

FCC Test Report

Equipment : AC1200 Wireless MU-MIMO Gigabit Indoor/Outdoor Access Point

Brand Name : tp-link

Model No. : EAP225-Outdoor

FCC ID : TE7EAP225OD

Standard : 47 CFR FCC Part 15.407

Operating Band : 5150 MHz – 5250 MHz
5725 MHz – 5850 MHz

Applicant : TP-Link Technologies Co., Ltd.
Building 24 (floors 1,3,4,5) and 28 (floors1-4), Central Science and Technology Park,Nanshan Shenzhen, 518057 China

Manufacturer : TP-Link Technologies Co., Ltd.
Building 24 (floors 1,3,4,5) and 28 (floors1-4), Central Science and Technology Park,Nanshan Shenzhen, 518057 China

Function : ☒ Outdoor; ☒ Indoor; ☐ Fixed P2P
☐ Client

The product sample received on Sep. 08, 2017 and completely tested on Oct. 18, 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



SPORTON INTERNATIONAL INC.
TEL : 886-3-3273456
FAX : 886-3-3270973
FCC ID: TE7EAP225OD

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	802.11n HT20-BF	20	2TX
5.15-5.25GHz	802.11ac VHT20	20	2TX
5.15-5.25GHz	802.11ac VHT20-BF	20	2TX
5.15-5.25GHz	802.11n HT40	40	2TX
5.15-5.25GHz	802.11n HT40-BF	40	2TX
5.15-5.25GHz	802.11ac VHT40	40	2TX
5.15-5.25GHz	802.11ac VHT40-BF	40	2TX
5.15-5.25GHz	802.11ac VHT80	80	2TX
5.15-5.25GHz	802.11ac VHT80-BF	80	2TX
5.725-5.85GHz	802.11a	20	2TX
5.725-5.85GHz	802.11n HT20	20	2TX
5.725-5.85GHz	802.11n HT20-BF	20	2TX
5.725-5.85GHz	802.11ac VHT20	20	2TX
5.725-5.85GHz	802.11ac VHT20-BF	20	2TX
5.725-5.85GHz	802.11n HT40	40	2TX
5.725-5.85GHz	802.11n HT40-BF	40	2TX
5.725-5.85GHz	802.11ac VHT40	40	2TX
5.725-5.85GHz	802.11ac VHT40-BF	40	2TX
5.725-5.85GHz	802.11ac VHT80	80	2TX
5.725-5.85GHz	802.11ac VHT80-BF	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.	Brand	P/N	Antenna Type	Connector	Gain (dBi)		
					2.4GHz	5GHz Band 1	5GHz Band 4
1	tp-link	3101501275	Dipole Antenna	RP-SMA-F	3.36	5.19	4.56
2	tp-link	3101501275	Dipole Antenna	RP-SMA-F	3.36	5.19	4.56

Note: The EUT has two antennas.

For WLAN 2.4GHz (2TX/2RX):

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

For WLAN 5GHz (2TX/2RX):

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

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11a	0.96	0.177	2.033m	1k
802.11ac VHT20	0.959	0.182	1.718m	1k
802.11ac VHT40	0.905	0.434	847.5u	3k
802.11ac VHT80	0.84	0.757	420u	3k

1.1.4 EUT Operational Condition

EUT Power Type	From PoE		
Beamforming Function	☒	With beamforming	☐ Without beamforming
	The product has beamforming function for 802.11n/ac in 5GHz.		
Test Software Version	QCA		

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	Eddie Weng & Brian Sun	22°C / 54%	Sep. 21, 2017~ Oct. 18, 2017
Radiated	03CH01-CB	Welson Chen & Zero Chen	22°C / 54%	Sep. 13, 2017~ Oct. 03, 2017
AC Conduction	CO01-CB	Max Lin & Rick Yeh	26°C / 58%	Sep. 15, 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

For non-beamforming mode:

For Indoor-5G Band 1:

Mode	Power Setting
802.11a_Nss1,(6Mbps)_2TX	-
5180MHz	21.5
5200MHz	24
5240MHz	24
802.11ac VHT20_Nss1,(MCS0)_2TX	-
5180MHz	21
5200MHz	24
5240MHz	24
802.11ac VHT40_Nss1,(MCS0)_2TX	-
5190MHz	17
5230MHz	22.5
802.11ac VHT80_Nss1,(MCS0)_2TX	-
5210MHz	15.5

**For Outdoor-5G Band 1 + Indoor/Outdoor-5G Band 4:**

Mode	Power Setting
802.11a_Nss1,(6Mbps)_2TX	-
5180MHz	21
5200MHz	21
5240MHz	21.5
5745MHz	21.5
5785MHz	21.5
5825MHz	20.5
802.11ac VHT20_Nss1,(MCS0)_2TX	-
5180MHz	21
5200MHz	21.5
5240MHz	21.5
5745MHz	21.5
5785MHz	20.5
5825MHz	20.5
802.11ac VHT40_Nss1,(MCS0)_2TX	-
5190MHz	17
5230MHz	20.5
5755MHz	22.5
5795MHz	22.5
802.11ac VHT80_Nss1,(MCS0)_2TX	-
5210MHz	15.5
5775MHz	21

For beamforming mode:

For Indoor-5G Band 1:

Mode	Power Setting
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	-
5180MHz	22
5200MHz	22
5240MHz	22
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-
5190MHz	22
5230MHz	22
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-
5210MHz	22

For Outdoor-5G Band 1 + Indoor/Outdoor-5G Band 4:

Mode	Power Setting
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	-
5180MHz	21
5200MHz	21
5240MHz	21
5745MHz	22
5785MHz	22
5825MHz	22
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-
5190MHz	22
5230MHz	20
5755MHz	22
5795MHz	22
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-
5210MHz	22
5775MHz	22

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.
- ♦ There are two functions of EUT, one is beamforming function, and the other is non-beamforming function for 802.11n/ac in 5GHz band. All test results were recorded in the report.

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 + PoE

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

The Worst Case Mode for Following Conformance Tests	
Tests Item	Unwanted Emissions
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	Normal Link
1	EUT at Y-axis(antenna in 180°) + PoE
Operating Mode > 1GHz	CTX

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Radiated Emission Co-location
Test Condition	Radiated measurement
Operating Mode	Normal Link
1	WLAN 2.4GHz +WLAN 5GHz
Refer to Appendix G for Radiated Emission Co-location.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	WLAN 2.4GHz+ WLAN 5GHz
Refer to Sporton Test Report No.: FA790815 for Co-location RF Exposure Evaluation.	

Note 1: The EUT can only be used at Y axis position and antenna in 180°.

Note 2: For band-edge emissions, the worst case of the antenna polarization is judged at first, and the worst case is found in vertical.



2.3 EUT Operation during Test

For CTX Mode:

non-beamforming mode:

The EUT was programmed to be in continuously transmitting mode.

beamforming mode:

For Conducted Mode:

The EUT was programmed to be in continuously transmitting mode.

For Radiated Mode:

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

The program was executed as follows:

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

For Normal Link:

During the test, the EUT operation to normal function.



2.4 Accessories

Accessories			
Equipment Name	Brand Name	Model Name	Rating
PoE	tp-link	TL-POE2412G	INPUT: 100-240V~50/60Hz 0.4A OUTPUT: 24V, 0.5A
Other			
Power cord*1, Non-shielded, 0.5m			

2.5 Support Equipment

For Test Site No: CO01-CB

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB*3	DELL	E6430	DoC

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

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E4300	DoC
2	NB*2	Apple	Mac Book	DoC

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

For non-beamforming mode:

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

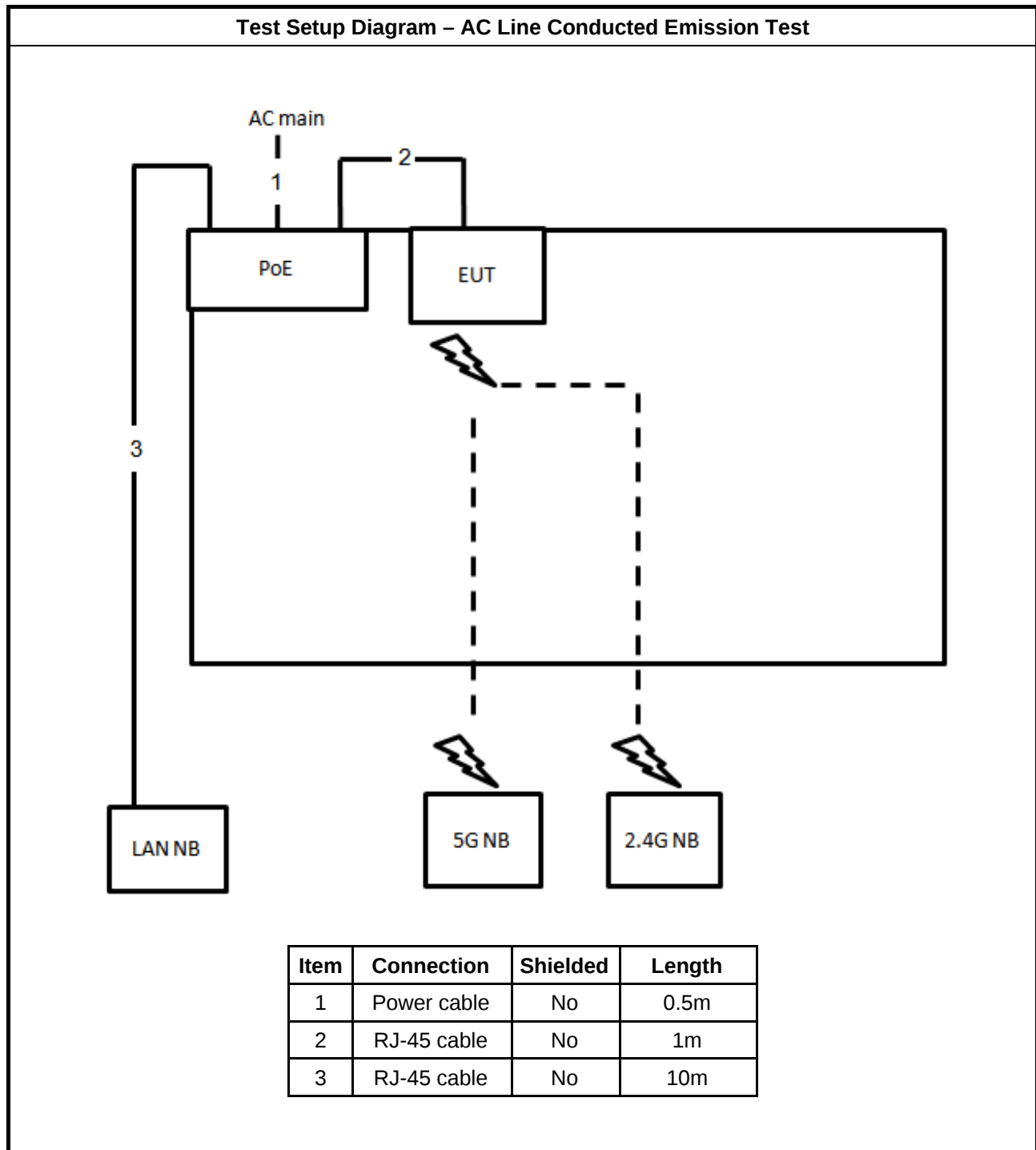
For beamforming mode:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB*2	DELL	E4300	DoC
2	RX Device	tp-link	Archer C59	TE7C59

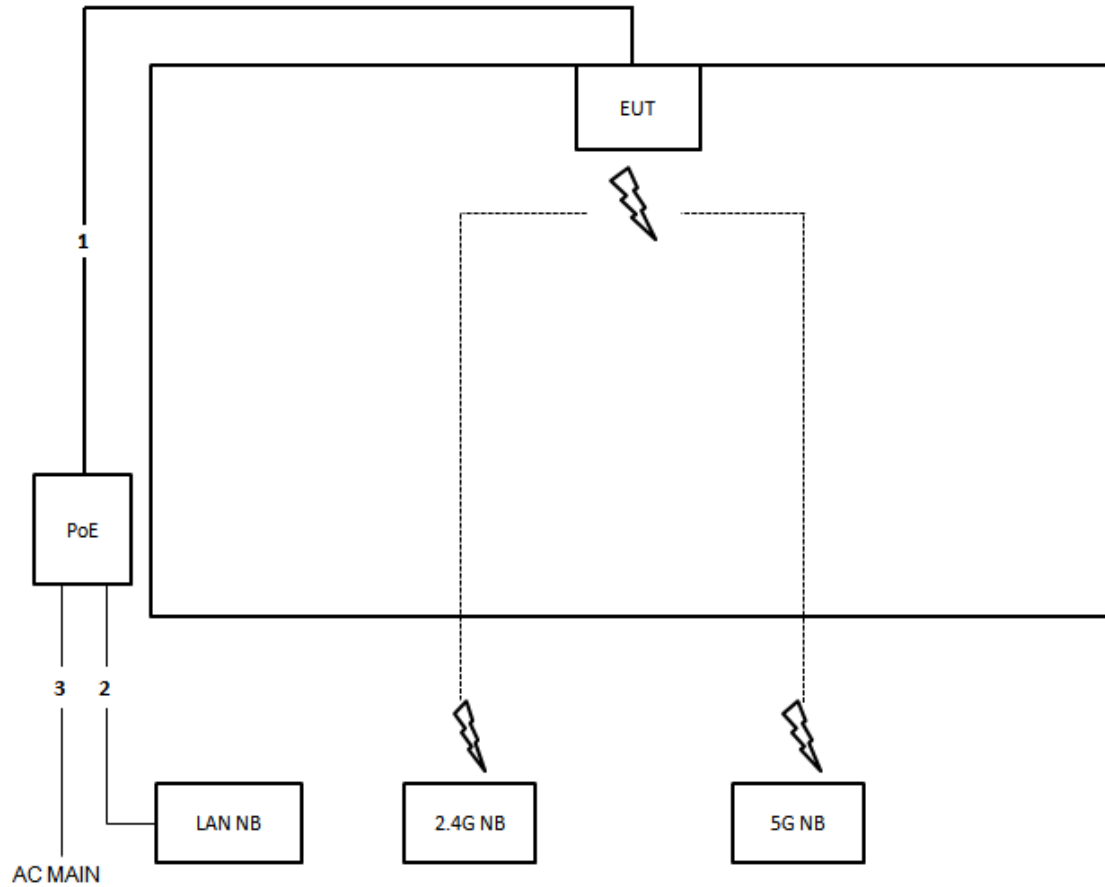
For Test Site No: TH01-CB

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

2.6 Test Setup Diagram



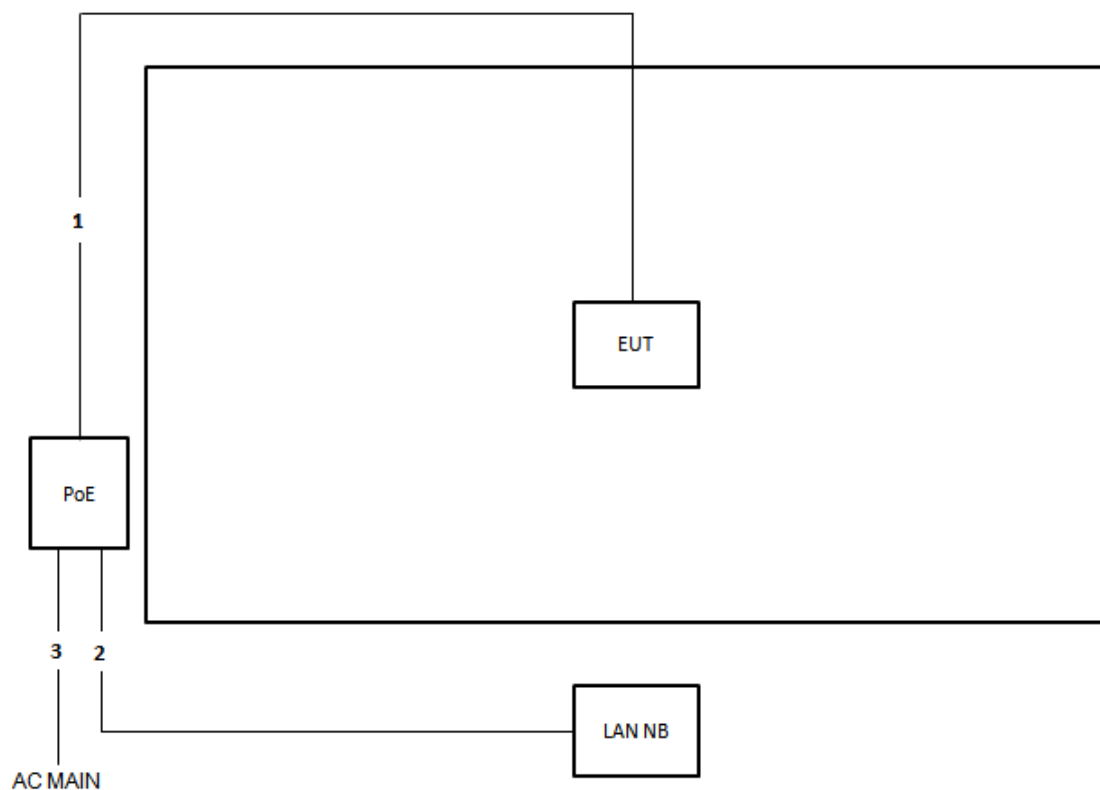
Test Setup Diagram - Radiated Test < 1GHz



Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	RJ-45 cable	No	1.5m
3	Power cable	No	0.5m

Test Setup Diagram - Radiated Test > 1GHz

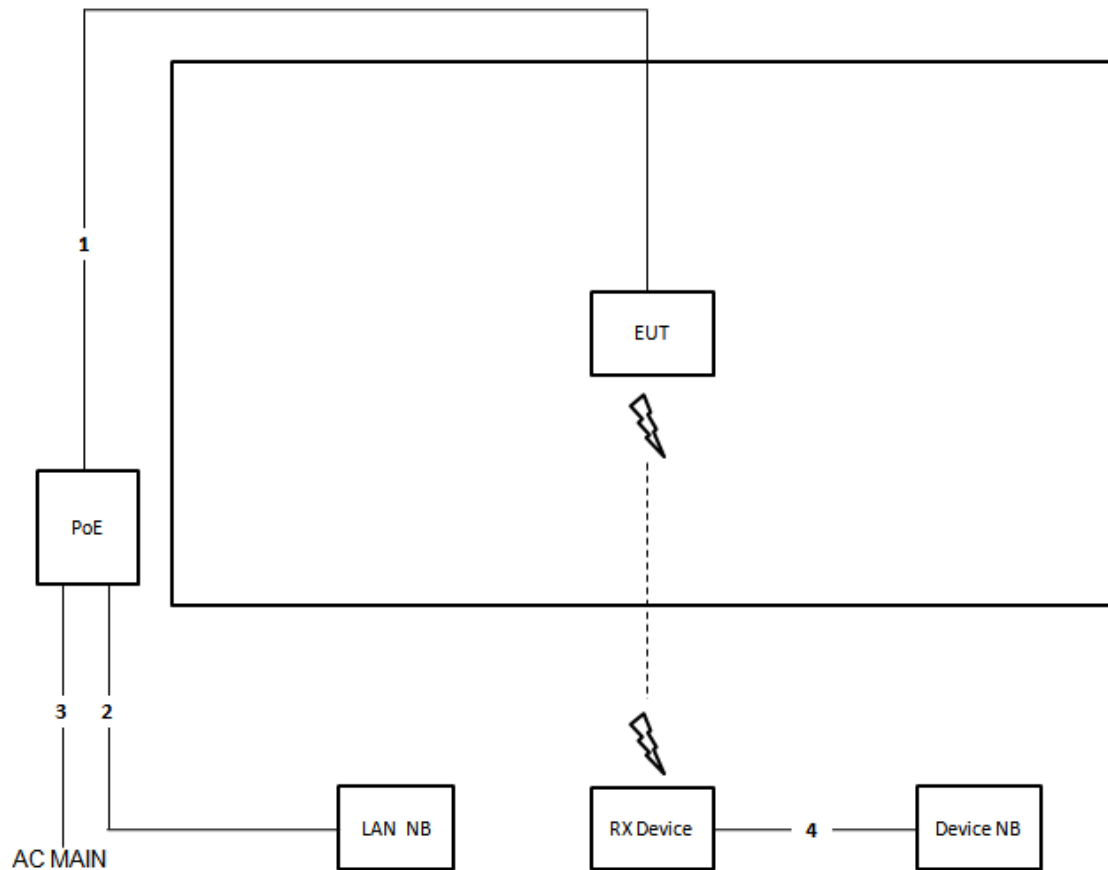
For non-beamforming mode:



Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	RJ-45 cable	No	1.5m
3	Power cable	No	0.5m

Test Setup Diagram - Radiated Test > 1GHz

For beamforming mode:



Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	RJ-45 cable	No	1.5m
3	Power cable	No	0.5m
4	RJ-45 cable	No	1.5m

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.

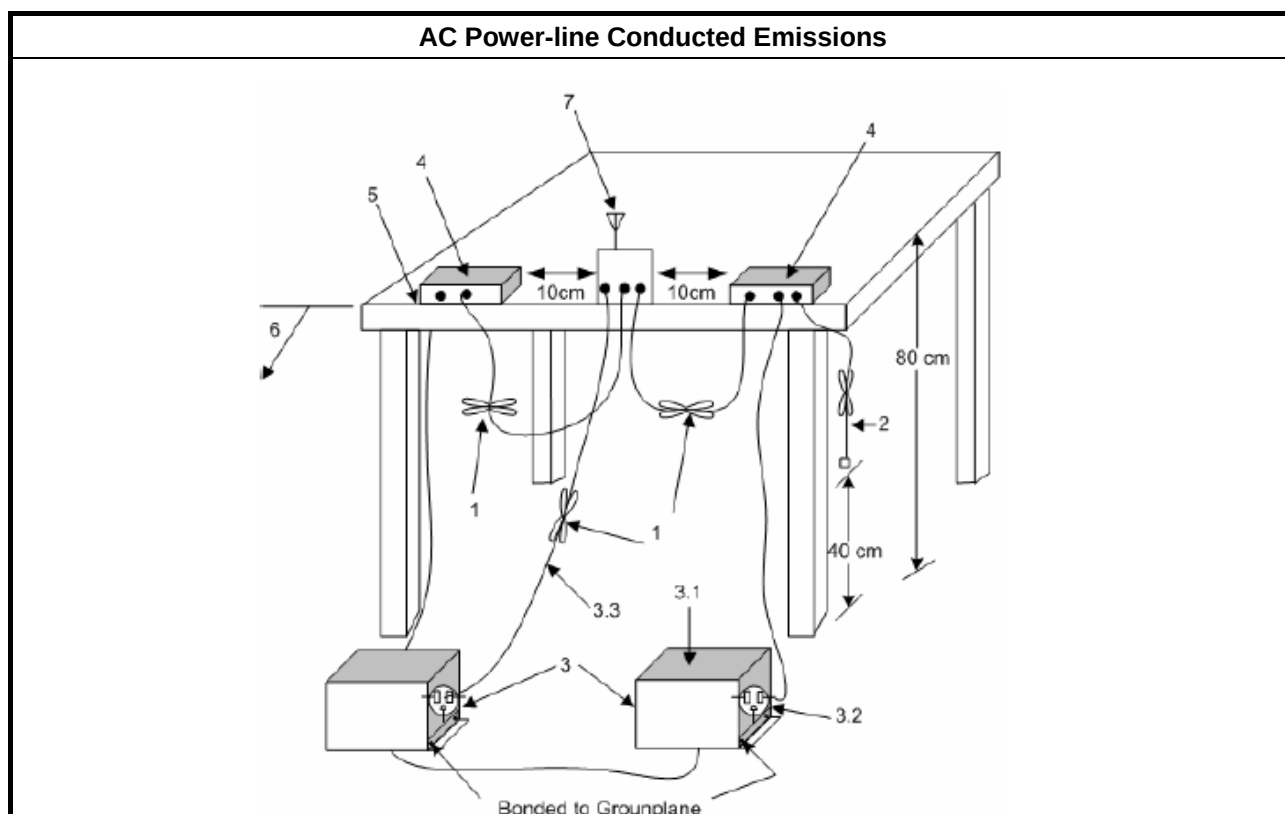
3.1.2 Measuring Instruments

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.

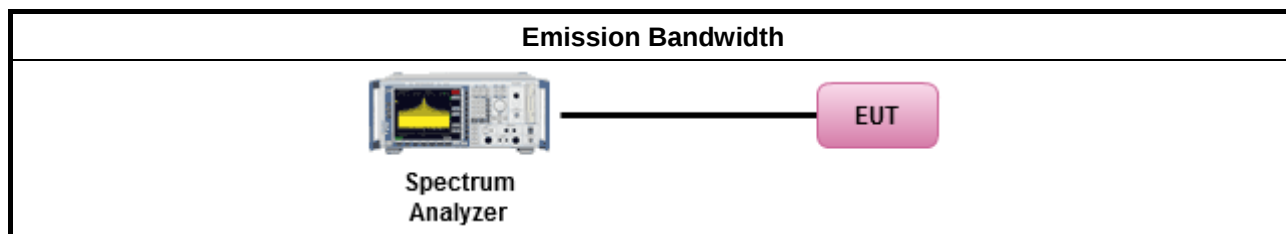
3.2.2 Measuring Instruments

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.	

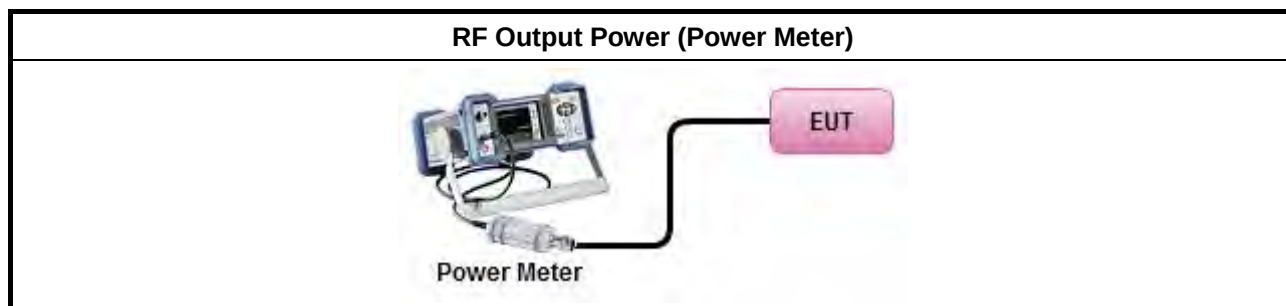
3.3.2 Measuring Instruments

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.	

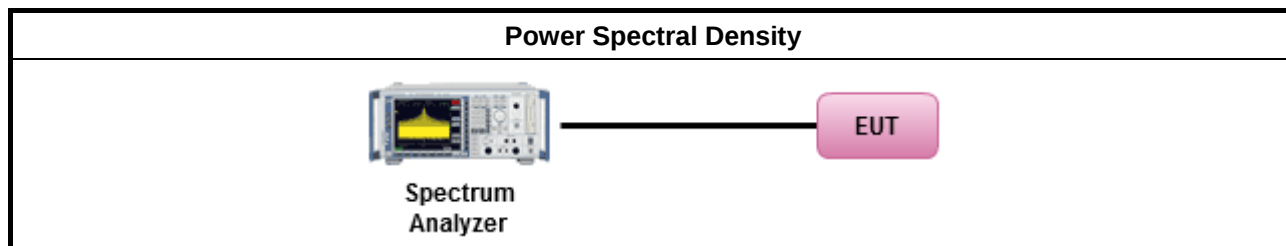
3.4.2 Measuring Instruments

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.

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

Un-restricted band emissions above 1GHz Limit	
Operating Band	Limit
5.15 - 5.25 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.25 - 5.35 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.47 - 5.725 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.725 - 5.85 GHz	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).

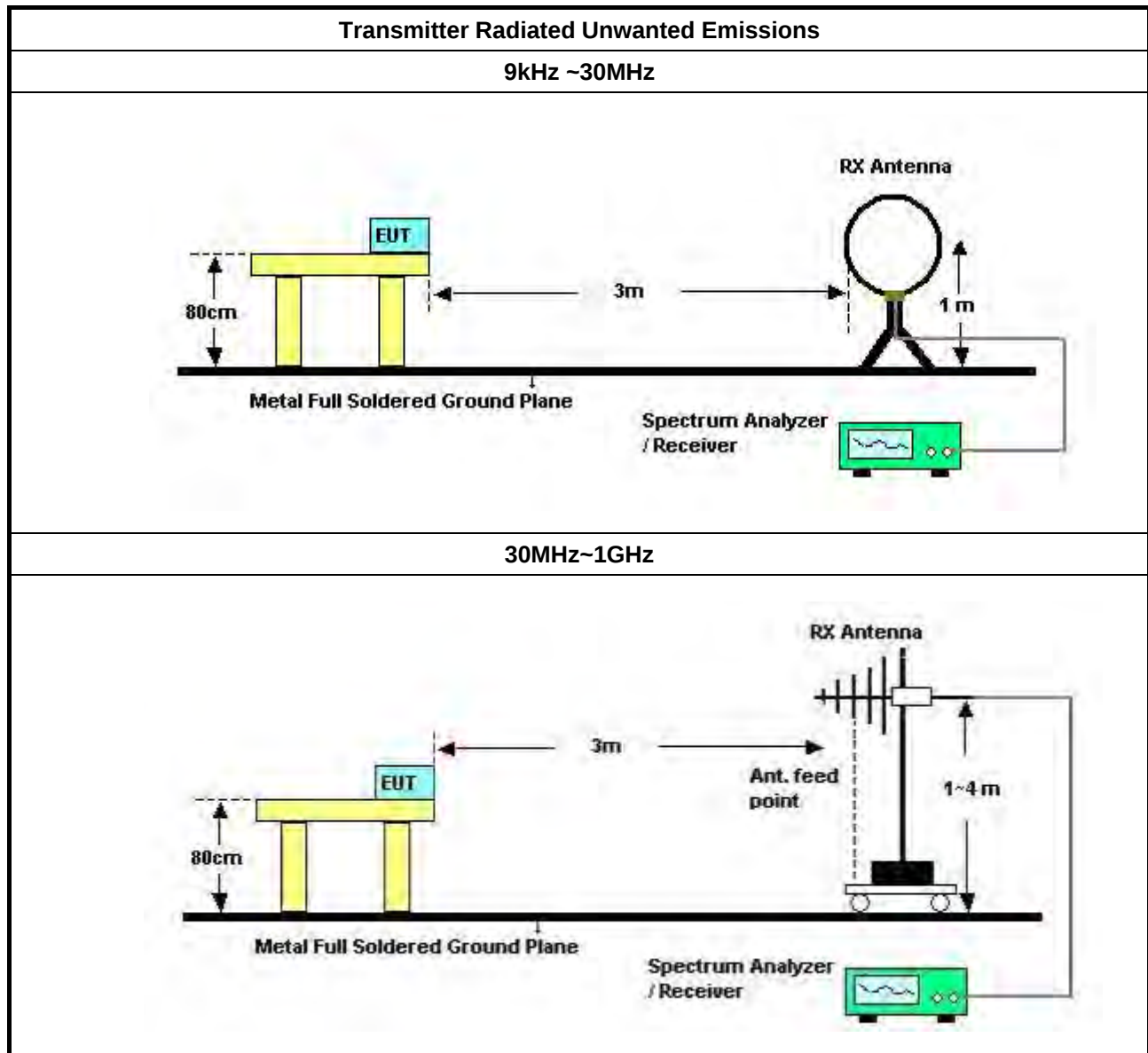
3.5.2 Measuring Instruments

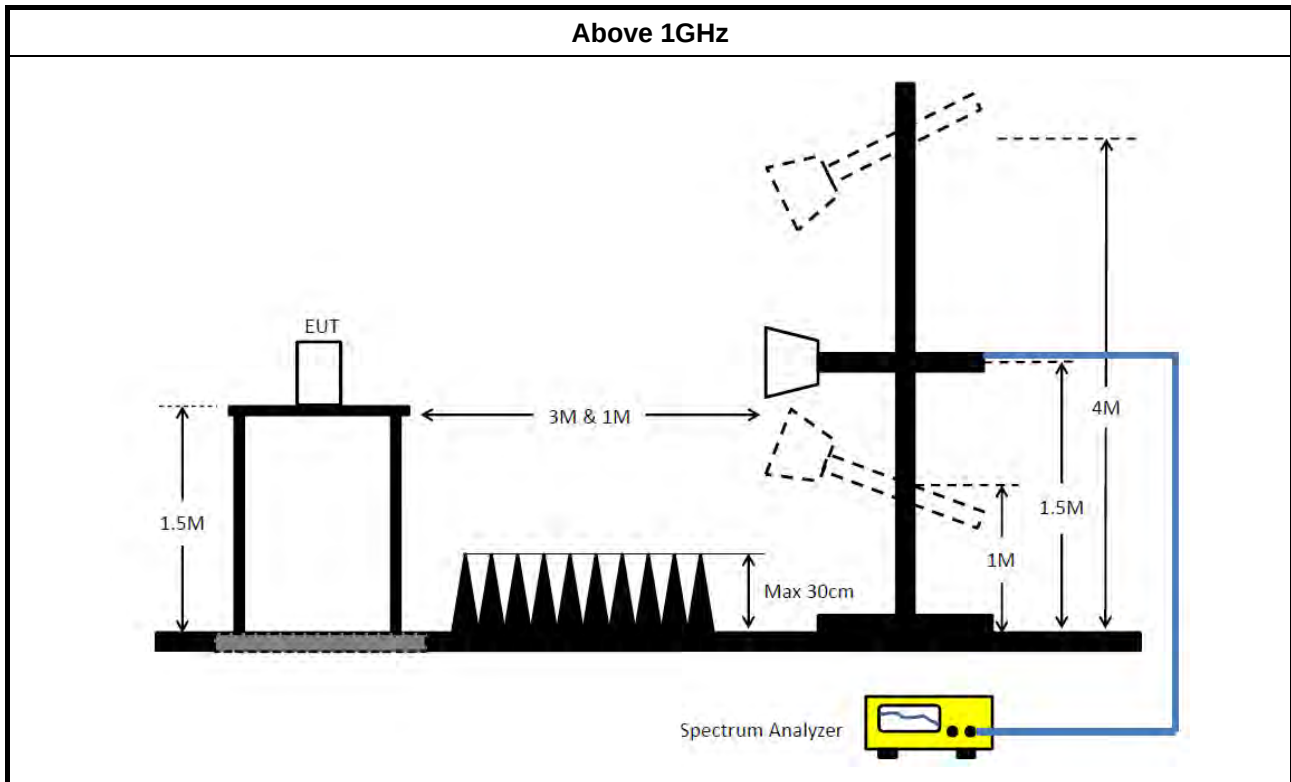
Refer a test equipment and calibration data table in this test report.

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 ≥ 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)

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

3.5.6 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.

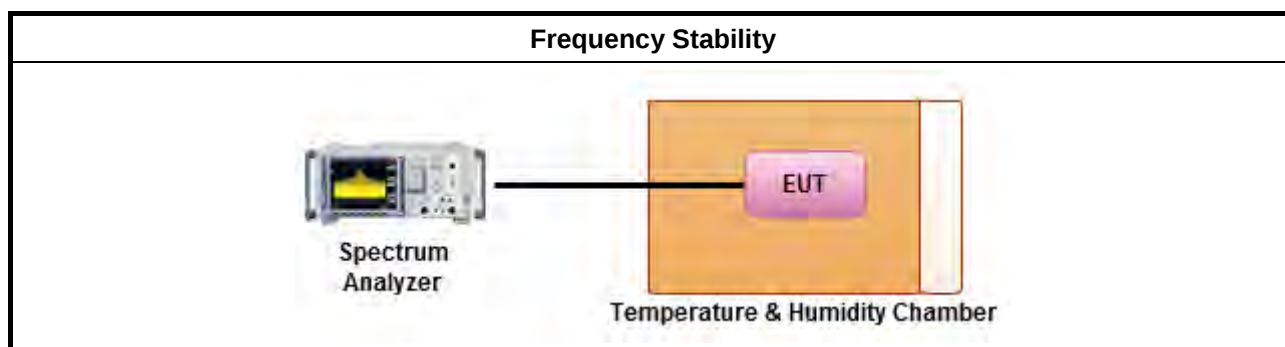
3.6.2 Measuring Instruments

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 $-30^{\circ}\text{C} \sim 70^{\circ}\text{C}$.

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	Calibration Due Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.45GHz	Jan. 23, 2017	Jan. 22, 2018	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Dec. 14, 2016	Dec. 13, 2017	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Dec. 21, 2016	Dec. 20, 2017	Conduction (CO01-CB)
COND Cable	Woken	Cable	01	150kHz ~ 30MHz	May 23, 2017	May 22, 2018	Conduction (CO01-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Aug. 30, 2017	Aug. 29, 2018	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 10, 2016	Nov. 09, 2017	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170507	15GHz ~ 40GHz	Jun. 16, 2017	Jun. 15, 2018	Radiation (03CH01-CB)
Pre-Amplifier	EMCI	EMC330N	980332	20MHz ~ 3GHz	May 02, 2017	May 01, 2018	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 16, 2017	Jan. 15, 2018	Radiation (03CH01-CB)
Pre-Amplifier	-	-	TF-130N-R1	26GHz ~ 40GHz	Jun. 20, 2017	Jun. 19, 2018	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Nov. 22, 2016	Nov. 21, 2017	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2016*	Mar. 15, 2018*	Radiation (03CH01-CB)
EMI Test	R&S	ESCS	100355	9kHz ~ 2.75GHz	May 06, 2017	May 05, 2018	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~ 1 GHz	Oct. 24, 2016	Oct. 23, 2017	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 24, 2016	Oct. 23, 2017	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 24, 2016	Oct. 23, 2017	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz ~ 40 GHz	Oct. 24, 2016	Oct. 23, 2017	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Oct. 24, 2016	Oct. 23, 2017	Radiation (03CH01-CB)



FCC Test Report

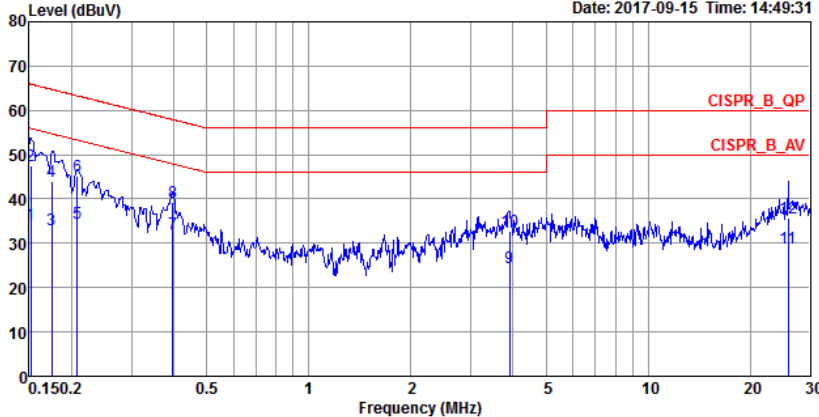
Report No. : FR790815AB

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Test Software	Audix	E3	6.2009-I0-7	N/A	N/A	N/A	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 26, 2016	Dec. 25, 2017	Conducted (TH01-CB)
Temp. and Humidity Chamber	Ten Billion	TTH-D3SP	TBN-931011	-30~100 degree	Jun. 02, 2017	Jun. 01, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-6	1 GHz – 26.5 GHz	Oct. 24, 2016	Oct. 23, 2017	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-7	1 GHz – 26.5 GHz	Oct. 24, 2016	Oct. 23, 2017	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-8	1 GHz – 26.5 GHz	Oct. 24, 2016	Oct. 23, 2017	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-9	1 GHz – 26.5 GHz	Oct. 24, 2016	Oct. 23, 2017	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz – 26.5 GHz	Oct. 24, 2016	Oct. 23, 2017	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 22, 2016	Nov. 21, 2017	Conducted (TH01-CB)

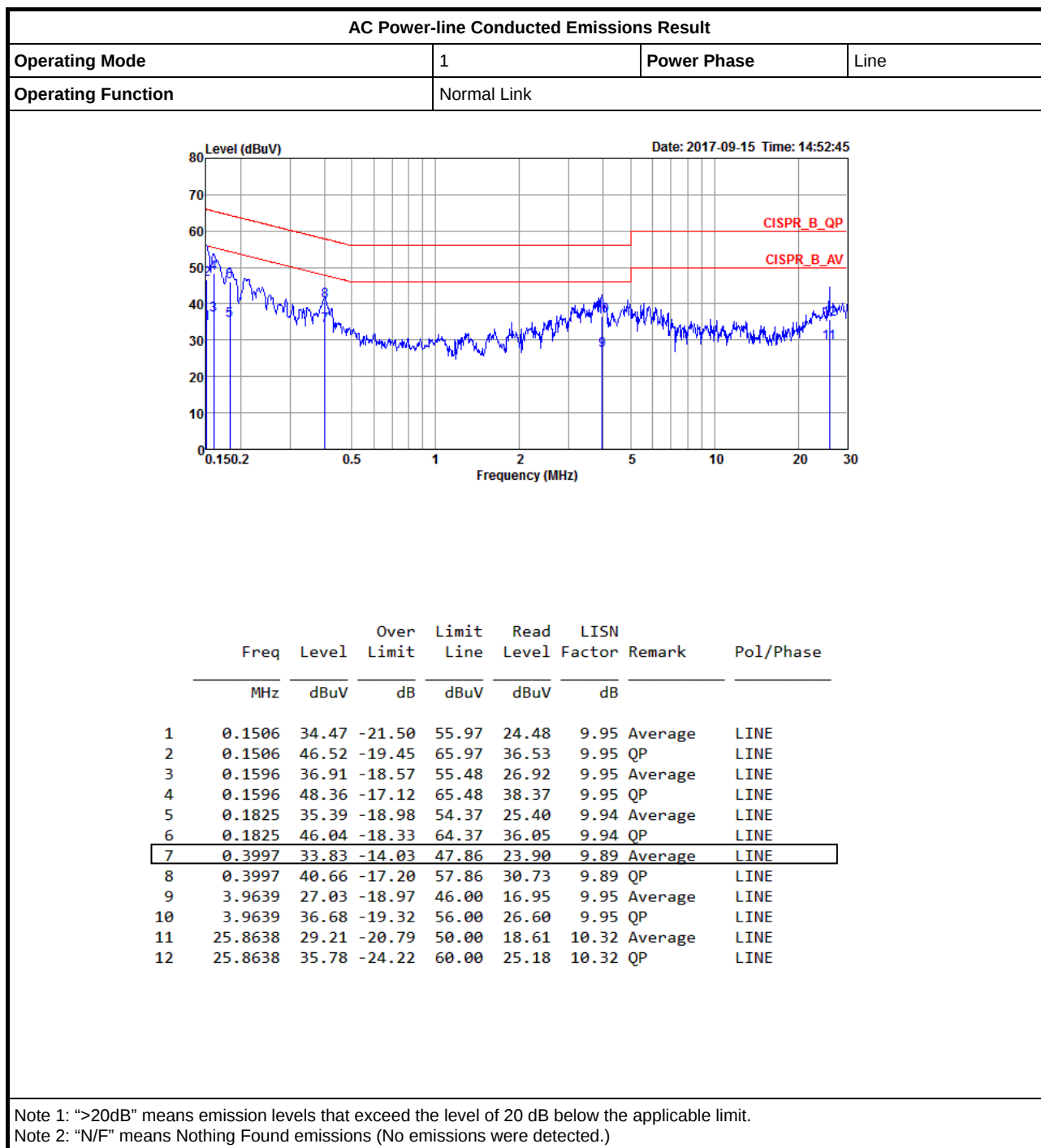
Note: Calibration Interval of instruments listed above is one year.

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

NCR means Non-Calibration required.

AC Power-line Conducted Emissions Result								
Operating Mode		1			Power Phase		Neutral	
Operating Function		Normal Link						
Level (dBuV)  Date: 2017-09-15 Time: 14:49:31								
	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB		
1	0.1516	34.31	-21.60	55.91	24.33	9.94	Average	NEUTRAL
2	0.1516	47.53	-18.38	65.91	37.55	9.94	QP	NEUTRAL
3	0.1749	33.17	-21.55	54.72	23.16	9.96	Average	NEUTRAL
4	0.1749	44.06	-20.66	64.72	34.05	9.96	QP	NEUTRAL
5	0.2072	34.59	-18.73	53.32	24.56	9.98	Average	NEUTRAL
6	0.2072	45.05	-18.27	63.32	35.02	9.98	QP	NEUTRAL
7	0.3976	32.11	-15.79	47.90	22.11	9.96	Average	NEUTRAL
8	0.3976	39.22	-18.68	57.90	29.22	9.96	QP	NEUTRAL
9	3.9014	24.53	-21.47	46.00	14.32	10.08	Average	NEUTRAL
10	3.9014	32.78	-23.22	56.00	22.57	10.08	QP	NEUTRAL
11	25.8638	29.06	-20.94	50.00	18.46	10.32	Average	NEUTRAL
12	25.8638	35.70	-24.30	60.00	25.10	10.32	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.)



For non-beamforming mode:

For Indoor-5G Band 1:

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	40.675M	22.389M	22M4D1D	22.425M	16.467M
802.11ac VHT20_Nss1,(MCS0)_2TX	37.8M	19.44M	19M4D1D	21.725M	17.666M
802.11ac VHT40_Nss1,(MCS0)_2TX	76.95M	36.982M	37M0D1D	39.4M	35.932M
802.11ac VHT80_Nss1,(MCS0)_2TX	83.5M	75.962M	76M0D1D	82.7M	75.762M

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;

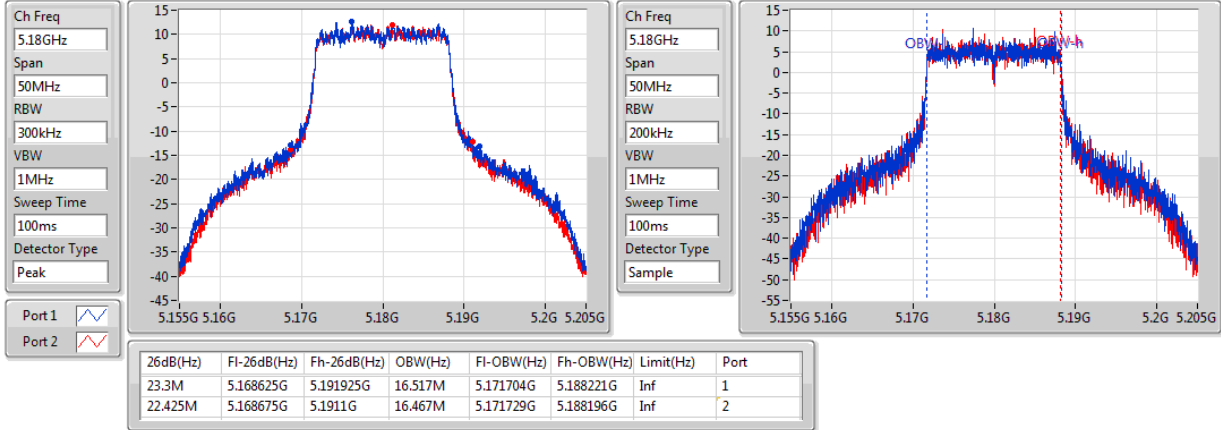
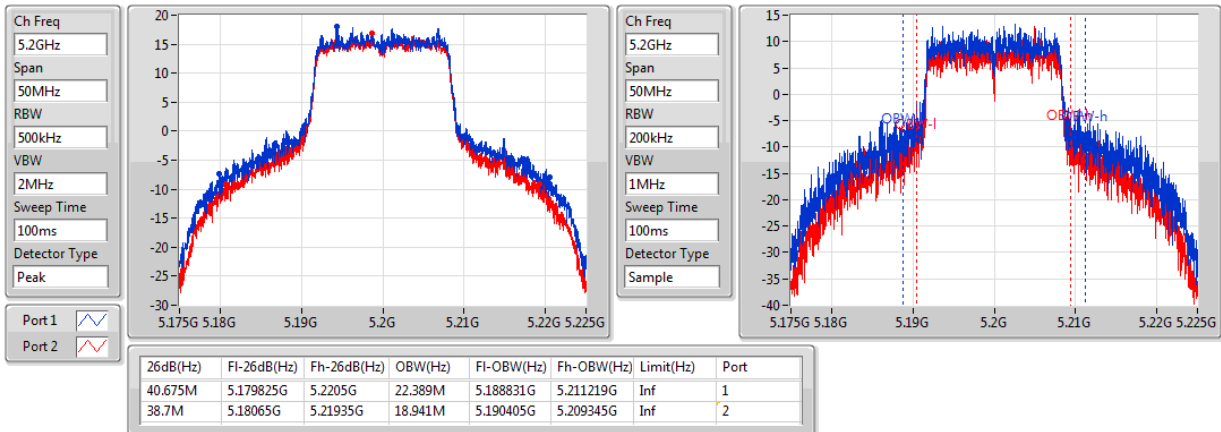
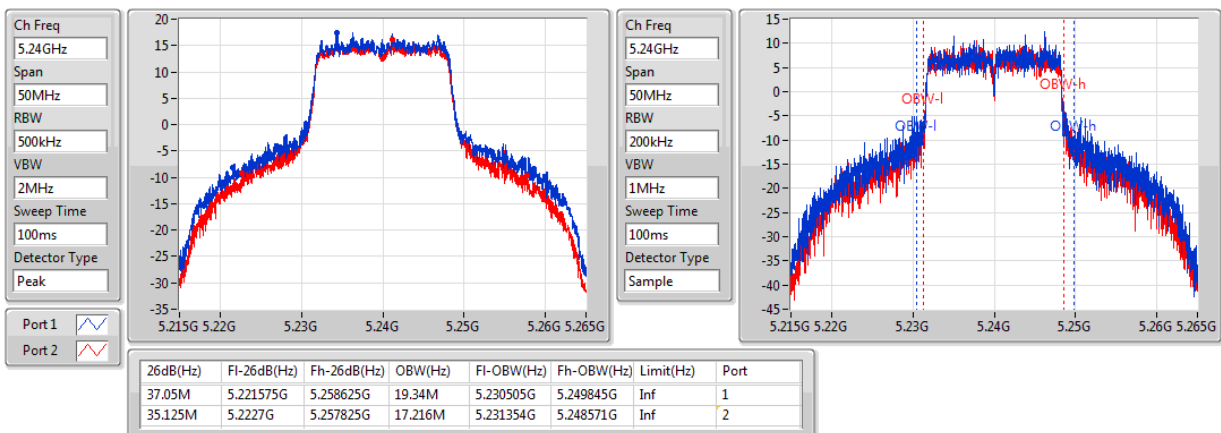
Min-OBW = Minimum 99% occupied bandwidth;

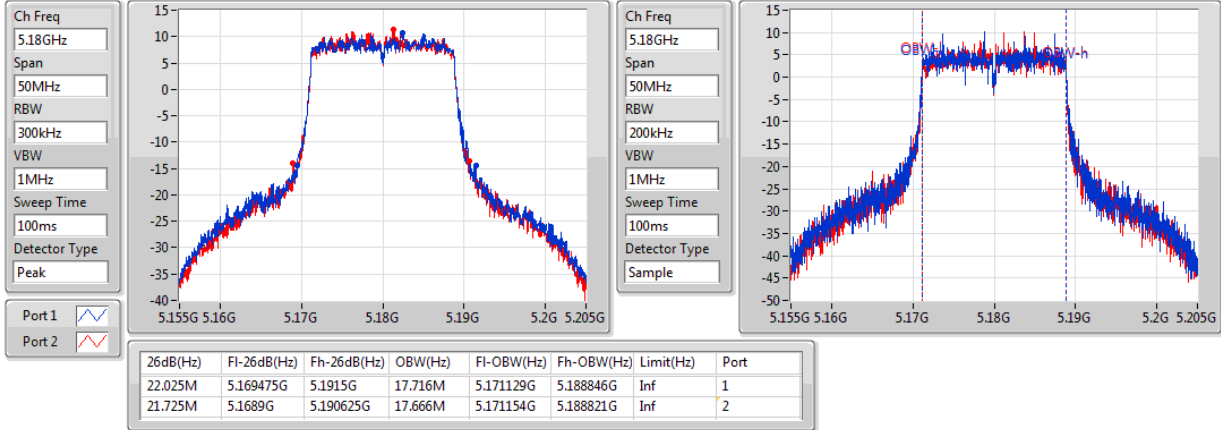
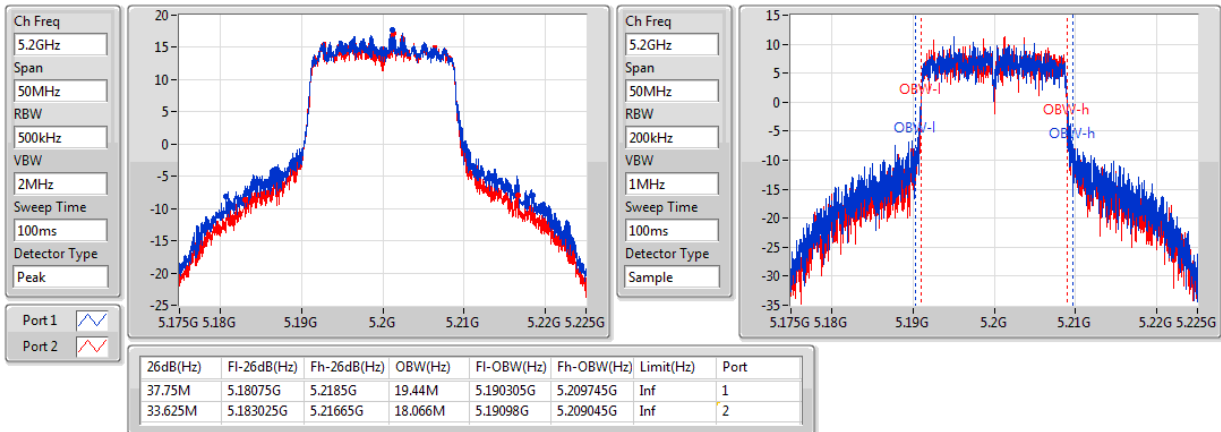
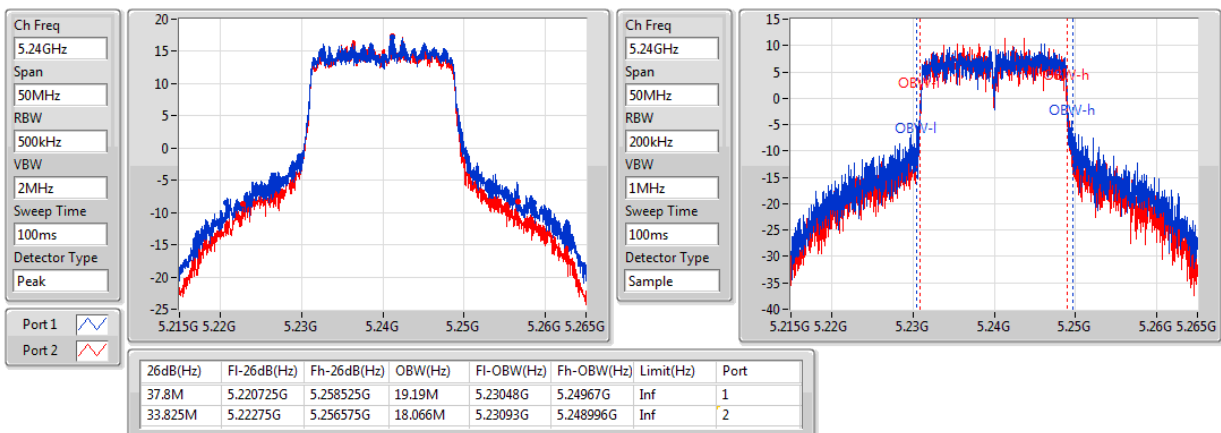
Result

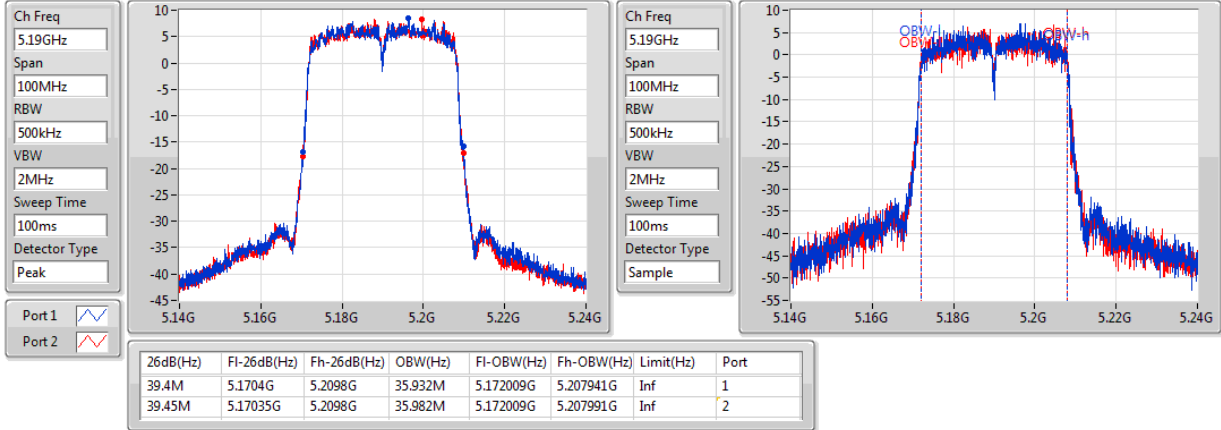
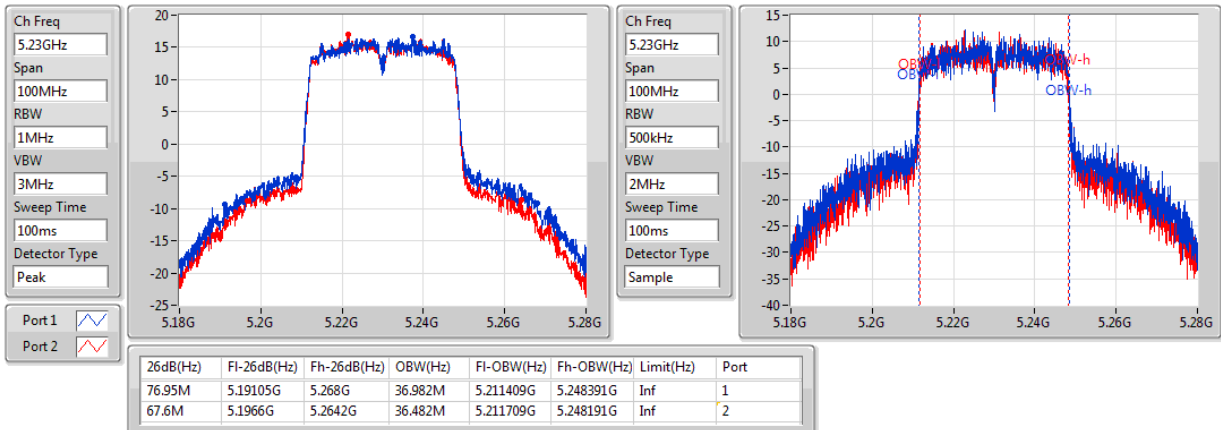
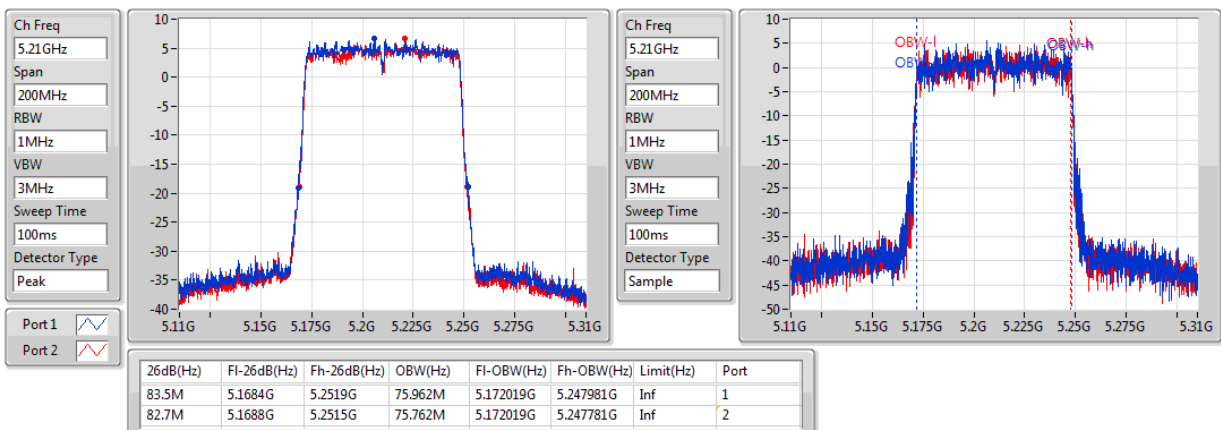
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	23.3M	16.517M	22.425M	16.467M
5200MHz	Pass	Inf	40.675M	22.389M	38.7M	18.941M
5240MHz	Pass	Inf	37.05M	19.34M	35.125M	17.216M
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	22.025M	17.716M	21.725M	17.666M
5200MHz	Pass	Inf	37.75M	19.44M	33.625M	18.066M
5240MHz	Pass	Inf	37.8M	19.19M	33.825M	18.066M
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	Inf	39.4M	35.932M	39.45M	35.982M
5230MHz	Pass	Inf	76.95M	36.982M	67.6M	36.482M
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	Inf	83.5M	75.962M	82.7M	75.762M

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

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

802.11a_Nss1,(6Mbps)_2TX
EBW
5180MHz

802.11a_Nss1,(6Mbps)_2TX
EBW
5200MHz

802.11a_Nss1,(6Mbps)_2TX
EBW
5240MHz


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 VHT40_Nss1,(MCS0)_2TX
EBW
5190MHz

802.11ac VHT40_Nss1,(MCS0)_2TX
EBW
5230MHz

802.11ac VHT80_Nss1,(MCS0)_2TX
EBW
5210MHz


**For Outdoor-5G Band 1 + Indoor/Outdoor-5G Band 4:
Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	21.275M	16.492M	16M5D1D	20.8M	16.442M
802.11ac VHT20_Nss1,(MCS0)_2TX	23.6M	17.691M	17M7D1D	21.15M	17.666M
802.11ac VHT40_Nss1,(MCS0)_2TX	40.45M	36.082M	36M1D1D	39.4M	35.932M
802.11ac VHT80_Nss1,(MCS0)_2TX	83.2M	75.862M	75M9D1D	82.9M	75.762M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	16.3M	16.767M	16M8D1D	16.3M	16.467M
802.11ac VHT20_Nss1,(MCS0)_2TX	17.525M	17.741M	17M7D1D	16.45M	17.641M
802.11ac VHT40_Nss1,(MCS0)_2TX	35M	51.724M	51M7D1D	32.5M	37.781M
802.11ac VHT80_Nss1,(MCS0)_2TX	75.2M	77.161M	77M2D1D	75.1M	76.162M

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;

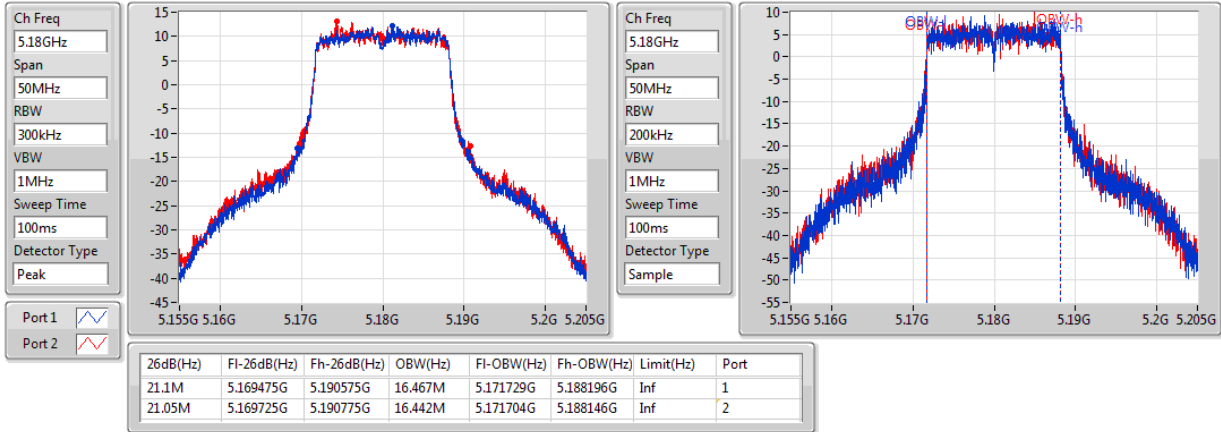
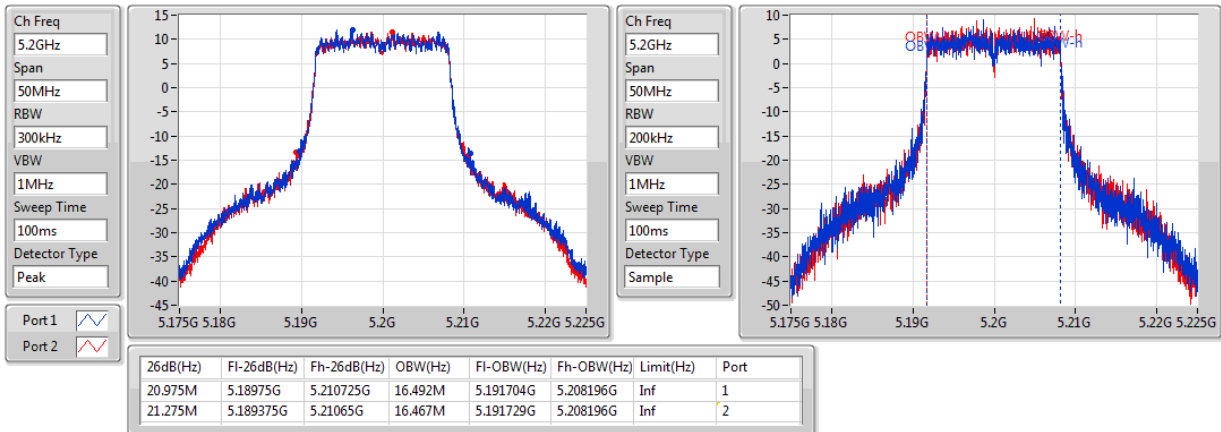
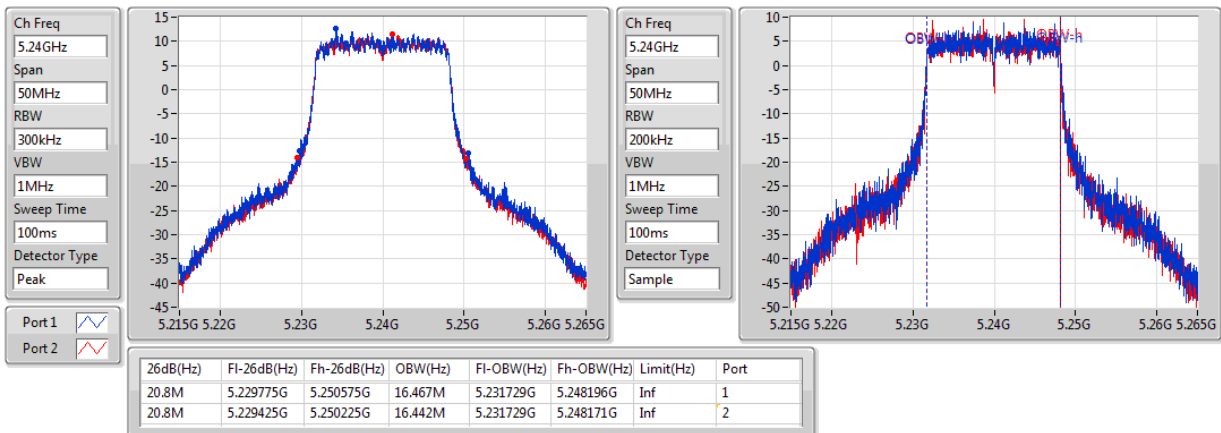
Min-OBW = Minimum 99% occupied bandwidth;

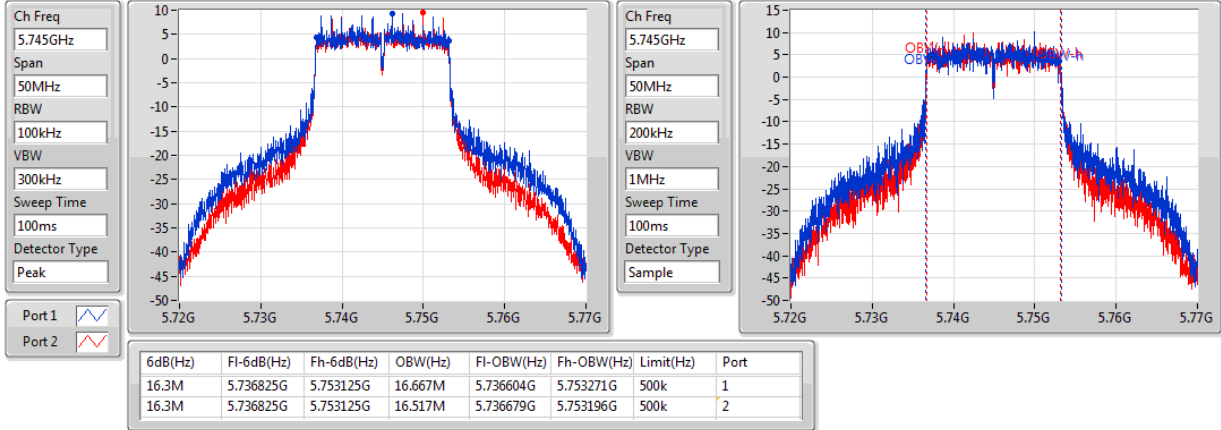
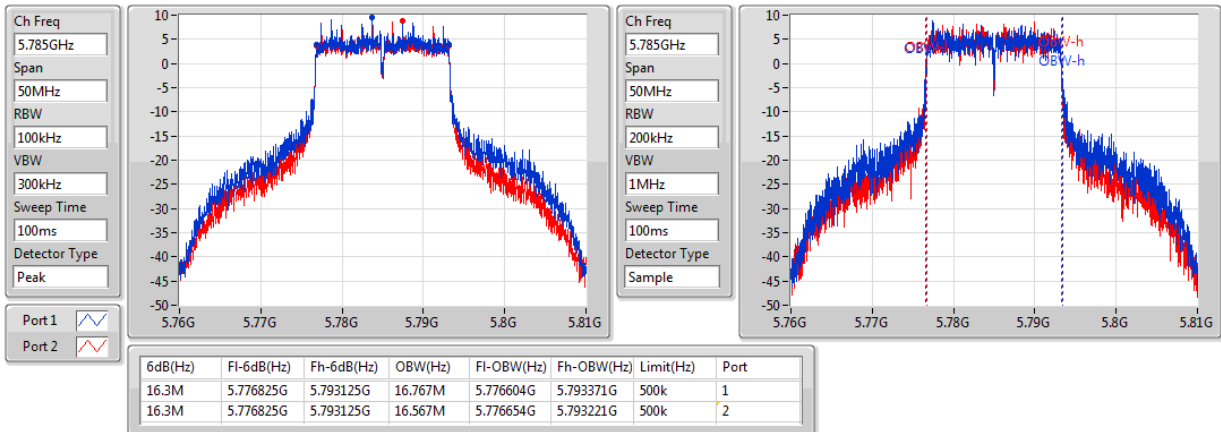
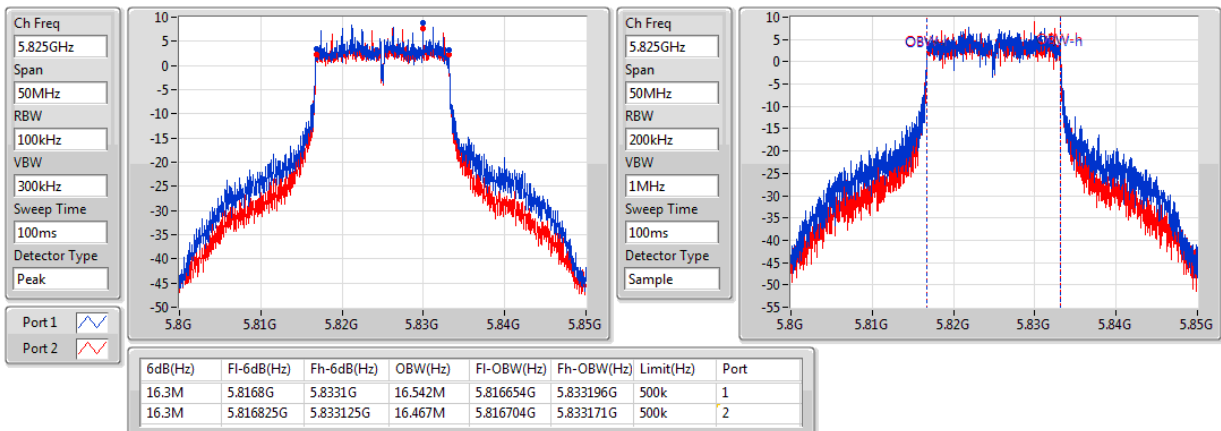
Result

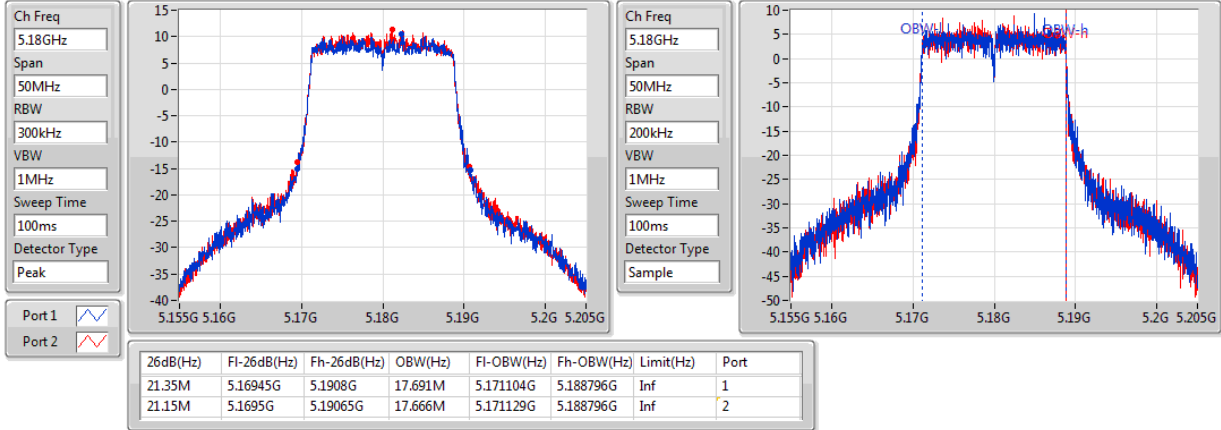
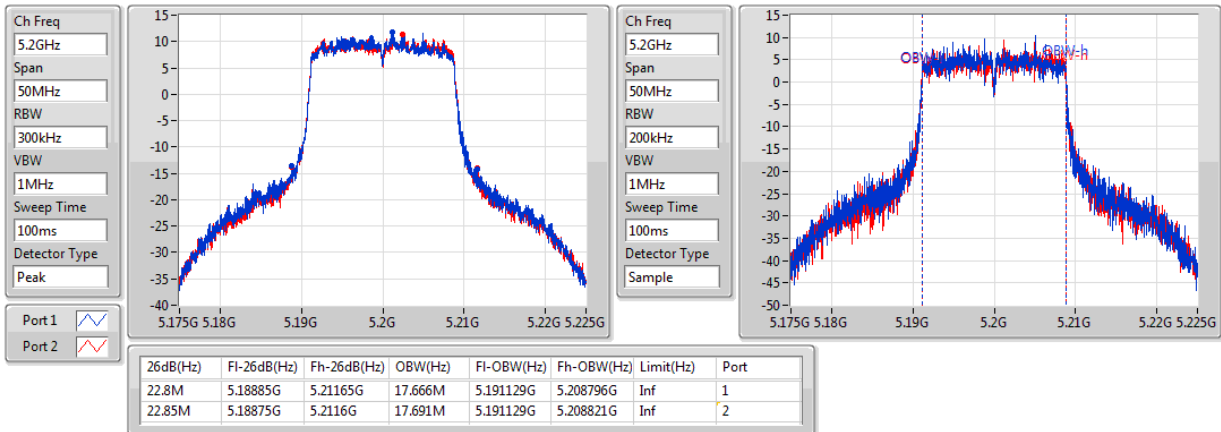
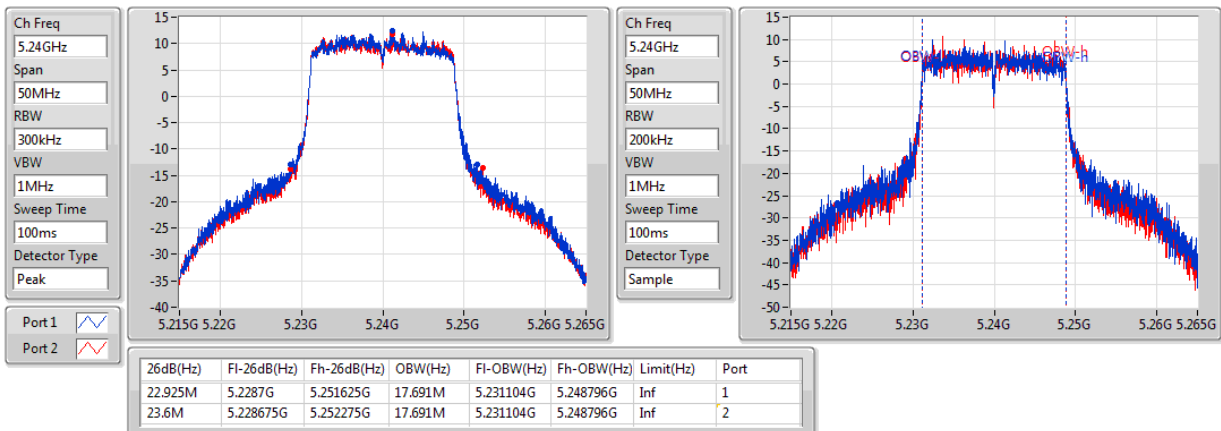
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	21.1M	16.467M	21.05M	16.442M
5200MHz	Pass	Inf	20.975M	16.492M	21.275M	16.467M
5240MHz	Pass	Inf	20.8M	16.467M	20.8M	16.442M
5745MHz	Pass	500k	16.3M	16.667M	16.3M	16.517M
5785MHz	Pass	500k	16.3M	16.767M	16.3M	16.567M
5825MHz	Pass	500k	16.3M	16.542M	16.3M	16.467M
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	21.35M	17.691M	21.15M	17.666M
5200MHz	Pass	Inf	22.8M	17.666M	22.85M	17.691M
5240MHz	Pass	Inf	22.925M	17.691M	23.6M	17.691M
5745MHz	Pass	500k	17.125M	17.741M	17.525M	17.641M
5785MHz	Pass	500k	17.375M	17.716M	16.45M	17.641M
5825MHz	Pass	500k	16.7M	17.741M	16.675M	17.641M
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	Inf	39.7M	36.082M	39.4M	35.932M
5230MHz	Pass	Inf	40.3M	36.082M	40.45M	35.982M
5755MHz	Pass	500k	33.95M	51.724M	32.55M	37.781M
5795MHz	Pass	500k	35M	47.576M	32.5M	39.33M
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	Inf	82.9M	75.762M	83.2M	75.862M
5775MHz	Pass	500k	75.2M	77.161M	75.1M	76.162M

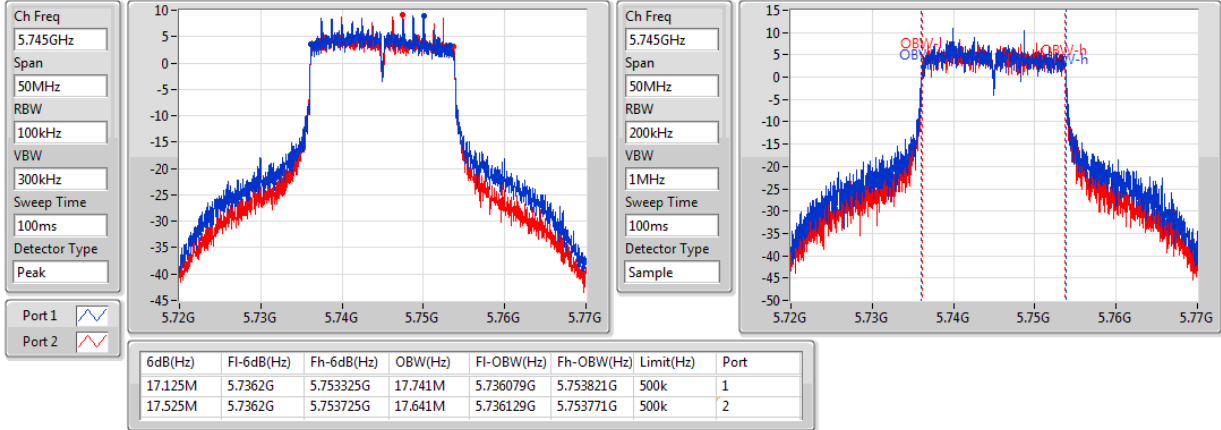
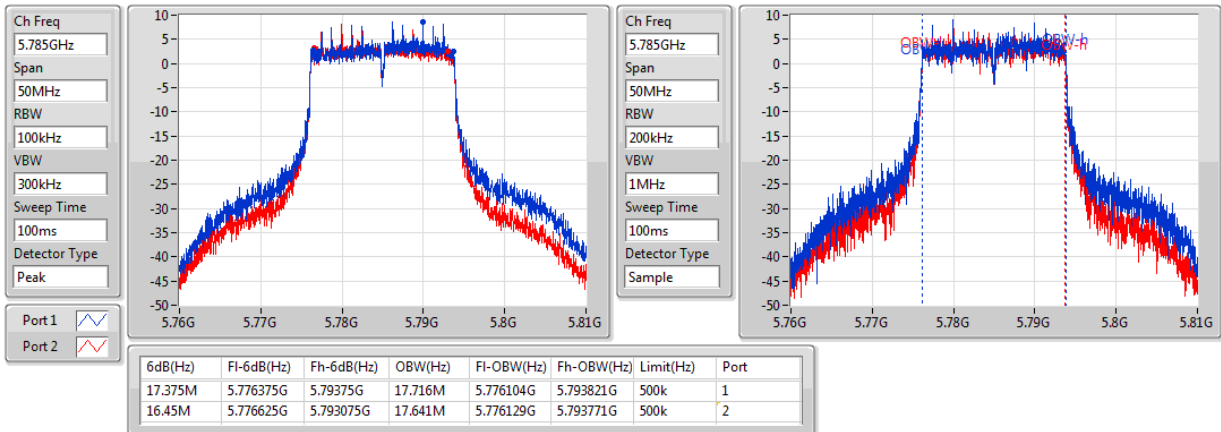
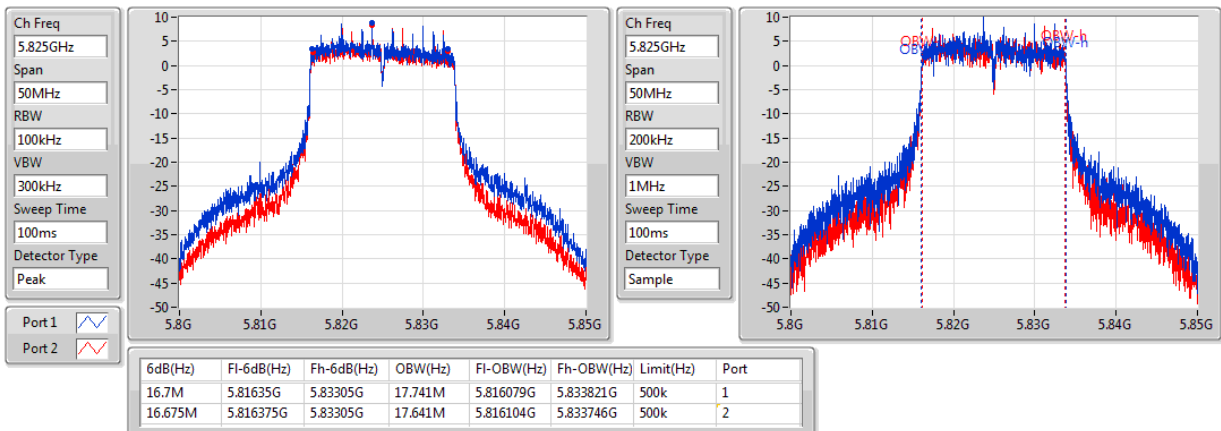
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band

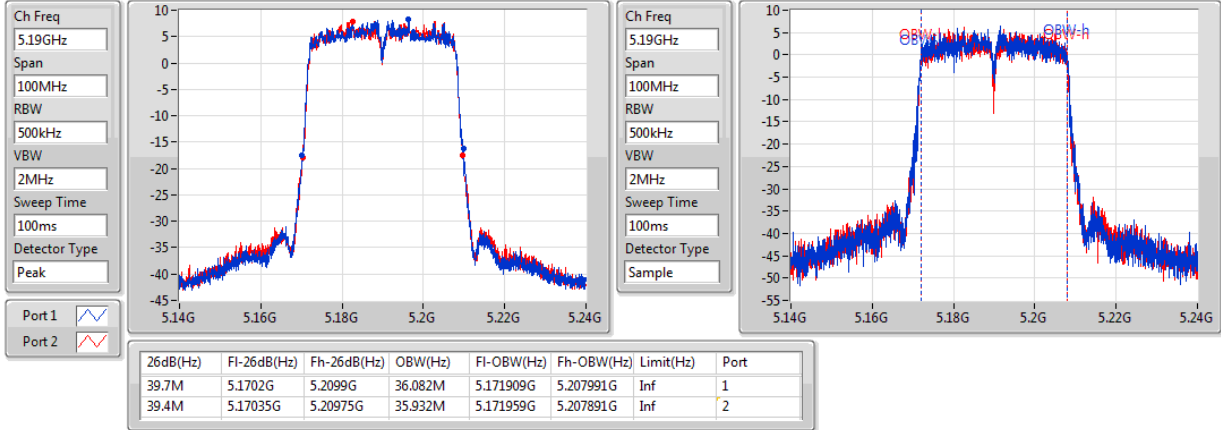
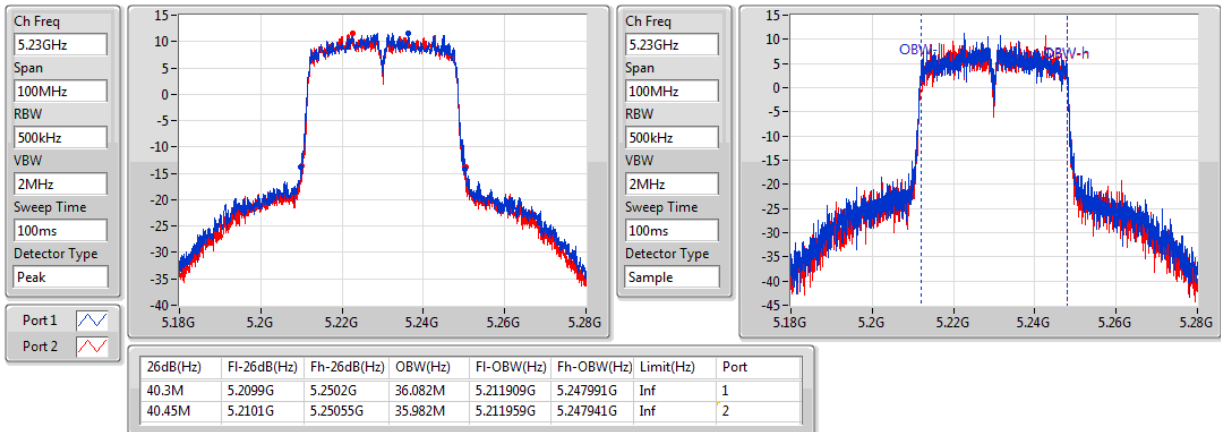
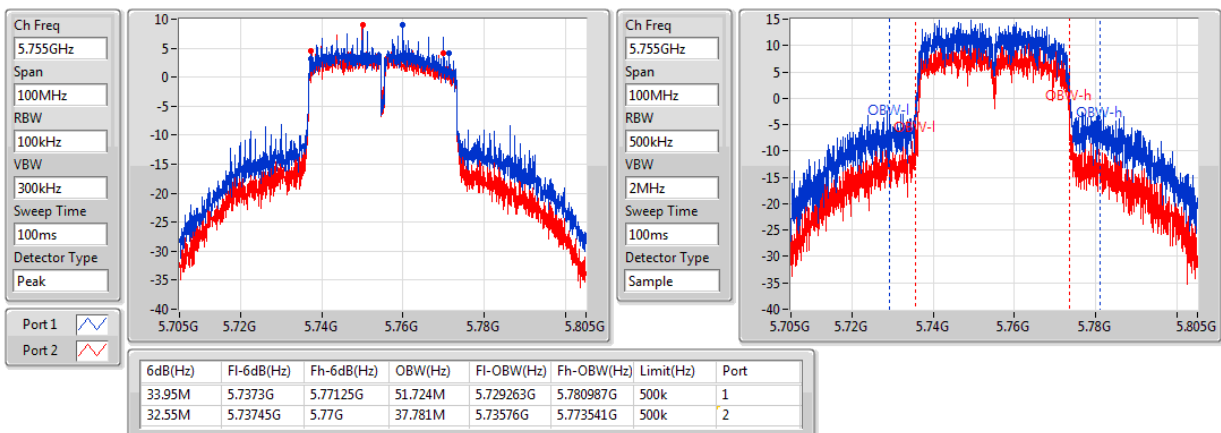
Port X-OBW = Port X 99% occupied bandwidth;

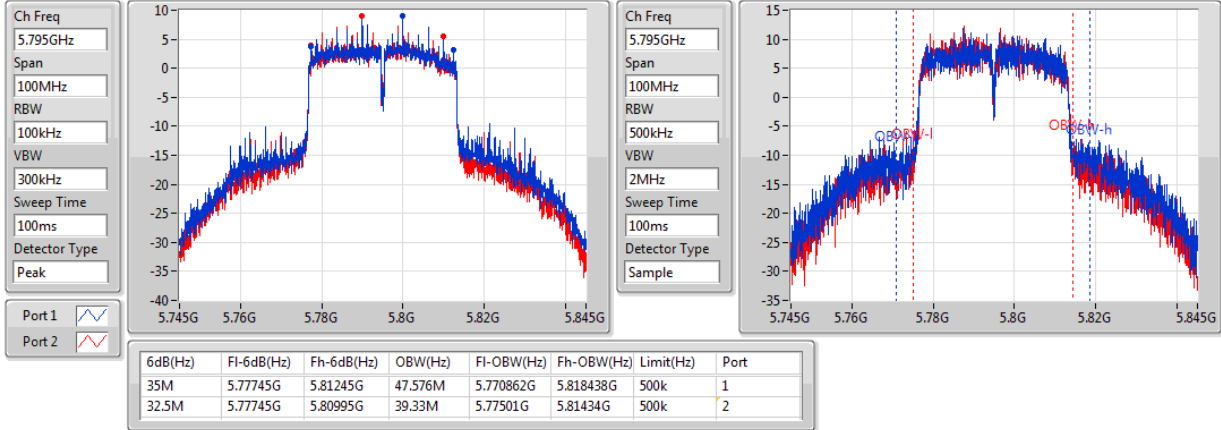
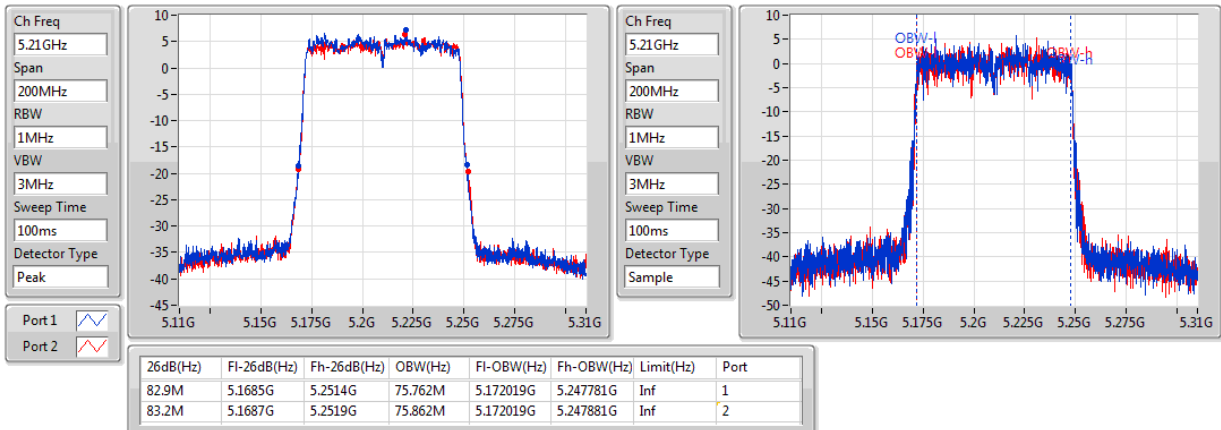
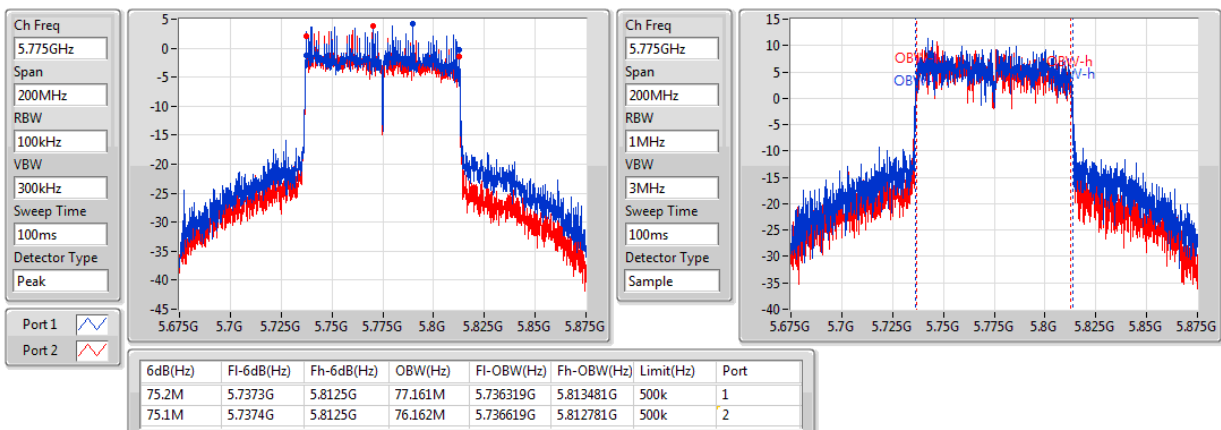
802.11a_Nss1,(6Mbps)_2TX
EBW
5180MHz

802.11a_Nss1,(6Mbps)_2TX
EBW
5200MHz

802.11a_Nss1,(6Mbps)_2TX
EBW
5240MHz


802.11a_Nss1,(6Mbps)_2TX
EBW
5745MHz

802.11a_Nss1,(6Mbps)_2TX
EBW
5785MHz

802.11a_Nss1,(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


For beamforming mode:

For Indoor-5G Band 1:

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	20.925M	17.641M	17M6D1D	19.95M	17.591M
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	40.55M	36.282M	36M3D1D	38.95M	35.582M
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	79.6M	75.562M	75M6D1D	78.4M	75.362M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

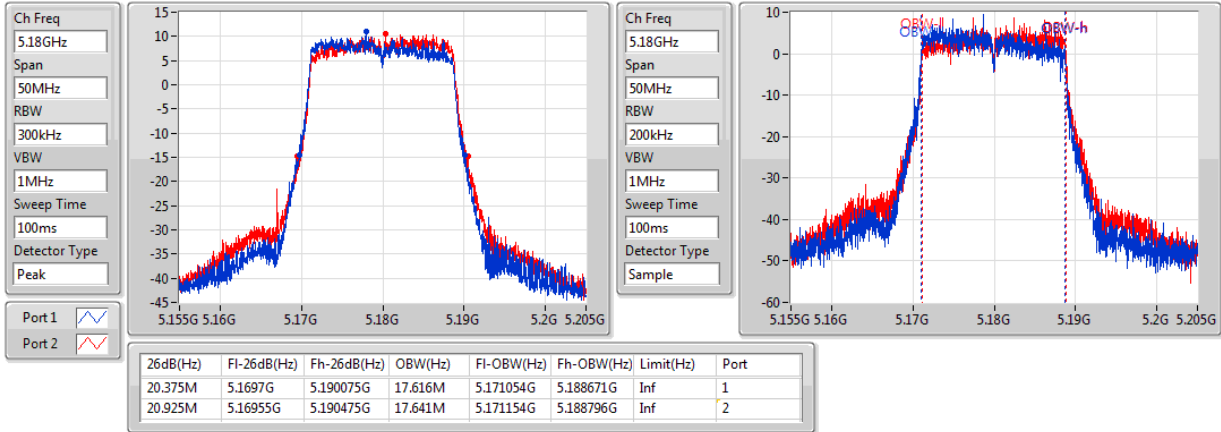
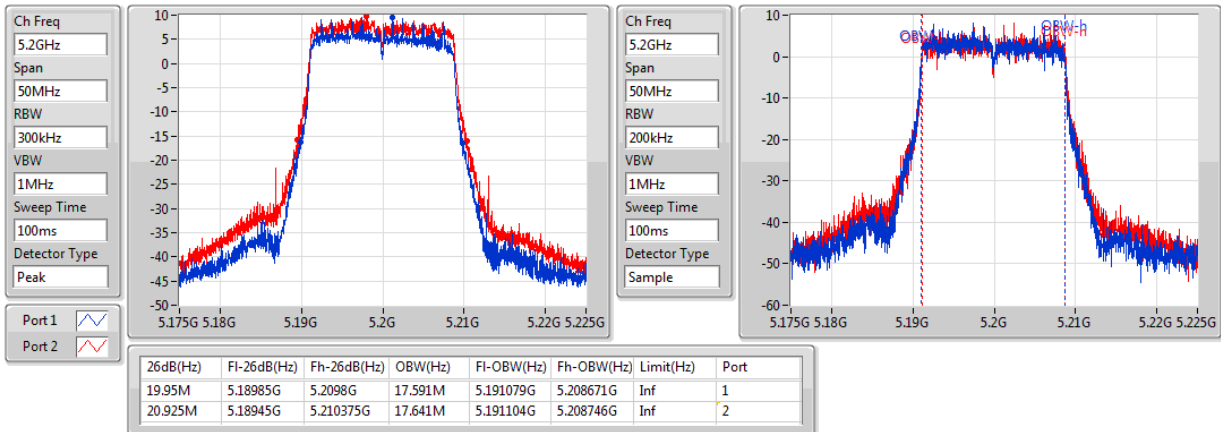
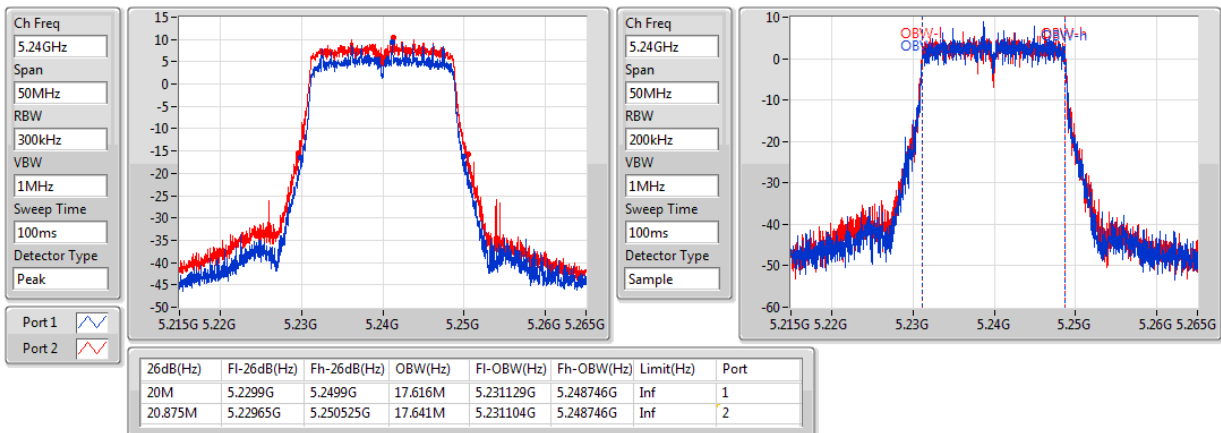
Min-OBW = Minimum 99% occupied bandwidth;

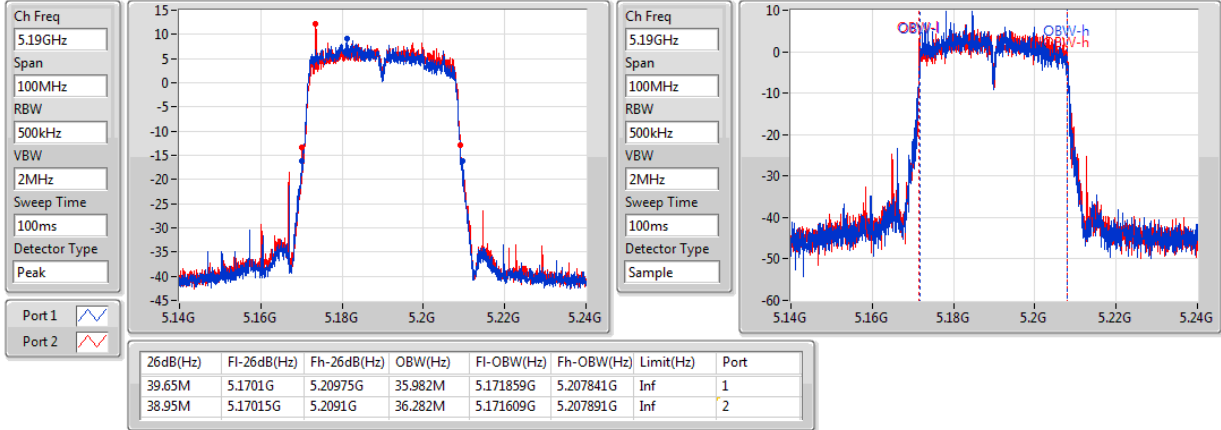
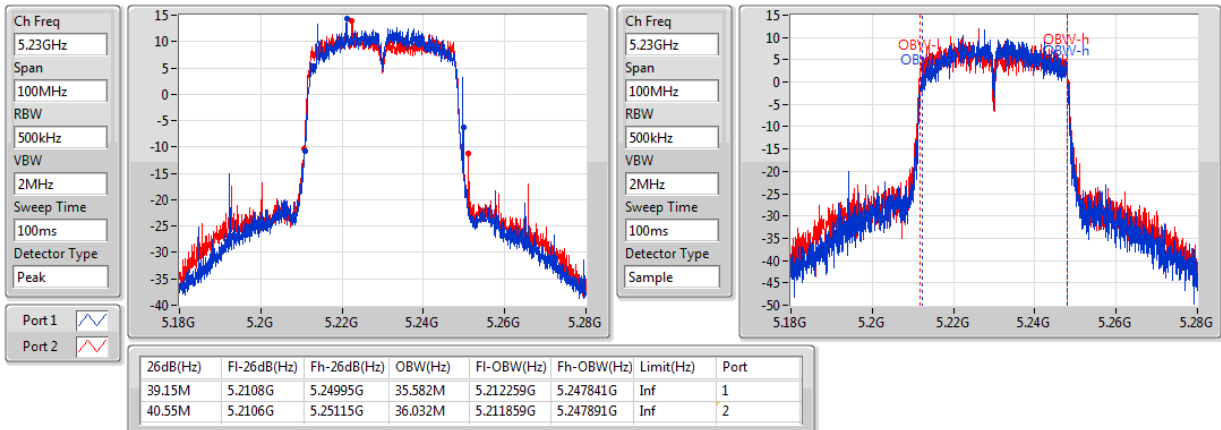
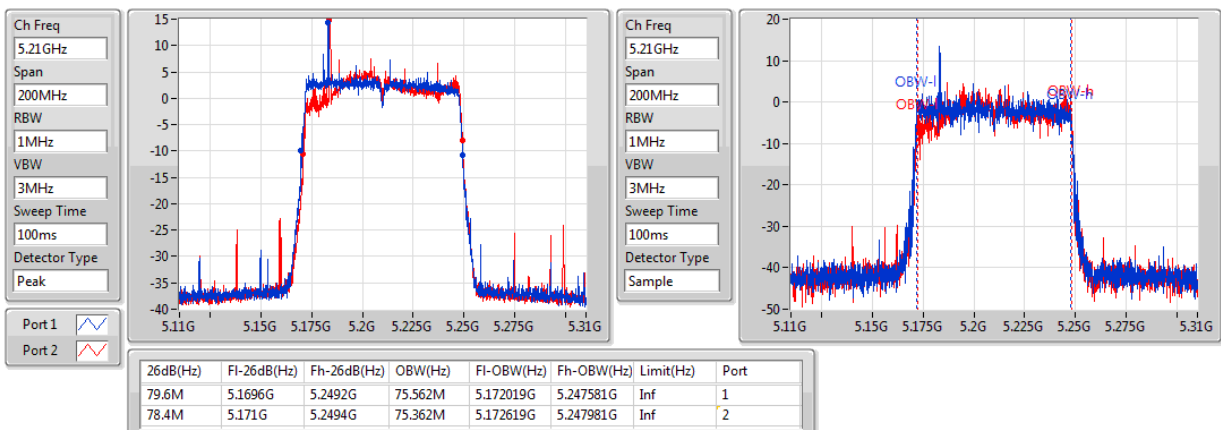
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	20.375M	17.616M	20.925M	17.641M
5200MHz	Pass	Inf	19.95M	17.591M	20.925M	17.641M
5240MHz	Pass	Inf	20M	17.616M	20.875M	17.641M
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	Inf	39.65M	35.982M	38.95M	36.282M
5230MHz	Pass	Inf	39.15M	35.582M	40.55M	36.032M
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	Inf	79.6M	75.562M	78.4M	75.362M

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

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

802.11ac VHT20-BF_Nss1,(MCS0)_2TX
EBW
5180MHz

802.11ac VHT20-BF_Nss1,(MCS0)_2TX
EBW
5200MHz

802.11ac VHT20-BF_Nss1,(MCS0)_2TX
EBW
5240MHz


802.11ac VHT40-BF_Nss1,(MCS0)_2TX
EBW
5190MHz

802.11ac VHT40-BF_Nss1,(MCS0)_2TX
EBW
5230MHz

802.11ac VHT80-BF_Nss1,(MCS0)_2TX
EBW
5210MHz


For Outdoor-5G Band 1 + Indoor/Outdoor-5G Band 4:
Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	21.075M	17.641M	17M6D1D	20.45M	17.616M
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	39.4M	36.082M	36M1D1D	37.8M	35.932M
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	79.2M	75.862M	75M9D1D	78.6M	75.662M
5.725-5.85GHz	-	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	17.375M	17.716M	17M7D1D	16.35M	17.591M
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	35M	36.232M	36M2D1D	31.35M	35.932M
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	76M	76.062M	76M1D1D	75.1M	75.662M

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

Max-OBW = Maximum 99% occupied bandwidth;

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

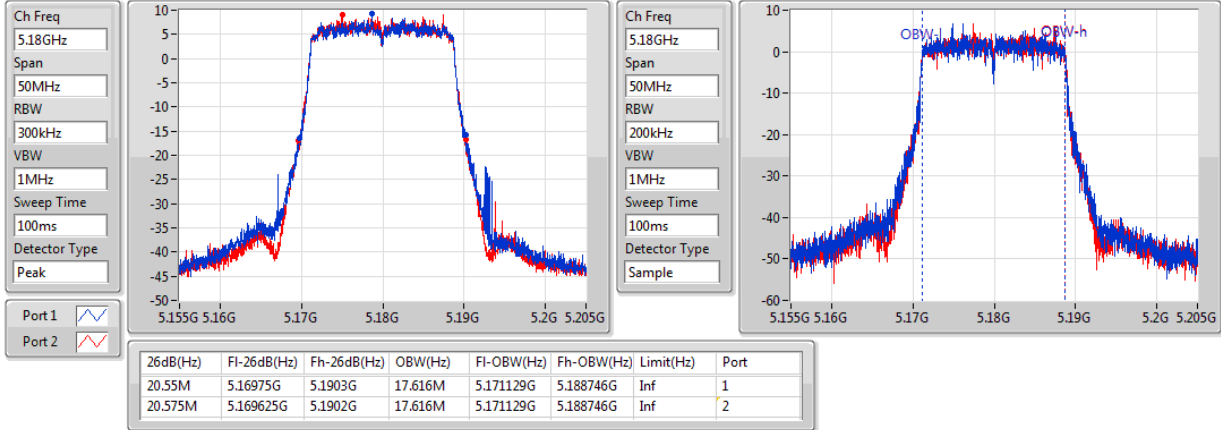
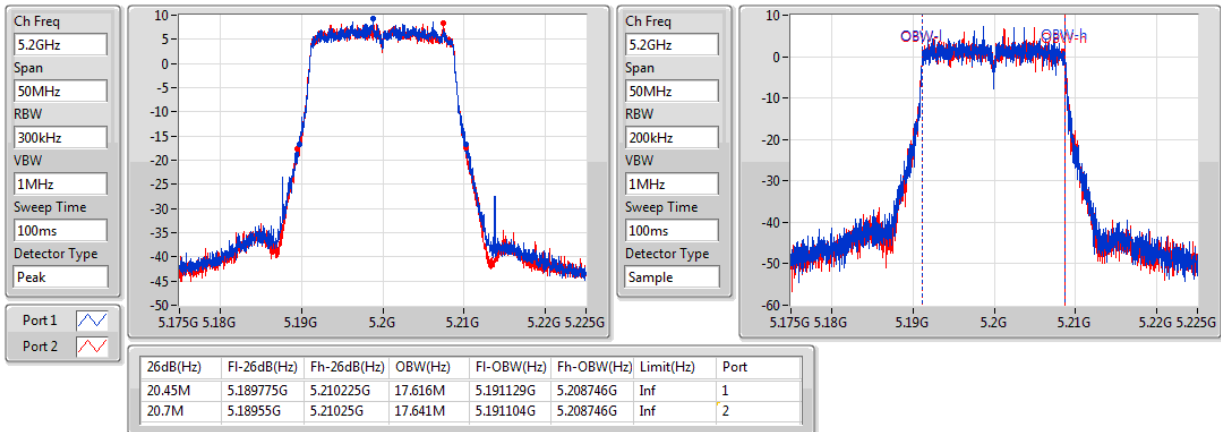
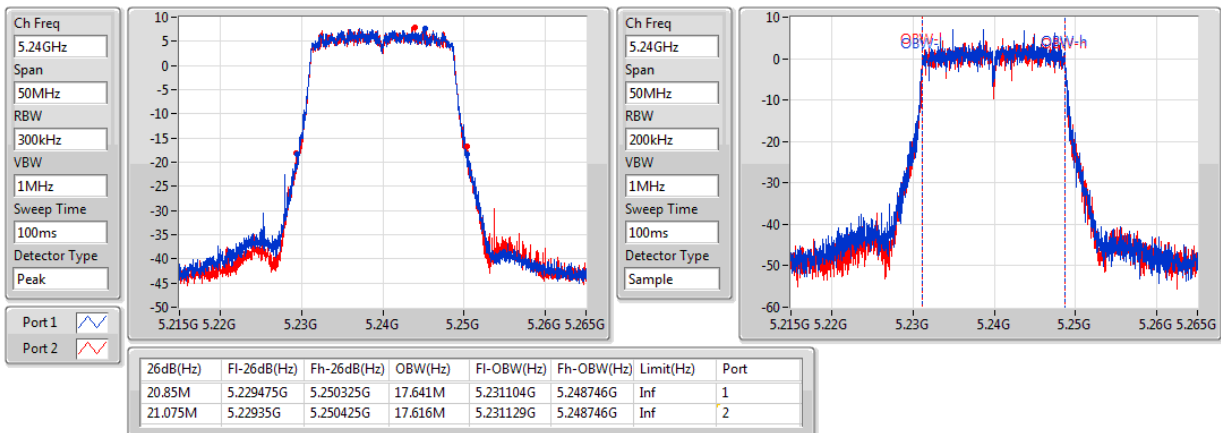
Min-OBW = Minimum 99% occupied bandwidth;

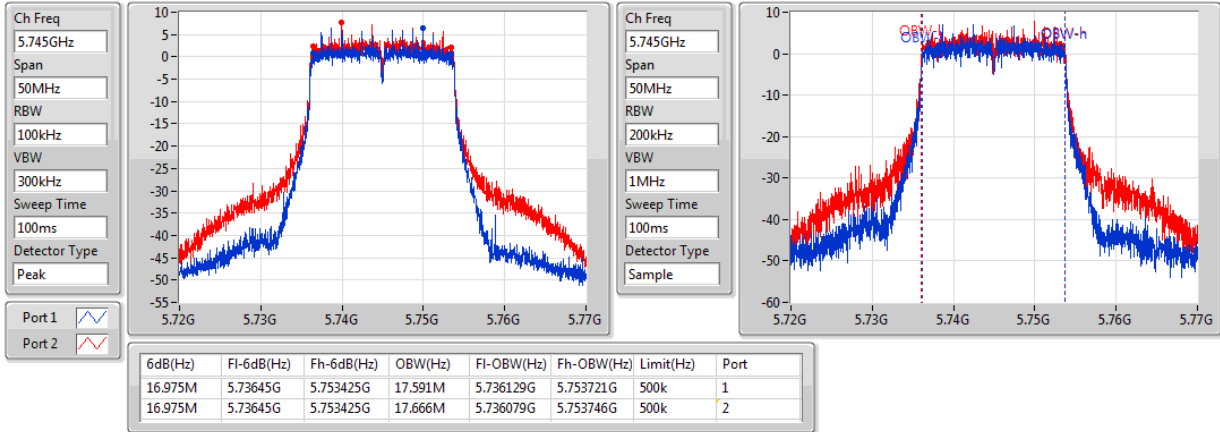
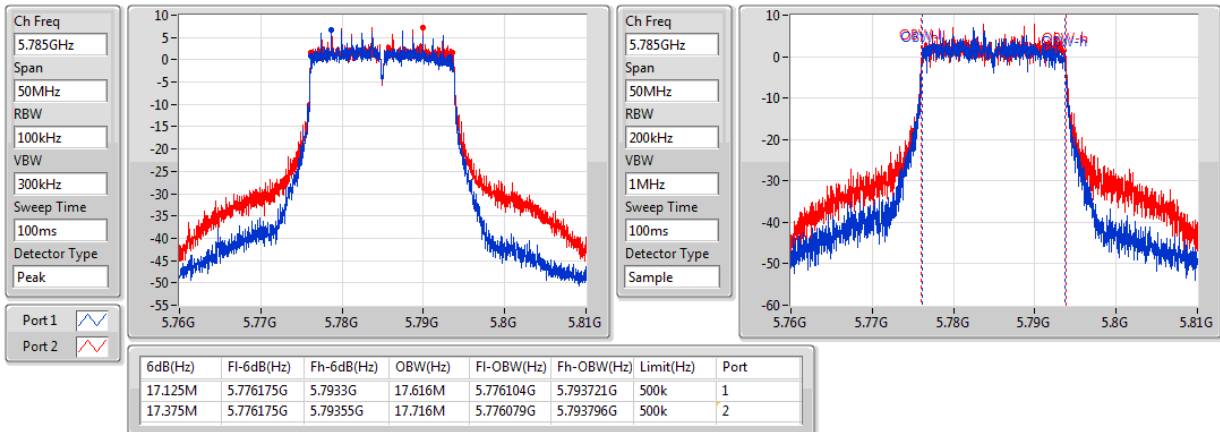
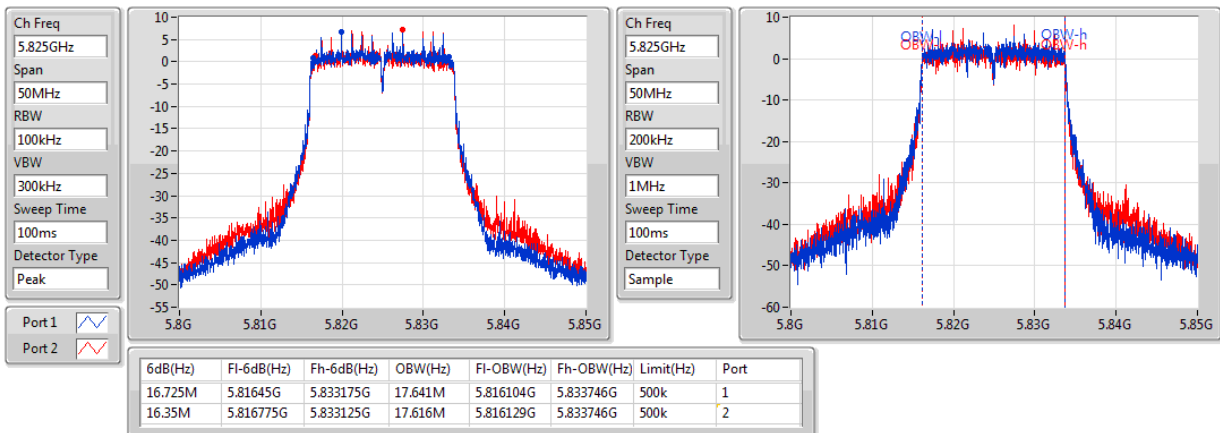
Result

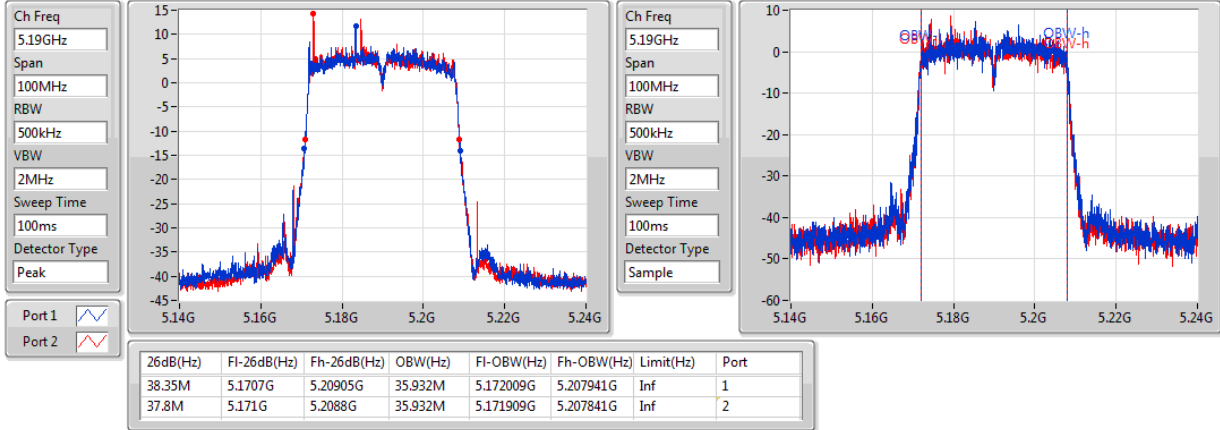
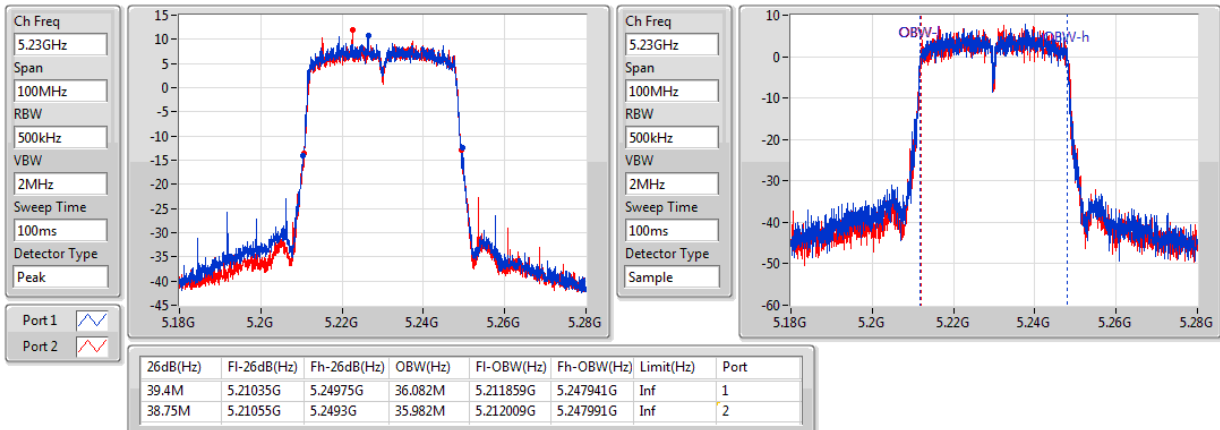
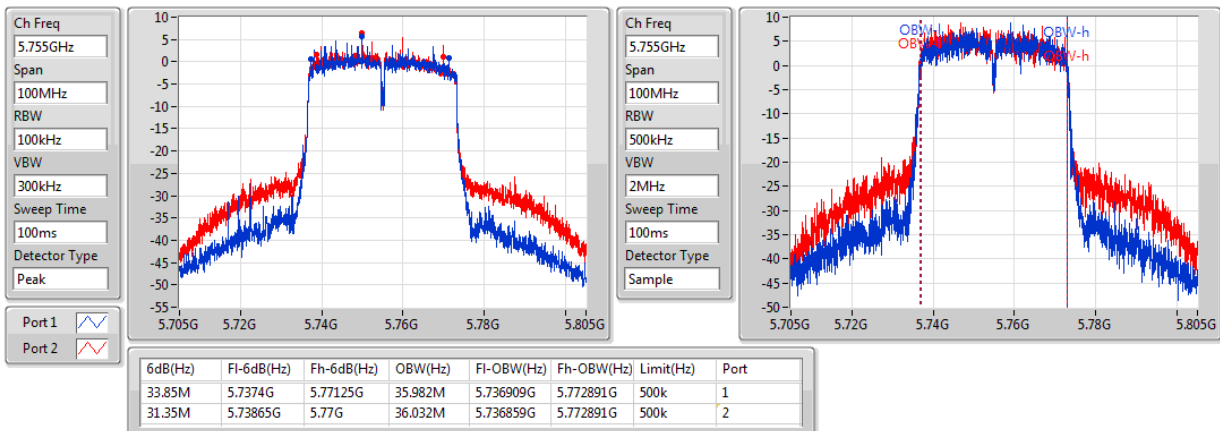
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	20.55M	17.616M	20.575M	17.616M
5200MHz	Pass	Inf	20.45M	17.616M	20.7M	17.641M
5240MHz	Pass	Inf	20.85M	17.641M	21.075M	17.616M
5745MHz	Pass	500k	16.975M	17.591M	16.975M	17.666M
5785MHz	Pass	500k	17.125M	17.616M	17.375M	17.716M
5825MHz	Pass	500k	16.725M	17.641M	16.35M	17.616M
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	Inf	38.35M	35.932M	37.8M	35.932M
5230MHz	Pass	Inf	39.4M	36.082M	38.75M	35.982M
5755MHz	Pass	500k	33.85M	35.982M	31.35M	36.032M
5795MHz	Pass	500k	35M	35.932M	34.75M	36.232M
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	Inf	78.6M	75.662M	79.2M	75.862M
5775MHz	Pass	500k	75.1M	75.662M	76M	76.062M

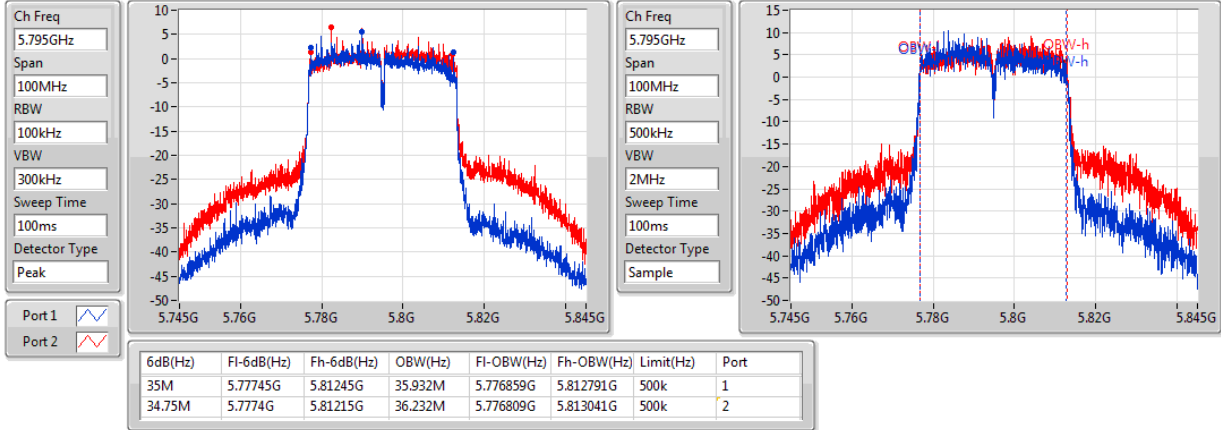
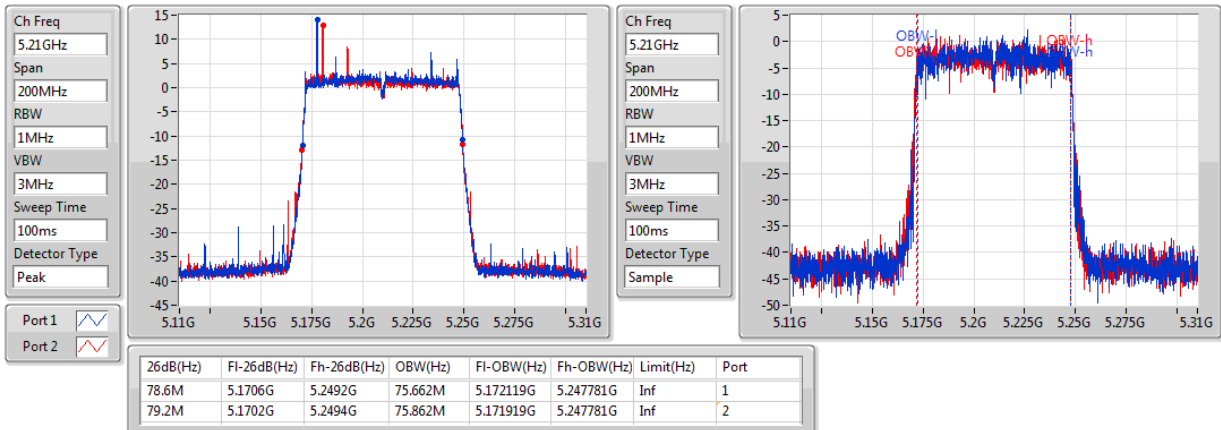
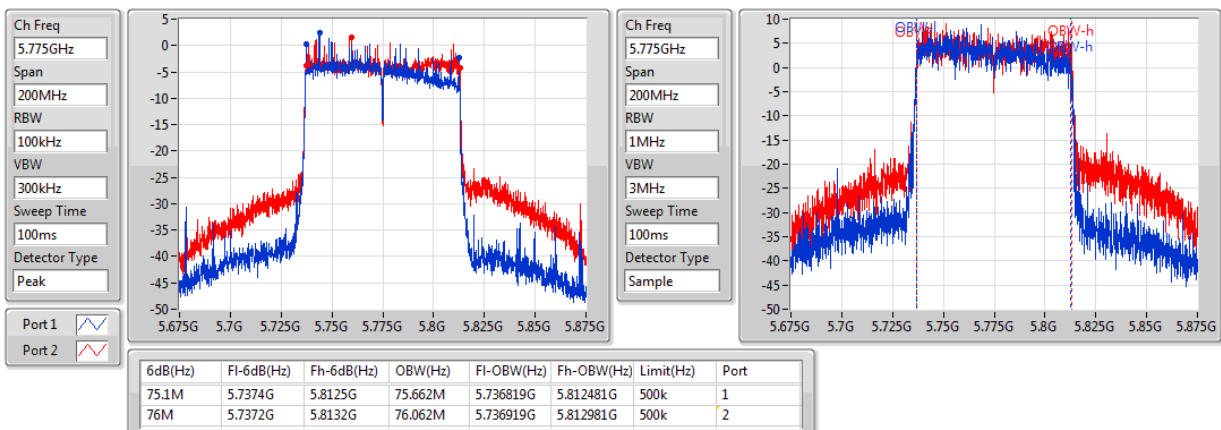
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band

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

802.11ac VHT20-BF_Nss1,(MCS0)_2TX
EBW
5180MHz

802.11ac VHT20-BF_Nss1,(MCS0)_2TX
EBW
5200MHz

802.11ac VHT20-BF_Nss1,(MCS0)_2TX
EBW
5240MHz


802.11ac VHT20-BF_Nss1,(MCS0)_2TX
EBW
5745MHz

802.11ac VHT20-BF_Nss1,(MCS0)_2TX
EBW
5785MHz

802.11ac VHT20-BF_Nss1,(MCS0)_2TX
EBW
5825MHz


802.11ac VHT40-BF_Nss1,(MCS0)_2TX
EBW
5190MHz

802.11ac VHT40-BF_Nss1,(MCS0)_2TX
EBW
5230MHz

802.11ac VHT40-BF_Nss1,(MCS0)_2TX
EBW
5755MHz


802.11ac VHT40-BF_Nss1,(MCS0)_2TX
EBW
5795MHz

802.11ac VHT80-BF_Nss1,(MCS0)_2TX
EBW
5210MHz

802.11ac VHT80-BF_Nss1,(MCS0)_2TX
EBW
5775MHz


**For non-beamforming mode:
For Indoor-5G Band 1:
Summary**

Mode	Total Power (dBm)	Total Power (W)
5.15-5.25GHz	-	-
802.11a_Nss1,(6Mbps)_2TX	25.70	0.37154
802.11ac VHT20_Nss1,(MCS0)_2TX	25.37	0.34435
802.11ac VHT40_Nss1,(MCS0)_2TX	24.66	0.29242
802.11ac VHT80_Nss1,(MCS0)_2TX	17.79	0.06012

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
5180MHz	Pass	5.19	20.52	20.49	23.52	30.00
5200MHz	Pass	5.19	22.69	22.69	25.70	30.00
5240MHz	Pass	5.19	21.93	21.89	24.92	30.00
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	5.19	19.44	19.62	22.54	30.00
5200MHz	Pass	5.19	22.31	22.40	25.37	30.00
5240MHz	Pass	5.19	21.74	21.96	24.86	30.00
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	5.19	16.53	16.54	19.55	30.00
5230MHz	Pass	5.19	21.64	21.66	24.66	30.00
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	5.19	14.82	14.73	17.79	30.00

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

**For Outdoor-5G Band 1 + Indoor/Outdoor-5G Band 4:
Summary**

Mode	Total Power (dBm)	Total Power (W)	EIRP/ EIRP- Elevation 30° (dBm)	EIRP/ EIRP- Elevation 30° (W)
5.15-5.25GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	23.18	0.20797	28.37/20.96	0.68707/0.12473
802.11ac VHT20_Nss1,(MCS0)_2TX	22.97	0.19815	28.16/20.75	0.65464/0.11885
802.11ac VHT40_Nss1,(MCS0)_2TX	22.99	0.19907	28.18/20.77	0.65766/0.11939
802.11ac VHT80_Nss1,(MCS0)_2TX	17.79	0.06012	22.98/15.57	0.19861/0.03605
5.725-5.85GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	23.00	0.19953	27.56	0.57016
802.11ac VHT20_Nss1,(MCS0)_2TX	22.79	0.19011	27.35	0.54325
802.11ac VHT40_Nss1,(MCS0)_2TX	24.66	0.29242	29.22	0.83560
802.11ac VHT80_Nss1,(MCS0)_2TX	22.64	0.18365	27.20	0.52481

Result

Mode	Result	Directional Gain (Output Power) / Gain- Elevation 30° (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP / EIRP- Elevation 30° (dBm)	EIRP Limit / EIRP Limit- Elevation 30° (dBm)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	5.19/-2.22	19.97	19.93	22.96	30.00	28.15/20.74	36.00/21.00
5200MHz	Pass	5.19/-2.22	19.83	20.01	22.93	30.00	28.12/20.71	36.00/21.00
5240MHz	Pass	5.19/-2.22	20.21	20.12	23.18	30.00	28.37/20.96	36.00/21.00
5745MHz	Pass	4.56	20.16	19.82	23.00	30.00	27.56	36.00
5785MHz	Pass	4.56	19.99	19.67	22.84	30.00	27.40	36.00
5825MHz	Pass	4.56	19.16	18.68	21.94	30.00	26.50	36.00
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	5.19/-2.22	19.44	19.62	22.54	30.00	27.73/20.32	36.00/21.00
5200MHz	Pass	5.19/-2.22	20.06	19.83	22.96	30.00	28.15/20.74	36.00/21.00
5240MHz	Pass	5.19/-2.22	20.03	19.89	22.97	30.00	28.16/20.75	36.00/21.00
5745MHz	Pass	4.56	19.90	19.66	22.79	30.00	27.35	36.00
5785MHz	Pass	4.56	18.62	18.46	21.55	30.00	26.11	36.00
5825MHz	Pass	4.56	18.86	18.63	21.76	30.00	26.32	36.00
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5190MHz	Pass	5.19/-2.22	16.53	16.54	19.55	30.00	24.74/17.33	36.00/21.00
5230MHz	Pass	5.19/-2.22	20.02	19.93	22.99	30.00	28.18/20.77	36.00/21.00
5755MHz	Pass	4.56	21.83	21.46	24.66	30.00	29.22	36.00
5795MHz	Pass	4.56	21.17	21.21	24.20	30.00	28.76	36.00
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5210MHz	Pass	5.19/-2.22	14.82	14.73	17.79	30.00	22.98/15.57	36.00/21.00
5775MHz	Pass	4.56	19.79	19.46	22.64	30.00	27.20	36.00

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

**For beamforming mode:
For Indoor-5G Band 1:
Summary**

Mode	Total Power (dBm)	Total Power (W)
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	21.37	0.13709
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	22.95	0.19724
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	14.72	0.02965

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	8.20	18.30	18.18	21.25	27.80
5200MHz	Pass	8.20	18.31	18.40	21.37	27.80
5240MHz	Pass	8.20	17.74	17.91	20.84	27.80
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	8.20	15.63	15.30	18.48	27.80
5230MHz	Pass	8.20	19.97	19.91	22.95	27.80
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	8.20	11.69	11.73	14.72	27.80

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

**For Outdoor-5G Band 1 + Indoor/Outdoor-5G Band 4:
Summary**

Mode	Total Power (dBm)	Total Power (W)	EIRP/ EIRP- Elevation 30° (dBm)	EIRP/ EIRP- Elevation 30° (W)
5.15-5.25GHz	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	20.08	0.10186	28.28/20.87	0.67298/0.12218
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	20.12	0.10280	28.32/20.91	0.67920/0.12331
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	14.72	0.02965	22.92/15.51	0.19588/0.03556
5.725-5.85GHz	-	-	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	20.43	0.11041	28.00	0.63096
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	22.22	0.16672	29.79	0.95280
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	21.23	0.13274	28.80	0.75858

Result

Mode	Result	Directional Gain (Output Power) / Gain- Elevation 30° (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP / EIRP- Elevation 30° (dBm)	EIRP Limit / EIRP Limit- Elevation 30° (dBm)
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5180MHz	Pass	8.20/0.79	16.90	17.24	20.08	27.80	28.28/20.87	36.00/21.00
5200MHz	Pass	8.20/0.79	17.03	16.93	19.99	27.80	28.19/20.78	36.00/21.00
5240MHz	Pass	8.20/0.79	16.69	16.56	19.64	27.80	27.84/20.43	36.00/21.00
5745MHz	Pass	7.57	17.23	17.61	20.43	28.43	28.00	36.00
5785MHz	Pass	7.57	17.17	17.59	20.40	28.43	27.97	36.00
5825MHz	Pass	7.57	17.32	16.67	20.02	28.43	27.59	36.00
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5190MHz	Pass	8.20/0.79	15.63	15.30	18.48	27.80	26.68/19.27	36.00/21.00
5230MHz	Pass	8.20/0.79	17.05	17.16	20.12	27.80	28.32/20.91	36.00/21.00
5755MHz	Pass	7.57	18.40	18.65	21.54	28.43	29.11	36.00
5795MHz	Pass	7.57	18.94	19.46	22.22	28.43	29.79	36.00
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
5210MHz	Pass	8.20/0.79	11.69	11.73	14.72	27.80	22.92/15.51	36.00/21.00
5775MHz	Pass	7.57	17.81	18.59	21.23	28.43	28.80	36.00

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

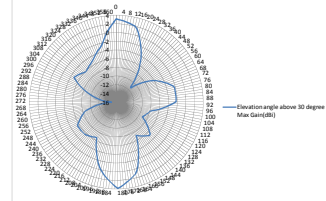


SPORTON International Inc.

No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.
Ph: 886-3-327-3456 / FAX: 886-3-327-0973 / www.sporton.com.tw

Elevation angle above 30 degree Max Gain(dBi)		-2.22
Freq. (MHz)	Gain(dBi)	Elevation Angle Define
H-Plane angle(Degree)		180° reference angle
0	3.15	0° ~ 30°
2	2.86	
4	2.83	
6	2.87	
8	2.51	
10	2.36	
12	2.19	
14	2.03	
16	1.48	
18	0.6	
20	-0.28	
22	-1.18	
24	-2.04	
26	-2.92	
28	-3.8	
30	-4.71	
32	-5.64	
34	-6.57	
36	-7.5	
38	-8.43	
40	-9.36	
42	-10.29	
44	-11.22	
46	-11.35	
48	-10.61	
50	-9.87	
52	-9.13	
54	-8.39	
56	-7.65	
58	-6.91	
60	-6.15	
62	-5.63	
64	-5.11	
66	-4.59	
68	-4.07	
70	-3.55	
72	-3.03	
74	-2.51	
76	-2.22	
78	-2.22	Above 30°
80	-2.22	
82	-2.22	
84	-2.22	
86	-2.22	
88	-2.22	
90	-2.22	
92	-2.88	
94	-3.74	
96	-4.6	
98	-5.26	
100	-6.02	
102	-6.78	
104	-7.54	
106	-8	
108	-8.16	
110	-8.32	
112	-8.48	
114	-8.64	
116	-8.8	
118	-8.96	
120	-9.13	
122	-8.99	
124	-8.99	
126	-7.51	
128	-6.97	
130	-6.43	
132	-5.89	
134	-5.35	
136	-5.19	
138	-5.46	
140	-5.73	
142	-6	
144	-6.27	
146	-6.54	
148	-6.81	
150	-7.08	
152	-6.62	
154	-6.06	
156	-5.9	
158	-2.84	0° ~ 30°
160	-1.78	
162	-0.72	
164	0.36	
166	1.1	
168	1.5	
170	1.9	
172	2.3	
174	2.7	
176	3.1	
178	3.5	0° reference angle
180	3.9	
182	3.34	
184	2.78	
186	2.22	
188	1.66	
190	1.1	
192	0.54	
194	-0.03	
196	-0.72	0° ~ 30°
198	-1.58	
200	-2.43	
202	-3.28	
204	-4.13	
206	-4.89	
208	-5.63	
210	-6.71	
212	-6.67	
214	-6.43	
216	-6.29	
218	-6.15	
220	-6.01	
222	-5.87	
224	-5.73	
226	-5.64	
228	-5.63	
230	-5.82	
232	-5.61	
234	-5.6	
236	-5.99	
238	-5.98	
240	-5.58	
242	-5.95	
244	-6.34	
246	-6.73	
248	-7.12	
250	-7.51	
252	-7.9	
254	-8.29	
256	-8.9	
258	-9.75	
260	-10.6	
262	-11.45	
264	-12.3	
266	-13.15	
268	-14	
270	-14.84	Above 30°
272	-14.84	
274	-14.19	
276	-13.54	
278	-12.89	
280	-12.24	
282	-11.59	
284	-10.94	
286	-10.29	
288	-9.64	
290	-8.94	
292	-8.24	
294	-7.54	
296	-6.84	
298	-6.14	
300	-5.44	
302	-4.74	
304	-4.93	
306	-5.12	
308	-5.31	0° ~ 30°
310	-5.5	
312	-5.69	
314	-5.88	
316	-6.07	
318	-6.26	
320	-6.94	
322	-6.79	
324	-5.64	
326	-5.49	
328	-5.34	
330	-5.19	
332	-5.03	
334	-4.72	
336	-4.41	
338	-4.1	
340	-3.79	
342	-3.48	
344	-3.17	
346	-2.86	
348	-2.5	
350	-1.52	
352	-0.74	
354	0.34	
356	0.82	
358	1.6	
360	2.38	

Elevation angle above 30 degree Max Gain(dBi)





For non-beamforming mode:

For Indoor-5G Band 1:

Summary

Mode	PD (dBm/RBW)
5.15-5.25GHz	-
802.11a_Nss1,(6Mbps)_2TX	12.48
802.11ac VHT20_Nss1,(MCS0)_2TX	11.83
802.11ac VHT40_Nss1,(MCS0)_2TX	8.98
802.11ac VHT80_Nss1,(MCS0)_2TX	-1.15

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_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
5180MHz	Pass	8.20	7.70	7.47	10.36	14.80
5200MHz	Pass	8.20	9.79	9.41	12.48	14.80
5240MHz	Pass	8.20	9.22	8.73	11.84	14.80
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	8.20	6.39	6.56	9.41	14.80
5200MHz	Pass	8.20	9.06	8.70	11.83	14.80
5240MHz	Pass	8.20	8.89	8.76	11.73	14.80
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	8.20	1.07	0.77	3.79	14.80
5230MHz	Pass	8.20	6.33	5.83	8.98	14.80
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	8.20	-3.53	-4.17	-1.15	14.80

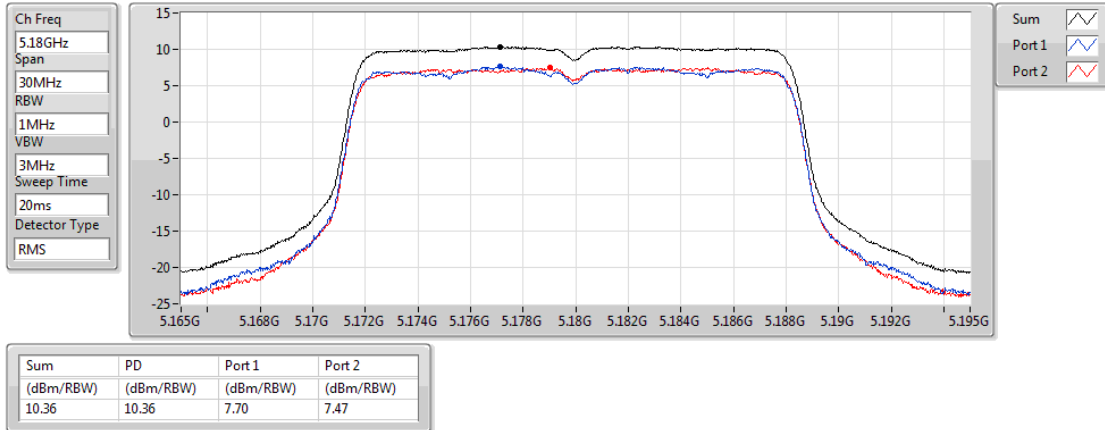
DG = Directional Gain; **RBW** = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

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

802.11a_Nss1,(6Mbps)_2TX

PSD

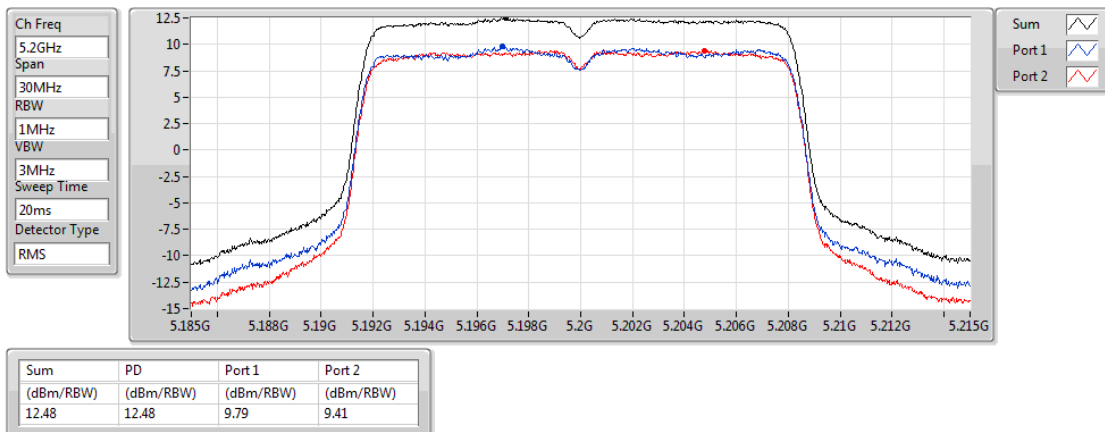
5180MHz



802.11a_Nss1,(6Mbps)_2TX

PSD

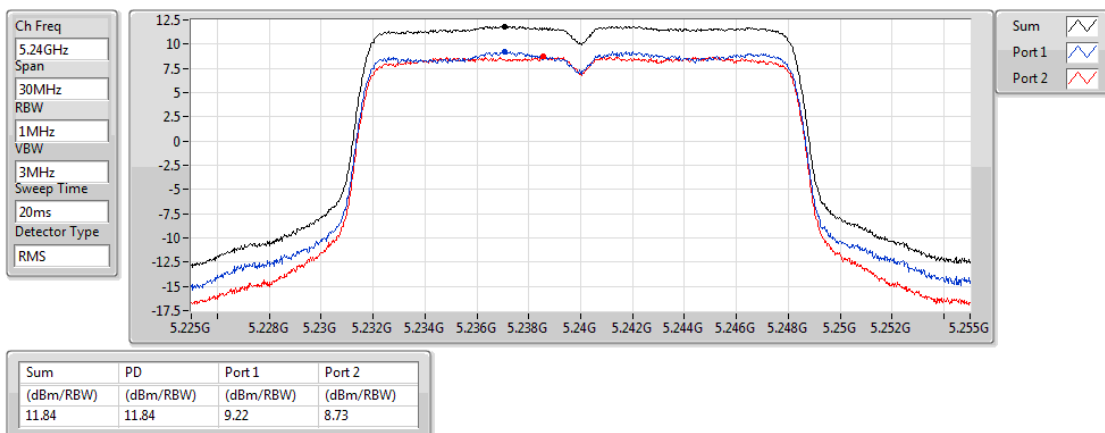
5200MHz



802.11a_Nss1,(6Mbps)_2TX

PSD

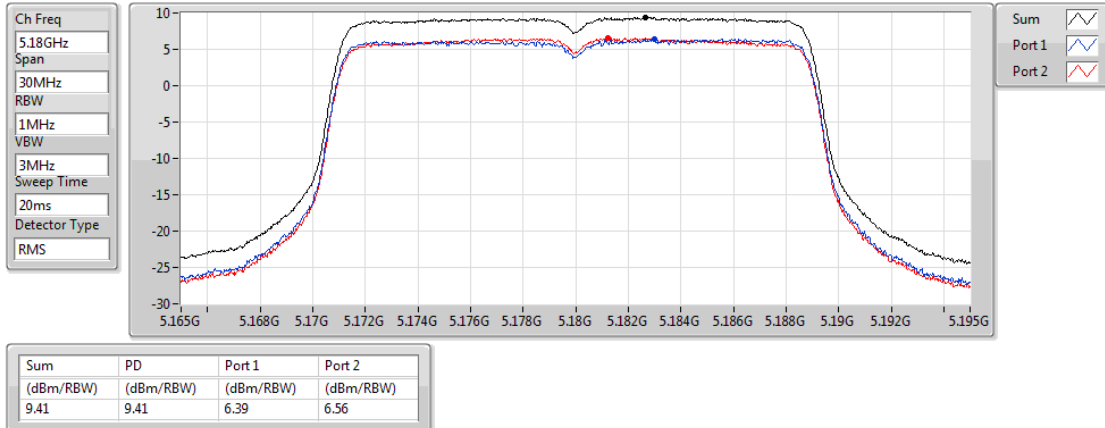
5240MHz



802.11ac VHT20_Nss1,(MCS0)_2TX

PSD

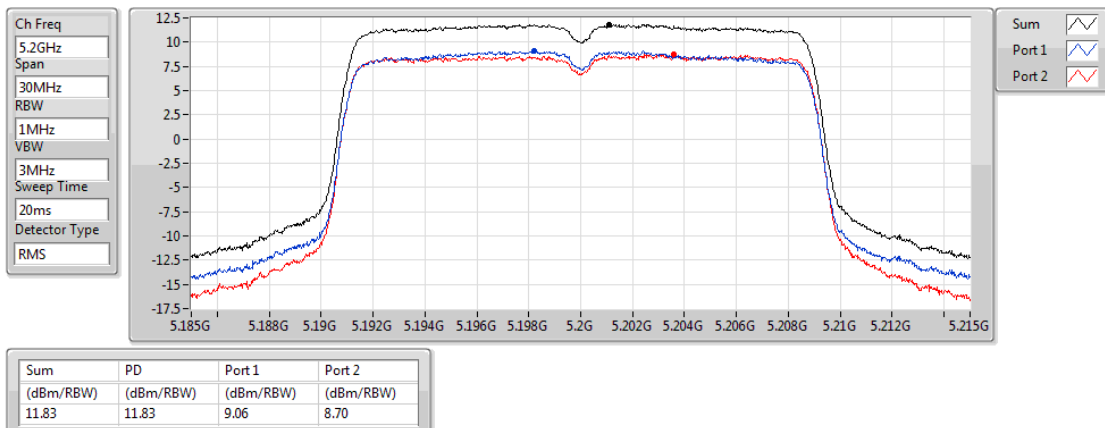
5180MHz



802.11ac VHT20_Nss1,(MCS0)_2TX

PSD

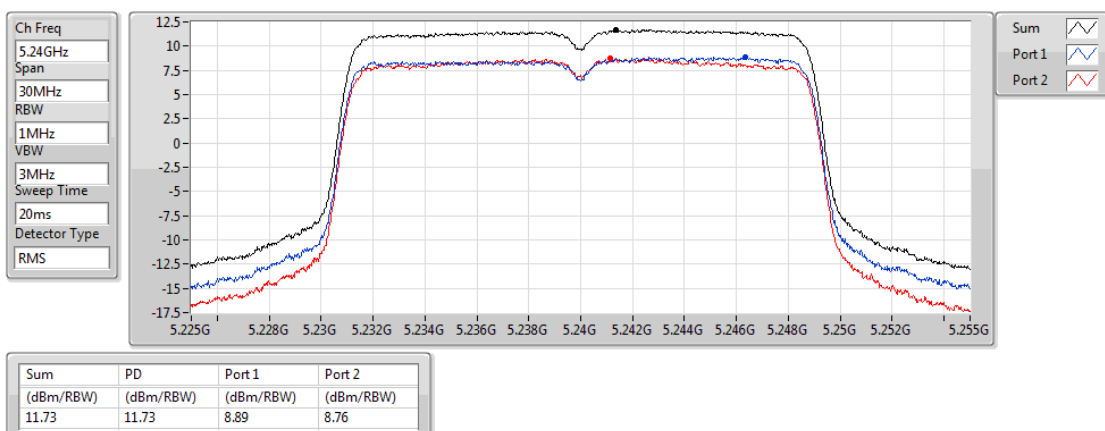
5200MHz



802.11ac VHT20_Nss1,(MCS0)_2TX

PSD

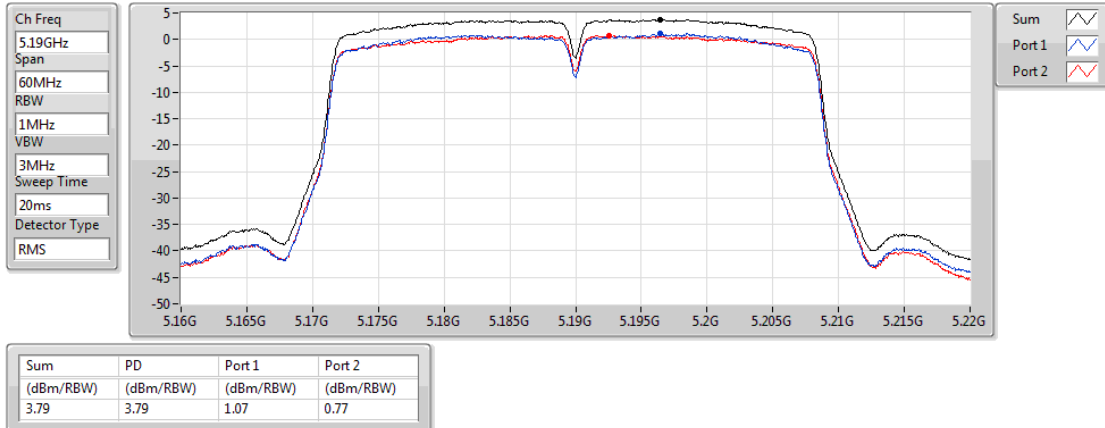
5240MHz



802.11ac VHT40_Nss1,(MCS0)_2TX

PSD

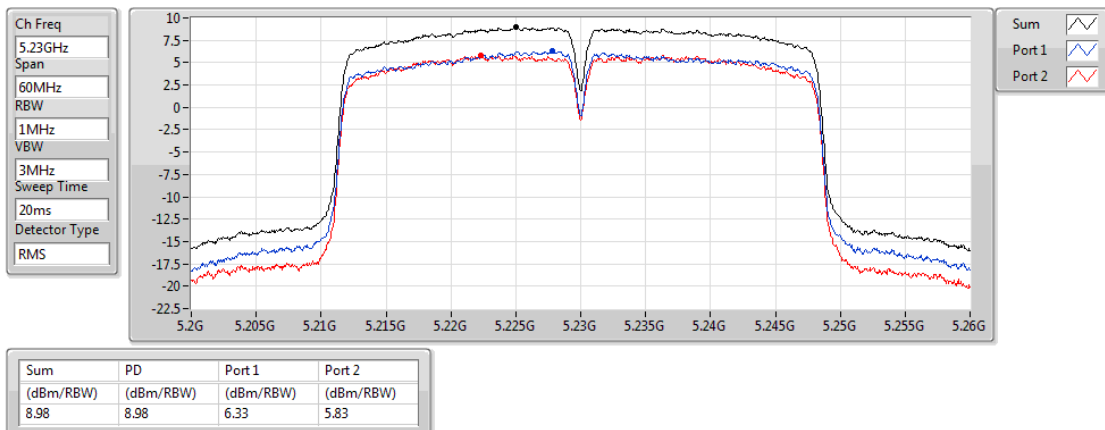
5190MHz



802.11ac VHT40_Nss1,(MCS0)_2TX

PSD

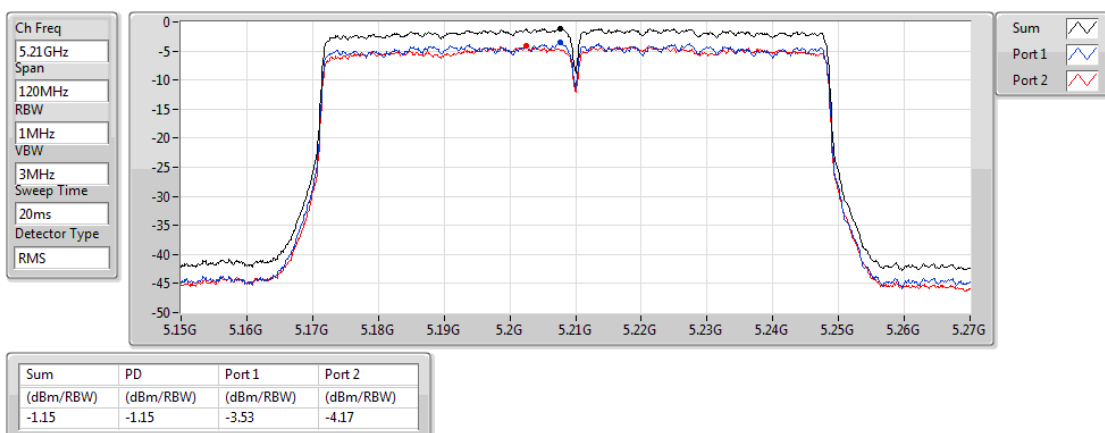
5230MHz



802.11ac VHT80_Nss1,(MCS0)_2TX

PSD

5210MHz



**For Outdoor-5G Band 1 + Indoor/Outdoor-5G Band 4:
Summary**

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
5.15-5.25GHz	-	-
802.11a_Nss1,(6Mbps)_2TX	9.89	18.09
802.11ac VHT20_Nss1,(MCS0)_2TX	9.89	18.09
802.11ac VHT40_Nss1,(MCS0)_2TX	7.24	15.44
802.11ac VHT80_Nss1,(MCS0)_2TX	-1.26	6.94
5.725-5.85GHz	-	-
802.11a_Nss1,(6Mbps)_2TX	8.71	16.28
802.11ac VHT20_Nss1,(MCS0)_2TX	8.36	15.93
802.11ac VHT40_Nss1,(MCS0)_2TX	7.38	14.95
802.11ac VHT80_Nss1,(MCS0)_2TX	2.70	10.27

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_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
5180MHz	Pass	8.20	7.10	6.92	9.79	14.80
5200MHz	Pass	8.20	7.07	6.96	9.89	14.80
5240MHz	Pass	8.20	7.04	6.89	9.83	14.80
5745MHz	Pass	7.57	6.06	5.48	8.71	28.43
5785MHz	Pass	7.57	5.91	5.32	8.50	28.43
5825MHz	Pass	7.57	5.03	4.44	7.71	28.43
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	8.20	6.19	6.50	9.22	14.80
5200MHz	Pass	8.20	6.99	6.71	9.72	14.80
5240MHz	Pass	8.20	7.14	6.62	9.89	14.80
5745MHz	Pass	7.57	5.54	5.24	8.36	28.43
5785MHz	Pass	7.57	4.38	3.96	7.14	28.43
5825MHz	Pass	7.57	4.57	4.00	7.24	28.43
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	8.20	1.05	0.73	3.69	14.80
5230MHz	Pass	8.20	4.75	4.16	7.24	14.80
5755MHz	Pass	7.57	4.60	4.54	7.38	28.43
5795MHz	Pass	7.57	4.40	4.15	7.16	28.43
802.11ac VHT80_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	8.20	-3.89	-4.28	-1.26	14.80
5775MHz	Pass	7.57	-0.15	-0.38	2.70	28.43

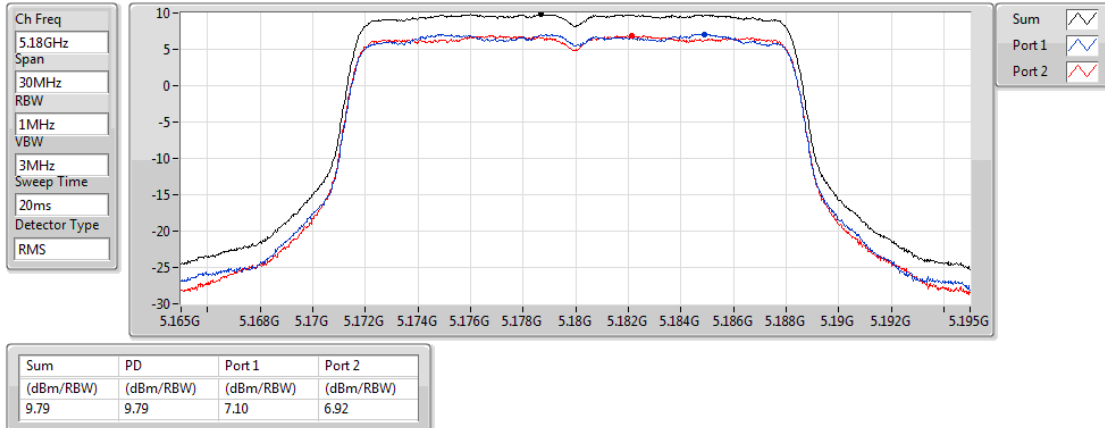
DG = Directional Gain; **RBW** = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

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

802.11a_Nss1,(6Mbps)_2TX

PSD

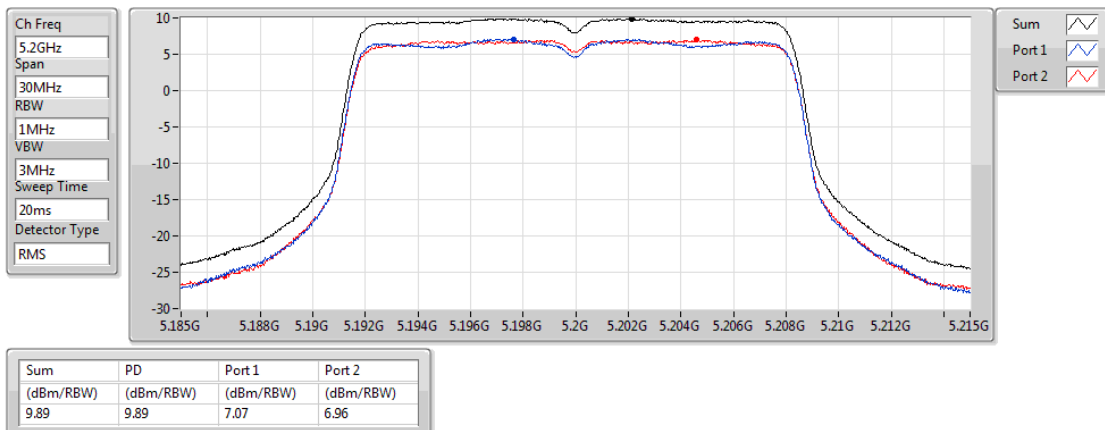
5180MHz



802.11a_Nss1,(6Mbps)_2TX

PSD

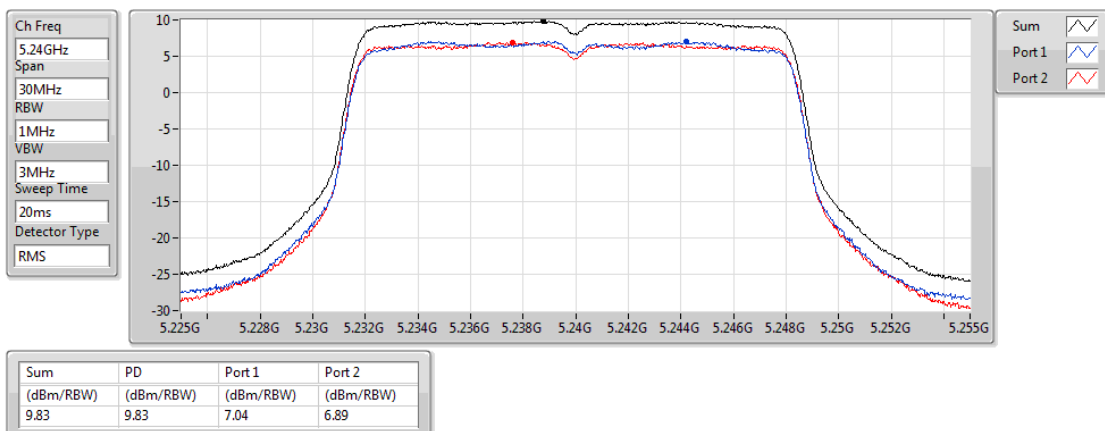
5200MHz



802.11a_Nss1,(6Mbps)_2TX

PSD

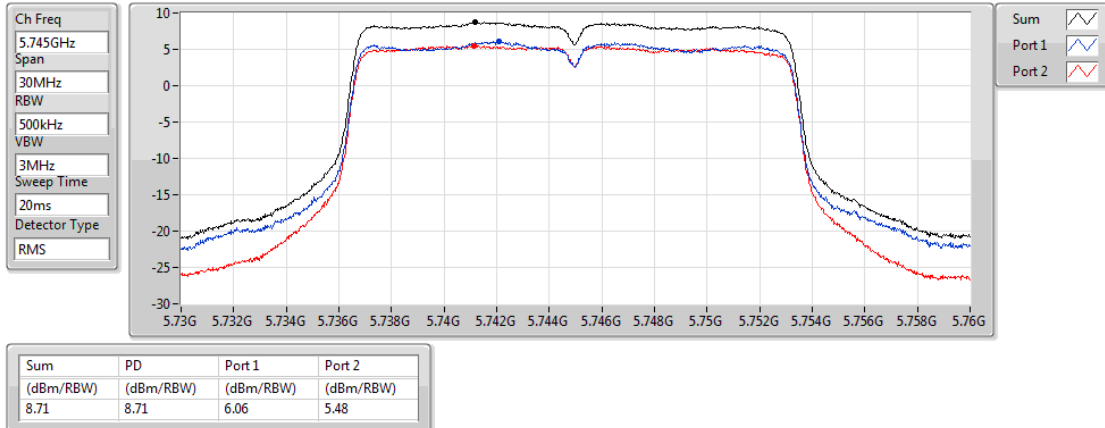
5240MHz



802.11a_Nss1,(6Mbps)_2TX

PSD

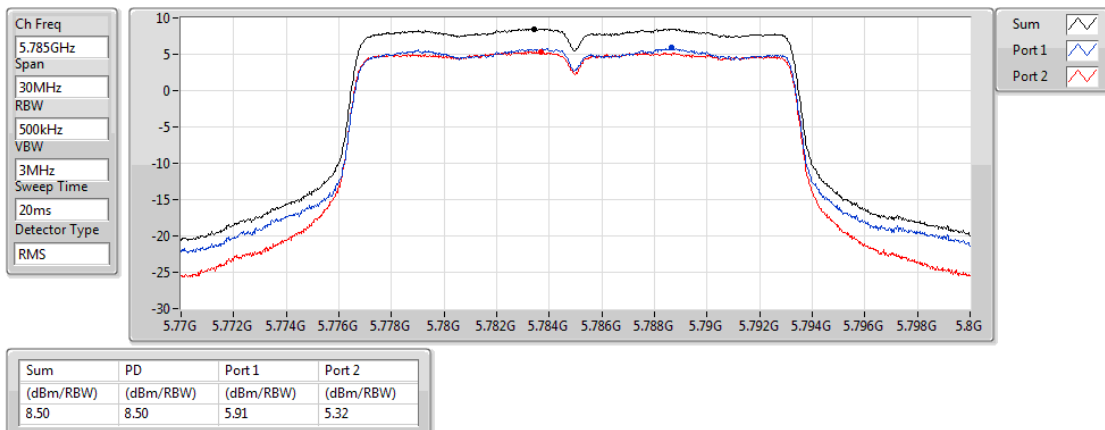
5745MHz



802.11a_Nss1,(6Mbps)_2TX

PSD

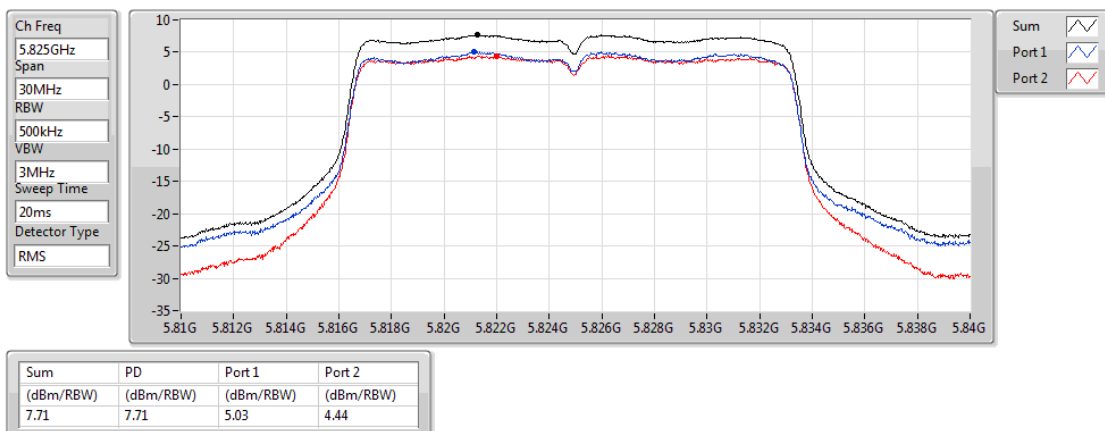
5785MHz



802.11a_Nss1,(6Mbps)_2TX

PSD

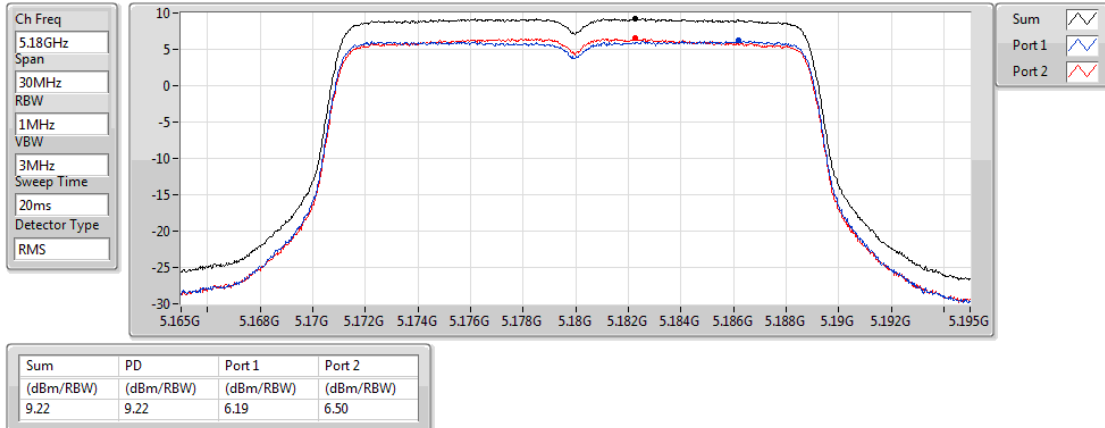
5825MHz



802.11ac VHT20_Nss1,(MCS0)_2TX

PSD

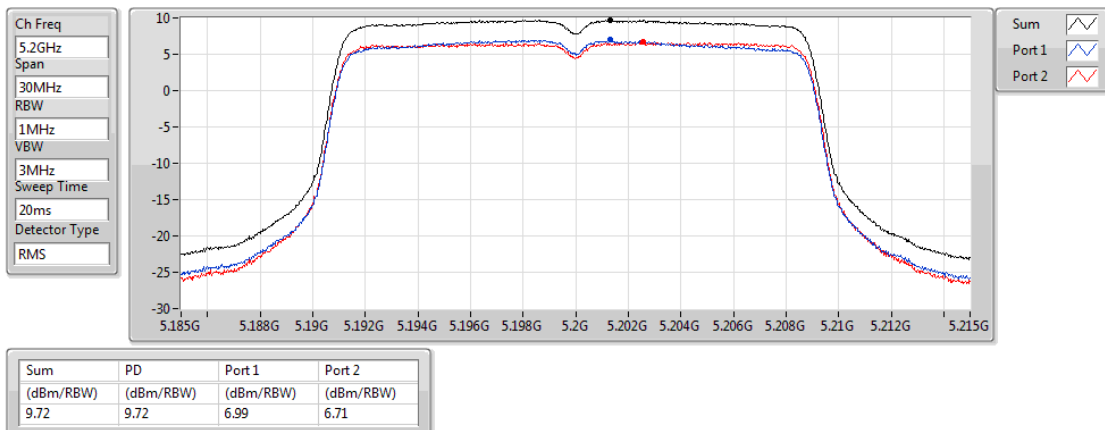
5180MHz



802.11ac VHT20_Nss1,(MCS0)_2TX

PSD

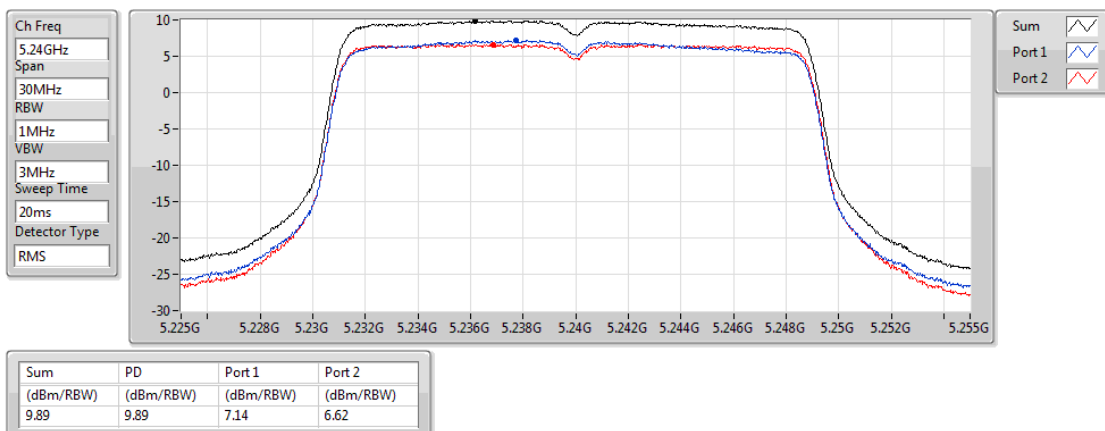
5200MHz



802.11ac VHT20_Nss1,(MCS0)_2TX

PSD

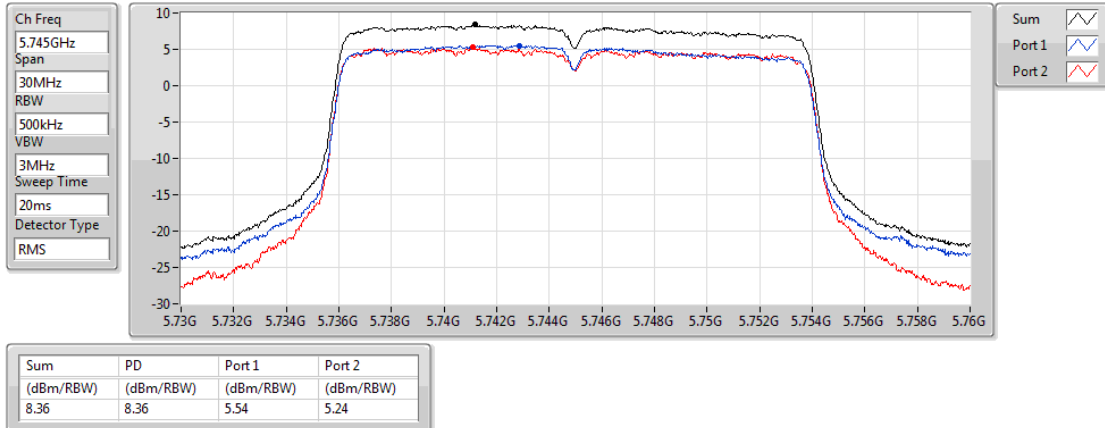
5240MHz



802.11ac VHT20_Nss1,(MCS0)_2TX

PSD

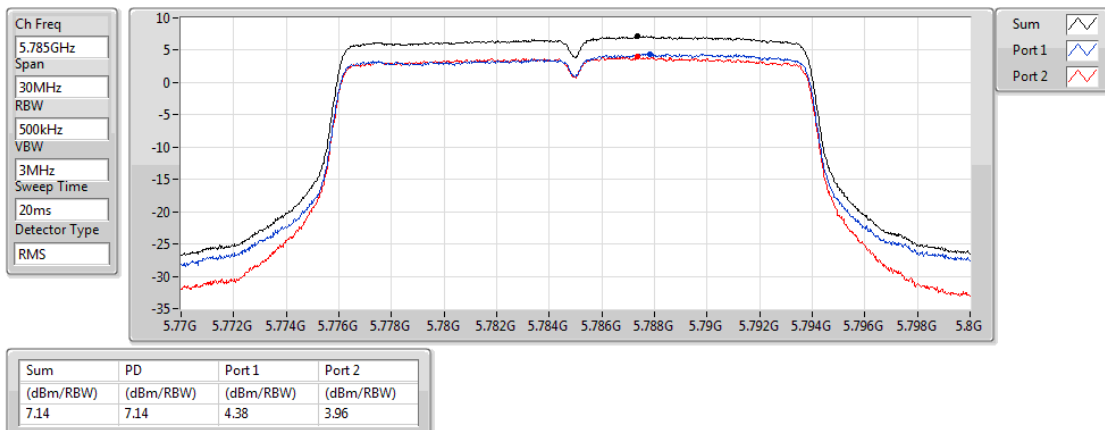
5745MHz



802.11ac VHT20_Nss1,(MCS0)_2TX

PSD

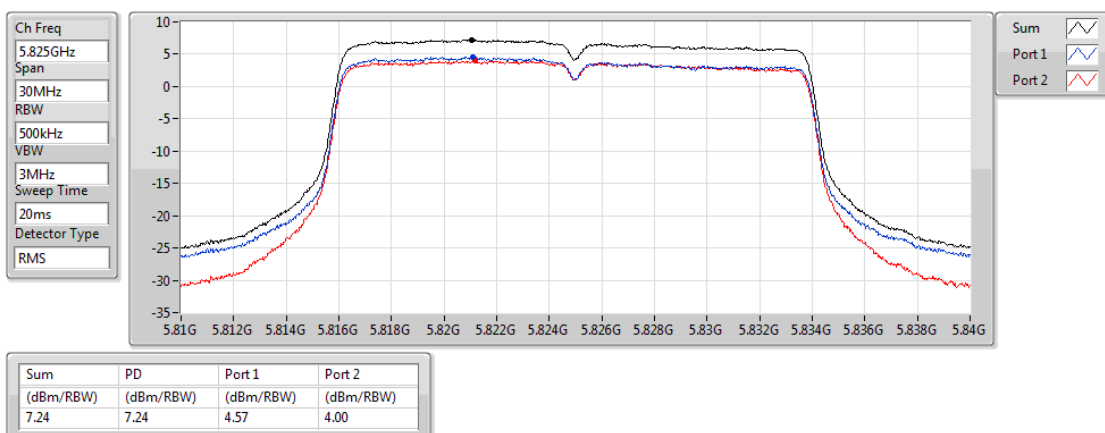
5785MHz



802.11ac VHT20_Nss1,(MCS0)_2TX

PSD

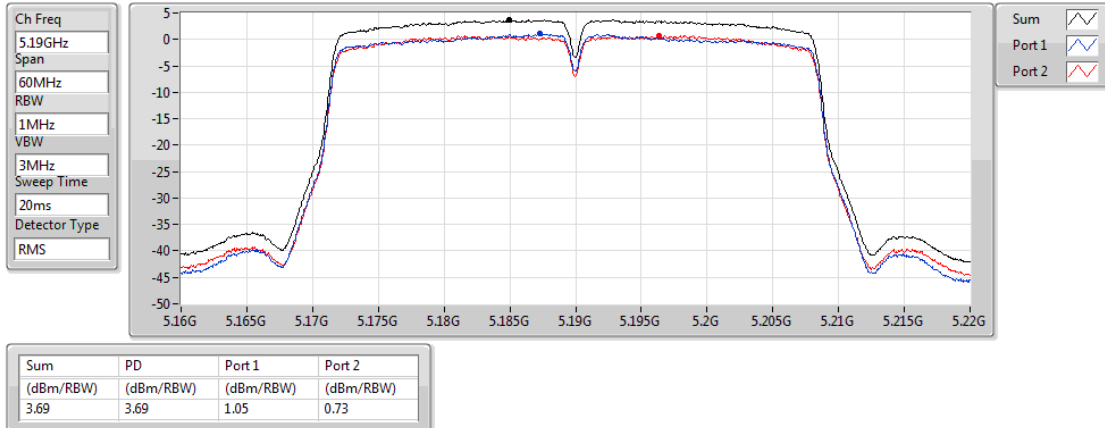
5825MHz



802.11ac VHT40_Nss1,(MCS0)_2TX

PSD

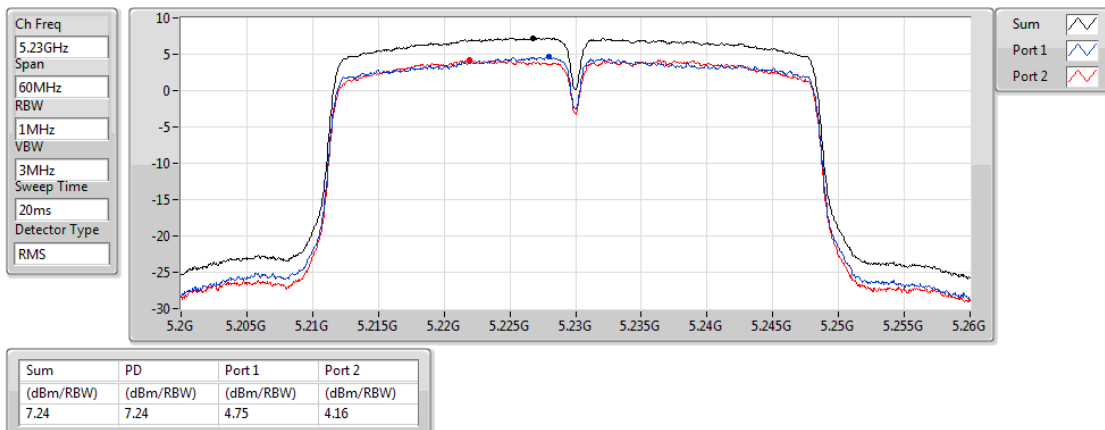
5190MHz



802.11ac VHT40_Nss1,(MCS0)_2TX

PSD

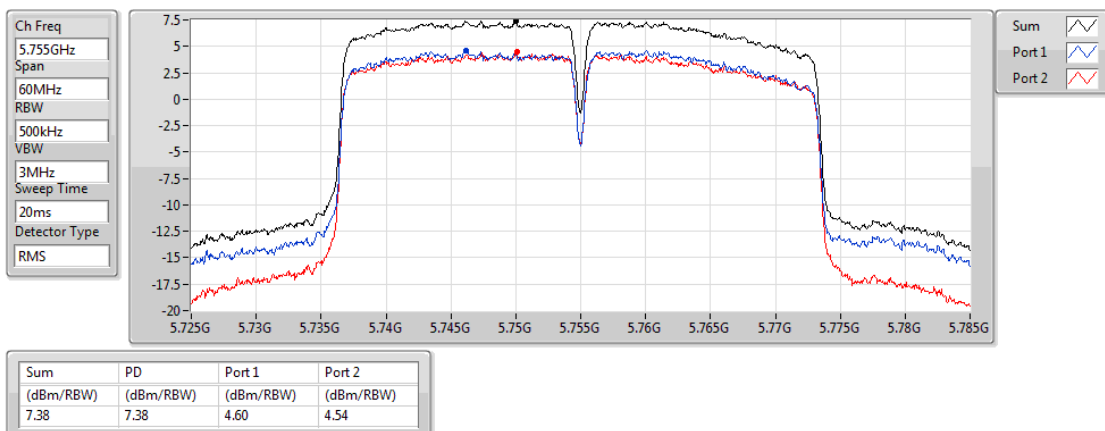
5230MHz



802.11ac VHT40_Nss1,(MCS0)_2TX

PSD

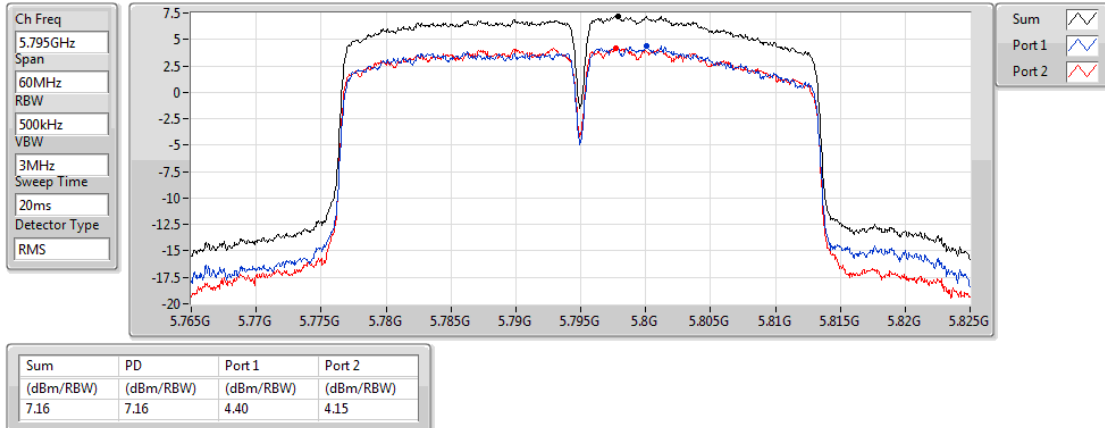
5755MHz



802.11ac VHT40_Nss1,(MCS0)_2TX

PSD

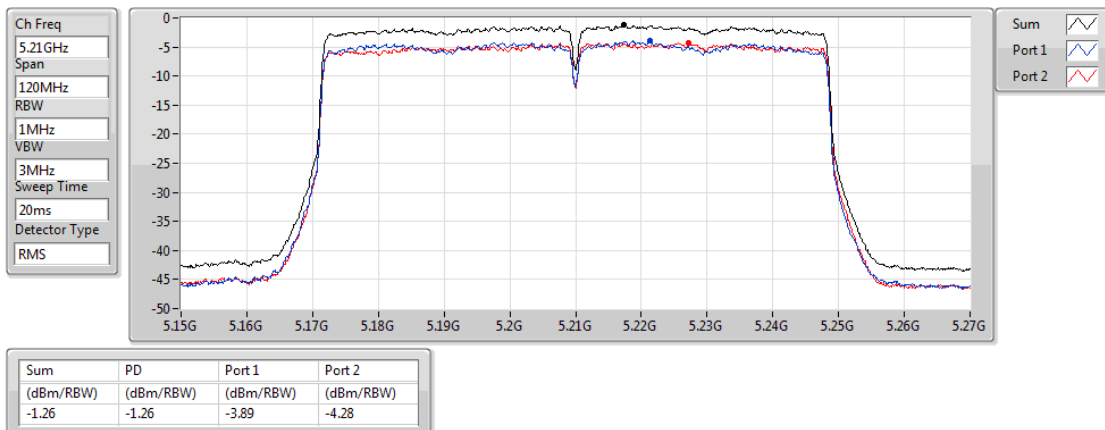
5795MHz



802.11ac VHT80_Nss1,(MCS0)_2TX

PSD

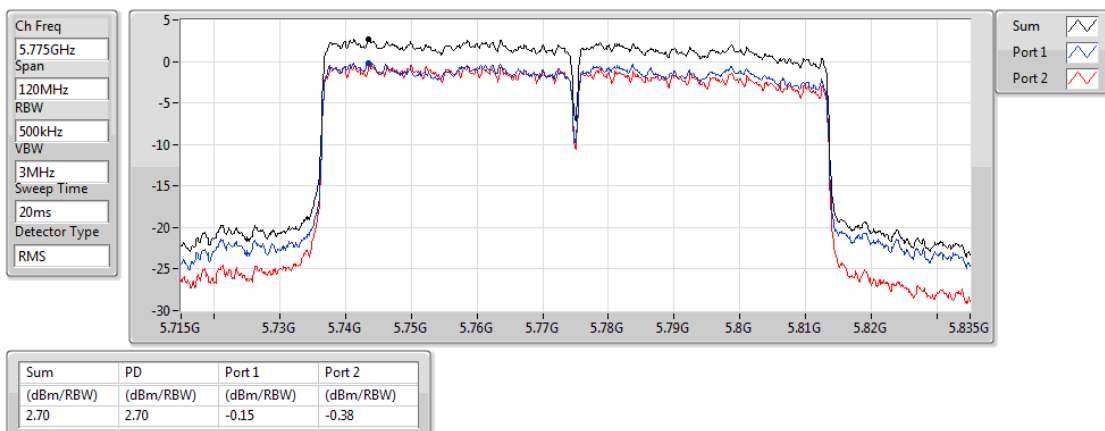
5210MHz



802.11ac VHT80_Nss1,(MCS0)_2TX

PSD

5775MHz



For beamforming mode:

For Indoor-5G Band 1:

Summary

Mode	PD (dBm/RBW)
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	8.25
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	7.00
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-5.04

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

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	8.20	6.41	5.82	8.25	14.80
5200MHz	Pass	8.20	5.18	4.64	7.80	14.80
5240MHz	Pass	8.20	4.62	4.65	7.55	14.80
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	8.20	0.47	-0.18	2.98	14.80
5230MHz	Pass	8.20	4.84	3.94	7.00	14.80
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	8.20	-7.88	-7.55	-5.04	14.80

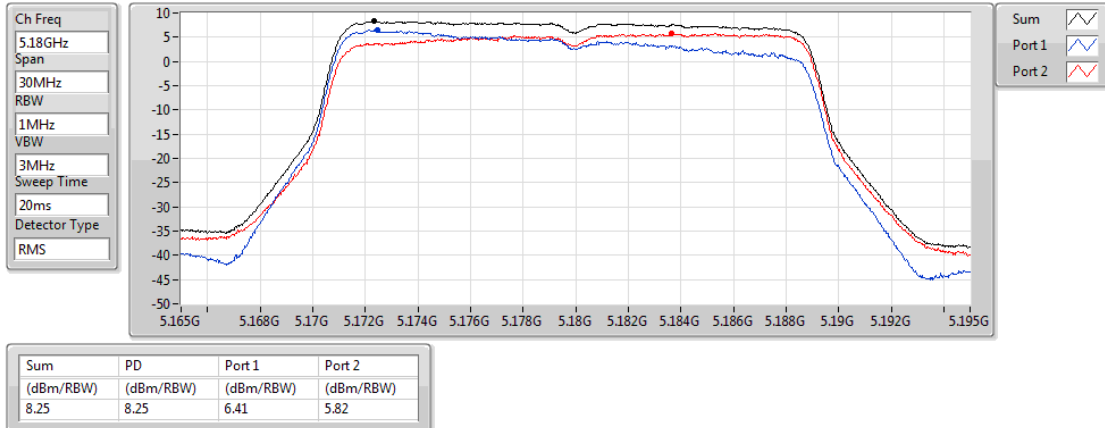
DG = Directional Gain; **RBW** = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

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

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

PSD

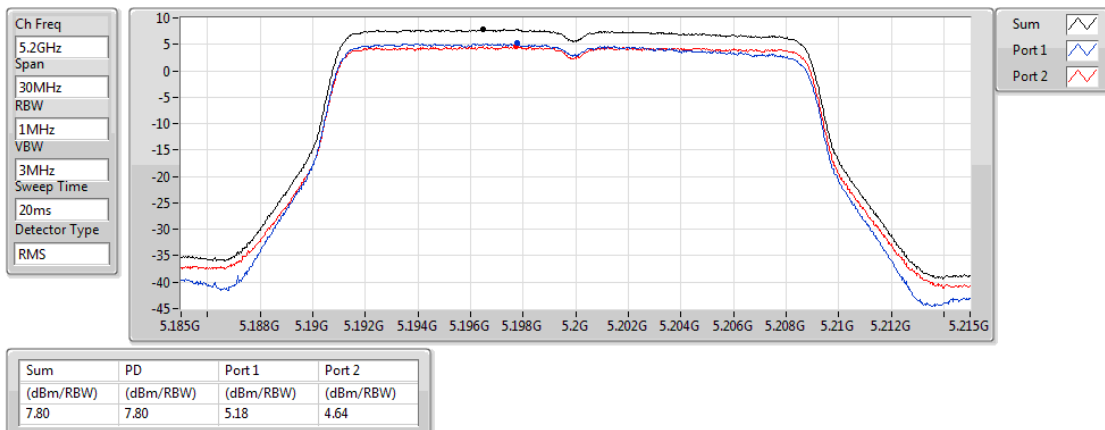
5180MHz



802.11ac VHT20-BF_Nss1,(MCS0)_2TX

PSD

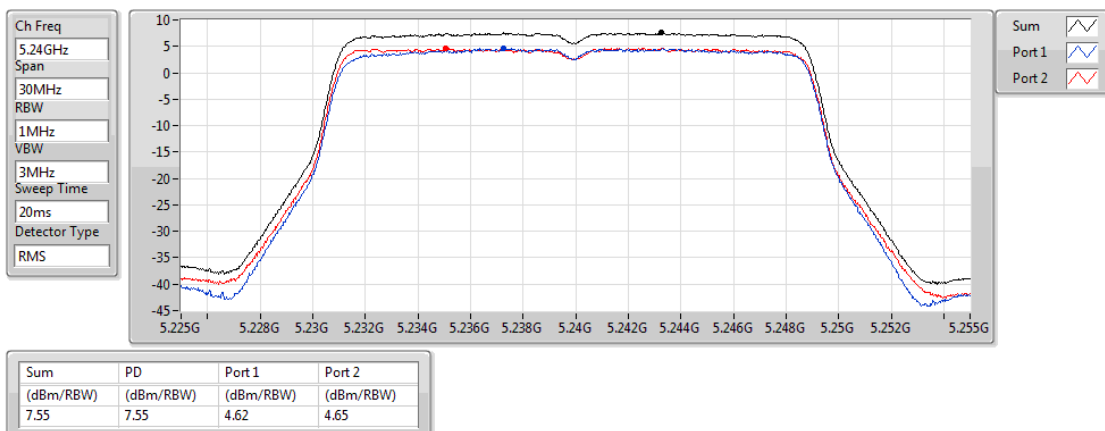
5200MHz



802.11ac VHT20-BF_Nss1,(MCS0)_2TX

PSD

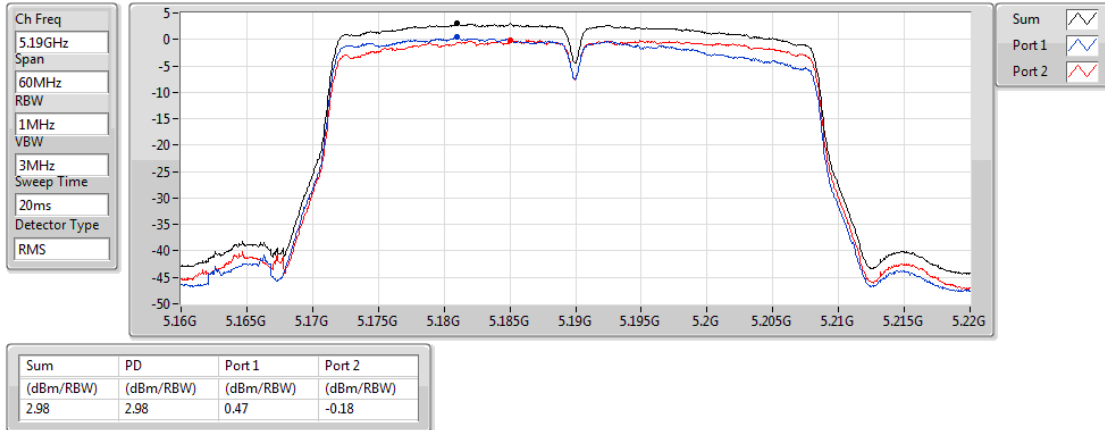
5240MHz



802.11ac VHT40-BF_Nss1,(MCS0)_2TX

PSD

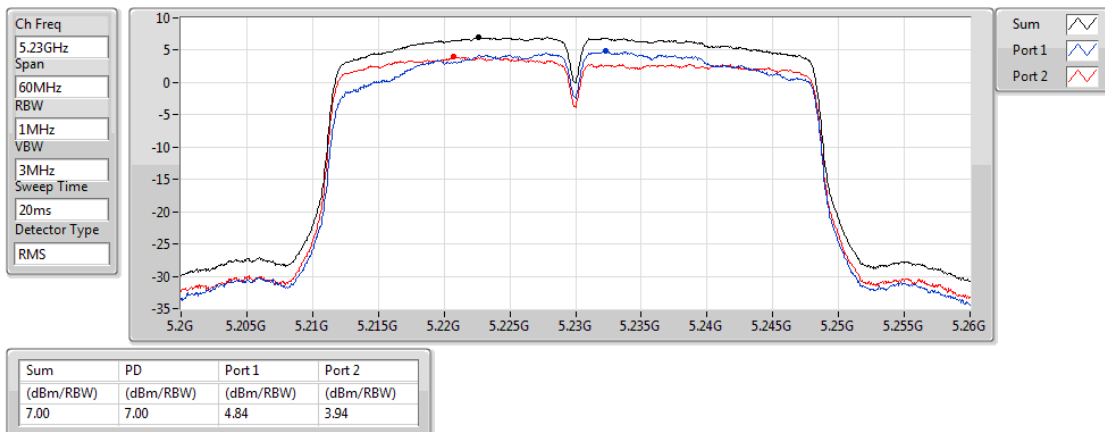
5190MHz



802.11ac VHT40-BF_Nss1,(MCS0)_2TX

PSD

5230MHz



802.11ac VHT80-BF_Nss1,(MCS0)_2TX

PSD

5210MHz



For Outdoor-5G Band 1 + Indoor/Outdoor-5G Band 4:
Summary

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
5.15-5.25GHz	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	6.34	14.54
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	3.89	12.09
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-5.04	3.16
5.725-5.85GHz	-	-
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	5.47	13.04
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	3.91	11.48
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	0.09	7.66

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)
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	8.20	3.33	3.57	6.31	14.80
5200MHz	Pass	8.20	3.50	3.32	6.34	14.80
5240MHz	Pass	8.20	3.22	2.96	6.05	14.80
5745MHz	Pass	7.57	1.96	3.24	5.47	28.43
5785MHz	Pass	7.57	2.38	2.74	5.31	28.43
5825MHz	Pass	7.57	2.08	1.97	4.87	28.43
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	8.20	-1.45	-1.27	1.53	14.80
5230MHz	Pass	8.20	1.12	1.09	3.89	14.80
5755MHz	Pass	7.57	0.92	1.11	3.89	28.43
5795MHz	Pass	7.57	1.18	1.43	3.91	28.43
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	8.20	-7.88	-7.55	-5.04	14.80
5775MHz	Pass	7.57	-2.80	-2.42	0.09	28.43

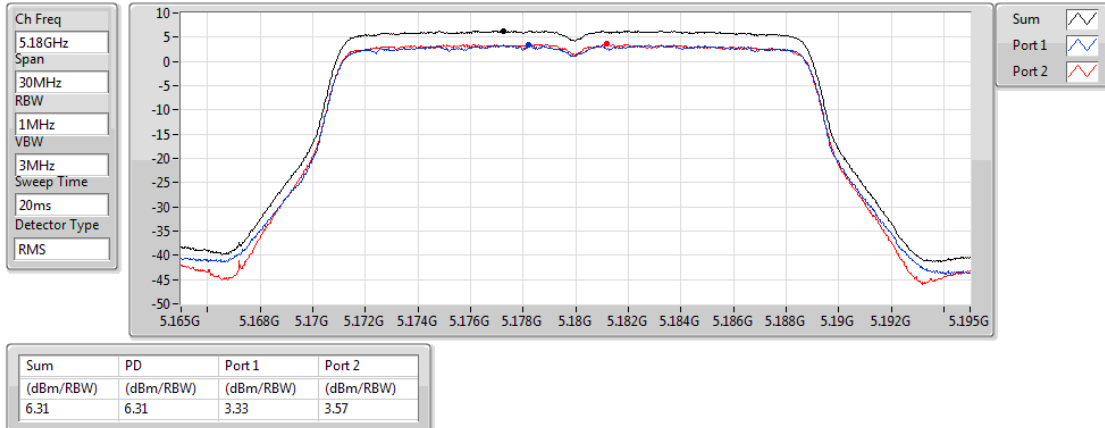
DG = Directional Gain; **RBW** = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

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

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

PSD

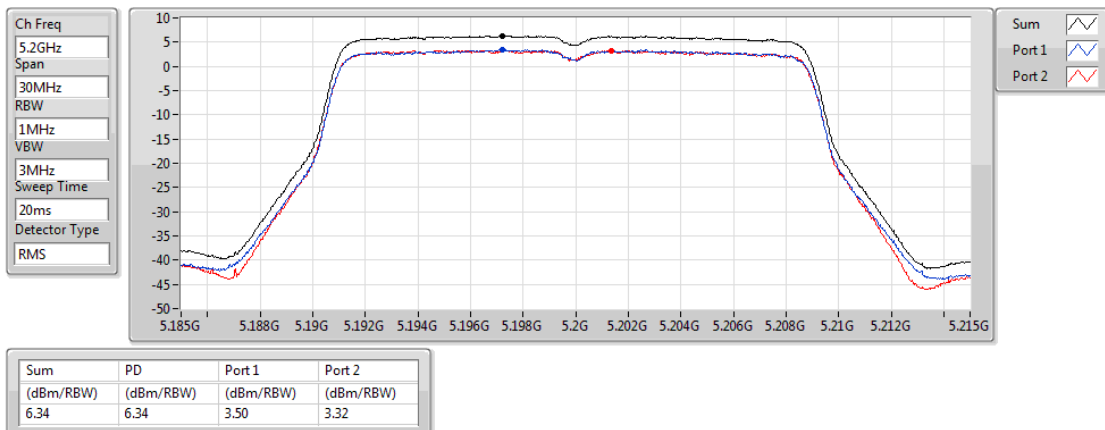
5180MHz



802.11ac VHT20-BF_Nss1,(MCS0)_2TX

PSD

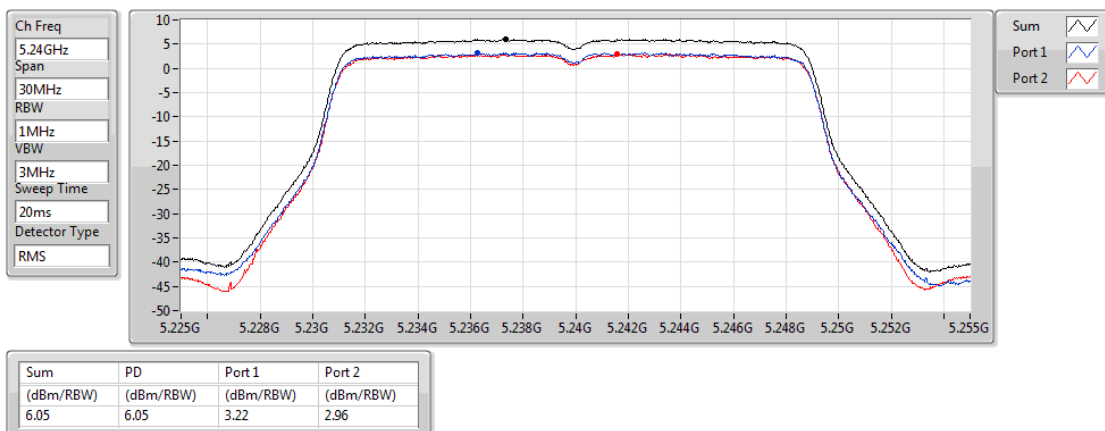
5200MHz



802.11ac VHT20-BF_Nss1,(MCS0)_2TX

PSD

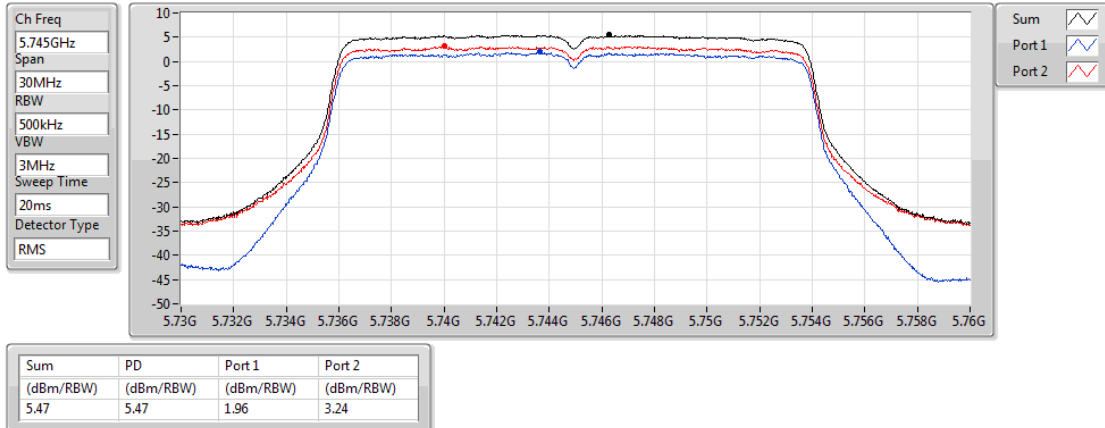
5240MHz



802.11ac VHT20-BF_Nss1,(MCS0)_2TX

PSD

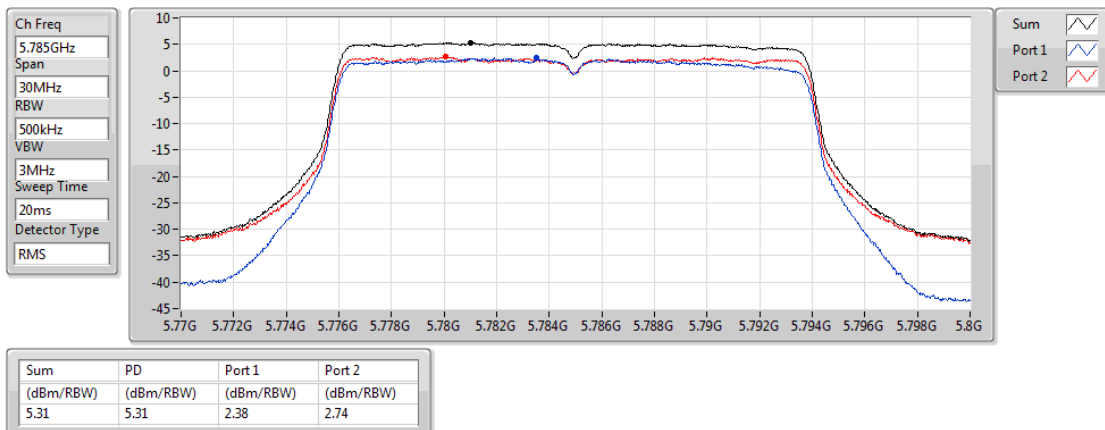
5745MHz



802.11ac VHT20-BF_Nss1,(MCS0)_2TX

PSD

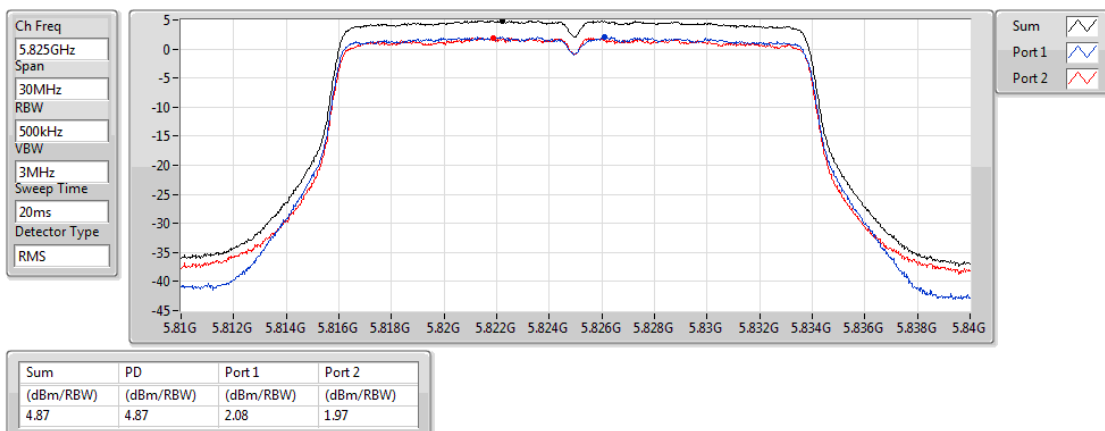
5785MHz



802.11ac VHT20-BF_Nss1,(MCS0)_2TX

PSD

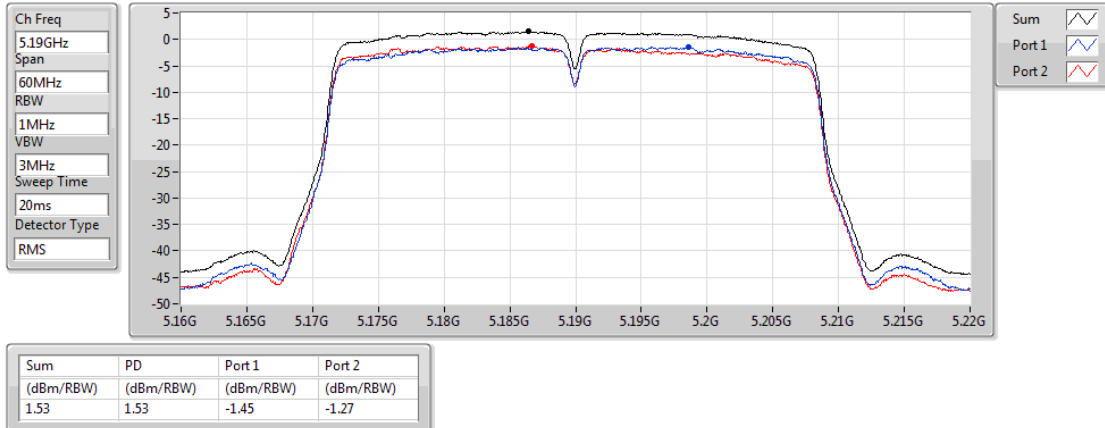
5825MHz



802.11ac VHT40-BF_Nss1,(MCS0)_2TX

PSD

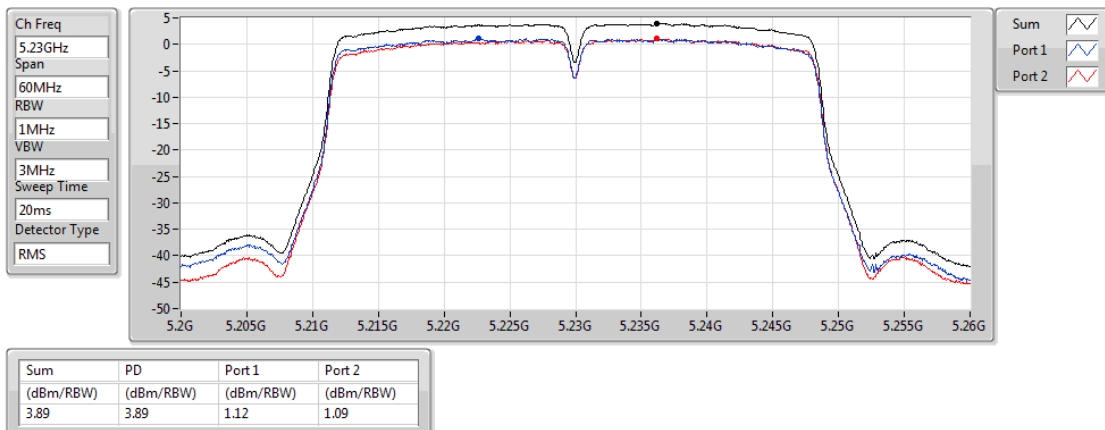
5190MHz



802.11ac VHT40-BF_Nss1,(MCS0)_2TX

PSD

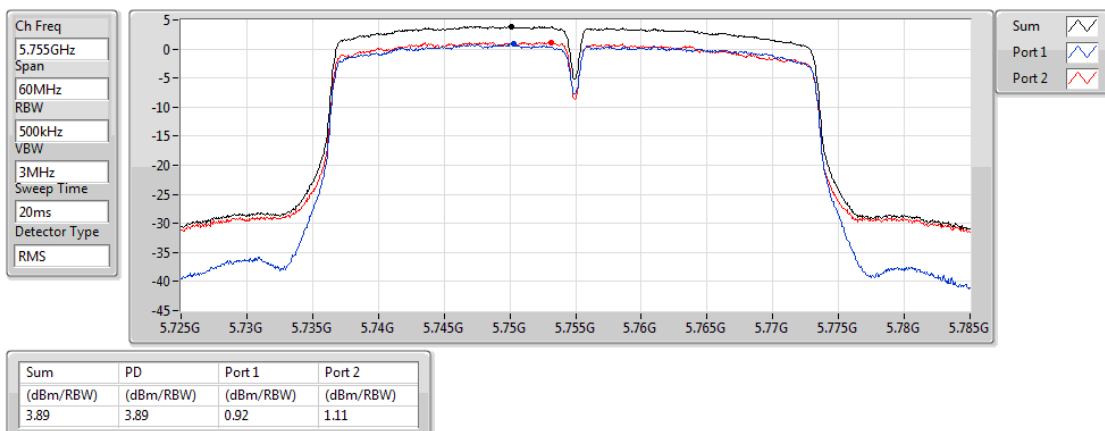
5230MHz



802.11ac VHT40-BF_Nss1,(MCS0)_2TX

PSD

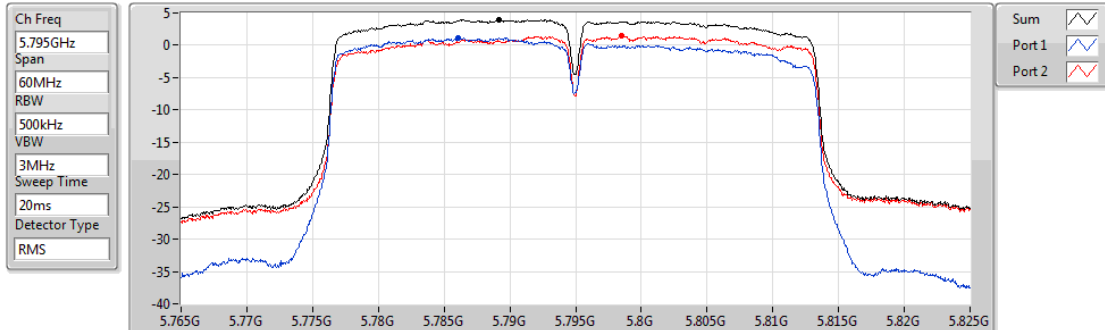
5755MHz



802.11ac VHT40-BF_Nss1,(MCS0)_2TX

PSD

5795MHz

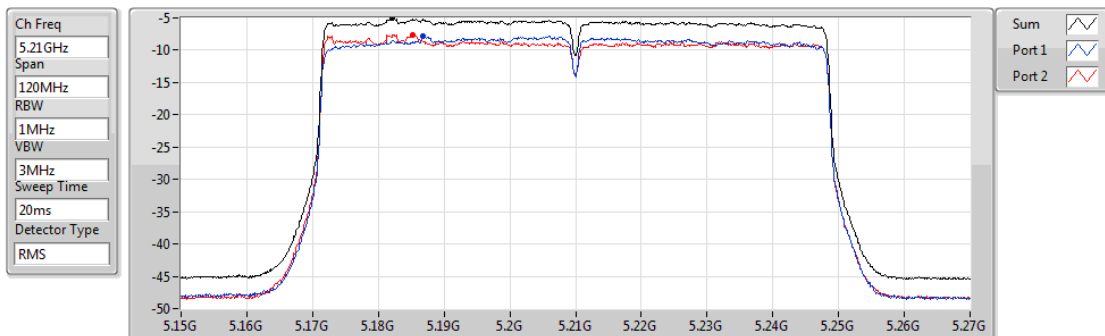


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.91	3.91	1.18	1.43

802.11ac VHT80-BF_Nss1,(MCS0)_2TX

PSD

5210MHz

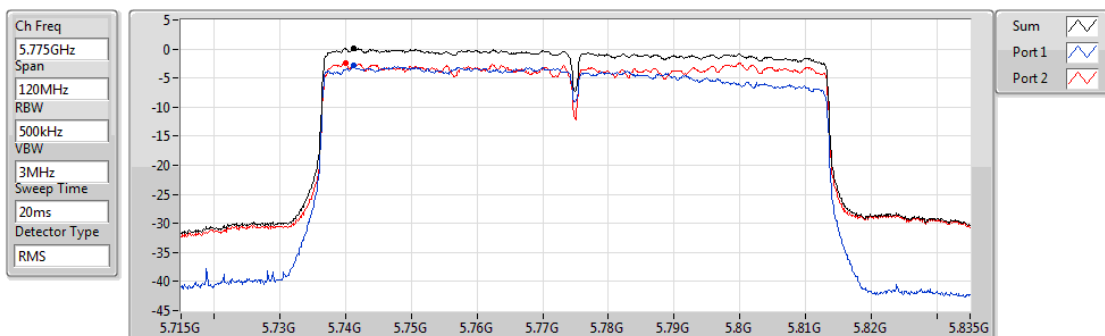


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-5.04	-5.04	-7.88	-7.55

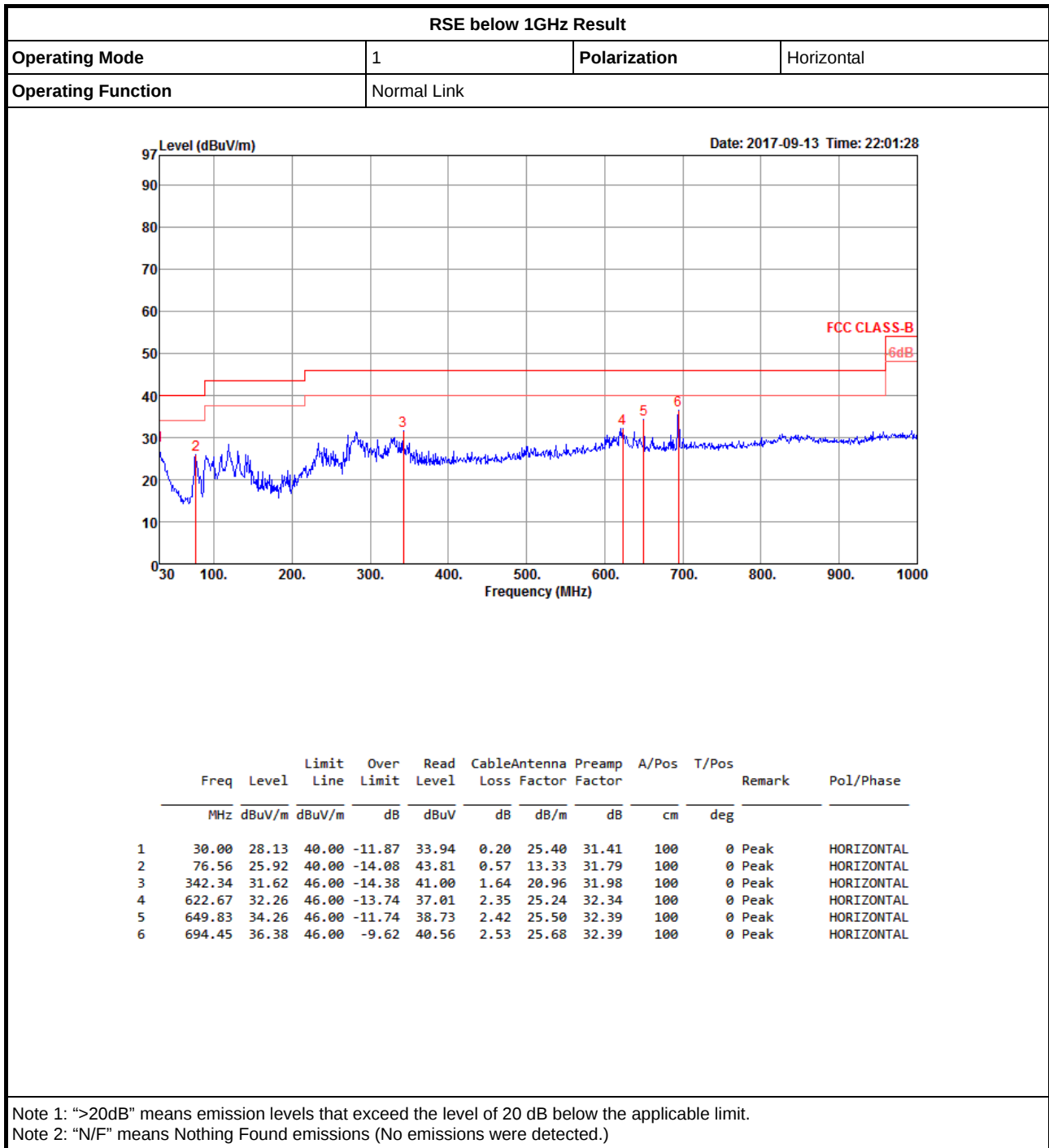
802.11ac VHT80-BF_Nss1,(MCS0)_2TX

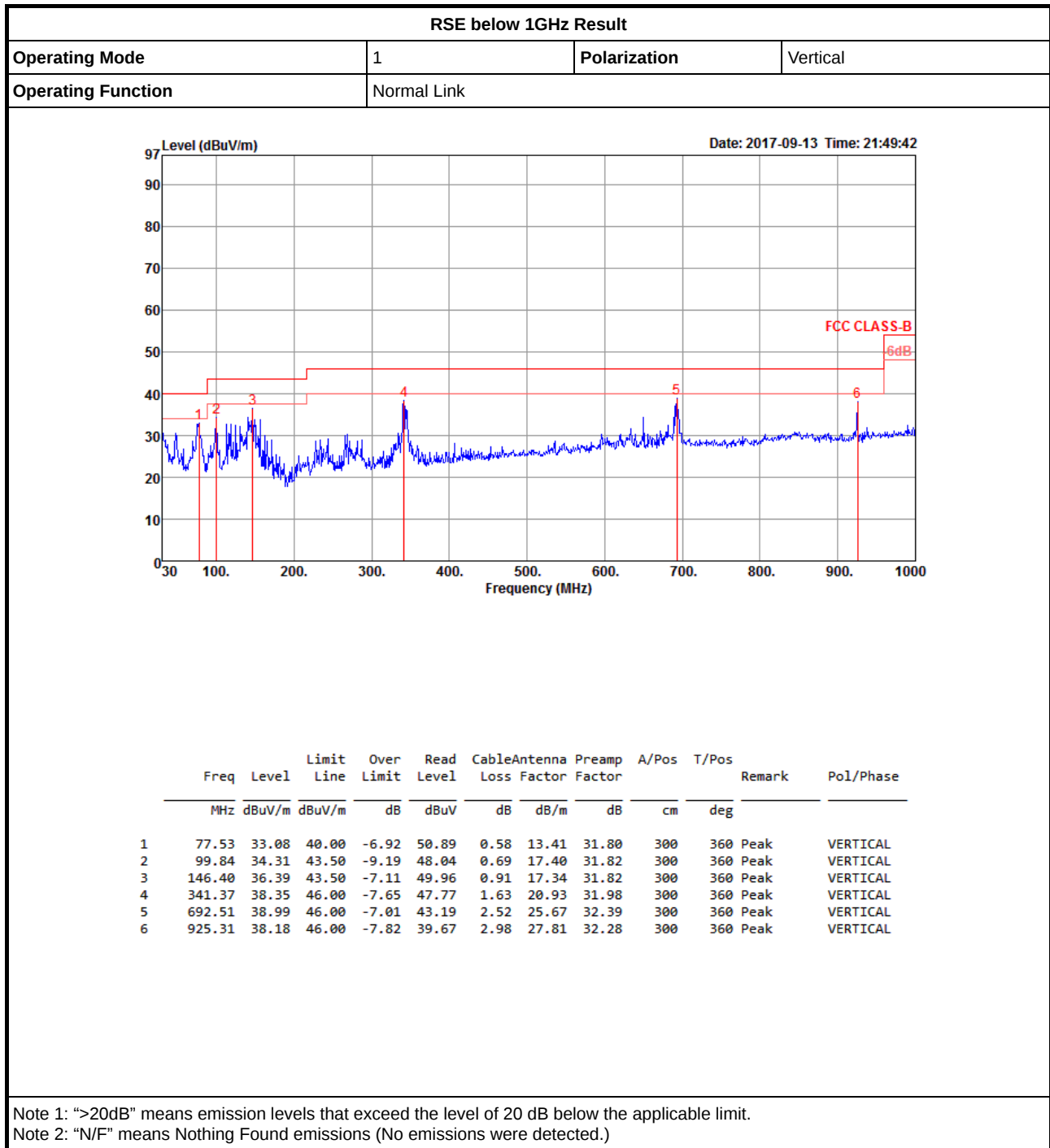
PSD

5775MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.09	0.09	-2.80	-2.42



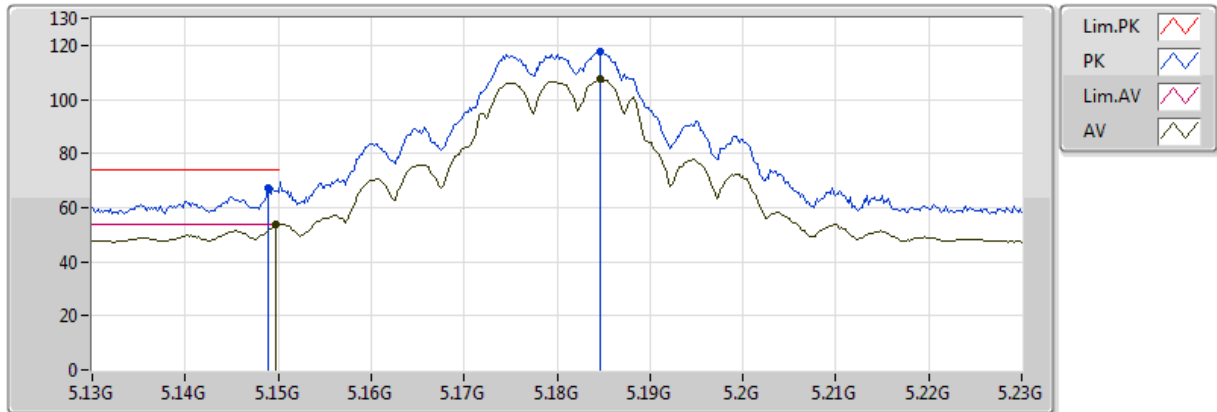


**Summary**

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
5.725-5.85GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11a_Nss1,(6Mbps)_2TX	Pass	PK	17.23008G	68.17	68.20	-0.03	23.05	3	Horizontal	190	1.50	-

802.11a_Nss1,(6Mbps)_2TX

5180MHz_TX

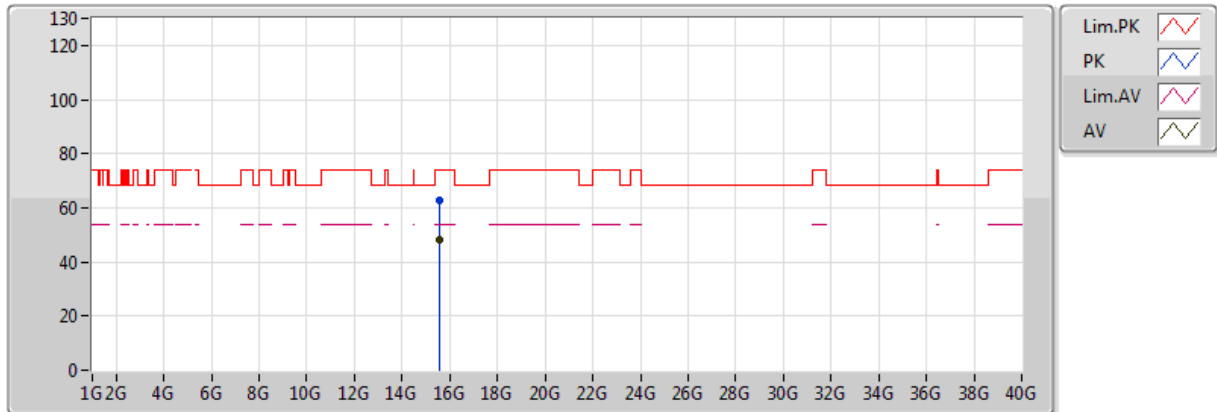


20170919
EUT Y_2TX ANT Dipole
Setting 21.5
02-J-6-10
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	5.1498G	53.76	54.00	-0.24	9.76	3	Vertical	296	1.49					
AV	5.1846G	107.33	Inf	-Inf	9.84	3	Vertical	296	1.49					
PK	5.149G	67.33	74.00	-6.67	9.76	3	Vertical	296	1.49					
PK	5.1846G	117.68	Inf	-Inf	9.84	3	Vertical	296	1.49					

802.11a_Nss1,(6Mbps)_2TX

5180MHz_TX

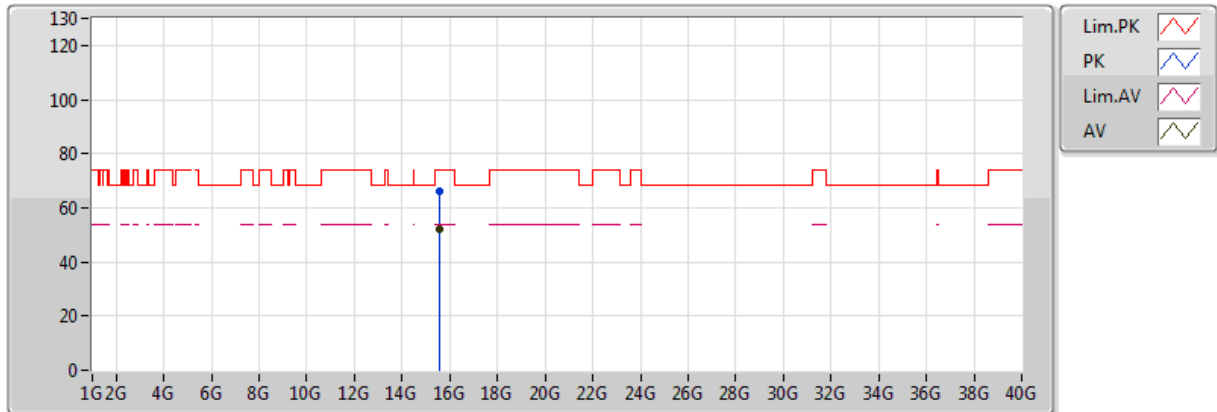


20170919
EUT Y_2TX ANT Dipole
Setting 21.5
02-J-6
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height					
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)					
AV	15.54294G	48.41	54.00	-5.59	18.69	3	Vertical	66	2.78					
PK	15.53892G	62.61	74.00	-11.39	18.70	3	Vertical	66	2.78					

802.11a_Nss1,(6Mbps)_2TX

5180MHz_TX

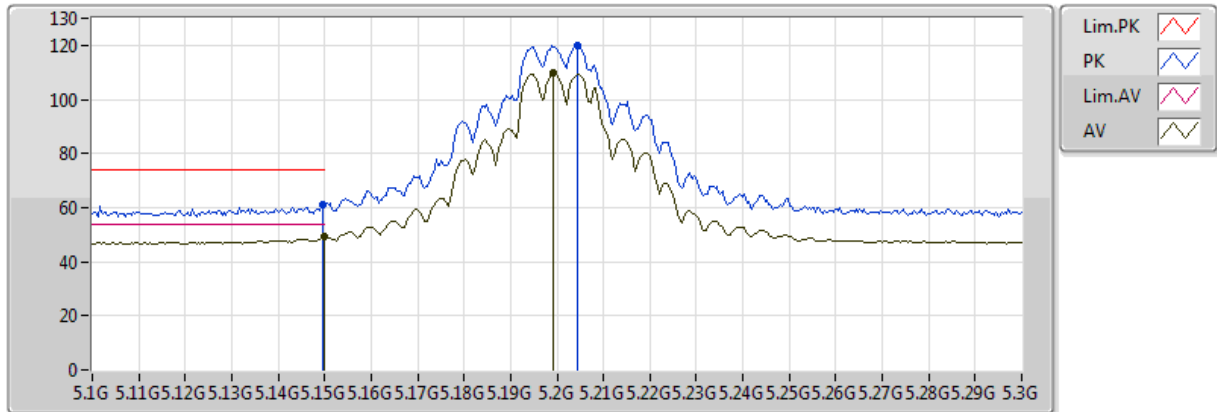


20170919
EUT Y_2TX ANT Dipole
Setting 21.5
02-J-6
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	15.54066G	52.17	54.00	-1.83	18.70	3	Horizontal	226	2.76					
PK	15.5502G	66.06	74.00	-7.94	18.68	3	Horizontal	226	2.76					

802.11a_Nss1,(6Mbps)_2TX

5200MHz_TX

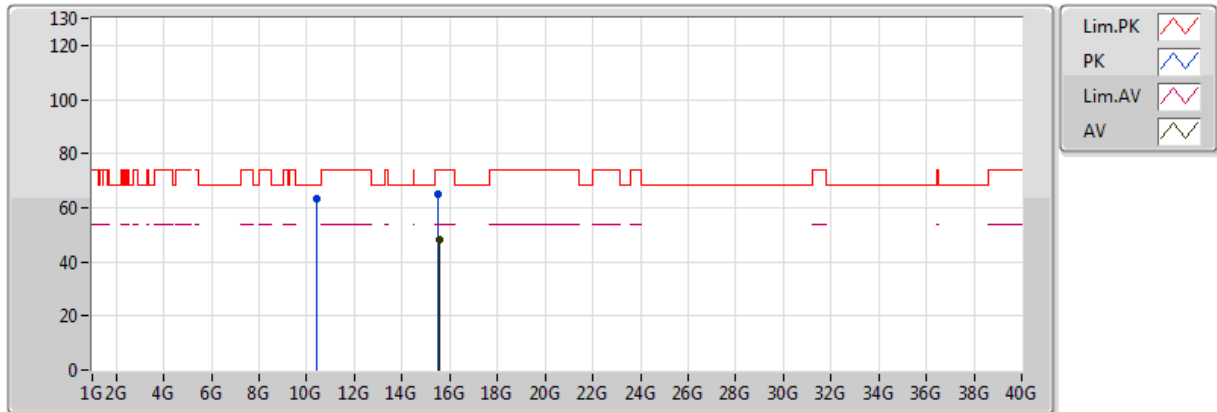


20170919
EUT Y_2TX ANT Dipole
Setting 24
02-J-6-10
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	5.149995G	49.09	54.00	-4.91	9.76	3	Vertical	147	1.49					
AV	5.1992G	109.64	Inf	-Inf	9.88	3	Vertical	147	1.49					
PK	5.1496G	60.97	74.00	-13.03	9.76	3	Vertical	147	1.49					
PK	5.2044G	119.92	Inf	-Inf	9.89	3	Vertical	147	1.49					

802.11a_Nss1,(6Mbps)_2TX

5200MHz_TX

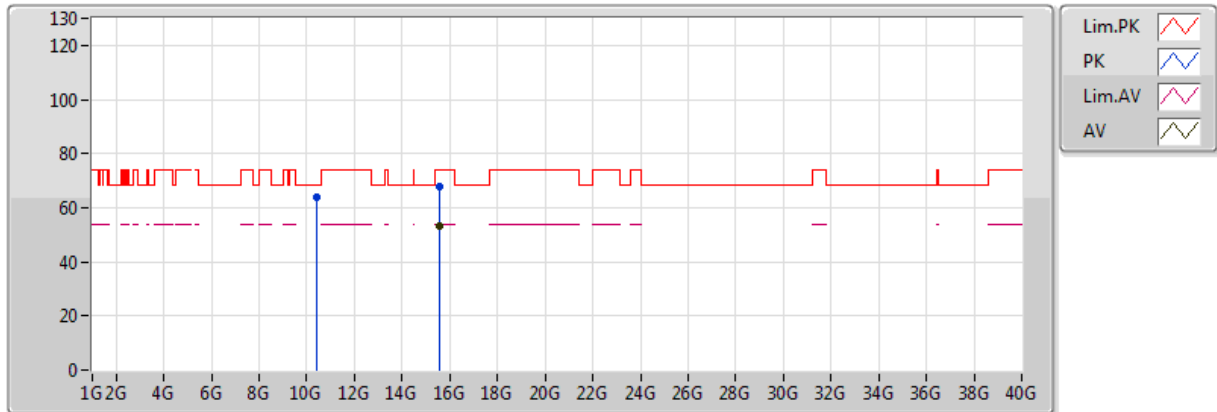


20170919
EUT Y_2TX ANT Dipole
Setting 24
02-J-6
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	15.59802G	48.36	54.00	-5.64	18.57	3	Vertical	217	2.76					
PK	10.3979G	63.20	68.20	-5.00	15.99	3	Vertical	359	1.50					
PK	15.53604G	64.95	74.00	-9.05	18.71	3	Vertical	217	2.76					

802.11a_Nss1,(6Mbps)_2TX

5200MHz_TX

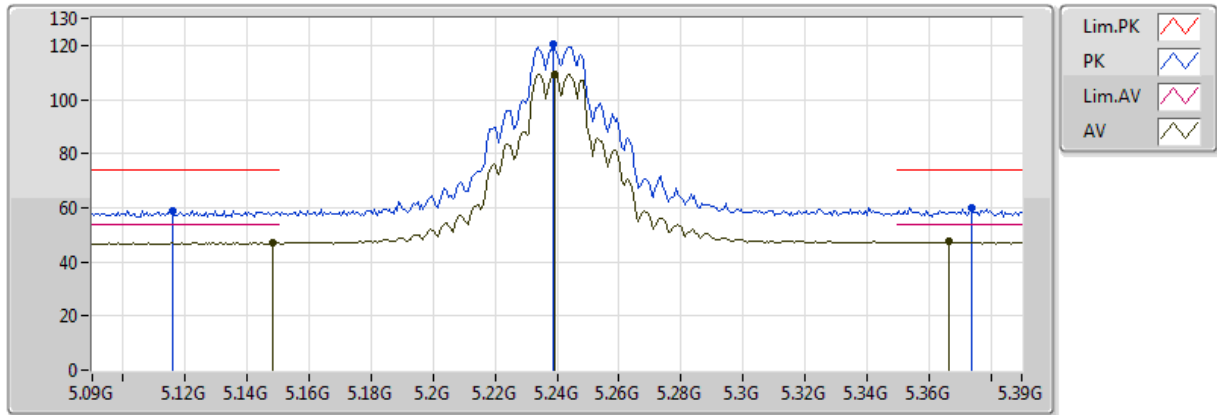


20170919
EUT Y_2TX ANT Dipole
Setting 24
02-J-6
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	15.60012G	53.30	54.00	-0.70	18.57	3	Horizontal	230	2.75					
PK	10.3979G	63.81	68.20	-4.39	15.99	3	Horizontal	59	1.45					
PK	15.59538G	67.90	74.00	-6.10	18.58	3	Horizontal	230	2.75					

802.11a_Nss1,(6Mbps)_2TX

5240MHz_TX

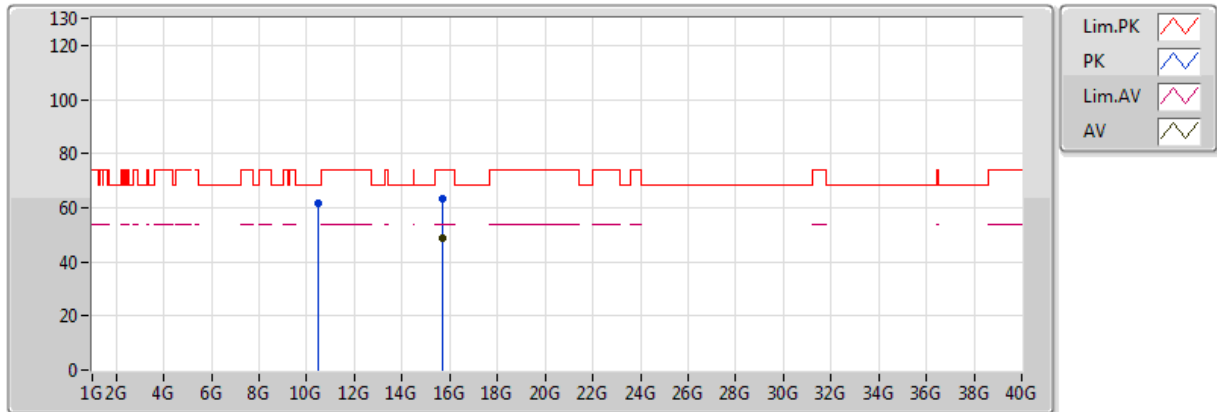


20170919
EUT Y_2TX ANT Dipole
Setting 24
02-J-6-10
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	5.1482G	46.95	54.00	-7.05	9.76	3	Vertical	65	2.02					
AV	5.2394G	109.32	Inf	-Inf	9.94	3	Vertical	65	2.02					
AV	5.3666G	47.42	54.00	-6.58	10.11	3	Vertical	65	2.02					
PK	5.1158G	59.10	74.00	-14.90	9.69	3	Vertical	65	2.02					
PK	5.2388G	120.52	Inf	-Inf	9.93	3	Vertical	65	2.02					
PK	5.3738G	59.87	74.00	-14.13	10.12	3	Vertical	65	2.02					

802.11a_Nss1,(6Mbps)_2TX

5240MHz_TX

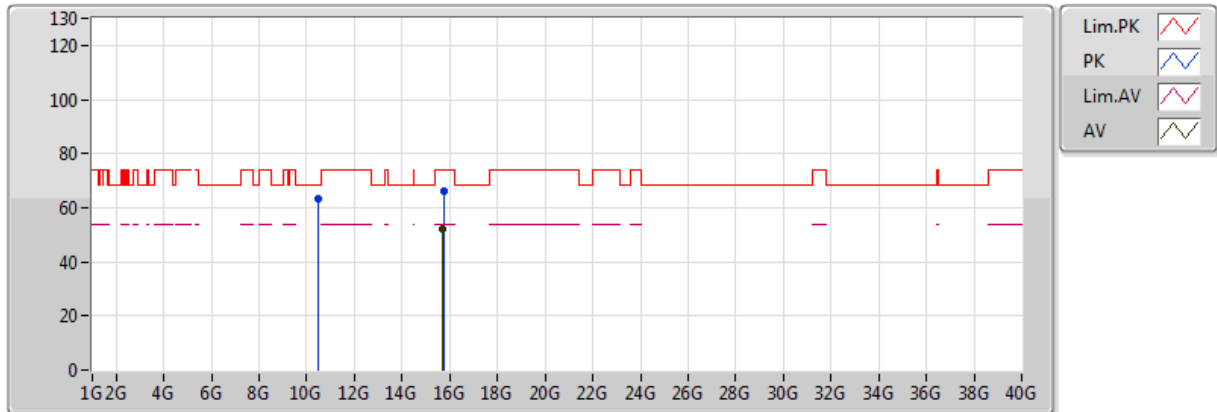


20170919
EUT Y_2TX ANT Dipole
Setting 24
02-J-6
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	15.72396G	48.49	54.00	-5.51	18.30	3	Vertical	78	2.76					
PK	10.47898G	61.68	68.20	-6.52	15.99	3	Vertical	229	1.82					
PK	15.72342G	63.22	74.00	-10.78	18.30	3	Vertical	78	2.76					

802.11a_Nss1,(6Mbps)_2TX

5240MHz_TX

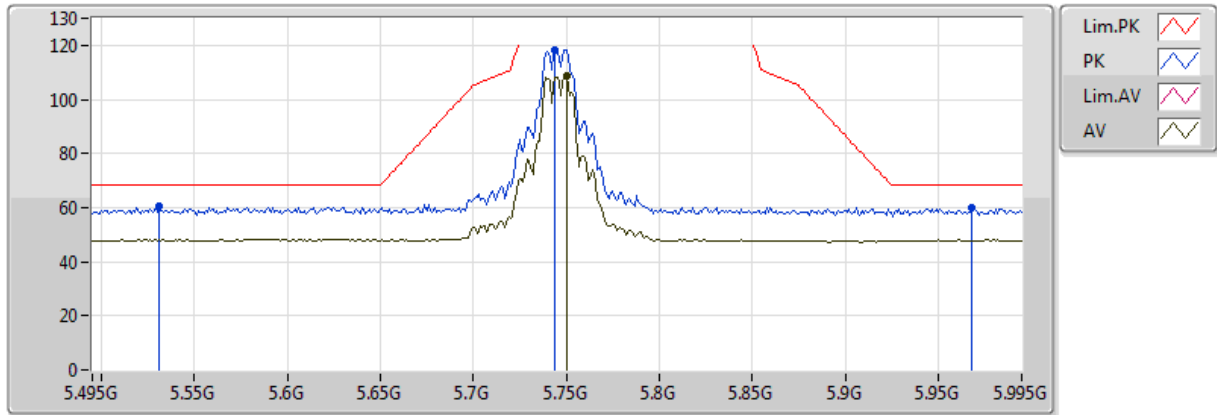


20170919
EUT Y_2TX ANT Dipole
Setting 24
02-J-6
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	15.72528G	52.22	54.00	-1.78	18.30	3	Horizontal	231	2.72					
PK	10.47298G	63.18	68.20	-5.02	15.99	3	Horizontal	62	1.71					
PK	15.73026G	66.25	74.00	-7.75	18.29	3	Horizontal	231	2.72					

802.11a_Nss1,(6Mbps)_2TX

5745MHz_TX

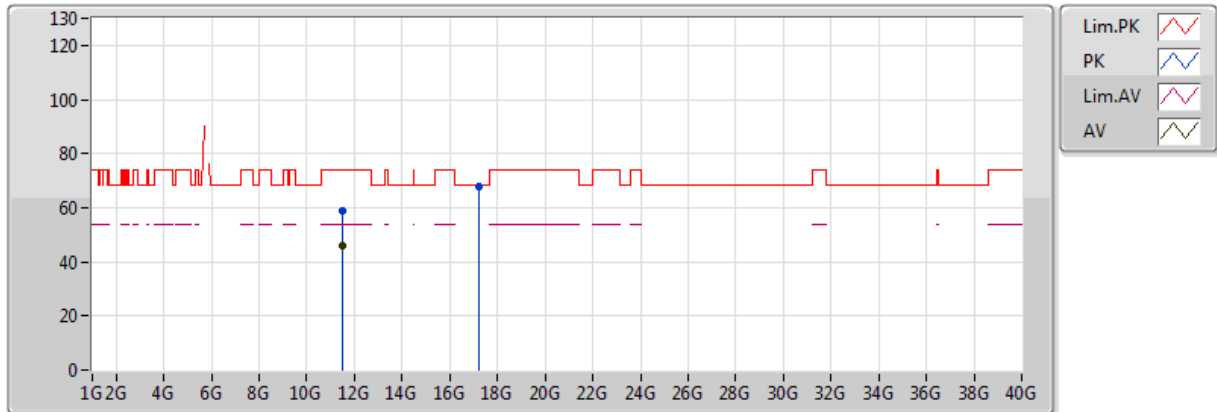


20170919
EUT Y_2TX ANT Dipole
Setting 21.5
02-J-6-10
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	5.75G	108.51	Inf	-Inf	10.65	3	Vertical	73	2.39					
PK	5.531G	60.72	68.20	-7.48	10.54	3	Vertical	73	2.39					
PK	5.744G	118.23	Inf	-Inf	10.65	3	Vertical	73	2.39					
PK	5.968G	60.23	68.20	-7.97	10.87	3	Vertical	73	2.39					

802.11a_Nss1,(6Mbps)_2TX

5745MHz_TX

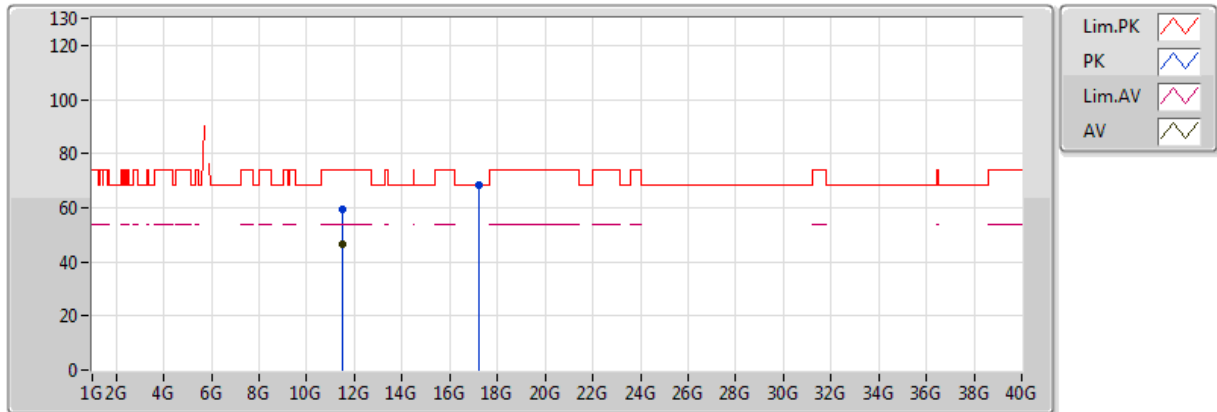


20170919
EUT Y_2TX ANT Dipole
Setting 21.5
02-J-6
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	11.48766G	45.92	54.00	-8.08	16.60	3	Vertical	203	2.54					
PK	11.48712G	58.96	74.00	-15.04	16.60	3	Vertical	203	2.54					
PK	17.2452G	67.56	68.20	-0.64	23.14	3	Vertical	44	2.51					

802.11a_Nss1,(6Mbps)_2TX

5745MHz_TX

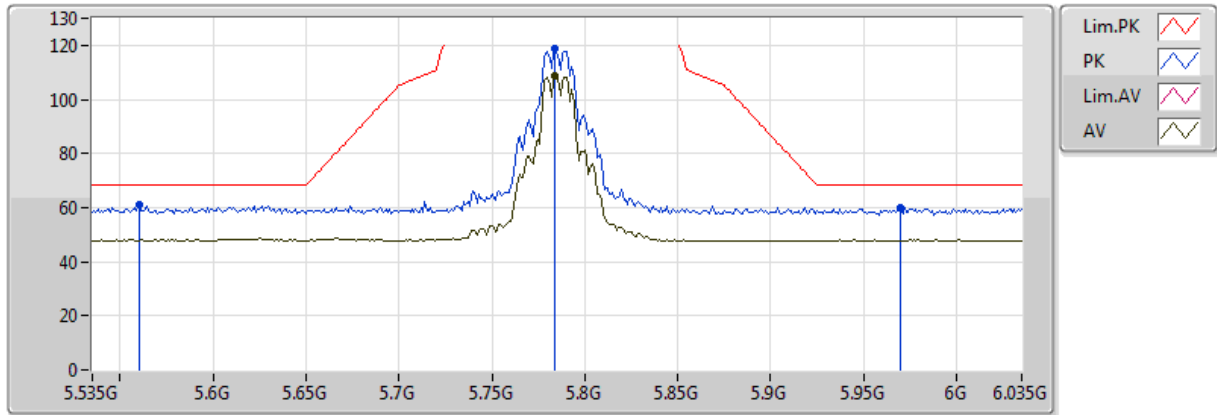


20170919
EUT Y_2TX ANT Dipole
Setting 21.5
02-J-6
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	11.49144G	46.44	54.00	-7.56	16.60	3	Horizontal	45	1.40					
PK	11.48676G	59.54	74.00	-14.46	16.60	3	Horizontal	45	1.40					
PK	17.23008G	68.17	68.20	-0.03	23.05	3	Horizontal	190	1.50					

802.11a_Nss1,(6Mbps)_2TX

5785MHz_TX

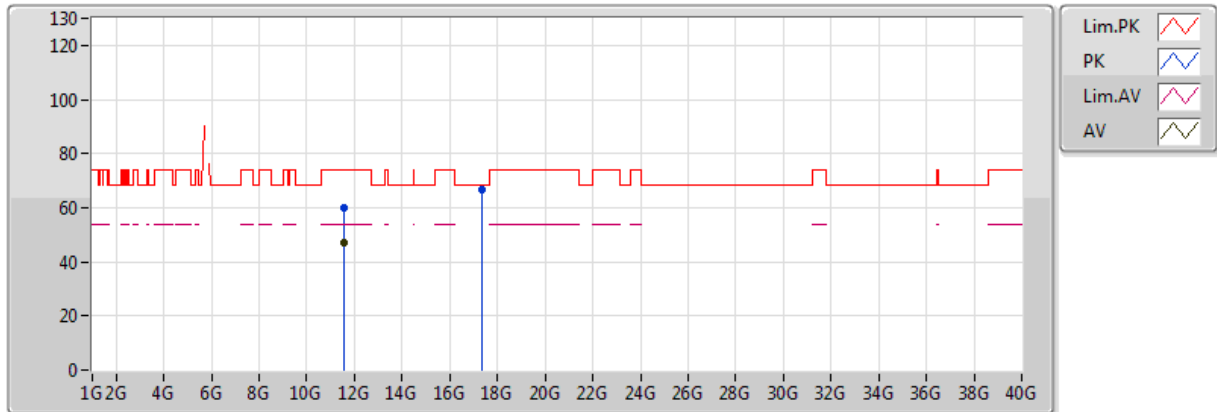


20170919
EUT Y_2TX ANT Dipole
Setting 21.5
02-J-6-10
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	5.784G	108.50	Inf	-Inf	10.65	3	Vertical	297	2.31					
PK	5.56G	60.98	68.20	-7.22	10.59	3	Vertical	297	2.31					
PK	5.784G	118.81	Inf	-Inf	10.65	3	Vertical	297	2.31					
PK	5.97G	59.94	68.20	-8.26	10.87	3	Vertical	297	2.31					

802.11a_Nss1,(6Mbps)_2TX

5785MHz_TX

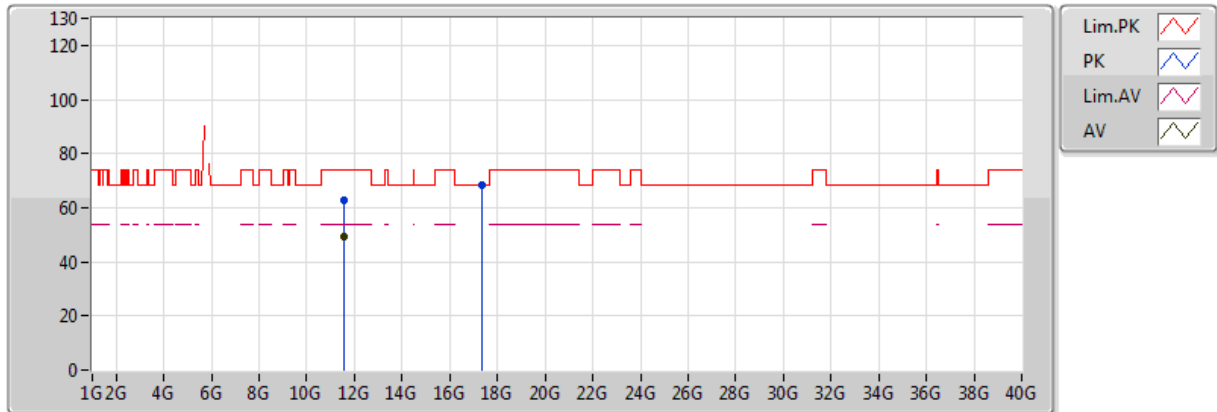


20170919
EUT Y_2TX ANT Dipole
Setting 21.5
02-J-6
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	11.57288G	46.83	54.00	-7.17	16.71	3	Vertical	345	1.98					
PK	11.57306G	59.73	74.00	-14.27	16.71	3	Vertical	345	1.98					
PK	17.3442G	66.47	68.20	-1.73	23.72	3	Vertical	336	2.69					

802.11a_Nss1,(6Mbps)_2TX

5785MHz_TX

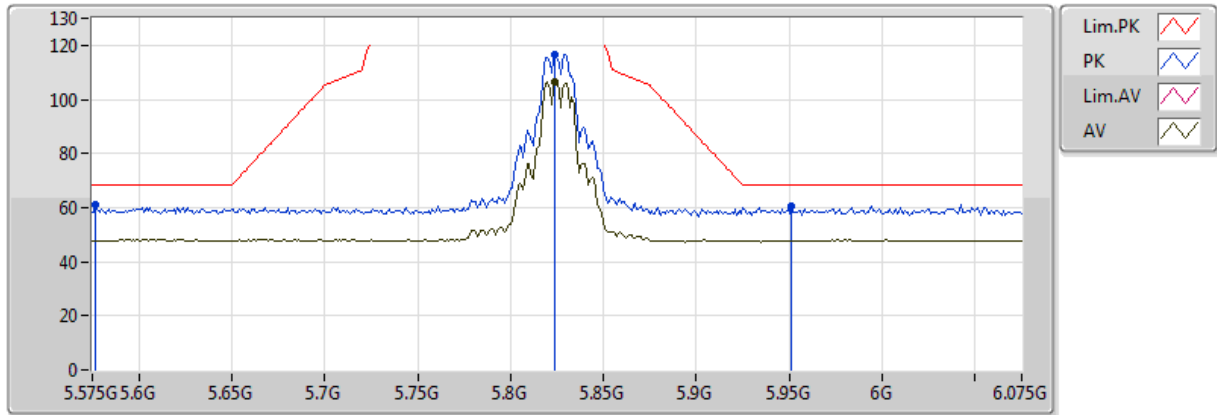


20170919
EUT Y_2TX ANT Dipole
Setting 21.5
02-J-6
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	11.56694G	49.37	54.00	-4.63	16.70	3	Horizontal	197	2.02					
PK	11.57642G	62.86	74.00	-11.14	16.71	3	Horizontal	197	2.02					
PK	17.34936G	68.16	68.20	-0.04	23.75	3	Horizontal	33	1.50					

802.11a_Nss1,(6Mbps)_2TX

5825MHz_TX

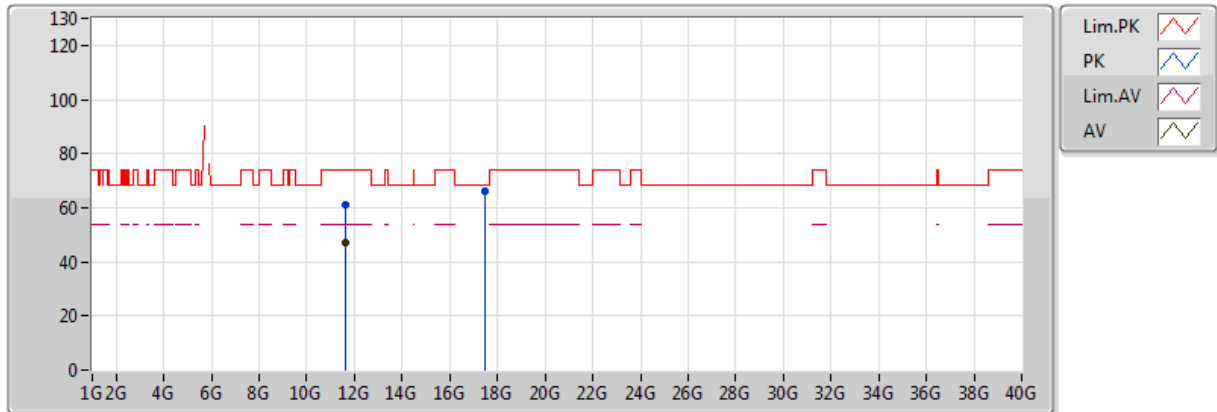


20170919
EUT Y_2TX ANT Dipole
Setting 20.5
02-J-6-10
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	5.824G	106.23	Inf	-Inf	10.68	3	Vertical	301	1.48					
PK	5.577G	61.06	68.20	-7.14	10.61	3	Vertical	301	1.48					
PK	5.824G	116.68	Inf	-Inf	10.68	3	Vertical	301	1.48					
PK	5.951G	60.51	68.20	-7.69	10.85	3	Vertical	301	1.48					

802.11a_Nss1,(6Mbps)_2TX

5825MHz_TX

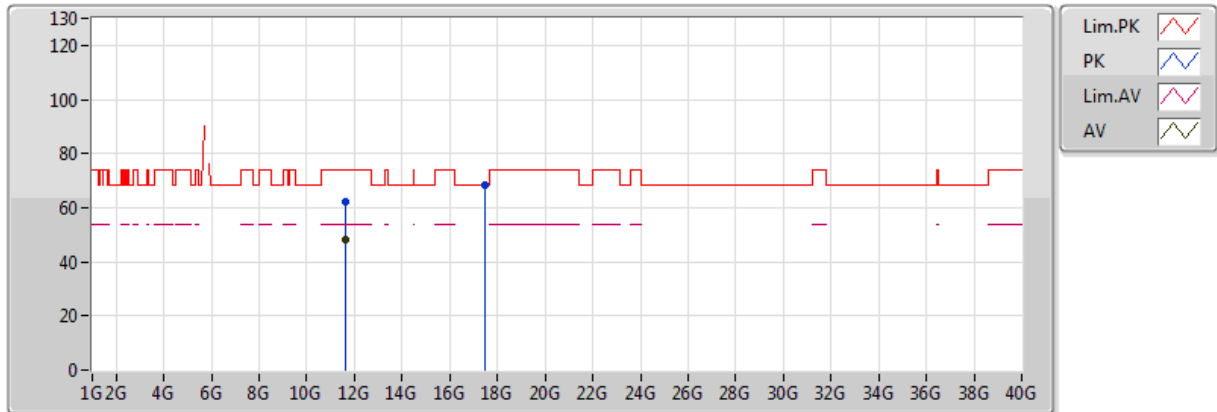


20170919
EUT Y_2TX ANT Dipole
Setting 20.5
02-J-6
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	11.6479G	47.30	54.00	-6.70	16.80	3	Vertical	190	2.48					
PK	11.64778G	60.82	74.00	-13.18	16.80	3	Vertical	190	2.48					
PK	17.47482G	66.26	68.20	-1.94	24.49	3	Vertical	27	2.69					

802.11a_Nss1,(6Mbps)_2TX

5825MHz_TX

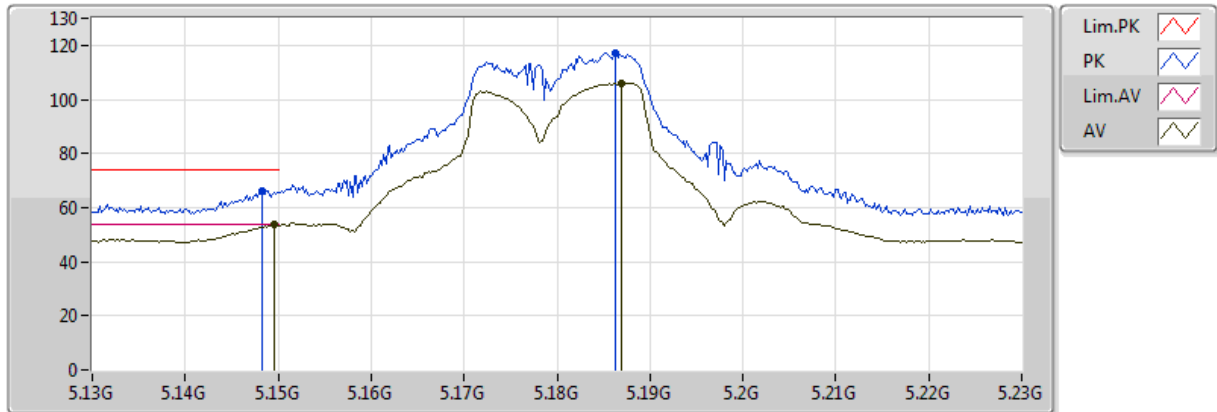


20170919
EUT Y_2TX ANT Dipole
Setting 20.5
02-J-6
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	11.65204G	48.21	54.00	-5.79	16.81	3	Horizontal	37	1.94					
PK	11.64268G	62.21	74.00	-11.79	16.79	3	Horizontal	37	1.94					
PK	17.47822G	68.17	68.20	-0.03	24.51	3	Horizontal	332	1.49					

802.11ac VHT20_Nss1,(MCS0)_2TX

5180MHz_TX

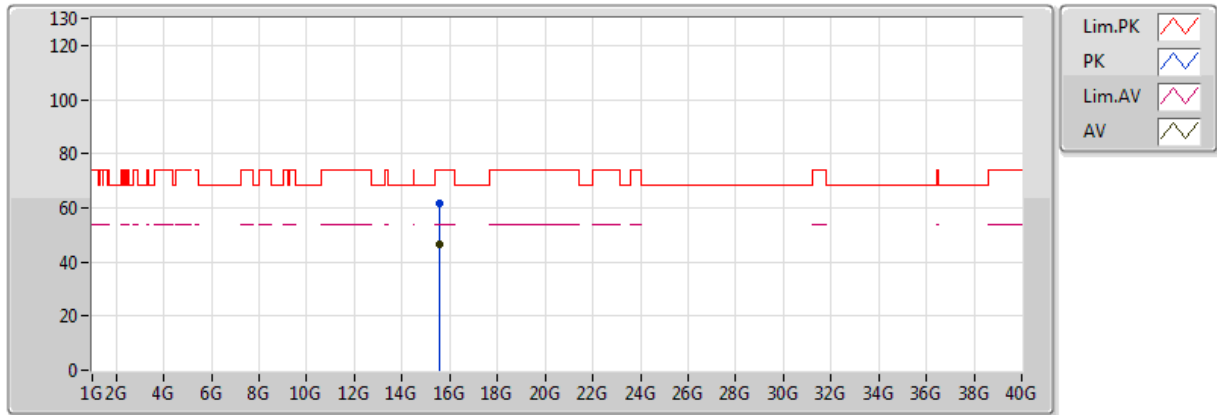


20170919
EUT Y_2TX ANT Dipole
Setting 21
02-J-6-10
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	5.1496G	53.71	54.00	-0.29	9.76	3	Vertical	300	1.50					
AV	5.187G	106.15	Inf	-Inf	9.85	3	Vertical	300	1.50					
PK	5.1482G	66.31	74.00	-7.69	9.76	3	Vertical	300	1.50					
PK	5.1862G	117.10	Inf	-Inf	9.85	3	Vertical	300	1.50					

802.11ac VHT20_Nss1,(MCS0)_2TX

5180MHz_TX

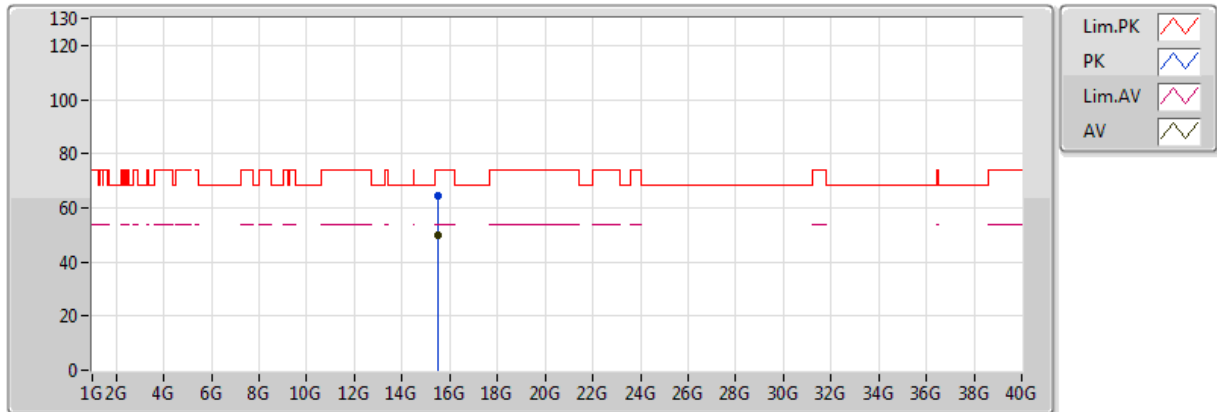


20170919
EUT Y_2TX ANT Dipole
Setting 21
02-J-6
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height					
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)					
AV	15.5418G	46.75	54.00	-7.25	18.70	3	Vertical	218	2.77					
PK	15.54042G	61.37	74.00	-12.63	18.70	3	Vertical	218	2.77					

802.11ac VHT20_Nss1,(MCS0)_2TX

5180MHz_TX

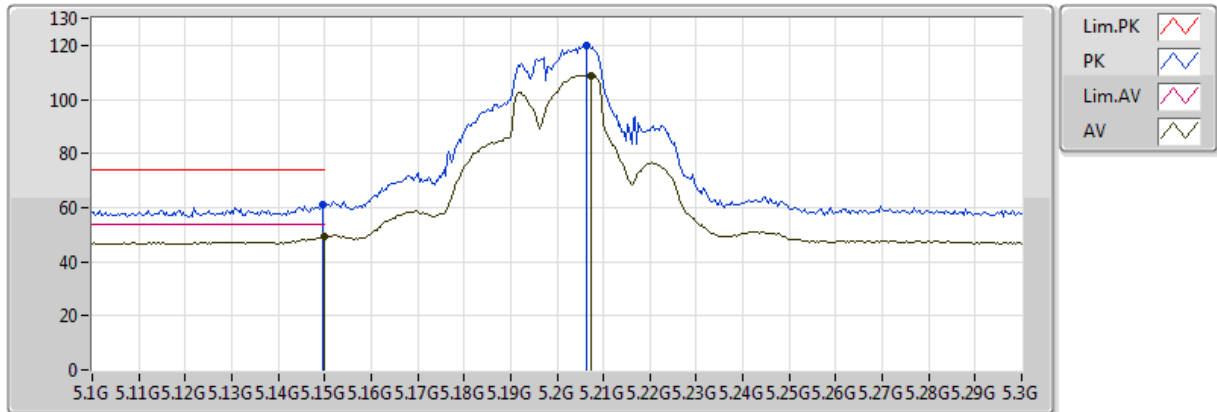


20170919
EUT Y_2TX ANT Dipole
Setting 21
02-J-6
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height					
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)					
AV	15.53682G	49.95	54.00	-4.05	18.71	3	Horizontal	83	2.75					
PK	15.534G	64.57	74.00	-9.43	18.71	3	Horizontal	83	2.75					

802.11ac VHT20_Nss1,(MCS0)_2TX

5200MHz_TX

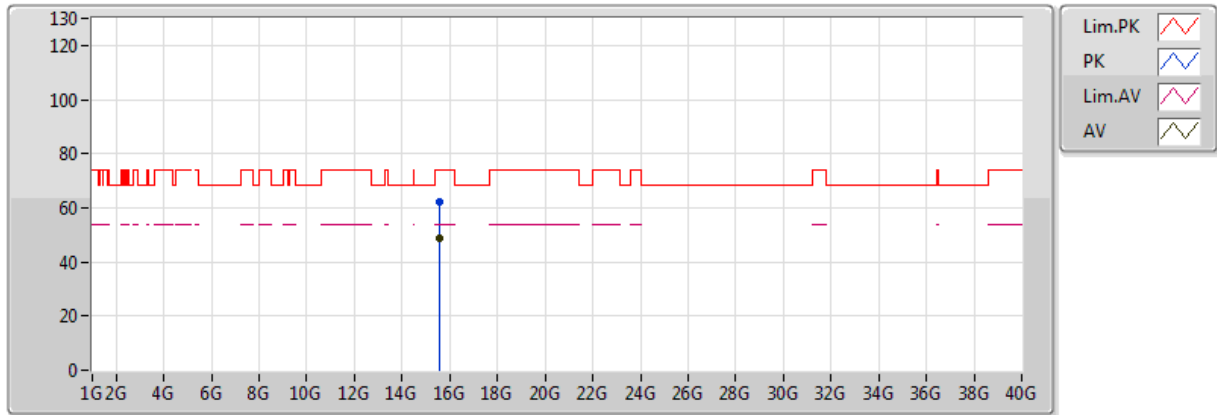


20170919
EUT Y_2TX ANT Dipole
Setting 24
02-J-6-10
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	5.149995G	49.09	54.00	-4.91	9.76	3	Vertical	303	1.47					
AV	5.2072G	108.89	Inf	-Inf	9.89	3	Vertical	303	1.47					
PK	5.1496G	60.97	74.00	-13.03	9.76	3	Vertical	303	1.47					
PK	5.2064G	119.68	Inf	-Inf	9.89	3	Vertical	303	1.47					

802.11ac VHT20_Nss1,(MCS0)_2TX

5200MHz_TX

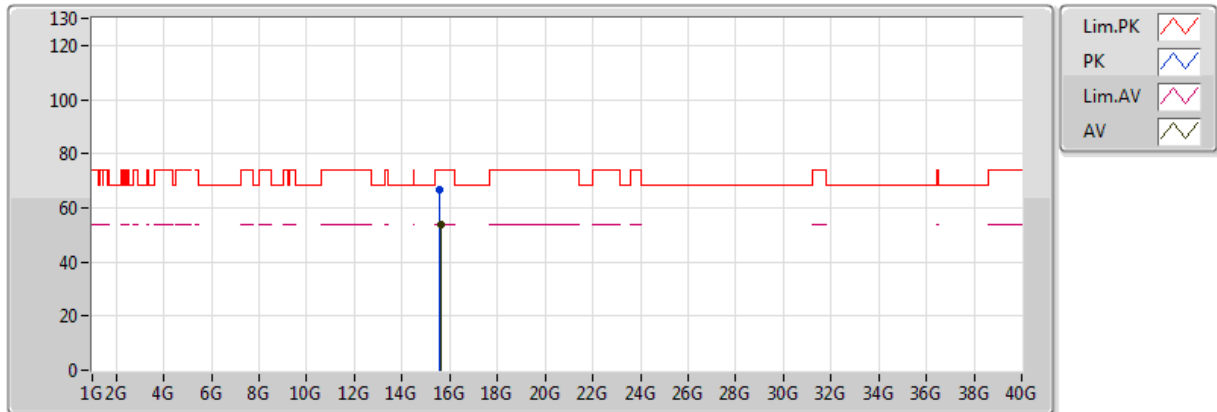


20170919
EUT Y_2TX ANT Dipole
Setting 24
02-J-6
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	15.59394G	48.74	54.00	-5.26	18.58	3	Vertical	222	2.79					
PK	15.59172G	62.47	74.00	-11.53	18.59	3	Vertical	222	2.79					

802.11ac VHT20_Nss1,(MCS0)_2TX

5200MHz_TX

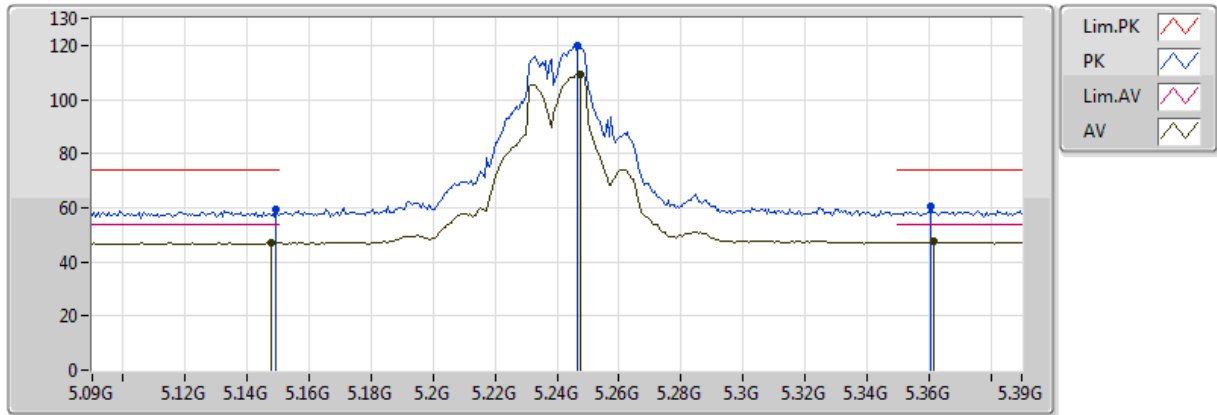


20170919
EUT Y_2TX ANT Dipole
Setting 24
02-J-6
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	15.6018G	53.85	54.00	-0.15	18.57	3	Horizontal	80	2.74					
PK	15.60048G	66.62	74.00	-7.38	18.57	3	Horizontal	80	2.74					

802.11ac VHT20_Nss1,(MCS0)_2TX

5240MHz_TX

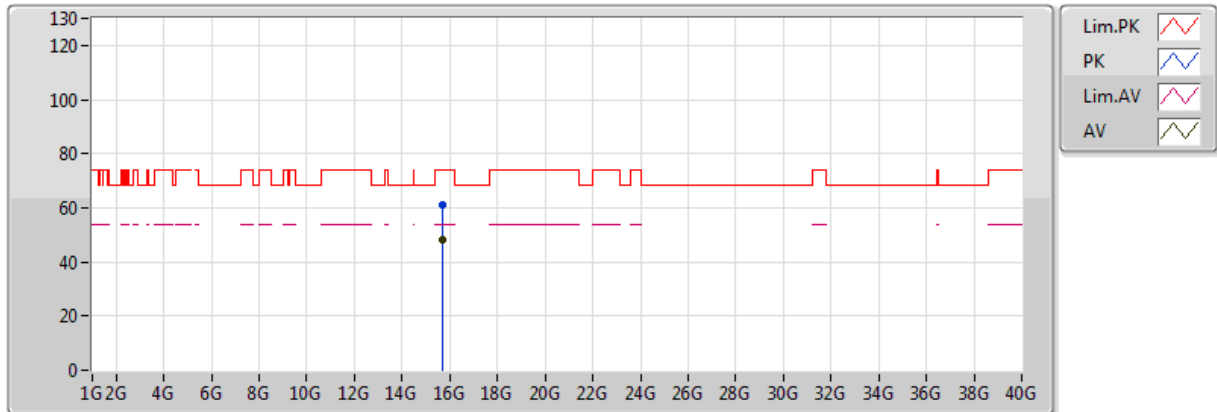


20170919
EUT Y_2TX ANT Dipole
Setting 24
02-J-6-10
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	5.1476G	46.93	54.00	-7.07	9.76	3	Vertical	297	1.96					
AV	5.2478G	109.21	Inf	-Inf	9.95	3	Vertical	297	1.96					
AV	5.3618G	47.35	54.00	-6.65	10.10	3	Vertical	297	1.96					
PK	5.1494G	59.23	74.00	-14.77	9.76	3	Vertical	297	1.96					
PK	5.2466G	120.13	Inf	-Inf	9.95	3	Vertical	297	1.96					
PK	5.3606G	60.42	74.00	-13.58	10.10	3	Vertical	297	1.96					

802.11ac VHT20_Nss1,(MCS0)_2TX

5240MHz_TX

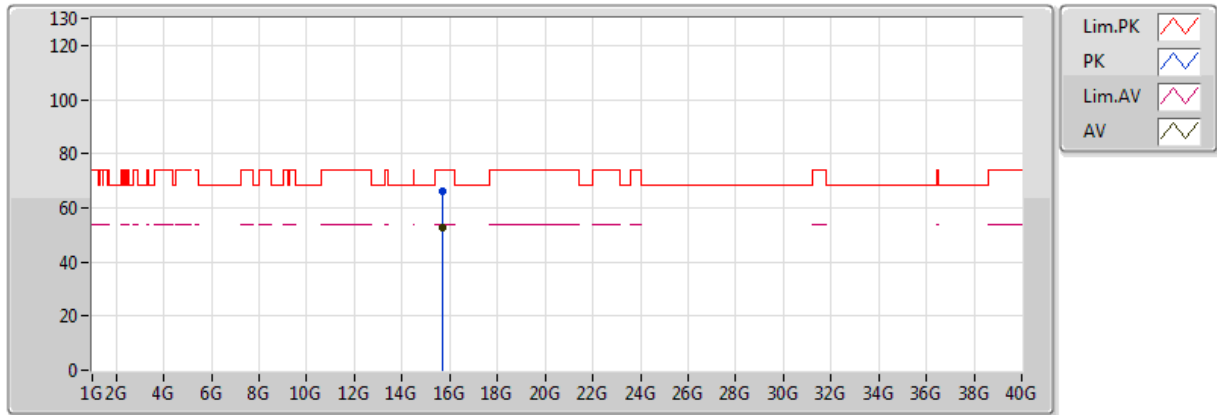


20170919
EUT Y_2TX ANT Dipole
Setting 24
02-J-6
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	15.72174G	48.06	54.00	-5.94	18.31	3	Vertical	223	2.76					
PK	15.72378G	60.92	74.00	-13.08	18.30	3	Vertical	223	2.76					

802.11ac VHT20_Nss1,(MCS0)_2TX

5240MHz_TX

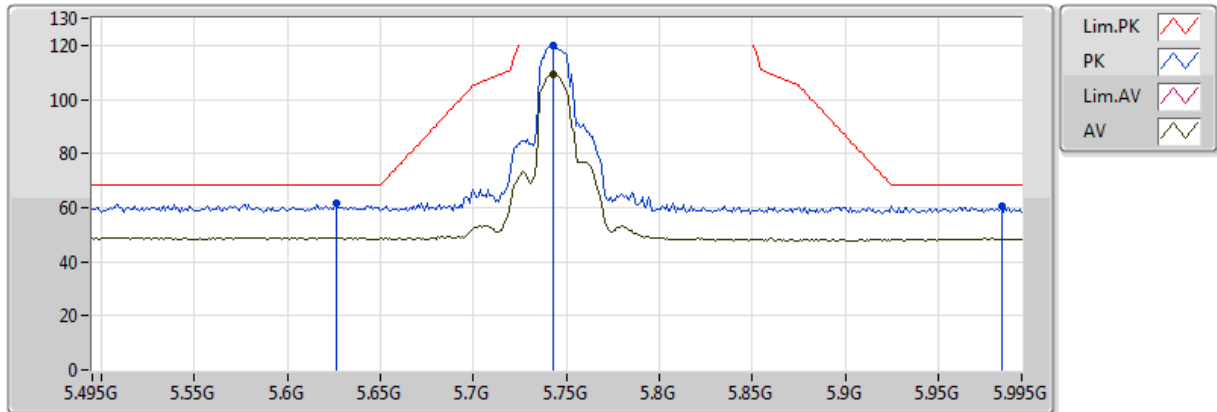


20170919
EUT Y_2TX ANT Dipole
Setting 24
02-J-6
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height					
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)					
AV	15.71694G	52.70	54.00	-1.30	18.32	3	Horizontal	90	2.70					
PK	15.71406G	66.10	74.00	-7.90	18.32	3	Horizontal	90	2.70					

802.11ac VHT20_Nss1,(MCS0)_2TX

5745MHz_TX

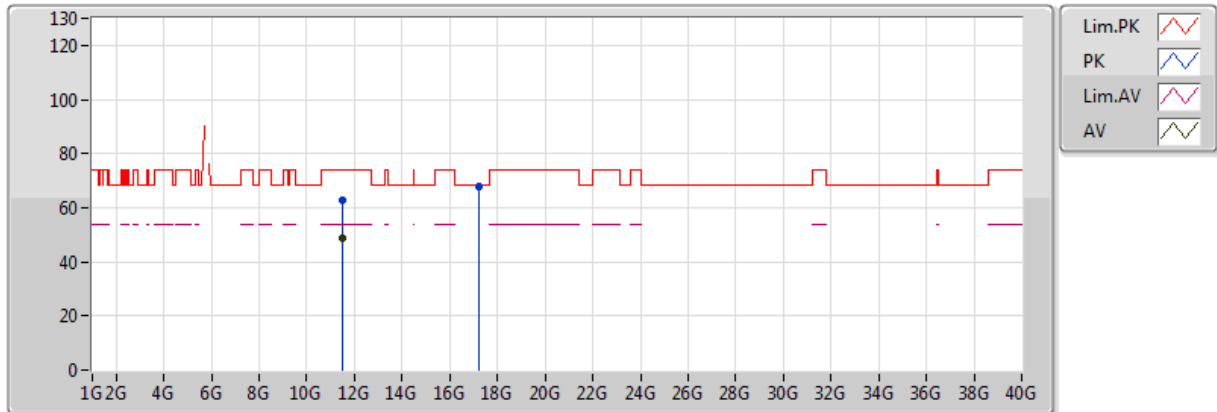


20170920
EUT Y_2TX ANT Dipole
Setting 21.5
02-Z-1-10
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	5.743G	109.32	Inf	-Inf	10.65	3	Vertical	285	1.78					
PK	5.626G	61.42	68.20	-6.78	10.65	3	Vertical	285	1.78					
PK	5.743G	119.77	Inf	-Inf	10.65	3	Vertical	285	1.78					
PK	5.984G	60.37	68.20	-7.83	10.89	3	Vertical	285	1.78					

802.11ac VHT20_Nss1,(MCS0)_2TX

5745MHz_TX

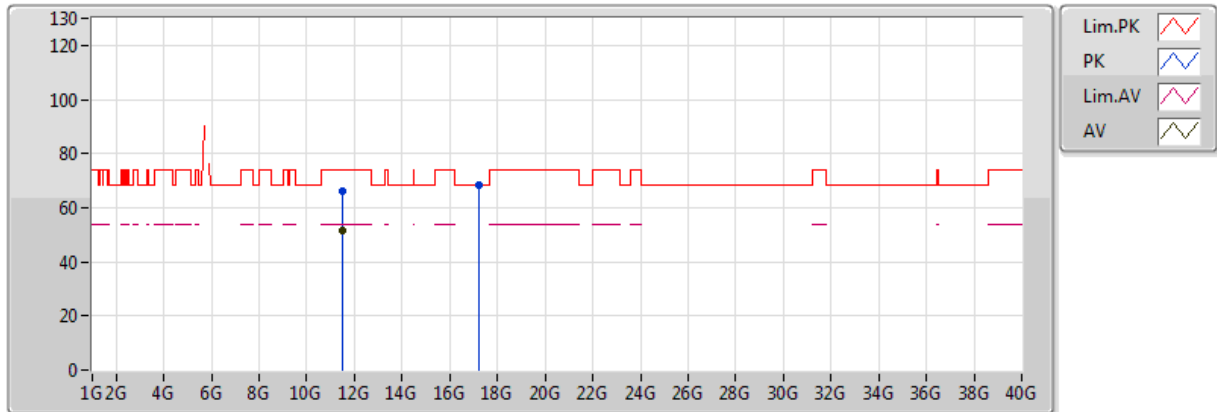


20170920
EUT Y_2TX ANT Dipole
Setting 21.5
02-Z-1
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	11.49688G	48.93	54.00	-5.07	16.61	3	Vertical	214	2.79					
PK	11.49816G	62.69	74.00	-11.31	16.61	3	Vertical	214	2.79					
PK	17.23412G	68.01	68.20	-0.19	23.07	3	Vertical	67	2.74					

802.11ac VHT20_Nss1,(MCS0)_2TX

5745MHz_TX

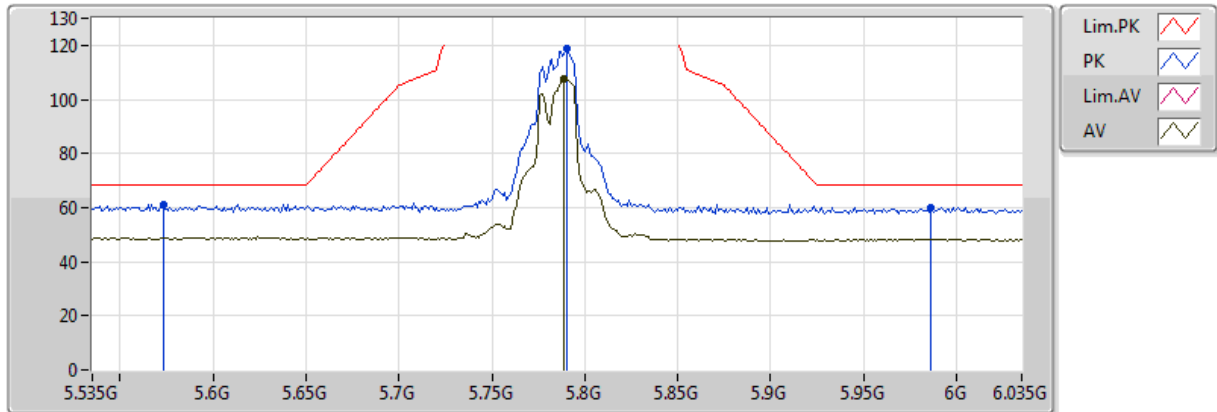


20170920
EUT Y_2TX ANT Dipole
Setting 21.5
02-Z-1
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	11.49536G	51.47	54.00	-2.53	16.61	3	Horizontal	213	1.39					
PK	11.49992G	66.18	74.00	-7.82	16.61	3	Horizontal	213	1.39					
PK	17.23476G	68.17	68.20	-0.03	23.08	3	Horizontal	52	1.49					

802.11ac VHT20_Nss1,(MCS0)_2TX

5785MHz_TX

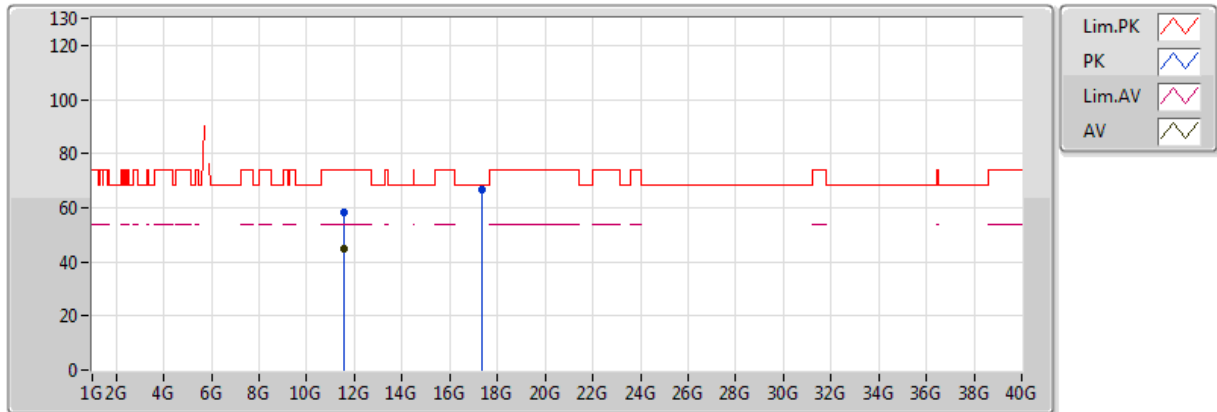


20170920
EUT Y_2TX ANT Dipole
Setting 20.5
02-Z-1-10
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	5.789G	107.40	Inf	-Inf	10.65	3	Vertical	271	1.86					
PK	5.573G	61.20	68.20	-7.00	10.61	3	Vertical	271	1.86					
PK	5.79G	118.55	Inf	-Inf	10.65	3	Vertical	271	1.86					
PK	5.986G	60.17	68.20	-8.03	10.89	3	Vertical	271	1.86					

802.11ac VHT20_Nss1,(MCS0)_2TX

5785MHz_TX

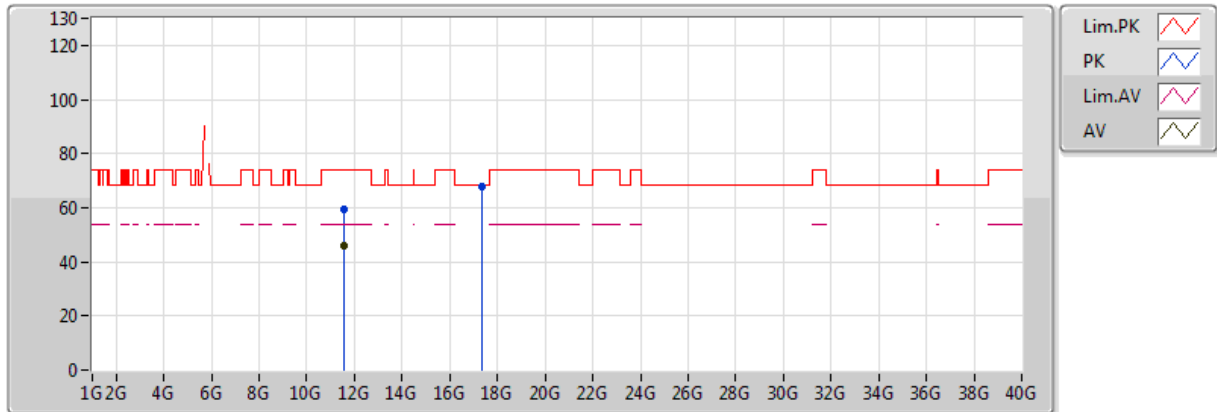


20170920
EUT Y_2TX ANT Dipole
Setting 20.5
02-Z-1
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	11.58014G	44.76	54.00	-9.24	16.72	3	Vertical	47	2.76					
PK	11.5772G	58.49	74.00	-15.51	16.71	3	Vertical	47	2.76					
PK	17.36028G	66.70	68.20	-1.50	23.82	3	Vertical	194	2.68					

802.11ac VHT20_Nss1,(MCS0)_2TX

5785MHz_TX

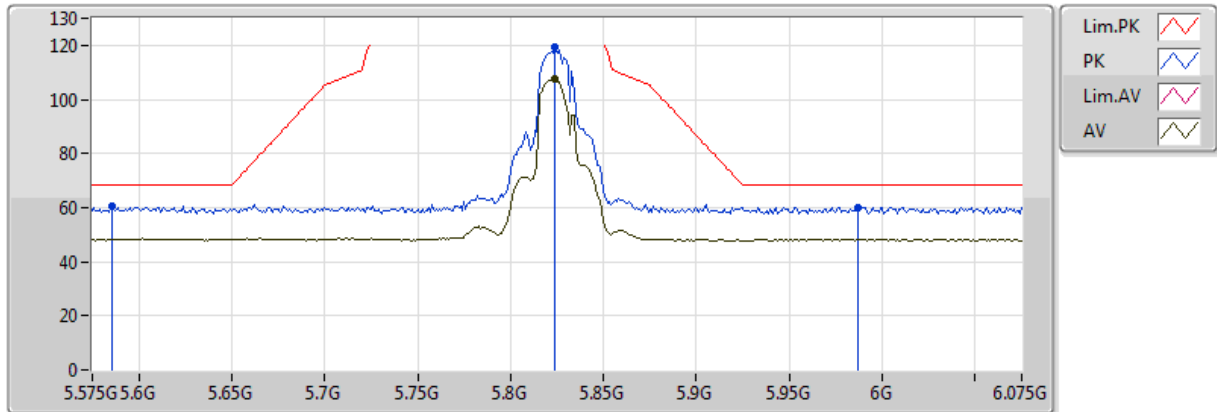


20170920
EUT Y_2TX ANT Dipole
Setting 20.5
02-Z-1
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	11.5751G	45.76	54.00	-8.24	16.71	3	Horizontal	348	1.34					
PK	11.5742G	59.14	74.00	-14.86	16.71	3	Horizontal	348	1.34					
PK	17.36196G	67.89	68.20	-0.31	23.83	3	Horizontal	40	1.50					

802.11ac VHT20_Nss1,(MCS0)_2TX

5825MHz_TX

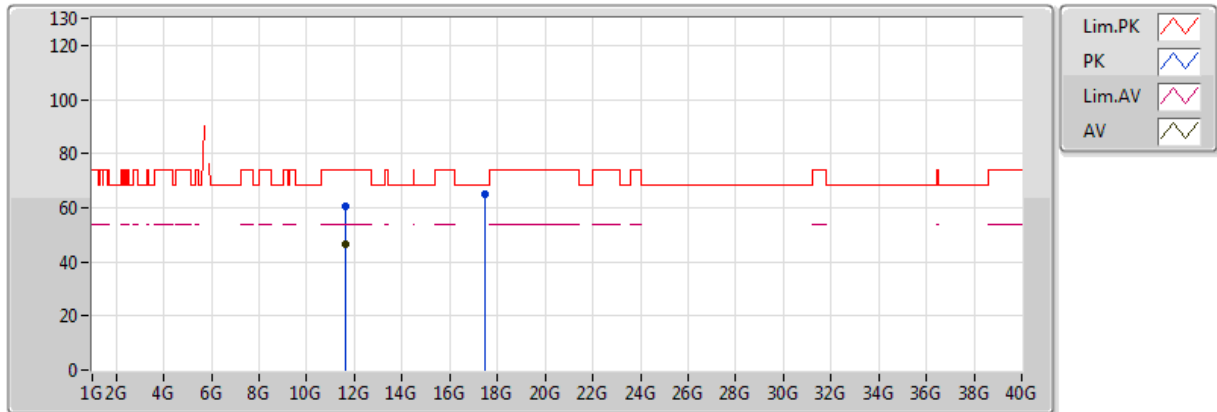


20170920
EUT Y_2TX ANT Dipole
Setting 20.5
02-Z-1-10
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	5.824G	107.58	Inf	-Inf	10.68	3	Vertical	34	1.46					
PK	5.586G	60.54	68.20	-7.66	10.63	3	Vertical	34	1.46					
PK	5.824G	119.14	Inf	-Inf	10.68	3	Vertical	34	1.46					
PK	5.987G	60.23	68.20	-7.97	10.89	3	Vertical	34	1.46					

802.11ac VHT20_Nss1,(MCS0)_2TX

5825MHz_TX

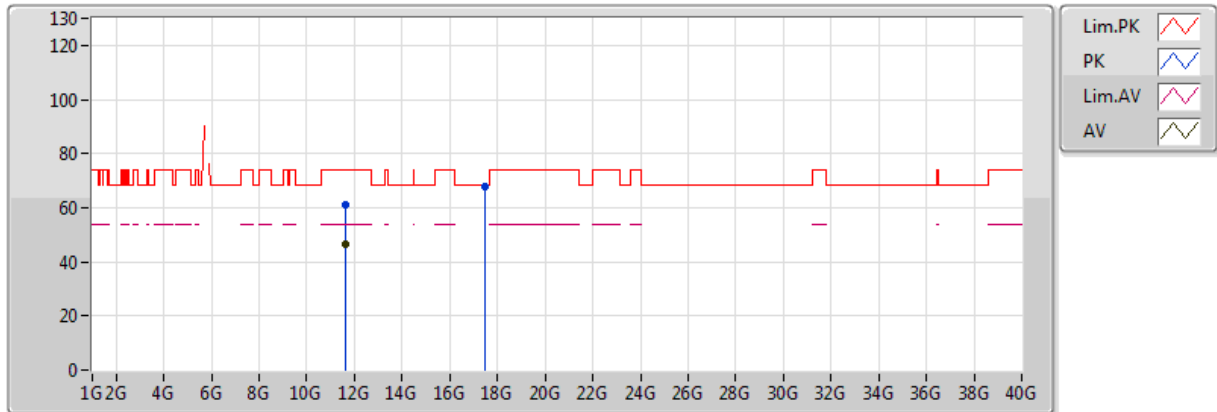


20170920
EUT Y_2TX ANT Dipole
Setting 20.5
02-Z-1
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	11.65528G	46.59	54.00	-7.41	16.81	3	Vertical	181	1.37					
PK	11.6533G	60.32	74.00	-13.68	16.81	3	Vertical	181	1.37					
PK	17.4744G	64.97	68.20	-3.23	24.49	3	Vertical	328	2.70					

802.11ac VHT20_Nss1,(MCS0)_2TX

5825MHz_TX

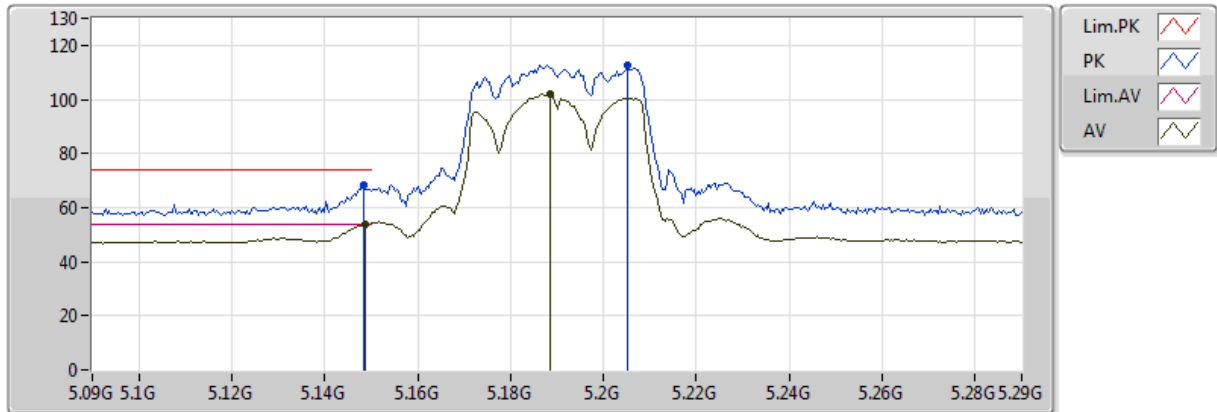


20170920
EUT Y_2TX ANT Dipole
Setting 20.5
02-Z-1
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	11.65336G	46.53	54.00	-7.47	16.81	3	Horizontal	332	1.36					
PK	11.65312G	61.28	74.00	-12.72	16.81	3	Horizontal	332	1.36					
PK	17.48496G	68.04	68.20	-0.16	24.55	3	Horizontal	28	1.49					

802.11ac VHT40_Nss1,(MCS0)_2TX

5190MHz_TX

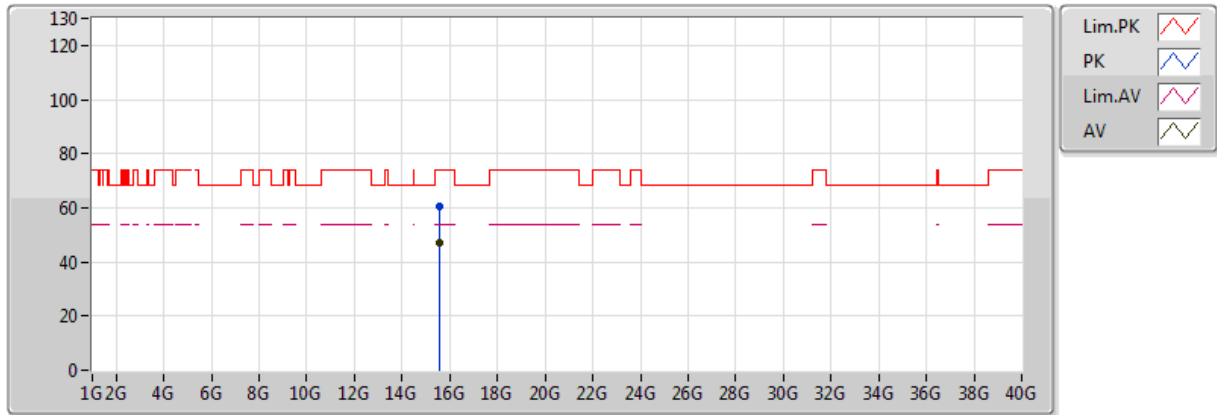


20170920
EUT Y_2TX ANT Dipole
Setting 17
02-Z-1-10
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	5.1488G	53.96	54.00	-0.04	9.76	3	Vertical	27	1.94					
AV	5.1884G	101.83	Inf	-Inf	9.85	3	Vertical	27	1.94					
PK	5.1484G	68.31	74.00	-5.69	9.76	3	Vertical	27	1.94					
PK	5.2052G	112.81	Inf	-Inf	9.89	3	Vertical	27	1.94					

802.11ac VHT40_Nss1,(MCS0)_2TX

5190MHz_TX

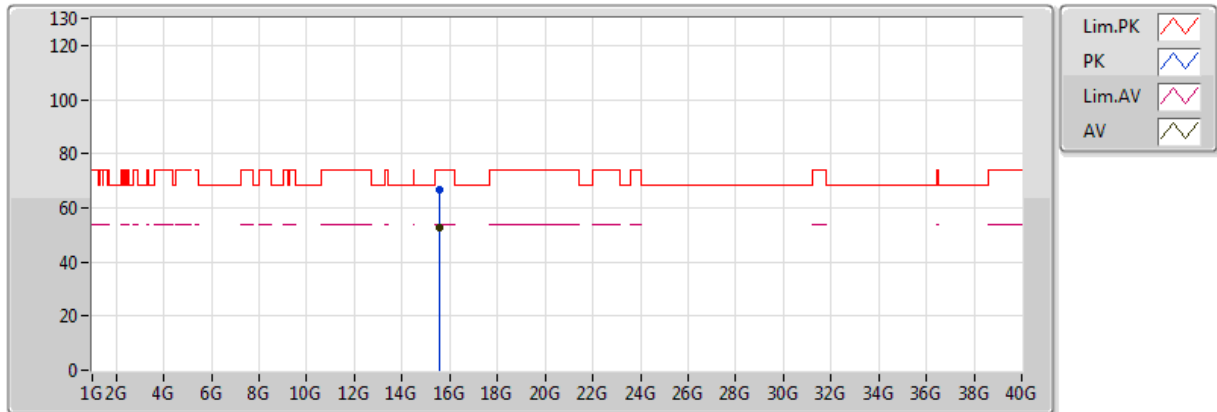


20170920
EUT Y_2TX ANT Dipole
Setting 17
02-Z-1
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	15.58266G	47.34	54.00	-6.66	18.61	3	Vertical	338	2.79					
PK	15.56478G	60.56	74.00	-13.44	18.65	3	Vertical	338	2.79					

802.11ac VHT40_Nss1,(MCS0)_2TX

5190MHz_TX

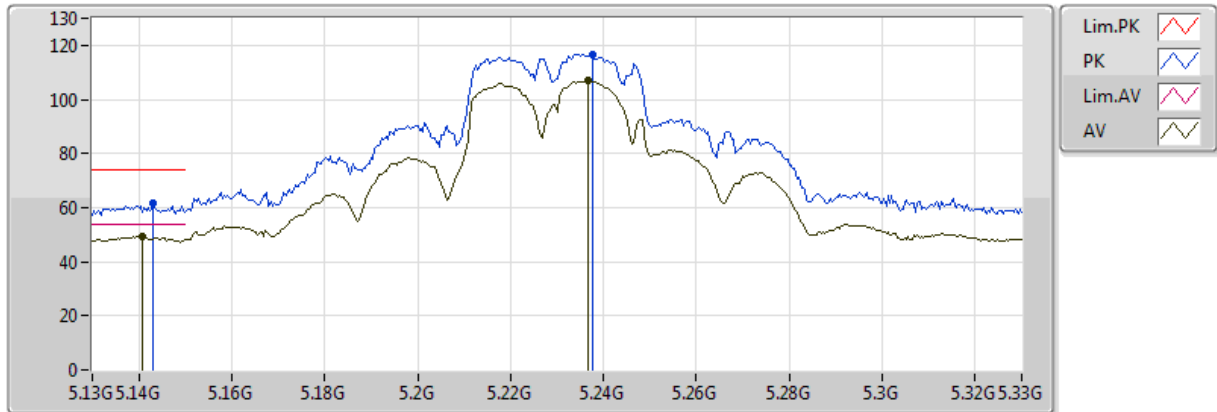


20170920
EUT Y_2TX ANT Dipole
Setting 17
02-Z-1
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	15.57354G	52.65	54.00	-1.35	18.63	3	Horizontal	204	2.74					
PK	15.57234G	66.76	74.00	-7.24	18.63	3	Horizontal	204	2.74					

802.11ac VHT40_Nss1,(MCS0)_2TX

5230MHz_TX

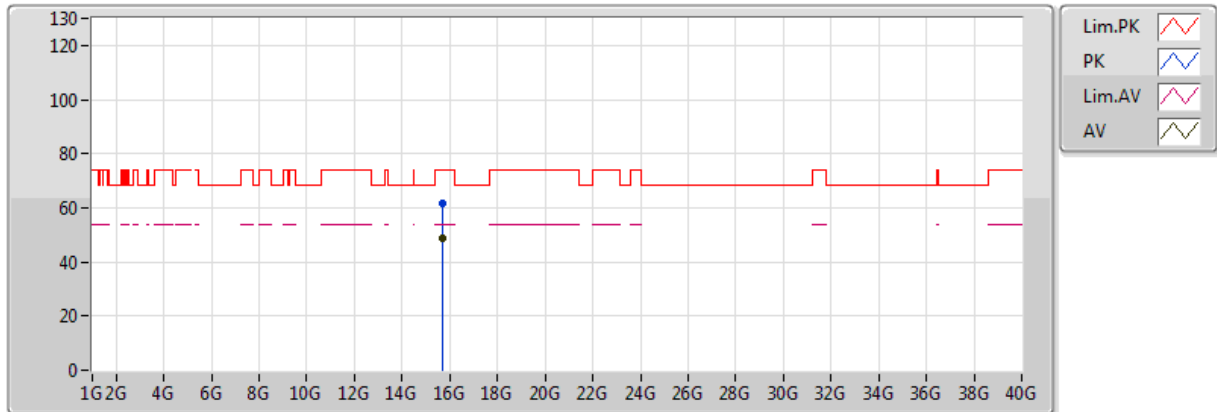


20170920
EUT Y_2TX ANT Dipole
Setting 22.5
02-Z-1-10
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	5.1408G	49.37	54.00	-4.63	9.74	3	Vertical	254	1.50					
AV	5.2368G	106.81	Inf	-Inf	9.93	3	Vertical	254	1.50					
PK	5.1432G	61.85	74.00	-12.15	9.75	3	Vertical	254	1.50					
PK	5.2376G	116.49	Inf	-Inf	9.93	3	Vertical	254	1.50					

802.11ac VHT40_Nss1,(MCS0)_2TX

5230MHz_TX

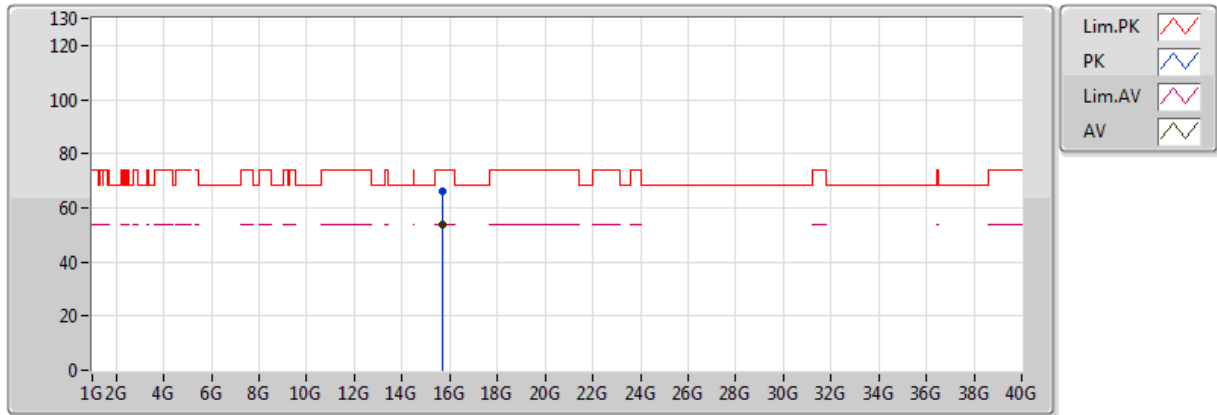


20170920
EUT Y_2TX ANT Dipole
Setting 22.5
02-Z-1
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	15.69184G	48.91	54.00	-5.09	18.37	3	Vertical	179	2.78					
PK	15.69096G	61.51	74.00	-12.49	18.37	3	Vertical	179	2.78					

802.11ac VHT40_Nss1,(MCS0)_2TX

5230MHz_TX

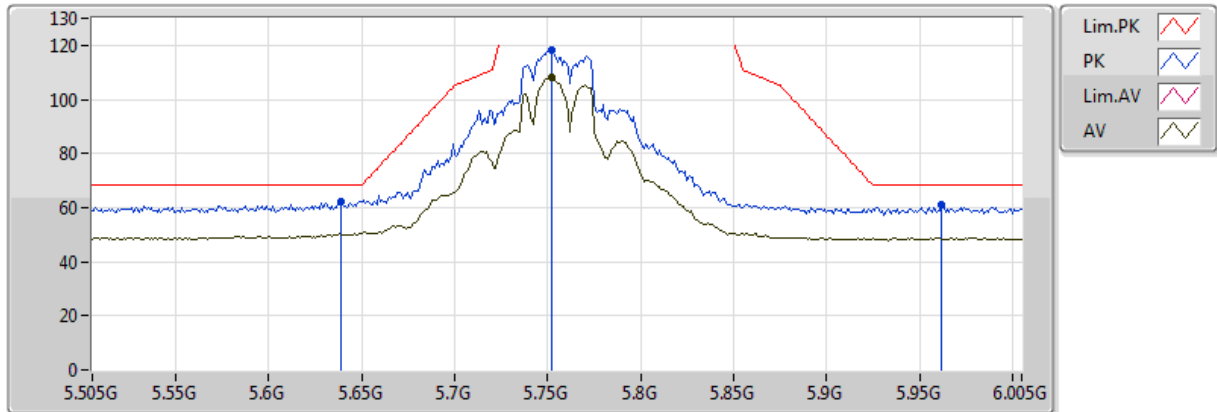


20170920
EUT Y_2TX ANT Dipole
Setting 22.5
02-Z-1
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	15.686G	53.97	54.00	-0.03	18.39	3	Horizontal	46	2.76					
PK	15.68728G	66.20	74.00	-7.80	18.38	3	Horizontal	46	2.76					

802.11ac VHT40_Nss1,(MCS0)_2TX

5755MHz_TX

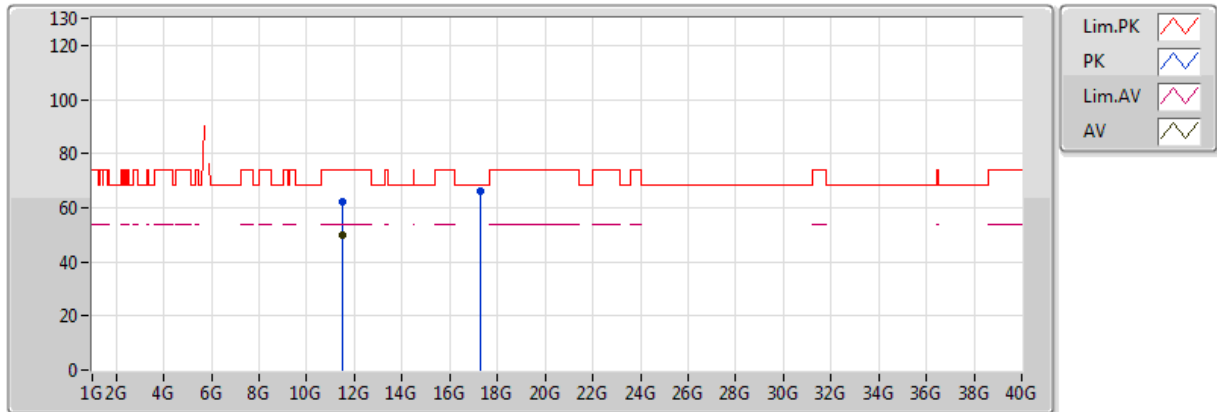


20170920
EUT Y_2TX ANT Dipole
Setting 22.5
02-Z-1-10
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	5.752G	108.28	Inf	-Inf	10.65	3	Vertical	149	1.80					
PK	5.639G	62.19	68.20	-6.01	10.65	3	Vertical	149	1.80					
PK	5.752G	118.37	Inf	-Inf	10.65	3	Vertical	149	1.80					
PK	5.962G	61.18	68.20	-7.02	10.86	3	Vertical	149	1.80					

802.11ac VHT40_Nss1,(MCS0)_2TX

5755MHz_TX

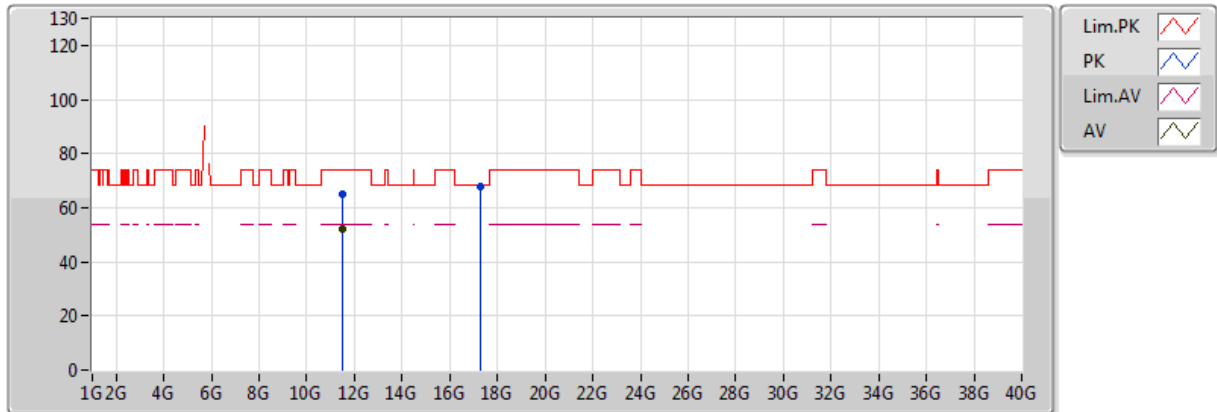


20170920
EUT Y_2TX ANT Dipole
Setting 22.5
02-Z-1
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	11.50088G	50.13	54.00	-3.87	16.62	3	Vertical	168	2.79					
PK	11.4988G	62.12	74.00	-11.88	16.61	3	Vertical	168	2.79					
PK	17.2846G	65.97	68.20	-2.23	23.37	3	Vertical	3	2.70					

802.11ac VHT40_Nss1,(MCS0)_2TX

5755MHz_TX

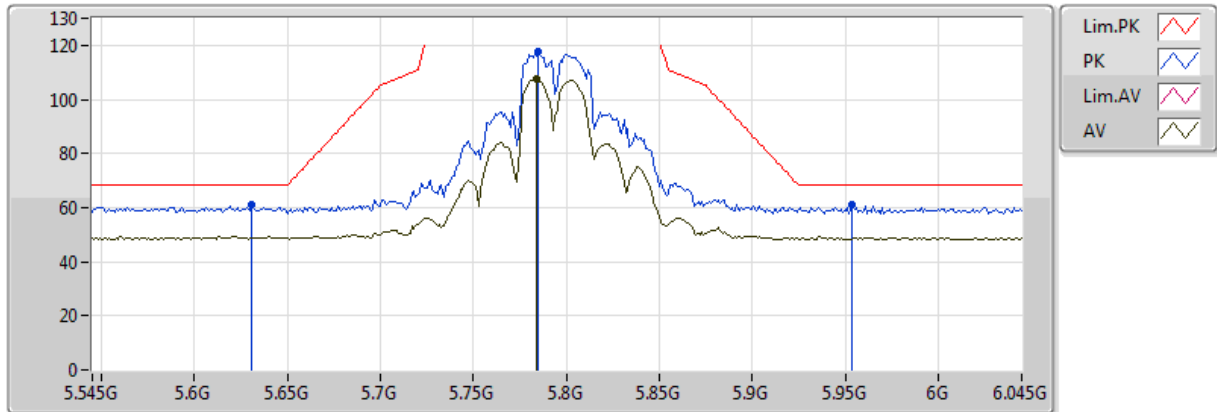


20170920
EUT Y_2TX ANT Dipole
Setting 22.5
02-Z-1
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	11.51648G	52.30	54.00	-1.70	16.64	3	Horizontal	315	1.50					
PK	11.50648G	64.95	74.00	-9.05	16.62	3	Horizontal	315	1.50					
PK	17.26692G	67.90	68.20	-0.30	23.26	3	Horizontal	162	1.50					

802.11ac VHT40_Nss1,(MCS0)_2TX

5795MHz_TX

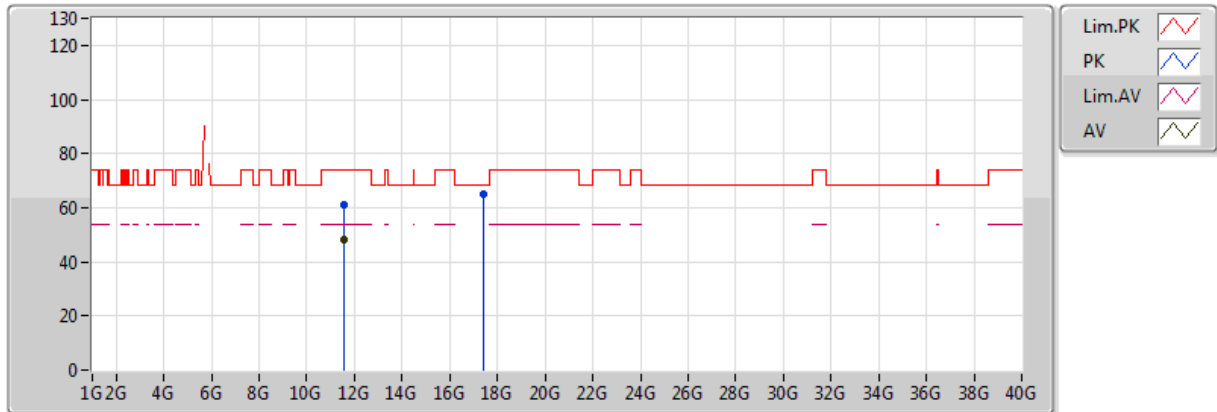


20170920
EUT Y_2TX ANT Dipole
Setting 22.5
02-Z-1-10
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	5.784G	107.46	Inf	-Inf	10.65	3	Vertical	68	2.47					
PK	5.631G	61.14	68.20	-7.06	10.65	3	Vertical	68	2.47					
PK	5.785G	117.47	Inf	-Inf	10.65	3	Vertical	68	2.47					
PK	5.954G	60.81	68.20	-7.39	10.85	3	Vertical	68	2.47					

802.11ac VHT40_Nss1,(MCS0)_2TX

5795MHz_TX

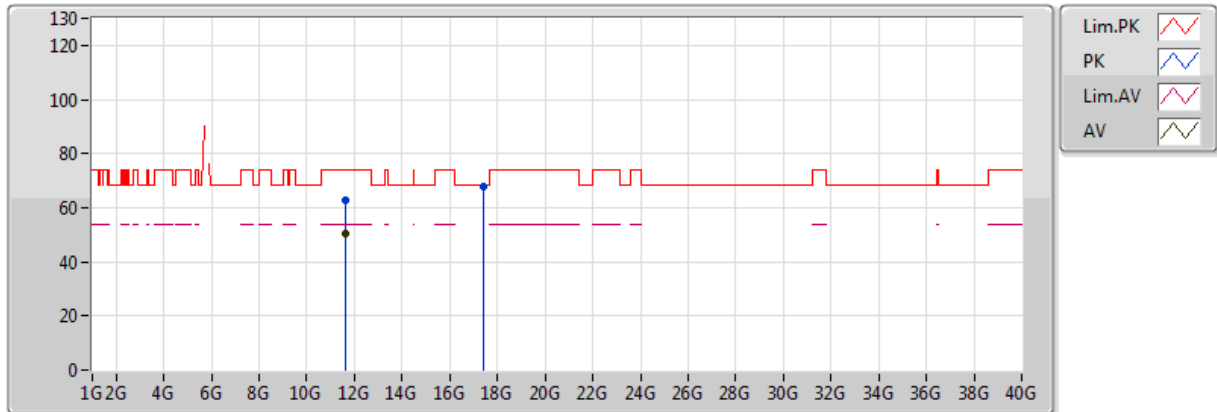


20170920
EUT Y_2TX ANT Dipole
Setting 22.5
02-Z-1
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	11.58424G	48.04	54.00	-5.96	16.72	3	Vertical	227	2.74					
PK	11.58536G	60.83	74.00	-13.17	16.72	3	Vertical	227	2.74					
PK	17.395G	65.01	68.20	-3.19	24.02	3	Vertical	359	2.71					

802.11ac VHT40_Nss1,(MCS0)_2TX

5795MHz_TX

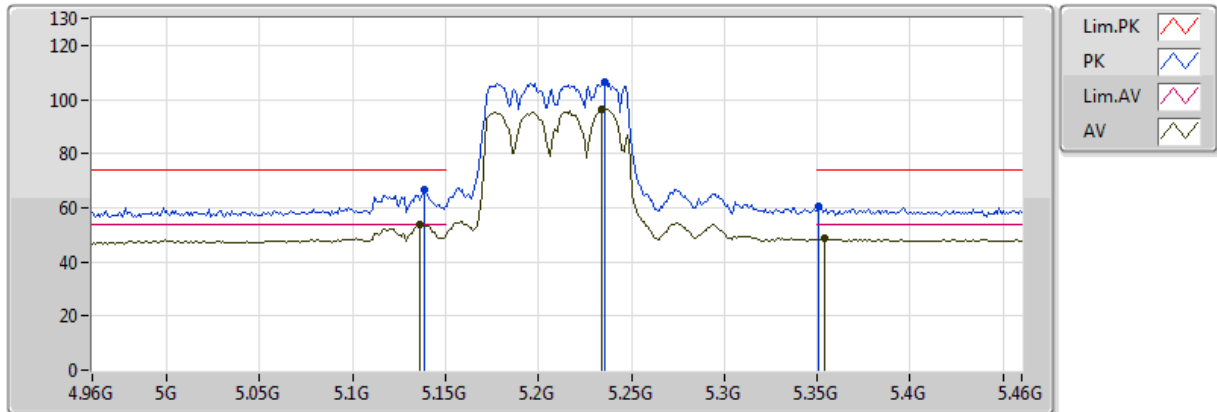


20170920
EUT Y_2TX ANT Dipole
Setting 22.5
02-Z-1
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	11.5984G	50.47	54.00	-3.53	16.74	3	Horizontal	68	1.30					
PK	11.59992G	62.72	74.00	-11.28	16.74	3	Horizontal	68	1.30					
PK	17.393G	67.80	68.20	-0.40	24.01	3	Horizontal	213	1.49					

802.11ac VHT80_Nss1,(MCS0)_2TX

5210MHz_TX

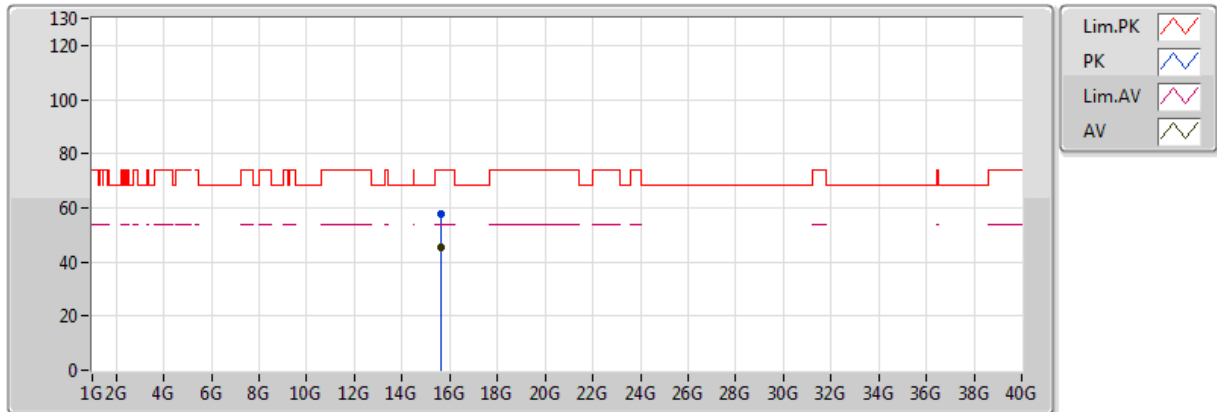


20170920
EUT Y_2TX ANT Dipole
Setting 15.5
02-Z-1-10
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	5.136G	53.88	54.00	-0.12	9.73	3	Vertical	296	1.50					
AV	5.234G	96.58	Inf	-Inf	9.93	3	Vertical	296	1.50					
AV	5.354G	48.64	54.00	-5.36	10.09	3	Vertical	296	1.50					
PK	5.139G	66.61	74.00	-7.39	9.74	3	Vertical	296	1.50					
PK	5.236G	106.29	Inf	-Inf	9.93	3	Vertical	296	1.50					
PK	5.351G	60.28	74.00	-13.72	10.09	3	Vertical	296	1.50					

802.11ac VHT80_Nss1,(MCS0)_2TX

5210MHz_TX

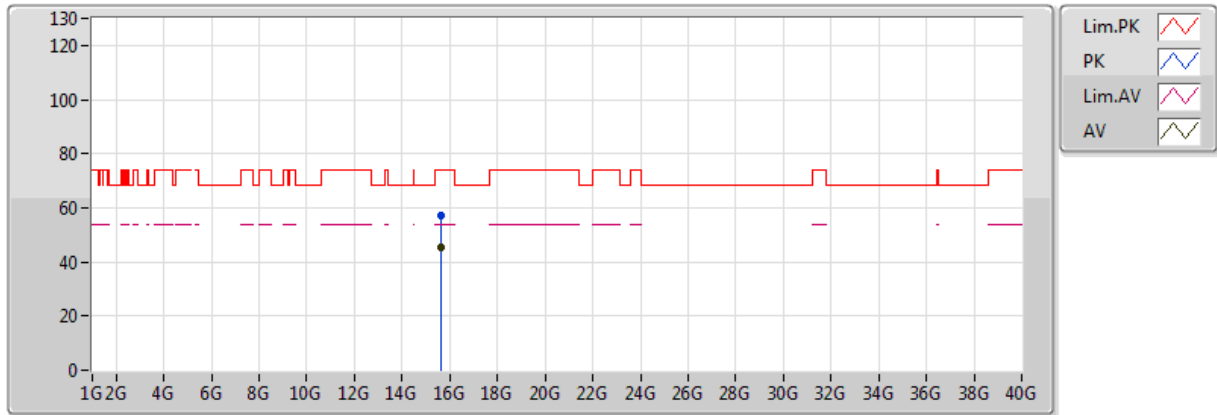


20170920
EUT Y_2TX ANT Dipole
Setting 15.5
02-Z-1
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height					
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)					
AV	15.62G	45.24	54.00	-8.76	18.53	3	Vertical	260	1.97					
PK	15.61488G	57.70	74.00	-16.30	18.54	3	Vertical	260	1.97					

802.11ac VHT80_Nss1,(MCS0)_2TX

5210MHz_TX

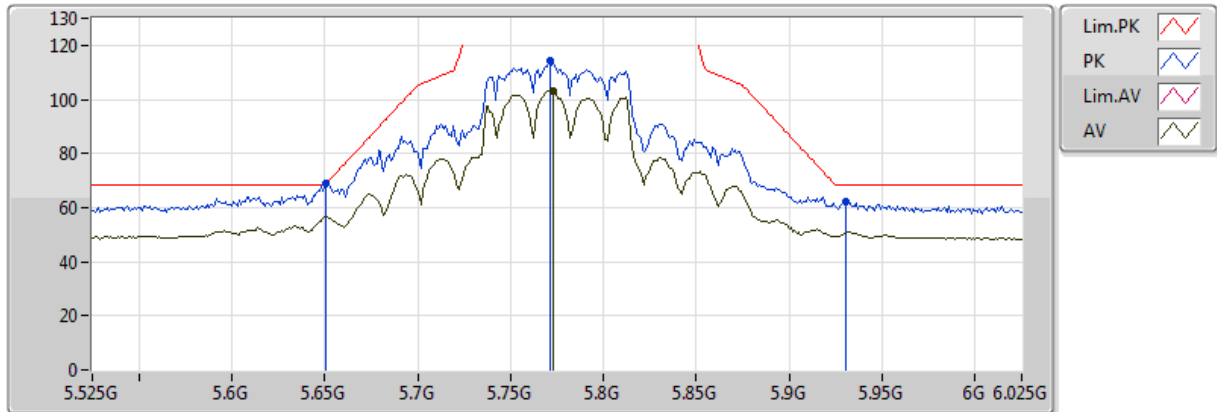


20170920
EUT Y_2TX ANT Dipole
Setting 15.5
02-Z-1
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	15.64184G	45.19	54.00	-8.81	18.48	3	Horizontal	146	1.06					
PK	15.62592G	57.14	74.00	-16.86	18.51	3	Horizontal	146	1.06					

802.11ac VHT80_Nss1,(MCS0)_2TX

5775MHz_TX

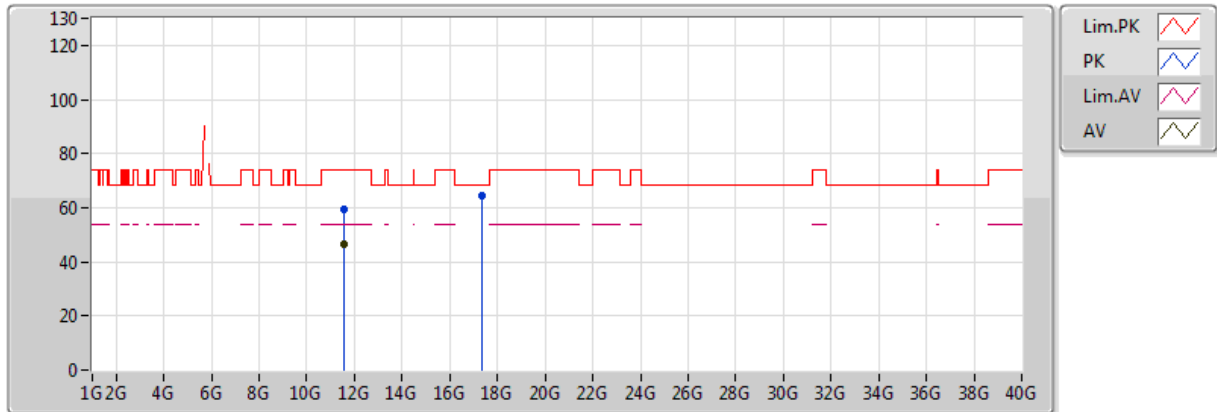


20170920
EUT Y_2TX ANT Dipole
Setting 21
02-Z-1-10
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	5.773G	103.35	Inf	-Inf	10.65	3	Vertical	210	1.37					
PK	5.651G	68.90	68.94	-0.04	10.65	3	Vertical	210	1.37					
PK	5.771G	114.21	Inf	-Inf	10.65	3	Vertical	210	1.37					
PK	5.93G	62.44	68.20	-5.76	10.82	3	Vertical	210	1.37					

802.11ac VHT80_Nss1,(MCS0)_2TX

5775MHz_TX

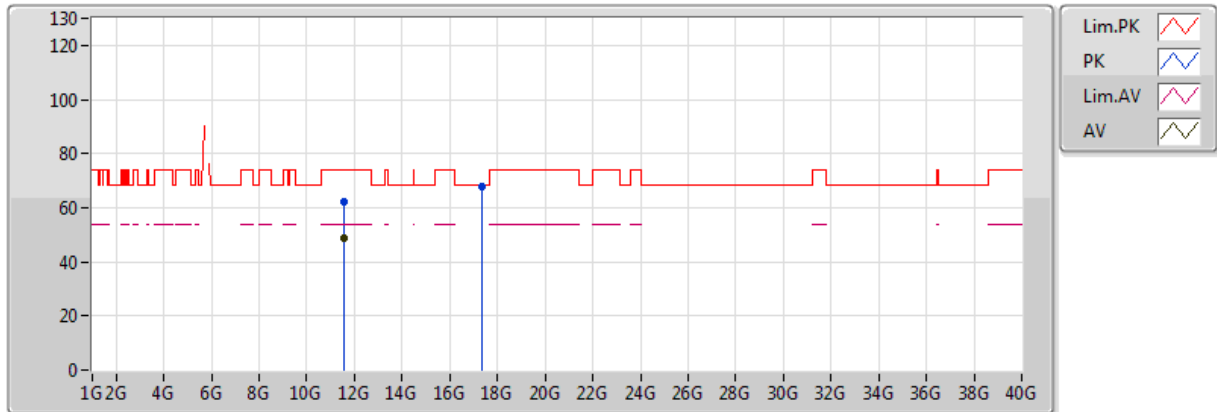


20170920
EUT Y_2TX ANT Dipole
Setting 21
02-Z-1
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	11.55856G	46.77	54.00	-7.23	16.69	3	Vertical	208	2.17					
PK	11.54104G	59.62	74.00	-14.38	16.67	3	Vertical	208	2.17					
PK	17.32092G	64.39	68.20	-3.81	23.58	3	Vertical	46	2.71					

802.11ac VHT80_Nss1,(MCS0)_2TX

5775MHz_TX

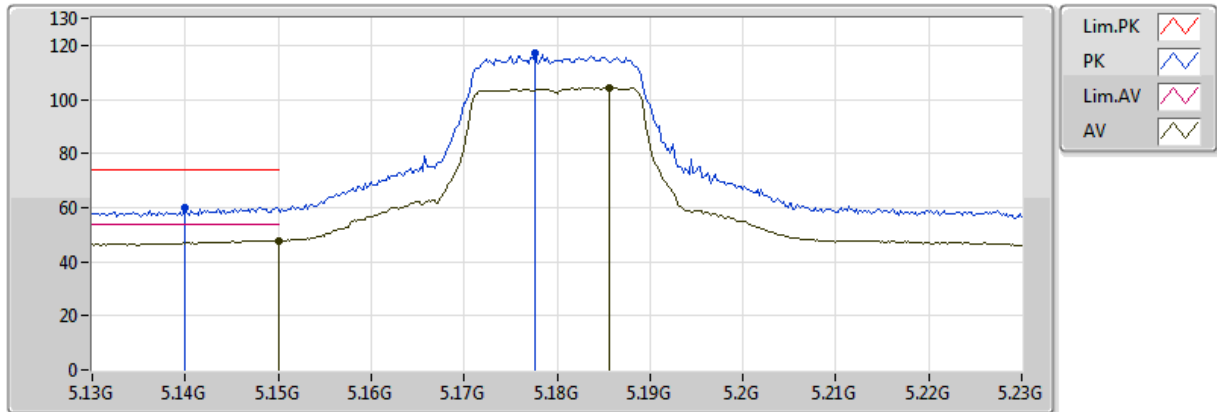


20170920
EUT Y_2TX ANT Dipole
Setting 21
02-Z-1
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	11.53448G	48.48	54.00	-5.52	16.66	3	Horizontal	52	1.35					
PK	11.53416G	62.25	74.00	-11.75	16.66	3	Horizontal	52	1.35					
PK	17.3234G	67.98	68.20	-0.22	23.60	3	Horizontal	202	1.50					

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5180MHz_TX

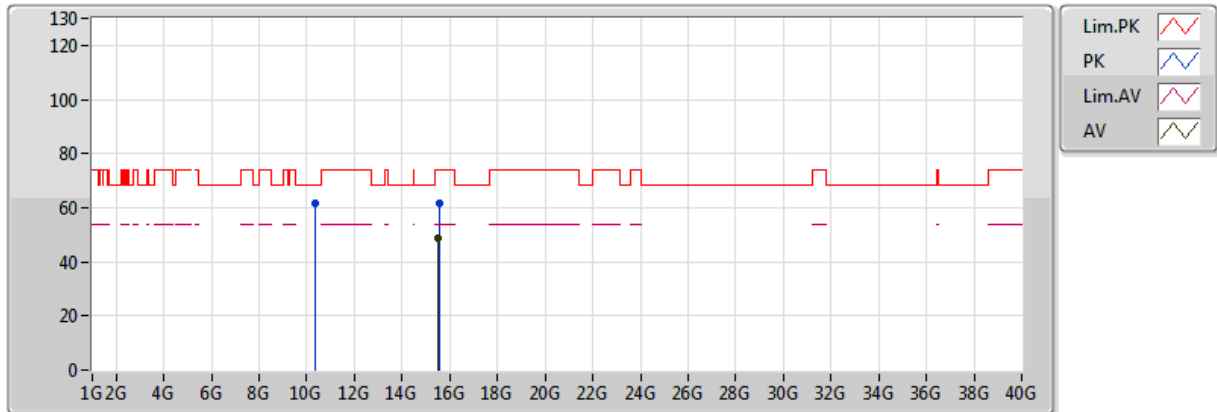


20171003
EUT Y_2TX_Dipole
Setting 22(Max Setting)
04-W-3-10
FSP(100142)

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	47.87	54.00	-6.13	5.31	3	Vertical	353	1.49	-				
AV	5.1856G	104.13	Inf	-Inf	5.44	3	Vertical	353	1.49	-				
PK	5.14G	60.00	74.00	-14.00	5.28	3	Vertical	353	1.49	-				
PK	5.1776G	117.29	Inf	-Inf	5.41	3	Vertical	353	1.49	-				

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5180MHz_TX

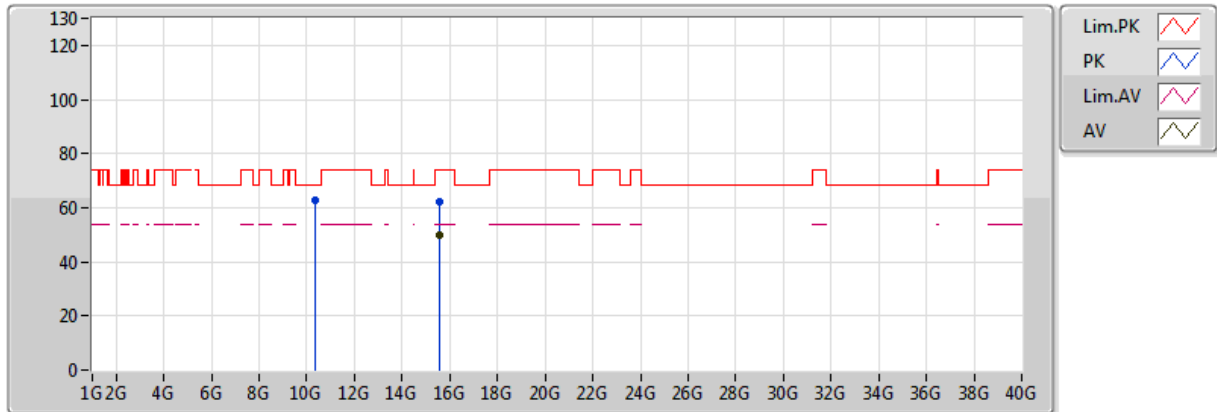


20171003
EUT Y_2TX_Dipole
Setting 22(Max Setting)
04-W-3
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments				
AV	15.5358G	48.95	54.00	-5.05	17.79	3	Vertical	302	1.05	-				
PK	10.36296G	61.89	68.20	-6.31	14.83	3	Vertical	175	1.91	-				
PK	15.53834G	61.71	74.00	-12.29	17.80	3	Vertical	302	1.05	-				

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5180MHz_TX

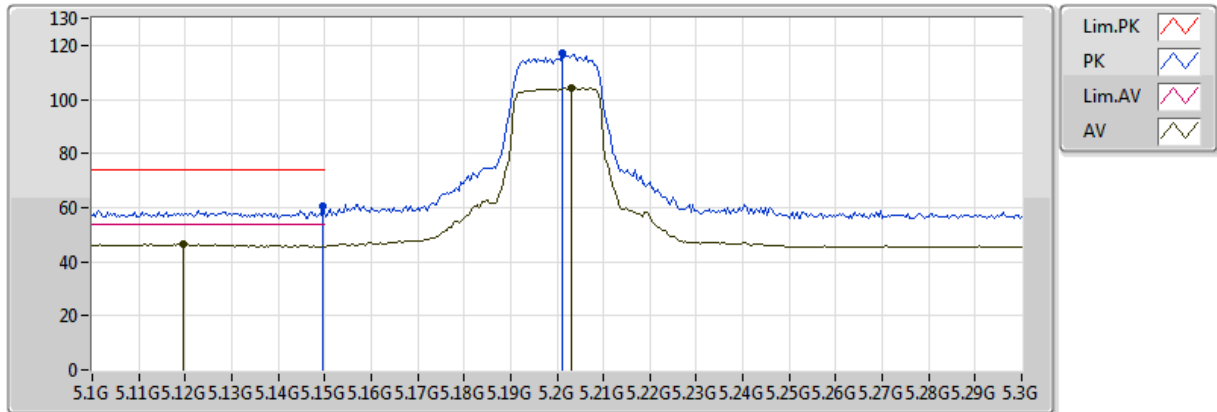


20171003
EUT Y_2TX_Dipole
Setting 22(Max Setting)
04-W-3
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments				
AV	15.54094G	49.80	54.00	-4.20	17.80	3	Horizontal	200	1.02	-				
PK	10.36186G	62.85	68.20	-5.35	14.83	3	Horizontal	171	1.58	-				
PK	15.53798G	62.30	74.00	-11.70	17.80	3	Horizontal	200	1.02	-				

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5200MHz_TX

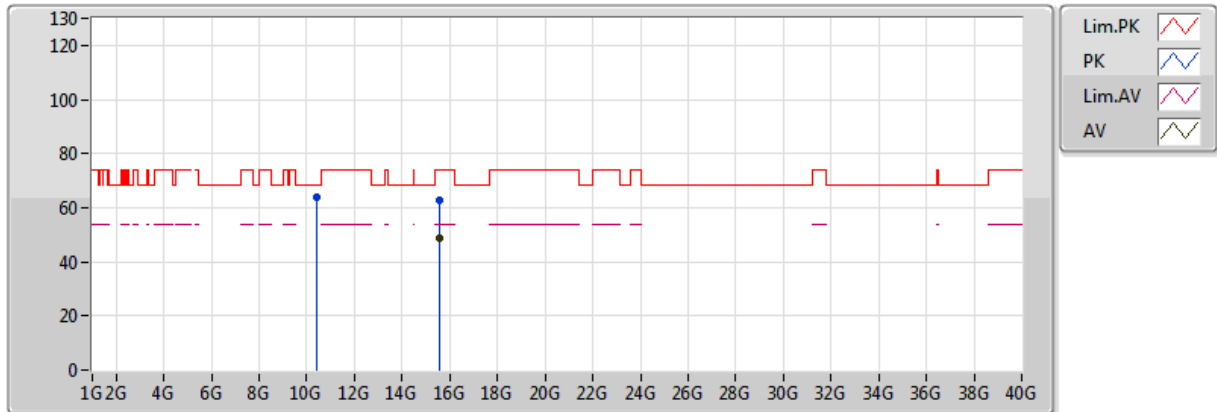


20171003
EUT Y_2TX_Dipole
Setting 22(Max Setting)
04-W-3-10
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments				
AV	5.1196G	46.43	54.00	-7.57	5.21	3	Vertical	357	1.50	-				
AV	5.2032G	104.10	Inf	-Inf	5.49	3	Vertical	357	1.50	-				
PK	5.1496G	60.49	74.00	-13.51	5.31	3	Vertical	357	1.50	-				
PK	5.2012G	117.08	Inf	-Inf	5.49	3	Vertical	357	1.50	-				

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5200MHz_TX

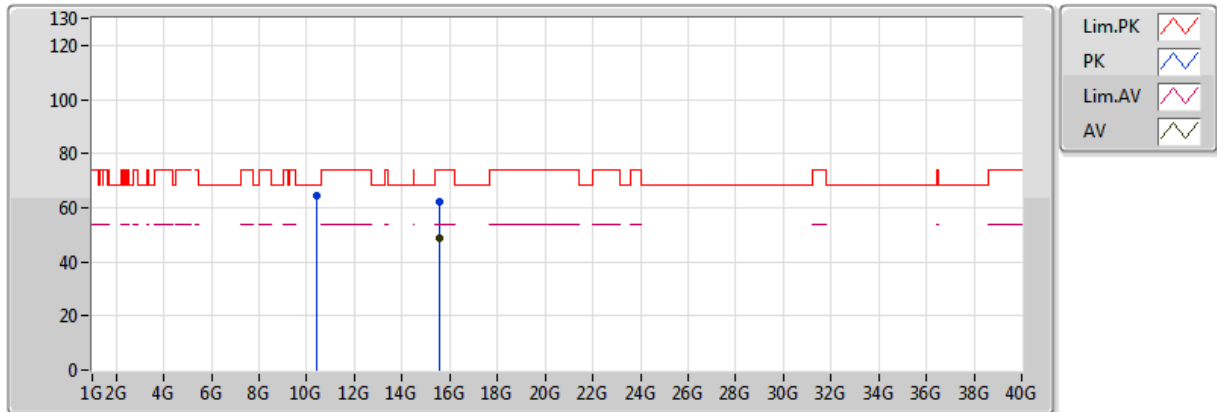


20171003
EUT Y_2TX_Dipole
Setting 22(Max Setting)
04-W-3
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments				
AV	15.599568G	48.75	54.00	-5.25	17.85	3	Vertical	188	2.89	-				
PK	10.397746G	63.84	68.20	-4.36	14.88	3	Vertical	188	1.84	-				
PK	15.600364G	62.80	74.00	-11.20	17.85	3	Vertical	188	2.89	-				

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5200MHz_TX

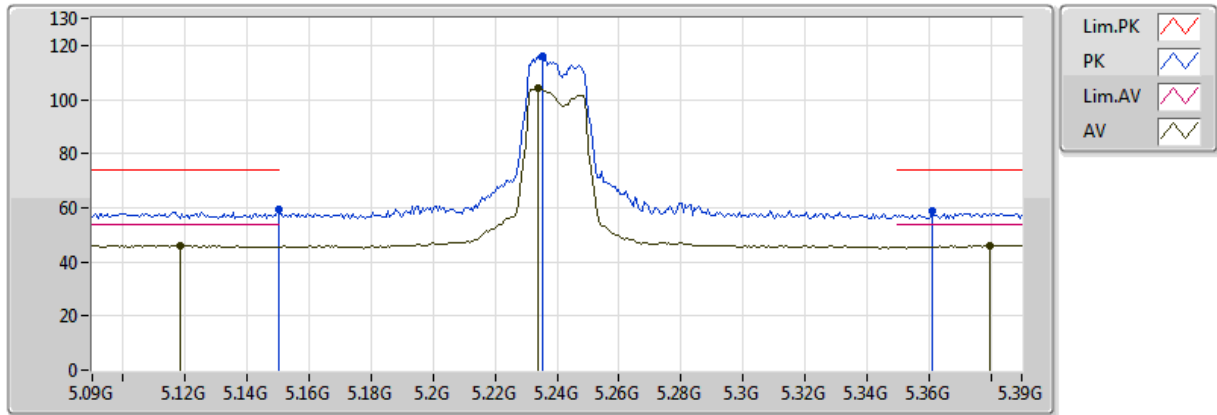


20171003
EUT Y_2TX_Dipole
Setting 22(Max Setting)
04-W-3
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments				
AV	15.5978G	49.02	54.00	-4.98	17.84	3	Horizontal	218	1.52	-				
PK	10.39992G	64.23	68.20	-3.97	14.89	3	Horizontal	167	1.81	-				
PK	15.5973G	62.44	74.00	-11.56	17.84	3	Horizontal	218	1.52	-				

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5240MHz_TX

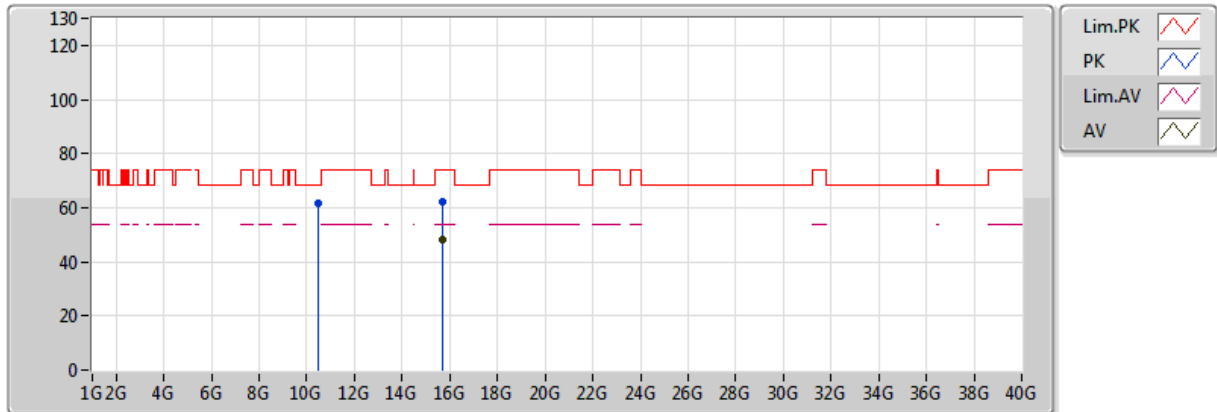


20171003
EUT Y_2TX_Dipole
Setting 22(Max Setting)
04-W-3-10
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments				
AV	5.1182G	46.02	54.00	-7.98	5.20	3	Vertical	177	1.84	-				
AV	5.234G	103.95	Inf	-Inf	5.53	3	Vertical	177	1.84	-				
AV	5.3798G	45.96	54.00	-8.04	5.68	3	Vertical	177	1.84	-				
PK	5.149995G	59.13	74.00	-14.87	5.31	3	Vertical	177	1.84	-				
PK	5.2352G	116.14	Inf	-Inf	5.53	3	Vertical	177	1.84	-				
PK	5.3612G	58.67	74.00	-15.33	5.66	3	Vertical	177	1.84	-				

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5240MHz_TX

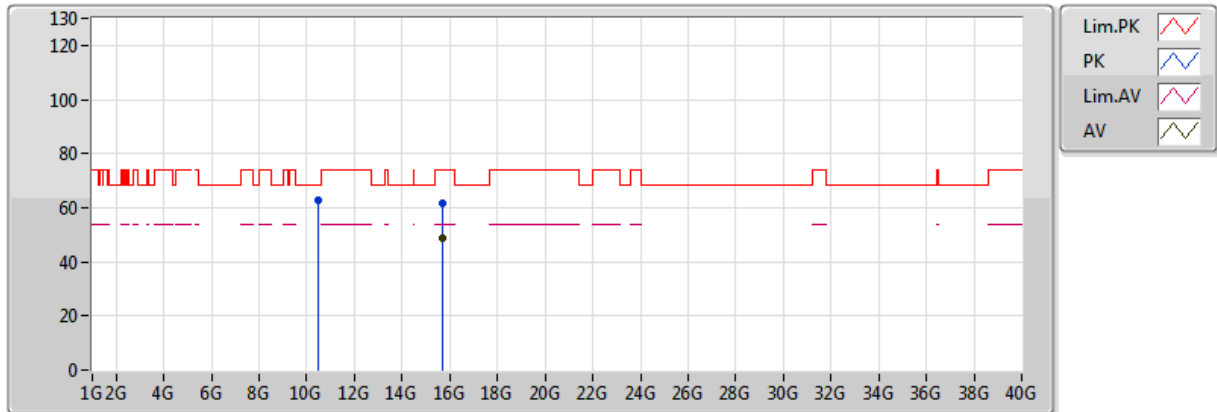


20171003
EUT Y_2TX_Dipole
Setting 22(Max Setting)
04-W-3
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments				
AV	15.72006G	48.15	54.00	-5.85	17.94	3	Vertical	229	1.11	-				
PK	10.47986G	61.56	68.20	-6.64	15.01	3	Vertical	178	1.81	-				
PK	15.71914G	62.25	74.00	-11.75	17.94	3	Vertical	229	1.11	-				

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5240MHz_TX

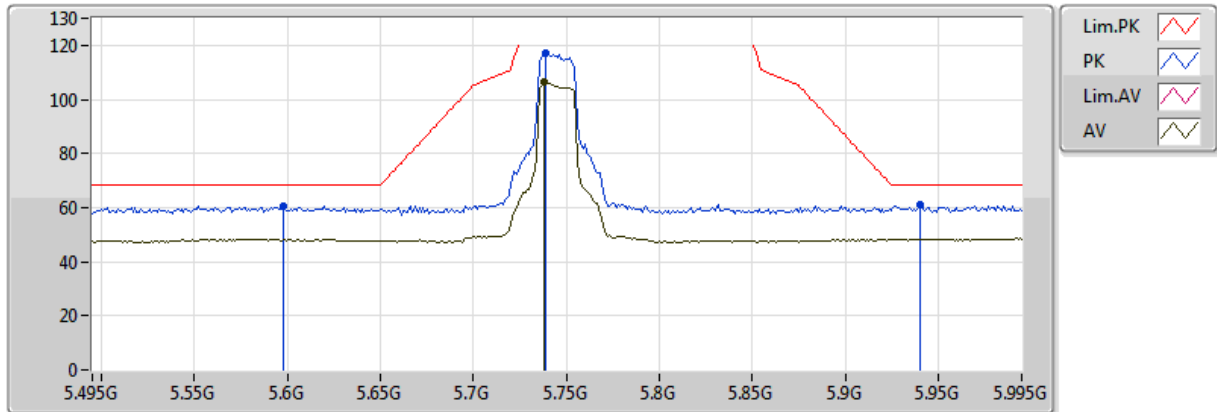


20171003
EUT Y_2TX_Dipole
Setting 22(Max Setting)
04-W-3
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments				
AV	15.7171G	48.52	54.00	-5.48	17.94	3	Horizontal	60	1.99	-				
PK	10.47996G	62.81	68.20	-5.39	15.01	3	Horizontal	172	1.62	-				
PK	15.7191G	61.49	74.00	-12.51	17.94	3	Horizontal	60	1.99	-				

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5745MHz_TX

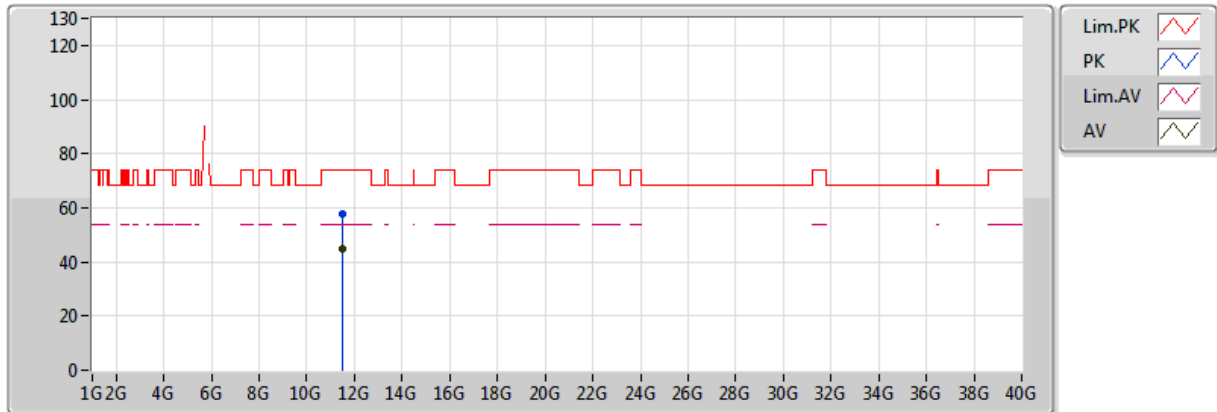


20171003
EUT Y_2TX_Dipole
Setting 22(Max Setting)
04-W-3-10
FSP(100142)

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	106.20	Inf	-Inf	7.05	3	Vertical	173	1.64	-				
PK	5.598G	60.73	68.20	-7.47	6.77	3	Vertical	173	1.64	-				
PK	5.739G	117.12	Inf	-Inf	7.05	3	Vertical	173	1.64	-				
PK	5.94G	61.19	68.20	-7.01	8.09	3	Vertical	173	1.64	-				

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5745MHz_TX

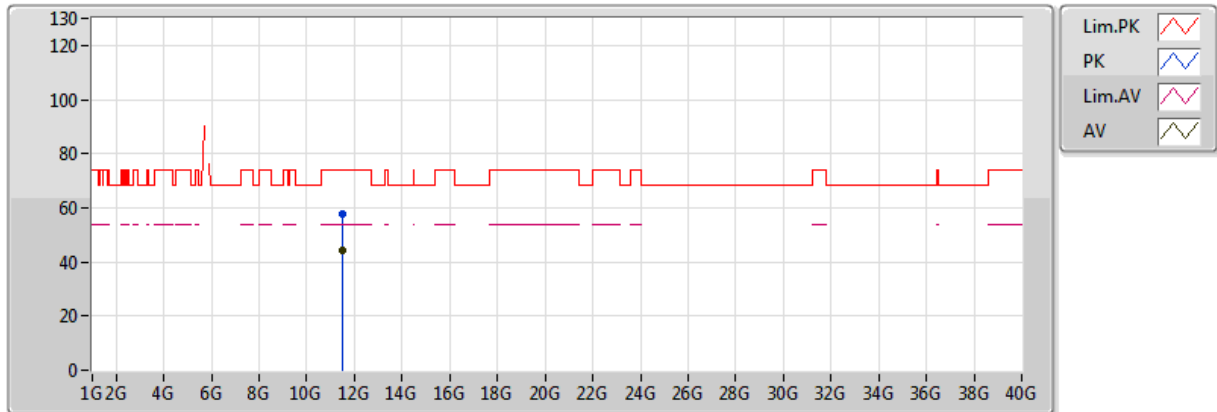


20171003
EUT Y_2TX_Dipole
Setting 22(Max Setting)
04-W-3
FSP(100142)

Type	Freq	Level	Limit	Margin	Factor	Dist	Pol.	Azimuth	Height	Comments				
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)	(H/V)	(°)	(m)					
AV	11.49388G	44.82	54.00	-9.18	16.13	3	Vertical	194	1.49	-				
PK	11.49356G	57.80	74.00	-16.20	16.13	3	Vertical	194	1.49	-				

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5745MHz_TX

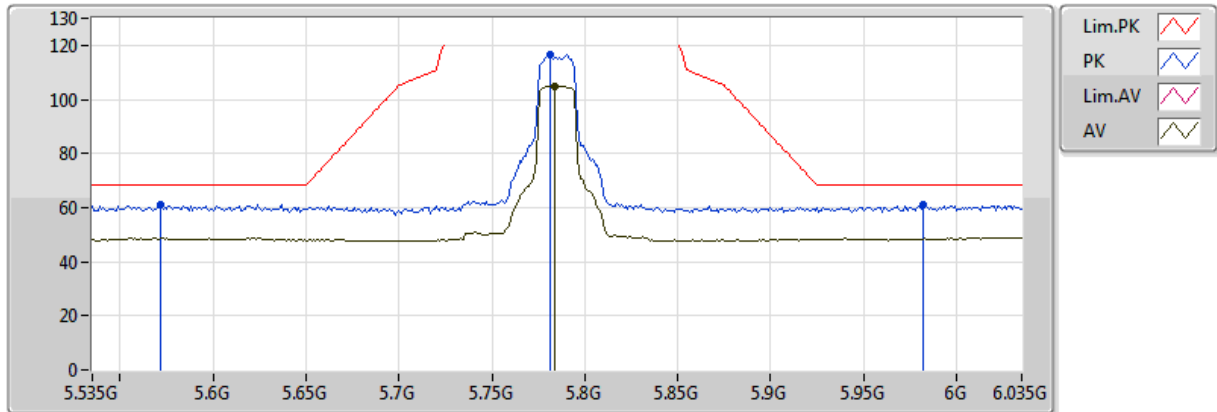


20171003
EUT Y_2TX_Dipole
Setting 22(Max Setting)
04-W-3
FSP(100142)

Type	Freq	Level	Limit	Margin	Factor	Dist	Pol.	Azimuth	Height	Comments				
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)	(H/V)	(°)	(m)					
AV	11.49434G	44.16	54.00	-9.84	16.13	3	Horizontal	17	1.30	-				
PK	11.49424G	57.62	74.00	-16.38	16.13	3	Horizontal	17	1.30	-				

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5785MHz_TX

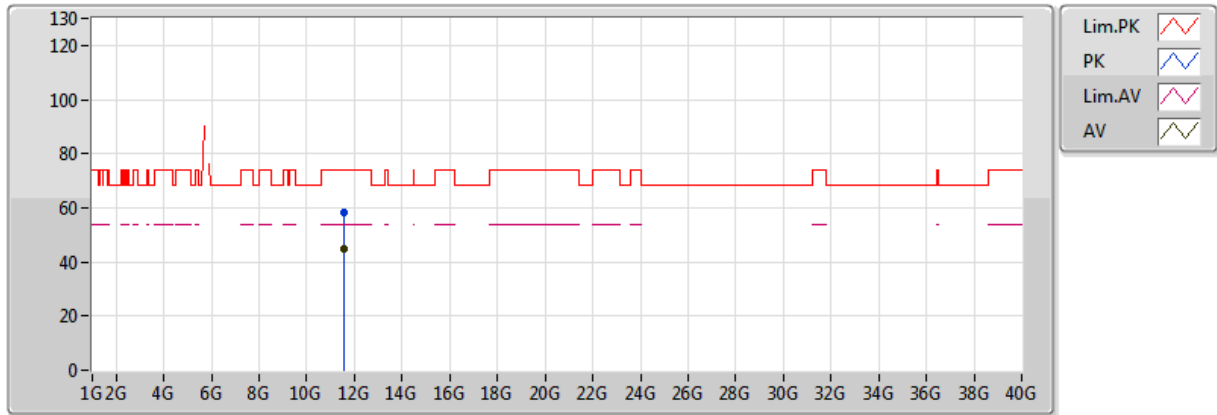


20171003
EUT Y_2TX_Dipole
Setting 22(Max Setting)
04-W-3-10
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments				
AV	5.784G	104.90	Inf	-Inf	7.15	3	Vertical	183	1.64	-				
PK	5.572G	61.26	68.20	-6.94	6.61	3	Vertical	183	1.64	-				
PK	5.781G	116.41	Inf	-Inf	7.14	3	Vertical	183	1.64	-				
PK	5.982G	61.21	68.20	-6.99	8.36	3	Vertical	183	1.64	-				

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5785MHz_TX

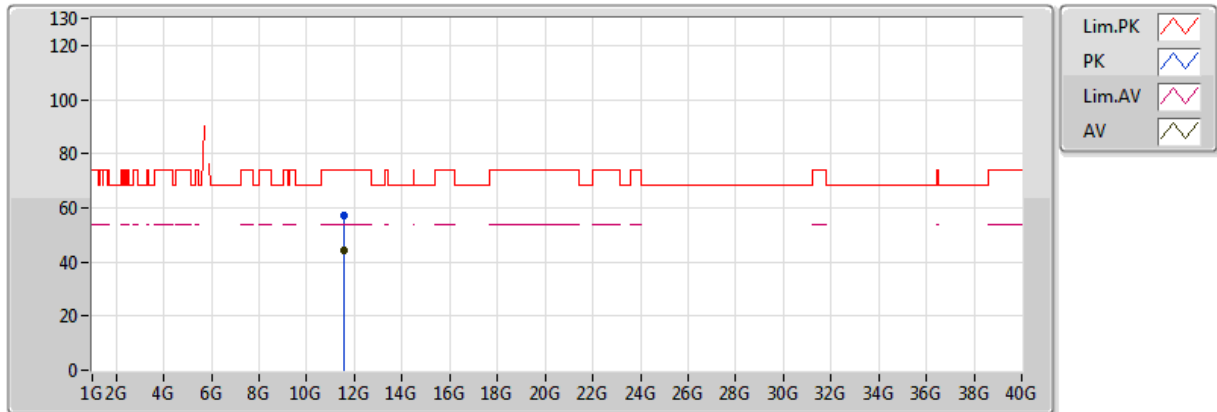


20171003
EUT Y_2TX_Dipole
Setting 22(Max Setting)
04-W-3
FSP(100142)

Type	Freq	Level	Limit	Margin	Factor	Dist	Pol.	Azimuth	Height	Comments				
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)	(H/V)	(°)	(m)					
AV	11.57278G	44.74	54.00	-9.26	16.18	3	Vertical	336	1.47	-				
PK	11.57104G	58.06	74.00	-15.94	16.18	3	Vertical	336	1.47	-				

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5785MHz_TX

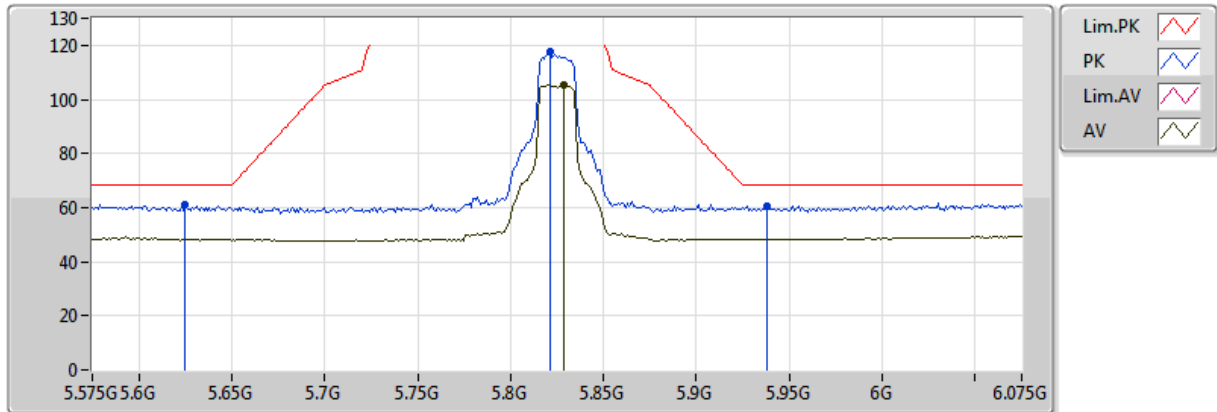


20171003
EUT Y_2TX_Dipole
Setting 22(Max Setting)
04-W-3
FSP(100142)

Type	Freq	Level	Limit	Margin	Factor	Dist	Pol.	Azimuth	Height	Comments				
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)	(H/V)	(°)	(m)					
AV	11.57282G	44.30	54.00	-9.70	16.18	3	Horizontal	72	2.24	-				
PK	11.56714G	57.24	74.00	-16.76	16.17	3	Horizontal	72	2.24	-				

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5825MHz_TX

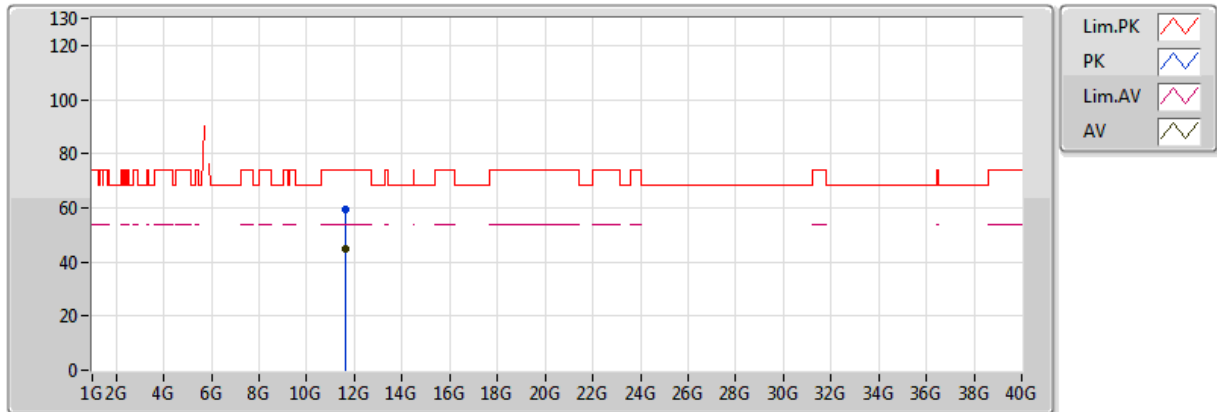


20171003
EUT Y_2TX_Dipole
Setting 22(Max Setting)
04-W-3-10
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments				
AV	5.829G	105.21	Inf	-Inf	7.37	3	Vertical	356	1.89	-				
PK	5.625G	60.83	68.20	-7.37	6.83	3	Vertical	356	1.89	-				
PK	5.821G	117.57	Inf	-Inf	7.32	3	Vertical	356	1.89	-				
PK	5.938G	60.38	68.20	-7.82	8.08	3	Vertical	356	1.89	-				

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5825MHz_TX

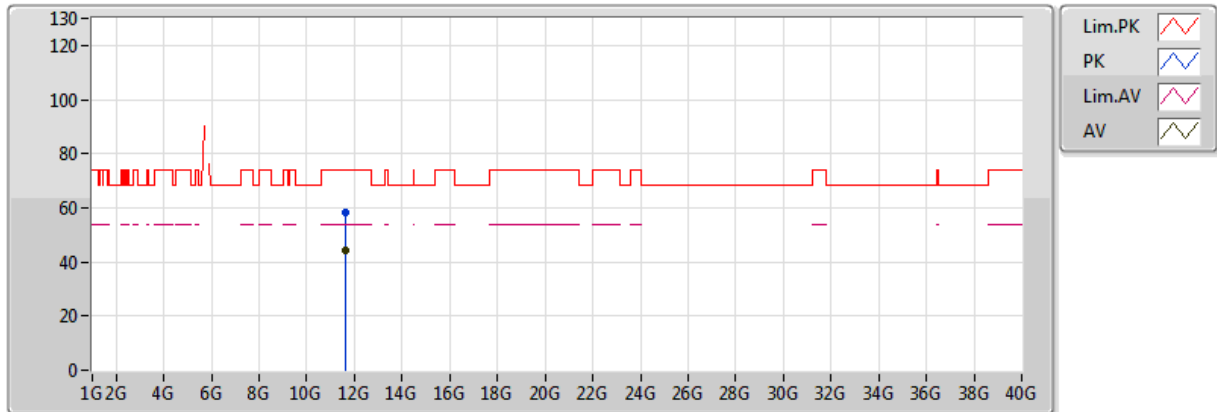


20171003
EUT Y_2TX_Dipole
Setting 22(Max Setting)
04-W-3
FSP(100142)

Type	Freq	Level	Limit	Margin	Factor	Dist	Pol.	Azimuth	Height	Comments				
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)	(H/V)	(°)	(m)					
AV	11.65216G	44.78	54.00	-9.22	16.23	3	Vertical	40	1.42	-				
PK	11.6471G	59.36	74.00	-14.64	16.23	3	Vertical	40	1.42	-				

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5825MHz_TX

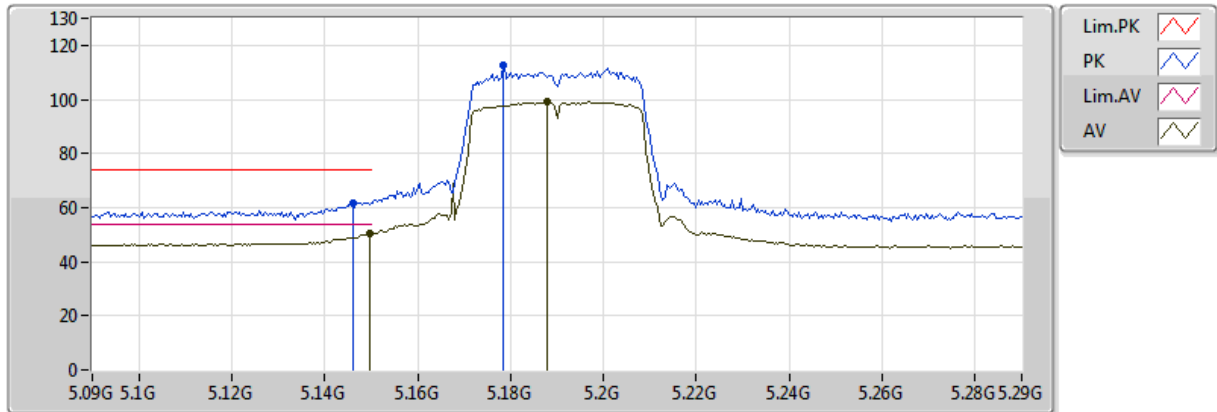


20171003
EUT Y_2TX_Dipole
Setting 22(Max Setting)
04-W-3
FSP(100142)

Type	Freq	Level	Limit	Margin	Factor	Dist	Pol.	Azimuth	Height	Comments				
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)	(H/V)	(°)	(m)					
AV	11.6497G	44.44	54.00	-9.56	16.23	3	Horizontal	284	1.37	-				
PK	11.65252G	58.30	74.00	-15.70	16.23	3	Horizontal	284	1.37	-				

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5190MHz_TX

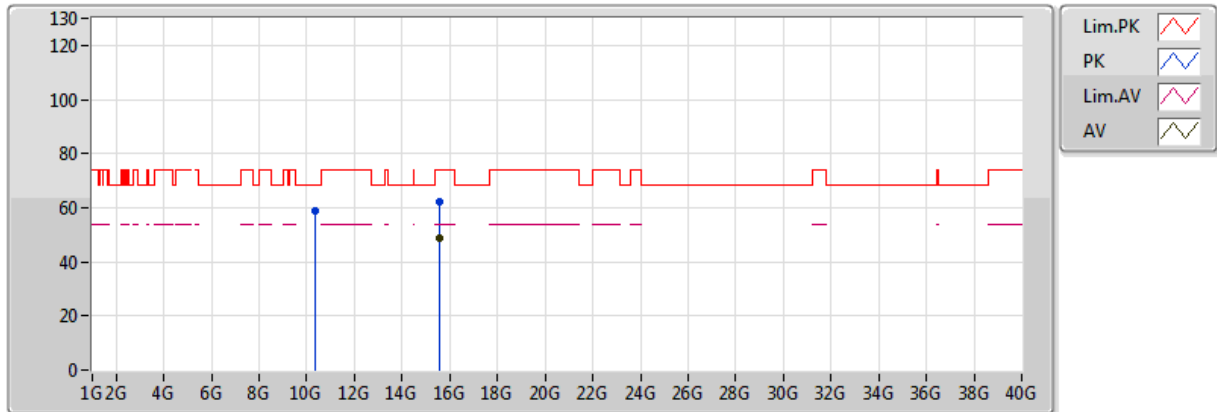


20171003
EUT Y_2TX_Dipole
Setting 22(Max Setting)
04-W-3-10
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments				
AV	5.1496G	50.22	54.00	-3.78	5.31	3	Vertical	343	1.50	-				
AV	5.188G	98.96	Inf	-Inf	5.45	3	Vertical	343	1.50	-				
PK	5.146G	61.89	74.00	-12.11	5.30	3	Vertical	343	1.50	-				
PK	5.1784G	112.67	Inf	-Inf	5.41	3	Vertical	343	1.50	-				

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5190MHz_TX

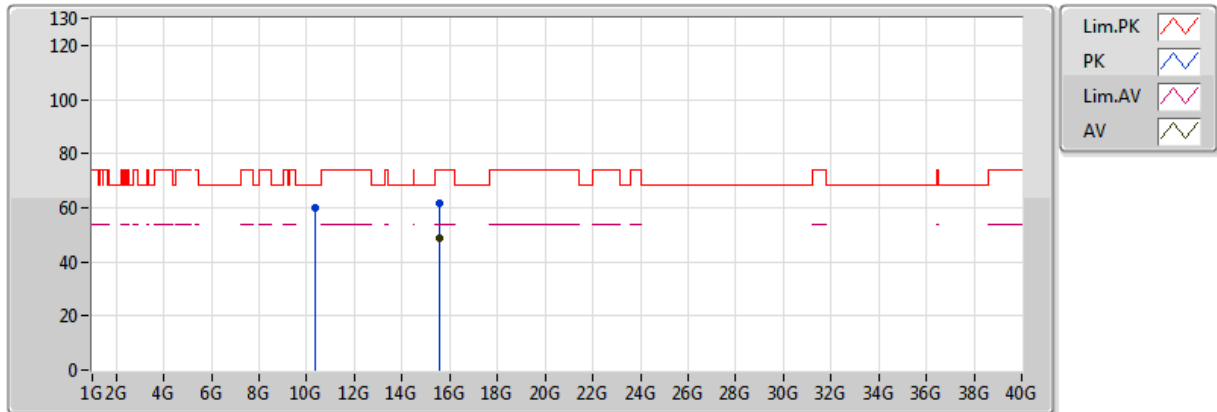


20171003
EUT Y_2TX_Dipole
Setting 22(Max Setting)
04-W-3
FSP(100142)

Type	Freq	Level	Limit	Margin	Factor	Dist	Pol.	Azimuth	Height	Comments				
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)	(H/V)	(°)	(m)					
AV	15.56923G	48.66	54.00	-5.34	17.82	3	Vertical	353	1.50	-				
PK	10.38055G	58.96	68.20	-9.24	14.86	3	Vertical	172	1.91	-				
PK	15.57175G	62.22	74.00	-11.78	17.82	3	Vertical	353	1.50	-				

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5190MHz_TX

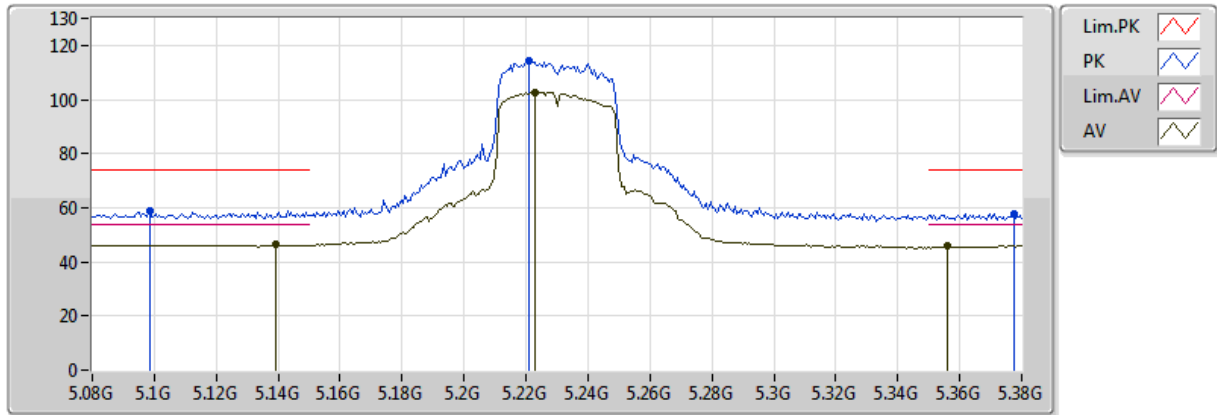


20171003
EUT Y_2TX_Dipole
Setting 22(Max Setting)
04-W-3
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments				
AV	15.57067G	48.75	54.00	-5.25	17.82	3	Horizontal	221	2.16	-				
PK	10.38008G	59.93	68.20	-8.27	14.86	3	Horizontal	173	1.50	-				
PK	15.57247G	61.90	74.00	-12.10	17.82	3	Horizontal	221	2.16	-				

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5230MHz_TX

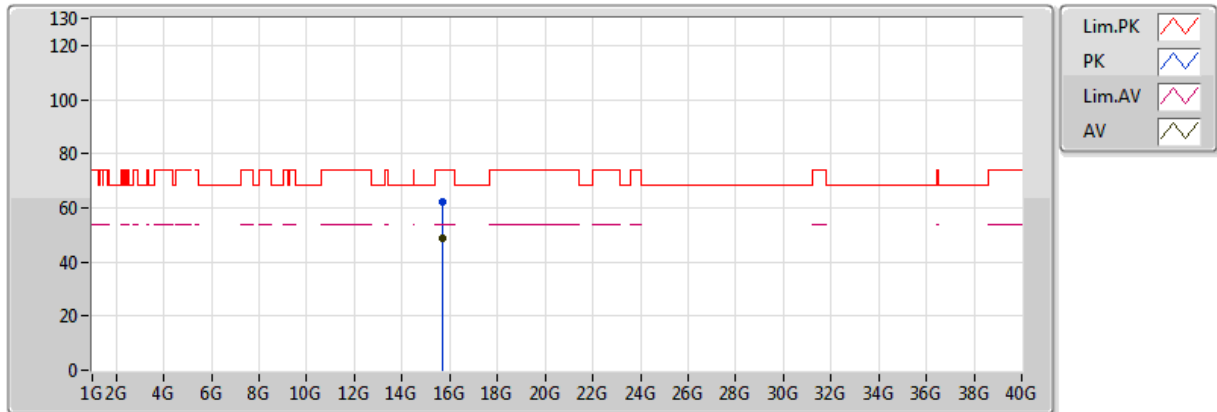


20171003
EUT Y_2TX_Dipole
Setting 22(Max Setting)
04-W-3-10
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments				
AV	5.1394G	46.27	54.00	-7.73	5.28	3	Vertical	163	1.50	-				
AV	5.2228G	102.81	Inf	-Inf	5.52	3	Vertical	163	1.50	-				
AV	5.356G	45.72	54.00	-8.28	5.66	3	Vertical	163	1.50	-				
PK	5.0986G	58.67	74.00	-15.33	5.13	3	Vertical	163	1.50	-				
PK	5.221G	114.35	Inf	-Inf	5.51	3	Vertical	163	1.50	-				
PK	5.3776G	57.93	74.00	-16.07	5.68	3	Vertical	163	1.50	-				

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5230MHz_TX

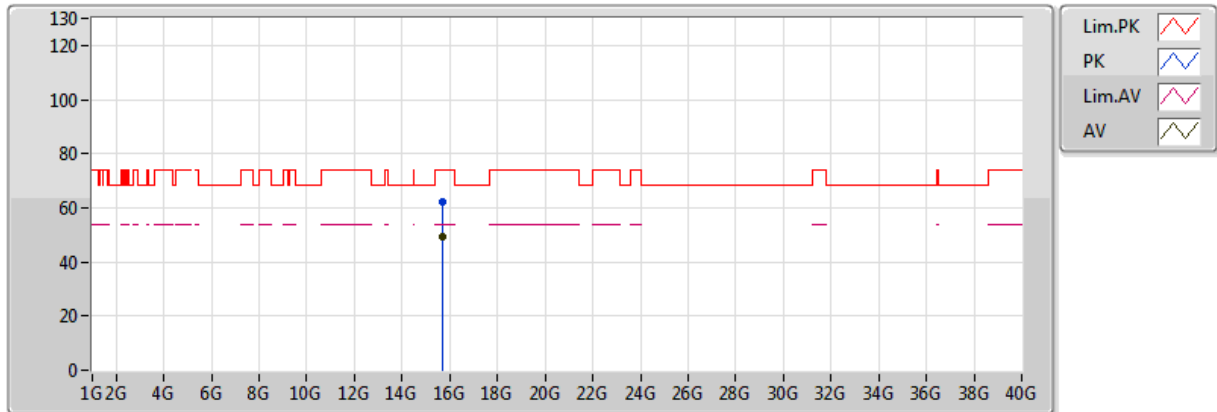


20171003
EUT Y_2TX_Dipole
Setting 22(Max Setting)
04-W-3
FSP(100142)

Type	Freq	Level	Limit	Margin	Factor	Dist	Pol.	Azimuth	Height	Comments				
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)	(H/V)	(°)	(m)					
AV	15.68616G	48.94	54.00	-5.06	17.92	3	Vertical	121	2.31	-				
PK	15.69486G	61.98	74.00	-12.02	17.92	3	Vertical	121	2.31	-				

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5230MHz_TX

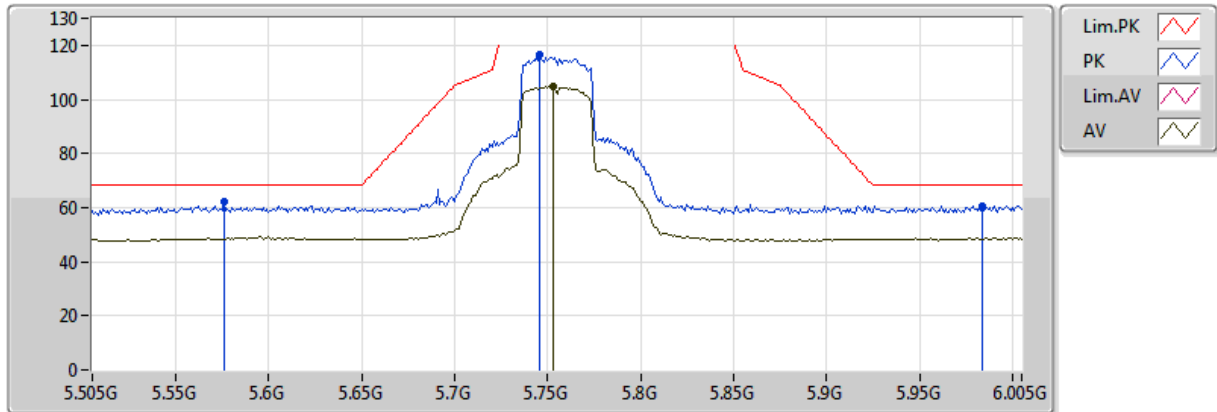


20171003
EUT Y_2TX_Dipole
Setting 22(Max Setting)
04-W-3
FSP(100142)

Type	Freq	Level	Limit	Margin	Factor	Dist	Pol.	Azimuth	Height	Comments				
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)	(H/V)	(°)	(m)					
AV	15.68748G	49.04	54.00	-4.96	17.92	3	Horizontal	29	2.16	-				
PK	15.68954G	62.08	74.00	-11.92	17.92	3	Horizontal	29	2.16	-				

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5755MHz_TX

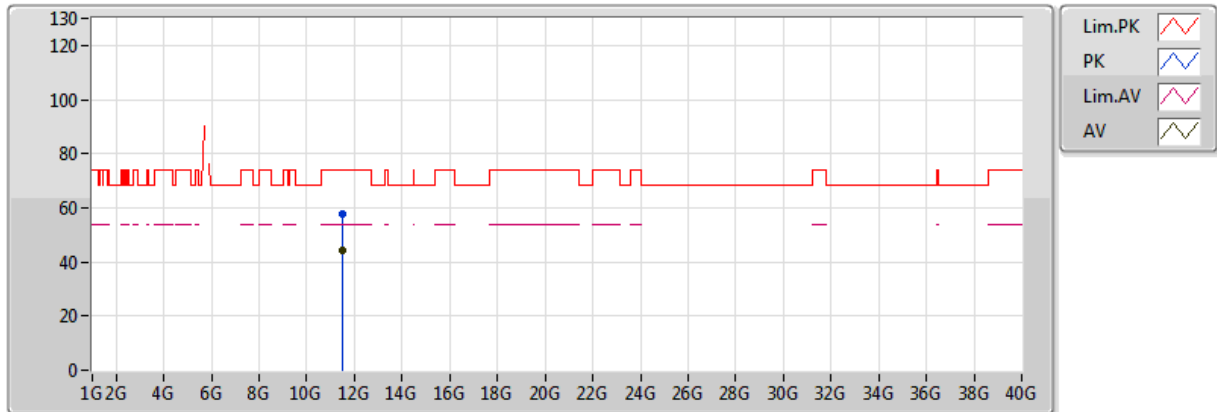


20171003
EUT Y_2TX_Dipole
Setting 22(Max Setting)
04-W-3-10
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
AV	5.753G	104.94	Inf	-Inf	7.08	3	Vertical	173	2.37	-
PK	5.576G	62.19	68.20	-6.01	6.63	3	Vertical	173	2.37	-
PK	5.746G	116.69	Inf	-Inf	7.07	3	Vertical	173	2.37	-
PK	5.984G	60.79	68.20	-7.41	8.38	3	Vertical	173	2.37	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5755MHz_TX

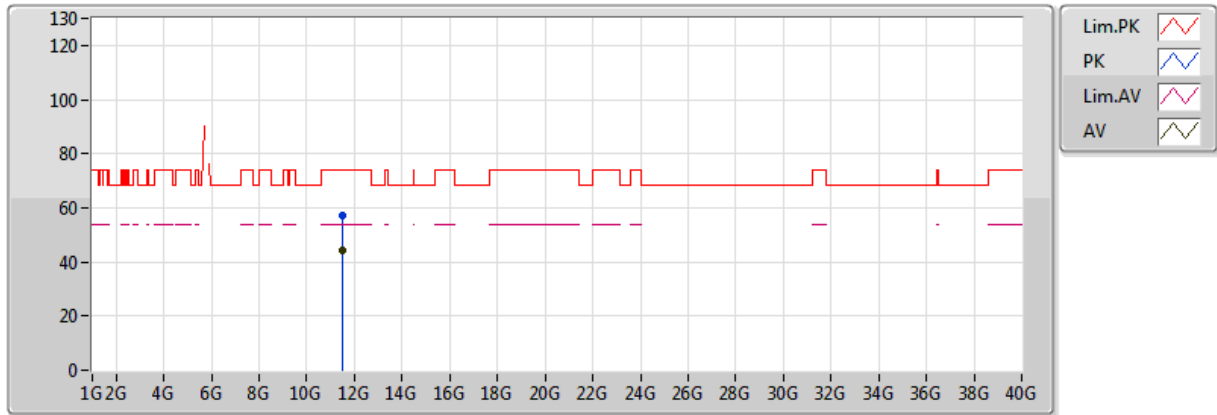


20171003
EUT Y_2TX_Dipole
Setting 22(Max Setting)
04-W-3
FSP(100142)

Type	Freq	Level	Limit	Margin	Factor	Dist	Pol.	Azimuth	Height	Comments				
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)	(H/V)	(°)	(m)					
AV	11.50522G	44.18	54.00	-9.82	16.13	3	Vertical	5	1.33	-				
PK	11.5099G	57.44	74.00	-16.56	16.14	3	Vertical	5	1.33	-				

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5755MHz_TX

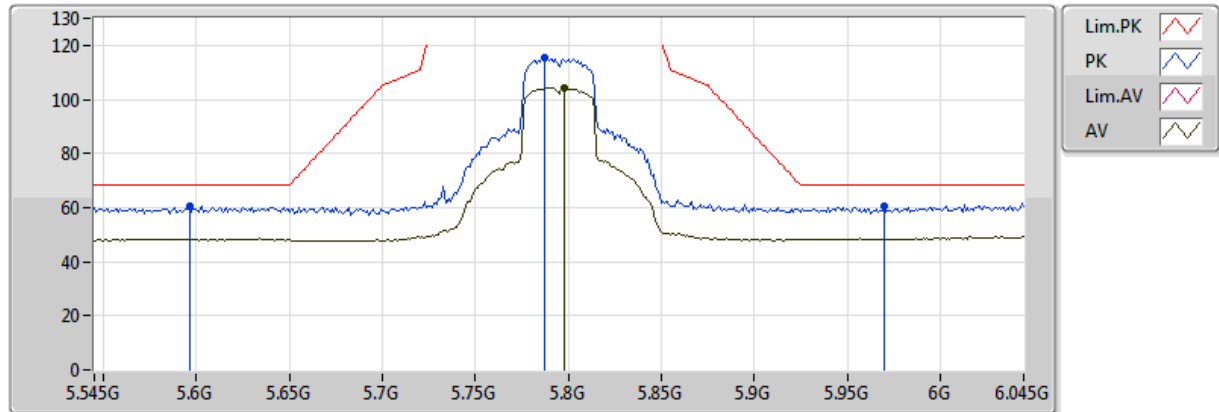


20171003
EUT Y_2TX_Dipole
Setting 22(Max Setting)
04-W-3
FSP(100142)

Type	Freq	Level	Limit	Margin	Factor	Dist	Pol.	Azimuth	Height	Comments				
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)	(H/V)	(°)	(m)					
AV	11.50598G	44.24	54.00	-9.76	16.13	3	Horizontal	337	2.12	-				
PK	11.50524G	57.32	74.00	-16.68	16.13	3	Horizontal	337	2.12	-				

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5795MHz_TX

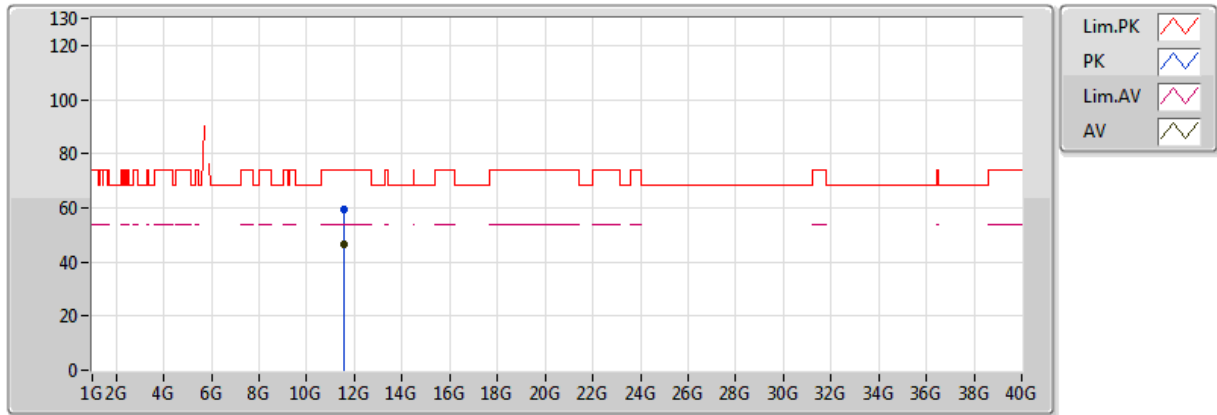


20171003
EUT Y_2TX_Dipole
Setting 22(Max Setting)
04-W-3-10
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments				
AV	5.798G	104.26	Inf	-Inf	7.18	3	Vertical	172	2.25	-				
PK	5.596G	60.43	68.20	-7.77	6.76	3	Vertical	172	2.25	-				
PK	5.787G	115.16	Inf	-Inf	7.15	3	Vertical	172	2.25	-				
PK	5.97G	60.47	68.20	-7.73	8.29	3	Vertical	172	2.25	-				

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5795MHz_TX

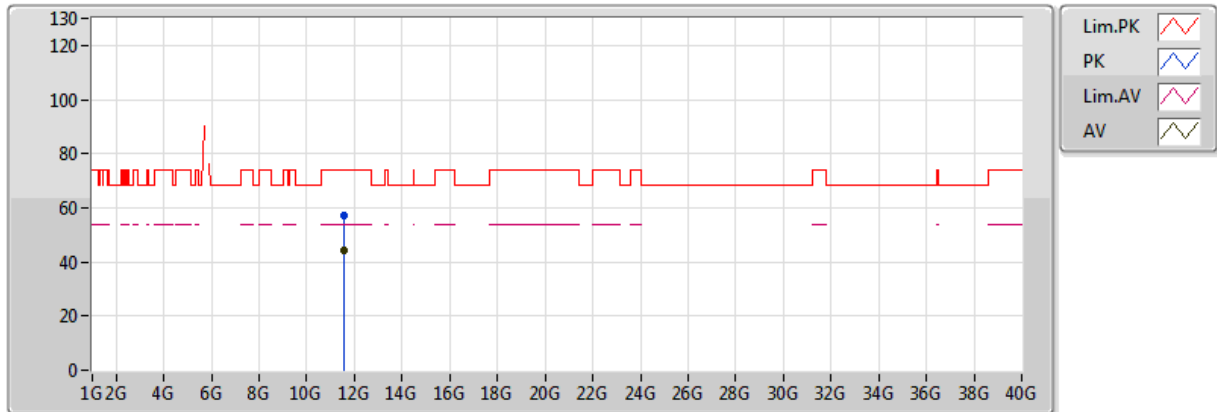


20171003
EUT Y_2TX_Dipole
Setting 22(Max Setting)
04-W-3
FSP(100142)

Type	Freq	Level	Limit	Margin	Factor	Dist	Pol.	Azimuth	Height	Comments				
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)	(H/V)	(°)	(m)					
AV	11.5902G	46.29	54.00	-7.71	16.19	3	Vertical	171	1.99	-				
PK	11.5873G	59.35	74.00	-14.65	16.19	3	Vertical	171	1.99	-				

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5795MHz_TX

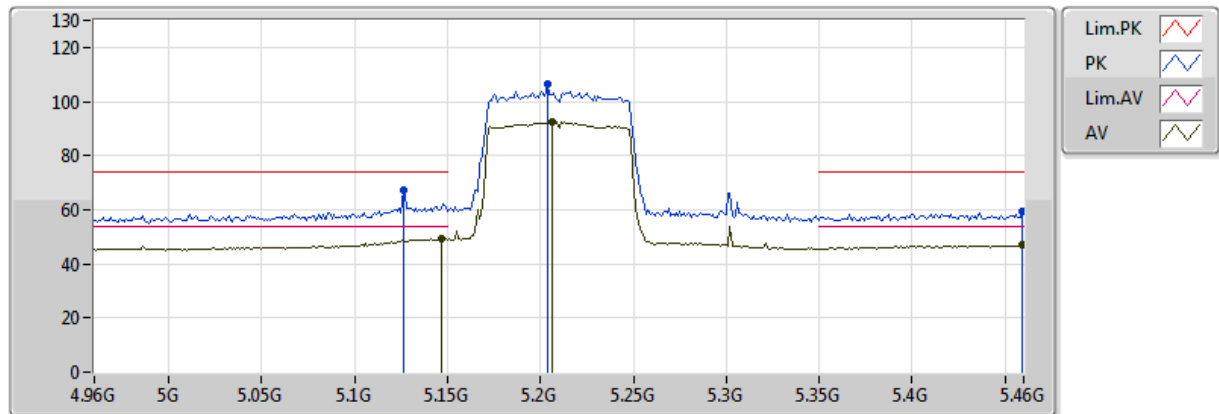


20171003
EUT Y_2TX_Dipole
Setting 22(Max Setting)
04-W-3
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments				
AV	11.5853G	44.51	54.00	-9.49	16.19	3	Horizontal	240	1.13	-				
PK	11.5872G	57.27	74.00	-16.73	16.19	3	Horizontal	240	1.13	-				

802.11ac VHT80-BF_Nss1,(MCS0)_2TX

5210MHz_TX

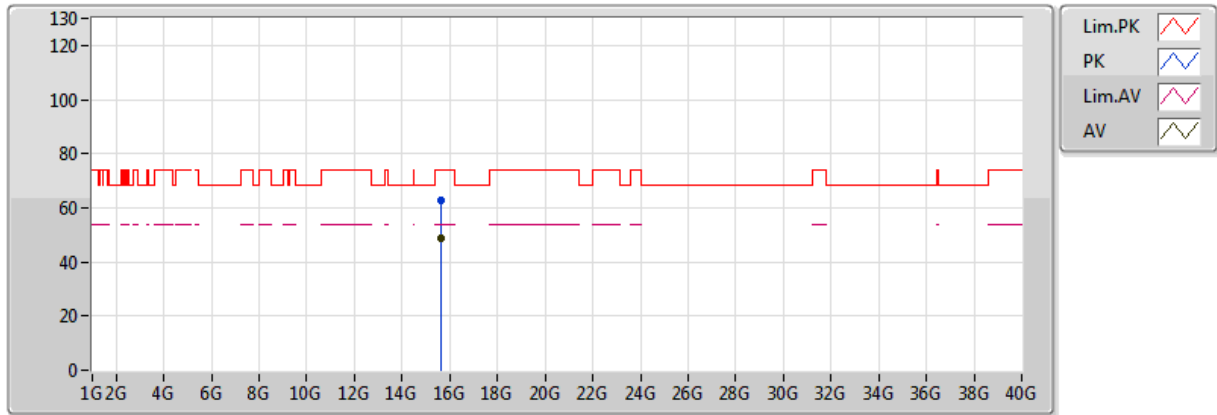


20171003
EUT Y_2TX_Dipole
Setting 22(Max Setting)
04-W-3-10
FSP(100142)

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	49.17	54.00	-4.83	5.30	3	Vertical	1	1.50	-				
AV	5.206G	92.42	Inf	-Inf	5.50	3	Vertical	1	1.50	-				
AV	5.459G	46.83	54.00	-7.17	5.97	3	Vertical	1	1.50	-				
PK	5.126G	67.31	74.00	-6.69	5.23	3	Vertical	1	1.50	-				
PK	5.204G	106.23	Inf	-Inf	5.49	3	Vertical	1	1.50	-				
PK	5.459G	59.50	74.00	-14.50	5.97	3	Vertical	1	1.50	-				

802.11ac VHT80-BF_Nss1,(MCS0)_2TX

5210MHz_TX

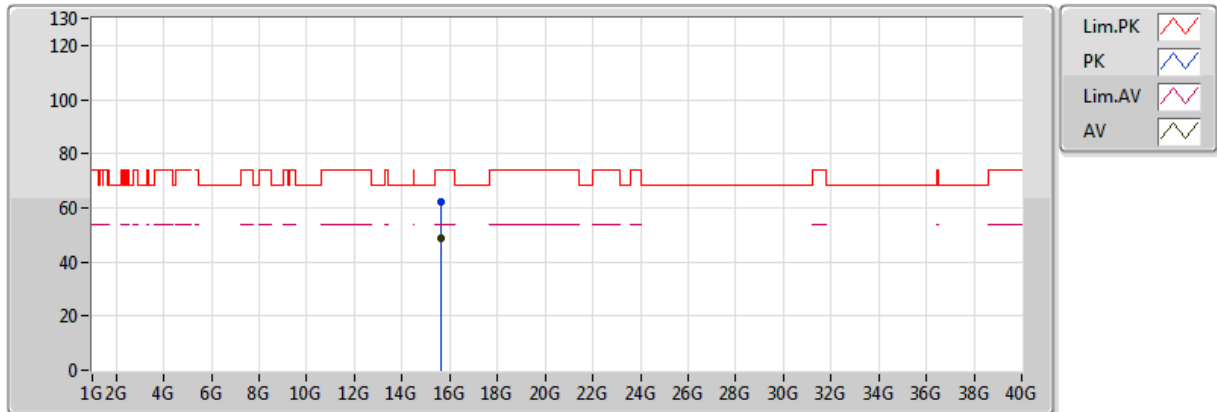


20171003
EUT Y_2TX_Dipole
Setting 22(Max Setting)
04-W-3
FSP(100142)

Type	Freq	Level	Limit	Margin	Factor	Dist	Pol.	Azimuth	Height	Comments				
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)	(H/V)	(°)	(m)					
AV	15.62919G	48.87	54.00	-5.13	17.87	3	Vertical	218	1.41	-				
PK	15.62816G	63.02	74.00	-10.98	17.87	3	Vertical	218	1.41	-				

802.11ac VHT80-BF_Nss1,(MCS0)_2TX

5210MHz_TX

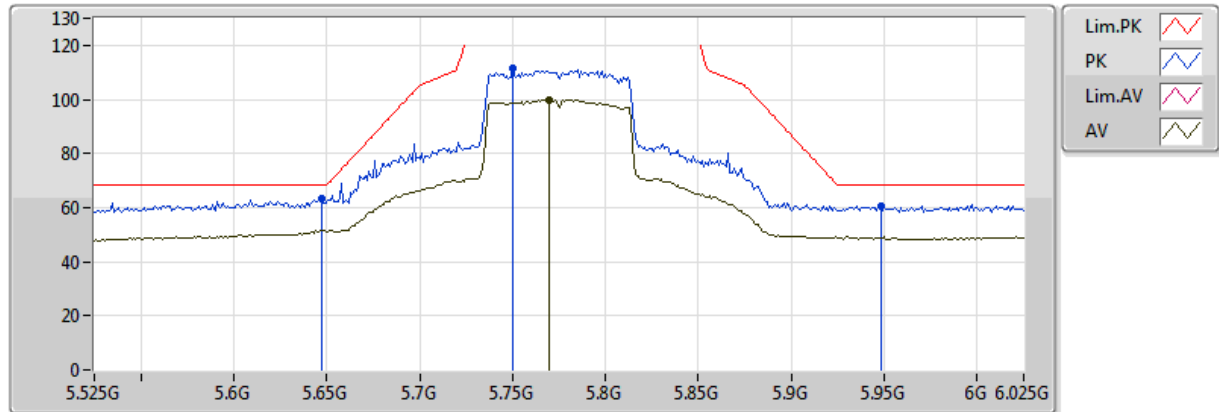


20171003
EUT Y_2TX_Dipole
Setting 22(Max Setting)
04-W-3
FSP(100142)

Type	Freq	Level	Limit	Margin	Factor	Dist	Pol.	Azimuth	Height	Comments				
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)	(H/V)	(°)	(m)					
AV	15.62824G	48.78	54.00	-5.22	17.87	3	Horizontal	200	2.43	-				
PK	15.62985G	62.04	74.00	-11.96	17.87	3	Horizontal	200	2.43	-				

802.11ac VHT80-BF_Nss1,(MCS0)_2TX

5775MHz_TX

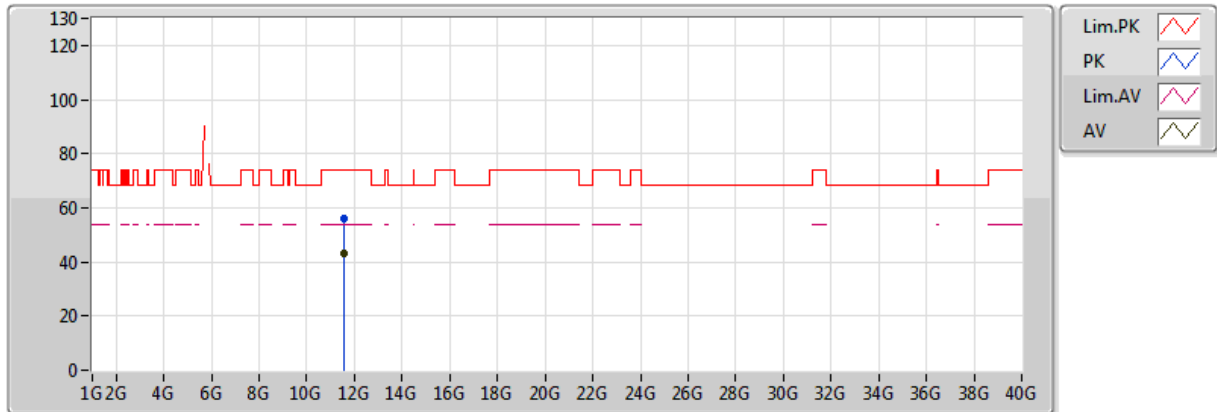


20171003
EUT Y_2TX_Dipole
Setting 22(Max Setting)
04-W-3-10
FSP(100142)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments				
AV	5.77G	99.85	Inf	-Inf	7.12	3	Vertical	166	2.16	-				
PK	5.647G	63.34	68.20	-4.86	6.87	3	Vertical	166	2.16	-				
PK	5.75G	111.67	Inf	-Inf	7.08	3	Vertical	166	2.16	-				
PK	5.948G	60.67	68.20	-7.53	8.14	3	Vertical	166	2.16	-				

802.11ac VHT80-BF_Nss1,(MCS0)_2TX

5775MHz_TX

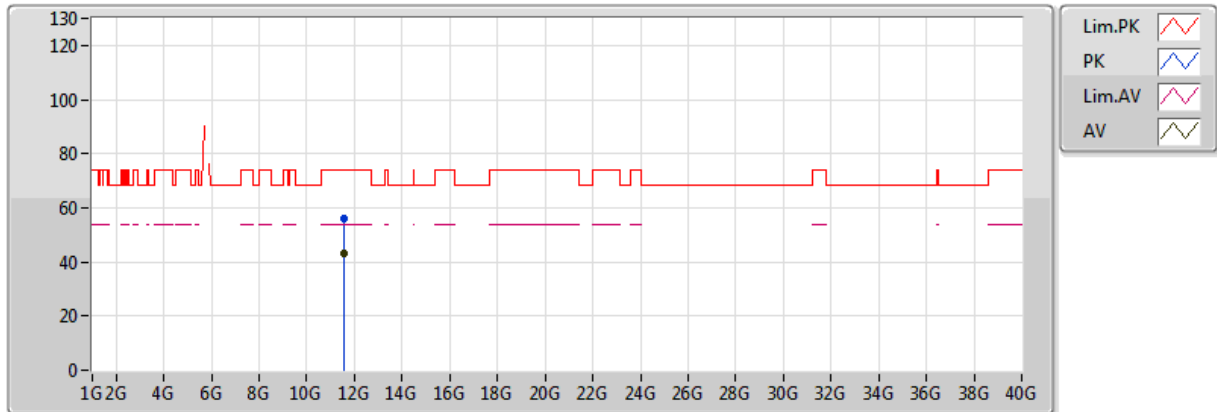


20171003
EUT Y_2TX_Dipole
Setting 22(Max Setting)
04-W-3
FSP(100142)

Type	Freq	Level	Limit	Margin	Factor	Dist	Pol.	Azimuth	Height	Comments				
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)	(H/V)	(°)	(m)					
AV	11.55198G	43.24	54.00	-10.76	16.16	3	Vertical	251	1.65	-				
PK	11.5506G	56.21	74.00	-17.79	16.16	3	Vertical	251	1.65	-				

802.11ac VHT80-BF_Nss1,(MCS0)_2TX

5775MHz_TX



20171003
EUT Y_2TX_Dipole
Setting 22(Max Setting)
04-W-3
FSP(100142)

Type	Freq	Level	Limit	Margin	Factor	Dist	Pol.	Azimuth	Height	Comments				
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)	(H/V)	(°)	(m)					
AV	11.54824G	43.04	54.00	-10.96	16.16	3	Horizontal	344	2.31	-				
PK	11.55193G	56.31	74.00	-17.69	16.16	3	Horizontal	344	2.31	-				

Mode: 20 MHz / Port 1
Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5200 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5199.9874	5199.9866	5199.9865	5199.9856
110.00	5199.9873	5199.9869	5199.9866	5199.9859
93.50	5199.9865	5199.9859	5199.9855	5199.9847
Max. Deviation (MHz)	0.0135	0.0141	0.0145	0.0153
Max. Deviation (ppm)	2.60	2.71	2.79	2.94
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5200 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-30	5199.9955	5199.9950	5199.9949	5199.9948
-20	5199.9943	5199.9939	5199.9934	5199.9927
-10	5199.9926	5199.9916	5199.9906	5199.9897
0	5199.9906	5199.9904	5199.9895	5199.9888
10	5199.9893	5199.9888	5199.9886	5199.9878
20	5199.9873	5199.9863	5199.9855	5199.9848
30	5199.9867	5199.9858	5199.9857	5199.9852
40	5199.9850	5199.9844	5199.9836	5199.9827
50	5199.9833	5199.9829	5199.9822	5199.9812
60	5199.9830	5199.9820	5199.9815	5199.9806
70	5199.9849	5199.9847	5199.9838	5199.9837
Max. Deviation (MHz)	0.0151	0.0156	0.0164	0.0173
Max. Deviation (ppm)	2.90	3.00	3.15	3.33
Result	Pass			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5785 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5784.9878	5784.9873	5784.9868	5784.9865
110.00	5784.9873	5784.9865	5784.9864	5784.9860
93.50	5784.9867	5784.9857	5784.9849	5784.9842
Max. Deviation (MHz)	0.0133	0.0143	0.0151	0.0158
Max. Deviation (ppm)	2.30	2.47	2.61	2.73
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5785 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-30	5784.9927	5784.9920	5784.9918	5784.9916
-20	5784.9907	5784.9897	5784.9896	5784.9891
-10	5784.9893	5784.9886	5784.9879	5784.9876
0	5784.9885	5784.9882	5784.9880	5784.9877
10	5784.9882	5784.9881	5784.9876	5784.9869
20	5784.9873	5784.9872	5784.9868	5784.9863
30	5784.9867	5784.9862	5784.9856	5784.9852
40	5784.9866	5784.9857	5784.9852	5784.9847
50	5784.9853	5784.9843	5784.9834	5784.9826
60	5784.9837	5784.9830	5784.9824	5784.9816
70	5784.9828	5784.9819	5784.9815	5784.9809
Max. Deviation (MHz)	0.0172	0.0181	0.0185	0.0191
Max. Deviation (ppm)	2.97	3.13	3.20	3.30
Result	Pass			

Mode: 40 MHz / Port 1

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5190 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5189.9877	5189.9876	5189.9871	5189.9864
110.00	5189.9873	5189.9864	5189.9860	5189.9859
93.50	5189.9868	5189.9859	5189.9857	5189.9855
Max. Deviation (MHz)	0.0132	0.0141	0.0143	0.0145
Max. Deviation (ppm)	2.54	2.72	2.76	2.79
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5190 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-30	5189.9927	5189.9926	5189.9917	5189.9908
-20	5189.9911	5189.9903	5189.9898	5189.9894
-10	5189.9908	5189.9905	5189.9899	5189.9890
0	5189.9895	5189.9886	5189.9884	5189.9880
10	5189.9881	5189.9874	5189.9868	5189.9867
20	5189.9873	5189.9865	5189.9856	5189.9847
30	5189.9867	5189.9857	5189.9853	5189.9849
40	5189.9855	5189.9852	5189.9849	5189.9841
50	5189.9839	5189.9836	5189.9831	5189.9822
60	5189.9832	5189.9828	5189.9818	5189.9808
70	5189.9814	5189.9812	5189.9808	5189.9798
Max. Deviation (MHz)	0.0186	0.0188	0.0192	0.0202
Max. Deviation (ppm)	3.58	3.62	3.70	3.89
Result	Pass			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5755 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5754.9878	5754.9877	5754.9871	5754.9864
110.00	5754.9873	5754.9863	5754.9854	5754.9844
93.50	5754.9865	5754.9855	5754.9848	5754.9839
Max. Deviation (MHz)	0.0135	0.0145	0.0152	0.0161
Max. Deviation (ppm)	2.35	2.52	2.64	2.80
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5755 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-30	5754.9910	5754.9906	5754.9901	5754.9895
-20	5754.9909	5754.9904	5754.9898	5754.9890
-10	5754.9901	5754.9900	5754.9893	5754.9887
0	5754.9889	5754.9887	5754.9878	5754.9876
10	5754.9877	5754.9875	5754.9866	5754.9858
20	5754.9873	5754.9863	5754.9857	5754.9853
30	5754.9867	5754.9862	5754.9856	5754.9854
40	5754.9855	5754.9845	5754.9836	5754.9828
50	5754.9850	5754.9847	5754.9839	5754.9837
60	5754.9837	5754.9832	5754.9827	5754.9823
70	5754.9826	5754.9820	5754.9817	5754.9810
Max. Deviation (MHz)	0.0174	0.0180	0.0183	0.0190
Max. Deviation (ppm)	3.02	3.13	3.18	3.30
Result	Pass			

Mode: 80 MHz / Port 1
Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5210 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5209.9875	5209.9871	5209.9864	5209.9856
110.00	5209.9873	5209.9868	5209.9859	5209.9857
93.50	5209.9868	5209.9858	5209.9852	5209.9845
Max. Deviation (MHz)	0.0132	0.0142	0.0148	0.0155
Max. Deviation (ppm)	2.53	2.73	2.84	2.98
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5210 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-30	5209.9949	5209.9943	5209.9942	5209.9941
-20	5209.9934	5209.9927	5209.9921	5209.9916
-10	5209.9915	5209.9912	5209.9910	5209.9905
0	5209.9895	5209.9886	5209.9882	5209.9875
10	5209.9875	5209.9870	5209.9860	5209.9853
20	5209.9873	5209.9872	5209.9863	5209.9858
30	5209.9867	5209.9862	5209.9858	5209.9852
40	5209.9858	5209.9856	5209.9854	5209.9852
50	5209.9840	5209.9833	5209.9825	5209.9819
60	5209.9828	5209.9819	5209.9815	5209.9808
70	5209.9819	5209.9813	5209.9808	5209.9799
Max. Deviation (MHz)	0.0172	0.0181	0.0185	0.0192
Max. Deviation (ppm)	3.30	3.47	3.55	3.69
Result	Pass			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5775 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5774.9876	5774.9868	5774.9863	5774.9854
110.00	5774.9873	5774.9870	5774.9861	5774.9857
93.50	5774.9863	5774.9853	5774.9848	5774.9839
Max. Deviation (MHz)	0.0137	0.0147	0.0152	0.0161
Max. Deviation (ppm)	2.37	2.55	2.63	2.79
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5775 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-30	5774.9930	5774.9926	5774.9918	5774.9917
-20	5774.9918	5774.9908	5774.9901	5774.9894
-10	5774.9911	5774.9903	5774.9896	5774.9890
0	5774.9896	5774.9890	5774.9883	5774.9876
10	5774.9876	5774.9873	5774.9866	5774.9856
20	5774.9873	5774.9865	5774.9860	5774.9857
30	5774.9867	5774.9857	5774.9855	5774.9850
40	5774.9866	5774.9857	5774.9849	5774.9845
50	5774.9854	5774.9844	5774.9841	5774.9831
60	5774.9838	5774.9830	5774.9823	5774.9817
70	5774.9829	5774.9827	5774.9821	5774.9814
Max. Deviation (MHz)	0.0162	0.0170	0.0177	0.0183
Max. Deviation (ppm)	2.81	2.94	3.06	3.17
Result	Pass			

