



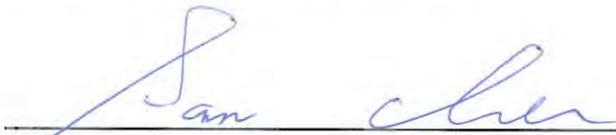
FCC RADIO TEST REPORT

FCC ID : MSQ-RTHR00
Equipment : Wireless-AX11000 Tri-band Gigabit Router
Brand Name : ASUS
Model Name : RT-AX95U, GT-AX11000
Applicant : ASUSTeK COMPUTER INC.
4F, No. 150, Li-Te Rd., Peitou, Taipei 112, Taiwan
Manufacturer (1) : ASKEY TECHNOLOGY (JIANG SU) LTD
NO1388, Jiao Tong Road, Wujiang Economic
Technological Development Area Jiangsu Province
215200 China
Manufacturer (2) : Compal Networking (KunShan) Co., LTD.
No. 520, Nabbang Rd., Economic & Technical
Development Zone Kunshan, Jiangsu Province China
Standard : 47 CFR FCC Part 15.407

The product was received on Jan. 18, 2018, and testing was started from Jan. 18, 2018 and completed on Mar. 07, 2018. We, SPORTON INTERTIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

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


Approved by: Sam Chen

SPORTON INTERTIONAL INC. EMC & Wireless Communications Laboratory

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



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Photographs of EUT v01



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
0	15.203	Antenna Requirement	PASS	-
3.1	15.407(a)	Emission Bandwidth	PASS	-
3.2	15.407(a)	Maximum Conducted Output Power	PASS	-
3.3	15.407(a)	Peak Power Spectral Density	PASS	-
3.4	15.407(b)	Unwanted Emissions	PASS	-

Reviewed by: **Sam Chen**

Report Producer: **Cindy Peng**



1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
5250-5350	a, n (HT20), ac (VHT20), ax (HE20)	5260-5320	52-64 [4]
5470-5725		5500-5720	100-144 [12]
5250-5350	n (HT40), ac (VHT40), ax (HE40)	5270-5310	54-62 [2]
5470-5725		5510-5710	102-142 [6]
5250-5350	ac (VHT80), ax (HE80)	5290	58 [1]
5470-5725		5530-5690	106-138 [3]
5150-5350	ac (VHT160)	5250	50 [1]
5470-5725		5570	114 [1]

Band	Mode	BWch (MHz)	Nant
5.15-5.25GHz	802.11ac VHT160	160	4TX
5.15-5.25GHz	802.11ac VHT160-BF	160	4TX
5.25-5.35GHz	802.11a	20	4TX
5.25-5.35GHz	802.11n HT20	20	4TX
5.25-5.35GHz	802.11n HT20-BF	20	4TX
5.25-5.35GHz	802.11ac VHT20	20	4TX
5.25-5.35GHz	802.11ac VHT20-BF	20	4TX
5.25-5.35GHz	802.11HE20	20	4TX
5.25-5.35GHz	802.11HE20,BF	20	4TX
5.25-5.35GHz	802.11n HT40	40	4TX
5.25-5.35GHz	802.11n HT40-BF	40	4TX
5.25-5.35GHz	802.11ac VHT40	40	4TX
5.25-5.35GHz	802.11ac VHT40-BF	40	4TX
5.25-5.35GHz	802.11HE40	40	4TX
5.25-5.35GHz	802.11HE40,BF	40	4TX
5.25-5.35GHz	802.11ac VHT80	80	4TX
5.25-5.35GHz	802.11ac VHT80-BF	80	4TX
5.25-5.35GHz	802.11HE80	80	4TX
5.25-5.35GHz	802.11HE80,BF	80	4TX
5.25-5.35GHz	802.11ac VHT160	160	4TX
5.25-5.35GHz	802.11ac VHT160-BF	160	4TX
5.47-5.725GHz	802.11a	20	4TX



Band	Mode	BWch (MHz)	Nant
5.47-5.725GHz	802.11n HT20	20	4TX
5.47-5.725GHz	802.11n HT20-BF	20	4TX
5.47-5.725GHz	802.11ac VHT20	20	4TX
5.47-5.725GHz	802.11ac VHT20-BF	20	4TX
5.47-5.725GHz	802.11HE20	20	4TX
5.47-5.725GHz	802.11HE20,BF	20	4TX
5.47-5.725GHz	802.11n HT40	40	4TX
5.47-5.725GHz	802.11n HT40-BF	40	4TX
5.47-5.725GHz	802.11ac VHT40	40	4TX
5.47-5.725GHz	802.11ac VHT40-BF	40	4TX
5.47-5.725GHz	802.11HE40	40	4TX
5.47-5.725GHz	802.11HE40,BF	40	4TX
5.47-5.725GHz	802.11ac VHT80	80	4TX
5.47-5.725GHz	802.11ac VHT80-BF	80	4TX
5.47-5.725GHz	802.11HE80	80	4TX
5.47-5.725GHz	802.11HE80,BF	80	4TX
5.47-5.725GHz	802.11ac VHT160	160	4TX
5.47-5.725GHz	802.11ac VHT160-BF	160	4TX

Note:

- ♦ 11a, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- ♦ VHT20, VHT40, VHT80 and VHT160 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- ♦ HE20, HE40, HE80 and HE160 use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- ♦ BWch is the nominal channel bandwidth.
- ♦ Nss-Min is the minimum number of spatial streams.
- ♦ Nant is the number of outputs. e.g., 2(2,3) means have 2 outputs for port 2 and port 3. 2 means have 2 outputs for port 1 and port 2.



1.1.2 Antenna Information

Ant.	Port				Brand	P/N	Type	Connector	Gain (dBi)			
	2.4GHz	5GHz Band1/2	5GHz Band 3	5GHz Band 4					2.4GHz	5GHz Band1/2	5GHz Band 3	5GHz Band 4
1	1	-	4	4	WHA YU	C660-510413-A	Dipole	Reverse SMA Plug	1.9	-	2.3	1.9
2	2	-	3	3	WHA YU	C660-510413-A	Dipole	Reverse SMA Plug	1.9	-	2.3	1.9
3	3	-	2	2	WHA YU	C660-510413-A	Dipole	Reverse SMA Plug	1.9	-	2.3	1.9
4	4	-	1	1	WHA YU	C660-510413-A	Dipole	Reverse SMA Plug	1.9	-	2.3	1.9
5	-	1	-	-	WHA YU	C660-510413-A	Dipole	Reverse SMA Plug	-	2.3	-	-
6	-	2	-	-	WHA YU	C660-510413-A	Dipole	Reverse SMA Plug	-	2.3	-	-
7	-	3	-	-	WHA YU	C660-510413-A	Dipole	Reverse SMA Plug	-	2.3	-	-
8	-	4	-	-	WHA YU	C660-510413-A	Dipole	Reverse SMA Plug	-	2.3	-	-

Note:

<For 2.4GHz Band>

For IEEE 802.11b/g/n/ac/ax mode <4TX/4RX>:

Ant.1 (Port 1), Ant.2 (Port 2), Ant.3 (Port 3) and Ant.4 (Port 4) will transmit/receive the same signal simultaneously.

Ant.1 (Port 1), Ant.2 (Port 2), Ant.3 (Port 3) and Ant.4 (Port 4) can be used as transmitting/receiving antennas.

<For 5GHz Band>

For Band 1/2

For IEEE 802.11a/n/ac/ax mode <4TX/4RX>:

Ant.5 (Port 1), Ant.6 (Port 2), Ant.7 (Port 3) and Ant.8 (Port 4) will transmit/receive the same signal simultaneously.

Ant.5 (Port 1), Ant.6 (Port 2), Ant.7 (Port 3) and Ant.8 (Port 4) can be used as transmitting/receiving antennas.

For Band 3/4

For IEEE 802.11a/n/ac/ax mode <4TX/4RX>:

Ant.1 (Port 4), Ant.2 (Port 3), Ant.3 (Port 2) and Ant.4 (Port 1) will transmit/receive the same signal simultaneously.

Ant.1 (Port 4), Ant.2 (Port 3), Ant.3 (Port 2) and Ant.4 (Port 1) can be used as transmitting/receiving antennas.



1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11a	0.97	0.132	2.066m	1k
802.11ac VHT20	0.959	0.182	1.93m	1k
802.11ac VHT20-BF	0.928	0.325	1.929m	1k
802.11HE20	0.949	0.227	1.473m	1k
802.11HE20,BF	0.914	0.391	1.472m	1k
802.11ac VHT40	0.919	0.367	953.75u	3k
802.11ac VHT40-BF	0.873	0.59	1.018m	1k
802.11HE40	0.881	0.55	757.5u	3k
802.11HE40,BF	0.804	0.947	740.469u	3k
802.11ac VHT80	0.832	0.799	453.75u	3k
802.11ac VHT80-BF	0.758	1.203	428.75u	3k
802.11HE80	0.794	1.002	395u	3k
802.11HE80,BF	0.735	1.337	369.375u	3k
802.11ac VHT160	0.969	0.137	2.24m	1k
802.11ac VHT160-BF	0.912	0.4	3.917m	1k

1.1.4 EUT Operational Condition

EUT Power Type	From power adapter			
Beamforming Function	<input checked="" type="checkbox"/>	With beamforming	<input type="checkbox"/>	Without beamforming
	The product has beamforming function for 802.11n/ac/ax.			
Weather Band	<input checked="" type="checkbox"/>	With 5600~5650MHz	<input type="checkbox"/>	Without 5600~5650MHz
Function	<input type="checkbox"/>	Outdoor P2M	<input checked="" type="checkbox"/>	Indoor P2M
	<input type="checkbox"/>	Fixed P2P	<input type="checkbox"/>	Client
TPC Function	<input checked="" type="checkbox"/>	With TPC	<input type="checkbox"/>	Without TPC
Test Software Version	accessMTool_3_0_0_5			



1.1.5 Table for Multiple Listing

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

Table with 2 columns: Model Name, Description. Rows include RT-AX95U and GT-AX11000. Description: All the models are identical, the different model names served as marketing strategy.

From the above models, model: RT-AX95U was selected as representative model for the test and its data was recorded in this report.

2. There are two EUT, the detail information as following:

Table with 4 columns: EUT, SKU, Brand Name, P/N. Sub-headers: LAN Transformer. Rows include EUT 1 (SKU 1) with SWAPnet and EUT 2 (SKU 2) with Mingtek.

Note: Only SKU1 was selected to test.

1.1.6 Table for Class II Change

This product is an extension of original one reported under Sporton project number: FR812227AB

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

Table with 2 columns: Modifications, Performance Checking. Rows describe changes like model name, beamforming, and 5GHz bands, and their impact on testing.



1.2 Testing Applied Standards

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

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

1.3 Testing Location Information

Testing Location		
<input type="checkbox"/>	HWA YA	ADD : No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL : 886-3-327-3456 FAX : 886-3-318-0055
<input checked="" type="checkbox"/>	JHUBEI	ADD : No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C. TEL : 886-3-656-9065 FAX : 886-3-656-9085

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH01-CB	Paul Chen, Serway Li	20°C / 50%	Jan. 18, 2018~Mar. 07, 2018
Radiated	03CH01-CB	Lance Hsieh, Nyle Chang	20°C / 50%	Jan. 19, 2018~Feb. 06, 2018

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

1.4 Measurement Uncertainty

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

Test Items	Uncertainty	Remark
Radiated Emission (1GHz ~ 18GHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.7 dB	Confidence levels of 95%
Output Power Measurement	1.33 dB	Confidence levels of 95%
Power Density Measurement	1.27 dB	Confidence levels of 95%
Bandwidth Measurement	9.74 x10 ⁻⁸	Confidence levels of 95%



2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
802.11a_Nss1,(6Mbps)_4TX	-
5260MHz	63
5300MHz	60
5320MHz	62
5500MHz	63
5580MHz	61
5700MHz	62
5720MHz Straddle 5.47-5.725GHz	61
5720MHz Straddle 5.725-5.85GHz	61
802.11ac VHT20_Nss1,(MCS0)_4TX	-
5260MHz	62
5300MHz	61
5320MHz	63
5500MHz	64
5580MHz	62
5700MHz	63
5720MHz Straddle 5.47-5.725GHz	61
5720MHz Straddle 5.725-5.85GHz	61
802.11ac VHT40_Nss1,(MCS0)_4TX	-
5270MHz	66
5310MHz	67
5510MHz	69
5550MHz	68
5670MHz	68
5710MHz Straddle 5.47-5.725GHz	69
5710MHz Straddle 5.725-5.85GHz	69
802.11ac VHT80_Nss1,(MCS0)_4TX	-
5290MHz	67
5530MHz	67
5610MHz	66
5690MHz Straddle 5.47-5.725GHz	69
5690MHz Straddle 5.725-5.85GHz	69
802.11ac VHT160_Nss1,(MCS0)_4TX	-
5250MHz Straddle 5.15-5.25GHz	71
5250MHz Straddle 5.25-5.35GHz	71
5570MHz	71



Mode	Power Setting
HE20_Nss1,(MCS0)_4TX	-
5260MHz	62
5300MHz	61
5320MHz	64
5500MHz	63
5580MHz	62
5700MHz	63
5720MHz Straddle 5.47-5.725GHz	60
5720MHz Straddle 5.725-5.85GHz	60
HE40_Nss1,(MCS0)_4TX	-
5270MHz	65
5310MHz	65
5510MHz	67
5550MHz	67
5670MHz	67
5710MHz Straddle 5.47-5.725GHz	69
5710MHz Straddle 5.725-5.85GHz	69
HE80_Nss1,(MCS0)_4TX	-
5290MHz	67
5530MHz	67
5610MHz	67
5690MHz Straddle 5.47-5.725GHz	68
5690MHz Straddle 5.725-5.85GHz	68
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-
5260MHz	59
5300MHz	58
5320MHz	60
5500MHz	60
5580MHz	59
5700MHz	60
5720MHz Straddle 5.47-5.725GHz	58
5720MHz Straddle 5.725-5.85GHz	58
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-
5270MHz	57
5310MHz	57
5510MHz	60
5550MHz	60
5670MHz	59
5710MHz Straddle 5.47-5.725GHz	59
5710MHz Straddle 5.725-5.85GHz	59



Mode	Power Setting
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-
5290MHz	59
5530MHz	59
5610MHz	59
5690MHz Straddle 5.47-5.725GHz	60
5690MHz Straddle 5.725-5.85GHz	60
802.11ac VHT160-BF_Nss1,(MCS0)_4TX	-
5250MHz Straddle 5.15-5.25GHz	75
5250MHz Straddle 5.25-5.35GHz	75
5570MHz	68
HE20,BF_Nss1,(MCS0)_4TX	-
5260MHz	59
5300MHz	58
5320MHz	60
5500MHz	59
5580MHz	58
5700MHz	58
5720MHz Straddle 5.47-5.725GHz	57
5720MHz Straddle 5.725-5.85GHz	57
HE40,BF_Nss1,(MCS0)_4TX	-
5270MHz	57
5310MHz	57
5510MHz	59
5550MHz	58
5670MHz	58
5710MHz Straddle 5.47-5.725GHz	59
5710MHz Straddle 5.725-5.85GHz	59
HE80,BF_Nss1,(MCS0)_4TX	-
5290MHz	58
5530MHz	58
5610MHz	58
5690MHz Straddle 5.47-5.725GHz	60
5690MHz Straddle 5.725-5.85GHz	60
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	-
5260MHz	68
5300MHz	68
5320MHz	70
5500MHz	71
5580MHz	70
5700MHz	71



Mode	Power Setting
5720MHz Straddle 5.47-5.725GHz	67
5720MHz Straddle 5.725-5.85GHz	67
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	-
5270MHz	67
5310MHz	68
5510MHz	70
5550MHz	70
5670MHz	70
5710MHz Straddle 5.47-5.725GHz	68
5710MHz Straddle 5.725-5.85GHz	68
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	-
5290MHz	68
5530MHz	70
5610MHz	70
5690MHz Straddle 5.47-5.725GHz	68
5690MHz Straddle 5.725-5.85GHz	68
802.11ac VHT160-BF_Nss2,(MCS0)_4TX	-
5250MHz Straddle 5.15-5.25GHz	76
5250MHz Straddle 5.25-5.35GHz	76
5570MHz	77
HE20,BF_Nss2,(MCS0)_4TX	-
5260MHz	67
5300MHz	67
5320MHz	68
5500MHz	69
5580MHz	68
5700MHz	69
5720MHz Straddle 5.47-5.725GHz	66
5720MHz Straddle 5.725-5.85GHz	66
HE40,BF_Nss2,(MCS0)_4TX	-
5270MHz	66
5310MHz	66
5510MHz	68
5550MHz	68
5670MHz	69
5710MHz Straddle 5.47-5.725GHz	68
5710MHz Straddle 5.725-5.85GHz	68
HE80,BF_Nss2,(MCS0)_4TX	-
5290MHz	67
5530MHz	68



Mode	Power Setting
5610MHz	69
5690MHz Straddle 5.47-5.725GHz	68
5690MHz Straddle 5.725-5.85GHz	68

Note:

- There are two modes of EUT for 802.11n/ac/ax. One is beamforming mode, and the other is non-beamforming mode. Both modes have been tested and recorded in this test report.
- VHT20/VHT40 covers HT20/HT40, due to same modulation. The power setting for 802.11n HT20 and HT40 are the same or lower than 802.11ac VHT20 and VHT40.

2.2 The Worst Case Measurement Configuration

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

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

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	WLAN 2.4GHz + WLAN 5GHz band 1, 2 + WLAN 5GHz band 3, 4
Refer to Sporton Test Report No.: FA812227-01 for Co-location RF Exposure Evaluation.	

Note: The EUT only be used at Z axis.



2.3 EUT Operation during Test

For non-beamforming mode:

The EUT was programmed to be in continuously transmitting mode.

For beamforming mode:

For Conducted Mode:

The EUT was programmed to be in continuously transmitting mode.

For Radiated Mode:

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

The program was executed as follows:

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



2.4 Accessories

Accessories				
Equipment Name	Brand Name	Model Name	Type	Rating
Adapter 1	DELTA	ADP-65DW B	-	INPUT: 100-240V~50-60Hz, 1.5A OUTPUT: 19V, 3.42A
Adapter 2	DELTA	ADP-65DW Y	-	INPUT: 100-240V~50-60Hz, 1.5A OUTPUT: 19V, 3.42A
Adapter 3	PI	AD2087320	010-1LF	INPUT: 100-240V~50/60Hz, 1.5A OUTPUT: 19V, 3.42A
Other				
RJ-45 cable: Shielded, 1.5m				

Note: Adapter does not affect the radio tests; there is only adapter 3 tested and recorded in this report.

2.5 Support Equipment

For Test Site No: 03CH01-CB

For non-beamforming mode:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	Notebook	DELL	E4300	DoC

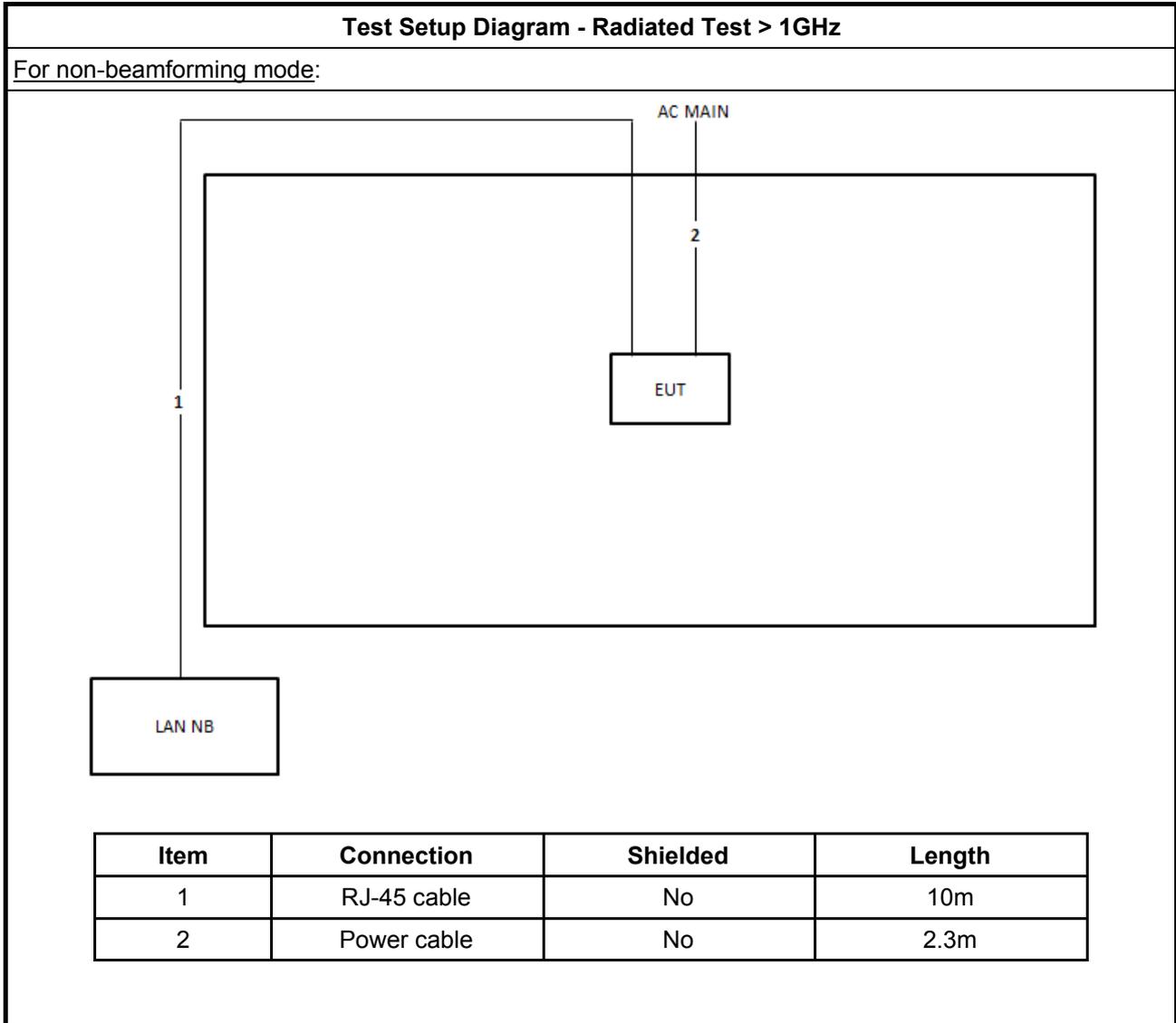
For beamforming mode:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	Notebook	DELL	E4300	DoC
2	Notebook	DELL	E4300	DoC
3	RX Device	AVAGO	43684MCH5	N/A

For Test Site No: TH01-CB

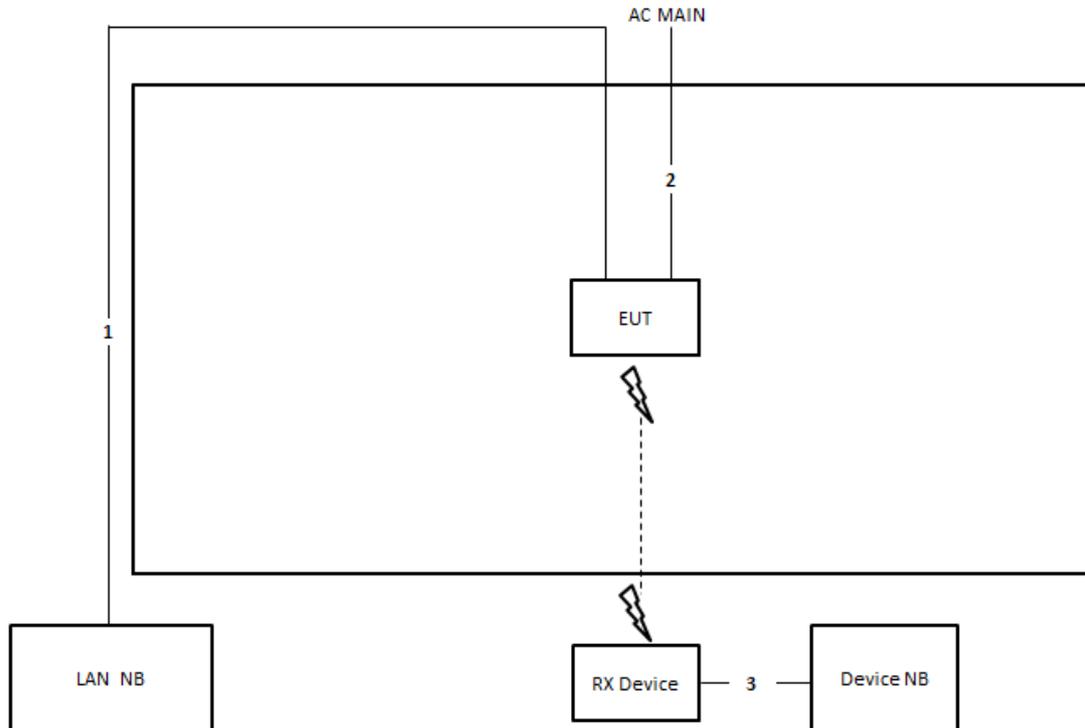
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	Notebook	DELL	E4300	DoC

2.6 Test Setup Diagram



Test Setup Diagram - Radiated Test > 1GHz

For beamforming mode:



Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	Power cable	No	2.3m
3	RJ-45 cable	No	1.5m

3 Transmitter Test Result

3.1 Emission Bandwidth

3.1.1 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.
LE-LAN Devices	
<input type="checkbox"/>	For the band 5.15-5.25 GHz, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.
<input type="checkbox"/>	For the 5.25-5.35 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz
<input type="checkbox"/>	For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz
<input type="checkbox"/>	For the 5.725-5.85 GHz band, 6 dB emission bandwidth \geq 500kHz.

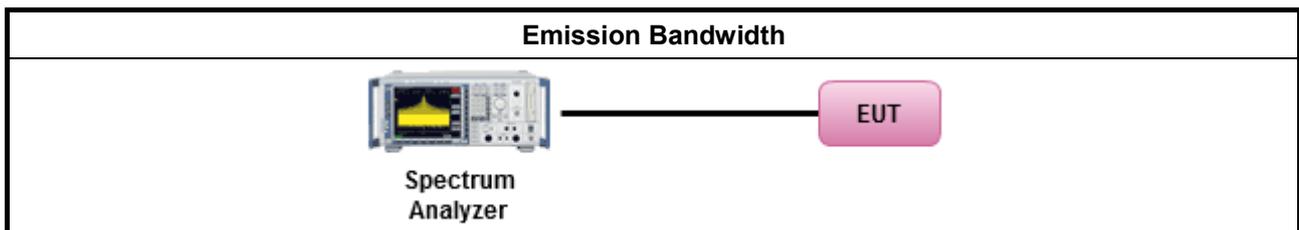
3.1.2 Measuring Instruments

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

3.1.3 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 FCC KDB 789033, clause C for EBW and clause D for OBW measurement.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.
<input type="checkbox"/>	Refer as IC RSS-Gen, clause 4.6 for bandwidth testing.

3.1.4 Test Setup





3.1.5 Test Result of Emission Bandwidth

Refer as Appendix A



3.2 Maximum Conducted Output Power

3.2.1 Maximum Conducted Output Power Limit

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

3.2.2 Measuring Instruments

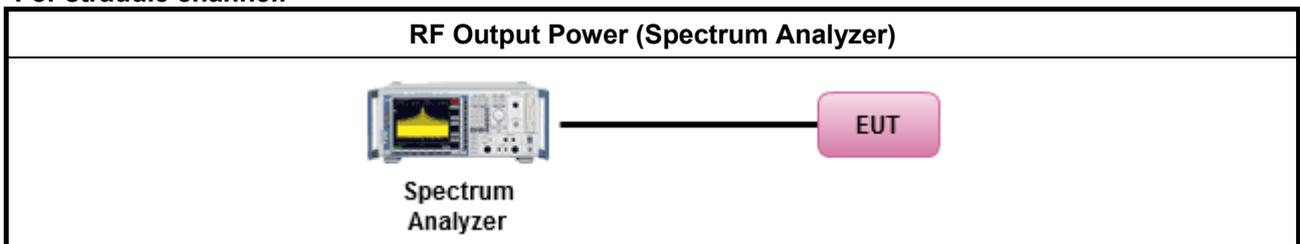
Refer a test equipment and calibration data table in this test report.

3.2.3 Test Procedures

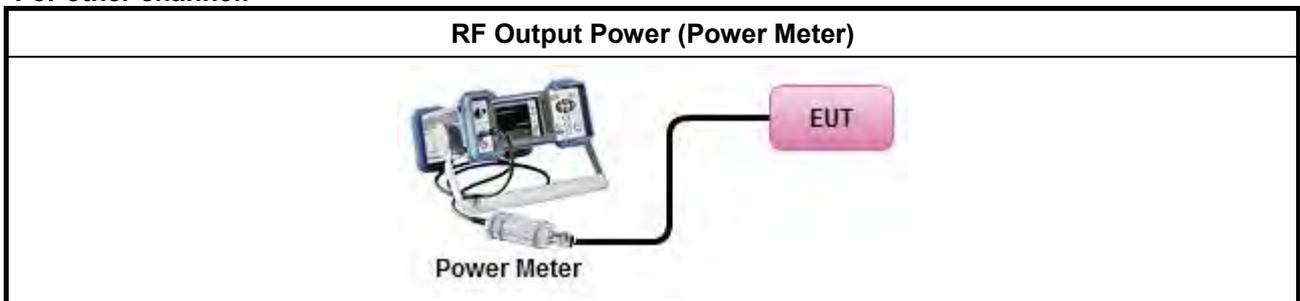
Test Method	
<ul style="list-style-type: none"> Maximum Conducted Output Power 	
Average over on/off periods with duty factor	
<input checked="" type="checkbox"/>	Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging) for straddle channel.
<input type="checkbox"/>	Refer as FCC KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
Wideband RF power meter and average over on/off periods with duty factor	
<input checked="" type="checkbox"/>	Refer as FCC KDB 789033, clause E Method PM-G (using an RF average power meter) for other channel.
<ul style="list-style-type: none"> For conducted measurement. 	
<ul style="list-style-type: none"> If the EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them. 	
<ul style="list-style-type: none"> If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$ 	

3.2.4 Test Setup

For straddle channel:



For other channel:



3.2.5 Test Result of Maximum Conducted Output Power

Refer as Appendix B



3.3 Peak Power Spectral Density

3.3.1 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 type="checkbox"/>	For the 5.15-5.25 GHz band, the peak power spectral density (PPSD) ≤ 4 dBm/MHz and the e.i.r.p. peak power spectral density (PPSD) ≤ 10 dBm/MHz.
<input type="checkbox"/>	For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz 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 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 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>	



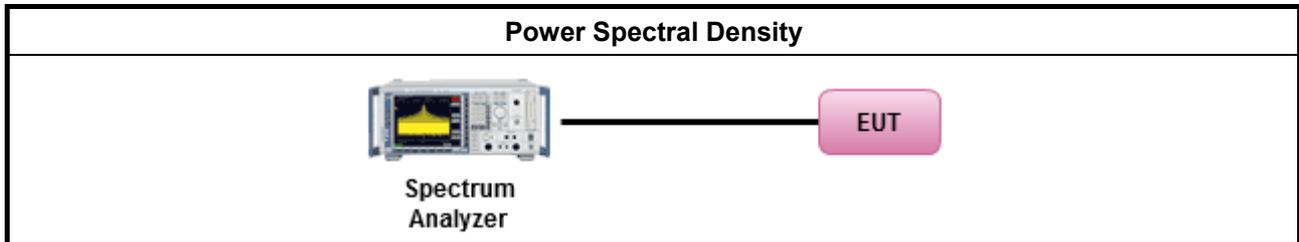
3.3.2 Measuring Instruments

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"> ▪ Peak power spectral density procedures that the same method as used to determine the conducted output power shall be used to determine the peak power spectral density and use the peak search function on the spectrum analyzer to find the peak of the spectrum. For the peak power spectral density shall be measured using below options: 	
	<input type="checkbox"/> Refer as FCC KDB 789033, F)5) power spectral density can be measured using resolution bandwidths < 1 MHz provided that the results are integrated over 1 MHz bandwidth [duty cycle ≥ 98% or external video / power trigger]
	<input checked="" type="checkbox"/> Refer as FCC KDB 789033, clause E Method SA-1 (spectral trace averaging).
	<input type="checkbox"/> Refer as FCC KDB 789033, clause E Method SA-1 Alt. (RMS detection with slow sweep speed) duty cycle < 98% and average over on/off periods with duty factor
	<input checked="" type="checkbox"/> Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging).
	<input type="checkbox"/> Refer as FCC KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
<ul style="list-style-type: none"> ▪ For conducted measurement. 	
	<ul style="list-style-type: none"> ▪ If the EUT supports multiple transmit chains using options given below:
	<input checked="" type="checkbox"/> Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.
	<input type="checkbox"/> Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits,
	<input type="checkbox"/> Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.
	<ul style="list-style-type: none"> ▪ If multiple transmit chains, EIRP PPSD calculation could be following as methods: $PPSD_{total} = PPSD_1 + PPSD_2 + \dots + PPSD_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = PPSD_{total} + DG$

3.3.4 Test Setup



3.3.5 Test Result of Peak Power Spectral Density

Refer as Appendix C



3.4 Unwanted Emissions

3.4.1 Transmitter Radiated Unwanted Emissions Limit

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

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

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

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

Un-restricted band emissions above 1GHz Limit	
Operating Band	Limit
<input checked="" type="checkbox"/> 5.15 - 5.25 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
<input checked="" type="checkbox"/> 5.25 - 5.35 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
<input checked="" type="checkbox"/> 5.47 - 5.725 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
<input checked="" type="checkbox"/> 5.725 - 5.85 GHz	Follow 15.407(b)(4)(ii), the emission limits in § 15.247(d), 30dBc in any 100 kHz bandwidth outside the operating frequency band.

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



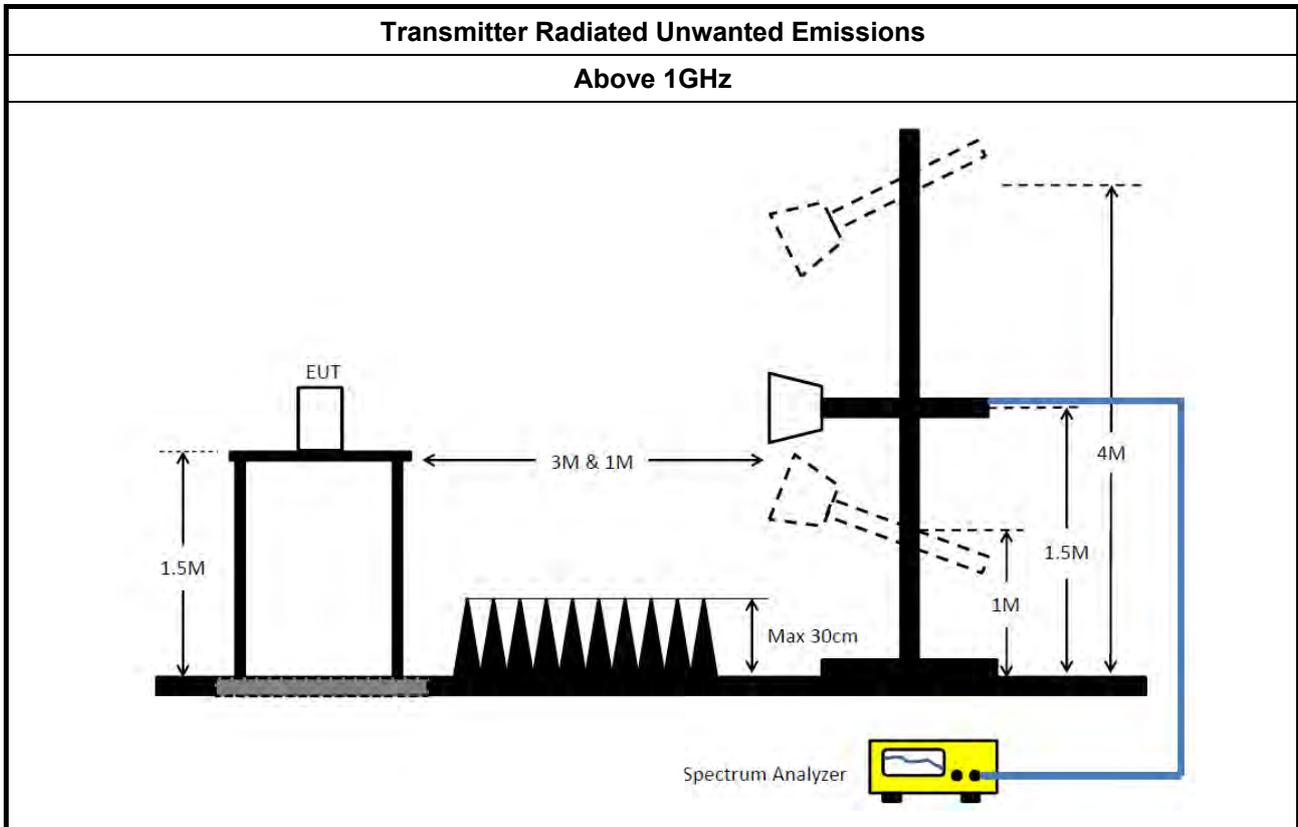
3.4.2 Measuring Instruments

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"> 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 FCC KDB 789033, clause H)2) for unwanted emissions into non-restricted bands. Refer as FCC KDB 789033, clause H)1) for unwanted emissions into restricted bands. <ul style="list-style-type: none"> <input type="checkbox"/> Refer as FCC KDB 789033, H)6) Method AD (Trace Averaging). <input checked="" type="checkbox"/> Refer as FCC KDB 789033, H)6) Method VB (Reduced VBW). <input type="checkbox"/> Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW \geq 1/T, where T is pulse time. <input type="checkbox"/> Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions. <input checked="" type="checkbox"/> Refer as FCC KDB 789033, clause H)5) measurement procedure peak limit. <input type="checkbox"/> Refer as ANSI C63.10, clause 4.2.3.2.2 measurement procedure peak limit.
	<ul style="list-style-type: none"> For radiated measurement. <ul style="list-style-type: none"> Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m. Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m. Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.
	<ul style="list-style-type: none"> The any unwanted emissions level shall not exceed the fundamental emission level.
	<ul style="list-style-type: none"> All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

3.4.4 Test Setup



3.4.5 Test Result of Transmitter Unwanted Emissions

Refer as Appendix D



4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 20, 2017	Nov. 19, 2018	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 05, 2017	Jul. 04, 2018	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 09, 2018	Jan. 08, 2019	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-H G	1864479	18GHz ~ 40GHz	Jul. 10, 2017	Jul. 09, 2018	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Nov. 23, 2017	Nov. 22, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz ~ 40 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 21, 2017	Dec. 20, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz ~ 26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz ~ 26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz ~ 26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz ~ 26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz ~ 26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 20, 2017	Nov. 19, 2018	Conducted (TH01-CB)

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



Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ac VHT160_Nss1,(MCS0)_4TX	81.6M	75.482M	75M5D1D	80.4M	75.322M
802.11ac VHT160-BF_Nss1,(MCS0)_4TX	94.96M	75.482M	75M5D1D	80.48M	75.322M
802.11ac VHT160-BF_Nss2,(MCS0)_4TX	115.6M	75.562M	75M6D1D	80.24M	75.402M
5.25-5.35GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	21.6M	16.617M	16M6D1D	21.275M	16.492M
802.11ac VHT20_Nss1,(MCS0)_4TX	21.8M	17.791M	17M8D1D	21.425M	17.716M
802.11ac VHT40_Nss1,(MCS0)_4TX	41.55M	36.65M	36M6D1D	40.8M	36.5M
802.11ac VHT80_Nss1,(MCS0)_4TX	82.2M	77.161M	77M2D1D	81.4M	76.862M
802.11ac VHT160_Nss1,(MCS0)_4TX	82M	75.722M	75M7D1D	80.4M	75.562M
HE20_Nss1,(MCS0)_4TX	21.8M	19.015M	19M0D1D	21.125M	18.941M
HE40_Nss1,(MCS0)_4TX	40.15M	37.631M	37M6D1D	39.85M	37.381M
HE80_Nss1,(MCS0)_4TX	82.1M	76.962M	77M0D1D	81.7M	76.862M
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	21.8M	17.791M	17M8D1D	21.425M	17.716M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	40.35M	36.282M	36M3D1D	39.55M	36.132M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	82M	75.762M	75M8D1D	81.2M	75.562M
802.11ac VHT160-BF_Nss1,(MCS0)_4TX	82.4M	75.802M	75M8D1D	80.48M	75.482M
HE20_BF_Nss1,(MCS0)_4TX	21.775M	18.991M	19M0D1D	21.45M	18.941M
HE40_BF_Nss1,(MCS0)_4TX	40.2M	37.581M	37M6D1D	39.85M	37.431M
HE80_BF_Nss1,(MCS0)_4TX	82.2M	77.161M	77M2D1D	81.7M	76.762M
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	21.925M	17.925M	17M9D1D	21.475M	17.775M
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	41.4M	36.7M	36M7D1D	40.75M	36.55M
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	82.3M	75.9M	75M9D1D	81.7M	75.8M
802.11ac VHT160-BF_Nss2,(MCS0)_4TX	82.32M	75.722M	75M7D1D	80.4M	75.482M
HE20_BF_Nss2,(MCS0)_4TX	21.85M	19.1M	19M1D1D	21.6M	18.975M
HE40_BF_Nss2,(MCS0)_4TX	41.4M	38M	38M0D1D	41.1M	37.7M
HE80_BF_Nss2,(MCS0)_4TX	82.4M	77.3M	77M3D1D	81.6M	77.1M
5.47-5.725GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	21.7M	16.592M	16M6D1D	15.585M	13.328M
802.11ac VHT20_Nss1,(MCS0)_4TX	21.775M	17.816M	17M8D1D	15.735M	13.943M
802.11ac VHT40_Nss1,(MCS0)_4TX	40.25M	36.332M	36M3D1D	34.895M	33.023M
802.11ac VHT80_Nss1,(MCS0)_4TX	82.1M	77.161M	77M2D1D	75.75M	72.339M
802.11ac VHT160_Nss1,(MCS0)_4TX	164M	154.323M	154MD1D	162.6M	153.723M
HE20_Nss1,(MCS0)_4TX	21.875M	19.015M	19M0D1D	15.675M	14.528M
HE40_Nss1,(MCS0)_4TX	40.4M	37.681M	37M7D1D	34.965M	33.688M
HE80_Nss1,(MCS0)_4TX	82.1M	77.261M	77M3D1D	75.9M	73.163M
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	21.925M	17.791M	17M8D1D	15.78M	13.928M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	40.35M	36.332M	36M3D1D	34.895M	33.023M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	82.1M	75.762M	75M8D1D	75.675M	72.564M
802.11ac VHT160-BF_Nss1,(MCS0)_4TX	163.8M	153.923M	154MD1D	162.8M	153.323M
HE20_BF_Nss1,(MCS0)_4TX	21.825M	19.015M	19M0D1D	15.75M	14.513M
HE40_BF_Nss1,(MCS0)_4TX	40.2M	37.631M	37M6D1D	35.035M	33.653M
HE80_BF_Nss1,(MCS0)_4TX	82.1M	77.061M	77M1D1D	75.9M	73.163M
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	21.875M	17.925M	17M9D1D	15.75M	13.928M



Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	41.55M	36.65M	36M6D1D	34.965M	32.989M
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	82.3M	75.9M	75M9D1D	75.675M	72.489M
802.11ac VHT160-BF_Nss2,(MCS0)_4TX	242M	154.2M	154MD1D	164.8M	153.8M
HE20,BF_Nss2,(MCS0)_4TX	21.825M	19.075M	19M1D1D	15.66M	14.513M
HE40,BF_Nss2,(MCS0)_4TX	41.45M	37.95M	37M9D1D	34.965M	33.653M
HE80,BF_Nss2,(MCS0)_4TX	82.6M	77.3M	77M3D1D	75.975M	73.088M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	3.2M	3.858M	3M86D1D	3.1M	3.758M
802.11ac VHT20_Nss1,(MCS0)_4TX	3.72M	4.178M	4M18D1D	3.7M	4.098M
802.11ac VHT40_Nss1,(MCS0)_4TX	3.2M	3.478M	3M48D1D	3.08M	3.418M
802.11ac VHT80_Nss1,(MCS0)_4TX	3.08M	3.558M	3M56D1D	3.02M	3.438M
HE20_Nss1,(MCS0)_4TX	4.48M	4.498M	4M50D1D	4.38M	4.458M
HE40_Nss1,(MCS0)_4TX	3.84M	3.978M	3M98D1D	3.74M	3.958M
HE80_Nss1,(MCS0)_4TX	3.76M	4.018M	4M02D1D	3.64M	3.978M
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	3.8M	4.238M	4M24D1D	3.66M	4.098M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	3.18M	3.458M	3M46D1D	3.06M	3.418M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	3.08M	3.598M	3M60D1D	3.06M	3.438M
HE20,BF_Nss1,(MCS0)_4TX	4.56M	4.478M	4M48D1D	4.38M	4.458M
HE40,BF_Nss1,(MCS0)_4TX	3.82M	3.978M	3M98D1D	3.62M	3.978M
HE80,BF_Nss1,(MCS0)_4TX	3.76M	4.018M	4M02D1D	3.34M	3.978M
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	3.72M	4.198M	4M20D1D	3.7M	4.118M
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	3.18M	3.438M	3M44D1D	3.08M	3.398M
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	3.08M	3.578M	3M58D1D	3.06M	3.398M
HE20,BF_Nss2,(MCS0)_4TX	4.44M	4.478M	4M48D1D	4.34M	4.458M
HE40,BF_Nss2,(MCS0)_4TX	3.8M	3.998M	4M00D1D	3.7M	3.958M
HE80,BF_Nss2,(MCS0)_4TX	3.76M	4.018M	4M02D1D	3.12M	3.978M

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



Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	21.325M	16.517M	21.475M	16.592M	21.55M	16.567M	21.55M	16.617M
5300MHz	Pass	Inf	21.525M	16.617M	21.6M	16.567M	21.3M	16.492M	21.275M	16.567M
5320MHz	Pass	Inf	21.6M	16.517M	21.55M	16.567M	21.375M	16.542M	21.275M	16.542M
5500MHz	Pass	Inf	21.5M	16.517M	21.45M	16.542M	21.425M	16.542M	21.375M	16.542M
5580MHz	Pass	Inf	21.325M	16.567M	21.525M	16.592M	21.35M	16.592M	21.275M	16.567M
5700MHz	Pass	Inf	21.7M	16.592M	21.6M	16.542M	21.425M	16.592M	21.225M	16.567M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.675M	13.328M	15.585M	13.358M	15.6M	13.328M	15.6M	13.343M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.14M	3.758M	3.1M	3.858M	3.2M	3.818M	3.1M	3.838M
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	21.8M	17.791M	21.575M	17.716M	21.55M	17.766M	21.725M	17.741M
5300MHz	Pass	Inf	21.8M	17.791M	21.575M	17.741M	21.425M	17.741M	21.7M	17.741M
5320MHz	Pass	Inf	21.6M	17.766M	21.575M	17.716M	21.475M	17.741M	21.675M	17.716M
5500MHz	Pass	Inf	21.725M	17.716M	21.575M	17.741M	21.425M	17.766M	21.775M	17.741M
5580MHz	Pass	Inf	21.75M	17.741M	21.625M	17.766M	21.5M	17.741M	21.7M	17.716M
5700MHz	Pass	Inf	21.775M	17.791M	21.5M	17.716M	21.425M	17.816M	21.7M	17.741M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.81M	13.958M	15.81M	13.943M	15.735M	13.943M	15.84M	13.958M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.72M	4.138M	3.72M	4.098M	3.7M	4.178M	3.72M	4.138M
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5270MHz	Pass	Inf	41.55M	36.65M	41.2M	36.55M	41.2M	36.6M	40.8M	36.65M
5310MHz	Pass	Inf	41.45M	36.55M	41.05M	36.55M	41.2M	36.5M	40.9M	36.55M
5510MHz	Pass	Inf	40.25M	36.182M	39.85M	36.232M	40.05M	36.232M	39.9M	36.182M
5550MHz	Pass	Inf	40.1M	36.232M	39.45M	36.182M	40.05M	36.232M	39.8M	36.282M
5670MHz	Pass	Inf	40.25M	36.232M	39.85M	36.132M	40.05M	36.232M	39.85M	36.332M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	34.895M	33.093M	35.07M	33.058M	34.895M	33.023M	35.21M	33.058M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.1M	3.458M	3.08M	3.418M	3.2M	3.478M	3.1M	3.438M
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5290MHz	Pass	Inf	82.2M	77.161M	81.8M	76.862M	82.1M	76.962M	81.4M	77.061M
5530MHz	Pass	Inf	82.1M	77.161M	82.1M	76.762M	81.8M	77.161M	82M	77.061M
5610MHz	Pass	Inf	81.9M	76.962M	82M	76.962M	81.8M	77.061M	81.6M	76.962M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	76.05M	72.339M	75.825M	72.714M	75.75M	72.564M	75.9M	72.489M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.08M	3.438M	3.02M	3.498M	3.06M	3.558M	3.08M	3.498M
802.11ac VHT160_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	Inf	80.4M	75.402M	80.64M	75.482M	81.6M	75.322M	80.48M	75.322M
5250MHz Straddle 5.25-5.35GHz	Pass	Inf	81.12M	75.722M	82M	75.722M	80.48M	75.562M	80.4M	75.642M
5570MHz	Pass	Inf	162.6M	153.723M	164M	154.123M	162.8M	153.923M	162.8M	154.323M
HE20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	21.625M	18.991M	21.475M	18.966M	21.625M	18.941M	21.55M	18.991M
5300MHz	Pass	Inf	21.65M	19.015M	21.6M	18.941M	21.675M	18.966M	21.625M	18.966M
5320MHz	Pass	Inf	21.6M	18.966M	21.125M	18.966M	21.55M	18.941M	21.8M	18.966M
5500MHz	Pass	Inf	21.775M	18.991M	21.6M	18.991M	21.7M	18.966M	21.725M	18.991M
5580MHz	Pass	Inf	21.725M	19.015M	21.575M	18.941M	21.75M	18.966M	21.875M	18.941M
5700MHz	Pass	Inf	21.55M	18.991M	21.6M	18.991M	21.8M	18.966M	21.7M	18.941M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.78M	14.528M	15.84M	14.528M	15.675M	14.543M	15.825M	14.528M



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)
5720MHz Straddle 5.725-5.85GHz	Pass	500k	4.48M	4.498M	4.38M	4.458M	4.4M	4.498M	4.42M	4.478M
HE40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5270MHz	Pass	Inf	40M	37.581M	39.85M	37.581M	40.1M	37.481M	40.15M	37.631M
5310MHz	Pass	Inf	40M	37.581M	39.9M	37.531M	40M	37.481M	40M	37.381M
5510MHz	Pass	Inf	40.1M	37.531M	39.85M	37.431M	40M	37.581M	40.15M	37.581M
5550MHz	Pass	Inf	39.85M	37.631M	39.8M	37.531M	40.4M	37.581M	40.1M	37.681M
5670MHz	Pass	Inf	39.8M	37.581M	39.8M	37.631M	40.05M	37.531M	40.05M	37.581M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	35.07M	33.688M	35.175M	33.688M	34.965M	33.758M	35.035M	33.688M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.76M	3.978M	3.74M	3.958M	3.84M	3.978M	3.74M	3.978M
HE80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5290MHz	Pass	Inf	82.1M	76.862M	82.1M	76.862M	81.8M	76.862M	81.7M	76.962M
5530MHz	Pass	Inf	81.9M	76.962M	82.1M	76.762M	81.9M	77.161M	81.9M	77.261M
5610MHz	Pass	Inf	82M	76.862M	81.9M	76.862M	82M	77.061M	81.9M	76.862M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	75.9M	73.238M	76.35M	73.163M	75.9M	73.313M	76.05M	73.388M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.64M	3.978M	3.76M	3.978M	3.64M	3.998M	3.72M	4.018M
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	21.75M	17.791M	21.5M	17.716M	21.525M	17.791M	21.75M	17.766M
5300MHz	Pass	Inf	21.675M	17.766M	21.625M	17.716M	21.425M	17.741M	21.725M	17.741M
5320MHz	Pass	Inf	21.8M	17.741M	21.45M	17.766M	21.5M	17.766M	21.75M	17.741M
5500MHz	Pass	Inf	21.925M	17.716M	21.525M	17.716M	21.55M	17.766M	21.65M	17.741M
5580MHz	Pass	Inf	21.725M	17.766M	21.575M	17.741M	21.425M	17.741M	21.6M	17.716M
5700MHz	Pass	Inf	21.725M	17.766M	21.675M	17.741M	21.425M	17.791M	21.725M	17.791M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.81M	13.958M	15.78M	13.943M	15.81M	13.928M	15.855M	13.928M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.7M	4.198M	3.66M	4.098M	3.8M	4.238M	3.74M	4.238M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5270MHz	Pass	Inf	40.35M	36.282M	39.85M	36.182M	40.05M	36.182M	39.85M	36.282M
5310MHz	Pass	Inf	40.25M	36.182M	39.55M	36.132M	39.8M	36.182M	39.85M	36.232M
5510MHz	Pass	Inf	40.2M	36.282M	39.85M	36.282M	39.9M	36.282M	39.85M	36.232M
5550MHz	Pass	Inf	40.25M	36.332M	39.8M	36.232M	40.25M	36.332M	39.95M	36.332M
5670MHz	Pass	Inf	40.35M	36.232M	39.9M	36.332M	40.15M	36.182M	39.8M	36.232M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	34.895M	33.023M	35.07M	33.093M	34.965M	33.058M	35.175M	33.058M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.06M	3.418M	3.18M	3.458M	3.08M	3.438M	3.08M	3.418M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5290MHz	Pass	Inf	82M	75.762M	81.2M	75.662M	81.4M	75.662M	81.8M	75.562M
5530MHz	Pass	Inf	82.1M	75.762M	81.2M	75.662M	81.2M	75.762M	82.1M	75.762M
5610MHz	Pass	Inf	82M	75.762M	81.2M	75.562M	81.5M	75.762M	81.7M	75.762M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	76.05M	72.639M	75.75M	72.714M	75.675M	72.564M	76.125M	72.564M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.06M	3.438M	3.06M	3.478M	3.08M	3.558M	3.08M	3.598M
802.11ac VHT160-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	Inf	80.48M	75.402M	80.64M	75.482M	81.12M	75.322M	94.96M	75.482M
5250MHz Straddle 5.25-5.35GHz	Pass	Inf	81.12M	75.562M	82.4M	75.722M	80.48M	75.802M	80.48M	75.482M
5570MHz	Pass	Inf	162.8M	153.923M	163.8M	153.323M	163.2M	153.923M	162.8M	153.923M
HE20,BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	21.675M	18.991M	21.45M	18.941M	21.6M	18.966M	21.775M	18.991M

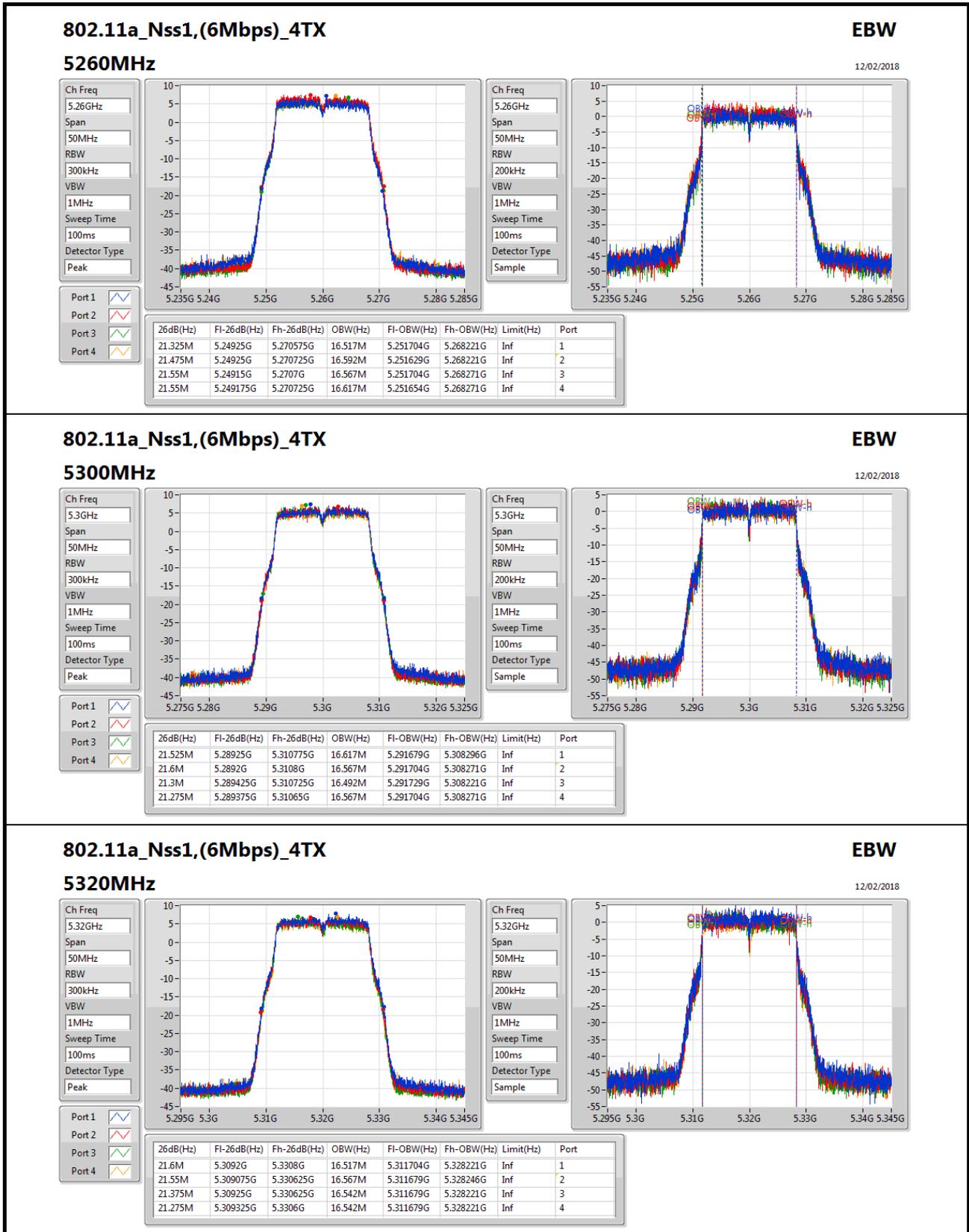


Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
5300MHz	Pass	Inf	21.675M	18.991M	21.7M	18.966M	21.575M	18.941M	21.675M	18.991M
5320MHz	Pass	Inf	21.725M	18.966M	21.675M	18.941M	21.45M	18.941M	21.725M	18.941M
5500MHz	Pass	Inf	21.575M	18.941M	21.5M	18.966M	21.7M	18.966M	21.4M	18.966M
5580MHz	Pass	Inf	21.6M	19.015M	21.675M	18.941M	21.7M	18.941M	21.825M	18.966M
5700MHz	Pass	Inf	21.55M	18.966M	21.55M	18.966M	21.7M	18.941M	21.65M	18.966M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.795M	14.513M	15.81M	14.528M	15.75M	14.543M	15.795M	14.528M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	4.56M	4.478M	4.4M	4.458M	4.38M	4.458M	4.44M	4.478M
HE40,BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5270MHz	Pass	Inf	40.05M	37.531M	39.9M	37.531M	40.05M	37.581M	40.2M	37.531M
5310MHz	Pass	Inf	40.05M	37.481M	39.85M	37.581M	40M	37.481M	40.05M	37.431M
5510MHz	Pass	Inf	40.15M	37.581M	39.85M	37.581M	40.1M	37.481M	40.05M	37.531M
5550MHz	Pass	Inf	39.9M	37.531M	39.9M	37.581M	40M	37.631M	40.1M	37.631M
5670MHz	Pass	Inf	40.05M	37.581M	39.8M	37.631M	40.05M	37.631M	40.2M	37.531M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	35.035M	33.688M	35.035M	33.793M	35.14M	33.653M	35.035M	33.688M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.78M	3.978M	3.82M	3.978M	3.8M	3.978M	3.62M	3.978M
HE80,BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5290MHz	Pass	Inf	82.2M	76.862M	82.2M	77.161M	81.7M	76.962M	81.8M	76.762M
5530MHz	Pass	Inf	82.1M	77.061M	82M	76.762M	82M	76.962M	81.7M	77.061M
5610MHz	Pass	Inf	82M	76.962M	82.1M	77.061M	81.7M	76.862M	81.7M	77.061M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	75.9M	73.388M	76.2M	73.163M	75.9M	73.313M	75.975M	73.313M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.34M	4.018M	3.68M	3.998M	3.64M	3.998M	3.76M	3.978M
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	21.775M	17.9M	21.575M	17.925M	21.6M	17.925M	21.825M	17.875M
5300MHz	Pass	Inf	21.925M	17.925M	21.6M	17.925M	21.5M	17.825M	21.825M	17.925M
5320MHz	Pass	Inf	21.8M	17.875M	21.65M	17.925M	21.475M	17.9M	21.7M	17.775M
5500MHz	Pass	Inf	21.85M	17.85M	21.55M	17.875M	21.45M	17.9M	21.7M	17.875M
5580MHz	Pass	Inf	21.85M	17.85M	21.65M	17.85M	21.45M	17.85M	21.8M	17.825M
5700MHz	Pass	Inf	21.875M	17.875M	21.55M	17.925M	21.575M	17.9M	21.725M	17.875M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.765M	13.973M	15.75M	13.943M	15.795M	13.928M	15.87M	13.928M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.7M	4.118M	3.72M	4.138M	3.72M	4.138M	3.72M	4.198M
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5270MHz	Pass	Inf	41.25M	36.55M	41.3M	36.55M	41.2M	36.55M	41M	36.7M
5310MHz	Pass	Inf	41.4M	36.6M	41.1M	36.55M	41.35M	36.55M	40.75M	36.6M
5510MHz	Pass	Inf	41.55M	36.5M	41.25M	36.65M	41.3M	36.5M	40.95M	36.6M
5550MHz	Pass	Inf	41.45M	36.6M	41.4M	36.5M	41.35M	36.6M	41M	36.6M
5670MHz	Pass	Inf	41.55M	36.6M	41.15M	36.55M	41.1M	36.45M	40.95M	36.65M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	34.965M	32.989M	35.105M	33.093M	34.965M	33.023M	35.21M	33.163M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.1M	3.398M	3.08M	3.418M	3.18M	3.418M	3.08M	3.438M
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5290MHz	Pass	Inf	82.3M	75.9M	81.7M	75.8M	81.8M	75.9M	82.1M	75.8M
5530MHz	Pass	Inf	82.3M	75.9M	81.7M	75.8M	81.6M	75.8M	82M	75.9M
5610MHz	Pass	Inf	82.1M	75.7M	81.7M	75.9M	81.6M	75.8M	82M	75.7M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	76.2M	72.489M	75.975M	72.564M	75.675M	72.564M	76.125M	72.564M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.08M	3.398M	3.08M	3.498M	3.06M	3.578M	3.08M	3.558M



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 VHT160-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	Inf	80.24M	75.402M	80.64M	75.402M	81.28M	75.562M	115.6M	75.562M
5250MHz Straddle 5.25-5.35GHz	Pass	Inf	80.4M	75.722M	82.32M	75.482M	80.56M	75.642M	80.56M	75.722M
5570MHz	Pass	Inf	164.8M	154.2M	166.2M	154.2M	165M	153.8M	242M	154.2M
HE20,BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	21.725M	19.025M	21.625M	19M	21.85M	19.05M	21.75M	19.075M
5300MHz	Pass	Inf	21.7M	19.1M	21.775M	19M	21.75M	18.975M	21.7M	18.975M
5320MHz	Pass	Inf	21.725M	19M	21.6M	19.025M	21.675M	19M	21.725M	19.025M
5500MHz	Pass	Inf	21.825M	19.05M	21.575M	19.075M	21.725M	19.05M	21.725M	19.025M
5580MHz	Pass	Inf	21.75M	19.025M	21.625M	19.075M	21.55M	19.025M	21.8M	19.05M
5700MHz	Pass	Inf	21.7M	19.05M	21.7M	19.075M	21.725M	19.05M	21.775M	19.025M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.75M	14.513M	15.84M	14.528M	15.66M	14.528M	15.825M	14.543M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	4.44M	4.478M	4.4M	4.458M	4.34M	4.458M	4.4M	4.458M
HE40,BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5270MHz	Pass	Inf	41.15M	37.85M	41.2M	37.95M	41.4M	37.9M	41.4M	38M
5310MHz	Pass	Inf	41.25M	37.75M	41.1M	37.7M	41.35M	37.75M	41.2M	37.8M
5510MHz	Pass	Inf	41.25M	37.85M	41.25M	37.8M	41.45M	37.85M	41.3M	37.9M
5550MHz	Pass	Inf	41.2M	37.9M	41.3M	37.85M	41.35M	37.95M	41.45M	37.9M
5670MHz	Pass	Inf	40.9M	36.55M	40.95M	36.65M	40.9M	36.5M	40.9M	36.45M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	35.14M	33.723M	35.245M	33.793M	34.965M	33.653M	35.07M	33.688M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.7M	3.998M	3.72M	3.958M	3.8M	3.978M	3.72M	3.958M
HE80,BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5290MHz	Pass	Inf	82.3M	77.2M	82.4M	77.1M	82M	77.3M	81.6M	77.2M
5530MHz	Pass	Inf	82.4M	77.3M	82.6M	77.2M	82.3M	77M	82.2M	76.9M
5610MHz	Pass	Inf	82.4M	77M	82.6M	77.1M	82.3M	77.1M	82.1M	77.2M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	75.975M	73.388M	76.275M	73.238M	75.975M	73.238M	75.975M	73.088M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.12M	3.998M	3.7M	3.978M	3.64M	4.018M	3.76M	3.998M

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

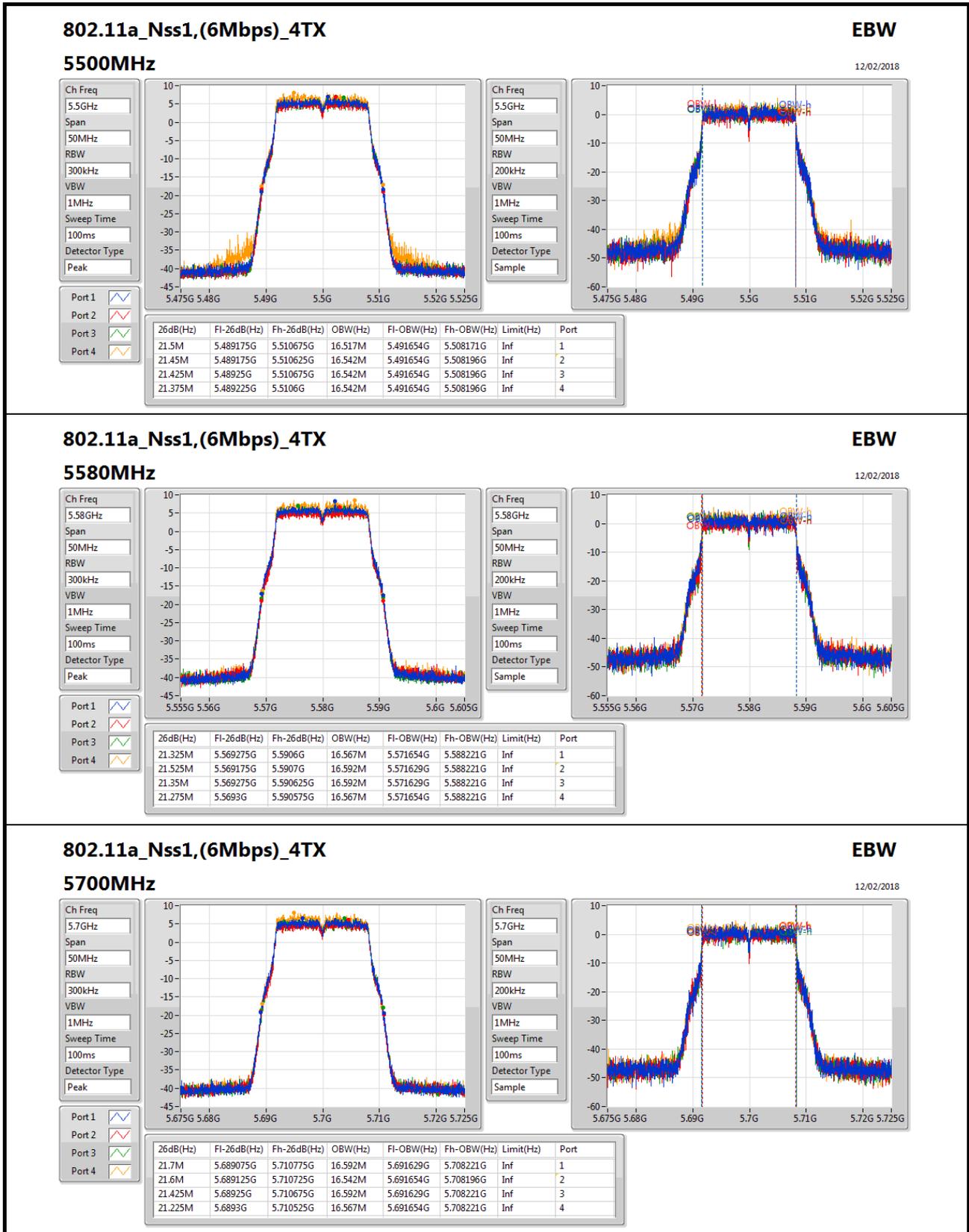
12/02/2018

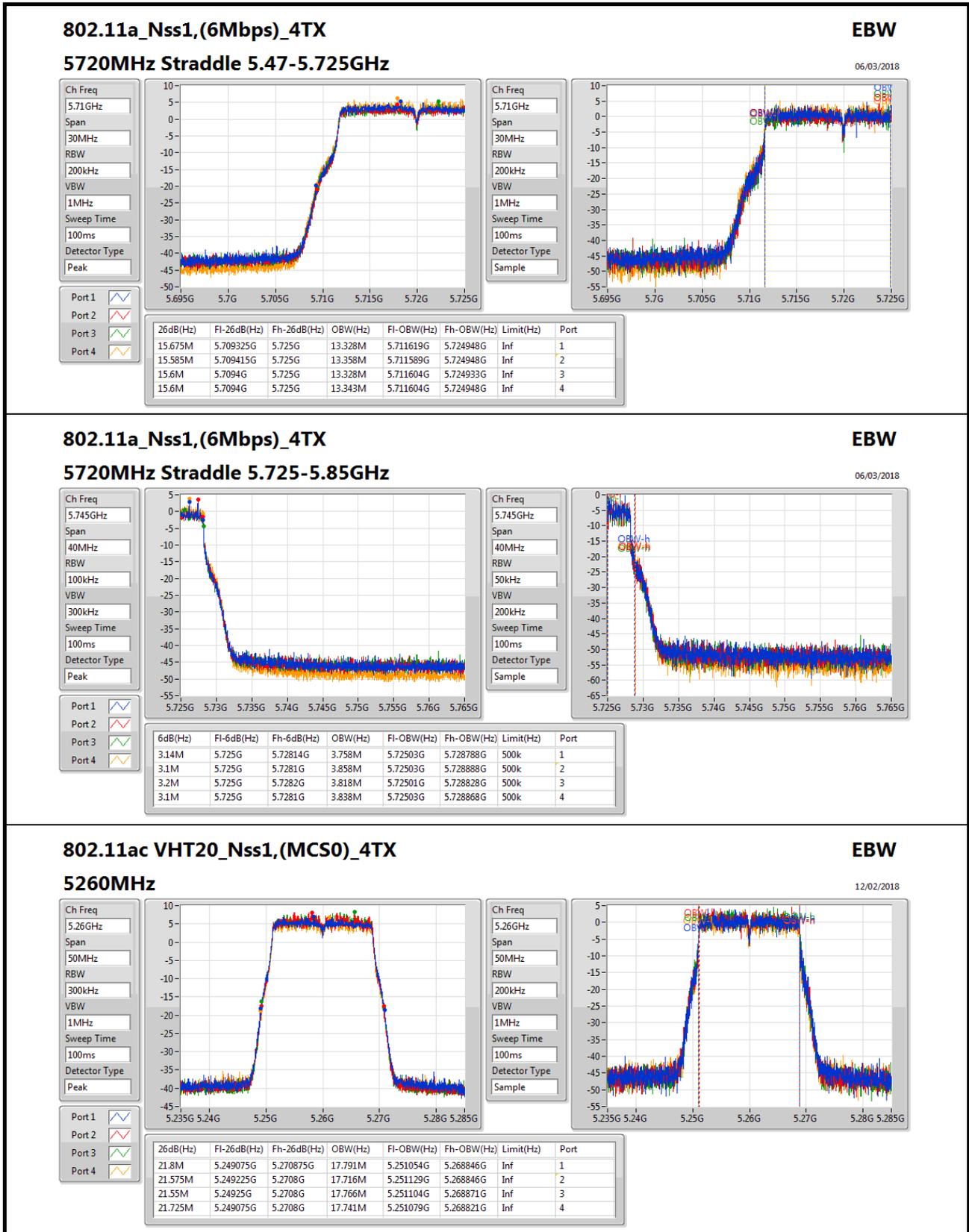
5320MHz

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
21.6M	5.3092G	5.3308G	16.517M	5.311704G	5.328221G	Inf	1
21.55M	5.309075G	5.330625G	16.567M	5.311679G	5.328246G	Inf	2
21.375M	5.30925G	5.330625G	16.542M	5.311679G	5.328221G	Inf	3
21.275M	5.309325G	5.3306G	16.542M	5.311679G	5.328221G	Inf	4



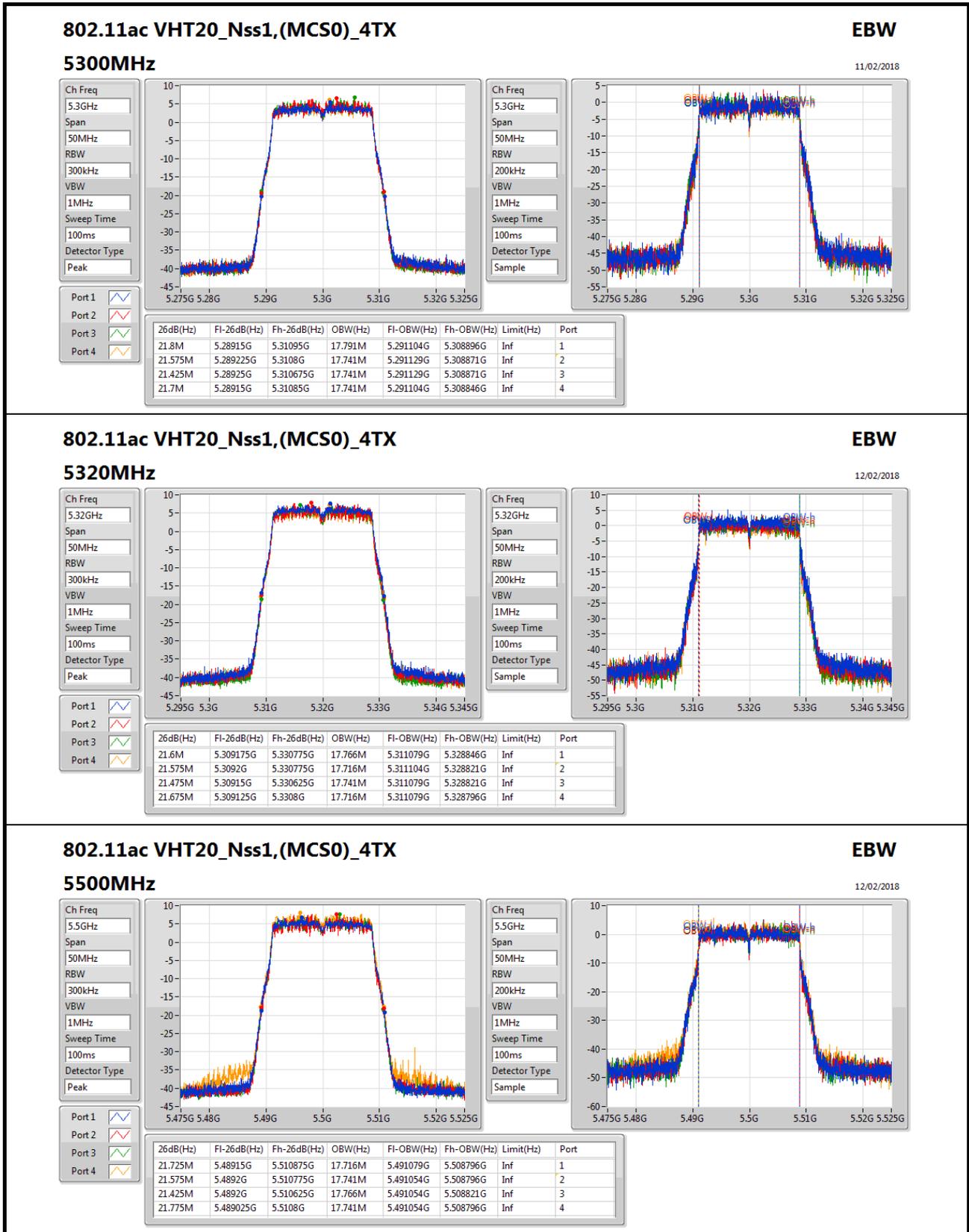

802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5260MHz
12/02/2018

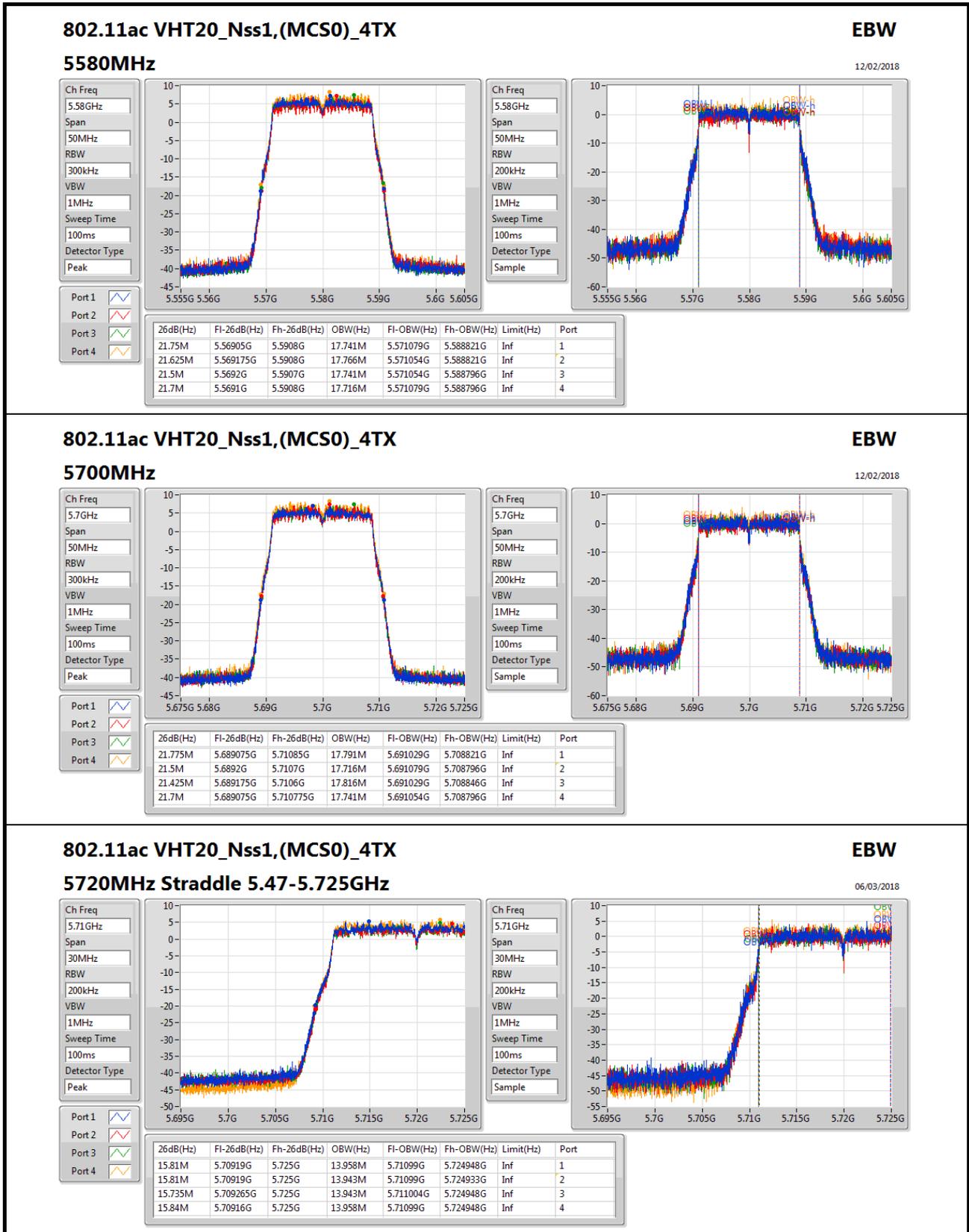
Ch Freq: 5.26GHz
Span: 50MHz
RBW: 300kHz
VBW: 1MHz
Sweep Time: 100ms
Detector Type: Peak

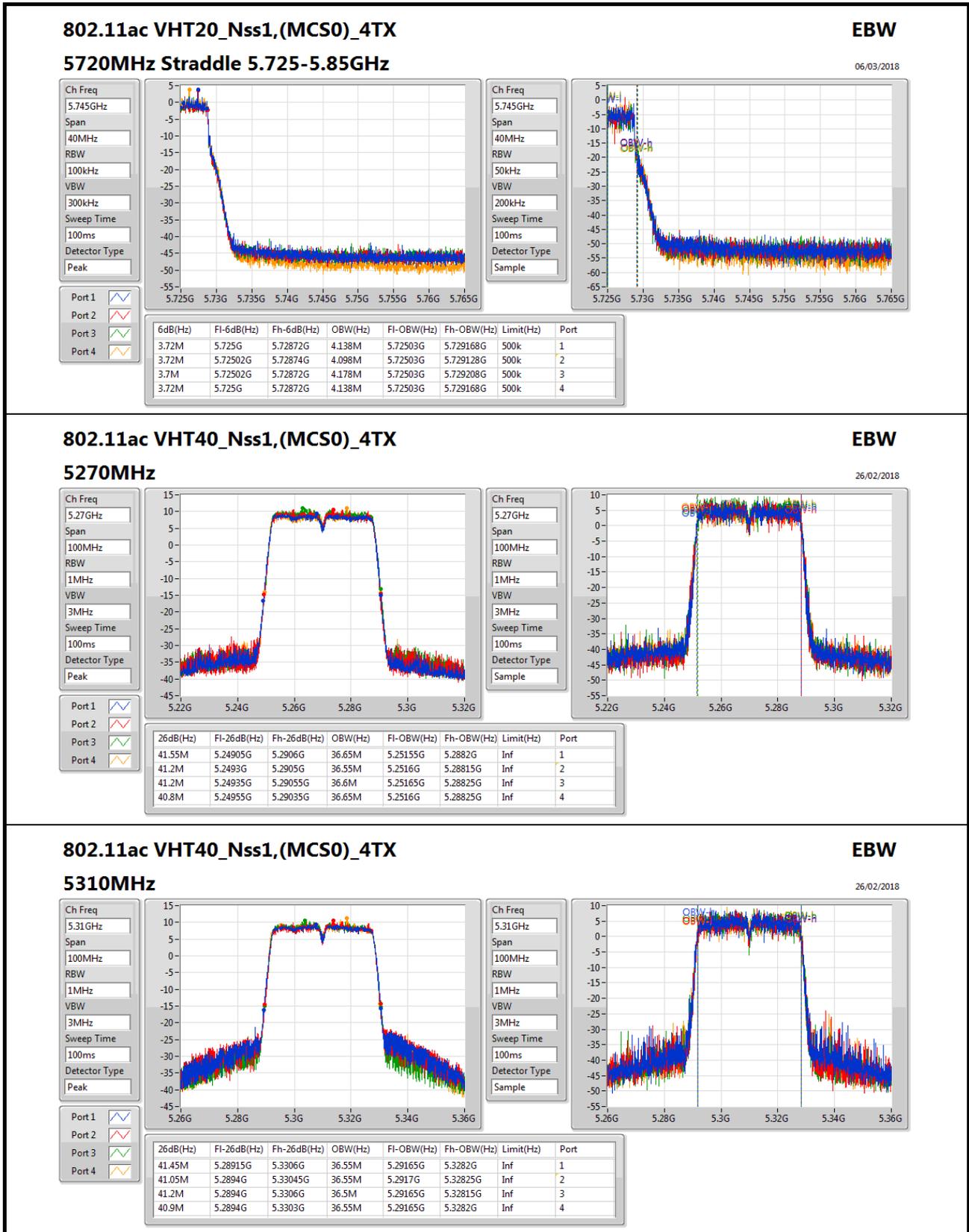
Port 1: [Waveform]
Port 2: [Waveform]
Port 3: [Waveform]
Port 4: [Waveform]

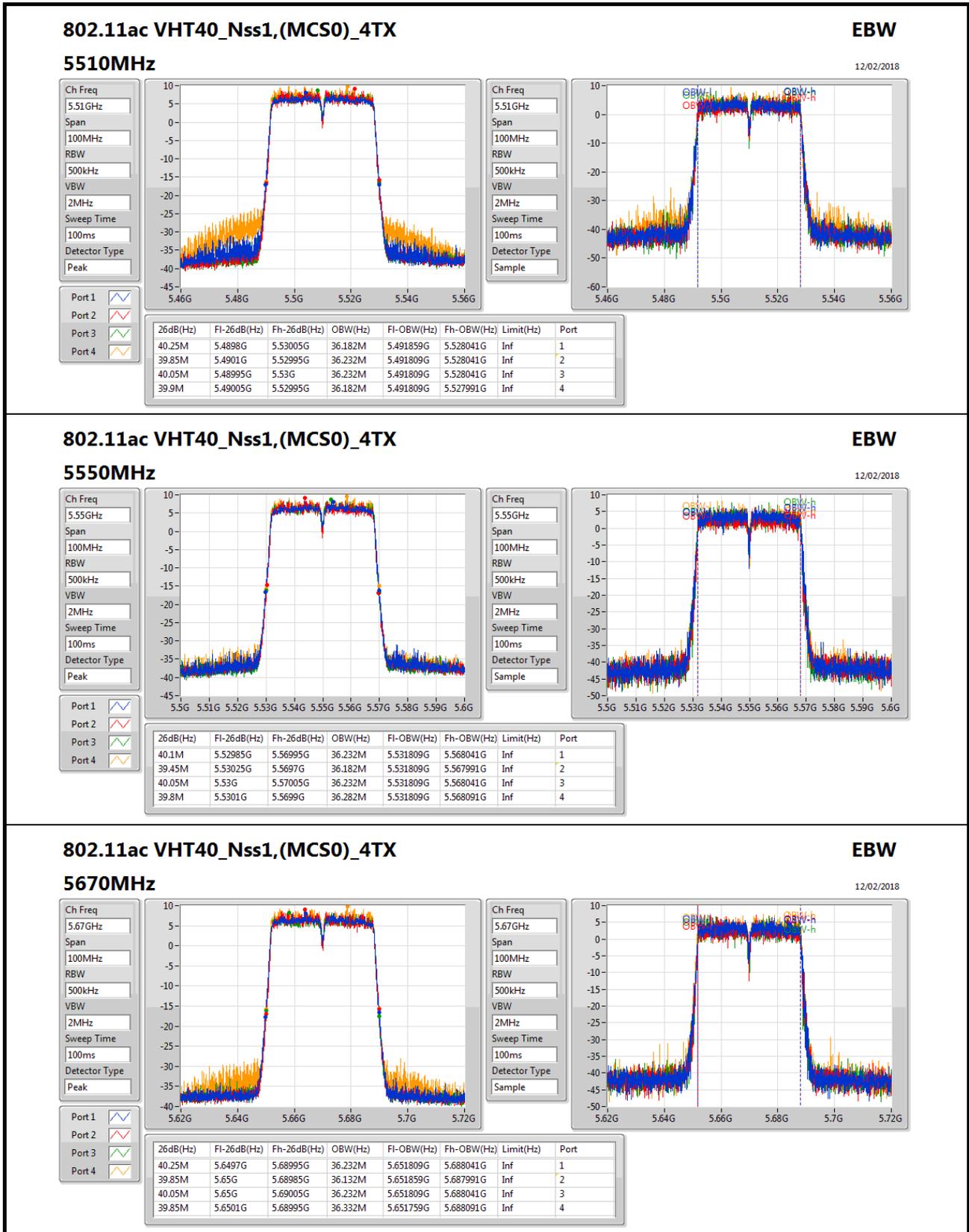
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.8M	5.249075G	5.270875G	17.791M	5.251054G	5.268846G	Inf	1
21.575M	5.249225G	5.2708G	17.716M	5.251129G	5.268846G	Inf	2
21.55M	5.24925G	5.2708G	17.766M	5.251104G	5.268871G	Inf	3
21.725M	5.249075G	5.2708G	17.741M	5.251079G	5.268821G	Inf	4

Ch Freq: 5.26GHz
Span: 50MHz
RBW: 200kHz
VBW: 1MHz
Sweep Time: 100ms
Detector Type: Sample



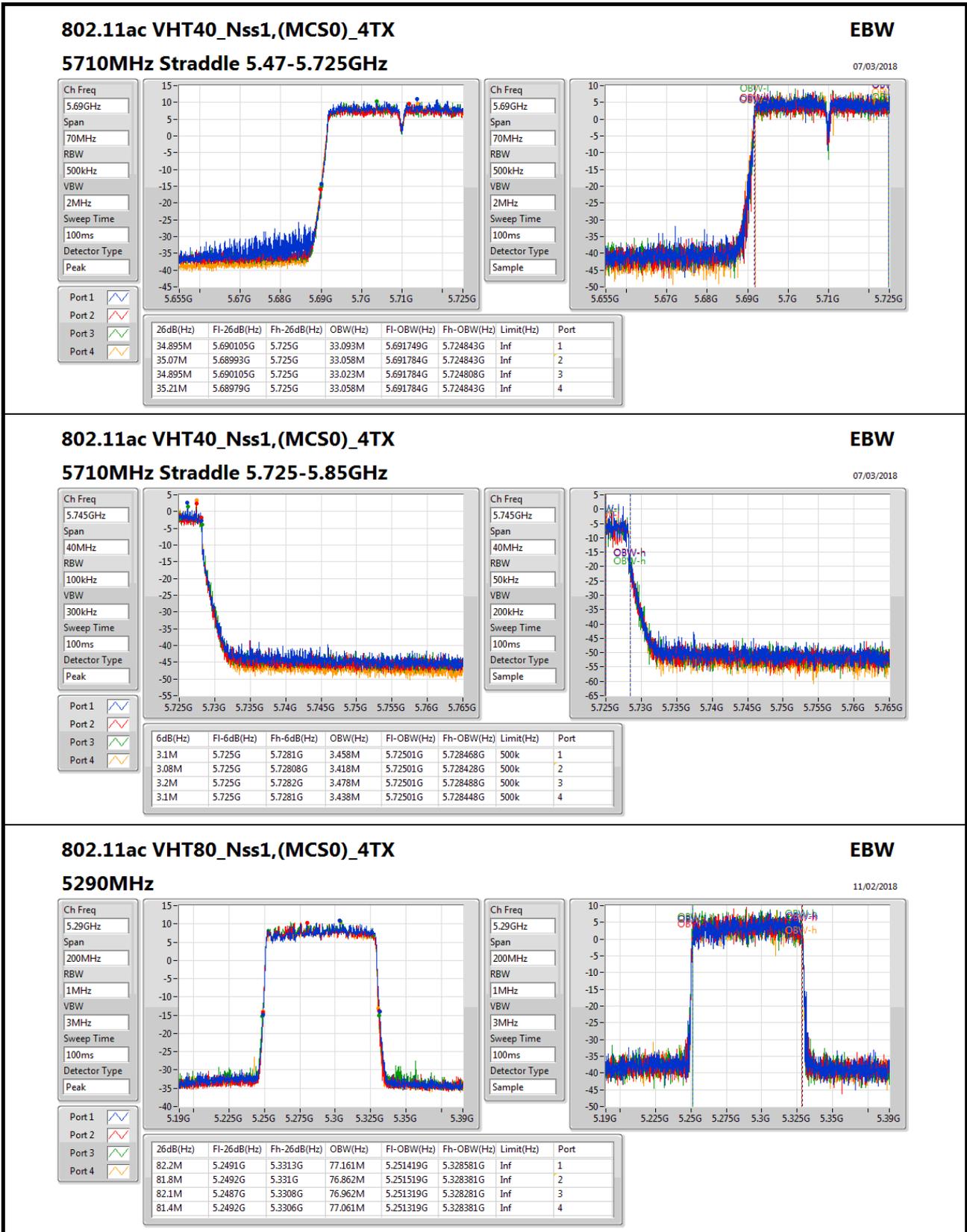





802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5670MHz
12/02/2018

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



802.11ac VHT80_Nss1,(MCS0)_4TX

5290MHz

11/02/2018

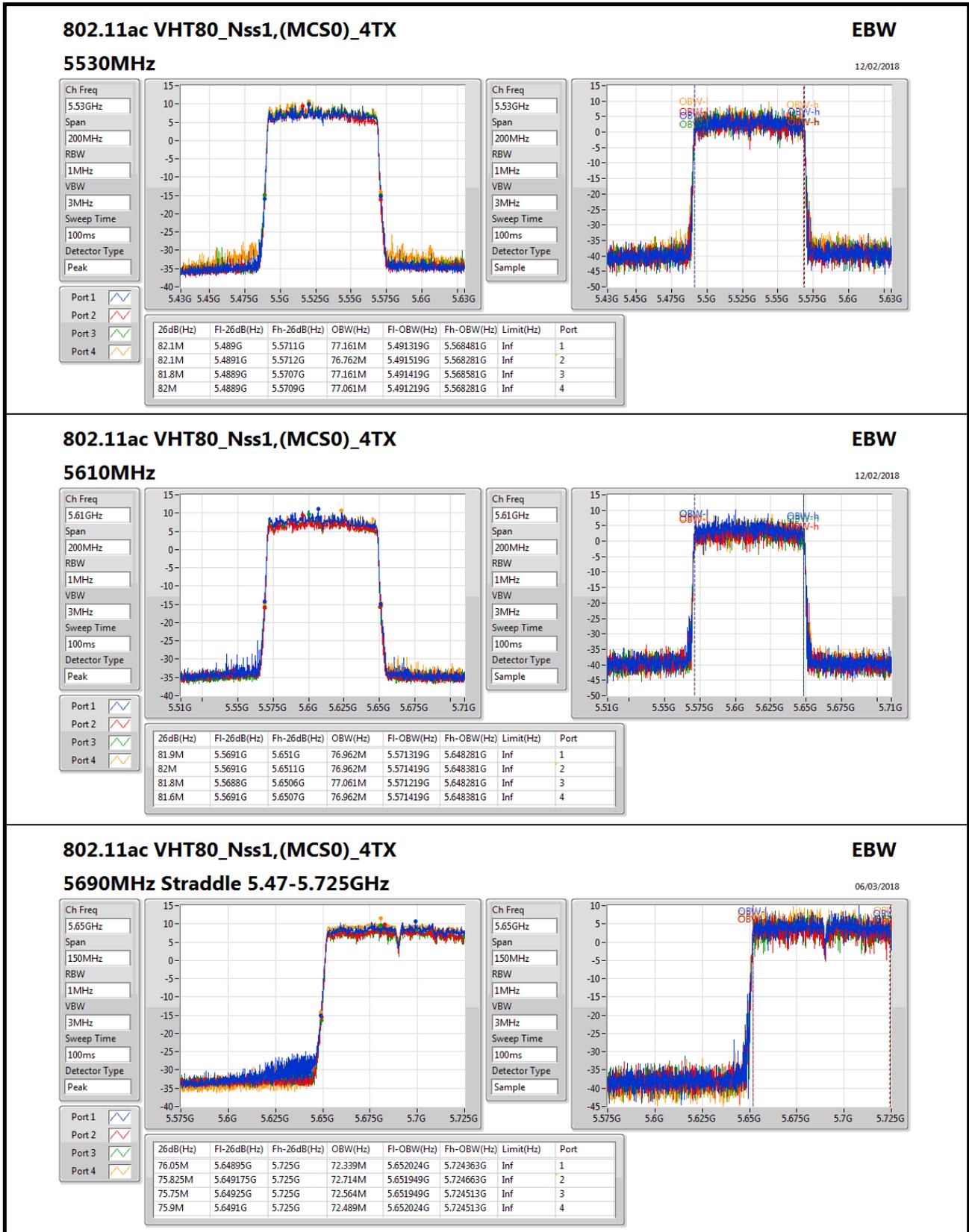
EBW

Ch Freq: 5.29GHz
Span: 200MHz
RBW: 1MHz
VBW: 3MHz
Sweep Time: 100ms
Detector Type: Peak

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

26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
82.2M	5.2491G	5.3313G	77.161M	5.251419G	5.328581G	Inf	1
81.8M	5.2492G	5.331G	76.862M	5.251519G	5.328381G	Inf	2
82.1M	5.2487G	5.3308G	76.962M	5.251319G	5.328281G	Inf	3
81.4M	5.2492G	5.3306G	77.061M	5.251319G	5.328381G	Inf	4

Ch Freq: 5.29GHz
Span: 200MHz
RBW: 1MHz
VBW: 3MHz
Sweep Time: 100ms
Detector Type: Sample


802.11ac VHT80_Nss1,(MCS0)_4TX
EBW
06/03/2018

5690MHz Straddle 5.47-5.725GHz

Ch Freq: 5.65GHz

Span: 150MHz

RBW: 1MHz

VBW: 3MHz

Sweep Time: 100ms

Detector Type: Peak

Port 1

Port 2

Port 3

Port 4

Ch Freq: 5.65GHz

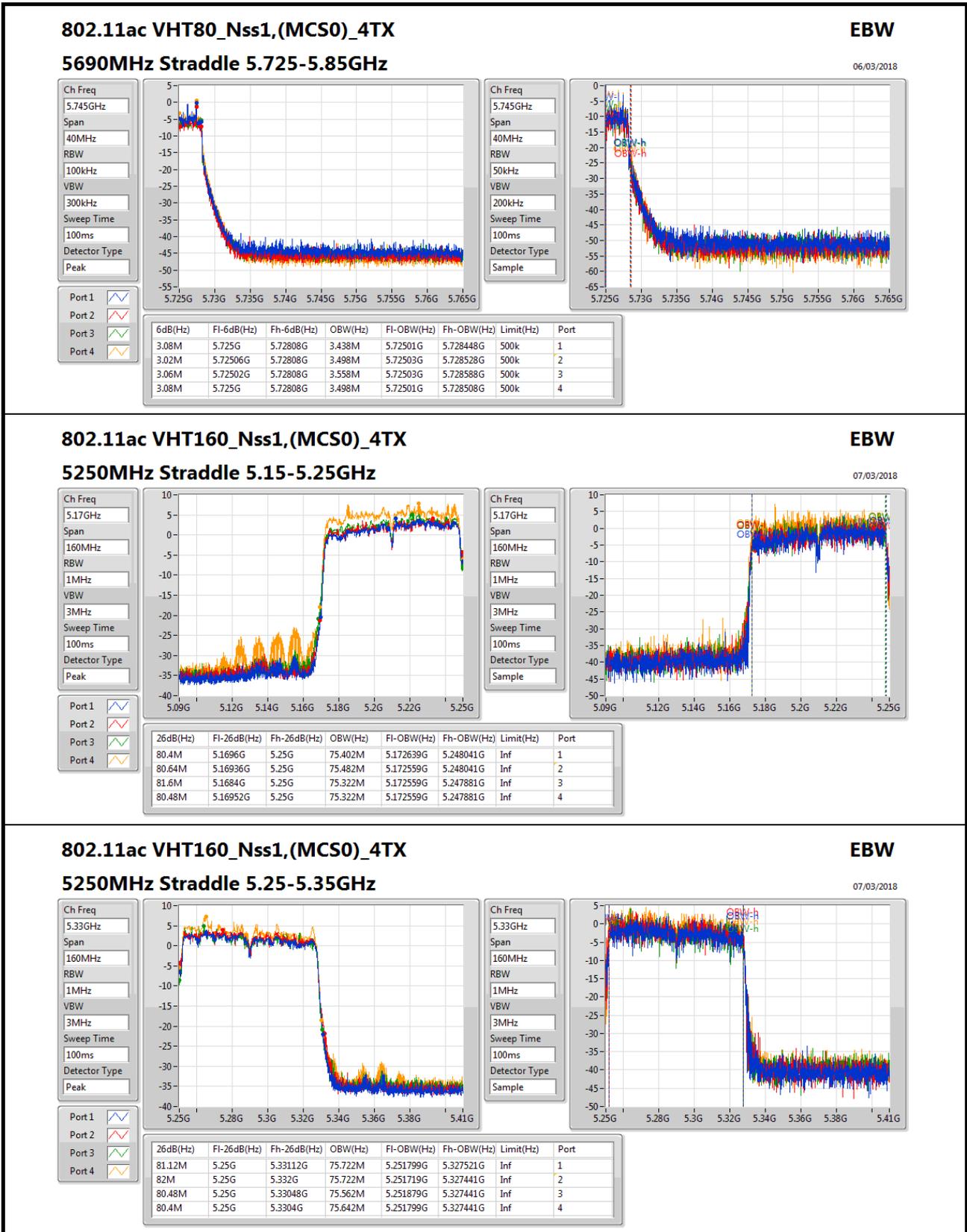
Span: 150MHz

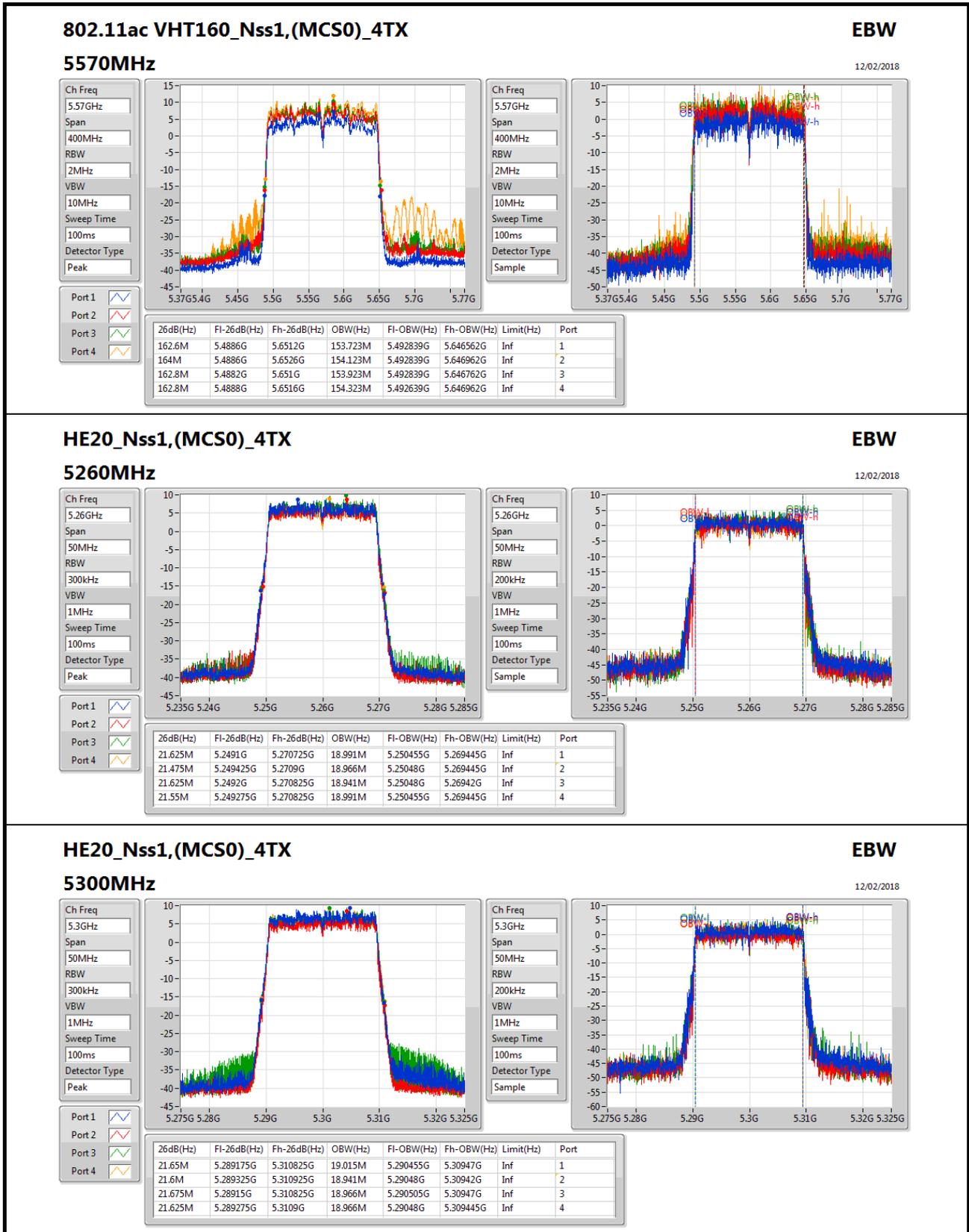
RBW: 1MHz

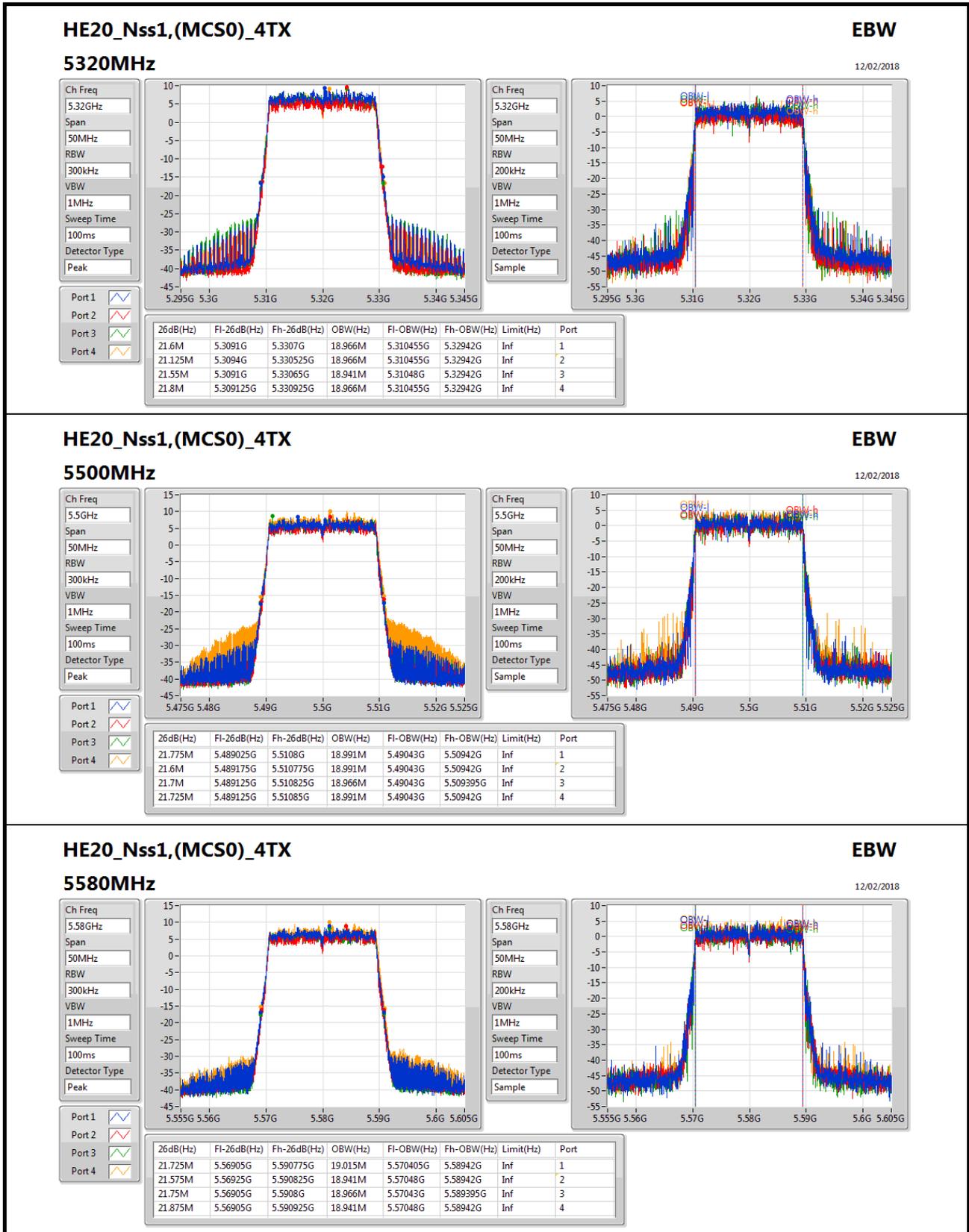
VBW: 3MHz

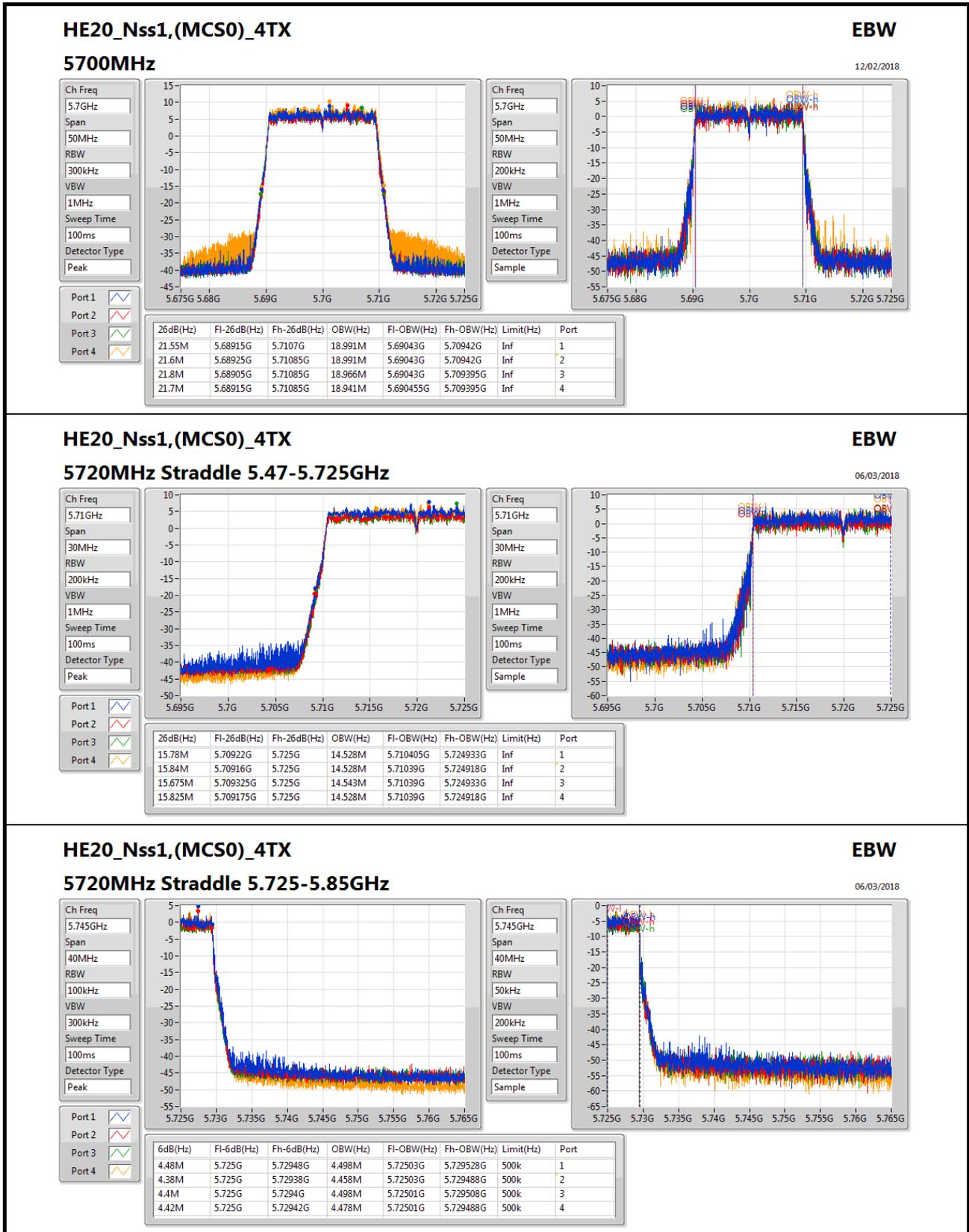
Sweep Time: 100ms

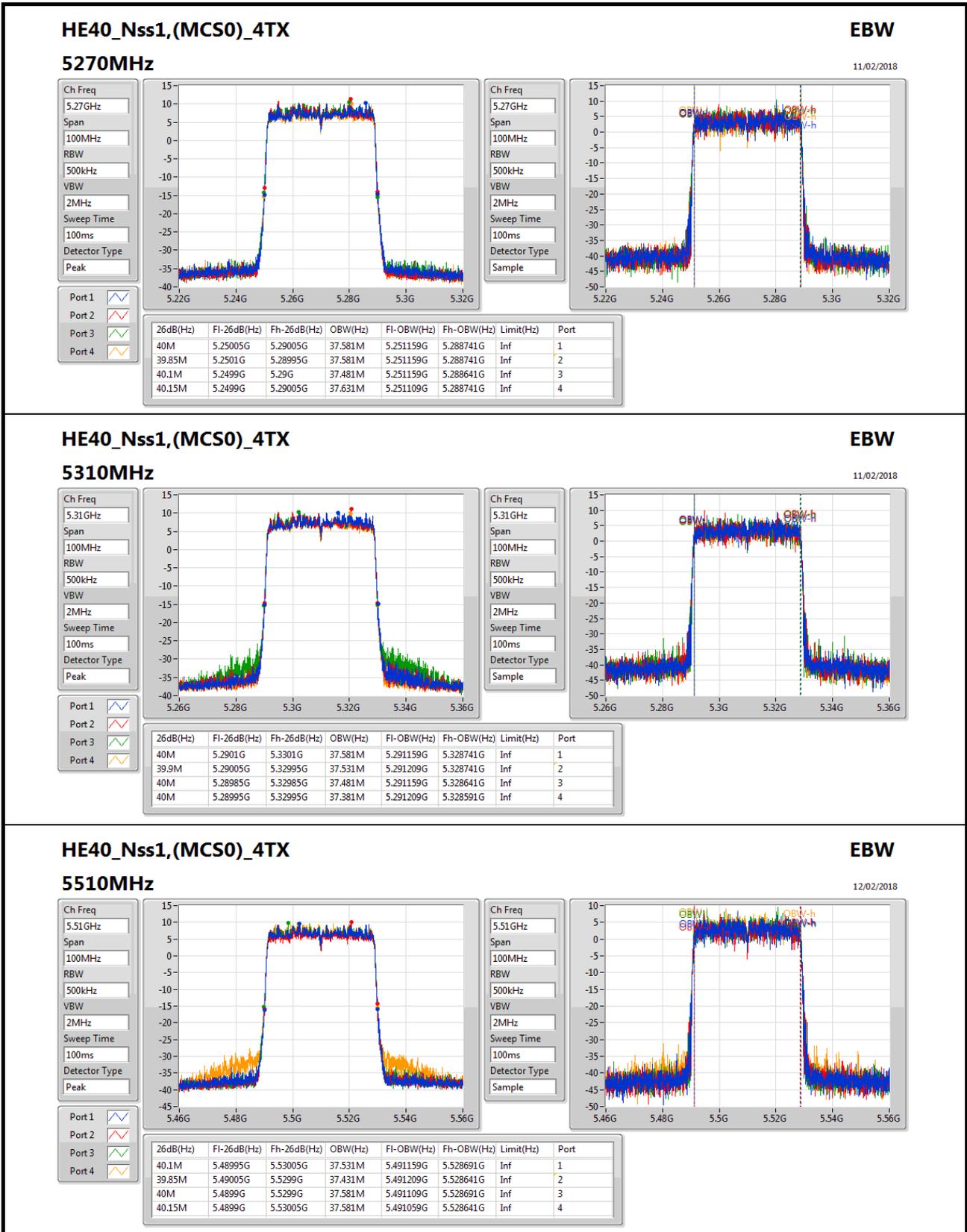
Detector Type: Sample

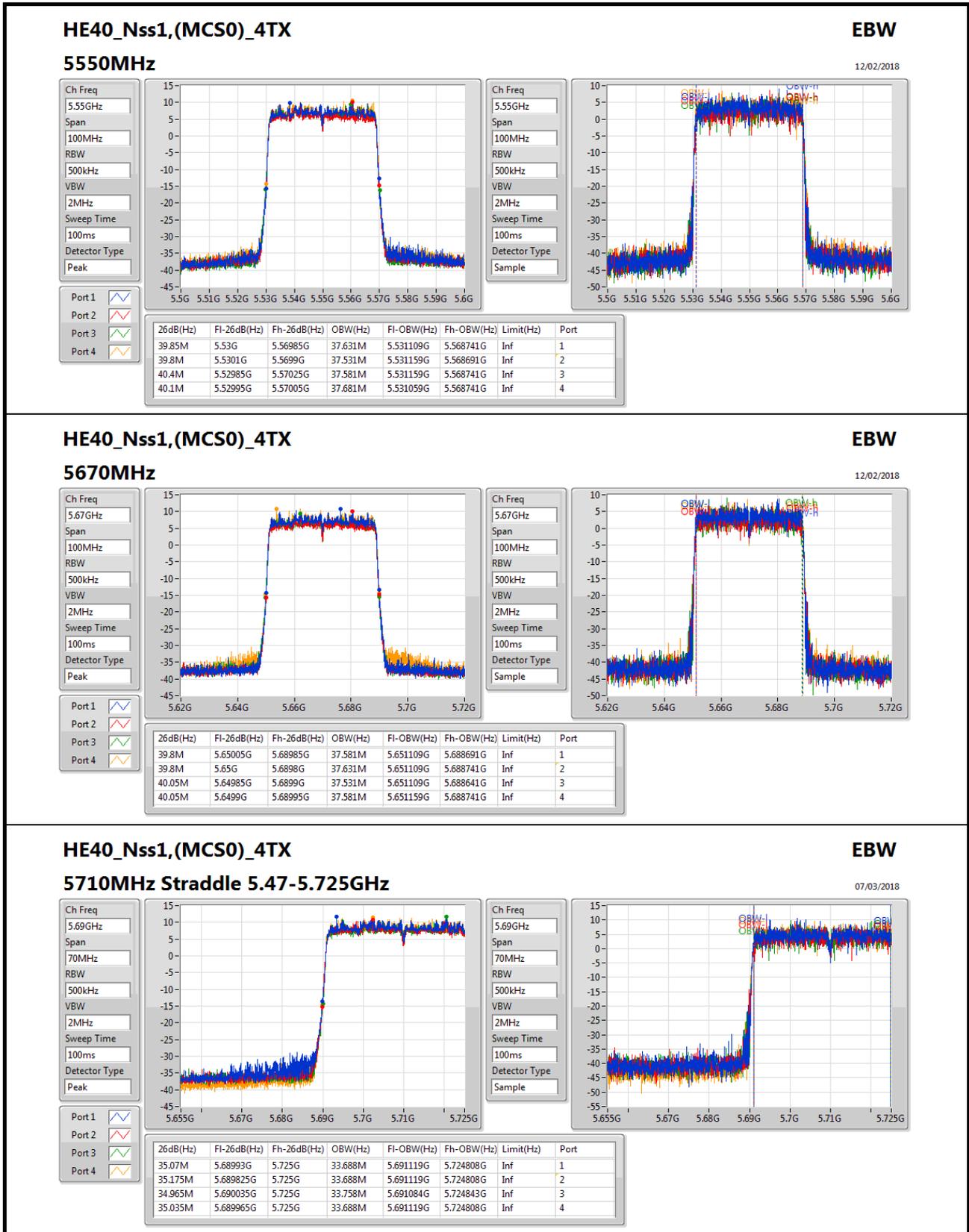






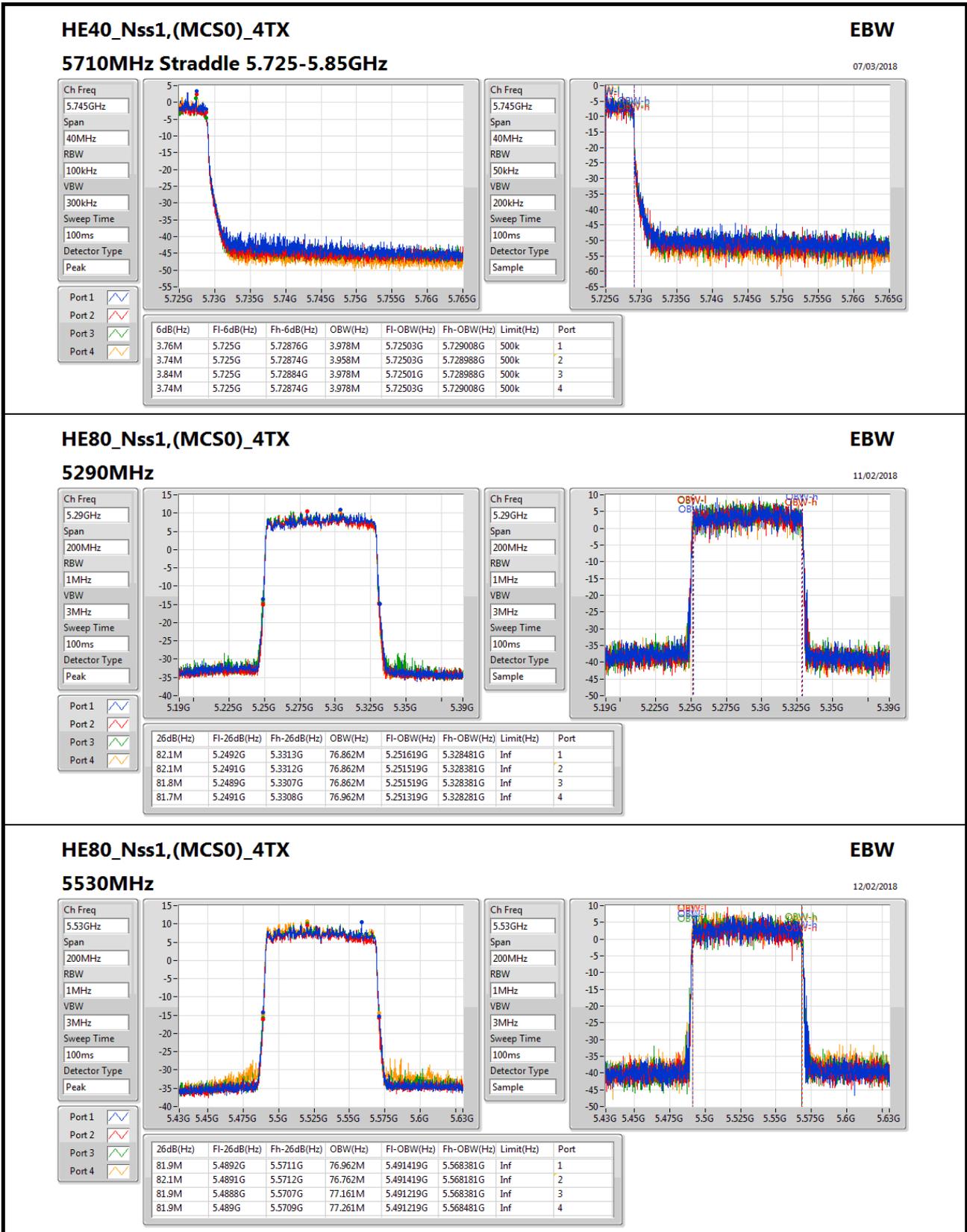


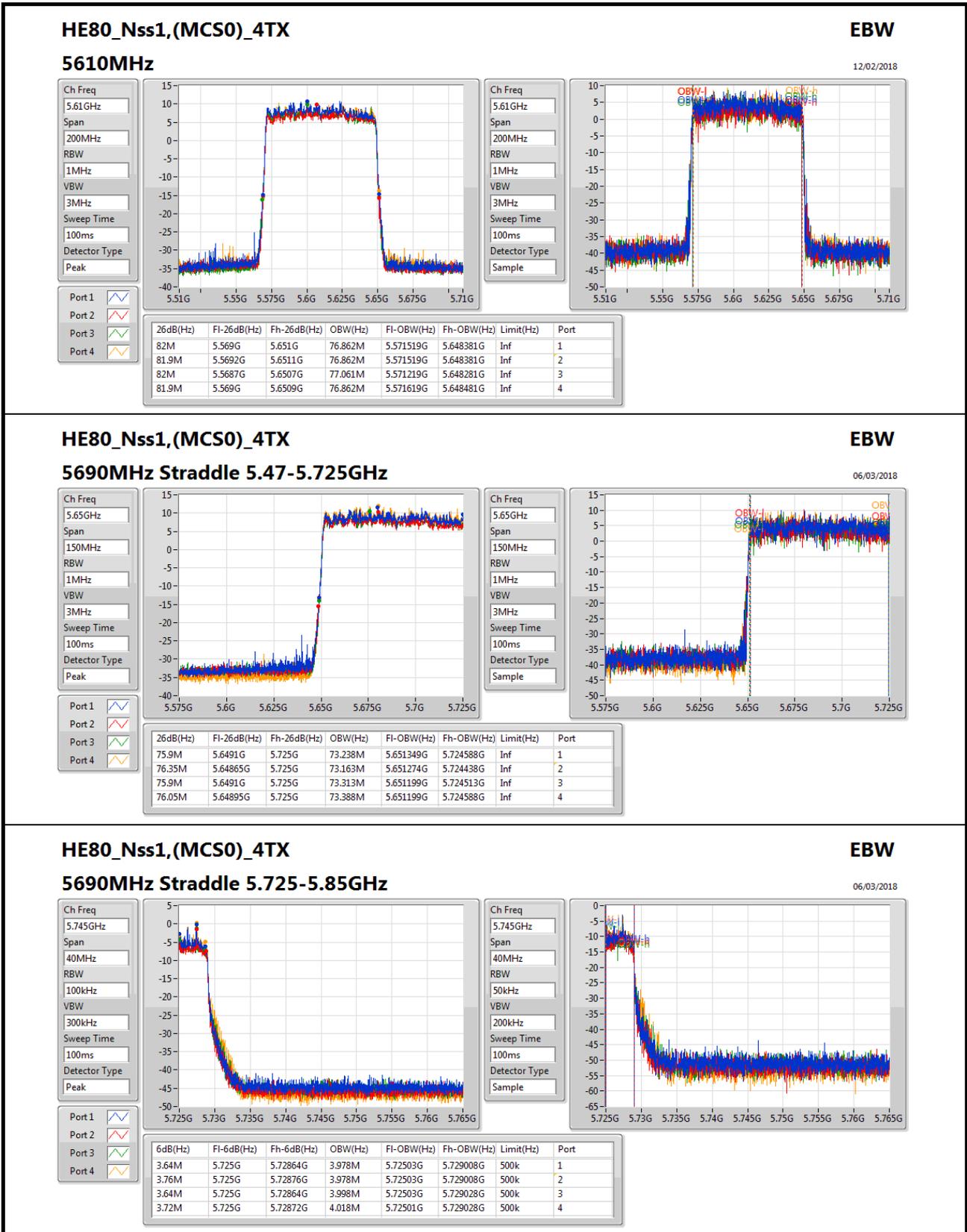


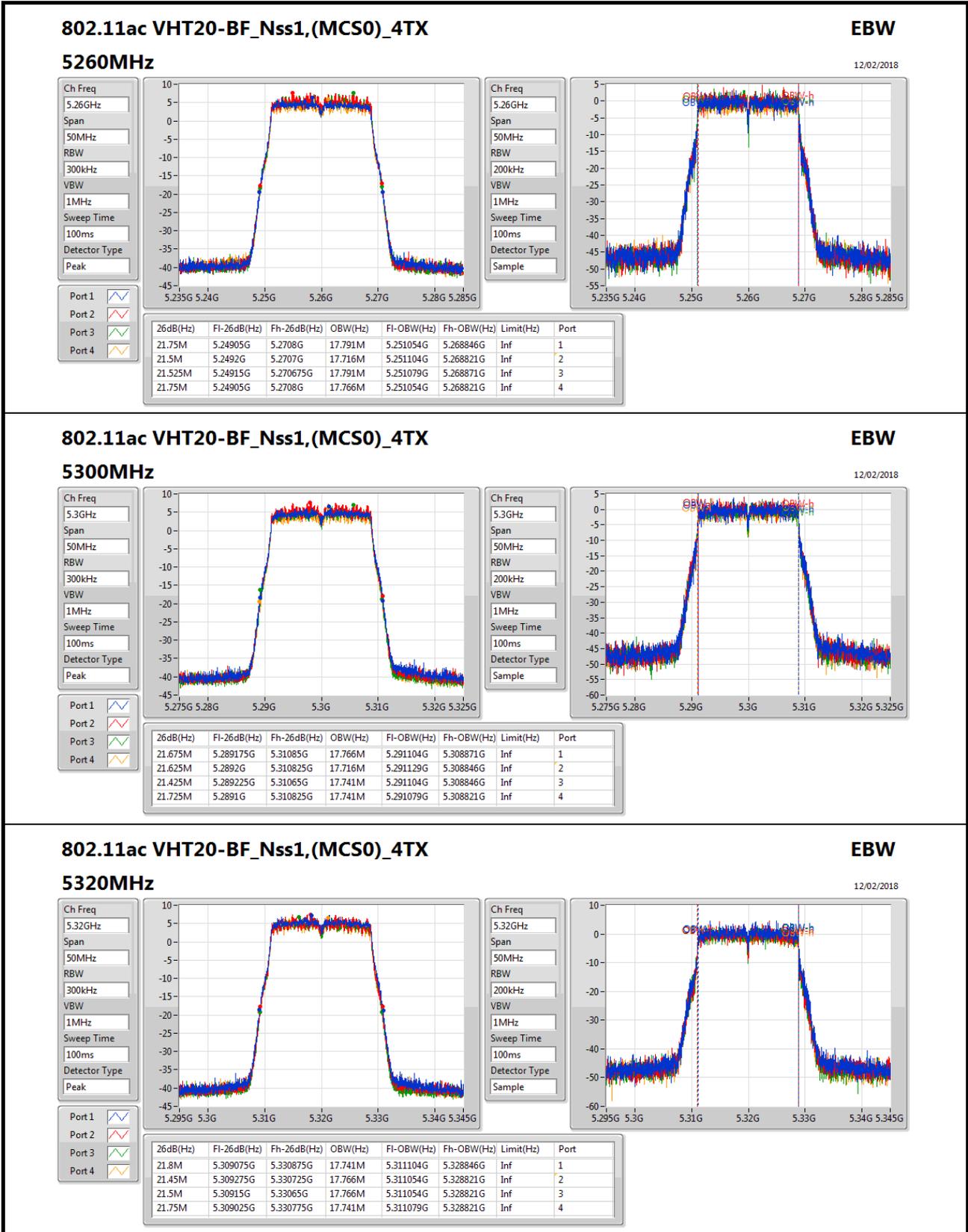

HE40_Nss1,(MCS0)_4TX
EBW
5710MHz Straddle 5.47-5.725GHz
07/03/2018

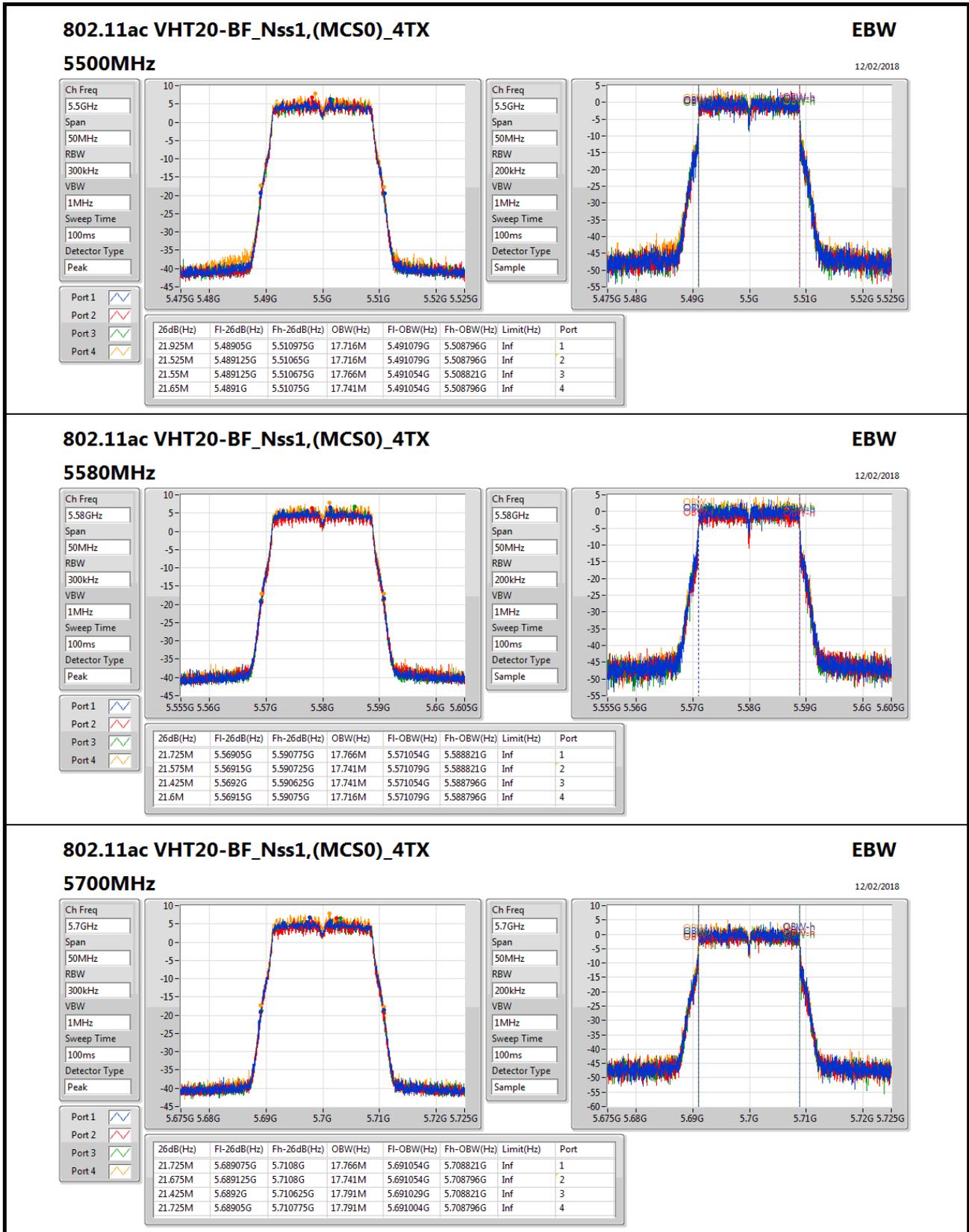
Ch Freq: 5.69GHz
Span: 70MHz
RBW: 500kHz
VBW: 2MHz
Sweep Time: 100ms
Detector Type: Peak

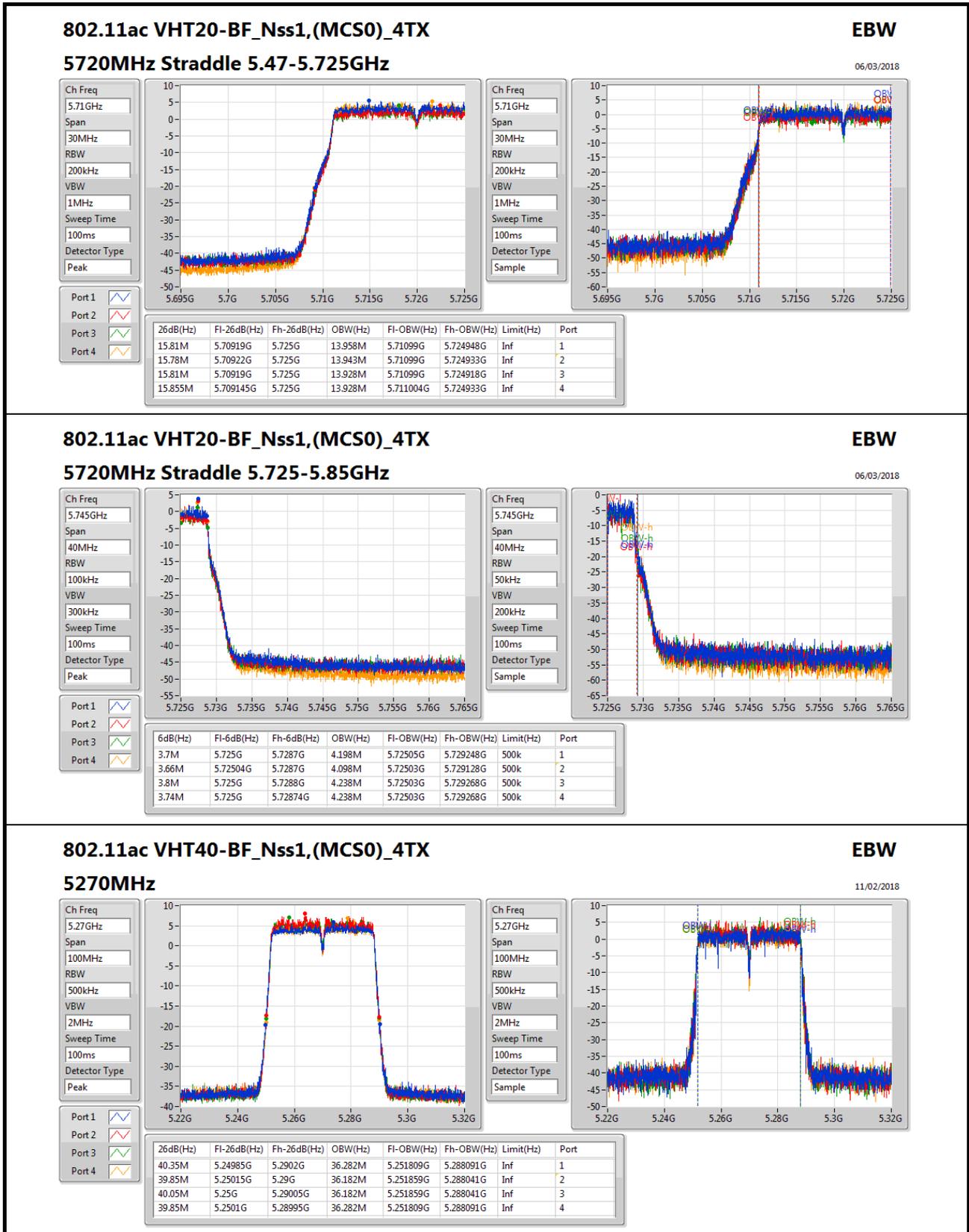
Ch Freq: 5.69GHz
Span: 70MHz
RBW: 500kHz
VBW: 2MHz
Sweep Time: 100ms
Detector Type: Sample











802.11ac VHT40-BF_Nss1,(MCS0)_4TX

5270MHz

11/02/2018

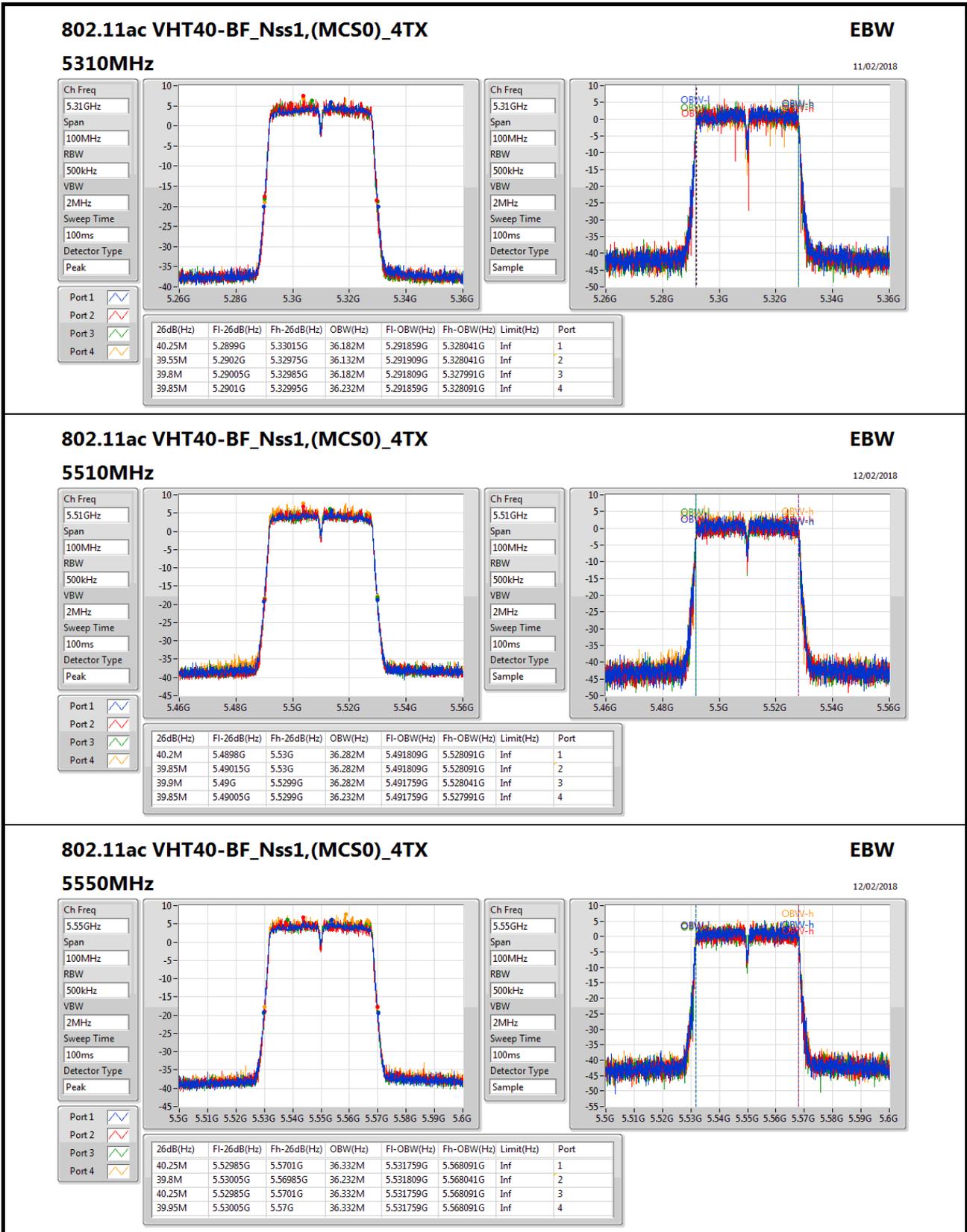
EBW

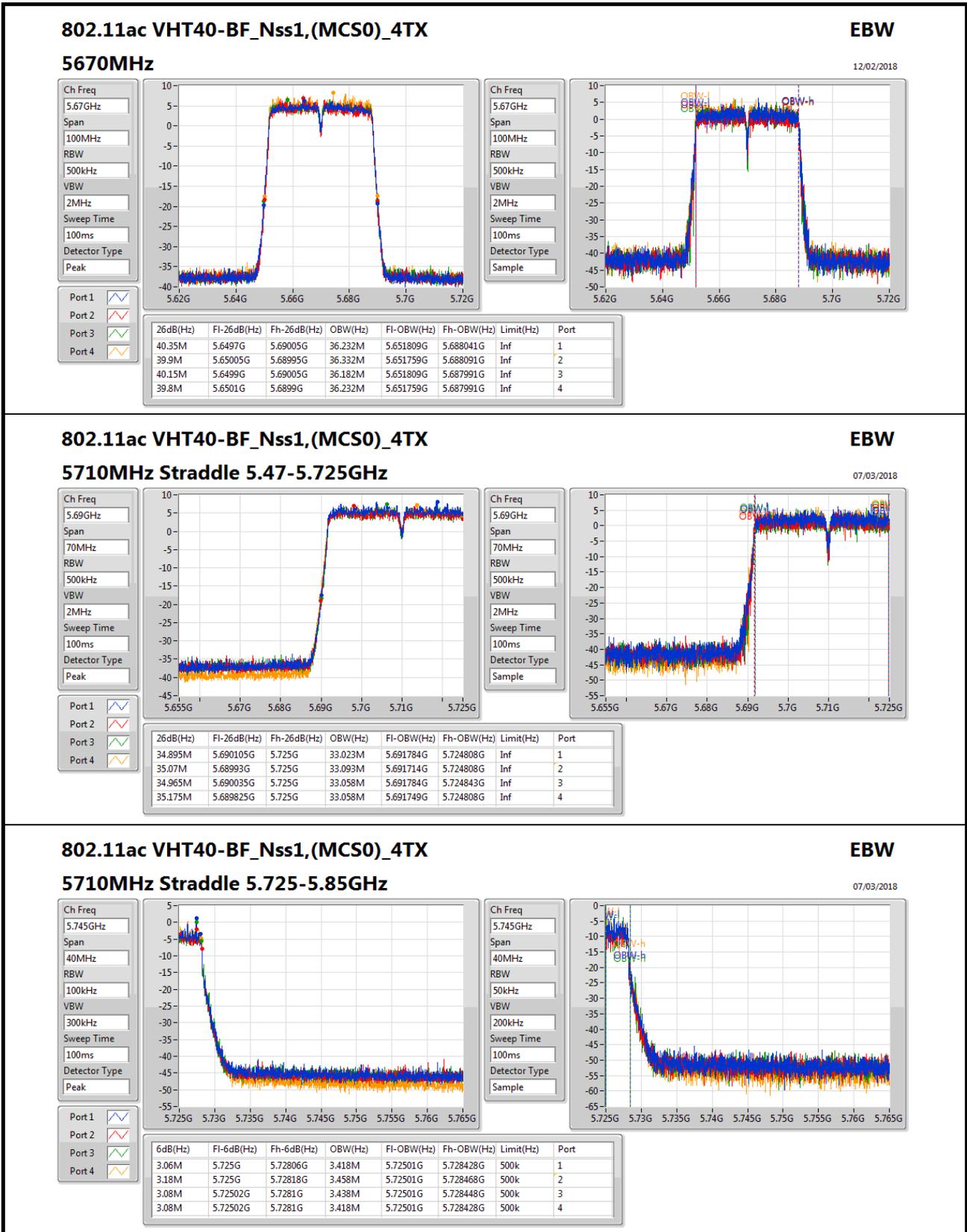
Ch Freq: 5.27GHz
Span: 100MHz
RBW: 500kHz
VBW: 2MHz
Sweep Time: 100ms
Detector Type: Peak

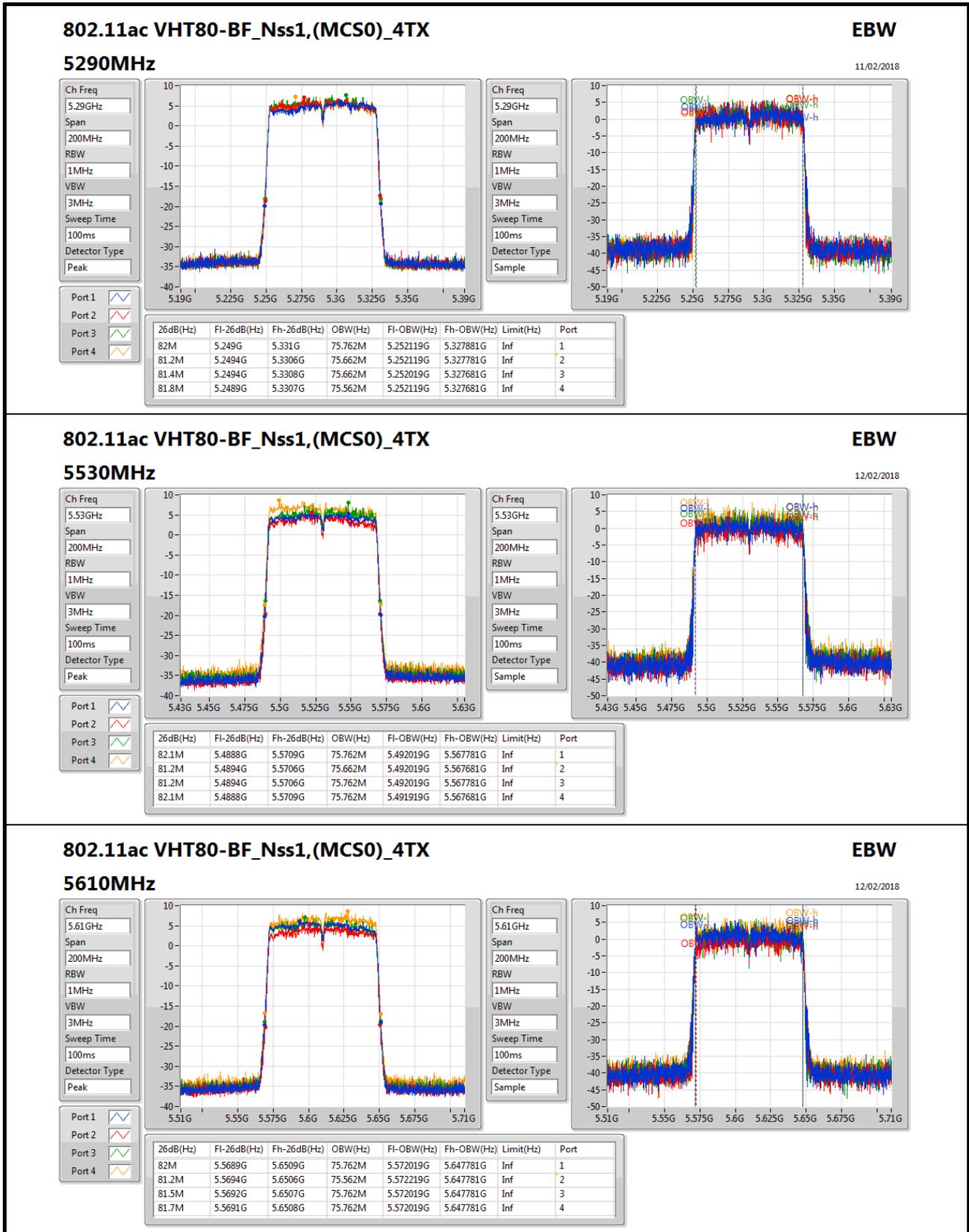
Port 1: [Waveform]
Port 2: [Waveform]
Port 3: [Waveform]
Port 4: [Waveform]

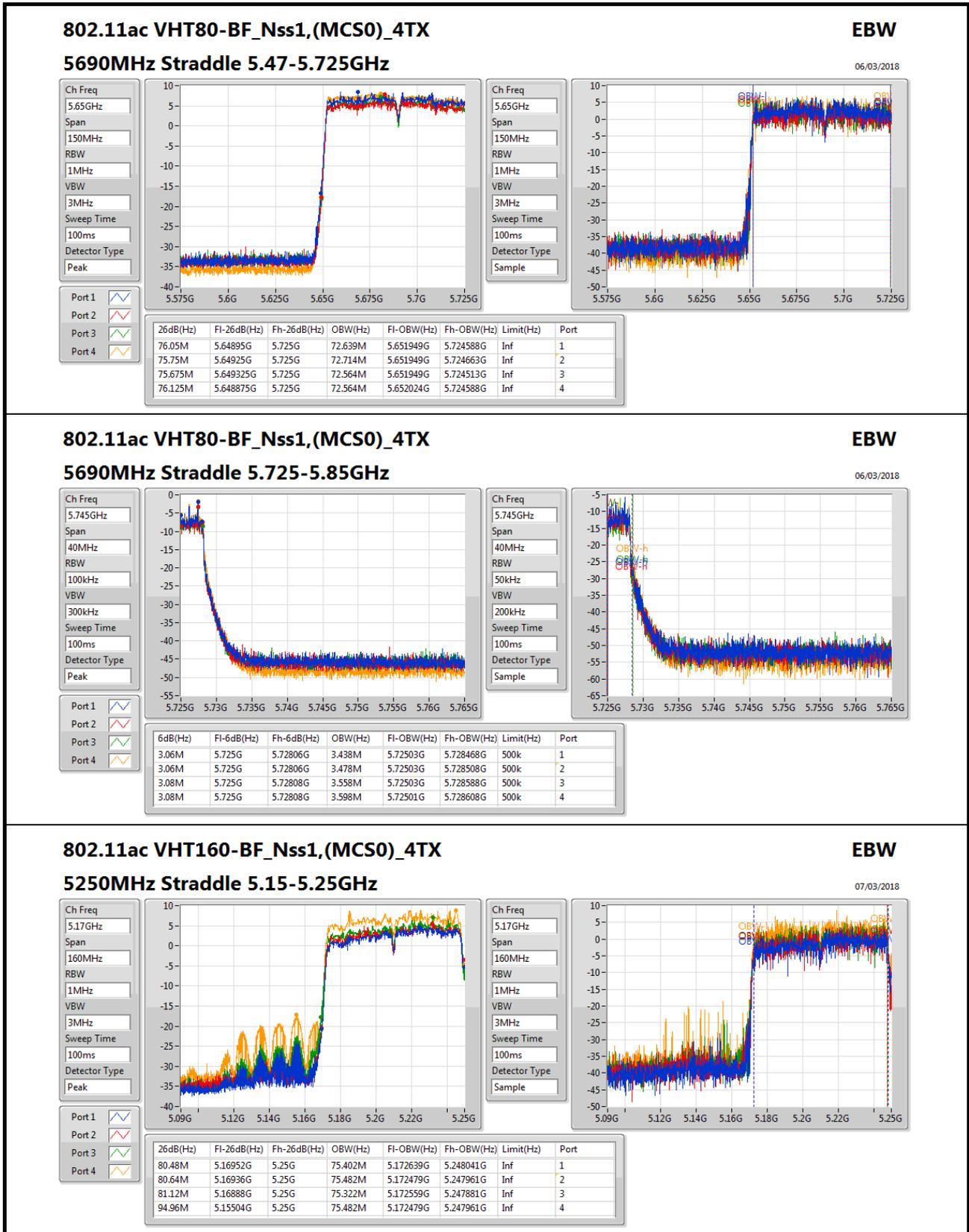
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
40.35M	5.24985G	5.2902G	36.282M	5.251809G	5.288091G	Inf	1
39.85M	5.25015G	5.29G	36.182M	5.251859G	5.288041G	Inf	2
40.05M	5.25G	5.29005G	36.182M	5.251859G	5.288041G	Inf	3
39.85M	5.2501G	5.28995G	36.282M	5.251809G	5.288091G	Inf	4

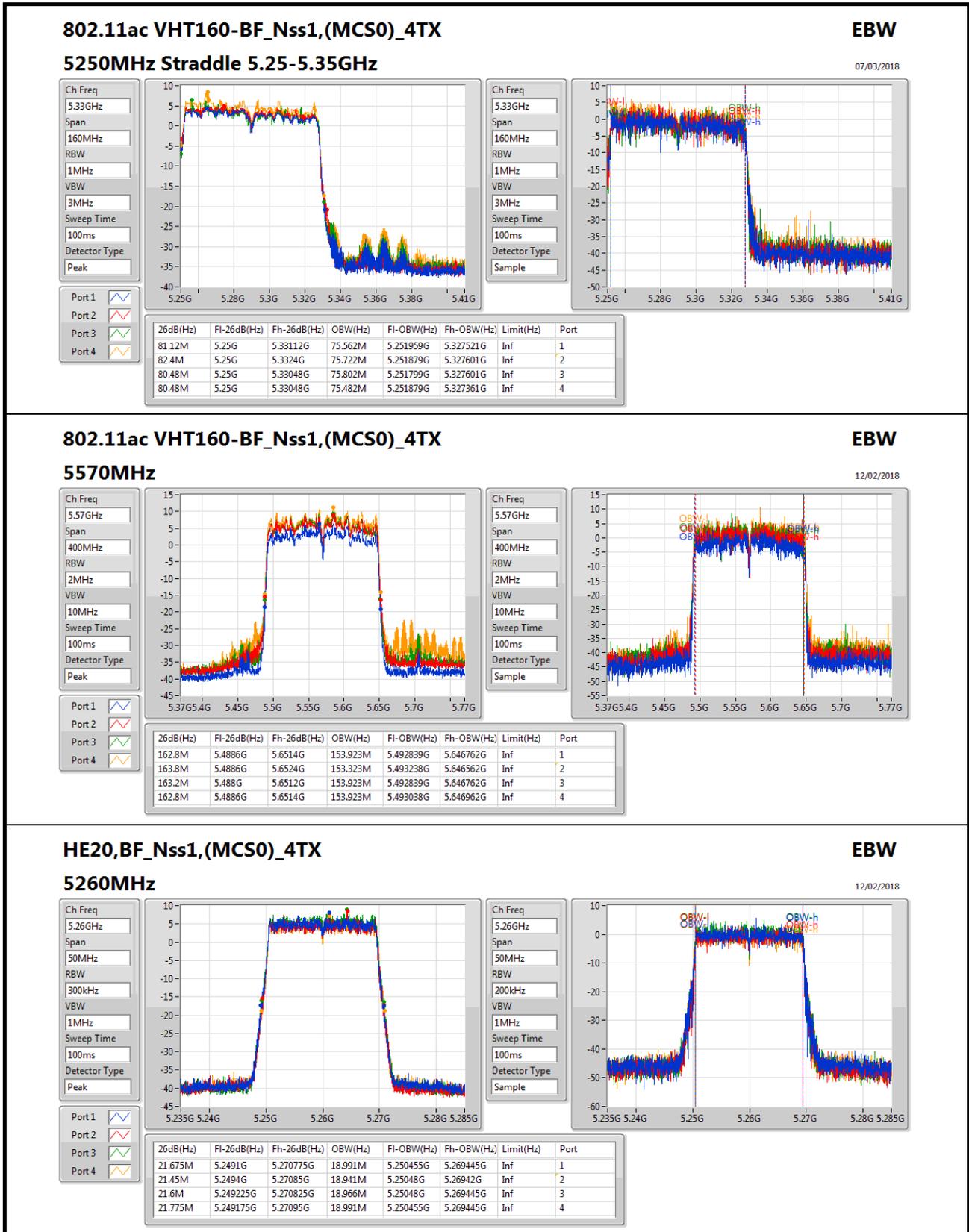
Ch Freq: 5.27GHz
Span: 100MHz
RBW: 500kHz
VBW: 2MHz
Sweep Time: 100ms
Detector Type: Sample

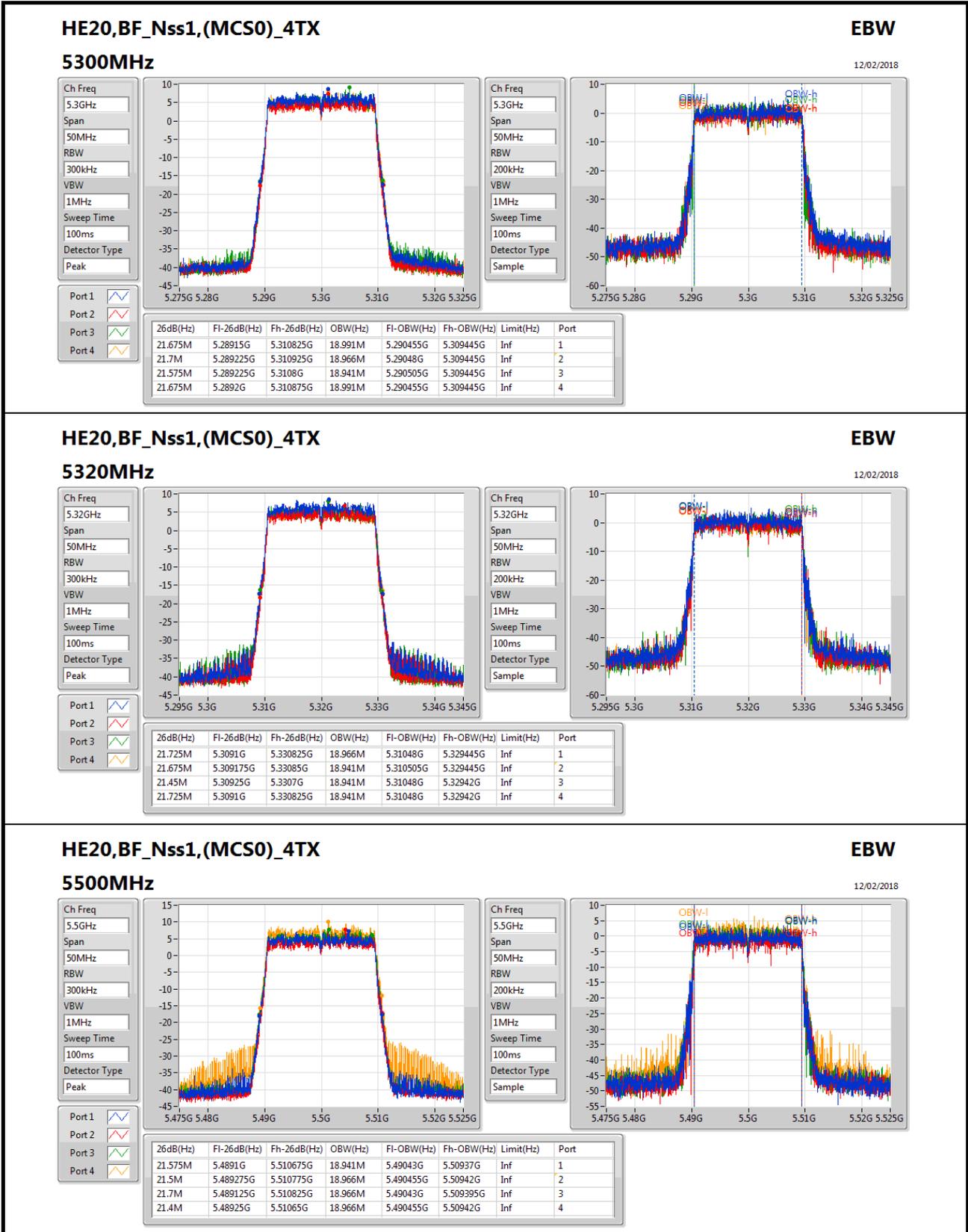


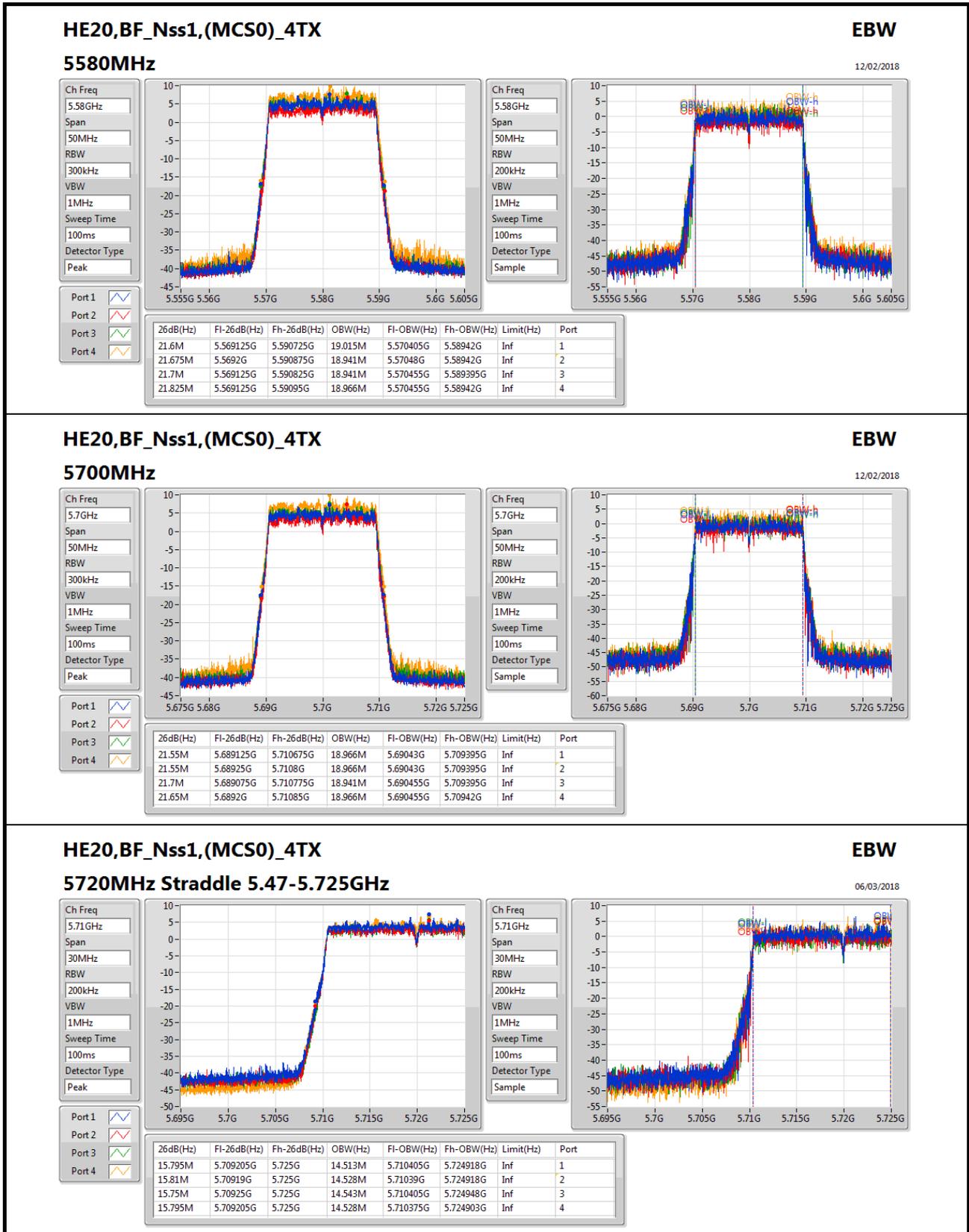


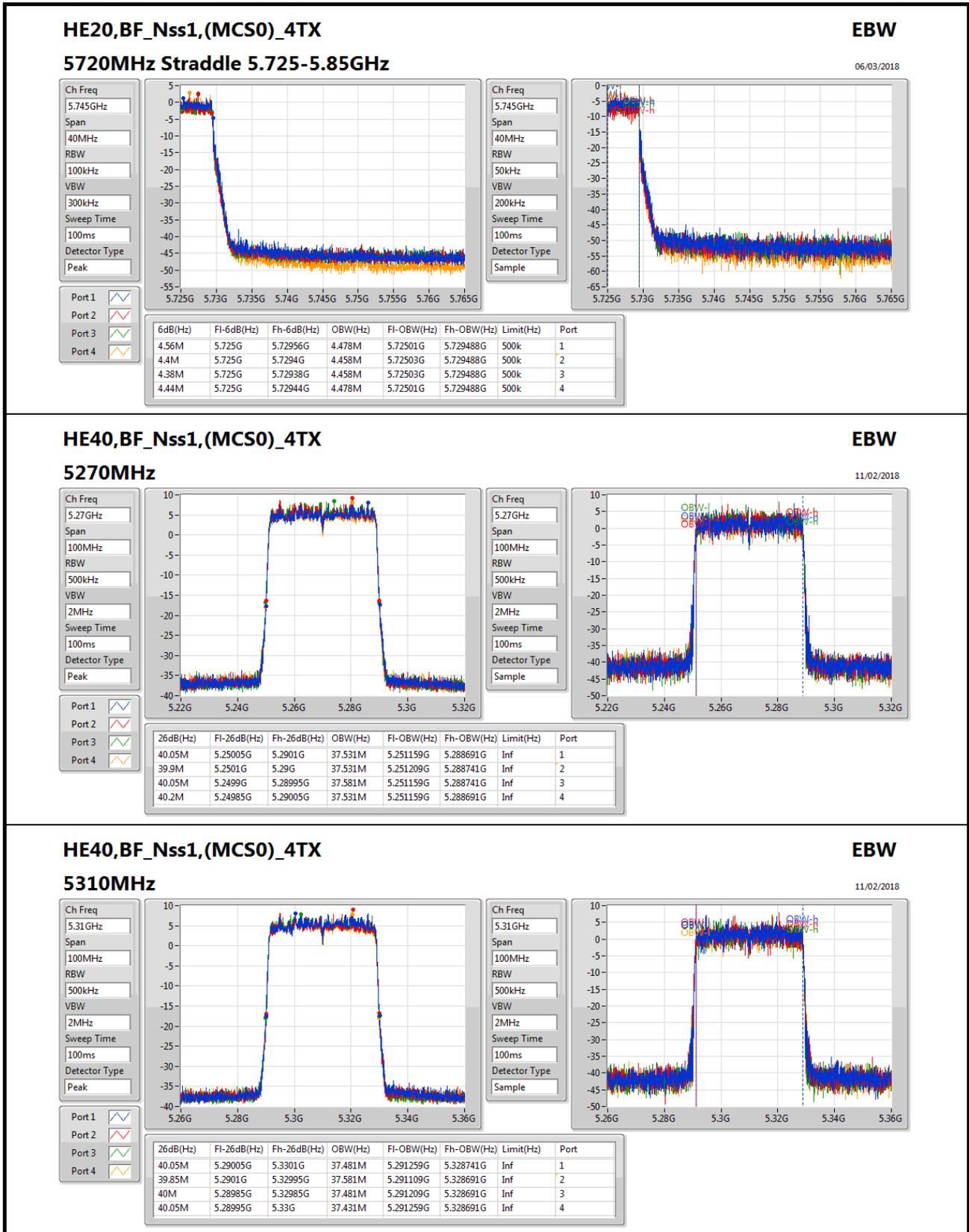




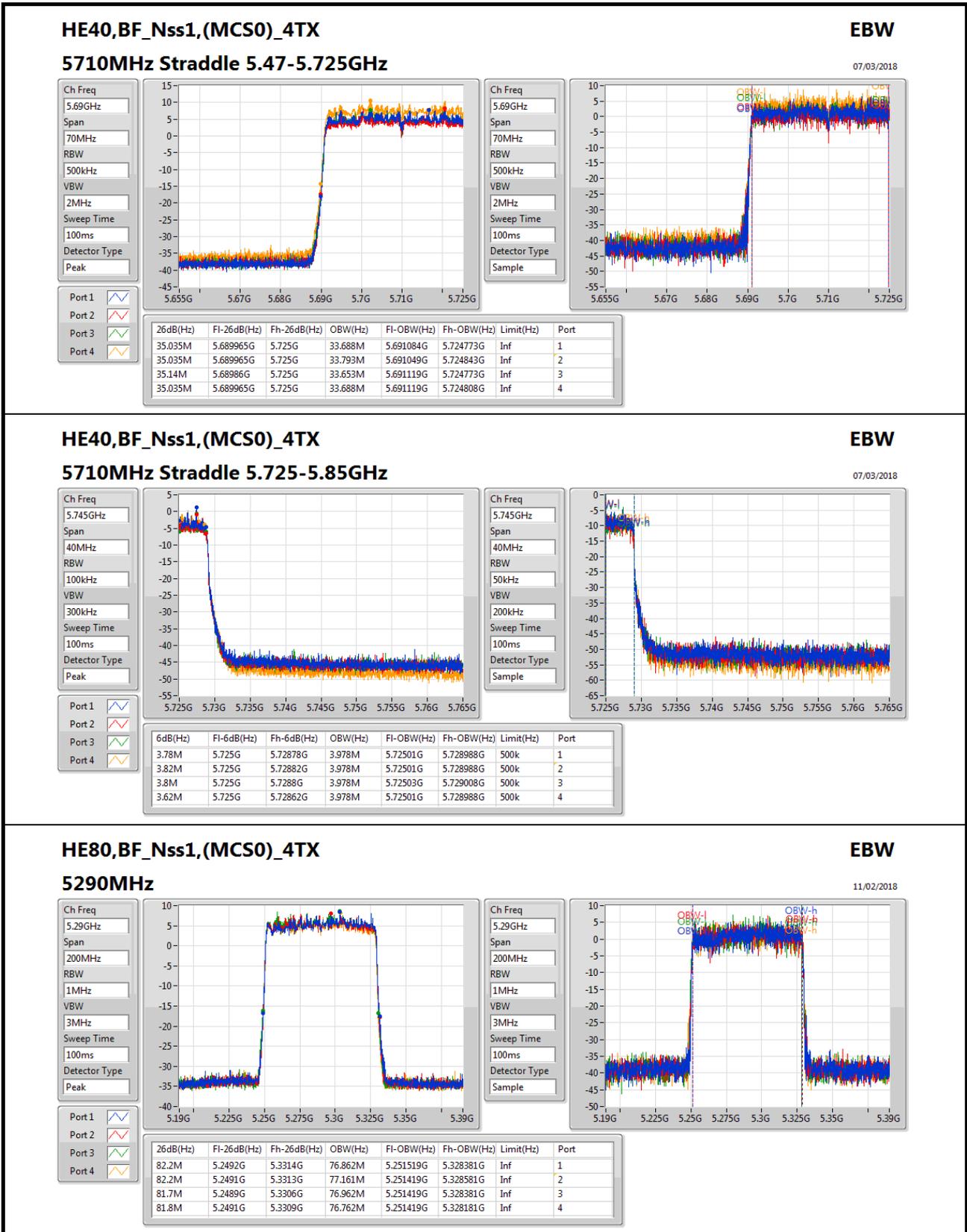


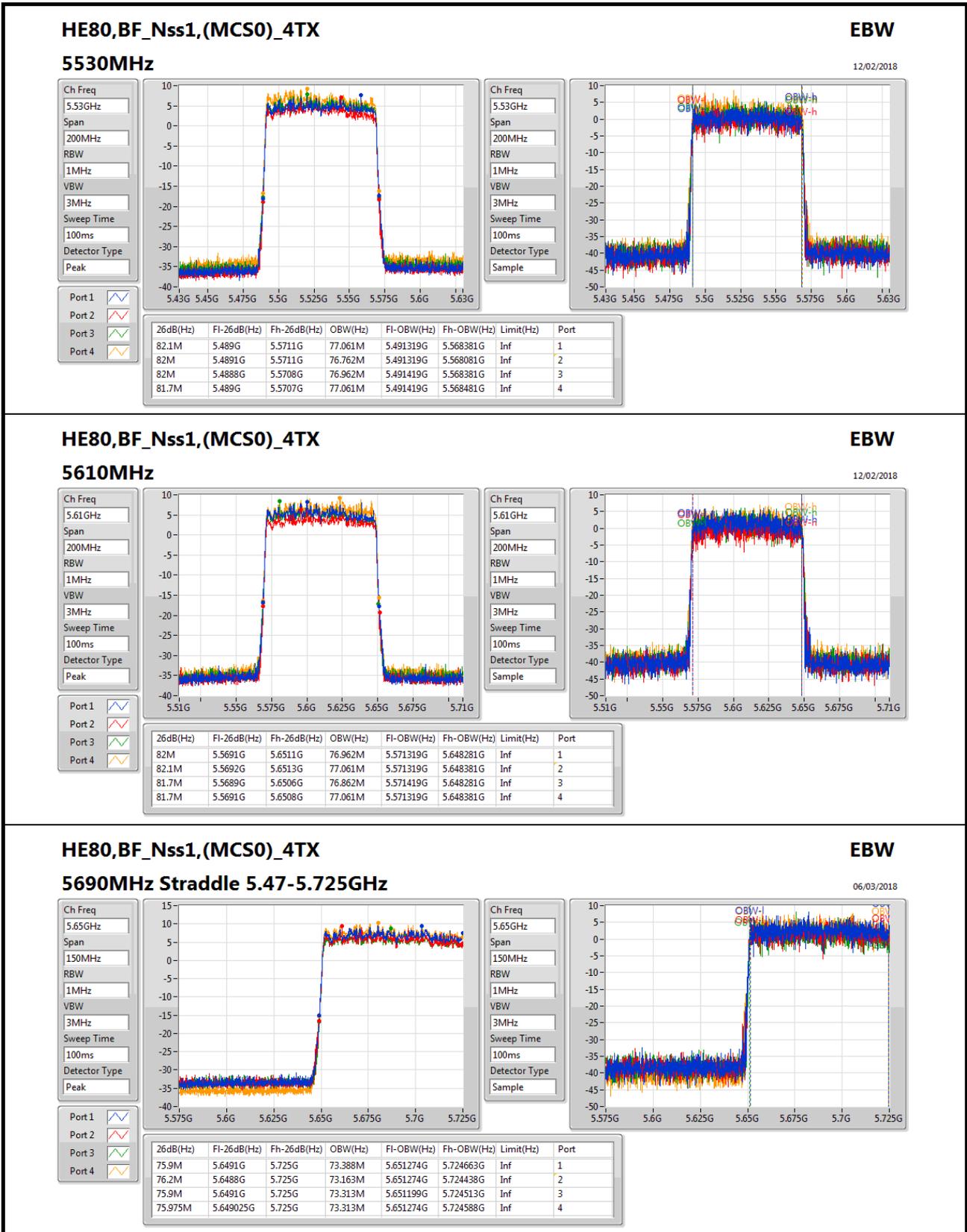


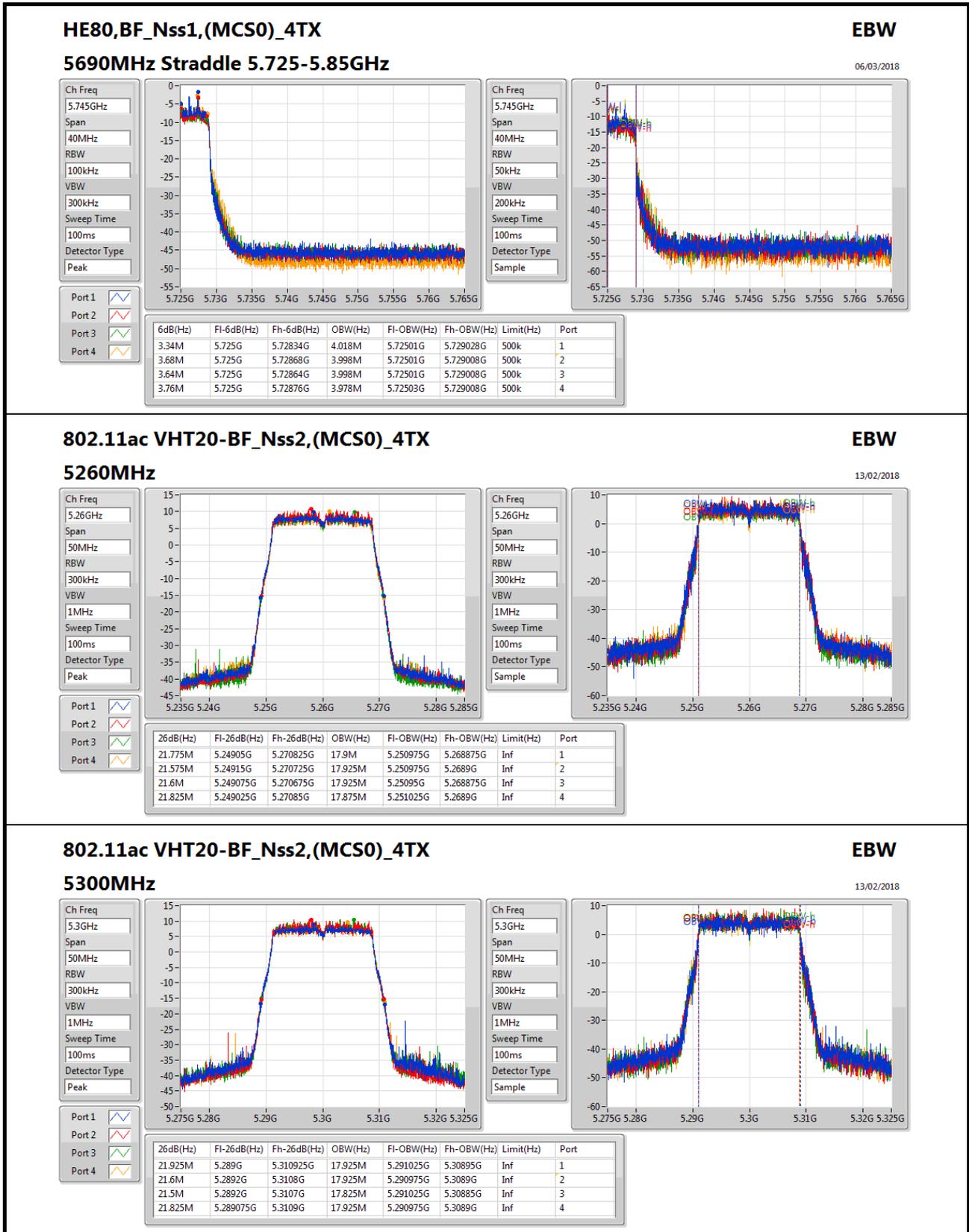


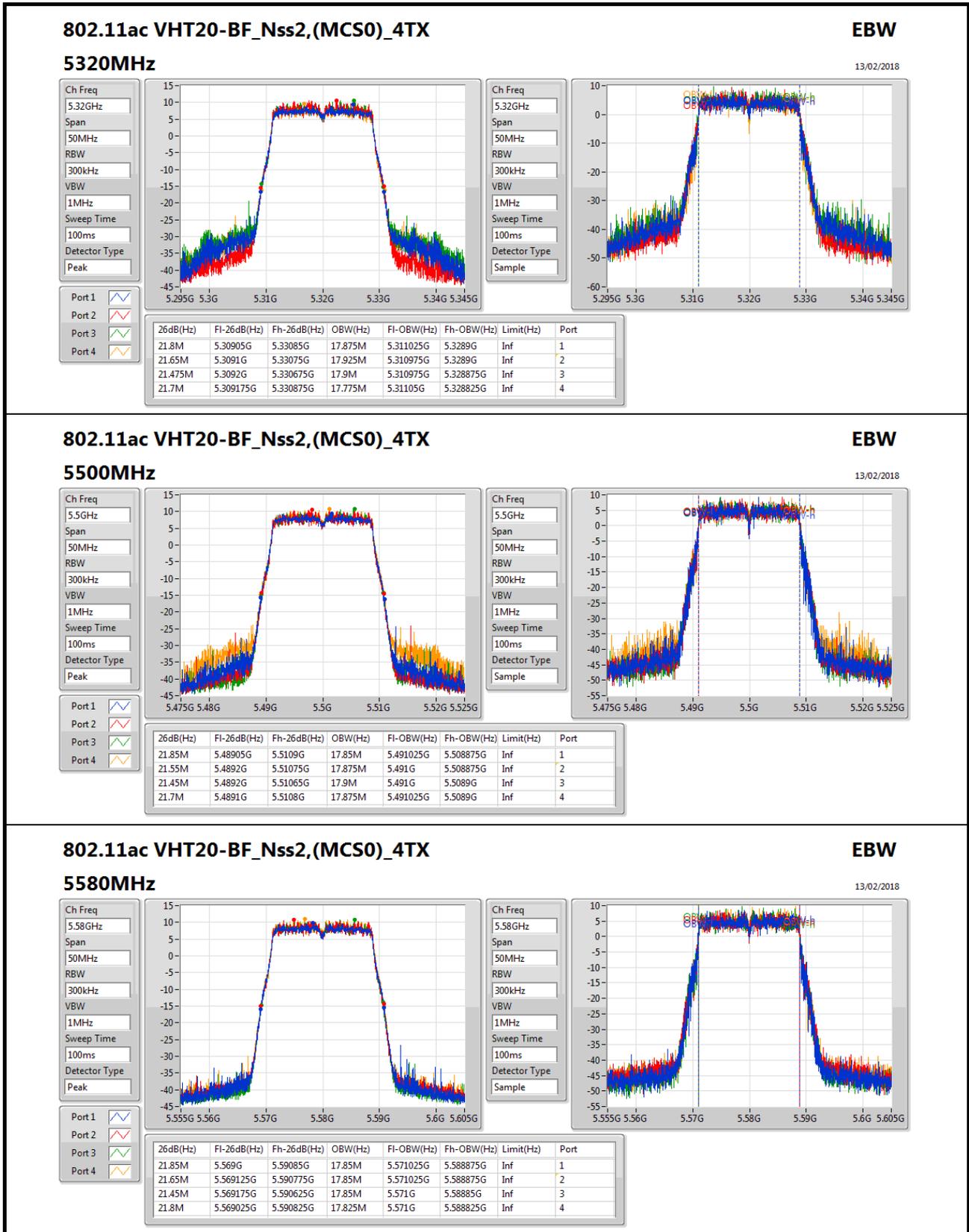











802.11ac VHT20-BF_Nss2,(MCS0)_4TX
EBW

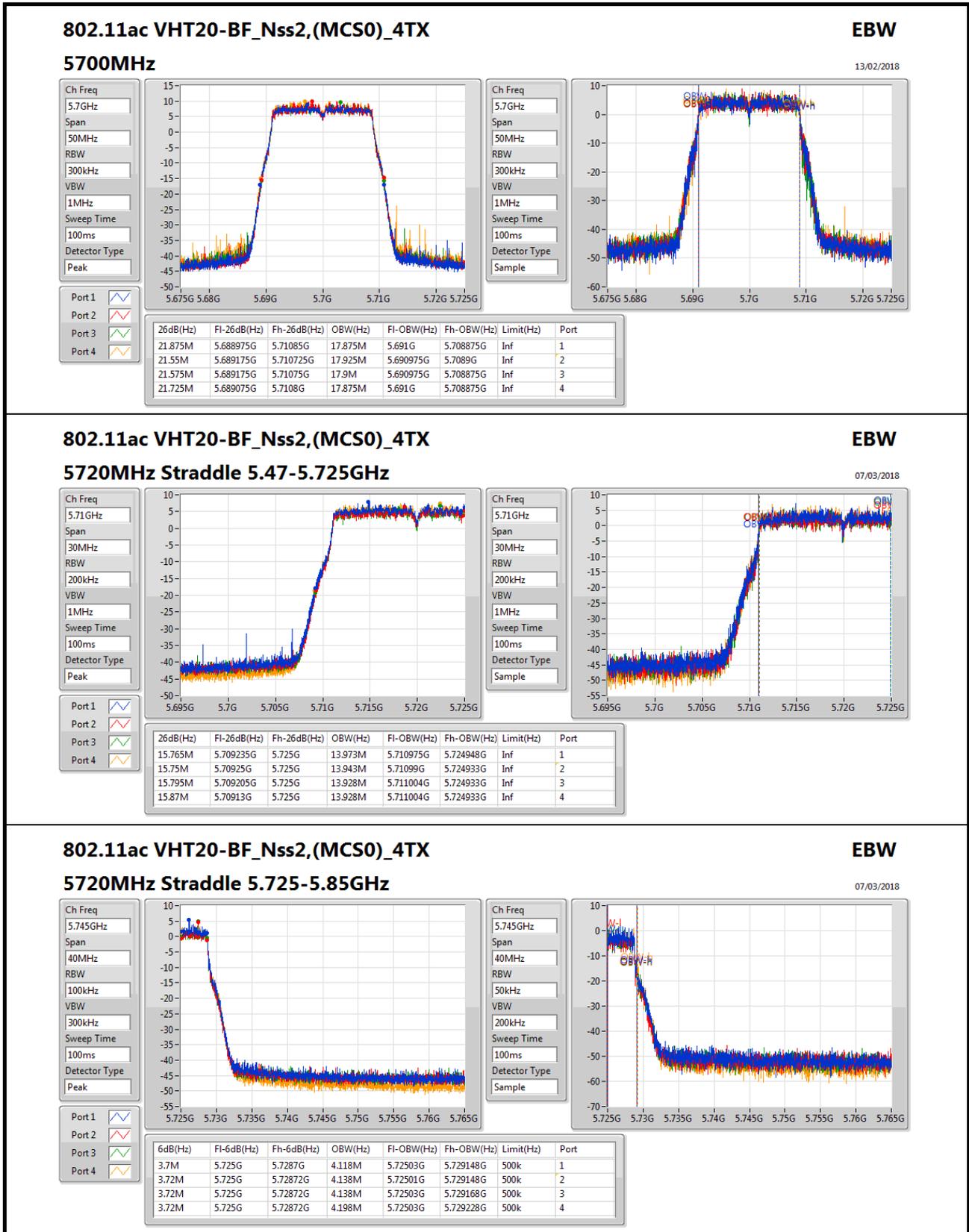
13/02/2018

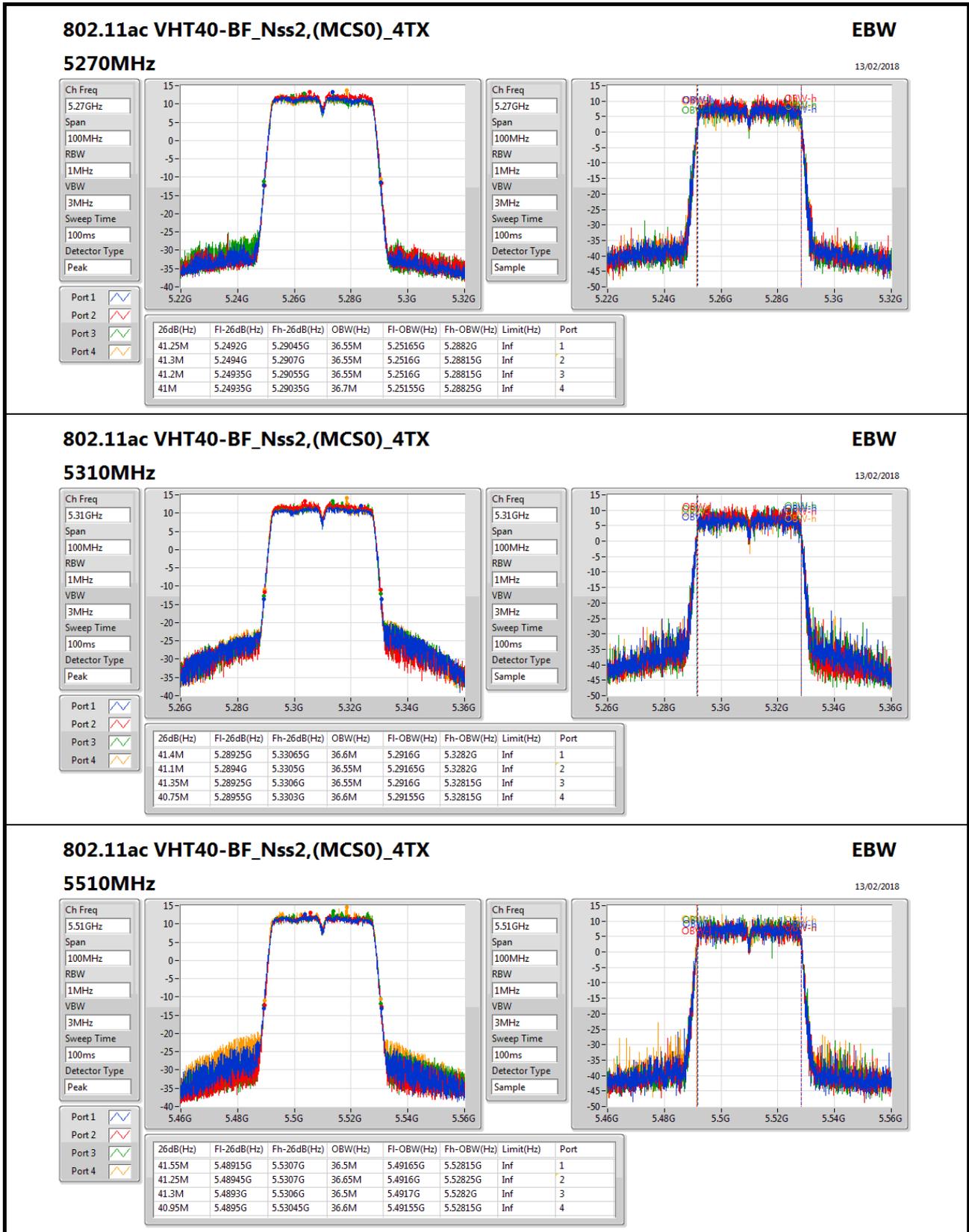
5580MHz

Ch Freq: 5.58GHz
Span: 50MHz
RBW: 300kHz
VBW: 1MHz
Sweep Time: 100ms
Detector Type: Peak

Ch Freq: 5.58GHz
Span: 50MHz
RBW: 300kHz
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
21.85M	5.569G	5.59085G	17.85M	5.571025G	5.588875G	Inf	1
21.65M	5.569125G	5.590775G	17.85M	5.571025G	5.588875G	Inf	2
21.45M	5.569175G	5.590625G	17.85M	5.571G	5.58885G	Inf	3
21.8M	5.569025G	5.590825G	17.825M	5.571G	5.588825G	Inf	4




802.11ac VHT40-BF_Nss2,(MCS0)_4TX
EBW

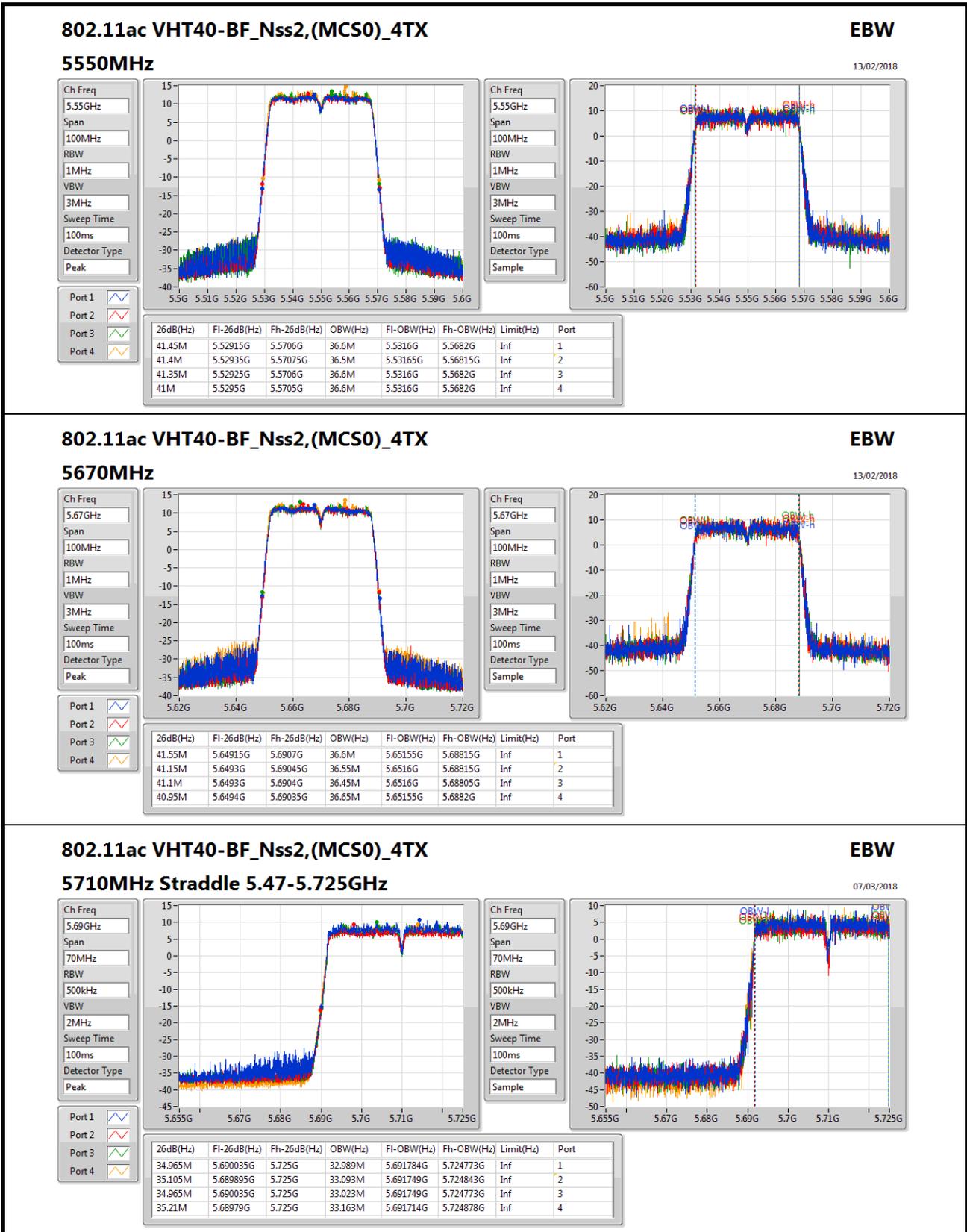
13/02/2018

5510MHz

Ch Freq: 5.51GHz
Span: 100MHz
RBW: 1MHz
VBW: 3MHz
Sweep Time: 100ms
Detector Type: Peak

Ch Freq: 5.51GHz
Span: 100MHz
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
41.55M	5.48915G	5.5307G	36.5M	5.49165G	5.52815G	Inf	1
41.25M	5.48945G	5.5307G	36.65M	5.4916G	5.52825G	Inf	2
41.3M	5.4893G	5.5306G	36.5M	5.4917G	5.5282G	Inf	3
40.95M	5.4895G	5.53045G	36.6M	5.49155G	5.52815G	Inf	4


802.11ac VHT40-BF_Nss2,(MCS0)_4TX
EBW
5710MHz Straddle 5.47-5.725GHz
07/03/2018

Ch Freq
5.69GHz

Span
70MHz

RBW
500kHz

VBW
2MHz

Sweep Time
100ms

Detector Type
Peak

Port 1

Port 2

Port 3

Port 4

Ch Freq
5.69GHz

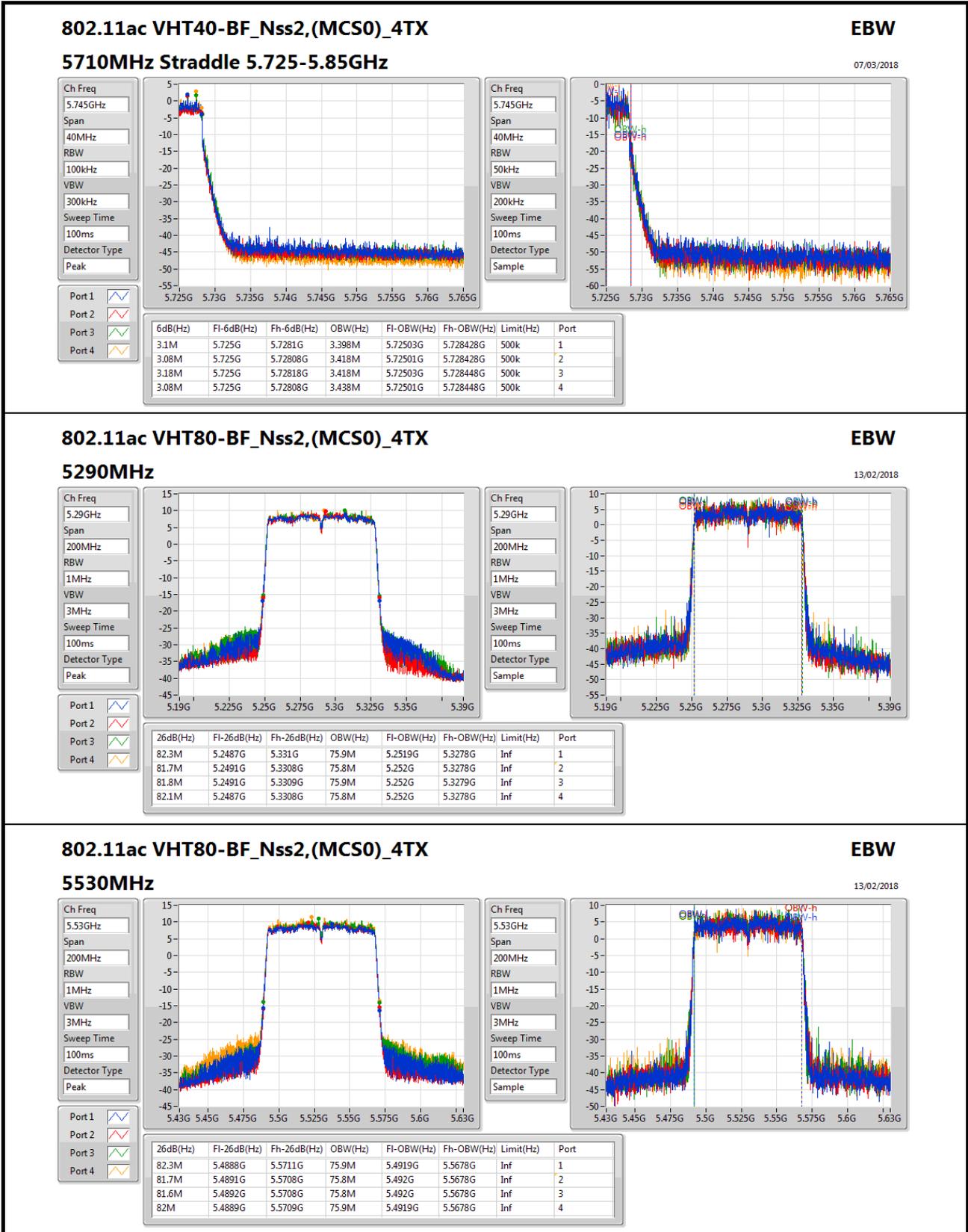
Span
70MHz

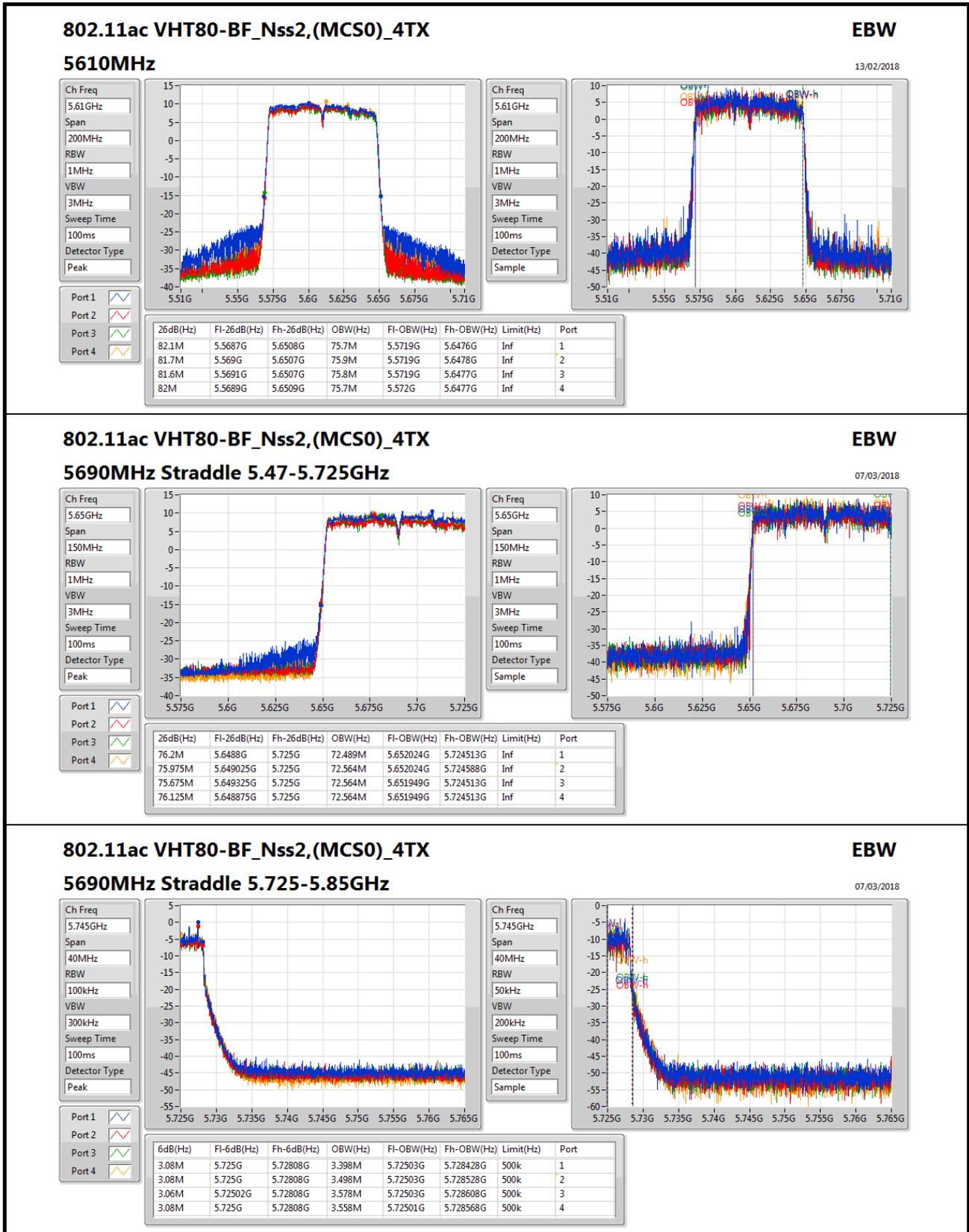
RBW
500kHz

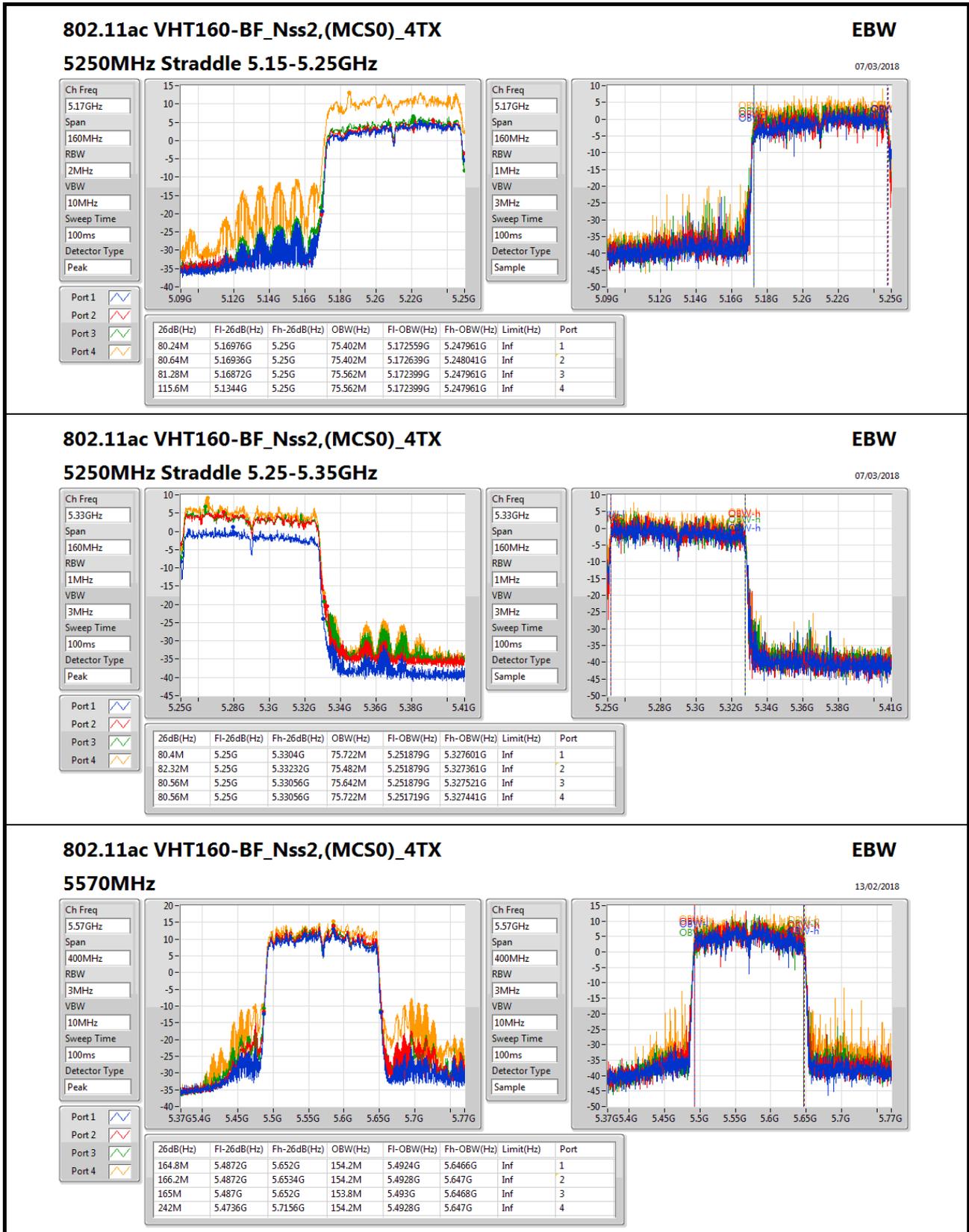
VBW
2MHz

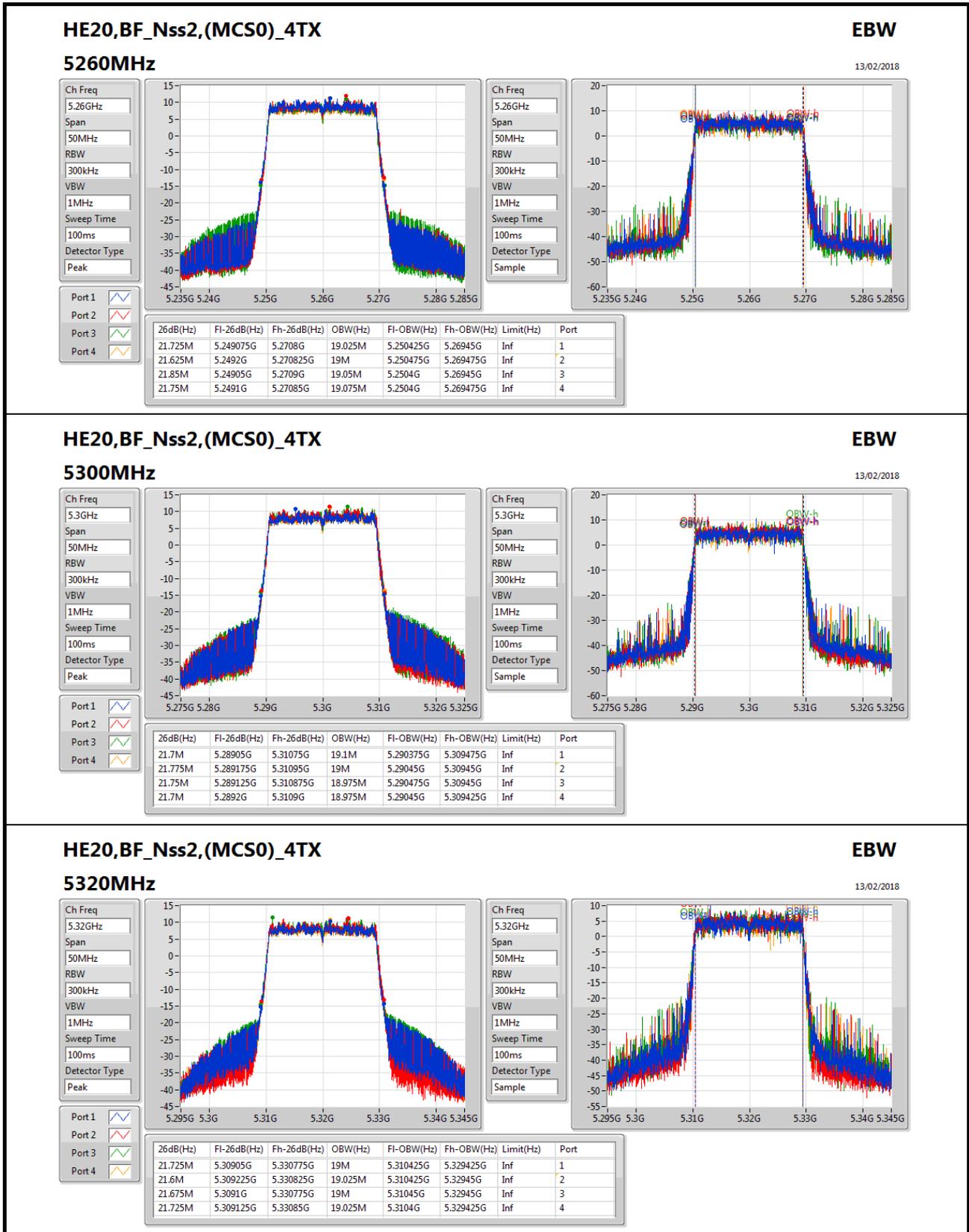
Sweep Time
100ms

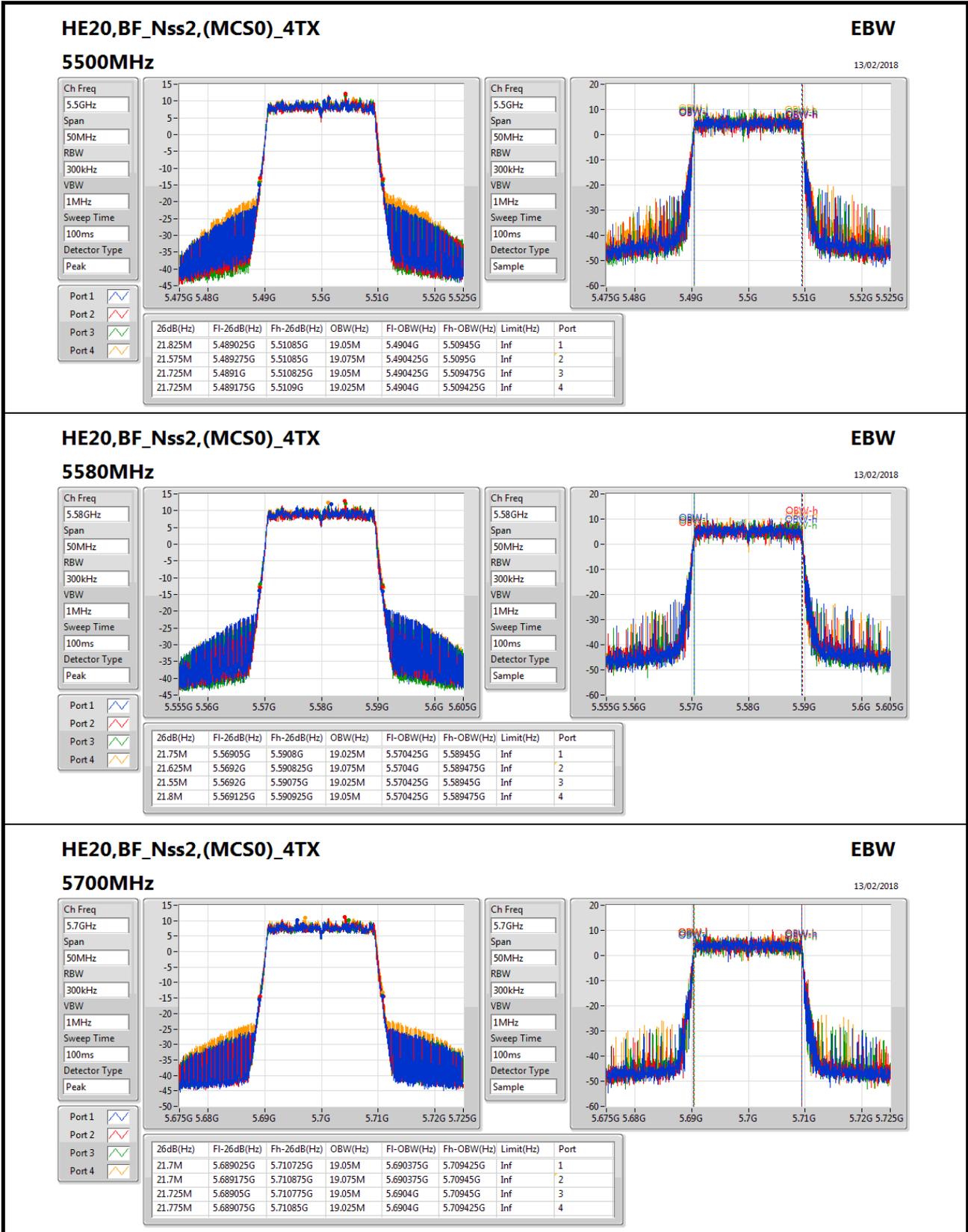
Detector Type
Sample

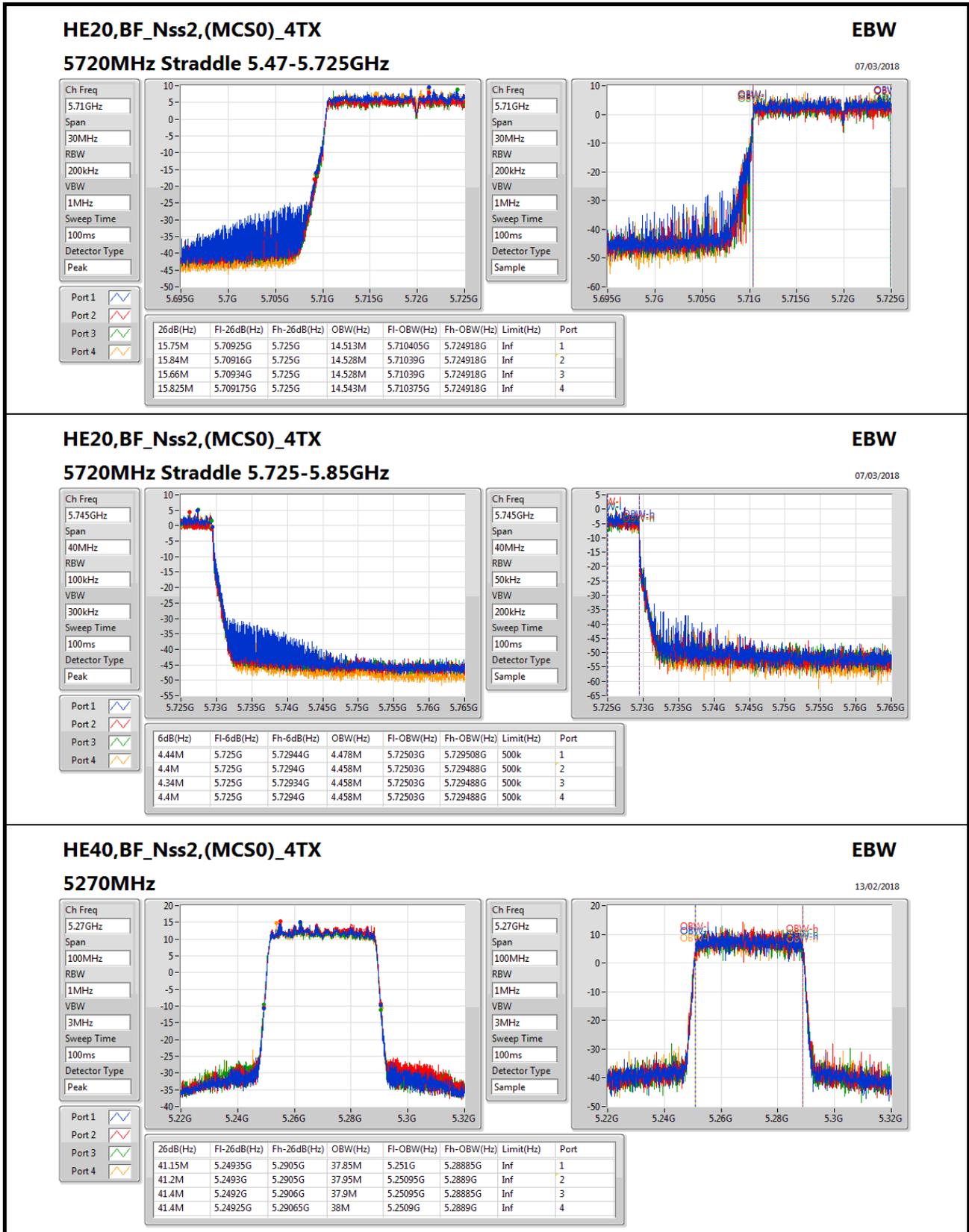


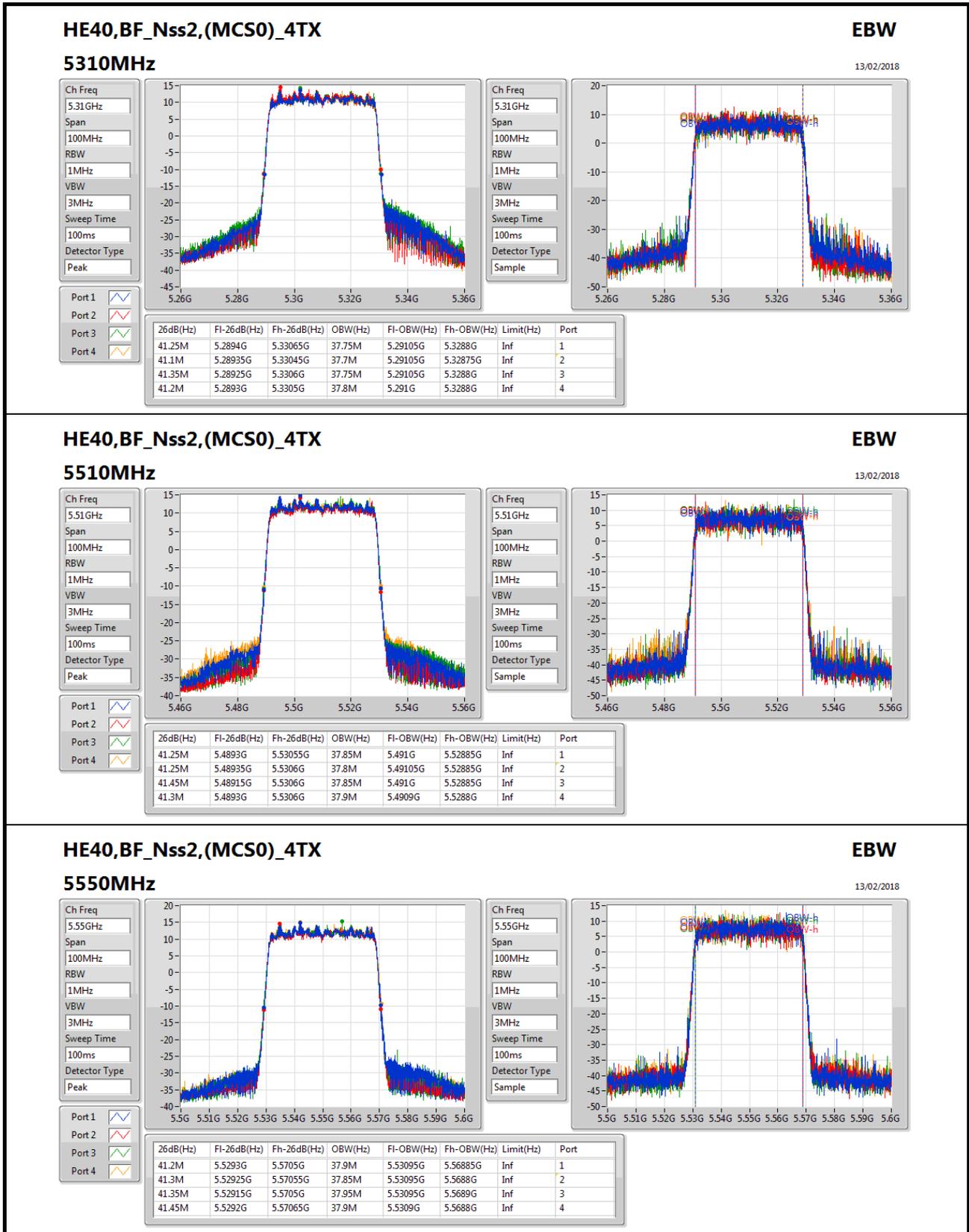











HE40,BF_Nss2,(MCS0)_4TX
EBW

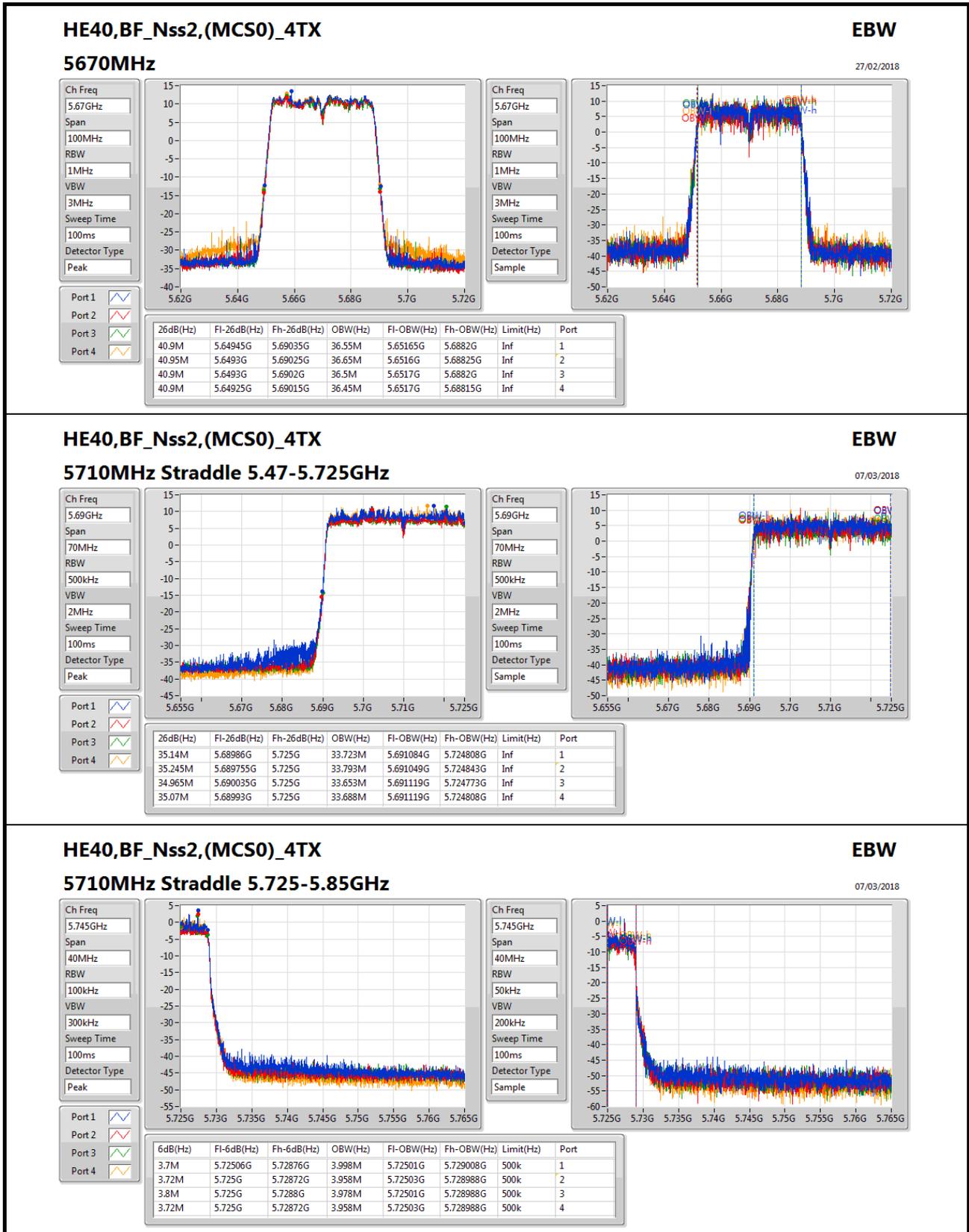
13/02/2018

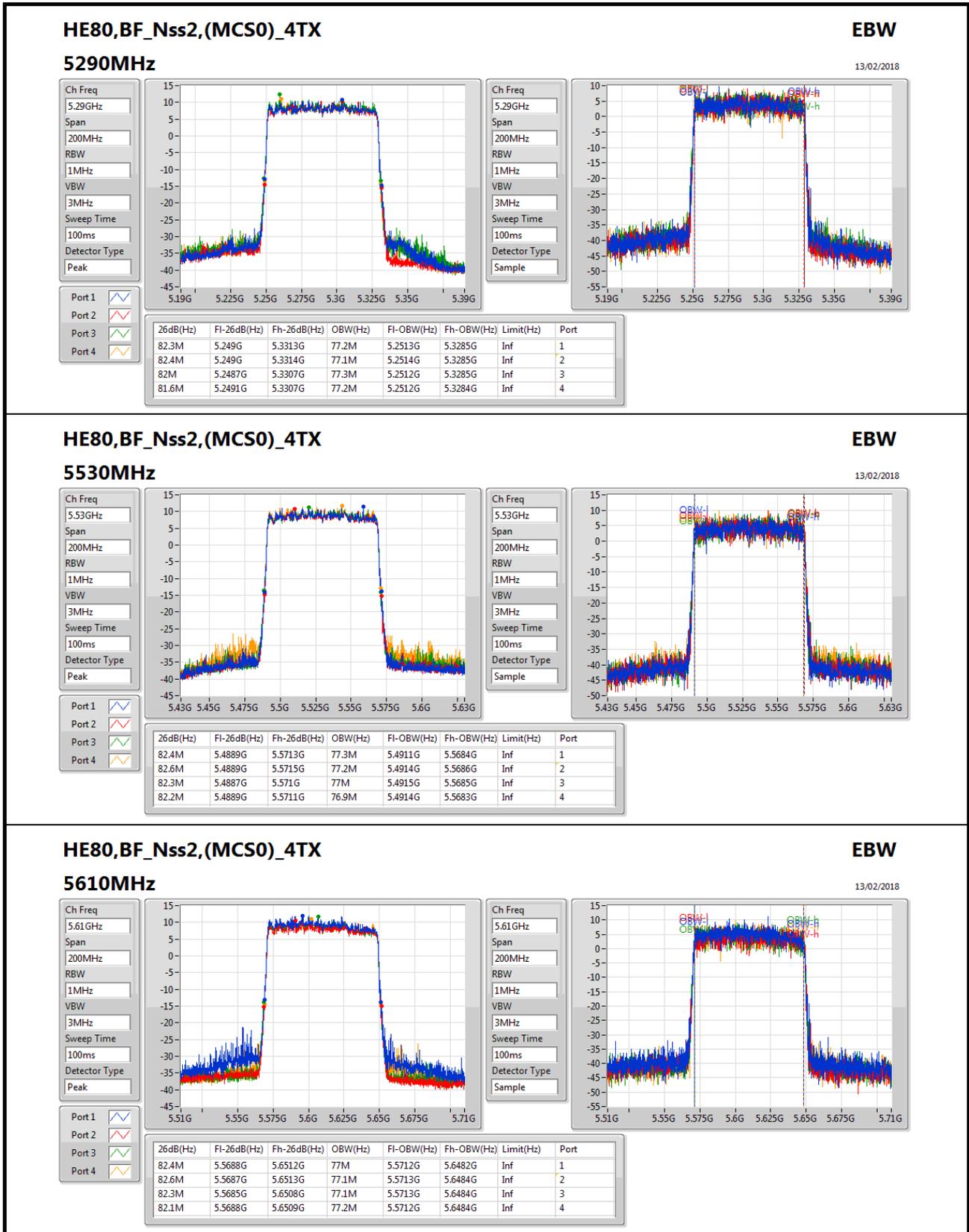
5550MHz

Ch Freq: 5.55GHz
Span: 100MHz
RBW: 1MHz
VBW: 3MHz
Sweep Time: 100ms
Detector Type: Peak

Ch Freq: 5.55GHz
Span: 100MHz
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
41.2M	5.5293G	5.5705G	37.9M	5.53095G	5.56885G	Inf	1
41.3M	5.52925G	5.57055G	37.85M	5.53095G	5.5688G	Inf	2
41.35M	5.52915G	5.5705G	37.95M	5.53095G	5.5689G	Inf	3
41.45M	5.5292G	5.57065G	37.9M	5.5309G	5.5688G	Inf	4




HE80,BF_Nss2,(MCS0)_4TX
EBW

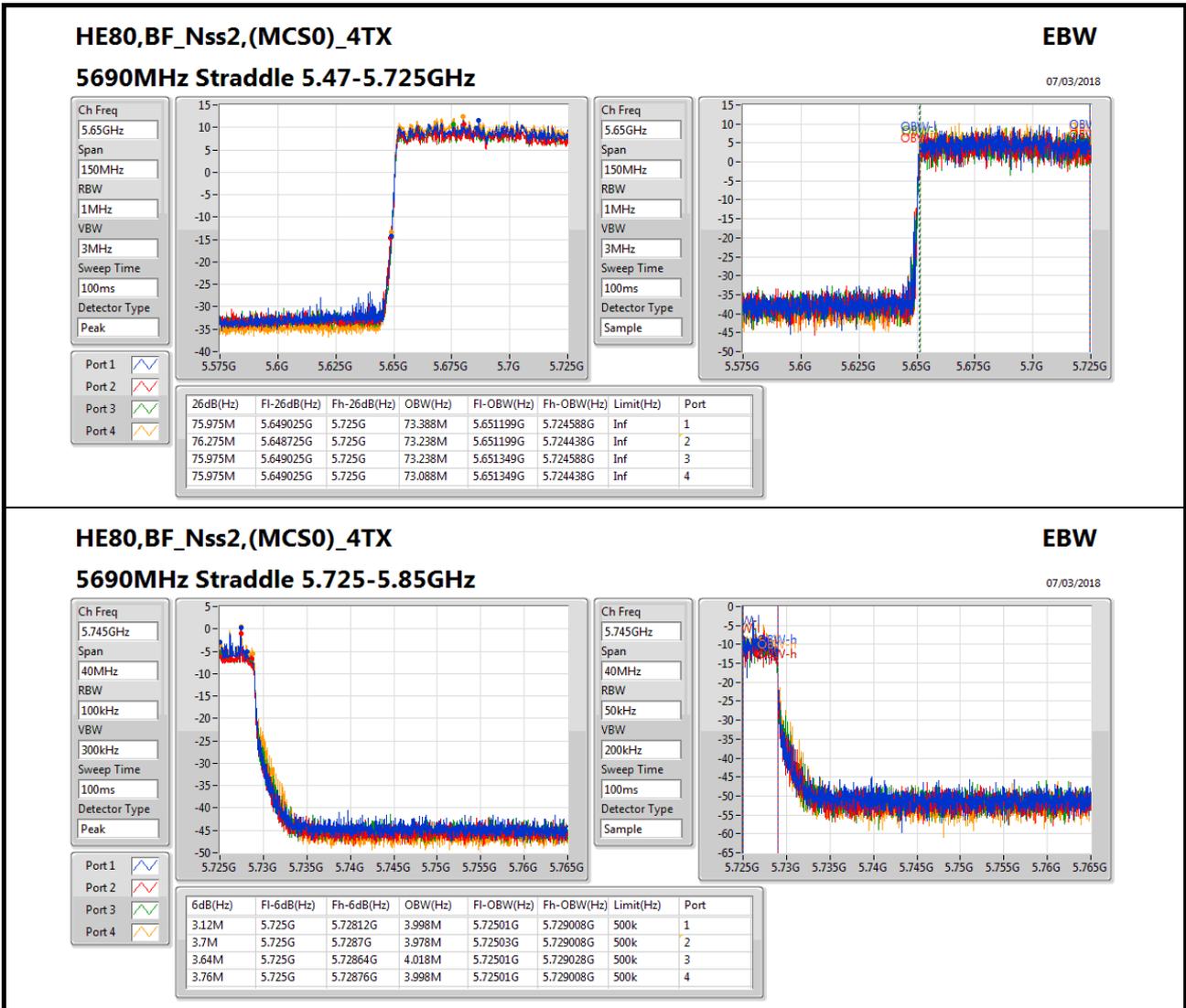
13/02/2018

5610MHz

Ch Freq: 5.61GHz
Span: 200MHz
RBW: 1MHz
VBW: 3MHz
Sweep Time: 100ms
Detector Type: Peak

Ch Freq: 5.61GHz
Span: 200MHz
RBW: 1MHz
VBW: 3MHz
Sweep Time: 100ms
Detector Type: Sample

26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
82.4M	5.5688G	5.6512G	77M	5.5712G	5.6482G	Inf	1
82.6M	5.5687G	5.6513G	77.1M	5.5713G	5.6484G	Inf	2
82.3M	5.5685G	5.6508G	77.1M	5.5713G	5.6484G	Inf	3
82.1M	5.5688G	5.6509G	77.2M	5.5712G	5.6484G	Inf	4





Summary

Mode	Total Power (dBm)	Total Power (W)
5.15-5.25GHz	-	-
802.11ac VHT160_Nss1,(MCS0)_4TX	18.58	0.07211
802.11ac VHT160-BF_Nss1,(MCS0)_4TX	19.81	0.09572
802.11ac VHT160-BF_Nss2,(MCS0)_4TX	20.06	0.10139
5.25-5.35GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	21.93	0.15596
802.11ac VHT20_Nss1,(MCS0)_4TX	22.35	0.17179
802.11ac VHT40_Nss1,(MCS0)_4TX	23.96	0.24889
802.11ac VHT80_Nss1,(MCS0)_4TX	23.92	0.24660
802.11ac VHT160_Nss1,(MCS0)_4TX	17.75	0.05957
HE20_Nss1,(MCS0)_4TX	22.64	0.18365
HE40_Nss1,(MCS0)_4TX	23.79	0.23933
HE80_Nss1,(MCS0)_4TX	23.93	0.24717
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	21.60	0.14454
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	21.43	0.13900
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	21.51	0.14158
802.11ac VHT160-BF_Nss1,(MCS0)_4TX	18.99	0.07925
HE20,BF_Nss1,(MCS0)_4TX	21.60	0.14454
HE40,BF_Nss1,(MCS0)_4TX	21.60	0.14454
HE80,BF_Nss1,(MCS0)_4TX	21.59	0.14421
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	23.96	0.24889
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	23.96	0.24889
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	23.82	0.24099
802.11ac VHT160-BF_Nss2,(MCS0)_4TX	19.25	0.08414
HE20,BF_Nss2,(MCS0)_4TX	23.94	0.24774
HE40,BF_Nss2,(MCS0)_4TX	23.79	0.23933
HE80,BF_Nss2,(MCS0)_4TX	23.85	0.24266
5.47-5.725GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	22.35	0.17179
802.11ac VHT20_Nss1,(MCS0)_4TX	22.63	0.18323
802.11ac VHT40_Nss1,(MCS0)_4TX	23.96	0.24889
802.11ac VHT80_Nss1,(MCS0)_4TX	23.92	0.24660
802.11ac VHT160_Nss1,(MCS0)_4TX	22.44	0.17539
HE20_Nss1,(MCS0)_4TX	22.76	0.18880
HE40_Nss1,(MCS0)_4TX	23.93	0.24717
HE80_Nss1,(MCS0)_4TX	23.96	0.24889
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	21.62	0.14521
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	21.64	0.14588
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	21.64	0.14588
802.11ac VHT160-BF_Nss1,(MCS0)_4TX	21.63	0.14555
HE20,BF_Nss1,(MCS0)_4TX	21.65	0.14622
HE40,BF_Nss1,(MCS0)_4TX	21.55	0.14289
HE80,BF_Nss1,(MCS0)_4TX	21.66	0.14655
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	23.91	0.24604



Power Result

Appendix B

Mode	Total Power (dBm)	Total Power (W)
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	23.87	0.24378
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	23.93	0.24717
802.11ac VHT160-BF_Nss2,(MCS0)_4TX	23.58	0.22803
HE20,BF_Nss2,(MCS0)_4TX	23.91	0.24604
HE40,BF_Nss2,(MCS0)_4TX	23.95	0.24831
HE80,BF_Nss2,(MCS0)_4TX	23.97	0.24946
5.725-5.85GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	14.63	0.02904
802.11ac VHT20_Nss1,(MCS0)_4TX	15.12	0.03251
802.11ac VHT40_Nss1,(MCS0)_4TX	13.38	0.02178
802.11ac VHT80_Nss1,(MCS0)_4TX	9.31	0.00853
HE20_Nss1,(MCS0)_4TX	15.76	0.03767
HE40_Nss1,(MCS0)_4TX	13.90	0.02455
HE80_Nss1,(MCS0)_4TX	9.94	0.00986
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	14.55	0.02851
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	10.87	0.01222
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	6.99	0.00500
HE20,BF_Nss1,(MCS0)_4TX	15.13	0.03258
HE40,BF_Nss1,(MCS0)_4TX	11.55	0.01429
HE80,BF_Nss1,(MCS0)_4TX	7.93	0.00621
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	17.03	0.05047
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	13.17	0.02075
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	9.10	0.00813
HE20,BF_Nss2,(MCS0)_4TX	17.43	0.05534
HE40,BF_Nss2,(MCS0)_4TX	13.95	0.02483
HE80,BF_Nss2,(MCS0)_4TX	10.06	0.01014



Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-
5260MHz	Pass	2.30	15.24	15.81	16.12	16.21	21.88	24.00
5300MHz	Pass	2.30	16.25	16.02	15.71	15.63	21.93	24.00
5320MHz	Pass	2.30	15.73	15.99	15.68	15.52	21.75	24.00
5500MHz	Pass	2.30	16.31	15.81	15.96	17.11	22.35	24.00
5580MHz	Pass	2.30	16.19	15.41	15.73	16.94	22.13	24.00
5700MHz	Pass	2.30	16.27	15.51	15.76	16.82	22.14	24.00
5720MHz Straddle 5.47-5.725GHz	Pass	2.30	14.85	14.40	14.19	15.49	20.78	22.93
5720MHz Straddle 5.725-5.85GHz	Pass	1.90	8.50	8.36	8.13	9.34	14.63	30.00
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5260MHz	Pass	2.30	16.31	16.62	16.79	15.5	22.35	24.00
5300MHz	Pass	2.30	16.51	16.19	16.25	15.89	22.24	24.00
5320MHz	Pass	2.30	17.1	15.44	16.31	16.23	22.33	24.00
5500MHz	Pass	2.30	16.47	16.13	16.41	17.33	22.63	24.00
5580MHz	Pass	2.30	16.49	15.77	15.97	17.17	22.40	24.00
5700MHz	Pass	2.30	16.29	15.78	16.24	17.18	22.42	24.00
5720MHz Straddle 5.47-5.725GHz	Pass	2.30	14.93	14.44	14.50	15.56	20.90	22.97
5720MHz Straddle 5.725-5.85GHz	Pass	1.90	9.13	8.68	8.66	9.81	15.12	30.00
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5270MHz	Pass	2.30	17.78	17.96	18.31	17.52	23.92	24.00
5310MHz	Pass	2.30	18.23	17.81	18.2	17.46	23.96	24.00
5510MHz	Pass	2.30	18	17.39	17.79	18.5	23.96	24.00
5550MHz	Pass	2.30	17.96	17.23	17.88	18.39	23.91	24.00
5670MHz	Pass	2.30	18.15	17.29	17.62	18.56	23.95	24.00
5710MHz Straddle 5.47-5.725GHz	Pass	2.30	18.21	17.52	17.54	18.37	23.95	24.00
5710MHz Straddle 5.725-5.85GHz	Pass	1.90	7.65	6.77	7.07	7.87	13.38	30.00
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5290MHz	Pass	2.30	18	17.73	18.11	17.76	23.92	24.00
5530MHz	Pass	2.30	17.84	17.28	17.98	18.41	23.92	24.00
5610MHz	Pass	2.30	18.39	17.18	17.27	18.22	23.82	24.00
5690MHz Straddle 5.47-5.725GHz	Pass	2.30	18.17	17.08	17.16	18.79	23.88	24.00
5690MHz Straddle 5.725-5.85GHz	Pass	1.90	3.65	2.46	2.52	4.25	9.31	30.00
802.11ac VHT160_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	2.30	11.35	11.44	12.30	14.41	18.58	30.00
5250MHz Straddle 5.25-5.35GHz	Pass	2.30	11.22	11.51	11.16	12.81	17.75	24.00
5570MHz	Pass	2.30	15.61	16.08	16.32	17.44	22.44	24.00
HE20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5260MHz	Pass	2.30	16.49	16.04	17.16	15.68	22.40	24.00
5300MHz	Pass	2.30	16.9	15.56	16.73	16.06	22.37	24.00
5320MHz	Pass	2.30	17.37	15.91	16.59	16.47	22.64	24.00
5500MHz	Pass	2.30	16.57	16.22	16.21	17.49	22.68	24.00
5580MHz	Pass	2.30	16.88	16.07	16.17	17.44	22.70	24.00
5700MHz	Pass	2.30	16.64	16.19	16.49	17.51	22.76	24.00
5720MHz Straddle 5.47-5.725GHz	Pass	2.30	15.72	14.41	14.39	15.66	21.11	22.95



Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
5720MHz Straddle 5.725-5.85GHz	Pass	1.90	10.36	9.23	8.95	10.25	15.76	30.00
HE40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5270MHz	Pass	2.30	18.21	17.01	17.82	17.78	23.75	24.00
5310MHz	Pass	2.30	17.79	17.73	17.88	17.66	23.79	24.00
5510MHz	Pass	2.30	17.69	17.15	17.73	18.34	23.77	24.00
5550MHz	Pass	2.30	18.03	17.07	17.57	18.27	23.78	24.00
5670MHz	Pass	2.30	18.21	17.36	17.35	18.23	23.83	24.00
5710MHz Straddle 5.47-5.725GHz	Pass	2.30	18.23	17.45	17.41	18.46	23.93	24.00
5710MHz Straddle 5.725-5.85GHz	Pass	1.90	8.23	7.38	7.36	8.45	13.90	30.00
HE80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5290MHz	Pass	2.30	17.89	17.85	18.14	17.75	23.93	24.00
5530MHz	Pass	2.30	17.82	17.25	18.06	18.48	23.95	24.00
5610MHz	Pass	2.30	18.41	17.33	17.59	18.32	23.96	24.00
5690MHz Straddle 5.47-5.725GHz	Pass	2.30	18.06	17.11	17.05	18.83	23.85	24.00
5690MHz Straddle 5.725-5.85GHz	Pass	1.90	4.30	3.18	3.24	4.74	9.94	30.00
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5260MHz	Pass	8.32	15.38	15.95	16.04	14.84	21.60	21.68
5300MHz	Pass	8.32	15.73	15.82	15.36	15.06	21.52	21.68
5320MHz	Pass	8.32	16.51	14.85	15.21	15.37	21.55	21.68
5500MHz	Pass	8.32	15.54	15.14	15.22	16.19	21.56	21.68
5580MHz	Pass	8.32	15.63	15.05	15.36	16.28	21.62	21.68
5700MHz	Pass	8.32	15.74	15.02	15.12	16.35	21.61	21.68
5720MHz Straddle 5.47-5.725GHz	Pass	8.32	15.03	13.81	13.74	15.01	20.46	20.66
5720MHz Straddle 5.725-5.85GHz	Pass	7.92	9.05	7.96	7.77	9.16	14.55	28.08
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5270MHz	Pass	8.32	15.25	15.6	15.85	14.88	21.43	21.68
5310MHz	Pass	8.32	15.49	15.31	15.51	15.28	21.42	21.68
5510MHz	Pass	8.32	15.56	15.06	15.43	16.16	21.59	21.68
5550MHz	Pass	8.32	15.79	15.11	15.37	16.14	21.64	21.68
5670MHz	Pass	8.32	15.76	15.15	15.32	16.11	21.62	21.68
5710MHz Straddle 5.47-5.725GHz	Pass	8.32	15.79	14.88	14.59	15.86	21.34	21.68
5710MHz Straddle 5.725-5.85GHz	Pass	7.92	5.23	4.33	4.24	5.45	10.87	28.08
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5290MHz	Pass	8.32	15.47	15.46	15.9	15.08	21.51	21.68
5530MHz	Pass	8.32	15.29	15.06	15.77	16.27	21.64	21.68
5610MHz	Pass	8.32	15.62	15.41	15.33	15.86	21.58	21.68
5690MHz Straddle 5.47-5.725GHz	Pass	8.32	15.92	14.91	14.81	16.60	21.64	21.68
5690MHz Straddle 5.725-5.85GHz	Pass	7.92	1.32	0.30	0.08	1.93	6.99	28.08
802.11ac VHT160-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	8.32	12.51	12.55	13.69	15.63	19.81	27.68
5250MHz Straddle 5.25-5.35GHz	Pass	8.32	12.31	12.64	12.52	14.14	18.99	21.68
5570MHz	Pass	8.32	14.85	15.24	15.45	16.68	21.63	21.68
HE20,BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5260MHz	Pass	8.32	15.66	15.1	16.1	14.78	21.46	21.68
5300MHz	Pass	8.32	16.02	14.97	15.65	15.25	21.51	21.68



Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
5320MHz	Pass	8.32	16.34	14.94	15.55	15.37	21.60	21.68
5500MHz	Pass	8.32	15.32	15.1	15.76	16.25	21.65	21.68
5580MHz	Pass	8.32	15.5	15.29	15.57	16.08	21.64	21.68
5700MHz	Pass	8.32	15.86	14.92	15.21	16.04	21.55	21.68
5720MHz Straddle 5.47-5.725GHz	Pass	8.32	14.96	13.82	13.81	15.09	20.48	20.65
5720MHz Straddle 5.725-5.85GHz	Pass	7.92	9.62	8.51	8.49	9.68	15.13	28.08
HE40,BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5270MHz	Pass	8.32	15.32	15.9	15.88	15.17	21.60	21.68
5310MHz	Pass	8.32	15.55	15.39	15.52	15.33	21.47	21.68
5510MHz	Pass	8.32	15.16	14.98	15.64	16.18	21.54	21.68
5550MHz	Pass	8.32	15.21	15	15.47	16.16	21.50	21.68
5670MHz	Pass	8.32	15.52	15.21	15.42	15.92	21.55	21.68
5710MHz Straddle 5.47-5.725GHz	Pass	8.32	15.89	14.97	14.89	15.99	21.49	21.68
5710MHz Straddle 5.725-5.85GHz	Pass	7.92	5.89	5.00	4.95	6.15	11.55	28.08
HE80,BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5290MHz	Pass	8.32	15.62	15.41	15.86	15.35	21.59	21.68
5530MHz	Pass	8.32	15.63	15.05	15.24	16.15	21.56	21.68
5610MHz	Pass	8.32	15.74	15.5	15.32	15.79	21.61	21.68
5690MHz Straddle 5.47-5.725GHz	Pass	8.32	15.85	14.89	14.95	16.62	21.66	21.68
5690MHz Straddle 5.725-5.85GHz	Pass	7.92	2.34	1.20	1.01	2.82	7.93	28.08
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5260MHz	Pass	5.31	17.95	17.89	17.68	17.39	23.75	24.00
5300MHz	Pass	5.31	17.82	18.08	18.2	17.64	23.96	24.00
5320MHz	Pass	5.31	17.67	18	18.16	17.49	23.86	24.00
5500MHz	Pass	5.31	17.86	17.73	17.79	18.18	23.91	24.00
5580MHz	Pass	5.31	17.91	17.61	17.69	17.95	23.81	24.00
5700MHz	Pass	5.31	17.85	17.81	17.56	18.27	23.90	24.00
5720MHz Straddle 5.47-5.725GHz	Pass	5.31	17.36	16.24	16.30	17.21	22.83	22.97
5720MHz Straddle 5.725-5.85GHz	Pass	4.91	11.54	10.50	10.48	11.41	17.03	30.00
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5270MHz	Pass	5.31	17.76	18.13	17.66	17.66	23.83	24.00
5310MHz	Pass	5.31	17.56	18.45	17.99	17.7	23.96	24.00
5510MHz	Pass	5.31	17.84	17.45	17.84	17.93	23.79	24.00
5550MHz	Pass	5.31	17.88	17.54	17.85	18.11	23.87	24.00
5670MHz	Pass	5.31	17.95	17.67	17.83	17.96	23.87	24.00
5710MHz Straddle 5.47-5.725GHz	Pass	5.31	18.18	17.19	17.28	18.30	23.79	24.00
5710MHz Straddle 5.725-5.85GHz	Pass	4.91	7.54	6.62	6.62	7.71	13.17	30.00
802.11ac VHT80-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5290MHz	Pass	5.31	17.67	17.65	18.03	17.83	23.82	24.00
5530MHz	Pass	5.31	17.78	17.4	18.11	18.3	23.93	24.00
5610MHz	Pass	5.31	18.36	17.64	17.59	17.92	23.91	24.00
5690MHz Straddle 5.47-5.725GHz	Pass	5.31	18.10	17.14	17.08	18.65	23.81	24.00
5690MHz Straddle 5.725-5.85GHz	Pass	4.91	3.39	2.41	2.35	3.97	9.10	30.00
802.11ac VHT160-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	5.31	12.68	12.86	13.85	15.93	20.06	30.00

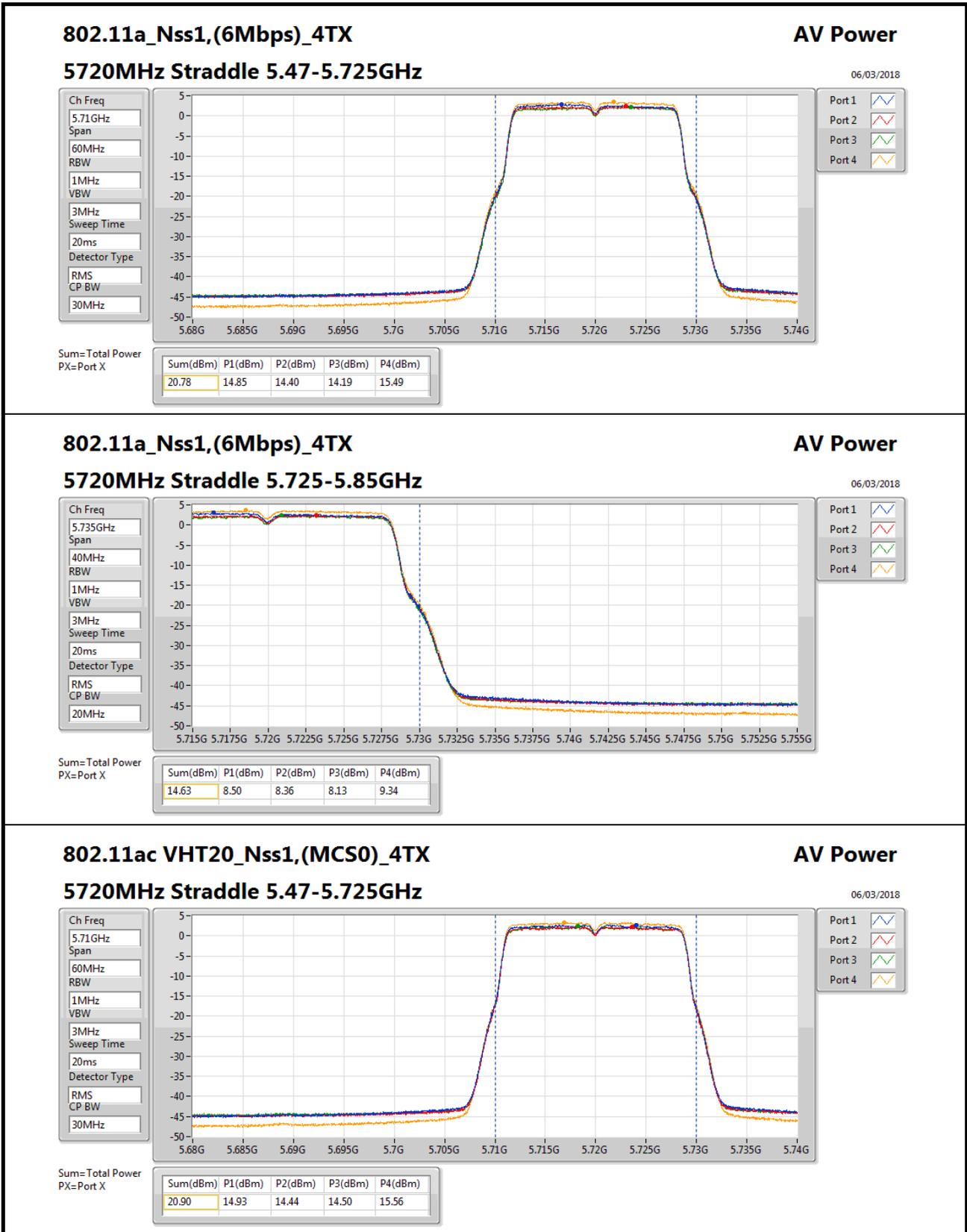


Power Result

Appendix B

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
5250MHz Straddle 5.25-5.35GHz	Pass	5.31	12.53	12.98	12.75	14.41	19.25	24.00
5570MHz	Pass	5.31	16.42	17.49	17.06	18.89	23.58	24.00
HE20,BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5260MHz	Pass	5.31	18	18.01	17.91	17.51	23.88	24.00
5300MHz	Pass	5.31	17.78	18.03	18.22	17.61	23.94	24.00
5320MHz	Pass	5.31	17.65	17.9	18.12	17.35	23.79	24.00
5500MHz	Pass	5.31	18.03	17.48	17.72	18.1	23.86	24.00
5580MHz	Pass	5.31	17.64	17.21	17.76	18.26	23.75	24.00
5700MHz	Pass	5.31	17.87	17.6	17.62	18.4	23.91	24.00
5720MHz Straddle 5.47-5.725GHz	Pass	5.31	17.31	16.31	16.15	17.21	22.80	22.95
5720MHz Straddle 5.725-5.85GHz	Pass	4.91	11.97	10.86	10.91	11.80	17.43	30.00
HE40,BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5270MHz	Pass	5.31	17.92	18.1	17.6	17.43	23.79	24.00
5310MHz	Pass	5.31	17.37	17.82	17.66	17.26	23.55	24.00
5510MHz	Pass	5.31	17.65	17.06	17.72	17.96	23.63	24.00
5550MHz	Pass	5.31	17.89	17.24	17.87	18.07	23.80	24.00
5670MHz	Pass	5.31	18.1	17.54	17.72	18.32	23.95	24.00
5710MHz Straddle 5.47-5.725GHz	Pass	5.31	18.31	17.43	17.22	18.44	23.90	24.00
5710MHz Straddle 5.725-5.85GHz	Pass	4.91	8.28	7.41	7.51	8.44	13.95	30.00
HE80,BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
5290MHz	Pass	5.31	17.8	17.64	18.03	17.83	23.85	24.00
5530MHz	Pass	5.31	17.78	17.28	17.96	17.98	23.78	24.00
5610MHz	Pass	5.31	18.62	17.35	17.78	17.94	23.97	24.00
5690MHz Straddle 5.47-5.725GHz	Pass	5.31	18.11	17.22	17.17	18.77	23.89	24.00
5690MHz Straddle 5.725-5.85GHz	Pass	4.91	4.37	3.35	3.31	4.91	10.06	30.00

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





802.11ac VHT20_Nss1,(MCS0)_4TX

AV Power

5720MHz Straddle 5.725-5.85GHz

06/03/2018

Ch Freq
5.735GHz

Span
40MHz

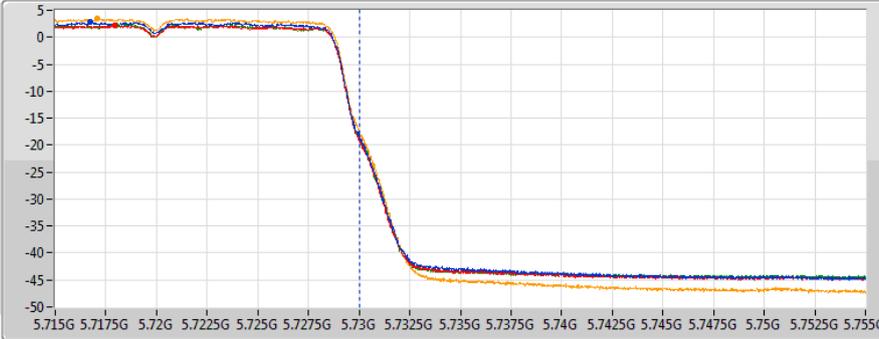
RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS

CP BW
20MHz



Port 1

Port 2

Port 3

Port 4

Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
15.12	9.13	8.68	8.66	9.81

802.11ac VHT40_Nss1,(MCS0)_4TX

AV Power

5710MHz Straddle 5.47-5.725GHz

07/03/2018

Ch Freq
5.69GHz

Span
140MHz

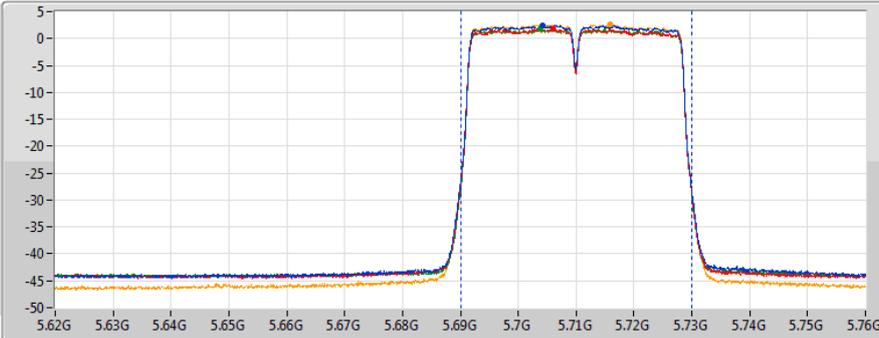
RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS

CP BW
70MHz



Port 1

Port 2

Port 3

Port 4

Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
23.95	18.21	17.52	17.54	18.37

802.11ac VHT40_Nss1,(MCS0)_4TX

AV Power

5710MHz Straddle 5.725-5.85GHz

07/03/2018

Ch Freq
5.735GHz

Span
40MHz

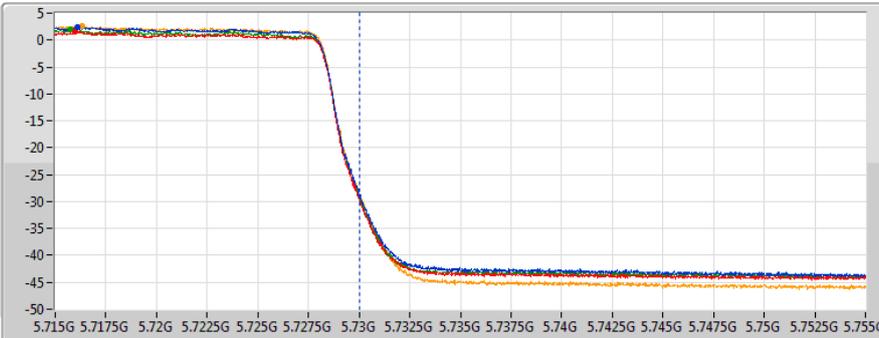
RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS

CP BW
20MHz



Port 1

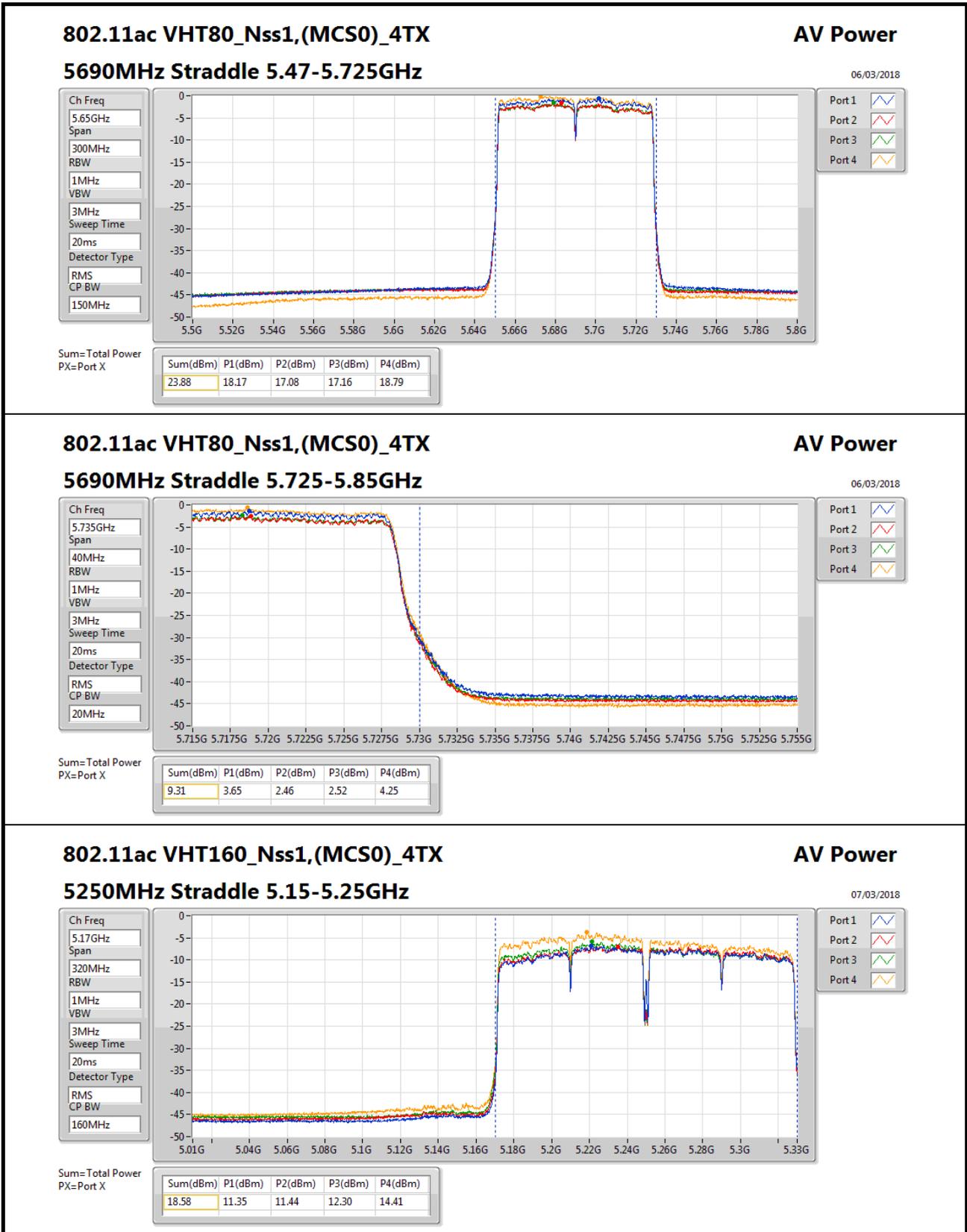
Port 2

Port 3

Port 4

Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
13.38	7.65	6.77	7.07	7.87



802.11ac VHT160_Nss1,(MCS0)_4TX

5250MHz Straddle 5.15-5.25GHz

AV Power

07/03/2018

Ch Freq
5.17GHz

Span
320MHz

RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS

CP BW
160MHz

Port 1

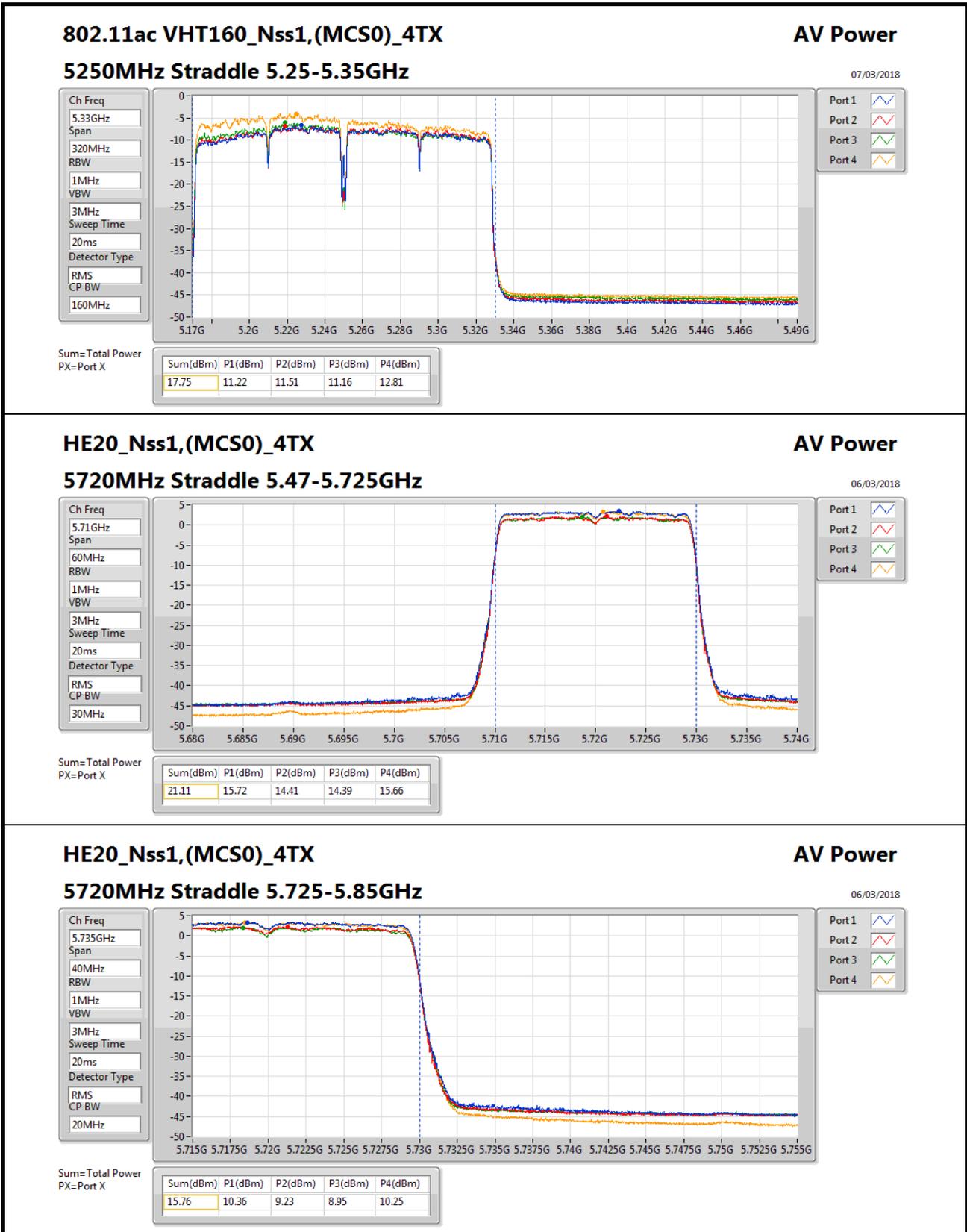
Port 2

Port 3

Port 4

Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
18.58	11.35	11.44	12.30	14.41



HE20_Nss1,(MCS0)_4TX

5720MHz Straddle 5.725-5.85GHz

AV Power

06/03/2018

Ch Freq
5.735GHz

Span
40MHz

RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS

CP BW
20MHz

Port 1

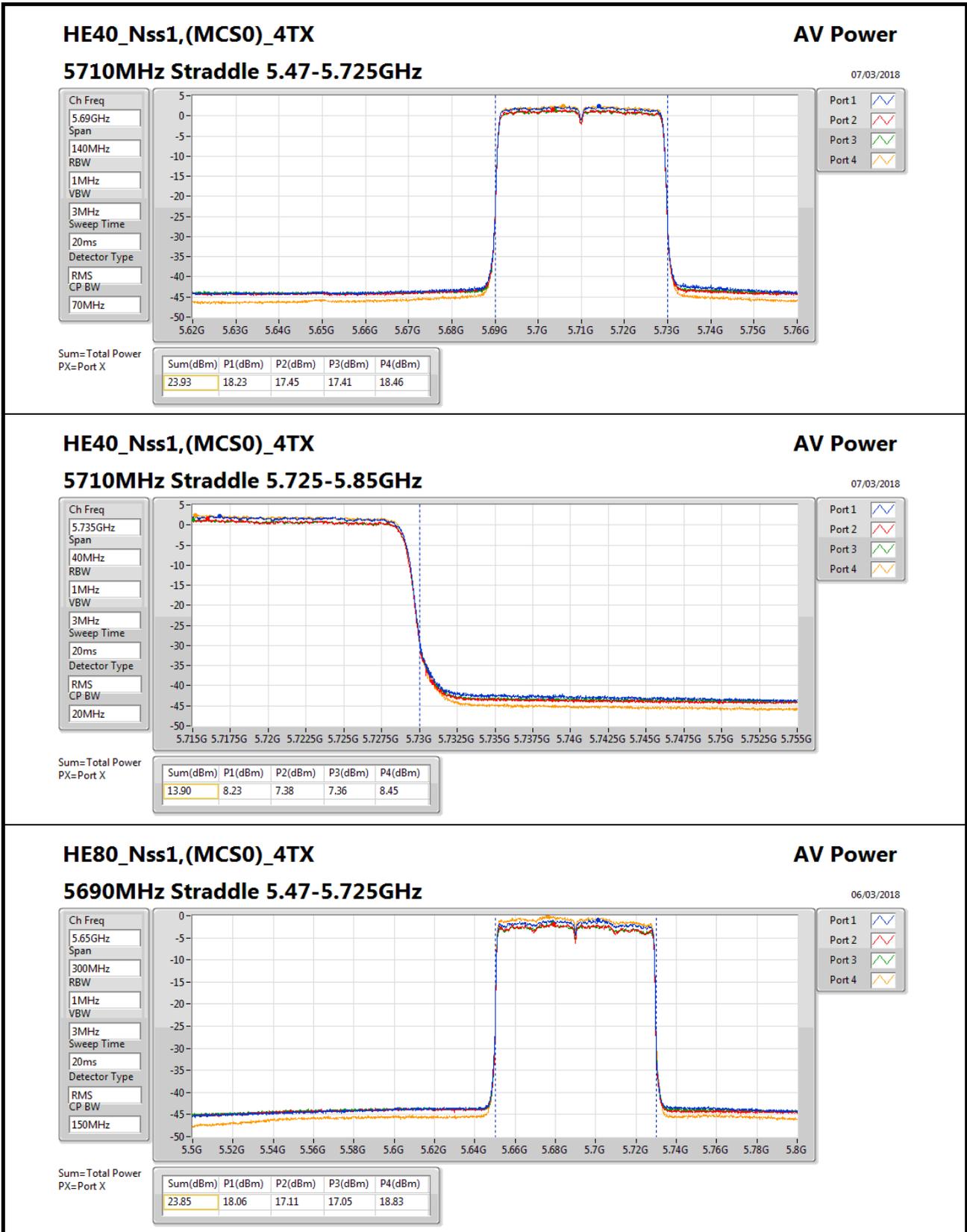
Port 2

Port 3

Port 4

Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
15.76	10.36	9.23	8.95	10.25



HE80_Nss1,(MCS0)_4TX

5690MHz Straddle 5.47-5.725GHz

AV Power

06/03/2018

Ch Freq
5.65GHz

Span
300MHz

RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS

CP BW
150MHz

Port 1

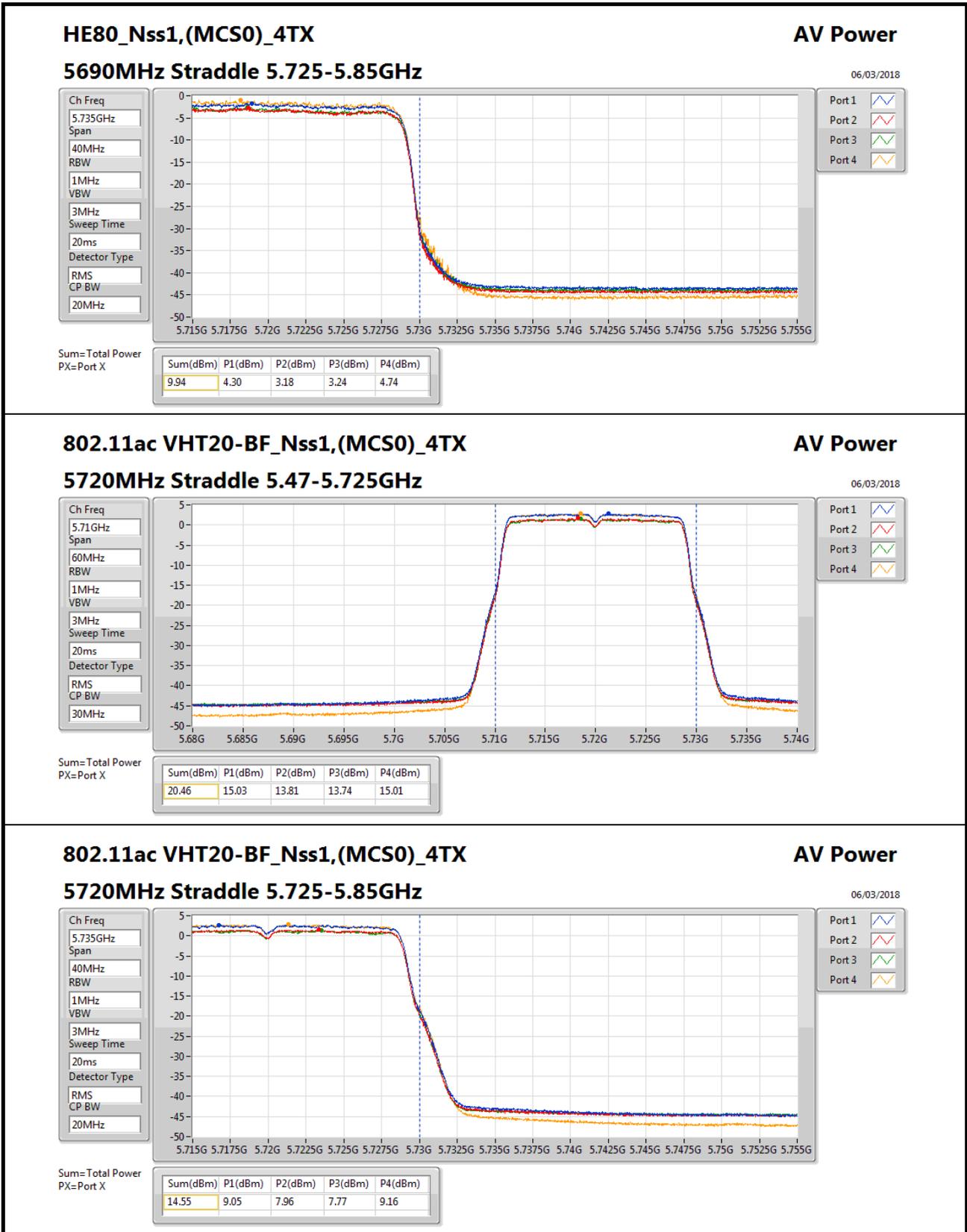
Port 2

Port 3

Port 4

Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
23.85	18.06	17.11	17.05	18.83



802.11ac VHT20-BF_Nss1,(MCS0)_4TX

5720MHz Straddle 5.725-5.85GHz

AV Power

06/03/2018

Ch Freq
5.735GHz

Span
40MHz

RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS

CP BW
20MHz

Port 1

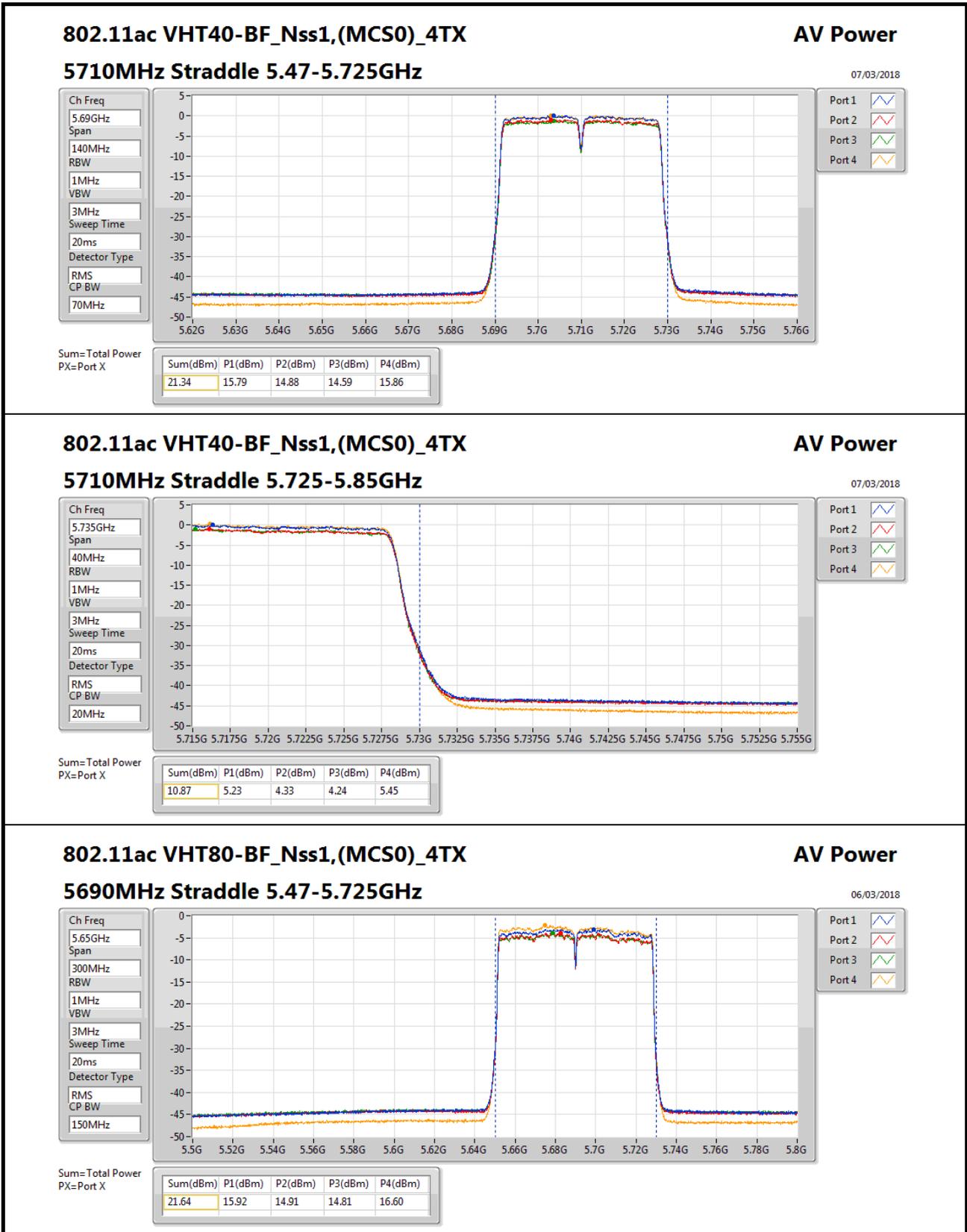
Port 2

Port 3

Port 4

Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
14.55	9.05	7.96	7.77	9.16



802.11ac VHT80-BF_Nss1,(MCS0)_4TX

5690MHz Straddle 5.47-5.725GHz

AV Power

06/03/2018

Ch Freq
5.65GHz

Span
300MHz

RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS

CP BW
150MHz

Port 1

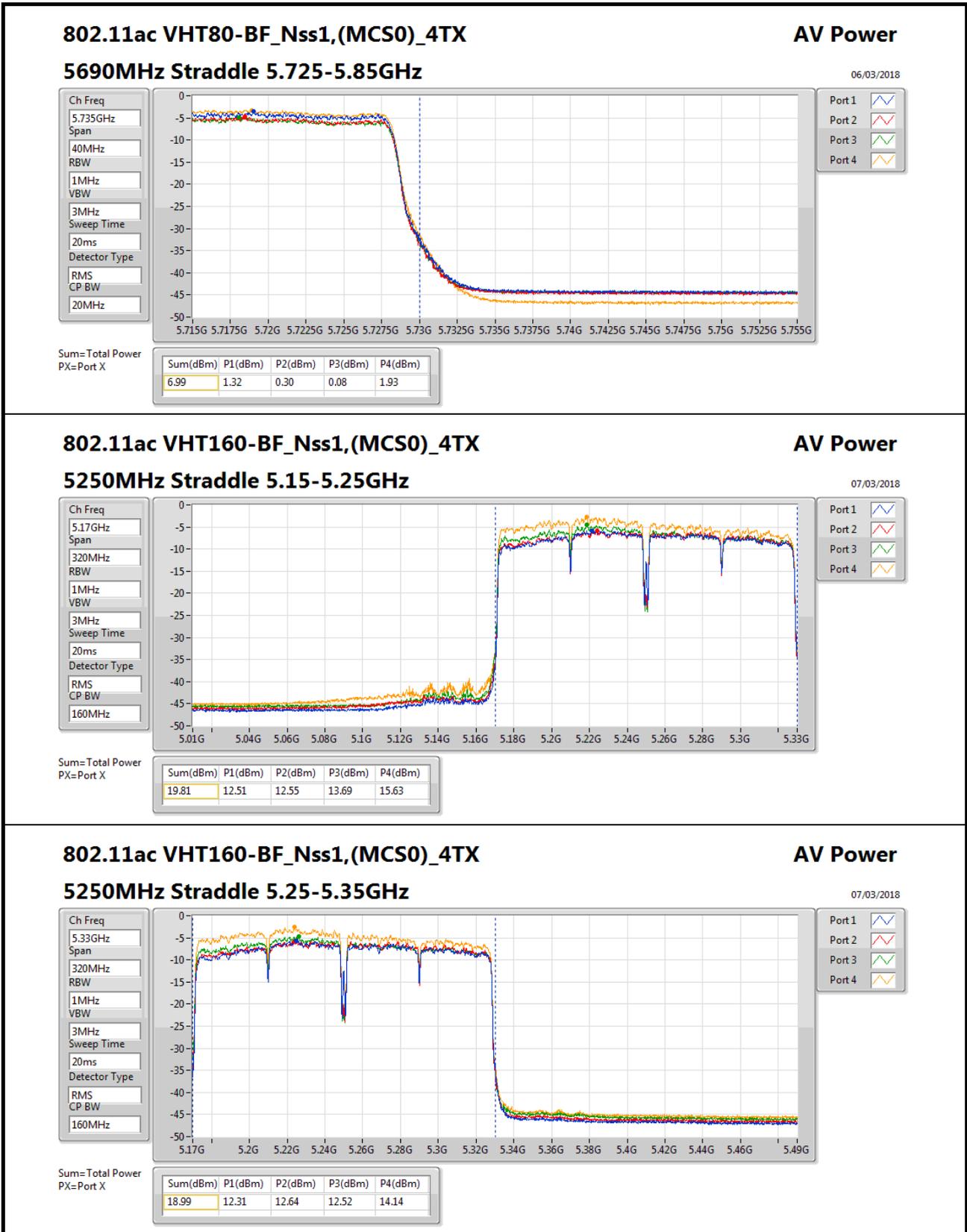
Port 2

Port 3

Port 4

Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
21.64	15.92	14.91	14.81	16.60



802.11ac VHT160-BF_Nss1,(MCS0)_4TX

5250MHz Straddle 5.25-5.35GHz

AV Power

07/03/2018

Ch Freq
5.33GHz

Span
320MHz

RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS

CP BW
160MHz

Port 1

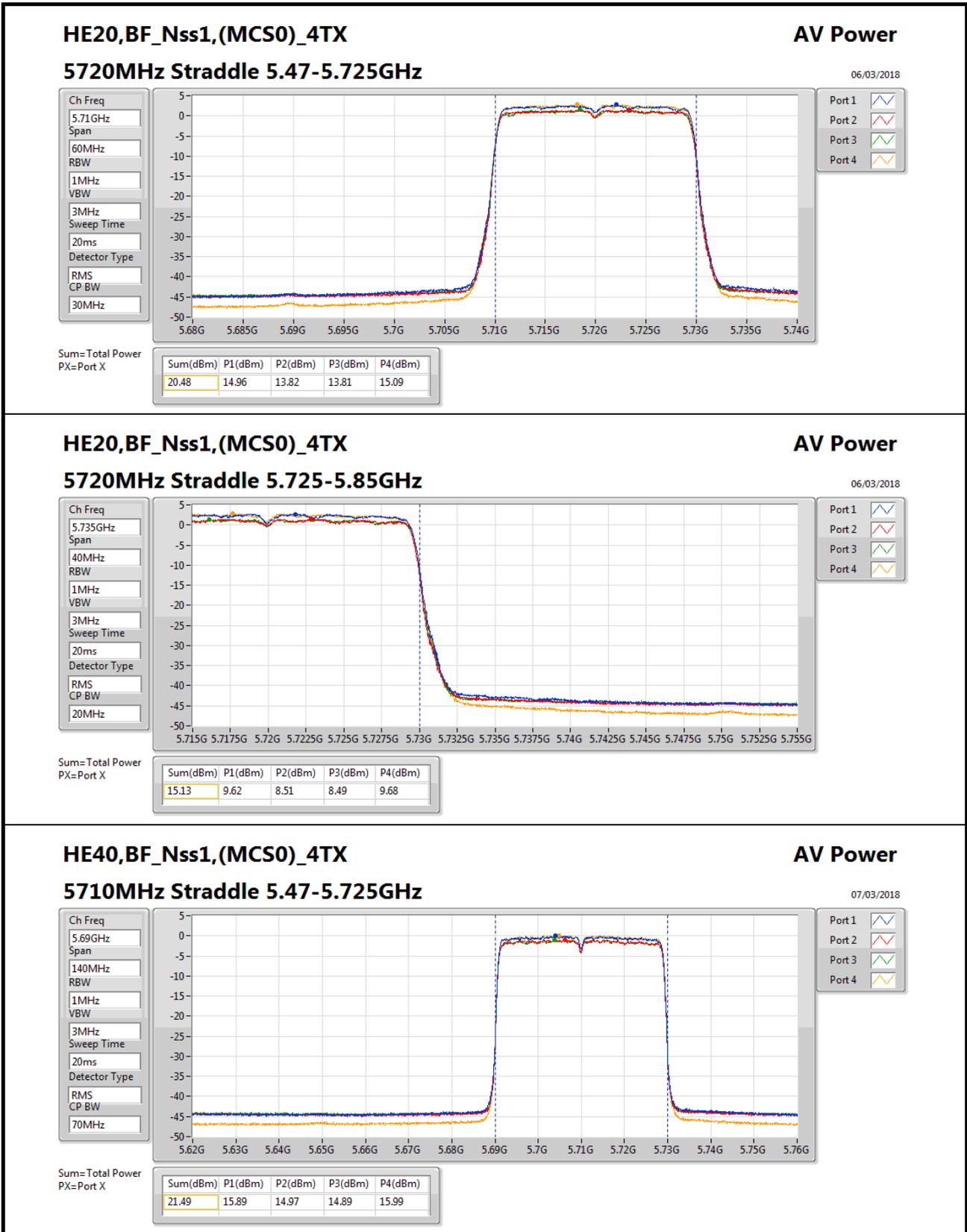
Port 2

Port 3

Port 4

Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
18.99	12.31	12.64	12.52	14.14



HE40,BF_Nss1,(MCS0)_4TX

5710MHz Straddle 5.47-5.725GHz

AV Power

07/03/2018

Ch Freq
5.69GHz

Span
140MHz

RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS

CP BW
70MHz

Port 1

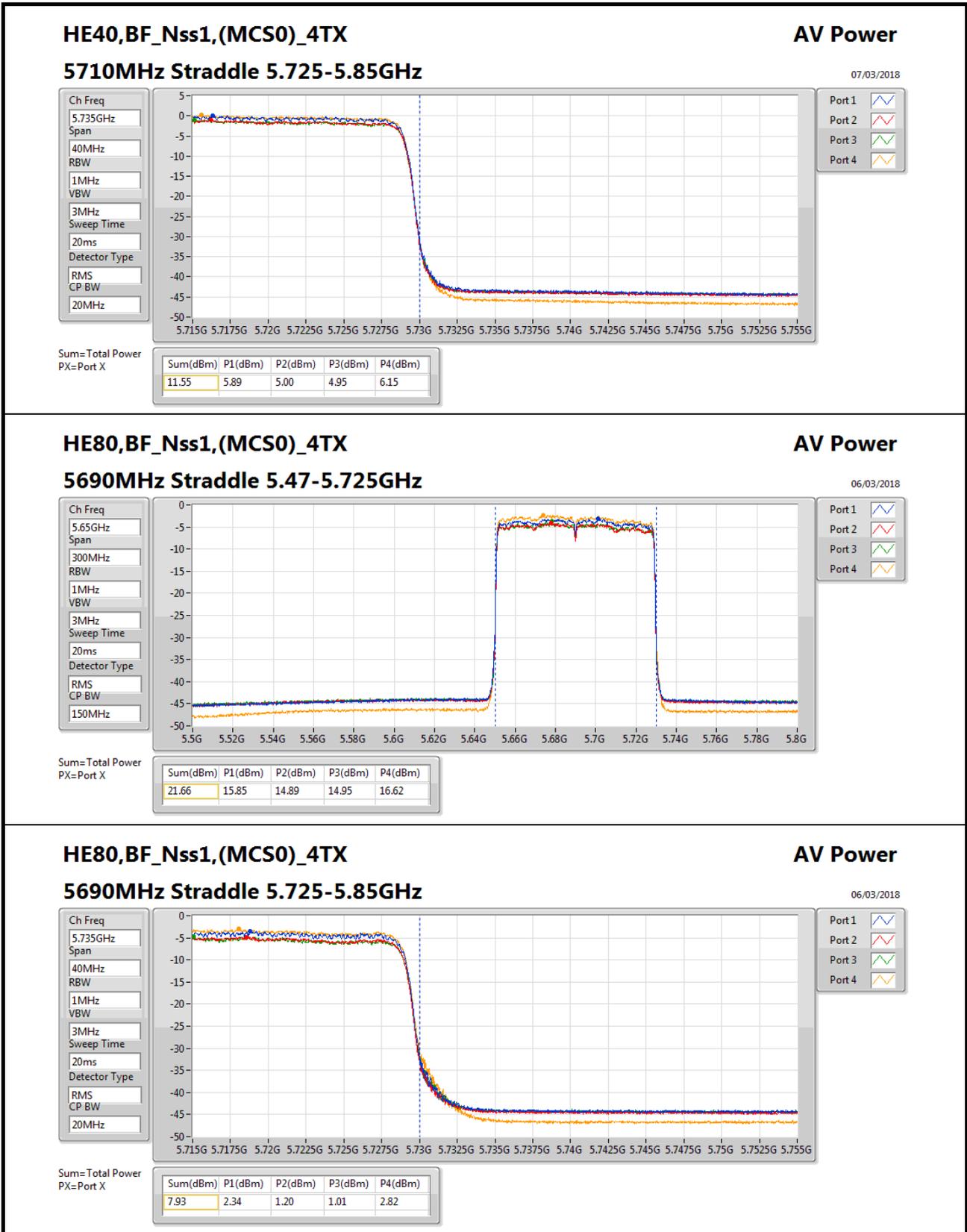
Port 2

Port 3

Port 4

Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
21.49	15.89	14.97	14.89	15.99



HE80,BF_Nss1,(MCS0)_4TX

5690MHz Straddle 5.725-5.85GHz

AV Power

06/03/2018

Ch Freq
5.735GHz

Span
40MHz

RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS

CP BW
20MHz

Port 1

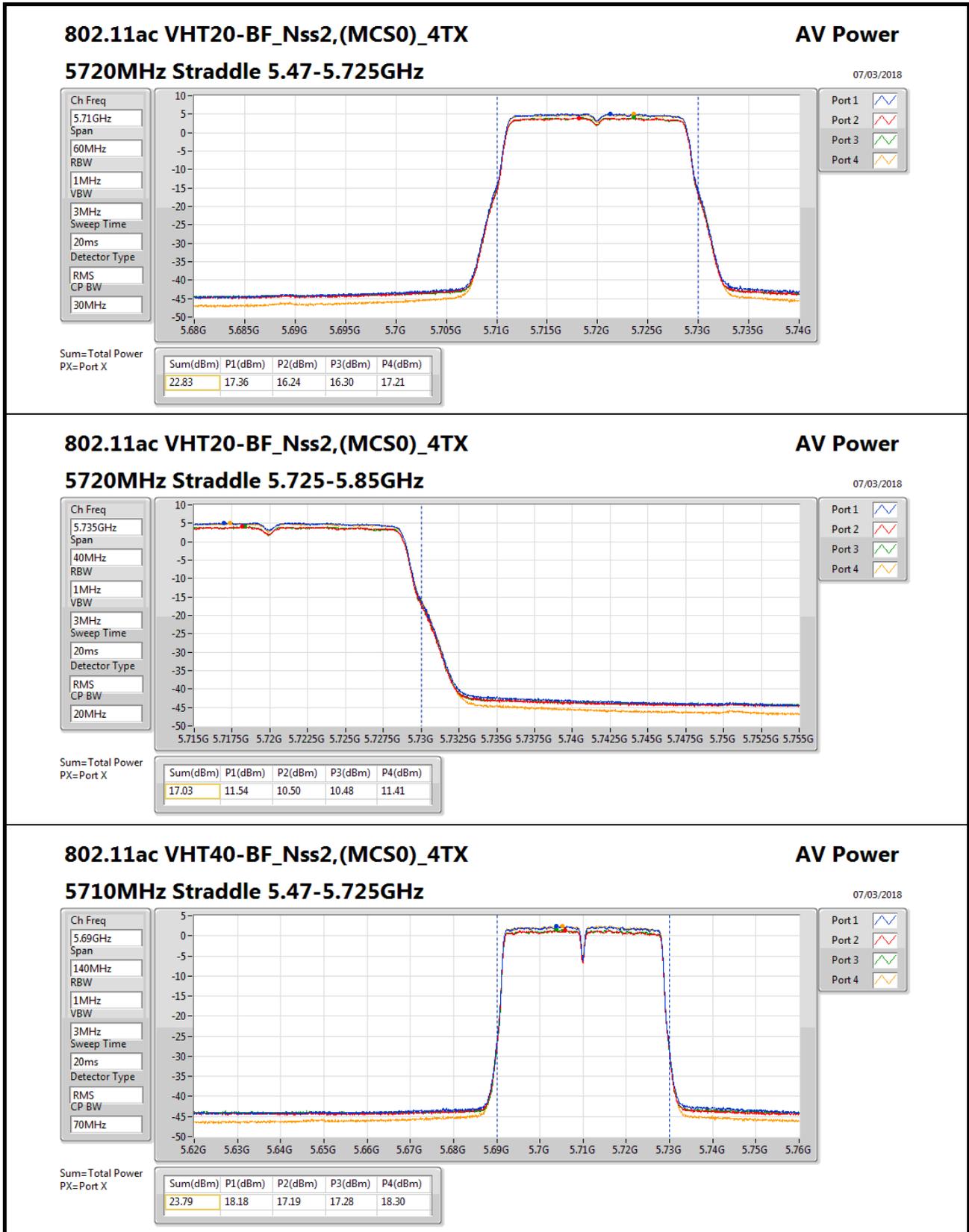
Port 2

Port 3

Port 4

Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
7.93	2.34	1.20	1.01	2.82



802.11ac VHT40-BF_Nss2,(MCS0)_4TX

5710MHz Straddle 5.47-5.725GHz

AV Power

07/03/2018

Ch Freq
5.69GHz

Span
140MHz

RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS

CP BW
70MHz

Port 1

Port 2

Port 3

Port 4

Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
23.79	18.18	17.19	17.28	18.30



802.11ac VHT40-BF_Nss2,(MCS0)_4TX

AV Power

5710MHz Straddle 5.725-5.85GHz

07/03/2018

Ch Freq
5.735GHz

Span
40MHz

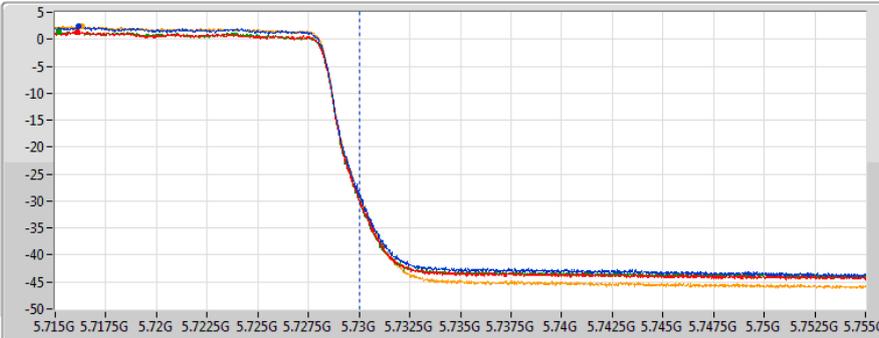
RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS

CP BW
20MHz



Port 1

Port 2

Port 3

Port 4

Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
13.17	7.54	6.62	6.62	7.71

802.11ac VHT80-BF_Nss2,(MCS0)_4TX

AV Power

5690MHz Straddle 5.47-5.725GHz

07/03/2018

Ch Freq
5.65GHz

Span
300MHz

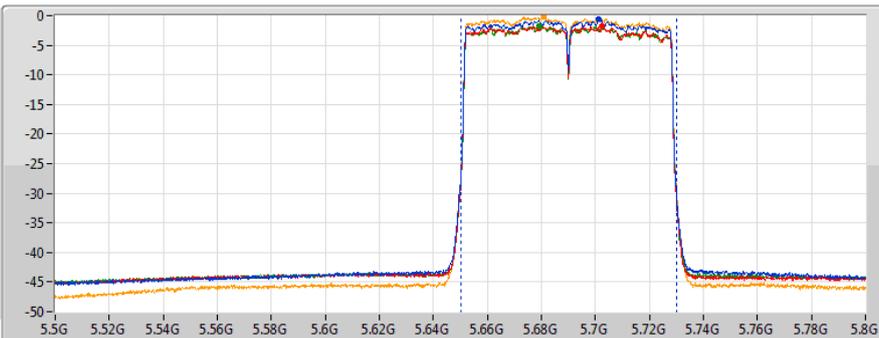
RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS

CP BW
150MHz



Port 1

Port 2

Port 3

Port 4

Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
23.81	18.10	17.14	17.08	18.65

802.11ac VHT80-BF_Nss2,(MCS0)_4TX

AV Power

5690MHz Straddle 5.725-5.85GHz

07/03/2018

Ch Freq
5.735GHz

Span
40MHz

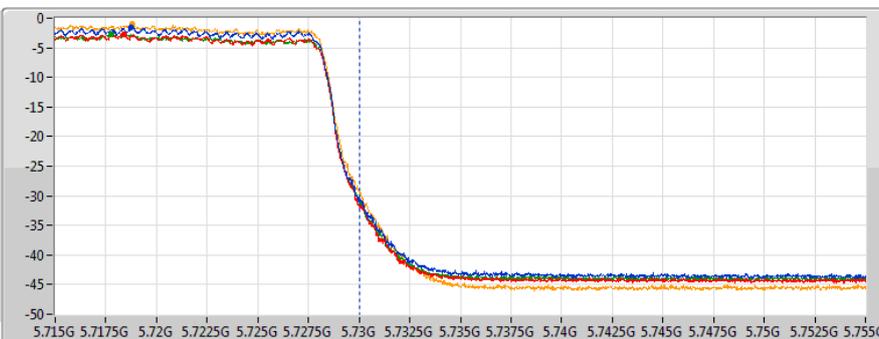
RBW
1MHz

VBW
3MHz

Sweep Time
20ms

Detector Type
RMS

CP BW
20MHz



Port 1

Port 2

Port 3

Port 4

Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
9.10	3.39	2.41	2.35	3.97