

FCC Test Report

Equipment : Digital Satellite Receiver(Headless DVR Server)
Brand Name : AT&T DIRECTV
Model No. : HS17-500
FCC ID : O6ZHS17
Standard : 47 CFR FCC Part 15.407
Operating Band : 5250 MHz – 5350 MHz
5470 MHz – 5725 MHz
Applicant : Humax Co., Ltd.
HUMAX Village, 11-4, Sunae-dong, Bundang-gu
Seongnam city, Gyeonggi-do South Korea 463-825
Manufacturer : Humax Co., Ltd.
HUMAX Village, 11-4, Sunae-dong, Bundang-gu
Seongnam city, Gyeonggi-do South Korea 463-825
Function : ☐ Outdoor; ☒ Indoor; ☐ Fixed P2P
☐ Client
TPC Function : TPC

The product sample received on Oct. 28, 2016 and completely tested on Nov. 18, 2016. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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


Cliff Chang
SPORTON INTERNATIONAL INC.



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Summary of Test Result

Conformance Test Specifications			
Report Clause	Ref. Std. Clause	Description	Result
1.1.2	15.203	Antenna Requirement	Complied
3.1	15.407(a)	Emission Bandwidth	Complied
3.2	15.407(a)	Maximum Conducted Output Power	Complied
3.3	15.407(a)	Peak Power Spectral Density	Complied
3.4	15.407(b)	Unwanted Emissions	Complied
3.5	15.407(g)	Frequency Stability	Complied

Revision History

[illegible]

1 General Description

1.1 Information

1.1.1 RF General Information

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

Band	Mode	BWch (MHz)	Nant
5.3G	HT20	20	4
5.6G	HT20	20	4
5.8G	HT20	20	4
5.3G	HT20,BF	20	4
5.6G	HT20,BF	20	4
5.8G	HT20,BF	20	4
5.3G	VHT20	20	4
5.6G	VHT20	20	4
5.8G	VHT20	20	4
5.3G	VHT20,BF	20	4
5.6G	VHT20,BF	20	4
5.8G	VHT20,BF	20	4
5.3G	HT40	40	4
5.6G	HT40	40	4
5.8G	HT40	40	4
5.3G	HT40,BF	40	4
5.6G	HT40,BF	40	4
5.8G	HT40,BF	40	4
5.3G	VHT40	40	4
5.6G	VHT40	40	4
5.8G	VHT40	40	4
5.3G	VHT40,BF	40	4
5.6G	VHT40,BF	40	4
5.8G	VHT40,BF	40	4
5.3G	VHT80	80	4
5.6G	VHT80	80	4
5.8G	VHT80	80	4

Note:

- ♦ 5.3G/5.3G-I(IC) is the 5.3GHz Band (5.25-5.35GHz).
- ♦ 5.6G is the 5.6GHz Band (5.47-5.725GHz) or w/o TDWR (5.47-5.6GHz and 5.65-5.725GHz).
- ♦ 5.6G-I(IC) is the 5.6GHz IC Band w/o TDWR (5.47-5.6GHz and 5.65-5.725GHz).
- ♦ 5.8G/5.8G-I(IC) is the 5.8GHz Band (5.725-5.850GHz).
- ♦ 11a, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- ♦ VHT20, VHT40, VHT80 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.

1.1.2 Antenna Information
<2.4GHz and Zigbee Antenna Gain>

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	
					2.4GHz	Zigbee
1	Airgain	N24X2H2YN-W98U	PIFA	U.FL	4.6	-
2	Airgain	N24X2H2YW-B95U	PIFA	U.FL	4.6	-
3	-	-	PCB printed IFA	N/A	-	4
4	-	-	PCB printed IFA	N/A	-	4

<5GHz Antenna Gain>

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)			
					5GHz Band 1	5GHz Band 2	5GHz Band 3	5GHz Band 4
5	Airgain	N5X35B2YN-E57U	PIFA	U.FL	2.89	2.43	3.69	4.34
6	Airgain	N5X35B2YN-R137U	PIFA	U.FL	4.38	4.25	4.71	4.53
7	Airgain	N5X35B2YW-G80U	PIFA	U.FL	3.65	3.82	3.05	3.49
8	Airgain	N5X35BYN-A100U	PIFA	U.FL	5.40	5.27	4.31	4.62

<5GHz Directional Gain>

Stream	Directional Gain (dBi)			
	5GHz Band 1	5GHz Band 2	5GHz Band 3	5GHz Band 4
4T1S	7.02	6.41	6.41	7.06
4T2S	4.14	3.52	3.40	4.11

Note: The EUT has eight antennas.

<For 2.4GHz Band>**For IEEE 802.11b/g Mode (1TX/1RX)**

The EUT supports the antenna with TX and RX diversity functions.

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

The Ant. 2 generated the worst case, so it was selected to test and record in the report.

For IEEE 802.11n Mode (2TX/2RX)

Ant. 1 and Ant. 2 can be used as transmitting/receiving antenna.

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

<For Zigbee Band> (1TX/1RX)

The EUT supports the antenna with TX and RX diversity functions.

Both Ant. 3 and Ant. 4 support transmit and receive functions, but only one of them will be used at one time.

The Ant. 4 generated the worst case, so it was selected to test and record in the report.

<For 5GHz Band >**For IEEE 802.11a/n/ac mode (4TX/4RX):**

Ant. 5, Ant. 6, Ant. 7 and Ant. 8 can be used as transmitting/receiving antenna.

Ant. 5, Ant. 6, Ant. 7 and Ant. 8 could transmit/receive simultaneously.

1.1.3 Mode Test Duty Cycle

<For Non-Beamforming Mode> and <For Beamforming Mode 4T1S>

Mode	DC	T(s)	VBW(Hz) $\geq 1/T$
VHT20	0.989	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
VHT20,BF	0.924	3.453m	300
VHT40	0.975	2.423m	1k
VHT40,BF	0.955	1.698m	1k
VHT80	0.958	1.143m	1k
VHT80,BF	0.965	4.22m	300

<For Beamforming Mode 4T2S>

Mode	DC	T(s)	VBW(Hz) $\geq 1/T$
VHT20,BF	0.949	4.322m	300
VHT40,BF	0.955	2.147m	1k
VHT80,BF	0.958	6.282m	300

1.1.4 Table for Class II Change

This product is an extension of original one reported under Sporton project number: FR6O2615AC

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

Modifications	Performance Checking
1. Adding Band 2 and Band 3 (5250~5350 MHz, 5470~5725 MHz) for this device.	1. Emission Bandwidth 2. Maximum Conducted Output Power 3. Peak Power Spectral Density 4. Unwanted Emissions 5. Frequency Stability

1.1.5 EUT Operational Condition

EUT Power Type	From Power Adapter			
Beamforming Function	☒	With beamforming	☐	Without beamforming
Weather Band	☒	With 5600~5650MHz	☐	Without 5600~5650MHz

Note: The product has beamforming function for 802.11n/ac in 5GHz.

1.2 Testing Applied Standards

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

- ♦ 47 CFR FCC Part 15
- ♦ ANSI C63.10-2013
- ♦ FCC KDB 789033 D02 v01r03
- ♦ FCC KDB 644545 D03 v01
- ♦ FCC KDB 662911 D01 v02r01
- ♦

1.3 Testing Location Information

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

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH01-CB	Paul Chen	25°C / 65%	Oct. 28, 2016
Radiated	03CH01-CB	Steven Liang	22°C / 54%	Nov. 14, 2016~Nov. 18, 2016

Test site Designation No. TW0006 with FCC

Test site registered number IC 4086D with Industry Canada.

1.4 Measurement Uncertainty

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

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.2 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.7 dB	Confidence levels of 95%
Output Power Measurement	1.33 dB	Confidence levels of 95%
Power Density Measurement	1.27 dB	Confidence levels of 95%
Bandwidth Measurement	9.74×10^{-8}	Confidence levels of 95%
Frequency Stability	6.06×10^{-8}	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

<For Non-Beamforming Mode> and <For Beamforming Mode 4T1S>

Band	Mode	BWch (MHz)	Nss-Min	Nant	Ch. (MHz)	Range	Power Setting
5.3G	VHT20	20	1,(M0)	4	5260	L	17
5.3G	VHT20	20	1,(M0)	4	5300	M	17
5.3G	VHT20	20	1,(M0)	4	5320	H	17
5.6G	VHT20	20	1,(M0)	4	5500	L	17
5.6G	VHT20	20	1,(M0)	4	5580	M	17
5.6G	VHT20	20	1,(M0)	4	5700	H	17
5.6G	VHT20	20	1,(M0)	4	5720	C	17
5.8G	VHT20	20	1,(M0)	4	5720	C	17
5.8G	VHT20	20	1,(M0)	4	5745	L	22
5.8G	VHT20	20	1,(M0)	4	5785	M	20
5.8G	VHT20	20	1,(M0)	4	5825	H	21
5.3G	VHT40	40	1,(M0)	4	5270	L	17
5.3G	VHT40	40	1,(M0)	4	5310	H	17
5.6G	VHT40	40	1,(M0)	4	5510	L	17
5.6G	VHT40	40	1,(M0)	4	5550	M	17
5.6G	VHT40	40	1,(M0)	4	5670	H	17
5.6G	VHT40	40	1,(M0)	4	5710	C	18
5.8G	VHT40	40	1,(M0)	4	5710	C	18
5.8G	VHT40	40	1,(M0)	4	5755	L	22
5.8G	VHT40	40	1,(M0)	4	5795	H	22
5.3G	VHT80	80	1,(M0)	4	5290	S	17
5.6G	VHT80	80	1,(M0)	4	5530	L	17
5.6G	VHT80	80	1,(M0)	4	5610	H	17
5.6G	VHT80	80	1,(M0)	4	5690	C	17
5.8G	VHT80	80	1,(M0)	4	5690	C	17
5.8G	VHT80	80	1,(M0)	4	5775	S	23
5.3G	VHT20,BF	20	1,(M0)	4	5260	L	16
5.3G	VHT20,BF	20	1,(M0)	4	5300	M	16
5.3G	VHT20,BF	20	1,(M0)	4	5320	H	16
5.6G	VHT20,BF	20	1,(M0)	4	5500	L	16
5.6G	VHT20,BF	20	1,(M0)	4	5580	M	16
5.6G	VHT20,BF	20	1,(M0)	4	5700	H	16
5.6G	VHT20,BF	20	1,(M0)	4	5720	C	17
5.8G	VHT20,BF	20	1,(M0)	4	5720	C	17
5.8G	VHT20,BF	20	1,(M0)	4	5745	L	22
5.8G	VHT20,BF	20	1,(M0)	4	5785	M	22



Band	Mode	BWch (MHz)	Nss-Min	Nant	Ch. (MHz)	Range	Power Setting
5.8G	VHT20,BF	20	1,(M0)	4	5825	H	22
5.3G	VHT40,BF	40	1,(M0)	4	5270	L	16
5.3G	VHT40,BF	40	1,(M0)	4	5310	H	16
5.6G	VHT40,BF	40	1,(M0)	4	5510	L	16
5.6G	VHT40,BF	40	1,(M0)	4	5550	M	16
5.6G	VHT40,BF	40	1,(M0)	4	5670	H	16
5.6G	VHT40,BF	40	1,(M0)	4	5710	C	17
5.8G	VHT40,BF	40	1,(M0)	4	5710	C	17
5.8G	VHT40,BF	40	1,(M0)	4	5755	L	23
5.8G	VHT40,BF	40	1,(M0)	4	5795	H	23
5.3G	VHT80,BF	80	1,(M0)	4	5290	S	16
5.6G	VHT80,BF	80	1,(M0)	4	5530	L	17
5.6G	VHT80,BF	80	1,(M0)	4	5610	H	17
5.6G	VHT80,BF	80	1,(M0)	4	5690	C	17
5.8G	VHT80,BF	80	1,(M0)	4	5690	C	17
5.8G	VHT80,BF	80	1,(M0)	4	5775	S	23

**<For Beamforming Mode 4T2S>**

Band	Mode	BWch (MHz)	Nss-Min	Nant	Ch. (MHz)	Range	Power Setting
5.3G	VHT20,BF	20	2,(M0)	4	5260	L	17
5.3G	VHT20,BF	20	2,(M0)	4	5300	M	17
5.3G	VHT20,BF	20	2,(M0)	4	5320	H	17
5.6G	VHT20,BF	20	2,(M0)	4	5500	L	17
5.6G	VHT20,BF	20	2,(M0)	4	5580	M	17
5.6G	VHT20,BF	20	2,(M0)	4	5700	H	17
5.6G	VHT20,BF	20	2,(M0)	4	5720	C	17
5.8G	VHT20,BF	20	2,(M0)	4	5720	C	17
5.8G	VHT20,BF	20	2,(M0)	4	5745	L	24
5.8G	VHT20,BF	20	2,(M0)	4	5785	M	24
5.8G	VHT20,BF	20	2,(M0)	4	5825	H	24
5.3G	VHT40,BF	40	2,(M0)	4	5270	L	17
5.3G	VHT40,BF	40	2,(M0)	4	5310	H	17
5.6G	VHT40,BF	40	2,(M0)	4	5510	L	17
5.6G	VHT40,BF	40	2,(M0)	4	5550	M	17
5.6G	VHT40,BF	40	2,(M0)	4	5670	H	17
5.6G	VHT40,BF	40	2,(M0)	4	5710	C	18
5.8G	VHT40,BF	40	2,(M0)	4	5710	C	18
5.8G	VHT40,BF	40	2,(M0)	4	5755	L	24
5.8G	VHT40,BF	40	2,(M0)	4	5795	H	24
5.3G	VHT80,BF	80	2,(M0)	4	5290	S	17
5.6G	VHT80,BF	80	2,(M0)	4	5530	L	17
5.6G	VHT80,BF	80	2,(M0)	4	5610	H	17
5.6G	VHT80,BF	80	2,(M0)	4	5690	C	18
5.8G	VHT80,BF	80	2,(M0)	4	5690	C	18
5.8G	VHT80,BF	80	2,(M0)	4	5775	S	24

Note:

- ♦ Test range channel consist of L (Low Ch.), M (Middle Ch.), H (High Ch.), S (Single Ch.) and C (Straddle Band Ch.).
- ♦ VHT20/VHT40 covers HT20/HT40, due to same modulation. The power setting for 802.11n HT20 and HT40 are the same or lower than 802.11ac VHT20 and VHT40.
- ♦ There are two modes of EUT, one is beamforming mode, and the other is non-beamforming mode for 802.11n/ac in 5GHz, Beamforming mode and non-beamforming mode has been test and record in this test report.
- ♦ Customer requests additional beamforming mode 4T2S.

2.2 The Worst Case Measurement Configuration

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

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

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis
Operating Mode	
1	WLAN 2.4GHz + WLAN 5GHz + Zigbee
Refer to Sporton Test Report No.: FA6O2615 for Co-location RF Exposure Evaluation.	

Note: The EUT can only be used at Y axis position

2.3 EUT Operation during Test

For non-beamforming mode:

The EUT was programmed to be in continuously transmitting mode.

For beamforming mode:

For Conducted Mode:

The EUT was programmed to be in continuously transmitting mode.

For Radiated Mode:

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

The program was executed as follows:

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

2.4 Accessories

Accessories					
No.	Equipment Name	Brand Name	Model Name	Rating	Remark
1	AC Adapter	DIRECTV	EPS17R0-36	INPUT: 120V ~ 1.8A 60Hz OUTPUT: 25.2V, 2.86A 72W	AC power cable: Non-Shielded, 1.9m DC power cable: Non-Shielded, 1.3m
Other					
No.	Equipment Name	Brand Name	Model Name	Rating	
1	Hard Drive	WD	WD20EURX-25T0FY0	5VDC, 0.60A 12VDC, 0.45A	

2.5 Support Equipment

<For Non-Beamforming Mode> (Above 1GHz)

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

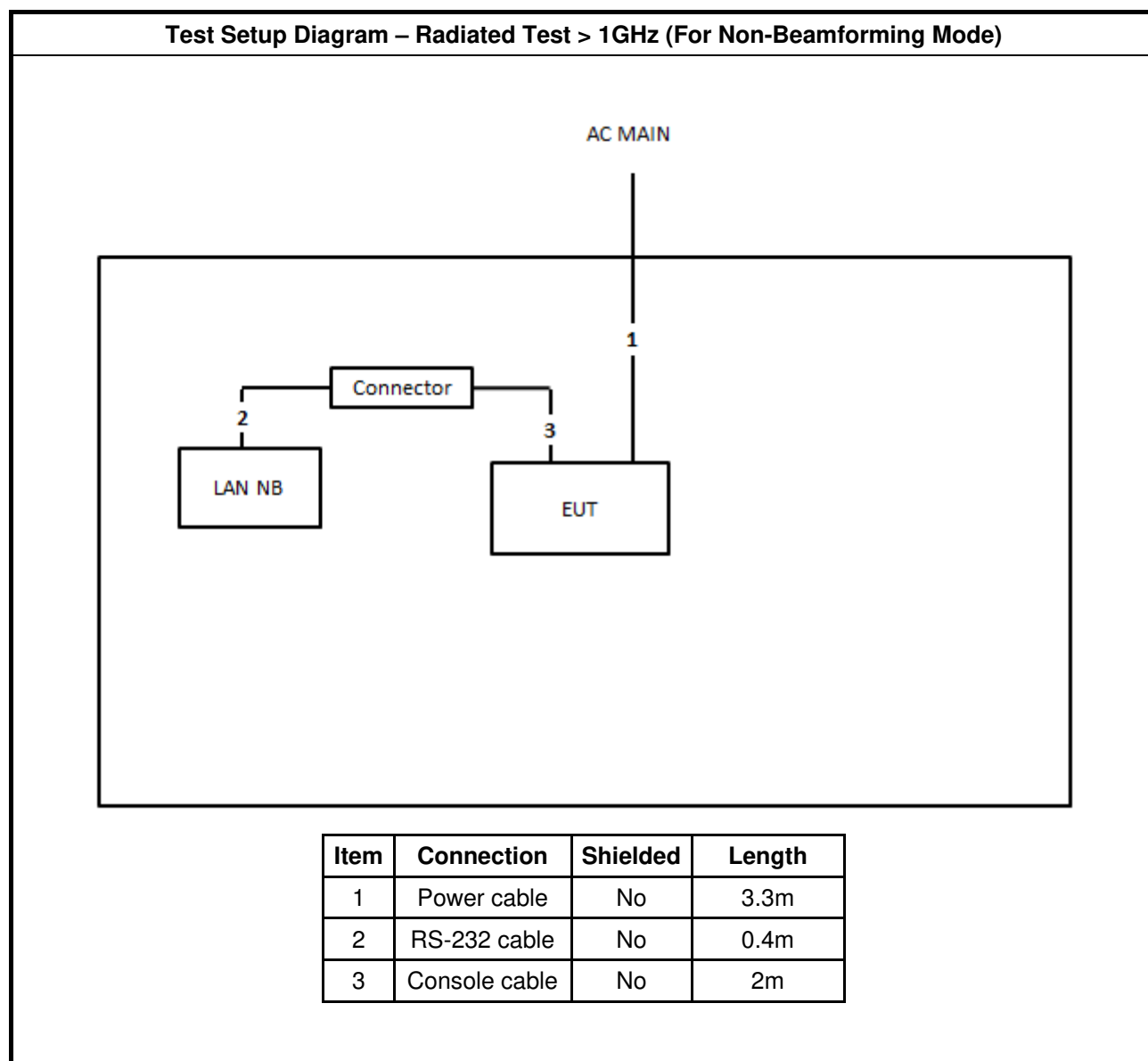
<For Beamforming Mode> (Above 1GHz)

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	Notebook	DELL	E4300	DoC
2	Notebook	DELL	E4300	DoC
3	WLAN module	Quantenna	N/A	N/A

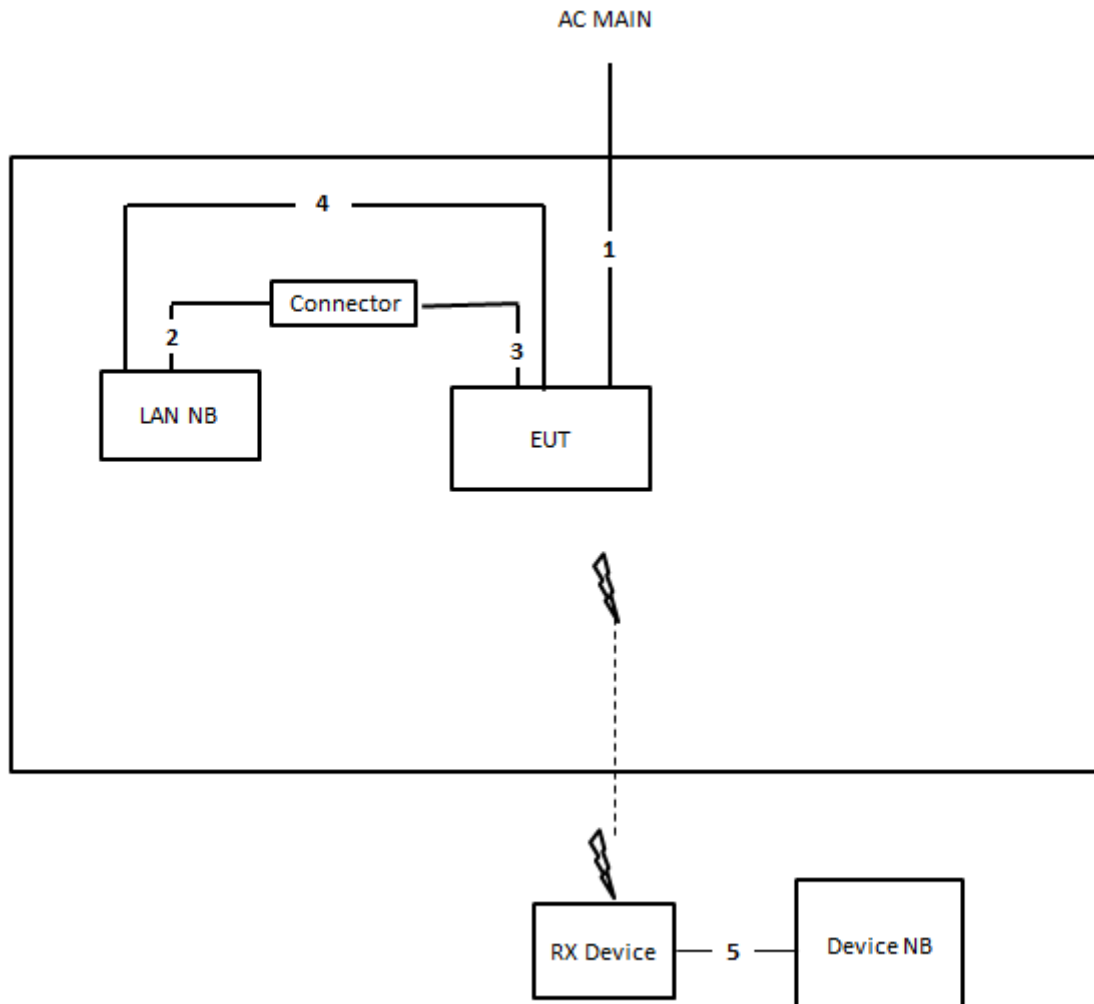
For Test Site No: TH01-CB

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

2.6 Test Setup Diagram



Test Setup Diagram - Radiated Test > 1GHz (For Beamforming Mode)



Item	Connection	Shielded	Length
1	Power cable	No	3.3m
2	RS-232 cable	No	0.4m
3	Console cable	No	2m
4	RJ-45 cable	No	1.5m
5	RJ-45 cable	No	10m

3 Transmitter Test Result

3.1 Emission Bandwidth

3.1.1 Emission Bandwidth Limit

Emission Bandwidth Limit	
UNII Devices	
☐	For the 5.15-5.25 GHz band, N/A
☒	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.
☒	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.
☒	For the 5.725-5.85 GHz band, 6 dB emission bandwidth $\geq$ 500kHz.
LE-LAN Devices	
☐	For the band 5.15-5.25 GHz, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.
☐	For the 5.25-5.35 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz
☐	For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz
☐	For the 5.725-5.85 GHz band, 6 dB emission bandwidth $\geq$ 500kHz.

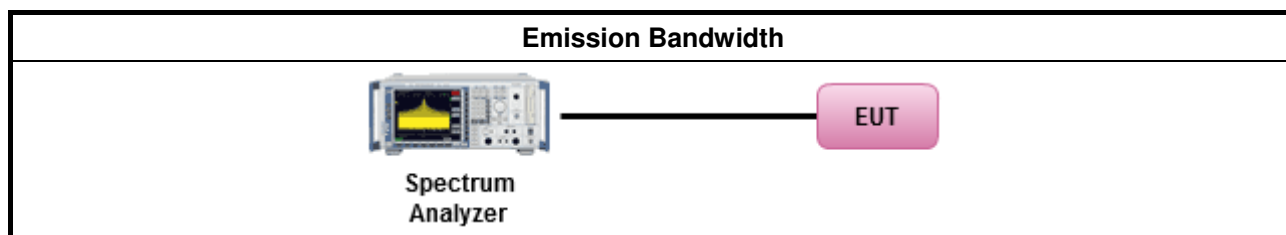
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

Test Method	
For the emission bandwidth shall be measured using one of the options below:	
☒	Refer as FCC KDB 789033, clause C for EBW and clause D for OBW measurement.
☐	Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.
☒	Refer as IC RSS-Gen, clause 4.6 for bandwidth testing.

3.1.4 Test Setup



3.1.5 Test Result of Emission Bandwidth

Refer as Appendix A

3.2 Maximum Conducted Output Power

3.2.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit	
UNII Devices	
☐ For the 5.15-5.25 GHz band:	
☐	- Outdoor AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$. e.i.r.p. at any elevation angle above 30 degrees ≤ 125mW [21dBm] - Indoor AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$ - Point-to-point AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 23$ dBi, then $P_{Out} = 30 - (G_{TX} - 23)$. - Mobile or Portable Client: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$.
☒	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 $P_{Out} = 24 - (G_{TX} - 6)$.
☒	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 $P_{Out} = 24 - (G_{TX} - 6)$.
☒ For the 5.725-5.85 GHz band:	
☐	- Point-to-multipoint systems (P2M): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$. - Point-to-point systems (P2P): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W.
LE-LAN Devices	
☐ For the 5.15-5.25 GHz band, the maximum e.i.r.p. shall not exceed 200 mW or $10 + 10 \log B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.	
☐ For the 5.25-5.35 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or $17 + 10 \log B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz	
☐ For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or $17 + 10 \log B$, dBm, whichever power is less. B is the 99% emission bandwidth in MHz	
☐ For the 5.725-5.85 GHz band:	
☐	- Point-to-multipoint systems (P2M): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$. - Point-to-point systems (P2P): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W.
P_{Out} = maximum conducted output power in dBm, G_{TX} = the maximum transmitting antenna directional gain in dBi.	

3.2.2 Measuring Instruments

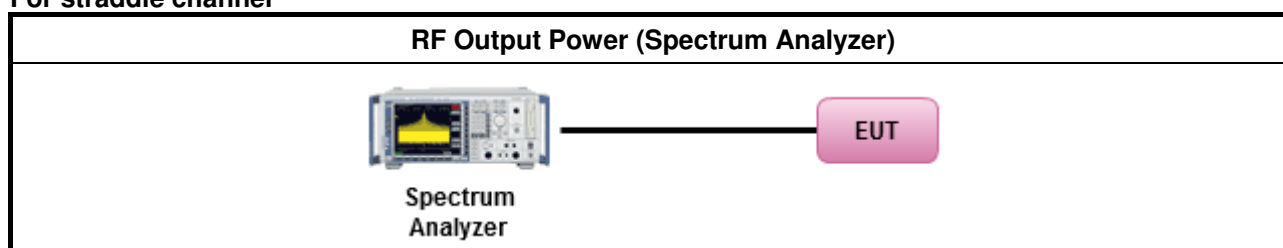
Refer a test equipment and calibration data table in this test report.

3.2.3 Test Procedures

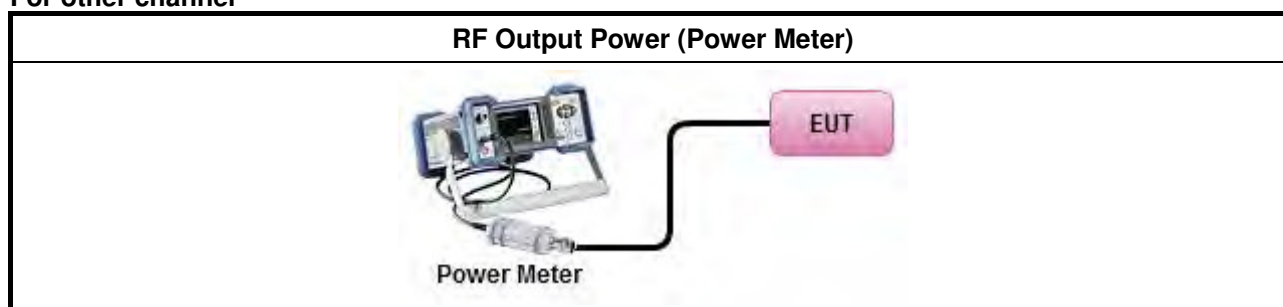
Test Method	
Maximum Conducted Output Power	
	[duty cycle $\geq$ 98% or external video / power trigger]
☒	Refer as FCC KDB 789033, clause E Method SA-1 (spectral trace averaging).
☐	Refer as FCC KDB 789033, clause E Method SA-1 Alt. (RMS detection with slow sweep speed)
	duty cycle $<$ 98% and average over on/off periods with duty factor
☐	Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging).
☐	Refer as FCC KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
	Wideband RF power meter and average over on/off periods with duty factor
☒	Refer as FCC KDB 789033, clause E Method PM-G (using an RF average power meter).
For conducted measurement.	
	If the EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.
	If multiple transmit chains, EIRP calculation could be following as methods: $P_{\text{total}} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $\text{EIRP}_{\text{total}} = P_{\text{total}} + \text{DG}$

3.2.4 Test Setup

For straddle channel



For other channel





3.2.5 Test Result of Maximum Conducted Output Power

Refer as Appendix B

3.3 Peak Power Spectral Density

3.3.1 Peak Power Spectral Density Limit

Peak Power Spectral Density Limit	
UNII Devices	
☐ For the 5.15-5.25 GHz band:	
	- 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 $PPSD = 11 - (G_{TX} - 6)$.
☒ For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.	
☒ For the 5.47-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.	
☒ For the 5.725-5.85 GHz band:	
	- Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If $G_{TX} > 6$ dBi, then $PPSD = 30 - (G_{TX} - 6)$. - Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.
LE-LAN Devices	
☐ For the 5.15-5.25 GHz band, the peak power spectral density (PPSD) ≤ 4 dBm/MHz and the e.i.r.p. peak power spectral density (PPSD) ≤ 10 dBm/MHz.	
☐ For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz and the e.i.r.p. peak power spectral density (PPSD) ≤ 17 dBm/MHz.	
	e.i.r.p. greater than 200 mW shall comply with the following e.i.r.p. at different elevations, where θ is the angle above the local horizontal plane (of the Earth) as shown below: -13 dBW/MHz for $0^\circ \leq \theta < 8^\circ$; $-13 - 0.716 (\theta - 8)$ dBW/MHz for $8^\circ \leq \theta < 40^\circ$; $-35.9 - 1.22 (\theta - 40)$ dBW/MHz for $40^\circ \leq \theta \leq 45^\circ$; -42 dBW/MHz for $\theta > 45^\circ$
☐ For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz and the e.i.r.p. peak power spectral density (PPSD) ≤ 17 dBm/MHz.	
☐ For the 5.725-5.85 GHz band:	
	- 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.
PPSD = peak power spectral density that he same method as used to determine the conducted output power shall be used to determine the power spectral density. And power spectral density in dBm/MHz G_{TX} = the maximum transmitting antenna directional gain in dBi.	

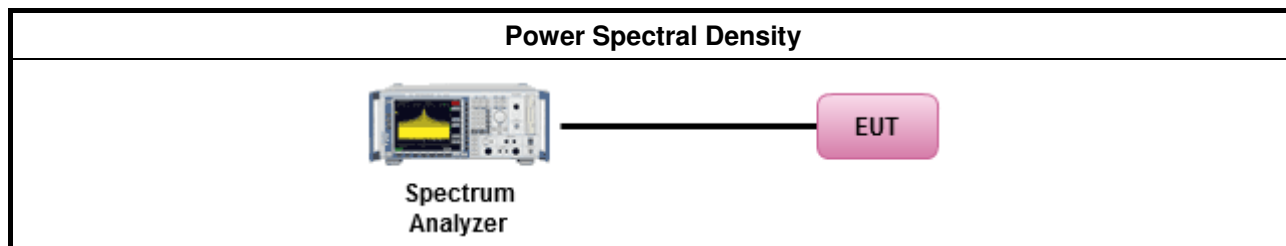
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method	
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:	
☐ Refer as FCC KDB 789033, F5) power spectral density can be measured using resolution bandwidths < 1 MHz provided that the results are integrated over 1 MHz bandwidth	
[duty cycle ≥ 98% or external video / power trigger]	
☒ Refer as FCC KDB 789033, clause E Method SA-1 (spectral trace averaging).	
☐ Refer as FCC KDB 789033, clause E Method SA-1 Alt. (RMS detection with slow sweep speed)	
duty cycle < 98% and average over on/off periods with duty factor	
☒ Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging).	
☐ Refer as FCC KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)	
For conducted measurement.	
If the EUT supports multiple transmit chains using options given below:	
☒ Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.	
☐ Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits,	
☐ Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.	
If multiple transmit chains, EIRP PPSD calculation could be following as methods: $PPSD_{total} = PPSD_1 + PPSD_2 + \dots + PPSD_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = PPSD_{total} + DG$	

3.3.4 Test Setup



3.3.5 Test Result of Peak Power Spectral Density

Refer as Appendix C

3.4 Unwanted Emissions

3.4.1 Transmitter Radiated Unwanted Emissions Limit

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

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

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

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

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

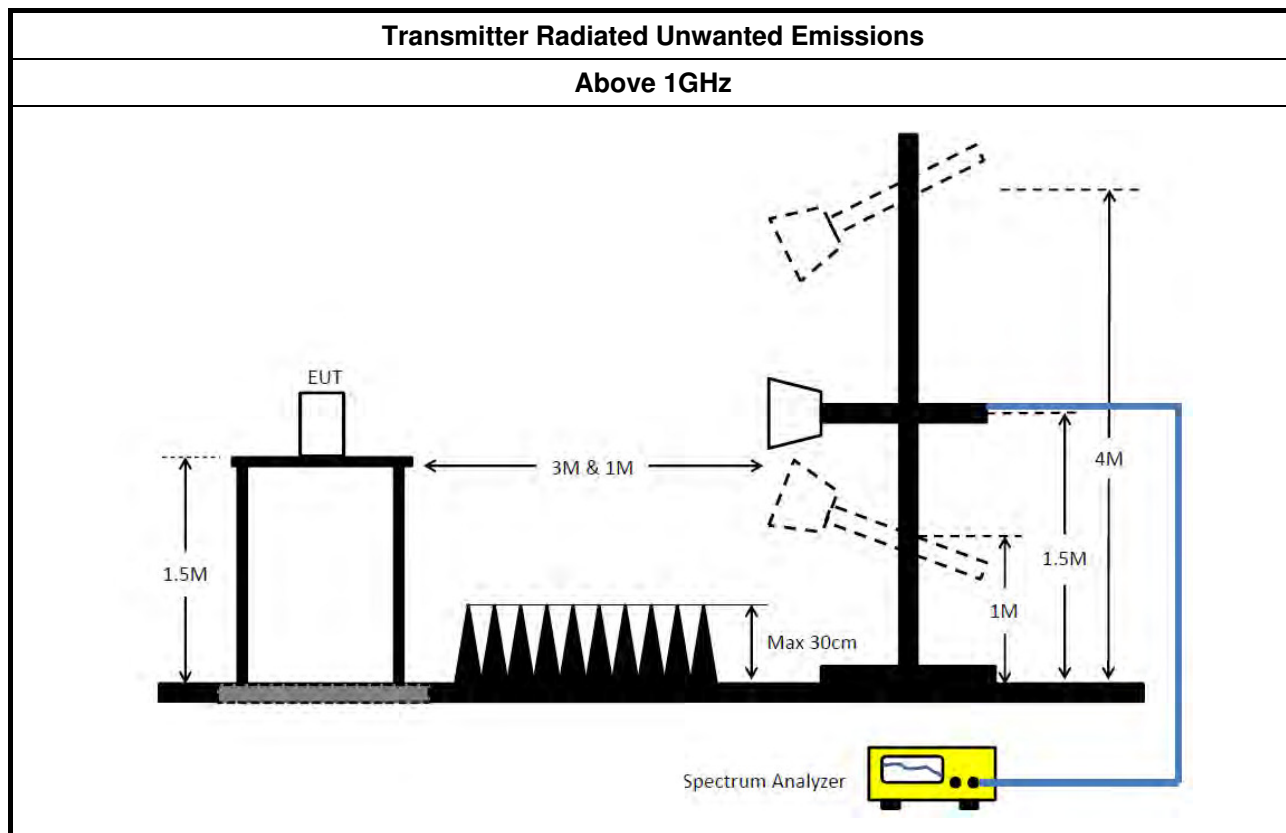
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method	
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).	
The average emission levels shall be measured in [duty cycle $\geq$ 98 or duty factor].	
For the transmitter unwanted emissions shall be measured using following options below:	
	Refer as FCC KDB 789033, clause H)2) for unwanted emissions into non-restricted bands.
	Refer as FCC KDB 789033, clause H)1) for unwanted emissions into restricted bands.
	☐ Refer as FCC KDB 789033, H)6) Method AD (Trace Averaging).
	☒ Refer as FCC KDB 789033, H)6) Method VB (Reduced VBW).
	☐ Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW $\geq$ 1/T, where T is pulse time.
	☐ Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions.
	☒ Refer as FCC KDB 789033, clause H)5) measurement procedure peak limit.
	☐ Refer as ANSI C63.10, clause 4.2.3.2.2 measurement procedure peak limit.
	For radiated measurement.
	Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.
	Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.
	Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.
	The any unwanted emissions level shall not exceed the fundamental emission level.
All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.	

3.4.4 Test Setup



3.4.5 Transmitter Unwanted Emissions (Below 30MHz)

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

3.4.6 Test Result of Transmitter Unwanted Emissions

Refer as Appendix D

3.5 Frequency Stability

3.5.1 Frequency Stability Limit

Frequency Stability Limit	
UNII Devices	
In-band emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.	
LE-LAN Devices	
N/A	
IEEE Std. 802.11	
The transmitter center frequency tolerance shall be ± 20 ppm maximum for the 5 GHz band and ± 25 ppm maximum for the 2.4 GHz band.	

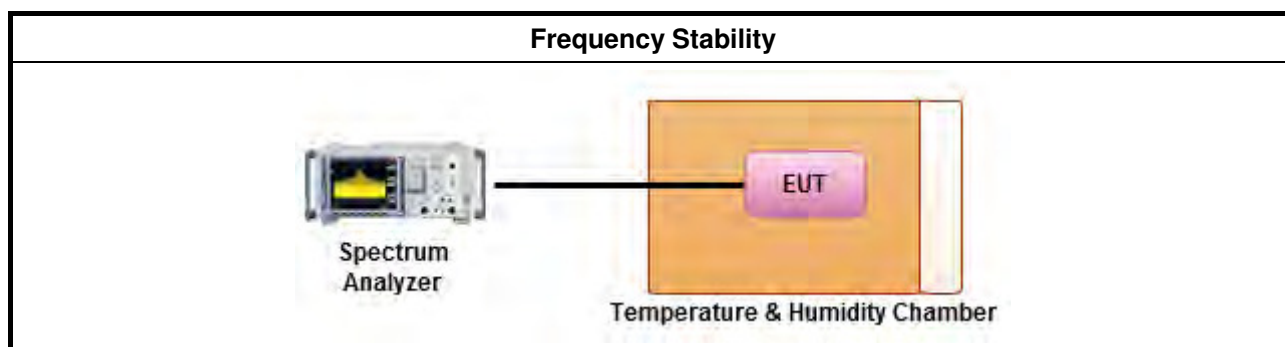
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

Test Method	
Refer as ANSI C63.10, clause 6.8 for frequency stability tests	
	Frequency stability with respect to ambient temperature
	Frequency stability when varying supply voltage
	Extreme temperature is 0°C~50°C.

3.5.4 Test Setup



3.5.5 Test Result of Frequency Stability

Refer as Appendix E

4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 10, 2016	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 25, 2016	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 18, 2016	Radiation (03CH01-CB)
Pre-Amplifier	WM	TF-130N-R1	923365	26GHz ~ 40GHz	Feb. 23, 2016	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100304	9kHz ~ 40GHz	May 05, 2016	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-1	N/A	30 MHz ~ 1 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-17	N/A	1 GHz ~ 18 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G-1	N/A	18GHz ~ 40 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G-2	N/A	18GHz ~ 40 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
Test Software	Audix	E3	6.2009-I0-7	N/A	N/A	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 09, 2015	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-6	1 GHz – 26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-7	1 GHz – 26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-8	1 GHz – 26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-9	1 GHz – 26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz – 26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY54320014	50MHz~18GHz	Apr. 20, 2016	Conducted (TH01-CB)

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



Summary

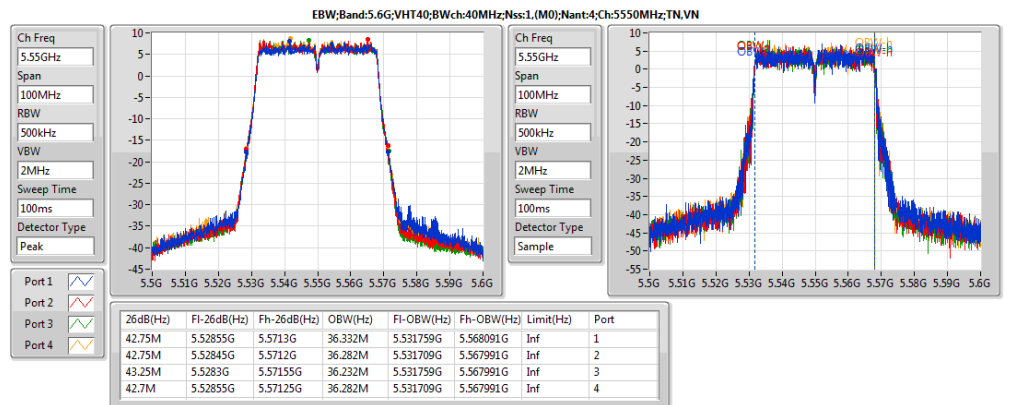
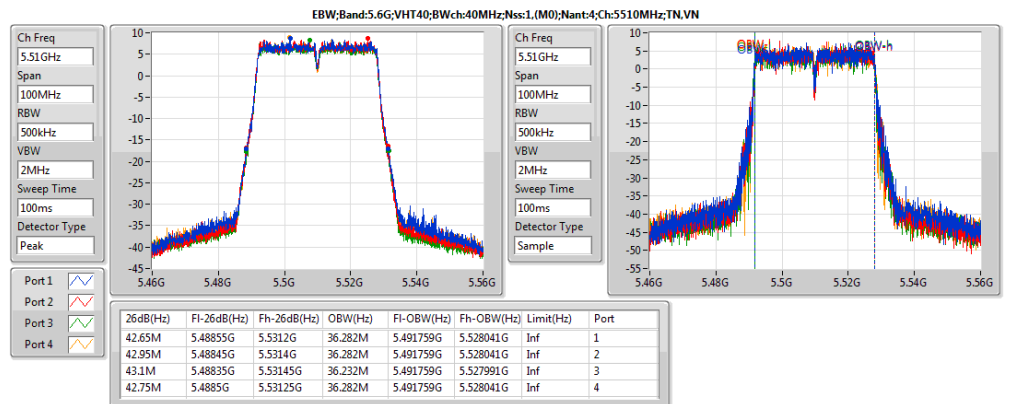
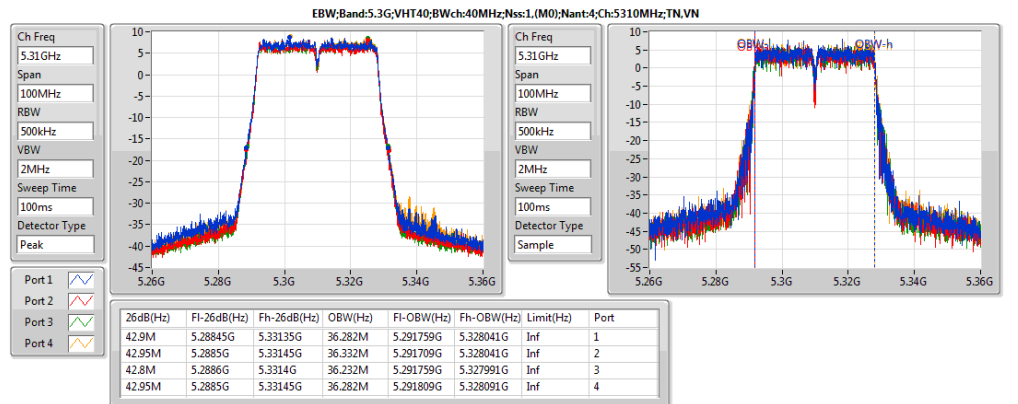
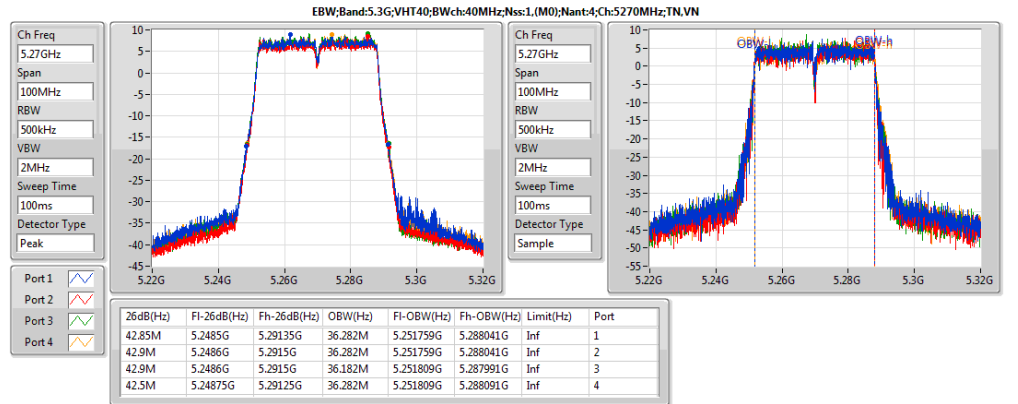
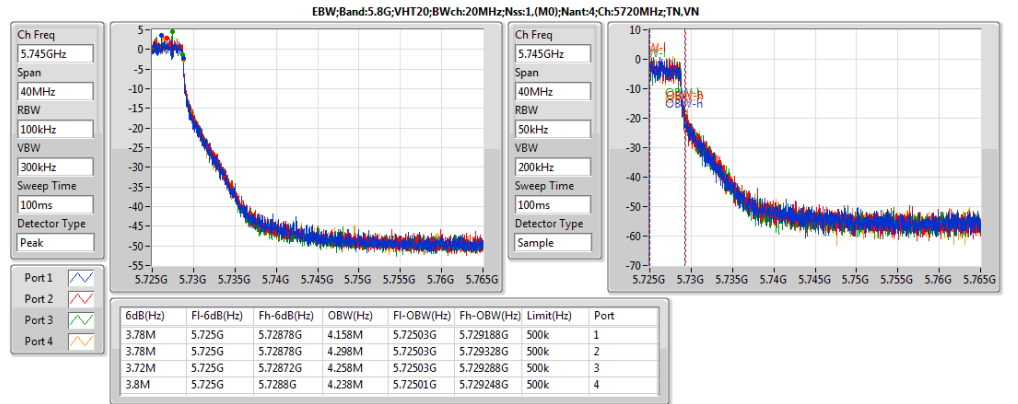
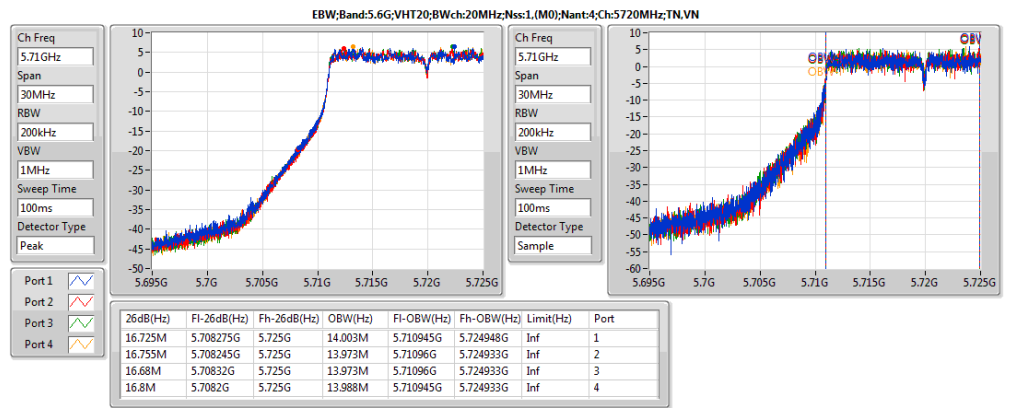
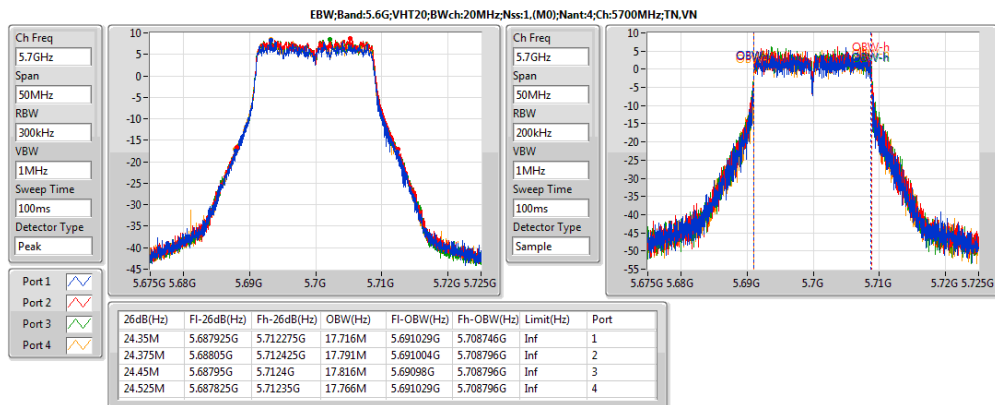
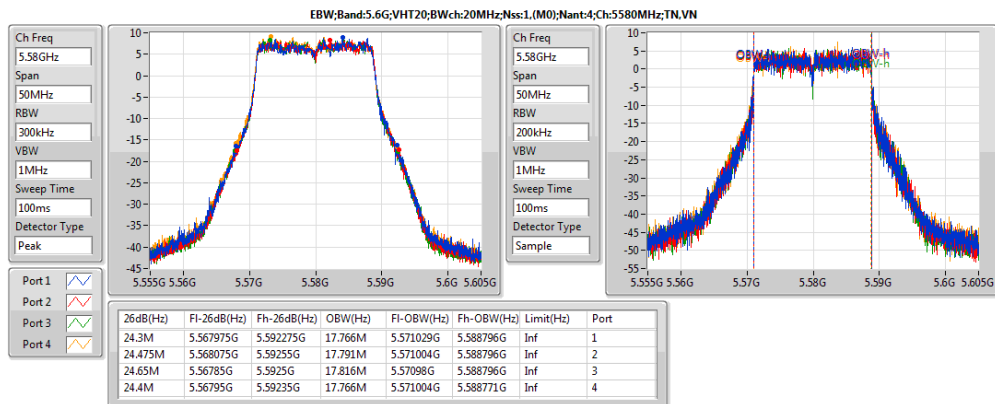
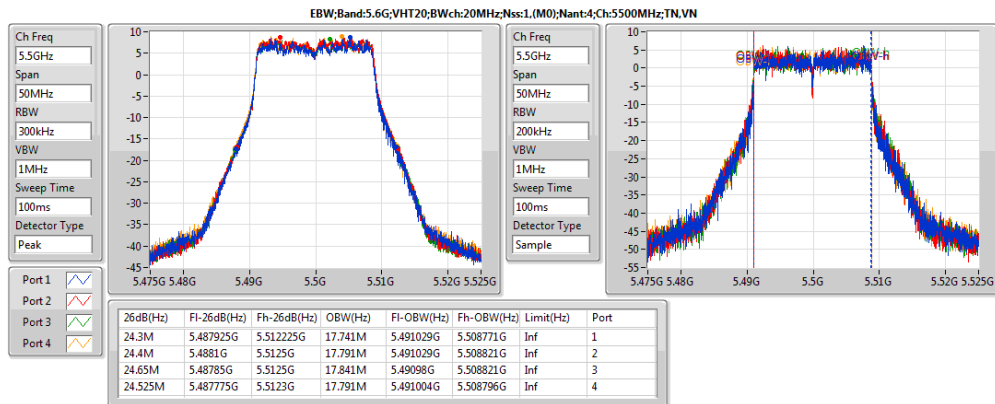
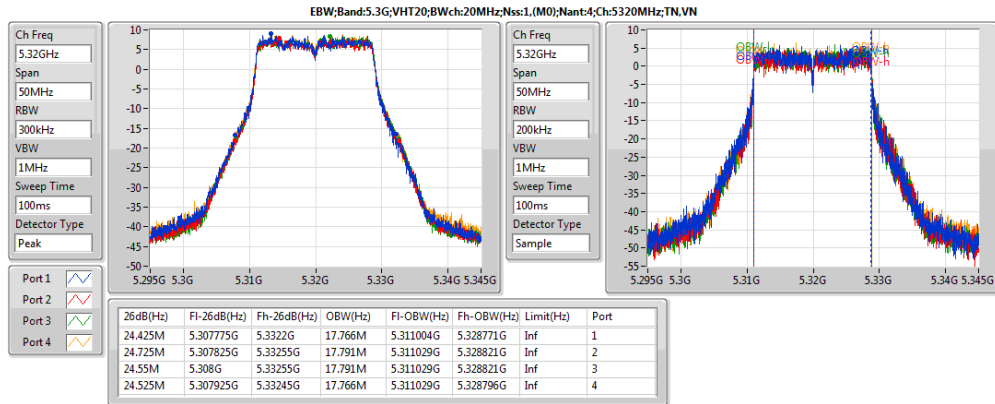
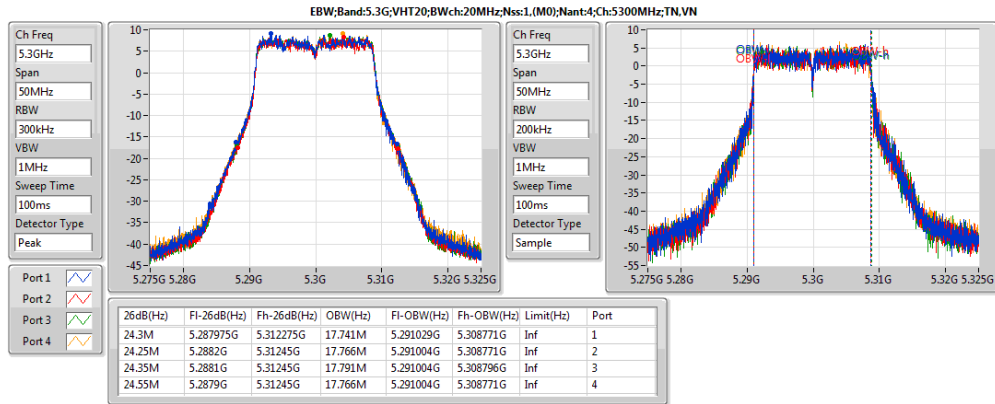
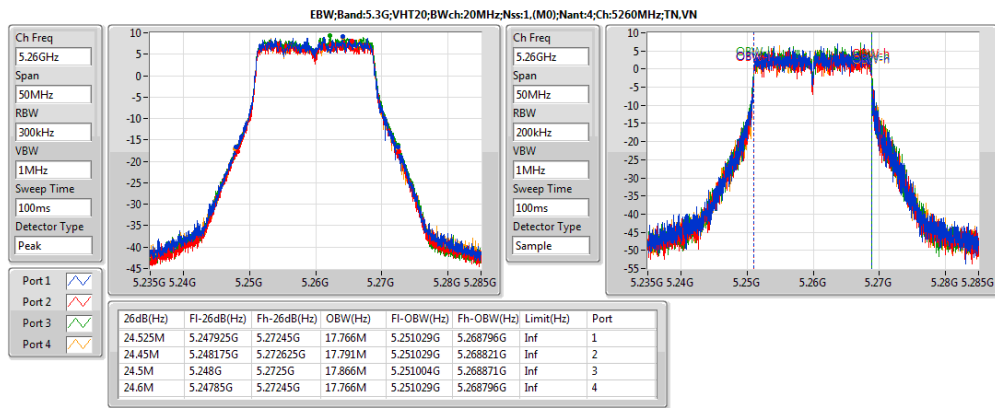
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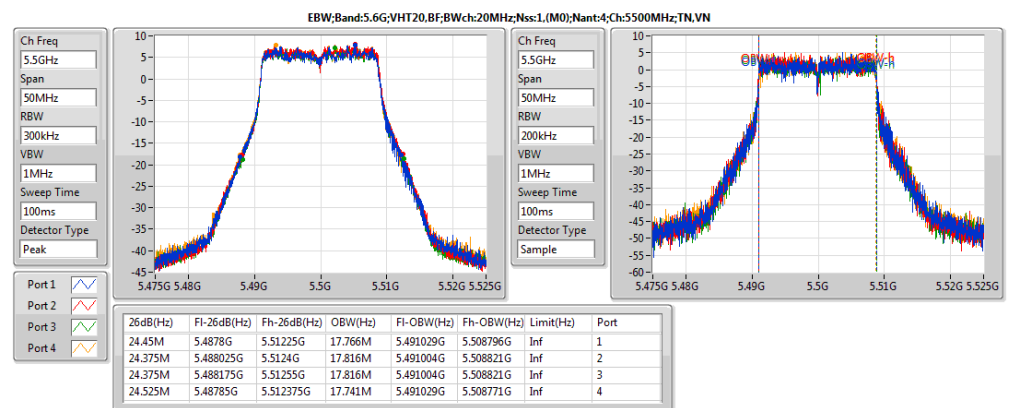
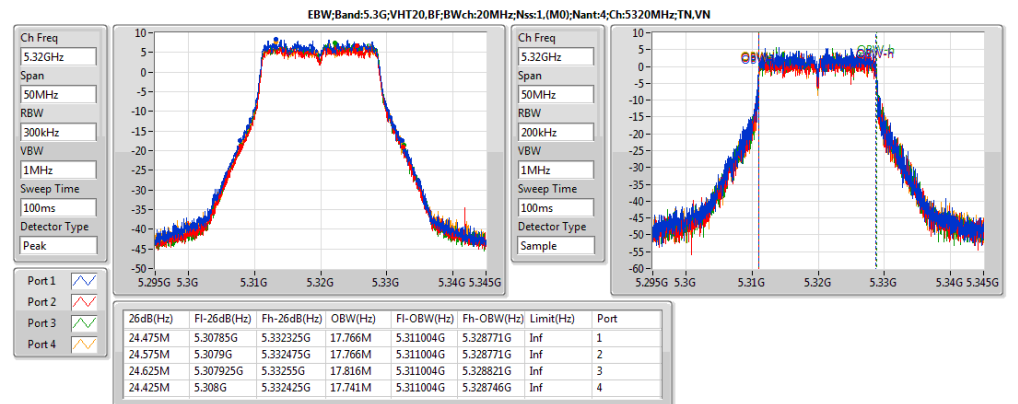
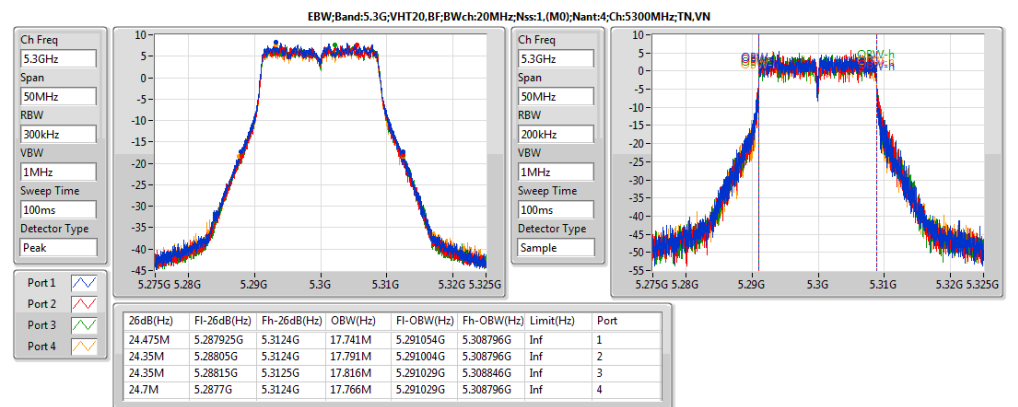
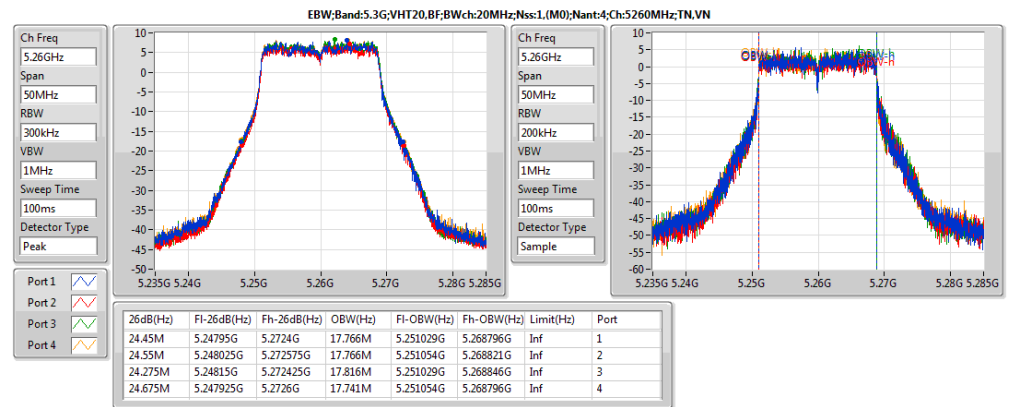
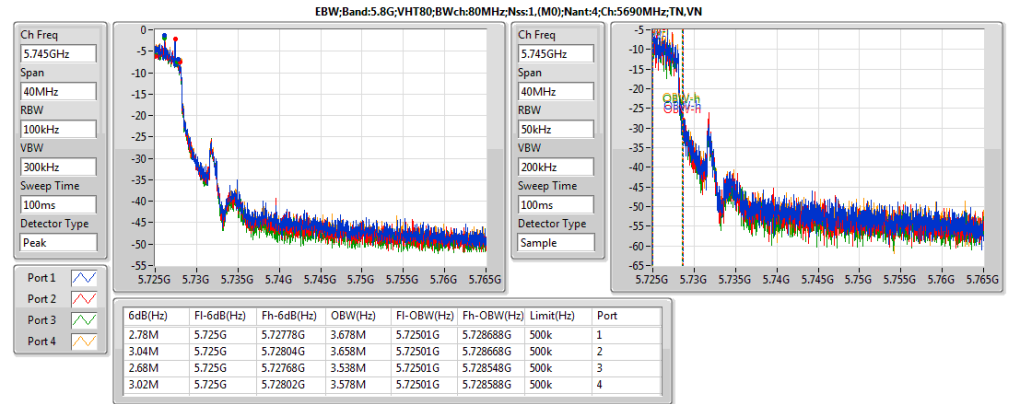
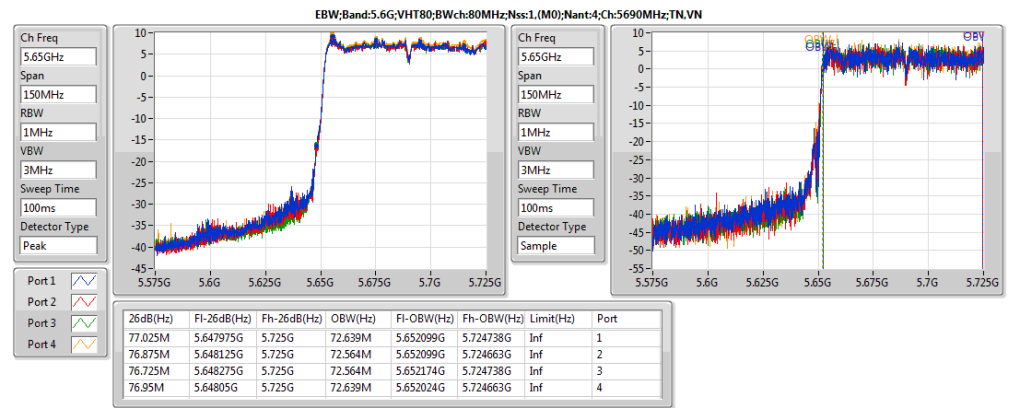
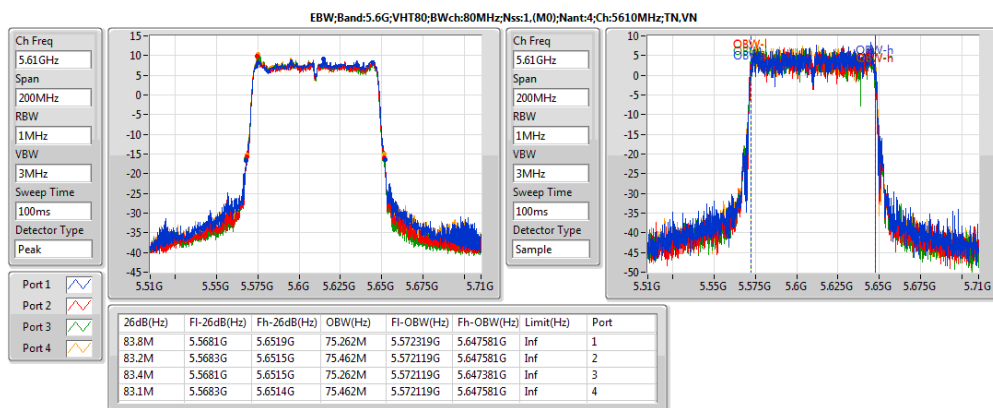
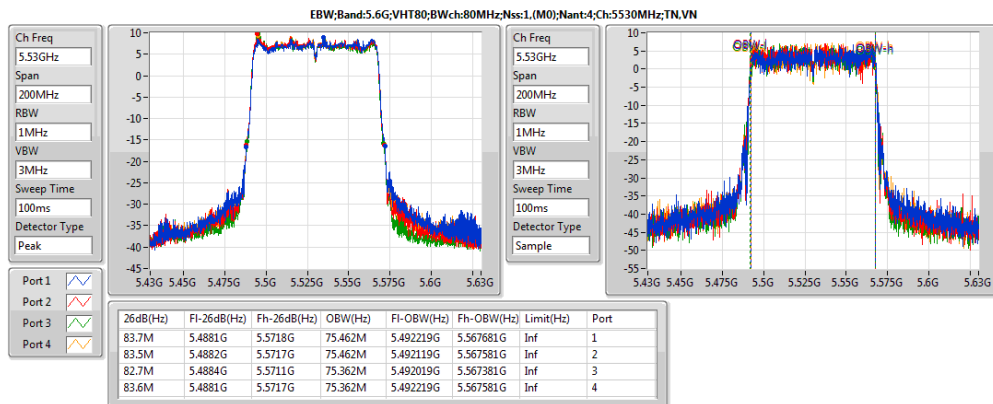
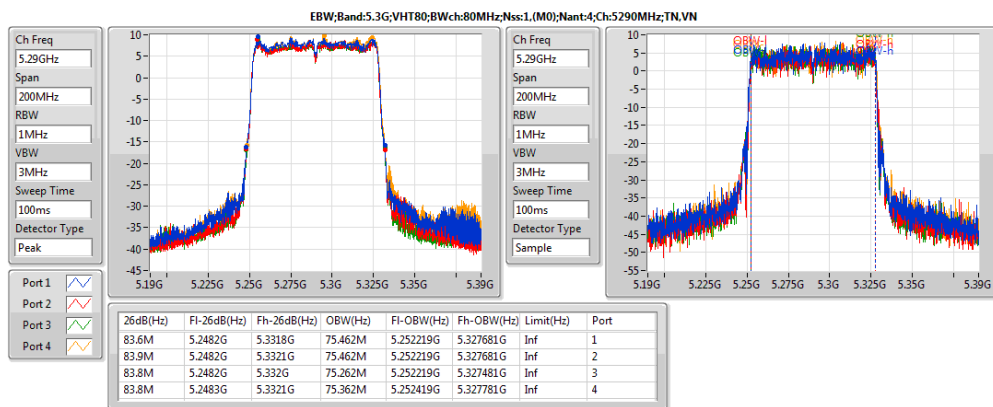
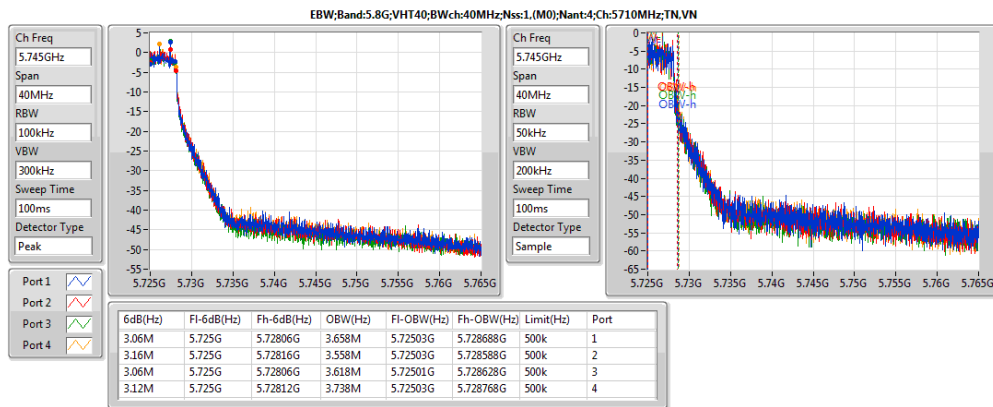
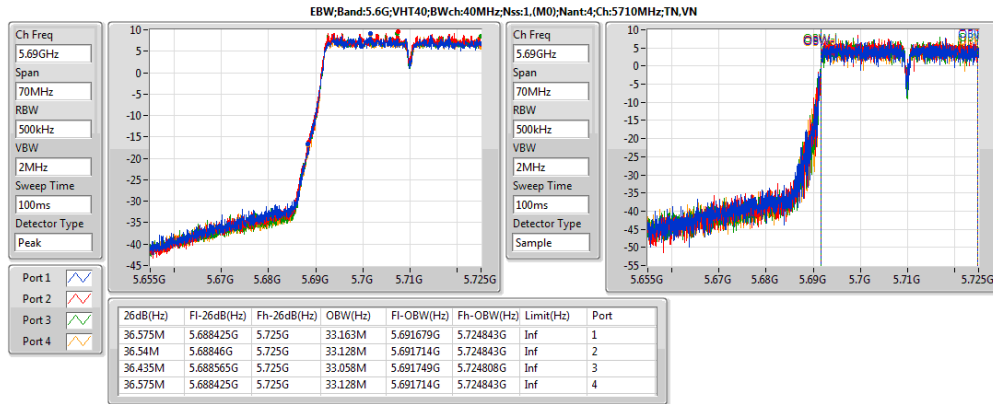
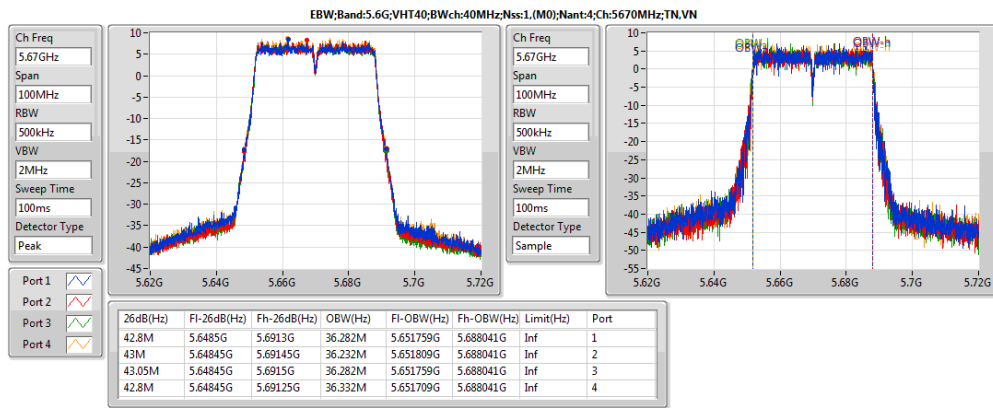
Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.3G;VHT20;Nss1,(M0);Ntx4	24.725M	17.866M	17M9D1D	24.25M	17.741M
5.6G;VHT20;Nss1,(M0);Ntx4	24.65M	17.841M	17M8D1D	16.68M	13.973M
5.8G;VHT20;Nss1,(M0);Ntx4	3.8M	4.298M	4M30D1D	3.72M	4.158M
5.3G;VHT40;Nss1,(M0);Ntx4	42.95M	36.332M	36M3D1D	42.5M	36.182M
5.6G;VHT40;Nss1,(M0);Ntx4	43.25M	36.332M	36M3D1D	36.435M	33.058M
5.8G;VHT40;Nss1,(M0);Ntx4	3.16M	3.738M	3M74D1D	3.06M	3.558M
5.3G;VHT80;Nss1,(M0);Ntx4	83.9M	75.462M	75M5D1D	83.6M	75.262M
5.6G;VHT80;Nss1,(M0);Ntx4	83.8M	75.462M	75M5D1D	76.725M	72.564M
5.8G;VHT80;Nss1,(M0);Ntx4	3.04M	3.678M	3M68D1D	2.68M	3.538M
5.3G;VHT20,BF;Nss1,(M0);Ntx4	24.7M	17.816M	17M8D1D	24.275M	17.741M
5.6G;VHT20,BF;Nss1,(M0);Ntx4	24.625M	17.841M	17M8D1D	16.665M	13.973M
5.8G;VHT20,BF;Nss1,(M0);Ntx4	3.8M	4.278M	4M28D1D	3.66M	4.178M
5.3G;VHT40,BF;Nss1,(M0);Ntx4	43M	36.332M	36M3D1D	42.65M	36.232M
5.6G;VHT40,BF;Nss1,(M0);Ntx4	43.05M	36.432M	36M4D1D	36.54M	33.128M
5.8G;VHT40,BF;Nss1,(M0);Ntx4	3.16M	3.698M	3M70D1D	3.04M	3.598M
5.3G;VHT80,BF;Nss1,(M0);Ntx4	84M	75.562M	75M6D1D	83.5M	75.362M
5.6G;VHT80,BF;Nss1,(M0);Ntx4	83.6M	75.562M	75M6D1D	76.725M	72.489M
5.8G;VHT80,BF;Nss1,(M0);Ntx4	3.04M	3.738M	3M74D1D	2.68M	3.638M

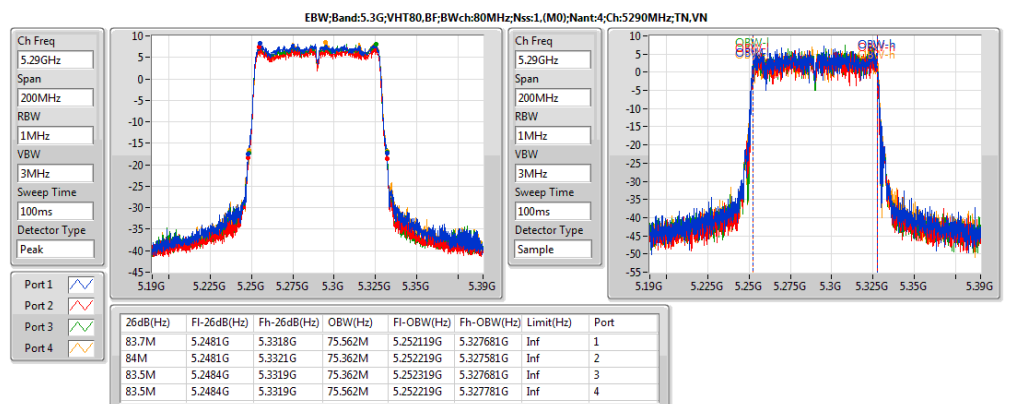
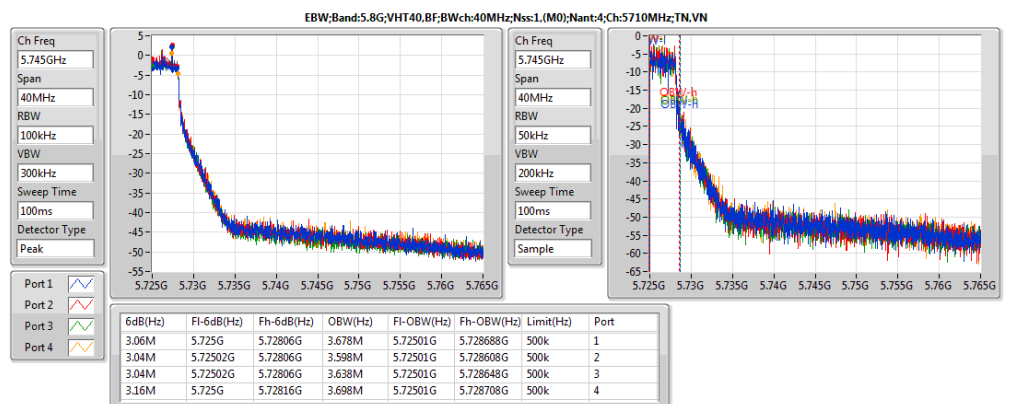
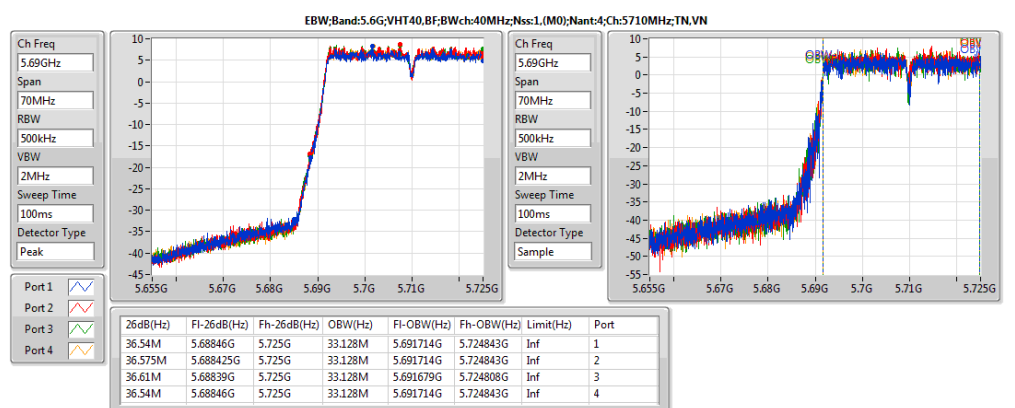
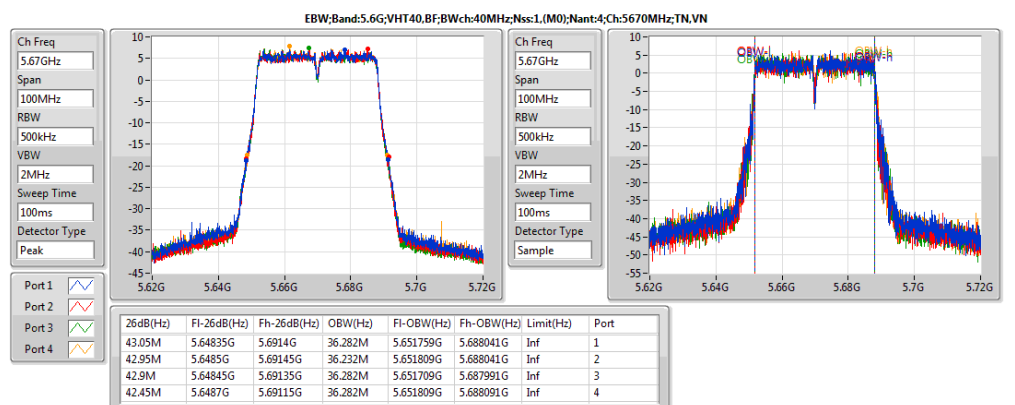
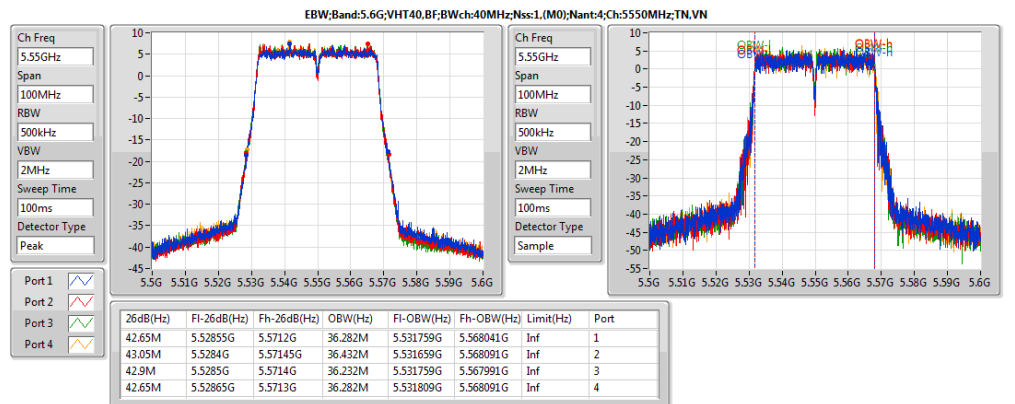
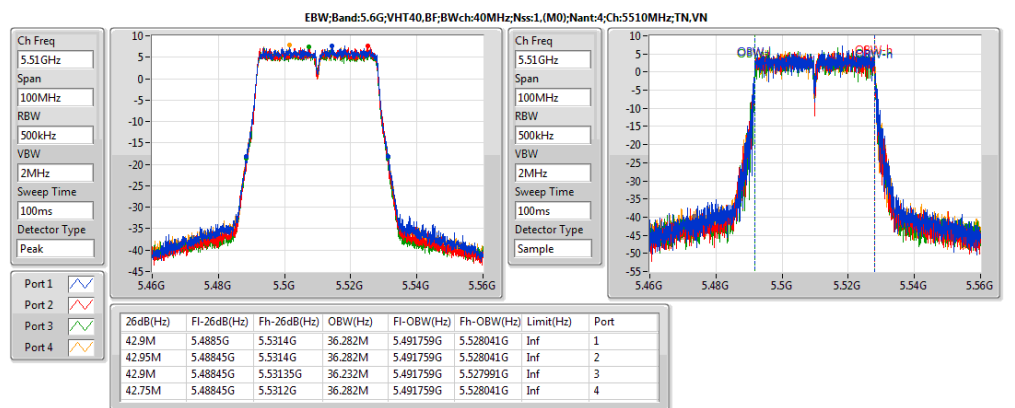
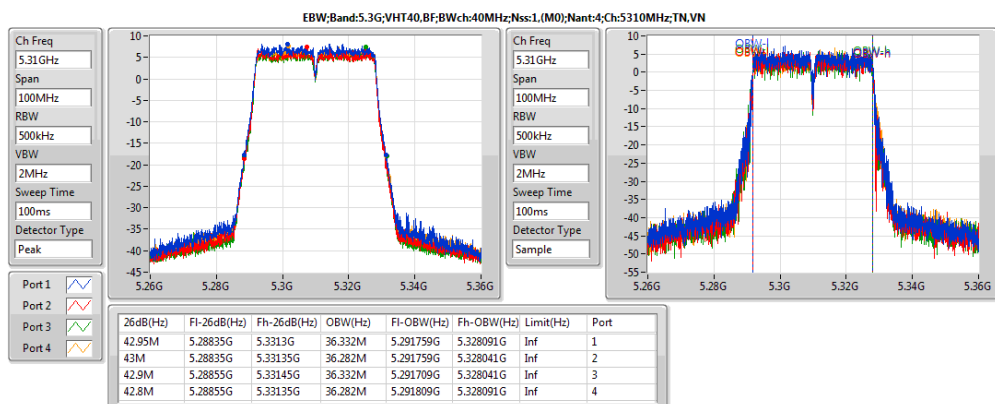
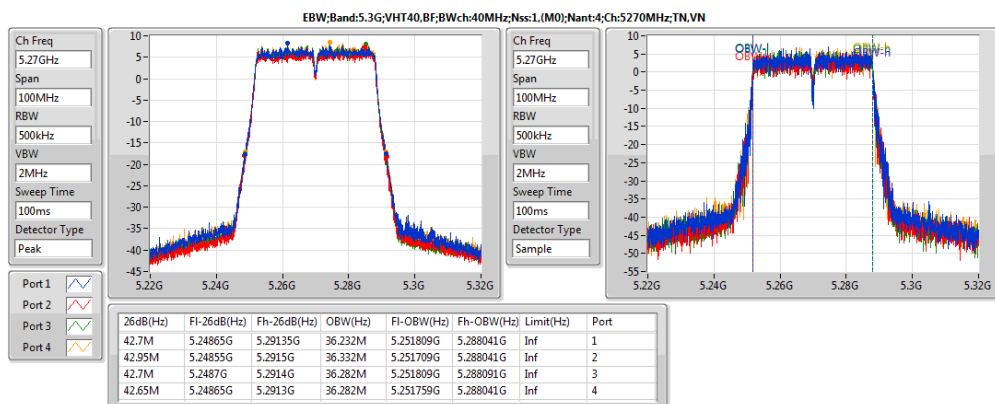
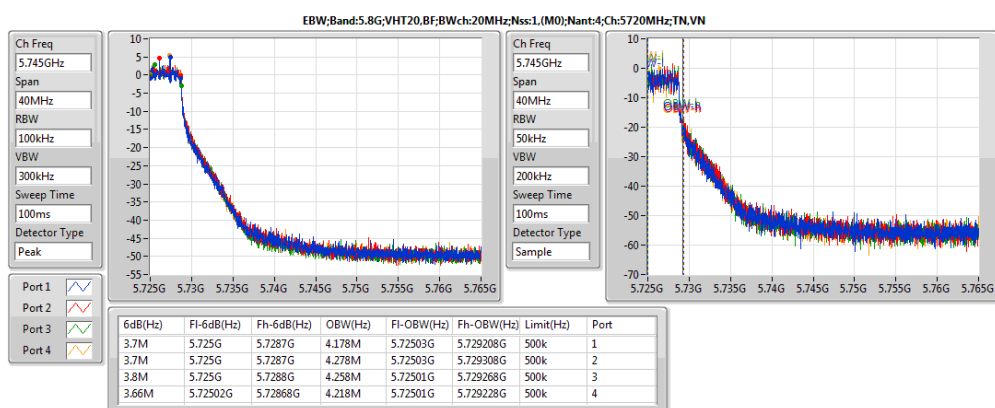
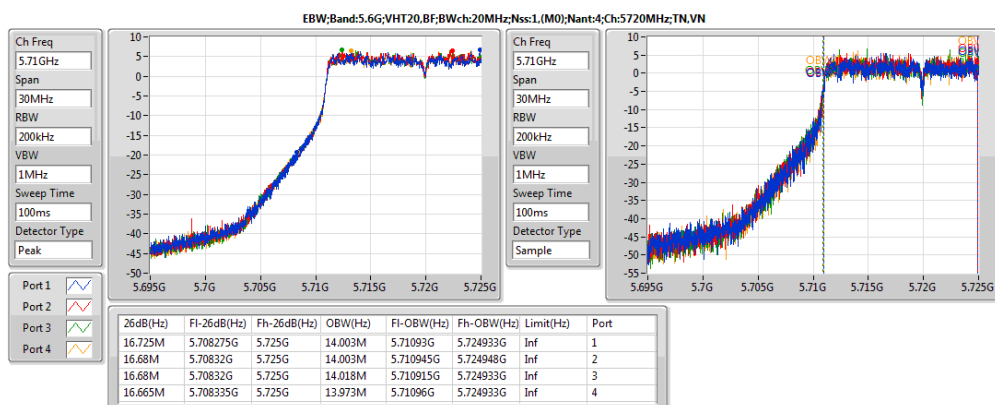
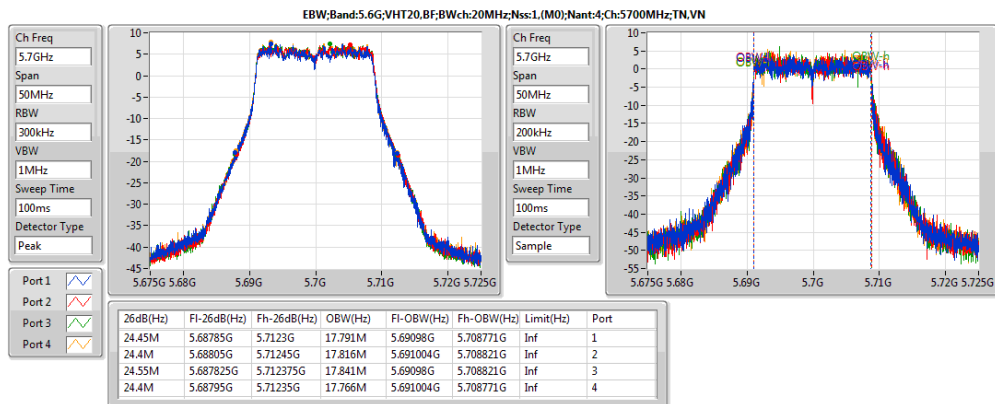
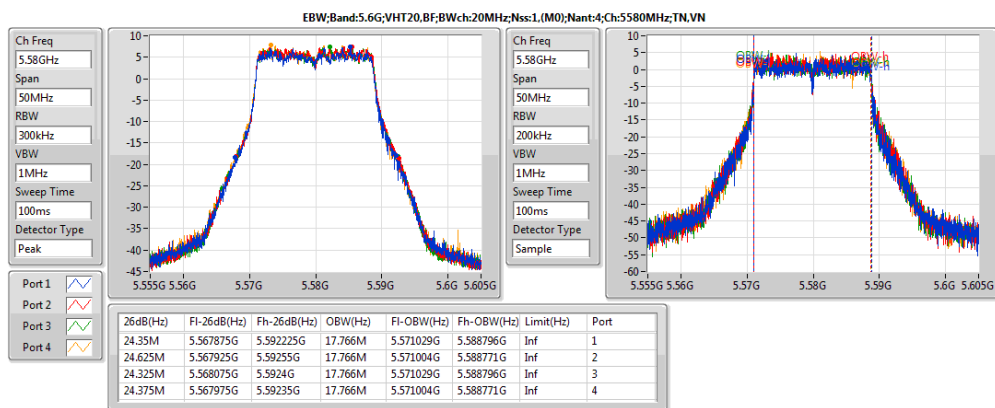


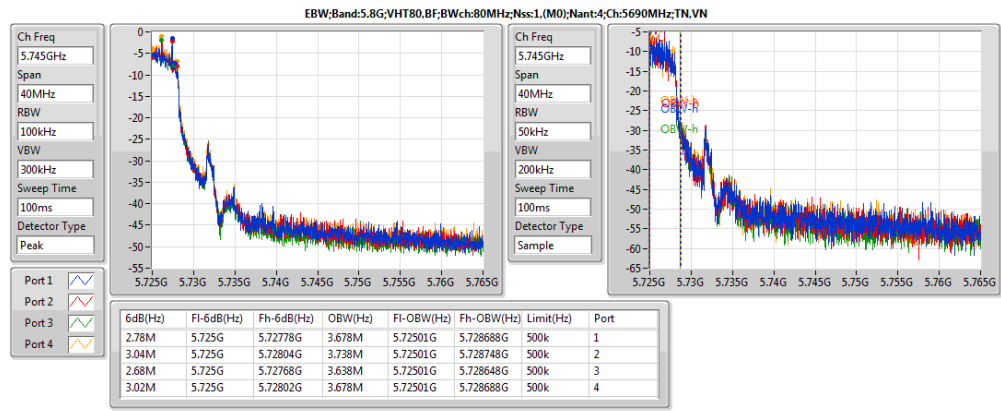
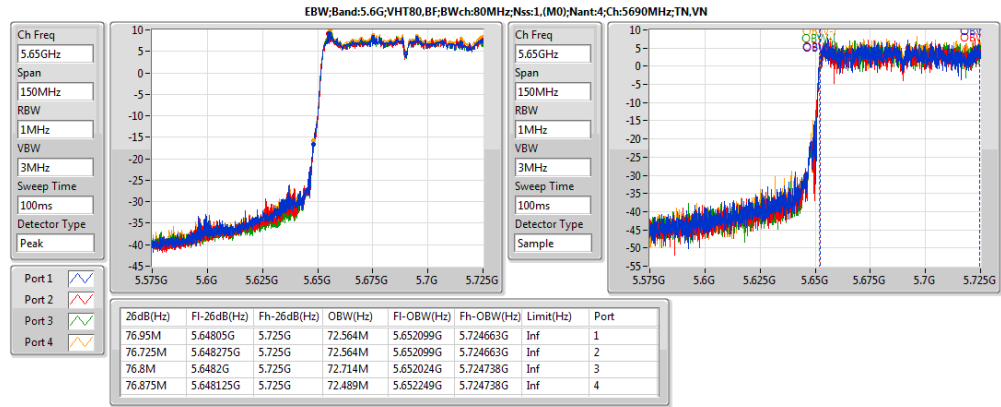
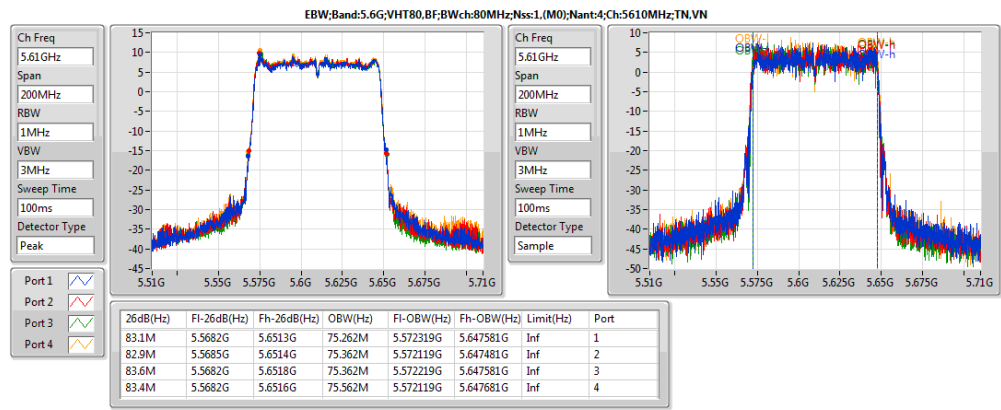
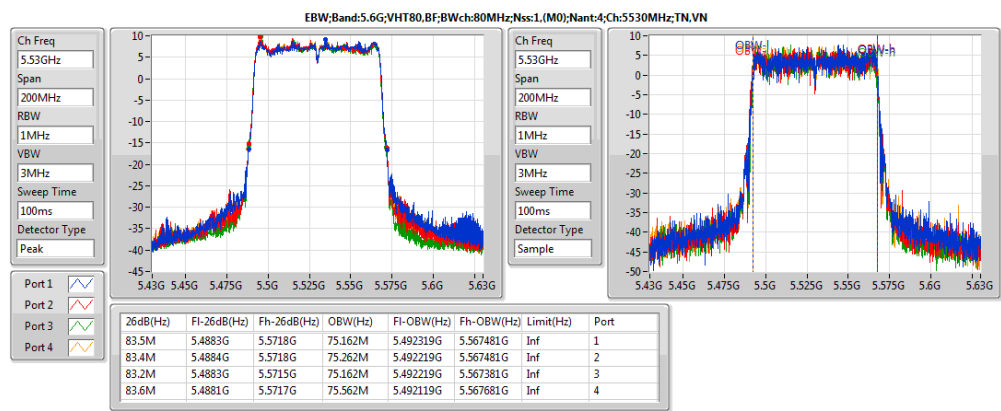
Result

Mode	Result	Limit	P1-N dB (Hz)	P1-OBW (Hz)	P2-N dB (Hz)	P2-OBW (Hz)	P3-N dB (Hz)	P3-OBW (Hz)	P4-N dB (Hz)	P4-OBW (Hz)
5.3G;VHT20;Nss1,(M0);Ntx4;5260	Pass	Inf	24.525M	17.766M	24.45M	17.791M	24.5M	17.866M	24.6M	17.766M
5.3G;VHT20;Nss1,(M0);Ntx4;5300	Pass	Inf	24.3M	17.741M	24.25M	17.766M	24.35M	17.791M	24.55M	17.766M
5.3G;VHT20;Nss1,(M0);Ntx4;5320	Pass	Inf	24.425M	17.766M	24.725M	17.791M	24.55M	17.791M	24.525M	17.766M
5.6G;VHT20;Nss1,(M0);Ntx4;5500	Pass	Inf	24.3M	17.741M	24.4M	17.791M	24.65M	17.841M	24.525M	17.791M
5.6G;VHT20;Nss1,(M0);Ntx4;5580	Pass	Inf	24.3M	17.766M	24.475M	17.791M	24.65M	17.816M	24.4M	17.766M
5.6G;VHT20;Nss1,(M0);Ntx4;5700	Pass	Inf	24.35M	17.716M	24.375M	17.791M	24.45M	17.816M	24.525M	17.766M
5.6G;VHT20;Nss1,(M0);Ntx4;5720	Pass	Inf	16.725M	14.003M	16.755M	13.973M	16.68M	13.973M	16.8M	13.988M
5.8G;VHT20;Nss1,(M0);Ntx4;5720	Pass	500k	3.78M	4.158M	3.78M	4.298M	3.72M	4.258M	3.8M	4.238M
5.3G;VHT40;Nss1,(M0);Ntx4;5270	Pass	Inf	42.85M	36.282M	42.9M	36.282M	42.9M	36.182M	42.5M	36.282M
5.3G;VHT40;Nss1,(M0);Ntx4;5310	Pass	Inf	42.9M	36.282M	42.95M	36.332M	42.8M	36.232M	42.95M	36.282M
5.6G;VHT40;Nss1,(M0);Ntx4;5510	Pass	Inf	42.65M	36.282M	42.95M	36.282M	43.1M	36.232M	42.75M	36.282M
5.6G;VHT40;Nss1,(M0);Ntx4;5550	Pass	Inf	42.75M	36.332M	42.75M	36.282M	43.25M	36.232M	42.7M	36.282M
5.6G;VHT40;Nss1,(M0);Ntx4;5670	Pass	Inf	42.8M	36.282M	43M	36.232M	43.05M	36.282M	42.8M	36.332M
5.6G;VHT40;Nss1,(M0);Ntx4;5710	Pass	Inf	36.575M	33.163M	36.54M	33.128M	36.435M	33.058M	36.575M	33.128M
5.8G;VHT40;Nss1,(M0);Ntx4;5710	Pass	500k	3.06M	3.658M	3.16M	3.558M	3.06M	3.618M	3.12M	3.738M
5.3G;VHT80;Nss1,(M0);Ntx4;5290	Pass	Inf	83.6M	75.462M	83.9M	75.462M	83.8M	75.262M	83.8M	75.362M
5.6G;VHT80;Nss1,(M0);Ntx4;5530	Pass	Inf	83.7M	75.462M	83.5M	75.462M	82.7M	75.362M	83.6M	75.362M
5.6G;VHT80;Nss1,(M0);Ntx4;5610	Pass	Inf	83.8M	75.262M	83.2M	75.462M	83.4M	75.262M	83.1M	75.462M
5.6G;VHT80;Nss1,(M0);Ntx4;5690	Pass	Inf	77.025M	72.639M	76.875M	72.564M	76.725M	72.564M	76.95M	72.639M
5.8G;VHT80;Nss1,(M0);Ntx4;5690	Pass	500k	2.78M	3.678M	3.04M	3.658M	2.68M	3.538M	3.02M	3.578M
5.3G;VHT20,BF;Nss1,(M0);Ntx4;5260	Pass	Inf	24.45M	17.766M	24.55M	17.766M	24.275M	17.816M	24.675M	17.741M
5.3G;VHT20,BF;Nss1,(M0);Ntx4;5300	Pass	Inf	24.475M	17.741M	24.35M	17.791M	24.35M	17.816M	24.7M	17.766M
5.3G;VHT20,BF;Nss1,(M0);Ntx4;5320	Pass	Inf	24.475M	17.766M	24.575M	17.766M	24.625M	17.816M	24.425M	17.741M
5.6G;VHT20,BF;Nss1,(M0);Ntx4;5500	Pass	Inf	24.45M	17.766M	24.375M	17.816M	24.375M	17.816M	24.525M	17.741M
5.6G;VHT20,BF;Nss1,(M0);Ntx4;5580	Pass	Inf	24.35M	17.766M	24.625M	17.766M	24.325M	17.766M	24.375M	17.766M
5.6G;VHT20,BF;Nss1,(M0);Ntx4;5700	Pass	Inf	24.45M	17.791M	24.4M	17.816M	24.55M	17.841M	24.4M	17.766M
5.6G;VHT20,BF;Nss1,(M0);Ntx4;5720	Pass	Inf	16.725M	14.003M	16.68M	14.003M	16.68M	14.018M	16.665M	13.973M
5.8G;VHT20,BF;Nss1,(M0);Ntx4;5720	Pass	500k	3.7M	4.178M	3.7M	4.278M	3.8M	4.258M	3.66M	4.218M
5.3G;VHT40,BF;Nss1,(M0);Ntx4;5270	Pass	Inf	42.7M	36.232M	42.95M	36.332M	42.7M	36.282M	42.65M	36.282M
5.3G;VHT40,BF;Nss1,(M0);Ntx4;5310	Pass	Inf	42.95M	36.332M	43M	36.282M	42.9M	36.332M	42.8M	36.282M
5.6G;VHT40,BF;Nss1,(M0);Ntx4;5510	Pass	Inf	42.9M	36.282M	42.95M	36.282M	42.9M	36.232M	42.75M	36.282M
5.6G;VHT40,BF;Nss1,(M0);Ntx4;5550	Pass	Inf	42.65M	36.282M	43.05M	36.432M	42.9M	36.232M	42.65M	36.282M
5.6G;VHT40,BF;Nss1,(M0);Ntx4;5670	Pass	Inf	43.05M	36.282M	42.95M	36.232M	42.9M	36.282M	42.45M	36.282M
5.6G;VHT40,BF;Nss1,(M0);Ntx4;5710	Pass	Inf	36.54M	33.128M	36.575M	33.128M	36.61M	33.128M	36.54M	33.128M
5.8G;VHT40,BF;Nss1,(M0);Ntx4;5710	Pass	500k	3.06M	3.678M	3.04M	3.598M	3.04M	3.638M	3.16M	3.698M
5.3G;VHT80,BF;Nss1,(M0);Ntx4;5290	Pass	Inf	83.7M	75.562M	84M	75.362M	83.5M	75.362M	83.5M	75.562M
5.6G;VHT80,BF;Nss1,(M0);Ntx4;5530	Pass	Inf	83.5M	75.162M	83.4M	75.262M	83.2M	75.162M	83.6M	75.562M
5.6G;VHT80,BF;Nss1,(M0);Ntx4;5610	Pass	Inf	83.1M	75.262M	82.9M	75.362M	83.6M	75.362M	83.4M	75.562M
5.6G;VHT80,BF;Nss1,(M0);Ntx4;5690	Pass	Inf	76.95M	72.564M	76.725M	72.564M	76.8M	72.714M	76.875M	72.489M
5.8G;VHT80,BF;Nss1,(M0);Ntx4;5690	Pass	500k	2.78M	3.678M	3.04M	3.738M	2.68M	3.638M	3.02M	3.678M











Summary

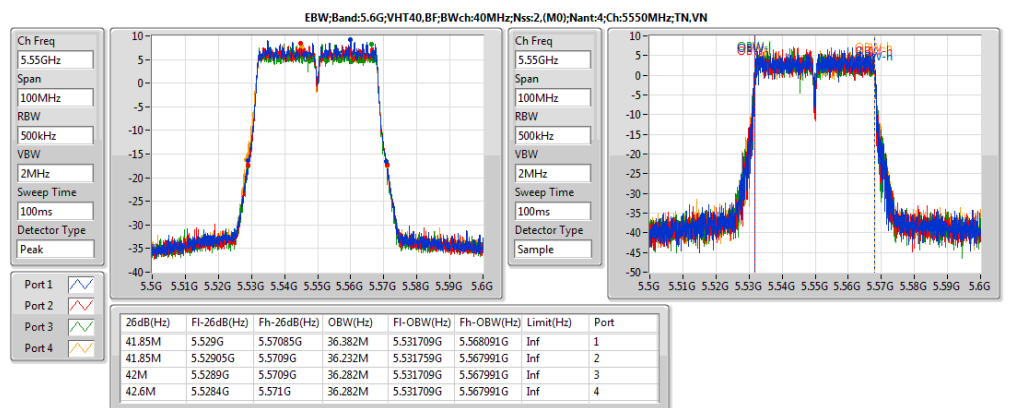
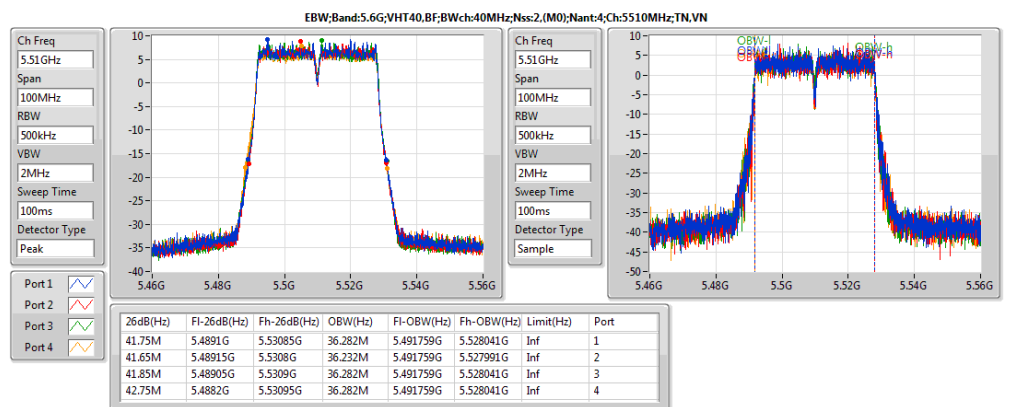
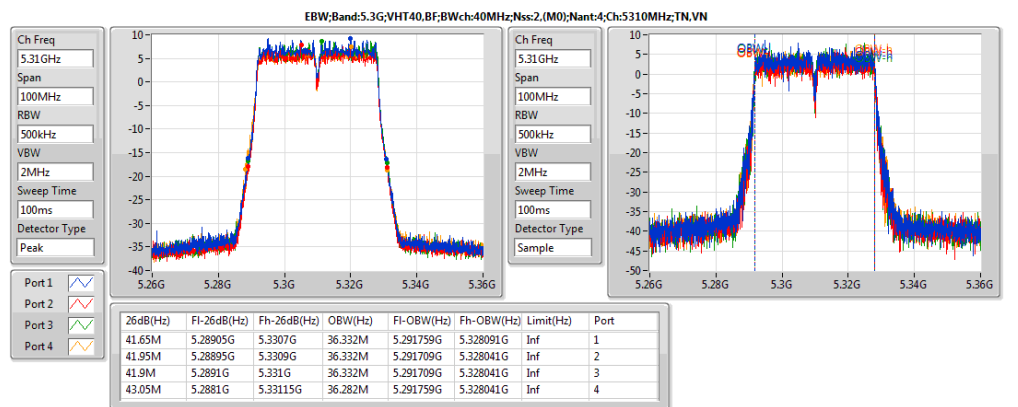
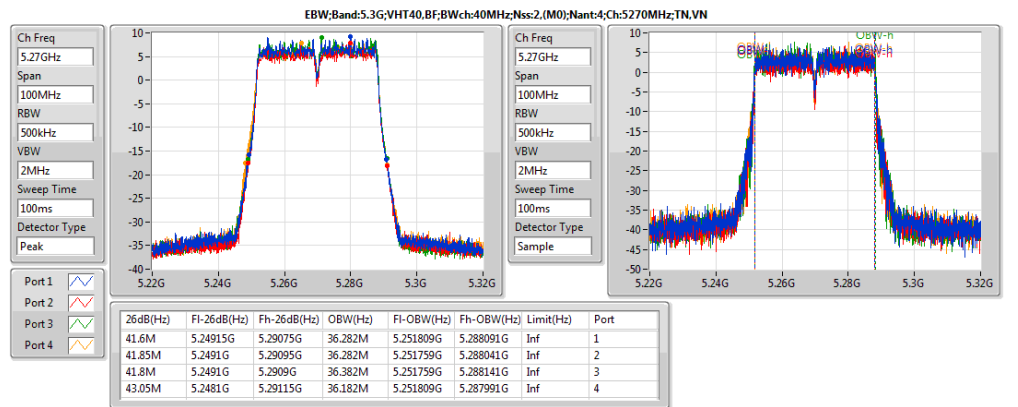
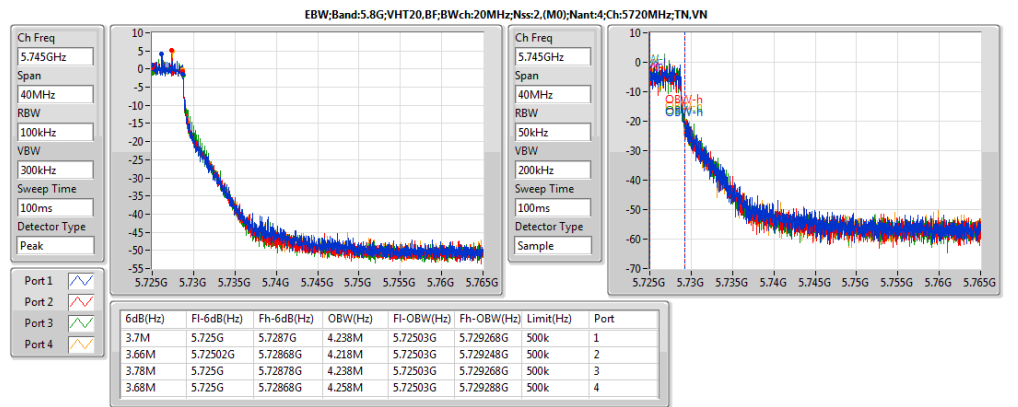
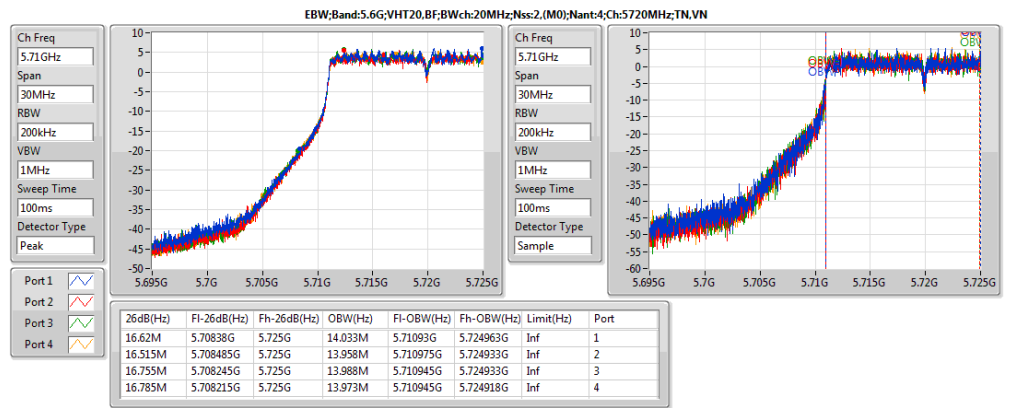
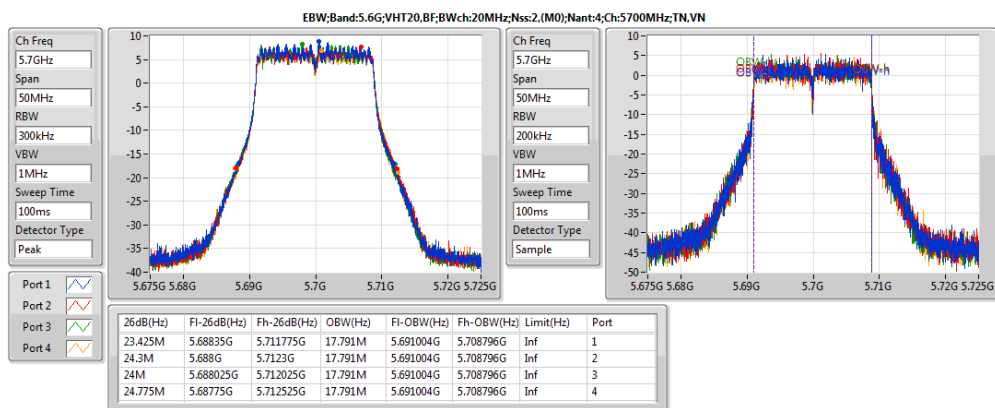
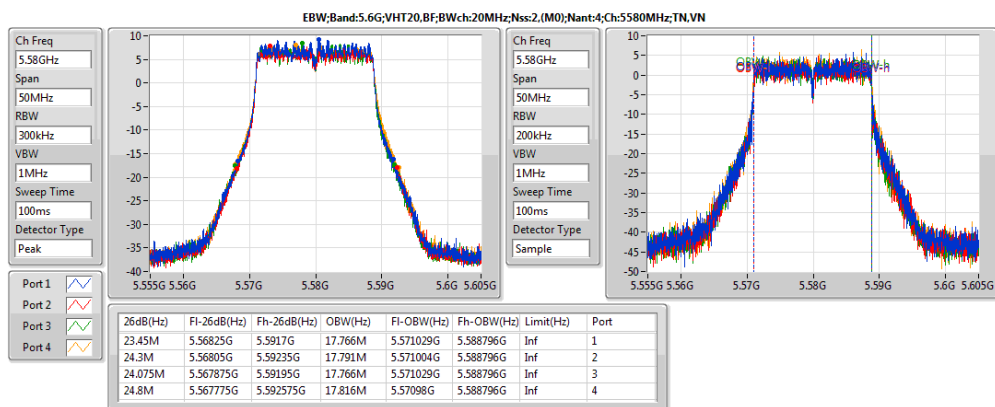
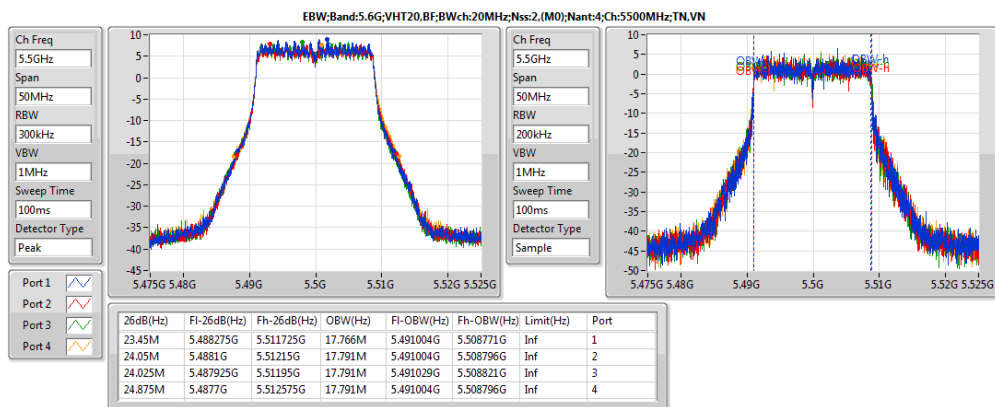
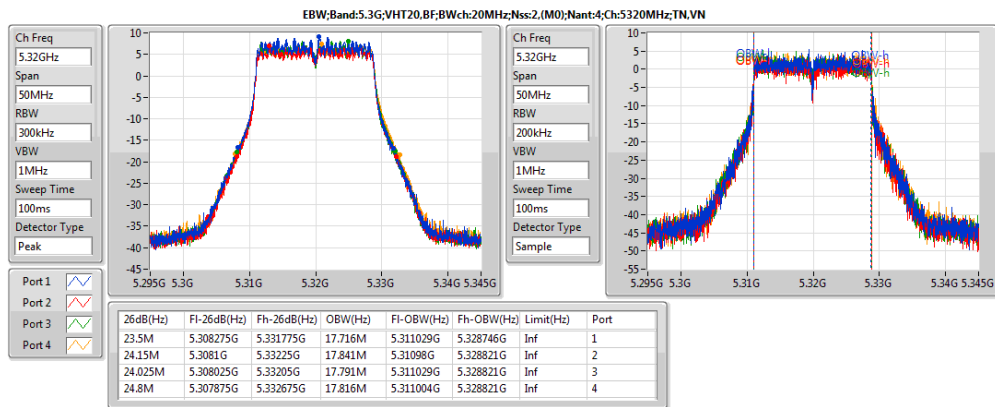
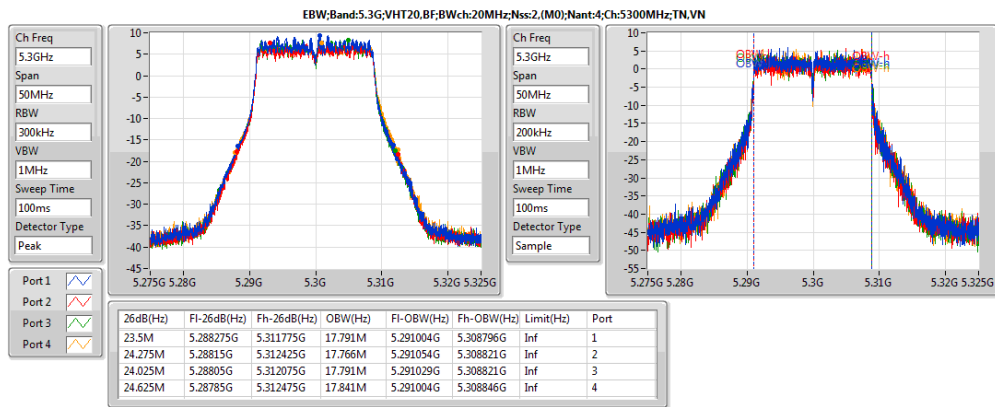
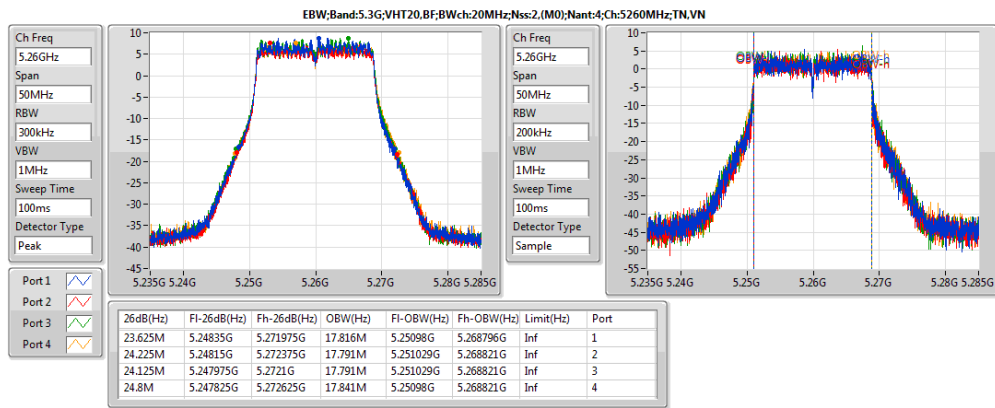
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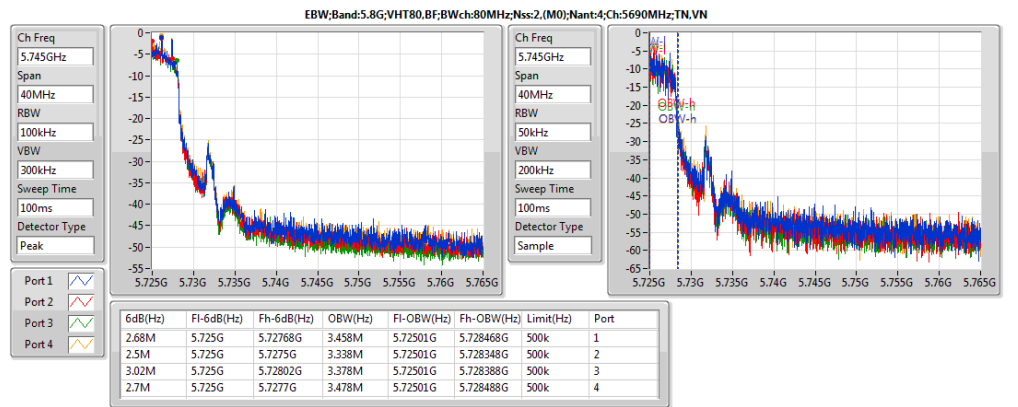
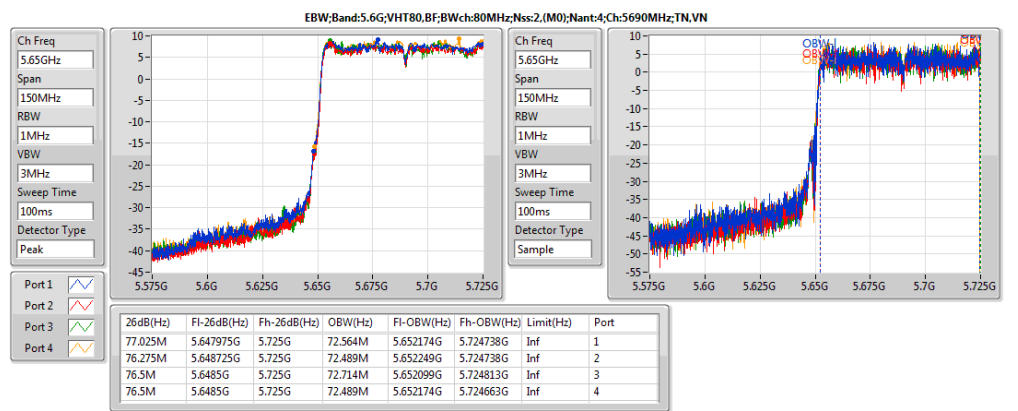
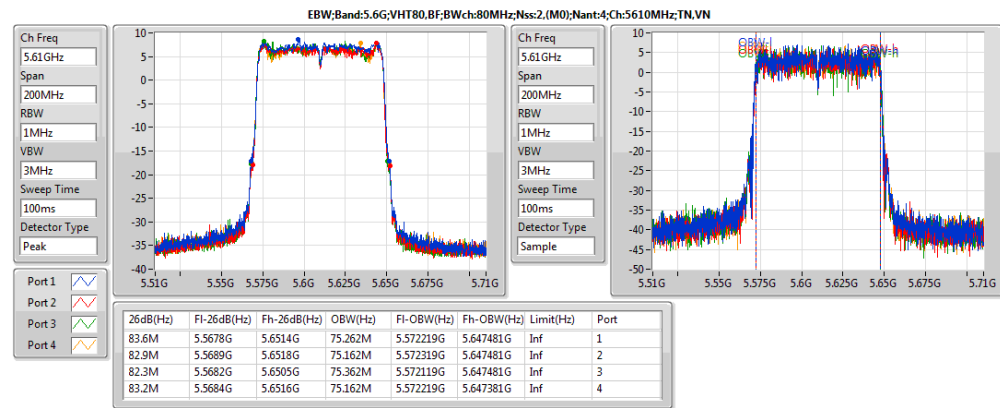
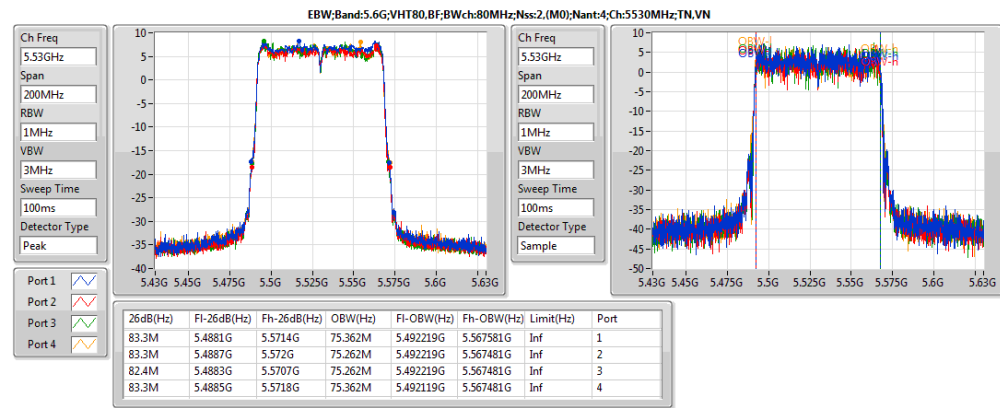
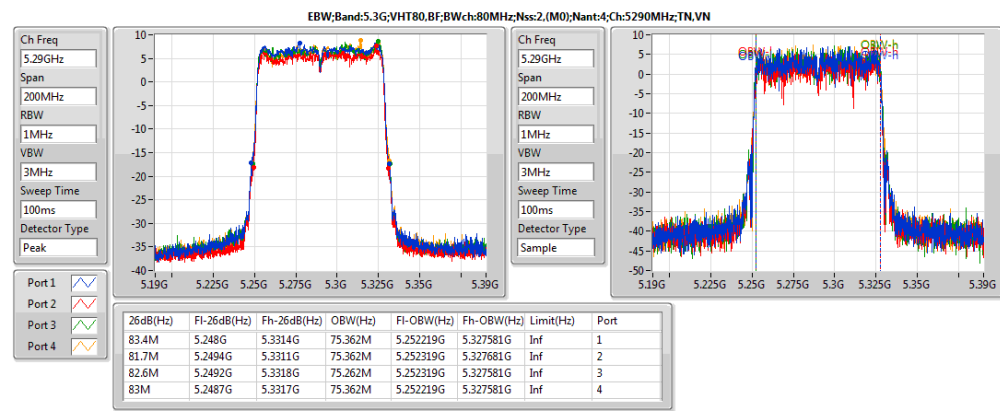
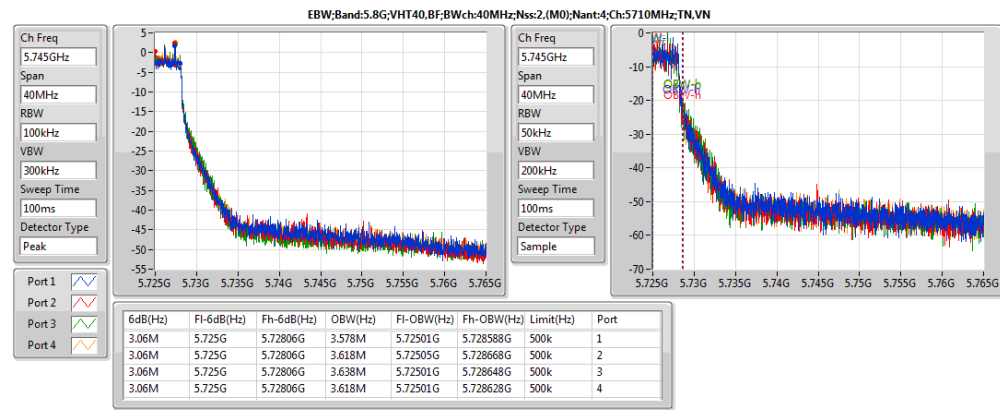
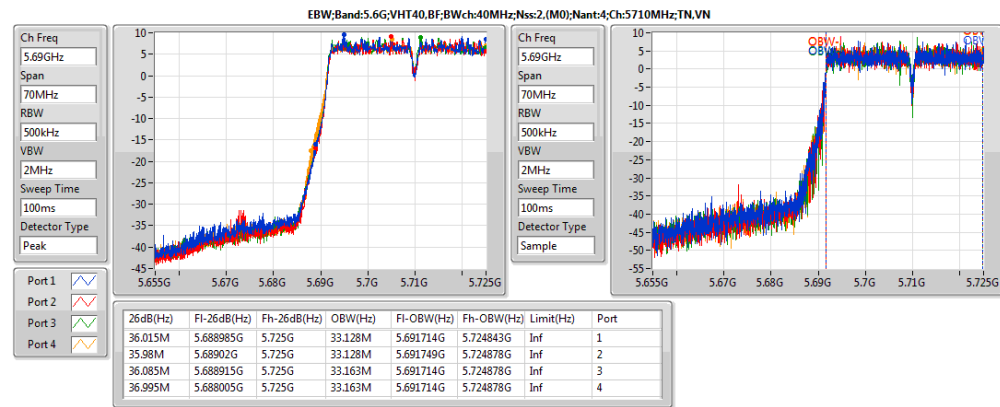
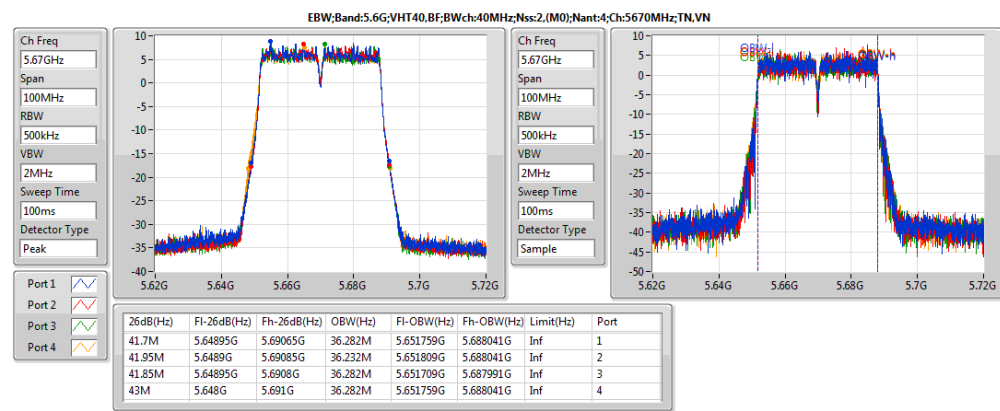
Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.3G;VHT20,BF;Nss2,(M0);Ntx4	24.8M	17.841M	17M8D1D	23.5M	17.716M
5.6G;VHT20,BF;Nss2,(M0);Ntx4	24.875M	17.816M	17M8D1D	16.515M	13.958M
5.3G;VHT40,BF;Nss2,(M0);Ntx4	43.05M	36.382M	36M4D1D	41.6M	36.182M
5.6G;VHT40,BF;Nss2,(M0);Ntx4	43M	36.382M	36M4D1D	35.98M	33.128M
5.3G;VHT80,BF;Nss2,(M0);Ntx4	83.4M	75.362M	75M4D1D	81.7M	75.262M
5.6G;VHT80,BF;Nss2,(M0);Ntx4	83.6M	75.362M	75M4D1D	76.275M	72.489M



Result

Mode	Result	Limit (Hz)	P1-N dB (Hz)	P1-OBW (Hz)	P2-N dB (Hz)	P2-OBW (Hz)	P3-N dB (Hz)	P3-OBW (Hz)	P4-N dB (Hz)	P4-OBW (Hz)
5.3G;VHT20,BF;Nss2,(M0);Ntx4;5260	Pass	Inf	23.625M	17.816M	24.225M	17.791M	24.125M	17.791M	24.8M	17.841M
5.3G;VHT20,BF;Nss2,(M0);Ntx4;5300	Pass	Inf	23.5M	17.791M	24.275M	17.766M	24.025M	17.791M	24.625M	17.841M
5.3G;VHT20,BF;Nss2,(M0);Ntx4;5320	Pass	Inf	23.5M	17.716M	24.15M	17.841M	24.025M	17.791M	24.8M	17.816M
5.6G;VHT20,BF;Nss2,(M0);Ntx4;5500	Pass	Inf	23.45M	17.766M	24.05M	17.791M	24.025M	17.791M	24.875M	17.791M
5.6G;VHT20,BF;Nss2,(M0);Ntx4;5580	Pass	Inf	23.45M	17.766M	24.3M	17.791M	24.075M	17.766M	24.8M	17.816M
5.6G;VHT20,BF;Nss2,(M0);Ntx4;5700	Pass	Inf	23.425M	17.791M	24.3M	17.791M	24M	17.791M	24.775M	17.791M
5.6G;VHT20,BF;Nss2,(M0);Ntx4;5720	Pass	Inf	16.62M	14.033M	16.515M	13.958M	16.755M	13.988M	16.785M	13.973M
5.8G;VHT20,BF;Nss2,(M0);Ntx4;5720	Pass	500k	3.7M	4.238M	3.66M	4.218M	3.78M	4.238M	3.68M	4.258M
5.3G;VHT40,BF;Nss2,(M0);Ntx4;5270	Pass	Inf	41.6M	36.282M	41.85M	36.282M	41.8M	36.382M	43.05M	36.182M
5.3G;VHT40,BF;Nss2,(M0);Ntx4;5310	Pass	Inf	41.65M	36.332M	41.95M	36.332M	41.9M	36.332M	43.05M	36.282M
5.6G;VHT40,BF;Nss2,(M0);Ntx4;5510	Pass	Inf	41.75M	36.282M	41.65M	36.232M	41.85M	36.282M	42.75M	36.282M
5.6G;VHT40,BF;Nss2,(M0);Ntx4;5550	Pass	Inf	41.85M	36.382M	41.85M	36.232M	42M	36.282M	42.6M	36.282M
5.6G;VHT40,BF;Nss2,(M0);Ntx4;5670	Pass	Inf	41.7M	36.282M	41.95M	36.232M	41.85M	36.282M	43M	36.282M
5.6G;VHT40,BF;Nss2,(M0);Ntx4;5710	Pass	Inf	36.015M	33.128M	35.98M	33.128M	36.085M	33.163M	36.995M	33.163M
5.8G;VHT40,BF;Nss2,(M0);Ntx4;5710	Pass	500k	3.06M	3.578M	3.06M	3.618M	3.06M	3.638M	3.06M	3.618M
5.3G;VHT80,BF;Nss2,(M0);Ntx4;5290	Pass	Inf	83.4M	75.362M	81.7M	75.362M	82.6M	75.262M	83M	75.362M
5.6G;VHT80,BF;Nss2,(M0);Ntx4;5530	Pass	Inf	83.3M	75.362M	83.3M	75.262M	82.4M	75.262M	83.3M	75.362M
5.6G;VHT80,BF;Nss2,(M0);Ntx4;5610	Pass	Inf	83.6M	75.262M	82.9M	75.162M	82.3M	75.362M	83.2M	75.162M
5.6G;VHT80,BF;Nss2,(M0);Ntx4;5690	Pass	Inf	77.025M	72.564M	76.275M	72.489M	76.5M	72.714M	76.5M	72.489M
5.8G;VHT80,BF;Nss2,(M0);Ntx4;5690	Pass	500k	2.68M	3.458M	2.5M	3.338M	3.02M	3.378M	2.7M	3.478M







Summary

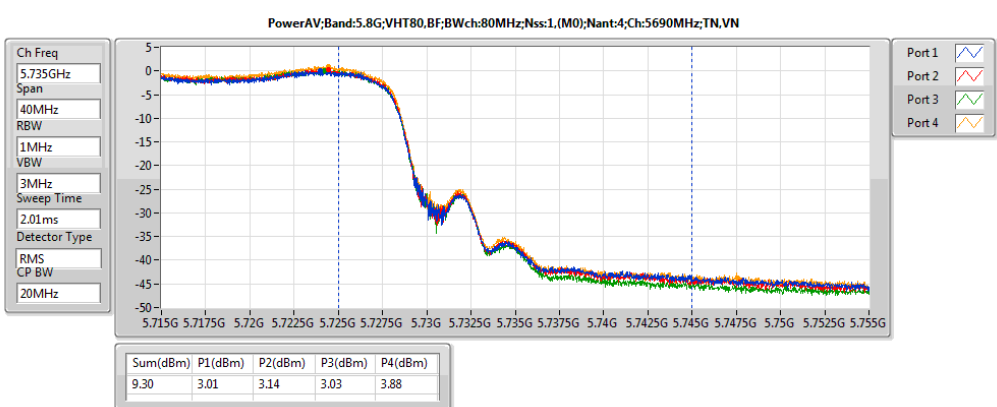
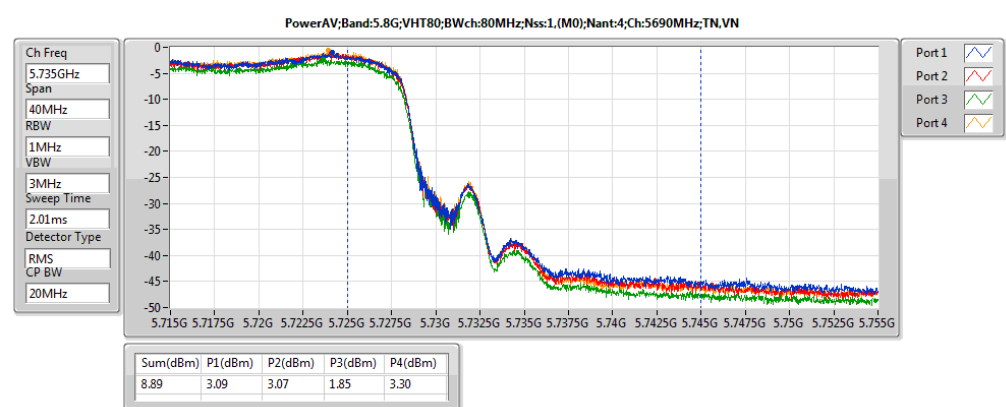
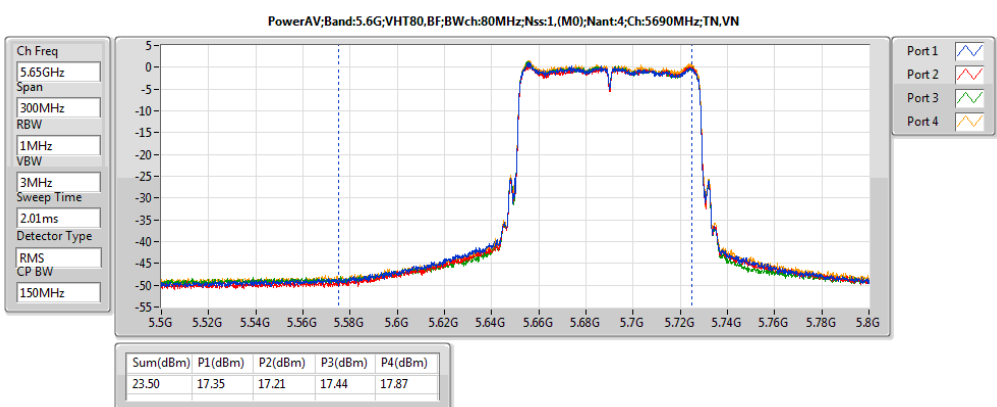
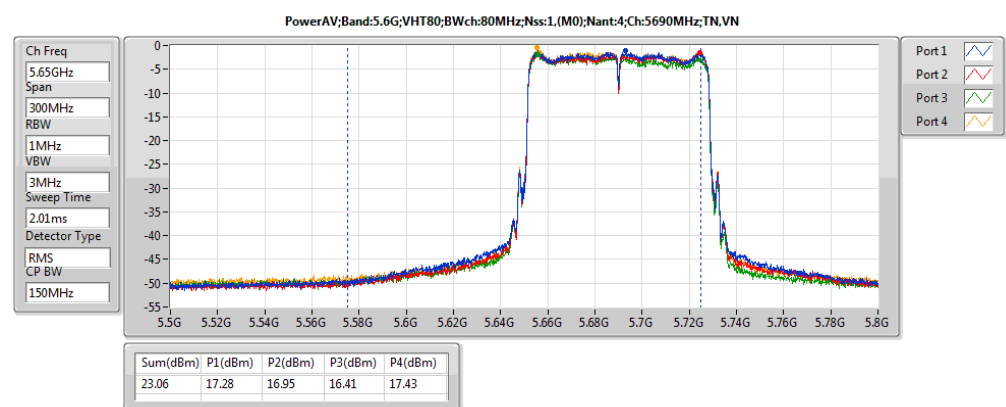
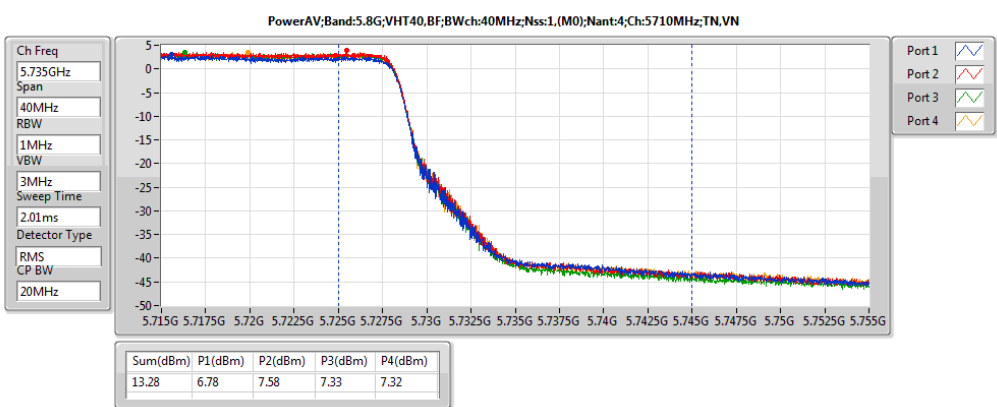
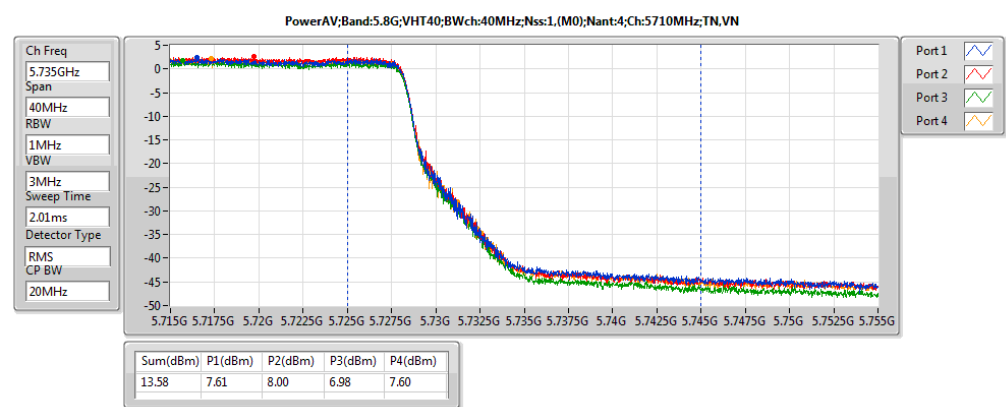
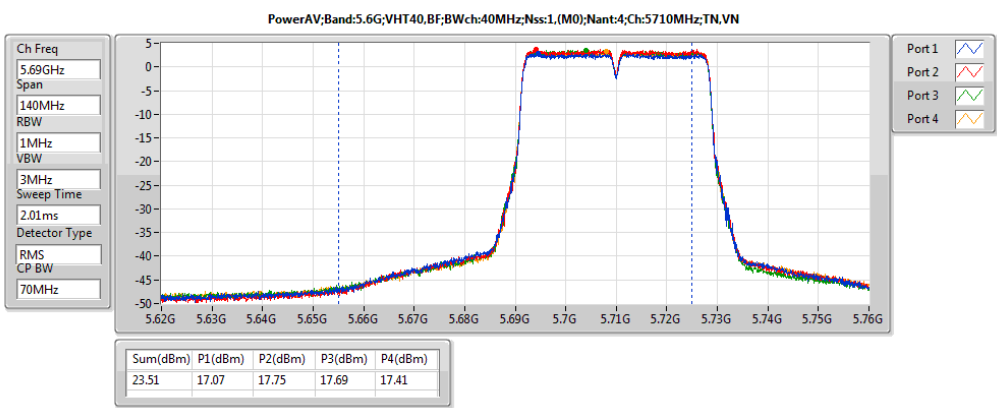
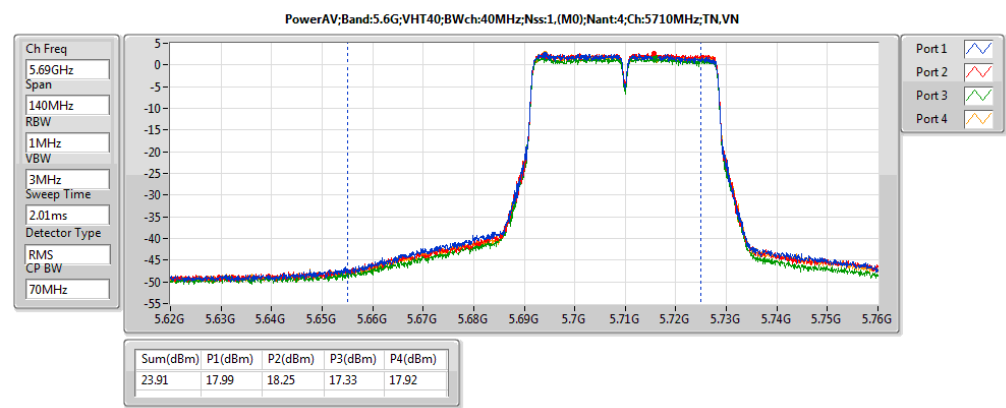
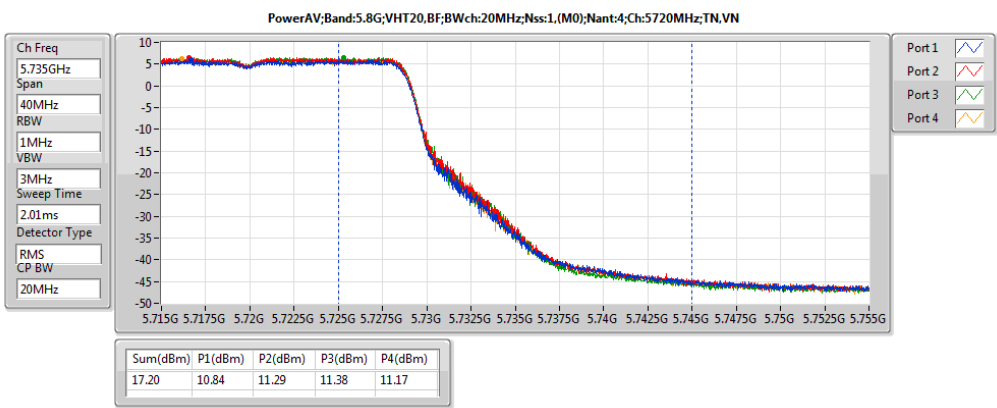
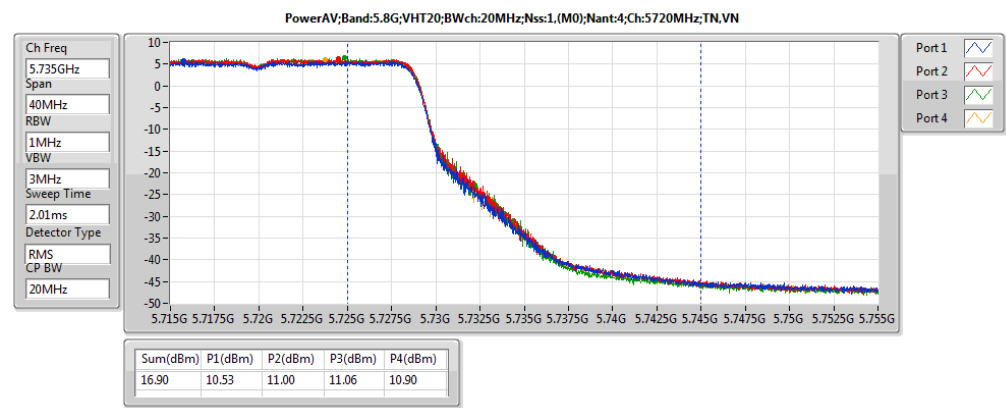
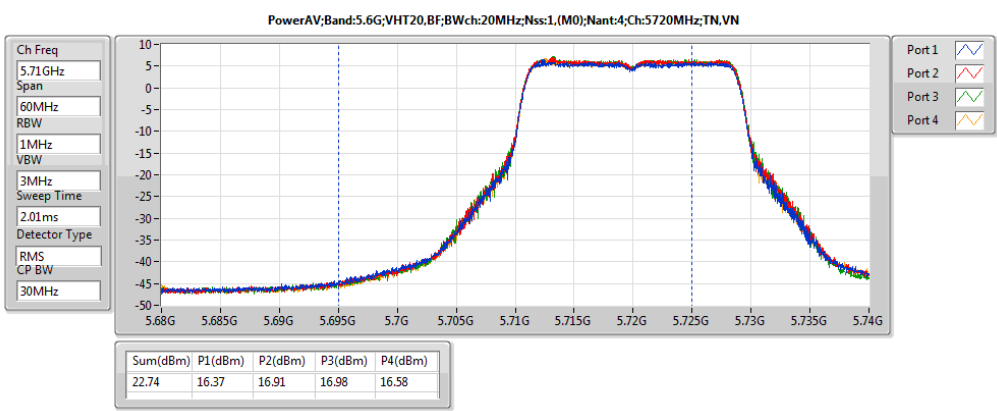
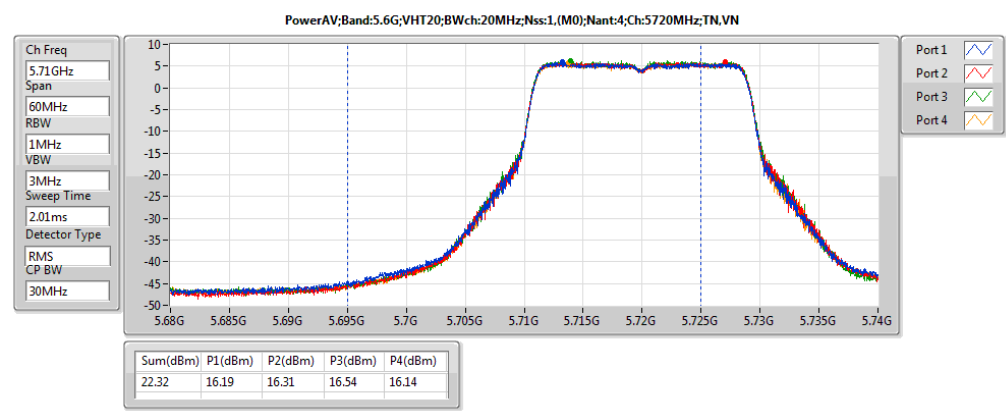
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Mode	Sum (dBm)	Sum (W)	EIRP (dBm)	EIRP (W)
5.3G;VHT20;Nss1,(M0);Ntx4	23.54	0.22594	28.81	0.76033
5.6G;VHT20;Nss1,(M0);Ntx4	23.54	0.22594	28.25	0.66834
5.8G;VHT20;Nss1,(M0);Ntx4	16.90	0.04898	21.52	0.14191
5.3G;VHT40;Nss1,(M0);Ntx4	23.96	0.24889	29.23	0.83753
5.6G;VHT40;Nss1,(M0);Ntx4	23.91	0.24604	28.62	0.72778
5.8G;VHT40;Nss1,(M0);Ntx4	13.58	0.0228	18.20	0.06607
5.3G;VHT80;Nss1,(M0);Ntx4	23.75	0.23714	29.02	0.79799
5.6G;VHT80;Nss1,(M0);Ntx4	23.44	0.2208	28.15	0.65313
5.8G;VHT80;Nss1,(M0);Ntx4	8.88	0.00773	13.50	0.02239
5.3G;VHT20,BF;Nss1,(M0);Ntx4	22.85	0.19275	29.26	0.84333
5.6G;VHT20,BF;Nss1,(M0);Ntx4	22.74	0.18793	29.15	0.82224
5.8G;VHT20,BF;Nss1,(M0);Ntx4	17.20	0.05248	24.26	0.26669
5.3G;VHT40,BF;Nss1,(M0);Ntx4	23.03	0.20091	29.44	0.87902
5.6G;VHT40,BF;Nss1,(M0);Ntx4	23.51	0.22439	29.92	0.98175
5.8G;VHT40,BF;Nss1,(M0);Ntx4	13.28	0.02128	20.34	0.10814
5.3G;VHT80,BF;Nss1,(M0);Ntx4	22.84	0.19231	29.25	0.8414
5.6G;VHT80,BF;Nss1,(M0);Ntx4	23.50	0.22387	29.91	0.97949
5.8G;VHT80,BF;Nss1,(M0);Ntx4	9.30	0.00851	16.36	0.04325



Result

Mode	Result	DG (dBi)	EIRP (dBm)	EIRP Lim. (dBm)	Sum (dBm)	Sum Lim. (dBm)	P1 (dBm)	P2 (dBm)	P3 (dBm)	P4 (dBm)
5.3G;VHT20;Nss1,(M0);Ntx4;5260	Pass	5.27	28.74	30.00	23.47	23.98	17.98	17.61	17.22	16.90
5.3G;VHT20;Nss1,(M0);Ntx4;5300	Pass	5.27	28.59	30.00	23.32	23.98	17.90	17.10	17.40	16.71
5.3G;VHT20;Nss1,(M0);Ntx4;5320	Pass	5.27	28.81	30.00	23.54	23.98	18.14	16.99	17.19	17.66
5.6G;VHT20;Nss1,(M0);Ntx4;5500	Pass	4.71	28.20	30.00	23.49	23.98	17.29	17.71	17.21	17.66
5.6G;VHT20;Nss1,(M0);Ntx4;5580	Pass	4.71	28.25	30.00	23.54	23.98	17.42	17.53	17.64	17.47
5.6G;VHT20;Nss1,(M0);Ntx4;5700	Pass	4.71	28.12	30.00	23.41	23.98	17.24	17.31	17.79	17.17
5.6G;VHT20;Nss1,(M0);Ntx4;5720	Pass	4.71	27.03	29.22	22.32	23.22	16.19	16.31	16.54	16.14
5.8G;VHT20;Nss1,(M0);Ntx4;5720	Pass	4.62	21.52	36.00	16.90	30.00	10.53	11.00	11.06	10.90
5.3G;VHT40;Nss1,(M0);Ntx4;5270	Pass	5.27	28.90	30.00	23.63	23.98	18.40	16.92	17.66	17.33
5.3G;VHT40;Nss1,(M0);Ntx4;5310	Pass	5.27	29.23	30.00	23.96	23.98	18.77	17.27	17.45	18.12
5.6G;VHT40;Nss1,(M0);Ntx4;5510	Pass	4.71	28.62	30.00	23.91	23.98	18.42	17.85	16.92	18.21
5.6G;VHT40;Nss1,(M0);Ntx4;5550	Pass	4.71	28.25	30.00	23.54	23.98	17.92	17.29	17.43	17.42
5.6G;VHT40;Nss1,(M0);Ntx4;5670	Pass	4.71	28.01	30.00	23.30	23.98	17.40	17.35	17.33	17.03
5.6G;VHT40;Nss1,(M0);Ntx4;5710	Pass	4.71	28.62	30.00	23.91	23.98	17.99	18.25	17.33	17.92
5.8G;VHT40;Nss1,(M0);Ntx4;5710	Pass	4.62	18.20	36.00	13.58	30.00	7.61	8	6.98	7.6
5.3G;VHT80;Nss1,(M0);Ntx4;5290	Pass	5.27	29.02	30.00	23.75	23.98	18.47	17.25	17.23	17.83
5.6G;VHT80;Nss1,(M0);Ntx4;5530	Pass	4.71	28.15	30.00	23.44	23.98	17.64	17.41	16.77	17.79
5.6G;VHT80;Nss1,(M0);Ntx4;5610	Pass	4.71	27.86	30.00	23.15	23.98	17.59	17.10	16.94	16.87
5.6G;VHT80;Nss1,(M0);Ntx4;5690	Pass	4.71	27.77	30.00	23.06	23.98	17.28	16.95	16.41	17.43
5.8G;VHT80;Nss1,(M0);Ntx4;5690	Pass	4.62	13.50	36.00	8.88	30.00	3.09	3.07	1.85	3.3
5.3G;VHT20,BF;Nss1,(M0);Ntx4;5260	Pass	6.41	29.15	30.00	22.74	23.57	17.28	16.68	16.27	16.59
5.3G;VHT20,BF;Nss1,(M0);Ntx4;5300	Pass	6.41	29.26	30.00	22.85	23.57	17.57	16.42	16.21	16.98
5.3G;VHT20,BF;Nss1,(M0);Ntx4;5320	Pass	6.41	29.12	30.00	22.71	23.57	17.26	16.23	16.48	16.71
5.6G;VHT20,BF;Nss1,(M0);Ntx4;5500	Pass	6.41	28.91	30.00	22.50	23.57	16.48	16.67	15.98	16.74
5.6G;VHT20,BF;Nss1,(M0);Ntx4;5580	Pass	6.41	28.95	30.00	22.54	23.57	16.59	16.37	15.98	17.06
5.6G;VHT20,BF;Nss1,(M0);Ntx4;5700	Pass	6.41	28.81	30.00	22.40	23.57	16.30	16.40	15.98	16.81
5.6G;VHT20,BF;Nss1,(M0);Ntx4;5720	Pass	6.41	29.15	29.22	22.74	22.81	16.37	16.91	16.98	16.58
5.8G;VHT20,BF;Nss1,(M0);Ntx4;5720	Pass	7.06	24.26	36.00	17.20	28.94	10.84	11.29	11.38	11.17
5.3G;VHT40,BF;Nss1,(M0);Ntx4;5270	Pass	6.41	29.06	30.00	22.65	23.57	17.32	16.58	16.56	15.94
5.3G;VHT40,BF;Nss1,(M0);Ntx4;5310	Pass	6.41	29.44	30.00	23.03	23.57	17.79	16.52	16.72	16.91
5.6G;VHT40,BF;Nss1,(M0);Ntx4;5510	Pass	6.41	29.17	30.00	22.76	23.57	16.83	16.76	16.53	16.84
5.6G;VHT40,BF;Nss1,(M0);Ntx4;5550	Pass	6.41	29.02	30.00	22.61	23.57	16.95	16.39	16.17	16.81
5.6G;VHT40,BF;Nss1,(M0);Ntx4;5670	Pass	6.41	29.08	30.00	22.67	23.57	16.78	16.72	16.32	16.77
5.6G;VHT40,BF;Nss1,(M0);Ntx4;5710	Pass	6.41	29.92	30.00	23.51	23.57	17.07	17.75	17.69	17.41
5.8G;VHT40,BF;Nss1,(M0);Ntx4;5710	Pass	7.06	20.34	36.00	13.28	28.94	6.78	7.58	7.33	7.32
5.3G;VHT80,BF;Nss1,(M0);Ntx4;5290	Pass	6.41	29.25	30.00	22.84	23.57	17.58	16.45	16.30	16.85
5.6G;VHT80,BF;Nss1,(M0);Ntx4;5530	Pass	6.41	29.64	30.00	23.23	23.57	17.07	17.32	17.17	17.28
5.6G;VHT80,BF;Nss1,(M0);Ntx4;5610	Pass	6.41	29.67	30.00	23.26	23.57	17.23	17.26	16.91	17.54
5.6G;VHT80,BF;Nss1,(M0);Ntx4;5690	Pass	6.41	29.91	30.00	23.50	23.57	17.35	17.21	17.44	17.87
5.8G;VHT80,BF;Nss1,(M0);Ntx4;5690	Pass	7.06	16.36	36.00	9.30	28.94	3.01	3.14	3.03	3.88





Summary

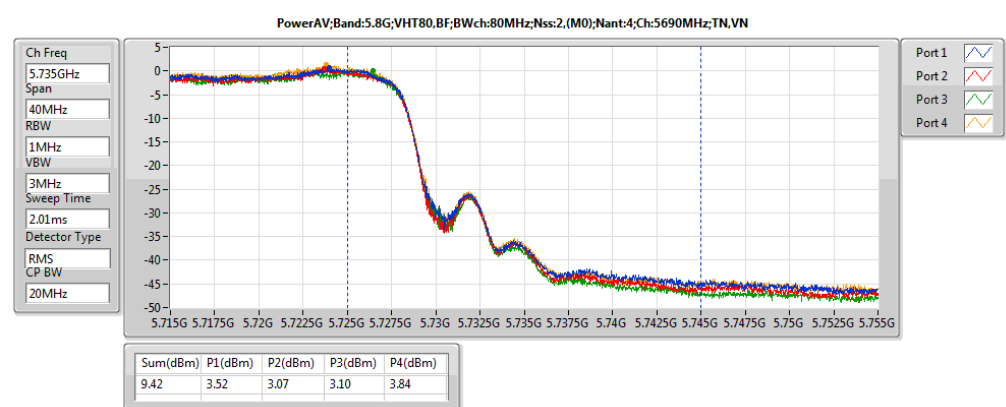
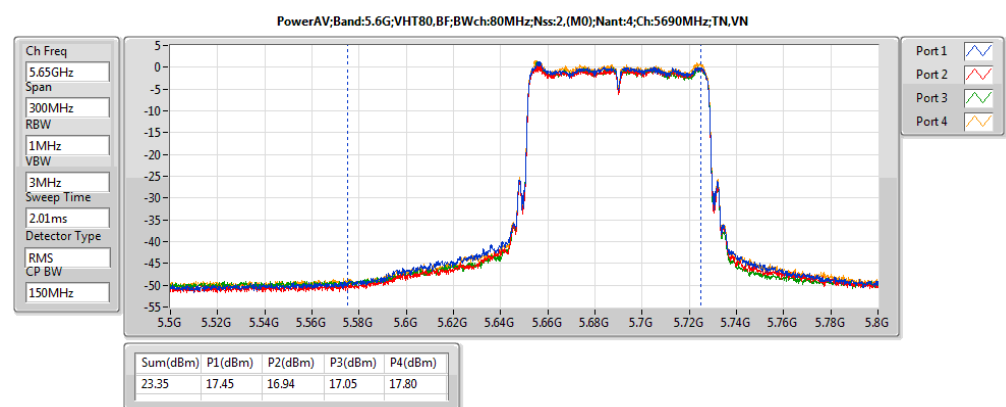
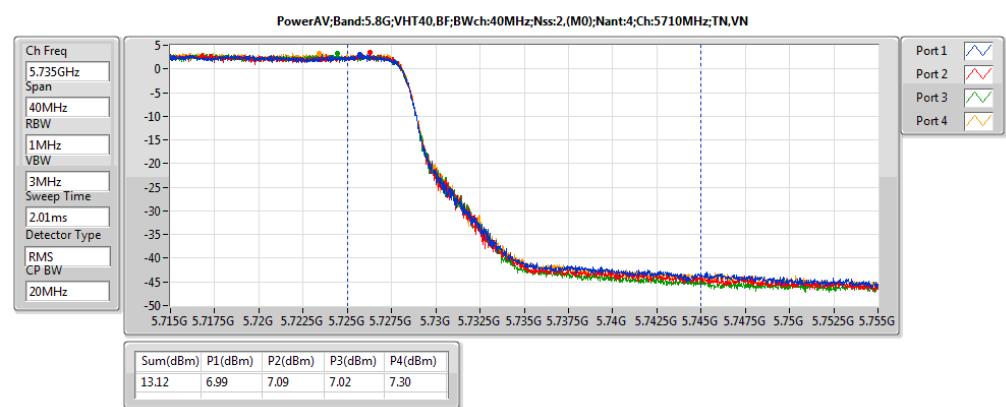
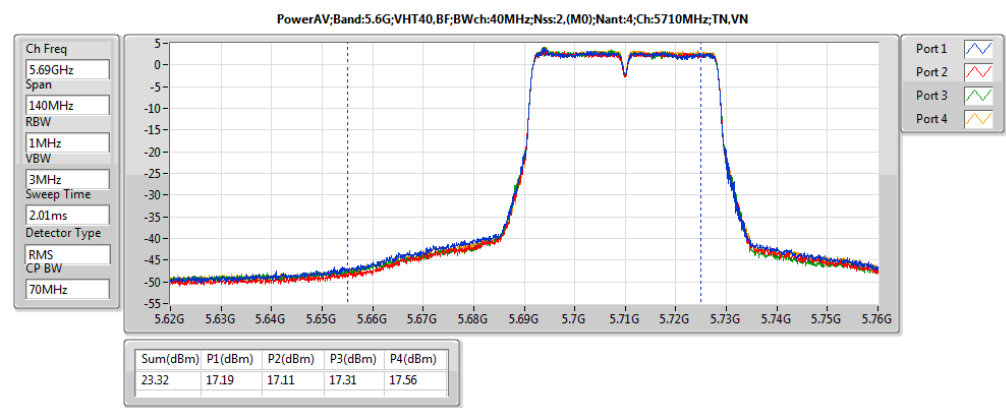
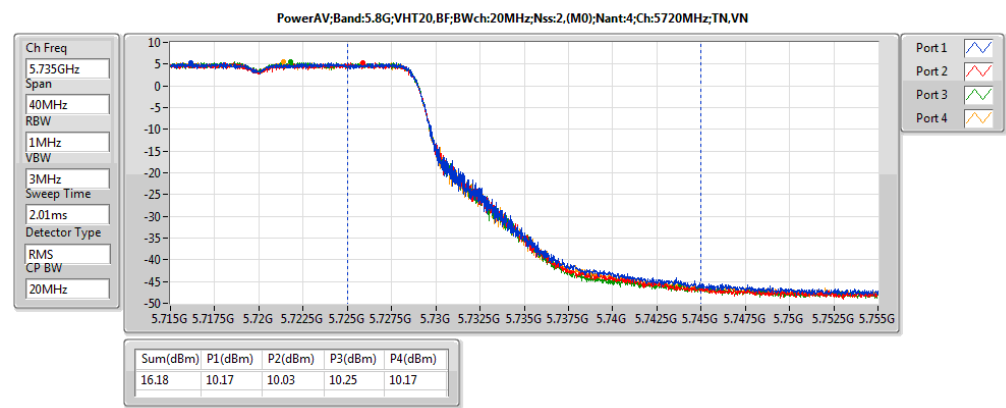
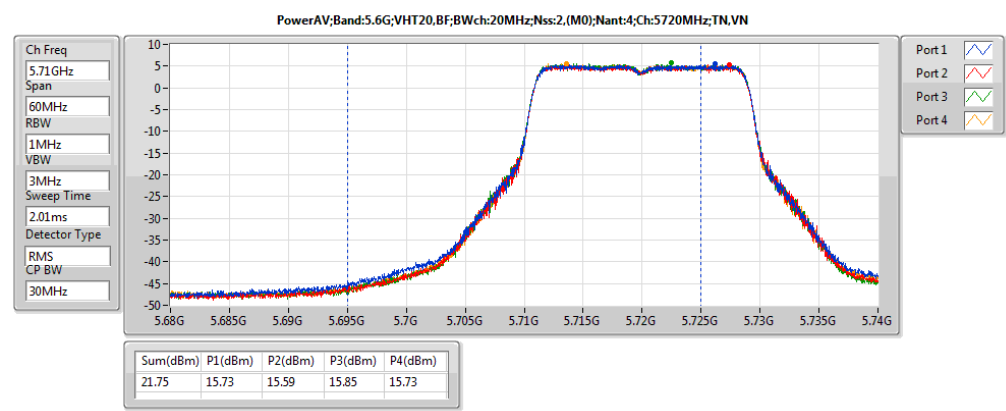
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Mode	Sum (dBm)	Sum (W)	EIRP (dBm)	EIRP (W)
5.3G;VHT20,BF;Nss2,(M0);Ntx4	23.58	0.22803	27.10	0.51286
5.6G;VHT20,BF;Nss2,(M0);Ntx4	23.68	0.23335	27.08	0.5105
5.3G;VHT40,BF;Nss2,(M0);Ntx4	23.67	0.23281	27.19	0.5236
5.6G;VHT40,BF;Nss2,(M0);Ntx4	23.88	0.24434	27.28	0.53456
5.3G;VHT80,BF;Nss2,(M0);Ntx4	23.67	0.23281	27.19	0.5236
5.6G;VHT80,BF;Nss2,(M0);Ntx4	23.53	0.22542	26.93	0.49317



Result

Mode	Result	DG (dBi)	Sum (dBm)	Sum Lim. (dBm)	EIRP (dBm)	EIRP Lim. (dBm)	P1 (dBm)	P2 (dBm)	P3 (dBm)	P4 (dBm)
5.3G;VHT20,BF;Nss2,(M0);Ntx4;5260	Pass	3.52	23.58	24.00	27.10	Inf	17.74	17.09	17.77	17.59
5.3G;VHT20,BF;Nss2,(M0);Ntx4;5300	Pass	3.52	23.45	24.00	26.97	Inf	17.64	16.95	17.54	17.55
5.3G;VHT20,BF;Nss2,(M0);Ntx4;5320	Pass	3.52	23.48	24.00	27.00	Inf	17.76	17.27	17.41	17.40
5.6G;VHT20,BF;Nss2,(M0);Ntx4;5500	Pass	3.40	23.46	24.00	26.86	Inf	17.48	17.09	17.39	17.76
5.6G;VHT20,BF;Nss2,(M0);Ntx4;5580	Pass	3.40	23.58	24.00	26.98	Inf	17.45	17.03	17.66	18.04
5.6G;VHT20,BF;Nss2,(M0);Ntx4;5700	Pass	3.40	23.68	24.00	27.08	Inf	17.38	17.30	18.12	17.80
5.6G;VHT20,BF;Nss2,(M0);Ntx4;5720	Pass	3.40	21.75	23.18	25.15	Inf	15.73	15.59	15.85	15.73
5.8G;VHT20,BF;Nss2,(M0);Ntx4;5720	Pass	4.11	16.18	30.00	20.29	Inf	10.17	10.03	10.25	10.17
5.3G;VHT40,BF;Nss2,(M0);Ntx4;5270	Pass	3.52	23.46	24.00	26.98	Inf	17.68	17.23	17.47	17.36
5.3G;VHT40,BF;Nss2,(M0);Ntx4;5310	Pass	3.52	23.67	24.00	27.19	Inf	17.95	17.10	17.67	17.82
5.6G;VHT40,BF;Nss2,(M0);Ntx4;5510	Pass	3.40	23.40	24.00	26.80	Inf	17.55	17.09	17.26	17.61
5.6G;VHT40,BF;Nss2,(M0);Ntx4;5550	Pass	3.40	23.72	24.00	27.12	Inf	17.64	17.37	17.75	18.02
5.6G;VHT40,BF;Nss2,(M0);Ntx4;5670	Pass	3.40	23.88	24.00	27.28	Inf	17.96	17.32	17.97	18.16
5.6G;VHT40,BF;Nss2,(M0);Ntx4;5710	Pass	3.40	23.32	24.00	26.72	Inf	17.19	17.11	17.31	17.56
5.8G;VHT40,BF;Nss2,(M0);Ntx4;5710	Pass	4.11	13.12	30.00	17.23	Inf	6.99	7.09	7.02	7.30
5.3G;VHT80,BF;Nss2,(M0);Ntx4;5290	Pass	3.52	23.67	24.00	27.19	Inf	17.84	17.45	17.67	17.63
5.6G;VHT80,BF;Nss2,(M0);Ntx4;5530	Pass	3.40	23.36	24.00	26.76	Inf	17.64	16.72	17.38	17.57
5.6G;VHT80,BF;Nss2,(M0);Ntx4;5610	Pass	3.40	23.53	24.00	26.93	Inf	17.79	16.98	17.70	17.54
5.6G;VHT80,BF;Nss2,(M0);Ntx4;5690	Pass	3.40	23.35	24.00	26.74	Inf	17.45	16.94	17.05	17.80
5.8G;VHT80,BF;Nss2,(M0);Ntx4;5690	Pass	4.11	9.42	30.00	13.52	Inf	3.52	3.07	3.10	3.84





Summary

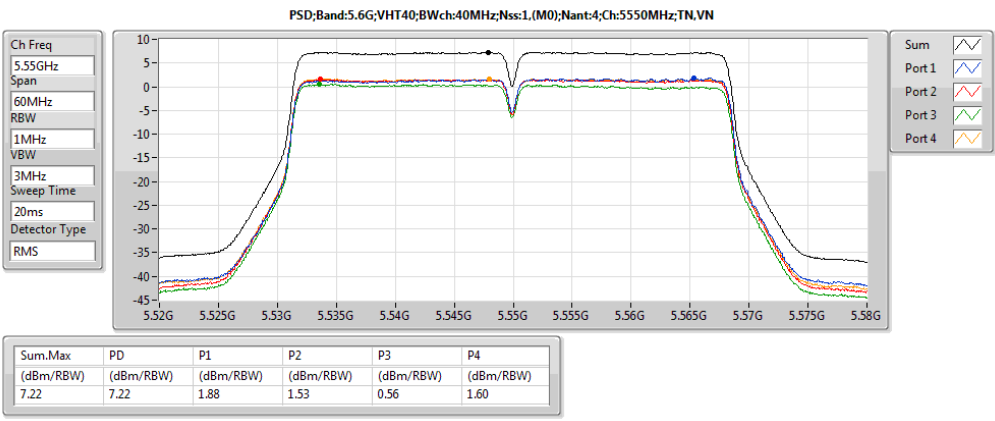
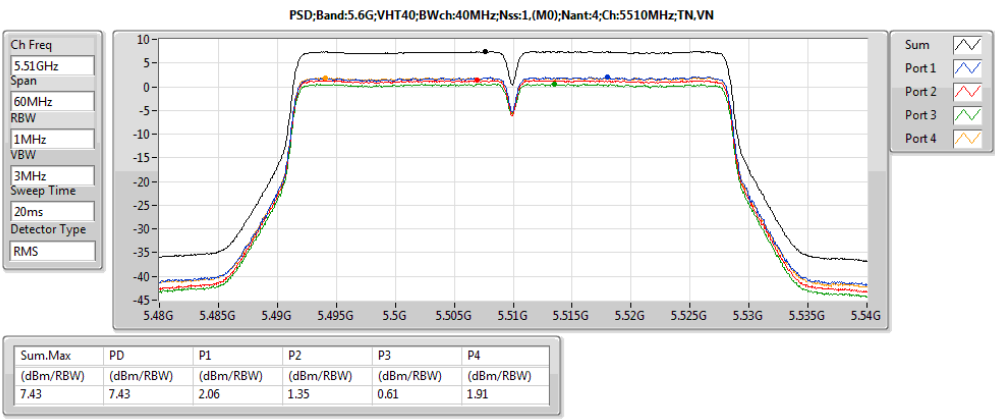
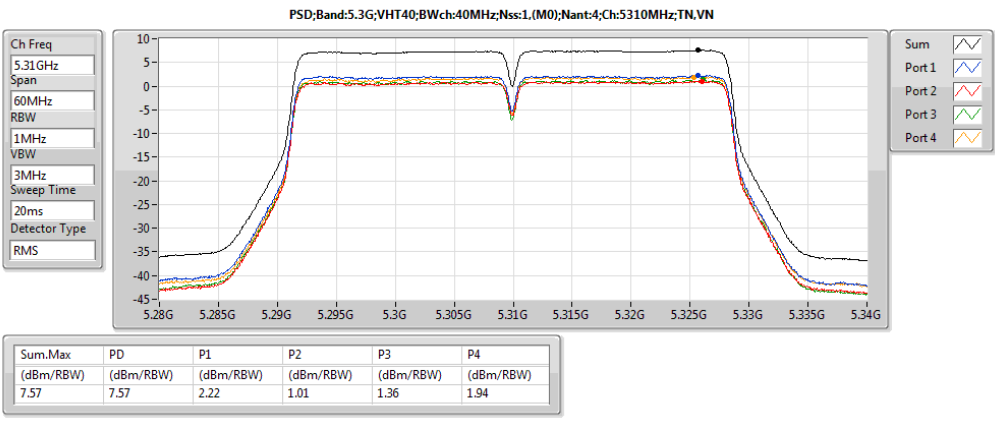
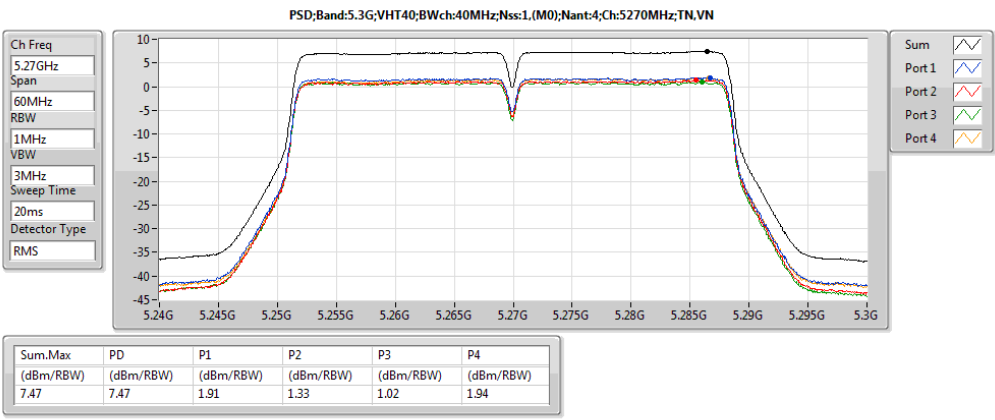
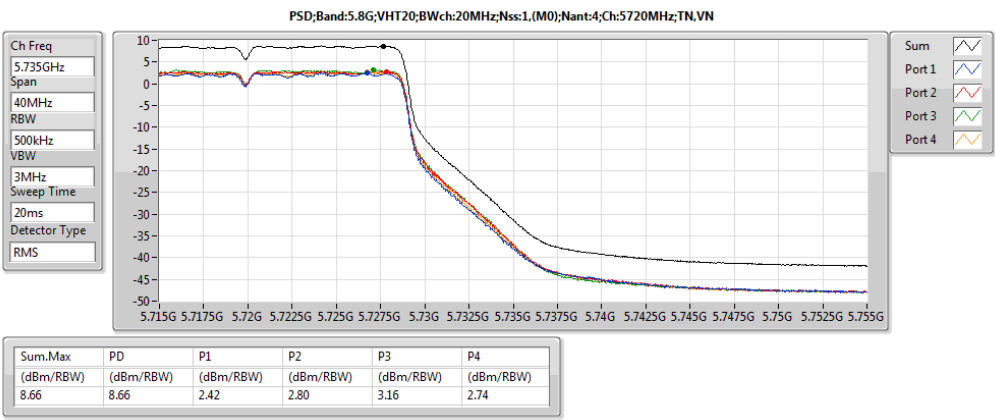
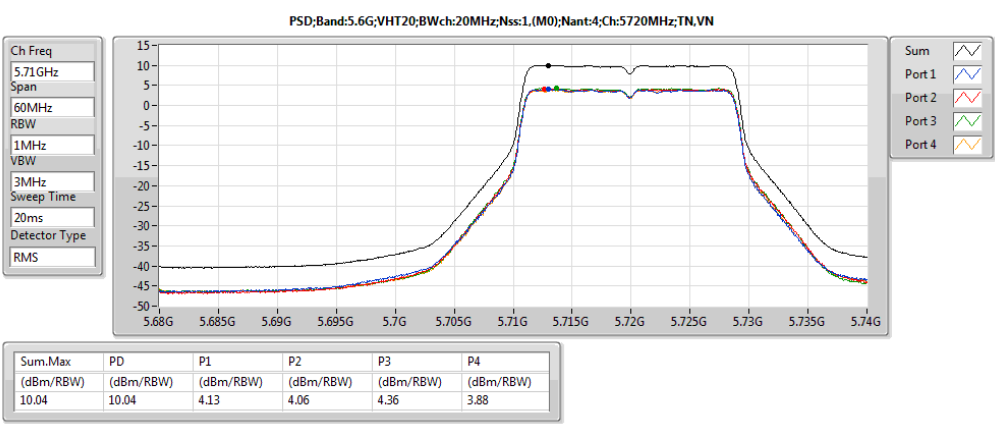
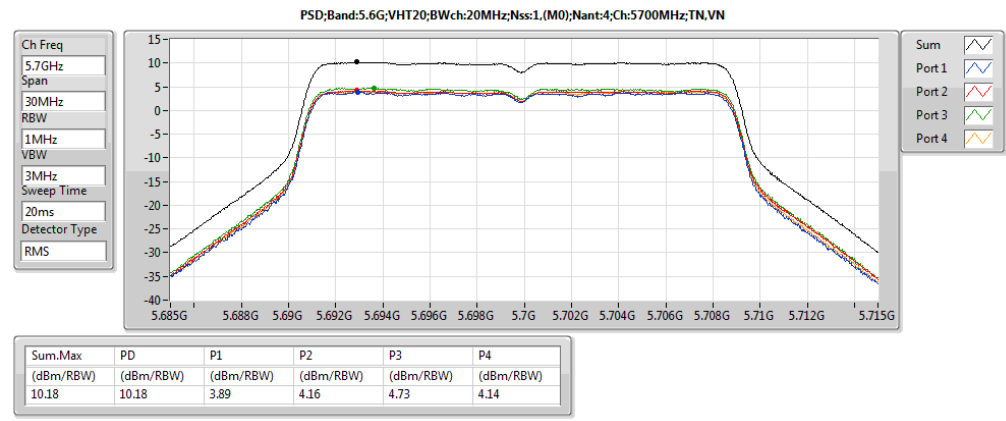
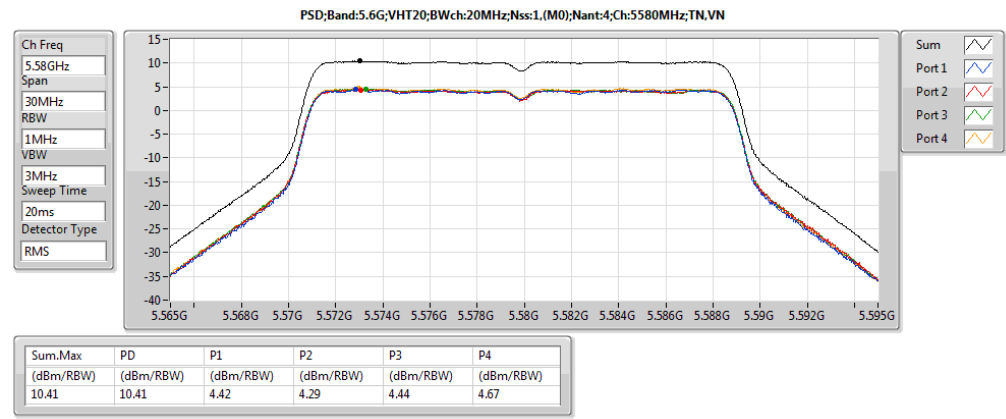
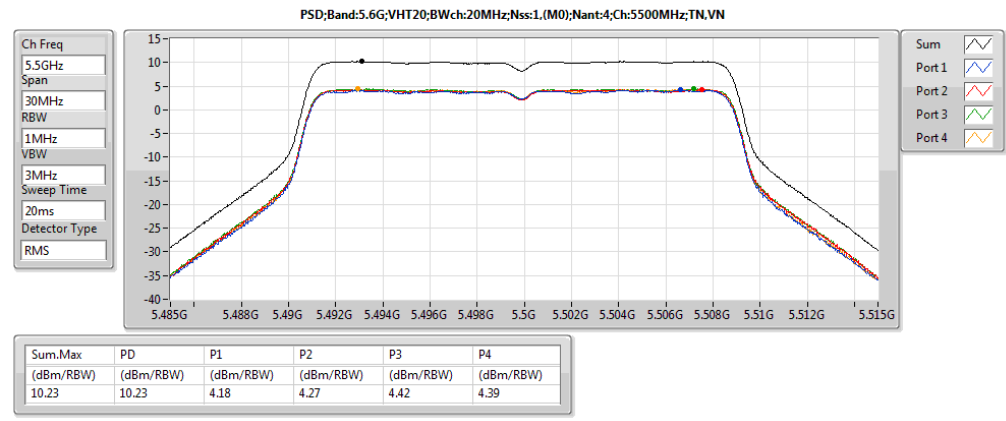
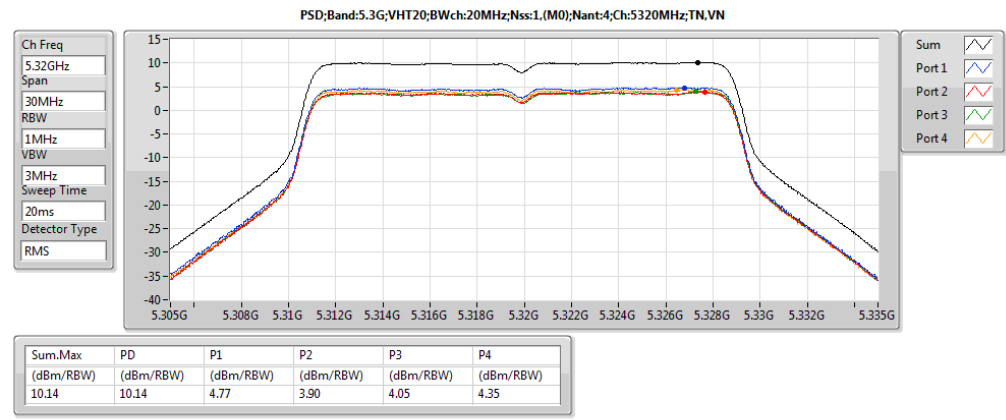
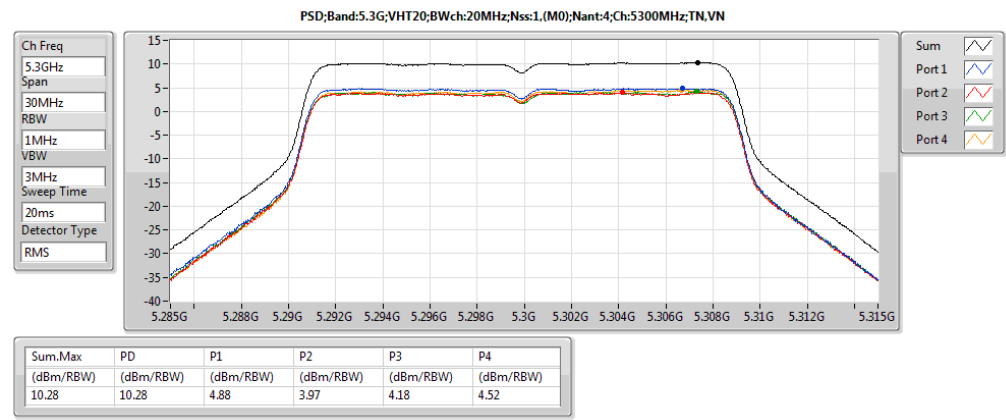
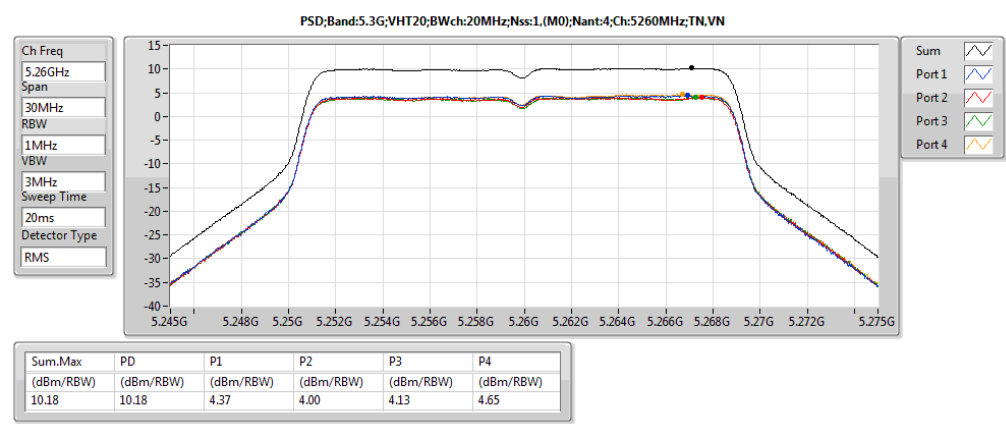
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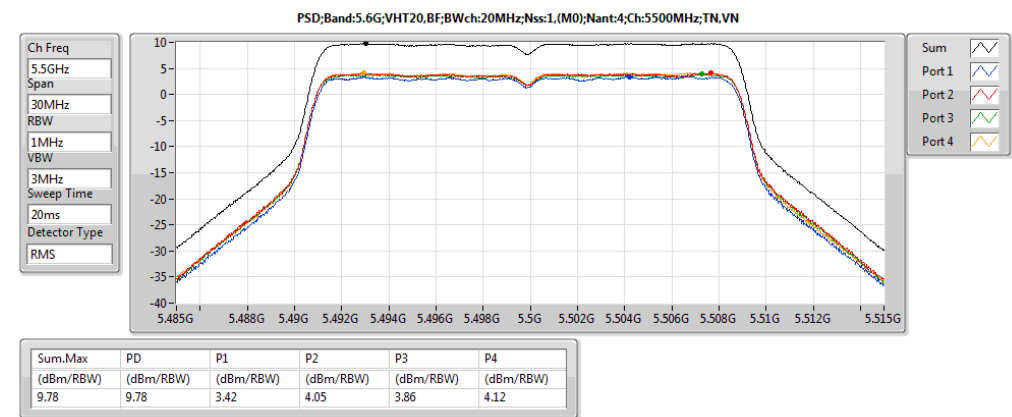
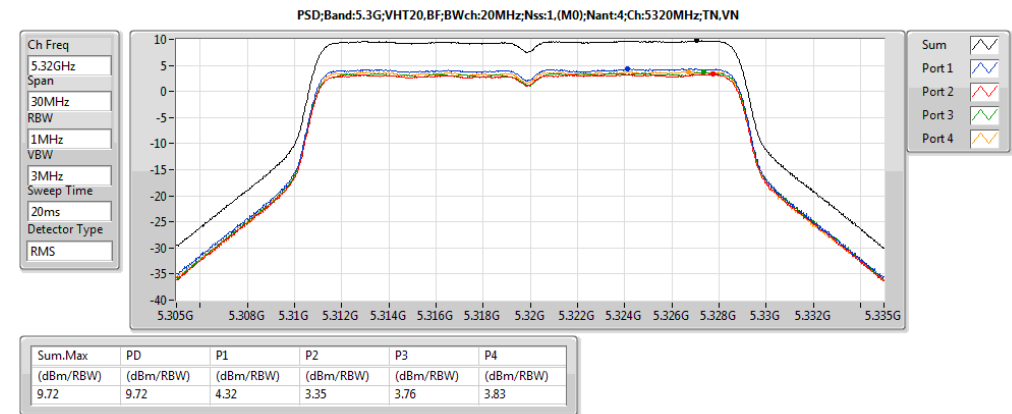
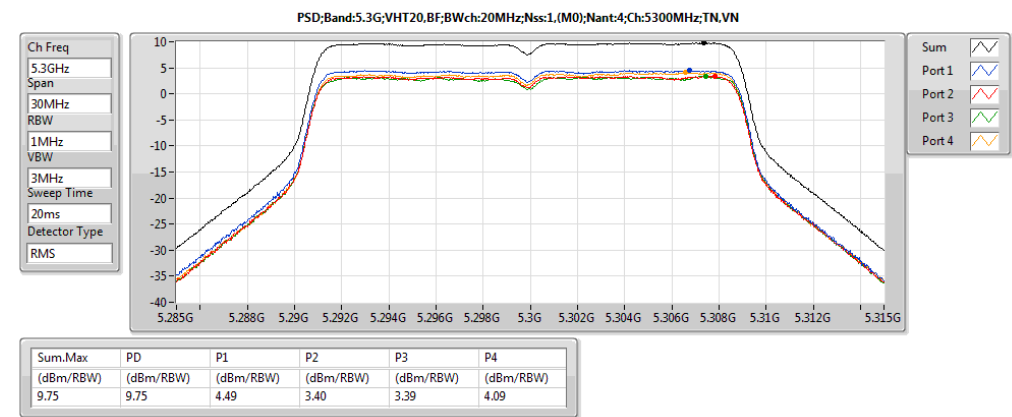
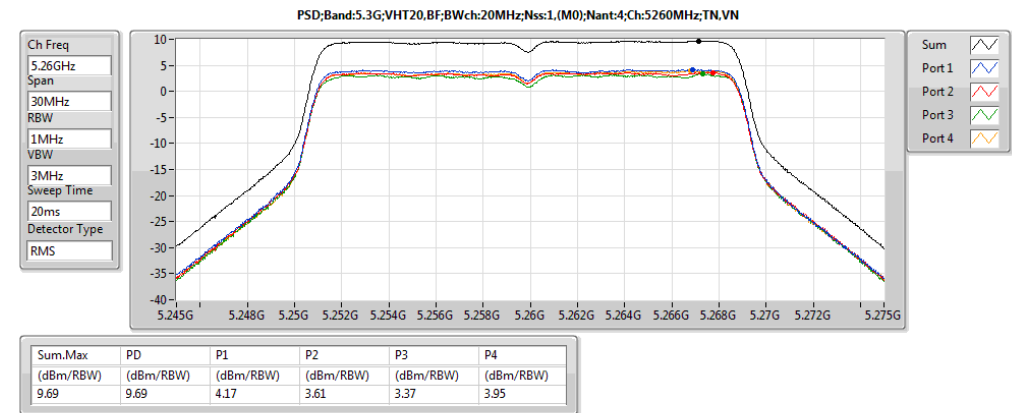
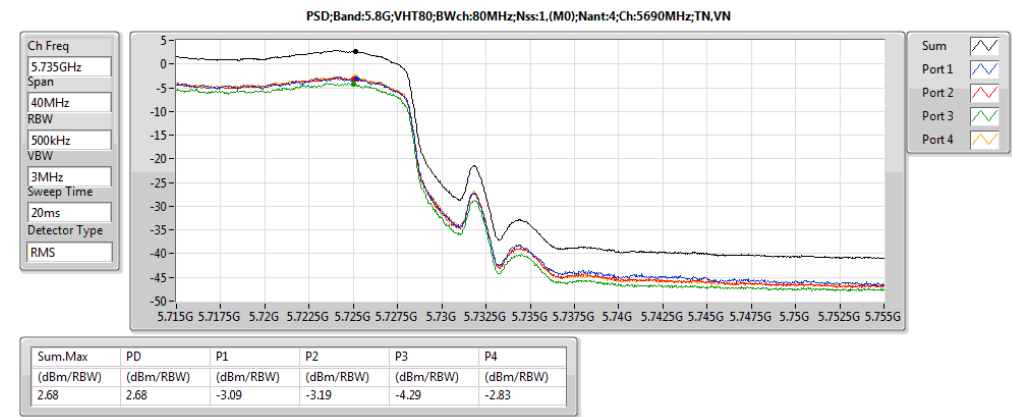
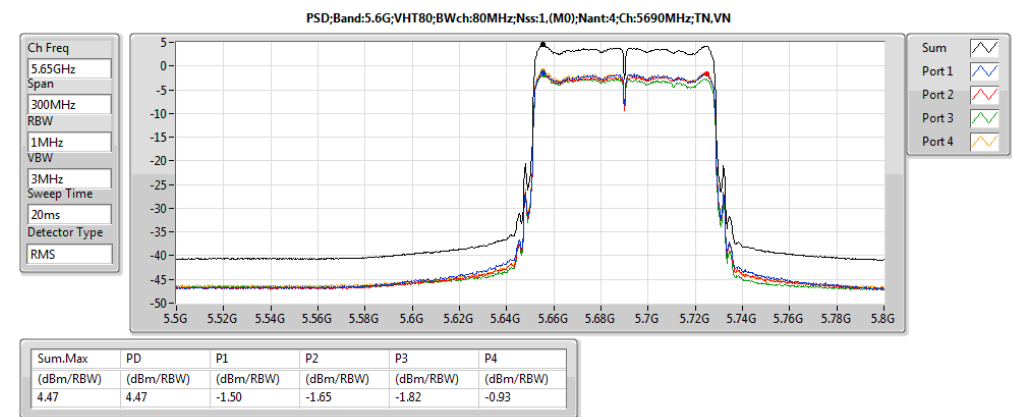
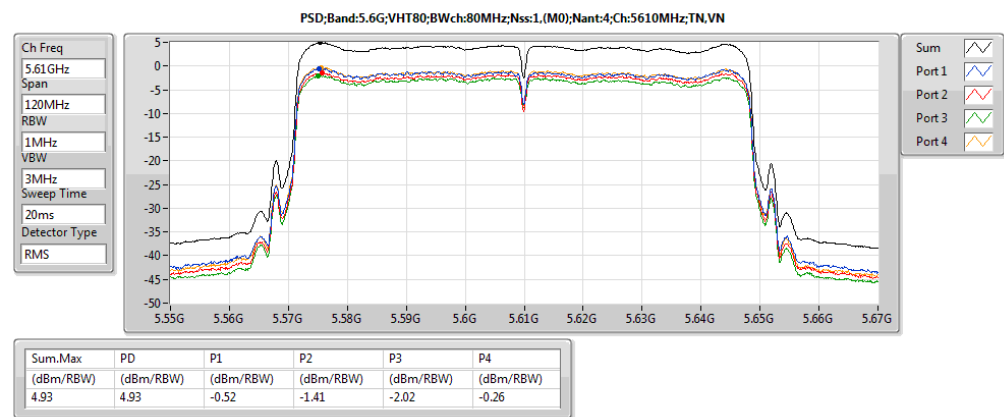
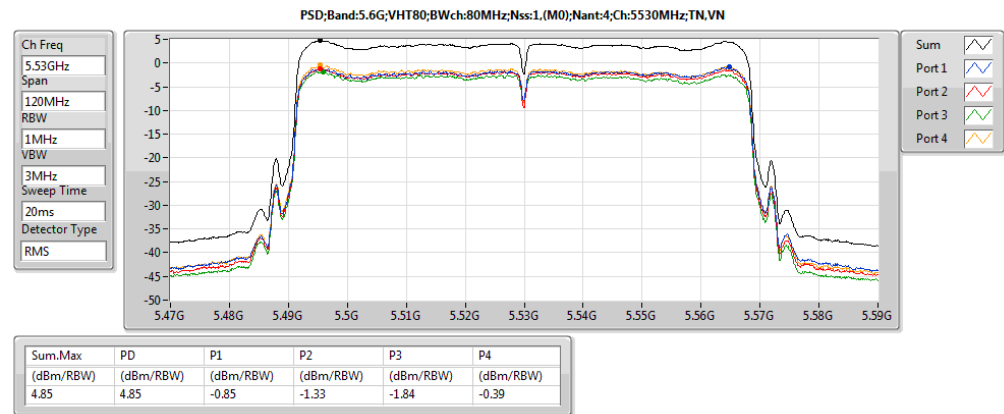
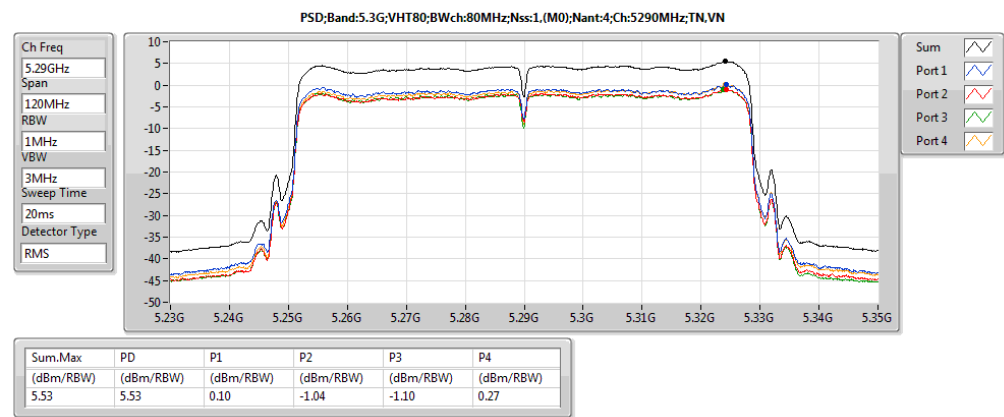
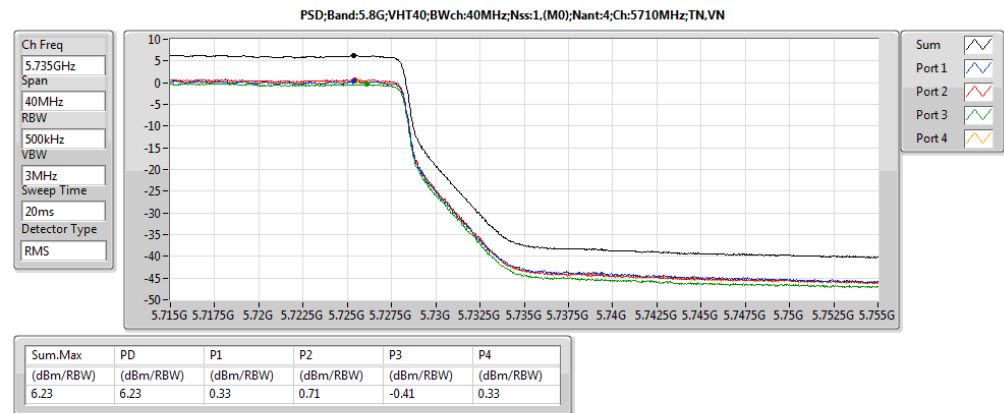
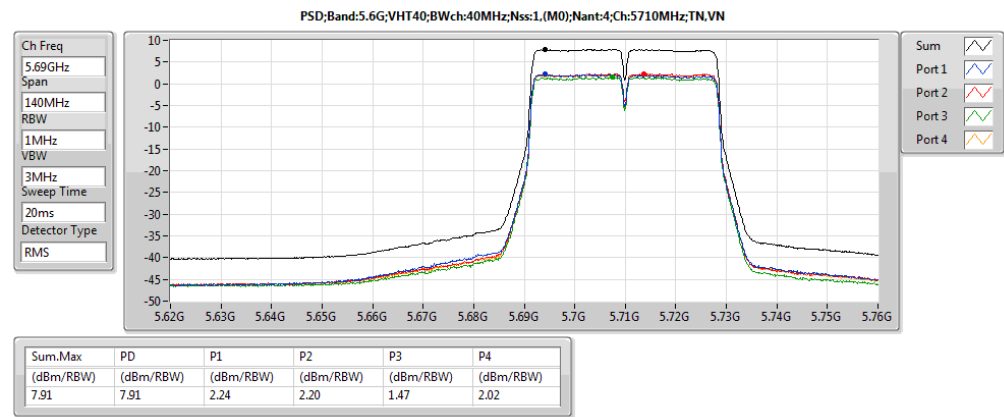
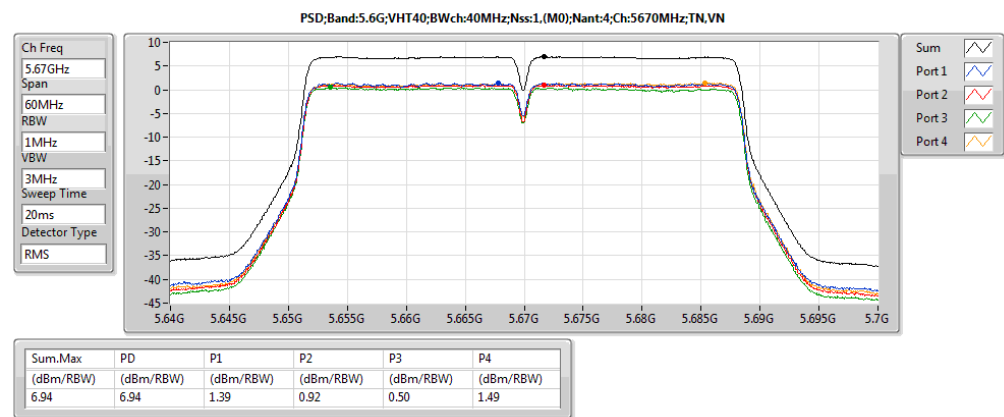
Mode	PD (dBm/RBW)	EIRP.PD (dBm/RBW)
5.3G;VHT20;Nss1,(M0);Ntx4	10.28	16.69
5.6G;VHT20;Nss1,(M0);Ntx4	10.41	16.82
5.8G;VHT20;Nss1,(M0);Ntx4	8.66	15.72
5.3G;VHT40;Nss1,(M0);Ntx4	7.57	13.98
5.6G;VHT40;Nss1,(M0);Ntx4	7.91	14.32
5.8G;VHT40;Nss1,(M0);Ntx4	6.23	13.29
5.3G;VHT80;Nss1,(M0);Ntx4	5.53	11.94
5.6G;VHT80;Nss1,(M0);Ntx4	4.93	11.34
5.8G;VHT80;Nss1,(M0);Ntx4	2.68	9.74
5.3G;VHT20,BF;Nss1,(M0);Ntx4	9.75	16.16
5.6G;VHT20,BF;Nss1,(M0);Ntx4	10.45	16.86
5.8G;VHT20,BF;Nss1,(M0);Ntx4	8.92	15.98
5.3G;VHT40,BF;Nss1,(M0);Ntx4	6.77	13.18
5.6G;VHT40,BF;Nss1,(M0);Ntx4	8.98	15.39
5.8G;VHT40,BF;Nss1,(M0);Ntx4	5.75	12.81
5.3G;VHT80,BF;Nss1,(M0);Ntx4	4.54	10.95
5.6G;VHT80,BF;Nss1,(M0);Ntx4	6.50	12.91
5.8G;VHT80,BF;Nss1,(M0);Ntx4	2.96	10.02

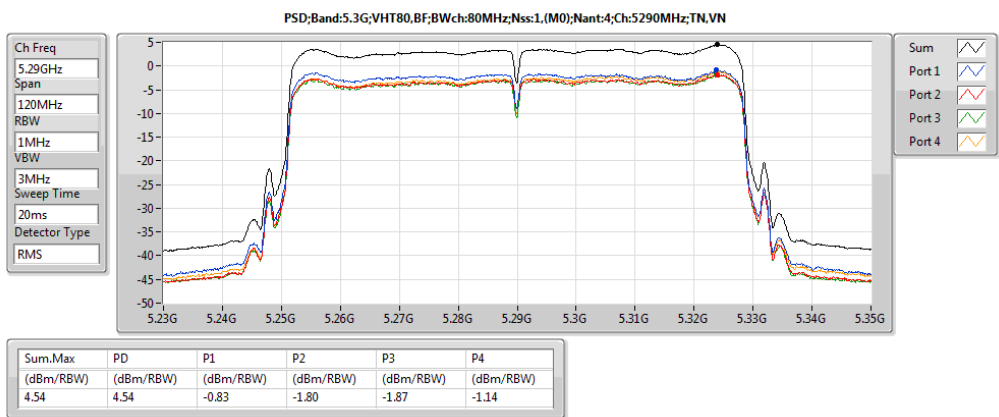
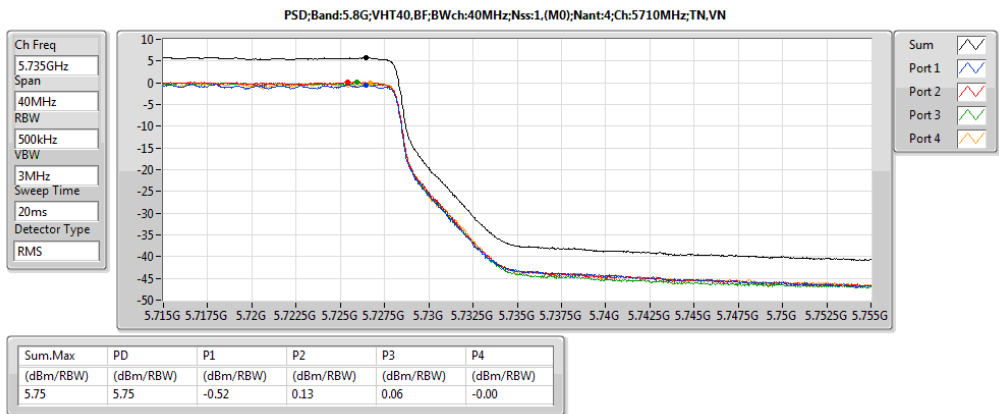
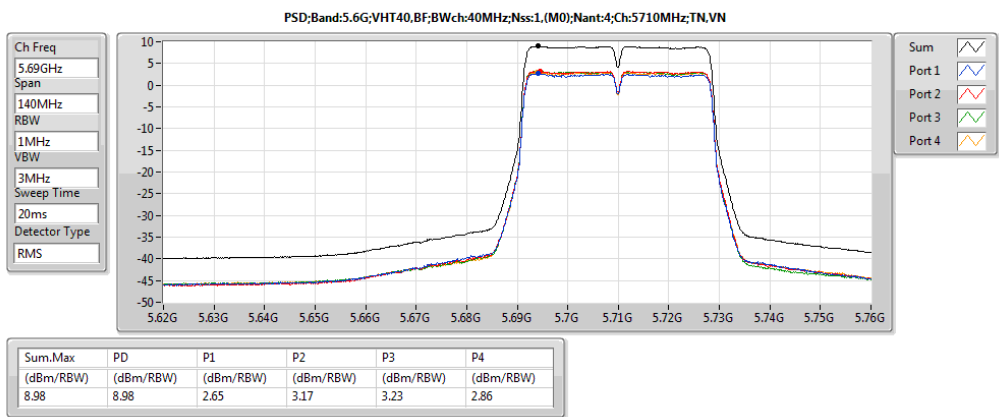
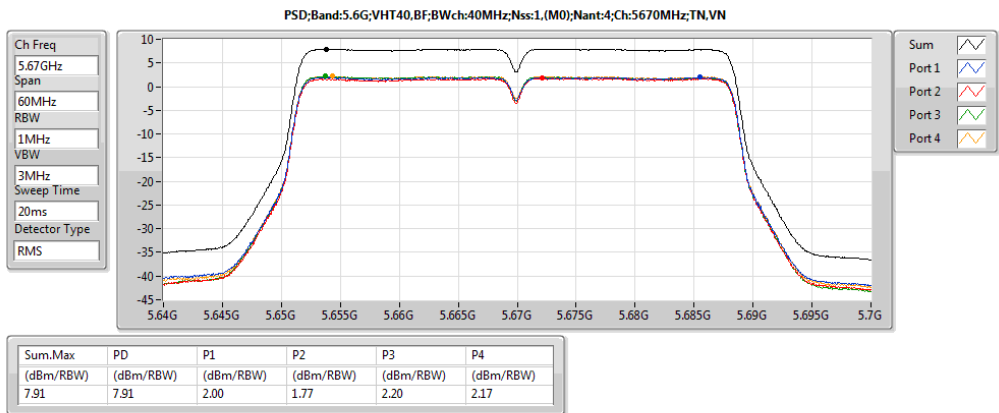
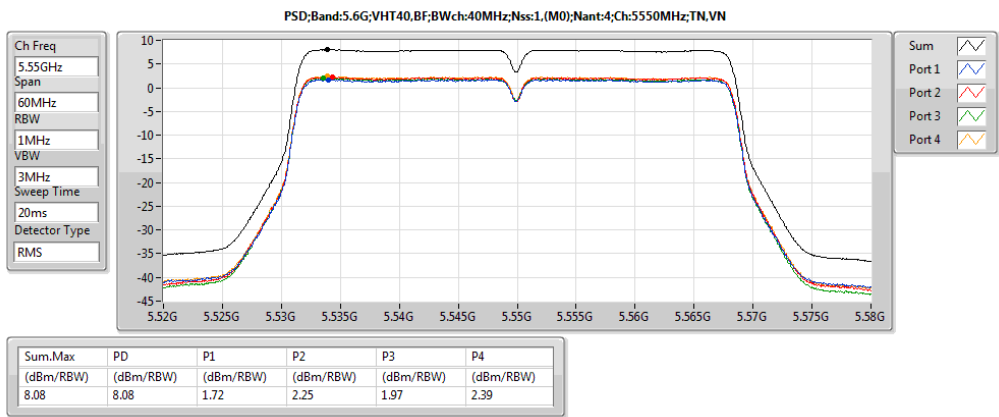
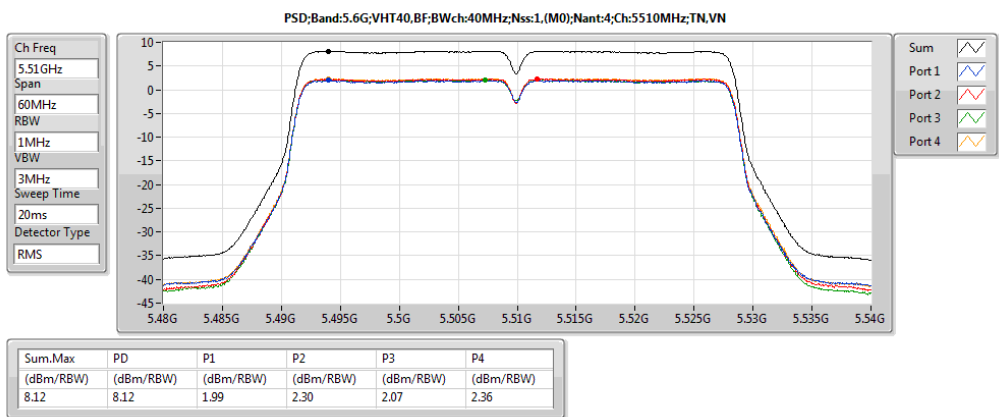
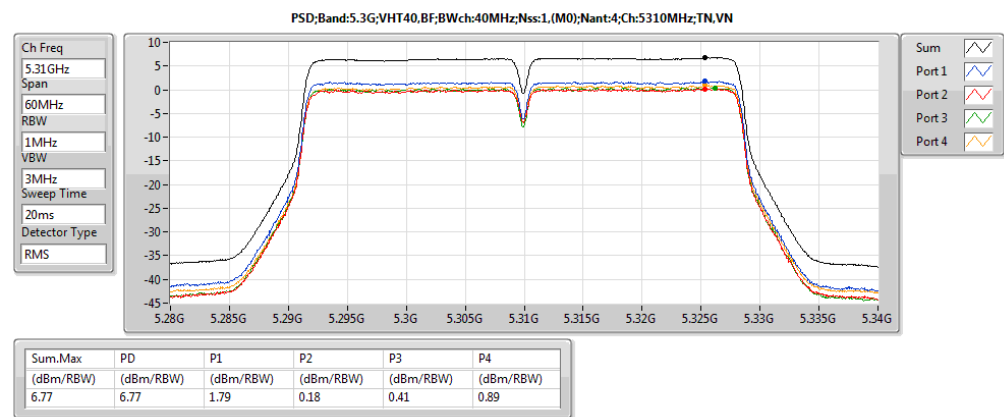
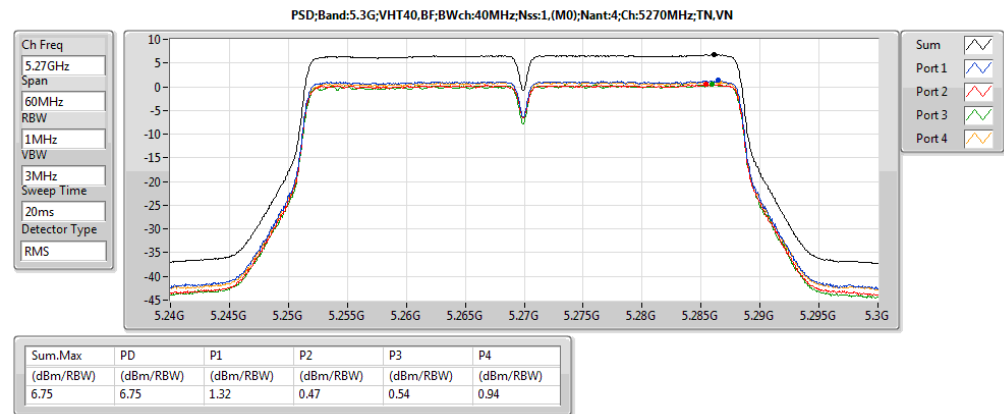
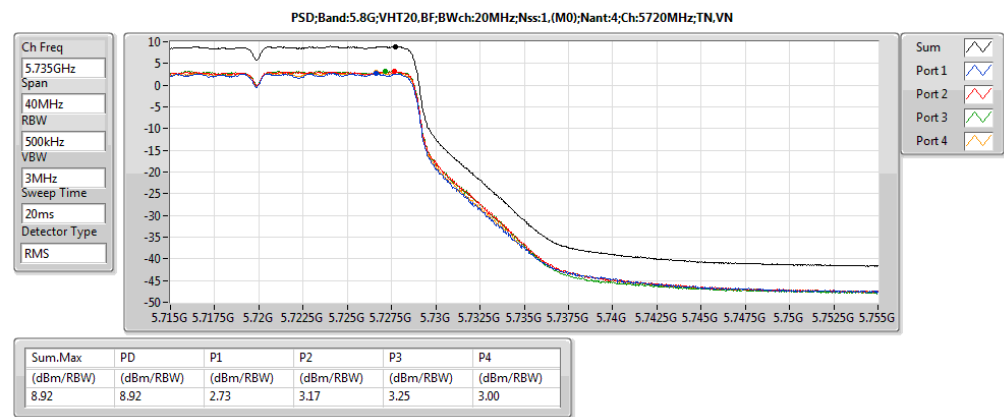
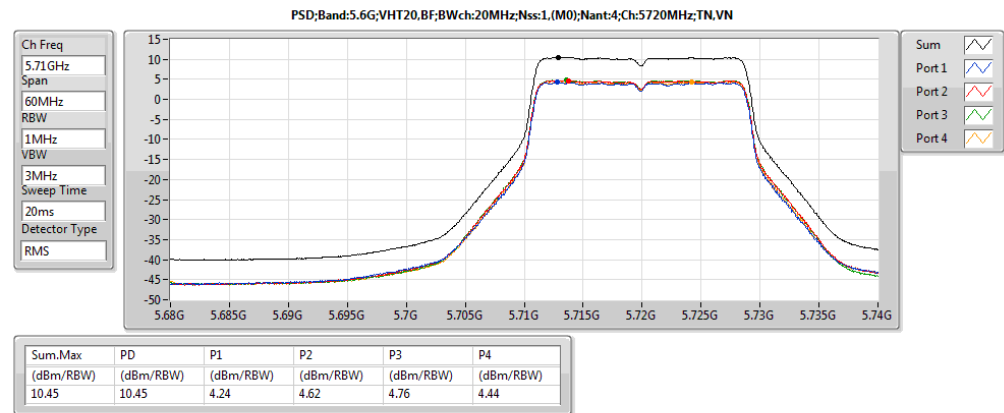
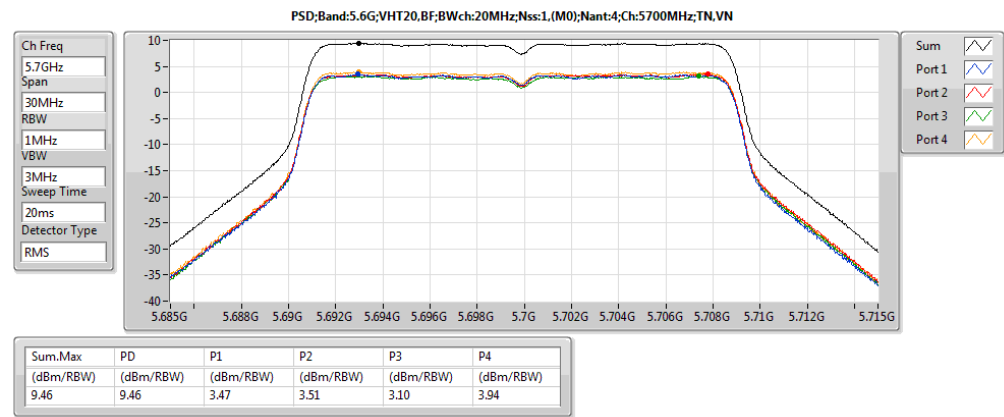
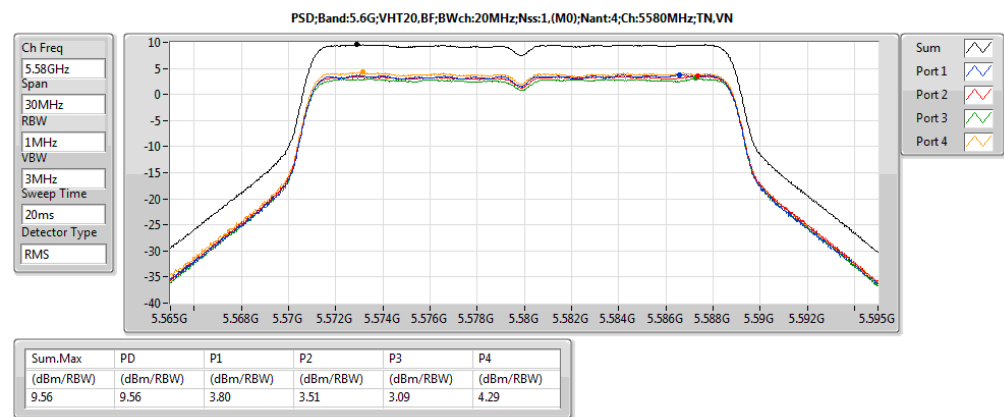


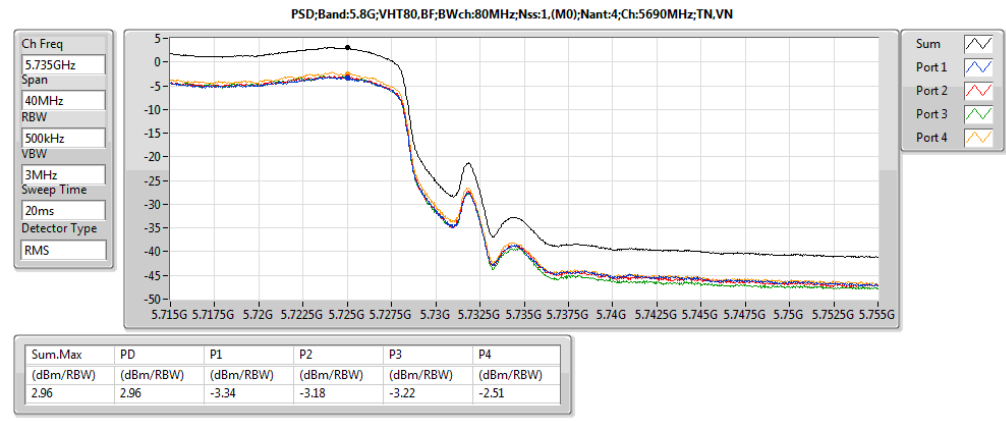
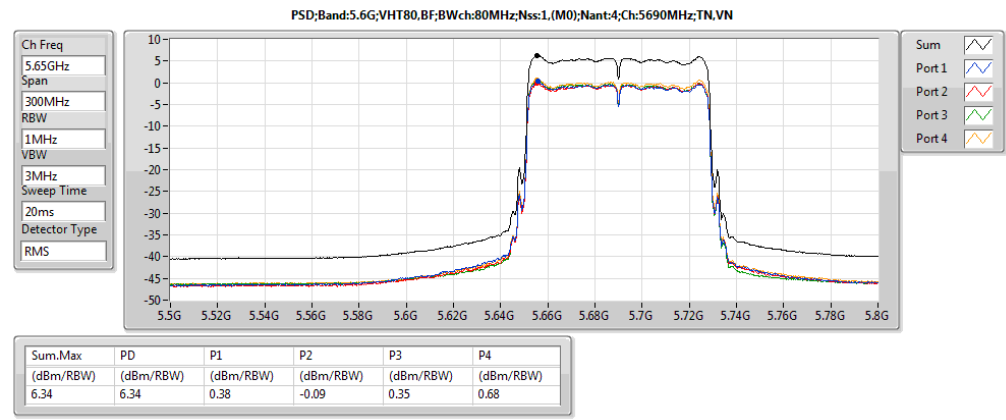
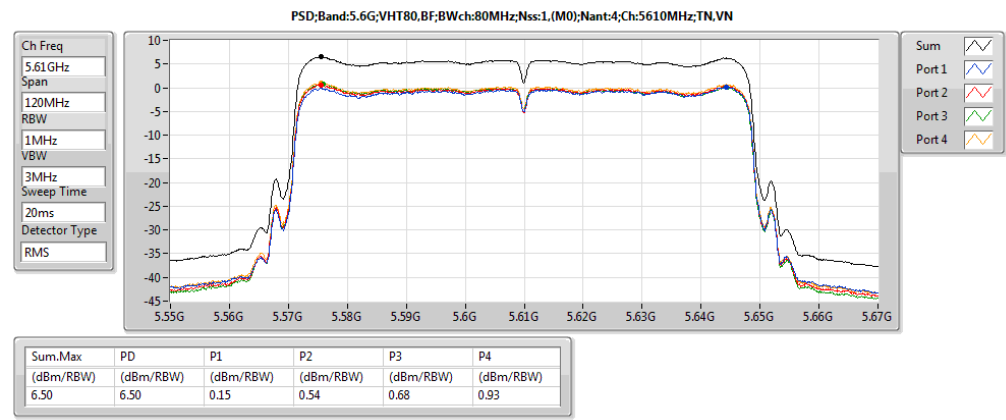
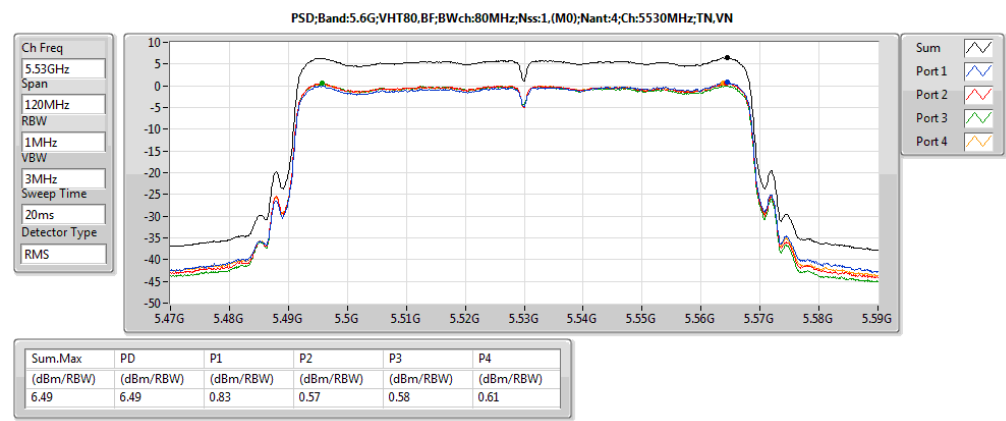
Result

Mode	Result	Meas.RBW (Hz)	Lim.RBW (Hz)	BWCF (dB)	DG (dBi)	Sum.Max (dBm/RBW)	PD (dBm/RBW)	PD.Limit (dBm/RBW)	EIRP.PD (dBm/RBW)	EIRP.PD.Li m (dBm/RBW)	P1 (dBm/RBW)	P2 (dBm/RBW)	P3 (dBm/RBW)	P4 (dBm/RBW)
5.3G;VHT20;Nss1,(M0);Ntx4;5260	Pass	1M	1M	0.00	6.41	10.18	10.18	10.59	16.59	Inf	4.37	4.00	4.13	4.65
5.3G;VHT20;Nss1,(M0);Ntx4;5300	Pass	1M	1M	0.00	6.41	10.28	10.28	10.59	16.69	Inf	4.88	3.97	4.18	4.52
5.3G;VHT20;Nss1,(M0);Ntx4;5320	Pass	1M	1M	0.00	6.41	10.14	10.14	10.59	16.55	Inf	4.77	3.90	4.05	4.35
5.6G;VHT20;Nss1,(M0);Ntx4;5500	Pass	1M	1M	0.00	6.41	10.23	10.23	10.59	16.64	Inf	4.18	4.27	4.42	4.39
5.6G;VHT20;Nss1,(M0);Ntx4;5580	Pass	1M	1M	0.00	6.41	10.41	10.41	10.59	16.82	Inf	4.42	4.29	4.44	4.67
5.6G;VHT20;Nss1,(M0);Ntx4;5700	Pass	1M	1M	0.00	6.41	10.18	10.18	10.59	16.59	Inf	3.89	4.16	4.73	4.14
5.6G;VHT20;Nss1,(M0);Ntx4;5720	Pass	1M	1M	0.00	6.41	10.04	10.04	10.59	16.45	Inf	4.13	4.06	4.36	3.88
5.8G;VHT20;Nss1,(M0);Ntx4;5720	Pass	500k	500k	0.00	7.06	8.66	8.66	28.94	15.72	Inf	2.42	2.80	3.16	2.74
5.3G;VHT40;Nss1,(M0);Ntx4;5270	Pass	1M	1M	0.00	6.41	7.47	7.47	10.59	13.88	Inf	1.91	1.33	1.02	1.94
5.3G;VHT40;Nss1,(M0);Ntx4;5310	Pass	1M	1M	0.00	6.41	7.57	7.57	10.59	13.98	Inf	2.22	1.01	1.36	1.94
5.6G;VHT40;Nss1,(M0);Ntx4;5510	Pass	1M	1M	0.00	6.41	7.43	7.43	10.59	13.84	Inf	2.06	1.35	0.61	1.91
5.6G;VHT40;Nss1,(M0);Ntx4;5550	Pass	1M	1M	0.00	6.41	7.22	7.22	10.59	13.63	Inf	1.88	1.53	0.56	1.60
5.6G;VHT40;Nss1,(M0);Ntx4;5670	Pass	1M	1M	0.00	6.41	6.94	6.94	10.59	13.35	Inf	1.39	0.92	0.50	1.49
5.6G;VHT40;Nss1,(M0);Ntx4;5710	Pass	1MM	1M	0.00	6.41	7.91	7.91	10.59	14.32	Inf	2.24	2.2	1.47	2.02
5.8G;VHT40;Nss1,(M0);Ntx4;5710	Pass	500k	500k	0.00	7.06	6.23	6.23	28.94	13.29	Inf	0.33	0.71	-0.41	0.33
5.3G;VHT80;Nss1,(M0);Ntx4;5290	Pass	1M	1M	0.00	6.41	5.53	5.53	10.59	11.94	Inf	0.10	-1.04	-1.10	0.27
5.6G;VHT80;Nss1,(M0);Ntx4;5530	Pass	1M	1M	0.00	6.41	4.85	4.85	10.59	11.26	Inf	-0.85	-1.33	-1.84	-0.39
5.6G;VHT80;Nss1,(M0);Ntx4;5610	Pass	1M	1M	0.00	6.41	4.93	4.93	10.59	11.34	Inf	-0.52	-1.41	-2.02	-0.26
5.6G;VHT80;Nss1,(M0);Ntx4;5690	Pass	1M	1M	0.00	6.41	4.47	4.47	10.59	10.88	Inf	-1.5	-1.65	-1.82	-0.93
5.8G;VHT80;Nss1,(M0);Ntx4;5690	Pass	500k	500k	0.00	7.06	2.68	2.68	28.94	9.74	Inf	-3.09	-3.19	-4.29	-2.83
5.3G;VHT20,BF;Nss1,(M0);Ntx4;5260	Pass	1M	1M	0.00	6.41	9.69	9.69	10.59	16.10	Inf	4.17	3.61	3.37	3.95
5.3G;VHT20,BF;Nss1,(M0);Ntx4;5300	Pass	1M	1M	0.00	6.41	9.75	9.75	10.59	16.16	Inf	4.49	3.40	3.39	4.09
5.3G;VHT20,BF;Nss1,(M0);Ntx4;5320	Pass	1M	1M	0.00	6.41	9.72	9.72	10.59	16.13	Inf	4.32	3.35	3.76	3.83
5.6G;VHT20,BF;Nss1,(M0);Ntx4;5500	Pass	1M	1M	0.00	6.41	9.78	9.78	10.59	16.19	Inf	3.42	4.05	3.86	4.12
5.6G;VHT20,BF;Nss1,(M0);Ntx4;5580	Pass	1M	1M	0.00	6.41	9.56	9.56	10.59	15.97	Inf	3.80	3.51	3.09	4.29
5.6G;VHT20,BF;Nss1,(M0);Ntx4;5700	Pass	1M	1M	0.00	6.41	9.46	9.46	10.59	15.87	Inf	3.47	3.51	3.10	3.94
5.6G;VHT20,BF;Nss1,(M0);Ntx4;5720	Pass	1M	1M	0.00	6.41	10.45	10.45	10.59	16.86	Inf	4.24	4.62	4.76	4.44
5.8G;VHT20,BF;Nss1,(M0);Ntx4;5720	Pass	500k	500k	0.00	7.06	8.92	8.92	28.94	15.98	Inf	2.73	3.17	3.25	3.00
5.3G;VHT40,BF;Nss1,(M0);Ntx4;5270	Pass	1M	1M	0.00	6.41	6.75	6.75	10.59	13.16	Inf	1.32	0.47	0.54	0.94
5.3G;VHT40,BF;Nss1,(M0);Ntx4;5310	Pass	1M	1M	0.00	6.41	6.77	6.77	10.59	13.18	Inf	1.79	0.18	0.41	0.89
5.6G;VHT40,BF;Nss1,(M0);Ntx4;5510	Pass	1M	1M	0.00	6.41	8.12	8.12	10.59	14.53	Inf	1.99	2.30	2.07	2.36
5.6G;VHT40,BF;Nss1,(M0);Ntx4;5550	Pass	1M	1M	0.00	6.41	8.08	8.08	10.59	14.49	Inf	1.72	2.25	1.97	2.39
5.6G;VHT40,BF;Nss1,(M0);Ntx4;5670	Pass	1M	1M	0.00	6.41	7.91	7.91	10.59	14.32	Inf	2.00	1.77	2.20	2.17
5.6G;VHT40,BF;Nss1,(M0);Ntx4;5710	Pass	1M	1M	0.00	6.41	8.98	8.98	10.59	15.39	Inf	2.65	3.17	3.23	2.86
5.8G;VHT40,BF;Nss1,(M0);Ntx4;5710	Pass	500k	500k	0.00	7.06	5.75	5.75	28.94	12.81	Inf	-0.52	0.13	0.06	-0.00
5.3G;VHT80,BF;Nss1,(M0);Ntx4;5290	Pass	1M	1M	0.00	6.41	4.54	4.54	10.59	10.95	Inf	-0.83	-1.80	-1.87	-1.14
5.6G;VHT80,BF;Nss1,(M0);Ntx4;5530	Pass	1M	1M	0.00	6.41	6.49	6.49	10.59	12.90	Inf	0.83	0.57	0.58	0.61
5.6G;VHT80,BF;Nss1,(M0);Ntx4;5610	Pass	1M	1M	0.00	6.41	6.50	6.50	10.59	12.91	Inf	0.15	0.54	0.68	0.93
5.6G;VHT80,BF;Nss1,(M0);Ntx4;5690	Pass	1M	1M	0.00	6.41	6.34	6.34	10.59	12.75	Inf	0.38	-0.09	0.35	0.68
5.8G;VHT80,BF;Nss1,(M0);Ntx4;5690	Pass	500k	500k	0.00	7.06	2.96	2.96	28.94	10.02	Inf	-3.34	-3.18	-3.22	-2.51











Summary

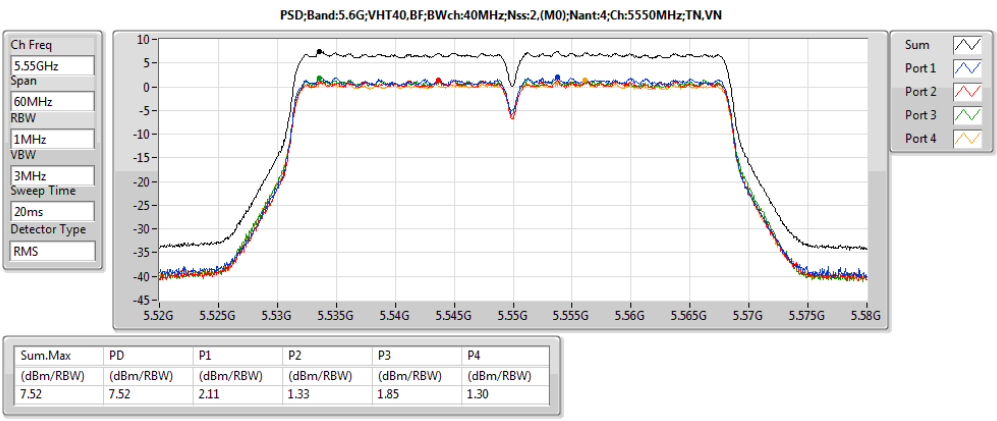
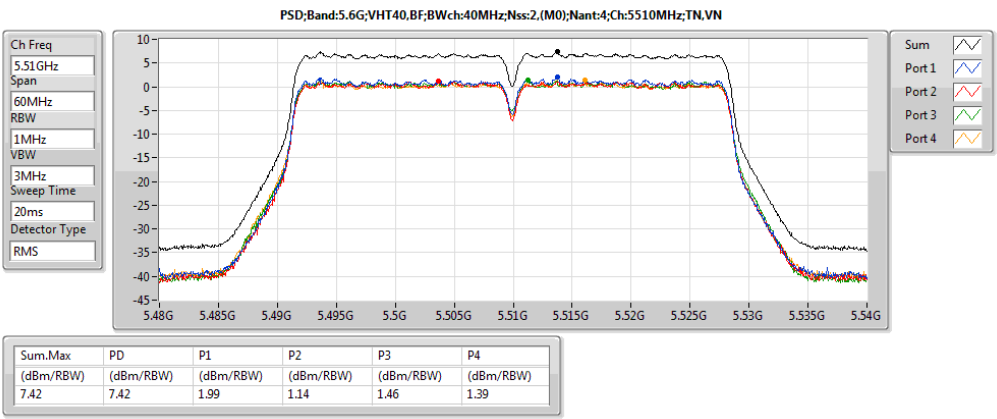
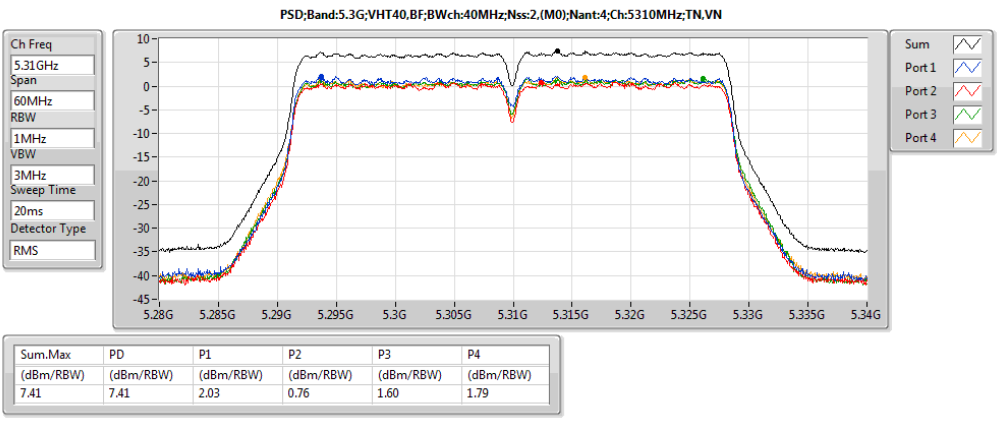
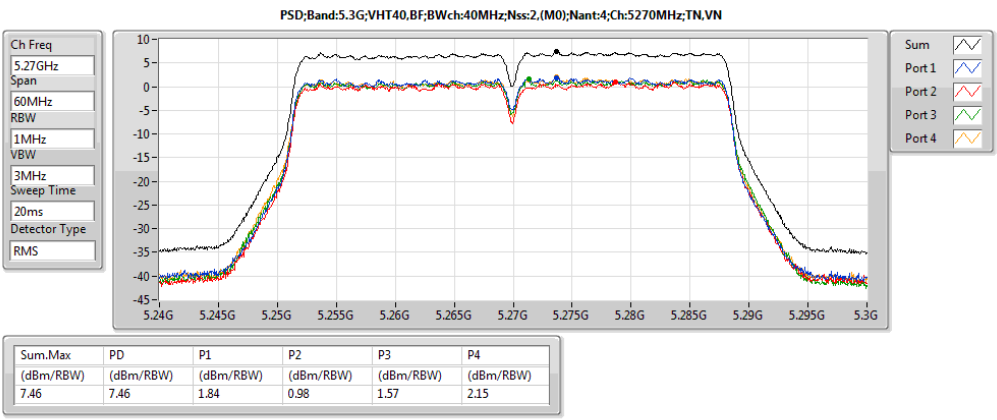
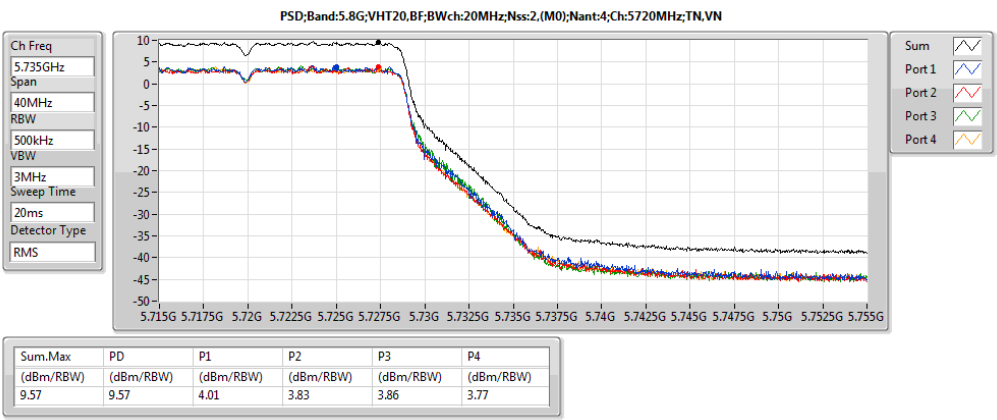
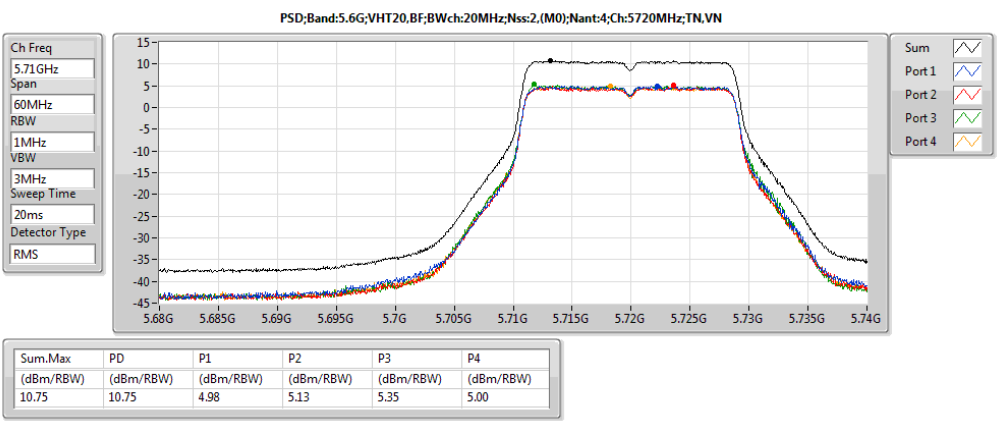
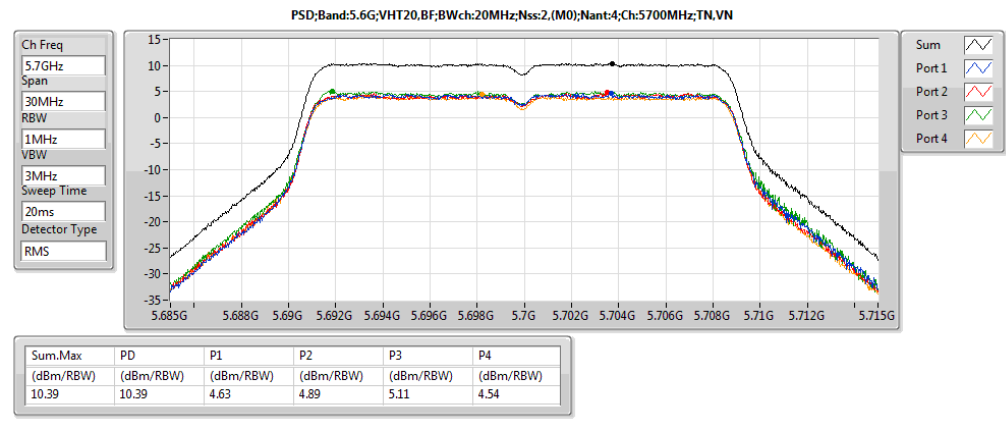
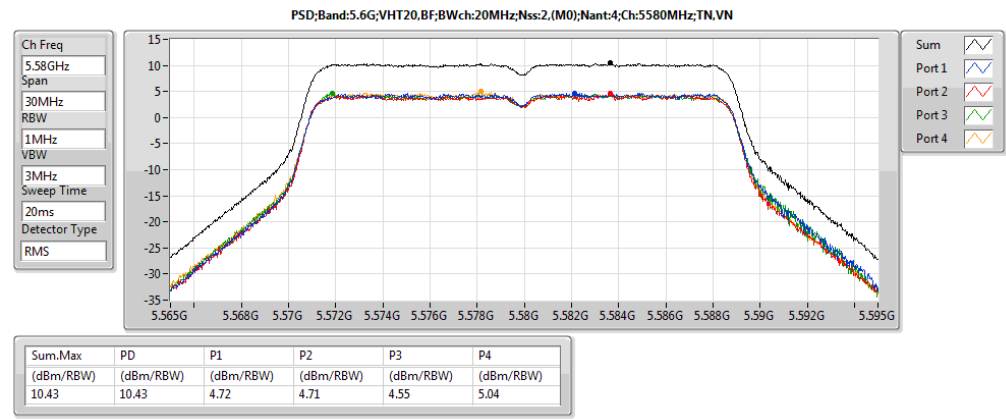
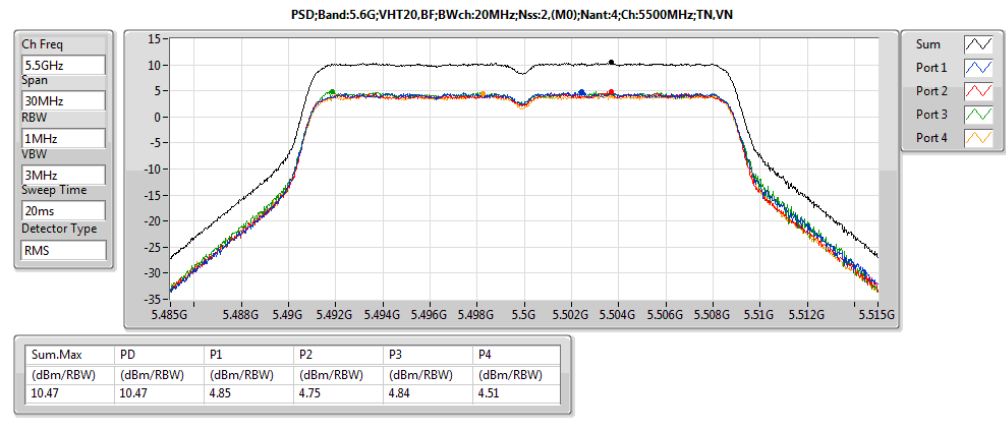
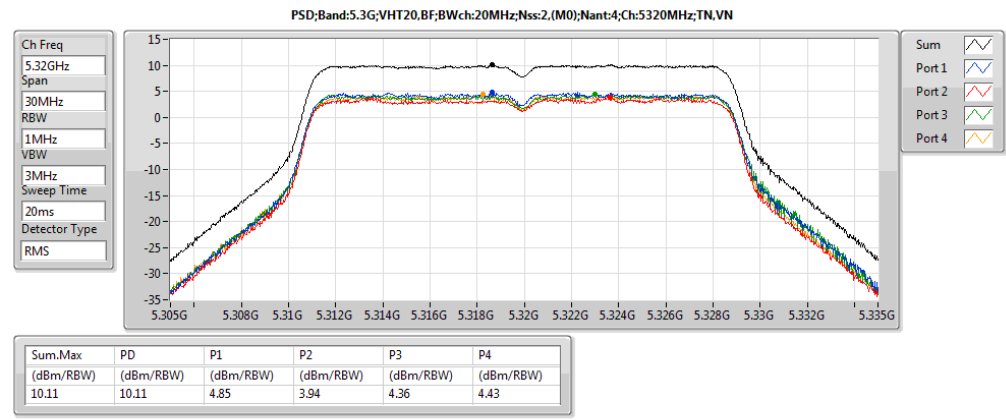
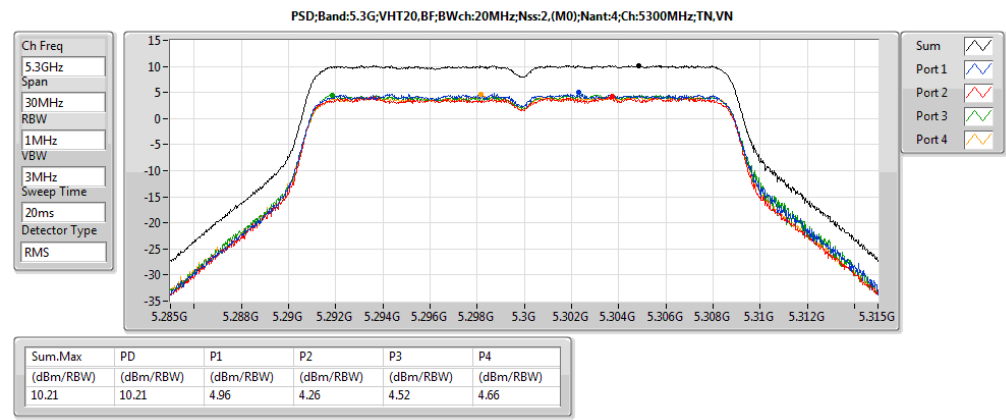
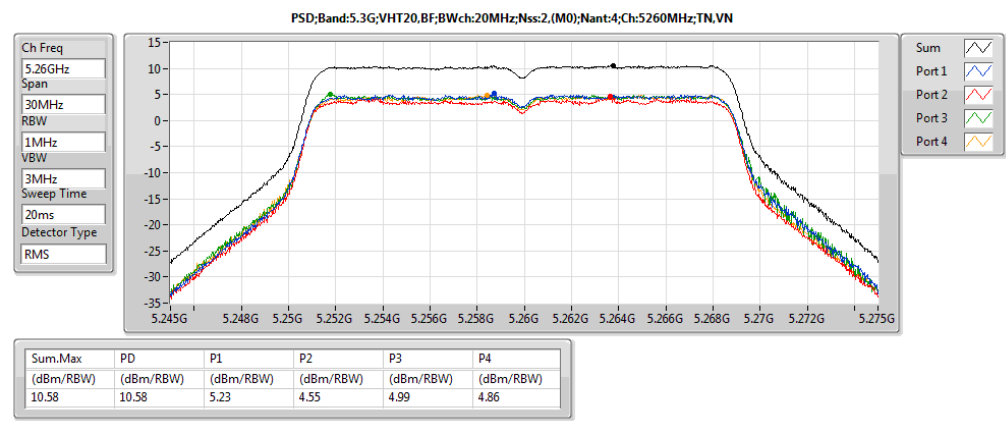
<For Beamforming Mode 4T2S>

Mode	PD (dBm/RBW)	EIRP.PD (dBm/RBW)
5.3G;VHT20,BF;Nss2,(M0);Ntx4	10.58	14.10
5.6G;VHT20,BF;Nss2,(M0);Ntx4	10.75	14.15
5.3G;VHT40,BF;Nss2,(M0);Ntx4	7.46	10.98
5.6G;VHT40,BF;Nss2,(M0);Ntx4	9.37	12.77
5.3G;VHT80,BF;Nss2,(M0);Ntx4	4.64	8.16
5.6G;VHT80,BF;Nss2,(M0);Ntx4	6.80	10.20



Result

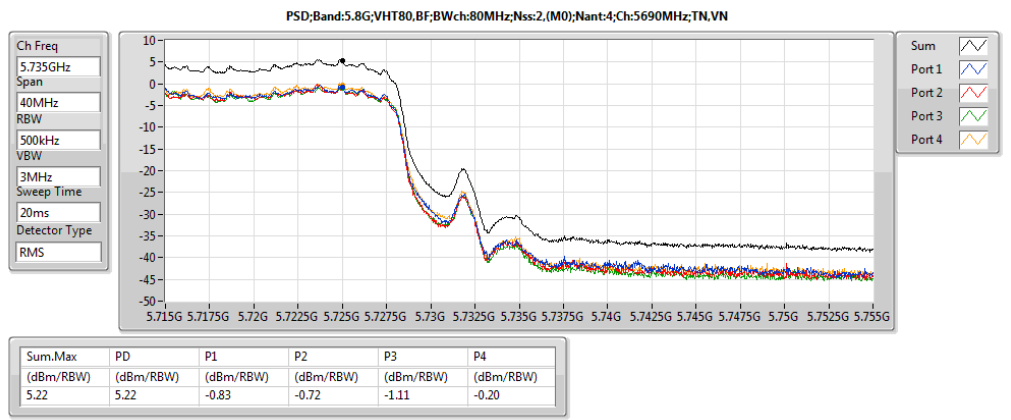
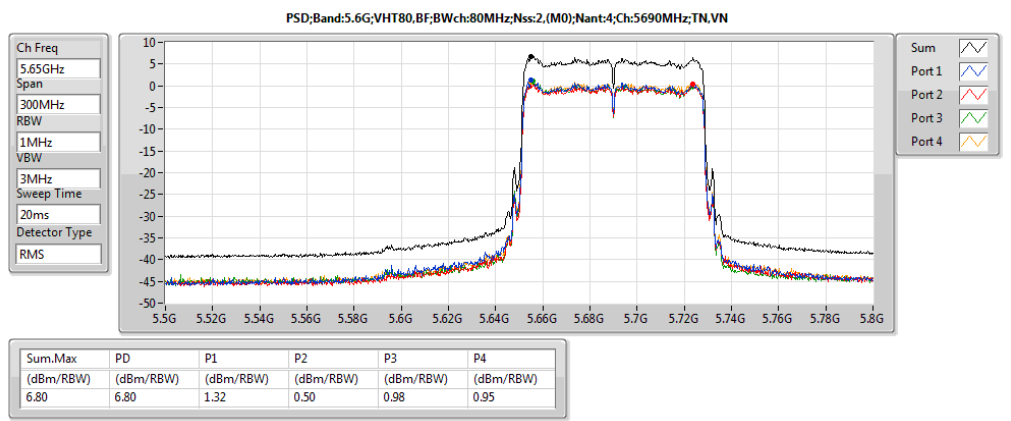
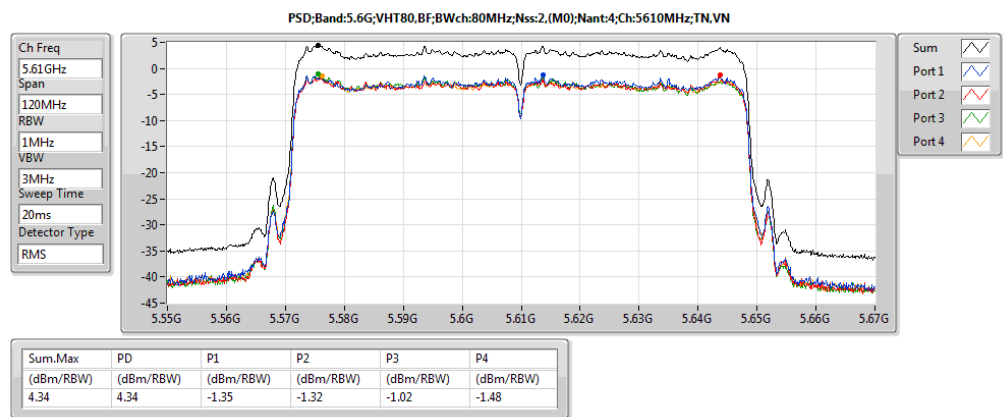
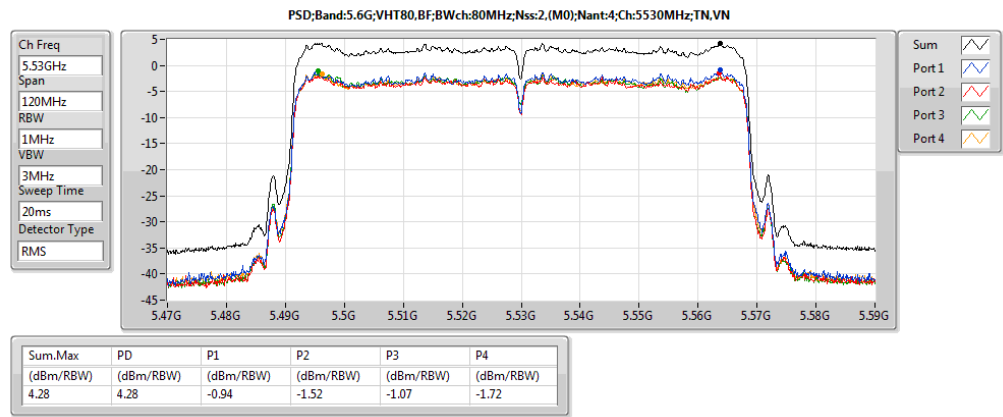
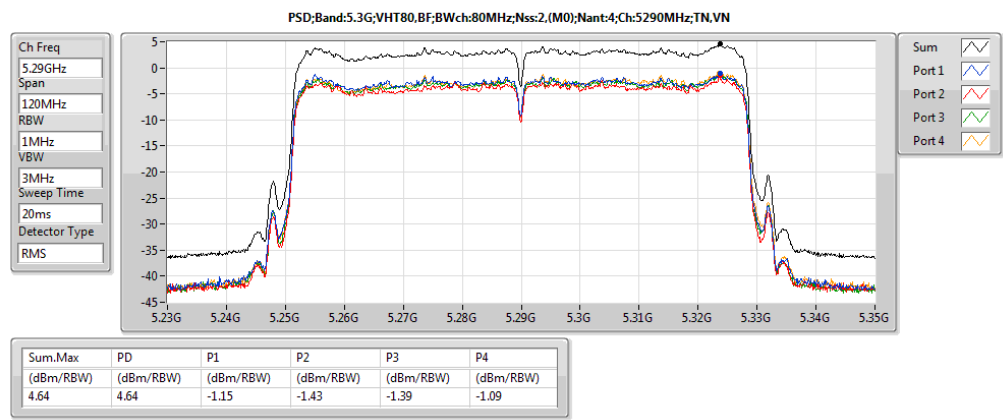
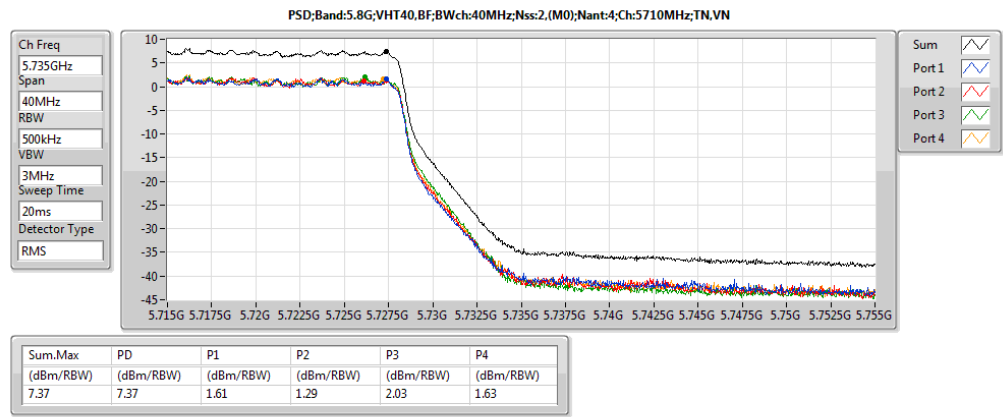
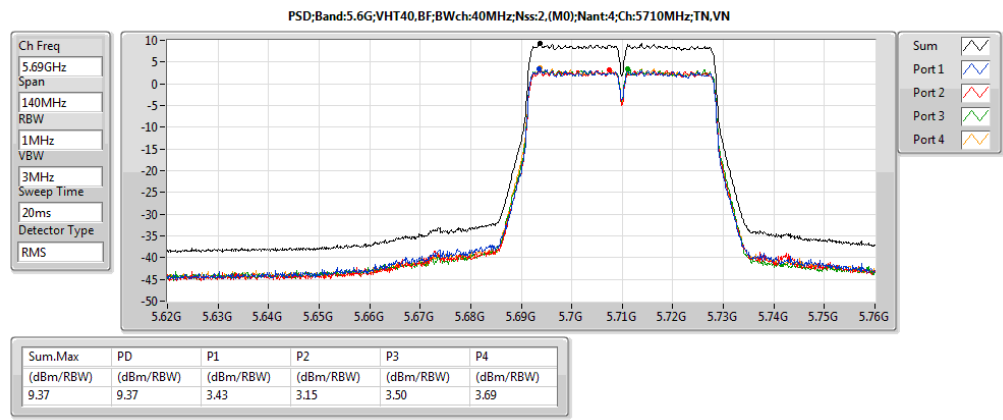
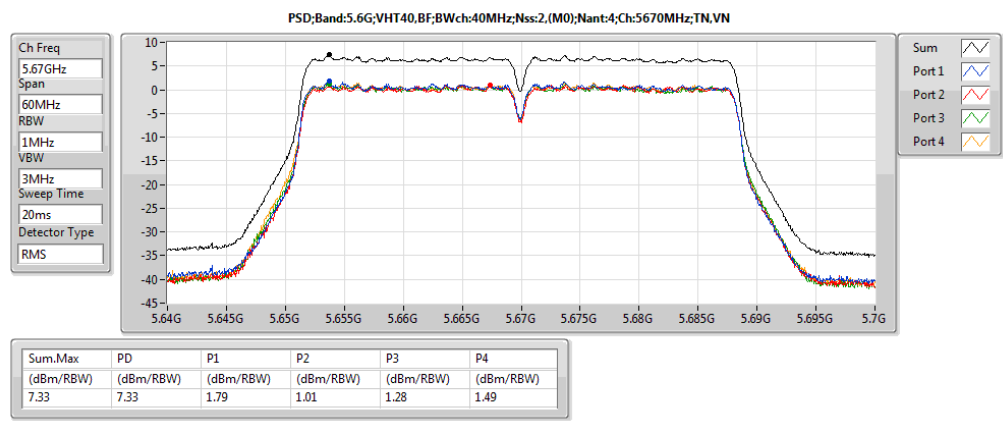
Mode	Result	Meas.RBW (Hz)	Lim.RBW (Hz)	BWCF (dB)	DG (dBi)	PD (dBm/RBW)	PD.Limit (dBm/RBW)	EIRP.PD (dBm/RBW)	EIRP.PD.Li m (dBm/RBW)	P1 (dBm/RBW)	P2 (dBm/RBW)	P3 (dBm/RBW)	P4 (dBm/RBW)
5.3G;VHT20,BF;Nss2,(M0);Ntx4;5260	Pass	1M	1M	0.00	3.52	10.58	11.00	14.10	Inf	5.23	4.55	4.99	4.86
5.3G;VHT20,BF;Nss2,(M0);Ntx4;5300	Pass	1M	1M	0.00	3.52	10.21	11.00	13.73	Inf	4.96	4.26	4.52	4.66
5.3G;VHT20,BF;Nss2,(M0);Ntx4;5320	Pass	1M	1M	0.00	3.52	10.11	11.00	13.63	Inf	4.85	3.94	4.36	4.43
5.6G;VHT20,BF;Nss2,(M0);Ntx4;5500	Pass	1M	1M	0.00	3.40	10.47	11.00	13.87	Inf	4.85	4.75	4.84	4.51
5.6G;VHT20,BF;Nss2,(M0);Ntx4;5580	Pass	1M	1M	0.00	3.40	10.43	11.00	13.83	Inf	4.72	4.71	4.55	5.04
5.6G;VHT20,BF;Nss2,(M0);Ntx4;5700	Pass	1M	1M	0.00	3.40	10.39	11.00	13.79	Inf	4.63	4.89	5.11	4.54
5.6G;VHT20,BF;Nss2,(M0);Ntx4;5720	Pass	1M	1M	0.00	3.40	10.75	11.00	14.15	Inf	4.98	5.13	5.35	5.00
5.8G;VHT20,BF;Nss2,(M0);Ntx4;5720	Pass	500k	500k	0.00	4.11	9.57	30.00	13.68	Inf	4.01	3.83	3.86	3.77
5.3G;VHT40,BF;Nss2,(M0);Ntx4;5270	Pass	1M	1M	0.00	3.52	7.46	11.00	10.98	Inf	1.84	0.98	1.57	2.15
5.3G;VHT40,BF;Nss2,(M0);Ntx4;5310	Pass	1M	1M	0.00	3.52	7.41	11.00	10.93	Inf	2.03	0.76	1.60	1.79
5.6G;VHT40,BF;Nss2,(M0);Ntx4;5510	Pass	1M	1M	0.00	3.40	7.42	11.00	10.82	Inf	1.99	1.14	1.46	1.39
5.6G;VHT40,BF;Nss2,(M0);Ntx4;5550	Pass	1M	1M	0.00	3.40	7.52	11.00	10.92	Inf	2.11	1.33	1.85	1.30
5.6G;VHT40,BF;Nss2,(M0);Ntx4;5670	Pass	1M	1M	0.00	3.40	7.33	11.00	10.73	Inf	1.79	1.01	1.28	1.49
5.6G;VHT40,BF;Nss2,(M0);Ntx4;5710	Pass	1M	1M	0.00	3.40	9.37	11.00	12.77	Inf	3.43	3.15	3.50	3.69
5.8G;VHT40,BF;Nss2,(M0);Ntx4;5710	Pass	500k	500k	0.00	4.11	7.37	30.00	11.48	Inf	1.61	1.29	2.03	1.63
5.3G;VHT80,BF;Nss2,(M0);Ntx4;5290	Pass	1M	1M	0.00	3.52	4.64	11.00	8.16	Inf	-1.15	-1.43	-1.39	-1.09
5.6G;VHT80,BF;Nss2,(M0);Ntx4;5530	Pass	1M	1M	0.00	3.40	4.28	11.00	7.68	Inf	-0.94	-1.52	-1.07	-1.72
5.6G;VHT80,BF;Nss2,(M0);Ntx4;5610	Pass	1M	1M	0.00	3.40	4.34	11.00	7.74	Inf	-1.35	-1.32	-1.02	-1.48
5.6G;VHT80,BF;Nss2,(M0);Ntx4;5690	Pass	1M	1M	0.00	3.40	6.80	11.00	10.20	Inf	1.32	0.50	0.98	0.95
5.8G;VHT80,BF;Nss2,(M0);Ntx4;5690	Pass	500k	500k	0.00	4.11	5.22	30.00	9.33	Inf	-0.83	-0.72	-1.11	-0.20





PSD Result

Appendix C.2





Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
5.6G;VHT20,BF;Nss2,(M0);Ntx4;5700;TX	Pass	PK	5.7256G	68.16	68.20	-0.04	8.91	3	V	145	1.08	-

