

FCC Test Report

Equipment : UniCAP
Brand Name : CAPWAVE TECHNOLOGIES
Model No. : UC-12-EXP
FCC ID : 2AFGY-UC12EXP
Standard : 47 CFR FCC Part 15.407
Operating Band : 5150 MHz – 5250 MHz
5725 MHz – 5850 MHz
Applicant : Capwave Technologies Inc.
1501 Ocean Ave, Unit 2601, Asbury Park, NJ 07712, USA
Manufacturer : SmartAnt Telecom Co., Ltd
3F, No.58, Park Avenue II, Science-based Industrial Park,
Hsinchu 30075, Taiwan, R.O.C.
Function : ☒ Outdoor; ☐ Indoor; ☒ Fixed P2P
☐ Client

The product sample received on Feb. 23, 2016 and completely tested on Jul. 26, 2017. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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


Cliff Chang
SPORTON INTERNATIONAL INC.





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Summary of Test Result

Conformance Test Specifications			
Report Clause	Ref. Std. Clause	Description	Result
1.1.2	15.203	Antenna Requirement	Complied
3.1	15.207	AC Power-line Conducted Emissions	Complied
3.2	15.407(a)	Emission Bandwidth	Complied
3.3	15.407(a)	Maximum Conducted Output Power	Complied
3.4	15.407(a)	Peak Power Spectral Density	Complied
3.5	15.407(b)	Unwanted Emissions	Complied
3.6	15.407(g)	Frequency Stability	Complied



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FCC ID: 2AFGY-UC12EXP

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]
5725-5850		5745-5825	149-165 [5]
5150-5250	n (HT40), ac (VHT40)	5190-5230	38-46 [2]
5725-5850		5755-5795	151-159 [2]
5150-5250	ac (VHT80)	5210	42 [1]
5725-5850		5775	155 [1]

Band	Mode	BWch (MHz)	Nant
5.15-5.25GHz	802.11a	20	2TX
5.15-5.25GHz	802.11n HT20	20	2TX
5.15-5.25GHz	802.11ac VHT20	20	2TX
5.15-5.25GHz	802.11n HT40	40	2TX
5.15-5.25GHz	802.11ac VHT40	40	2TX
5.15-5.25GHz	802.11ac VHT80	80	2TX
5.725-5.85GHz	802.11a	20	2TX
5.725-5.85GHz	802.11n HT20	20	2TX
5.725-5.85GHz	802.11ac VHT20	20	2TX
5.725-5.85GHz	802.11n HT40	40	2TX
5.725-5.85GHz	802.11ac VHT40	40	2TX
5.725-5.85GHz	802.11ac VHT80	80	2TX

Note:

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

1.1.2 Antenna Information

Ant.	Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	
						2.4GHz	5GHz
1	1	SmartAnt	CAP15-220290	Dual Polarization Directional Antenna	MMCX R/A plug	11	12.5
2	2	SmartAnt	CAP15-220290	Dual Polarization Directional Antenna	MMCX R/A plug	11	12.5

Note: The EUT has two antennas.

<For 2.4GHz Function>

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

Port 1 and Port 2 could transmit/receive simultaneously.

<For 5GHz Function>

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

Port 1 and Port 2 could transmit/receive simultaneously.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11a	0.942	0.259	1.348m	1k
802.11ac VHT20	0.948	0.232	1.273m	1k
802.11ac VHT40	0.88	0.555	635u	3k
802.11ac VHT80	0.775	1.107	320u	10k

1.1.4 EUT Operational Condition

EUT Power Type	From PoE			
Beamforming Function	☐	With beamforming	☒	Without beamforming

1.1.5 Table for radio type

Radio type	Support function
Radio 1	2.4GHz and 5GHz
Radio 2	2.4GHz and 5GHz

Note: Radio 1 and Radio 2 are the same module , so 2.4GHz test for Radio 2 and 5GHz test for Radio 1.

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 v01r04
- ♦ 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	Gino Huang	23°C / 54%	Mar. 29, 2017~ Jul. 26, 2017
Radiated	03CH01-CB	Justin Lin / Joy Tseng	22°C / 54%	Mar. 22, 2017~ Apr. 26, 2017
AC Conduction	CO01-CB	Rick Yeh	23°C / 57%	Jun. 28, 2017

Test site Designation No. TW0006 with FCC

Test site registered number IC 4086D with Industry Canada.

1.4 Measurement Uncertainty

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

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.2 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.7 dB	Confidence levels of 95%
Output Power Measurement	1.33 dB	Confidence levels of 95%
Power Density Measurement	1.27 dB	Confidence levels of 95%
Bandwidth Measurement	9.74 x10 ⁻⁸	Confidence levels of 95%
Frequency Stability	6.06 x10 ⁻⁸	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

<Point to Point>

Mode	Power Setting
802.11a_(6Mbps)_2TX	-
5180MHz	18
5200MHz	23
5240MHz	25
5745MHz	27
5785MHz	24
5825MHz	24
802.11ac VHT20_Nss1,(MCS0)_2TX	-
5180MHz	19.5
5200MHz	24
5240MHz	25.5
5745MHz	24
5785MHz	23
5825MHz	23
802.11ac VHT40_Nss1,(MCS0)_2TX	-
5190MHz	15.5
5230MHz	21
5755MHz	25.5
5795MHz	25.5
802.11ac VHT80_Nss1,(MCS0)_2TX	-
5210MHz	9
5775MHz	24.5

**<Point to Multi-point >**

Mode	Power Setting
802.11a_(6Mbps)_2TX	-
5180MHz	8
5200MHz	8
5240MHz	8
5745MHz	21
5785MHz	20.5
5825MHz	20.5
802.11ac VHT20_Nss1,(MCS0)_2TX	-
5180MHz	8
5200MHz	8
5240MHz	8
5745MHz	21
5785MHz	20.5
5825MHz	20.5
802.11ac VHT40_Nss1,(MCS0)_2TX	-
5190MHz	8.5
5230MHz	8.5
5755MHz	21.5
5795MHz	21
802.11ac VHT80_Nss1,(MCS0)_2TX	-
5210MHz	9
5775MHz	21

Note:

- ♦ VHT20/VHT40 covers HT20/HT40, due to same modulation. The power setting for 802.11n HT20 and HT40 are the same or lower than 802.11ac VHT20 and VHT40.

2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral
Operating Mode	Normal Link
1	EUT - Bridge mode (Radio 1: 5GHz + Radio 2: 5GHz)
2	EUT - Bridge mode (Radio 1: 2.4GHz + Radio 2: 2.4GHz)
3	EUT - AP mode (Radio 1: 2.4GHz + Radio 2: 2.4GHz)
4	EUT - Station mode (Radio 1: 2.4GHz + Radio 2: 2.4GHz)
5	EUT - AP mode (Radio 1: 5GHz + Radio 2: 5GHz)
6	EUT - Station mode (Radio 1: 5GHz + Radio 2: 5GHz)
Mode 2 generated the worst test result, so it was recorded in this report.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emission Bandwidth Maximum Conducted Output Power Peak Power Spectral Density Frequency Stability Unwanted Emissions
Operating Mode	CTX - Radio 1
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	Normal Link
1	EUT - Bridge mode (Radio 1: 5GHz + Radio 2: 5GHz)
2	EUT - Bridge mode (Radio 1: 2.4GHz + Radio 2: 2.4GHz)
3	EUT - AP mode (Radio 1: 2.4GHz + Radio 2: 2.4GHz)
4	EUT - Station mode (Radio 1: 2.4GHz + Radio 2: 2.4GHz)
5	EUT - AP mode (Radio 1: 5GHz + Radio 2: 5GHz)
6	EUT - Station mode (Radio 1: 5GHz + Radio 2: 5GHz)
For operating mode 1 is the worst case and it was record in this test report.	
Operating Mode	CTX - Radio 1
Operating Mode > 1GHz	CTX

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	2.4GHz(Radio 1) + 5GHz(Radio 1) + 2.4GHz(Radio 2) + 5GHz(Radio 2)
Refer to Sporton Test Report No.: FA622328 for Co-location RF Exposure Evaluation.	

Note 1: The EUT can only use Y axis position.

Note 2: The Conducted measurement will perform point-to-point and Point to Multi-point operation.

Note 3: The PoE was for measurement only, would not be marketed.

The PoE information as below:

Support Unit	Brand	Model Number
PoE	MOTOROLA	AP-PSBIAS-2P3-ATR
PoE	CISCO	MA-INJ-4

2.3 EUT Operation during Test

For CTX Mode:

The EUT was programmed to be in continuously transmitting mode.

For Normal Link:

During the test, the EUT operation to normal function.



2.4 Accessories

N/A

2.5 Support Equipment

For Test Site No: CO01-CB

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB*4	DELL	E6430	DoC
2	Device	UniCAP	UC-12-EXP	2AFGY-UC12EXP
3	PoE*2	MOTOROLA	AP-PSBIAS-2P3-ATR	DoC
4	PoE*2	CISCO	MA-INJ-4	DoC

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

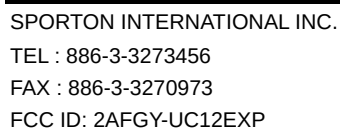
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB*4	DELL	E4300	DoC
2	Device	UniCAP	UC-12-EXP	2AFGY-UC12EXP
3	PoE*2	MOTOROLA	AP-PSBIAS-2P3-ATR	DoC
4	PoE*2	CISCO	MA-INJ-4	DoC

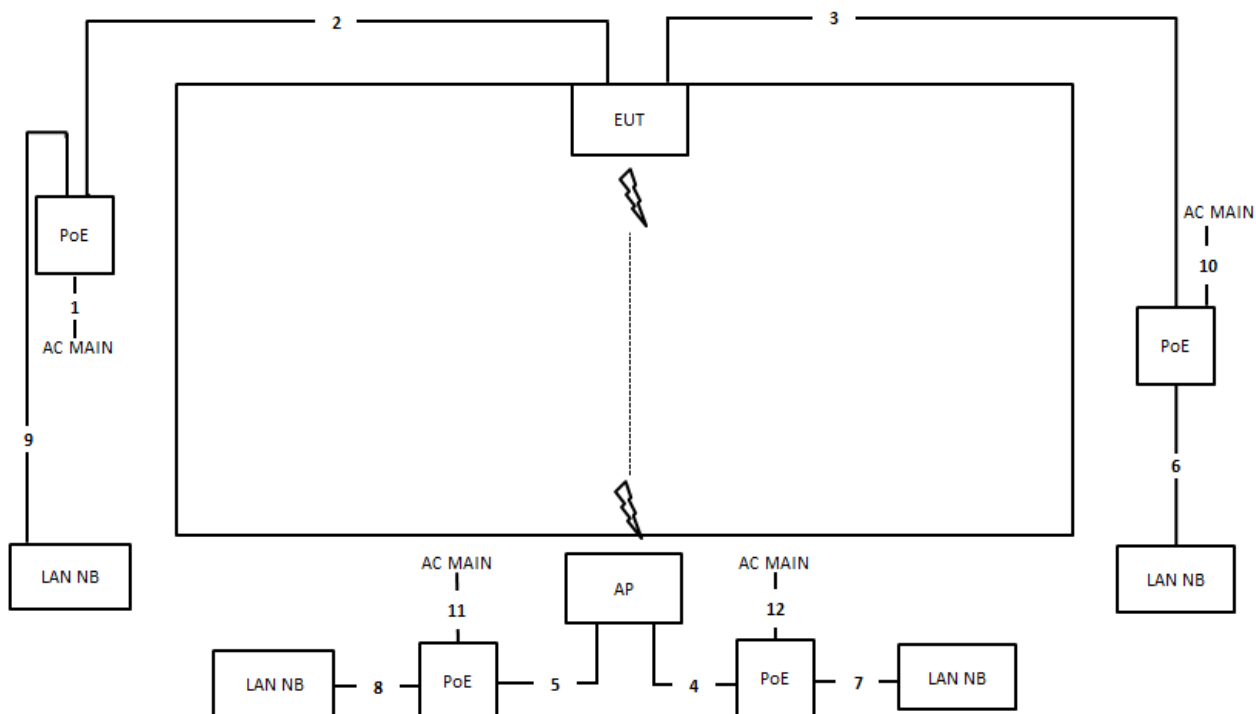
For Test Site No: 03CH01-CB (above 1GHz)

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	Notebook	DELL	E4300	DoC
2	PoE	MOTOROLA	AP-PSBIAS-2P3-ATR	DoC

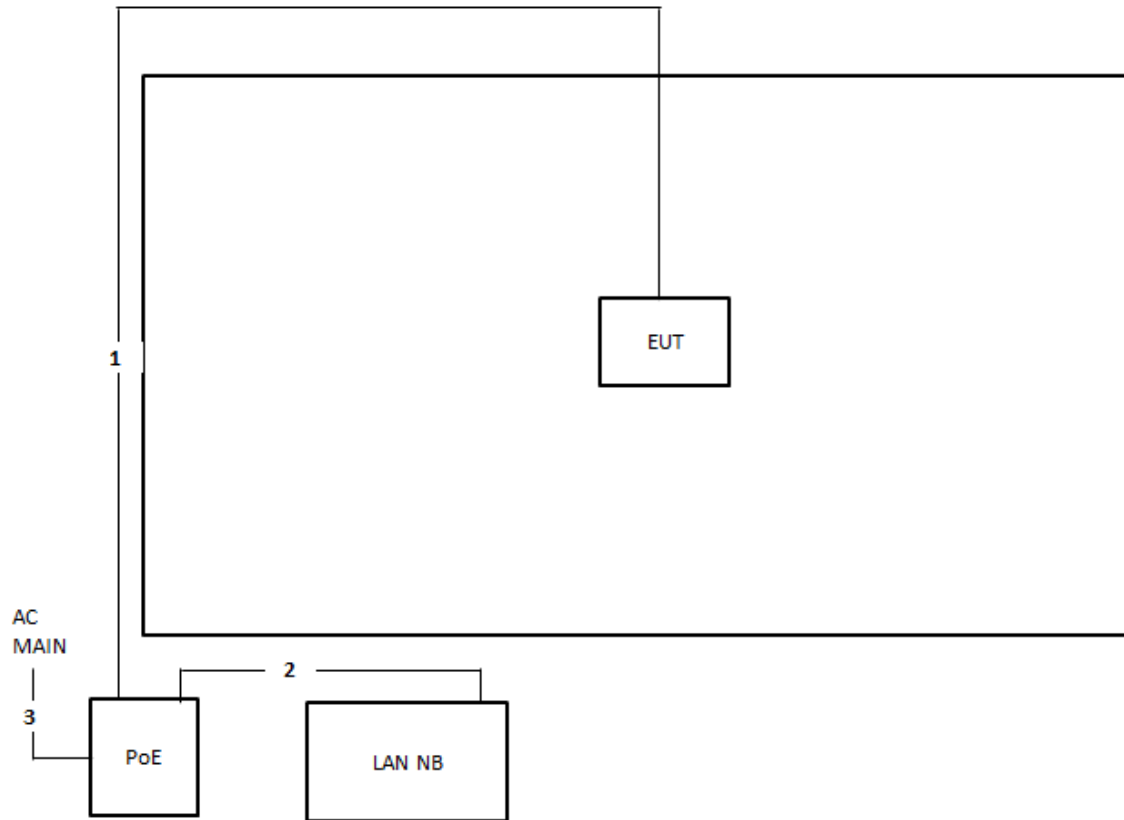
For Test Site No: TH01-CB

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	Notebook	DELL	E4300	DoC
2	PoE	MOTOROLA	AP-PSBIAS-2P3-ATR	DoC



Test Setup Diagram - Radiated Test < 1GHz


Item	Connection	Shielded	Length
1	Power cable	No	1.5m
2	RJ-45 cable	No	10m
3	RJ-45 cable	No	10m
4	RJ-45 cable	No	10m
5	RJ-45 cable	No	10m
6	RJ-45 cable	No	2m
7	RJ-45 cable	No	2m
8	RJ-45 cable	No	2m
9	RJ-45 cable	No	2m
10	Power cable	No	1.5m
11	Power cable	No	1.5m
12	Power cable	No	1.5m

Test Setup Diagram - Radiated Test > 1GHz


Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	RJ-45 cable	No	1m
3	Power cable	No	1.8m

3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

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

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

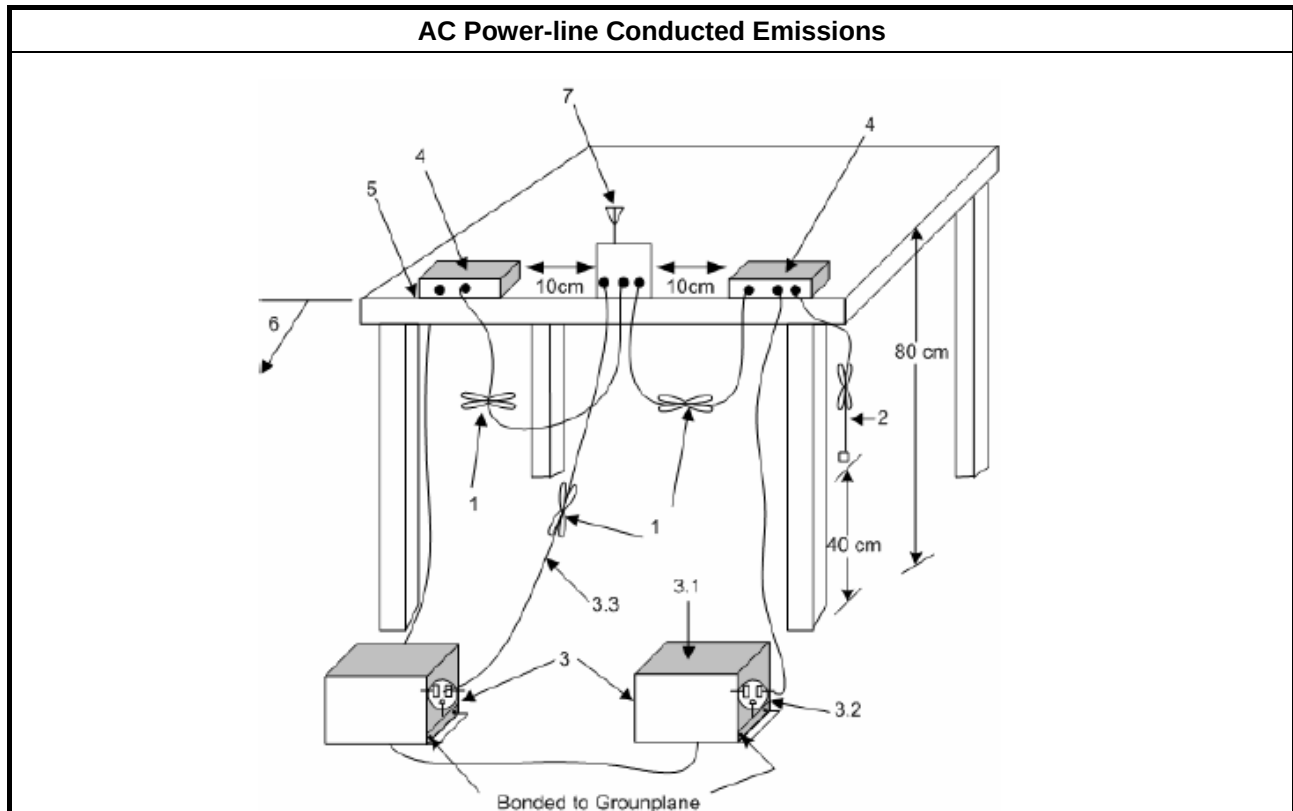
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

Test Method
☒ Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

3.1.4 Test Setup





3.1.5 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 Emission Bandwidth

3.2.1 Emission Bandwidth Limit

Emission Bandwidth Limit	
UNII Devices	
☒	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.

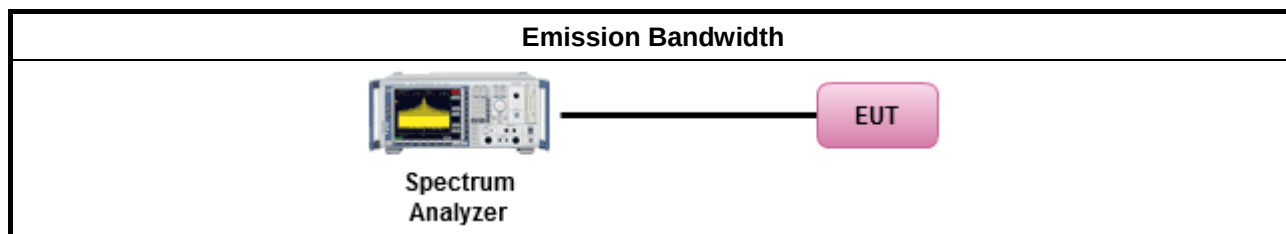
3.2.2 Measuring Instruments

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

3.2.3 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.

3.2.4 Test Setup



3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit	
UNII Devices	
☒ 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 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 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.	

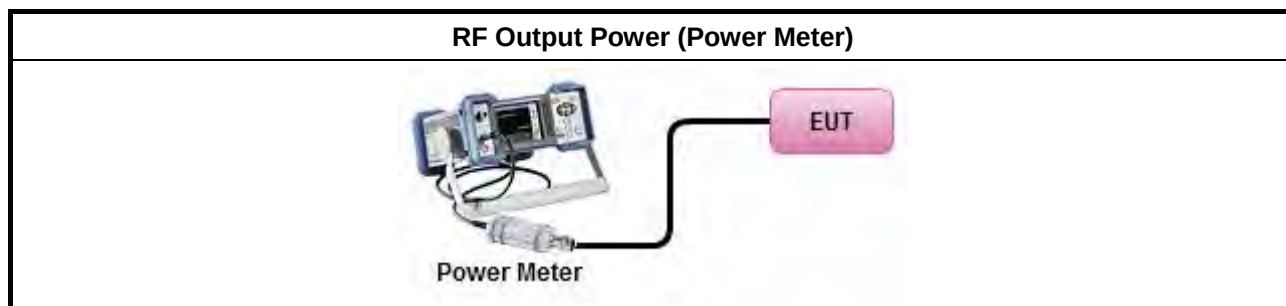
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

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

3.3.4 Test Setup



3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

3.4 Peak Power Spectral Density

3.4.1 Peak Power Spectral Density Limit

Peak Power Spectral Density Limit	
UNII Devices	
☒ 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 (θ-8) dBW/MHz for $8^\circ \leq \theta < 40^\circ$ -35.9 - 1.22 (θ-40) dBW/MHz for $40^\circ \leq \theta \leq 45^\circ$; -42 dBW/MHz for $\theta > 45^\circ$
☐ 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.	

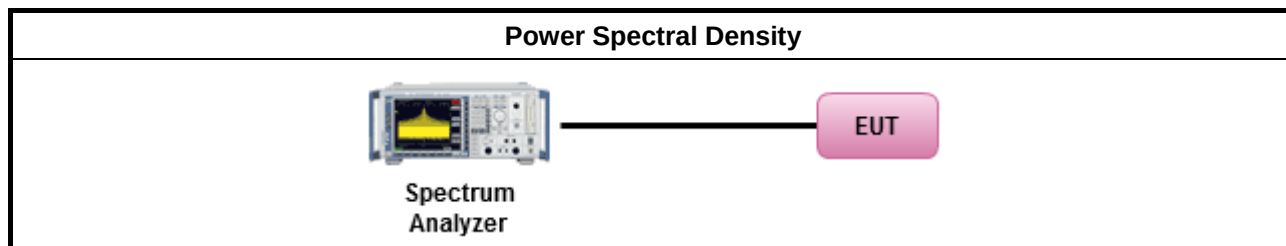
3.4.2 Measuring Instruments

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

3.4.3 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]) $EIRP_{total} = PPSD_{total} + DG$	

3.4.4 Test Setup





3.4.5 Test Result of Peak Power Spectral Density

Refer as Appendix D

3.5 Unwanted Emissions

3.5.1 Transmitter Radiated Unwanted Emissions Limit

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

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

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

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).

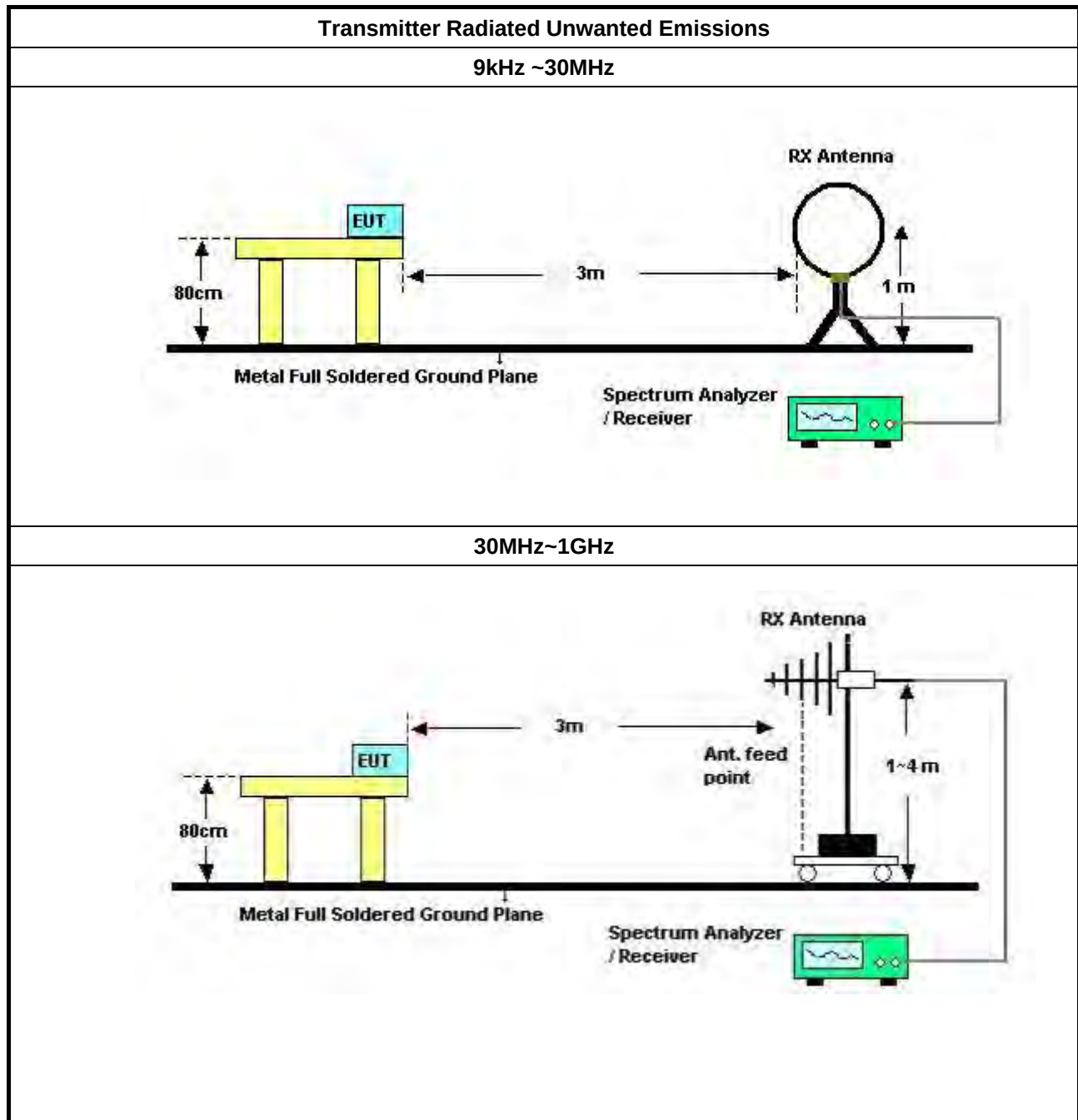
3.5.2 Measuring Instruments

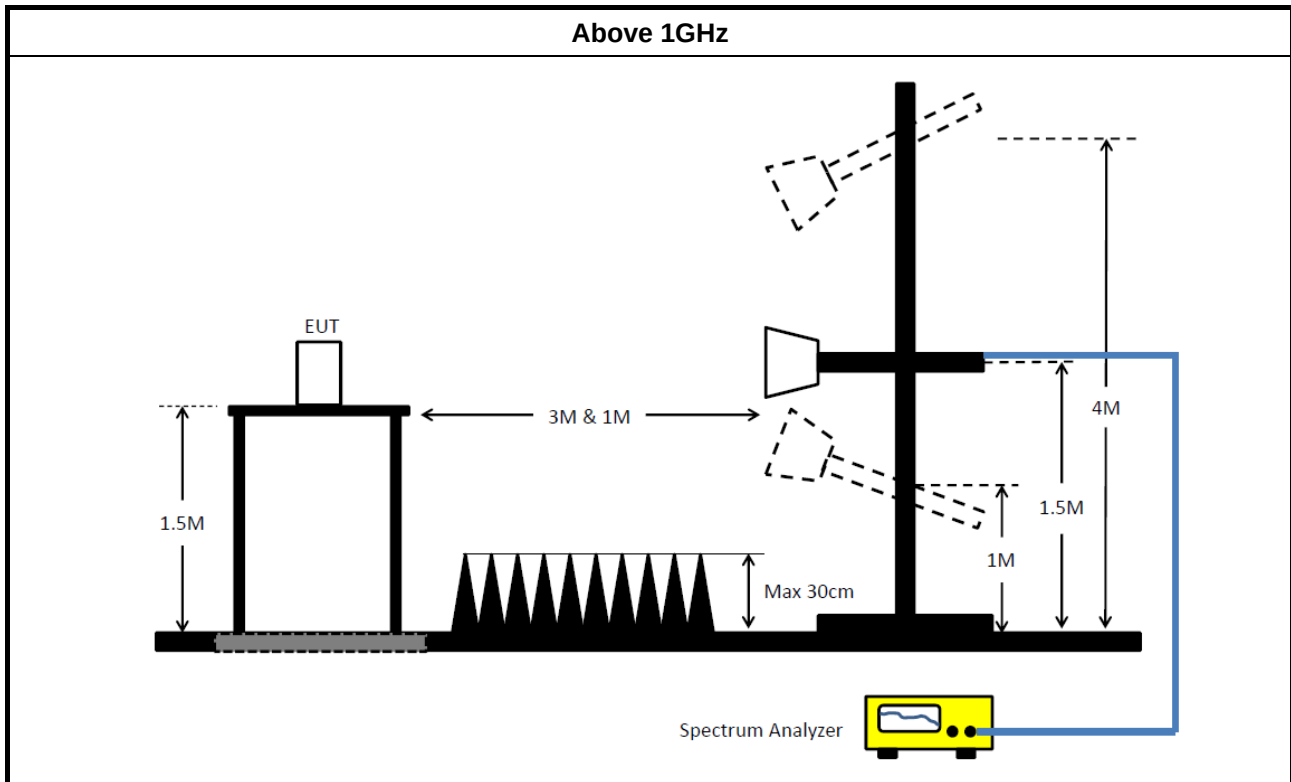
Refer a test equipment and calibration data table in this test report.

3.5.3 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.	

3.5.4 Test Setup





3.5.5 Transmitter Unwanted Emissions (Below 30MHz)

The definitive verification that the radio spectrum below 30 MHz was investigated down to at least 25 MHz. Due to spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

3.5.6 Test Result of Transmitter Unwanted Emissions

Refer as Appendix E

3.6 Frequency Stability

3.6.1 Frequency Stability Limit

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

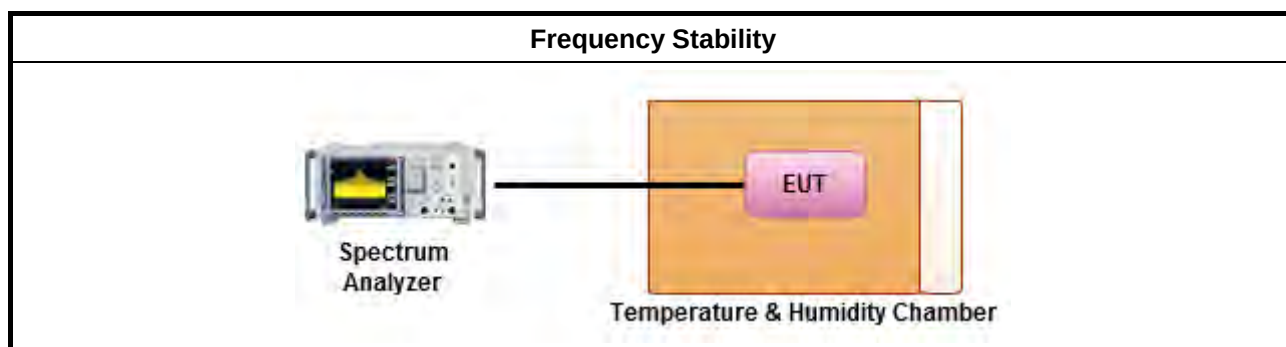
3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

Test Method	
Refer as ANSI C63.10, clause 6.8 for frequency stability tests	
	Frequency stability with respect to ambient temperature
	Frequency stability when varying supply voltage
	Extreme temperature is $-40^{\circ}\text{C} \sim 65^{\circ}\text{C}$.

3.6.4 Test Setup



3.6.5 Test Result of Frequency Stability

Refer as Appendix F

4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.45GHz	Jan. 23, 2017	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Dec. 14, 2016	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Dec. 21, 2016	Conduction (CO01-CB)
COND Cable	Woken	Cable	01	150kHz ~ 30MHz	May 23, 2017	Conduction (CO01-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	Conduction (CO01-CB)
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Aug. 30, 2016	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2016*	Radiation (10CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 10, 2016	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 25, 2016	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8447D	2944A10991	0.1MHz ~ 1.3GHz	Mar. 13, 2017	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 16, 2017	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jun. 28, 2016	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Nov. 22, 2016	Radiation (03CH01-CB)
EMI Test	R&S	ESCS	100355	9kHz ~ 2.75GHz	May 16, 2016	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~ 1 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz ~ 40 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
Test Software	Audix	E3	6.2009-I0-7	N/A	N/A	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 26, 2016	Conducted (TH01-CB)
Temp. and Humidity Chamber	Gaint Force	GTH-408-40-CP-AR	MAA1410-011	-40~100 degree	Sep. 20, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-6	1 GHz ~ 26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)



Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
RF Cable-high	Woken	RG402	High Cable-7	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-8	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-9	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 22, 2016	Conducted (TH01-CB)

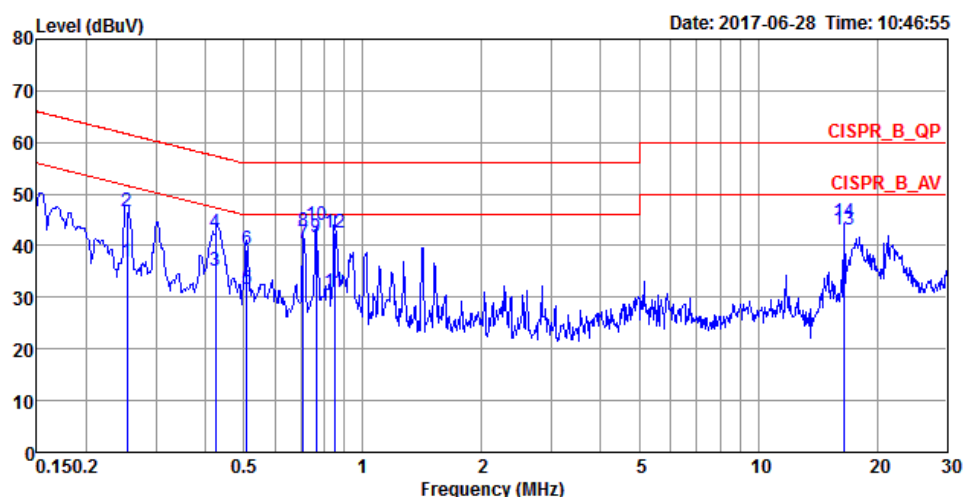
Note: Calibration Interval of instruments listed above is one year.

“*” Calibration Interval of instruments listed above is two years.

NCR means Non-Calibration required.

AC Power-line Conducted Emissions Result

Operating Mode	2	Power Phase	Neutral
Operating Function	Normal Link		

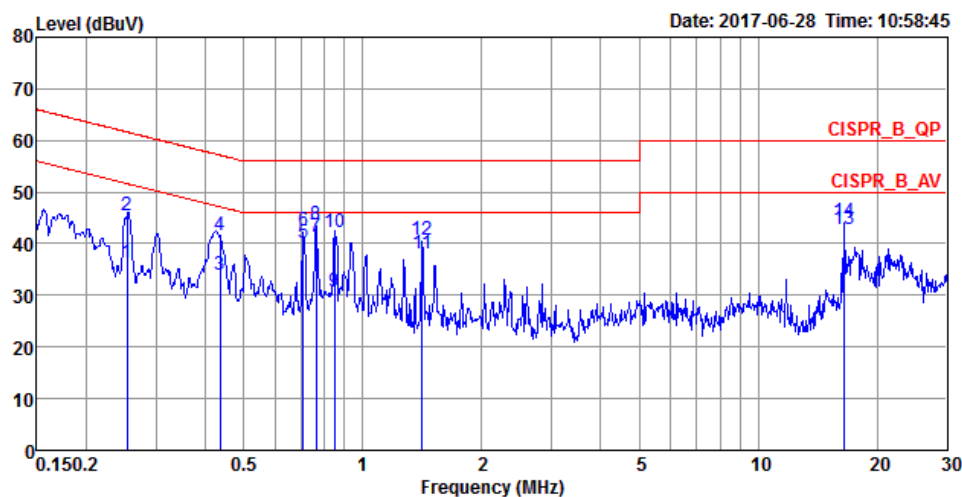


	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.2539	36.97	-14.66	51.63	26.80	10.08	0.09	Average	NEUTRAL
2	0.2539	46.55	-15.08	61.63	36.38	10.08	0.09	QP	NEUTRAL
3	0.4244	35.13	-12.23	47.36	24.86	10.25	0.02	Average	NEUTRAL
4	0.4244	42.41	-14.95	57.36	32.14	10.25	0.02	QP	NEUTRAL
5	0.5099	31.65	-14.35	46.00	21.37	10.22	0.06	Average	NEUTRAL
6	0.5099	39.36	-16.64	56.00	29.08	10.22	0.06	QP	NEUTRAL
7	0.7080	40.39	-5.61	46.00	30.11	10.16	0.12	Average	NEUTRAL
8	0.7080	42.69	-13.31	56.00	32.41	10.16	0.12	QP	NEUTRAL
9	0.7612	41.76	-4.24	46.00	31.49	10.13	0.14	Average	NEUTRAL
10	0.7612	44.11	-11.89	56.00	33.84	10.13	0.14	QP	NEUTRAL
11	0.8488	30.97	-15.03	46.00	20.71	10.10	0.16	Average	NEUTRAL
12	0.8488	42.38	-13.62	56.00	32.12	10.10	0.16	QP	NEUTRAL
13	16.4654	43.18	-6.82	50.00	32.70	10.29	0.19	Average	NEUTRAL
14	16.4654	44.67	-15.33	60.00	34.19	10.29	0.19	QP	NEUTRAL

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

AC Power-line Conducted Emissions Result

Operating Mode	2	Power Phase	Line
Operating Function	Normal Link		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.2536	36.21	-15.43	51.64	26.20	9.92	0.09	Average	LINE
2	0.2536	45.51	-16.13	61.64	35.50	9.92	0.09	QP	LINE
3	0.4354	33.98	-13.17	47.15	24.00	9.95	0.03	Average	LINE
4	0.4354	41.68	-15.47	57.15	31.70	9.95	0.03	QP	LINE
5	0.7074	40.25	-5.75	46.00	30.18	9.95	0.12	Average	LINE
6	0.7074	42.54	-13.46	56.00	32.47	9.95	0.12	QP	LINE
7	0.7609	41.40	-4.60	46.00	31.30	9.96	0.14	Average	LINE
8	0.7609	43.71	-12.29	56.00	33.61	9.96	0.14	QP	LINE
9	0.8483	30.64	-15.36	46.00	20.52	9.96	0.16	Average	LINE
10	0.8483	42.31	-13.69	56.00	32.19	9.96	0.16	QP	LINE
11	1.4157	38.09	-7.91	46.00	27.93	9.96	0.20	Average	LINE
12	1.4157	40.61	-15.39	56.00	30.45	9.96	0.20	QP	LINE
13	16.4650	42.74	-7.26	50.00	32.28	10.27	0.19	Average	LINE
14	16.4650	44.19	-15.81	60.00	33.73	10.27	0.19	QP	LINE

Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

<Point to Point>

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
802.11a_(6Mbps)_2TX	-	-	-	-	-
5.15-5.25GHz	23.575M	16.567M	16M6D1D	21.35M	16.442M
5.725-5.85GHz	16.325M	16.567M	16M6D1D	16.275M	16.492M
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-
5.15-5.25GHz	23.925M	17.766M	17M8D1D	23.15M	17.666M
5.725-5.85GHz	17.575M	17.716M	17M7D1D	16.9M	17.666M
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-
5.15-5.25GHz	44.8M	36.332M	36M3D1D	43.45M	36.232M
5.725-5.85GHz	35.8M	36.282M	36M3D1D	35.65M	36.182M
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-
5.15-5.25GHz	90.3M	75.762M	75M8D1D	90.2M	75.762M
5.725-5.85GHz	75.4M	75.662M	75M7D1D	70.6M	75.562M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

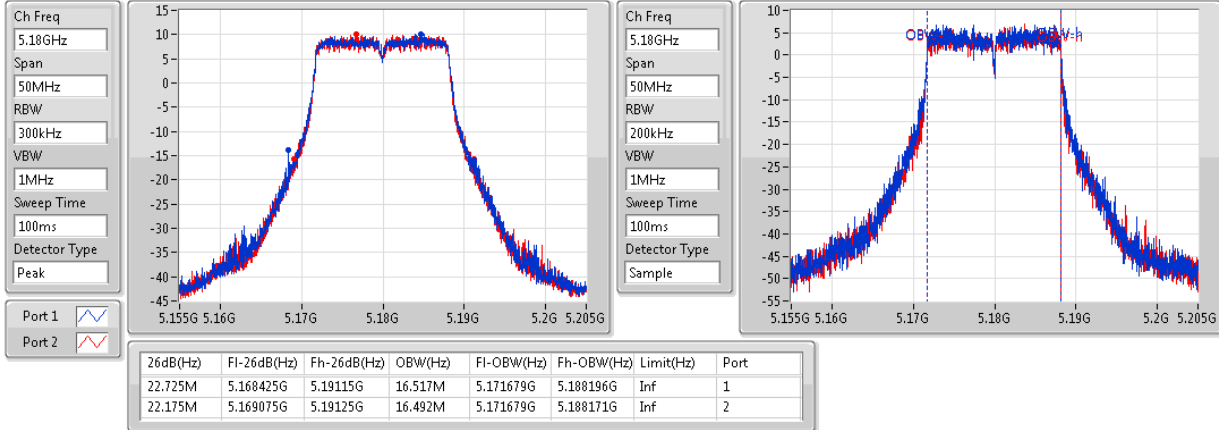
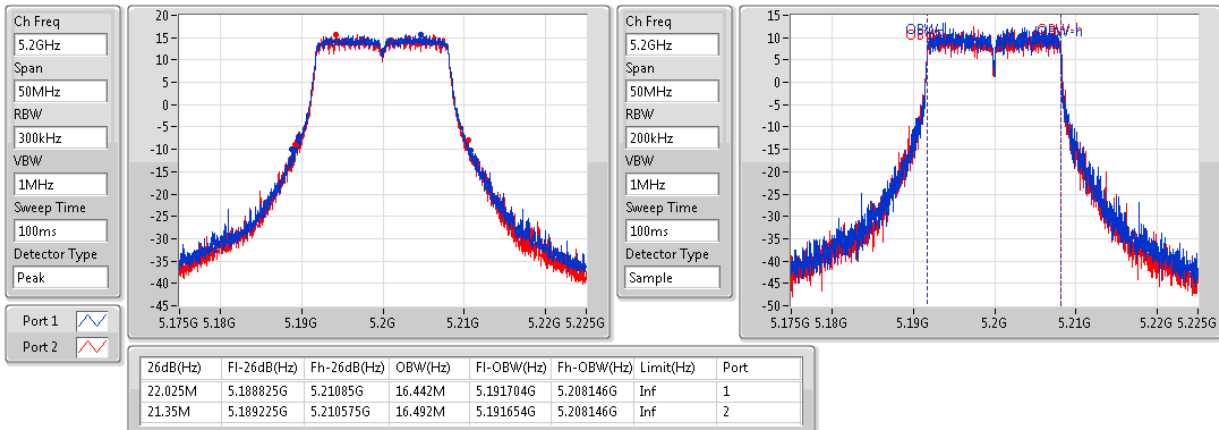
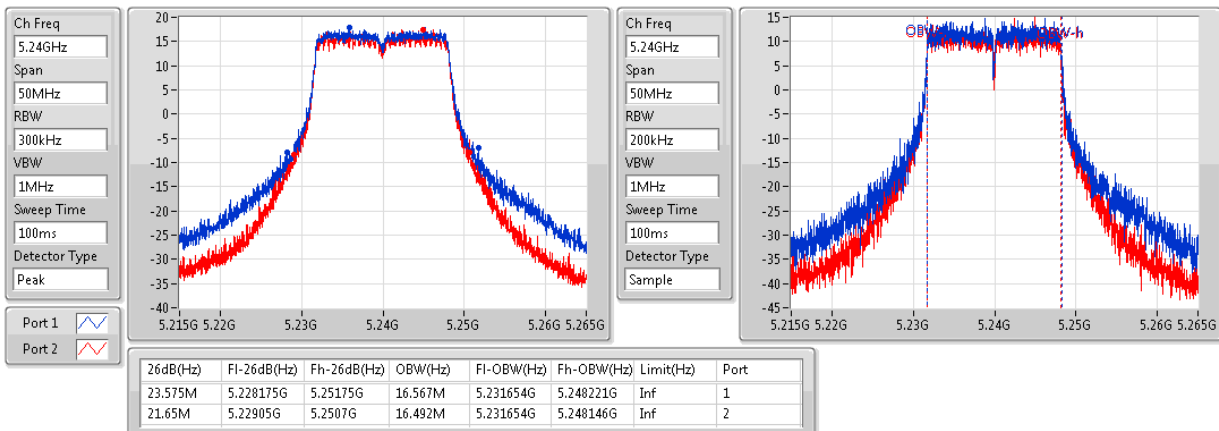
Min-OBW = Minimum 99% occupied bandwidth;

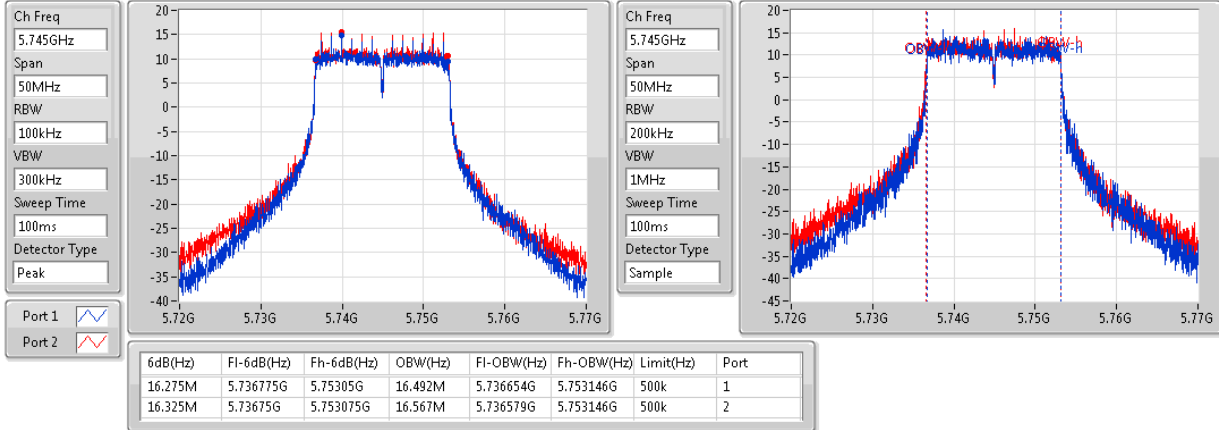
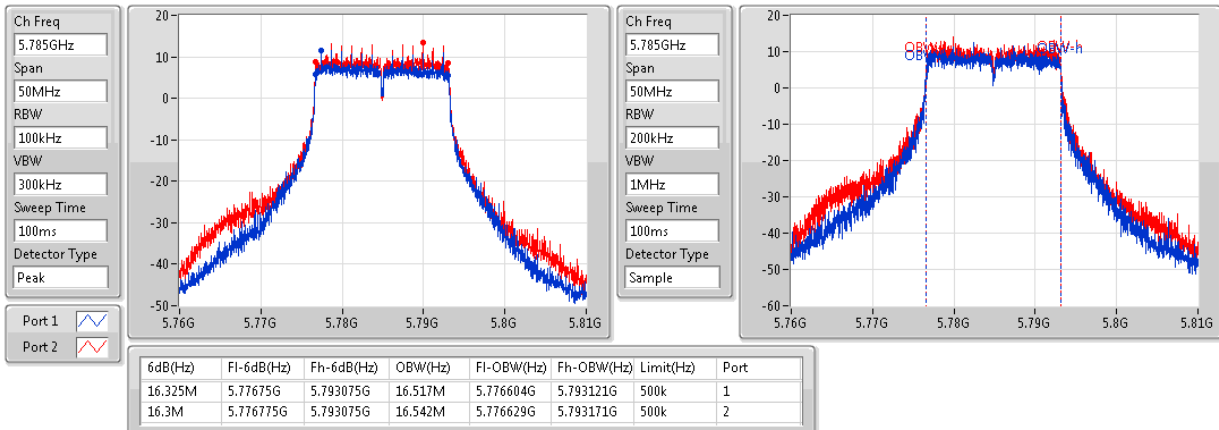
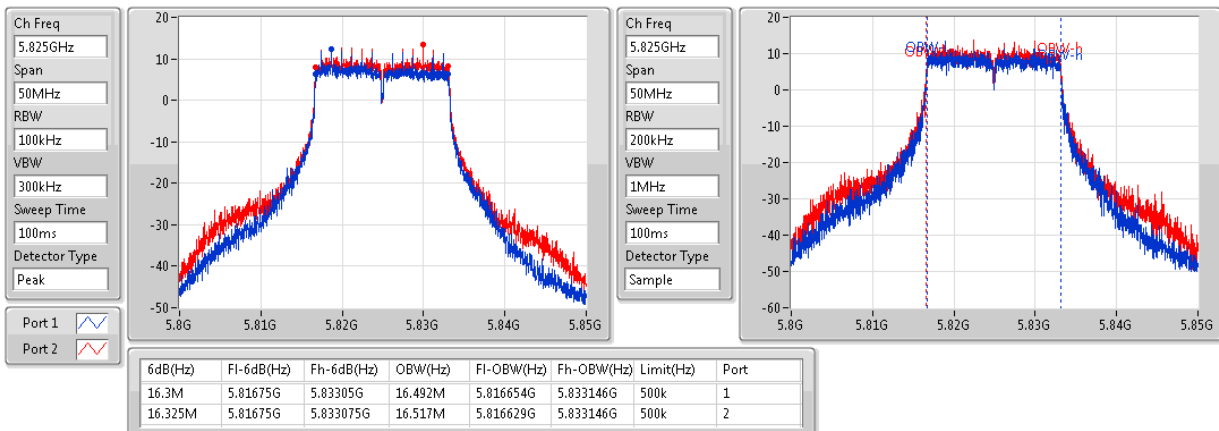
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11a_(6Mbps)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	22.725M	16.517M	22.175M	16.492M
5200MHz	Pass	Inf	22.025M	16.442M	21.35M	16.492M
5240MHz	Pass	Inf	23.575M	16.567M	21.65M	16.492M
5745MHz	Pass	500k	16.275M	16.492M	16.325M	16.567M
5785MHz	Pass	500k	16.325M	16.517M	16.3M	16.542M
5825MHz	Pass	500k	16.3M	16.492M	16.325M	16.517M
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	23.15M	17.666M	23.15M	17.691M
5200MHz	Pass	Inf	23.525M	17.741M	23.275M	17.666M
5240MHz	Pass	Inf	23.925M	17.766M	23.55M	17.691M
5745MHz	Pass	500k	17.575M	17.691M	17.55M	17.716M
5785MHz	Pass	500k	17.575M	17.716M	17.525M	17.716M
5825MHz	Pass	500k	16.9M	17.716M	17.55M	17.666M
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	Inf	44.8M	36.282M	44.8M	36.282M
5230MHz	Pass	Inf	43.45M	36.232M	44.75M	36.332M
5755MHz	Pass	500k	35.8M	36.182M	35.65M	36.282M
5795MHz	Pass	500k	35.65M	36.182M	35.65M	36.282M
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	Inf	90.3M	75.762M	90.2M	75.762M
5775MHz	Pass	500k	70.6M	75.562M	75.4M	75.662M

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

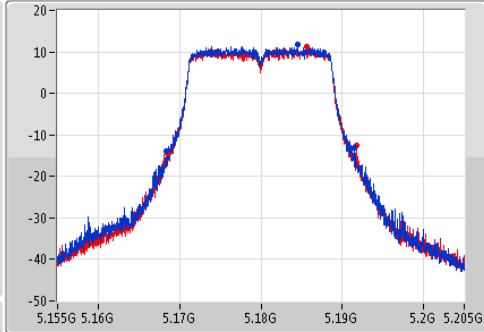
Port X-OBW = Port X 99% occupied bandwidth;

802.11a_(6Mbps)_2TX
EBW
5180MHz

802.11a_(6Mbps)_2TX
EBW
5200MHz

802.11a_(6Mbps)_2TX
EBW
5240MHz


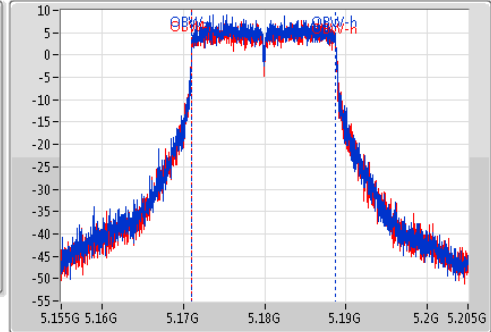
802.11a_(6Mbps)_2TX
EBW
5745MHz

802.11a_(6Mbps)_2TX
EBW
5785MHz

802.11a_(6Mbps)_2TX
EBW
5825MHz


802.11ac VHT20_Nss1,(MCS0)_2TX
EBW
5180MHz

Ch Freq
5.18GHz
Span
50MHz
RBW
300kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Peak
Port 1
Port 2



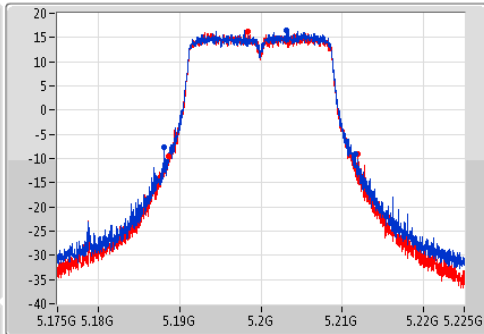
Ch Freq
5.18GHz
Span
50MHz
RBW
200kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Sample



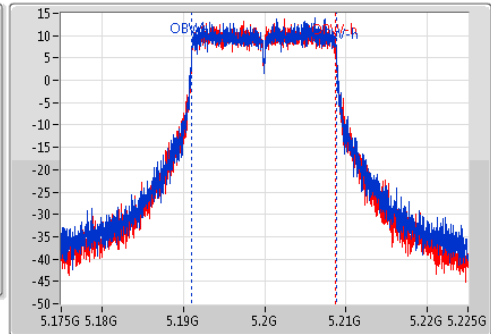
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
23.15M	5.16835G	5.1915G	17.666M	5.171079G	5.188746G	Inf	1
23.15M	5.168575G	5.191725G	17.691M	5.171079G	5.188771G	Inf	2

802.11ac VHT20_Nss1,(MCS0)_2TX
EBW
5200MHz

Ch Freq
5.2GHz
Span
50MHz
RBW
300kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Peak
Port 1
Port 2



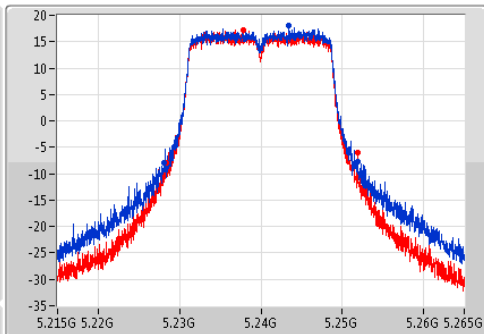
Ch Freq
5.2GHz
Span
50MHz
RBW
200kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Sample



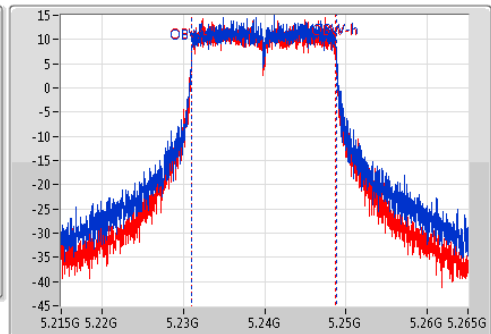
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
23.525M	5.18805G	5.211575G	17.741M	5.191054G	5.208796G	Inf	1
23.275M	5.1886G	5.211875G	17.666M	5.191079G	5.208746G	Inf	2

802.11ac VHT20_Nss1,(MCS0)_2TX
EBW
5240MHz

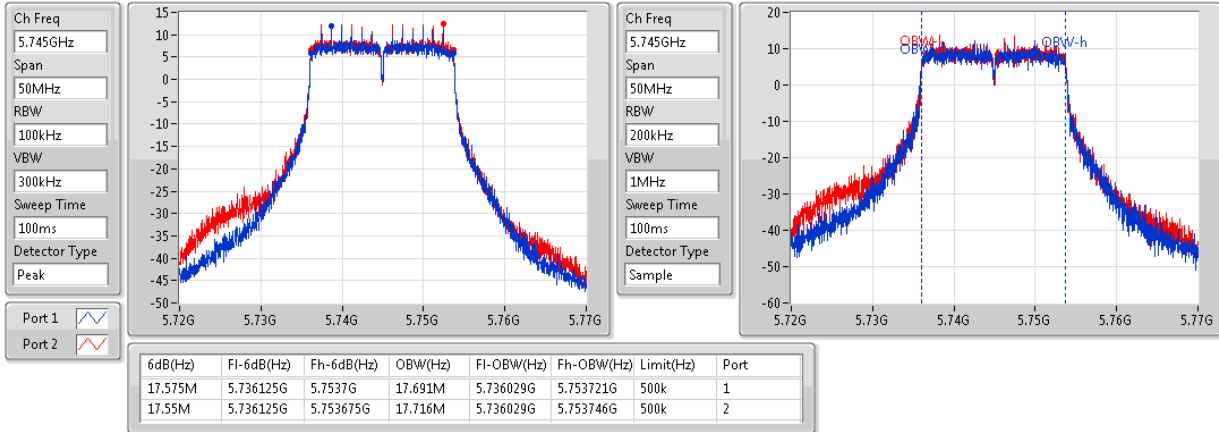
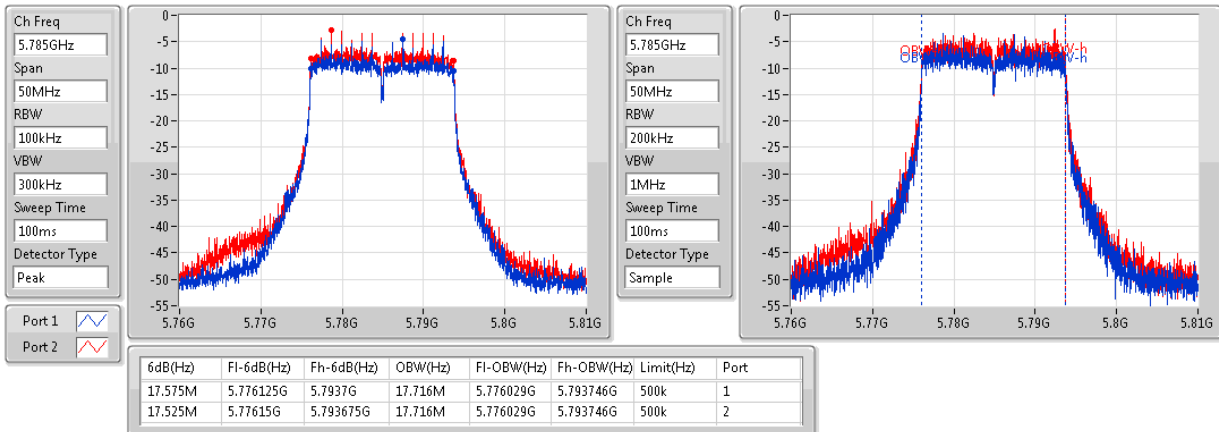
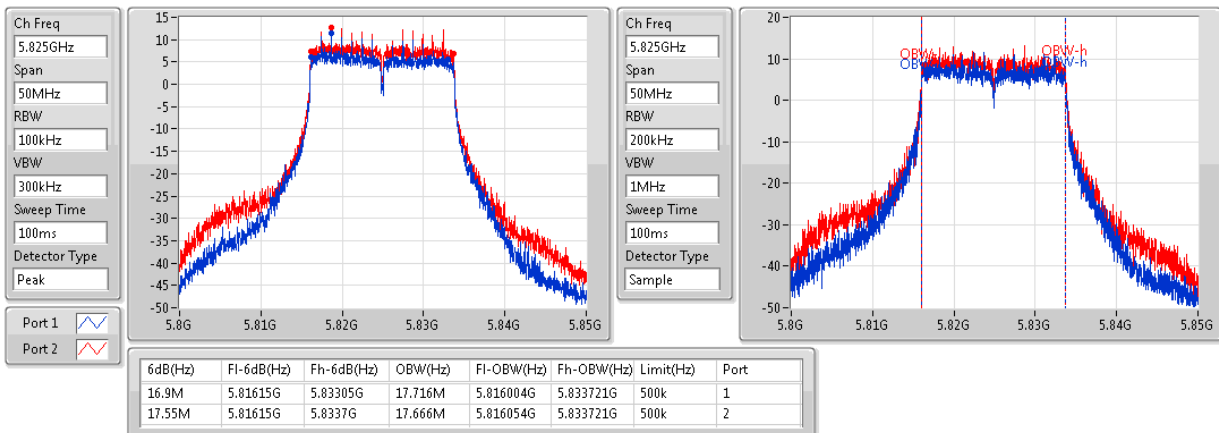
Ch Freq
5.24GHz
Span
50MHz
RBW
300kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Peak
Port 1
Port 2

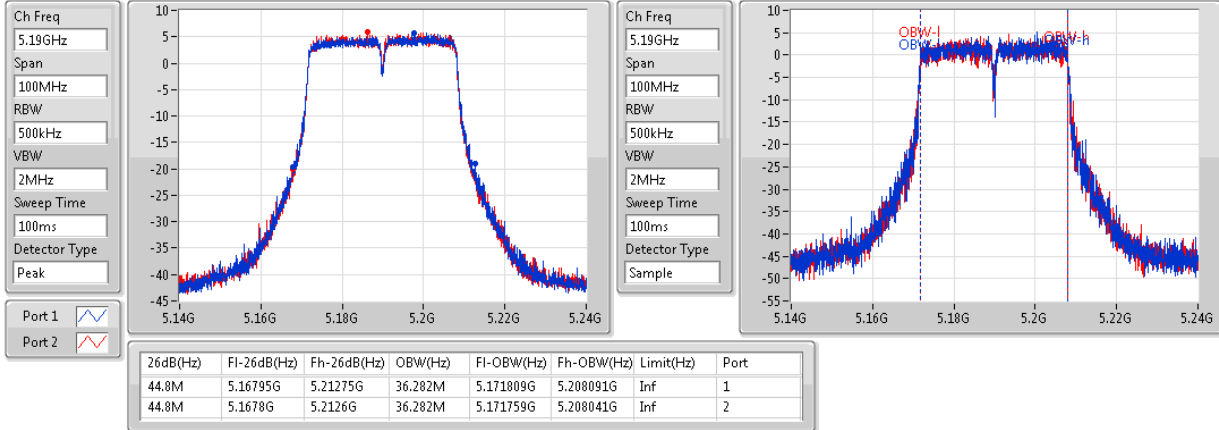
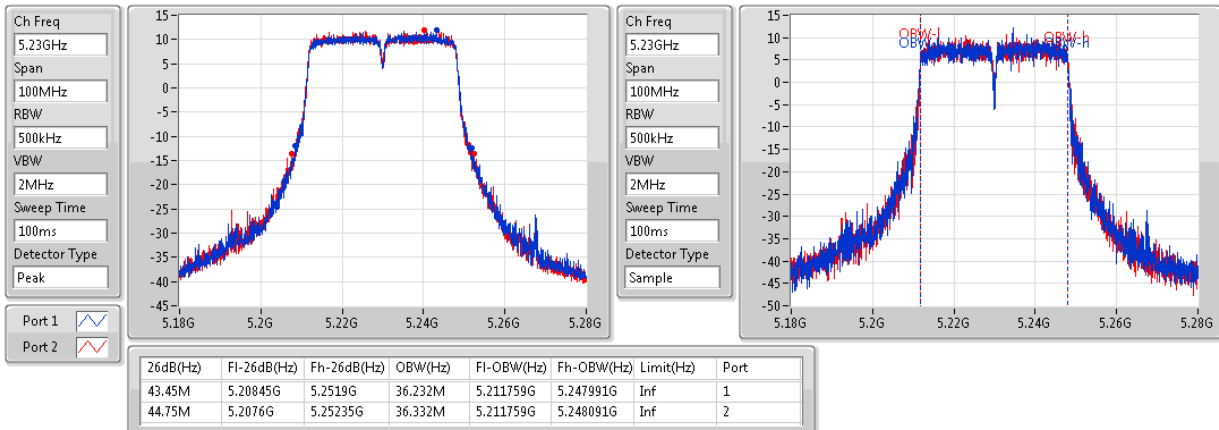
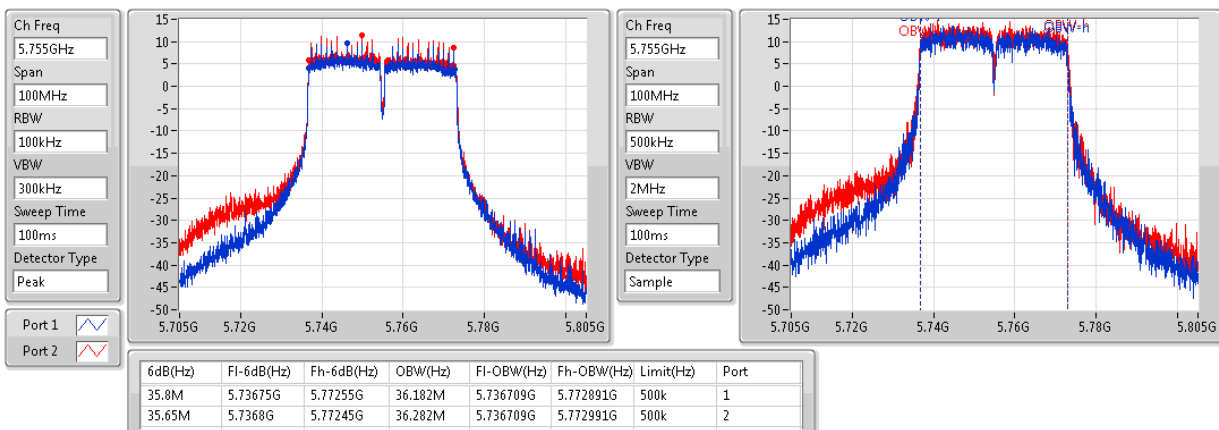


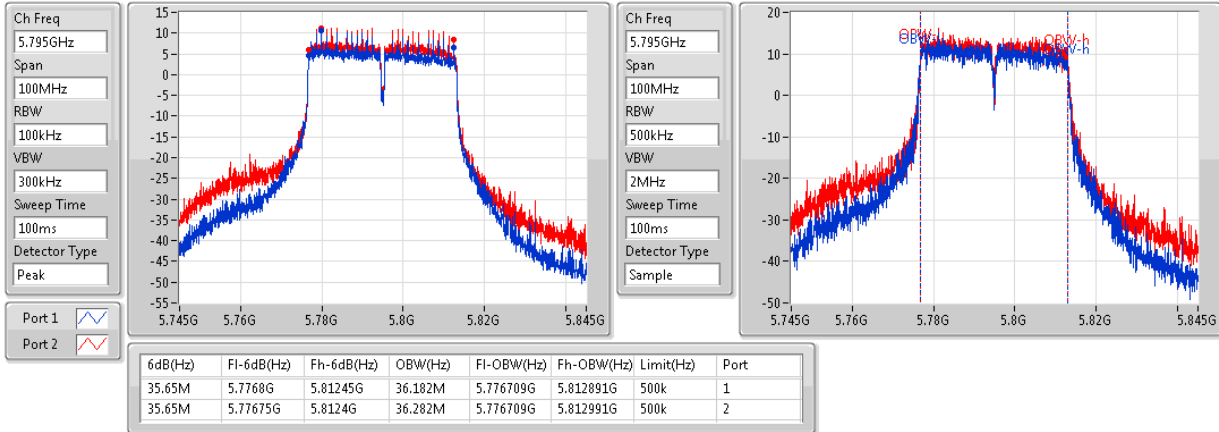
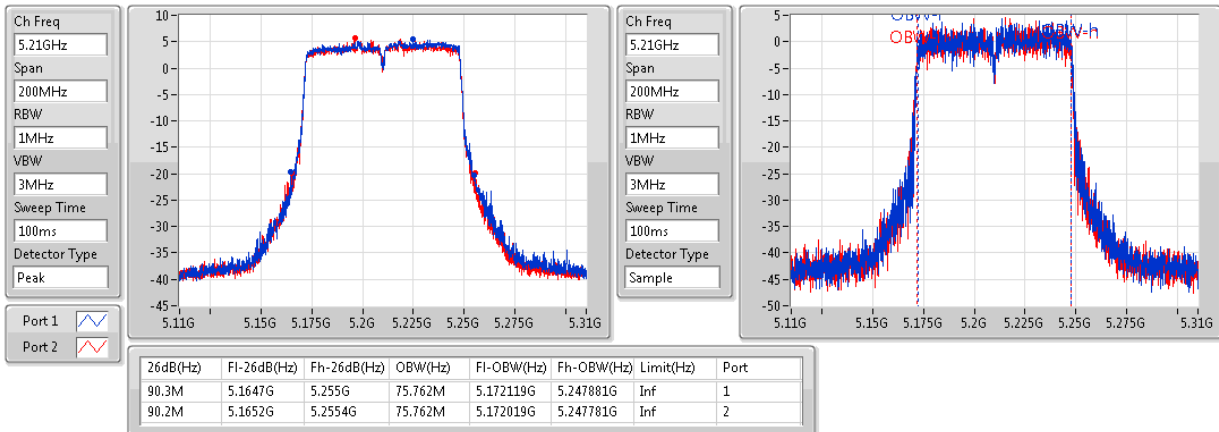
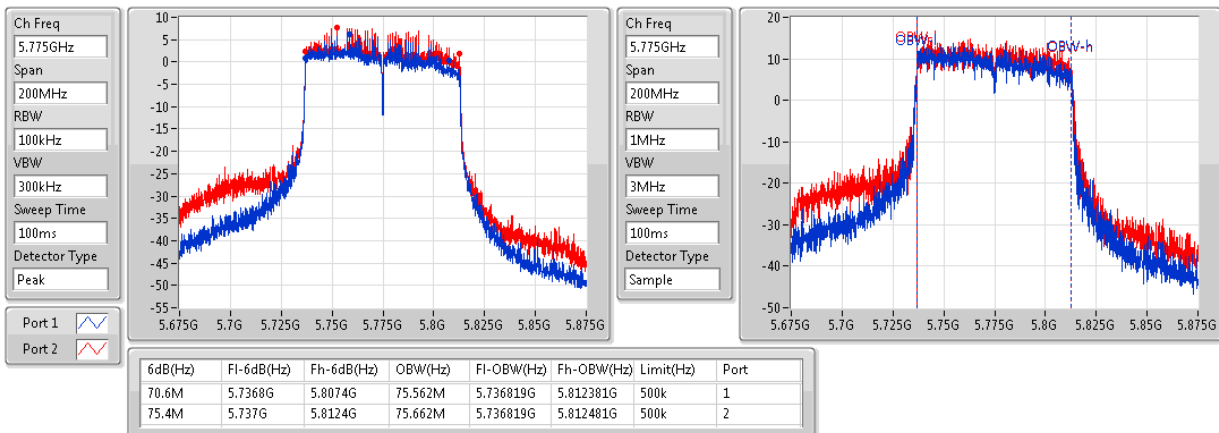
Ch Freq
5.24GHz
Span
50MHz
RBW
200kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Sample



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
23.925M	5.22805G	5.251975G	17.766M	5.231054G	5.248821G	Inf	1
23.55M	5.2284G	5.25195G	17.691M	5.231054G	5.248746G	Inf	2

802.11ac VHT20_Nss1,(MCS0)_2TX
EBW
5745MHz

802.11ac VHT20_Nss1,(MCS0)_2TX
EBW
5785MHz

802.11ac VHT20_Nss1,(MCS0)_2TX
EBW
5825MHz


802.11ac VHT40_Nss1,(MCS0)_2TX
EBW
5190MHz

802.11ac VHT40_Nss1,(MCS0)_2TX
EBW
5230MHz

802.11ac VHT40_Nss1,(MCS0)_2TX
EBW
5755MHz


802.11ac VHT40_Nss1,(MCS0)_2TX
EBW
5795MHz

802.11ac VHT80_Nss1,(MCS0)_2TX
EBW
5210MHz

802.11ac VHT80_Nss1,(MCS0)_2TX
EBW
5775MHz


<Point to Multi-point>

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
802.11a_(6Mbps)_2TX	-	-	-	-	-
5.15-5.25GHz	22.375M	16.542M	16M5D1D	21.65M	16.492M
5.725-5.85GHz	16.35M	16.542M	16M5D1D	16.3M	16.467M
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-
5.15-5.25GHz	23.7M	17.741M	17M7D1D	22.4M	17.666M
5.725-5.85GHz	17.575M	17.716M	17M7D1D	16.925M	17.666M
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-
5.15-5.25GHz	45.35M	36.332M	36M3D1D	43.8M	36.182M
5.725-5.85GHz	35.8M	36.332M	36M3D1D	35.45M	36.232M
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-
5.15-5.25GHz	90.3M	75.762M	75M8D1D	90.2M	75.762M
5.725-5.85GHz	73.2M	75.662M	75M7D1D	73.2M	75.662M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

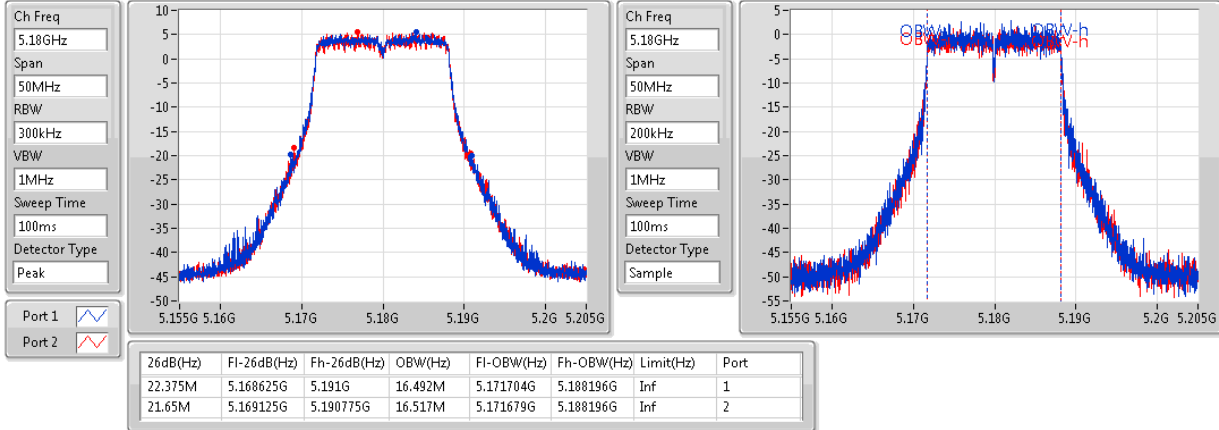
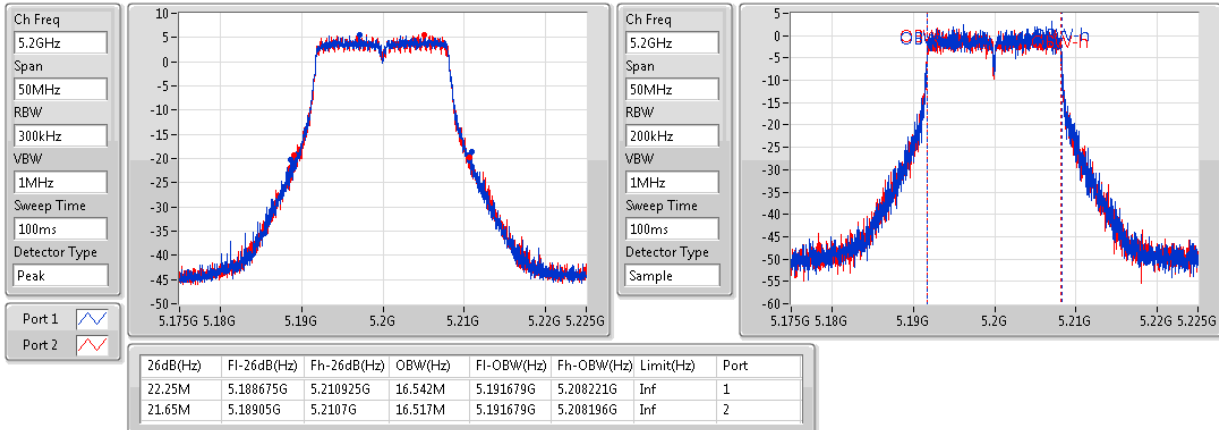
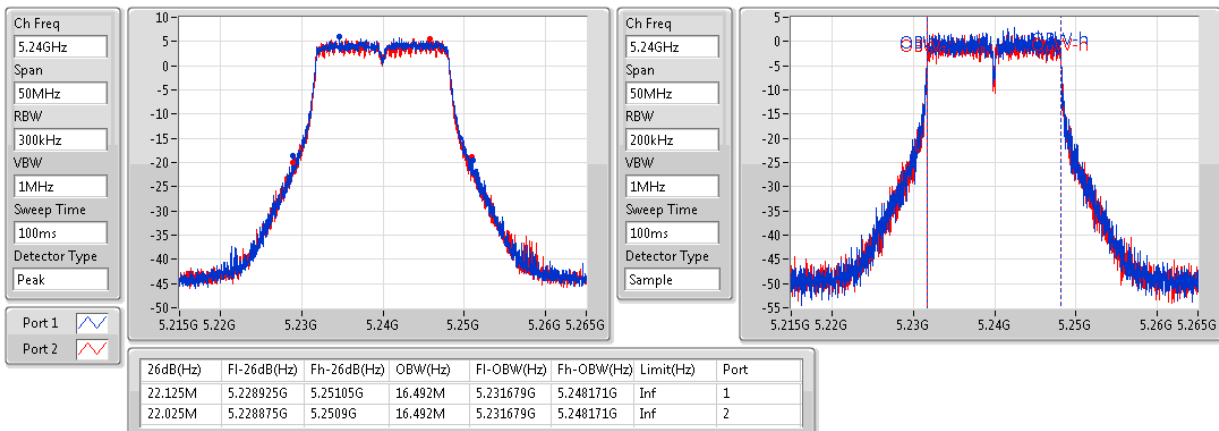
Min-OBW = Minimum 99% occupied bandwidth;

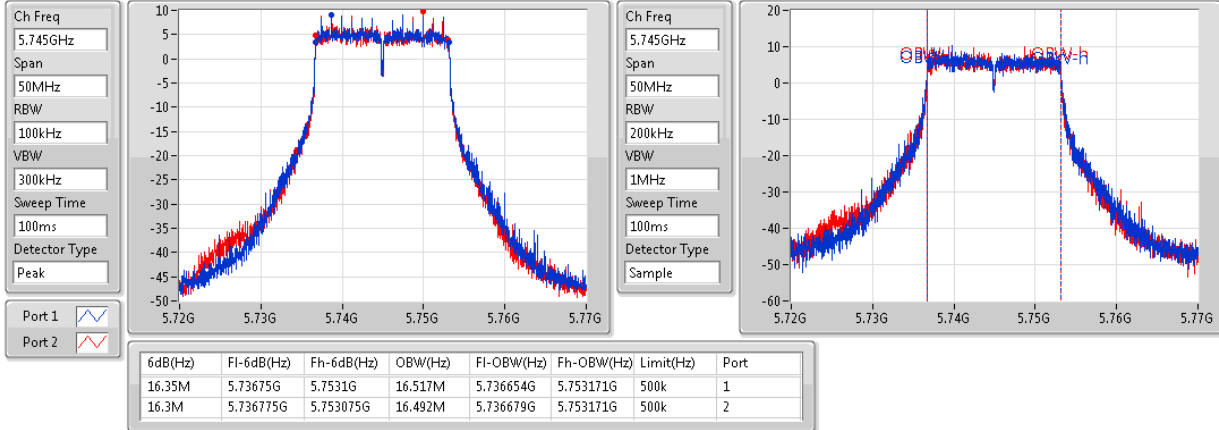
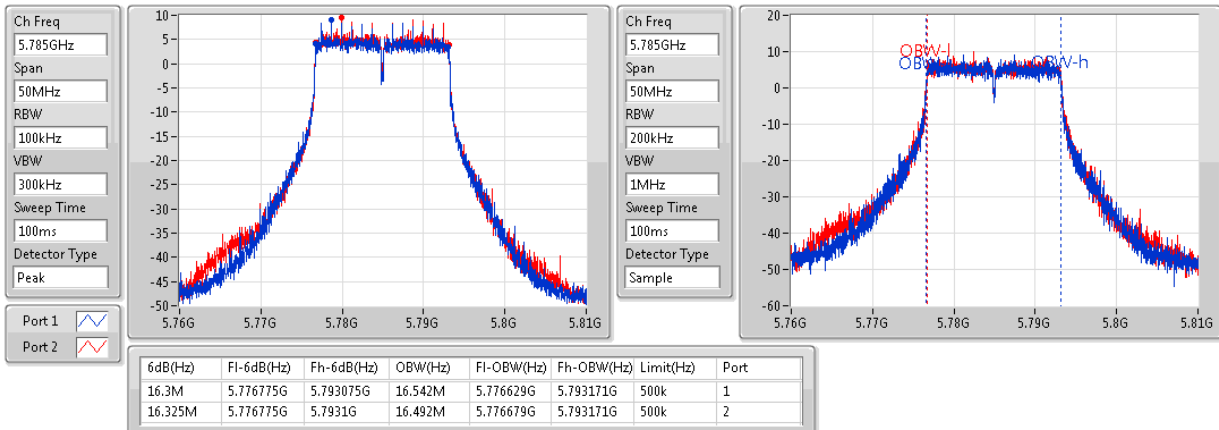
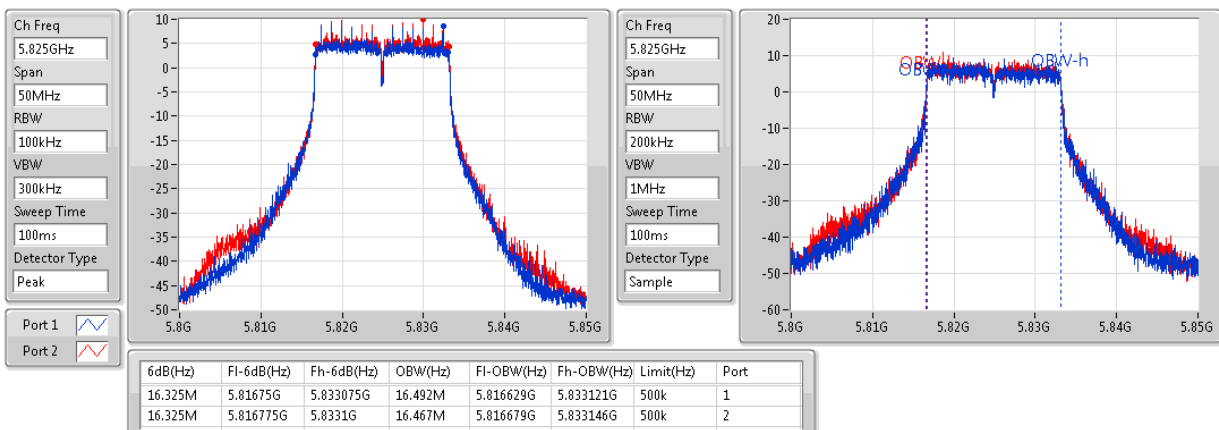
Result

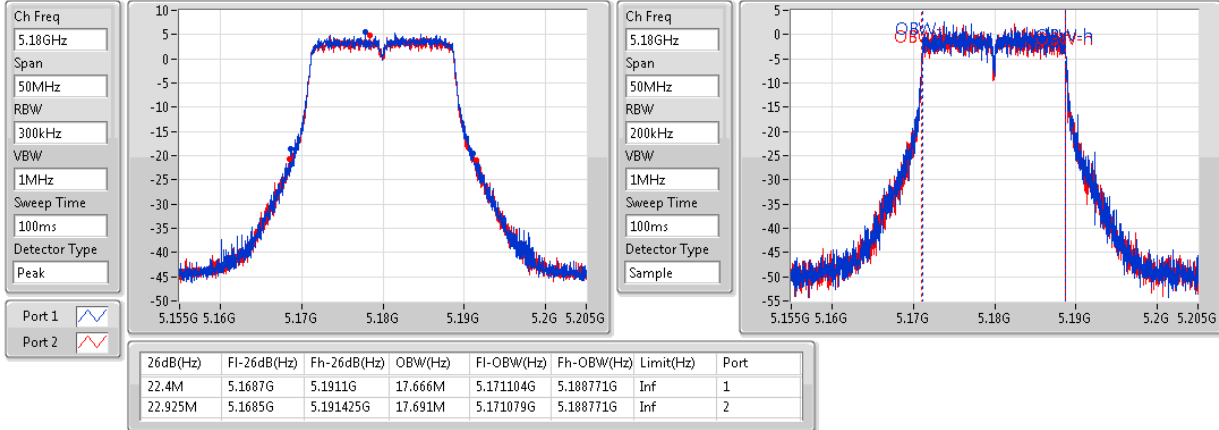
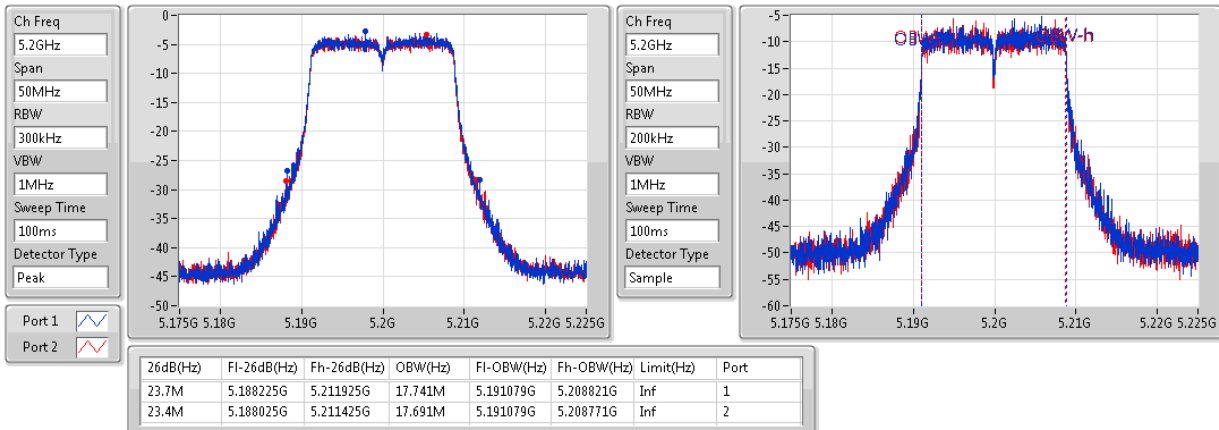
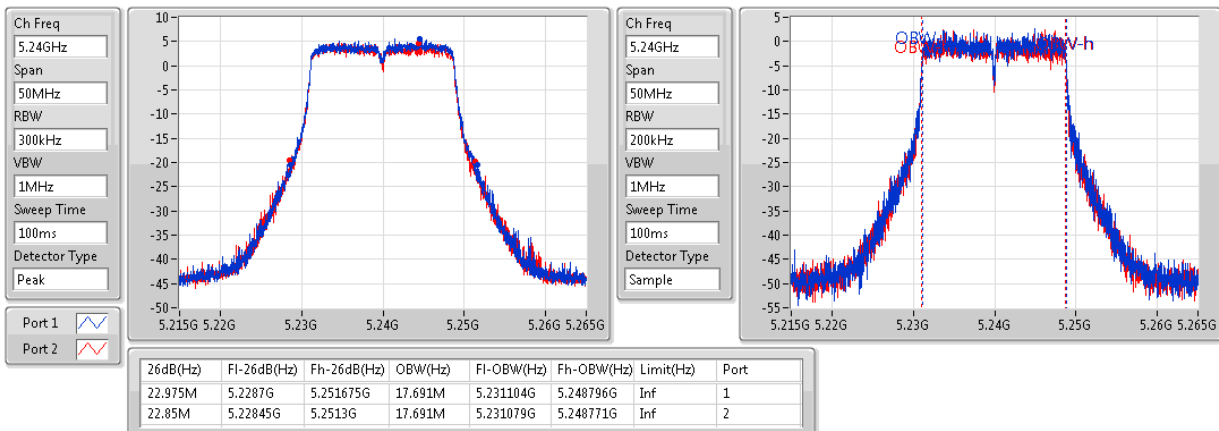
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11a_(6Mbps)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	22.375M	16.492M	21.65M	16.517M
5200MHz	Pass	Inf	22.25M	16.542M	21.65M	16.517M
5240MHz	Pass	Inf	22.125M	16.492M	22.025M	16.492M
5745MHz	Pass	500k	16.35M	16.517M	16.3M	16.492M
5785MHz	Pass	500k	16.3M	16.542M	16.325M	16.492M
5825MHz	Pass	500k	16.325M	16.492M	16.325M	16.467M
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	22.4M	17.666M	22.925M	17.691M
5200MHz	Pass	Inf	23.7M	17.741M	23.4M	17.691M
5240MHz	Pass	Inf	22.975M	17.691M	22.85M	17.691M
5745MHz	Pass	500k	17.575M	17.691M	16.925M	17.691M
5785MHz	Pass	500k	17.175M	17.691M	17.55M	17.716M
5825MHz	Pass	500k	17.125M	17.666M	17.15M	17.691M
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	Inf	44.05M	36.332M	43.8M	36.332M
5230MHz	Pass	Inf	45.35M	36.232M	44.85M	36.182M
5755MHz	Pass	500k	35.8M	36.332M	35.45M	36.282M
5795MHz	Pass	500k	35.7M	36.232M	35.7M	36.232M
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	Inf	90.3M	75.762M	90.2M	75.762M
5775MHz	Pass	500k	73.2M	75.662M	73.2M	75.662M

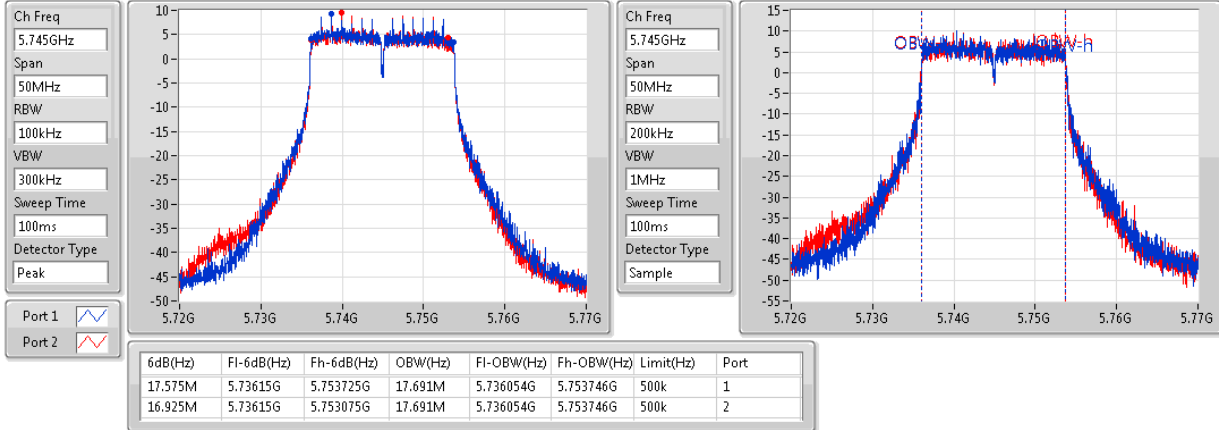
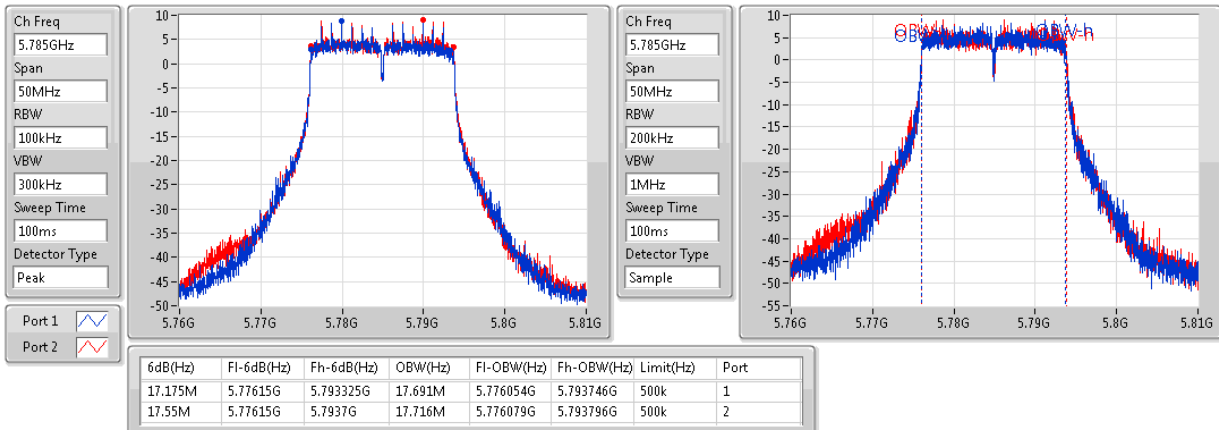
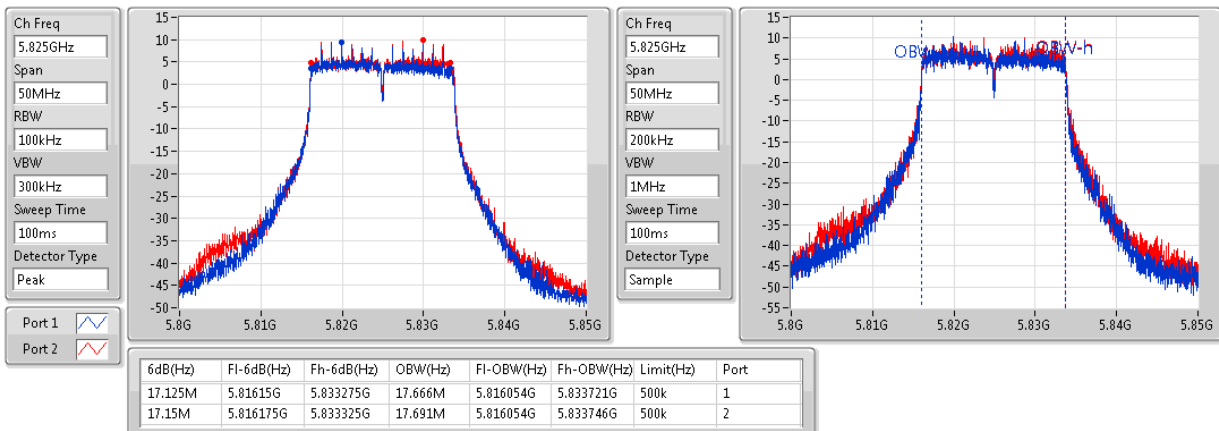
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band

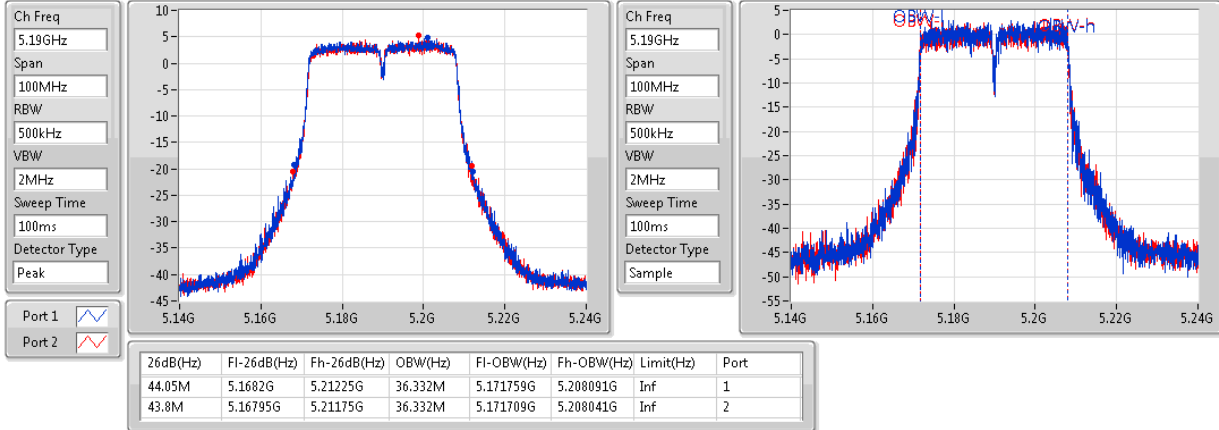
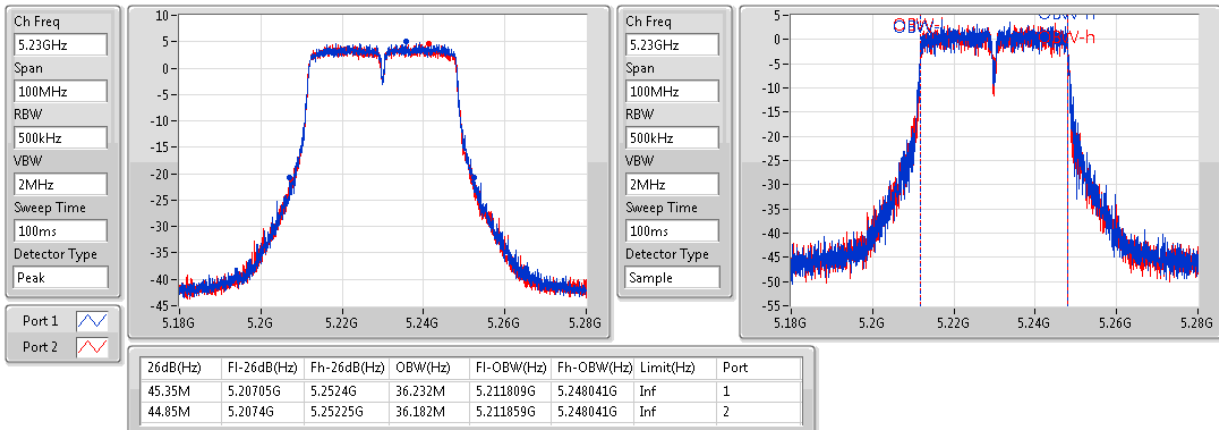
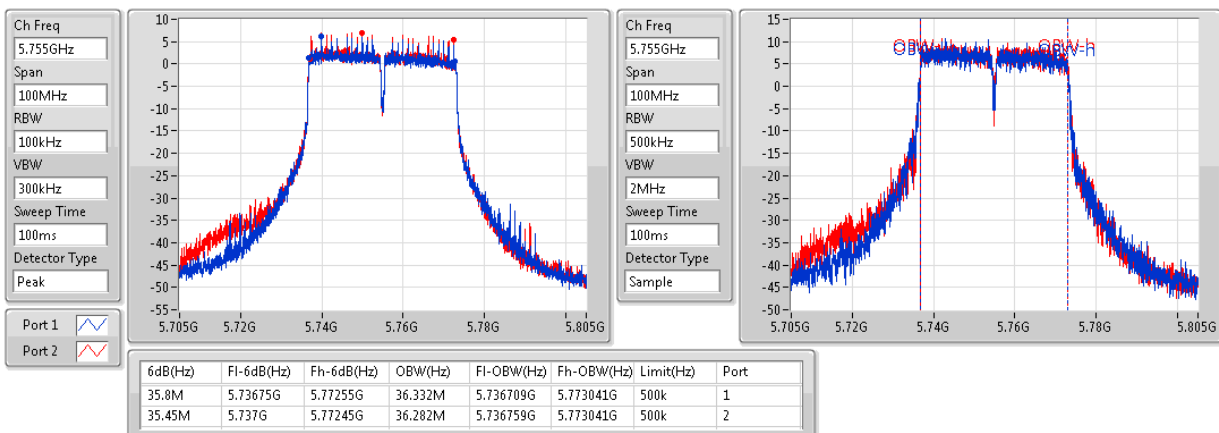
Port X-OBW = Port X 99% occupied bandwidth;

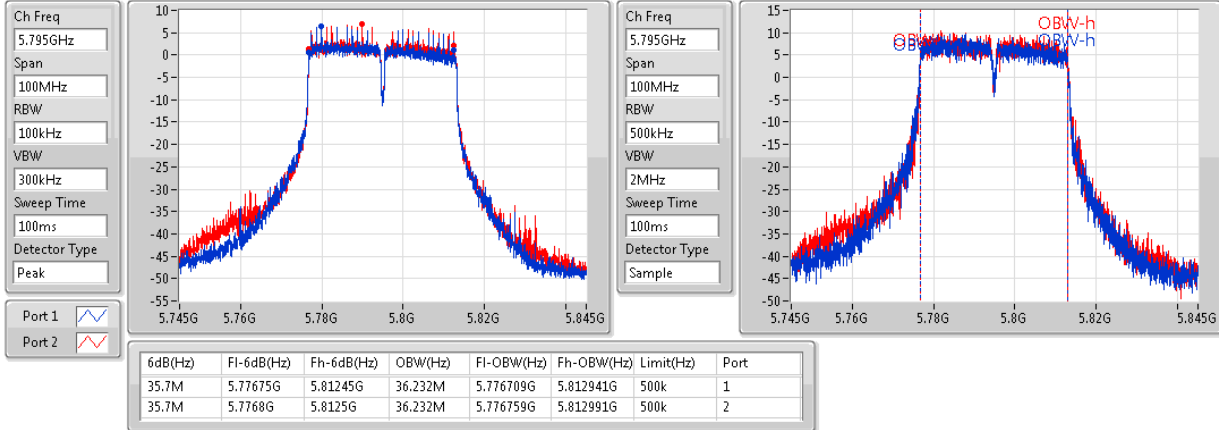
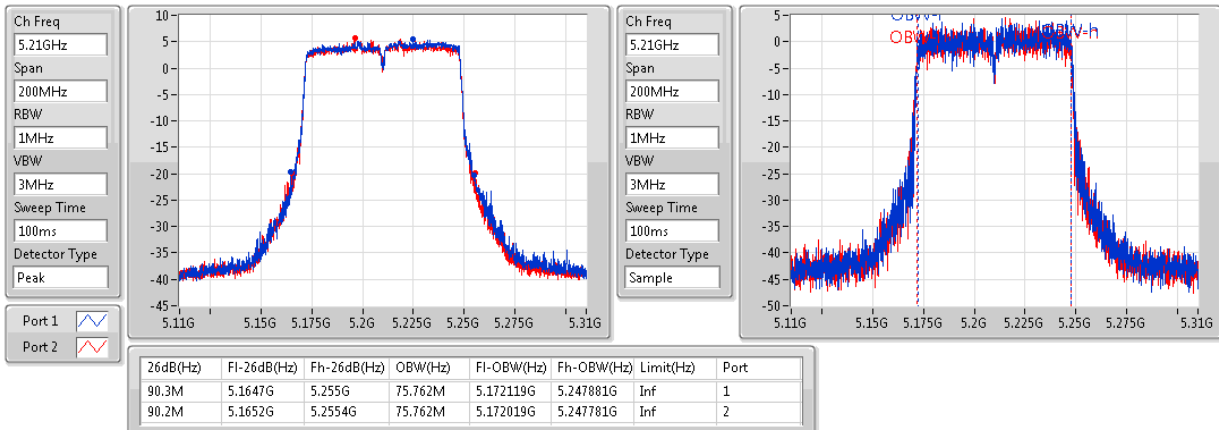
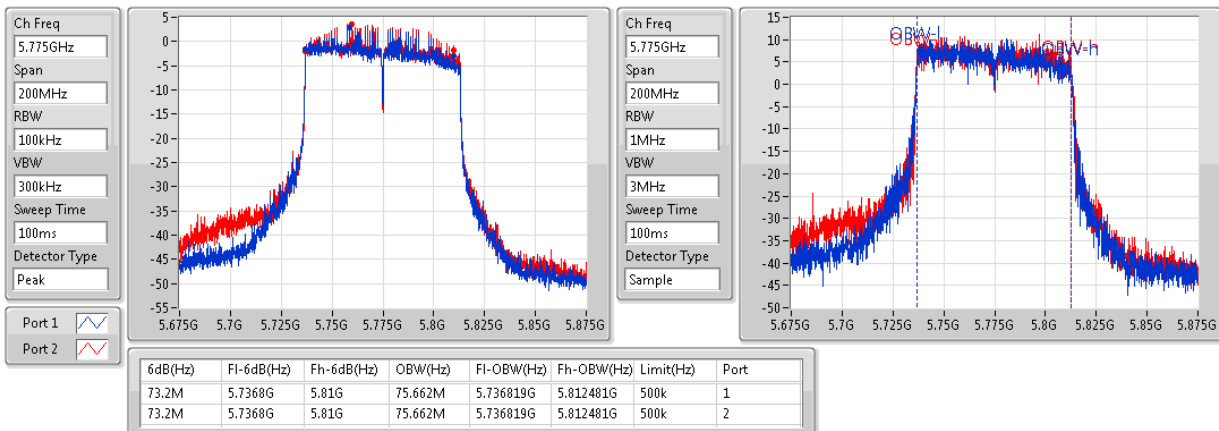
802.11a_(6Mbps)_2TX
EBW
5180MHz

802.11a_(6Mbps)_2TX
EBW
5200MHz

802.11a_(6Mbps)_2TX
EBW
5240MHz


802.11a_(6Mbps)_2TX
EBW
5745MHz

802.11a_(6Mbps)_2TX
EBW
5785MHz

802.11a_(6Mbps)_2TX
EBW
5825MHz


802.11ac VHT20_Nss1,(MCS0)_2TX
EBW
5180MHz

802.11ac VHT20_Nss1,(MCS0)_2TX
EBW
5200MHz

802.11ac VHT20_Nss1,(MCS0)_2TX
EBW
5240MHz


802.11ac VHT20_Nss1,(MCS0)_2TX
EBW
5745MHz

802.11ac VHT20_Nss1,(MCS0)_2TX
EBW
5785MHz

802.11ac VHT20_Nss1,(MCS0)_2TX
EBW
5825MHz


802.11ac VHT40_Nss1,(MCS0)_2TX
EBW
5190MHz

802.11ac VHT40_Nss1,(MCS0)_2TX
EBW
5230MHz

802.11ac VHT40_Nss1,(MCS0)_2TX
EBW
5755MHz


802.11ac VHT40_Nss1,(MCS0)_2TX
EBW
5795MHz

802.11ac VHT80_Nss1,(MCS0)_2TX
EBW
5210MHz

802.11ac VHT80_Nss1,(MCS0)_2TX
EBW
5775MHz


<Point to Point>
Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
802.11a_(6Mbps)_2TX	-	-	-	-
5.15-5.25GHz	29.14	0.82035	41.64	14.58814
5.725-5.85GHz	29.52	0.89536	42.02	15.92209
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-
5.15-5.25GHz	29.31	0.85310	41.81	15.17050
5.725-5.85GHz	26.63	0.46026	39.13	8.18465
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-
5.15-5.25GHz	24.11	0.25763	36.61	4.58142
5.725-5.85GHz	27.75	0.59566	40.25	10.59254
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-
5.15-5.25GHz	11.03	0.01268	23.53	0.22542
5.725-5.85GHz	26.80	0.47863	39.30	8.51138

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11a_(6Mbps)_2TX	-	-	-	-	-	-
5180MHz	Pass	12.50	18.91	18.61	21.77	30.00
5200MHz	Pass	12.50	24.65	24.14	27.41	30.00
5240MHz	Pass	12.50	26.58	25.64	29.14	30.00
5745MHz	Pass	12.50	26.22	26.79	29.52	30.00
5785MHz	Pass	12.50	22.72	24.23	26.55	30.00
5825MHz	Pass	12.50	22.95	24.33	26.70	30.00
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	12.50	20.71	20.19	23.47	30.00
5200MHz	Pass	12.50	25.41	25.07	28.26	30.00
5240MHz	Pass	12.50	26.63	25.95	29.31	30.00
5745MHz	Pass	12.50	23.48	23.76	26.63	30.00
5785MHz	Pass	12.50	21.68	23.25	25.55	30.00
5825MHz	Pass	12.50	21.85	23.57	25.81	30.00
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	12.50	15.45	15.35	18.41	30.00
5230MHz	Pass	12.50	21.09	21.10	24.11	30.00
5755MHz	Pass	12.50	24.27	25.16	27.75	30.00
5795MHz	Pass	12.50	23.85	25.28	27.64	30.00
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	12.50	8.13	7.90	11.03	30.00
5775MHz	Pass	12.50	23.14	24.36	26.80	30.00

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

<Point to Multi-point>
Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
802.11a_(6Mbps)_2TX	-	-	-	-
5.15-5.25GHz	10.94	0.01242	20.87	0.12218
5.725-5.85GHz	23.36	0.21677	35.86	3.85478
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-
5.15-5.25GHz	10.96	0.01247	20.89	0.12274
5.725-5.85GHz	23.41	0.21928	35.91	3.89942
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-
5.15-5.25GHz	10.90	0.01230	20.83	0.12106
5.725-5.85GHz	23.23	0.21038	35.73	3.74111
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-
5.15-5.25GHz	11.03	0.01268	20.96	0.12474
5.725-5.85GHz	23.13	0.20559	35.63	3.65595

**Result**

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11a_(6Mbps)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	12.50	8.02	7.84	10.94	23.50	20.87	36.00
5200MHz	Pass	12.50	7.94	7.81	10.89	23.50	20.82	36.00
5240MHz	Pass	12.50	7.92	7.75	10.85	23.50	20.78	36.00
5745MHz	Pass	12.50	20.36	20.33	23.36	23.50	35.86	36.00
5785MHz	Pass	12.50	20.16	20.45	23.32	23.50	35.82	36.00
5825MHz	Pass	12.50	19.88	20.73	23.34	23.50	35.84	36.00
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	12.50	8.03	7.86	10.96	23.50	20.89	36.00
5200MHz	Pass	12.50	7.97	7.85	10.92	23.50	20.85	36.00
5240MHz	Pass	12.50	7.84	7.77	10.82	23.50	20.75	36.00
5745MHz	Pass	12.50	20.39	20.41	23.41	23.50	35.91	36.00
5785MHz	Pass	12.50	20.31	20.11	23.22	23.50	35.72	36.00
5825MHz	Pass	12.50	19.95	20.51	23.25	23.50	35.75	36.00
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5190MHz	Pass	12.50	7.93	7.85	10.90	23.50	20.83	36.00
5230MHz	Pass	12.50	7.87	7.73	10.81	23.50	20.74	36.00
5755MHz	Pass	12.50	19.70	20.62	23.19	23.50	35.69	36.00
5795MHz	Pass	12.50	19.93	20.50	23.23	23.50	35.73	36.00
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5210MHz	Pass	12.50	8.13	7.90	11.03	23.50	20.96	36.00
5775MHz	Pass	12.50	20.09	20.15	23.13	23.50	35.63	36.00

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



Elevation Elevation Angle Above 30 Degree Power Table

<Point to Multi-point>

Elevation Angle Above 30 Degree Power Table

Mode	Conducted Setting	Elevation angle above 30 degree Gain (dBi)	Array Gain (dBi)	Directional Gain (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)	Elevation angle above 30 degree EIRP (dBm)	Elevation angle above 30 degree EIRP Limit (dBm)
802.11a_(6Mbps)_2TX	-	-	-	-	-	-	-	-	-	-
5180MHz	8	9.93	0	12.50	8.02	7.84	10.94	23.5	20.87	21.00
5200MHz	8	9.93	0	12.50	7.94	7.81	10.89	23.5	20.82	21.00
5240MHz	8	9.93	0	12.50	7.92	7.75	10.85	23.5	20.78	21.00
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-
5180MHz	8	9.93	0	12.50	8.03	7.86	10.96	23.5	20.89	21.00
5200MHz	8	9.93	0	12.50	7.97	7.85	10.92	23.5	20.85	21.00
5240MHz	8	9.93	0	12.50	7.84	7.77	10.82	23.5	20.75	21.00
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-
5190MHz	8.5	9.93	0	12.50	7.93	7.85	10.90	23.5	20.83	21.00
5230MHz	8.5	9.93	0	12.50	7.87	7.73	10.81	23.5	20.74	21.00
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-
5210MHz	9	9.93	0	12.50	8.13	7.90	11.03	23.5	20.96	21.00

Note :

1. For CDD mode power measurements; array Gain = 0 dB (i.e., no array gain) for NANT ≤ 4.
2. EIRP = Total Power + Directional Gain.

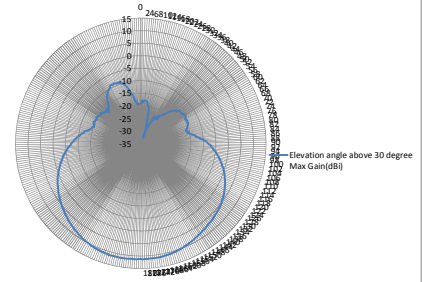


SPORTON International Inc.

No.8, Lane 724, Bo-ai St., Jhubei City, Hsinchu County 302, Taiwan, R.O.C.
Ph: 886-3-656-9065 / FAX: 886-3-656-9085 / www.sporton.com.tw

Elevation angle above 30 degree Max Gain(dBi)		9.9352
Freq. (MHz)	Gain(dBm)	Elevation Angle Define
H-Plan angle(Degree)		
0	-19.0408	
1	-18.9108	
2	-17.9728	
3	-18.6438	
4	-18.1598	
5	-17.8128	
6	-17.8048	
7	-17.8688	
8	-18.1678	
9	-18.2308	
10	-19.4438	
11	-19.6968	
12	-20.0478	
13	-20.4638	
14	-21.6308	
15	-23.2738	
16	-25.9418	
17	-27.4998	
18	-26.6198	
19	-28.9218	
20	-29.5828	
21	-32.6108	
22	-29.6328	
23	-27.6828	
24	-28.2478	
25	-25.5538	
26	-25.6878	
27	-23.3488	
28	-24.3888	
29	-22.9618	
30	-23.9918	
31	-22.8278	
32	-22.5328	
33	-21.9028	
34	-23.3578	
35	-21.4618	
36	-21.2068	
37	-20.6168	
38	-20.1538	
39	-20.4028	
40	-19.7408	
41	-18.8238	
42	-18.2128	
43	-17.7378	
44	-17.4518	
45	-16.5888	
46	-16.3418	
47	-15.6658	
48	-15.8458	
49	-15.4428	
50	-14.6478	
51	-14.9358	
52	-14.8628	
53	-14.9088	
54	-14.9838	
55	-14.4828	
56	-14.1738	
57	-14.4808	
58	-14.0148	
59	-13.9748	
60	-14.3758	
61	-14.4528	
62	-14.9758	
63	-14.6678	
64	-14.3378	
65	-14.6018	
66	-14.6588	
67	-14.3748	
68	-14.6868	
69	-14.6278	
70	-15.1468	
71	-15.2438	
72	-15.3948	
73	-15.7708	
74	-16.2448	
75	-15.9288	
76	-16.1408	
77	-15.4038	
78	-15.8358	
79	-15.2118	
80	-14.4718	
81	-14.0528	
82	-13.1178	
83	-13.0358	
84	-12.2908	
85	-11.5388	
86	-10.9428	
87	-10.2168	
88	-9.5528	
89	-8.7468	
90	-8.3218	
91	-7.9238	
92	-7.1158	
93	-6.8558	
94	-6.5818	
95	-5.9288	
96	-5.6128	
97	-4.9158	
98	-4.5418	
99	-4.1598	
100	-3.5928	
101	-3.2138	
102	-2.7578	
103	-2.3478	
104	-2.0078	
105	-1.5718	
106	-1.2888	
107	-0.6068	
108	-0.4128	
109	-0.1378	
110	0.3712	
111	0.5882	
112	1.0412	
113	1.3212	
114	1.6562	
115	1.9892	
116	2.2702	
117	2.5382	
118	2.7832	
119	3.0892	
120	3.3282	
121	3.4852	
122	3.9592	
123	4.1272	

Elevation angle above 30 degree Max Gain(dBi)



Above 30°

124	4.2862	0° ~ 30°
125	4.5172	
126	4.7272	
127	4.9782	
128	5.1802	
129	5.3752	
130	5.4982	
131	5.7242	
132	5.8162	
133	6.0292	
134	6.1502	
135	6.3122	
136	6.4622	
137	6.5792	
138	6.7772	
139	6.8422	
140	6.9932	
141	7.0922	
142	7.3122	
143	7.4442	
144	7.5882	
145	7.7232	
146	7.8662	
147	7.9932	
148	8.1872	
149	8.3232	
150	8.4662	
151	8.6402	
152	8.8472	
153	9.0012	
154	9.1742	
155	9.2892	
156	9.4462	
157	9.5932	
158	9.7742	
159	9.9352	
160	10.0682	
161	10.1922	
162	10.2992	
163	10.4002	
164	10.5222	
165	10.5962	
166	10.7102	
167	10.7752	
168	10.8092	
169	10.8732	
170	10.9822	
171	11.0582	
172	11.0662	
173	11.0942	
174	11.1132	
175	11.1502	
176	11.1572	
177	11.1962	
178	11.2662	
179	11.2272	
180	11.2522	
181	11.2272	
182	11.2312	
183	11.2702	
184	11.2982	
185	11.3022	
186	11.2862	
187	11.3092	
188	11.3282	
189	11.3802	
190	11.3912	0° reference angle
191	11.3442	
192	11.3672	
193	11.3392	
194	11.3162	
195	11.2922	
196	11.2842	
197	11.2392	
198	11.1742	
199	11.1262	
200	11.0242	
201	10.9592	
202	10.8802	
203	10.7812	
204	10.7112	
205	10.5752	
206	10.4402	
207	10.3392	
208	10.2102	
209	10.0712	
210	9.9092	
211	9.7622	
212	9.5912	
213	9.4362	
214	9.2782	
215	9.0612	
216	8.8642	
217	8.6622	
218	8.4742	
219	8.3142	
220	8.0722	
221	7.8922	
222	7.6432	
223	7.4502	
224	7.2142	
225	7.0322	
226	6.7672	
227	6.5262	
228	6.2812	
229	6.0672	
230	5.8202	
231	5.6112	
232	5.3652	
233	5.1072	
234	4.8782	
235	4.6522	
236	4.3932	
237	4.1712	
238	3.7912	
239	3.7062	
240	3.3672	
241	3.1262	
242	2.8422	
243	2.6052	
244	2.2662	
245	1.9902	
246	1.7272	
247	1.4092	
248	1.2012	
249	0.8682	
250	0.4362	
251	0.1882	
252	-0.1868	
253	-0.3918	
254	-0.8598	
255	-1.2368	

256	-1.4538	Above 30°
257	-1.9228	
258	-2.2408	
259	-2.6928	
260	-2.9668	
261	-3.2738	
262	-3.5478	
263	-4.0338	
264	-4.4398	
265	-4.7378	
266	-5.2498	
267	-5.5478	
268	-5.9628	
269	-6.4338	
270	-7.0368	
271	-7.0848	
272	-7.6148	
273	-8.1058	
274	-8.4978	
275	-8.6478	
276	-9.2078	
277	-9.4818	
278	-9.8848	
279	-10.4548	
280	-10.7568	
281	-11.1338	
282	-11.7578	
283	-11.9558	
284	-12.2898	
285	-13.2428	
286	-13.4168	
287	-14.0508	
288	-14.4468	
289	-14.5678	
290	-14.6468	
291	-15.2528	
292	-15.0318	
293	-15.0578	
294	-15.2018	
295	-14.4428	
296	-14.3478	
297	-14.8398	
298	-14.5728	
299	-14.6618	
300	-14.9758	
301	-15.0138	
302	-14.5258	
303	-14.6748	
304	-14.8788	
305	-15.0078	
306	-15.0958	
307	-15.5058	
308	-15.5168	
309	-14.8198	
310	-15.4148	
311	-15.8448	
312	-15.8578	
313	-16.3568	
314	-15.9788	
315	-16.2318	
316	-17.1808	
317	-15.4768	
318	-16.6928	
319	-15.9208	
320	-15.7768	
321	-15.4188	
322	-14.3508	
323	-14.2178	
324	-13.2658	
325	-12.4428	
326	-11.9448	
327	-11.5158	
328	-11.3498	
329	-10.8488	
330	-10.3848	
331	-10.1358	
332	-9.8438	
333	-9.5388	
334	-8.9688	
335	-8.8838	
336	-9.2618	
337	-8.9198	
338	-8.8328	
339	-9.1038	
340	-9.2708	
341	-8.9928	
342	-9.4078	
343	-9.3248	
344	-9.7728	
345	-10.0458	
346	-10.5188	
347	-11.0198	
348	-11.8068	
349	-12.5408	
350	-13.4148	
351	-14.2508	
352	-15.3938	
353	-16.0868	
354	-17.7768	
355	-17.7648	
356	-18.7108	
357	-19.4258	
358	-19.2398	
359	-19.4608	
360	-19.2718	

<Point to Point>

Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
802.11a_(6Mbps)_2TX	-	-
5.15-5.25GHz	16.03	31.54
5.725-5.85GHz	15.04	30.55
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-
5.15-5.25GHz	15.92	31.43
5.725-5.85GHz	11.91	27.42
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-
5.15-5.25GHz	7.87	23.38
5.725-5.85GHz	10.53	26.04
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-
5.15-5.25GHz	-7.44	8.07
5.725-5.85GHz	7.25	22.76

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

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11a_(6Mbps)_2TX	-	-	-	-	-	-
5180MHz	Pass	15.51	5.69	5.33	8.50	17.00
5200MHz	Pass	15.51	11.51	10.88	14.11	17.00
5240MHz	Pass	15.51	13.65	12.48	16.03	17.00
5745MHz	Pass	15.51	11.97	12.39	15.04	30.00
5785MHz	Pass	15.51	8.50	10.20	12.29	30.00
5825MHz	Pass	15.51	8.70	9.89	12.34	30.00
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	15.51	7.21	6.76	9.92	17.00
5200MHz	Pass	15.51	12.00	11.72	14.81	17.00
5240MHz	Pass	15.51	13.34	12.84	15.92	17.00
5745MHz	Pass	15.51	8.76	9.08	11.91	30.00
5785MHz	Pass	15.51	7.36	8.84	11.12	30.00
5825MHz	Pass	15.51	7.63	9.28	11.47	30.00
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	15.51	-0.79	-0.69	2.16	17.00
5230MHz	Pass	15.51	5.17	4.94	7.87	17.00
5755MHz	Pass	15.51	7.28	7.82	10.46	30.00
5795MHz	Pass	15.51	6.93	8.31	10.53	30.00
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	15.51	-10.32	-10.52	-7.44	17.00
5775MHz	Pass	15.51	3.80	4.91	7.25	30.00

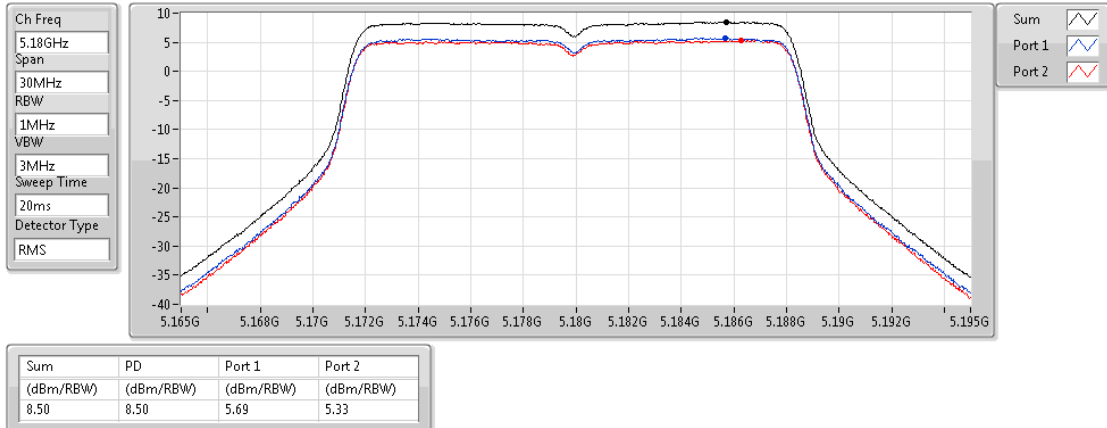
DG = Directional Gain; **RBW** = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

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

802.11a_(6Mbps)_2TX

PSD

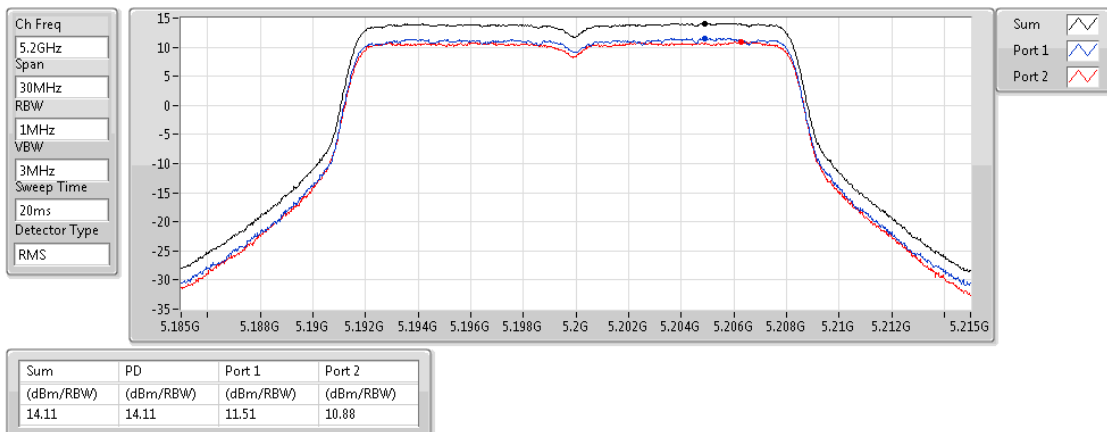
5180MHz



802.11a_(6Mbps)_2TX

PSD

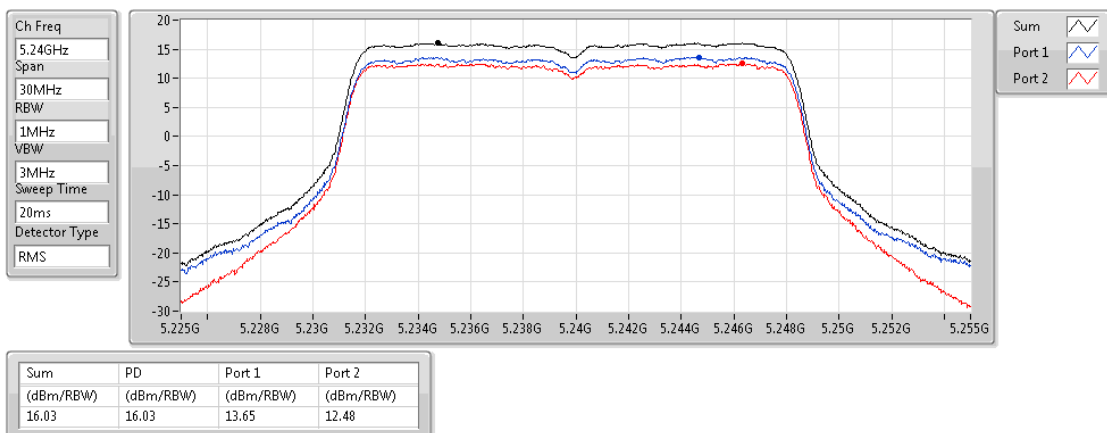
5200MHz



802.11a_(6Mbps)_2TX

PSD

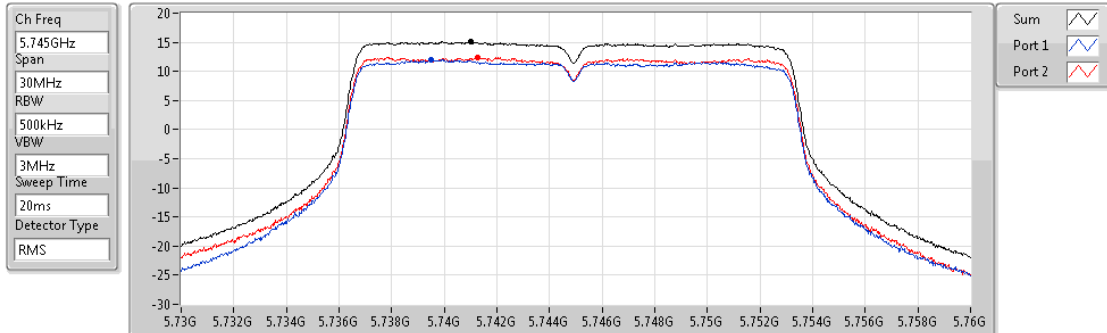
5240MHz



802.11a_(6Mbps)_2TX

PSD

5745MHz

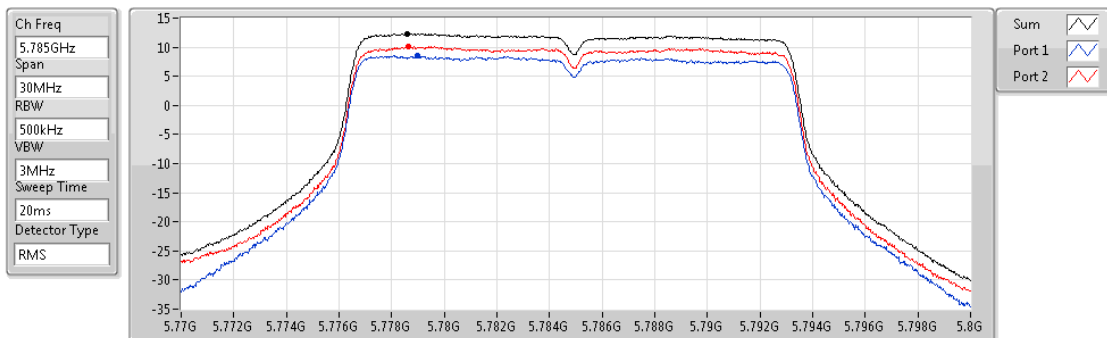


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
15.04	15.04	11.97	12.39

802.11a_(6Mbps)_2TX

PSD

5785MHz

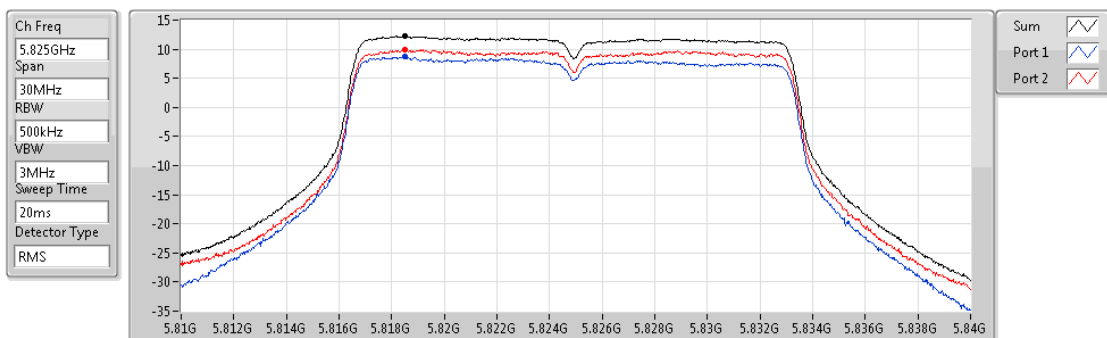


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
12.29	12.29	8.50	10.20

802.11a_(6Mbps)_2TX

PSD

5825MHz

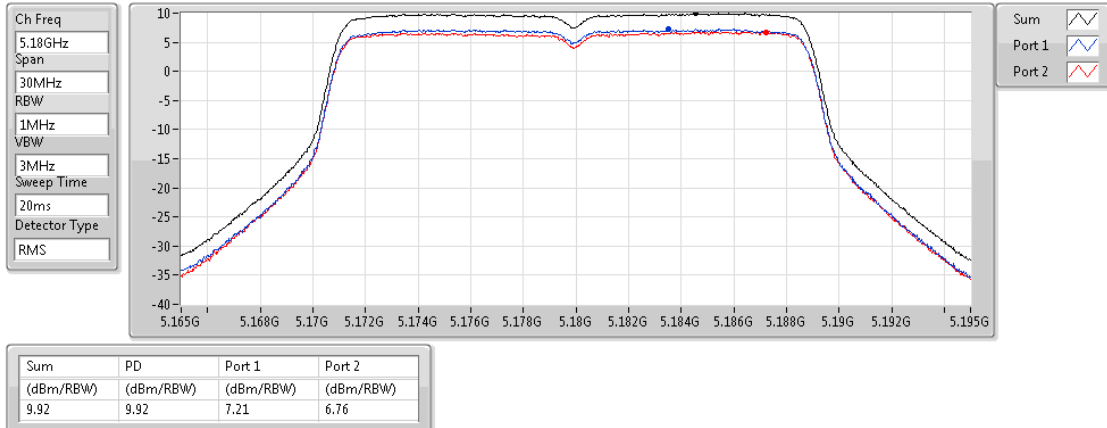


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
12.34	12.34	8.70	9.89

802.11ac VHT20_Nss1,(MCS0)_2TX

PSD

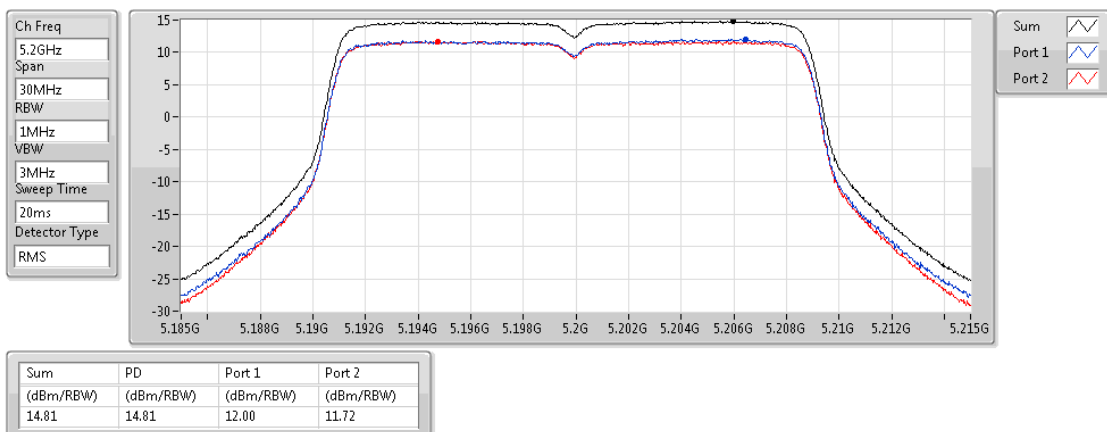
5180MHz



802.11ac VHT20_Nss1,(MCS0)_2TX

PSD

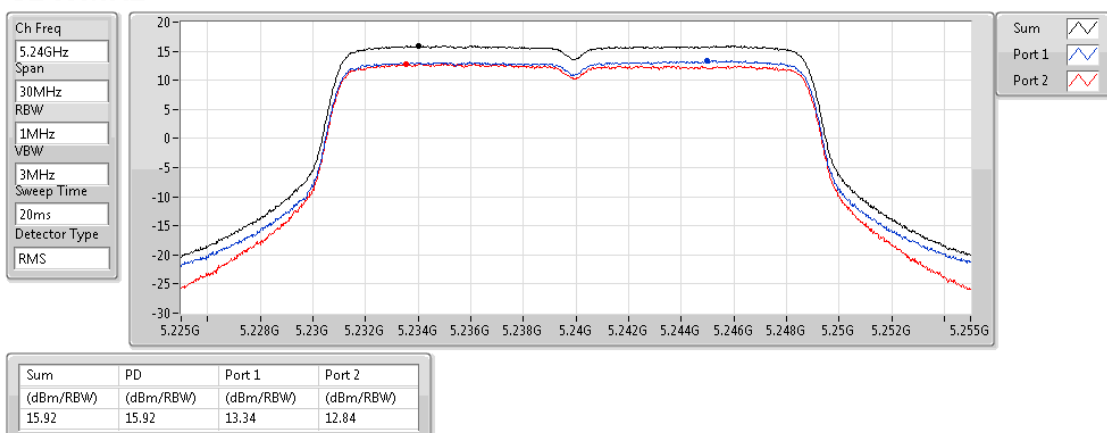
5200MHz



802.11ac VHT20_Nss1,(MCS0)_2TX

PSD

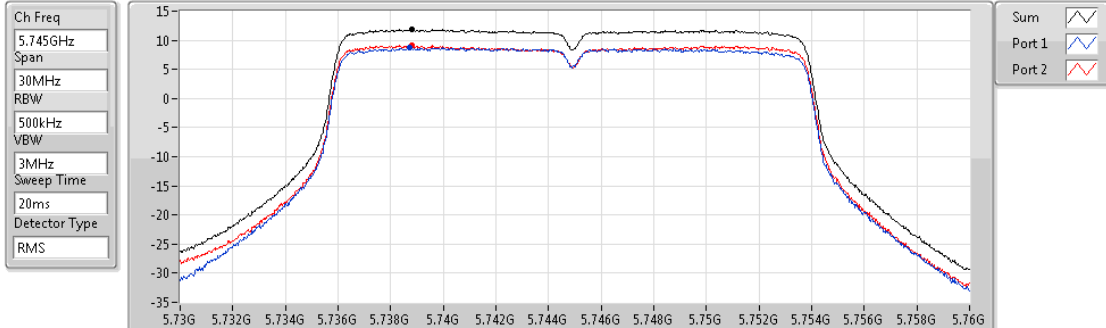
5240MHz



802.11ac VHT20_Nss1,(MCS0)_2TX

PSD

5745MHz

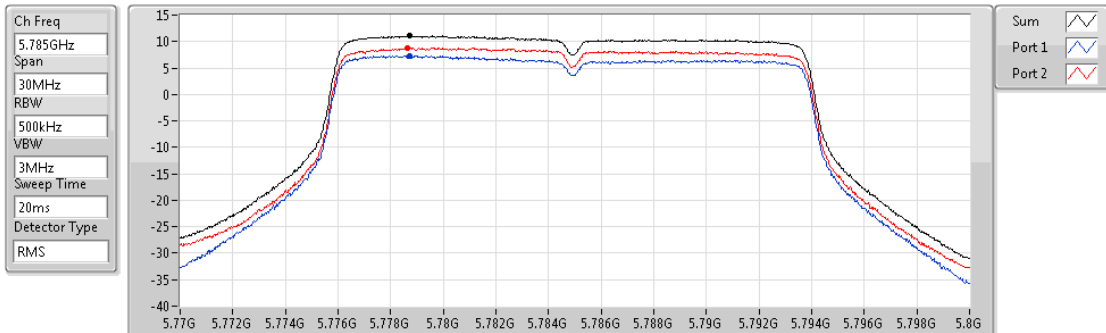


Sum	PD	Port 1	Port 2
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
11.91	11.91	8.76	9.08

802.11ac VHT20_Nss1,(MCS0)_2TX

PSD

5785MHz

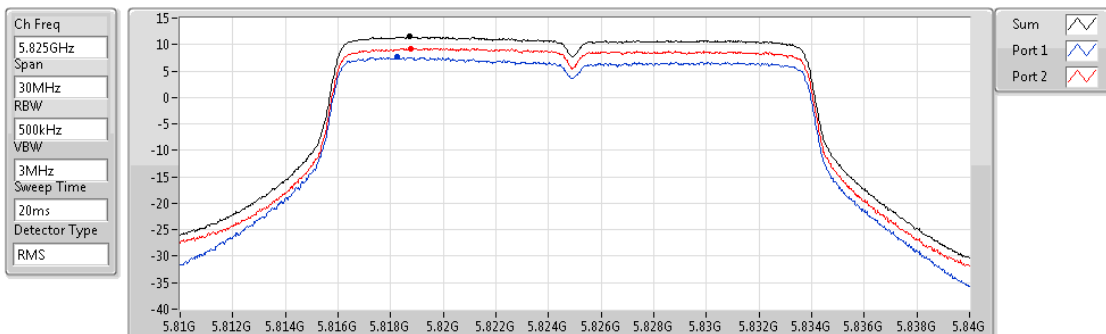


Sum	PD	Port 1	Port 2
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
11.12	11.12	7.36	8.84

802.11ac VHT20_Nss1,(MCS0)_2TX

PSD

5825MHz

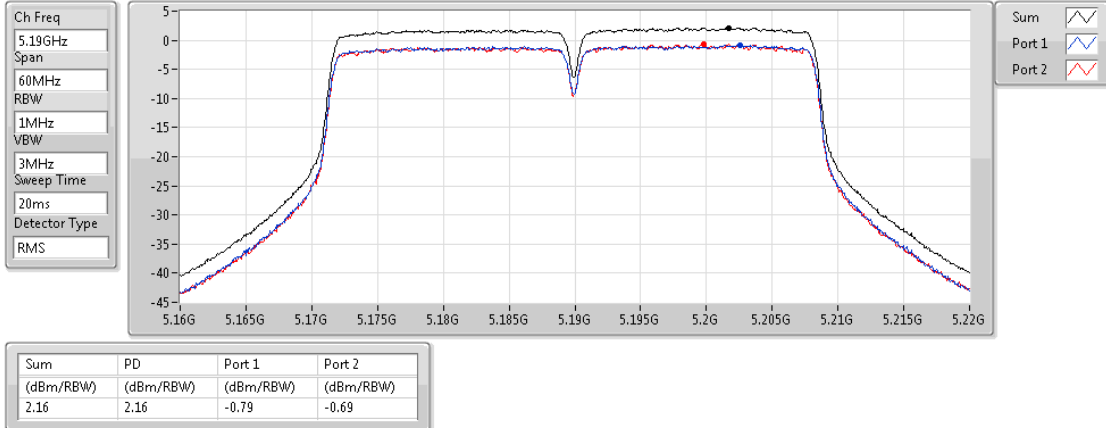


Sum	PD	Port 1	Port 2
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
11.47	11.47	7.63	9.28

802.11ac VHT40_Nss1,(MCS0)_2TX

PSD

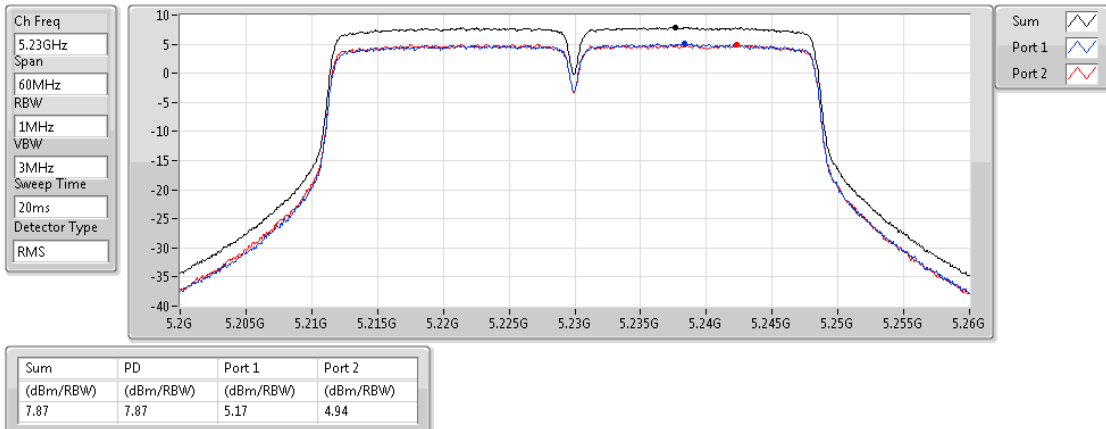
5190MHz



802.11ac VHT40_Nss1,(MCS0)_2TX

PSD

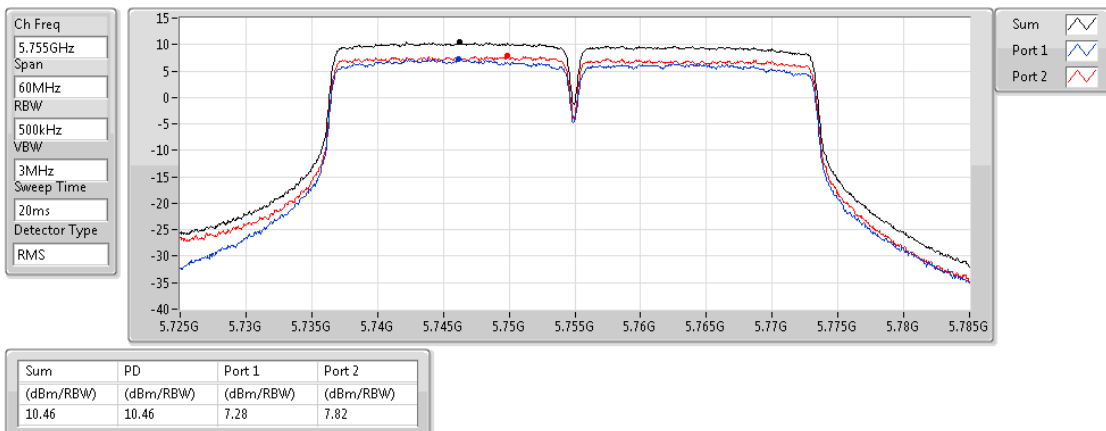
5230MHz



802.11ac VHT40_Nss1,(MCS0)_2TX

PSD

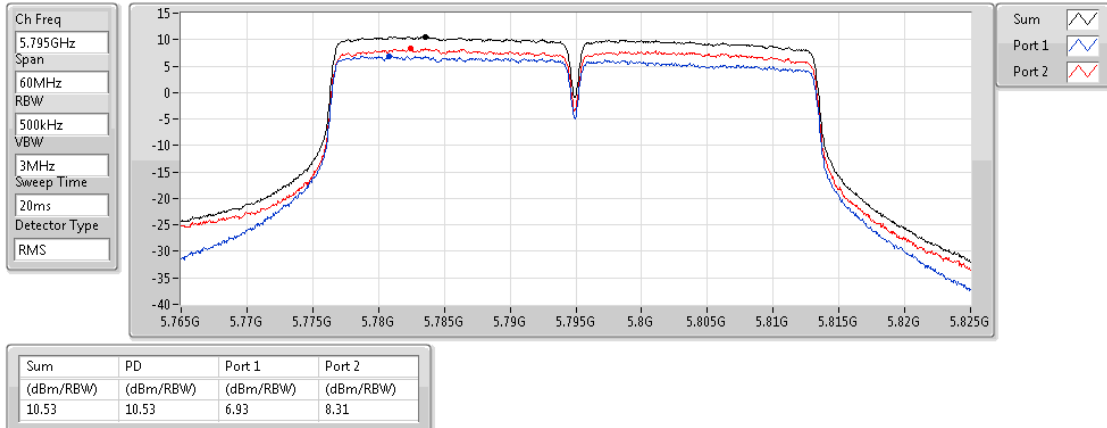
5755MHz



802.11ac VHT40_Nss1,(MCS0)_2TX

PSD

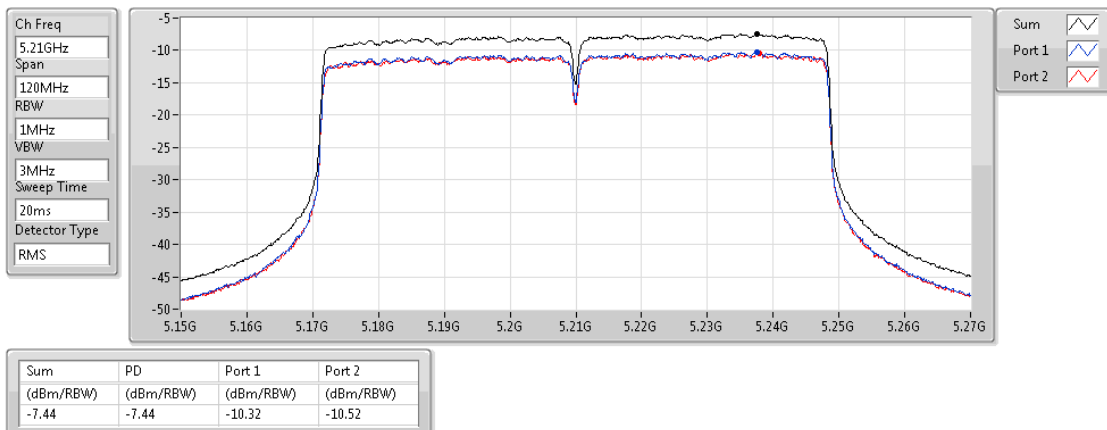
5795MHz



802.11ac VHT80_Nss1,(MCS0)_2TX

PSD

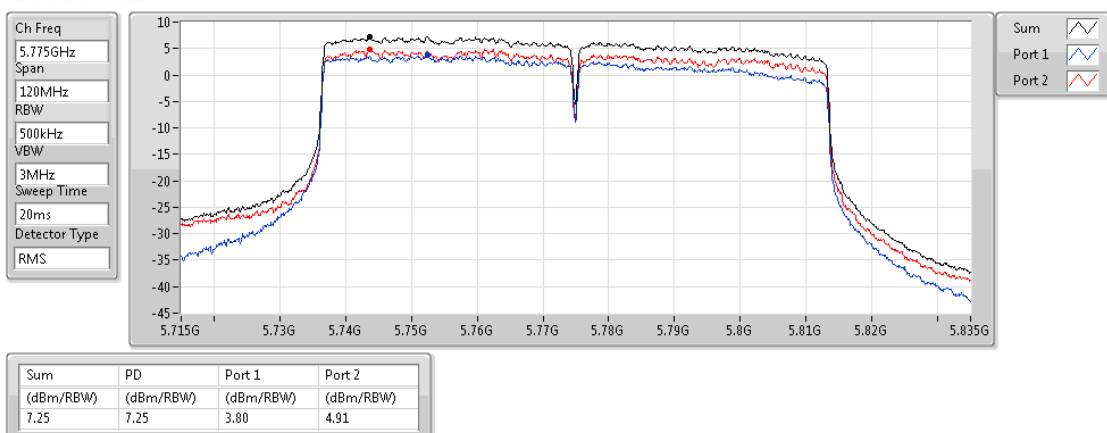
5210MHz



802.11ac VHT80_Nss1,(MCS0)_2TX

PSD

5775MHz



<Point to Multi-point>
Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
802.11a_(6Mbps)_2TX	-	-
5.15-5.25GHz	-1.81	13.70
5.725-5.85GHz	9.61	25.12
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-
5.15-5.25GHz	-2.18	13.33
5.725-5.85GHz	9.19	24.70
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-
5.15-5.25GHz	-4.84	10.67
5.725-5.85GHz	6.55	22.06
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-
5.15-5.25GHz	-7.44	8.07
5.725-5.85GHz	3.46	18.97

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

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11a_(6Mbps)_2TX	-	-	-	-	-	-
5180MHz	Pass	15.51	-4.73	-4.96	-1.92	7.49
5200MHz	Pass	15.51	-4.71	-4.82	-1.81	7.49
5240MHz	Pass	15.51	-4.94	-5.22	-2.14	7.49
5745MHz	Pass	15.51	6.68	6.61	9.61	20.49
5785MHz	Pass	15.51	5.93	6.43	9.15	20.49
5825MHz	Pass	15.51	6.15	6.73	9.41	20.49
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	15.51	-5.13	-5.36	-2.27	7.49
5200MHz	Pass	15.51	-5.03	-5.31	-2.18	7.49
5240MHz	Pass	15.51	-5.37	-5.52	-2.50	7.49
5745MHz	Pass	15.51	6.31	6.20	9.19	20.49
5785MHz	Pass	15.51	5.32	5.41	8.33	20.49
5825MHz	Pass	15.51	6.02	6.28	9.05	20.49
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	15.51	-7.69	-7.93	-4.84	7.49
5230MHz	Pass	15.51	-7.95	-8.08	-5.08	7.49
5755MHz	Pass	15.51	3.26	3.93	6.55	20.49
5795MHz	Pass	15.51	3.16	3.58	6.39	20.49
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	15.51	-10.32	-10.52	-7.44	7.49
5775MHz	Pass	15.51	0.57	0.77	3.46	20.49

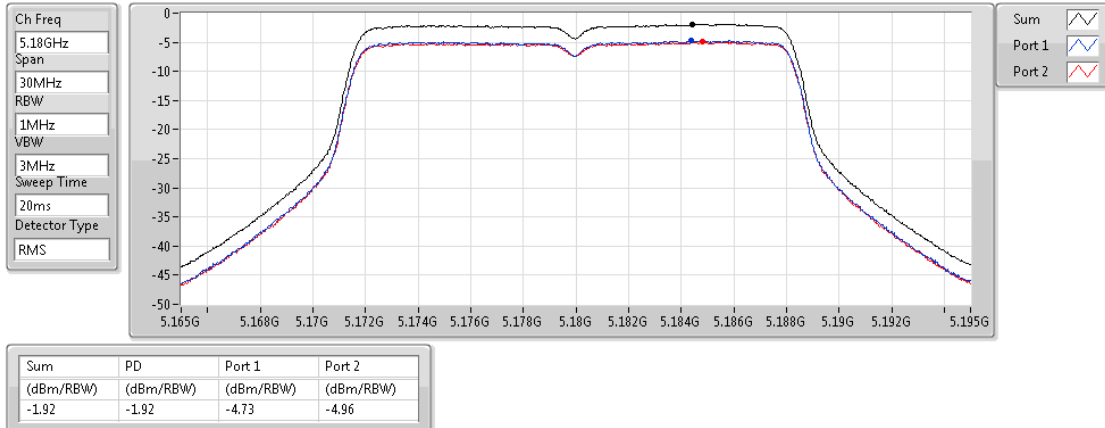
DG = Directional Gain; **RBW** = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

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

802.11a_(6Mbps)_2TX

PSD

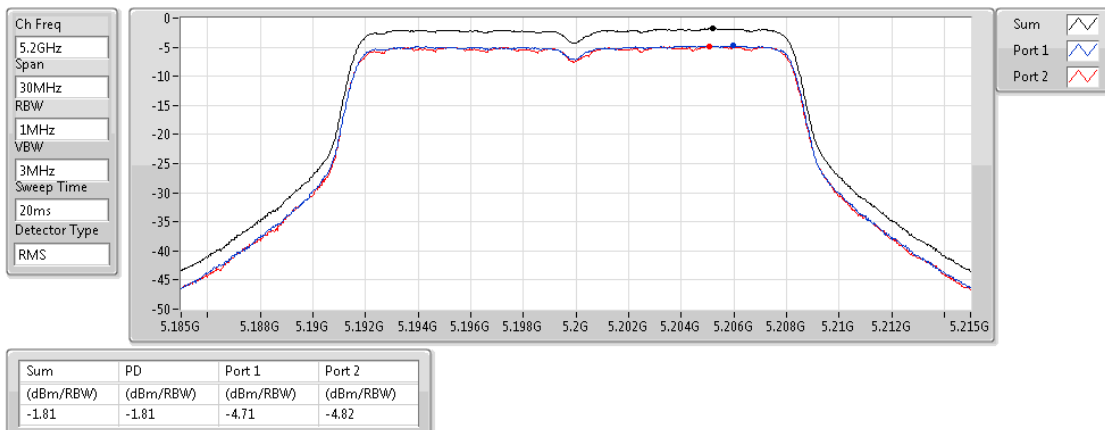
5180MHz



802.11a_(6Mbps)_2TX

PSD

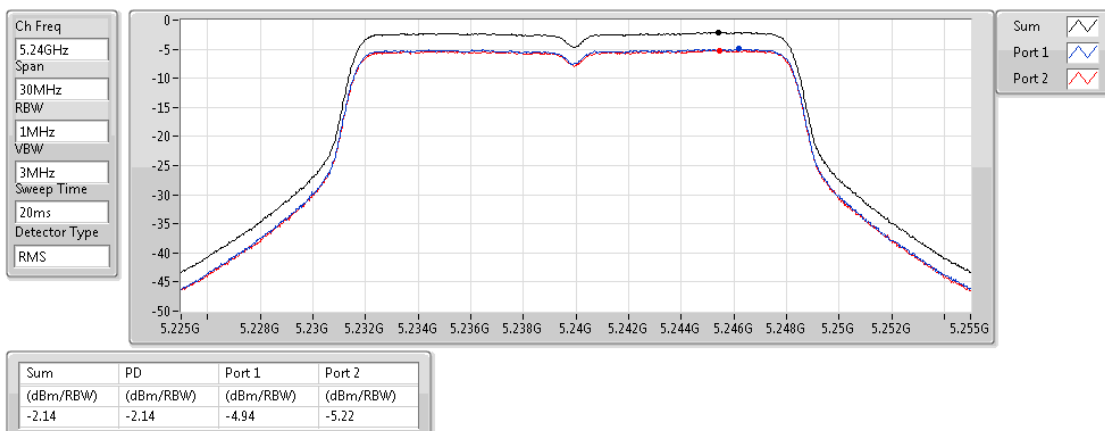
5200MHz



802.11a_(6Mbps)_2TX

PSD

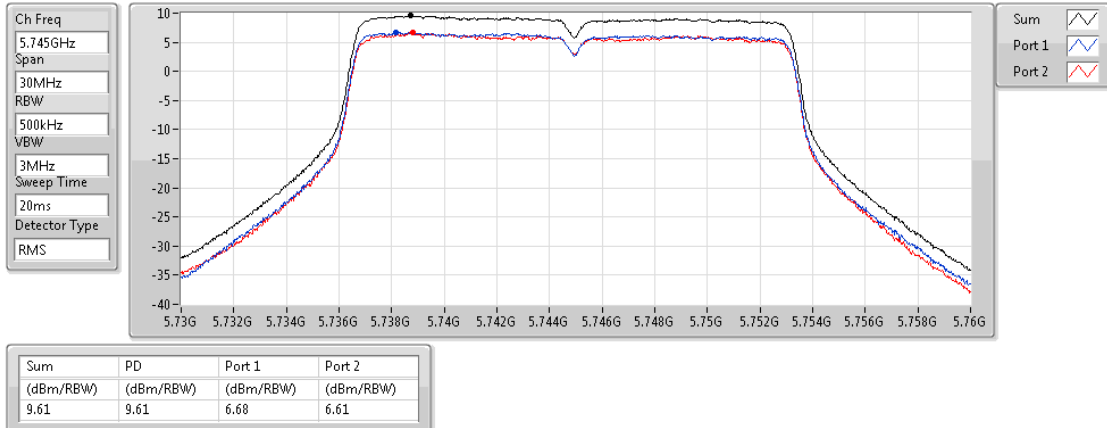
5240MHz



802.11a_(6Mbps)_2TX

PSD

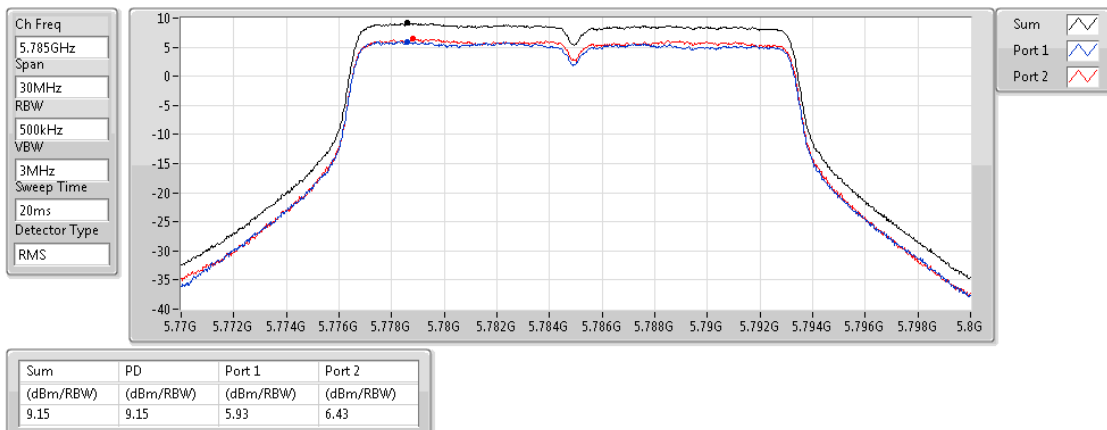
5745MHz



802.11a_(6Mbps)_2TX

PSD

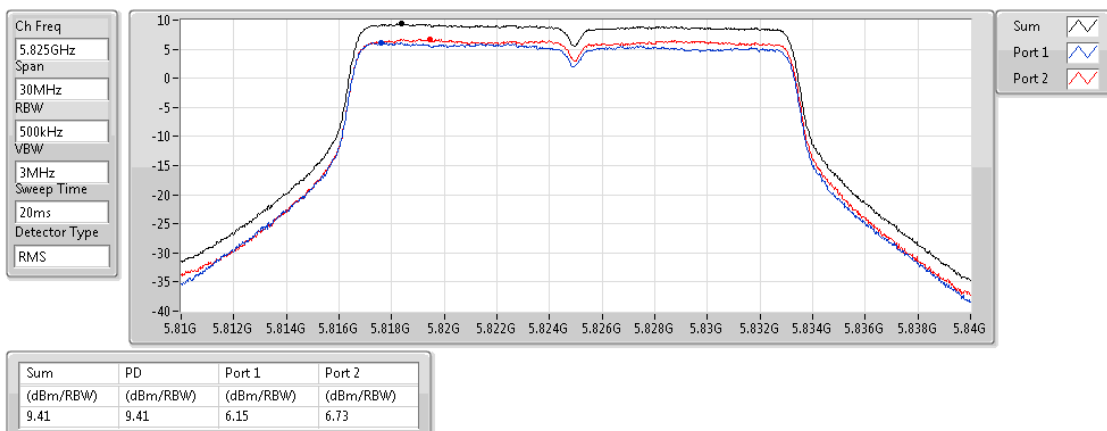
5785MHz



802.11a_(6Mbps)_2TX

PSD

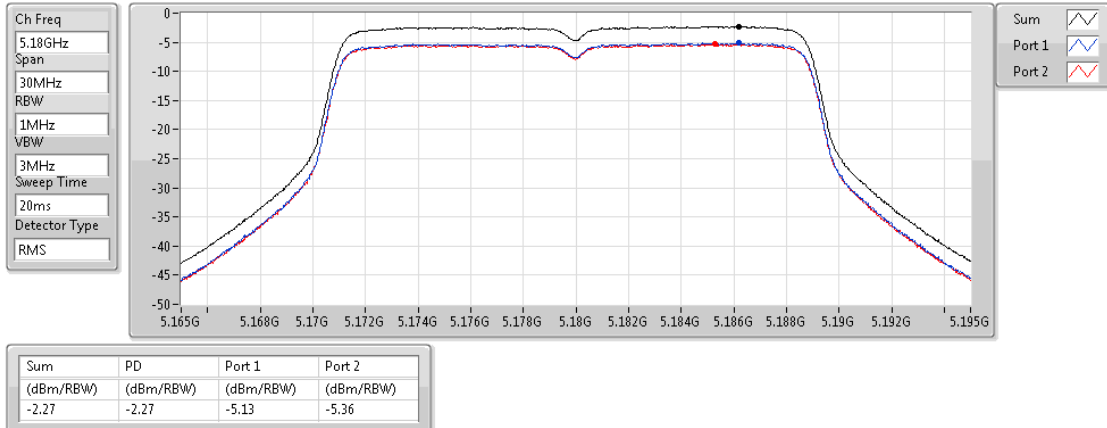
5825MHz



802.11ac VHT20_Nss1,(MCS0)_2TX

PSD

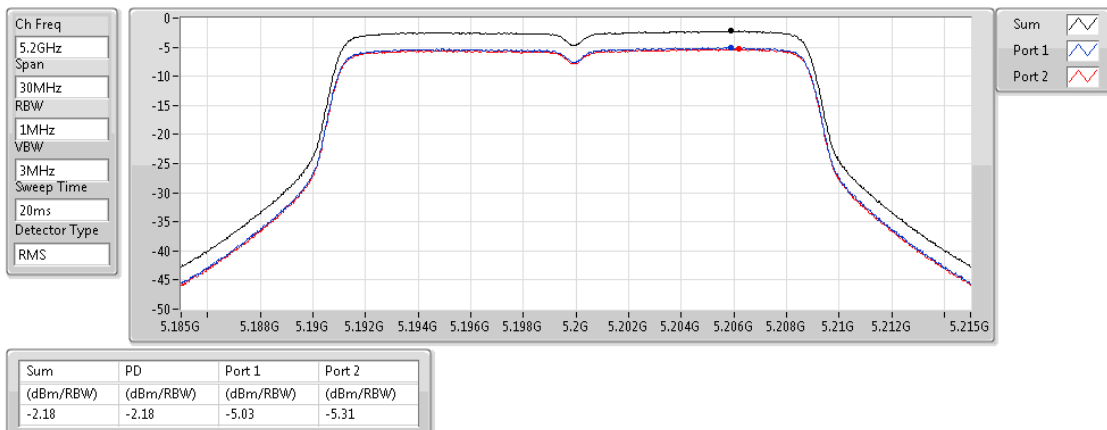
5180MHz



802.11ac VHT20_Nss1,(MCS0)_2TX

PSD

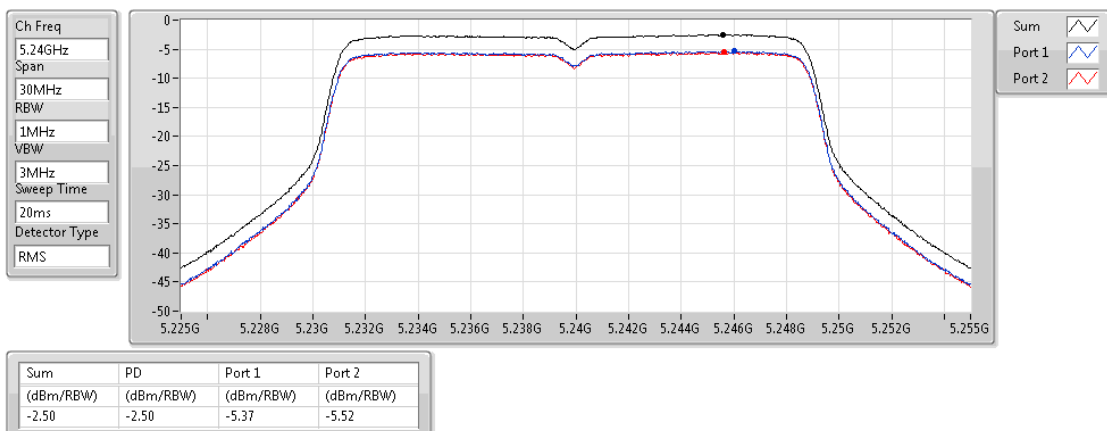
5200MHz



802.11ac VHT20_Nss1,(MCS0)_2TX

PSD

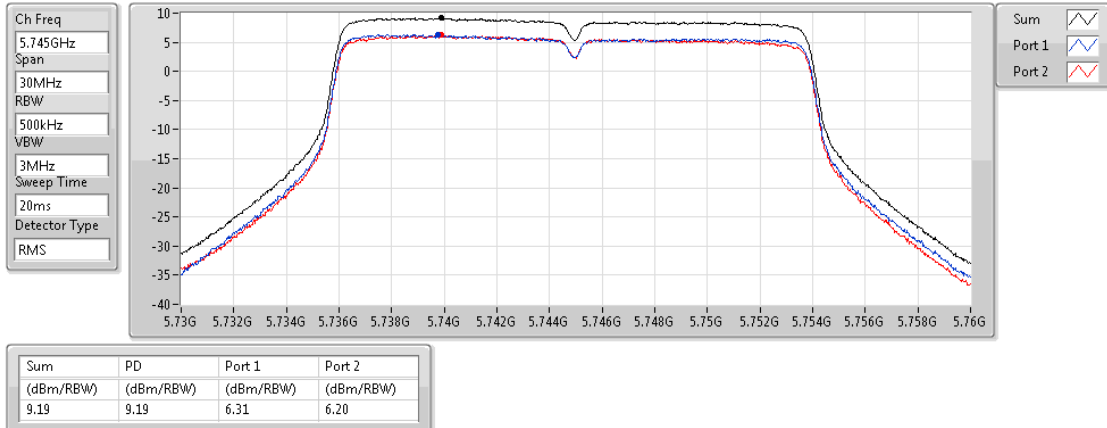
5240MHz



802.11ac VHT20_Nss1,(MCS0)_2TX

PSD

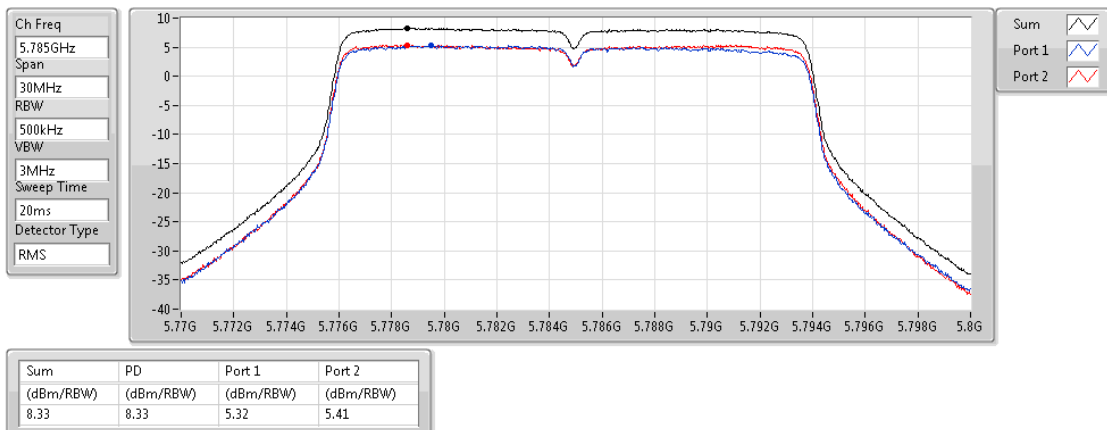
5745MHz



802.11ac VHT20_Nss1,(MCS0)_2TX

PSD

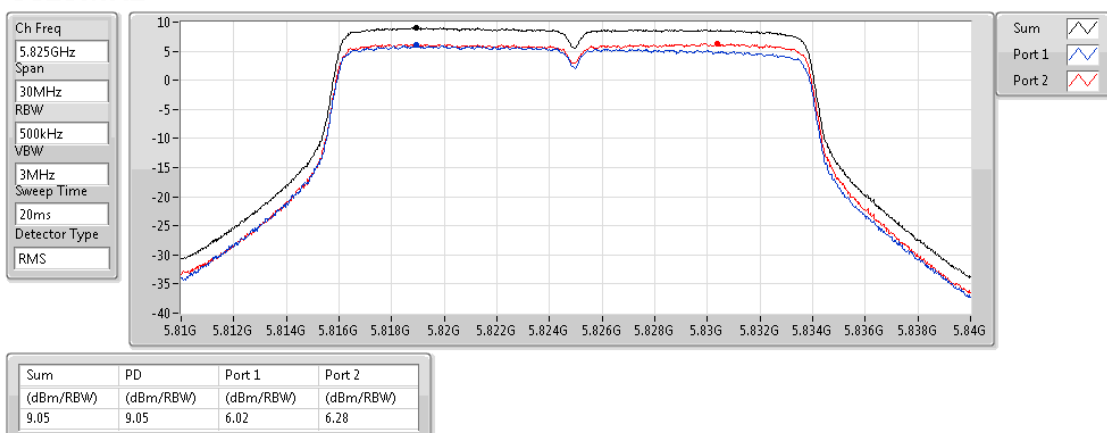
5785MHz



802.11ac VHT20_Nss1,(MCS0)_2TX

PSD

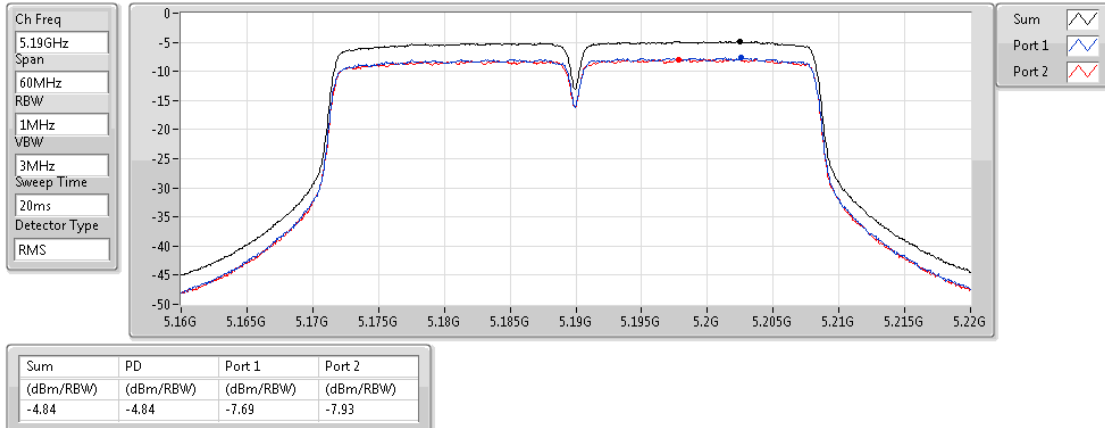
5825MHz



802.11ac VHT40_Nss1,(MCS0)_2TX

PSD

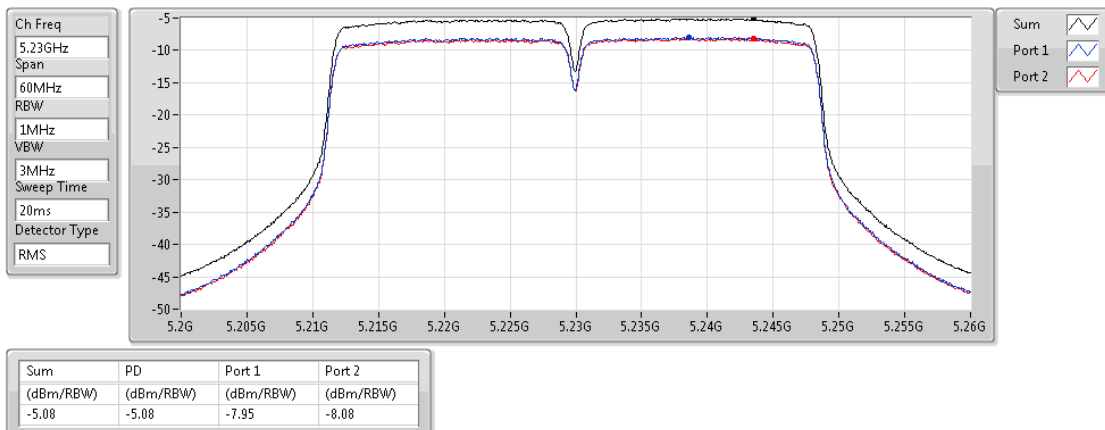
5190MHz



802.11ac VHT40_Nss1,(MCS0)_2TX

PSD

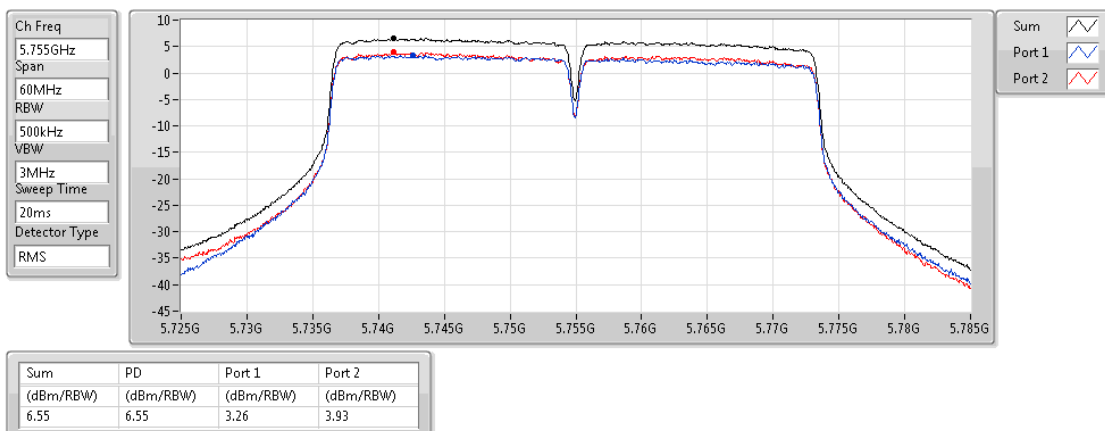
5230MHz



802.11ac VHT40_Nss1,(MCS0)_2TX

PSD

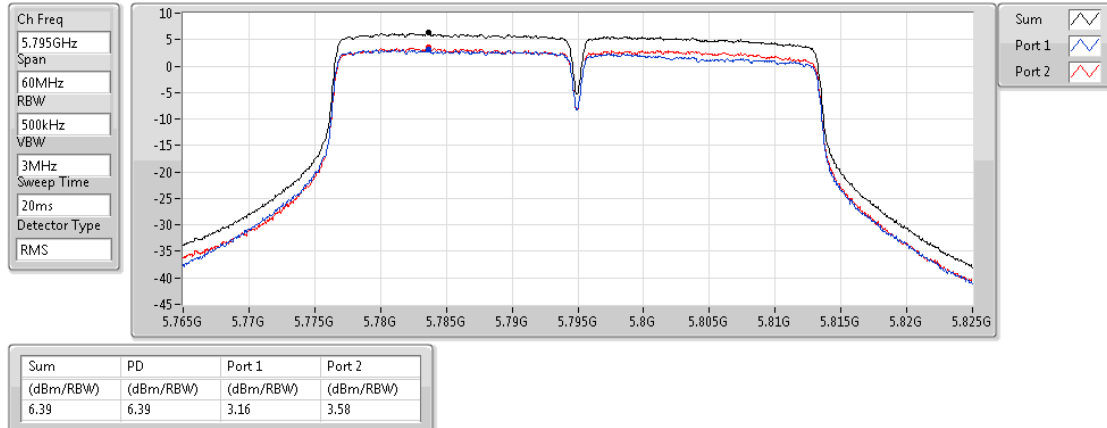
5755MHz



802.11ac VHT40_Nss1,(MCS0)_2TX

PSD

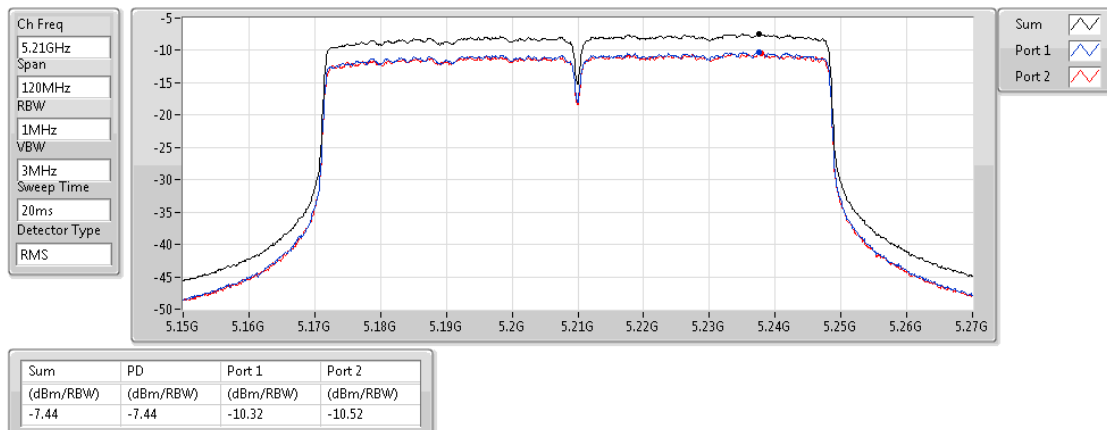
5795MHz



802.11ac VHT80_Nss1,(MCS0)_2TX

PSD

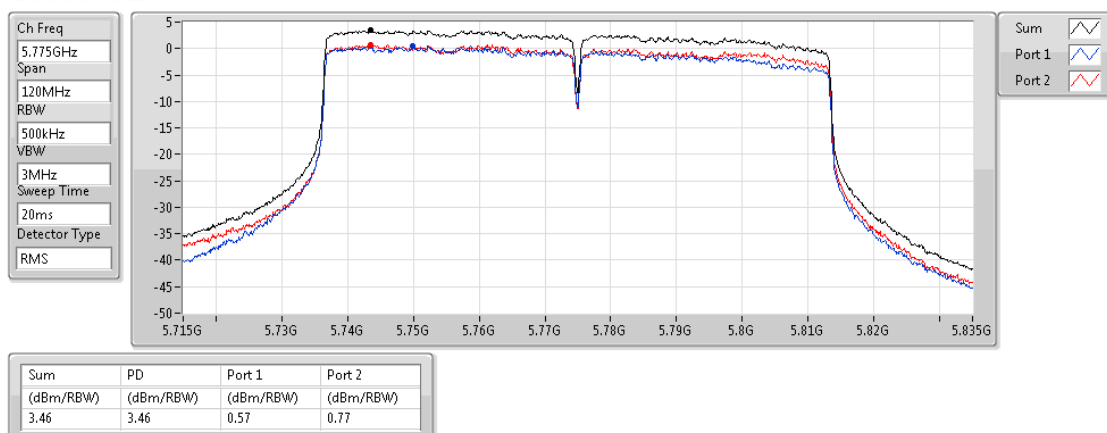
5210MHz

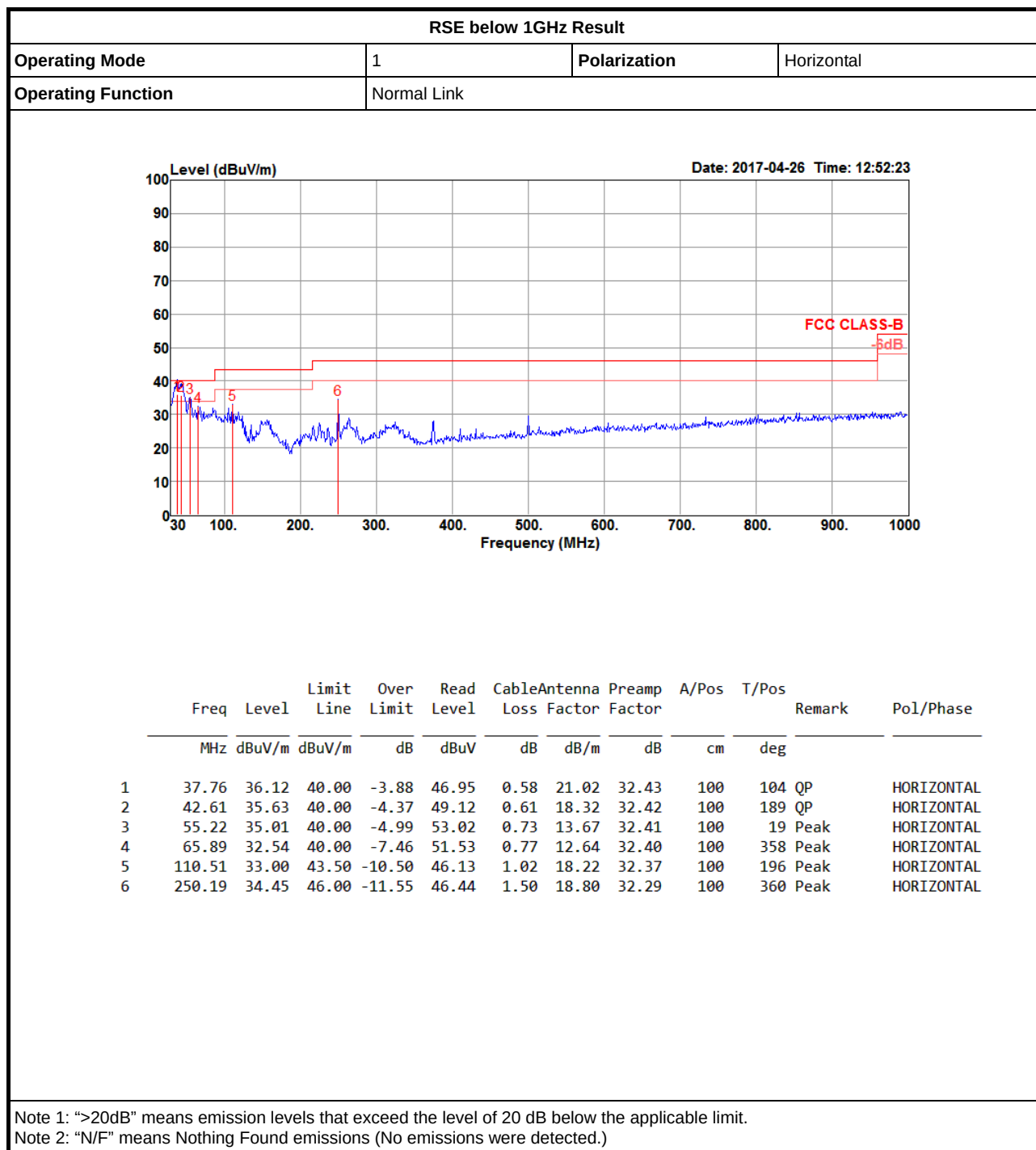


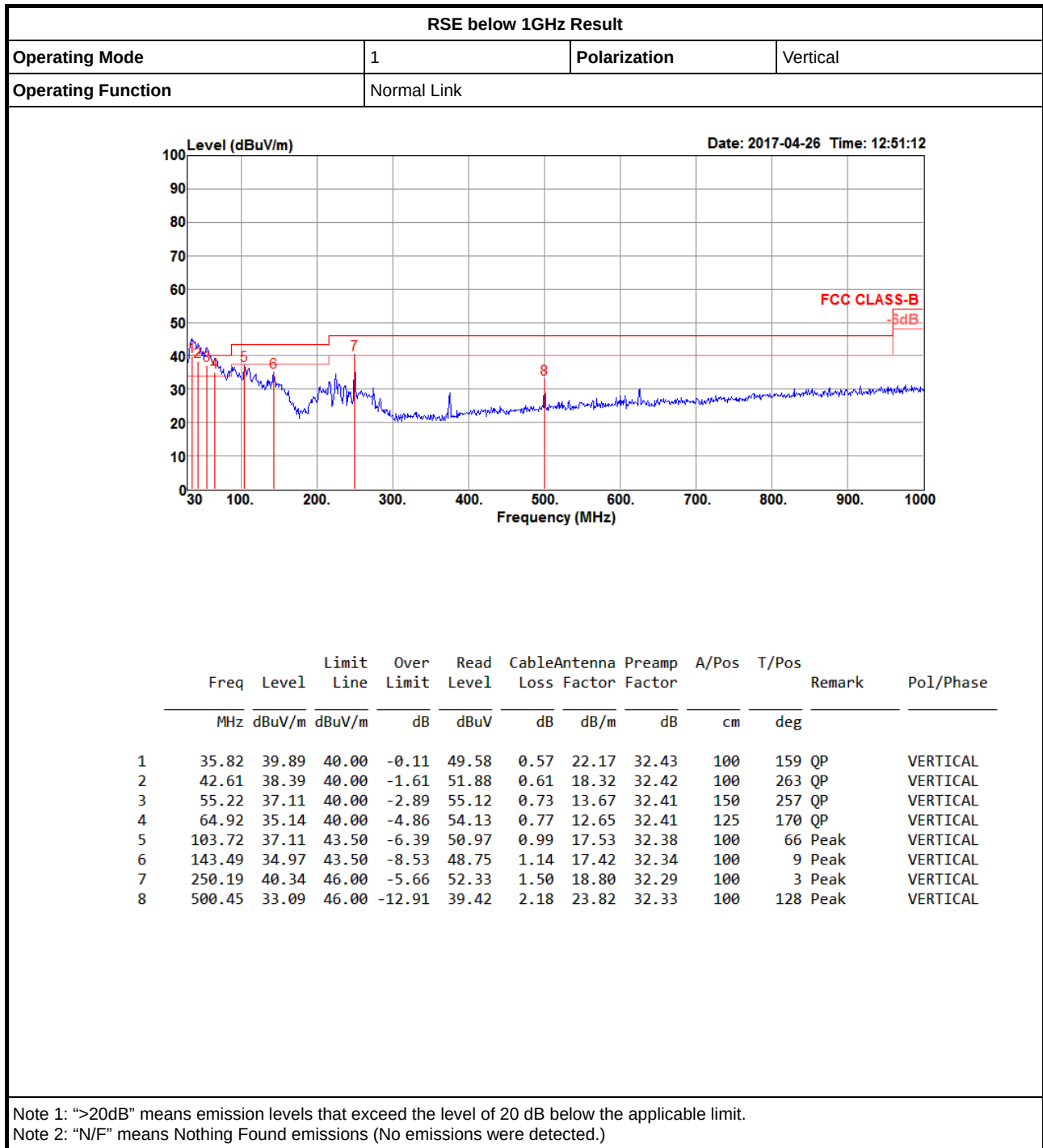
802.11ac VHT80_Nss1,(MCS0)_2TX

PSD

5775MHz









RSE TX above 1GHz Result

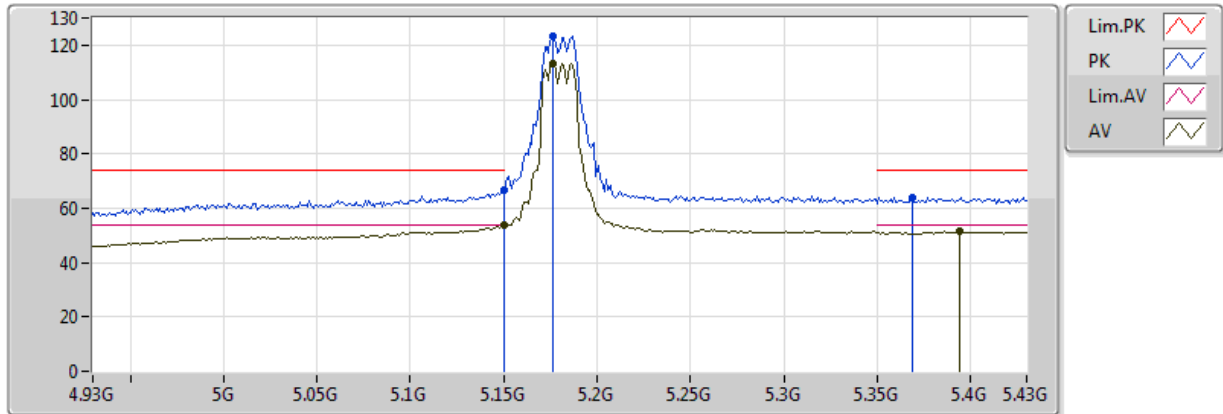
Appendix E.2

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-
5.725-5.85GHz	Pass	PK	5.55G	68.17	68.20	-0.03	5.20	3	V	333	1.27	-

802.11a_(6Mbps)_2TX

5180MHz_TX

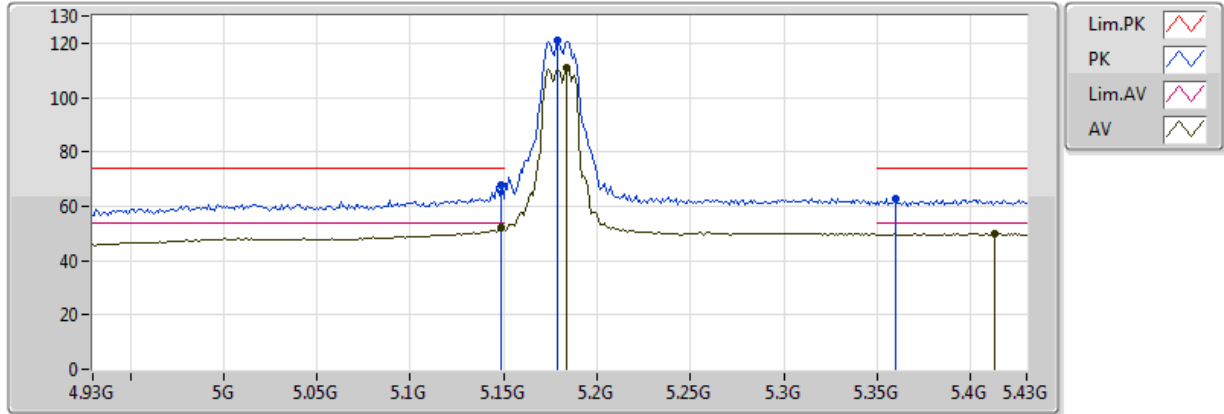


20170413
EUT_Z_2TX
Setting 18
01-J-5-10
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.149995G	53.76	54.00	-0.24	4.27	3	V	342	1.35	-
AV	5.176G	113.38	Inf	-Inf	4.33	3	V	342	1.35	-
AV	5.394G	51.33	54.00	-2.67	4.76	3	V	342	1.35	-
PK	5.149995G	66.87	74.00	-7.13	4.27	3	V	342	1.35	-
PK	5.176G	123.08	Inf	-Inf	4.33	3	V	342	1.35	-
PK	5.369G	64.10	74.00	-9.90	4.71	3	V	342	1.35	-

802.11a_(6Mbps)_2TX

5180MHz_TX

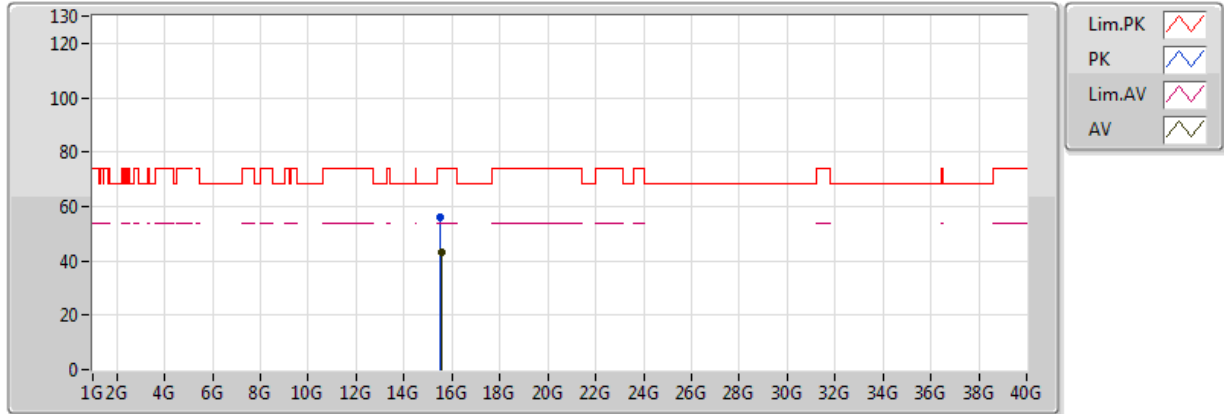


20170413
EUT_Z_2TX
Setting 18
01-J-5-10
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.149G	51.87	54.00	-2.13	4.27	3	H	286	1.29	-
AV	5.184G	110.82	Inf	-Inf	4.34	3	H	286	1.29	-
AV	5.413G	49.82	54.00	-4.18	4.80	3	H	286	1.29	-
PK	5.149G	67.57	74.00	-6.43	4.27	3	H	286	1.29	-
PK	5.179G	120.79	Inf	-Inf	4.33	3	H	286	1.29	-
PK	5.36G	62.77	74.00	-11.23	4.70	3	H	286	1.29	-

802.11a_(6Mbps)_2TX

5180MHz_TX

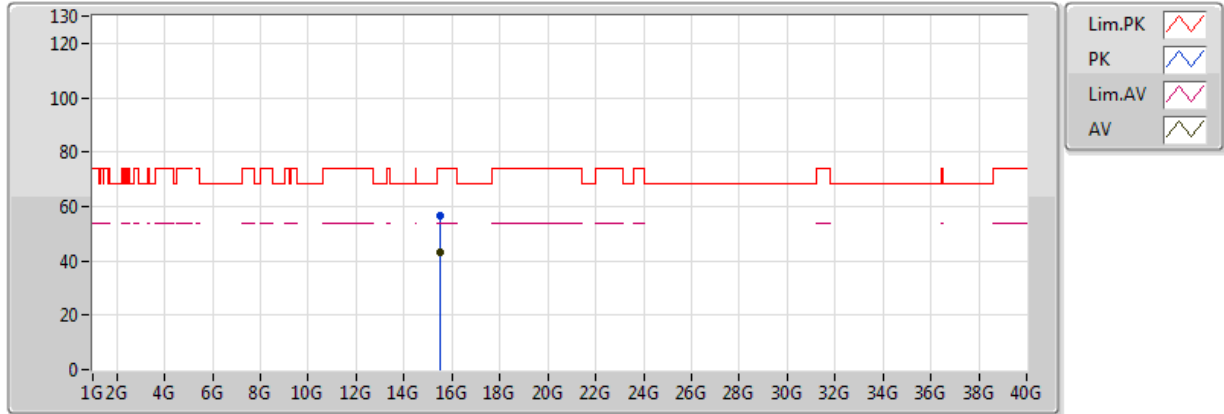


20170413
EUT_Z_2TX
Setting 18
01-J-5
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.54702G	42.92	54.00	-11.08	13.79	3	V	82	1.37	-
PK	15.53334G	56.18	74.00	-17.82	13.81	3	V	82	1.37	-

802.11a_(6Mbps)_2TX

5180MHz_TX

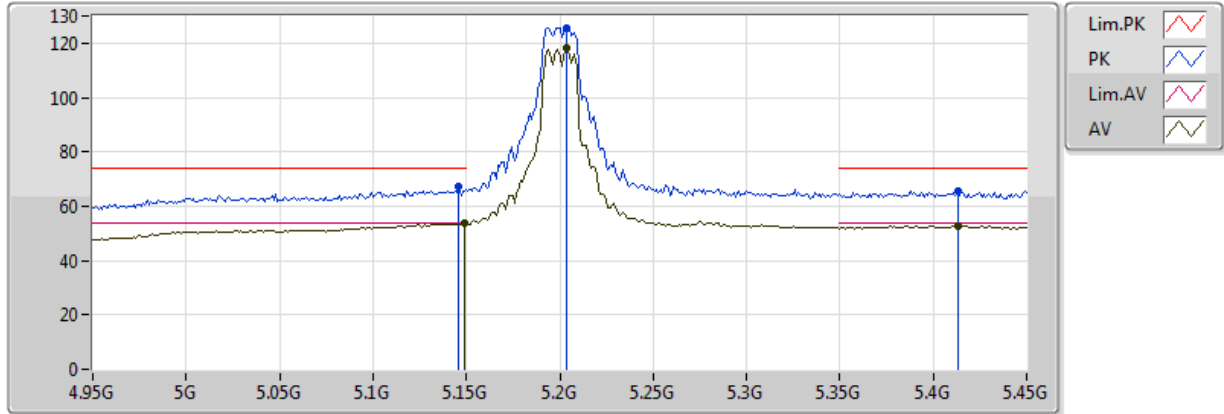


20170413
EUT_Z_2TX
Setting 18
01-J-5
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.52668G	42.99	54.00	-11.01	13.82	3	H	15	1.00	-
PK	15.52776G	56.47	74.00	-17.53	13.82	3	H	15	1.00	-

802.11a_(6Mbps)_2TX

5200MHz_TX

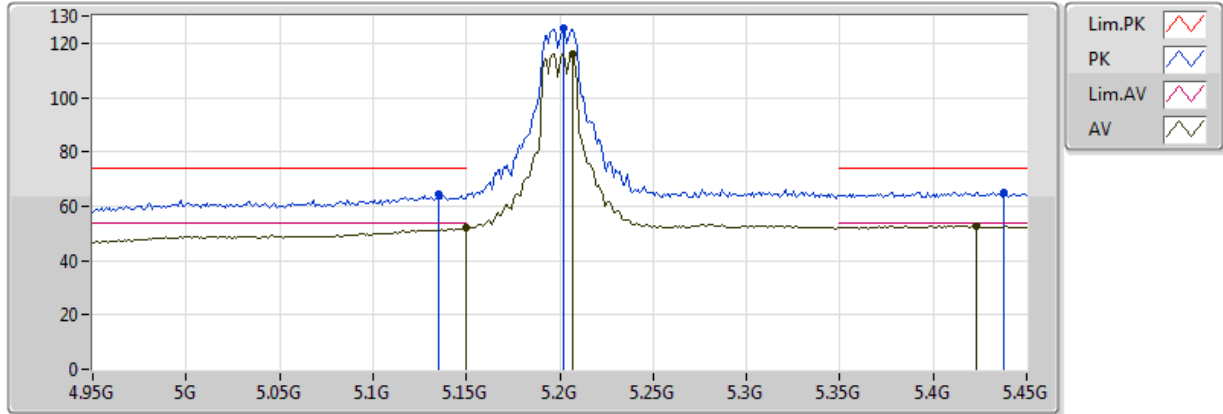


20170413
EUT_Z_2TX
Setting 23
01-J-5-10
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.149G	53.86	54.00	-0.14	4.27	3	V	340	1.47	-
AV	5.204G	117.96	Inf	-Inf	4.39	3	V	340	1.47	-
AV	5.413G	52.66	54.00	-1.34	4.80	3	V	340	1.47	-
PK	5.146G	67.26	74.00	-6.74	4.26	3	V	340	1.47	-
PK	5.204G	125.62	Inf	-Inf	4.39	3	V	340	1.47	-
PK	5.413G	65.50	74.00	-8.50	4.80	3	V	340	1.47	-

802.11a_(6Mbps)_2TX

5200MHz_TX

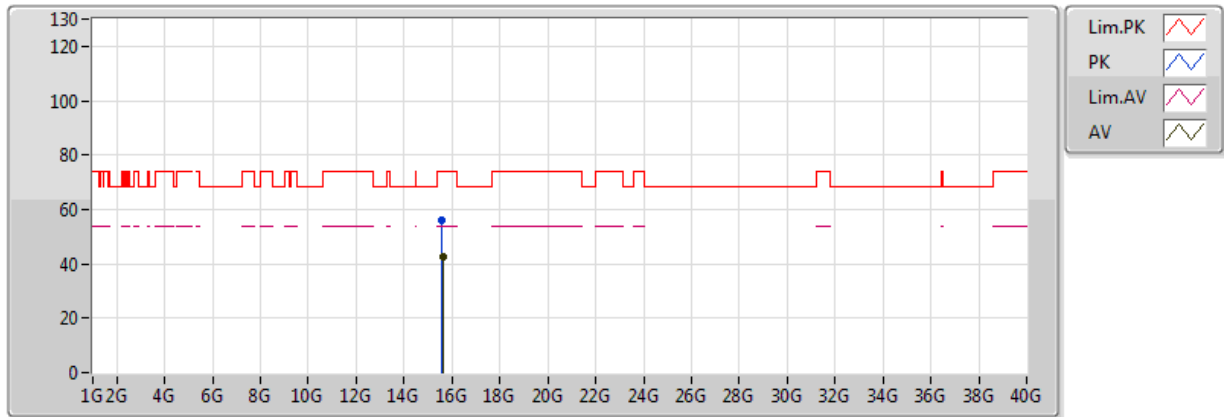


20170413
EUT_Z_2TX
Setting 23
01-J-5-10
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.149995G	51.87	54.00	-2.13	4.27	3	H	322	1.10	-
AV	5.207G	116.15	Inf	-Inf	4.39	3	H	322	1.10	-
AV	5.423G	52.72	54.00	-1.28	4.83	3	H	322	1.10	-
PK	5.135G	64.16	74.00	-9.84	4.24	3	H	322	1.10	-
PK	5.202G	125.31	Inf	-Inf	4.38	3	H	322	1.10	-
PK	5.438G	65.15	74.00	-8.85	4.87	3	H	322	1.10	-

802.11a_(6Mbps)_2TX

5200MHz_TX

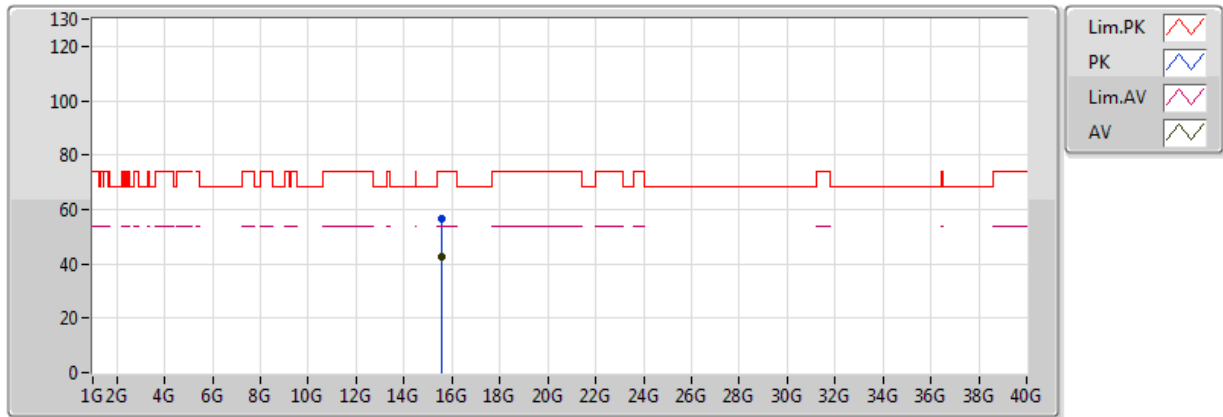


20170413
EUT_Z_2TX
Setting 23
01-J-5
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.6087G	42.65	54.00	-11.35	13.72	3	V	303	2.22	-
PK	15.58656G	56.09	74.00	-17.91	13.74	3	V	303	2.22	-

802.11a_(6Mbps)_2TX

5200MHz_TX

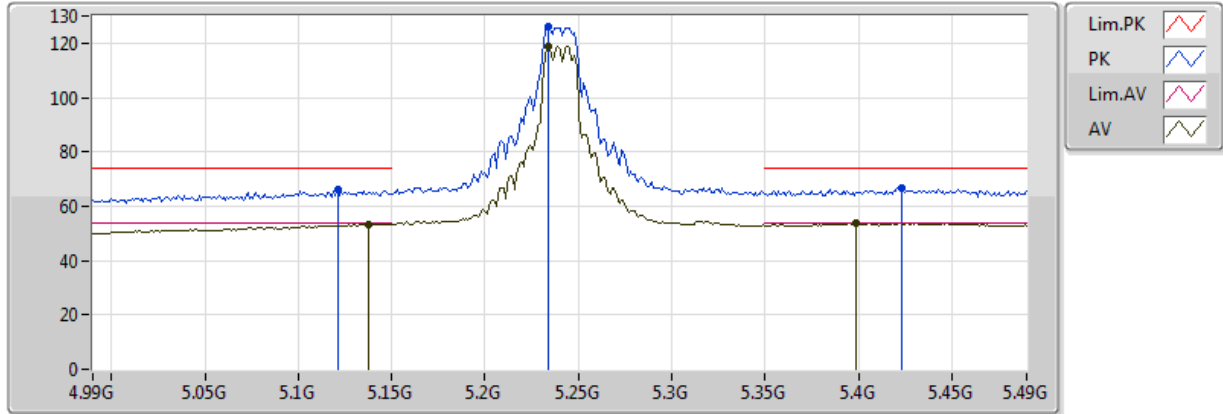


20170413
EUT_Z_2TX
Setting 23
01-J-5
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.59088G	42.68	54.00	-11.32	13.74	3	H	142	1.80	-
PK	15.58644G	56.40	74.00	-17.60	13.74	3	H	142	1.80	-

802.11a_(6Mbps)_2TX

5240MHz_TX

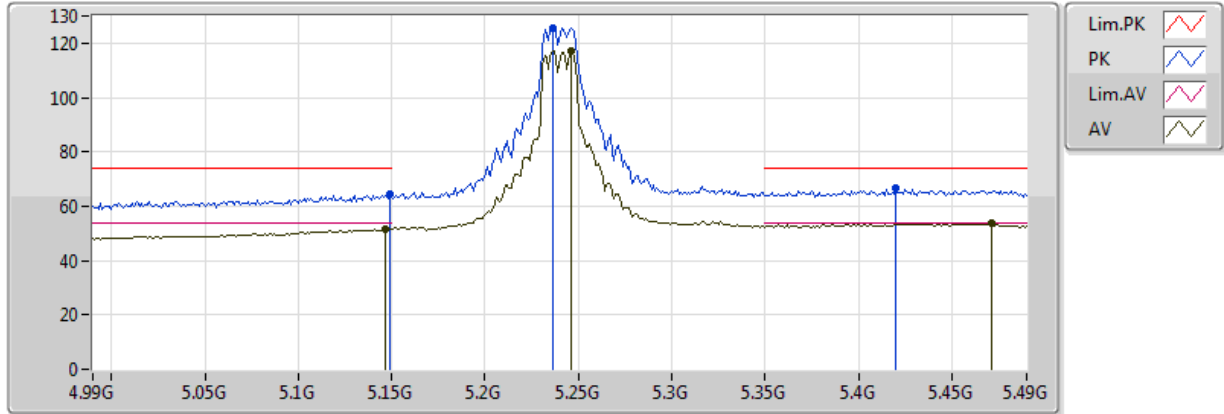


20170413
EUT_Z_2TX
Setting 25
01-J-5-10
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.138G	53.45	54.00	-0.55	4.24	3	V	336	1.40	-
AV	5.234G	118.84	Inf	-Inf	4.45	3	V	336	1.40	-
AV	5.399G	53.72	54.00	-0.28	4.77	3	V	336	1.40	-
PK	5.121G	65.85	74.00	-8.15	4.21	3	V	336	1.40	-
PK	5.234G	125.99	Inf	-Inf	4.45	3	V	336	1.40	-
PK	5.423G	66.53	74.00	-7.47	4.83	3	V	336	1.40	-

802.11a_(6Mbps)_2TX

5240MHz_TX

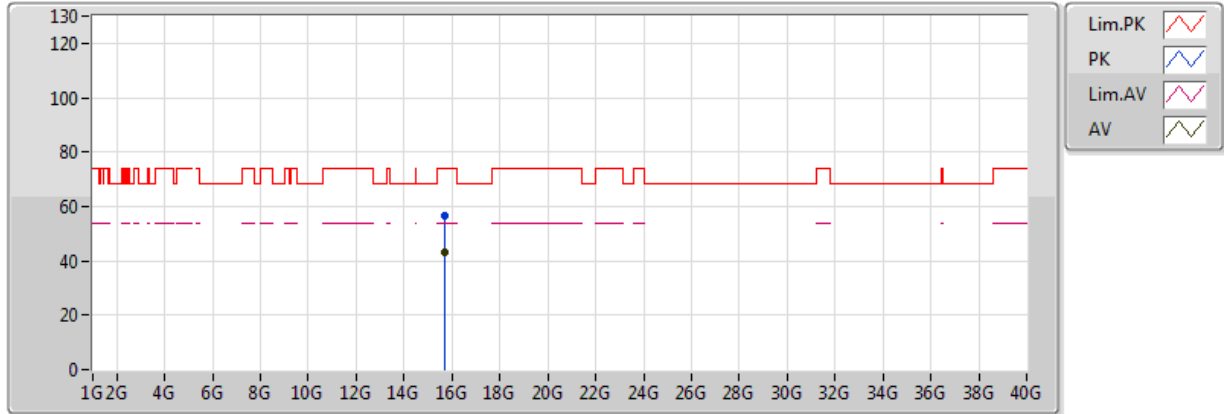


20170413
EUT_Z_2TX
Setting 25
01-J-5-10
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.147G	51.49	54.00	-2.51	4.26	3	H	324	1.04	-
AV	5.246G	117.36	Inf	-Inf	4.48	3	H	324	1.04	-
AV	5.471G	53.53	54.00	-0.47	4.95	3	H	324	1.04	-
PK	5.149G	64.32	74.00	-9.68	4.27	3	H	324	1.04	-
PK	5.236G	125.54	Inf	-Inf	4.46	3	H	324	1.04	-
PK	5.42G	66.47	74.00	-7.53	4.82	3	H	324	1.04	-

802.11a_(6Mbps)_2TX

5240MHz_TX

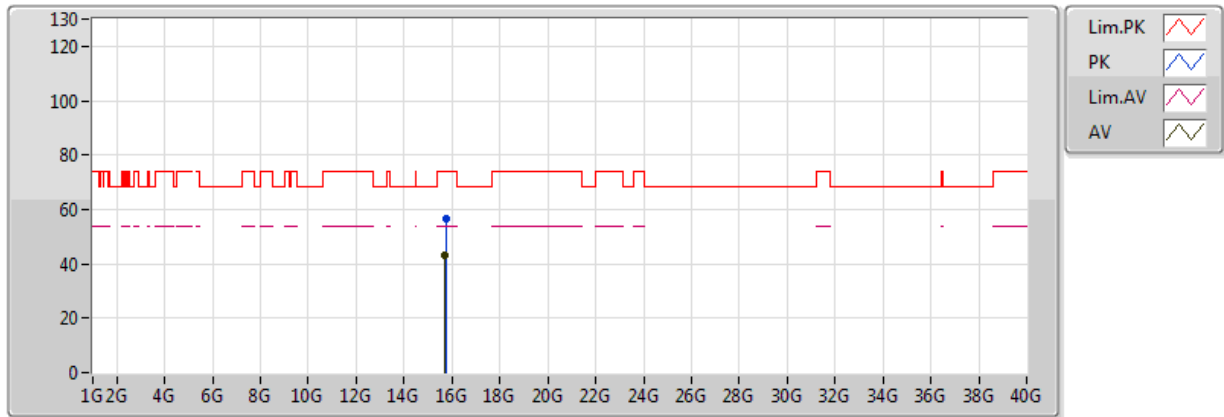


20170413
EUT_Z_2TX
Setting 25
01-J-5
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.7188G	43.27	54.00	-10.73	13.58	3	V	212	2.30	-
PK	15.71592G	56.72	74.00	-17.28	13.58	3	V	212	2.30	-

802.11a_(6Mbps)_2TX

5240MHz_TX

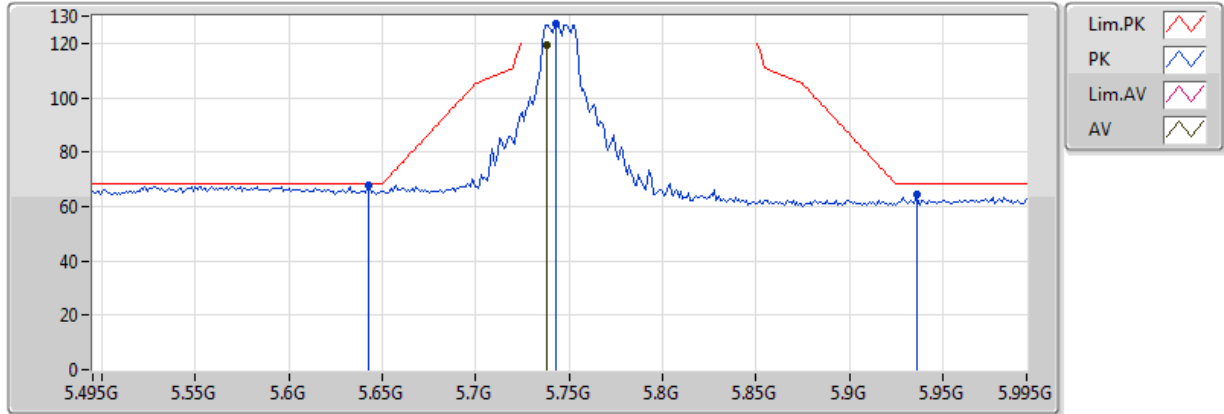


20170413
EUT_Z_2TX
Setting 25
01-J-5
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.71454G	43.09	54.00	-10.91	13.58	3	H	34	2.15	-
PK	15.73134G	56.46	74.00	-17.54	13.56	3	H	34	2.15	-

802.11a_(6Mbps)_2TX

5745MHz_TX

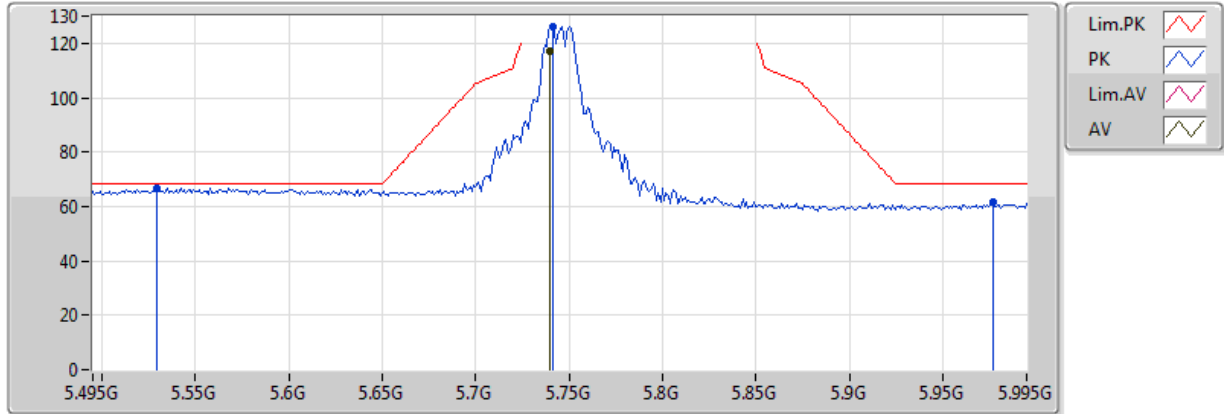


20170413
EUT_Z_2TX
Setting 27
01-J-5-10
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.738G	119.44	Inf	-Inf	5.79	3	V	328	1.49	-
PK	5.643G	67.95	68.20	-0.25	5.51	3	V	328	1.49	-
PK	5.743G	127.00	Inf	-Inf	5.80	3	V	328	1.49	-
PK	5.936G	64.23	68.20	-3.97	6.48	3	V	328	1.49	-

802.11a_(6Mbps)_2TX

5745MHz_TX

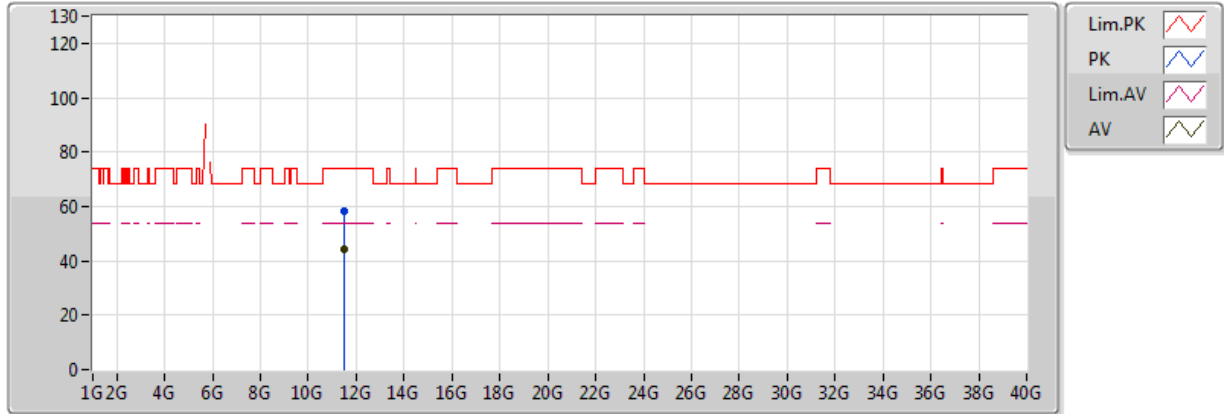


20170413
EUT_Z_2TX
Setting 27
01-J-5-10
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.74G	117.14	Inf	-Inf	5.79	3	H	327	1.39	-
PK	5.529G	66.57	68.20	-1.63	5.13	3	H	327	1.39	-
PK	5.741G	126.34	Inf	-Inf	5.79	3	H	327	1.39	-
PK	5.977G	61.71	68.20	-6.49	6.63	3	H	327	1.39	-

802.11a_(6Mbps)_2TX

5745MHz_TX

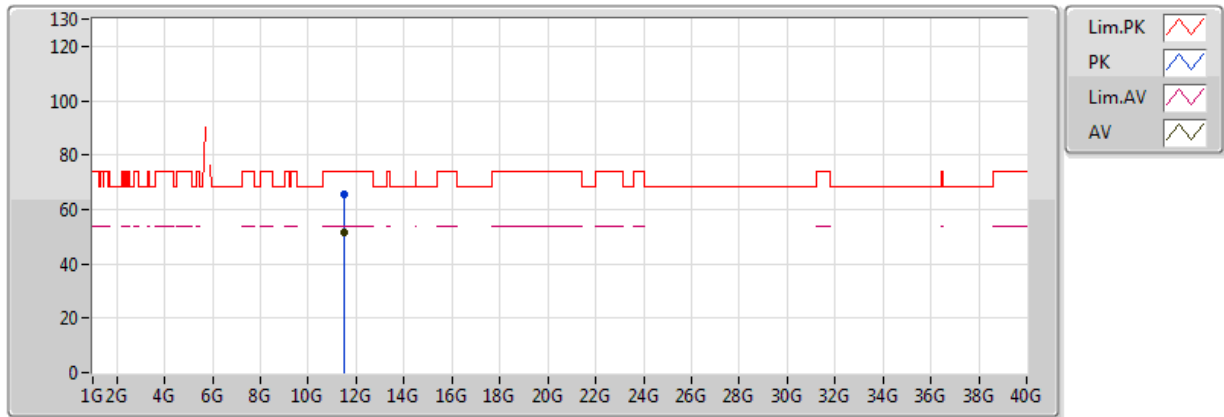


20170413
EUT_Z_2TX
Setting 27
01-J-5
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.49084G	44.42	54.00	-9.58	12.04	3	V	49	1.01	-
PK	11.49024G	58.41	74.00	-15.59	12.04	3	V	49	1.01	-

802.11a_(6Mbps)_2TX

5745MHz_TX

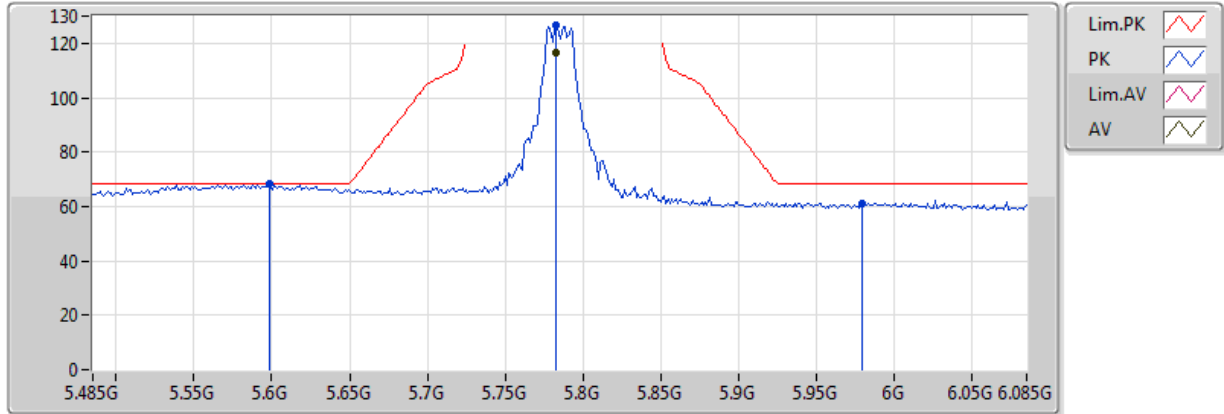


20170413
EUT_Z_2TX
Setting 27
01-J-5
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.4915G	51.52	54.00	-2.48	12.04	3	H	323	1.51	-
PK	11.49162G	65.76	74.00	-8.24	12.04	3	H	323	1.51	-

802.11a_(6Mbps)_2TX

5785MHz_TX

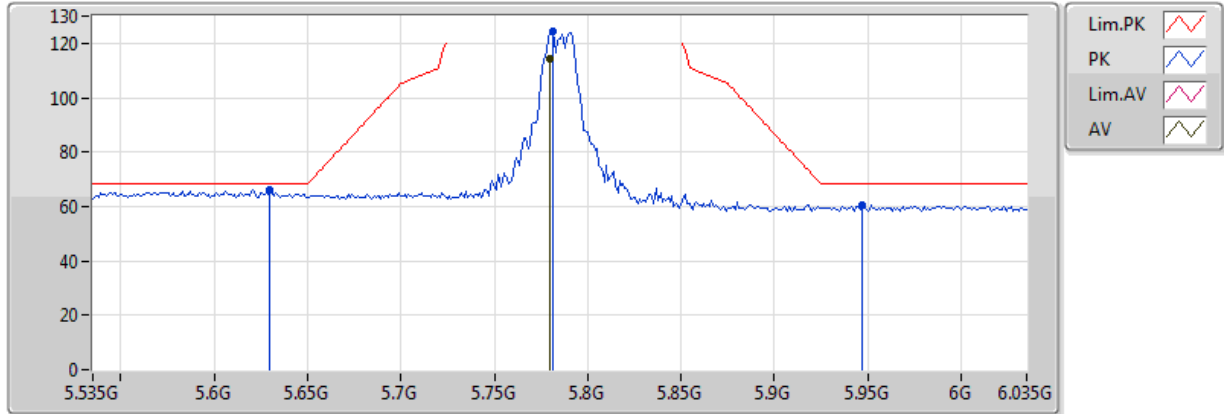


20170413
EUT_Z_2TX
Setting 24
01-J-5-10
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.7826G	116.70	Inf	-Inf	5.91	3	V	328	1.26	-
PK	5.599G	68.09	68.20	-0.11	5.38	3	V	328	1.26	-
PK	5.7826G	126.45	Inf	-Inf	5.91	3	V	328	1.26	-
PK	5.9794G	61.23	68.20	-6.97	6.64	3	V	328	1.26	-

802.11a_(6Mbps)_2TX

5785MHz_TX

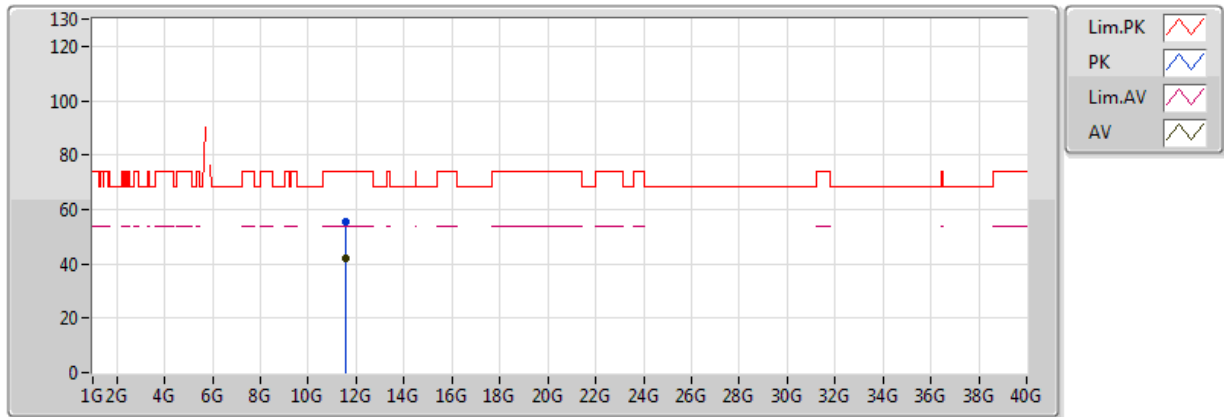


20170413
EUT_Z_2TX
Setting 24
01-J-5-10
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.78G	114.39	Inf	-Inf	5.90	3	H	331	1.49	-
PK	5.63G	65.95	68.20	-2.25	5.47	3	H	331	1.49	-
PK	5.781G	124.14	Inf	-Inf	5.91	3	H	331	1.49	-
PK	5.947G	60.68	68.20	-7.52	6.52	3	H	331	1.49	-

802.11a_(6Mbps)_2TX

5785MHz_TX

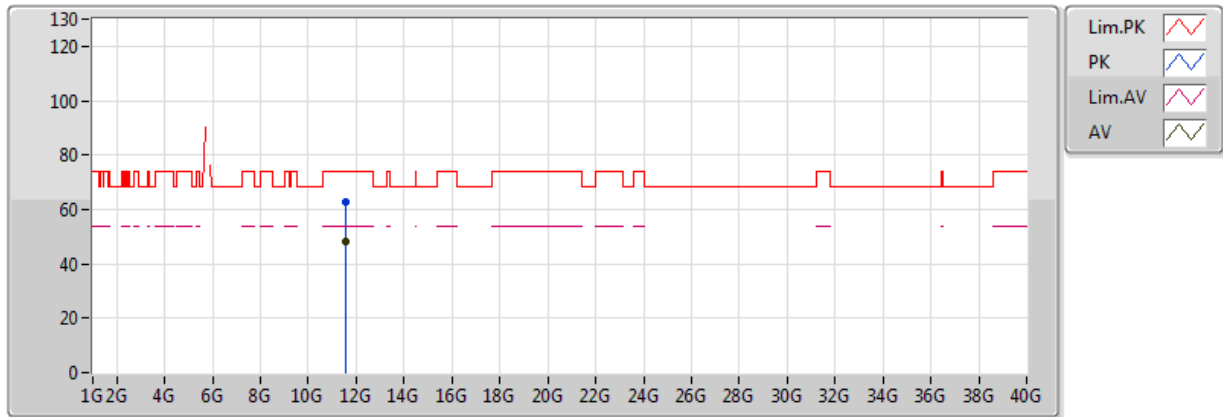


20170413
EUT_Z_2TX
Setting 24
01-J-5
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.57024G	41.97	54.00	-12.03	12.08	3	V	351	2.23	-
PK	11.561G	55.56	74.00	-18.44	12.07	3	V	351	2.23	-

802.11a_(6Mbps)_2TX

5785MHz_TX

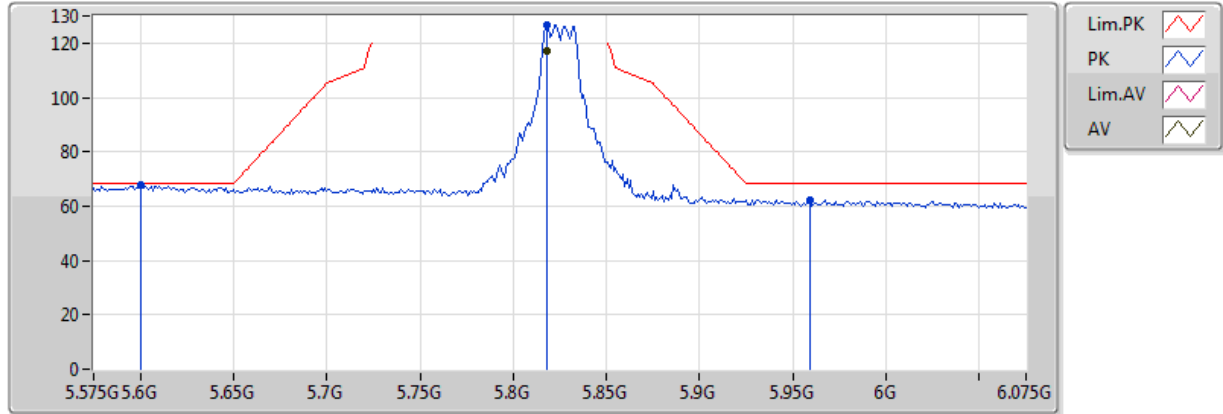


20170413
EUT_Z_2TX
Setting 24
01-J-5
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.57144G	48.25	54.00	-5.75	12.08	3	H	302	1.50	-
PK	11.56622G	62.60	74.00	-11.40	12.08	3	H	302	1.50	-

802.11a_(6Mbps)_2TX

5825MHz_TX

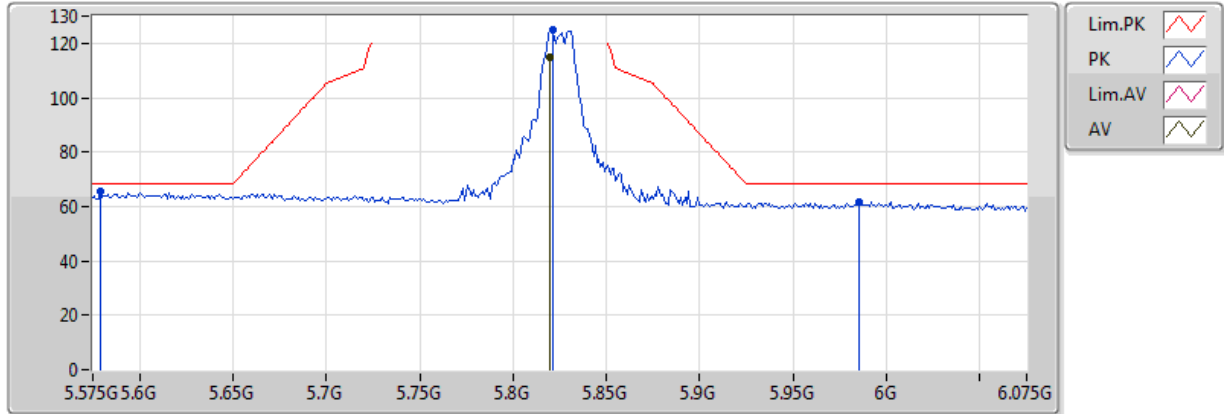


20170413
EUT_Z_2TX
Setting 24
01-J-5-10
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.818G	117.39	Inf	-Inf	6.03	3	V	327	1.41	-
PK	5.6G	68.05	68.20	-0.15	5.38	3	V	327	1.41	-
PK	5.818G	126.88	Inf	-Inf	6.03	3	V	327	1.41	-
PK	5.959G	62.43	68.20	-5.77	6.56	3	V	327	1.41	-

802.11a_(6Mbps)_2TX

5825MHz_TX

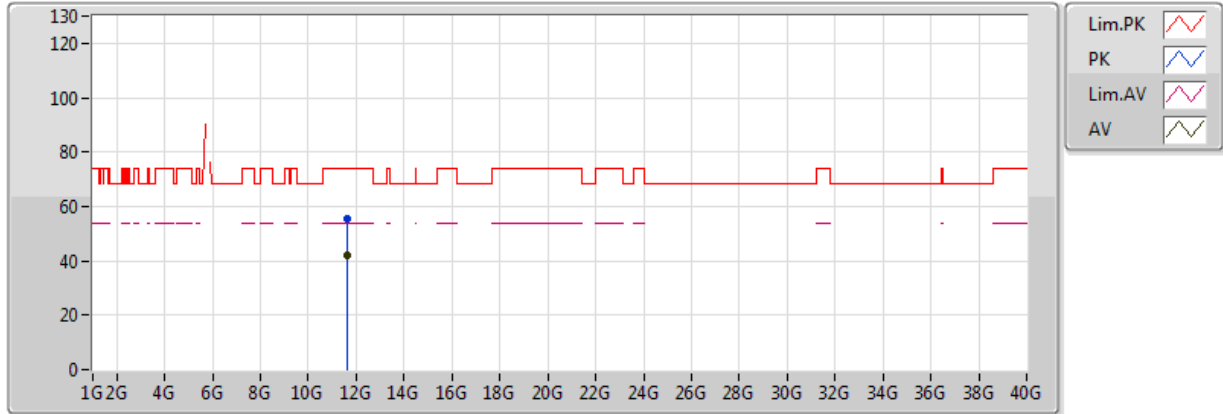


20170413
EUT_Z_2TX
Setting 24
01-J-5-10
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.82G	115.07	Inf	-Inf	6.04	3	H	313	1.50	-
PK	5.579G	65.41	68.20	-2.79	5.31	3	H	313	1.50	-
PK	5.821G	125.09	Inf	-Inf	6.04	3	H	313	1.50	-
PK	5.985G	61.54	68.20	-6.66	6.66	3	H	313	1.50	-

802.11a_(6Mbps)_2TX

5825MHz_TX

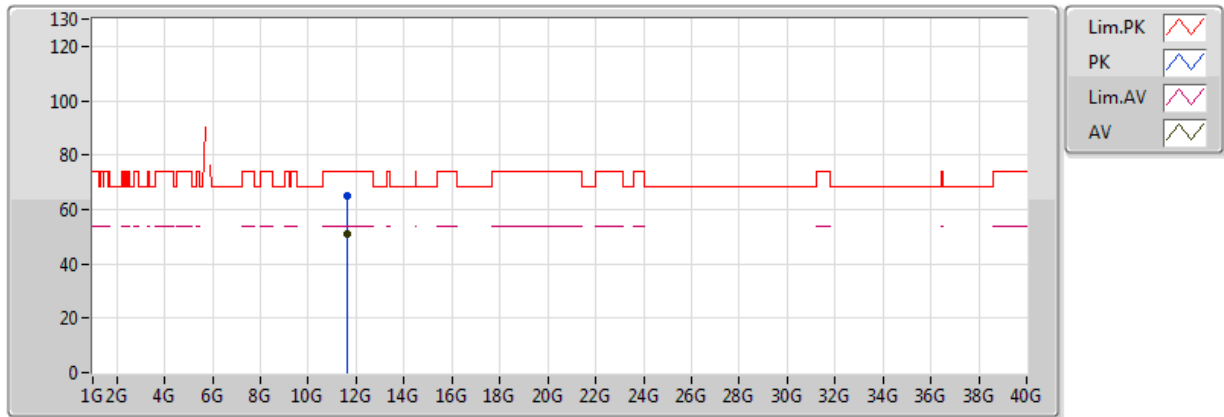


20170413
EUT_Z_2TX
Setting 24
01-J-5
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.64892G	42.24	54.00	-11.76	12.12	3	V	348	1.49	-
PK	11.64298G	55.73	74.00	-18.27	12.12	3	V	348	1.49	-

802.11a_(6Mbps)_2TX

5825MHz_TX

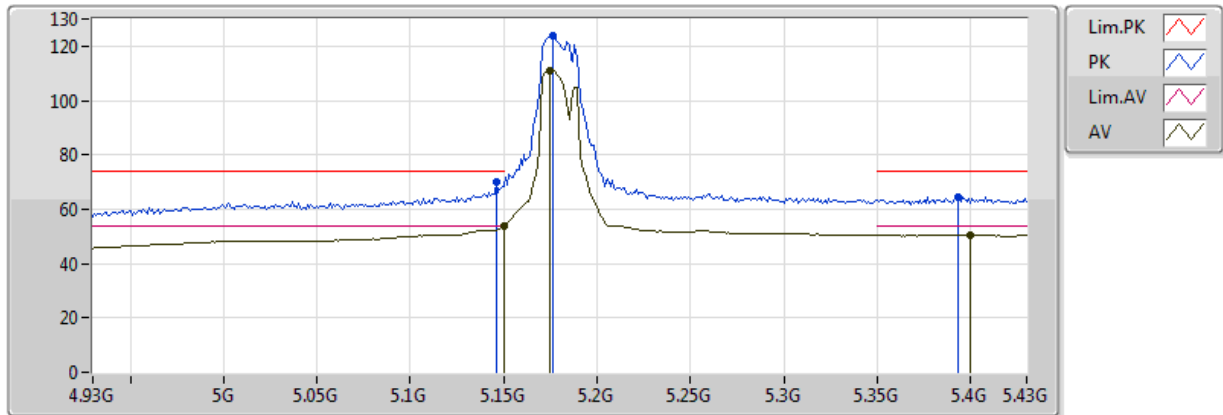


20170413
EUT_Z_2TX
Setting 24
01-J-5
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.6494G	50.76	54.00	-3.24	12.12	3	H	303	2.03	-
PK	11.64994G	64.95	74.00	-9.05	12.12	3	H	303	2.03	-

802.11ac VHT20_Nss1,(MCS0)_2TX

5180MHz_TX

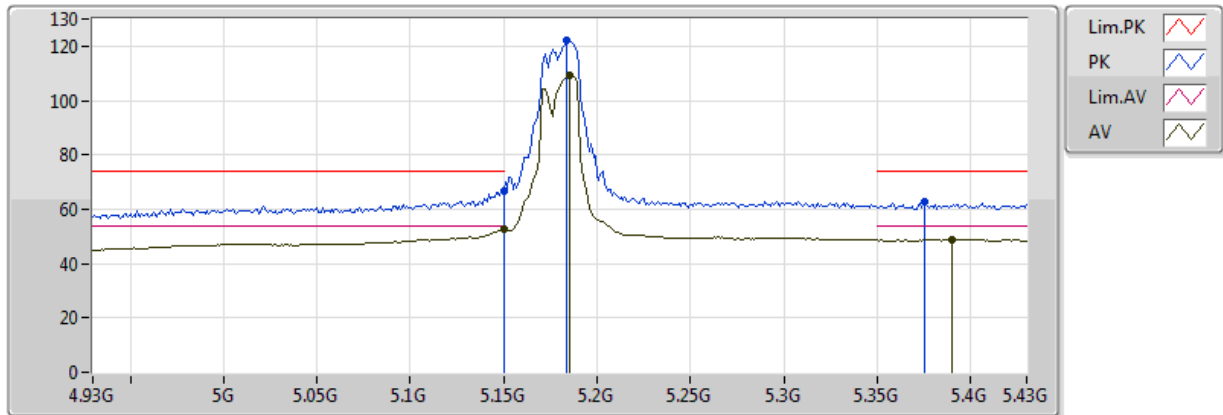


20170413
EUT_Z_2TX
Setting 19.5
01-J-5-10
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.149995G	53.77	54.00	-0.23	4.27	3	V	339	1.28	-
AV	5.175G	111.18	Inf	-Inf	4.33	3	V	339	1.28	-
AV	5.4G	50.65	54.00	-3.35	4.77	3	V	339	1.28	-
PK	5.146G	70.20	74.00	-3.80	4.26	3	V	339	1.28	-
PK	5.176G	123.87	Inf	-Inf	4.33	3	V	339	1.28	-
PK	5.393G	64.39	74.00	-9.61	4.76	3	V	339	1.28	-

802.11ac VHT20_Nss1,(MCS0)_2TX

5180MHz_TX

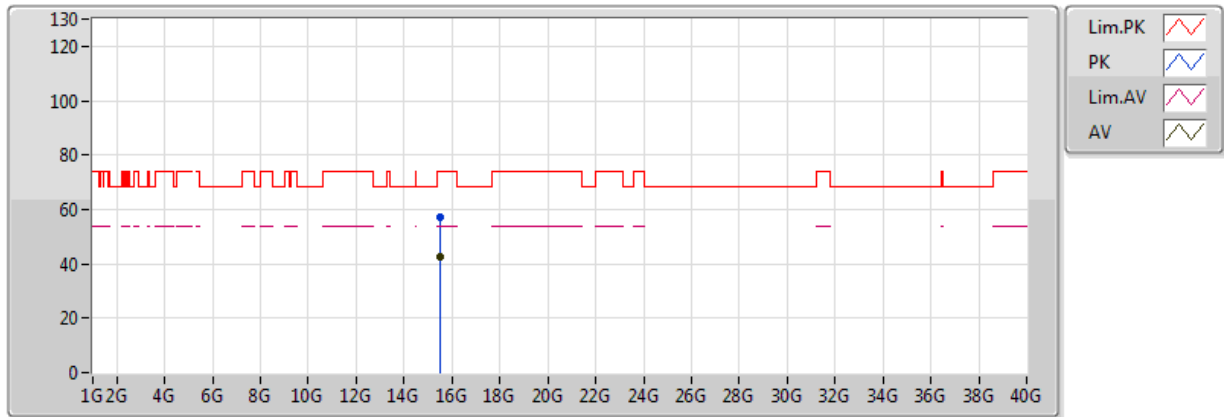


20170413
EUT_Z_2TX
Setting 19.5
01-J-5-10
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.149995G	52.54	54.00	-1.46	4.27	3	H	284	1.30	-
AV	5.185G	109.47	Inf	-Inf	4.35	3	H	284	1.30	-
AV	5.39G	48.77	54.00	-5.23	4.75	3	H	284	1.30	-
PK	5.149995G	66.47	74.00	-7.53	4.27	3	H	284	1.30	-
PK	5.184G	121.88	Inf	-Inf	4.34	3	H	284	1.30	-
PK	5.375G	62.62	74.00	-11.38	4.73	3	H	284	1.30	-

802.11ac VHT20_Nss1,(MCS0)_2TX

5180MHz_TX

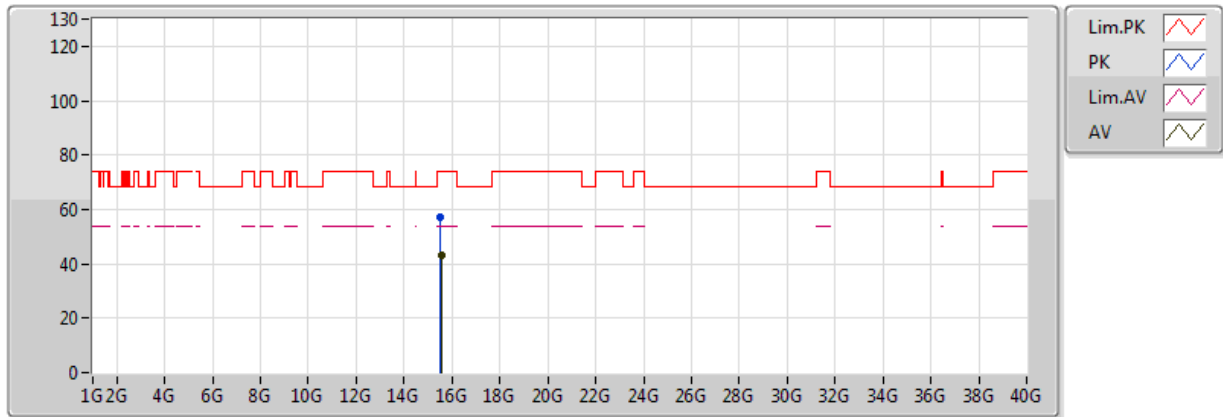


20170413
EUT_Z_2TX
Setting 19.5
01-J-5
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.52884G	42.71	54.00	-11.29	13.81	3	V	244	1.11	-
PK	15.53664G	57.09	74.00	-16.91	13.80	3	V	244	1.11	-

802.11ac VHT20_Nss1,(MCS0)_2TX

5180MHz_TX

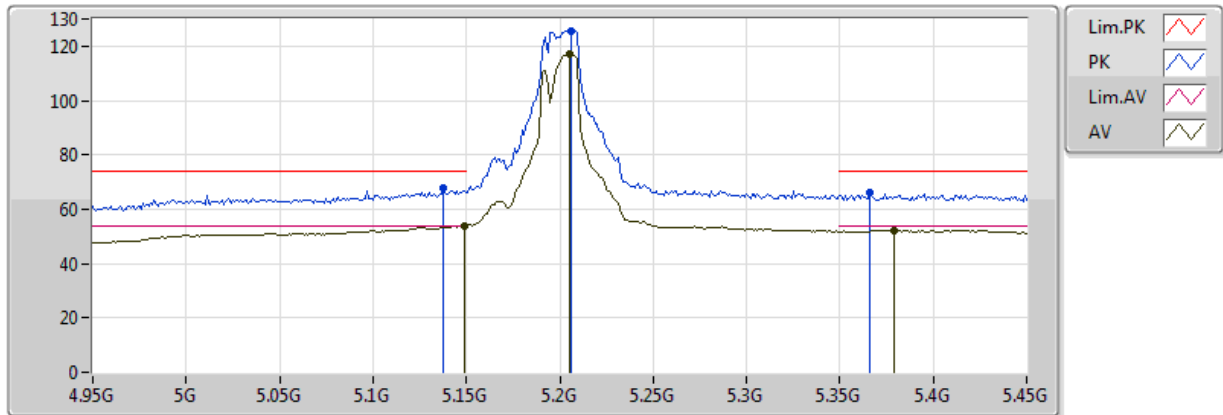


20170413
EUT_Z_2TX
Setting 19.5
01-J-5
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.5421G	42.87	54.00	-11.13	13.80	3	H	199	2.26	-
PK	15.53652G	57.04	74.00	-16.96	13.80	3	H	199	2.26	-

802.11ac VHT20_Nss1,(MCS0)_2TX

5200MHz_TX

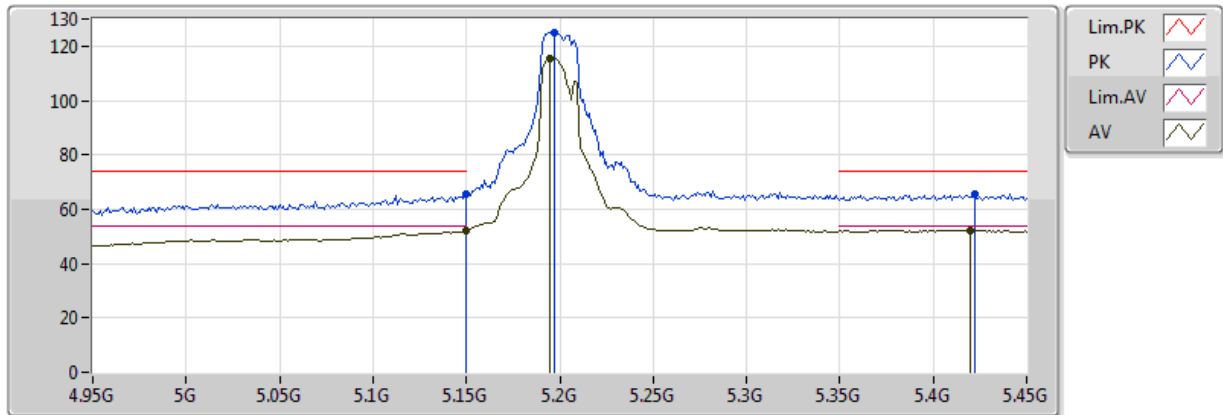


20170413
EUT_Z_2TX
Setting 24
01-J-5-10
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.149G	53.85	54.00	-0.15	4.27	3	V	339	1.50	-
AV	5.205G	117.38	Inf	-Inf	4.39	3	V	339	1.50	-
AV	5.379G	52.09	54.00	-1.91	4.73	3	V	339	1.50	-
PK	5.138G	68.05	74.00	-5.95	4.24	3	V	339	1.50	-
PK	5.206G	125.77	Inf	-Inf	4.39	3	V	339	1.50	-
PK	5.366G	66.07	74.00	-7.93	4.71	3	V	339	1.50	-

802.11ac VHT20_Nss1,(MCS0)_2TX

5200MHz_TX

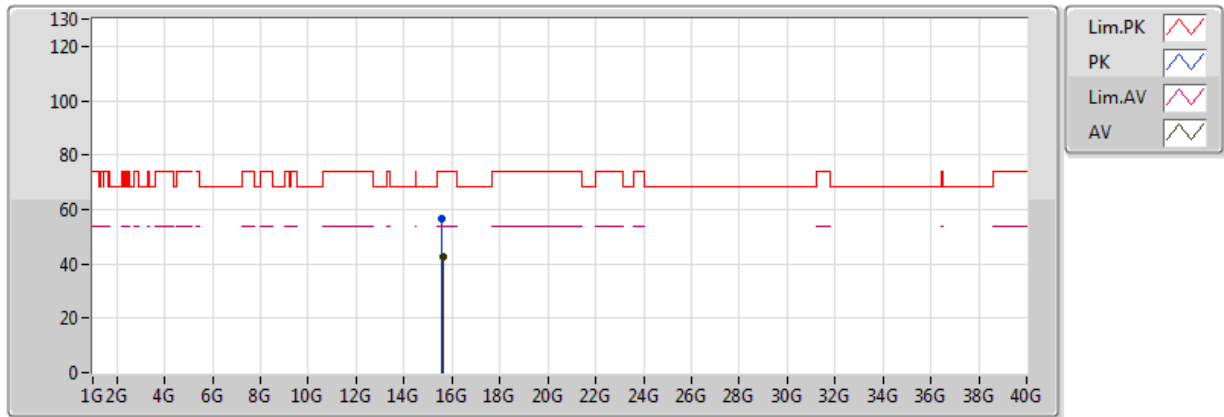


20170413
EUT_Z_2TX
Setting 24
01-J-5-10
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.149995G	52.38	54.00	-1.62	4.27	3	H	321	1.10	-
AV	5.195G	115.53	Inf	-Inf	4.37	3	H	321	1.10	-
AV	5.42G	52.28	54.00	-1.72	4.82	3	H	321	1.10	-
PK	5.149995G	65.29	74.00	-8.71	4.27	3	H	321	1.10	-
PK	5.197G	125.14	Inf	-Inf	4.37	3	H	321	1.10	-
PK	5.422G	65.50	74.00	-8.50	4.83	3	H	321	1.10	-

802.11ac VHT20_Nss1,(MCS0)_2TX

5200MHz_TX

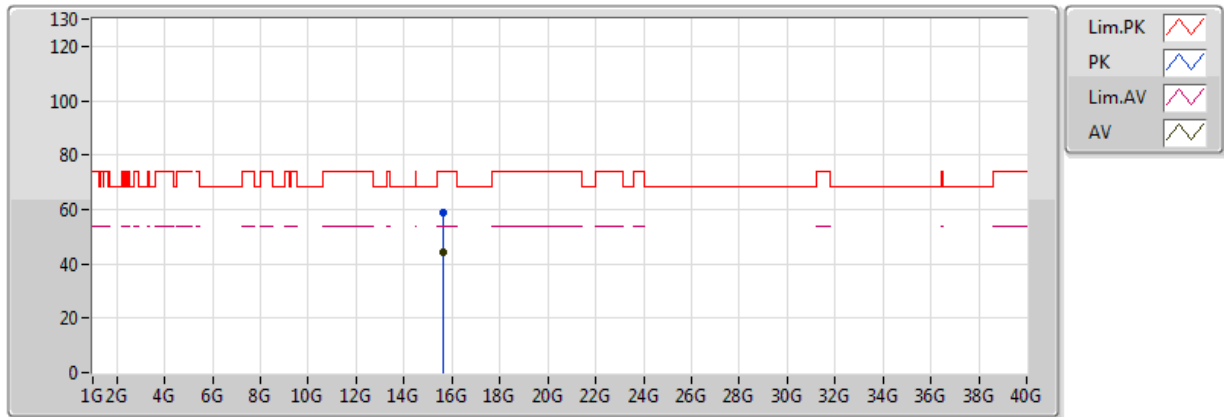


20170413
EUT_Z_2TX
Setting 24
01-J-5
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.61008G	42.61	54.00	-11.39	13.71	3	V	170	1.66	-
PK	15.59304G	56.35	74.00	-17.65	13.73	3	V	170	1.66	-

802.11ac VHT20_Nss1,(MCS0)_2TX

5200MHz_TX

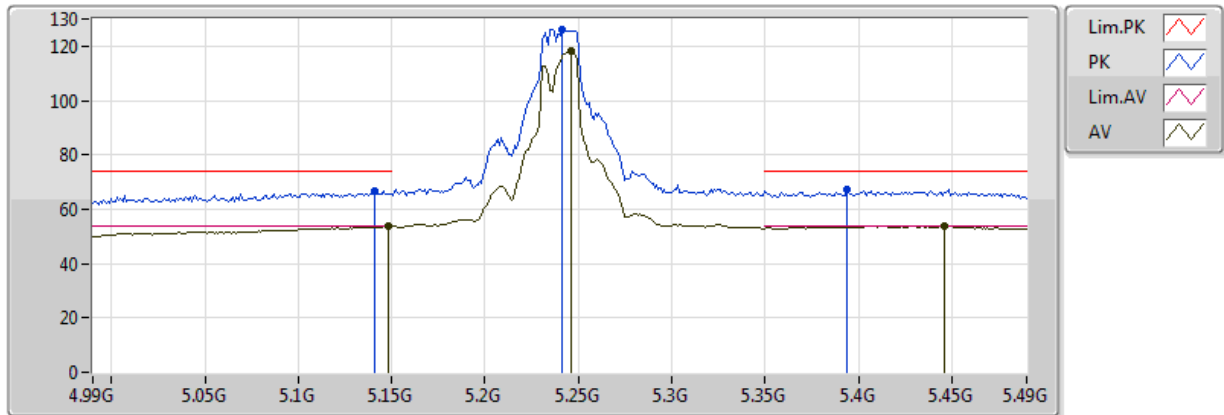


20170413
EUT_Z_2TX
Setting 24
01-J-5
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.60486G	44.07	54.00	-9.93	13.72	3	H	83	2.17	-
PK	15.6054G	58.75	74.00	-15.25	13.72	3	H	83	2.17	-

802.11ac VHT20_Nss1,(MCS0)_2TX

5240MHz_TX

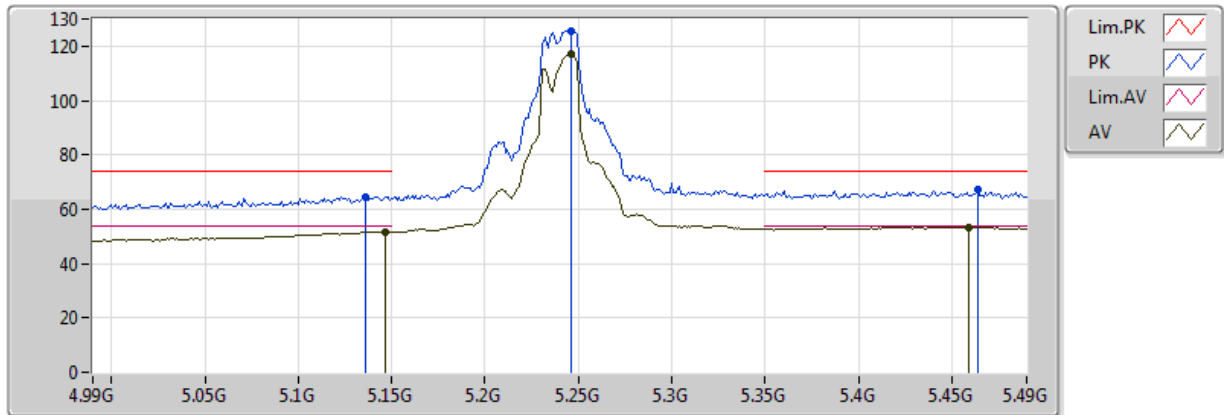


20170413
EUT_Z_2TX
Setting 25.5
01-J-5-10
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.148G	53.76	54.00	-0.24	4.27	3	V	342	1.21	-
AV	5.246G	118.03	Inf	-Inf	4.48	3	V	342	1.21	-
AV	5.446G	53.91	54.00	-0.09	4.89	3	V	342	1.21	-
PK	5.141G	66.63	74.00	-7.37	4.25	3	V	342	1.21	-
PK	5.241G	126.13	Inf	-Inf	4.47	3	V	342	1.21	-
PK	5.394G	67.26	74.00	-6.74	4.76	3	V	342	1.21	-

802.11ac VHT20_Nss1,(MCS0)_2TX

5240MHz_TX

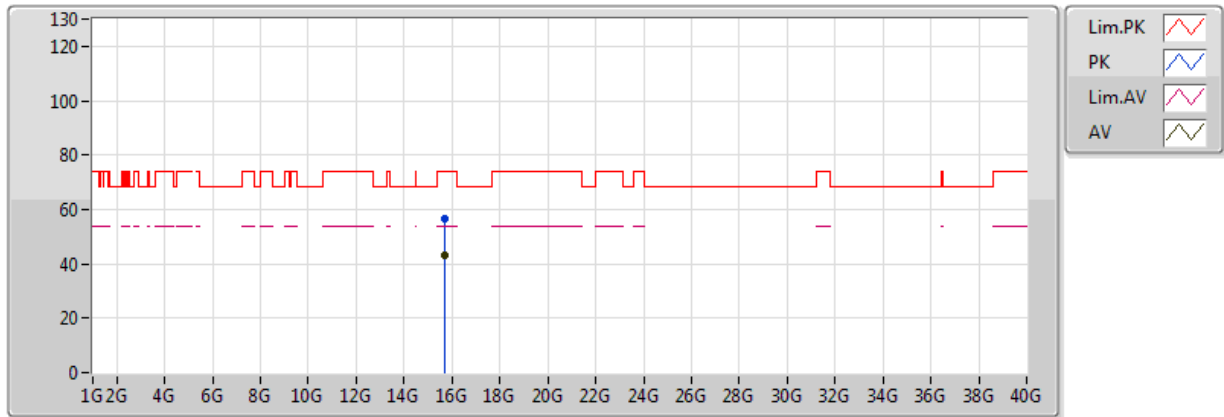


20170413
EUT_Z_2TX
Setting 25.5
01-J-5-10
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.147G	51.65	54.00	-2.35	4.26	3	H	322	1.07	-
AV	5.246G	116.85	Inf	-Inf	4.48	3	H	322	1.07	-
AV	5.459G	53.42	54.00	-0.58	4.92	3	H	322	1.07	-
PK	5.136G	64.48	74.00	-9.52	4.24	3	H	322	1.07	-
PK	5.246G	125.58	Inf	-Inf	4.48	3	H	322	1.07	-
PK	5.464G	66.97	74.00	-7.03	4.94	3	H	322	1.07	-

802.11ac VHT20_Nss1,(MCS0)_2TX

5240MHz_TX

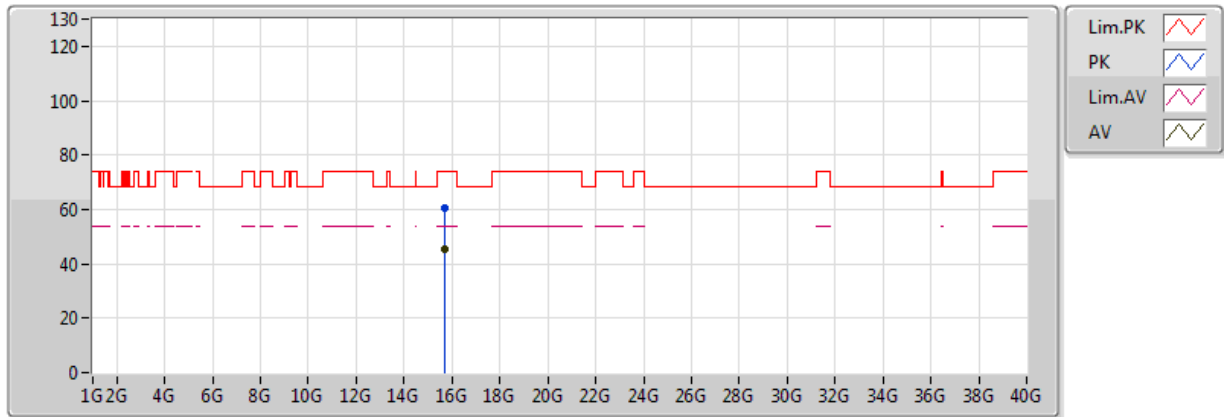


20170413
EUT_Z_2TX
Setting 25.5
01-J-5
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.72786G	42.93	54.00	-11.07	13.57	3	V	101	1.35	-
PK	15.70992G	56.49	74.00	-17.51	13.59	3	V	101	1.35	-

802.11ac VHT20_Nss1,(MCS0)_2TX

5240MHz_TX

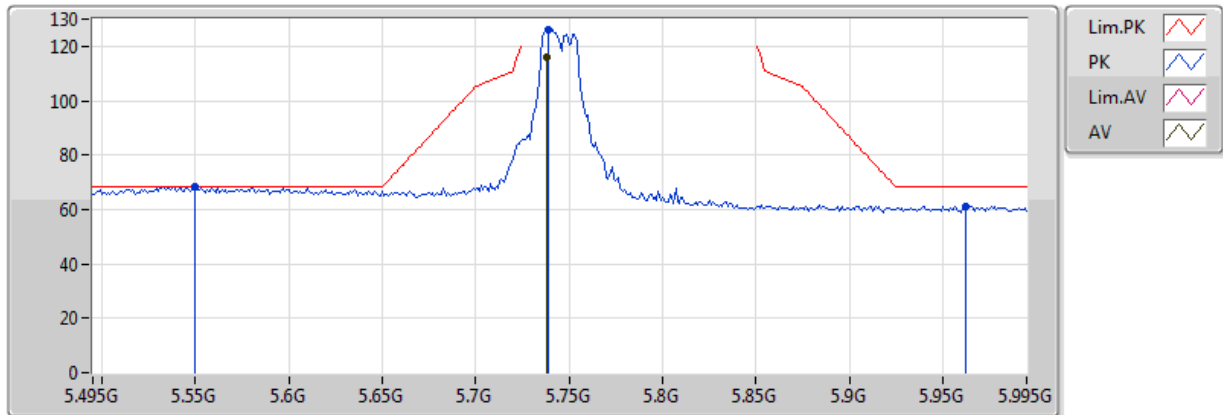


20170413
EUT_Z_2TX
Setting 25.5
01-J-5
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.72486G	45.62	54.00	-8.38	13.57	3	H	295	1.68	-
PK	15.7239G	60.30	74.00	-13.70	13.57	3	H	295	1.68	-

802.11ac VHT20_Nss1,(MCS0)_2TX

5745MHz_TX

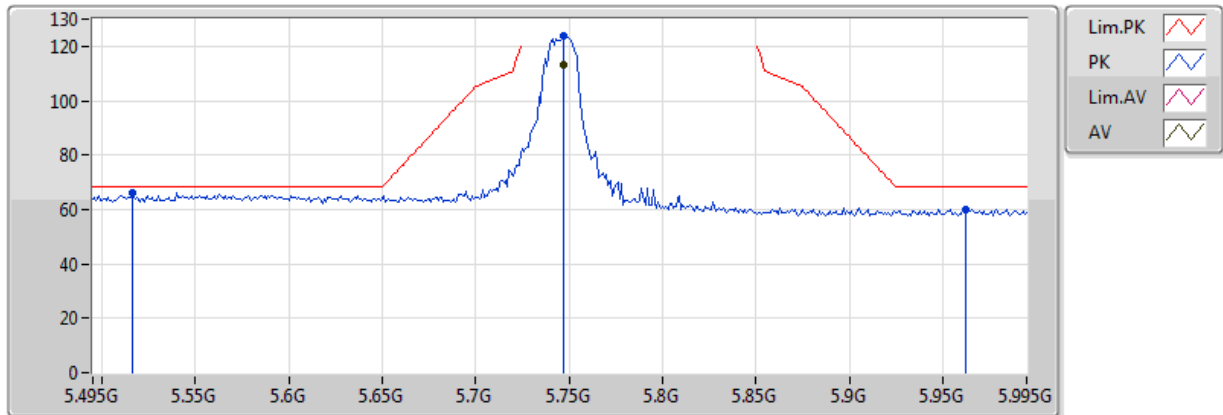


20170413
EUT_Z_2TX
Setting 24
01-J-5-10
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.738G	115.88	Inf	-Inf	5.79	3	V	333	1.27	-
PK	5.55G	68.17	68.20	-0.03	5.20	3	V	333	1.27	-
PK	5.739G	126.11	Inf	-Inf	5.79	3	V	333	1.27	-
PK	5.962G	61.29	68.20	-6.91	6.58	3	V	333	1.27	-

802.11ac VHT20_Nss1,(MCS0)_2TX

5745MHz_TX

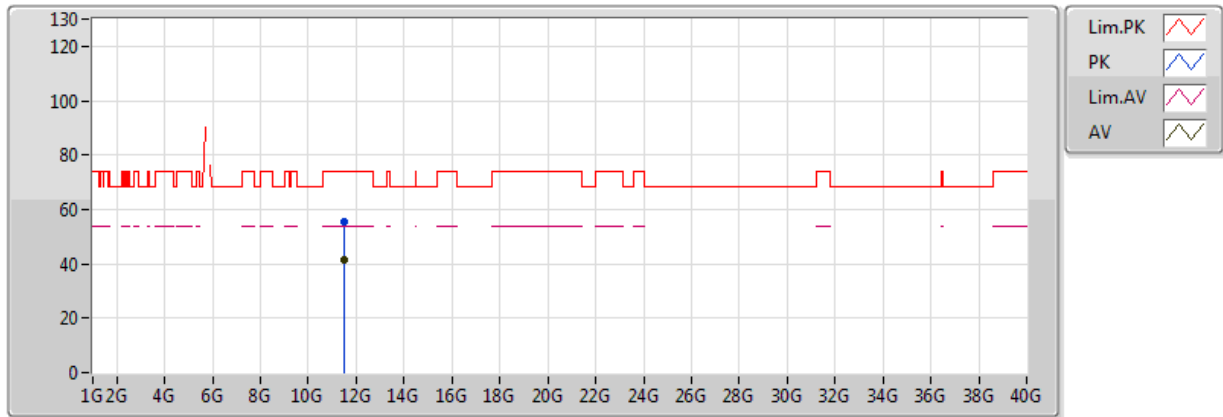


20170413
EUT_Z_2TX
Setting 24
01-J-5-10
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.747G	113.06	Inf	-Inf	5.81	3	H	329	1.47	-
PK	5.516G	66.04	68.20	-2.16	5.09	3	H	329	1.47	-
PK	5.747G	123.92	Inf	-Inf	5.81	3	H	329	1.47	-
PK	5.962G	60.16	68.20	-8.04	6.58	3	H	329	1.47	-

802.11ac VHT20_Nss1,(MCS0)_2TX

5745MHz_TX

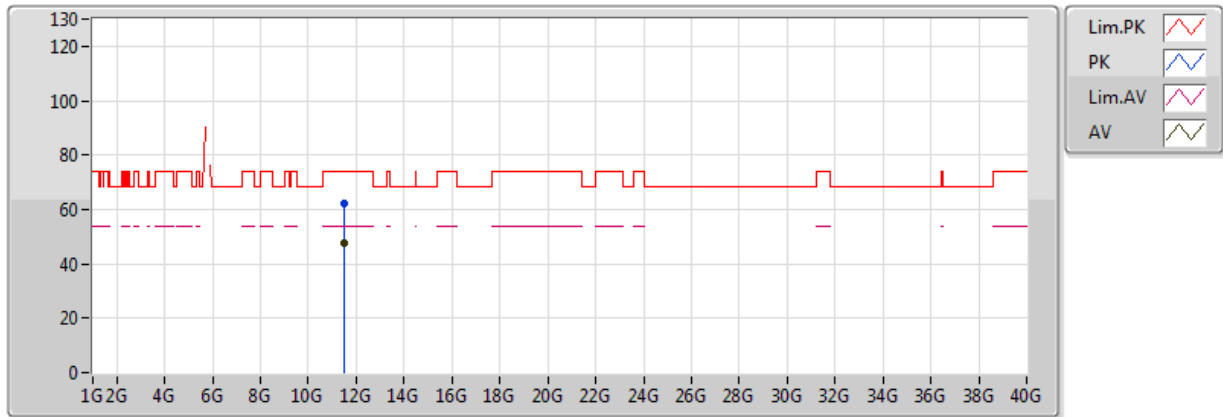


20170413
EUT_Z_2TX
Setting 24
01-J-5
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.48112G	41.54	54.00	-12.46	12.04	3	V	324	2.05	-
PK	11.4804G	55.41	74.00	-18.59	12.04	3	V	324	2.05	-

802.11ac VHT20_Nss1,(MCS0)_2TX

5745MHz_TX

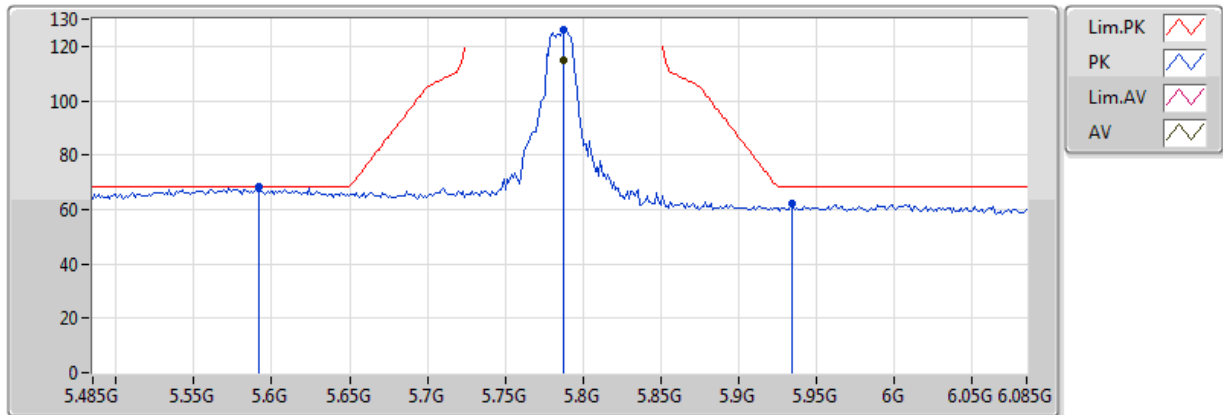


20170413
EUT_Z_2TX
Setting 24
01-J-5
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.49084G	47.43	54.00	-6.57	12.04	3	H	312	1.98	-
PK	11.49408G	62.24	74.00	-11.76	12.04	3	H	312	1.98	-

802.11ac VHT20_Nss1,(MCS0)_2TX

5785MHz_TX

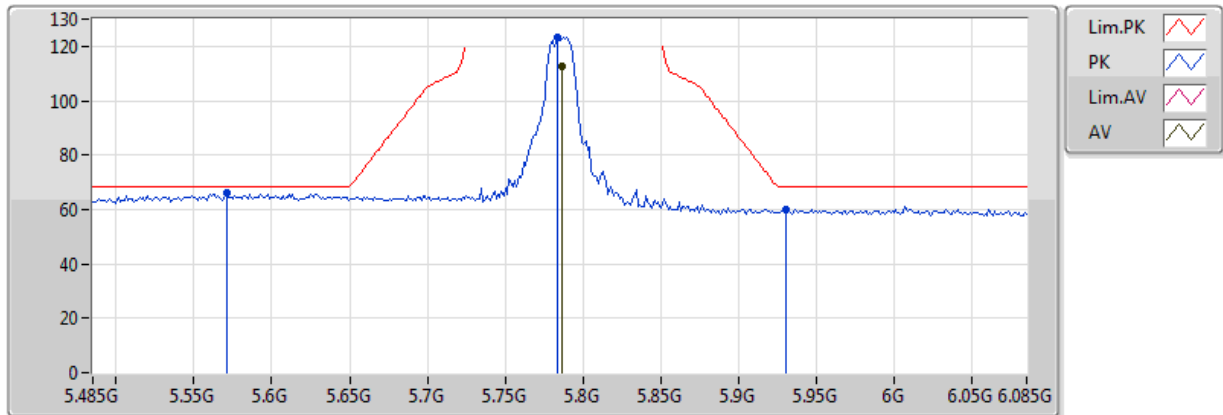


20170413
EUT_Z_2TX
Setting 23
01-J-5-10
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.7874G	115.10	Inf	-Inf	5.92	3	V	330	1.36	-
PK	5.5918G	68.13	68.20	-0.07	5.35	3	V	330	1.36	-
PK	5.7874G	125.80	Inf	-Inf	5.92	3	V	330	1.36	-
PK	5.9338G	62.07	68.20	-6.13	6.47	3	V	330	1.36	-

802.11ac VHT20_Nss1,(MCS0)_2TX

5785MHz_TX

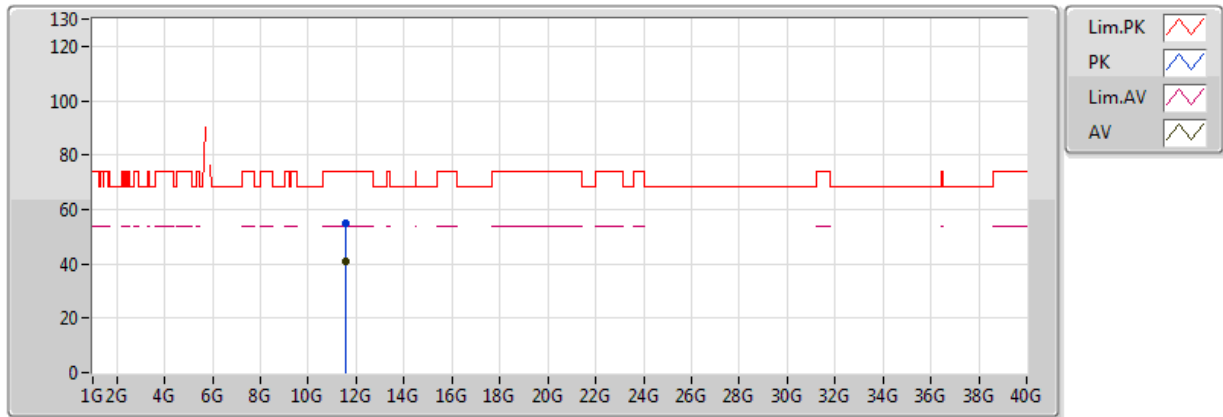


20170413
EUT_Z_2TX
Setting 23
01-J-5-10
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.7862G	112.44	Inf	-Inf	5.92	3	H	334	1.43	-
PK	5.5714G	65.88	68.20	-2.32	5.28	3	H	334	1.43	-
PK	5.7838G	123.28	Inf	-Inf	5.91	3	H	334	1.43	-
PK	5.9302G	59.94	68.20	-8.26	6.45	3	H	334	1.43	-

802.11ac VHT20_Nss1,(MCS0)_2TX

5785MHz_TX

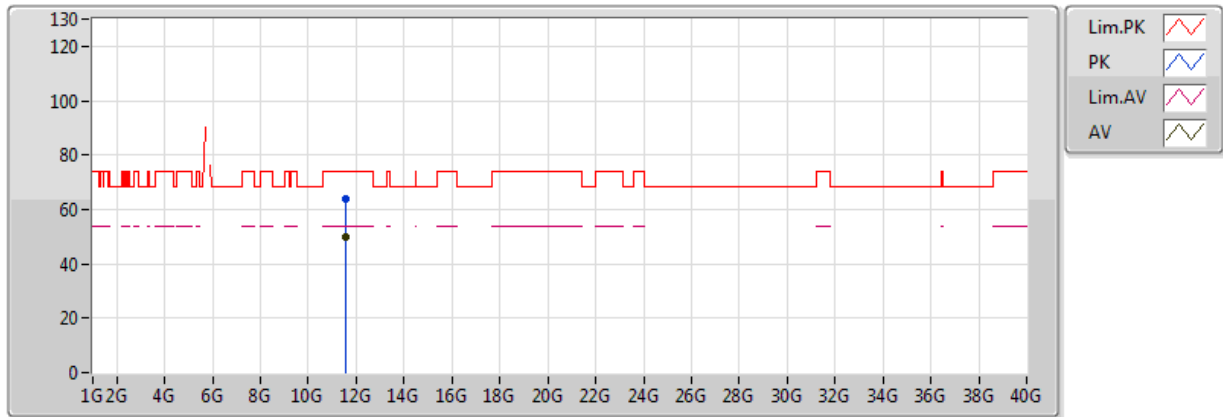


20170413
EUT_Z_2TX
Setting 23
01-J-5
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.57342G	41.17	54.00	-12.83	12.08	3	V	4	2.22	-
PK	11.57396G	54.72	74.00	-19.28	12.08	3	V	4	2.22	-

802.11ac VHT20_Nss1,(MCS0)_2TX

5785MHz_TX

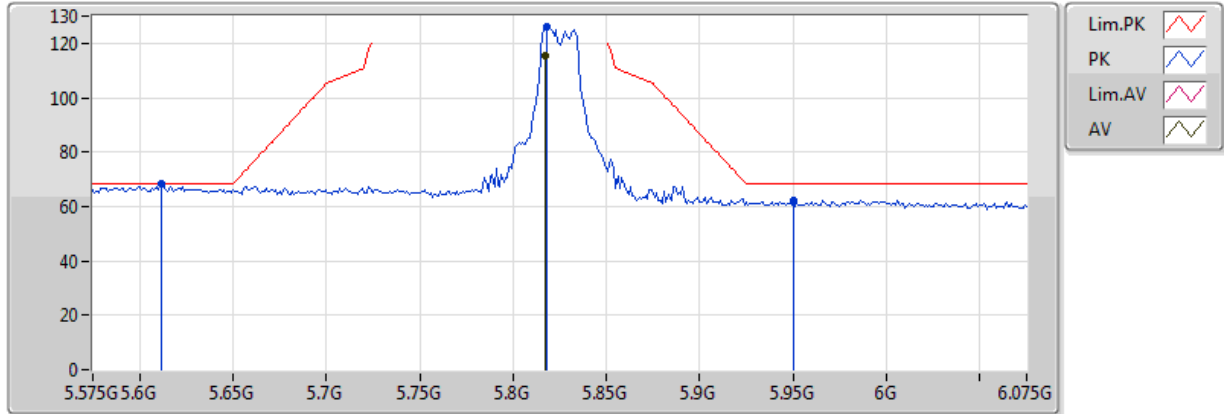


20170413
EUT_Z_2TX
Setting 23
01-J-5
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.57048G	49.67	54.00	-4.33	12.08	3	H	302	2.00	-
PK	11.56892G	64.00	74.00	-10.00	12.08	3	H	302	2.00	-

802.11ac VHT20_Nss1,(MCS0)_2TX

5825MHz_TX

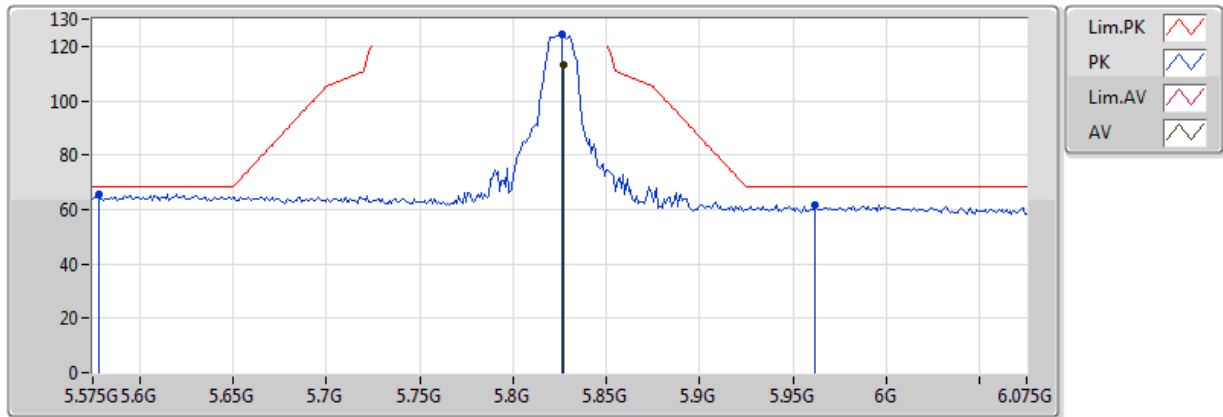


20170413
EUT_Z_2TX
Setting 23
01-J-5-10
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.817G	115.57	Inf	-Inf	6.02	3	V	329	1.49	-
PK	5.612G	68.13	68.20	-0.07	5.42	3	V	329	1.49	-
PK	5.818G	125.93	Inf	-Inf	6.03	3	V	329	1.49	-
PK	5.95G	62.37	68.20	-5.83	6.53	3	V	329	1.49	-

802.11ac VHT20_Nss1,(MCS0)_2TX

5825MHz_TX

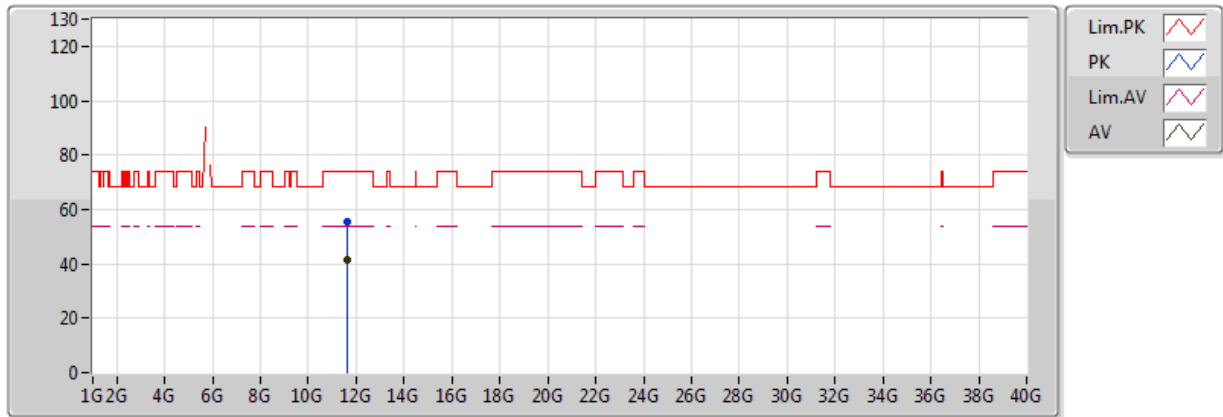


20170413
EUT_Z_2TX
Setting 23
01-J-5-10
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.827G	113.22	Inf	-Inf	6.06	3	H	310	1.40	-
PK	5.578G	65.58	68.20	-2.62	5.30	3	H	310	1.40	-
PK	5.826G	124.24	Inf	-Inf	6.06	3	H	310	1.40	-
PK	5.962G	61.73	68.20	-6.47	6.58	3	H	310	1.40	-

802.11ac VHT20_Nss1,(MCS0)_2TX

5825MHz_TX

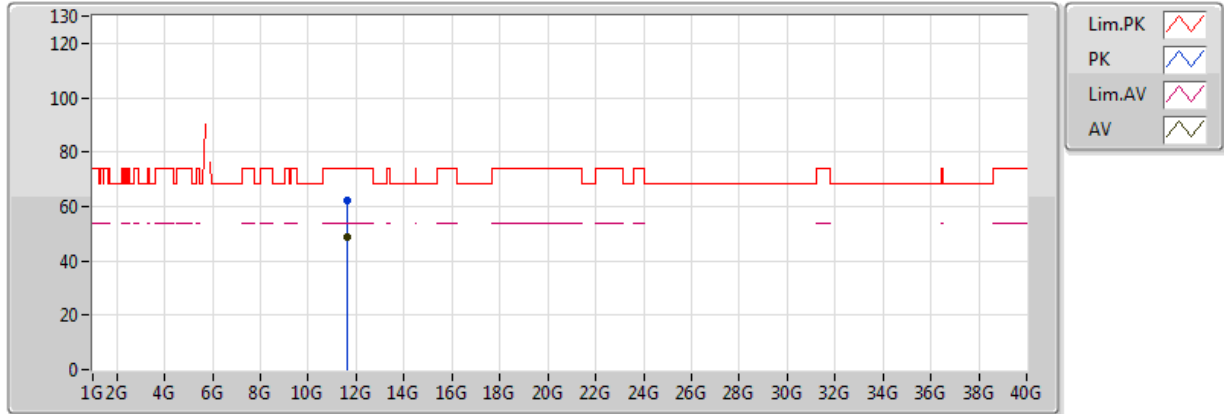


20170413
EUT_Z_2TX
Setting 23
01-J-5
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.65096G	41.51	54.00	-12.49	12.12	3	V	348	2.26	-
PK	11.64748G	55.52	74.00	-18.48	12.12	3	V	348	2.26	-

802.11ac VHT20_Nss1,(MCS0)_2TX

5825MHz_TX

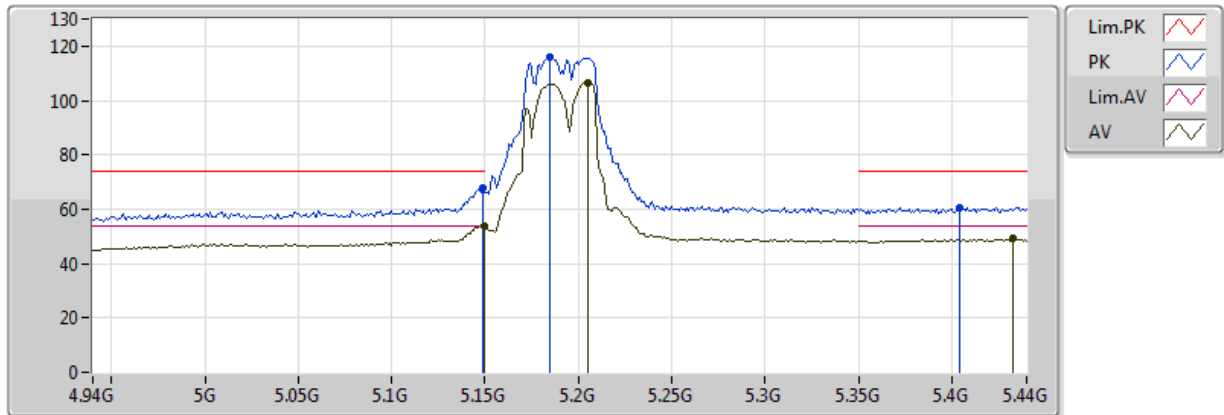


20170413
EUT_Z_2TX
Setting 23
01-J-5
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.64916G	48.67	54.00	-5.33	12.12	3	H	301	2.04	-
PK	11.6464G	62.46	74.00	-11.54	12.12	3	H	301	2.04	-

802.11ac VHT40_Nss1,(MCS0)_2TX

5190MHz_TX

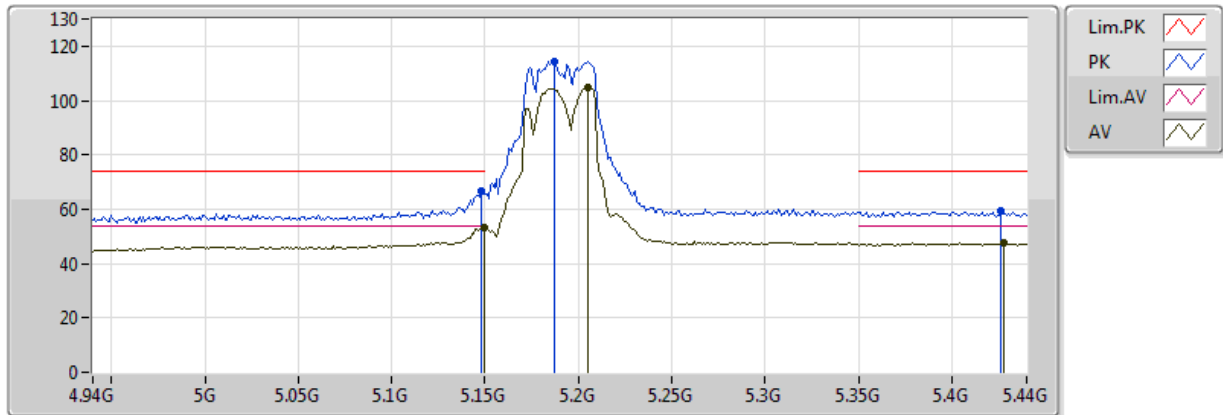


20170413
EUT_Z_2TX
Setting 15.5
01-J-5-10
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.149995G	53.76	54.00	-0.24	4.27	3	V	340	1.13	-
AV	5.205G	106.70	Inf	-Inf	4.39	3	V	340	1.13	-
AV	5.433G	49.06	54.00	-4.94	4.86	3	V	340	1.13	-
PK	5.149G	68.08	74.00	-5.92	4.27	3	V	340	1.13	-
PK	5.185G	115.79	Inf	-Inf	4.35	3	V	340	1.13	-
PK	5.404G	60.64	74.00	-13.36	4.78	3	V	340	1.13	-

802.11ac VHT40_Nss1,(MCS0)_2TX

5190MHz_TX

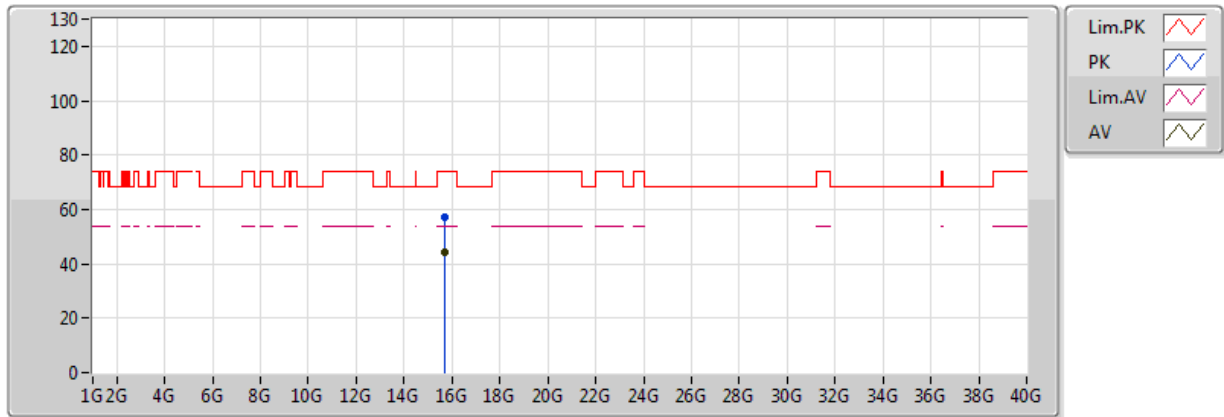


20170413
EUT_Z_2TX
Setting 15.5
01-J-5-10
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.149995G	53.07	54.00	-0.93	4.27	3	H	287	1.22	-
AV	5.205G	104.69	Inf	-Inf	4.39	3	H	287	1.22	-
AV	5.428G	47.59	54.00	-6.41	4.84	3	H	287	1.22	-
PK	5.148G	66.96	74.00	-7.04	4.27	3	H	287	1.22	-
PK	5.187G	114.50	Inf	-Inf	4.35	3	H	287	1.22	-
PK	5.426G	59.23	74.00	-14.77	4.84	3	H	287	1.22	-

802.11ac VHT40_Nss1,(MCS0)_2TX

5190MHz_TX

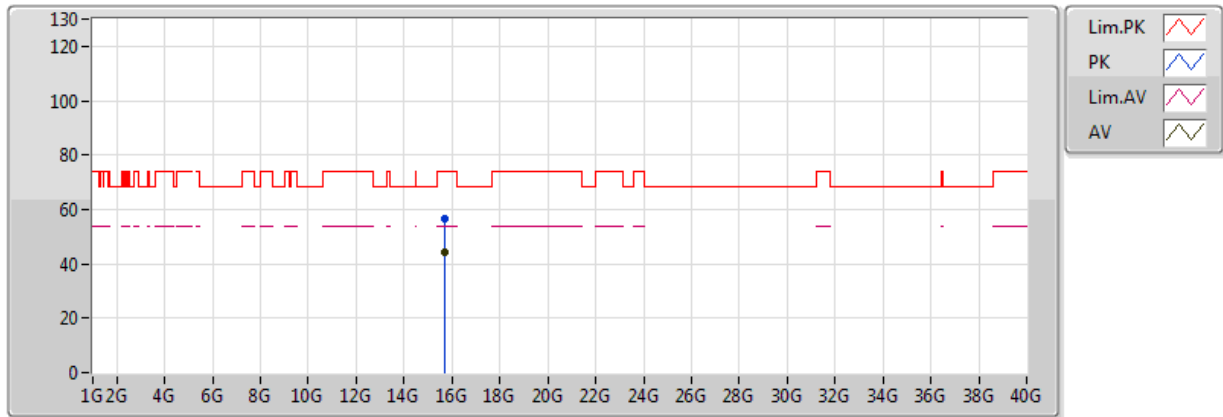


20170413
EUT_Z_2TX
Setting 15.5
01-J-5
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.68118G	44.25	54.00	-9.75	13.63	3	V	91	1.89	-
PK	15.69156G	56.98	74.00	-17.02	13.61	3	V	91	1.89	-

802.11ac VHT40_Nss1,(MCS0)_2TX

5190MHz_TX

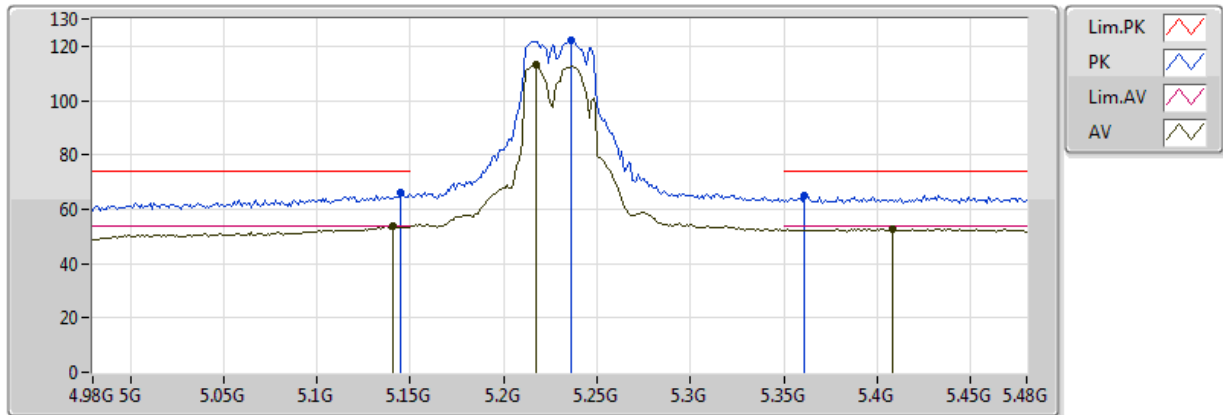


20170413
EUT_Z_2TX
Setting 15.5
01-J-5
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.6999G	44.22	54.00	-9.78	13.60	3	H	58	1.45	-
PK	15.68166G	56.59	74.00	-17.41	13.62	3	H	58	1.45	-

802.11ac VHT40_Nss1,(MCS0)_2TX

5230MHz_TX

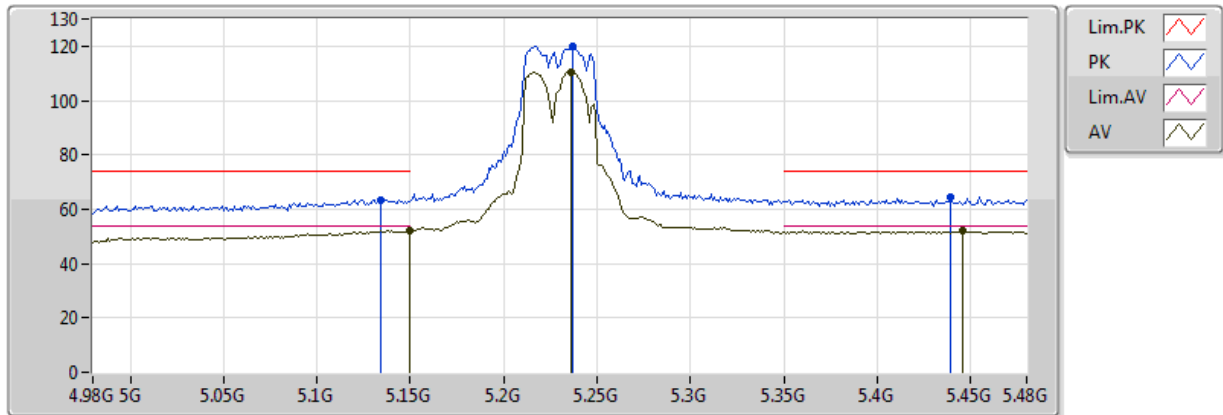


20170413
EUT_Z_2TX
Setting 21
01-J-5-10
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.141G	53.62	54.00	-0.38	4.25	3	V	341	1.30	-
AV	5.217G	112.91	Inf	-Inf	4.42	3	V	341	1.30	-
AV	5.408G	52.85	54.00	-1.15	4.79	3	V	341	1.30	-
PK	5.145G	66.36	74.00	-7.64	4.26	3	V	341	1.30	-
PK	5.236G	121.99	Inf	-Inf	4.46	3	V	341	1.30	-
PK	5.361G	64.87	74.00	-9.13	4.70	3	V	341	1.30	-

802.11ac VHT40_Nss1,(MCS0)_2TX

5230MHz_TX

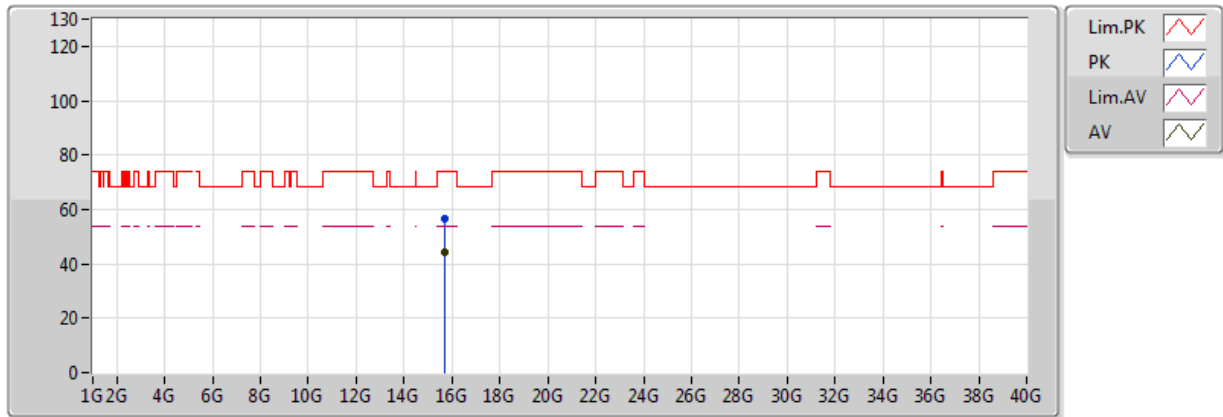


20170413
EUT_Z_2TX
Setting 21
01-J-5-10
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.149995G	52.05	54.00	-1.95	4.27	3	H	284	1.17	-
AV	5.236G	110.61	Inf	-Inf	4.46	3	H	284	1.17	-
AV	5.446G	51.94	54.00	-2.06	4.89	3	H	284	1.17	-
PK	5.134G	63.37	74.00	-10.63	4.23	3	H	284	1.17	-
PK	5.237G	119.74	Inf	-Inf	4.46	3	H	284	1.17	-
PK	5.439G	64.39	74.00	-9.61	4.87	3	H	284	1.17	-

802.11ac VHT40_Nss1,(MCS0)_2TX

5230MHz_TX

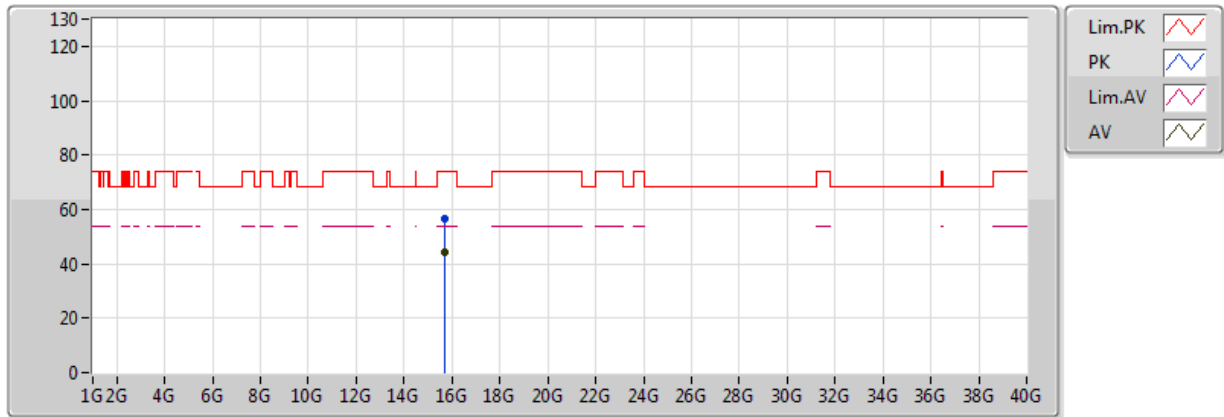


20170413
EUT_Z_2TX
Setting 21
01-J-5
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.70044G	44.08	54.00	-9.92	13.60	3	V	90	1.79	-
PK	15.70434G	56.70	74.00	-17.30	13.60	3	V	90	1.79	-

802.11ac VHT40_Nss1,(MCS0)_2TX

5230MHz_TX

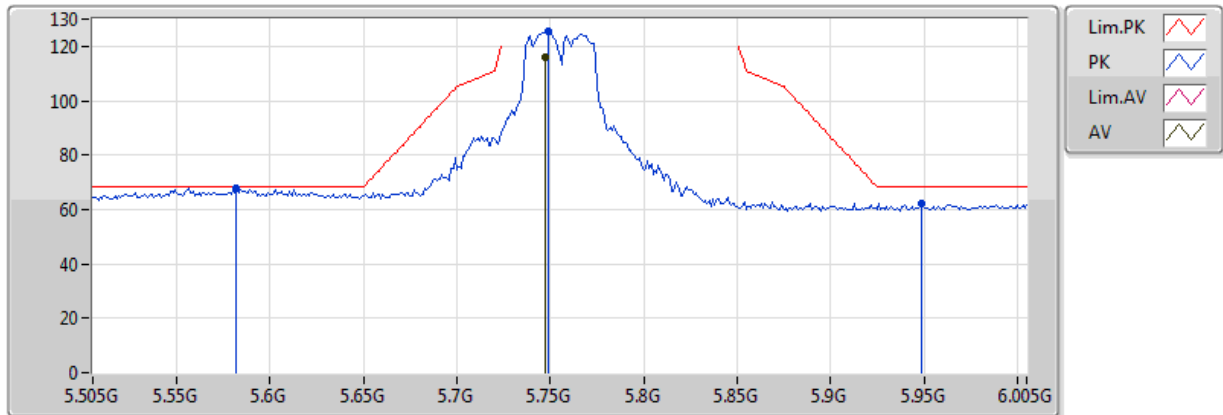


20170413
EUT_Z_2TX
Setting 21
01-J-5
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.69846G	44.10	54.00	-9.90	13.60	3	H	249	1.53	-
PK	15.69858G	56.54	74.00	-17.46	13.60	3	H	249	1.53	-

802.11ac VHT40_Nss1,(MCS0)_2TX

5755MHz_TX

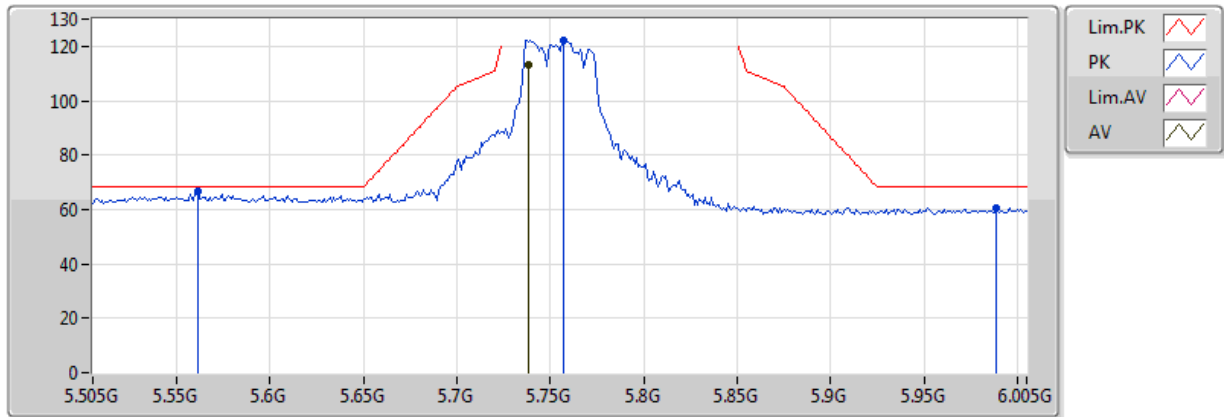


20170413
EUT_Z_2TX
Setting 25.5
01-J-5-10
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.747G	116.04	Inf	-Inf	5.81	3	V	329	1.37	-
PK	5.582G	67.92	68.20	-0.28	5.32	3	V	329	1.37	-
PK	5.749G	125.53	Inf	-Inf	5.82	3	V	329	1.37	-
PK	5.949G	62.21	68.20	-5.99	6.53	3	V	329	1.37	-

802.11ac VHT40_Nss1,(MCS0)_2TX

5755MHz_TX

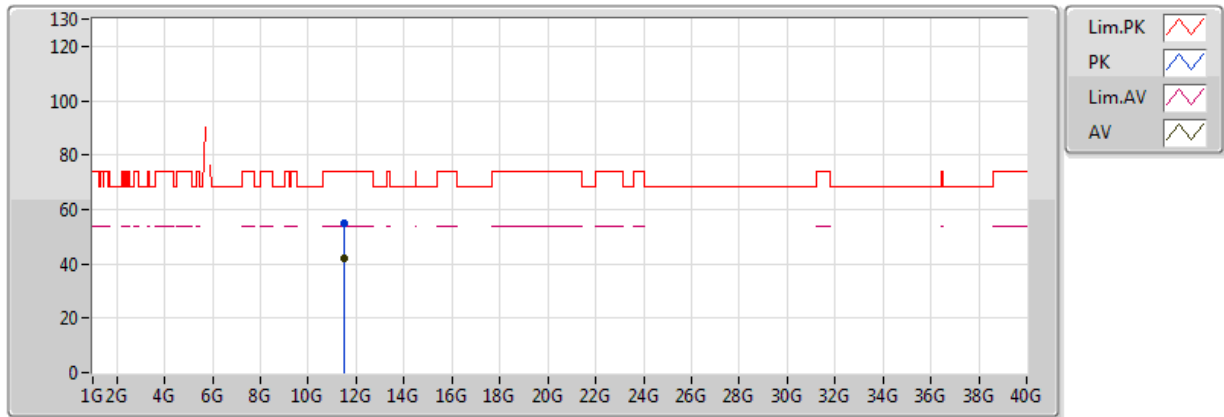


20170413
EUT_Z_2TX
Setting 25.5
01-J-5-10
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.738G	113.01	Inf	-Inf	5.79	3	H	329	1.41	-
PK	5.561G	66.42	68.20	-1.78	5.24	3	H	329	1.41	-
PK	5.757G	122.21	Inf	-Inf	5.84	3	H	329	1.41	-
PK	5.989G	60.59	68.20	-7.61	6.68	3	H	329	1.41	-

802.11ac VHT40_Nss1,(MCS0)_2TX

5755MHz_TX

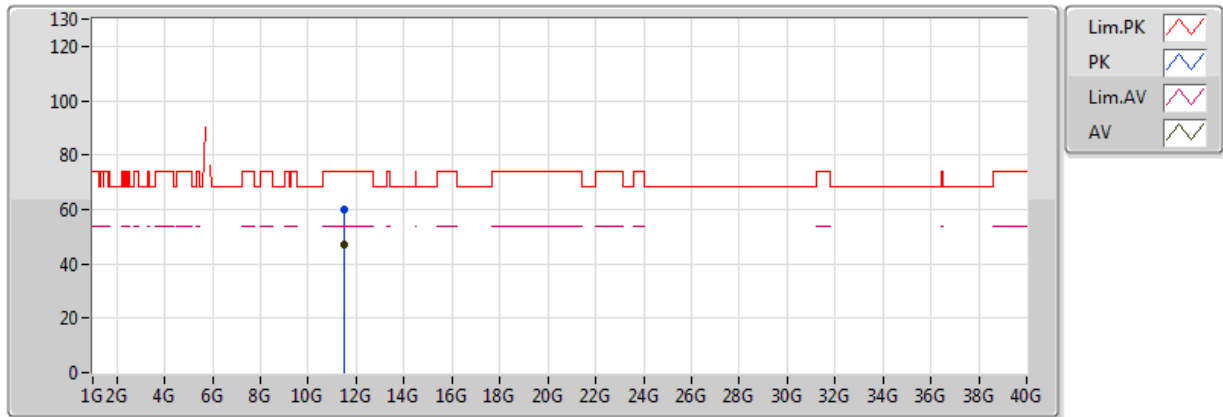


20170413
EUT_Z_2TX
Setting 25.5
01-J-5
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.50958G	41.85	54.00	-12.15	12.05	3	V	160	1.27	-
PK	11.52386G	54.75	74.00	-19.25	12.06	3	V	160	1.27	-

802.11ac VHT40_Nss1,(MCS0)_2TX

5755MHz_TX

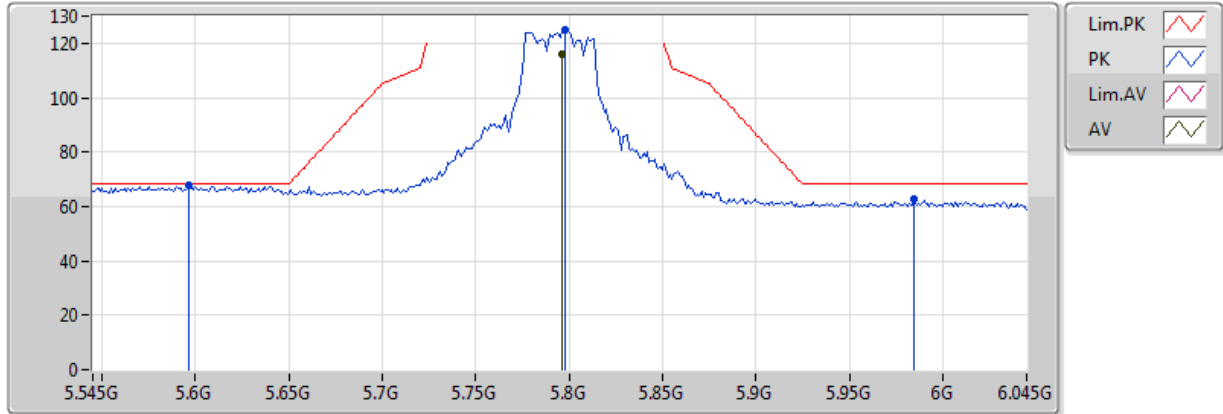


20170413
EUT_Z_2TX
Setting 25.5
01-J-5
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.51678G	47.11	54.00	-6.89	12.05	3	H	321	1.49	-
PK	11.50658G	59.97	74.00	-14.03	12.05	3	H	321	1.49	-

802.11ac VHT40_Nss1,(MCS0)_2TX

5795MHz_TX

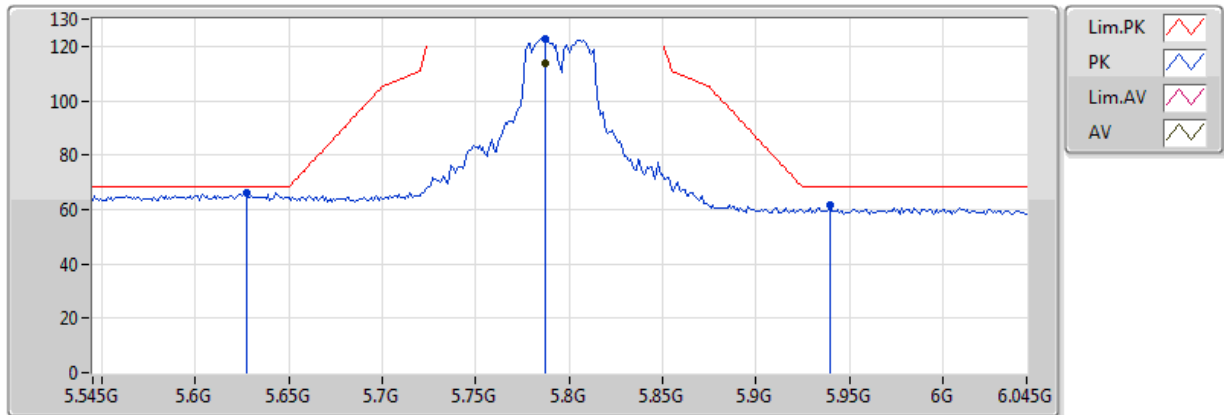


20170413
EUT_Z_2TX
Setting 25.5
01-J-5-10
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.796G	115.72	Inf	-Inf	5.95	3	V	327	1.28	-
PK	5.596G	67.95	68.20	-0.25	5.37	3	V	327	1.28	-
PK	5.798G	124.78	Inf	-Inf	5.95	3	V	327	1.28	-
PK	5.985G	62.78	68.20	-5.42	6.66	3	V	327	1.28	-

802.11ac VHT40_Nss1,(MCS0)_2TX

5795MHz_TX

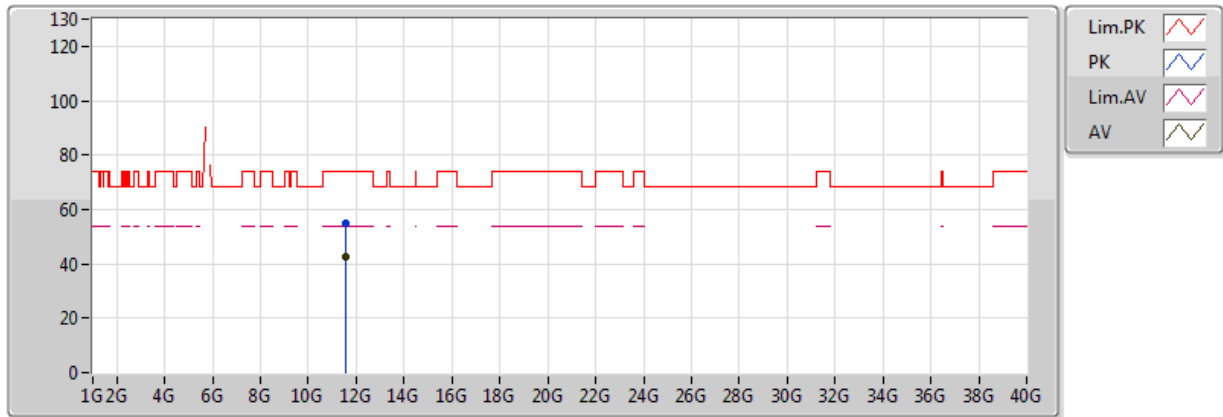


20170413
EUT_Z_2TX
Setting 25.5
01-J-5-10
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.787G	113.74	Inf	-Inf	5.92	3	H	332	1.44	-
PK	5.627G	65.98	68.20	-2.22	5.46	3	H	332	1.44	-
PK	5.787G	122.89	Inf	-Inf	5.92	3	H	332	1.44	-
PK	5.94G	61.90	68.20	-6.30	6.49	3	H	332	1.44	-

802.11ac VHT40_Nss1,(MCS0)_2TX

5795MHz_TX

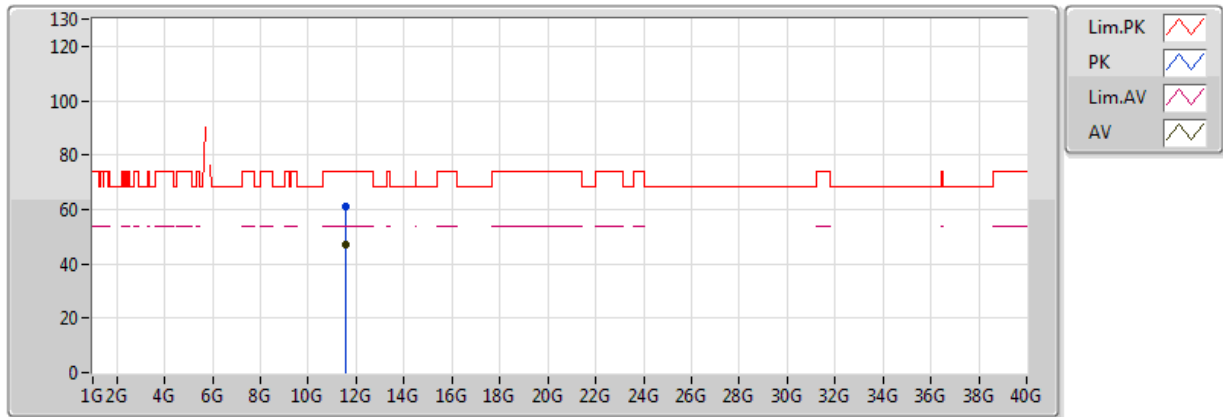


20170413
EUT_Z_2TX
Setting 25.5
01-J-5
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.57824G	42.47	54.00	-11.53	12.08	3	V	289	1.56	-
PK	11.5885G	55.06	74.00	-18.94	12.09	3	V	289	1.56	-

802.11ac VHT40_Nss1,(MCS0)_2TX

5795MHz_TX

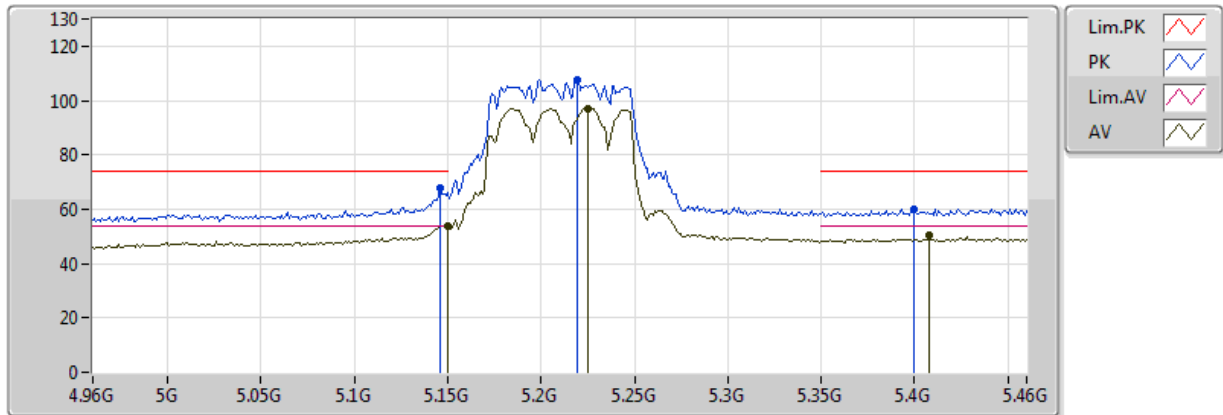


20170413
EUT_Z_2TX
Setting 25.5
01-J-5
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.5762G	47.12	54.00	-6.88	12.08	3	H	324	1.49	-
PK	11.58658G	60.96	74.00	-13.04	12.09	3	H	324	1.49	-

802.11ac VHT80_Nss1,(MCS0)_2TX

5210MHz_TX

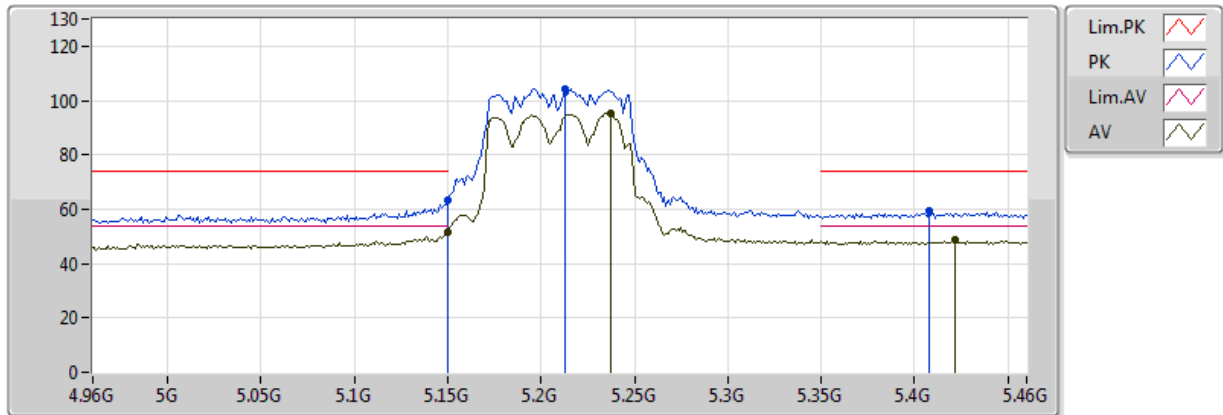


20170413
EUT_Z_2TX
Setting 9
01-J-5-10
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.149995G	53.97	54.00	-0.03	4.27	3	V	339	1.29	-
AV	5.225G	97.16	Inf	-Inf	4.43	3	V	339	1.29	-
AV	5.408G	50.33	54.00	-3.67	4.79	3	V	339	1.29	-
PK	5.146G	67.61	74.00	-6.39	4.26	3	V	339	1.29	-
PK	5.219G	107.85	Inf	-Inf	4.42	3	V	339	1.29	-
PK	5.4G	60.20	74.00	-13.80	4.77	3	V	339	1.29	-

802.11ac VHT80_Nss1,(MCS0)_2TX

5210MHz_TX

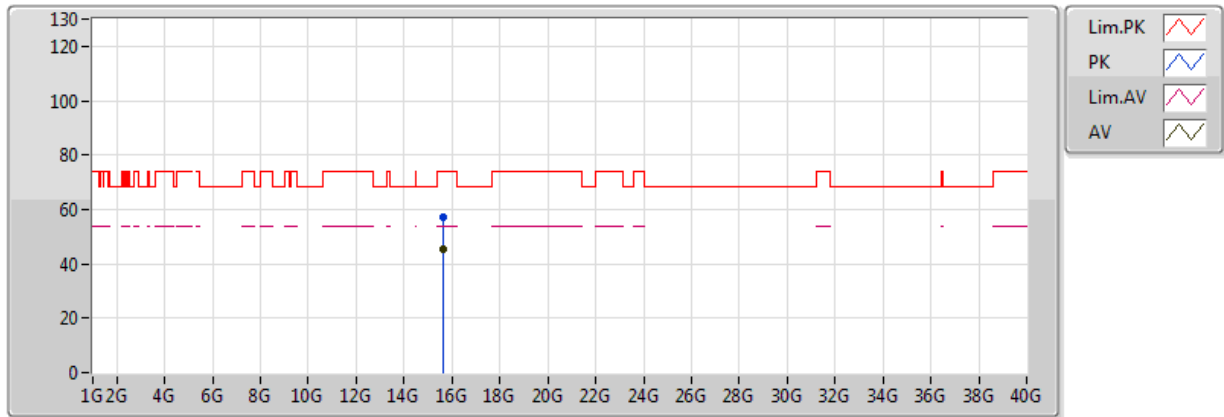


20170413
EUT_Z_2TX
Setting 9
01-J-5-10
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.149995G	51.73	54.00	-2.27	4.27	3	H	287	1.09	-
AV	5.237G	95.29	Inf	-Inf	4.46	3	H	287	1.09	-
AV	5.422G	48.93	54.00	-5.07	4.83	3	H	287	1.09	-
PK	5.149995G	63.27	74.00	-10.73	4.27	3	H	287	1.09	-
PK	5.213G	104.44	Inf	-Inf	4.41	3	H	287	1.09	-
PK	5.408G	59.15	74.00	-14.85	4.79	3	H	287	1.09	-

802.11ac VHT80_Nss1,(MCS0)_2TX

5210MHz_TX

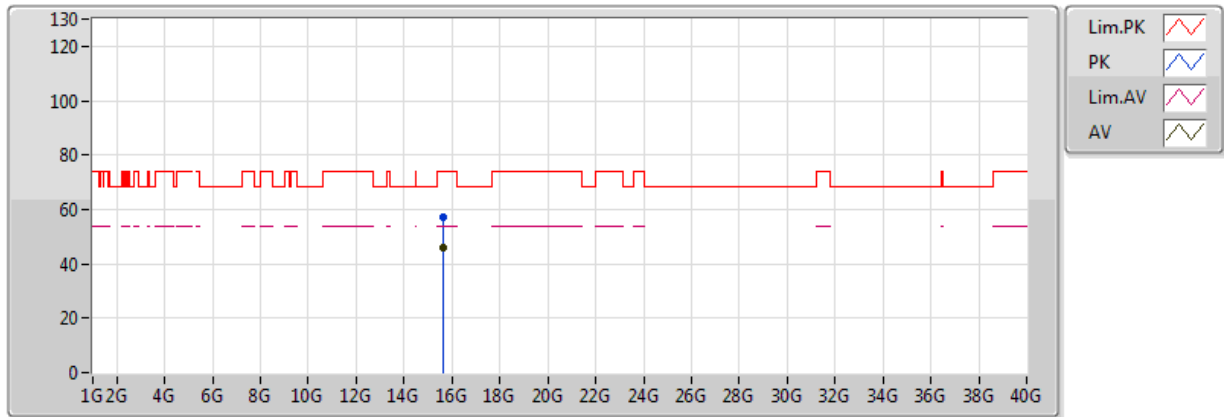


20170413
EUT_Z_2TX
Setting 9
01-J-5
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.63078G	45.53	54.00	-8.47	13.69	3	V	344	2.26	-
PK	15.62712G	56.92	74.00	-17.08	13.69	3	V	344	2.26	-

802.11ac VHT80_Nss1,(MCS0)_2TX

5210MHz_TX

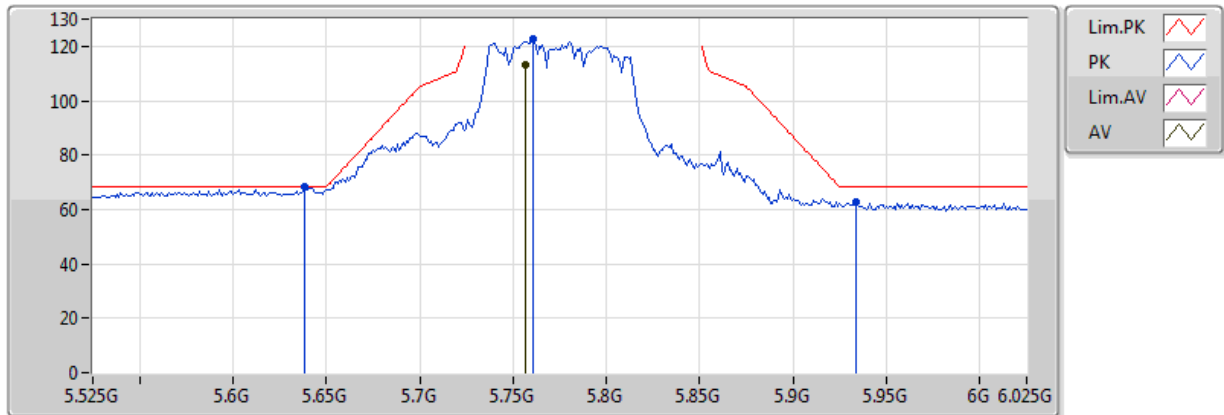


20170413
EUT_Z_2TX
Setting 9
01-J-5
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.62388G	45.81	54.00	-8.19	13.70	3	H	19	1.37	-
PK	15.63654G	57.04	74.00	-16.96	13.68	3	H	19	1.37	-

802.11ac VHT80_Nss1,(MCS0)_2TX

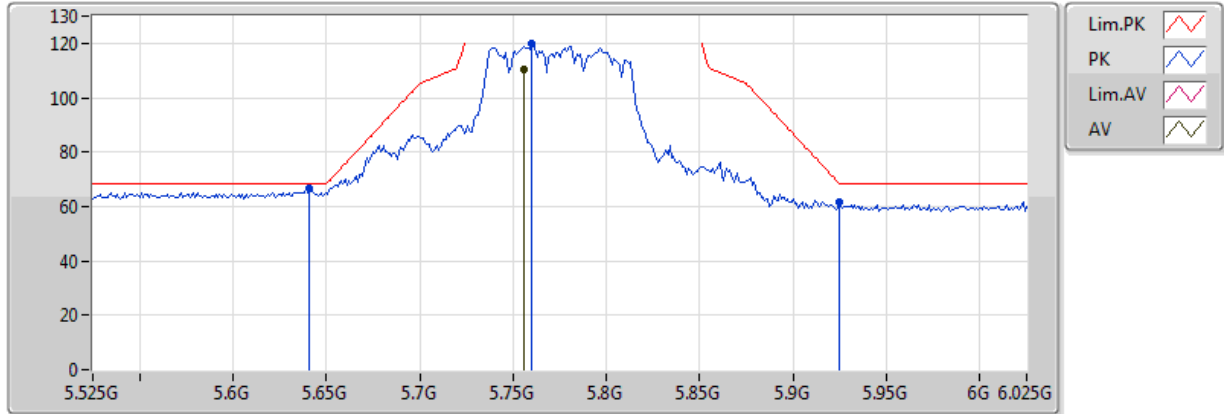
5775MHz_TX



Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.757G	113.07	Inf	-Inf	5.84	3	V	328	1.35	-
PK	5.638G	68.15	68.20	-0.05	5.49	3	V	328	1.35	-
PK	5.761G	122.77	Inf	-Inf	5.85	3	V	328	1.35	-
PK	5.934G	62.79	68.20	-5.41	6.47	3	V	328	1.35	-

802.11ac VHT80_Nss1,(MCS0)_2TX

5775MHz_TX

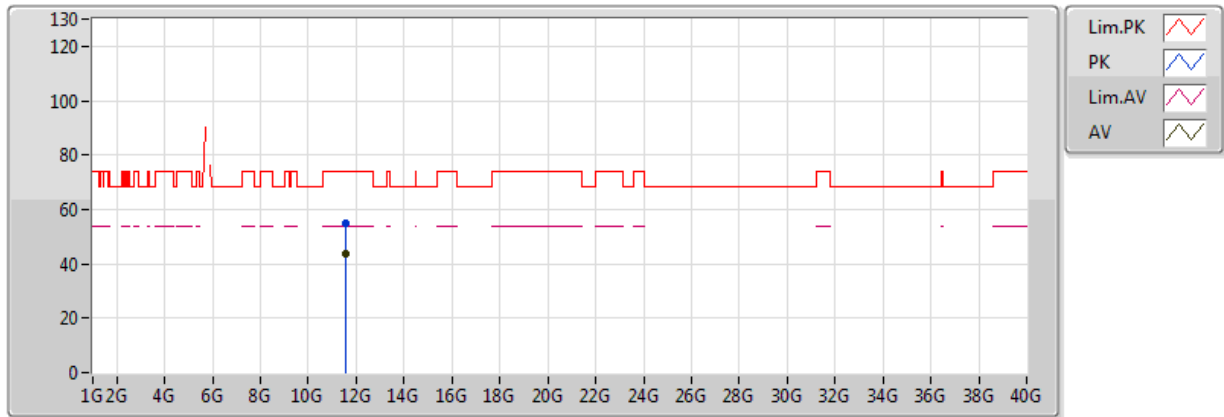


20170413
EUT_Z_2TX
Setting 24.5
01-J-5-10
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.756G	110.30	Inf	-Inf	5.84	3	H	327	1.40	-
PK	5.641G	66.92	68.20	-1.28	5.50	3	H	327	1.40	-
PK	5.76G	119.83	Inf	-Inf	5.85	3	H	327	1.40	-
PK	5.925G	61.44	68.20	-6.76	6.43	3	H	327	1.40	-

802.11ac VHT80_Nss1,(MCS0)_2TX

5775MHz_TX

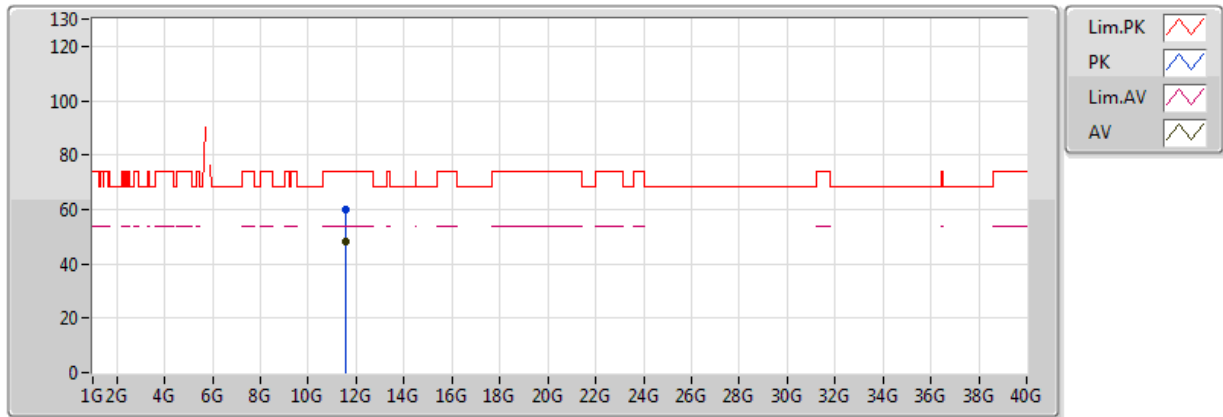


20170413
EUT_Z_2TX
Setting 24.5
01-J-5
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.56182G	43.80	54.00	-10.20	12.08	3	V	152	2.16	-
PK	11.5446G	54.85	74.00	-19.15	12.07	3	V	152	2.16	-

802.11ac VHT80_Nss1,(MCS0)_2TX

5775MHz_TX



20170413
EUT_Z_2TX
Setting 24.5
01-J-5
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.55378G	48.32	54.00	-5.68	12.07	3	H	301	2.14	-
PK	11.56062G	59.72	74.00	-14.28	12.07	3	H	301	2.14	-

Mode: 20 MHz / Port 2

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5200 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5199.9797	5199.9788	5199.9783	5199.9774
110.00	5199.9793	5199.9788	5199.9781	5199.9774
93.50	5199.9786	5199.9784	5199.9776	5199.9775
Max. Deviation (MHz)	0.0214	0.0216	0.0224	0.0226
Max. Deviation (ppm)	4.12	4.15	4.31	4.35
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5200 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-40	5199.9846	5199.9845	5199.9842	5199.9839
-30	5199.9840	5199.9830	5199.9828	5199.9822
-20	5199.9837	5199.9831	5199.9830	5199.9820
-10	5199.9833	5199.9832	5199.9825	5199.9822
0	5199.9820	5199.9815	5199.9812	5199.9810
10	5199.9807	5199.9800	5199.9797	5199.9793
20	5199.9793	5199.9784	5199.9778	5199.9771
30	5199.9784	5199.9774	5199.9767	5199.9760
40	5199.9765	5199.9760	5199.9755	5199.9753
50	5199.9754	5199.9747	5199.9742	5199.9738
60	5199.9756	5199.9754	5199.9745	5199.9739
65	5199.9758	5199.9756	5199.9748	5199.9740
Max. Deviation (MHz)	0.0244	0.0246	0.0255	0.0261
Max. Deviation (ppm)	4.69	4.73	4.90	5.02
Result	Pass			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5785 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5784.9796	5784.9787	5784.9777	5784.9768
110.00	5784.9793	5784.9789	5784.9784	5784.9776
93.50	5784.9790	5784.9782	5784.9775	5784.9769
Max. Deviation (MHz)	0.0210	0.0218	0.0225	0.0232
Max. Deviation (ppm)	3.63	3.77	3.89	4.01
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5785 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-40	5784.9830	5784.9821	5784.9814	5784.9807
-30	5784.9827	5784.9825	5784.9823	5784.9814
-20	5784.9826	5784.9823	5784.9815	5784.9809
-10	5784.9820	5784.9814	5784.9809	5784.9803
0	5784.9819	5784.9811	5784.9803	5784.9798
10	5784.9811	5784.9803	5784.9802	5784.9793
20	5784.9793	5784.9786	5784.9785	5784.9777
30	5784.9784	5784.9775	5784.9773	5784.9764
40	5784.9778	5784.9772	5784.9765	5784.9755
50	5784.9769	5784.9759	5784.9751	5784.9746
60	5784.9763	5784.9755	5784.9745	5784.9742
65	5784.9754	5784.9748	5784.9746	5784.9741
Max. Deviation (MHz)	0.0246	0.0252	0.0255	0.0259
Max. Deviation (ppm)	4.25	4.36	4.41	4.48
Result	Pass			

Mode: 40 MHz / Port 2

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5190 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5189.9801	5189.9793	5189.9785	5189.9779
110.00	5189.9793	5189.9783	5189.9775	5189.9773
93.50	5189.9783	5189.9779	5189.9778	5189.9769
Max. Deviation (MHz)	0.0217	0.0221	0.0225	0.0231
Max. Deviation (ppm)	4.18	4.26	4.34	4.45
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5190 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-40	5189.9855	5189.9848	5189.9842	5189.9836
-30	5189.9838	5189.9834	5189.9832	5189.9827
-20	5189.9835	5189.9827	5189.9818	5189.9814
-10	5189.9832	5189.9826	5189.9820	5189.9812
0	5189.9823	5189.9817	5189.9807	5189.9803
10	5189.9805	5189.9799	5189.9793	5189.9786
20	5189.9793	5189.9789	5189.9779	5189.9773
30	5189.9784	5189.9776	5189.9775	5189.9765
40	5189.9775	5189.9772	5189.9765	5189.9756
50	5189.9772	5189.9769	5189.9767	5189.9762
60	5189.9768	5189.9762	5189.9755	5189.9753
65	5189.9749	5189.9747	5189.9743	5189.9733
Max. Deviation (MHz)	0.0251	0.0253	0.0257	0.0267
Max. Deviation (ppm)	4.84	4.87	4.95	5.14
Result	Pass			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5755 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5754.9799	5754.9797	5754.9794	5754.9789
110.00	5754.9793	5754.9786	5754.9784	5754.9777
93.50	5754.9792	5754.9789	5754.9781	5754.9774
Max. Deviation (MHz)	0.0208	0.0214	0.0219	0.0226
Max. Deviation (ppm)	3.61	3.72	3.81	3.93
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5755 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-40	5754.9853	5754.9847	5754.9844	5754.9843
-30	5754.9840	5754.9831	5754.9823	5754.9819
-20	5754.9828	5754.9821	5754.9811	5754.9803
-10	5754.9816	5754.9812	5754.9810	5754.9807
0	5754.9805	5754.9796	5754.9791	5754.9789
10	5754.9798	5754.9797	5754.9796	5754.9794
20	5754.9793	5754.9786	5754.9785	5754.9779
30	5754.9784	5754.9779	5754.9777	5754.9769
40	5754.9774	5754.9764	5754.9760	5754.9753
50	5754.9765	5754.9761	5754.9754	5754.9753
60	5754.9760	5754.9755	5754.9753	5754.9752
65	5754.9751	5754.9744	5754.9736	5754.9728
Max. Deviation (MHz)	0.0249	0.0256	0.0264	0.0272
Max. Deviation (ppm)	4.33	4.45	4.59	4.73
Result	Pass			

Mode: 80 MHz / Port 2

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5210 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5209.9794	5209.9784	5209.9774	5209.9766
110.00	5209.9793	5209.9785	5209.9782	5209.9776
93.50	5209.9792	5209.9790	5209.9783	5209.9777
Max. Deviation (MHz)	0.0208	0.0216	0.0226	0.0234
Max. Deviation (ppm)	3.99	4.15	4.34	4.49
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5210 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-40	5209.9839	5209.9838	5209.9830	5209.9828
-30	5209.9836	5209.9827	5209.9826	5209.9823
-20	5209.9833	5209.9830	5209.9821	5209.9819
-10	5209.9819	5209.9811	5209.9786	5209.9801
0	5209.9805	5209.9796	5209.9789	5209.9788
10	5209.9800	5209.9797	5209.9793	5209.9785
20	5209.9793	5209.9786	5209.9781	5209.9775
30	5209.9784	5209.9774	5209.9771	5209.9770
40	5209.9774	5209.9772	5209.9765	5209.9761
50	5209.9755	5209.9748	5209.9744	5209.9736
60	5209.9751	5209.9745	5209.9738	5209.9729
65	5209.9735	5209.9731	5209.9724	5209.9716
Max. Deviation (MHz)	0.0265	0.0269	0.0276	0.0284
Max. Deviation (ppm)	5.09	5.16	5.30	5.45
Result	Pass			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5775 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5774.9799	5774.9795	5774.9789	5774.9784
110.00	5774.9793	5774.9790	5774.9780	5774.9770
93.50	5774.9784	5774.9774	5774.9764	5774.9754
Max. Deviation (MHz)	0.0216	0.0226	0.0236	0.0246
Max. Deviation (ppm)	3.74	3.91	4.09	4.26
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5775 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-40	5774.9848	5774.9844	5774.9839	5774.9832
-30	5774.9836	5774.9829	5774.9824	5774.9823
-20	5774.9816	5774.9809	5774.9801	5774.9796
-10	5774.9815	5774.9806	5774.9804	5774.9795
0	5774.9809	5774.9799	5774.9795	5774.9793
10	5774.9794	5774.9793	5774.9789	5774.9781
20	5774.9793	5774.9790	5774.9786	5774.9784
30	5774.9784	5774.9779	5774.9769	5774.9759
40	5774.9765	5774.9757	5774.9750	5774.9748
50	5774.9751	5774.9744	5774.9736	5774.9734
60	5774.9737	5774.9735	5774.9729	5774.9724
65	5774.9733	5774.9727	5774.9718	5774.9715
Max. Deviation (MHz)	0.0267	0.0273	0.0282	0.0285
Max. Deviation (ppm)	4.62	4.73	4.88	4.94
Result	Pass			