



FCC Test Report

FCC ID : SWX-LAPGPS
Equipment : LiteAP GPS
Brand Name : UBIQUITI
Model Name : LAP-GPS
**Applicant/
Manufacturer** : Ubiquiti Networks, Inc.
685 Third Avenue, 27th Floor New York, New York 10017
USA
Standard : 47 CFR FCC Part 15.407

The product was received on Apr. 25, 2018, and testing was started from May 09, 2018 and completed on Jun. 06, 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: Phoenix Chen

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

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



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PHOTOGRAPHS OF EUT V01



Summary of Test Result

Report Clause	Ref. Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	-
3.1	15.207	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: Jeremy Lin

Report Producer: Debby Hung



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	ac (VHT10)	5160-5245	32-49 [18]
5725-5850		5735-5840	147-168 [22]
5150-5250	n (HT20), ac (VHT20)	5165-5240	33-48 [16]
5725-5850		5740-5835	148-167 [20]
5150-5250	ac (VHT30)	5170-5235	34-47 [14]
5725-5850		5745-5830	149-166 [18]
5150-5250	n (HT40), ac (VHT40)	5175-5230	35-46 [12]
5725-5850		5750-5825	150-165 [16]
5150-5250	ac (VHT50)	5180-5225	36-45 [10]
5725-5850		5755-5820	151-164 [14]
5150-5250	ac (VHT60)	5185-5220	37-44 [8]
5725-5850		5760-5815	152-163 [12]
5150-5250	ac (VHT80)	5190-5210	38-42 [5]
5725-5850		5770-5805	154-161 [8]

<Point-to-point> and <Indoor>

Band	Mode	BWch (MHz)	Nant
5.15-5.25GHz	802.11ac VHT10	10	2TX
5.725-5.85GHz	802.11ac VHT10	10	2TX
5.15-5.25GHz	802.11ac VHT20	20	2TX
5.725-5.85GHz	802.11ac VHT20	20	2TX
5.15-5.25GHz	802.11ac VHT30	30	2TX
5.725-5.85GHz	802.11ac VHT30	30	2TX
5.15-5.25GHz	802.11ac VHT40	40	2TX
5.725-5.85GHz	802.11ac VHT40	40	2TX
5.15-5.25GHz	802.11ac VHT50	50	2TX
5.725-5.85GHz	802.11ac VHT50	50	2TX
5.15-5.25GHz	802.11ac VHT60	60	2TX
5.725-5.85GHz	802.11ac VHT60	60	2TX
5.15-5.25GHz	802.11ac VHT80	80	2TX
5.725-5.85GHz	802.11ac VHT80	80	2TX



<Outdoor>

Band	Mode	BWch (MHz)	Nant
5.15-5.25GHz	802.11ac VHT10	10	2TX
5.725-5.85GHz	802.11ac VHT10	10	2TX
5.15-5.25GHz	802.11ac VHT20	20	2TX
5.725-5.85GHz	802.11ac VHT20	20	2TX
5.15-5.25GHz	802.11ac VHT30	30	2TX
5.725-5.85GHz	802.11ac VHT30	30	2TX
5.15-5.25GHz	802.11ac VHT40	40	2TX
5.725-5.85GHz	802.11ac VHT40	40	2TX

Note:

- 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.	Port	Brand	Model Name	Antenna Type	Connector
1	1	-	-	internal antenna	Murata
2	2	-	-	internal antenna	Murata

Ant.	Gain (dBi)	
	2.4G	5G
1	2	17
2	-	17

Note 1: The EUT has two antennas.

For 2.4GHz function:

For IEEE 802.11 b/g/n mode (1TX/1RX)

Ant. 1 (port 1) could transmit/receive simultaneously.

For 5GHz function:

For IEEE 802.11 n/ac mode (2TX/2RX)

Ant. 1 (port 1) and Ant. 2 (port 2) could transmit/receive simultaneously.



1.1.3 EUT Information

Operational Condition				
EUT Power Type	From PoE Adapter			
EUT Function	<input checked="" type="checkbox"/>	Outdoor	<input checked="" type="checkbox"/>	Indoor
	<input checked="" type="checkbox"/>	Fixed P2P	<input type="checkbox"/>	Client
Beamforming Function	<input type="checkbox"/>	With beamforming	<input checked="" type="checkbox"/>	Without beamforming
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

<Point-to-point> and <Indoor>

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11ac VHT10	0.975	0.11	2.538m	1k
802.11ac VHT20	0.957	0.191	1.263m	1k
802.11ac VHT30	0.938	0.278	873.438u	3k
802.11ac VHT40	0.916	0.381	634.375u	3k
802.11ac VHT50	0.906	0.429	517.188u	3k
802.11ac VHT60	0.886	0.526	435.938u	3k
802.11ac VHT80	0.804	0.947	318.75u	10k

<Outdoor>

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11ac VHT10	0.975	0.11	2.538m	1k
802.11ac VHT20	0.957	0.191	1.263m	1k
802.11ac VHT30	0.938	0.278	873.438u	3k
802.11ac VHT40	0.916	0.381	634.375u	3k

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	Kevin	23.5°C / 55%	12/May/2018
RF Conducted <Point-to-point> and <outdoor>	TH06-HY	Tim	22.5°C / 65%	14/May/2018
RF Conducted <indoor>	TH06-HY	Tim	22.5°C / 60%	06/Jun/2018
Radiated	03CH09-HY	Jerry	25°C / 60%	09/May/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

Test Software	DoS
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2.3 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral
Operating Mode	CTX
1	PoE Mode

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

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

Note : Test result of Point to Point was covered by Point to Multipoint.



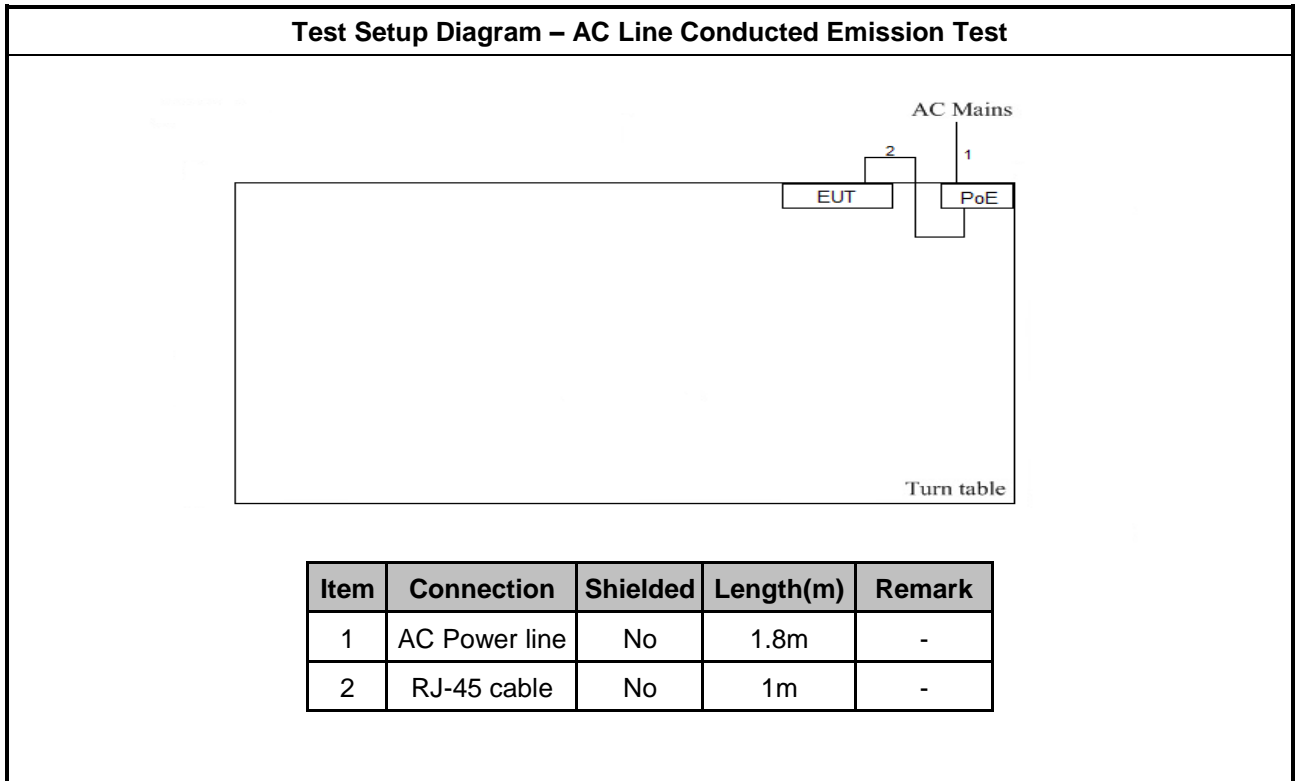
2.4 Accessories and Support Equipment

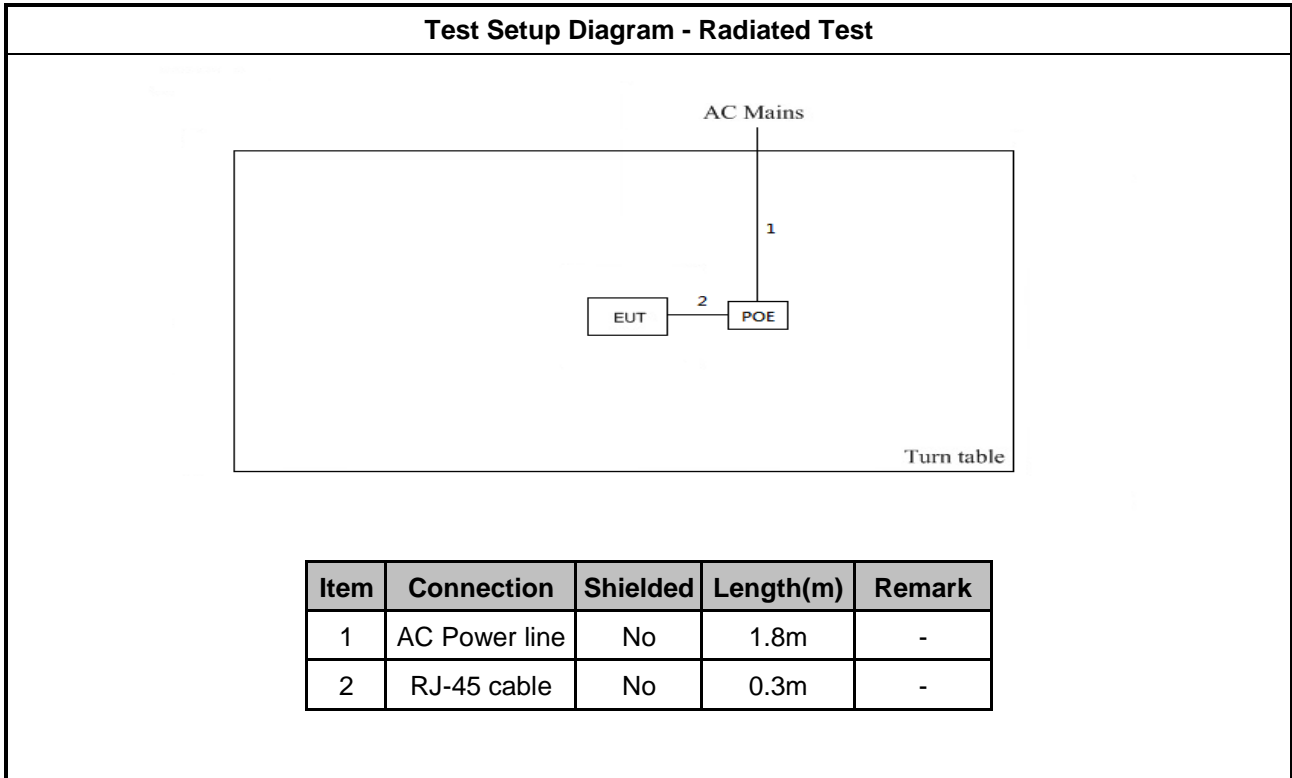
Accessories				
PoE Adapter	Brand Name	UBIQUITI	Model Name	GP-J240-030G
	Power Rating	I/P: 100 - 240Vac, 0.3 A, O/P: 24 Vdc, 0.3 A		

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

Support Equipment - RF Conducted				
No.	Equipment	Brand Name	Model Name	FCC ID
1	Notebook	DELL	E5410	R33002 / DOC
2	Adapter for NB	DELL	HA65NM130	R35737 / DOC
3	AC Source	G.W	APS-9102	-

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.

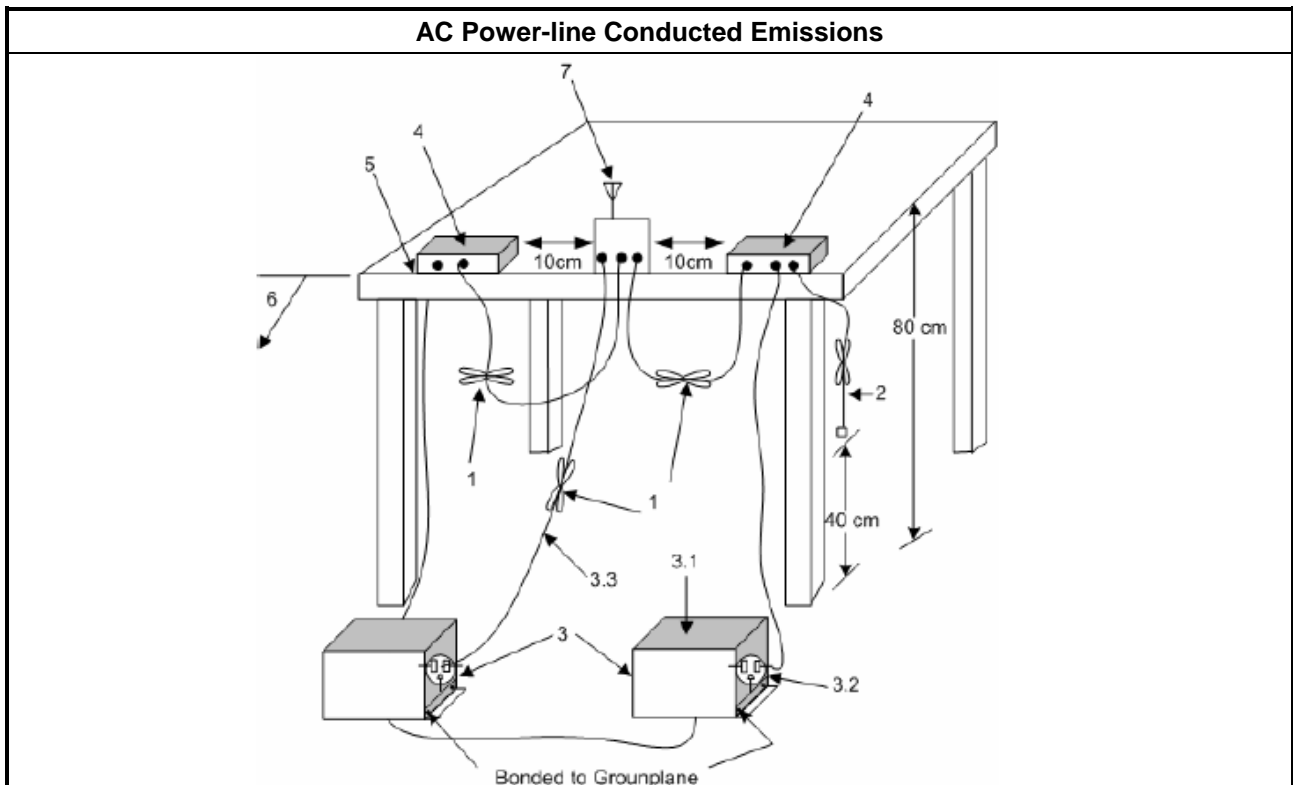
3.1.2 Measuring Instruments

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

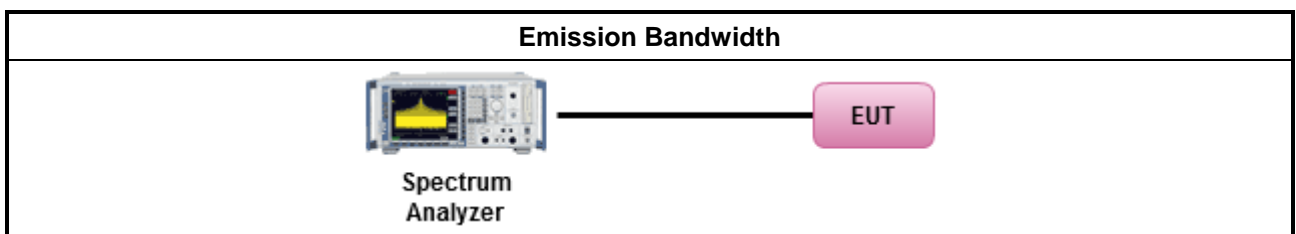
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> ▪ For the emission bandwidth shall be measured using one of the options below: 	
<input checked="" type="checkbox"/>	Refer as KDB 789033, clause C for EBW and clause D for OBW measurement.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 6.9.3 for occupied bandwidth testing.
<input 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	
UNII Devices	
<input checked="" type="checkbox"/> For the 5.15-5.25 GHz band:	
<input type="checkbox"/>	<ul style="list-style-type: none"> ▪ Outdoor AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$. e.i.r.p. at any elevation angle above 30 degrees $\leq 125mW$ [21dBm] ▪ Indoor AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$ ▪ Point-to-point AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 23$ dBi, then $P_{Out} = 30 - (G_{TX} - 23)$. ▪ Mobile or Portable Client: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$.
<input 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 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:	
<input type="checkbox"/>	<ul style="list-style-type: none"> ▪ Point-to-multipoint systems (P2M): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$. ▪ Point-to-point systems (P2P): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W.
P_{Out} = maximum conducted output power in dBm, G_{TX} = the maximum transmitting antenna directional gain in dBi.	

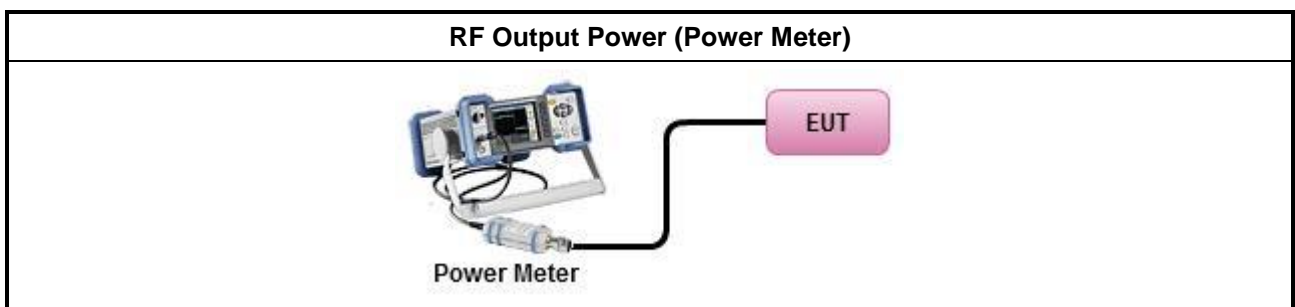
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

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

3.3.4 Test Setup



3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

3.4 Peak Power Spectral Density

3.4.1 Peak Power Spectral Density Limit

Peak Power Spectral Density Limit	
UNII Devices	
<input checked="" type="checkbox"/> For the 5.15-5.25 GHz band:	
	<ul style="list-style-type: none"> ▪ Outdoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$. ▪ Indoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$. ▪ Point-to-point AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 23$ dBi, then $P_{Out} = 17 - (G_{TX} - 23)$. ▪ Mobile or Portable Client: the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.
<input type="checkbox"/> For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.	
<input type="checkbox"/> For the 5.47-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.	
<input checked="" type="checkbox"/> For the 5.725-5.85 GHz band:	
	<ul style="list-style-type: none"> ▪ Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If $G_{TX} > 6$ dBi, then $PPSD = 30 - (G_{TX} - 6)$. ▪ Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.
<p>PPSD = peak power spectral density that he same method as used to determine the conducted output power shall be used to determine the power spectral density. And power spectral density in dBm/MHz</p> <p>G_{TX} = the maximum transmitting antenna directional gain in dBi.</p>	

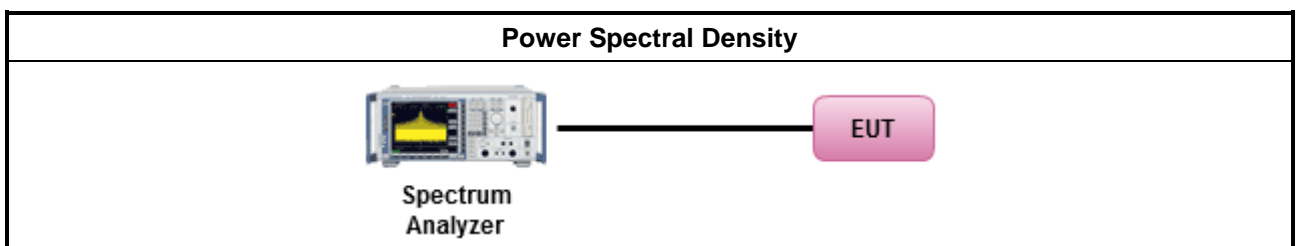
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

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

3.4.4 Test Setup



3.4.5 Test Result of Peak Power Spectral Density

Refer as Appendix D

3.5 Unwanted Emissions

3.5.1 Transmitter Radiated Unwanted Emissions Limit

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

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

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

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

Un-restricted band emissions above 1GHz Limit	
Operating Band	Limit
5.15 - 5.25 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.25 - 5.35 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.47 - 5.725 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.725 - 5.85 GHz	5.650-5700 GHz: e.i.r.p. -27 ~ 10 dBm [68.2 ~ 105.2 dBuV/m@3m] 5.700-5720 GHz: e.i.r.p. 10 ~ 15.6 dBm [105.2 ~ 110.8 dBuV/m@3m] 5.720-5725 GHz: e.i.r.p. 15.6 ~ 27 dBm [110.8 ~ 122.2 dBuV/m@3m] 5.850-5.855 GHz: e.i.r.p. 27 ~ 15.6 dBm [122.2 ~ 110.8 dBuV/m@3m] 5.855-5.875 GHz: e.i.r.p. 15.6 ~ 10 dBm [110.8 ~ 105.2 dBuV/m@3m] 5.875-5.925 GHz: e.i.r.p. 10 ~ -27 dBm [105.2 ~ 68.2dBuV/m@3m] Other un-restricted band: e.i.r.p. -27 dBm [68.2 dBuV/m@3m]

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

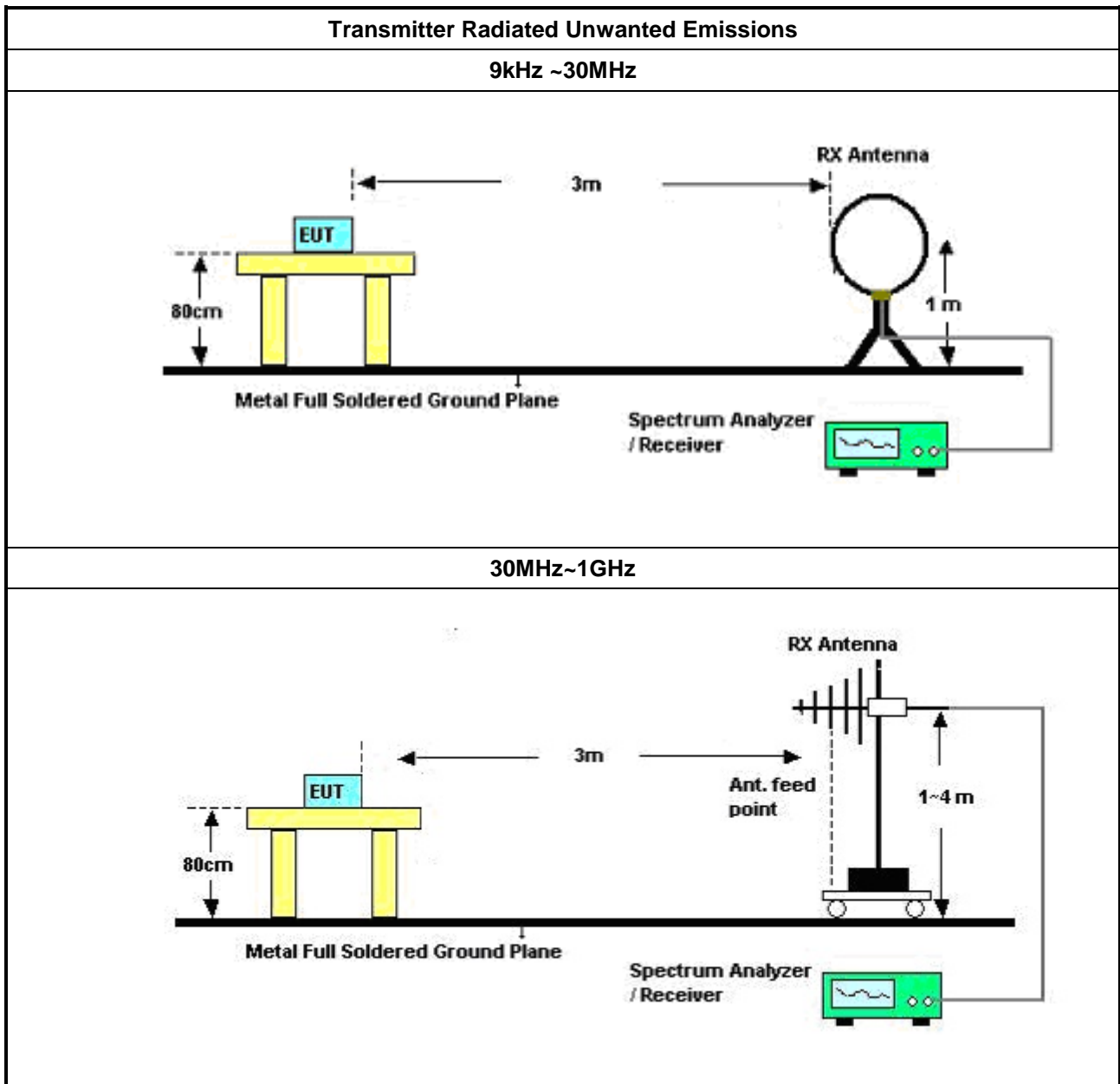
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

Test Method									
<ul style="list-style-type: none"> ▪ Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 m for frequencies above 30 MHz, unless it can be further demonstrated that measurements at a distance of 30 m or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements). 									
<ul style="list-style-type: none"> ▪ The average emission levels shall be measured in [duty cycle \geq 98 or duty factor]. 									
<ul style="list-style-type: none"> ▪ For the transmitter unwanted emissions shall be measured using following options below: <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20px;"></td> <td> <ul style="list-style-type: none"> ▪ Refer as KDB 789033, clause G)2) for unwanted emissions into non-restricted bands. </td> </tr> <tr> <td></td> <td> <ul style="list-style-type: none"> ▪ Refer as KDB 789033, clause G)1) for unwanted emissions into restricted bands. </td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Refer as KDB 789033, G)6) Method VB (ANSI C63.10, clause 4.1.4.2.3), Reduced VBW.</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Refer as KDB 789033, clause G)5) (ANSI C63.10, clause 4.1.4.2.2), measurement procedure peak limit.</td> </tr> </table> 			<ul style="list-style-type: none"> ▪ Refer as KDB 789033, clause G)2) for unwanted emissions into non-restricted bands. 		<ul style="list-style-type: none"> ▪ Refer as KDB 789033, clause G)1) for unwanted emissions into restricted bands. 	<input checked="" type="checkbox"/>	Refer as KDB 789033, G)6) Method VB (ANSI C63.10, clause 4.1.4.2.3), Reduced VBW.	<input checked="" type="checkbox"/>	Refer as KDB 789033, clause G)5) (ANSI C63.10, clause 4.1.4.2.2), measurement procedure peak limit.
	<ul style="list-style-type: none"> ▪ Refer as KDB 789033, clause G)2) for unwanted emissions into non-restricted bands. 								
	<ul style="list-style-type: none"> ▪ Refer as KDB 789033, clause G)1) for unwanted emissions into restricted bands. 								
<input checked="" type="checkbox"/>	Refer as KDB 789033, G)6) Method VB (ANSI C63.10, clause 4.1.4.2.3), Reduced VBW.								
<input checked="" type="checkbox"/>	Refer as KDB 789033, clause G)5) (ANSI C63.10, clause 4.1.4.2.2), measurement procedure peak limit.								
<ul style="list-style-type: none"> ▪ For radiated measurement. <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20px;"></td> <td> <ul style="list-style-type: none"> ▪ Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m. </td> </tr> <tr> <td></td> <td> <ul style="list-style-type: none"> ▪ Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m. </td> </tr> <tr> <td></td> <td> <ul style="list-style-type: none"> ▪ Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz. </td> </tr> </table> 			<ul style="list-style-type: none"> ▪ Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m. 		<ul style="list-style-type: none"> ▪ Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m. 		<ul style="list-style-type: none"> ▪ Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz. 		
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	<ul style="list-style-type: none"> ▪ Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz. 								
<ul style="list-style-type: none"> ▪ The any unwanted emissions level shall not exceed the fundamental emission level. 									
<ul style="list-style-type: none"> ▪ All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported. 									

3.5.4 Test Setup





3.6 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	ESCS30	838251/003	9KHz ~ 2.75GHz	13/Jun/2017	12/Jun/2018
LISN	R&S	ENV216	101295	9kHz ~ 30MHz	17/Nov/2017	16/Nov/2018
RF Cable-CON	HUBER+SUHNER	RG213/U	0761183202000 1	9kHz ~ 30MHz	06/Oct/2017	05/Oct/2018
AC POWER	APC	AFC-11005G	F310050055	47Hz~63Hz 5~300V	NCR	NCR
Impuls Begrenzer Puls e Limiter	SCHWARZBEC K	VTSD 9561-F	9561-F041	9 kHz ~ 30 MHz	12/Oct/2017	11/Oct/2018

NCR : Non-Calibration Require

Instrument for Conducted Test

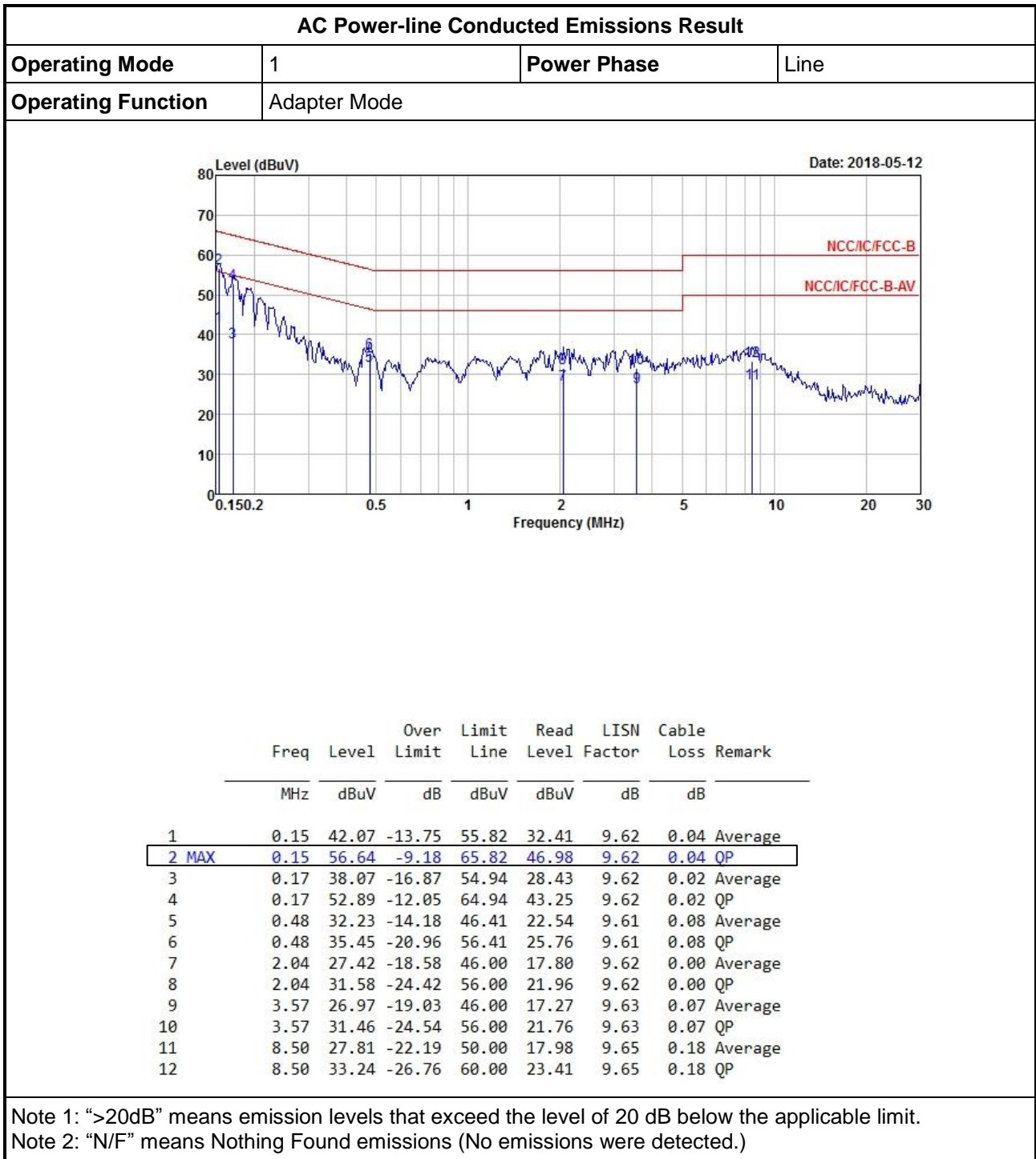
Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Spectrum Analyzer	R&S	FSV 40	101013	9kHz~40GHz	29/Dec/2017	28/Dec/2018
Signal Generator	R&S	SMR40	100116	10MHz ~ 40GHz	27/Jul/2017	26/Jul/2018
Power Sensor	Anritsu	MA2411B	0917017	300MHz ~ 40GHz	05/Feb/2018	04/Feb/2019
Power Meter	Anritsu	ML2495A	0949003	300MHz ~ 40GHz	05/Feb/2018	04/Feb/2019
RF Cable-0.2m	HUBER+SUHNER	SUCOFLEX_10 4	MY10709/4	30MHz ~ 26.5GHz	25/Aug/2017	24/Aug/2018
RF Cable-0.2m	HUBER+SUHNER	SUCOFLEX_10 4	MY10712/4	30MHz ~ 26.5GHz	25/Aug/2017	24/Aug/2018
RF Cable-0.5m	HUBER+SUHNER	SUCOFLEX_10 4	MY10713/4	30MHz ~ 26.5GHz	25/Aug/2017	24/Aug/2018

**Instrument for Radiated Test**

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
N.S.A. Measurement	TDK	SAC-3M	03CH09-HY	30MHz ~ 1GHz	29/Apr/2018	28/Apr/2019
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	1GHz ~ 18GHz	28/Jun/2017	27/Jun/2018
Amplifier	Agilent	8449B	3008A02326	1GHz ~ 26.5GHz	17/Jul/2017	16/Jul/2018
Amplifier	EMC	EMC9135	980209	9KHz~1GHz	03/Jan/2018	02/Jan/2019
EXA Signal Analyzer	KEYSIGHT	N9010A	MY54200885	10Hz ~ 44GHz	20/Jul/2017	19/Jul/2018
Bilog Antenna & 5dB Attenuator	TESEQ	CBL 6111D	35418	30MHz~1GHz	09/Sep/2017	08/Sep/2018
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120D	BBHA9120D 1534	1GHz~18GHz	30/Apr/2018	29/Apr/2019
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170614	18GHz~40GHz	09/Feb/2018	08/Feb/2019
Preamplifier	MITEQ	TTA1840-35-H G	1864481	18GHz ~ 40GHz	24/Aug/2017	23/Aug/2018
Loop Antenna	TESEQ	HLA 6120	31244	9kHz ~ 30MHz	28/Mar/2018	27/Mar/2019
RF Cable-R03m	Jye Bao	RG142	CB021	9kHz ~ 1GHz	02/Feb/2018	01/Feb/2019
RF Cable-high	SUHNER	SUCOFLEX10 4	MY34918/4	1GHz ~ 40GHz	02/Feb/2018	01/Feb/2019



AC Power-line Conducted Emissions Result																																																																																																																																																			
Operating Mode	1	Power Phase	Neutral																																																																																																																																																
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<div style="display: flex; justify-content: space-between;"> <div> </div> <div style="text-align: right;">Date: 2018-05-12</div> </div>																																																																																																																																																			
<table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <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>41.65</td><td>-14.26</td><td>55.91</td><td>31.98</td><td>9.63</td><td>0.04</td><td>Average</td></tr> <tr><td>2</td><td>0.15</td><td>56.61</td><td>-9.30</td><td>65.91</td><td>46.94</td><td>9.63</td><td>0.04</td><td>QP</td></tr> <tr><td>3</td><td>0.17</td><td>36.96</td><td>-18.03</td><td>54.99</td><td>27.31</td><td>9.63</td><td>0.02</td><td>Average</td></tr> <tr><td>4</td><td>0.17</td><td>52.82</td><td>-12.17</td><td>64.99</td><td>43.17</td><td>9.63</td><td>0.02</td><td>QP</td></tr> <tr><td>5</td><td>0.48</td><td>31.90</td><td>-14.51</td><td>46.41</td><td>22.21</td><td>9.61</td><td>0.08</td><td>Average</td></tr> <tr><td>6</td><td>0.48</td><td>35.04</td><td>-21.37</td><td>56.41</td><td>25.35</td><td>9.61</td><td>0.08</td><td>QP</td></tr> <tr><td>7</td><td>2.01</td><td>27.89</td><td>-18.11</td><td>46.00</td><td>18.26</td><td>9.63</td><td>0.00</td><td>Average</td></tr> <tr><td>8</td><td>2.01</td><td>32.59</td><td>-23.41</td><td>56.00</td><td>22.96</td><td>9.63</td><td>0.00</td><td>QP</td></tr> <tr><td>9</td><td>3.03</td><td>26.79</td><td>-19.21</td><td>46.00</td><td>17.10</td><td>9.64</td><td>0.05</td><td>Average</td></tr> <tr><td>10</td><td>3.03</td><td>31.34</td><td>-24.66</td><td>56.00</td><td>21.65</td><td>9.64</td><td>0.05</td><td>QP</td></tr> <tr><td>11</td><td>3.94</td><td>26.23</td><td>-19.77</td><td>46.00</td><td>16.51</td><td>9.64</td><td>0.08</td><td>Average</td></tr> <tr><td>12</td><td>3.94</td><td>30.56</td><td>-25.44</td><td>56.00</td><td>20.84</td><td>9.64</td><td>0.08</td><td>QP</td></tr> <tr><td>13</td><td>8.82</td><td>25.26</td><td>-24.74</td><td>50.00</td><td>15.40</td><td>9.68</td><td>0.18</td><td>Average</td></tr> <tr><td>14</td><td>8.82</td><td>30.80</td><td>-29.20</td><td>60.00</td><td>20.94</td><td>9.68</td><td>0.18</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	41.65	-14.26	55.91	31.98	9.63	0.04	Average	2	0.15	56.61	-9.30	65.91	46.94	9.63	0.04	QP	3	0.17	36.96	-18.03	54.99	27.31	9.63	0.02	Average	4	0.17	52.82	-12.17	64.99	43.17	9.63	0.02	QP	5	0.48	31.90	-14.51	46.41	22.21	9.61	0.08	Average	6	0.48	35.04	-21.37	56.41	25.35	9.61	0.08	QP	7	2.01	27.89	-18.11	46.00	18.26	9.63	0.00	Average	8	2.01	32.59	-23.41	56.00	22.96	9.63	0.00	QP	9	3.03	26.79	-19.21	46.00	17.10	9.64	0.05	Average	10	3.03	31.34	-24.66	56.00	21.65	9.64	0.05	QP	11	3.94	26.23	-19.77	46.00	16.51	9.64	0.08	Average	12	3.94	30.56	-25.44	56.00	20.84	9.64	0.08	QP	13	8.82	25.26	-24.74	50.00	15.40	9.68	0.18	Average	14	8.82	30.80	-29.20	60.00	20.94	9.68	0.18	QP
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<p>Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit. Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)</p>																																																																																																																																																			





Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ac VHT10_Nss1,(MCS0)_2TX	14.725M	9.033M	9M03D1D	14.238M	8.983M
802.11ac VHT20_Nss1,(MCS0)_2TX	32.9M	17.941M	17M9D1D	26.2M	17.816M
802.11ac VHT30_Nss1,(MCS0)_2TX	49.125M	26.274M	26M3D1D	38.138M	25.975M
802.11ac VHT40_Nss1,(MCS0)_2TX	62.85M	36.732M	36M7D1D	48.8M	36.432M
802.11ac VHT50_Nss1,(MCS0)_2TX	69.75M	44.853M	44M9D1D	59.313M	44.603M
802.11ac VHT60_Nss1,(MCS0)_2TX	77.1M	53.298M	53M3D1D	69.9M	52.999M
802.11ac VHT80_Nss1,(MCS0)_2TX	199.2M	77.061M	77M1D1D	96.4M	75.862M
5.725-5.85GHz	-	-	-	-	-
802.11ac VHT10_Nss1,(MCS0)_2TX	8.813M	8.996M	9M00D1D	8.788M	8.971M
802.11ac VHT20_Nss1,(MCS0)_2TX	17.525M	17.891M	17M9D1D	16.65M	17.741M
802.11ac VHT30_Nss1,(MCS0)_2TX	25.538M	26.087M	26M1D1D	25.463M	25.9M
802.11ac VHT40_Nss1,(MCS0)_2TX	35.7M	36.732M	36M7D1D	35.15M	36.382M
802.11ac VHT50_Nss1,(MCS0)_2TX	44.25M	44.915M	44M9D1D	43.063M	44.603M
802.11ac VHT60_Nss1,(MCS0)_2TX	52.8M	53.823M	53M8D1D	51.9M	53.073M
802.11ac VHT80_Nss1,(MCS0)_2TX	72.8M	76.162M	76M2D1D	72.5M	75.862M

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



Result

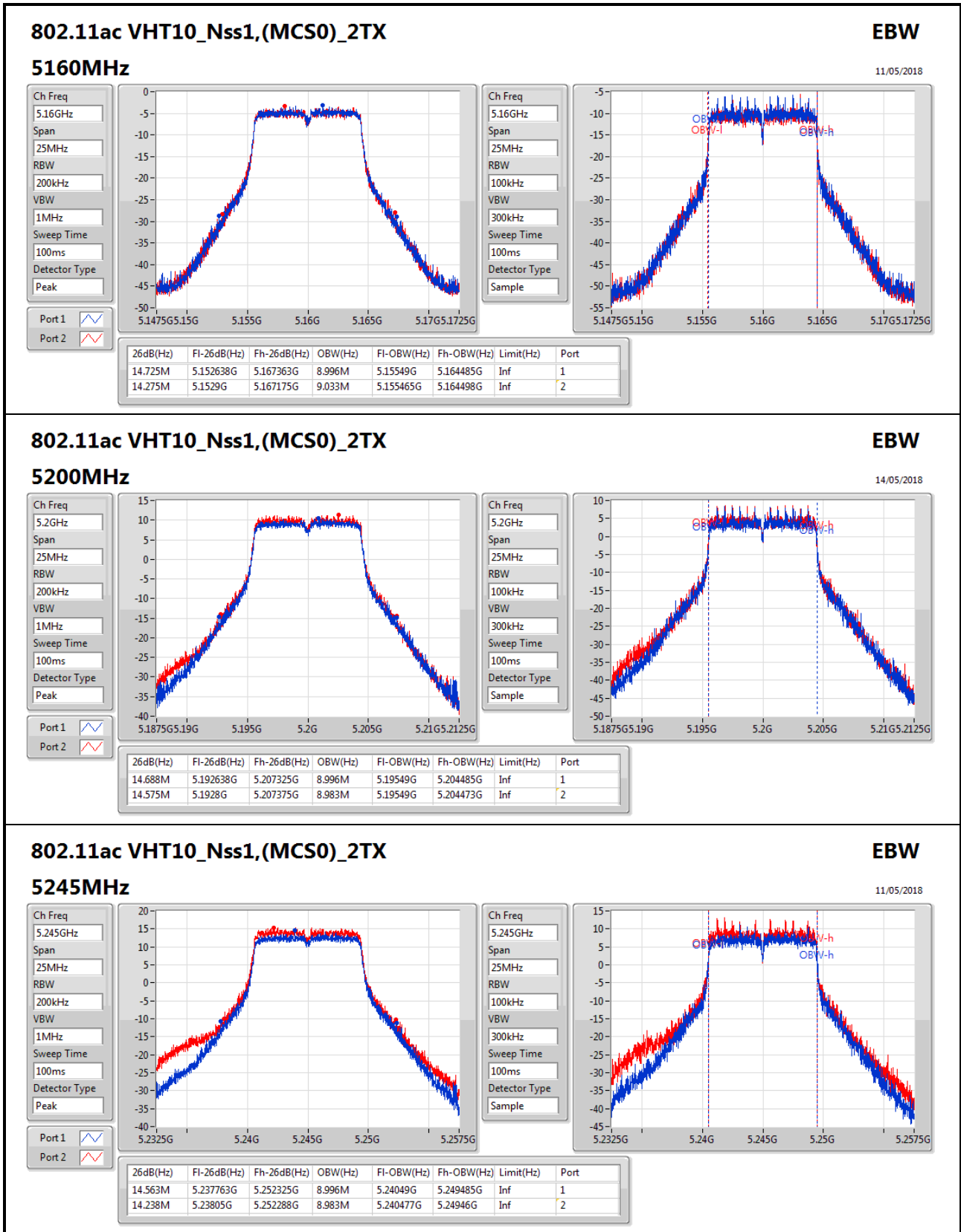
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11ac VHT10_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5160MHz_TnomVnom	Pass	Inf	14.725M	8.996M	14.275M	9.033M
5200MHz_TnomVnom	Pass	Inf	14.688M	8.996M	14.575M	8.983M
5245MHz_TnomVnom	Pass	Inf	14.563M	8.996M	14.238M	8.983M
5735MHz_TnomVnom	Pass	500k	8.8M	8.996M	8.8M	8.996M
5790MHz_TnomVnom	Pass	500k	8.8M	8.996M	8.8M	8.971M
5840MHz_TnomVnom	Pass	500k	8.788M	8.983M	8.813M	8.996M
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5165MHz_TnomVnom	Pass	Inf	26.325M	17.891M	27.675M	17.841M
5200MHz_TnomVnom	Pass	Inf	26.25M	17.816M	31.375M	17.941M
5240MHz_TnomVnom	Pass	Inf	26.2M	17.816M	32.9M	17.941M
5740MHz_TnomVnom	Pass	500k	17.275M	17.816M	17.275M	17.741M
5790MHz_TnomVnom	Pass	500k	16.65M	17.891M	17.525M	17.791M
5835MHz_TnomVnom	Pass	500k	17.15M	17.891M	17.5M	17.841M
802.11ac VHT30_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5170MHz_TnomVnom	Pass	Inf	39.75M	26.124M	39.6M	26.087M
5200MHz_TnomVnom	Pass	Inf	38.325M	25.975M	38.138M	25.975M
5235MHz_TnomVnom	Pass	Inf	44.438M	26.049M	49.125M	26.274M
5745MHz_TnomVnom	Pass	500k	25.5M	25.9M	25.538M	25.975M
5790MHz_TnomVnom	Pass	500k	25.463M	26.087M	25.5M	25.975M
5830MHz_TnomVnom	Pass	500k	25.538M	26.049M	25.5M	25.975M
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5175MHz_TnomVnom	Pass	Inf	53.2M	36.632M	52.35M	36.732M
5200MHz_TnomVnom	Pass	Inf	52.75M	36.482M	48.8M	36.432M
5230MHz_TnomVnom	Pass	Inf	52.45M	36.482M	62.85M	36.732M
5750MHz_TnomVnom	Pass	500k	35.45M	36.382M	35.7M	36.432M
5790MHz_TnomVnom	Pass	500k	35.65M	36.732M	35.45M	36.482M
5825MHz_TnomVnom	Pass	500k	35.7M	36.632M	35.15M	36.482M
802.11ac VHT50_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz_TnomVnom	Pass	Inf	69.75M	44.79M	65M	44.853M
5200MHz_TnomVnom	Pass	Inf	61.125M	44.665M	59.313M	44.603M
5225MHz_TnomVnom	Pass	Inf	62.438M	44.603M	60.375M	44.603M
5755MHz_TnomVnom	Pass	500k	43.875M	44.603M	43.063M	44.603M
5790MHz_TnomVnom	Pass	500k	44.25M	44.853M	43.875M	44.728M
5820MHz_TnomVnom	Pass	500k	43.813M	44.915M	43.313M	44.728M
802.11ac VHT60_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5185MHz_TnomVnom	Pass	Inf	76.425M	53.148M	77.1M	53.298M
5200MHz_TnomVnom	Pass	Inf	72M	52.999M	69.9M	53.073M
5220MHz_TnomVnom	Pass	Inf	72.9M	53.073M	73.125M	52.999M
5760MHz_TnomVnom	Pass	500k	52.8M	53.073M	52.725M	53.073M
5790MHz_TnomVnom	Pass	500k	52.8M	53.823M	51.9M	53.523M
5815MHz_TnomVnom	Pass	500k	51.9M	53.448M	51.9M	53.298M
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz_TnomVnom	Pass	Inf	198.7M	77.061M	199.2M	76.862M

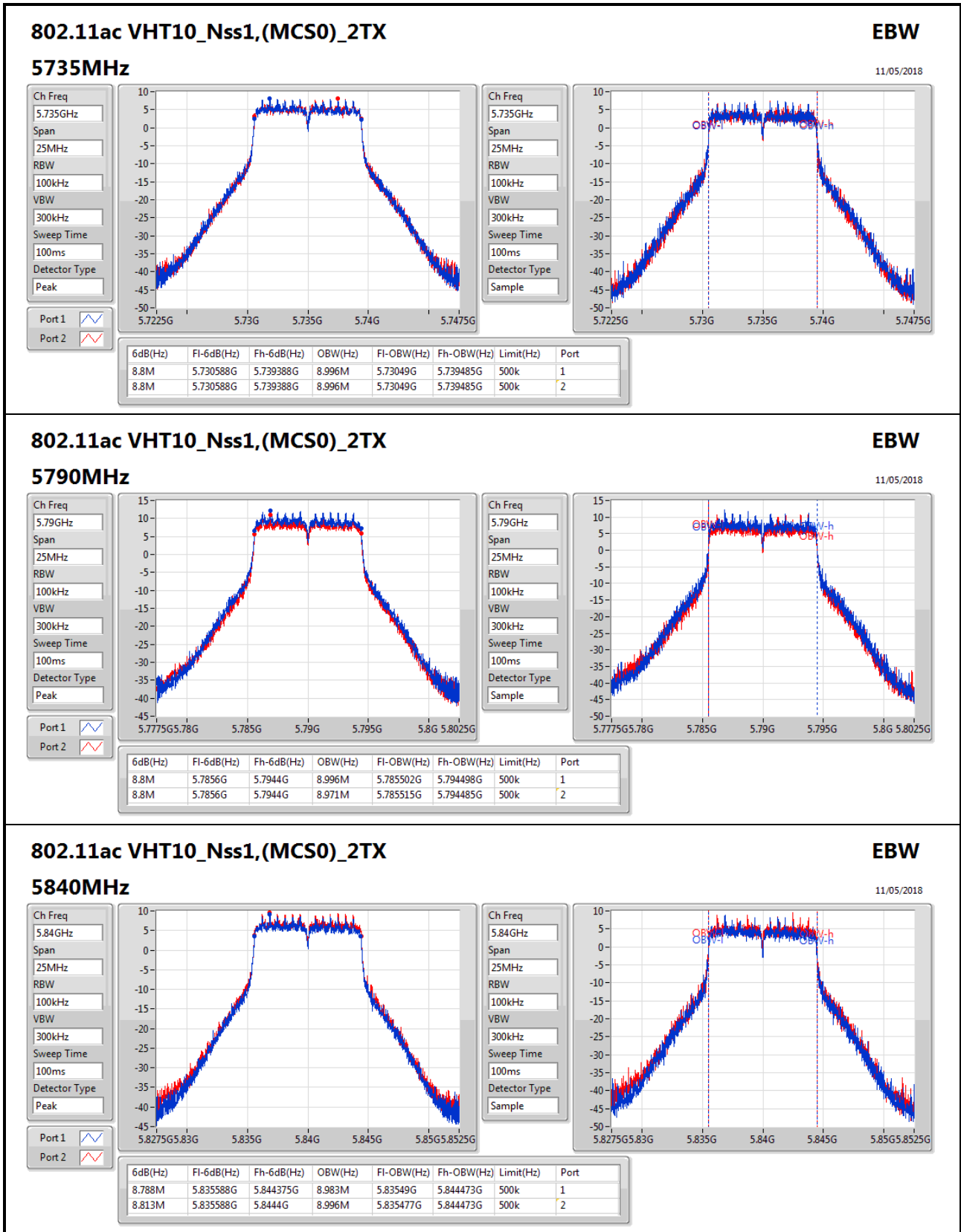


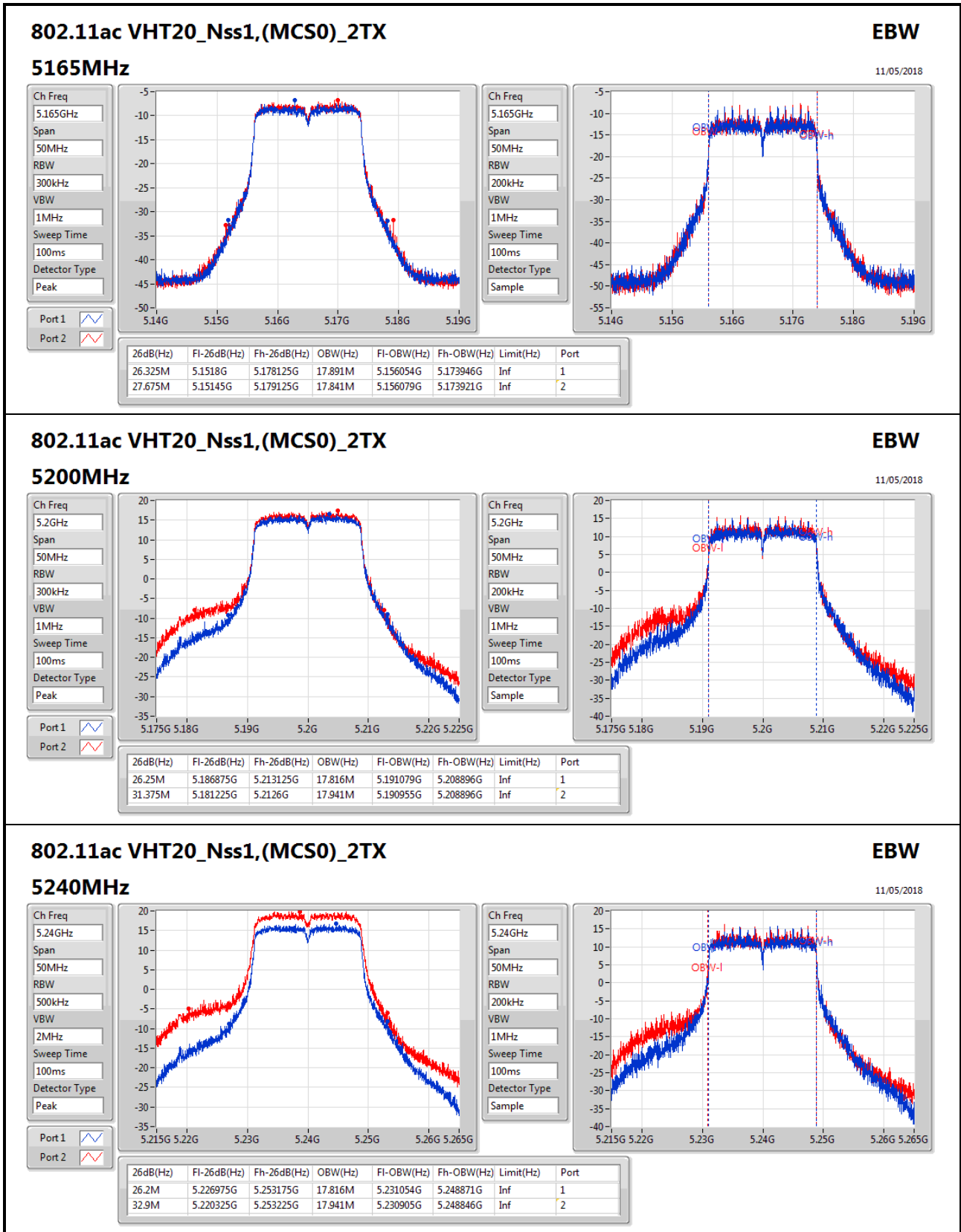
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
5200MHz_TnomVnom	Pass	Inf	99.1M	76.162M	99.3M	76.262M
5210MHz_TnomVnom	Pass	Inf	102.2M	75.962M	96.4M	75.862M
5770MHz_TnomVnom	Pass	500k	72.8M	75.862M	72.5M	75.862M
5790MHz_TnomVnom	Pass	500k	72.5M	76.062M	72.5M	76.162M
5805MHz_TnomVnom	Pass	500k	72.6M	75.862M	72.5M	75.862M

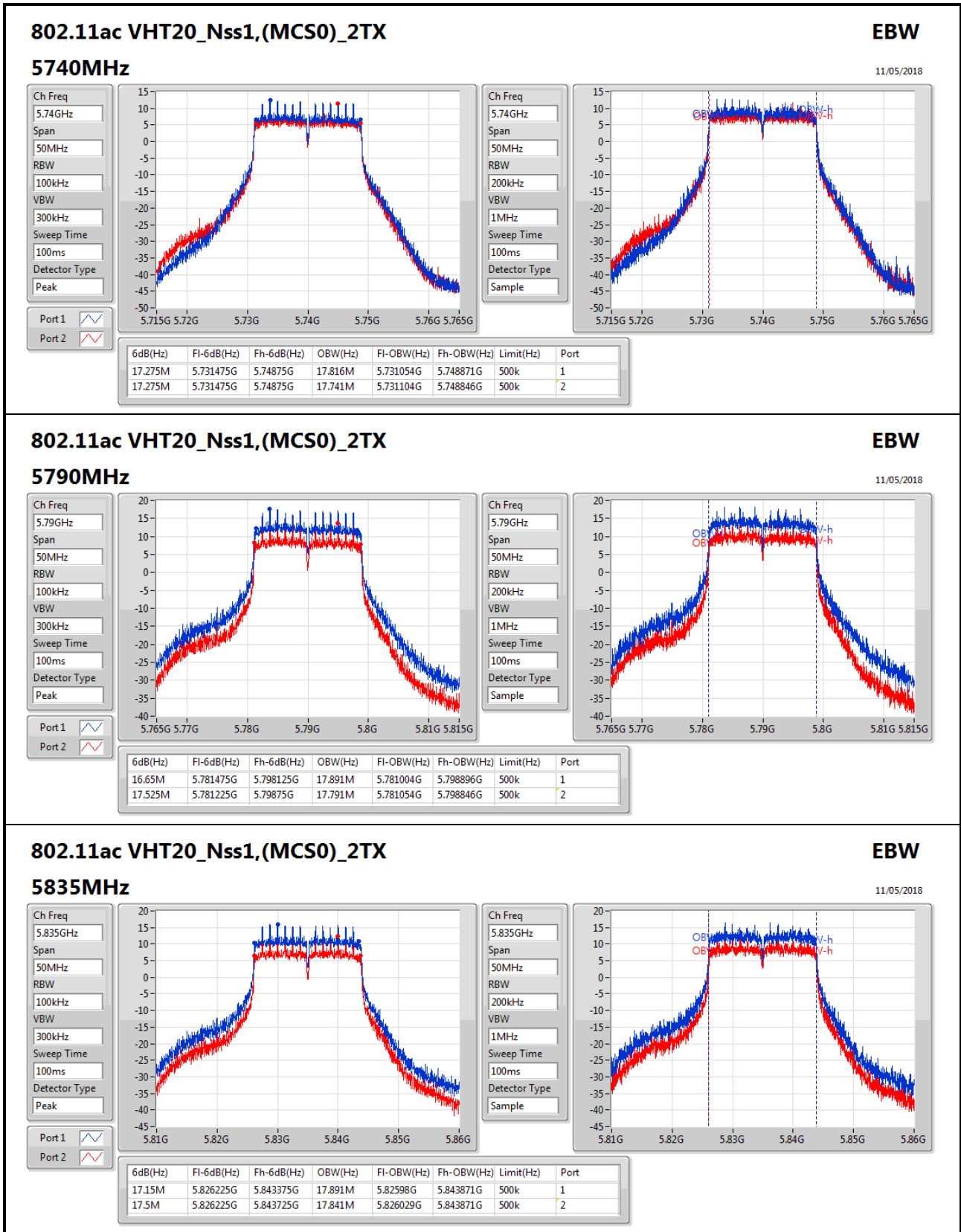
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band

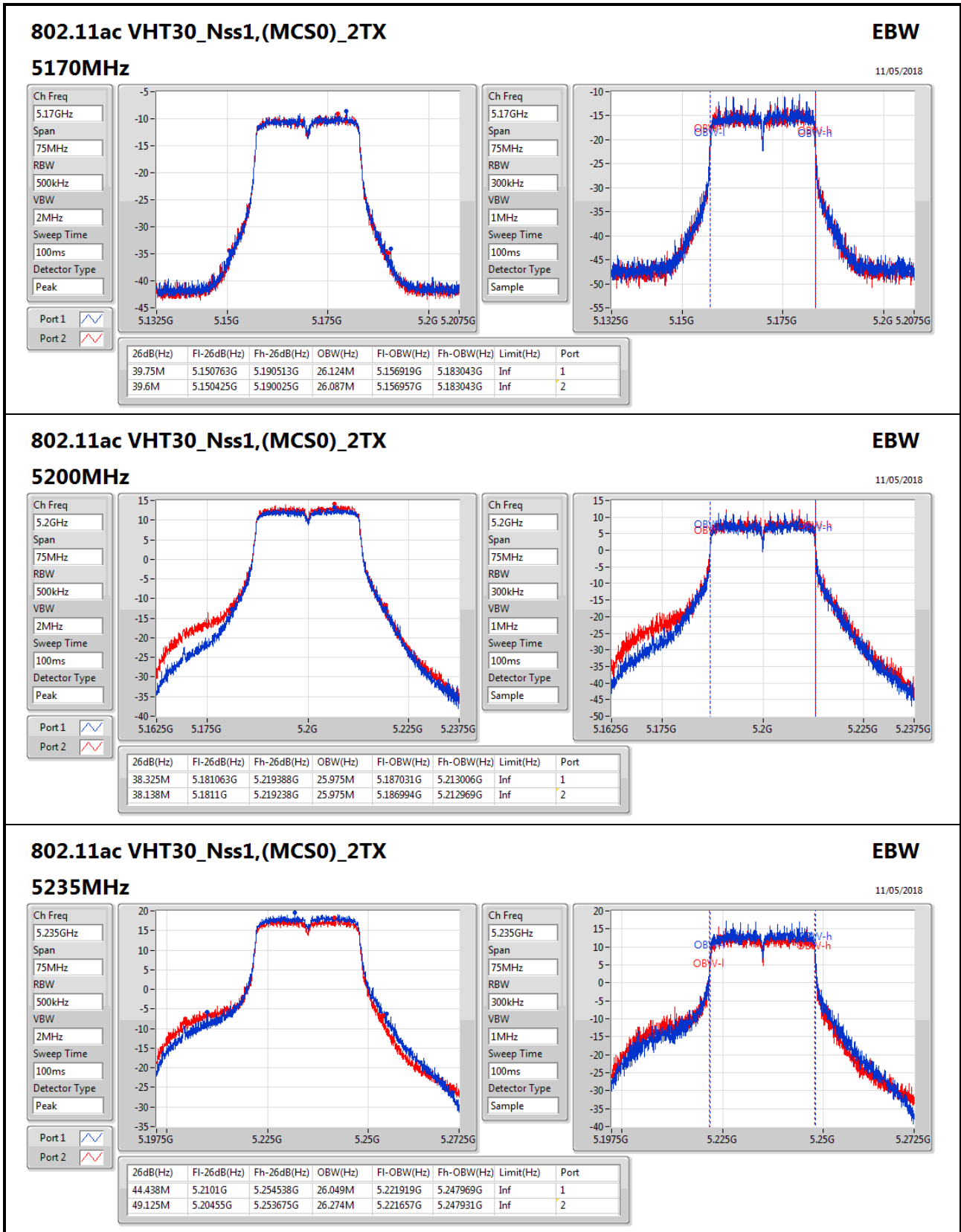
Port X-OBW = Port X 99% occupied bandwidth;

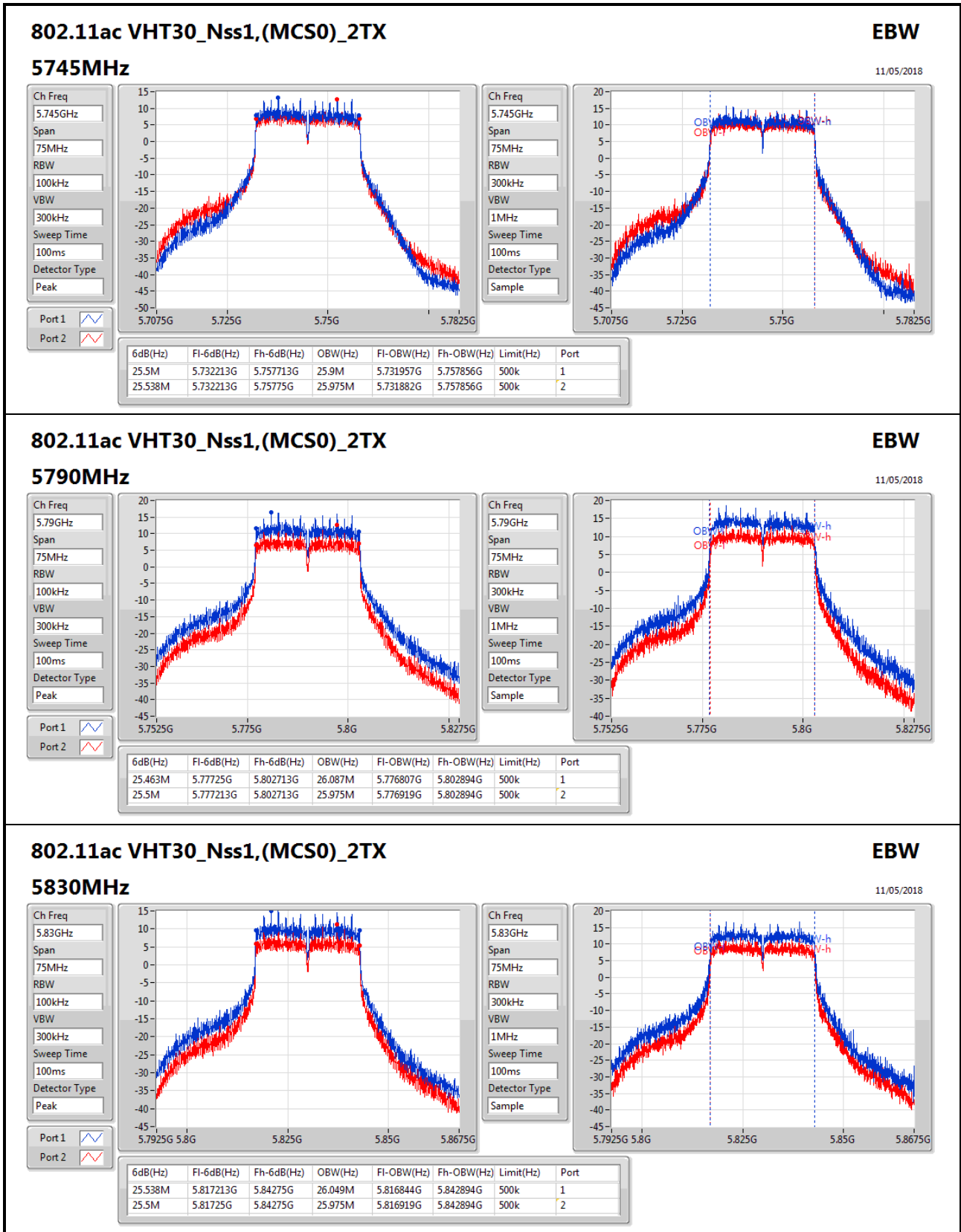


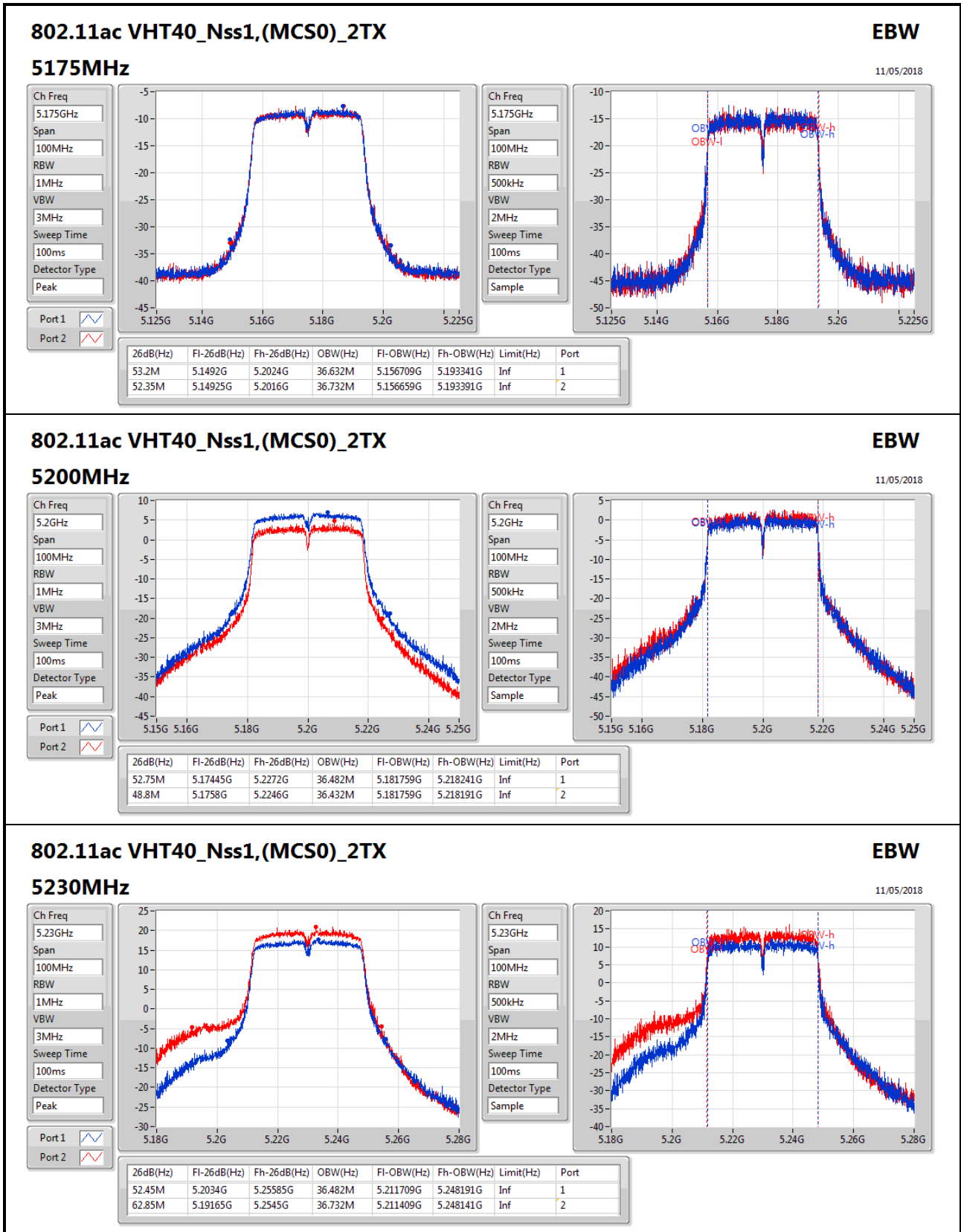


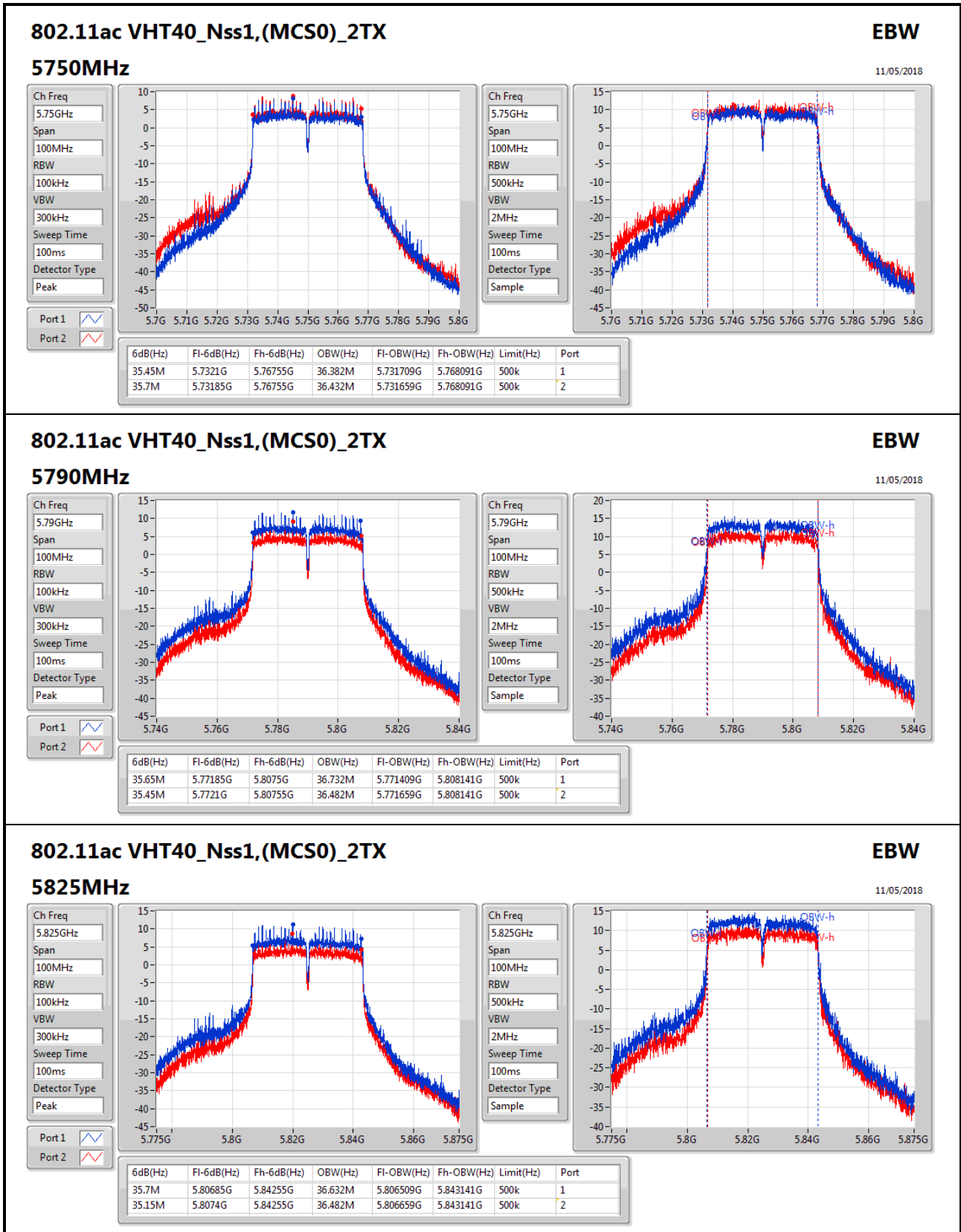


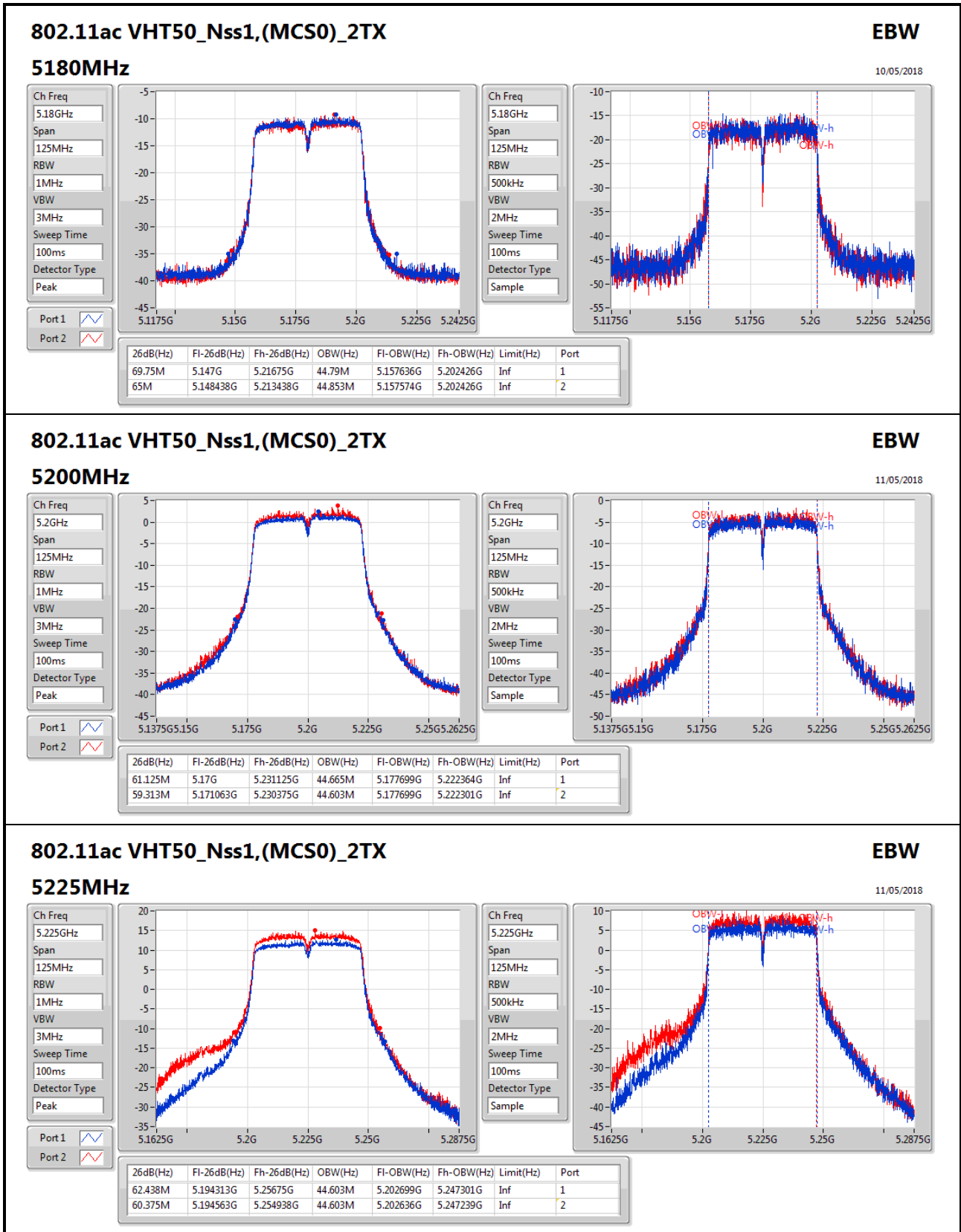


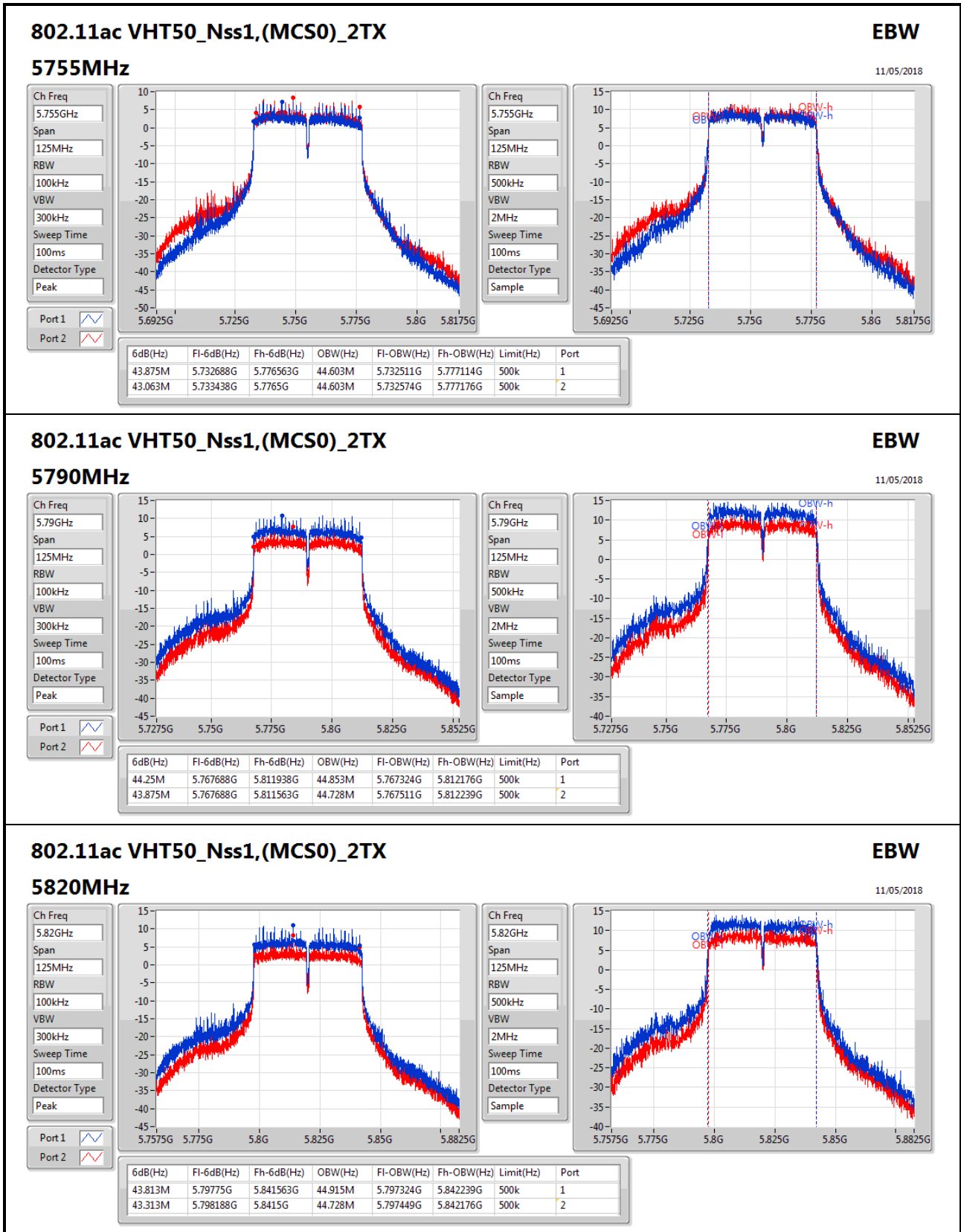


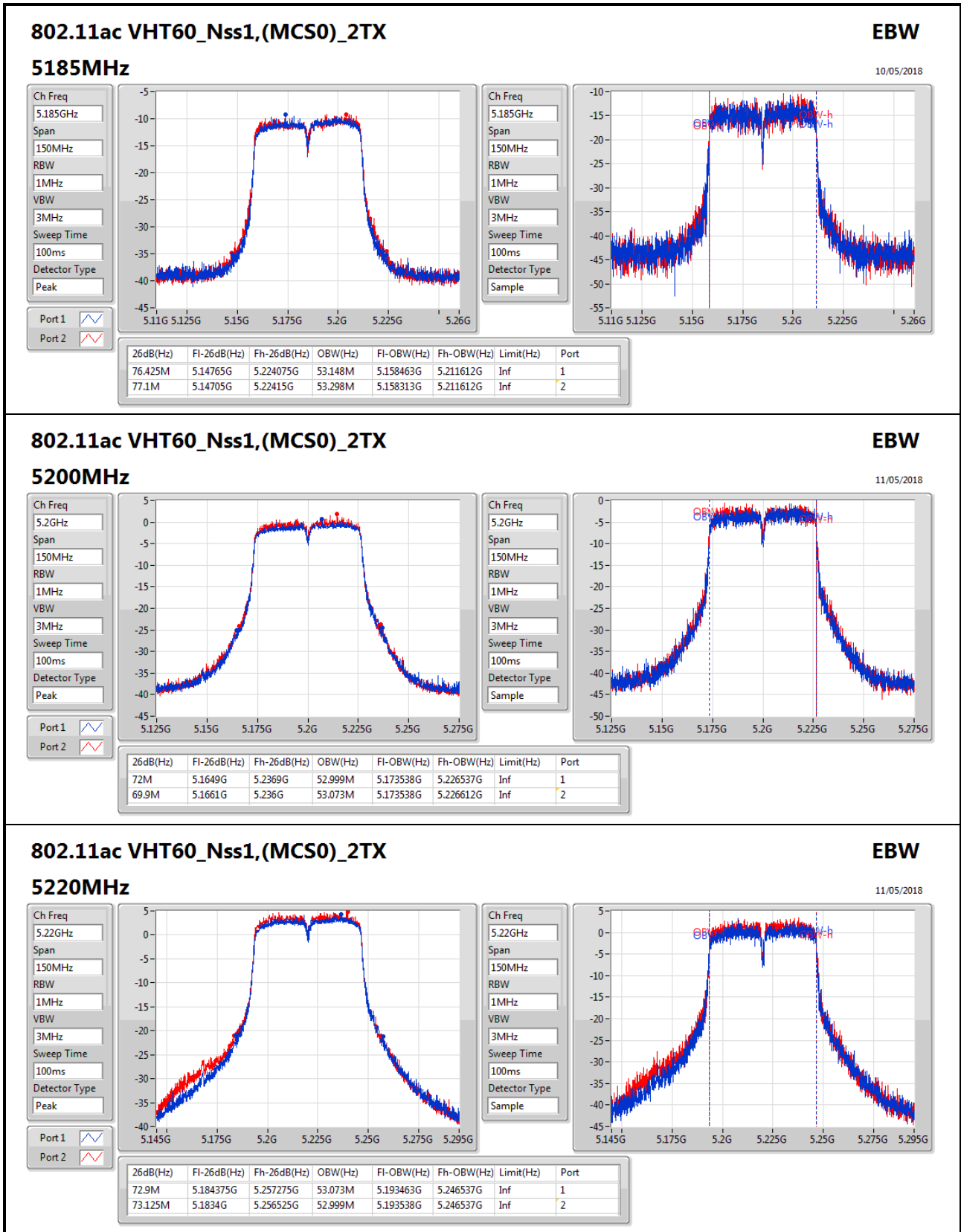











802.11ac VHT60_Nss1,(MCS0)_2TX
EBW

11/05/2018

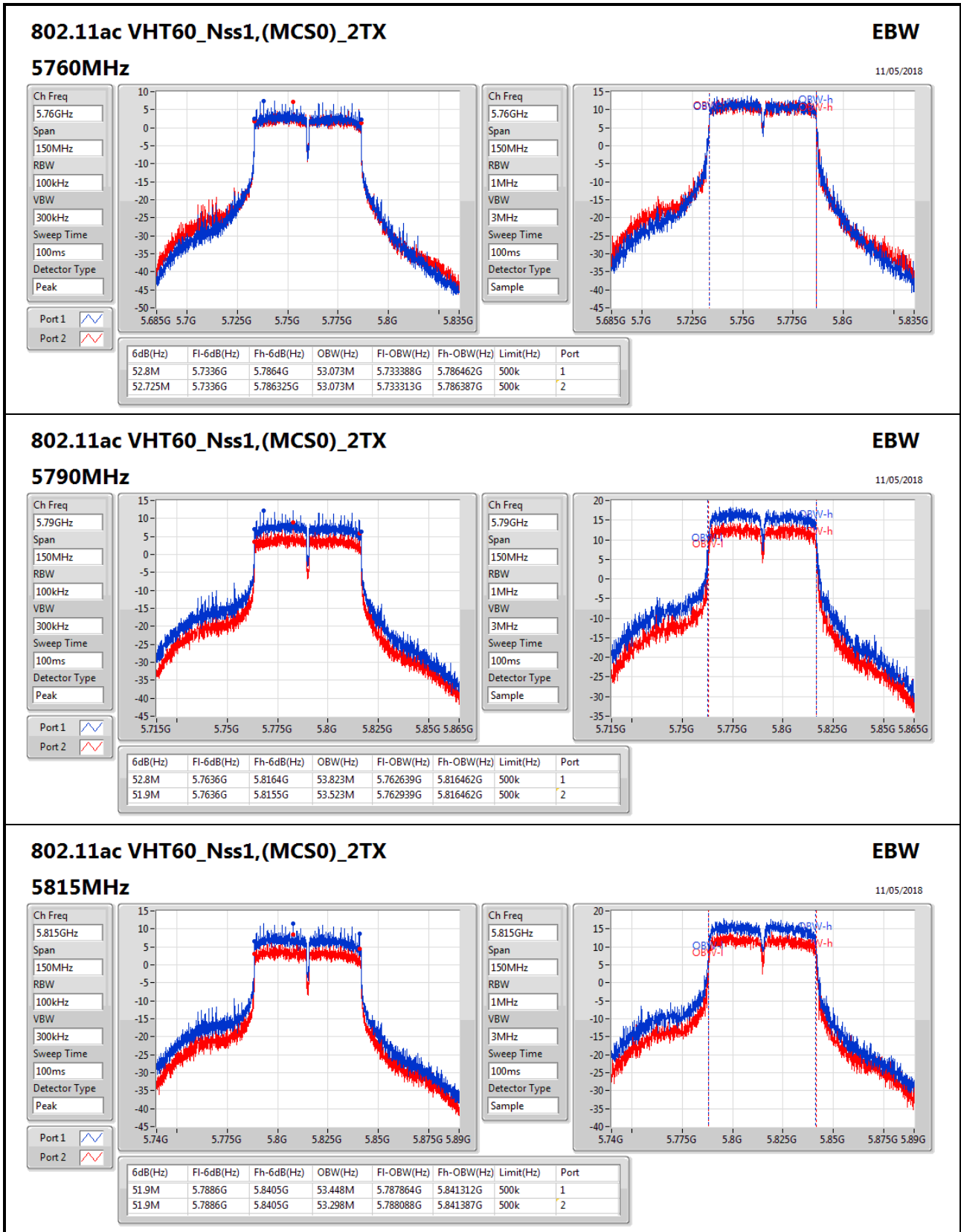
5220MHz

Ch Freq: 5.22GHz
Span: 150MHz
RBW: 1MHz
VBW: 3MHz
Sweep Time: 100ms
Detector Type: Peak

Port 1:
Port 2:

Ch Freq: 5.22GHz
Span: 150MHz
RBW: 1MHz
VBW: 3MHz
Sweep Time: 100ms
Detector Type: Sample

26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
72.9M	5.184375G	5.257275G	53.073M	5.193463G	5.246537G	Inf	1
73.125M	5.1834G	5.256525G	52.999M	5.193538G	5.246537G	Inf	2


802.11ac VHT60_Nss1,(MCS0)_2TX
EBW

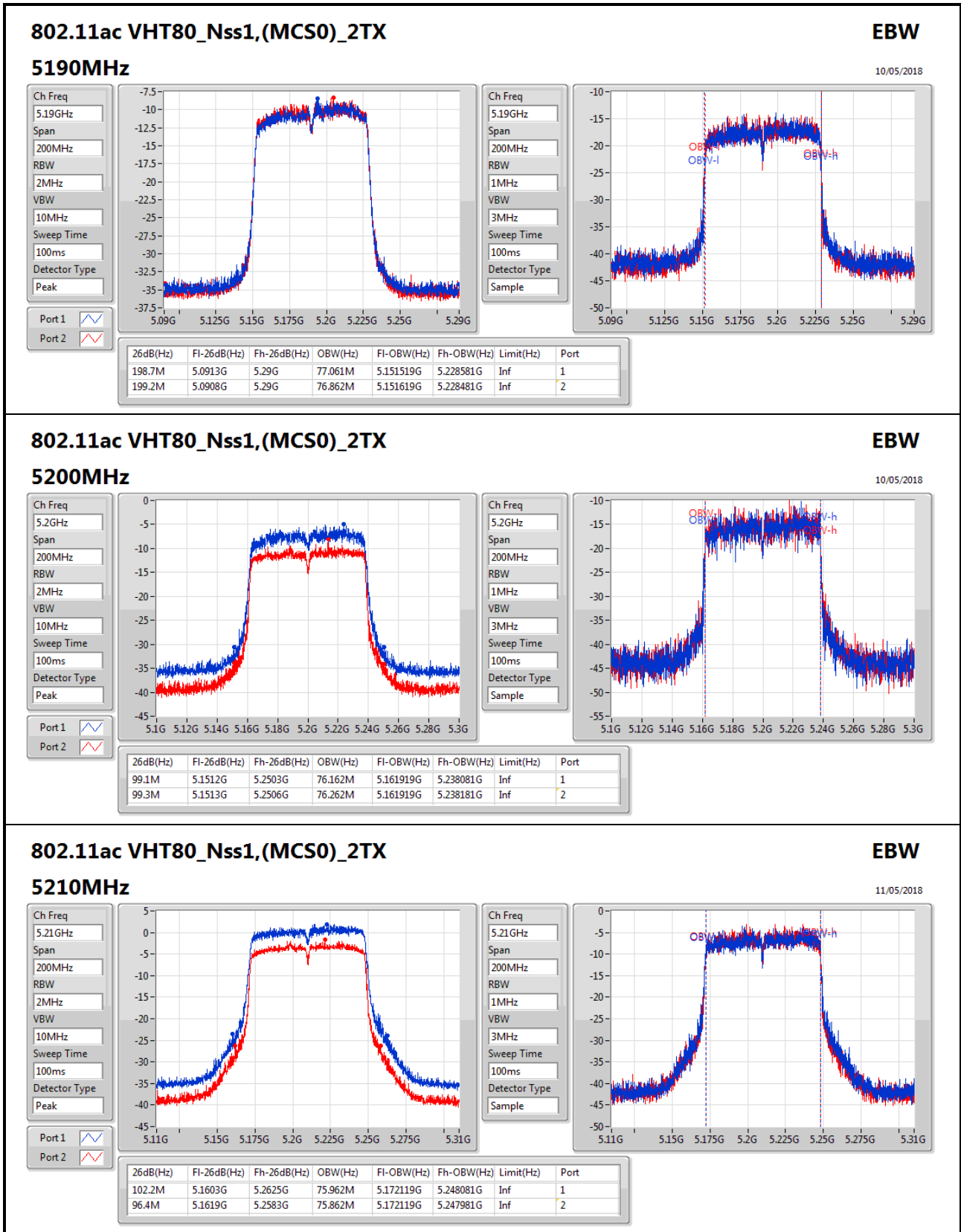
11/05/2018

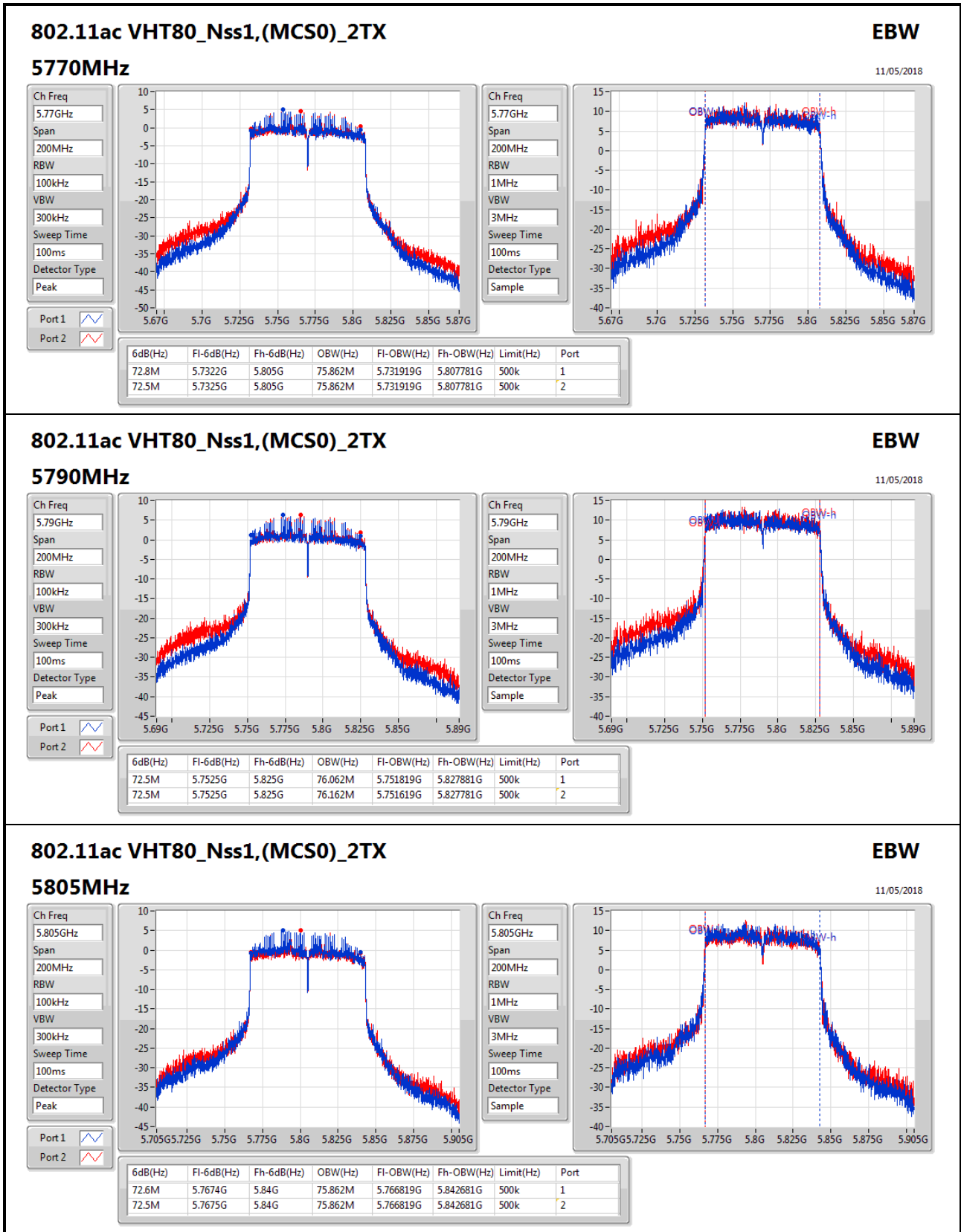
5815MHz

Ch Freq: 5.815GHz
Span: 150MHz
RBW: 100kHz
VBW: 300kHz
Sweep Time: 100ms
Detector Type: Peak

Port 1:
Port 2:

Ch Freq: 5.815GHz
Span: 150MHz
RBW: 1MHz
VBW: 3MHz
Sweep Time: 100ms
Detector Type: Sample







Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ac VHT10_Nss1,(MCS0)_2TX	14.313M	8.996M	9M00D1D	13.725M	8.958M
802.11ac VHT20_Nss1,(MCS0)_2TX	26.25M	17.866M	17M9D1D	25.175M	17.766M
802.11ac VHT30_Nss1,(MCS0)_2TX	38.663M	26.012M	26M0D1D	37.163M	25.9M
802.11ac VHT40_Nss1,(MCS0)_2TX	53.4M	36.532M	36M5D1D	49.5M	36.382M
5.725-5.85GHz	-	-	-	-	-
802.11ac VHT10_Nss1,(MCS0)_2TX	8.85M	8.983M	8M98D1D	8.788M	8.958M
802.11ac VHT20_Nss1,(MCS0)_2TX	17.525M	17.816M	17M8D1D	16.15M	17.716M
802.11ac VHT30_Nss1,(MCS0)_2TX	25.5M	25.9M	25M9D1D	24.6M	25.862M
802.11ac VHT40_Nss1,(MCS0)_2TX	36.05M	36.382M	36M4D1D	35.05M	36.232M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;

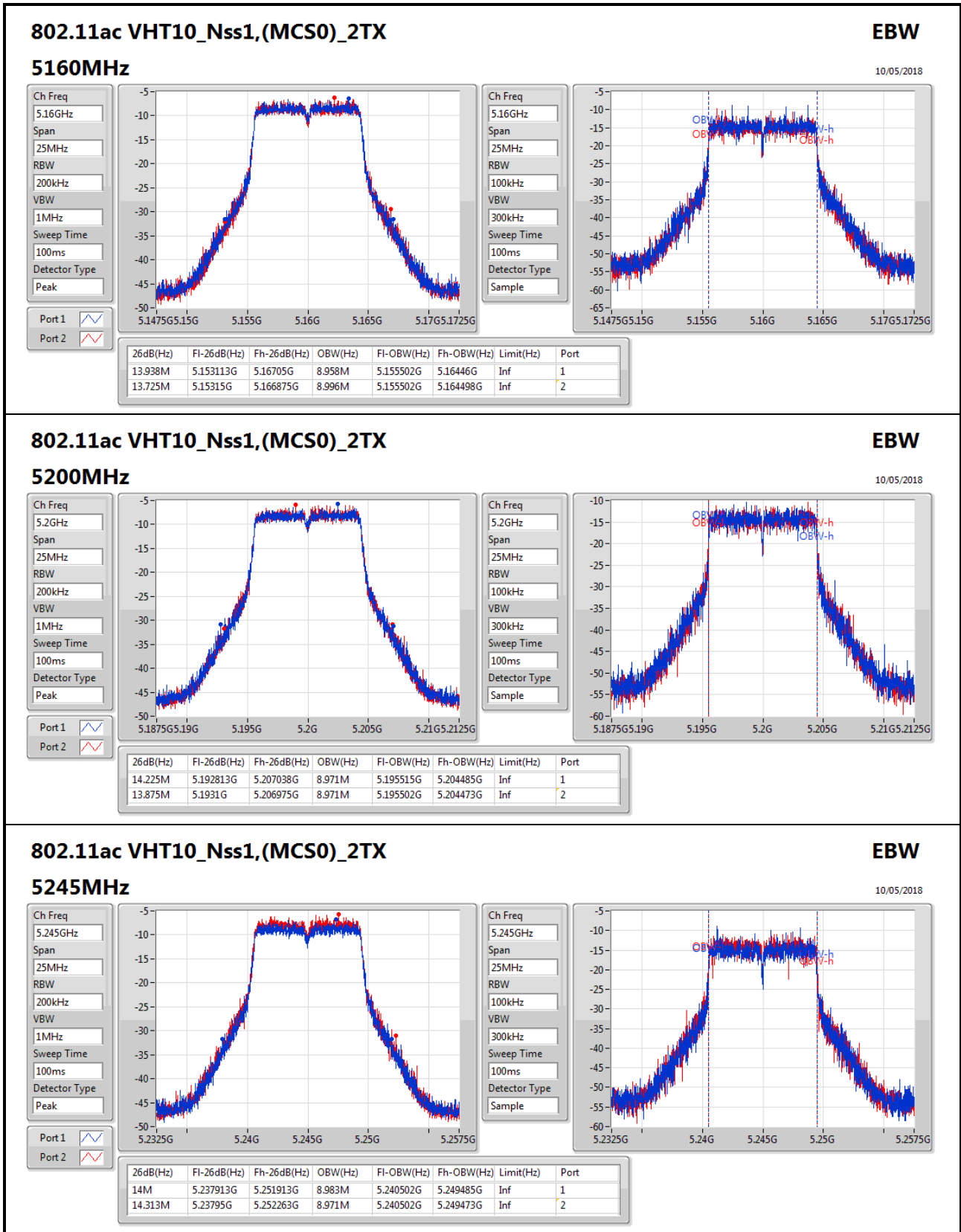


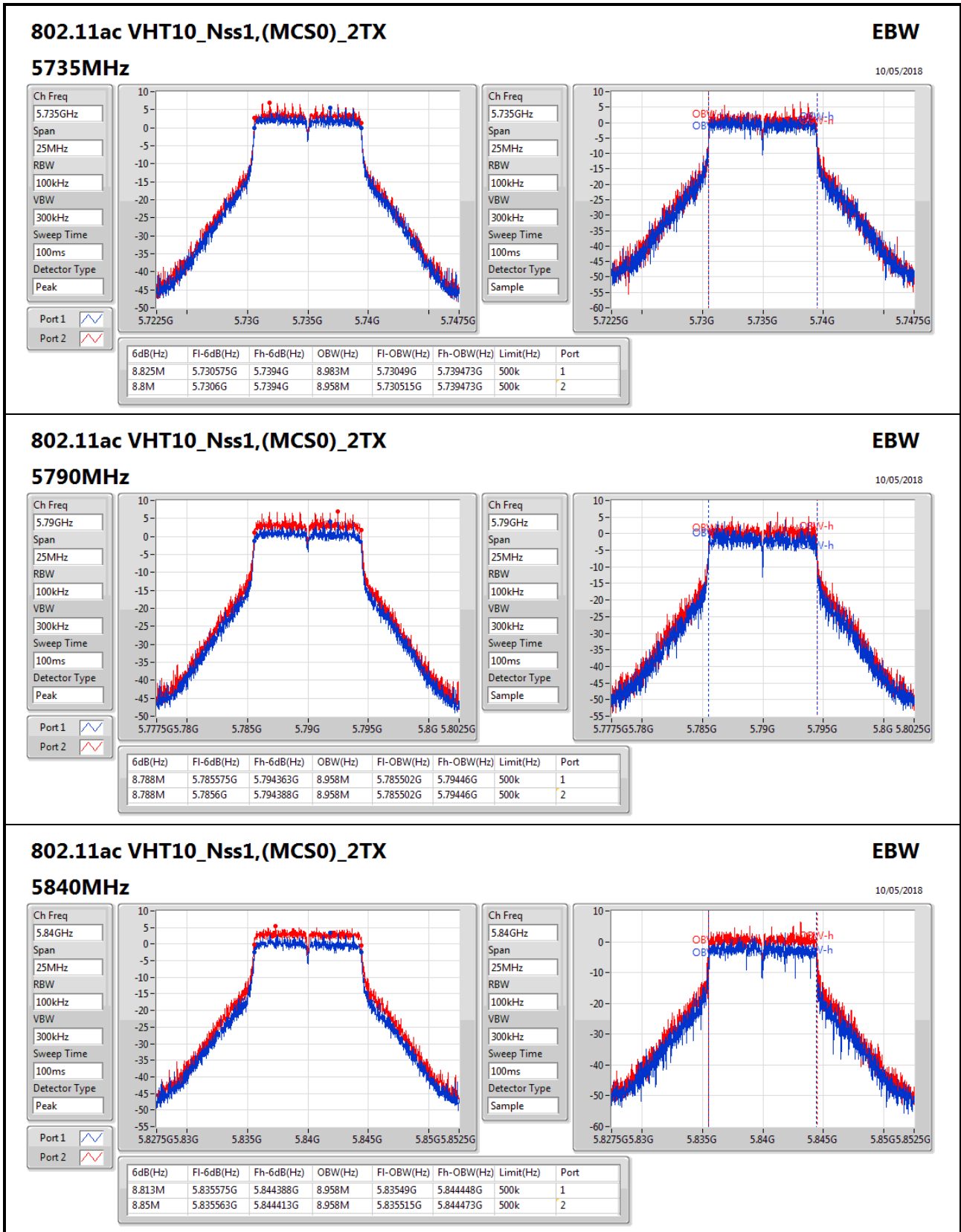
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11ac VHT10_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5160MHz_TnomVnom	Pass	Inf	13.938M	8.958M	13.725M	8.996M
5200MHz_TnomVnom	Pass	Inf	14.225M	8.971M	13.875M	8.971M
5245MHz_TnomVnom	Pass	Inf	14M	8.983M	14.313M	8.971M
5735MHz_TnomVnom	Pass	500k	8.825M	8.983M	8.8M	8.958M
5790MHz_TnomVnom	Pass	500k	8.788M	8.958M	8.788M	8.958M
5840MHz_TnomVnom	Pass	500k	8.813M	8.958M	8.85M	8.958M
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5165MHz_TnomVnom	Pass	Inf	25.925M	17.766M	25.175M	17.816M
5200MHz_TnomVnom	Pass	Inf	26.25M	17.841M	25.425M	17.841M
5240MHz_TnomVnom	Pass	Inf	26.15M	17.866M	25.65M	17.766M
5740MHz_TnomVnom	Pass	500k	16.15M	17.716M	16.9M	17.766M
5790MHz_TnomVnom	Pass	500k	17.525M	17.816M	16.525M	17.766M
5835MHz_TnomVnom	Pass	500k	17.15M	17.741M	16.5M	17.716M
802.11ac VHT30_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5170MHz_TnomVnom	Pass	Inf	38.363M	25.937M	38.363M	25.975M
5200MHz_TnomVnom	Pass	Inf	38.663M	25.937M	37.613M	25.937M
5235MHz_TnomVnom	Pass	Inf	38.175M	26.012M	37.163M	25.9M
5745MHz_TnomVnom	Pass	500k	24.938M	25.862M	24.6M	25.862M
5790MHz_TnomVnom	Pass	500k	25.5M	25.862M	25.425M	25.9M
5830MHz_TnomVnom	Pass	500k	25.463M	25.862M	25.5M	25.862M
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5175MHz_TnomVnom	Pass	Inf	49.85M	36.532M	53.4M	36.482M
5200MHz_TnomVnom	Pass	Inf	52.45M	36.432M	50.45M	36.432M
5230MHz_TnomVnom	Pass	Inf	51.8M	36.482M	49.5M	36.382M
5750MHz_TnomVnom	Pass	500k	36.05M	36.382M	35.7M	36.232M
5790MHz_TnomVnom	Pass	500k	35.7M	36.232M	35.05M	36.332M
5825MHz_TnomVnom	Pass	500k	35.75M	36.282M	35.9M	36.282M

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 VHT10_Nss1,(MCS0)_2TX
EBW

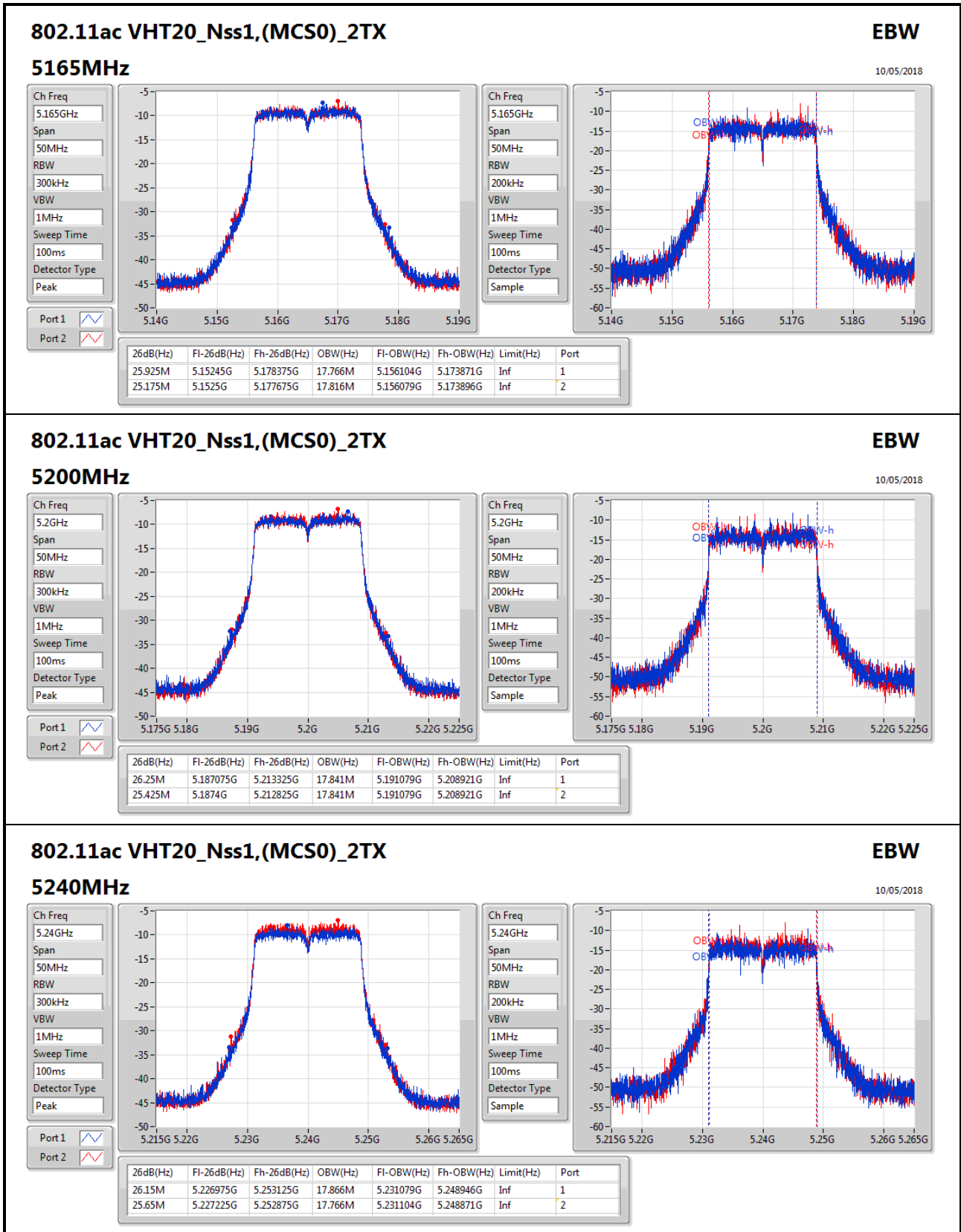
10/05/2018

5840MHz

Ch Freq: 5.84GHz
Span: 25MHz
RBW: 100kHz
VBW: 300kHz
Sweep Time: 100ms
Detector Type: Peak

Port 1:
Port 2:

6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8.813M	5.835575G	5.844388G	8.958M	5.83549G	5.844448G	500k	1
8.85M	5.835563G	5.844413G	8.958M	5.835515G	5.844473G	500k	2


802.11ac VHT20_Nss1,(MCS0)_2TX
EBW

10/05/2018

5240MHz

Ch Freq: 5.24GHz

Span: 50MHz

RBW: 300kHz

VBW: 1MHz

Sweep Time: 100ms

Detector Type: Peak

Port 1:

Port 2:

Ch Freq: 5.24GHz

Span: 50MHz

RBW: 200kHz

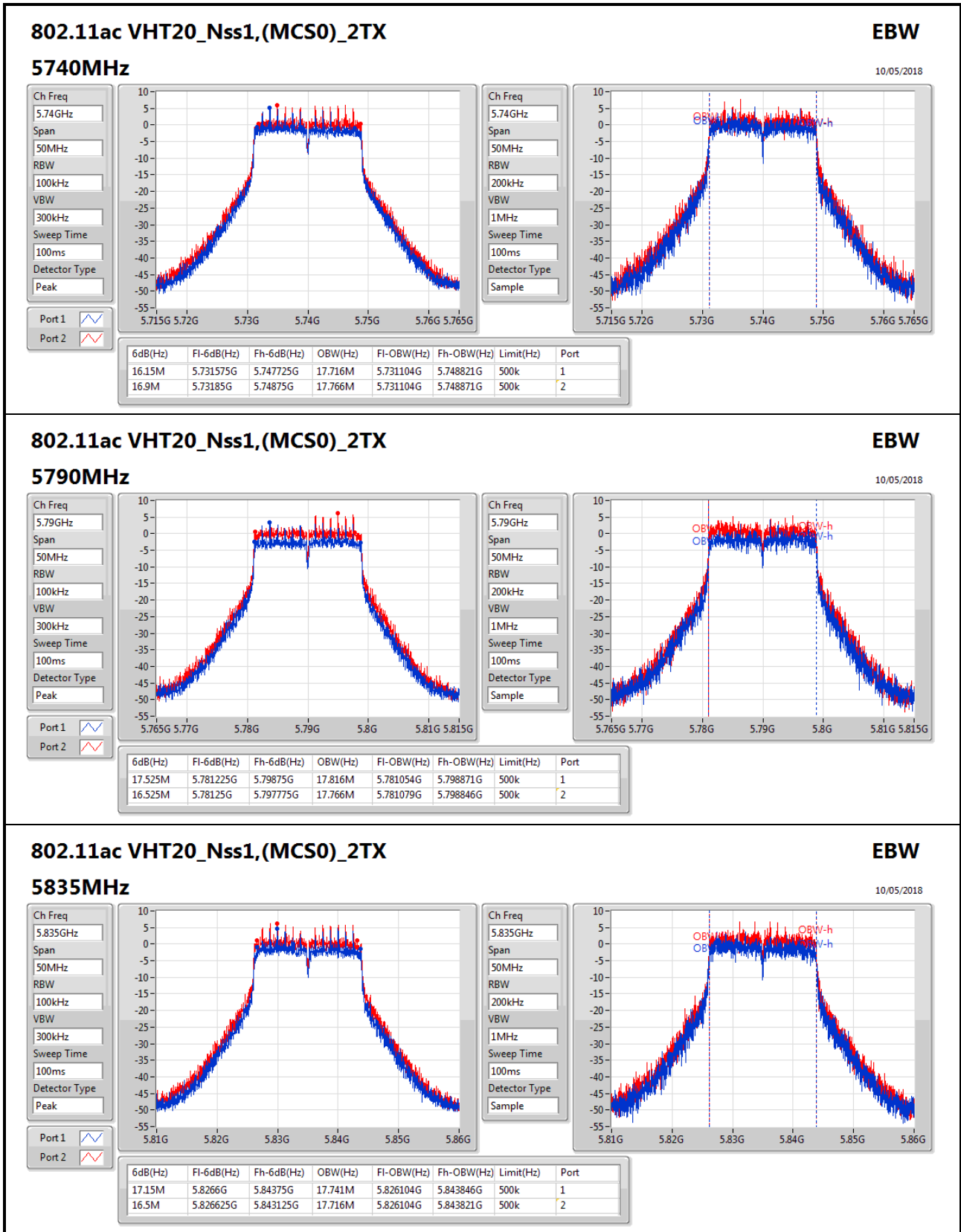
VBW: 1MHz

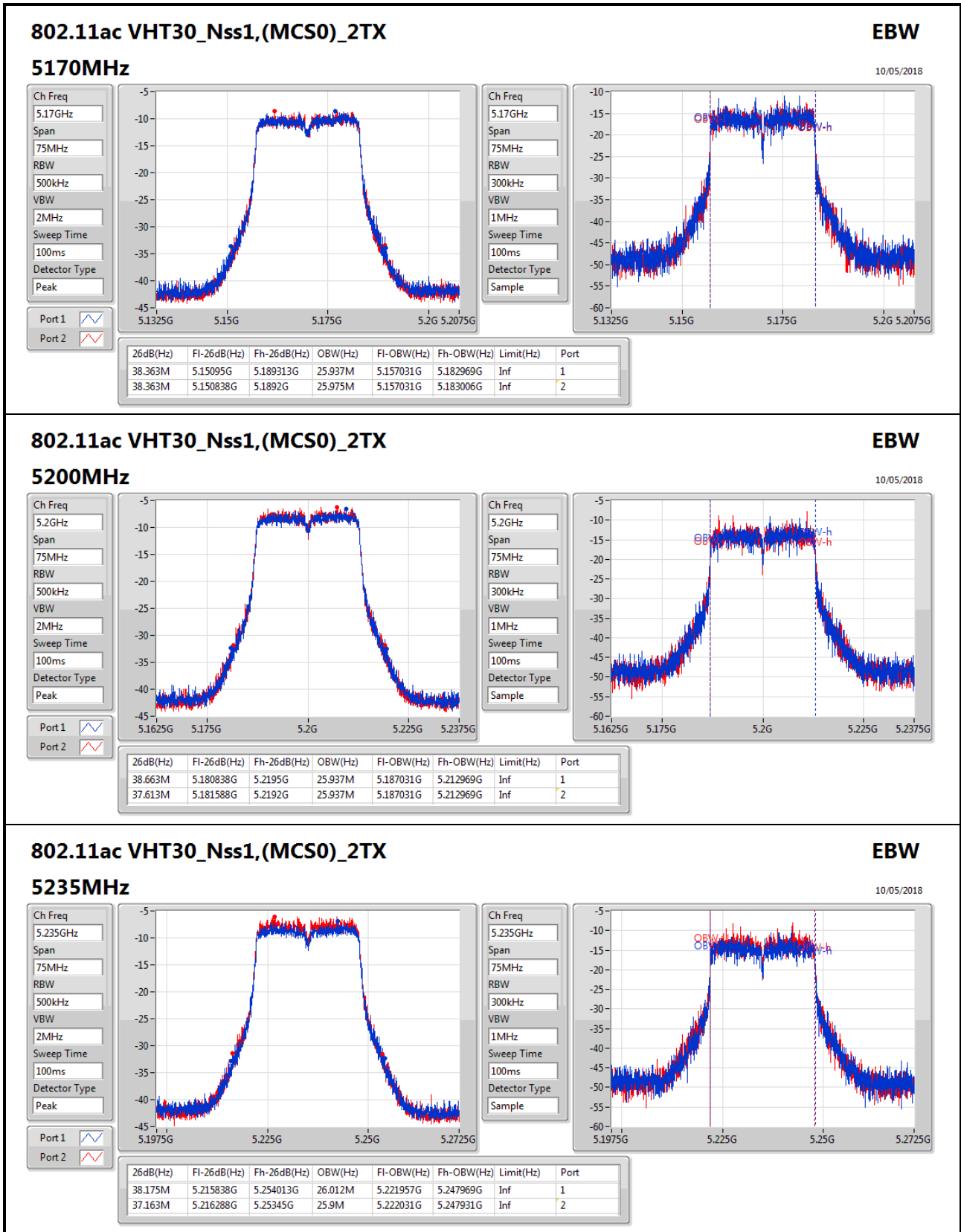
Sweep Time: 100ms

Detector Type: Peak

Sample

26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
26.15M	5.226975G	5.253125G	17.866M	5.231079G	5.248946G	Inf	1
25.65M	5.227225G	5.252875G	17.766M	5.231104G	5.248871G	Inf	2




802.11ac VHT30_Nss1,(MCS0)_2TX
EBW

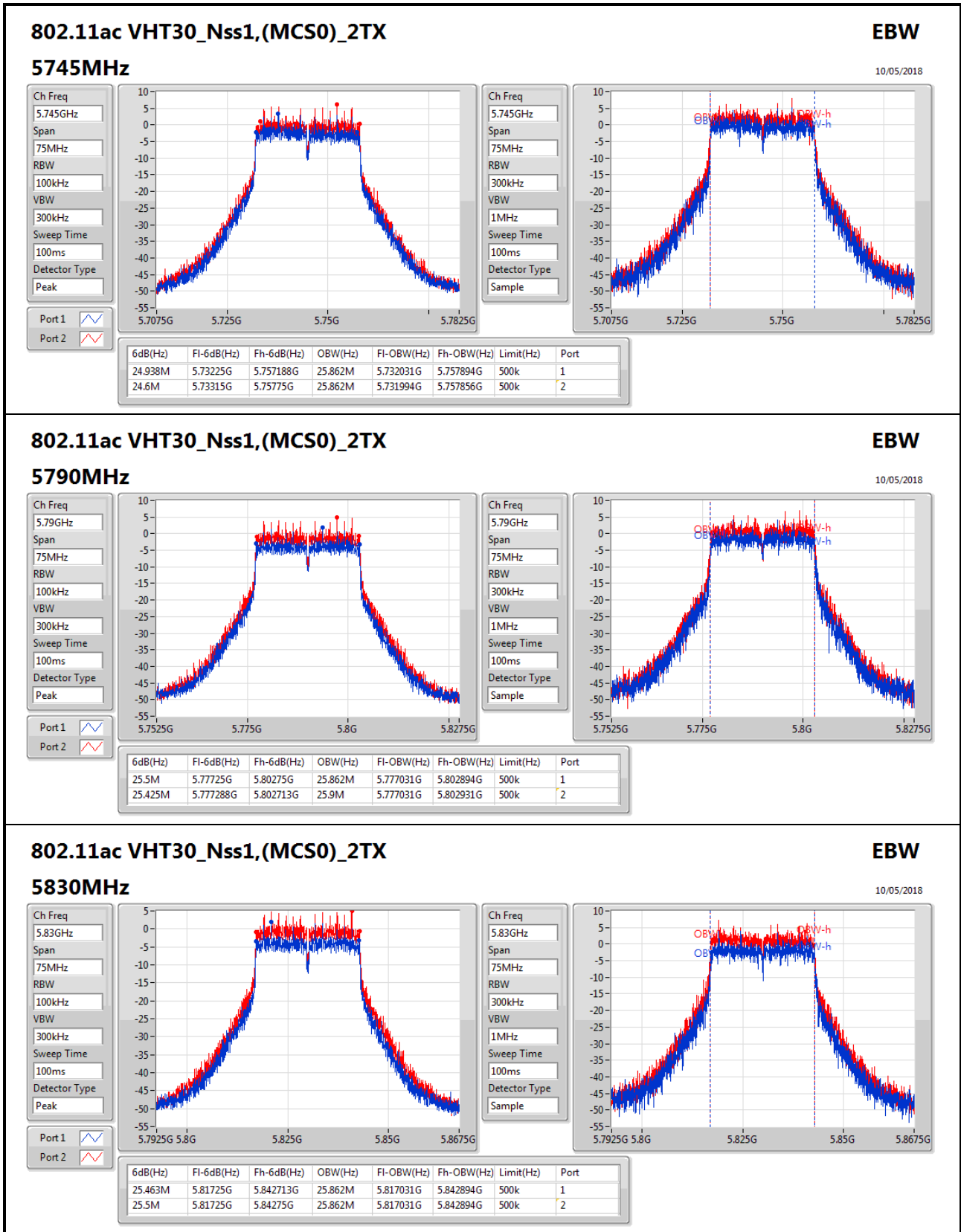
10/05/2018

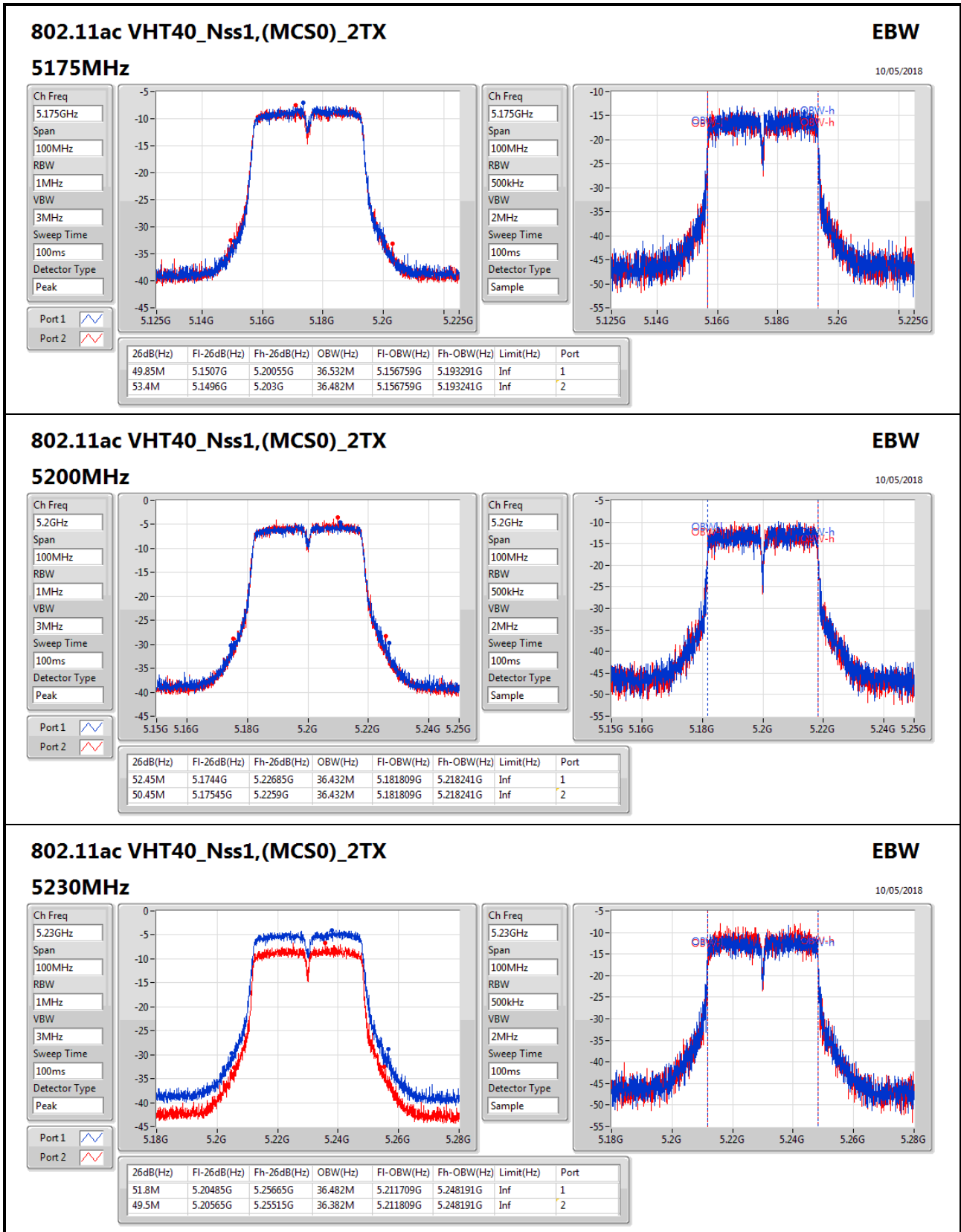
5235MHz

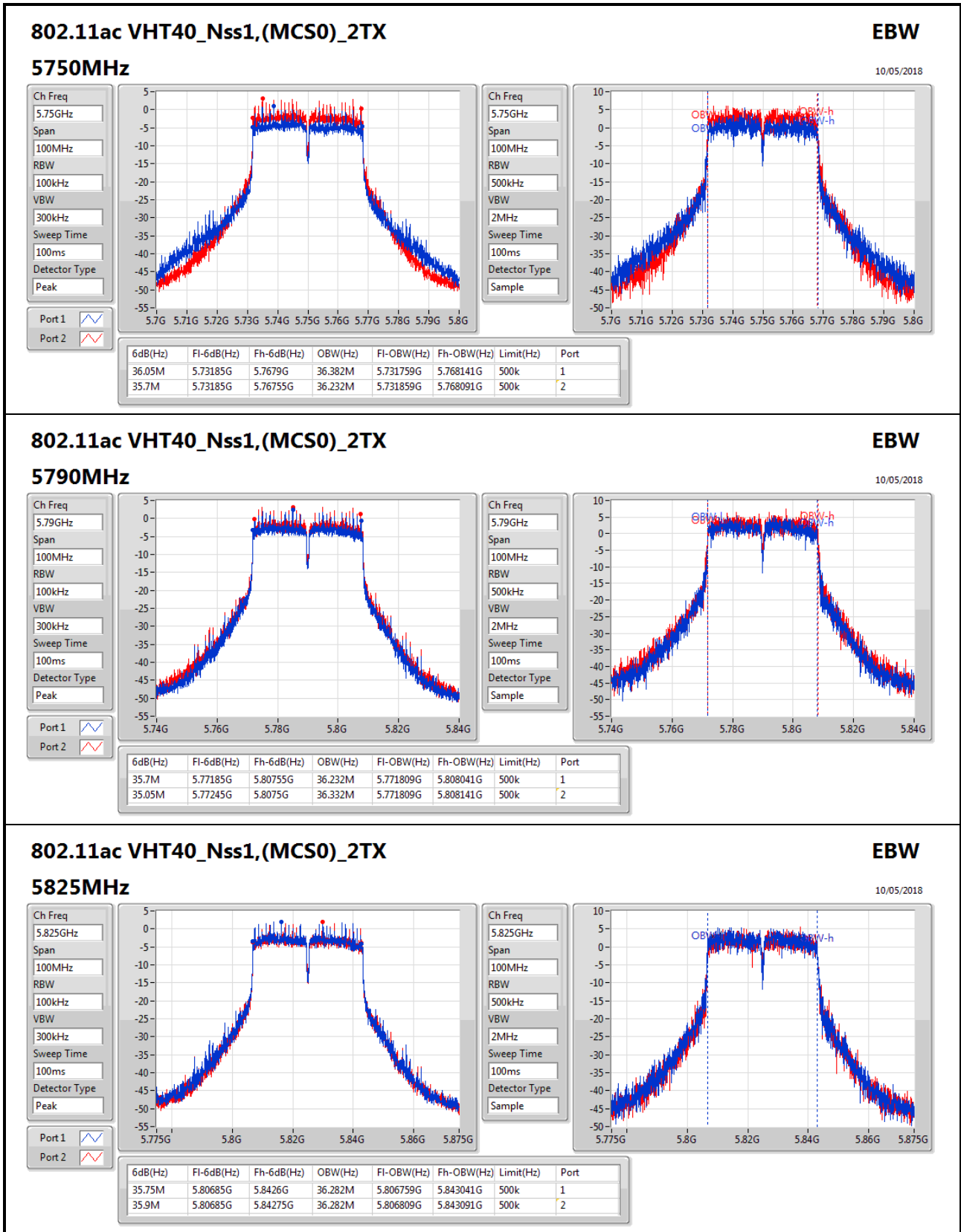
Ch Freq: 5.235GHz
Span: 75MHz
RBW: 500kHz
VBW: 2MHz
Sweep Time: 100ms
Detector Type: Peak

Ch Freq: 5.235GHz
Span: 75MHz
RBW: 300kHz
VBW: 1MHz
Sweep Time: 100ms
Detector Type: Sample

26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
38.175M	5.215838G	5.254013G	26.012M	5.221957G	5.247969G	Inf	1
37.163M	5.216288G	5.25345G	25.9M	5.222031G	5.247931G	Inf	2









Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ac VHT10_Nss1,(MCS0)_2TX	14.925M	9.02M	9M02D1D	14.025M	8.996M
802.11ac VHT20_Nss1,(MCS0)_2TX	26.6M	17.866M	17M9D1D	25.3M	17.791M
802.11ac VHT30_Nss1,(MCS0)_2TX	38.475M	25.975M	26M0D1D	37.688M	25.862M
802.11ac VHT40_Nss1,(MCS0)_2TX	53.4M	36.532M	36M5D1D	48.7M	36.332M
802.11ac VHT50_Nss1,(MCS0)_2TX	69.75M	44.853M	44M9D1D	59.375M	44.54M
802.11ac VHT60_Nss1,(MCS0)_2TX	77.1M	53.298M	53M3D1D	69.3M	52.924M
802.11ac VHT80_Nss1,(MCS0)_2TX	199.2M	77.061M	77M1D1D	99.1M	75.862M
5.725-5.85GHz	-	-	-	-	-
802.11ac VHT10_Nss1,(MCS0)_2TX	8.85M	8.983M	8M98D1D	8.788M	8.958M
802.11ac VHT20_Nss1,(MCS0)_2TX	17.525M	17.816M	17M8D1D	16.15M	17.716M
802.11ac VHT30_Nss1,(MCS0)_2TX	25.5M	25.9M	25M9D1D	24.6M	25.862M
802.11ac VHT40_Nss1,(MCS0)_2TX	36.05M	36.382M	36M4D1D	35.05M	36.232M
802.11ac VHT50_Nss1,(MCS0)_2TX	44.063M	44.603M	44M6D1D	43.063M	44.478M
802.11ac VHT60_Nss1,(MCS0)_2TX	52.8M	52.999M	53M0D1D	51.375M	52.924M
802.11ac VHT80_Nss1,(MCS0)_2TX	75.4M	75.862M	75M9D1D	69.4M	75.662M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

Min-OBW = Minimum 99% occupied bandwidth;



Result

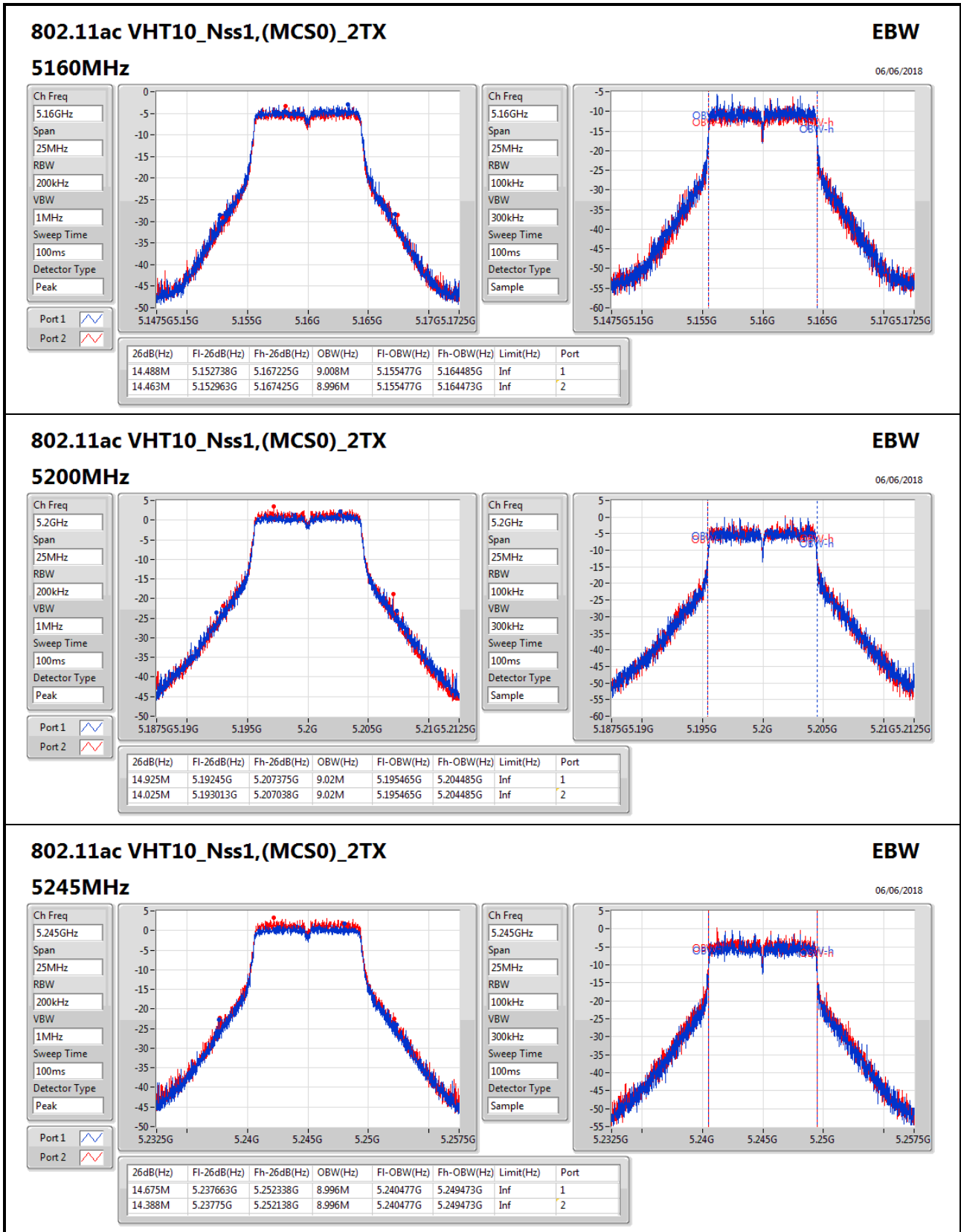
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11ac VHT10_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5160MHz	Pass	Inf	14.488M	9.008M	14.463M	8.996M
5200MHz	Pass	Inf	14.925M	9.02M	14.025M	9.02M
5245MHz	Pass	Inf	14.675M	8.996M	14.388M	8.996M
5735MHz	Pass	500k	8.825M	8.983M	8.8M	8.958M
5790MHz	Pass	500k	8.788M	8.958M	8.788M	8.958M
5840MHz	Pass	500k	8.813M	8.958M	8.85M	8.958M
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5165MHz	Pass	Inf	25.3M	17.866M	25.675M	17.841M
5200MHz	Pass	Inf	26.6M	17.816M	26M	17.791M
5240MHz	Pass	Inf	25.625M	17.791M	25.625M	17.816M
5740MHz	Pass	500k	16.15M	17.716M	16.9M	17.766M
5790MHz	Pass	500k	17.525M	17.816M	16.525M	17.766M
5835MHz	Pass	500k	17.15M	17.741M	16.5M	17.716M
802.11ac VHT30_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5170MHz	Pass	Inf	38.363M	25.937M	38.363M	25.975M
5200MHz	Pass	Inf	38.138M	25.975M	37.688M	25.9M
5235MHz	Pass	Inf	38.475M	25.9M	38.138M	25.862M
5745MHz	Pass	500k	24.938M	25.862M	24.6M	25.862M
5790MHz	Pass	500k	25.5M	25.862M	25.425M	25.9M
5830MHz	Pass	500k	25.463M	25.862M	25.5M	25.862M
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5175MHz	Pass	Inf	49.85M	36.532M	53.4M	36.482M
5200MHz	Pass	Inf	51.05M	36.432M	51.1M	36.432M
5230MHz	Pass	Inf	52.15M	36.482M	48.7M	36.332M
5750MHz	Pass	500k	36.05M	36.382M	35.7M	36.232M
5790MHz	Pass	500k	35.7M	36.232M	35.05M	36.332M
5825MHz	Pass	500k	35.75M	36.282M	35.9M	36.282M
802.11ac VHT50_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	69.75M	44.79M	65M	44.853M
5200MHz	Pass	Inf	62.813M	44.54M	59.75M	44.603M
5225MHz	Pass	Inf	63.375M	44.728M	59.375M	44.603M
5755MHz	Pass	500k	43.063M	44.603M	43.063M	44.478M
5790MHz	Pass	500k	44.063M	44.54M	43.813M	44.54M
5820MHz	Pass	500k	43.75M	44.478M	43.875M	44.478M
802.11ac VHT60_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5185MHz	Pass	Inf	76.425M	53.148M	77.1M	53.298M
5200MHz	Pass	Inf	72.525M	52.999M	69.3M	52.924M
5220MHz	Pass	Inf	74.25M	53.073M	73.8M	53.148M
5760MHz	Pass	500k	51.9M	52.999M	51.375M	52.924M
5790MHz	Pass	500k	51.9M	52.999M	51.9M	52.924M
5815MHz	Pass	500k	52.8M	52.999M	52.725M	52.999M
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	Inf	198.7M	77.061M	199.2M	76.862M

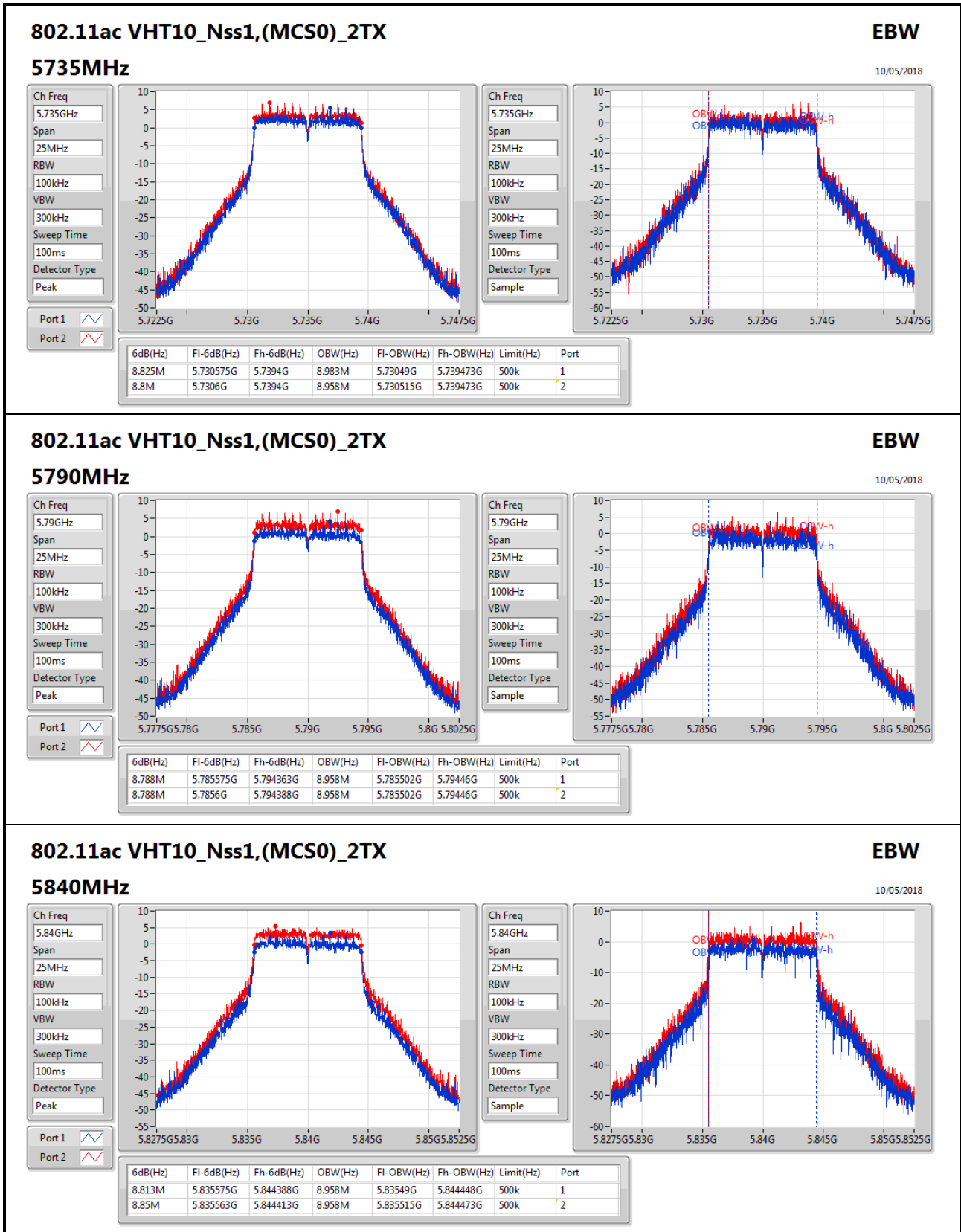


Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
5200MHz	Pass	Inf	99.1M	76.162M	99.3M	76.262M
5210MHz	Pass	Inf	99.9M	76.062M	99.1M	75.862M
5770MHz	Pass	500k	72.5M	75.862M	69.4M	75.862M
5790MHz	Pass	500k	72.2M	75.862M	75M	75.762M
5805MHz	Pass	500k	72.6M	75.662M	75.4M	75.862M

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 VHT10_Nss1,(MCS0)_2TX

5840MHz

EBW
10/05/2018

Ch Freq: 5.84GHz

Span: 25MHz

RBW: 100kHz

VBW: 300kHz

Sweep Time: 100ms

Detector Type: Peak

Port 1:

Port 2:

Ch Freq: 5.84GHz

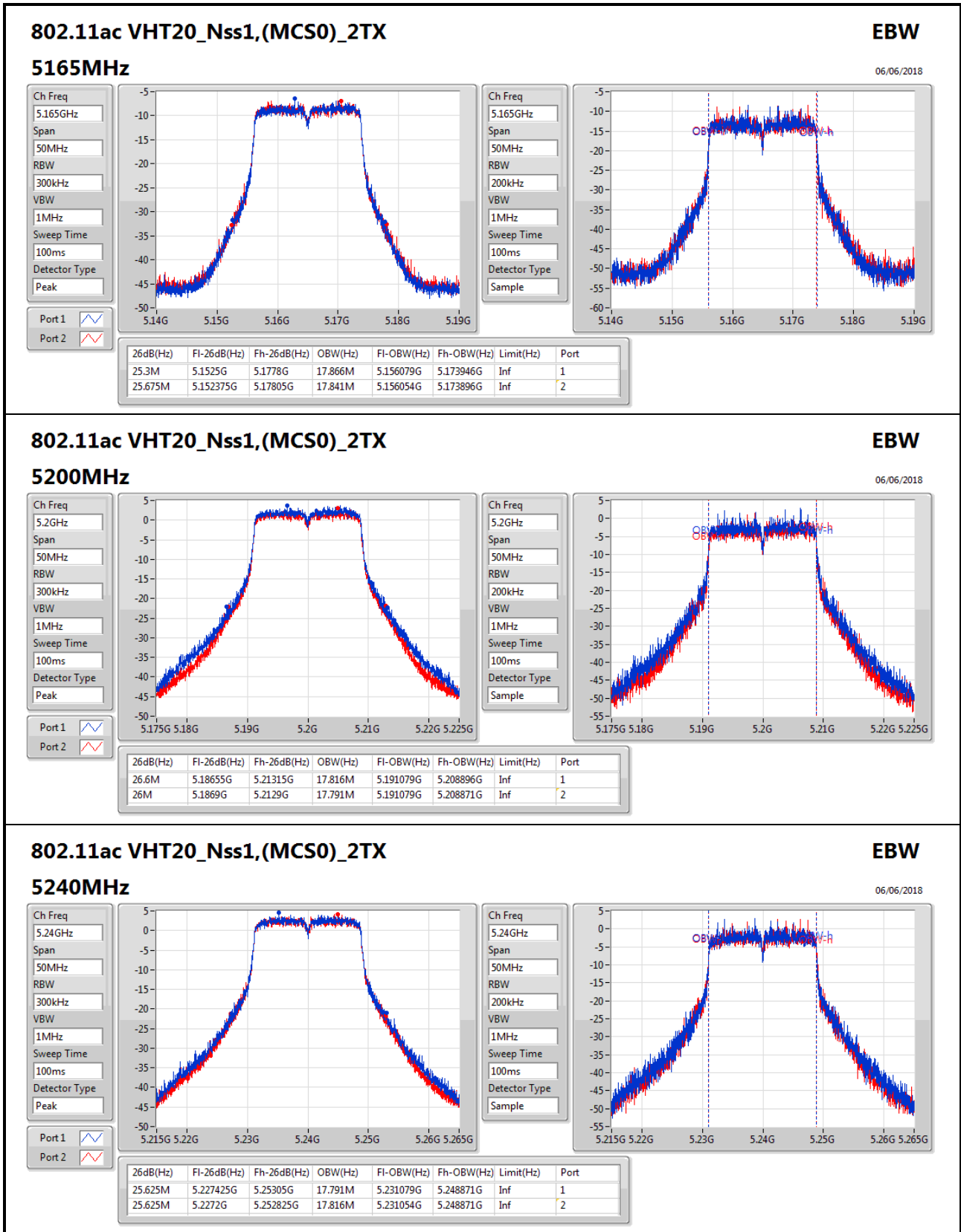
Span: 25MHz

RBW: 100kHz

VBW: 300kHz

Sweep Time: 100ms

Detector Type: Sample


802.11ac VHT20_Nss1,(MCS0)_2TX
EBW

06/06/2018

5240MHz

Ch Freq: 5.24GHz

Span: 50MHz

RBW: 300kHz

VBW: 1MHz

Sweep Time: 100ms

Detector Type: Peak

Port 1:

Port 2:

Ch Freq: 5.24GHz

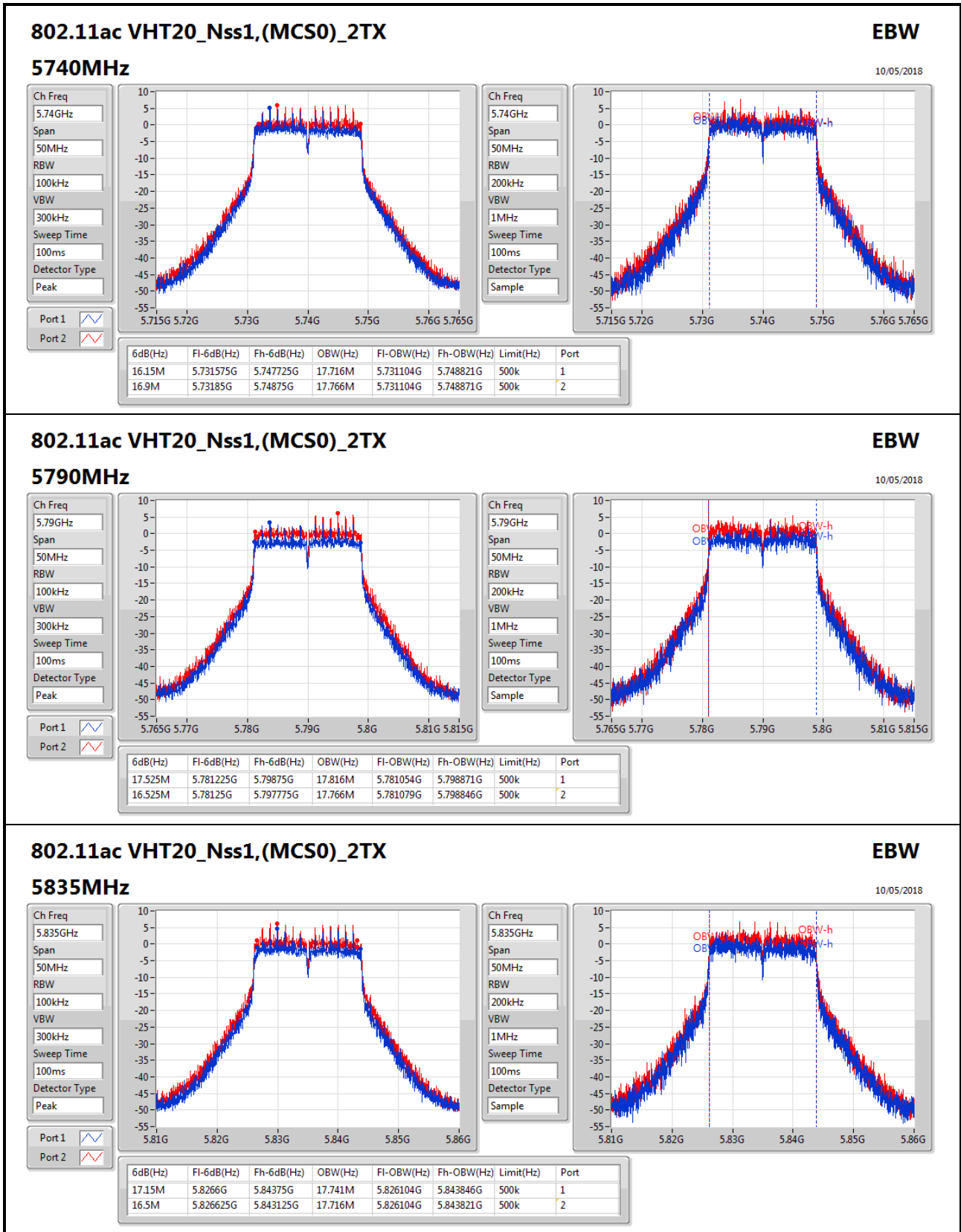
Span: 50MHz

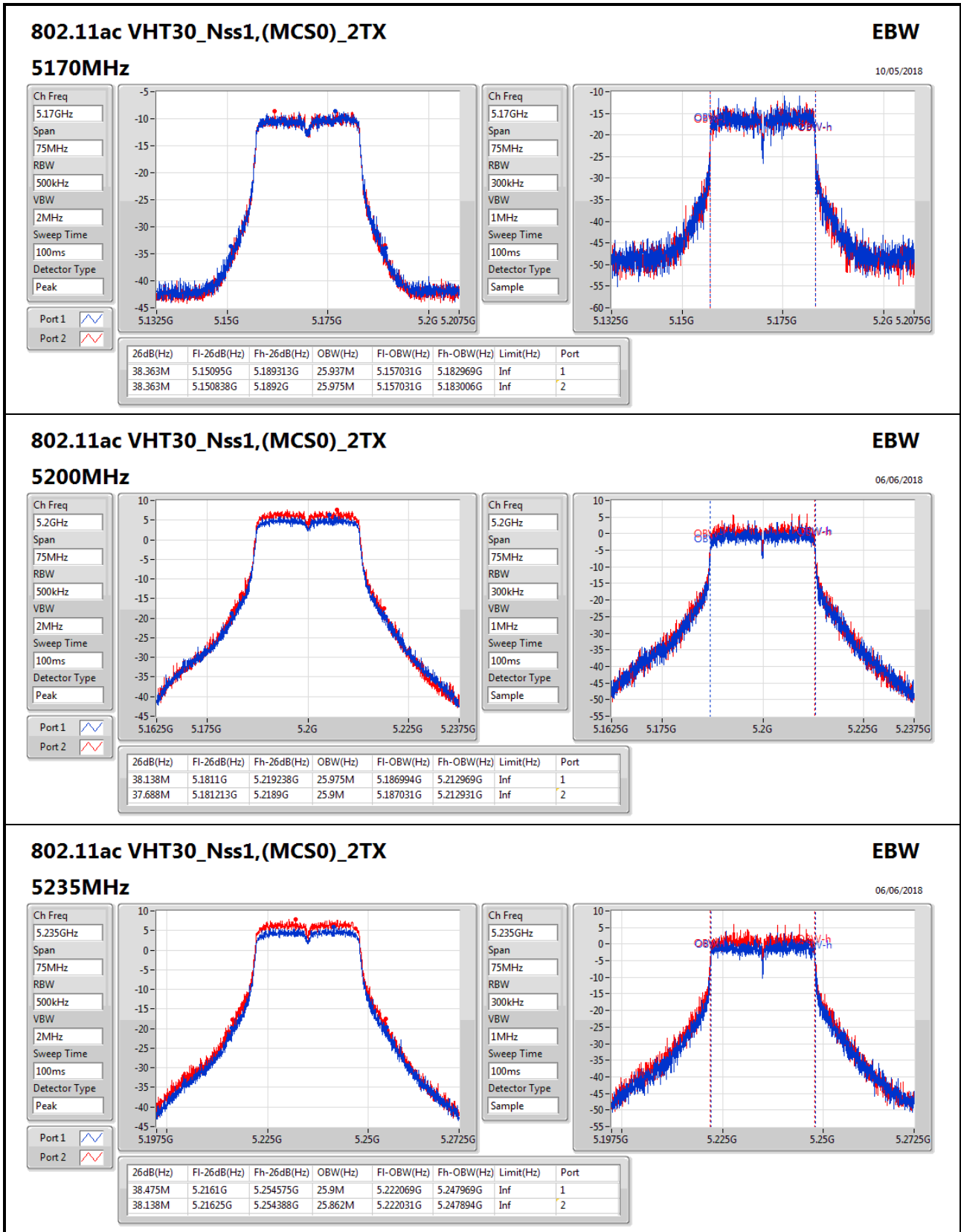
RBW: 200kHz

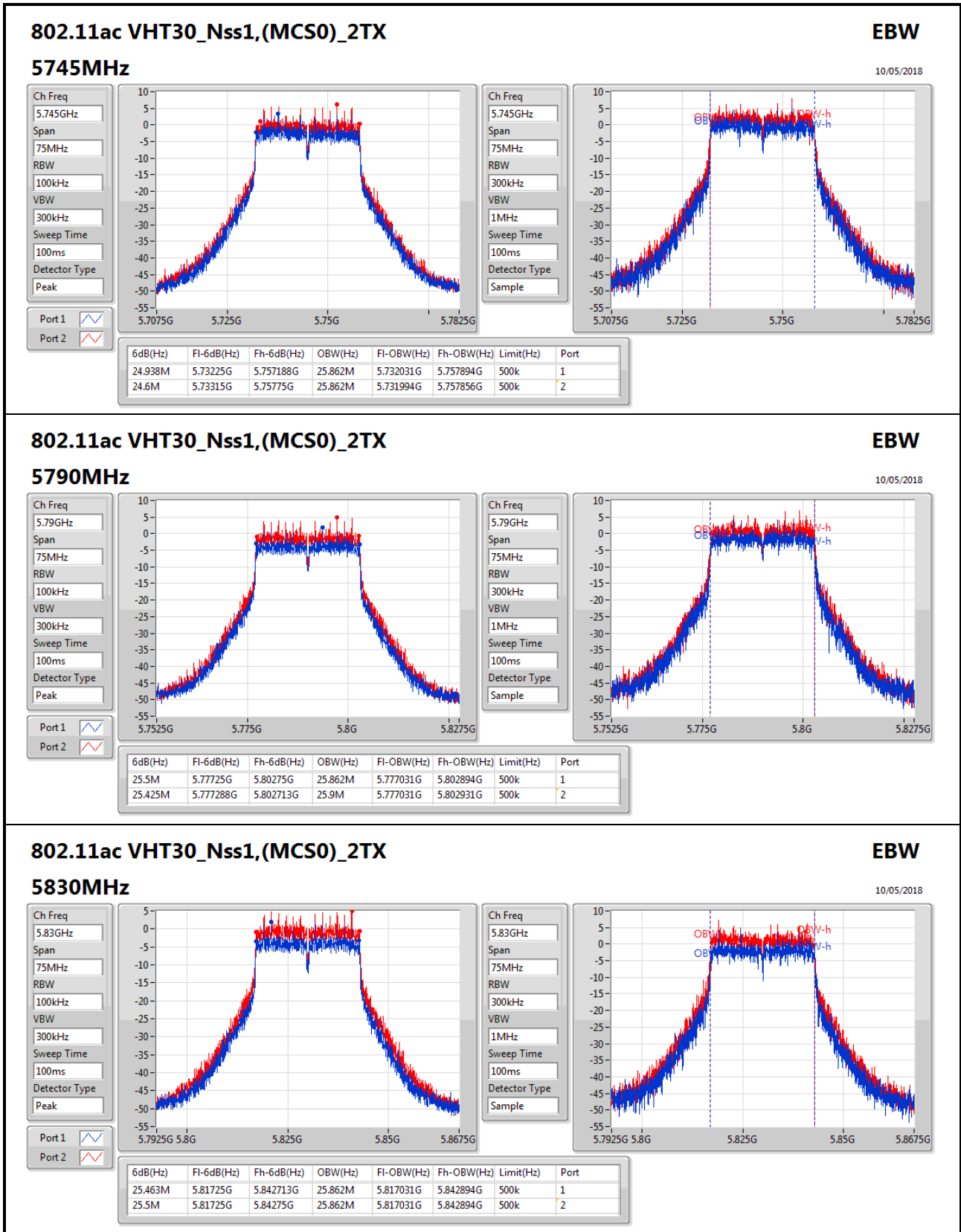
VBW: 1MHz

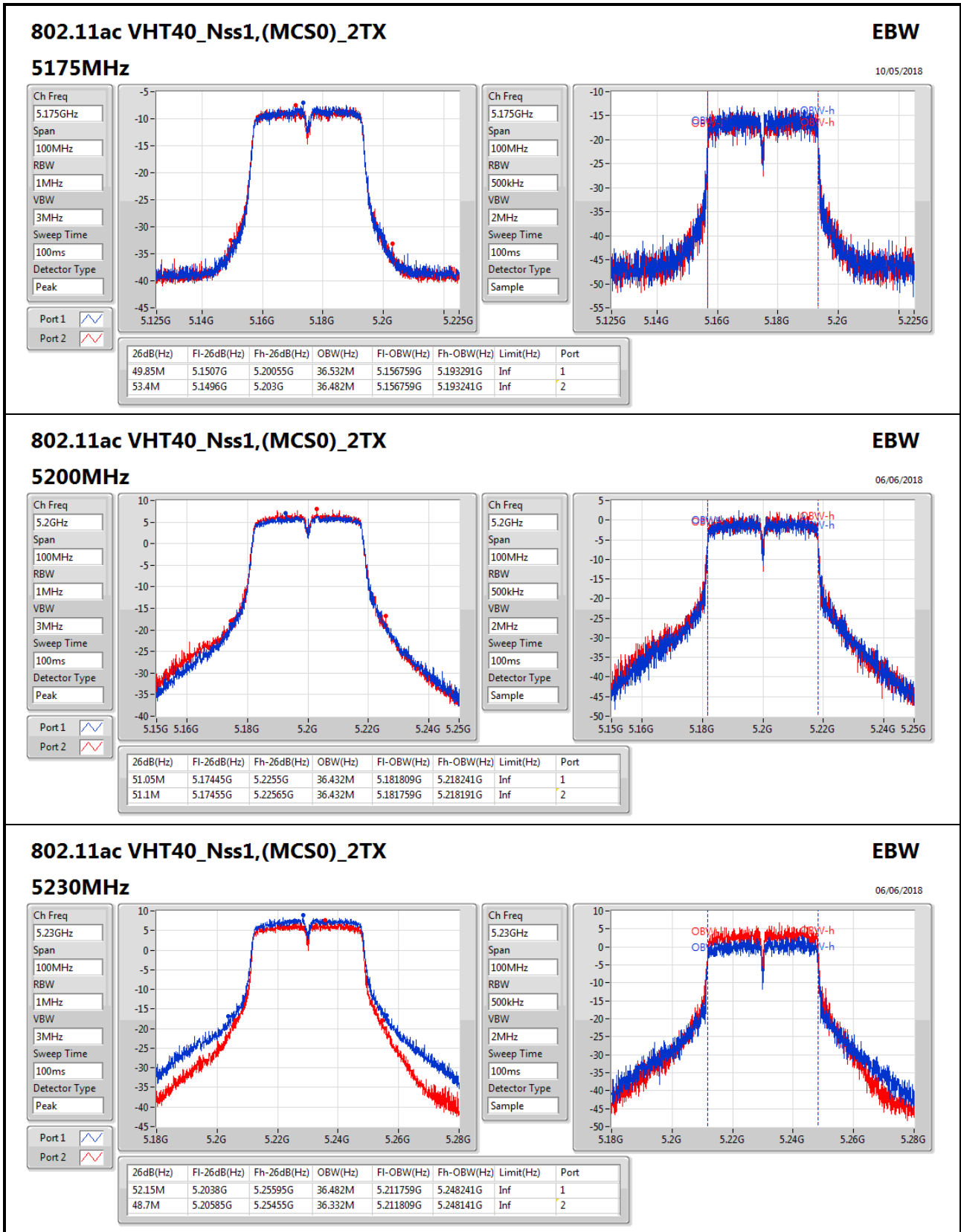
Sweep Time: 100ms

Detector Type: Sample








802.11ac VHT40_Nss1,(MCS0)_2TX
EBW

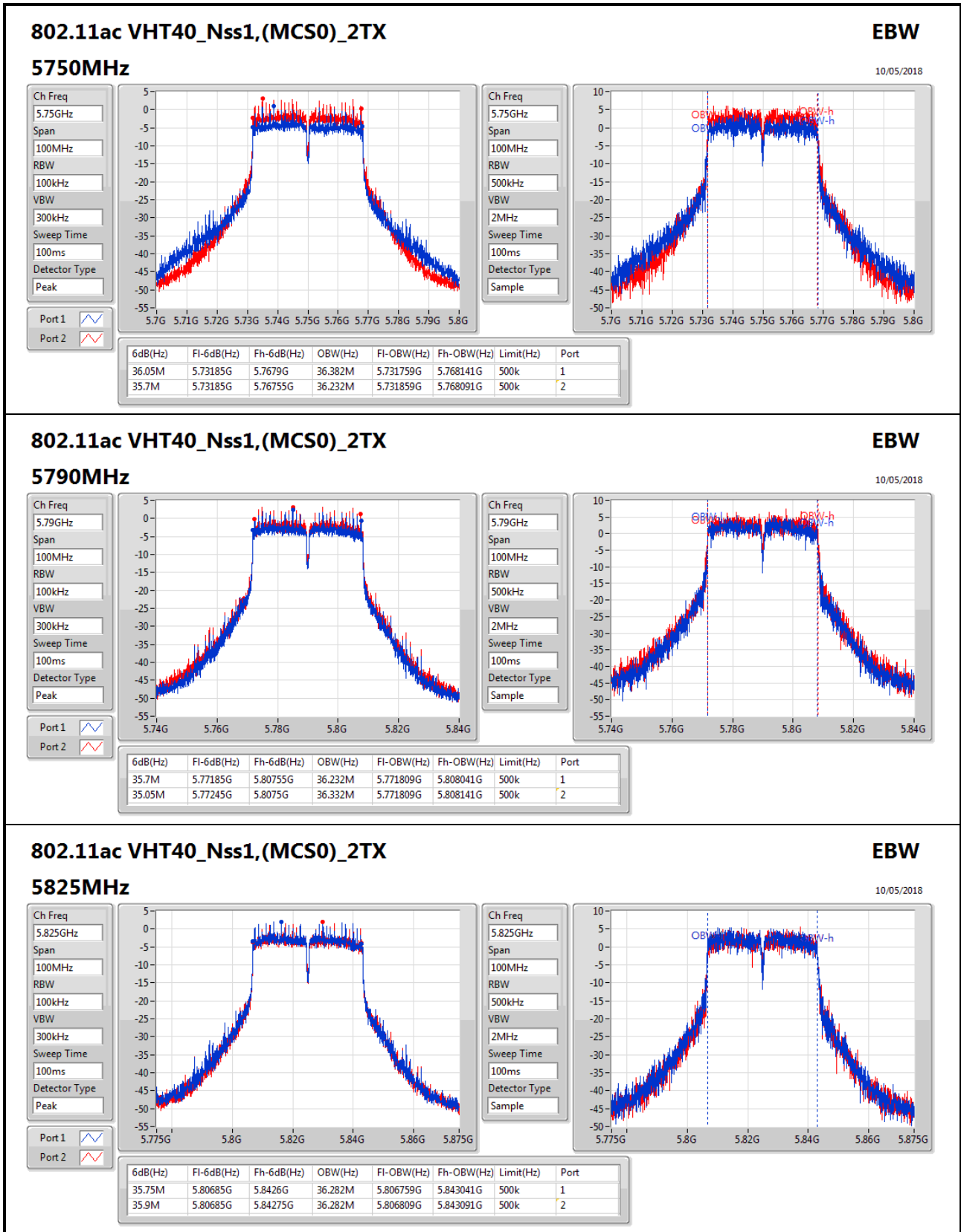
06/06/2018

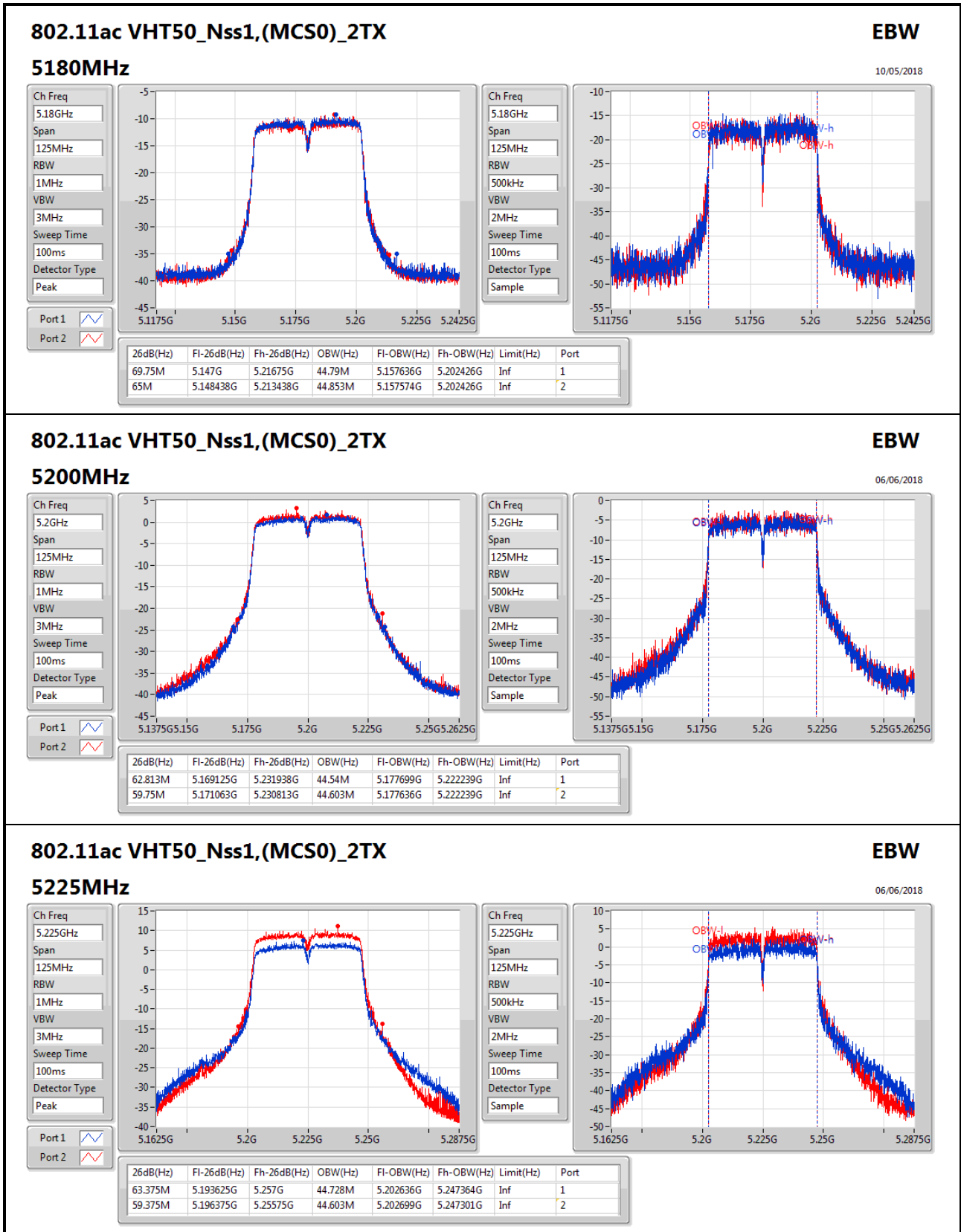
5230MHz

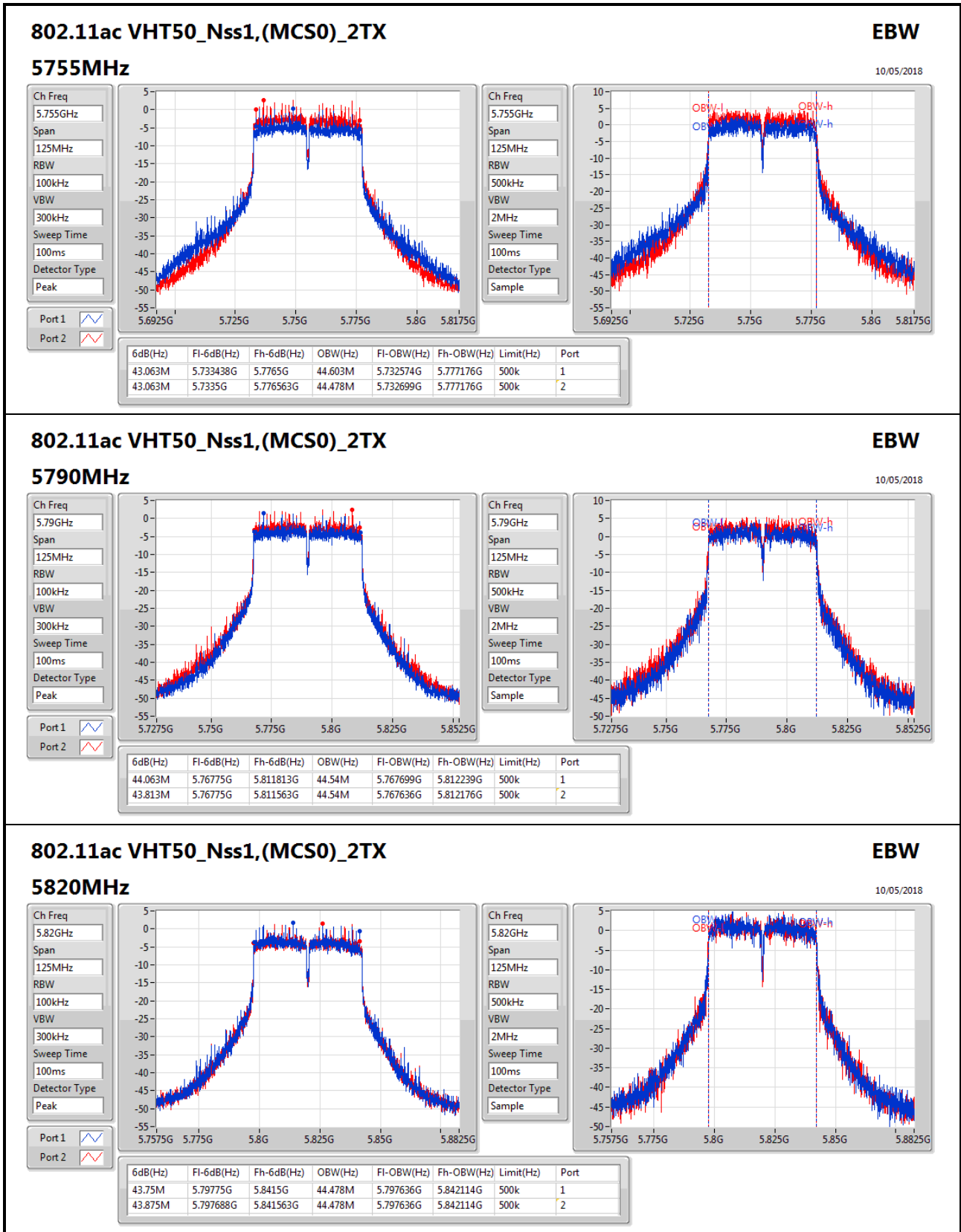
Ch Freq: 5.23GHz
Span: 100MHz
RBW: 1MHz
VBW: 3MHz
Sweep Time: 100ms
Detector Type: Peak

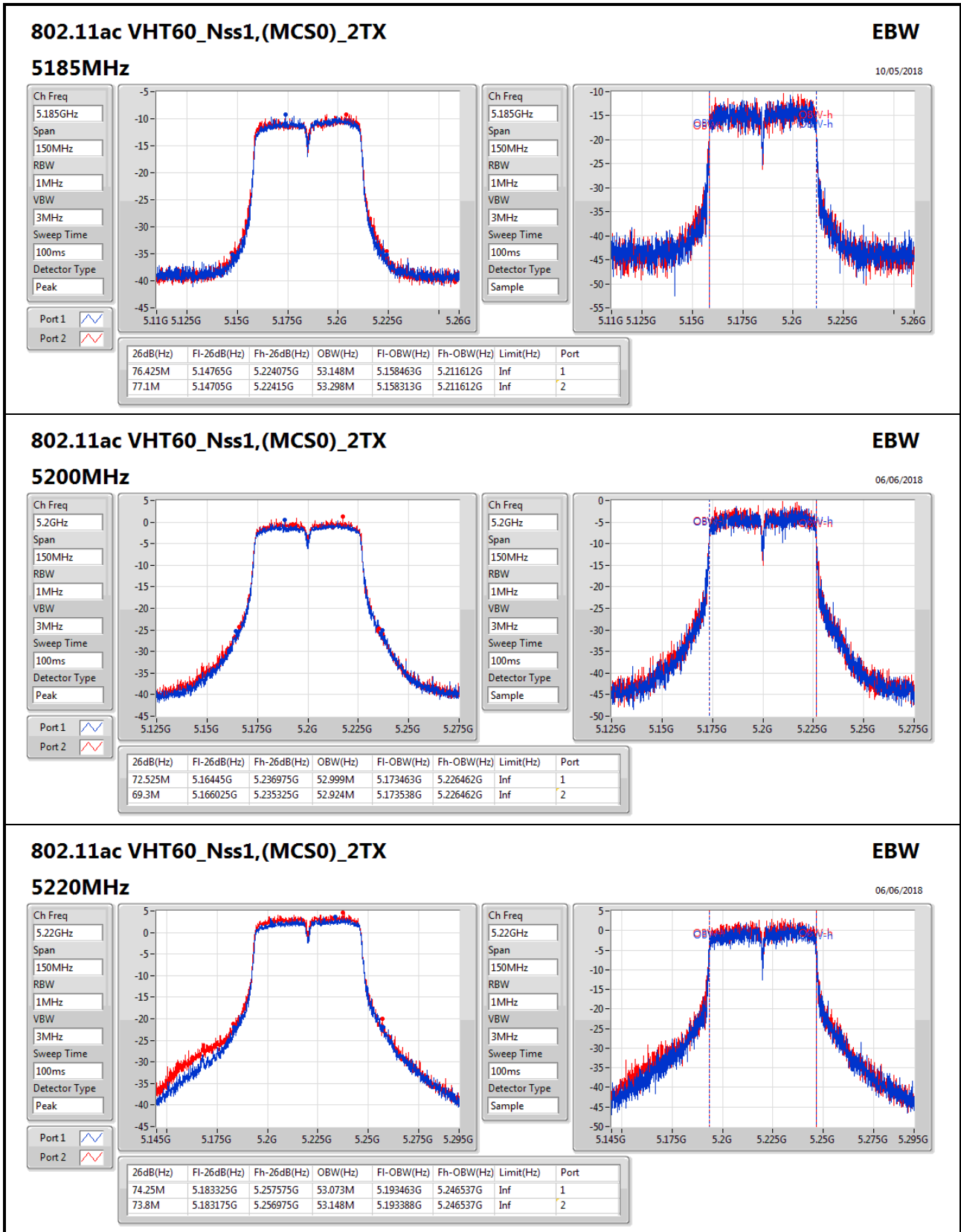
Port 1:
Port 2:

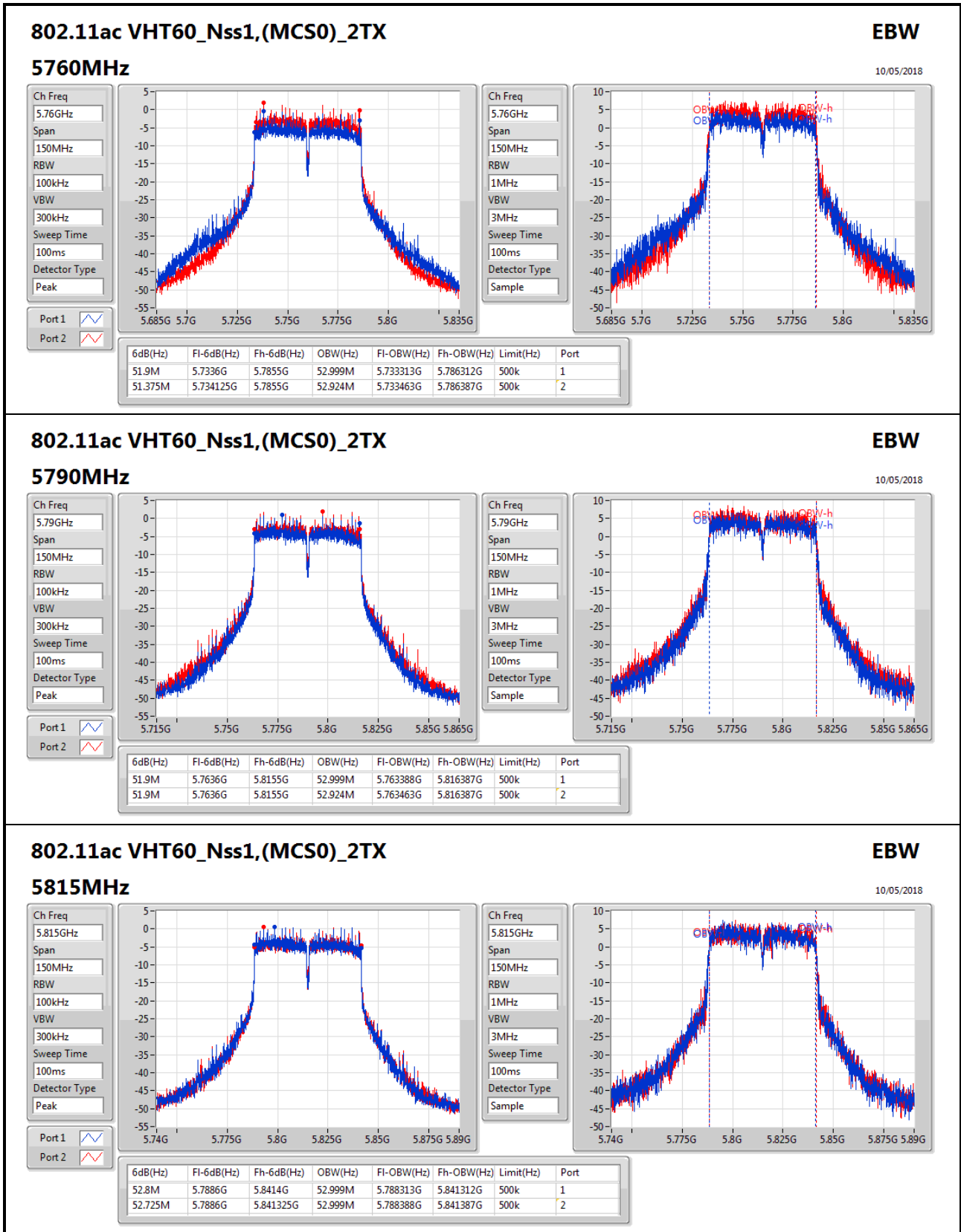
Ch Freq: 5.23GHz
Span: 100MHz
RBW: 500kHz
VBW: 2MHz
Sweep Time: 100ms
Detector Type: Sample










802.11ac VHT60_Nss1,(MCS0)_2TX
EBW

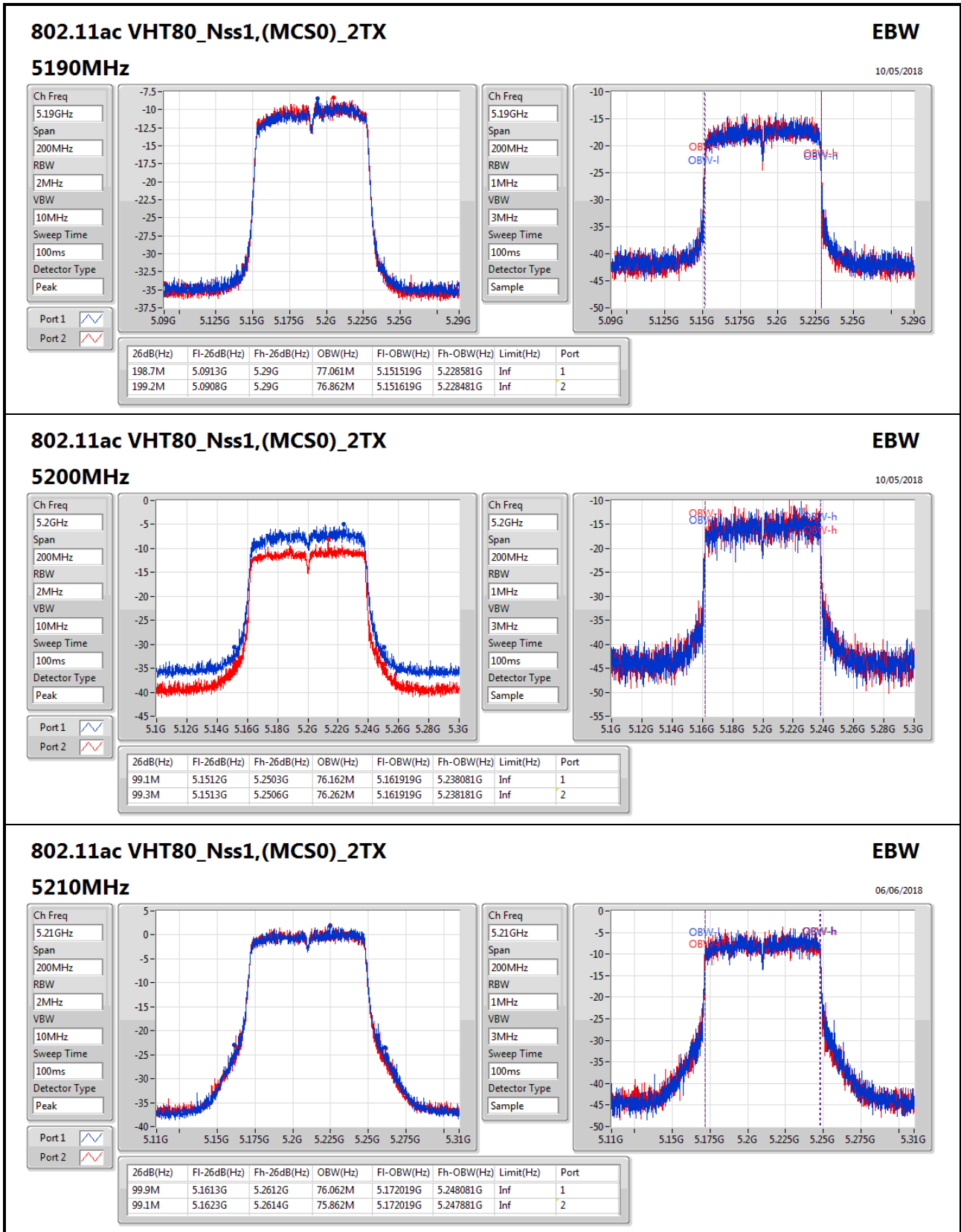
10/05/2018

5815MHz

Ch Freq: 5.815GHz
Span: 150MHz
RBW: 100kHz
VBW: 300kHz
Sweep Time: 100ms
Detector Type: Peak

Port 1:
Port 2:

Ch Freq: 5.815GHz
Span: 150MHz
RBW: 1MHz
VBW: 3MHz
Sweep Time: 100ms
Detector Type: Sample


802.11ac VHT80_Nss1,(MCS0)_2TX
EBW

06/06/2018

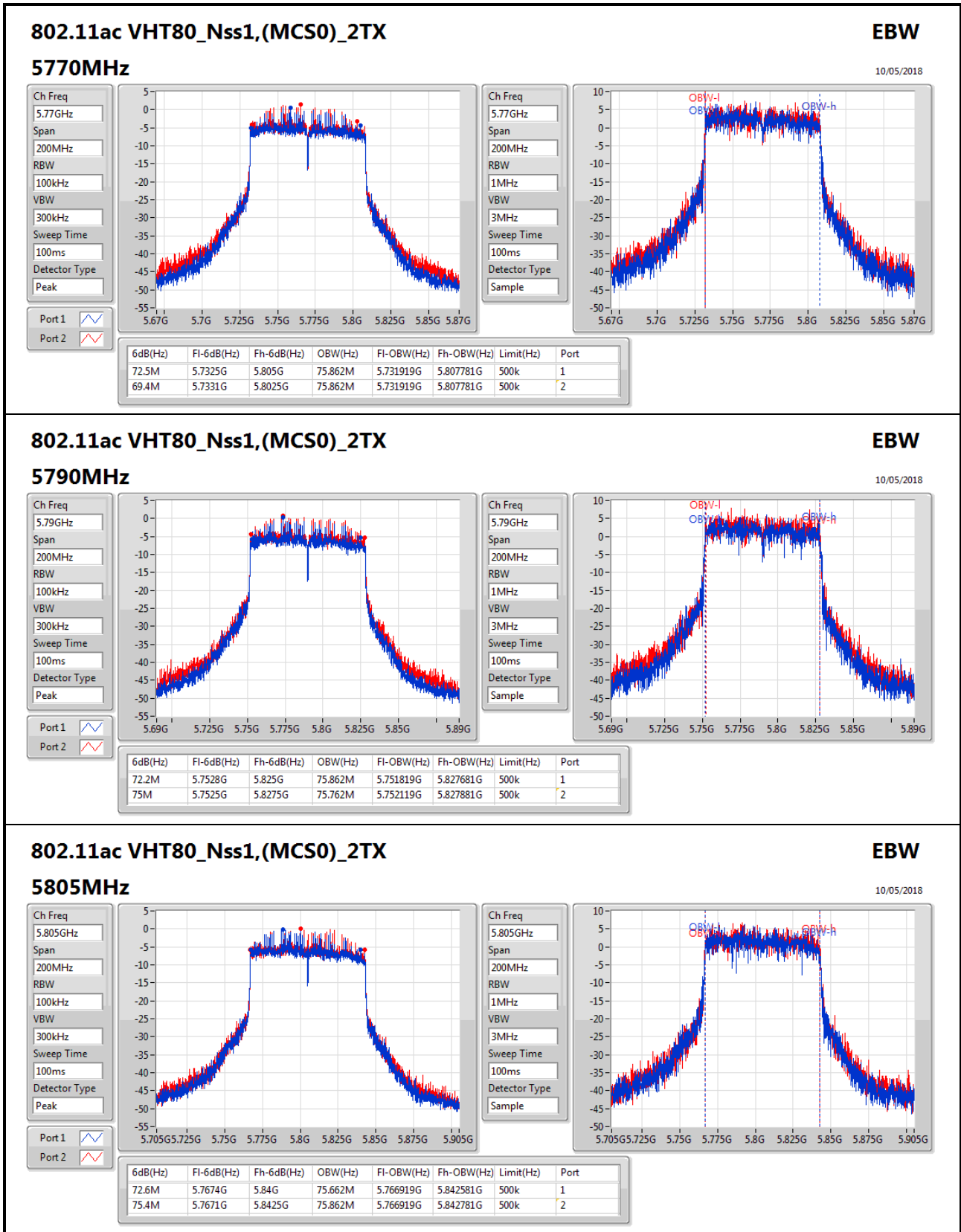
5210MHz

Ch Freq: 5.21GHz
Span: 200MHz
RBW: 2MHz
VBW: 10MHz
Sweep Time: 100ms
Detector Type: Peak

Port 1:
Port 2:

Ch Freq: 5.21GHz
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
99.9M	5.1613G	5.2612G	76.062M	5.172019G	5.248081G	Inf	1
99.1M	5.1623G	5.2614G	75.862M	5.172019G	5.247881G	Inf	2


802.11ac VHT80_Nss1,(MCS0)_2TX
EBW

10/05/2018

5805MHz

Ch Freq: 5.805GHz
Span: 200MHz
RBW: 100kHz
VBW: 300kHz
Sweep Time: 100ms
Detector Type: Peak

Port 1:
Port 2:

Ch Freq: 5.805GHz
Span: 200MHz
RBW: 1MHz
VBW: 3MHz
Sweep Time: 100ms
Detector Type: Sample

6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
72.6M	5.7674G	5.84G	75.662M	5.766919G	5.842581G	500k	1
75.4M	5.7671G	5.8425G	75.862M	5.766919G	5.842781G	500k	2



Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.15-5.25GHz	-	-	-	-
802.11ac VHT10_Nss1,(MCS0)_2TX	24.70	0.29512	41.70	14.79108
802.11ac VHT20_Nss1,(MCS0)_2TX	25.70	0.37154	42.70	18.62087
802.11ac VHT30_Nss1,(MCS0)_2TX	25.96	0.39446	42.96	19.76970
802.11ac VHT40_Nss1,(MCS0)_2TX	25.84	0.38371	42.84	19.23092
802.11ac VHT50_Nss1,(MCS0)_2TX	22.51	0.17824	39.51	8.93305
802.11ac VHT60_Nss1,(MCS0)_2TX	14.43	0.02773	31.43	1.38995
802.11ac VHT80_Nss1,(MCS0)_2TX	8.33	0.00681	25.33	0.34119
5.725-5.85GHz	-	-	-	-
802.11ac VHT10_Nss1,(MCS0)_2TX	23.93	0.24717	40.93	12.38797
802.11ac VHT20_Nss1,(MCS0)_2TX	25.56	0.35975	42.56	18.03018
802.11ac VHT30_Nss1,(MCS0)_2TX	25.74	0.37497	42.74	18.79317
802.11ac VHT40_Nss1,(MCS0)_2TX	25.65	0.36728	42.65	18.40772
802.11ac VHT50_Nss1,(MCS0)_2TX	25.74	0.37497	42.74	18.79317
802.11ac VHT60_Nss1,(MCS0)_2TX	25.61	0.36392	42.61	18.23896
802.11ac VHT80_Nss1,(MCS0)_2TX	24.57	0.28642	41.57	14.35489



Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11ac VHT10_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5160MHz_TnomVnom	Pass	17.00	4.04	3.80	6.93	30.00	23.93	53.00
5200MHz_TnomVnom	Pass	17.00	18.59	19.22	21.93	30.00	38.93	53.00
5245MHz_TnomVnom	Pass	17.00	20.94	22.33	24.70	30.00	41.70	53.00
5735MHz_TnomVnom	Pass	17.00	17.11	17.11	20.12	30.00	37.12	Inf
5790MHz_TnomVnom	Pass	17.00	21.41	20.37	23.93	30.00	40.93	Inf
5840MHz_TnomVnom	Pass	17.00	18.41	18.99	21.72	30.00	38.72	Inf
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5165MHz_TnomVnom	Pass	17.00	0.90	1.41	4.17	30.00	21.17	53.00
5200MHz_TnomVnom	Pass	17.00	22.25	22.08	25.18	30.00	42.18	53.00
5240MHz_TnomVnom	Pass	17.00	22.43	22.94	25.70	30.00	42.70	53.00
5740MHz_TnomVnom	Pass	17.00	22.09	20.91	24.55	30.00	41.55	Inf
5790MHz_TnomVnom	Pass	17.00	22.91	22.04	25.51	30.00	42.51	Inf
5835MHz_TnomVnom	Pass	17.00	22.81	22.28	25.56	30.00	42.56	Inf
802.11ac VHT30_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5170MHz_TnomVnom	Pass	17.00	-1.89	-1.86	1.14	30.00	18.14	53.00
5200MHz_TnomVnom	Pass	17.00	20.81	21.34	24.09	30.00	41.09	53.00
5235MHz_TnomVnom	Pass	17.00	22.84	23.05	25.96	30.00	42.96	53.00
5745MHz_TnomVnom	Pass	17.00	22.67	21.58	25.17	30.00	42.17	Inf
5790MHz_TnomVnom	Pass	17.00	22.86	22.09	25.50	30.00	42.50	Inf
5830MHz_TnomVnom	Pass	17.00	22.90	22.56	25.74	30.00	42.74	Inf
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5175MHz_TnomVnom	Pass	17.00	-3.21	-3.50	-0.34	30.00	16.66	53.00
5200MHz_TnomVnom	Pass	17.00	12.13	12.73	15.45	30.00	32.45	53.00
5230MHz_TnomVnom	Pass	17.00	22.09	23.47	25.84	30.00	42.84	53.00
5750MHz_TnomVnom	Pass	17.00	21.14	21.79	24.49	30.00	41.49	Inf
5790MHz_TnomVnom	Pass	17.00	22.71	22.57	25.65	30.00	42.65	Inf
5825MHz_TnomVnom	Pass	17.00	22.86	21.37	25.19	30.00	42.19	Inf
802.11ac VHT50_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5180MHz_TnomVnom	Pass	17.00	-3.62	-3.78	-0.69	30.00	16.31	53.00
5200MHz_TnomVnom	Pass	17.00	8.25	8.87	11.58	30.00	28.58	53.00
5225MHz_TnomVnom	Pass	17.00	18.42	20.36	22.51	30.00	39.51	53.00
5755MHz_TnomVnom	Pass	17.00	21.30	21.68	24.50	30.00	41.50	Inf
5790MHz_TnomVnom	Pass	17.00	22.64	22.81	25.74	30.00	42.74	Inf
5820MHz_TnomVnom	Pass	17.00	22.74	21.46	25.16	30.00	42.16	Inf
802.11ac VHT60_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5185MHz_TnomVnom	Pass	17.00	-2.78	-2.73	0.26	30.00	17.26	53.00
5200MHz_TnomVnom	Pass	17.00	7.44	7.91	10.69	30.00	27.69	53.00
5220MHz_TnomVnom	Pass	17.00	11.08	11.74	14.43	30.00	31.43	53.00
5760MHz_TnomVnom	Pass	17.00	21.75	21.36	24.57	30.00	41.57	Inf
5790MHz_TnomVnom	Pass	17.00	22.65	22.55	25.61	30.00	42.61	Inf
5815MHz_TnomVnom	Pass	17.00	22.82	21.67	25.29	30.00	42.29	Inf
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5190MHz_TnomVnom	Pass	17.00	-11.02	-11.05	-8.02	30.00	8.98	53.00



Power Result_Point-to-point

Appendix C.1

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
5200MHz_TnomVnom	Pass	17.00	-2.37	-2.23	0.71	30.00	17.71	53.00
5210MHz_TnomVnom	Pass	17.00	5.25	5.39	8.33	30.00	25.33	53.00
5770MHz_TnomVnom	Pass	17.00	20.02	20.08	23.06	30.00	40.06	Inf
5790MHz_TnomVnom	Pass	17.00	21.52	21.60	24.57	30.00	41.57	Inf
5805MHz_TnomVnom	Pass	17.00	20.57	20.20	23.40	30.00	40.40	Inf

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



Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.15-5.25GHz	-	-	-	-
802.11ac VHT10_Nss1,(MCS0)_2TX	3.59	0.00229	20.59	0.11455
802.11ac VHT20_Nss1,(MCS0)_2TX	3.67	0.00233	20.67	0.11668
802.11ac VHT30_Nss1,(MCS0)_2TX	3.61	0.00230	20.61	0.11508
802.11ac VHT40_Nss1,(MCS0)_2TX	3.94	0.00248	20.94	0.12417
5.725-5.85GHz	-	-	-	-
802.11ac VHT10_Nss1,(MCS0)_2TX	17.86	0.06109	34.86	3.06196
802.11ac VHT20_Nss1,(MCS0)_2TX	18.36	0.06855	35.36	3.43558
802.11ac VHT30_Nss1,(MCS0)_2TX	18.24	0.06668	35.24	3.34195
802.11ac VHT40_Nss1,(MCS0)_2TX	18.74	0.07482	35.74	3.74973



Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11ac VHT10_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5160MHz_TnomVnom	Pass	17.00	0.63	0.42	3.54	19.00	20.54	36.00
5200MHz_TnomVnom	Pass	17.00	0.54	0.62	3.59	19.00	20.59	36.00
5245MHz_TnomVnom	Pass	17.00	-0.22	0.56	3.20	19.00	20.20	36.00
5735MHz_TnomVnom	Pass	17.00	14.21	15.41	17.86	19.00	34.86	36.00
5790MHz_TnomVnom	Pass	17.00	13.23	15.66	17.62	19.00	34.62	36.00
5840MHz_TnomVnom	Pass	17.00	12.78	15.92	17.64	19.00	34.64	36.00
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5165MHz_TnomVnom	Pass	17.00	0.64	0.68	3.67	19.00	20.67	36.00
5200MHz_TnomVnom	Pass	17.00	0.49	0.64	3.58	19.00	20.58	36.00
5240MHz_TnomVnom	Pass	17.00	-0.28	0.59	3.19	19.00	20.19	36.00
5740MHz_TnomVnom	Pass	17.00	13.91	15.44	17.75	19.00	34.75	36.00
5790MHz_TnomVnom	Pass	17.00	12.96	15.69	17.55	19.00	34.55	36.00
5835MHz_TnomVnom	Pass	17.00	14.43	16.10	18.36	19.00	35.36	36.00
802.11ac VHT30_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5170MHz_TnomVnom	Pass	17.00	-1.36	-1.39	1.64	19.00	18.64	36.00
5200MHz_TnomVnom	Pass	17.00	0.58	0.62	3.61	19.00	20.61	36.00
5235MHz_TnomVnom	Pass	17.00	-0.11	0.69	3.32	19.00	20.32	36.00
5745MHz_TnomVnom	Pass	17.00	13.94	16.22	18.24	19.00	35.24	36.00
5790MHz_TnomVnom	Pass	17.00	12.98	15.17	17.22	19.00	34.22	36.00
5830MHz_TnomVnom	Pass	17.00	12.92	16.17	17.85	19.00	34.85	36.00
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5175MHz_TnomVnom	Pass	17.00	-2.60	-2.83	0.30	19.00	17.30	36.00
5200MHz_TnomVnom	Pass	17.00	0.08	0.15	3.13	19.00	20.13	36.00
5230MHz_TnomVnom	Pass	17.00	0.62	1.21	3.94	19.00	20.94	36.00
5750MHz_TnomVnom	Pass	17.00	13.67	15.87	17.92	19.00	34.92	36.00
5790MHz_TnomVnom	Pass	17.00	15.21	16.20	18.74	19.00	35.74	36.00
5825MHz_TnomVnom	Pass	17.00	15.39	15.20	18.31	19.00	35.31	36.00

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



Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
5.15-5.25GHz	-	-	-	-
802.11ac VHT10_Nss1,(MCS0)_2TX	13.46	0.02218	30.46	1.11173
802.11ac VHT20_Nss1,(MCS0)_2TX	15.55	0.03589	32.55	1.79887
802.11ac VHT30_Nss1,(MCS0)_2TX	17.97	0.06266	34.97	3.14051
802.11ac VHT40_Nss1,(MCS0)_2TX	18.34	0.06823	35.34	3.41979
802.11ac VHT50_Nss1,(MCS0)_2TX	18.35	0.06839	35.35	3.42768
802.11ac VHT60_Nss1,(MCS0)_2TX	14.52	0.02831	31.52	1.41906
802.11ac VHT80_Nss1,(MCS0)_2TX	8.59	0.00723	25.59	0.36224
5.725-5.85GHz	-	-	-	-
802.11ac VHT10_Nss1,(MCS0)_2TX	17.86	0.06109	34.86	3.06196
802.11ac VHT20_Nss1,(MCS0)_2TX	18.36	0.06855	35.36	3.43558
802.11ac VHT30_Nss1,(MCS0)_2TX	18.24	0.06668	35.24	3.34195
802.11ac VHT40_Nss1,(MCS0)_2TX	18.74	0.07482	35.74	3.74973
802.11ac VHT50_Nss1,(MCS0)_2TX	18.76	0.07516	35.76	3.76704
802.11ac VHT60_Nss1,(MCS0)_2TX	18.69	0.07396	35.69	3.70681
802.11ac VHT80_Nss1,(MCS0)_2TX	18.79	0.07568	35.79	3.79315



Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11ac VHT10_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5160MHz	Pass	17.00	4.72	3.99	7.38	19.00	24.38	36.00
5200MHz	Pass	17.00	10.21	10.68	13.46	19.00	30.46	36.00
5245MHz	Pass	17.00	9.38	10.36	12.91	19.00	29.91	36.00
5735MHz	Pass	17.00	14.21	15.41	17.86	19.00	34.86	36.00
5790MHz	Pass	17.00	13.23	15.66	17.62	19.00	34.62	36.00
5840MHz	Pass	17.00	12.78	15.92	17.64	19.00	34.64	36.00
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5165MHz	Pass	17.00	1.58	1.54	4.57	19.00	21.57	36.00
5200MHz	Pass	17.00	12.34	11.70	15.04	19.00	32.04	36.00
5240MHz	Pass	17.00	12.59	12.48	15.55	19.00	32.55	36.00
5740MHz	Pass	17.00	13.91	15.44	17.75	19.00	34.75	36.00
5790MHz	Pass	17.00	12.96	15.69	17.55	19.00	34.55	36.00
5835MHz	Pass	17.00	14.43	16.10	18.36	19.00	35.36	36.00
802.11ac VHT30_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5170MHz	Pass	17.00	-1.36	-1.39	1.64	19.00	18.64	36.00
5200MHz	Pass	17.00	14.20	15.61	17.97	19.00	34.97	36.00
5235MHz	Pass	17.00	13.70	15.51	17.71	19.00	34.71	36.00
5745MHz	Pass	17.00	13.94	16.22	18.24	19.00	35.24	36.00
5790MHz	Pass	17.00	12.98	15.17	17.22	19.00	34.22	36.00
5830MHz	Pass	17.00	12.92	16.17	17.85	19.00	34.85	36.00
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5175MHz	Pass	17.00	-2.60	-2.83	0.30	19.00	17.30	36.00
5200MHz	Pass	17.00	12.39	12.79	15.60	19.00	32.60	36.00
5230MHz	Pass	17.00	13.78	16.47	18.34	19.00	35.34	36.00
5750MHz	Pass	17.00	13.67	15.87	17.92	19.00	34.92	36.00
5790MHz	Pass	17.00	15.21	16.20	18.74	19.00	35.74	36.00
5825MHz	Pass	17.00	15.39	15.20	18.31	19.00	35.31	36.00
802.11ac VHT50_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	17.00	-3.62	-3.78	-0.69	19.00	16.31	36.00
5200MHz	Pass	17.00	8.58	9.07	11.84	19.00	28.84	36.00
5225MHz	Pass	17.00	13.80	16.47	18.35	19.00	35.35	36.00
5755MHz	Pass	17.00	13.57	15.78	17.82	19.00	34.82	36.00
5790MHz	Pass	17.00	15.19	16.24	18.76	19.00	35.76	36.00
5820MHz	Pass	17.00	15.23	15.27	18.26	19.00	35.26	36.00
802.11ac VHT60_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5185MHz	Pass	17.00	-2.78	-2.73	0.26	19.00	17.26	36.00
5200MHz	Pass	17.00	7.69	8.10	10.91	19.00	27.91	36.00
5220MHz	Pass	17.00	11.15	11.84	14.52	19.00	31.52	36.00
5760MHz	Pass	17.00	13.45	15.47	17.59	19.00	34.59	36.00
5790MHz	Pass	17.00	15.26	16.07	18.69	19.00	35.69	36.00
5815MHz	Pass	17.00	15.35	15.22	18.30	19.00	35.30	36.00
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5190MHz	Pass	17.00	-11.02	-11.05	-8.02	19.00	8.98	36.00



Power Result_indoor

Appendix C.3

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
5200MHz	Pass	17.00	-2.37	-2.23	0.71	19.00	17.71	36.00
5210MHz	Pass	17.00	5.66	5.50	8.59	19.00	25.59	36.00
5770MHz	Pass	17.00	15.43	16.11	18.79	19.00	35.79	36.00
5790MHz	Pass	17.00	14.94	15.82	18.41	19.00	35.41	36.00
5805MHz	Pass	17.00	14.98	15.37	18.19	19.00	35.19	36.00

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



Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
5.15-5.25GHz	-	-
802.11ac VHT10_Nss1,(MCS0)_2TX	14.34	34.35
802.11ac VHT20_Nss1,(MCS0)_2TX	11.99	32.00
802.11ac VHT30_Nss1,(MCS0)_2TX	10.81	30.82
802.11ac VHT40_Nss1,(MCS0)_2TX	9.28	29.29
802.11ac VHT50_Nss1,(MCS0)_2TX	5.86	25.87
802.11ac VHT60_Nss1,(MCS0)_2TX	-2.77	17.24
802.11ac VHT80_Nss1,(MCS0)_2TX	-10.08	9.93
5.725-5.85GHz	-	-
802.11ac VHT10_Nss1,(MCS0)_2TX	12.28	32.29
802.11ac VHT20_Nss1,(MCS0)_2TX	10.84	30.85
802.11ac VHT30_Nss1,(MCS0)_2TX	9.40	29.41
802.11ac VHT40_Nss1,(MCS0)_2TX	8.00	28.01
802.11ac VHT50_Nss1,(MCS0)_2TX	7.31	27.32
802.11ac VHT60_Nss1,(MCS0)_2TX	6.68	26.69
802.11ac VHT80_Nss1,(MCS0)_2TX	4.94	24.95

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



Result

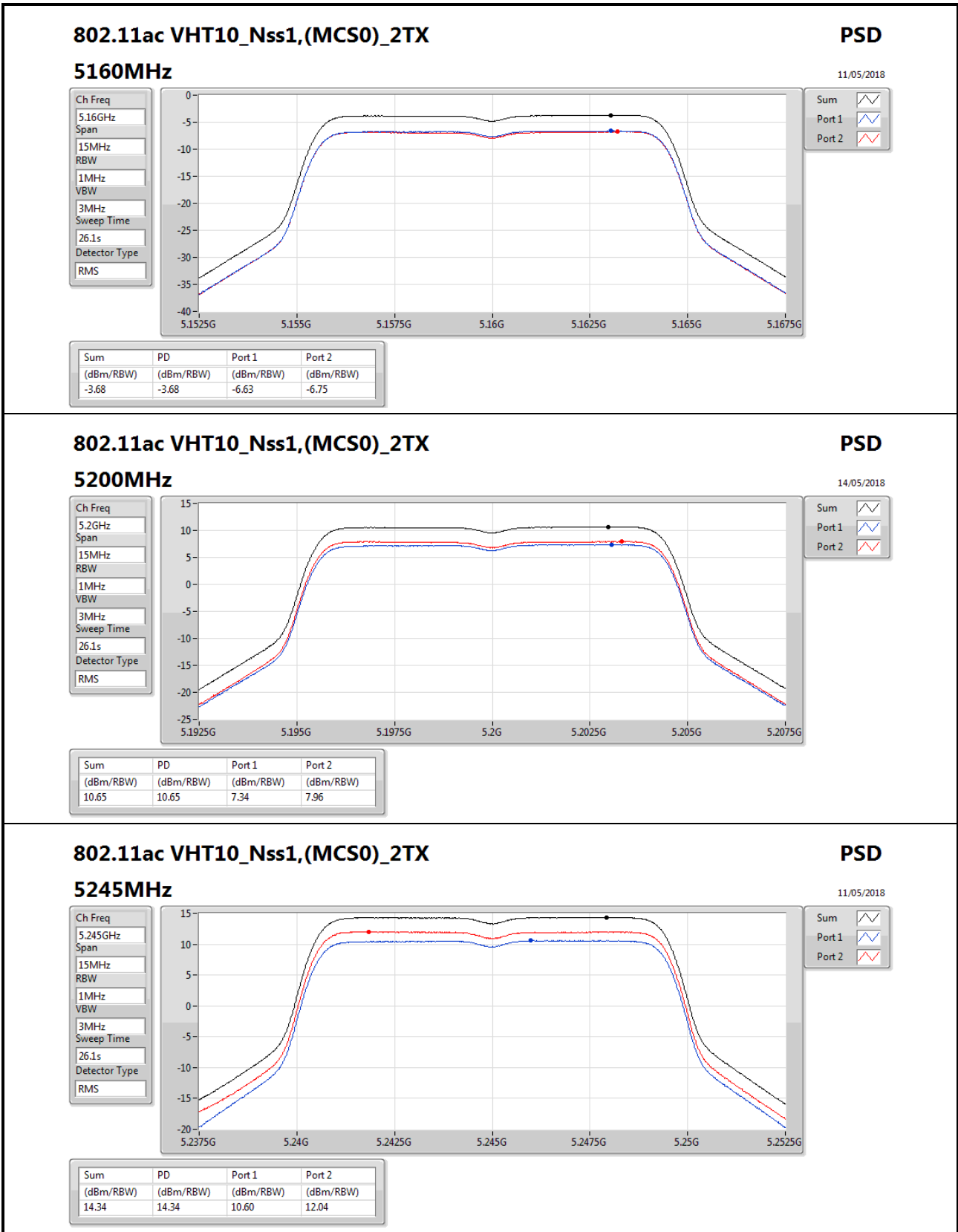
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)	EIRP PD (dBm/RBW)	EIRP PD Limit (dBm/RBW)
802.11ac VHT10_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5160MHz_TnomVnom	Pass	20.01	-6.63	-6.75	-3.68	17.00	16.33	40.00
5200MHz_TnomVnom	Pass	20.01	7.34	7.96	10.65	17.00	30.66	40.00
5245MHz_TnomVnom	Pass	20.01	10.60	12.04	14.34	17.00	34.35	40.00
5735MHz_TnomVnom	Pass	20.01	5.67	5.45	8.53	30.00	28.54	Inf
5790MHz_TnomVnom	Pass	20.01	9.77	8.71	12.28	30.00	32.29	Inf
5840MHz_TnomVnom	Pass	20.01	6.45	6.97	9.70	30.00	29.71	Inf
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5165MHz_TnomVnom	Pass	20.01	-12.20	-11.87	-9.04	17.00	10.97	40.00
5200MHz_TnomVnom	Pass	20.01	8.41	8.06	11.23	17.00	31.24	40.00
5240MHz_TnomVnom	Pass	20.01	8.75	9.21	11.99	17.00	32.00	40.00
5740MHz_TnomVnom	Pass	20.01	7.92	6.77	10.37	30.00	30.38	Inf
5790MHz_TnomVnom	Pass	20.01	8.22	7.28	10.76	30.00	30.77	Inf
5835MHz_TnomVnom	Pass	20.01	8.15	7.50	10.84	30.00	30.85	Inf
802.11ac VHT30_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5170MHz_TnomVnom	Pass	20.01	-16.28	-16.26	-13.28	17.00	6.73	40.00
5200MHz_TnomVnom	Pass	20.01	6.18	6.70	9.46	17.00	29.47	40.00
5235MHz_TnomVnom	Pass	20.01	7.62	7.97	10.81	17.00	30.82	40.00
5745MHz_TnomVnom	Pass	20.01	6.37	5.29	8.87	30.00	28.88	Inf
5790MHz_TnomVnom	Pass	20.01	6.87	5.86	9.40	30.00	29.41	Inf
5830MHz_TnomVnom	Pass	20.01	6.53	6.16	9.27	30.00	29.28	Inf
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5175MHz_TnomVnom	Pass	20.01	-18.84	-19.02	-15.95	17.00	4.06	40.00
5200MHz_TnomVnom	Pass	20.01	-3.86	-3.20	-0.54	17.00	19.47	40.00
5230MHz_TnomVnom	Pass	20.01	5.64	6.88	9.28	17.00	29.29	40.00
5750MHz_TnomVnom	Pass	20.01	4.27	4.71	7.51	30.00	27.52	Inf
5790MHz_TnomVnom	Pass	20.01	5.05	4.99	8.00	30.00	28.01	Inf
5825MHz_TnomVnom	Pass	20.01	5.23	3.62	7.51	30.00	27.52	Inf
802.11ac VHT50_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5180MHz_TnomVnom	Pass	20.01	-19.60	-19.84	-16.71	17.00	3.30	40.00
5200MHz_TnomVnom	Pass	20.01	-8.54	-7.93	-5.21	17.00	14.80	40.00
5225MHz_TnomVnom	Pass	20.01	1.76	3.76	5.86	17.00	25.87	40.00
5755MHz_TnomVnom	Pass	20.01	3.71	3.95	6.82	30.00	26.83	Inf
5790MHz_TnomVnom	Pass	20.01	4.32	4.31	7.31	30.00	27.32	Inf
5820MHz_TnomVnom	Pass	20.01	4.34	2.99	6.69	30.00	26.70	Inf
802.11ac VHT60_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5185MHz_TnomVnom	Pass	20.01	-19.15	-19.15	-16.17	17.00	3.84	40.00
5200MHz_TnomVnom	Pass	20.01	-9.92	-9.55	-6.72	17.00	13.29	40.00
5220MHz_TnomVnom	Pass	20.01	-5.98	-5.56	-2.77	17.00	17.24	40.00
5760MHz_TnomVnom	Pass	20.01	3.50	3.16	6.34	30.00	26.35	Inf
5790MHz_TnomVnom	Pass	20.01	3.81	3.61	6.68	30.00	26.69	Inf
5815MHz_TnomVnom	Pass	20.01	3.95	3.33	6.57	30.00	26.58	Inf
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5190MHz_TnomVnom	Pass	20.01	-28.93	-29.00	-26.03	17.00	-6.02	40.00

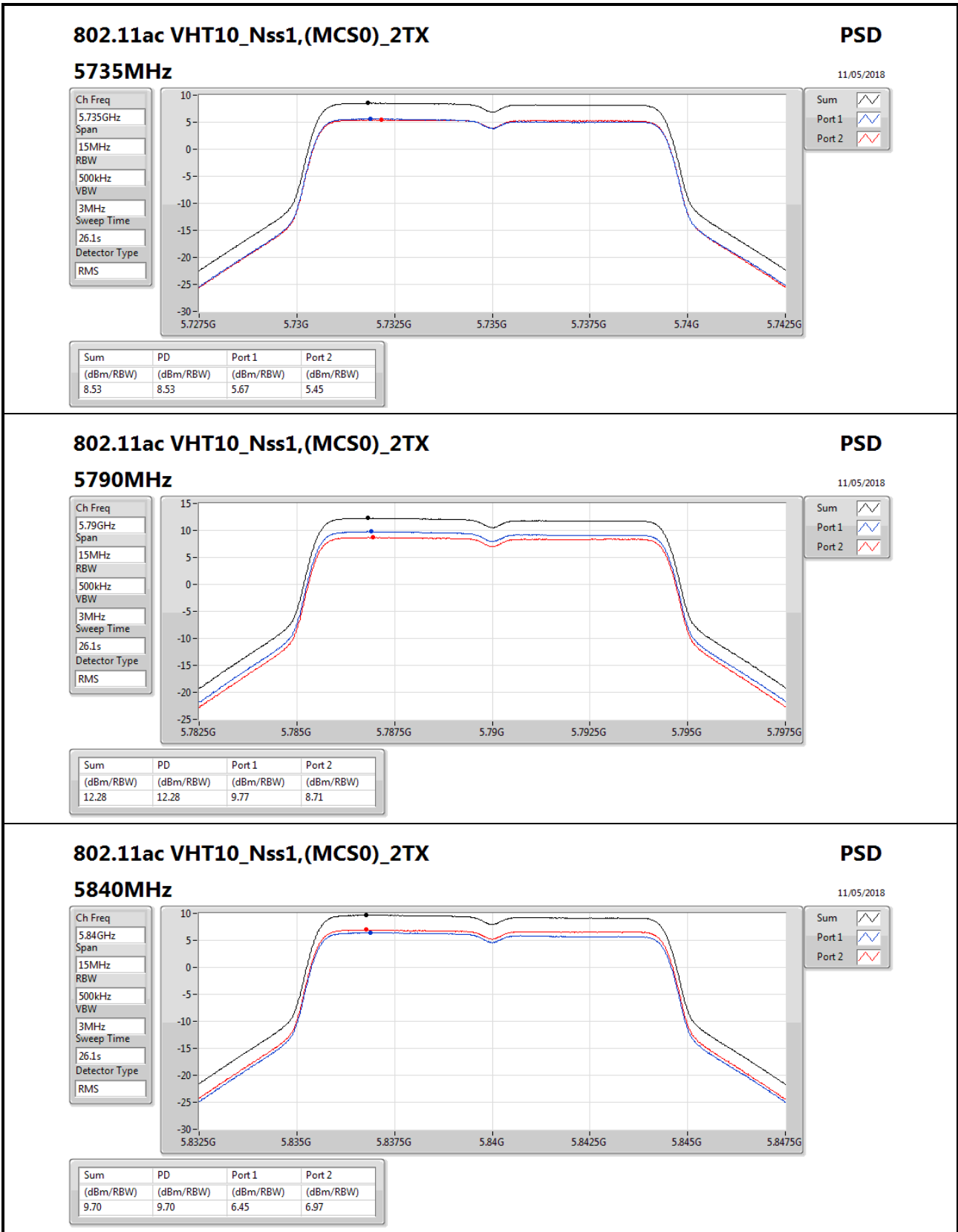


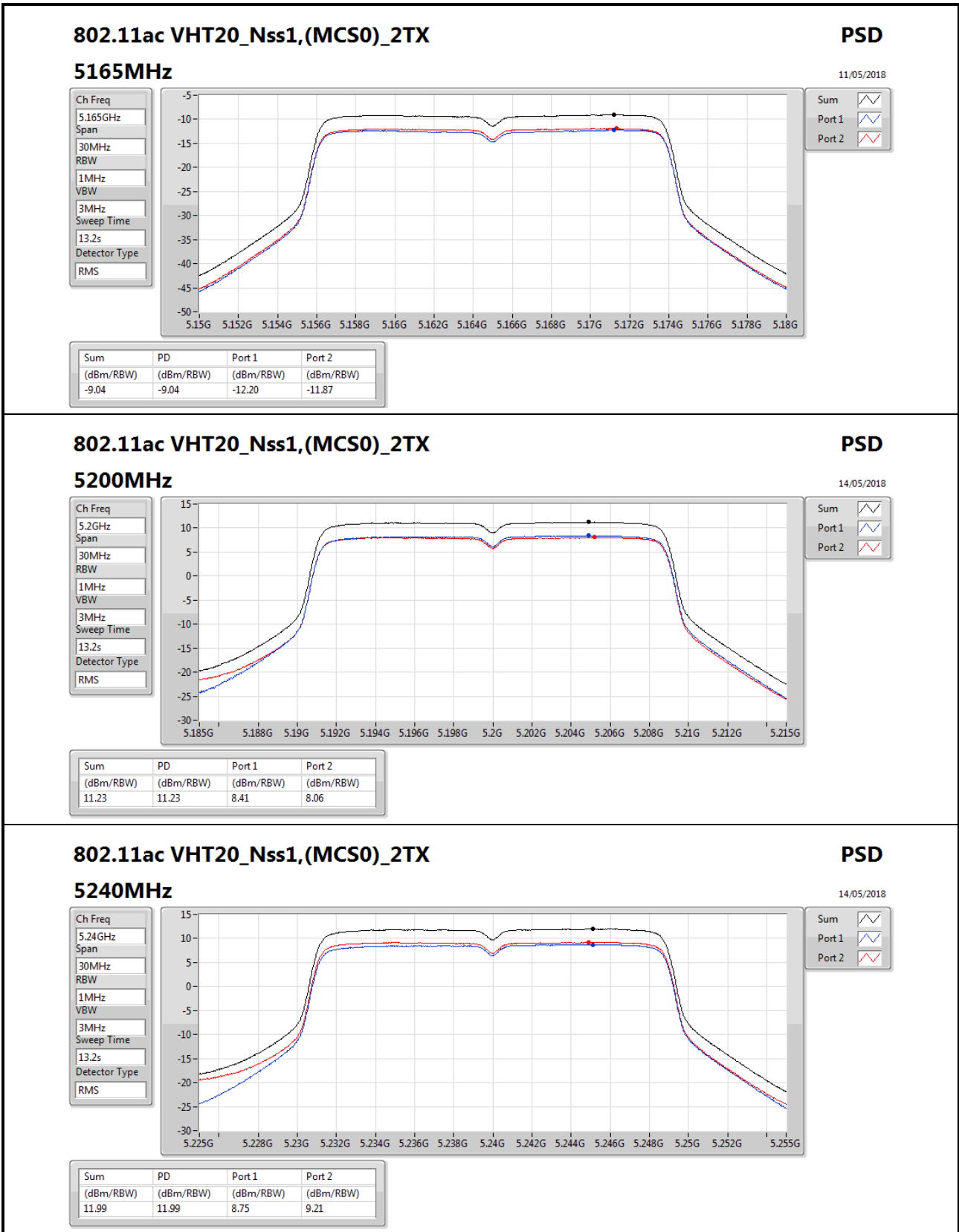
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)	EIRP PD (dBm/RBW)	EIRP PD Limit (dBm/RBW)
5200MHz_TnomVnom	Pass	20.01	-19.77	-19.74	-16.78	17.00	3.23	40.00
5210MHz_TnomVnom	Pass	20.01	-13.06	-12.99	-10.08	17.00	9.93	40.00
5770MHz_TnomVnom	Pass	20.01	0.66	0.55	3.61	30.00	23.62	Inf
5790MHz_TnomVnom	Pass	20.01	1.97	1.94	4.94	30.00	24.95	Inf
5805MHz_TnomVnom	Pass	20.01	1.15	0.60	3.89	30.00	23.90	Inf

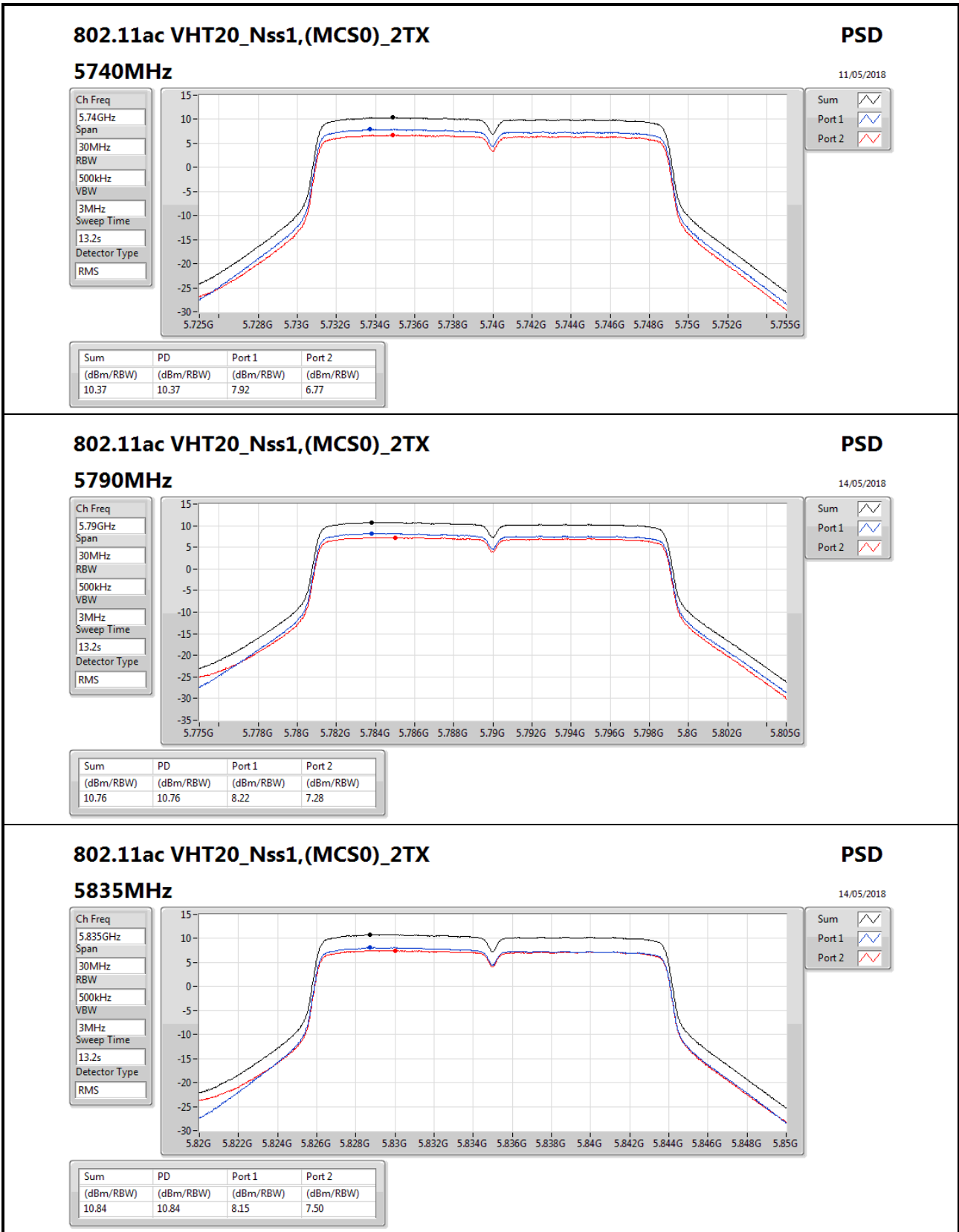
DG = Directional Gain; RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

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









802.11ac VHT20_Nss1,(MCS0)_2TX

5835MHz

PSD

14/05/2018

Ch Freq
5.835GHz

Span
30MHz

RBW
500kHz

VBW
3MHz

Sweep Time
13.2s

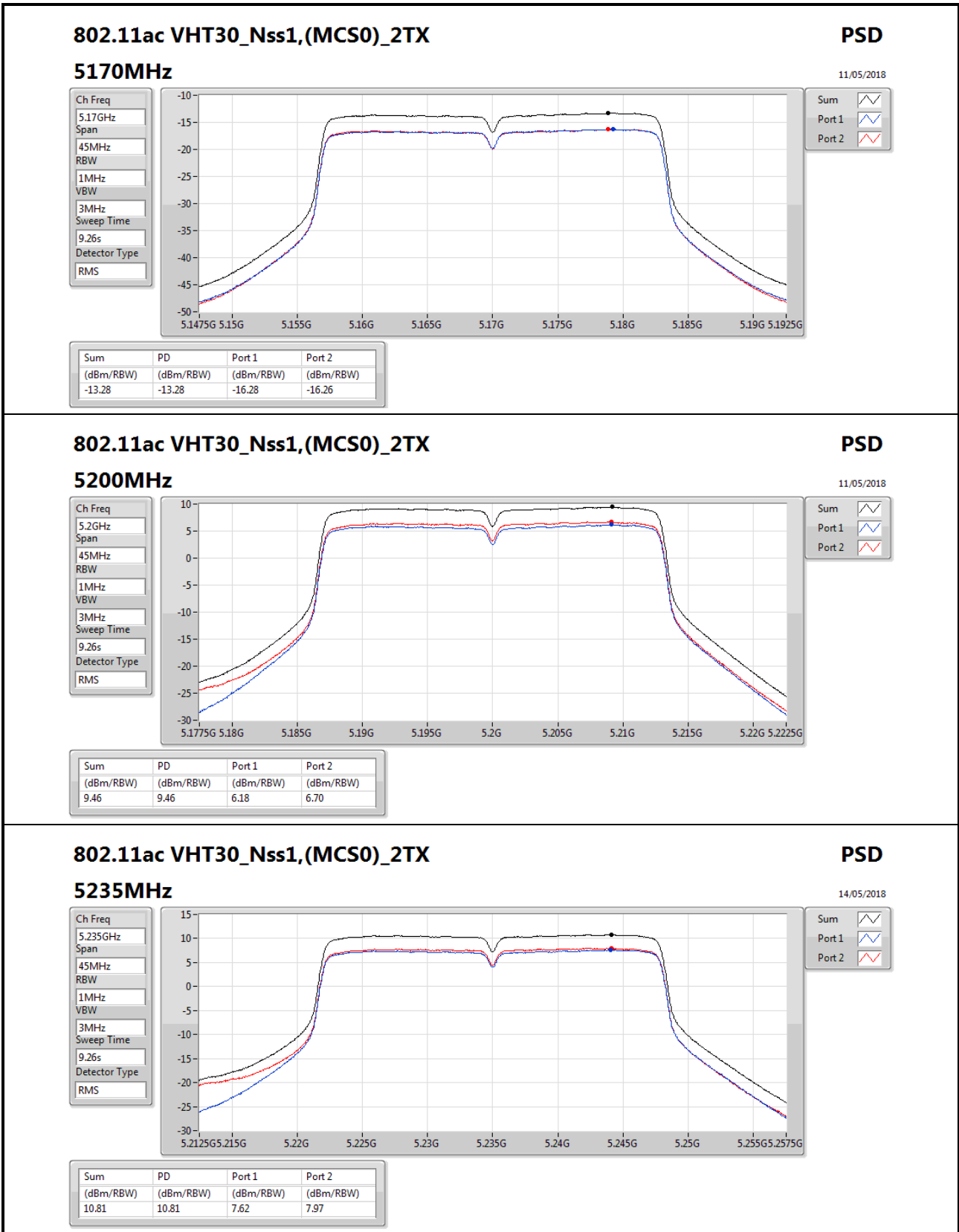
Detector Type
RMS

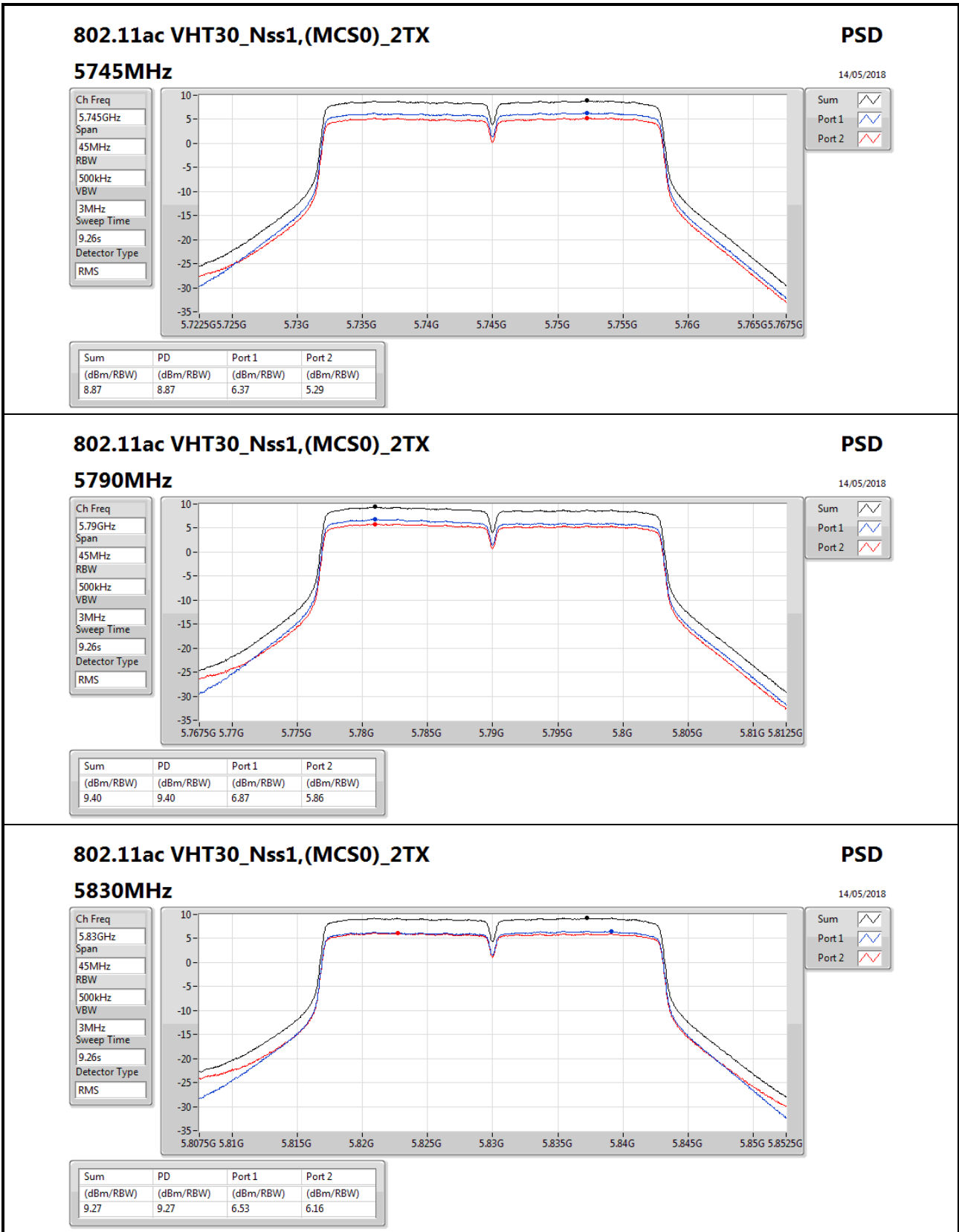
Sum

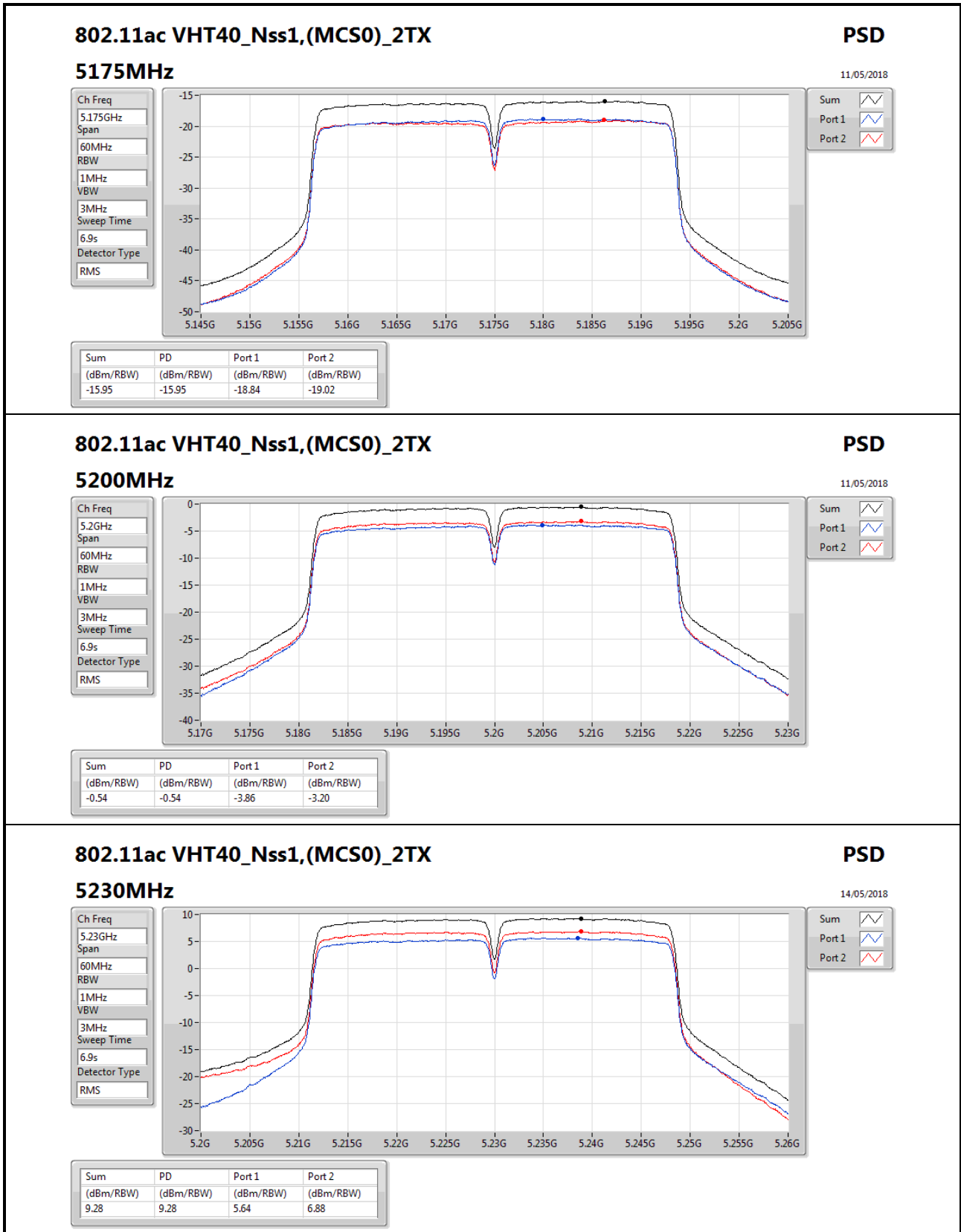
Port 1

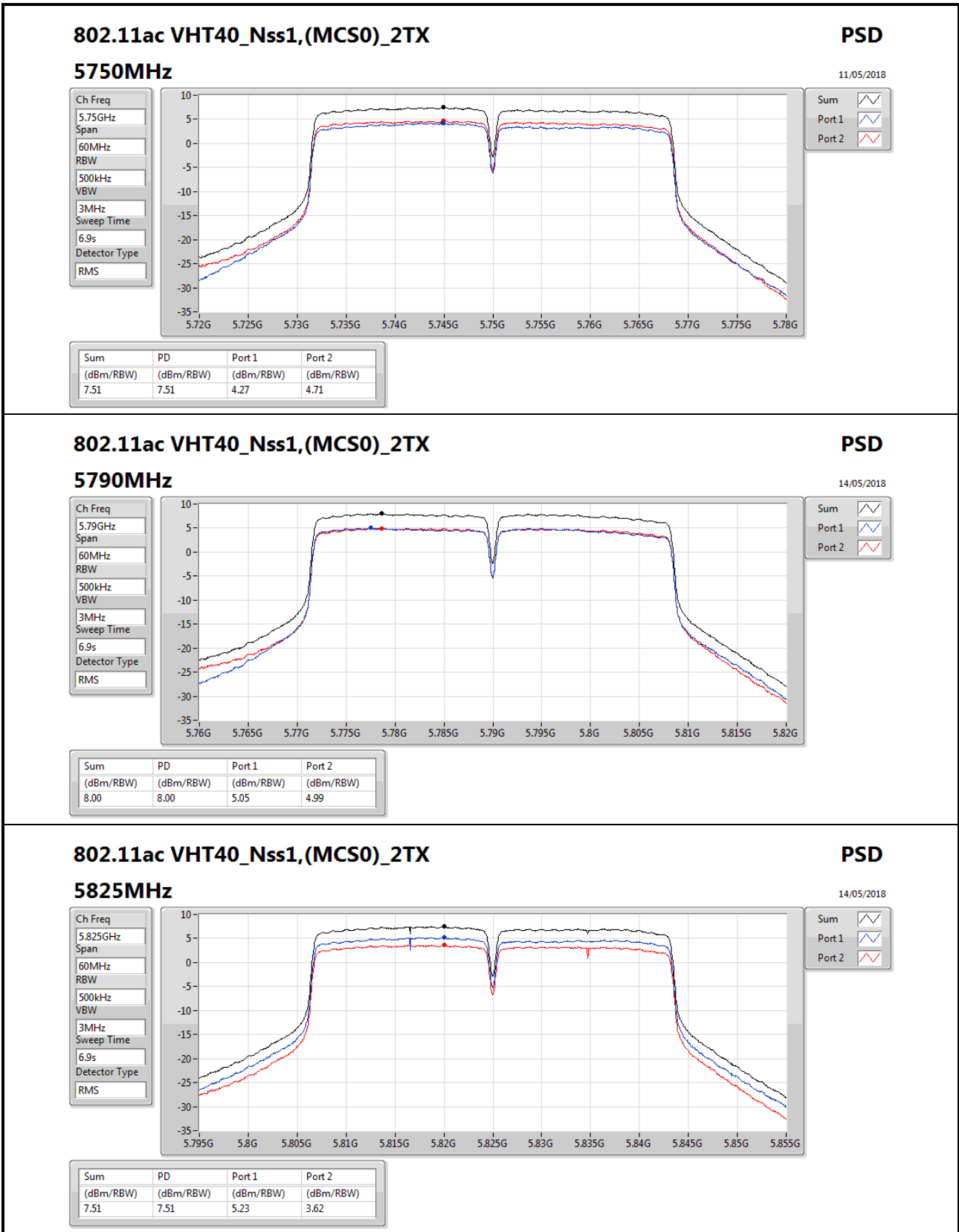
Port 2

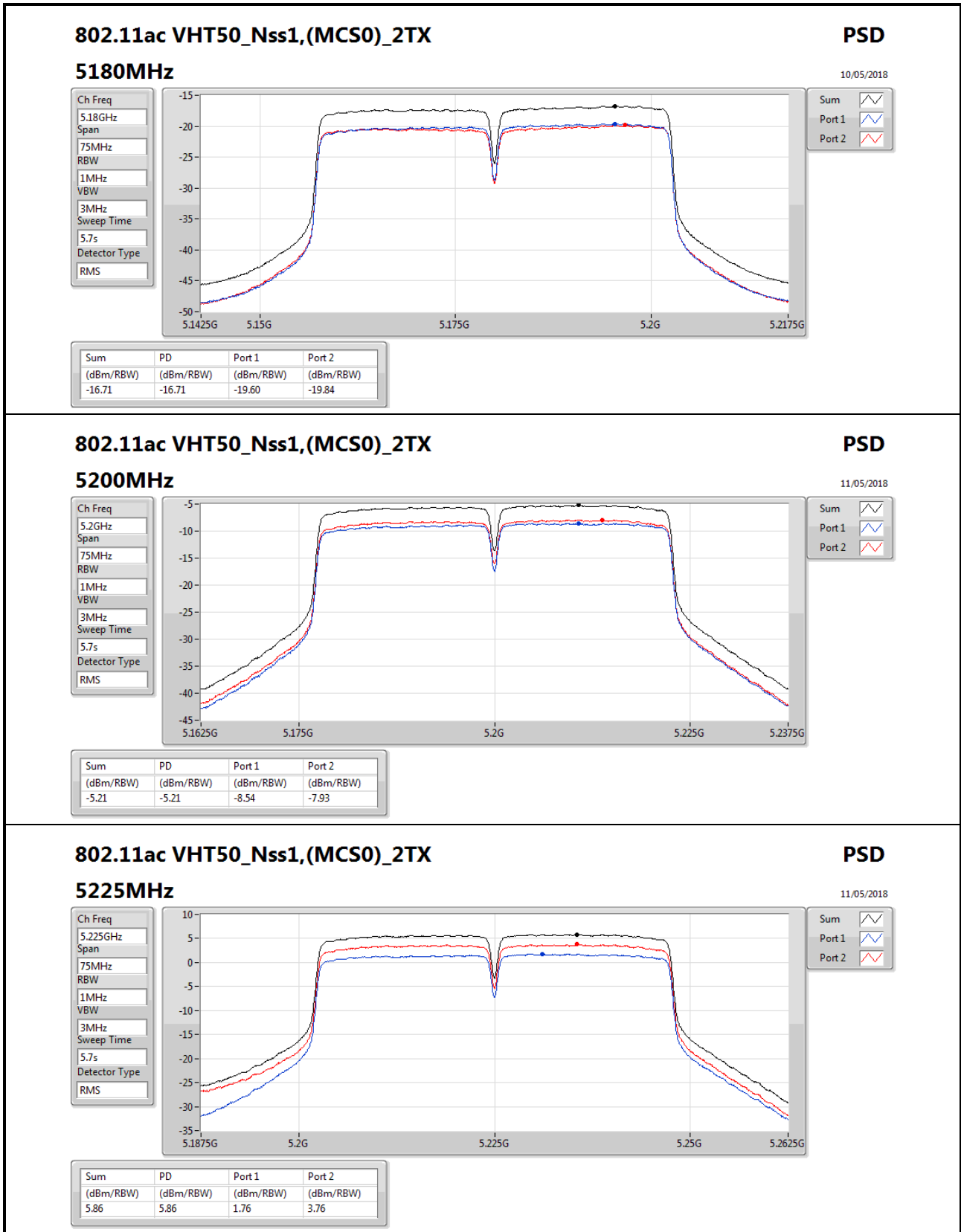
Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
10.84	10.84	8.15	7.50

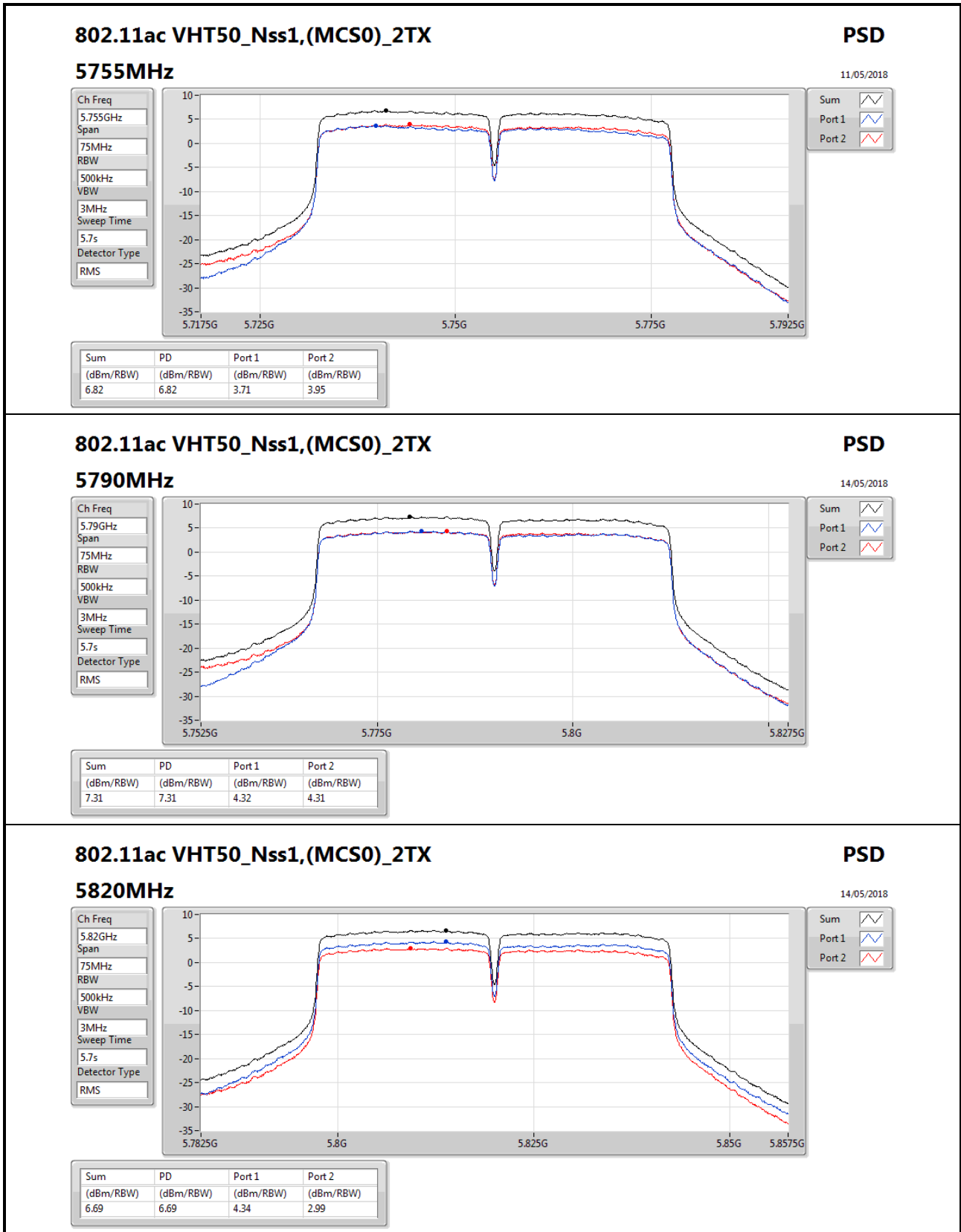


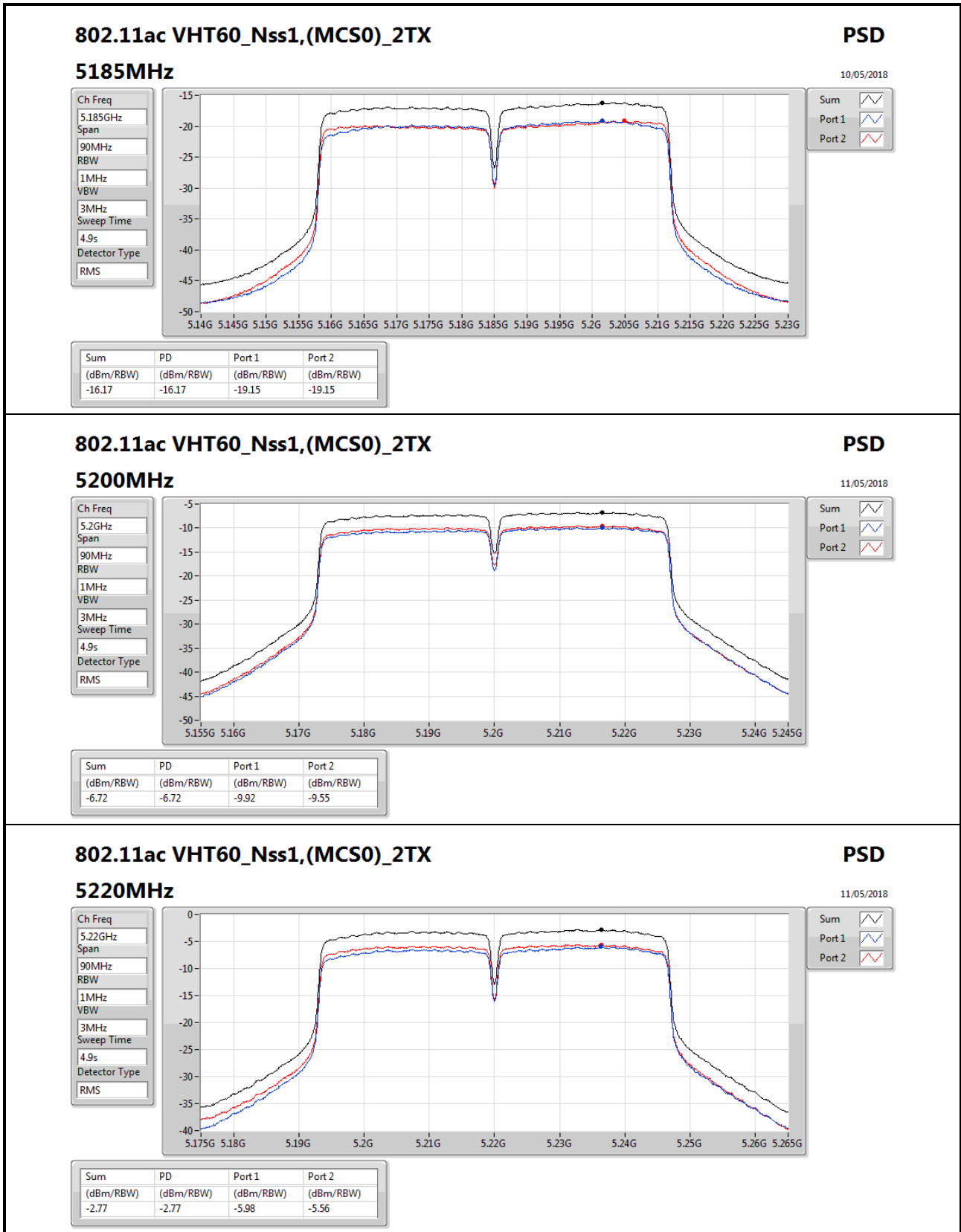


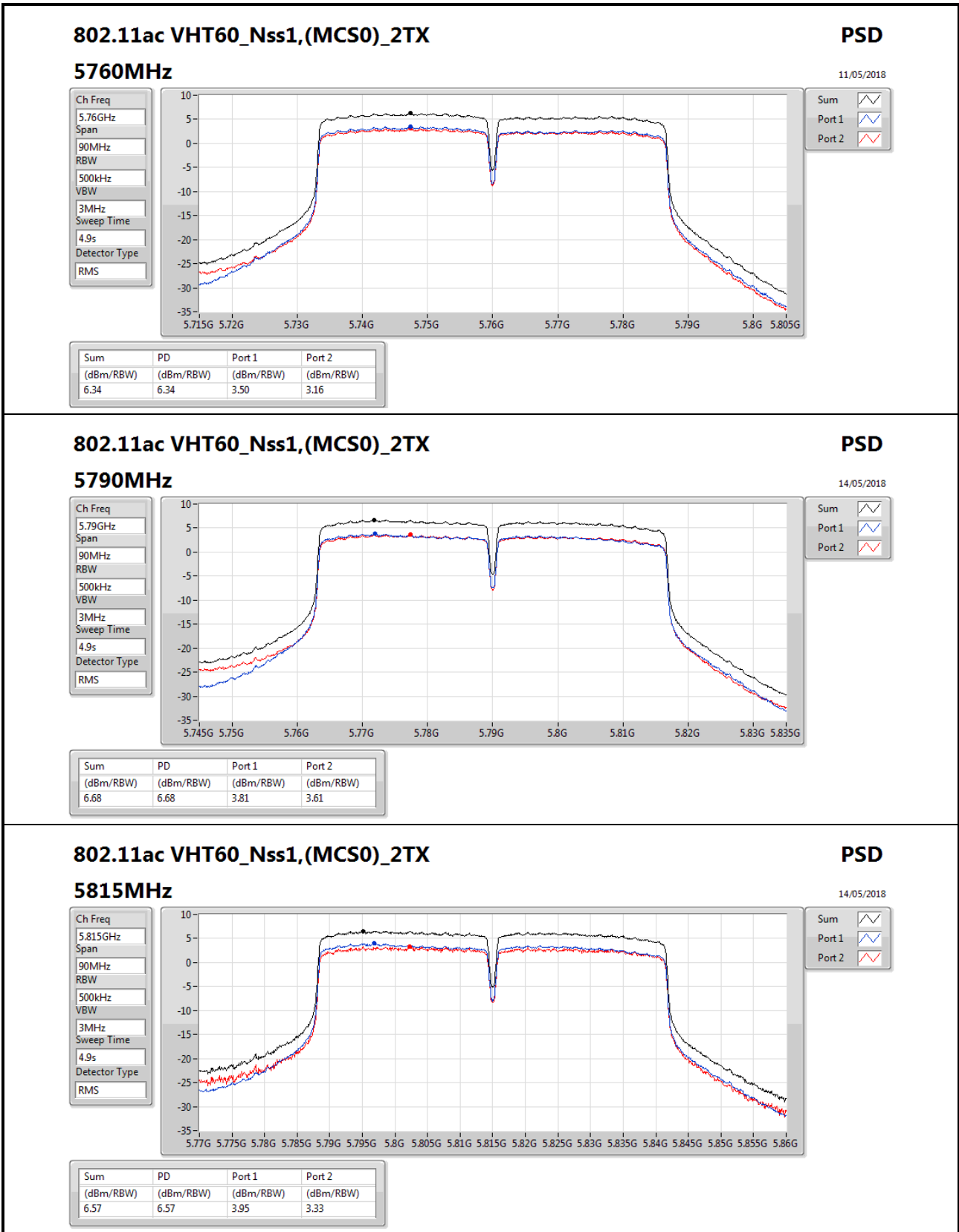


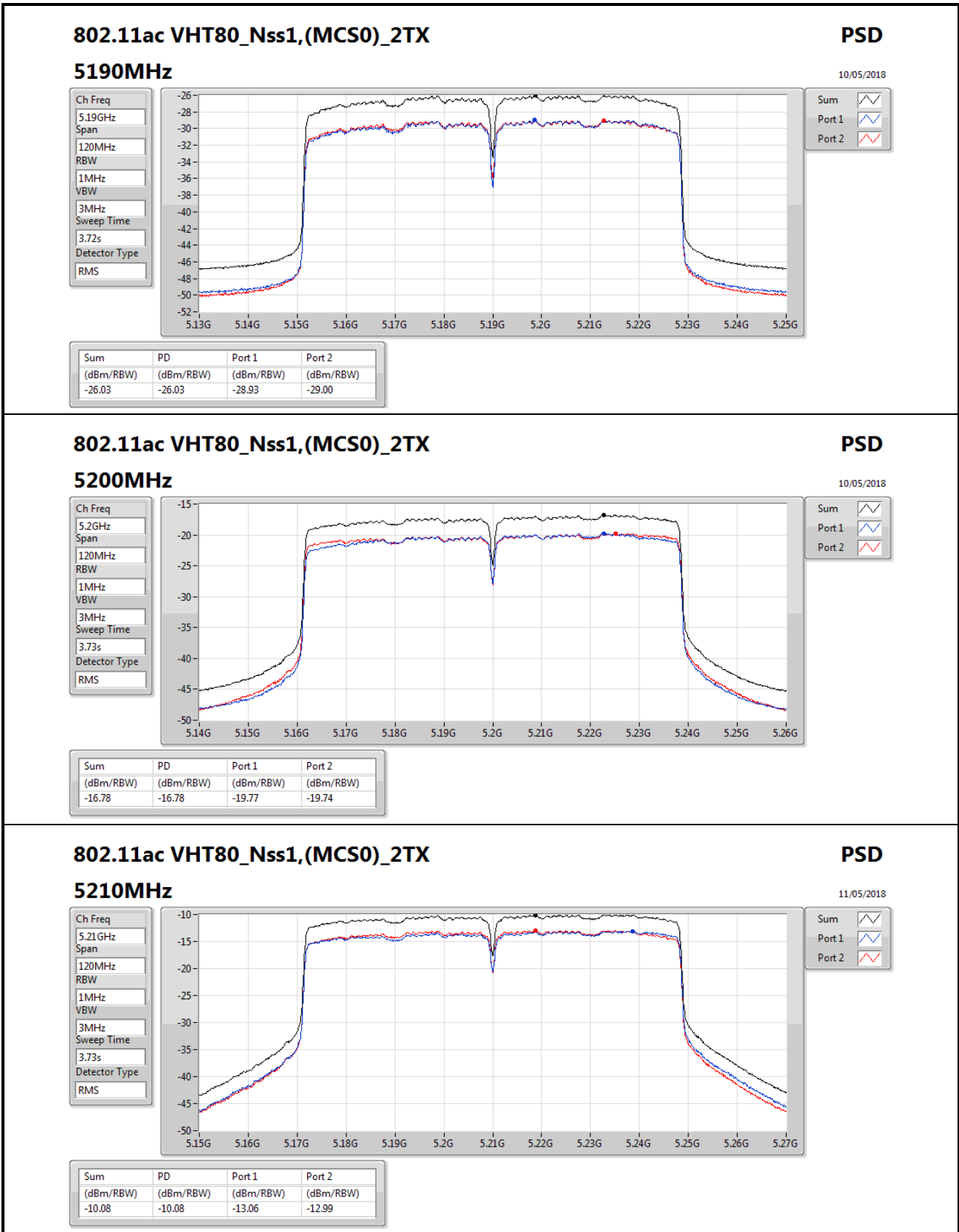


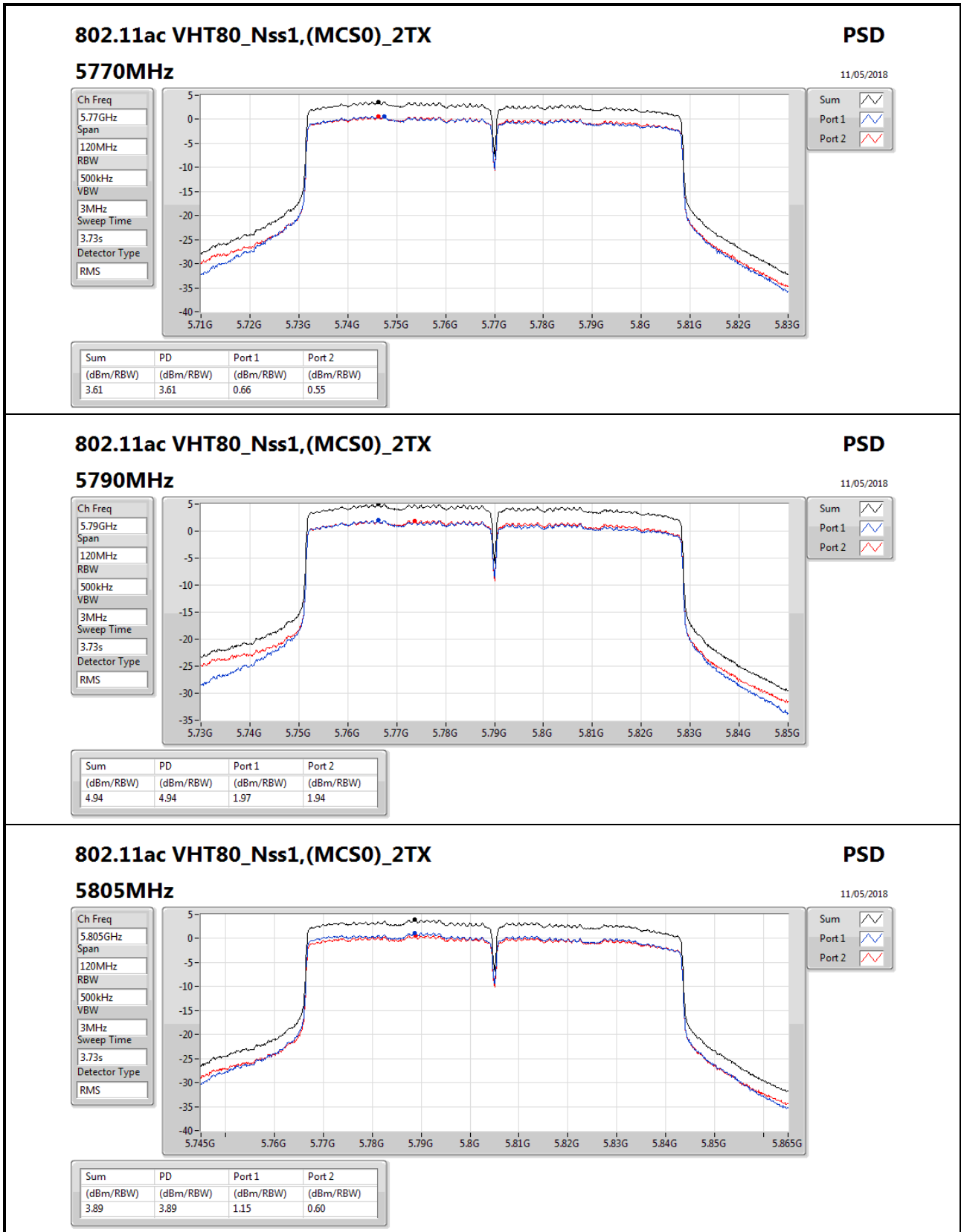














Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
5.15-5.25GHz	-	-
802.11ac VHT10_Nss1,(MCS0)_2TX	-6.07	13.94
802.11ac VHT20_Nss1,(MCS0)_2TX	-8.75	11.26
802.11ac VHT30_Nss1,(MCS0)_2TX	-10.27	9.74
802.11ac VHT40_Nss1,(MCS0)_2TX	-11.19	8.82
5.725-5.85GHz	-	-
802.11ac VHT10_Nss1,(MCS0)_2TX	6.93	26.94
802.11ac VHT20_Nss1,(MCS0)_2TX	4.24	24.25
802.11ac VHT30_Nss1,(MCS0)_2TX	3.10	23.11
802.11ac VHT40_Nss1,(MCS0)_2TX	1.99	22.00

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

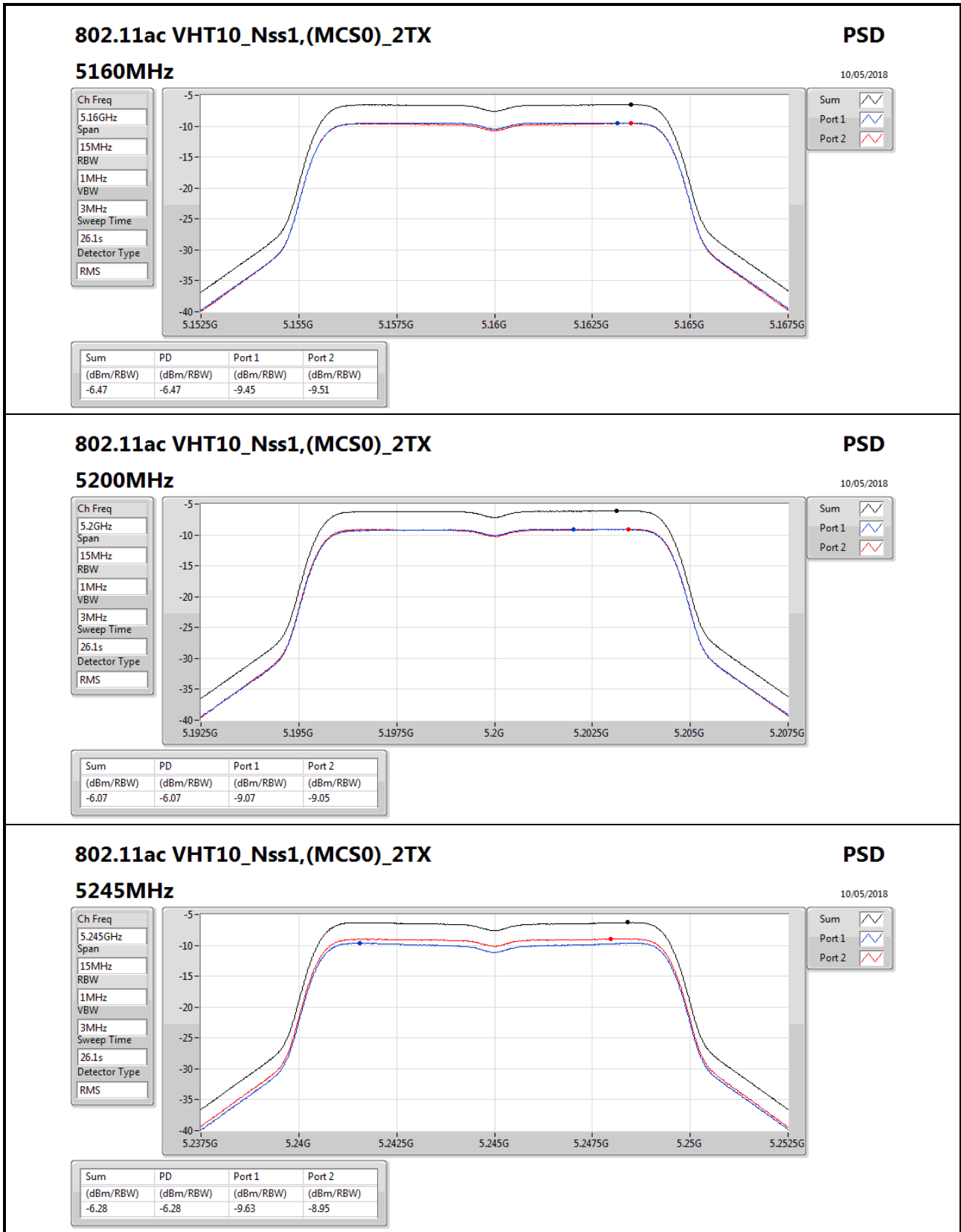


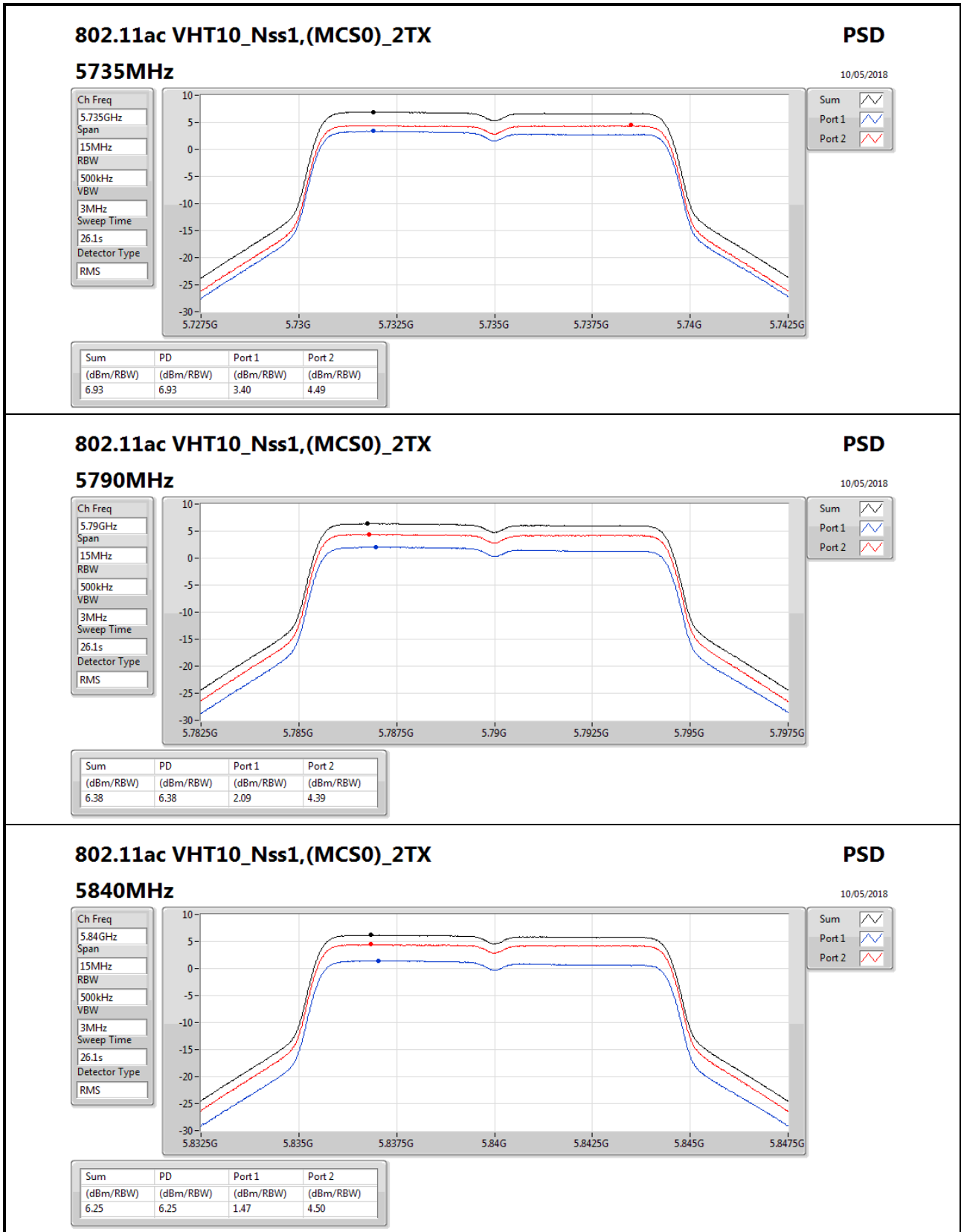
Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)	EIRP PD (dBm/RBW)	EIRP PD Limit (dBm/RBW)
802.11ac VHT10_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5160MHz_TnomVnom	Pass	20.01	-9.45	-9.51	-6.47	2.99	13.54	23.00
5200MHz_TnomVnom	Pass	20.01	-9.07	-9.05	-6.07	2.99	13.94	23.00
5245MHz_TnomVnom	Pass	20.01	-9.63	-8.95	-6.28	2.99	13.73	23.00
5735MHz_TnomVnom	Pass	20.01	3.40	4.49	6.93	15.99	26.94	36.00
5790MHz_TnomVnom	Pass	20.01	2.09	4.39	6.38	15.99	26.39	36.00
5840MHz_TnomVnom	Pass	20.01	1.47	4.50	6.25	15.99	26.26	36.00
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5165MHz_TnomVnom	Pass	20.01	-12.17	-12.19	-9.18	2.99	10.83	23.00
5200MHz_TnomVnom	Pass	20.01	-11.80	-11.71	-8.75	2.99	11.26	23.00
5240MHz_TnomVnom	Pass	20.01	-12.61	-11.80	-9.18	2.99	10.83	23.00
5740MHz_TnomVnom	Pass	20.01	0.38	1.91	4.19	15.99	24.20	36.00
5790MHz_TnomVnom	Pass	20.01	-1.10	1.58	3.35	15.99	23.36	36.00
5835MHz_TnomVnom	Pass	20.01	0.41	1.95	4.24	15.99	24.25	36.00
802.11ac VHT30_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5170MHz_TnomVnom	Pass	20.01	-15.44	-15.46	-12.45	2.99	7.56	23.00
5200MHz_TnomVnom	Pass	20.01	-13.41	-13.13	-10.27	2.99	9.74	23.00
5235MHz_TnomVnom	Pass	20.01	-13.89	-13.14	-10.49	2.99	9.52	23.00
5745MHz_TnomVnom	Pass	20.01	-0.97	0.98	3.10	15.99	23.11	36.00
5790MHz_TnomVnom	Pass	20.01	-2.58	0.07	1.89	15.99	21.90	36.00
5830MHz_TnomVnom	Pass	20.01	-1.69	0.53	2.40	15.99	22.41	36.00
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5175MHz_TnomVnom	Pass	20.01	-18.12	-18.29	-15.23	2.99	4.78	23.00
5200MHz_TnomVnom	Pass	20.01	-15.18	-14.98	-12.09	2.99	7.92	23.00
5230MHz_TnomVnom	Pass	20.01	-14.43	-13.96	-11.19	2.99	8.82	23.00
5750MHz_TnomVnom	Pass	20.01	-2.69	-0.74	1.39	15.99	21.40	36.00
5790MHz_TnomVnom	Pass	20.01	-1.43	-0.56	1.99	15.99	22.00	36.00
5825MHz_TnomVnom	Pass	20.01	-1.30	-1.62	1.53	15.99	21.54	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 VHT10_Nss1,(MCS0)_2TX

5840MHz

PSD

10/05/2018

Ch Freq
5.84GHz

Span
15MHz

RBW
500kHz

VBW
3MHz

Sweep Time
26.1s

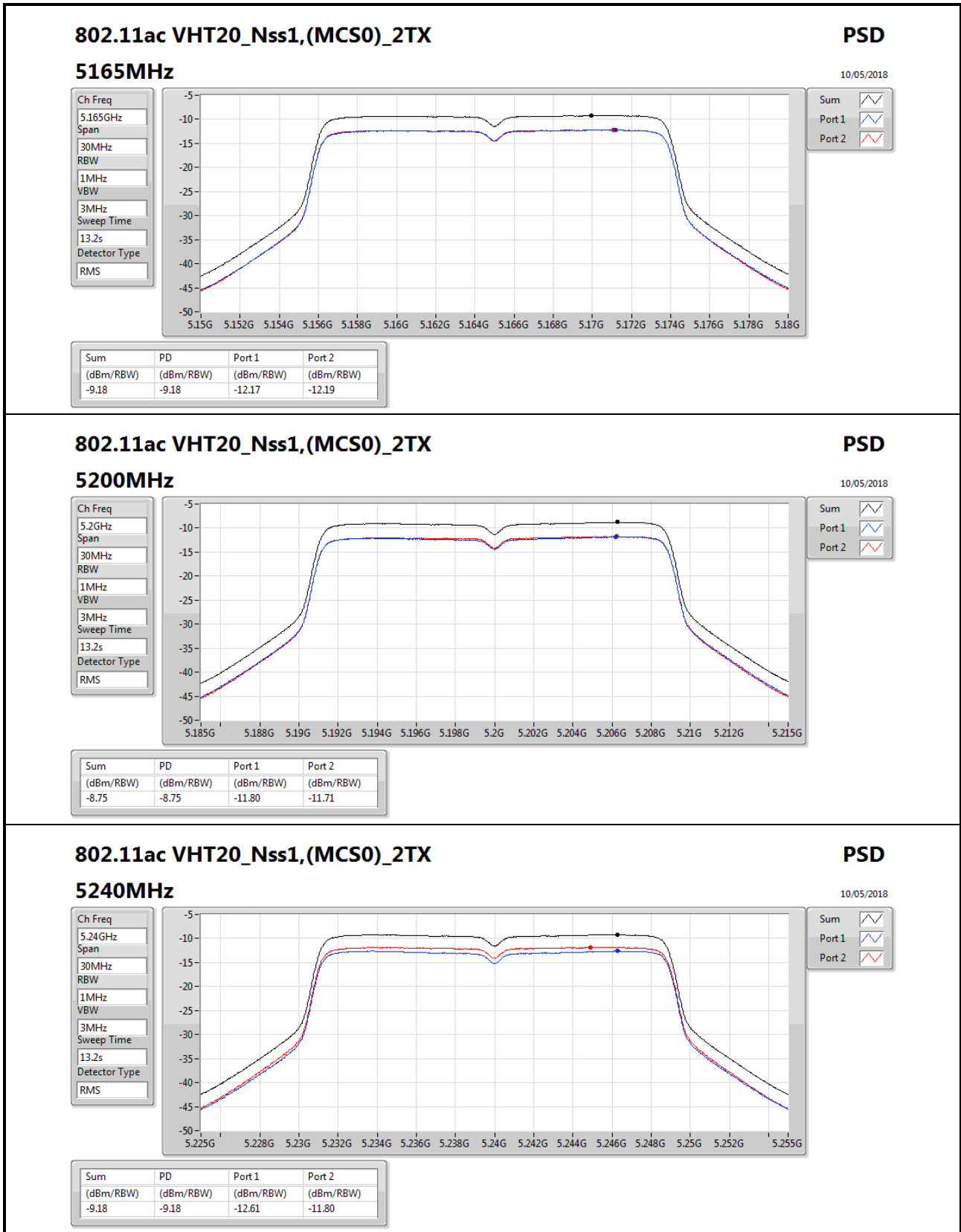
Detector Type
RMS

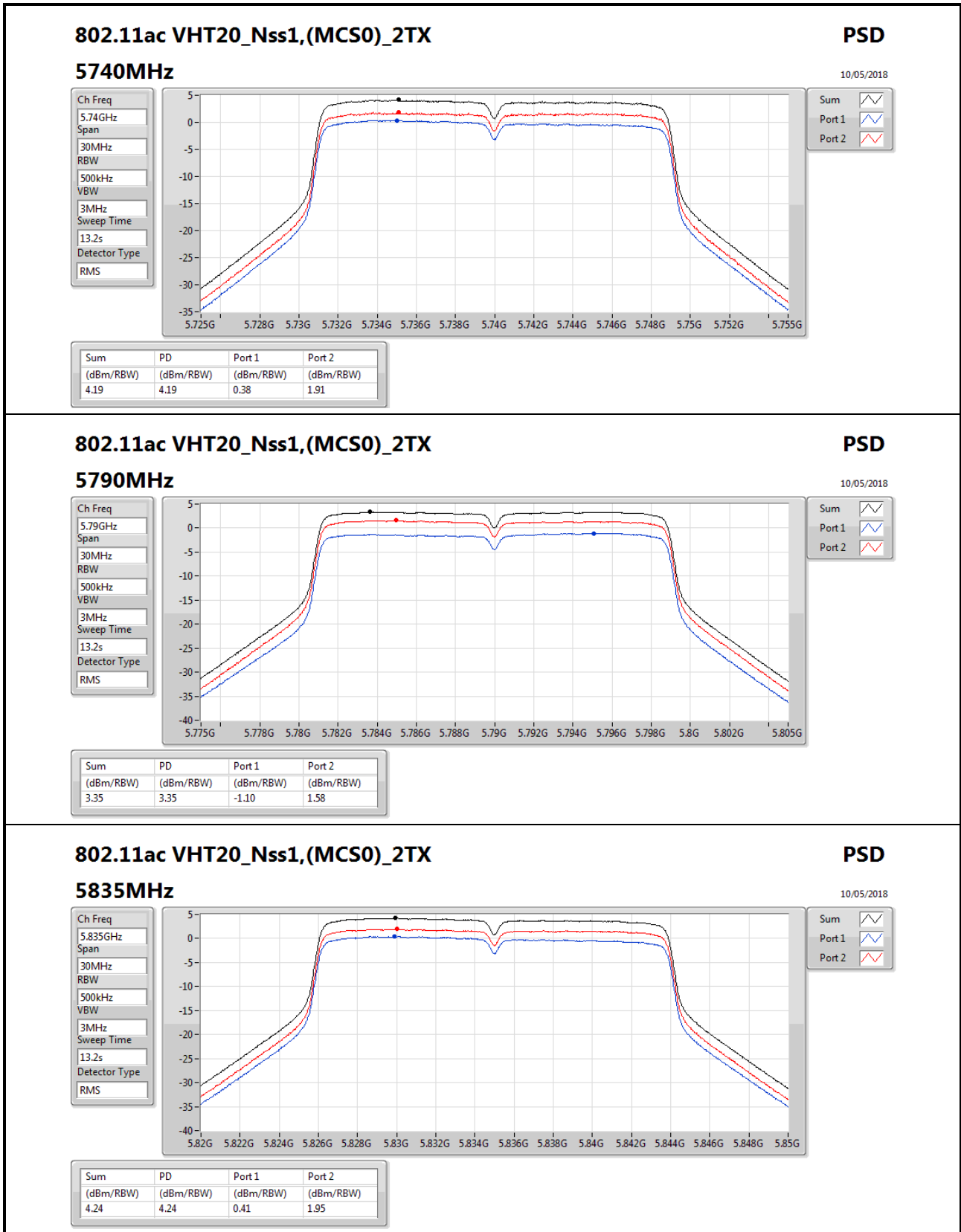
Sum

Port 1

Port 2

Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.25	6.25	1.47	4.50





802.11ac VHT20_Nss1,(MCS0)_2TX

5835MHz

PSD
10/05/2018

Ch Freq
5.835GHz

Span
30MHz

RBW
500kHz

VBW
3MHz

Sweep Time
13.2s

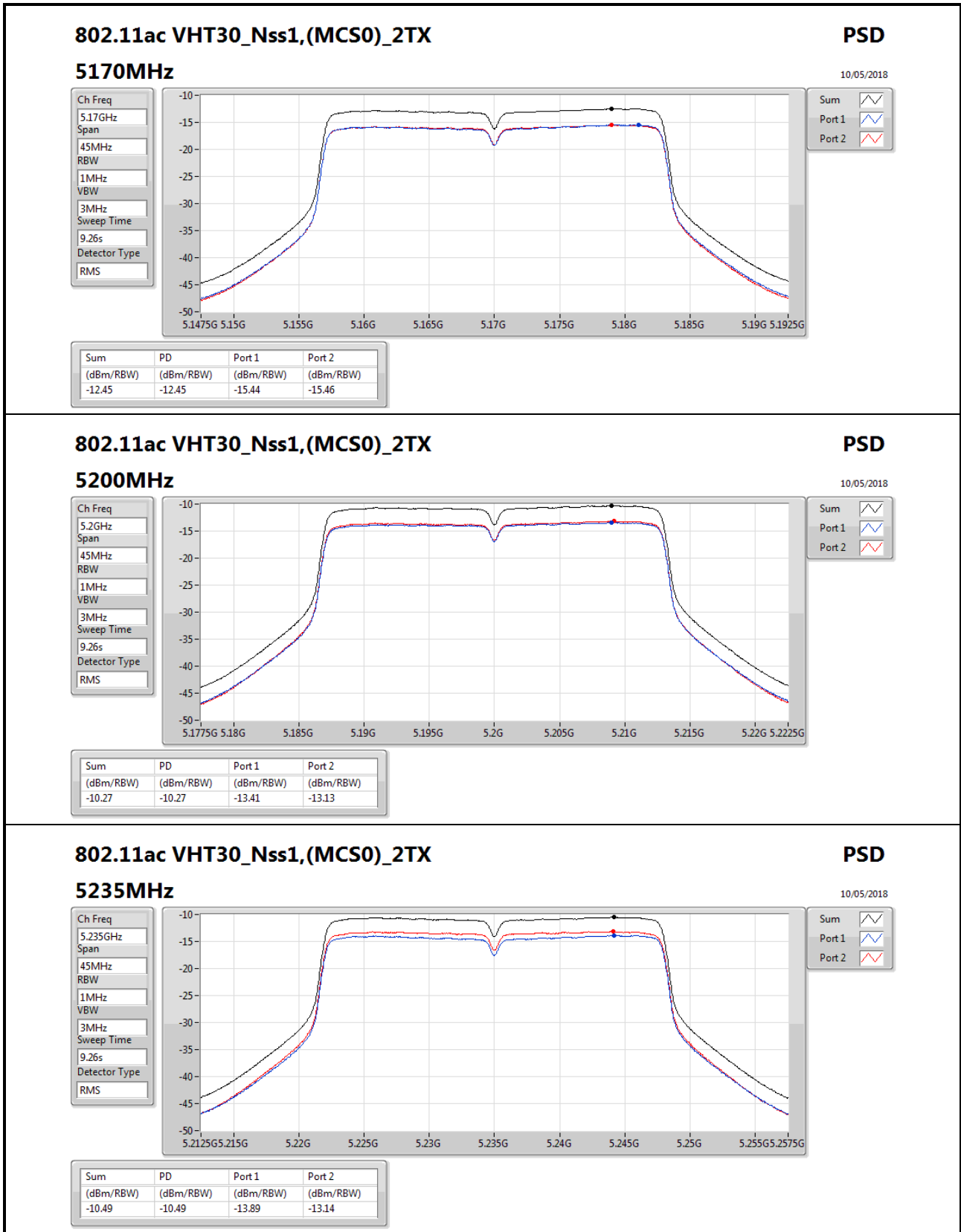
Detector Type
RMS

Sum

Port 1

Port 2

Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.24	4.24	0.41	1.95



802.11ac VHT30_Nss1,(MCS0)_2TX

5235MHz

PSD

10/05/2018

Ch Freq
5.235GHz

Span
45MHz

RBW
1MHz

VBW
3MHz

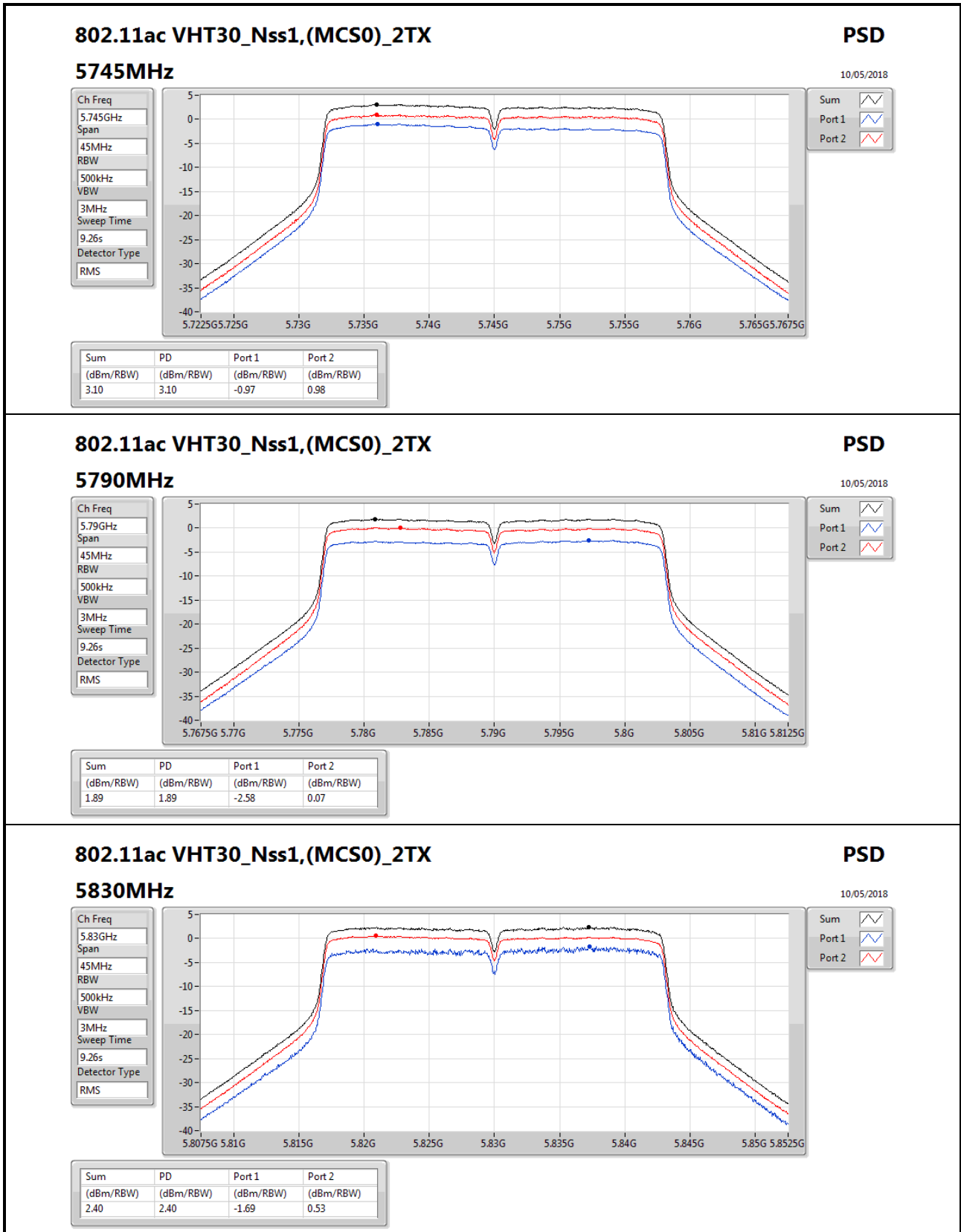
Sweep Time
9.26s

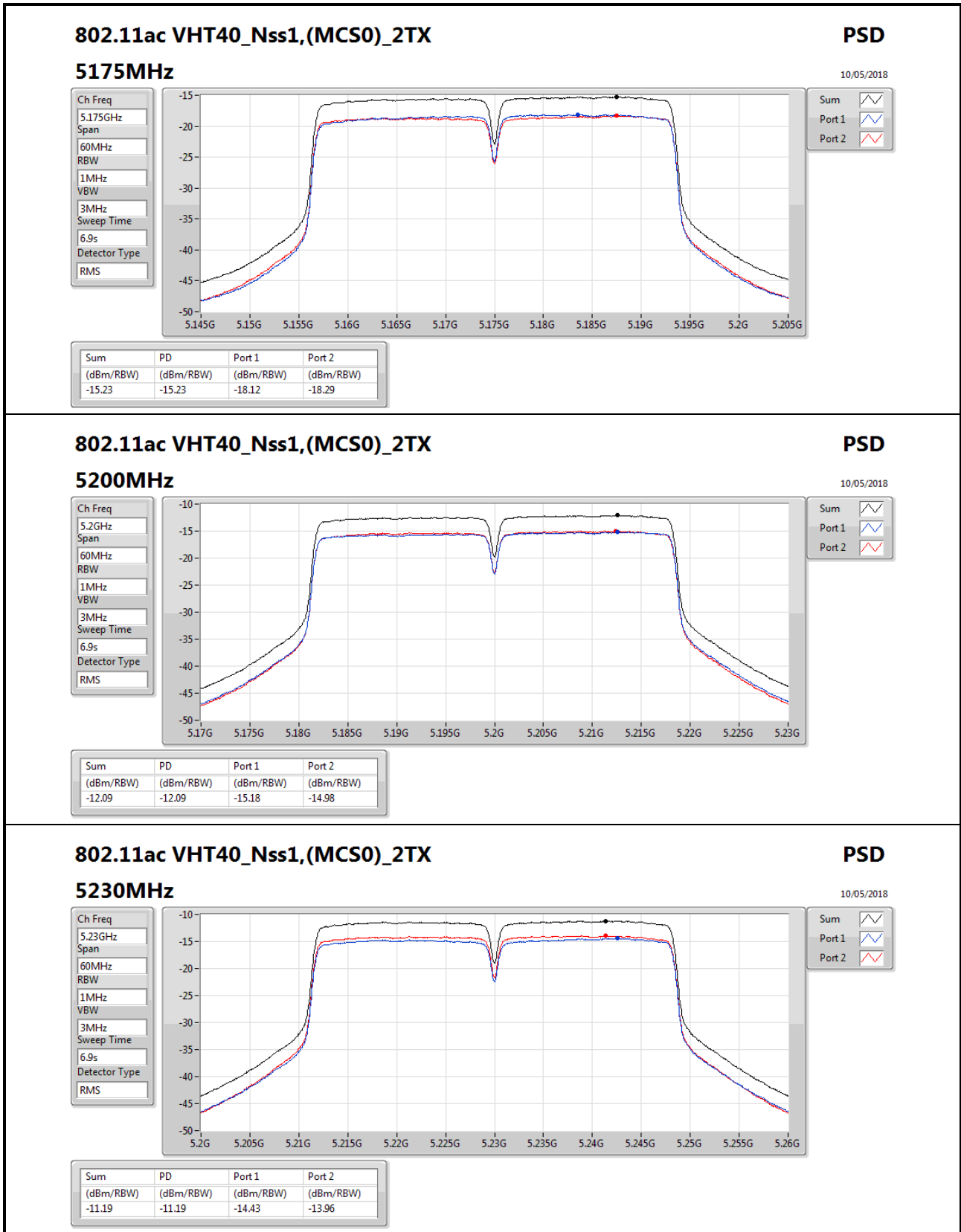
Detector Type
RMS

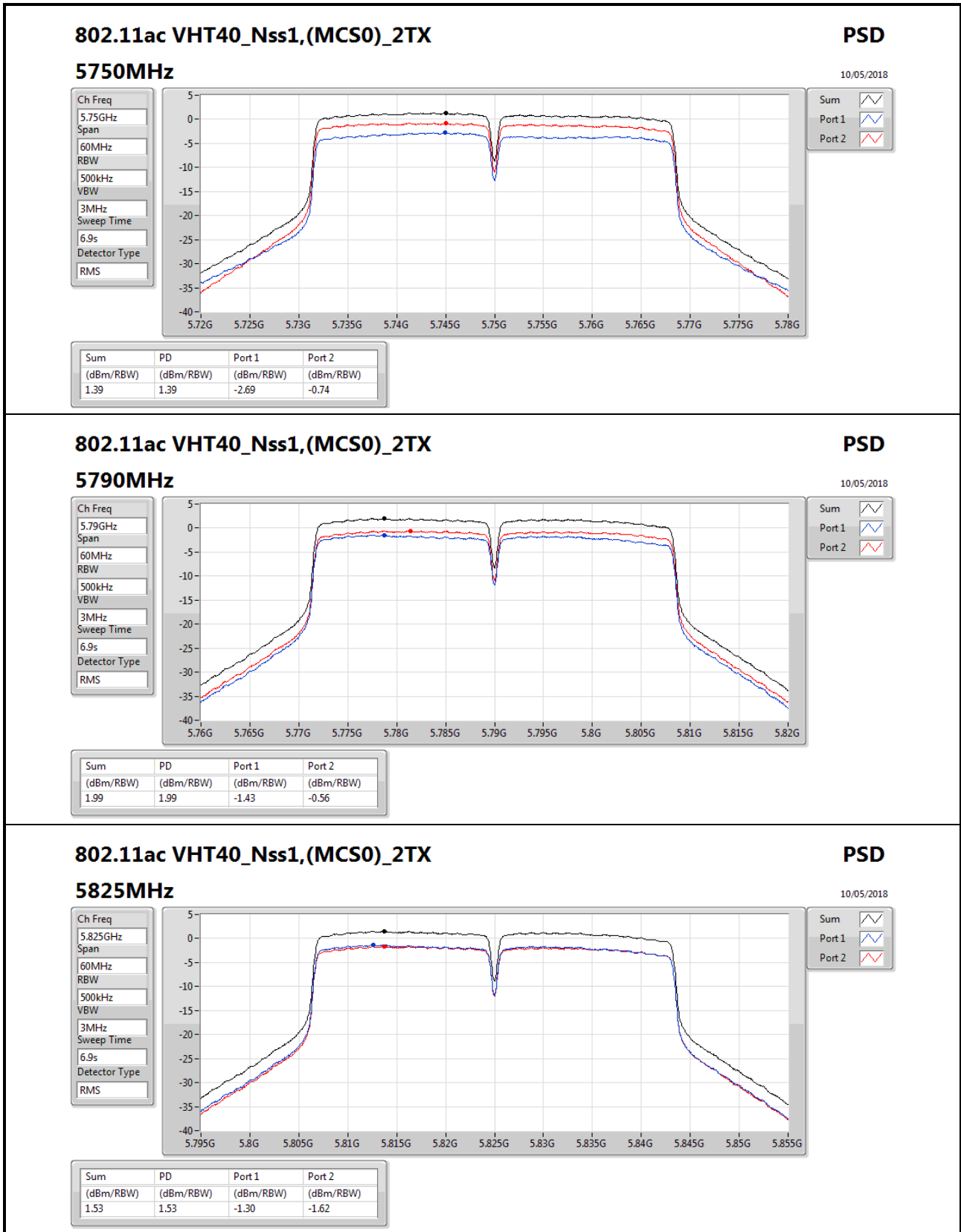
Sum

Port 1

Port 2







802.11ac VHT40_Nss1,(MCS0)_2TX

5825MHz

PSD
10/05/2018

Ch Freq
5.825GHz

Span
60MHz

RBW
500kHz

VBW
3MHz

Sweep Time
6.9s

Detector Type
RMS

Sum

Port 1

Port 2

Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.53	1.53	-1.30	-1.62



Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
5.15-5.25GHz	-	-
802.11ac VHT10_Nss1,(MCS0)_2TX	2.60	22.61
802.11ac VHT20_Nss1,(MCS0)_2TX	2.09	22.10
802.11ac VHT30_Nss1,(MCS0)_2TX	2.80	22.81
802.11ac VHT40_Nss1,(MCS0)_2TX	2.08	22.09
802.11ac VHT50_Nss1,(MCS0)_2TX	1.35	21.36
802.11ac VHT60_Nss1,(MCS0)_2TX	-3.13	16.88
802.11ac VHT80_Nss1,(MCS0)_2TX	-10.22	9.79
5.725-5.85GHz	-	-
802.11ac VHT10_Nss1,(MCS0)_2TX	6.93	26.94
802.11ac VHT20_Nss1,(MCS0)_2TX	4.24	24.25
802.11ac VHT30_Nss1,(MCS0)_2TX	3.10	23.11
802.11ac VHT40_Nss1,(MCS0)_2TX	1.99	22.00
802.11ac VHT50_Nss1,(MCS0)_2TX	1.25	21.26
802.11ac VHT60_Nss1,(MCS0)_2TX	0.75	20.76
802.11ac VHT80_Nss1,(MCS0)_2TX	0.03	20.04

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



Result

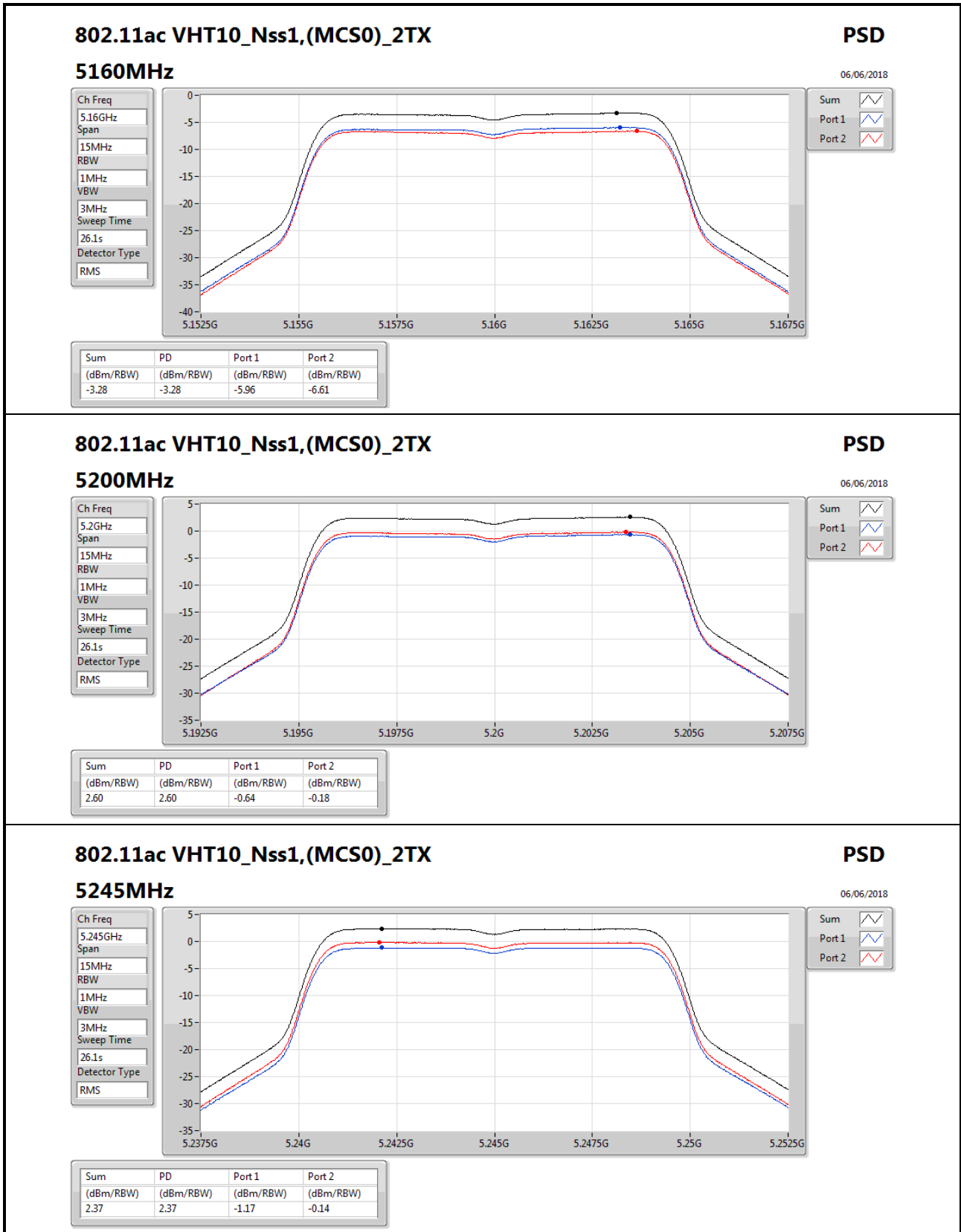
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)	EIRP PD (dBm/RBW)	EIRP PD Limit (dBm/RBW)
802.11ac VHT10_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5160MHz	Pass	20.01	-5.96	-6.61	-3.28	2.99	16.73	23.00
5200MHz	Pass	20.01	-0.64	-0.18	2.60	2.99	22.61	23.00
5245MHz	Pass	20.01	-1.17	-0.14	2.37	2.99	22.38	23.00
5735MHz	Pass	20.01	3.40	4.49	6.93	15.99	26.94	36.00
5790MHz	Pass	20.01	2.09	4.39	6.38	15.99	26.39	36.00
5840MHz	Pass	20.01	1.47	4.50	6.25	15.99	26.26	36.00
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5165MHz	Pass	20.01	-11.66	-11.87	-8.75	2.99	11.26	23.00
5200MHz	Pass	20.01	-1.20	-1.91	1.45	2.99	21.46	23.00
5240MHz	Pass	20.01	-0.79	-0.98	2.09	2.99	22.10	23.00
5740MHz	Pass	20.01	0.38	1.91	4.19	15.99	24.20	36.00
5790MHz	Pass	20.01	-1.10	1.58	3.35	15.99	23.36	36.00
5835MHz	Pass	20.01	0.41	1.95	4.24	15.99	24.25	36.00
802.11ac VHT30_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5170MHz	Pass	20.01	-15.44	-15.46	-12.45	2.99	7.56	23.00
5200MHz	Pass	20.01	-0.94	0.44	2.80	2.99	22.81	23.00
5235MHz	Pass	20.01	-1.23	0.55	2.75	2.99	22.76	23.00
5745MHz	Pass	20.01	-0.97	0.98	3.10	15.99	23.11	36.00
5790MHz	Pass	20.01	-2.58	0.07	1.89	15.99	21.90	36.00
5830MHz	Pass	20.01	-1.69	0.53	2.40	15.99	22.41	36.00
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5175MHz	Pass	20.01	-18.12	-18.29	-15.23	2.99	4.78	23.00
5200MHz	Pass	20.01	-4.06	-3.72	-0.91	2.99	19.10	23.00
5230MHz	Pass	20.01	-2.48	0.23	2.08	2.99	22.09	23.00
5750MHz	Pass	20.01	-2.69	-0.74	1.39	15.99	21.40	36.00
5790MHz	Pass	20.01	-1.43	-0.56	1.99	15.99	22.00	36.00
5825MHz	Pass	20.01	-1.30	-1.62	1.53	15.99	21.54	36.00
802.11ac VHT50_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	20.01	-19.60	-19.84	-16.71	2.99	3.30	23.00
5200MHz	Pass	20.01	-8.57	-8.25	-5.40	2.99	14.61	23.00
5225MHz	Pass	20.01	-3.21	-0.47	1.35	2.99	21.36	23.00
5755MHz	Pass	20.01	-3.59	-1.55	0.51	15.99	20.52	36.00
5790MHz	Pass	20.01	-2.21	-1.28	1.25	15.99	21.26	36.00
5820MHz	Pass	20.01	-2.17	-2.37	0.73	15.99	20.74	36.00
802.11ac VHT60_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5185MHz	Pass	20.01	-19.15	-19.15	-16.17	2.99	3.84	23.00
5200MHz	Pass	20.01	-9.96	-9.65	-6.80	2.99	13.21	23.00
5220MHz	Pass	20.01	-6.45	-5.81	-3.13	2.99	16.88	23.00
5760MHz	Pass	20.01	-4.10	-2.11	-0.01	15.99	20.00	36.00
5790MHz	Pass	20.01	-2.61	-1.86	0.75	15.99	20.76	36.00
5815MHz	Pass	20.01	-2.48	-2.68	0.42	15.99	20.43	36.00
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5190MHz	Pass	20.01	-28.93	-29.00	-26.03	2.99	-6.02	23.00

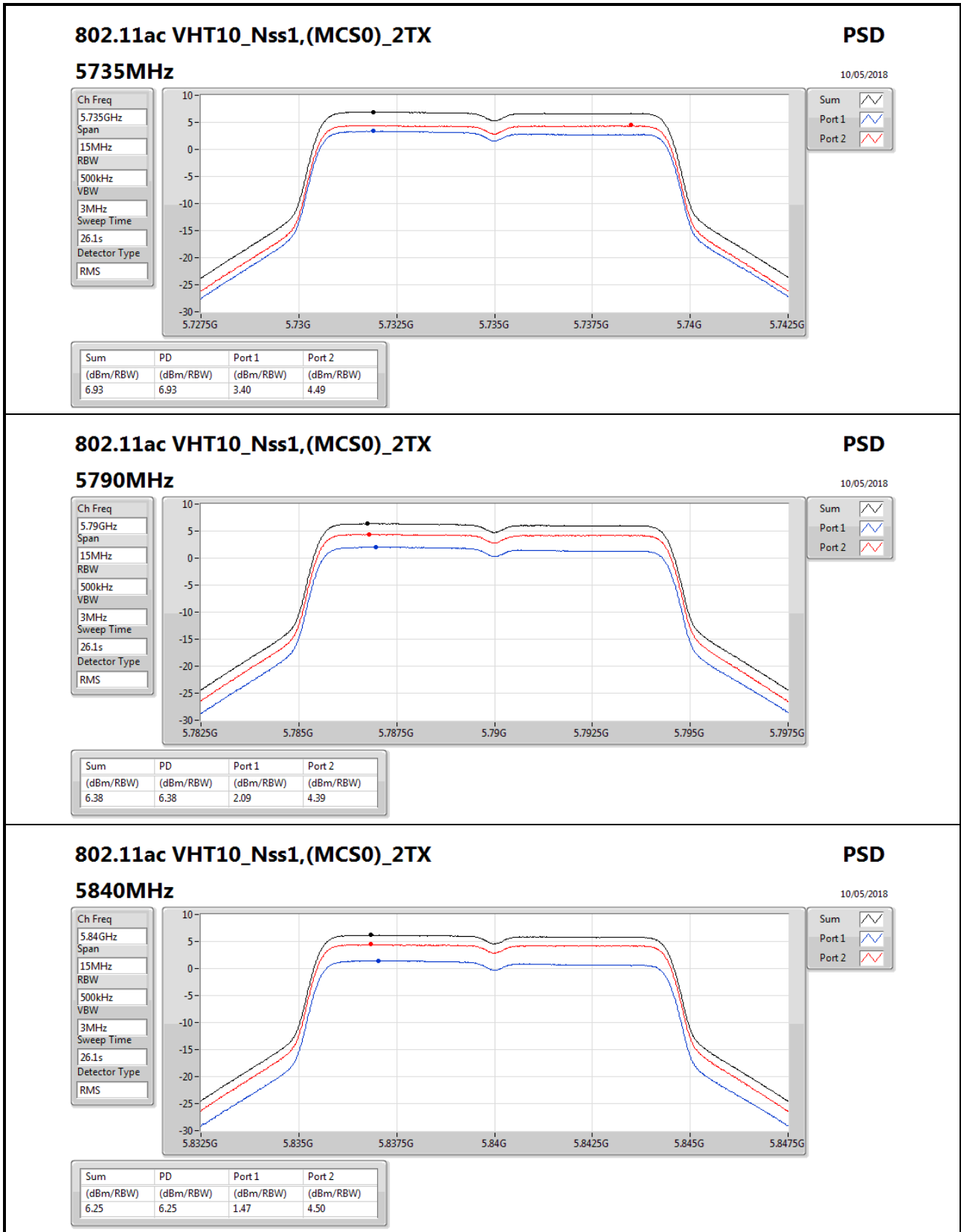


Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)	EIRP PD (dBm/RBW)	EIRP PD Limit (dBm/RBW)
5200MHz	Pass	20.01	-19.77	-19.74	-16.78	2.99	3.23	23.00
5210MHz	Pass	20.01	-13.09	-13.33	-10.22	2.99	9.79	23.00
5770MHz	Pass	20.01	-3.20	-2.74	0.03	15.99	20.04	36.00
5790MHz	Pass	20.01	-4.04	-3.35	-0.69	15.99	19.32	36.00
5805MHz	Pass	20.01	-3.96	-2.80	-0.59	15.99	19.42	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 VHT10_Nss1,(MCS0)_2TX

5840MHz

PSD
10/05/2018

Ch Freq
5.84GHz

Span
15MHz

RBW
500kHz

VBW
3MHz

Sweep Time
26.1s

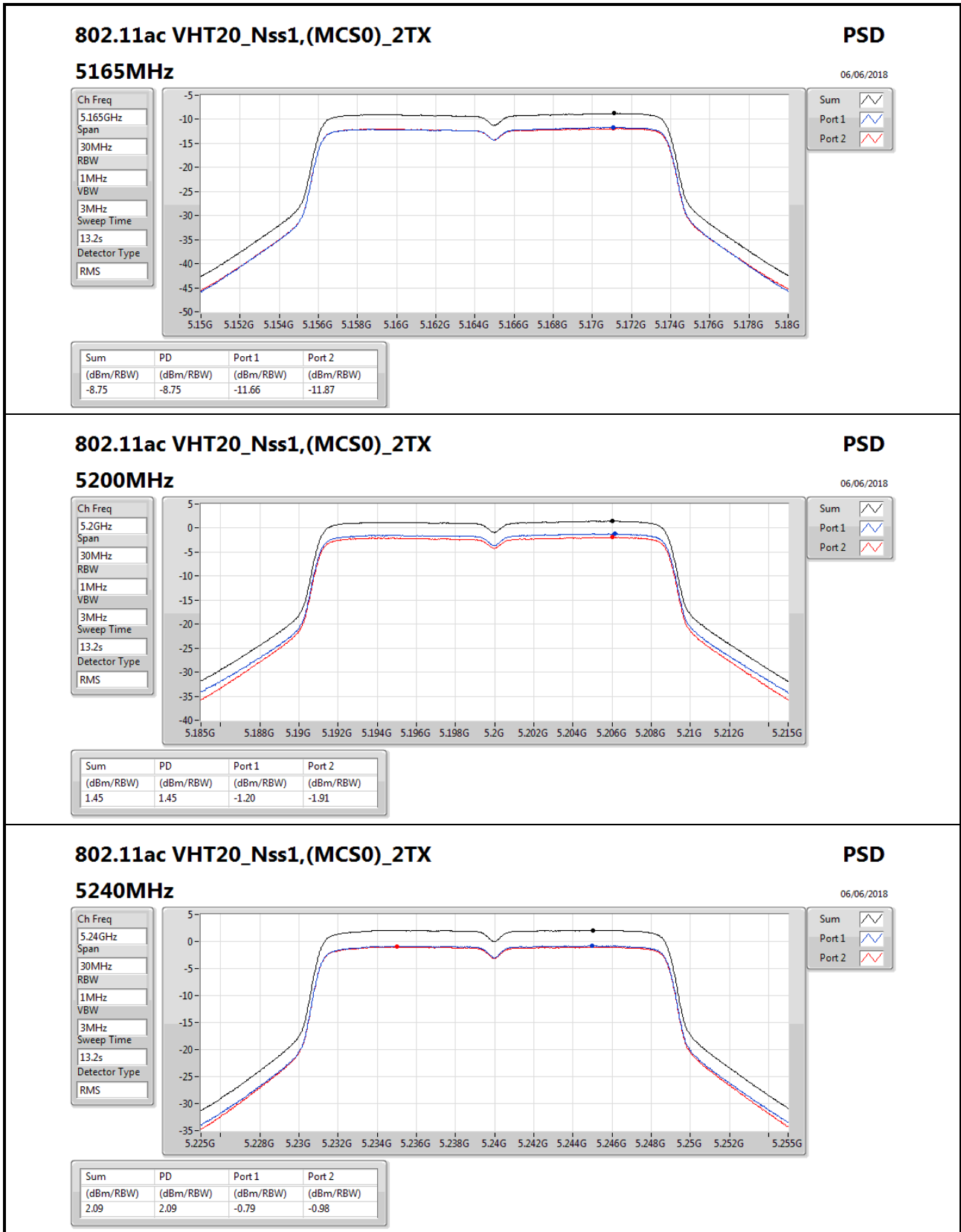
Detector Type
RMS

Sum

Port 1

Port 2

Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.25	6.25	1.47	4.50



802.11ac VHT20_Nss1,(MCS0)_2TX

5240MHz

PSD
06/06/2018

Ch Freq
5.24GHz

Span
30MHz

RBW
1MHz

VBW
3MHz

Sweep Time
13.2s

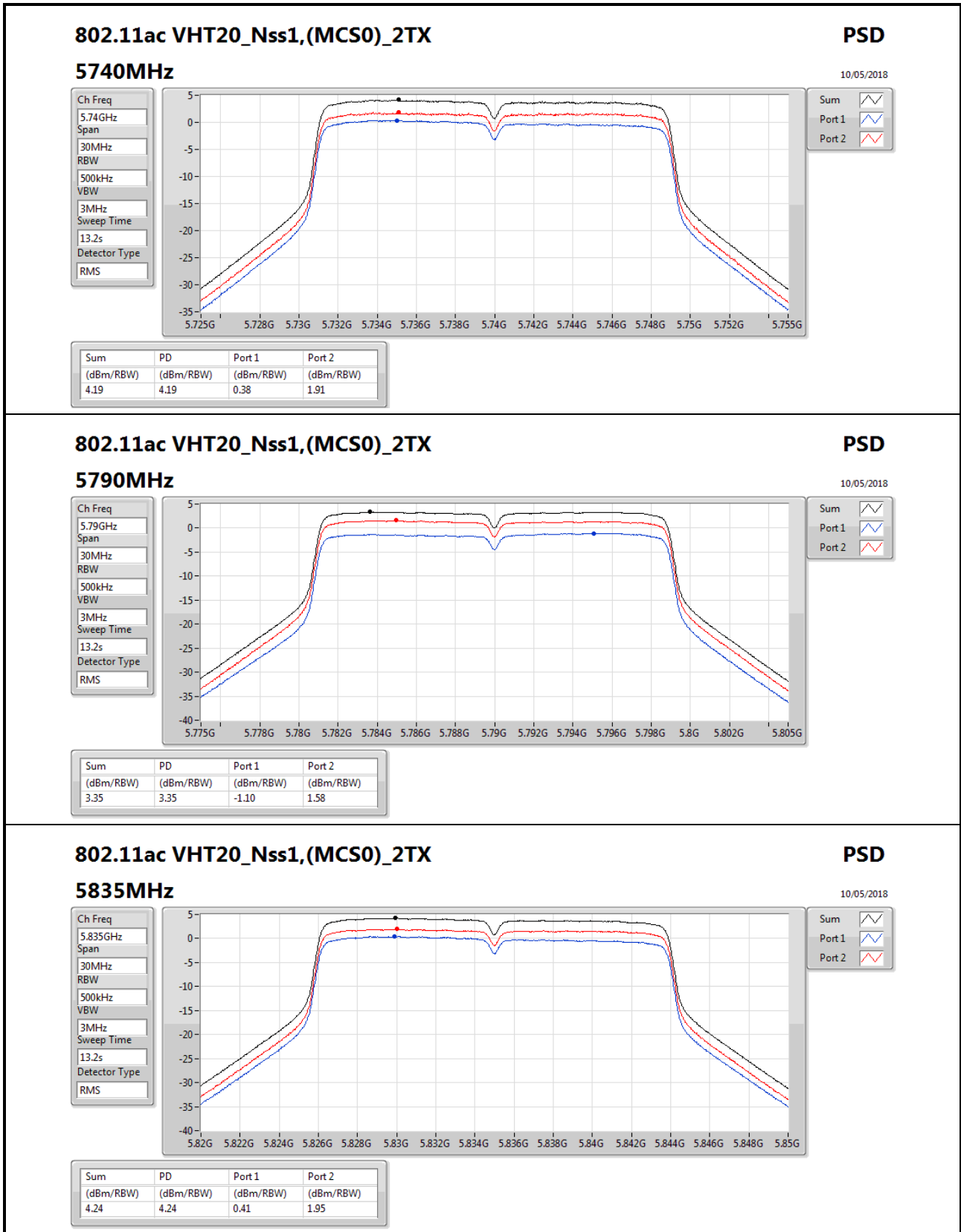
Detector Type
RMS

Sum

Port 1

Port 2

Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.09	2.09	-0.79	-0.98



802.11ac VHT20_Nss1,(MCS0)_2TX

5835MHz

PSD

10/05/2018

Ch Freq
5.835GHz

Span
30MHz

RBW
500kHz

VBW
3MHz

Sweep Time
13.2s

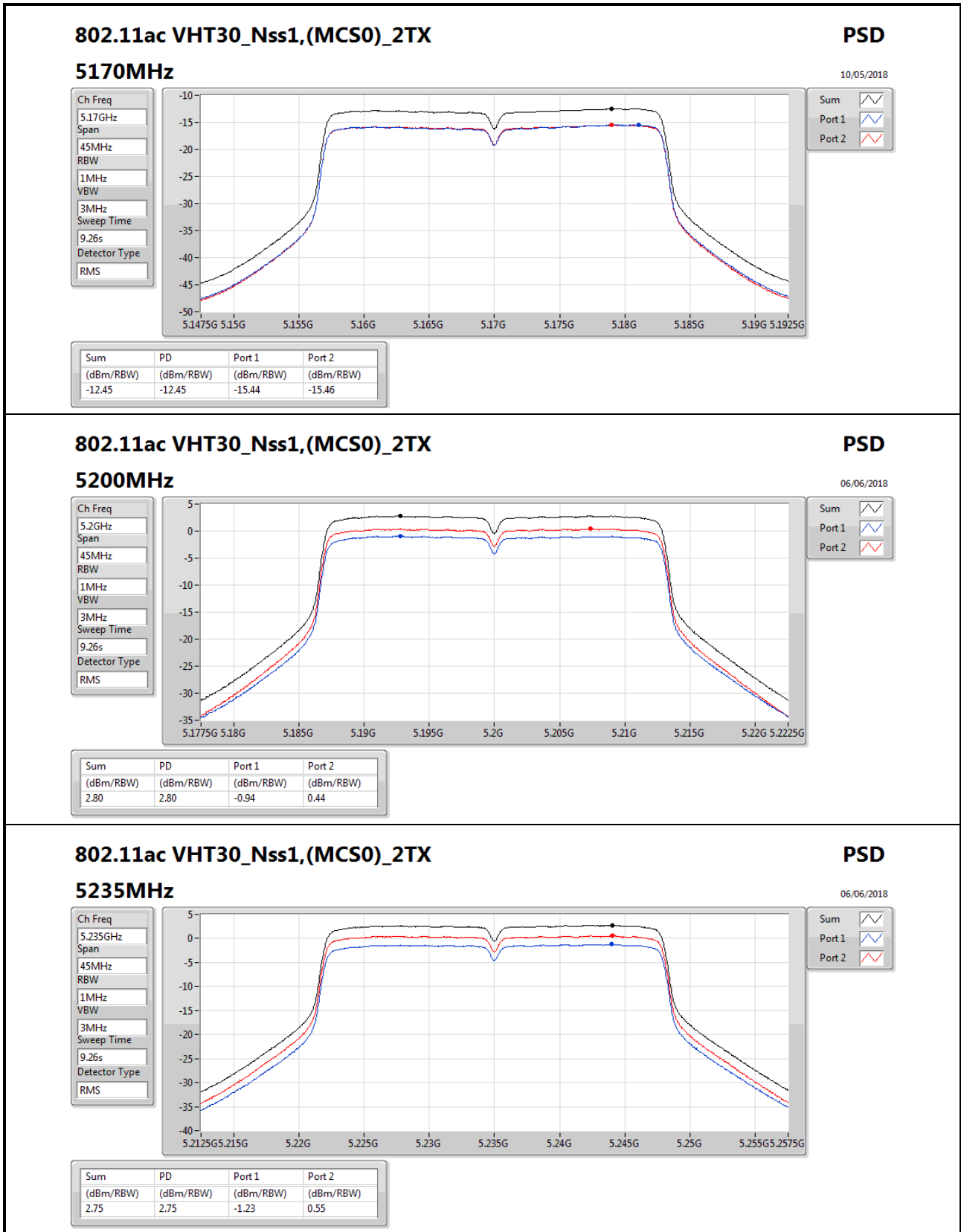
Detector Type
RMS

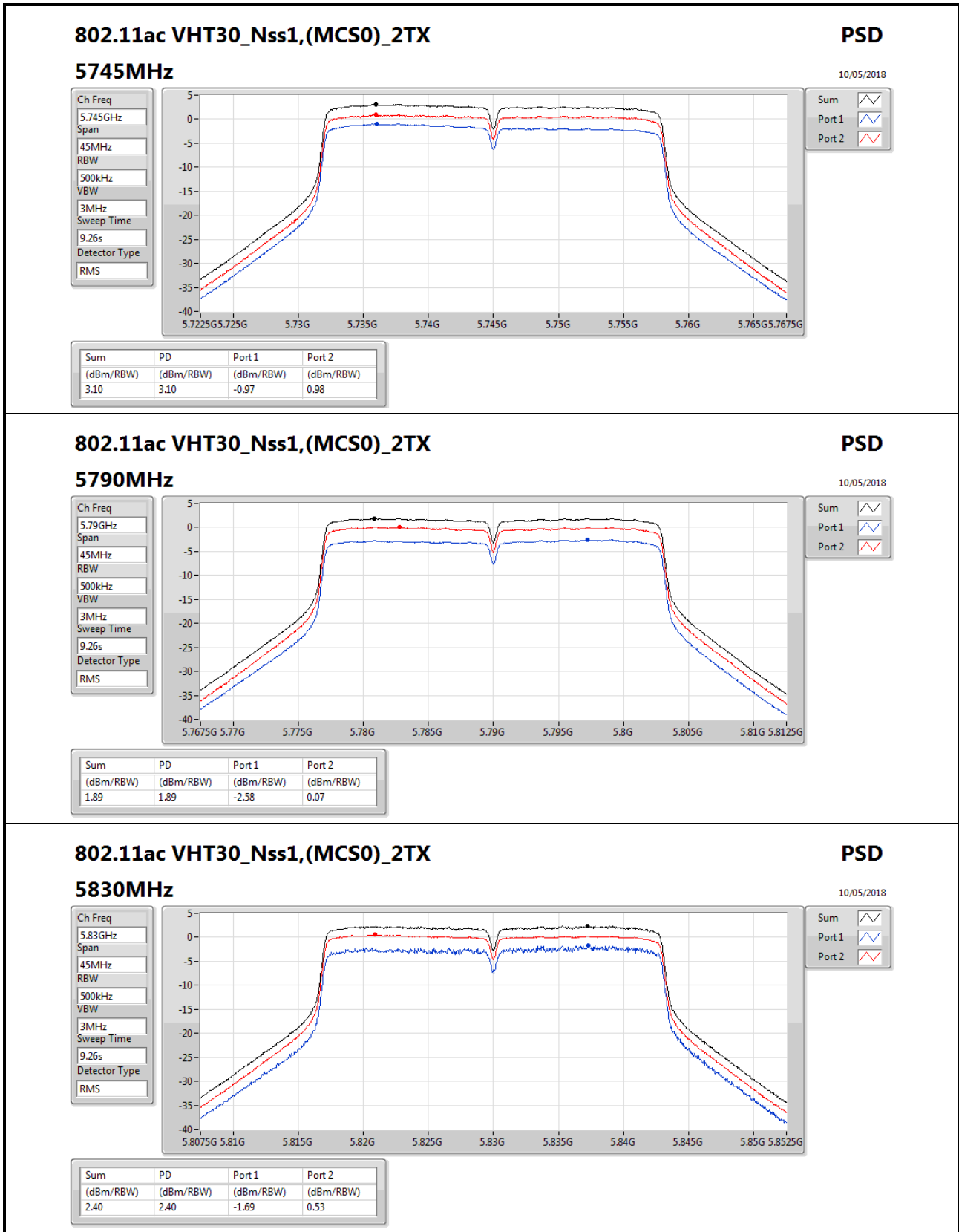
Sum

Port 1

Port 2

Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.24	4.24	0.41	1.95





802.11ac VHT30_Nss1,(MCS0)_2TX

5830MHz

PSD

10/05/2018

Ch Freq
5.83GHz

Span
45MHz

RBW
500kHz

VBW
3MHz

Sweep Time
9.26s

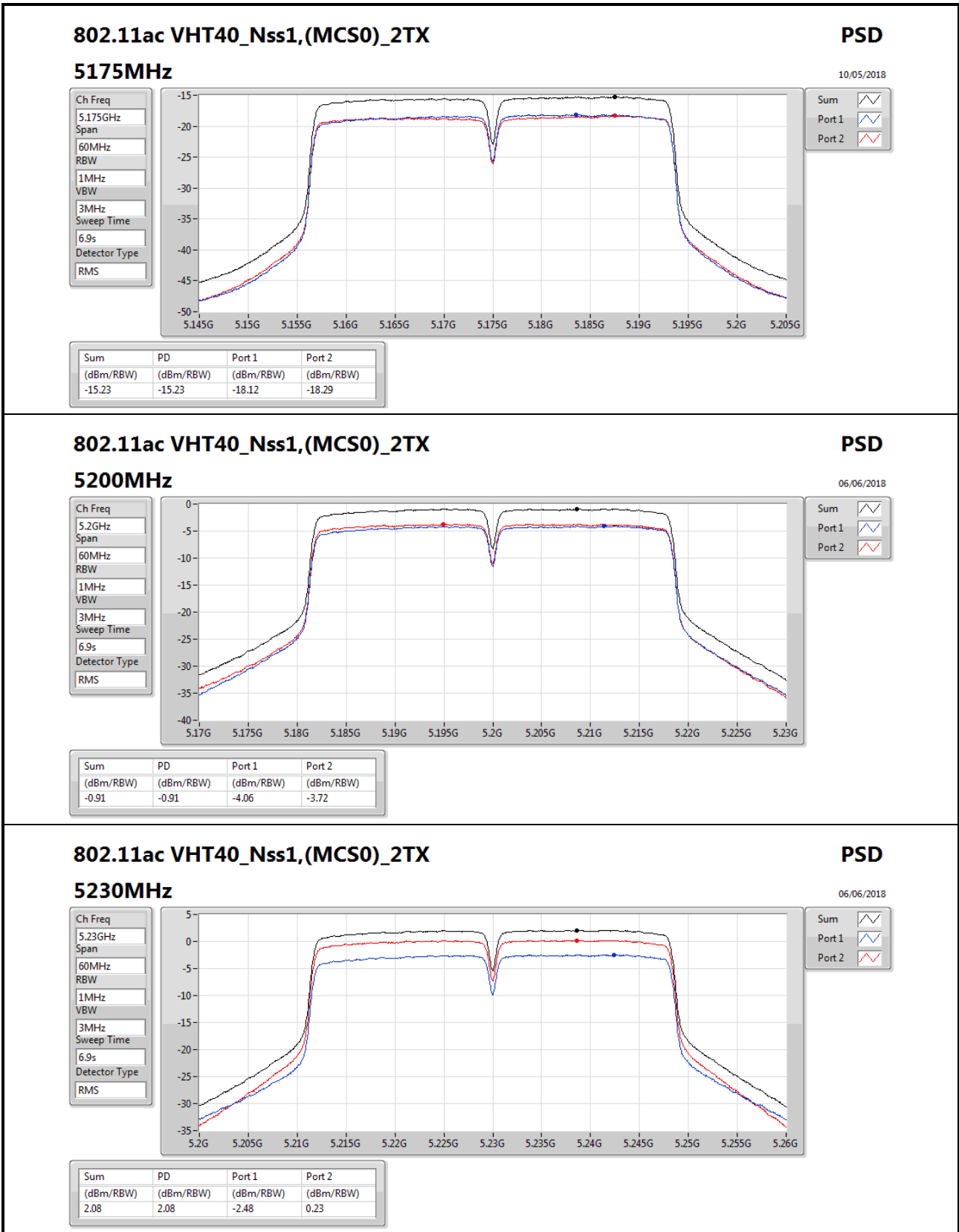
Detector Type
RMS

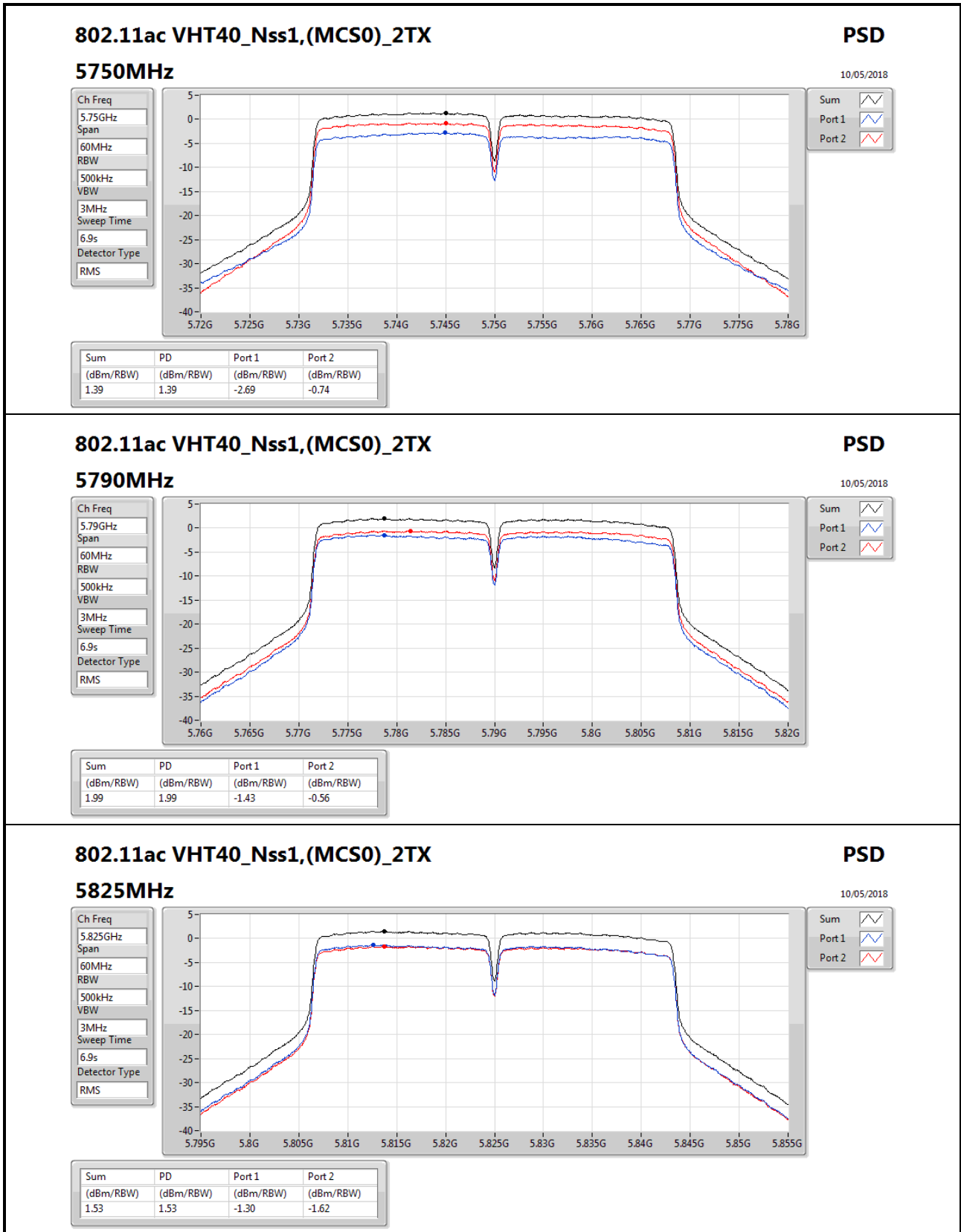
Sum

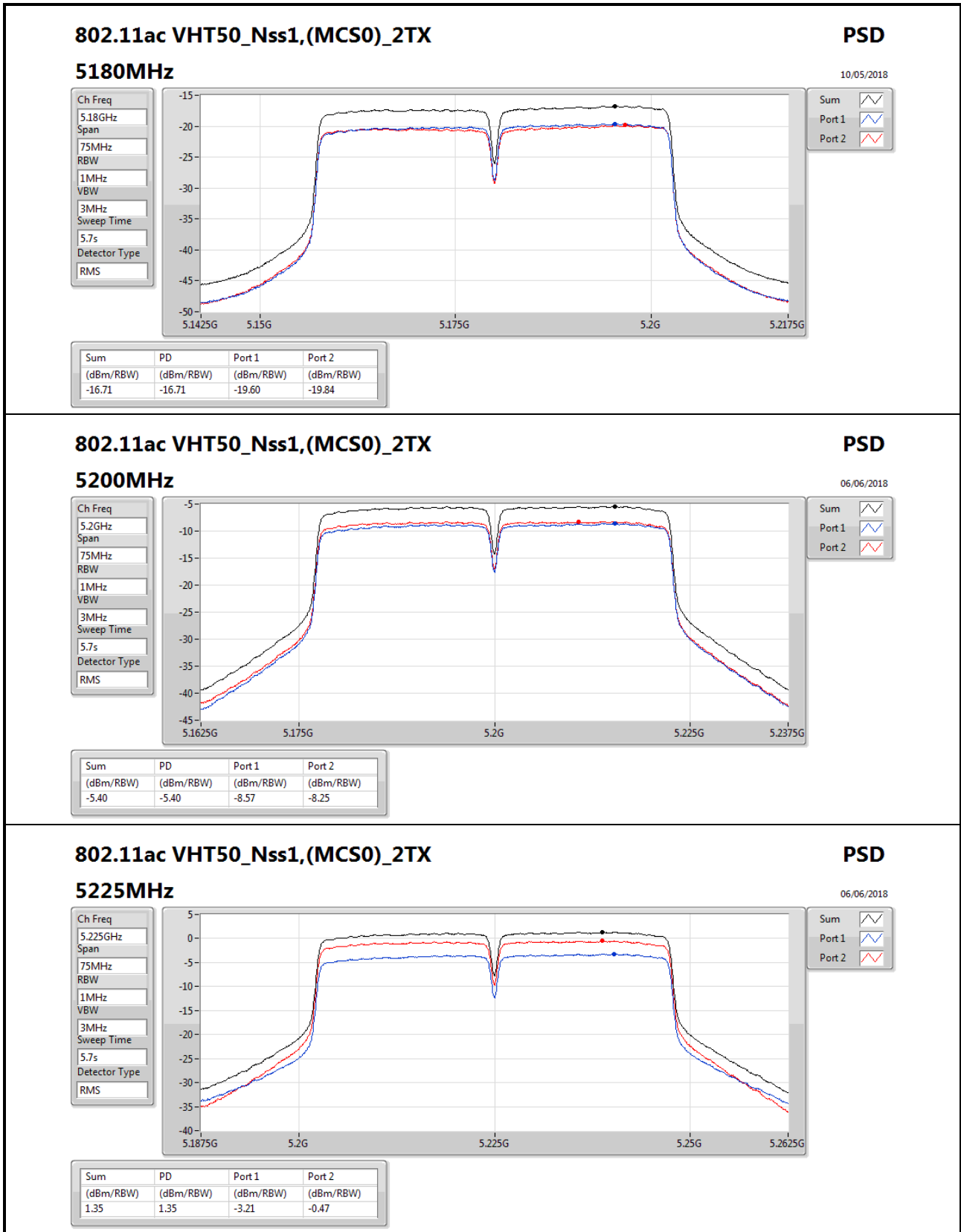
Port 1

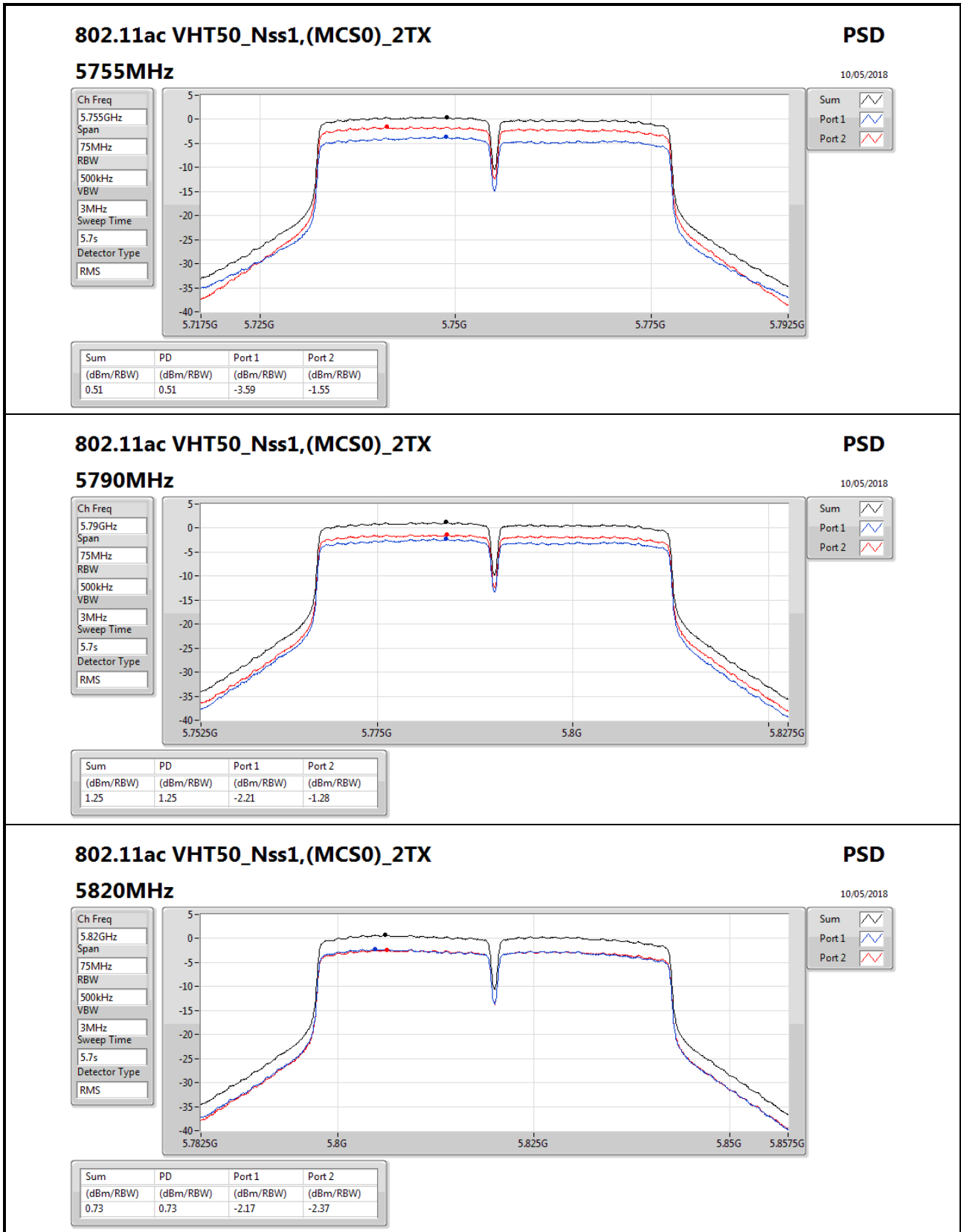
Port 2

Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.40	2.40	-1.69	0.53









802.11ac VHT50_Nss1,(MCS0)_2TX

5820MHz

PSD
10/05/2018

Ch Freq
5.82GHz

Span
75MHz

RBW
500kHz

VBW
3MHz

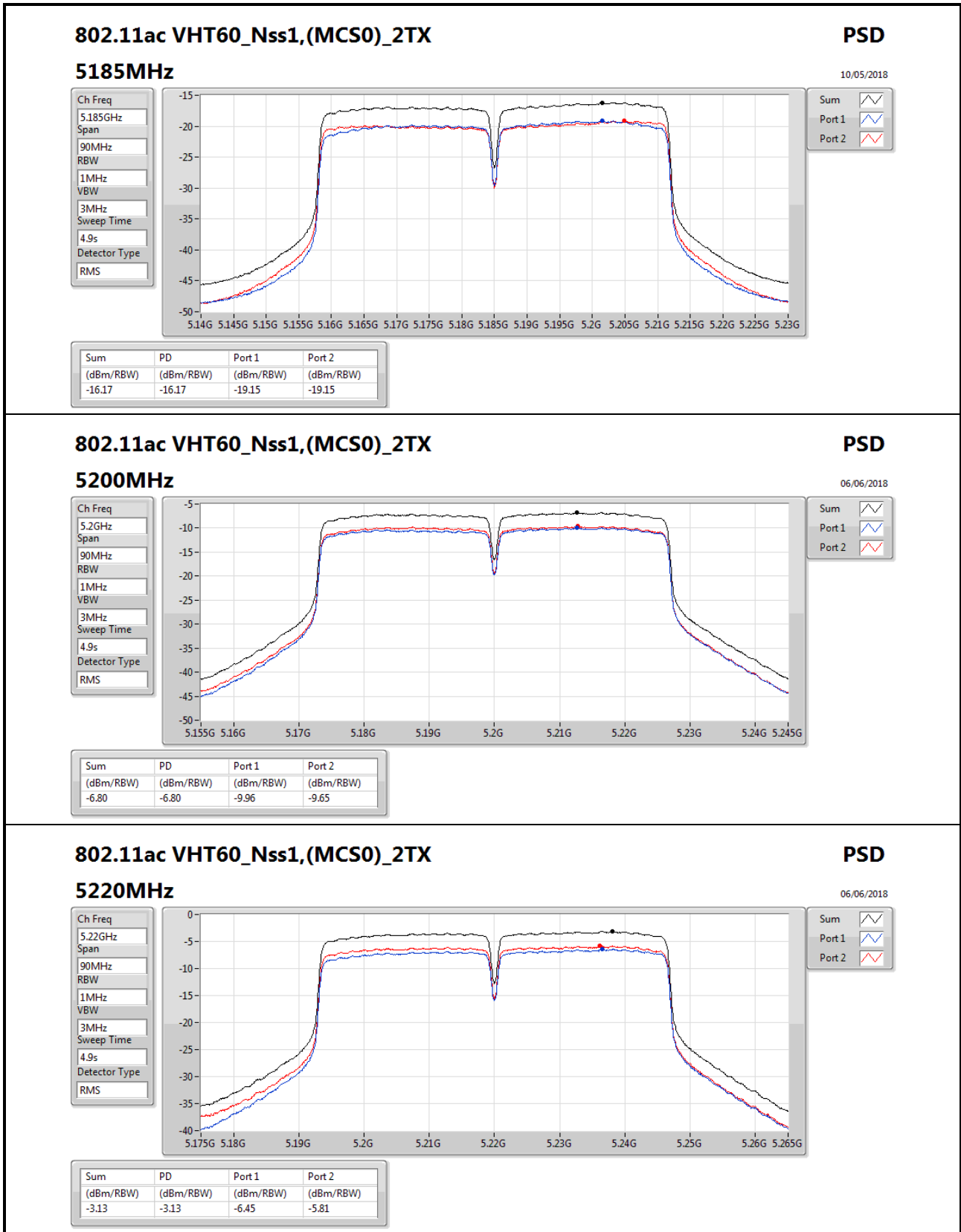
Sweep Time
5.7s

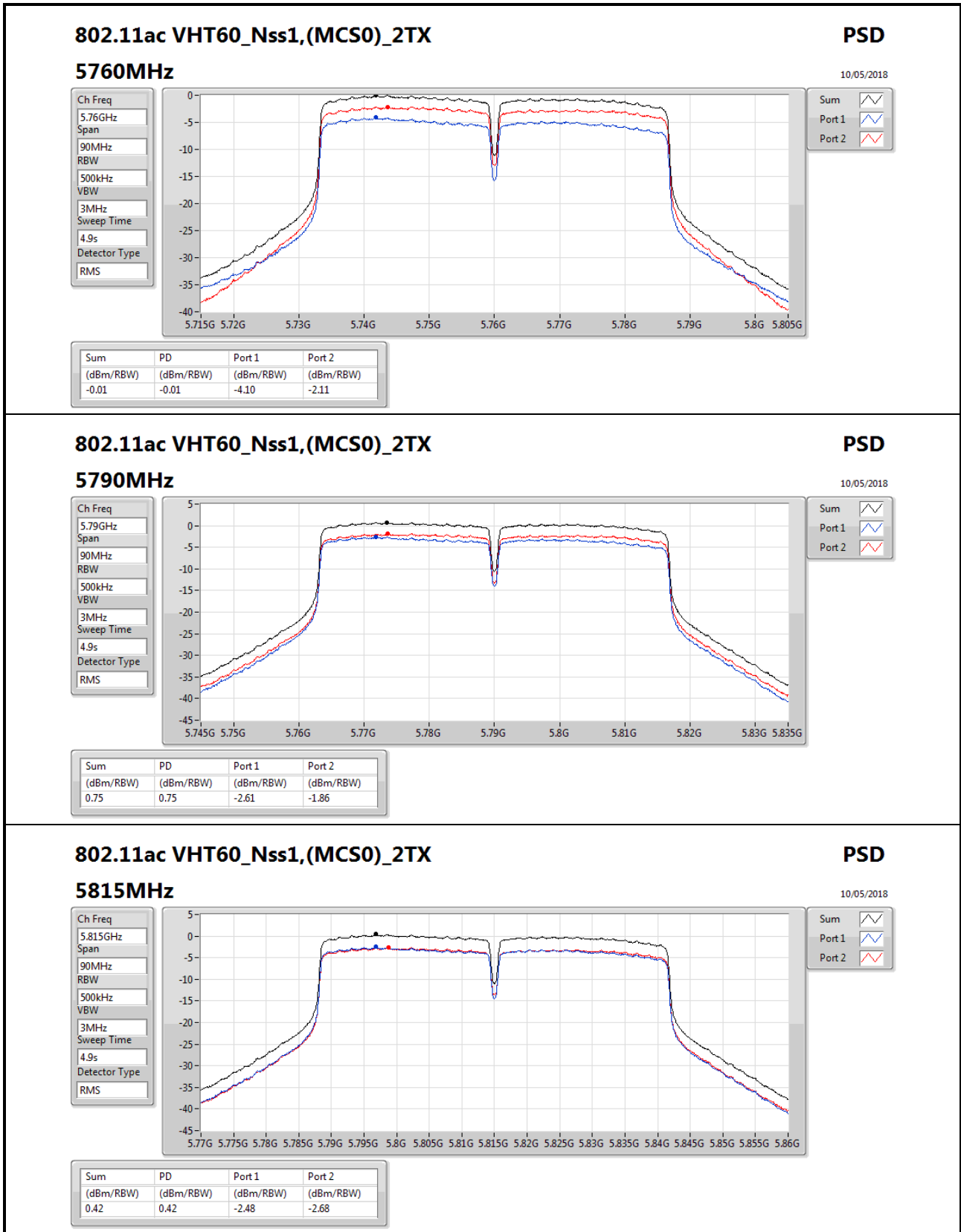
Detector Type
RMS

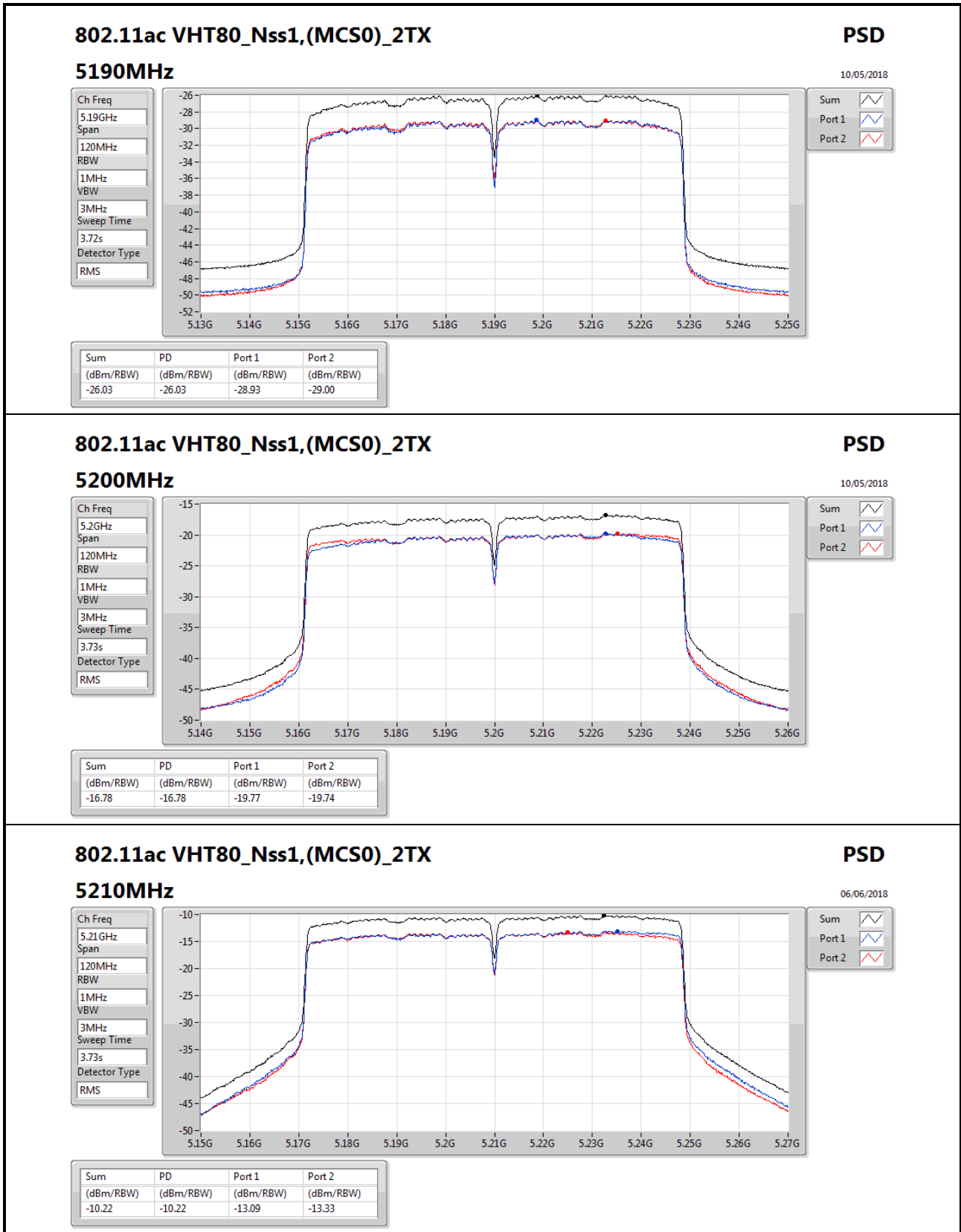
Sum

Port 1

Port 2







802.11ac VHT80_Nss1,(MCS0)_2TX

5210MHz

PSD

06/06/2018

Ch Freq
5.21GHz

Span
120MHz

RBW
1MHz

VBW
3MHz

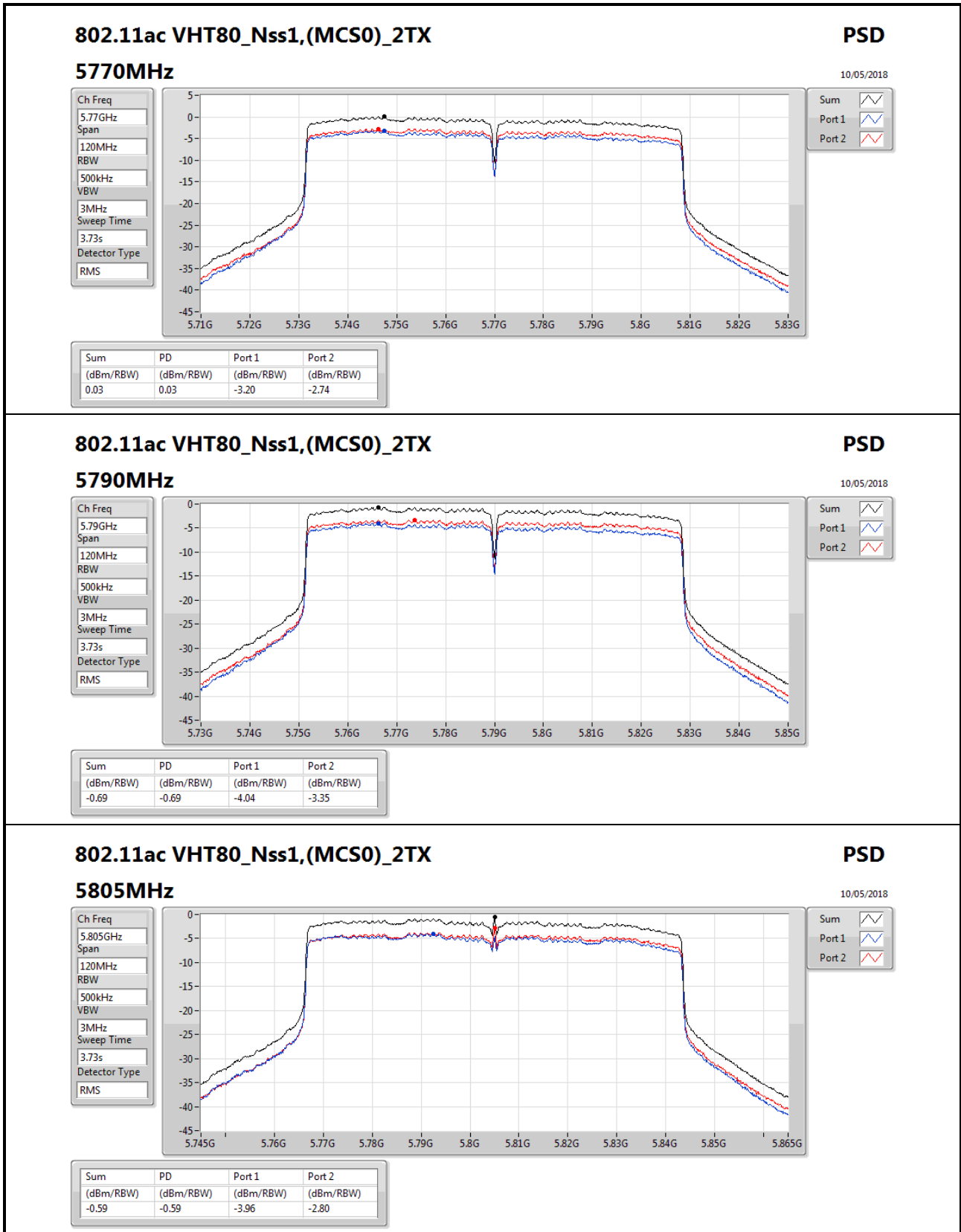
Sweep Time
3.73s

Detector Type
RMS

Sum

Port 1

Port 2





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)_2TX	Pass	PK	78.5M	36.86	40.00	-3.14	-13.58	3	Vertical	0	1.00	-



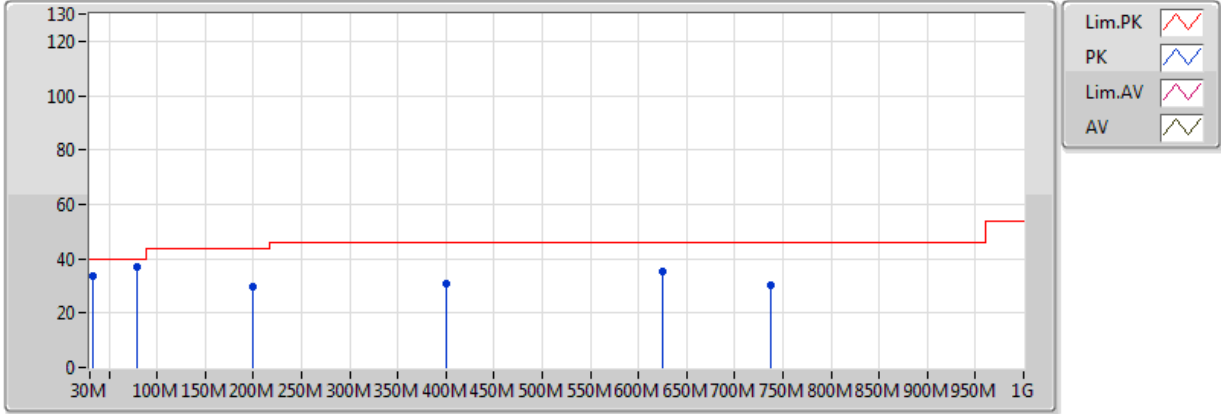
Result

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)_2TX	-	-	-	-	-	-	-	-	-	-	-	-
5790MHz	Pass	PK	33.88M	33.60	40.00	-6.40	-4.73	3	Vertical	0	1.00	-
5790MHz	Pass	PK	78.5M	36.86	40.00	-3.14	-13.58	3	Vertical	0	1.00	-
5790MHz	Pass	PK	198.78M	29.66	43.50	-13.84	-10.03	3	Vertical	0	1.00	-
5790MHz	Pass	PK	400.54M	30.81	46.00	-15.19	-3.37	3	Vertical	0	1.00	-
5790MHz	Pass	PK	625.58M	35.11	46.00	-10.89	-0.04	3	Vertical	0	1.00	-
5790MHz	Pass	PK	738.1M	29.98	46.00	-16.02	1.46	3	Vertical	0	1.00	-
5790MHz	Pass	PK	78.5M	36.21	40.00	-3.79	-13.58	3	Horizontal	360	1.00	-
5790MHz	Pass	PK	173.56M	32.02	43.50	-11.48	-9.97	3	Horizontal	360	1.00	-
5790MHz	Pass	PK	299.66M	31.99	46.00	-14.01	-5.79	3	Horizontal	360	1.00	-
5790MHz	Pass	PK	400.54M	38.04	46.00	-7.96	-3.37	3	Horizontal	360	1.00	-
5790MHz	Pass	PK	625.58M	30.08	46.00	-15.92	-0.04	3	Horizontal	360	1.00	-
5790MHz	Pass	PK	800.18M	33.83	46.00	-12.17	1.93	3	Horizontal	360	1.00	-

802.11ac VHT80_Nss1,(MCS0)_2TX

5790MHz_PoE

09/05/2018

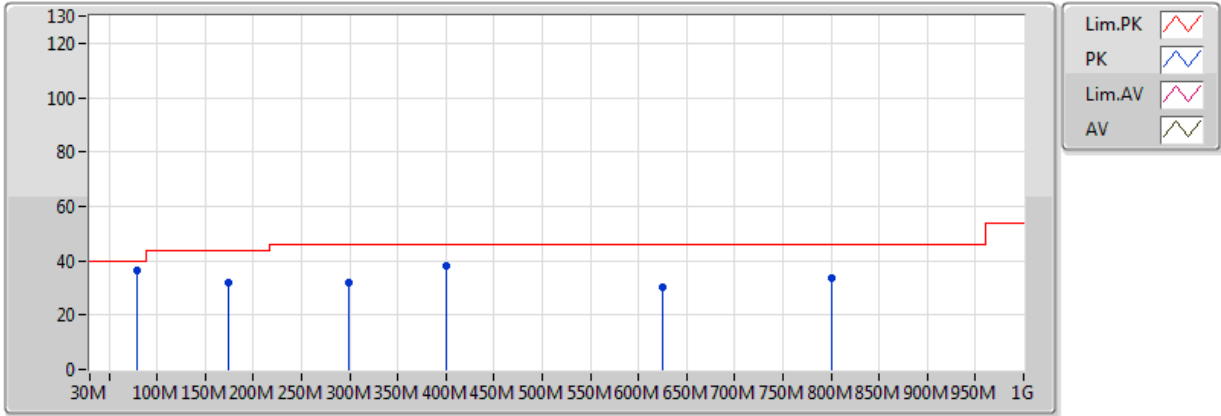


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	33.88M	33.60	40.00	-6.40	-4.73	3	Vertical	0	1.00	-
PK	78.5M	36.86	40.00	-3.14	-13.58	3	Vertical	0	1.00	-
PK	198.78M	29.66	43.50	-13.84	-10.03	3	Vertical	0	1.00	-
PK	400.54M	30.81	46.00	-15.19	-3.37	3	Vertical	0	1.00	-
PK	625.58M	35.11	46.00	-10.89	-0.04	3	Vertical	0	1.00	-
PK	738.1M	29.98	46.00	-16.02	1.46	3	Vertical	0	1.00	-

802.11ac VHT80_Nss1,(MCS0)_2TX

5790MHz_PoE

09/05/2018



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	78.5M	36.21	40.00	-3.79	-13.58	3	Horizontal	360	1.00	-
PK	173.56M	32.02	43.50	-11.48	-9.97	3	Horizontal	360	1.00	-
PK	299.66M	31.99	46.00	-14.01	-5.79	3	Horizontal	360	1.00	-
PK	400.54M	38.04	46.00	-7.96	-3.37	3	Horizontal	360	1.00	-
PK	625.58M	30.08	46.00	-15.92	-0.04	3	Horizontal	360	1.00	-
PK	800.18M	33.83	46.00	-12.17	1.93	3	Horizontal	360	1.00	-