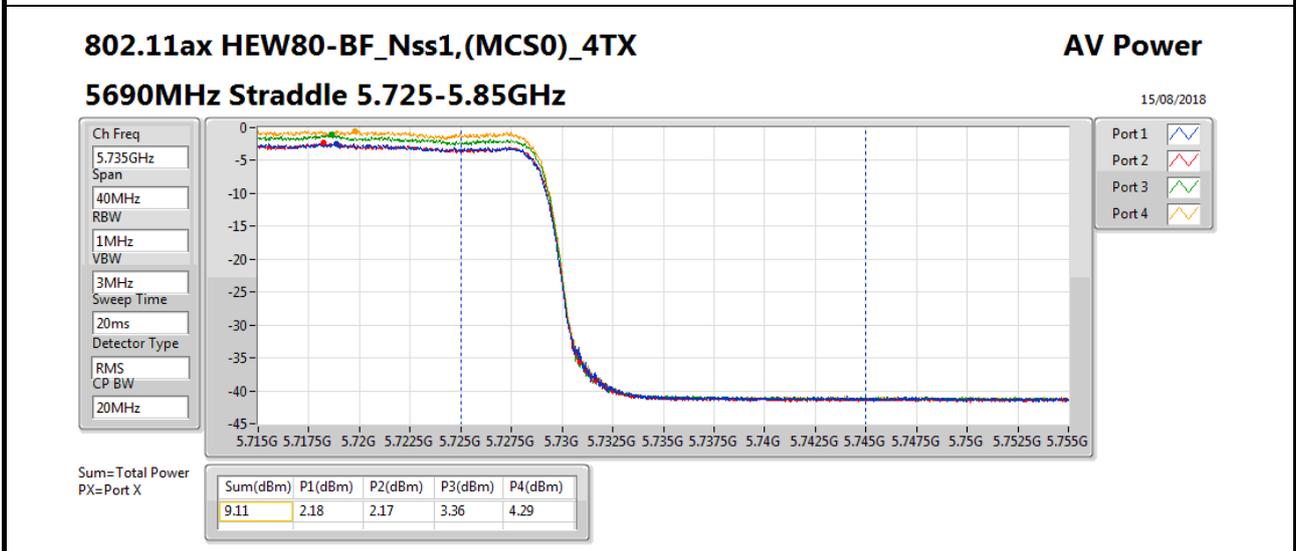
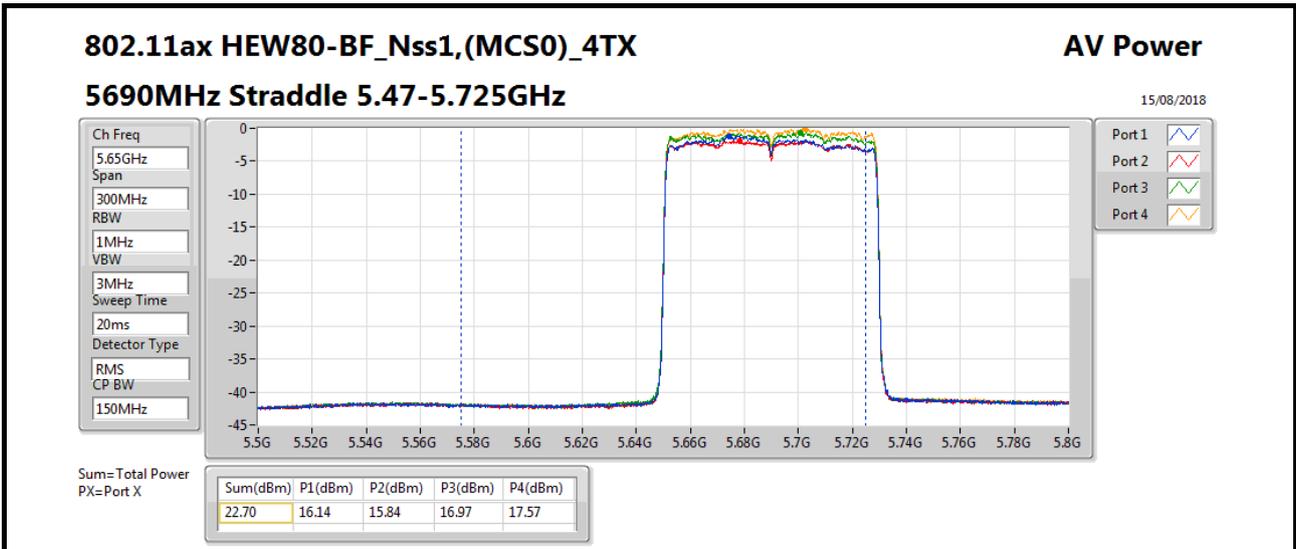
Port 2

Port 3

Port 4

Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
13.00	6.16	6.22	7.24	8.03





**For Nss2:
Summary**

Mode	Total Power (dBm)	Total Power (W)
5.15-5.25GHz	-	-
802.11ac VHT20_Nss2,(MCS0)_2TX	29.94	0.98628
802.11ac VHT40_Nss2,(MCS0)_2TX	29.08	0.80910
802.11ac VHT80_Nss2,(MCS0)_2TX	23.41	0.21928
5.47-5.725GHz	-	-
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	23.94	0.24774
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	23.96	0.24889
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	23.96	0.24889
802.11ac VHT160-BF_Nss2,(MCS0)_4TX	23.49	0.22336
802.11ax HEW20-BF_Nss2,(MCS0)_4TX	23.96	0.24889
802.11ax HEW40-BF_Nss2,(MCS0)_4TX	23.96	0.24889
802.11ax HEW80-BF_Nss2,(MCS0)_4TX	23.95	0.24831
802.11ax HEW160-BF_Nss2,(MCS0)_4TX	22.29	0.16943
5.725-5.85GHz	-	-
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	29.97	0.99312
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	29.85	0.96605
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	29.08	0.80910
802.11ax HEW20-BF_Nss2,(MCS0)_4TX	29.93	0.98401
802.11ax HEW40-BF_Nss2,(MCS0)_4TX	29.95	0.98855
802.11ax HEW80-BF_Nss2,(MCS0)_4TX	29.41	0.87297



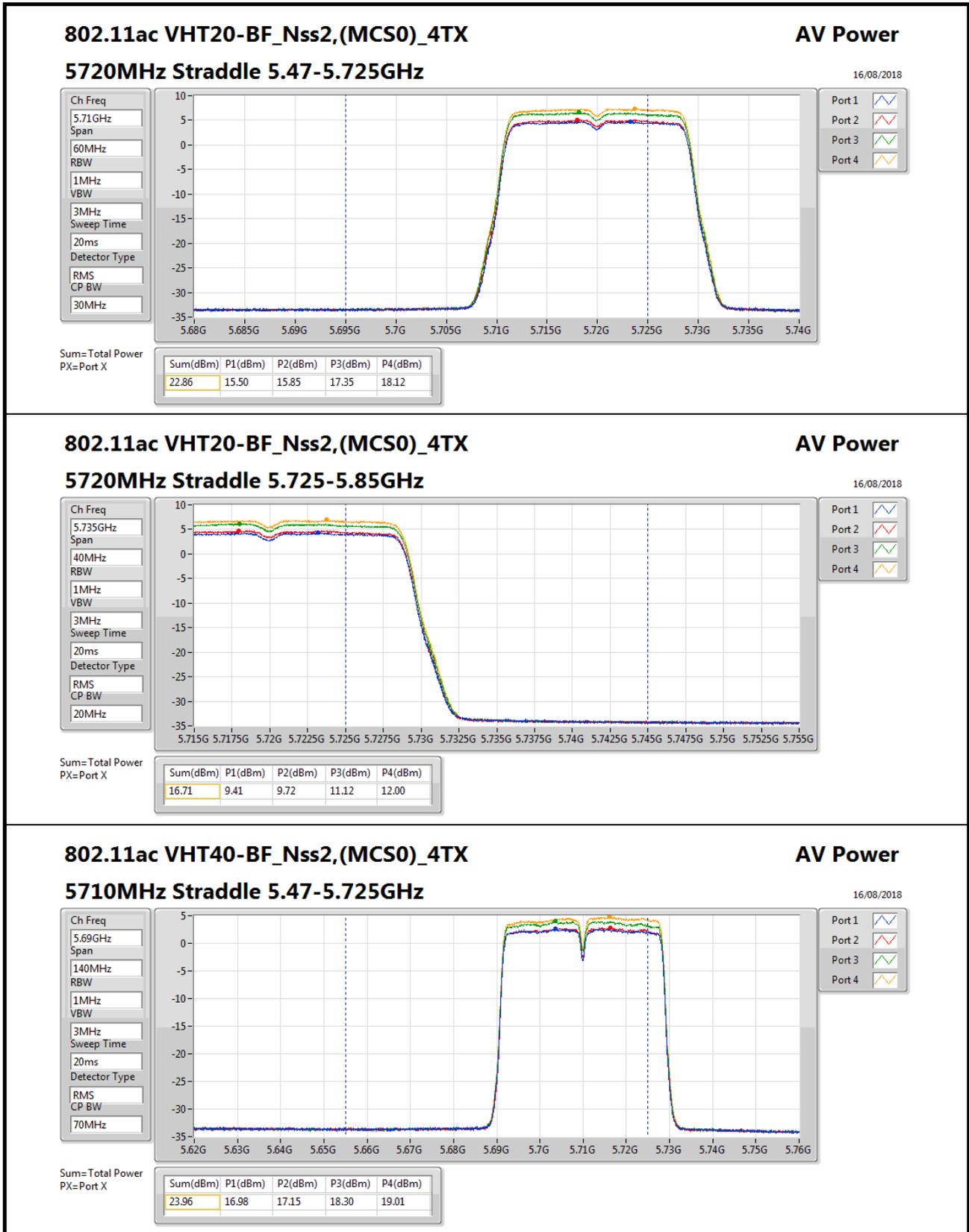
Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11ac VHT20_Nss2,(MCS0)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	2.00	24.15	23.96			27.07	30.00
5200MHz	Pass	2.00	26.97	26.89			29.94	30.00
5240MHz	Pass	2.00	26.98	26.81			29.91	30.00
802.11ac VHT40_Nss2,(MCS0)_2TX	-	-	-	-	-	-	-	-
5190MHz	Pass	2.00	20.96	20.03			23.53	30.00
5230MHz	Pass	2.00	26.22	25.92			29.08	30.00
802.11ac VHT80_Nss2,(MCS0)_2TX	-	-	-	-	-	-	-	-
5210MHz	Pass	2.00	20.89	19.84			23.41	30.00
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5500MHz	Pass	4.55	17.07	17.25	18.32	18.52	23.86	23.98
5580MHz	Pass	4.55	17.59	17.28	18.27	18.45	23.94	23.98
5700MHz	Pass	4.55	16.84	16.96	18.37	18.53	23.76	23.98
5720MHz Straddle 5.47-5.725GHz	Pass	4.55	15.50	15.85	17.35	18.12	22.86	22.98
5720MHz Straddle 5.725-5.85GHz	Pass	4.55	9.41	9.72	11.12	12.00	16.71	30.00
5745MHz	Pass	4.55	22.89	23.36	24.49	24.51	29.89	30.00
5785MHz	Pass	4.55	22.77	23.37	24.54	24.66	29.93	30.00
5825MHz	Pass	4.55	23.04	23.33	24.57	24.62	29.97	30.00
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5510MHz	Pass	4.55	17.49	17.24	18.31	18.54	23.95	23.98
5550MHz	Pass	4.55	17.51	17.26	18.42	18.45	23.96	23.98
5670MHz	Pass	4.55	17.34	17.22	18.15	18.68	23.91	23.98
5710MHz Straddle 5.47-5.725GHz	Pass	4.55	16.98	17.15	18.30	19.01	23.96	23.98
5710MHz Straddle 5.725-5.85GHz	Pass	4.55	6.48	6.37	7.65	8.60	13.39	30.00
5755MHz	Pass	4.55	23.09	23.52	23.65	24.81	29.84	30.00
5795MHz	Pass	4.55	23.03	23.56	23.82	24.73	29.85	30.00
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5530MHz	Pass	4.55	17.42	16.91	18.26	18.35	23.80	23.98
5610MHz	Pass	4.55	17.52	17.06	18.31	18.69	23.96	23.98
5690MHz Straddle 5.47-5.725GHz	Pass	4.55	17.16	17.01	18.14	18.89	23.89	23.98
5690MHz Straddle 5.725-5.85GHz	Pass	4.55	2.60	2.31	3.69	4.82	9.49	30.00
5775MHz	Pass	4.55	22.01	22.68	23.56	23.76	29.08	30.00
802.11ac VHT160-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5570MHz	Pass	4.55	16.95	16.81	17.85	18.12	23.49	23.98
802.11ax HEW20-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5500MHz	Pass	4.55	17.27	17.43	18.42	18.48	23.96	23.98
5580MHz	Pass	4.55	17.48	17.35	18.24	18.52	23.95	23.98
5700MHz	Pass	4.55	16.78	17.03	18.36	18.89	23.88	23.98
5720MHz Straddle 5.47-5.725GHz	Pass	4.55	15.29	15.86	17.38	18.06	22.81	22.96
5720MHz Straddle 5.725-5.85GHz	Pass	4.55	10.04	10.32	11.84	12.63	17.36	30.00
5745MHz	Pass	4.55	23.03	23.29	24.35	24.72	29.93	30.00
5785MHz	Pass	4.55	23.01	23.12	24.52	24.61	29.90	30.00
5825MHz	Pass	4.55	23.03	23.05	24.46	24.50	29.84	30.00
802.11ax HEW40-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-



Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
5510MHz	Pass	4.55	17.28	17.06	18.24	18.58	23.86	23.98
5550MHz	Pass	4.55	17.49	17.02	18.65	18.41	23.96	23.98
5670MHz	Pass	4.55	17.43	17.07	18.17	18.65	23.89	23.98
5710MHz Straddle 5.47-5.725GHz	Pass	4.55	16.88	16.93	18.18	18.85	23.81	23.98
5710MHz Straddle 5.725-5.85GHz	Pass	4.55	7.45	7.52	8.66	9.32	14.33	30.00
5755MHz	Pass	4.55	23.25	23.54	23.96	24.81	29.95	30.00
5795MHz	Pass	4.55	23.12	23.39	23.89	24.76	29.86	30.00
802.11ax HEW80-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5530MHz	Pass	4.55	17.34	17.05	18.45	18.51	23.91	23.98
5610MHz	Pass	4.55	17.46	17.14	18.31	18.63	23.95	23.98
5690MHz Straddle 5.47-5.725GHz	Pass	4.55	17.09	16.96	18.16	18.72	23.82	23.98
5690MHz Straddle 5.725-5.85GHz	Pass	4.55	3.51	3.35	4.70	5.86	10.50	30.00
5775MHz	Pass	4.55	22.36	22.87	23.95	24.13	29.41	30.00
802.11ax HEW160-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5570MHz	Pass	4.55	15.77	15.62	16.72	16.84	22.29	23.98

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



802.11ac VHT40-BF_Nss2,(MCS0)_4TX

5710MHz Straddle 5.47-5.725GHz

AV Power

16/08/2018

Ch Freq
5.69GHz

Span
140MHz

RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS

CP BW
70MHz

Port 1

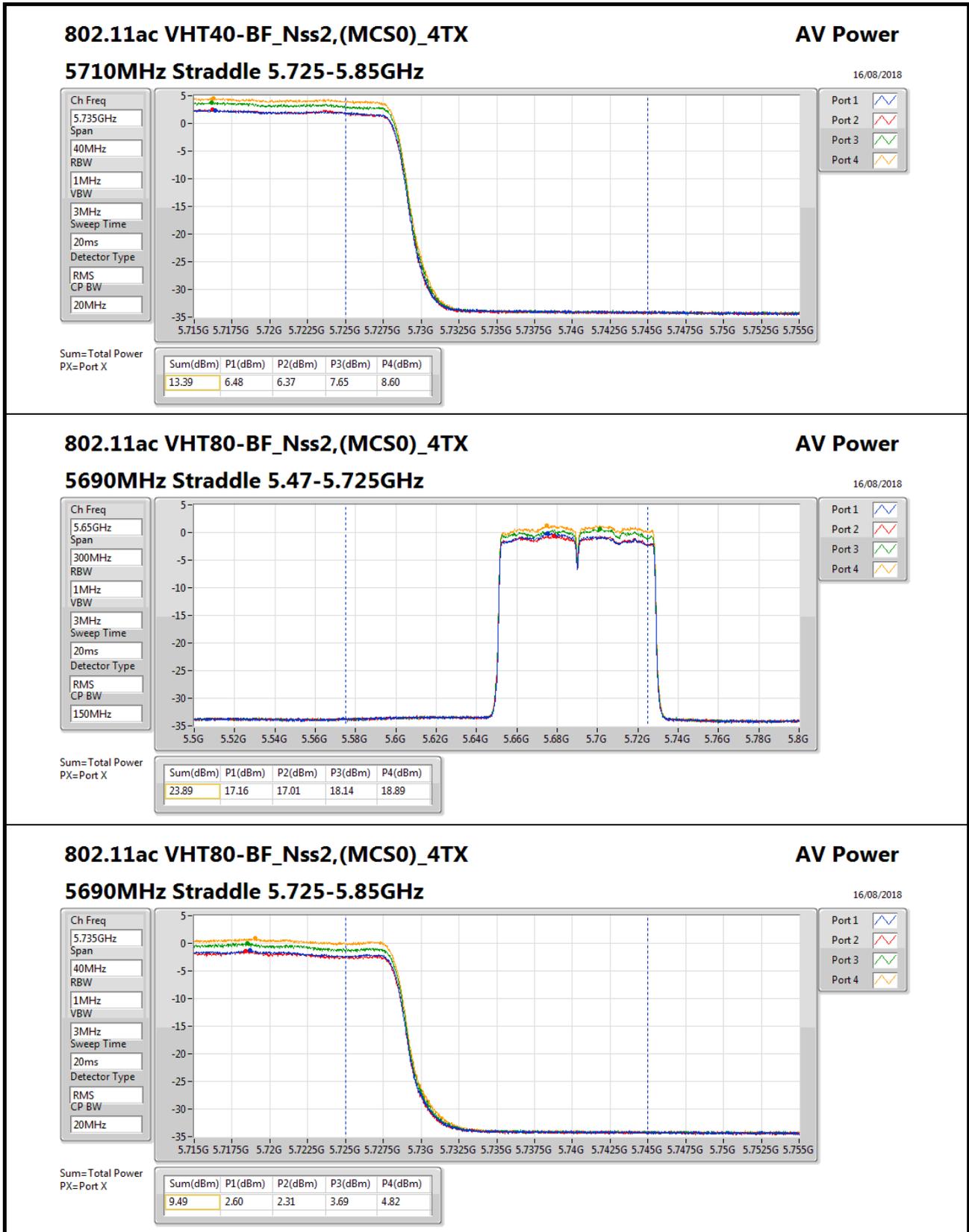
Port 2

Port 3

Port 4

Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
23.96	16.98	17.15	18.30	19.01



802.11ac VHT80-BF_Nss2,(MCS0)_4TX

5690MHz Straddle 5.725-5.85GHz

AV Power

16/08/2018

Ch Freq
5.735GHz

Span
40MHz

RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS

CP BW
20MHz

Port 1

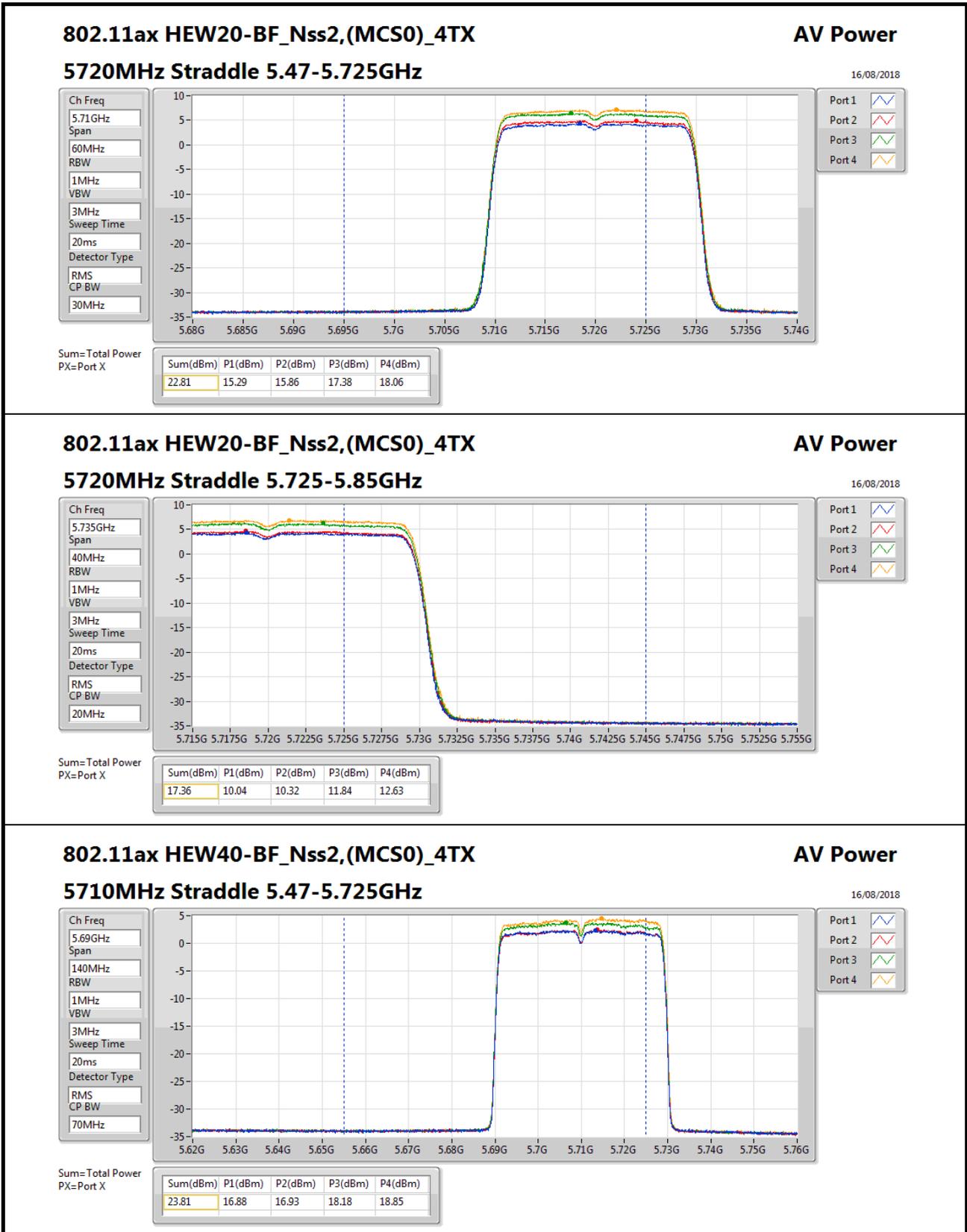
Port 2

Port 3

Port 4

Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
9.49	2.60	2.31	3.69	4.82



802.11ax HEW40-BF_Nss2,(MCS0)_4TX

5710MHz Straddle 5.47-5.725GHz

AV Power

16/08/2018

Ch Freq
5.69GHz

Span
140MHz

RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS

CP BW
70MHz

Port 1

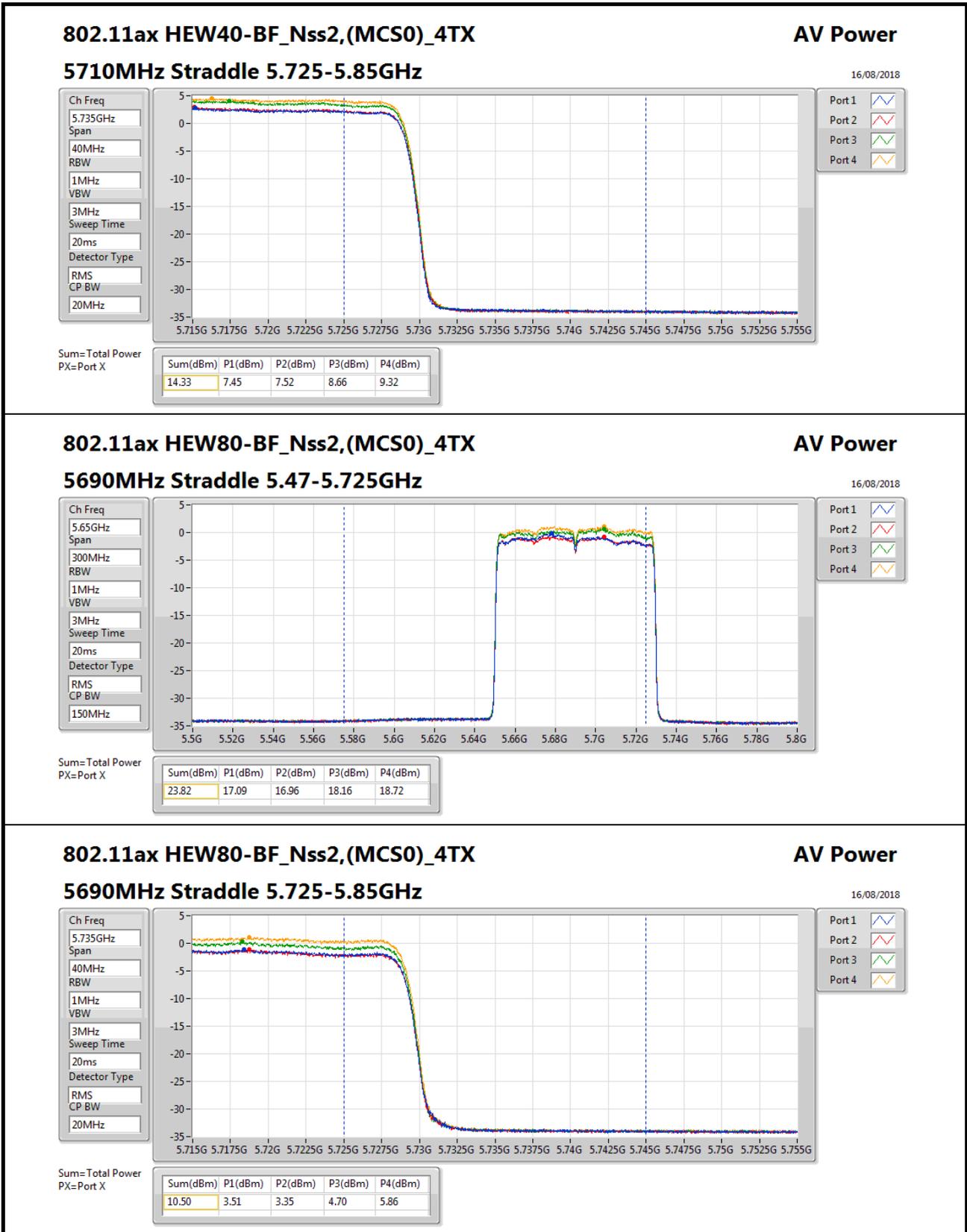
Port 2

Port 3

Port 4

Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
23.81	16.88	16.93	18.18	18.85



802.11ax HEW80-BF_Nss2,(MCS0)_4TX

5690MHz Straddle 5.725-5.85GHz

AV Power

16/08/2018

Ch Freq
5.735GHz

Span
40MHz

RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS

CP BW
20MHz

Port 1

Port 2

Port 3

Port 4

Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
10.50	3.51	3.35	4.70	5.86



**For Nss1:
Summary**

Mode	PD (dBm/RBW)
5.15-5.25GHz	-
802.11a_Nss1,(6Mbps)_2TX	16.77
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	16.58
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	12.40
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	2.88
5.47-5.725GHz	-
802.11a_Nss1,(6Mbps)_4TX	9.84
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	9.54
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	6.97
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	3.73
802.11ac VHT160-BF_Nss1,(MCS0)_4TX	0.93
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	9.28
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	6.61
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	3.55
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	0.84
5.725-5.85GHz	-
802.11a_Nss1,(6Mbps)_4TX	15.16
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	13.79
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	10.78
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	7.98
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	13.51
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	10.80
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	7.65

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



Result

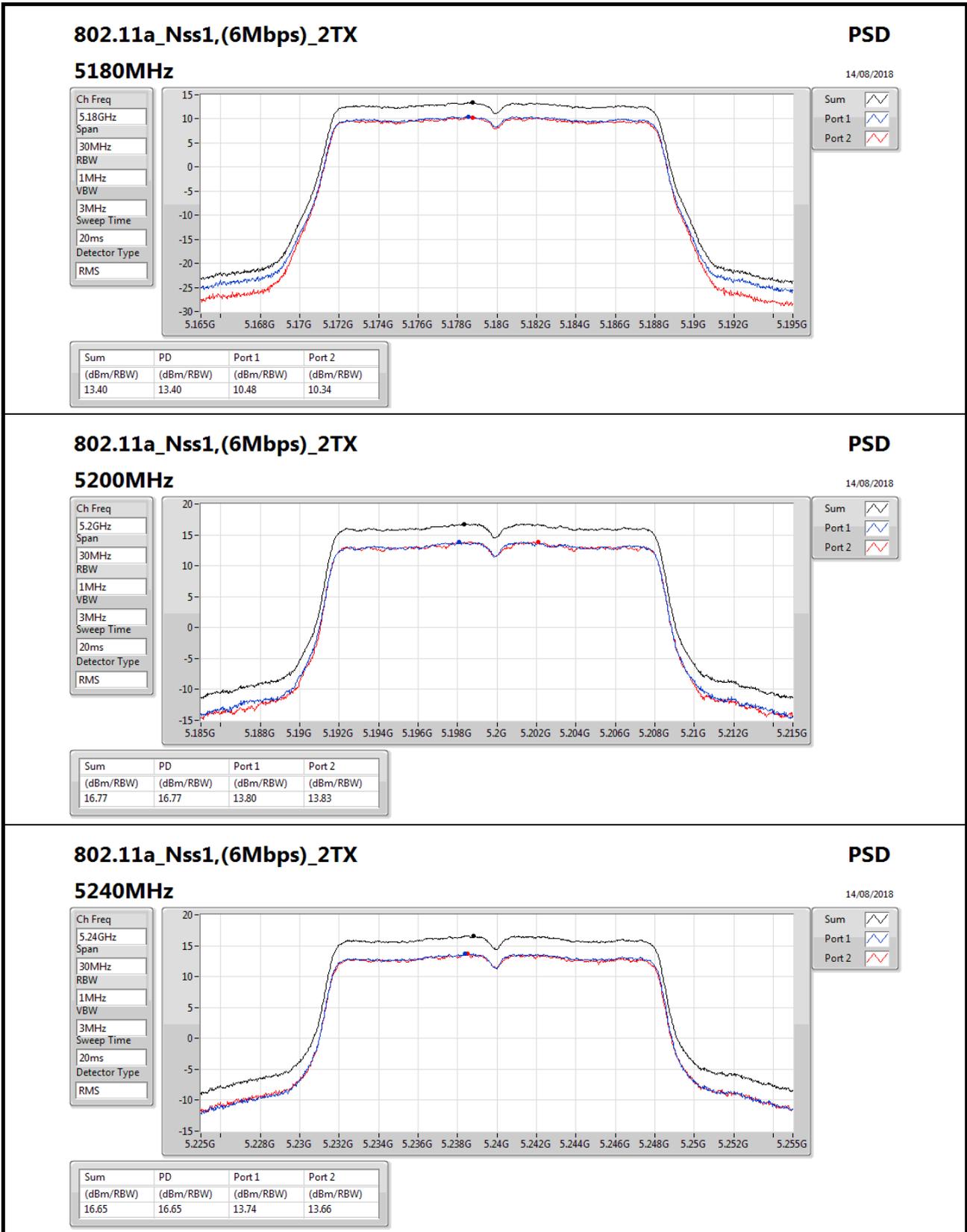
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	4.93	10.48	10.34			13.40	17.00
5200MHz	Pass	4.93	13.80	13.83			16.77	17.00
5240MHz	Pass	4.93	13.74	13.66			16.65	17.00
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-
5500MHz	Pass	7.13	3.33	3.34	4.31	4.56	9.83	9.87
5580MHz	Pass	7.13	3.43	3.08	4.32	4.65	9.84	9.87
5700MHz	Pass	7.13	2.71	2.82	4.21	4.98	9.69	9.87
5720MHz Straddle 5.47-5.725GHz	Pass	7.13	2.77	2.82	4.32	5.06	9.76	9.87
5720MHz Straddle 5.725-5.85GHz	Pass	7.13	1.04	1.17	2.57	3.48	8.11	28.87
5745MHz	Pass	7.13	8.37	8.54	9.82	10.03	15.16	28.87
5785MHz	Pass	7.13	8.00	8.28	9.72	9.71	14.93	28.87
5825MHz	Pass	7.13	8.06	8.04	9.72	9.38	14.79	28.87
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	4.93	10.31	9.78			13.02	17.00
5200MHz	Pass	4.93	13.69	13.45			16.58	17.00
5240MHz	Pass	4.93	13.71	13.30			16.48	17.00
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5500MHz	Pass	7.13	2.72	2.92	3.96	4.07	9.40	9.87
5580MHz	Pass	7.13	3.25	2.94	4.11	3.91	9.54	9.87
5700MHz	Pass	7.13	2.39	2.67	4.20	4.50	9.48	9.87
5720MHz Straddle 5.47-5.725GHz	Pass	7.13	2.09	2.58	3.93	4.72	9.43	9.87
5720MHz Straddle 5.725-5.85GHz	Pass	7.13	0.16	0.35	1.79	2.52	7.28	28.87
5745MHz	Pass	7.13	6.87	7.39	8.69	8.52	13.79	28.87
5785MHz	Pass	7.13	6.65	7.31	8.51	8.23	13.58	28.87
5825MHz	Pass	7.13	6.85	7.19	8.33	7.97	13.47	28.87
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5190MHz	Pass	4.93	4.51	3.30			6.91	17.00
5230MHz	Pass	4.93	9.61	9.22			12.40	17.00
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5510MHz	Pass	7.13	0.12	-0.19	1.11	1.36	6.55	9.87
5550MHz	Pass	7.13	-0.06	-0.03	1.39	1.18	6.58	9.87
5670MHz	Pass	7.13	0.04	-0.26	0.63	1.35	6.43	9.87
5710MHz Straddle 5.47-5.725GHz	Pass	7.13	0.23	0.16	1.45	2.09	6.97	9.87
5710MHz Straddle 5.725-5.85GHz	Pass	7.13	-2.06	-2.09	-0.81	-0.13	4.79	28.87
5755MHz	Pass	7.13	4.25	4.65	4.76	5.81	10.78	28.87
5795MHz	Pass	7.13	3.90	4.48	4.82	5.68	10.66	28.87
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5210MHz	Pass	4.93	0.57	-0.72			2.88	17.00
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5530MHz	Pass	7.13	-2.77	-3.45	-1.84	-1.63	3.59	9.87
5610MHz	Pass	7.13	-2.72	-3.08	-1.90	-1.52	3.64	9.87
5690MHz Straddle 5.47-5.725GHz	Pass	7.13	-2.51	-3.06	-2.06	-1.22	3.73	9.87
5690MHz Straddle 5.725-5.85GHz	Pass	7.13	-5.83	-5.70	-4.81	-3.57	1.08	28.87

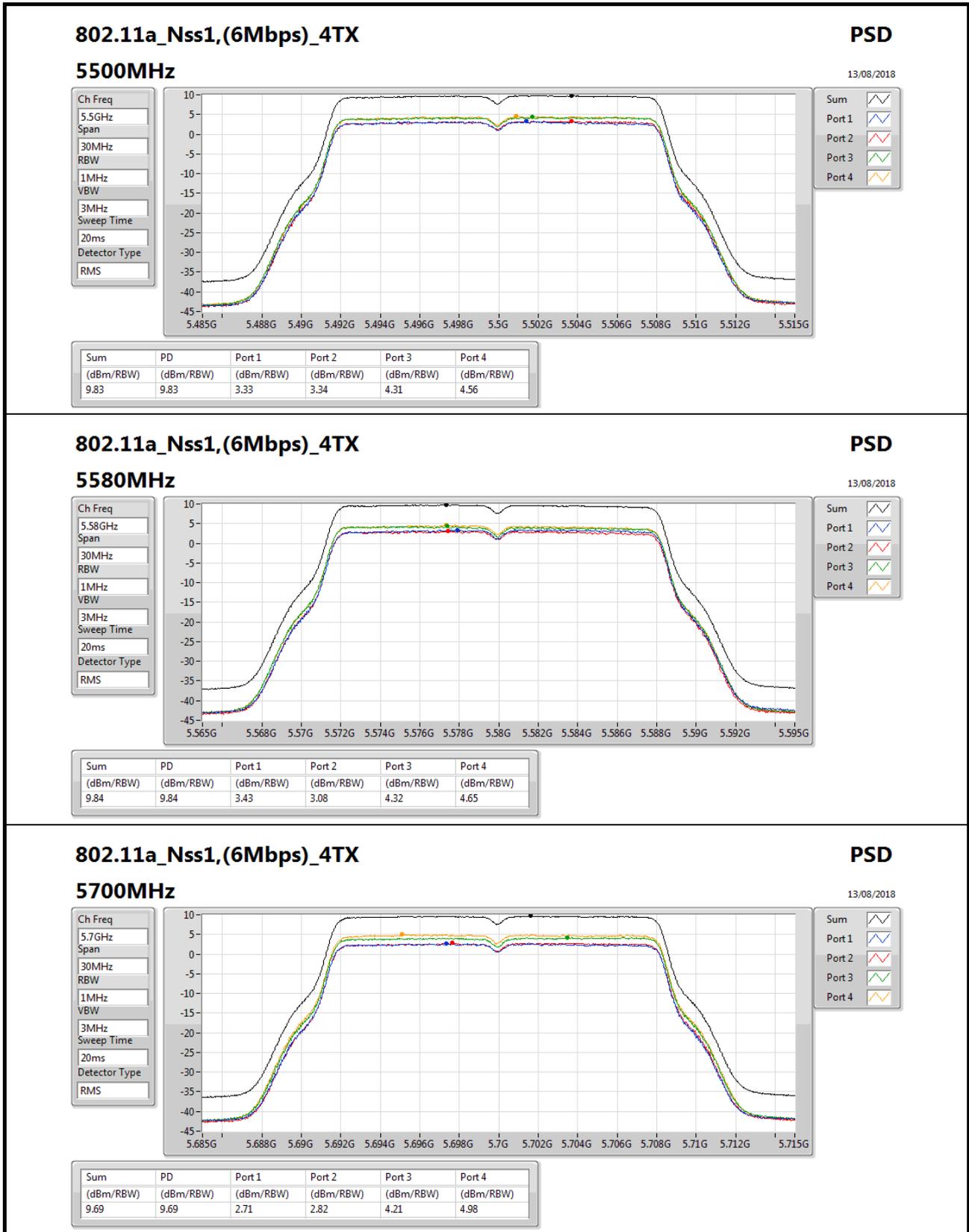


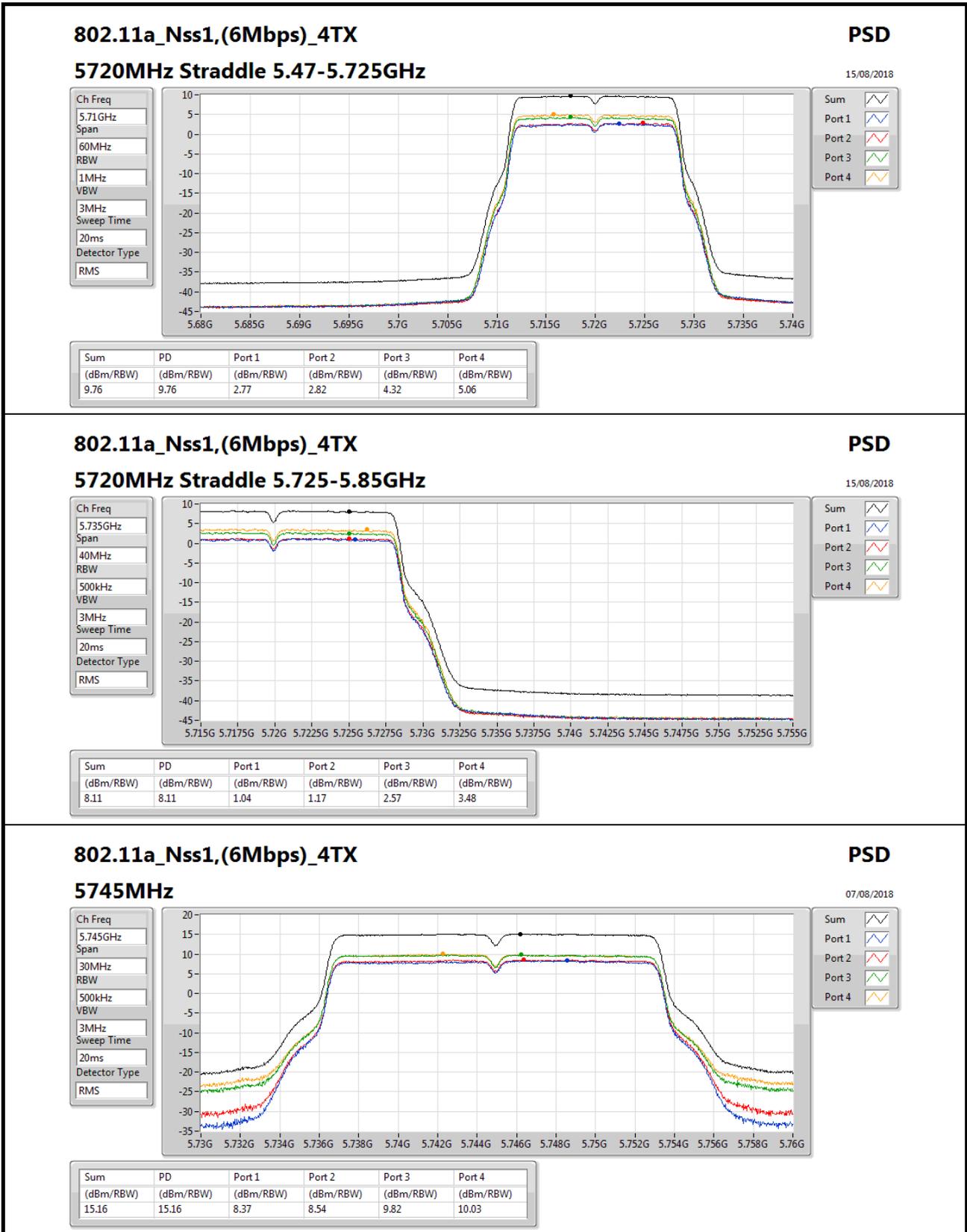
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
5775MHz	Pass	7.13	1.01	1.90	2.58	2.93	7.98	28.87
802.11ac VHT160-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5570MHz	Pass	7.13	-5.62	-5.69	-4.15	-3.99	0.93	9.87
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5500MHz	Pass	7.13	2.34	2.66	3.74	4.02	9.20	9.87
5580MHz	Pass	7.13	2.71	2.59	3.58	3.82	9.15	9.87
5700MHz	Pass	7.13	2.17	2.30	3.82	4.49	9.18	9.87
5720MHz Straddle 5.47-5.725GHz	Pass	7.13	2.15	2.51	3.81	4.53	9.28	9.87
5720MHz Straddle 5.725-5.85GHz	Pass	7.13	-0.09	0.18	1.49	2.19	6.98	28.87
5745MHz	Pass	7.13	6.82	6.96	8.19	8.33	13.51	28.87
5785MHz	Pass	7.13	6.40	6.85	8.09	8.11	13.31	28.87
5825MHz	Pass	7.13	6.61	6.63	8.12	7.71	13.20	28.87
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5510MHz	Pass	7.13	-0.19	-0.64	0.90	1.10	6.27	9.87
5550MHz	Pass	7.13	-0.04	-0.30	0.82	0.81	6.25	9.87
5670MHz	Pass	7.13	0.06	-0.27	0.64	1.02	6.31	9.87
5710MHz Straddle 5.47-5.725GHz	Pass	7.13	-0.04	-0.05	1.14	1.58	6.61	9.87
5710MHz Straddle 5.725-5.85GHz	Pass	7.13	-2.07	-2.01	-1.04	-0.08	4.74	28.87
5755MHz	Pass	7.13	4.35	4.51	4.72	5.93	10.80	28.87
5795MHz	Pass	7.13	3.88	4.51	4.91	5.68	10.64	28.87
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5530MHz	Pass	7.13	-2.63	-3.25	-2.03	-1.86	3.54	9.87
5610MHz	Pass	7.13	-2.51	-3.12	-2.22	-1.85	3.55	9.87
5690MHz Straddle 5.47-5.725GHz	Pass	7.13	-2.75	-3.37	-2.14	-1.61	3.45	9.87
5690MHz Straddle 5.725-5.85GHz	Pass	7.13	-5.89	-5.82	-4.78	-3.69	0.96	28.87
5775MHz	Pass	7.13	0.73	1.29	2.11	2.58	7.65	28.87
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5570MHz	Pass	7.13	-5.44	-5.78	-4.54	-4.45	0.84	9.87

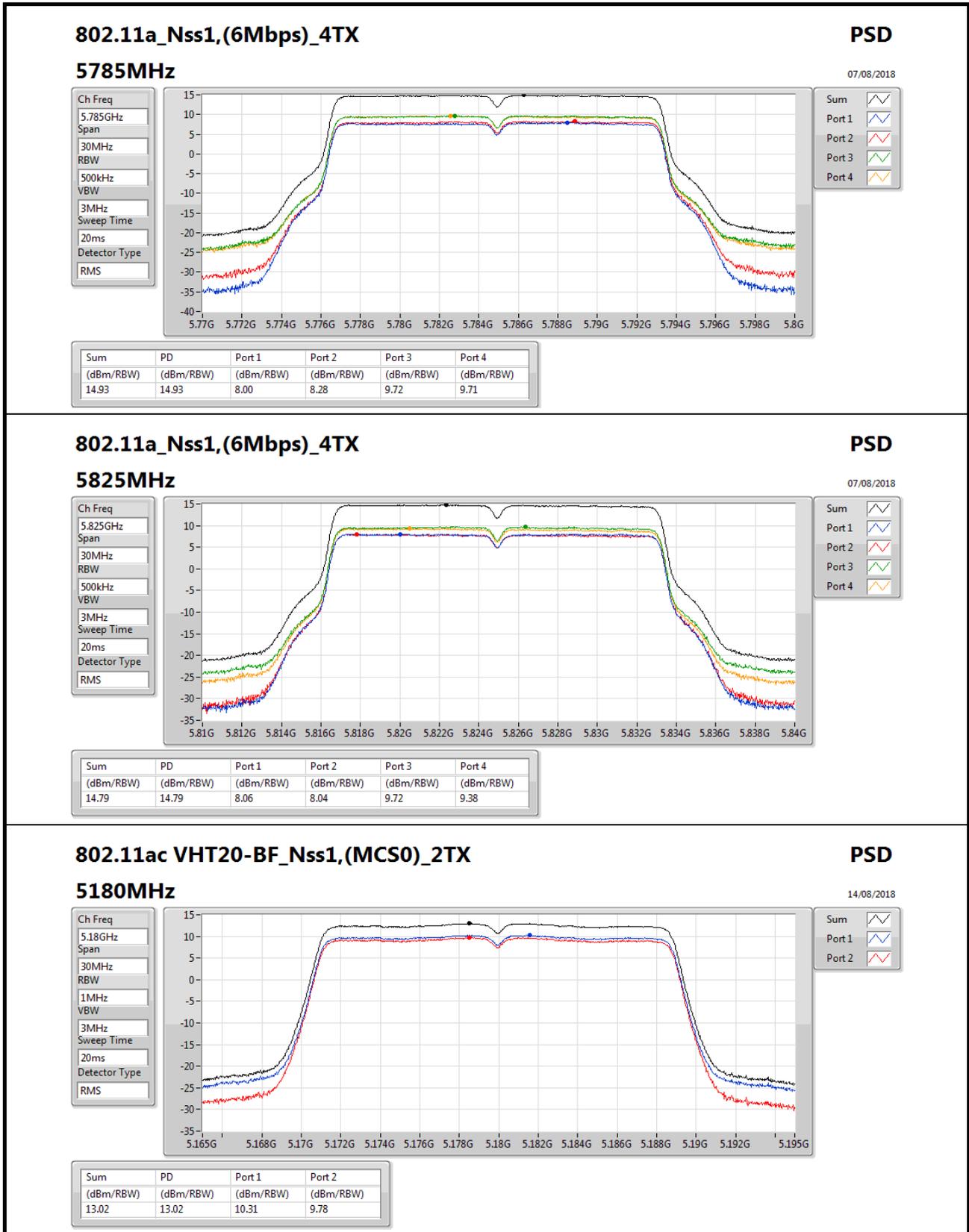
DG = Directional Gain; RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

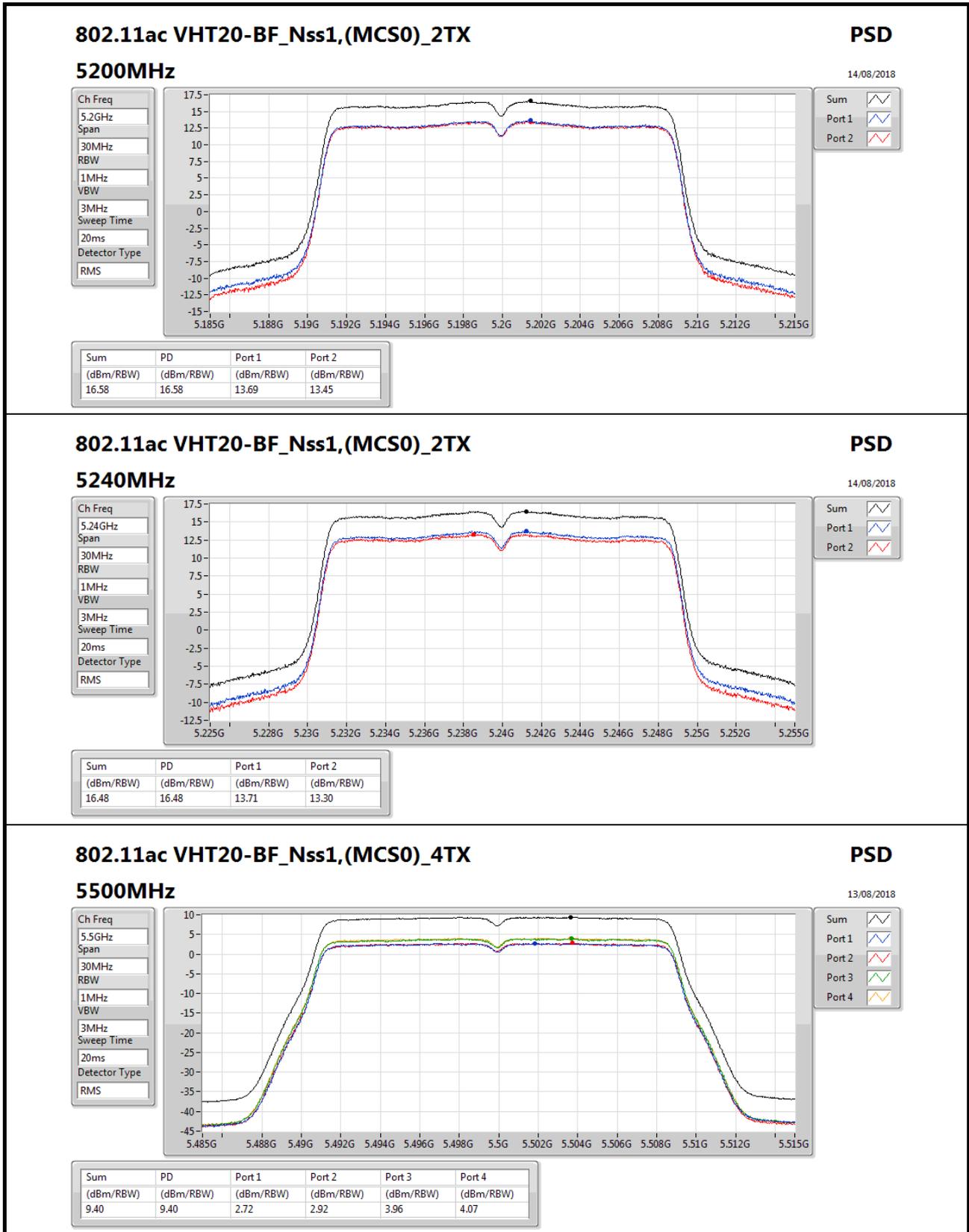
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port Xpower density;

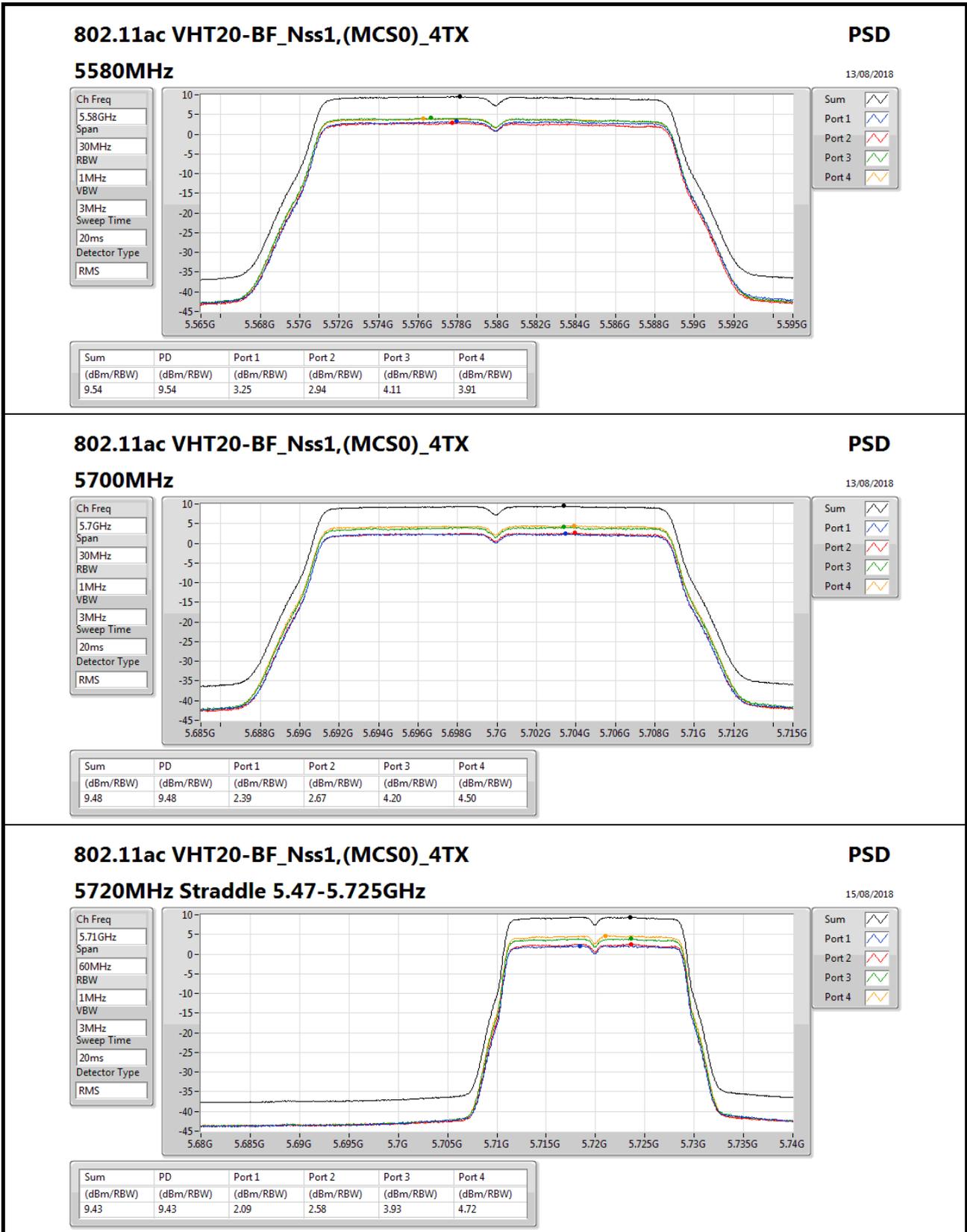


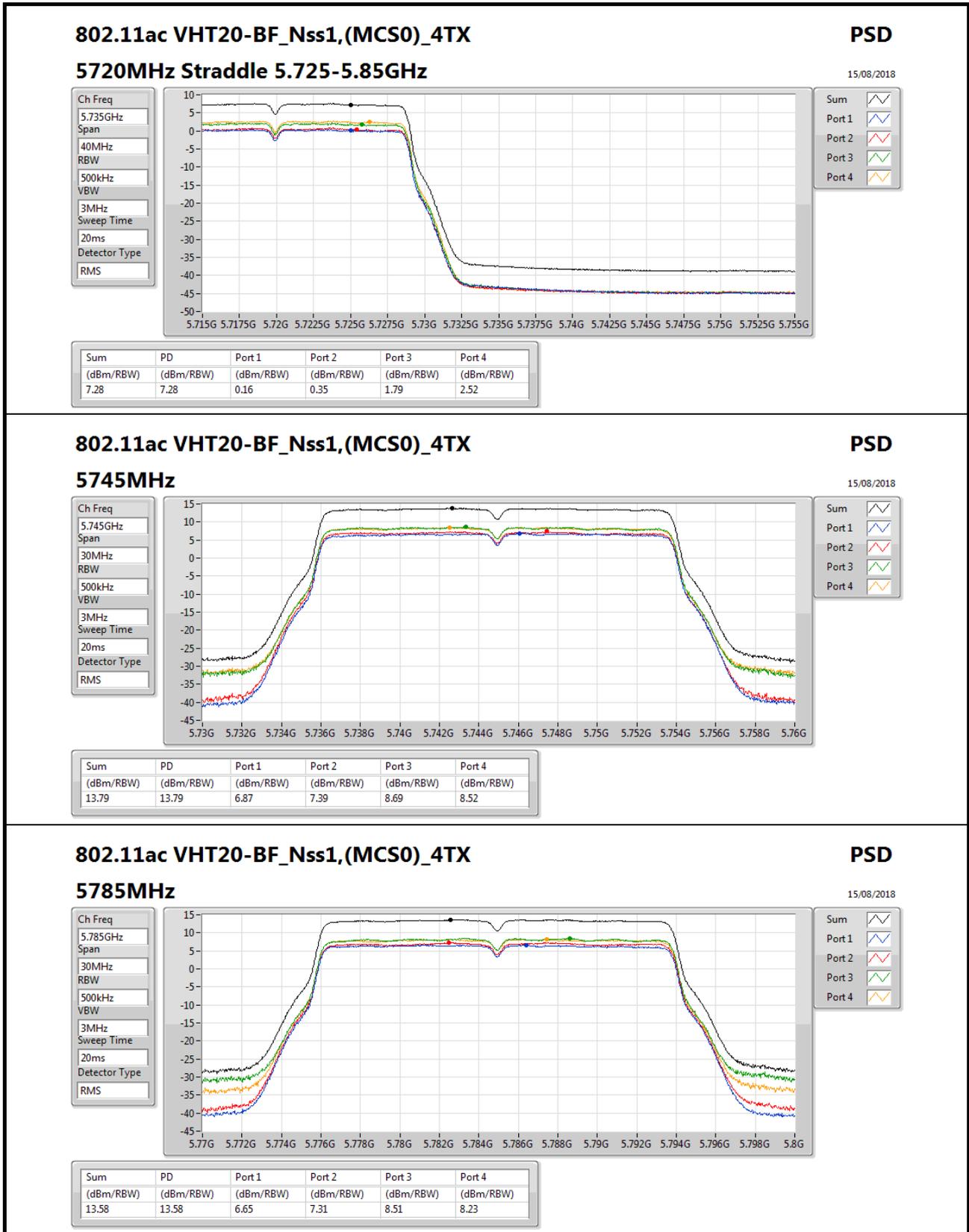


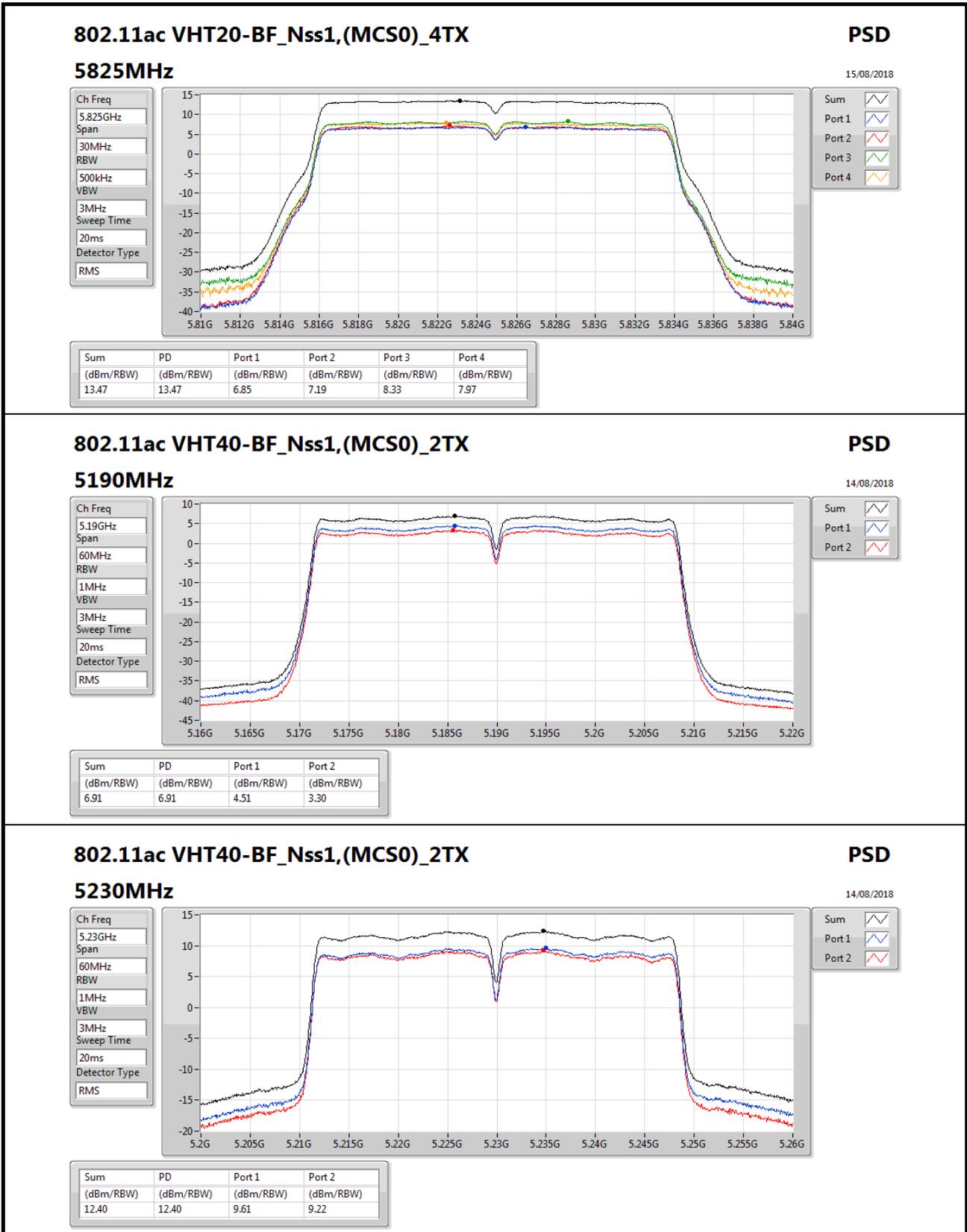


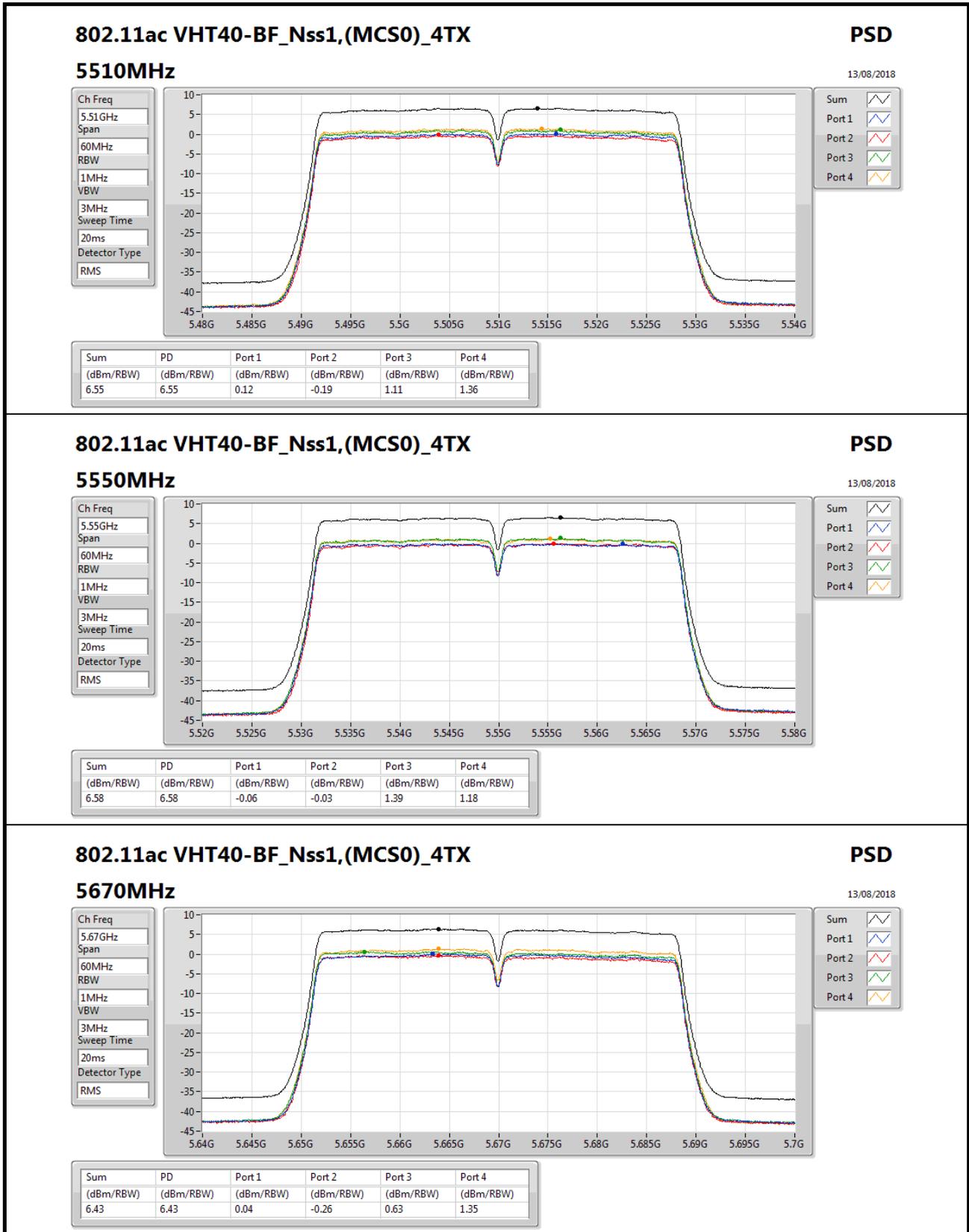


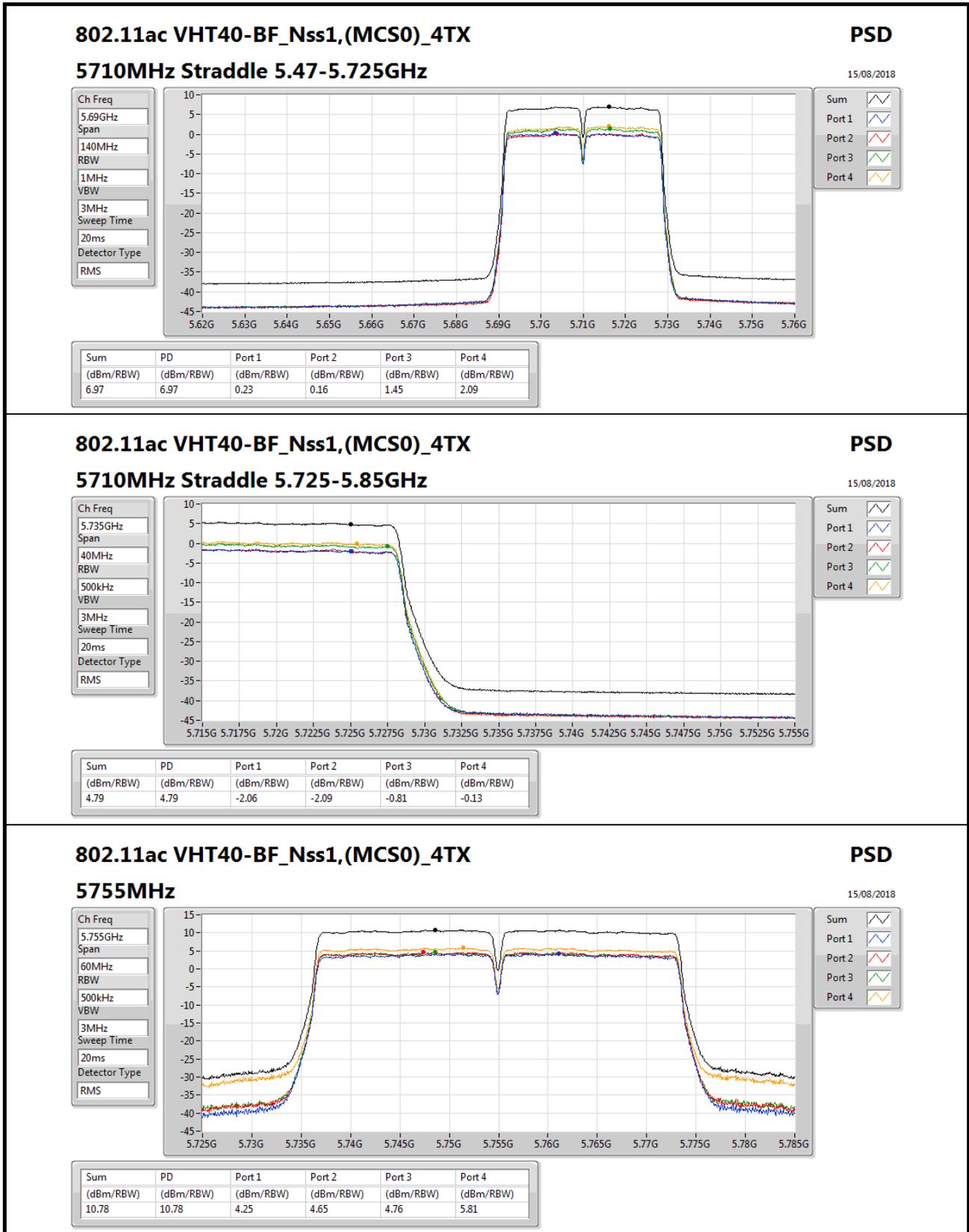


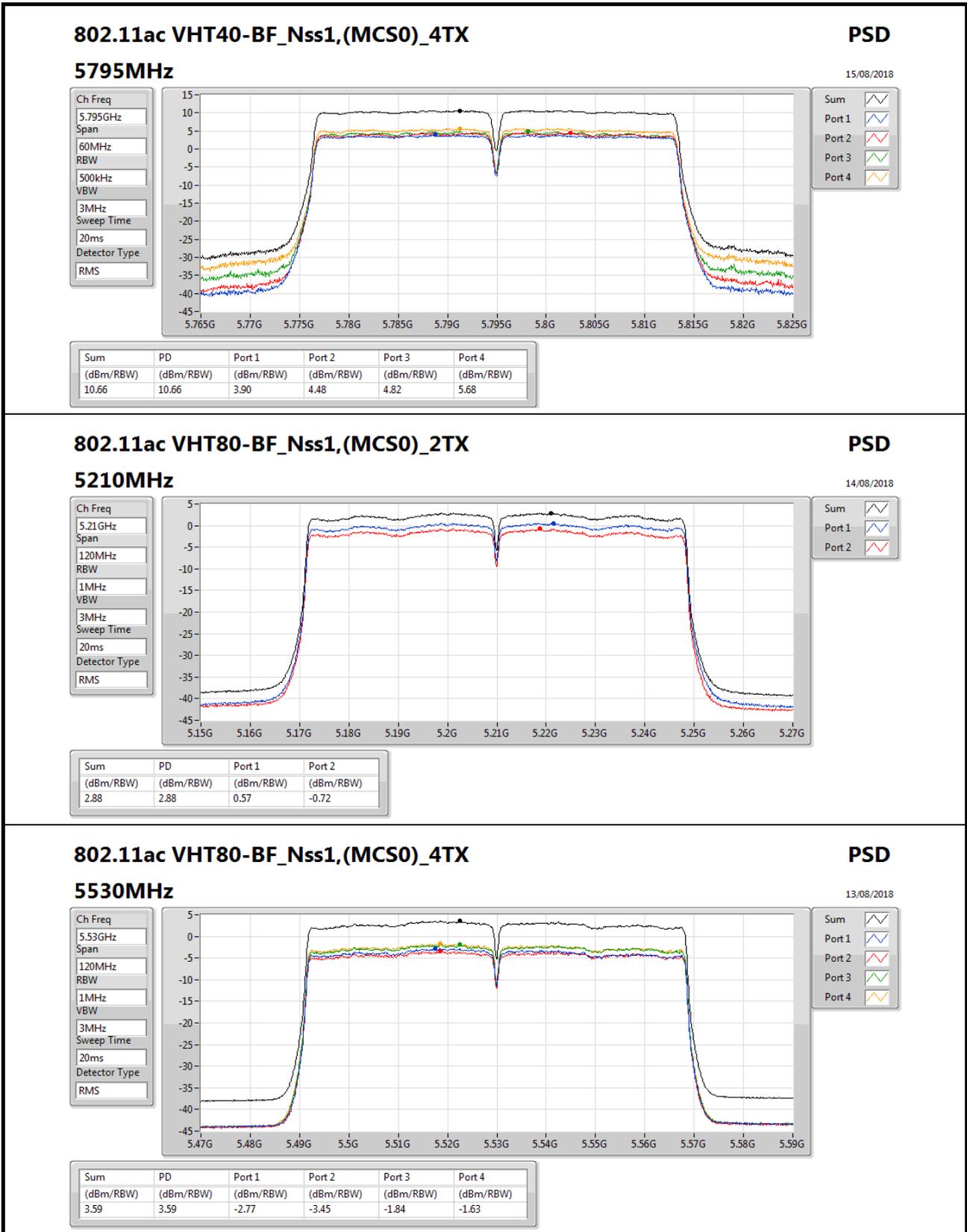


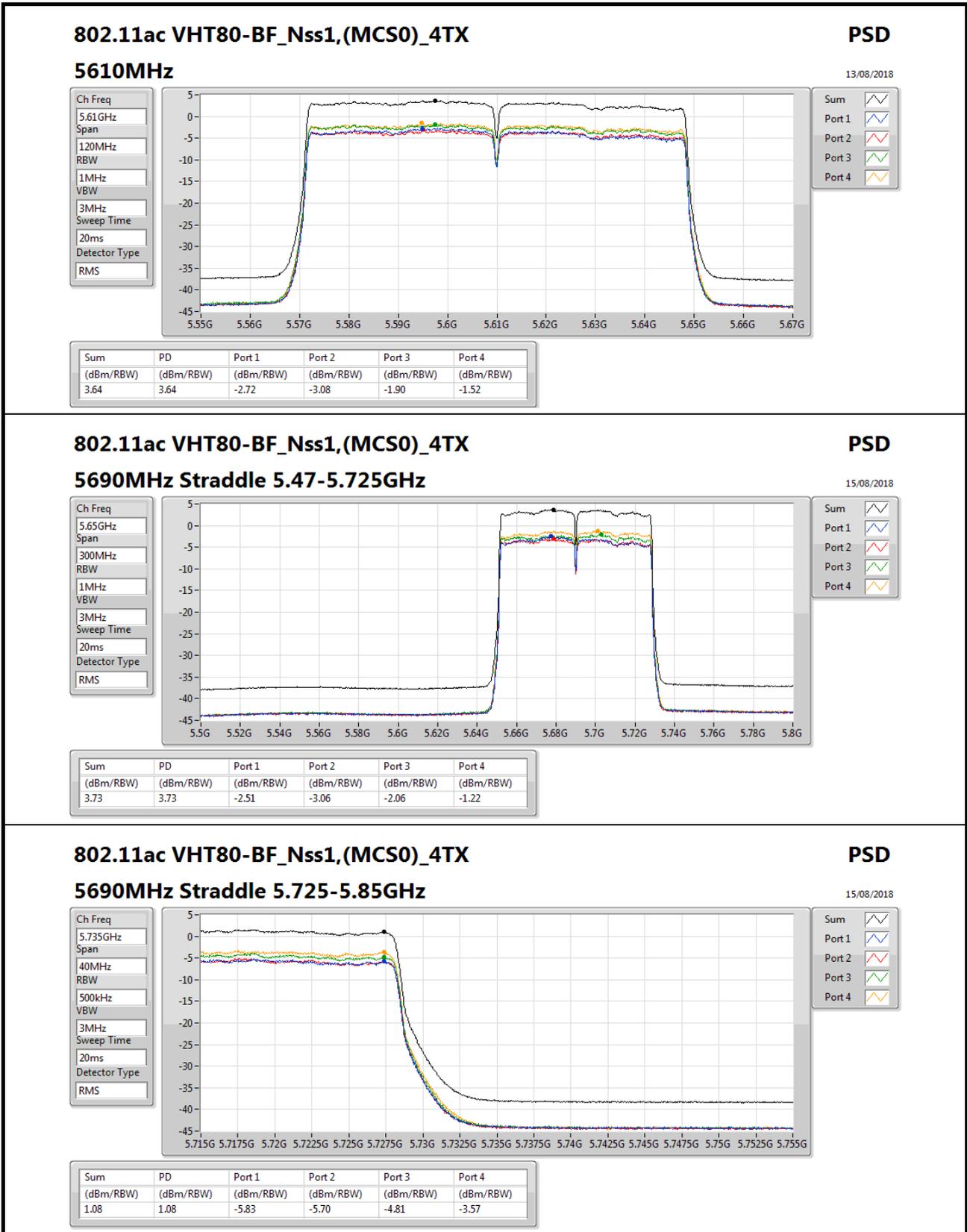


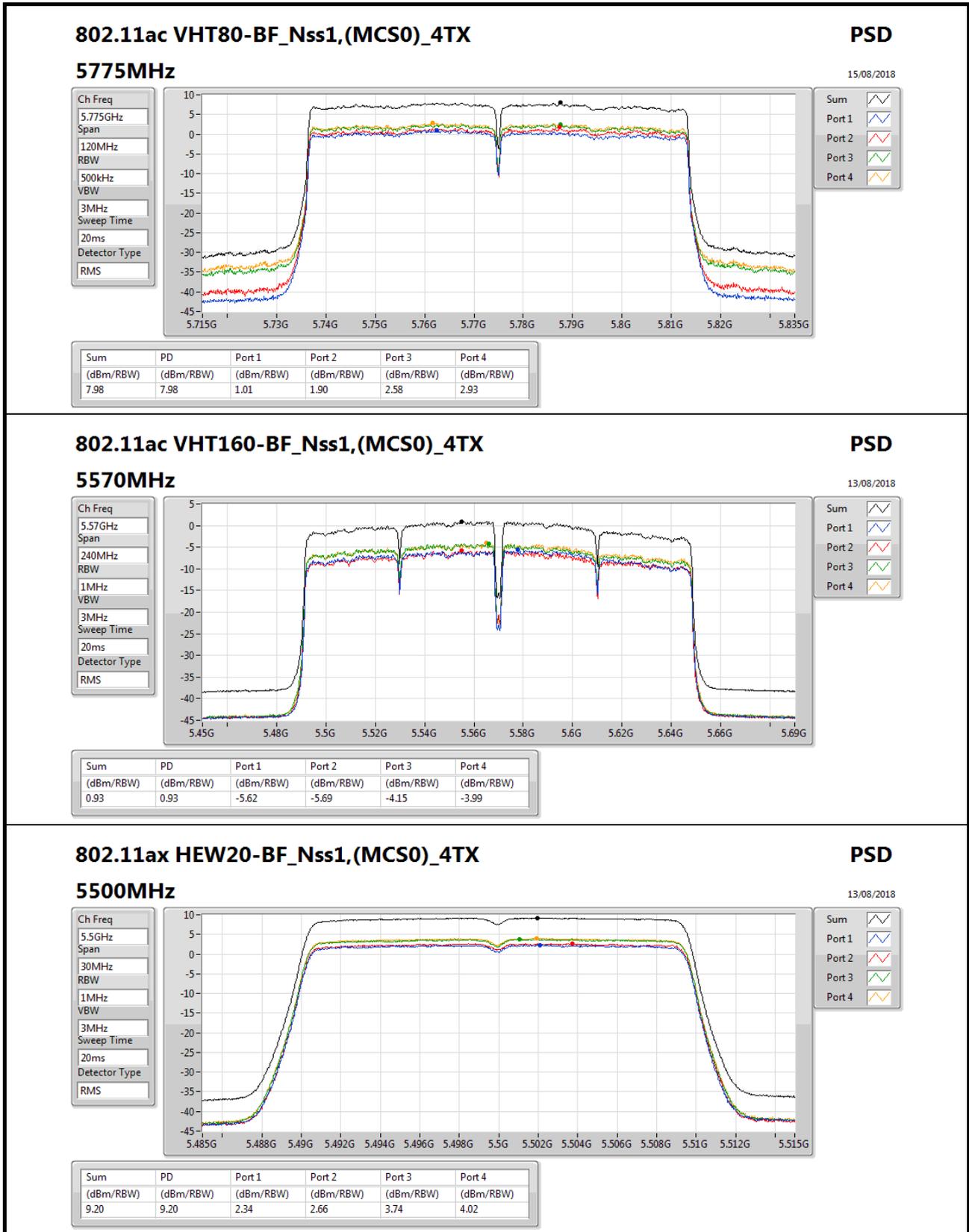


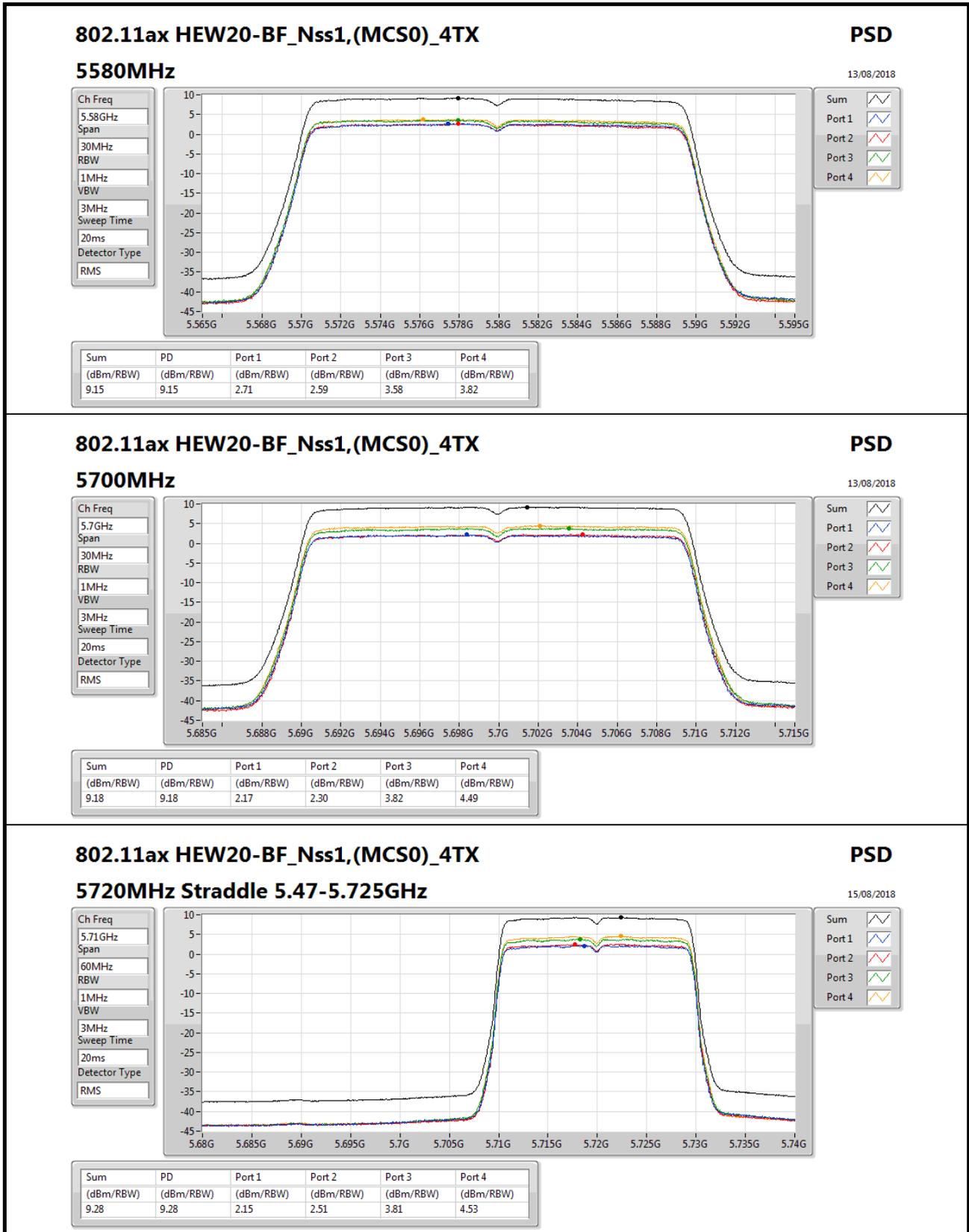


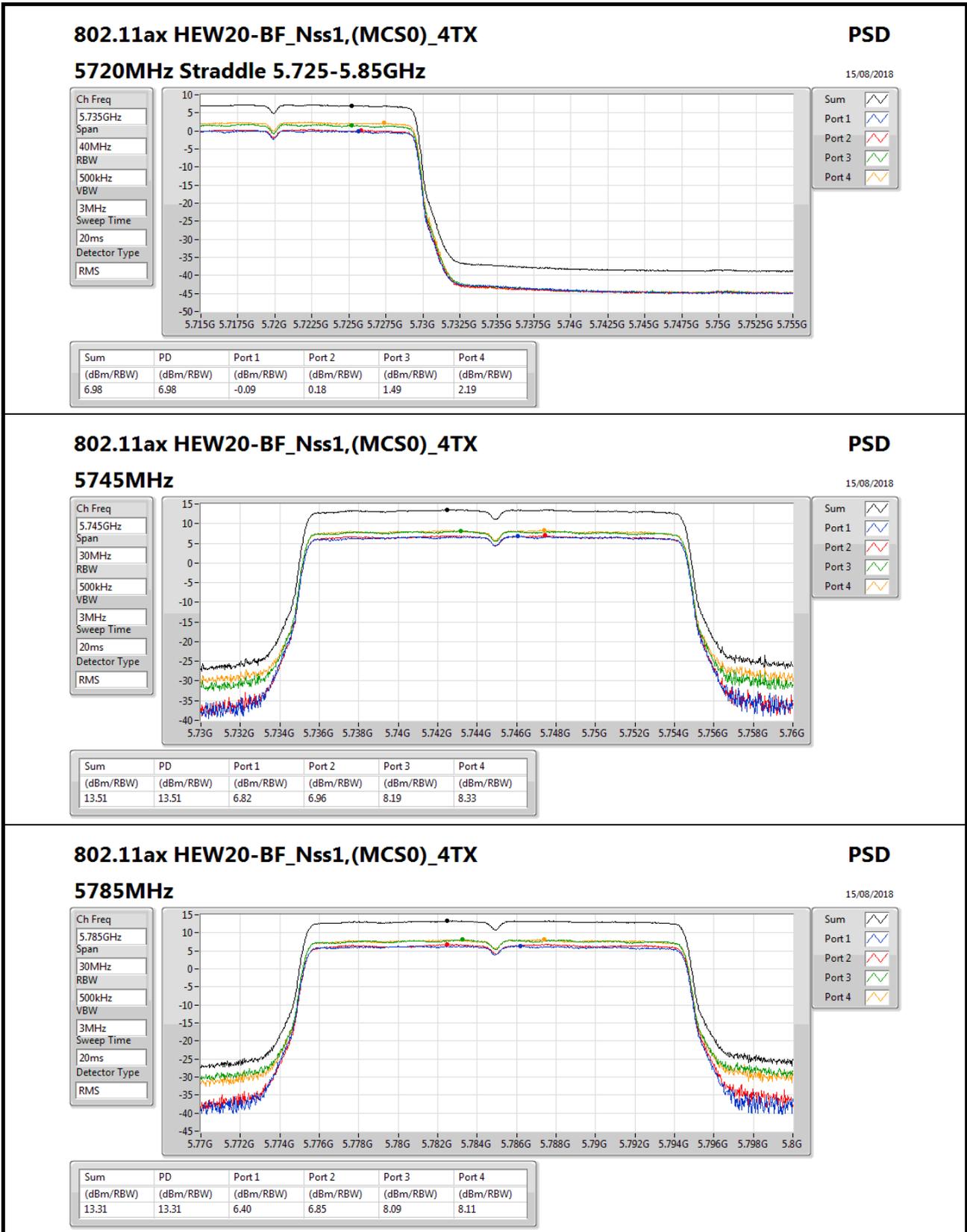


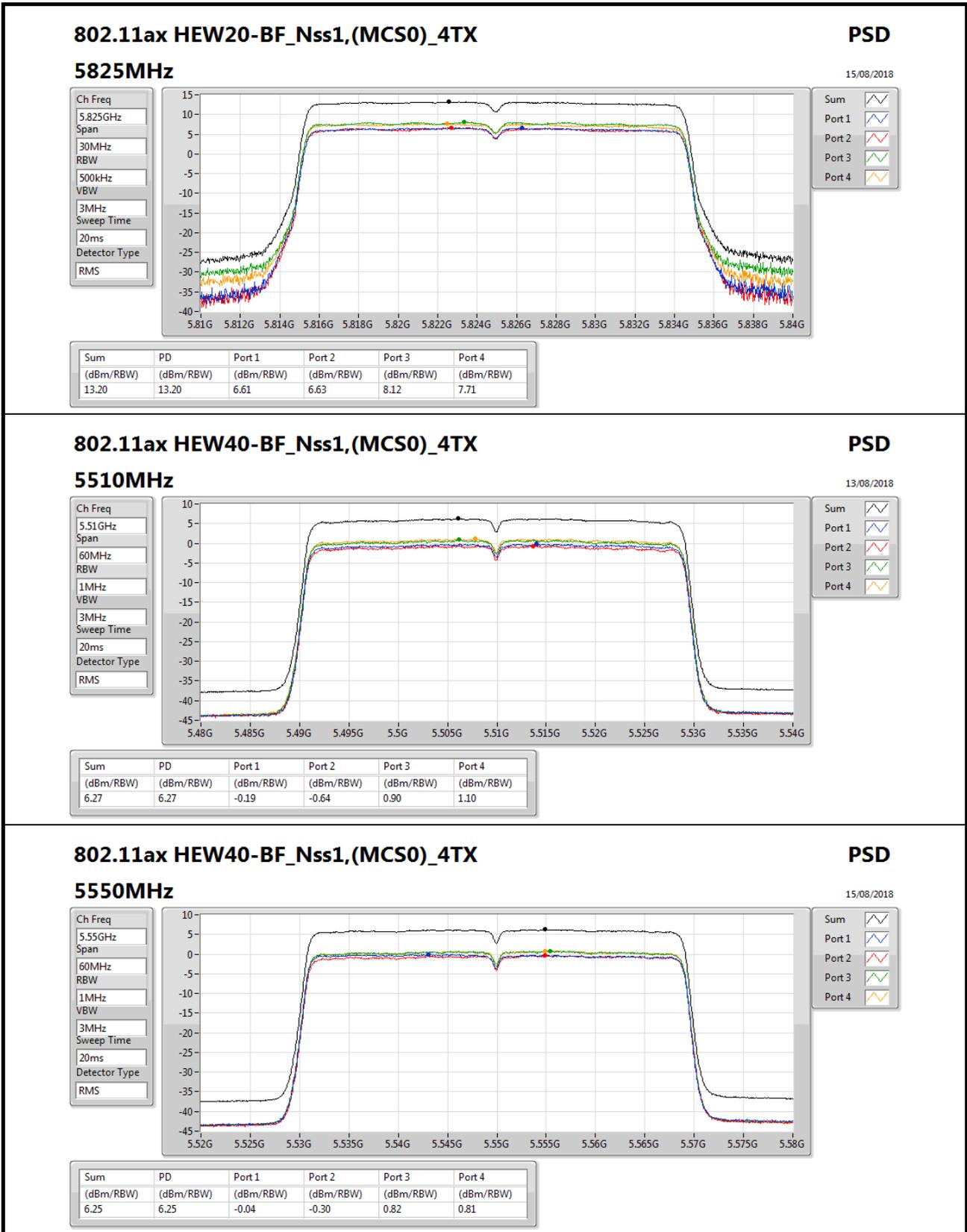


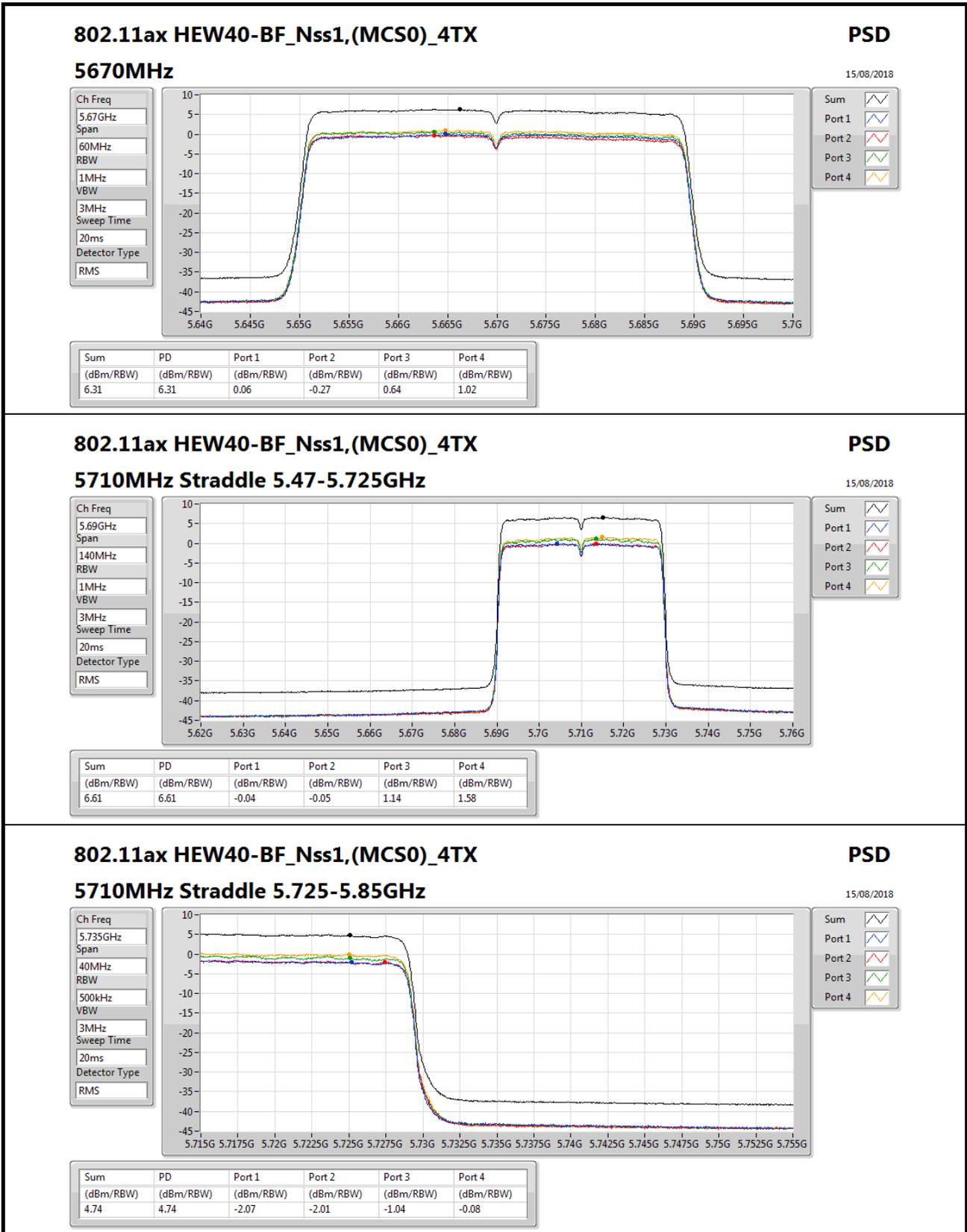


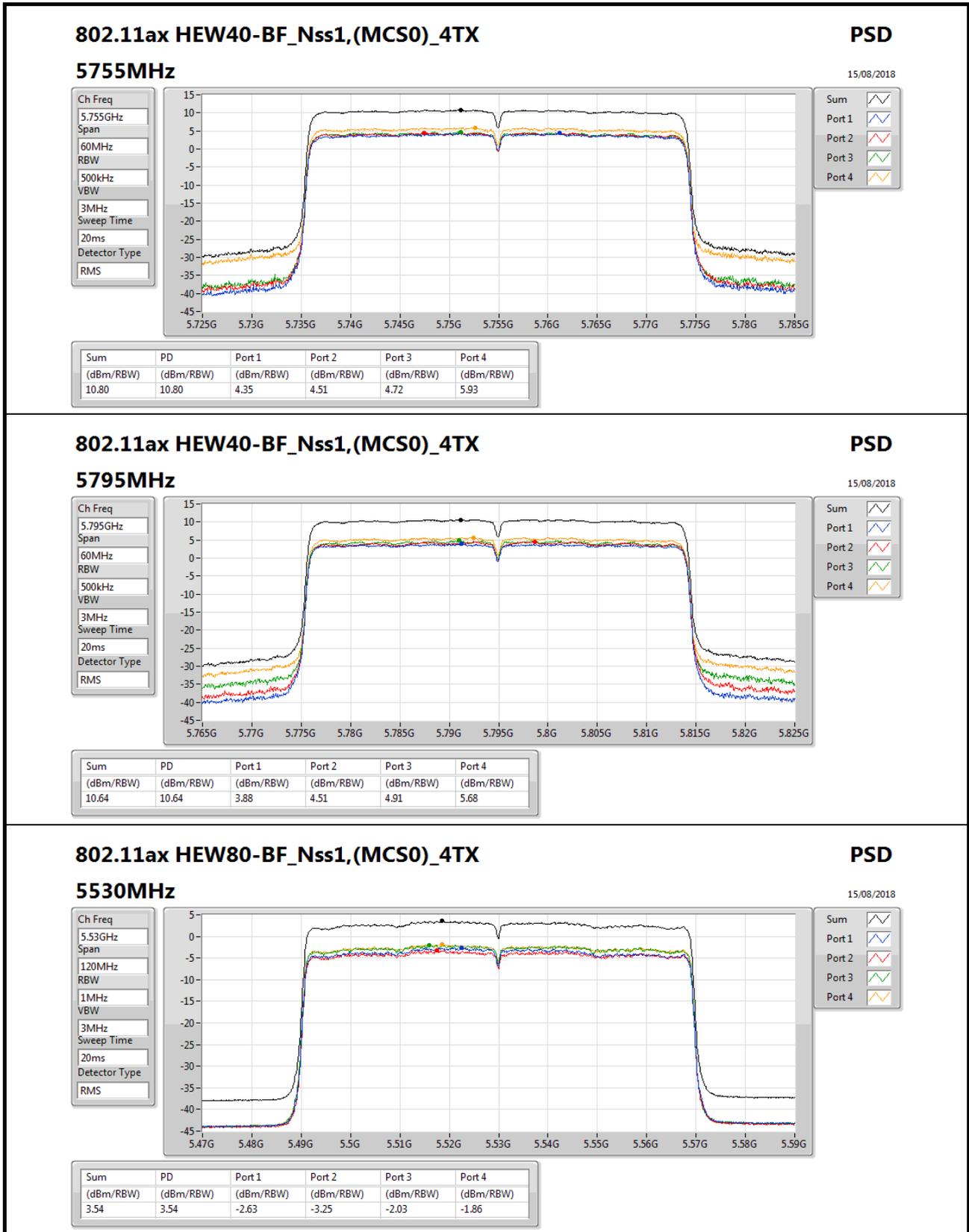


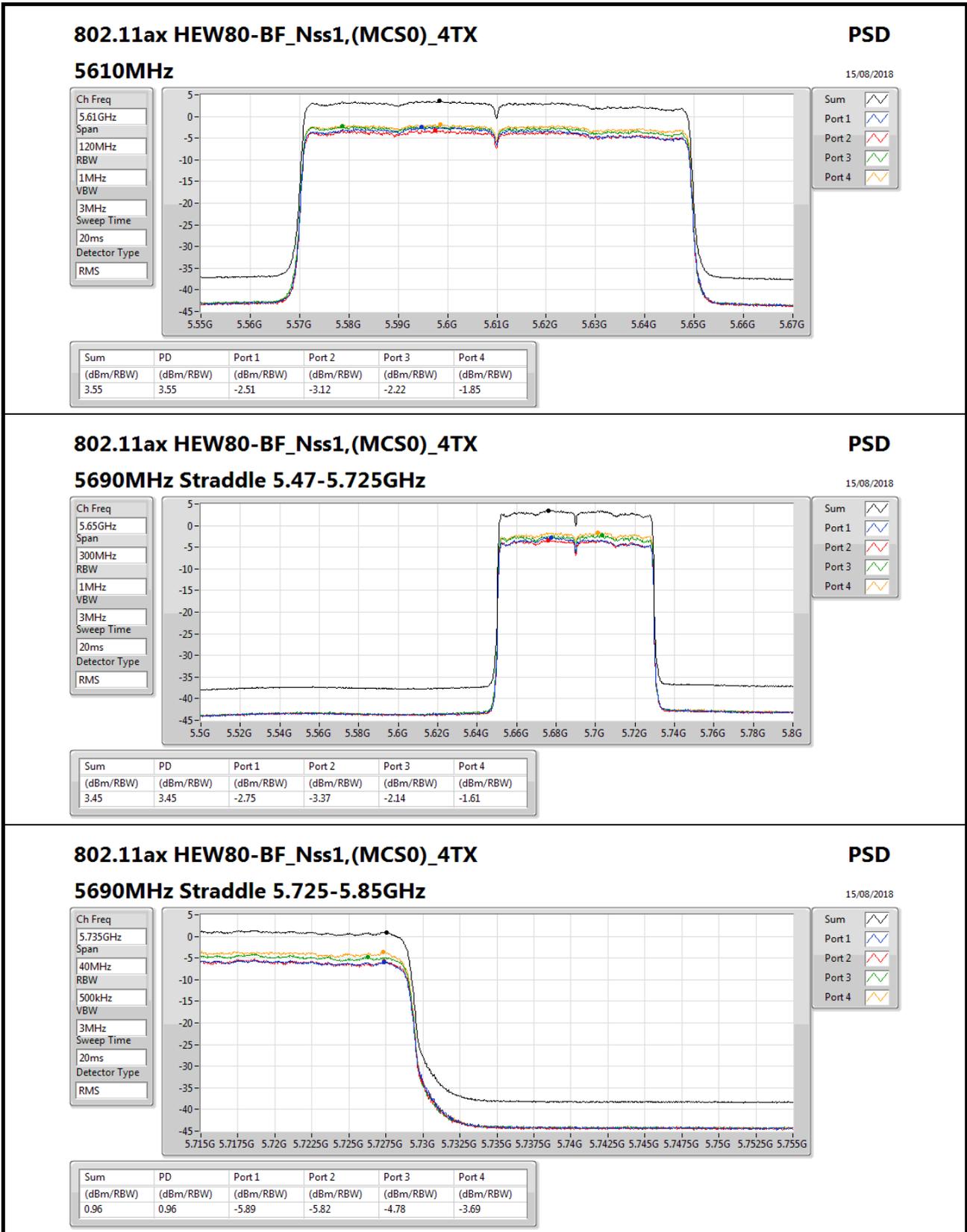












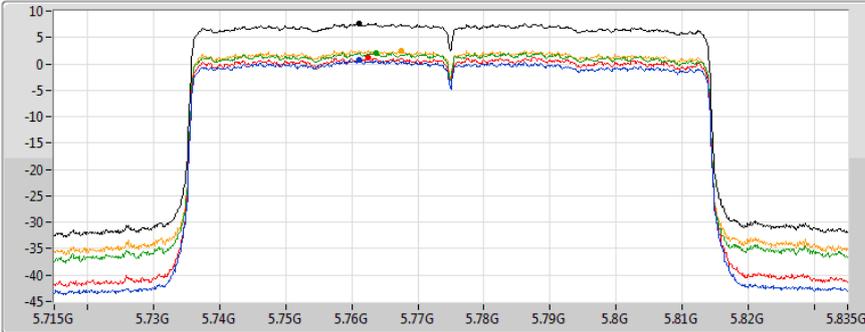
802.11ax HEW80-BF_Nss1,(MCS0)_4TX

PSD

5775MHz

15/08/2018

Ch Freq
5.775GHz
Span
120MHz
RBW
500kHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



Sum
Port 1
Port 2
Port 3
Port 4

Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.65	7.65	0.73	1.29	2.11	2.58

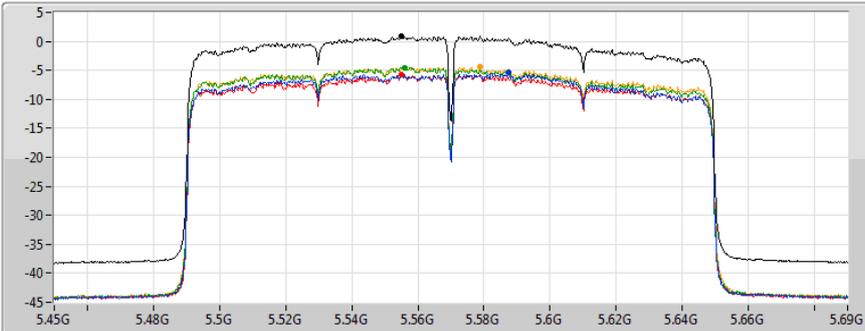
802.11ax HEW160-BF_Nss1,(MCS0)_4TX

PSD

5570MHz

15/08/2018

Ch Freq
5.57GHz
Span
240MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



Sum
Port 1
Port 2
Port 3
Port 4

Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.84	0.84	-5.44	-5.78	-4.54	-4.45

**For Nss2:
Summary**

Mode	PD (dBm/RBW)
5.15-5.25GHz	-
802.11ac VHT20_Nss2,(MCS0)_2TX	16.71
802.11ac VHT40_Nss2,(MCS0)_2TX	12.77
802.11ac VHT80_Nss2,(MCS0)_2TX	4.31
5.47-5.725GHz	-
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	10.81
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	8.54
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	4.95
802.11ac VHT160-BF_Nss2,(MCS0)_4TX	1.69
802.11ax HEW20-BF_Nss2,(MCS0)_4TX	10.67
802.11ax HEW40-BF_Nss2,(MCS0)_4TX	8.06
802.11ax HEW80-BF_Nss2,(MCS0)_4TX	4.90
802.11ax HEW160-BF_Nss2,(MCS0)_4TX	0.32
5.725-5.85GHz	-
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	14.83
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	11.98
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	8.12
802.11ax HEW20-BF_Nss2,(MCS0)_4TX	14.32
802.11ax HEW40-BF_Nss2,(MCS0)_4TX	11.26
802.11ax HEW80-BF_Nss2,(MCS0)_4TX	7.89

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



Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11ac VHT20_Nss2,(MCS0)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	2.00	10.97	10.67			13.80	17.00
5200MHz	Pass	2.00	13.80	13.66			16.71	17.00
5240MHz	Pass	2.00	13.80	13.59			16.63	17.00
802.11ac VHT40_Nss2,(MCS0)_2TX	-	-	-	-	-	-	-	-
5190MHz	Pass	2.00	4.84	3.80			7.29	17.00
5230MHz	Pass	2.00	9.99	9.60			12.77	17.00
802.11ac VHT80_Nss2,(MCS0)_2TX	-	-	-	-	-	-	-	-
5210MHz	Pass	2.00	1.89	0.79			4.31	17.00
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5500MHz	Pass	4.55	3.94	4.18	5.20	5.37	10.66	11.00
5580MHz	Pass	4.55	4.28	4.23	4.99	5.37	10.68	11.00
5700MHz	Pass	4.55	3.34	3.45	5.10	5.67	10.47	11.00
5720MHz Straddle 5.47-5.725GHz	Pass	4.55	3.47	3.88	5.29	6.01	10.81	11.00
5720MHz Straddle 5.725-5.85GHz	Pass	4.55	1.10	1.40	2.81	3.67	8.32	30.00
5745MHz	Pass	4.55	7.81	8.31	9.46	9.52	14.73	30.00
5785MHz	Pass	4.55	7.79	8.38	9.57	9.64	14.79	30.00
5825MHz	Pass	4.55	8.04	8.55	9.58	9.51	14.83	30.00
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5510MHz	Pass	4.55	1.11	0.95	2.19	2.52	7.66	11.00
5550MHz	Pass	4.55	1.29	1.02	2.33	2.20	7.67	11.00
5670MHz	Pass	4.55	1.15	0.99	1.77	2.48	7.56	11.00
5710MHz Straddle 5.47-5.725GHz	Pass	4.55	1.62	1.73	3.05	3.73	8.54	11.00
5710MHz Straddle 5.725-5.85GHz	Pass	4.55	-1.05	-1.09	0.08	1.08	5.83	30.00
5755MHz	Pass	4.55	5.22	5.80	5.90	6.99	11.98	30.00
5795MHz	Pass	4.55	4.88	5.74	6.07	6.88	11.88	30.00
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5530MHz	Pass	4.55	-1.59	-2.11	-0.80	-0.59	4.71	11.00
5610MHz	Pass	4.55	-1.21	-1.98	-1.02	-0.31	4.85	11.00
5690MHz Straddle 5.47-5.725GHz	Pass	4.55	-1.56	-1.97	-0.72	-0.00	4.95	11.00
5690MHz Straddle 5.725-5.85GHz	Pass	4.55	-4.99	-5.15	-3.73	-2.56	2.03	30.00
5775MHz	Pass	4.55	1.18	1.73	2.59	3.02	8.12	30.00
802.11ac VHT160-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5570MHz	Pass	4.55	-4.67	-4.86	-3.46	-3.59	1.69	11.00
802.11ax HEW20-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5500MHz	Pass	4.55	3.46	3.80	4.92	5.01	10.29	11.00
5580MHz	Pass	4.55	4.02	3.84	4.67	4.89	10.31	11.00
5700MHz	Pass	4.55	3.04	3.33	4.78	5.51	10.20	11.00
5720MHz Straddle 5.47-5.725GHz	Pass	4.55	3.28	3.74	5.37	5.96	10.67	11.00
5720MHz Straddle 5.725-5.85GHz	Pass	4.55	1.12	1.38	2.83	3.63	8.30	30.00
5745MHz	Pass	4.55	7.39	7.61	9.11	9.12	14.32	30.00
5785MHz	Pass	4.55	7.27	7.46	9.01	8.99	14.23	30.00
5825MHz	Pass	4.55	7.57	7.39	8.87	8.81	14.15	30.00
802.11ax HEW40-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-



Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
5510MHz	Pass	4.55	0.91	0.18	1.68	2.02	7.15	11.00
5550MHz	Pass	4.55	0.99	0.60	2.02	1.70	7.27	11.00
5670MHz	Pass	4.55	0.83	0.45	1.45	2.06	7.19	11.00
5710MHz Straddle 5.47-5.725GHz	Pass	4.55	1.21	1.33	2.53	3.11	8.06	11.00
5710MHz Straddle 5.725-5.85GHz	Pass	4.55	-0.90	-0.80	0.34	1.24	6.04	30.00
5755MHz	Pass	4.55	4.59	4.78	5.18	6.39	11.26	30.00
5795MHz	Pass	4.55	4.38	4.63	5.27	6.18	11.12	30.00
802.11ax HEW80-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5530MHz	Pass	4.55	-2.03	-2.61	-1.07	-1.02	4.29	11.00
5610MHz	Pass	4.55	-1.93	-2.37	-1.50	-0.76	4.33	11.00
5690MHz Straddle 5.47-5.725GHz	Pass	4.55	-1.50	-2.02	-0.59	0.02	4.90	11.00
5690MHz Straddle 5.725-5.85GHz	Pass	4.55	-4.60	-4.78	-3.37	-2.05	2.36	30.00
5775MHz	Pass	4.55	0.96	1.35	2.35	2.87	7.89	30.00
802.11ax HEW160-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5570MHz	Pass	4.55	-5.86	-6.29	-5.02	-4.92	0.32	11.00

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

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