



# FCC Test Report

**FCC ID** : ACQ-IPC4100  
**Equipment** : IP Client WiFi Set Top Box  
**Brand Name** : ARRIS  
**Model Name** : IPC4100  
**Applicant** : ARRIS  
101 Tournament Drive, Horsham PA 19044, USA  
**Manufacturer** : ARRIS  
101 Tournament Drive, Horsham PA 19044, USA  
**Standard** : 47 CFR FCC Part 15.407

The product was received on May 22, 2018, and testing was started from May 31, 2018 and completed on Jul. 17, 2018. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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

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

Approved by: Allen Lin

**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**



### History of this test report

Report No.	Version	Description	Issued Date
FR860525AN	01	Initial issue of report	Jul. 12, 2018
FR860525AN	02	Radiated Emission 9kHz to 30MHz data was evaluated	Jul. 18, 2018



### Summary of Test Result

Report Clause	Ref. Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	-
3.1	15.207	AC Power-line Conducted Emissions	PASS	-
3.2	15.407(a)	Emission Bandwidth	PASS	-
3.3	15.407(a)	Maximum Conducted Output Power	PASS	-
3.4	15.407(a)	Peak Power Spectral Density	PASS	-
3.5	15.407(b)	Unwanted Emissions	PASS	-

Reviewed by: Sam Chen

Report Producer: Jenny Yang



# 1 General Description

## 1.1 Information

### 1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
5150-5250	a, ac (VHT20)	5180-5240	36-48 [4]
5250-5350		5260-5320	52-64 [4]
5470-5725		5500-5700	100-140 [11]
straddle 5725		5720	144[1]
5725-5850		5745-5825	149-165 [5]
5150-5250	ac (VHT40)	5190-5230	38-46 [2]
5250-5350		5270-5310	54-62 [2]
5470-5725		5510-5670	102-134 [5]
straddle 5725		5710	142[1]
5725-5850		5755-5795	151-159 [2]
5150-5250	ac (VHT80)	5210	42 [1]
5250-5350		5290	58 [1]
5470-5725		5530-5610	106-122 [2]
straddle 5725		5690	138[1]
5725-5850		5775	155 [1]

#### < Non-Beamforming >

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



Band	Mode	BWch (MHz)	Nant
5.15-5.25GHz	802.11ac VHT80	80	4TX
5.25-5.35GHz	802.11ac VHT80	80	4TX
5.47-5.725GHz	802.11ac VHT80	80	4TX
5.725-5.85GHz	802.11ac VHT80	80	4TX

< Beamforming >

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

Note:

- ◆ 11a use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- ◆ VHT20, VHT40, VHT80 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.
- ◆ BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector
1	HONGBO	5G_ANT#1	Monopole	I-PEX
2	HONGBO	5G_ANT#2	Monopole	I-PEX
3	HONGBO	5G_ANT#3	Monopole	I-PEX
4	HONGBO	5G_ANT#4	Monopole	I-PEX
5	HONGBO	BT_ANT#5	Monopole	I-PEX

Ant.	Port	Peak Gain (dBi)	
		5G	BT
1	1	5.1	-
2	2	3.75	-
3	3	4.16	-
4	4	4.82	-
5	1	-	4.43

Ant.	Correlated Gain (dBi)			
	5G			
	4T1S			
	U-NII-1	U-NII-2A	U-NII-2C	U-NII-3
1	6.3		-	-
2	-	6.3	-	-
3	-		6.6	-
4	-		-	6.6

Note 1: The EUT has five antennas.

**For BT function:**

For IEEE 802.15.1 Bluetooth mode (1TX/1RX)

Ant. 5 was declared to be tested only by customer.

**For 5GHz function:**

For IEEE 802.11 a mode (1TX/1RX)

Support diversity function and pre-tested on each single chain, the worst case was Ant. 1 and it was record in this test report.

For IEEE 802.11 ac mode (4TX/4RX)

Ant. 1 and Ant. 2 and Ant. 3 and Ant. 4 could transmit/receive simultaneously.

Note 2:

- The Signals support CDD and correlated, and transmits simultaneously in multiple channels in single or multiple frequency bands.
- If all antennas have the same gain,  $G_{ANT}$ :  
Directional gain =  $G_{ANT} + 10 \log(N_{ANT}/N_{SS})$  dBi, where  $N_{SS}$  = the number of independent spatial streams of data and  $G_{ANT}$  is the antenna gain in dBi. (This formula can also be applied when antennas have different gains if the highest antenna gain is substituted for  $G_{ANT}$ .)
- For power measurements on IEEE 802.11 devices,  
Array Gain = 0 dB (i.e., no array gain) for  $N_{ANT} \leq 4$ ;  
Array Gain = 0 dB (i.e., no array gain) for channel widths  $\geq 40$  MHz for any  $N_{ANT}$ ;

Array Gain =  $5 \log(N_{ANT}/N_{SS})$  dB or 3 dB, whichever is less, for 20-MHz channel widths with  $N_{ANT} \geq 5$ .

1.1.3 EUT Information

Identify EUT				
RF Chip	BRCM97271 B0			
Operational Condition				
EUT Power Type	From AC Adapter			
EUT Function	<input type="checkbox"/>	Outdoor	<input type="checkbox"/>	Indoor
	<input type="checkbox"/>	Fixed P2P	<input checked="" type="checkbox"/>	Client
Beamforming Function	<input checked="" type="checkbox"/>	With beamforming	<input type="checkbox"/>	Without beamforming
Weather Band	<input checked="" type="checkbox"/>	With 5600~5650MHz	<input type="checkbox"/>	Without 5600~5650MHz
Type of EUT				
<input checked="" type="checkbox"/>	Stand-alone			
<input type="checkbox"/>	Combined (EUT where the radio part is fully integrated within another device)			
	Combined Equipment - Brand Name / Model No.:		...	
<input type="checkbox"/>	Plug-in radio (EUT intended for a variety of host systems)			
	Host System - Brand Name / Model No.:		...	
<input type="checkbox"/>	Other:			

1.1.4 Mode Test Duty Cycle

< Non-Beamforming >

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11a	0.981	0.083	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11ac VHT20	0.979	0.092	1.923m	1k
802.11ac VHT40	0.954	0.205	947.5u	3k
802.11ac VHT80	0.903	0.443	447.5u	3k

< Beamforming >

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11ac VHT20-BF	0.906	0.429	3.841m	300
802.11ac VHT40-BF	0.872	0.595	3.697m	300
802.11ac VHT80-BF	0.867	0.62	5.097m	300



## 1.2 Testing Applied Standards

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

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

## 1.3 Testing Location Information

Testing Location		
<input checked="" type="checkbox"/>	HWA YA	ADD : No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL : 886-3-327-3456      FAX : 886-3-327-0973
Test site Designation No. TW1190 with FCC.		
<input type="checkbox"/>	JHUBEI	ADD : No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County, Taiwan (R.O.C.) TEL : 886-3-656-9065      FAX : 886-3-656-9085
Test site Designation No. TW0006 with FCC.		

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
AC Conduction	CO04-HY	Daniel	23.5°C / 54%	26/Jun/2018
RF Conducted <Non-Beamforming>	TH06-HY	Tim	23.1°C / 63%	04/Jun/2018
RF Conducted < Beamforming>	TH06-HY	Tim	24.5°C / 65%	31/May/2018
Radiated <Non-Beamforming>	03CH02-HY	Jerry	25.5°C / 57%	02/Jun/2018
Radiated < Beamforming>	03CH02-HY	Jerry	24.5°C / 55%	02/Jun/2018
Radiated <9kHz to 30MHz>	03CH02-HY	Jerry	25.6°C / 58%	17/Jul/2018



### 1.4 Measurement Uncertainty

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

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	3.0 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	4.3 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.9 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.3 dB	Confidence levels of 95%
Temperature	0.7 °C	Confidence levels of 95%
Humidity	4 %	Confidence levels of 95%



## 2 Test Configuration of EUT

### 2.1 Test Condition

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

### 2.2 Test Channel Mode

<Non-Beamforming>

Test Software Version	MTool 2.1.3.0
-----------------------	---------------

Mode	Power Setting
802.11a_Nss1,(6Mbps)_1TX	-
5180MHz	85
5200MHz	89
5240MHz	88
5260MHz	88
5300MHz	88
5320MHz	82
5500MHz	86
5580MHz	90
5700MHz	75
5720MHz Straddle 5.47-5.725GHz	87
5720MHz Straddle 5.725-5.85GHz	87
5745MHz	109
5785MHz	110
5825MHz	110
802.11ac VHT20_Nss1,(MCS0)_4TX	-
5180MHz	70
5200MHz	70
5240MHz	70
5260MHz	71
5300MHz	71
5320MHz	71
5500MHz	69



Mode	Power Setting
5580MHz	70
5700MHz	68
5720MHz Straddle 5.47-5.725GHz	68
5720MHz Straddle 5.725-5.85GHz	68
5745MHz	94
5785MHz	95
5825MHz	95
802.11ac VHT40_Nss1,(MCS0)_4TX	-
5190MHz	66
5230MHz	72
5270MHz	72
5310MHz	68
5510MHz	62
5550MHz	71
5670MHz	70
5710MHz Straddle 5.47-5.725GHz	72
5710MHz Straddle 5.725-5.85GHz	72
5755MHz	94
5795MHz	95
802.11ac VHT80_Nss1,(MCS0)_4TX	-
5210MHz	64
5290MHz	66
5530MHz	64
5610MHz	70
5690MHz Straddle 5.47-5.725GHz	73
5690MHz Straddle 5.725-5.85GHz	73
5775MHz	88



< Beamforming >

Test Software Version	Dos
<b>Mode</b>	<b>Power Setting</b>
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-
5180MHz	66
5200MHz	66
5240MHz	67
5260MHz	66
5300MHz	66
5320MHz	67
5500MHz	65
5580MHz	65
5700MHz	64
5720MHz Straddle 5.47-5.725GHz	63
5720MHz Straddle 5.725-5.85GHz	63
5745MHz	92
5785MHz	92
5825MHz	92
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-
5190MHz	69
5230MHz	69
5270MHz	71
5310MHz	69
5510MHz	68
5550MHz	68
5670MHz	66
5710MHz Straddle 5.47-5.725GHz	69
5710MHz Straddle 5.725-5.85GHz	69
5755MHz	92
5795MHz	92
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-
5210MHz	70
5290MHz	70
5530MHz	61
5610MHz	68






<b>Mode</b>	<b>Power Setting</b>
5690MHz Straddle 5.47-5.725GHz	69
5690MHz Straddle 5.725-5.85GHz	69
5775MHz	86

### 2.3 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
<b>Tests Item</b>	AC power-line conducted emissions
<b>Condition</b>	AC power-line conducted measurement for line and neutral
<b>Operating Mode</b>	CTX
1	Adapter mode; Non-Beamforming
2	Adapter mode; Beamforming

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

The Worst Case Mode for Following Conformance Tests			
<b>Tests Item</b>	Unwanted Emissions		
<b>Test Condition</b>	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.		
<b>Operating Mode &lt; 1GHz</b>	CTX		
1	Adapter mode		
<b>Operating Mode &gt; 1GHz</b>	CTX		
<b>Orthogonal Planes of EUT</b>	<b>X Plane</b>	<b>Y Plane</b>	<b>Z Plane</b>
			
<b>Worst Planes of EUT</b>			V

The Worst Case Mode for Following Conformance Tests	
<b>Tests Item</b>	Simultaneous Transmission Analysis
<b>Operating Mode</b>	CTX
1	Bluetooth +WLAN 5GHz
Refer to Sporton Test Report No.: FA860525 for Co-location RF Exposure Evaluation.	

## 2.4 Accessories and Support Equipment

Accessories				
AC Adapter 1	Brand Name	Liteon	Model Name	PB-1180-12R1-ROHS
	Power Rating	I/P: 100 - 120Vac, 0.6A, O/P: 12Vdc, 1.5A		
	Power Cord	1.7 meter, Non-Shielded cable, w/o ferrite core		
AC Adapter 2	Brand Name	APD	Model Name	DA-18F12
	Power Rating	I/P: 100 - 120Vac, 0.6A, O/P: 12Vdc, 1.5A		
	Power Cord	1.74 meter, Non-Shielded cable, w/o ferrite core		
AC Adapter 3	Brand Name	ARRIS	Model Name	NBS18D120150M2
	Power Rating	I/P: 100 - 120Vac, 0.6A, O/P: 12Vdc, 1.5A		
	Power Cord	1.7 meter, Non-Shielded cable, w/o ferrite core		

Reminder: Regarding to more detail and other information, please refer to user manual.





Support Equipment – AC Conduction				
No.	Equipment	Brand Name	Model Name	FCC ID
1	Client(Remote)	PEGA	IPC4100	-
2	Notebook(Remote)	DELL	E5530	DoC
3	Notebook(Remote) <for Beamforming>	DELL	E5530	DoC

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

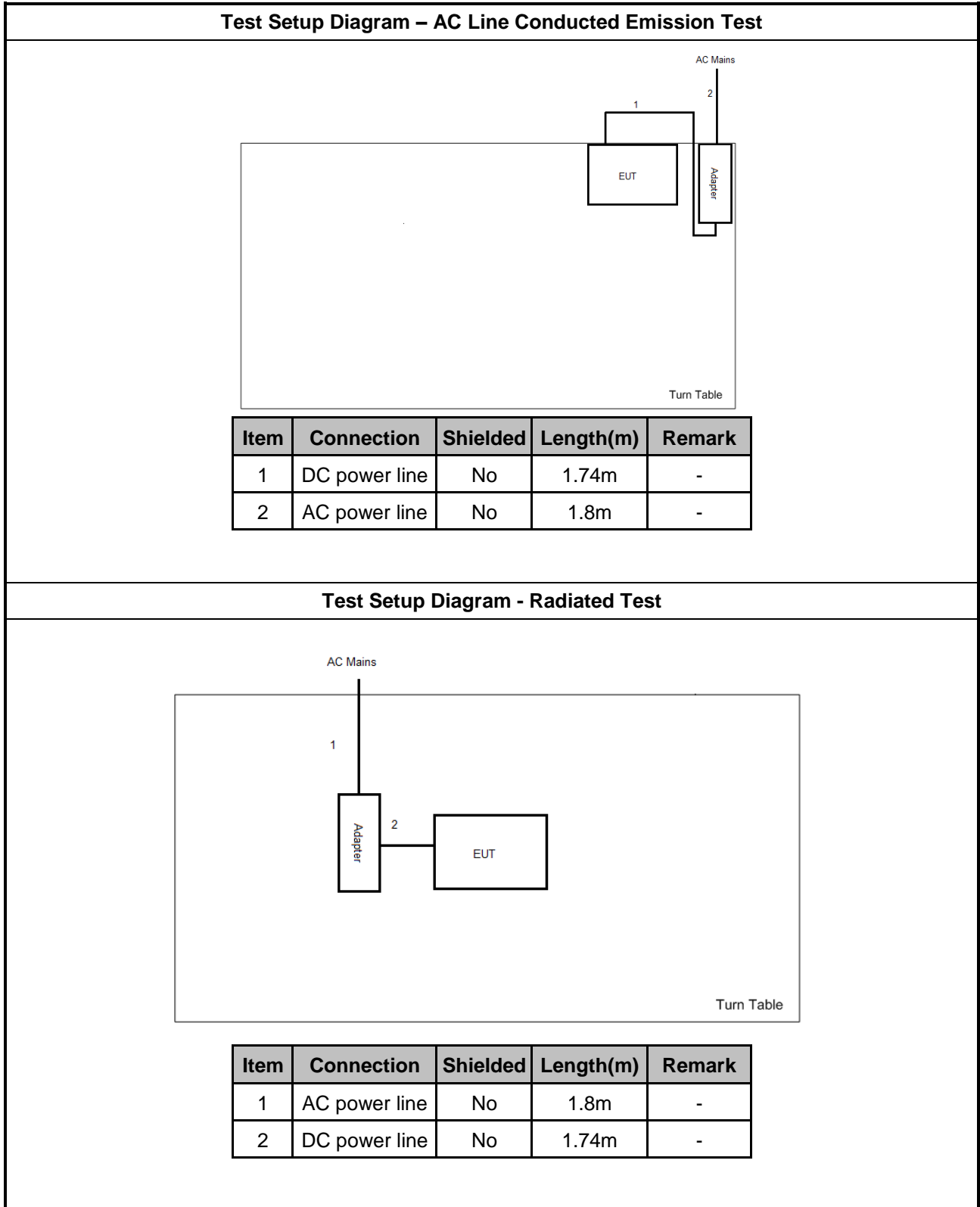
Support Equipment – RF Conducted				
No.	Equipment	Brand Name	Model Name	FCC ID
1	Notebook	DELL	E5410	DoC
2	Adapter for NB	DELL	HA65NM130	DoC
3	Notebook <for Beamforming>	DELL	E5410	DoC
4	Adapter for NB <for Beamforming>	DELL	HA65NM130	DoC
5	Client	PEGA	IPC4100	-

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

Support Equipment – Radiated Emission				
No.	Equipment	Brand Name	Model Name	FCC ID
1	Client(Remote)	PEGA	IPC4100	-
2	Notebook(Remote)	DELL	E5530	DoC
3	Notebook(Remote) <for Beamforming>	DELL	E5533	DoC

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

## 2.5 Test Setup Diagram



### 3 Transmitter Test Result

#### 3.1 AC Power-line Conducted Emissions

##### 3.1.1 AC Power-line Conducted Emissions Limit

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

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

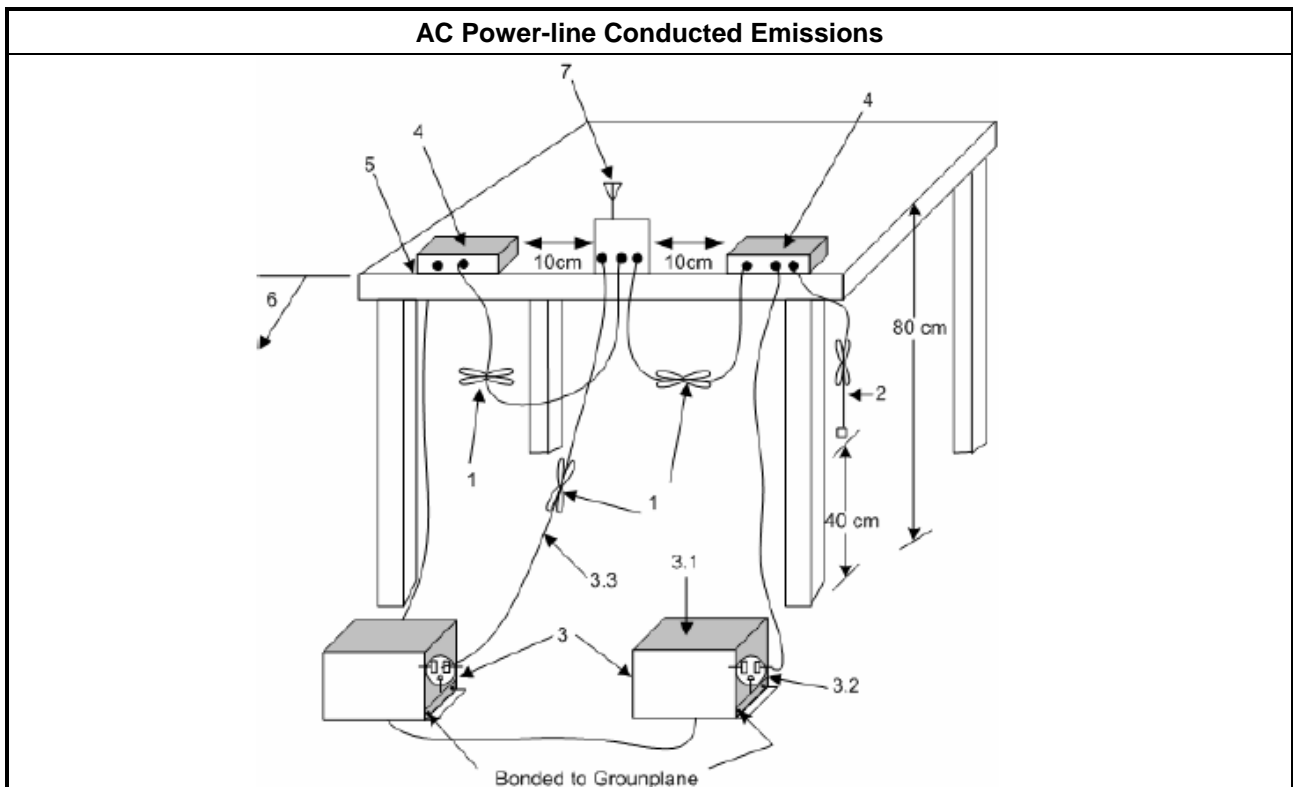
##### 3.1.2 Measuring Instruments

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

##### 3.1.3 Test Procedures

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

##### 3.1.4 Test Setup





### **3.1.5 Test Result of AC Power-line Conducted Emissions**

Refer as Appendix A

### 3.2 Emission Bandwidth

#### 3.2.1 Emission Bandwidth Limit

Emission Bandwidth Limit	
<b>UNII Devices</b>	
<input checked="" type="checkbox"/>	For the 5.15-5.25 GHz band, N/A
<input checked="" type="checkbox"/>	For the 5.25-5.35 GHz band, the maximum conducted output power shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz.
<input checked="" type="checkbox"/>	For the 5.47-5.725 GHz band, the maximum conducted output power shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz.
<input checked="" type="checkbox"/>	For the 5.725-5.85 GHz band, 6 dB emission bandwidth $\geq$ 500kHz.

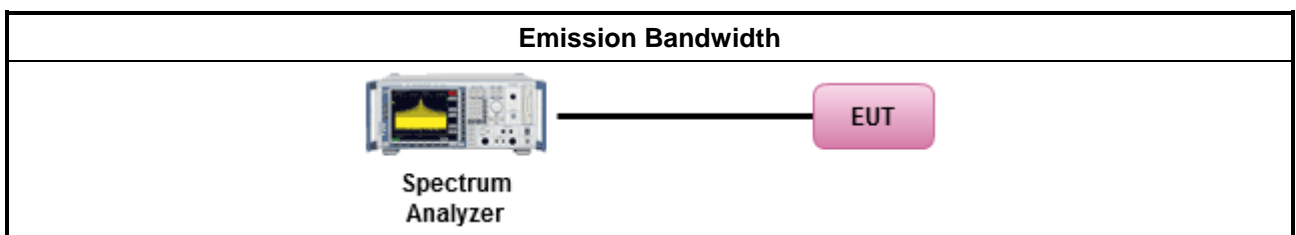
#### 3.2.2 Measuring Instruments

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

#### 3.2.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> <li>▪ For the emission bandwidth shall be measured using one of the options below:</li> </ul>	
<input checked="" type="checkbox"/>	Refer as KDB 789033, clause C for EBW and clause D for OBW measurement.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 6.9.3 for occupied bandwidth testing.
<input type="checkbox"/>	Refer as IC RSS-Gen, clause 6.7 for bandwidth testing.

#### 3.2.4 Test Setup



#### 3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

### 3.3 Maximum Conducted Output Power

#### 3.3.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit	
<b>UNII Devices</b>	
<input checked="" type="checkbox"/> For the 5.15-5.25 GHz band:	
	<ul style="list-style-type: none"> <li>▪ Outdoor AP: the maximum conducted output power (<math>P_{Out}</math>) shall not exceed the lesser of 1 W. If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{Out} = 30 - (G_{TX} - 6)</math>. e.i.r.p. at any elevation angle above 30 degrees <math>\leq 125mW</math> [21dBm]</li> <li>▪ Indoor AP: the maximum conducted output power (<math>P_{Out}</math>) shall not exceed the lesser of 1 W. If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{Out} = 30 - (G_{TX} - 6)</math></li> <li>▪ Point-to-point AP: the maximum conducted output power (<math>P_{Out}</math>) shall not exceed the lesser of 1 W. If <math>G_{TX} &gt; 23</math> dBi, then <math>P_{Out} = 30 - (G_{TX} - 23)</math>.</li> <li>▪ Mobile or Portable Client: the maximum conducted output power (<math>P_{Out}</math>) shall not exceed the lesser of 250 mW. If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{Out} = 24 - (G_{TX} - 6)</math>.</li> </ul>
<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"> <li>▪ Point-to-multipoint systems (P2M): the maximum conducted output power (<math>P_{Out}</math>) shall not exceed the lesser of 1 W. If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{Out} = 30 - (G_{TX} - 6)</math>.</li> <li>▪ Point-to-point systems (P2P): the maximum conducted output power (<math>P_{Out}</math>) shall not exceed the lesser of 1 W.</li> </ul>
$P_{Out}$ = maximum conducted output power in dBm, $G_{TX}$ = the maximum transmitting antenna directional gain in dBi.	

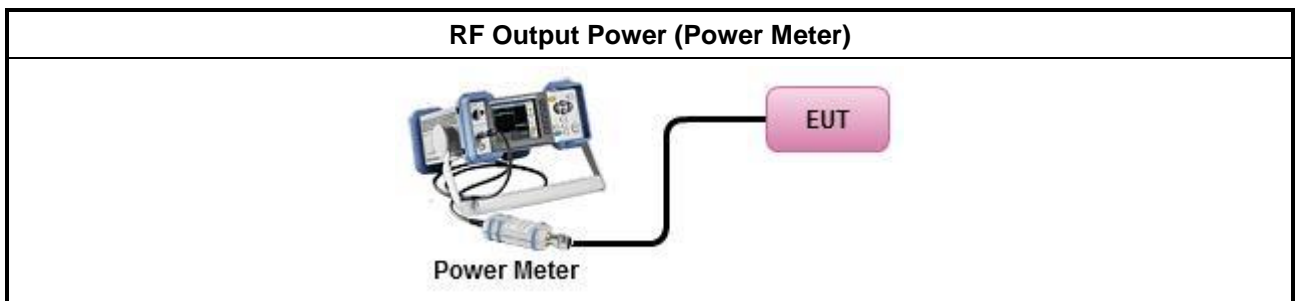
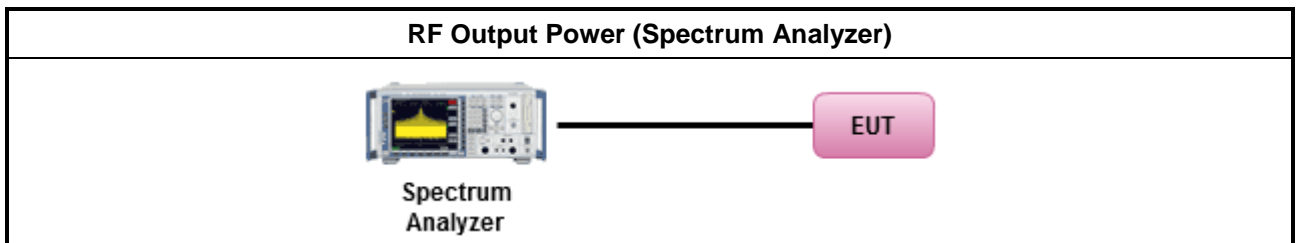
### 3.3.2 Measuring Instruments

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

### 3.3.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> <li>Maximum Conducted Output Power</li> </ul>	
	Duty cycle ≥ 98%
<input type="checkbox"/>	Refer as KDB 789033, clause E Method SA-2 (spectral trace averaging).
	Duty cycle < 98%
<input checked="" type="checkbox"/>	Refer as KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
	Wideband RF power meter and average over on/off periods with duty factor
<input checked="" type="checkbox"/>	Refer as KDB 789033, clause E Method PM (using an RF average power meter).
<ul style="list-style-type: none"> <li>For conducted measurement.</li> </ul>	
	<ul style="list-style-type: none"> <li>If the EUT supports multiple transmit chains using options given below: Refer as KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.</li> </ul>
	<ul style="list-style-type: none"> <li>If multiple transmit chains, EIRP calculation could be following as methods:  <math>P_{total} = P_1 + P_2 + \dots + P_n</math>                      (calculated in linear unit [mW] and transfer to log unit [dBm])  <math>EIRP_{total} = P_{total} + DG</math> </li> </ul>

### 3.3.4 Test Setup



### 3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

### 3.4 Peak Power Spectral Density

#### 3.4.1 Peak Power Spectral Density Limit

Peak Power Spectral Density Limit	
<b>UNII Devices</b>	
<input checked="" type="checkbox"/> For the 5.15-5.25 GHz band:	
	<ul style="list-style-type: none"> <li>▪ Outdoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{Out} = 17 - (G_{TX} - 6)</math>.</li> <li>▪ Indoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{Out} = 17 - (G_{TX} - 6)</math>.</li> <li>▪ Point-to-point AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If <math>G_{TX} &gt; 23</math> dBi, then <math>P_{Out} = 17 - (G_{TX} - 23)</math>.</li> <li>▪ Mobile or Portable Client: the peak power spectral density (PPSD) <math>\leq 11</math> dBm/MHz. If <math>G_{TX} &gt; 6</math> dBi, then <math>PPSD = 11 - (G_{TX} - 6)</math>.</li> </ul>
<input checked="" type="checkbox"/> For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) $\leq 11$ 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) $\leq 11$ 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"> <li>▪ Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) <math>\leq 30</math> dBm/500kHz. If <math>G_{TX} &gt; 6</math> dBi, then <math>PPSD = 30 - (G_{TX} - 6)</math>.</li> <li>▪ Point-to-point systems (P2P): the peak power spectral density (PPSD) <math>\leq 30</math> dBm/500kHz.</li> </ul>
<p><b>PPSD</b> = 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</p> <p><b>G<sub>TX</sub></b> = the maximum transmitting antenna directional gain in dBi.</p>	

#### 3.4.2 Measuring Instruments

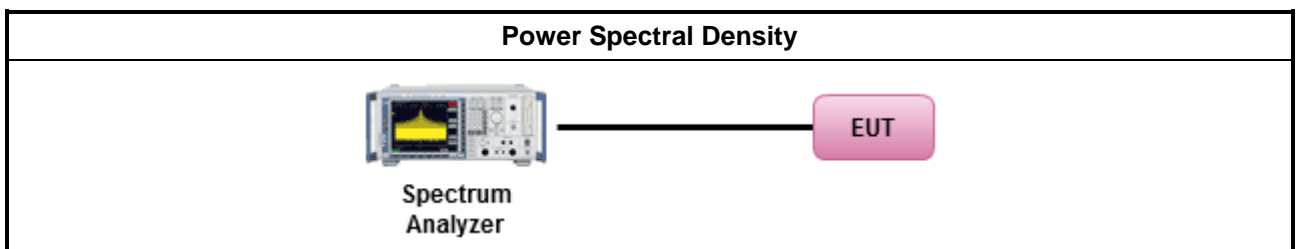
Refer a test equipment and calibration data table in this test report.



### 3.4.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> <li>▪ 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:</li> </ul>	
<input type="checkbox"/>	Refer as KDB 789033, F)5) power spectral density can be measured using resolution bandwidths < 1 MHz provided that the results are integrated over 1 MHz bandwidth
Duty cycle ≥ 98%	
<input type="checkbox"/>	Refer as KDB 789033, clause E Method SA-2 (spectral trace averaging).
Duty cycle < 98%	
<input checked="" type="checkbox"/>	Refer as KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
<ul style="list-style-type: none"> <li>▪ For conducted measurement.</li> </ul>	
<ul style="list-style-type: none"> <li>▪ If the EUT supports multiple transmit chains using options given below:           <ul style="list-style-type: none"> <li>▪ Measure and sum the spectra across the outputs. Refer as KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.</li> </ul> </li> <li>▪ If multiple transmit chains, EIRP PPSD calculation could be following as methods:  <math>PPSD_{total} = PPSD_1 + PPSD_2 + \dots + PPSD_n</math>            (calculated in linear unit [mW] and transfer to log unit [dBm])  <math>EIRP_{total} = PPSD_{total} + DG</math> </li> </ul>	

### 3.4.4 Test Setup



### 3.4.5 Test Result of Peak Power Spectral Density

Refer as Appendix D



### 3.5 Unwanted Emissions

#### 3.5.1 Transmitter Radiated Unwanted Emissions Limit

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

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

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

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



Un-restricted band emissions above 1GHz Limit	
Operating Band	Limit
5.15 - 5.25 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.25 - 5.35 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.47 - 5.725 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.725 - 5.85 GHz	5.650-5700 GHz: e.i.r.p. -27 ~ 10 dBm [68.2 ~ 105.2 dBuV/m@3m] 5.700-5720 GHz: e.i.r.p. 10 ~ 15.6 dBm [105.2 ~ 110.8 dBuV/m@3m] 5.720-5725 GHz: e.i.r.p. 15.6 ~ 27 dBm [110.8 ~ 122.2 dBuV/m@3m] 5.850-5.855 GHz: e.i.r.p. 27 ~ 15.6 dBm [122.2 ~ 110.8 dBuV/m@3m] 5.855-5.875 GHz: e.i.r.p. 15.6 ~ 10 dBm [110.8 ~ 105.2 dBuV/m@3m] 5.875-5.925 GHz: e.i.r.p. 10 ~ -27 dBm [105.2 ~ 68.2dBuV/m@3m] Other un-restricted band: e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
Note 1: Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).	

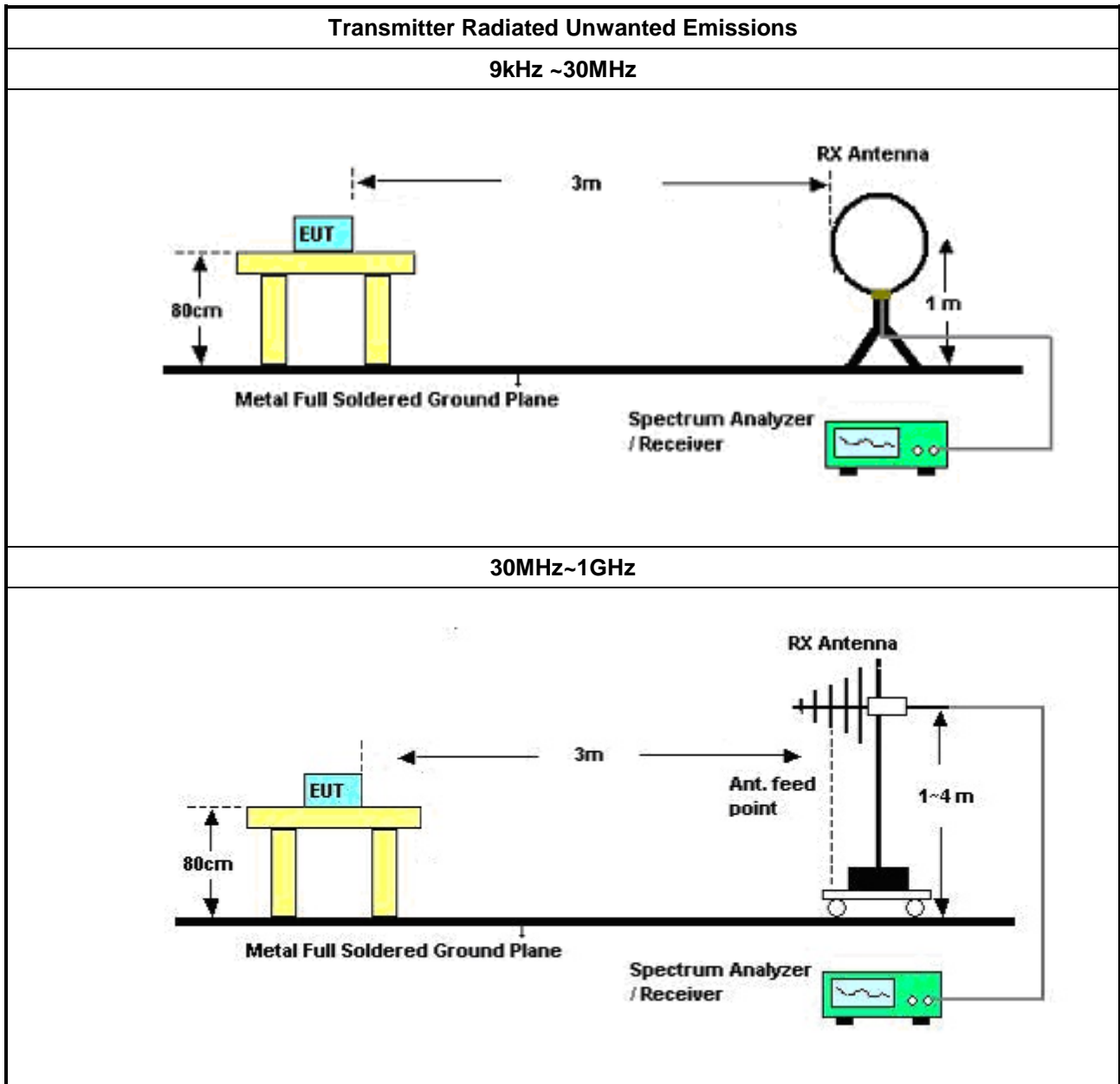
### 3.5.2 Measuring Instruments

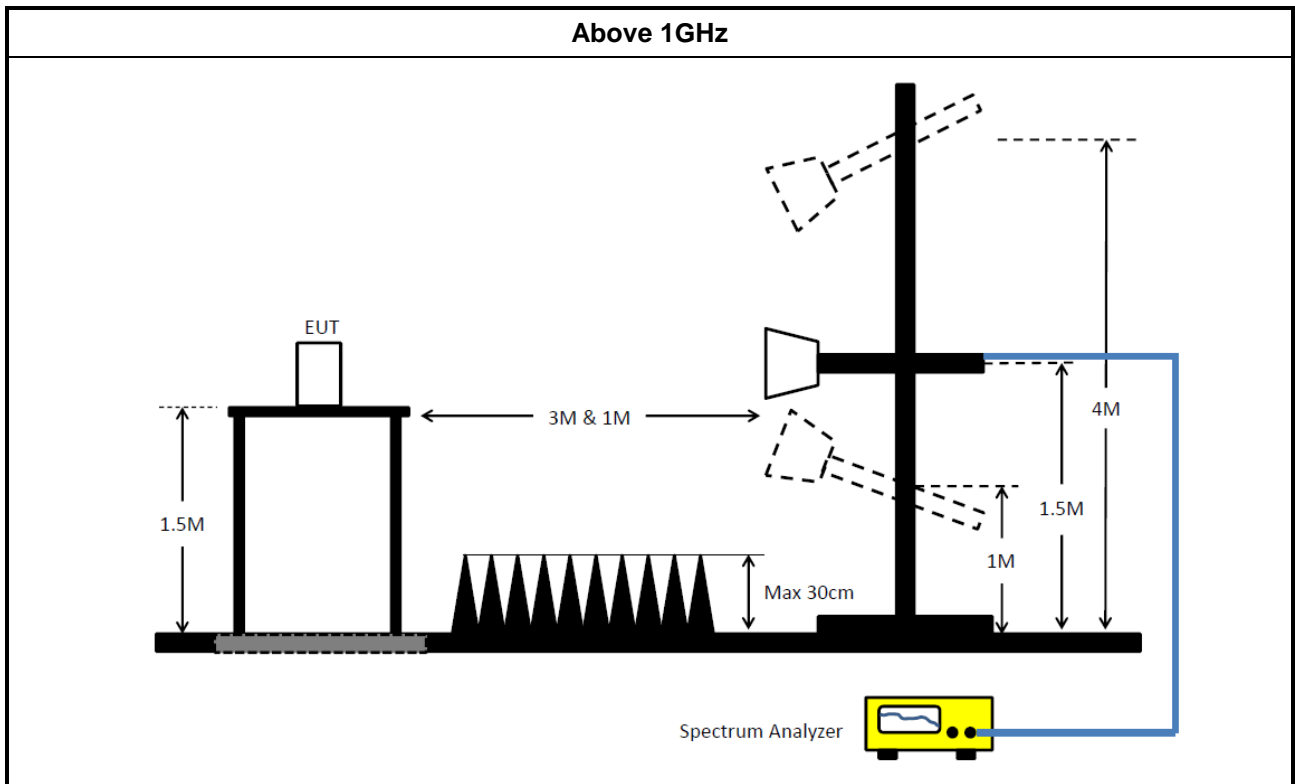
Refer a test equipment and calibration data table in this test report.

### 3.5.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> <li>▪ 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).</li> </ul>	
<ul style="list-style-type: none"> <li>▪ The average emission levels shall be measured in [duty cycle <math>\geq</math> 98 or duty factor].</li> </ul>	
<ul style="list-style-type: none"> <li>▪ For the transmitter unwanted emissions shall be measured using following options below:</li> </ul>	
	<ul style="list-style-type: none"> <li>▪ Refer as KDB 789033, clause G)2) for unwanted emissions into non-restricted bands.</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Refer as KDB 789033, clause G)1) for unwanted emissions into restricted bands.</li> </ul>
<input checked="" type="checkbox"/>	Refer as KDB 789033, G)6) Method VB (ANSI C63.10, clause 4.1.4.2.3), Reduced VBW.
<input checked="" type="checkbox"/>	Refer as KDB 789033, clause G)5) (ANSI C63.10, clause 4.1.4.2.2), measurement procedure peak limit.
<ul style="list-style-type: none"> <li>▪ For radiated measurement.</li> </ul>	
	<ul style="list-style-type: none"> <li>▪ Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.</li> </ul>
<ul style="list-style-type: none"> <li>▪ The any unwanted emissions level shall not exceed the fundamental emission level.</li> </ul>	
<ul style="list-style-type: none"> <li>▪ All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.</li> </ul>	

### 3.5.4 Test Setup





### 3.5.5 Test Result of Transmitter Unwanted Emissions

Refer as Appendix E



### 3.6 Test Equipment and Calibration Data

#### Instrument for AC Conduction

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
EMC Receiver	R&S	ESR3	102051	9KHz ~ 3.6GHz	03/May/2018	02/May/2019
LISN	R&S	ENV216	101295	9kHz ~ 30MHz	17/Nov/2017	16/Nov/2018
RF Cable-CON	HUBER+SUHNER	RG213/U	07611832020001	9kHz ~ 30MHz	06/Oct/2017	05/Oct/2018
AC POWER	APC	AFC-11005G	F310050055	47Hz~63Hz 5~300V	NCR	NCR
Impuls Begrenzer Pulse Limiter	SCHWARZBECK	VTSD 9561-F	9561-F041	9 kHz ~ 30 MHz	12/Oct/2017	11/Oct/2018

**NCR : Non-Calibration Require**

#### Instrument for Radiated Test

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH02-HY	30MHz ~ 1GHz 3m	20/Oct/2017	19/Oct/2018
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH02-HY	1GHz ~ 18GHz 3m	27/Oct/2017	26/Oct/2018
Amplifier	Agilent	8447D	2944A11149	100kHz ~ 1.3GHz	29Jun/2017	28/Jun/2018
Microwave Preamplifier	Agilent	8449B	3008A02373	1GHz ~ 26.5GHz	28/Sep/2017	27/Sep/2018
Spectrum Analyzer	Rohde & Schwarz	FSP40	100593	9KHz - 40GHz	12/Dec/2017	11/Dec/2018
EMI Test Receiver	Rohde & Schwarz	ESCS 30	100354	9kHz ~ 2.75GHz	08/Dec/2017	07/Dec/2018
RF Cable-R03m	Jye Bao	RG142	CB017	9kHz ~ 1GHz	19/Jan/2018	18/Jan/2019
RF Cable-high	SUHNER	SUCOFLEX104	MY34918/4	1GHz ~ 40GHz	19/Jan/2018	18/Jan/2019
Bilog Antenna	SCHAFFNER	CBL 6112B	2723	30MHz ~ 1GHz	09/Sep/2017	08/Sep/2018
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170154	18GHz ~ 40GHz	06/Feb/2018	05/Feb/2019
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120D	BBHA 9120 D 1531	1GHz ~ 18GHz	18/Apr/2018	17/Apr/2019
Loop Antenna	TESEQ	HLA 6120	31244	9k-30MHz	29/Mar/2018	28/Mar/2019



**Instrument for Conducted Test  
<Non-Beamforming>**

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Spectrum Analyzer	R&S	FSV 40	101013	9kHz~40GHz	29/Dec/2017	28/Dec/2018
Signal Generator	R&S	SMR40	100116	10MHz ~ 40GHz	27/Jul/2017	26/Jul/2018
Power Sensor	Anritsu	MA2411B	0917017	300MHz ~ 40GHz	05/Feb/2018	04/Feb/2019
Power Meter	Anritsu	ML2495A	0949003	300MHz ~ 40GHz	05/Feb/2018	04/Feb/2019
RF Cable-0.2m	HUBER+SUHNER	SUCOFLEX_104	MY10710/4	30MHz ~ 26.5GHz	25/Aug/2017	24/Aug/2018
RF Cable-0.2m	HUBER+SUHNER	SUCOFLEX_104	MY10709/4	30MHz ~ 26.5GHz	25/Aug/2017	24/Aug/2018
RF Cable-0.5m	HUBER+SUHNER	SUCOFLEX_104	MY10713/4	30MHz ~ 26.5GHz	25/Aug/2017	24/Aug/2018

**<Beamforming>**

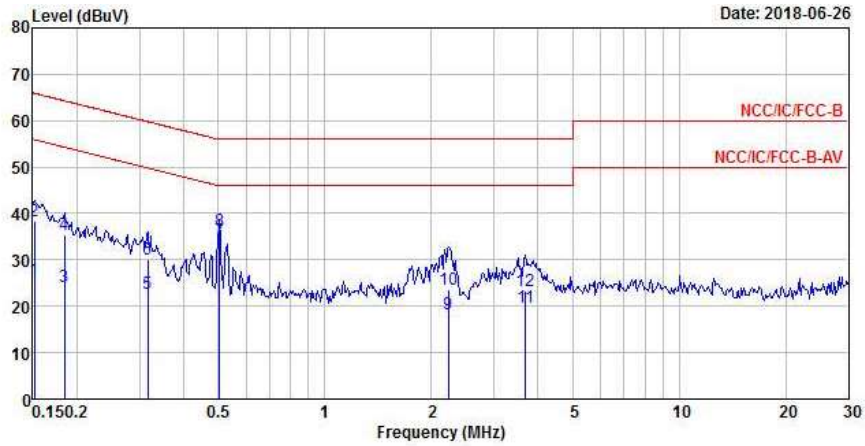
Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Spectrum Analyzer	R&S	FSV 40	101013	9kHz~40GHz	29/Dec/2017	28/Dec/2018
Signal Generator	R&S	SMR40	100116	10MHz ~ 40GHz	27/Jul/2017	26/Jul/2018
Power Sensor	Anritsu	MA2411B	0917017	300MHz ~ 40GHz	05/Feb/2018	04/Feb/2019
Power Meter	Anritsu	ML2495A	0949003	300MHz ~ 40GHz	05/Feb/2018	04/Feb/2019
RF Cable-0.2m	HUBER+SUHNER	SUCOFLEX_104	MY10709/4	30MHz ~ 26.5GHz	25/Aug/2017	24/Aug/2018
RF Cable-0.2m	HUBER+SUHNER	SUCOFLEX_104	MY10712/4	30MHz ~ 26.5GHz	25/Aug/2017	24/Aug/2018
RF Cable-0.5m	HUBER+SUHNER	SUCOFLEX_104	MY10713/4	30MHz ~ 26.5GHz	25/Aug/2017	24/Aug/2018
RF Cable-0.5m	HUBER+SUHNER	SUCOFLEX_104	MY10714/4	30MHz ~ 26.5GHz	25/Aug/2017	24/Aug/2018
RF Cable-0.5m	HUBER+SUHNER	SUCOFLEX_104	MY10715/4	30MHz ~ 26.5GHz	25/Aug/2017	24/Aug/2018
RF Cable-0.5m	HUBER+SUHNER	SUCOFLEX_104	MY10716/4	30MHz ~ 26.5GHz	25/Aug/2017	24/Aug/2018
RF Cable-0.5m	HUBER+SUHNER	SUCOFLEX_104	MY10717/4	30MHz ~ 26.5GHz	25/Aug/2017	24/Aug/2018





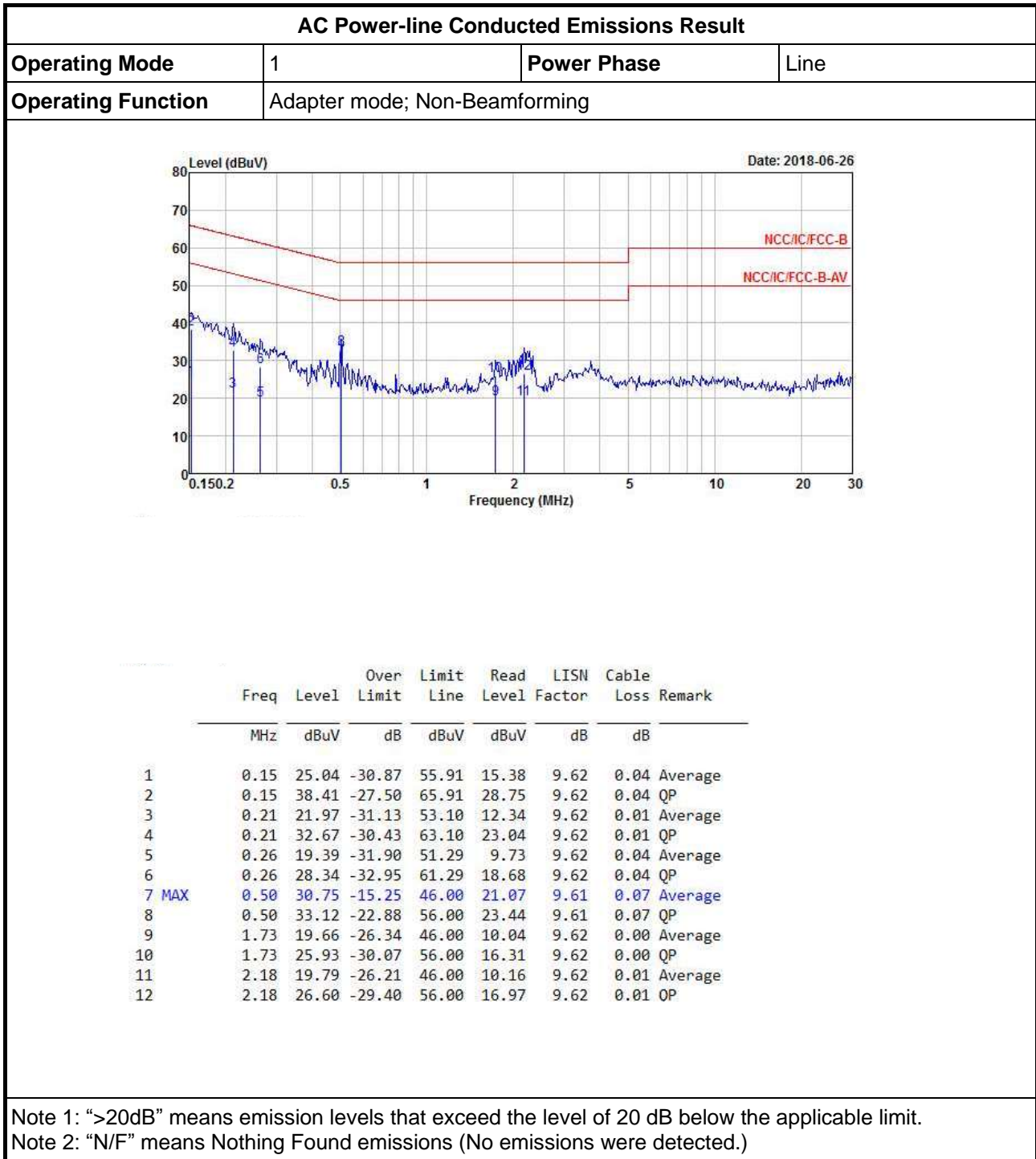
AC Power-line Conducted Emissions Result

Operating Mode	1	Power Phase	Neutral
Operating Function	Adapter mode; Non-Beamforming		

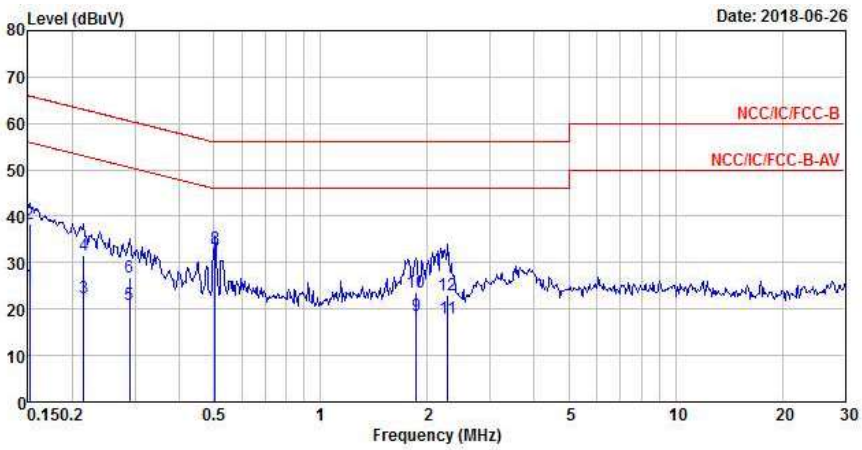


	Freq	Level	Over	Limit	Read	LISM	Cable	Remark
	MHz	dBuV	Limit	Line	Level	Factor	Loss	
			dB	dBuV	dBuV	dB	dB	
1	0.15	25.54	-30.37	55.91	15.87	9.63	0.04	Average
2	0.15	38.42	-27.49	65.91	28.75	9.63	0.04	QP
3	0.18	24.06	-30.22	54.28	14.43	9.62	0.01	Average
4	0.18	35.33	-28.95	64.28	25.70	9.62	0.01	QP
5	0.32	22.72	-27.08	49.80	13.04	9.61	0.07	Average
6	0.32	30.04	-29.76	59.80	20.36	9.61	0.07	QP
7 MAX	0.50	34.24	-11.76	46.00	24.56	9.61	0.07	Average
8	0.50	36.18	-19.82	56.00	26.50	9.61	0.07	QP
9	2.24	18.16	-27.84	46.00	8.52	9.63	0.01	Average
10	2.24	23.56	-32.44	56.00	13.92	9.63	0.01	QP
11	3.68	19.77	-26.23	46.00	10.05	9.64	0.08	Average
12	3.68	23.20	-32.80	56.00	13.48	9.64	0.08	QP

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





AC Power-line Conducted Emissions Result																																																																																																																																	
Operating Mode	2	Power Phase	Neutral																																																																																																																														
Operating Function	Adapter mode; Beamforming																																																																																																																																
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<table border="1" style="width: 100%; border-collapse: collapse; font-size: x-small;"> <thead> <tr> <th></th> <th>Freq</th> <th>Level</th> <th>Over Limit</th> <th>Limit Line</th> <th>Read Level</th> <th>LISN Factor</th> <th>Cable Loss</th> <th>Remark</th> </tr> <tr> <th></th> <th>MHz</th> <th>dBuV</th> <th>dB</th> <th>dBuV</th> <th>dBuV</th> <th>dB</th> <th>dB</th> <th></th> </tr> </thead> <tbody> <tr><td>1</td><td>0.15</td><td>25.10</td><td>-30.81</td><td>55.91</td><td>15.43</td><td>9.63</td><td>0.04</td><td>Average</td></tr> <tr><td>2</td><td>0.15</td><td>38.32</td><td>-27.59</td><td>65.91</td><td>28.65</td><td>9.63</td><td>0.04</td><td>QP</td></tr> <tr><td>3</td><td>0.22</td><td>22.38</td><td>-30.63</td><td>53.01</td><td>12.75</td><td>9.62</td><td>0.01</td><td>Average</td></tr> <tr><td>4</td><td>0.22</td><td>31.66</td><td>-31.35</td><td>63.01</td><td>22.03</td><td>9.62</td><td>0.01</td><td>QP</td></tr> <tr><td>5</td><td>0.29</td><td>21.09</td><td>-29.45</td><td>50.54</td><td>11.43</td><td>9.61</td><td>0.05</td><td>Average</td></tr> <tr><td>6</td><td>0.29</td><td>26.96</td><td>-33.58</td><td>60.54</td><td>17.30</td><td>9.61</td><td>0.05</td><td>QP</td></tr> <tr><td>7 MAX</td><td>0.50</td><td>30.65</td><td>-15.35</td><td>46.00</td><td>20.97</td><td>9.61</td><td>0.07</td><td>Average</td></tr> <tr><td>8</td><td>0.50</td><td>32.96</td><td>-23.04</td><td>56.00</td><td>23.28</td><td>9.61</td><td>0.07</td><td>QP</td></tr> <tr><td>9</td><td>1.86</td><td>18.74</td><td>-27.26</td><td>46.00</td><td>9.11</td><td>9.63</td><td>0.00</td><td>Average</td></tr> <tr><td>10</td><td>1.86</td><td>23.65</td><td>-32.35</td><td>56.00</td><td>14.02</td><td>9.63</td><td>0.00</td><td>QP</td></tr> <tr><td>11</td><td>2.28</td><td>17.93</td><td>-28.07</td><td>46.00</td><td>8.28</td><td>9.63</td><td>0.02</td><td>Average</td></tr> <tr><td>12</td><td>2.28</td><td>23.17</td><td>-32.83</td><td>56.00</td><td>13.52</td><td>9.63</td><td>0.02</td><td>QP</td></tr> </tbody> </table>					Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark		MHz	dBuV	dB	dBuV	dBuV	dB	dB		1	0.15	25.10	-30.81	55.91	15.43	9.63	0.04	Average	2	0.15	38.32	-27.59	65.91	28.65	9.63	0.04	QP	3	0.22	22.38	-30.63	53.01	12.75	9.62	0.01	Average	4	0.22	31.66	-31.35	63.01	22.03	9.62	0.01	QP	5	0.29	21.09	-29.45	50.54	11.43	9.61	0.05	Average	6	0.29	26.96	-33.58	60.54	17.30	9.61	0.05	QP	7 MAX	0.50	30.65	-15.35	46.00	20.97	9.61	0.07	Average	8	0.50	32.96	-23.04	56.00	23.28	9.61	0.07	QP	9	1.86	18.74	-27.26	46.00	9.11	9.63	0.00	Average	10	1.86	23.65	-32.35	56.00	14.02	9.63	0.00	QP	11	2.28	17.93	-28.07	46.00	8.28	9.63	0.02	Average	12	2.28	23.17	-32.83	56.00	13.52	9.63	0.02	QP
	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark																																																																																																																									
	MHz	dBuV	dB	dBuV	dBuV	dB	dB																																																																																																																										
1	0.15	25.10	-30.81	55.91	15.43	9.63	0.04	Average																																																																																																																									
2	0.15	38.32	-27.59	65.91	28.65	9.63	0.04	QP																																																																																																																									
3	0.22	22.38	-30.63	53.01	12.75	9.62	0.01	Average																																																																																																																									
4	0.22	31.66	-31.35	63.01	22.03	9.62	0.01	QP																																																																																																																									
5	0.29	21.09	-29.45	50.54	11.43	9.61	0.05	Average																																																																																																																									
6	0.29	26.96	-33.58	60.54	17.30	9.61	0.05	QP																																																																																																																									
7 MAX	0.50	30.65	-15.35	46.00	20.97	9.61	0.07	Average																																																																																																																									
8	0.50	32.96	-23.04	56.00	23.28	9.61	0.07	QP																																																																																																																									
9	1.86	18.74	-27.26	46.00	9.11	9.63	0.00	Average																																																																																																																									
10	1.86	23.65	-32.35	56.00	14.02	9.63	0.00	QP																																																																																																																									
11	2.28	17.93	-28.07	46.00	8.28	9.63	0.02	Average																																																																																																																									
12	2.28	23.17	-32.83	56.00	13.52	9.63	0.02	QP																																																																																																																									
<p>Note 1: "&gt;20dB" means emission levels that exceed the level of 20 dB below the applicable limit.            Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)</p>																																																																																																																																	



AC Power-line Conducted Emissions Result																																																																																																																																	
Operating Mode	2	Power Phase	Line																																																																																																																														
Operating Function	Adapter mode; Beamforming																																																																																																																																
<div style="display: flex; justify-content: space-between;"> <div> </div> <div style="text-align: right;">Date: 2018-06-26</div> </div>																																																																																																																																	
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Freq</th> <th>Level</th> <th>Over Limit</th> <th>Limit Line</th> <th>Read Level</th> <th>LISN Factor</th> <th>Cable Loss</th> <th>Remark</th> </tr> <tr> <th></th> <th>MHz</th> <th>dBuV</th> <th>dB</th> <th>dBuV</th> <th>dBuV</th> <th>dB</th> <th>dB</th> <th></th> </tr> </thead> <tbody> <tr><td>1</td><td>0.15</td><td>25.85</td><td>-29.89</td><td>55.74</td><td>16.19</td><td>9.62</td><td>0.04</td><td>Average</td></tr> <tr><td>2</td><td>0.15</td><td>38.46</td><td>-27.28</td><td>65.74</td><td>28.80</td><td>9.62</td><td>0.04</td><td>QP</td></tr> <tr><td>3</td><td>0.20</td><td>22.37</td><td>-31.17</td><td>53.54</td><td>12.75</td><td>9.62</td><td>0.00</td><td>Average</td></tr> <tr><td>4</td><td>0.20</td><td>32.70</td><td>-30.84</td><td>63.54</td><td>23.08</td><td>9.62</td><td>0.00</td><td>QP</td></tr> <tr><td>5</td><td>0.32</td><td>23.92</td><td>-25.74</td><td>49.66</td><td>14.24</td><td>9.61</td><td>0.07</td><td>Average</td></tr> <tr><td>6</td><td>0.32</td><td>29.56</td><td>-30.10</td><td>59.66</td><td>19.88</td><td>9.61</td><td>0.07</td><td>QP</td></tr> <tr style="background-color: #e0e0e0;"><td>7 MAX</td><td>0.50</td><td>34.29</td><td>-11.71</td><td>46.00</td><td>24.61</td><td>9.61</td><td>0.07</td><td>Average</td></tr> <tr><td>8</td><td>0.50</td><td>36.26</td><td>-19.74</td><td>56.00</td><td>26.58</td><td>9.61</td><td>0.07</td><td>QP</td></tr> <tr><td>9</td><td>2.24</td><td>18.02</td><td>-27.98</td><td>46.00</td><td>8.39</td><td>9.62</td><td>0.01</td><td>Average</td></tr> <tr><td>10</td><td>2.24</td><td>22.78</td><td>-33.22</td><td>56.00</td><td>13.15</td><td>9.62</td><td>0.01</td><td>QP</td></tr> <tr><td>11</td><td>3.76</td><td>19.85</td><td>-26.15</td><td>46.00</td><td>10.14</td><td>9.63</td><td>0.08</td><td>Average</td></tr> <tr><td>12</td><td>3.76</td><td>22.93</td><td>-33.07</td><td>56.00</td><td>13.22</td><td>9.63</td><td>0.08</td><td>QP</td></tr> </tbody> </table>					Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark		MHz	dBuV	dB	dBuV	dBuV	dB	dB		1	0.15	25.85	-29.89	55.74	16.19	9.62	0.04	Average	2	0.15	38.46	-27.28	65.74	28.80	9.62	0.04	QP	3	0.20	22.37	-31.17	53.54	12.75	9.62	0.00	Average	4	0.20	32.70	-30.84	63.54	23.08	9.62	0.00	QP	5	0.32	23.92	-25.74	49.66	14.24	9.61	0.07	Average	6	0.32	29.56	-30.10	59.66	19.88	9.61	0.07	QP	7 MAX	0.50	34.29	-11.71	46.00	24.61	9.61	0.07	Average	8	0.50	36.26	-19.74	56.00	26.58	9.61	0.07	QP	9	2.24	18.02	-27.98	46.00	8.39	9.62	0.01	Average	10	2.24	22.78	-33.22	56.00	13.15	9.62	0.01	QP	11	3.76	19.85	-26.15	46.00	10.14	9.63	0.08	Average	12	3.76	22.93	-33.07	56.00	13.22	9.63	0.08	QP
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Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	26.55M	16.667M	16M7D1D	23M	16.592M
802.11ac VHT20_Nss1,(MCS0)_4TX	21.925M	17.766M	17M8D1D	21.475M	17.716M
802.11ac VHT40_Nss1,(MCS0)_4TX	40.4M	36.332M	36M3D1D	39.6M	36.182M
802.11ac VHT80_Nss1,(MCS0)_4TX	81.8M	75.862M	75M9D1D	81.3M	75.662M
5.25-5.35GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	32.075M	16.717M	16M7D1D	21.9M	16.667M
802.11ac VHT20_Nss1,(MCS0)_4TX	21.875M	17.791M	17M8D1D	21.375M	17.691M
802.11ac VHT40_Nss1,(MCS0)_4TX	40.2M	36.232M	36M2D1D	39.55M	36.182M
802.11ac VHT80_Nss1,(MCS0)_4TX	82.1M	75.862M	75M9D1D	81.1M	75.662M
5.47-5.725GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	36.825M	16.942M	16M9D1D	21.85M	14.108M
802.11ac VHT20_Nss1,(MCS0)_4TX	21.85M	17.791M	17M8D1D	15.735M	13.883M
802.11ac VHT40_Nss1,(MCS0)_4TX	40.35M	36.332M	36M3D1D	34.755M	32.989M
802.11ac VHT80_Nss1,(MCS0)_4TX	82.3M	75.862M	75M9D1D	75.375M	72.414M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	16.325M	37.856M	37M9D1D	3.12M	9.675M
802.11ac VHT20_Nss1,(MCS0)_4TX	17.55M	33.683M	33M7D1D	3.76M	4.158M
802.11ac VHT40_Nss1,(MCS0)_4TX	36.35M	71.814M	71M8D1D	3.12M	3.458M
802.11ac VHT80_Nss1,(MCS0)_4TX	75.2M	78.961M	79M0D1D	3.1M	3.798M

**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

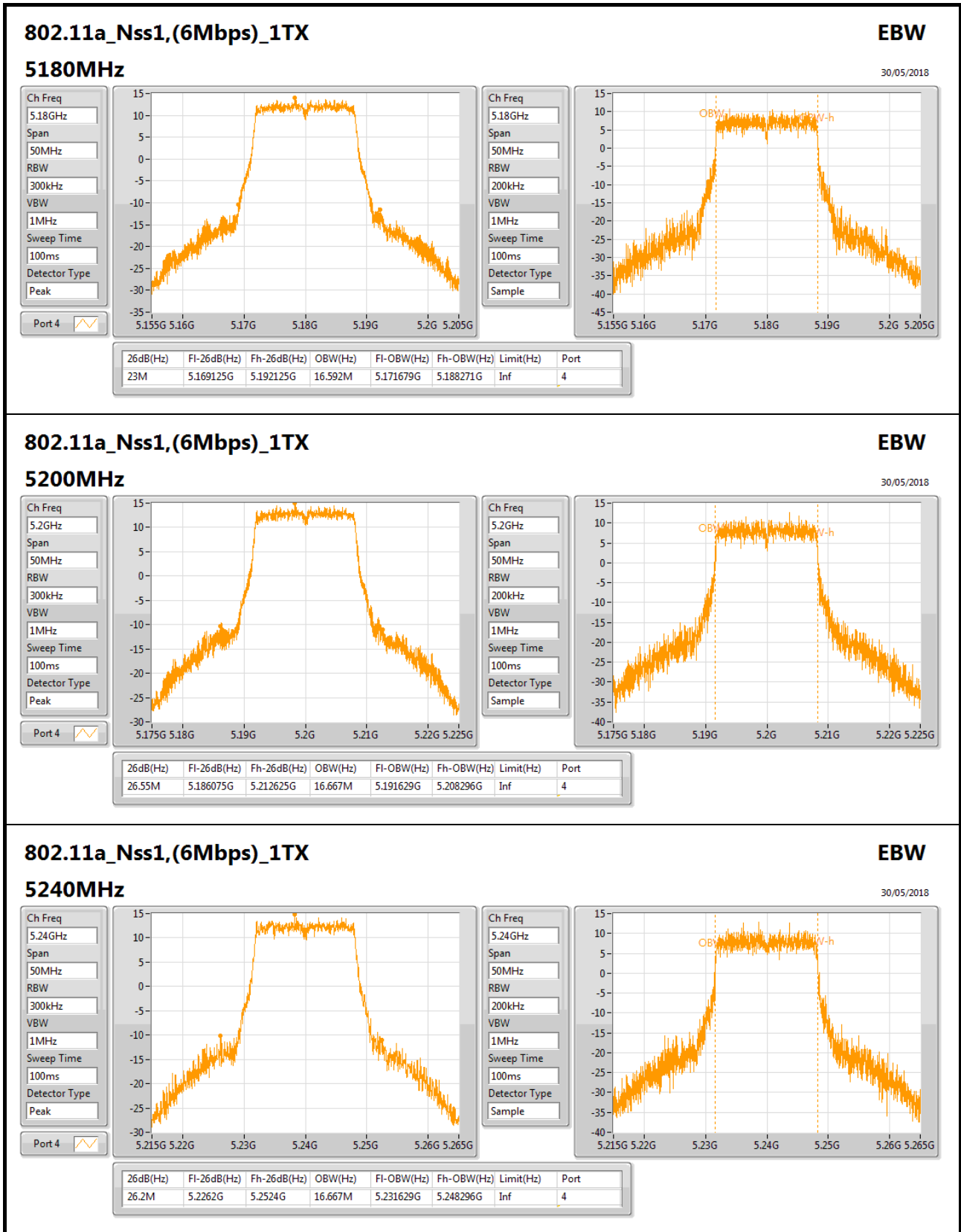
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11a_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-
5180MHz_TnomVnom	Pass	Inf							23M	16.592M
5200MHz_TnomVnom	Pass	Inf							26.55M	16.667M
5240MHz_TnomVnom	Pass	Inf							26.2M	16.667M
5260MHz_TnomVnom	Pass	Inf							32.075M	16.692M
5300MHz_TnomVnom	Pass	Inf							31.15M	16.717M
5320MHz_TnomVnom	Pass	Inf							21.9M	16.667M
5500MHz_TnomVnom	Pass	Inf							36.3M	16.817M
5580MHz_TnomVnom	Pass	Inf							36.825M	16.942M
5700MHz_TnomVnom	Pass	Inf							21.85M	16.642M
5720MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	Inf							23.31M	14.108M
5720MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	500k							3.12M	9.675M
5745MHz_TnomVnom	Pass	500k							16.325M	37.106M
5785MHz_TnomVnom	Pass	500k							16.275M	37.356M
5825MHz_TnomVnom	Pass	500k							16.3M	37.856M
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz_TnomVnom	Pass	Inf	21.7M	17.766M	21.5M	17.716M	21.625M	17.716M	21.6M	17.741M
5200MHz_TnomVnom	Pass	Inf	21.775M	17.741M	21.575M	17.741M	21.8M	17.741M	21.6M	17.741M
5240MHz_TnomVnom	Pass	Inf	21.925M	17.766M	21.625M	17.716M	21.475M	17.766M	21.475M	17.716M
5260MHz_TnomVnom	Pass	Inf	21.775M	17.791M	21.475M	17.741M	21.7M	17.716M	21.525M	17.716M
5300MHz_TnomVnom	Pass	Inf	21.875M	17.791M	21.55M	17.741M	21.7M	17.741M	21.825M	17.716M
5320MHz_TnomVnom	Pass	Inf	21.725M	17.791M	21.375M	17.691M	21.825M	17.716M	21.675M	17.716M
5500MHz_TnomVnom	Pass	Inf	21.625M	17.766M	21.575M	17.741M	21.65M	17.741M	21.5M	17.716M
5580MHz_TnomVnom	Pass	Inf	21.85M	17.716M	21.675M	17.766M	21.7M	17.741M	21.65M	17.741M
5700MHz_TnomVnom	Pass	Inf	21.725M	17.791M	21.65M	17.716M	21.675M	17.741M	21.575M	17.741M
5720MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	Inf	15.855M	13.883M	15.735M	13.883M	15.735M	13.898M	15.855M	13.898M
5720MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	500k	3.76M	4.238M	3.78M	4.158M	3.78M	4.198M	3.76M	4.218M
5745MHz_TnomVnom	Pass	500k	17.525M	28.511M	17.525M	29.035M	17.55M	26.287M	17.275M	32.084M
5785MHz_TnomVnom	Pass	500k	17.525M	30.985M	16.9M	30.435M	17.55M	30.21M	17.475M	32.434M
5825MHz_TnomVnom	Pass	500k	17.525M	30.135M	16.475M	29.46M	17.475M	30.735M	16.925M	33.683M
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz_TnomVnom	Pass	Inf	40.15M	36.232M	39.6M	36.232M	39.85M	36.232M	39.85M	36.182M
5230MHz_TnomVnom	Pass	Inf	40.4M	36.282M	39.95M	36.182M	39.8M	36.182M	39.65M	36.332M
5270MHz_TnomVnom	Pass	Inf	40.2M	36.232M	39.65M	36.232M	39.55M	36.182M	39.7M	36.182M
5310MHz_TnomVnom	Pass	Inf	40.05M	36.232M	39.55M	36.232M	39.55M	36.232M	39.75M	36.232M
5510MHz_TnomVnom	Pass	Inf	40.35M	36.082M	39.65M	36.282M	39.8M	36.282M	39.8M	36.282M
5550MHz_TnomVnom	Pass	Inf	40.25M	36.232M	39.75M	36.332M	39.8M	36.282M	39.85M	36.182M
5670MHz_TnomVnom	Pass	Inf	40.25M	36.282M	39.7M	36.232M	39.75M	36.132M	39.9M	36.332M
5710MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	Inf	35.245M	32.989M	34.755M	32.989M	35.105M	33.023M	35M	33.058M
5710MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	500k	3.12M	3.478M	3.14M	3.498M	3.12M	3.458M	3.12M	3.458M



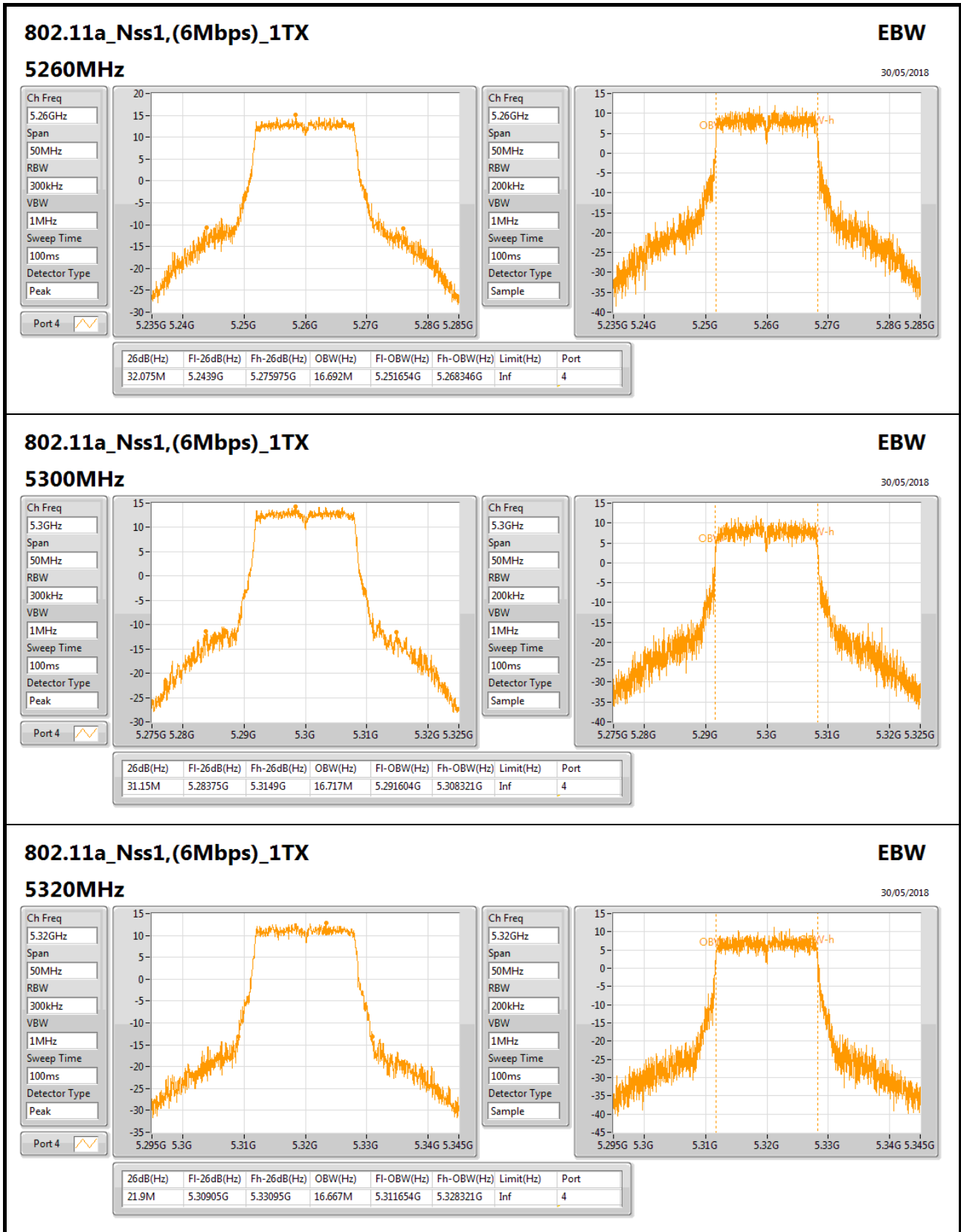
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
5755MHz_TnomVnom	Pass	500k	35.7M	53.073M	36.35M	49.975M	36.25M	45.027M	36.35M	57.571M
5795MHz_TnomVnom	Pass	500k	35.7M	64.818M	36.3M	61.819M	36.3M	58.271M	36.25M	71.814M
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz_TnomVnom	Pass	Inf	81.8M	75.662M	81.4M	75.862M	81.3M	75.762M	81.6M	75.662M
5290MHz_TnomVnom	Pass	Inf	82.1M	75.662M	81.5M	75.862M	81.1M	75.662M	81.3M	75.762M
5530MHz_TnomVnom	Pass	Inf	81.9M	75.662M	82.3M	75.662M	81.3M	75.662M	81.4M	75.662M
5610MHz_TnomVnom	Pass	Inf	82M	75.862M	81.5M	75.662M	81.9M	75.862M	81.4M	75.862M
5690MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	Inf	75.825M	72.639M	75.75M	72.414M	75.375M	72.414M	75.75M	72.639M
5690MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	500k	3.12M	3.858M	3.12M	3.898M	3.12M	3.958M	3.1M	3.798M
5775MHz_TnomVnom	Pass	500k	75.1M	77.461M	75.2M	76.962M	75.1M	76.462M	75.1M	78.961M

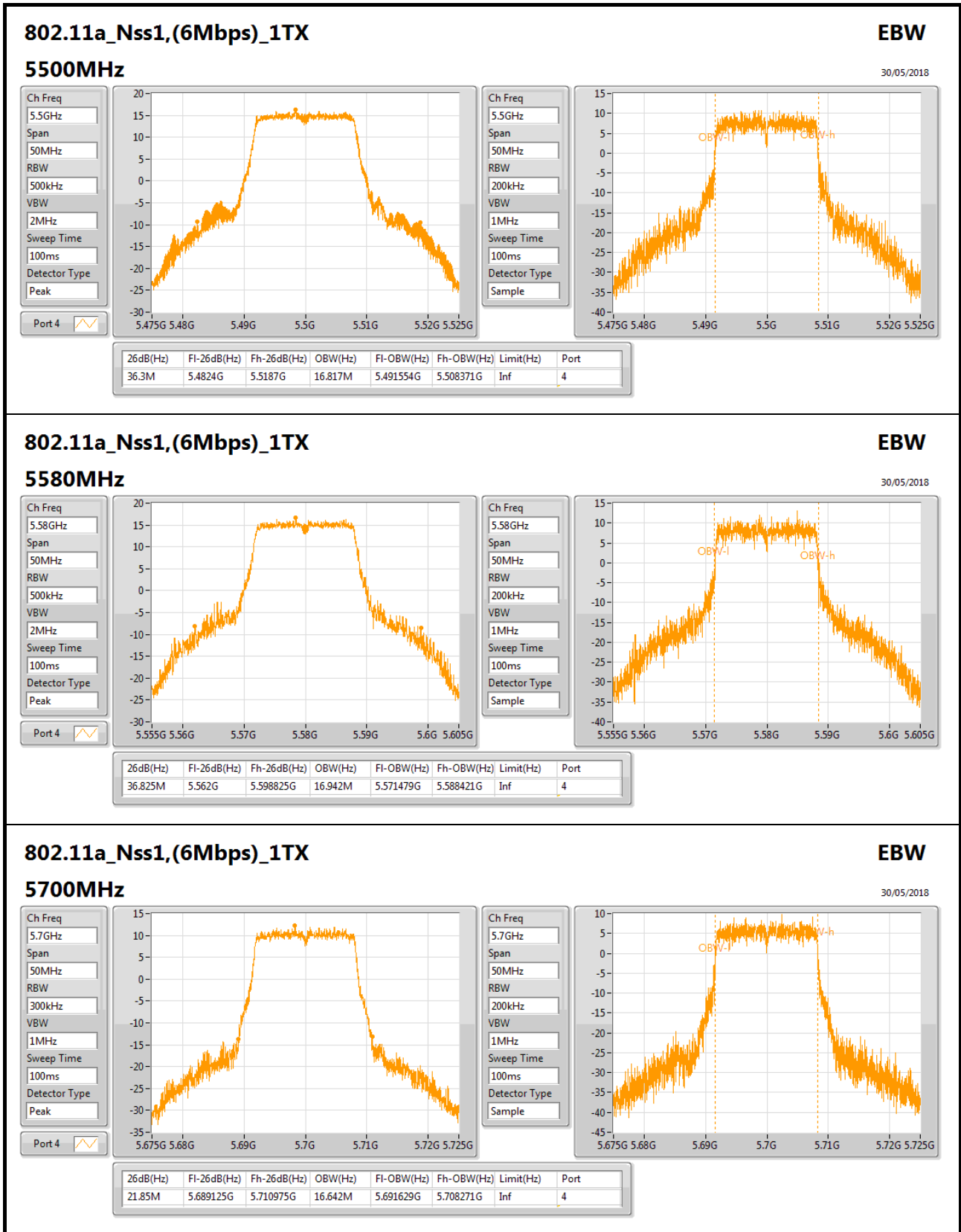
**Port X-N dB** = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band

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








**802.11a\_Nss1,(6Mbps)\_1TX**
**EBW**

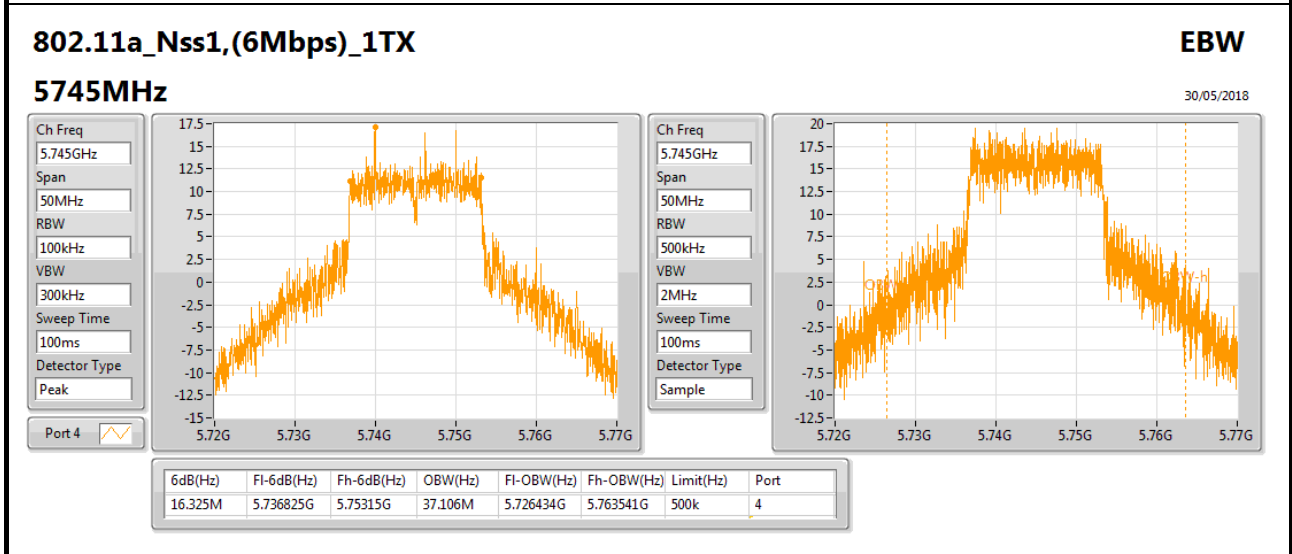
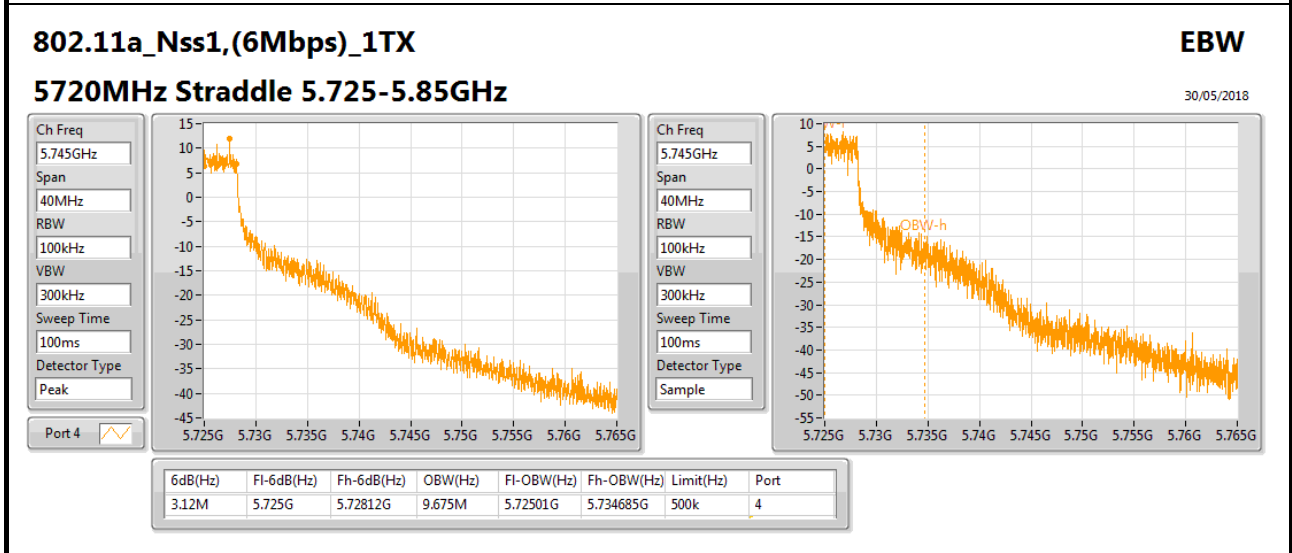
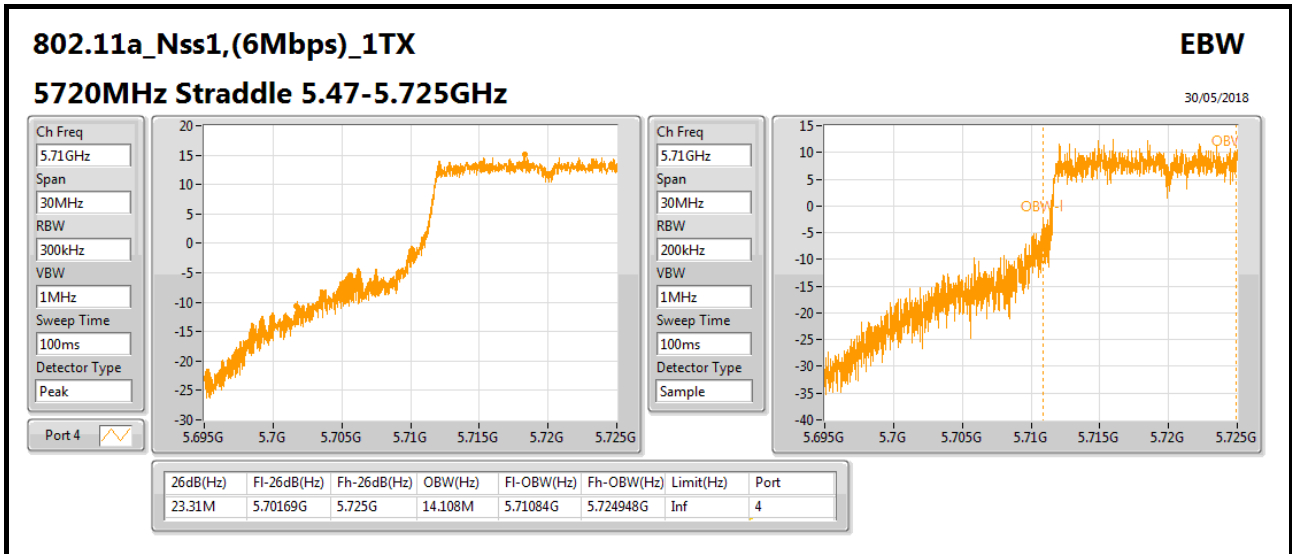
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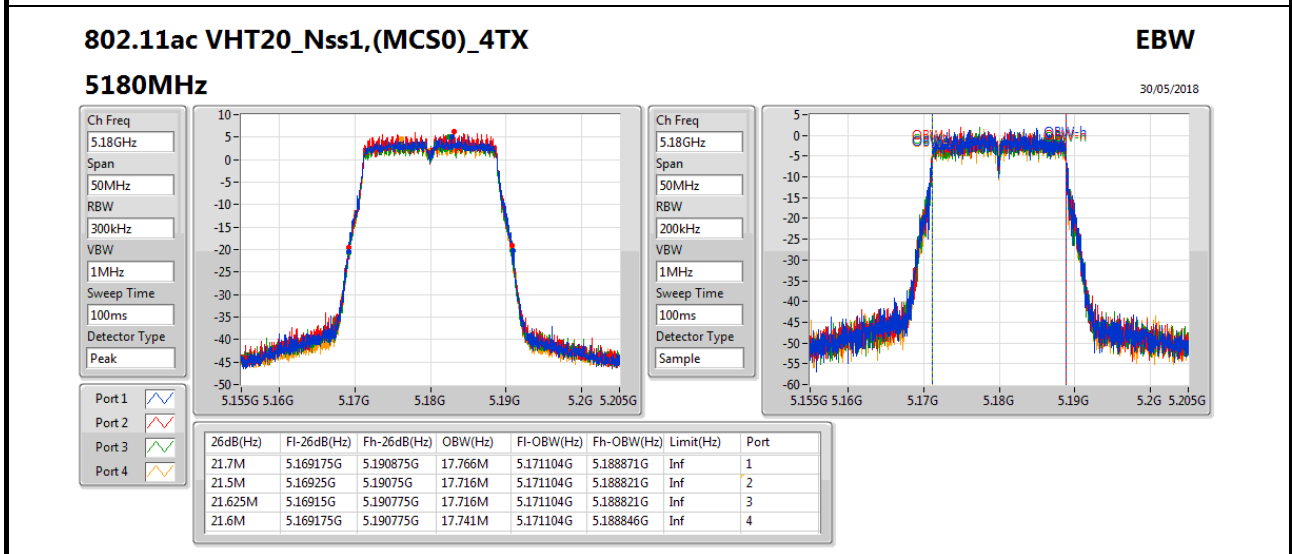
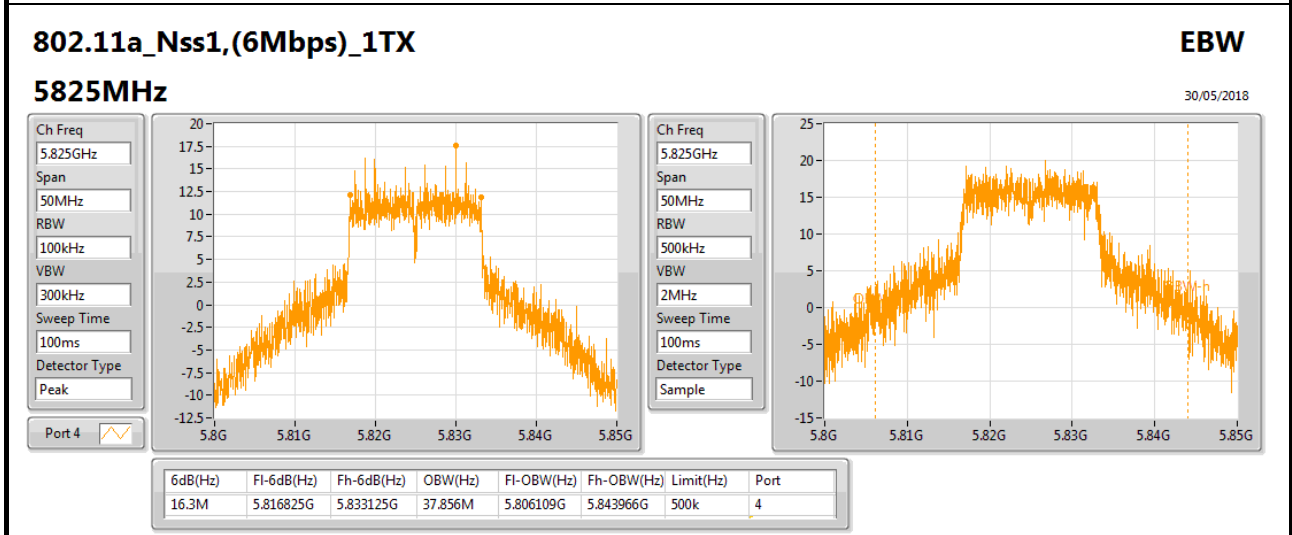
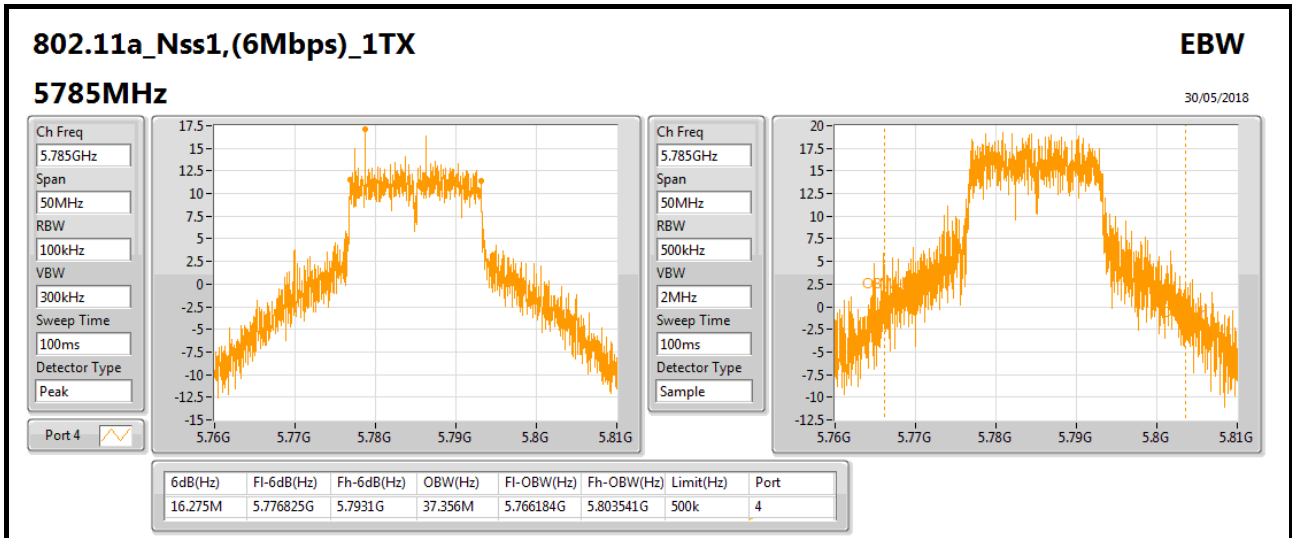
**5700MHz**

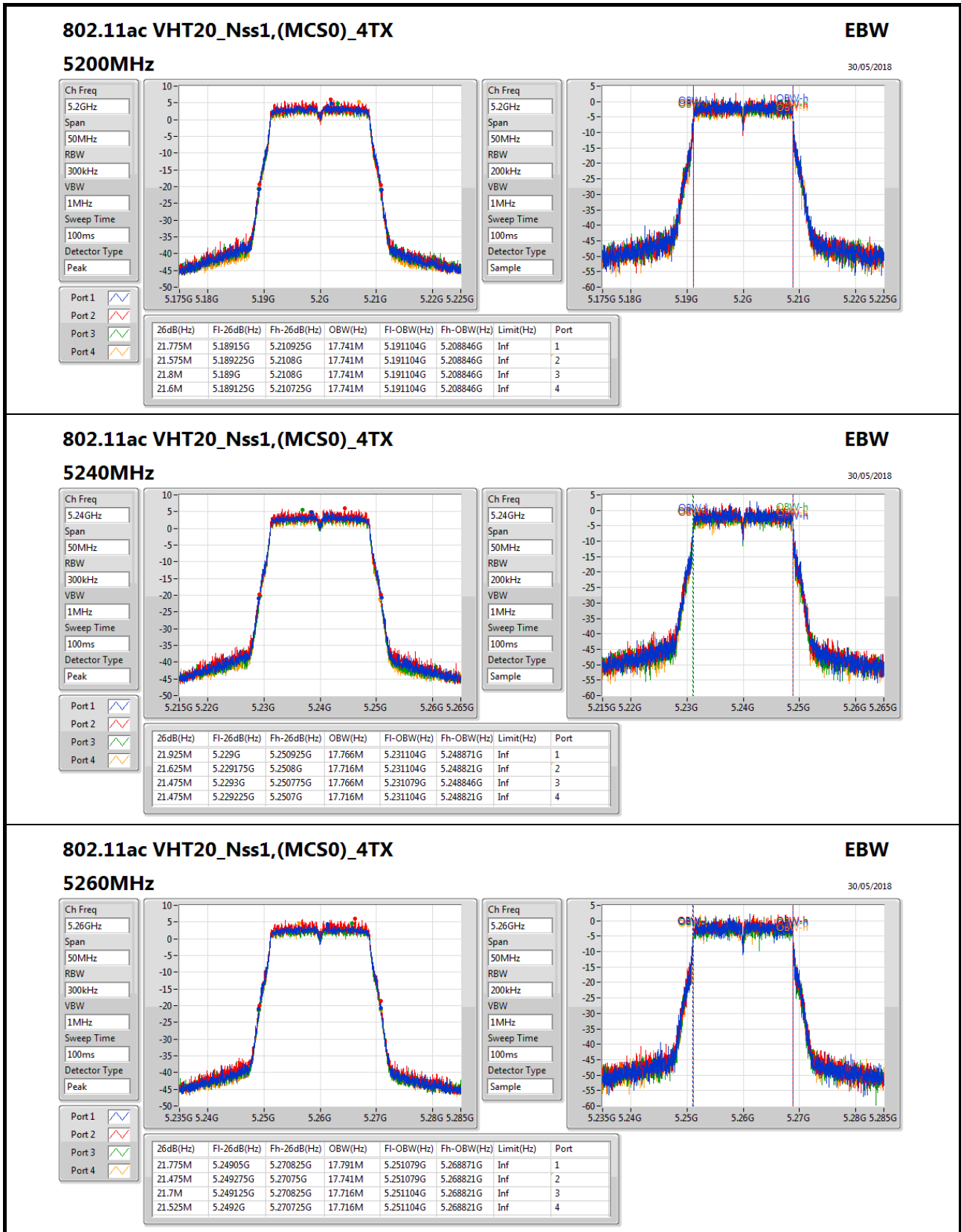
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Span: 50MHz  
RBW: 300kHz  
VBW: 1MHz  
Sweep Time: 100ms  
Detector Type: Peak

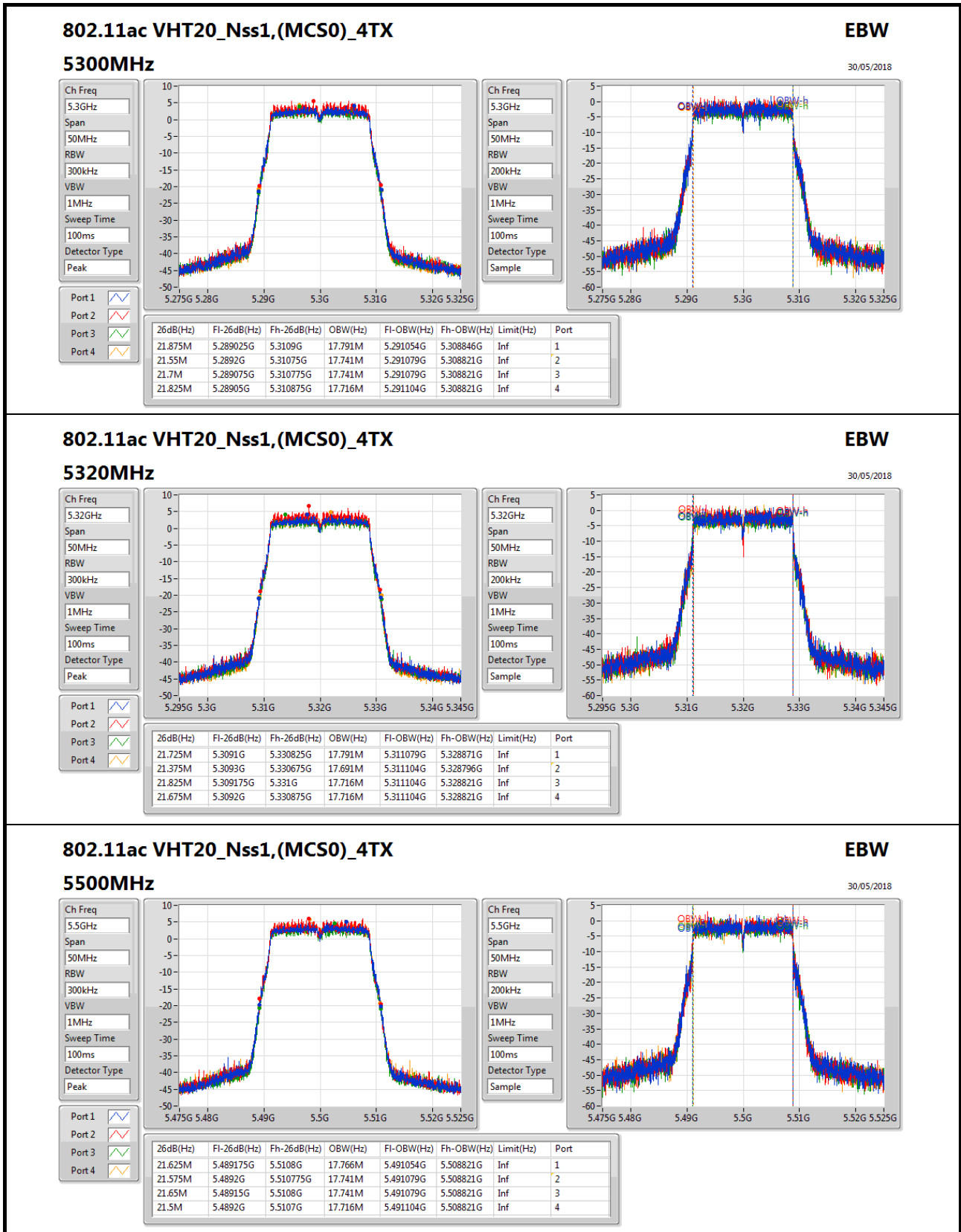
Port 4

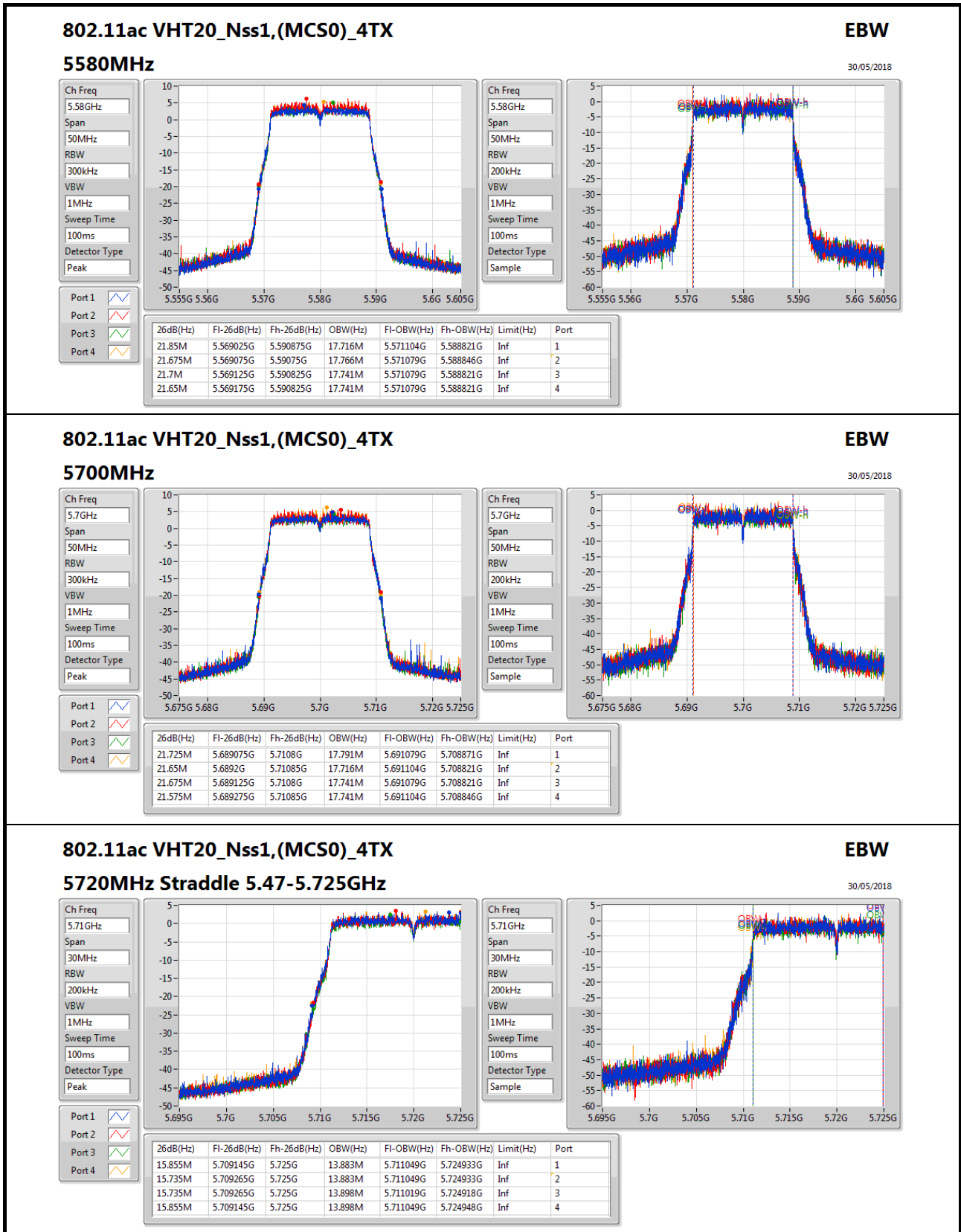
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Detector Type: Sample

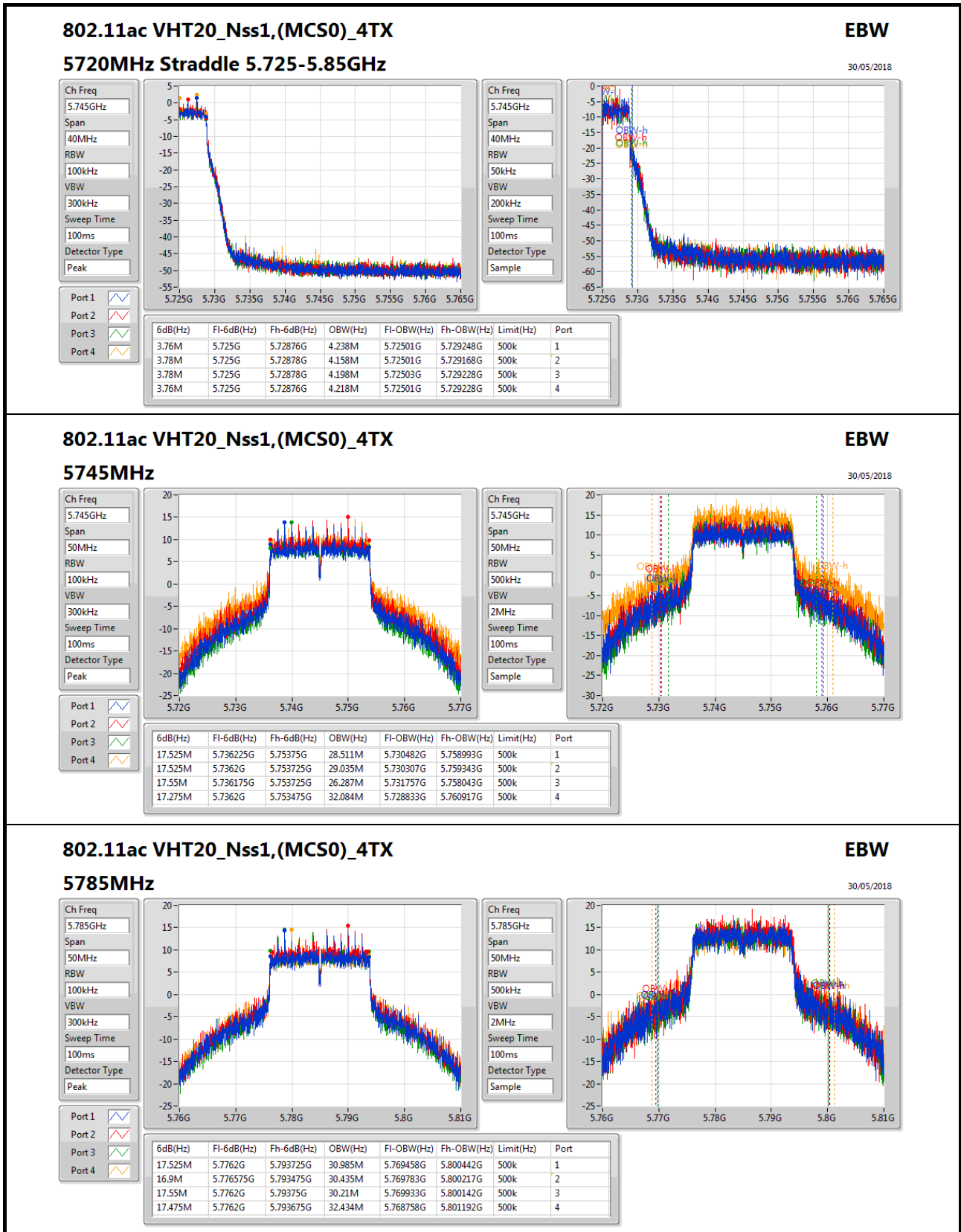




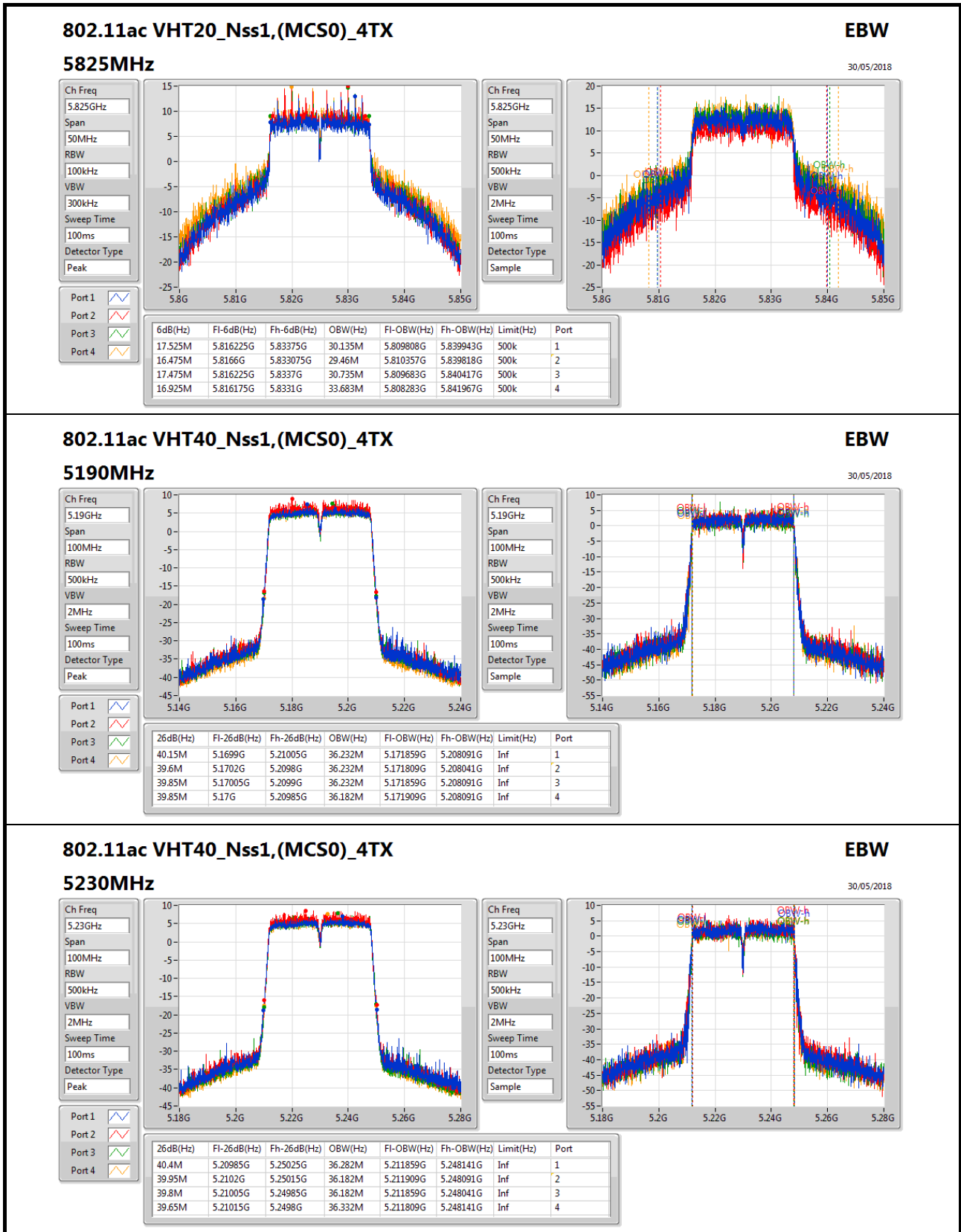


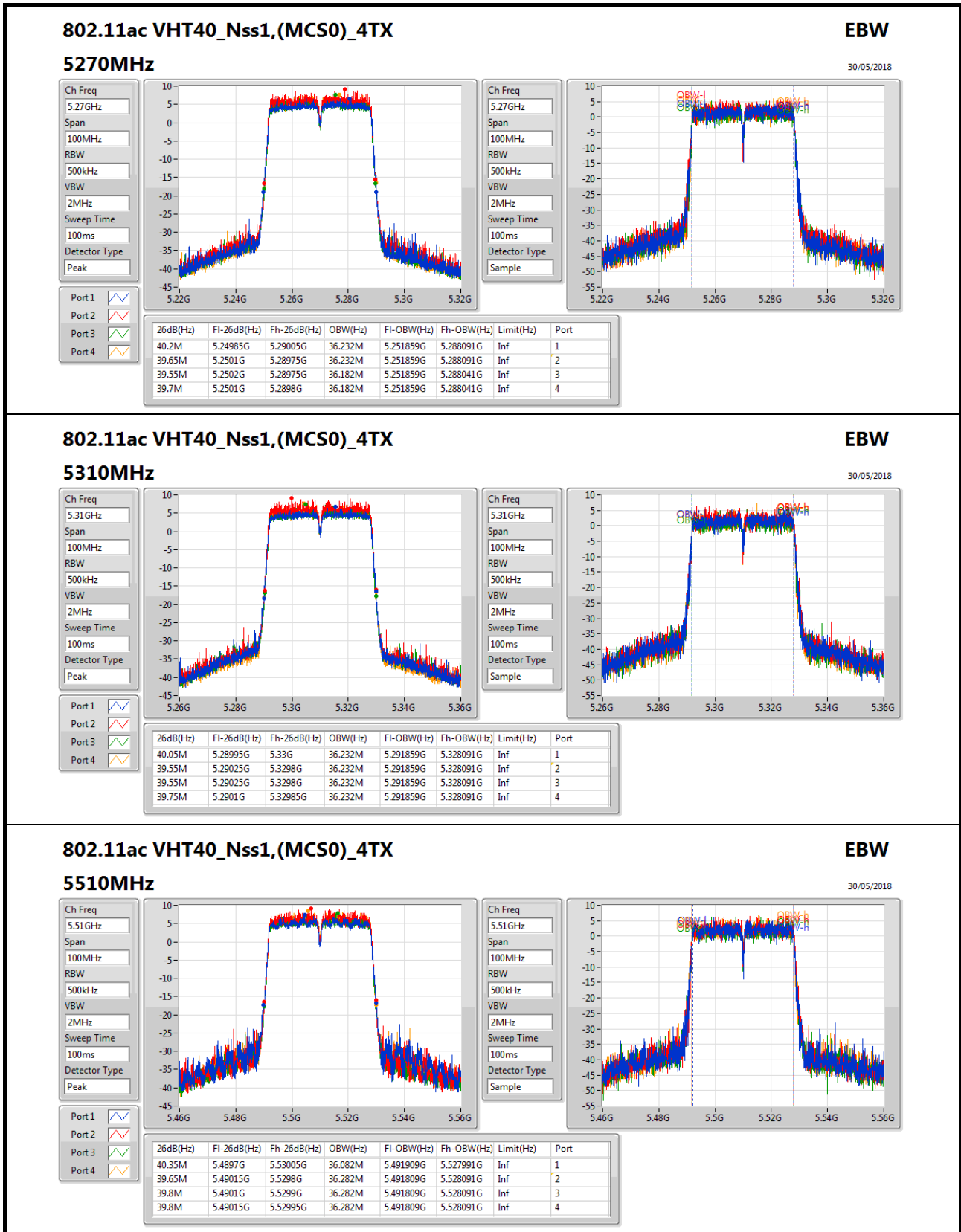











**802.11ac VHT40\_Nss1,(MCS0)\_4TX**
**EBW**

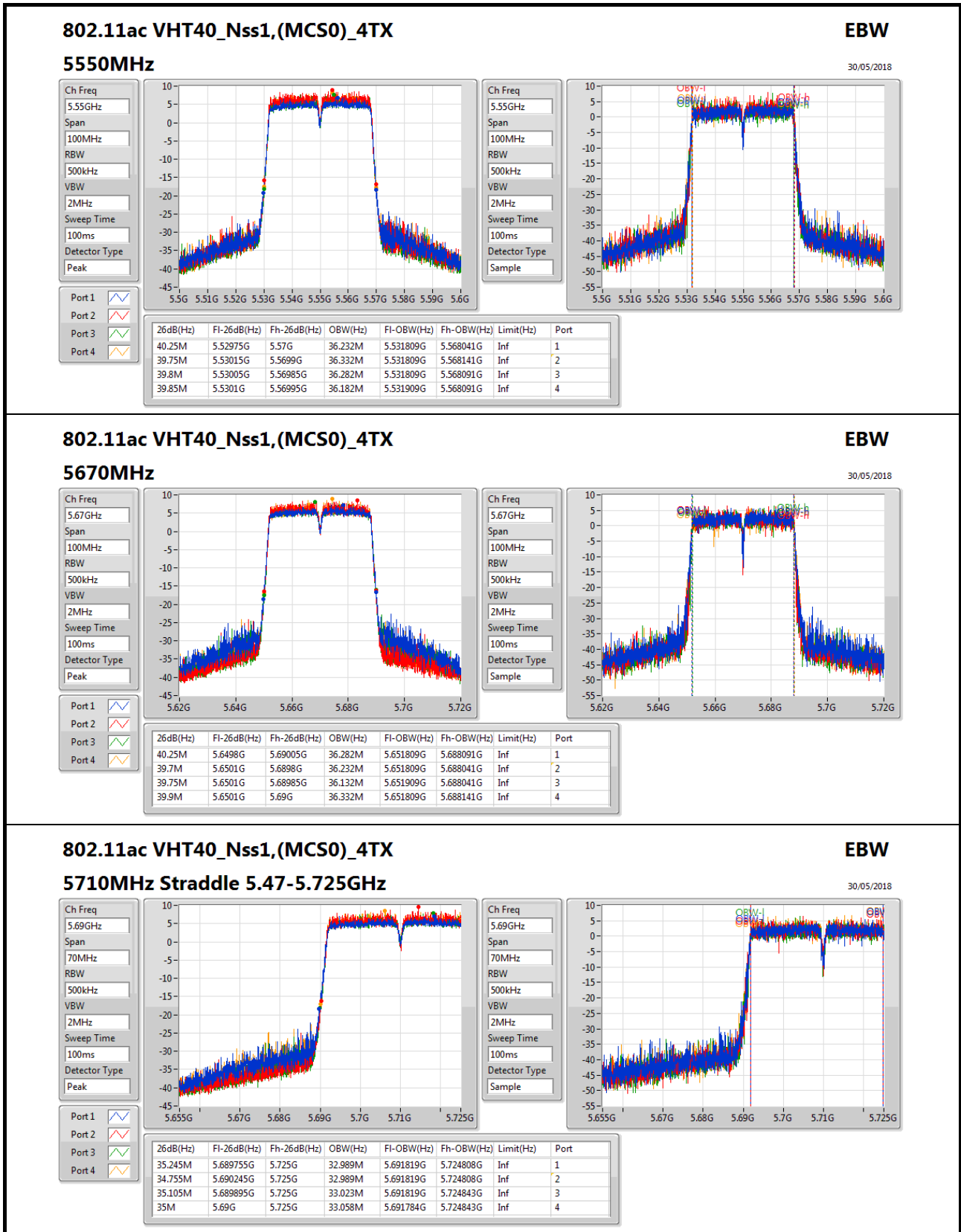
30/05/2018

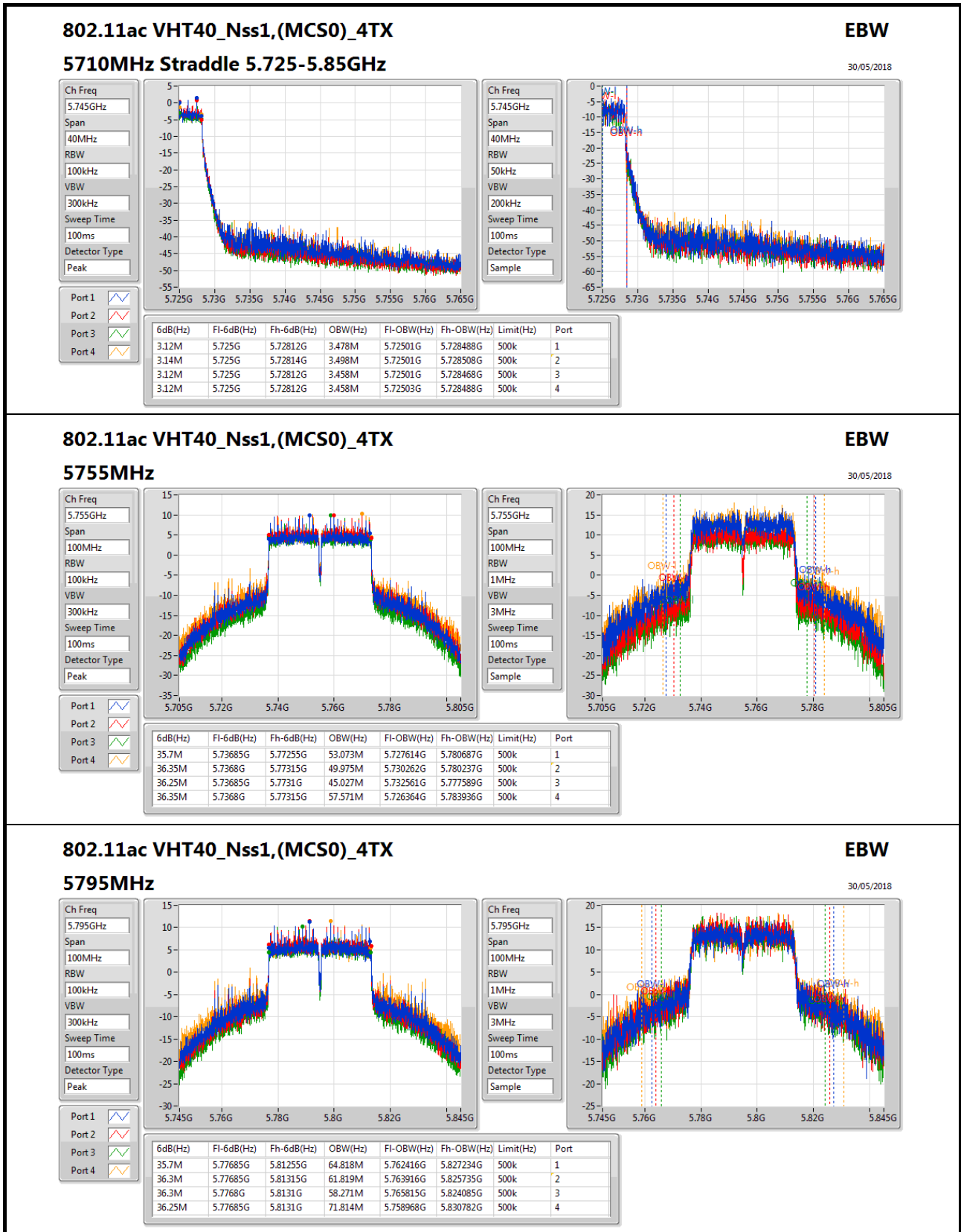
**5510MHz**

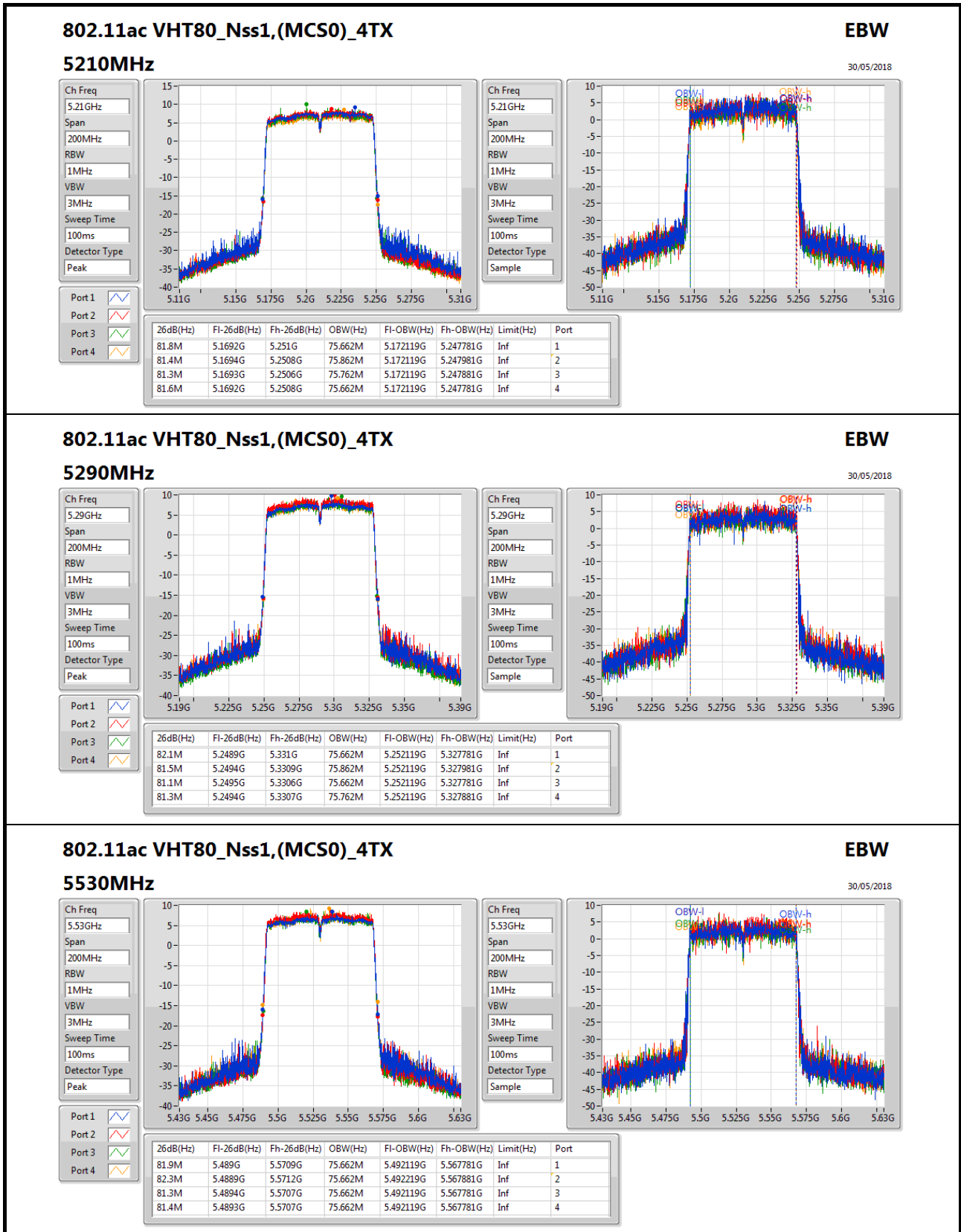
Ch Freq: 5.51GHz  
Span: 100MHz  
RBW: 500kHz  
VBW: 2MHz  
Sweep Time: 100ms  
Detector Type: Peak

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

26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
40.35M	5.4897G	5.53005G	36.082M	5.491909G	5.527991G	Inf	1
39.65M	5.49015G	5.5298G	36.282M	5.491809G	5.528091G	Inf	2
39.8M	5.4901G	5.5299G	36.282M	5.491809G	5.528091G	Inf	3
39.8M	5.49015G	5.52995G	36.282M	5.491809G	5.528091G	Inf	4






**802.11ac VHT80\_Nss1,(MCS0)\_4TX**
**EBW**

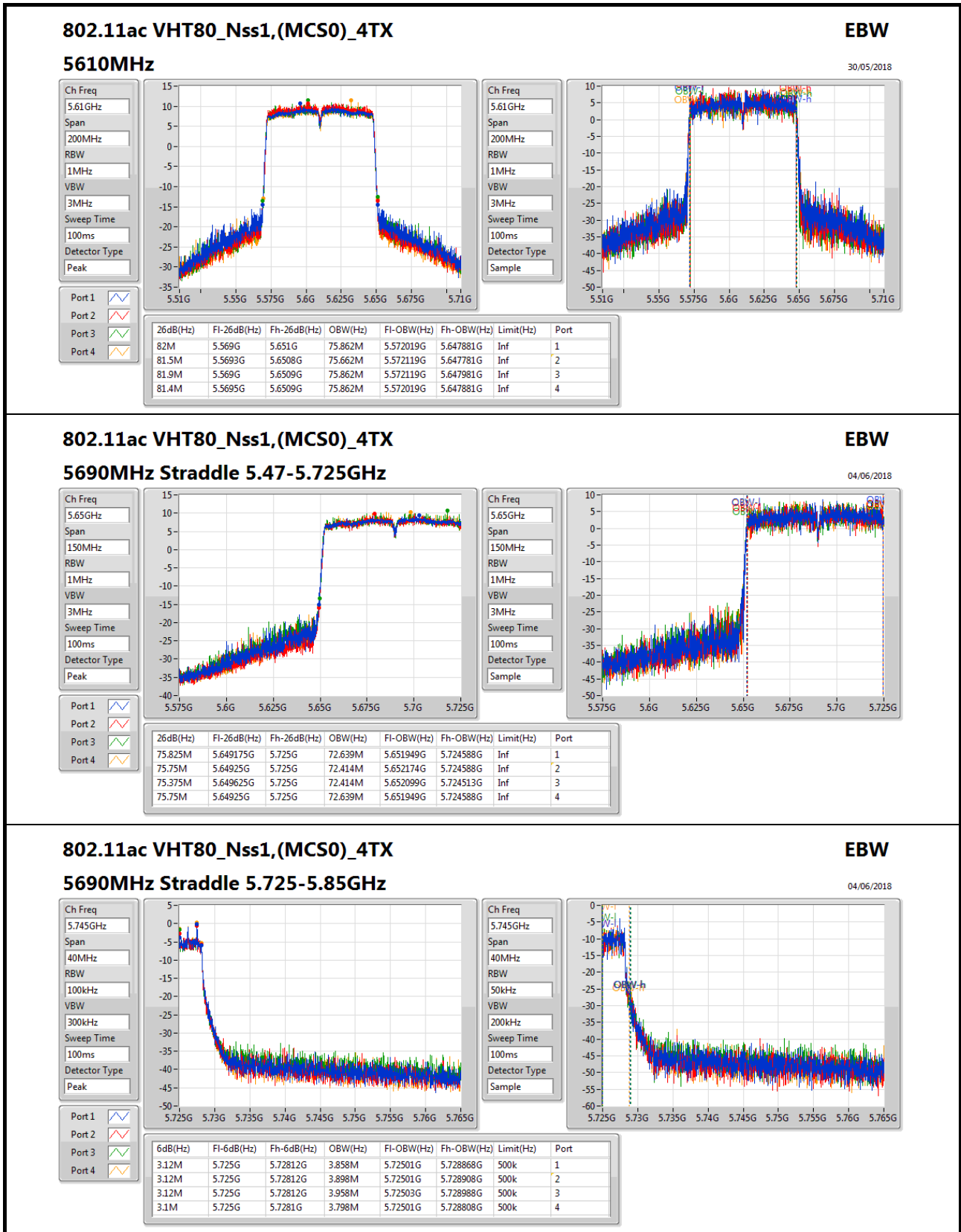
30/05/2018

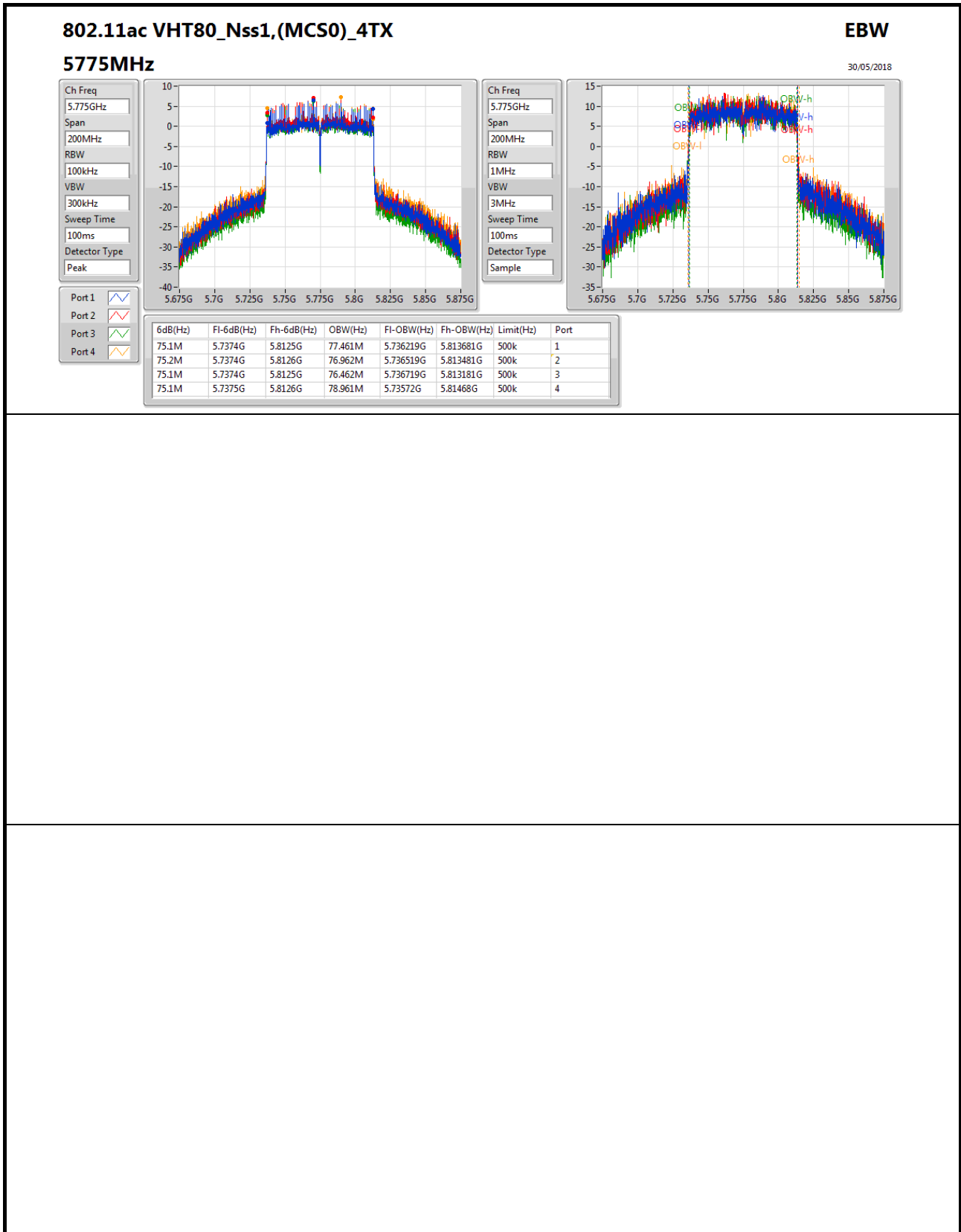
**5530MHz**

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

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

26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
81.9M	5.489G	5.5709G	75.662M	5.492119G	5.567781G	Inf	1
82.3M	5.4889G	5.5712G	75.662M	5.492219G	5.567881G	Inf	2
81.3M	5.4894G	5.5707G	75.662M	5.492119G	5.567781G	Inf	3
81.4M	5.4893G	5.5707G	75.662M	5.492119G	5.567781G	Inf	4







Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	21.875M	17.841M	17M8D1D	21.65M	17.716M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	40.25M	36.232M	36M2D1D	39.75M	36.132M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	82.7M	75.862M	75M9D1D	80.8M	75.562M
5.25-5.35GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	21.9M	17.816M	17M8D1D	21.6M	17.691M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	40.2M	36.332M	36M3D1D	39.75M	36.182M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	81.6M	75.762M	75M8D1D	80.5M	75.562M
5.47-5.725GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	22.025M	17.766M	17M8D1D	15.795M	13.883M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	40.75M	36.282M	36M3D1D	34.965M	32.919M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	82.2M	75.962M	76M0D1D	75.075M	72.339M
5.725-5.85GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	17.55M	23.963M	24M0D1D	3.74M	4.118M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	36.3M	50.475M	50M5D1D	3.12M	3.478M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	75.6M	76.562M	76M6D1D	3.12M	3.518M

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

**Max-OBW** = Maximum 99% occupied bandwidth;

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

**Min-OBW** = Minimum 99% occupied bandwidth;



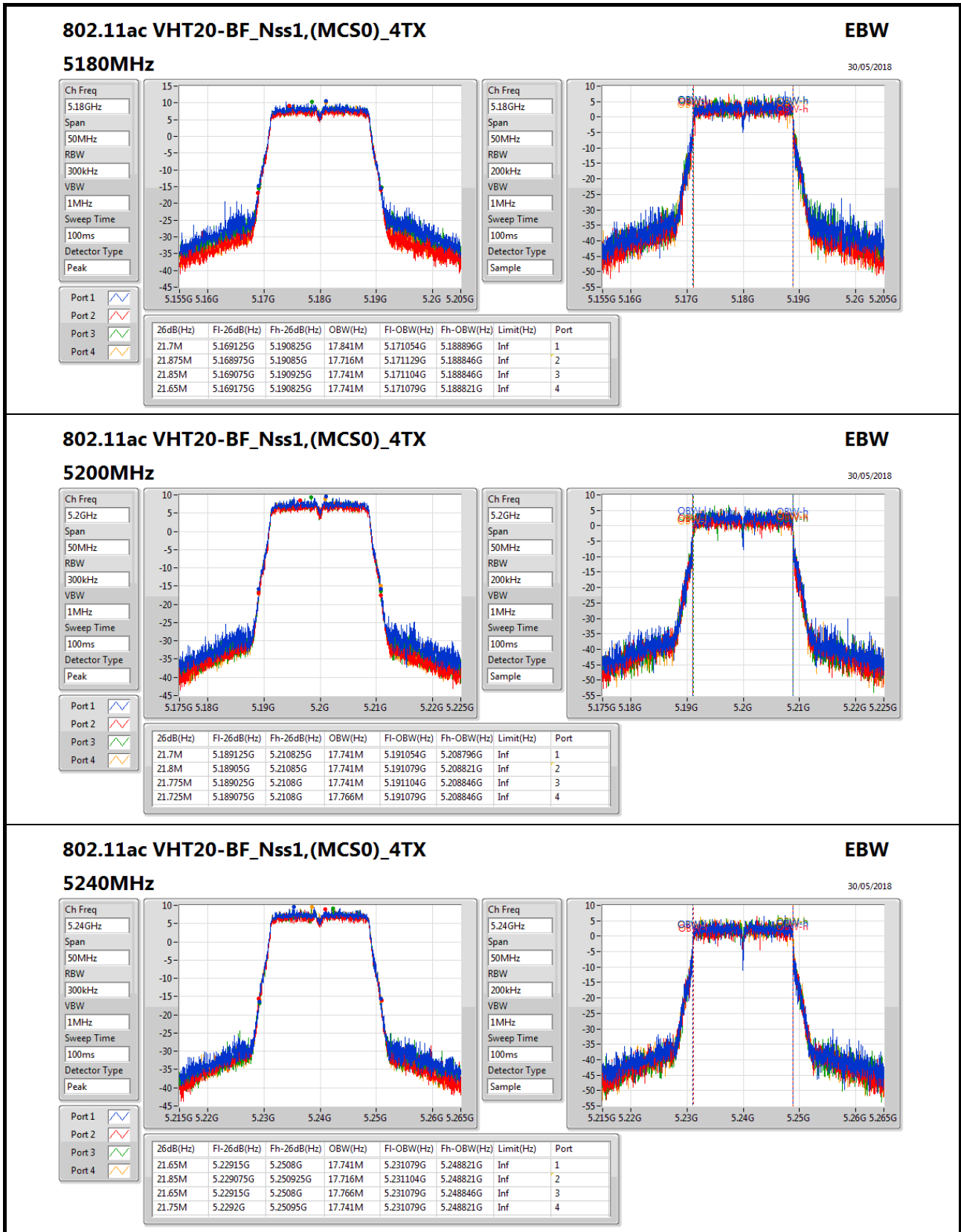


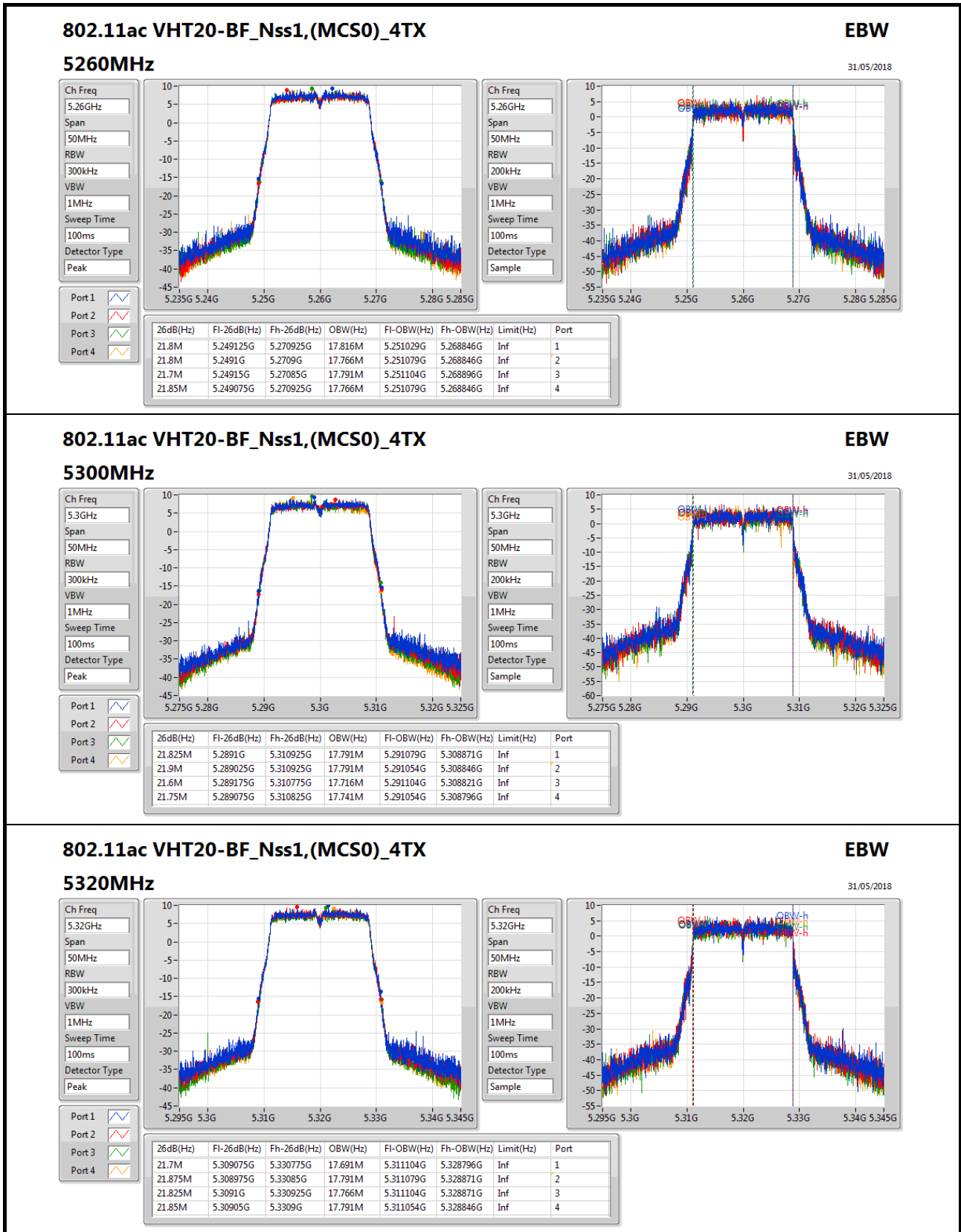
Result

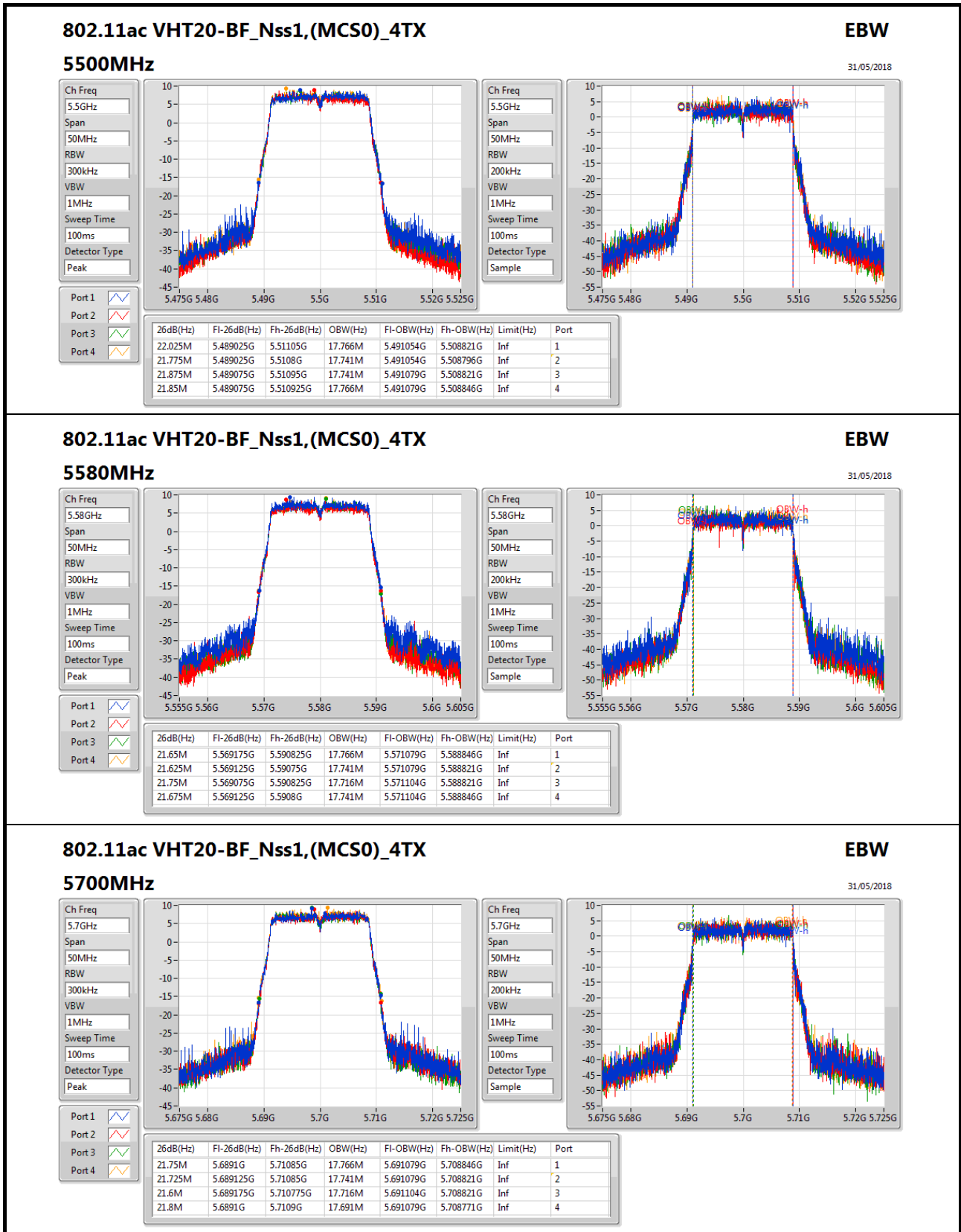
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz_TnomVnom	Pass	Inf	21.7M	17.841M	21.875M	17.716M	21.85M	17.741M	21.65M	17.741M
5200MHz_TnomVnom	Pass	Inf	21.7M	17.741M	21.8M	17.741M	21.775M	17.741M	21.725M	17.766M
5240MHz_TnomVnom	Pass	Inf	21.65M	17.741M	21.85M	17.716M	21.65M	17.766M	21.75M	17.741M
5260MHz_TnomVnom	Pass	Inf	21.8M	17.816M	21.8M	17.766M	21.7M	17.791M	21.85M	17.766M
5300MHz_TnomVnom	Pass	Inf	21.825M	17.791M	21.9M	17.791M	21.6M	17.716M	21.75M	17.741M
5320MHz_TnomVnom	Pass	Inf	21.7M	17.691M	21.875M	17.791M	21.825M	17.766M	21.85M	17.791M
5500MHz_TnomVnom	Pass	Inf	22.025M	17.766M	21.775M	17.741M	21.875M	17.741M	21.85M	17.766M
5580MHz_TnomVnom	Pass	Inf	21.65M	17.766M	21.625M	17.741M	21.75M	17.716M	21.675M	17.741M
5700MHz_TnomVnom	Pass	Inf	21.75M	17.766M	21.725M	17.741M	21.6M	17.716M	21.8M	17.691M
5720MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	Inf	15.87M	13.883M	15.795M	13.928M	15.825M	13.928M	15.81M	13.913M
5720MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	500k	3.76M	4.158M	3.76M	4.118M	3.74M	4.198M	3.76M	4.178M
5745MHz_TnomVnom	Pass	500k	17.3M	22.739M	17.15M	22.839M	17.525M	22.114M	17.15M	23.388M
5785MHz_TnomVnom	Pass	500k	17.525M	23.013M	17.3M	22.714M	16.775M	22.789M	17.55M	22.864M
5825MHz_TnomVnom	Pass	500k	17.175M	23.338M	17.15M	22.764M	17.525M	23.788M	17.55M	23.963M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz_TnomVnom	Pass	Inf	39.85M	36.232M	40.1M	36.232M	40.05M	36.132M	40.25M	36.232M
5230MHz_TnomVnom	Pass	Inf	40M	36.182M	39.9M	36.232M	39.75M	36.232M	39.95M	36.232M
5270MHz_TnomVnom	Pass	Inf	40.2M	36.232M	39.95M	36.232M	39.85M	36.232M	40.05M	36.232M
5310MHz_TnomVnom	Pass	Inf	39.95M	36.182M	39.75M	36.232M	39.95M	36.232M	39.75M	36.332M
5510MHz_TnomVnom	Pass	Inf	40.1M	36.182M	40M	36.282M	39.95M	36.182M	40.25M	36.232M
5550MHz_TnomVnom	Pass	Inf	40.75M	36.282M	40.3M	36.282M	40.4M	36.282M	40M	36.232M
5670MHz_TnomVnom	Pass	Inf	40.15M	36.232M	40M	36.282M	39.6M	36.182M	39.75M	36.282M
5710MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	Inf	35.595M	33.023M	35.945M	32.919M	34.965M	33.023M	35.14M	33.023M
5710MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	500k	3.12M	3.518M	3.2M	3.498M	3.12M	3.478M	3.12M	3.478M
5755MHz_TnomVnom	Pass	500k	35.4M	48.926M	34.4M	44.628M	35.9M	43.328M	35M	49.575M
5795MHz_TnomVnom	Pass	500k	31.3M	50.475M	32.5M	45.827M	36.3M	43.978M	35.05M	48.826M
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz_TnomVnom	Pass	Inf	82.7M	75.562M	82.1M	75.662M	82.3M	75.862M	80.8M	75.762M
5290MHz_TnomVnom	Pass	Inf	80.5M	75.662M	81.6M	75.562M	81.4M	75.762M	80.8M	75.762M
5530MHz_TnomVnom	Pass	Inf	81.5M	75.562M	82.2M	75.762M	80.6M	75.662M	82.1M	75.762M
5610MHz_TnomVnom	Pass	Inf	80.7M	75.662M	80.3M	75.662M	80.7M	75.962M	80.6M	75.662M
5690MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	Inf	75.975M	72.339M	75.975M	72.414M	75.075M	72.339M	75.9M	72.414M
5690MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	500k	3.18M	3.658M	3.22M	3.738M	3.14M	3.658M	3.12M	3.518M
5775MHz_TnomVnom	Pass	500k	75.4M	76.462M	75.3M	76.162M	75.3M	76.062M	75.6M	76.562M

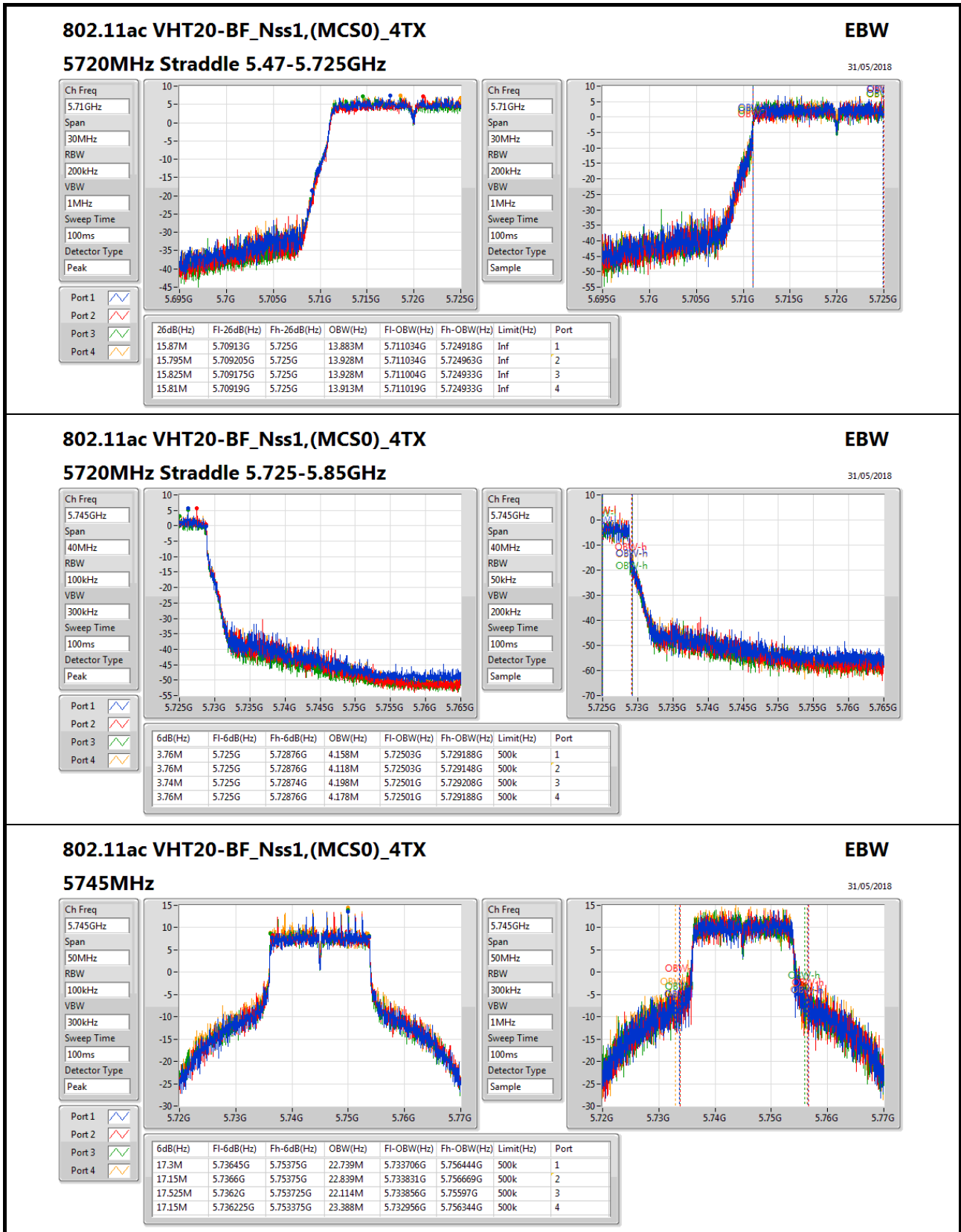
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band

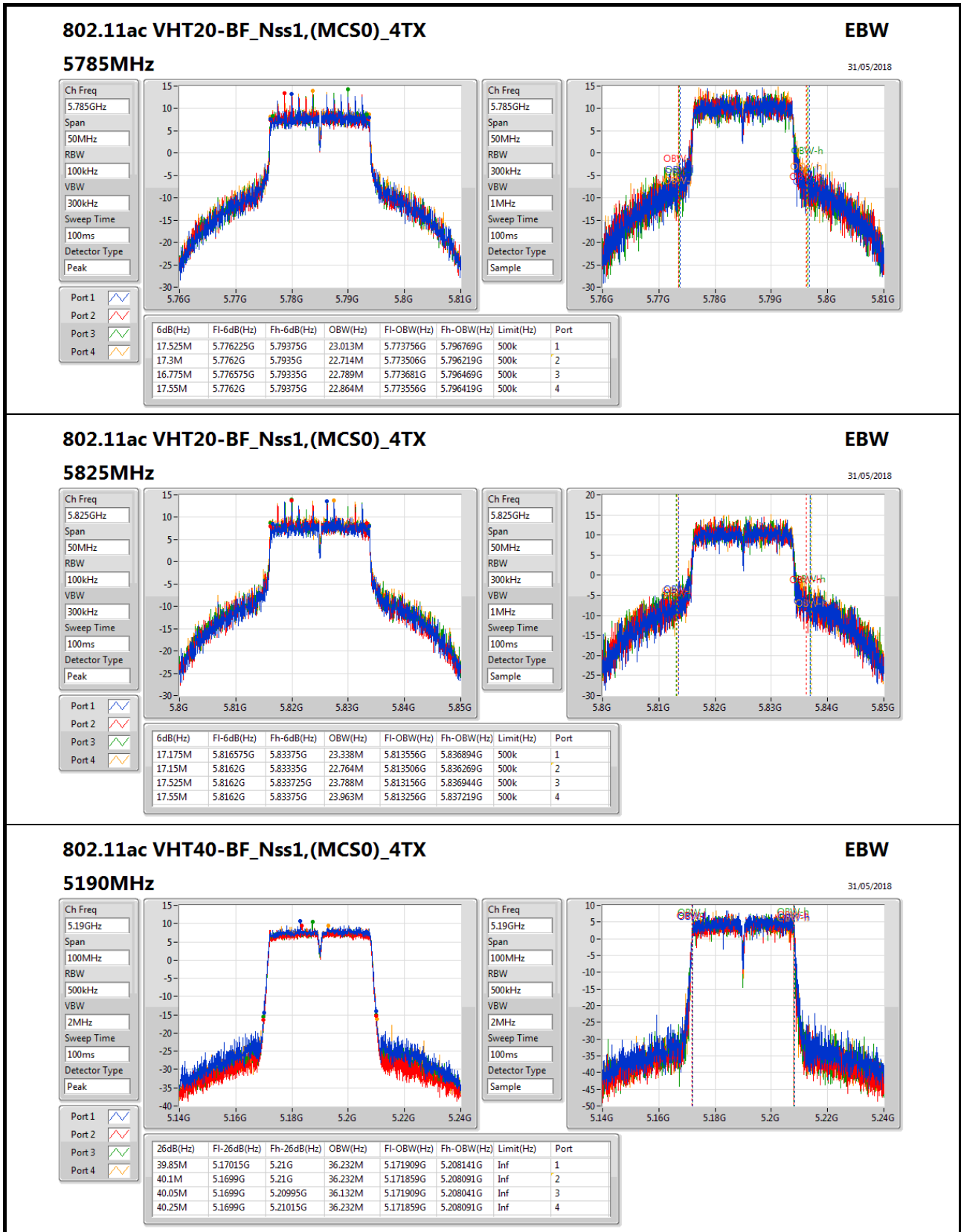
Port X-OBW = Port X 99% occupied bandwidth;










**802.11ac VHT40-BF\_Nss1,(MCS0)\_4TX**
**EBW**

31/05/2018

**5190MHz**

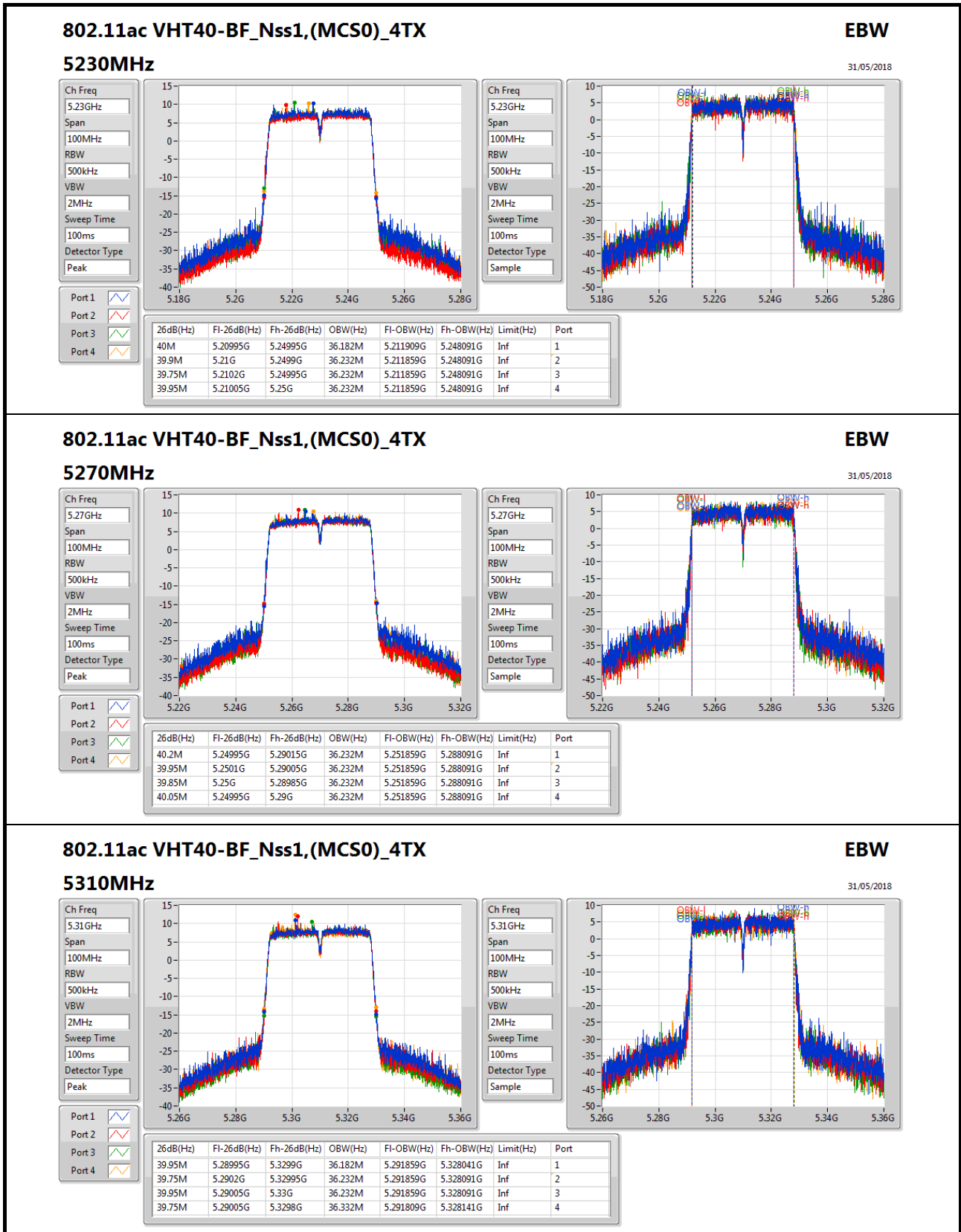
Ch Freq: 5.19GHz  
Span: 100MHz  
RBW: 500kHz  
VBW: 2MHz  
Sweep Time: 100ms  
Detector Type: Peak

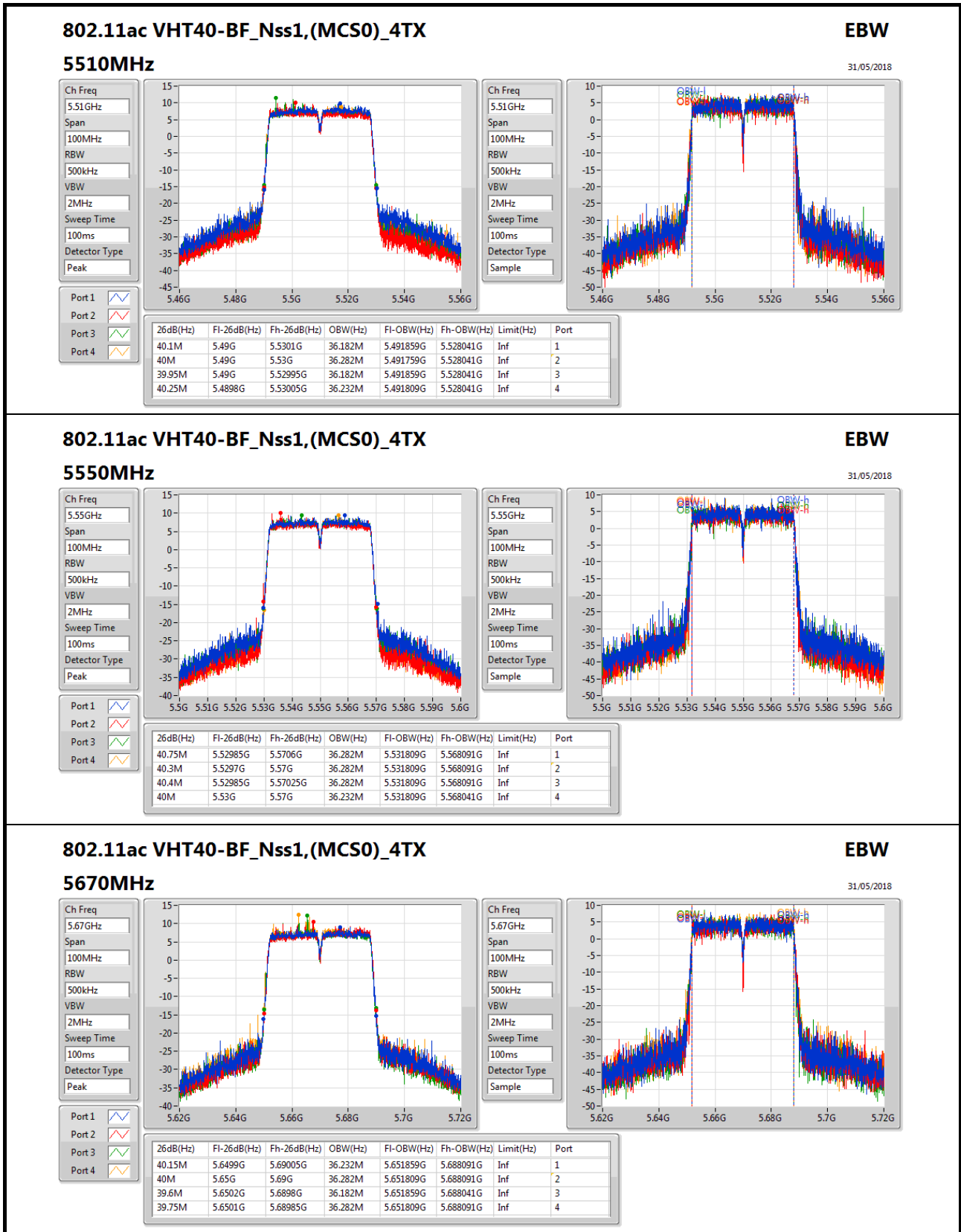


Ch Freq: 5.19GHz  
Span: 100MHz  
RBW: 500kHz  
VBW: 2MHz  
Sweep Time: 100ms  
Detector Type: Sample



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
39.85M	5.17015G	5.21G	36.232M	5.171909G	5.208141G	Inf	1
40.1M	5.1699G	5.21G	36.232M	5.171859G	5.208091G	Inf	2
40.05M	5.1699G	5.20995G	36.132M	5.171909G	5.208041G	Inf	3
40.25M	5.1699G	5.21015G	36.232M	5.171859G	5.208091G	Inf	4




**802.11ac VHT40-BF\_Nss1,(MCS0)\_4TX**
**EBW**
**5670MHz**
31/05/2018

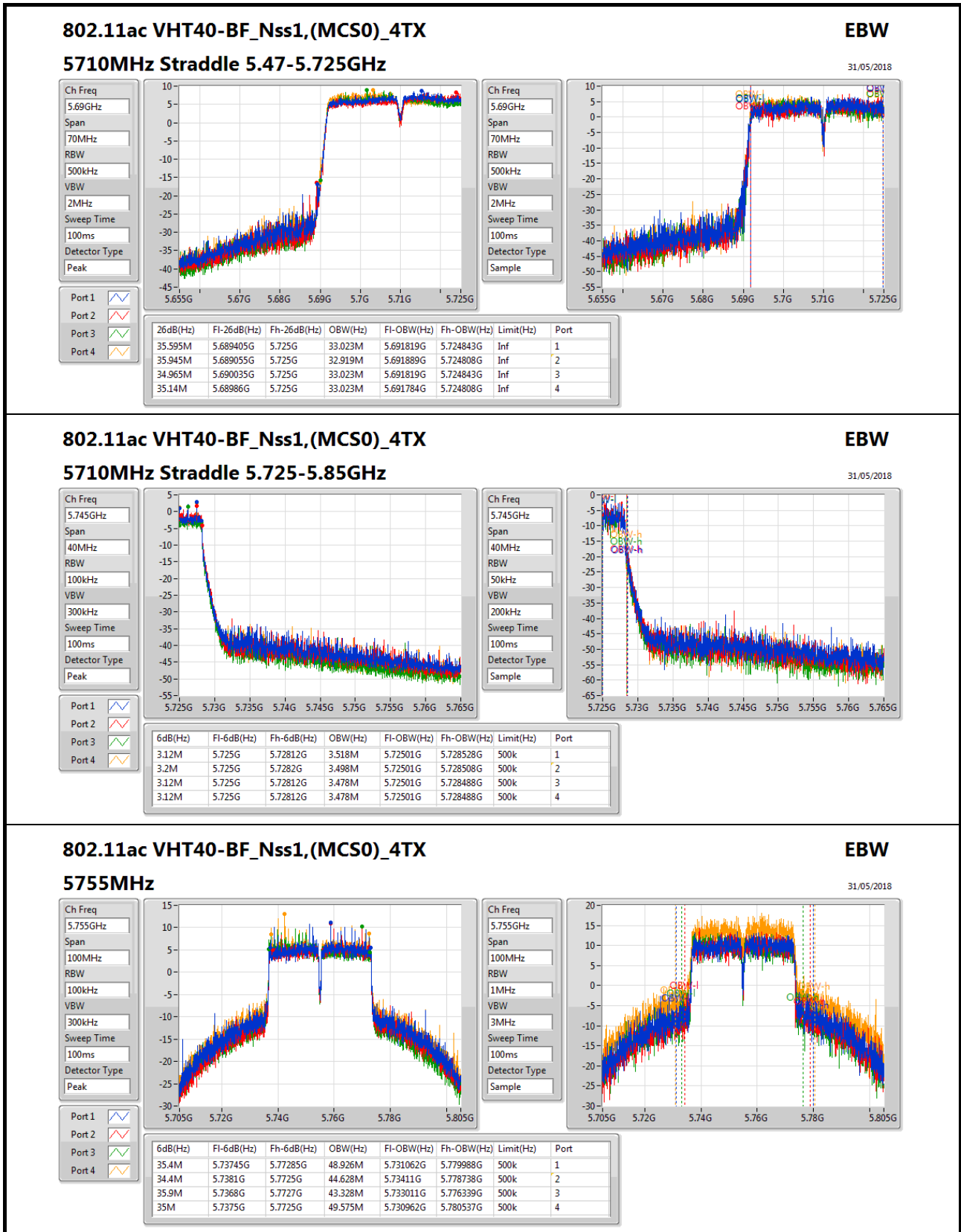
Ch Freq: 5.67GHz  
Span: 100MHz  
RBW: 500kHz  
VBW: 2MHz  
Sweep Time: 100ms  
Detector Type: Peak

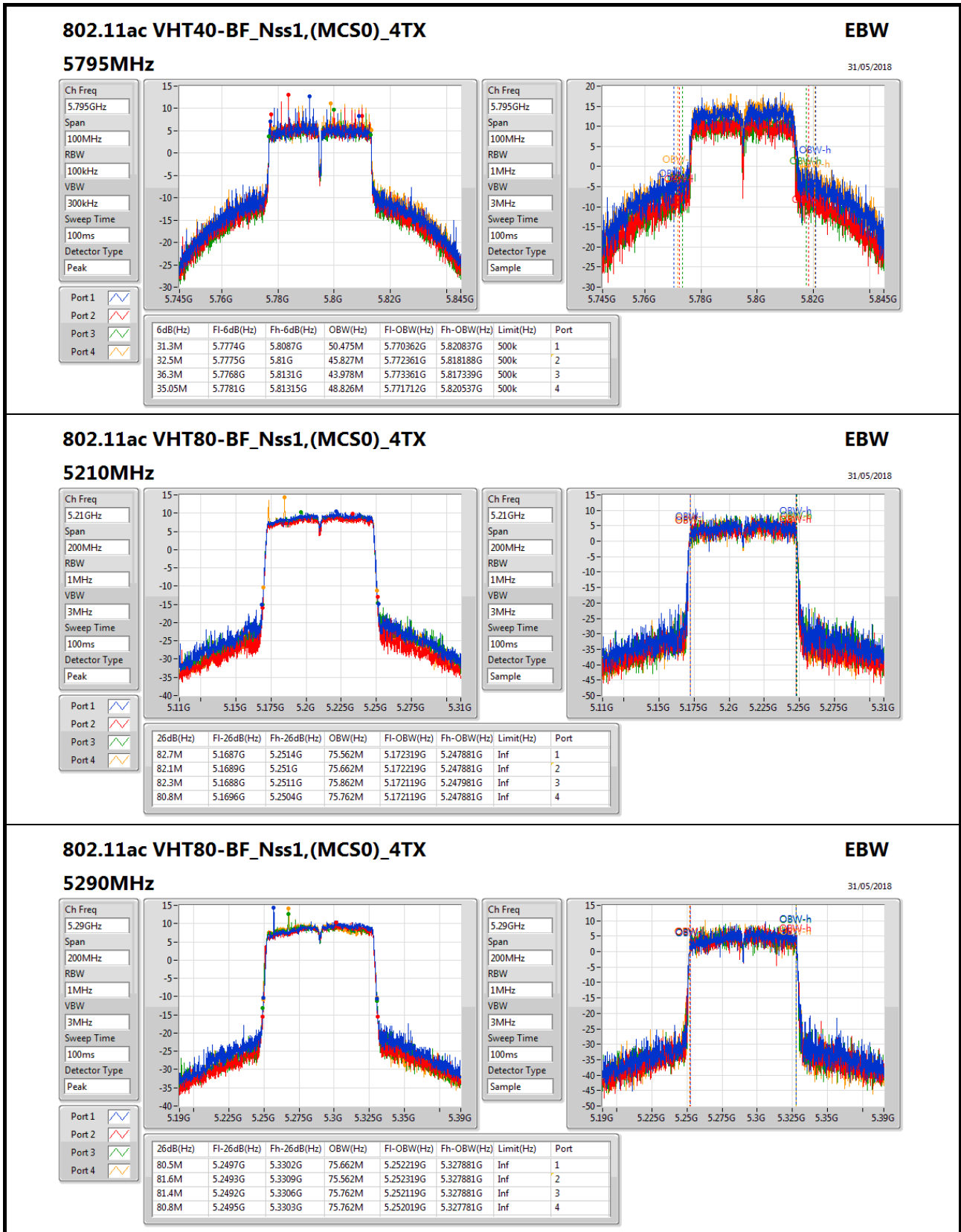
Port 1: [Waveform]  
Port 2: [Waveform]  
Port 3: [Waveform]  
Port 4: [Waveform]

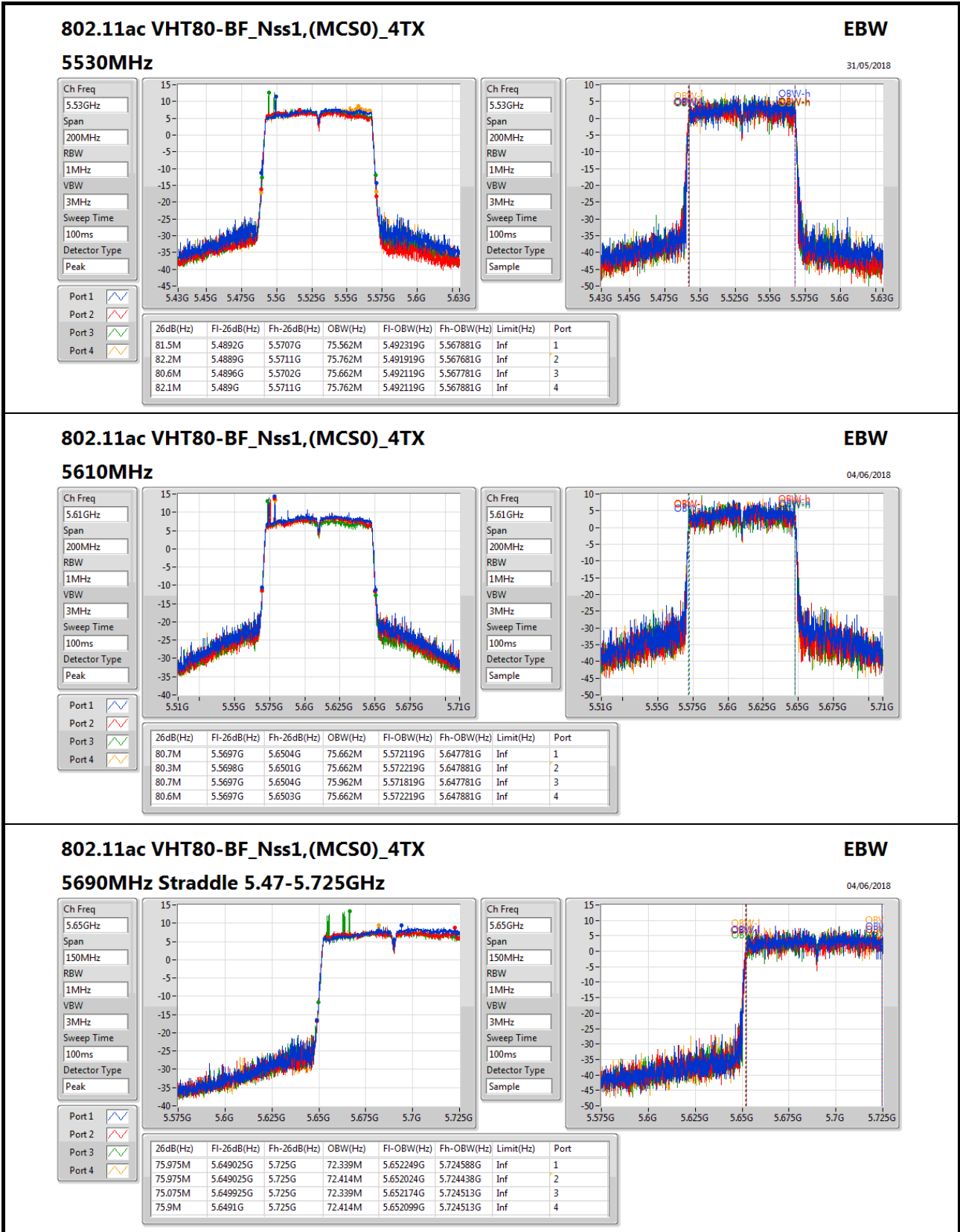
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
40.15M	5.6499G	5.69005G	36.232M	5.651859G	5.688091G	Inf	1
40M	5.65G	5.69G	36.282M	5.651809G	5.688091G	Inf	2
39.6M	5.6502G	5.6898G	36.182M	5.651859G	5.688041G	Inf	3
39.75M	5.6501G	5.68985G	36.282M	5.651809G	5.688091G	Inf	4

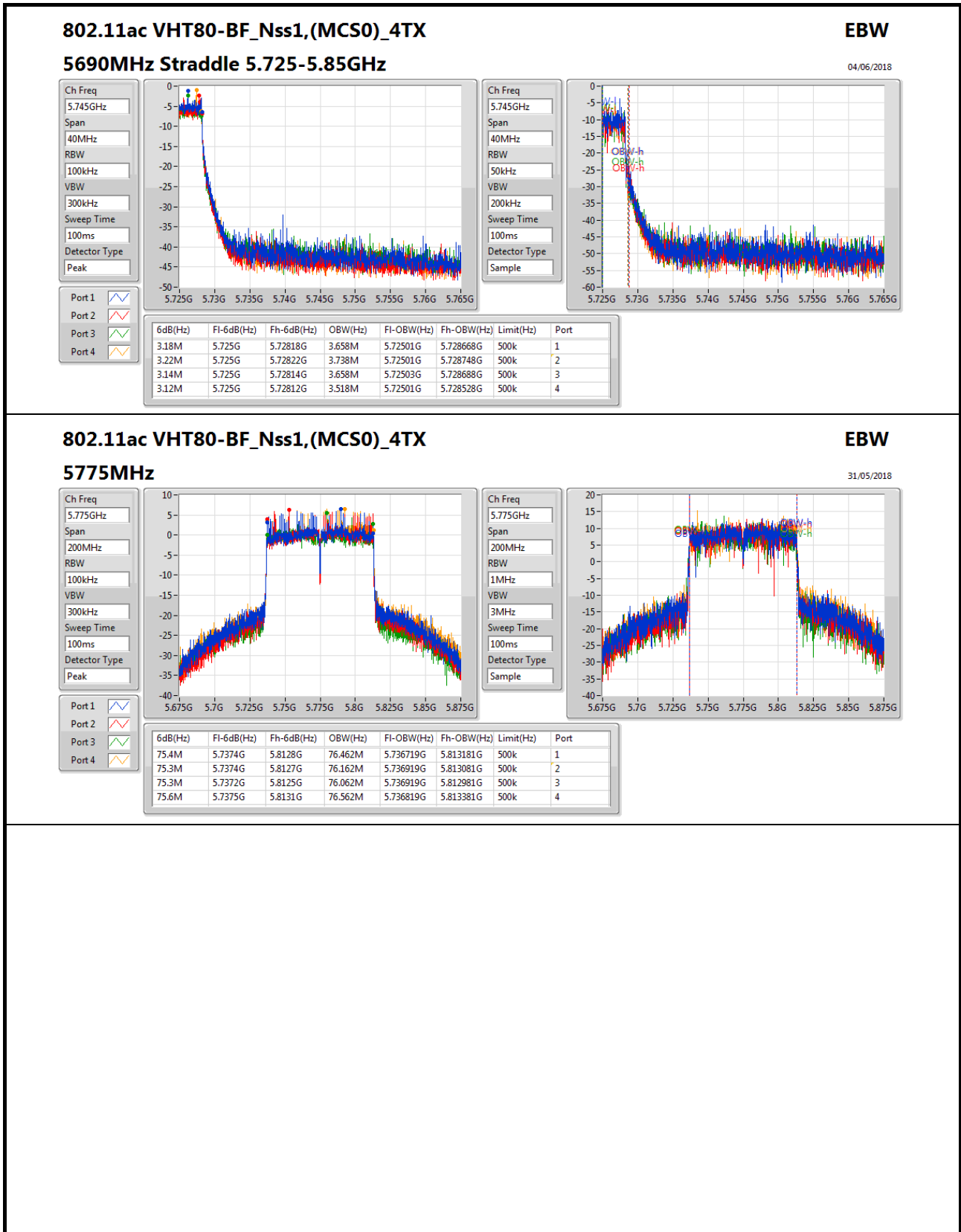
Ch Freq: 5.67GHz  
Span: 100MHz  
RBW: 500kHz  
VBW: 2MHz  
Sweep Time: 100ms  
Detector Type: Sample













Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.15-5.25GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	22.88	0.19409	27.70	0.58884
802.11ac VHT20_Nss1,(MCS0)_4TX	23.76	0.23768	28.58	0.72111
802.11ac VHT40_Nss1,(MCS0)_4TX	23.97	0.24946	28.79	0.75683
802.11ac VHT80_Nss1,(MCS0)_4TX	21.86	0.15346	26.68	0.46559
5.25-5.35GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	22.99	0.19907	28.09	0.64417
802.11ac VHT20_Nss1,(MCS0)_4TX	23.90	0.24547	29.00	0.79433
802.11ac VHT40_Nss1,(MCS0)_4TX	23.96	0.24889	29.06	0.80538
802.11ac VHT80_Nss1,(MCS0)_4TX	22.27	0.16866	27.37	0.54576
5.47-5.725GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	23.13	0.20559	27.74	0.59429
802.11ac VHT20_Nss1,(MCS0)_4TX	23.60	0.22909	28.21	0.66222
802.11ac VHT40_Nss1,(MCS0)_4TX	23.97	0.24946	28.58	0.72111
802.11ac VHT80_Nss1,(MCS0)_4TX	23.96	0.24889	28.57	0.71945
5.725-5.85GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	26.57	0.45394	31.08	1.28233
802.11ac VHT20_Nss1,(MCS0)_4TX	29.78	0.95060	34.29	2.68534
802.11ac VHT40_Nss1,(MCS0)_4TX	29.79	0.95280	34.30	2.69153
802.11ac VHT80_Nss1,(MCS0)_4TX	27.66	0.58345	32.17	1.64816



Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11a_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-
5180MHz_TnomVnom	Pass	4.82				21.99	21.99	24.00	26.81	30.00
5200MHz_TnomVnom	Pass	4.82				22.88	22.88	24.00	27.70	30.00
5240MHz_TnomVnom	Pass	4.82				22.67	22.67	24.00	27.49	30.00
5260MHz_TnomVnom	Pass	5.10				22.99	22.99	24.00	28.09	30.00
5300MHz_TnomVnom	Pass	5.10				22.75	22.75	24.00	27.85	30.00
5320MHz_TnomVnom	Pass	5.10				21.54	21.54	24.00	26.64	30.00
5500MHz_TnomVnom	Pass	4.61				22.70	22.70	24.00	27.31	30.00
5580MHz_TnomVnom	Pass	4.61				23.13	23.13	24.00	27.74	30.00
5700MHz_TnomVnom	Pass	4.61				20.44	20.44	24.00	25.05	30.00
5720MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	4.61				22.62	22.62	24.00	27.23	30.00
5720MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	4.51				16.71	16.71	30.00	21.22	36.00
5745MHz_TnomVnom	Pass	4.51				26.57	26.57	30.00	31.08	36.00
5785MHz_TnomVnom	Pass	4.51				26.46	26.46	30.00	30.97	36.00
5825MHz_TnomVnom	Pass	4.51				26.43	26.43	30.00	30.94	36.00
802.11ac_VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz_TnomVnom	Pass	4.82	17.25	16.84	17.25	16.77	23.05	24.00	27.87	30.00
5200MHz_TnomVnom	Pass	4.82	17.95	17.53	17.94	17.50	23.76	24.00	28.58	30.00
5240MHz_TnomVnom	Pass	4.82	17.76	17.45	17.85	17.70	23.71	24.00	28.53	30.00
5260MHz_TnomVnom	Pass	5.10	18.01	17.91	17.87	17.72	23.90	24.00	29.00	30.00
5300MHz_TnomVnom	Pass	5.10	18.03	17.98	17.72	17.65	23.87	24.00	28.97	30.00
5320MHz_TnomVnom	Pass	5.10	18.06	17.86	17.60	17.72	23.83	24.00	28.93	30.00
5500MHz_TnomVnom	Pass	4.61	17.79	17.25	17.52	17.73	23.60	24.00	28.21	30.00
5580MHz_TnomVnom	Pass	4.61	17.83	17.10	17.64	17.66	23.59	24.00	28.20	30.00
5700MHz_TnomVnom	Pass	4.61	17.63	17.37	17.49	17.65	23.56	24.00	28.17	30.00
5720MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	4.61	16.89	16.45	16.48	16.71	22.66	22.97	27.27	28.97
5720MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	4.51	11.09	10.87	11.04	11.16	17.06	30.00	21.57	36.00
5745MHz_TnomVnom	Pass	4.51	23.16	24.08	23.22	24.37	29.76	30.00	34.27	36.00
5785MHz_TnomVnom	Pass	4.51	23.52	24.22	23.73	23.55	29.78	30.00	34.29	36.00
5825MHz_TnomVnom	Pass	4.51	23.28	23.82	23.52	23.93	29.67	30.00	34.18	36.00
802.11ac_VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz_TnomVnom	Pass	4.82	16.44	16.28	16.75	16.86	22.61	24.00	27.43	30.00
5230MHz_TnomVnom	Pass	4.82	18.40	17.62	17.89	17.85	23.97	24.00	28.79	30.00
5270MHz_TnomVnom	Pass	5.10	18.39	17.75	17.79	17.78	23.96	24.00	29.06	30.00
5310MHz_TnomVnom	Pass	5.10	17.32	16.84	16.67	16.87	22.95	24.00	28.05	30.00
5510MHz_TnomVnom	Pass	4.61	15.82	16.11	15.48	15.87	21.85	24.00	26.46	30.00
5550MHz_TnomVnom	Pass	4.61	18.40	17.41	17.83	17.82	23.90	24.00	28.51	30.00
5670MHz_TnomVnom	Pass	4.61	18.17	17.70	17.82	18.08	23.97	24.00	28.58	30.00
5710MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	4.61	18.10	17.71	17.72	17.95	23.89	24.00	28.50	30.00
5710MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	4.51	8.22	7.47	7.48	7.90	13.80	30.00	18.31	36.00

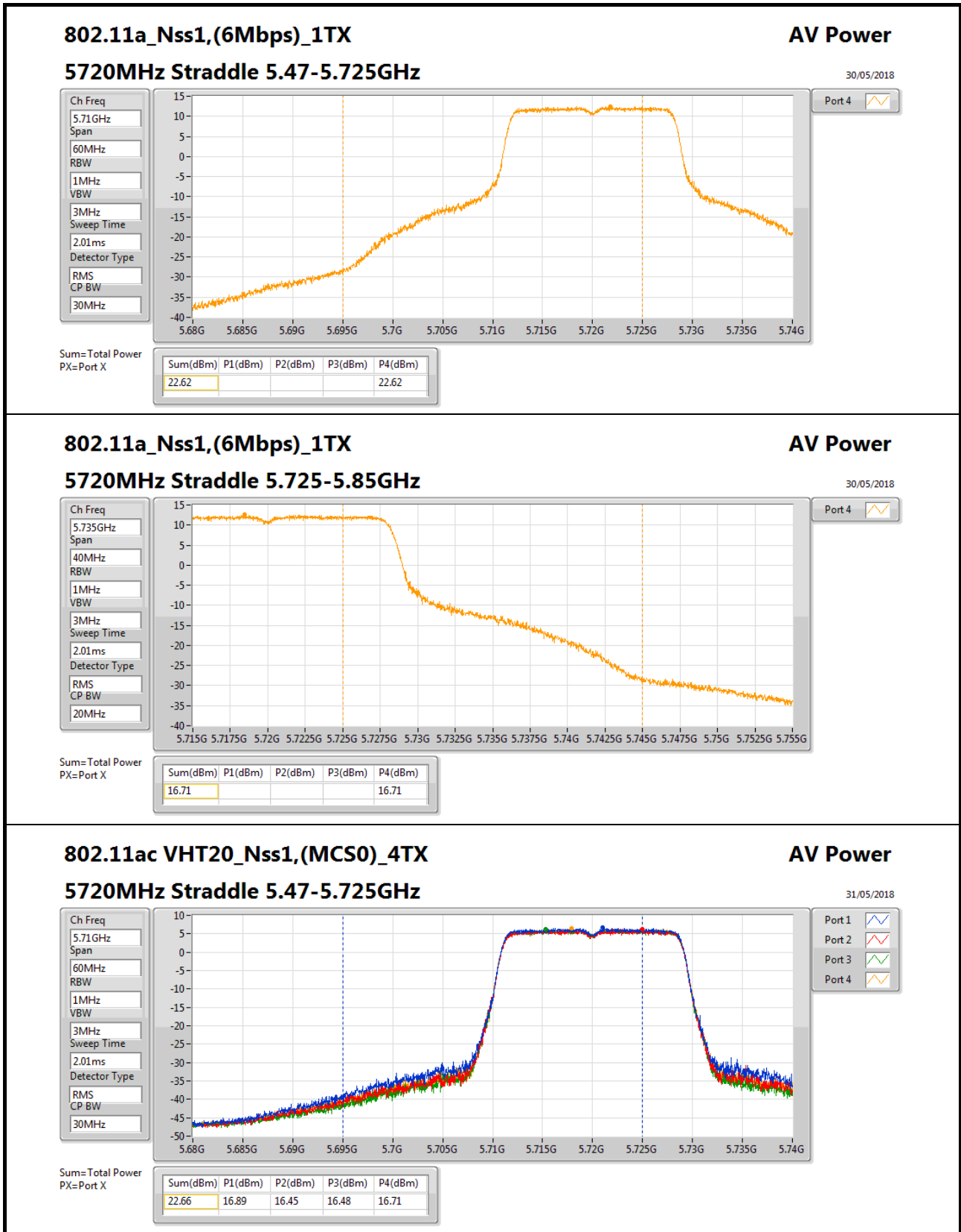


**Power Result\_Non-Beamforming**

**Appendix C.1**

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
5755MHz_TnomVnom	Pass	4.51	23.37	23.63	23.21	23.68	29.50	30.00	34.01	36.00
5795MHz_TnomVnom	Pass	4.51	23.71	24.07	23.51	23.75	29.79	30.00	34.30	36.00
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz_TnomVnom	Pass	4.82	16.18	16.07	15.84	15.19	21.86	24.00	26.68	30.00
5290MHz_TnomVnom	Pass	5.10	16.36	16.89	15.94	15.71	22.27	24.00	27.37	30.00
5530MHz_TnomVnom	Pass	4.61	15.80	16.21	15.46	15.42	21.75	24.00	26.36	30.00
5610MHz_TnomVnom	Pass	4.61	17.91	18.30	17.78	17.57	23.92	24.00	28.53	30.00
5690MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	4.61	18.08	17.98	17.81	17.88	23.96	24.00	28.57	30.00
5690MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	4.51	4.20	3.66	3.65	3.97	9.90	30.00	14.41	36.00
5775MHz_TnomVnom	Pass	4.51	21.43	21.86	21.22	22.01	27.66	30.00	32.17	36.00

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



### 802.11ac VHT20\_Nss1,(MCS0)\_4TX

#### 5720MHz Straddle 5.47-5.725GHz

### AV Power

31/05/2018

Ch Freq  
5.71GHz

Span  
60MHz

RBW  
1MHz

VBW  
3MHz

Sweep Time  
2.01ms

Detector Type  
RMS

CP BW  
30MHz

Port 1

Port 2

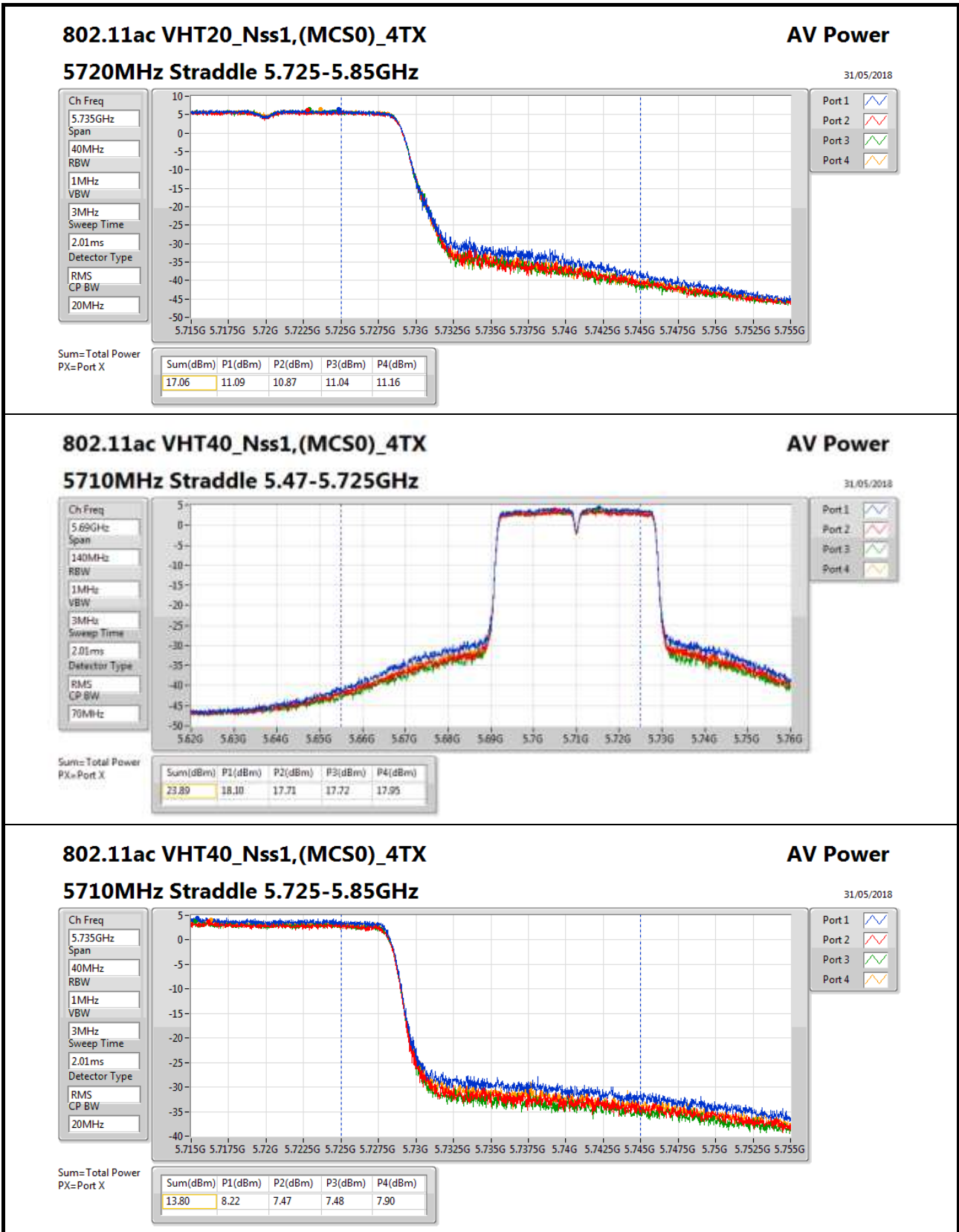
Port 3

Port 4

Sum=Total Power  
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
22.66	16.89	16.45	16.48	16.71





### 802.11ac VHT40\_Nss1,(MCS0)\_4TX

#### 5710MHz Straddle 5.725-5.85GHz

### AV Power

31/05/2018

Ch Freq  
5.735GHz

Span  
40MHz

RBW  
1MHz

VBW  
3MHz

Sweep Time  
2.01ms

Detector Type  
RMS

CP BW  
20MHz

Port 1

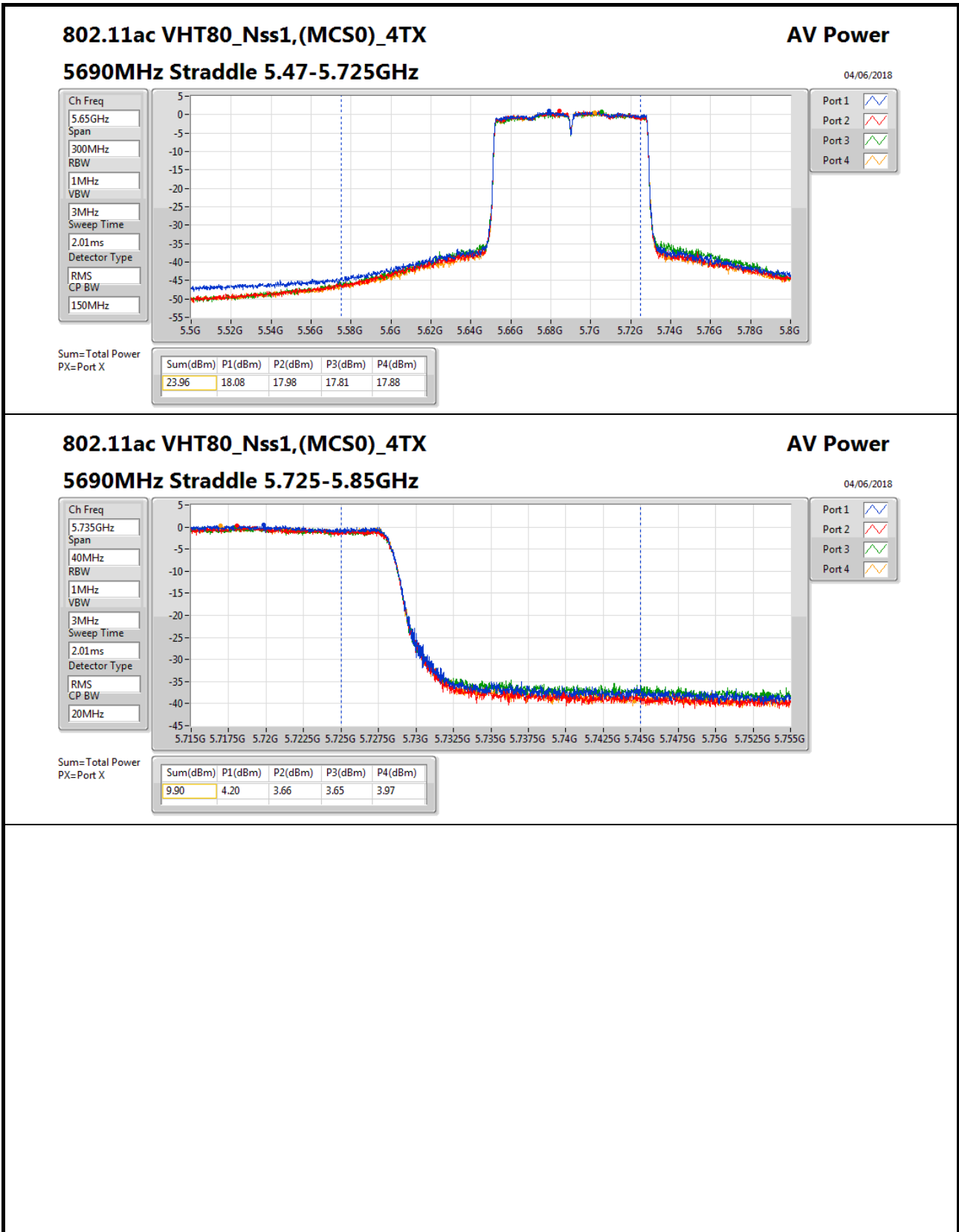
Port 2

Port 3

Port 4

Sum=Total Power  
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
13.80	8.22	7.47	7.48	7.90





**Summary**

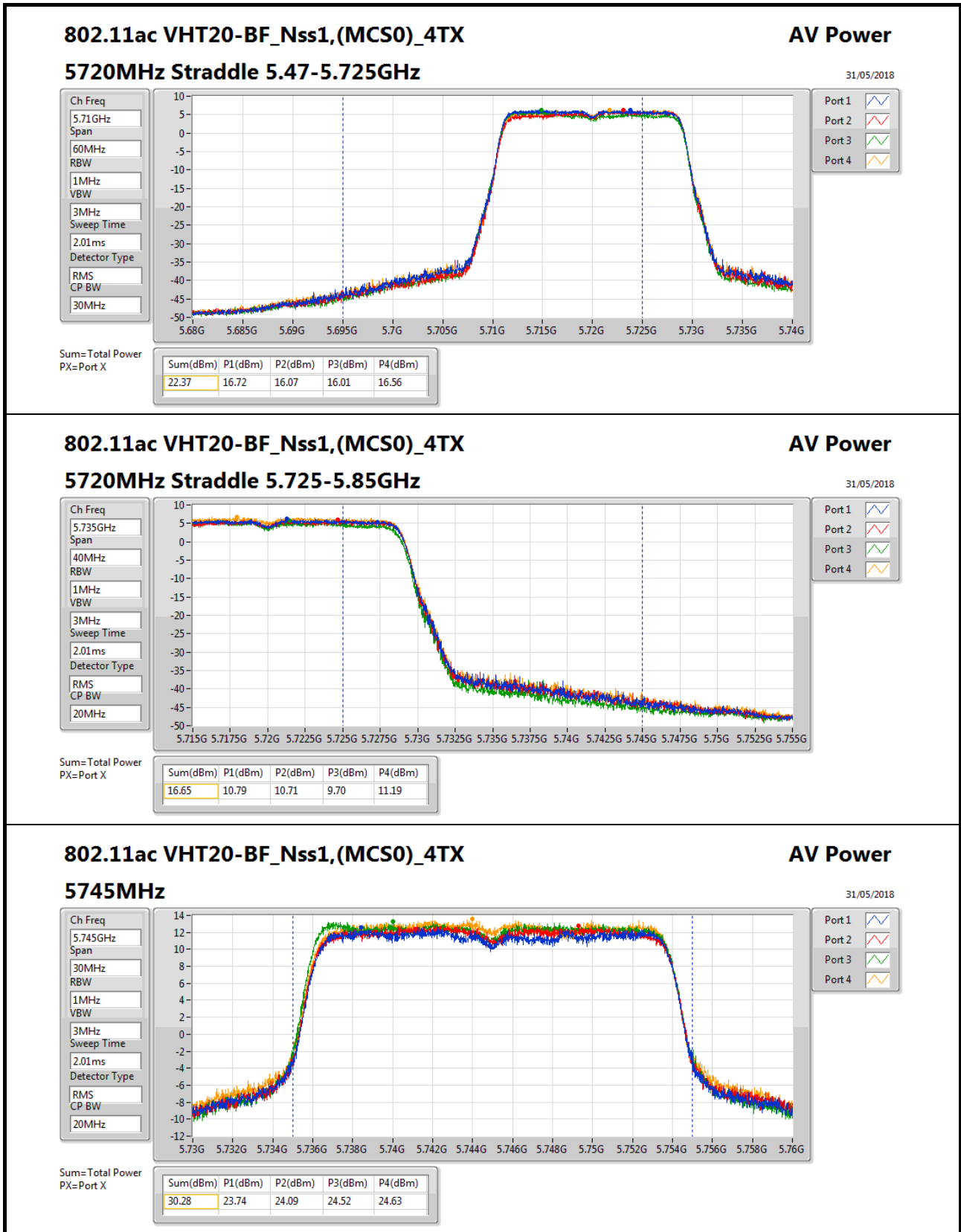
Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.15-5.25GHz	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	22.87	0.19364	29.17	0.82604
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	23.64	0.23121	29.94	0.98628
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	23.49	0.22336	29.79	0.95280
5.25-5.35GHz	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	22.78	0.18967	29.08	0.80910
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	23.68	0.23335	29.98	0.99541
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	23.46	0.22182	29.76	0.94624
5.47-5.725GHz	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	22.70	0.18621	29.30	0.85114
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	23.28	0.21281	29.88	0.97275
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	23.33	0.21528	29.93	0.98401
5.725-5.85GHz	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	29.05	0.80353	35.65	3.67282
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	29.34	0.85901	35.94	3.92645
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	28.04	0.63680	34.64	2.91072



Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz_TnomVnom	Pass	6.30	17.28	16.33	16.84	16.78	22.84	23.70	29.14	30.00
5200MHz_TnomVnom	Pass	6.30	17.32	16.50	16.70	16.82	22.87	23.70	29.17	30.00
5240MHz_TnomVnom	Pass	6.30	17.08	16.35	16.69	17.19	22.86	23.70	29.16	30.00
5260MHz_TnomVnom	Pass	6.30	16.58	16.75	16.55	16.37	22.59	23.70	28.89	30.00
5300MHz_TnomVnom	Pass	6.30	17.06	16.47	16.12	16.76	22.64	23.70	28.94	30.00
5320MHz_TnomVnom	Pass	6.30	16.99	16.97	16.48	16.57	22.78	23.70	29.08	30.00
5500MHz_TnomVnom	Pass	6.60	16.71	16.51	16.74	16.74	22.70	23.40	29.30	30.00
5580MHz_TnomVnom	Pass	6.60	17.10	16.05	16.50	16.67	22.62	23.40	29.22	30.00
5700MHz_TnomVnom	Pass	6.60	16.51	16.59	16.57	16.70	22.61	23.40	29.21	30.00
5720MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	6.60	16.72	16.07	16.01	16.56	22.37	22.39	28.97	28.99
5720MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	6.60	10.79	10.71	9.70	11.19	16.65	29.40	23.25	36.00
5745MHz_TnomVnom	Pass	6.60	23.34	22.92	22.72	23.10	29.05	29.40	35.65	36.00
5785MHz_TnomVnom	Pass	6.60	22.73	23.16	22.80	23.39	29.05	29.40	35.65	36.00
5825MHz_TnomVnom	Pass	6.60	22.96	23.07	22.82	23.20	29.04	29.40	35.64	36.00
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz_TnomVnom	Pass	6.30	18.11	17.35	17.52	17.47	23.64	23.70	29.94	30.00
5230MHz_TnomVnom	Pass	6.30	17.79	17.52	17.10	17.88	23.60	23.70	29.90	30.00
5270MHz_TnomVnom	Pass	6.30	17.80	17.48	17.62	17.74	23.68	23.70	29.98	30.00
5310MHz_TnomVnom	Pass	6.30	18.02	17.35	17.25	17.56	23.58	23.70	29.88	30.00
5510MHz_TnomVnom	Pass	6.60	17.42	16.70	17.52	17.35	23.28	23.40	29.88	30.00
5550MHz_TnomVnom	Pass	6.60	17.60	16.87	17.31	17.09	23.25	23.40	29.85	30.00
5670MHz_TnomVnom	Pass	6.60	17.07	17.12	17.18	17.58	23.26	23.40	29.86	30.00
5710MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	6.60	17.05	17.06	17.56	17.01	23.20	23.40	29.80	30.00
5710MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	6.60	7.00	7.48	7.25	7.14	13.24	29.40	19.84	36.00
5755MHz_TnomVnom	Pass	6.60	23.80	22.93	22.79	23.65	29.34	29.40	35.94	36.00
5795MHz_TnomVnom	Pass	6.60	23.22	22.13	23.14	23.58	29.07	29.40	35.67	36.00
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz_TnomVnom	Pass	6.30	17.88	17.03	17.42	17.52	23.49	23.70	29.79	30.00
5290MHz_TnomVnom	Pass	6.30	17.63	17.06	17.04	17.94	23.46	23.70	29.76	30.00
5530MHz_TnomVnom	Pass	6.60	15.78	15.29	15.08	15.70	21.49	23.40	28.09	30.00
5610MHz_TnomVnom	Pass	6.60	17.82	17.03	16.38	17.36	23.20	23.40	29.80	30.00
5690MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	6.60	17.69	17.19	16.98	17.35	23.33	23.40	29.93	30.00
5690MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	6.60	3.97	3.42	2.83	3.30	9.42	29.40	16.02	36.00
5775MHz_TnomVnom	Pass	6.60	22.15	21.79	21.72	22.39	28.04	29.40	34.64	36.00

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



**802.11ac VHT20-BF\_Nss1,(MCS0)\_4TX**

**5745MHz**

**AV Power**

31/05/2018

Ch Freq  
5.745GHz

Span  
30MHz

RBW  
1MHz

VBW  
3MHz

Sweep Time  
2.01ms

Detector Type  
RMS

CP BW  
20MHz

Port 1

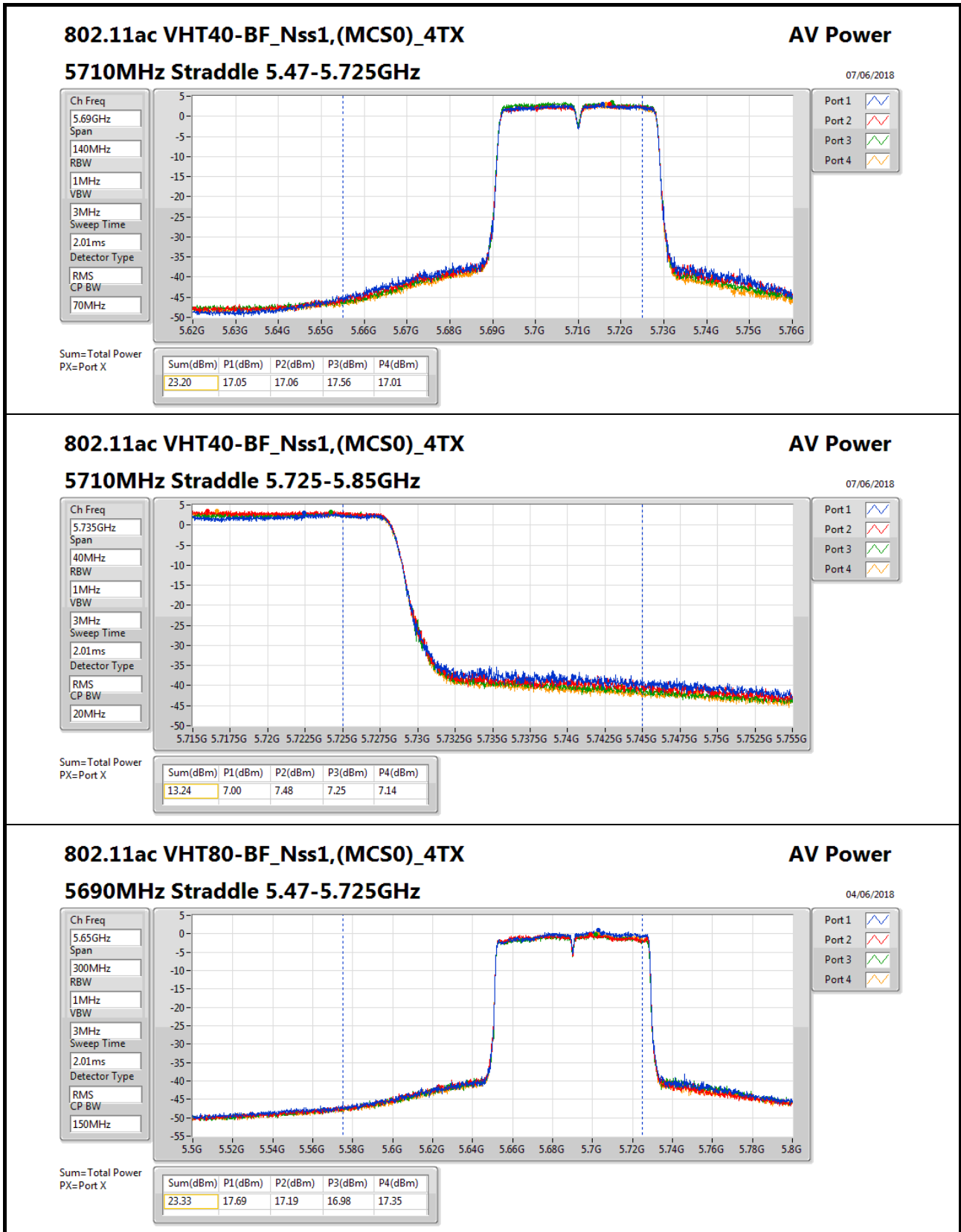
Port 2

Port 3

Port 4

Sum=Total Power  
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
30.28	23.74	24.09	24.52	24.63



**802.11ac VHT80-BF\_Nss1,(MCS0)\_4TX**

**5690MHz Straddle 5.47-5.725GHz**

**AV Power**

04/06/2018

Ch Freq  
5.65GHz

Span  
300MHz

RBW  
1MHz

VBW  
3MHz

Sweep Time  
2.01ms

Detector Type  
RMS

CP BW  
150MHz

Port 1

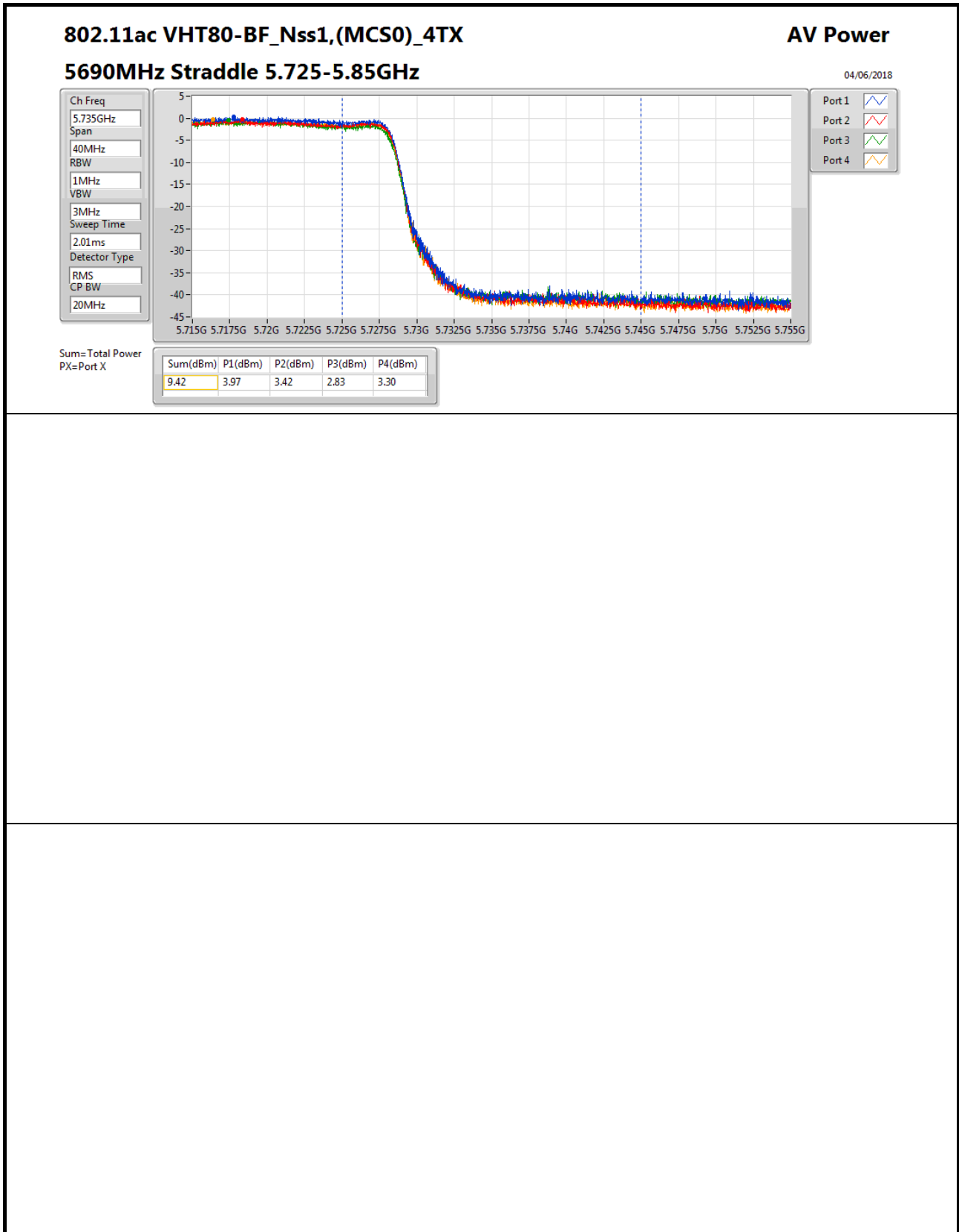
Port 2

Port 3

Port 4

Sum=Total Power  
PX=Port X

Sum(dBm)	P1(dBm)	P2(dBm)	P3(dBm)	P4(dBm)
23.33	17.69	17.19	16.98	17.35





Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
5.15-5.25GHz	-	-
802.11a_Nss1,(6Mbps)_1TX	10.92	15.74
802.11ac VHT20_Nss1,(MCS0)_4TX	10.55	16.85
802.11ac VHT40_Nss1,(MCS0)_4TX	7.78	14.08
802.11ac VHT80_Nss1,(MCS0)_4TX	4.17	10.47
5.25-5.35GHz	-	-
802.11a_Nss1,(6Mbps)_1TX	10.99	16.09
802.11ac VHT20_Nss1,(MCS0)_4TX	10.68	16.98
802.11ac VHT40_Nss1,(MCS0)_4TX	7.67	13.97
802.11ac VHT80_Nss1,(MCS0)_4TX	4.47	10.77
5.47-5.725GHz	-	-
802.11a_Nss1,(6Mbps)_1TX	10.99	15.60
802.11ac VHT20_Nss1,(MCS0)_4TX	10.37	16.97
802.11ac VHT40_Nss1,(MCS0)_4TX	8.10	14.70
802.11ac VHT80_Nss1,(MCS0)_4TX	5.92	12.52
5.725-5.85GHz	-	-
802.11a_Nss1,(6Mbps)_1TX	12.83	17.34
802.11ac VHT20_Nss1,(MCS0)_4TX	15.47	22.07
802.11ac VHT40_Nss1,(MCS0)_4TX	12.71	19.31
802.11ac VHT80_Nss1,(MCS0)_4TX	8.32	14.92

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





Result

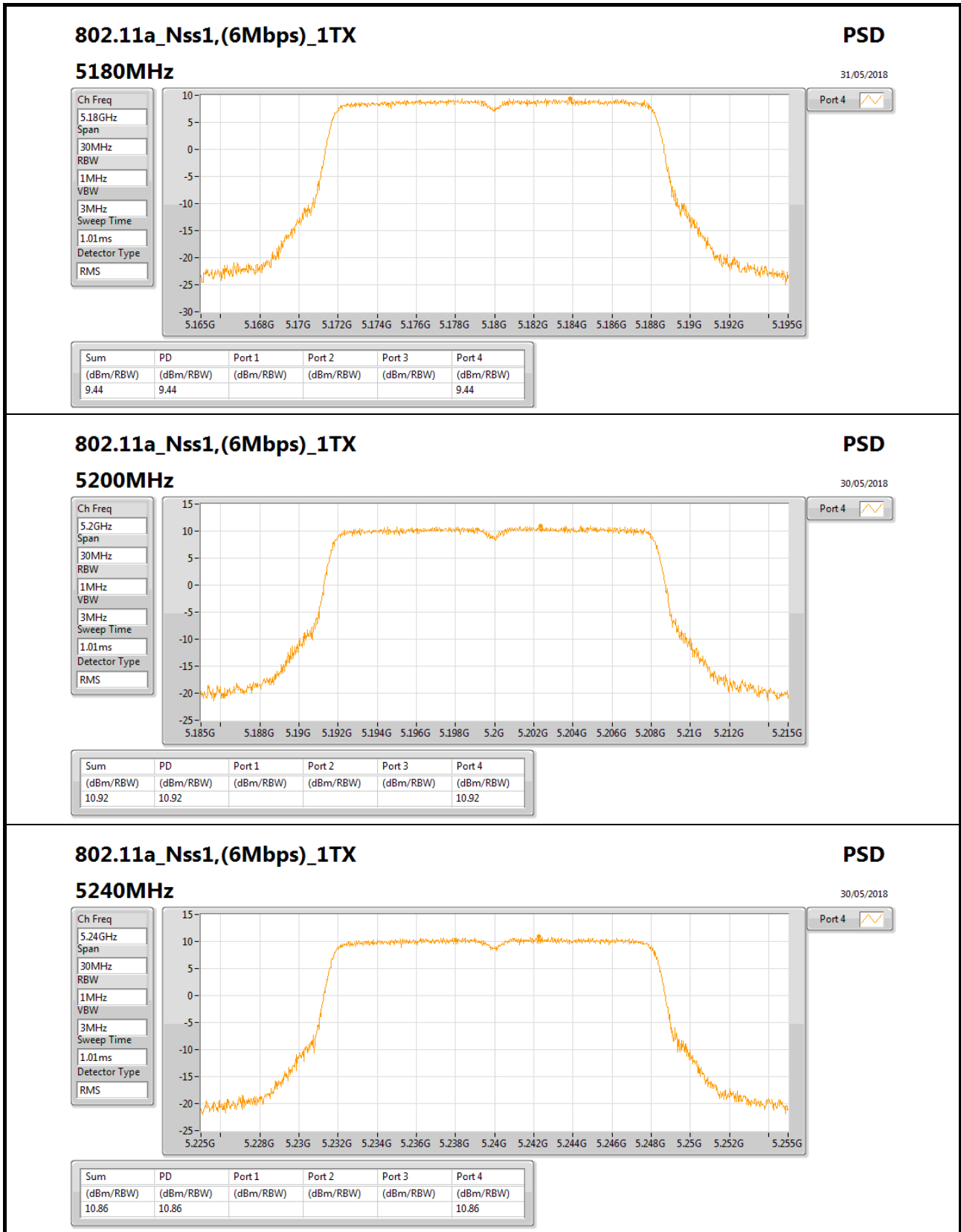
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)	EIRP PD (dBm/RBW)	EIRP PD Limit (dBm/RBW)
802.11a_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-
5180MHz_TnomVnom	Pass	4.82				9.44	9.44	11.00	14.26	17.00
5200MHz_TnomVnom	Pass	4.82				10.92	10.92	11.00	15.74	17.00
5240MHz_TnomVnom	Pass	4.82				10.86	10.86	11.00	15.68	17.00
5260MHz_TnomVnom	Pass	5.10				10.99	10.99	11.00	16.09	17.00
5300MHz_TnomVnom	Pass	5.10				10.86	10.86	11.00	15.96	17.00
5320MHz_TnomVnom	Pass	5.10				9.56	9.56	11.00	14.66	17.00
5500MHz_TnomVnom	Pass	4.61				10.38	10.38	11.00	14.99	17.00
5580MHz_TnomVnom	Pass	4.61				10.99	10.99	11.00	15.60	17.00
5700MHz_TnomVnom	Pass	4.61				8.34	8.34	11.00	12.95	17.00
5720MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	4.61				10.88	10.88	11.00	15.49	17.00
5720MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	4.51				9.42	9.42	30.00	13.93	36.00
5745MHz_TnomVnom	Pass	4.51				12.68	12.68	30.00	17.19	36.00
5785MHz_TnomVnom	Pass	4.51				12.83	12.83	30.00	17.34	36.00
5825MHz_TnomVnom	Pass	4.51				12.48	12.48	30.00	16.99	36.00
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz_TnomVnom	Pass	6.30	4.83	4.39	4.73	4.38	10.52	10.70	16.82	17.00
5200MHz_TnomVnom	Pass	6.30	4.78	4.28	4.72	4.37	10.48	10.70	16.78	17.00
5240MHz_TnomVnom	Pass	6.30	4.89	4.45	4.66	4.51	10.55	10.70	16.85	17.00
5260MHz_TnomVnom	Pass	6.30	4.90	4.69	4.74	4.56	10.68	10.70	16.98	17.00
5300MHz_TnomVnom	Pass	6.30	4.90	4.73	4.51	4.38	10.61	10.70	16.91	17.00
5320MHz_TnomVnom	Pass	6.30	5.03	4.74	4.52	4.48	10.66	10.70	16.96	17.00
5500MHz_TnomVnom	Pass	6.60	4.67	3.95	4.45	4.41	10.37	10.40	16.97	17.00
5580MHz_TnomVnom	Pass	6.60	4.58	4.02	4.38	4.36	10.32	10.40	16.92	17.00
5700MHz_TnomVnom	Pass	6.60	4.49	4.17	4.13	4.48	10.28	10.40	16.88	17.00
5720MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	6.60	4.67	4.04	4.21	4.39	10.33	10.40	16.93	17.00
5720MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	6.60	2.72	2.44	2.60	2.68	8.60	29.40	15.20	36.00
5745MHz_TnomVnom	Pass	6.60	9.02	9.77	8.97	10.03	15.47	29.40	22.07	36.00
5785MHz_TnomVnom	Pass	6.60	9.22	9.94	9.27	9.35	15.44	29.40	22.04	36.00
5825MHz_TnomVnom	Pass	6.60	8.84	9.47	9.14	8.94	15.08	29.40	21.68	36.00
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz_TnomVnom	Pass	6.30	1.17	0.57	0.77	0.74	6.78	10.70	13.08	17.00
5230MHz_TnomVnom	Pass	6.30	2.30	1.47	1.87	1.79	7.78	10.70	14.08	17.00
5270MHz_TnomVnom	Pass	6.30	2.10	1.55	1.62	1.58	7.67	10.70	13.97	17.00
5310MHz_TnomVnom	Pass	6.30	1.40	0.76	0.72	0.84	6.90	10.70	13.20	17.00
5510MHz_TnomVnom	Pass	6.60	0.23	0.52	-0.16	0.43	6.24	10.40	12.84	17.00
5550MHz_TnomVnom	Pass	6.60	2.15	1.13	1.54	1.59	7.60	10.40	14.20	17.00
5670MHz_TnomVnom	Pass	6.60	2.10	1.48	1.71	1.98	7.80	10.40	14.40	17.00
5710MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	6.60	2.54	1.85	1.87	2.14	8.10	10.40	14.70	17.00
5710MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	6.60	0.57	-0.07	-0.11	0.24	6.17	29.40	12.77	36.00



Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)	EIRP PD (dBm/RBW)	EIRP PD Limit (dBm/RBW)
5755MHz_TnomVnom	Pass	6.60	5.75	6.33	5.71	5.99	11.94	29.40	18.54	36.00
5795MHz_TnomVnom	Pass	6.60	6.57	7.10	6.54	6.68	12.71	29.40	19.31	36.00
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz_TnomVnom	Pass	6.30	-1.51	-1.40	-1.91	-2.57	4.17	10.70	10.47	17.00
5290MHz_TnomVnom	Pass	6.30	-1.41	-0.87	-1.97	-1.96	4.47	10.70	10.77	17.00
5530MHz_TnomVnom	Pass	6.60	-2.30	-1.93	-2.79	-2.84	3.55	10.40	10.15	17.00
5610MHz_TnomVnom	Pass	6.60	-0.05	0.26	-0.19	-0.43	5.92	10.40	12.52	17.00
5690MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	6.60	-0.87	-1.32	-1.38	-1.21	4.77	10.40	11.37	17.00
5690MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	6.60	-3.47	-3.93	-3.93	-3.43	2.31	29.40	8.91	36.00
5775MHz_TnomVnom	Pass	6.60	2.07	2.68	1.99	2.46	8.32	29.40	14.92	36.00

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

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



### 802.11a\_Nss1,(6Mbps)\_1TX

#### 5240MHz

**PSD**

30/05/2018

Ch Freq  
5.24GHz

Span  
30MHz

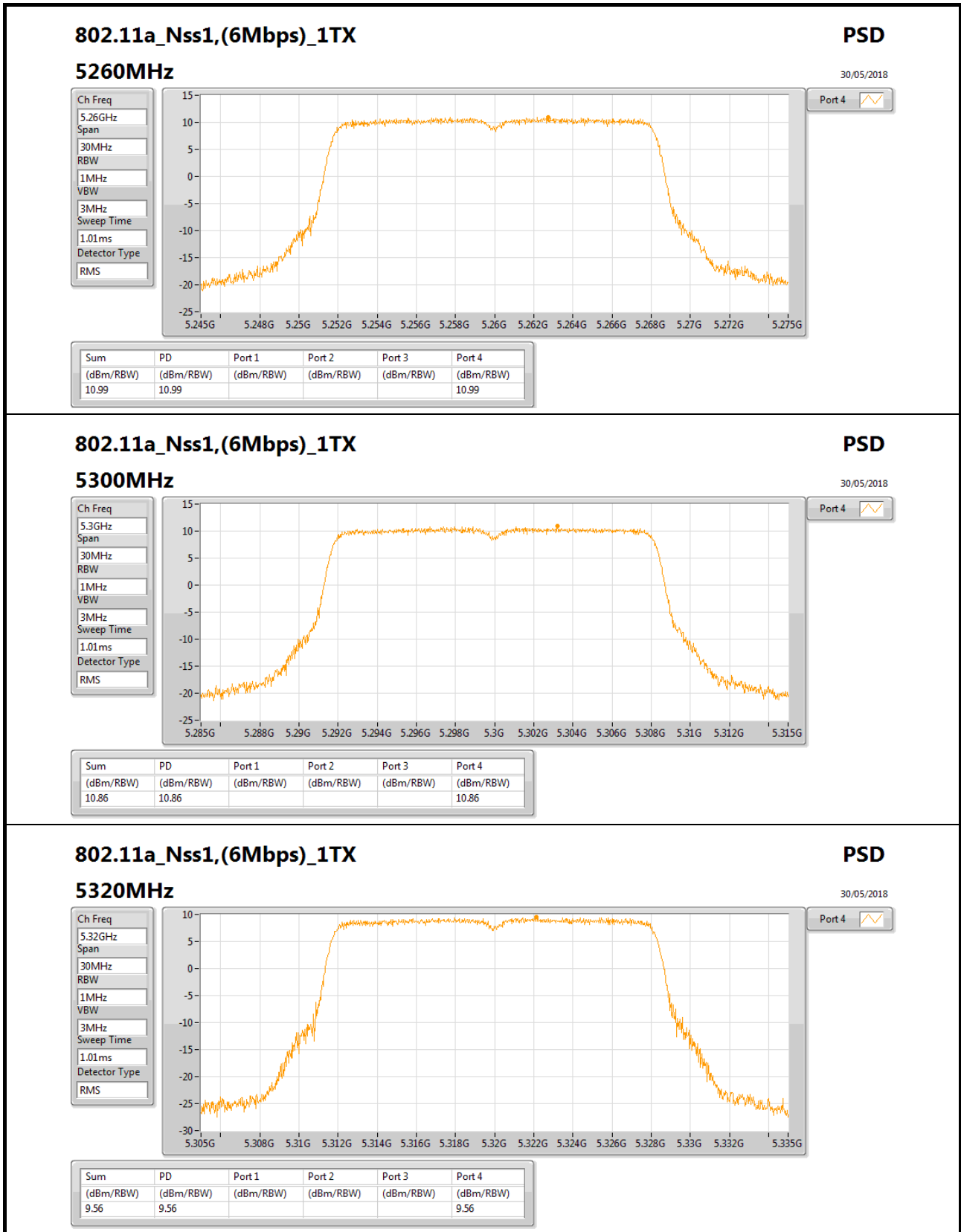
RBW  
1MHz

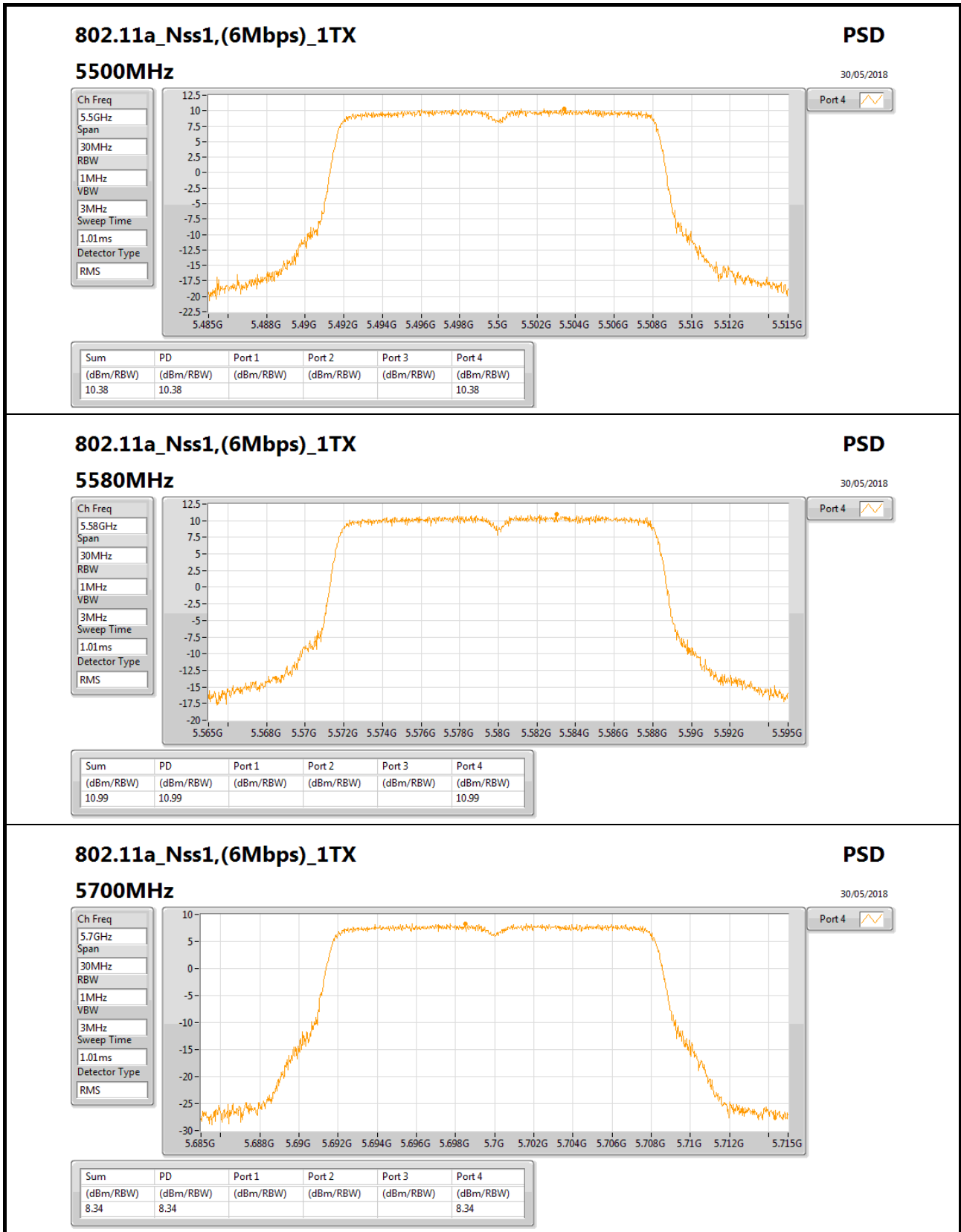
VBW  
3MHz

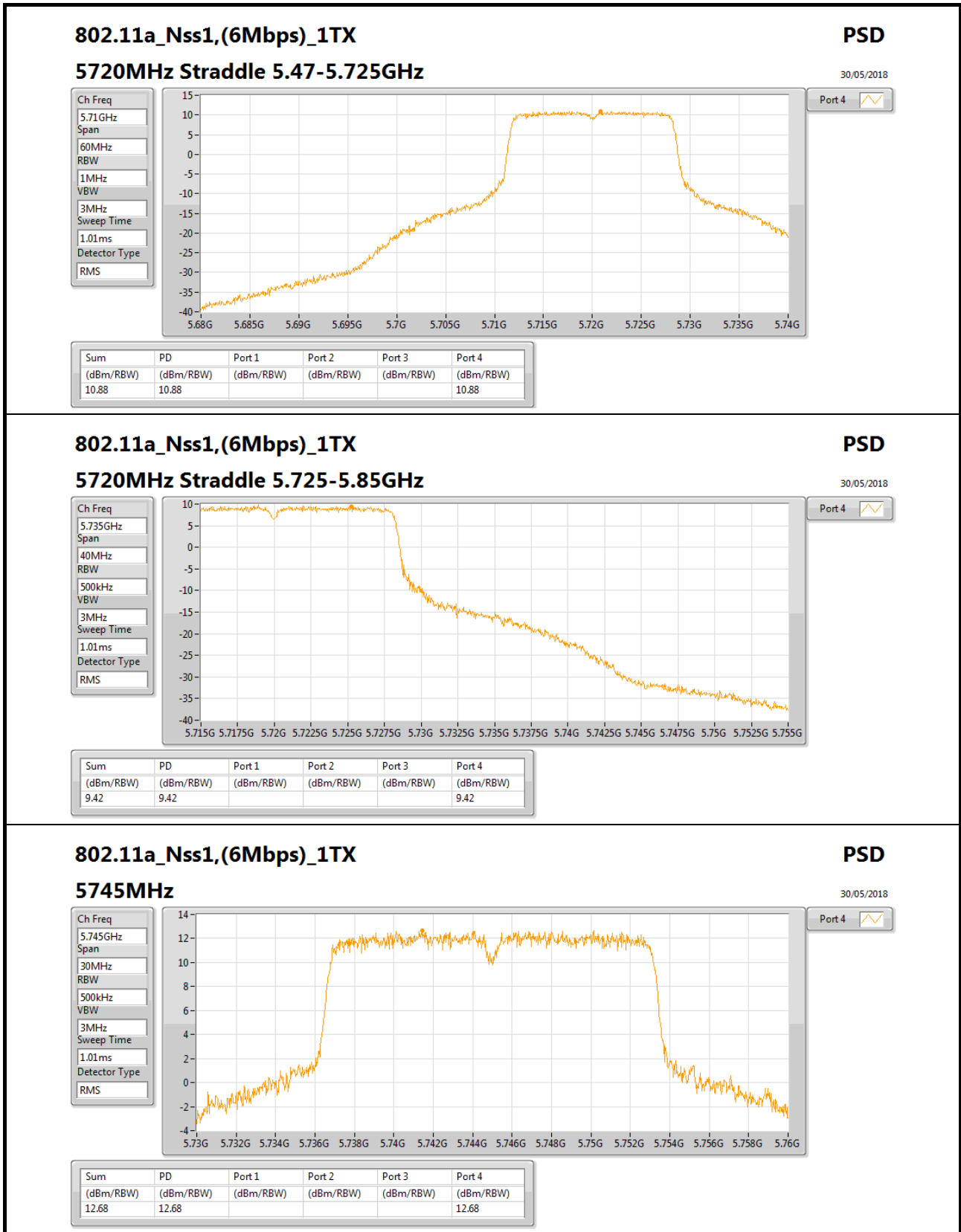
Sweep Time  
1.01ms

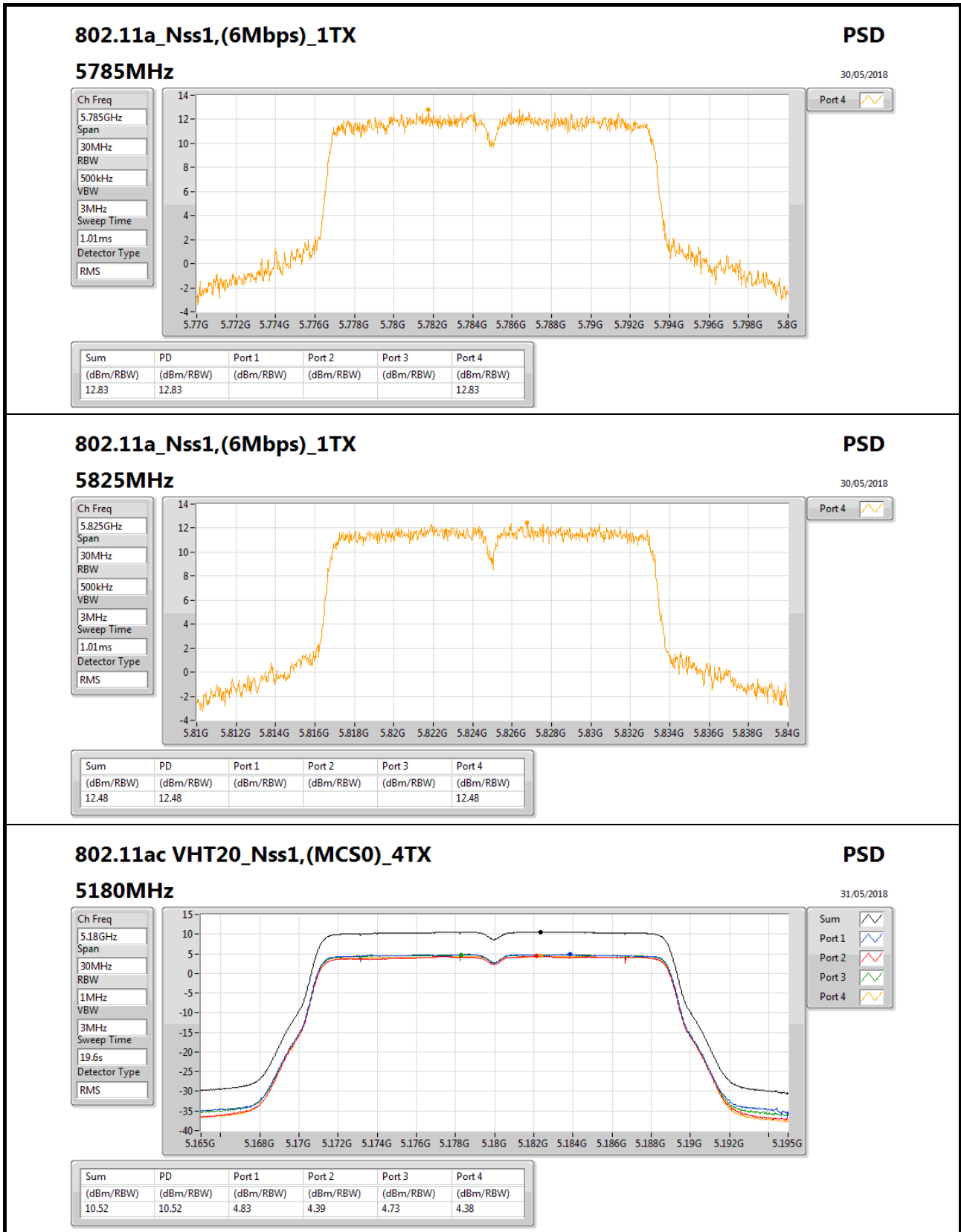
Detector Type  
RMS

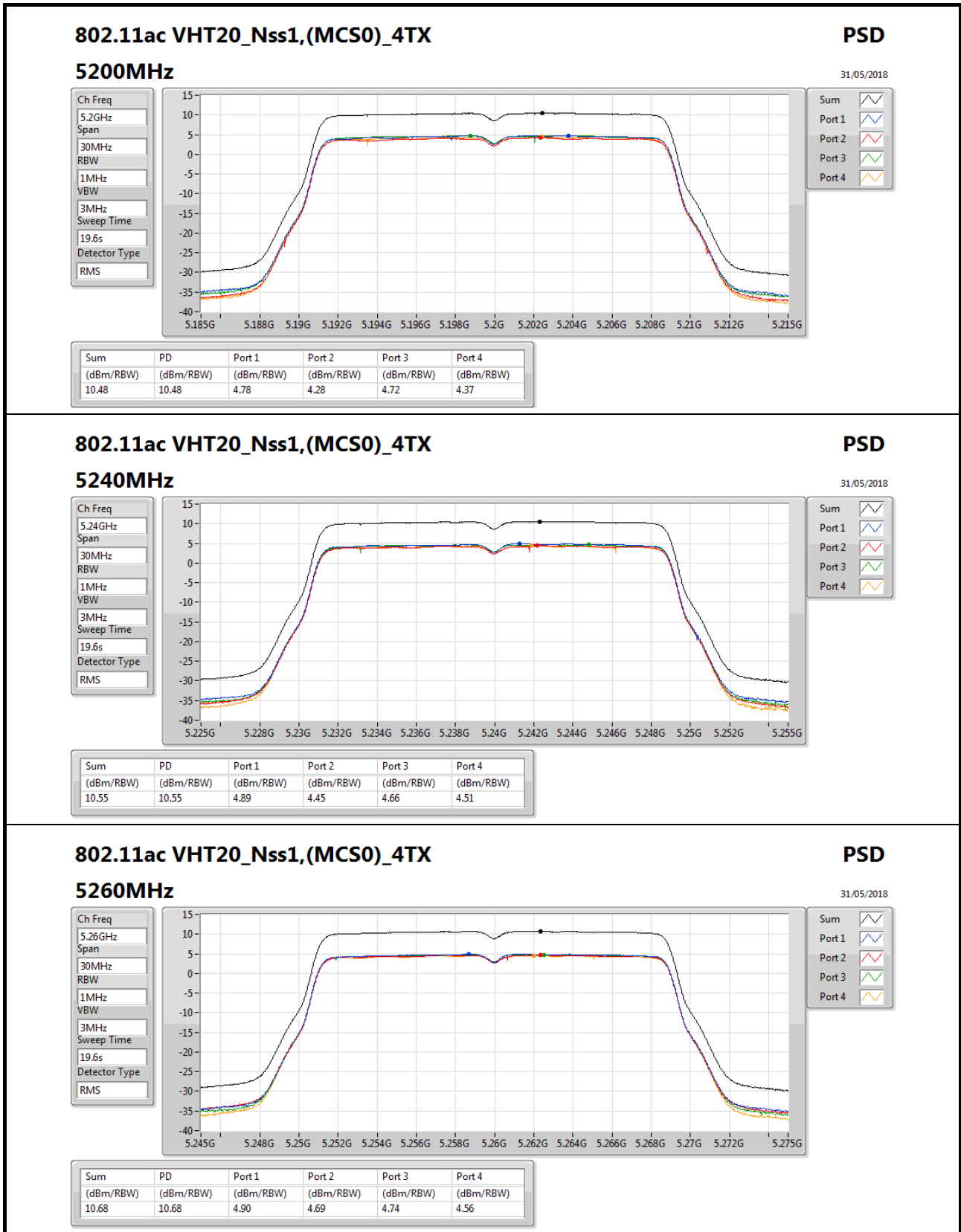
Port 4



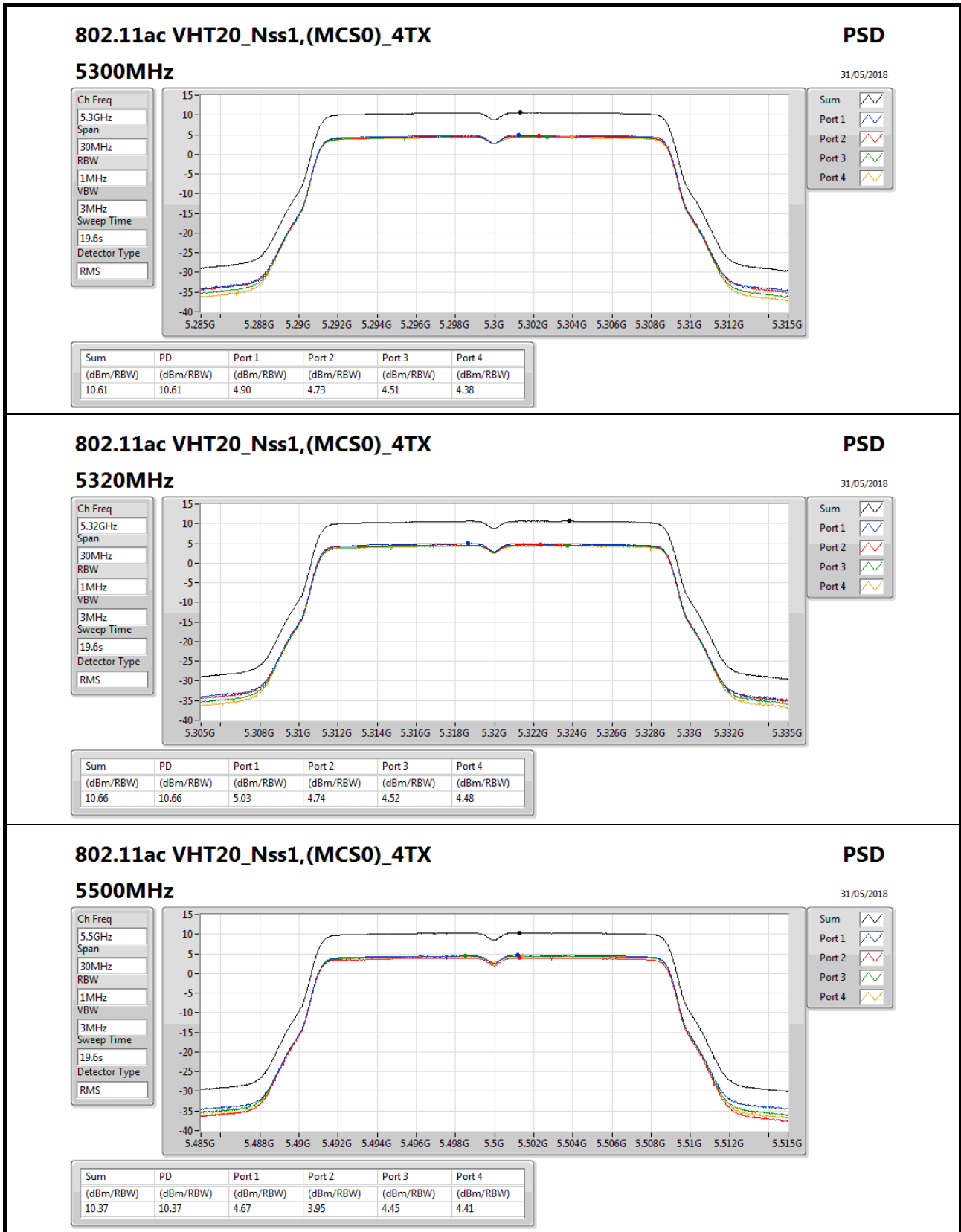


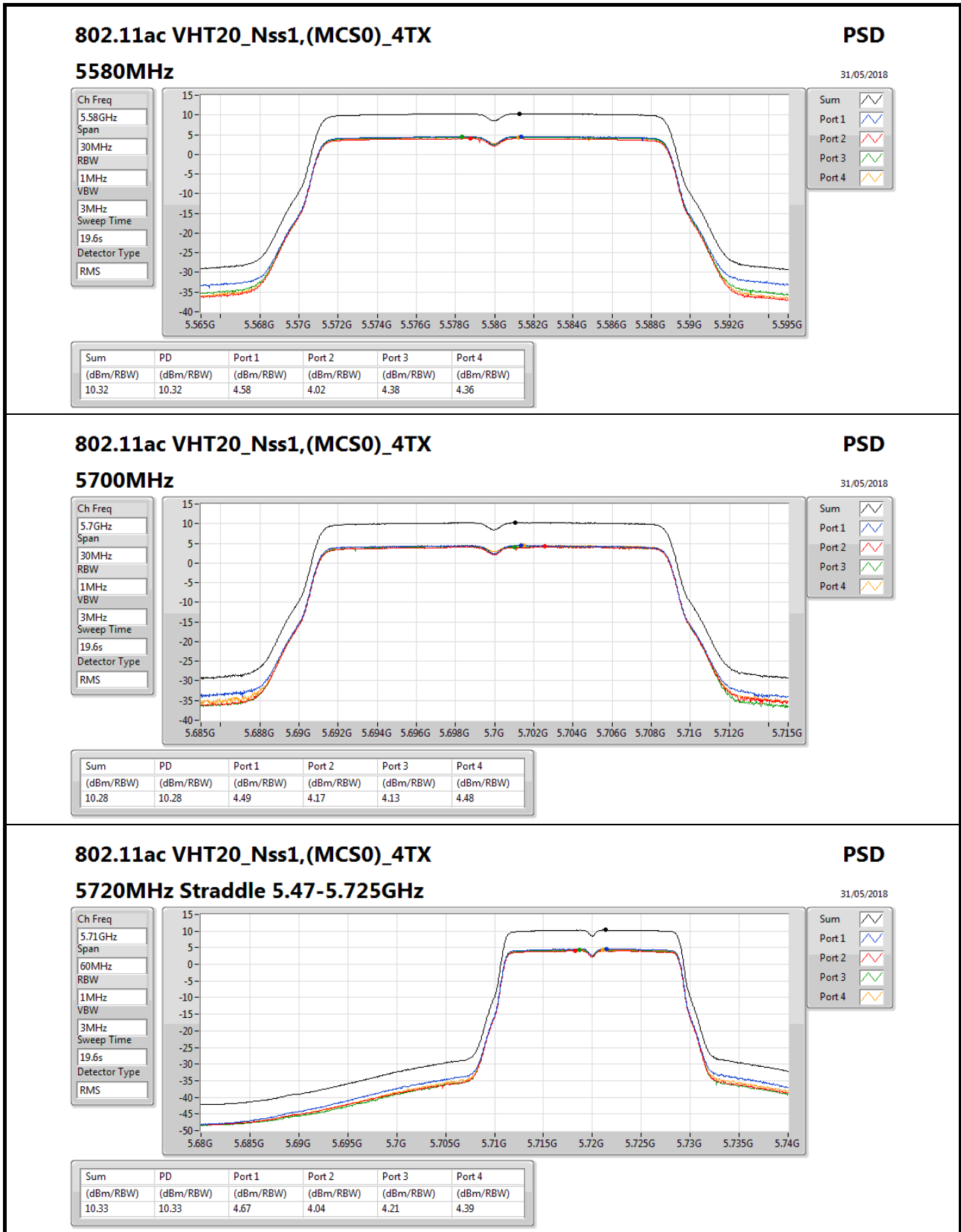


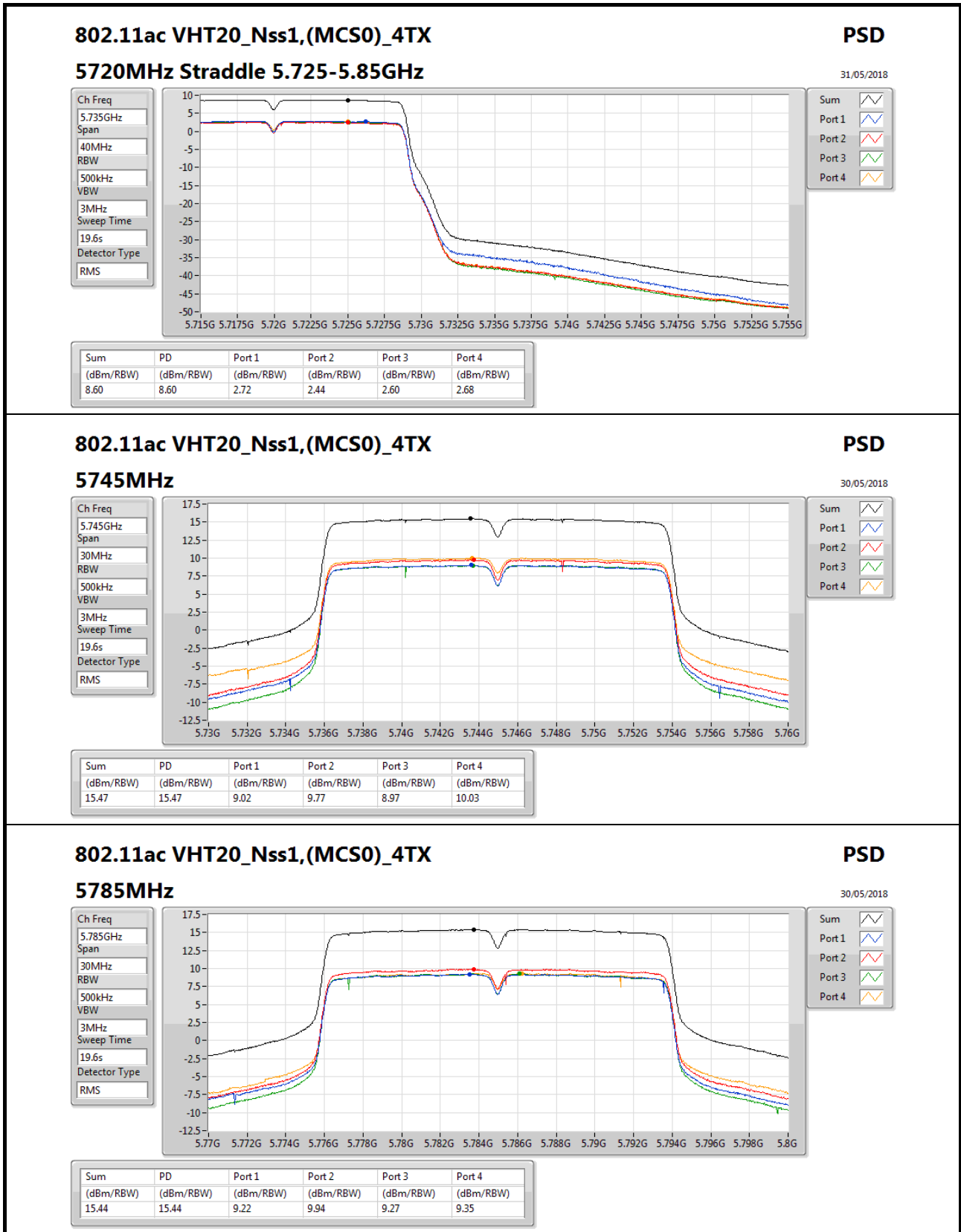


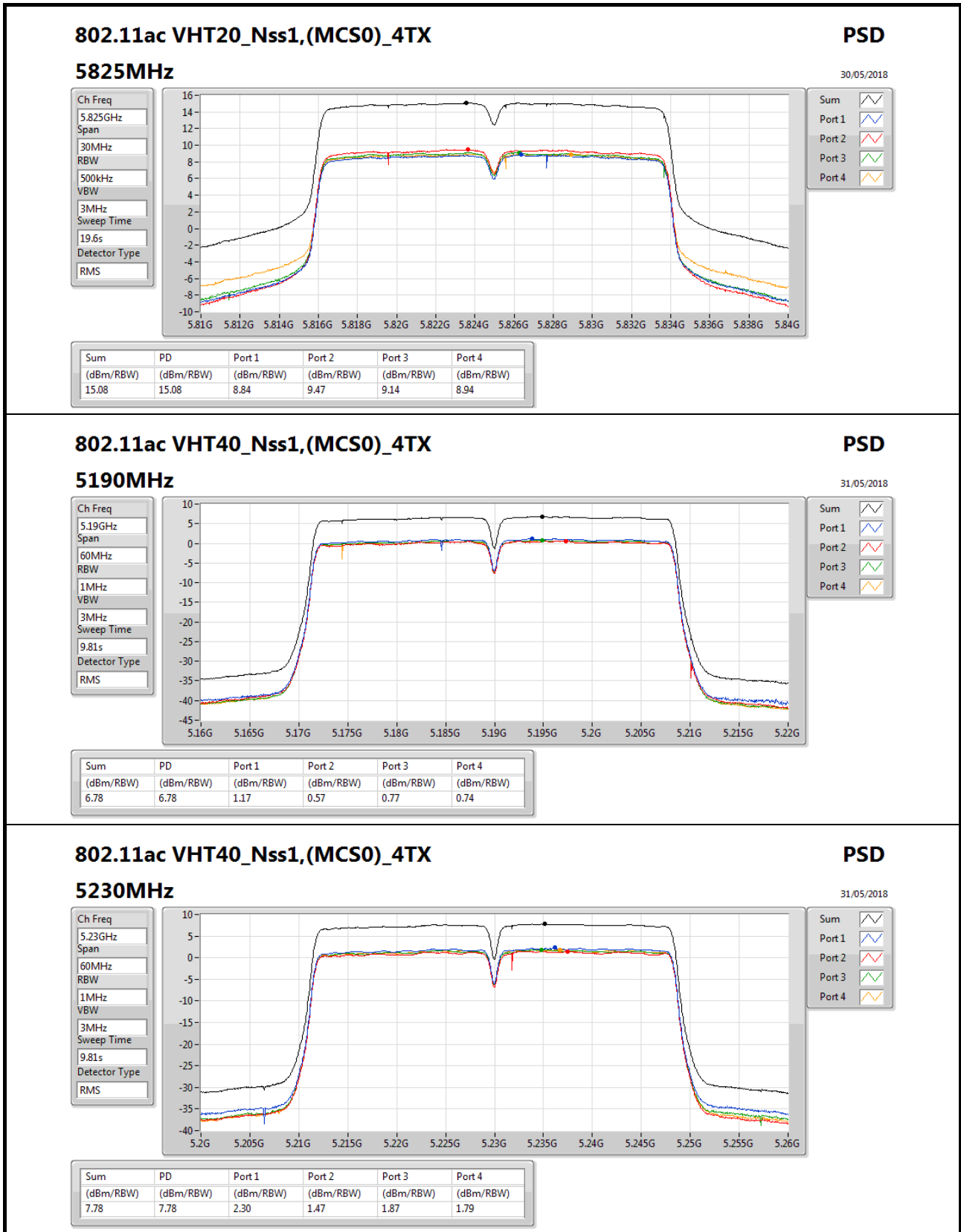


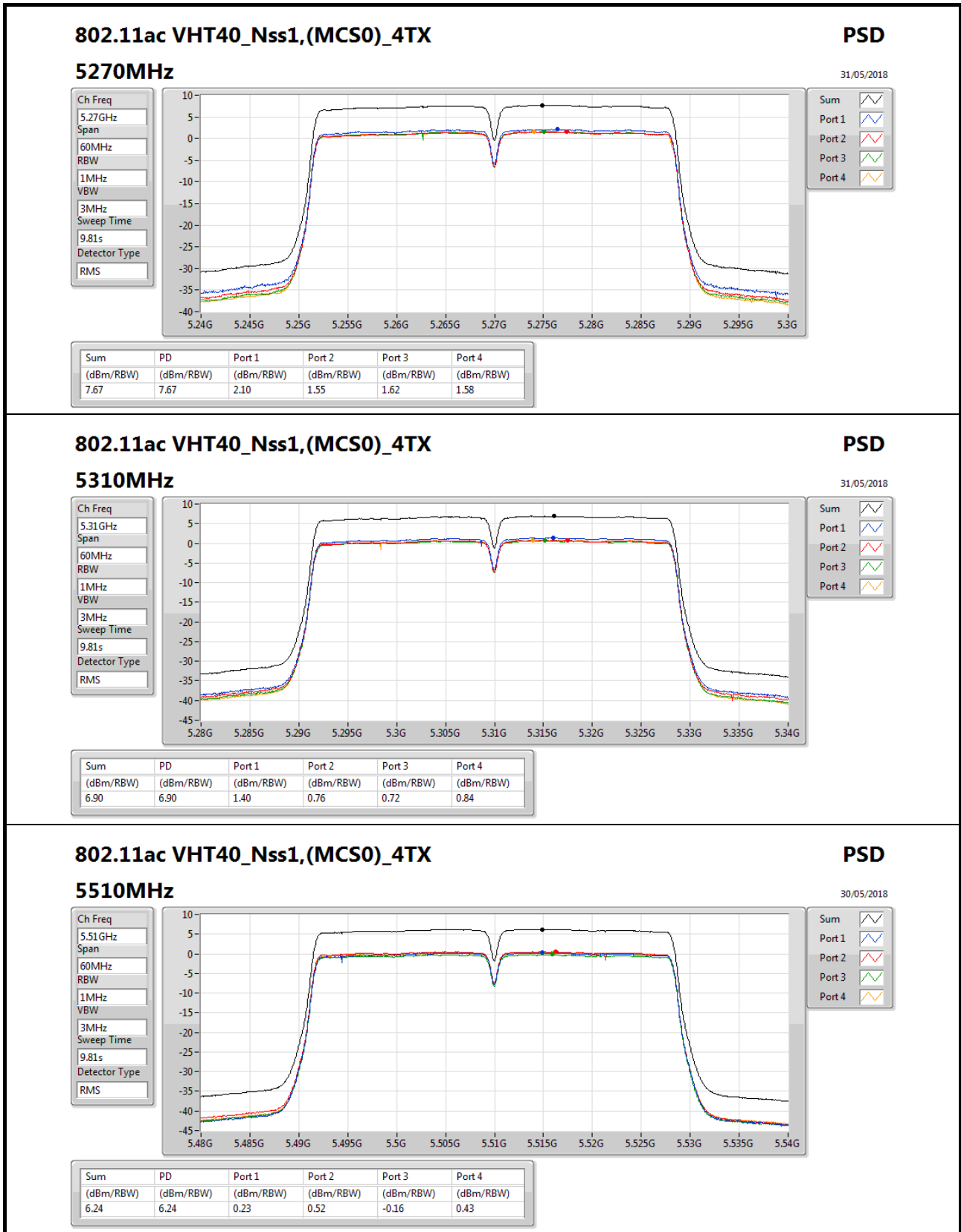


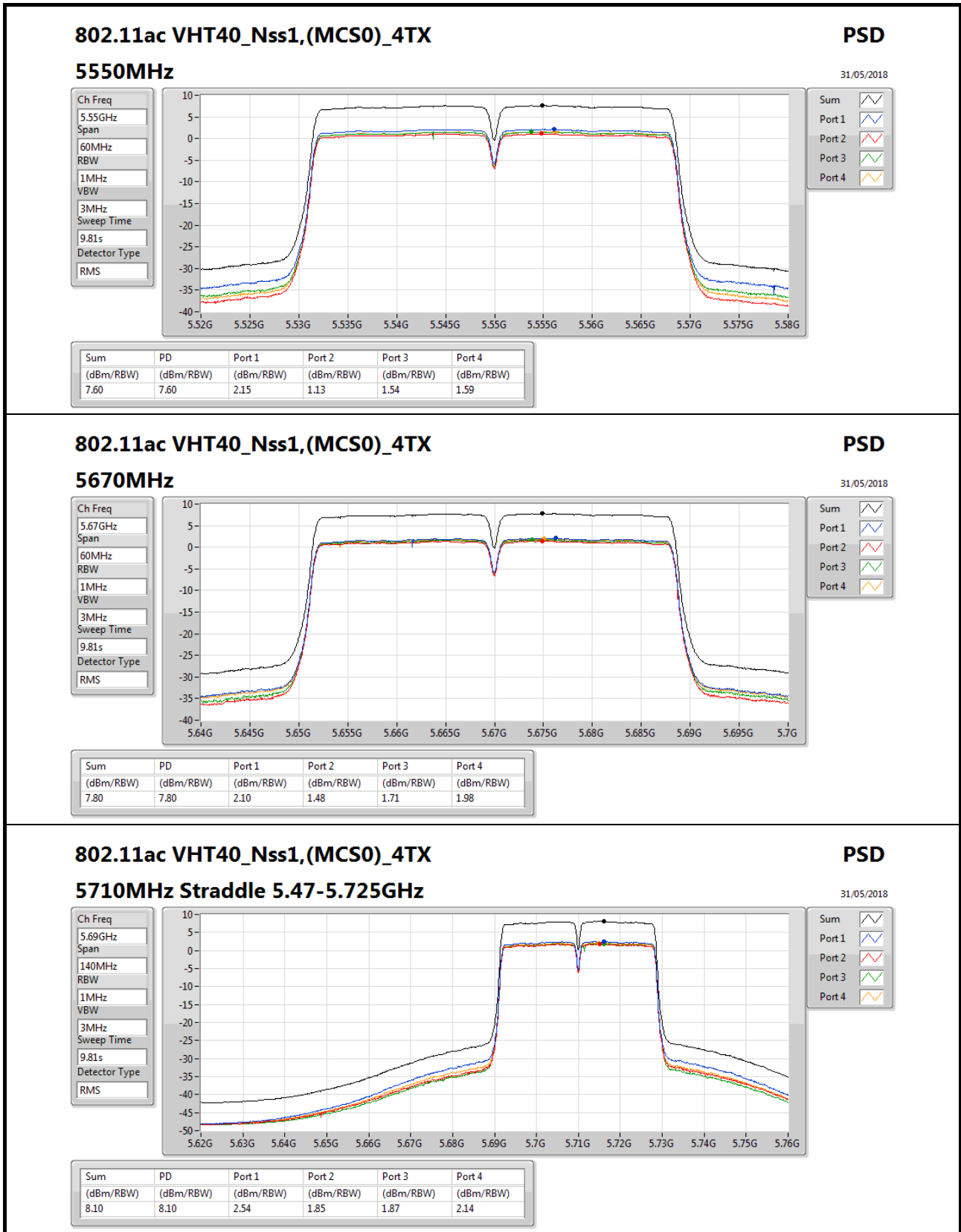


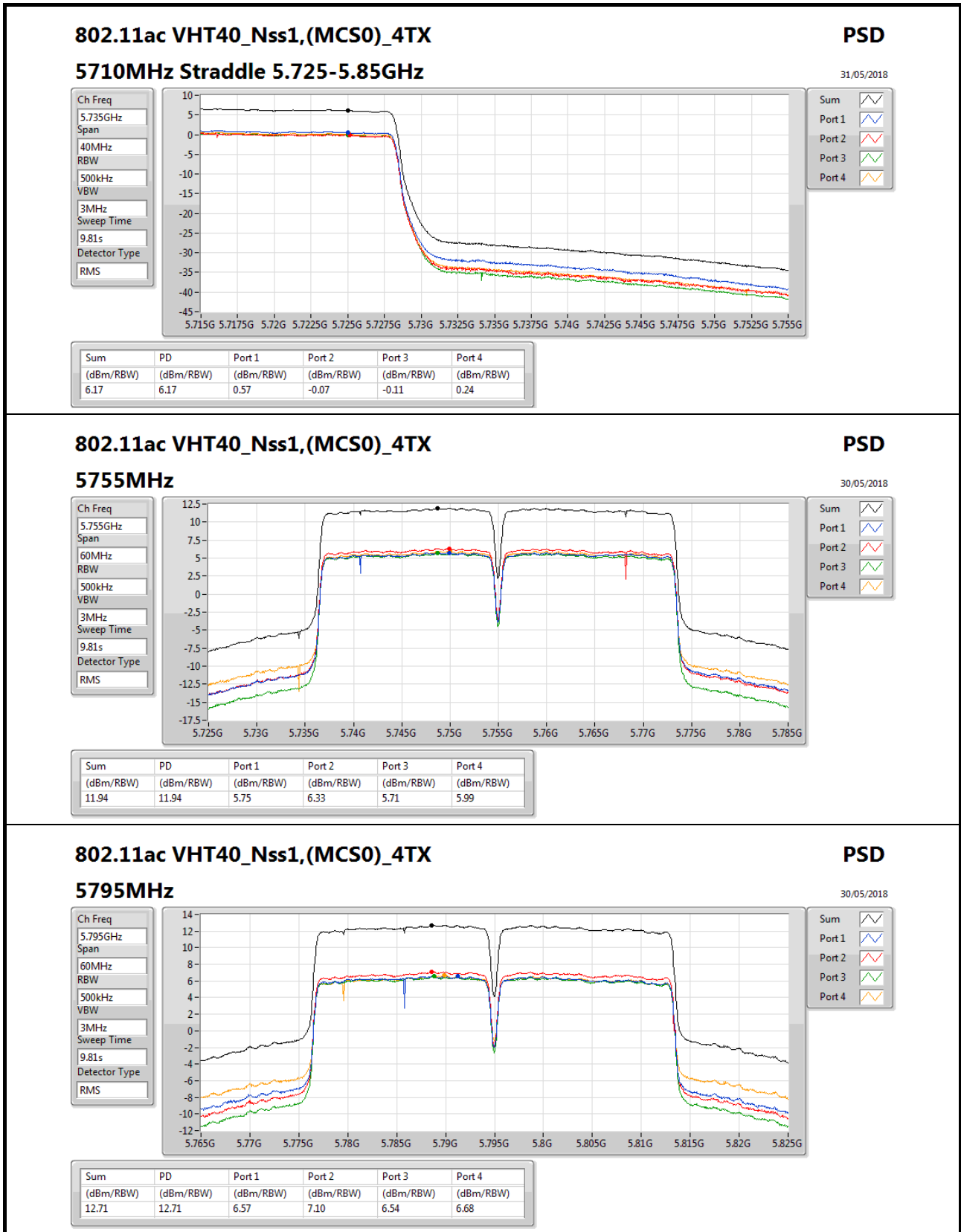


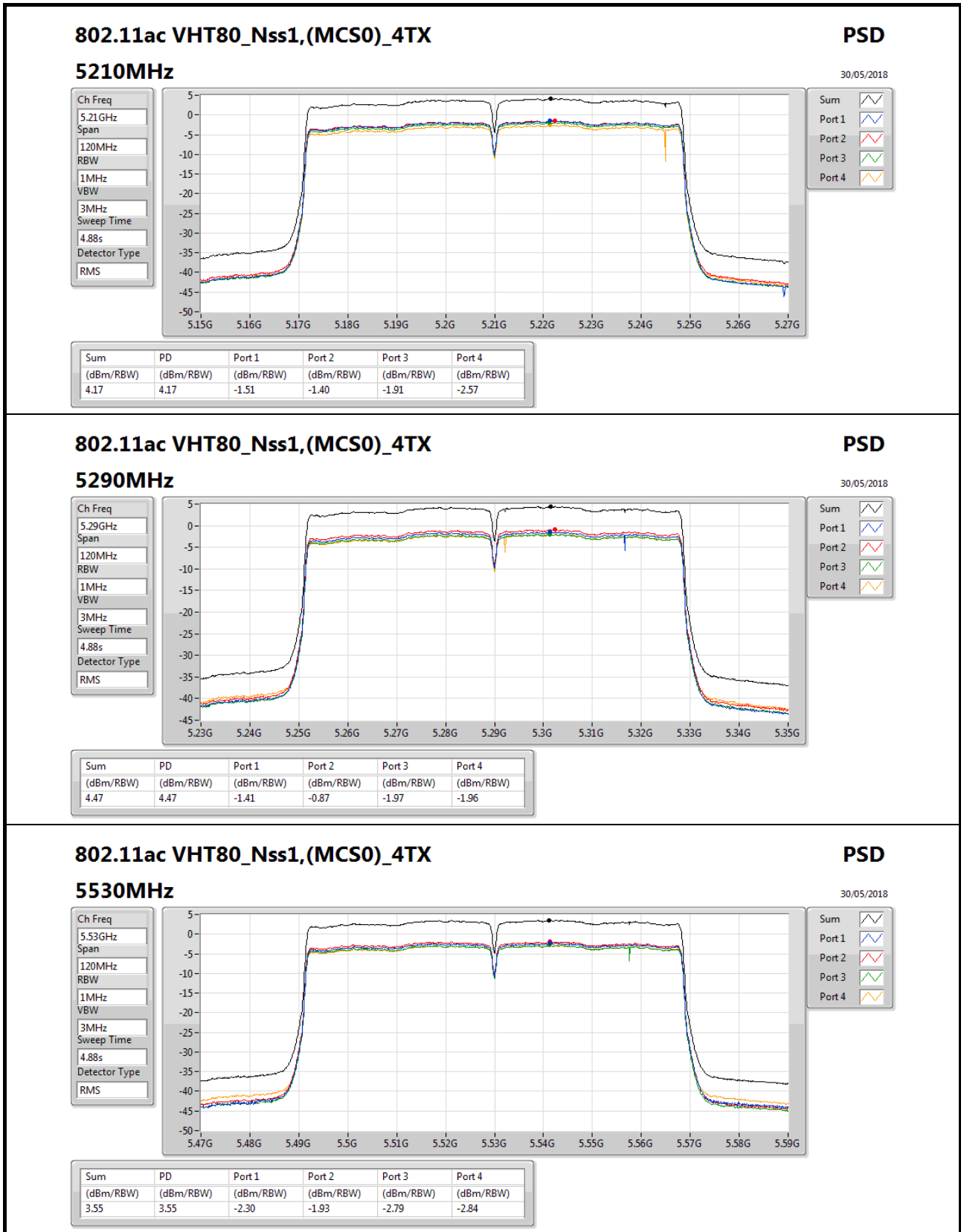




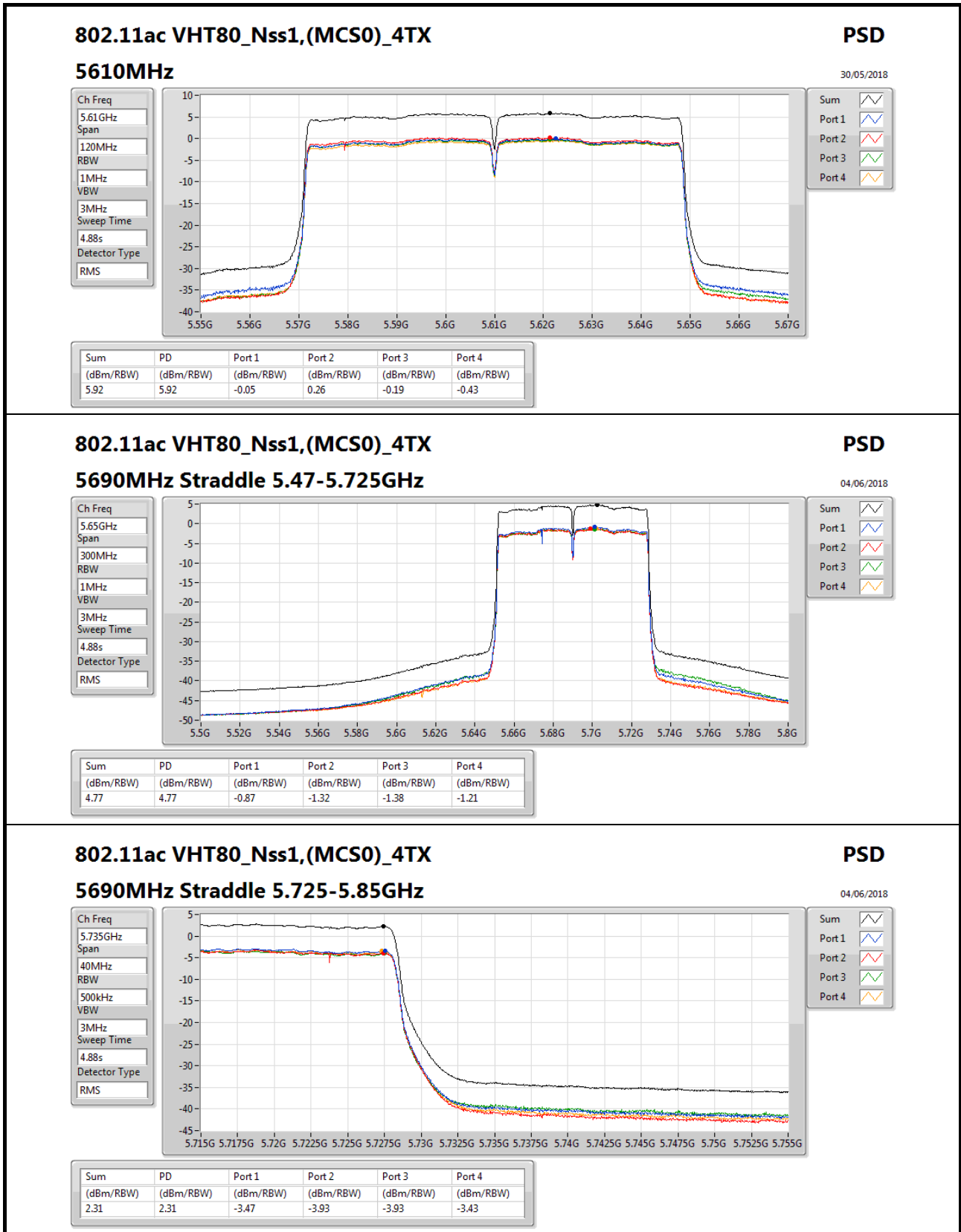


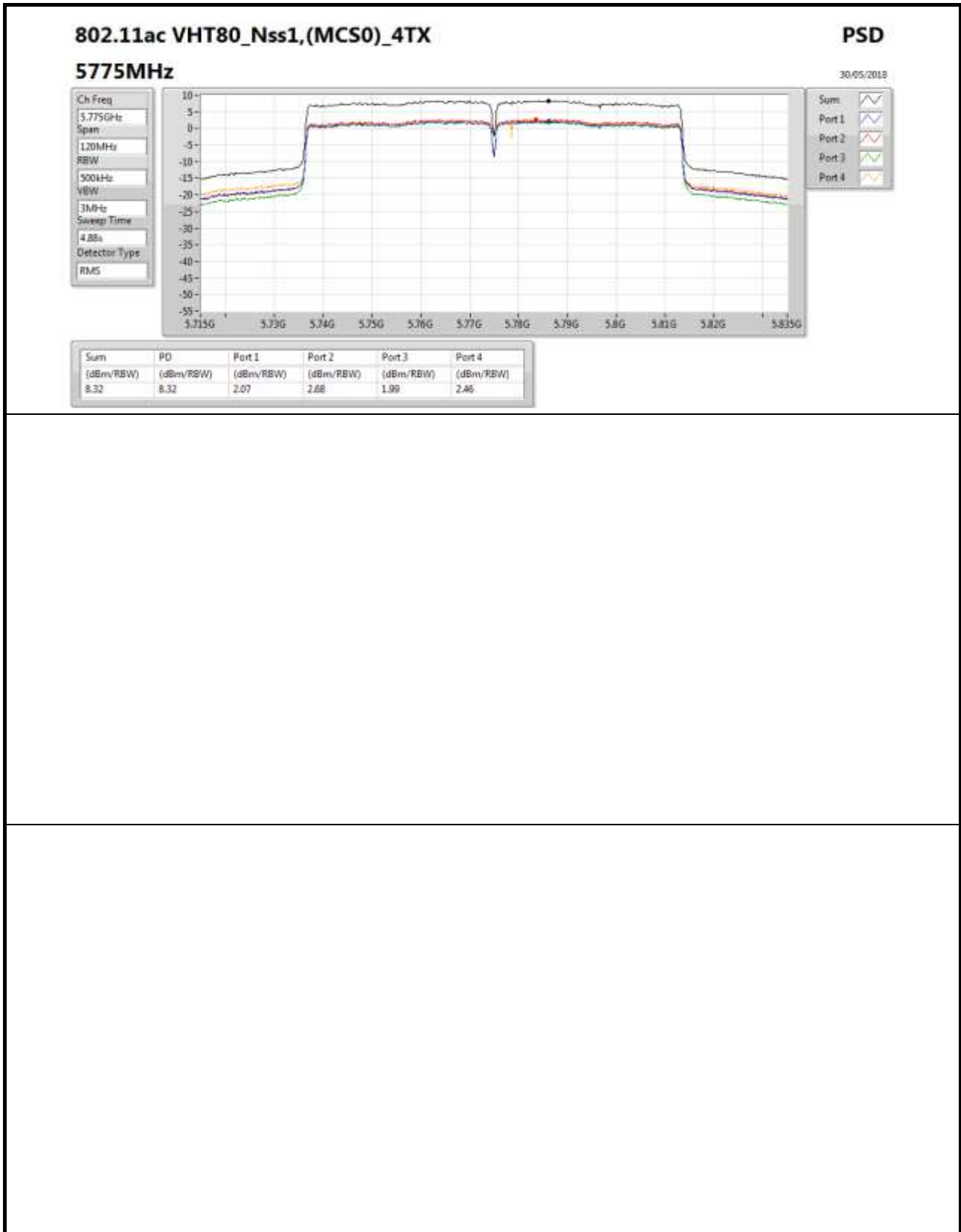














Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
5.15-5.25GHz	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	10.57	16.87
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	8.60	14.90
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	5.86	12.16
5.25-5.35GHz	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	10.67	16.97
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	8.81	15.11
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	5.72	12.02
5.47-5.725GHz	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	10.38	16.98
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	8.23	14.83
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	4.76	11.36
5.725-5.85GHz	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	15.33	21.93
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	12.56	19.16
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	6.87	13.47

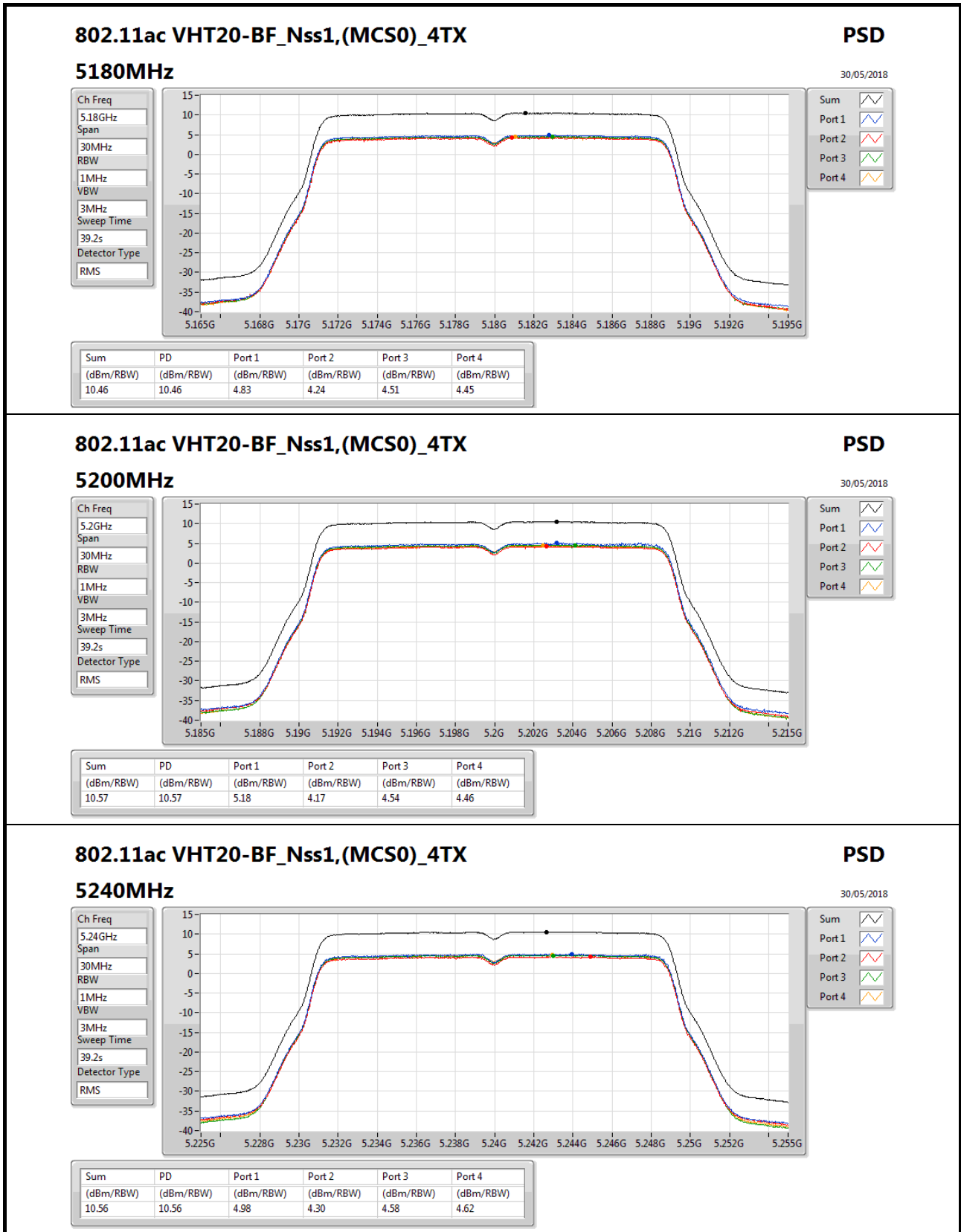
RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

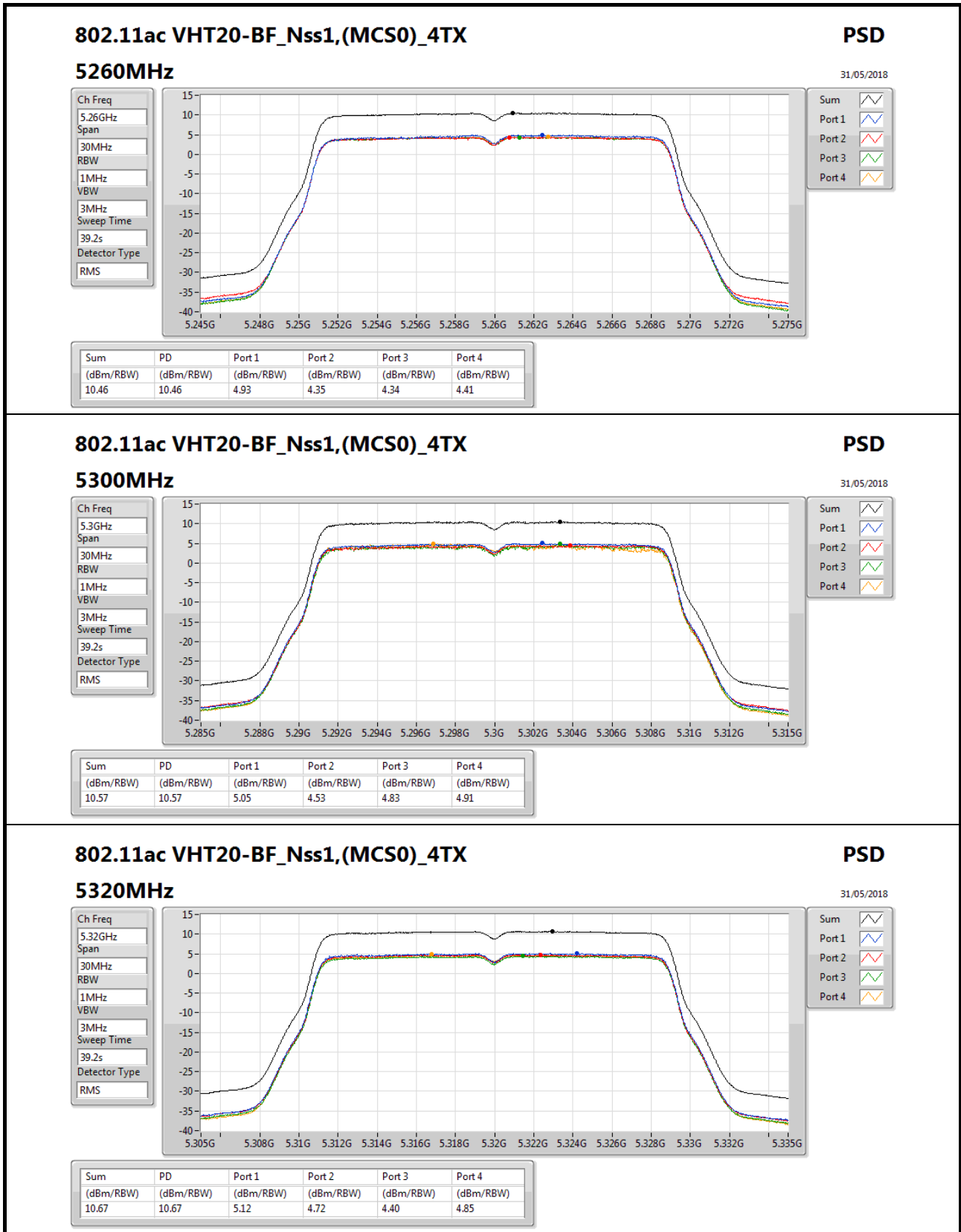


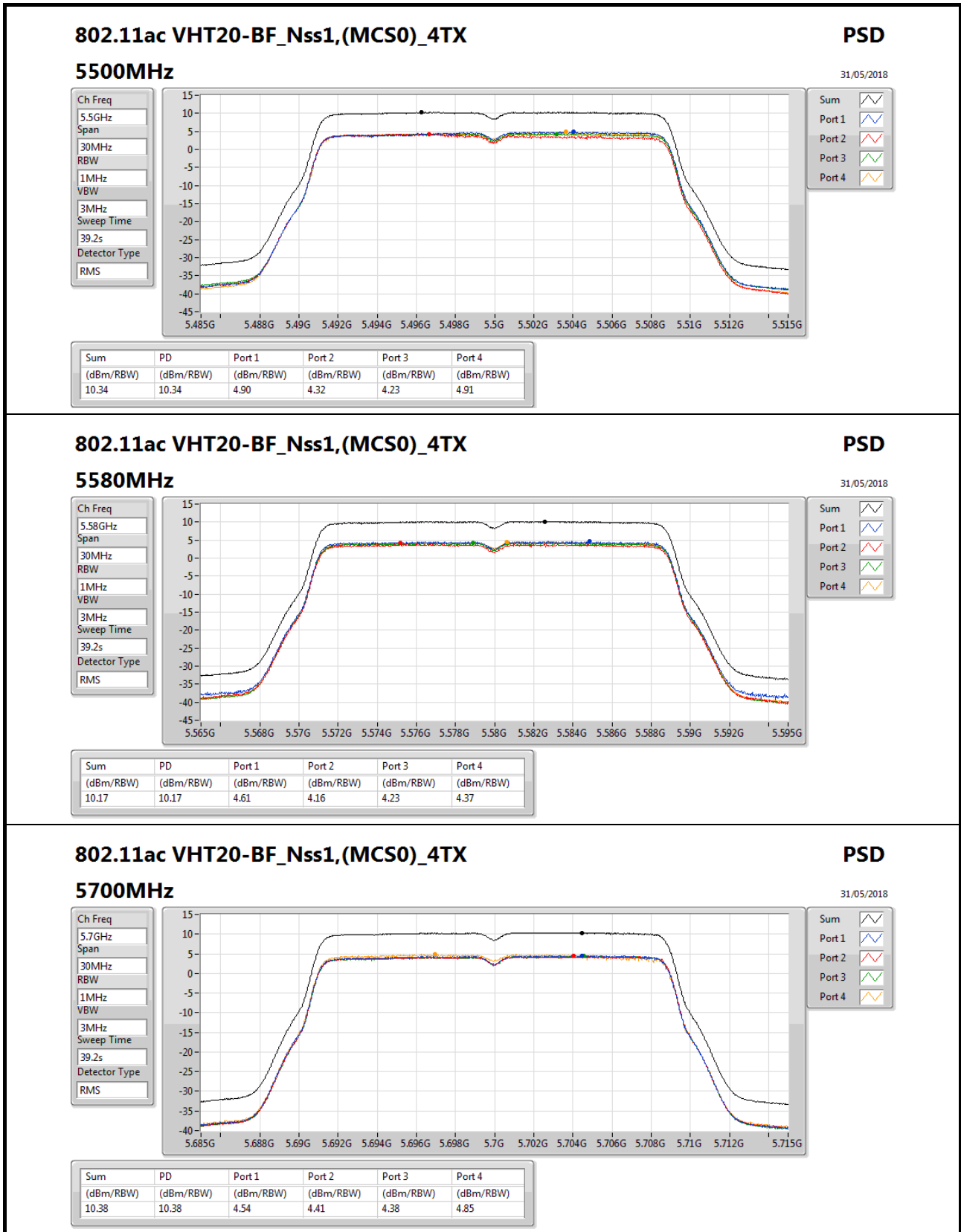
Result

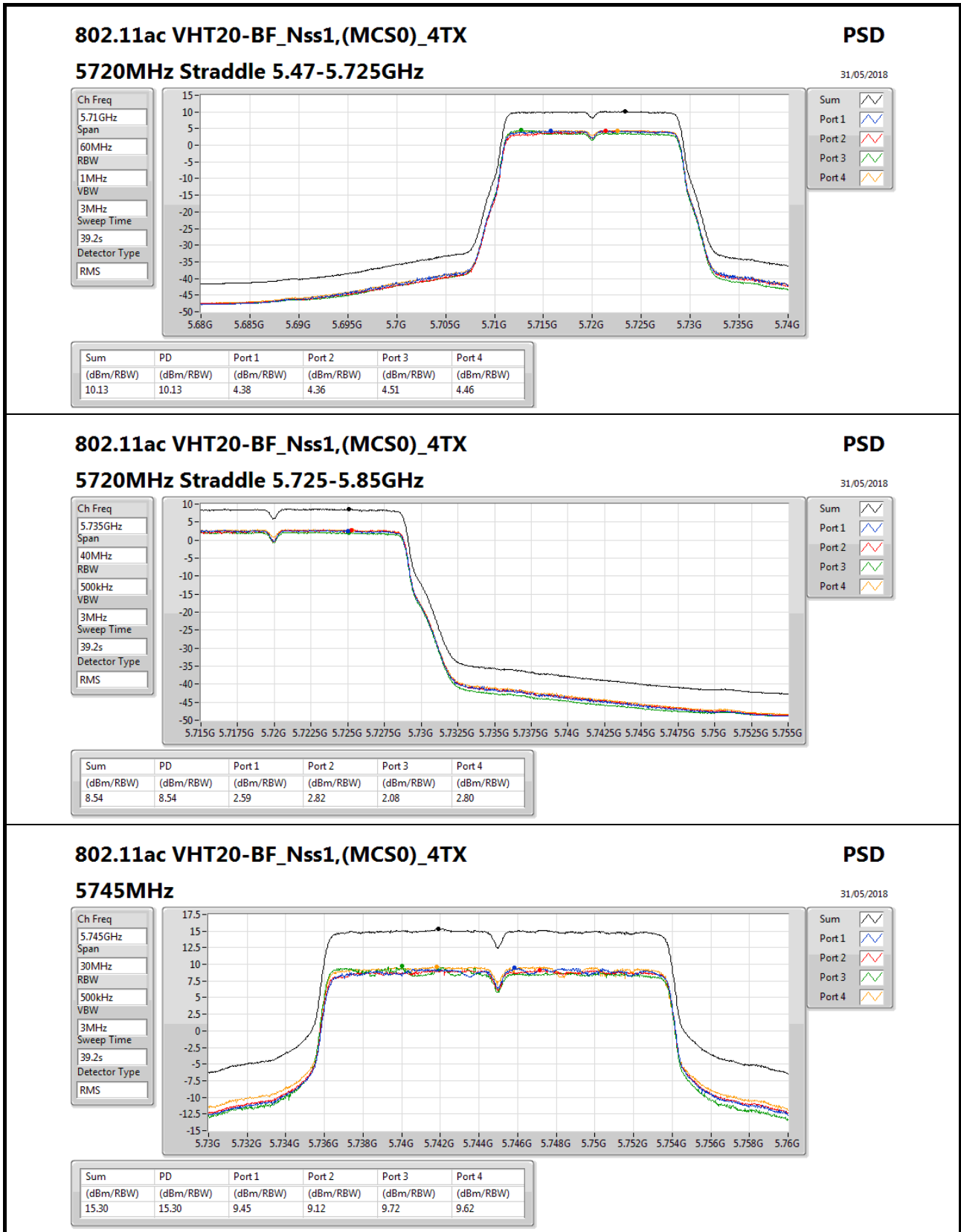
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)	EIRP PD (dBm/RBW)	EIRP PD Limit (dBm/RBW)
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz_TnomVnom	Pass	6.30	4.83	4.24	4.51	4.45	10.46	10.70	16.76	17.00
5200MHz_TnomVnom	Pass	6.30	5.18	4.17	4.54	4.46	10.57	10.70	16.87	17.00
5240MHz_TnomVnom	Pass	6.30	4.98	4.30	4.58	4.62	10.56	10.70	16.86	17.00
5260MHz_TnomVnom	Pass	6.30	4.93	4.35	4.34	4.41	10.46	10.70	16.76	17.00
5300MHz_TnomVnom	Pass	6.30	5.05	4.53	4.83	4.91	10.57	10.70	16.87	17.00
5320MHz_TnomVnom	Pass	6.30	5.12	4.72	4.40	4.85	10.67	10.70	16.97	17.00
5500MHz_TnomVnom	Pass	6.60	4.90	4.32	4.23	4.91	10.34	10.40	16.94	17.00
5580MHz_TnomVnom	Pass	6.60	4.61	4.16	4.23	4.37	10.17	10.40	16.77	17.00
5700MHz_TnomVnom	Pass	6.60	4.54	4.41	4.38	4.85	10.38	10.40	16.98	17.00
5720MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	6.60	4.38	4.36	4.51	4.46	10.13	10.40	16.73	17.00
5720MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	6.60	2.59	2.82	2.08	2.80	8.54	29.40	15.14	36.00
5745MHz_TnomVnom	Pass	6.60	9.45	9.12	9.72	9.62	15.30	29.40	21.90	36.00
5785MHz_TnomVnom	Pass	6.60	9.70	9.26	9.32	10.14	15.27	29.40	21.87	36.00
5825MHz_TnomVnom	Pass	6.60	9.85	9.33	9.59	9.51	15.33	29.40	21.93	36.00
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz_TnomVnom	Pass	6.30	2.92	2.26	2.77	2.68	8.60	10.70	14.90	17.00
5230MHz_TnomVnom	Pass	6.30	2.72	2.08	2.41	2.50	8.38	10.70	14.68	17.00
5270MHz_TnomVnom	Pass	6.30	3.40	2.61	2.68	2.87	8.81	10.70	15.11	17.00
5310MHz_TnomVnom	Pass	6.30	2.89	2.46	2.20	2.86	8.35	10.70	14.65	17.00
5510MHz_TnomVnom	Pass	6.60	2.72	2.13	2.12	2.59	8.21	10.40	14.81	17.00
5550MHz_TnomVnom	Pass	6.60	2.58	1.78	2.05	2.33	8.11	10.40	14.71	17.00
5670MHz_TnomVnom	Pass	6.60	2.48	2.45	2.11	2.46	8.23	10.40	14.83	17.00
5710MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	6.60	1.42	2.15	2.09	1.59	7.67	10.40	14.27	17.00
5710MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	6.60	-0.46	-0.00	0.12	-0.29	5.82	29.40	12.42	36.00
5755MHz_TnomVnom	Pass	6.60	7.02	6.45	6.91	6.81	12.54	29.40	19.14	36.00
5795MHz_TnomVnom	Pass	6.60	7.05	6.42	6.63	7.46	12.56	29.40	19.16	36.00
802.11ac VHT80-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz_TnomVnom	Pass	6.30	0.29	-0.47	-0.03	-0.13	5.86	10.70	12.16	17.00
5290MHz_TnomVnom	Pass	6.30	0.50	-0.27	-0.39	0.17	5.72	10.70	12.02	17.00
5530MHz_TnomVnom	Pass	6.60	-1.71	-2.60	-2.25	-1.46	3.69	10.40	10.29	17.00
5610MHz_TnomVnom	Pass	6.60	-0.48	-0.90	-1.16	-1.14	4.76	10.40	11.36	17.00
5690MHz Straddle 5.47-5.725GHz_TnomVnom	Pass	6.60	-0.80	-1.87	-1.99	-1.78	4.21	10.40	10.81	17.00
5690MHz Straddle 5.725-5.85GHz_TnomVnom	Pass	6.60	-2.44	-3.36	-4.38	-4.23	1.94	29.40	8.54	36.00
5775MHz_TnomVnom	Pass	6.60	1.33	1.03	0.95	1.63	6.87	29.40	13.47	36.00

DG = Directional Gain; RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;  
 PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port Xpower density;

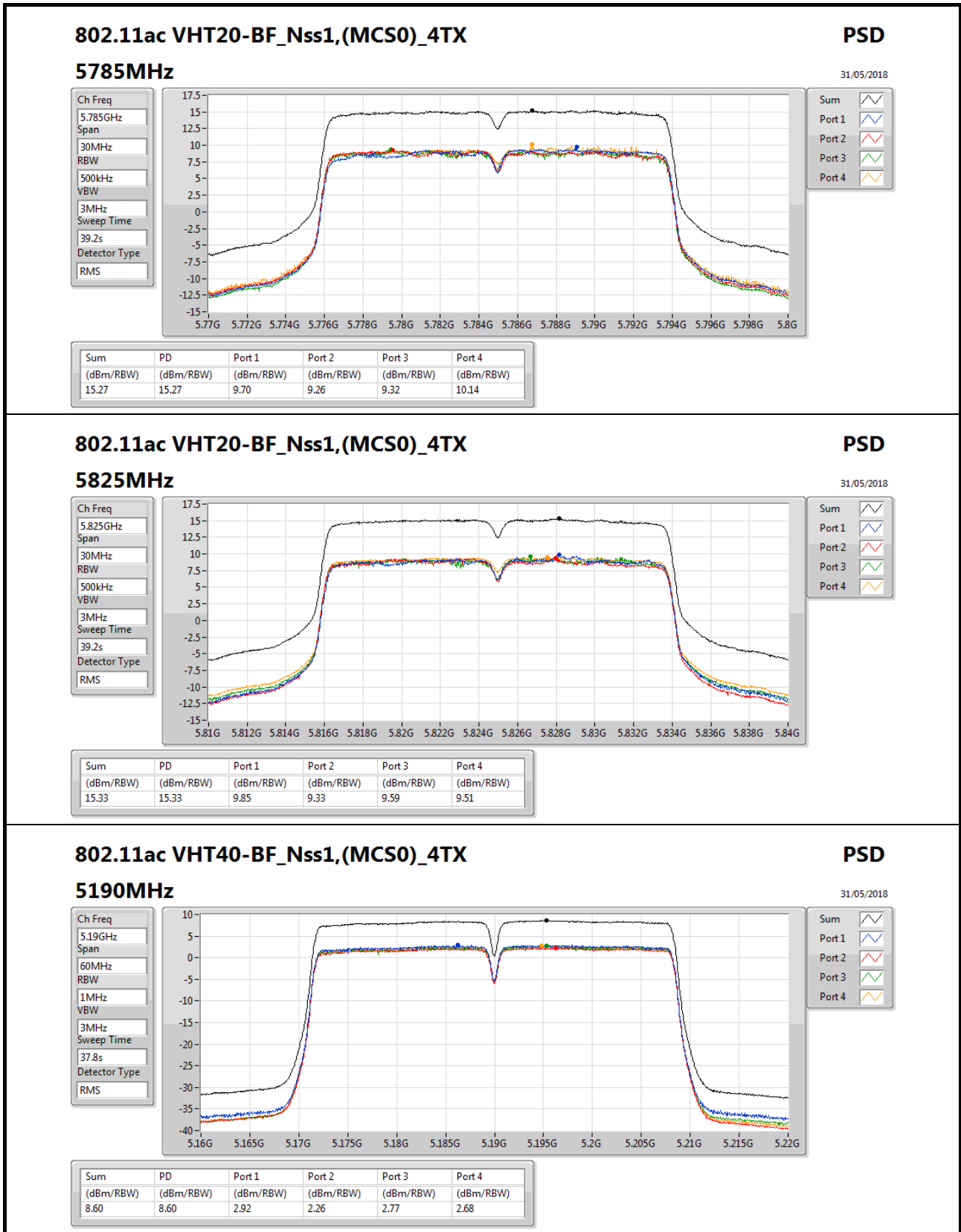


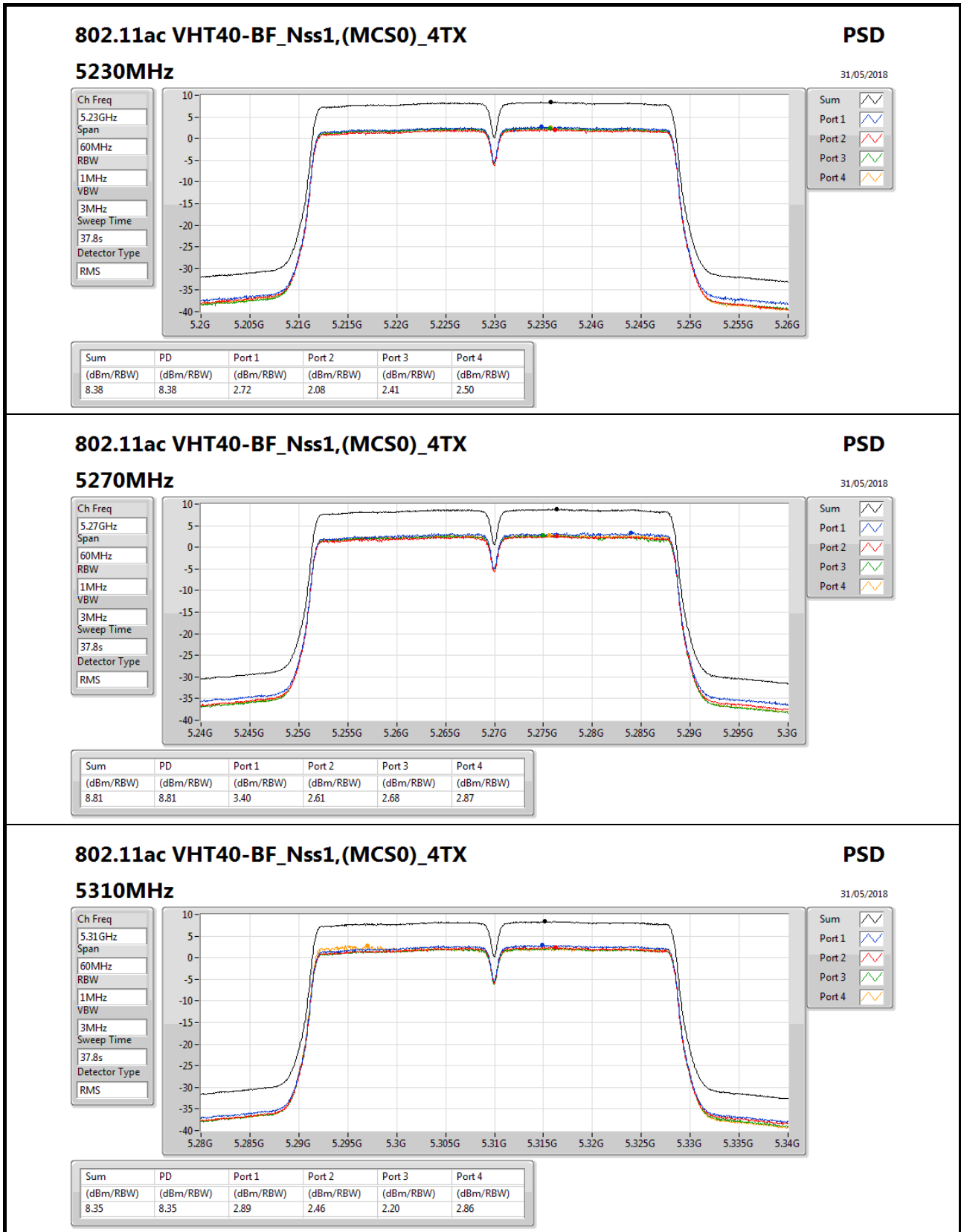


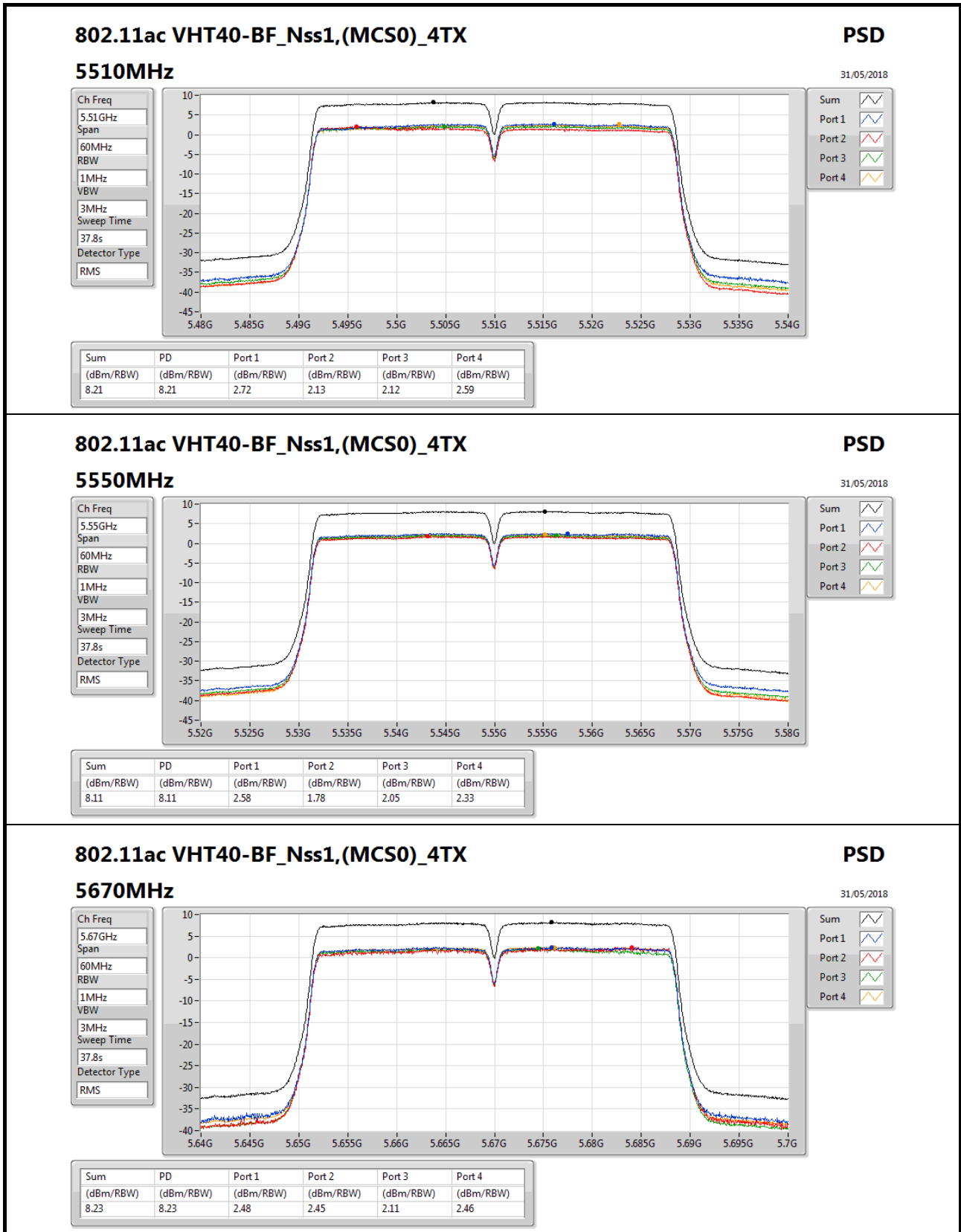


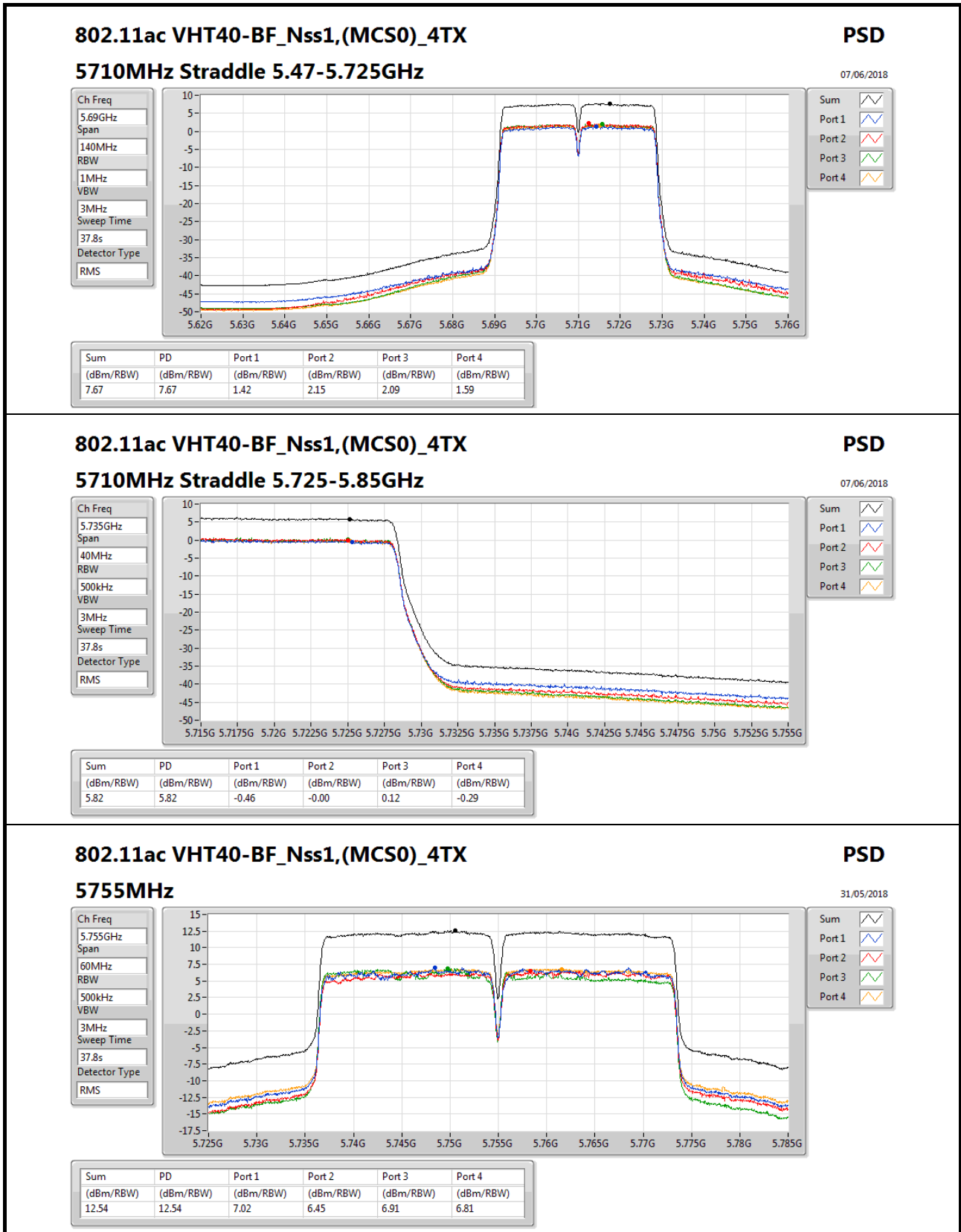


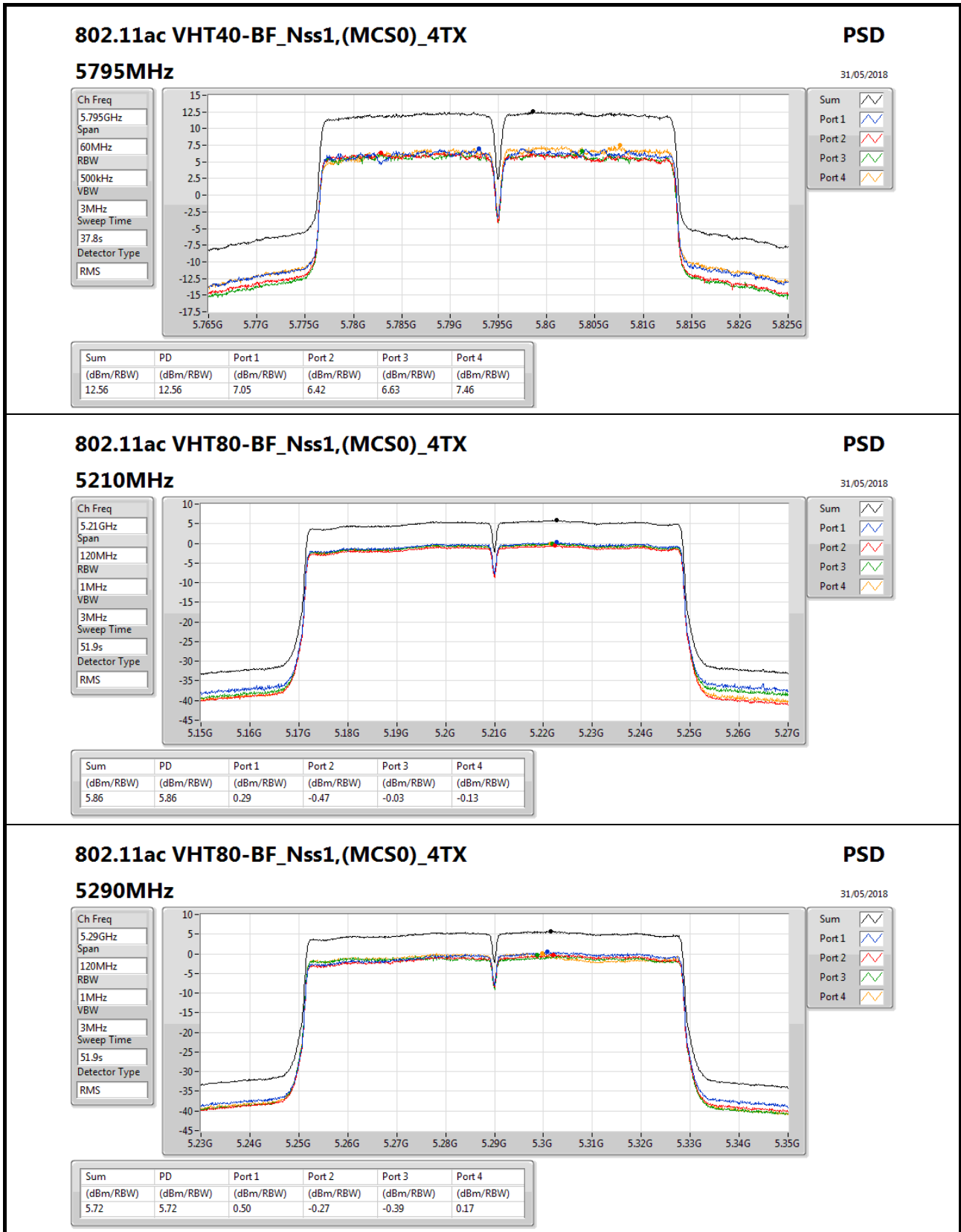


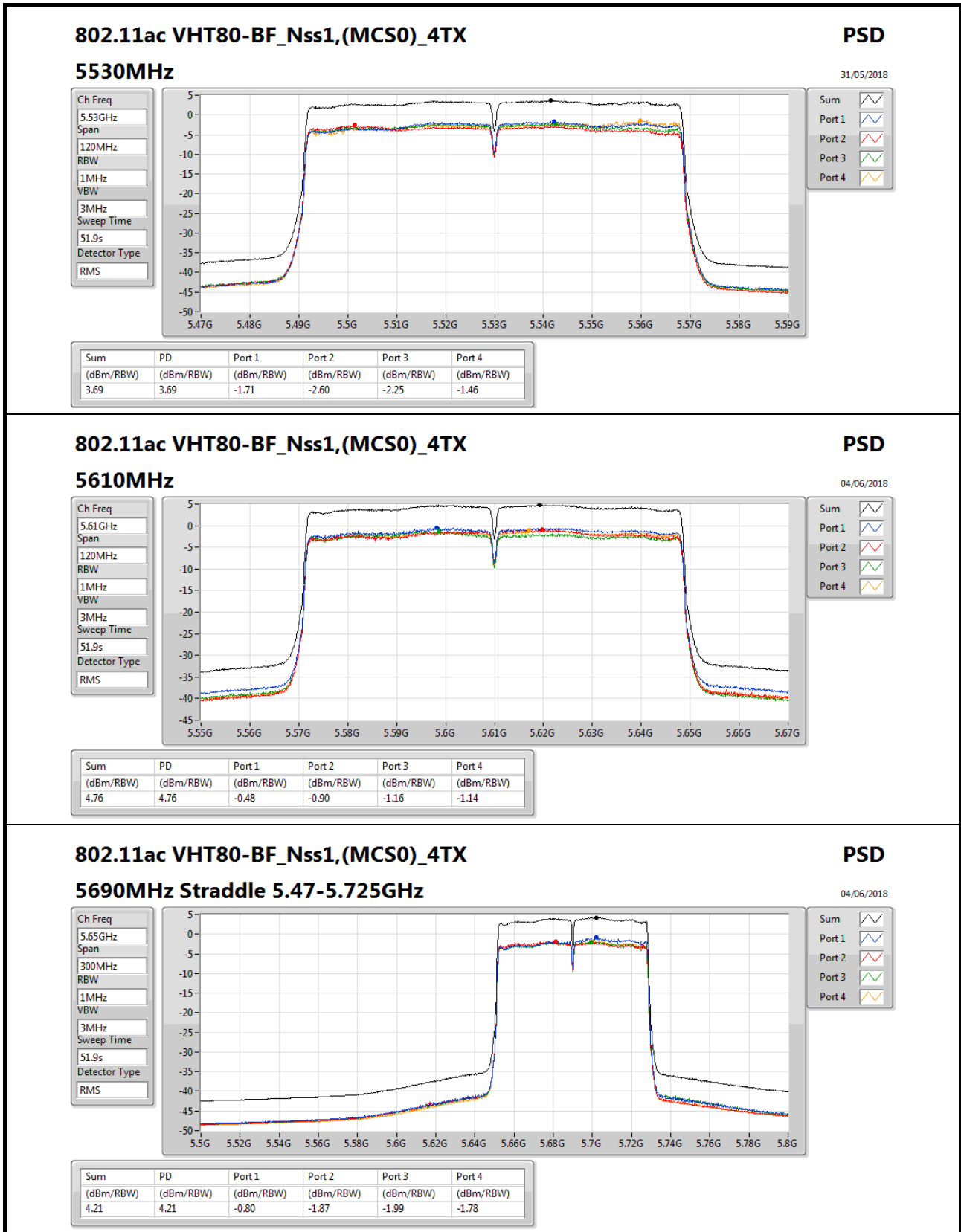














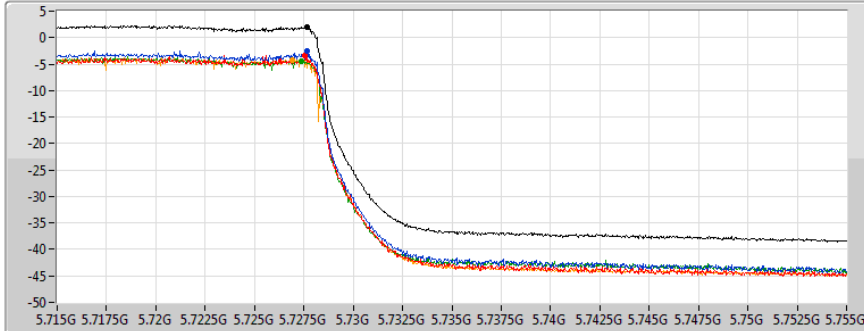
802.11ac VHT80-BF\_Nss1,(MCS0)\_4TX

PSD

5690MHz Straddle 5.725-5.85GHz

04/06/2018

Ch Freq  
5.735GHz  
Span  
40MHz  
RBW  
500kHz  
VBW  
3MHz  
Sweep Time  
51.9s  
Detector Type  
RMS



Sum  
Port 1  
Port 2  
Port 3  
Port 4

Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.94	1.94	-2.44	-3.36	-4.38	-4.23

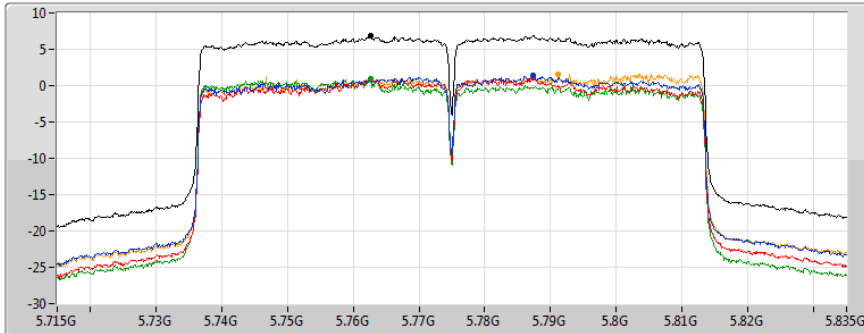
802.11ac VHT80-BF\_Nss1,(MCS0)\_4TX

PSD

5775MHz

31/05/2018

Ch Freq  
5.775GHz  
Span  
120MHz  
RBW  
500kHz  
VBW  
3MHz  
Sweep Time  
51.9s  
Detector Type  
RMS



Sum  
Port 1  
Port 2  
Port 3  
Port 4

Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.87	6.87	1.33	1.03	0.95	1.63



Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
5.725-5.85GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11ac VHT80_Nss1,(MCS0)_4TX	Pass	PK	22.3584M	37.62	69.50	-31.88	22.66	3	Horizontal	360	1.00	-





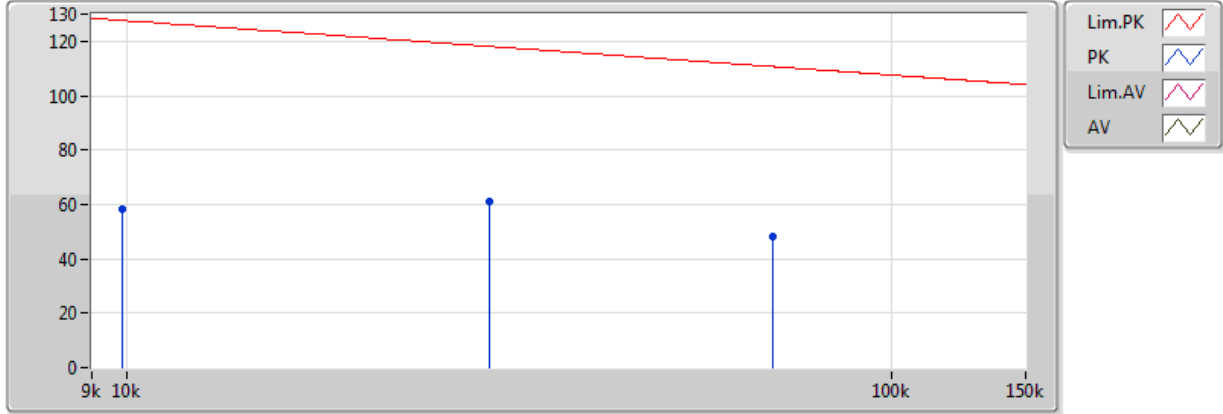
**Result**

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-	-	-
5775MHz	Pass	PK	9.846k	58.04	127.72	-69.68	10.89	3	Horizontal	0	1.00	-
5775MHz	Pass	PK	29.868k	61.14	118.09	-56.95	13.15	3	Horizontal	0	1.00	-
5775MHz	Pass	PK	69.912k	48.30	110.69	-62.39	13.51	3	Horizontal	0	1.00	-
5775MHz	Pass	PK	388.8k	54.02	95.80	-41.78	15.54	3	Horizontal	360	1.00	-
5775MHz	Pass	PK	4.5678M	36.73	69.50	-32.77	18.55	3	Horizontal	360	1.00	-
5775MHz	Pass	PK	22.3584M	37.62	69.50	-31.88	22.66	3	Horizontal	360	1.00	-

### 802.11ac VHT80\_Nss1,(MCS0)\_4TX

### 5775MHz\_Adapter

17/07/2018

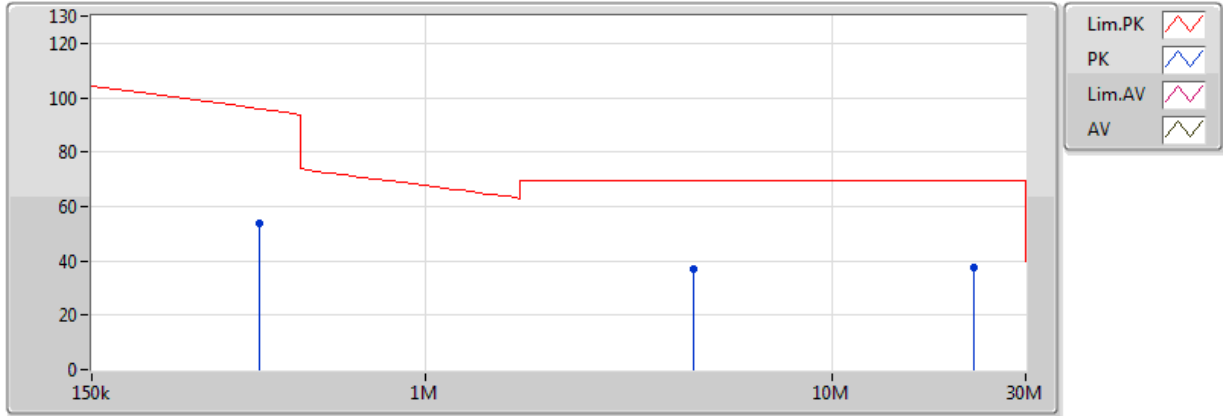


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	9.846k	58.04	127.72	-69.68	10.89	3	Horizontal	0	1.00	-
PK	29.868k	61.14	118.09	-56.95	13.15	3	Horizontal	0	1.00	-
PK	69.912k	48.30	110.69	-62.39	13.51	3	Horizontal	0	1.00	-

### 802.11ac VHT80\_Nss1,(MCS0)\_4TX

### 5775MHz\_Adapter

17/07/2018



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	388.8k	54.02	95.80	-41.78	15.54	3	Horizontal	360	1.00	-
PK	4.5678M	36.73	69.50	-32.77	18.55	3	Horizontal	360	1.00	-
PK	22.3584M	37.62	69.50	-31.88	22.66	3	Horizontal	360	1.00	-



Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
5.725-5.85GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11ac VHT80_Nss1,(MCS0)_4TX	Pass	PK	875.84M	42.71	46.00	-3.29	2.30	3	Horizontal	360	1.00	-



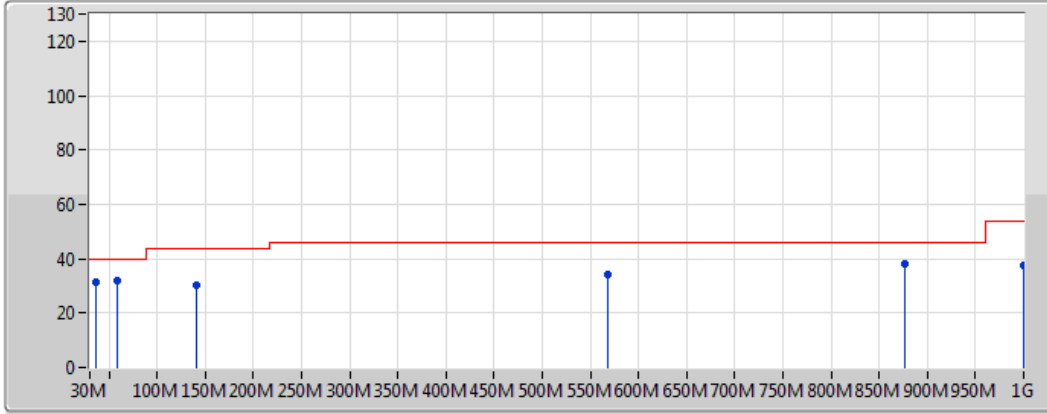
**Result**

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-	-	-
5775MHz	Pass	PK	35.82M	31.50	40.00	-8.50	-7.23	3	Vertical	0	1.00	-
5775MHz	Pass	PK	59.1M	32.04	40.00	-7.96	-15.04	3	Vertical	0	1.00	-
5775MHz	Pass	PK	140.58M	30.09	43.50	-13.41	-9.68	3	Vertical	0	1.00	-
5775MHz	Pass	PK	567.38M	34.28	46.00	-11.72	-1.00	3	Vertical	0	1.00	-
5775MHz	Pass	PK	875.84M	38.17	46.00	-7.83	2.30	3	Vertical	0	1.00	-
5775MHz	Pass	PK	999.999M	37.42	54.00	-16.58	4.45	3	Vertical	0	1.00	-
5775MHz	Pass	PK	35.82M	27.59	40.00	-12.41	-7.23	3	Horizontal	360	1.00	-
5775MHz	Pass	PK	138.64M	33.83	43.50	-9.67	-9.56	3	Horizontal	360	1.00	-
5775MHz	Pass	PK	212.36M	36.02	43.50	-7.48	-10.65	3	Horizontal	360	1.00	-
5775MHz	Pass	PK	730.34M	38.37	46.00	-7.63	0.60	3	Horizontal	360	1.00	-
5775MHz	Pass	PK	875.84M	42.71	46.00	-3.29	2.30	3	Horizontal	360	1.00	-
5775MHz	Pass	PK	999.999M	39.66	54.00	-14.34	4.45	3	Horizontal	360	1.00	-

### 802.11ac VHT80\_Nss1,(MCS0)\_4TX

### 5775MHz\_Adapter

02/06/2018



Legend for the spectrum plot:

- Lim.PK: Red stepped line
- PK: Blue vertical line
- Lim.AV: Pink stepped line
- AV: Green stepped line

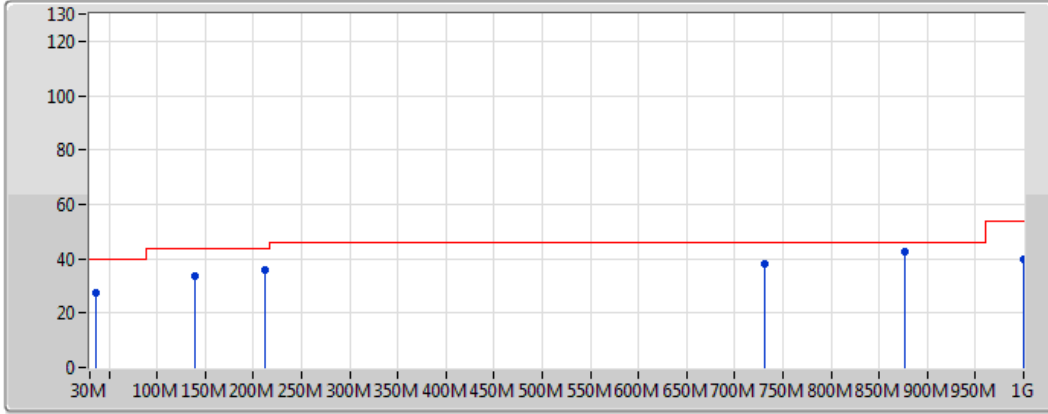
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	35.82M	31.50	40.00	-8.50	-7.23	3	Vertical	0	1.00	-
PK	59.1M	32.04	40.00	-7.96	-15.04	3	Vertical	0	1.00	-
PK	140.58M	30.09	43.50	-13.41	-9.68	3	Vertical	0	1.00	-
PK	567.38M	34.28	46.00	-11.72	-1.00	3	Vertical	0	1.00	-
PK	875.84M	38.17	46.00	-7.83	2.30	3	Vertical	0	1.00	-
PK	999.999M	37.42	54.00	-16.58	4.45	3	Vertical	0	1.00	-



### 802.11ac VHT80\_Nss1,(MCS0)\_4TX

### 5775MHz\_Adapter

02/06/2018



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	35.82M	27.59	40.00	-12.41	-7.23	3	Horizontal	360	1.00	-
PK	138.64M	33.83	43.50	-9.67	-9.56	3	Horizontal	360	1.00	-
PK	212.36M	36.02	43.50	-7.48	-10.65	3	Horizontal	360	1.00	-
PK	730.34M	38.37	46.00	-7.63	0.60	3	Horizontal	360	1.00	-
PK	875.84M	42.71	46.00	-3.29	2.30	3	Horizontal	360	1.00	-
PK	999.999M	39.66	54.00	-14.34	4.45	3	Horizontal	360	1.00	-



Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
5.725-5.85GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11ac VHT80_Nss1,(MCS0)_4TX	Pass	PK	28.0299M	37.48	69.50	-32.02	22.99	3	Horizontal	0	1.00	-





**Result**

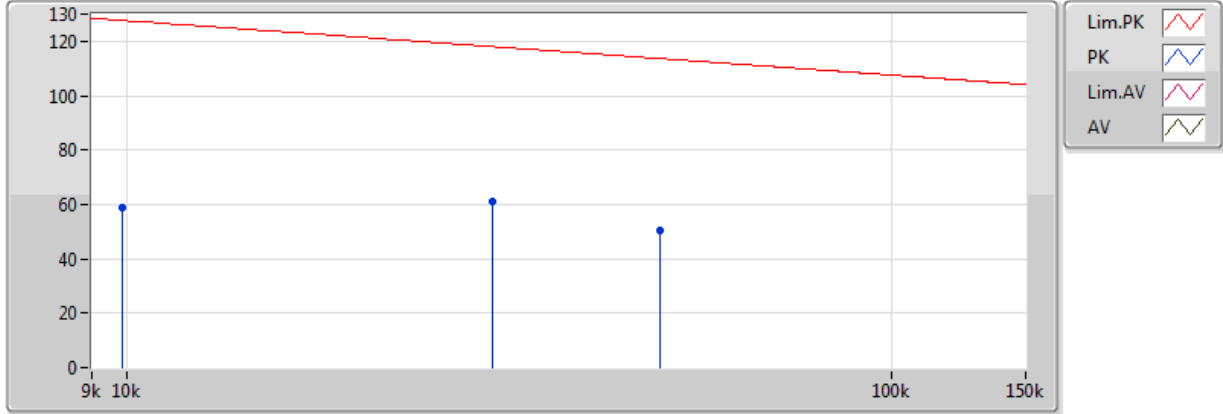
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-	-	-
5775MHz	Pass	PK	9.846k	58.64	127.72	-69.08	10.89	3	Horizontal	360	1.00	-
5775MHz	Pass	PK	30.15k	61.08	118.01	-56.93	13.17	3	Horizontal	360	1.00	-
5775MHz	Pass	PK	49.89k	50.63	113.63	-63.00	13.58	3	Horizontal	360	1.00	-
5775MHz	Pass	PK	388.8k	54.11	95.80	-41.69	15.54	3	Horizontal	0	1.00	-
5775MHz	Pass	PK	4.8663M	37.36	69.50	-32.14	18.73	3	Horizontal	0	1.00	-
5775MHz	Pass	PK	28.0299M	37.48	69.50	-32.02	22.99	3	Horizontal	0	1.00	-



### 802.11ac VHT80\_Nss1,(MCS0)\_4TX

### 5775MHz\_Adapter

17/07/2018



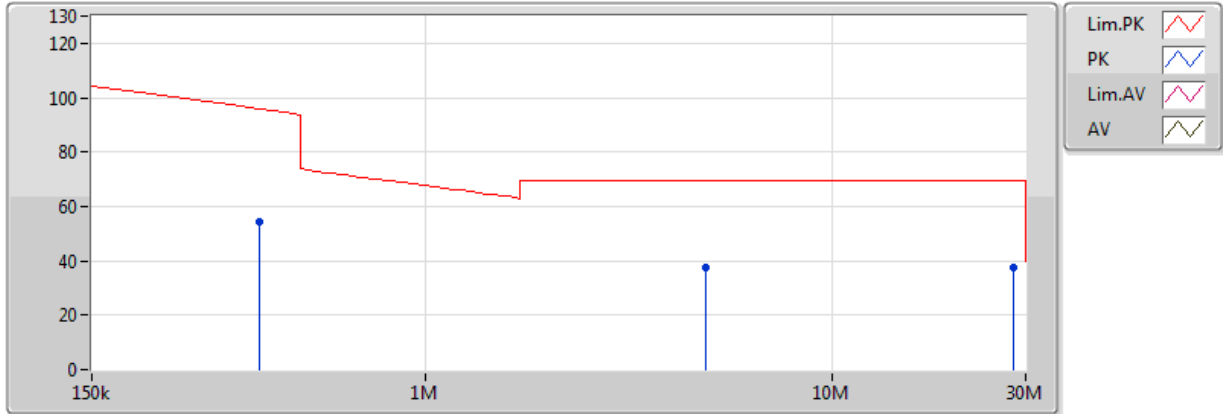
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	9.846k	58.64	127.72	-69.08	10.89	3	Horizontal	360	1.00	-
PK	30.15k	61.08	118.01	-56.93	13.17	3	Horizontal	360	1.00	-
PK	49.89k	50.63	113.63	-63.00	13.58	3	Horizontal	360	1.00	-



### 802.11ac VHT80\_Nss1,(MCS0)\_4TX

### 5775MHz\_Adapter

17/07/2018



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	388.8k	54.11	95.80	-41.69	15.54	3	Horizontal	0	1.00	-
PK	4.8663M	37.36	69.50	-32.14	18.73	3	Horizontal	0	1.00	-
PK	28.0299M	37.48	69.50	-32.02	22.99	3	Horizontal	0	1.00	-



Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
5.725-5.85GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11ac VHT80_Nss1,(MCS0)_4TX	Pass	PK	875.84M	42.18	46.00	-3.82	2.30	3	Horizontal	360	1.00	-



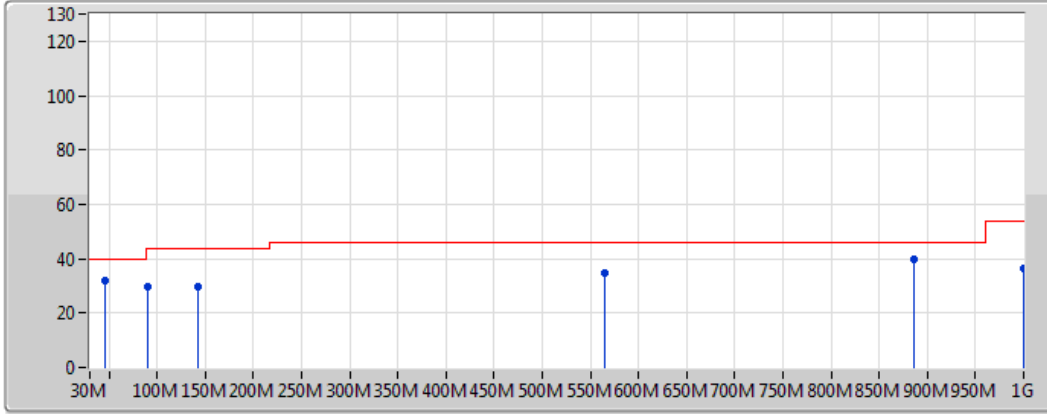
**Result**

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-	-	-
5775MHz	Pass	PK	45.52M	32.12	40.00	-7.88	-11.93	3	Vertical	0	1.00	-
5775MHz	Pass	PK	90.14M	29.61	43.50	-13.89	-12.35	3	Vertical	0	1.00	-
5775MHz	Pass	PK	142.52M	29.69	43.50	-13.81	-9.81	3	Vertical	0	1.00	-
5775MHz	Pass	PK	565.44M	34.79	46.00	-11.21	-0.98	3	Vertical	0	1.00	-
5775MHz	Pass	PK	885.54M	39.70	46.00	-6.30	2.39	3	Vertical	0	1.00	-
5775MHz	Pass	PK	999.999M	36.41	54.00	-17.59	4.45	3	Vertical	0	1.00	-
5775MHz	Pass	PK	90.14M	29.82	43.50	-13.68	-12.35	3	Horizontal	360	1.00	-
5775MHz	Pass	PK	140.58M	33.26	43.50	-10.24	-9.68	3	Horizontal	360	1.00	-
5775MHz	Pass	PK	214.3M	31.81	43.50	-11.69	-10.63	3	Horizontal	360	1.00	-
5775MHz	Pass	PK	555.74M	35.15	46.00	-10.85	-0.88	3	Horizontal	360	1.00	-
5775MHz	Pass	PK	875.84M	42.18	46.00	-3.82	2.30	3	Horizontal	360	1.00	-
5775MHz	Pass	PK	999.999M	39.91	54.00	-14.09	4.45	3	Horizontal	360	1.00	-

### 802.11ac VHT80\_Nss1,(MCS0)\_4TX

### 5775MHz\_Adapter

02/06/2018



Legend for the spectrum plot:

- Lim.PK: Red stepped line
- PK: Blue vertical line with dot
- Lim.AV: Pink stepped line
- AV: Black stepped line

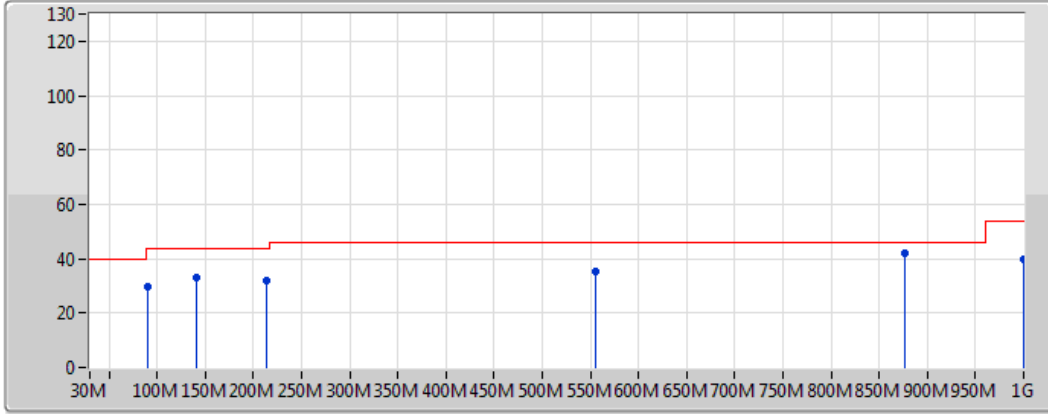
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	45.52M	32.12	40.00	-7.88	-11.93	3	Vertical	0	1.00	-
PK	90.14M	29.61	43.50	-13.89	-12.35	3	Vertical	0	1.00	-
PK	142.52M	29.69	43.50	-13.81	-9.81	3	Vertical	0	1.00	-
PK	565.44M	34.79	46.00	-11.21	-0.98	3	Vertical	0	1.00	-
PK	885.54M	39.70	46.00	-6.30	2.39	3	Vertical	0	1.00	-
PK	999.999M	36.41	54.00	-17.59	4.45	3	Vertical	0	1.00	-



### 802.11ac VHT80\_Nss1,(MCS0)\_4TX

### 5775MHz\_Adapter

02/06/2018



Legend for the spectrum plot:

- Lim.PK: Red stepped line
- PK: Blue vertical line
- Lim.AV: Pink stepped line
- AV: Black stepped line

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	90.14M	29.82	43.50	-13.68	-12.35	3	Horizontal	360	1.00	-
PK	140.58M	33.26	43.50	-10.24	-9.68	3	Horizontal	360	1.00	-
PK	214.3M	31.81	43.50	-11.69	-10.63	3	Horizontal	360	1.00	-
PK	555.74M	35.15	46.00	-10.85	-0.88	3	Horizontal	360	1.00	-
PK	875.84M	42.18	46.00	-3.82	2.30	3	Horizontal	360	1.00	-
PK	999.999M	39.91	54.00	-14.09	4.45	3	Horizontal	360	1.00	-



Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
5.15-5.25GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	Pass	PK	10.40564G	67.88	68.20	-0.32	15.40	3	Vertical	334	1.03	-
802.11ac VHT20_Nss1,(MCS0)_4TX	Pass	AV	5.1488G	53.31	54.00	-0.69	2.66	3	Horizontal	3	1.08	-
802.11ac VHT40_Nss1,(MCS0)_4TX	Pass	AV	5.149995G	53.55	54.00	-0.45	2.66	3	Horizontal	10	1.01	-
802.11ac VHT80_Nss1,(MCS0)_4TX	Pass	AV	5.149G	53.83	54.00	-0.17	2.66	3	Horizontal	8	1.02	-
5.25-5.35GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	Pass	AV	5.3502G	53.52	54.00	-0.48	2.93	3	Horizontal	231	1.01	-
802.11ac VHT20_Nss1,(MCS0)_4TX	Pass	AV	5.350005G	53.45	54.00	-0.55	2.93	3	Horizontal	4	1.00	-
802.11ac VHT40_Nss1,(MCS0)_4TX	Pass	AV	5.3536G	53.86	54.00	-0.14	2.93	3	Horizontal	9	1.01	-
802.11ac VHT80_Nss1,(MCS0)_4TX	Pass	AV	5.353G	53.56	54.00	-0.44	2.93	3	Horizontal	7	1.00	-
5.47-5.725GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	Pass	PK	5.726G	67.78	68.20	-0.42	3.54	3	Horizontal	236	1.01	-
802.11ac VHT20_Nss1,(MCS0)_4TX	Pass	PK	5.7252G	67.93	68.20	-0.27	3.54	3	Horizontal	167	1.05	-
802.11ac VHT40_Nss1,(MCS0)_4TX	Pass	PK	5.7264G	68.01	68.20	-0.19	3.54	3	Vertical	41	1.39	-
802.11ac VHT80_Nss1,(MCS0)_4TX	Pass	PK	5.8532G	67.87	68.20	-0.33	3.77	3	Vertical	37	1.06	-
5.725-5.85GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	Pass	PK	5.6478G	67.71	68.20	-0.49	3.39	3	Horizontal	216	1.01	-
802.11ac VHT20_Nss1,(MCS0)_4TX	Pass	AV	11.651238G	53.72	54.00	-0.28	15.62	3	Vertical	173	1.14	-
802.11ac VHT40_Nss1,(MCS0)_4TX	Pass	PK	5.6482G	67.55	68.20	-0.65	3.39	3	Horizontal	19	1.02	-
802.11ac VHT80_Nss1,(MCS0)_4TX	Pass	PK	5.6478G	67.69	68.20	-0.51	3.39	3	Horizontal	58	1.04	-





Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
802.11a_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	AV	5.149995G	43.88	54.00	-10.12	2.66	3	Vertical	20	1.50	-
5180MHz	Pass	AV	5.1812G	89.44	Inf	-Inf	2.71	3	Vertical	20	1.50	-
5180MHz	Pass	PK	5.1498G	57.63	74.00	-16.37	2.66	3	Vertical	20	1.50	-
5180MHz	Pass	PK	5.1866G	99.94	Inf	-Inf	2.71	3	Vertical	20	1.50	-
5180MHz	Pass	AV	5.149995G	53.46	54.00	-0.54	2.66	3	Horizontal	283	1.10	-
5180MHz	Pass	AV	5.1814G	101.81	Inf	-Inf	2.71	3	Horizontal	283	1.10	-
5180MHz	Pass	PK	5.1482G	69.18	74.00	-4.82	2.66	3	Horizontal	283	1.10	-
5180MHz	Pass	PK	5.179G	111.75	Inf	-Inf	2.70	3	Horizontal	283	1.10	-
5180MHz	Pass	AV	15.52524G	44.09	54.00	-9.91	15.58	3	Vertical	0	1.50	-
5180MHz	Pass	PK	15.5256G	56.80	74.00	-17.20	15.58	3	Vertical	0	1.50	-
5180MHz	Pass	AV	15.54822G	44.03	54.00	-9.97	15.51	3	Horizontal	360	1.50	-
5180MHz	Pass	PK	15.55374G	56.78	74.00	-17.22	15.49	3	Horizontal	360	1.50	-
5200MHz	Pass	AV	5.149995G	46.18	54.00	-7.82	2.66	3	Vertical	359	2.95	-
5200MHz	Pass	AV	5.1964G	97.19	Inf	-Inf	2.73	3	Vertical	359	2.95	-
5200MHz	Pass	PK	5.1464G	57.84	74.00	-16.16	2.66	3	Vertical	359	2.95	-
5200MHz	Pass	PK	5.198G	107.09	Inf	-Inf	2.73	3	Vertical	359	2.95	-
5200MHz	Pass	AV	5.149995G	53.33	54.00	-0.67	2.66	3	Horizontal	278	3.17	-
5200MHz	Pass	AV	5.2012G	105.32	Inf	-Inf	2.73	3	Horizontal	278	3.17	-
5200MHz	Pass	PK	5.149995G	64.24	74.00	-9.76	2.66	3	Horizontal	278	3.17	-
5200MHz	Pass	PK	5.1932G	114.91	Inf	-Inf	2.72	3	Horizontal	278	3.17	-
5200MHz	Pass	AV	15.5889G	44.68	54.00	-9.32	15.38	3	Vertical	0	1.50	-
5200MHz	Pass	PK	10.40564G	67.88	68.20	-0.32	15.40	3	Vertical	334	1.03	-
5200MHz	Pass	PK	15.59538G	58.10	74.00	-15.90	15.36	3	Vertical	0	1.50	-
5200MHz	Pass	AV	15.58908G	44.57	54.00	-9.43	15.38	3	Horizontal	360	1.50	-
5200MHz	Pass	PK	10.3993G	67.38	68.20	-0.82	15.39	3	Horizontal	229	1.04	-
5200MHz	Pass	PK	15.60456G	57.57	74.00	-16.43	15.33	3	Horizontal	360	1.50	-
5240MHz	Pass	AV	5.149995G	45.37	54.00	-8.63	2.66	3	Vertical	314	3.19	-
5240MHz	Pass	AV	5.2418G	101.91	Inf	-Inf	2.78	3	Vertical	314	3.19	-
5240MHz	Pass	AV	5.350005G	46.24	54.00	-7.76	2.93	3	Vertical	314	3.19	-
5240MHz	Pass	PK	5.123G	57.52	74.00	-16.48	2.63	3	Vertical	314	3.19	-
5240MHz	Pass	PK	5.2418G	113.12	Inf	-Inf	2.78	3	Vertical	314	3.19	-
5240MHz	Pass	PK	5.3522G	58.33	74.00	-15.67	2.93	3	Vertical	314	3.19	-
5240MHz	Pass	AV	5.149995G	52.32	54.00	-1.68	2.66	3	Horizontal	233	1.02	-
5240MHz	Pass	AV	5.2418G	108.05	Inf	-Inf	2.78	3	Horizontal	233	1.02	-
5240MHz	Pass	AV	5.350005G	53.61	54.00	-0.39	2.93	3	Horizontal	233	1.02	-
5240MHz	Pass	PK	5.2346G	119.68	Inf	-Inf	2.77	3	Horizontal	233	1.02	-
5240MHz	Pass	PK	5.1434G	66.32	74.00	-7.68	2.66	3	Horizontal	233	1.02	-
5240MHz	Pass	PK	5.3546G	67.67	74.00	-6.33	2.93	3	Horizontal	233	1.02	-
5240MHz	Pass	AV	15.724371G	44.61	54.00	-9.39	14.94	3	Vertical	0	1.50	-
5240MHz	Pass	PK	10.4793G	67.38	68.20	-0.82	15.51	3	Vertical	335	1.01	-
5240MHz	Pass	PK	15.72006G	56.95	74.00	-17.05	14.96	3	Vertical	0	1.50	-
5240MHz	Pass	AV	15.723713G	45.67	54.00	-8.33	14.95	3	Horizontal	360	1.50	-
5240MHz	Pass	PK	10.478683G	64.27	68.20	-3.93	15.50	3	Horizontal	198	2.11	-
5240MHz	Pass	PK	15.711018G	57.54	74.00	-16.46	14.99	3	Horizontal	360	1.50	-
5260MHz	Pass	AV	5.149995G	43.65	54.00	-10.35	2.66	3	Vertical	184	3.07	-
5260MHz	Pass	AV	5.2564G	99.60	Inf	-Inf	2.80	3	Vertical	184	3.07	-
5260MHz	Pass	AV	5.3608G	46.28	54.00	-7.72	2.94	3	Vertical	184	3.07	-



RSE TX above 1GHz Result\_Non-Beamforming

Appendix E.3

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
5260MHz	Pass	PK	5.1442G	55.33	74.00	-18.67	2.66	3	Vertical	184	3.07	-
5260MHz	Pass	PK	5.254G	110.19	Inf	-Inf	2.80	3	Vertical	184	3.07	-
5260MHz	Pass	PK	5.3608G	59.98	74.00	-14.02	2.94	3	Vertical	184	3.07	-
5260MHz	Pass	AV	5.149995G	50.55	54.00	-3.45	2.66	3	Horizontal	294	1.01	-
5260MHz	Pass	AV	5.2612G	108.32	Inf	-Inf	2.81	3	Horizontal	294	1.01	-
5260MHz	Pass	AV	5.350005G	53.20	54.00	-0.80	2.93	3	Horizontal	294	1.01	-
5260MHz	Pass	PK	5.146G	62.54	74.00	-11.46	2.66	3	Horizontal	294	1.01	-
5260MHz	Pass	PK	5.2576G	120.05	Inf	-Inf	2.80	3	Horizontal	294	1.01	-
5260MHz	Pass	PK	5.3512G	67.95	74.00	-6.05	2.93	3	Horizontal	294	1.01	-
5260MHz	Pass	AV	15.787425G	44.36	54.00	-9.64	14.74	3	Vertical	0	1.50	-
5260MHz	Pass	PK	10.520539G	67.21	68.20	-0.99	15.56	3	Vertical	336	1.00	-
5260MHz	Pass	PK	15.787784G	57.08	74.00	-16.92	14.74	3	Vertical	0	1.50	-
5260MHz	Pass	AV	15.785389G	44.16	54.00	-9.84	14.75	3	Horizontal	0	1.50	-
5260MHz	Pass	PK	10.520659G	65.33	68.20	-2.87	15.56	3	Horizontal	198	2.12	-
5260MHz	Pass	PK	15.782096G	56.91	74.00	-17.09	14.76	3	Horizontal	0	1.50	-
5300MHz	Pass	AV	5.3012G	98.93	Inf	-Inf	2.86	3	Vertical	179	3.15	-
5300MHz	Pass	AV	5.350005G	45.82	54.00	-8.18	2.93	3	Vertical	179	3.15	-
5300MHz	Pass	PK	5.2984G	109.77	Inf	-Inf	2.86	3	Vertical	179	3.15	-
5300MHz	Pass	PK	5.3524G	59.20	74.00	-14.80	2.93	3	Vertical	179	3.15	-
5300MHz	Pass	AV	5.3016G	106.17	Inf	-Inf	2.86	3	Horizontal	231	1.15	-
5300MHz	Pass	AV	5.350005G	53.20	54.00	-0.80	2.93	3	Horizontal	231	1.15	-
5300MHz	Pass	PK	5.3044G	116.57	Inf	-Inf	2.87	3	Horizontal	231	1.15	-
5300MHz	Pass	PK	5.354G	66.85	74.00	-7.15	2.93	3	Horizontal	231	1.15	-
5300MHz	Pass	AV	10.601617G	49.15	54.00	-4.85	15.68	3	Vertical	338	1.03	-
5300MHz	Pass	AV	15.91006G	44.34	54.00	-9.66	14.35	3	Vertical	0	1.50	-
5300MHz	Pass	PK	10.598204G	62.76	74.00	-11.24	15.67	3	Vertical	338	1.03	-
5300MHz	Pass	PK	15.903293G	56.96	74.00	-17.04	14.37	3	Vertical	0	1.50	-
5300MHz	Pass	AV	10.59976G	47.27	54.00	-6.73	15.68	3	Horizontal	198	2.13	-
5300MHz	Pass	AV	15.906946G	43.47	54.00	-10.53	14.36	3	Horizontal	0	1.50	-
5300MHz	Pass	PK	10.603772G	60.26	74.00	-13.74	15.68	3	Horizontal	198	2.13	-
5300MHz	Pass	PK	15.905569G	56.69	74.00	-17.31	14.36	3	Horizontal	0	1.50	-
5320MHz	Pass	AV	5.3214G	92.76	Inf	-Inf	2.89	3	Vertical	6	1.49	-
5320MHz	Pass	AV	5.350005G	44.00	54.00	-10.00	2.93	3	Vertical	6	1.49	-
5320MHz	Pass	PK	5.32G	103.05	Inf	-Inf	2.89	3	Vertical	6	1.49	-
5320MHz	Pass	PK	5.3532G	57.78	74.00	-16.22	2.93	3	Vertical	6	1.49	-
5320MHz	Pass	AV	5.3214G	102.77	Inf	-Inf	2.89	3	Horizontal	231	1.01	-
5320MHz	Pass	AV	5.3502G	53.52	54.00	-0.48	2.93	3	Horizontal	231	1.01	-
5320MHz	Pass	PK	5.3202G	113.27	Inf	-Inf	2.89	3	Horizontal	231	1.01	-
5320MHz	Pass	PK	5.358G	69.66	74.00	-4.34	2.93	3	Horizontal	231	1.01	-
5320MHz	Pass	AV	10.641796G	47.77	54.00	-6.23	15.73	3	Vertical	339	1.01	-
5320MHz	Pass	AV	15.95988G	45.31	54.00	-8.69	14.19	3	Vertical	360	0.00	-
5320MHz	Pass	PK	10.642695G	61.01	74.00	-12.99	15.74	3	Vertical	339	1.01	-
5320MHz	Pass	PK	15.95742G	58.41	74.00	-15.59	14.20	3	Vertical	360	0.00	-
5320MHz	Pass	AV	10.64192G	46.52	54.00	-7.48	15.74	3	Horizontal	205	2.05	-
5320MHz	Pass	AV	15.95976G	43.69	54.00	-10.31	14.19	3	Horizontal	360	1.50	-
5320MHz	Pass	PK	10.64258G	59.69	74.00	-14.31	15.74	3	Horizontal	205	2.05	-
5320MHz	Pass	PK	15.959042G	56.69	74.00	-17.31	14.19	3	Horizontal	360	1.50	-
5500MHz	Pass	AV	5.459995G	43.28	54.00	-10.72	3.07	3	Vertical	153	2.85	-
5500MHz	Pass	AV	5.4964G	94.09	Inf	-Inf	3.12	3	Vertical	153	2.85	-