



FCC Test Report

Equipment : UniFi nanoHD
Brand Name : UBIQUITI
Model No. : UAP-NanoHD
FCC ID : SWX-UAPHDNANO
Standard : 47 CFR FCC Part 15.407
Operating Band : 5150 MHz – 5250 MHz
5250 MHz – 5350 MHz
5470 MHz – 5725 MHz
5725 MHz – 5850 MHz
Applicant / Manufacturer : Ubiquiti Networks, Inc.
685 Third Avenue, 27th Floor New York,
New York 10017 USA
Function : Outdoor; Indoor; Fixed P2P
 Client
TPC Function : TPC

This report was evaluated for permissive change. The product sample received on Dec. 01, 2017 and completely tested on Jan. 23, 2018. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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

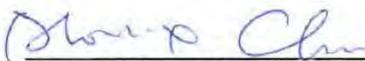

Phoenix Chen / Assistant Manager





Table of Contents

- 1 GENERAL DESCRIPTION5**
- 1.1 Information.....5
- 1.2 Testing Applied Standards10
- 1.3 Testing Location Information10
- 1.4 Measurement Uncertainty11
- 2 TEST CONFIGURATION OF EUT.....12**
- 2.1 Test Condition12
- 2.2 Test Channel Mode12
- 2.3 The Worst Case Measurement Configuration13
- 2.4 Support Equipment.....14
- 2.5 Test Setup Diagram15
- 3 TRANSMITTER TEST RESULT19**
- 3.1 AC Power-line Conducted Emissions19
- 3.2 Emission Bandwidth20
- 3.3 Maximum Conducted Output Power21
- 3.4 Peak Power Spectral Density.....23
- 3.5 Unwanted Emissions.....25
- 3.6 Frequency Stability.....30
- 4 TEST EQUIPMENT AND CALIBRATION DATA31**

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 FREQUENCY STABILITY

APPENDIX G. TEST PHOTOS

PHOTOGRAPHS OF EUT V01



Summary of Test Result

Conformance Test Specifications			
Report Clause	Ref. Std. Clause	Description	Result
1.1.3	15.203	Antenna Requirement	Complied
3.1	15.207	AC Power-line Conducted Emissions	Complied
3.2	15.407(a)	Emission Bandwidth	Complied
3.3	15.407(a)	Maximum Conducted Output Power	Complied
3.4	15.407(a)	Peak Power Spectral Density	Complied
3.5	15.407(b)	Unwanted Emissions	Complied
3.6	15.407(g)	Frequency Stability	Complied



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]
5250-5350		5260-5320	52-64 [4]
5470-5725		5500-5700	100-140 [11]
straddle 5725		5720	144 [1]
5725-5850		5745-5825	149-165 [5]
5150-5250	n (HT40), ac (VHT40)	5190-5230	38-46 [2]
5250-5350		5270-5310	54-62 [2]
5470-5725		5510-5670	102-134 [5]
straddle 5725		5710	142 [1]
5725-5850		5755-5795	151-159 [2]
5150-5250	ac (VHT80)	5210	42 [1]
5250-5350		5290	58 [1]
5470-5725		5530-5610	106-122 [2]
straddle 5725		5690	138 [1]
5725-5850		5775	155 [1]
5150-5350	ac (VHT80+80)	5210+5290 MHz	42+58 [1]
5470-5725		5530+5610 MHz	106+122 [1]

Non-Beamforming for Indoor

Band	Mode	BWch (MHz)	Nant
5.25-5.35GHz	802.11a	20	4TX
5.47-5.725GHz	802.11a	20	4TX
5.725-5.85GHz	802.11a	20	4TX
5.25-5.35GHz	802.11ac VHT20	20	4TX
5.47-5.725GHz	802.11ac VHT20	20	4TX
5.725-5.85GHz	802.11ac VHT20	20	4TX
5.25-5.35GHz	802.11ac VHT40	40	4TX
5.47-5.725GHz	802.11ac VHT40	40	4TX
5.725-5.85GHz	802.11ac VHT40	40	4TX
5.25-5.35GHz	802.11ac VHT80	80	4TX
5.47-5.725GHz	802.11ac VHT80	80	4TX
5.725-5.85GHz	802.11ac VHT80	80	4TX



Band	Mode	BWch (MHz)	Nant
5.15-5.25GHz	802.11ac VHT80+80	80	4TX(Port 1/2)
5.25-5.35GHz	802.11ac VHT80+80	80	4TX(Port 3/4)
5.47-5.725GHz	802.11ac VHT80+80	80+80	4TX

Non-Beamforming for Outdoor

Band	Mode	BWch (MHz)	Nant
5.15-5.25GHz	802.11a	20	4TX
5.25-5.35GHz	802.11a	20	4TX
5.47-5.725GHz	802.11a	20	4TX
5.725-5.85GHz	802.11a	20	4TX
5.15-5.25GHz	802.11ac VHT20	20	4TX
5.25-5.35GHz	802.11ac VHT20	20	4TX
5.47-5.725GHz	802.11ac VHT20	20	4TX
5.725-5.85GHz	802.11ac VHT20	20	4TX
5.15-5.25GHz	802.11ac VHT40	40	4TX
5.25-5.35GHz	802.11ac VHT40	40	4TX
5.47-5.725GHz	802.11ac VHT40	40	4TX
5.725-5.85GHz	802.11ac VHT40	40	4TX
5.15-5.25GHz	802.11ac VHT80	80	4TX
5.25-5.35GHz	802.11ac VHT80	80	4TX
5.47-5.725GHz	802.11ac VHT80	80	4TX
5.725-5.85GHz	802.11ac VHT80	80	4TX
5.15-5.25GHz	802.11ac VHT80+80	80	4TX(Port 1/2)
5.25-5.35GHz	802.11ac VHT80+80	80	4TX(Port 3/4)
5.47-5.725GHz	802.11ac VHT80+80	80+80	4TX



Beamforming for Indoor

Band	Mode	BWch (MHz)	Nant
5.15-5.25GHz	802.11ac VHT20-BF	20	4TX
5.25-5.35GHz	802.11ac VHT20-BF	20	4TX
5.47-5.725GHz	802.11ac VHT20-BF	20	4TX
5.725-5.85GHz	802.11ac VHT20-BF	20	4TX
5.15-5.25GHz	802.11ac VHT40-BF	40	4TX
5.25-5.35GHz	802.11ac VHT40-BF	40	4TX
5.47-5.725GHz	802.11ac VHT40-BF	40	4TX
5.725-5.85GHz	802.11ac VHT40-BF	40	4TX
5.15-5.25GHz	802.11ac VHT80-BF	80	4TX
5.25-5.35GHz	802.11ac VHT80-BF	80	4TX
5.47-5.725GHz	802.11ac VHT80-BF	80	4TX
5.725-5.85GHz	802.11ac VHT80-BF	80	4TX
5.15-5.25GHz	802.11ac VHT80+80-BF	80	4TX(Port 1/2)
5.25-5.35GHz	802.11ac VHT80+80-BF	80	4TX(Port 3/4)
5.47-5.725GHz	802.11ac VHT80+80-BF	80+80	4TX

Beamforming for Outdoor

Band	Mode	BWch (MHz)	Nant
5.15-5.25GHz	802.11ac VHT20-BF	20	4TX
5.25-5.35GHz	802.11ac VHT20-BF	20	4TX
5.47-5.725GHz	802.11ac VHT20-BF	20	4TX
5.725-5.85GHz	802.11ac VHT20-BF	20	4TX
5.15-5.25GHz	802.11ac VHT40-BF	40	4TX
5.25-5.35GHz	802.11ac VHT40-BF	40	4TX
5.47-5.725GHz	802.11ac VHT40-BF	40	4TX
5.725-5.85GHz	802.11ac VHT40-BF	40	4TX
5.15-5.25GHz	802.11ac VHT80-BF	80	4TX
5.25-5.35GHz	802.11ac VHT80-BF	80	4TX
5.47-5.725GHz	802.11ac VHT80-BF	80	4TX
5.725-5.85GHz	802.11ac VHT80-BF	80	4TX
5.15-5.25GHz	802.11ac VHT80+80-BF	80	4TX(Port 1/2)
5.25-5.35GHz	802.11ac VHT80+80-BF	80	4TX(Port 3/4)
5.47-5.725GHz	802.11ac VHT80+80-BF	80+80	4TX



Note:

- ♦ 11a, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- ♦ VHT20, VHT40, VHT80, VHT80+80 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.
- ♦ BWch is the nominal channel bandwidth.

1.1.2 Table for 80+80 MHz Mode

Type	Channel No.	Frequency
13	42+58	5210+5290 MHz
14	106+122	5530+5610 MHz

1.1.3 Antenna Information

Ant.	Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	1	-	-	internal antenna	Murata	3
	3	-	-	internal antenna	Murata	3
2	2	-	-	internal antenna	Murata	3
	4	-	-	internal antenna	Murata	3

1.1.4 EUT Information

Operational Condition			
EUT Power Type	From PoE		
Beamforming Function	<input checked="" type="checkbox"/> With beamforming	<input type="checkbox"/> Without beamforming	
Weather Band	<input checked="" type="checkbox"/> With 5600~5650MHz	<input type="checkbox"/> Without 5600~5650MHz	
Type of EUT			
<input checked="" type="checkbox"/>	Stand-alone		
<input type="checkbox"/>	Combined (EUT where the radio part is fully integrated within another device)		
	Combined Equipment - Brand Name / Model No.:	...	
<input type="checkbox"/>	Plug-in radio (EUT intended for a variety of host systems)		
	Host System - Brand Name / Model No.:	...	
<input type="checkbox"/>	Other:		



1.1.5 Mode Test Duty Cycle

Non-Beamforming for Indoor

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11a	0.807	0.931	1.398m	1k
802.11ac VHT20	0.797	0.985	1.319m	1k
802.11ac VHT40	0.645	1.904	657.813u	3k
802.11ac VHT80	0.487	3.125	327.5u	10k
802.11ac VHT80+80	0.345	4.622	187.5u	10k

Non-Beamforming for Outdoor

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11a	0.797	0.985	1.397m	1k
802.11ac VHT20	0.782	1.068	1.317m	1k
802.11ac VHT40	0.647	1.891	657.813u	3k
802.11ac VHT80	0.504	2.976	328.125u	10k
802.11ac VHT80+80	0.345	4.622	187.5u	10k

Beamforming for Indoor

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11ac VHT20-BF	0.988	0.052	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11ac VHT40-BF	0.978	0.097	2.422m	1k
802.11ac VHT80-BF	0.993	0.031	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11ac VHT80+80-BF	0.519	2.848	230u	10k

Beamforming for Outdoor

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11ac VHT20-BF	0.988	0.052	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11ac VHT40-BF	0.978	0.097	2.422m	1k
802.11ac VHT80-BF	0.993	0.031	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11ac VHT80+80-BF	0.519	2.848	230u	10k



1.1.6 Table for Permissive Change

This product is an extension of original one reported under Sporton project number: FR7O2609-02

Below is the table for the change of the product with respect to the original one.

Modifications	Performance Checking
1. Adding DFS bands of operation (5250MHz~5350MHz and 5470MHz~5725MHz) by software. 2. Enable 802.11a/n/ac VHT80+VHT80 bandwidth. 3. Enable outdoor operation 4. Enable 5GHz transmit beamforming operation in all band by software.	All

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
- ◆ KDB 789033 D02 v02r01
- ◆ KDB 662911 D01 v02r01

1.3 Testing Location Information

Testing Location		
<input checked="" 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
Test site Designation No. TW1190 with FCC.		
<input type="checkbox"/>	JHUBEI	ADD : No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County, Taiwan (R.O.C.) TEL : 886-3-656-9065 FAX : 886-3-656-9085
Test site Designation No. TW0006 with FCC.		

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH01-HY	Tim	24.5°C / 65%	20/Jan/2018
Radiated	03CH09-HY	Eric	22.5°C / 62%	16/Jan/2018
AC Conduction < Non-Beamforming >	CO04-HY	Thor Wei	22.4°C / 60.5%	05/Dec/2017
AC Conduction <Beamforming>	CO04-HY	Eric	22.4°C / 60.5%	23/Jan/2018



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)	3.6 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	3.0 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	4.3 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.9 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.3 dB	Confidence levels of 95%



2 Test Configuration of EUT

2.1 Test Condition

Non-Beamforming

Condition Item	Abbreviation/Remark	Remark
RF Conducted	Abbreviation	Remark
TnomVnom	Tnom	20°C
	Vnom	120V
Freq. Stability	Abbreviation	Remark
-10°C		
0°C		
10°C		
20°C		
30°C		
40°C		
50°C		
60°C		
70°C		
138V		
120V		
102V		

Beamforming

Condition Item	Abbreviation/Remark	Remark
RF Conducted	Abbreviation	Remark
TnomVnom	Tnom	20°C
	Vnom	120V

2.2 Test Channel Mode

Non-Beamforming

Test Software Version	0.0.1.58
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Beamforming

Test Software	Dos
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2.3 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
1	POE Mode

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

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

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis
Operating Mode	Normal Link
1	2.4G+5G;EUT =Y
2	2.4G+5G;EUT =X
Refer to Sporton Test Report No.: FA7O2609-01 for Co-location RF Exposure Evaluation.	



2.4 Support Equipment

Support Equipment – RF Conducted				
No.	Equipment	Brand Name	Model Name	FCC ID
1	Notebook	DELL	E5410	DoC
2	Adapter for NB	DELL	HA65NM130	DoC
3	AC Source	GW	APS-9102	-
4	PoE for EUT	D-Link	DWL-P200	-
5	Client	UBNT	UAP-HD-Nano_Tier 1	-
6	PoE for client	CERIO	POE-S48G	-

Note. Support equipment No.5 was provided by customer.

Support Equipment – Radiated Emission				
No.	Equipment	Brand Name	Model Name	FCC ID
1	Client	UBNT	UAP-HD-Nano_Tier 1	-
2	Notebook	DELL	E4300	-
3	PoE for client	CERIO	POE-S48G	-
4	PoE	D-Link	DWL-P200	-

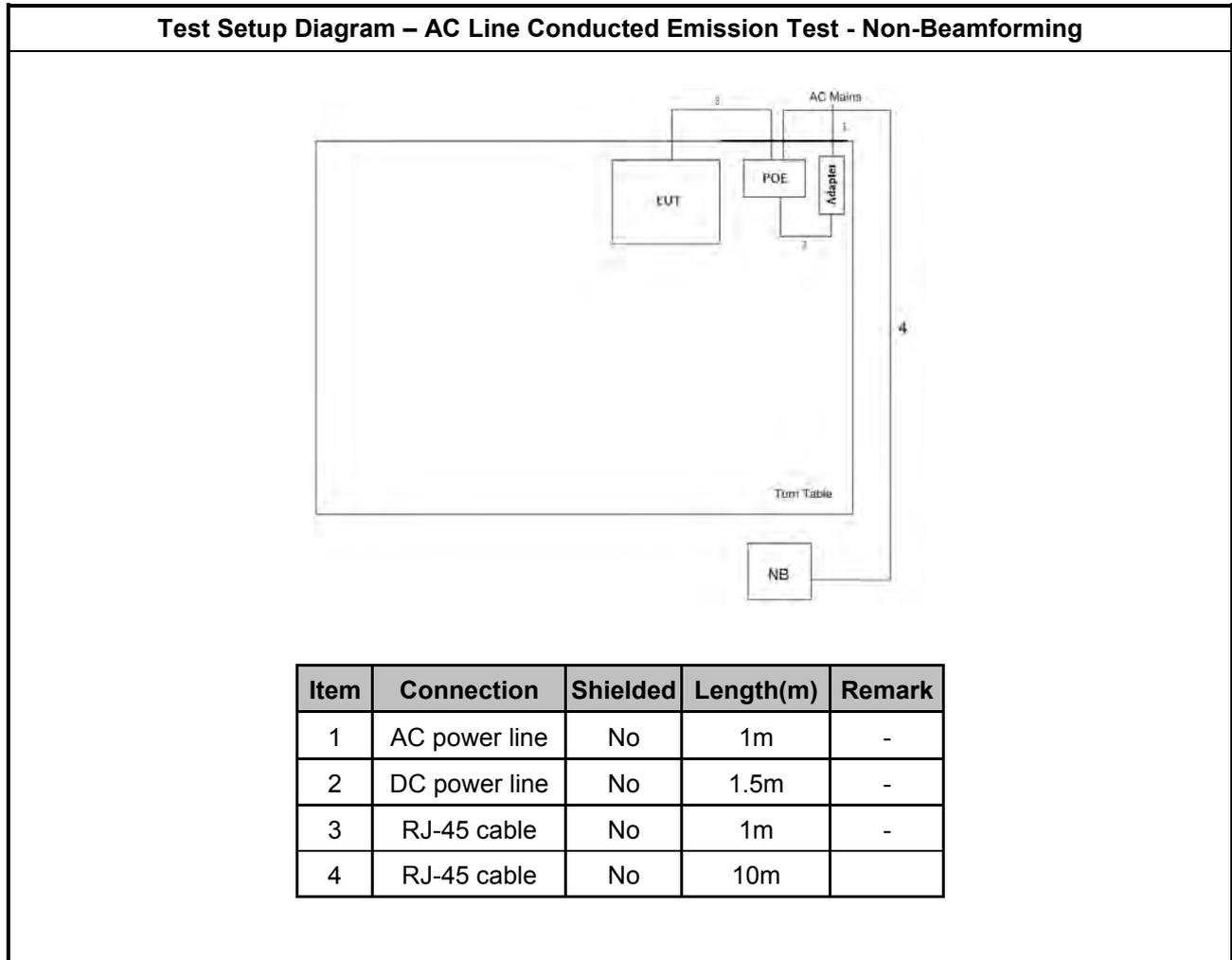
Note. Support equipment No.1 was provided by customer.

Support Equipment – AC Conduction - Non-Beamforming				
No.	Equipment	Brand Name	Model Name	FCC ID
1	PoE(SPORTON)	D-Link	DWL-P200	-
2	AC adapter(PoE)	D-Link	DSA-0421S-50	-

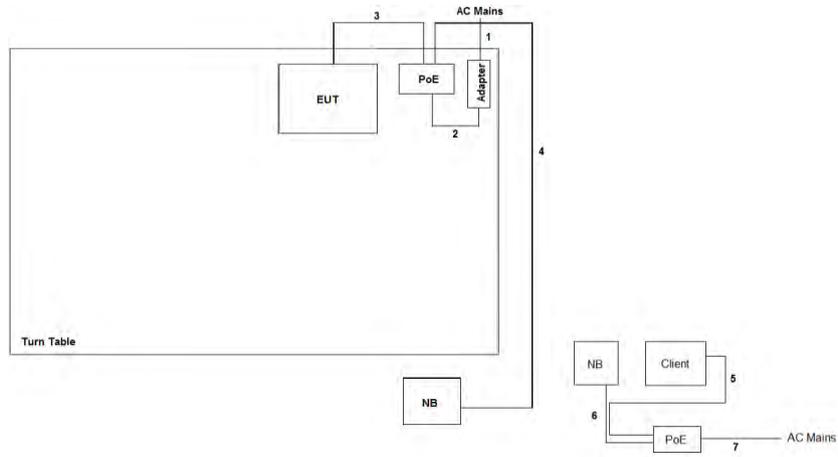
Support Equipment – AC Conduction - Beamforming				
No.	Equipment	Brand Name	Model Name	FCC ID
1	PoE	D-Link	DWL-P200	-
2	Client	UBNT	UAP-HD-Nano_Tier 1	-
3	Notebook	DELL	E4300	-
4	PoE for client	CERIO	POE-S48G	-
5	AC adapter(PoE)	D-Link	DSA-0421S-50	-

Note. Support equipment No.2 was provided by customer.

2.5 Test Setup Diagram

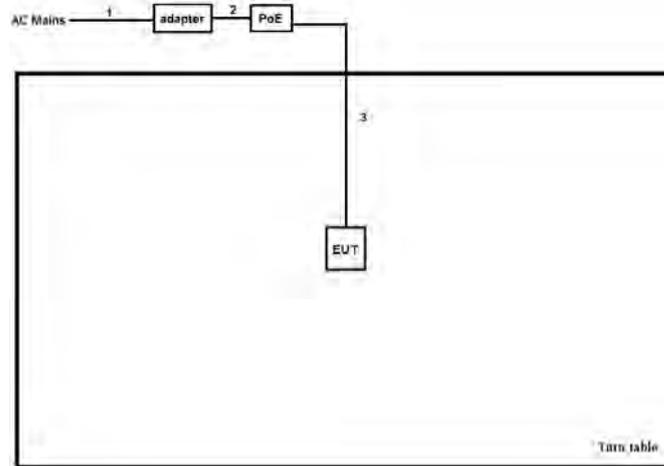


Test Setup Diagram – AC Line Conducted Emission Test - Beamforming



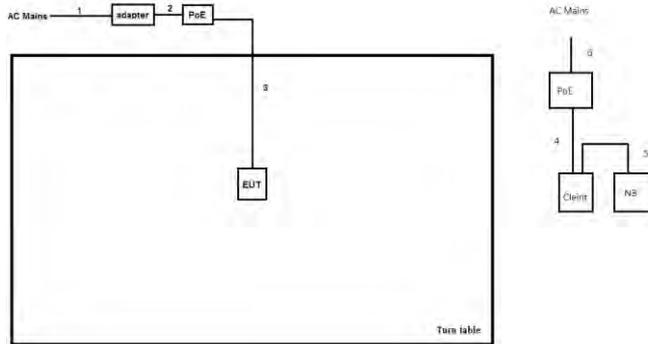
Item	Connection	Shielded	Length(m)	Remark
1	AC power line	No	1m	-
2	DC power line	No	1.5m	-
3	RJ-45 cable	No	1m	-
4	RJ-45 cable	No	10m	
5	RJ-45 Cable	No	1m	-
6	RJ-45Cable	No	1m	-
7	AC power line	No	1.8m	-

Test Setup Diagram - Radiated Test - Non-Beamforming



Item	Connection	Shielded	Length(m)	Remark
1	AC Power line	No	1.8m	-
2	DC Power line	No	1.75m	-
3	LAN cable	No	10m	-

Test Setup Diagram - Radiated Test - Beamforming



Item	Connection	Shielded	Length(m)	Remark
1	AC Power line	No	1.8m	-
2	DC Power line	No	1.75m	-
3	LAN cable	No	10m	-
4	LAN cable	No	10m	-
5	LAN cable	No	1m	-
6	AC Power line	No	1.75m	-

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.

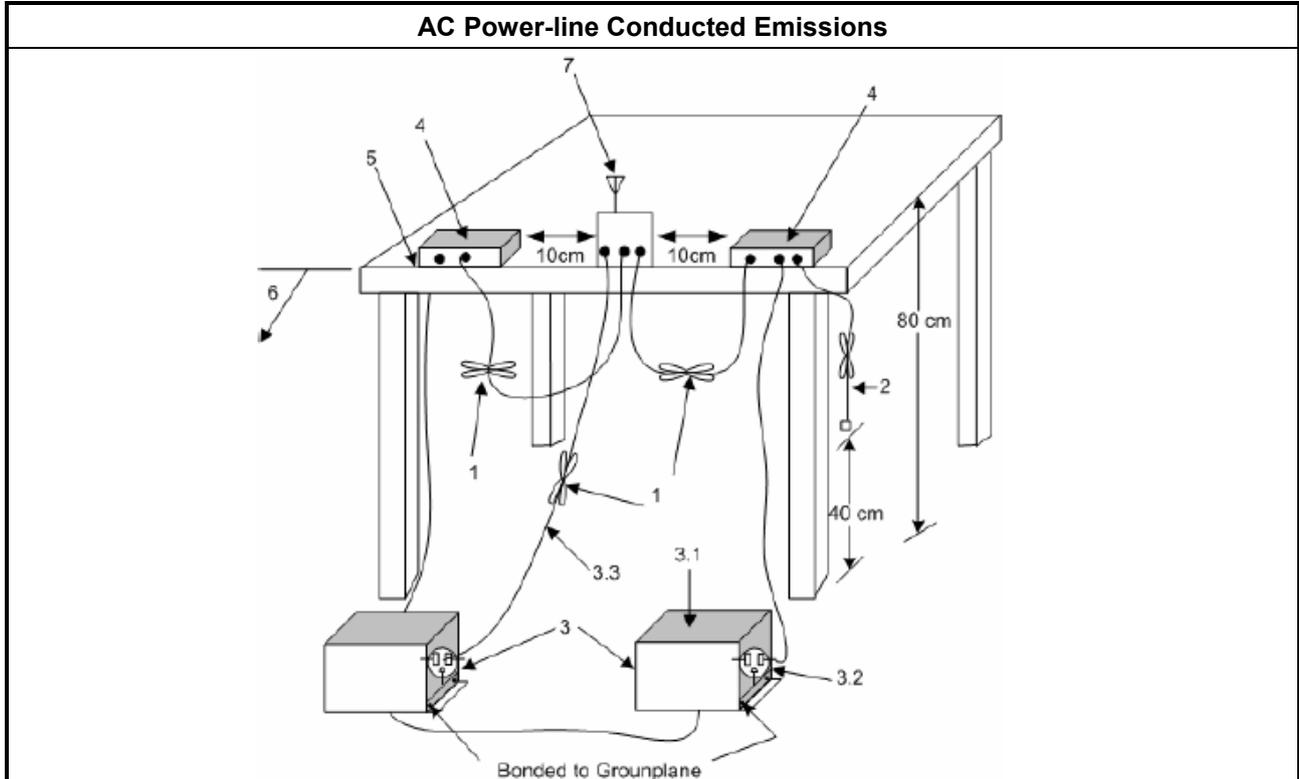
3.1.2 Measuring Instruments

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 checked="" 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.

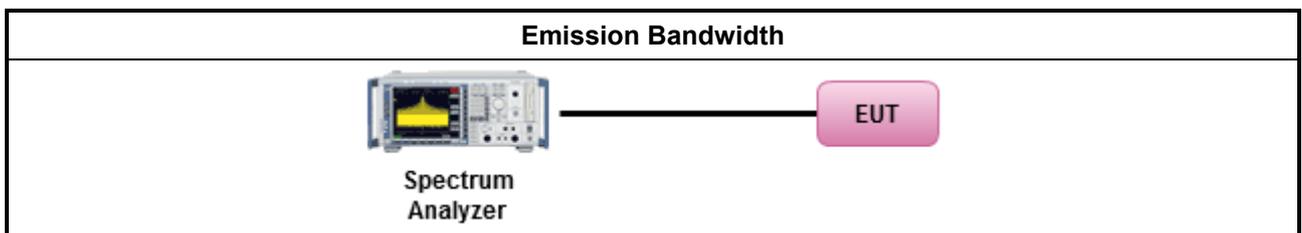
3.2.2 Measuring Instruments

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: 	
<input checked="" type="checkbox"/>	Refer as KDB 789033, clause C for EBW and clause D for OBW measurement.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 6.9.3 for occupied bandwidth testing.
<input checked="" type="checkbox"/>	Refer as IC RSS-Gen, clause 6.6 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 $\leq 125mW$ [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 checked="" 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.
<p>P_{Out} = maximum conducted output power in dBm, G_{TX} = the maximum transmitting antenna directional gain in dBi.</p>	

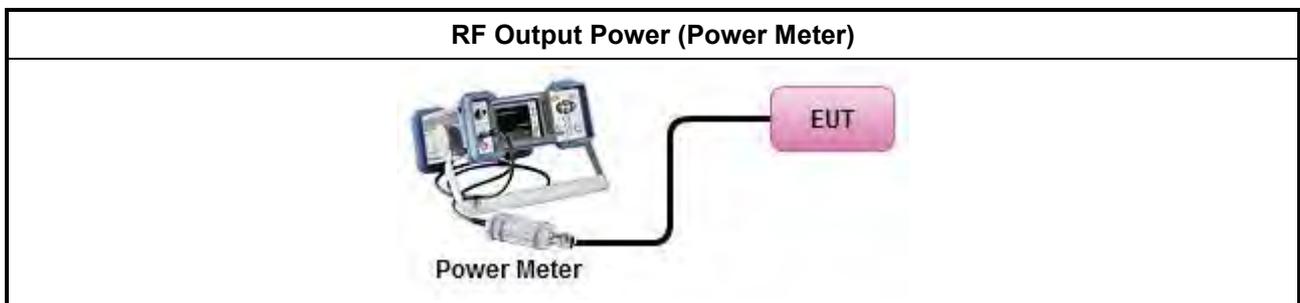
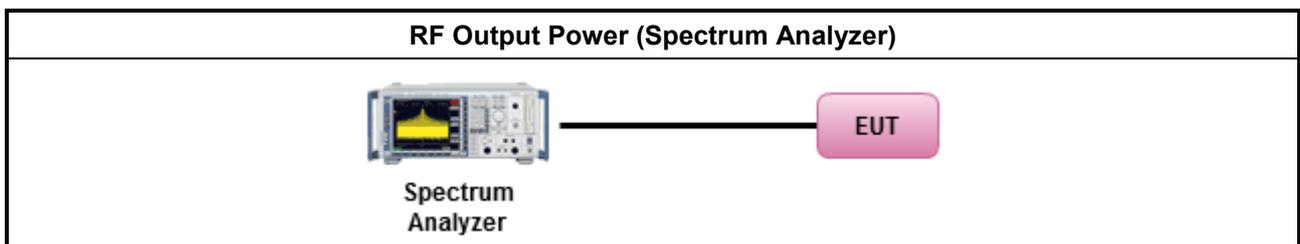
3.3.2 Measuring Instruments

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 	
	Duty cycle $\geq 98\%$
<input checked="" type="checkbox"/>	Refer as KDB 789033, clause E Method SA-2 (spectral trace averaging).
	Duty cycle $< 98\%$
<input checked="" type="checkbox"/>	Refer as KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
	Wideband RF power meter and average over on/off periods with duty factor
<input checked="" type="checkbox"/>	Refer as KDB 789033, clause E Method PM (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 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



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 checked="" 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 checked="" type="checkbox"/> For the 5.15-5.25 GHz band the e.i.r.p. peak power spectral density (PPSD) ≤ 10 dBm/MHz.	
<input checked="" type="checkbox"/> For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz and the e.i.r.p. peak power spectral density (PPSD) ≤ 17 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 checked="" 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 and the e.i.r.p. peak power spectral density (PPSD) ≤ 17 dBm/MHz.	
<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.
<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>	

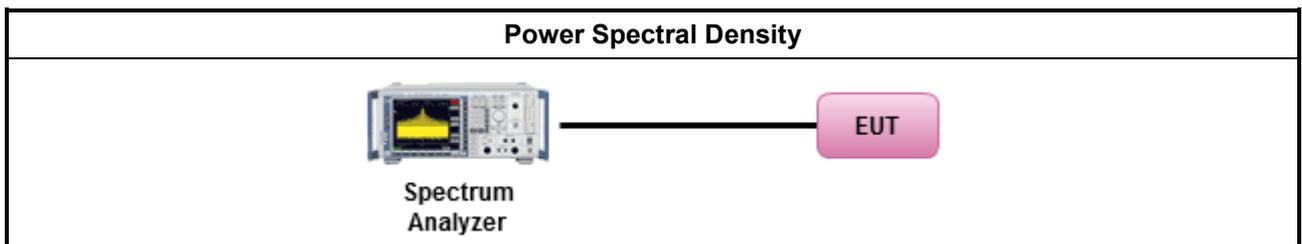
3.4.2 Measuring Instruments

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 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%
<input checked="" type="checkbox"/>	Refer as KDB 789033, clause E Method SA-2 (spectral trace averaging). Duty cycle < 98%
<input checked="" type="checkbox"/>	Refer as 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: <ul style="list-style-type: none"> Measure and sum the spectra across the outputs. Refer as 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. 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
5.15 - 5.25 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.25 - 5.35 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.47 - 5.725 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.725 - 5.85 GHz	5.650-5700 GHz: e.i.r.p. -27 ~ 10 dBm [68.2 ~ 105.2 dBuV/m@3m] 5.700-5720 GHz: e.i.r.p. 10 ~ 15.6 dBm [105.2 ~ 110.8 dBuV/m@3m] 5.720-5725 GHz: e.i.r.p. 15.6 ~ 27 dBm [110.8 ~ 122.2 dBuV/m@3m] 5.850-5.855 GHz: e.i.r.p. 27 ~ 15.6 dBm [122.2 ~ 110.8 dBuV/m@3m] 5.855-5.875 GHz: e.i.r.p. 15.6 ~ 10 dBm [110.8 ~ 105.2 dBuV/m@3m] 5.875-5.925 GHz: e.i.r.p. 10 ~ -27 dBm [105.2 ~ 68.2dBuV/m@3m] Other un-restricted band: e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
<p>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).</p>	



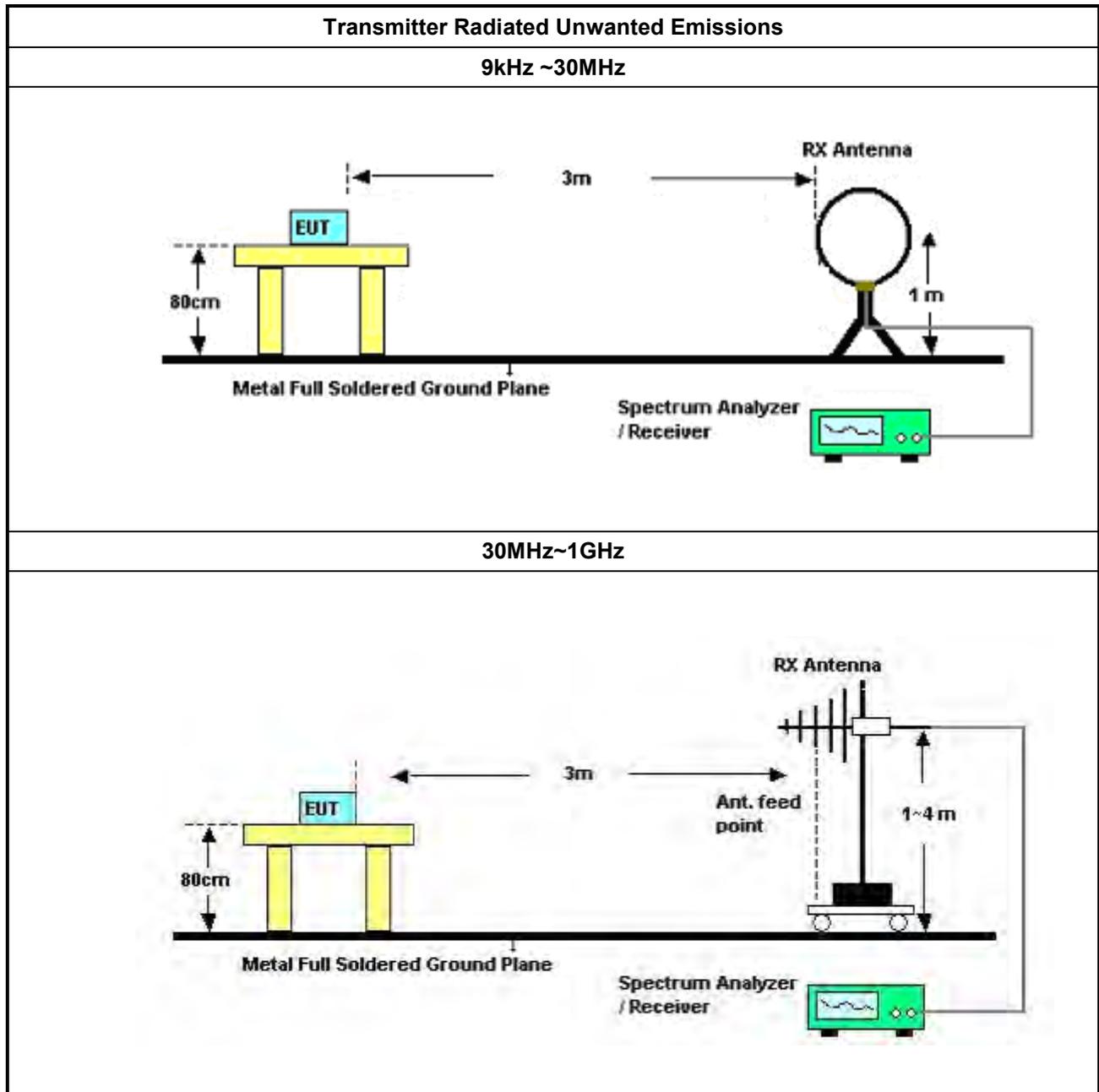
3.5.2 Measuring Instruments

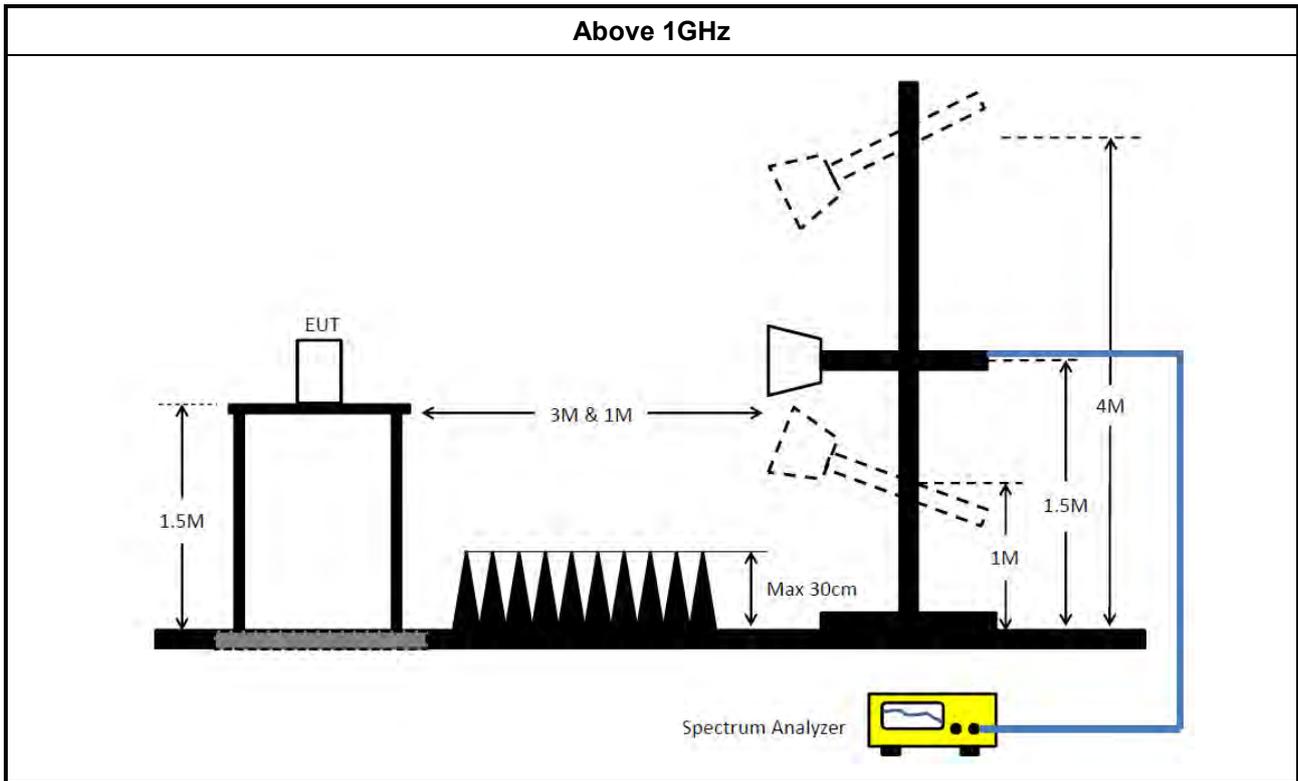
Refer a test equipment and calibration data table in this test report.

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 \geq 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 KDB 789033, clause G)2) for unwanted emissions into non-restricted bands.
	<ul style="list-style-type: none"> ▪ Refer as KDB 789033, clause G)1) for unwanted emissions into restricted bands.
<input checked="" type="checkbox"/>	Refer as KDB 789033, G)6) Method VB (ANSI C63.10, clause 4.1.4.2.3), Reduced VBW.
<input checked="" type="checkbox"/>	Refer as KDB 789033, clause G)5) (ANSI C63.10, clause 4.1.4.2.2), 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.
	<ul style="list-style-type: none"> ▪ Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.
	<ul style="list-style-type: none"> ▪ Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.
<ul style="list-style-type: none"> ▪ The any unwanted emissions level shall not exceed the fundamental emission level. 	
<ul style="list-style-type: none"> ▪ All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported. 	

3.5.4 Test Setup





3.5.5 Transmitter Unwanted Emissions (Below 30MHz)

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

3.5.6 Test Result of Transmitter Unwanted Emissions

Refer as Appendix E

3.6 Frequency Stability

3.6.1 Frequency Stability Limit

Frequency Stability Limit	
UNII Devices	
<ul style="list-style-type: none"> In-band emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual. 	
IEEE Std. 802.11	
<ul style="list-style-type: none"> The transmitter center frequency tolerance shall be ± 20 ppm maximum for the 5 GHz band. 	

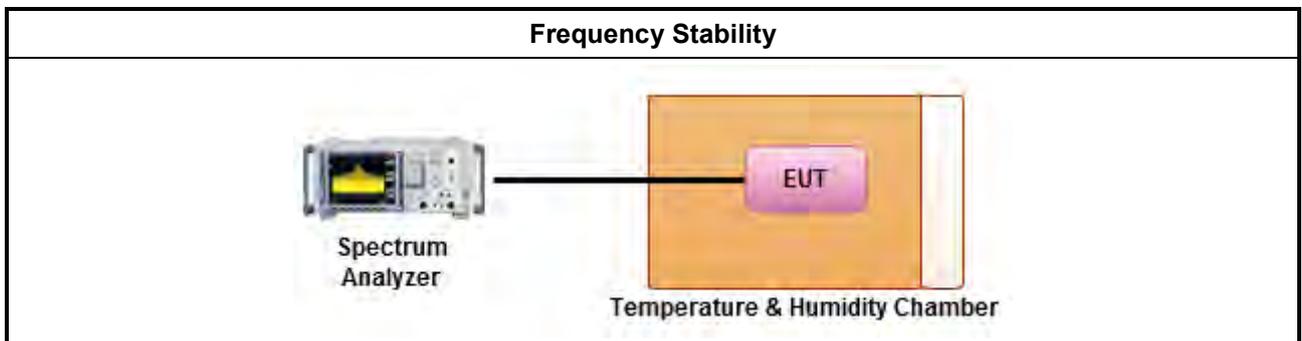
3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> Refer as ANSI C63.10, clause 6.8 for frequency stability tests 	
	<ul style="list-style-type: none"> Frequency stability with respect to ambient temperature
	<ul style="list-style-type: none"> Frequency stability when varying supply voltage

3.6.4 Test Setup



3.6.5 Test Result of Frequency Stability

Refer as Appendix F



4 Test Equipment and Calibration Data

Instrument for AC Conduction

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
EMC Receiver	R&S	ESR3	102052	9KHz ~ 3.6GHz	29/Apr/2017	28/Apr/2018
RF Cable-CON	HUBER+SUHNER	RG213/U	07611832020001	9kHz ~ 30MHz	06/Oct/2017	05/Oct/2018
AC POWER	APC	AFC-11005G	F310050055	47Hz~63Hz 5~300V	NCR	NCR
Impuls Begrenzer Pulse Limiter	SCHWARZBECK	VTSD 9561-F	9561-F041	9 kHz ~ 30 MHz	12/Oct/2017	11/Oct/2018
LISN	R&S	ENV216	101295	9kHz ~ 30MHz	17/Nov/2017	16/Nov/2018

NCR : Non-Calibration Require

Instrument for Radiated Test

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	30MHz ~ 1GHz	25/Apr/2017	24/Apr/2018
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	1GHz ~ 18GHz	28/Jun/2017	27/Jun/2018
Amplifier	Agilent	8449B	3008A02096	1GHz ~ 26.5GHz	25/Apr/2017	24/Apr/2018
Amplifier	EMC	EMC9135	980232	9KHz~1GHz	25/Apr/2017	24/Apr/2018
Spectrum Analyzer	KEYSIGHT	N9010A	MY54200885	10Hz ~ 44GHz	20/Jul/2017	19/Jul/2018
Bilog Antenna	TESEQ	CBL 6111D	35418	30MHz~1GHz	09/Sep/2017	08/Sep/2018
Horn Antenna	SCHWARZBECK	BBHA 9120D	BBHA9120D 1534	1GHz~18GHz	28/Apr/2017	27/Apr/2018
Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170614	18GHz ~ 40GHz	06/Feb/2017	05/Feb/2018
Amplifier	MITEQ	JS44-18004000-3 3-8P	1840917	18GHz ~ 40GHz	06/Feb/2017	05/Feb/2018
Loop Antenna	TESTQ	HLA 6120	31244	9 kHz~30 MHz	02/Mar/2017	01/Mar/2018
RF Cable-R03m	Jye Bao	RG142	CB021	9kHz ~ 1GHz	02/Feb/2017	01/Feb/2018
RF Cable-high	Jye Bao	RG142	03CH09-HY	1GHz ~ 40GHz	02/Feb/2017	01/Feb/2018
Receiver	R&S	ESR3	102052	9KHz ~ 3.6GHz	29/Apr/2017	28/Apr/2018



Instrument for Conducted Test

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Spectrum	R&S	FSV40	101500	9kHz ~ 40GHz	28/Jun/2017	27/Jun/2018
Temp. and Humidity Chamber	Giant Force	GTH-225-20-SP-SD	MAA1112-007	-20 ~ 100°C	10/May/2017	09/May/2018
Signal Generator	R&S	SMR40	100116	10MHz ~ 40GHz	27/Jul/2017	26/Jul/2018
RF Cable-1.5m	HUBER+SUHNER	SUCOFLEX_104	MY12582/4	30MHz ~ 26.5GHz	25/Aug/2017	24/Aug/2018
RF Cable-1.5m	HUBER+SUHNER	SUCOFLEX_104	MY12583/4	30MHz ~ 26.5GHz	25/Aug/2017	24/Aug/2018
RF Cable-1.5m	HUBER+SUHNER	SUCOFLEX_104	MY12581/4	30MHz ~ 26.5GHz	25/Aug/2017	24/Aug/2018
RF Cable-1.5m	HUBER+SUHNER	SUCOFLEX_104	MY12584/4	30MHz ~ 26.5GHz	25/Aug/2017	24/Aug/2018
RF Cable-0.2m	HUBER+SUHNER	SUCOFLEX_104	MY10710/4	30MHz ~ 26.5GHz	25/Aug/2017	24/Aug/2018
RF Cable-0.2m	HUBER+SUHNER	SUCOFLEX_104	MY10709/4	30MHz ~ 26.5GHz	25/Aug/2017	24/Aug/2018
RF Cable-0.2m	HUBER+SUHNER	SUCOFLEX_104	MY10712/4	30MHz ~ 26.5GHz	25/Aug/2017	24/Aug/2018
RF Cable-0.5m	HUBER+SUHNER	SUCOFLEX_104	MY10713/4	30MHz ~ 26.5GHz	25/Aug/2017	24/Aug/2018
Power Sensor	Anritsu	MA2411B	1027452	300MHz ~ 40GHz	24/Feb/2017	23/Feb/2018
Power Meter	Anritsu	ML2495A	1124009	300MHz ~ 40GHz	24/Feb/2017	23/Feb/2018



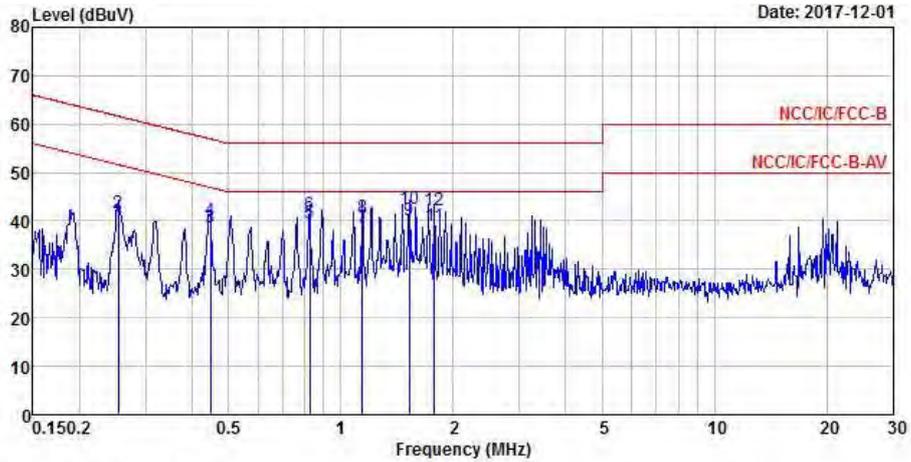
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<table border="1" style="width:100%; border-collapse: collapse; margin-top: 20px;"> <thead> <tr> <th></th> <th>Freq</th> <th>Level</th> <th>Over Limit</th> <th>Limit Line</th> <th>Read Level</th> <th>LISN Factor</th> <th>Cable Loss</th> <th>Remark</th> </tr> <tr> <th></th> <th>MHz</th> <th>dBuV</th> <th>dB</th> <th>dBuV</th> <th>dBuV</th> <th>dB</th> <th>dB</th> <th></th> </tr> </thead> <tbody> <tr><td>1</td><td>0.2548</td><td>39.04</td><td>-12.56</td><td>51.60</td><td>29.39</td><td>9.62</td><td>0.03</td><td>Average</td></tr> <tr><td>2</td><td>0.2548</td><td>40.85</td><td>-20.75</td><td>61.60</td><td>31.20</td><td>9.62</td><td>0.03</td><td>QP</td></tr> <tr><td>3</td><td>0.4421</td><td>35.55</td><td>-11.47</td><td>47.02</td><td>25.85</td><td>9.61</td><td>0.09</td><td>Average</td></tr> <tr><td>4</td><td>0.4421</td><td>37.08</td><td>-19.94</td><td>57.02</td><td>27.38</td><td>9.61</td><td>0.09</td><td>QP</td></tr> <tr><td>5</td><td>0.8261</td><td>37.23</td><td>-8.77</td><td>46.00</td><td>27.59</td><td>9.62</td><td>0.02</td><td>Average</td></tr> <tr><td>6</td><td>0.8261</td><td>39.44</td><td>-16.56</td><td>56.00</td><td>29.80</td><td>9.62</td><td>0.02</td><td>QP</td></tr> <tr><td>7</td><td>1.1413</td><td>36.87</td><td>-9.13</td><td>46.00</td><td>27.25</td><td>9.62</td><td>0.00</td><td>Average</td></tr> <tr><td>8</td><td>1.1413</td><td>39.18</td><td>-16.82</td><td>56.00</td><td>29.56</td><td>9.62</td><td>0.00</td><td>QP</td></tr> <tr><td>9 MAX</td><td>1.5274</td><td>38.13</td><td>-7.87</td><td>46.00</td><td>28.50</td><td>9.63</td><td>0.00</td><td>Average</td></tr> <tr><td>10</td><td>1.5274</td><td>40.37</td><td>-15.63</td><td>56.00</td><td>30.74</td><td>9.63</td><td>0.00</td><td>QP</td></tr> <tr><td>11</td><td>1.8386</td><td>34.66</td><td>-11.34</td><td>46.00</td><td>25.03</td><td>9.63</td><td>0.00</td><td>Average</td></tr> <tr><td>12</td><td>1.8386</td><td>36.92</td><td>-19.08</td><td>56.00</td><td>27.29</td><td>9.63</td><td>0.00</td><td>QP</td></tr> </tbody> </table>					Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark		MHz	dBuV	dB	dBuV	dBuV	dB	dB		1	0.2548	39.04	-12.56	51.60	29.39	9.62	0.03	Average	2	0.2548	40.85	-20.75	61.60	31.20	9.62	0.03	QP	3	0.4421	35.55	-11.47	47.02	25.85	9.61	0.09	Average	4	0.4421	37.08	-19.94	57.02	27.38	9.61	0.09	QP	5	0.8261	37.23	-8.77	46.00	27.59	9.62	0.02	Average	6	0.8261	39.44	-16.56	56.00	29.80	9.62	0.02	QP	7	1.1413	36.87	-9.13	46.00	27.25	9.62	0.00	Average	8	1.1413	39.18	-16.82	56.00	29.56	9.62	0.00	QP	9 MAX	1.5274	38.13	-7.87	46.00	28.50	9.63	0.00	Average	10	1.5274	40.37	-15.63	56.00	30.74	9.63	0.00	QP	11	1.8386	34.66	-11.34	46.00	25.03	9.63	0.00	Average	12	1.8386	36.92	-19.08	56.00	27.29	9.63	0.00	QP
	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark																																																																																																																									
	MHz	dBuV	dB	dBuV	dBuV	dB	dB																																																																																																																										
1	0.2548	39.04	-12.56	51.60	29.39	9.62	0.03	Average																																																																																																																									
2	0.2548	40.85	-20.75	61.60	31.20	9.62	0.03	QP																																																																																																																									
3	0.4421	35.55	-11.47	47.02	25.85	9.61	0.09	Average																																																																																																																									
4	0.4421	37.08	-19.94	57.02	27.38	9.61	0.09	QP																																																																																																																									
5	0.8261	37.23	-8.77	46.00	27.59	9.62	0.02	Average																																																																																																																									
6	0.8261	39.44	-16.56	56.00	29.80	9.62	0.02	QP																																																																																																																									
7	1.1413	36.87	-9.13	46.00	27.25	9.62	0.00	Average																																																																																																																									
8	1.1413	39.18	-16.82	56.00	29.56	9.62	0.00	QP																																																																																																																									
9 MAX	1.5274	38.13	-7.87	46.00	28.50	9.63	0.00	Average																																																																																																																									
10	1.5274	40.37	-15.63	56.00	30.74	9.63	0.00	QP																																																																																																																									
11	1.8386	34.66	-11.34	46.00	25.03	9.63	0.00	Average																																																																																																																									
12	1.8386	36.92	-19.08	56.00	27.29	9.63	0.00	QP																																																																																																																									
<p>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.)</p>																																																																																																																																	



AC Power-line Conducted Emissions Result

Operating Mode	1	Power Phase	Line
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Operating Function	PoE Mode
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	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.2535	40.24	-11.40	51.64	30.59	9.62	0.03	Average
2	0.2535	41.72	-19.92	61.64	32.07	9.62	0.03	QP
3	0.4468	38.56	-8.37	46.93	28.86	9.61	0.09	Average
4	0.4468	40.05	-16.88	56.93	30.35	9.61	0.09	QP
5	0.8261	39.48	-6.52	46.00	29.85	9.61	0.02	Average
6	0.8261	41.37	-14.63	56.00	31.74	9.61	0.02	QP
7	1.1413	38.71	-7.29	46.00	29.10	9.61	0.00	Average
8	1.1413	40.75	-15.25	56.00	31.14	9.61	0.00	QP
9 MAX	1.5274	40.23	-5.77	46.00	30.61	9.62	0.00	Average
10	1.5274	42.48	-13.52	56.00	32.86	9.62	0.00	QP
11	1.7810	38.87	-7.13	46.00	29.25	9.62	0.00	Average
12	1.7810	42.13	-13.87	56.00	32.51	9.62	0.00	QP

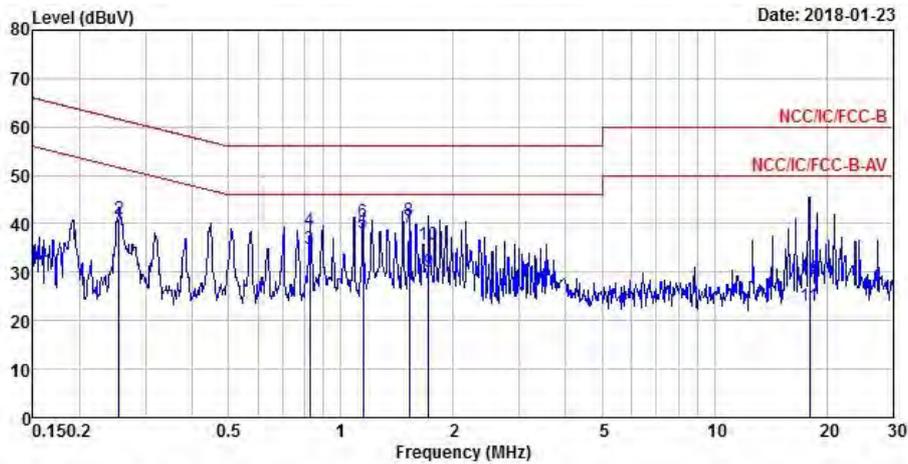
Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.
 Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)



AC Power-line Conducted Emissions Result

Operating Mode	1	Power Phase	Neutral
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Operating Function	PoE Mode
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	Freq	Level	Over	Limit	Read	LISN	Cable	Remark
	MHz	dBuV	Limit	Line	Level	Factor	Loss	
			dB	dBuV	dBuV	dB	dB	
1	0.2548	39.74	-11.86	51.60	30.09	9.62	0.03	Average
2	0.2548	41.16	-20.44	61.60	31.51	9.62	0.03	QP
3	0.8261	34.80	-11.20	46.00	25.16	9.62	0.02	Average
4	0.8261	38.77	-17.23	56.00	29.13	9.62	0.02	QP
5	1.1473	38.04	-7.96	46.00	28.42	9.62	0.00	Average
6	1.1473	40.51	-15.49	56.00	30.89	9.62	0.00	QP
7 MAX	1.5274	39.34	-6.66	46.00	29.71	9.63	0.00	Average
8	1.5274	40.66	-15.34	56.00	31.03	9.63	0.00	QP
9	1.7162	30.09	-15.91	46.00	20.46	9.63	0.00	Average
10	1.7162	35.60	-20.40	56.00	25.97	9.63	0.00	QP
11	17.9441	22.97	-27.03	50.00	13.13	9.71	0.13	Average
12	17.9441	28.64	-31.36	60.00	18.80	9.71	0.13	QP

Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.
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AC Power-line Conducted Emissions Result																																																																																																																																	
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<table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <thead> <tr> <th></th> <th>Freq</th> <th>Level</th> <th>Over Limit</th> <th>Limit Line</th> <th>Read Level</th> <th>LISN Factor</th> <th>Cable Loss</th> <th>Remark</th> </tr> <tr> <th></th> <th>MHz</th> <th>dBuV</th> <th>dB</th> <th>dBuV</th> <th>dBuV</th> <th>dB</th> <th>dB</th> <th></th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0.2548</td> <td>40.28</td> <td>-11.32</td> <td>51.60</td> <td>30.63</td> <td>9.62</td> <td>0.03</td> <td>Average</td> </tr> <tr> <td>2</td> <td>0.2548</td> <td>42.01</td> <td>-19.59</td> <td>61.60</td> <td>32.36</td> <td>9.62</td> <td>0.03</td> <td>QP</td> </tr> <tr> <td>3 MAX</td> <td>0.4468</td> <td>39.11</td> <td>-7.82</td> <td>46.93</td> <td>29.41</td> <td>9.61</td> <td>0.09</td> <td>Average</td> </tr> <tr> <td>4</td> <td>0.4468</td> <td>40.91</td> <td>-16.02</td> <td>56.93</td> <td>31.21</td> <td>9.61</td> <td>0.09</td> <td>QP</td> </tr> <tr> <td>5</td> <td>1.4032</td> <td>36.75</td> <td>-9.25</td> <td>46.00</td> <td>27.14</td> <td>9.61</td> <td>0.00</td> <td>Average</td> </tr> <tr> <td>6</td> <td>1.4032</td> <td>42.37</td> <td>-13.63</td> <td>56.00</td> <td>32.76</td> <td>9.61</td> <td>0.00</td> <td>QP</td> </tr> <tr> <td>7</td> <td>1.7905</td> <td>37.81</td> <td>-8.19</td> <td>46.00</td> <td>28.19</td> <td>9.62</td> <td>0.00</td> <td>Average</td> </tr> <tr> <td>8</td> <td>1.7905</td> <td>40.52</td> <td>-15.48</td> <td>56.00</td> <td>30.90</td> <td>9.62</td> <td>0.00</td> <td>QP</td> </tr> <tr> <td>9</td> <td>3.2583</td> <td>26.97</td> <td>-19.03</td> <td>46.00</td> <td>17.28</td> <td>9.63</td> <td>0.06</td> <td>Average</td> </tr> <tr> <td>10</td> <td>3.2583</td> <td>34.14</td> <td>-21.86</td> <td>56.00</td> <td>24.45</td> <td>9.63</td> <td>0.06</td> <td>QP</td> </tr> <tr> <td>11</td> <td>18.6221</td> <td>28.77</td> <td>-21.23</td> <td>50.00</td> <td>19.00</td> <td>9.62</td> <td>0.15</td> <td>Average</td> </tr> <tr> <td>12</td> <td>18.6221</td> <td>33.24</td> <td>-26.76</td> <td>60.00</td> <td>23.47</td> <td>9.62</td> <td>0.15</td> <td>QP</td> </tr> </tbody> </table>					Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark		MHz	dBuV	dB	dBuV	dBuV	dB	dB		1	0.2548	40.28	-11.32	51.60	30.63	9.62	0.03	Average	2	0.2548	42.01	-19.59	61.60	32.36	9.62	0.03	QP	3 MAX	0.4468	39.11	-7.82	46.93	29.41	9.61	0.09	Average	4	0.4468	40.91	-16.02	56.93	31.21	9.61	0.09	QP	5	1.4032	36.75	-9.25	46.00	27.14	9.61	0.00	Average	6	1.4032	42.37	-13.63	56.00	32.76	9.61	0.00	QP	7	1.7905	37.81	-8.19	46.00	28.19	9.62	0.00	Average	8	1.7905	40.52	-15.48	56.00	30.90	9.62	0.00	QP	9	3.2583	26.97	-19.03	46.00	17.28	9.63	0.06	Average	10	3.2583	34.14	-21.86	56.00	24.45	9.63	0.06	QP	11	18.6221	28.77	-21.23	50.00	19.00	9.62	0.15	Average	12	18.6221	33.24	-26.76	60.00	23.47	9.62	0.15	QP
	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark																																																																																																																									
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Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ac VHT80+80_Nss2,(MCS0)_4TX(Port1&Port2)	80.5M	75.262M	75M3D1D	80.4M	75.162M
5.25-5.35GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	20.25M	16.417M	16M4D1D	19.65M	16.342M
802.11ac VHT20_Nss1,(MCS0)_4TX	20.575M	17.591M	17M6D1D	19.825M	17.491M
802.11ac VHT40_Nss1,(MCS0)_4TX	41.6M	36.032M	36M0D1D	39.8M	35.882M
802.11ac VHT80_Nss1,(MCS0)_4TX	80.8M	75.262M	75M3D1D	79.4M	74.963M
802.11ac VHT80+80_Nss2,(MCS0)_4TX(Port3&Port4)	80.6M	75.062M	75M1D1D	80.6M	75.062M
5.47-5.725GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	20.125M	16.442M	16M4D1D	14.835M	13.103M
802.11ac VHT20_Nss1,(MCS0)_4TX	20.425M	17.566M	17M6D1D	14.97M	13.733M
802.11ac VHT40_Nss1,(MCS0)_4TX	40.4M	36.132M	36M1D1D	34.86M	32.744M
802.11ac VHT80_Nss1,(MCS0)_4TX	81.1M	75.262M	75M3D1D	74.775M	71.814M
802.11ac VHT80+80_Nss2,(MCS0)_4TX	80.55M	75.262M	75M3D1D	80.25M	75.262M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;

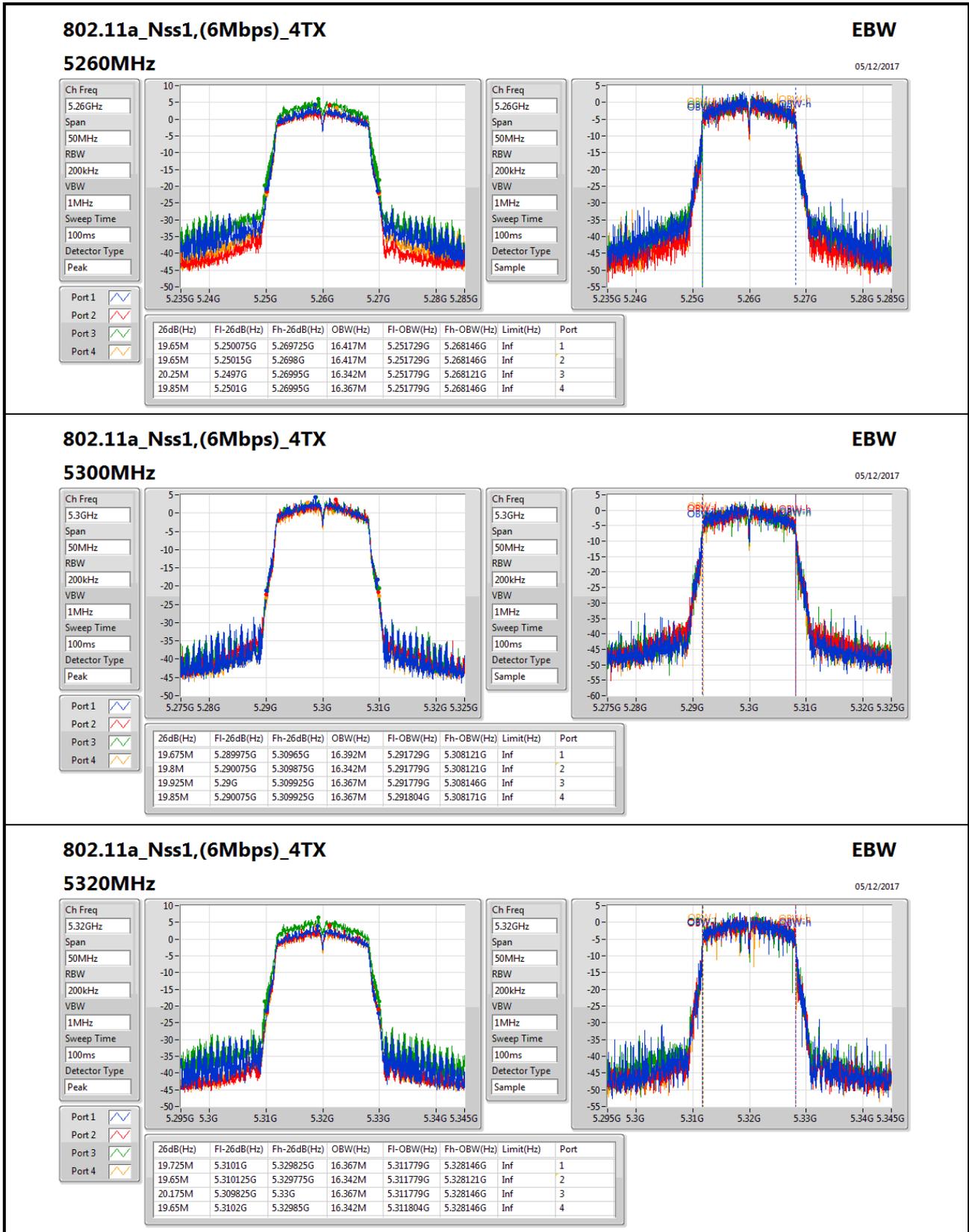


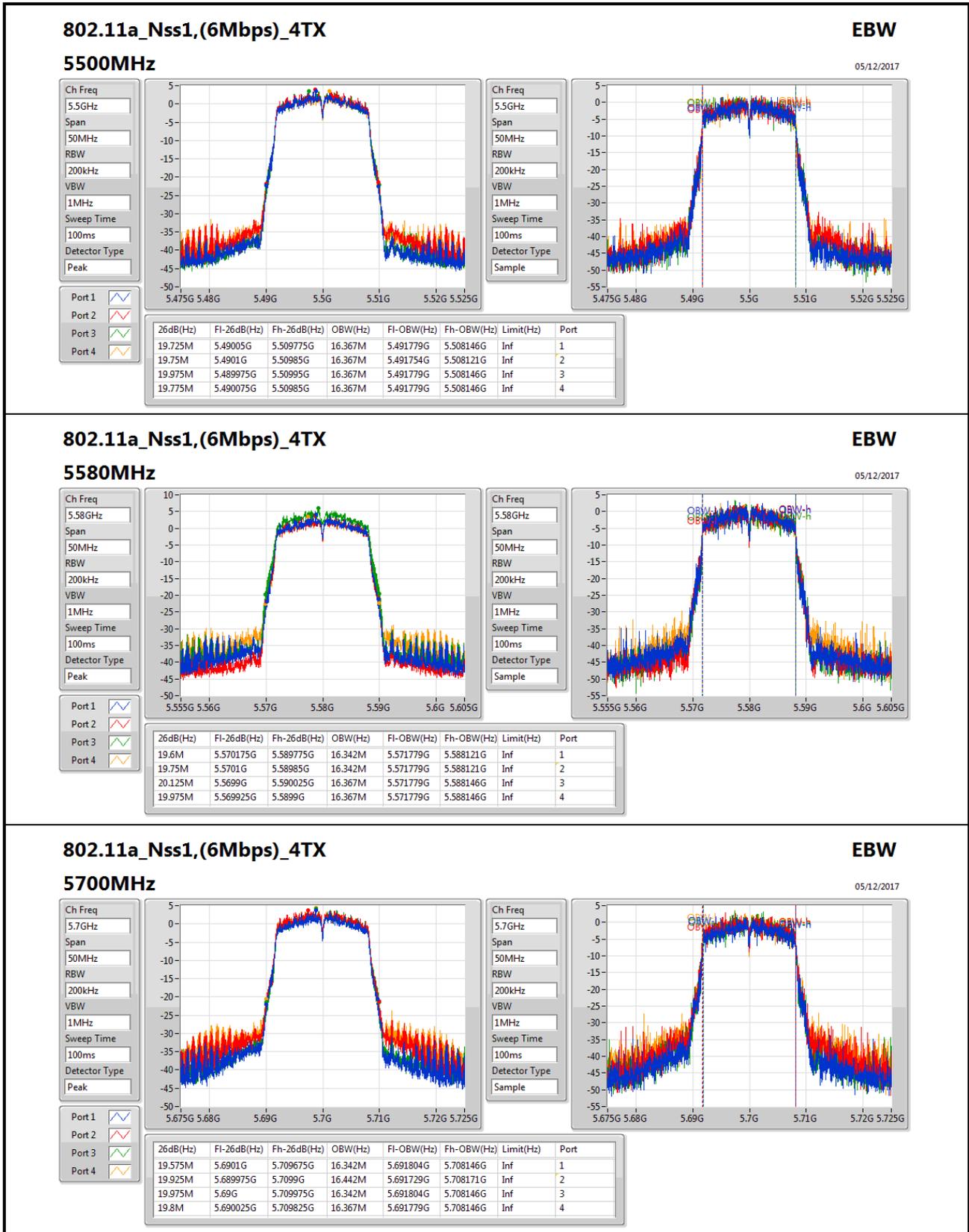
Result

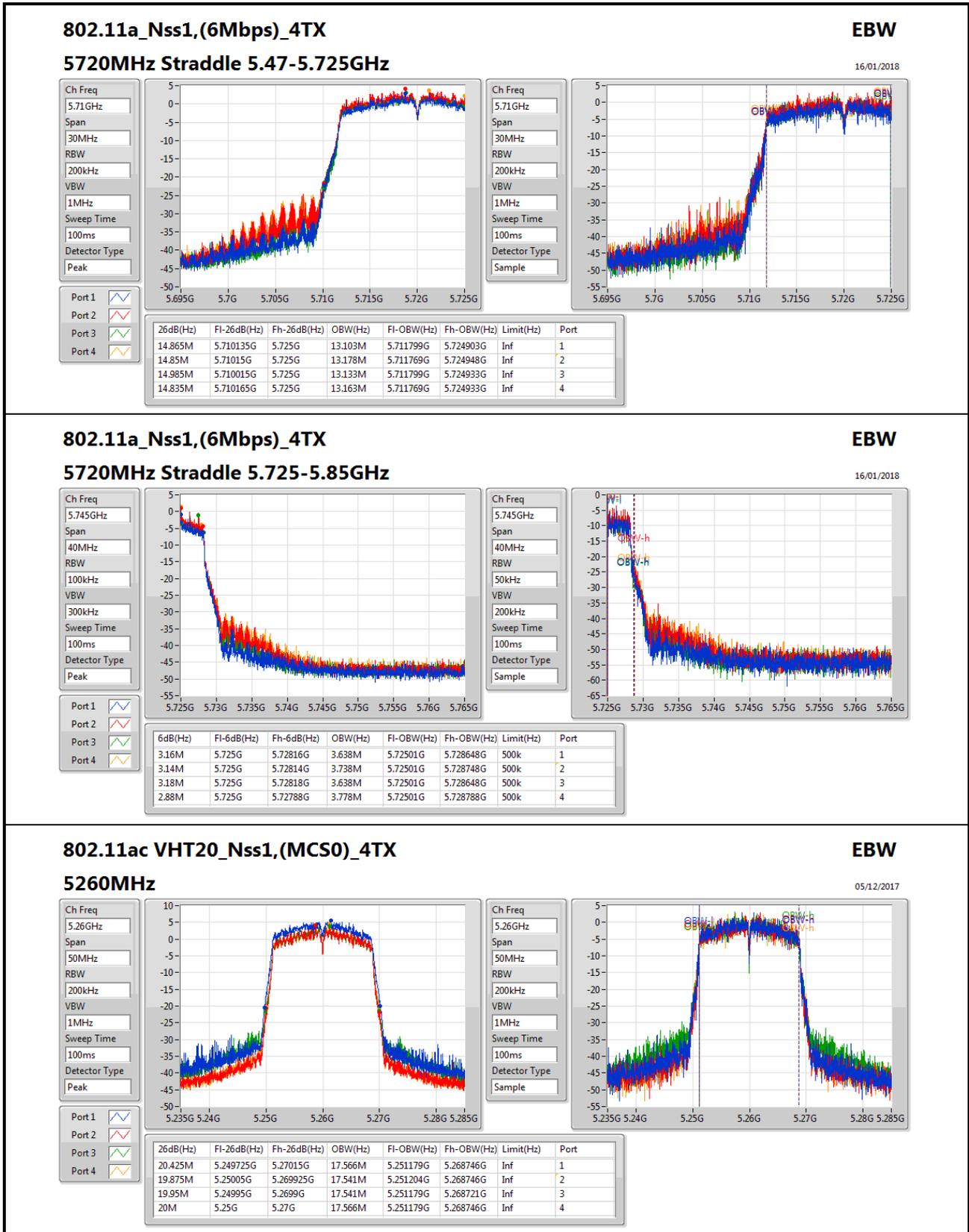
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz_TnomVnom	Pass	Inf	19.65M	16.417M	19.65M	16.417M	20.25M	16.342M	19.85M	16.367M
5300MHz_TnomVnom	Pass	Inf	19.675M	16.392M	19.8M	16.342M	19.925M	16.367M	19.85M	16.367M
5320MHz_TnomVnom	Pass	Inf	19.725M	16.367M	19.65M	16.342M	20.175M	16.367M	19.65M	16.342M
5500MHz_TnomVnom	Pass	Inf	19.725M	16.367M	19.75M	16.367M	19.975M	16.367M	19.775M	16.367M
5580MHz_TnomVnom	Pass	Inf	19.6M	16.342M	19.75M	16.342M	20.125M	16.367M	19.975M	16.367M
5700MHz_TnomVnom	Pass	Inf	19.575M	16.342M	19.925M	16.442M	19.975M	16.342M	19.8M	16.367M
5720MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	Inf	14.865M	13.103M	14.85M	13.178M	14.985M	13.133M	14.835M	13.163M
5720MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	500k	3.16M	3.638M	3.14M	3.738M	3.18M	3.638M	2.88M	3.778M
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz_TnomVnom	Pass	Inf	20.425M	17.566M	19.875M	17.541M	19.95M	17.541M	20M	17.566M
5300MHz_TnomVnom	Pass	Inf	20.475M	17.591M	19.825M	17.516M	19.975M	17.491M	20M	17.566M
5320MHz_TnomVnom	Pass	Inf	20.575M	17.541M	19.9M	17.516M	19.85M	17.541M	20.25M	17.541M
5500MHz_TnomVnom	Pass	Inf	20.425M	17.566M	20.1M	17.541M	19.825M	17.566M	20.25M	17.541M
5580MHz_TnomVnom	Pass	Inf	20.4M	17.516M	20M	17.516M	19.9M	17.541M	20.375M	17.541M
5700MHz_TnomVnom	Pass	Inf	20.425M	17.566M	19.875M	17.541M	19.9M	17.516M	20.325M	17.566M
5720MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	Inf	15.045M	13.733M	14.97M	13.733M	15.03M	13.763M	15.015M	13.733M
5720MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	500k	3.78M	4.058M	3.78M	4.058M	3.78M	4.038M	3.74M	4.038M
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5270MHz_TnomVnom	Pass	Inf	41.6M	35.982M	39.8M	35.932M	40.35M	35.982M	40.05M	35.932M
5310MHz_TnomVnom	Pass	Inf	40.35M	35.982M	39.95M	35.882M	40.15M	35.882M	40.1M	36.032M
5510MHz_TnomVnom	Pass	Inf	40.05M	35.932M	39.85M	35.982M	39.95M	35.982M	40.25M	35.882M
5550MHz_TnomVnom	Pass	Inf	40.25M	35.882M	39.8M	36.032M	40.2M	35.882M	40.15M	35.882M
5670MHz_TnomVnom	Pass	Inf	40.4M	35.982M	40M	35.882M	40.3M	35.982M	40.2M	36.132M
5710MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	Inf	36.225M	32.779M	34.86M	32.814M	34.965M	32.814M	35.14M	32.744M
5710MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	500k	3.16M	4.078M	3.18M	4.178M	3.16M	4.018M	3.16M	4.538M
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5290MHz_TnomVnom	Pass	Inf	80.8M	74.963M	79.4M	75.262M	79.9M	75.162M	80.1M	75.262M
5530MHz_TnomVnom	Pass	Inf	81.1M	75.162M	79.3M	75.062M	80.1M	75.162M	79.7M	75.162M
5610MHz_TnomVnom	Pass	Inf	81M	75.162M	79.3M	75.262M	80.3M	75.262M	79.7M	74.763M
5690MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	Inf	75.75M	72.039M	74.775M	71.814M	75.075M	71.964M	75M	71.889M
5690MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	500k	3.16M	17.891M	3.16M	24.928M	3.16M	12.474M	3.16M	31.244M
802.11ac VHT80+80_Nss2,(MCS0)_4TX(Port1&Port2)	-	-	-	-	-	-	-	-	-	-
#5210MHz,#5290MHz	Pass	Inf	80.5M	75.162M	80.4M	75.262M				
802.11ac VHT80+80_Nss2,(MCS0)_4TX(Port3&Port4)	-	-	-	-	-	-	-	-	-	-
5210MHz,#5290MHz	Pass	Inf					80.6M	75.062M	80.6M	75.062M
802.11ac VHT80+80_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
#5530MHz,#5610MHz	Pass	Inf	80.4M	75.262M	80.55M	75.262M	80.4M	75.262M	80.25M	75.262M

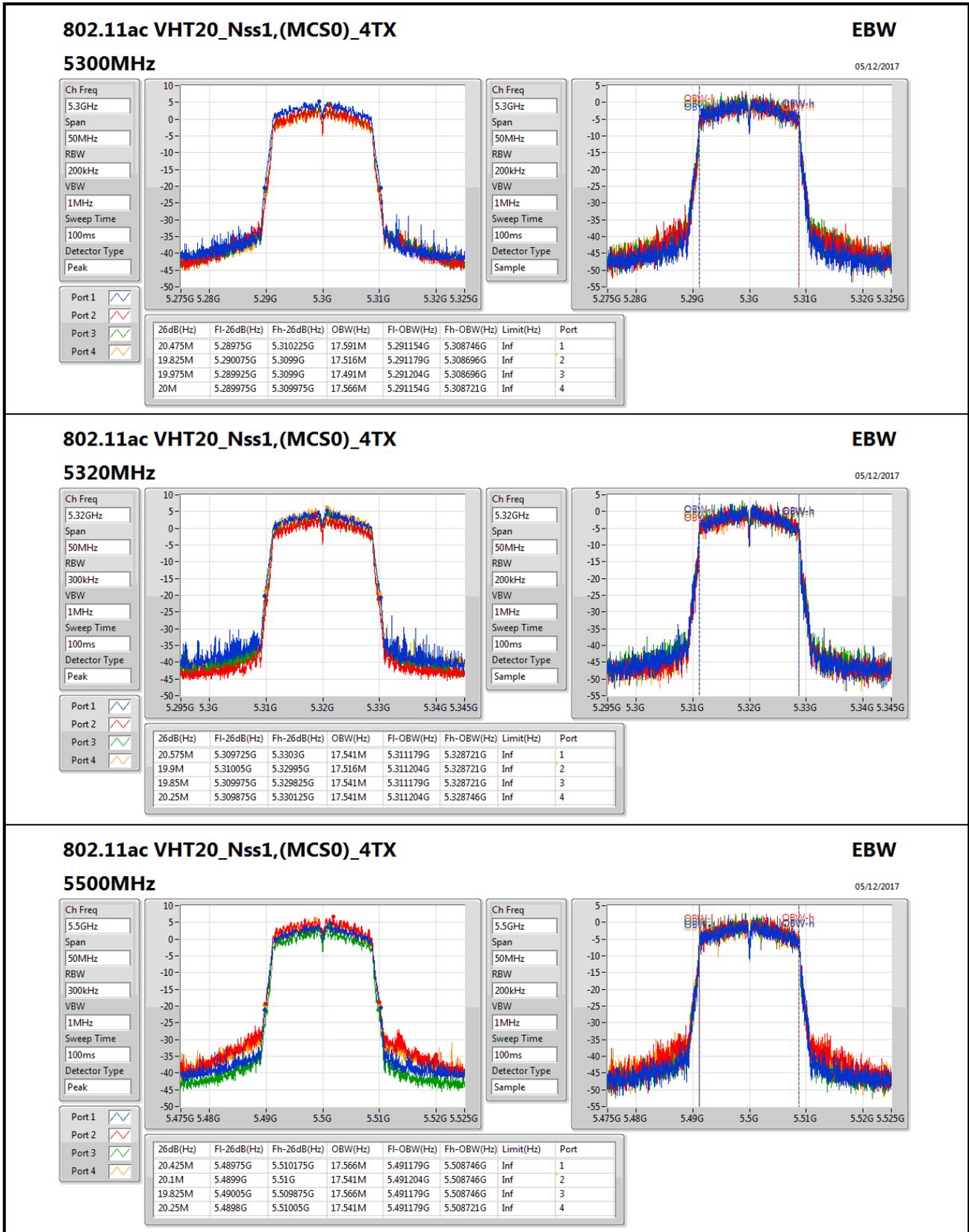


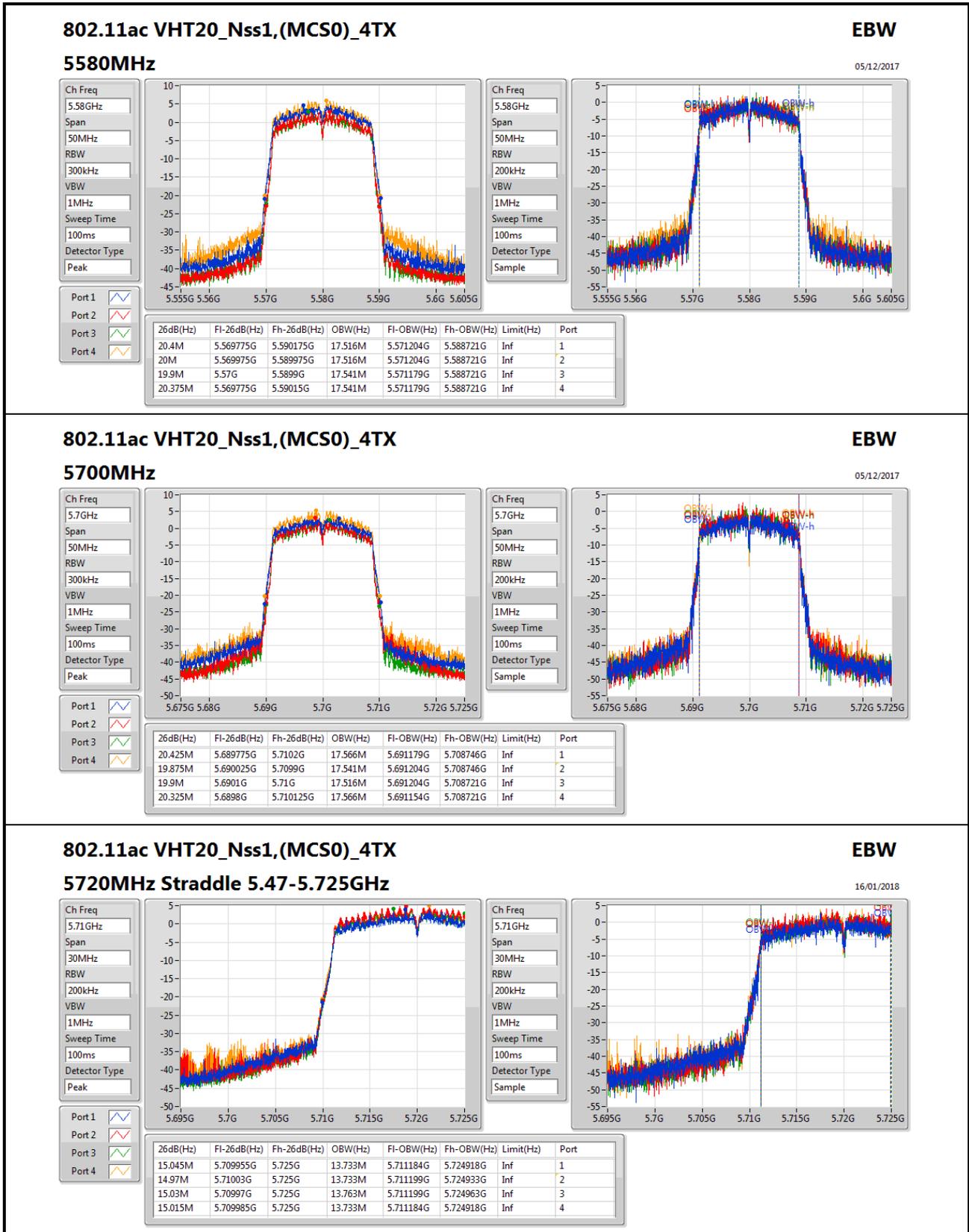
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth;







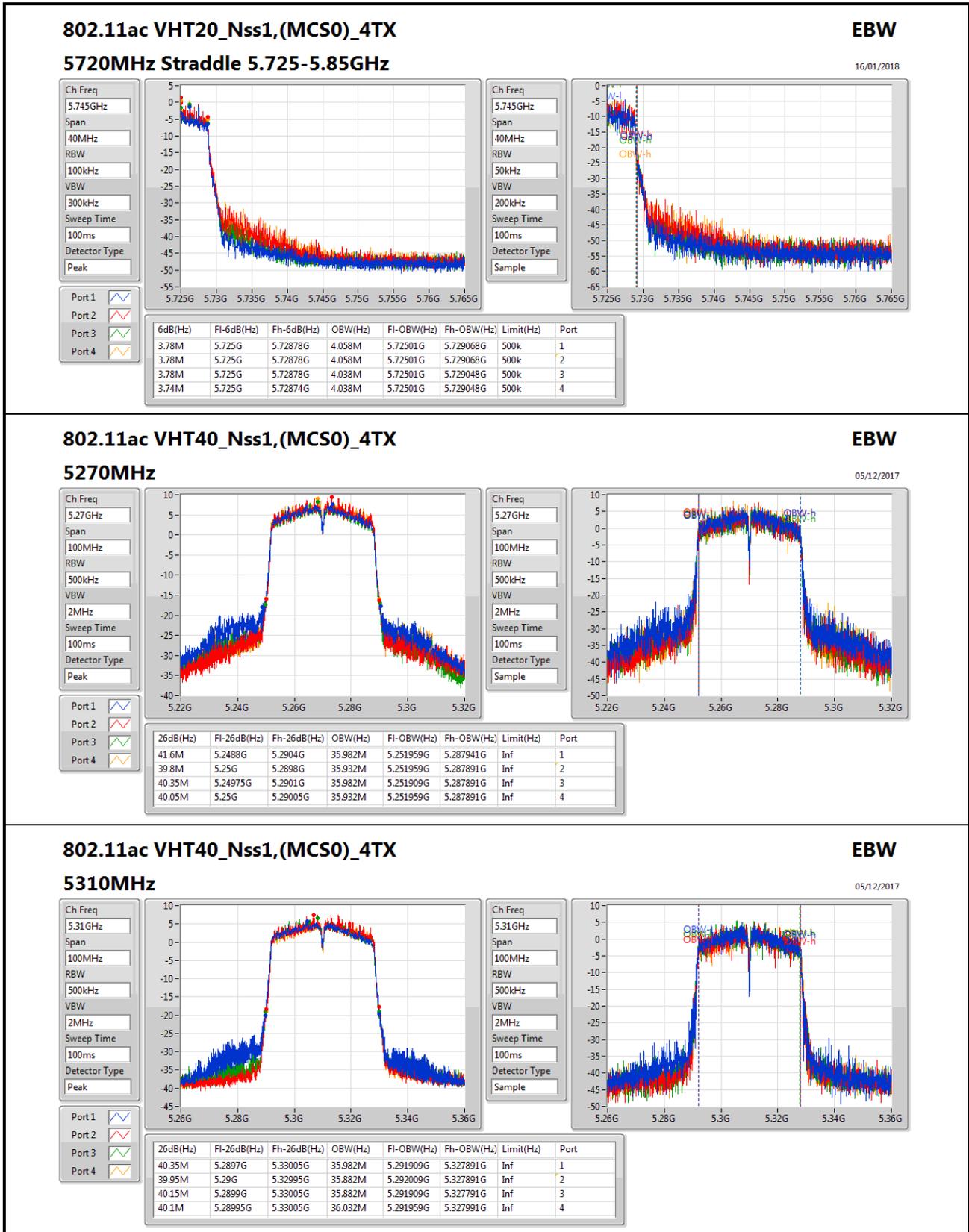


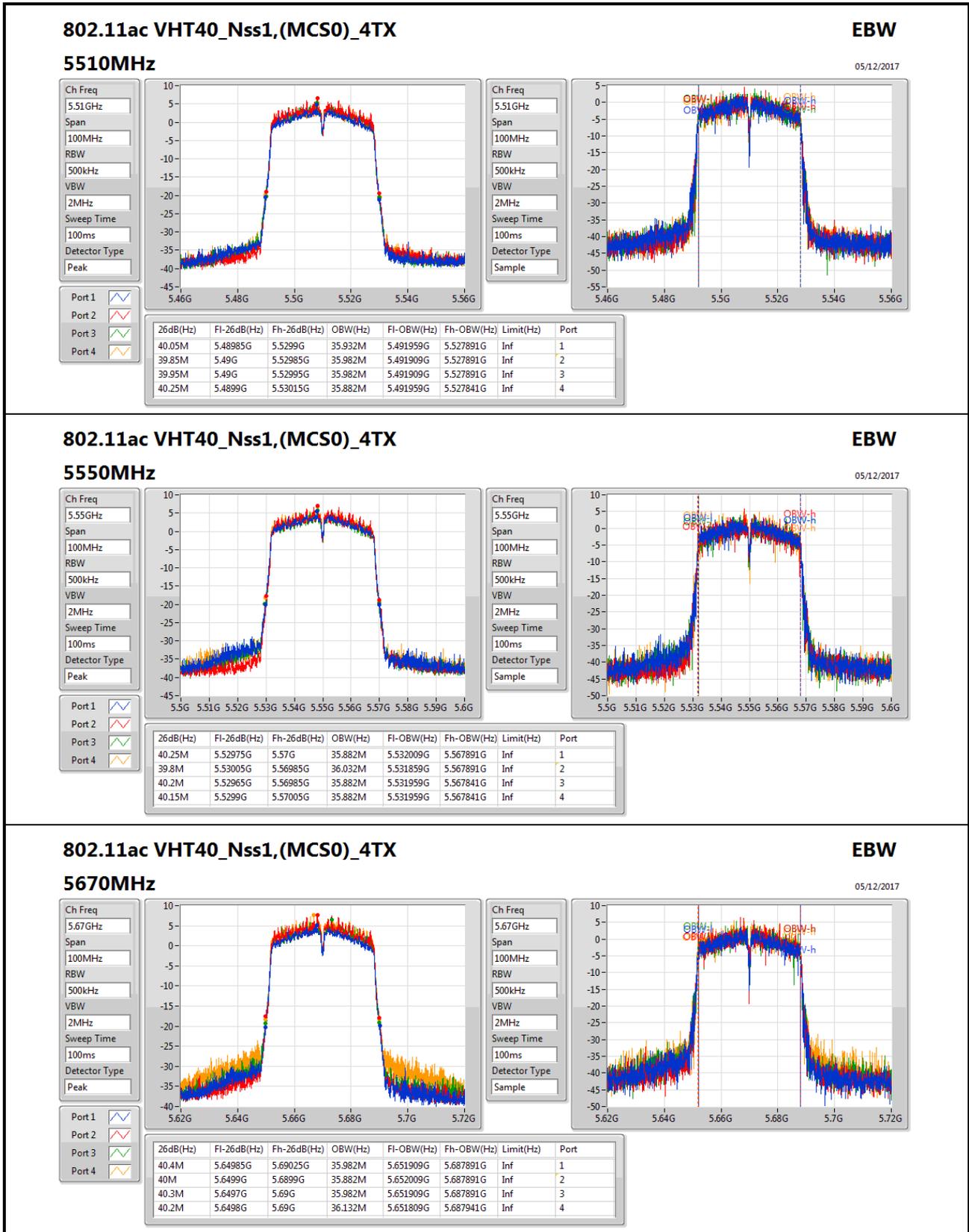

802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5720MHz Straddle 5.47-5.725GHz
16/01/2018

Ch Freq: 5.71GHz
Span: 30MHz
RBW: 200kHz
VBW: 1MHz
Sweep Time: 100ms
Detector Type: Peak

Port 1: [Waveform]
Port 2: [Waveform]
Port 3: [Waveform]
Port 4: [Waveform]

Ch Freq: 5.71GHz
Span: 30MHz
RBW: 200kHz
VBW: 1MHz
Sweep Time: 100ms
Detector Type: Sample




802.11ac VHT40_Nss1,(MCS0)_4TX
EBW

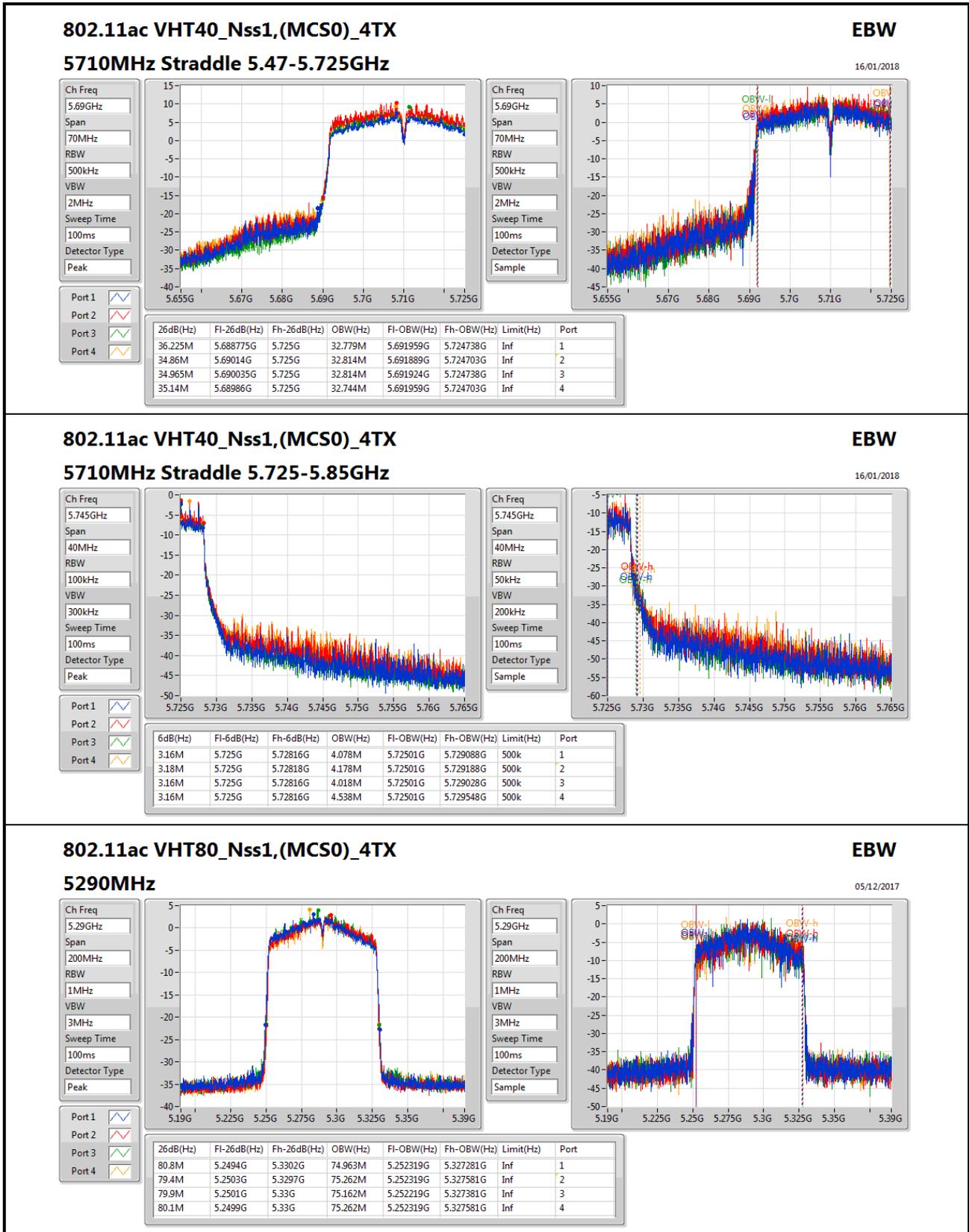
05/12/2017

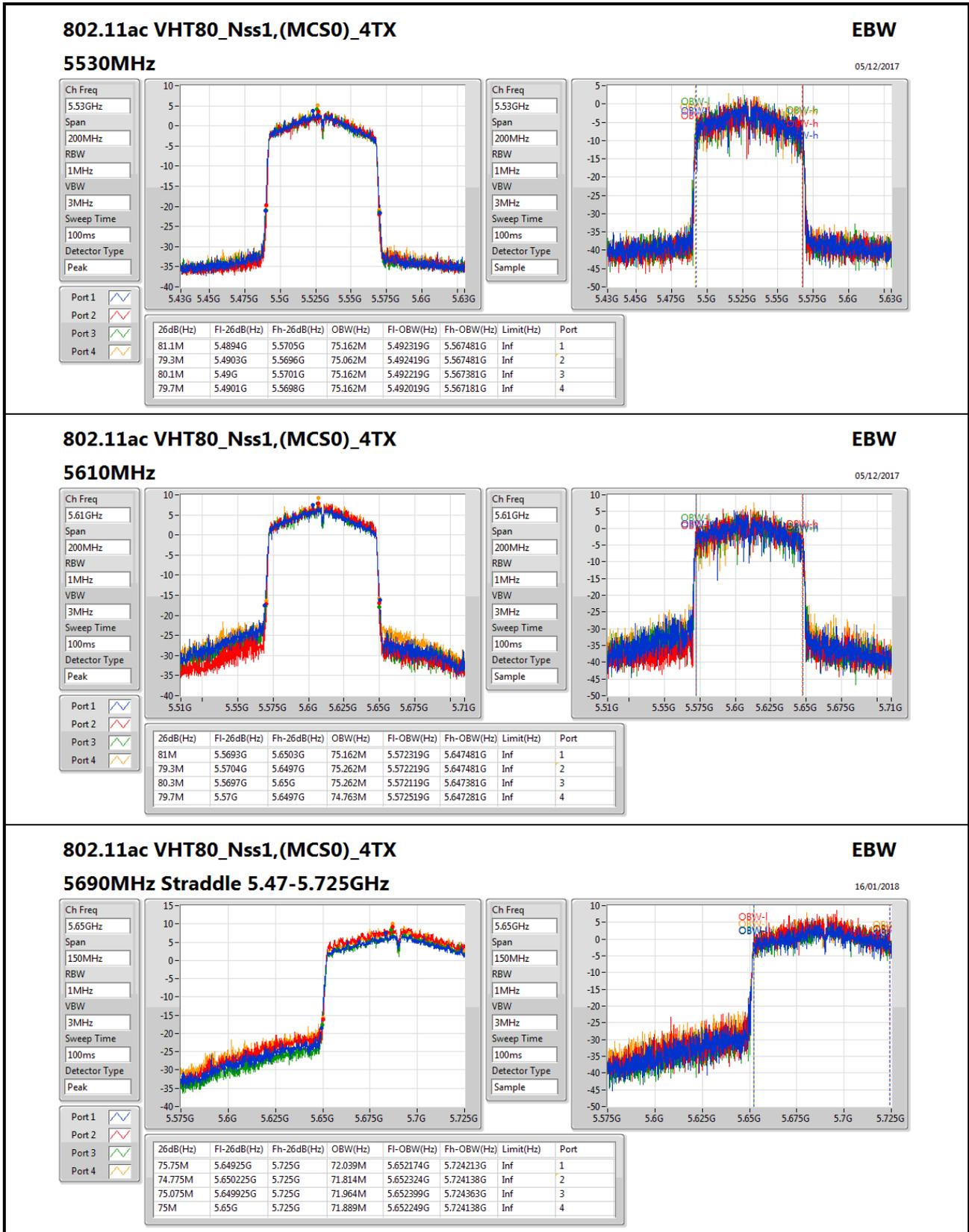
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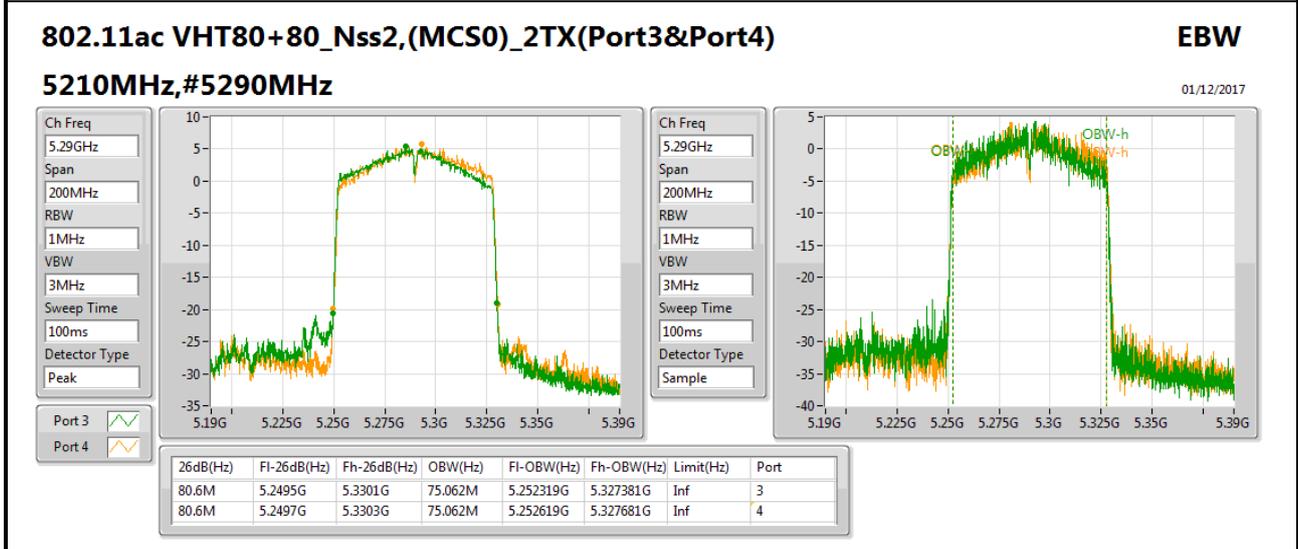
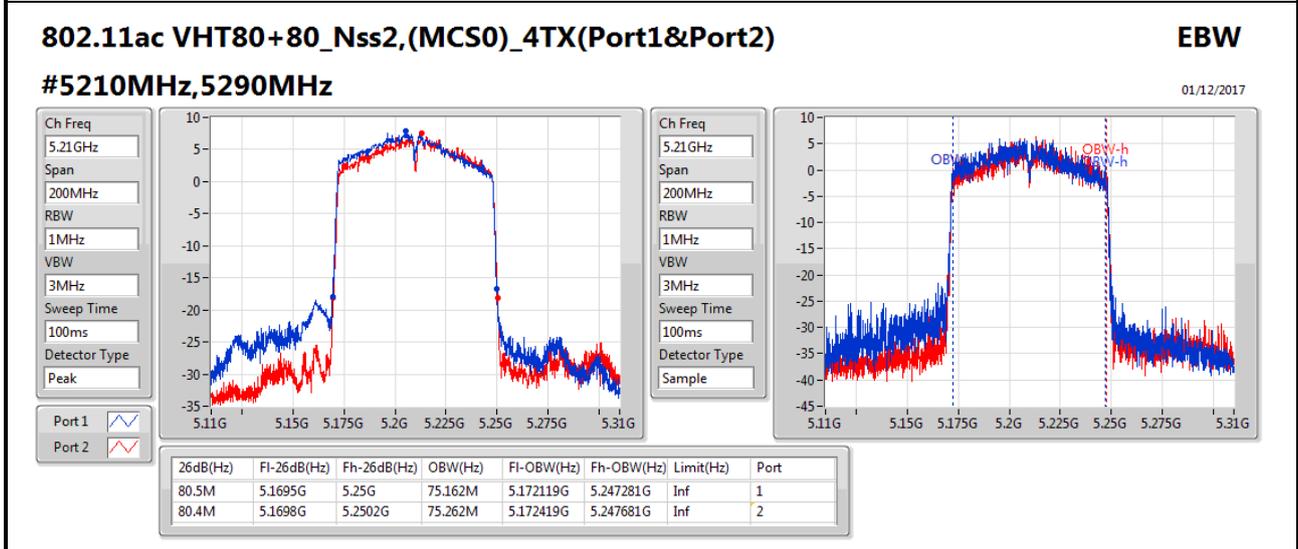
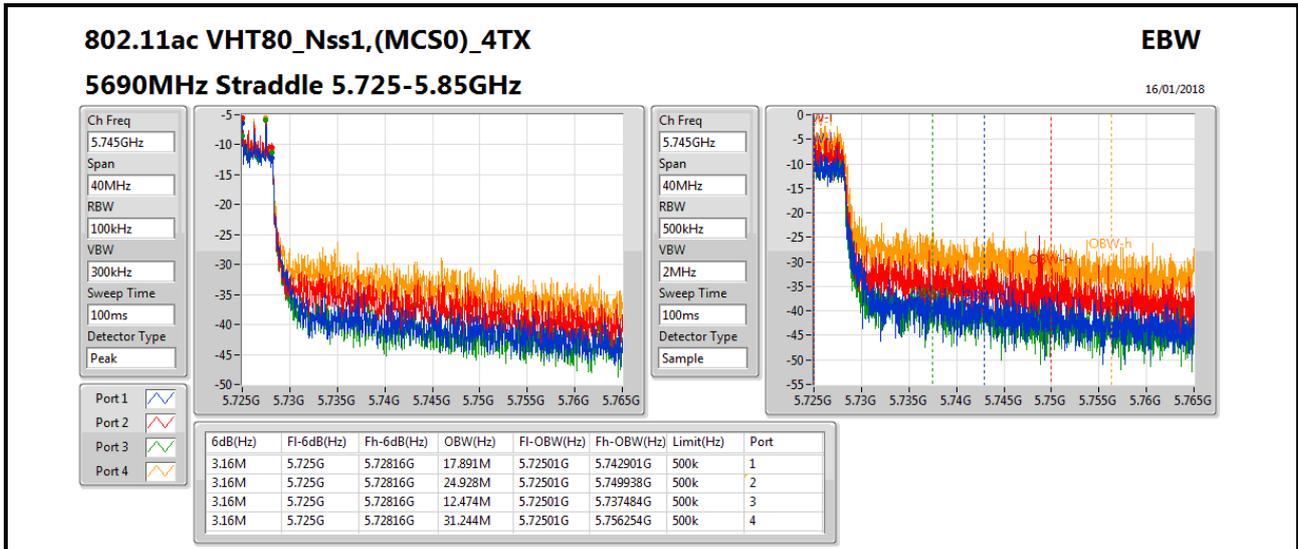
Ch Freq: 5.67GHz
Span: 100MHz
RBW: 500kHz
VBW: 2MHz
Sweep Time: 100ms
Detector Type: Peak

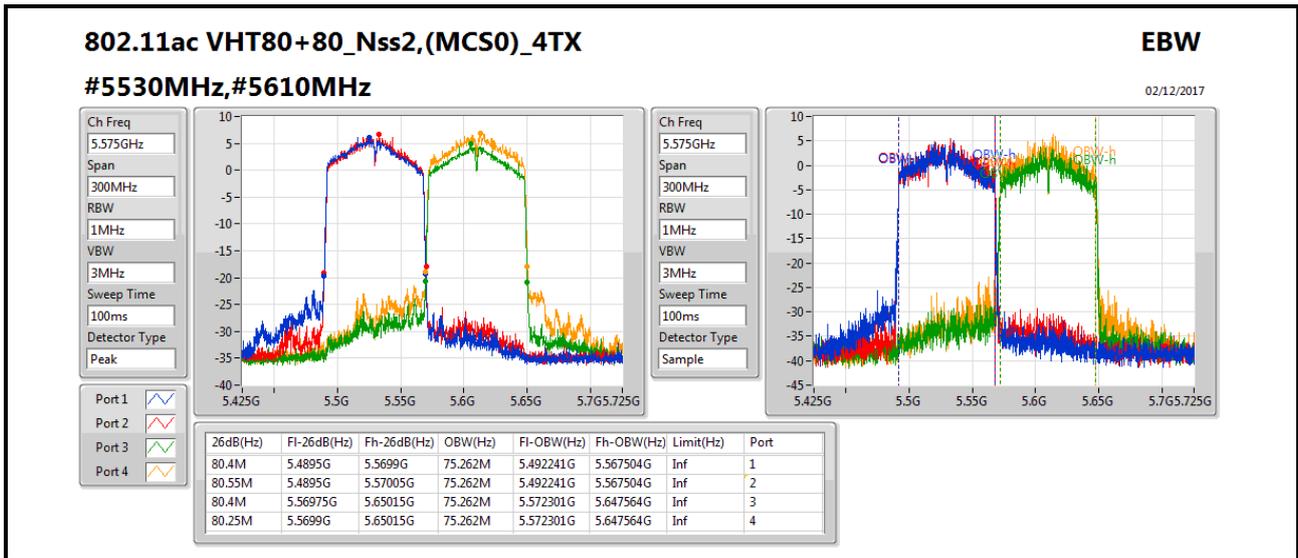
Ch Freq: 5.67GHz
Span: 100MHz
RBW: 500kHz
VBW: 2MHz
Sweep Time: 100ms
Detector Type: Sample

26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
40.4M	5.64985G	5.69025G	35.982M	5.651909G	5.687891G	Inf	1
40M	5.6499G	5.6899G	35.882M	5.652009G	5.687891G	Inf	2
40.3M	5.6497G	5.69G	35.982M	5.651909G	5.687891G	Inf	3
40.2M	5.6498G	5.69G	36.132M	5.651809G	5.687941G	Inf	4











Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	20M	16.392M	16M4D1D	19.6M	16.317M
802.11ac VHT20_Nss1,(MCS0)_4TX	20.475M	17.566M	17M6D1D	19.825M	17.491M
802.11ac VHT40_Nss1,(MCS0)_4TX	40.8M	36.082M	36M1D1D	39.9M	35.932M
802.11ac VHT80_Nss1,(MCS0)_4TX	81.1M	75.262M	75M3D1D	79.5M	75.062M
802.11ac VHT80+80_Nss2,(MCS0)_4TX(Port1&Port2)	80.5M	75.262M	75M3D1D	80.4M	75.162M
5.25-5.35GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	20.25M	16.417M	16M4D1D	19.65M	16.342M
802.11ac VHT20_Nss1,(MCS0)_4TX	20.575M	17.591M	17M6D1D	19.825M	17.491M
802.11ac VHT40_Nss1,(MCS0)_4TX	41.6M	36.032M	36M0D1D	39.8M	35.882M
802.11ac VHT80_Nss1,(MCS0)_4TX	80.8M	75.262M	75M3D1D	79.4M	74.963M
802.11ac VHT80+80_Nss2,(MCS0)_4TX(Port3&Port4)	80.6M	75.062M	75M1D1D	80.6M	75.062M
5.47-5.725GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	20.125M	16.442M	16M4D1D	14.835M	13.103M
802.11ac VHT20_Nss1,(MCS0)_4TX	20.425M	17.566M	17M6D1D	14.97M	13.733M
802.11ac VHT40_Nss1,(MCS0)_4TX	40.4M	36.132M	36M1D1D	34.86M	32.744M
802.11ac VHT80_Nss1,(MCS0)_4TX	81.1M	75.262M	75M3D1D	74.775M	71.814M
802.11ac VHT80+80_Nss2,(MCS0)_4TX	80.55M	75.262M	75M3D1D	80.25M	75.262M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	15.875M	22.589M	22M6D1D	12.975M	16.742M
802.11ac VHT20_Nss1,(MCS0)_4TX	15.925M	20.09M	20M1D1D	14.05M	17.891M
802.11ac VHT40_Nss1,(MCS0)_4TX	35.1M	38.131M	38M1D1D	32.65M	36.282M
802.11ac VHT80_Nss1,(MCS0)_4TX	75M	75.762M	75M8D1D	70M	75.362M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;



Result

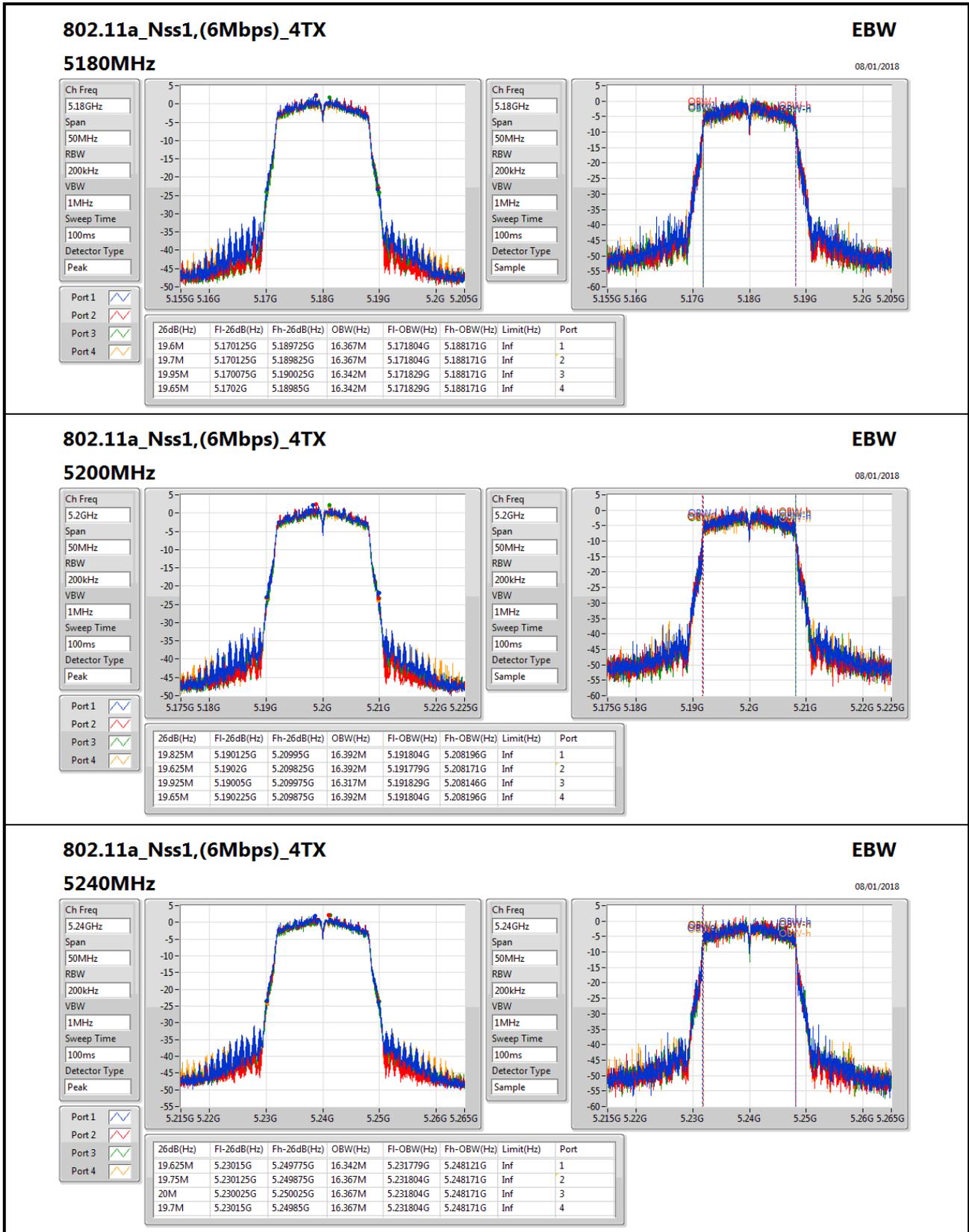
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz_TnomVnom	Pass	Inf	19.6M	16.367M	19.7M	16.367M	19.95M	16.342M	19.65M	16.342M
5200MHz_TnomVnom	Pass	Inf	19.825M	16.392M	19.625M	16.392M	19.925M	16.317M	19.65M	16.392M
5240MHz_TnomVnom	Pass	Inf	19.625M	16.342M	19.75M	16.367M	20M	16.367M	19.7M	16.367M
5260MHz_TnomVnom	Pass	Inf	19.65M	16.417M	19.65M	16.417M	20.25M	16.342M	19.85M	16.367M
5300MHz_TnomVnom	Pass	Inf	19.675M	16.392M	19.8M	16.342M	19.925M	16.367M	19.85M	16.367M
5320MHz_TnomVnom	Pass	Inf	19.725M	16.367M	19.65M	16.342M	20.175M	16.367M	19.65M	16.342M
5500MHz_TnomVnom	Pass	Inf	19.725M	16.367M	19.75M	16.367M	19.975M	16.367M	19.775M	16.367M
5580MHz_TnomVnom	Pass	Inf	19.6M	16.342M	19.75M	16.342M	20.125M	16.367M	19.975M	16.367M
5700MHz_TnomVnom	Pass	Inf	19.575M	16.342M	19.925M	16.442M	19.975M	16.342M	19.8M	16.367M
5720MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	Inf	14.865M	13.103M	14.85M	13.178M	14.985M	13.133M	14.835M	13.163M
5720MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	500k	3.16M	3.638M	3.14M	3.738M	3.18M	3.638M	2.88M	3.778M
5745MHz_TnomVnom	Pass	500k	14.925M	19.49M	15.05M	17.166M	15.05M	16.742M	15M	17.041M
5785MHz_TnomVnom	Pass	500k	15.1M	18.316M	15.05M	22.589M	14.975M	19.14M	15.075M	20.44M
5825MHz_TnomVnom	Pass	500k	12.975M	18.591M	13.75M	18.091M	15.875M	17.066M	15.1M	20.465M
802.11ac_VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz_TnomVnom	Pass	Inf	20.4M	17.541M	20.025M	17.541M	19.825M	17.541M	20.275M	17.566M
5200MHz_TnomVnom	Pass	Inf	20.45M	17.491M	19.925M	17.566M	19.925M	17.491M	20.275M	17.541M
5240MHz_TnomVnom	Pass	Inf	20.475M	17.541M	19.85M	17.541M	19.825M	17.516M	20.25M	17.566M
5260MHz_TnomVnom	Pass	Inf	20.425M	17.566M	19.875M	17.541M	19.95M	17.541M	20M	17.566M
5300MHz_TnomVnom	Pass	Inf	20.475M	17.591M	19.825M	17.516M	19.975M	17.491M	20M	17.566M
5320MHz_TnomVnom	Pass	Inf	20.575M	17.541M	19.9M	17.516M	19.85M	17.541M	20.25M	17.541M
5500MHz_TnomVnom	Pass	Inf	20.425M	17.566M	20.1M	17.541M	19.825M	17.566M	20.25M	17.541M
5580MHz_TnomVnom	Pass	Inf	20.4M	17.516M	20M	17.516M	19.9M	17.541M	20.375M	17.541M
5700MHz_TnomVnom	Pass	Inf	20.425M	17.566M	19.875M	17.541M	19.9M	17.516M	20.325M	17.566M
5720MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	Inf	15.045M	13.733M	14.97M	13.733M	15.03M	13.763M	15.015M	13.733M
5720MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	500k	3.78M	4.058M	3.78M	4.058M	3.78M	4.038M	3.74M	4.038M
5745MHz_TnomVnom	Pass	500k	14.925M	19.265M	15.825M	18.516M	15.075M	17.941M	15.05M	18.016M
5785MHz_TnomVnom	Pass	500k	15.075M	18.666M	15.925M	20.09M	15.075M	18.041M	15.125M	18.066M
5825MHz_TnomVnom	Pass	500k	14.05M	18.266M	15.05M	18.366M	15.075M	17.891M	15.075M	19.165M
802.11ac_VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz_TnomVnom	Pass	Inf	40.8M	35.932M	39.9M	35.932M	40.15M	35.982M	40.05M	35.932M
5230MHz_TnomVnom	Pass	Inf	40.6M	35.932M	39.9M	35.932M	40.1M	35.982M	40.15M	36.082M
5270MHz_TnomVnom	Pass	Inf	41.6M	35.982M	39.8M	35.932M	40.35M	35.982M	40.05M	35.932M
5310MHz_TnomVnom	Pass	Inf	40.35M	35.982M	39.95M	35.882M	40.15M	35.882M	40.1M	36.032M
5510MHz_TnomVnom	Pass	Inf	40.05M	35.932M	39.85M	35.982M	39.95M	35.982M	40.25M	35.882M
5550MHz_TnomVnom	Pass	Inf	40.25M	35.882M	39.8M	36.032M	40.2M	35.882M	40.15M	35.882M
5670MHz_TnomVnom	Pass	Inf	40.4M	35.982M	40M	35.882M	40.3M	35.982M	40.2M	36.132M
5710MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	Inf	36.225M	32.779M	34.86M	32.814M	34.965M	32.814M	35.14M	32.744M
5710MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	500k	3.16M	4.078M	3.18M	4.178M	3.16M	4.018M	3.16M	4.538M

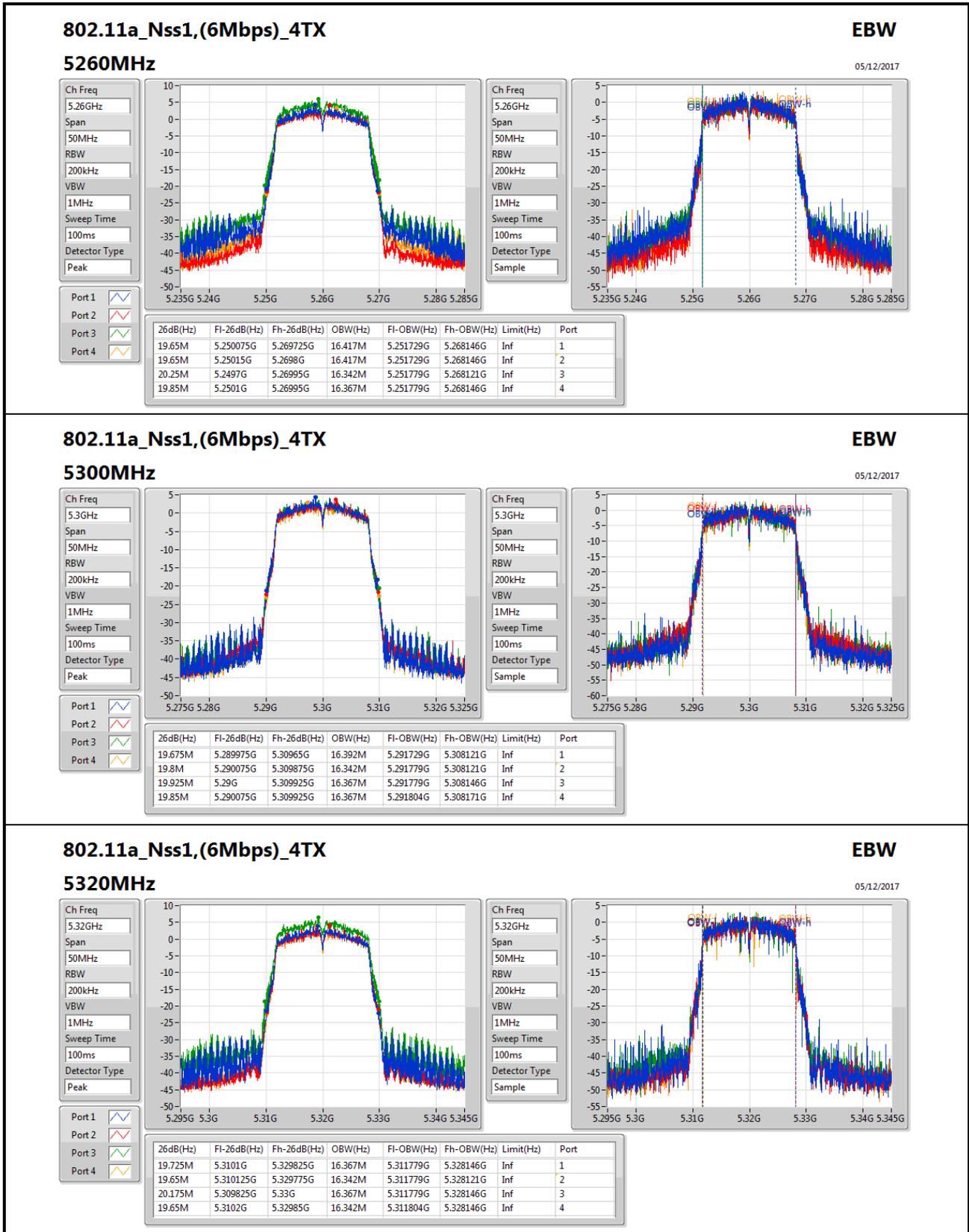


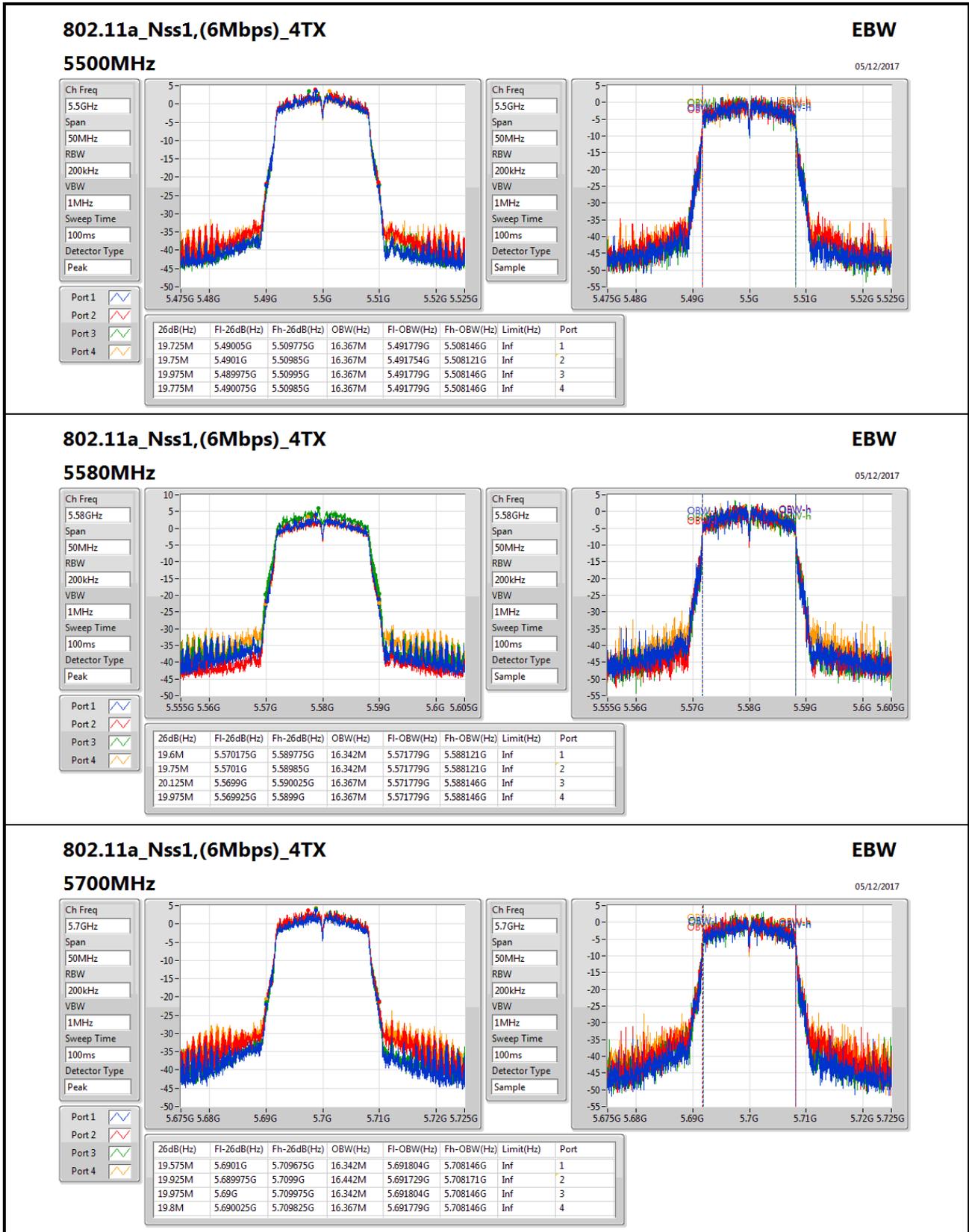
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
5755MHz_TnomVnom	Pass	500k	35.05M	37.031M	35.05M	37.481M	33.75M	36.282M	35.1M	36.482M
5795MHz_TnomVnom	Pass	500k	35.1M	38.131M	32.65M	37.681M	33.75M	36.432M	35.05M	36.432M
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz_TnomVnom	Pass	Inf	81.1M	75.162M	79.5M	75.062M	79.7M	75.162M	79.9M	75.262M
5290MHz_TnomVnom	Pass	Inf	80.8M	74.963M	79.4M	75.262M	79.9M	75.162M	80.1M	75.262M
5530MHz_TnomVnom	Pass	Inf	81.1M	75.162M	79.3M	75.062M	80.1M	75.162M	79.7M	75.162M
5610MHz_TnomVnom	Pass	Inf	81M	75.162M	79.3M	75.262M	80.3M	75.262M	79.7M	74.763M
5690MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	Inf	75.75M	72.039M	74.775M	71.814M	75.075M	71.964M	75M	71.889M
5690MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	500k	3.16M	17.891M	3.16M	24.928M	3.16M	12.474M	3.16M	31.244M
5775MHz_TnomVnom	Pass	500k	70M	75.762M	75M	75.362M	73.7M	75.562M	70M	75.462M
802.11ac VHT80+80_Nss2,(MCS0)_4TX(Port1&Port2)	-	-	-	-	-	-	-	-	-	-
#5210MHz,5290MHz	Pass	Inf	80.5M	75.162M	80.4M	75.262M				
802.11ac VHT80+80_Nss2,(MCS0)_4TX(Port3&Port4)	-	-	-	-	-	-	-	-	-	-
5210MHz,#5290MHz	Pass	Inf					80.6M	75.062M	80.6M	75.062M
802.11ac VHT80+80_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
#5530MHz,#5610MHz	Pass	Inf	80.4M	75.262M	80.55M	75.262M	80.4M	75.262M	80.25M	75.262M

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

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






802.11a_Nss1,(6Mbps)_4TX
EBW

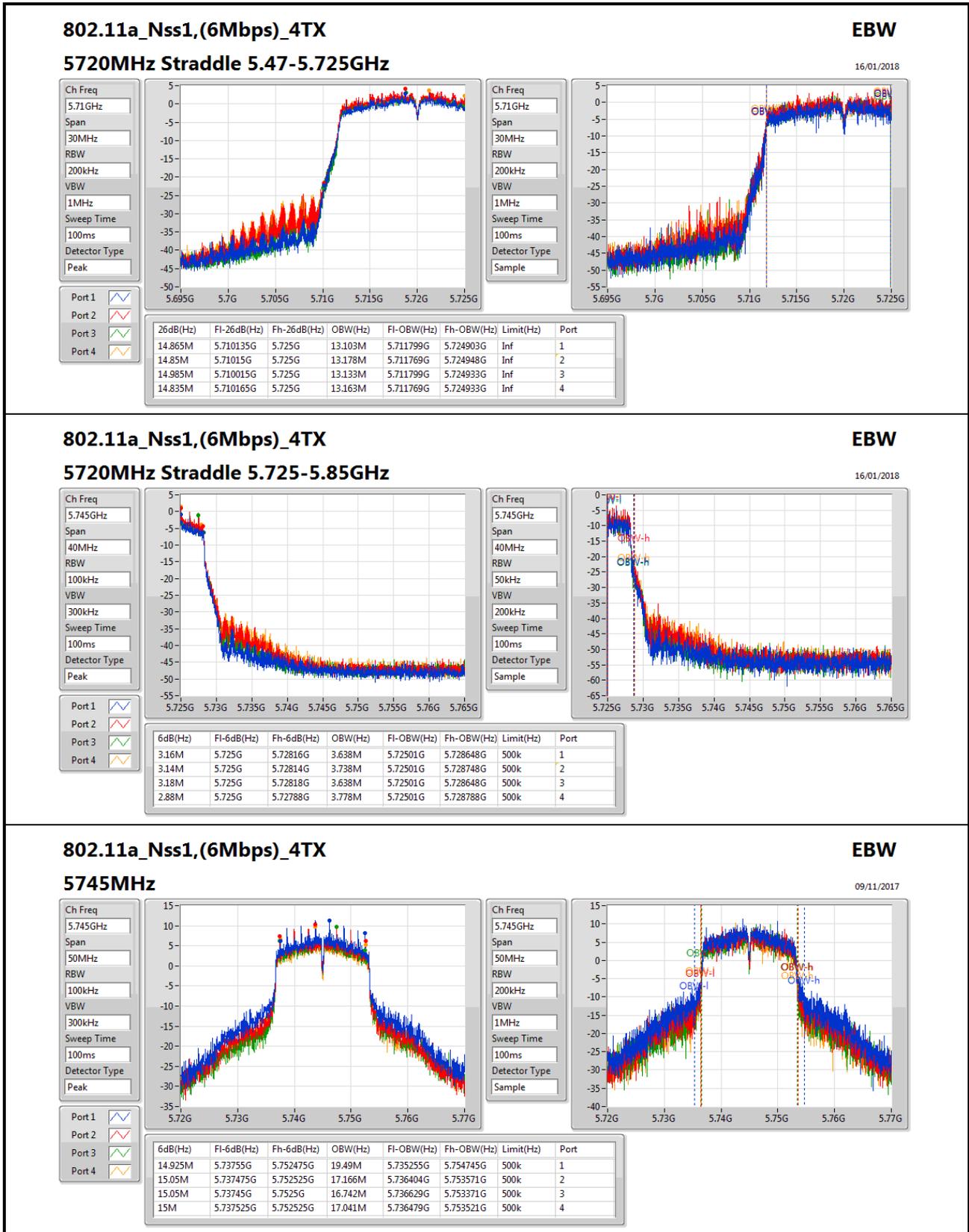
05/12/2017

5700MHz

Ch Freq: 5.7GHz
Span: 50MHz
RBW: 200kHz
VBW: 1MHz
Sweep Time: 100ms
Detector Type: Peak

Ch Freq: 5.7GHz
Span: 50MHz
RBW: 200kHz
VBW: 1MHz
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
19.575M	5.6901G	5.709675G	16.342M	5.691804G	5.708146G	Inf	1
19.925M	5.689975G	5.7099G	16.442M	5.691729G	5.708171G	Inf	2
19.975M	5.69G	5.709975G	16.342M	5.691804G	5.708146G	Inf	3
19.8M	5.690025G	5.709825G	16.367M	5.691779G	5.708146G	Inf	4

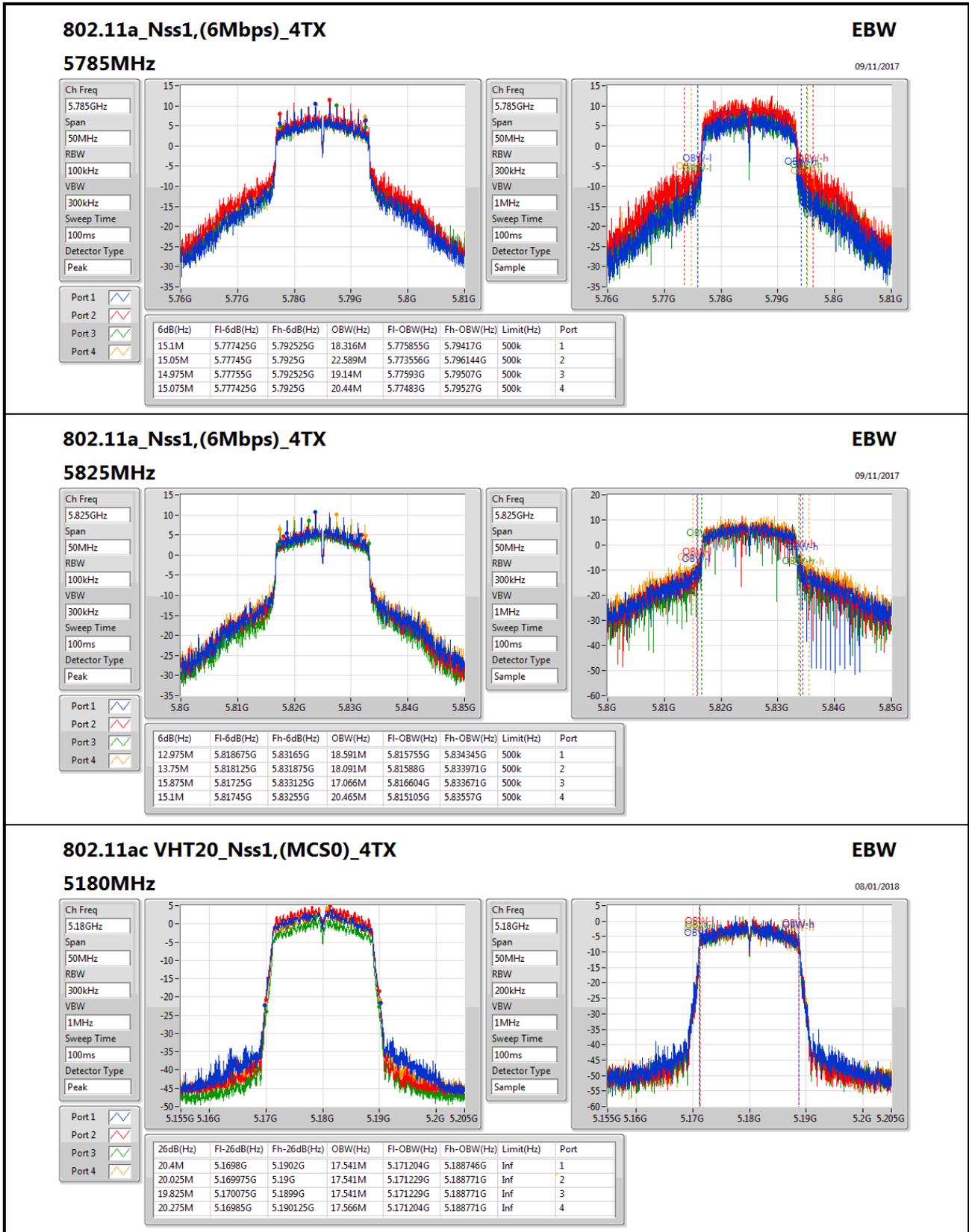

802.11a_Nss1,(6Mbps)_4TX
EBW

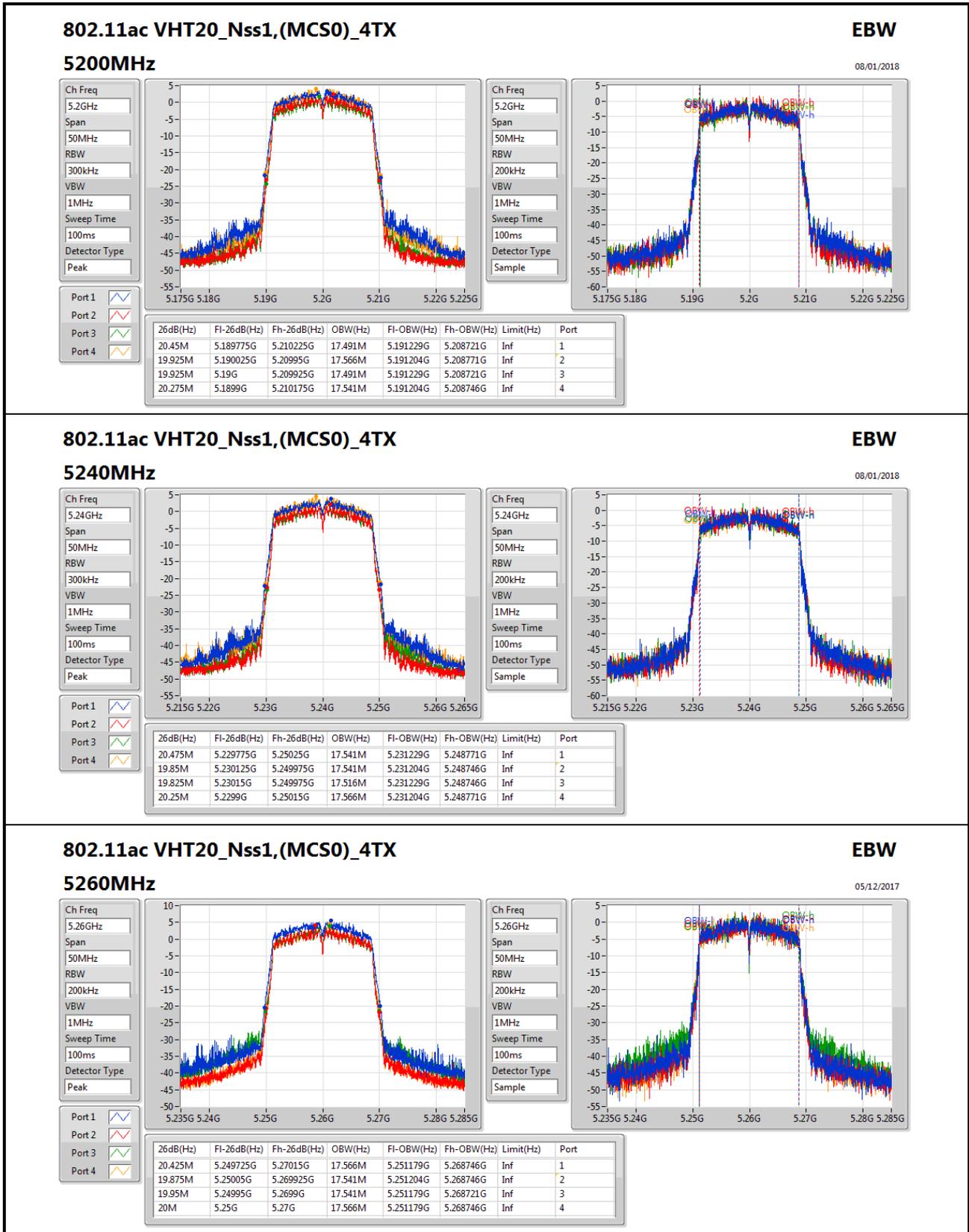
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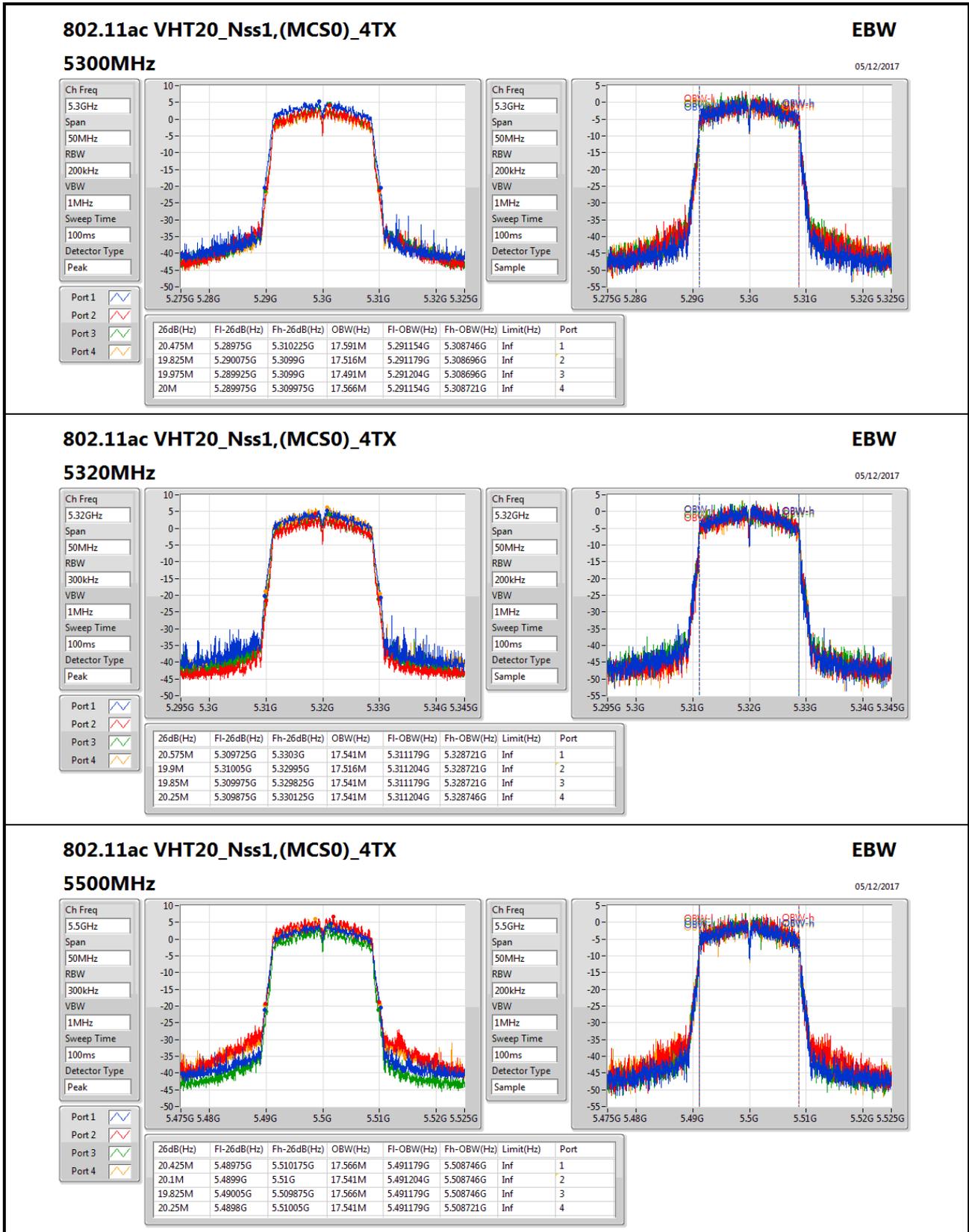
5745MHz

Ch Freq: 5.745GHz
Span: 50MHz
RBW: 100kHz
VBW: 300kHz
Sweep Time: 100ms
Detector Type: Peak

Ch Freq: 5.745GHz
Span: 50MHz
RBW: 200kHz
VBW: 1MHz
Sweep Time: 100ms
Detector Type: Sample






802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
05/12/2017

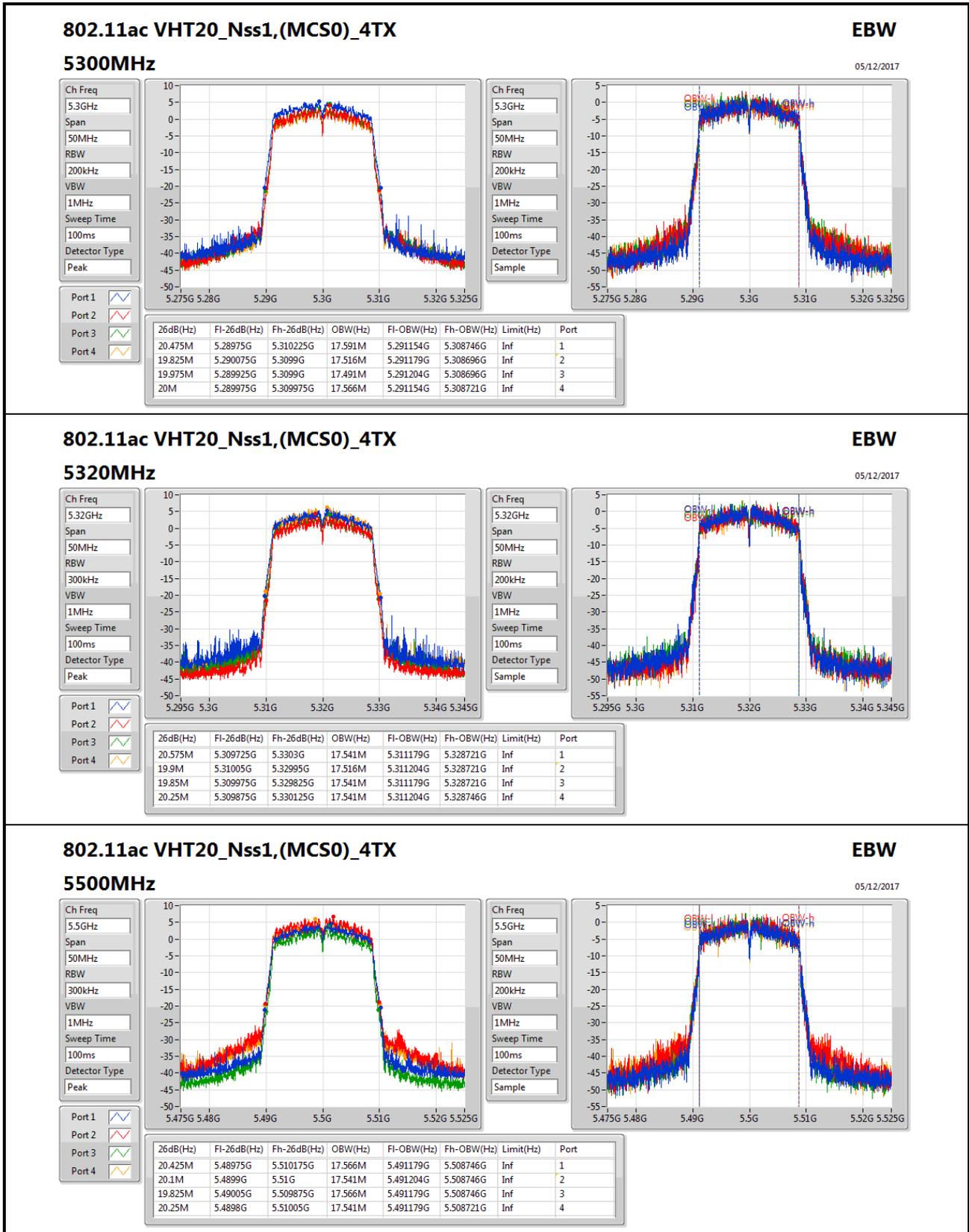
5500MHz

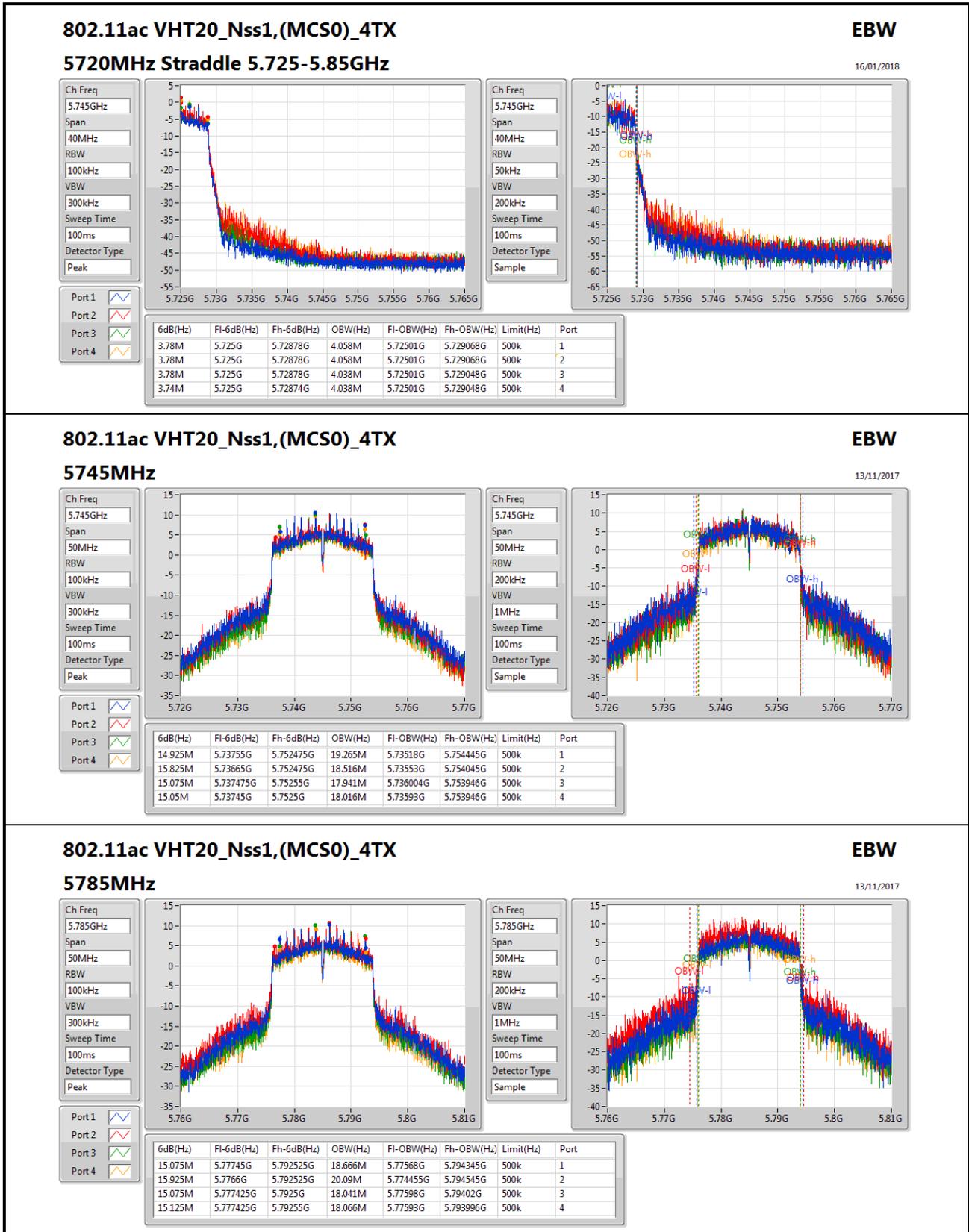
Ch Freq: 5.5GHz
 Span: 50MHz
 RBW: 300kHz
 VBW: 1MHz
 Sweep Time: 100ms
 Detector Type: Peak

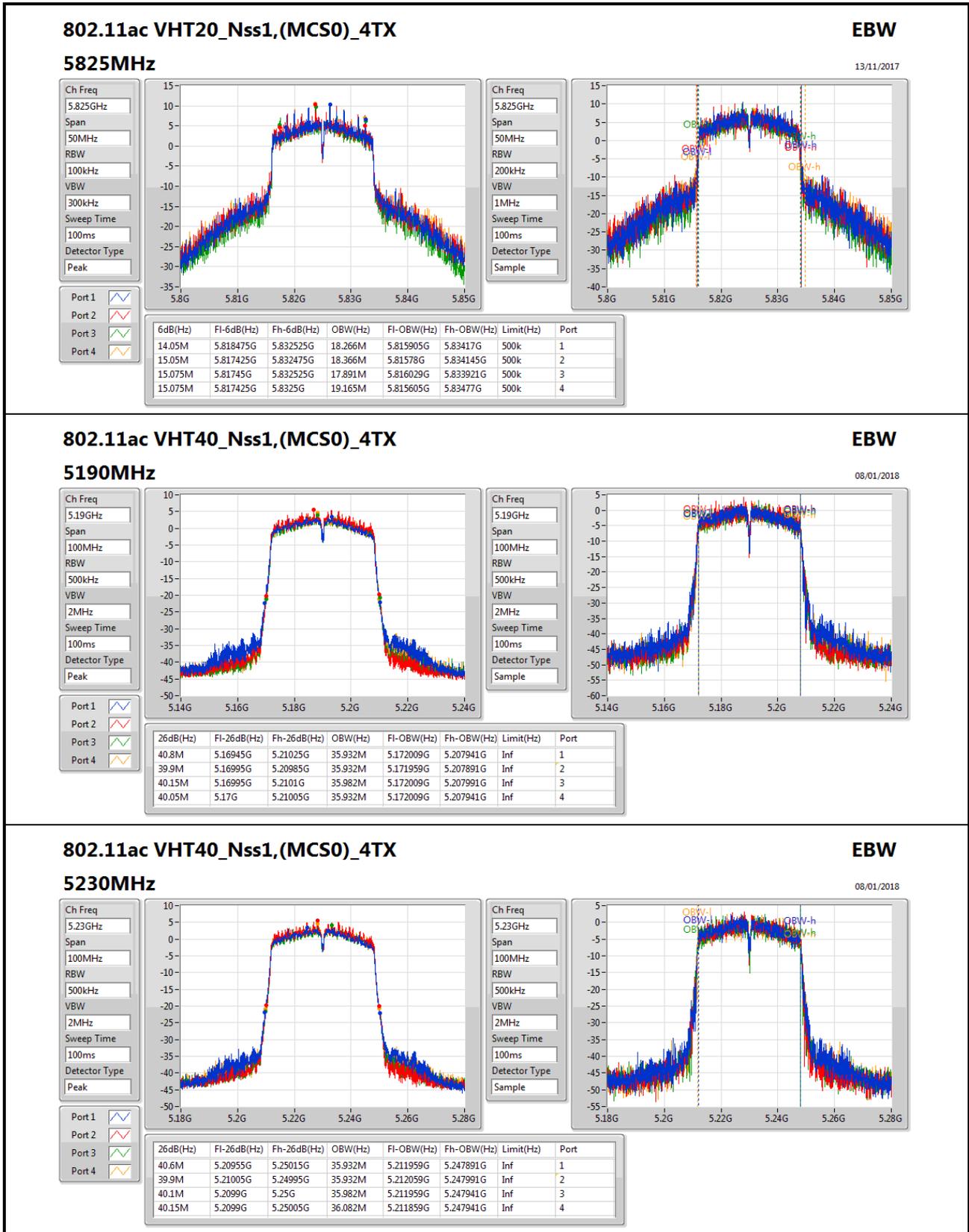
Port 1:
 Port 2:
 Port 3:
 Port 4:

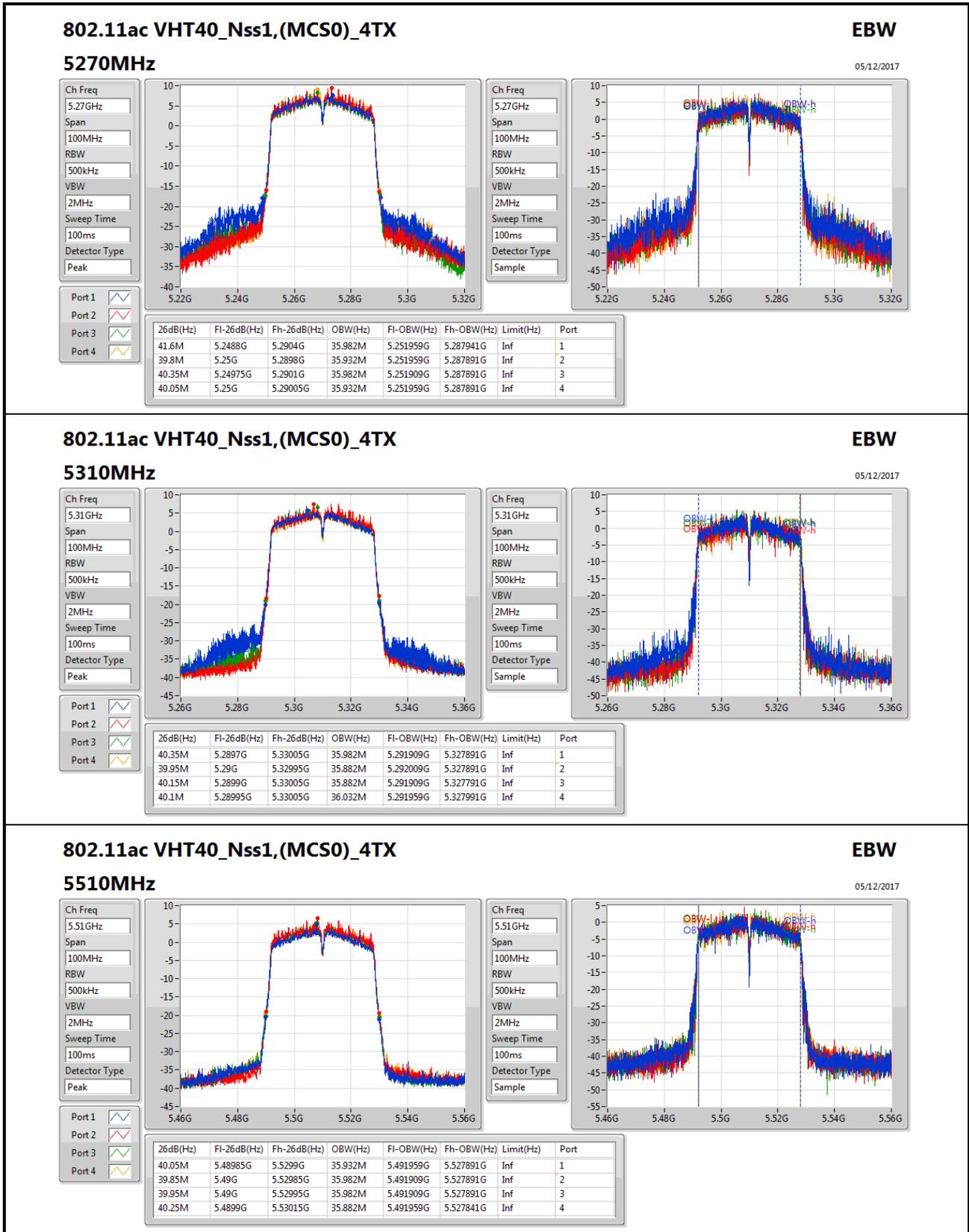
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
20.425M	5.48975G	5.510175G	17.566M	5.491179G	5.508746G	Inf	1
20.1M	5.4899G	5.51G	17.541M	5.491204G	5.508746G	Inf	2
19.825M	5.49005G	5.509875G	17.566M	5.491179G	5.508746G	Inf	3
20.25M	5.4898G	5.51005G	17.541M	5.491179G	5.508721G	Inf	4

Ch Freq: 5.5GHz
 Span: 50MHz
 RBW: 200kHz
 VBW: 1MHz
 Sweep Time: 100ms
 Detector Type: Sample








802.11ac VHT40_Nss1,(MCS0)_4TX
EBW

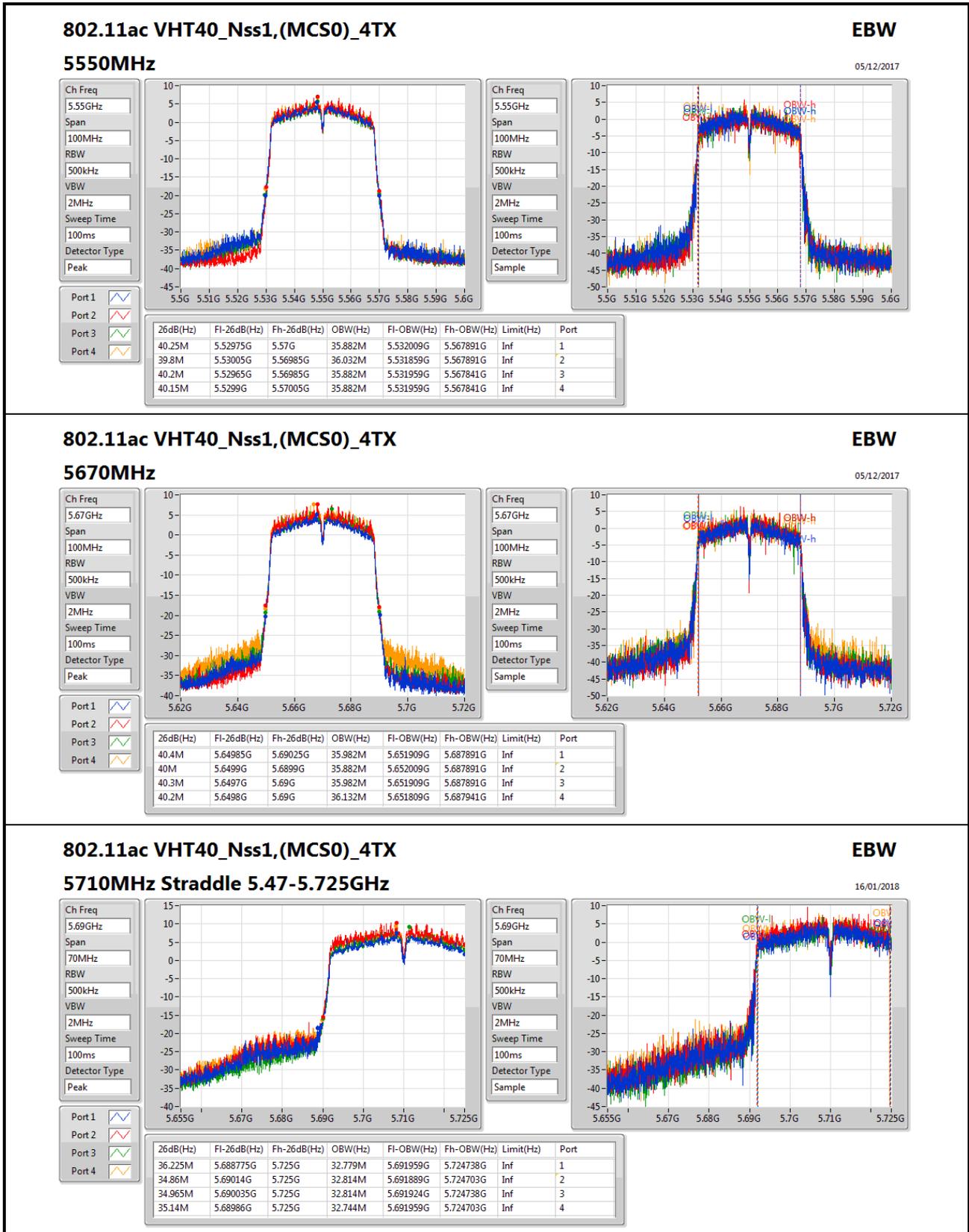
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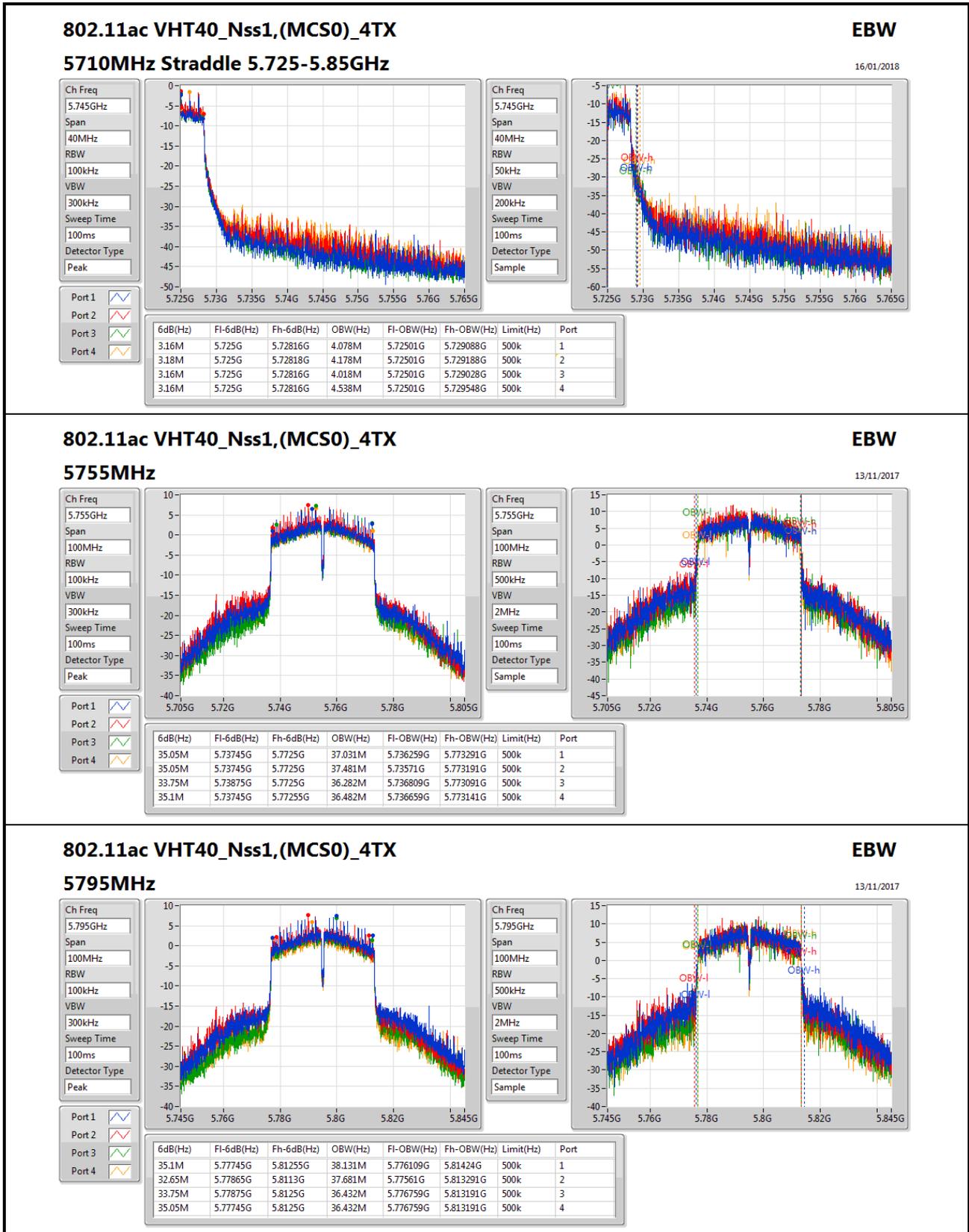
5510MHz

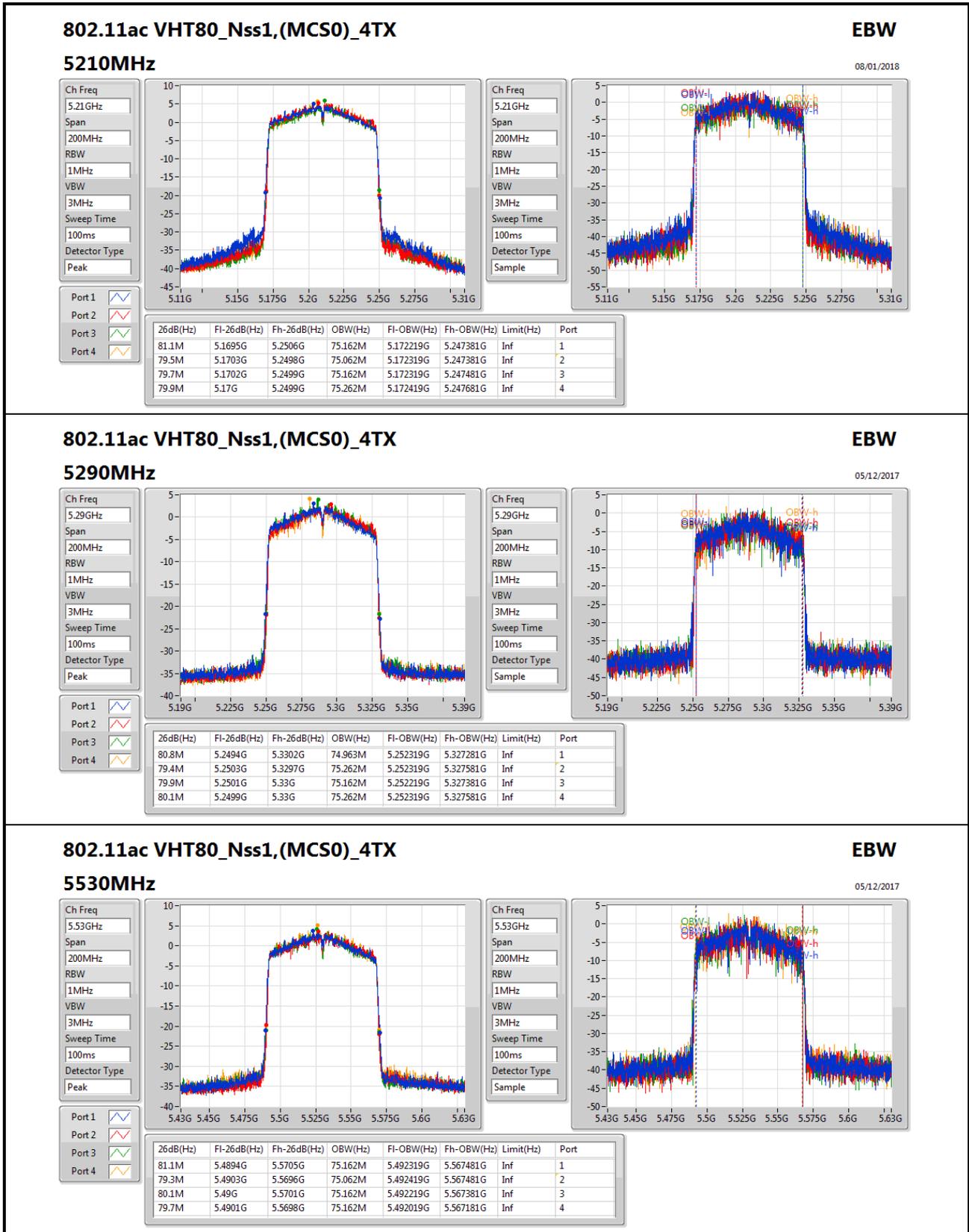
Ch Freq: 5.51GHz
Span: 100MHz
RBW: 500kHz
VBW: 2MHz
Sweep Time: 100ms
Detector Type: Peak

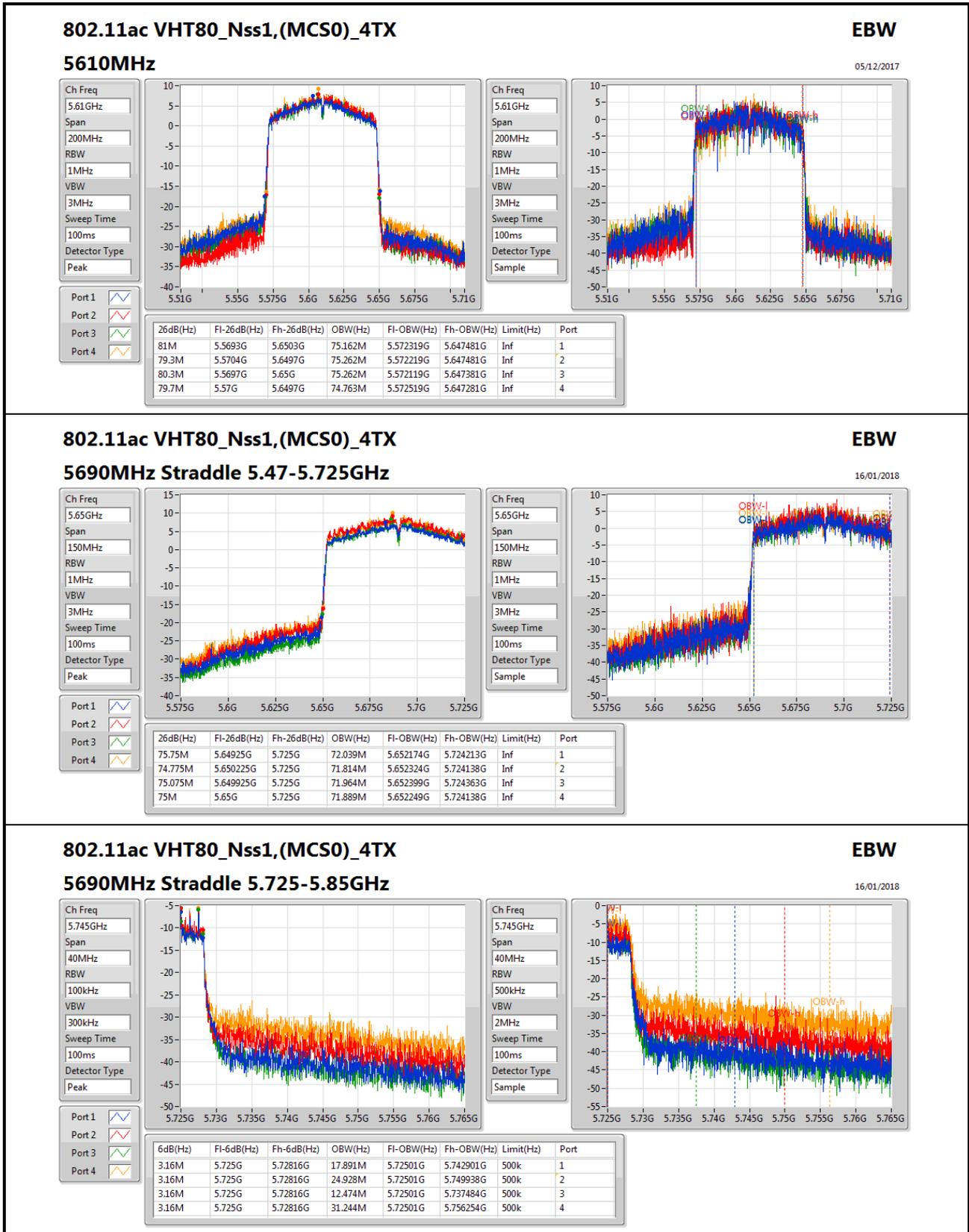
Ch Freq: 5.51GHz
Span: 100MHz
RBW: 500kHz
VBW: 2MHz
Sweep Time: 100ms
Detector Type: Sample

26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
40.05M	5.48985G	5.5299G	35.932M	5.491959G	5.527891G	Inf	1
39.85M	5.49G	5.52985G	35.982M	5.491909G	5.527891G	Inf	2
39.95M	5.49G	5.52995G	35.982M	5.491909G	5.527891G	Inf	3
40.25M	5.4899G	5.53015G	35.882M	5.491959G	5.527841G	Inf	4







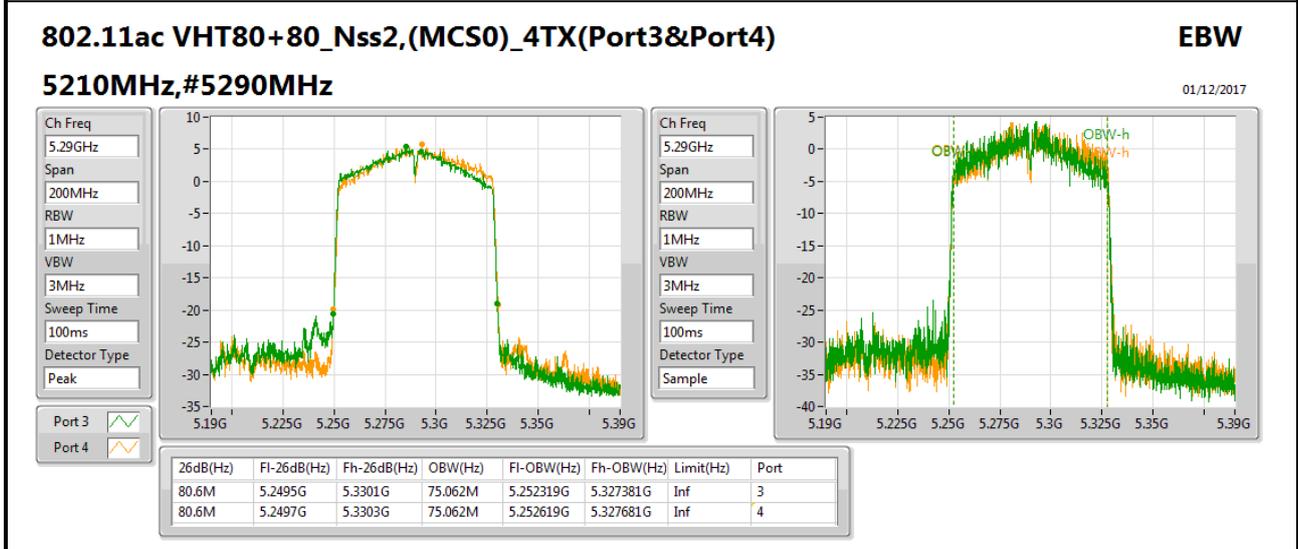
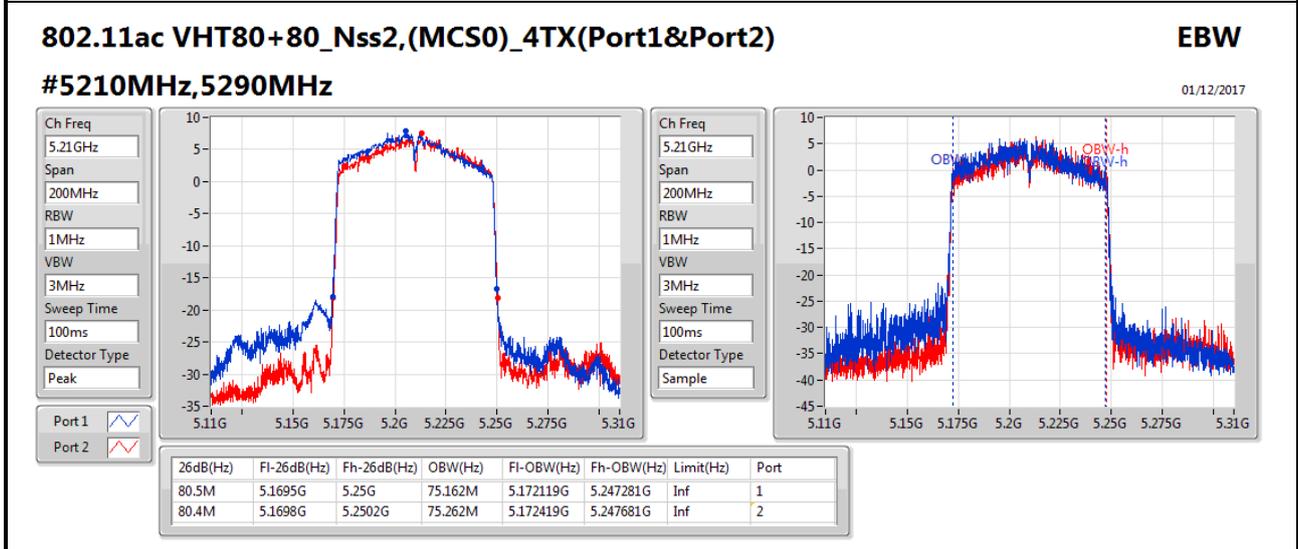
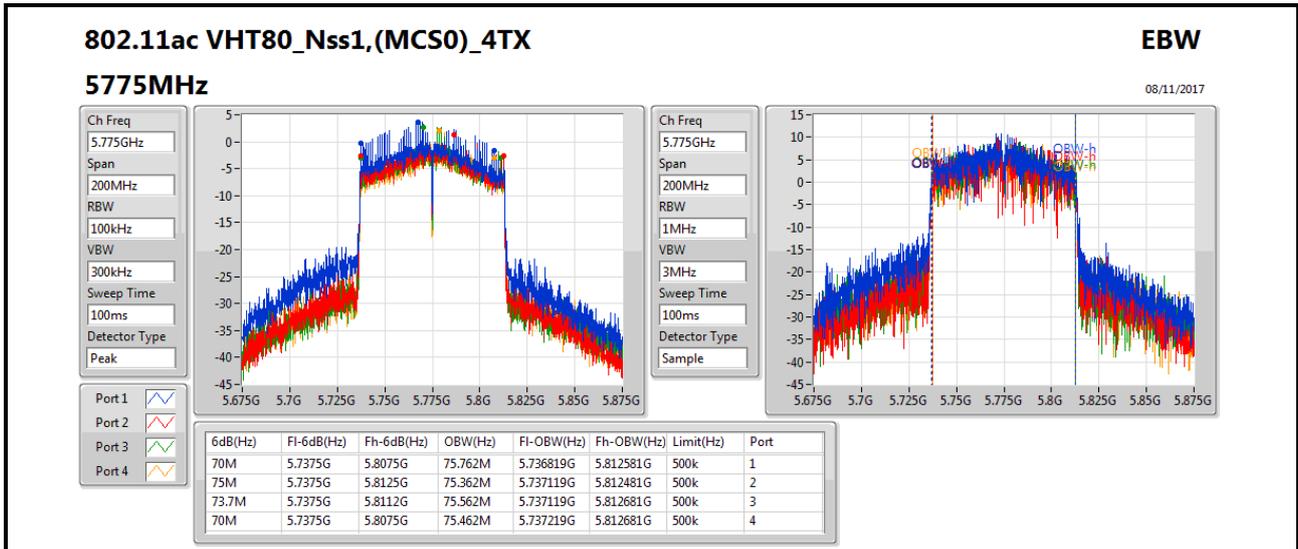

802.11ac VHT80_Nss1,(MCS0)_4TX
EBW

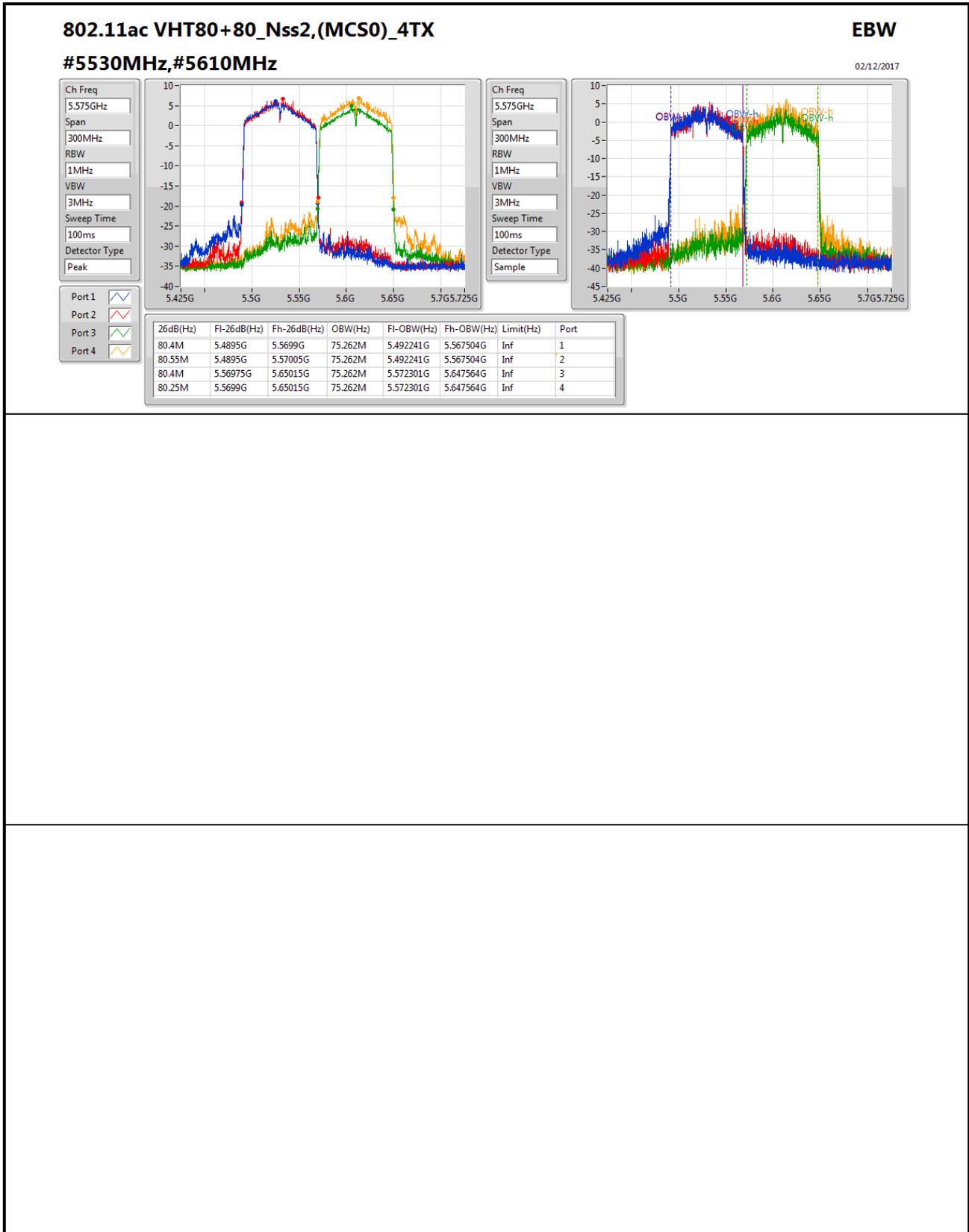
16/01/2018

5690MHz Straddle 5.725-5.85GHz

Ch Freq: 5.745GHz
Span: 40MHz
RBW: 100kHz
VBW: 300kHz
Sweep Time: 100ms
Detector Type: Peak

Ch Freq: 5.745GHz
Span: 40MHz
RBW: 500kHz
VBW: 2MHz
Sweep Time: 100ms
Detector Type: Sample







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-BF_Nss1,(MCS0)_4TX	46.775M	19.515M	19M5D1D	42.025M	17.816M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	88.25M	45.027M	45M0D1D	66.75M	36.182M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	81.2M	75.962M	76M0D1D	80.5M	75.562M
802.11ac VHT80+80-BF_Nss2,(MCS0)_4TX(Port1&Port2)	80.5M	75.162M	75M2D1D	80.1M	75.162M
5.25-5.35GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	20.75M	17.716M	17M7D1D	20.5M	17.641M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	41.6M	36.232M	36M2D1D	40.5M	36.032M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	112.7M	76.162M	76M2D1D	81.3M	75.562M
802.11ac VHT80+80-BF_Nss2,(MCS0)_4TX(Port3&Port4)	80.4M	75.362M	75M4D1D	80M	75.262M
5.47-5.725GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	20.85M	17.816M	17M8D1D	14.97M	13.778M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	46.5M	36.232M	36M2D1D	35.21M	32.954M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	124.7M	76.062M	76M1D1D	75.6M	72.489M
802.11ac VHT80+80-BF_Nss2,(MCS0)_4TX	81.15M	75.412M	75M4D1D	80.1M	74.813M
5.725-5.85GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	17.6M	28.436M	28M4D1D	3.82M	4.078M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	36.3M	53.973M	54M0D1D	3.22M	3.978M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	76.1M	82.859M	82M9D1D	3.22M	7.396M

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;



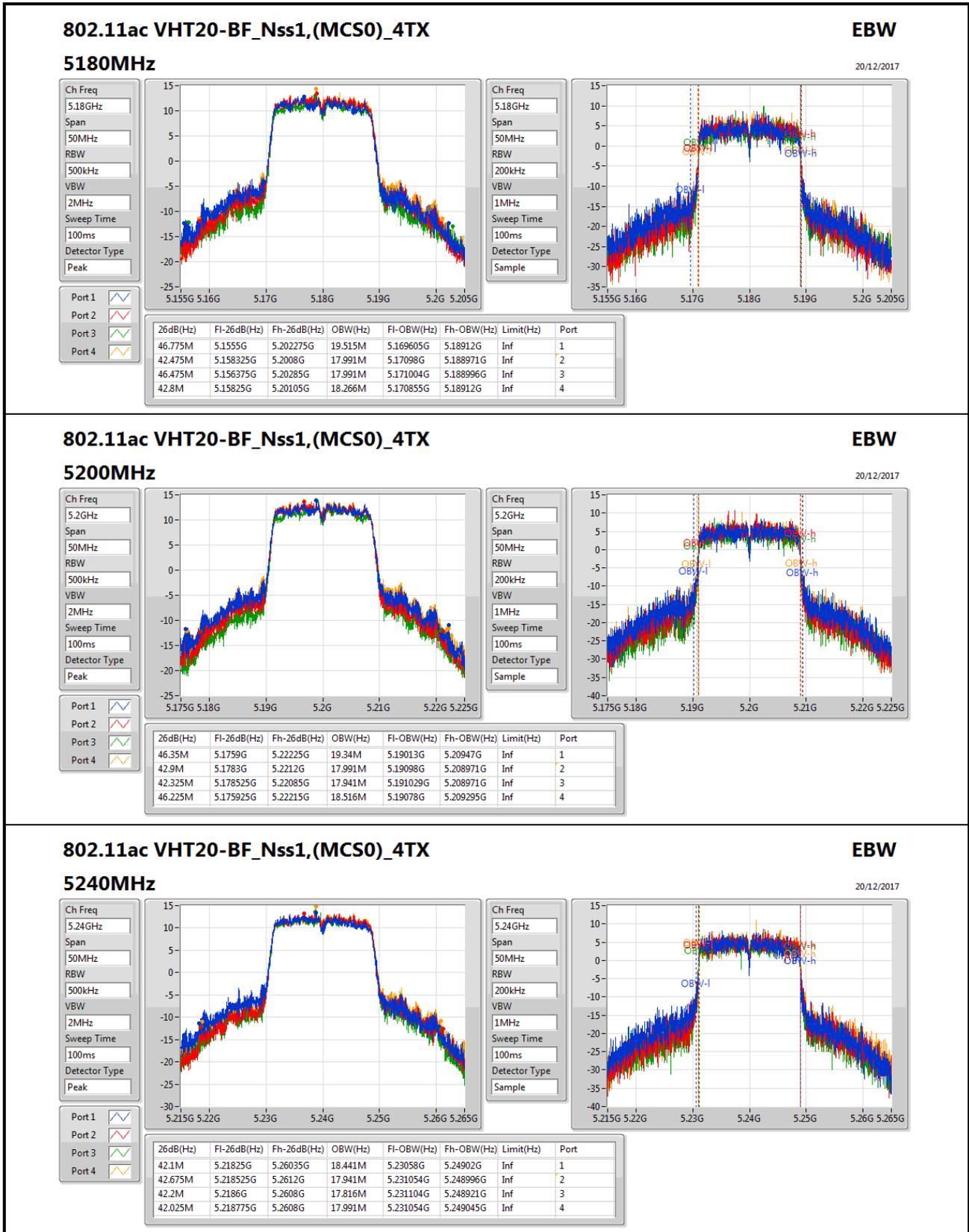
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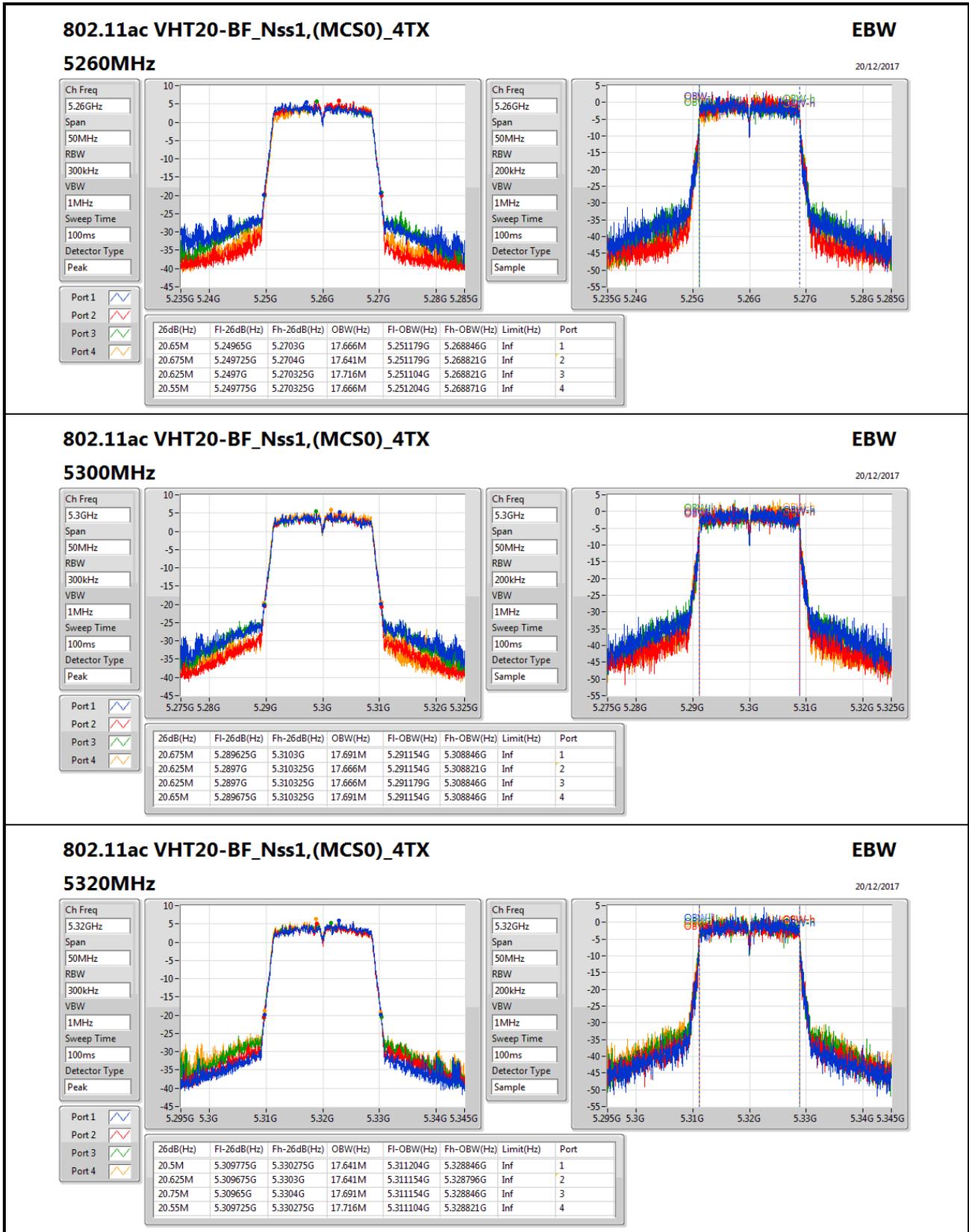
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz_TnomVnom	Pass	Inf	46.775M	19.515M	42.475M	17.991M	46.475M	17.991M	42.8M	18.266M
5200MHz_TnomVnom	Pass	Inf	46.35M	19.34M	42.9M	17.991M	42.325M	17.941M	46.225M	18.516M
5240MHz_TnomVnom	Pass	Inf	42.1M	18.441M	42.675M	17.941M	42.2M	17.816M	42.025M	17.991M
5260MHz_TnomVnom	Pass	Inf	20.65M	17.666M	20.675M	17.641M	20.625M	17.716M	20.55M	17.666M
5300MHz_TnomVnom	Pass	Inf	20.675M	17.691M	20.625M	17.666M	20.625M	17.666M	20.65M	17.691M
5320MHz_TnomVnom	Pass	Inf	20.5M	17.641M	20.625M	17.641M	20.75M	17.691M	20.55M	17.716M
5500MHz_TnomVnom	Pass	Inf	20.7M	17.666M	20.65M	17.641M	20.625M	17.641M	20.65M	17.716M
5580MHz_TnomVnom	Pass	Inf	20.55M	17.691M	20.625M	17.666M	20.525M	17.641M	20.85M	17.816M
5700MHz_TnomVnom	Pass	Inf	20.525M	17.616M	20.625M	17.666M	20.525M	17.641M	20.6M	17.691M
5745MHz_TnomVnom	Pass	500k	16.275M	20.99M	17.6M	27.511M	15.9M	24.663M	17.6M	26.837M
5785MHz_TnomVnom	Pass	500k	17.55M	19.84M	17.575M	25.662M	17.575M	24.338M	17.55M	27.036M
5825MHz_TnomVnom	Pass	500k	17.55M	21.264M	17.3M	28.186M	17.6M	26.912M	16.3M	28.436M
5720MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	Inf	15.075M	13.778M	14.97M	13.808M	15.015M	13.808M	15.03M	13.808M
5720MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	500k	3.82M	4.098M	3.88M	4.078M	3.84M	4.098M	3.84M	4.238M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz_TnomVnom	Pass	Inf	69.6M	36.382M	66.75M	36.182M	70.65M	36.282M	73.35M	36.182M
5230MHz_TnomVnom	Pass	Inf	85.9M	45.027M	84.15M	36.732M	76.05M	36.532M	88.25M	37.531M
5270MHz_TnomVnom	Pass	Inf	41.05M	36.182M	40.5M	36.232M	41.15M	36.182M	40.8M	36.032M
5310MHz_TnomVnom	Pass	Inf	41.1M	36.232M	41.1M	36.182M	41.6M	36.132M	41.4M	36.082M
5510MHz_TnomVnom	Pass	Inf	41.05M	36.182M	40.7M	36.132M	40.8M	36.132M	46.5M	36.182M
5550MHz_TnomVnom	Pass	Inf	40.85M	36.182M	41.15M	36.132M	40.95M	36.182M	41M	36.132M
5670MHz_TnomVnom	Pass	Inf	41.5M	36.232M	40.75M	36.132M	41.2M	36.182M	41M	36.232M
5755MHz_TnomVnom	Pass	500k	36.3M	41.479M	35.4M	53.023M	35M	45.377M	34.4M	53.973M
5795MHz_TnomVnom	Pass	500k	34.4M	37.931M	36M	49.675M	31.9M	48.376M	32.25M	53.273M
5710MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	Inf	35.21M	32.954M	35.945M	32.989M	35.385M	32.989M	44.1M	32.989M
5710MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	500k	3.24M	4.198M	3.22M	3.978M	3.24M	4.838M	3.24M	9.735M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz_TnomVnom	Pass	Inf	81.2M	75.962M	81M	75.762M	80.5M	75.562M	80.8M	75.662M
5290MHz_TnomVnom	Pass	Inf	112.7M	76.162M	81.6M	75.562M	81.9M	75.762M	81.3M	75.662M
5530MHz_TnomVnom	Pass	Inf	81.5M	75.862M	81.5M	75.762M	82M	76.062M	81.5M	75.562M
5610MHz_TnomVnom	Pass	Inf	124.7M	75.562M	82.8M	75.862M	81.9M	75.862M	81.6M	75.962M
5775MHz_TnomVnom	Pass	500k	75.4M	76.362M	76.1M	76.962M	69.4M	75.962M	74.4M	82.859M
5690MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	Inf	75.75M	72.789M	75.6M	72.564M	91.875M	72.489M	75.9M	72.489M
5690MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	500k	3.24M	7.396M	3.24M	14.733M	3.22M	8.536M	3.24M	17.671M
802.11ac VHT80+80-BF_Nss2,(MCS0)_4TX(Port1&Port2)	-	-	-	-	-	-	-	-	-	-
#5210MHz,5290MHz_TnomVnom	Pass	Inf	80.1M	75.162M	80.5M	75.162M	-	-	-	-
802.11ac VHT80+80-BF_Nss2,(MCS0)_4TX(Port3&Port4)	-	-	-	-	-	-	-	-	-	-

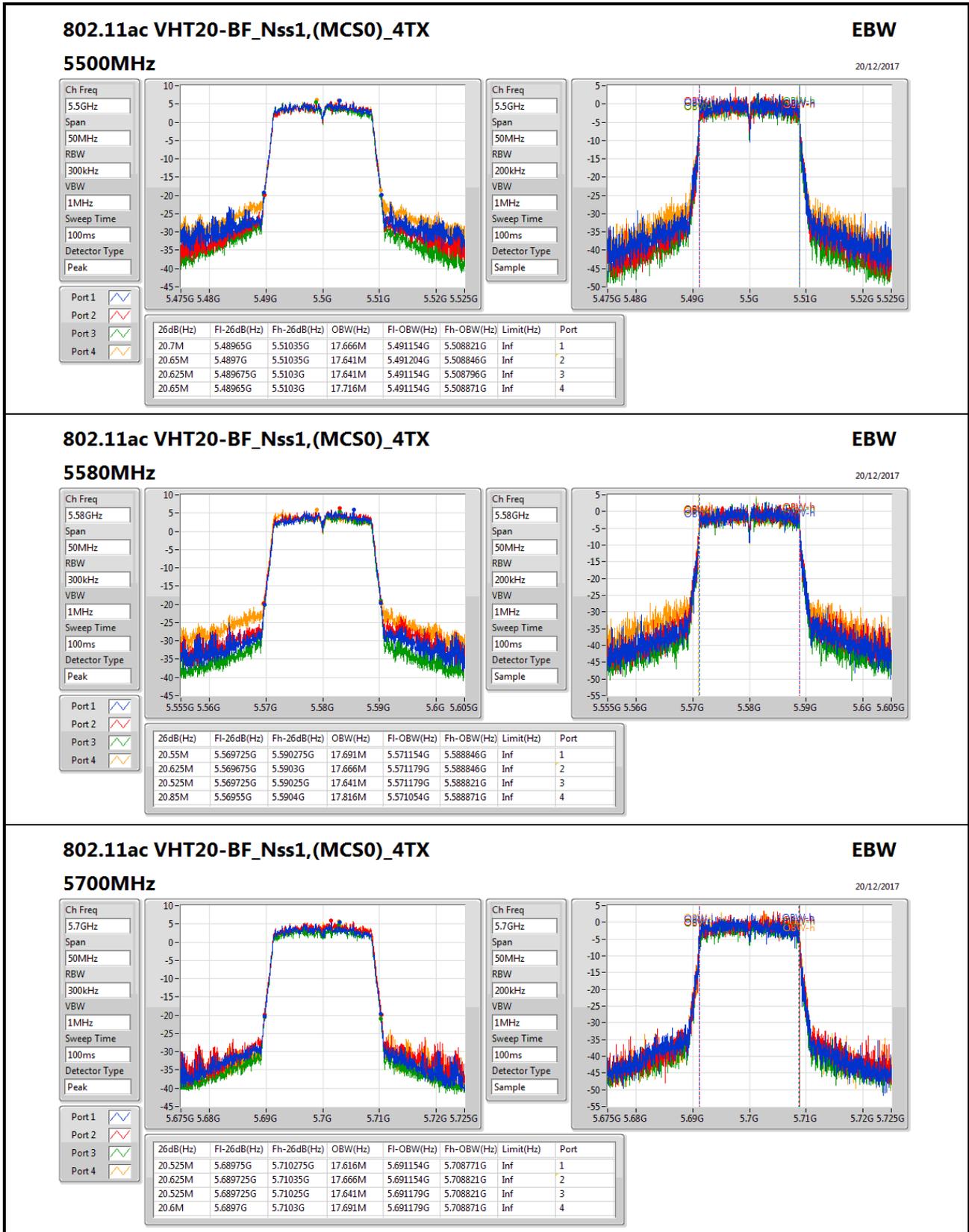


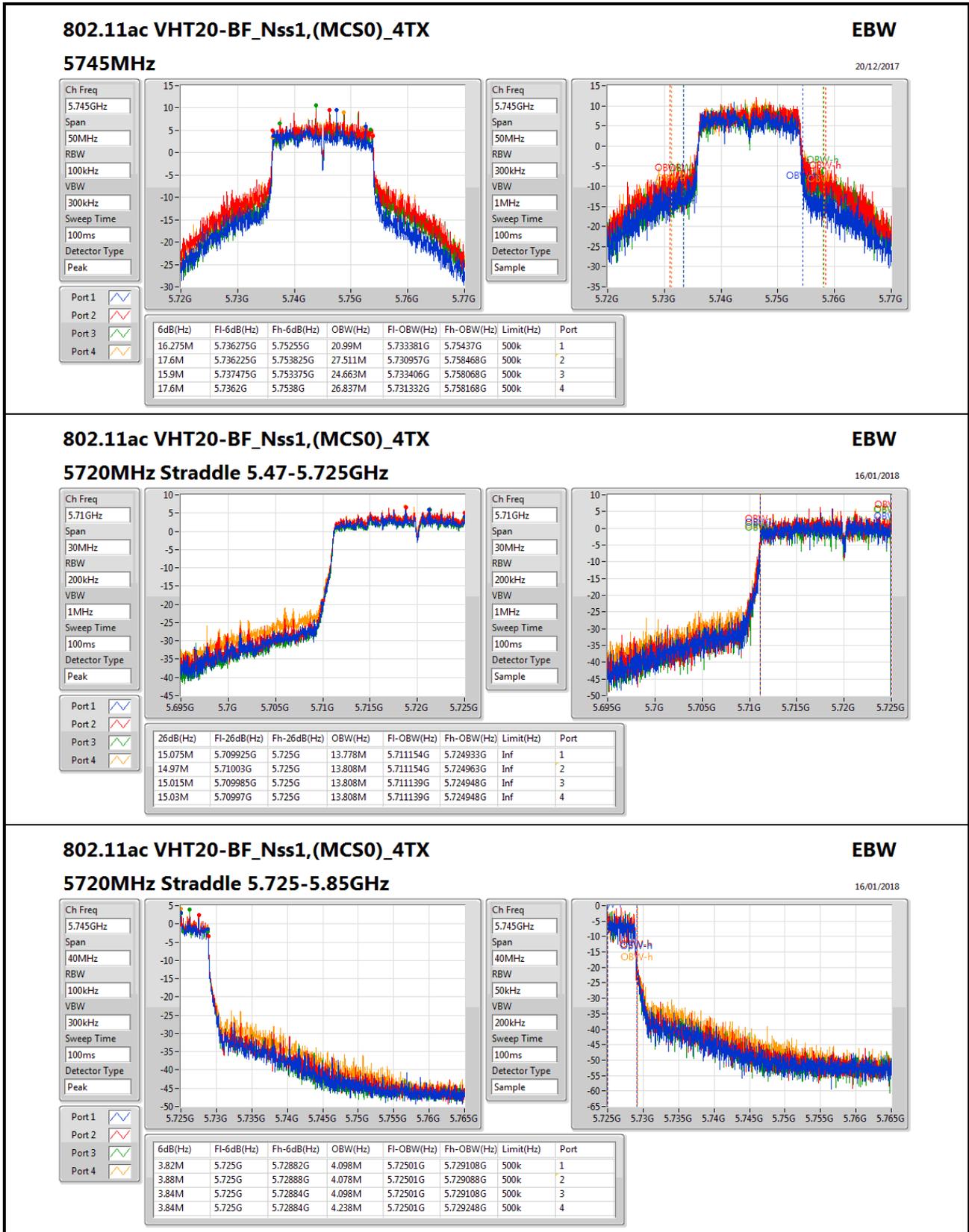
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
5210MHz,#5290MHz_TnomVnom	Pass	Inf					80.4M	75.262M	80M	75.362M
802.11ac VHT80+80-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
#5530MHz,#5610MHz_TnomVnom	Pass	Inf	80.4M	75.412M	80.1M	74.963M	80.55M	74.813M	81.15M	75.262M

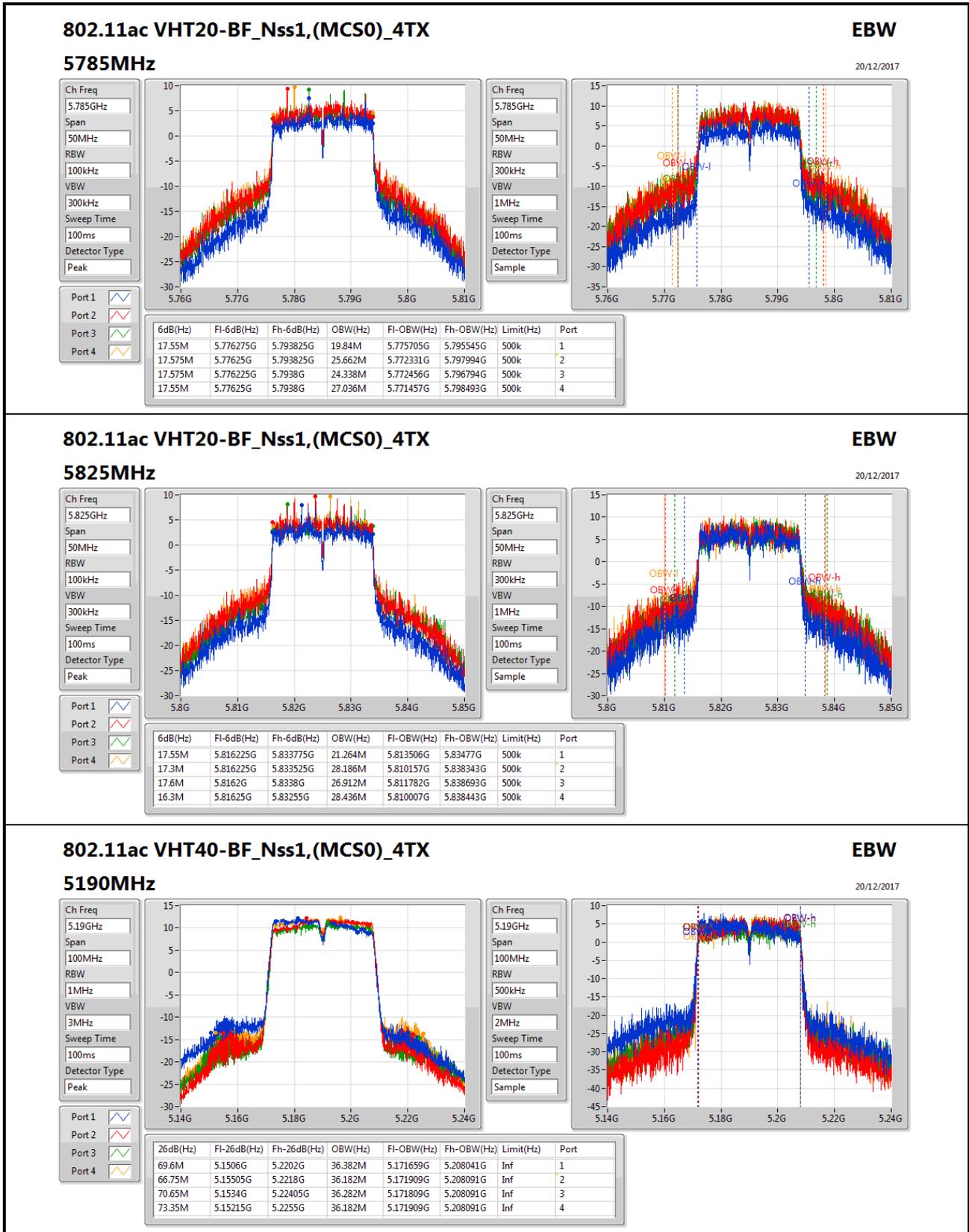
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth;

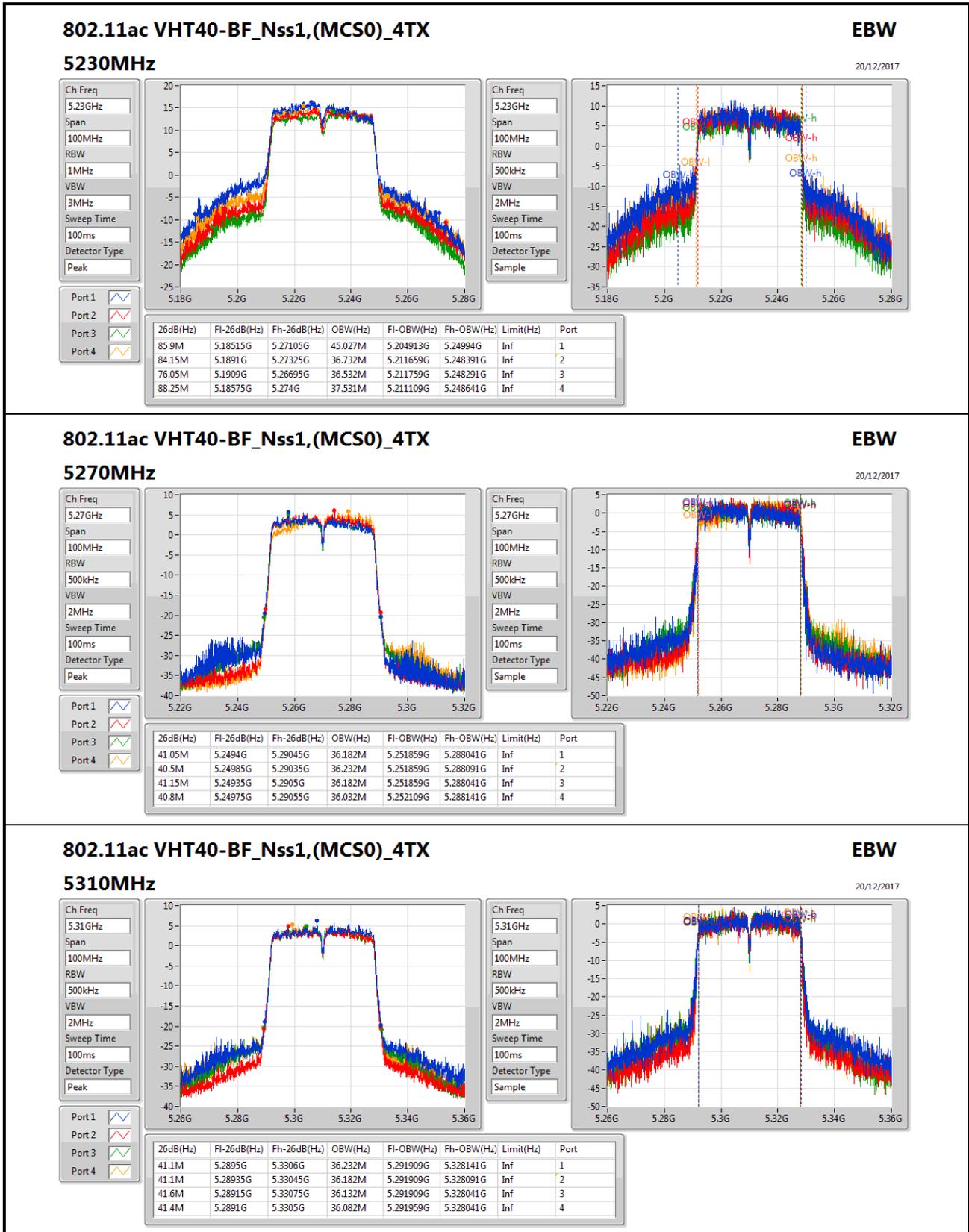


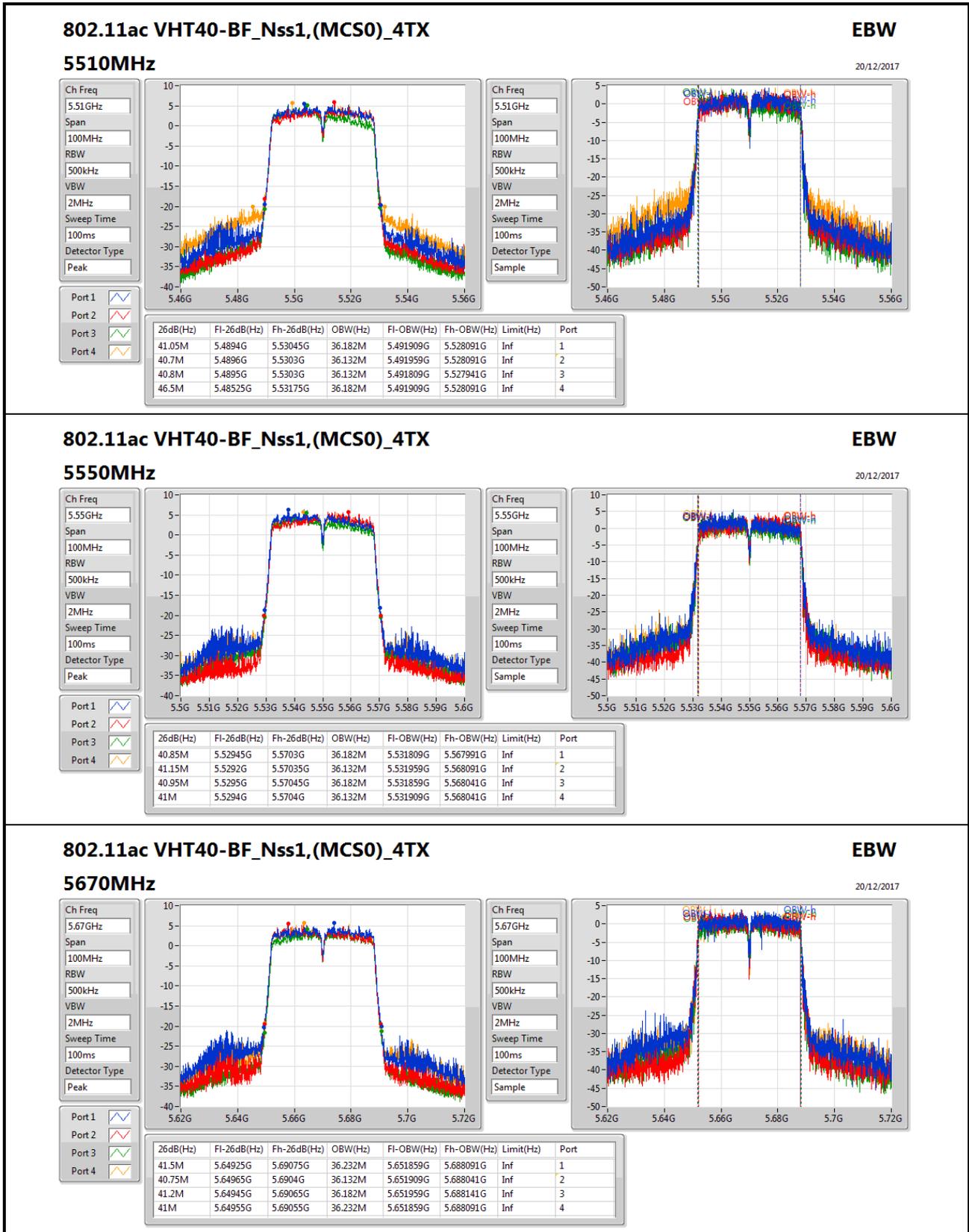


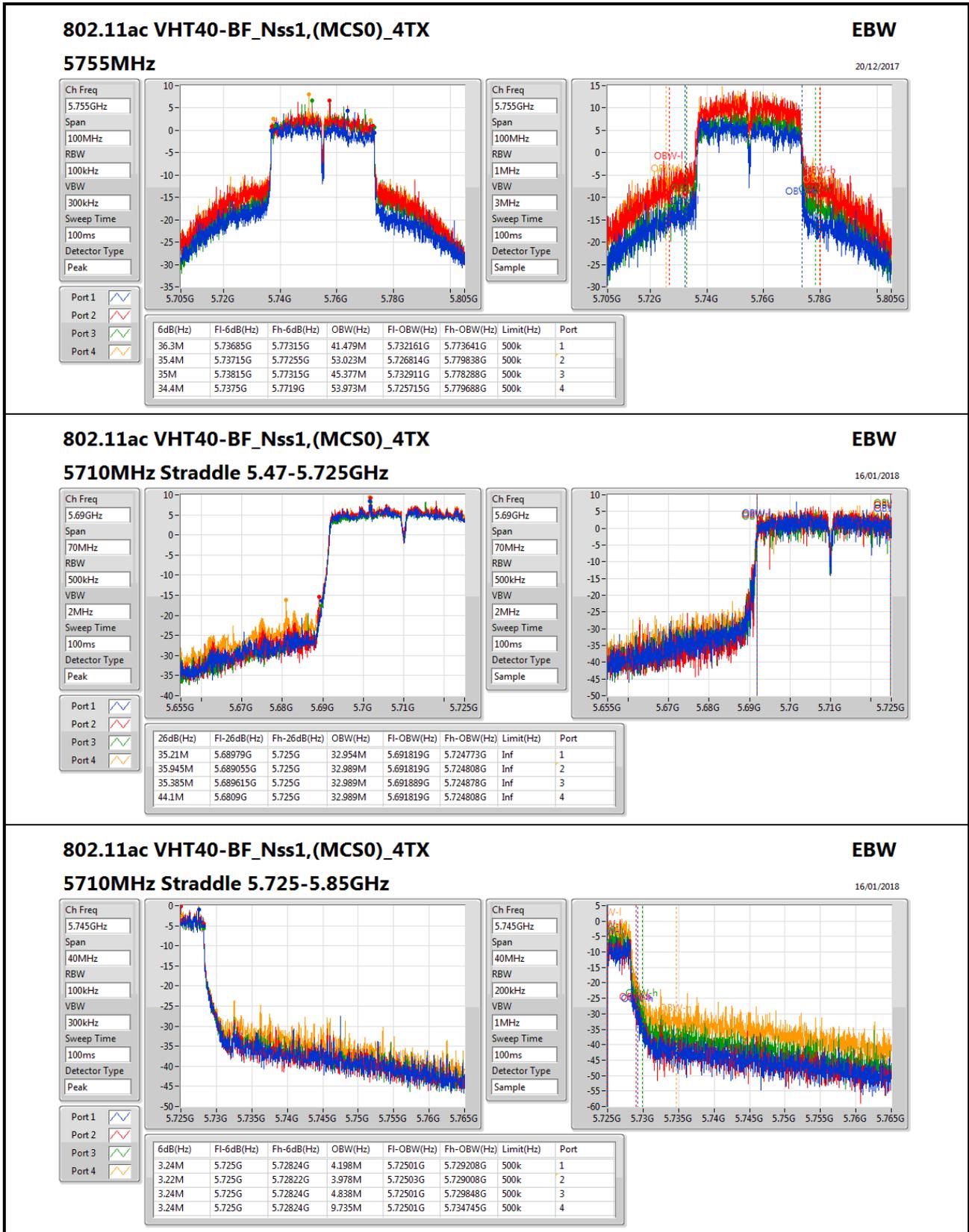












802.11ac VHT40-BF_Nss1,(MCS0)_4TX

5710MHz Straddle 5.725-5.85GHz

16/01/2018

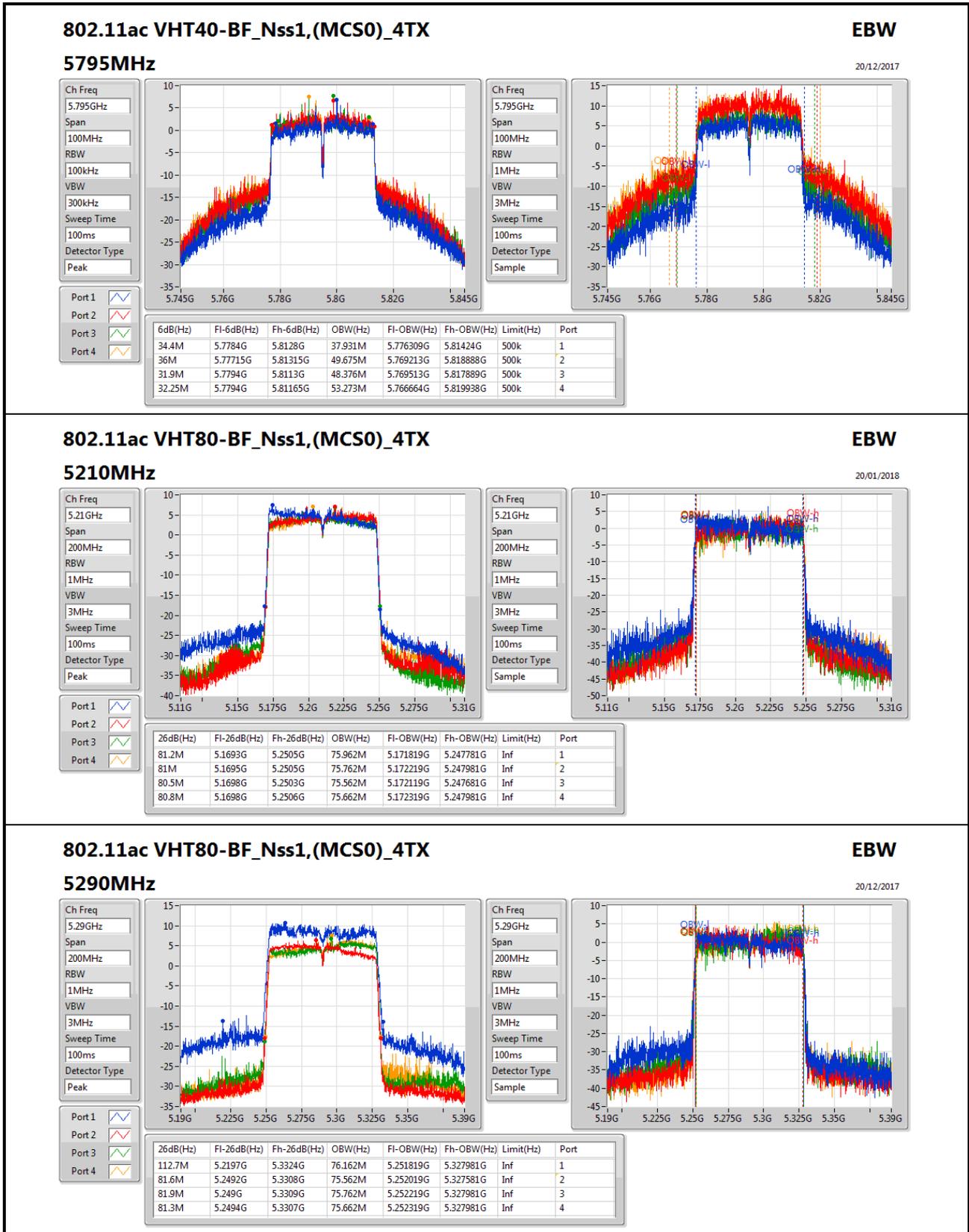
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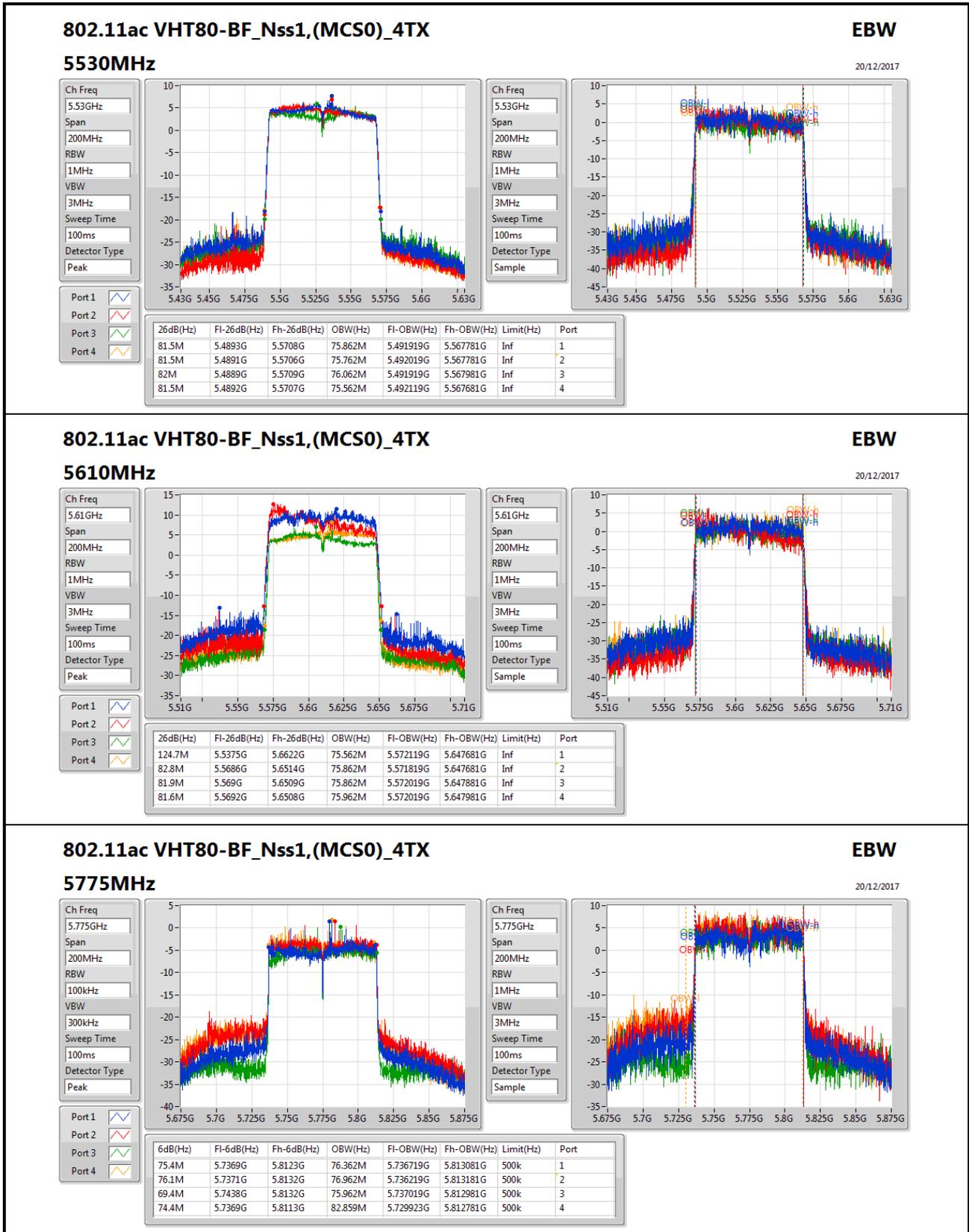
Ch Freq: 5.745GHz
Span: 40MHz
RBW: 100kHz
VBW: 300kHz
Sweep Time: 100ms
Detector Type: Peak

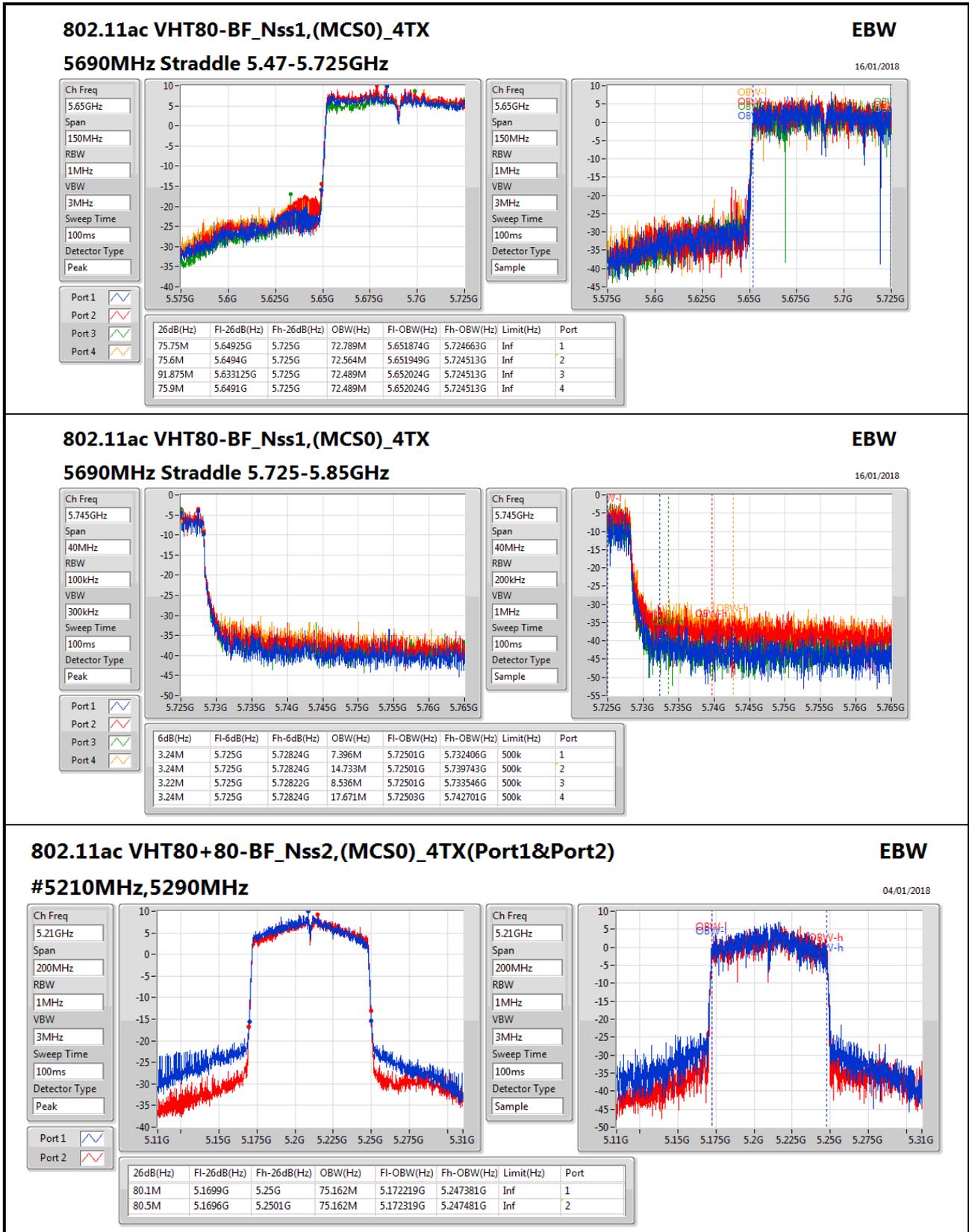
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Port 2: [Waveform]
Port 3: [Waveform]
Port 4: [Waveform]

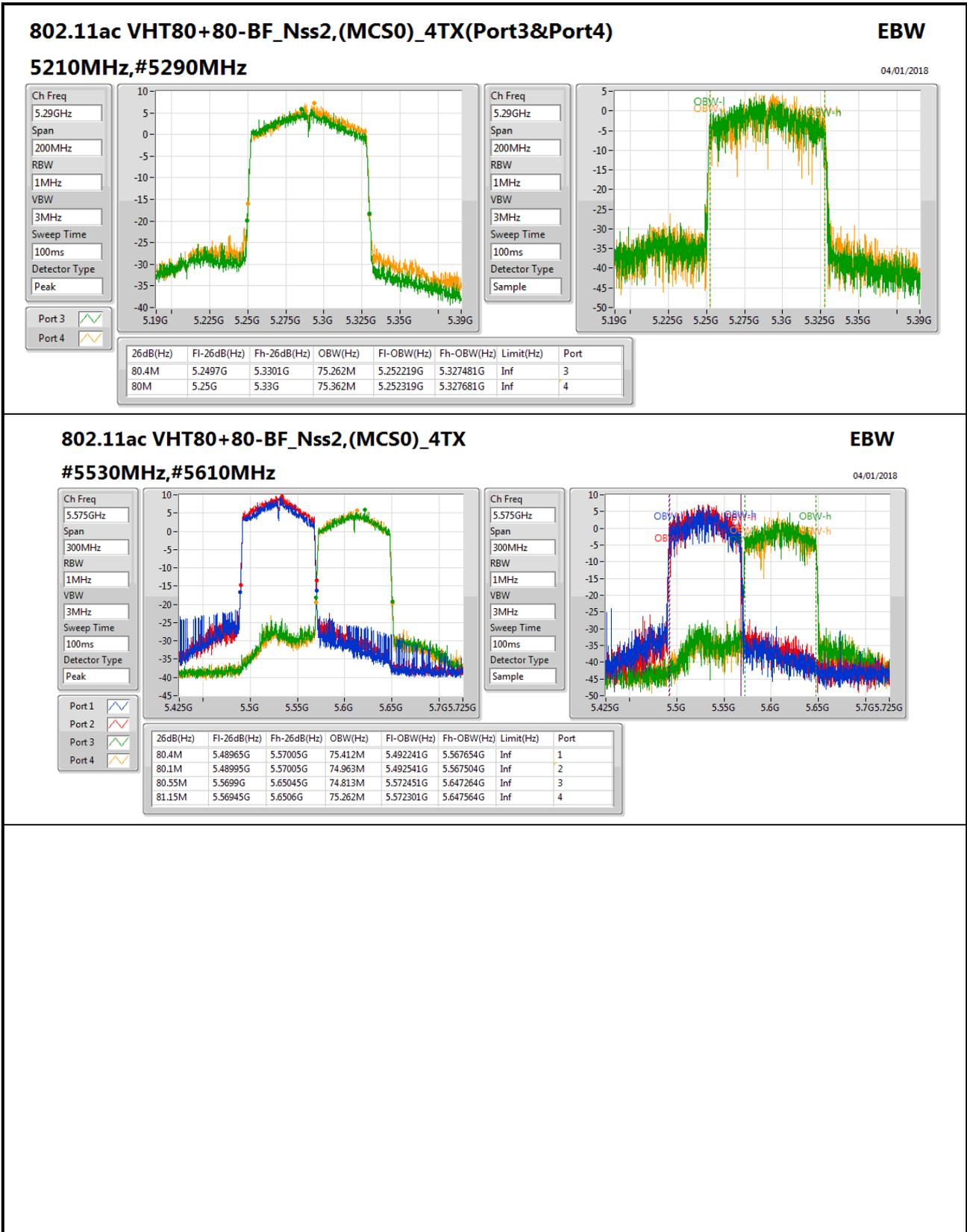
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
3.24M	5.725G	5.72824G	4.198M	5.72501G	5.729208G	500k	1
3.22M	5.725G	5.72822G	3.978M	5.72503G	5.729008G	500k	2
3.24M	5.725G	5.72824G	4.838M	5.72501G	5.729848G	500k	3
3.24M	5.725G	5.72824G	9.735M	5.72501G	5.734745G	500k	4

Ch Freq: 5.745GHz
Span: 40MHz
RBW: 200kHz
VBW: 1MHz
Sweep Time: 100ms
Detector Type: Sample











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-BF_Nss1,(MCS0)_4TX	19.975M	17.691M	17M7D1D	19.7M	17.591M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	40.9M	36.282M	36M3D1D	40.2M	36.032M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	80.9M	75.762M	75M8D1D	80.6M	75.362M
802.11ac VHT80+80-BF_Nss2,(MCS0)_4TX(Port1&Port2)	80.6M	75.962M	76M0D1D	80.5M	75.762M
5.25-5.35GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	20.75M	17.716M	17M7D1D	20.5M	17.641M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	41.6M	36.232M	36M2D1D	40.5M	36.032M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	112.7M	76.162M	76M2D1D	81.3M	75.562M
802.11ac VHT80+80-BF_Nss2,(MCS0)_4TX(Port3&Port4)	80.4M	75.362M	75M4D1D	80M	75.262M
5.47-5.725GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	20.85M	17.816M	17M8D1D	14.97M	13.778M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	46.5M	36.232M	36M2D1D	35.21M	32.954M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	124.7M	76.062M	76M1D1D	75.6M	72.489M
802.11ac VHT80+80-BF_Nss2,(MCS0)_4TX	81.15M	75.412M	75M4D1D	80.1M	74.813M
5.725-5.85GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	17.6M	28.436M	28M4D1D	3.82M	4.078M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	36.3M	53.973M	54M0D1D	3.22M	3.978M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	76.1M	82.859M	82M9D1D	3.22M	7.396M

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

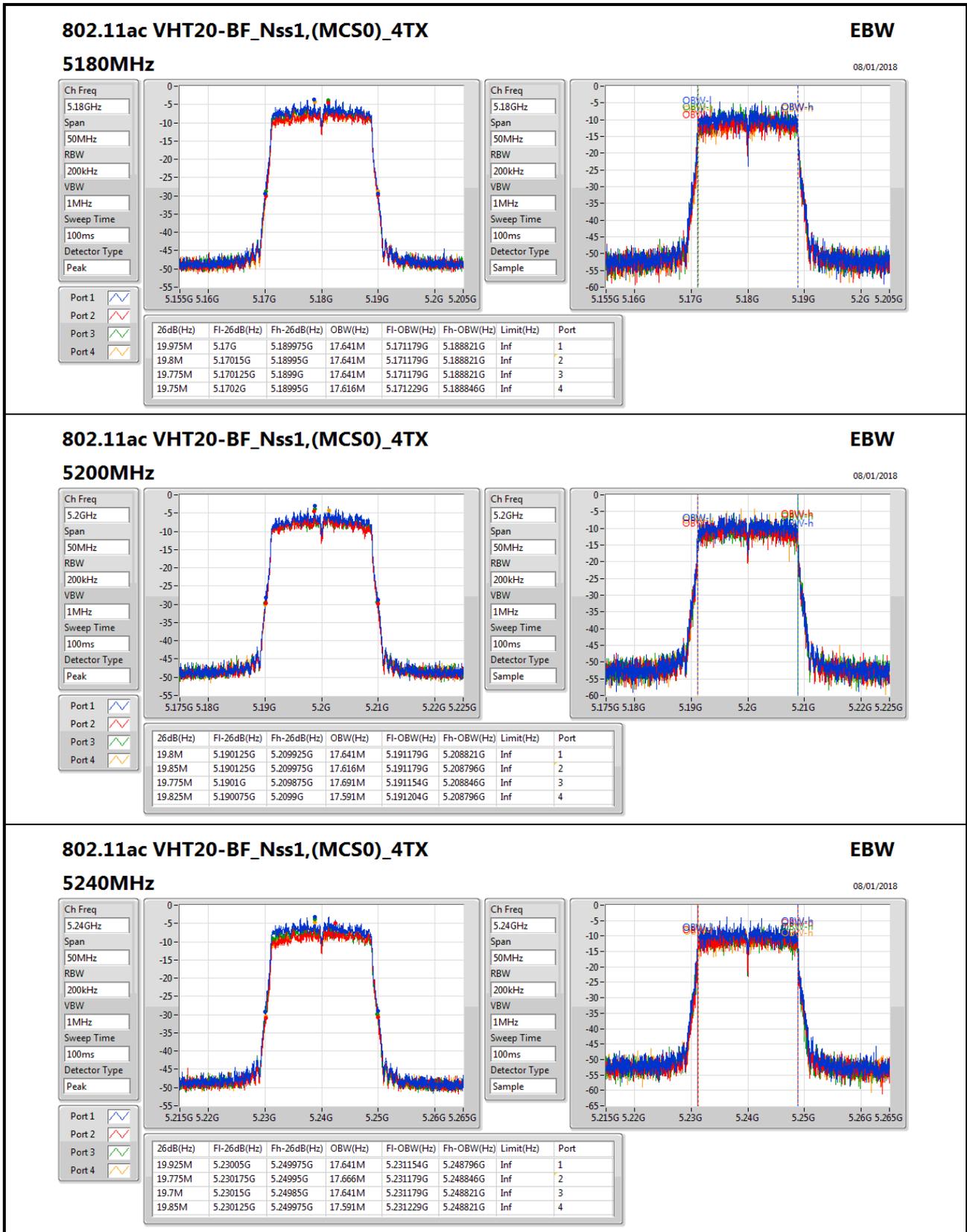
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	19.975M	17.641M	19.8M	17.641M	19.775M	17.641M	19.75M	17.616M
5200MHz	Pass	Inf	19.8M	17.641M	19.85M	17.616M	19.775M	17.691M	19.825M	17.591M
5240MHz	Pass	Inf	19.925M	17.641M	19.775M	17.666M	19.7M	17.641M	19.85M	17.591M
5260MHz	Pass	Inf	20.65M	17.666M	20.675M	17.641M	20.625M	17.716M	20.55M	17.666M
5300MHz	Pass	Inf	20.675M	17.691M	20.625M	17.666M	20.625M	17.666M	20.65M	17.691M
5320MHz	Pass	Inf	20.5M	17.641M	20.625M	17.641M	20.75M	17.691M	20.55M	17.716M
5500MHz	Pass	Inf	20.7M	17.666M	20.65M	17.641M	20.625M	17.641M	20.65M	17.716M
5580MHz	Pass	Inf	20.55M	17.691M	20.625M	17.666M	20.525M	17.641M	20.85M	17.816M
5700MHz	Pass	Inf	20.525M	17.616M	20.625M	17.666M	20.525M	17.641M	20.6M	17.691M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.075M	13.778M	14.97M	13.808M	15.015M	13.808M	15.03M	13.808M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.82M	4.098M	3.88M	4.078M	3.84M	4.098M	3.84M	4.238M
5745MHz	Pass	500k	16.275M	20.99M	17.6M	27.511M	15.9M	24.663M	17.6M	26.837M
5785MHz	Pass	500k	17.55M	19.84M	17.575M	25.662M	17.575M	24.338M	17.55M	27.036M
5825MHz	Pass	500k	17.55M	21.264M	17.3M	28.186M	17.6M	26.912M	16.3M	28.436M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	40.45M	36.232M	40.5M	36.132M	40.9M	36.282M	40.35M	36.032M
5230MHz	Pass	Inf	40.6M	36.282M	40.45M	36.182M	40.2M	36.032M	40.75M	36.182M
5270MHz	Pass	Inf	41.05M	36.182M	40.5M	36.232M	41.15M	36.182M	40.8M	36.032M
5310MHz	Pass	Inf	41.1M	36.232M	41.1M	36.182M	41.6M	36.132M	41.4M	36.082M
5510MHz	Pass	Inf	41.05M	36.182M	40.7M	36.132M	40.8M	36.132M	46.5M	36.182M
5550MHz	Pass	Inf	40.85M	36.182M	41.15M	36.132M	40.95M	36.182M	41M	36.132M
5670MHz	Pass	Inf	41.5M	36.232M	40.75M	36.132M	41.2M	36.182M	41M	36.232M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	35.21M	32.954M	35.945M	32.989M	35.385M	32.989M	44.1M	32.989M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.24M	4.198M	3.22M	3.978M	3.24M	4.838M	3.24M	9.735M
5755MHz	Pass	500k	36.3M	41.479M	35.4M	53.023M	35M	45.377M	34.4M	53.973M
5795MHz	Pass	500k	34.4M	37.931M	36M	49.675M	31.9M	48.376M	32.25M	53.273M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	80.9M	75.462M	80.6M	75.362M	80.9M	75.362M	80.7M	75.762M
5290MHz	Pass	Inf	112.7M	76.162M	81.6M	75.562M	81.9M	75.762M	81.3M	75.662M
5530MHz	Pass	Inf	81.5M	75.862M	81.5M	75.762M	82M	76.062M	81.5M	75.562M
5610MHz	Pass	Inf	124.7M	75.562M	82.8M	75.862M	81.9M	75.862M	81.6M	75.962M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	75.75M	72.789M	75.6M	72.564M	91.875M	72.489M	75.9M	72.489M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.24M	7.396M	3.24M	14.733M	3.22M	8.536M	3.24M	17.671M
5775MHz	Pass	500k	75.4M	76.362M	76.1M	76.962M	69.4M	75.962M	74.4M	82.859M
802.11ac VHT80+80-BF_Nss2,(MCS0)_4TX(Port1&Port2)	-	-	-	-	-	-	-	-	-	-
#5210MHz,5290MHz	Pass	Inf	80.6M	75.762M	80.5M	75.962M				
802.11ac VHT80+80-BF_Nss2,(MCS0)_4TX(Port3&Port4)	-	-	-	-	-	-	-	-	-	-
5210MHz,#5290MHz	Pass	Inf					80.8M	75.962M	80.8M	75.962M
802.11ac VHT80+80-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)
#5530MHz,#5610MHz	Pass	Inf	80.4M	75.412M	80.1M	74.963M	80.55M	74.813M	81.15M	75.262M

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 VHT20-BF_Nss1,(MCS0)_4TX
EBW

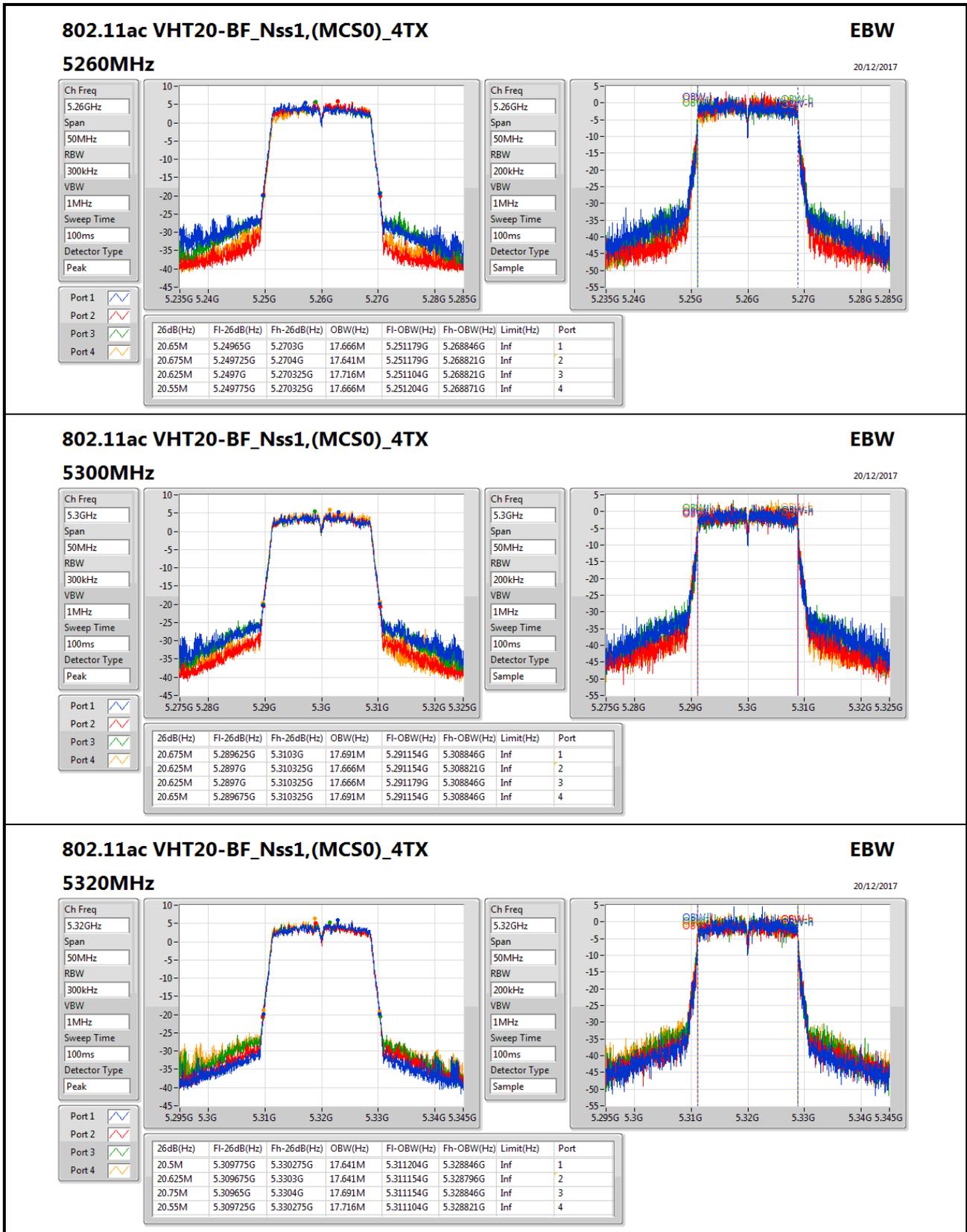
08/01/2018

5240MHz

Ch Freq: 5.24GHz
Span: 50MHz
RBW: 200kHz
VBW: 1MHz
Sweep Time: 100ms
Detector Type: Peak

Ch Freq: 5.24GHz
Span: 50MHz
RBW: 200kHz
VBW: 1MHz
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
19.925M	5.23005G	5.249975G	17.641M	5.231154G	5.248796G	Inf	1
19.775M	5.230175G	5.24995G	17.666M	5.231179G	5.248846G	Inf	2
19.7M	5.23015G	5.24985G	17.641M	5.231179G	5.248821G	Inf	3
19.85M	5.230125G	5.249975G	17.591M	5.231229G	5.248821G	Inf	4


802.11ac VHT20-BF_Nss1,(MCS0)_4TX
EBW

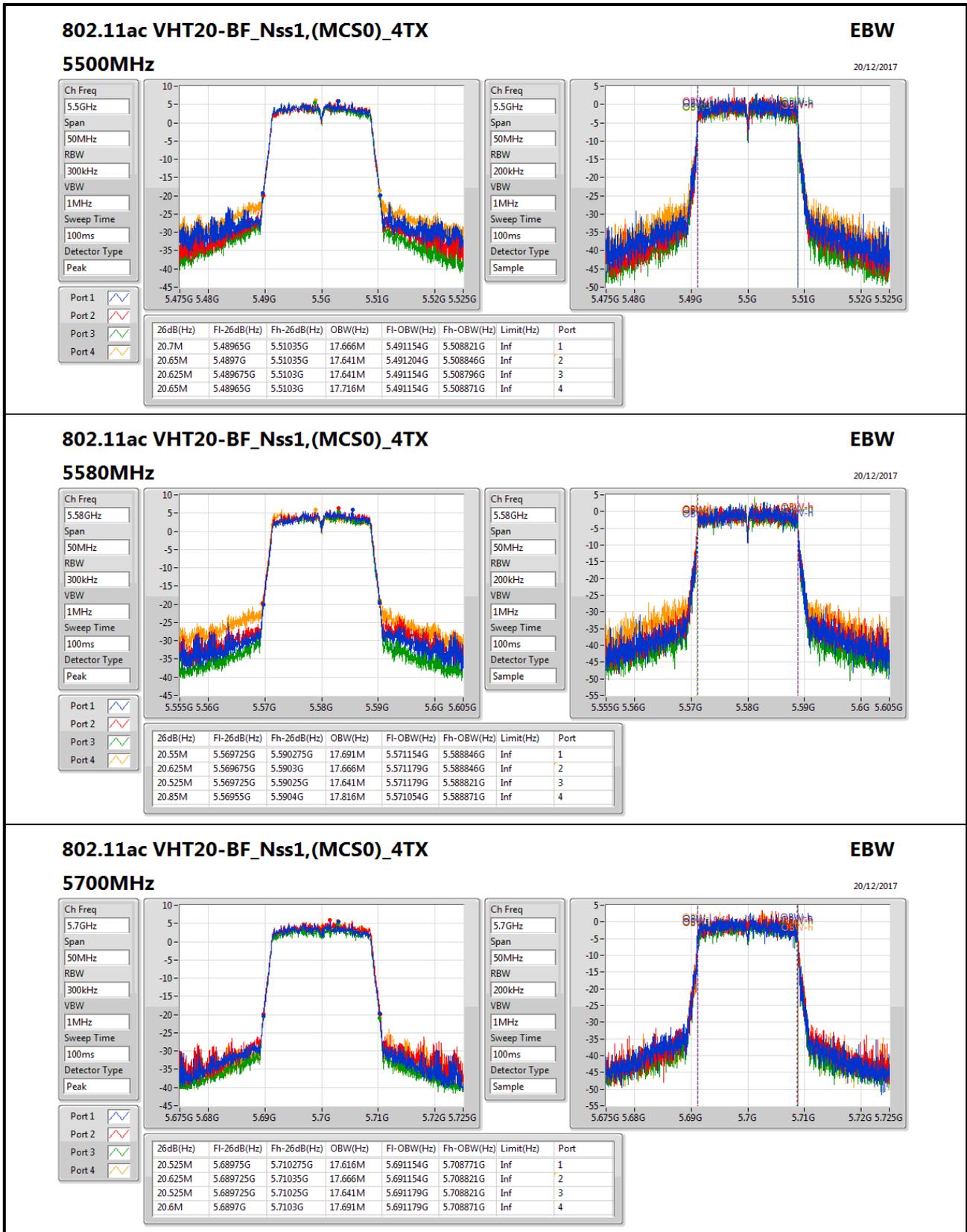
20/12/2017

5320MHz

Ch Freq: 5.32GHz
Span: 50MHz
RBW: 300kHz
VBW: 1MHz
Sweep Time: 100ms
Detector Type: Peak

Ch Freq: 5.32GHz
Span: 50MHz
RBW: 200kHz
VBW: 1MHz
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
20.5M	5.309775G	5.330275G	17.641M	5.311204G	5.328846G	Inf	1
20.625M	5.309675G	5.3303G	17.641M	5.311154G	5.328796G	Inf	2
20.75M	5.30965G	5.3304G	17.691M	5.311154G	5.328846G	Inf	3
20.55M	5.309725G	5.330275G	17.716M	5.311104G	5.328821G	Inf	4


802.11ac VHT20-BF_Nss1,(MCS0)_4TX
EBW

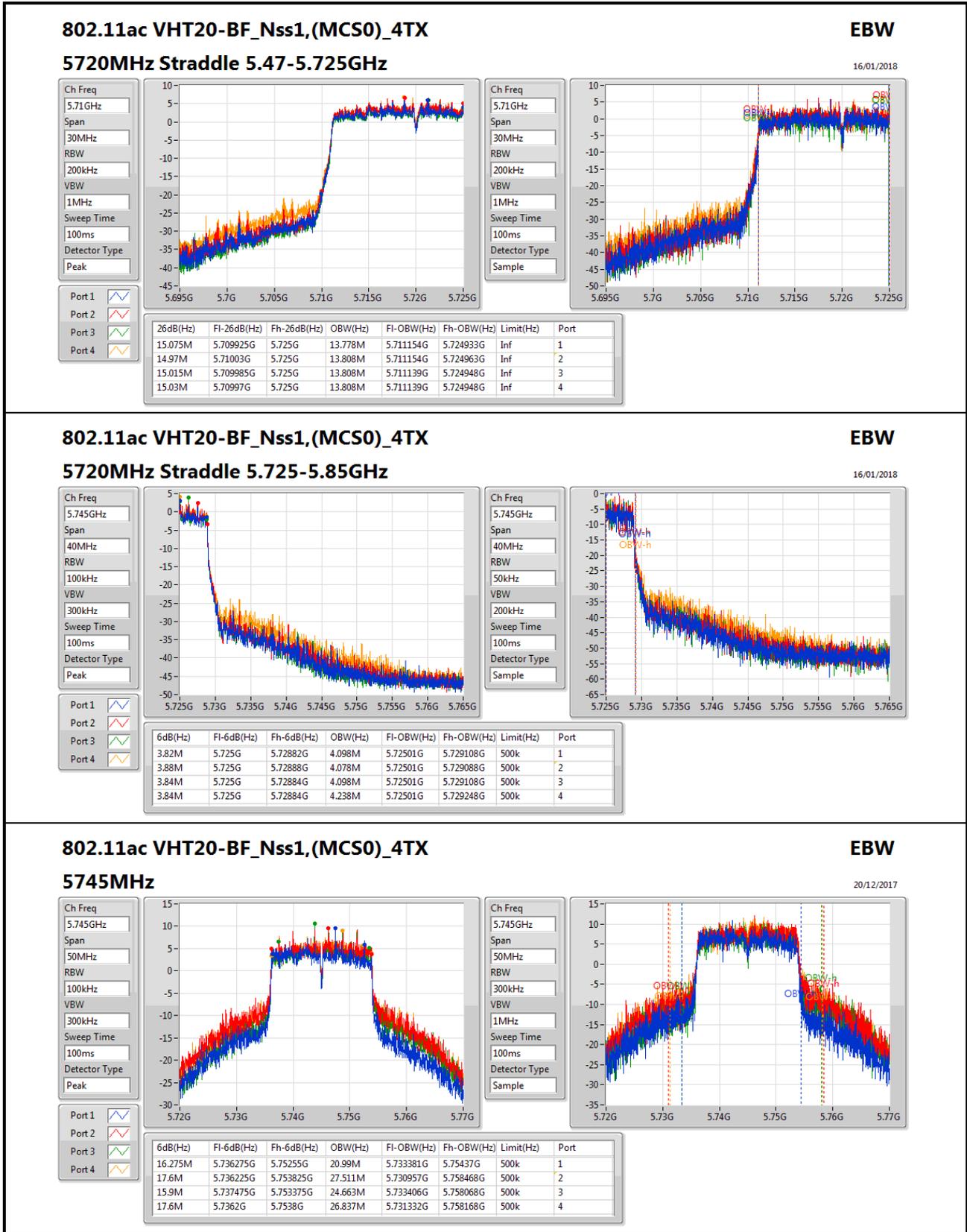
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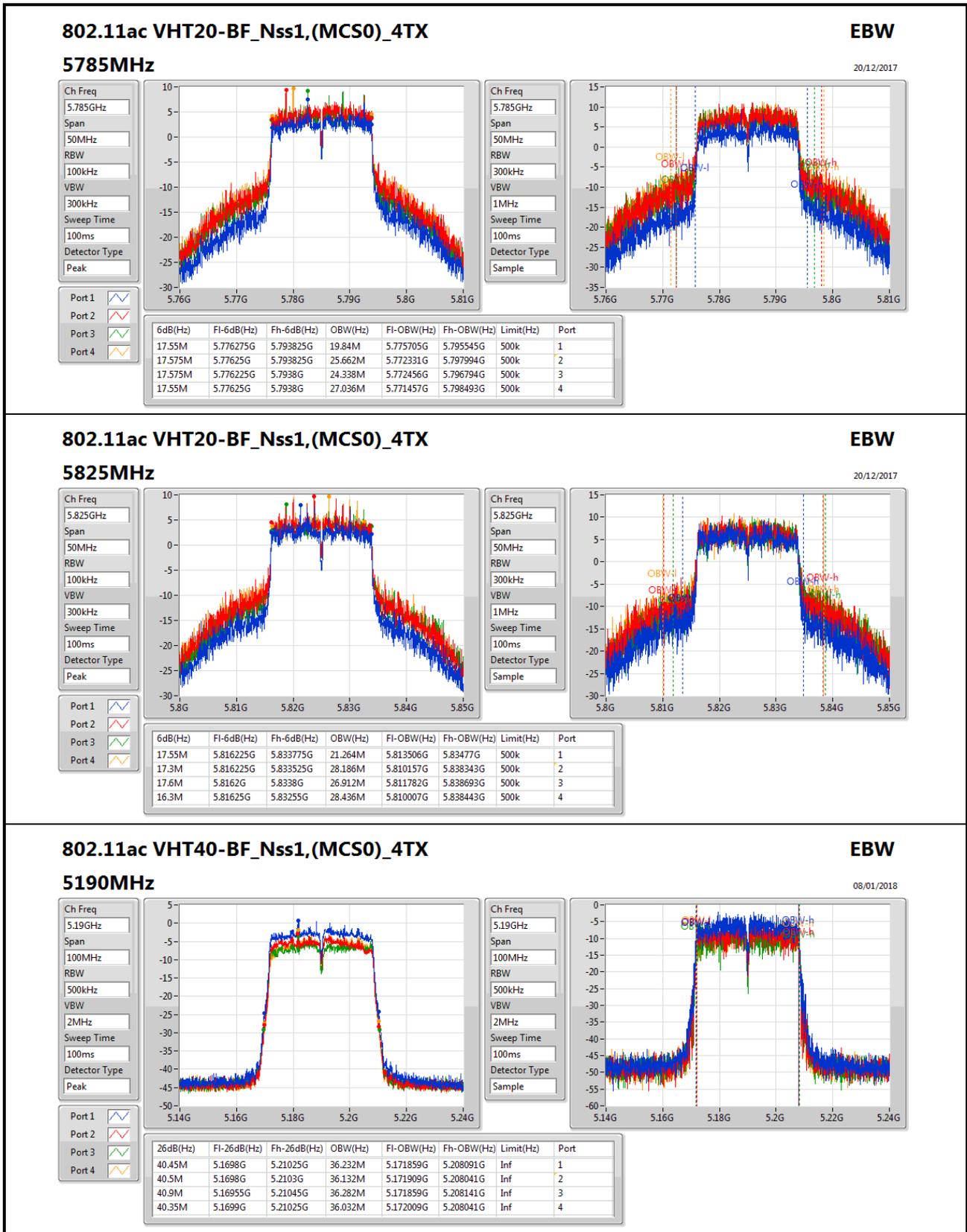
5700MHz

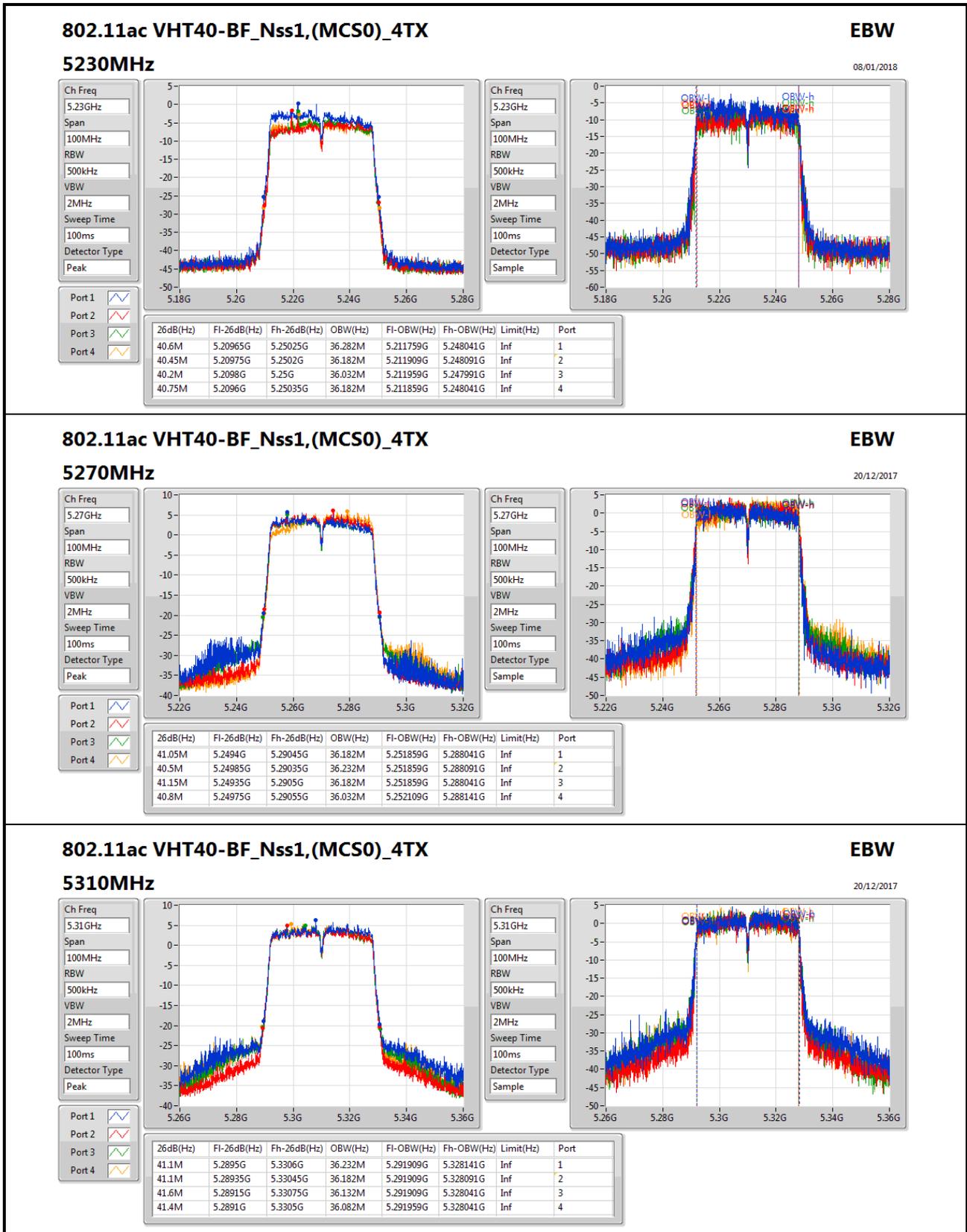
Ch Freq: 5.7GHz
Span: 50MHz
RBW: 300kHz
VBW: 1MHz
Sweep Time: 100ms
Detector Type: Peak

Ch Freq: 5.7GHz
Span: 50MHz
RBW: 200kHz
VBW: 1MHz
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
20.525M	5.68975G	5.710275G	17.616M	5.691154G	5.708771G	Inf	1
20.625M	5.689725G	5.71035G	17.666M	5.691154G	5.708821G	Inf	2
20.525M	5.689725G	5.71025G	17.641M	5.691179G	5.708821G	Inf	3
20.6M	5.6897G	5.7103G	17.691M	5.691179G	5.708871G	Inf	4



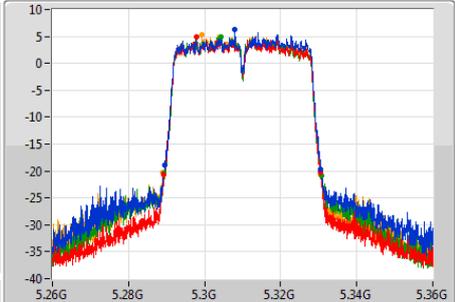



802.11ac VHT40-BF_Nss1,(MCS0)_4TX
EBW

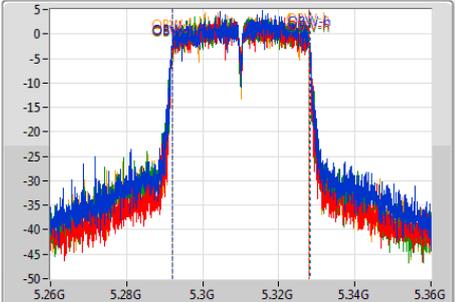
20/12/2017

5310MHz

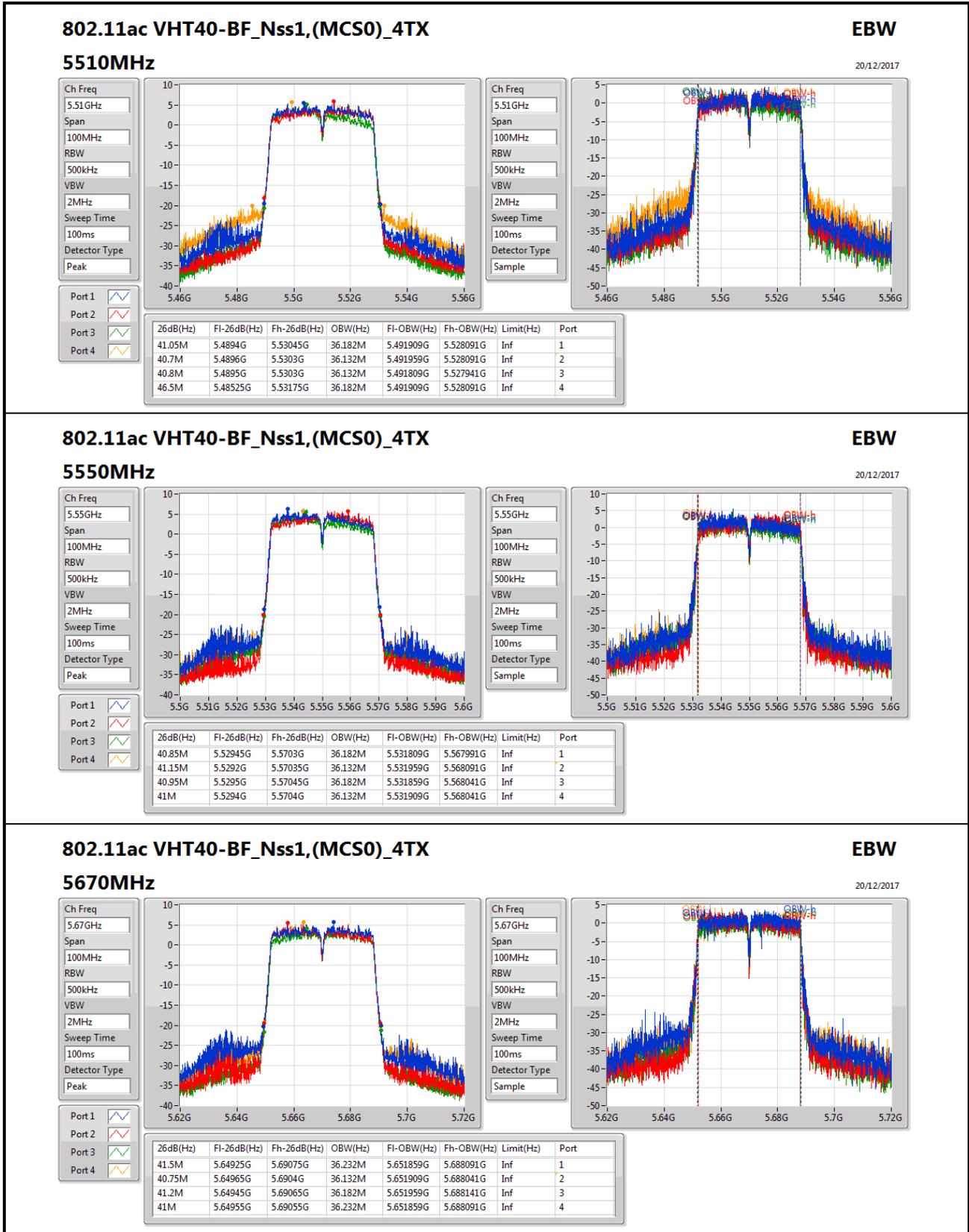
Ch Freq: 5.31GHz
Span: 100MHz
RBW: 500kHz
VBW: 2MHz
Sweep Time: 100ms
Detector Type: Peak



Ch Freq: 5.31GHz
Span: 100MHz
RBW: 500kHz
VBW: 2MHz
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
41.1M	5.2895G	5.3306G	36.232M	5.291909G	5.328141G	Inf	1
41.1M	5.28935G	5.33045G	36.182M	5.291909G	5.328091G	Inf	2
41.6M	5.28915G	5.33075G	36.132M	5.291909G	5.328041G	Inf	3
41.4M	5.2891G	5.3305G	36.082M	5.291959G	5.328041G	Inf	4


802.11ac VHT40-BF_Nss1,(MCS0)_4TX
EBW

20/12/2017

5670MHz

Ch Freq: 5.67GHz

Span: 100MHz

RBW: 500kHz

VBW: 2MHz

Sweep Time: 100ms

Detector Type: Peak

Ch Freq: 5.67GHz

Span: 100MHz

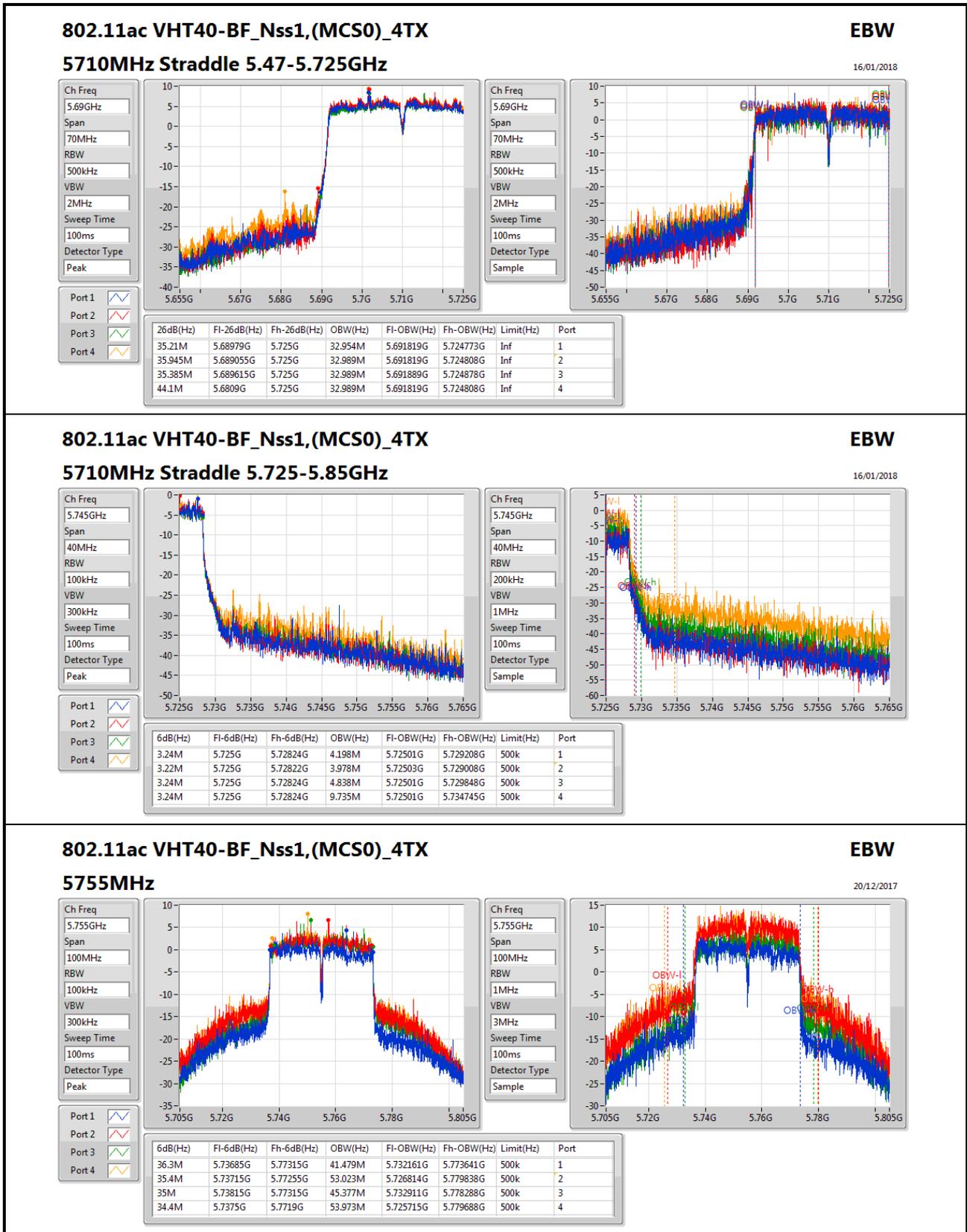
RBW: 500kHz

VBW: 2MHz

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
41.5M	5.64925G	5.69075G	36.232M	5.651859G	5.688091G	Inf	1
40.75M	5.64965G	5.6904G	36.132M	5.651909G	5.688041G	Inf	2
41.2M	5.64945G	5.69065G	36.182M	5.651959G	5.688141G	Inf	3
41M	5.64955G	5.69055G	36.232M	5.651859G	5.688091G	Inf	4

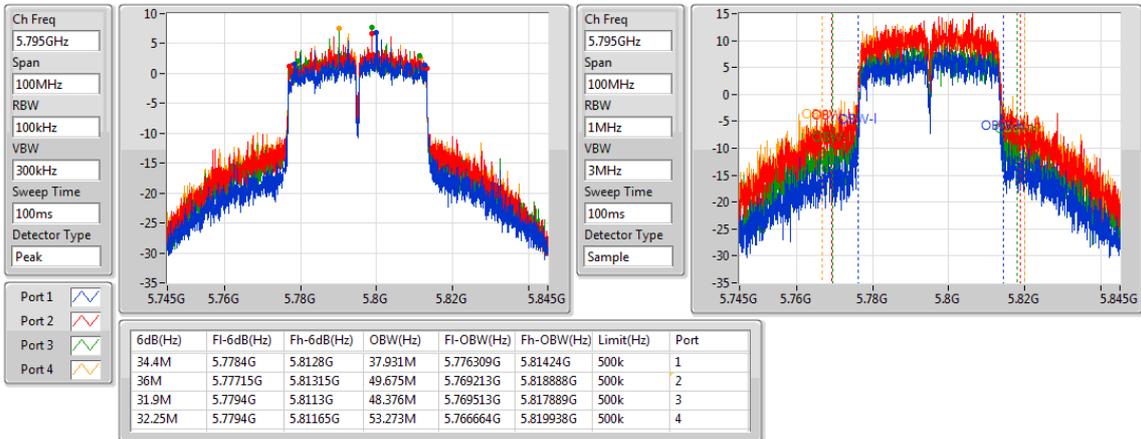


802.11ac VHT40-BF_Nss1,(MCS0)_4TX

EBW

5795MHz

20/12/2017

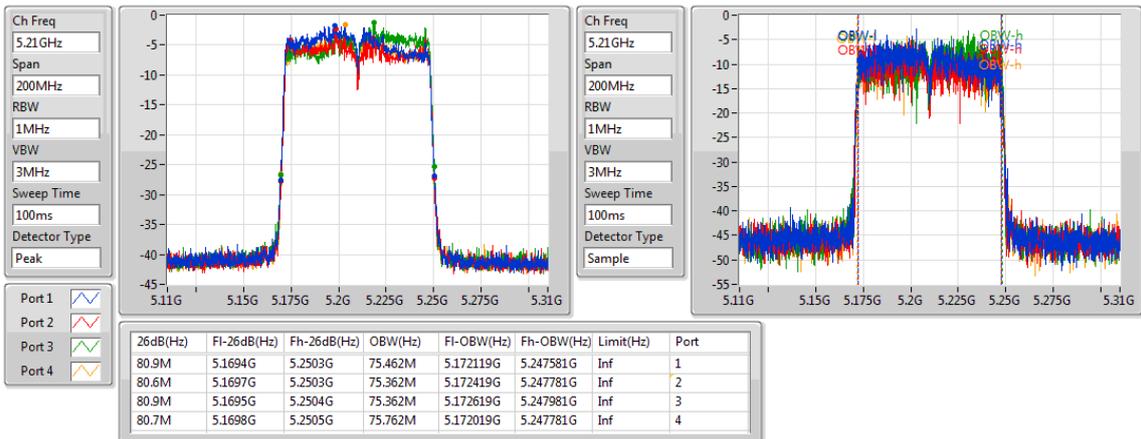


802.11ac VHT80-BF_Nss1,(MCS0)_4TX

EBW

5210MHz

08/01/2018

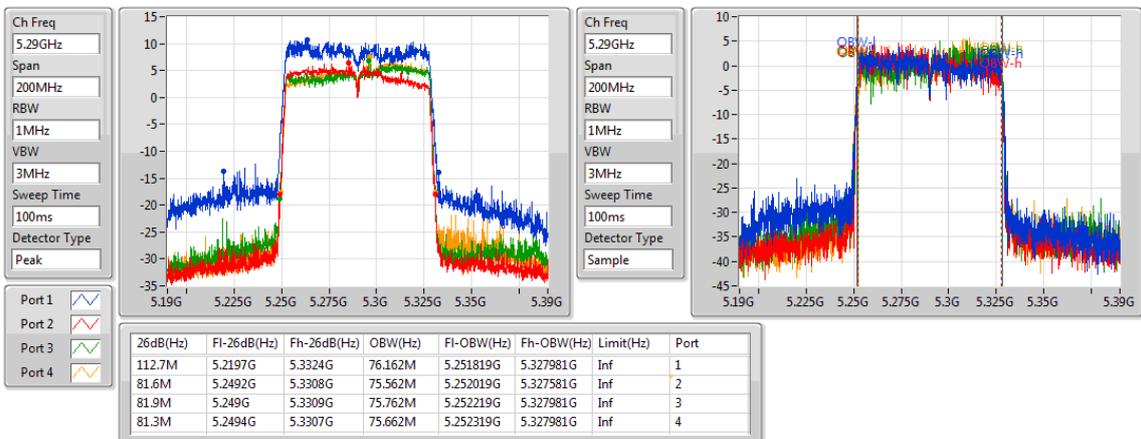


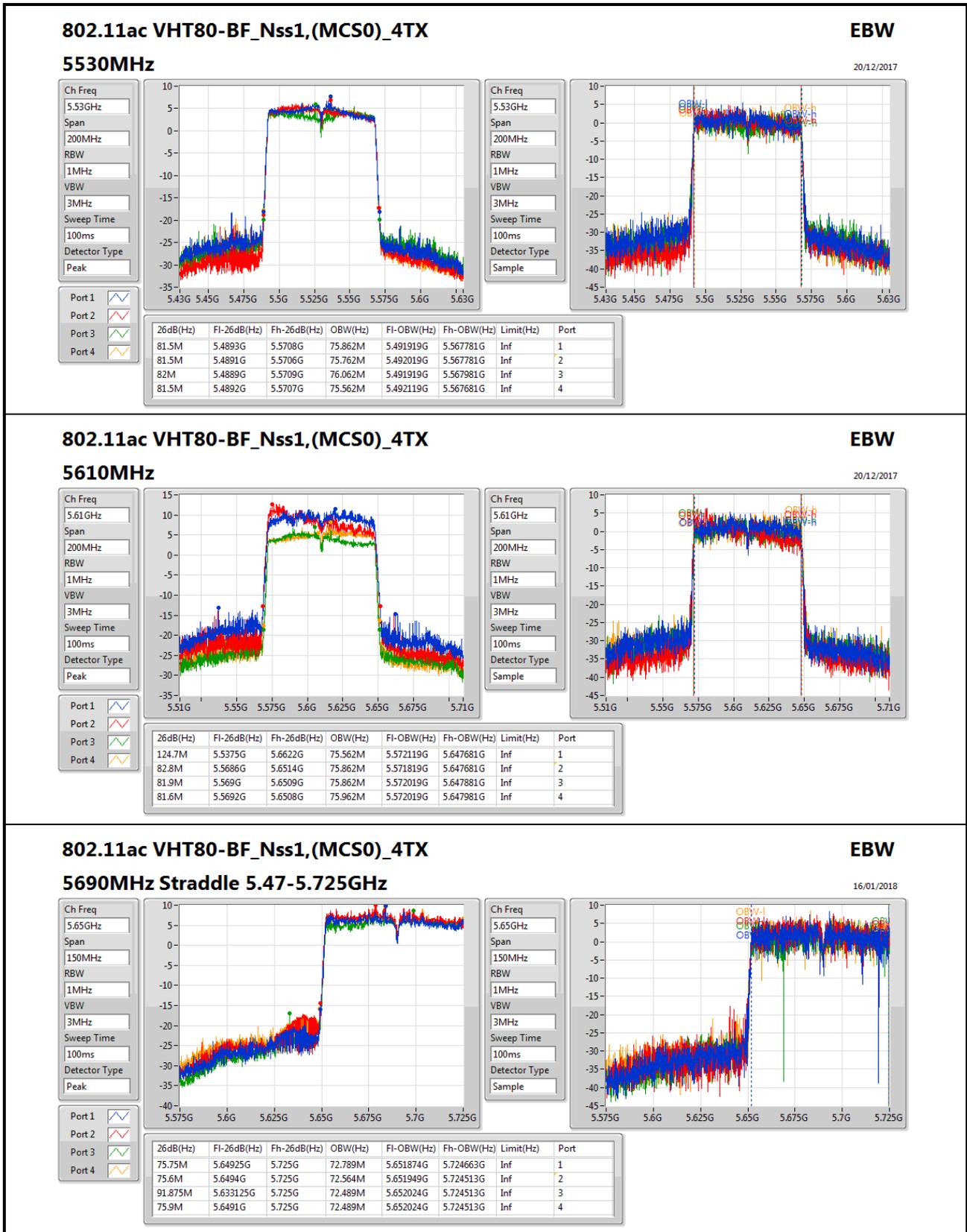
802.11ac VHT80-BF_Nss1,(MCS0)_4TX

EBW

5290MHz

20/12/2017




802.11ac VHT80-BF_Nss1,(MCS0)_4TX
EBW

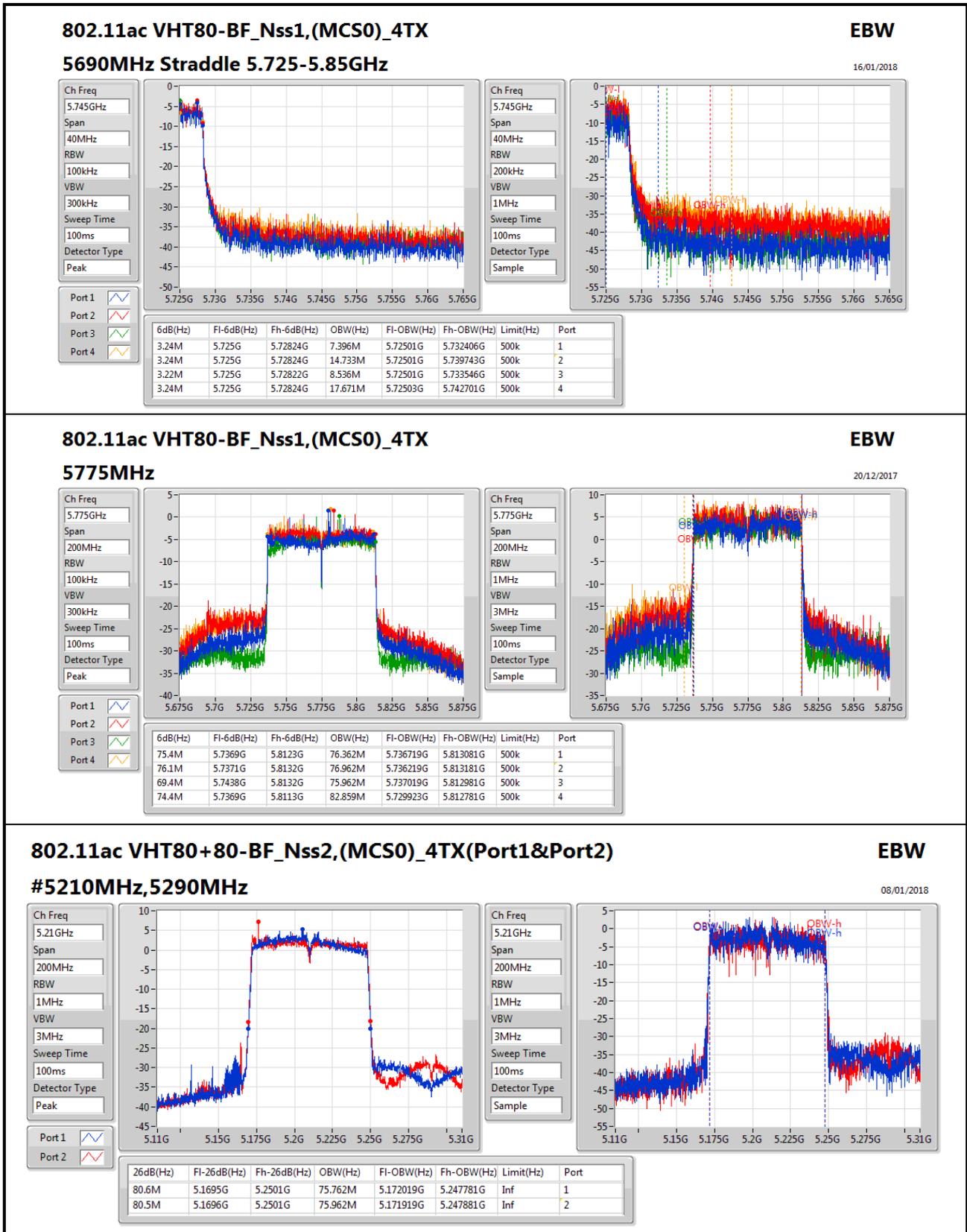
16/01/2018

5690MHz Straddle 5.47-5.725GHz

Ch Freq: 5.65GHz
Span: 150MHz
RBW: 1MHz
VBW: 3MHz
Sweep Time: 100ms
Detector Type: Peak

Ch Freq: 5.65GHz
Span: 150MHz
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
75.75M	5.64925G	5.725G	72.789M	5.651874G	5.724663G	Inf	1
75.6M	5.6494G	5.725G	72.564M	5.651949G	5.724513G	Inf	2
91.875M	5.633125G	5.725G	72.489M	5.652024G	5.724513G	Inf	3
75.9M	5.6491G	5.725G	72.489M	5.652024G	5.724513G	Inf	4



802.11ac VHT80+80-BF_Nss2,(MCS0)_4TX(Port1&Port2)

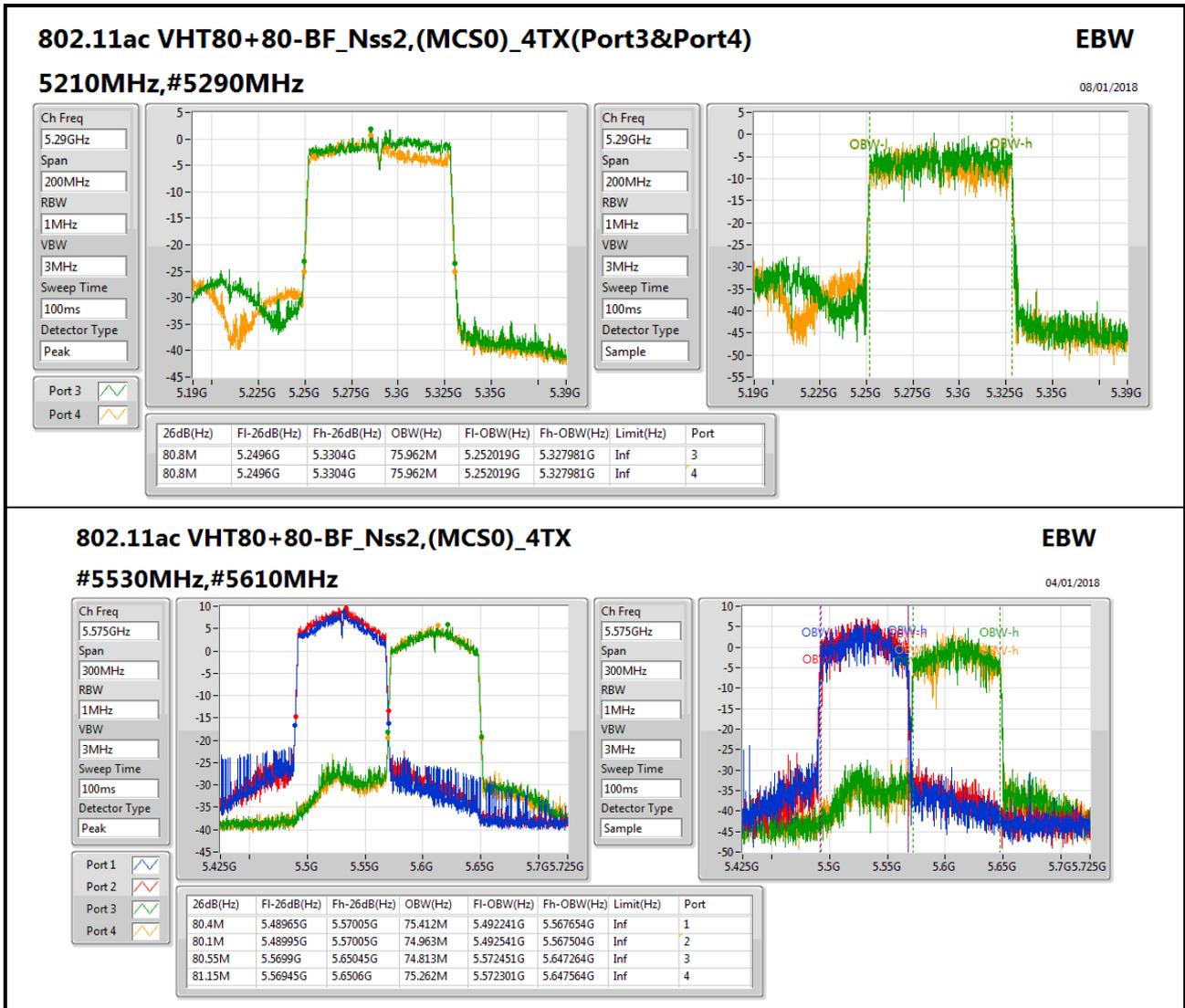
#5210MHz,5290MHz

EBW

08/01/2018

Ch Freq: 5.21GHz
Span: 200MHz
RBW: 1MHz
VBW: 3MHz
Sweep Time: 100ms
Detector Type: Peak

Ch Freq: 5.21GHz
Span: 200MHz
RBW: 1MHz
VBW: 3MHz
Sweep Time: 100ms
Detector Type: Sample





Summary

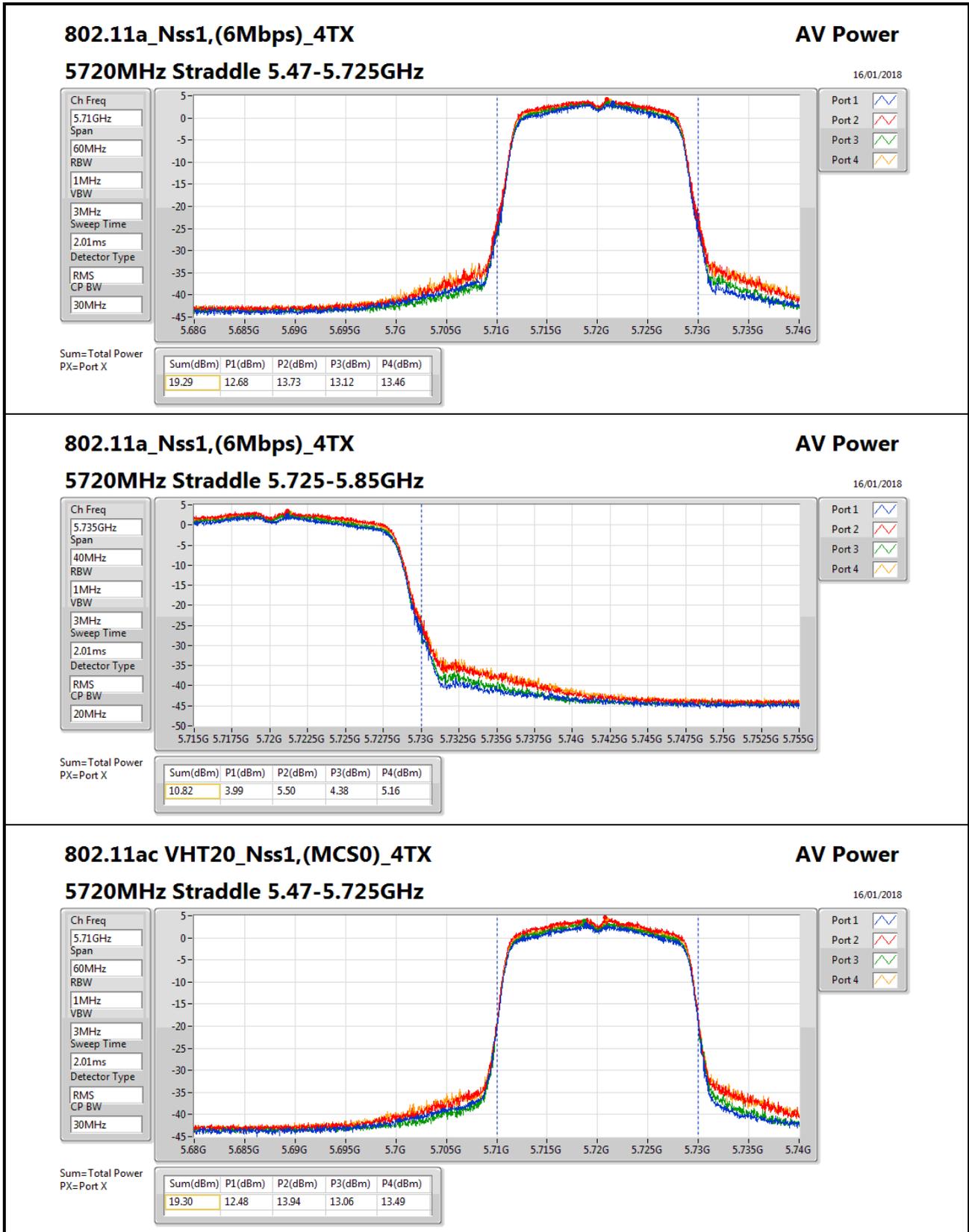
Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.15-5.25GHz	-	-	-	-
802.11ac VHT80+80_Nss2,(MCS0)_4TX(Port1&Port2)	13.73	0.02360	16.73	0.04710
5.25-5.35GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	20.65	0.11614	23.65	0.23174
802.11ac VHT20_Nss1,(MCS0)_4TX	20.63	0.11561	23.63	0.23067
802.11ac VHT40_Nss1,(MCS0)_4TX	23.09	0.20370	26.09	0.40644
802.11ac VHT80_Nss1,(MCS0)_4TX	16.81	0.04797	19.81	0.09572
802.11ac VHT80+80_Nss2,(MCS0)_4TX(Port3&Port4)	12.03	0.01596	15.03	0.03184
5.47-5.725GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	20.54	0.11324	23.54	0.22594
802.11ac VHT20_Nss1,(MCS0)_4TX	20.04	0.10093	23.04	0.20137
802.11ac VHT40_Nss1,(MCS0)_4TX	22.43	0.17498	25.43	0.34914
802.11ac VHT80_Nss1,(MCS0)_4TX	23.61	0.22961	26.61	0.45814
802.11ac VHT80+80_Nss2,(MCS0)_4TX	15.41	0.03475	18.41	0.06934
5.725-5.85GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	10.82	0.01208	13.82	0.02410
802.11ac VHT20_Nss1,(MCS0)_4TX	11.11	0.01291	14.11	0.02576
802.11ac VHT40_Nss1,(MCS0)_4TX	8.25	0.00668	11.25	0.01334
802.11ac VHT80_Nss1,(MCS0)_4TX	3.94	0.00248	6.94	0.00494



Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz_TnomVnom	Pass	3.00	14.69	14.43	14.52	14.54	20.57	23.93	23.57	30.00
5300MHz_TnomVnom	Pass	3.00	14.48	14.34	14.84	14.26	20.51	23.94	23.51	30.00
5320MHz_TnomVnom	Pass	3.00	14.80	14.49	14.81	14.40	20.65	23.93	23.65	30.00
5500MHz_TnomVnom	Pass	3.00	14.09	14.38	14.60	14.11	20.32	23.95	23.32	30.00
5580MHz_TnomVnom	Pass	3.00	14.31	14.21	14.42	14.63	20.42	23.92	23.42	30.00
5700MHz_TnomVnom	Pass	3.00	14.03	14.59	14.67	14.76	20.54	23.92	23.54	30.00
5720MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	3.00	12.68	13.73	13.12	13.46	19.29	22.71	22.29	30.00
5720MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	3.00	3.99	5.50	4.38	5.16	10.82	30.00	13.82	36.00
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz_TnomVnom	Pass	3.00	14.72	14.43	14.52	14.75	20.63	23.98	23.63	30.00
5300MHz_TnomVnom	Pass	3.00	14.79	14.44	14.85	14.15	20.59	23.97	23.59	30.00
5320MHz_TnomVnom	Pass	3.00	14.68	14.58	14.89	14.26	20.63	23.98	23.63	30.00
5500MHz_TnomVnom	Pass	3.00	13.63	14.31	14.27	13.85	20.04	23.97	23.04	30.00
5580MHz_TnomVnom	Pass	3.00	13.87	13.80	13.68	14.18	19.91	23.99	22.91	30.00
5700MHz_TnomVnom	Pass	3.00	12.39	13.29	13.04	13.32	19.05	23.98	22.05	30.00
5720MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	3.00	12.48	13.94	13.06	13.49	19.30	22.75	22.30	30.00
5720MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	3.00	4.28	5.77	4.79	5.37	11.11	30.00	14.11	36.00
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5270MHz_TnomVnom	Pass	3.00	17.37	16.95	16.34	17.51	23.09	24.00	26.09	30.00
5310MHz_TnomVnom	Pass	3.00	15.53	14.98	15.34	14.82	21.20	24.00	24.20	30.00
5510MHz_TnomVnom	Pass	3.00	13.56	13.61	13.79	13.56	19.65	24.00	22.65	30.00
5550MHz_TnomVnom	Pass	3.00	14.60	14.34	14.36	14.80	20.55	24.00	23.55	30.00
5670MHz_TnomVnom	Pass	3.00	14.67	14.95	14.95	15.44	21.03	24.00	24.03	30.00
5710MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	3.00	15.73	16.82	16.11	16.88	22.43	24.00	25.43	30.00
5710MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	3.00	1.61	2.65	1.95	2.63	8.25	30.00	11.25	36.00
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5290MHz_TnomVnom	Pass	3.00	10.91	10.66	11.00	10.58	16.81	24.00	19.81	30.00
5530MHz_TnomVnom	Pass	3.00	11.69	11.50	11.38	11.86	17.63	24.00	20.63	30.00
5610MHz_TnomVnom	Pass	3.00	15.43	15.52	15.16	16.04	21.57	24.00	24.57	30.00
5690MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	3.00	16.83	18.34	16.99	18.00	23.61	24.00	26.61	30.00
5690MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	3.00	-2.67	-1.70	-2.28	-1.73	3.94	30.00	6.94	36.00
802.11ac VHT80+80_Nss2,(MCS0)_4TX(Port1&Port2)	-	-	-	-	-	-	-	-	-	-
#5210MHz,5290MHz	Pass	3.00	10.97	10.46			13.73	30.00	16.73	36.00
802.11ac VHT80+80_Nss2,(MCS0)_4TX(Port3&Port4)	-	-	-	-	-	-	-	-	-	-
5210MHz,#5290MHz	Pass	3.00			9.03	9.01	12.03	24.00	15.03	30.00
802.11ac VHT80+80_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
#5530MHz,#5610MHz	Pass	3.00	9.39	9.49	8.31	10.17	15.41	24.00	18.41	30.00

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



802.11ac VHT20_Nss1,(MCS0)_4TX

5720MHz Straddle 5.47-5.725GHz

AV Power

16/01/2018

Ch Freq
5.71GHz

Span
60MHz

RBW
1MHz

VBW
3MHz

Sweep Time
2.01ms

Detector Type
RMS

CP BW
30MHz

Port 1

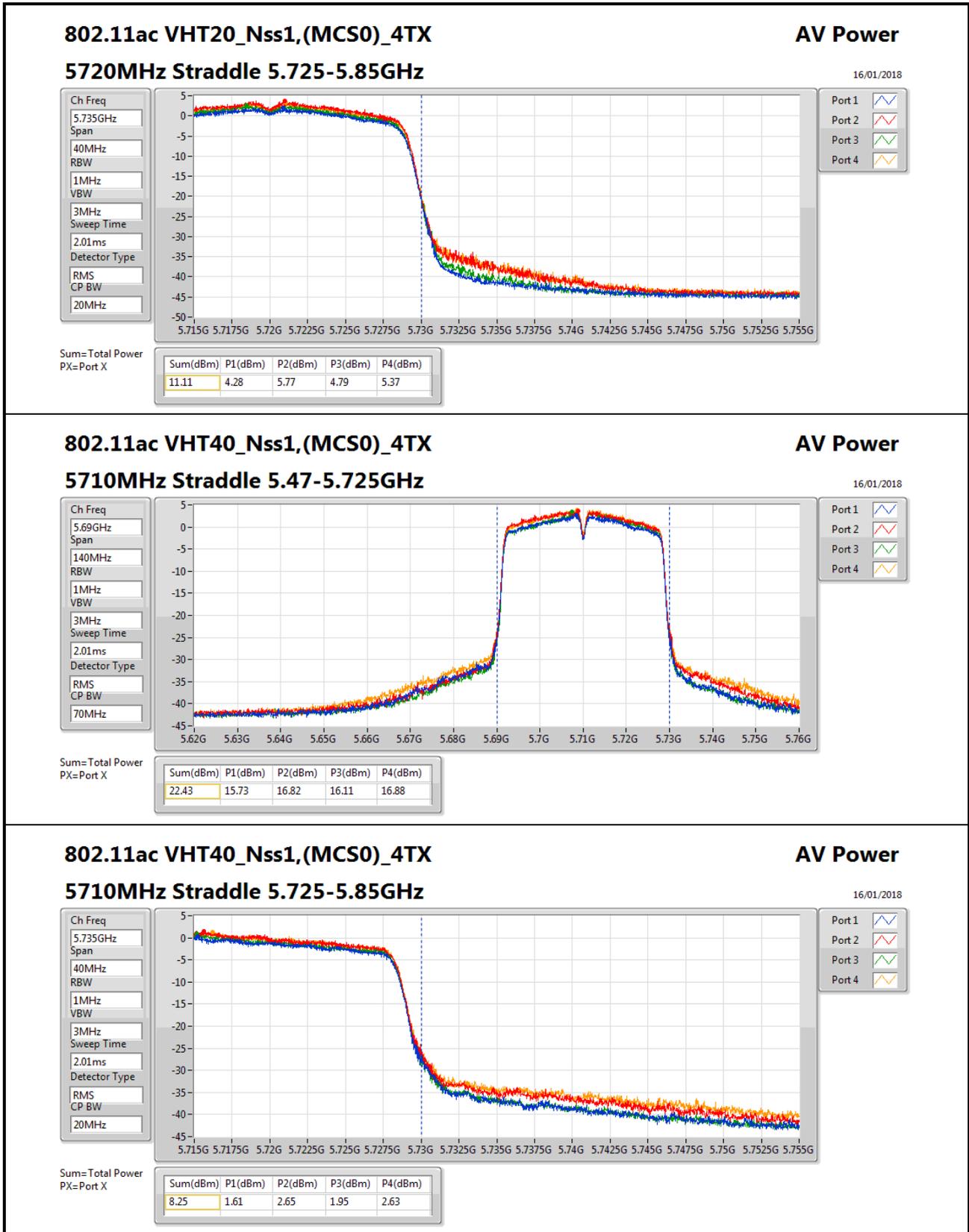
Port 2

Port 3

Port 4

Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
19.30	12.48	13.94	13.06	13.49



802.11ac VHT40_Nss1,(MCS0)_4TX

5710MHz Straddle 5.725-5.85GHz

AV Power

16/01/2018

Ch Freq
5.735GHz

Span
40MHz

RBW
1MHz

VBW
3MHz

Sweep Time
2.01ms

Detector Type
RMS

CP BW
20MHz

Port 1

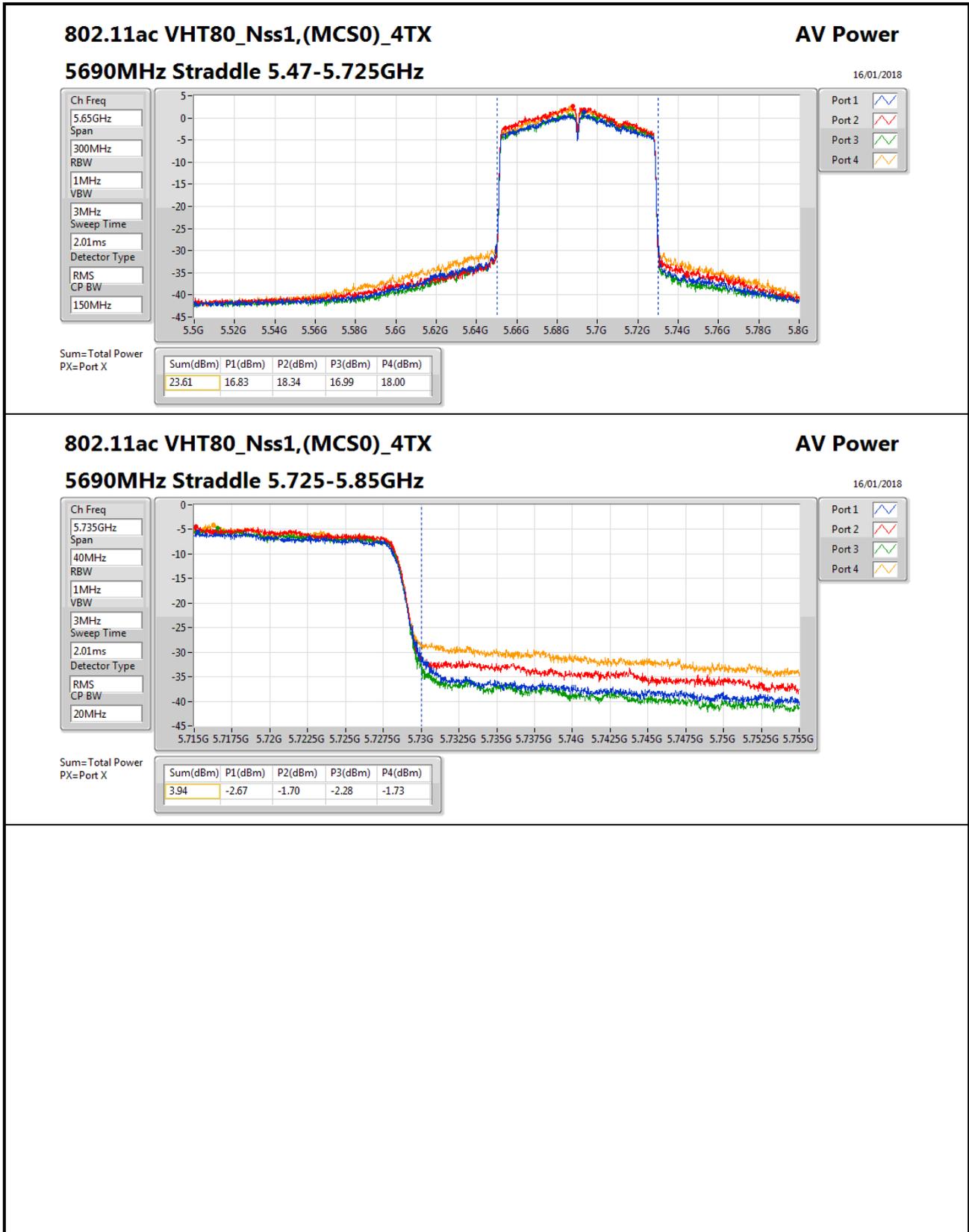
Port 2

Port 3

Port 4

Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
8.25	1.61	2.65	1.95	2.63





Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.15-5.25GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	17.85	0.06095	20.85	0.12162
802.11ac VHT20_Nss1,(MCS0)_4TX	17.92	0.06194	20.92	0.12359
802.11ac VHT40_Nss1,(MCS0)_4TX	17.95	0.06237	20.95	0.12445
802.11ac VHT80_Nss1,(MCS0)_4TX	17.66	0.05834	20.66	0.11641
802.11ac VHT80+80_Nss1,(MCS0)_4TX(Port1&Port2)	13.73	0.02360	16.73	0.04710
5.25-5.35GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	20.65	0.11614	23.65	0.23174
802.11ac VHT20_Nss1,(MCS0)_4TX	20.63	0.11561	23.63	0.23067
802.11ac VHT40_Nss1,(MCS0)_4TX	23.09	0.20370	26.09	0.40644
802.11ac VHT80_Nss1,(MCS0)_4TX	16.81	0.04797	19.81	0.09572
802.11ac VHT80+80_Nss1,(MCS0)_4TX(Port3&Port4)	12.03	0.01596	15.03	0.03184
5.47-5.725GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	20.54	0.11324	23.54	0.22594
802.11ac VHT20_Nss1,(MCS0)_4TX	20.04	0.10093	23.04	0.20137
802.11ac VHT40_Nss1,(MCS0)_4TX	22.43	0.17498	25.43	0.34914
802.11ac VHT80_Nss1,(MCS0)_4TX	23.61	0.22961	26.61	0.45814
802.11ac VHT80+80_Nss2,(MCS0)_4TX	15.41	0.03475	18.41	0.06934
5.725-5.85GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	26.31	0.42756	29.31	0.85310
802.11ac VHT20_Nss1,(MCS0)_4TX	26.12	0.40926	29.12	0.81658
802.11ac VHT40_Nss1,(MCS0)_4TX	25.91	0.38994	28.91	0.77804
802.11ac VHT80_Nss1,(MCS0)_4TX	24.75	0.29854	27.75	0.59566



Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz_TnomVnom	Pass	3.00	11.69	11.97	11.71	11.55	17.75	30.00	20.75	36.00
5200MHz_TnomVnom	Pass	3.00	11.96	12.11	11.61	11.62	17.85	30.00	20.85	36.00
5240MHz_TnomVnom	Pass	3.00	11.95	11.97	11.52	11.73	17.82	30.00	20.82	36.00
5260MHz_TnomVnom	Pass	3.00	14.69	14.43	14.52	14.54	20.57	23.93	23.57	30.00
5300MHz_TnomVnom	Pass	3.00	14.48	14.34	14.84	14.26	20.51	23.94	23.51	30.00
5320MHz_TnomVnom	Pass	3.00	14.80	14.49	14.81	14.40	20.65	23.93	23.65	30.00
5500MHz_TnomVnom	Pass	3.00	14.09	14.38	14.60	14.11	20.32	23.95	23.32	30.00
5580MHz_TnomVnom	Pass	3.00	14.31	14.21	14.42	14.63	20.42	23.92	23.42	30.00
5700MHz_TnomVnom	Pass	3.00	14.03	14.59	14.67	14.76	20.54	23.92	23.54	30.00
5720MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	3.00	12.68	13.73	13.12	13.46	19.29	22.71	22.29	30.00
5720MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	3.00	3.99	5.50	4.38	5.16	10.82	30.00	13.82	36.00
5745MHz_TnomVnom	Pass	3.00	20.21	20.36	19.74	19.30	25.94	30.00	28.94	36.00
5785MHz_TnomVnom	Pass	3.00	19.51	20.97	20.34	20.23	26.31	30.00	29.31	36.00
5825MHz_TnomVnom	Pass	3.00	20.15	20.23	19.36	19.98	25.96	30.00	28.96	36.00
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz_TnomVnom	Pass	3.00	11.77	11.94	11.71	11.47	17.75	30.00	20.75	36.00
5200MHz_TnomVnom	Pass	3.00	11.89	12.23	11.67	11.53	17.86	30.00	20.86	36.00
5240MHz_TnomVnom	Pass	3.00	11.99	12.18	11.65	11.74	17.92	30.00	20.92	36.00
5260MHz_TnomVnom	Pass	3.00	14.72	14.43	14.52	14.75	20.63	23.98	23.63	30.00
5300MHz_TnomVnom	Pass	3.00	14.79	14.44	14.85	14.15	20.59	23.97	23.59	30.00
5320MHz_TnomVnom	Pass	3.00	14.68	14.58	14.89	14.26	20.63	23.98	23.63	30.00
5500MHz_TnomVnom	Pass	3.00	13.63	14.31	14.27	13.85	20.04	23.97	23.04	30.00
5580MHz_TnomVnom	Pass	3.00	13.87	13.80	13.68	14.18	19.91	23.99	22.91	30.00
5700MHz_TnomVnom	Pass	3.00	12.39	13.29	13.04	13.32	19.05	23.98	22.05	30.00
5720MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	3.00	12.48	13.94	13.06	13.49	19.30	22.75	22.30	30.00
5720MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	3.00	4.28	5.77	4.79	5.37	11.11	30.00	14.11	36.00
5745MHz_TnomVnom	Pass	3.00	20.29	20.43	20.06	19.55	26.12	30.00	29.12	36.00
5785MHz_TnomVnom	Pass	3.00	20.26	20.44	20.00	19.34	26.05	30.00	29.05	36.00
5825MHz_TnomVnom	Pass	3.00	20.06	20.26	19.91	20.02	26.08	30.00	29.08	36.00
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz_TnomVnom	Pass	3.00	12.25	12.13	11.70	11.58	17.94	30.00	20.94	36.00
5230MHz_TnomVnom	Pass	3.00	12.18	12.04	11.73	11.76	17.95	30.00	20.95	36.00
5270MHz_TnomVnom	Pass	3.00	17.37	16.95	16.34	17.51	23.09	24.00	26.09	30.00
5310MHz_TnomVnom	Pass	3.00	15.53	14.98	15.34	14.82	21.20	24.00	24.20	30.00
5510MHz_TnomVnom	Pass	3.00	13.56	13.61	13.79	13.56	19.65	24.00	22.65	30.00
5550MHz_TnomVnom	Pass	3.00	14.60	14.34	14.36	14.80	20.55	24.00	23.55	30.00
5670MHz_TnomVnom	Pass	3.00	14.67	14.95	14.95	15.44	21.03	24.00	24.03	30.00
5710MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	3.00	15.73	16.82	16.11	16.88	22.43	24.00	25.43	30.00
5710MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	3.00	1.61	2.65	1.95	2.63	8.25	30.00	11.25	36.00

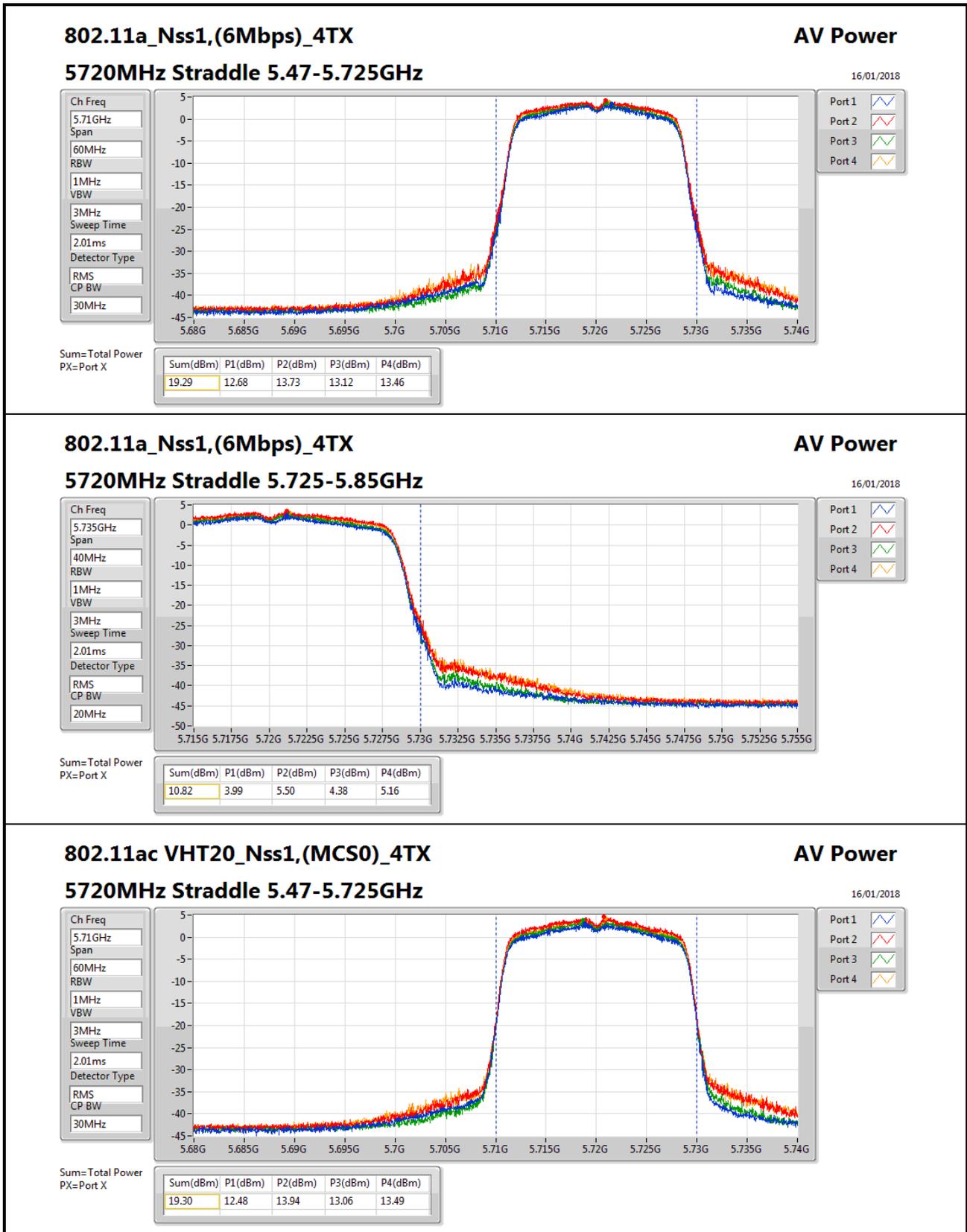


Power Result-Non-Beamforming for Outdoor

Appendix C.2

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
5755MHz_TnomVnom	Pass	3.00	19.96	20.29	19.77	19.42	25.89	30.00	28.89	36.00
5795MHz_TnomVnom	Pass	3.00	20.34	20.23	19.71	19.16	25.91	30.00	28.91	36.00
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz_TnomVnom	Pass	3.00	11.68	11.78	11.47	11.61	17.66	30.00	20.66	36.00
5290MHz_TnomVnom	Pass	3.00	10.91	10.66	11.00	10.58	16.81	24.00	19.81	30.00
5530MHz_TnomVnom	Pass	3.00	11.69	11.50	11.38	11.86	17.63	24.00	20.63	30.00
5610MHz_TnomVnom	Pass	3.00	15.43	15.52	15.16	16.04	21.57	24.00	24.57	30.00
5690MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	3.00	16.83	18.34	16.99	18.00	23.61	24.00	26.61	30.00
5690MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	3.00	-2.67	-1.70	-2.28	-1.73	3.94	30.00	6.94	36.00
5775MHz_TnomVnom	Pass	3.00	19.60	18.67	18.51	17.96	24.75	30.00	27.75	36.00
802.11ac VHT80+80_Nss1,(MCS0)_4TX(Port1&Port2)	-	-	-	-	-	-	-	-	-	-
#5210MHz,5290MHz	Pass	3.00	10.97	10.46			13.73	30.00	16.73	36.00
802.11ac VHT80+80_Nss1,(MCS0)_4TX(Port3&Port4)	-	-	-	-	-	-	-	-	-	-
5210MHz,#5290MHz	Pass	3.00			9.03	9.01	12.03	24.00	15.03	30.00
802.11ac VHT80+80_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
#5530MHz,#5610MHz	Pass	3.00	9.39	9.49	8.31	10.17	15.41	24.00	18.41	30.00

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



802.11ac VHT20_Nss1,(MCS0)_4TX

5720MHz Straddle 5.47-5.725GHz

AV Power

16/01/2018

Ch Freq
5.71GHz

Span
60MHz

RBW
1MHz

VBW
3MHz

Sweep Time
2.01ms

Detector Type
RMS

CP BW
30MHz

Port 1

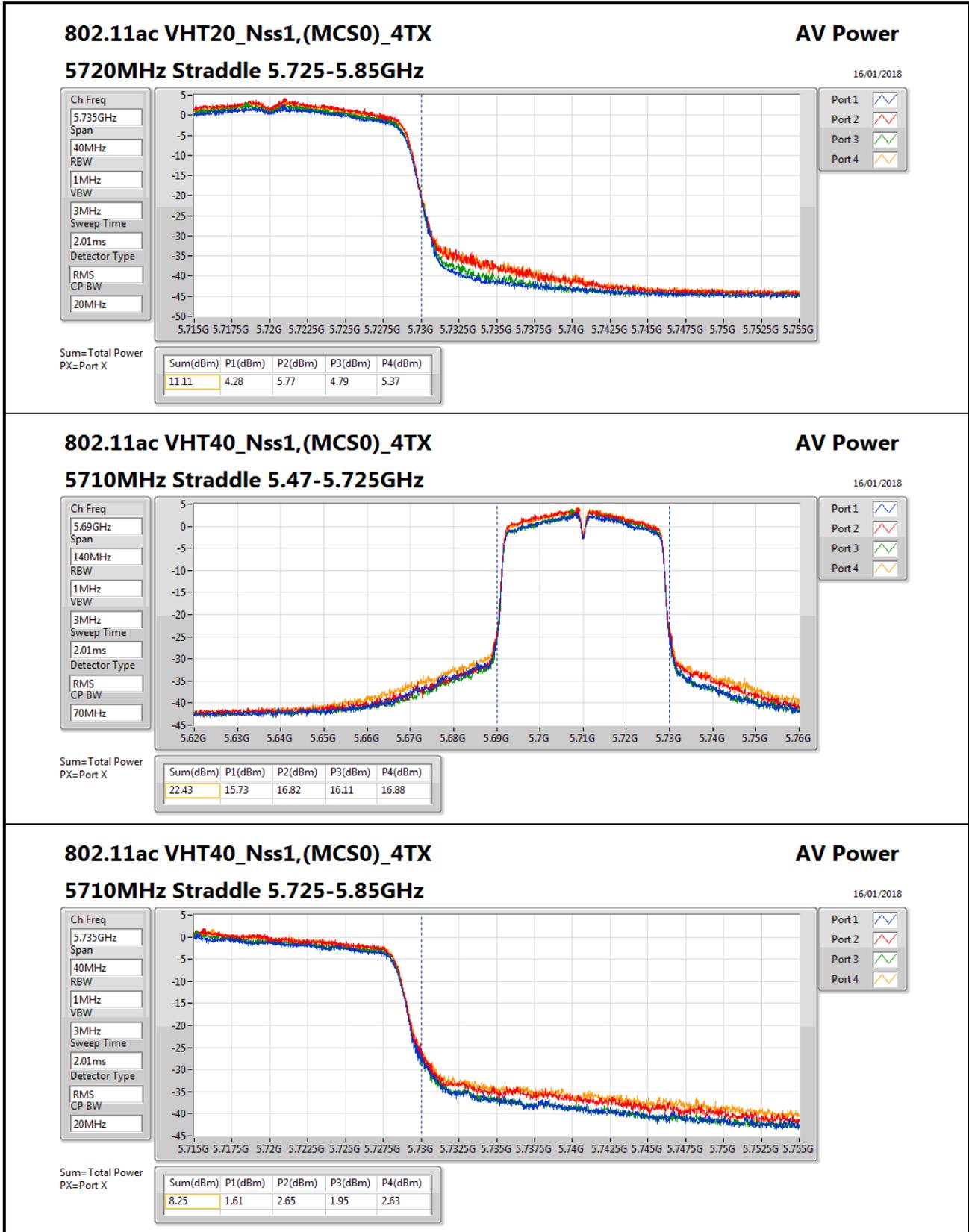
Port 2

Port 3

Port 4

Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
19.30	12.48	13.94	13.06	13.49



802.11ac VHT40_Nss1,(MCS0)_4TX

5710MHz Straddle 5.725-5.85GHz

AV Power

16/01/2018

Ch Freq
5.735GHz

Span
40MHz

RBW
1MHz

VBW
3MHz

Sweep Time
2.01ms

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)
8.25	1.61	2.65	1.95	2.63



Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.15-5.25GHz	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	26.09	0.40644	35.11	3.24340
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	25.90	0.38905	34.92	3.10456
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	19.66	0.09247	28.68	0.73790
802.11ac VHT80+80-BF_Nss2,(MCS0)_4TX(Port1&Port2)	17.05	0.05070	20.05	0.10116
5.25-5.35GHz	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	20.34	0.10814	29.36	0.86298
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	20.48	0.11169	29.50	0.89125
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	20.72	0.11803	29.74	0.94189
802.11ac VHT80+80-BF_Nss2,(MCS0)_4TX(Port3&Port4)	13.87	0.02438	16.87	0.04864
5.47-5.725GHz	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	20.41	0.10990	29.43	0.87700
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	20.71	0.11776	29.73	0.93972
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	20.80	0.12023	29.82	0.95940
802.11ac VHT80+80-BF_Nss2,(MCS0)_4TX	21.07	0.12794	27.08	0.51050
5.725-5.85GHz	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	26.10	0.40738	35.12	3.25087
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	25.89	0.38815	34.91	3.09742
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	24.16	0.26062	33.18	2.07970



Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz_TnomVnom	Pass	9.02	19.33	20.04	19.23	20.18	25.74	26.98	34.76	36.00
5200MHz_TnomVnom	Pass	9.02	20.36	20.13	19.45	20.27	26.09	26.98	35.11	36.00
5240MHz_TnomVnom	Pass	9.02	20.13	19.81	19.10	19.68	25.72	26.98	34.74	36.00
5260MHz_TnomVnom	Pass	9.02	14.00	14.27	13.80	13.88	20.01	20.98	29.03	30.00
5300MHz_TnomVnom	Pass	9.02	13.75	13.66	13.80	14.45	19.95	20.98	28.97	30.00
5320MHz_TnomVnom	Pass	9.02	14.11	14.83	14.02	14.29	20.34	20.98	29.36	30.00
5500MHz_TnomVnom	Pass	9.02	14.62	14.22	14.10	14.60	20.41	20.98	29.43	30.00
5580MHz_TnomVnom	Pass	9.02	14.30	14.45	13.50	13.90	20.07	20.98	29.09	30.00
5700MHz_TnomVnom	Pass	9.02	13.72	14.18	13.22	14.16	19.86	20.98	28.88	30.00
5720MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	9.02	13.31	14.11	13.15	14.13	19.72	19.73	28.74	30.00
5720MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	9.02	7.25	8.36	7.56	8.50	13.97	26.98	22.99	36.00
5745MHz_TnomVnom	Pass	9.02	19.73	20.29	19.88	20.41	26.10	26.98	35.12	36.00
5785MHz_TnomVnom	Pass	9.02	19.22	20.76	19.90	20.15	26.06	26.98	35.08	36.00
5825MHz_TnomVnom	Pass	9.02	19.57	19.96	19.74	19.80	25.79	26.98	34.81	36.00
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz_TnomVnom	Pass	9.02	17.96	18.04	17.12	18.46	23.94	26.98	32.96	36.00
5230MHz_TnomVnom	Pass	9.02	20.05	20.12	19.27	20.03	25.90	26.98	34.92	36.00
5270MHz_TnomVnom	Pass	9.02	14.06	14.47	14.02	14.43	20.27	20.98	29.29	30.00
5310MHz_TnomVnom	Pass	9.02	14.69	14.15	14.25	14.70	20.48	20.98	29.50	30.00
5510MHz_TnomVnom	Pass	9.02	16.21	14.10	13.65	14.23	20.69	20.98	29.71	30.00
5550MHz_TnomVnom	Pass	9.02	15.09	14.89	13.89	14.81	20.71	20.98	29.73	30.00
5670MHz_TnomVnom	Pass	9.02	16.18	14.14	13.40	14.26	20.64	20.98	29.66	30.00
5710MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	9.02	14.44	14.96	14.01	15.05	20.66	20.98	29.68	30.00
5710MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	9.02	3.26	4.29	3.62	4.11	9.86	26.98	18.88	36.00
5755MHz_TnomVnom	Pass	9.02	19.11	20.34	19.82	20.12	25.89	26.98	34.91	36.00
5795MHz_TnomVnom	Pass	9.02	19.32	20.21	19.79	20.03	25.87	26.98	34.89	36.00
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz_TnomVnom	Pass	9.02	14.08	13.79	13.18	13.45	19.66	26.98	28.68	36.00
5290MHz_TnomVnom	Pass	9.02	14.74	14.64	14.47	14.93	20.72	20.98	29.74	30.00
5530MHz_TnomVnom	Pass	9.02	14.74	14.85	13.84	14.44	20.51	20.98	29.53	30.00
5610MHz_TnomVnom	Pass	9.02	15.06	14.56	14.45	15.00	20.80	20.98	29.82	30.00
5690MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	9.02	14.16	15.00	14.01	14.81	20.54	20.98	29.56	30.00
5690MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	9.02	-0.76	0.65	0.10	0.18	6.09	26.98	15.11	36.00
5775MHz_TnomVnom	Pass	9.02	17.53	19.02	17.06	18.64	24.16	26.98	33.18	36.00
802.11ac VHT80+80-BF_Nss2,(MCS0)_4TX(Port1&Port2)	-	-	-	-	-	-	-	-	-	-
#5210MHz,5290MHz_TnomVnom	Pass	3.00	14.11	13.97			17.05	30.00	20.05	36.00
802.11ac VHT80+80-BF_Nss2,(MCS0)_4TX(Port3&Port4)	-	-	-	-	-	-	-	-	-	-

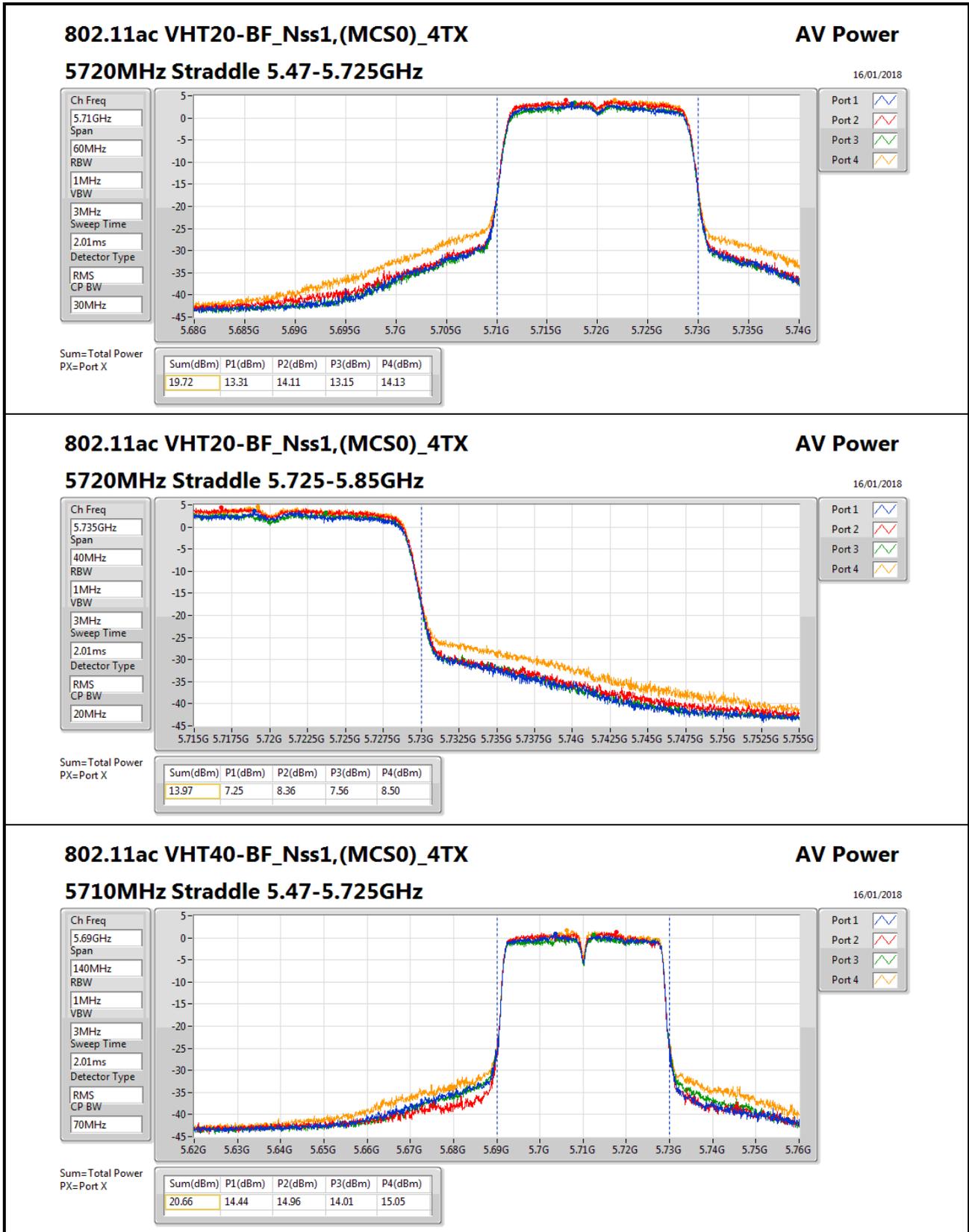


Power Result-Beamforming for Indoor

Appendix C.3

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
5210MHz,#5290MHz_TnomVnom	Pass	3.00			10.61	11.09	13.87	24.00	16.87	30.00
802.11ac VHT80+80-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
#5530MHz,#5610MHz_TnomVnom	Pass	6.01	15.79	16.99	12.99	13.06	21.07	23.99	27.08	30.00

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



802.11ac VHT40-BF_Nss1,(MCS0)_4TX

5710MHz Straddle 5.47-5.725GHz

AV Power

16/01/2018

Ch Freq
5.69GHz

Span
140MHz

RBW
1MHz

VBW
3MHz

Sweep Time
2.01ms

Detector Type
RMS

CP BW
70MHz

Port 1

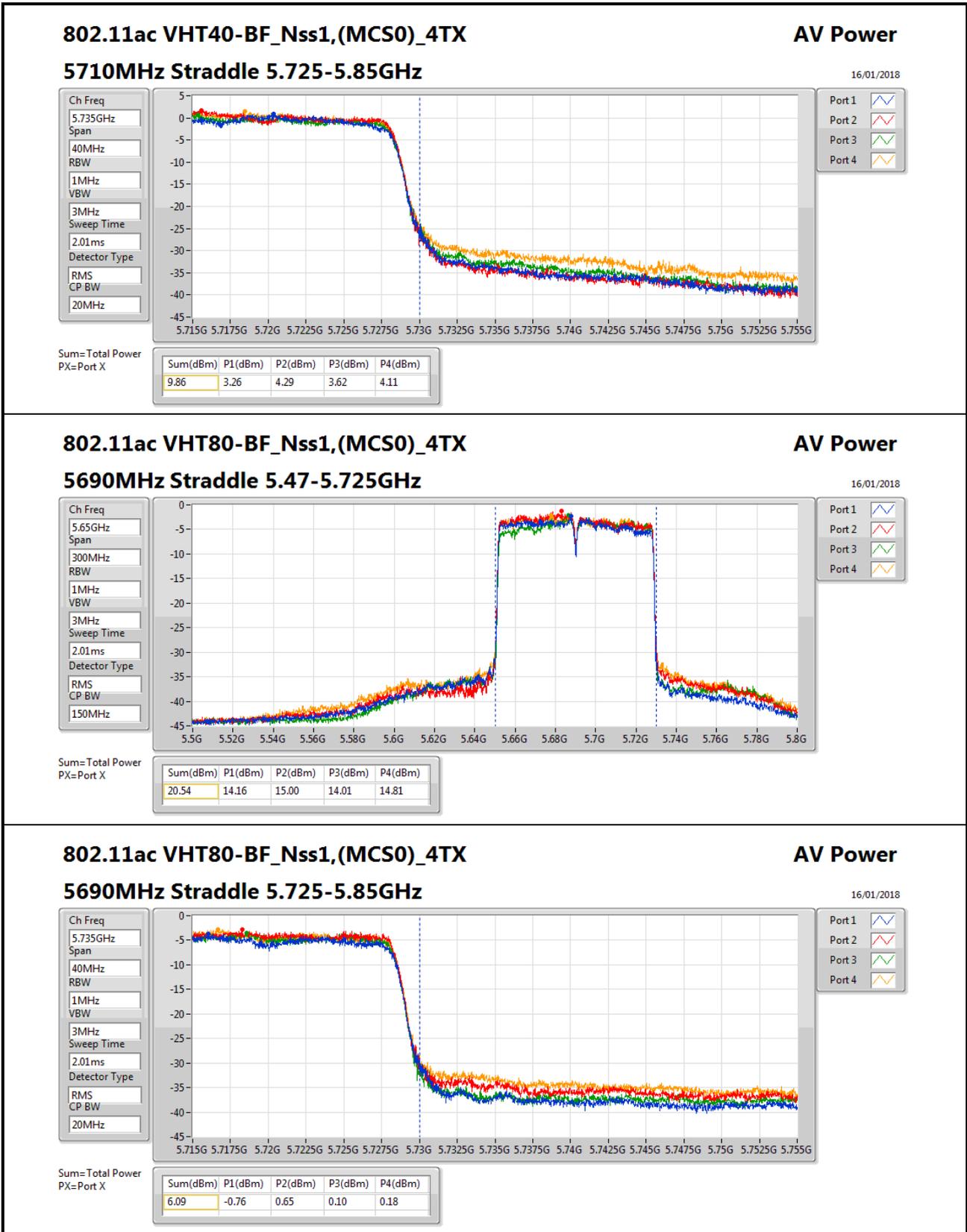
Port 2

Port 3

Port 4

Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
20.66	14.44	14.96	14.01	15.05



802.11ac VHT80-BF_Nss1,(MCS0)_4TX

5690MHz Straddle 5.725-5.85GHz

AV Power

16/01/2018

Ch Freq
5.735GHz

Span
40MHz

RBW
1MHz

VBW
3MHz

Sweep Time
2.01ms

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)
6.09	-0.76	0.65	0.10	0.18



Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.15-5.25GHz	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	10.92	0.01236	19.94	0.09863
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	10.91	0.01233	19.93	0.09840
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	10.44	0.01107	19.46	0.08831
802.11ac VHT80+80-BF_Nss2,(MCS0)_4TX(Port1&Port2)	14.61	0.02891	20.62	0.11535
5.25-5.35GHz	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	20.34	0.10814	29.36	0.86298
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	20.48	0.11169	29.50	0.89125
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	20.72	0.11803	29.74	0.94189
802.11ac VHT80+80-BF_Nss2,(MCS0)_4TX(Port3&Port4)	13.87	0.02438	16.87	0.04864
5.47-5.725GHz	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	20.41	0.10990	29.43	0.87700
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	20.71	0.11776	29.73	0.93972
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	20.80	0.12023	29.82	0.95940
802.11ac VHT80+80-BF_Nss2,(MCS0)_4TX	21.07	0.12794	27.08	0.51050
5.725-5.85GHz	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	26.10	0.40738	35.12	3.25087
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	25.89	0.38815	34.91	3.09742
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	24.16	0.26062	33.18	2.07970

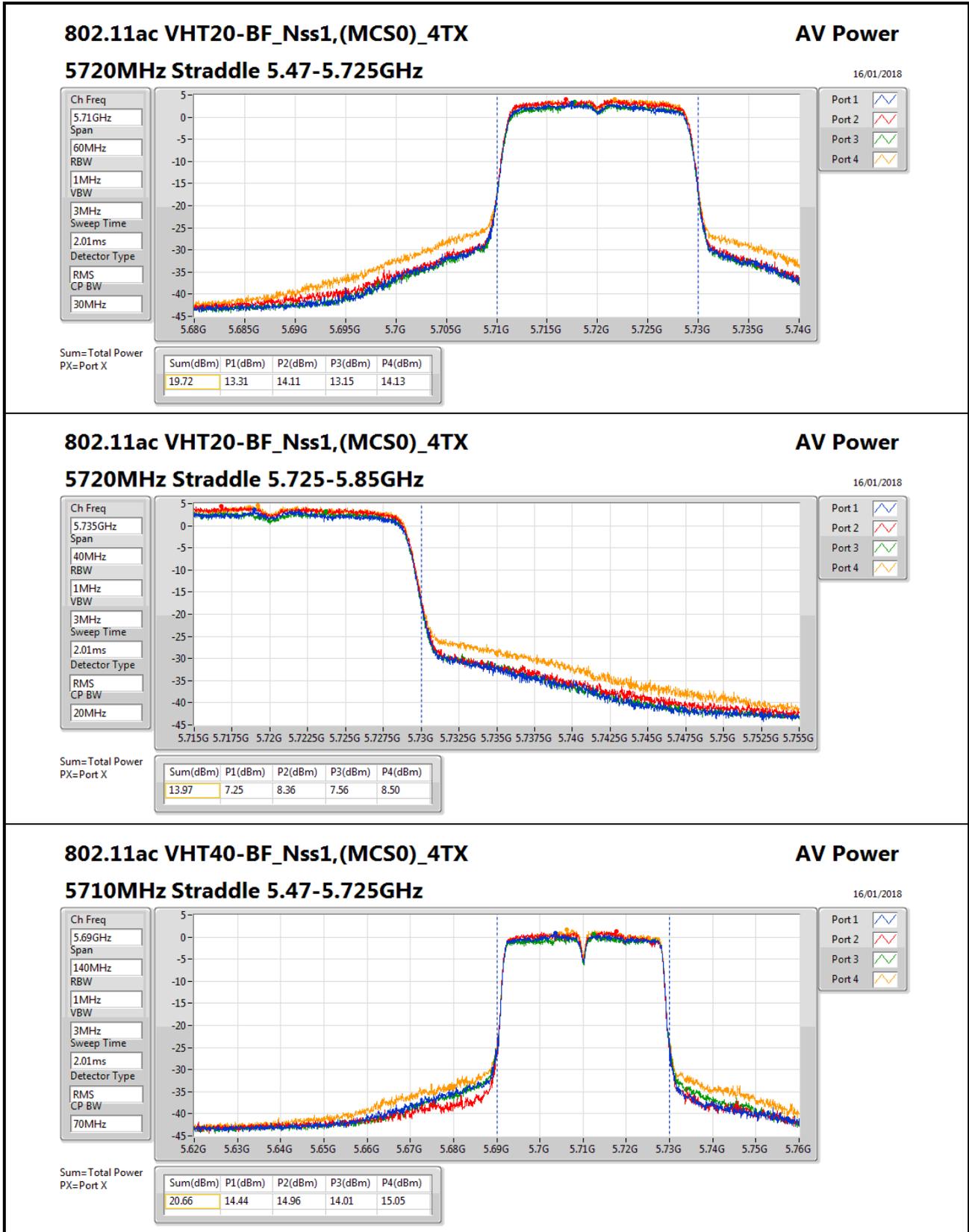


Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	9.02	4.73	3.16	4.44	3.60	10.05	26.98	19.07	36.00
5200MHz	Pass	9.02	5.78	4.32	4.37	4.97	10.92	26.98	19.94	36.00
5240MHz	Pass	9.02	5.60	3.33	4.69	4.57	10.64	26.98	19.66	36.00
5260MHz	Pass	9.02	14.00	14.27	13.80	13.88	20.01	20.98	29.03	30.00
5300MHz	Pass	9.02	13.75	13.66	13.80	14.45	19.95	20.98	28.97	30.00
5320MHz	Pass	9.02	14.11	14.83	14.02	14.29	20.34	20.98	29.36	30.00
5500MHz	Pass	9.02	14.62	14.22	14.10	14.60	20.41	20.98	29.43	30.00
5580MHz	Pass	9.02	14.30	14.45	13.50	13.90	20.07	20.98	29.09	30.00
5700MHz	Pass	9.02	13.72	14.18	13.22	14.16	19.86	20.98	28.88	30.00
5720MHz Straddle 5.47-5.725GHz	Pass	9.02	13.31	14.11	13.15	14.13	19.72	19.73	28.74	30.00
5720MHz Straddle 5.725-5.85GHz	Pass	9.02	7.25	8.36	7.56	8.50	13.97	26.98	22.99	36.00
5745MHz	Pass	9.02	19.73	20.29	19.88	20.41	26.10	26.98	35.12	36.00
5785MHz	Pass	9.02	19.22	20.76	19.90	20.15	26.06	26.98	35.08	36.00
5825MHz	Pass	9.02	19.57	19.96	19.74	19.80	25.79	26.98	34.81	36.00
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	9.02	6.94	4.21	3.02	4.38	10.91	26.98	19.93	36.00
5230MHz	Pass	9.02	5.84	3.34	3.68	3.66	10.27	26.98	19.29	36.00
5270MHz	Pass	9.02	14.06	14.47	14.02	14.43	20.27	20.98	29.29	30.00
5310MHz	Pass	9.02	14.69	14.15	14.25	14.70	20.48	20.98	29.50	30.00
5510MHz	Pass	9.02	16.21	14.10	13.65	14.23	20.69	20.98	29.71	30.00
5550MHz	Pass	9.02	15.09	14.89	13.89	14.81	20.71	20.98	29.73	30.00
5670MHz	Pass	9.02	16.18	14.14	13.40	14.26	20.64	20.98	29.66	30.00
5710MHz Straddle 5.47-5.725GHz	Pass	9.02	14.44	14.96	14.01	15.05	20.66	20.98	29.68	30.00
5710MHz Straddle 5.725-5.85GHz	Pass	9.02	3.26	4.29	3.62	4.11	9.86	26.98	18.88	36.00
5755MHz	Pass	9.02	19.11	20.34	19.82	20.12	25.89	26.98	34.91	36.00
5795MHz	Pass	9.02	19.32	20.21	19.79	20.03	25.87	26.98	34.89	36.00
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	9.02	5.05	3.57	4.82	4.07	10.44	26.98	19.46	36.00
5290MHz	Pass	9.02	14.74	14.64	14.47	14.93	20.72	20.98	29.74	30.00
5530MHz	Pass	9.02	14.74	14.85	13.84	14.44	20.51	20.98	29.53	30.00
5610MHz	Pass	9.02	15.06	14.56	14.45	15.00	20.80	20.98	29.82	30.00
5690MHz Straddle 5.47-5.725GHz	Pass	9.02	14.16	15.00	14.01	14.81	20.54	20.98	29.56	30.00
5690MHz Straddle 5.725-5.85GHz	Pass	9.02	-0.76	0.65	0.10	0.18	6.09	26.98	15.11	36.00
5775MHz	Pass	9.02	17.53	19.02	17.06	18.64	24.16	26.98	33.18	36.00
802.11ac VHT80+80-BF_Nss2,(MCS0)_4TX(Port1&Port2)	-	-	-	-	-	-	-	-	-	-
#5210MHz,#5290MHz	Pass	3.00	14.11	13.97			17.05	30.00	20.05	36.00
802.11ac VHT80+80-BF_Nss2,(MCS0)_4TX(Port3&Port4)	-	-	-	-	-	-	-	-	-	-
5210MHz,#5290MHz	Pass	3.00			10.61	11.09	13.87	24.00	16.87	30.00
802.11ac VHT80+80-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
#5530MHz,#5610MHz	Pass	6.01	15.79	16.99	12.99	13.06	21.07	23.99	27.08	30.00



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



802.11ac VHT40-BF_Nss1,(MCS0)_4TX

5710MHz Straddle 5.47-5.725GHz

AV Power

16/01/2018

Ch Freq

Span

RBW

VBW

Sweep Time

Detector Type

CP BW

Port 1

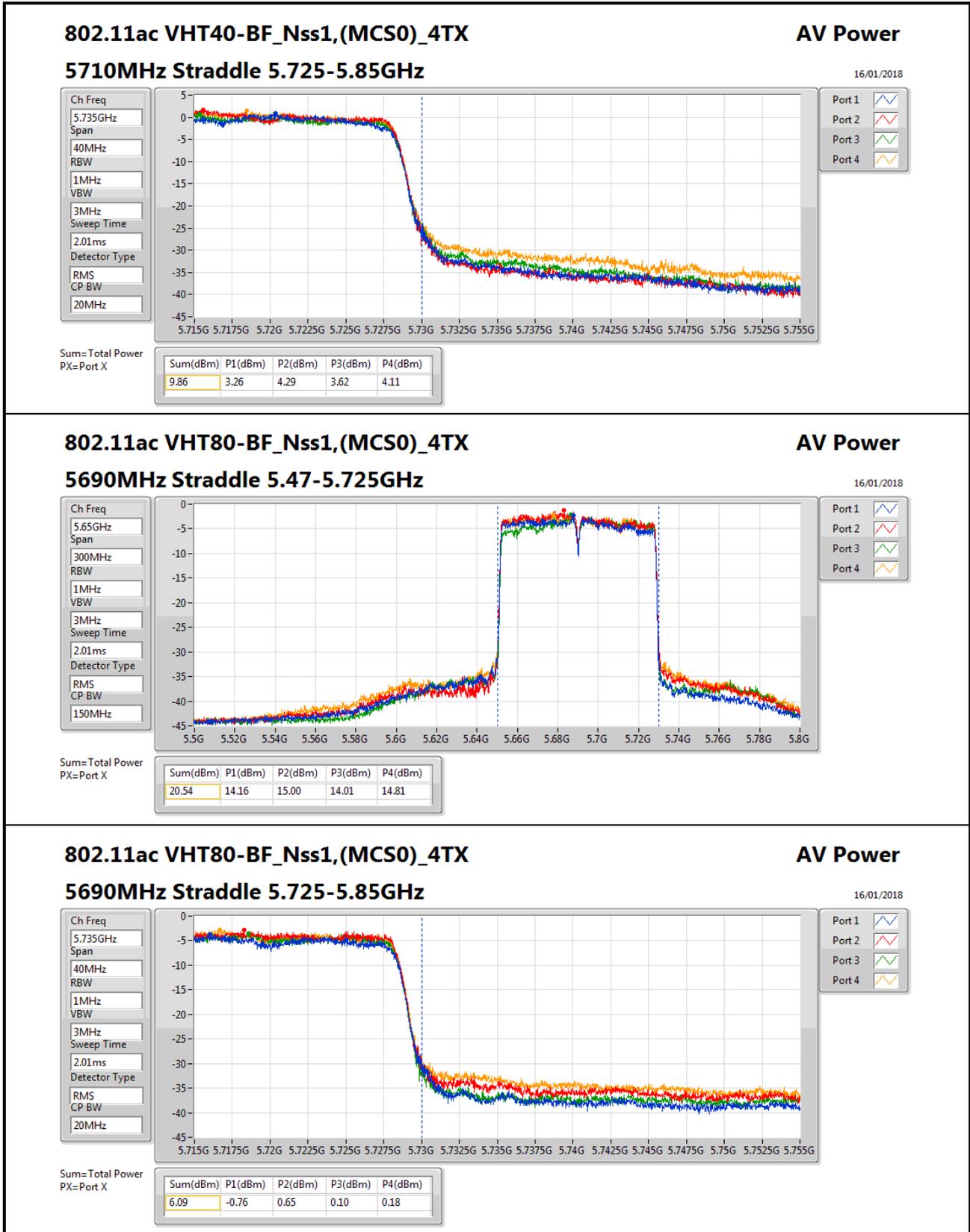
Port 2

Port 3

Port 4

Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
20.66	14.44	14.96	14.01	15.05



802.11ac VHT80-BF_Nss1,(MCS0)_4TX

5690MHz Straddle 5.725-5.85GHz

AV Power

16/01/2018

Ch Freq
5.735GHz

Span
40MHz

RBW
1MHz

VBW
3MHz

Sweep Time
2.01ms

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)
6.09	-0.76	0.65	0.10	0.18



Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
5.15-5.25GHz	-	-
802.11ac VHT80+80_Nss2,(MCS0)_4TX(Port1&Port2)	-2.53	3.48
5.25-5.35GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	7.89	16.91
802.11ac VHT20_Nss1,(MCS0)_4TX	7.94	16.96
802.11ac VHT40_Nss1,(MCS0)_4TX	7.62	16.64
802.11ac VHT80_Nss1,(MCS0)_4TX	-1.09	7.93
802.11ac VHT80+80_Nss2,(MCS0)_4TX(Port3&Port4)	-5.30	0.71
5.47-5.725GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	7.96	16.98
802.11ac VHT20_Nss1,(MCS0)_4TX	7.97	16.99
802.11ac VHT40_Nss1,(MCS0)_4TX	7.54	16.56
802.11ac VHT80_Nss1,(MCS0)_4TX	6.00	15.02
802.11ac VHT80+80_Nss2,(MCS0)_4TX	-4.38	1.63

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



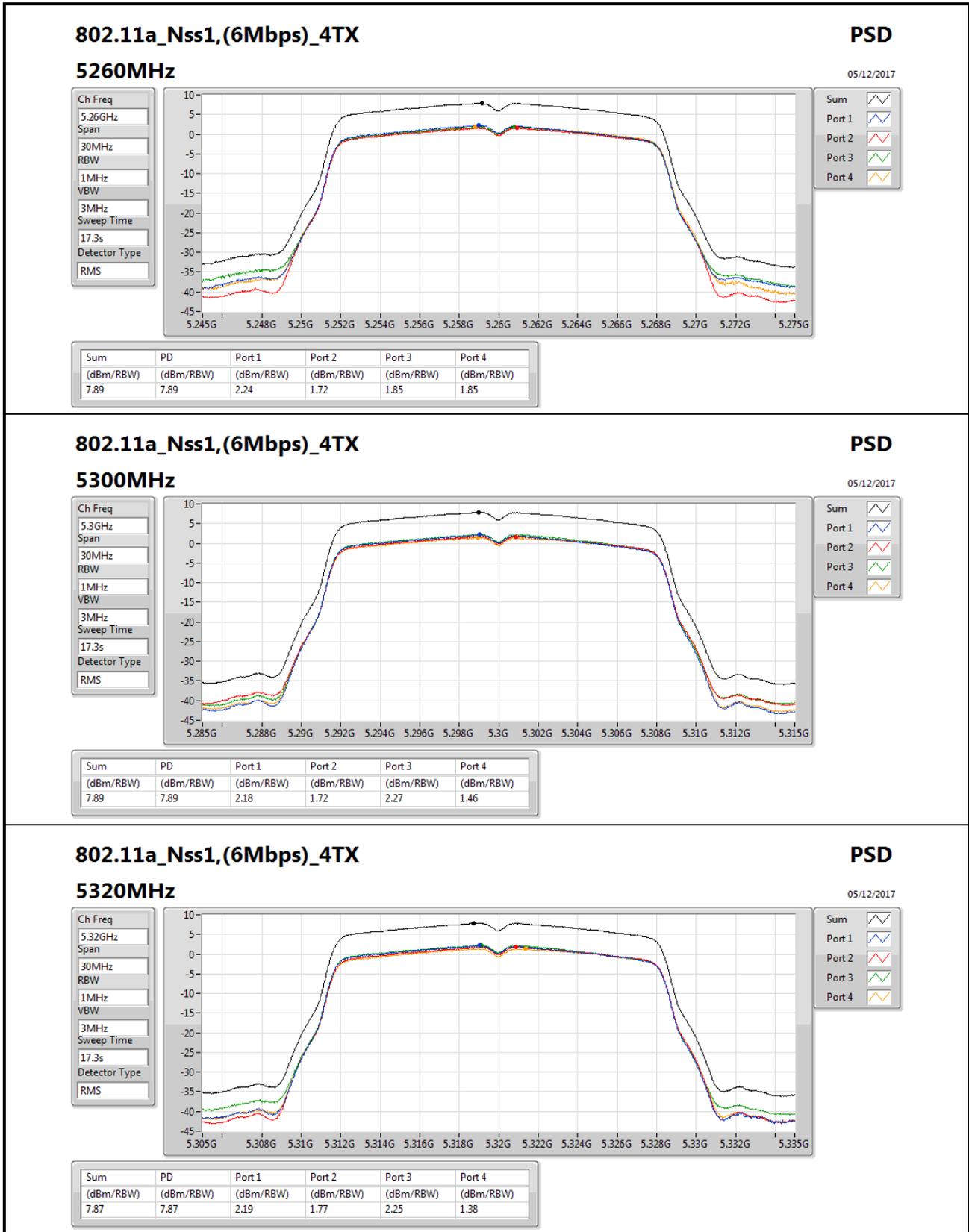
Result

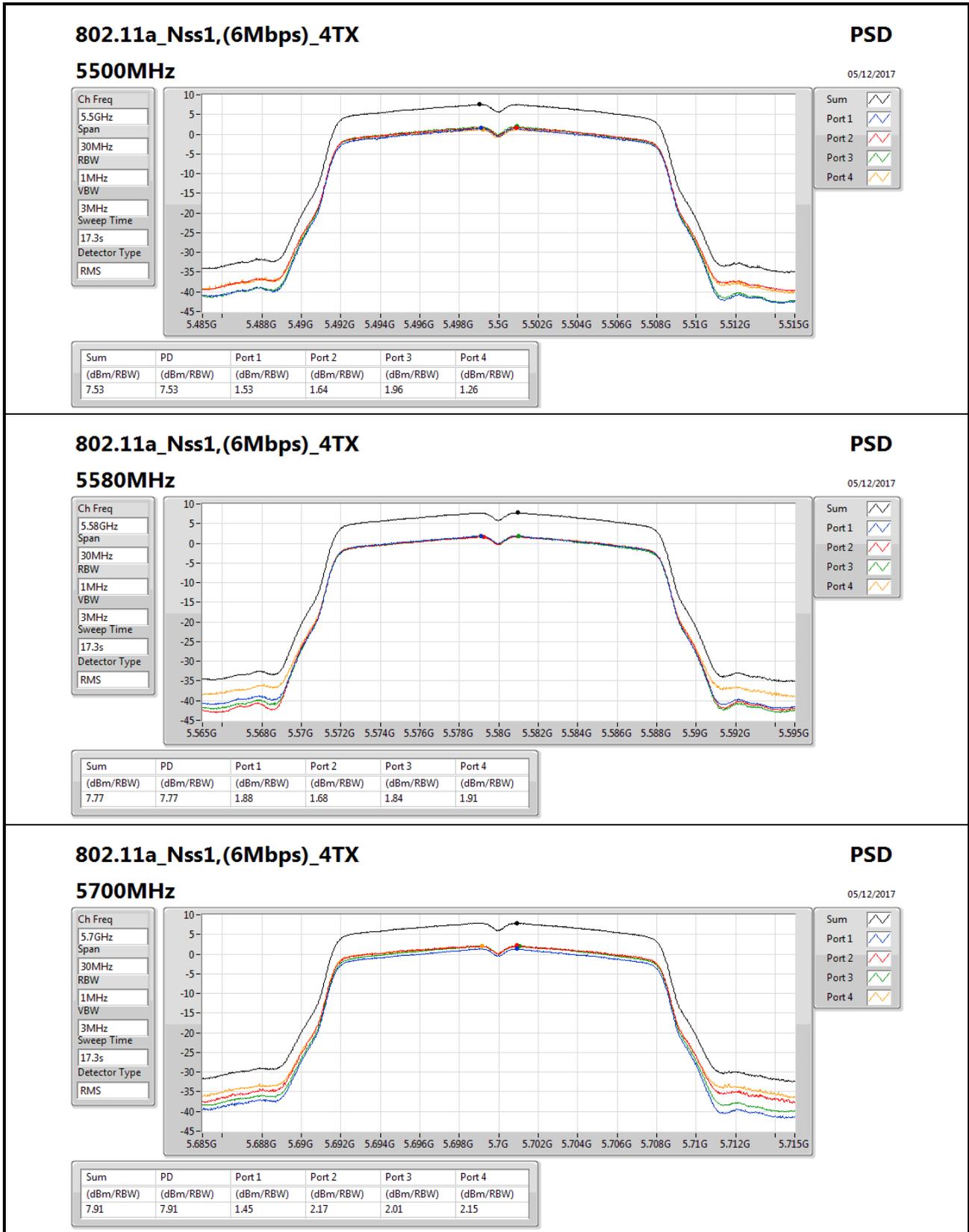
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)	EIRP PD (dBm/RBW)	EIRP PD Limit (dBm/RBW)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz_TnomVnom	Pass	9.02	2.24	1.72	1.85	1.85	7.89	7.98	16.91	17.00
5300MHz_TnomVnom	Pass	9.02	2.18	1.72	2.27	1.46	7.89	7.98	16.91	17.00
5320MHz_TnomVnom	Pass	9.02	2.19	1.77	2.25	1.38	7.87	7.98	16.89	17.00
5500MHz_TnomVnom	Pass	9.02	1.53	1.64	1.96	1.26	7.53	7.98	16.55	17.00
5580MHz_TnomVnom	Pass	9.02	1.88	1.68	1.84	1.91	7.77	7.98	16.79	17.00
5700MHz_TnomVnom	Pass	9.02	1.45	2.17	2.01	2.15	7.91	7.98	16.93	17.00
5720MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	9.02	1.39	2.46	1.89	2.13	7.96	7.98	16.98	17.00
5720MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	9.02	-2.67	-1.10	-1.98	-1.02	4.21	26.98	13.23	36.00
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz_TnomVnom	Pass	9.02	1.91	1.95	1.88	2.04	7.91	7.98	16.93	17.00
5300MHz_TnomVnom	Pass	9.02	1.86	2.02	2.20	1.69	7.90	7.98	16.92	17.00
5320MHz_TnomVnom	Pass	9.02	1.94	1.95	2.24	1.76	7.94	7.98	16.96	17.00
5500MHz_TnomVnom	Pass	9.02	1.07	1.91	1.79	1.51	7.54	7.98	16.56	17.00
5580MHz_TnomVnom	Pass	9.02	1.13	1.30	1.15	1.45	7.23	7.98	16.25	17.00
5700MHz_TnomVnom	Pass	9.02	-0.40	0.70	0.47	0.76	6.32	7.98	15.34	17.00
5720MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	9.02	1.05	2.61	1.77	2.36	7.97	7.98	16.99	17.00
5720MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	9.02	-2.98	-1.61	-2.45	-2.00	3.59	26.98	12.61	36.00
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5270MHz_TnomVnom	Pass	9.02	2.01	1.56	1.35	1.78	7.62	7.98	16.64	17.00
5310MHz_TnomVnom	Pass	9.02	0.12	-0.59	-0.08	-0.61	5.60	7.98	14.62	17.00
5510MHz_TnomVnom	Pass	9.02	-1.59	-1.68	-1.43	-1.82	4.30	7.98	13.32	17.00
5550MHz_TnomVnom	Pass	9.02	-0.89	-1.03	-1.18	-0.81	4.94	7.98	13.96	17.00
5670MHz_TnomVnom	Pass	9.02	-0.76	-0.55	-0.46	-0.03	5.52	7.98	14.54	17.00
5710MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	9.02	1.01	2.04	1.37	1.89	7.54	7.98	16.56	17.00
5710MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	9.02	-5.55	-4.34	-5.03	-4.37	0.93	26.98	9.95	36.00
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5290MHz_TnomVnom	Pass	9.02	-6.62	-7.17	-6.66	-7.13	-1.09	7.98	7.93	17.00
5530MHz_TnomVnom	Pass	9.02	-6.05	-6.51	-6.43	-6.07	-0.38	7.98	8.64	17.00
5610MHz_TnomVnom	Pass	9.02	-2.46	-2.40	-2.71	-1.86	3.52	7.98	12.54	17.00
5690MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	9.02	-0.84	0.75	-0.54	0.69	6.00	7.98	15.02	17.00
5690MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	9.02	-9.64	-8.94	-9.15	-8.83	-3.45	26.98	5.57	36.00
802.11ac VHT80+80_Nss2,(MCS0)_4TX(Port1&Port2)	-	-	-	-	-	-	-	-	-	-
#5210MHz,5290MHz	Pass	6.01	-4.69	-6.20			-2.53	16.99	3.48	23.00
802.11ac VHT80+80_Nss2,(MCS0)_4TX(Port3&Port4)	-	-	-	-	-	-	-	-	-	-
5210MHz,#5290MHz	Pass	6.01			-7.94	-7.90	-5.30	10.99	0.71	17.00
802.11ac VHT80+80_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
#5530MHz,#5610MHz	Pass	6.01	-7.22	-7.08	-9.02	-7.46	-4.38	10.99	1.63	17.00

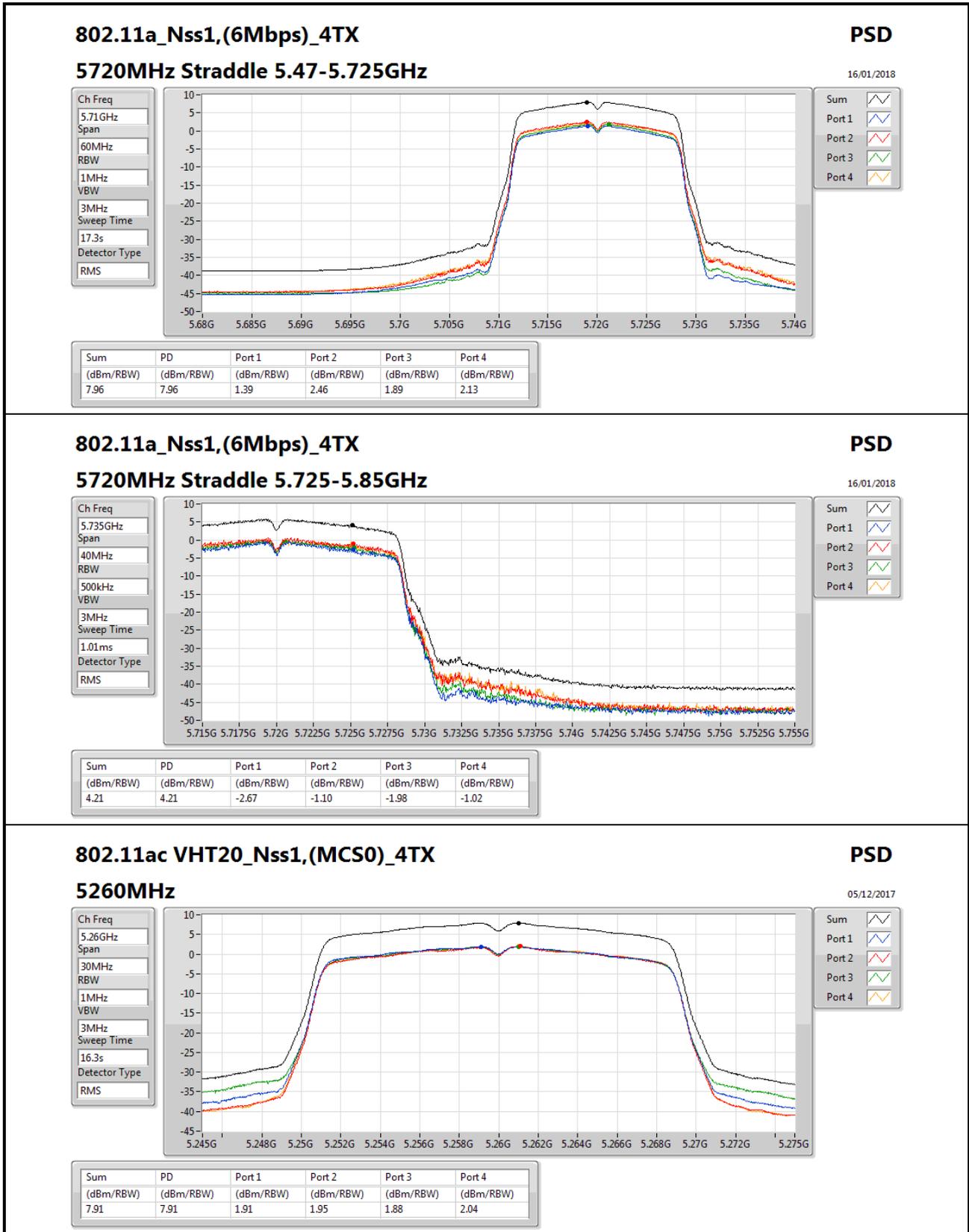
DG = Directional Gain; RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

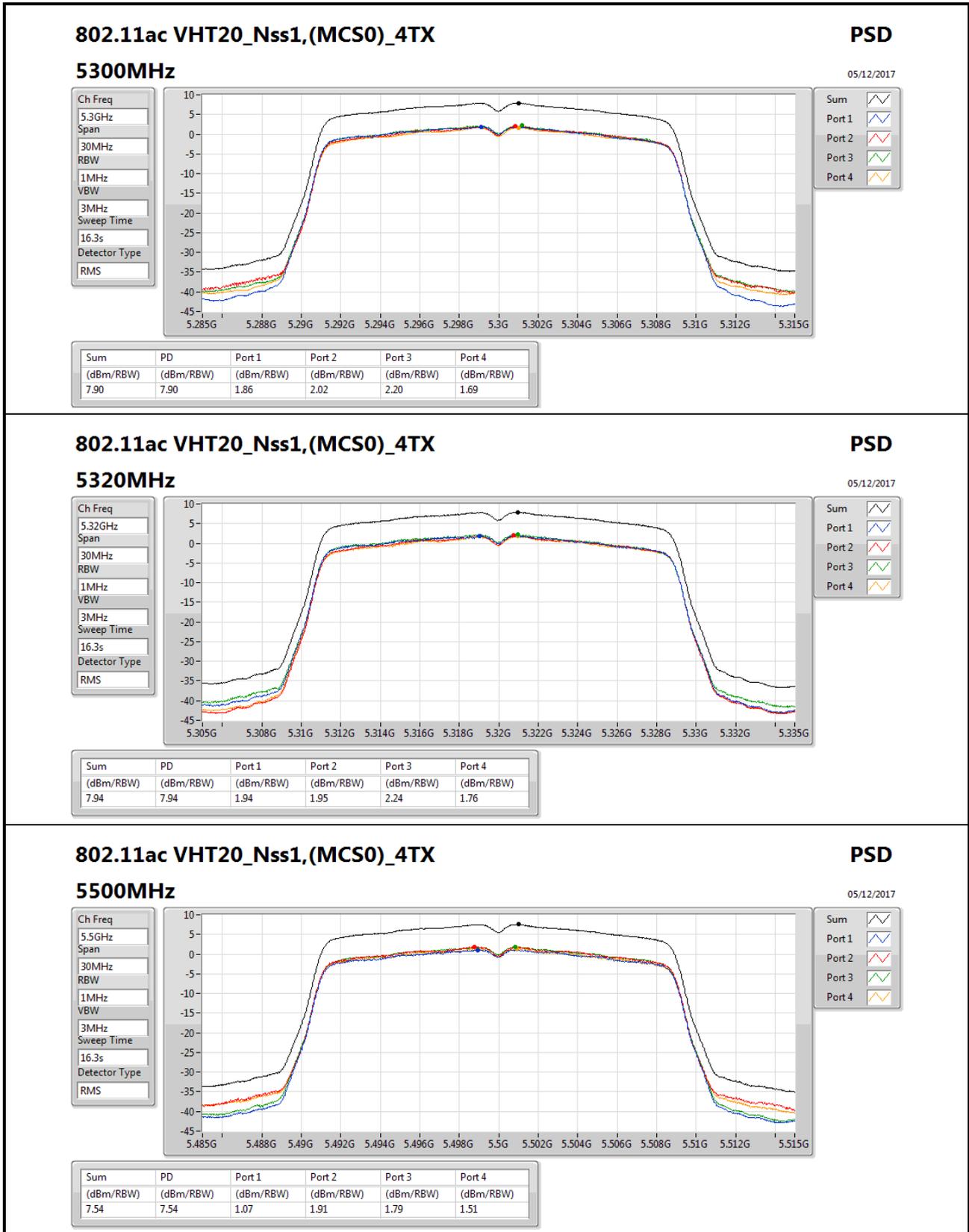


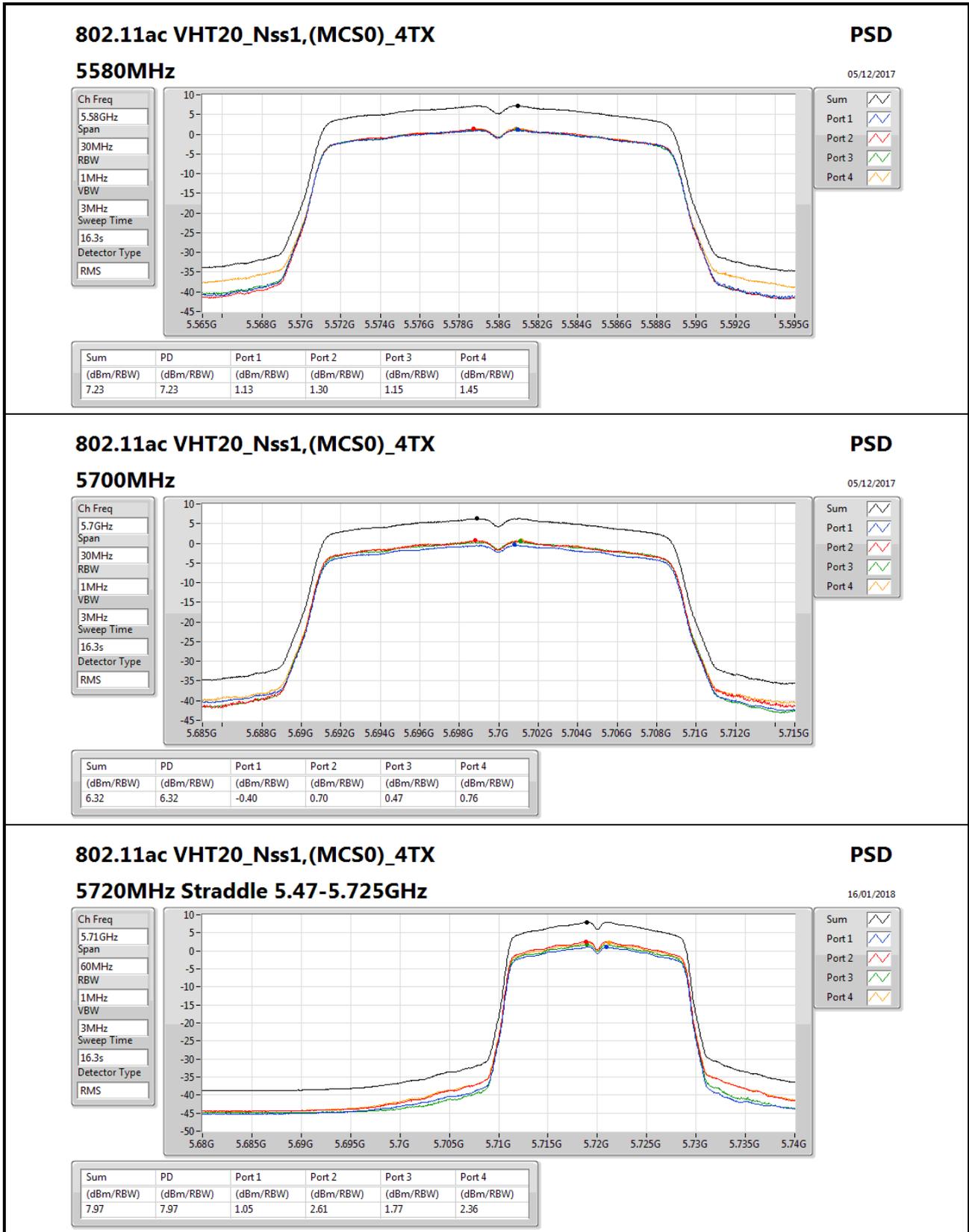
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port Xpower density;

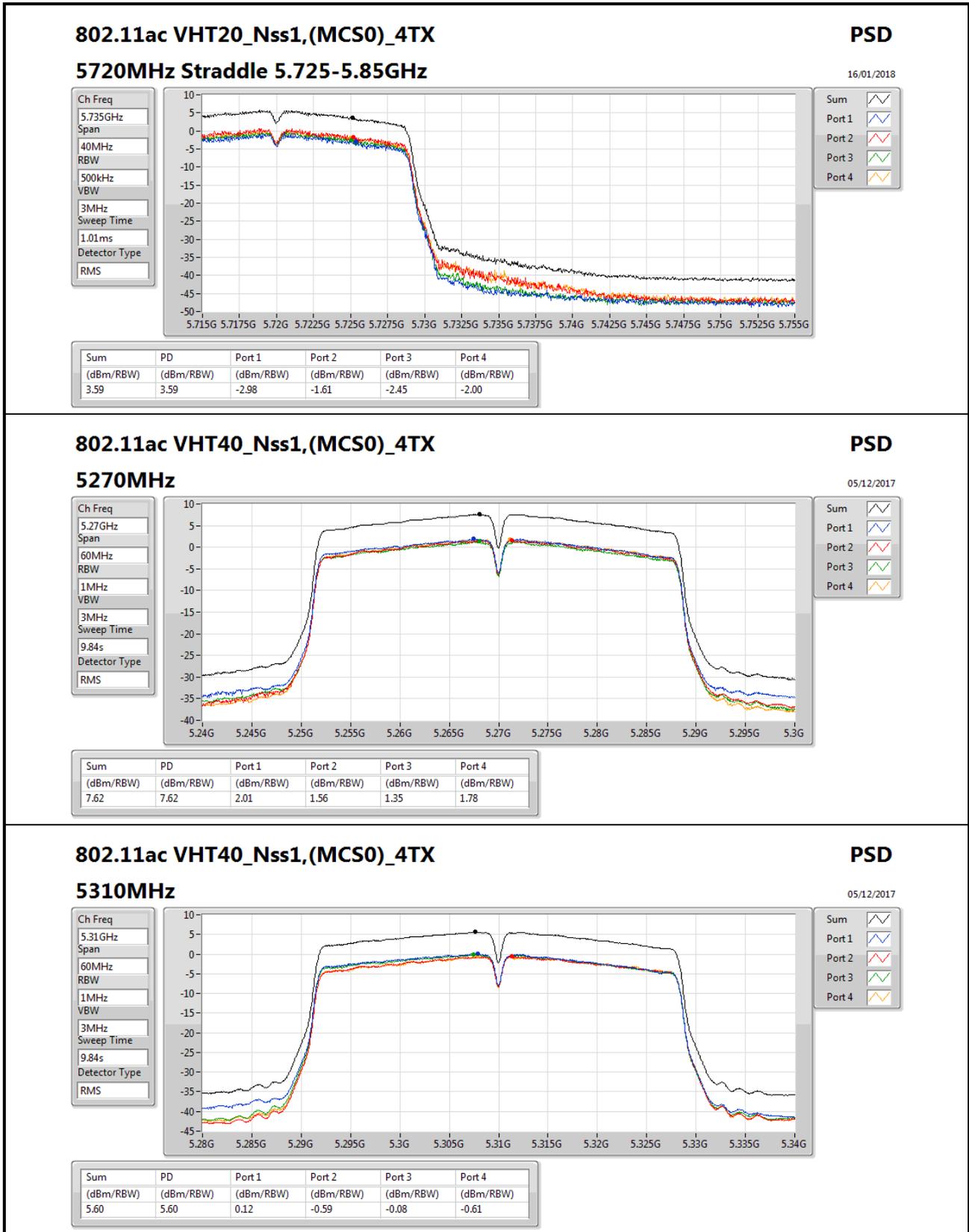


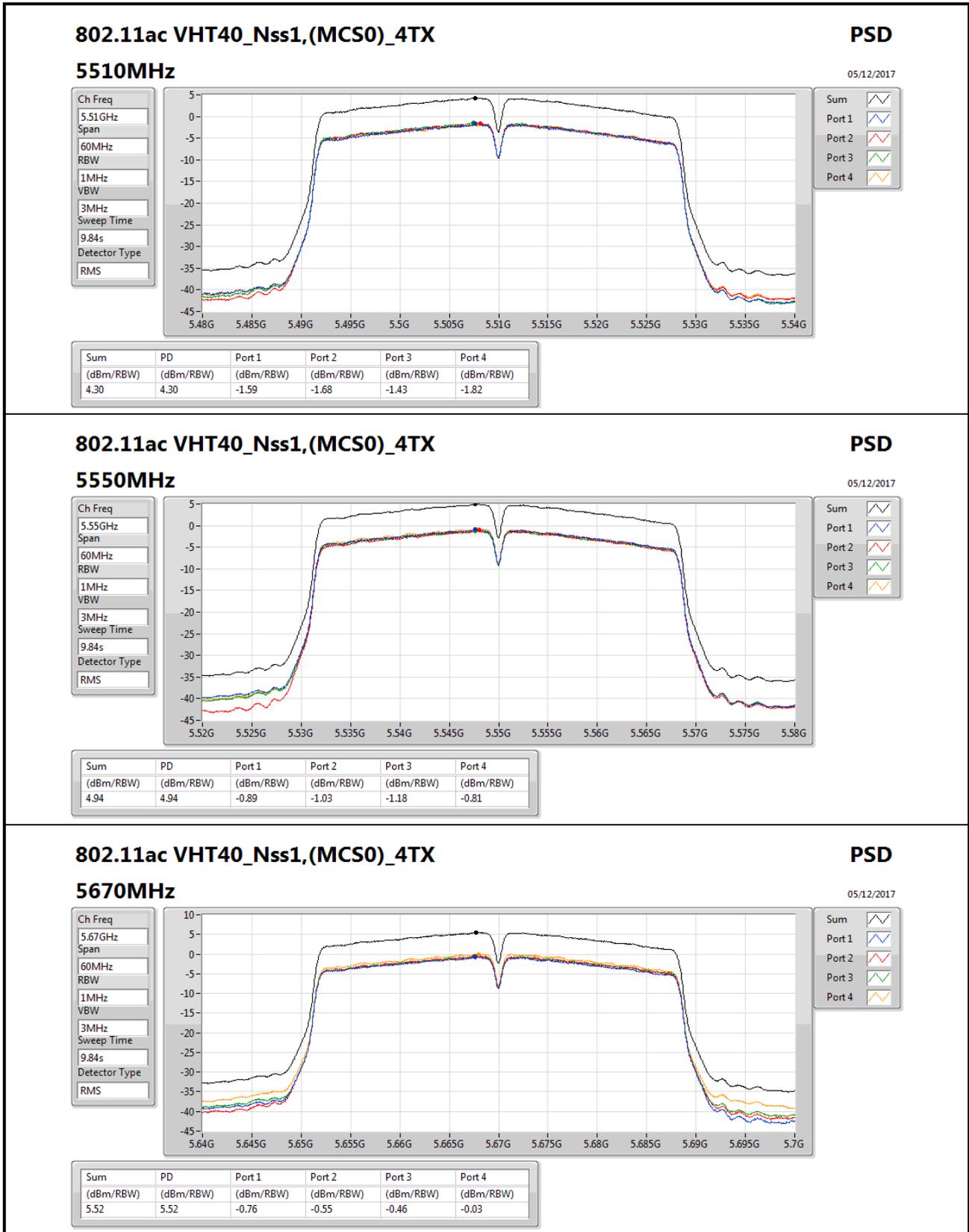


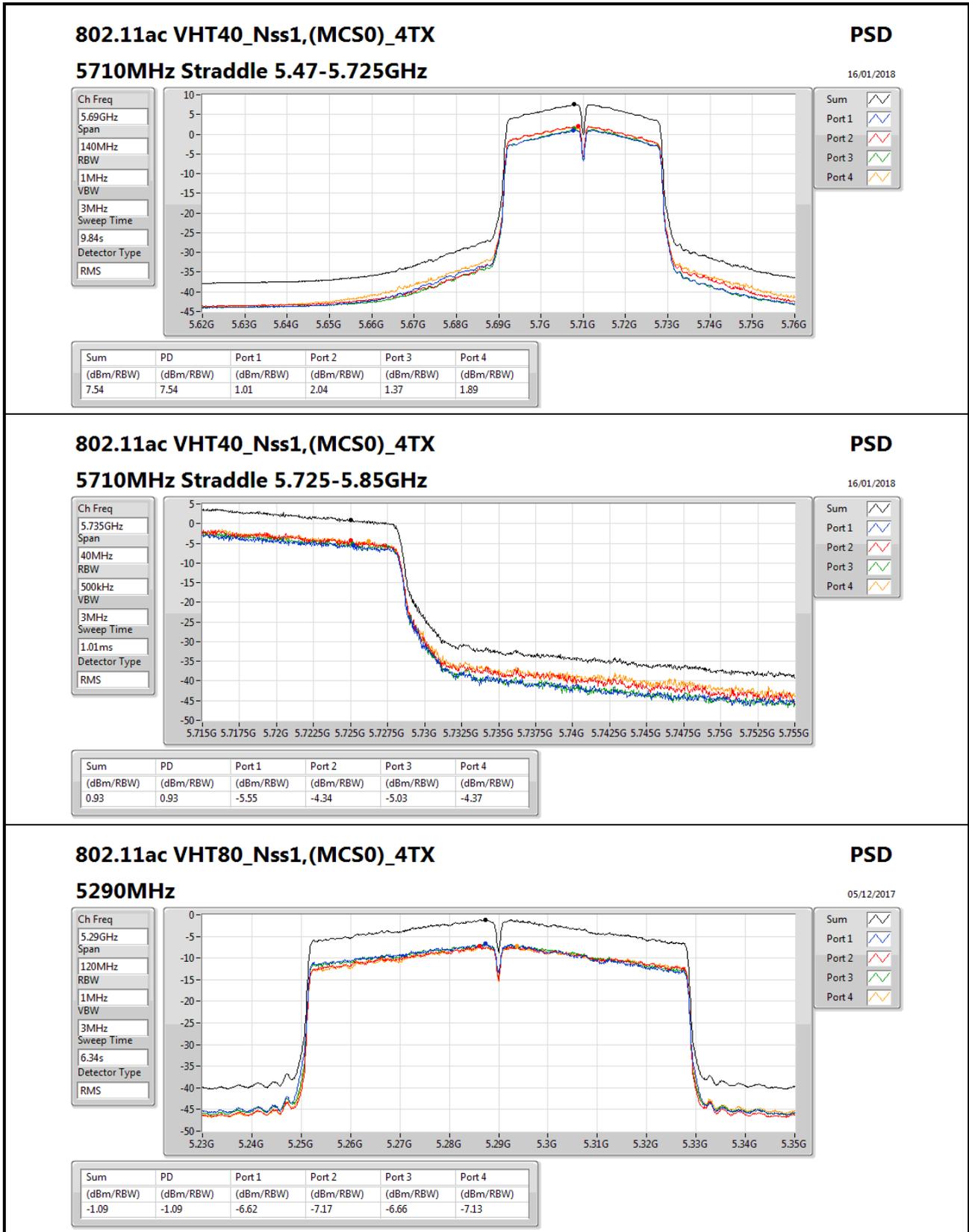


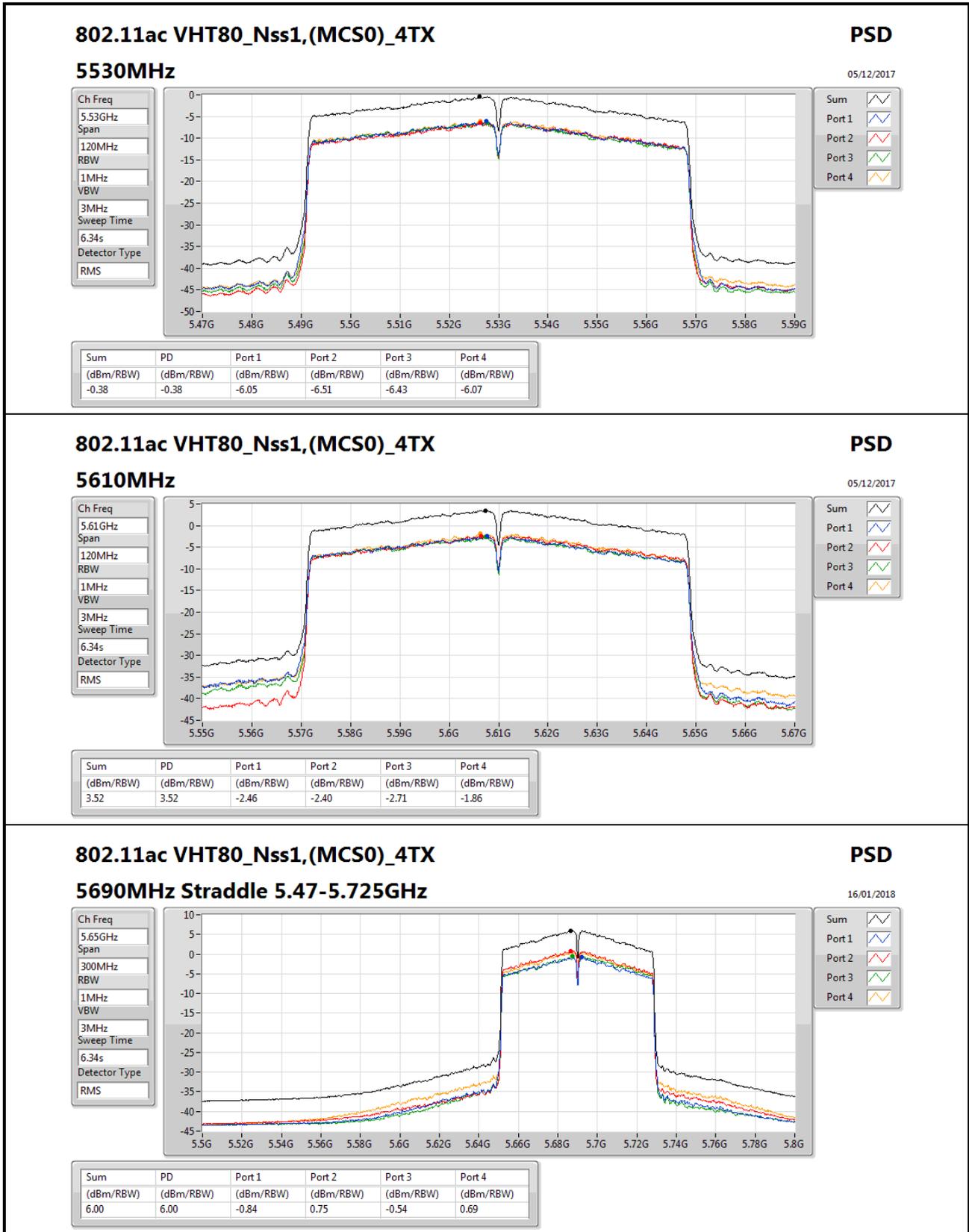


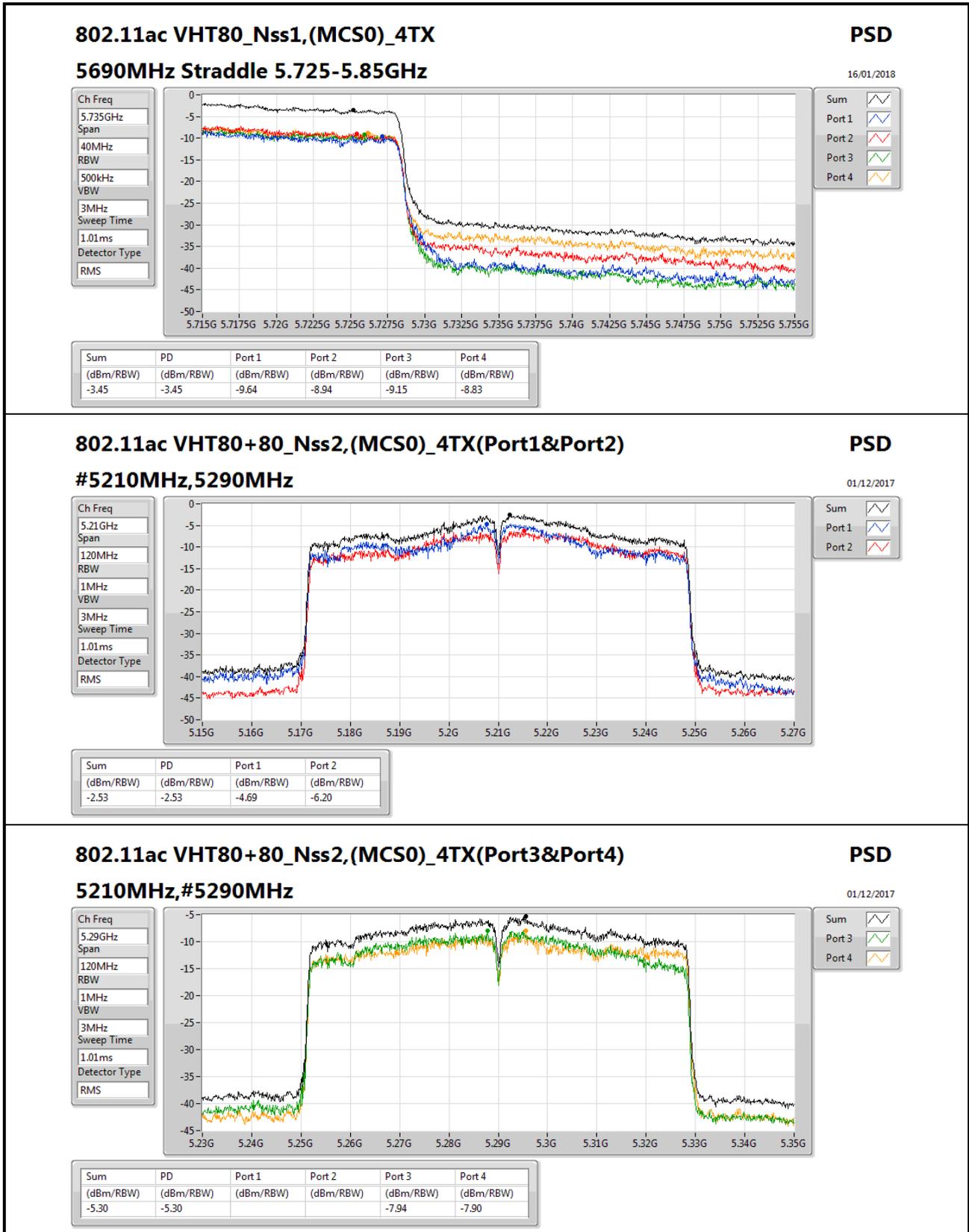


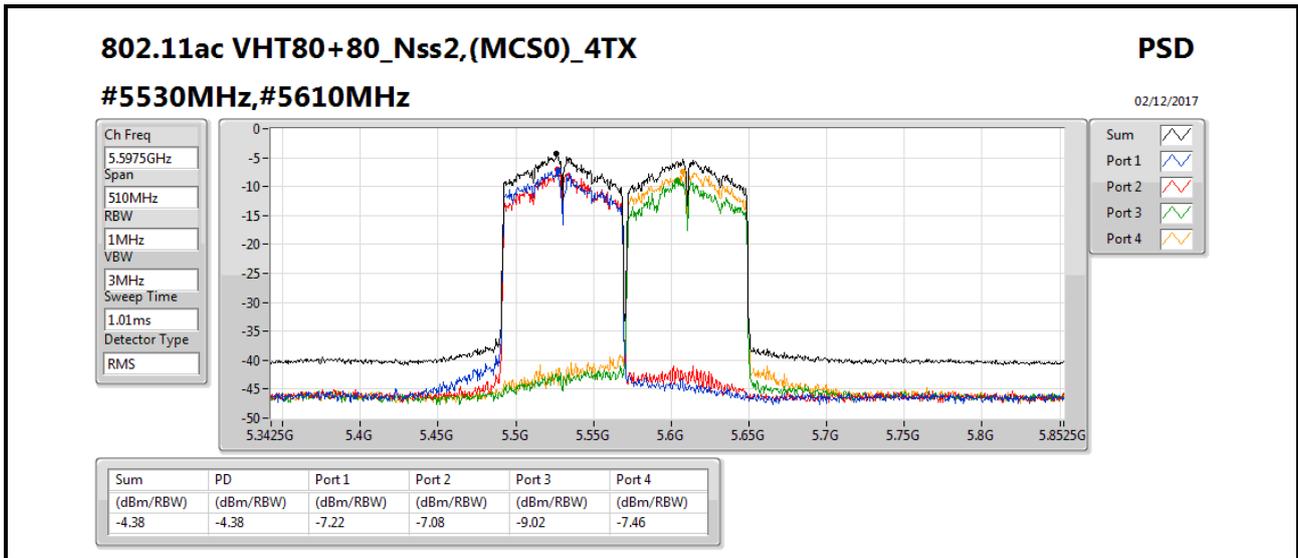














Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
5.15-5.25GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	6.94	15.96
802.11ac VHT20_Nss1,(MCS0)_4TX	6.94	15.96
802.11ac VHT40_Nss1,(MCS0)_4TX	4.83	13.85
802.11ac VHT80_Nss1,(MCS0)_4TX	2.99	12.01
802.11ac VHT80+80_Nss2,(MCS0)_4TX(Port1&Port2)	-2.53	3.48
5.25-5.35GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	7.89	16.91
802.11ac VHT20_Nss1,(MCS0)_4TX	7.94	16.96
802.11ac VHT40_Nss1,(MCS0)_4TX	7.62	16.64
802.11ac VHT80_Nss1,(MCS0)_4TX	-1.09	7.93
802.11ac VHT80+80_Nss2,(MCS0)_4TX(Port3&Port4)	-5.30	0.71
5.47-5.725GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	7.96	16.98
802.11ac VHT20_Nss1,(MCS0)_4TX	7.97	16.99
802.11ac VHT40_Nss1,(MCS0)_4TX	7.54	16.56
802.11ac VHT80_Nss1,(MCS0)_4TX	6.00	15.02
802.11ac VHT80+80_Nss2,(MCS0)_4TX	-4.38	1.63
5.725-5.85GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	13.57	22.59
802.11ac VHT20_Nss1,(MCS0)_4TX	12.95	21.97
802.11ac VHT40_Nss1,(MCS0)_4TX	9.99	19.01
802.11ac VHT80_Nss1,(MCS0)_4TX	5.94	14.96

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)	EIRP PD (dBm/RBW)	EIRP PD Limit (dBm/RBW)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz_TnomVnom	Pass	9.02	1.19	1.06	0.79	0.29	6.78	13.98	15.80	23.00
5200MHz_TnomVnom	Pass	9.02	1.13	1.08	0.85	0.45	6.81	13.98	15.83	23.00
5240MHz_TnomVnom	Pass	9.02	1.26	1.04	0.87	0.67	6.94	13.98	15.96	23.00
5260MHz_TnomVnom	Pass	9.02	2.24	1.72	1.85	1.85	7.89	7.98	16.91	17.00
5300MHz_TnomVnom	Pass	9.02	2.18	1.72	2.27	1.46	7.89	7.98	16.91	17.00
5320MHz_TnomVnom	Pass	9.02	2.19	1.77	2.25	1.38	7.87	7.98	16.89	17.00
5500MHz_TnomVnom	Pass	9.02	1.53	1.64	1.96	1.26	7.53	7.98	16.55	17.00
5580MHz_TnomVnom	Pass	9.02	1.88	1.68	1.84	1.91	7.77	7.98	16.79	17.00
5700MHz_TnomVnom	Pass	9.02	1.45	2.17	2.01	2.15	7.91	7.98	16.93	17.00
5720MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	9.02	1.39	2.46	1.89	2.13	7.96	7.98	16.98	17.00
5720MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	9.02	-2.67	-1.10	-1.98	-1.02	4.21	26.98	13.23	36.00
5745MHz_TnomVnom	Pass	9.02	7.90	7.39	7.02	6.59	13.23	26.98	22.25	36.00
5785MHz_TnomVnom	Pass	9.02	7.16	8.27	7.53	7.31	13.57	26.98	22.59	36.00
5825MHz_TnomVnom	Pass	9.02	7.53	7.38	6.60	7.25	13.20	26.98	22.22	36.00
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz_TnomVnom	Pass	9.02	0.77	1.27	0.76	0.62	6.81	13.98	15.83	23.00
5200MHz_TnomVnom	Pass	9.02	0.88	1.24	0.79	0.68	6.87	13.98	15.89	23.00
5240MHz_TnomVnom	Pass	9.02	0.98	1.14	0.84	0.85	6.94	13.98	15.96	23.00
5260MHz_TnomVnom	Pass	9.02	1.91	1.95	1.88	2.04	7.91	7.98	16.93	17.00
5300MHz_TnomVnom	Pass	9.02	1.86	2.02	2.20	1.69	7.90	7.98	16.92	17.00
5320MHz_TnomVnom	Pass	9.02	1.94	1.95	2.24	1.76	7.94	7.98	16.96	17.00
5500MHz_TnomVnom	Pass	9.02	1.07	1.91	1.79	1.51	7.54	7.98	16.56	17.00
5580MHz_TnomVnom	Pass	9.02	1.13	1.30	1.15	1.45	7.23	7.98	16.25	17.00
5700MHz_TnomVnom	Pass	9.02	-0.40	0.70	0.47	0.76	6.32	7.98	15.34	17.00
5720MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	9.02	1.05	2.61	1.77	2.36	7.97	7.98	16.99	17.00
5720MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	9.02	-2.98	-1.61	-2.45	-2.00	3.59	26.98	12.61	36.00
5745MHz_TnomVnom	Pass	9.02	6.94	7.46	6.95	6.54	12.95	26.98	21.97	36.00
5785MHz_TnomVnom	Pass	9.02	6.82	7.44	6.97	6.29	12.87	26.98	21.89	36.00
5825MHz_TnomVnom	Pass	9.02	7.00	7.19	6.69	6.99	12.93	26.98	21.95	36.00
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz_TnomVnom	Pass	9.02	-0.89	-0.98	-1.44	-1.55	4.79	13.98	13.81	23.00
5230MHz_TnomVnom	Pass	9.02	-0.70	-1.06	-1.47	-1.30	4.83	13.98	13.85	23.00
5270MHz_TnomVnom	Pass	9.02	2.01	1.56	1.35	1.78	7.62	7.98	16.64	17.00
5310MHz_TnomVnom	Pass	9.02	0.12	-0.59	-0.08	-0.61	5.60	7.98	14.62	17.00
5510MHz_TnomVnom	Pass	9.02	-1.59	-1.68	-1.43	-1.82	4.30	7.98	13.32	17.00
5550MHz_TnomVnom	Pass	9.02	-0.89	-1.03	-1.18	-0.81	4.94	7.98	13.96	17.00
5670MHz_TnomVnom	Pass	9.02	-0.76	-0.55	-0.46	-0.03	5.52	7.98	14.54	17.00
5710MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	9.02	1.01	2.04	1.37	1.89	7.54	7.98	16.56	17.00
5710MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	9.02	-5.55	-4.34	-5.03	-4.37	0.93	26.98	9.95	36.00



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)	EIRP PD (dBm/RBW)	EIRP PD Limit (dBm/RBW)
5755MHz_TnomVnom	Pass	9.02	3.90	4.42	3.97	3.45	9.94	26.98	18.96	36.00
5795MHz_TnomVnom	Pass	9.02	4.34	4.34	3.89	3.22	9.99	26.98	19.01	36.00
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz_TnomVnom	Pass	9.02	-2.75	-2.74	-3.12	-3.06	2.99	13.98	12.01	23.00
5290MHz_TnomVnom	Pass	9.02	-6.62	-7.17	-6.66	-7.13	-1.09	7.98	7.93	17.00
5530MHz_TnomVnom	Pass	9.02	-6.05	-6.51	-6.43	-6.07	-0.38	7.98	8.64	17.00
5610MHz_TnomVnom	Pass	9.02	-2.46	-2.40	-2.71	-1.86	3.52	7.98	12.54	17.00
5690MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	9.02	-0.84	0.75	-0.54	0.69	6.00	7.98	15.02	17.00
5690MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	9.02	-9.64	-8.94	-9.15	-8.83	-3.45	26.98	5.57	36.00
5775MHz_TnomVnom	Pass	9.02	1.18	-0.38	-0.25	-0.87	5.94	26.98	14.96	36.00
802.11ac VHT80+80_Nss2,(MCS0)_4TX(Port1&Port2)	-	-	-	-	-	-	-	-	-	-
#5210MHz,5290MHz	Pass	6.01	-4.69	-6.20			-2.53	16.99	3.48	23.00
802.11ac VHT80+80_Nss2,(MCS0)_4TX(Port3&Port4)	-	-	-	-	-	-	-	-	-	-
5210MHz,#5290MHz	Pass	6.01			-7.94	-7.90	-5.30	10.99	0.71	17.00
802.11ac VHT80+80_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
#5530MHz,#5610MHz	Pass	6.01	-7.22	-7.08	-9.02	-7.46	-4.38	10.99	1.63	17.00

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;

