



FCC RADIO TEST REPORT

FCC ID : QXO-AP560H
Equipment : 802.11ax Access Point
Brand Name : Extreme Networks
Model Name : AP560h
Applicant : Extreme Networks, Inc.
6480 Via Del Oro, San Jose, CA 95119
Manufacturer : Extreme Networks, Inc.
6480 Via Del Oro, San Jose, CA 95119
Standard : 47 CFR FCC Part 15.407

The product was received on Mar. 13, 2019, and testing was started from Mar. 23, 2019 and completed on May 15, 2019. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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

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


Approved by: Cliff Chang

SPORTON INTERNATIONAL 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
1.1.2	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	-

Declaration of Conformity:

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

Comments and Explanations:

1. The test configuration, test mode and test software were written in this test report are declared by the manufacturer.
2. The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: **Sam Chen**

Report Producer: **Wendy Pan**



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 (HEW20)	5260-5320	52-64 [4]
5470-5725		5500-5720	100-144 [12]
5250-5350	n (HT40), ac (VHT40), ax (HEW40)	5270-5310	54-62 [2]
5470-5725		5510-5710	102-142 [6]
5250-5350	ac (VHT80), ax (HEW80)	5290	58 [1]
5470-5725		5530-5690	106-138 [3]
5150-5350	ac (VHT160), ax (HEW160)	5250	50 [1]
5470-5725		5570	114 [1]

Band	Mode	BWch (MHz)	Nant
5.15-5.25GHz	802.11ac VHT160	160	1TX, 2TX, 4TX
5.15-5.25GHz	802.11ac VHT160-BF	160	2TX, 4TX
5.15-5.25GHz	802.11ax HEW160	160	1TX, 2TX, 4TX
5.15-5.25GHz	802.11ax HEW160-BF	160	2TX, 4TX



Band	Mode	BWch (MHz)	Nant
5.25-5.35GHz	802.11a	20	1TX, 2TX, 4TX
5.25-5.35GHz	802.11n HT20	20	1TX, 2TX, 4TX
5.25-5.35GHz	802.11n HT20-BF	20	2TX, 4TX
5.25-5.35GHz	802.11ac VHT20	20	1TX, 2TX, 4TX
5.25-5.35GHz	802.11ac VHT20-BF	20	2TX, 4TX
5.25-5.35GHz	802.11ax HEW20	20	1TX, 2TX, 4TX
5.25-5.35GHz	802.11ax HEW20-BF	20	2TX, 4TX
5.25-5.35GHz	802.11n HT40	40	1TX, 2TX, 4TX
5.25-5.35GHz	802.11n HT40-BF	40	2TX, 4TX
5.25-5.35GHz	802.11ac VHT40	40	1TX, 2TX, 4TX
5.25-5.35GHz	802.11ac VHT40-BF	40	2TX, 4TX
5.25-5.35GHz	802.11ax HEW40	40	1TX, 2TX, 4TX
5.25-5.35GHz	802.11ax HEW40-BF	40	2TX, 4TX
5.25-5.35GHz	802.11ac VHT80	80	1TX, 2TX, 4TX
5.25-5.35GHz	802.11ac VHT80-BF	80	2TX, 4TX
5.25-5.35GHz	802.11ax HEW80	80	1TX, 2TX, 4TX
5.25-5.35GHz	802.11ax HEW80-BF	80	2TX, 4TX
5.25-5.35GHz	802.11ac VHT160	160	1TX, 2TX, 4TX
5.25-5.35GHz	802.11ac VHT160-BF	160	2TX, 4TX
5.25-5.35GHz	802.11ax HEW160	160	1TX, 2TX, 4TX
5.25-5.35GHz	802.11ax HEW160-BF	160	2TX, 4TX



Band	Mode	BWch (MHz)	Nant
5.47-5.725GHz	802.11a	20	1TX, 2TX, 4TX
5.47-5.725GHz	802.11n HT20	20	1TX, 2TX, 4TX
5.47-5.725GHz	802.11n HT20-BF	20	2TX, 4TX
5.47-5.725GHz	802.11ac VHT20	20	1TX, 2TX, 4TX
5.47-5.725GHz	802.11ac VHT20-BF	20	2TX, 4TX
5.47-5.725GHz	802.11ax HEW20	20	1TX, 2TX, 4TX
5.47-5.725GHz	802.11ax HEW20-BF	20	2TX, 4TX
5.47-5.725GHz	802.11n HT40	40	1TX, 2TX, 4TX
5.47-5.725GHz	802.11n HT40-BF	40	2TX, 4TX
5.47-5.725GHz	802.11ac VHT40	40	1TX, 2TX, 4TX
5.47-5.725GHz	802.11ac VHT40-BF	40	2TX, 4TX
5.47-5.725GHz	802.11ax HEW40	40	1TX, 2TX, 4TX
5.47-5.725GHz	802.11ax HEW40-BF	40	2TX, 4TX
5.47-5.725GHz	802.11ac VHT80	80	1TX, 2TX, 4TX
5.47-5.725GHz	802.11ac VHT80-BF	80	2TX, 4TX
5.47-5.725GHz	802.11ax HEW80	80	1TX, 2TX, 4TX
5.47-5.725GHz	802.11ax HEW80-BF	80	2TX, 4TX
5.47-5.725GHz	802.11ac VHT160	160	1TX, 2TX, 4TX
5.47-5.725GHz	802.11ac VHT160-BF	160	2TX, 4TX
5.47-5.725GHz	802.11ax HEW160	160	1TX, 2TX, 4TX
5.47-5.725GHz	802.11ax HEW160-BF	160	2TX, 4TX

Note:

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



1.1.2 Antenna Information

Ant.	Set	Port			Brand	Model Name	Antenna Type	Connector	Radio	Gain (dBi)				Beam width	
		1TX	2TX	4TX						2.4GHz	5GHz	BT	Thread		
1	1	1	1	1	WNC	Seahawk 560h	Panel Antenna	I-PEX	R1-5GHz	-	8.27	-	-	30/70	
		-	2	2	WNC	Seahawk 560h	Panel Antenna	I-PEX	R1-5GHz	-	8.27	-	-	30/70	
	2	-	-	3	WNC	Seahawk 560h	Panel Antenna	I-PEX	R1-5GHz	-	8.27	-	-	30/70	
		-	-	4	WNC	Seahawk 560h	Panel Antenna	I-PEX	R1-5GHz	-	8.27	-	-	30/70	
	1	R2-1	R2-1	R1-4 R2-1	WNC	Seahawk 560h	Panel Antenna	I-PEX	R1-2.4GHz R2-5GHz	7.89	7.93	-	-	30/70	
		-	R2-2	R1-3 R2-2	WNC	Seahawk 560h	Panel Antenna	I-PEX	R1-2.4GHz R2-5GHz	7.89	7.93	-	-	30/70	
	2	-	R1-2	R1-2 R2-3	WNC	Seahawk 560h	Panel Antenna	I-PEX	R1-2.4GHz R2-5GHz	7.89	7.93	-	-	30/70	
		R1-1	R1-1	R1-1 R2-4	WNC	Seahawk 560h	Panel Antenna	I-PEX	R1-2.4GHz R2-5GHz	7.89	7.93	-	-	30/70	
	2	1	1	1	1	WNC	Seahawk 560h	Panel Antenna	I-PEX	R1-5GHz	-	6.16	-	-	70/70
			1	2	2	WNC	Seahawk 560h	Panel Antenna	I-PEX	R1-5GHz	-	6.16	-	-	70/70
2		-	-	3	WNC	Seahawk 560h	Panel Antenna	I-PEX	R1-5GHz	-	6.16	-	-	70/70	
		-	-	4	WNC	Seahawk 560h	Panel Antenna	I-PEX	R1-5GHz	-	6.16	-	-	70/70	
1		R2-1	R2-1	R1-4 R2-1	WNC	Seahawk 560h	Panel Antenna	I-PEX	R1-2.4GHz R2-5GHz	6.22	6.32	-	-	70/70	
		-	R2-2	R1-3 R2-2	WNC	Seahawk 560h	Panel Antenna	I-PEX	R1-2.4GHz R2-5GHz	6.22	6.32	-	-	70/70	
2		-	R1-2	R1-2 R2-3	WNC	Seahawk 560h	Panel Antenna	I-PEX	R1-2.4GHz R2-5GHz	6.22	6.32	-	-	70/70	
		R1-1	R1-1	R1-1 R2-4	WNC	Seahawk 560h	Panel Antenna	I-PEX	R1-2.4GHz R2-5GHz	6.22	6.32	-	-	70/70	
3		-	1	-	-	WNC	Seahawk 560h	Panel Antenna	I-PEX	R3	-	-	2.61	2.61	-

Note1: The above information was declared by manufacturer.

Note2: Both Ant.1 and Ant. 2 support transmit and receive functions, but only one of them will be used at one time.

Note3:

For 2.4GHz function:

For IEEE 802.11b/g/n/ax mode (1TX, 2TX, 4TX/4RX):

For 1TX

Only Port 1 can be use as transmitting antenna.

For 2TX

Port 1 and Port 2 can be use as transmitting antenna.

Port 1 and Port 2 could transmit simultaneously.

For 4TX

Port 1, Port 2, Port 3 and Port 4 can be use as transmitting antenna.

Port 1, Port 2, Port 3 and Port 4 could transmit simultaneously.

For 4RX



Port 1, Port 2, Port 3 and Port 4 can be used as receiving antennas.
Port 1, Port 2, Port 3 and Port 4 could receive simultaneously.

For 5GHz function:

For IEEE 802.11a/n/ac/ax mode (1TX, 2TX, 4TX/4RX):

For 1TX

Only Port 1 can be use as transmitting antenna.

For 2TX

Port 1 and Port 2 can be use as transmitting antenna.

Port 1 and Port 2 could transmit simultaneously.

For 4TX

Port 1, Port 2, Port 3 and Port 4 can be use as transmitting antenna.

Port 1, Port 2, Port 3 and Port 4 could transmit simultaneously.

For 4RX

Port 1, Port 2, Port 3 and Port 4 can be used as receiving antennas.

Port 1, Port 2, Port 3 and Port 4 could receive simultaneously.

For Bluetooth and Thread mode (1TX/1RX):

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



1.1.3 Mode Test Duty Cycle

For Radio 1:

For 1T1S Mode:

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11a	0.953	0.21	2.068m	1k
802.11ax HEW20	0.983	0.07	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11ax HEW40	0.969	0.14	910u	3k
802.11ax HEW80	0.945	0.25	473.75u	3k
802.11ax HEW160	0.903	0.443	273.125u	10k

For 2T2S Mode:

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11ax HEW20	0.972	0.12	925u	3k
802.11ax HEW40	0.944	0.25	504.375u	3k
802.11ax HEW80	0.896	0.48	288u	10k

For 4T1S Mode:

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11a	0.948	0.23	2.068m	1k
802.11ax HEW20	0.983	0.07	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11ax HEW40	0.969	0.14	910u	3k
802.11ax HEW80	0.944	0.25	473.75u	3k
802.11ax HEW160	0.892	0.496	244.375u	10k
802.11ax HEW20-BF	0.859	0.66	1.5m	1k
802.11ax HEW40-BF	0.894	0.487	781.875u	3k
802.11ax HEW80-BF	0.928	0.325	3.834m	300
802.11ax HEW160-BF	0.796	0.991	3.832m	300

For 4T4S Mode:

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11ax HEW20	0.952	0.21	536.625u	3k
802.11ax HEW40	0.924	0.34	328.5u	10k
802.11ax HEW80	0.884	0.54	220.25u	10k
802.11ax HEW160	0.857	0.67	168.75u	10k

**For Radio 2:****For 1T1S Mode:**

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11a	0.958	0.186	2.065m	1k
802.11ax HEW20	0.983	0.074	n/a (DC \geq 0.98)	n/a (DC \geq 0.98)
802.11ax HEW40	0.969	0.137	910u	3k
802.11ax HEW80	0.945	0.246	473.75u	3k
802.11ax HEW160	0.908	0.419	273.75u	10k

For 2T2S Mode:

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ax HEW20	0.971	0.128	924.5u	3k
802.11ax HEW40	0.91	0.41	504u	3k
802.11ax HEW80	0.91	0.41	288.125u	10k
802.11ax HEW160	0.87	0.59	190u	10k

For 4T1S Mode:

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11a	0.958	0.186	2.065m	1k
802.11ax HEW20	0.983	0.074	n/a (DC \geq 0.98)	n/a (DC \geq 0.98)
802.11ax HEW40	0.969	0.137	910u	3k
802.11ax HEW80	0.944	0.25	473.75u	3k
802.11ax HEW160	0.908	0.419	273.75u	10k
802.11ax HEW20-BF	0.938	0.278	1.498m	1k
802.11ax HEW40-BF	0.882	0.545	781.875u	3k
802.11ax HEW80-BF	0.929	0.32	3.834m	300
802.11ax HEW160-BF	0.902	0.448	3.856m	300

For 4T4S Mode:

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11ax HEW20	0.95	0.223	536.5u	3k
802.11ax HEW40	0.923	0.348	328.5u	10k
802.11ax HEW80	0.884	0.535	220.25u	10k
802.11ax HEW160	0.858	0.665	170u	10k

Note:

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



1.1.4 EUT Operational Condition

EUT Power Type	From PoE			
Beamforming Function	<input checked="" type="checkbox"/>	With beamforming	<input type="checkbox"/>	Without beamforming
	For 802.11ax in 2.4GHz and 802.11n/ac/ax in 5GHz.			
Weather Band	<input checked="" type="checkbox"/>	With 5600~5650MHz	<input type="checkbox"/>	Without 5600~5650MHz
Function	<input checked="" 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 3.0.0.6			

Note: The above information was declared by manufacturer.

1.1.5 Table for Multiple Listing

1.The EUT has three radios, the information as following table:

Radio	Function		
	WLAN 2.4GHz	WLAN 5GHz	Bluetooth/Thread
1	V	V	-
2	-	V	-
3	-	-	V

2.Table for EUT support function

Function	Support Type	Support Band
AP	Master	WLAN 2.4GHz/Bluetooth/Thread/WLAN 5GHz Band 1~4
Client	Slave without Radar Detection (Sensor Mode)	WLAN 2.4GHz/Bluetooth/Thread/WLAN 5GHz Band 1+4
Bridge	Master	WLAN 2.4GHz/Bluetooth/Thread/WLAN 5GHz Band 1+4
Mesh	Master	WLAN 2.4GHz/Bluetooth/Thread/WLAN 5GHz Band 1+4

Note: 1.The above information was declared by manufacturer.

2.Only the AP mode was tested and recorded in this test report that is designated by the manufacturer.



1.1.6 Table for Class II Change

This product is an extension of original one reported under Sporton project number: FR8O1739-09AD

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

Modifications	Performance Checking
1. Adding 5GHz band 2 and band 3 (5250~5350 MHz, 5470~5725 MHz) for this device. 2. Adding 802.11ac 160MHz and 802.11ax 160MHz Mode.	1. Emission Bandwidth. 2. Maximum Conducted Output Power. 3. Peak Power Spectral Density. 4. Unwanted Emissions Radiated Emission >1GHz.



1.2 Testing Applied Standards

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

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

1.3 Testing Location Information

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

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH01-CB	Eddie Weng	21~23.5°C / 65%	Apr. 15, 2019 ~ May 15, 2019
Radiated >1GHz	03CH01-CB	Justin Lin	22~24°C / 50~60%	Mar. 23, 2019 ~ May 13, 2019

Test site Designation No. TW0006 with FCC
Test site registered number IC 4086B 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

For Radio 1 / Antenna 1 / Beam width 30/70:

For 1T1S Mode:

For Conducted measurement and Band Edge Emission test:

For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 2 ~ Band 4:

Mode	PowerSetting	PowerSetting (dBm)
802.11a_Nss1,(6Mbps)_1TX	-	-
5260MHz	81	20.25
5300MHz	82	20.5
5320MHz	78	19.5
5500MHz	72	18
5580MHz	77	19.25
5700MHz	62	15.5
5720MHz Straddle 5.47-5.725GHz	69	17.25
5720MHz Straddle 5.725-5.85GHz	69	17.25
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-
5260MHz	83	20.75
5300MHz	84	21
5320MHz	74	18.5
5500MHz	69	17.25
5580MHz	74	18.5
5700MHz	54	13.5
5720MHz Straddle 5.47-5.725GHz	71	17.75
5720MHz Straddle 5.725-5.85GHz	71	17.75
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-
5270MHz	83	20.75
5310MHz	67	16.75
5510MHz	64	16
5550MHz	82	20.5
5670MHz	70	17.5
5710MHz Straddle 5.47-5.725GHz	73	18.25
5710MHz Straddle 5.725-5.85GHz	73	18.25
802.11ax HEW80_Nss1,(MCS0)_1TX	-	-
5290MHz	65	16.25
5530MHz	66	16.5
5610MHz	77	19.25
5690MHz Straddle 5.47-5.725GHz	86	21.5
5690MHz Straddle 5.725-5.85GHz	86	21.5
802.11ax HEW160_Nss1,(MCS0)_1TX	-	-



Mode	PowerSetting	PowerSetting (dBm)
5250MHz Straddle 5.15-5.25GHz	61	15.25
5250MHz Straddle 5.25-5.35GHz	61	15.25
5570MHz	63	15.75



For Outdoor use for 5G Band 1:

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW160_Nss1,(MCS0)_1TX	-	-
5250MHz Straddle 5.15-5.25GHz	61	15.25
5250MHz Straddle 5.25-5.35GHz	61	15.25



For 2T2S Mode:

For Conducted measurement and Band Edge Emission test:

For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 2 ~ Band 4:

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW20_Nss2,(MCS0)_2TX	-	-
5260MHz	73	18.25
5300MHz	74	18.5
5320MHz	68	17
5500MHz	67	16.75
5580MHz	74	18.5
5700MHz	58	14.5
5720MHz Straddle 5.47-5.725GHz	71	17.75
5720MHz Straddle 5.725-5.85GHz	71	17.75
802.11ax HEW40_Nss2,(MCS0)_2TX	-	-
5270MHz	74	18.5
5310MHz	63	15.75
5510MHz	58	14.5
5550MHz	74	18.5
5670MHz	65	16.25
5710MHz Straddle 5.47-5.725GHz	73	18.25
5710MHz Straddle 5.725-5.85GHz	73	18.25
802.11ax HEW80_Nss2,(MCS0)_2TX	-	-
5290MHz	60	15
5530MHz	60	15
5610MHz	71	17.75
5690MHz Straddle 5.47-5.725GHz	75	18.75
5690MHz Straddle 5.725-5.85GHz	75	18.75
802.11ax HEW160_Nss2,(MCS0)_2TX	-	-
5250MHz Straddle 5.15-5.25GHz	53	13.25
5250MHz Straddle 5.25-5.35GHz	53	13.25
5570MHz	52	13

For Outdoor use for 5G Band 1:

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW160_Nss2,(MCS0)_2TX	-	-
5250MHz Straddle 5.15-5.25GHz	53	13.25
5250MHz Straddle 5.25-5.35GHz	53	13.25



For 4T1S Mode:
For Radiated Emission:

Mode	Radiated Setting
802.11a_Nss1,(6Mbps)_4TX	-
5260MHz	81
5300MHz	82
5320MHz	81
5500MHz	79
5580MHz	77
5700MHz	71
5720MHz Straddle 5.47-5.725GHz	69
802.11ax HEW20_Nss1,(MCS0)_4TX	-
5260MHz	83
5300MHz	84
5320MHz	83
5500MHz	76
5580MHz	74
5700MHz	73
5720MHz Straddle 5.47-5.725GHz	71
802.11ax HEW40_Nss1,(MCS0)_4TX	-
5270MHz	83
5310MHz	85
5510MHz	82
5550MHz	82
5670MHz	76
5710MHz Straddle 5.47-5.725GHz	73
802.11ax HEW80_Nss1,(MCS0)_4TX	-
5290MHz	93
5530MHz	90
5610MHz	88
5690MHz Straddle 5.47-5.725GHz	90
802.11ax HEW160_Nss1,(MCS0)_4TX	-
5250MHz Straddle 5.25-5.35GHz	93
5570MHz	96



**For Conducted measurement and Band Edge Emission test:
For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 2 ~ Band 4:**

Mode	PowerSetting	PowerSetting (dBm)
802.11a_Nss1,(6Mbps)_4TX	-	-
5260MHz	41	10.25
5300MHz	42	10.5
5320MHz	43	10.75
5500MHz	42	10.5
5580MHz	41	10.25
5700MHz	40	10
5720MHz Straddle 5.47-5.725GHz	40	10
5720MHz Straddle 5.725-5.85GHz	40	10
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-
5260MHz	42	10.5
5300MHz	43	10.75
5320MHz	44	11
5500MHz	43	10.75
5580MHz	42	10.5
5700MHz	41	10.25
5720MHz Straddle 5.47-5.725GHz	41	10.25
5720MHz Straddle 5.725-5.85GHz	41	10.25
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-
5270MHz	53	13.25
5310MHz	53	13.25
5510MHz	52	13
5550MHz	52	13
5670MHz	51	12.75
5710MHz Straddle 5.47-5.725GHz	51	12.75
5710MHz Straddle 5.725-5.85GHz	51	12.75
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-
5290MHz	57	14.25
5530MHz	55	13.75
5610MHz	62	15.5
5690MHz Straddle 5.47-5.725GHz	62	15.5
5690MHz Straddle 5.725-5.85GHz	62	15.5
802.11ax HEW160_Nss1,(MCS0)_4TX	-	-
5250MHz Straddle 5.15-5.25GHz	50	12.5
5250MHz Straddle 5.25-5.35GHz	50	12.5
5570MHz	53	13.25



Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-
5260MHz	38	9.5
5300MHz	39	9.75
5320MHz	40	10
5500MHz	40	10
5580MHz	39	9.75
5700MHz	38	9.5
5720MHz Straddle 5.47-5.725GHz	39	9.75
5720MHz Straddle 5.725-5.85GHz	39	9.75
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-
5270MHz	39	9.75
5310MHz	39	9.75
5510MHz	39	9.75
5550MHz	38	9.5
5670MHz	37	9.25
5710MHz Straddle 5.47-5.725GHz	38	9.5
5710MHz Straddle 5.725-5.85GHz	38	9.5
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-
5290MHz	39	9.75
5530MHz	39	9.75
5610MHz	38	9.5
5690MHz Straddle 5.47-5.725GHz	39	9.75
5690MHz Straddle 5.725-5.85GHz	39	9.75
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-	-
5250MHz Straddle 5.15-5.25GHz	42	10.5
5250MHz Straddle 5.25-5.35GHz	42	10.5
5570MHz	37	9.25



For Outdoor use for 5G Band 1:

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW160_Nss1,(MCS0)_4TX	-	-
5250MHz Straddle 5.15-5.25GHz	50	12.5
5250MHz Straddle 5.25-5.35GHz	50	12.5
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-	-
5250MHz Straddle 5.15-5.25GHz	26	6.5
5250MHz Straddle 5.25-5.35GHz	26	6.5



For 4T4S Mode:

For Conducted measurement and Band Edge Emission test:

For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 2 ~ Band 4:

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW20_Nss4,(MCS0)_4TX	-	-
5260MHz	62	15.5
5300MHz	63	15.75
5320MHz	64	16
5500MHz	63	15.75
5580MHz	62	15.5
5700MHz	57	14.25
5720MHz Straddle 5.47-5.725GHz	62	15.5
5720MHz Straddle 5.725-5.85GHz	62	15.5
802.11ax HEW40_Nss4,(MCS0)_4TX	-	-
5270MHz	62	15.5
5310MHz	57	14.25
5510MHz	54	13.5
5550MHz	62	15.5
5670MHz	58	14.5
5710MHz Straddle 5.47-5.725GHz	62	15.5
5710MHz Straddle 5.725-5.85GHz	62	15.5
802.11ax HEW80_Nss4,(MCS0)_4TX	-	-
5290MHz	57	14.25
5530MHz	55	13.75
5610MHz	62	15.5
5690MHz Straddle 5.47-5.725GHz	62	15.5
5690MHz Straddle 5.725-5.85GHz	62	15.5
802.11ax HEW160_Nss4,(MCS0)_4TX	-	-
5250MHz Straddle 5.15-5.25GHz	53	13.25
5250MHz Straddle 5.25-5.35GHz	53	13.25
5570MHz	53	13.25

For Outdoor use for 5G Band 1:

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW160_Nss4,(MCS0)_4TX	-	-
5250MHz Straddle 5.15-5.25GHz	52	13
5250MHz Straddle 5.25-5.35GHz	52	13



For Radio 1 / Antenna 2 / Beam width 70/70:

For 1T1S Mode:

For Conducted measurement and Band Edge Emission test:

For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 2 ~ Band 4:

Mode	PowerSetting	PowerSetting (dBm)
802.11a_Nss1,(6Mbps)_1TX	-	-
5260MHz	81	20.25
5300MHz	83	20.75
5320MHz	80	20
5500MHz	73	18.25
5580MHz	78	19.5
5700MHz	68	17
5720MHz Straddle 5.47-5.725GHz	78	19.5
5720MHz Straddle 5.725-5.85GHz	78	19.5
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-
5260MHz	81	20.25
5300MHz	84	21
5320MHz	84	21
5500MHz	69	17.25
5580MHz	83	20.75
5700MHz	61	15.25
5720MHz Straddle 5.47-5.725GHz	78	19.5
5720MHz Straddle 5.725-5.85GHz	78	19.5
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-
5270MHz	87	21.75
5310MHz	68	17
5510MHz	59	14.75
5550MHz	84	21
5670MHz	69	17.25
5710MHz Straddle 5.47-5.725GHz	83	20.75
5710MHz Straddle 5.725-5.85GHz	83	20.75
802.11ax HEW80_Nss1,(MCS0)_1TX	-	-
5290MHz	67	16.75
5530MHz	66	16.5
5610MHz	82	20.5
5690MHz Straddle 5.47-5.725GHz	86	21.5
5690MHz Straddle 5.725-5.85GHz	86	21.5
802.11ax HEW160_Nss1,(MCS0)_1TX	-	-
5250MHz Straddle 5.15-5.25GHz	60	15
5250MHz Straddle 5.25-5.35GHz	60	15
5570MHz	63	15.75



For Outdoor use for 5G Band 1:

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW160_Nss1,(MCS0)_1TX	-	-
5250MHz Straddle 5.15-5.25GHz	60	15
5250MHz Straddle 5.25-5.35GHz	60	15

**For 2T2S Mode:****For Conducted measurement and Band Edge Emission test:****For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 2 ~ Band 4:**

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW20_Nss2,(MCS0)_2TX	-	-
5260MHz	81	20.25
5300MHz	83	20.75
5320MHz	71	17.75
5500MHz	69	17.25
5580MHz	83	20.75
5700MHz	61	15.25
5720MHz Straddle 5.47-5.725GHz	78	19.5
5720MHz Straddle 5.725-5.85GHz	78	19.5
802.11ax HEW40_Nss2,(MCS0)_2TX	-	-
5270MHz	83	20.75
5310MHz	62	15.5
5510MHz	53	13.25
5550MHz	83	20.75
5670MHz	68	17
5710MHz Straddle 5.47-5.725GHz	82	20.5
5710MHz Straddle 5.725-5.85GHz	82	20.5
802.11ax HEW80_Nss2,(MCS0)_2TX	-	-
5290MHz	64	16
5530MHz	63	15.75
5610MHz	78	19.5
5690MHz Straddle 5.47-5.725GHz	84	21
5690MHz Straddle 5.725-5.85GHz	84	21
802.11ax HEW160_Nss2,(MCS0)_2TX	-	-
5250MHz Straddle 5.15-5.25GHz	59	14.75
5250MHz Straddle 5.25-5.35GHz	59	14.75
5570MHz	59	14.75

For Outdoor use for 5G Band 1:

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW160_Nss2,(MCS0)_2TX	-	-
5250MHz Straddle 5.15-5.25GHz	59	14.75
5250MHz Straddle 5.25-5.35GHz	59	14.75



For 4T1S Mode:
For Radiated Emission:

Mode	Radiated Setting
802.11a_Nss1,(6Mbps)_4TX	-
5260MHz	81
5300MHz	83
5320MHz	84
5500MHz	76
5580MHz	78
5700MHz	78
5720MHz Straddle 5.47-5.725GHz	78
802.11ax HEW20_Nss1,(MCS0)_4TX	-
5260MHz	81
5300MHz	84
5320MHz	84
5500MHz	76
5580MHz	83
5700MHz	77
5720MHz Straddle 5.47-5.725GHz	78
802.11ax HEW40_Nss1,(MCS0)_4TX	-
5270MHz	87
5310MHz	87
5510MHz	84
5550MHz	84
5670MHz	83
5710MHz Straddle 5.47-5.725GHz	83
802.11ax HEW80_Nss1,(MCS0)_4TX	-
5290MHz	93
5530MHz	94
5610MHz	95
5690MHz Straddle 5.47-5.725GHz	94
802.11ax HEW160_Nss1,(MCS0)_4TX	-
5250MHz Straddle 5.25-5.35GHz	91
5570MHz	97

**For Conducted measurement and Band Edge Emission test:
For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 2 ~ Band 4:**

Mode	PowerSetting	PowerSetting (dBm)
802.11a_Nss1,(6Mbps)_4TX	-	-
5260MHz	50	12.5
5300MHz	50	12.5
5320MHz	52	13
5500MHz	51	12.75
5580MHz	50	12.5
5700MHz	49	12.25
5720MHz Straddle 5.47-5.725GHz	49	12.25
5720MHz Straddle 5.725-5.85GHz	49	12.25
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-
5260MHz	51	12.75
5300MHz	51	12.75
5320MHz	52	13
5500MHz	52	13
5580MHz	51	12.75
5700MHz	45	11.25
5720MHz Straddle 5.47-5.725GHz	50	12.5
5720MHz Straddle 5.725-5.85GHz	50	12.5
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-
5270MHz	62	15.5
5310MHz	63	15.75
5510MHz	58	14.5
5550MHz	62	15.5
5670MHz	60	15
5710MHz Straddle 5.47-5.725GHz	60	15
5710MHz Straddle 5.725-5.85GHz	60	15
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-
5290MHz	62	15.5
5530MHz	61	15.25
5610MHz	70	17.5
5690MHz Straddle 5.47-5.725GHz	72	18
5690MHz Straddle 5.725-5.85GHz	72	18
802.11ax HEW160_Nss1,(MCS0)_4TX	-	-
5250MHz Straddle 5.15-5.25GHz	56	14
5250MHz Straddle 5.25-5.35GHz	56	14
5570MHz	58	14.5



Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-
5260MHz	48	12
5300MHz	49	12.25
5320MHz	50	12.5
5500MHz	48	12
5580MHz	47	11.75
5700MHz	41	10.25
5720MHz Straddle 5.47-5.725GHz	48	12
5720MHz Straddle 5.725-5.85GHz	48	12
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-
5270MHz	49	12.25
5310MHz	50	12.5
5510MHz	45	11.25
5550MHz	48	12
5670MHz	46	11.5
5710MHz Straddle 5.47-5.725GHz	47	11.75
5710MHz Straddle 5.725-5.85GHz	47	11.75
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-
5290MHz	49	12.25
5530MHz	48	12
5610MHz	47	11.75
5690MHz Straddle 5.47-5.725GHz	48	12
5690MHz Straddle 5.725-5.85GHz	48	12
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-	-
5250MHz Straddle 5.15-5.25GHz	54	13.5
5250MHz Straddle 5.25-5.35GHz	54	13.5
5570MHz	47	11.75



For Outdoor use for 5G Band 1:

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW160_Nss1,(MCS0)_4TX	-	-
5250MHz Straddle 5.15-5.25GHz	56	14
5250MHz Straddle 5.25-5.35GHz	56	14
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-	-
5250MHz Straddle 5.15-5.25GHz	40	10
5250MHz Straddle 5.25-5.35GHz	40	10

**For 4T4S Mode:****For Conducted measurement and Band Edge Emission test:****For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 2 ~ Band 4:**

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW20_Nss4,(MCS0)_4TX	-	
5260MHz	70	17.5
5300MHz	71	17.75
5320MHz	68	17
5500MHz	62	15.5
5580MHz	70	17.5
5700MHz	46	11.5
5720MHz Straddle 5.47-5.725GHz	67	16.75
5720MHz Straddle 5.725-5.85GHz	67	16.75
802.11ax HEW40_Nss4,(MCS0)_4TX	-	
5270MHz	70	17.5
5310MHz	60	15
5510MHz	57	14.25
5550MHz	71	17.75
5670MHz	63	15.75
5710MHz Straddle 5.47-5.725GHz	69	17.25
5710MHz Straddle 5.725-5.85GHz	69	17.25
802.11ax HEW80_Nss4,(MCS0)_4TX	-	
5290MHz	60	15
5530MHz	59	14.75
5610MHz	59	14.75
5690MHz Straddle 5.47-5.725GHz	70	17.5
5690MHz Straddle 5.725-5.85GHz	70	17.5
802.11ax HEW160_Nss4,(MCS0)_4TX	-	
5250MHz Straddle 5.15-5.25GHz	56	14
5250MHz Straddle 5.25-5.35GHz	56	14
5570MHz	57	14.25

For Outdoor use for 5G Band 1:

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW160_Nss4,(MCS0)_4TX	-	-
5250MHz Straddle 5.15-5.25GHz	56	14
5250MHz Straddle 5.25-5.35GHz	56	14



For Radio 2 / Antenna 1 / Beam width 30/70:

For 1T1S Mode:

For Conducted measurement and Band Edge Emission test:

For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 2 ~ Band 4:

Mode	PowerSetting	PowerSetting (dBm)
802.11a_Nss1,(6Mbps)_1TX	-	-
5260MHz	76	19
5300MHz	76	19
5320MHz	77	19.25
5500MHz	68	17
5580MHz	88	22
5700MHz	61	15.25
5720MHz Straddle 5.47-5.725GHz	84	21
5720MHz Straddle 5.725-5.85GHz	84	21
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-
5260MHz	74	18.5
5300MHz	79	19.75
5320MHz	75	18.75
5500MHz	67	16.75
5580MHz	86	21.5
5700MHz	60	15
5720MHz Straddle 5.47-5.725GHz	82	20.5
5720MHz Straddle 5.725-5.85GHz	82	20.5
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-
5270MHz	76	19
5310MHz	66	16.5
5510MHz	60	15
5550MHz	87	21.75
5670MHz	65	16.25
5710MHz Straddle 5.47-5.725GHz	83	20.75
5710MHz Straddle 5.725-5.85GHz	83	20.75
802.11ax HEW80_Nss1,(MCS0)_1TX	-	-
5290MHz	66	16.5
5530MHz	63	15.75
5610MHz	78	19.5
5690MHz Straddle 5.47-5.725GHz	85	21.25
5690MHz Straddle 5.725-5.85GHz	85	21.25
802.11ax HEW160_Nss1,(MCS0)_1TX	-	-
5250MHz Straddle 5.15-5.25GHz	59	14.75
5250MHz Straddle 5.25-5.35GHz	59	14.75
5570MHz	59	14.75



For Outdoor use for 5G Band 1:

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW160_Nss1,(MCS0)_1TX	-	-
5250MHz Straddle 5.15-5.25GHz	59	14.75
5250MHz Straddle 5.25-5.35GHz	59	14.75



For 2T2S Mode:

For Conducted measurement and Band Edge Emission test:

For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 2 ~ Band 4:

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW20_Nss2,(MCS0)_2TX	-	-
5260MHz	74	18.5
5300MHz	75	18.75
5320MHz	68	17
5500MHz	60	15
5580MHz	77	19.25
5700MHz	57	14.25
5720MHz Straddle 5.47-5.725GHz	81	20.25
5720MHz Straddle 5.725-5.85GHz	81	20.25
802.11ax HEW40_Nss2,(MCS0)_2TX	-	-
5270MHz	76	19
5310MHz	61	15.25
5510MHz	57	14.25
5550MHz	77	19.25
5670MHz	59	14.75
5710MHz Straddle 5.47-5.725GHz	77	19.25
5710MHz Straddle 5.725-5.85GHz	77	19.25
802.11ax HEW80_Nss2,(MCS0)_2TX	-	-
5290MHz	57	14.25
5530MHz	56	14
5610MHz	69	17.25
5690MHz Straddle 5.47-5.725GHz	76	19
5690MHz Straddle 5.725-5.85GHz	76	19
802.11ax HEW160_Nss2,(MCS0)_2TX	-	-
5250MHz Straddle 5.15-5.25GHz	53	13.25
5250MHz Straddle 5.25-5.35GHz	53	13.25
5570MHz	50	12.5

For Outdoor use for 5G Band 1:

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW160_Nss2,(MCS0)_2TX	-	-
5250MHz Straddle 5.15-5.25GHz	53	13.25
5250MHz Straddle 5.25-5.35GHz	53	13.25



For 4T1S Mode:
For Radiated Emission:

Mode	Radiated Setting
802.11a_Nss1,(6Mbps)_4TX	-
5260MHz	76
5300MHz	76
5320MHz	80
5500MHz	87
5580MHz	88
5700MHz	97
5720MHz Straddle 5.47-5.725GHz	104
802.11ax HEW20_Nss1,(MCS0)_4TX	-
5260MHz	74
5300MHz	79
5320MHz	85
5500MHz	85
5580MHz	100
5700MHz	100
5720MHz Straddle 5.47-5.725GHz	104
802.11ax HEW40_Nss1,(MCS0)_4TX	-
5270MHz	76
5310MHz	84
5510MHz	103
5550MHz	99
5670MHz	106
5710MHz Straddle 5.47-5.725GHz	110
802.11ax HEW80_Nss1,(MCS0)_4TX	-
5290MHz	85
5530MHz	110
5610MHz	110
5690MHz Straddle 5.47-5.725GHz	110
802.11ax HEW160_Nss1,(MCS0)_4TX	-
5250MHz Straddle 5.25-5.35GHz	82
5570MHz	110

**For Conducted measurement and Band Edge Emission test:
For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 2 ~ Band 4:**

Mode	PowerSetting	PowerSetting (dBm)
802.11a_Nss1,(6Mbps)_4TX	-	-
5260MHz	41	10.25
5300MHz	41	10.25
5320MHz	41	10.25
5500MHz	42	10.5
5580MHz	42	10.5
5700MHz	42	10.5
5720MHz Straddle 5.47-5.725GHz	42	10.5
5720MHz Straddle 5.725-5.85GHz	42	10.5
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-
5260MHz	43	10.75
5300MHz	42	10.5
5320MHz	42	10.5
5500MHz	44	11
5580MHz	44	11
5700MHz	42	10.5
5720MHz Straddle 5.47-5.725GHz	44	11
5720MHz Straddle 5.725-5.85GHz	44	11
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-
5270MHz	54	13.5
5310MHz	53	13.25
5510MHz	52	13
5550MHz	54	13.5
5670MHz	53	13.25
5710MHz Straddle 5.47-5.725GHz	54	13.5
5710MHz Straddle 5.725-5.85GHz	54	13.5
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-
5290MHz	53	13.25
5530MHz	55	13.75
5610MHz	61	15.25
5690MHz Straddle 5.47-5.725GHz	65	16.25
5690MHz Straddle 5.725-5.85GHz	65	16.25
802.11ax HEW160_Nss1,(MCS0)_4TX	-	-
5250MHz Straddle 5.15-5.25GHz	46	11.5
5250MHz Straddle 5.25-5.35GHz	46	11.5
5570MHz	50	12.5



Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-
5260MHz	40	10
5300MHz	39	9.75
5320MHz	39	9.75
5500MHz	41	10.25
5580MHz	40	10
5700MHz	40	10
5720MHz Straddle 5.47-5.725GHz	41	10.25
5720MHz Straddle 5.725-5.85GHz	41	10.25
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-
5270MHz	39	9.75
5310MHz	39	9.75
5510MHz	40	10
5550MHz	40	10
5670MHz	39	9.75
5710MHz Straddle 5.47-5.725GHz	41	10.25
5710MHz Straddle 5.725-5.85GHz	41	10.25
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-
5290MHz	38	9.5
5530MHz	39	9.75
5610MHz	40	10
5690MHz Straddle 5.47-5.725GHz	40	10
5690MHz Straddle 5.725-5.85GHz	40	10
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-	-
5250MHz Straddle 5.15-5.25GHz	43	10.75
5250MHz Straddle 5.25-5.35GHz	43	10.75
5570MHz	39	9.75



For Outdoor use for 5G Band 1:

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW160_Nss1,(MCS0)_4TX	-	-
5250MHz Straddle 5.15-5.25GHz	46	11.5
5250MHz Straddle 5.25-5.35GHz	46	11.5
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-	-
5250MHz Straddle 5.15-5.25GHz	27	6.75
5250MHz Straddle 5.25-5.35GHz	27	6.75

**For 4T4S Mode:****For Conducted measurement and Band Edge Emission test:****For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 2 ~ Band 4:**

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW20_Nss4,(MCS0)_4TX	-	-
5260MHz	63	15.75
5300MHz	63	15.75
5320MHz	63	15.75
5500MHz	58	14.5
5580MHz	65	16.25
5700MHz	55	13.75
5720MHz Straddle 5.47-5.725GHz	65	16.25
5720MHz Straddle 5.725-5.85GHz	65	16.25
802.11ax HEW40_Nss4,(MCS0)_4TX	-	-
5270MHz	63	15.75
5310MHz	53	13.25
5510MHz	56	14
5550MHz	63	15.75
5670MHz	58	14.5
5710MHz Straddle 5.47-5.725GHz	66	16.5
5710MHz Straddle 5.725-5.85GHz	66	16.5
802.11ax HEW80_Nss4,(MCS0)_4TX	-	-
5290MHz	55	13.75
5530MHz	57	14.25
5610MHz	64	16
5690MHz Straddle 5.47-5.725GHz	66	16.5
5690MHz Straddle 5.725-5.85GHz	66	16.5
802.11ax HEW160_Nss4,(MCS0)_4TX	-	-
5250MHz Straddle 5.15-5.25GHz	50	12.5
5250MHz Straddle 5.25-5.35GHz	50	12.5
5570MHz	49	12.25

For Outdoor use for 5G Band 1:

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW160_Nss4,(MCS0)_4TX	-	-
5250MHz Straddle 5.15-5.25GHz	50	12.5
5250MHz Straddle 5.25-5.35GHz	50	12.5



For Radio 2 / Antenna 2 / Beam width 70/70:

For 1T1S Mode:

For Conducted measurement and Band Edge Emission test:

For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 2 ~ Band 4:

Mode	PowerSetting	PowerSetting (dBm)
802.11a_Nss1,(6Mbps)_1TX	-	-
5260MHz	74	18.5
5300MHz	77	19.25
5320MHz	77	19.25
5500MHz	72	18
5580MHz	86	21.5
5700MHz	65	16.25
5720MHz Straddle 5.47-5.725GHz	84	21
5720MHz Straddle 5.725-5.85GHz	84	21
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-
5260MHz	78	19.5
5300MHz	78	19.5
5320MHz	77	19.25
5500MHz	66	16.5
5580MHz	86	21.5
5700MHz	63	15.75
5720MHz Straddle 5.47-5.725GHz	82	20.5
5720MHz Straddle 5.725-5.85GHz	82	20.5
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-
5270MHz	77	19.25
5310MHz	66	16.5
5510MHz	61	15.25
5550MHz	85	21.25
5670MHz	69	17.25
5710MHz Straddle 5.47-5.725GHz	83	20.75
5710MHz Straddle 5.725-5.85GHz	83	20.75
802.11ax HEW80_Nss1,(MCS0)_1TX	-	-
5290MHz	66	16.5
5530MHz	62	15.5
5610MHz	78	19.5
5690MHz Straddle 5.47-5.725GHz	84	21
5690MHz Straddle 5.725-5.85GHz	84	21
802.11ax HEW160_Nss1,(MCS0)_1TX	-	-
5250MHz Straddle 5.15-5.25GHz	59	14.75
5250MHz Straddle 5.25-5.35GHz	59	14.75
5570MHz	59	14.75



For Outdoor use for 5G Band 1:

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW160_Nss1,(MCS0)_1TX	-	-
5250MHz Straddle 5.15-5.25GHz	59	14.75
5250MHz Straddle 5.25-5.35GHz	59	14.75

**For 2T2S Mode:****For Conducted measurement and Band Edge Emission test:****For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 2 ~ Band 4:**

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW20_Nss2,(MCS0)_2TX	-	-
5260MHz	78	19.5
5300MHz	78	19.5
5320MHz	70	17.5
5500MHz	67	16.75
5580MHz	84	21
5700MHz	61	15.25
5720MHz Straddle 5.47-5.725GHz	90	22.5
5720MHz Straddle 5.725-5.85GHz	90	22.5
802.11ax HEW40_Nss2,(MCS0)_2TX	-	-
5270MHz	77	19.25
5310MHz	64	16
5510MHz	57	14.25
5550MHz	83	20.75
5670MHz	66	16.5
5710MHz Straddle 5.47-5.725GHz	87	21.75
5710MHz Straddle 5.725-5.85GHz	87	21.75
802.11ax HEW80_Nss2,(MCS0)_2TX	-	-
5290MHz	60	15
5530MHz	54	13.5
5610MHz	70	17.5
5690MHz Straddle 5.47-5.725GHz	81	20.25
5690MHz Straddle 5.725-5.85GHz	81	20.25
802.11ax HEW160_Nss2,(MCS0)_2TX	-	-
5250MHz Straddle 5.15-5.25GHz	56	14
5250MHz Straddle 5.25-5.35GHz	56	14
5570MHz	54	13.5

For Indoor of 5GHz Band 1 use:

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW160_Nss2,(MCS0)_2TX	-	-
5250MHz Straddle 5.15-5.25GHz	56	14
5250MHz Straddle 5.25-5.35GHz	56	14



**For 4T1S Mode:
For Radiated Emission:**

Mode	Radiated Setting
802.11a_Nss1,(6Mbps)_4TX	-
5260MHz	74
5300MHz	77
5320MHz	77
5500MHz	82
5580MHz	86
5700MHz	87
5720MHz Straddle 5.47-5.725GHz	93
802.11ax HEW20_Nss1,(MCS0)_4TX	-
5260MHz	78
5300MHz	78
5320MHz	80
5500MHz	81
5580MHz	92
5700MHz	89
5720MHz Straddle 5.47-5.725GHz	102
802.11ax HEW40_Nss1,(MCS0)_4TX	-
5270MHz	77
5310MHz	85
5510MHz	89
5550MHz	103
5670MHz	100
5710MHz Straddle 5.47-5.725GHz	106
802.11ax HEW80_Nss1,(MCS0)_4TX	-
5290MHz	86
5530MHz	110
5610MHz	110
5690MHz Straddle 5.47-5.725GHz	110
802.11ax HEW160_Nss1,(MCS0)_4TX	-
5250MHz Straddle 5.25-5.35GHz	91
5570MHz	110



**For Conducted measurement and Band Edge Emission test:
For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 2 ~ Band 4:**

Mode	PowerSetting	PowerSetting (dBm)
802.11a_Nss1,(6Mbps)_4TX	-	-
5260MHz	47	11.75
5300MHz	47	11.75
5320MHz	47	11.75
5500MHz	48	12
5580MHz	48	12
5700MHz	48	12
5720MHz Straddle 5.47-5.725GHz	48	12
5720MHz Straddle 5.725-5.85GHz	48	12
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-
5260MHz	49	12.25
5300MHz	48	12
5320MHz	48	12
5500MHz	49	12.25
5580MHz	50	12.5
5700MHz	47	11.75
5720MHz Straddle 5.47-5.725GHz	49	12.25
5720MHz Straddle 5.725-5.85GHz	49	12.25
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-
5270MHz	60	15
5310MHz	56	14
5510MHz	54	13.5
5550MHz	60	15
5670MHz	59	14.75
5710MHz Straddle 5.47-5.725GHz	60	15
5710MHz Straddle 5.725-5.85GHz	60	15
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-
5290MHz	55	13.75
5530MHz	57	14.25
5610MHz	69	17.25
5690MHz Straddle 5.47-5.725GHz	71	17.75
5690MHz Straddle 5.725-5.85GHz	71	17.75
802.11ax HEW160_Nss1,(MCS0)_4TX	-	-
5250MHz Straddle 5.15-5.25GHz	49	12.25
5250MHz Straddle 5.25-5.35GHz	49	12.25
5570MHz	50	12.5



Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-
5260MHz	46	11.5
5300MHz	46	11.5
5320MHz	46	11.5
5500MHz	47	11.75
5580MHz	47	11.75
5700MHz	45	11.25
5720MHz Straddle 5.47-5.725GHz	47	11.75
5720MHz Straddle 5.725-5.85GHz	47	11.75
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-
5270MHz	46	11.5
5310MHz	45	11.25
5510MHz	46	11.5
5550MHz	46	11.5
5670MHz	46	11.5
5710MHz Straddle 5.47-5.725GHz	48	12
5710MHz Straddle 5.725-5.85GHz	48	12
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-
5290MHz	45	11.25
5530MHz	46	11.5
5610MHz	46	11.5
5690MHz Straddle 5.47-5.725GHz	47	11.75
5690MHz Straddle 5.725-5.85GHz	47	11.75
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-	-
5250MHz Straddle 5.15-5.25GHz	53	13.25
5250MHz Straddle 5.25-5.35GHz	53	13.25
5570MHz	46	11.5

For Outdoor use for 5G Band 1:

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW160_Nss1,(MCS0)_4TX	-	-
5250MHz Straddle 5.15-5.25GHz	49	12.25
5250MHz Straddle 5.25-5.35GHz	49	12.25
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-	-
5250MHz Straddle 5.15-5.25GHz	28	7
5250MHz Straddle 5.25-5.35GHz	28	7



For 4T4S Mode:

For Conducted measurement and Band Edge Emission test:

For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 2 ~ Band 4:

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW20_Nss4,(MCS0)_4TX	-	-
5260MHz	70	17.5
5300MHz	70	17.5
5320MHz	66	16.5
5500MHz	65	16.25
5580MHz	71	17.75
5700MHz	60	15
5720MHz Straddle 5.47-5.725GHz	72	18
5720MHz Straddle 5.725-5.85GHz	72	18
802.11ax HEW40_Nss4,(MCS0)_4TX	-	-
5270MHz	70	17.5
5310MHz	57	14.25
5510MHz	57	14.25
5550MHz	71	17.75
5670MHz	61	15.25
5710MHz Straddle 5.47-5.725GHz	72	18
5710MHz Straddle 5.725-5.85GHz	72	18
802.11ax HEW80_Nss4,(MCS0)_4TX	-	-
5290MHz	55	13.75
5530MHz	52	13
5610MHz	66	16.5
5690MHz Straddle 5.47-5.725GHz	71	17.75
5690MHz Straddle 5.725-5.85GHz	71	17.75
802.11ax HEW160_Nss4,(MCS0)_4TX	-	-
5250MHz Straddle 5.15-5.25GHz	51	12.75
5250MHz Straddle 5.25-5.35GHz	51	12.75
5570MHz	51	12.75

For Outdoor use for 5G Band 1:

Mode	PowerSetting	PowerSetting (dBm)
802.11ax HEW160_Nss4,(MCS0)_4TX	-	-
5250MHz Straddle 5.15-5.25GHz	50	12.5
5250MHz Straddle 5.25-5.35GHz	50	12.5



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
Test Mode	(Refer to note 1 for detail test mode)

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
Test Mode	(Refer to note 1 for detail test mode)



The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	WLAN 2.4GHz (Radio 1) + WLAN 5GHz (Radio 2) + Bluetooth (Radio 3)
2	WLAN 5GHz (Radio 1) + WLAN 5GHz (Radio 2) + Bluetooth (Radio 3)
3	WLAN 2.4GHz (Radio 1) + WLAN 5GHz (Radio 2) + Thread (Radio 3)
4	WLAN 5GHz (Radio 1) + WLAN 5GHz (Radio 2) + Thread (Radio 3)

Refer to Sporton Test Report No.: FA801739-10 for Co-location RF Exposure Evaluation.

Note:

1. Test Mode:

Test Item	Test Mode								
	802.11a		802.11ax HEW20/40/80/160						
	1T1S	4T1S	CDD 1T1S	SDM 2T2S	CDD 4T1S	SDM 4T4S	TxBF 2T2S	TxBF 4T1S	TxBF 4T4S
Maximum Conducted Output Power	V	V	V	V	V	V	-	V	-
Emission Bandwidth	V	V	V	V	V	V	-	V	-
Peak Power Spectral Density	V	V	V	V	V	V	-	V	-
Radiated Emission	Cover by CDD 4T1S Max setting	V	Cover by CDD 4T1S Max setting	Cover by CDD 4T1S Max setting	Max setting	Cover by CDD 4T1S Max setting	-	Cover by CDD 4T1S Max setting	-
Band Edge Emission	V	V	V	V	V	V	-	V	-

3. 802.11ax modulation and bandwidth are similar for 802.11n mode for 20/40MHz and 802.11ac mode for 20/40/80/160MHz, therefore investigated worst case to representative mode in test report.
4. The EUT can only be used at Y axis.
5. The PoE is for measurement only, would not be marketed.

PoE information as below:

Support Unit	Brand	Model
PoE	Microsemi	PD-9001GR/AT/AC



2.3 EUT Operation during Test

For CTX Mode:

non-beamforming mode:

The EUT was programmed to be in continuously transmitting mode.

beamforming mode:

For Conducted Mode:

The EUT was programmed to be in continuously transmitting mode.

For Radiated Mode:

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

The program was executed as follows:

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

2.4 Accessories

N/A



2.5 Support Equipment

For Radiated (above 1GHz):

For Non-Beamforming Mode:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A
E	PoE	Microsemi	PD-9001GR/AT/AC	N/A

For Beamforming Mode:

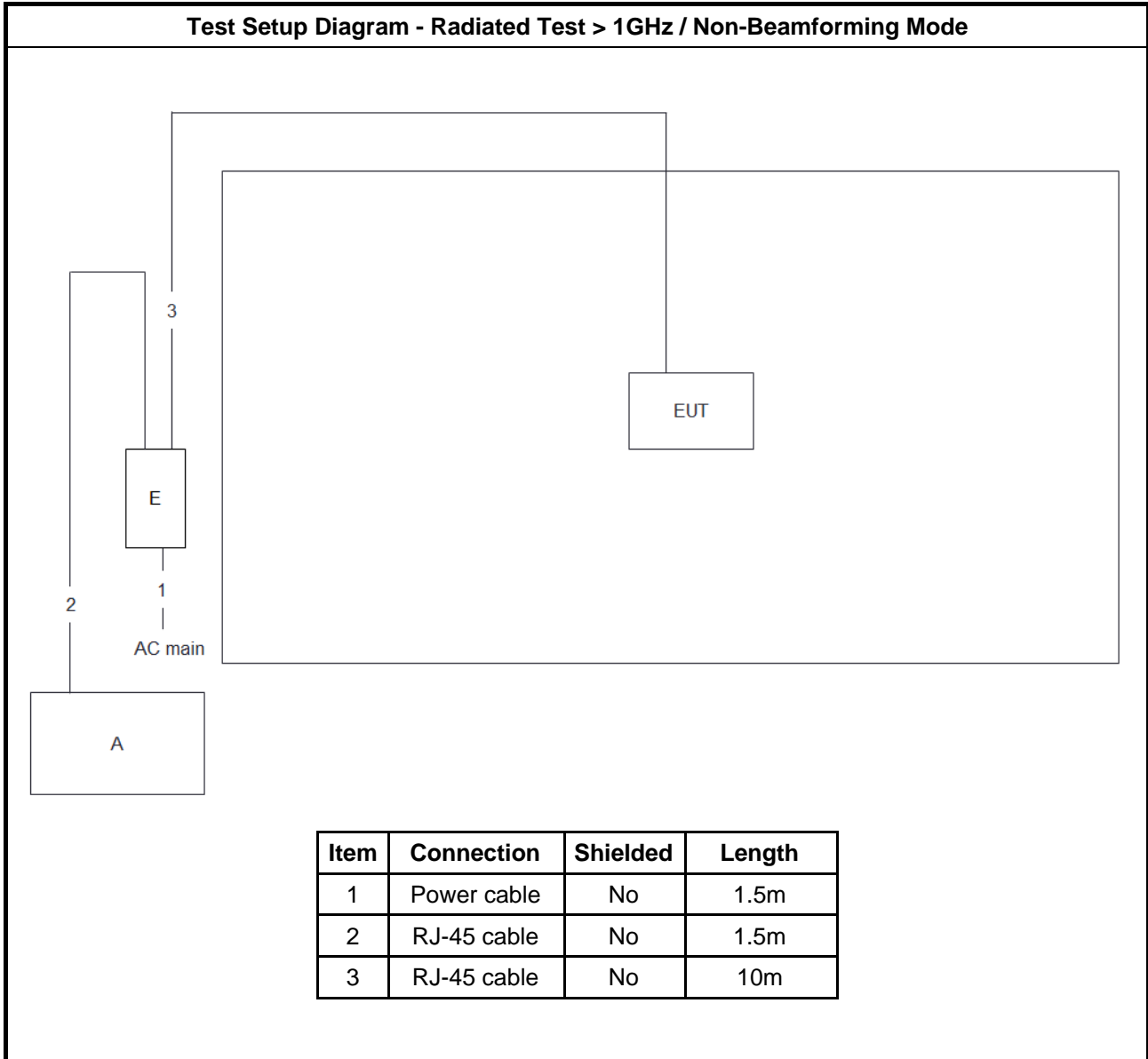
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A
C	Notebook	DELL	E4300	N/A
D	WLAN module	Boardcom	BCM 943684MCH5	N/A
E	PoE	Microsemi	PD-9001GR/AT/AC	N/A

For RF Conducted:

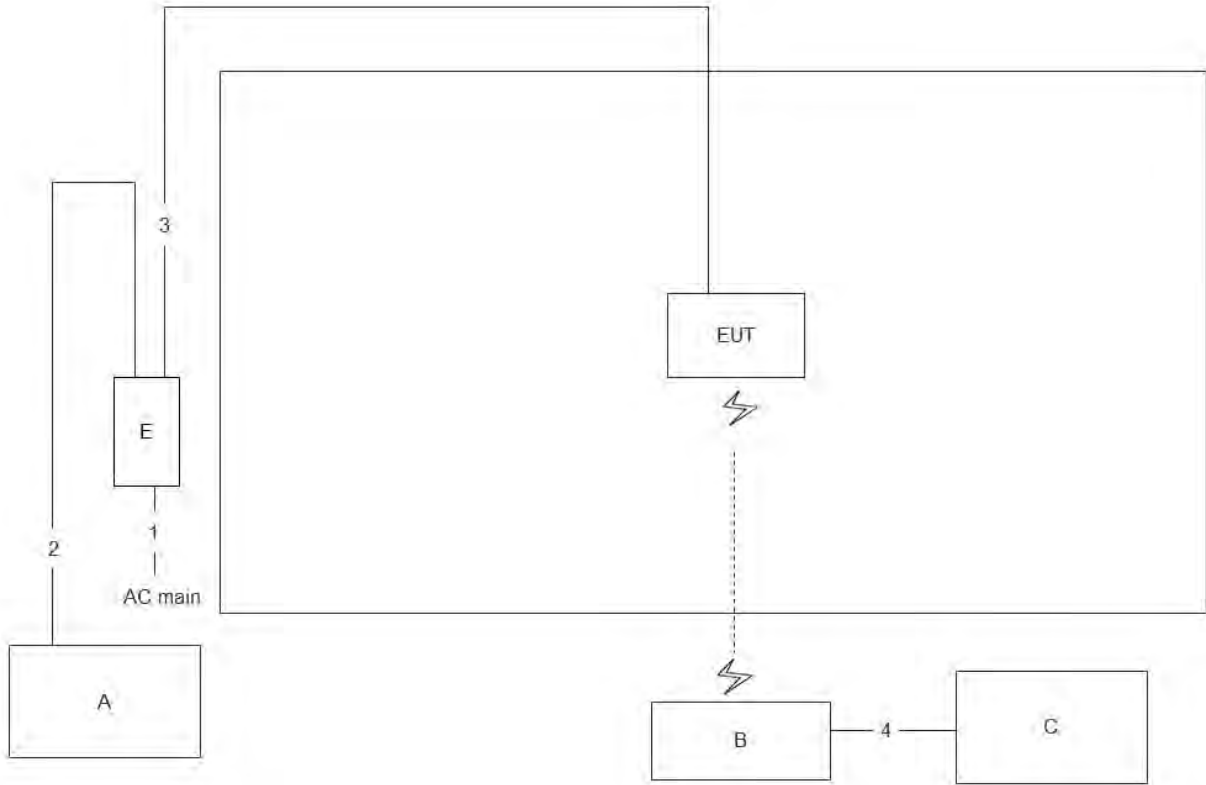
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A
B	PoE	Microsemi	PD-9001GR/AT/AC	N/A



2.6 Test Setup Diagram



Test Setup Diagram - Radiated Test > 1GHz / Beamforming Mode



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

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.

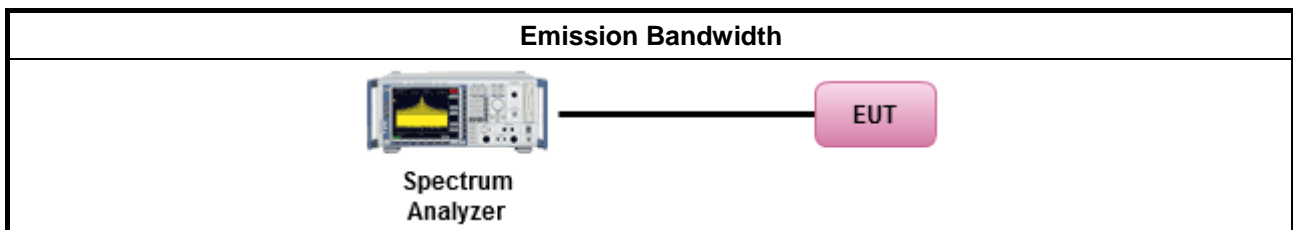
3.1.2 Measuring Instruments

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 $\leq 125mW$ [21dBm] ▪ Indoor AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$ ▪ Point-to-point AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 23$ dBi, then $P_{Out} = 30 - (G_{TX} - 23)$. ▪ Mobile or Portable Client: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$.
<input checked="" type="checkbox"/> For the 5.25-5.35 GHz band, the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$.	
<input checked="" type="checkbox"/> For the 5.47-5.725 GHz band, the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$.	
<input checked="" type="checkbox"/> For the 5.725-5.85 GHz band:	
	<ul style="list-style-type: none"> ▪ Point-to-multipoint systems (P2M): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$. ▪ Point-to-point systems (P2P): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W.
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

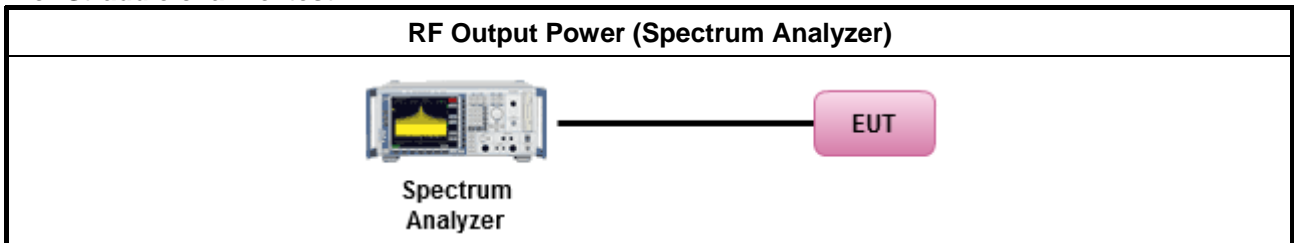
Refer a test equipment and calibration data table in this test report.

3.2.3 Test Procedures

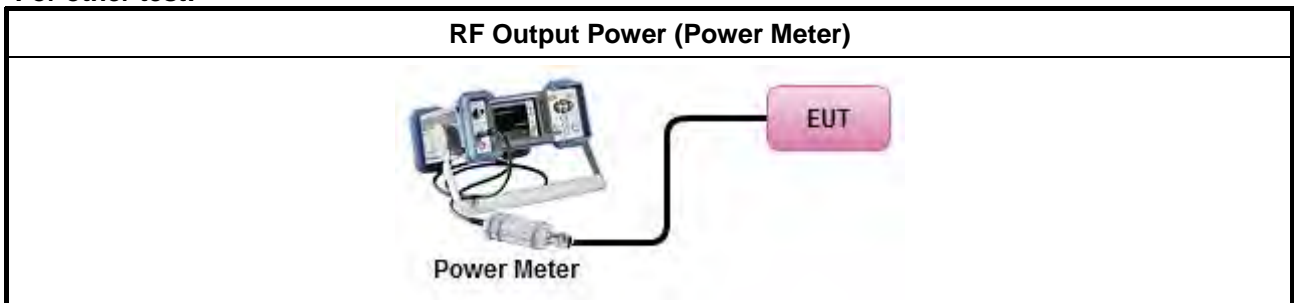
Test Method	
<ul style="list-style-type: none"> Maximum Conducted Output Power 	
Average over on/off periods with duty factor	
<input checked="" type="checkbox"/>	Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging).
<input type="checkbox"/>	Refer as FCC KDB 789033, clause E Method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

3.2.4 Test Setup

For Straddle channel test:



For other test:



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 e.i.r.p. peak power spectral density (PPSD) ≤ 10 dBm/MHz.
<input type="checkbox"/>	For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz.
	<ul style="list-style-type: none"> ▪ e.i.r.p. greater than 200 mW shall comply with the following e.i.r.p. at different elevations, where θ is the angle above the local horizontal plane (of the Earth) as shown below: -13 dBW/MHz for $0^\circ \leq \theta < 8^\circ$; -13 - 0.716 (θ-8) dBW/MHz for $8^\circ \leq \theta < 40^\circ$ -35.9 - 1.22 (θ-40) dBW/MHz for $40^\circ \leq \theta \leq 45^\circ$; -42 dBW/MHz for $\theta > 45^\circ$
<input type="checkbox"/>	For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz.
<input type="checkbox"/>	For the 5.725-5.85 GHz band:
	<ul style="list-style-type: none"> ▪ Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If $G_{TX} > 6$ dBi, then $PPSD = 30 - (G_{TX} - 6)$. ▪ Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.
<p>PPSD = peak power spectral density that he same method as used to determine the conducted output power shall be used to determine the power spectral density. And power spectral density in dBm/MHz G_{TX} = the maximum transmitting antenna directional gain in dBi.</p>	

3.3.2 Measuring Instruments

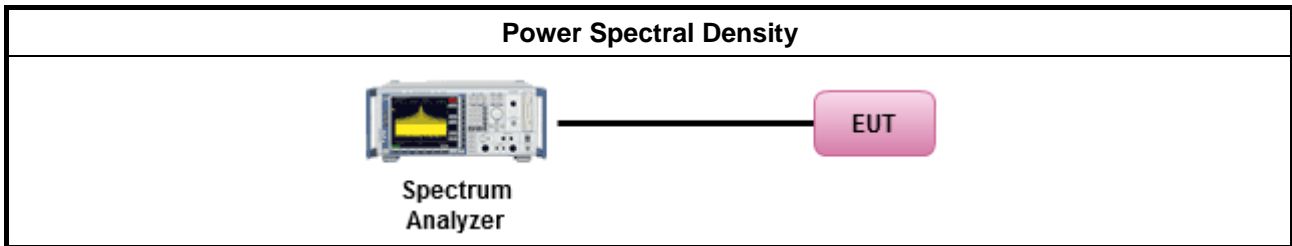
Refer a test equipment and calibration data table in this test report.



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, F5) 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 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	all emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

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



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

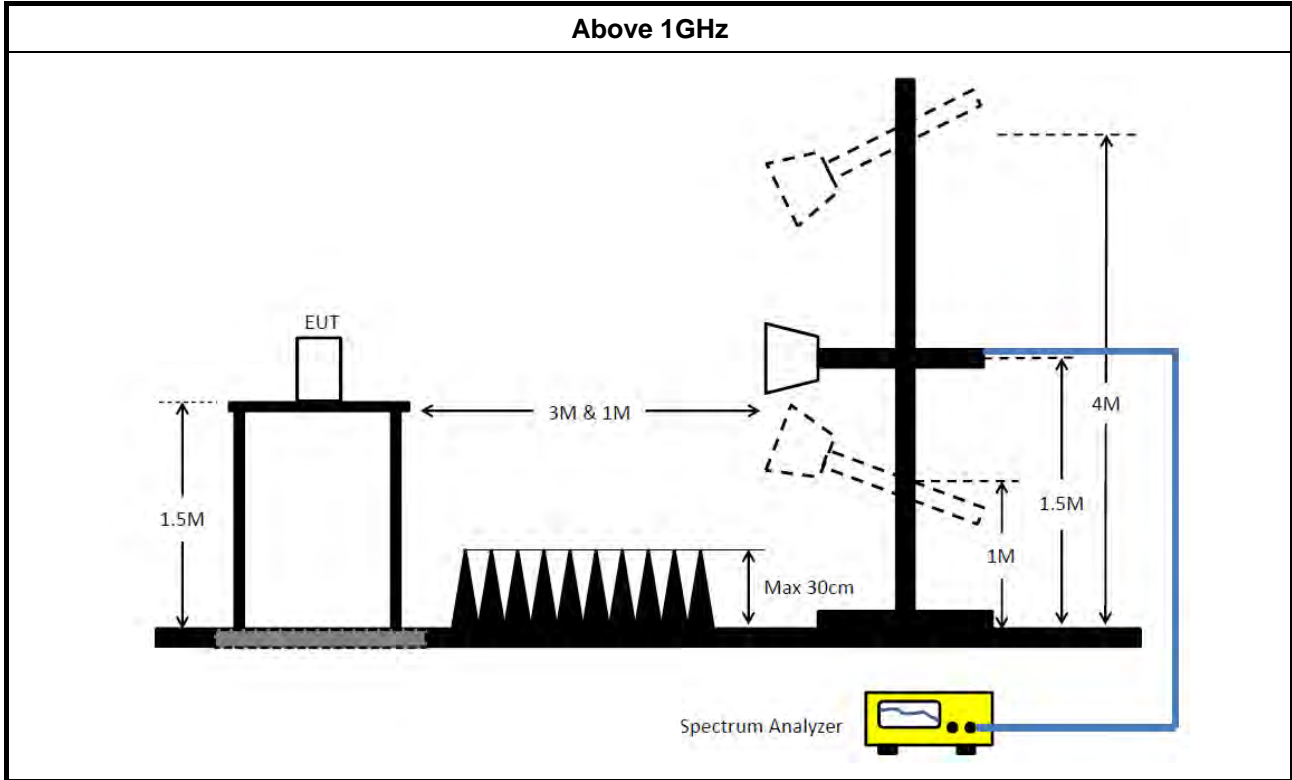
3.4.2 Measuring Instruments

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 ≥ 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 G)2) for unwanted emissions into non-restricted bands. Refer as FCC KDB 789033, clause G)1) for unwanted emissions into restricted bands. <ul style="list-style-type: none"> <input type="checkbox"/> Refer as FCC KDB 789033, G)6) Method AD (Trace Averaging). <input checked="" type="checkbox"/> Refer as FCC KDB 789033, G)6) Method VB (Reduced VBW). <input type="checkbox"/> Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time. <input type="checkbox"/> Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions. <input checked="" type="checkbox"/> Refer as FCC KDB 789033, clause G)5) measurement procedure peak limit. <input type="checkbox"/> Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak limit. 	
<ul style="list-style-type: none"> For radiated measurement. <ul style="list-style-type: none"> Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m. 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. 13, 2018	Nov. 12, 2019	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jun. 28, 2018	Jun. 27, 2019	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 08, 2019	Jan. 07, 2020	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-H G	1864479	18GHz ~ 40GHz	Jul. 04, 2018	Jul. 03, 2019	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Jan. 31, 2019	Jan. 30, 2020	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz ~ 40 GHz	Jul. 27, 2018	Jul. 26, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Jul. 27, 2018	Jul. 26, 2019	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Feb. 25, 2019	Feb. 24, 2020	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz ~ 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz ~ 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz ~ 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz ~ 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz ~ 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-28	1 GHz ~ 26.5 GHz	Nov. 19, 2018	Nov. 18, 2019	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 05, 2018	Nov. 04, 2019	Conducted (TH01-CB)

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



**For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 2 ~ Band 4:
Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ax HEW160_Nss1,(MCS0)_1TX	81.28M	77.241M	77M2D1D	81.28M	77.241M
5.25-5.35GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	41.05M	16.942M	16M9D1D	27.5M	16.717M
802.11ax HEW20_Nss1,(MCS0)_1TX	40.925M	19.19M	19M2D1D	26.325M	19.015M
802.11ax HEW40_Nss1,(MCS0)_1TX	73.6M	37.831M	37M8D1D	40M	37.531M
802.11ax HEW80_Nss1,(MCS0)_1TX	81.5M	77.061M	77M1D1D	81.5M	77.061M
802.11ax HEW160_Nss1,(MCS0)_1TX	81.28M	77.161M	77M2D1D	81.28M	77.161M
5.47-5.725GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	28.4M	16.667M	16M7D1D	15.915M	13.343M
802.11ax HEW20_Nss1,(MCS0)_1TX	28.575M	19.015M	19M0D1D	18.51M	14.513M
802.11ax HEW40_Nss1,(MCS0)_1TX	59.2M	37.731M	37M7D1D	39.13M	33.653M
802.11ax HEW80_Nss1,(MCS0)_1TX	140.8M	77.561M	77M6D1D	81.6M	74.363M
802.11ax HEW160_Nss1,(MCS0)_1TX	164.8M	155.122M	155MD1D	164.8M	155.122M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	3.2M	4.258M	4M26D1D	3.2M	4.258M
802.11ax HEW20_Nss1,(MCS0)_1TX	4.46M	5.457M	5M46D1D	4.46M	5.457M
802.11ax HEW40_Nss1,(MCS0)_1TX	3.98M	16.352M	16M4D1D	3.98M	16.352M
802.11ax HEW80_Nss1,(MCS0)_1TX	3.5M	36.882M	36M9D1D	3.5M	36.882M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

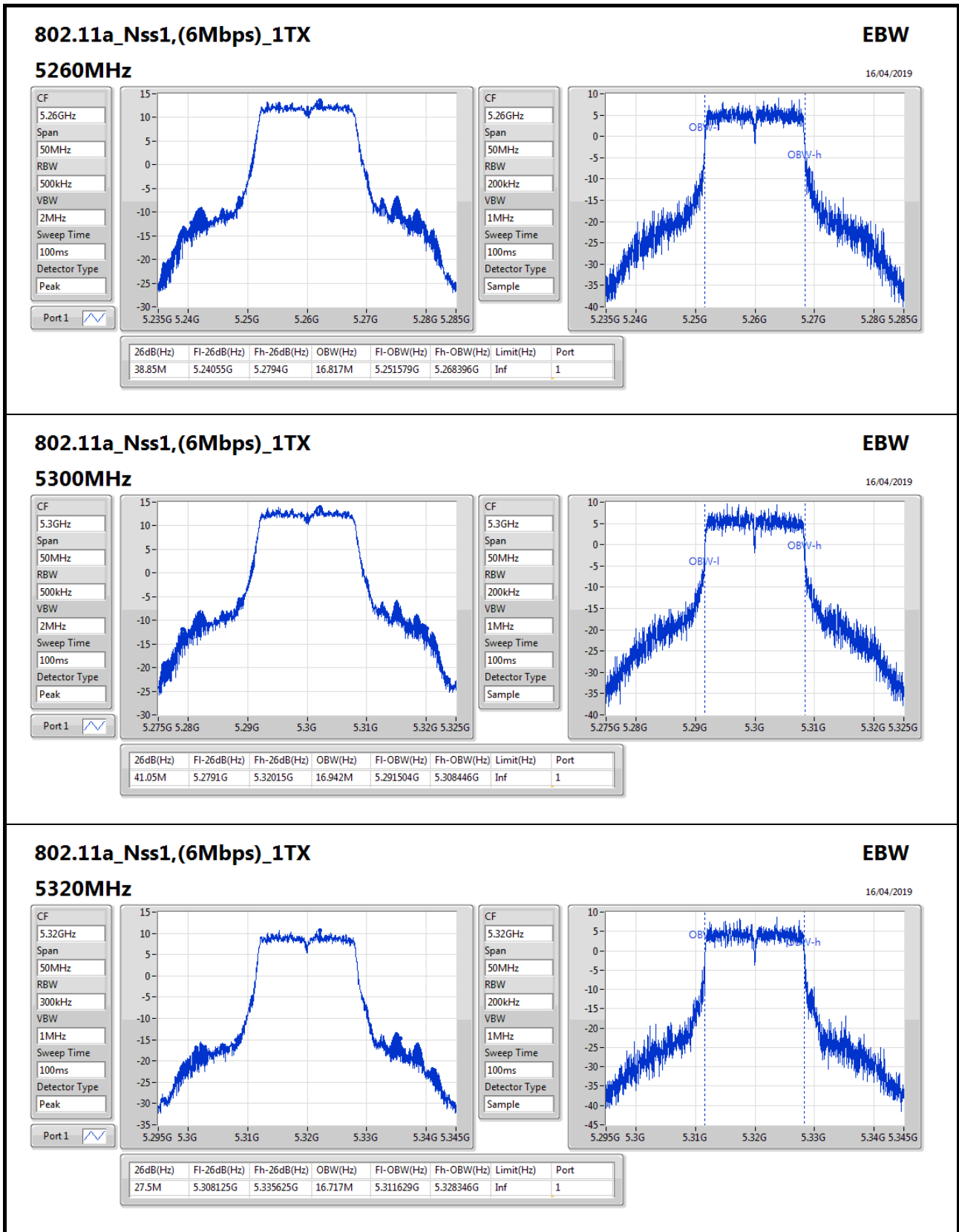
Min-OBW = Minimum 99% occupied bandwidth;

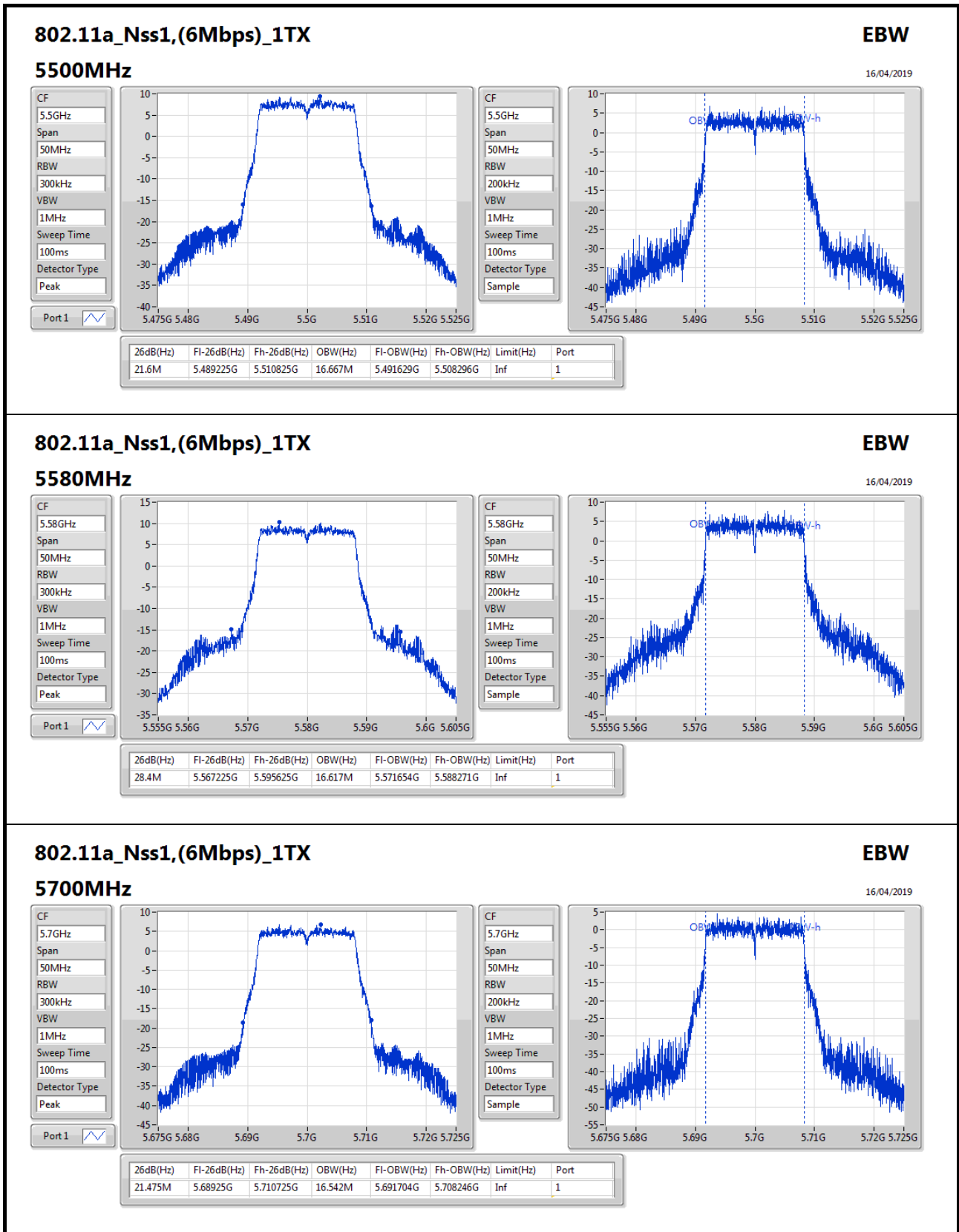


Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11a_Nss1,(6Mbps)_1TX	-	-	-	-
5260MHz	Pass	Inf	38.85M	16.817M
5300MHz	Pass	Inf	41.05M	16.942M
5320MHz	Pass	Inf	27.5M	16.717M
5500MHz	Pass	Inf	21.6M	16.667M
5580MHz	Pass	Inf	28.4M	16.617M
5700MHz	Pass	Inf	21.475M	16.542M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.915M	13.343M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.2M	4.258M
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-
5260MHz	Pass	Inf	40.8M	19.14M
5300MHz	Pass	Inf	40.925M	19.19M
5320MHz	Pass	Inf	26.325M	19.015M
5500MHz	Pass	Inf	23.35M	18.966M
5580MHz	Pass	Inf	28.575M	19.015M
5700MHz	Pass	Inf	21.6M	18.991M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	18.51M	14.513M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	4.46M	5.457M
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-	-	-
5270MHz	Pass	Inf	73.6M	37.831M
5310MHz	Pass	Inf	40M	37.531M
5510MHz	Pass	Inf	39.95M	37.581M
5550MHz	Pass	Inf	59.2M	37.731M
5670MHz	Pass	Inf	42.4M	37.581M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	39.13M	33.653M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.98M	16.352M
802.11ax HEW80_Nss1,(MCS0)_1TX	-	-	-	-
5290MHz	Pass	Inf	81.5M	77.061M
5530MHz	Pass	Inf	81.6M	77.261M
5610MHz	Pass	Inf	140.8M	77.561M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	125.475M	74.363M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.5M	36.882M
802.11ax HEW160_Nss1,(MCS0)_1TX	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	Inf	81.28M	77.241M
5250MHz Straddle 5.25-5.35GHz	Pass	Inf	81.28M	77.161M
5570MHz	Pass	Inf	164.8M	155.122M

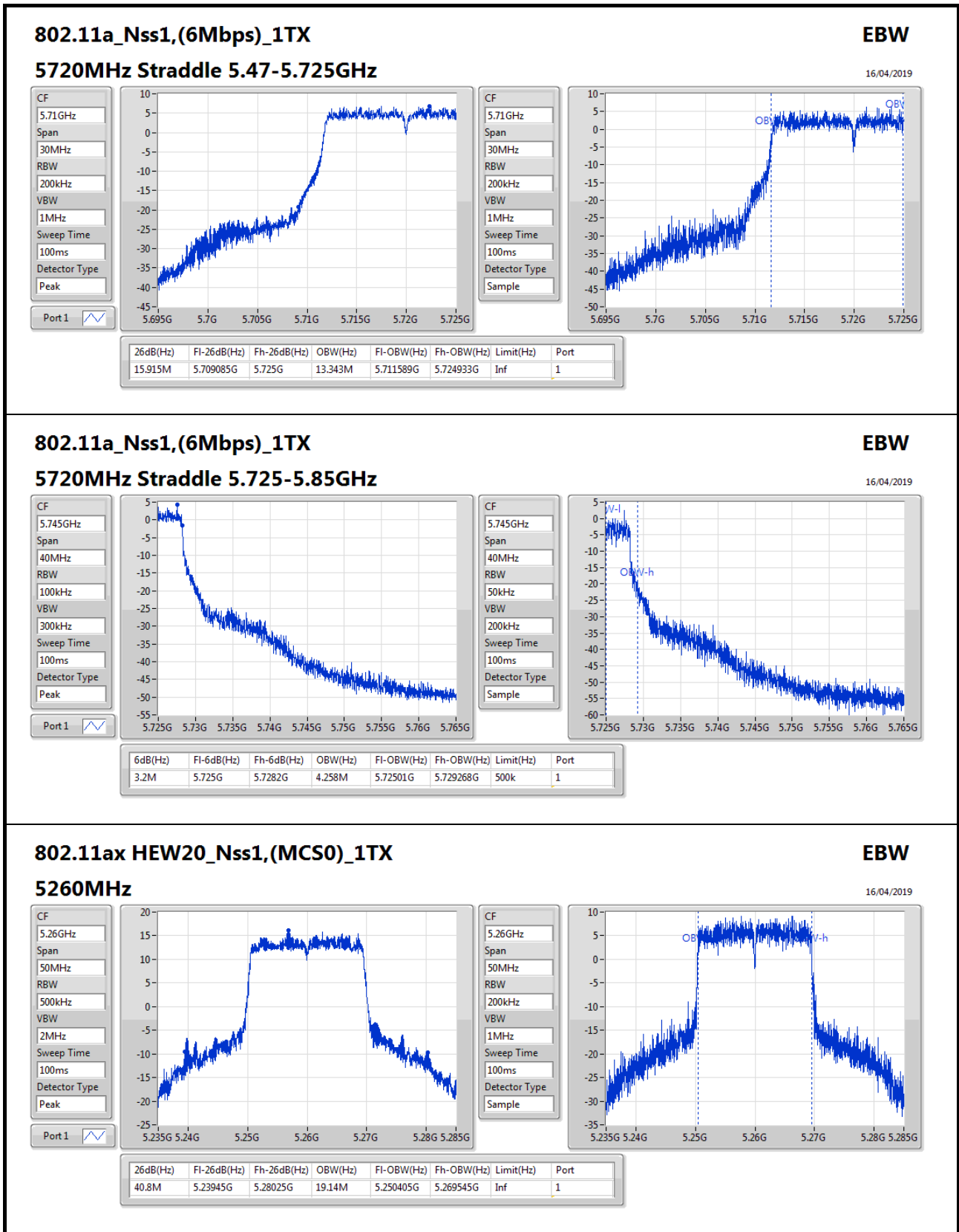
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth;

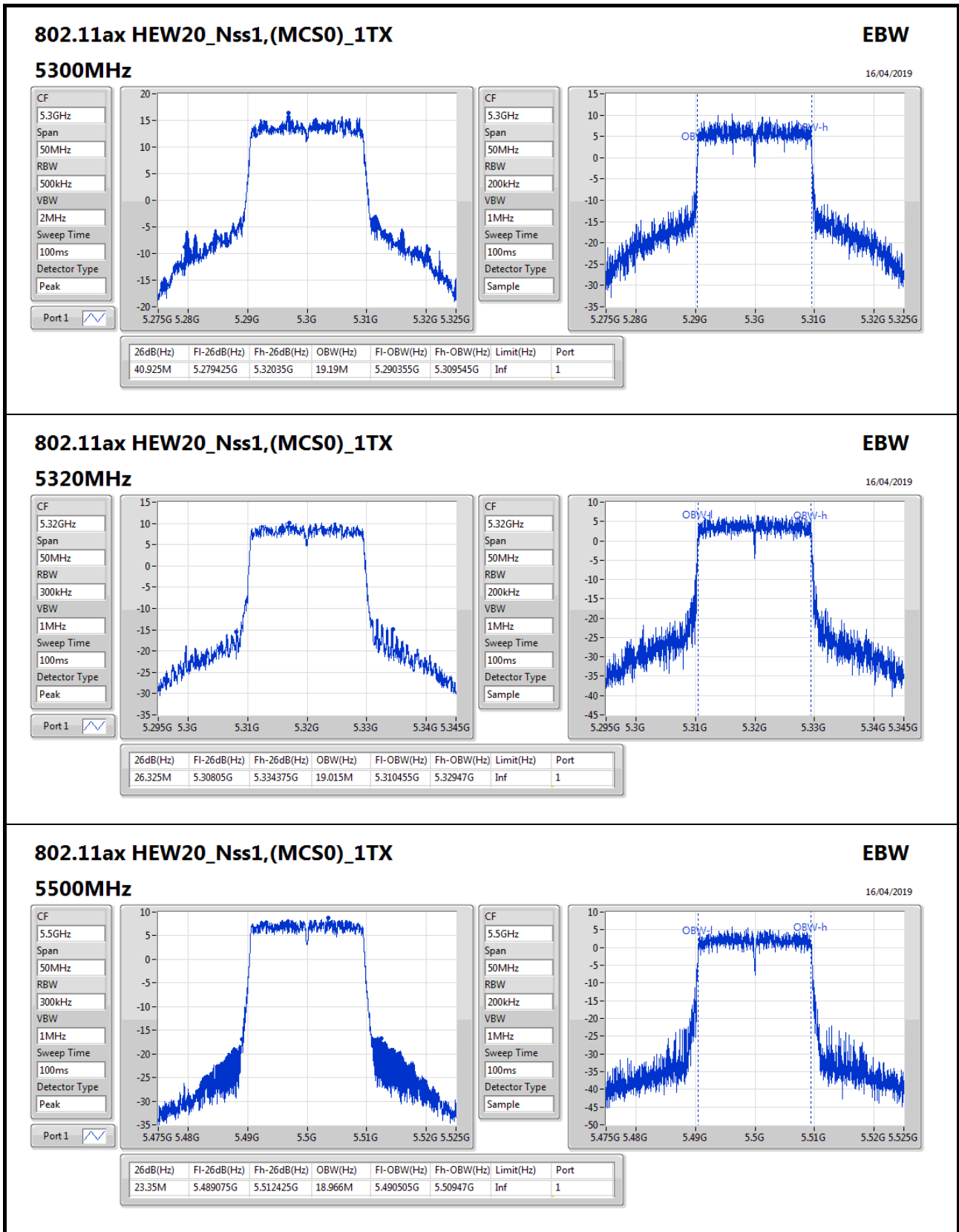


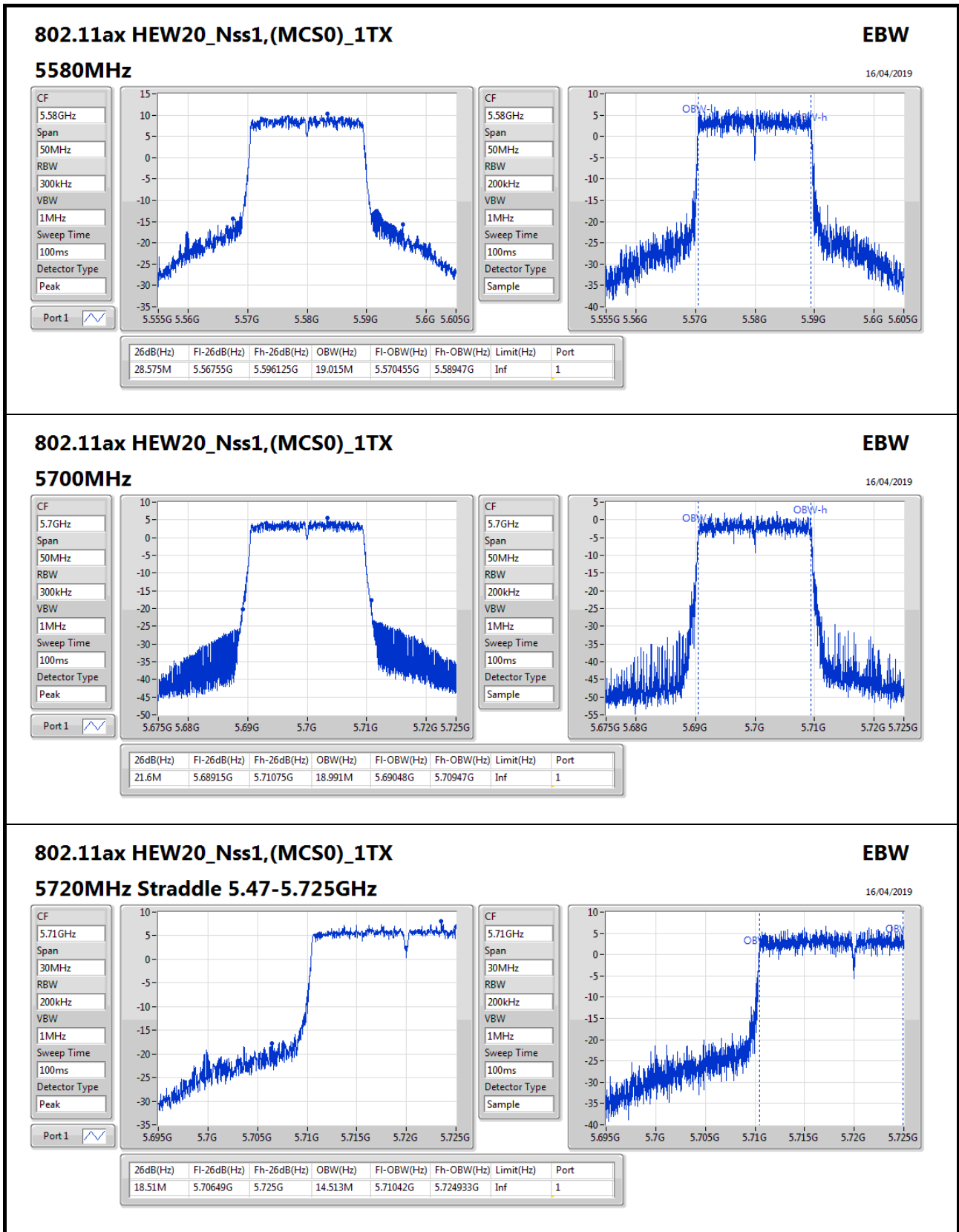

802.11a_Nss1,(6Mbps)_1TX
EBW
5700MHz
16/04/2019

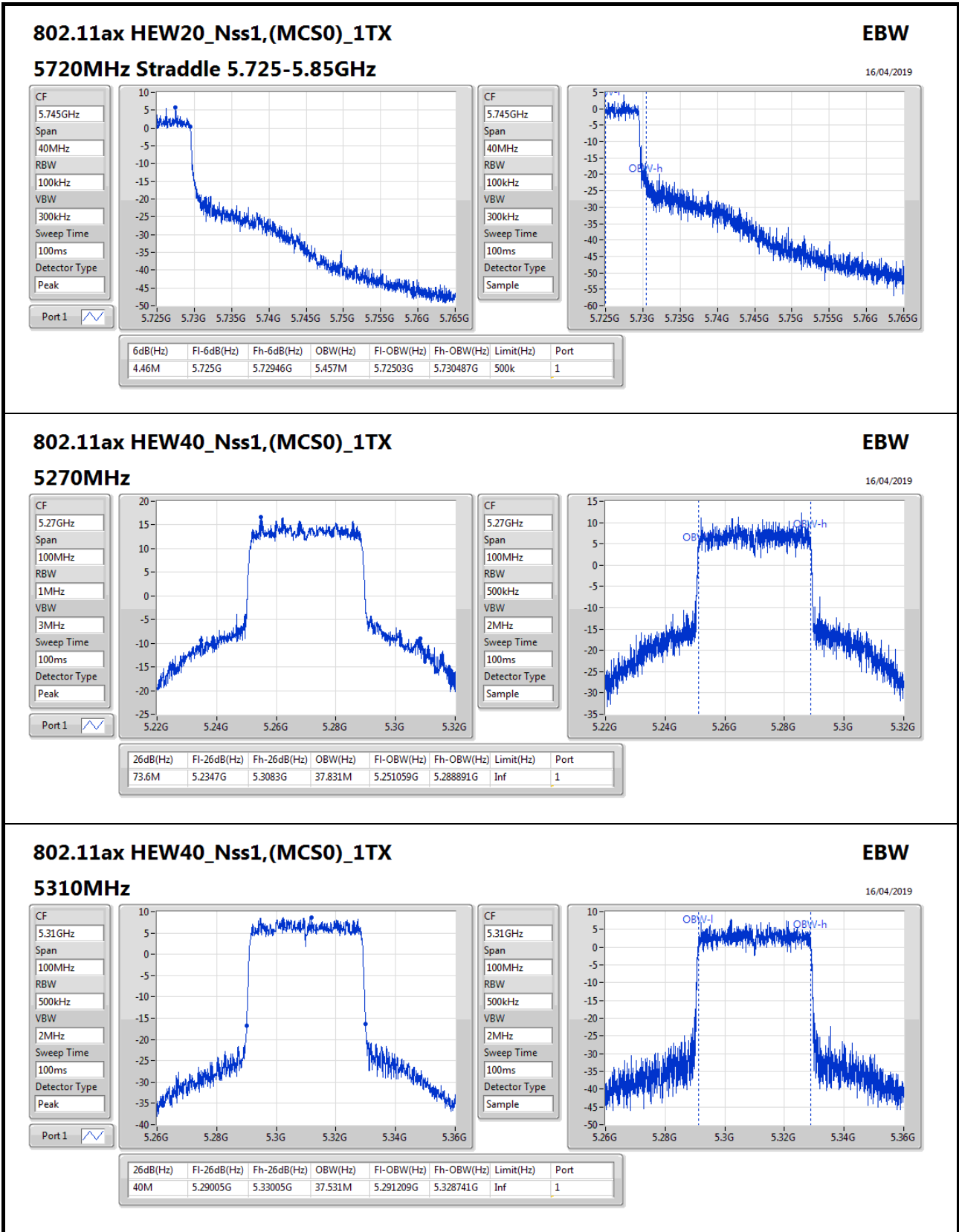
CF: 5.7GHz
Span: 50MHz
RBW: 300kHz
VBW: 1MHz
Sweep Time: 100ms
Detector Type: Peak

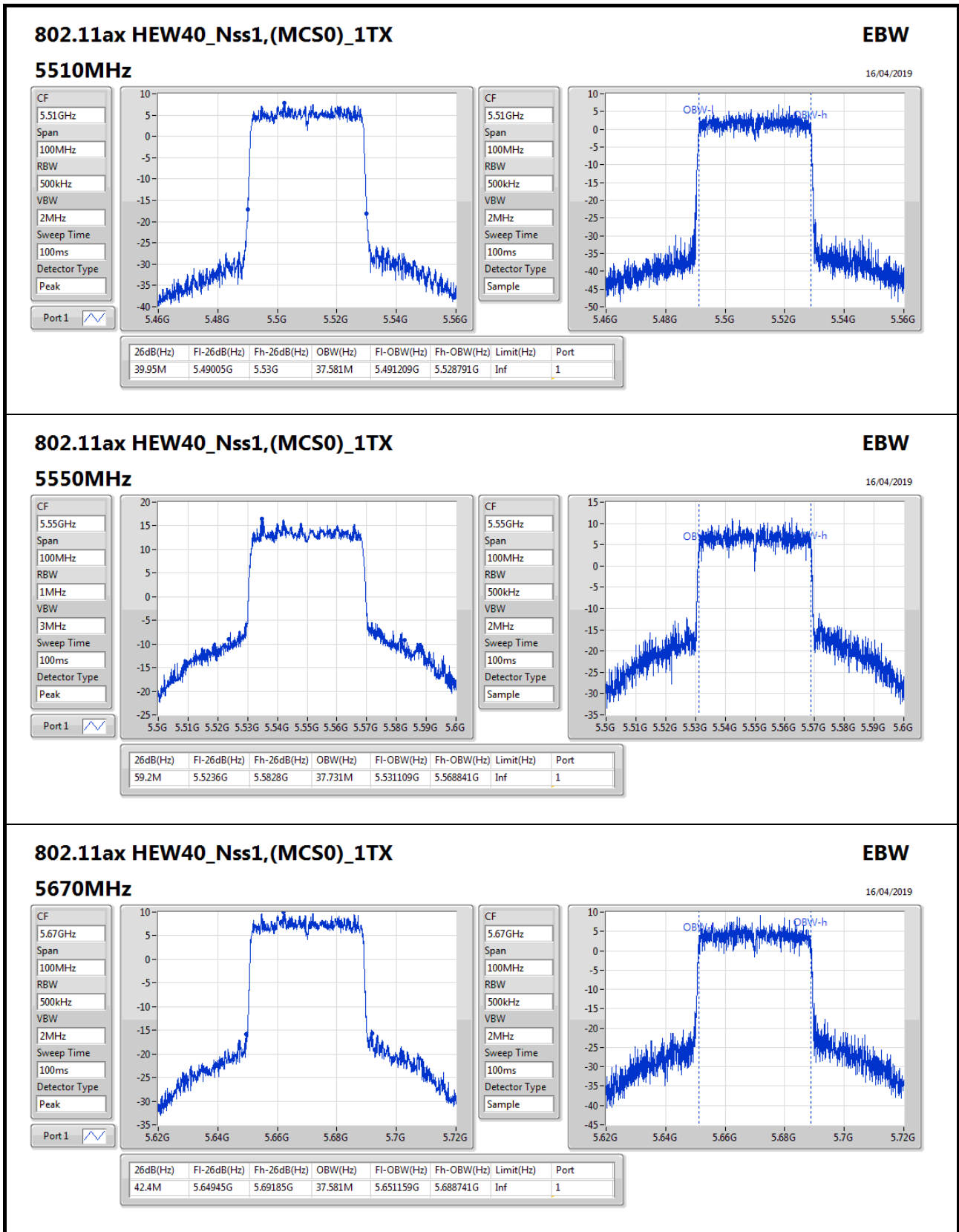
CF: 5.7GHz
Span: 50MHz
RBW: 200kHz
VBW: 1MHz
Sweep Time: 100ms
Detector Type: Sample

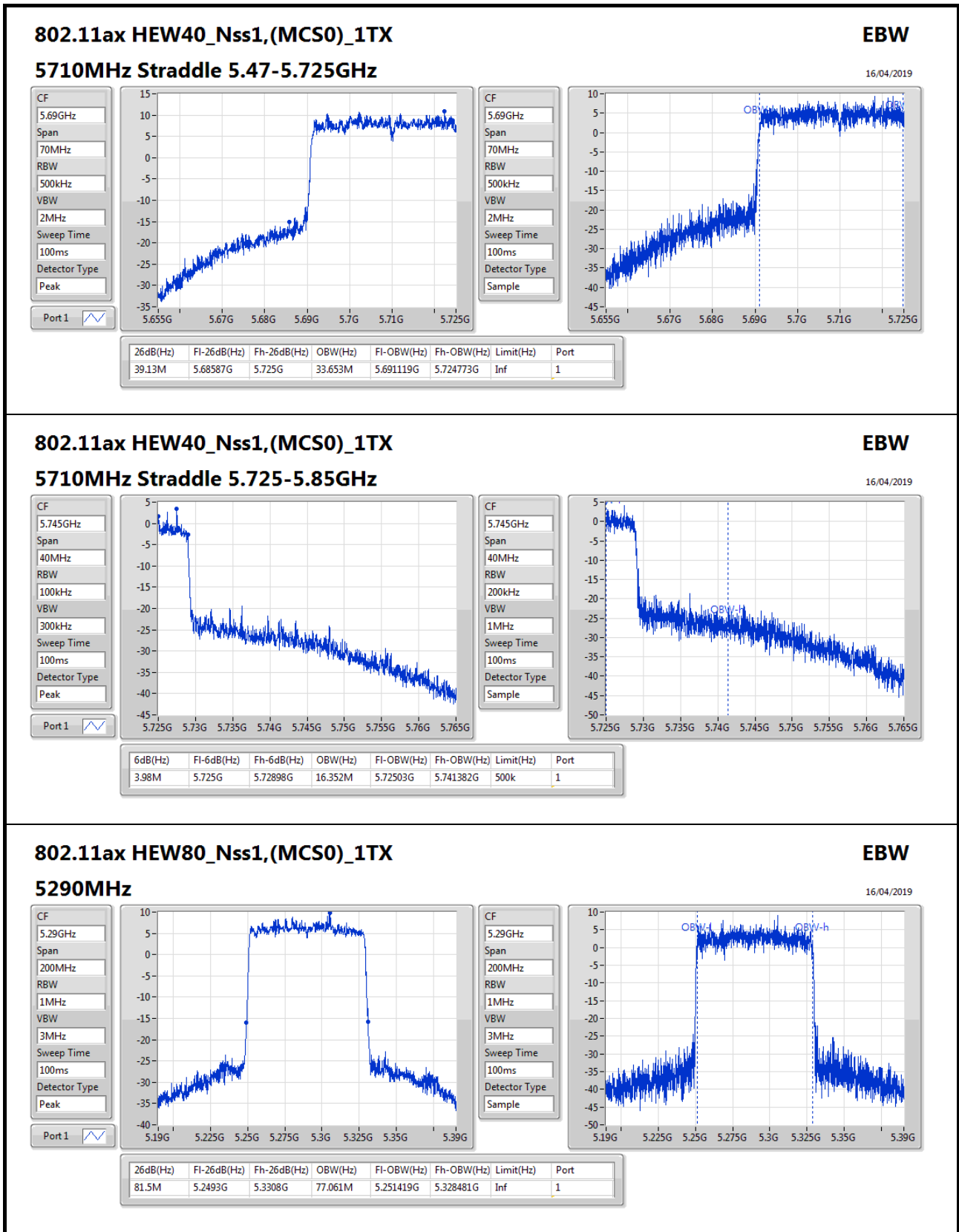


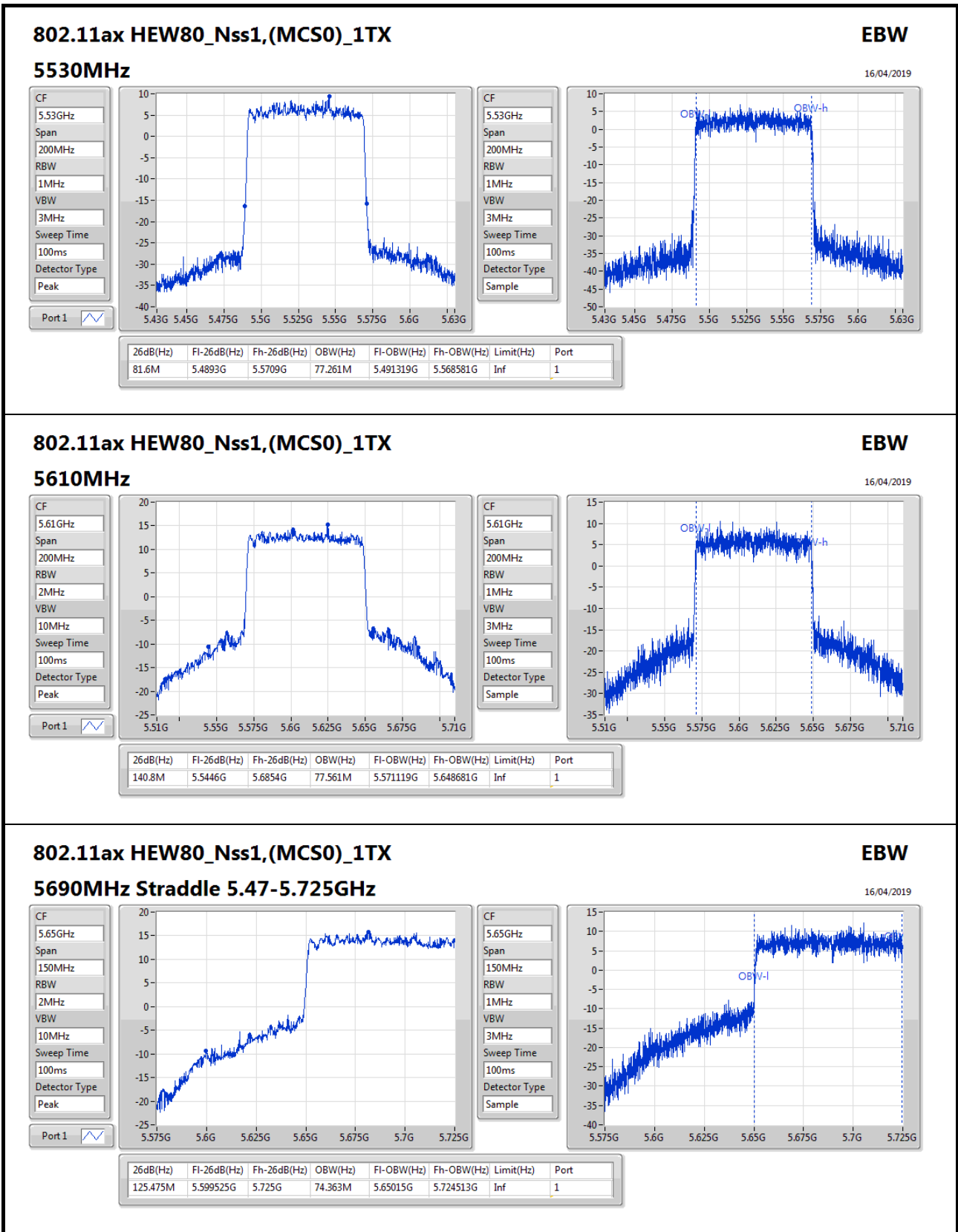






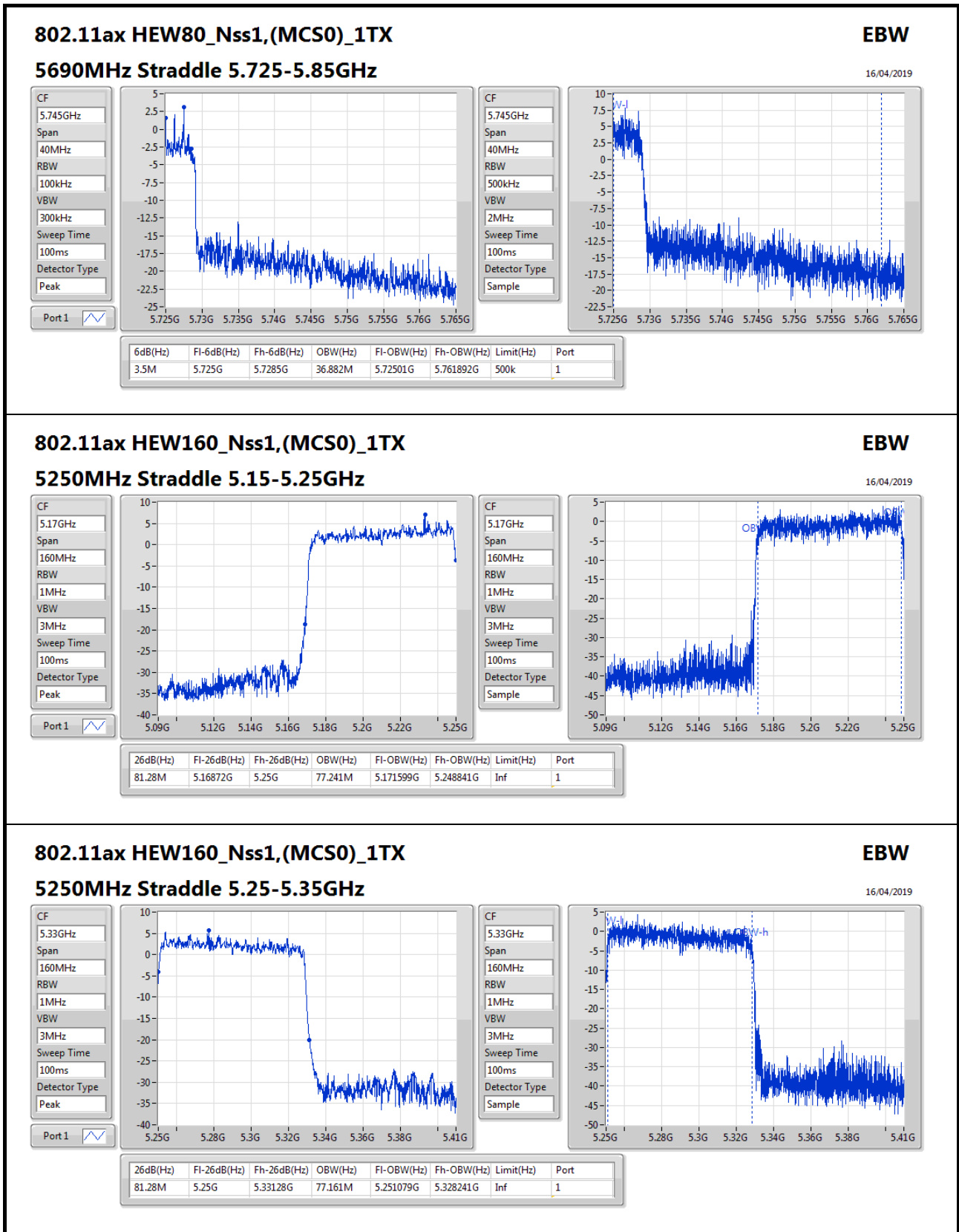


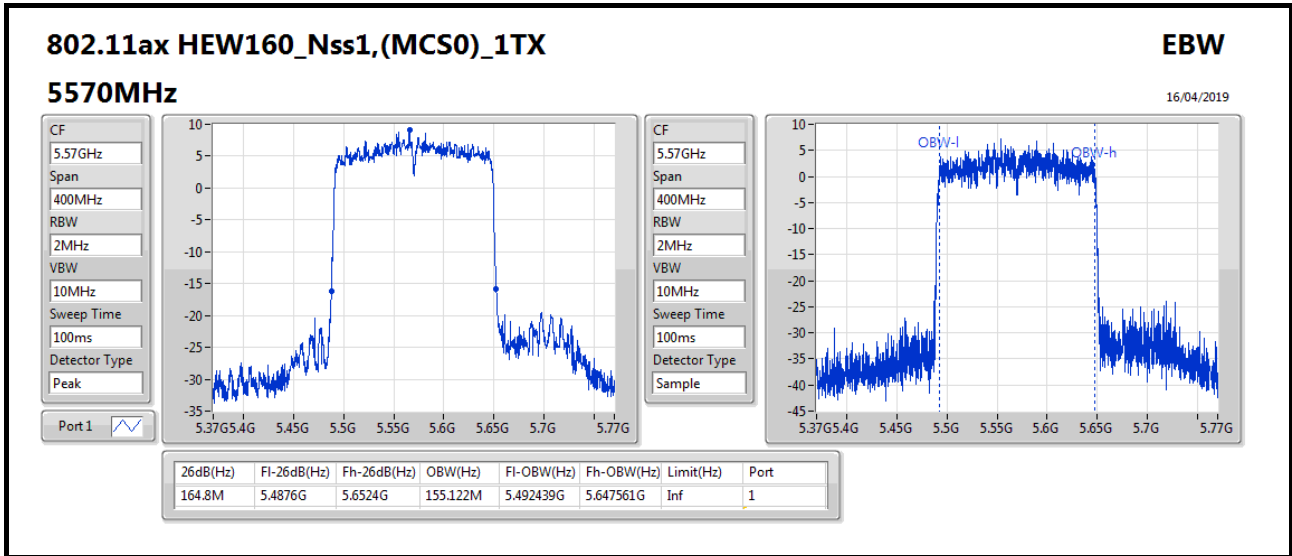



802.11ax HEW80_Nss1,(MCS0)_1TX
EBW
5690MHz Straddle 5.47-5.725GHz
16/04/2019

CF: 5.65GHz
Span: 150MHz
RBW: 2MHz
VBW: 10MHz
Sweep Time: 100ms
Detector Type: Peak

CF: 5.65GHz
Span: 150MHz
RBW: 1MHz
VBW: 3MHz
Sweep Time: 100ms
Detector Type: Sample







**For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 2 ~ Band 4:
Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ax HEW160_Nss2,(MCS0)_2TX	82M	77.161M	77M2D1D	81.44M	77.081M
5.25-5.35GHz	-	-	-	-	-
802.11ax HEW20_Nss2,(MCS0)_2TX	26.975M	19.015M	19M0D1D	21.425M	18.966M
802.11ax HEW40_Nss2,(MCS0)_2TX	70.6M	37.631M	37M6D1D	39.9M	37.531M
802.11ax HEW80_Nss2,(MCS0)_2TX	81.8M	76.962M	77M0D1D	81.5M	76.962M
802.11ax HEW160_Nss2,(MCS0)_2TX	81.28M	77.001M	77M0D1D	80.72M	77.001M
5.47-5.725GHz	-	-	-	-	-
802.11ax HEW20_Nss2,(MCS0)_2TX	29.775M	18.991M	19M0D1D	15.825M	14.483M
802.11ax HEW40_Nss2,(MCS0)_2TX	70.25M	37.581M	37M6D1D	39.62M	33.723M
802.11ax HEW80_Nss2,(MCS0)_2TX	125M	77.161M	77M2D1D	81.3M	73.313M
802.11ax HEW160_Nss2,(MCS0)_2TX	165.4M	155.522M	156MD1D	164.4M	154.923M
5.725-5.85GHz	-	-	-	-	-
802.11ax HEW20_Nss2,(MCS0)_2TX	4.46M	4.898M	4M90D1D	4.42M	4.878M
802.11ax HEW40_Nss2,(MCS0)_2TX	3.76M	15.572M	15M6D1D	3.72M	14.433M
802.11ax HEW80_Nss2,(MCS0)_2TX	3.76M	31.764M	31M8D1D	3.74M	29.885M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;

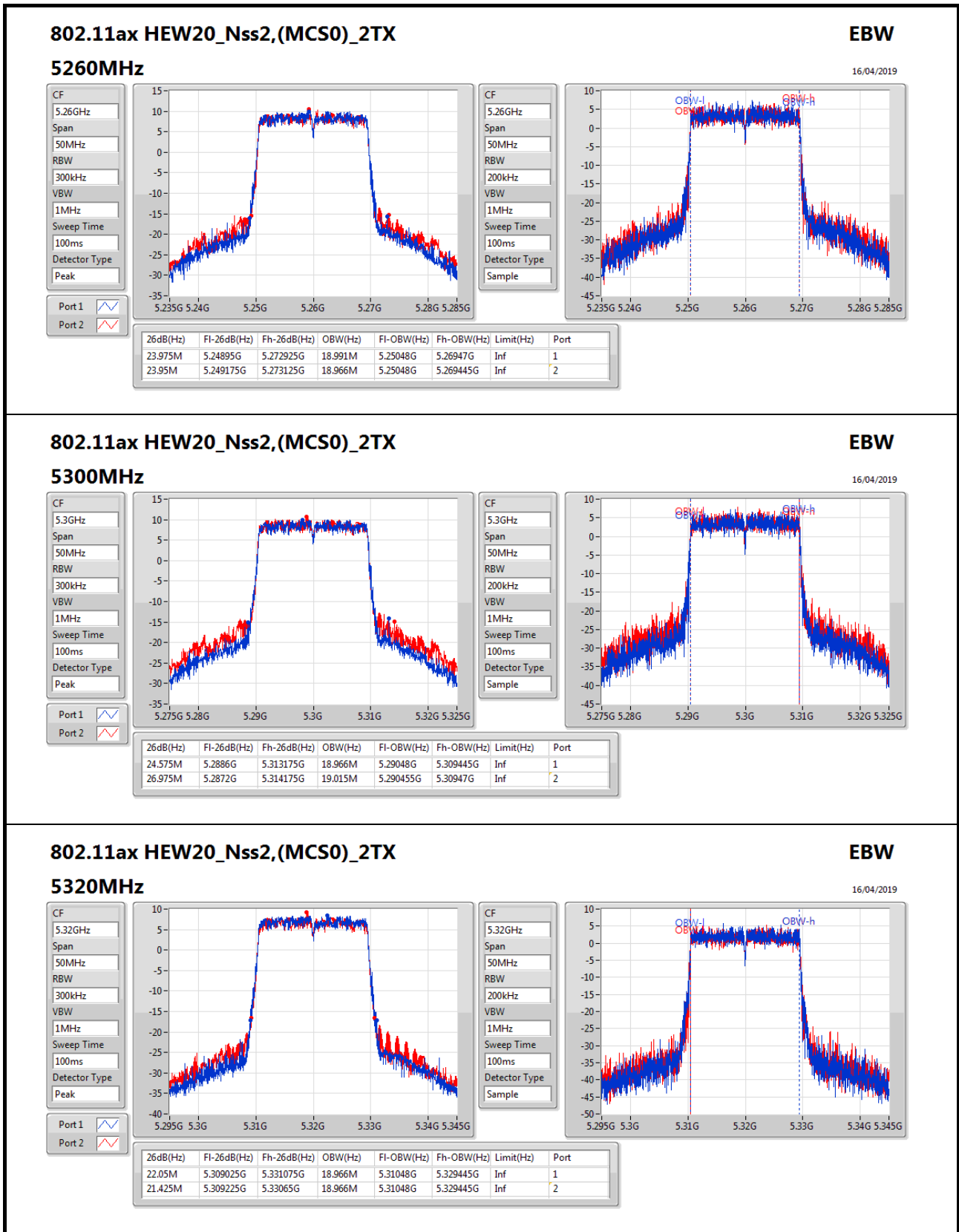


Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11ax HEW20_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5260MHz	Pass	Inf	23.975M	18.991M	23.95M	18.966M
5300MHz	Pass	Inf	24.575M	18.966M	26.975M	19.015M
5320MHz	Pass	Inf	22.05M	18.966M	21.425M	18.966M
5500MHz	Pass	Inf	22.025M	18.991M	21.65M	18.966M
5580MHz	Pass	Inf	25.85M	18.991M	29.775M	18.991M
5700MHz	Pass	Inf	22.25M	18.916M	21.45M	18.966M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	16.575M	14.483M	15.825M	14.498M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	4.46M	4.898M	4.42M	4.878M
802.11ax HEW40_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5270MHz	Pass	Inf	40.05M	37.581M	70.6M	37.631M
5310MHz	Pass	Inf	39.9M	37.531M	40M	37.531M
5510MHz	Pass	Inf	39.95M	37.531M	39.95M	37.531M
5550MHz	Pass	Inf	40.2M	37.581M	70.25M	37.531M
5670MHz	Pass	Inf	39.95M	37.581M	39.95M	37.531M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	39.62M	33.723M	40.705M	33.793M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.72M	14.433M	3.76M	15.572M
802.11ax HEW80_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5290MHz	Pass	Inf	81.8M	76.962M	81.5M	76.962M
5530MHz	Pass	Inf	81.5M	76.862M	81.3M	77.161M
5610MHz	Pass	Inf	90.6M	76.962M	125M	77.161M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	97.2M	73.313M	96.375M	73.388M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.76M	31.764M	3.74M	29.885M
802.11ax HEW160_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	Inf	81.44M	77.081M	82M	77.161M
5250MHz Straddle 5.25-5.35GHz	Pass	Inf	81.28M	77.001M	80.72M	77.001M
5570MHz	Pass	Inf	165.4M	155.522M	164.4M	154.923M

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

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


802.11ax HEW20_Nss2,(MCS0)_2TX
EBW

16/04/2019

5320MHz

CF: 5.32GHz

Span: 50MHz

RBW: 300kHz

VBW: 1MHz

Sweep Time: 100ms

Detector Type: Peak

Port 1:

Port 2:

CF: 5.32GHz

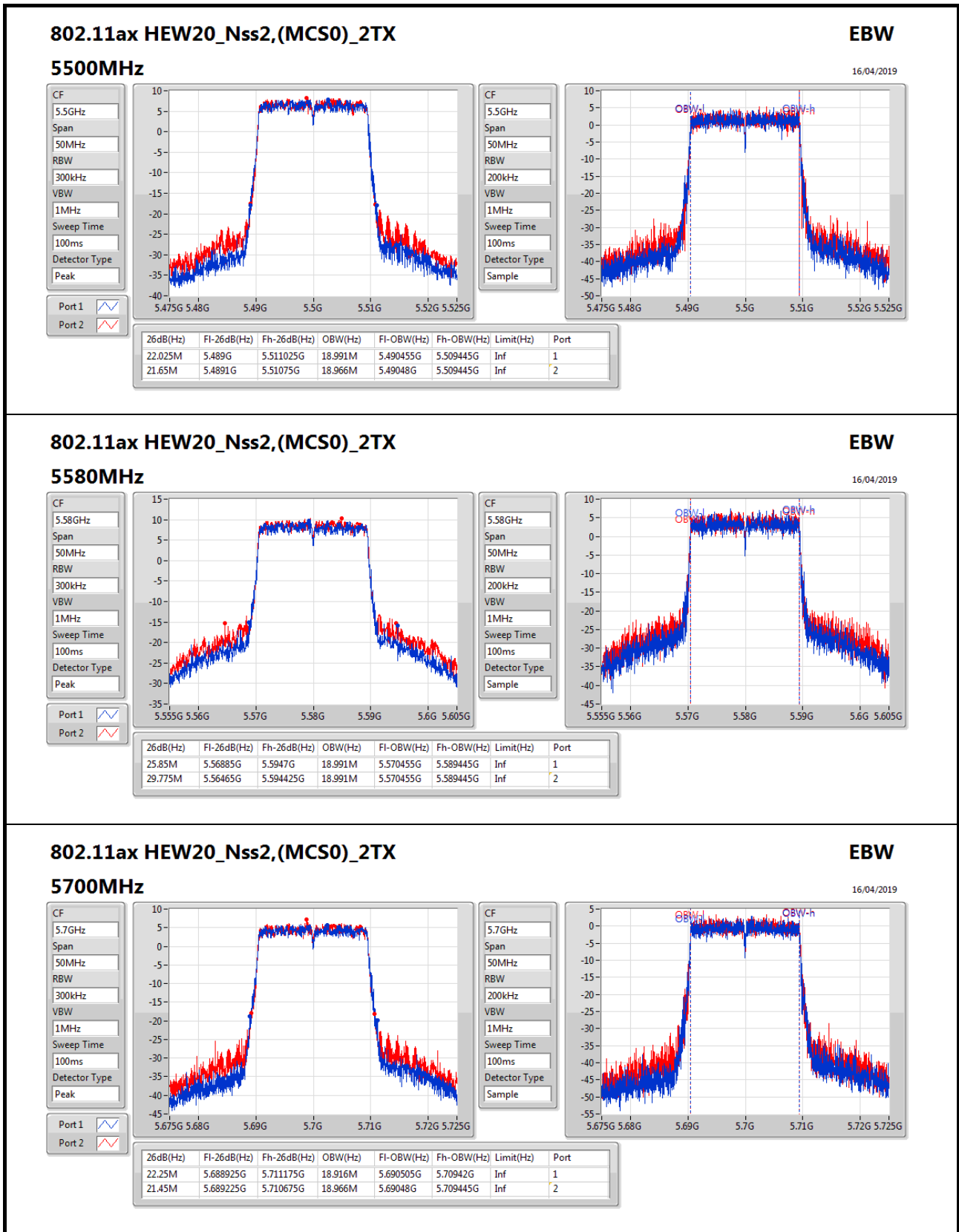
Span: 50MHz

RBW: 200kHz

VBW: 1MHz

Sweep Time: 100ms

Detector Type: Sample


802.11ax HEW20_Nss2,(MCS0)_2TX
EBW

5700MHz 16/04/2019

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

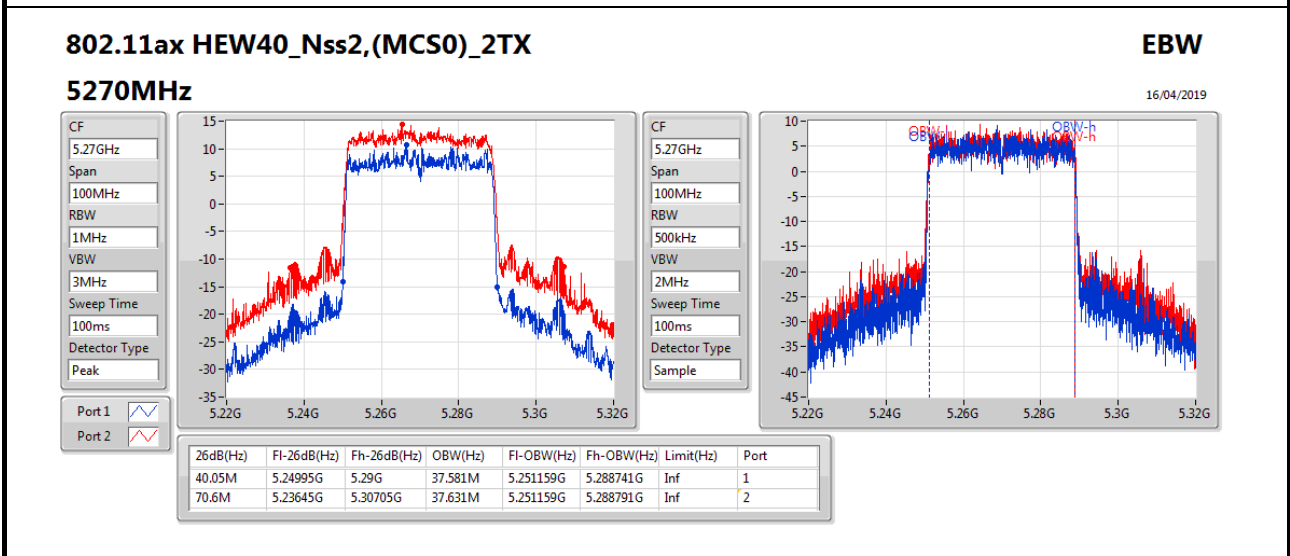
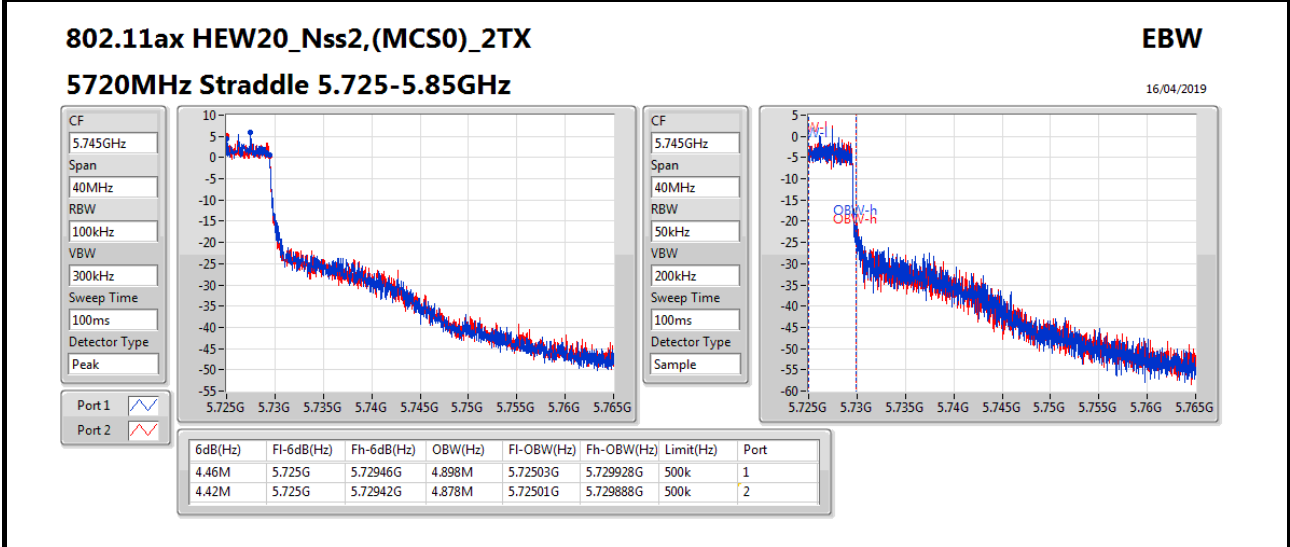
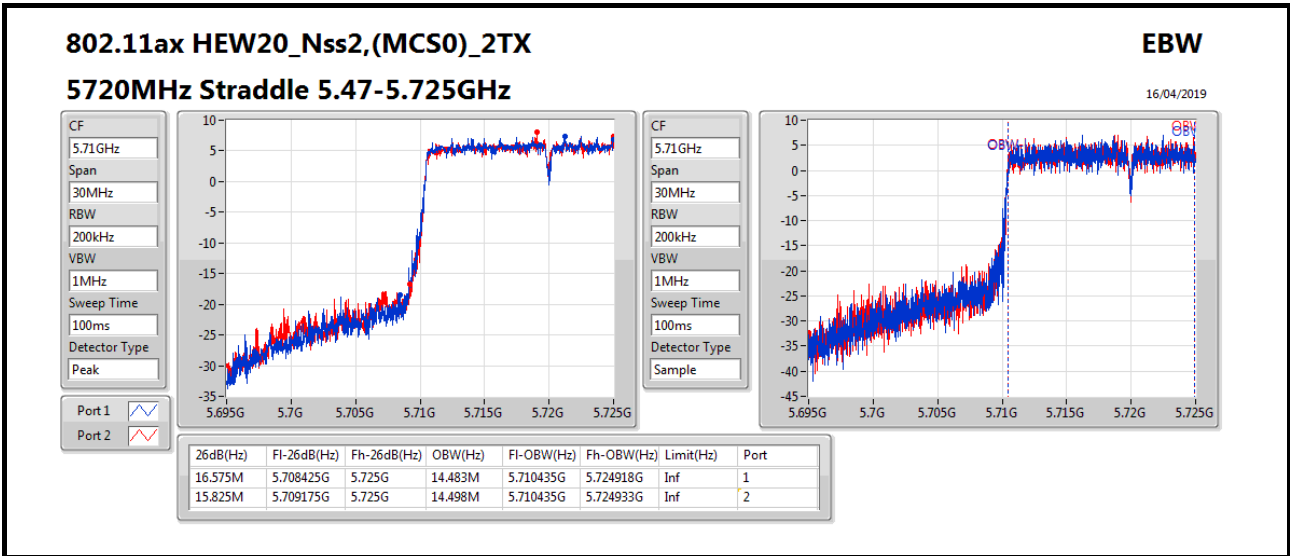
Port 1:

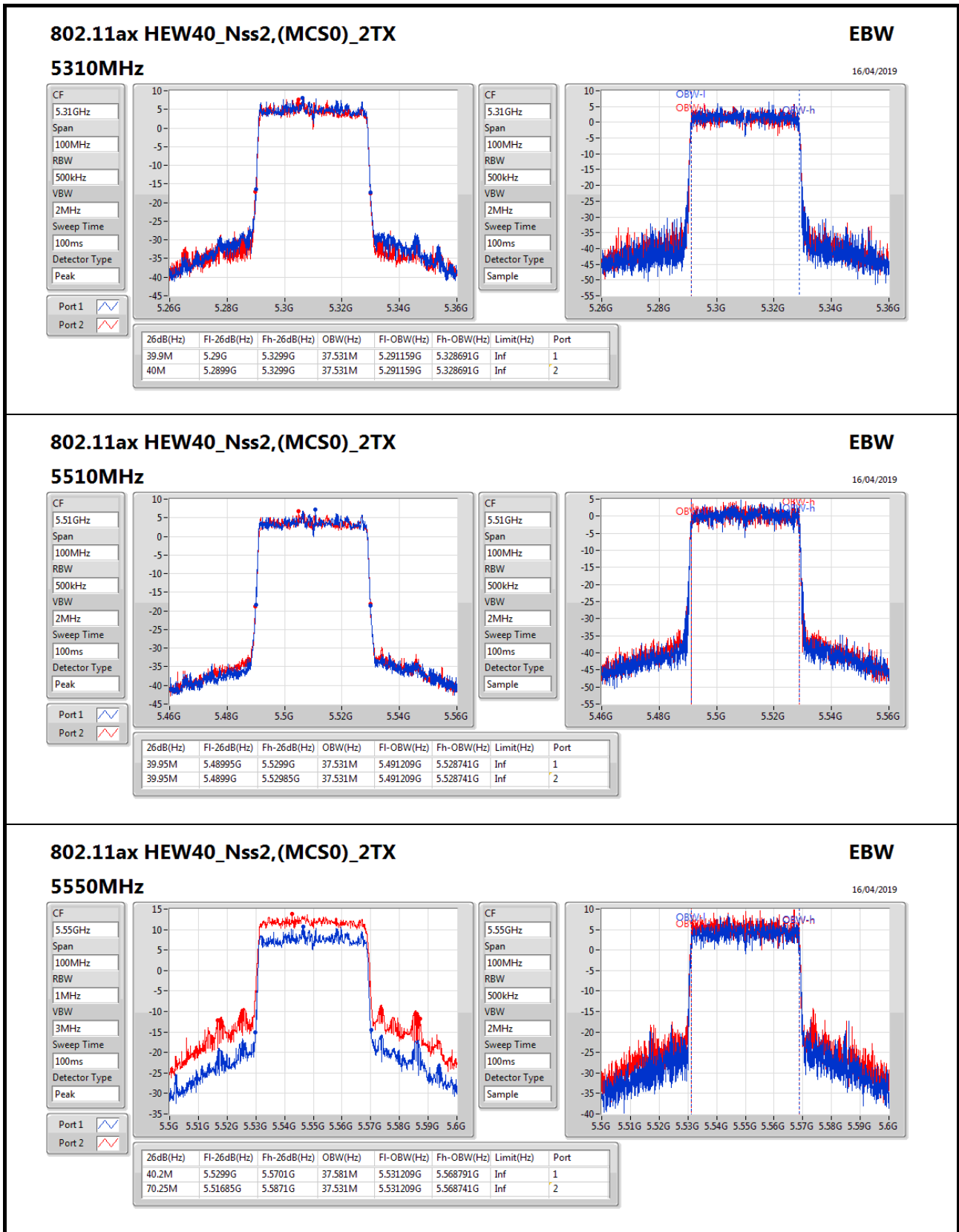
Port 2:

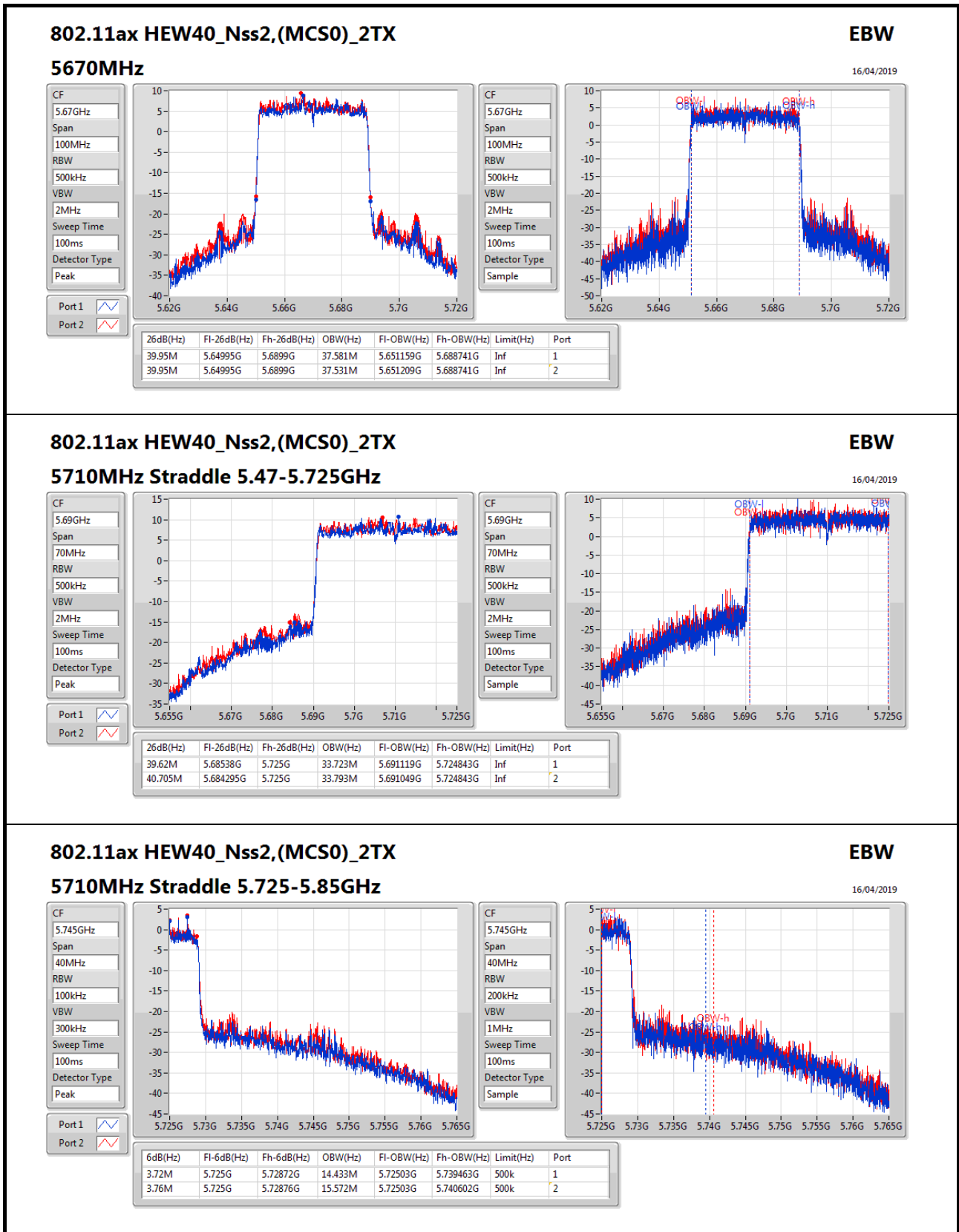
CF: 5.7GHz
Span: 50MHz
RBW: 200kHz
VBW: 1MHz
Sweep Time: 100ms
Detector Type: Sample

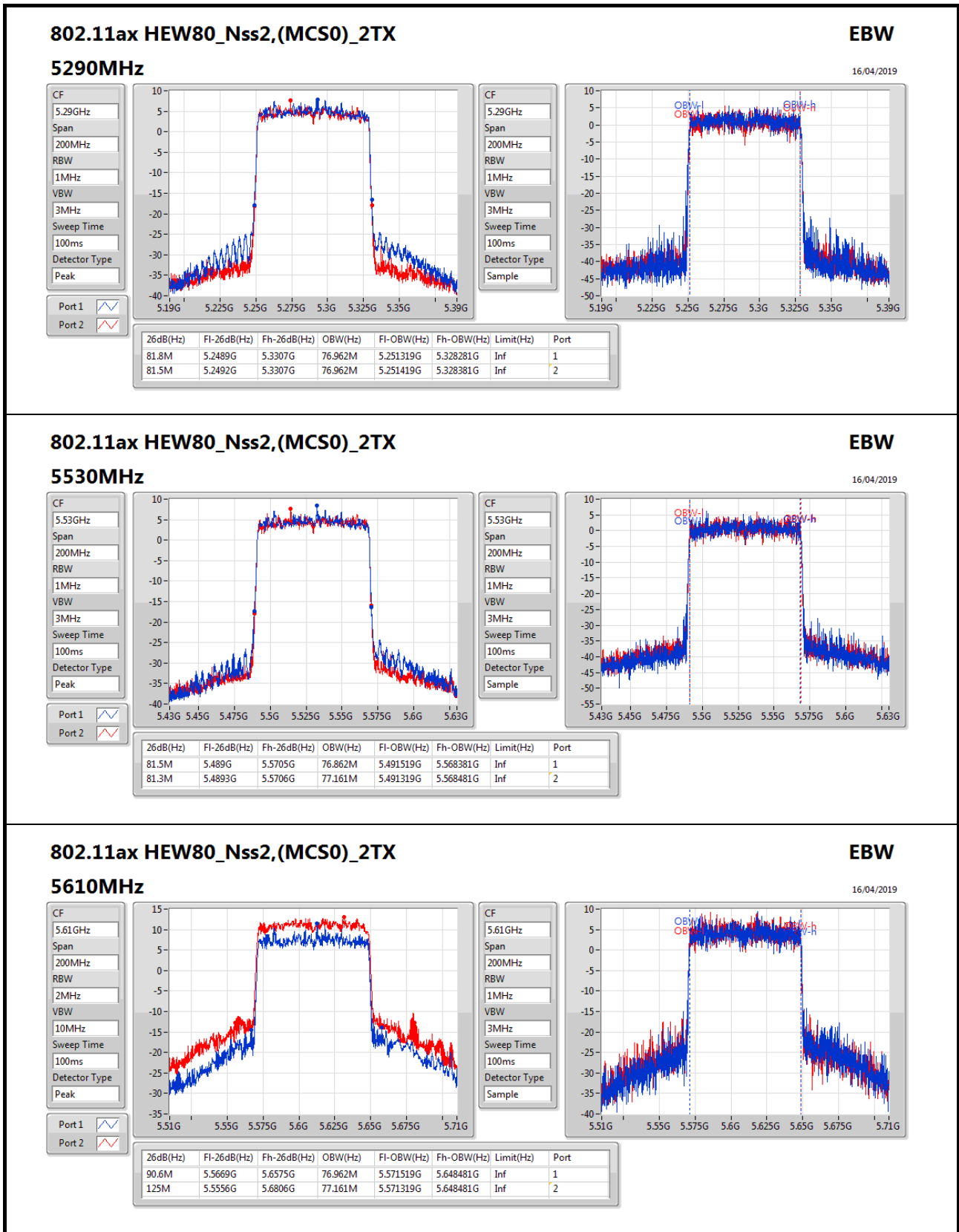
Port 1:

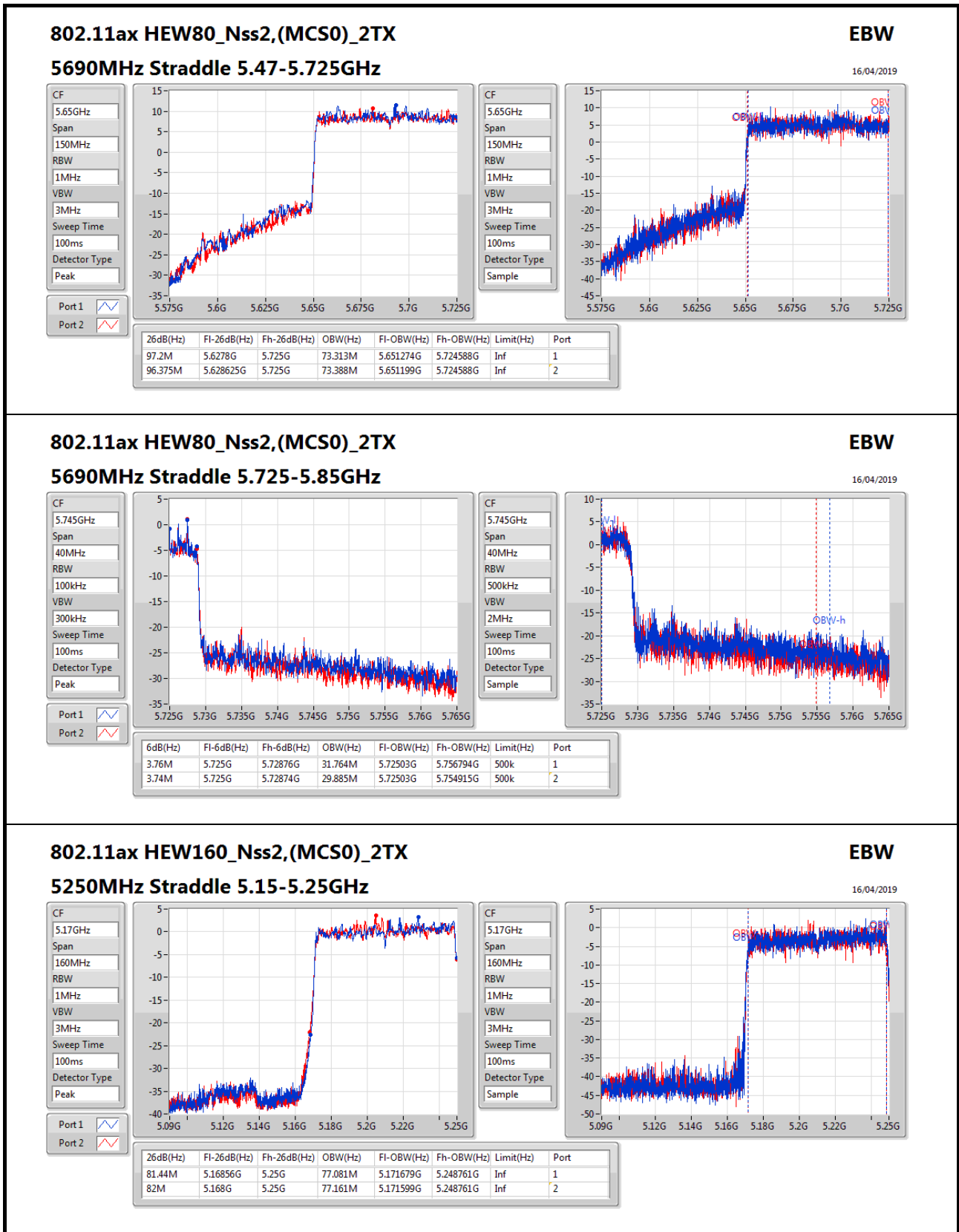
Port 2:

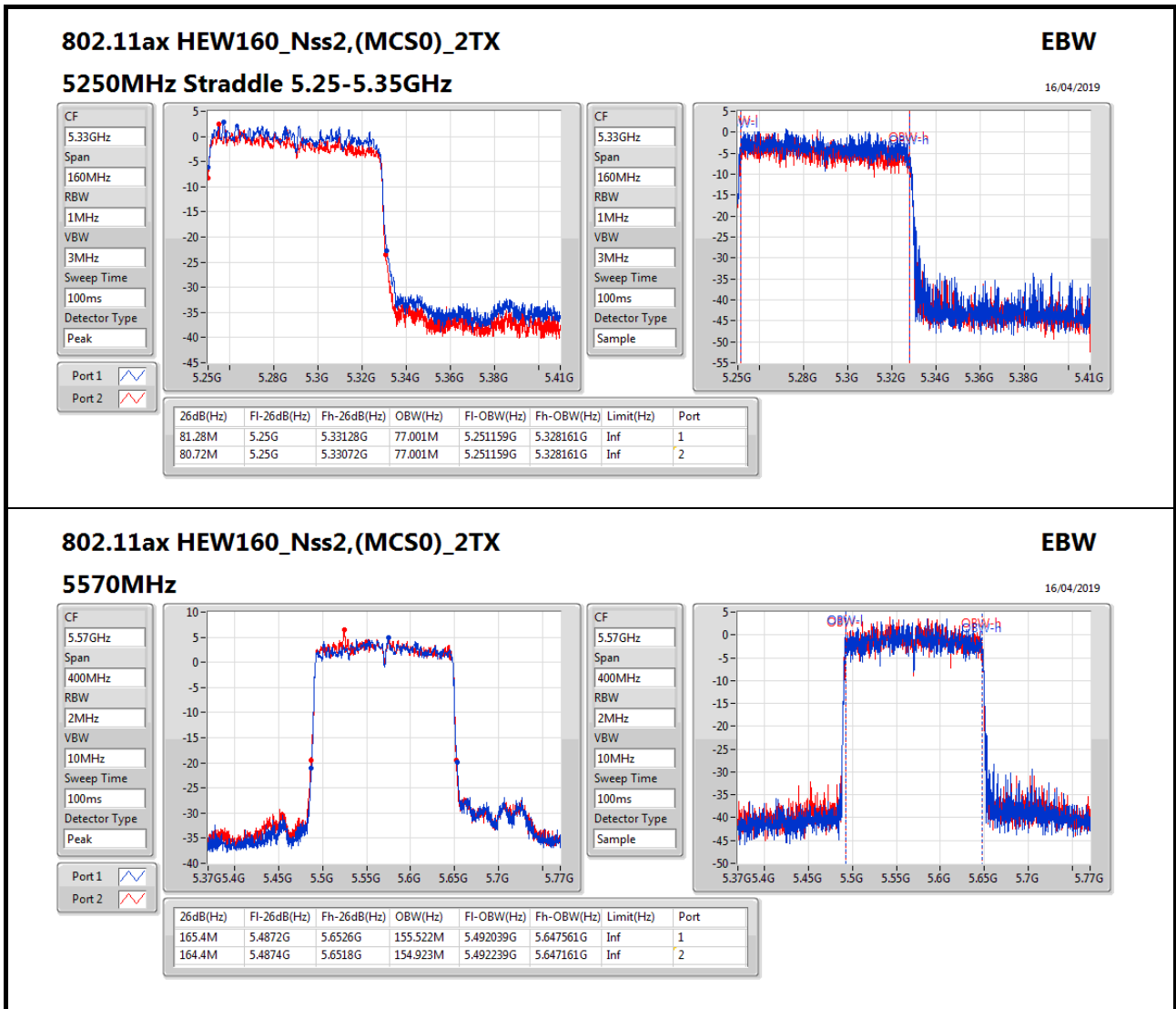














**For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 2 ~ Band 4:
Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ax HEW160_Nss1,(MCS0)_4TX	81.36M	77.321M	77M3D1D	80.96M	77.081M
5.25-5.35GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	21.65M	16.617M	16M6D1D	21.475M	16.542M
802.11ax HEW20_Nss1,(MCS0)_4TX	21.975M	18.991M	19M0D1D	21.35M	18.941M
802.11ax HEW40_Nss1,(MCS0)_4TX	40.15M	37.631M	37M6D1D	39.9M	37.481M
802.11ax HEW80_Nss1,(MCS0)_4TX	81.3M	77.161M	77M2D1D	81M	76.962M
802.11ax HEW160_Nss1,(MCS0)_4TX	81.92M	77.081M	77M1D1D	80.96M	76.922M
5.47-5.725GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	21.775M	16.642M	16M6D1D	15.615M	13.298M
802.11ax HEW20_Nss1,(MCS0)_4TX	21.975M	18.991M	19M0D1D	15.69M	14.453M
802.11ax HEW40_Nss1,(MCS0)_4TX	40.2M	37.631M	37M6D1D	34.965M	33.653M
802.11ax HEW80_Nss1,(MCS0)_4TX	81.6M	77.261M	77M3D1D	75.375M	73.238M
802.11ax HEW160_Nss1,(MCS0)_4TX	165M	155.522M	156MD1D	163.8M	154.923M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	3.22M	3.958M	3M96D1D	3.12M	3.898M
802.11ax HEW20_Nss1,(MCS0)_4TX	4.5M	4.518M	4M52D1D	4.48M	4.518M
802.11ax HEW40_Nss1,(MCS0)_4TX	3.96M	4.018M	4M02D1D	3.68M	4.018M
802.11ax HEW80_Nss1,(MCS0)_4TX	3.78M	4.538M	4M54D1D	3.3M	4.058M

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;

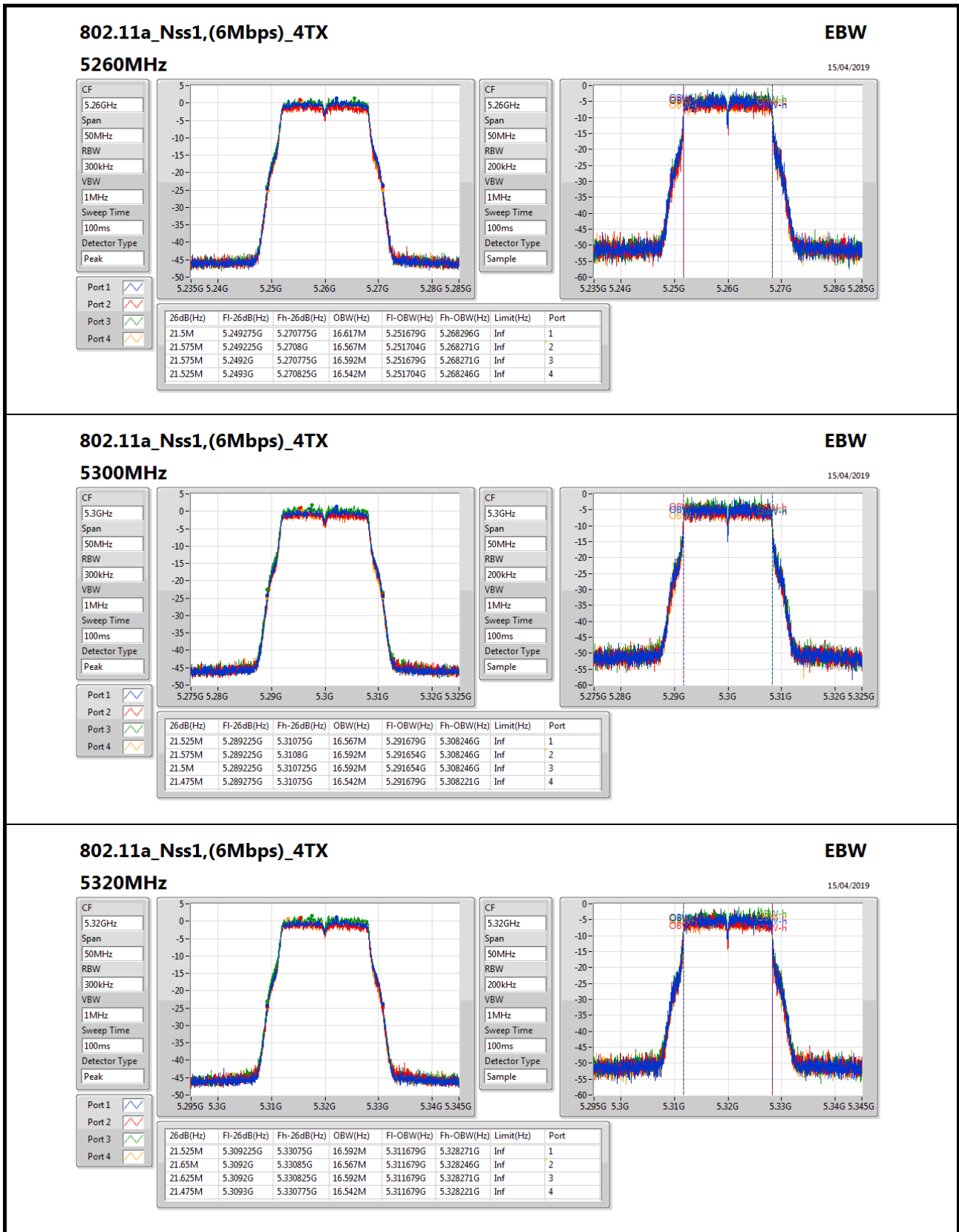


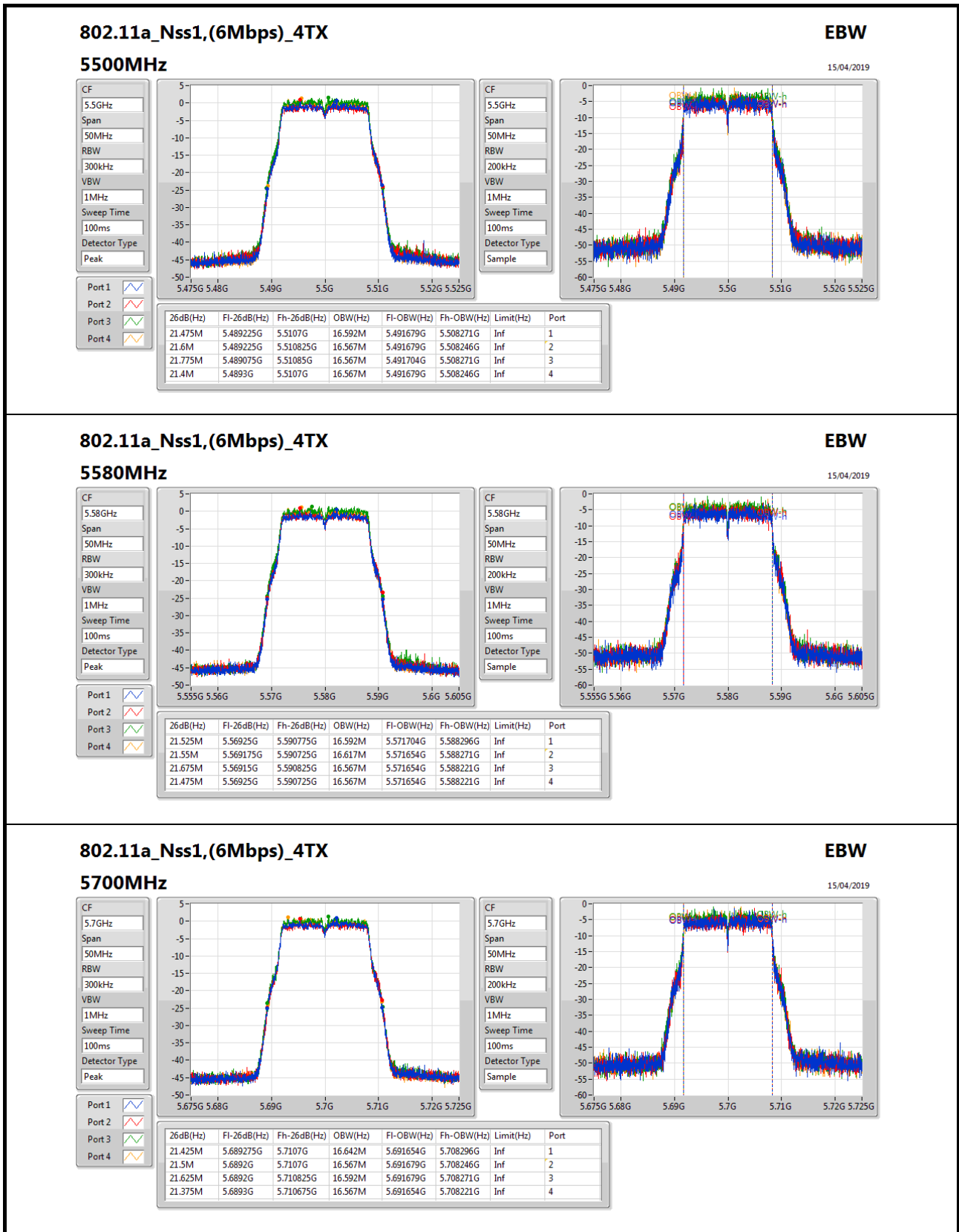
Result

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	21.5M	16.617M	21.575M	16.567M	21.575M	16.592M	21.525M	16.542M
5300MHz	Pass	Inf	21.525M	16.567M	21.575M	16.592M	21.5M	16.592M	21.475M	16.542M
5320MHz	Pass	Inf	21.525M	16.592M	21.65M	16.567M	21.625M	16.592M	21.475M	16.542M
5500MHz	Pass	Inf	21.475M	16.592M	21.6M	16.567M	21.775M	16.567M	21.4M	16.567M
5580MHz	Pass	Inf	21.525M	16.592M	21.55M	16.617M	21.675M	16.567M	21.475M	16.567M
5700MHz	Pass	Inf	21.425M	16.642M	21.5M	16.567M	21.625M	16.592M	21.375M	16.567M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.63M	13.328M	15.69M	13.298M	15.705M	13.298M	15.615M	13.313M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.14M	3.898M	3.22M	3.958M	3.12M	3.938M	3.14M	3.958M
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	21.625M	18.966M	21.65M	18.966M	21.975M	18.991M	21.4M	18.966M
5300MHz	Pass	Inf	21.675M	18.941M	21.625M	18.966M	21.875M	18.966M	21.35M	18.966M
5320MHz	Pass	Inf	21.7M	18.966M	21.65M	18.966M	21.9M	18.966M	21.5M	18.966M
5500MHz	Pass	Inf	21.725M	18.966M	21.65M	18.991M	21.975M	18.966M	21.425M	18.966M
5580MHz	Pass	Inf	21.75M	18.991M	21.675M	18.966M	21.9M	18.966M	21.35M	18.991M
5700MHz	Pass	Inf	21.775M	18.966M	21.625M	18.941M	21.975M	18.991M	21.525M	18.966M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.765M	14.453M	15.795M	14.468M	15.87M	14.483M	15.69M	14.468M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	4.48M	4.518M	4.5M	4.518M	4.5M	4.518M	4.5M	4.518M
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5270MHz	Pass	Inf	40M	37.581M	40.15M	37.481M	40M	37.481M	40.15M	37.531M
5310MHz	Pass	Inf	39.9M	37.531M	40.1M	37.631M	40.05M	37.581M	39.95M	37.481M
5510MHz	Pass	Inf	39.85M	37.481M	40.1M	37.481M	40M	37.531M	40.2M	37.481M
5550MHz	Pass	Inf	39.95M	37.531M	40.05M	37.531M	40.15M	37.531M	40.2M	37.531M
5670MHz	Pass	Inf	39.95M	37.531M	40.1M	37.631M	40.1M	37.581M	40.15M	37.531M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	34.965M	33.688M	35.07M	33.653M	35.105M	33.688M	35.035M	33.688M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.96M	4.018M	3.74M	4.018M	3.68M	4.018M	3.88M	4.018M
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5290MHz	Pass	Inf	81.3M	77.161M	81.2M	76.962M	81M	76.962M	81.2M	77.061M
5530MHz	Pass	Inf	81.3M	77.161M	81M	77.061M	81.1M	77.061M	81.3M	76.862M
5610MHz	Pass	Inf	81.6M	77.161M	81.1M	77.161M	81.3M	77.061M	81.4M	77.261M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	75.75M	73.388M	75.675M	73.238M	75.375M	73.313M	75.825M	73.313M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.48M	4.238M	3.78M	4.078M	3.3M	4.538M	3.7M	4.058M
802.11ax HEW160_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	Inf	81.36M	77.081M	81.12M	77.321M	81.04M	77.161M	80.96M	77.241M
5250MHz Straddle 5.25-5.35GHz	Pass	Inf	81.28M	77.081M	80.96M	76.922M	81.12M	77.081M	81.92M	77.081M
5570MHz	Pass	Inf	165M	155.122M	165M	155.322M	163.8M	155.522M	164.8M	154.923M

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
5700MHz
15/04/2019

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

Port 1:

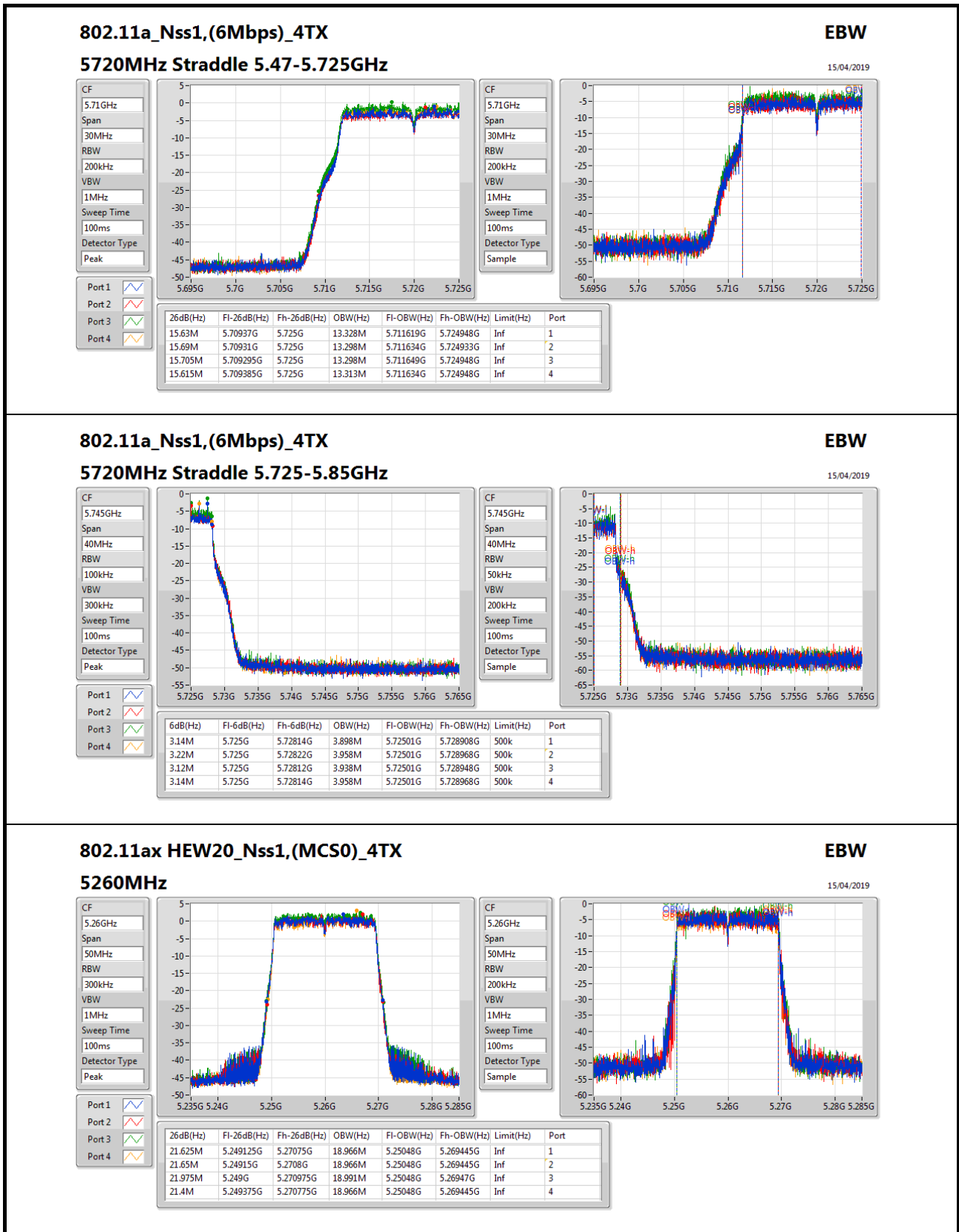
Port 2:

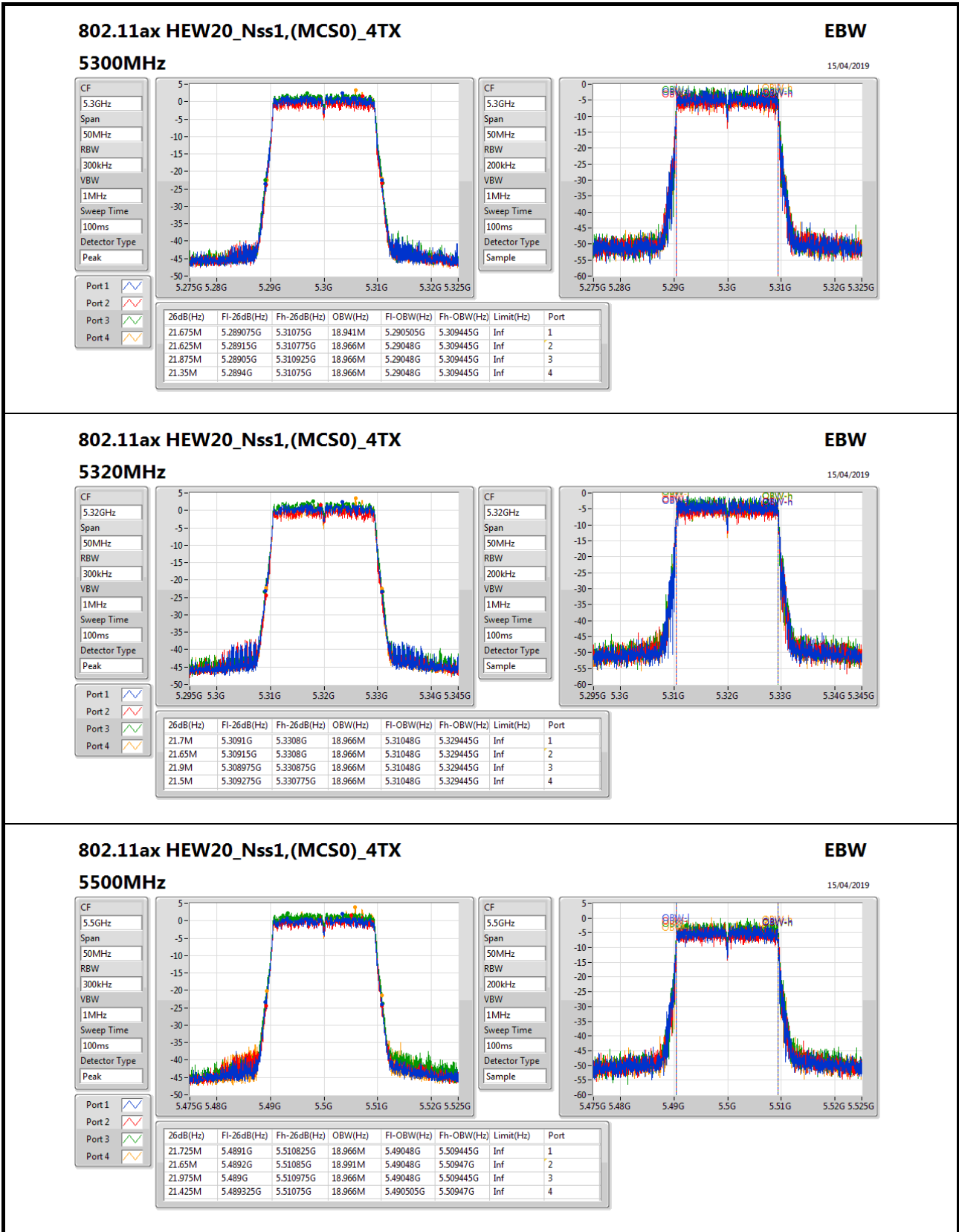
Port 3:

Port 4:

26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.425M	5.689275G	5.7107G	16.642M	5.691654G	5.708296G	Inf	1
21.5M	5.6892G	5.7107G	16.567M	5.691679G	5.708246G	Inf	2
21.625M	5.6892G	5.710825G	16.592M	5.691679G	5.708271G	Inf	3
21.375M	5.6893G	5.710675G	16.567M	5.691654G	5.708221G	Inf	4

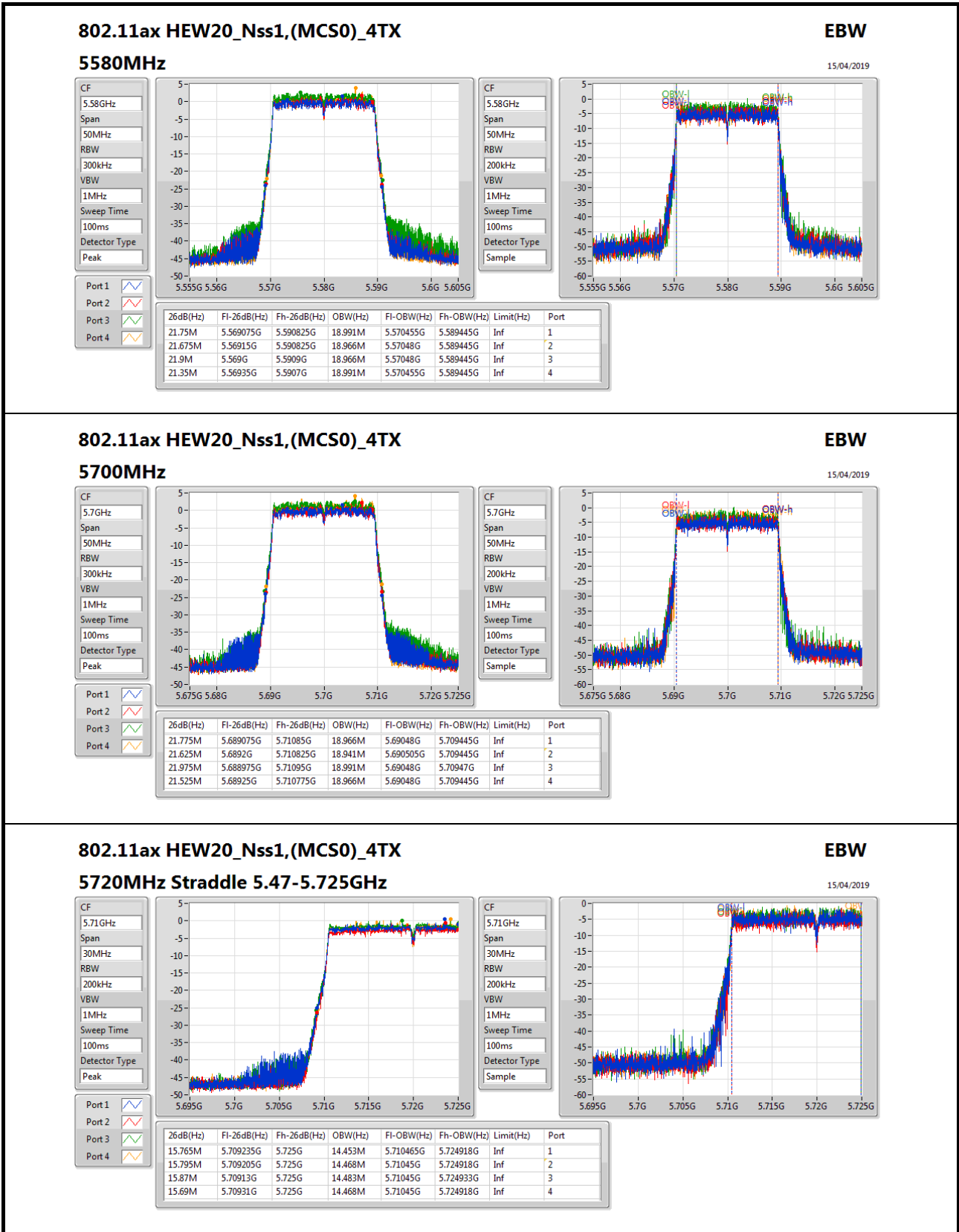
CF: 5.7GHz
Span: 50MHz
RBW: 200kHz
VBW: 1MHz
Sweep Time: 100ms
Detector Type: Sample




802.11ax HEW20_Nss1,(MCS0)_4TX
EBW
5500MHz
15/04/2019

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

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

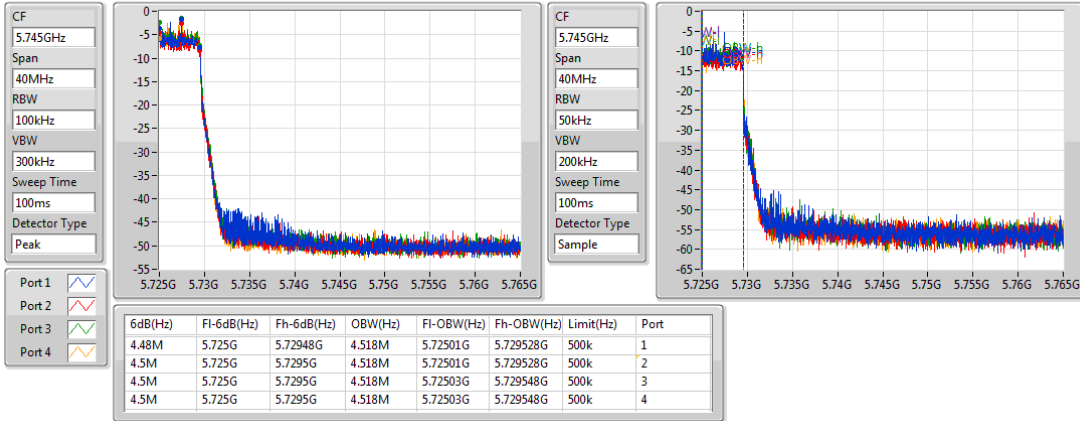


802.11ax HEW20_Nss1,(MCS0)_4TX

EBW

5720MHz Straddle 5.725-5.85GHz

15/04/2019

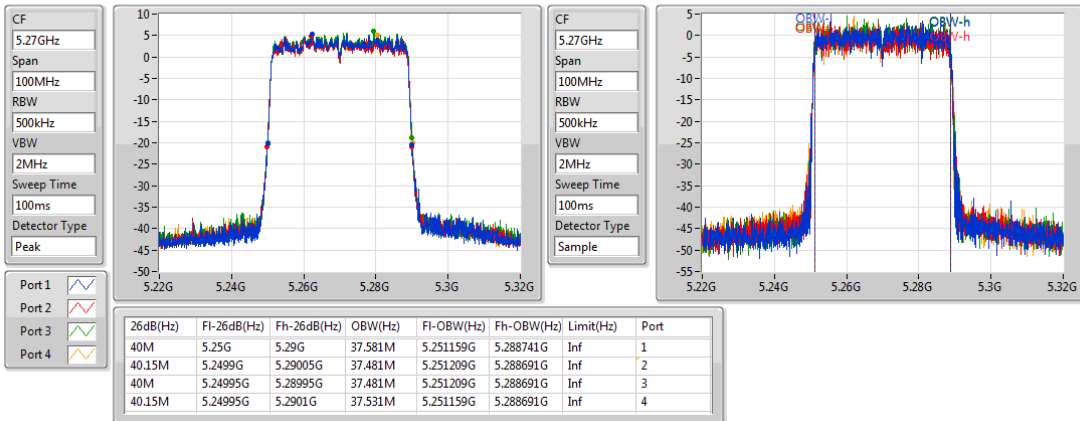


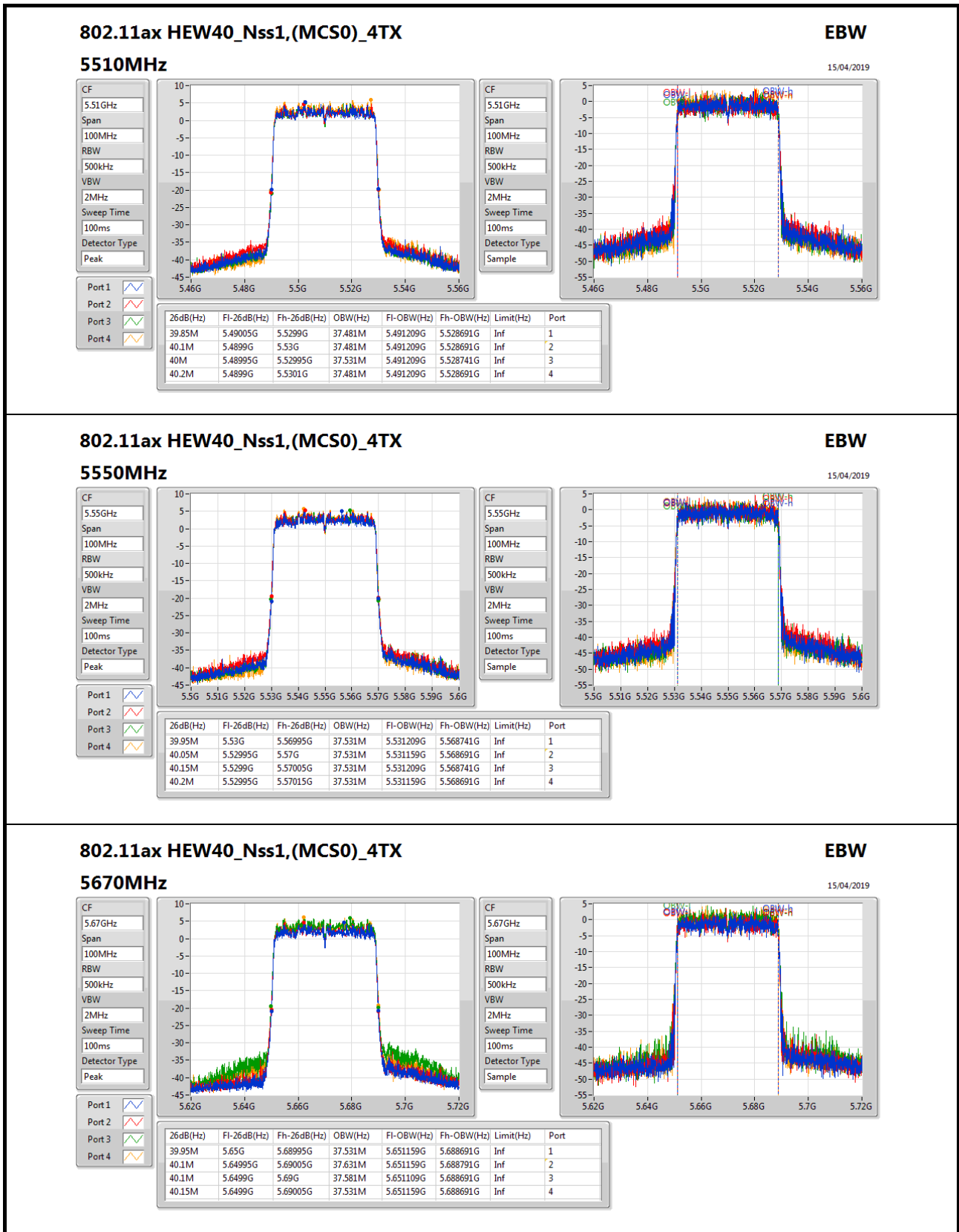
802.11ax HEW40_Nss1,(MCS0)_4TX

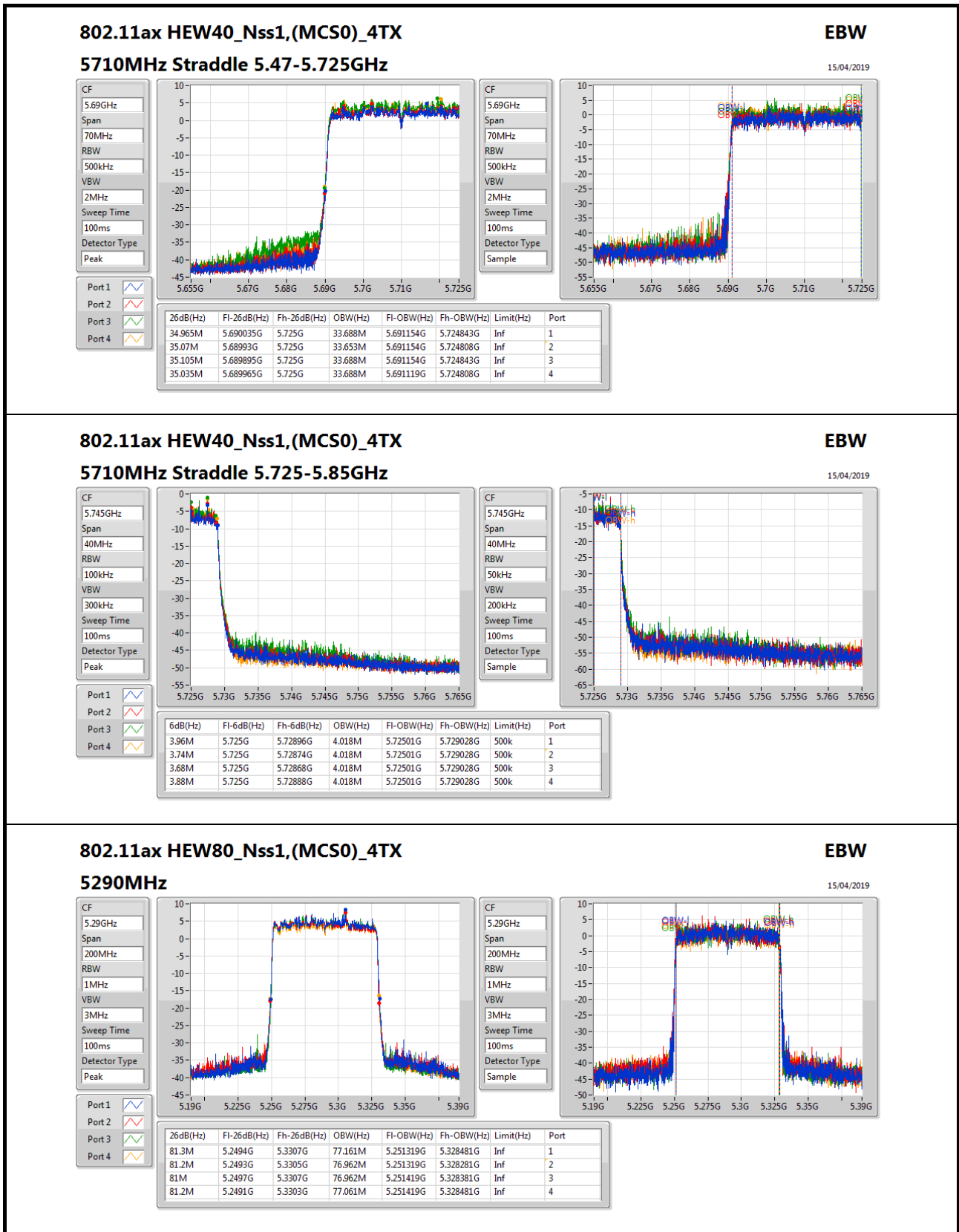
EBW

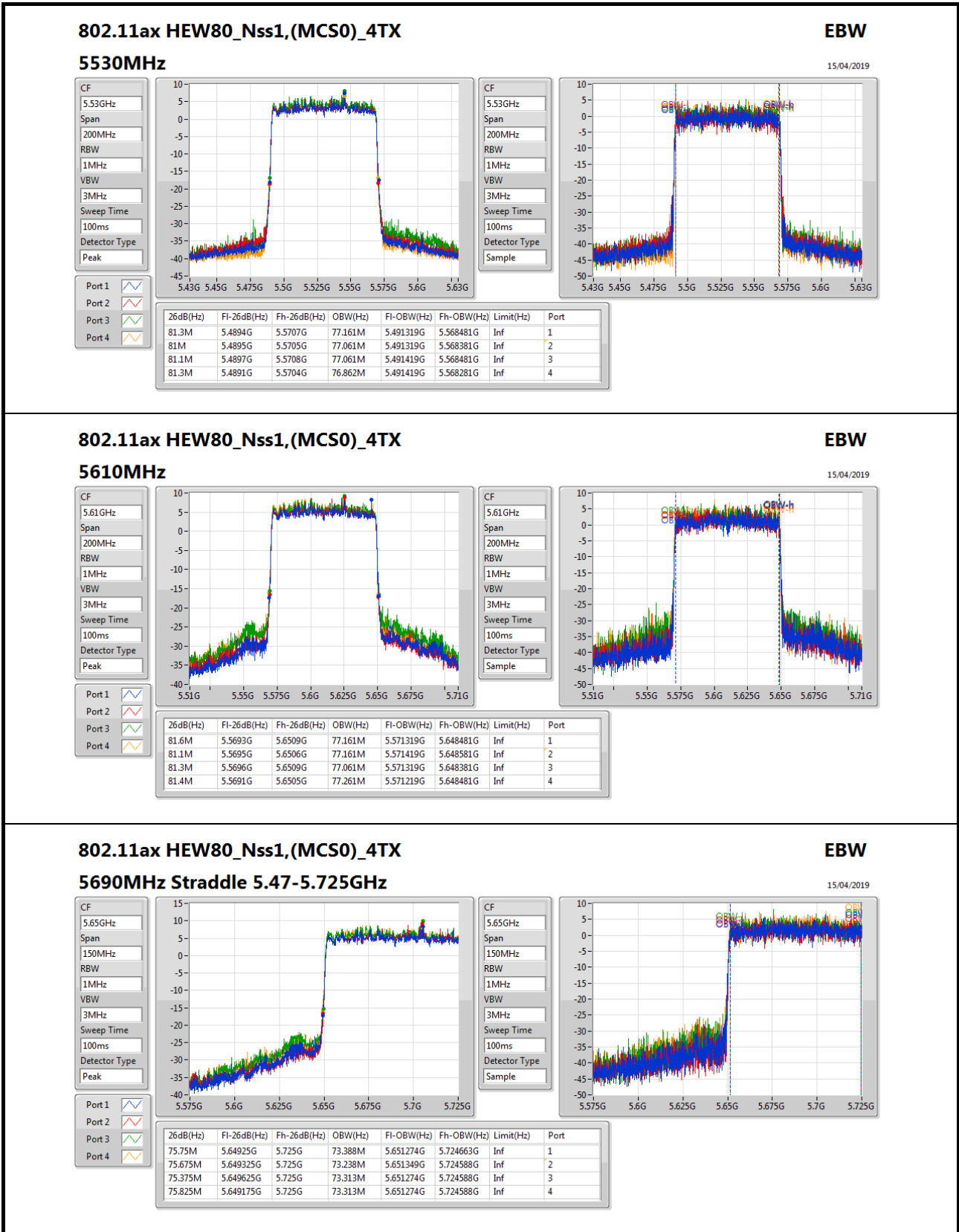
5270MHz

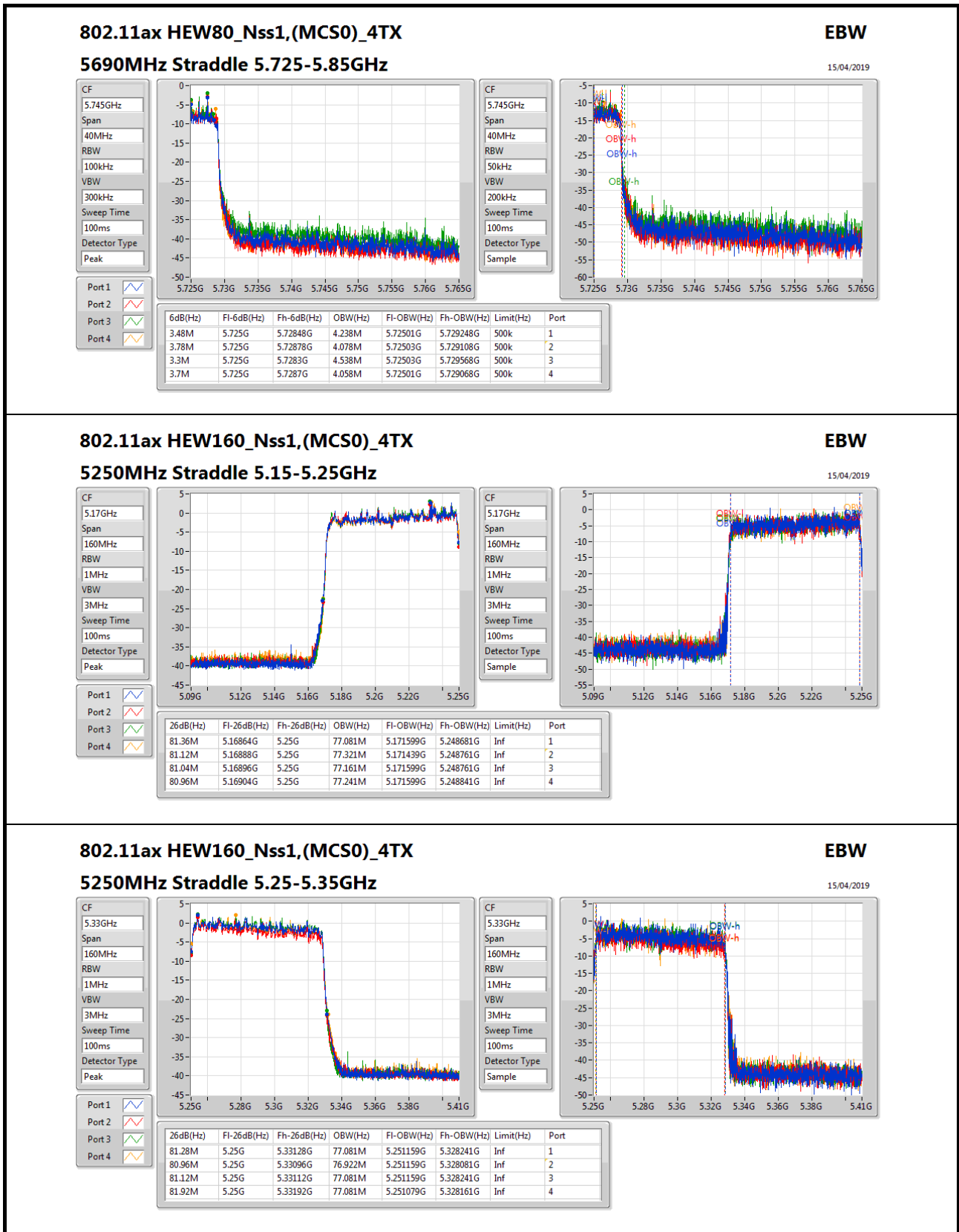
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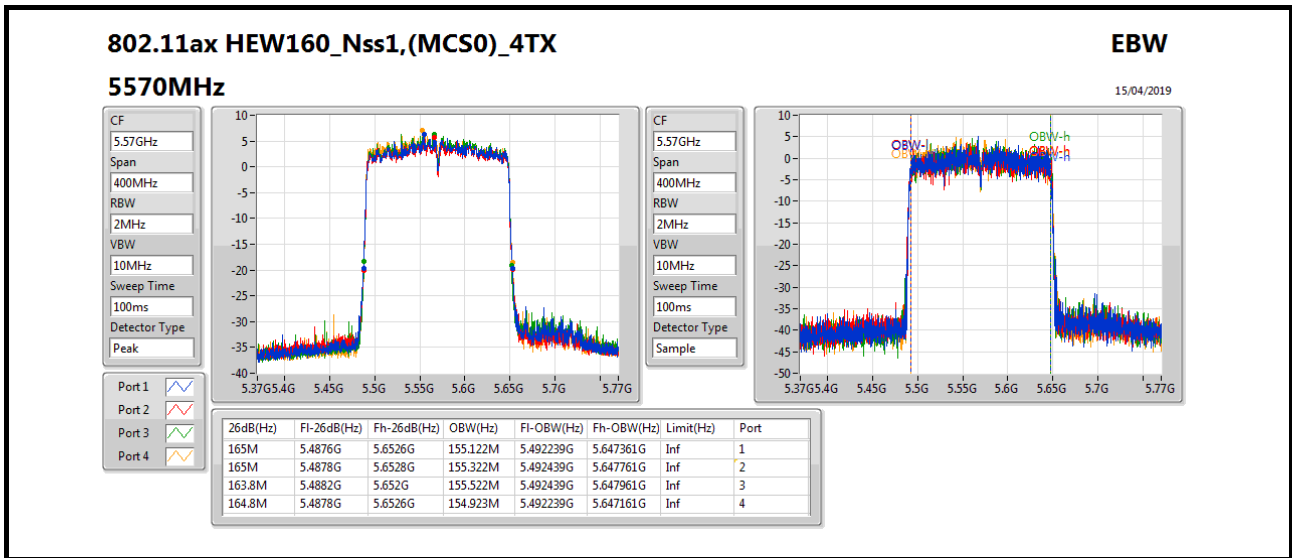














**For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 2 ~ Band 4:
Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	81.36M	77.321M	77M3D1D	80.64M	77.081M
5.25-5.35GHz	-	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	21.95M	18.991M	19M0D1D	21.35M	18.941M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	40.15M	37.581M	37M6D1D	39.95M	37.531M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	81.4M	77.261M	77M3D1D	81.1M	76.962M
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	81.76M	77.161M	77M2D1D	80.88M	77.001M
5.47-5.725GHz	-	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	21.95M	18.966M	19M0D1D	15.765M	14.468M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	40.2M	37.631M	37M6D1D	34.965M	33.653M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	81.5M	77.161M	77M2D1D	75.45M	73.313M
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	165.2M	155.322M	155MD1D	164.2M	154.923M
5.725-5.85GHz	-	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	4.52M	4.518M	4M52D1D	4.46M	4.518M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	3.96M	4.038M	4M04D1D	3.86M	4.018M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	3.78M	4.078M	4M08D1D	3.34M	4.038M

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;

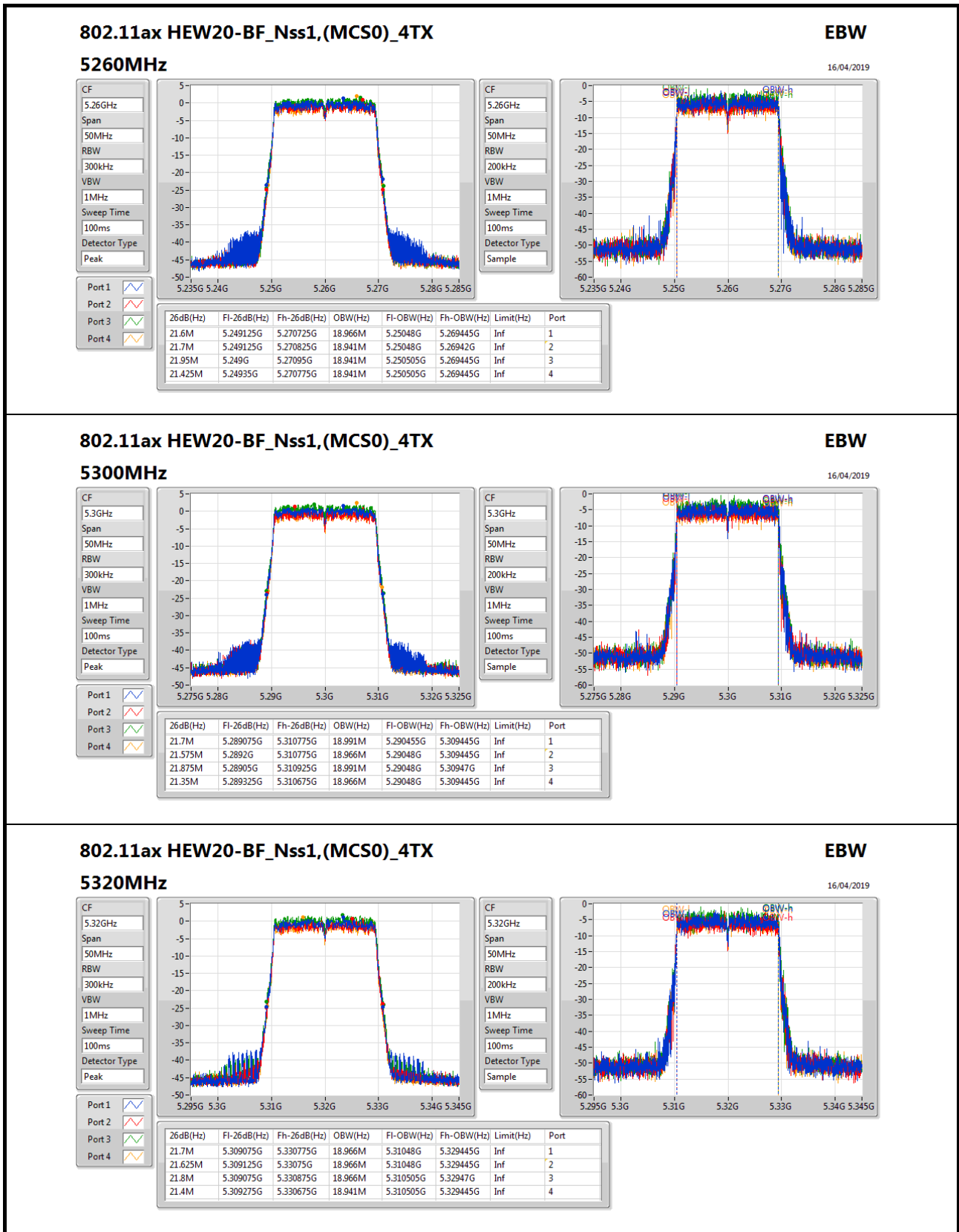
Min-OBW = Minimum 99% occupied bandwidth;

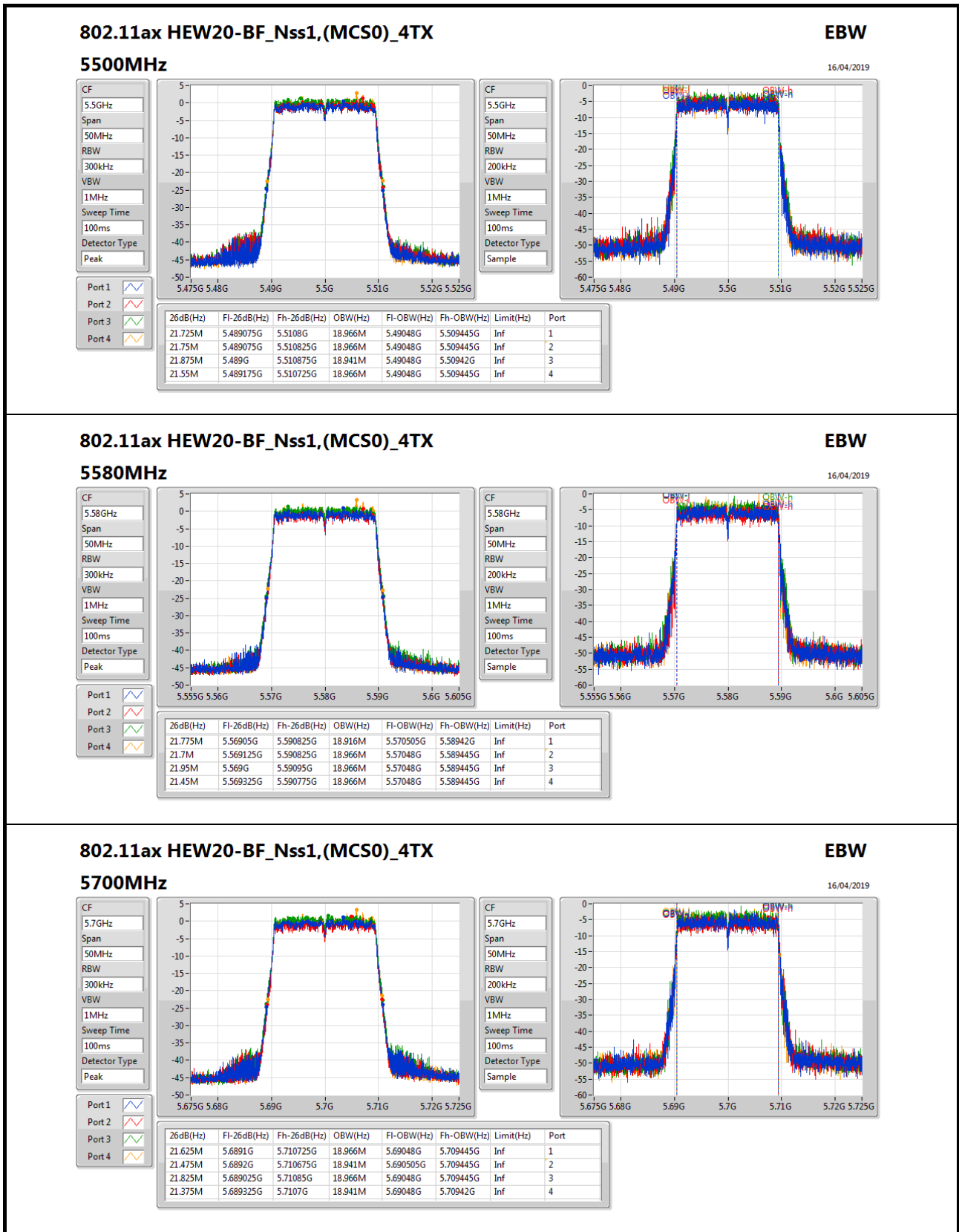


Result

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)
802.11ax HEW20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	21.6M	18.966M	21.7M	18.941M	21.95M	18.941M	21.425M	18.941M
5300MHz	Pass	Inf	21.7M	18.991M	21.575M	18.966M	21.875M	18.991M	21.35M	18.966M
5320MHz	Pass	Inf	21.7M	18.966M	21.625M	18.966M	21.8M	18.966M	21.4M	18.941M
5500MHz	Pass	Inf	21.725M	18.966M	21.75M	18.966M	21.875M	18.941M	21.55M	18.966M
5580MHz	Pass	Inf	21.775M	18.916M	21.7M	18.966M	21.95M	18.966M	21.45M	18.966M
5700MHz	Pass	Inf	21.625M	18.966M	21.475M	18.941M	21.825M	18.966M	21.375M	18.941M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.81M	14.468M	15.765M	14.498M	15.84M	14.468M	15.78M	14.468M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	4.46M	4.518M	4.48M	4.518M	4.52M	4.518M	4.52M	4.518M
802.11ax HEW40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5270MHz	Pass	Inf	40M	37.581M	40.15M	37.531M	40.15M	37.531M	40.15M	37.581M
5310MHz	Pass	Inf	39.95M	37.531M	40.15M	37.531M	40.15M	37.581M	39.95M	37.581M
5510MHz	Pass	Inf	40M	37.531M	40.15M	37.631M	40.05M	37.431M	40.2M	37.531M
5550MHz	Pass	Inf	39.95M	37.581M	40.05M	37.581M	40.1M	37.431M	40.15M	37.531M
5670MHz	Pass	Inf	40M	37.631M	40.15M	37.581M	40.1M	37.631M	40M	37.631M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	34.965M	33.653M	35.14M	33.653M	35.07M	33.688M	35.07M	33.688M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.96M	4.018M	3.94M	4.038M	3.86M	4.018M	3.88M	4.038M
802.11ax HEW80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5290MHz	Pass	Inf	81.4M	77.061M	81.1M	77.061M	81.1M	77.261M	81.2M	76.962M
5530MHz	Pass	Inf	81.5M	76.962M	81.1M	76.962M	81M	77.061M	81.1M	77.161M
5610MHz	Pass	Inf	81.4M	77.061M	81.2M	77.061M	81.2M	77.161M	81.4M	76.962M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	75.75M	73.313M	75.525M	73.313M	75.45M	73.313M	75.975M	73.313M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.48M	4.078M	3.78M	4.058M	3.34M	4.038M	3.76M	4.038M
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	Inf	81.36M	77.081M	81.04M	77.321M	80.64M	77.241M	81.28M	77.081M
5250MHz Straddle 5.25-5.35GHz	Pass	Inf	81.44M	77.161M	80.88M	77.001M	80.96M	77.161M	81.76M	77.081M
5570MHz	Pass	Inf	165.2M	155.122M	164.6M	155.322M	164.2M	154.923M	164.2M	155.122M

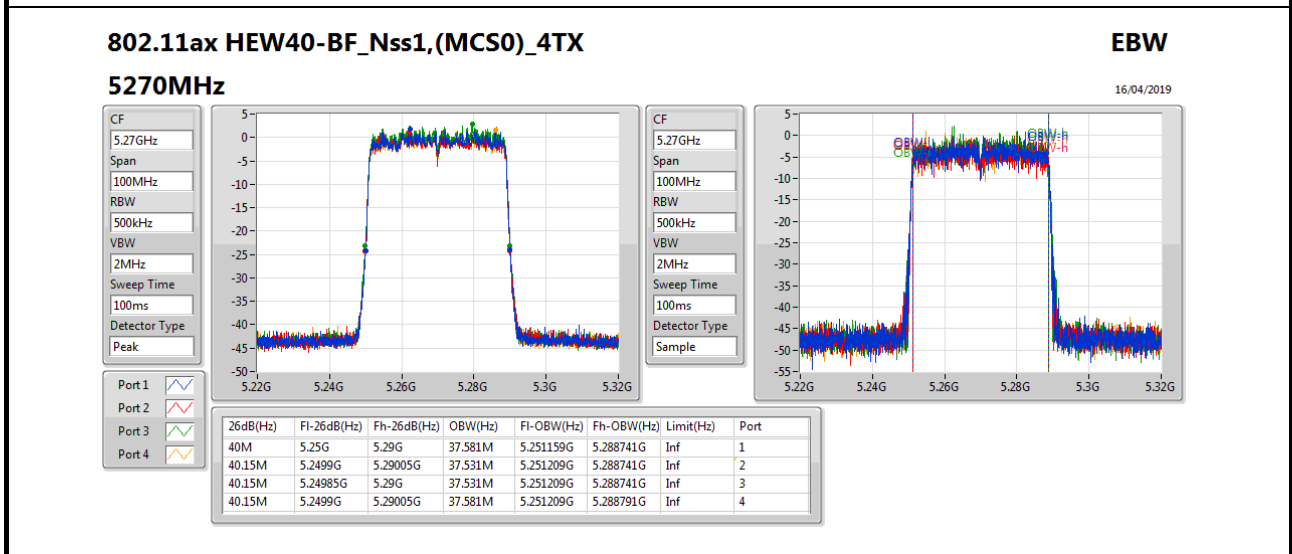
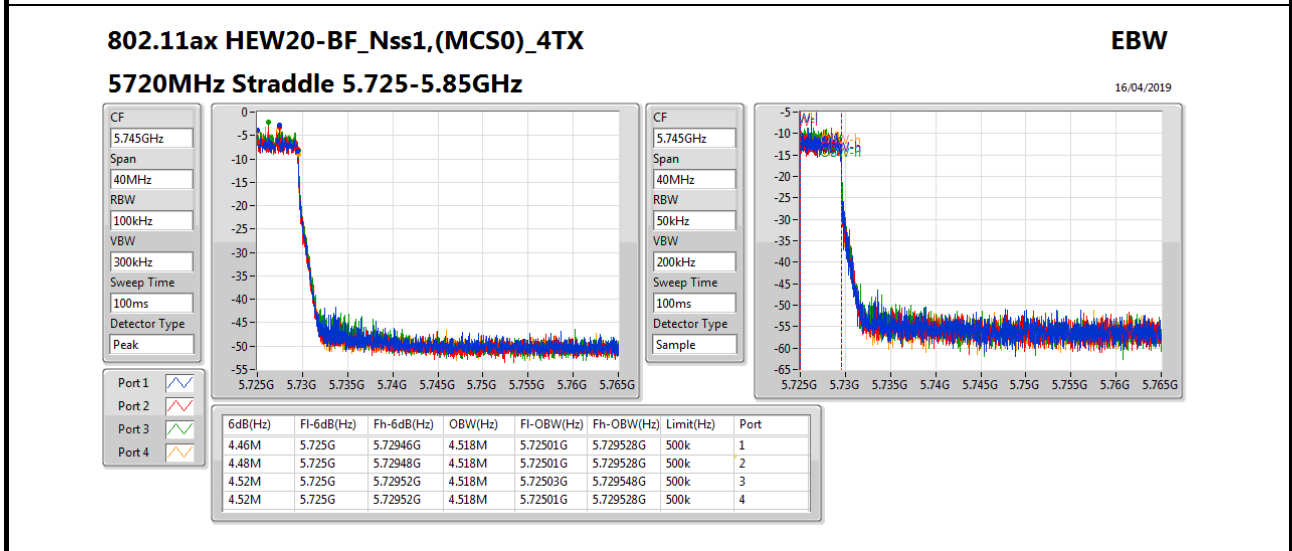
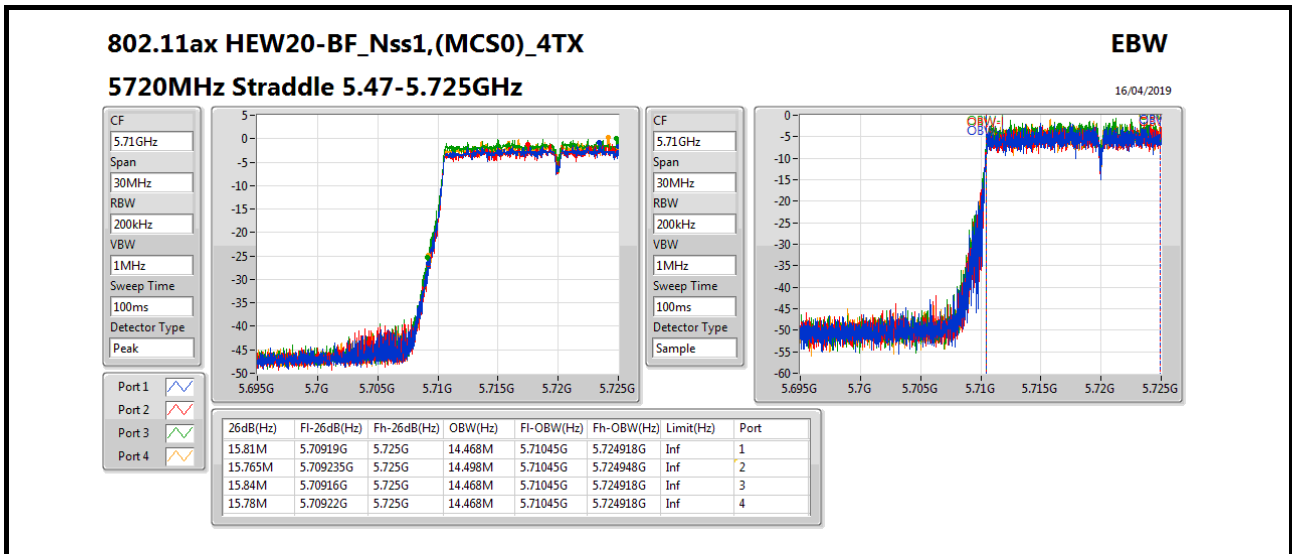
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth;

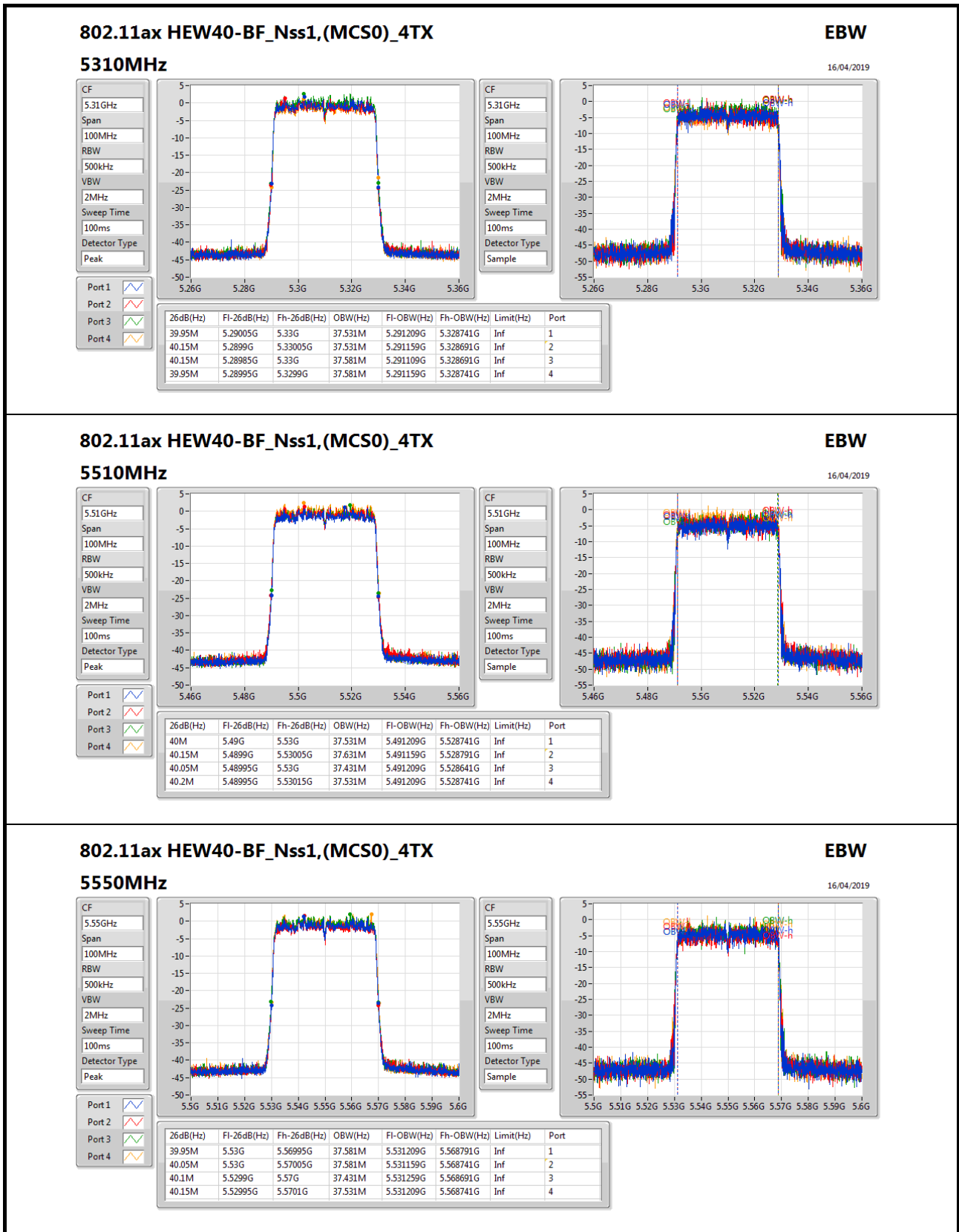


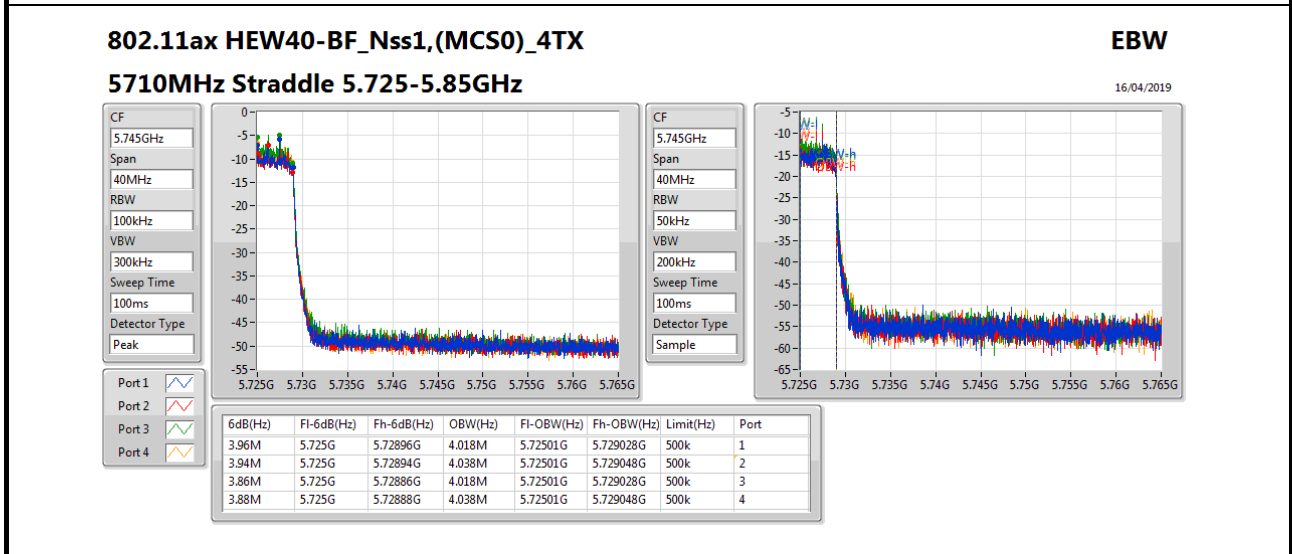
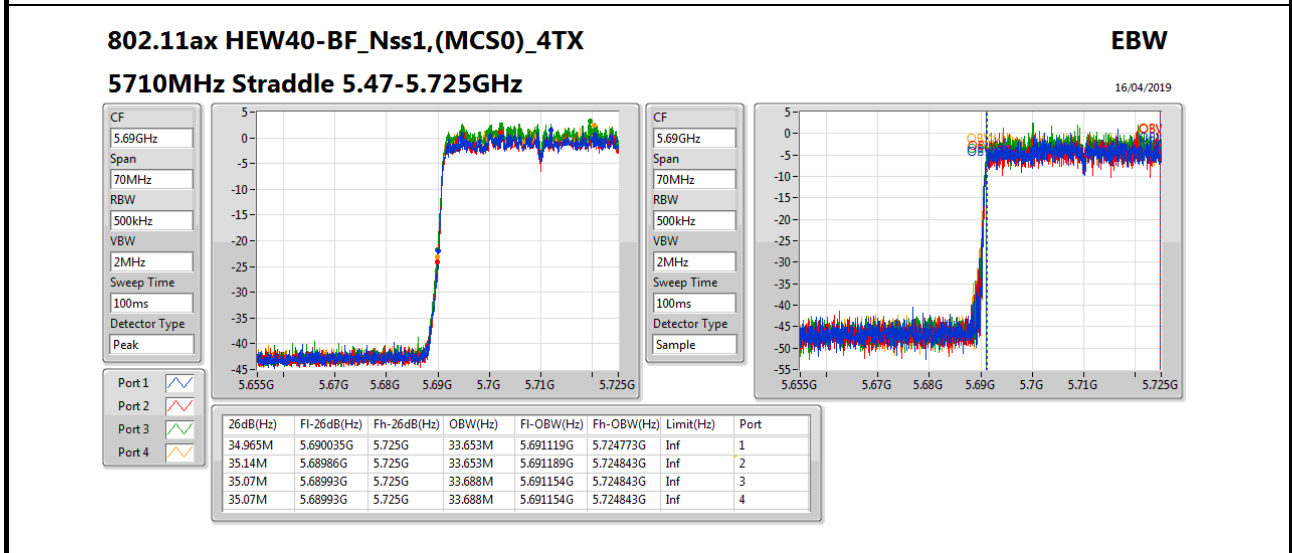
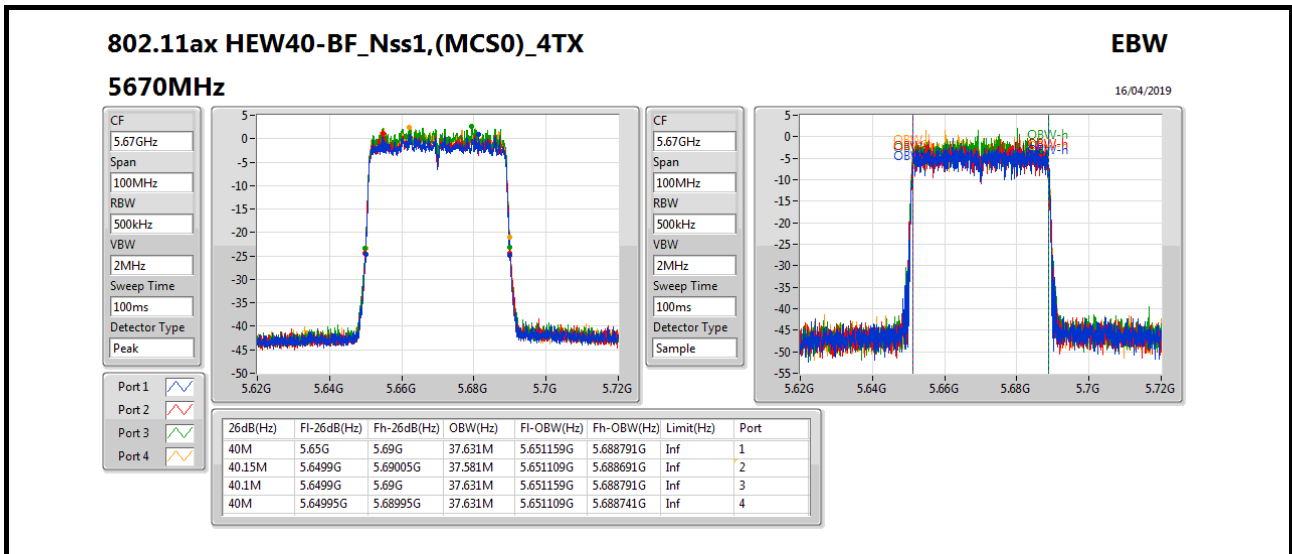

802.11ax HEW20-BF_Nss1,(MCS0)_4TX
EBW
5700MHz
16/04/2019

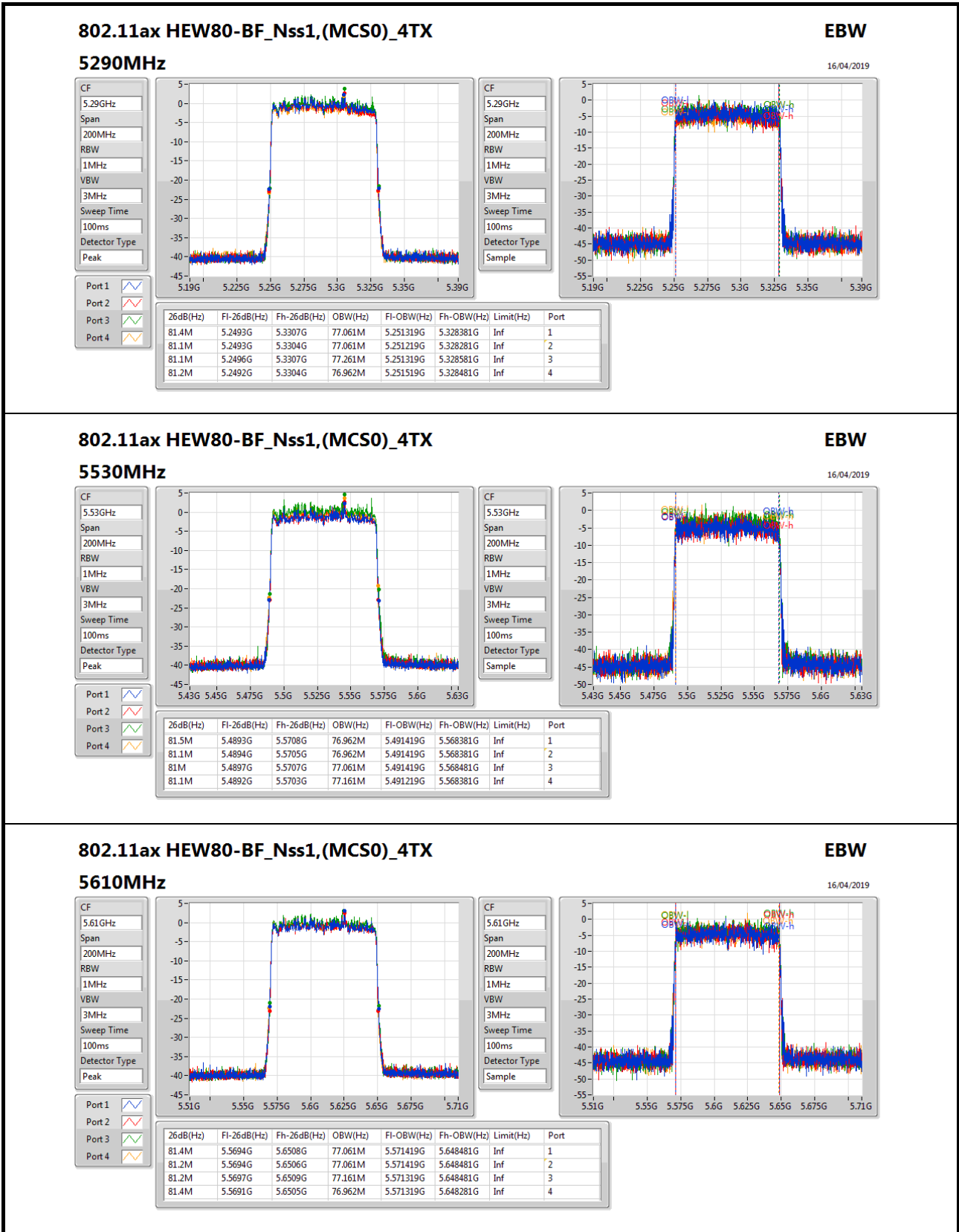
CF: 5.7GHz
Span: 50MHz
RBW: 300kHz
VBW: 1MHz
Sweep Time: 100ms
Detector Type: Peak

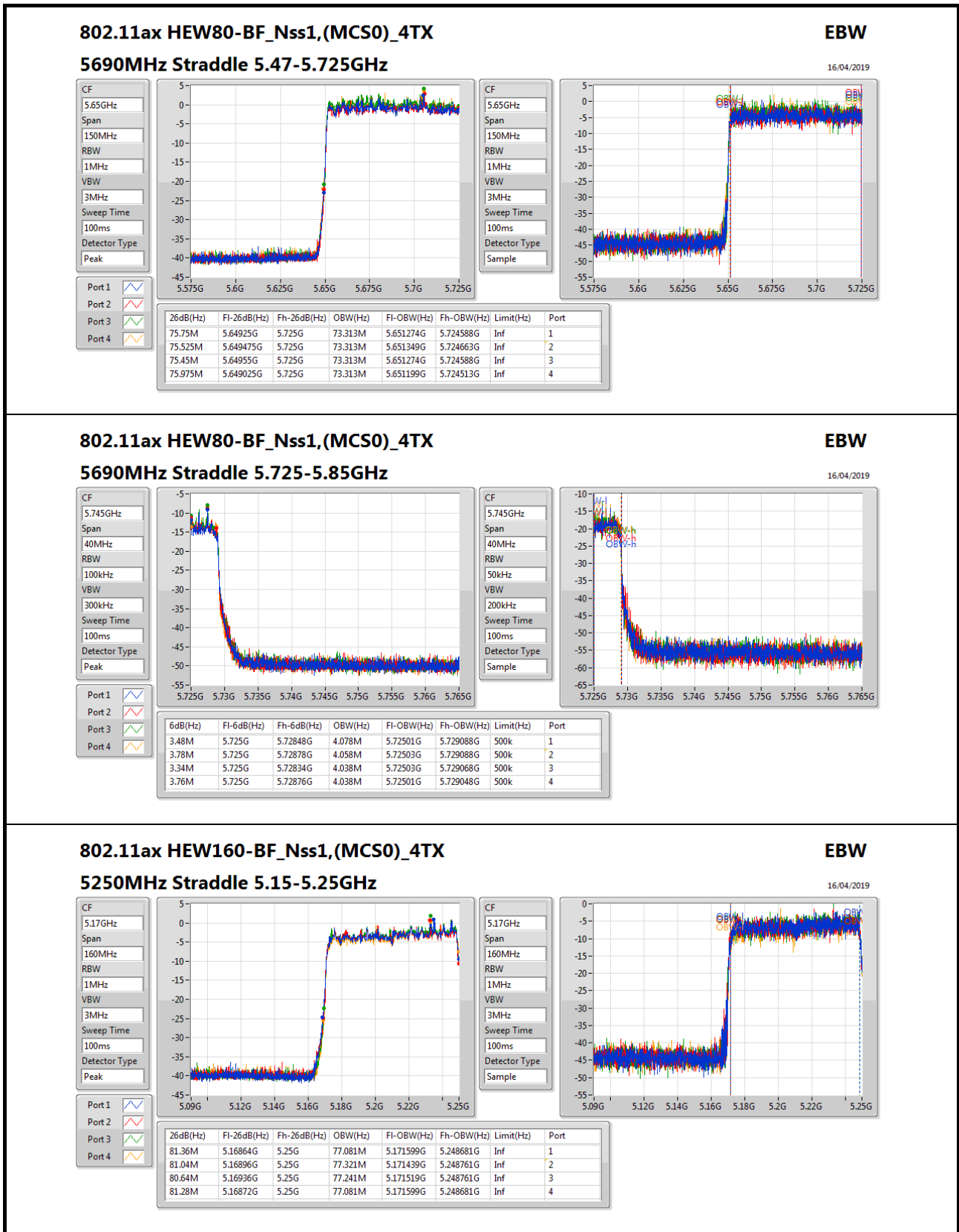
CF: 5.7GHz
Span: 50MHz
RBW: 200kHz
VBW: 1MHz
Sweep Time: 100ms
Detector Type: Sample

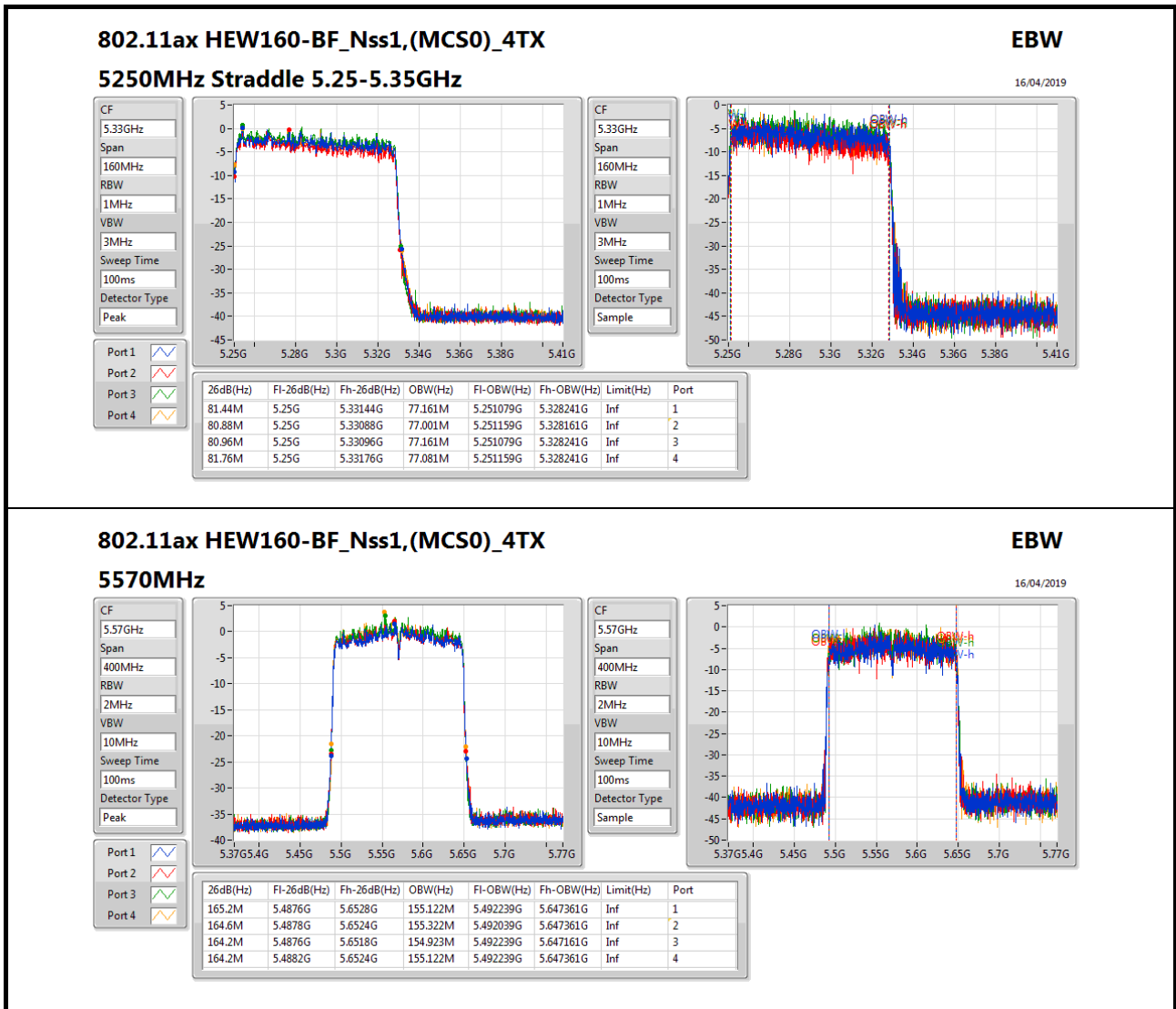














**For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 2 ~ Band 4:
Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ax HEW160_Nss4,(MCS0)_4TX	81.68M	77.241M	77M2D1D	80.56M	76.842M
5.25-5.35GHz	-	-	-	-	-
802.11ax HEW20_Nss4,(MCS0)_4TX	21.85M	18.991M	19M0D1D	21.3M	18.916M
802.11ax HEW40_Nss4,(MCS0)_4TX	40.25M	37.631M	37M6D1D	40.05M	37.431M
802.11ax HEW80_Nss4,(MCS0)_4TX	82M	76.962M	77M0D1D	81.2M	76.862M
802.11ax HEW160_Nss4,(MCS0)_4TX	82.16M	77.161M	77M2D1D	81.28M	76.842M
5.47-5.725GHz	-	-	-	-	-
802.11ax HEW20_Nss4,(MCS0)_4TX	21.925M	18.991M	19M0D1D	15.6M	14.483M
802.11ax HEW40_Nss4,(MCS0)_4TX	40.25M	37.731M	37M7D1D	35.105M	33.688M
802.11ax HEW80_Nss4,(MCS0)_4TX	81.9M	77.161M	77M2D1D	75.45M	73.088M
802.11ax HEW160_Nss4,(MCS0)_4TX	165.6M	155.322M	155MD1D	164M	154.923M
5.725-5.85GHz	-	-	-	-	-
802.11ax HEW20_Nss4,(MCS0)_4TX	4.48M	4.518M	4M52D1D	4.42M	4.518M
802.11ax HEW40_Nss4,(MCS0)_4TX	3.9M	4.158M	4M16D1D	3.7M	4.038M
802.11ax HEW80_Nss4,(MCS0)_4TX	3.92M	4.178M	4M18D1D	3.3M	4.038M

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;

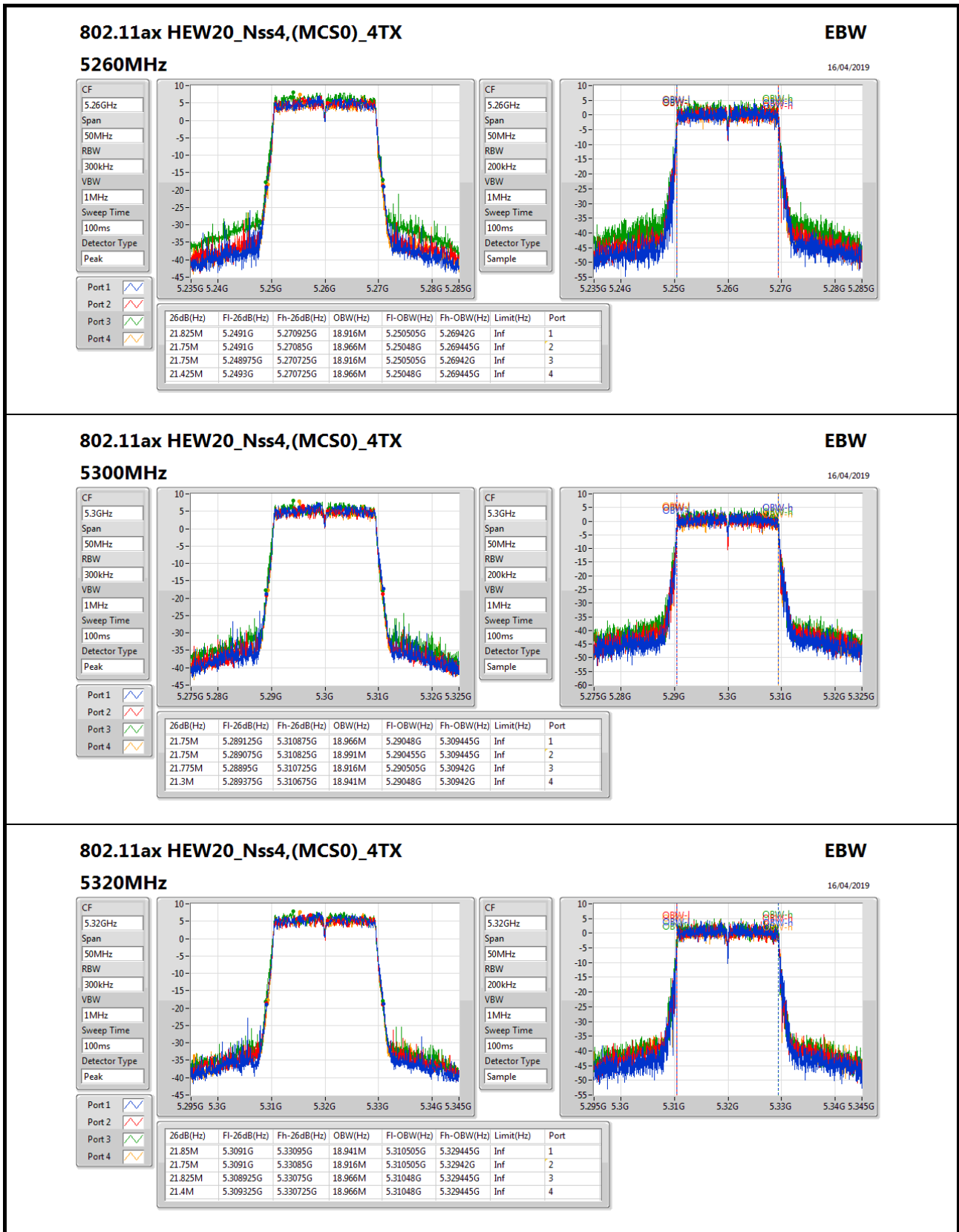
Min-OBW = Minimum 99% occupied bandwidth;



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)
802.11ax HEW20_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	21.825M	18.916M	21.75M	18.966M	21.75M	18.916M	21.425M	18.966M
5300MHz	Pass	Inf	21.75M	18.966M	21.75M	18.991M	21.775M	18.916M	21.3M	18.941M
5320MHz	Pass	Inf	21.85M	18.941M	21.75M	18.916M	21.825M	18.966M	21.4M	18.966M
5500MHz	Pass	Inf	21.85M	18.941M	21.775M	18.966M	21.825M	18.941M	21.375M	18.966M
5580MHz	Pass	Inf	21.85M	18.991M	21.7M	18.966M	21.775M	18.966M	21.35M	18.916M
5700MHz	Pass	Inf	21.925M	18.991M	21.8M	18.991M	21.75M	18.941M	21.35M	18.941M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.825M	14.483M	15.81M	14.483M	15.96M	14.483M	15.6M	14.498M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	4.44M	4.518M	4.48M	4.518M	4.42M	4.518M	4.48M	4.518M
802.11ax HEW40_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5270MHz	Pass	Inf	40.25M	37.481M	40.25M	37.531M	40.05M	37.531M	40.2M	37.581M
5310MHz	Pass	Inf	40.1M	37.431M	40.2M	37.481M	40.05M	37.481M	40.25M	37.631M
5510MHz	Pass	Inf	40.05M	37.481M	40.15M	37.681M	40.15M	37.481M	40.2M	37.731M
5550MHz	Pass	Inf	40.1M	37.531M	40.15M	37.481M	40.1M	37.531M	40.25M	37.631M
5670MHz	Pass	Inf	40.15M	37.481M	40.1M	37.581M	40.1M	37.431M	40.15M	37.631M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	35.245M	33.688M	35.245M	33.723M	35.14M	33.688M	35.105M	33.688M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.88M	4.038M	3.9M	4.038M	3.7M	4.158M	3.9M	4.038M
802.11ax HEW80_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5290MHz	Pass	Inf	81.3M	76.962M	81.2M	76.862M	81.7M	76.862M	82M	76.862M
5530MHz	Pass	Inf	81.4M	76.962M	81.4M	77.161M	81.8M	77.061M	81.8M	77.061M
5610MHz	Pass	Inf	81.4M	76.862M	81.6M	77.161M	81.9M	76.962M	81.9M	76.962M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	75.45M	73.388M	75.825M	73.163M	75.825M	73.163M	75.825M	73.088M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.78M	4.138M	3.68M	4.078M	3.92M	4.178M	3.3M	4.038M
802.11ax HEW160_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	Inf	80.96M	77.081M	81.68M	77.241M	80.56M	77.081M	80.88M	76.842M
5250MHz Straddle 5.25-5.35GHz	Pass	Inf	81.76M	77.001M	81.92M	77.161M	81.28M	77.081M	82.16M	76.842M
5570MHz	Pass	Inf	164.8M	154.923M	164.6M	155.122M	164M	155.122M	165.6M	155.322M

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


802.11ax HEW20_Nss4,(MCS0)_4TX
EBW

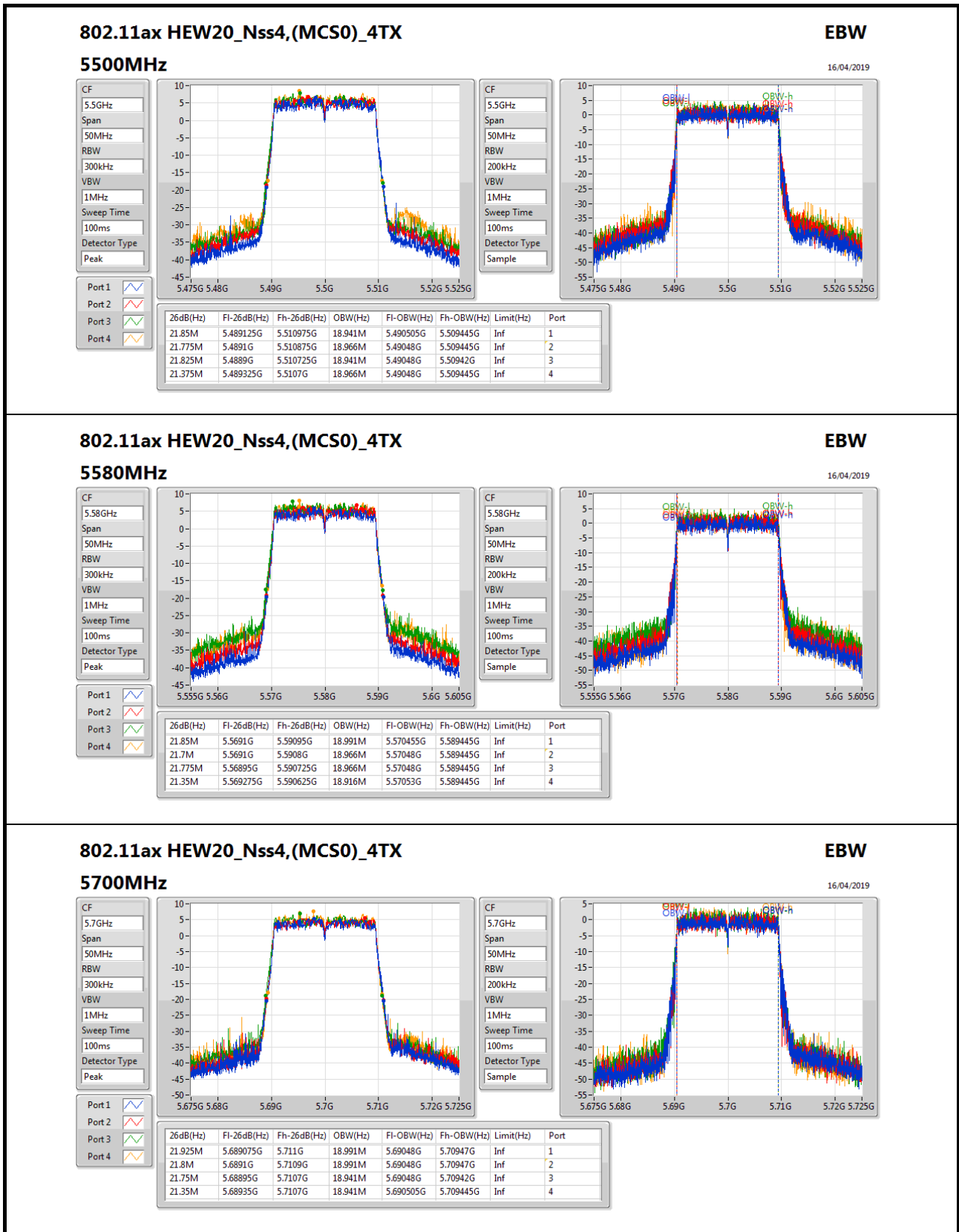
16/04/2019

5320MHz

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

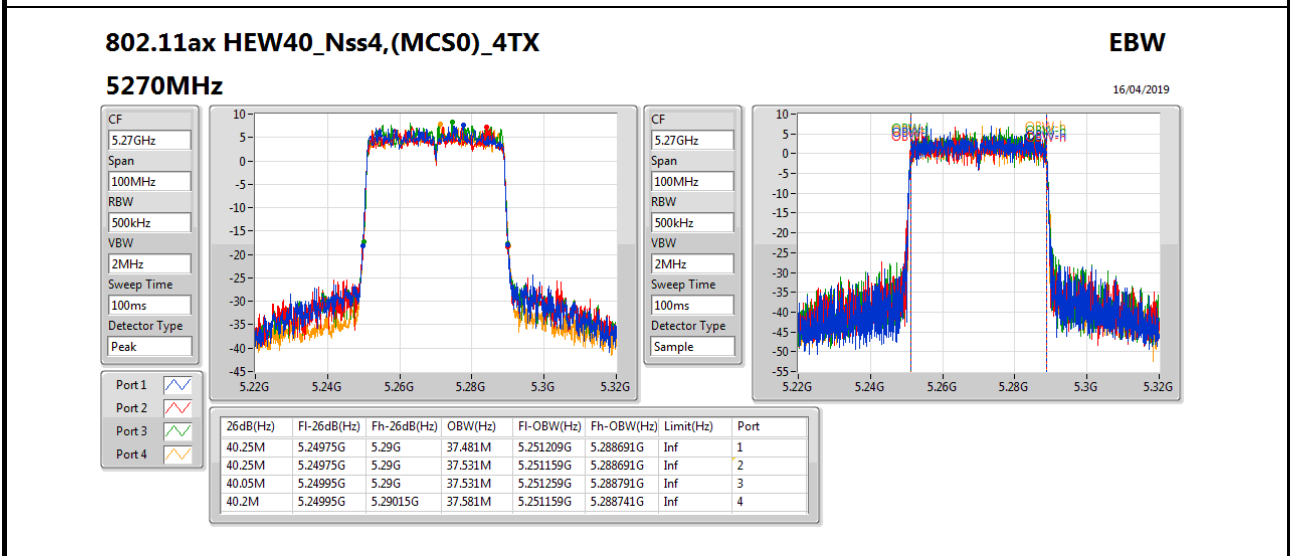
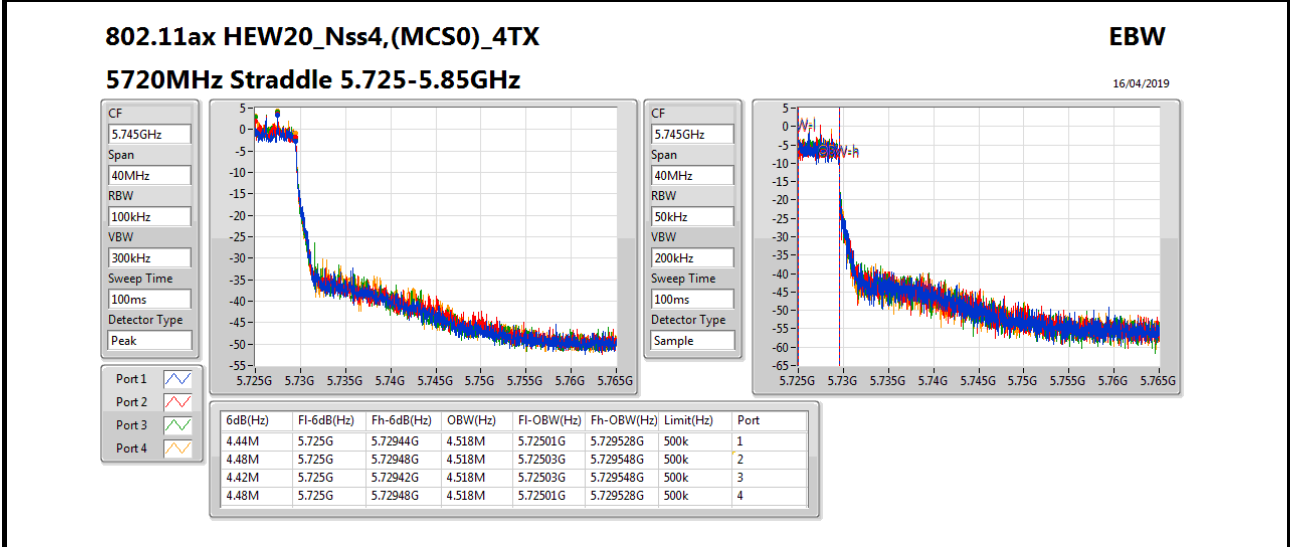
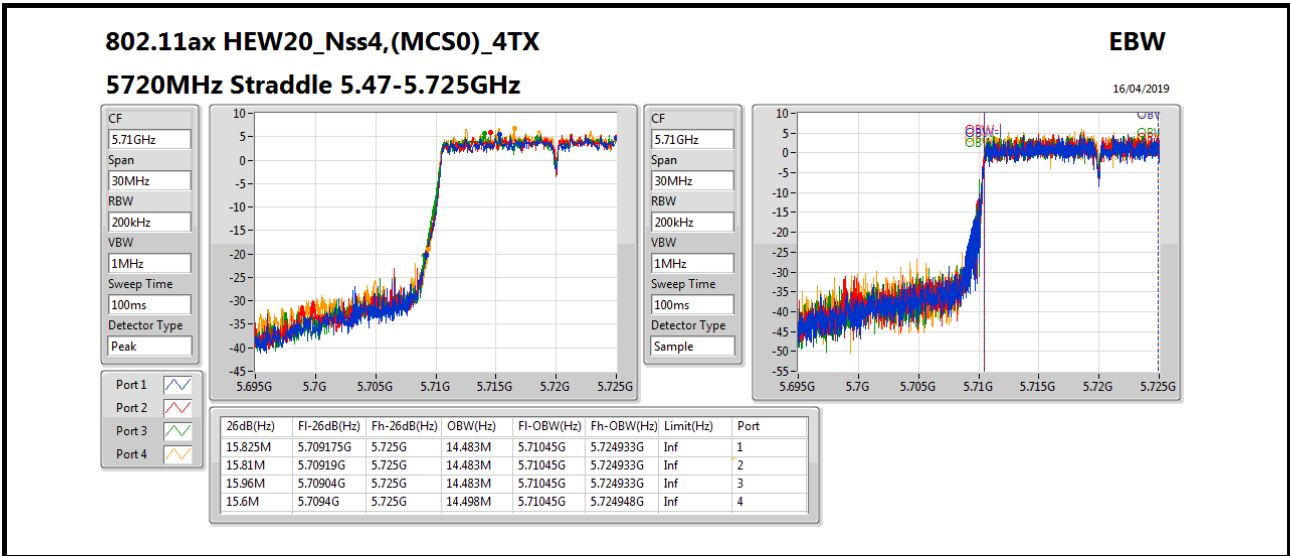
CF: 5.32GHz
Span: 50MHz
RBW: 200kHz
VBW: 1MHz
Sweep Time: 100ms
Detector Type: Sample

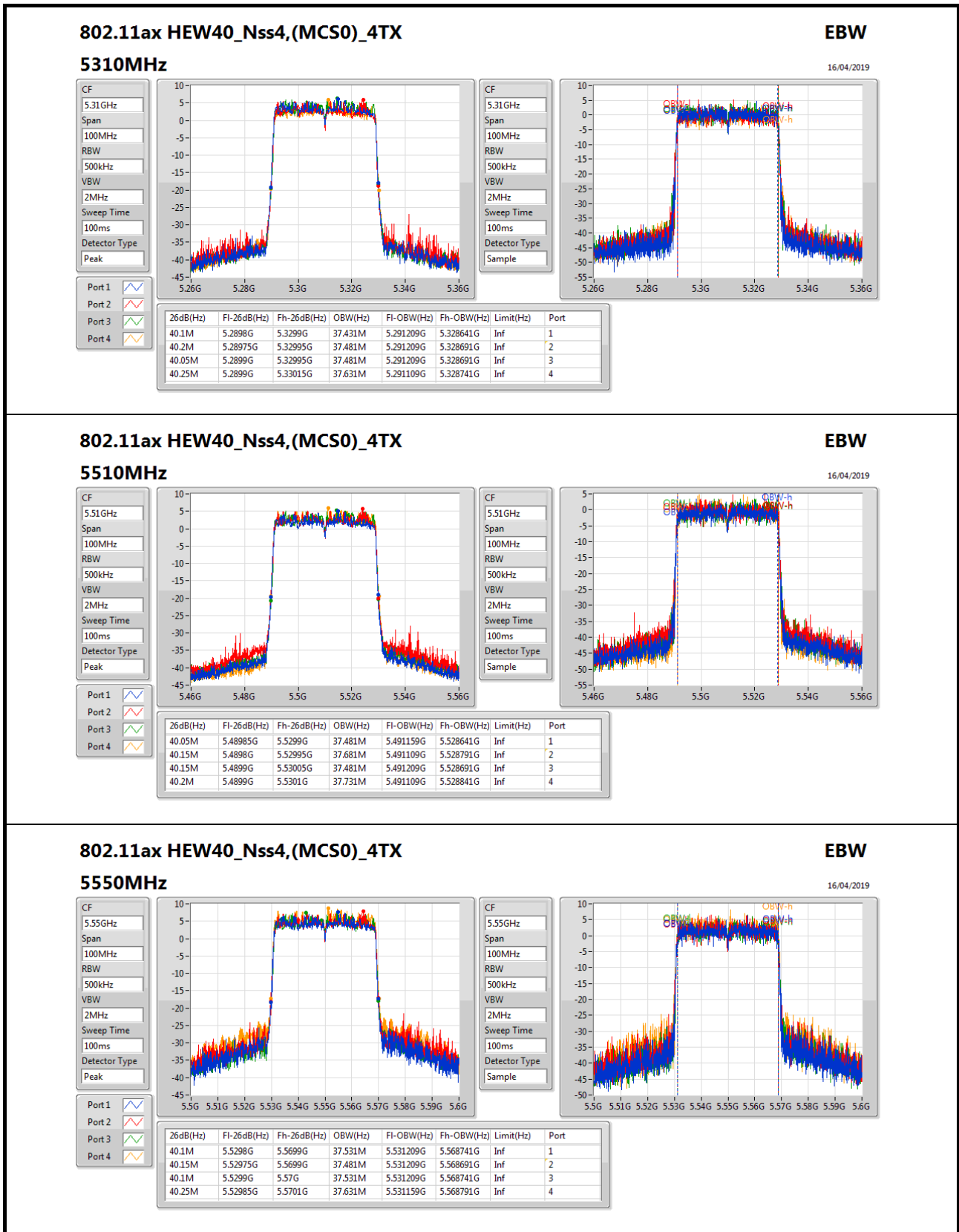
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.85M	5.3091G	5.33095G	18.941M	5.310505G	5.329445G	Inf	1
21.75M	5.3091G	5.33085G	18.916M	5.310505G	5.32942G	Inf	2
21.825M	5.308925G	5.33075G	18.966M	5.31048G	5.329445G	Inf	3
21.4M	5.309325G	5.330725G	18.966M	5.31048G	5.329445G	Inf	4


802.11ax HEW20_Nss4,(MCS0)_4TX
EBW
5700MHz
16/04/2019

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

CF: 5.7GHz
Span: 50MHz
RBW: 200kHz
VBW: 1MHz
Sweep Time: 100ms
Detector Type: Sample




802.11ax HEW40_Nss4,(MCS0)_4TX
EBW

16/04/2019

5550MHz

CF: 5.55GHz

Span: 100MHz

RBW: 500kHz

VBW: 2MHz

Sweep Time: 100ms

Detector Type: Peak

CF: 5.55GHz

Span: 100MHz

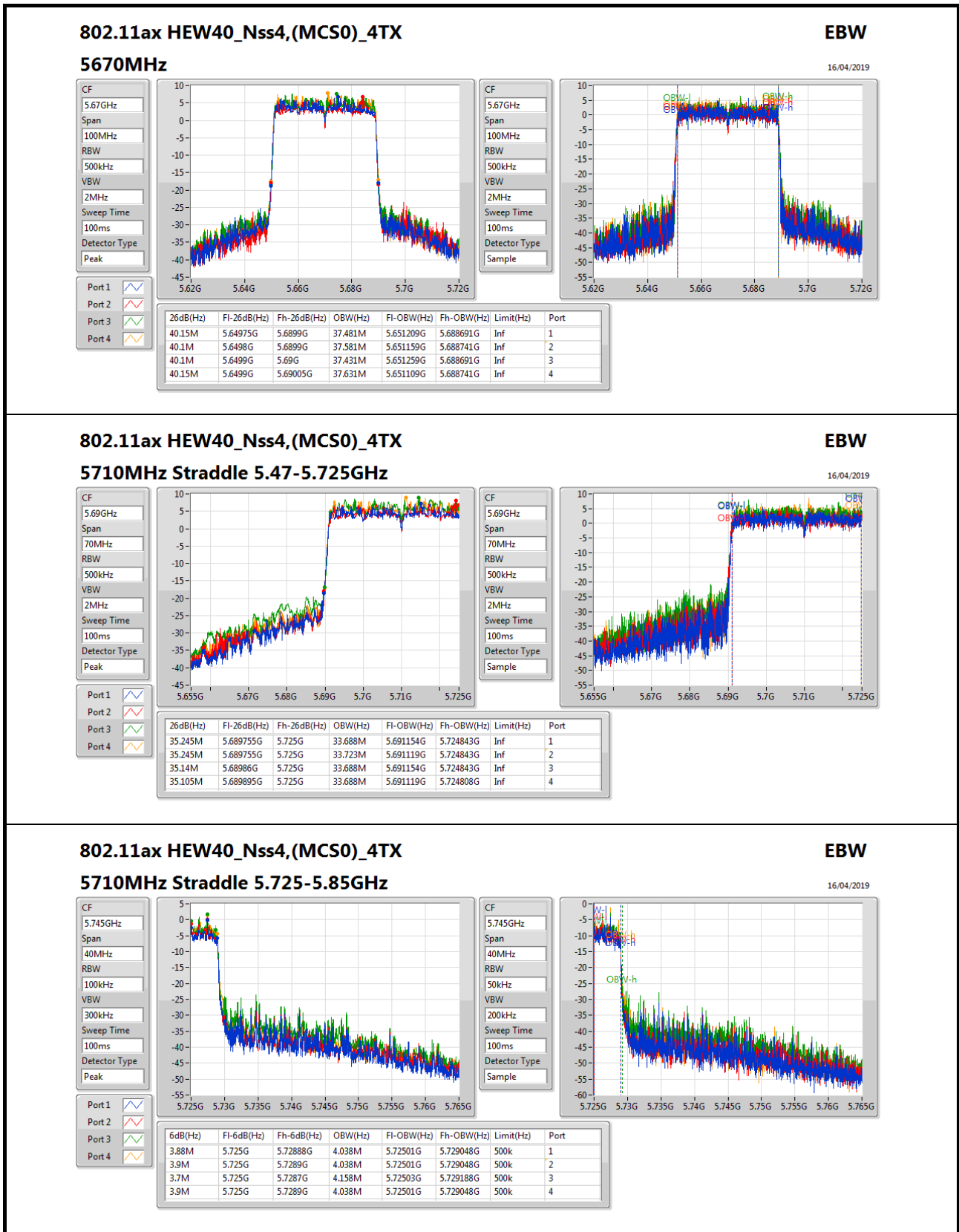
RBW: 500kHz

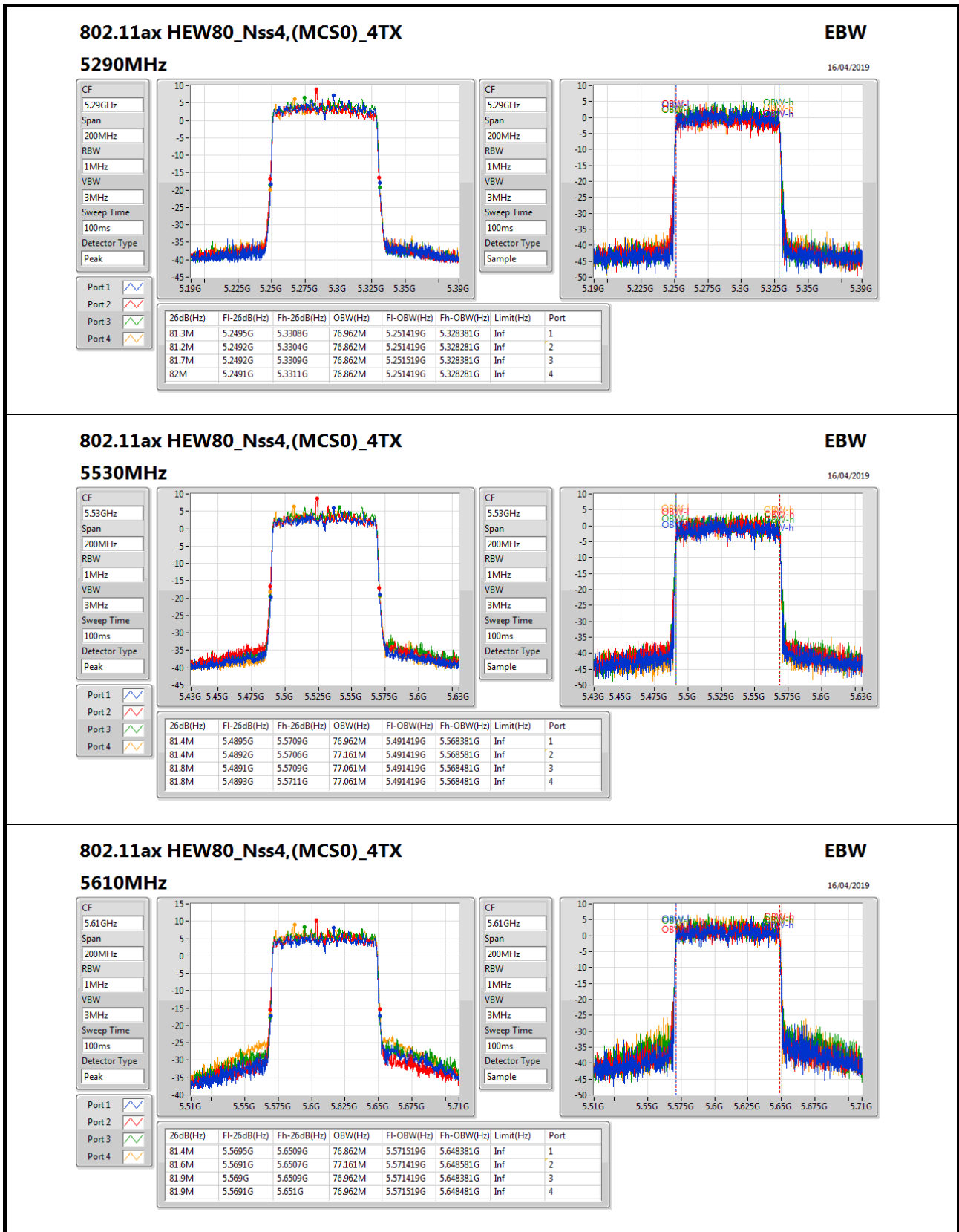
VBW: 2MHz

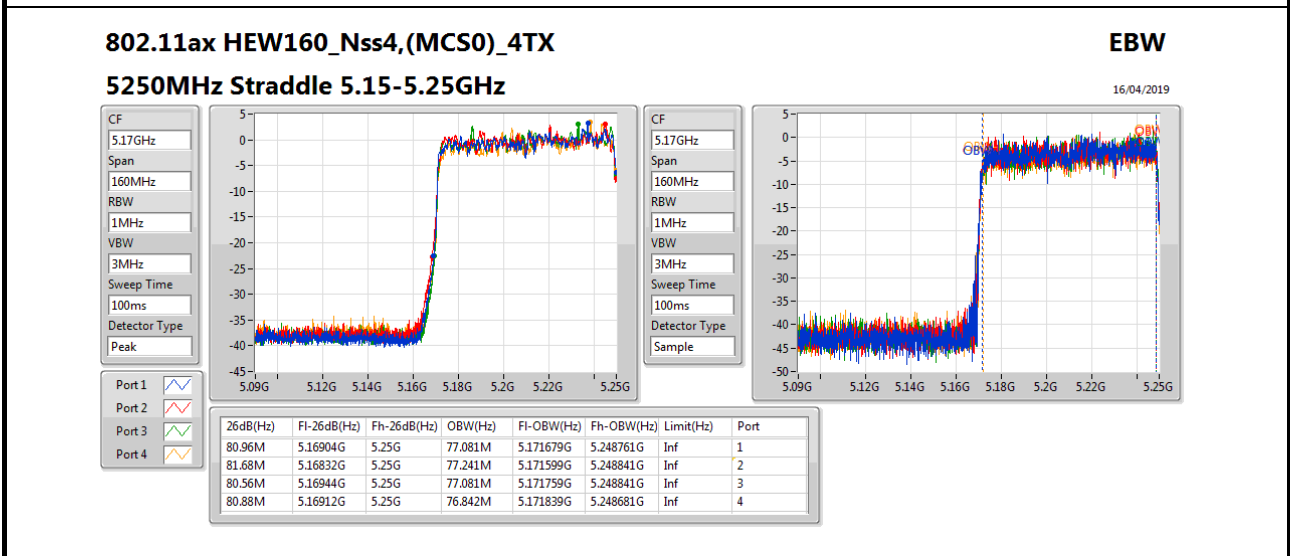
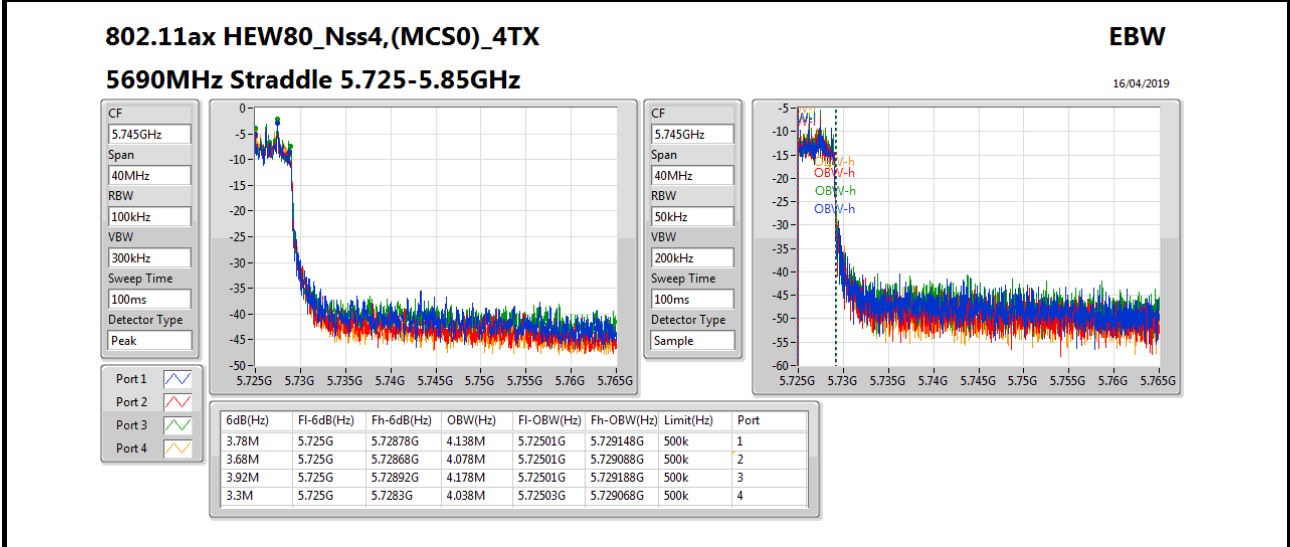
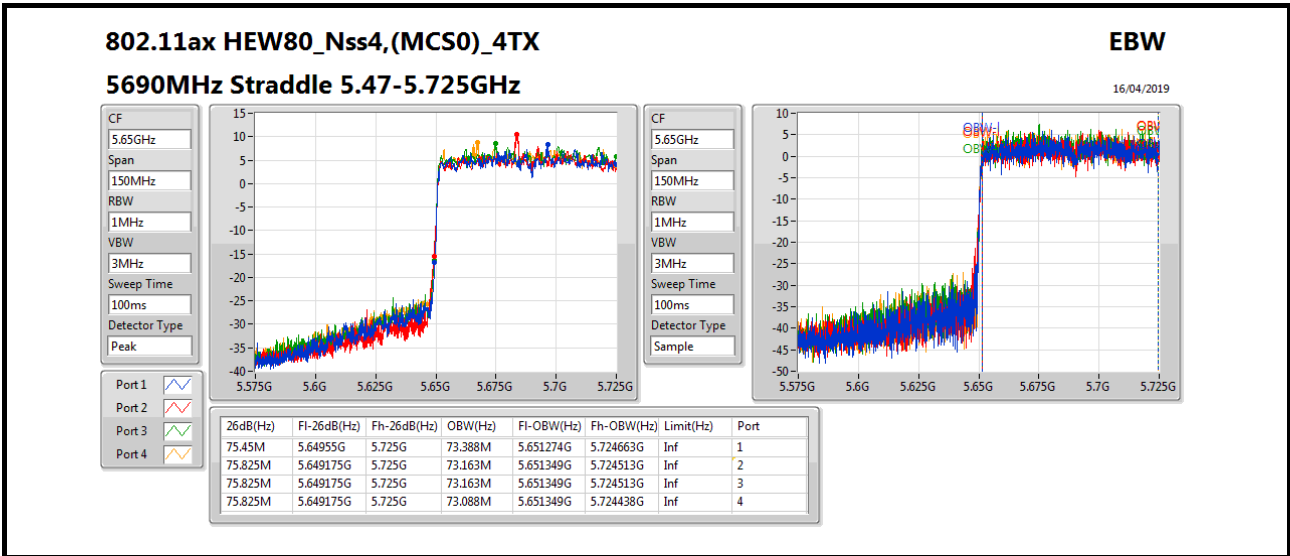
Sweep Time: 100ms

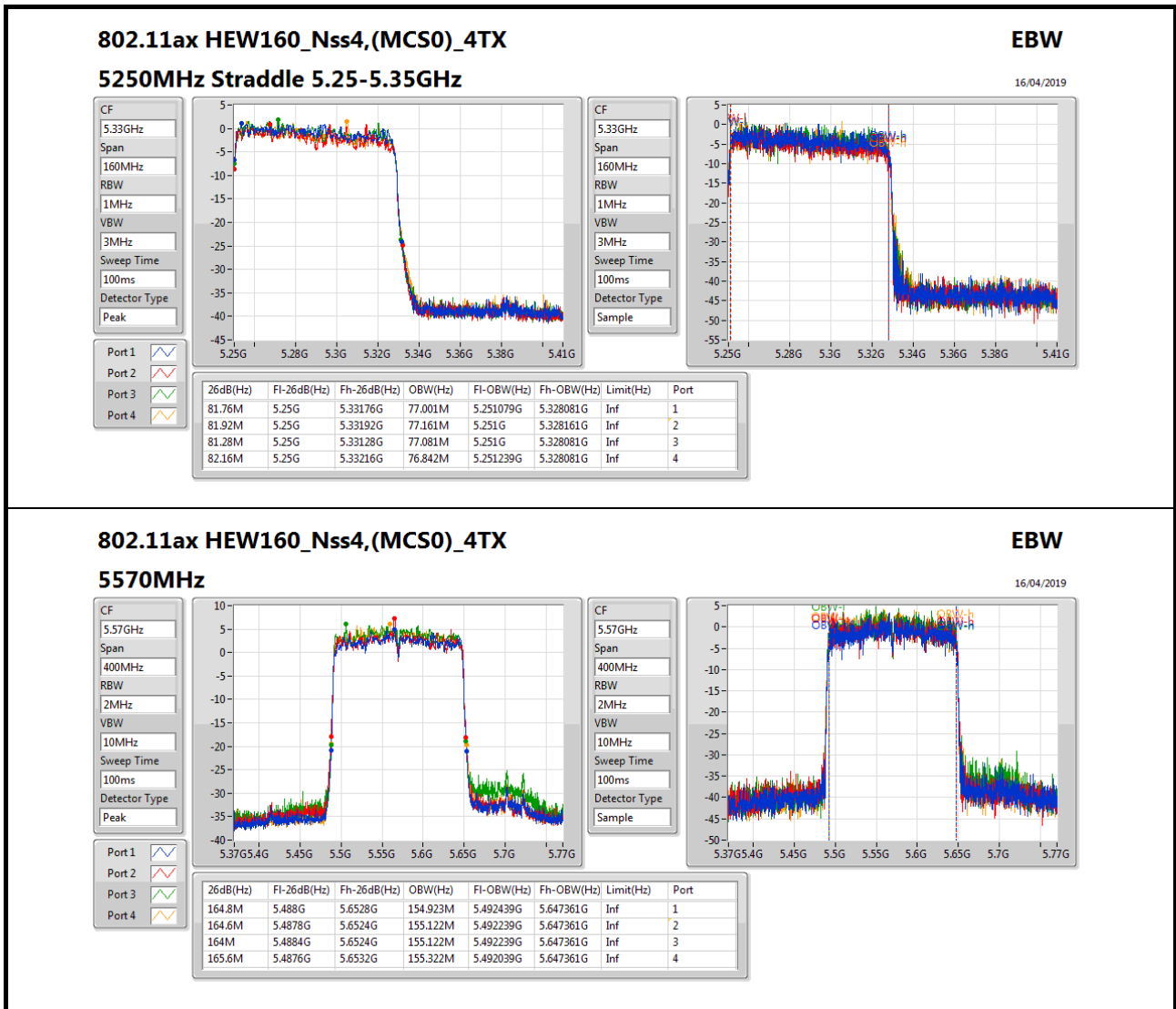
Detector Type: Sample

26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
40.1M	5.5298G	5.5699G	37.531M	5.531209G	5.568741G	Inf	1
40.15M	5.52975G	5.5699G	37.481M	5.531209G	5.568691G	Inf	2
40.1M	5.5299G	5.57G	37.531M	5.531209G	5.568741G	Inf	3
40.25M	5.52985G	5.5701G	37.631M	5.531159G	5.568791G	Inf	4











**For Outdoor use for 5G Band 1:
Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ax HEW160_Nss1,(MCS0)_1TX	81.28M	77.241M	77M2D1D	81.28M	77.241M
5.25-5.35GHz	-	-	-	-	-
802.11ax HEW160_Nss1,(MCS0)_1TX	81.28M	77.161M	77M2D1D	81.28M	77.161M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;



Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11ax HEW160_Nss1,(MCS0)_1TX	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	Inf	81.28M	77.241M
5250MHz Straddle 5.25-5.35GHz	Pass	Inf	81.28M	77.161M

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

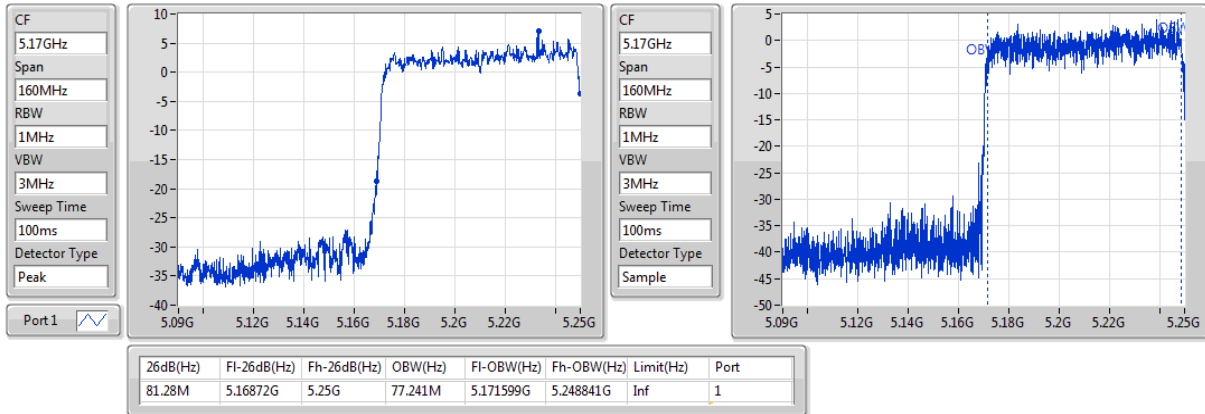
Port X-OBW = Port X 99% occupied bandwidth;

802.11ax HEW160_Nss1,(MCS0)_1TX

EBW

5250MHz Straddle 5.15-5.25GHz

16/04/2019

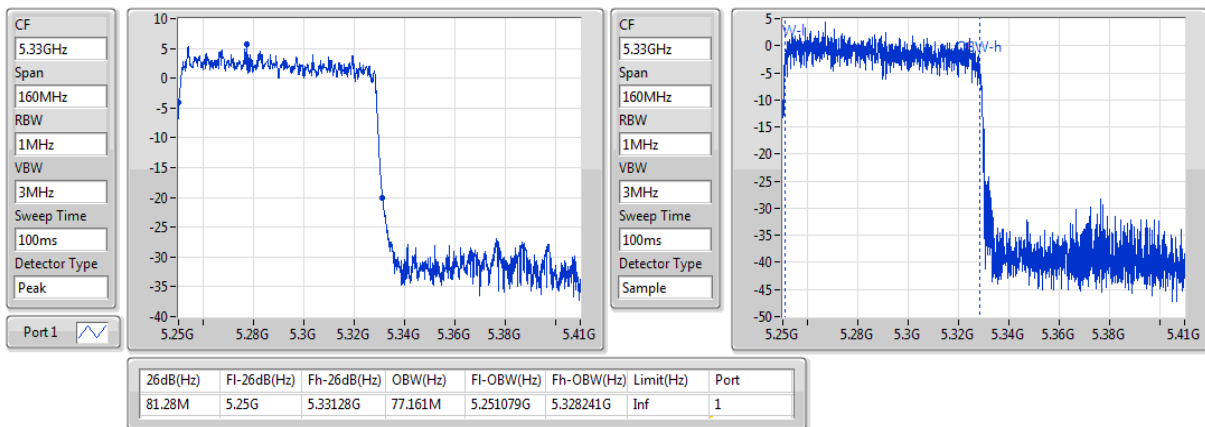


802.11ax HEW160_Nss1,(MCS0)_1TX

EBW

5250MHz Straddle 5.25-5.35GHz

16/04/2019





**For Outdoor use for 5G Band 1:
Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ax HEW160_Nss2,(MCS0)_2TX	82M	77.161M	77M2D1D	81.44M	77.081M
5.25-5.35GHz	-	-	-	-	-
802.11ax HEW160_Nss2,(MCS0)_2TX	81.28M	77.001M	77MOD1D	80.72M	77.001M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;



Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11ax HEW160_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	Inf	81.44M	77.081M	82M	77.161M
5250MHz Straddle 5.25-5.35GHz	Pass	Inf	81.28M	77.001M	80.72M	77.001M

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

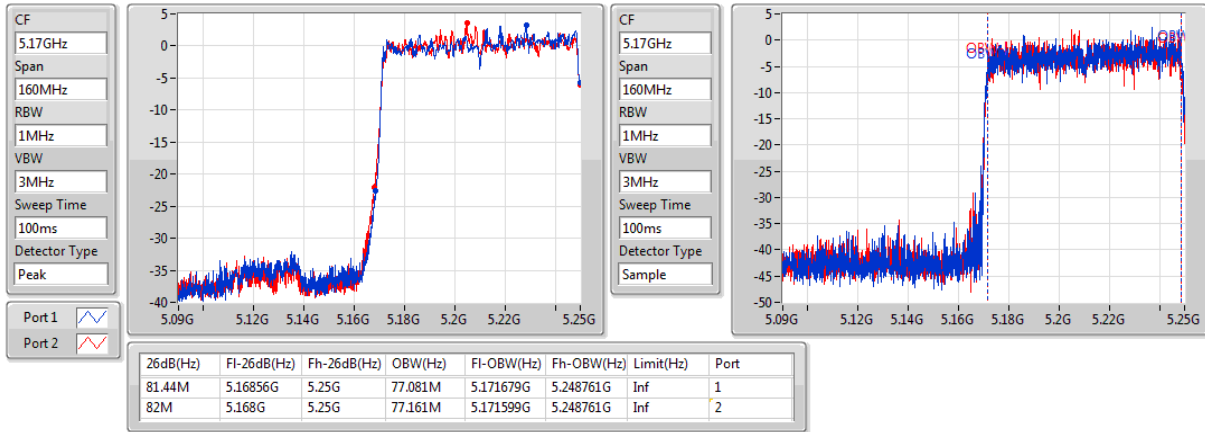
Port X-OBW = Port X 99% occupied bandwidth;

802.11ax HEW160_Nss2,(MCS0)_2TX

EBW

5250MHz Straddle 5.15-5.25GHz

16/04/2019

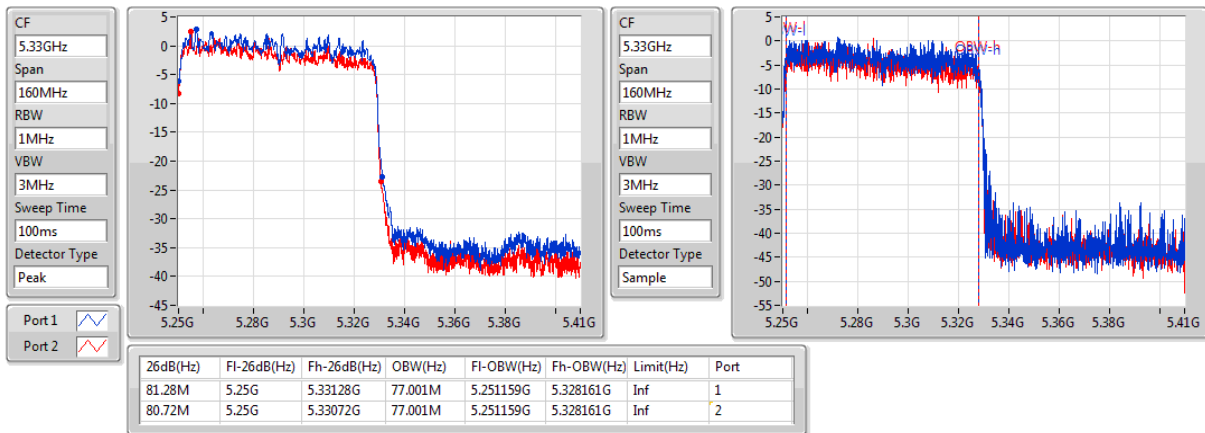


802.11ax HEW160_Nss2,(MCS0)_2TX

EBW

5250MHz Straddle 5.25-5.35GHz

16/04/2019





**For Outdoor use for 5G Band 1:
Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ax HEW160_Nss1,(MCS0)_4TX	81.36M	77.321M	77M3D1D	80.96M	77.081M
5.25-5.35GHz	-	-	-	-	-
802.11ax HEW160_Nss1,(MCS0)_4TX	81.92M	77.081M	77M1D1D	80.96M	76.922M

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)
802.11ax HEW160_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	Inf	81.36M	77.081M	81.12M	77.321M	81.04M	77.161M	80.96M	77.241M
5250MHz Straddle 5.25-5.35GHz	Pass	Inf	81.28M	77.081M	80.96M	76.922M	81.12M	77.081M	81.92M	77.081M

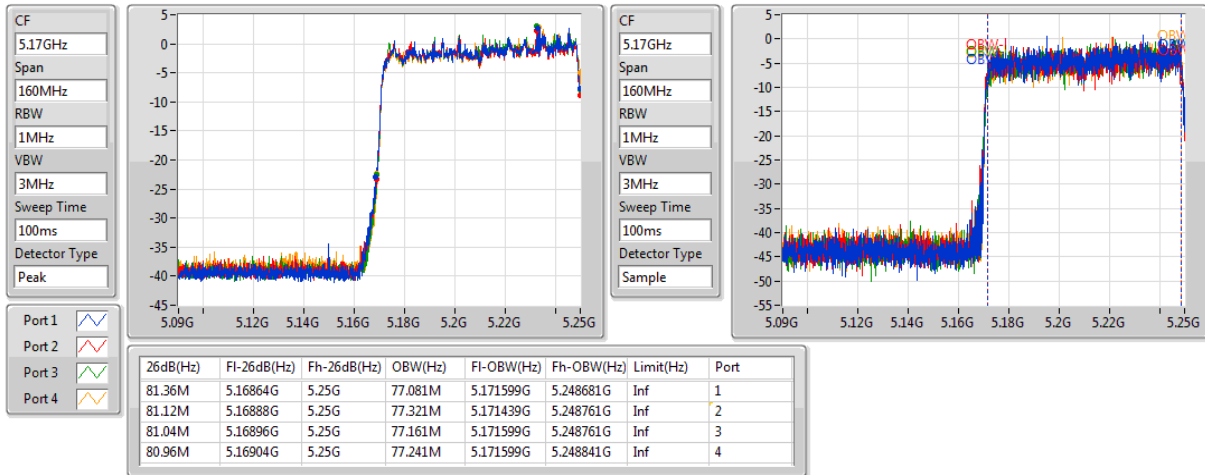
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth;

802.11ax HEW160_Nss1,(MCS0)_4TX

EBW

5250MHz Straddle 5.15-5.25GHz

15/04/2019

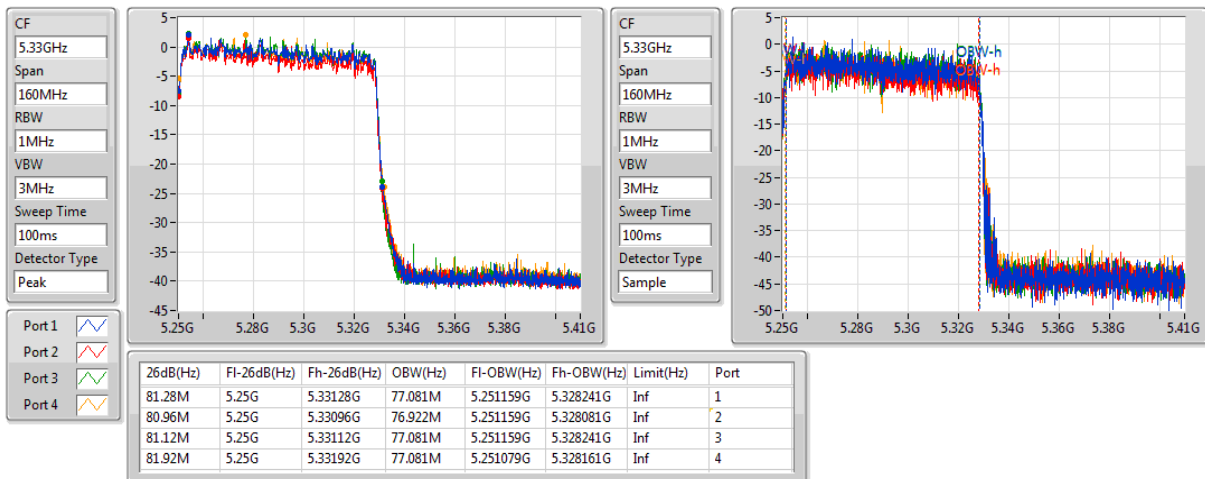


802.11ax HEW160_Nss1,(MCS0)_4TX

EBW

5250MHz Straddle 5.25-5.35GHz

15/04/2019





**For Outdoor use for 5G Band 1:
Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	81.2M	77.241M	77M2D1D	80.56M	77.001M
5.25-5.35GHz	-	-	-	-	-
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	81.84M	77.241M	77M2D1D	80.96M	77.001M

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)
802.11ax HEW160-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	Inf	81.2M	77.001M	80.8M	77.241M	80.64M	77.241M	80.56M	77.161M
5250MHz Straddle 5.25-5.35GHz	Pass	Inf	81.68M	77.081M	81.12M	77.001M	80.96M	77.241M	81.84M	77.001M

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

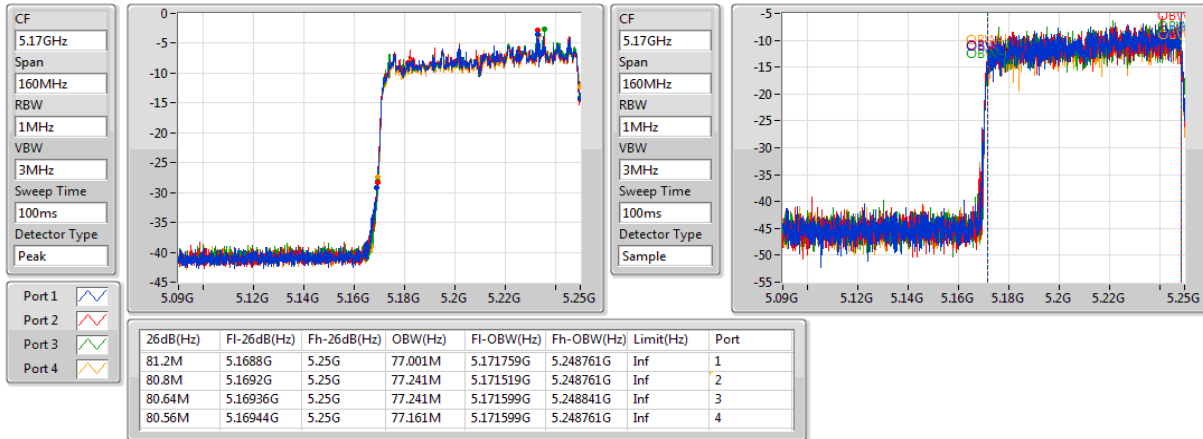
Port X-OBW = Port X 99% occupied bandwidth;

802.11ax HEW160-BF_Nss1,(MCS0)_4TX

EBW

5250MHz Straddle 5.15-5.25GHz

15/05/2019

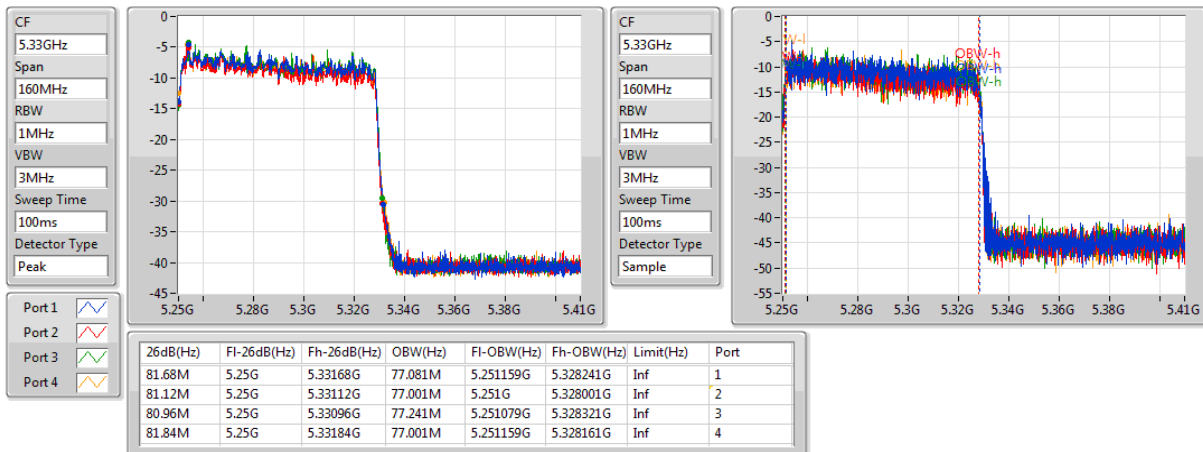


802.11ax HEW160-BF_Nss1,(MCS0)_4TX

EBW

5250MHz Straddle 5.25-5.35GHz

15/05/2019





**For Outdoor use for 5G Band 1:
Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ax HEW160_Nss4,(MCS0)_4TX	81.6M	77.161M	77M2D1D	80.48M	76.762M
5.25-5.35GHz	-	-	-	-	-
802.11ax HEW160_Nss4,(MCS0)_4TX	81.92M	77.161M	77M2D1D	81.44M	77.001M

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)
802.11ax HEW160_Nss4,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	Inf	80.8M	76.922M	81.6M	77.161M	80.48M	77.001M	80.8M	76.762M
5250MHz Straddle 5.25-5.35GHz	Pass	Inf	81.76M	77.161M	81.92M	77.161M	81.44M	77.001M	81.84M	77.161M

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

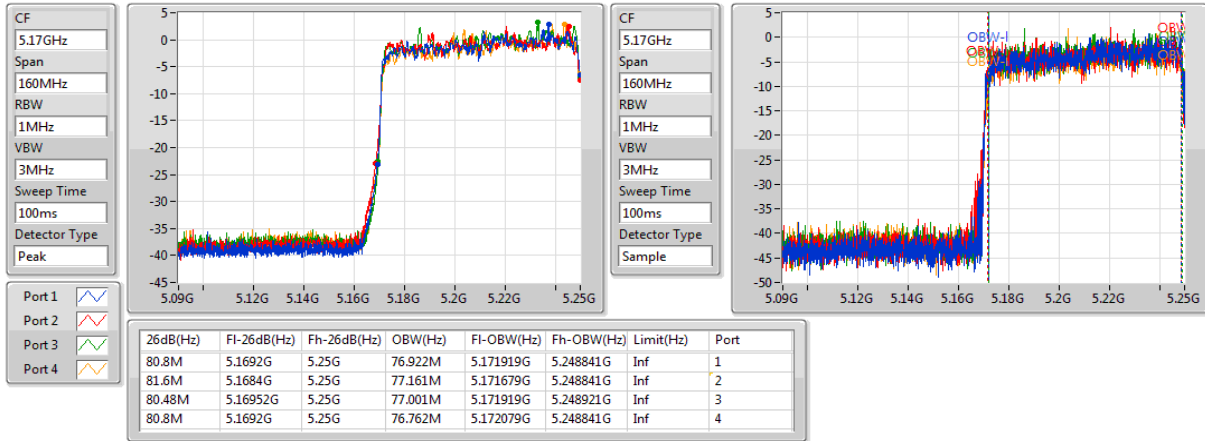
Port X-OBW = Port X 99% occupied bandwidth;

802.11ax HEW160_Nss4,(MCS0)_4TX

EBW

5250MHz Straddle 5.15-5.25GHz

14/05/2019

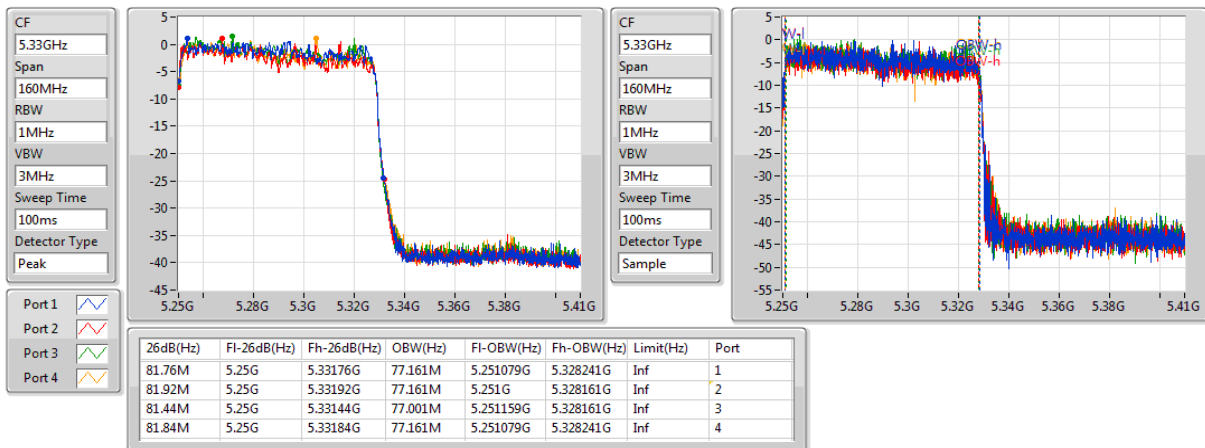


802.11ax HEW160_Nss4,(MCS0)_4TX

EBW

5250MHz Straddle 5.25-5.35GHz

14/05/2019





**For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 2 ~ Band 4:
Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ax HEW160_Nss1,(MCS0)_1TX	81.44M	77.081M	77M1D1D	81.44M	77.081M
5.25-5.35GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	40.875M	17.041M	17M0D1D	38.475M	16.717M
802.11ax HEW20_Nss1,(MCS0)_1TX	41.1M	19.215M	19M2D1D	39.1M	19.04M
802.11ax HEW40_Nss1,(MCS0)_1TX	79.4M	38.181M	38M2D1D	40.45M	37.531M
802.11ax HEW80_Nss1,(MCS0)_1TX	81.2M	77.061M	77M1D1D	81.2M	77.061M
802.11ax HEW160_Nss1,(MCS0)_1TX	81.36M	77.161M	77M2D1D	81.36M	77.161M
5.47-5.725GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	38.325M	16.717M	16M7D1D	21.725M	13.718M
802.11ax HEW20_Nss1,(MCS0)_1TX	40.9M	19.115M	19M1D1D	22.225M	14.618M
802.11ax HEW40_Nss1,(MCS0)_1TX	77.6M	38.031M	38M0D1D	39.95M	34.388M
802.11ax HEW80_Nss1,(MCS0)_1TX	159.7M	78.261M	78M3D1D	81.5M	74.063M
802.11ax HEW160_Nss1,(MCS0)_1TX	164.8M	155.322M	155MD1D	164.8M	155.322M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	3.14M	9.355M	9M36D1D	3.14M	9.355M
802.11ax HEW20_Nss1,(MCS0)_1TX	4.44M	10.515M	10M5D1D	4.44M	10.515M
802.11ax HEW40_Nss1,(MCS0)_1TX	3.76M	25.967M	26M0D1D	3.76M	25.967M
802.11ax HEW80_Nss1,(MCS0)_1TX	3.8M	36.742M	36M7D1D	3.8M	36.742M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

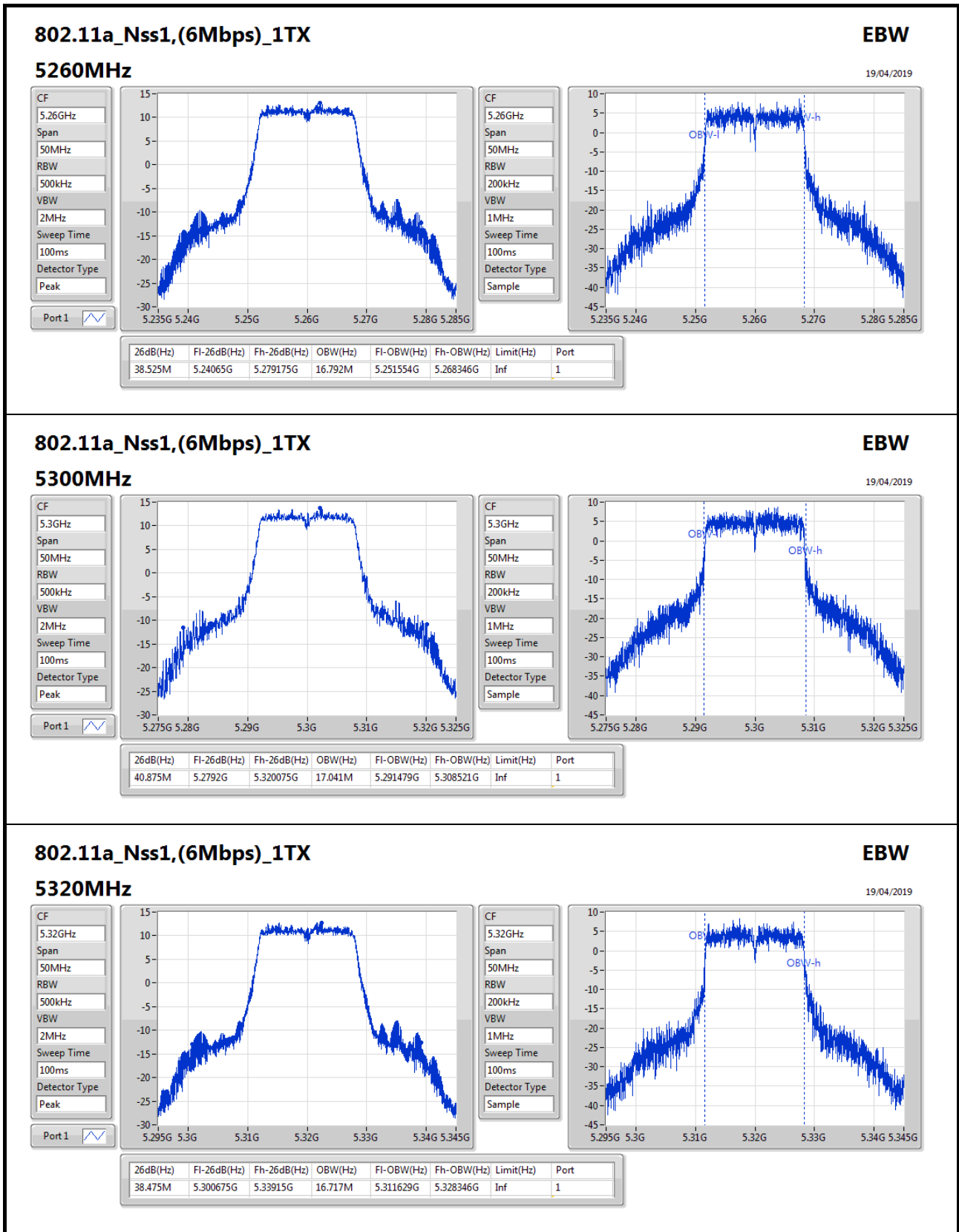
Min-OBW = Minimum 99% occupied bandwidth;

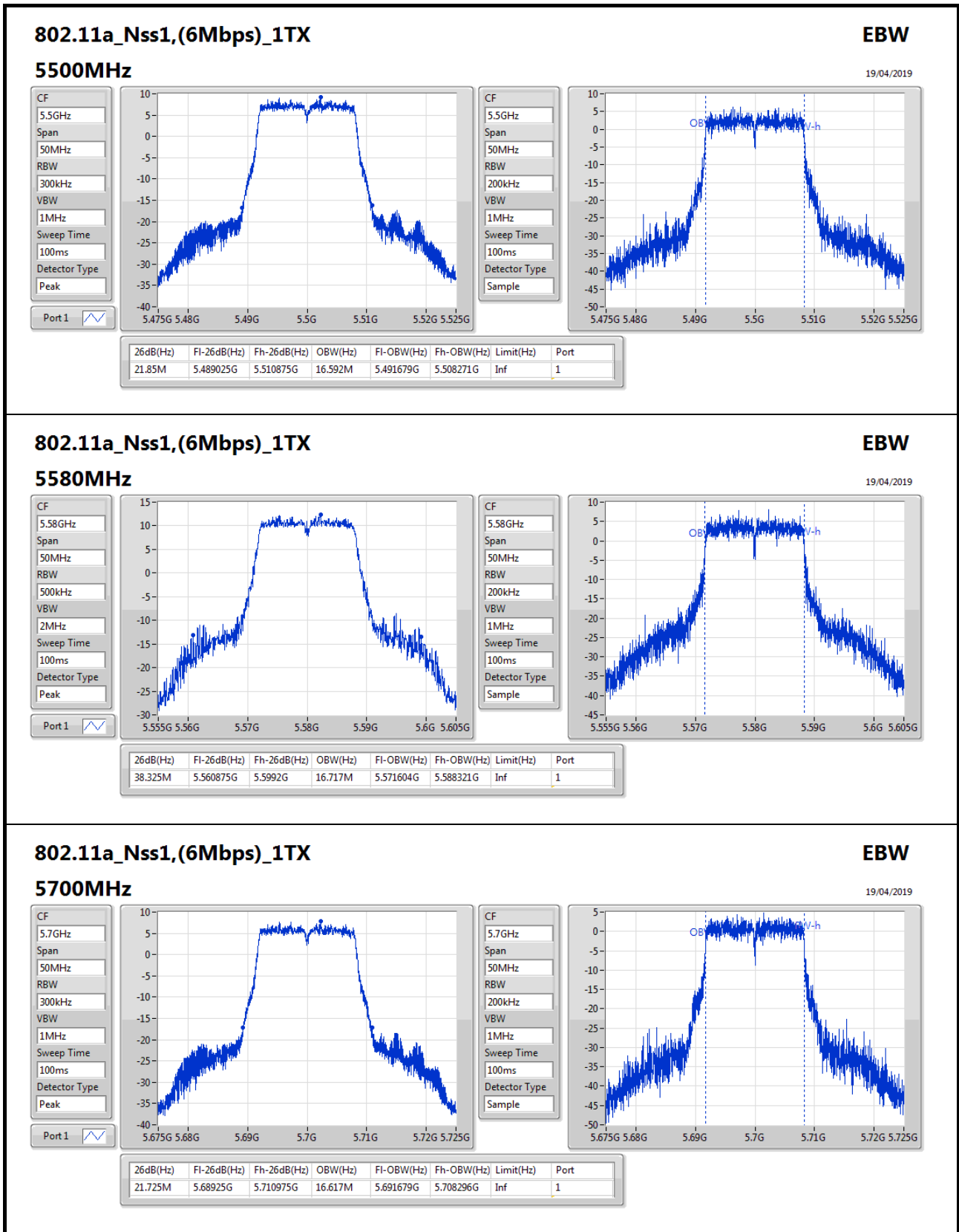


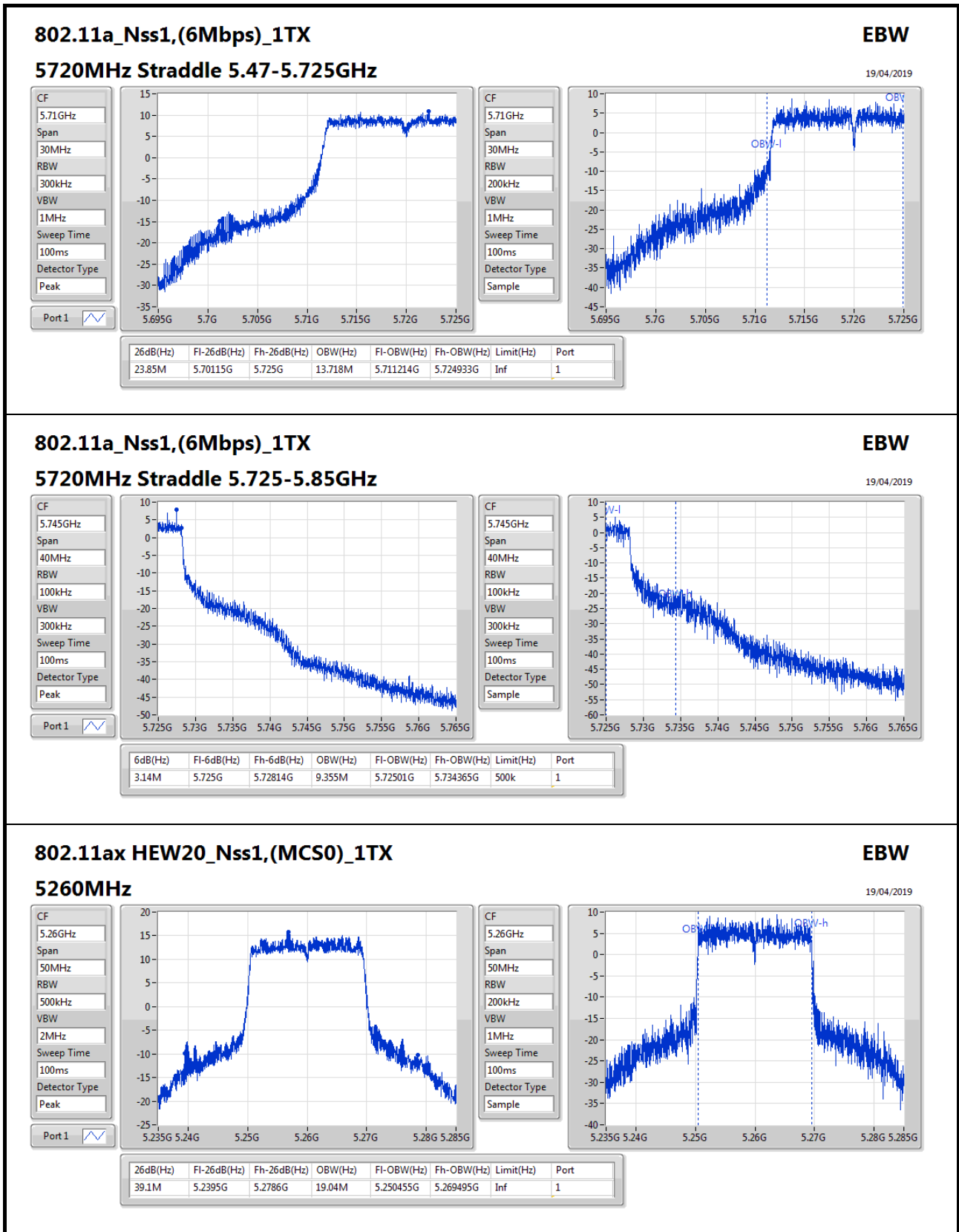
Result

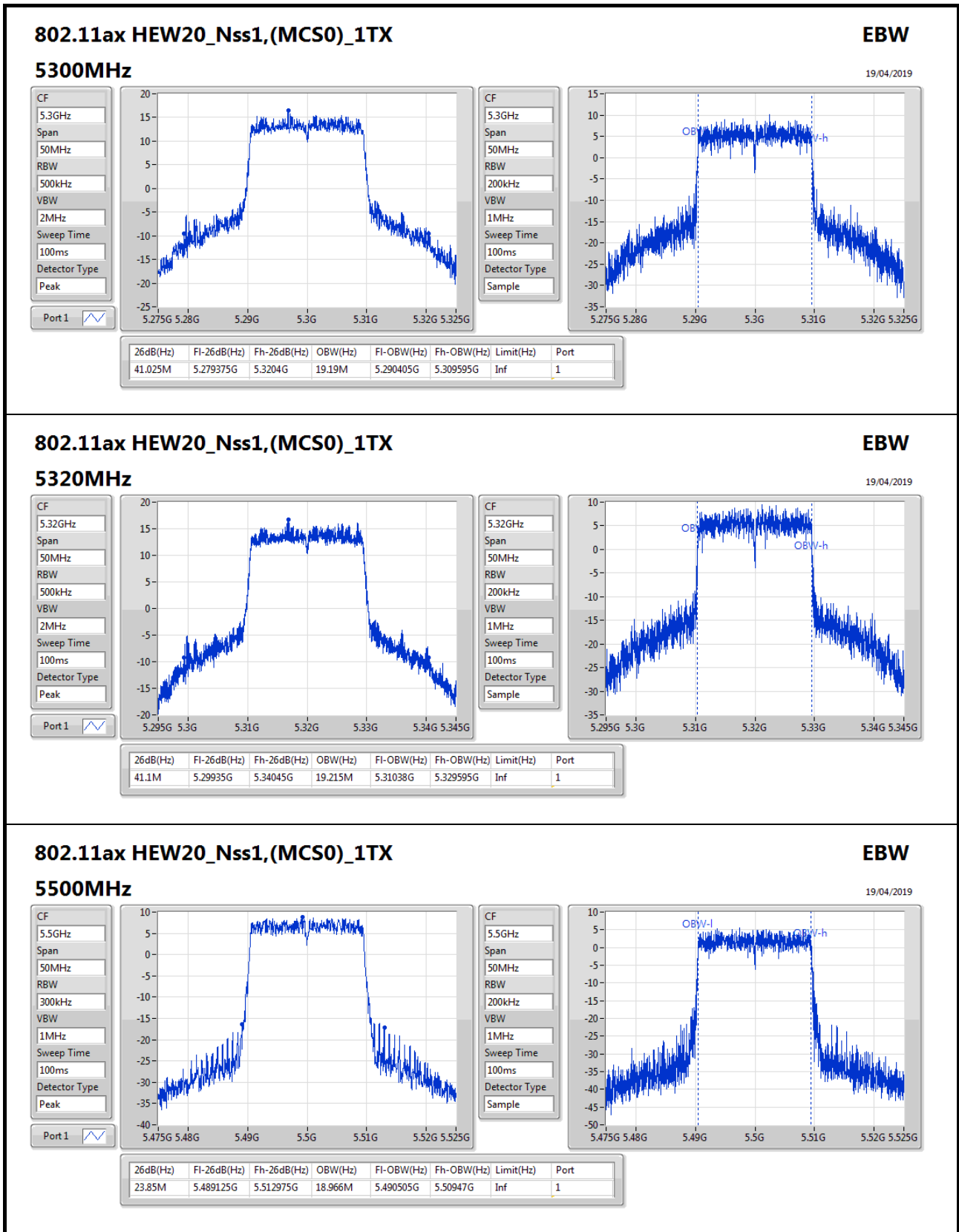
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11a_Nss1,(6Mbps)_1TX	-	-	-	-
5260MHz	Pass	Inf	38.525M	16.792M
5300MHz	Pass	Inf	40.875M	17.041M
5320MHz	Pass	Inf	38.475M	16.717M
5500MHz	Pass	Inf	21.85M	16.592M
5580MHz	Pass	Inf	38.325M	16.717M
5700MHz	Pass	Inf	21.725M	16.617M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	23.85M	13.718M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.14M	9.355M
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-
5260MHz	Pass	Inf	39.1M	19.04M
5300MHz	Pass	Inf	41.025M	19.19M
5320MHz	Pass	Inf	41.1M	19.215M
5500MHz	Pass	Inf	23.85M	18.966M
5580MHz	Pass	Inf	40.9M	19.115M
5700MHz	Pass	Inf	22.225M	18.991M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	25.59M	14.618M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	4.44M	10.515M
802.11ax HEW40_Nss1,(MCS0)_1TX	-	-	-	-
5270MHz	Pass	Inf	79.4M	38.181M
5310MHz	Pass	Inf	40.45M	37.531M
5510MHz	Pass	Inf	39.95M	37.581M
5550MHz	Pass	Inf	77.6M	38.031M
5670MHz	Pass	Inf	42.35M	37.581M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	53.41M	34.388M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.76M	25.967M
802.11ax HEW80_Nss1,(MCS0)_1TX	-	-	-	-
5290MHz	Pass	Inf	81.2M	77.061M
5530MHz	Pass	Inf	81.5M	77.161M
5610MHz	Pass	Inf	159.7M	78.261M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	125.25M	74.063M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.8M	36.742M
802.11ax HEW160_Nss1,(MCS0)_1TX	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	Inf	81.44M	77.081M
5250MHz Straddle 5.25-5.35GHz	Pass	Inf	81.36M	77.161M
5570MHz	Pass	Inf	164.8M	155.322M

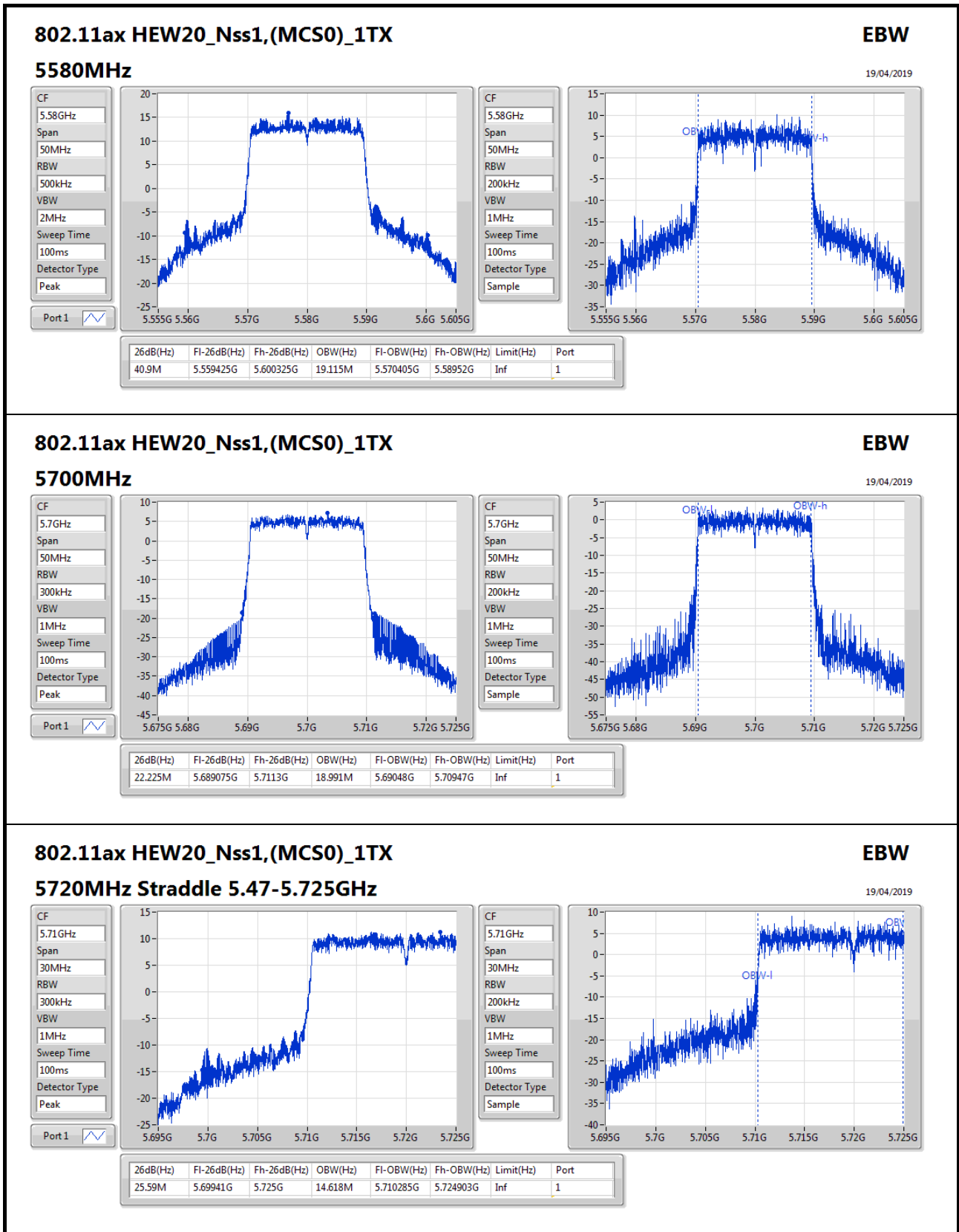
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth;

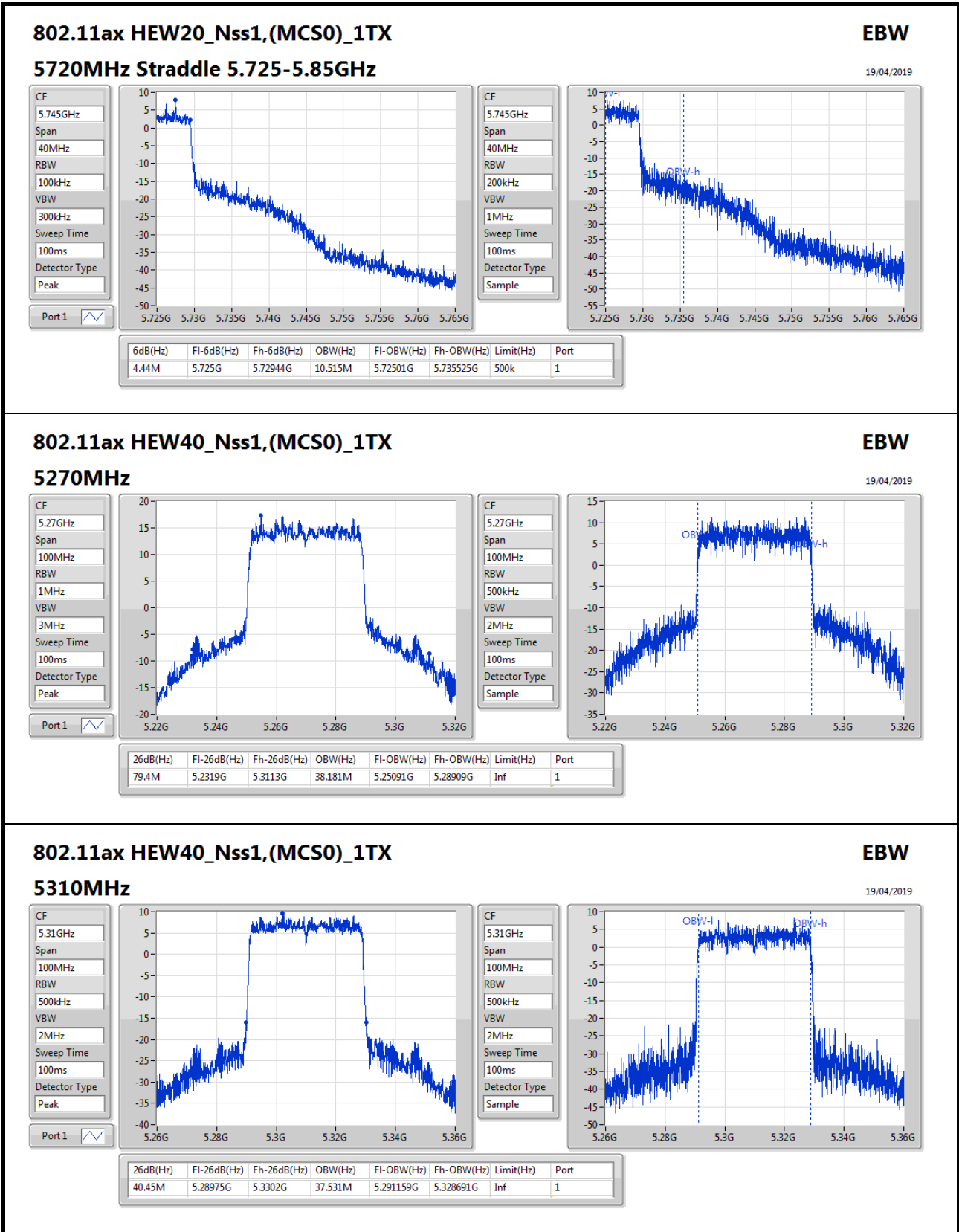


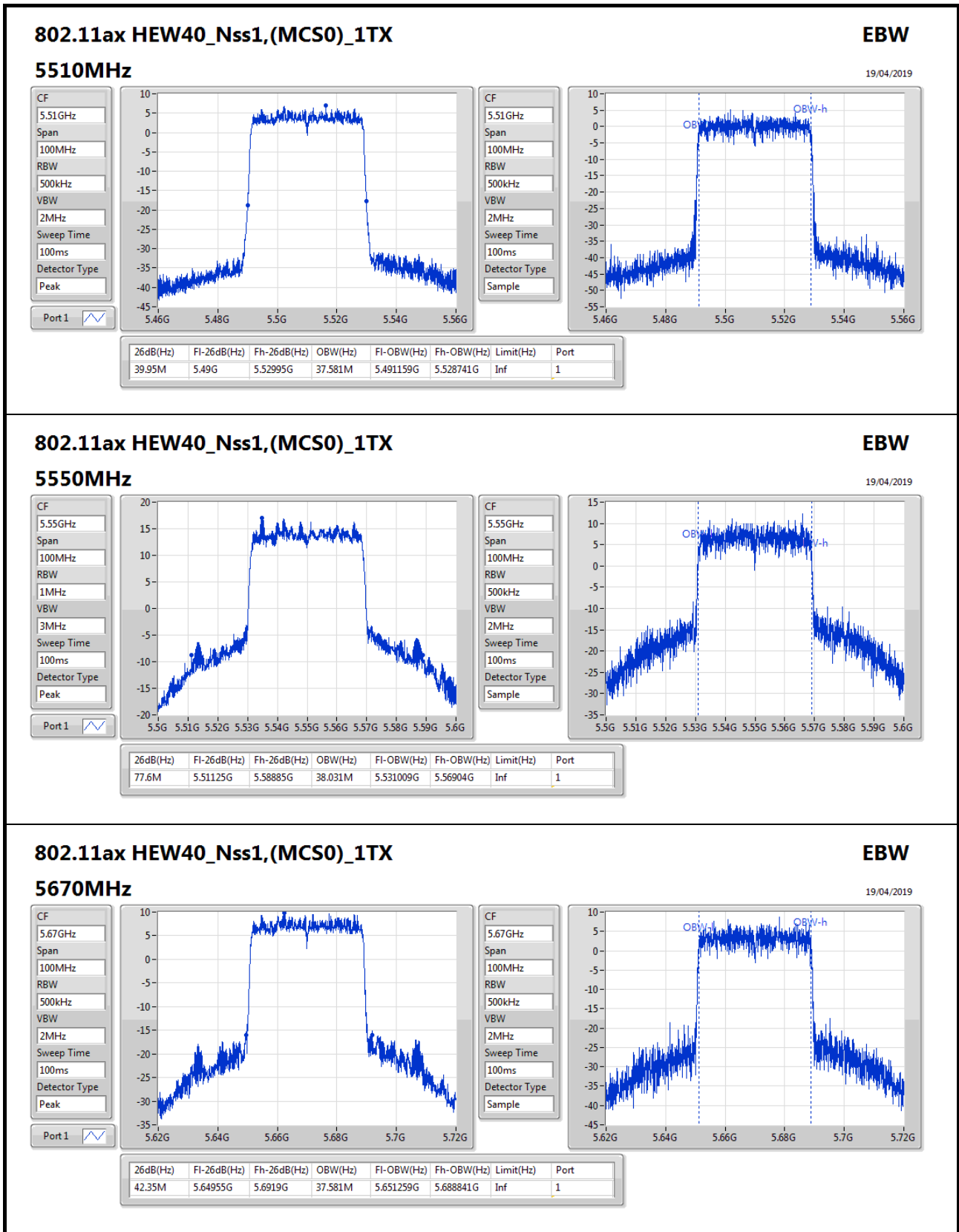


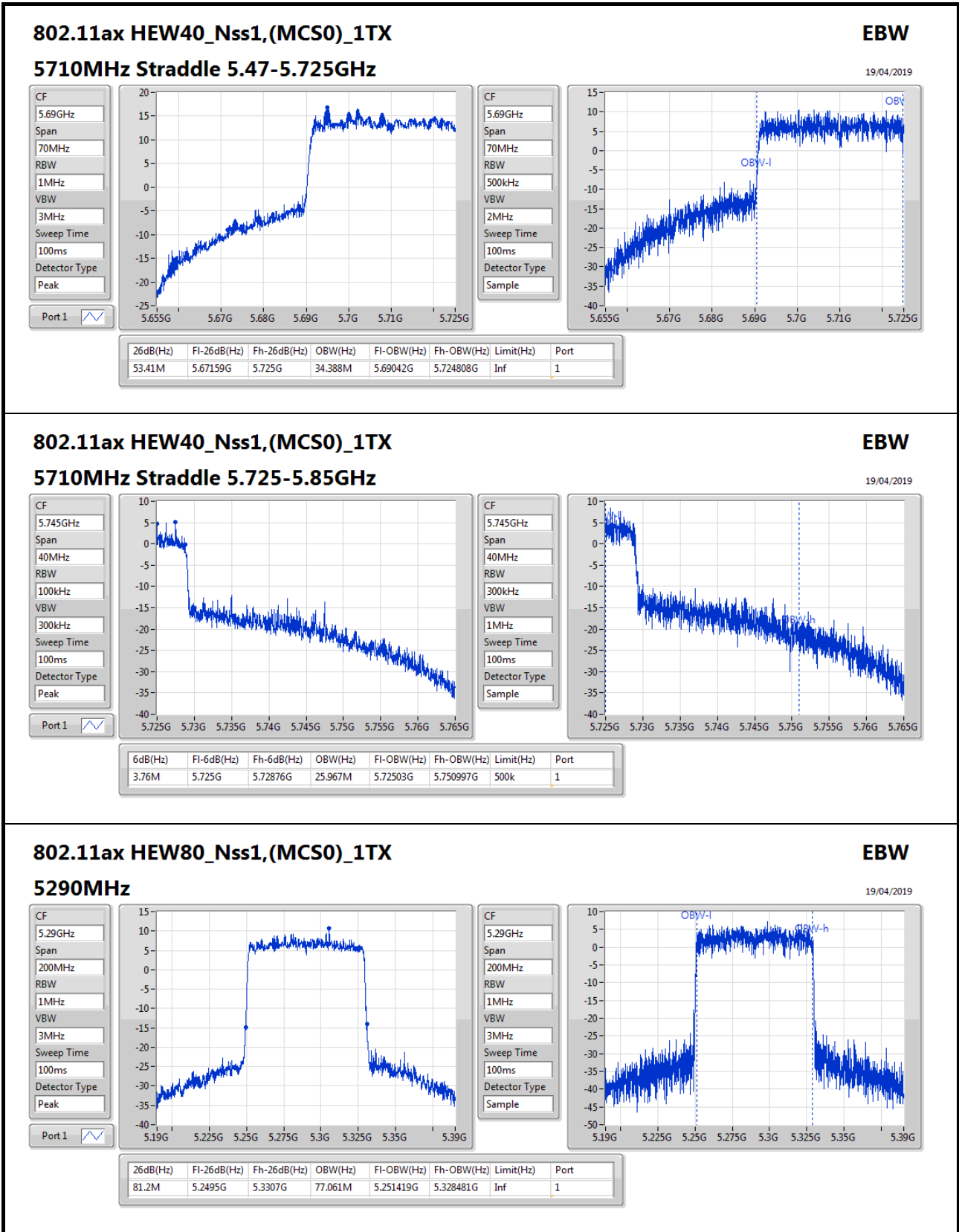












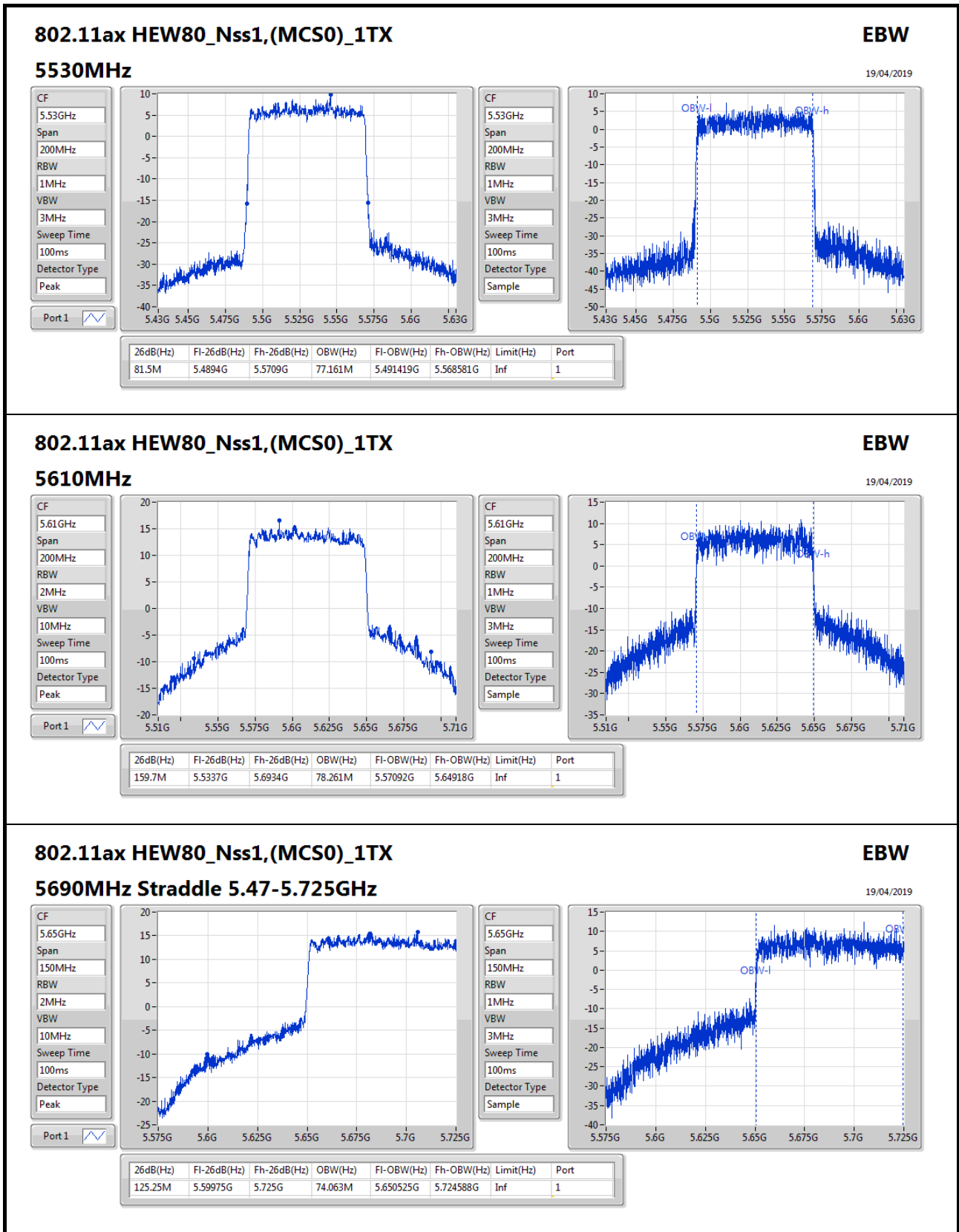
802.11ax HEW80_Nss1,(MCS0)_1TX

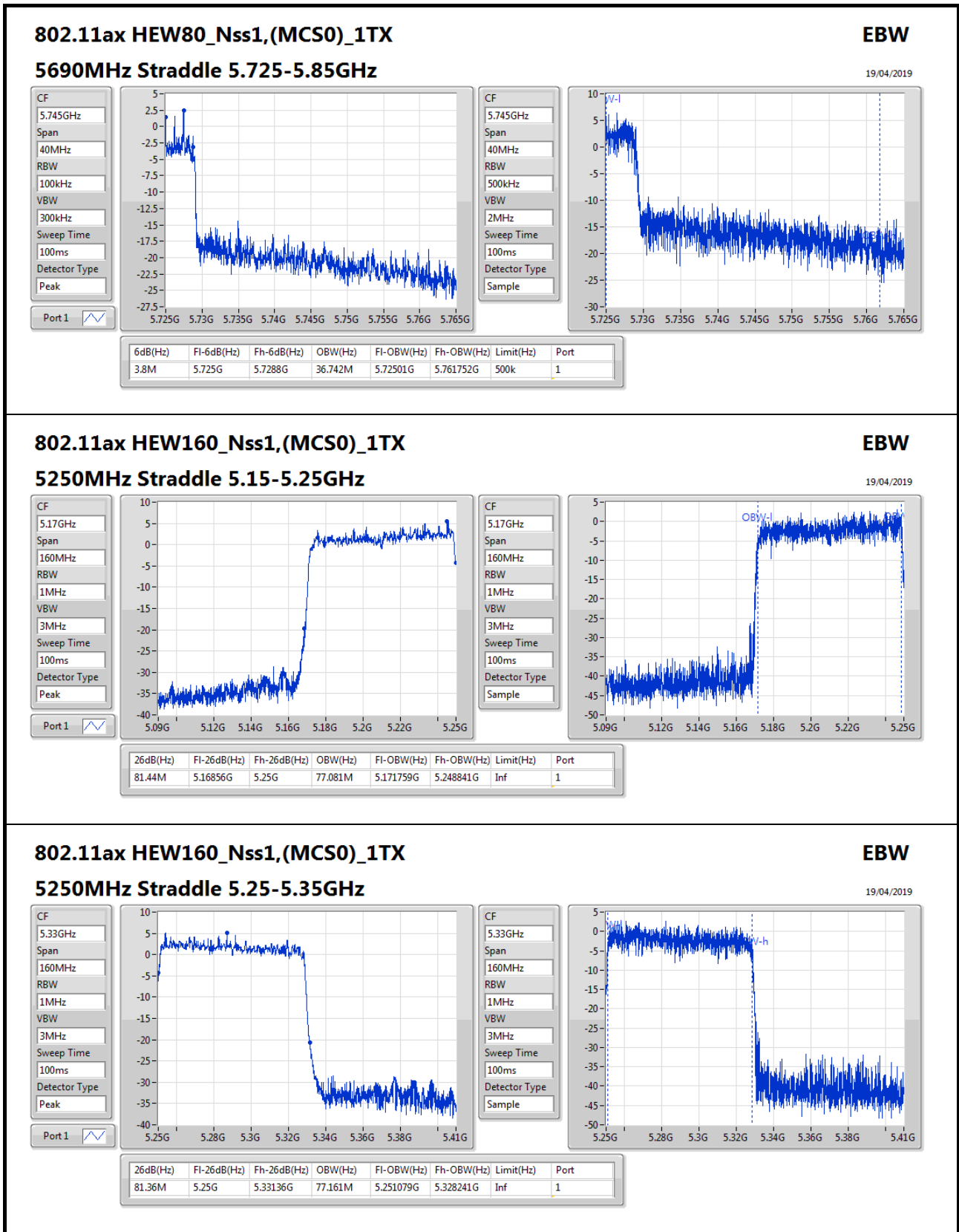
5290MHz

EBW
19/04/2019

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

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





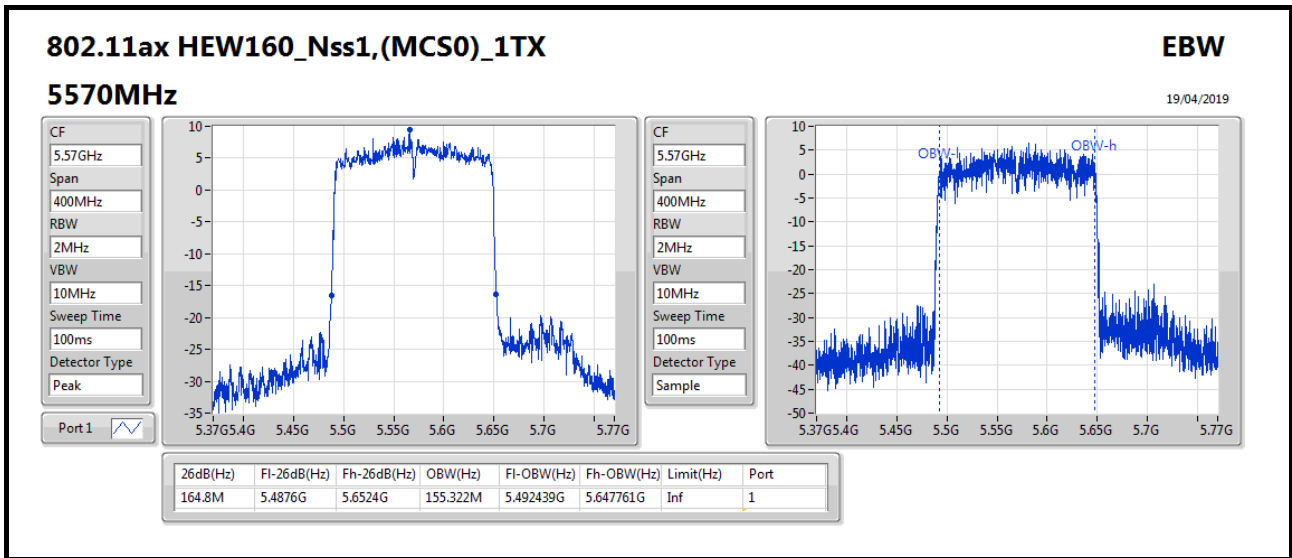
802.11ax HEW160_Nss1,(MCS0)_1TX

5250MHz Straddle 5.25-5.35GHz

EBW
19/04/2019

CF: 5.33GHz
Span: 160MHz
RBW: 1MHz
VBW: 3MHz
Sweep Time: 100ms
Detector Type: Peak

CF: 5.33GHz
Span: 160MHz
RBW: 1MHz
VBW: 3MHz
Sweep Time: 100ms
Detector Type: Sample





**For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 2 ~ Band 4:
Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ax HEW160_Nss2,(MCS0)_2TX	81.92M	77.081M	77M1D1D	81.28M	77.001M
5.25-5.35GHz	-	-	-	-	-
802.11ax HEW20_Nss2,(MCS0)_2TX	42.425M	19.115M	19M1D1D	21.35M	18.941M
802.11ax HEW40_Nss2,(MCS0)_2TX	73.75M	38.031M	38M0D1D	39.95M	37.481M
802.11ax HEW80_Nss2,(MCS0)_2TX	81.7M	77.161M	77M2D1D	81.4M	76.862M
802.11ax HEW160_Nss2,(MCS0)_2TX	81.44M	77.001M	77M0D1D	80.8M	76.922M
5.47-5.725GHz	-	-	-	-	-
802.11ax HEW20_Nss2,(MCS0)_2TX	42.2M	19.115M	19M1D1D	21.45M	14.603M
802.11ax HEW40_Nss2,(MCS0)_2TX	78.7M	37.931M	37M9D1D	39.9M	34.073M
802.11ax HEW80_Nss2,(MCS0)_2TX	155.6M	77.561M	77M6D1D	81.6M	73.913M
802.11ax HEW160_Nss2,(MCS0)_2TX	167.2M	155.722M	156MD1D	164.8M	155.522M
5.725-5.85GHz	-	-	-	-	-
802.11ax HEW20_Nss2,(MCS0)_2TX	4.44M	10.755M	10M8D1D	4.44M	10.055M
802.11ax HEW40_Nss2,(MCS0)_2TX	3.82M	25.227M	25M2D1D	3.7M	24.248M
802.11ax HEW80_Nss2,(MCS0)_2TX	3.7M	36.722M	36M7D1D	3.5M	36.442M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;

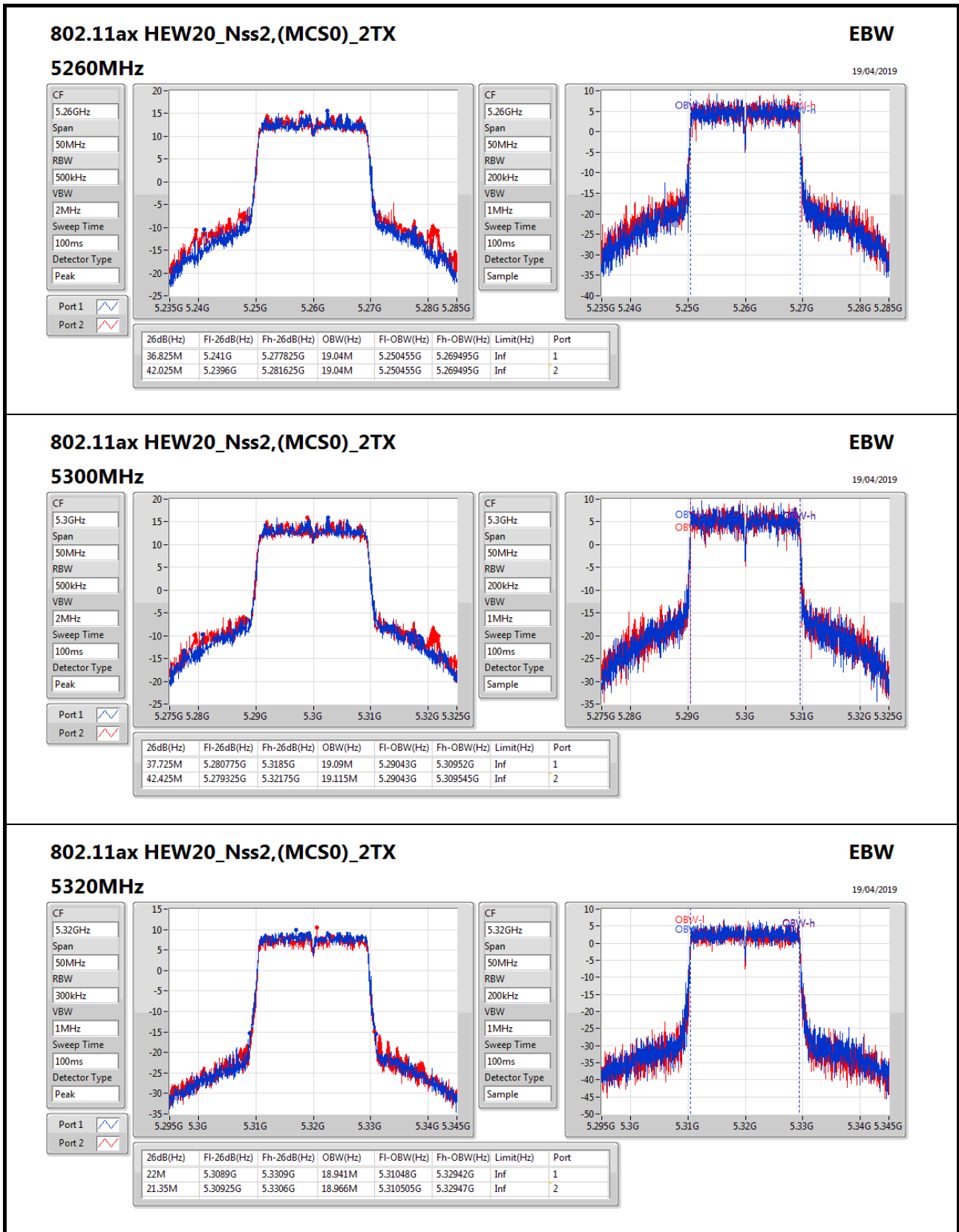


Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11ax HEW20_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5260MHz	Pass	Inf	36.825M	19.04M	42.025M	19.04M
5300MHz	Pass	Inf	37.725M	19.09M	42.425M	19.115M
5320MHz	Pass	Inf	22M	18.941M	21.35M	18.966M
5500MHz	Pass	Inf	22.15M	18.966M	21.45M	18.941M
5580MHz	Pass	Inf	36.3M	19.065M	42.2M	19.115M
5700MHz	Pass	Inf	21.8M	18.966M	21.525M	18.941M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	23.82M	14.603M	25.515M	14.633M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	4.44M	10.055M	4.44M	10.755M
802.11ax HEW40_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5270MHz	Pass	Inf	73.75M	37.931M	72.5M	38.031M
5310MHz	Pass	Inf	39.95M	37.581M	40M	37.481M
5510MHz	Pass	Inf	40M	37.681M	39.9M	37.581M
5550MHz	Pass	Inf	65.3M	37.931M	78.7M	37.881M
5670MHz	Pass	Inf	40M	37.581M	40.05M	37.681M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	54.88M	34.073M	57.155M	34.248M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.7M	25.227M	3.82M	24.248M
802.11ax HEW80_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5290MHz	Pass	Inf	81.7M	76.862M	81.4M	77.161M
5530MHz	Pass	Inf	81.7M	77.161M	81.6M	76.962M
5610MHz	Pass	Inf	136M	77.561M	155.6M	77.461M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	118.5M	73.913M	123M	74.438M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.7M	36.722M	3.5M	36.442M
802.11ax HEW160_Nss2,(MCS0)_2TX	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	Inf	81.28M	77.081M	81.92M	77.001M
5250MHz Straddle 5.25-5.35GHz	Pass	Inf	81.44M	77.001M	80.8M	76.922M
5570MHz	Pass	Inf	167.2M	155.722M	164.8M	155.522M

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

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


802.11ax HEW20_Nss2,(MCS0)_2TX
EBW

19/04/2019

5320MHz

CF: 5.32GHz

Span: 50MHz

RBW: 300kHz

VBW: 1MHz

Sweep Time: 100ms

Detector Type: Peak

Port 1:

Port 2:

CF: 5.32GHz

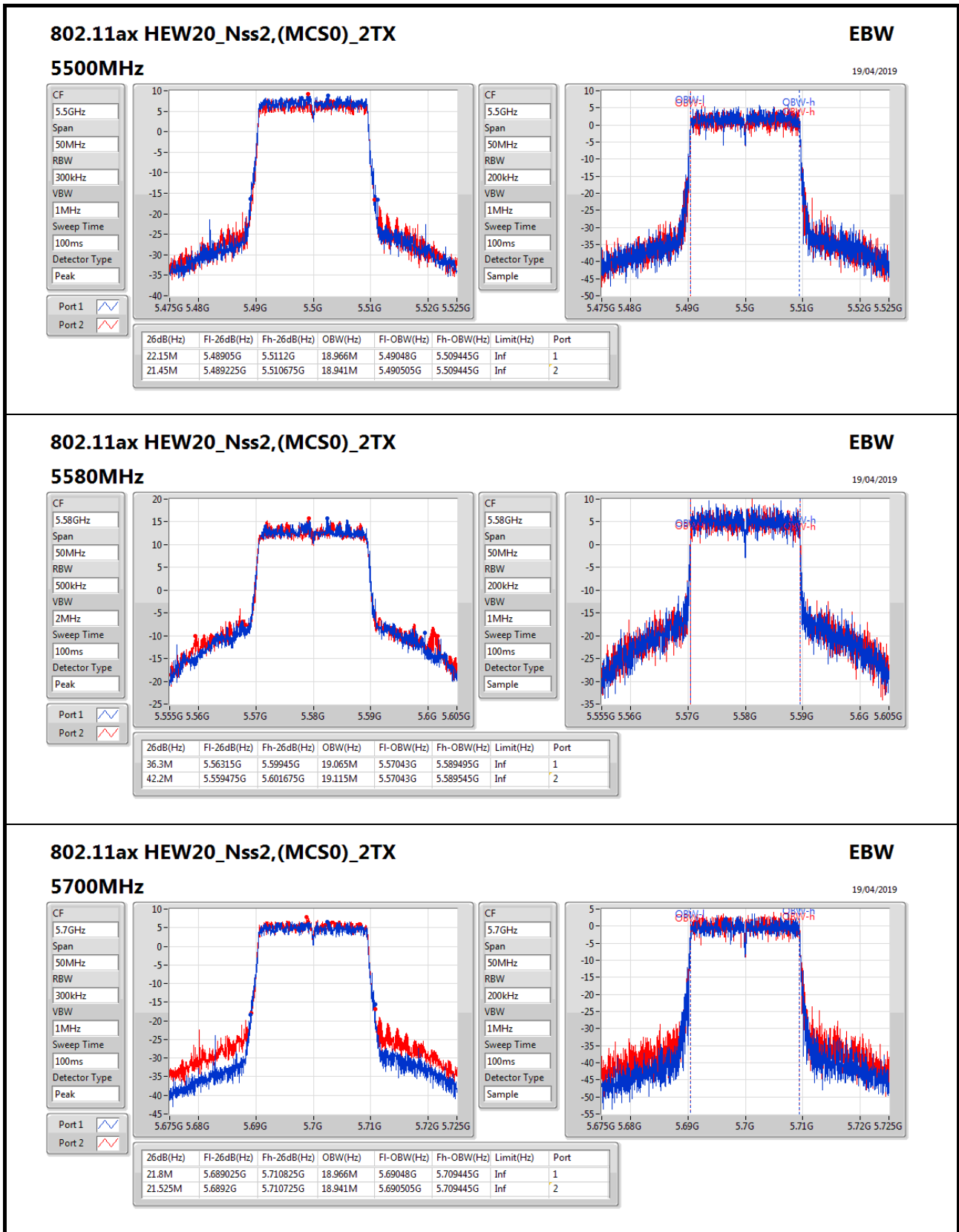
Span: 50MHz

RBW: 200kHz

VBW: 1MHz

Sweep Time: 100ms

Detector Type: Sample


802.11ax HEW20_Nss2,(MCS0)_2TX
EBW

5700MHz 19/04/2019

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

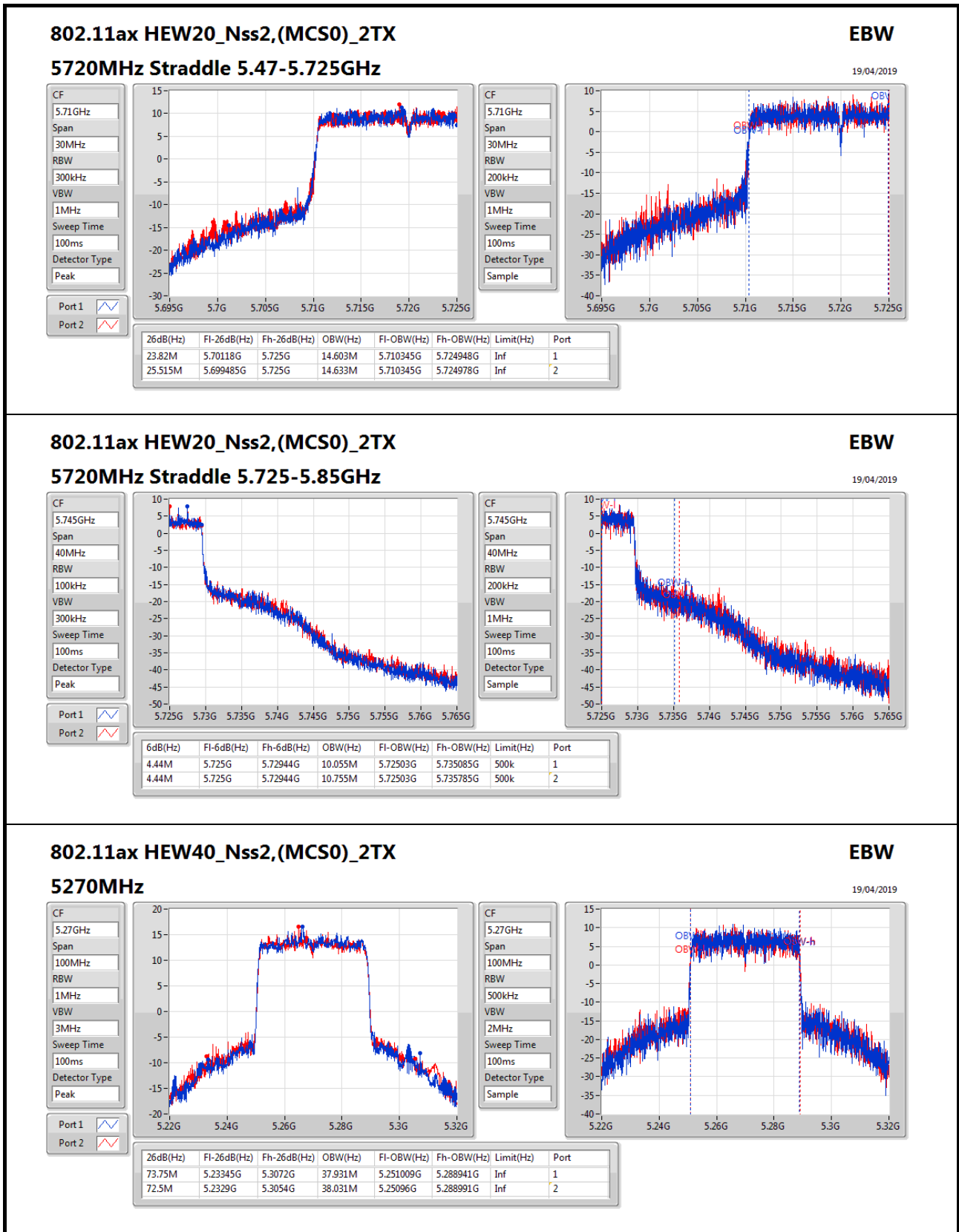
Port 1:

Port 2:

CF: 5.7GHz
Span: 50MHz
RBW: 200kHz
VBW: 1MHz
Sweep Time: 100ms
Detector Type: Sample

Port 1:

Port 2:



802.11ax HEW40_Nss2,(MCS0)_2TX

5270MHz

EBW
19/04/2019

CF: 5.27GHz
Span: 100MHz
RBW: 1MHz
VBW: 3MHz
Sweep Time: 100ms
Detector Type: Peak

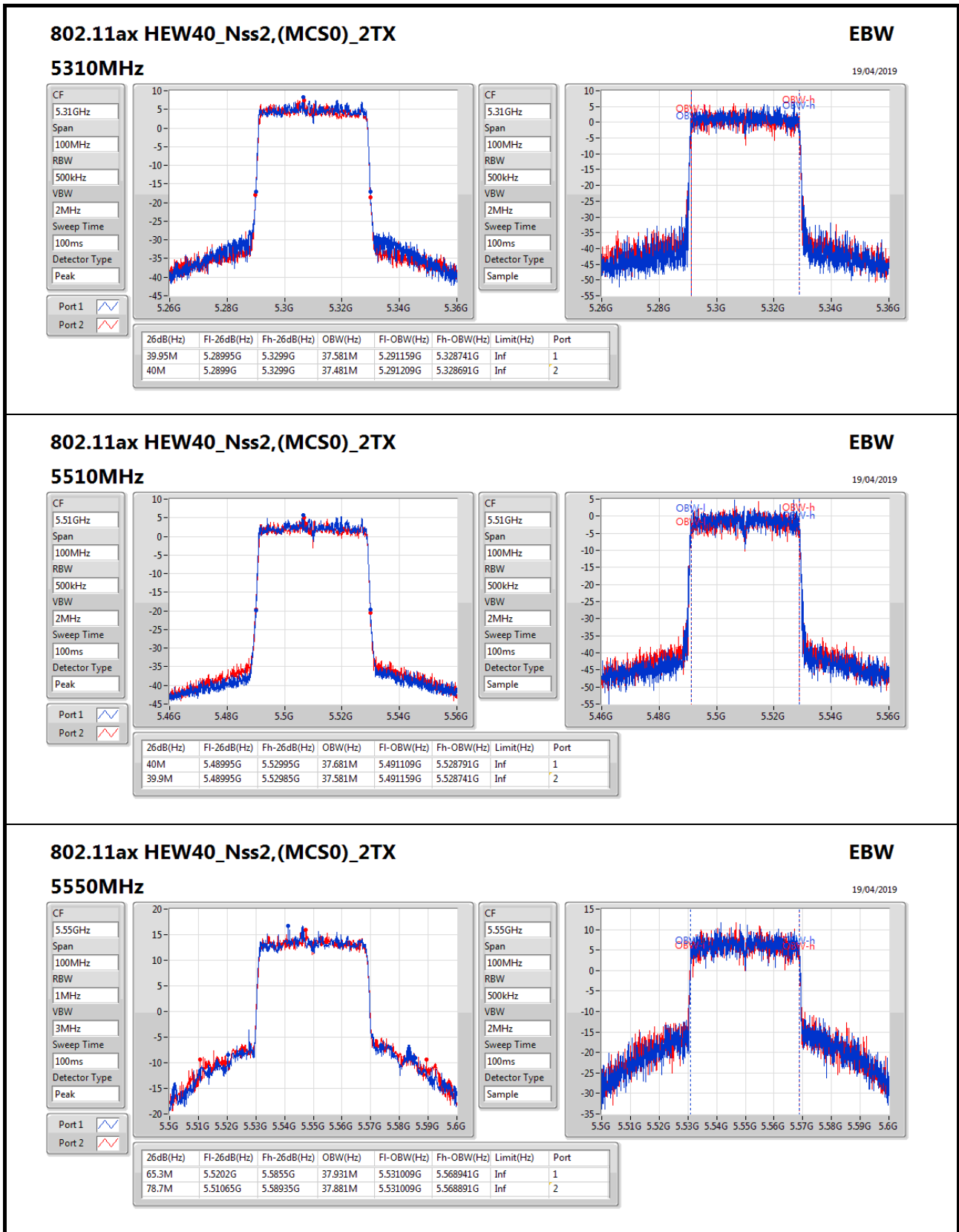
Port 1:

Port 2:

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

Port 1:

Port 2:


802.11ax HEW40_Nss2,(MCS0)_2TX
EBW

5550MHz 19/04/2019

CF: 5.55GHz

Span: 100MHz

RBW: 1MHz

VBW: 3MHz

Sweep Time: 100ms

Detector Type: Peak

Port 1:

Port 2:

CF: 5.55GHz

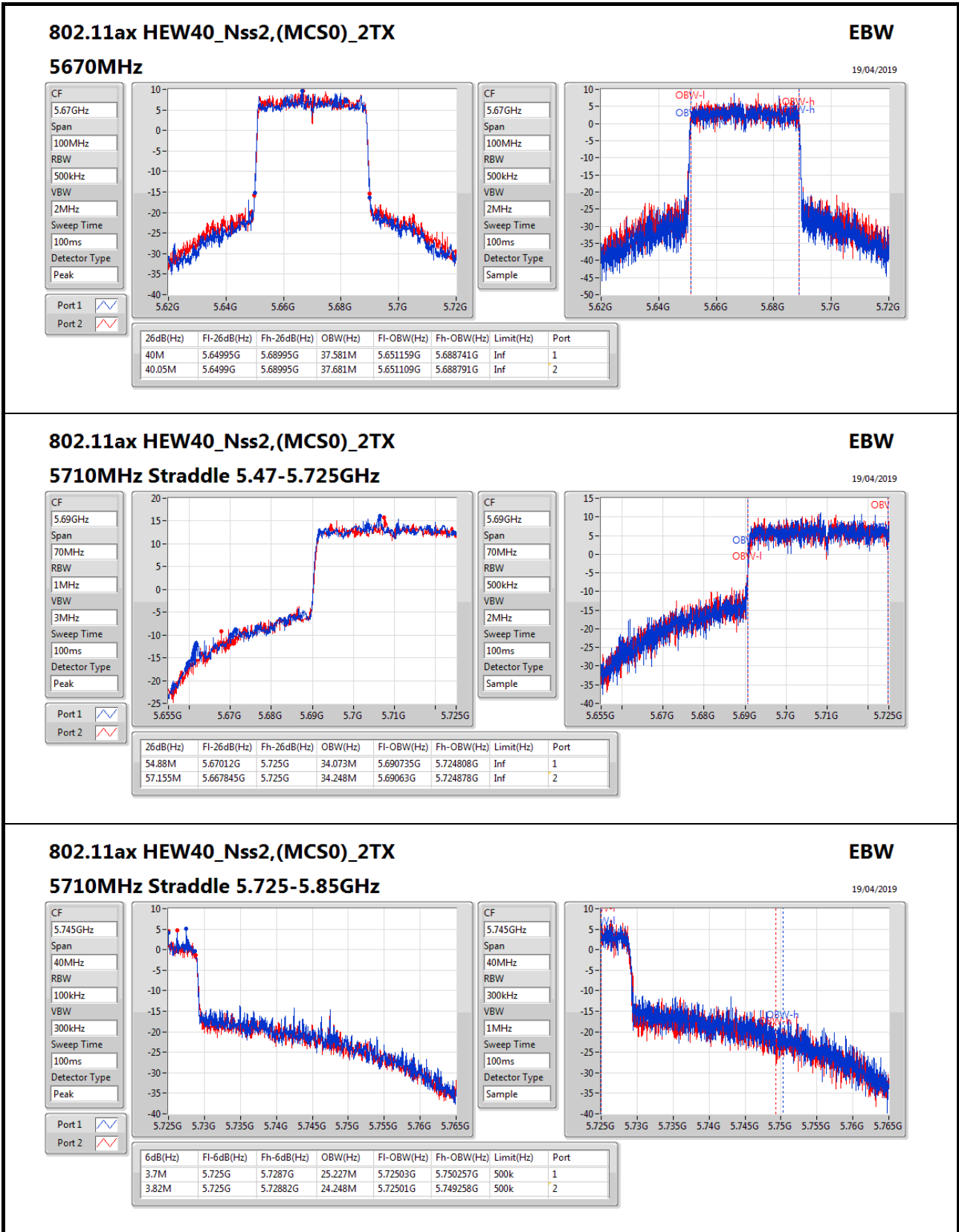
Span: 100MHz

RBW: 500kHz

VBW: 2MHz

Sweep Time: 100ms

Detector Type: Sample


802.11ax HEW40_Nss2,(MCS0)_2TX
EBW

5710MHz Straddle 5.725-5.85GHz

19/04/2019

CF: 5.745GHz

Span: 40MHz

RBW: 100kHz

VBW: 300kHz

Sweep Time: 100ms

Detector Type: Peak

Port 1:

Port 2:

CF: 5.745GHz

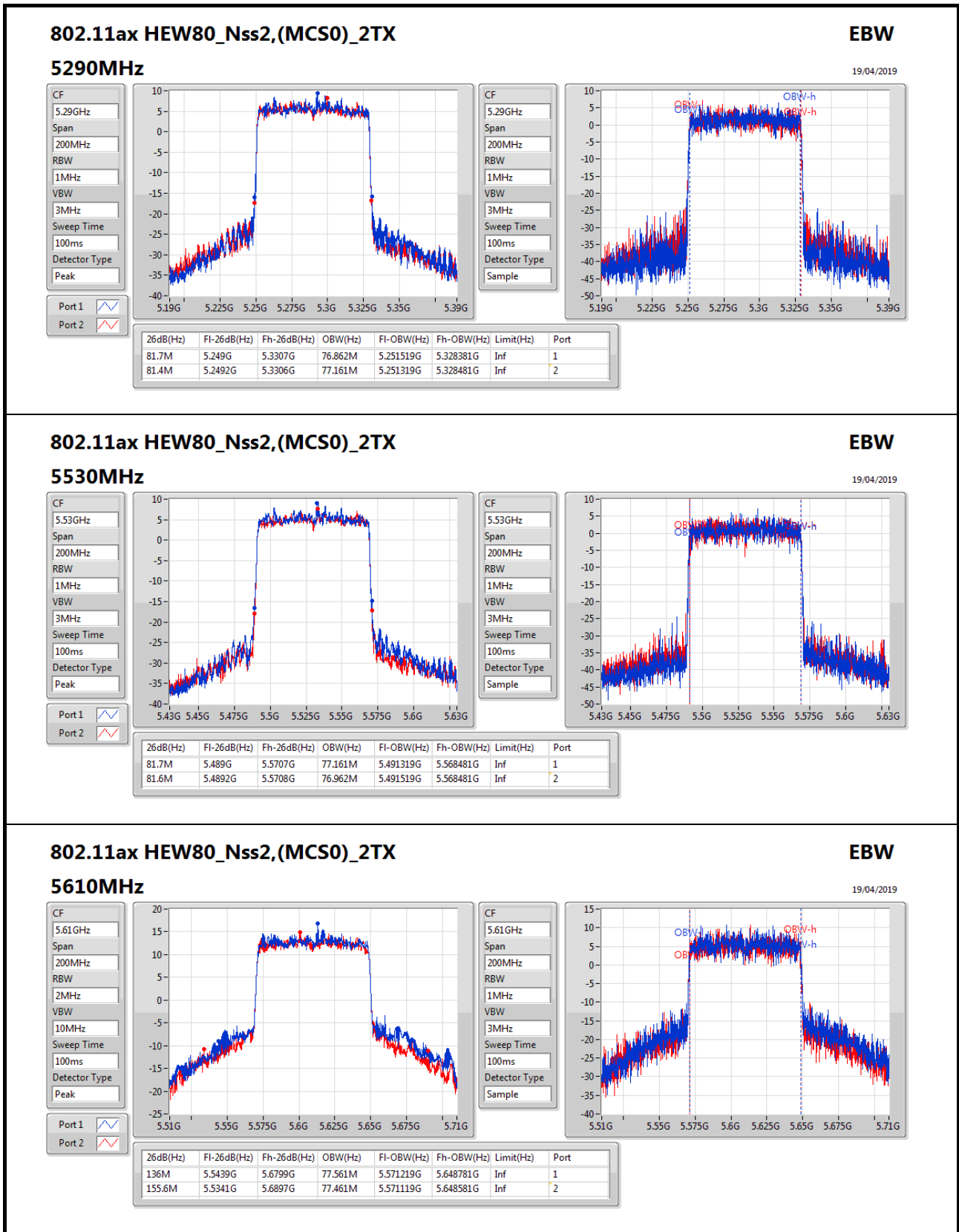
Span: 40MHz

RBW: 300kHz

VBW: 1MHz

Sweep Time: 100ms

Detector Type: Sample


802.11ax HEW80_Nss2,(MCS0)_2TX
EBW

5610MHz

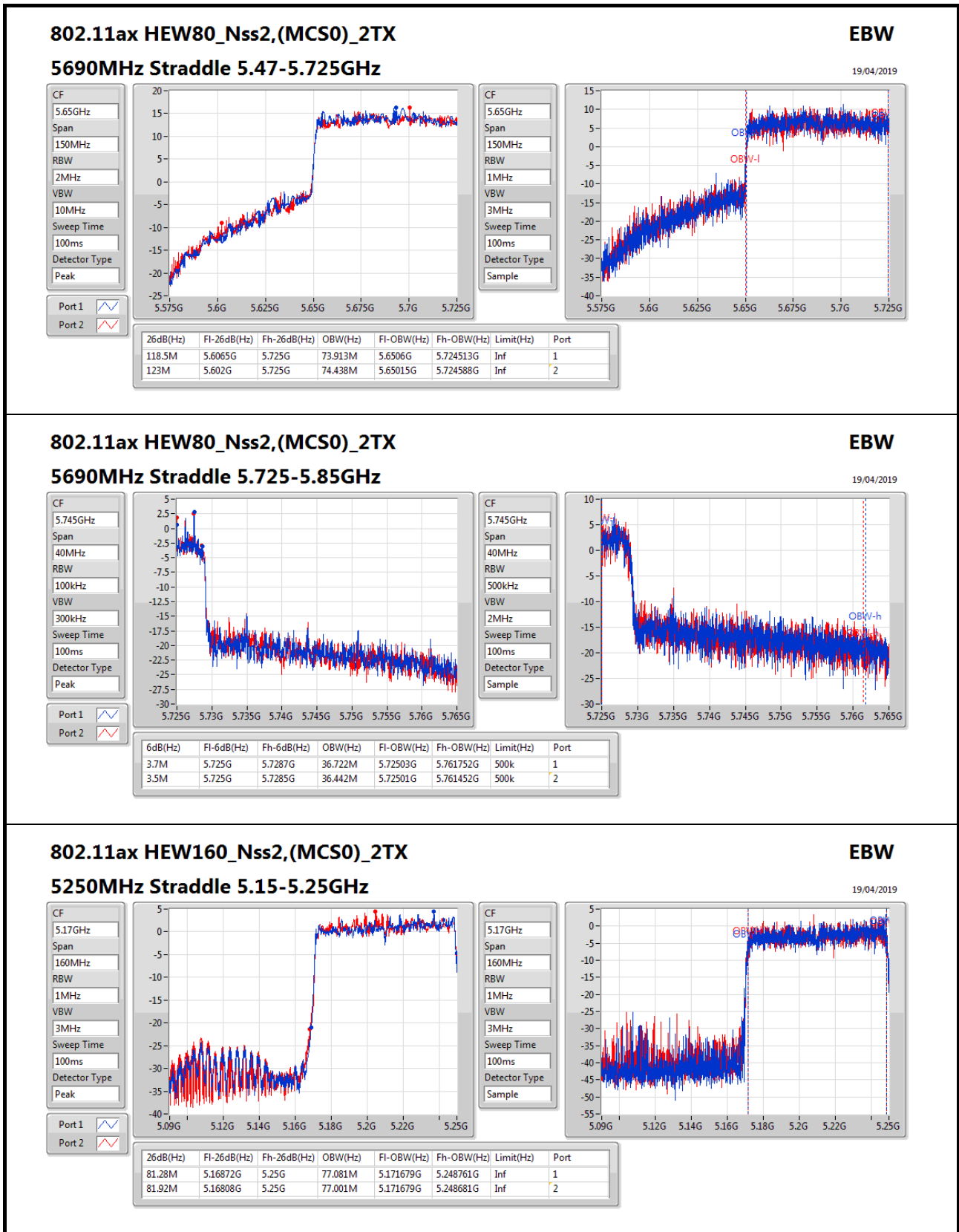
19/04/2019

CF: 5.61GHz
Span: 200MHz
RBW: 2MHz
VBW: 10MHz
Sweep Time: 100ms
Detector Type: Peak

Port 1:

Port 2:

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



802.11ax HEW160_Nss2,(MCS0)_2TX

5250MHz Straddle 5.15-5.25GHz

EBW
19/04/2019

CF: 5.17GHz

Span: 160MHz

RBW: 1MHz

VBW: 3MHz

Sweep Time: 100ms

Detector Type: Peak

Port 1:

Port 2:

CF: 5.17GHz

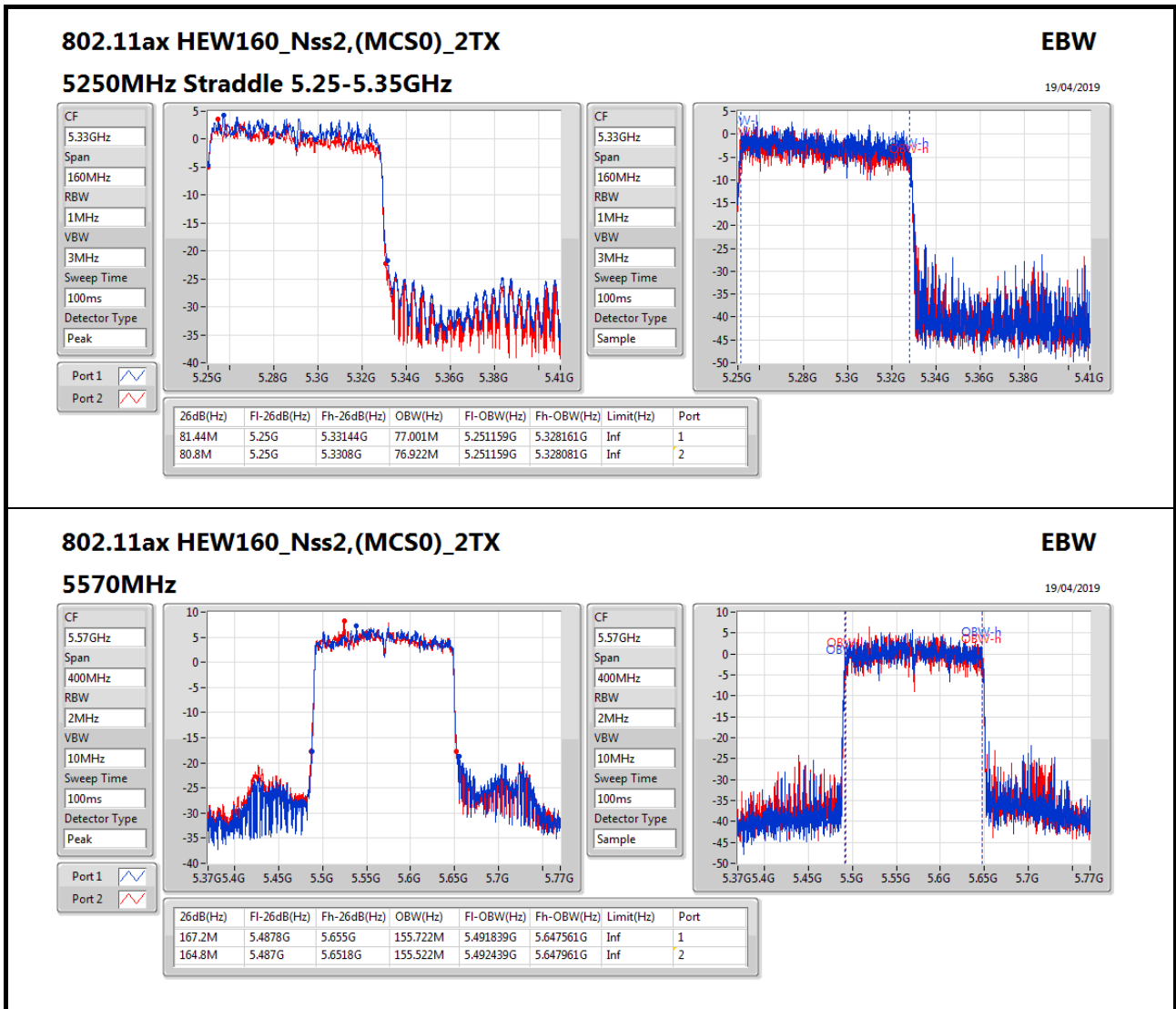
Span: 160MHz

RBW: 1MHz

VBW: 3MHz

Sweep Time: 100ms

Detector Type: Sample





**For Indoor use for 5G Band 1 and Indoor/Outdoor use for 5G Band 2 ~ Band 4:
Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ax HEW160_Nss1,(MCS0)_4TX	81.36M	77.161M	77M2D1D	80.88M	77.081M
5.25-5.35GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	21.7M	16.617M	16M6D1D	21.45M	16.542M
802.11ax HEW20_Nss1,(MCS0)_4TX	21.875M	18.991M	19M0D1D	21.45M	18.916M
802.11ax HEW40_Nss1,(MCS0)_4TX	40.25M	37.631M	37M6D1D	39.95M	37.531M
802.11ax HEW80_Nss1,(MCS0)_4TX	81.6M	77.061M	77M1D1D	81M	76.962M
802.11ax HEW160_Nss1,(MCS0)_4TX	81.6M	77.161M	77M2D1D	80.96M	76.922M
5.47-5.725GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	21.675M	16.617M	16M6D1D	15.63M	13.313M
802.11ax HEW20_Nss1,(MCS0)_4TX	21.95M	18.991M	19M0D1D	15.645M	14.468M
802.11ax HEW40_Nss1,(MCS0)_4TX	40.25M	37.631M	37M6D1D	34.965M	33.653M
802.11ax HEW80_Nss1,(MCS0)_4TX	88.875M	77.261M	77M3D1D	75.75M	73.238M
802.11ax HEW160_Nss1,(MCS0)_4TX	165.4M	155.522M	156MD1D	163.8M	154.923M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	3.22M	3.918M	3M92D1D	3.12M	3.818M
802.11ax HEW20_Nss1,(MCS0)_4TX	4.5M	4.538M	4M54D1D	4.44M	4.498M
802.11ax HEW40_Nss1,(MCS0)_4TX	3.94M	4.058M	4M06D1D	3.68M	4.038M
802.11ax HEW80_Nss1,(MCS0)_4TX	3.76M	28.506M	28M5D1D	3.36M	27.306M

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;

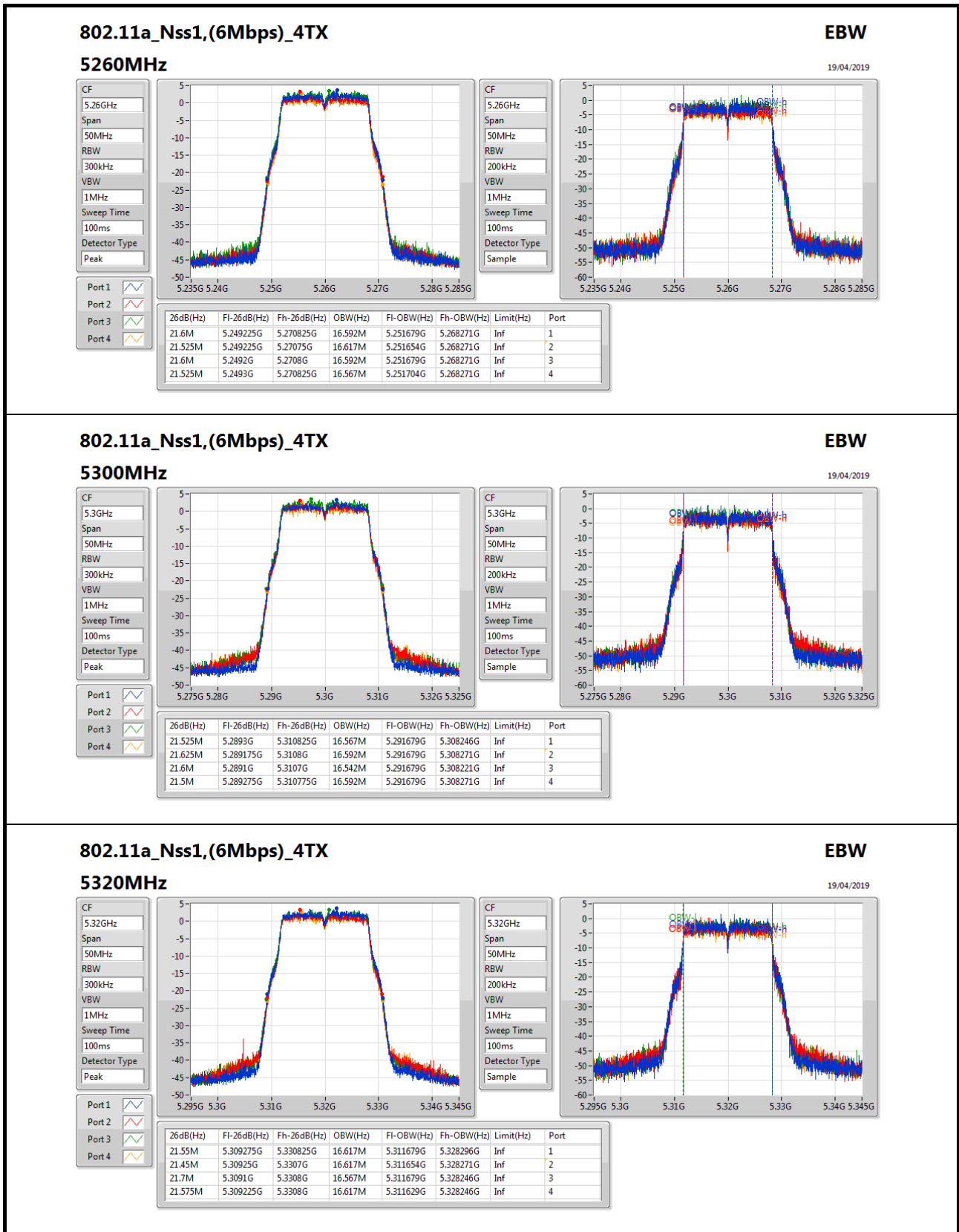


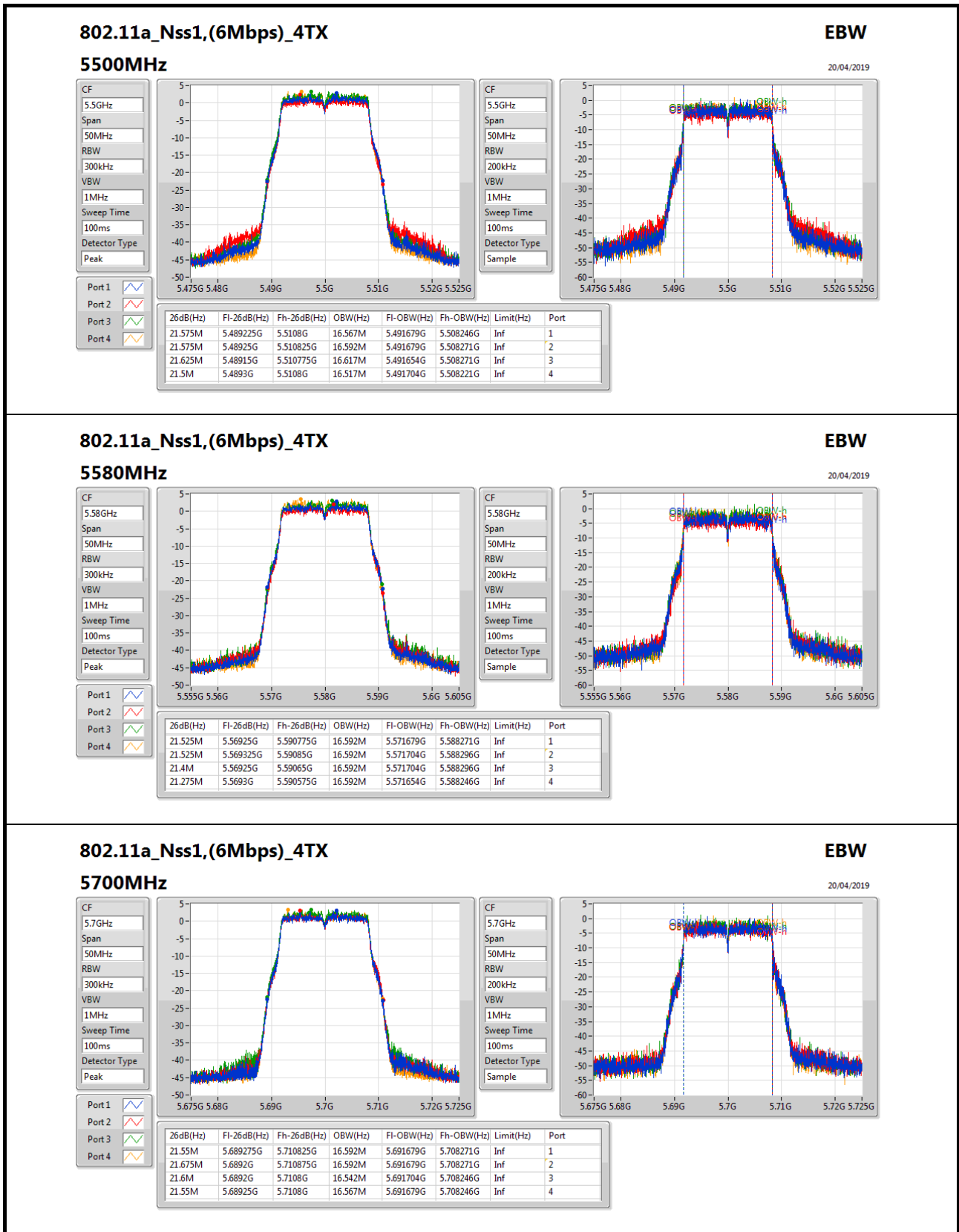
Result

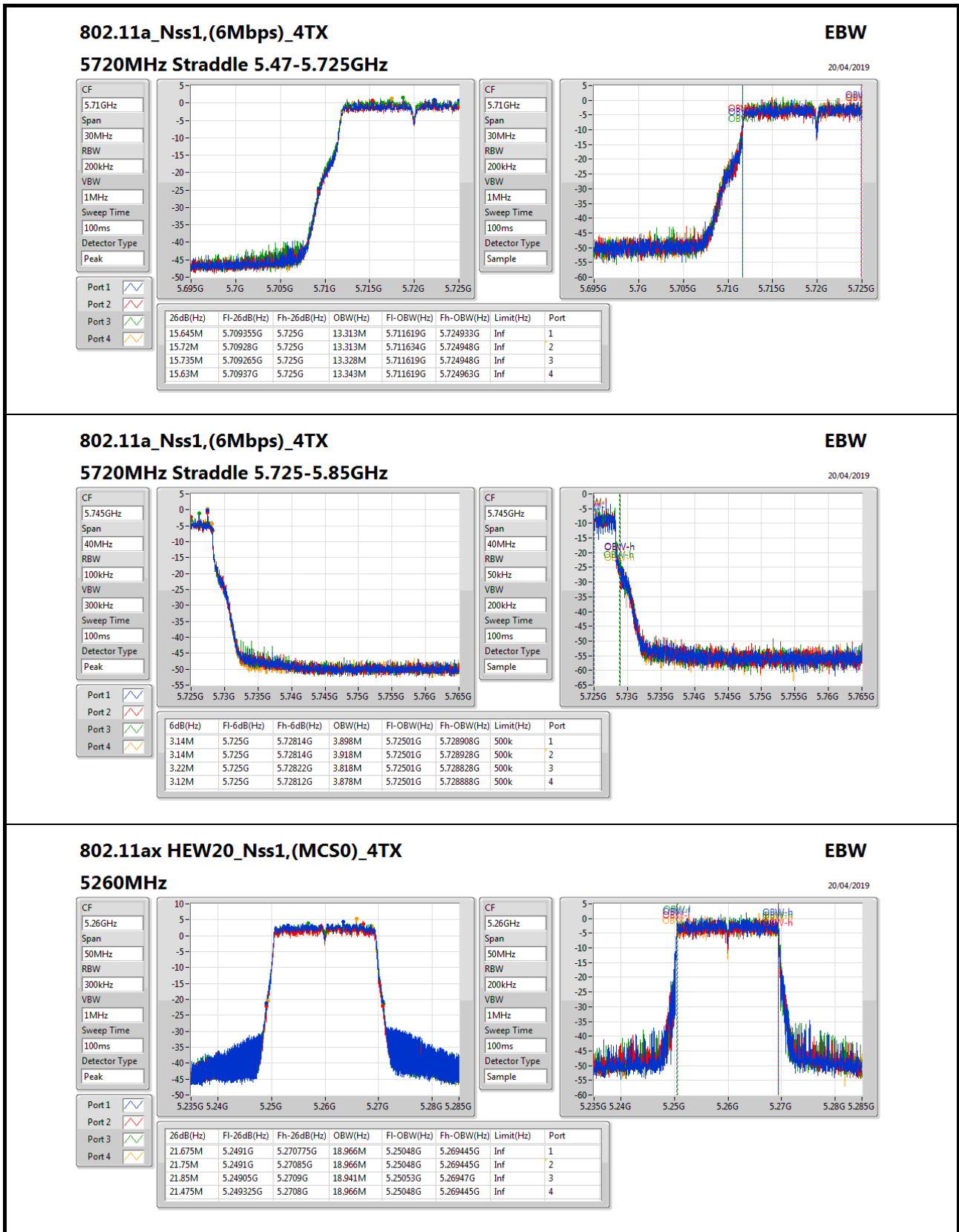
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	21.6M	16.592M	21.525M	16.617M	21.6M	16.592M	21.525M	16.567M
5300MHz	Pass	Inf	21.525M	16.567M	21.625M	16.592M	21.6M	16.542M	21.5M	16.592M
5320MHz	Pass	Inf	21.55M	16.617M	21.45M	16.617M	21.7M	16.567M	21.575M	16.617M
5500MHz	Pass	Inf	21.575M	16.567M	21.575M	16.592M	21.625M	16.617M	21.5M	16.517M
5580MHz	Pass	Inf	21.525M	16.592M	21.525M	16.592M	21.4M	16.592M	21.275M	16.592M
5700MHz	Pass	Inf	21.55M	16.592M	21.675M	16.592M	21.6M	16.542M	21.55M	16.567M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.645M	13.313M	15.72M	13.313M	15.735M	13.328M	15.63M	13.343M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.14M	3.898M	3.14M	3.918M	3.22M	3.818M	3.12M	3.878M
802.11ax HEW20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	21.675M	18.966M	21.75M	18.966M	21.85M	18.941M	21.475M	18.966M
5300MHz	Pass	Inf	21.725M	18.991M	21.65M	18.966M	21.875M	18.966M	21.45M	18.941M
5320MHz	Pass	Inf	21.7M	18.916M	21.7M	18.916M	21.825M	18.966M	21.475M	18.966M
5500MHz	Pass	Inf	21.725M	18.966M	21.65M	18.941M	21.775M	18.966M	21.375M	18.966M
5580MHz	Pass	Inf	21.725M	18.966M	21.675M	18.966M	21.85M	18.966M	21.425M	18.991M
5700MHz	Pass	Inf	21.75M	18.966M	21.625M	18.991M	21.95M	18.991M	21.425M	18.991M
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	15.81M	14.513M	15.75M	14.483M	15.87M	14.468M	15.645M	14.498M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	4.46M	4.538M	4.5M	4.538M	4.44M	4.518M	4.5M	4.498M
802.11ax HEW40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5270MHz	Pass	Inf	40M	37.531M	40.1M	37.581M	40.15M	37.531M	40.2M	37.581M
5310MHz	Pass	Inf	39.95M	37.531M	40.05M	37.531M	40.2M	37.531M	40.25M	37.631M
5510MHz	Pass	Inf	40M	37.581M	40.2M	37.581M	40.2M	37.531M	40.1M	37.581M
5550MHz	Pass	Inf	40M	37.581M	40.15M	37.531M	40M	37.531M	40.15M	37.531M
5670MHz	Pass	Inf	40.05M	37.581M	40.2M	37.531M	40.25M	37.581M	40.15M	37.631M
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	35M	33.758M	34.965M	33.688M	35.175M	33.723M	35.035M	33.653M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.94M	4.038M	3.76M	4.038M	3.68M	4.058M	3.88M	4.038M
802.11ax HEW80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5290MHz	Pass	Inf	81.6M	77.061M	81.1M	77.061M	81M	76.962M	81.2M	76.962M
5530MHz	Pass	Inf	81.5M	76.962M	81M	76.962M	81M	76.862M	81.5M	77.261M
5610MHz	Pass	Inf	81.7M	77.161M	83.7M	77.161M	81.2M	77.161M	81.4M	77.261M
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	75.75M	73.238M	88.875M	73.388M	88.425M	73.538M	86.325M	73.388M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.44M	28.086M	3.76M	28.506M	3.36M	27.306M	3.76M	27.426M
802.11ax HEW160_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5250MHz Straddle 5.15-5.25GHz	Pass	Inf	81.36M	77.081M	80.88M	77.161M	80.88M	77.081M	81.04M	77.161M
5250MHz Straddle 5.25-5.35GHz	Pass	Inf	81.12M	76.922M	80.96M	77.081M	81.6M	77.161M	81.2M	77.161M
5570MHz	Pass	Inf	164.6M	155.322M	165.4M	155.522M	164.2M	155.522M	163.8M	154.923M

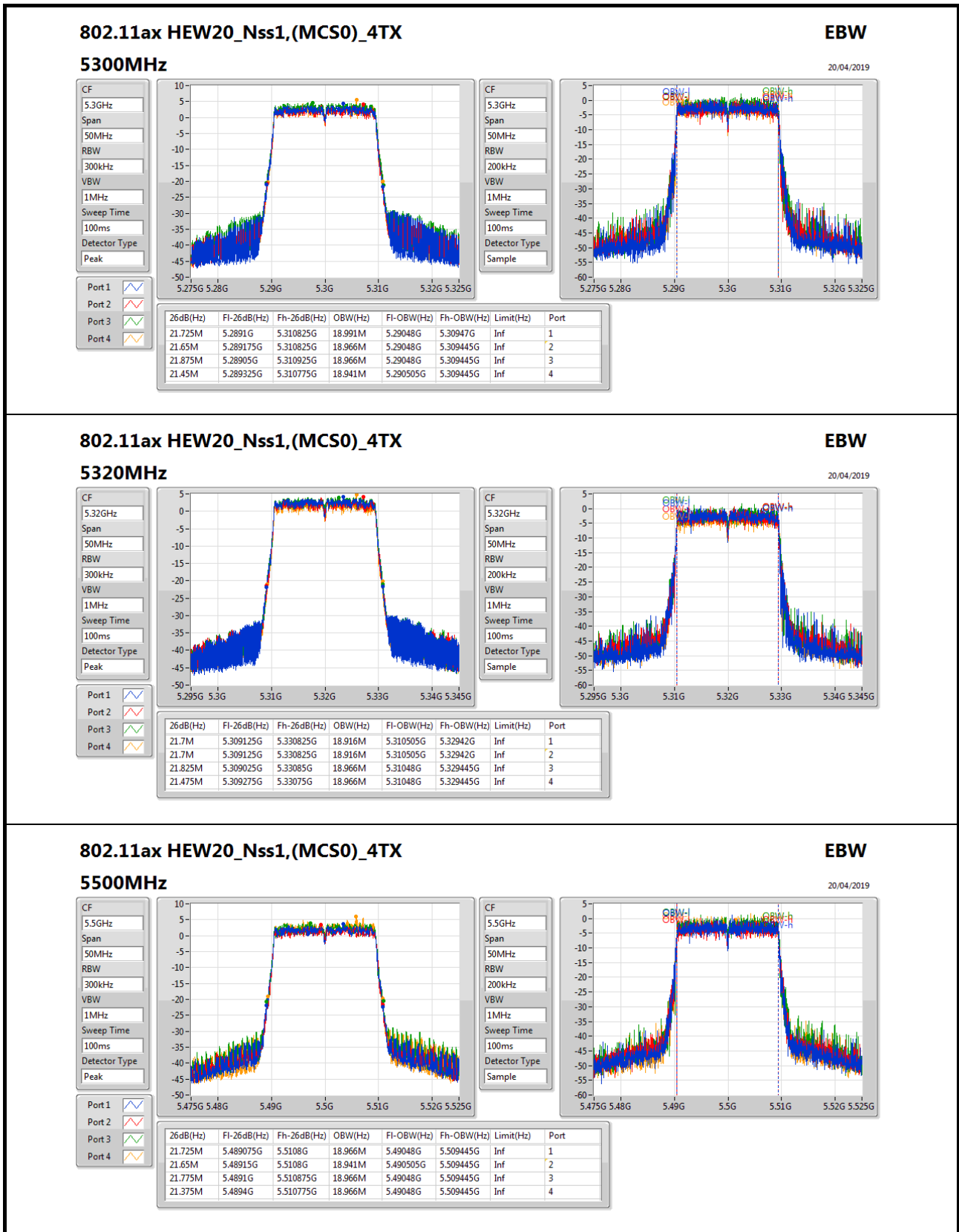
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band

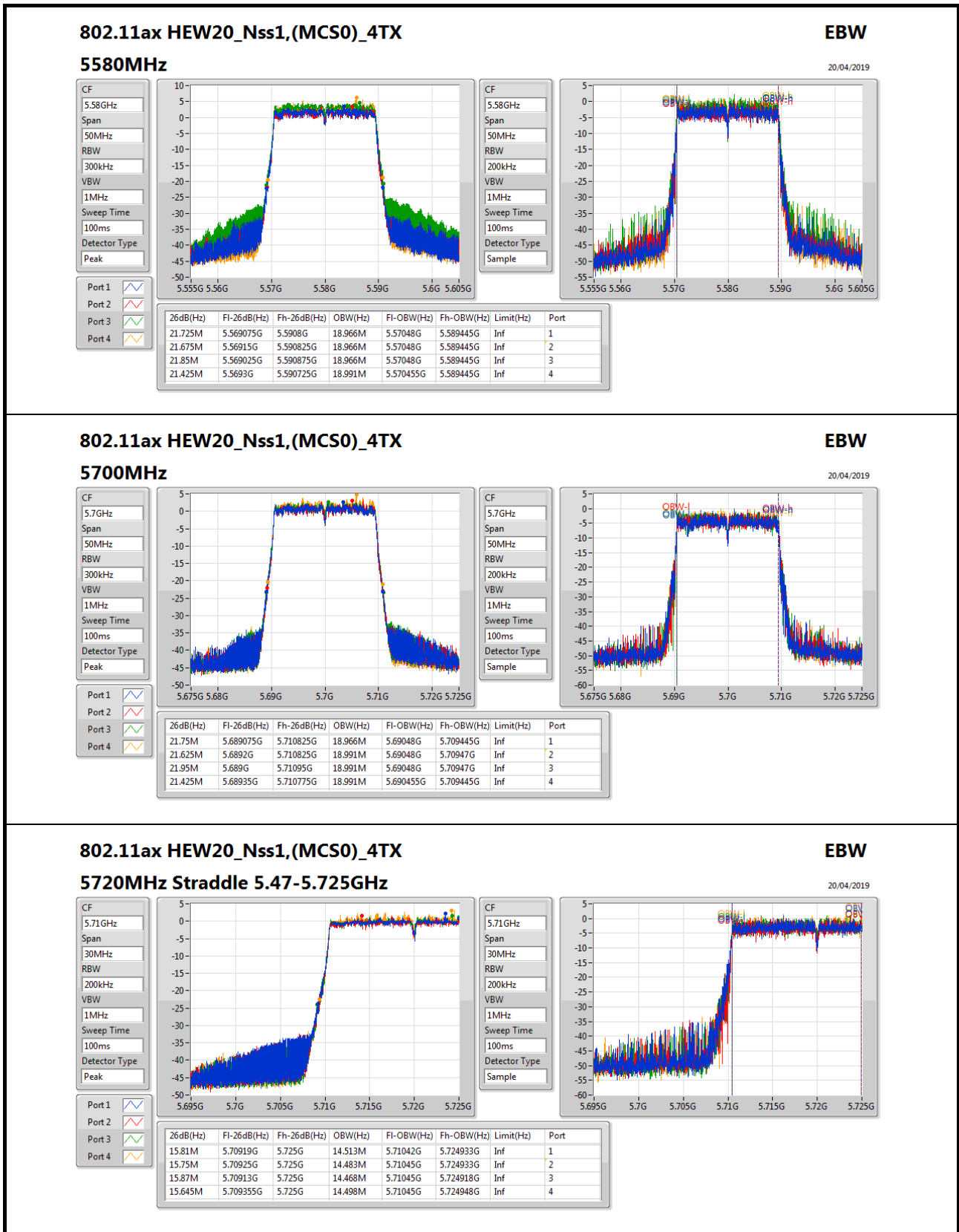
Port X-OBW = Port X 99% occupied bandwidth;











802.11ax HEW20_Nss1,(MCS0)_4TX

5720MHz Straddle 5.47-5.725GHz

20/04/2019

EBW

CF: 5.71GHz

Span: 30MHz

RBW: 200kHz

VBW: 1MHz

Sweep Time: 100ms

Detector Type: Peak

CF: 5.71GHz

Span: 30MHz

RBW: 200kHz

VBW: 1MHz

Sweep Time: 100ms

Detector Type: Sample

