



FCC Test Report

Equipment : R610 Access Point
Brand Name : Ruckus
Model No. : R610
FCC ID : S9GR610
Standard : 47 CFR FCC Part 15.407
Operating Band : 5250 MHz – 5350 MHz
5470 MHz – 5725 MHz
Applicant : Ruckus Wireless, Inc.
350 West Java Drive Sunnyvale, California 94089 U.S.A
Manufacturer : Ruckus Wireless, Inc.
350 West Java Drive Sunnyvale, California 94089 U.S.A
Function : ☐ Outdoor; ☒ Indoor; ☐ Fixed P2P
☐ Client
TPC Function : TPC

The product sample received on Jul. 25, 2016 and completely tested on Sep. 12, 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
1.1.3	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



SPORTON INTERNATIONAL INC.
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FCC ID: S9GR610

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
5150-5250	a, n (HT20), ac (VHT20)	5180-5240	36-48 [4]
5250-5350		5260-5320	52-64 [4]
5470-5725		5500-5720	100-140 [12]
5725-5850		5745-5825	149-165 [5]
5150-5250	n (HT40), ac (VHT40)	5190-5230	38-46 [2]
5250-5350		5270-5310	54-62 [2]
5470-5725		5510-5720	102-134 [6]
5725-5850		5755-5795	151-159 [2]
5150-5250	ac (VHT80)	5210	42 [1]
5250-5350		5290	58 [1]
5470-5725		5530-5690	106-122 [3]
5725-5850		5775	155 [1]

Band	Mode	BWch (MHz)	Nant
5.2G	11a	20	3
5.3G	11a	20	3
5.6G	11a	20	3
5.8G	11a	20	3
5.2G	HT20	20	3
5.3G	HT20	20	3
5.6G	HT20	20	3
5.8G	HT20	20	3
5.2G	HT20,BF	20	3
5.3G	HT20,BF	20	3
5.6G	HT20,BF	20	3
5.8G	HT20,BF	20	3
5.2G	VHT20	20	3
5.3G	VHT20	20	3
5.6G	VHT20	20	3
5.8G	VHT20	20	3
5.2G	VHT20,BF	20	3

5.3G	VHT20,BF	20	3
5.6G	VHT20,BF	20	3
5.8G	VHT20,BF	20	3
5.2G	HT40	40	3
5.3G	HT40	40	3
5.6G	HT40	40	3
5.8G	HT40	40	3
5.2G	HT40,BF	40	3
5.3G	HT40,BF	40	3
5.6G	HT40,BF	40	3
5.8G	HT40,BF	40	3
5.2G	VHT40	40	3
5.3G	VHT40	40	3
5.6G	VHT40	40	3
5.8G	VHT40	40	3
5.2G	VHT40,BF	40	3
5.3G	VHT40,BF	40	3
5.6G	VHT40,BF	40	3
5.8G	VHT40,BF	40	3
5.2G	VHT80	80	3
5.3G	VHT80	80	3
5.6G	VHT80	80	3
5.8G	VHT80	80	3
5.2G	VHT80,BF	80	3
5.3G	VHT80,BF	80	3
5.6G	VHT80,BF	80	3
5.8G	VHT80,BF	80	3

Note:

- ◆ 5.2G/5.2G-I(IC) is the 5.2GHz Band (5.15-5.25GHz).
- ◆ 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.
- ◆ BWch is the nominal channel bandwidth.
- ◆ Nss-Min is the minimum number of spatial streams.
- ◆ Nant is the number of outputs. e.g., 2(2,3) means have 2 outputs for port 2 and port 3. 2 means have 2 outputs for port 1 and port 2.

1.1.2 Table for 80+80 MHz

Type	Channel No.	Frequency
1	42+106	5210+5530 MHz
2	42+122	5210+5610 MHz
3	42+138	5210+5690 MHz
4	58+106	5290+5530 MHz
5	58+122	5290+5610 MHz
6	58+138	5290+5690 MHz
7	58+155	5290+5775 MHz
8	106+138	5530+5690 MHz
9	106+155	5530+5775 MHz
10	122+155	5610+5775 MHz
11	138+155	5690+5775 MHz
12	42+58	5210+5290 MHz
13	106+122	5530+5610 MHz
14	122+138	5610+5690 MHz

1.1.3 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	
					2.4GHz	5GHz
1	Ruckus	R610	PIFA Antenna	I-PEX	1	3
2	Ruckus	R610	PIFA Antenna	I-PEX	1	3
3	Ruckus	R610	PIFA Antenna	I-PEX	1	3

Note: 1. The EUT has three antennas.

2. The EUT is with 3 antennas. Two of the antennas' polarity is vertical and the other antenna's polarity is Horizontal which is 3T2S, the array gain is 1.76dBi.

The 80+80MHz mode which is 2T2S(Chain 1 + Chain 3), the array gain is 0 dBi.

The non-beamforming 80+80MHz mode=beamforming 80+80MHz mode.

<For 2.4GHz Band>

For IEEE 802.11b/g/n/ac mode <3TX/3RX>:

Chain 1, Chain 2 and Chain 3 will transmit/receive the same signal simultaneously.

Chain 1, Chain 2 and Chain 3 can be used as transmitting/receiving antennas.

<For 5GHz Band>

For IEEE 802.11a/n/ac mode <3TX/3RX>:

Chain 1, Chain 2 and Chain 3 will transmit/receive the same signal simultaneously.

Chain 1, Chain 2 and Chain 3 can be used as transmitting/receiving antennas.

For IEEE 802.11ac 80+80MHz <2TX/2RX>:

Chain 1 and Chain 3 will transmit/receive the same signal simultaneously.

Chain 1 and Chain 3 can be used as transmitting/receiving antennas.



1.1.4 Mode Test Duty Cycle

Mode	DC	T(s)	VBW(Hz) $\geq 1/T$
VHT80	0.948	1.137m	1k
VHT80,BF	0.951	1.153m	1k

1.1.5 EUT Operational Condition

EUT Power Type	From Power Adapter or PoE		
Beamforming Function	☒ With beamforming for 802.11n/ac in 2.4GHz/5GHz	☐ Without beamforming	
Weather Band	☒ With 5600~5650MHz	☐ Without 5600~5650MHz	

1.1.6 Table for Class II Change

This product is an extension of original one reported under Sporton project number: FR672501-01

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

Modifications	Performance Checking
Add fourteen sets 80+80 Mode, please refer to the section 1.1.2 for detail.	1. Emission Bandwidth 2. Maximum Conducted Output Power 3. Peak Power Spectral Density 4. Unwanted Emissions (Above 1GHz)

1.2 Testing Applied Standards

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

- ♦ 47 CFR FCC Part 15
- ♦ ANSI C63.10-2013
- ♦ FCC KDB 789033 D02 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	Eddie Weng	25°C / 60%	Sep. 05, 2016 ~ Sep. 12, 2016
Radiated	03CH01-CB	Nyle Chang & Zero Chen	22°C / 54%	Aug. 31, 2016 ~ Sep. 08, 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
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%

2 Test Configuration of EUT

2.1 Test Channel Mode

Band	Mode	BWch (MHz)	Nss-Min	Nant	Ch. (MHz)	Range	Power Setting
5.2G	VHT80+80	80	1,(M0)	1(3)	#5210,5530	S	18
5.2G	VHT80+80	80	1,(M0)	1(3)	#5210,5610	S	18
5.2G	VHT80+80	80	1,(M0)	1(3)	#5210,5690	S	18
5.2G	VHT80+80	80	1,(M0)	1(3)	#5210,5290	S	17
5.3G	VHT80+80	80	1,(M0)	1(3)	#5290,5530	S	18
5.3G	VHT80+80	80	1,(M0)	1(3)	#5290,5610	S	18.5
5.3G	VHT80+80	80	1,(M0)	1(3)	#5290,5690	S	18.5
5.3G	VHT80+80	80	1,(M0)	1(3)	#5290,5775	S	18.5
5.3G	VHT80+80	80	1,(M0)	1(1)	5210,#5290	S	17
5.6G	VHT80+80	80	1,(M0)	2(1,3)	#5530,#5690	C	19
5.6G	VHT80+80	80	1,(M0)	1(3)	#5530,5775	S	19
5.6G	VHT80+80	80	1,(M0)	1(3)	#5610,5775	S	22
5.6G	VHT80+80	80	1,(M0)	1(3)	#5690,5775	C	22
5.6G	VHT80+80	80	1,(M0)	2(1,3)	#5530,#5610	S	19
5.6G	VHT80+80	80	1,(M0)	2(1,3)	#5610,#5690	C	20.5
5.6G	VHT80+80	80	1,(M0)	1(1)	5210,#5530	S	18
5.6G	VHT80+80	80	1,(M0)	1(1)	5210,#5610	S	18
5.6G	VHT80+80	80	1,(M0)	1(1)	5210,#5690	C	18
5.6G	VHT80+80	80	1,(M0)	1(1)	5290,#5530	S	18
5.6G	VHT80+80	80	1,(M0)	1(1)	5290,#5610	S	18.5
5.6G	VHT80+80	80	1,(M0)	1(1)	5290,#5690	C	18.5
5.6G	VHT80+80	80	1,(M0)	1(1)	#5530,#5610	S	19
5.6G	VHT80+80	80	1,(M0)	1(1)	#5610,#5690	C	22
5.8G	VHT80+80	80	1,(M0)	1(3)	5610,#5690	C	22
5.8G	VHT80+80	80	1,(M0)	1(1)	5210,#5690	C	18
5.8G	VHT80+80	80	1,(M0)	1(1)	5290,#5690	C	18.5
5.8G	VHT80+80	80	1,(M0)	1(1)	5290,#5775	S	18.5
5.8G	VHT80+80	80	1,(M0)	1(1)	#5530,#5690	C	19
5.8G	VHT80+80	80	1,(M0)	1(1)	5530,#5775	S	19
5.8G	VHT80+80	80	1,(M0)	1(1)	5610,#5775	S	22
5.8G	VHT80+80	80	1,(M0)	2(1,3)	#5690,#5775	C	22
5.8G	VHT80+80	80	1,(M0)	1(1)	#5610,#5690	C	20.5

2.2 The Worst Case Measurement Configuration

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

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	Place EUT in Y axis
2	Place EUT in Z axis
Mode 2 has been evaluated to be the worst case after evaluating. Consequently, measurement will follow this same test mode.	

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 RX Device and transmit duty cycle no less 98%

2.4 Accessories

Accessories			
Equipment Name	Brand Name	Model Name	Rating
Adapter	Ruckus	WGF-1200200T3	Input: 100-240V~, 50/60Hz, 0.6A Output: 12.0V, 2.0A
PoE	Ruckus	740-64214-001	Input: 100-240V~50/60Hz 0.75A MAX Output: 48V, 0.5A
Other			
Wall-mounted rack*1			

2.5 Support Equipment

For Test Site No: 03CH01-CB (above 1GHz)

<For Non-Beamforming Mode>

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

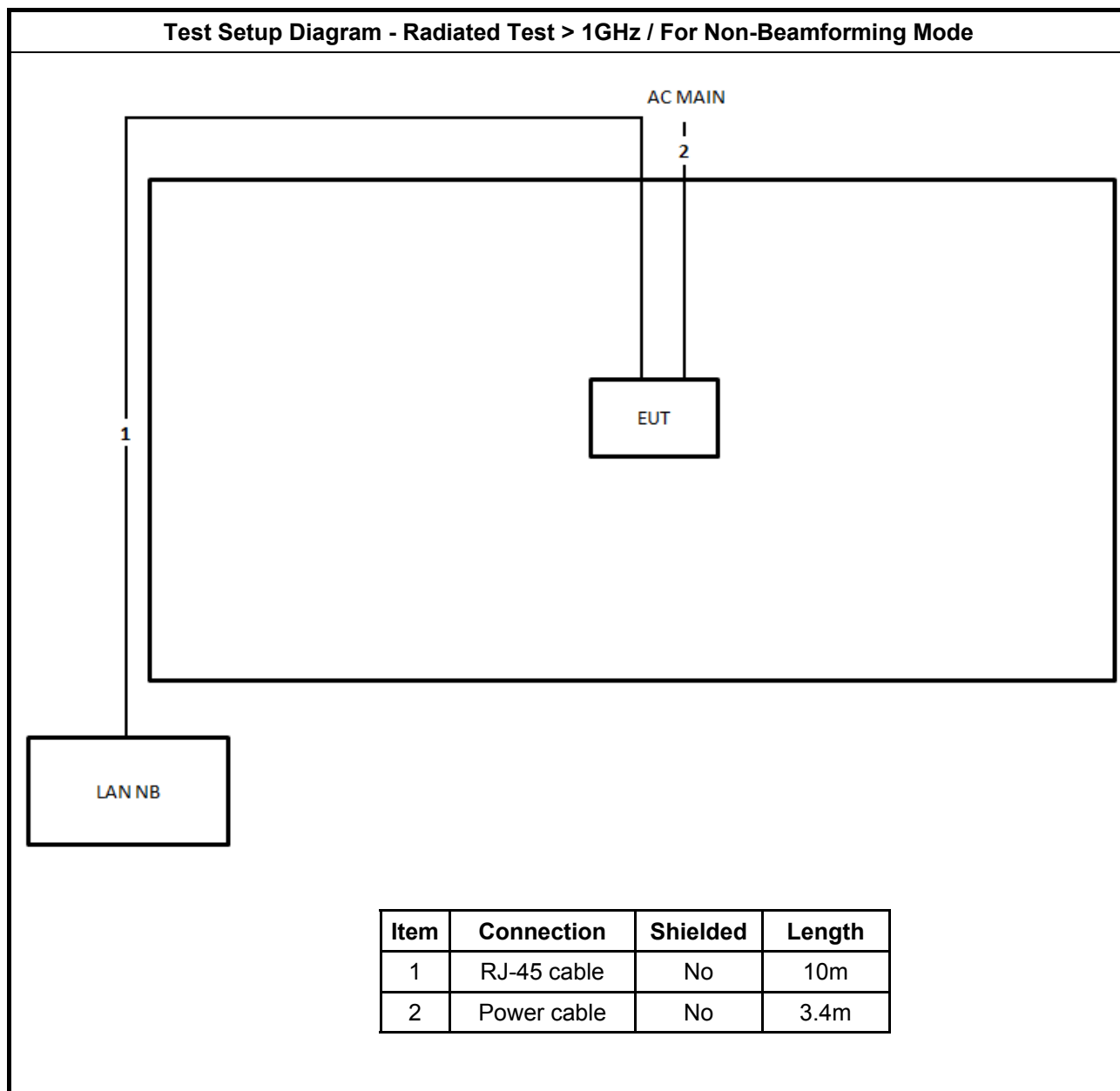
<For Beamforming Mode>

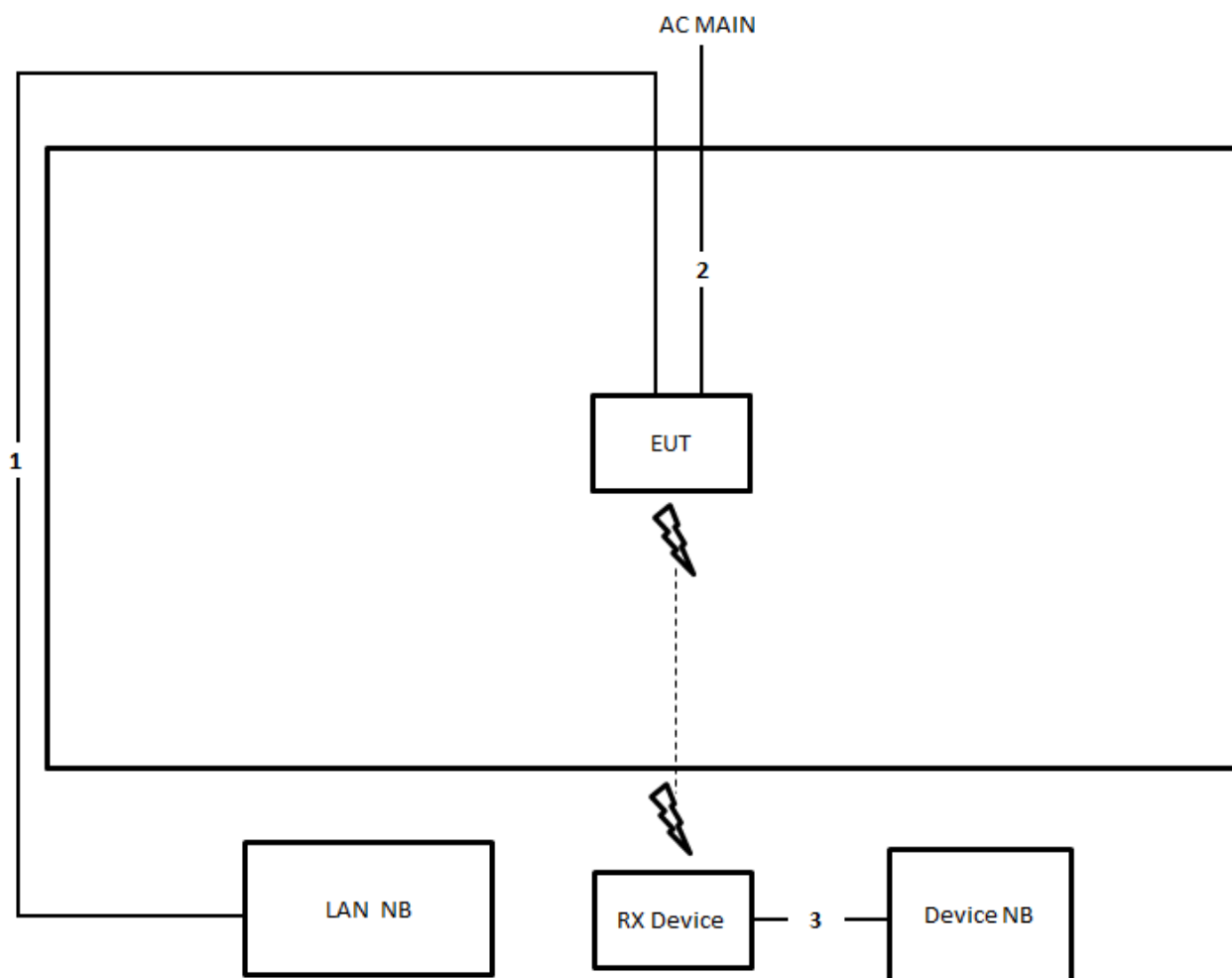
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E4300	DoC
2	NB	DELL	E4300	DoC
3	RX Device	Ruckus	R610	S9GR610

For Test Site No: TH01-CB

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

2.6 Test Setup Diagram



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


Item	Connection	Shielded	Length
1	RJ-45 Cable	No	10m
2	Power cable	No	3.4m
3	RJ-45 Cable	No	1.5m

3 Transmitter Test Result

3.1 Emission Bandwidth

3.1.1 Emission Bandwidth Limit

Emission Bandwidth Limit	
UNII Devices	
☒	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.

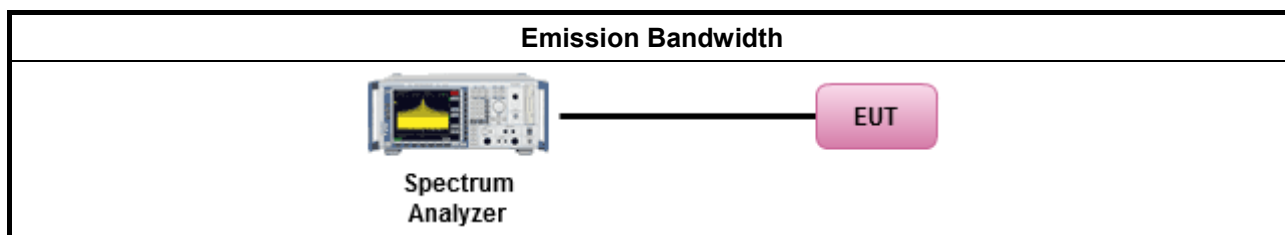
3.1.2 Measuring Instruments

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

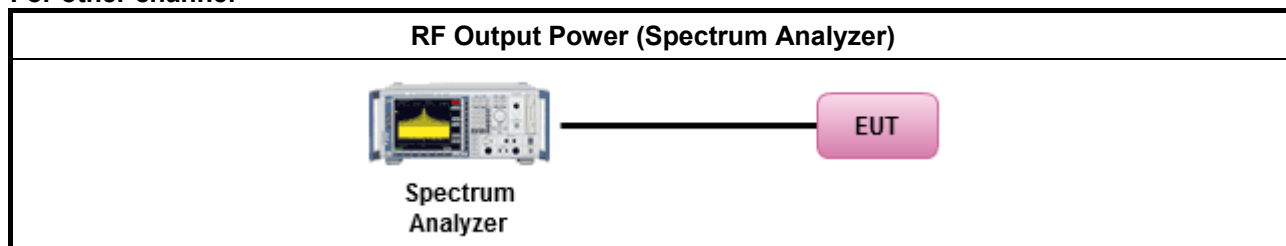
Refer a test equipment and calibration data table in this test report.

3.2.3 Test Procedures

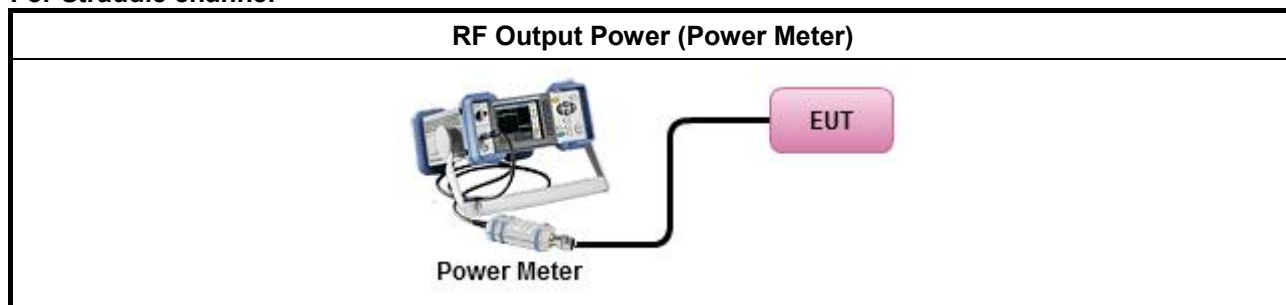
Test Method	
Maximum Conducted Output Power	
	[duty cycle $\geq$ 98% or external video / power trigger]
☒	Refer as FCC KDB 789033, clause E Method SA-1 (spectral trace averaging). for straddle channel
☐	Refer as FCC KDB 789033, clause E Method SA-1 Alt. (RMS detection with slow sweep speed)
	duty cycle $<$ 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 other channel
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: $P_{total} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$	

3.2.4 Test Setup

For other channel



For Straddle 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.	

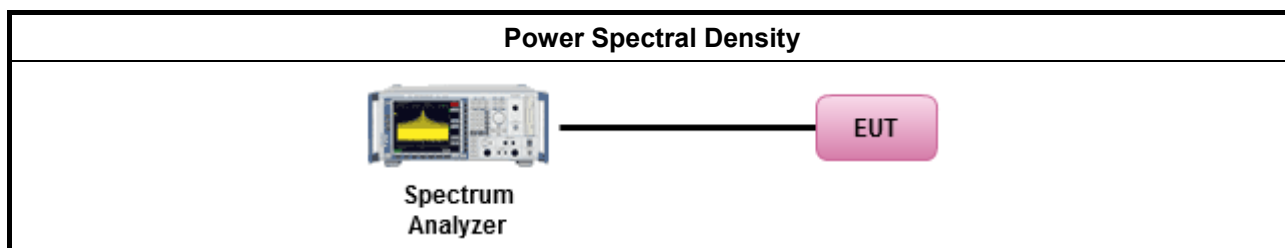
3.3.2 Measuring Instruments

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).

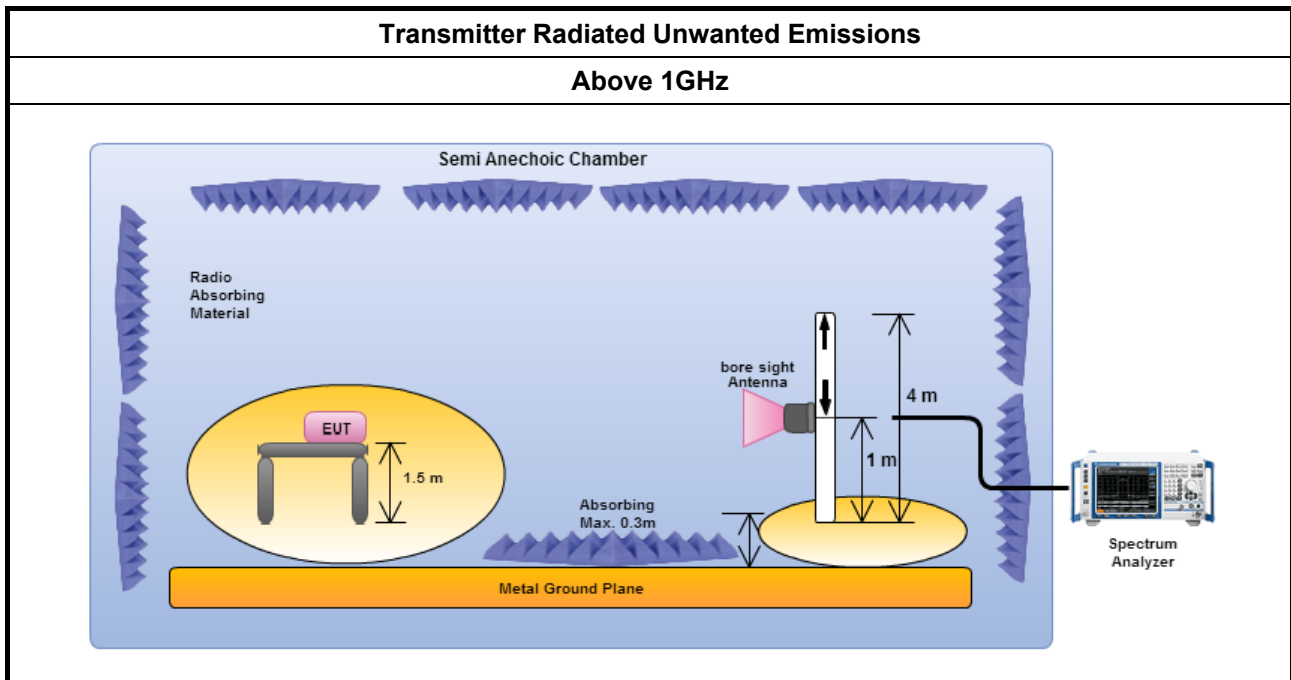
3.4.2 Measuring Instruments

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 Test Result of Transmitter Unwanted Emissions

Refer as Appendix D

4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Oct. 22, 2015	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	Nov. 13, 2015	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Oct. 27, 2015	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-17	N/A	1 GHz ~ 18 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G-1	N/A	18GHz ~ 40 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G-2	N/A	18GHz ~ 40 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
Test Software	Audix	E3	6.2009-10-7	N/A	N/A	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 09, 2015	Conducted (TH01-CB)
Temp. and Humidity Chamber	Ten Billion	TTH-D3SP	TBN-931011	-30~100 degree	Jun. 03, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-6	1 GHz – 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-7	1 GHz – 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-8	1 GHz – 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-9	1 GHz – 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz – 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 02, 2015	Conducted (TH01-CB)

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



Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.2G;VHT80+80;Nss1,(M0);Ntx1(3)	80.5M	75.762M	75M8D1D	80.2M	75.562M
5.3G;VHT80+80;Nss1,(M0);Ntx1(3)	80.5M	75.862M	75M9D1D	80.3M	75.762M
5.3G;VHT80+80;Nss1,(M0);Ntx1(1)	80.5M	75.862M	75M9D1D	80.5M	75.862M
5.6G;VHT80+80;Nss1,(M0);Ntx2(1,3)	80.85M	75.862M	75M9D1D	75.15M	72.564M
5.6G;VHT80+80;Nss1,(M0);Ntx1(3)	157.313M	76.368M	76M4D1D	80.4M	75.762M
5.6G;VHT80+80;Nss1,(M0);Ntx2(1,3)	80.85M	75.862M	75M9D1D	75.15M	72.564M
5.6G;VHT80+80;Nss1,(M0);Ntx1(1)	80.5M	75.962M	76M0D1D	75.15M	72.489M
5.8G;VHT80+80;Nss1,(M0);Ntx1(1)	76.1M	76.262M	76M3D1D	3.14M	3.378M
5.8G;VHT80+80;Nss1,(M0);Ntx2(1,3)	76.275M	76.162M	76M2D1D	3.225M	53.748M
5.8G;VHT80+80;Nss1,(M0);Ntx1(1)	76.1M	76.262M	76M3D1D	3.14M	3.378M



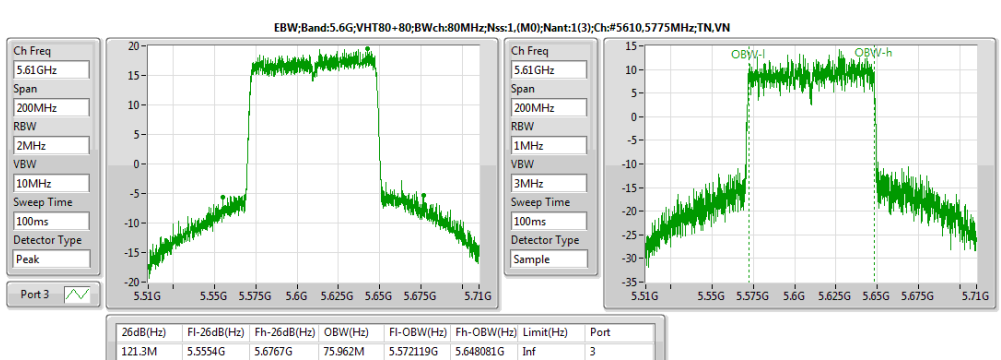
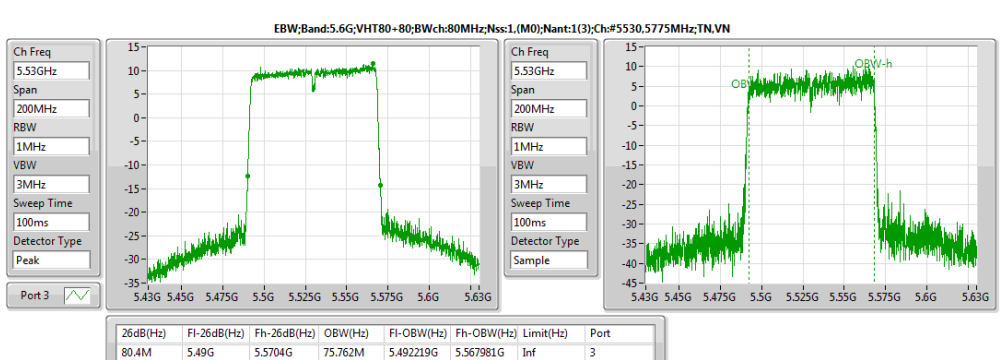
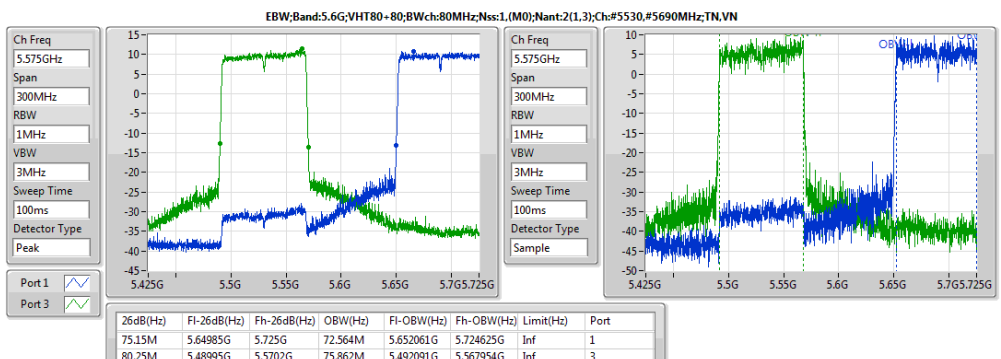
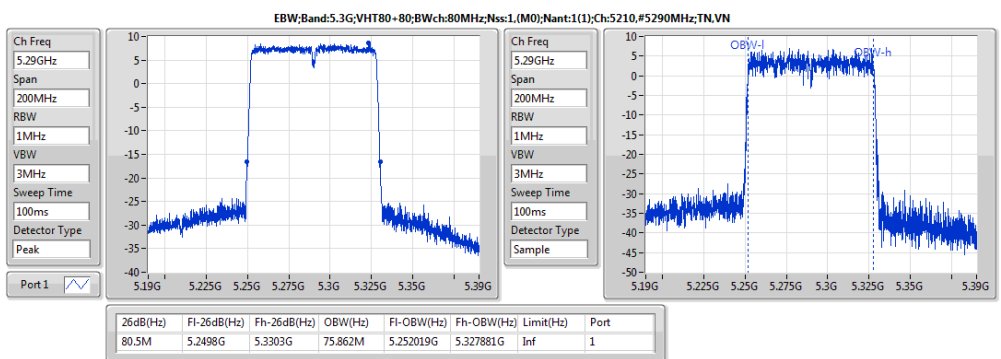
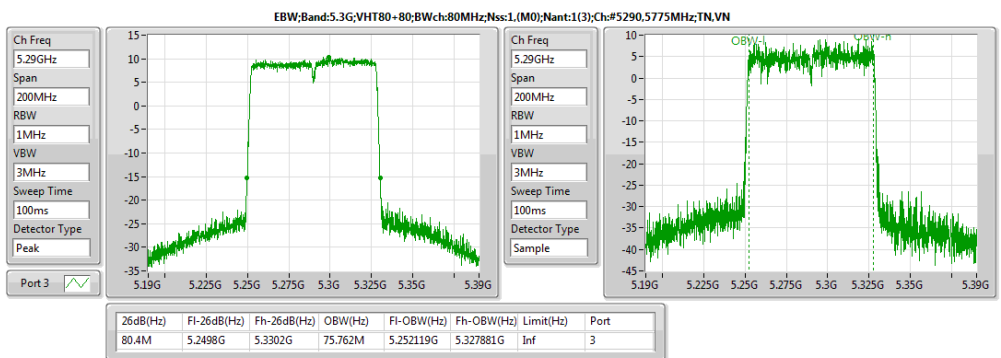
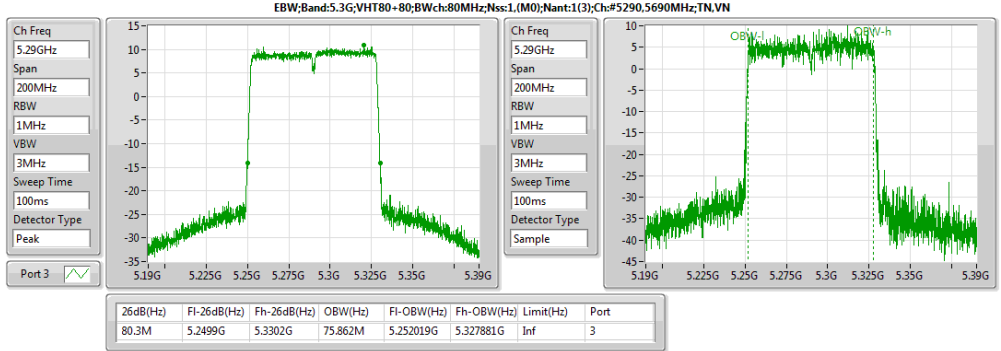
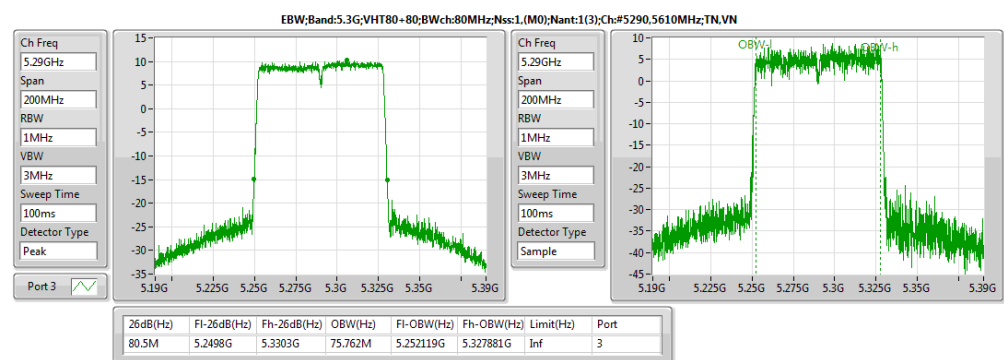
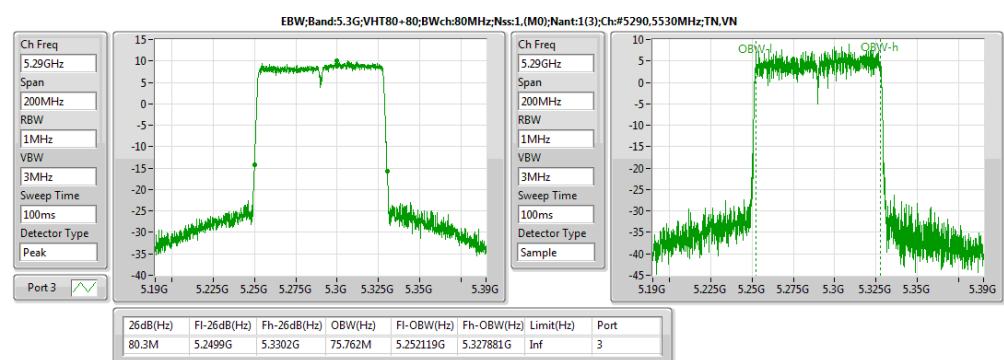
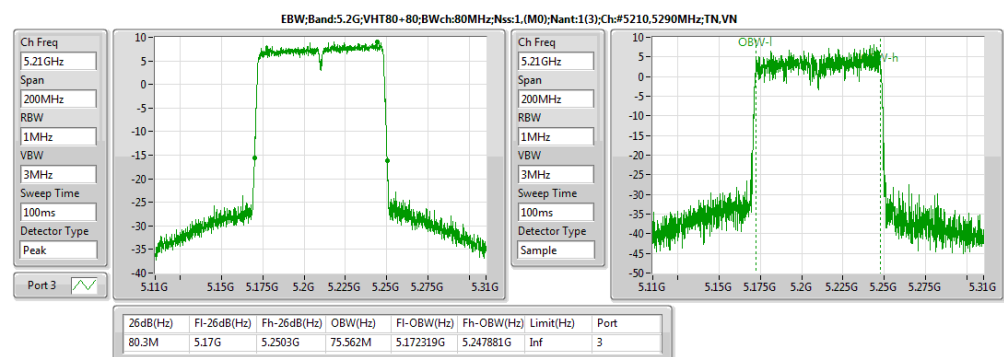
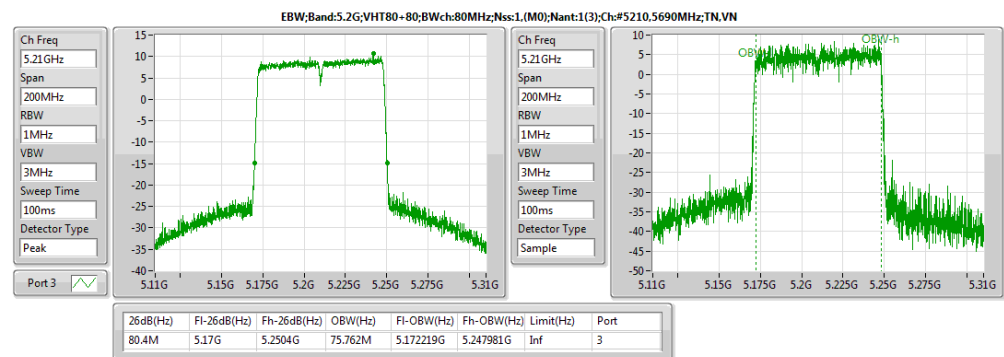
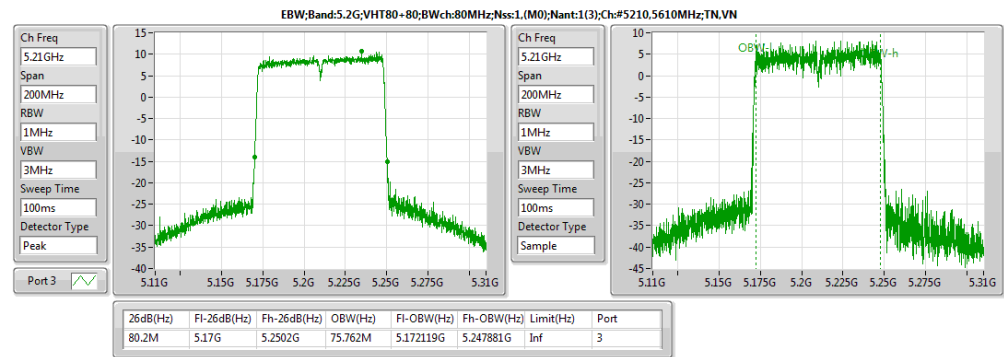
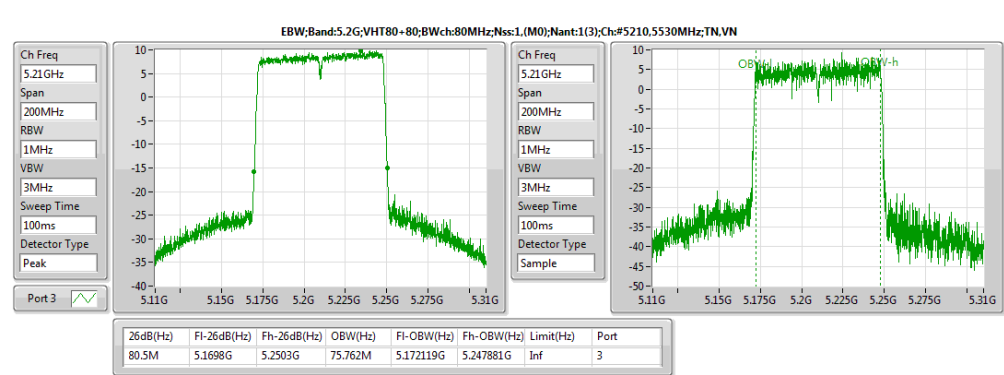
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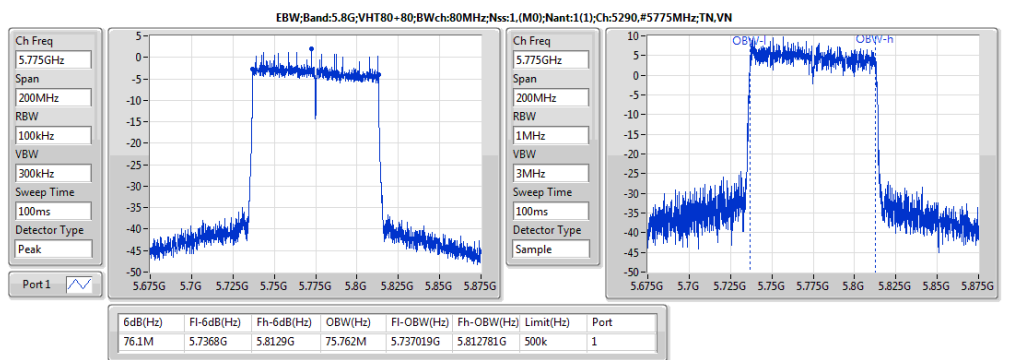
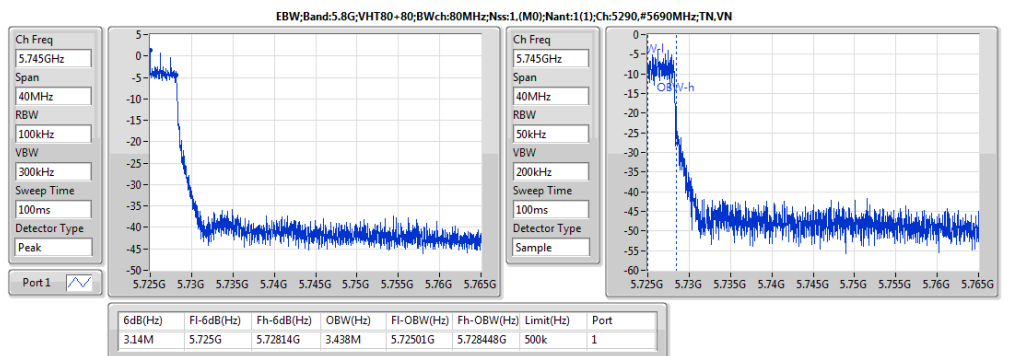
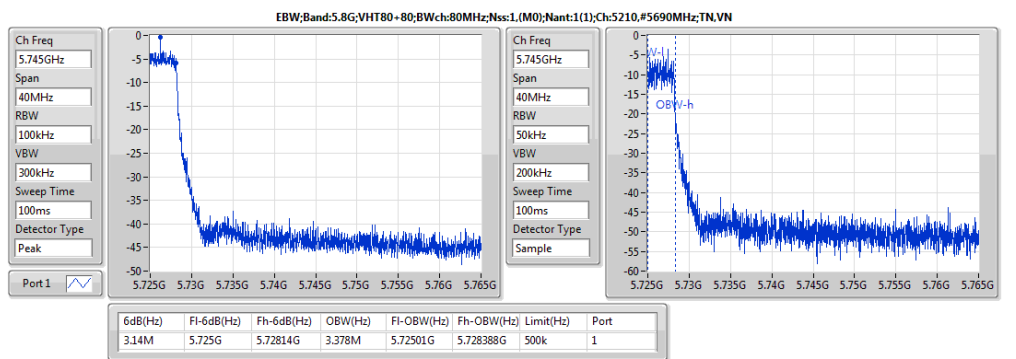
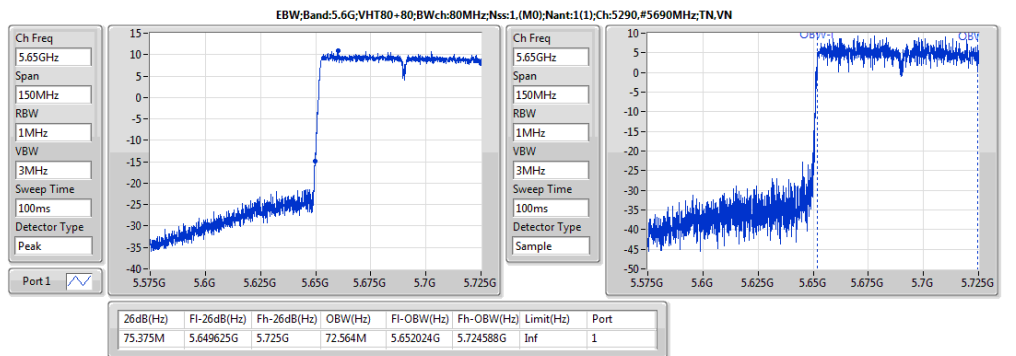
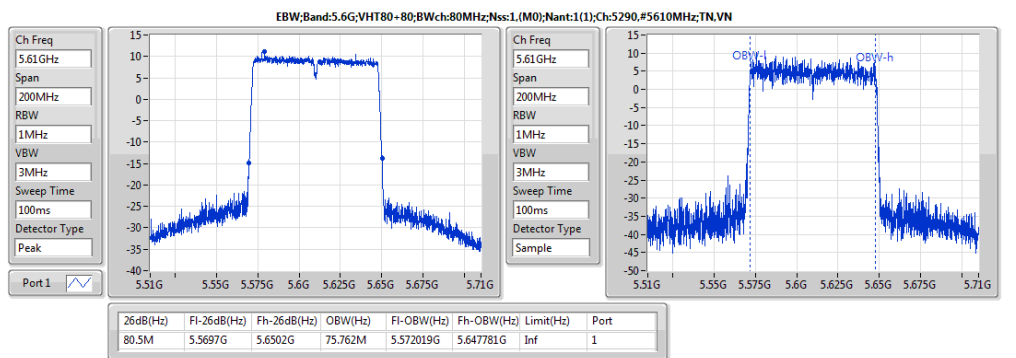
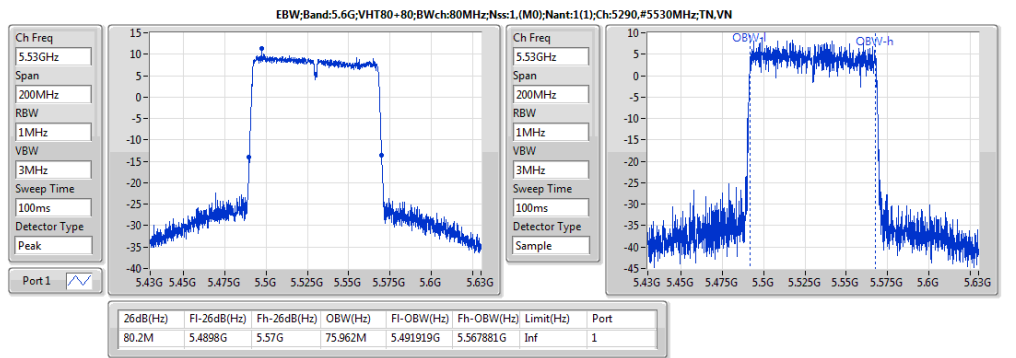
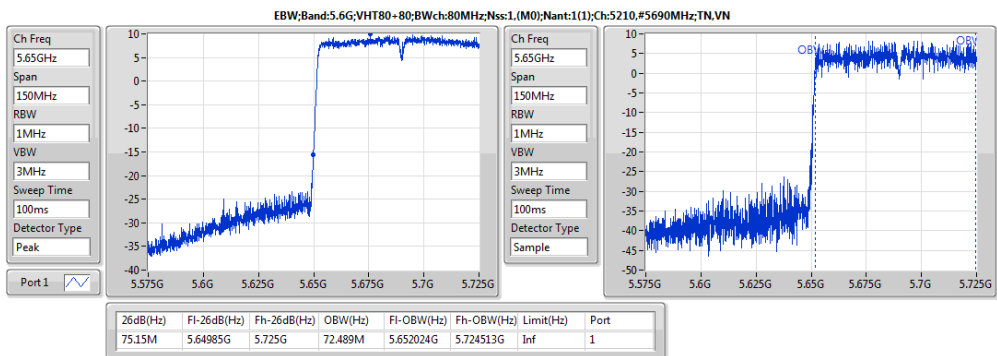
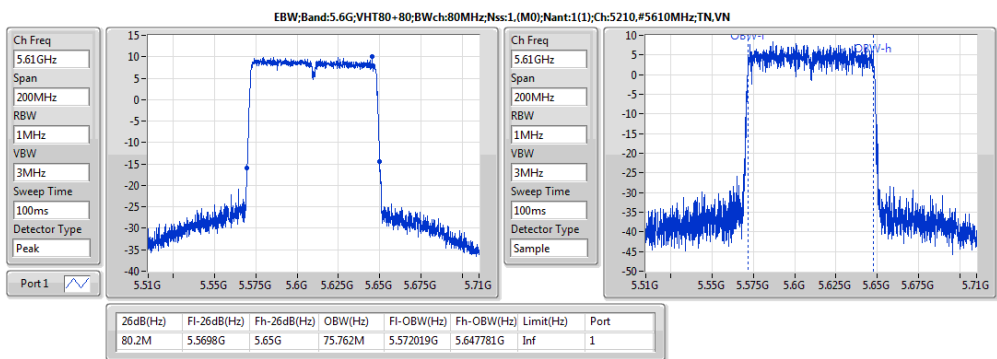
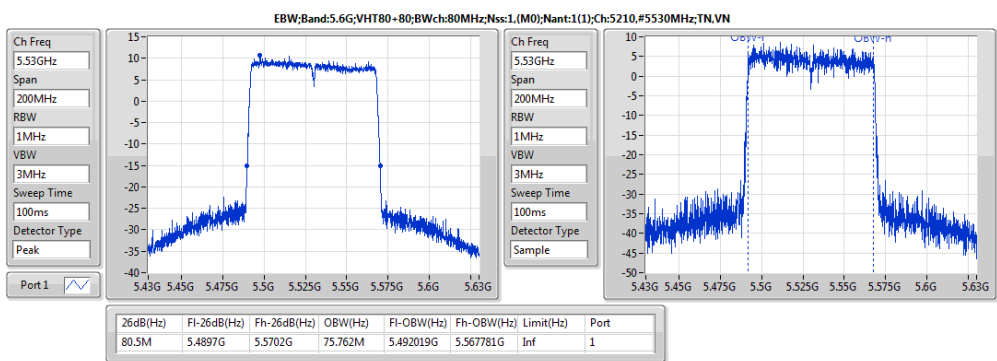
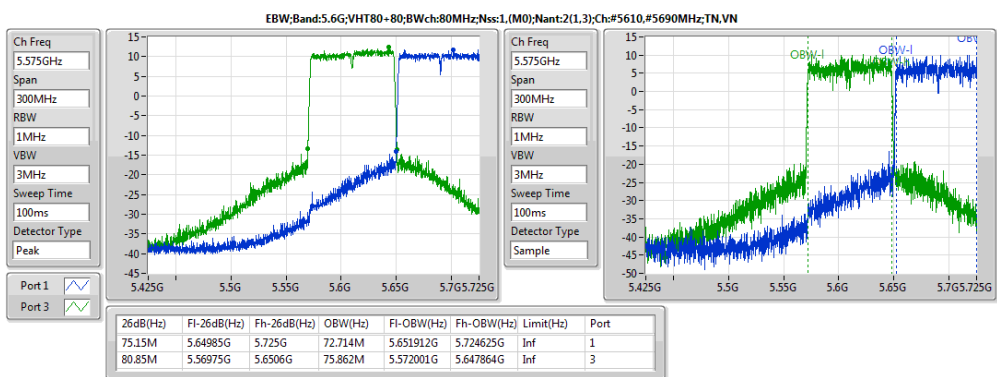
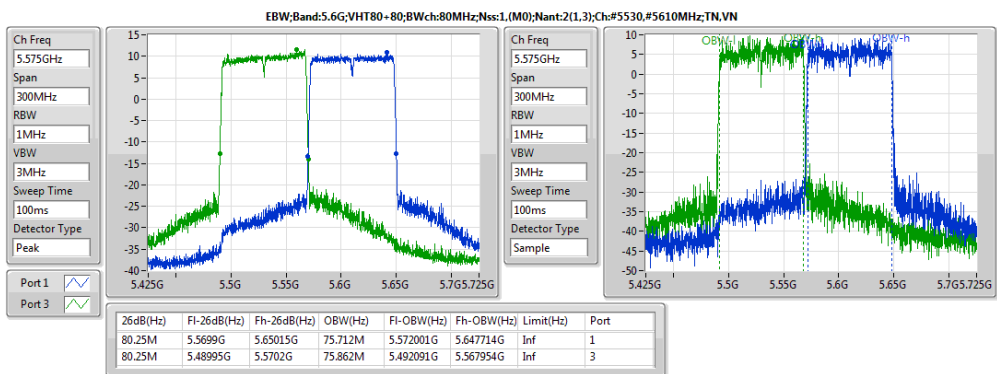
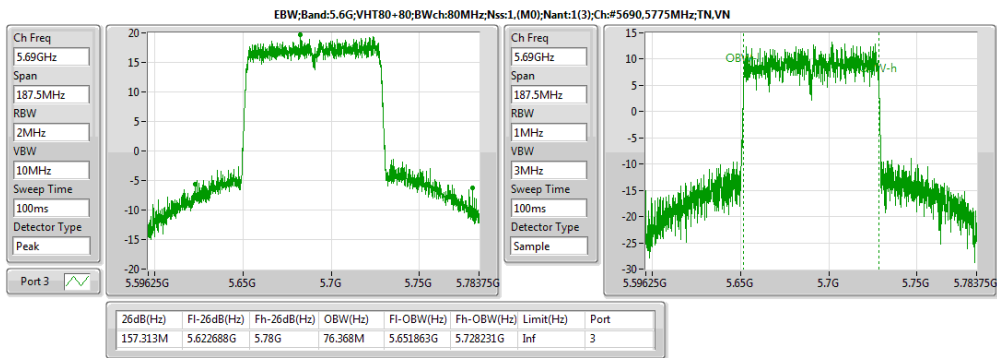
Mode	Result	Limit	P1-N dB (Hz)	P1-OBW (Hz)	P2-N dB (Hz)	P2-OBW (Hz)	P3-N dB (Hz)	P3-OBW (Hz)
5.2G;VHT80+80;Nss1,(M0);Ntx1(3);#5210,5530	Pass	Inf					80.5M	75.762M
5.2G;VHT80+80;Nss1,(M0);Ntx1(3);#5210,5610	Pass	Inf					80.2M	75.762M
5.2G;VHT80+80;Nss1,(M0);Ntx1(3);#5210,5690	Pass	Inf					80.4M	75.762M
5.2G;VHT80+80;Nss1,(M0);Ntx1(3);#5210,5290	Pass	Inf					80.3M	75.562M
5.3G;VHT80+80;Nss1,(M0);Ntx1(3);#5290,5530	Pass	Inf					80.3M	75.762M
5.3G;VHT80+80;Nss1,(M0);Ntx1(3);#5290,5610	Pass	Inf					80.5M	75.762M
5.3G;VHT80+80;Nss1,(M0);Ntx1(3);#5290,5690	Pass	Inf					80.3M	75.862M
5.3G;VHT80+80;Nss1,(M0);Ntx1(3);#5290,5775	Pass	Inf					80.4M	75.762M
5.3G;VHT80+80;Nss1,(M0);Ntx1(1);5210,#5290	Pass	Inf	80.5M	75.862M				
5.6G;VHT80+80;Nss1,(M0);Ntx2(1,3);#5530,#5690	Pass	Inf	75.15M	72.564M			80.25M	75.862M
5.6G;VHT80+80;Nss1,(M0);Ntx1(3);#5530,5775	Pass	Inf					80.4M	75.762M
5.6G;VHT80+80;Nss1,(M0);Ntx1(3);#5610,5775	Pass	Inf					121.3M	75.962M
5.6G;VHT80+80;Nss1,(M0);Ntx1(3);#5690,5775	Pass	Inf					157.313M	76.368M
5.6G;VHT80+80;Nss1,(M0);Ntx2(1,3);#5530,#5610	Pass	Inf	80.25M	75.712M			80.25M	75.862M
5.6G;VHT80+80;Nss1,(M0);Ntx2(1,3);#5610,#5690	Pass	Inf	75.15M	72.714M			80.85M	75.862M
5.6G;VHT80+80;Nss1,(M0);Ntx1(1);5210,#5530	Pass	Inf	80.5M	75.762M				
5.6G;VHT80+80;Nss1,(M0);Ntx1(1);5210,#5610	Pass	Inf	80.2M	75.762M				
5.6G;VHT80+80;Nss1,(M0);Ntx1(1);5210,#5690	Pass	Inf	75.15M	72.489M				
5.6G;VHT80+80;Nss1,(M0);Ntx1(1);5290,#5530	Pass	Inf	80.2M	75.962M				
5.6G;VHT80+80;Nss1,(M0);Ntx1(1);5290,#5610	Pass	Inf	80.5M	75.762M				
5.6G;VHT80+80;Nss1,(M0);Ntx1(1);5290,#5690	Pass	Inf	75.375M	72.564M				
5.8G;VHT80+80;Nss1,(M0);Ntx1(1);5210,#5690	Pass	500k	3.14M	3.378M				
5.8G;VHT80+80;Nss1,(M0);Ntx1(1);5290,#5690	Pass	500k	3.14M	3.438M				
5.8G;VHT80+80;Nss1,(M0);Ntx1(1);5290,#5775	Pass	500k	76.1M	75.762M				
5.8G;VHT80+80;Nss1,(M0);Ntx1(1);#5530,#5690	Pass	500k	3.16M	3.498M				
5.8G;VHT80+80;Nss1,(M0);Ntx1(1);5530,#5775	Pass	500k	75.7M	75.762M				
5.8G;VHT80+80;Nss1,(M0);Ntx1(1);5610,#5775	Pass	500k	75.1M	76.262M				
5.8G;VHT80+80;Nss1,(M0);Ntx2(1,3);#5690,#5775	Pass	500k	76.275M	76.162M			3.225M	53.748M
5.8G;VHT80+80;Nss1,(M0);Ntx1(1);#5610,#5690	Pass	500k	3.14M	20.99M				

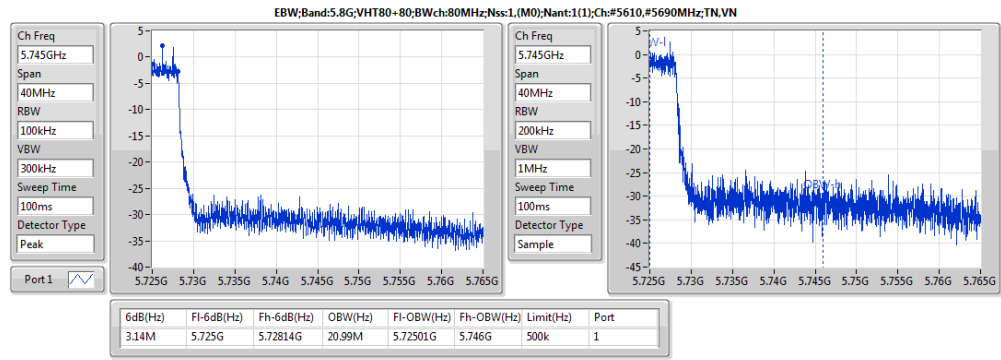
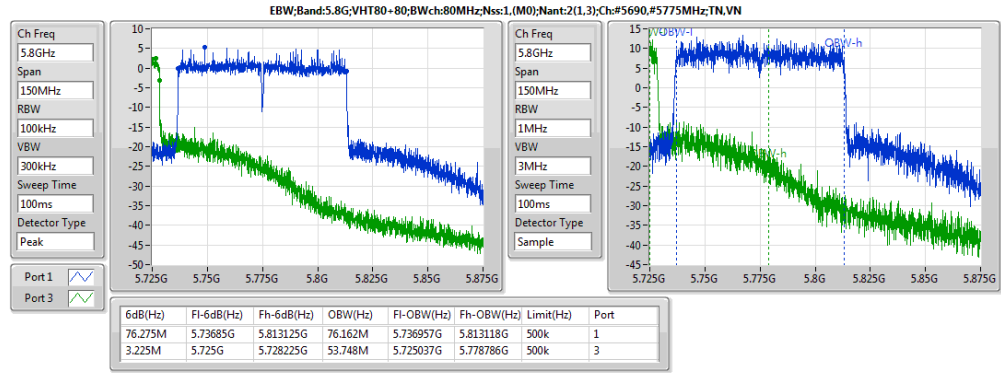
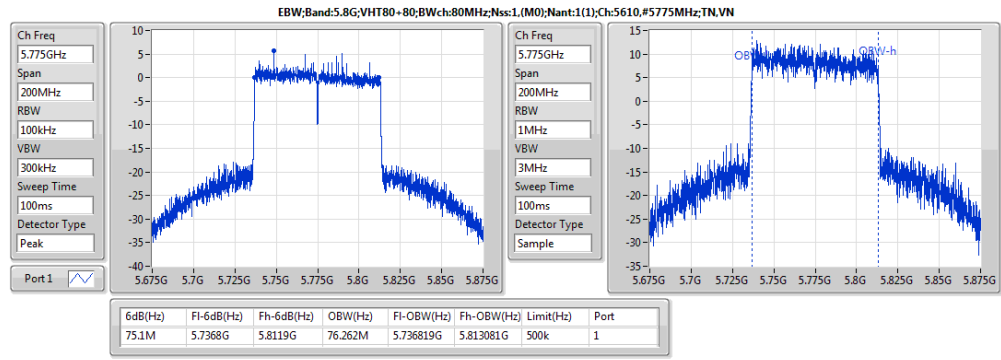
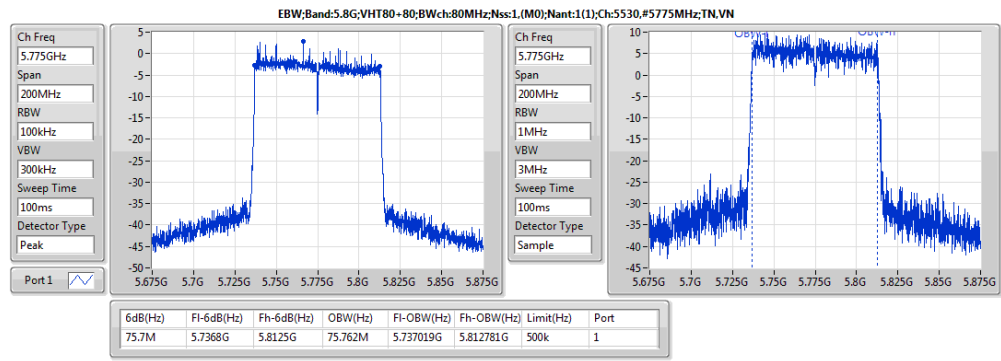
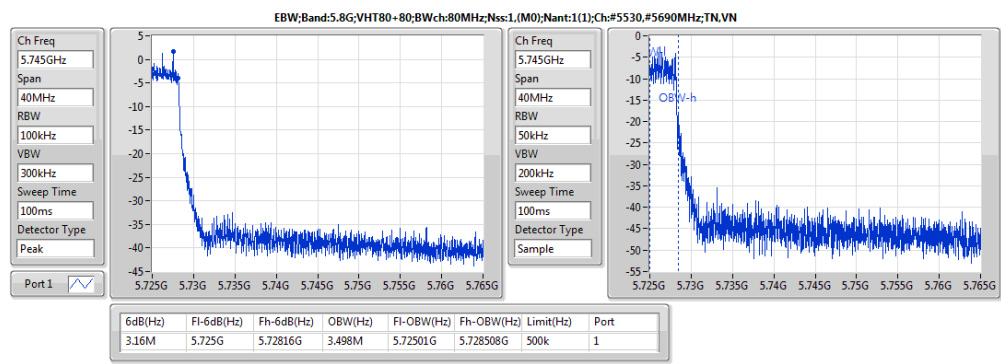


EBW Result

Appendix A









Summary

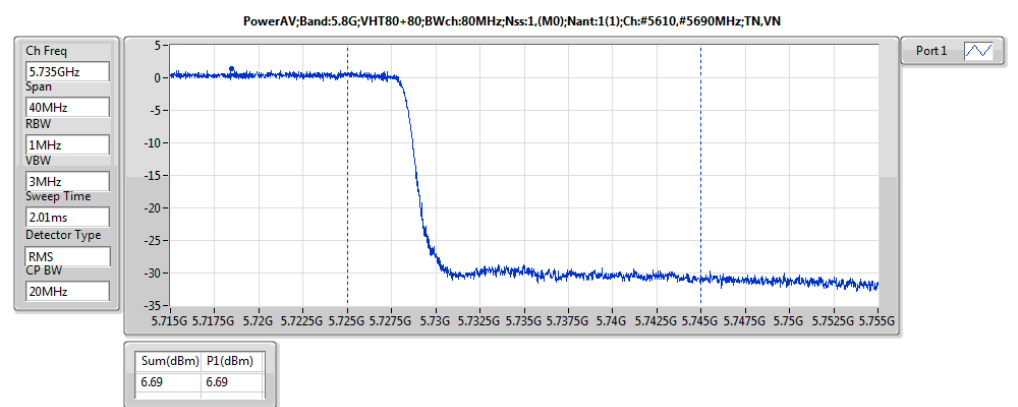
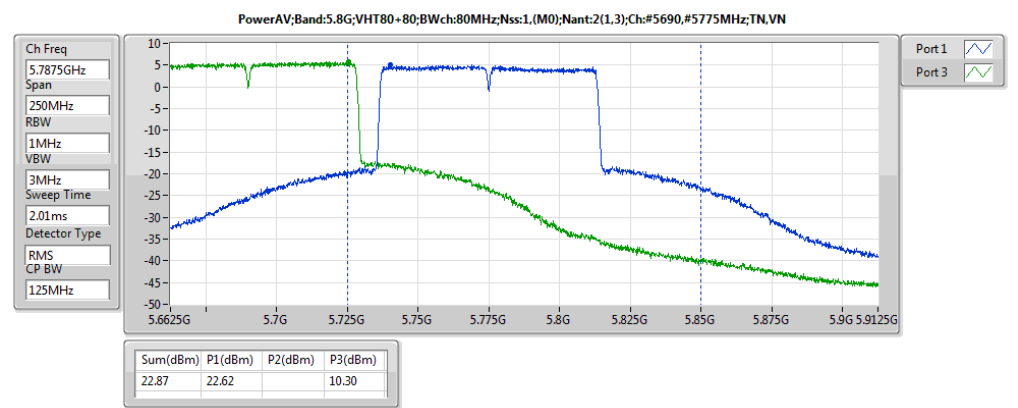
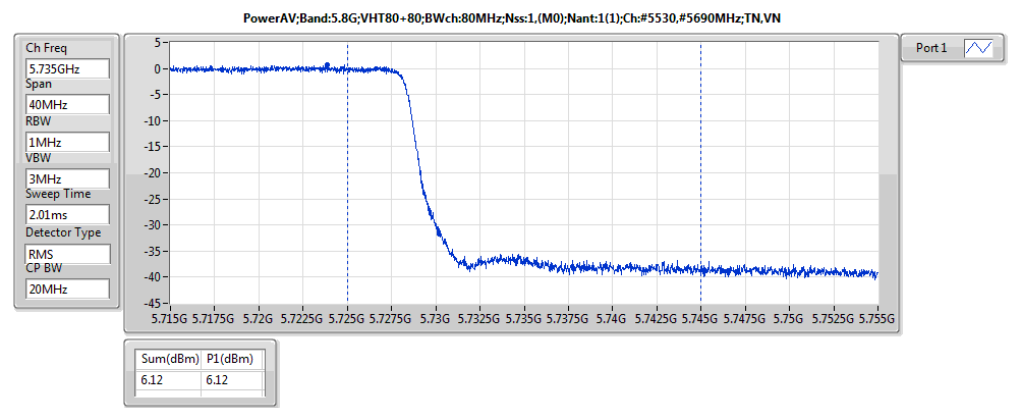
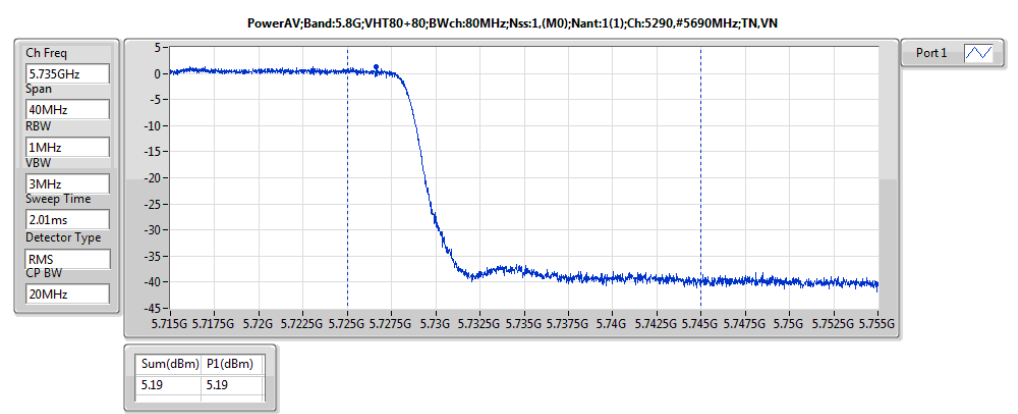
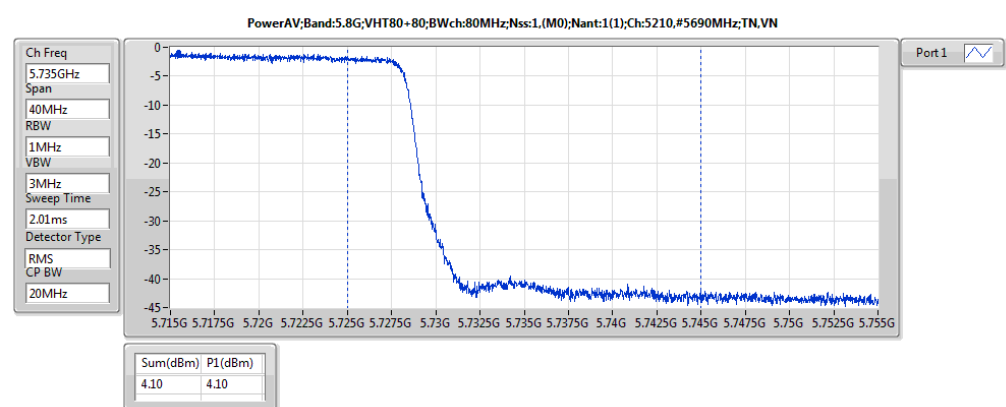
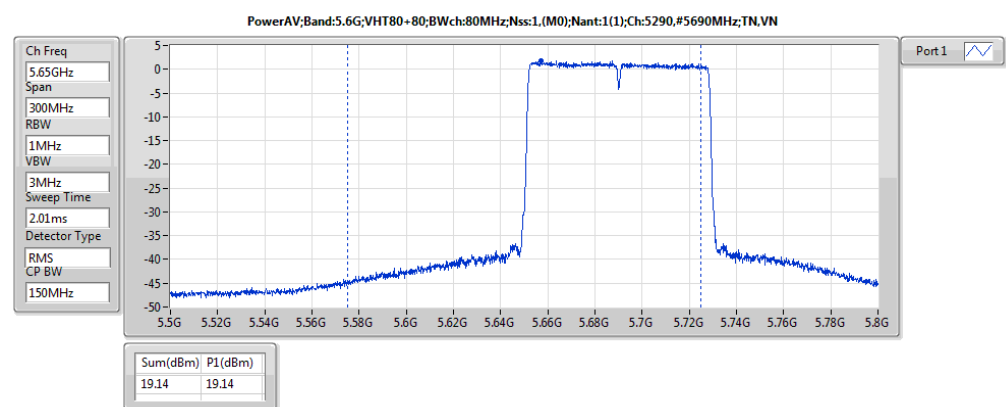
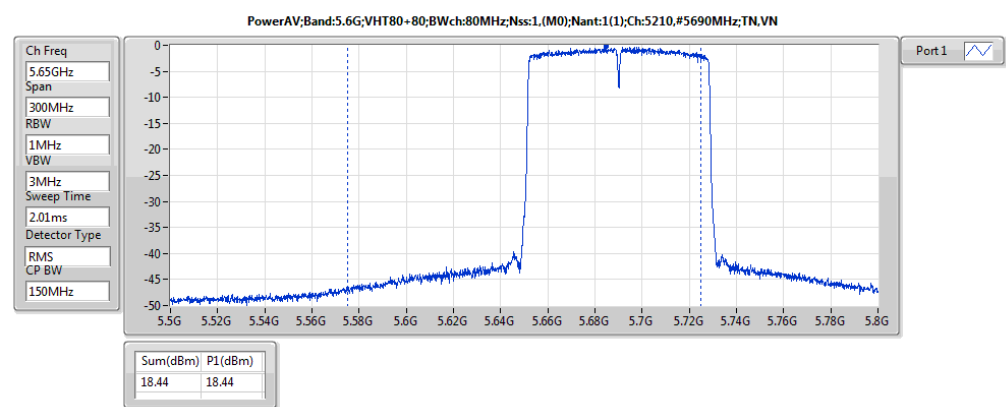
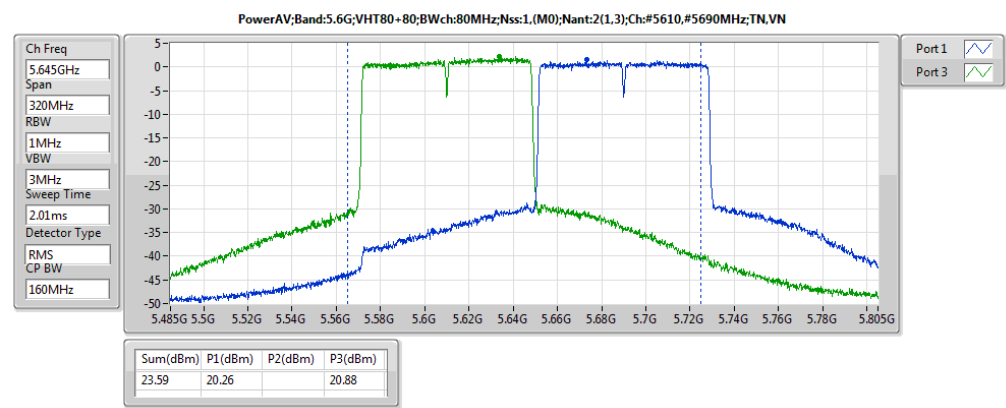
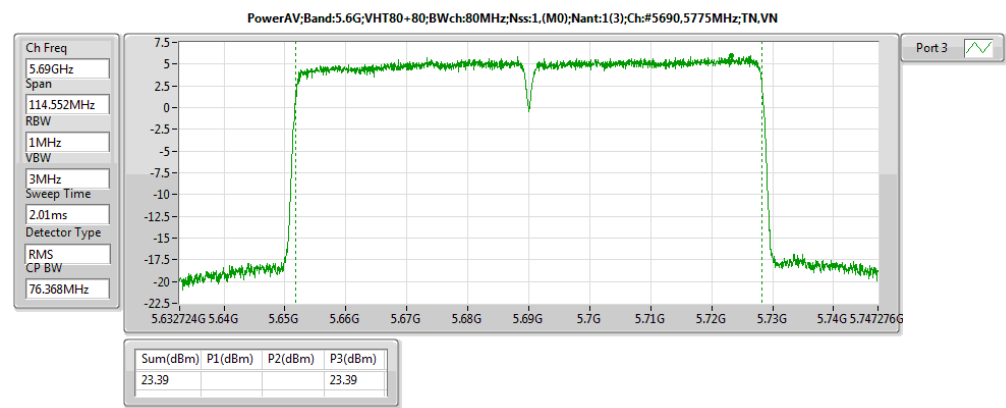
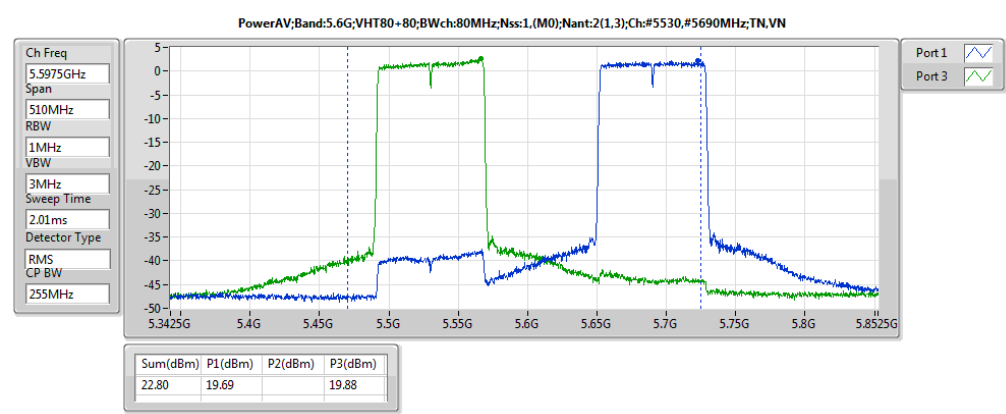
Mode	Sum (dBm)	Sum (W)	EIRP (dBm)	EIRP (W)
5.2G;VHT80+80;Nss1,(M0);Ntx1(3)	18.63	0.07295	21.63	0.14555
5.3G;VHT80+80;Nss1,(M0);Ntx1(3)	19.25	0.08414	22.25	0.16788
5.3G;VHT80+80;Nss1,(M0);Ntx1(1)	17.58	0.05728	20.58	0.11429
5.6G;VHT80+80;Nss1,(M0);Ntx2(1,3)	23.59	0.22856	26.59	0.45604
5.6G;VHT80+80;Nss1,(M0);Ntx1(3)	23.39	0.21827	26.39	0.43551
5.6G;VHT80+80;Nss1,(M0);Ntx2(1,3)	23.59	0.22856	26.59	0.45604
5.6G;VHT80+80;Nss1,(M0);Ntx1(1)	19.77	0.09484	22.77	0.18923
5.8G;VHT80+80;Nss1,(M0);Ntx1(1)	22.61	0.18239	25.61	0.36392
5.8G;VHT80+80;Nss1,(M0);Ntx2(1,3)	22.87	0.19364	25.87	0.38637
5.8G;VHT80+80;Nss1,(M0);Ntx1(1)	22.61	0.18239	25.61	0.36392

Note: The test result of Non-Beamforming mode and Beamforming mode for Bandwidth 80+80MHz are the same.



Result

Mode	Result	DG (dBi)	EIRP (dBm)	EIRP Lim. (dBm)	Sum (dBm)	Sum Lim. (dBm)	P1 (dBm)	P2 (dBm)	P3 (dBm)
5.2G;VHT80+80;Nss1,(M0);Ntx1(3);#5210,5530	Pass	3.00	21.56	36.00	18.56	30.00			18.56
5.2G;VHT80+80;Nss1,(M0);Ntx1(3);#5210,5610	Pass	3.00	21.59	36.00	18.59	30.00			18.59
5.2G;VHT80+80;Nss1,(M0);Ntx1(3);#5210,5690	Pass	3.00	21.63	36.00	18.63	30.00			18.63
5.2G;VHT80+80;Nss1,(M0);Ntx1(3);#5210,5290	Pass	3.00	20.58	36.00	17.58	30.00			17.58
5.3G;VHT80+80;Nss1,(M0);Ntx1(3);#5290,5530	Pass	3.00	21.69	30.00	18.69	23.98			18.69
5.3G;VHT80+80;Nss1,(M0);Ntx1(3);#5290,5610	Pass	3.00	22.17	30.00	19.17	23.98			19.17
5.3G;VHT80+80;Nss1,(M0);Ntx1(3);#5290,5690	Pass	3.00	22.24	30.00	19.24	23.98			19.24
5.3G;VHT80+80;Nss1,(M0);Ntx1(3);#5290,5775	Pass	3.00	22.25	30.00	19.25	23.98			19.25
5.3G;VHT80+80;Nss1,(M0);Ntx1(1);5210,#5290	Pass	3.00	20.58	30.00	17.58	23.98	17.58		
5.6G;VHT80+80;Nss1,(M0);Ntx2(1,3);#5530,#5690	Pass	3.00	25.80	30.00	22.80	23.98	19.69		19.88
5.6G;VHT80+80;Nss1,(M0);Ntx1(3);#5530,5775	Pass	3.00	22.82	30.00	19.82	23.98			19.82
5.6G;VHT80+80;Nss1,(M0);Ntx1(3);#5610,5775	Pass	3.00	26.33	30.00	23.33	23.98			23.33
5.6G;VHT80+80;Nss1,(M0);Ntx1(3);#5690,5775	Pass	3.00	26.39	30.00	23.39	23.98			23.39
5.6G;VHT80+80;Nss1,(M0);Ntx2(1,3);#5530,#5610	Pass	3.00	25.82	30.00	22.82	23.98	19.72		19.90
5.6G;VHT80+80;Nss1,(M0);Ntx2(1,3);#5610,#5690	Pass	3.00	26.59	30.00	23.59	23.98	20.26		20.88
5.6G;VHT80+80;Nss1,(M0);Ntx1(1);5210,#5530	Pass	3.00	21.50	30.00	18.50	23.98	18.50		
5.6G;VHT80+80;Nss1,(M0);Ntx1(1);5210,#5610	Pass	3.00	21.71	30.00	18.71	23.98	18.71		
5.6G;VHT80+80;Nss1,(M0);Ntx1(1);5210,#5690	Pass	3.00	21.44	30.00	18.44	23.98	18.44		
5.6G;VHT80+80;Nss1,(M0);Ntx1(1);5290,#5530	Pass	3.00	21.51	30.00	18.51	23.98	18.51		
5.6G;VHT80+80;Nss1,(M0);Ntx1(1);5290,#5610	Pass	3.00	22.19	30.00	19.19	23.98	19.19		
5.6G;VHT80+80;Nss1,(M0);Ntx1(1);5290,#5690	Pass	3.00	22.14	30.00	19.14	23.98	19.14		
5.8G;VHT80+80;Nss1,(M0);Ntx1(1);5210,#5690	Pass	3.00	7.10	36.00	4.10	30.00	4.10		
5.8G;VHT80+80;Nss1,(M0);Ntx1(1);5290,#5690	Pass	3.00	8.19	36.00	5.19	30.00	5.19		
5.8G;VHT80+80;Nss1,(M0);Ntx1(1);5290,#5775	Pass	3.00	22.07	36.00	19.07	30.00	19.07		
5.8G;VHT80+80;Nss1,(M0);Ntx1(1);#5530,#5690	Pass	3.00	9.12	36.00	6.12	30.00	6.12		
5.8G;VHT80+80;Nss1,(M0);Ntx1(1);5530,#5775	Pass	3.00	22.54	36.00	19.54	30.00	19.54		
5.8G;VHT80+80;Nss1,(M0);Ntx1(1);5610,#5775	Pass	3.00	25.61	36.00	22.61	30.00	22.61		
5.8G;VHT80+80;Nss1,(M0);Ntx2(1,3);#5690,#5775	Pass	3.00	25.87	36.00	22.87	30.00	22.62		10.30
5.8G;VHT80+80;Nss1,(M0);Ntx1(1);#5610,#5690	Pass	3.00	9.69	36.00	6.69	30.00	6.69		





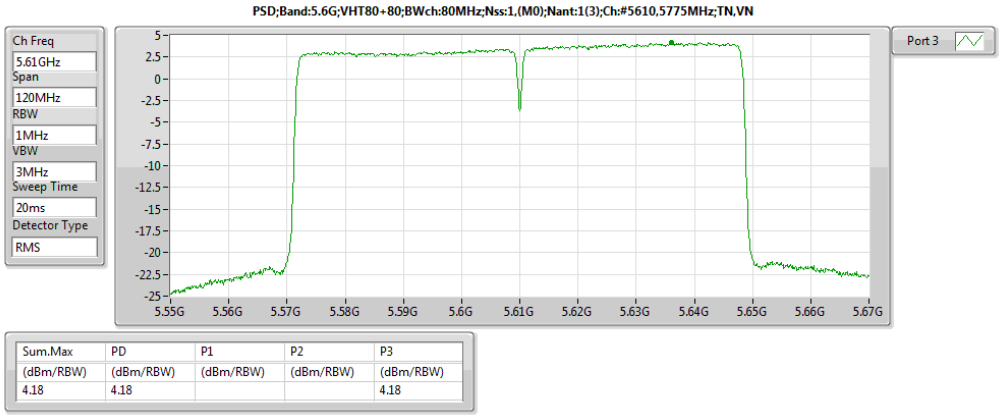
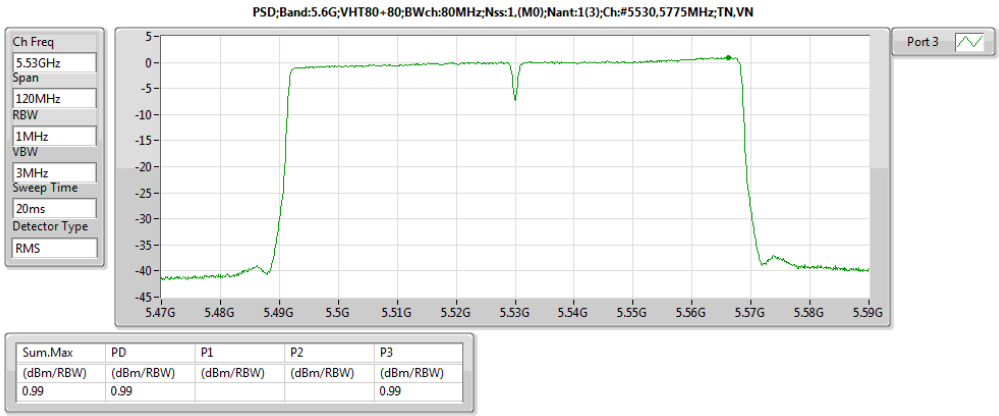
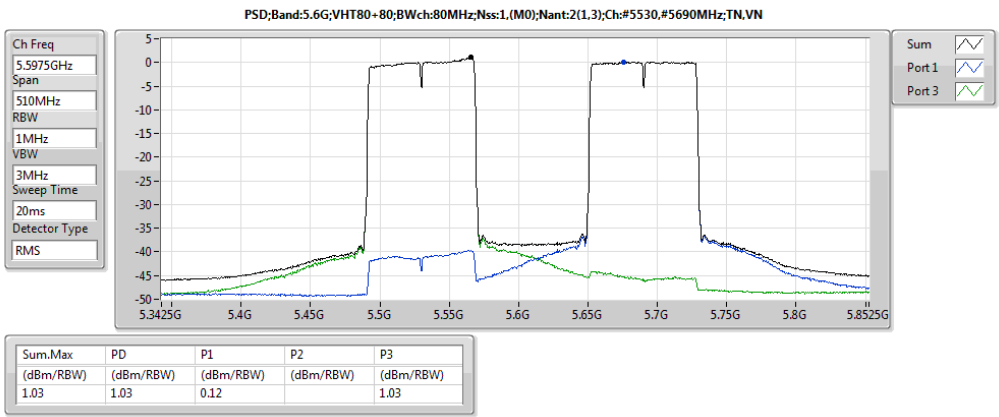
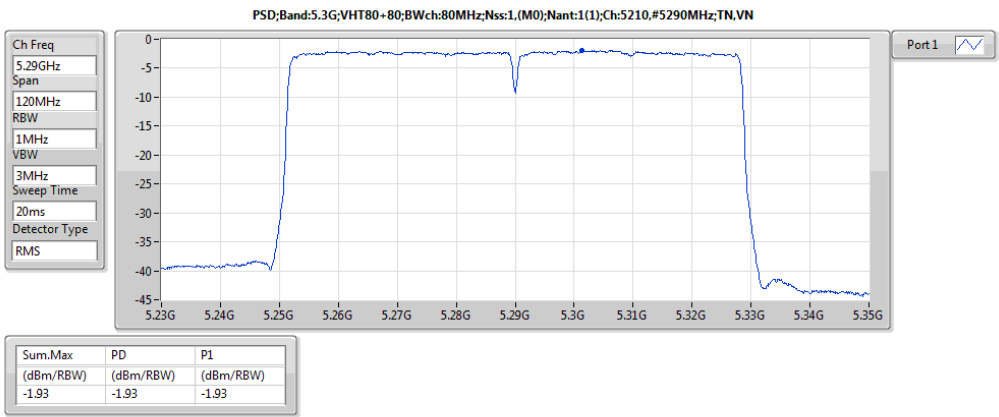
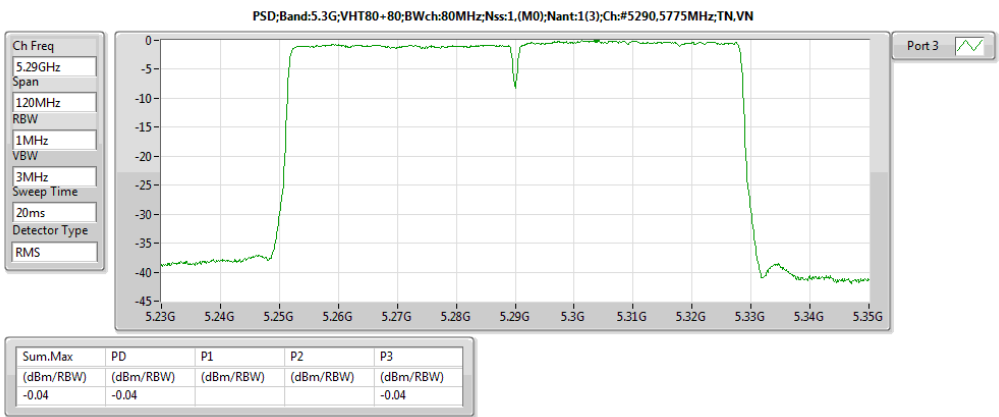
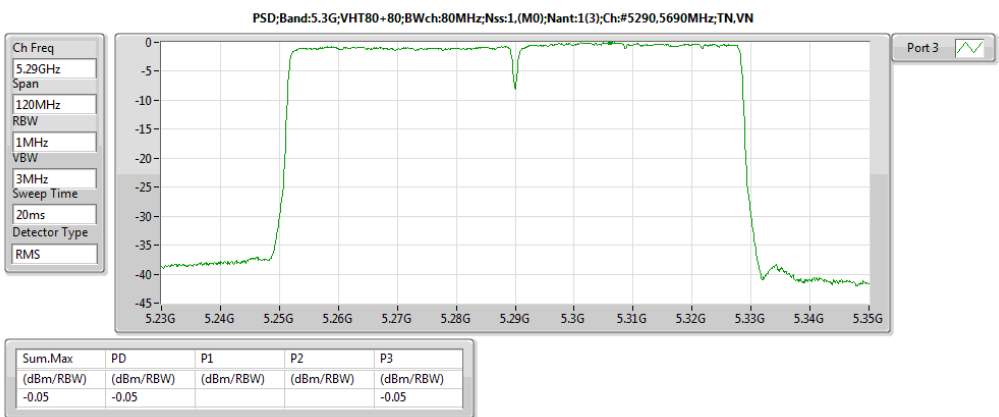
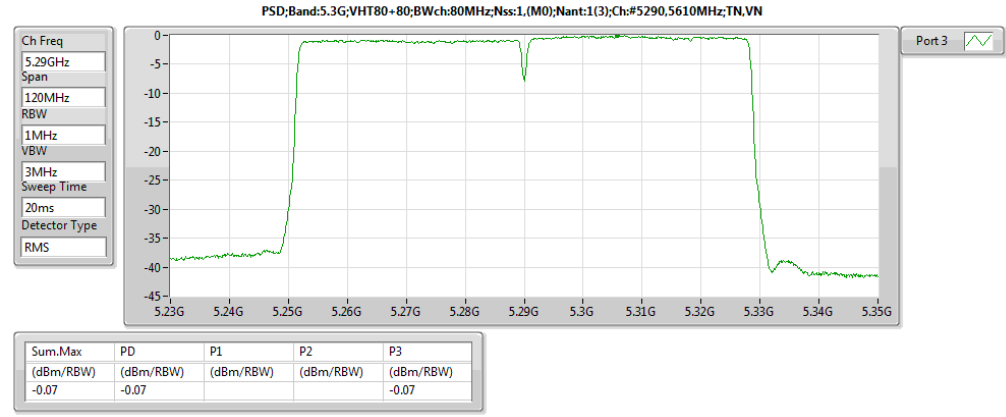
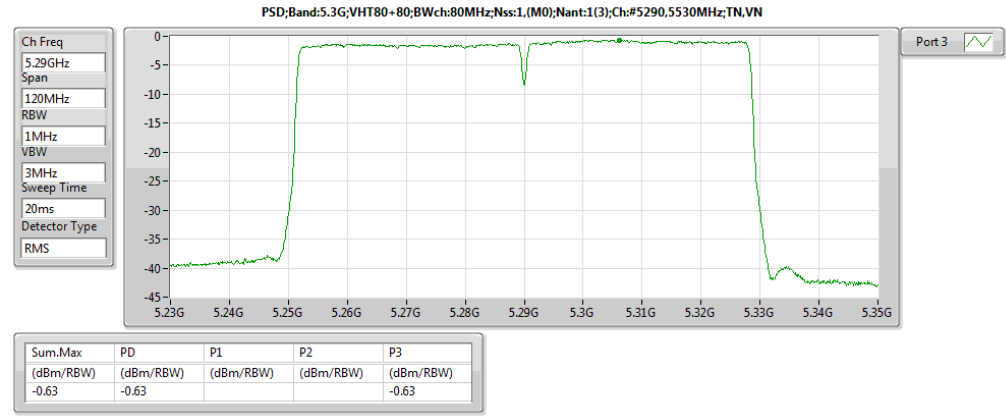
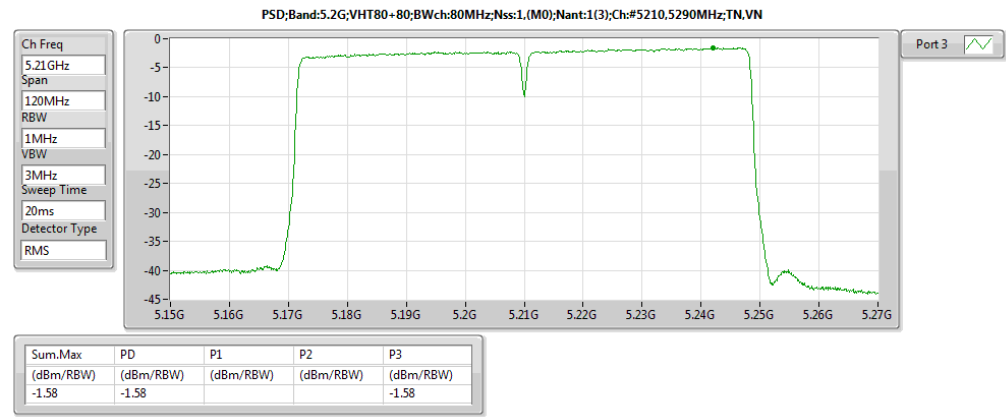
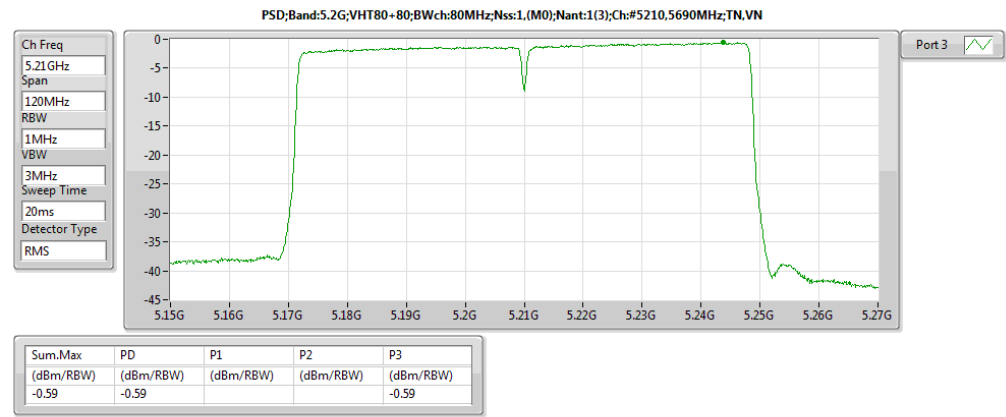
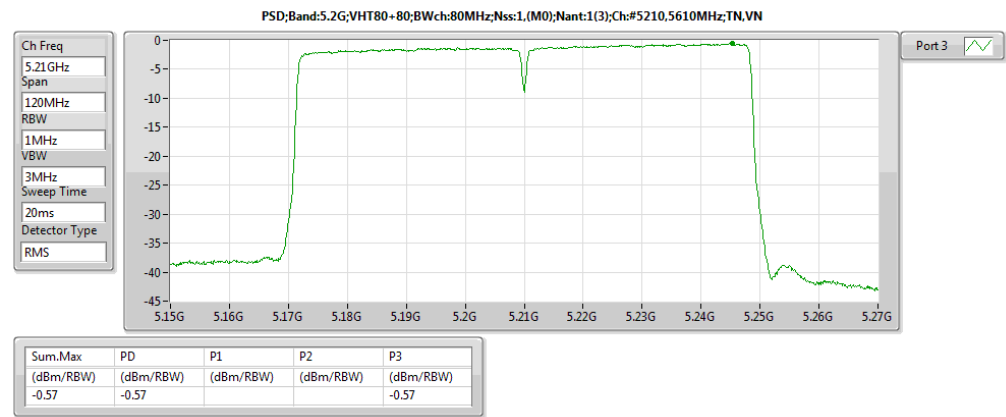
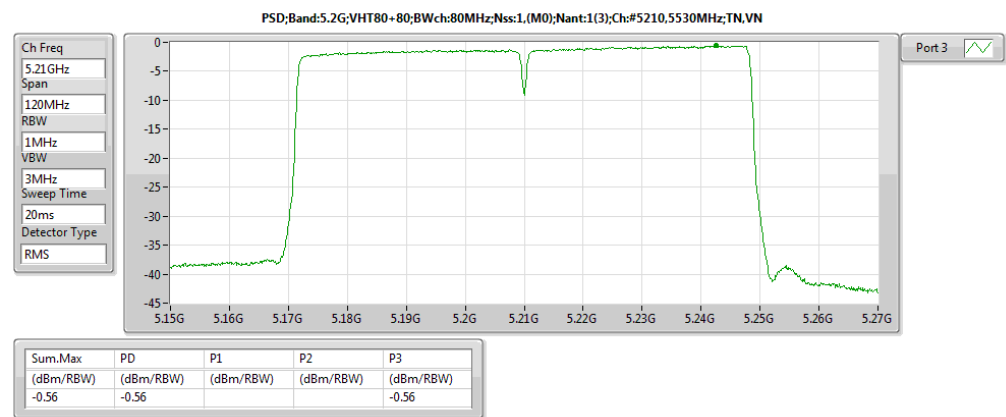
Summary

Mode	PD (dBm/RBW)	EIRP.PD (dBm/RBW)
5.2G;VHT80+80;Nss1,(M0);Ntx1(3)	-0.56	2.44
5.3G;VHT80+80;Nss1,(M0);Ntx1(3)	-0.04	2.96
5.3G;VHT80+80;Nss1,(M0);Ntx1(1)	-1.93	1.07
5.6G;VHT80+80;Nss1,(M0);Ntx2(1,3)	3.05	9.07
5.6G;VHT80+80;Nss1,(M0);Ntx1(3)	4.18	7.18
5.6G;VHT80+80;Nss1,(M0);Ntx2(1,3)	3.05	9.07
5.6G;VHT80+80;Nss1,(M0);Ntx1(1)	0.57	3.57
5.8G;VHT80+80;Nss1,(M0);Ntx1(1)	1.85	4.85
5.8G;VHT80+80;Nss1,(M0);Ntx2(1,3)	2.30	8.31
5.8G;VHT80+80;Nss1,(M0);Ntx1(1)	1.85	4.85



Result

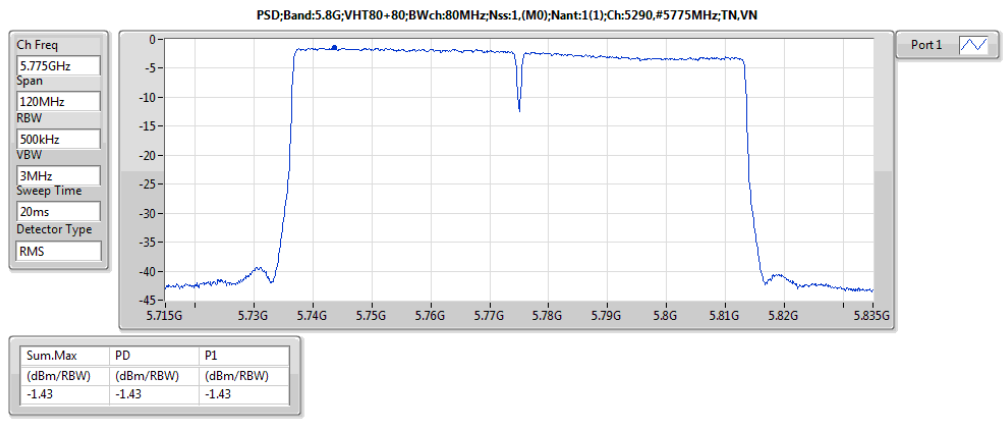
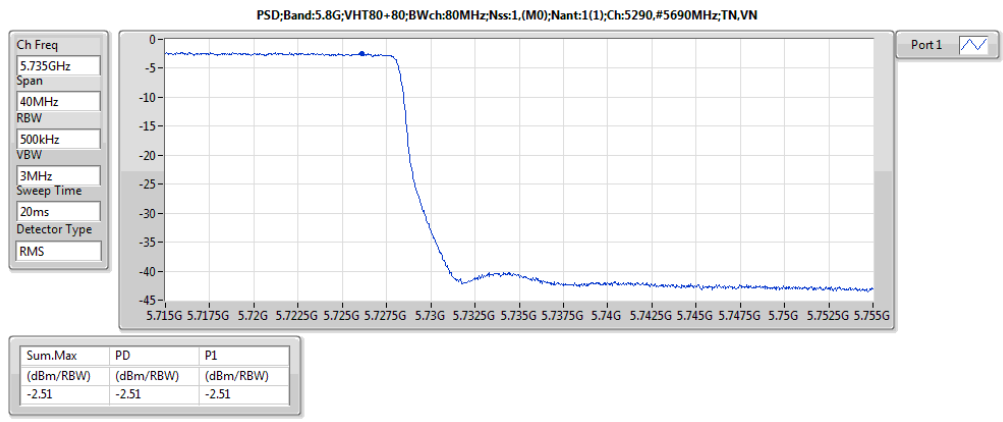
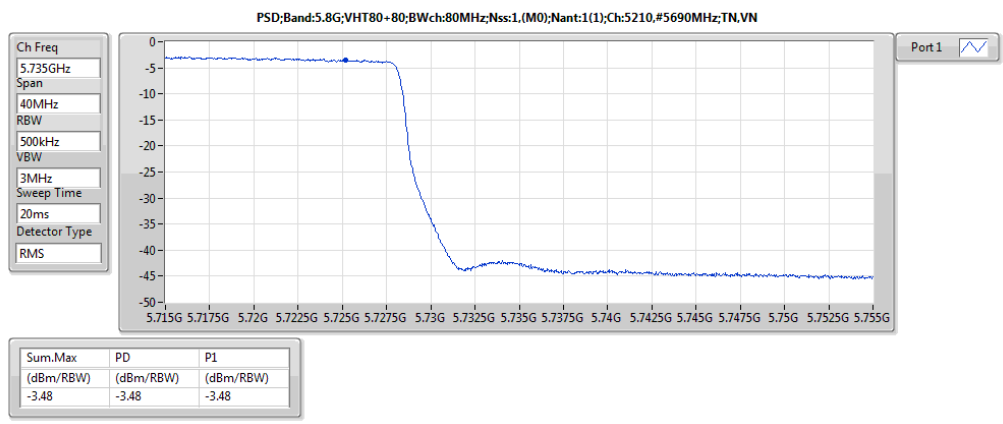
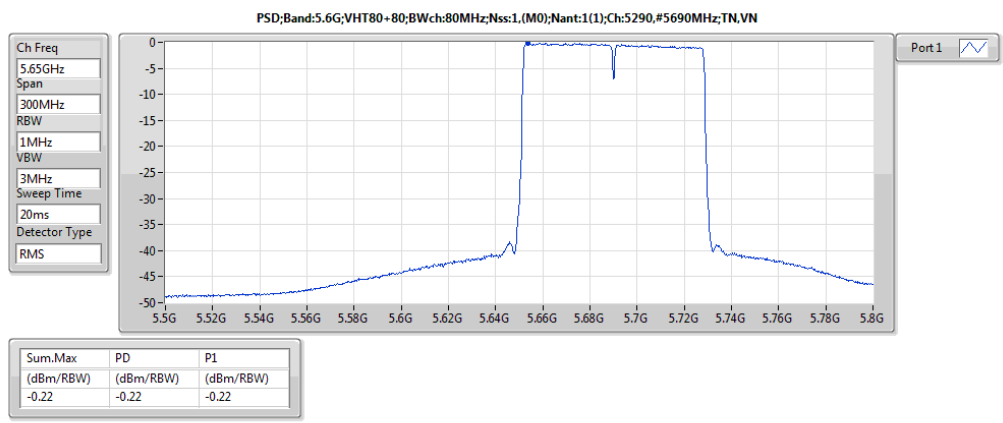
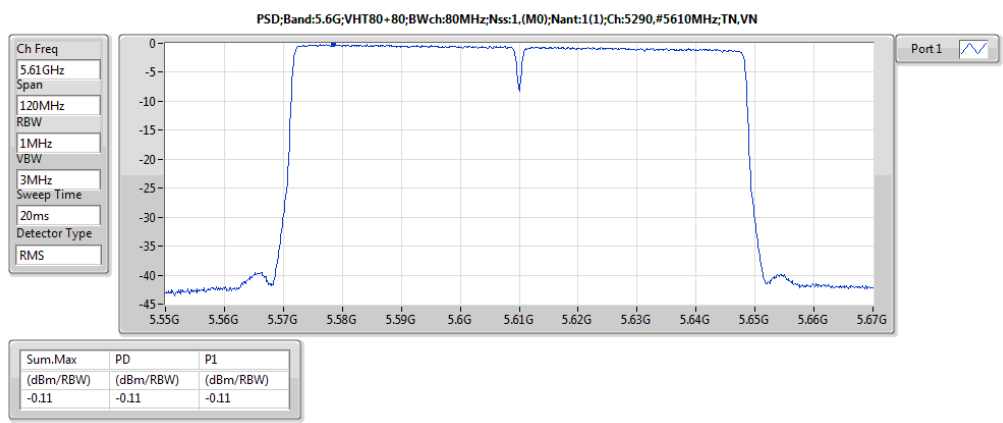
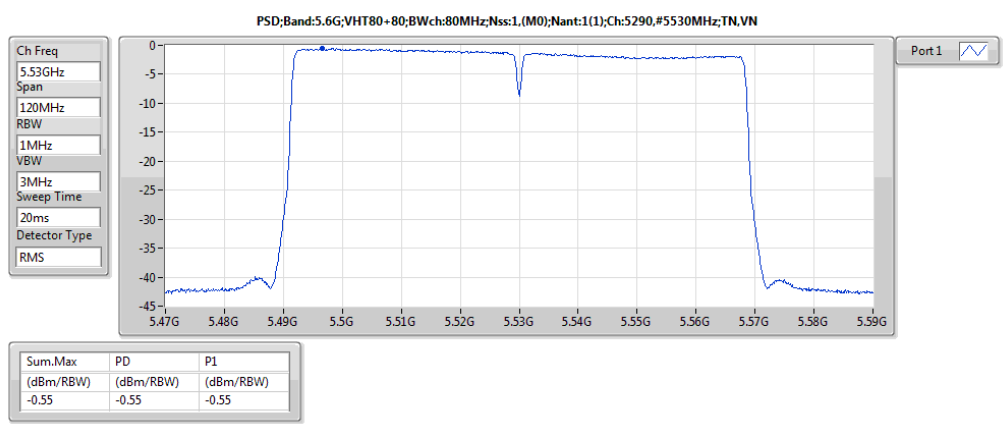
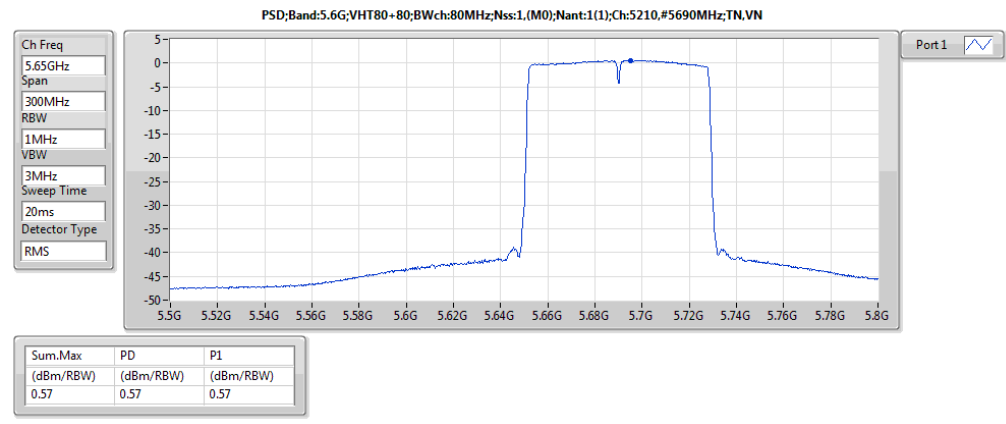
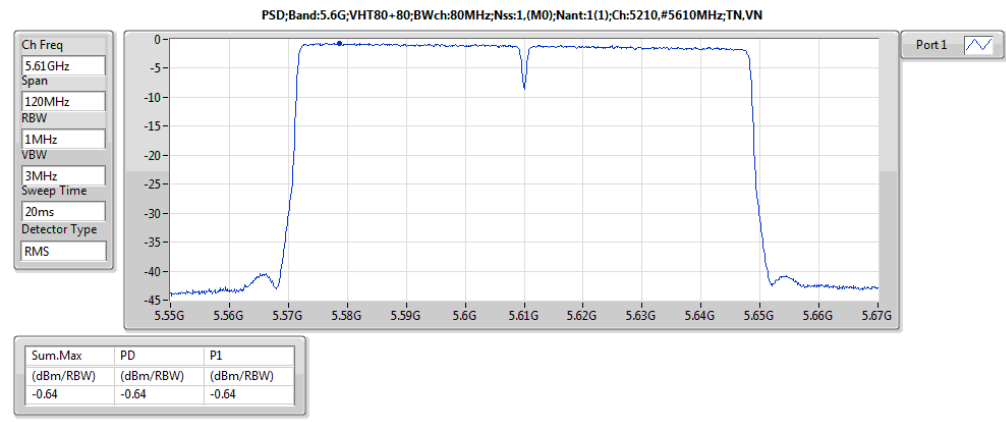
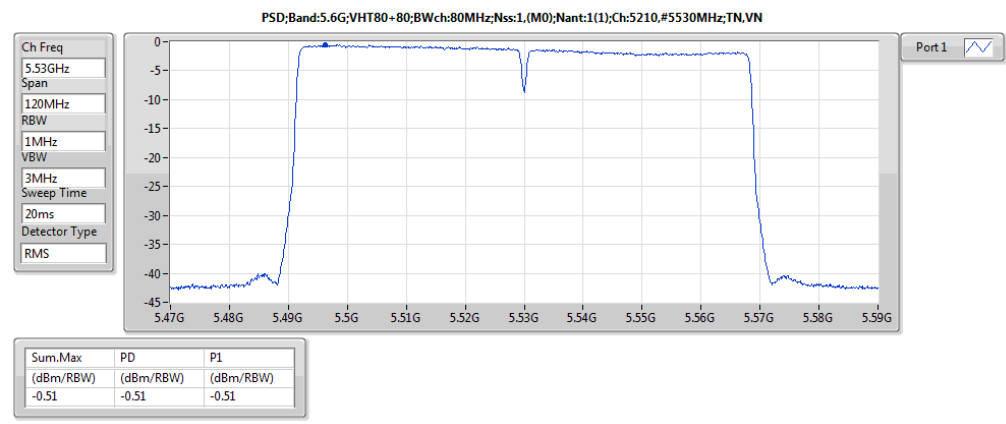
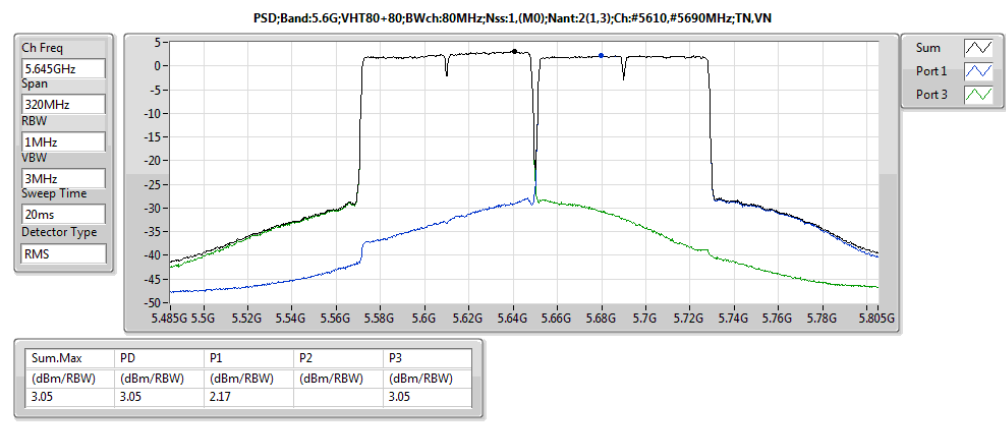
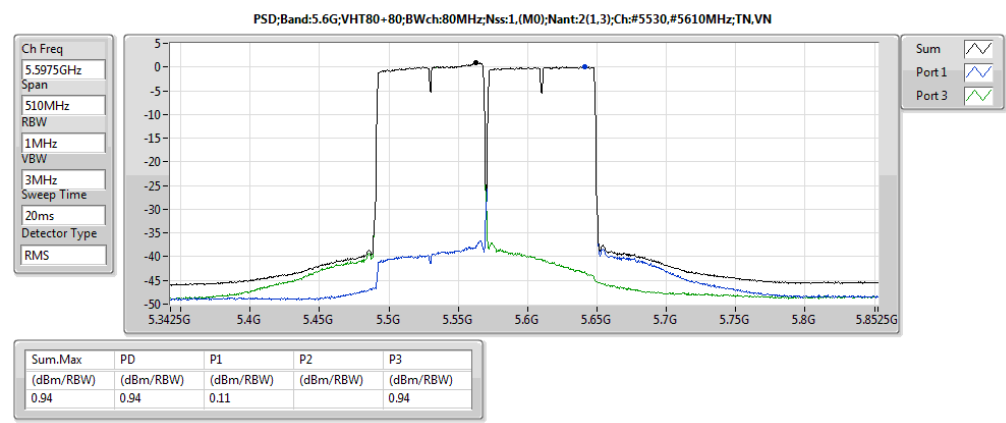
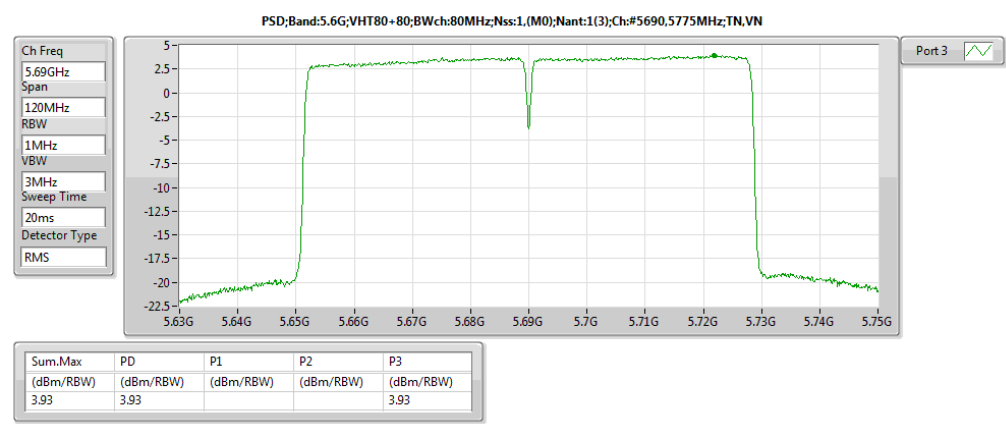
Mode	Result	Meas.RBW (Hz)	Lim.RBW (Hz)	BWCF (dB)	DG (dBi)	Sum.Max (dBm/RBW)	PD (dBm/RBW)	PD.Limit (dBm/RBW)	P1 (dBm/RBW)	P2 (dBm/RBW)	P3 (dBm/RBW)
5.2G;VHT80+80;Nss1,(M0);Ntx1(3);#5210,5530	Pass	1M	1M	0.00	3.00	-0.56	-0.56	17.00			-0.56
5.2G;VHT80+80;Nss1,(M0);Ntx1(3);#5210,5610	Pass	1M	1M	0.00	3.00	-0.57	-0.57	17.00			-0.57
5.2G;VHT80+80;Nss1,(M0);Ntx1(3);#5210,5690	Pass	1M	1M	0.00	3.00	-0.59	-0.59	17.00			-0.59
5.2G;VHT80+80;Nss1,(M0);Ntx1(3);#5210,5290	Pass	1M	1M	0.00	3.00	-1.58	-1.58	17.00			-1.58
5.3G;VHT80+80;Nss1,(M0);Ntx1(3);#5290,5530	Pass	1M	1M	0.00	3.00	-0.63	-0.63	11.00			-0.63
5.3G;VHT80+80;Nss1,(M0);Ntx1(3);#5290,5610	Pass	1M	1M	0.00	3.00	-0.07	-0.07	11.00			-0.07
5.3G;VHT80+80;Nss1,(M0);Ntx1(3);#5290,5690	Pass	1M	1M	0.00	3.00	-0.05	-0.05	11.00			-0.05
5.3G;VHT80+80;Nss1,(M0);Ntx1(3);#5290,5775	Pass	1M	1M	0.00	3.00	-0.04	-0.04	11.00			-0.04
5.3G;VHT80+80;Nss1,(M0);Ntx1(1);5210,#5290	Pass	1M	1M	0.00	3.00	-1.93	-1.93	11.00	-1.93		
5.6G;VHT80+80;Nss1,(M0);Ntx2(1,3);#5530,#5690	Pass	1M	1M	0.00	3.00	1.03	1.03	11.00	0.12		1.03
5.6G;VHT80+80;Nss1,(M0);Ntx1(3);#5530,5775	Pass	1M	1M	0.00	3.00	0.99	0.99	11.00			0.99
5.6G;VHT80+80;Nss1,(M0);Ntx1(3);#5610,5775	Pass	1M	1M	0.00	3.00	4.18	4.18	11.00			4.18
5.6G;VHT80+80;Nss1,(M0);Ntx1(3);#5690,5775	Pass	1M	1M	0.00	3.00	3.93	3.93	11.00			3.93
5.6G;VHT80+80;Nss1,(M0);Ntx2(1,3);#5530,#5610	Pass	1M	1M	0.00	3.00	0.94	0.94	11.00	0.11		0.94
5.6G;VHT80+80;Nss1,(M0);Ntx2(1,3);#5610,#5690	Pass	1M	1M	0.00	3.00	3.05	3.05	11.00	2.17		3.05
5.6G;VHT80+80;Nss1,(M0);Ntx1(1);5210,#5530	Pass	1M	1M	0.00	3.00	-0.51	-0.51	11.00	-0.51		
5.6G;VHT80+80;Nss1,(M0);Ntx1(1);5210,#5610	Pass	1M	1M	0.00	3.00	-0.64	-0.64	11.00	-0.64		
5.6G;VHT80+80;Nss1,(M0);Ntx1(1);5210,#5690	Pass	1M	1M	0.00	3.00	0.57	0.57	11.00	0.57		
5.6G;VHT80+80;Nss1,(M0);Ntx1(1);5290,#5530	Pass	1M	1M	0.00	3.00	-0.55	-0.55	11.00	-0.55		
5.6G;VHT80+80;Nss1,(M0);Ntx1(1);5290,#5610	Pass	1M	1M	0.00	3.00	-0.11	-0.11	11.00	-0.11		
5.6G;VHT80+80;Nss1,(M0);Ntx1(1);5290,#5690	Pass	1M	1M	0.00	3.00	-0.22	-0.22	11.00	-0.22		
5.8G;VHT80+80;Nss1,(M0);Ntx1(1);5210,#5690	Pass	500k	500k	0.00	3.00	-3.48	-3.48	30.00	-3.48		
5.8G;VHT80+80;Nss1,(M0);Ntx1(1);5290,#5690	Pass	500k	500k	0.00	3.00	-2.51	-2.51	30.00	-2.51		
5.8G;VHT80+80;Nss1,(M0);Ntx1(1);5290,#5775	Pass	500k	500k	0.00	3.00	-1.43	-1.43	30.00	-1.43		
5.8G;VHT80+80;Nss1,(M0);Ntx1(1);#5530,#5690	Pass	500k	500k	0.00	3.00	-1.62	-1.62	30.00	-1.62		
5.8G;VHT80+80;Nss1,(M0);Ntx1(1);5530,#5775	Pass	500k	500k	0.00	3.00	-1.09	-1.09	30.00	-1.09		
5.8G;VHT80+80;Nss1,(M0);Ntx1(1);5610,#5775	Pass	500k	500k	0.00	3.00	1.85	1.85	30.00	1.85		
5.8G;VHT80+80;Nss1,(M0);Ntx2(1,3);#5690,#5775	Pass	500k	500k	0.00	3.00	2.30	2.30	30.00	1.66		2.29
5.8G;VHT80+80;Nss1,(M0);Ntx1(1);#5610,#5690	Pass	500k	500k	0.00	3.00	-1.01	-1.01	30.00	-1.01		





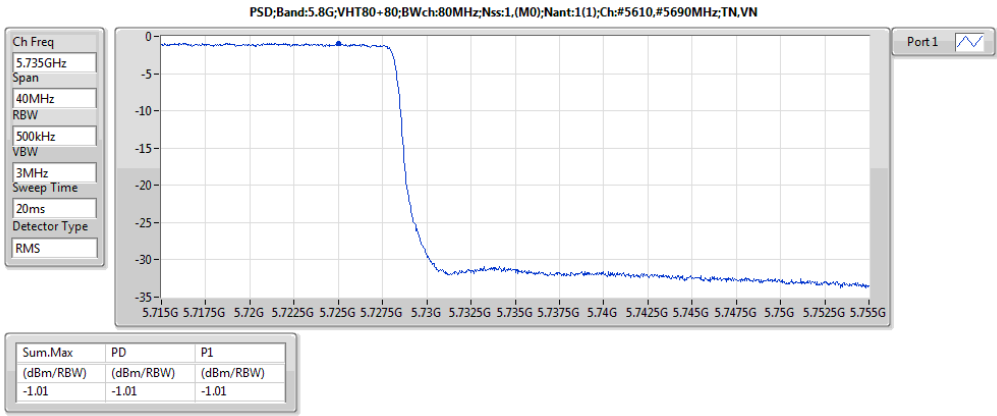
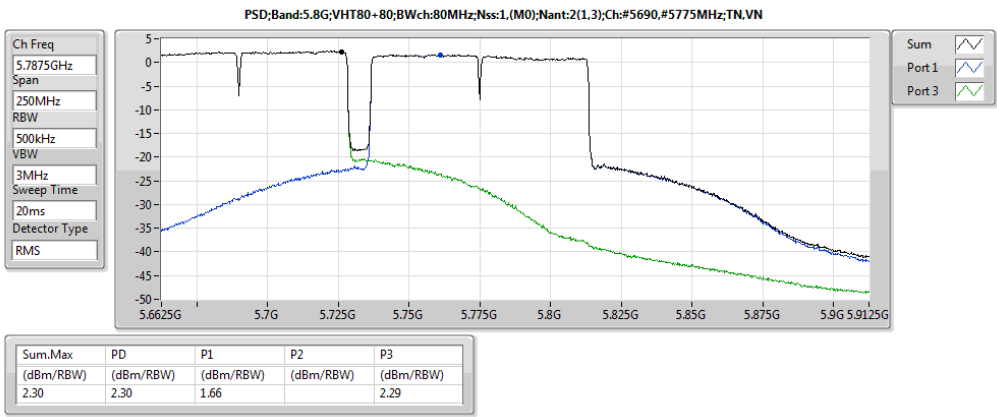
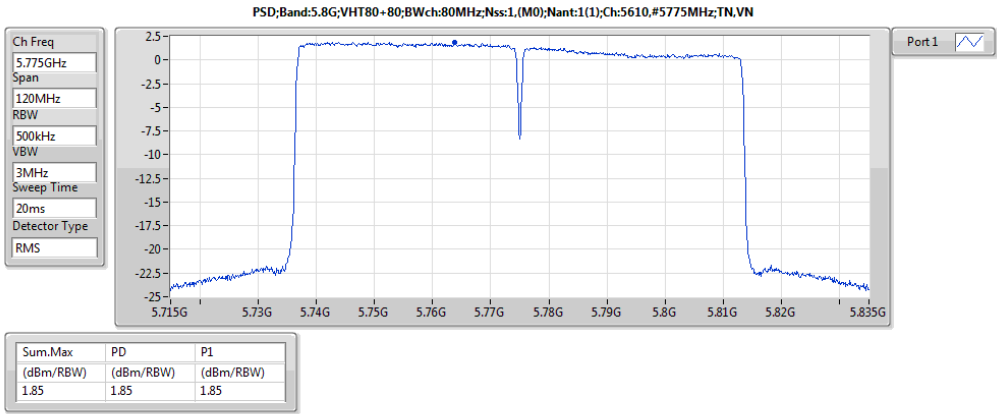
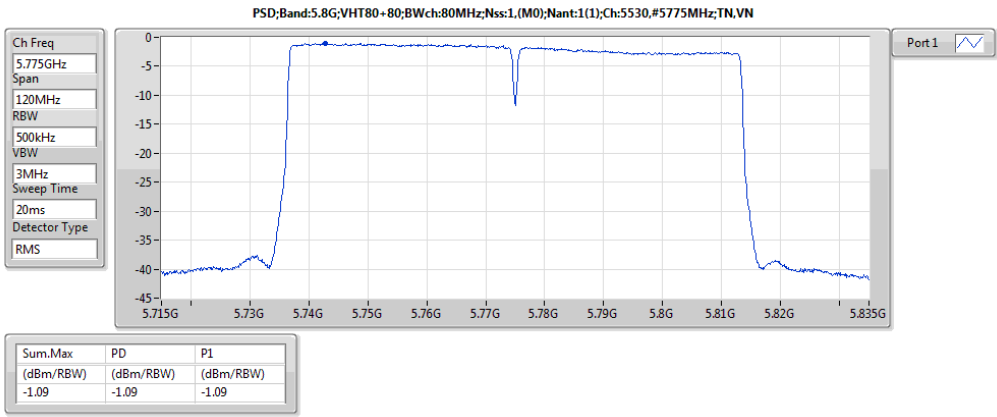
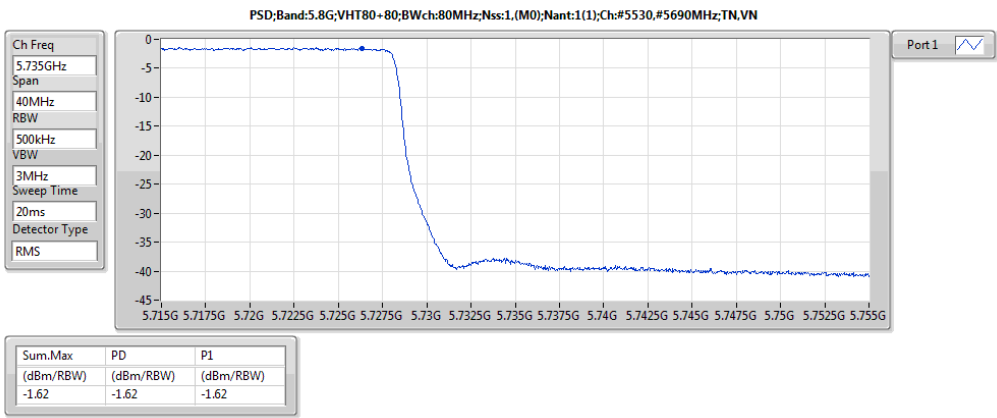
PSD Result

Appendix C





PSD Result



Radiated Emissions (1GHz~40GHz)

802.11ac MCS0/Nss1 VHT80+80

Configurations	IEEE 802.11ac MCS0/Nss1 VHT80+80 Type 1 / CH 42+106 / Chain 1 + Chain 3
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Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	11059.44	59.50	74.00	-14.50	40.23	11.77	40.19	32.69	225	196 Peak	HORIZONTAL
2	11059.47	46.59	54.00	-7.41	27.32	11.77	40.19	32.69	225	196 Average	HORIZONTAL
3	15629.90	60.57	74.00	-13.43	41.07	14.08	38.14	32.72	192	226 Peak	HORIZONTAL
4	15630.17	47.32	54.00	-6.68	27.82	14.08	38.14	32.72	192	226 Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	11060.30	59.28	74.00	-14.72	40.03	11.77	40.17	32.69	213	219 Peak	VERTICAL
2	11060.39	46.43	54.00	-7.57	27.18	11.77	40.17	32.69	213	219 Average	VERTICAL
3	15629.18	47.24	54.00	-6.76	27.74	14.08	38.14	32.72	138	215 Average	VERTICAL
4	15629.42	60.44	74.00	-13.56	40.94	14.08	38.14	32.72	138	215 Peak	VERTICAL

Configurations	IEEE 802.11ac MCS0/Nss1 VHT80+80 Type 2 / CH 42+122 / Chain 1 + Chain 3
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Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	11219.98	60.20	74.00	-13.80	40.95	11.84	40.12	32.71	221	177 Peak	HORIZONTAL
2	11220.78	46.77	54.00	-7.23	27.52	11.84	40.12	32.71	221	177 Average	HORIZONTAL
3	15629.66	47.13	54.00	-6.87	27.63	14.08	38.14	32.72	152	240 Average	HORIZONTAL
4	15629.74	60.47	74.00	-13.53	40.97	14.08	38.14	32.72	152	240 Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	11220.46	46.66	54.00	-7.34	27.41	11.84	40.12	32.71	233	189 Average	VERTICAL
2	11220.63	59.98	74.00	-14.02	40.73	11.84	40.12	32.71	233	189 Peak	VERTICAL
3	15630.74	60.52	74.00	-13.48	41.02	14.08	38.14	32.72	164	322 Peak	VERTICAL
4	15630.86	47.09	54.00	-6.91	27.59	14.08	38.14	32.72	164	322 Average	VERTICAL

Configurations	IEEE 802.11ac MCS0/Nss1 VHT80+80 Type 3 / CH 42+138 / Chain 1 + Chain 3
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Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	11379.69	46.71	54.00	-7.29	27.48	11.91	40.05	32.73	216	135 Average	HORIZONTAL
2	11380.72	59.38	74.00	-14.62	40.15	11.91	40.05	32.73	216	135 Peak	HORIZONTAL
3	15629.51	48.09	54.00	-5.91	28.59	14.08	38.14	32.72	131	192 Average	HORIZONTAL
4	15630.73	61.41	74.00	-12.59	41.91	14.08	38.14	32.72	131	192 Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	11379.14	46.62	54.00	-7.38	27.39	11.91	40.05	32.73	204	147 Average	VERTICAL
2	11380.89	59.97	74.00	-14.03	40.74	11.91	40.05	32.73	204	147 Peak	VERTICAL
3	15629.15	60.34	74.00	-13.66	40.84	14.08	38.14	32.72	148	265 Peak	VERTICAL
4	15630.49	47.37	54.00	-6.63	27.87	14.08	38.14	32.72	148	265 Average	VERTICAL

Configurations	IEEE 802.11ac MCS0/Nss1 VHT80+80 Type 4 / CH 58+106 / Chain 1 + Chain 3
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Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	11060.13	46.85	54.00	-7.15	27.60	11.77	40.17	32.69	167	4 Average	HORIZONTAL
2	11060.13	61.32	74.00	-12.68	42.07	11.77	40.17	32.69	241	244 Peak	HORIZONTAL
3	11060.38	57.79	74.00	-16.21	38.54	11.77	40.17	32.69	167	4 Peak	HORIZONTAL
4	11060.59	46.46	54.00	-7.54	27.21	11.77	40.17	32.69	241	244 Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	11060.10	59.79	74.00	-14.21	40.52	11.77	40.19	32.69	231	306 Peak	VERTICAL
2	11060.30	45.81	54.00	-8.19	26.56	11.77	40.17	32.69	231	306 Average	VERTICAL
3	11060.51	46.23	54.00	-7.77	26.98	11.77	40.17	32.69	225	220 Average	VERTICAL
4	11060.92	59.36	74.00	-14.64	40.11	11.77	40.17	32.69	225	220 Peak	VERTICAL

Configurations	IEEE 802.11ac MCS0/Nss1 VHT80+80 Type 5 / CH 58+122 / Chain 1 + Chain 3
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Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	11219.15	59.83	74.00	-14.17	40.58	11.84	40.12	32.71	202	191 Peak	HORIZONTAL
2	11220.20	46.84	54.00	-7.16	27.59	11.84	40.12	32.71	202	191 Average	HORIZONTAL
3	15869.32	47.35	54.00	-6.65	28.06	14.16	37.86	32.73	159	248 Average	HORIZONTAL
4	15870.01	60.48	74.00	-13.52	41.19	14.16	37.86	32.73	159	248 Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	11219.37	60.02	74.00	-13.98	40.77	11.84	40.12	32.71	213	204 Peak	VERTICAL
2	11220.95	46.67	54.00	-7.33	27.42	11.84	40.12	32.71	213	204 Average	VERTICAL
3	15869.75	48.33	54.00	-5.67	29.04	14.16	37.86	32.73	159	248 Average	VERTICAL
4	15870.23	60.82	74.00	-13.18	41.53	14.16	37.86	32.73	159	248 Peak	VERTICAL

Configurations	IEEE 802.11ac MCS0/Nss1 VHT80+80 Type 6 / CH 58+138 / Chain 1 + Chain 3
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Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	11379.23	60.03	74.00	-13.97	40.80	11.91	40.05	32.73	223	229 Peak	HORIZONTAL
2	11380.44	46.88	54.00	-7.12	27.65	11.91	40.05	32.73	223	229 Average	HORIZONTAL
3	15869.70	60.31	74.00	-13.69	41.02	14.16	37.86	32.73	155	149 Peak	HORIZONTAL
4	15870.25	47.36	54.00	-6.64	28.07	14.16	37.86	32.73	155	149 Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	11379.74	59.68	74.00	-14.32	40.45	11.91	40.05	32.73	198	188 Peak	VERTICAL
2	11380.37	46.76	54.00	-7.24	27.53	11.91	40.05	32.73	198	188 Average	VERTICAL
3	15869.36	48.08	54.00	-5.92	28.79	14.16	37.86	32.73	178	189 Average	VERTICAL
4	15870.52	60.78	74.00	-13.22	41.49	14.16	37.86	32.73	178	189 Peak	VERTICAL

Configurations	IEEE 802.11ac MCS0/Nss1 VHT80+80 Type 7 / CH 58+155 / Chain 1 + Chain 3
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Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11549.50	59.22	74.00	-14.78	40.05	11.98	39.93	32.74	185	192	Peak	HORIZONTAL
2	11549.61	46.25	54.00	-7.75	27.08	11.98	39.93	32.74	185	192	Average	HORIZONTAL
3	15869.07	60.55	74.00	-13.45	41.26	14.16	37.86	32.73	148	182	Peak	HORIZONTAL
4	15869.94	47.41	54.00	-6.59	28.12	14.16	37.86	32.73	148	182	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11550.25	46.14	54.00	-7.86	27.03	11.98	39.87	32.74	206	224	Average	VERTICAL
2	11550.30	59.53	74.00	-14.47	40.42	11.98	39.87	32.74	206	224	Peak	VERTICAL
3	15869.17	48.20	54.00	-5.80	28.91	14.16	37.86	32.73	172	222	Average	VERTICAL
4	15870.98	61.10	74.00	-12.90	41.81	14.16	37.86	32.73	172	222	Peak	VERTICAL

Configurations	IEEE 802.11ac MCS0/Nss1 VHT80+80 Type 8 / CH 106+138 / Chain 1 + Chain 3
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Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11059.40	58.96	74.00	-15.04	39.69	11.77	40.19	32.69	186	133	Peak	HORIZONTAL
2	11060.69	46.31	54.00	-7.69	27.06	11.77	40.17	32.69	186	133	Average	HORIZONTAL
3	11379.44	46.87	54.00	-7.13	27.64	11.91	40.05	32.73	228	174	Average	HORIZONTAL
4	11380.94	59.99	74.00	-14.01	40.76	11.91	40.05	32.73	228	174	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11060.09	46.16	54.00	-7.84	26.89	11.77	40.19	32.69	120	221	Average	VERTICAL
2	11060.10	59.08	74.00	-14.92	39.81	11.77	40.19	32.69	120	221	Peak	VERTICAL
3	11380.37	60.45	74.00	-13.55	41.22	11.91	40.05	32.73	208	183	Peak	VERTICAL
4	11380.60	46.70	54.00	-7.30	27.47	11.91	40.05	32.73	208	183	Average	VERTICAL

Configurations	IEEE 802.11ac MCS0/Nss1 VHT80+80 Type 9 / CH 106+155 / Chain 1 + Chain 3
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Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11060.12	59.65	74.00	-14.35	40.40	11.77	40.17	32.69	166	299	Peak	HORIZONTAL
2	11060.19	46.78	54.00	-7.22	27.53	11.77	40.17	32.69	166	299	Average	HORIZONTAL
3	11550.24	46.56	54.00	-7.44	27.45	11.98	39.87	32.74	174	224	Average	HORIZONTAL
4	11550.24	59.82	74.00	-14.18	40.71	11.98	39.87	32.74	174	224	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11060.49	46.04	54.00	-7.96	26.79	11.77	40.17	32.69	219	236	Average	VERTICAL
2	11060.67	59.35	74.00	-14.65	40.10	11.77	40.17	32.69	219	236	Peak	VERTICAL
3	11549.53	46.06	54.00	-7.94	26.89	11.98	39.93	32.74	201	197	Average	VERTICAL
4	11549.91	59.33	74.00	-14.67	40.16	11.98	39.93	32.74	201	197	Peak	VERTICAL

Configurations	IEEE 802.11ac MCS0/Nss1 VHT80+80 Type 10 / CH 122+155 / Chain 1 + Chain 3
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Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	11215.36	64.06	74.00	-9.94	44.81	11.84	40.12	32.71	214	277	Peak
2	11226.56	49.51	54.00	-4.49	30.27	11.84	40.11	32.71	214	277	Average
3	11550.36	45.30	54.00	-8.70	26.19	11.98	39.87	32.74	207	251	Average
4	11550.66	59.19	74.00	-14.81	40.08	11.98	39.87	32.74	207	251	Peak

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	11199.76	46.59	54.00	-7.41	27.35	11.83	40.12	32.71	208	137	Average
2	11241.20	59.58	74.00	-14.42	40.34	11.84	40.11	32.71	208	137	Peak
3	11580.88	59.11	74.00	-14.89	39.99	11.99	39.87	32.74	286	360	Peak
4	11583.60	46.09	54.00	-7.91	27.04	11.99	39.80	32.74	286	360	Average

Configurations	IEEE 802.11ac MCS0/Nss1 VHT80+80 Type 11 / CH 138+155 / Chain 1 + Chain 3
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Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	11389.60	48.65	54.00	-5.35	29.43	11.91	40.04	32.73	218	274	Average
2	11396.80	62.45	74.00	-11.55	43.23	11.91	40.04	32.73	218	274	Peak
3	11549.99	45.37	54.00	-8.63	26.20	11.98	39.93	32.74	217	32	Average
4	11552.19	59.22	74.00	-14.78	40.11	11.98	39.87	32.74	217	32	Peak

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	11366.08	59.96	74.00	-14.04	40.74	11.90	40.05	32.73	208	140	Peak
2	11391.36	46.59	54.00	-7.41	27.37	11.91	40.04	32.73	208	140	Average
3	11585.76	58.79	74.00	-15.21	39.74	11.99	39.80	32.74	220	260	Peak
4	11586.32	45.76	54.00	-8.24	26.71	11.99	39.80	32.74	220	260	Average

Configurations	IEEE 802.11ac MCS0/Nss1 VHT80+80 Type 12 / CH 42+58 / Chain 1 + Chain 3
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Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	15627.70	46.53	54.00	-7.47	27.04	14.07	38.14	32.72	218	238	Average
2	15630.36	60.43	74.00	-13.57	40.93	14.08	38.14	32.72	218	238	Peak
3	15867.54	60.58	74.00	-13.42	41.29	14.16	37.86	32.73	206	142	Peak
4	15869.47	46.97	54.00	-7.03	27.68	14.16	37.86	32.73	206	142	Average

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	15636.36	60.20	74.00	-13.80	40.70	14.08	38.14	32.72	223	321	Peak
2	15649.80	46.81	54.00	-7.19	27.36	14.09	38.08	32.72	223	321	Average
3	15851.20	60.10	74.00	-13.90	40.80	14.16	37.86	32.72	213	244	Peak
4	15888.68	47.11	54.00	-6.89	27.86	14.17	37.81	32.73	213	244	Average

Configurations	IEEE 802.11ac MCS0/Nss1 VHT80+80 Type 13 / CH 106+122 / Chain 1 + Chain 3
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Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	11059.28	59.60	74.00	-14.40	40.33	11.77	40.19	32.69	197	142 Peak	HORIZONTAL
2	11080.16	46.32	54.00	-7.68	27.07	11.78	40.17	32.70	197	142 Average	HORIZONTAL
3	11202.08	46.25	54.00	-7.75	27.01	11.83	40.12	32.71	212	356 Average	HORIZONTAL
4	11239.76	59.41	74.00	-14.59	40.17	11.84	40.11	32.71	212	356 Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	11063.20	58.31	74.00	-15.69	39.06	11.77	40.17	32.69	220	104 Peak	VERTICAL
2	11074.12	45.63	54.00	-8.37	26.38	11.78	40.17	32.70	220	104 Average	VERTICAL
3	11205.28	46.70	54.00	-7.30	27.46	11.83	40.12	32.71	233	154 Average	VERTICAL
4	11209.44	59.54	74.00	-14.46	40.29	11.84	40.12	32.71	233	154 Peak	VERTICAL

Configurations	IEEE 802.11ac MCS0/Nss1 VHT80+80 Type 14 / CH 122+138 / Chain 1 + Chain 3
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Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	11213.44	49.33	54.00	-4.67	30.08	11.84	40.12	32.71	208	332 Average	HORIZONTAL
2	11236.40	62.70	74.00	-11.30	43.46	11.84	40.11	32.71	208	332 Peak	HORIZONTAL
3	11380.16	46.19	54.00	-7.81	26.96	11.91	40.05	32.73	220	95 Average	HORIZONTAL
4	11384.88	59.54	74.00	-14.46	40.32	11.91	40.04	32.73	220	95 Peak	HORIZONTAL

Vertical

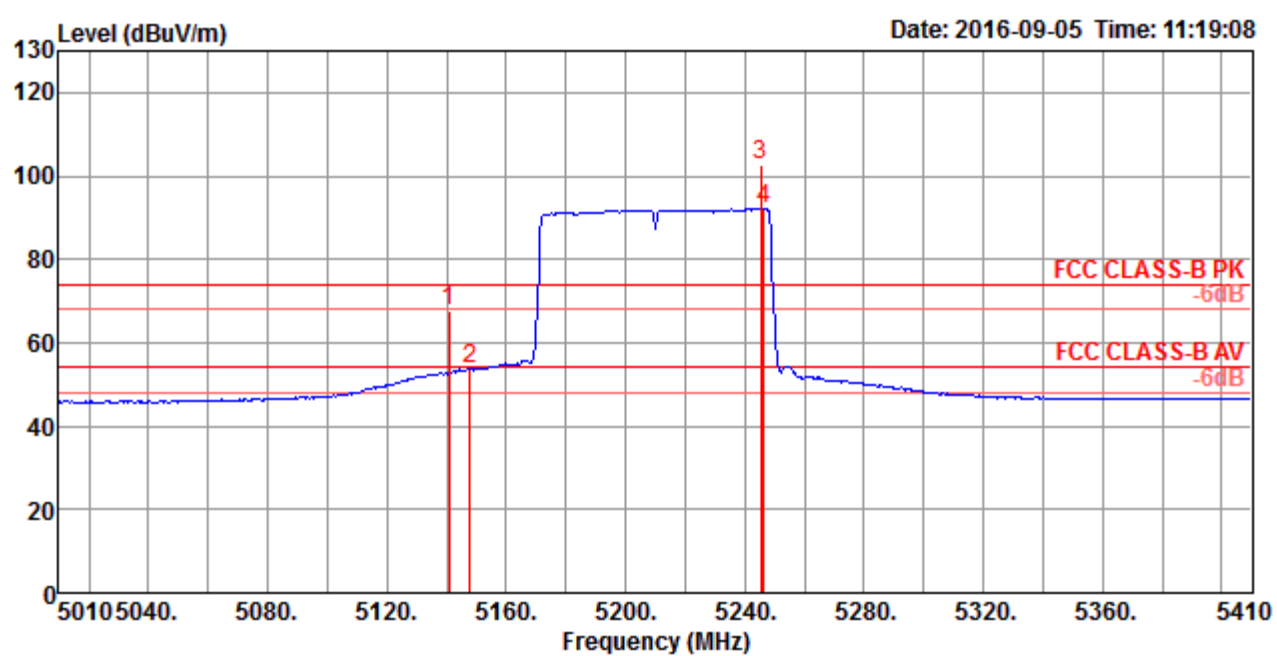
	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	11201.36	59.31	74.00	-14.69	40.07	11.83	40.12	32.71	223	162 Peak	VERTICAL
2	11202.20	46.91	54.00	-7.09	27.67	11.83	40.12	32.71	223	162 Average	VERTICAL
3	11372.72	46.31	54.00	-7.69	27.09	11.90	40.05	32.73	236	282 Average	VERTICAL
4	11388.24	59.58	74.00	-14.42	40.36	11.91	40.04	32.73	236	282 Peak	VERTICAL

Band Edge Emissions

802.11ac MCS0/Nss1 VHT80+80

Configurations	IEEE 802.11ac MCS0/Nss1 VHT80+80 Type 1 / CH 42+106 / Chain 1 + Chain 3
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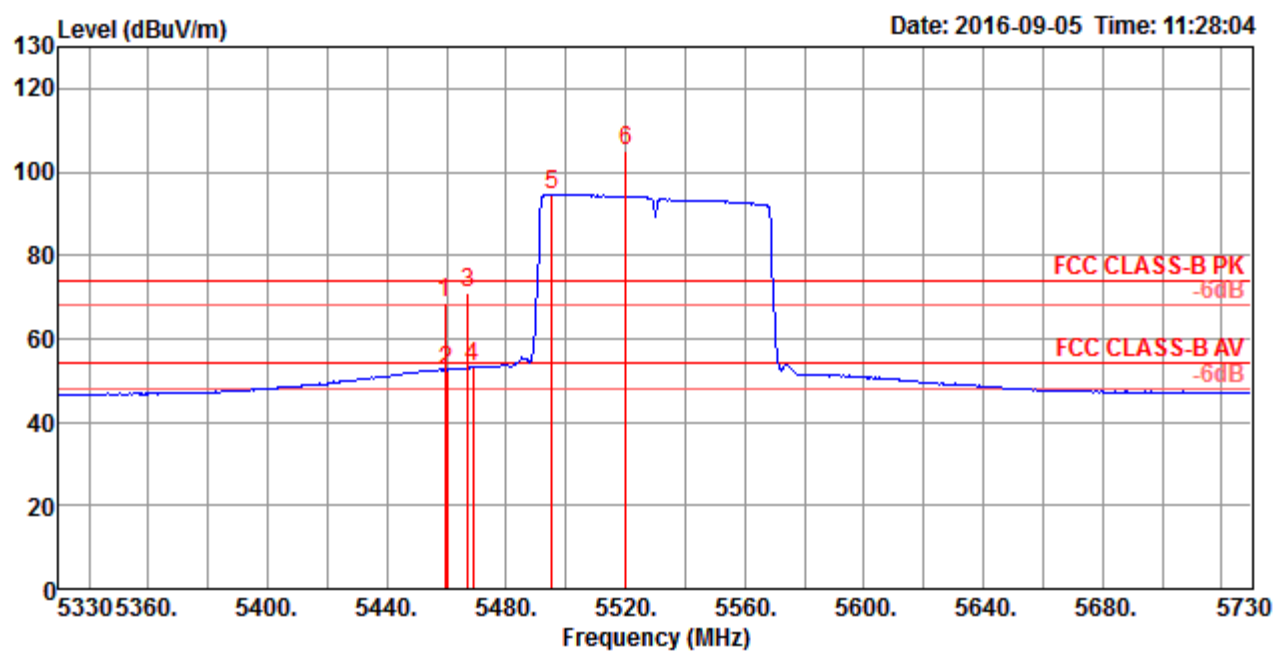
Channel 42



	Freq	Level	Limit	Over	Read	CableAntenna	Preampl	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	5140.74	67.41	74.00	-6.59	60.22	7.32	31.51	31.64	249	280 Peak	HORIZONTAL
2	5148.00	53.76	54.00	-0.24	46.54	7.34	31.52	31.64	249	280 Average	HORIZONTAL
3 @	5245.31	102.89			95.48	7.45	31.59	31.63	249	280 Peak	HORIZONTAL
4 @	5246.47	92.23			84.82	7.45	31.59	31.63	249	280 Average	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5210 MHz.

Channel 106

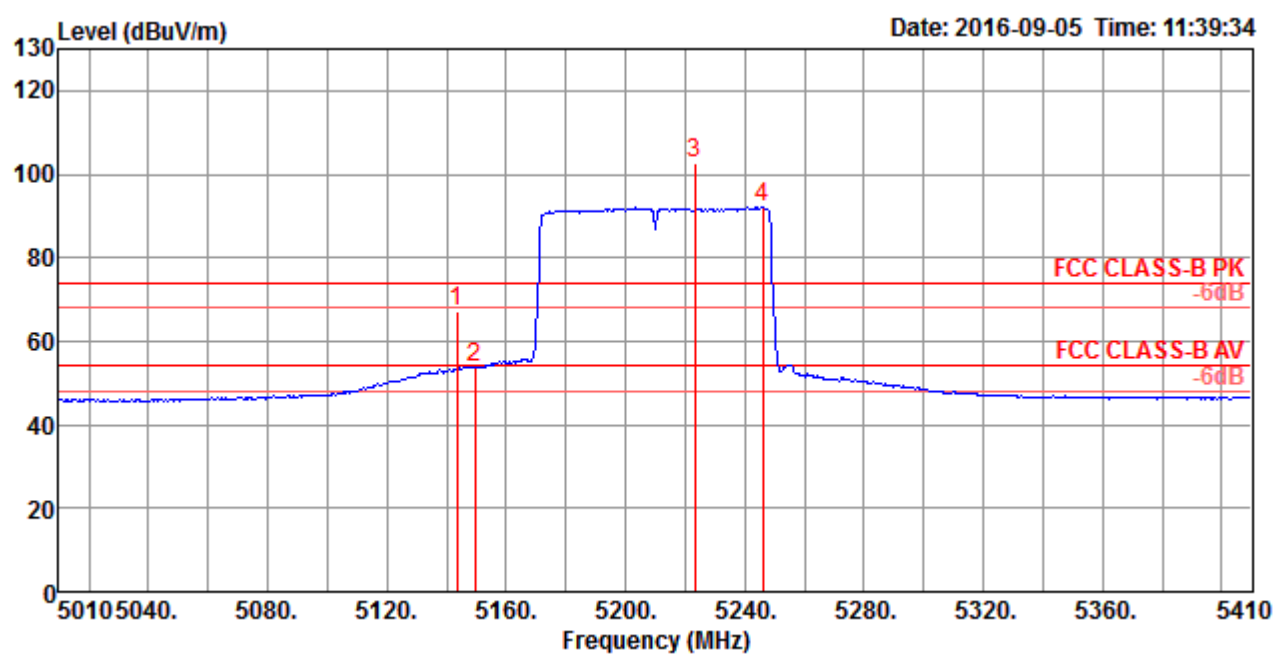


	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	5459.42	68.56	74.00	-5.44	60.77	7.64	31.76	31.61	263	93 Peak	VERTICAL
2	5460.00	52.48	54.00	-1.52	44.69	7.64	31.76	31.61	263	93 Average	VERTICAL
3	5467.11	70.82	74.00	-3.18	63.01	7.64	31.78	31.61	263	93 Peak	VERTICAL
4	5468.84	53.24	54.00	-0.76	45.43	7.64	31.78	31.61	263	93 Average	VERTICAL
5 @	5495.27	94.69			86.87	7.63	31.80	31.61	263	93 Average	VERTICAL
6 @	5520.16	105.06			97.23	7.63	31.82	31.62	263	93 Peak	VERTICAL

Item 5, 6 are the fundamental frequency at 5530 MHz.

Configurations	IEEE 802.11ac MCS0/Nss1 VHT80+80 Type 2 / CH 42+122 / Chain 1 + Chain 3
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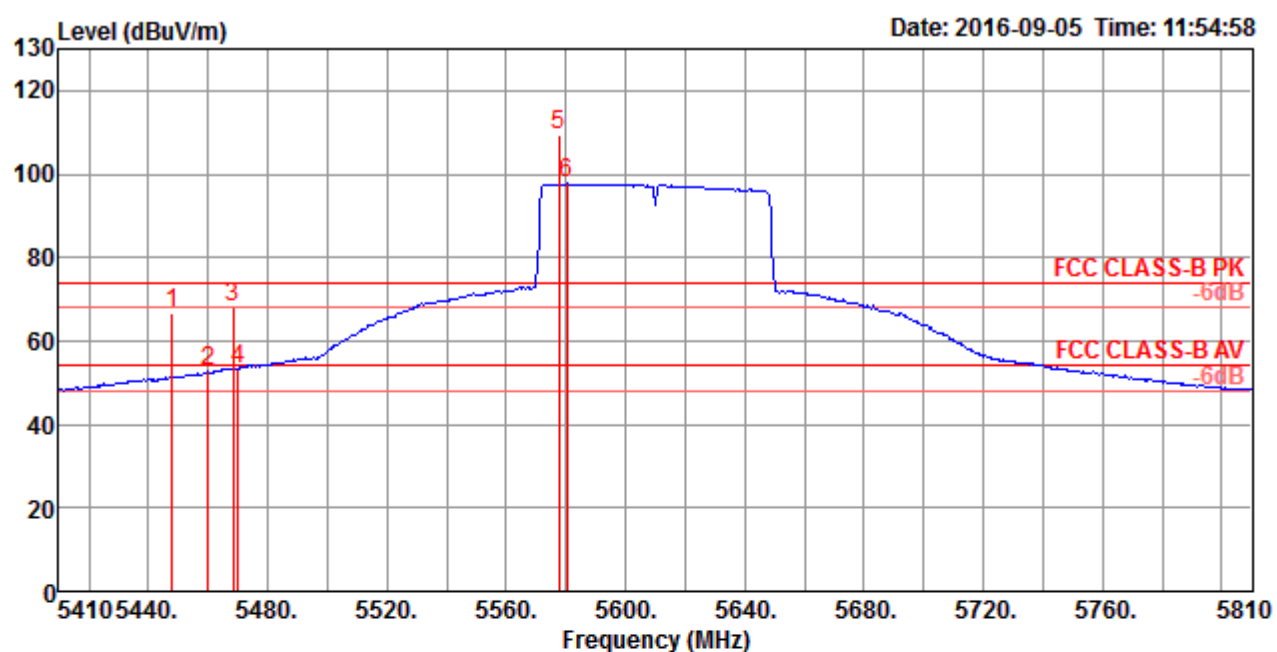
Channel 42



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	5143.63	67.35	74.00	-6.65	60.13	7.34	31.52	31.64	249	281 Peak	HORIZONTAL
2	5149.60	53.79	54.00	-0.21	46.57	7.34	31.52	31.64	249	281 Average	HORIZONTAL
3 @	5223.31	102.58			95.21	7.43	31.58	31.64	249	281 Peak	HORIZONTAL
4 @	5245.89	92.09			84.68	7.45	31.59	31.63	249	281 Average	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5210 MHz.

Channel 122

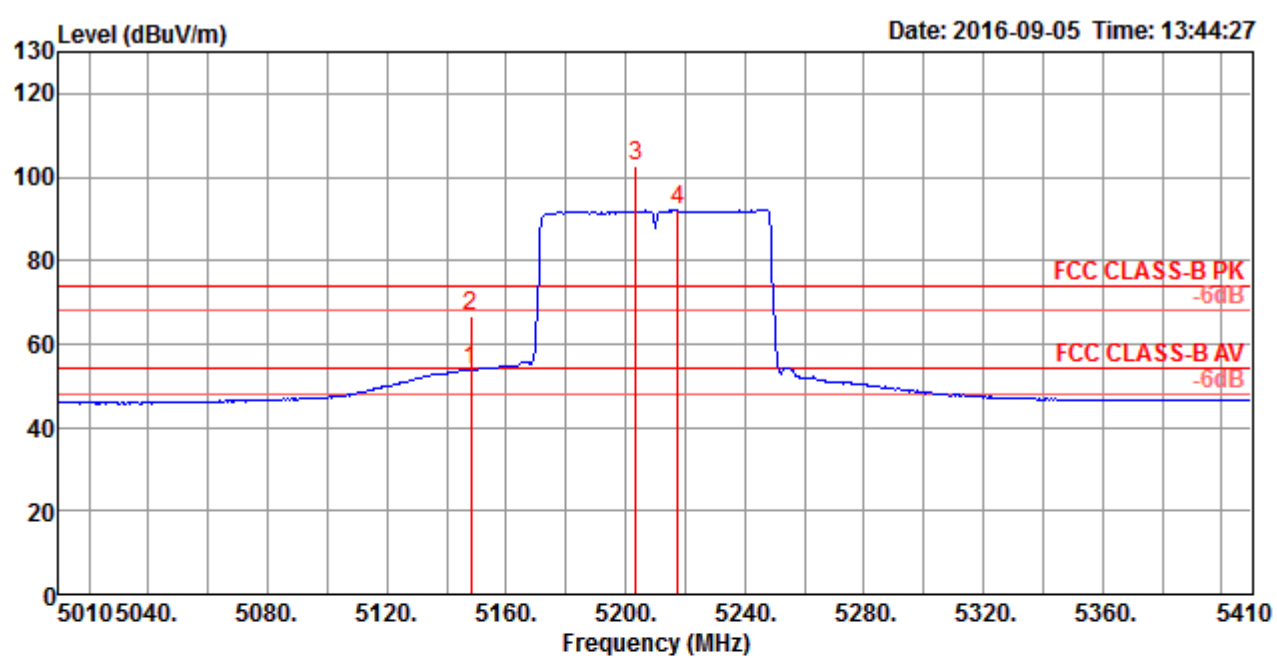


	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	cm	deg	
1	5447.84	66.51	74.00	-7.49	58.73	7.64	31.76	31.62	280	96 Peak	VERTICAL
2	5460.00	52.58	54.00	-1.42	44.79	7.64	31.76	31.61	280	96 Average	VERTICAL
3	5468.26	68.32	74.00	-5.68	60.51	7.64	31.78	31.61	280	96 Peak	VERTICAL
4	5470.00	53.43	54.00	-0.57	45.62	7.64	31.78	31.61	280	96 Average	VERTICAL
5 @	5577.58	109.16			101.29	7.61	31.90	31.64	280	96 Peak	VERTICAL
6 @	5580.48	97.62			89.76	7.61	31.90	31.65	280	96 Average	VERTICAL

Item 5, 6 are the fundamental frequency at 5610 MHz.

Configurations	IEEE 802.11ac MCS0/Nss1 VHT80+80 Type 3 / CH 42+138 / Chain 1 + Chain 3
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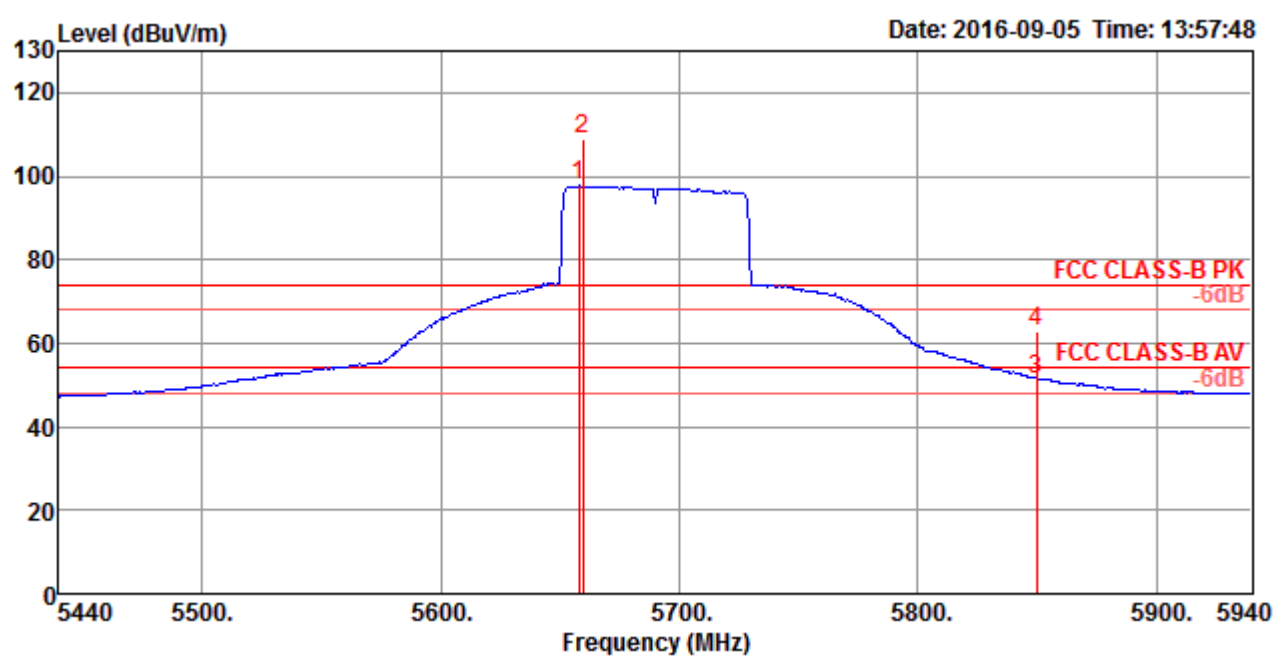
Channel 42



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	5148.26	53.94	54.00	-0.06	46.72	7.34	31.52	31.64	251	281	Average
2	5148.26	66.82	74.00	-7.18	59.60	7.34	31.52	31.64	251	281	Peak
3 @	5203.63	102.57			95.23	7.41	31.57	31.64	251	281	Peak
4 @	5217.53	92.03			84.66	7.43	31.58	31.64	251	281	Average

Item 3, 4 are the fundamental frequency at 5210 MHz.

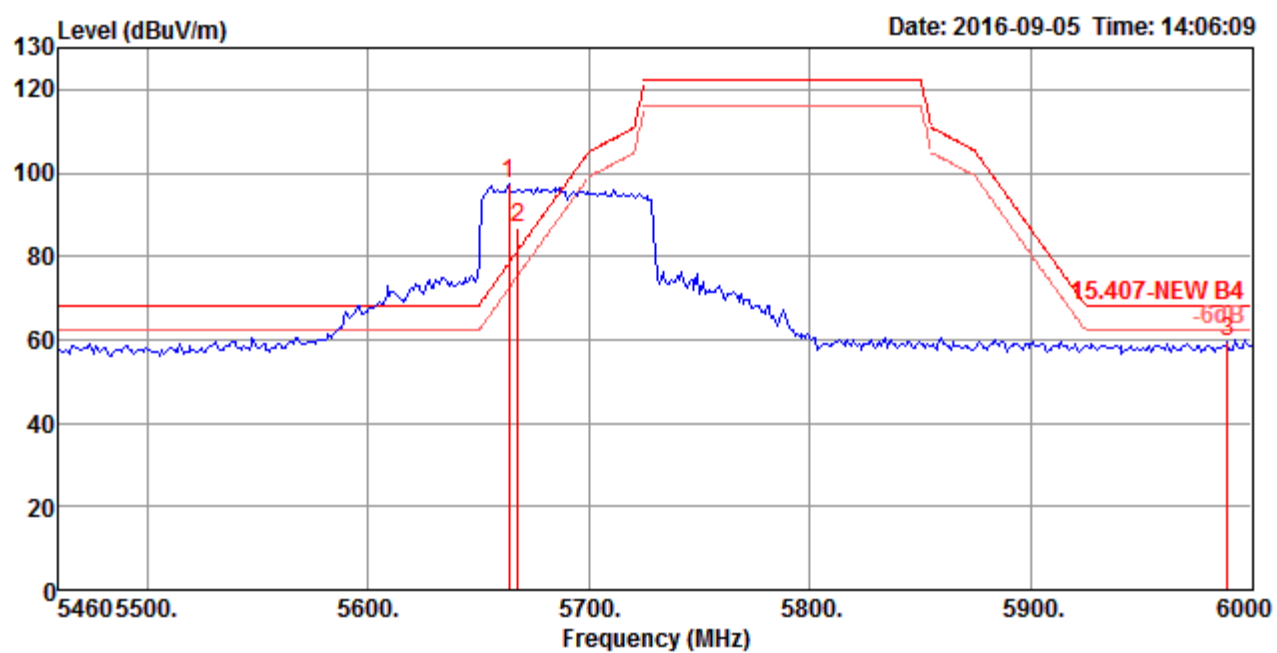
Channel 138 (UNII 2C)



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	cm	deg	
1 @	5658.16	97.64			89.64	7.68	32.00	31.68	278	106 Average	VERTICAL
2 @	5659.61	109.09			101.09	7.68	32.00	31.68	278	106 Peak	VERTICAL
3	5850.00	51.49	54.00	-2.51	43.18	7.84	32.22	31.75	278	106 Average	VERTICAL
4	5850.00	63.07	74.00	-10.93	54.76	7.84	32.22	31.75	278	106 Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 5690 MHz.

Channel 138 (UNII 3)



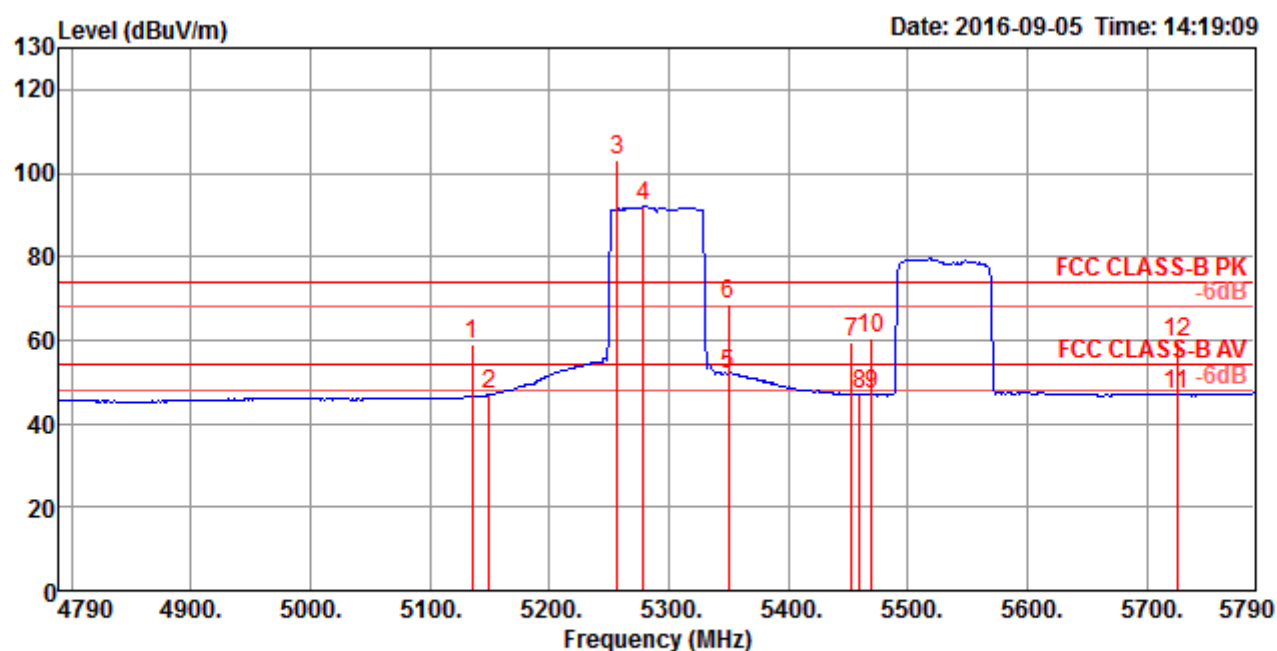
	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1 @	5663.60	97.39			89.39	7.68	32.00	31.68	100	156 Peak	HORIZONTAL
2 @	5668.00	86.74			78.74	7.68	32.00	31.68	100	156 Average	HORIZONTAL
3	5989.20	59.69	68.20	-8.51	51.19	7.92	32.38	31.80	100	156 Peak	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5690 MHz.

Configurations

IEEE 802.11ac MCS0/Nss1 VHT80+80 Type 4 / CH 58+106 / Chain 1 + Chain 3

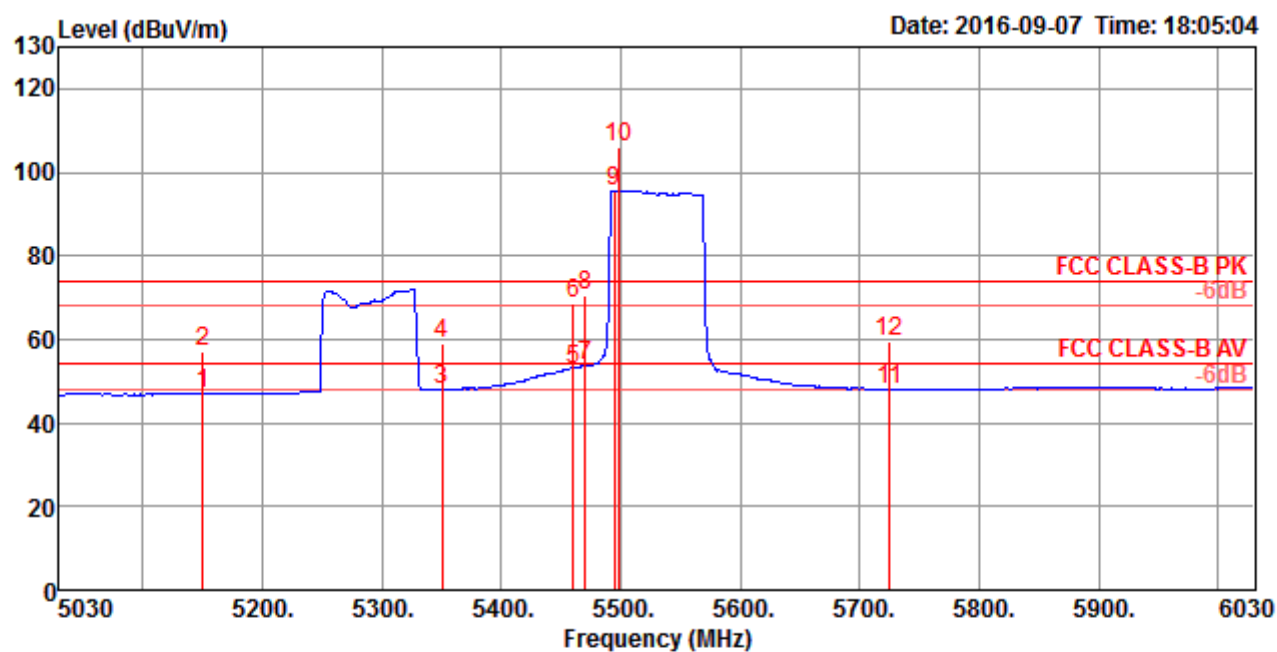
Channel 58



	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5135.50	59.11	74.00	-14.89	51.93	7.32	31.51	31.65	246	274	Peak	HORIZONTAL
2	5150.00	46.82	54.00	-7.18	39.60	7.34	31.52	31.64	246	274	Average	HORIZONTAL
3 @	5256.70	103.20			95.75	7.47	31.61	31.63	246	274	Peak	HORIZONTAL
4 @	5278.40	91.97			84.46	7.51	31.63	31.63	246	274	Average	HORIZONTAL
5	5350.00	51.87	54.00	-2.13	44.21	7.60	31.68	31.62	246	274	Average	HORIZONTAL
6	5350.00	68.81	74.00	-5.19	61.15	7.60	31.68	31.62	246	274	Peak	HORIZONTAL
7	5452.80	59.48	74.00	-14.52	51.69	7.64	31.76	31.61	246	274	Peak	HORIZONTAL
8	5460.00	46.96	54.00	-7.04	39.17	7.64	31.76	31.61	246	274	Average	HORIZONTAL
9	5470.00	46.81	54.00	-7.19	39.00	7.64	31.78	31.61	246	274	Average	HORIZONTAL
10	5470.00	60.61	74.00	-13.39	52.80	7.64	31.78	31.61	246	274	Peak	HORIZONTAL
11	5725.00	46.83	54.00	-7.17	38.71	7.74	32.08	31.70	246	274	Average	HORIZONTAL
12	5726.40	59.71	74.00	-14.29	51.60	7.74	32.08	31.71	246	274	Peak	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5290 MHz.

Channel 106

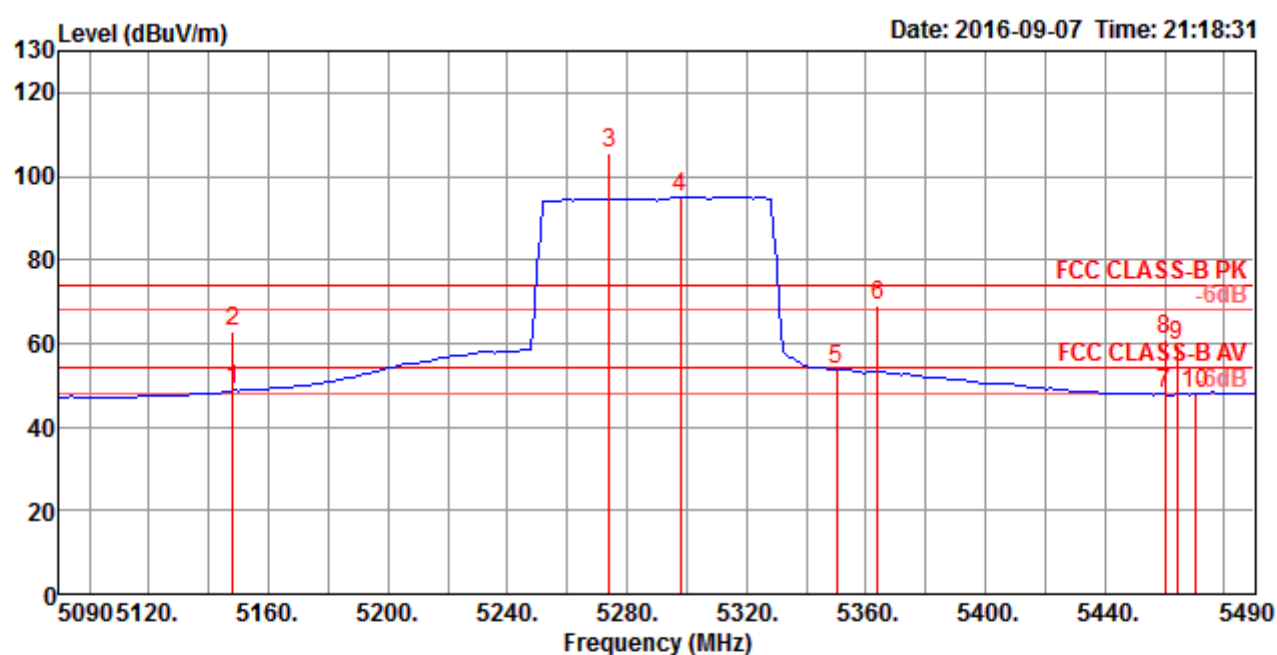


	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5150.00	46.96	54.00	-7.04	38.44	8.05	31.52	31.05	277	103	Average	VERTICAL
2	5150.00	57.17	74.00	-16.83	48.65	8.05	31.52	31.05	277	103	Peak	VERTICAL
3	5350.00	47.76	54.00	-6.24	38.85	8.26	31.68	31.03	277	103	Average	VERTICAL
4	5350.00	58.94	74.00	-15.06	50.03	8.26	31.68	31.03	277	103	Peak	VERTICAL
5	5460.00	52.99	54.00	-1.01	43.84	8.41	31.76	31.02	277	103	Average	VERTICAL
6	5460.00	68.79	74.00	-5.21	59.64	8.41	31.76	31.02	277	103	Peak	VERTICAL
7	5470.00	53.76	54.00	-0.24	44.57	8.43	31.78	31.02	277	103	Average	VERTICAL
8	5470.00	70.62	74.00	-3.38	61.43	8.43	31.78	31.02	277	103	Peak	VERTICAL
9 @	5494.00	95.50			86.27	8.46	31.79	31.02	277	103	Average	VERTICAL
10 @	5498.00	105.92			96.65	8.49	31.80	31.02	277	103	Peak	VERTICAL
11	5725.00	48.09	54.00	-5.91	38.58	8.54	32.08	31.11	277	103	Average	VERTICAL
12	5725.00	59.46	74.00	-14.54	49.95	8.54	32.08	31.11	277	103	Peak	VERTICAL

Item 9, 10 are the fundamental frequency at 5530 MHz.

Configurations	IEEE 802.11ac MCS0/Nss1 VHT80+80 Type 5 / CH 58+122 / Chain 1 + Chain 3
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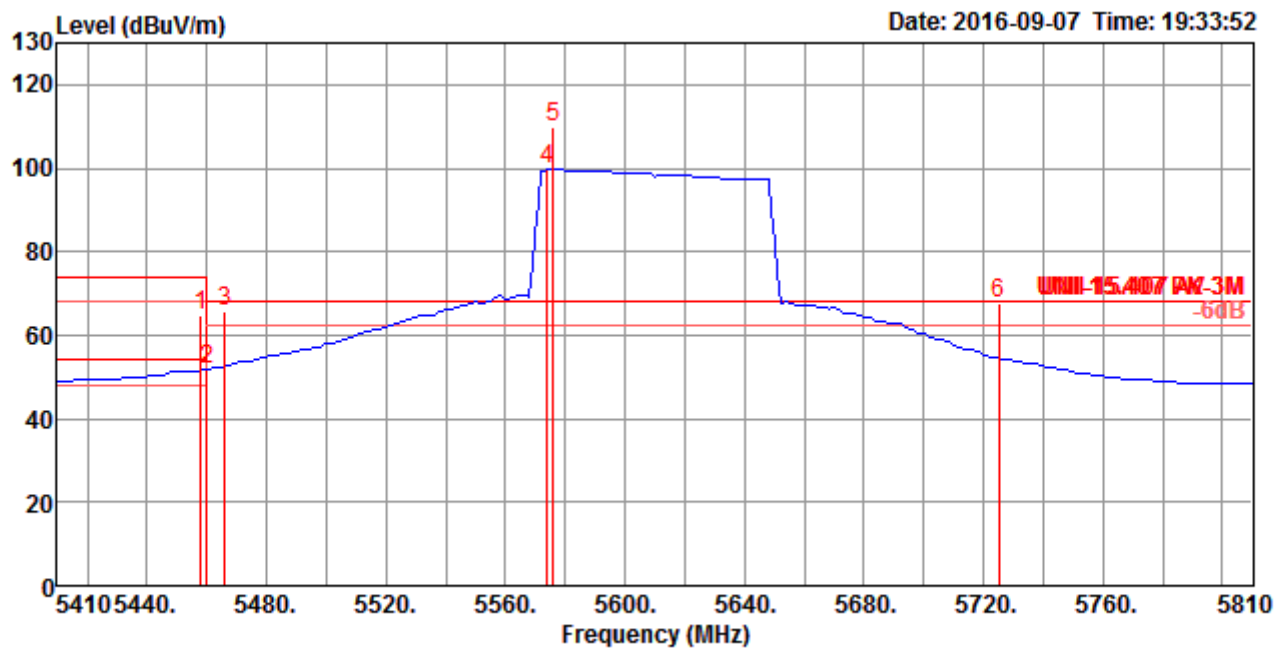
Channel 58



	Freq	Level	Limit Line	Over Limit	Read Level	CableLoss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5148.00	48.78	54.00	-5.22	40.26	8.05	31.52	31.05	251	276	Average	HORIZONTAL
2	5148.00	62.91	74.00	-11.09	54.39	8.05	31.52	31.05	251	276	Peak	HORIZONTAL
3 @	5274.00	105.47			96.74	8.15	31.62	31.04	251	276	Peak	HORIZONTAL
4 @	5298.00	94.94			86.15	8.19	31.64	31.04	251	276	Average	HORIZONTAL
5	5350.00	53.87	54.00	-0.13	44.96	8.26	31.68	31.03	251	276	Average	HORIZONTAL
6	5364.00	69.12	74.00	-4.88	60.18	8.28	31.69	31.03	251	276	Peak	HORIZONTAL
7	5460.00	47.74	54.00	-6.26	38.59	8.41	31.76	31.02	251	276	Average	HORIZONTAL
8	5460.00	60.78	74.00	-13.22	51.63	8.41	31.76	31.02	251	276	Peak	HORIZONTAL
9	5464.00	59.62	74.00	-14.38	50.43	8.43	31.78	31.02	251	276	Peak	HORIZONTAL
10	5470.00	48.03	54.00	-5.97	38.84	8.43	31.78	31.02	251	276	Average	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5290 MHz.

Channel 122

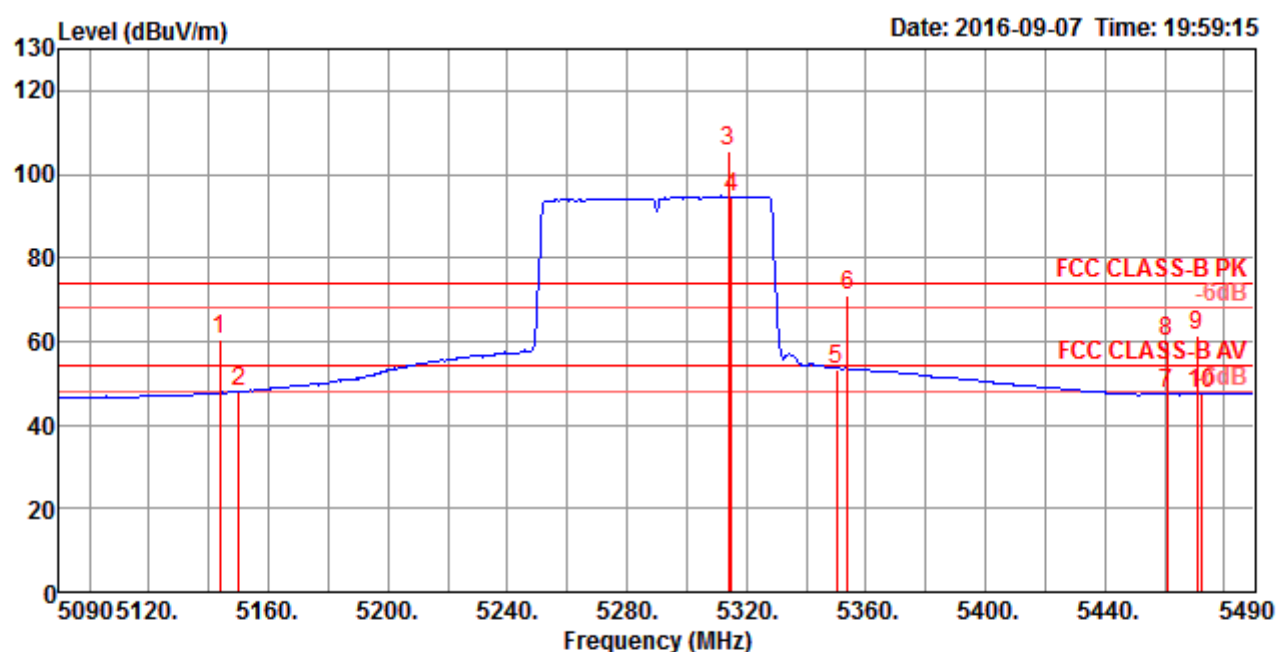


	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	5458.00	65.00	74.00	-9.00	55.85	8.41	31.76	31.02	288	105	Peak
2	5460.00	51.97	54.00	-2.03	42.82	8.41	31.76	31.02	288	105	Average
3	5466.00	65.82	68.20	-2.38	56.63	8.43	31.78	31.02	288	105	Peak
4 @	5574.00	99.82			90.39	8.60	31.88	31.05	288	105	Average
5 @	5576.00	110.04			100.59	8.60	31.90	31.05	288	105	Peak
6	5725.00	67.83	68.20	-0.37	58.32	8.54	32.08	31.11	288	105	Peak

Item 4, 5 are the fundamental frequency at 5610 MHz.

Configurations	IEEE 802.11ac MCS0/Nss1 VHT80+80 Type 6 / CH 58+138 / Chain 1 + Chain 3
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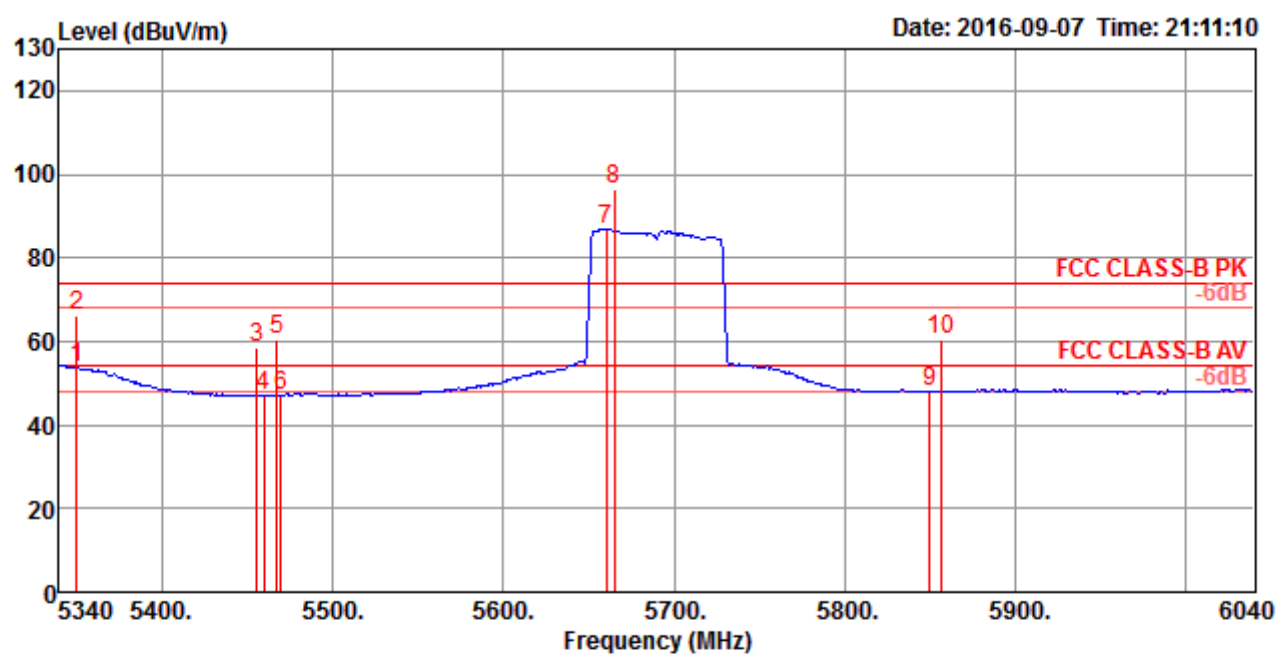
Channel 58



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	cm	deg	
1	5143.60	60.50	74.00	-13.50	51.98	8.05	31.52	31.05	228	306	Peak
2	5150.00	47.87	54.00	-6.13	39.35	8.05	31.52	31.05	228	306	Average
3 @	5314.00	105.45			96.62	8.22	31.65	31.04	228	306	Peak
4 @	5314.80	94.67			85.84	8.22	31.65	31.04	228	306	Average
5	5350.00	53.48	54.00	-0.52	44.57	8.26	31.68	31.03	228	306	Average
6	5354.00	71.07	74.00	-2.93	62.16	8.26	31.68	31.03	228	306	Peak
7	5460.80	47.41	54.00	-6.59	38.26	8.41	31.76	31.02	228	306	Average
8	5460.80	59.85	74.00	-14.15	50.70	8.41	31.76	31.02	228	306	Peak
9	5470.80	61.29	74.00	-12.71	52.10	8.43	31.78	31.02	228	306	Peak
10	5472.40	47.51	54.00	-6.49	38.32	8.43	31.78	31.02	228	306	Average

Item 3, 4 are the fundamental frequency at 5290 MHz.

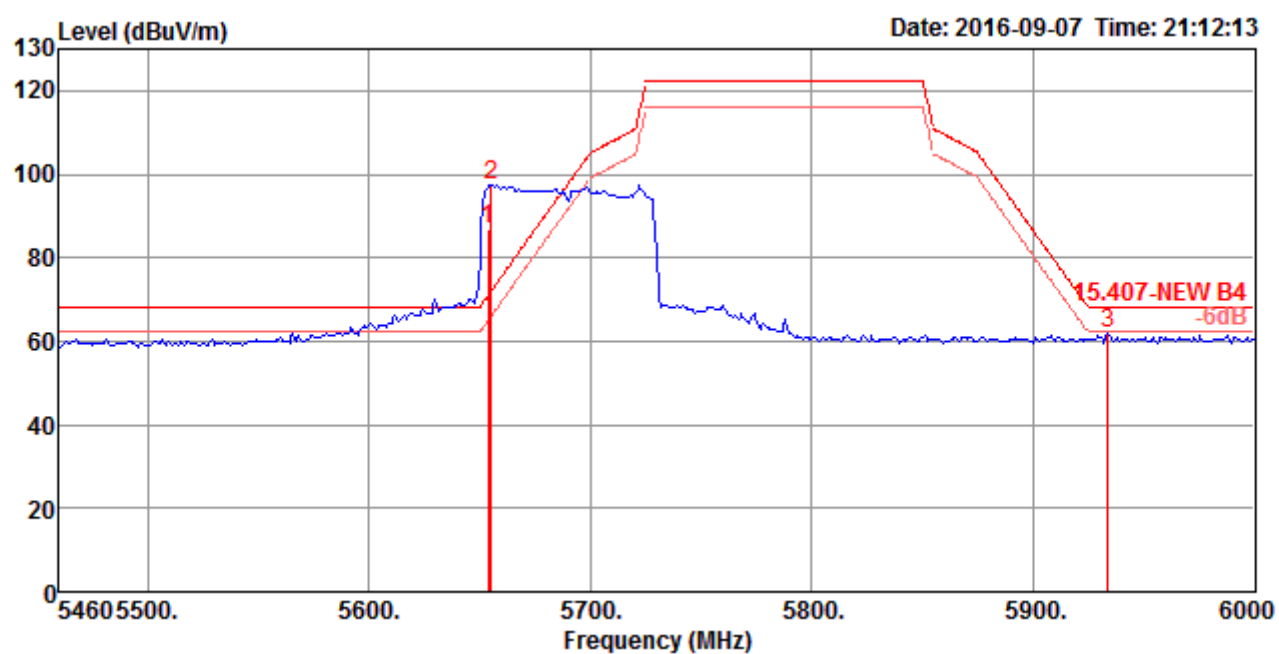
Channel 138 (UNII 2C)



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	5350.00	53.75	54.00	-0.25	44.84	8.26	31.68	31.03	286	66 Average	HORIZONTAL
2	5350.00	66.16	74.00	-7.84	57.25	8.26	31.68	31.03	286	66 Peak	HORIZONTAL
3	5455.80	58.75	74.00	-15.25	49.60	8.41	31.76	31.02	286	66 Peak	HORIZONTAL
4	5460.00	46.94	54.00	-7.06	37.79	8.41	31.76	31.02	286	66 Average	HORIZONTAL
5	5467.20	60.53	74.00	-13.47	51.34	8.43	31.78	31.02	286	66 Peak	HORIZONTAL
6	5470.00	47.22	54.00	-6.78	38.03	8.43	31.78	31.02	286	66 Average	HORIZONTAL
7 @	5660.60	86.95			77.43	8.61	32.00	31.09	286	66 Average	HORIZONTAL
8 @	5664.80	96.41			86.89	8.61	32.00	31.09	286	66 Peak	HORIZONTAL
9	5850.00	48.04	54.00	-5.96	38.41	8.57	32.22	31.16	286	66 Average	HORIZONTAL
10	5857.00	60.58	74.00	-13.42	50.90	8.60	32.24	31.16	286	66 Peak	HORIZONTAL

Item 7, 8 are the fundamental frequency at 5690 MHz.

Channel 138 (UNII 3)

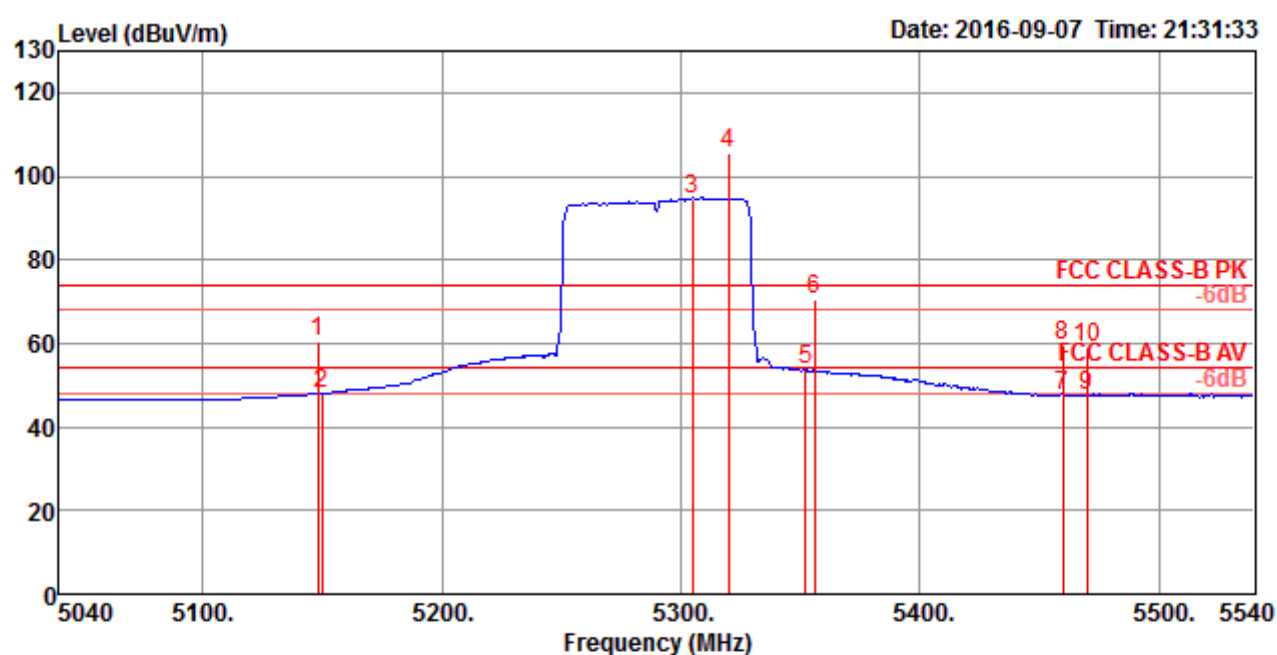


	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1 @	5653.60	86.90			77.40	8.61	31.98	31.09	286	66 Average	HORIZONTAL
2 @	5655.00	97.57			88.07	8.61	31.98	31.09	286	66 Peak	HORIZONTAL
3	5933.60	61.99	68.20	-6.21	52.14	8.72	32.32	31.19	286	66 Peak	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5690 MHz.

Configurations	IEEE 802.11ac MCS0/Nss1 VHT80+80 Type 7 / CH 58+155 / Chain 1 + Chain 3
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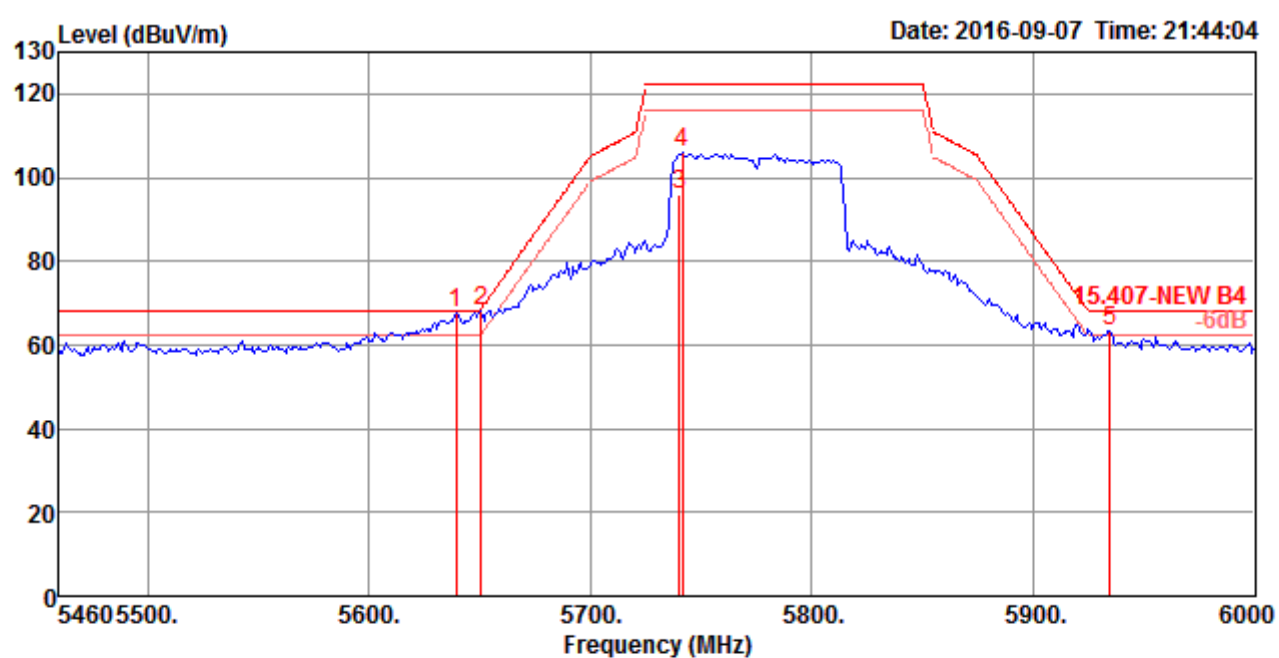
Channel 58



	Freq	Level	Limit Line	Over Limit	Read Level	CableLoss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5148.00	60.52	74.00	-13.48	52.00	8.05	31.52	31.05	245	305	Peak	HORIZONTAL
2	5150.00	48.09	54.00	-5.91	39.57	8.05	31.52	31.05	245	305	Average	HORIZONTAL
3 @	5305.00	94.74			85.95	8.19	31.64	31.04	245	305	Average	HORIZONTAL
4 @	5320.00	105.54			96.71	8.22	31.65	31.04	245	305	Peak	HORIZONTAL
5	5352.00	53.51	54.00	-0.49	44.60	8.26	31.68	31.03	245	305	Average	HORIZONTAL
6	5356.00	70.38	74.00	-3.62	61.46	8.26	31.69	31.03	245	305	Peak	HORIZONTAL
7	5460.00	47.68	54.00	-6.32	38.53	8.41	31.76	31.02	245	305	Average	HORIZONTAL
8	5460.00	59.30	74.00	-14.70	50.15	8.41	31.76	31.02	245	305	Peak	HORIZONTAL
9	5470.00	47.47	54.00	-6.53	38.28	8.43	31.78	31.02	245	305	Average	HORIZONTAL
10	5470.00	59.06	74.00	-14.94	49.87	8.43	31.78	31.02	245	305	Peak	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5290 MHz.

Channel 155

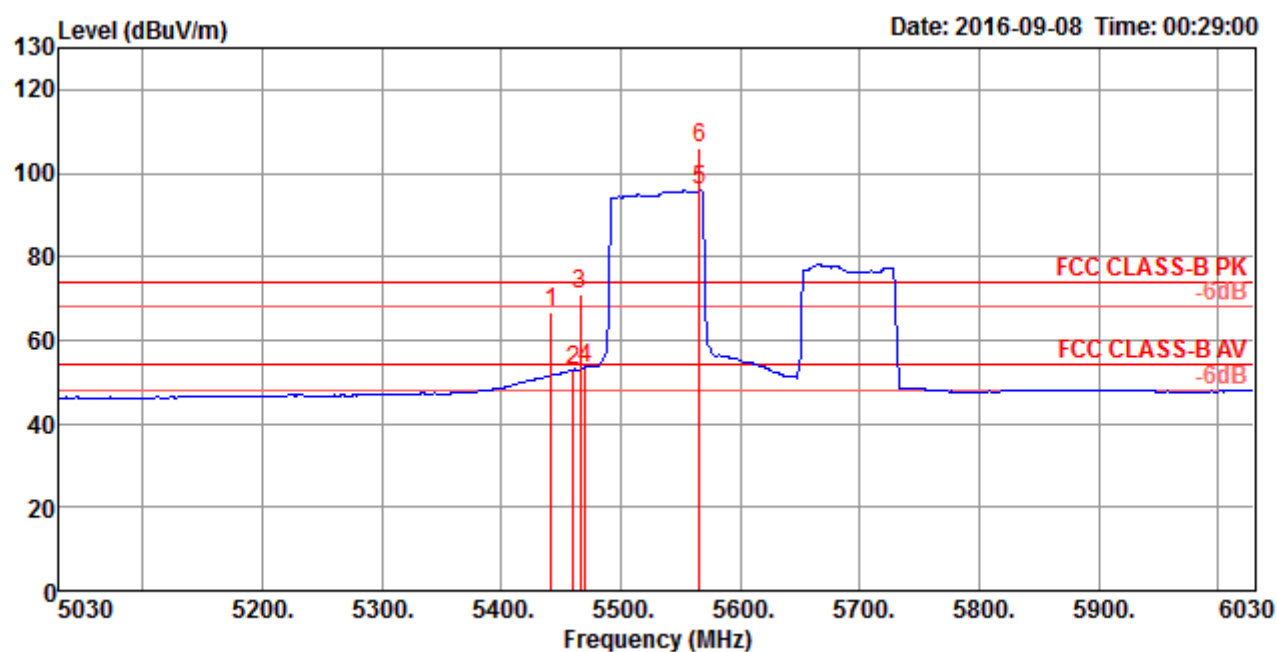


	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	5639.20	67.63	68.20	-0.57	58.13	8.62	31.96	31.08	283	92 Peak	VERTICAL
2	5650.40	68.32	68.50	-0.18	58.81	8.61	31.98	31.08	283	92 Peak	VERTICAL
3	5740.00	95.90			86.39	8.53	32.10	31.12	283	92 Average	VERTICAL
4	5741.40	105.78			96.27	8.53	32.10	31.12	283	92 Peak	VERTICAL
5	5934.60	63.43	68.20	-4.77	53.58	8.72	32.32	31.19	283	92 Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 5775 MHz.

Configurations	IEEE 802.11ac MCS0/Nss1 VHT80+80 Type 8 / CH 106+138 / Chain 1 + Chain 3
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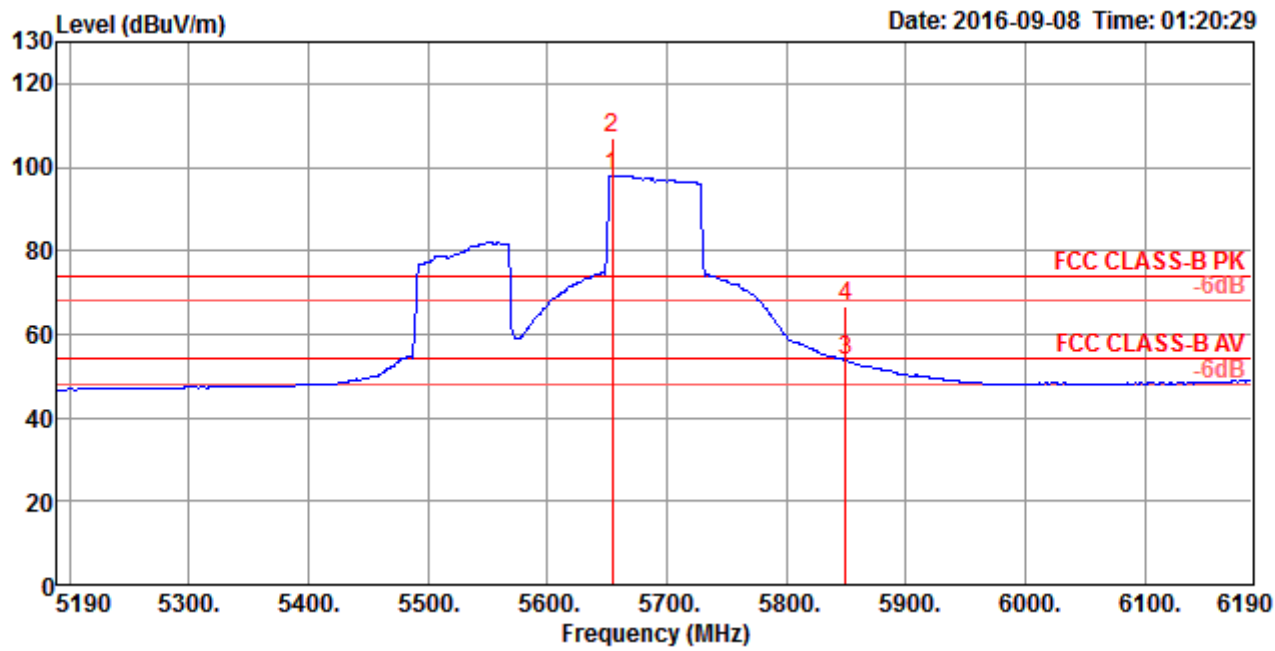
Channel 106



	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	5442.00	66.80	74.00	-7.20	57.70	8.38	31.75	31.03	296	319 Peak	HORIZONTAL
2	5460.00	52.65	54.00	-1.35	43.50	8.41	31.76	31.02	296	319 Average	HORIZONTAL
3	5466.00	71.09	74.00	-2.91	61.90	8.43	31.78	31.02	296	319 Peak	HORIZONTAL
4	5470.00	53.42	54.00	-0.58	44.23	8.43	31.78	31.02	296	319 Average	HORIZONTAL
5 @	5566.00	95.96			86.53	8.60	31.88	31.05	296	319 Average	HORIZONTAL
6 @	5566.00	105.96			96.53	8.60	31.88	31.05	296	319 Peak	HORIZONTAL

Item 5, 6 are the fundamental frequency at 5530 MHz.

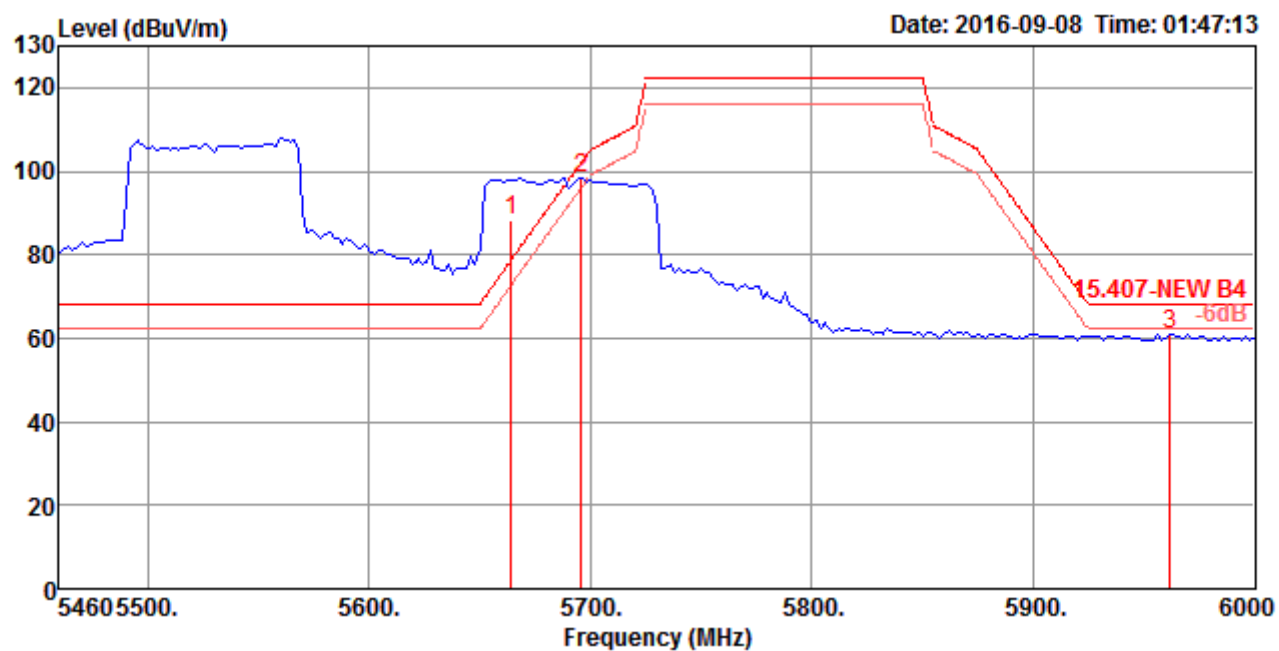
Channel 138 (UNII 2C)



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	cm	deg	
1 @	5654.00	98.03			88.53	8.61	31.98	31.09	271	106 Average	VERTICAL
2 @	5654.00	107.05			97.55	8.61	31.98	31.09	271	106 Peak	VERTICAL
3	5850.00	53.79	54.00	-0.21	44.16	8.57	32.22	31.16	271	106 Average	VERTICAL
4	5850.00	66.60	74.00	-7.40	56.97	8.57	32.22	31.16	271	106 Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 5690 MHz.

Channel 138 (UNII 3)

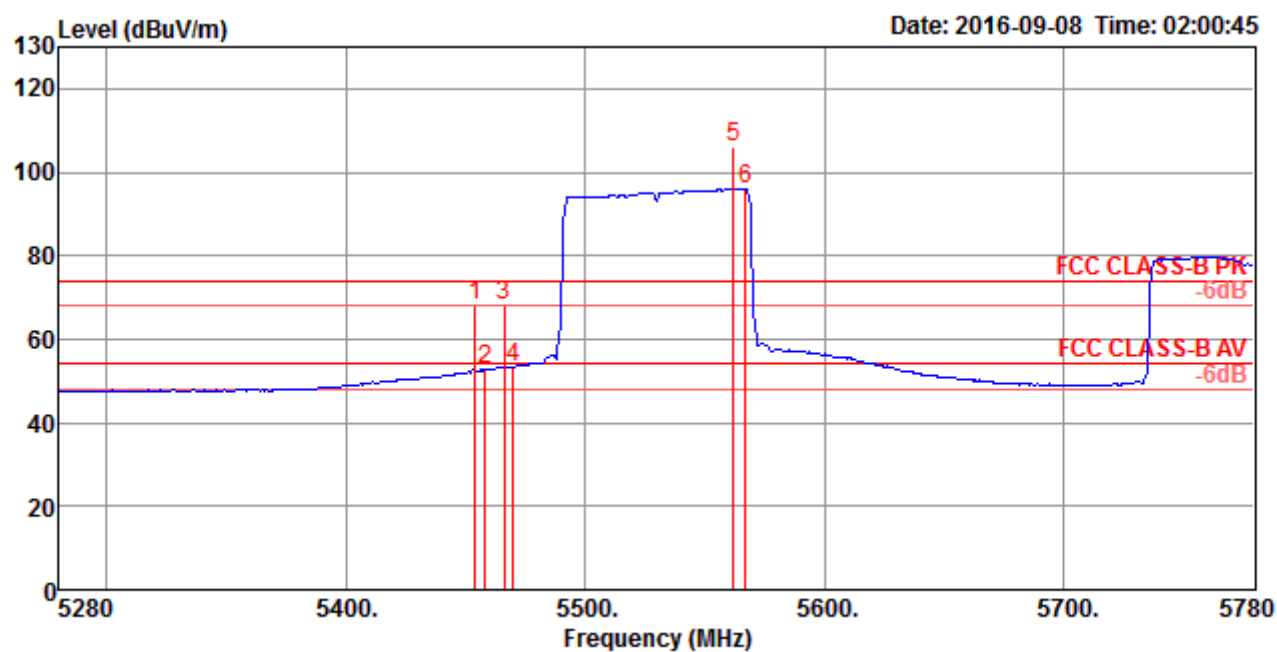


	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1 @	5664.00	88.39			78.87	8.61	32.00	31.09	305	180 Average	HORIZONTAL
2	5696.00	98.20			88.69	8.57	32.04	31.10	305	180 Peak	HORIZONTAL
3	5962.00	60.98	68.20	-7.22	51.05	8.78	32.36	31.21	305	180 Peak	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5690 MHz.

Configurations	IEEE 802.11ac MCS0/Nss1 VHT80+80 Type 9 / CH 106+155 / Chain 1 + Chain 3
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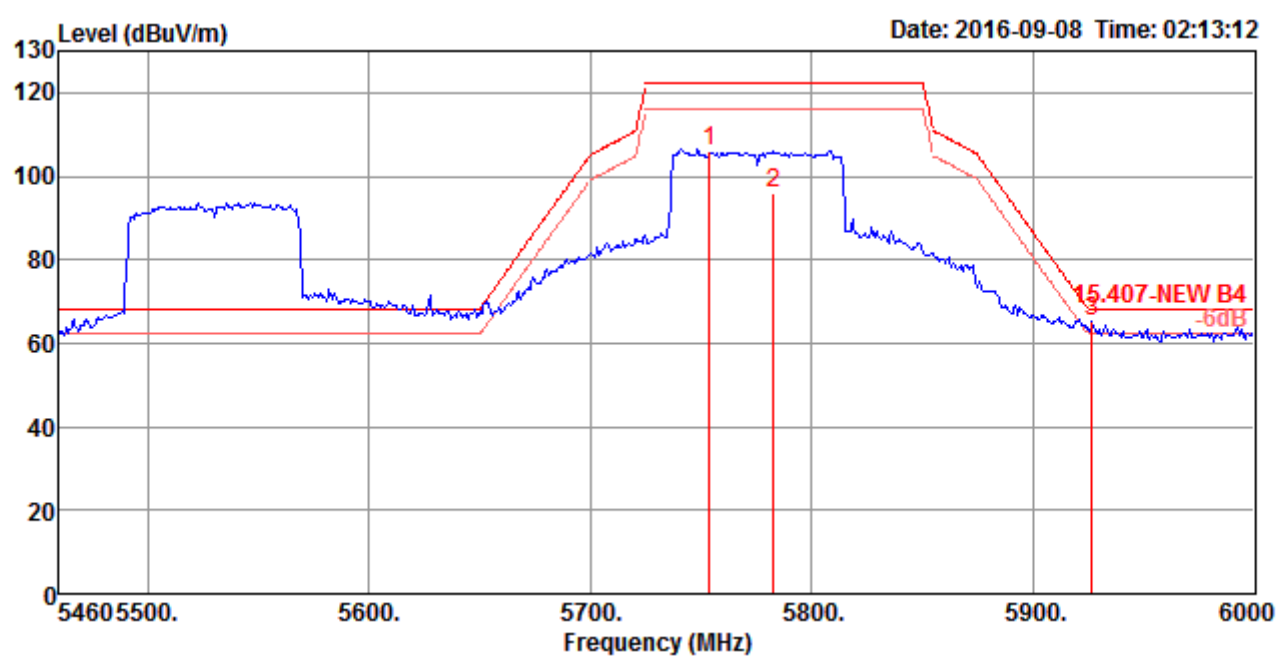
Channel 106



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	cm	deg	
1	5454.00	68.20	74.00	-5.80	59.05	8.41	31.76	31.02	272	193	Peak
2	5458.00	52.75	54.00	-1.25	43.60	8.41	31.76	31.02	272	193	Average
3	5466.00	68.20	74.00	-5.80	59.01	8.43	31.78	31.02	272	193	Peak
4	5470.00	53.45	54.00	-0.55	44.26	8.43	31.78	31.02	272	193	Average
5 @	5562.00	106.25			96.85	8.57	31.88	31.05	272	193	Peak
6 @	5567.00	96.14			86.71	8.60	31.88	31.05	272	193	Average

Item 5, 6 are the fundamental frequency at 5530 MHz.

Channel 155

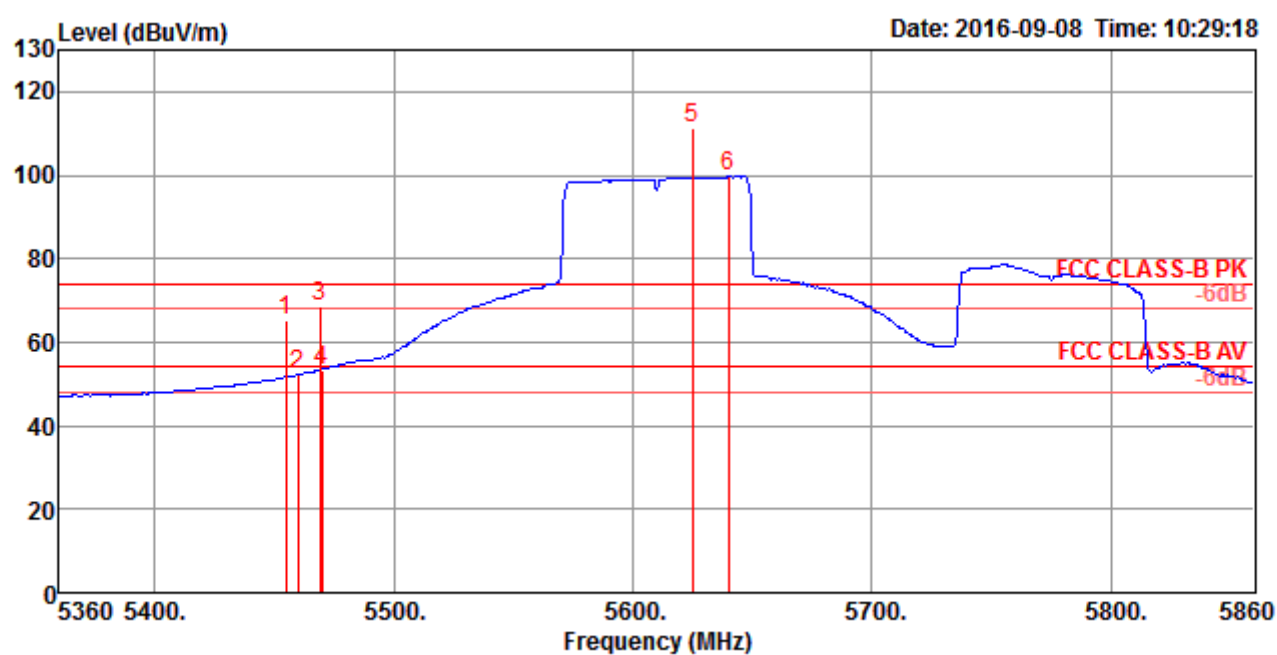


	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	5753.76	105.88			96.39	8.51	32.10	31.12	320	39 Peak	VERTICAL
2	5782.92	95.93			86.42	8.50	32.14	31.13	320	39 Average	VERTICAL
3	5926.56	65.00	68.20	-3.20	55.15	8.72	32.32	31.19	320	39 Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 5775 MHz.

Configurations	IEEE 802.11ac MCS0/Nss1 VHT80+80 Type 10 / CH 122+155 / Chain 1 + Chain 3
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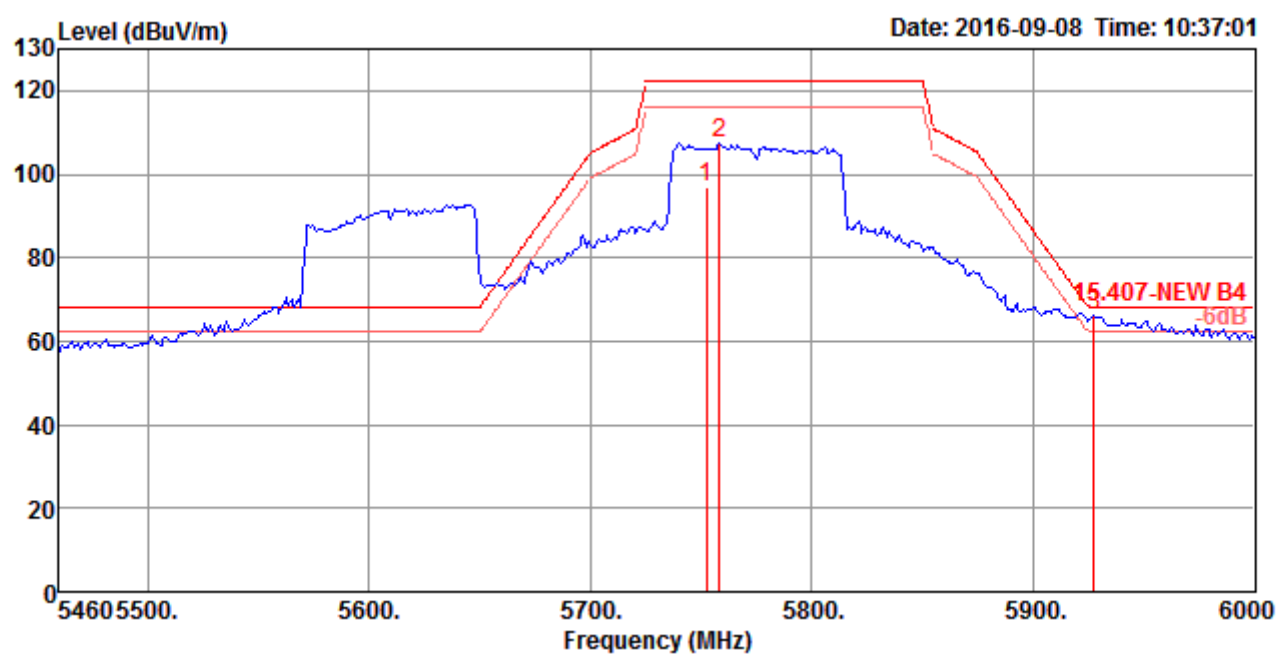
Channel 122



	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	5455.00	65.39	74.00	-8.61	56.24	8.41	31.76	31.02	291	314 Peak	HORIZONTAL
2	5460.00	52.08	54.00	-1.92	42.93	8.41	31.76	31.02	291	314 Average	HORIZONTAL
3	5469.00	68.44	74.00	-5.56	59.25	8.43	31.78	31.02	291	314 Peak	HORIZONTAL
4	5470.00	53.48	54.00	-0.52	44.29	8.43	31.78	31.02	291	314 Average	HORIZONTAL
5 @	5625.00	111.28			101.75	8.64	31.96	31.07	291	314 Peak	HORIZONTAL
6 @	5640.00	99.65			90.15	8.62	31.96	31.08	291	314 Average	HORIZONTAL

Item 5, 6 are the fundamental frequency at 5610 MHz.

Channel 155

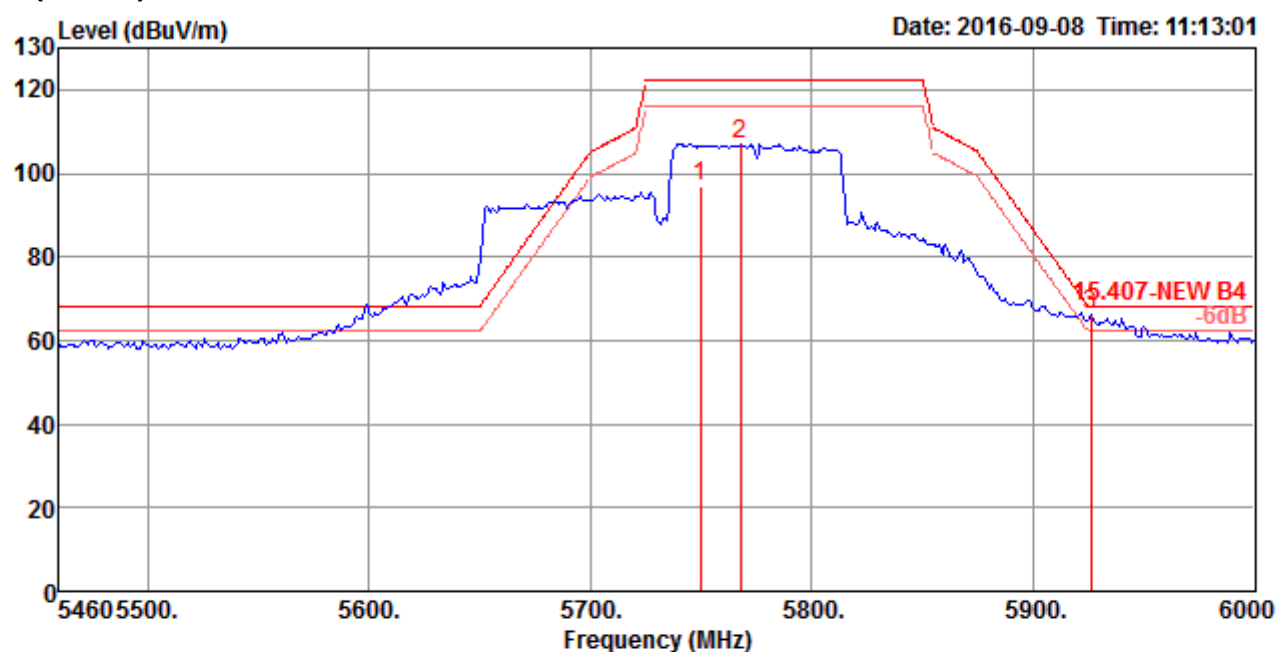


	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	5752.60	97.07			87.58	8.51	32.10	31.12	252	61 Average	VERTICAL
2	5758.20	107.47			97.96	8.51	32.12	31.12	252	61 Peak	VERTICAL
3	5927.60	65.98	68.20	-2.22	56.13	8.72	32.32	31.19	252	61 Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 5775 MHz.

Configurations	IEEE 802.11ac MCS0/Nss1 VHT80+80 Type 11 / CH 138+155 / Chain 1 + Chain 3
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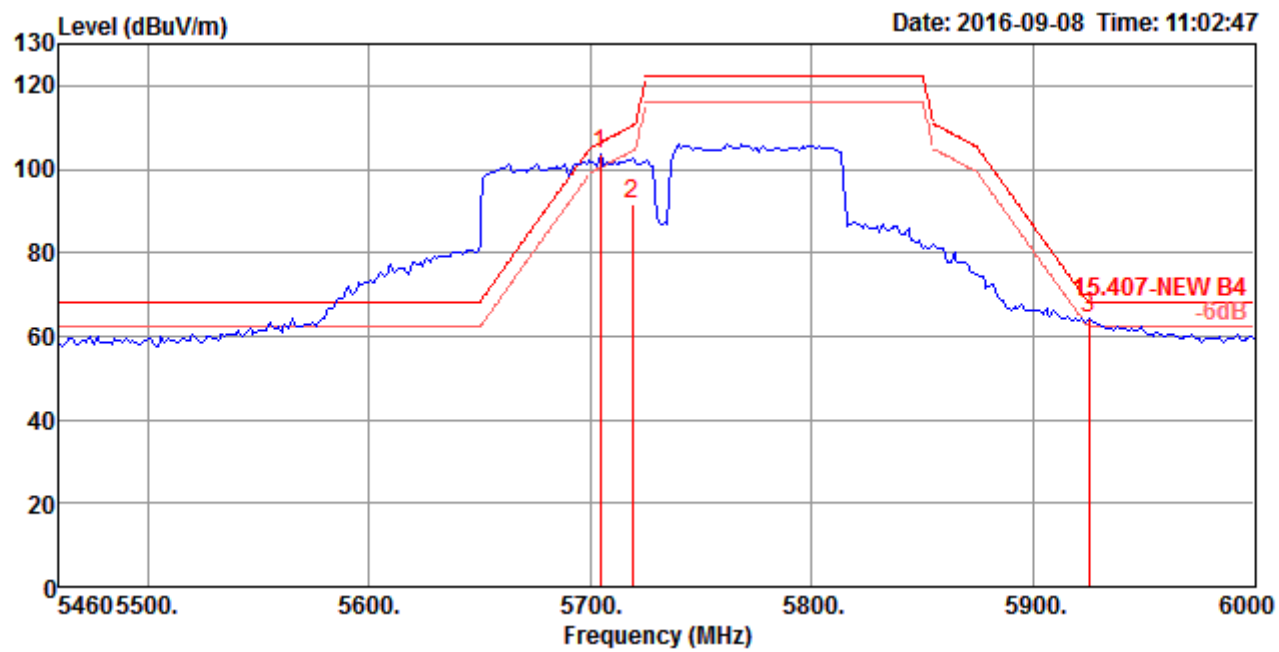
Channel 138 (UNII 2C)



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	5749.80	97.06			87.55	8.53	32.10	31.12	266	59 Peak	VERTICAL
2	5768.00	106.94			97.44	8.51	32.12	31.13	266	59 Peak	VERTICAL
3	5926.20	66.07	68.20	-2.13	56.22	8.72	32.32	31.19	266	59 Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 5690 MHz.

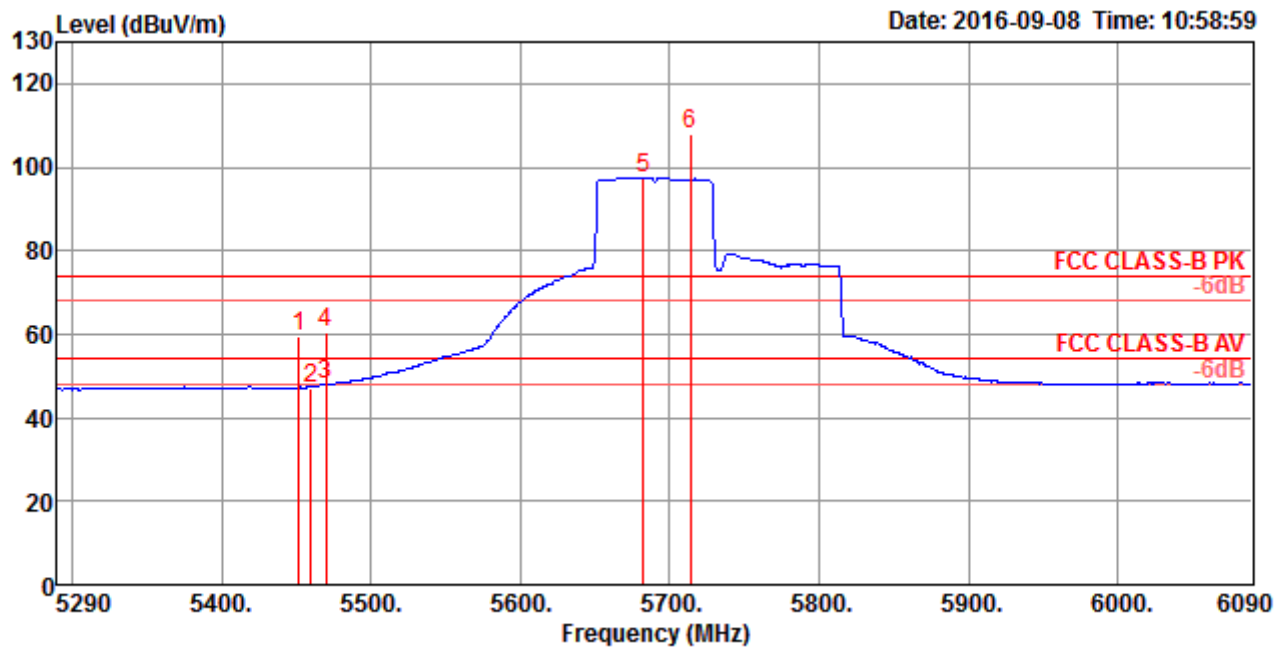
Channel 138 (UNII 3)



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5704.40	103.84			94.34	8.56	32.04	31.10	294	21	Peak	VERTICAL
2	5718.80	91.77			82.28	8.54	32.06	31.11	294	21	Peak	VERTICAL
3	5925.20	64.19	68.20	-4.01	54.34	8.72	32.32	31.19	294	21	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 5690 MHz.

Channel 155

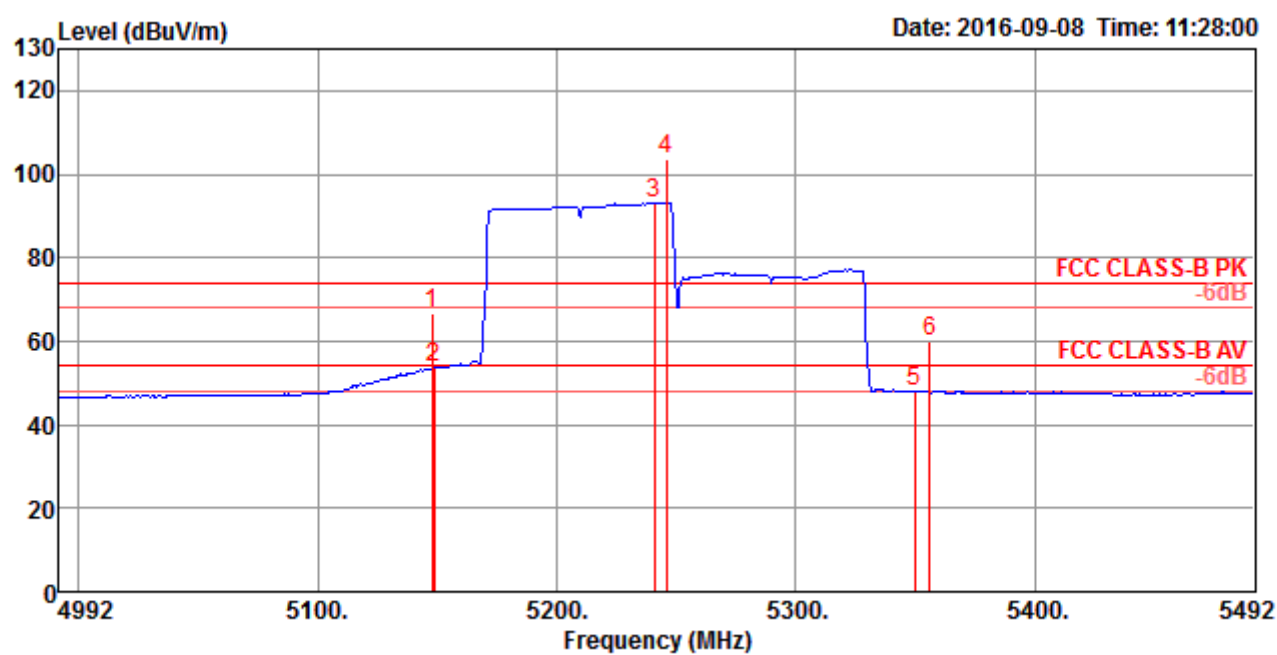


	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	5452.00	59.49	74.00	-14.51	50.34	8.41	31.76	31.02	230	300	Peak
2	5460.00	47.20	54.00	-6.80	38.05	8.41	31.76	31.02	230	300	Average
3	5470.00	47.90	54.00	-6.10	38.71	8.43	31.78	31.02	230	300	Average
4	5470.00	60.61	74.00	-13.39	51.42	8.43	31.78	31.02	230	300	Peak
5 @	5682.00	97.58			88.06	8.59	32.02	31.09	230	300	Average
6 @	5714.00	107.87			98.36	8.56	32.06	31.11	230	300	Peak

Item 5, 6 are the fundamental frequency at 5775 MHz.

Configurations	IEEE 802.11ac MCS0/Nss1 VHT80+80 Type 12 / CH 42+58 / Chain 1 + Chain 3
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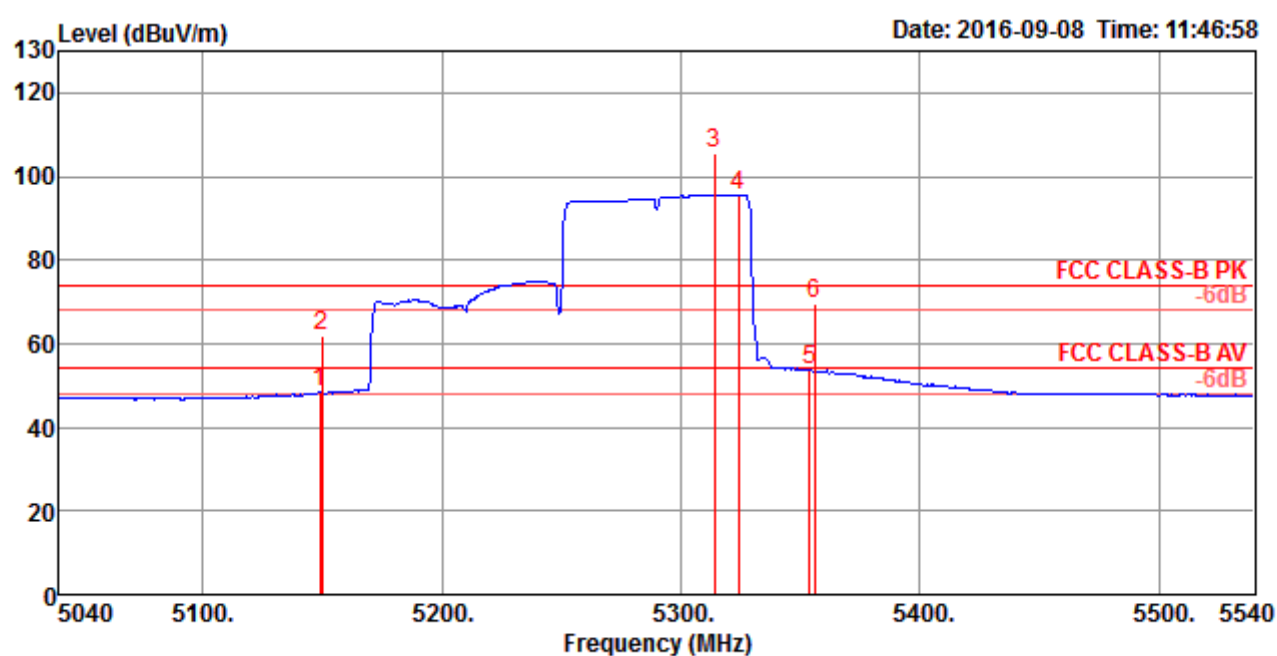
Channel 42



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	5148.00	66.67	74.00	-7.33	58.15	8.05	31.52	31.05	233	281 Peak	HORIZONTAL
2	5149.00	53.65	54.00	-0.35	45.13	8.05	31.52	31.05	233	281 Average	HORIZONTAL
3 @	5241.00	93.21			84.56	8.11	31.59	31.05	233	281 Average	HORIZONTAL
4 @	5246.00	103.79			95.11	8.13	31.59	31.04	233	281 Peak	HORIZONTAL
5	5350.00	47.79	54.00	-6.21	38.88	8.26	31.68	31.03	233	281 Average	HORIZONTAL
6	5356.00	60.11	74.00	-13.89	51.19	8.26	31.69	31.03	233	281 Peak	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5210 MHz.

Channel 58



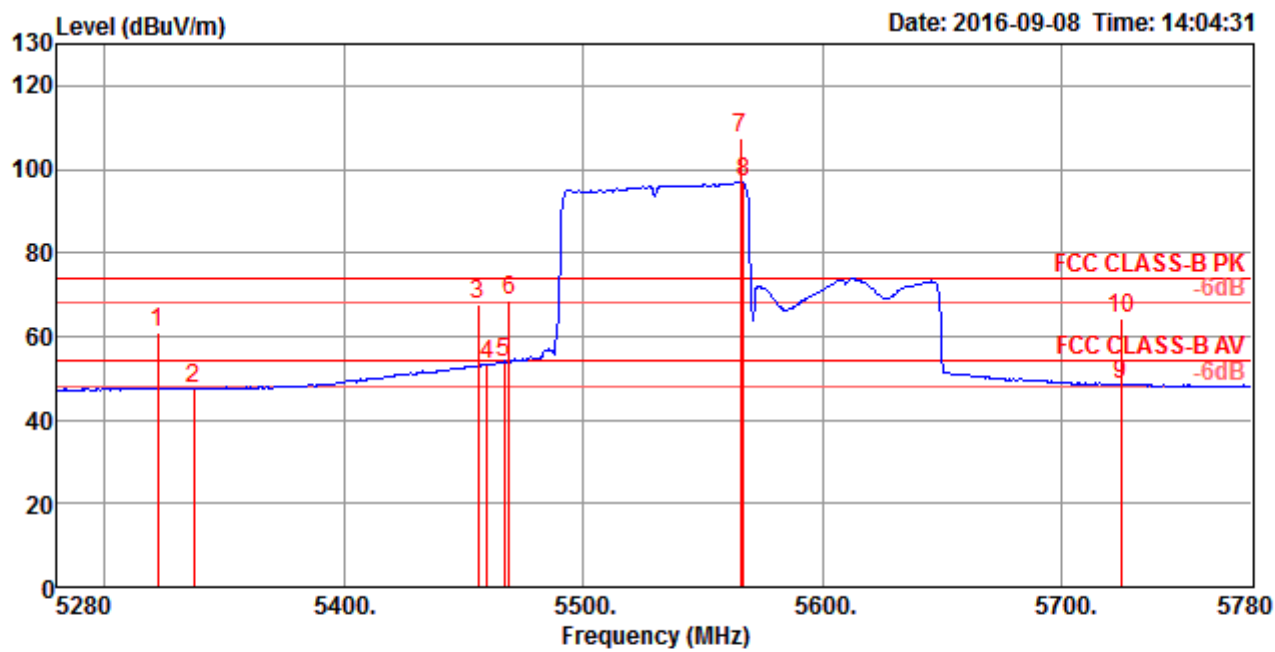
	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	5149.00	48.36	54.00	-5.64	39.84	8.05	31.52	31.05	271	99 Average	VERTICAL
2	5150.00	61.81	74.00	-12.19	53.29	8.05	31.52	31.05	271	99 Peak	VERTICAL
3 @	5314.00	105.74			96.91	8.22	31.65	31.04	271	99 Peak	VERTICAL
4 @	5324.00	95.56			86.71	8.22	31.67	31.04	271	99 Average	VERTICAL
5	5354.00	53.74	54.00	-0.26	44.83	8.26	31.68	31.03	271	99 Average	VERTICAL
6	5356.00	69.79	74.00	-4.21	60.87	8.26	31.69	31.03	271	99 Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 5290 MHz.

Configurations

IEEE 802.11ac MCS0/Nss1 VHT80+80 Type 13 / CH 106+122 / Chain 1 + Chain 3

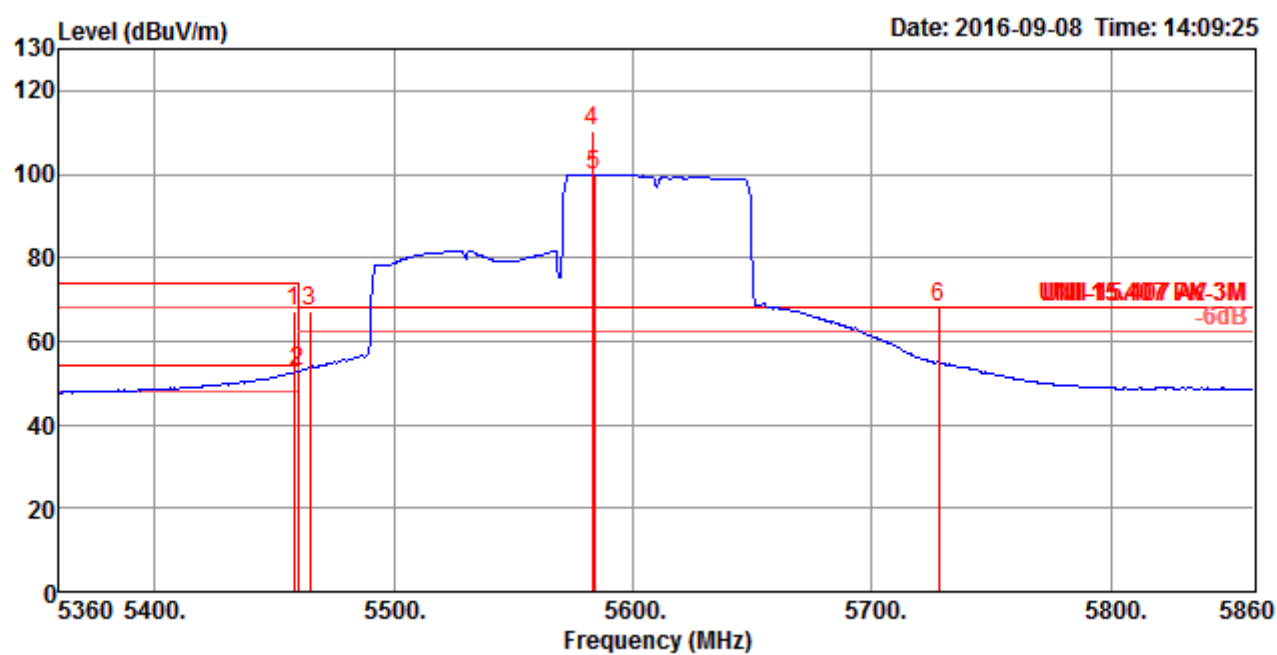
Channel 106



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	5322.00	60.93	74.00	-13.07	52.10	8.22	31.65	31.04	292	315	Peak
2	5337.00	47.65	54.00	-6.35	38.78	8.24	31.67	31.04	292	315	Average
3	5456.00	67.57	74.00	-6.43	58.42	8.41	31.76	31.02	292	315	Peak
4	5460.00	53.45	54.00	-0.55	44.30	8.41	31.76	31.02	292	315	Average
5	5467.00	53.87	54.00	-0.13	44.68	8.43	31.78	31.02	292	315	Average
6	5469.00	68.43	74.00	-5.57	59.24	8.43	31.78	31.02	292	315	Peak
7 @	5566.00	107.37			97.94	8.60	31.88	31.05	292	315	Peak
8 @	5567.00	96.84			87.41	8.60	31.88	31.05	292	315	Average
9	5725.00	48.36	54.00	-5.64	38.85	8.54	32.08	31.11	292	315	Average
10	5725.00	64.36	74.00	-9.64	54.85	8.54	32.08	31.11	292	315	Peak

Item 7, 8 are the fundamental frequency at 5530 MHz.

Channel 122



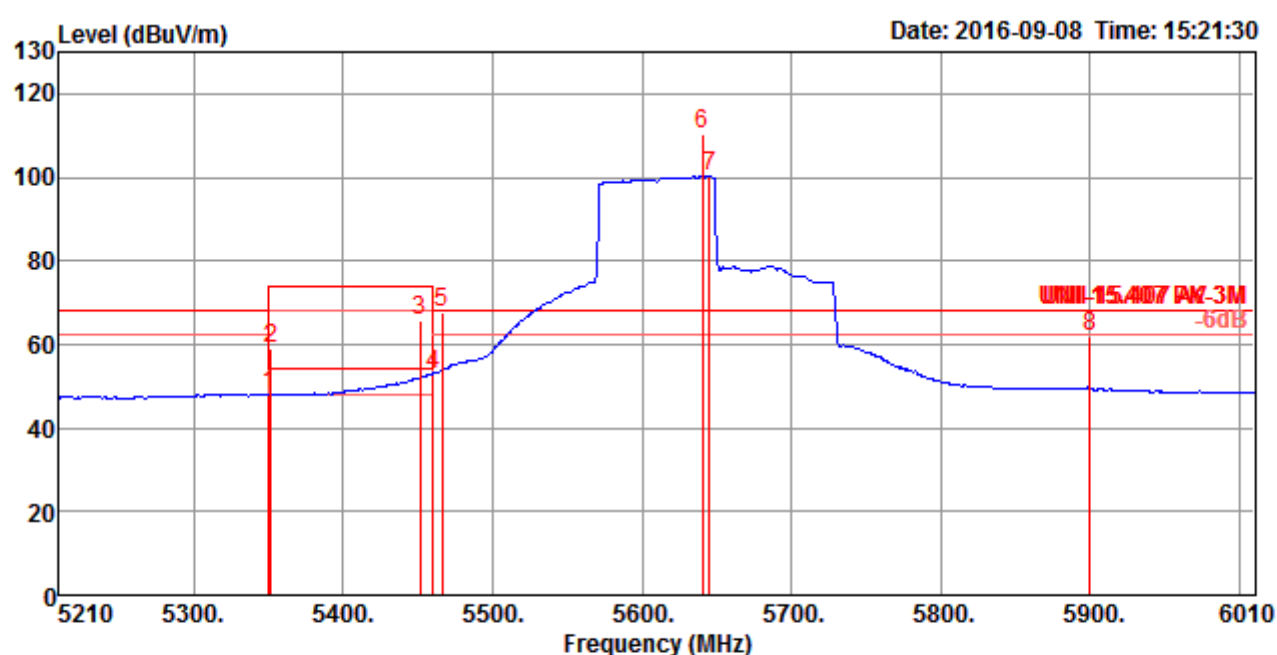
	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	5458.00	67.12	74.00	-6.88	57.97	8.41	31.76	31.02	262	104 Peak	VERTICAL
2	5460.00	53.00	54.00	-1.00	43.85	8.41	31.76	31.02	262	104 Average	VERTICAL
3	5465.00	67.01	68.20	-1.19	57.82	8.43	31.78	31.02	262	104 Peak	VERTICAL
4 @	5583.00	110.30			100.84	8.62	31.90	31.06	262	104 Peak	VERTICAL
5 @	5584.00	99.86			90.40	8.62	31.90	31.06	262	104 Average	VERTICAL
6	5728.00	68.02	68.20	-0.18	58.52	8.54	32.08	31.12	262	104 Peak	VERTICAL

Item 4, 5 are the fundamental frequency at 5610 MHz.

Configurations

IEEE 802.11ac MCS0/Nss1 VHT80+80 Type 14 / CH 122+138 / Chain 1 + Chain 3

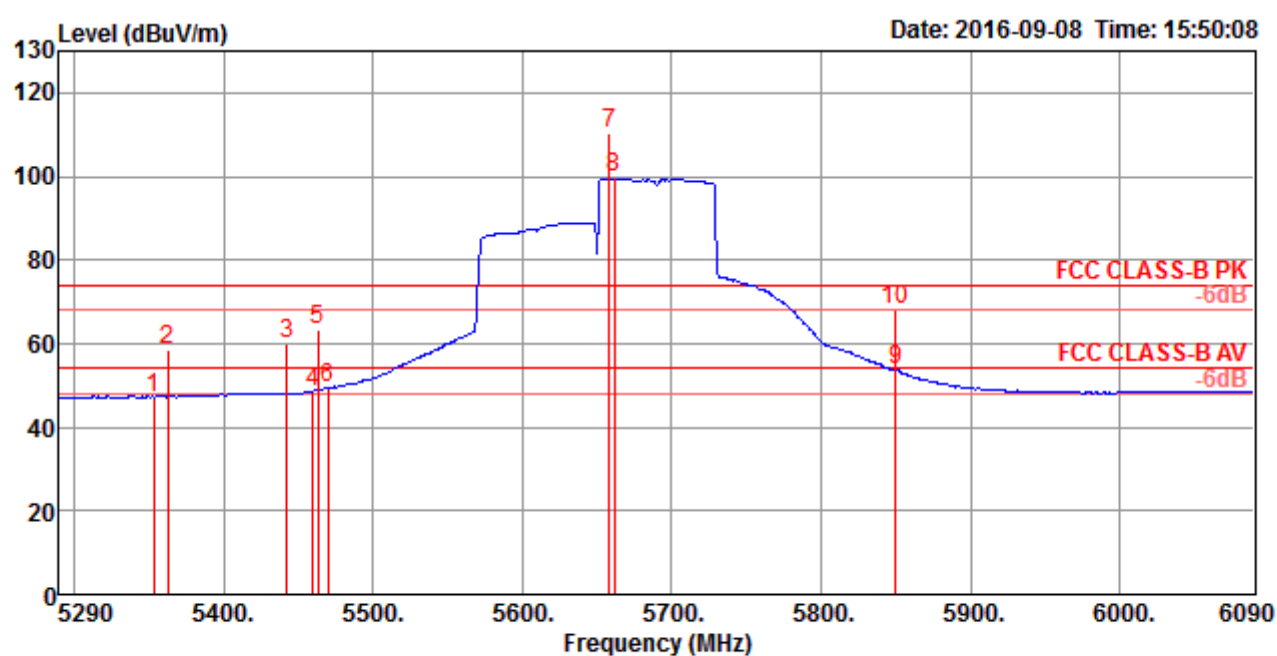
Channel 122



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	5350.00	47.81	54.00	-6.19	38.90	8.26	31.68	31.03	290	313 Average	HORIZONTAL
2	5351.60	59.23	74.00	-14.77	50.32	8.26	31.68	31.03	290	313 Peak	HORIZONTAL
3	5451.60	65.59	74.00	-8.41	56.45	8.41	31.76	31.03	290	313 Peak	HORIZONTAL
4	5460.00	52.84	54.00	-1.16	43.69	8.41	31.76	31.02	290	313 Average	HORIZONTAL
5	5466.00	67.43	68.20	-0.77	58.24	8.43	31.78	31.02	290	313 Peak	HORIZONTAL
6 @	5640.40	110.46			100.94	8.62	31.98	31.08	290	313 Peak	HORIZONTAL
7 @	5645.20	100.21			90.69	8.62	31.98	31.08	290	313 Average	HORIZONTAL
8	5899.60	62.11	68.20	-6.09	52.35	8.66	32.28	31.18	290	313 Peak	HORIZONTAL

Item 6, 7 are the fundamental frequency at 5610 MHz.

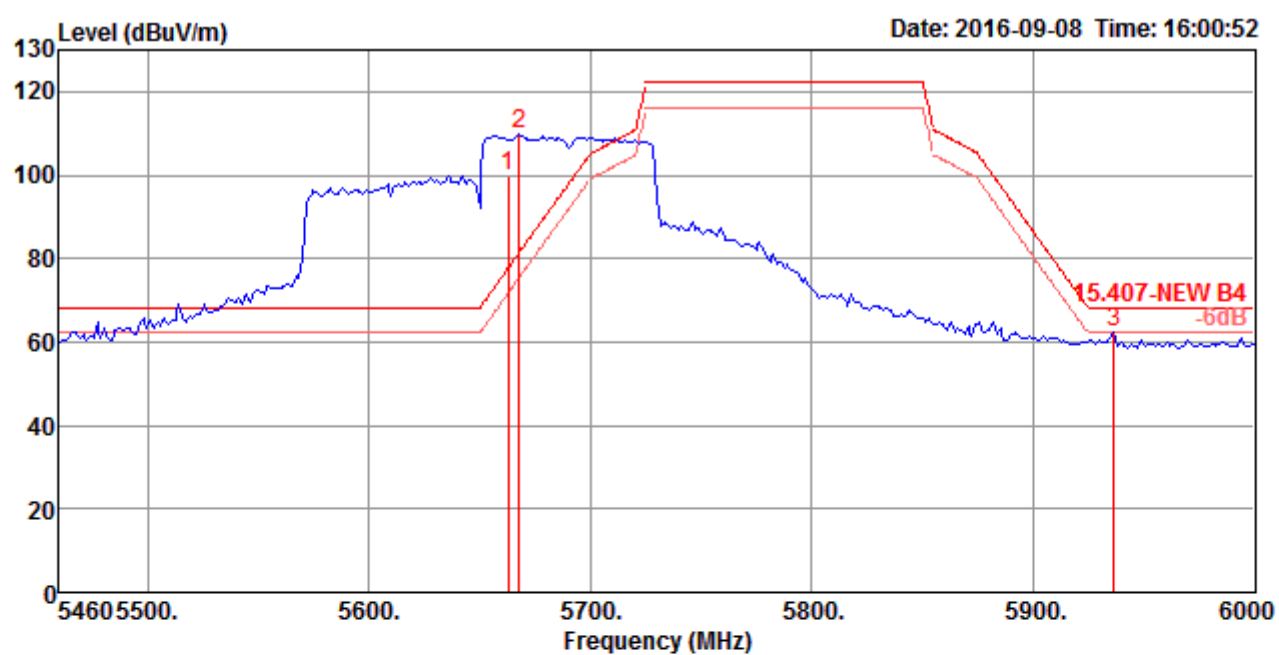
Channel 138 (UNII 2C)



	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	5353.20	47.09	54.00	-6.91	38.18	8.26	31.68	31.03	269	36 Average	VERTICAL
2	5362.80	58.65	74.00	-15.35	49.71	8.28	31.69	31.03	269	36 Peak	VERTICAL
3	5442.40	59.94	74.00	-14.06	50.84	8.38	31.75	31.03	269	36 Peak	VERTICAL
4	5460.00	48.63	54.00	-5.37	39.48	8.41	31.76	31.02	269	36 Average	VERTICAL
5	5462.80	63.22	74.00	-10.78	54.05	8.43	31.76	31.02	269	36 Peak	VERTICAL
6	5470.00	49.23	54.00	-4.77	40.04	8.43	31.78	31.02	269	36 Average	VERTICAL
7 @	5658.00	110.44			100.92	8.61	32.00	31.09	269	36 Peak	VERTICAL
8 @	5661.20	99.97			90.45	8.61	32.00	31.09	269	36 Average	VERTICAL
9	5850.00	53.62	54.00	-0.38	43.99	8.57	32.22	31.16	269	36 Average	VERTICAL
10	5850.00	68.00	74.00	-6.00	58.37	8.57	32.22	31.16	269	36 Peak	VERTICAL

Item 7, 8 are the fundamental frequency at 5690 MHz.

Channel 138 (UNII 3)



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1 @	5662.80	99.79			90.27	8.61	32.00	31.09	269	36	Average	VERTICAL
2 @	5667.60	109.67			100.17	8.59	32.00	31.09	269	36	Peak	VERTICAL
3	5936.40	62.31	68.20	-5.89	52.46	8.72	32.32	31.19	269	36	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 5690 MHz.