



FCC Test Report

Equipment : DBDC ROUTER
Brand Name : Charter
Model No. : RAC2V1K
FCC ID : H8NRAC2V1K
Standard : 47 CFR FCC Part 15.407
Operating Band : 5150 MHz – 5250 MHz
5725 MHz – 5850 MHz
Applicant : Askey Computer Corp.
10F, NO.119, JIANKANG RD., ZHONGHE DIST., NEW
TAIPEI CITY 23585, TAIWAN
Manufacturer : Askey Computer Corp.
10F, NO.119, JIANKANG RD., ZHONGHE DIST., NEW
TAIPEI CITY 23585, TAIWAN
Function : ☐ Outdoor; ☒ Indoor; ☐ Fixed P2P
☐ Client

The product sample received on Feb. 15, 2017 and completely tested on Feb. 24, 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.

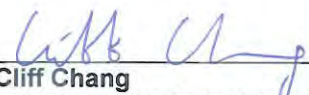

Cliff Chang
SPORTON INTERNATIONAL INC.



Table of Contents

1	GENERAL DESCRIPTION	5
1.1	Information.....	5
1.2	Testing Applied Standards	7
1.3	Testing Location Information	7
1.4	Measurement Uncertainty	8
2	TEST CONFIGURATION OF EUT	9
2.1	Test Channel Mode	9
2.2	The Worst Case Measurement Configuration.....	10
2.3	EUT Operation during Test	11
2.4	Accessories	11
2.5	Support Equipment.....	11
2.6	Test Setup Diagram	12
3	TRANSMITTER TEST RESULT	15
3.1	AC Power-line Conducted Emissions	15
3.2	Emission Bandwidth	17
3.3	Maximum Conducted Output Power	18
3.4	Peak Power Spectral Density.....	20
3.5	Unwanted Emissions.....	23
3.6	Frequency Stability.....	27
4	TEST EQUIPMENT AND CALIBRATION DATA	28
APPENDIX A. TEST RESULTS OF AC POWER-LINE CONDUCTED EMISSIONS		
APPENDIX B. TEST RESULTS OF EMISSION BANDWIDTH		
APPENDIX C. TEST RESULTS OF MAXIMUM CONDUCTED OUTPUT POWER		
APPENDIX D. TEST RESULTS OF PEAK POWER SPECTRAL DENSITY		
APPENDIX E. TEST RESULTS OF UNWANTED EMISSIONS		
APPENDIX F. TEST RESULTS OF FREQUENCY STABILITY		
APPENDIX G. TEST RESULTS OF RADIATED EMISSION CO-LOCATION		
APPENDIX H. TEST PHOTOS		
PHOTOGRAPHS OF EUT V01		



Summary of Test Result

Conformance Test Specifications			
Report Clause	Ref. Std. Clause	Description	Result
1.1.3	15.203	Antenna Requirement	Complied
3.1	15.207	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

Revision History

[illegible]

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
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	4TX
5.15-5.25GHz	802.11n HT20	20	4TX
5.15-5.25GHz	802.11ac VHT20	20	4TX
5.15-5.25GHz	802.11n HT40	40	4TX
5.15-5.25GHz	802.11ac VHT40	40	4TX
5.15-5.25GHz	802.11ac VHT80	80	4TX
5.15-5.25GHz	802.11ac VHT80+80	80	4TX(Port 1/2)
5.725-5.85GHz	802.11a	20	4TX
5.725-5.85GHz	802.11n HT20	20	4TX
5.725-5.85GHz	802.11ac VHT20	20	4TX
5.725-5.85GHz	802.11n HT40	40	4TX
5.725-5.85GHz	802.11ac VHT40	40	4TX
5.725-5.85GHz	802.11ac VHT80	80	4TX
5.725-5.85GHz	802.11ac VHT80+80	80	4TX(Port 3/4)

Note:

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

1.1.2 Table for 80+80 MHz Mode

Type	Channel No.	Frequency
1	42+155	5210+5775 MHz

1.1.3 Antenna Information

Ant.	Brand	Part Number	Antenna Type	Connector	Gain (dBi)	Remark
1	Airgain	N2420GS	PCB Antenna	I-PEX	4.30	2.4GHz TX/RX
2	Airgain	N2420GS	PCB Antenna	I-PEX	3.40	2.4GHz TX/RX
3	Airgain	N2420GS	PCB Antenna	I-PEX	3.50	2.4GHz TX/RX
4	Airgain	N2420GS	PCB Antenna	I-PEX	4.20	2.4GHz TX/RX
5	Airgain	M5x05C (Longer)	PCB Antenna	I-PEX	5.00	5GHz TX/RX
6	Airgain	M5x05C	PCB Antenna	I-PEX	5.60	5GHz TX/RX
7	Airgain	M5x05C	PCB Antenna	I-PEX	4.50	5GHz TX/RX
8	Airgain	M5x05C (Longer)	PCB Antenna	I-PEX	4.10	5GHz TX/RX

Note: The EUT has eight antennas.

For 2.4GHz function (4TX/4RX):

Ant. 1 (P1), Ant. 2 (P2), Ant. 3 (P3) and Ant. 4 (P4) could transmit/receive simultaneously.

For 5GHz function (4TX/4RX):

Ant. 5 (P1), Ant. 6 (P2), Ant. 7 (P3) and Ant. 8 (P4) could transmit/receive simultaneously.

1.1.4 Mode Test Duty Cycle

Mode	DC	DCF(dB)
802.11a	0.969	0.137
802.11ac VHT20	0.988	0.052
802.11ac VHT40	0.976	0.106
802.11ac VHT80	0.934	0.297
802.11ac VHT80+80	0.975	0.11

1.1.5 EUT Operational Condition

EUT Power Type	From power adapter			
Beamforming Function	☒	With beamforming	☐	Without beamforming
	The product has beamforming function for 802.11n/ac.			

Note: There are two functions of EUT, one is beamforming function, and the other is non-beamforming function for 802.11n/ac. The non-beamforming function was tested and recorded in this report, and the beamforming function was tested and recorded in Report No. : FR711935-01AD.

1.2 Testing Applied Standards

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

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

1.3 Testing Location Information

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

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH01-CB	Serway Li	22°C / 55%	Feb. 20, 2017~Feb. 24, 2017
Radiated	03CH01-CB	Jay Luo	22°C / 54%	Feb. 15, 2017~Feb. 24, 2017
AC Conduction	CO01-CB	Deven Huang	23°C / 66%	Feb. 17, 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	9.74×10^{-8}	Confidence levels of 95%
Frequency Stability	6.06×10^{-8}	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
802.11a_(6Mbps)_4TX	-
5180MHz	17.5
5200MHz	17.5
5240MHz	18
5745MHz	23.5
5785MHz	23.5
5825MHz	23.5
802.11ac VHT20_Nss1,(MCS0)_4TX	-
5180MHz	17.5
5200MHz	17.5
5240MHz	18
5745MHz	23.5
5785MHz	24
5825MHz	24
802.11ac VHT40_Nss1,(MCS0)_4TX	-
5190MHz	18
5230MHz	21
5755MHz	23.5
5795MHz	24
802.11ac VHT80_Nss1,(MCS0)_4TX	-
5210MHz	15
5775MHz	21
802.11ac VHT80+80_Nss1,(MCS0)_4TX	-
#5210MHz,5775MHz	19.5
5210MHz,#5775MHz	19.5
#5210MHz,5775MHz	25
5210MHz,#5775MHz	25

Note:

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

2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral
Operating Mode	Normal Link
1	EUT + Adapter 1
2	EUT + Adapter 2
For operating mode 1 is the worst case and it was record in this test report.	

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 + Adapter 1
2	EUT + Adapter 2
For operating mode 1 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis
Test Condition	Radiated measurement
Operating Mode	Normal Link
1	WLAN 2.4GHz+WLAN 5GHz
Refer to Sporton Test Report No.: FA711935-01 for Co-location RF Exposure Evaluation and Appendix G for Radiated Emission Co-location.	

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

2.3 EUT Operation during Test

For CTX Mode:

The EUT was programmed to be in continuously transmitting mode.

For Normal Link:

During the test, the EUT operation to normal function.

2.4 Accessories

Accessories				
No.	Equipment Name	Brand Name	Model No.	Rating
1	Adapter 1	Sunny	SYS1564-3012-W2	INPUT: 100-240Vac, 50-60Hz, 1.0A MAX. OUTPUT: 12Vdc, 2.5A
2	Adapter 2	Ktec	KSA-36W-120250HU	INPUT: 100-240Vac, 50/60Hz, 1.0A OUTPUT: 12Vdc, 2.5A

2.5 Support Equipment

For Test Site No: CO01-CB

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB*4	DELL	E6430	DoC
2	Flash disk3.0	Transcend	639205 7755	DoC

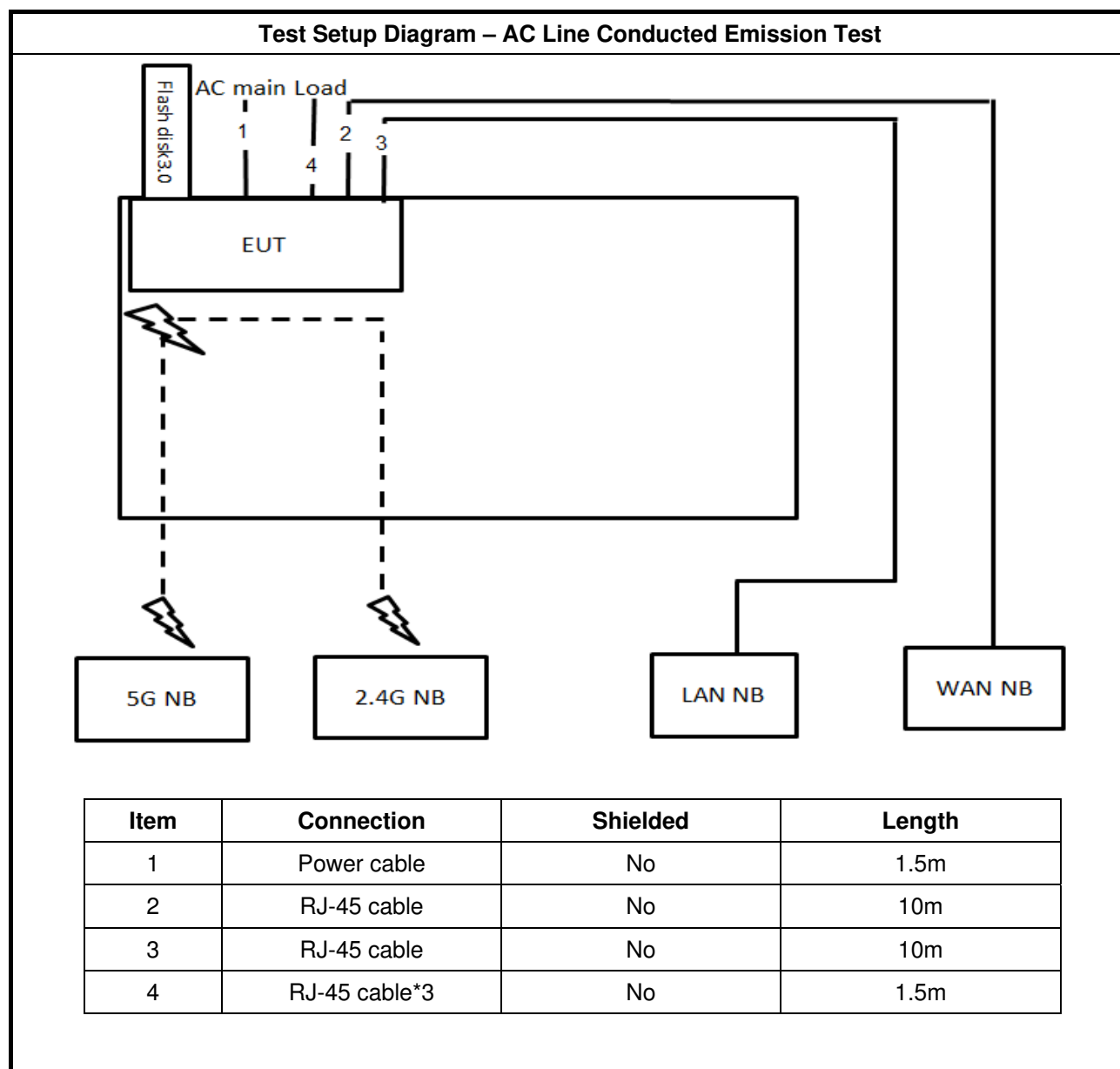
For Test Site No: 03CH01-CB (below 1GHz)

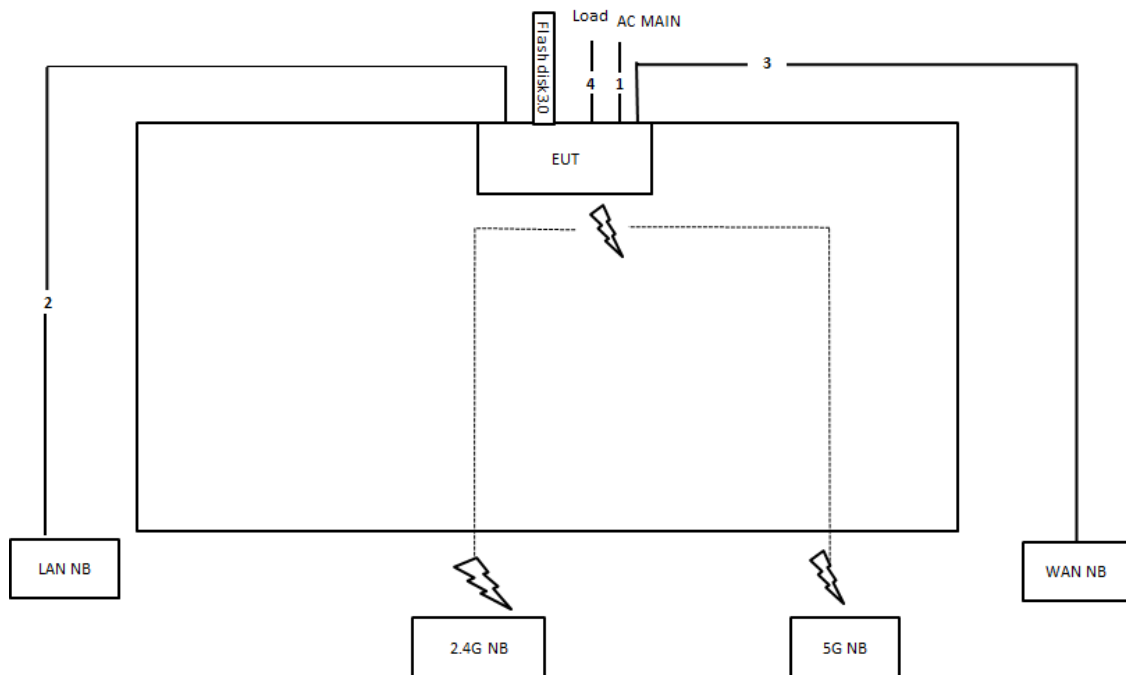
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB*4	DELL	E4300	DoC
2	Flash disk3.0	Transcend	JetFlash-700	DoC

For Test Site No: 03CH01-CB (above 1GHz) and TH01-CB

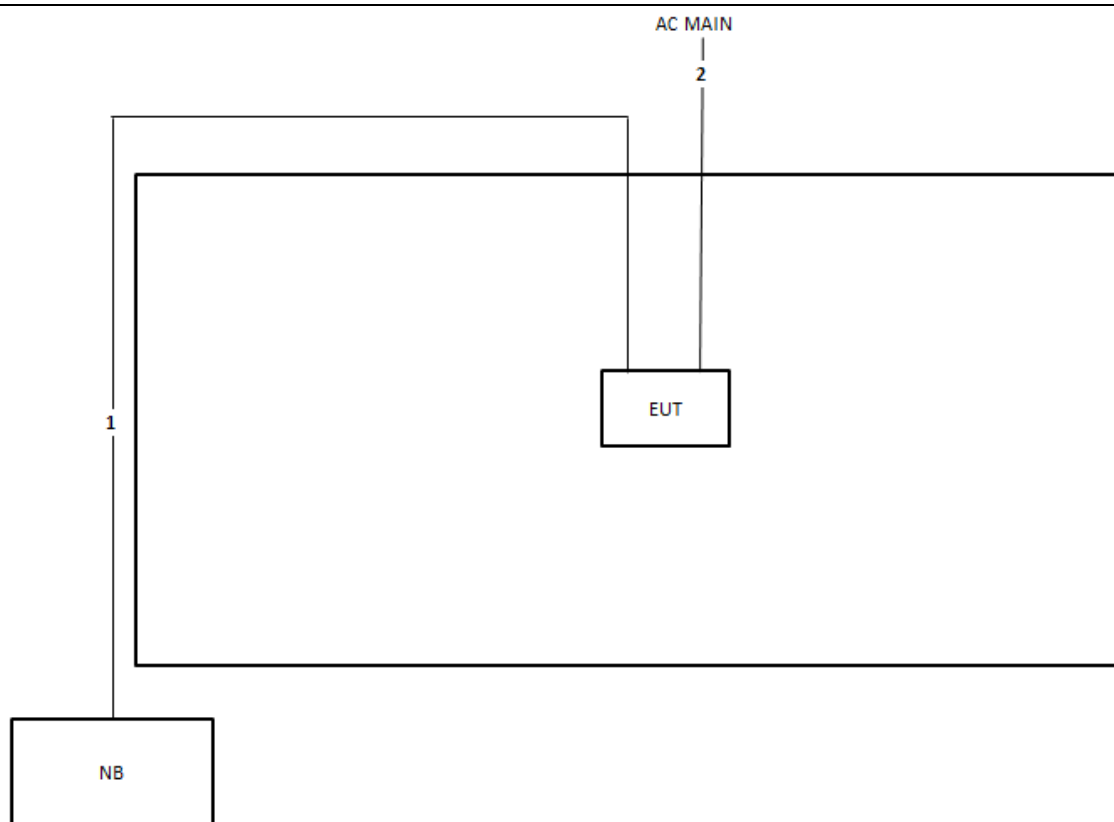
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E4300	DoC

2.6 Test Setup Diagram



Test Setup Diagram - Radiated Test < 1GHz


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

Test Setup Diagram - Radiated Test > 1GHz


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

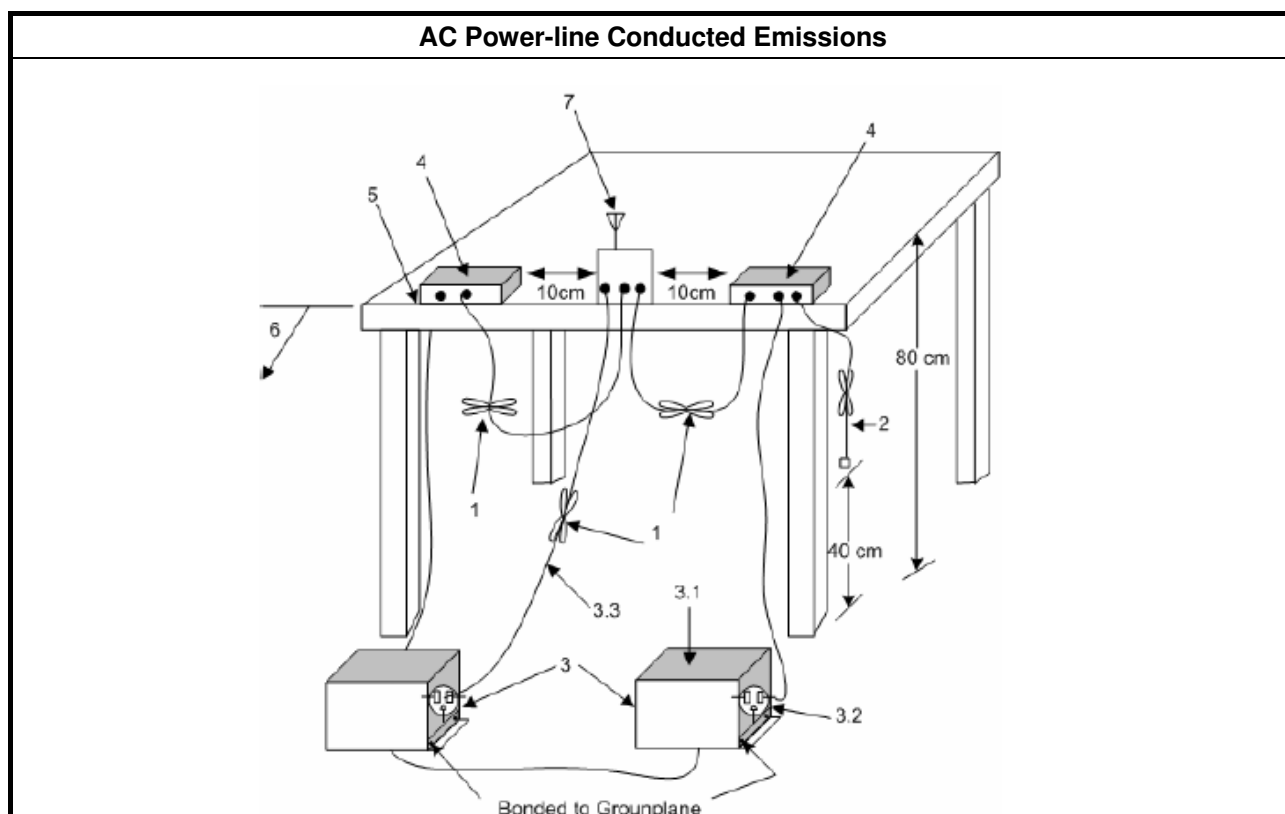
3.1.2 Measuring Instruments

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.

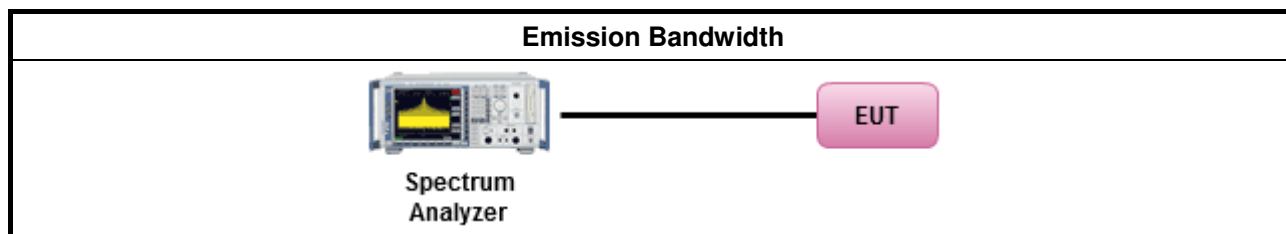
3.2.2 Measuring Instruments

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.	

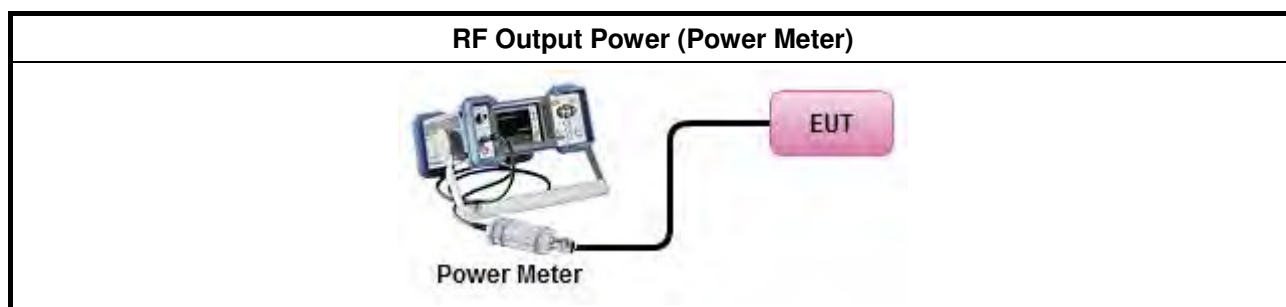
3.3.2 Measuring Instruments

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	
☒	For straddle channel and VHT80+80: 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	
☒	For other channel: 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 $0^\circ \leq \theta < 8^\circ$; $-13 - 0.716 (\theta - 8)$ dBW/MHz for $8^\circ \leq \theta < 40^\circ$; $-35.9 - 1.22 (\theta - 40)$ dBW/MHz for $40^\circ \leq \theta \leq 45^\circ$; -42 dBW/MHz for $\theta > 45^\circ$
☐ For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz and the e.i.r.p. peak power spectral density (PPSD) ≤ 17 dBm/MHz.	
☐ For the 5.725-5.85 GHz band:	
	- Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If $G_{TX} > 6$ dBi, then $PPSD = 30 - (G_{TX} - 6)$. - Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.
PPSD = peak power spectral density that he same method as used to determine the conducted output power shall be used to determine the power spectral density. And power spectral density in dBm/MHz G_{TX} = the maximum transmitting antenna directional gain in dBi.	

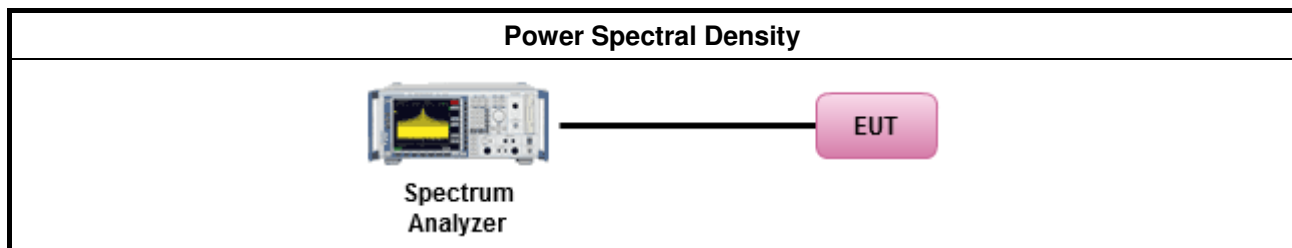
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

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

3.4.4 Test Setup





3.4.5 Test Result of Peak Power Spectral Density

Refer as Appendix D

3.5 Unwanted Emissions

3.5.1 Transmitter Radiated Unwanted Emissions Limit

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

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

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

Un-restricted band emissions above 1GHz Limit	
Operating Band	Limit
5.15 - 5.25 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.25 - 5.35 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.47 - 5.725 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.725 - 5.85 GHz	all emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

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

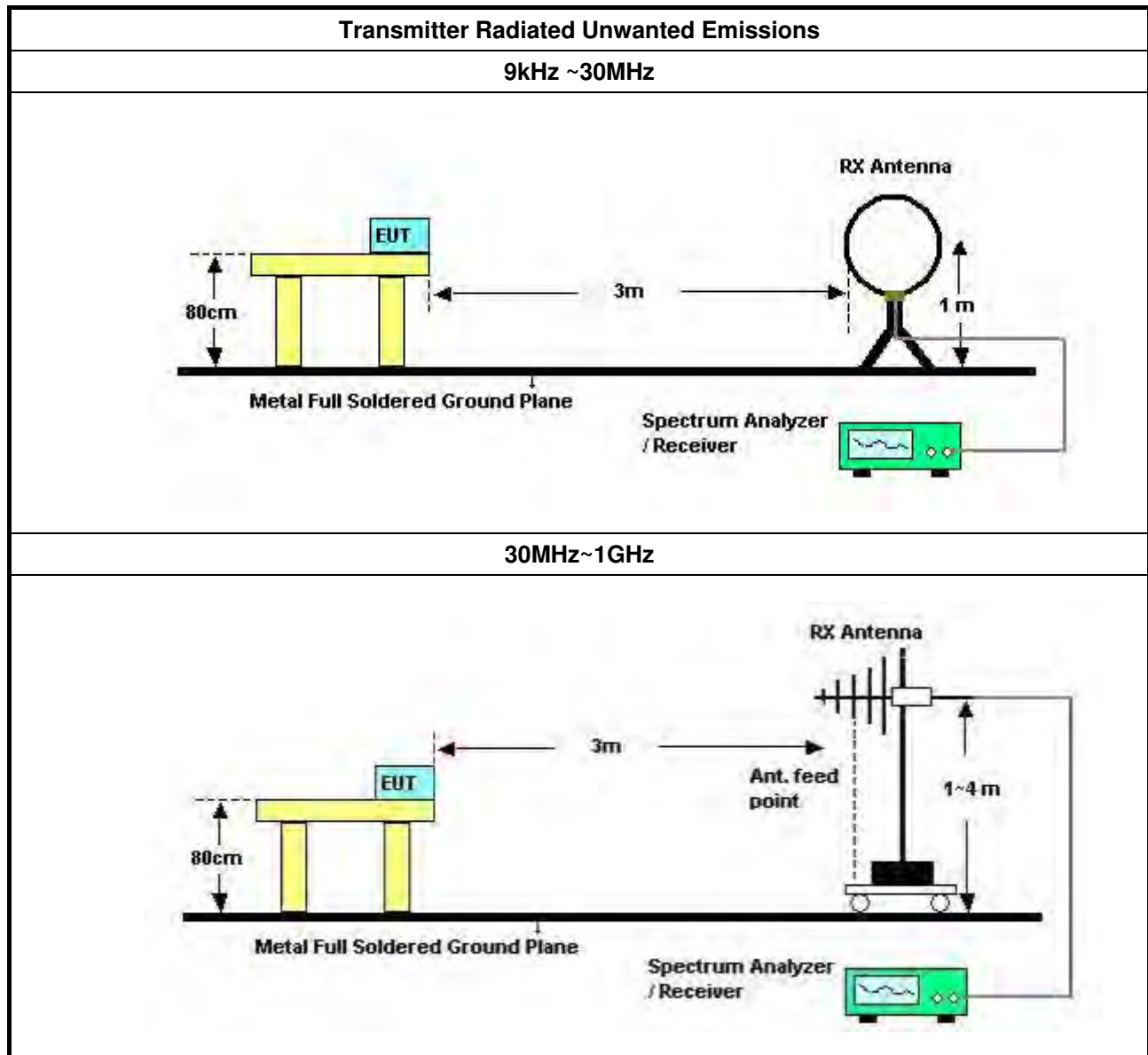
3.5.2 Measuring Instruments

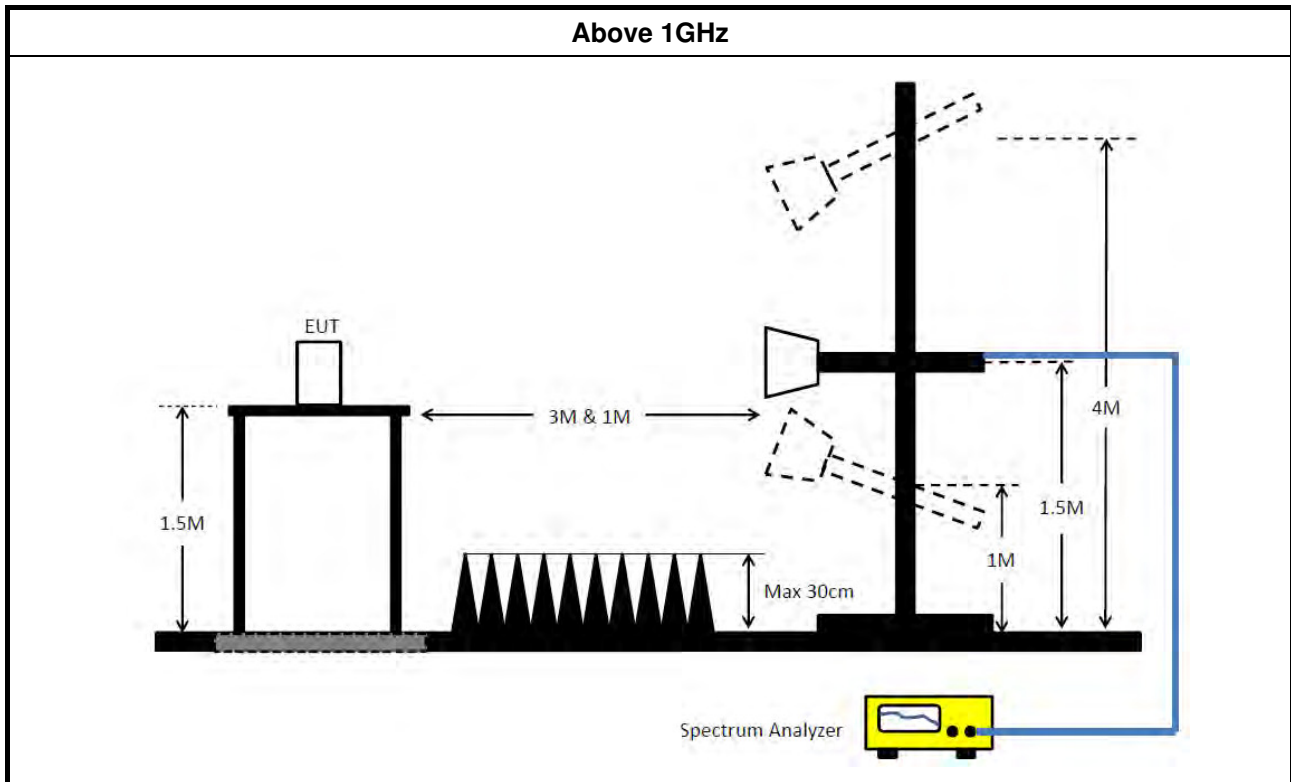
Refer a test equipment and calibration data table in this test report.

3.5.3 Test Procedures

Test Method	
Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 m for frequencies above 30 MHz, unless it can be further demonstrated that measurements at a distance of 30 m or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).	
The average emission levels shall be measured in [duty cycle $\geq$ 98 or duty factor].	
For the transmitter unwanted emissions shall be measured using following options below:	
	Refer as FCC KDB 789033, clause H)2) for unwanted emissions into non-restricted bands.
	Refer as FCC KDB 789033, clause H)1) for unwanted emissions into restricted bands.
	☐ Refer as FCC KDB 789033, H)6) Method AD (Trace Averaging).
	☒ Refer as FCC KDB 789033, H)6) Method VB (Reduced VBW).
	☐ Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW $\geq$ 1/T, where T is pulse time.
	☐ Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions.
	☒ Refer as FCC KDB 789033, clause H)5) measurement procedure peak limit.
	☐ Refer as ANSI C63.10, clause 4.2.3.2.2 measurement procedure peak limit.
	For radiated measurement.
	Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.
	Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.
	Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.
	The any unwanted emissions level shall not exceed the fundamental emission level.
All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.	

3.5.4 Test Setup





3.5.5 Transmitter Unwanted Emissions (Below 30MHz)

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.	

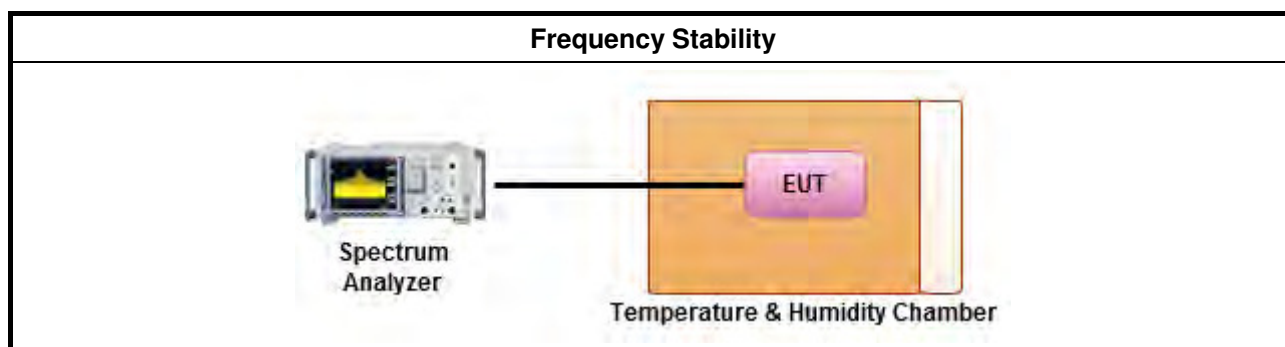
3.6.2 Measuring Instruments

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 0°C~40°C.

3.6.4 Test Setup



3.6.5 Test Result of Frequency Stability

Refer as Appendix F



4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.45GHz	Jan. 23, 2017	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Dec. 14, 2016	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Dec. 21, 2016	Conduction (CO01-CB)
COND Cable	Woken	Cable	01	150kHz ~ 30MHz	May 24, 2016	Conduction (CO01-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	Conduction (CO01-CB)
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMC	CBL6112D & N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Aug. 30, 2016	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 10, 2016	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 25, 2016	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8447D	2944A10991	0.1MHz ~ 1.3GHz	Mar. 15, 2016	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 18, 2016	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 16, 2017	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jun. 28, 2016	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Nov. 21, 2016	Radiation (03CH01-CB)
EMI Test	R&S	ESCS	100355	9kHz ~ 2.75GHz	May 16, 2016	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~ 1 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz ~ 40 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2016*	Radiation (03CH01-CB)
Test Software	Audix	E3	6.2009-10-7	N/A	N/A	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 26, 2016	Conducted (TH01-CB)
Temp. and Humidity Chamber	Ten Billion	TTH-D3SP	TBN-931011	-30~100 degree	Jun. 03, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-6	1 GHz ~ 26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)

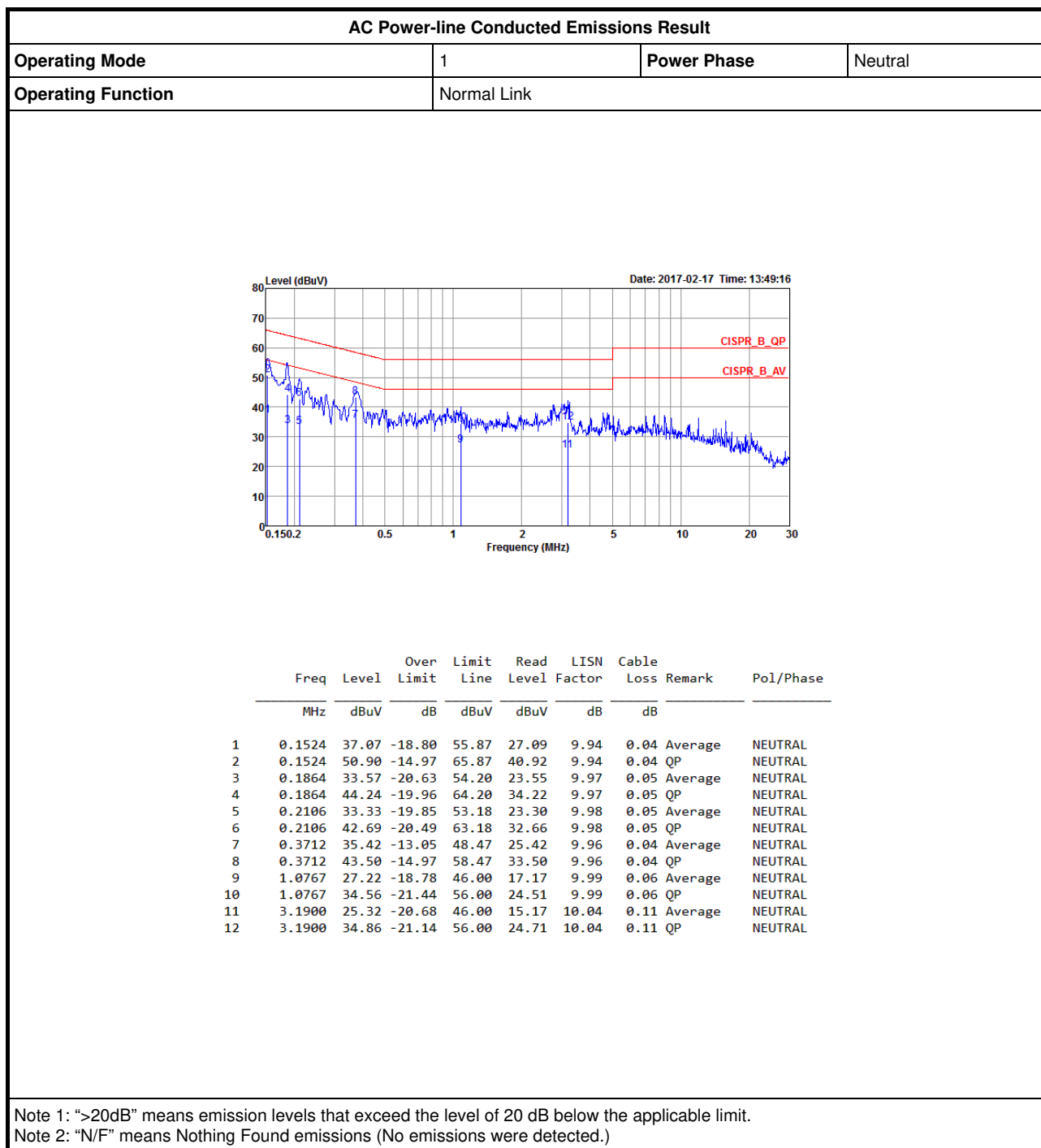
**FCC Test Report****Report No. : FR711935-01AB**

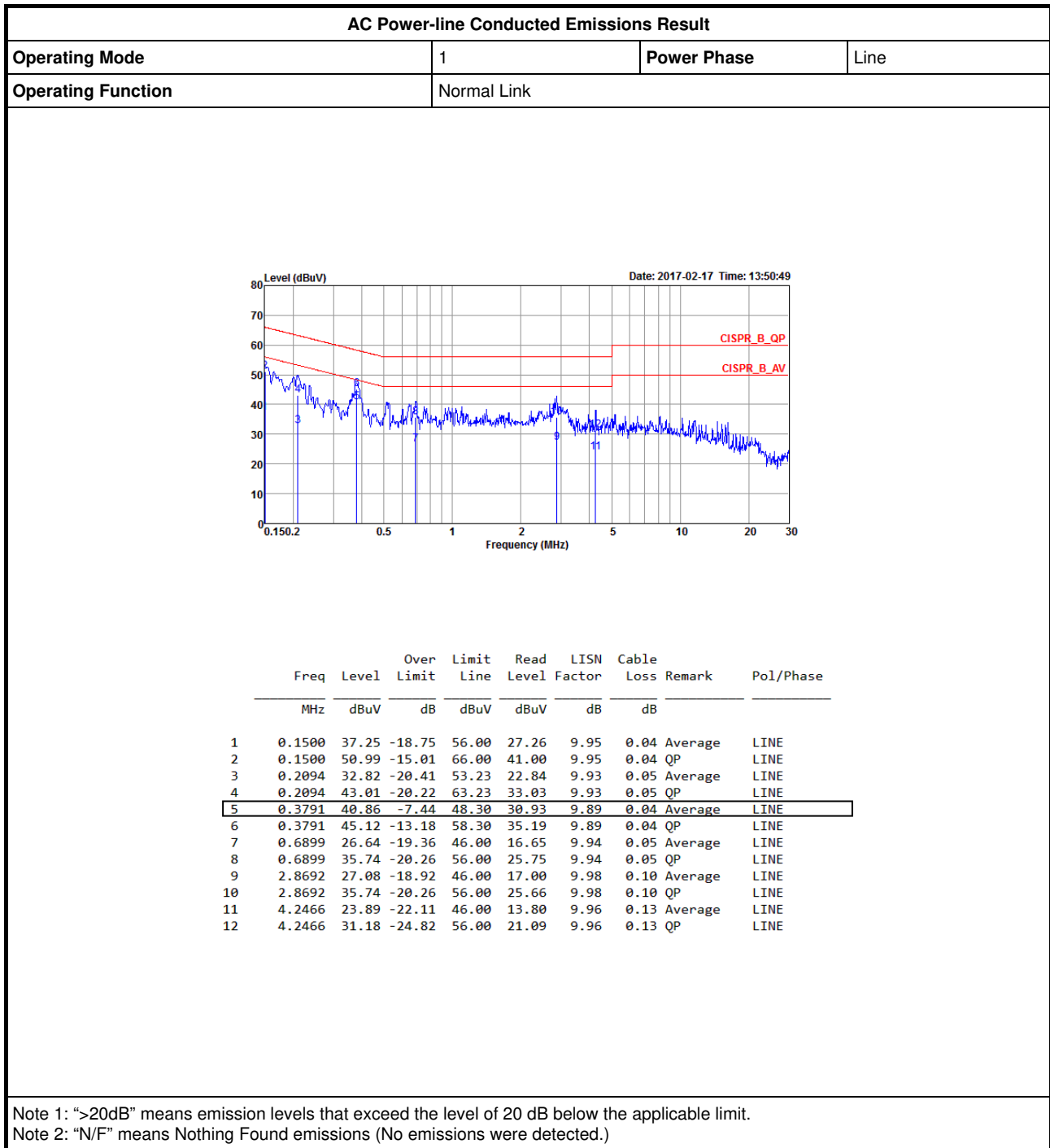
Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
RF Cable-high	Woken	RG402	High Cable-7	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-8	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-9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

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

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

N.C.R. means Non-Calibration required.





VHT80+80
Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
802.11ac VHT80+80_Nss1,(MCS0)_4TX	-	-	-	-	-
5.15-5.25GHz	84M	75.762M	75M8D1D	83.4M	75.762M
802.11ac VHT80+80_Nss1,(MCS0)_4TX	-	-	-	-	-
5.725-5.85GHz	75.8M	75.762M	75M8D1D	75M	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;

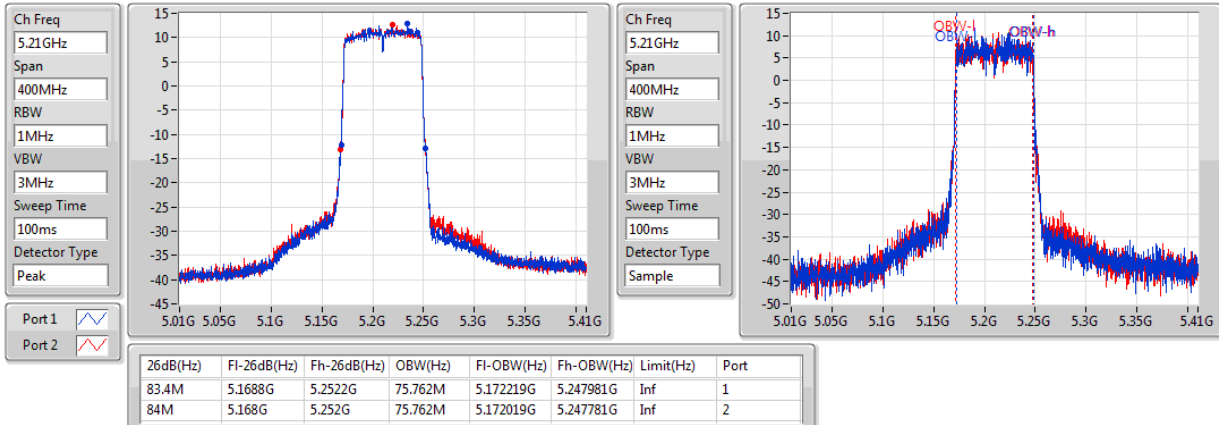
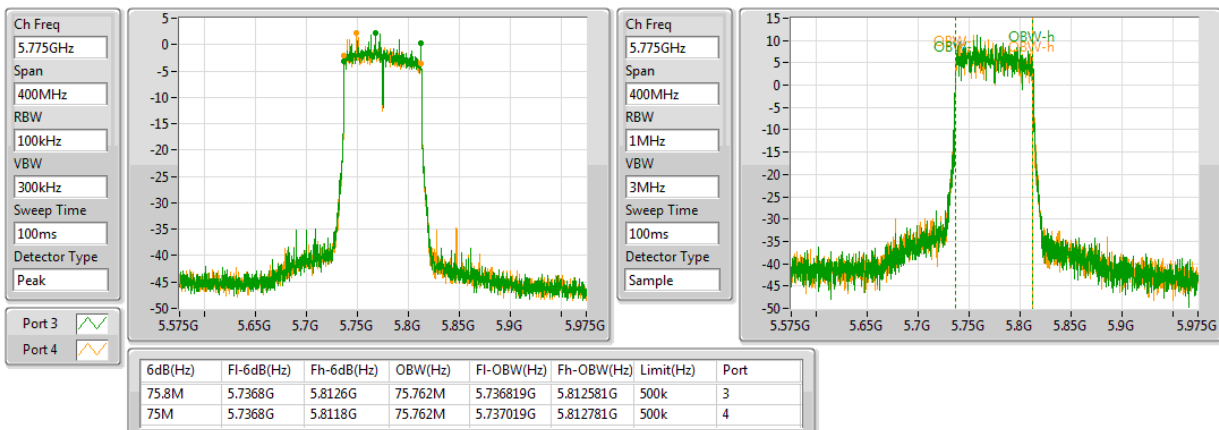
Min-OBW = Minimum 99% occupied bandwidth;

Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11ac VHT80+80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
#5210MHz,5775MHz	Pass	Inf	83.4M	75.762M	84M	75.762M				
802.11ac VHT80+80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz,#5775MHz	Pass	500k					75.8M	75.762M	75M	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;

802.11ac VHT80+80_Nss1,(MCS0)_4TX
EBW
#5210MHz,5775MHz

802.11ac VHT80+80_Nss1,(MCS0)_4TX
EBW
5210MHz,#5775MHz


**11a, VHT20, VHT40 and VHT80
Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
802.11a_(6Mbps)_4TX	-	-	-	-	-
5.15-5.25GHz	19.875M	16.442M	16M4D1D	19.35M	16.367M
5.725-5.85GHz	16.35M	16.442M	16M4D1D	16.275M	16.392M
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-
5.15-5.25GHz	20.7M	17.616M	17M6D1D	20.3M	17.591M
5.725-5.85GHz	17.575M	17.666M	17M7D1D	17.525M	17.616M
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-
5.15-5.25GHz	39.95M	36.032M	36M0D1D	39.05M	35.882M
5.725-5.85GHz	35.3M	36.082M	36M1D1D	34.4M	35.882M
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-
5.15-5.25GHz	83.7M	75.762M	75M8D1D	83M	75.562M
5.725-5.85GHz	76.3M	75.862M	75M9D1D	75M	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;

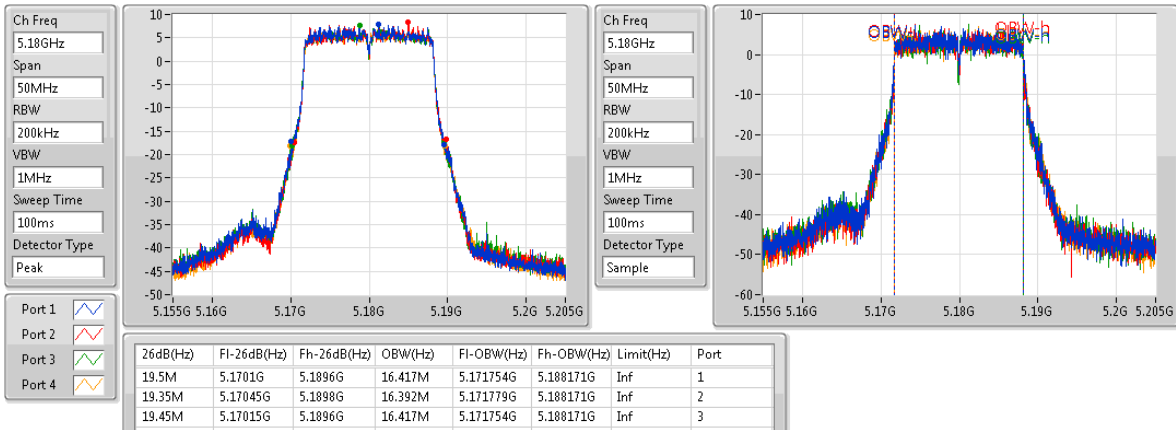
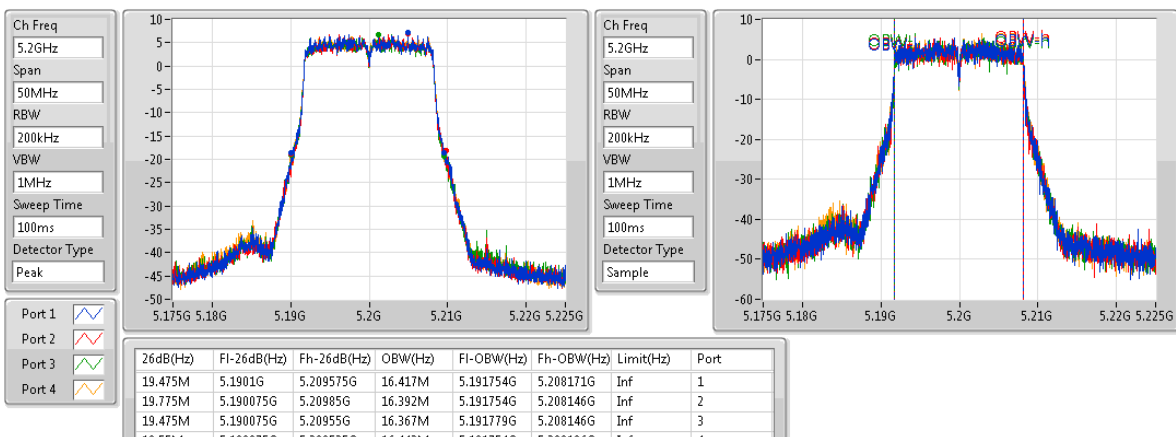
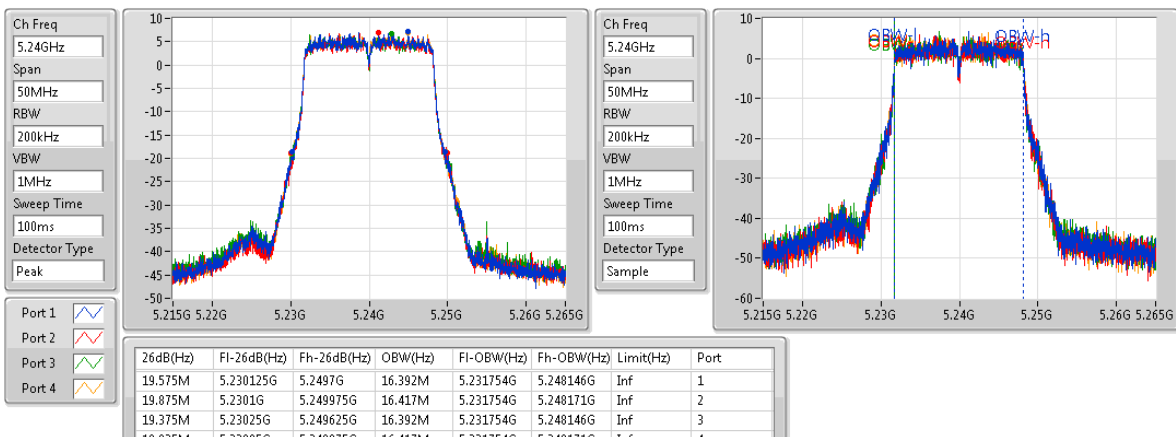
Min-OBW = Minimum 99% occupied bandwidth;

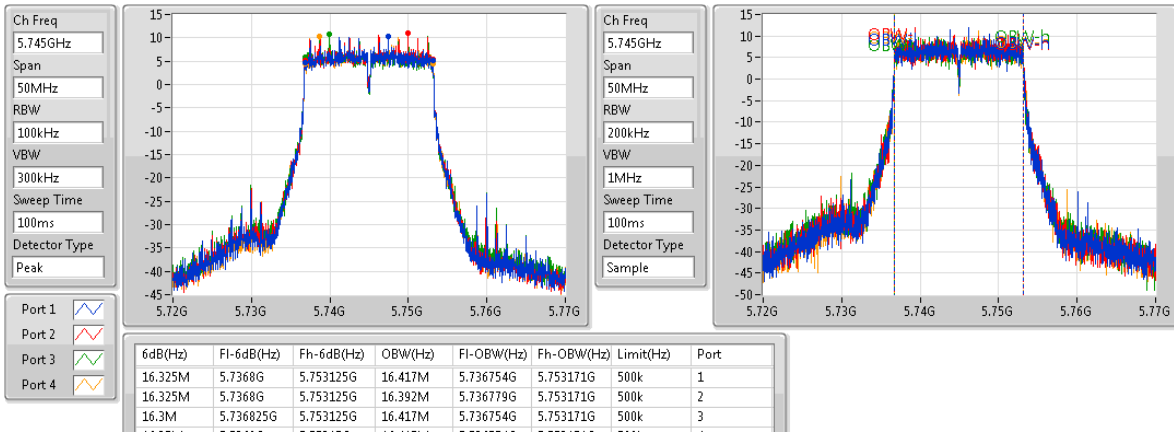
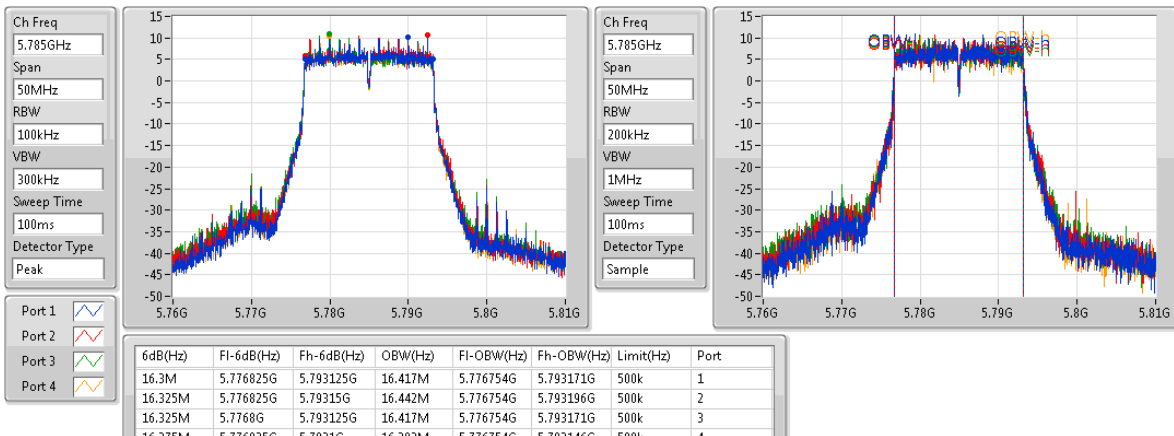
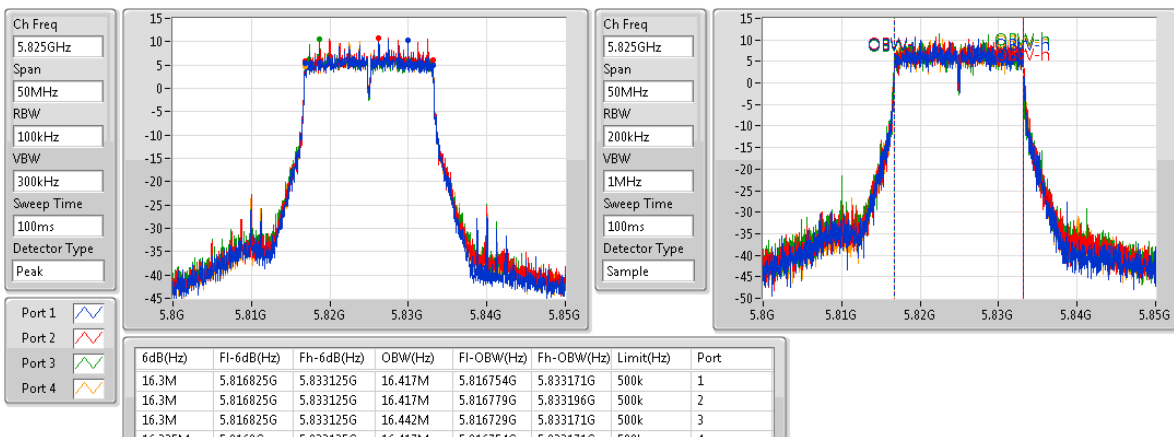
Result

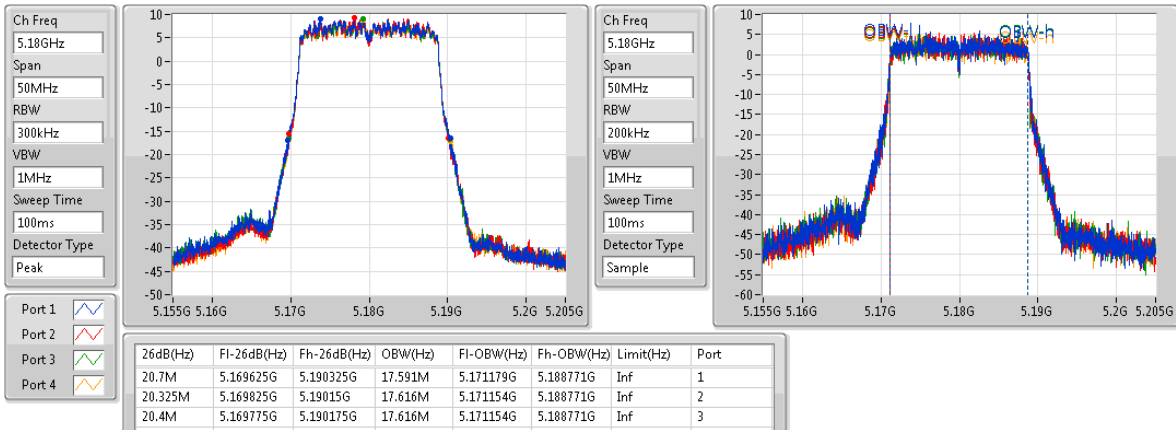
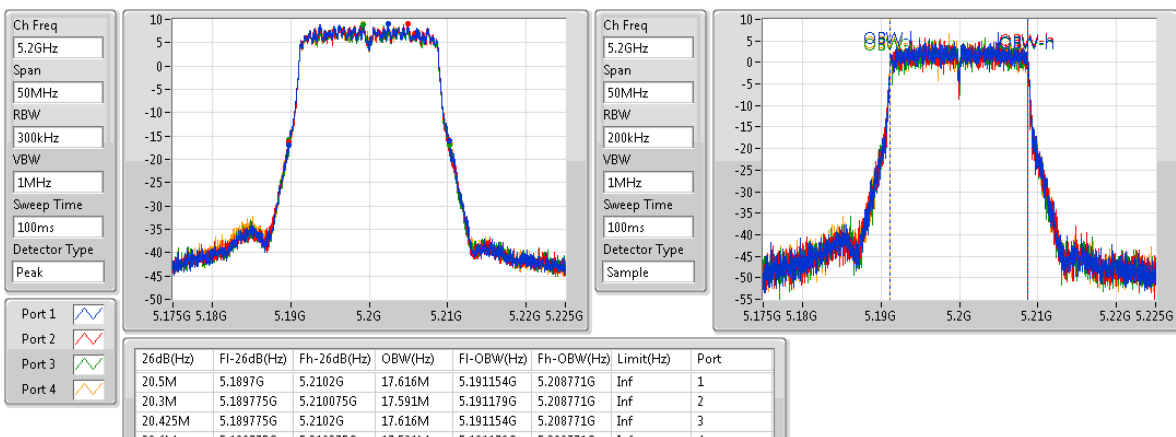
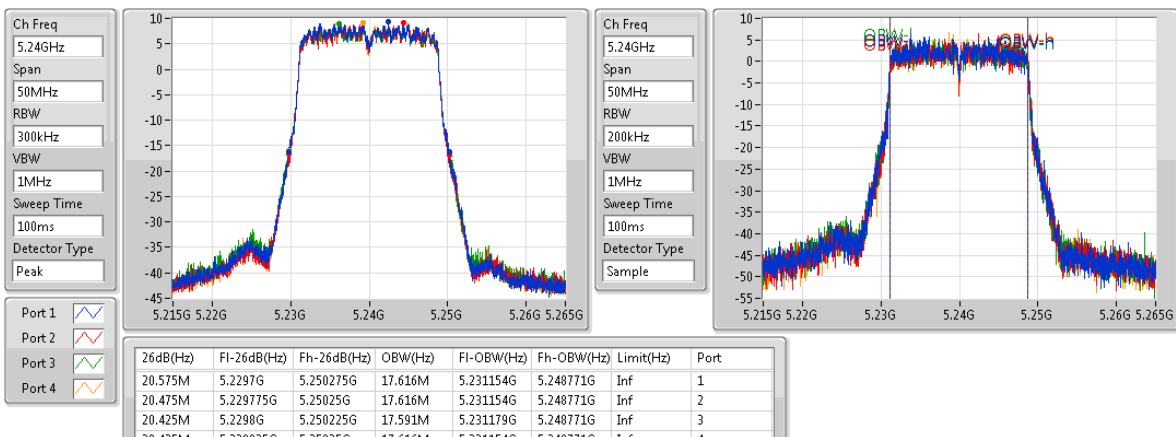
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11a_(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	19.5M	16.417M	19.35M	16.392M	19.45M	16.417M	19.75M	16.392M
5200MHz	Pass	Inf	19.475M	16.417M	19.775M	16.392M	19.475M	16.367M	19.55M	16.442M
5240MHz	Pass	Inf	19.575M	16.392M	19.875M	16.417M	19.375M	16.392M	19.825M	16.417M
5745MHz	Pass	500k	16.325M	16.417M	16.325M	16.392M	16.3M	16.417M	16.35M	16.417M
5785MHz	Pass	500k	16.3M	16.417M	16.325M	16.442M	16.325M	16.417M	16.275M	16.392M
5825MHz	Pass	500k	16.3M	16.417M	16.3M	16.417M	16.3M	16.442M	16.325M	16.417M
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	20.7M	17.591M	20.325M	17.616M	20.4M	17.616M	20.575M	17.616M
5200MHz	Pass	Inf	20.5M	17.616M	20.3M	17.591M	20.425M	17.616M	20.6M	17.591M
5240MHz	Pass	Inf	20.575M	17.616M	20.475M	17.616M	20.425M	17.591M	20.425M	17.616M
5745MHz	Pass	500k	17.525M	17.616M	17.55M	17.616M	17.525M	17.641M	17.55M	17.616M
5785MHz	Pass	500k	17.525M	17.641M	17.575M	17.616M	17.55M	17.641M	17.55M	17.616M
5825MHz	Pass	500k	17.525M	17.641M	17.55M	17.616M	17.575M	17.666M	17.575M	17.641M
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	39.4M	35.982M	39.35M	35.932M	39.65M	35.932M	39.95M	36.032M
5230MHz	Pass	Inf	39.45M	35.932M	39.05M	35.982M	39.8M	35.982M	39.75M	35.882M
5755MHz	Pass	500k	35.05M	36.032M	35.3M	35.932M	34.7M	35.882M	34.4M	35.982M
5795MHz	Pass	500k	34.95M	36.032M	35M	36.082M	35.05M	35.932M	35M	36.032M
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	83.7M	75.662M	83M	75.562M	83.2M	75.662M	83.2M	75.762M
5775MHz	Pass	500k	75M	75.862M	76M	75.762M	75.7M	75.662M	76.3M	75.862M

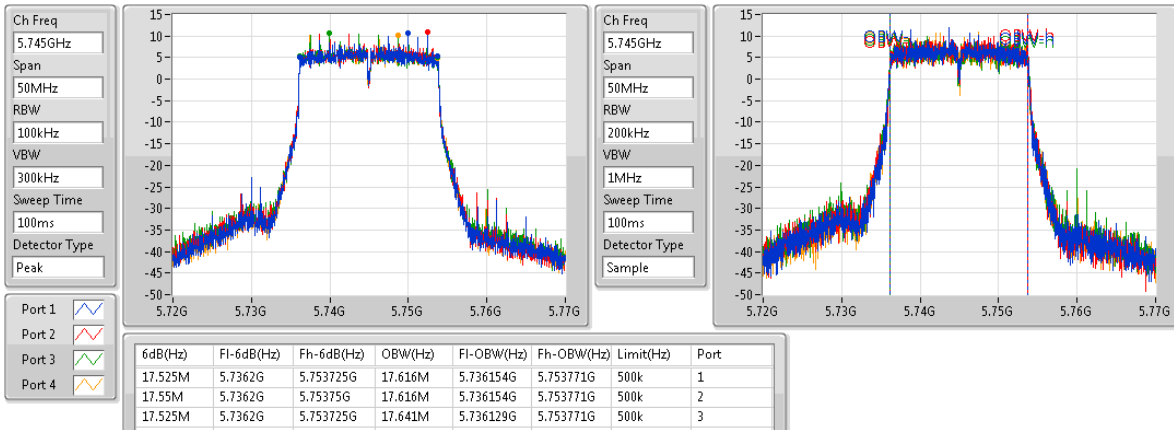
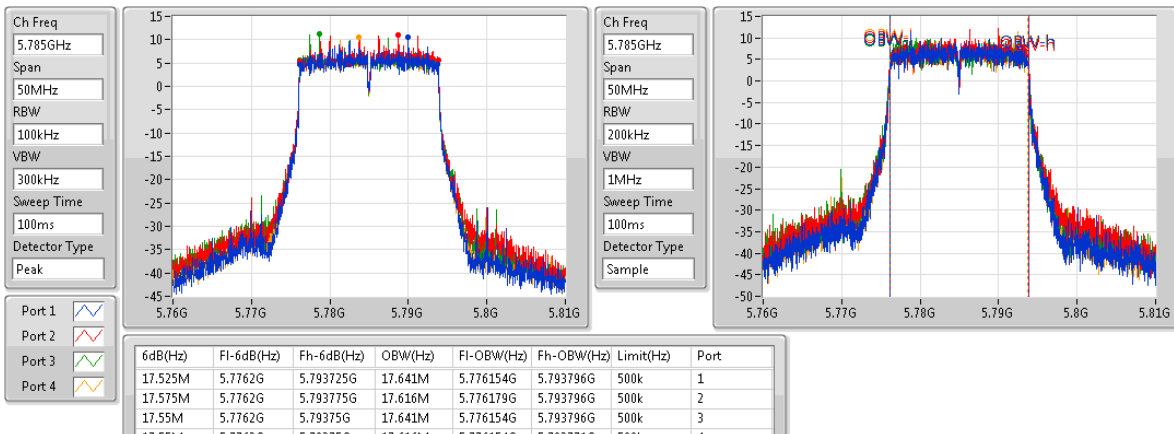
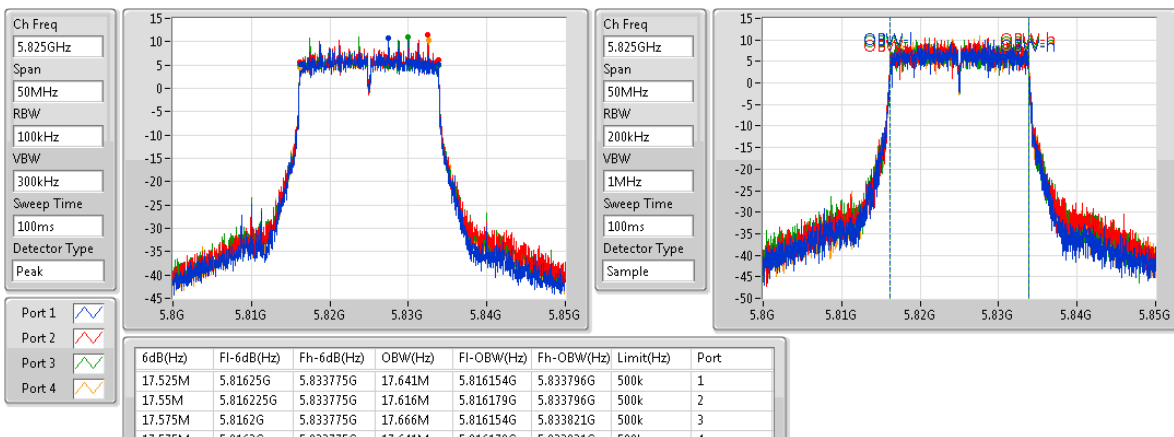
Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band

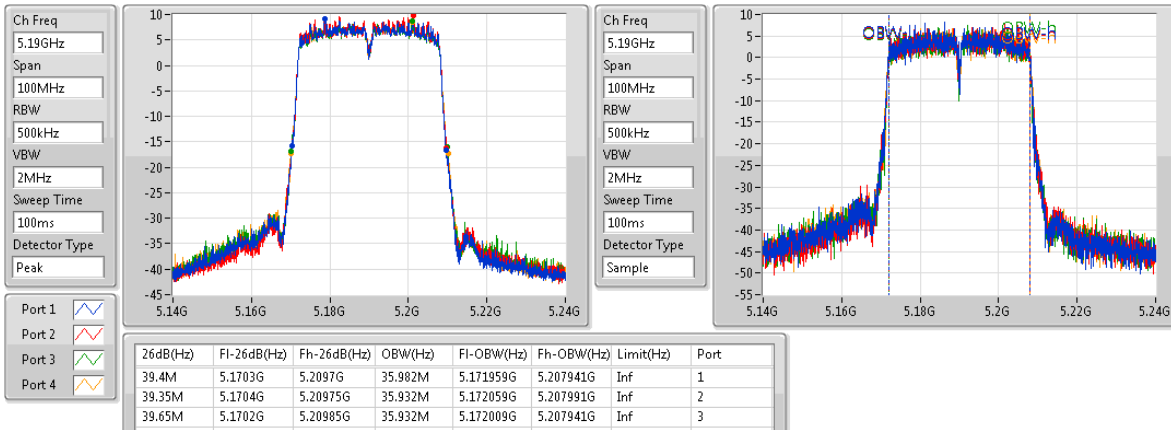
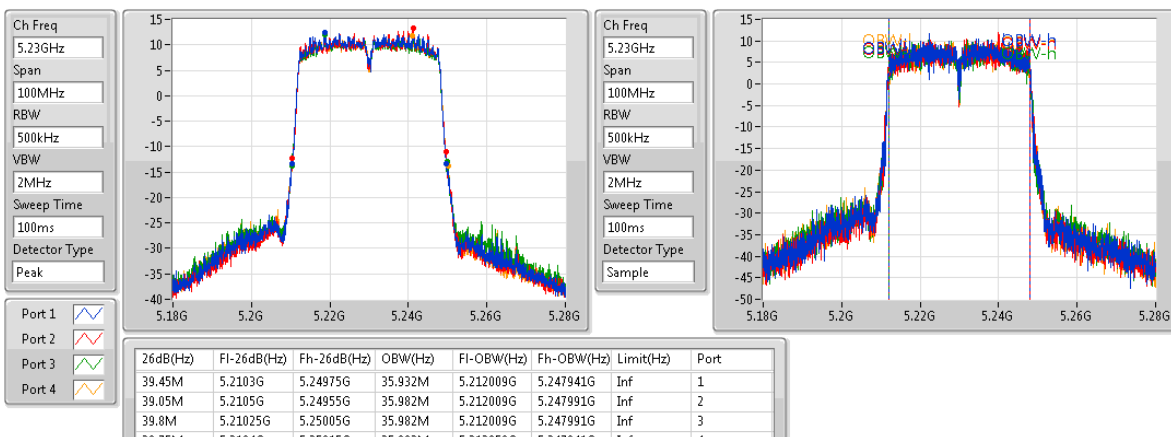
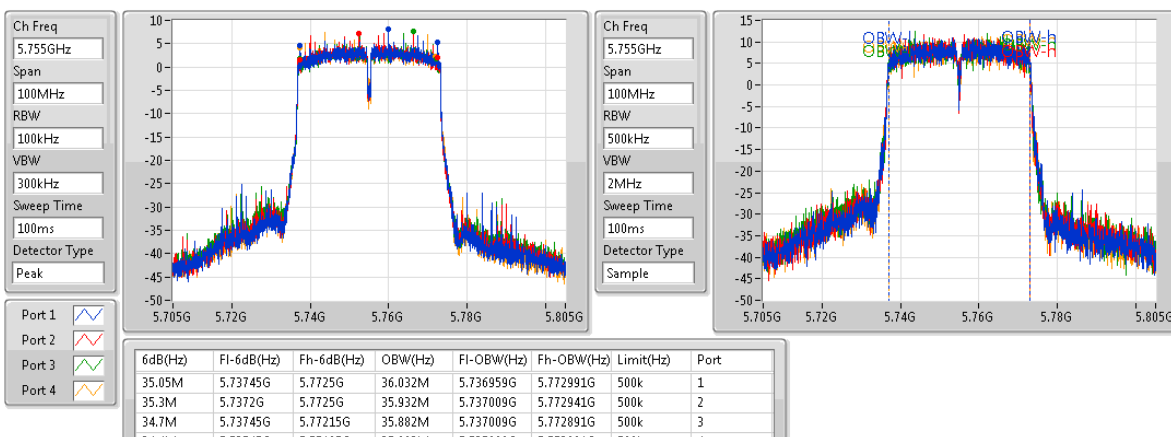
Port X-OBW = Port X 99% occupied bandwidth;

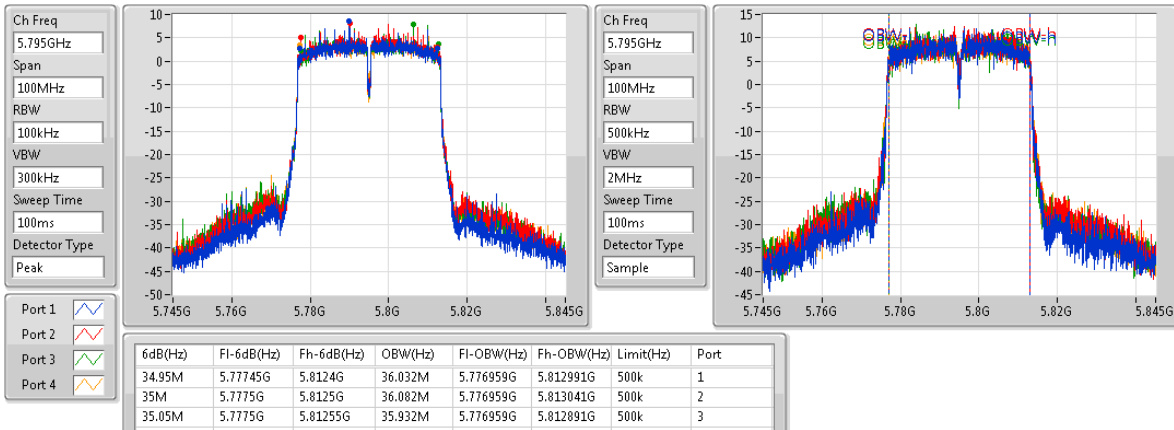
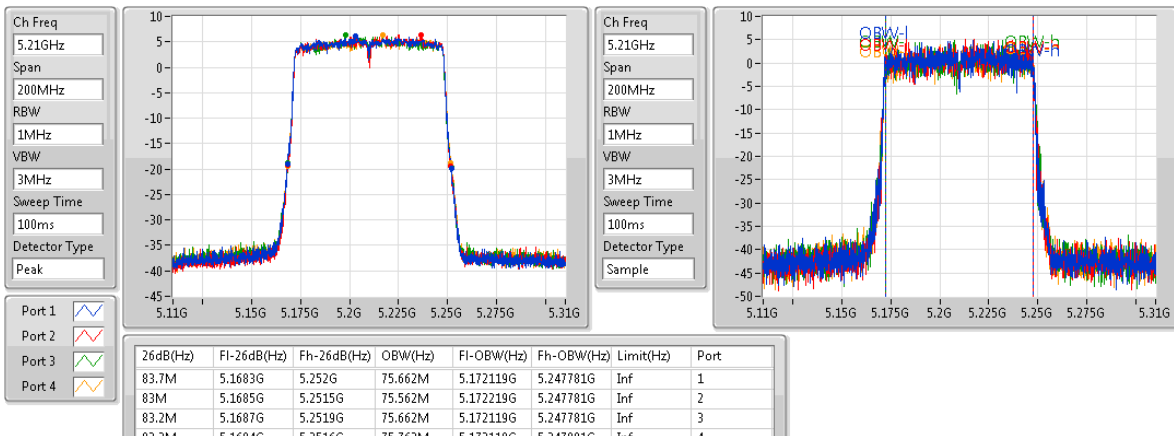
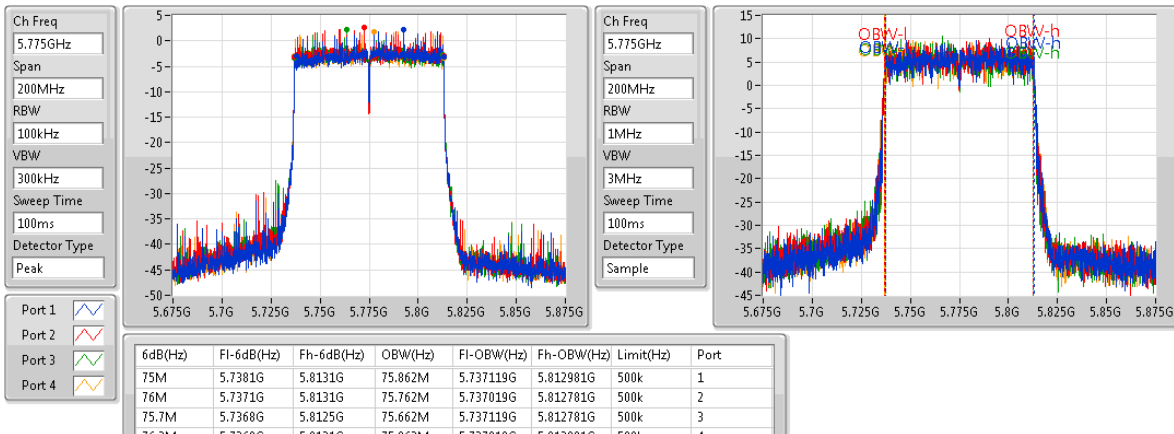
802.11a_(6Mbps)_4TX
EBW
5180MHz

802.11a_(6Mbps)_4TX
EBW
5200MHz

802.11a_(6Mbps)_4TX
EBW
5240MHz


802.11a_(6Mbps)_4TX
EBW
5745MHz

802.11a_(6Mbps)_4TX
EBW
5785MHz

802.11a_(6Mbps)_4TX
EBW
5825MHz


802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5180MHz

802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5200MHz

802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5240MHz


802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5745MHz

802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5785MHz

802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5825MHz


802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5190MHz

802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5230MHz

802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5755MHz


802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5795MHz

802.11ac VHT80_Nss1,(MCS0)_4TX
EBW
5210MHz

802.11ac VHT80_Nss1,(MCS0)_4TX
EBW
5775MHz




**VHT80+80
Summary**

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
802.11ac VHT80+80_Nss1,(MCS0)_4TX	-	-	-	-
5.15-5.25GHz	24.13	0.25882	29.73	0.93972
802.11ac VHT80+80_Nss1,(MCS0)_4TX	-	-	-	-
5.725-5.85GHz	23.02	0.20045	27.52	0.56494

**Result**

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)	Port 3 (dBm)	Port 4 (dBm)
802.11ac VHT80+80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
#5210MHz,5775MHz	Pass	5.60	21.04	21.21	24.13	30.00	29.73	36.00		
802.11ac VHT80+80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz,#5775MHz	Pass	4.50			23.02	30.00	27.52	36.00	20.02	19.99

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

**11a, VHT20, VHT40 and VHT80
Summary**

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
802.11a_(6Mbps)_4TX	-	-	-	-
5.15-5.25GHz	25.42	0.34834	31.02	1.26474
5.725-5.85GHz	29.94	0.98628	35.54	3.58096
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-
5.15-5.25GHz	25.21	0.33189	30.81	1.20504
5.725-5.85GHz	29.92	0.98175	35.52	3.56451
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-
5.15-5.25GHz	28.48	0.70469	34.08	2.55859
5.725-5.85GHz	29.97	0.99312	35.57	3.60579
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-
5.15-5.25GHz	22.83	0.19187	28.43	0.69663
5.725-5.85GHz	27.29	0.53580	32.89	1.94536

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11a_(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	5.60	19.47	19.34	19.28	19.06	25.31	30.00	30.91	36.00
5200MHz	Pass	5.60	19.41	19.27	19.24	19.19	25.30	30.00	30.90	36.00
5240MHz	Pass	5.60	19.58	19.23	19.33	19.45	25.42	30.00	31.02	36.00
5745MHz	Pass	5.60	23.97	24.05	23.79	23.86	29.94	30.00	35.54	36.00
5785MHz	Pass	5.60	23.55	23.83	23.67	23.46	29.65	30.00	35.25	36.00
5825MHz	Pass	5.60	23.51	23.88	23.65	23.57	29.68	30.00	35.28	36.00
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5180MHz	Pass	5.60	19.25	19.24	19.11	18.93	25.16	30.00	30.76	36.00
5200MHz	Pass	5.60	19.22	19.15	19.02	19.09	25.14	30.00	30.74	36.00
5240MHz	Pass	5.60	19.38	19.12	19.06	19.18	25.21	30.00	30.81	36.00
5745MHz	Pass	5.60	23.76	23.86	23.62	23.65	29.74	30.00	35.34	36.00
5785MHz	Pass	5.60	23.61	24.23	23.94	23.59	29.87	30.00	35.47	36.00
5825MHz	Pass	5.60	23.64	24.25	23.85	23.82	29.92	30.00	35.52	36.00
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5190MHz	Pass	5.60	19.56	19.72	19.63	19.75	25.69	30.00	31.29	36.00
5230MHz	Pass	5.60	22.67	22.34	22.28	22.54	28.48	30.00	34.08	36.00
5755MHz	Pass	5.60	23.73	23.84	23.82	23.66	29.78	30.00	35.38	36.00
5795MHz	Pass	5.60	23.78	24.17	23.97	23.85	29.97	30.00	35.57	36.00
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz	Pass	5.60	16.85	16.86	16.65	16.89	22.83	30.00	28.43	36.00
5775MHz	Pass	5.60	21.13	21.51	21.36	21.08	27.29	30.00	32.89	36.00

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

**VHT80+80
Summary**

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
802.11ac VHT80+80_Nss1,(MCS0)_4TX	-	-
5.15-5.25GHz	4.63	12.95
802.11ac VHT80+80_Nss1,(MCS0)_4TX	-	-
5.725-5.85GHz	2.53	9.84

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

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)	EIRP PD (dBm/RBW)	EIRP PD Limit (dBm/RBW)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)
802.11ac VHT80+80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
#5210MHz,5775MHz	Pass	8.32	1.58	1.71	4.63	14.68	12.95	Inf		
802.11ac VHT80+80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5210MHz,#5775MHz	Pass	7.31			2.53	28.69	9.84	Inf	-0.44	-0.52

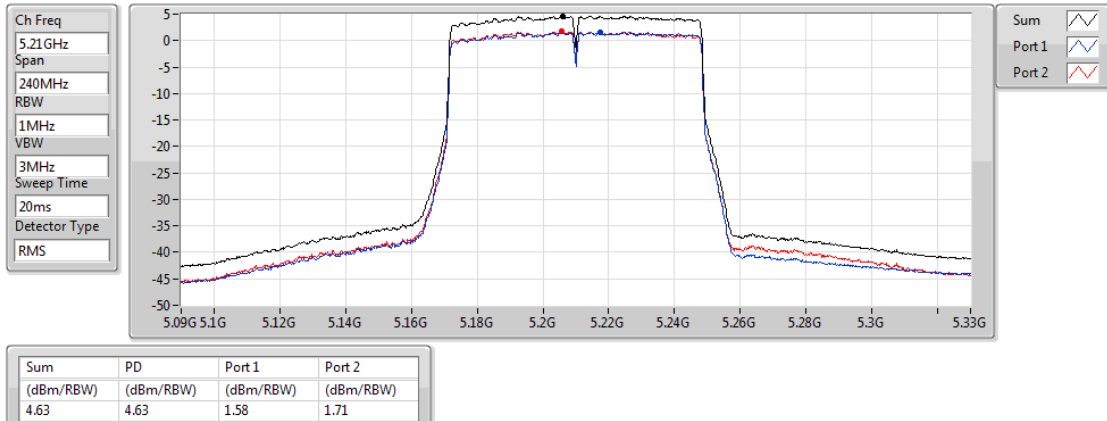
DG = Directional Gain; **RBW** = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

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

802.11ac VHT80+80_Nss1,(MCS0)_4TX

PSD

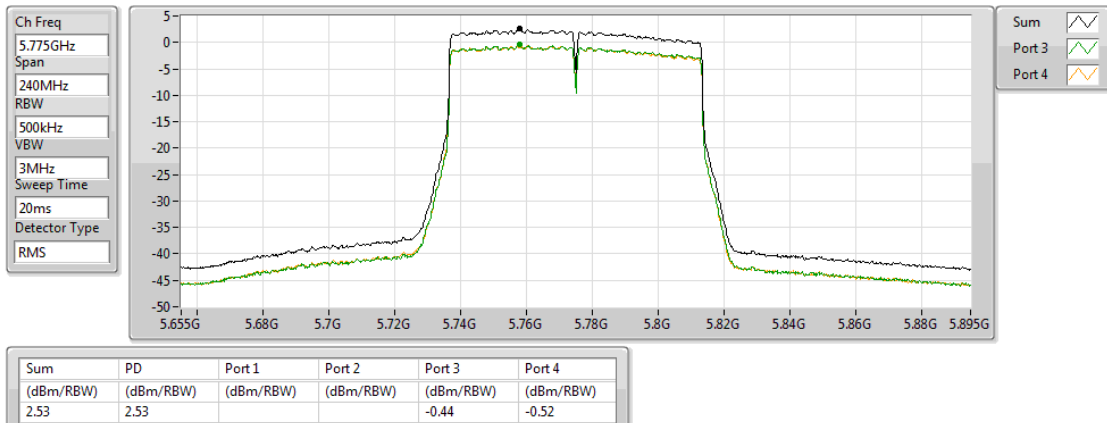
#5210MHz,5775MHz



802.11ac VHT80+80_Nss1,(MCS0)_4TX

PSD

5210MHz,#5775MHz



**11a, VHT20, VHT40 and VHT80
Summary**

Mode	PD (dBm/RBW)	EIRP PD (dBm/RBW)
802.11a_(6Mbps)_4TX	-	-
5.15-5.25GHz	12.13	22.97
5.725-5.85GHz	15.65	26.49
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-
5.15-5.25GHz	12.03	22.87
5.725-5.85GHz	15.71	26.55
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-
5.15-5.25GHz	12.15	22.99
5.725-5.85GHz	12.96	23.80
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-
5.15-5.25GHz	3.62	14.46
5.725-5.85GHz	7.21	18.05

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)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11a_(6Mbps)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	10.84	6.54	6.59	6.04	5.81	12.13	12.16
5200MHz	Pass	10.84	6.31	6.35	6.04	6.14	12.05	12.16
5240MHz	Pass	10.84	6.49	6.52	6.02	6.10	12.11	12.16
5745MHz	Pass	10.84	10.16	10.20	9.95	9.63	15.65	25.16
5785MHz	Pass	10.84	9.76	10.26	9.98	9.31	15.48	25.16
5825MHz	Pass	10.84	9.65	10.21	9.51	9.59	15.49	25.16
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5180MHz	Pass	10.84	6.34	6.45	5.77	6.06	11.88	12.16
5200MHz	Pass	10.84	6.31	6.60	5.81	5.89	11.80	12.16
5240MHz	Pass	10.84	6.62	6.59	6.07	6.22	12.03	12.16
5745MHz	Pass	10.84	10.02	10.07	9.93	9.76	15.47	25.16
5785MHz	Pass	10.84	9.78	10.58	10.49	9.86	15.67	25.16
5825MHz	Pass	10.84	9.71	10.45	10.09	10.04	15.71	25.16
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5190MHz	Pass	10.84	3.70	3.90	3.52	3.41	9.54	12.16
5230MHz	Pass	10.84	6.55	6.49	6.08	6.16	12.15	12.16
5755MHz	Pass	10.84	6.89	6.80	7.22	6.27	12.32	25.16
5795MHz	Pass	10.84	6.88	7.51	7.32	6.77	12.96	25.16
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5210MHz	Pass	10.84	-1.99	-2.12	-2.24	-2.22	3.62	12.16
5775MHz	Pass	10.84	1.29	2.37	1.93	1.38	7.21	25.16

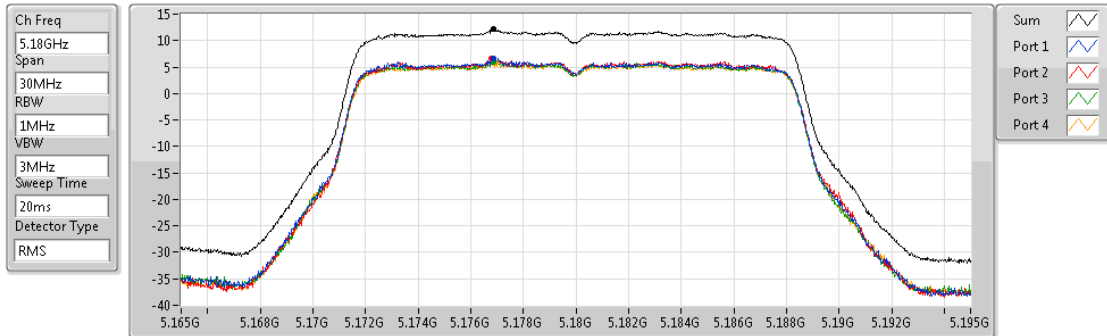
DG = Directional Gain; **RBW** = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

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

802.11a_(6Mbps)_4TX

PSD

5180MHz

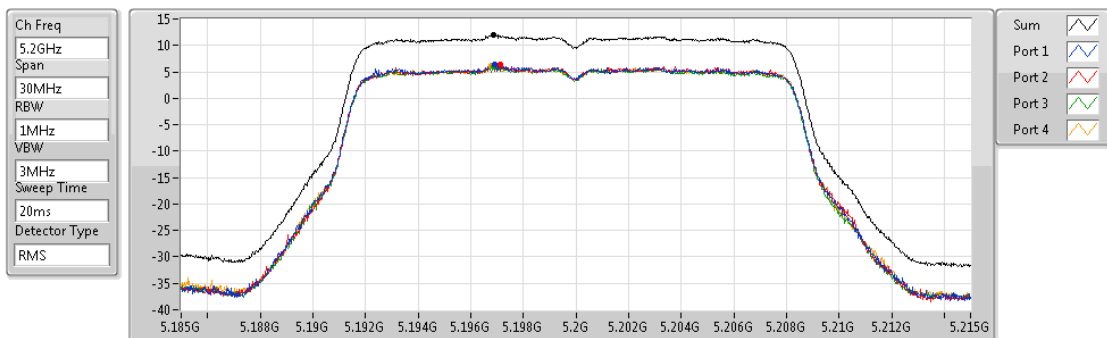


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
12.13	12.13	6.54	6.59	6.04	5.81

802.11a_(6Mbps)_4TX

PSD

5200MHz

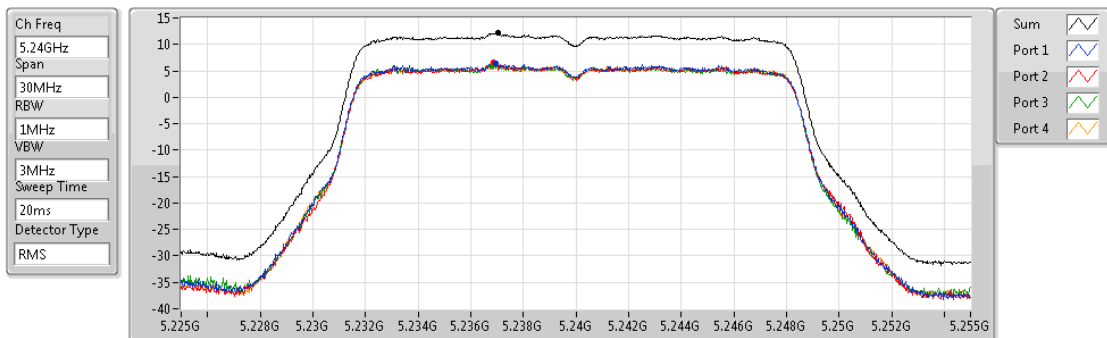


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
12.05	12.05	6.31	6.35	6.04	6.14

802.11a_(6Mbps)_4TX

PSD

5240MHz

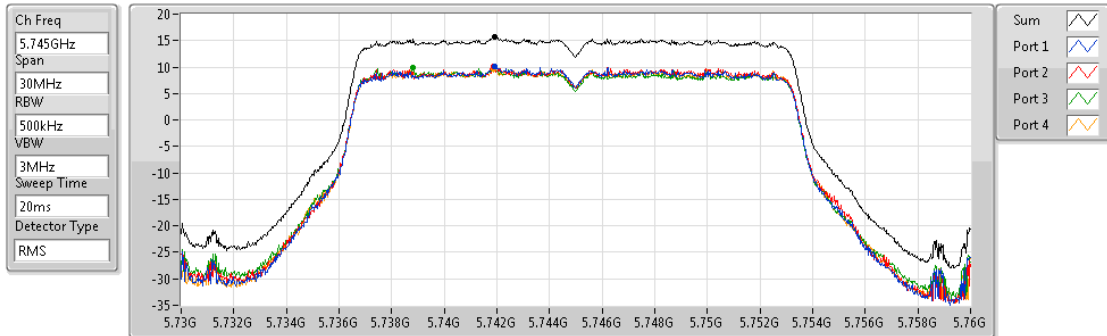


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
12.11	12.11	6.49	6.52	6.02	6.10

802.11a_(6Mbps)_4TX

PSD

5745MHz

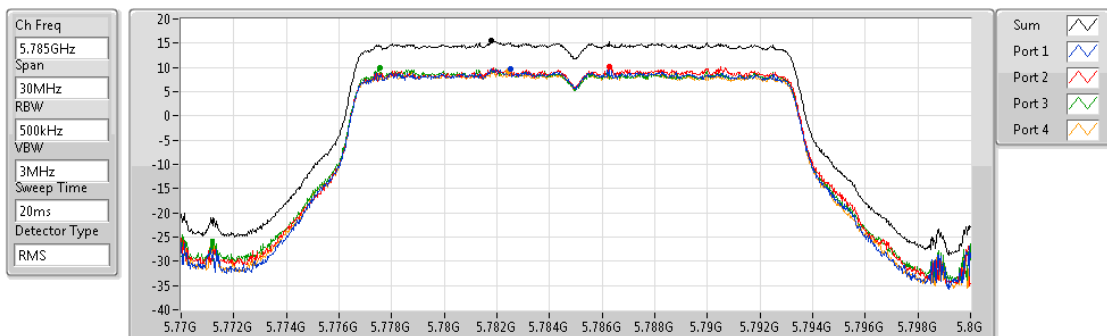


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
15.65	15.65	10.16	10.20	9.95	9.63

802.11a_(6Mbps)_4TX

PSD

5785MHz

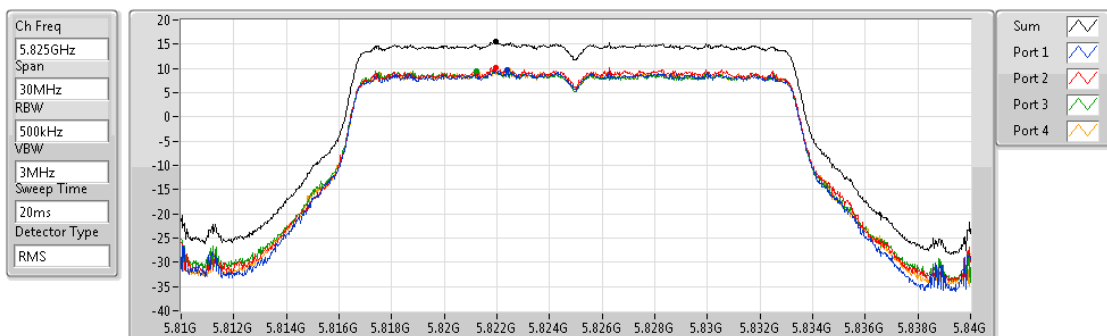


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
15.48	15.48	9.76	10.26	9.98	9.31

802.11a_(6Mbps)_4TX

PSD

5825MHz

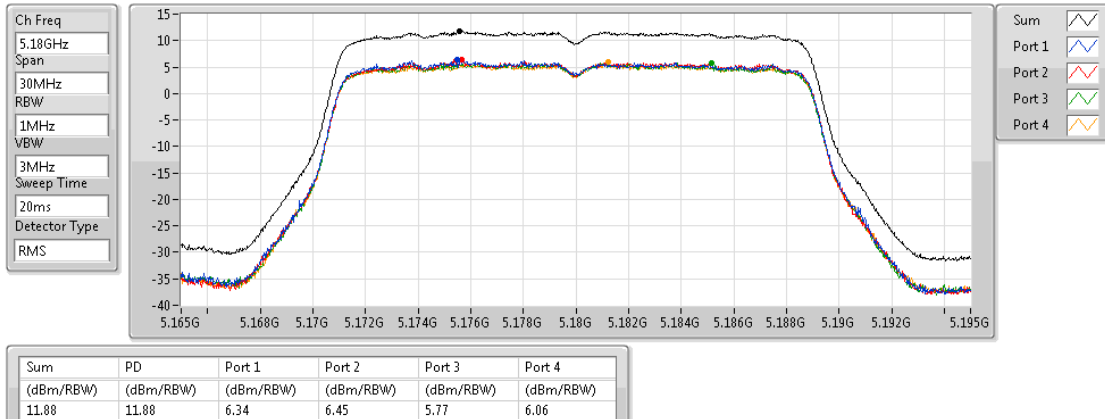


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
15.49	15.49	9.65	10.21	9.51	9.59

802.11ac VHT20_Nss1,(MCS0)_4TX

PSD

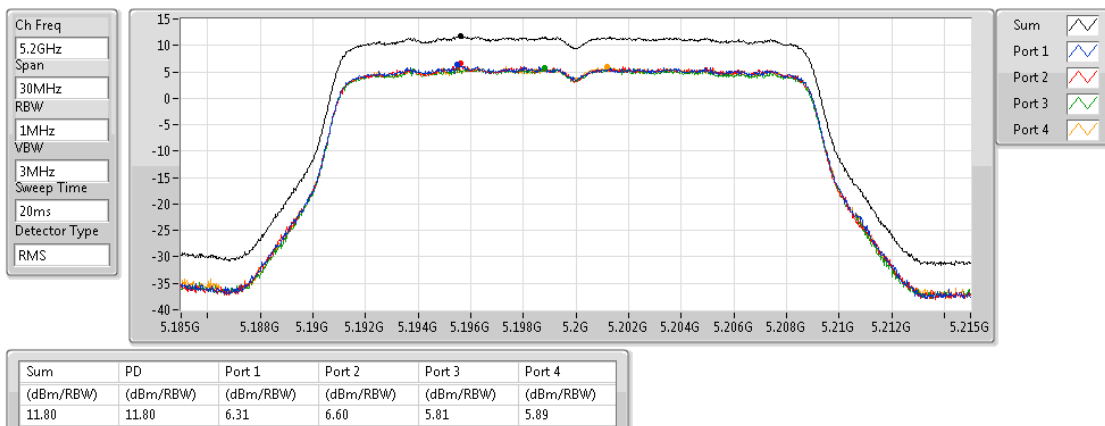
5180MHz



802.11ac VHT20_Nss1,(MCS0)_4TX

PSD

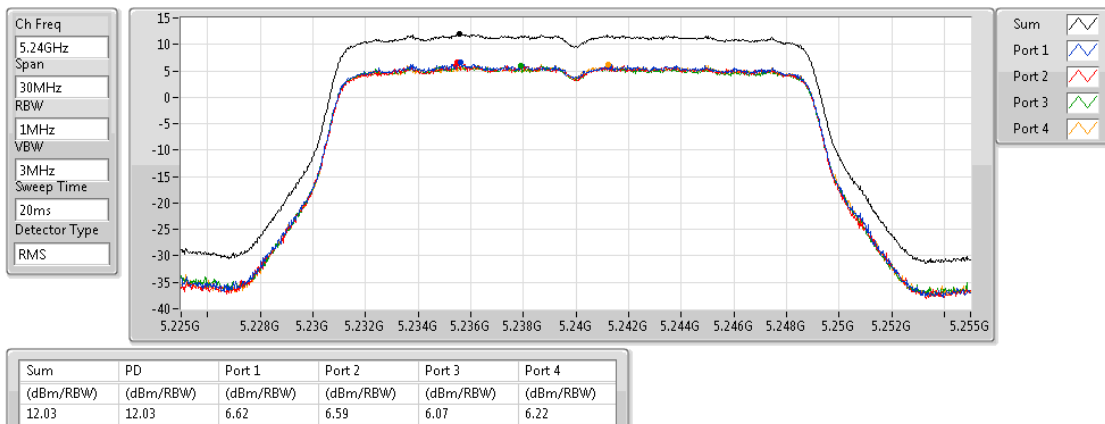
5200MHz



802.11ac VHT20_Nss1,(MCS0)_4TX

PSD

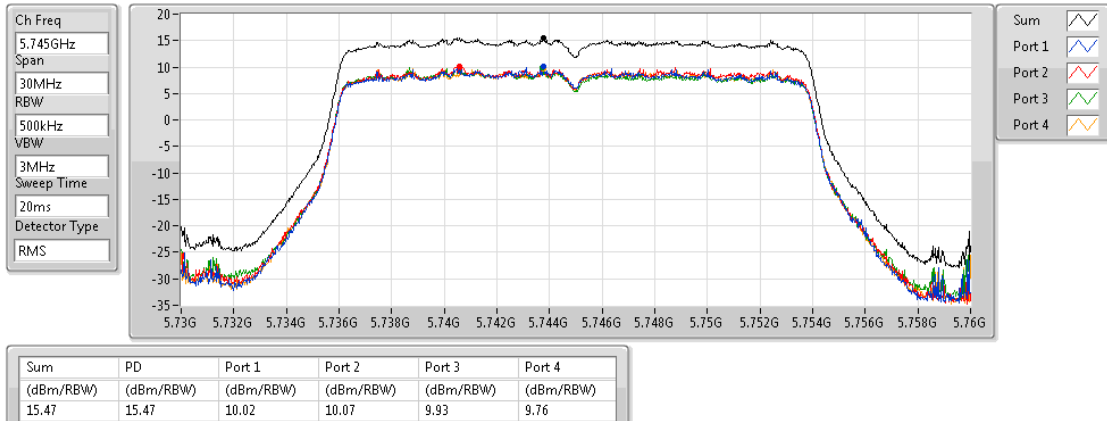
5240MHz



802.11ac VHT20_Nss1,(MCS0)_4TX

PSD

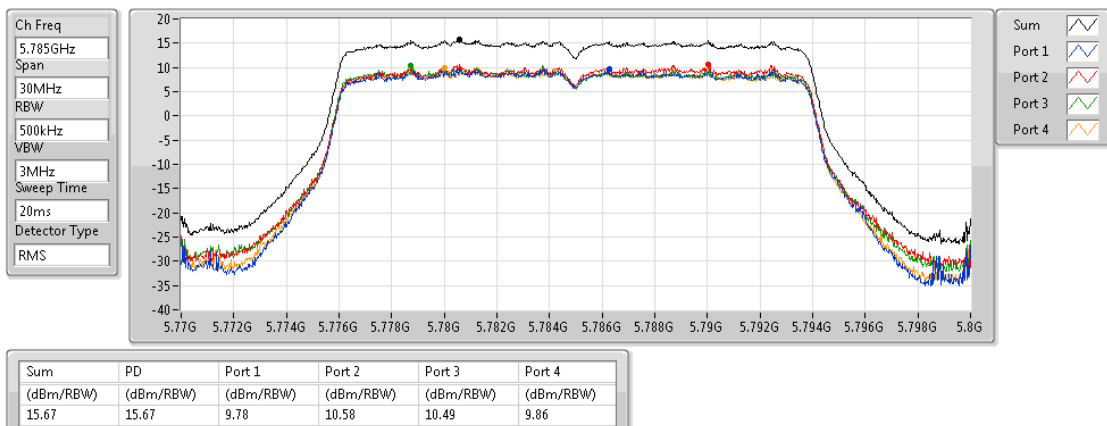
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802.11ac VHT20_Nss1,(MCS0)_4TX

PSD

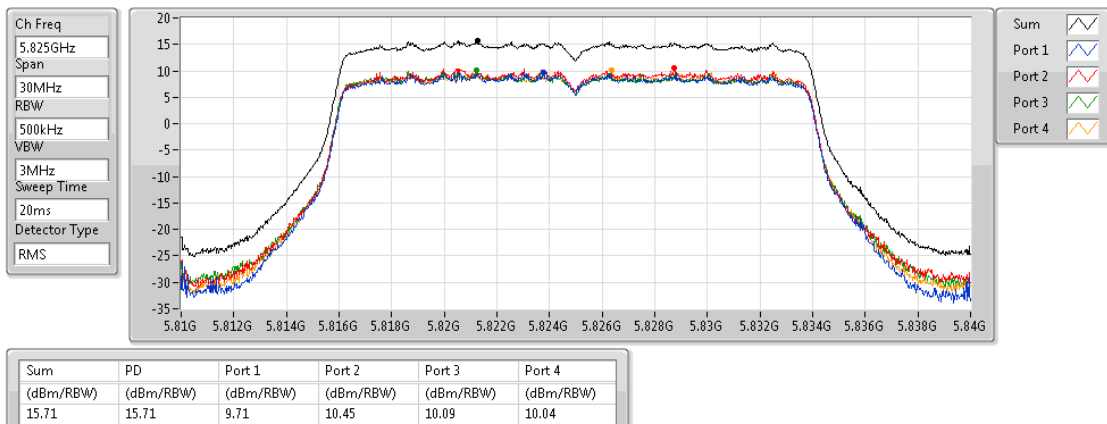
5785MHz



802.11ac VHT20_Nss1,(MCS0)_4TX

PSD

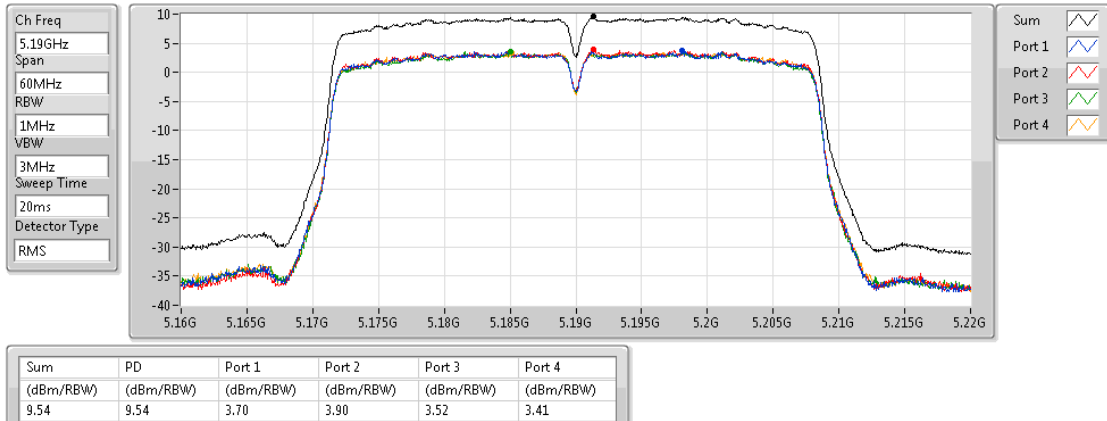
5825MHz



802.11ac VHT40_Nss1,(MCS0)_4TX

PSD

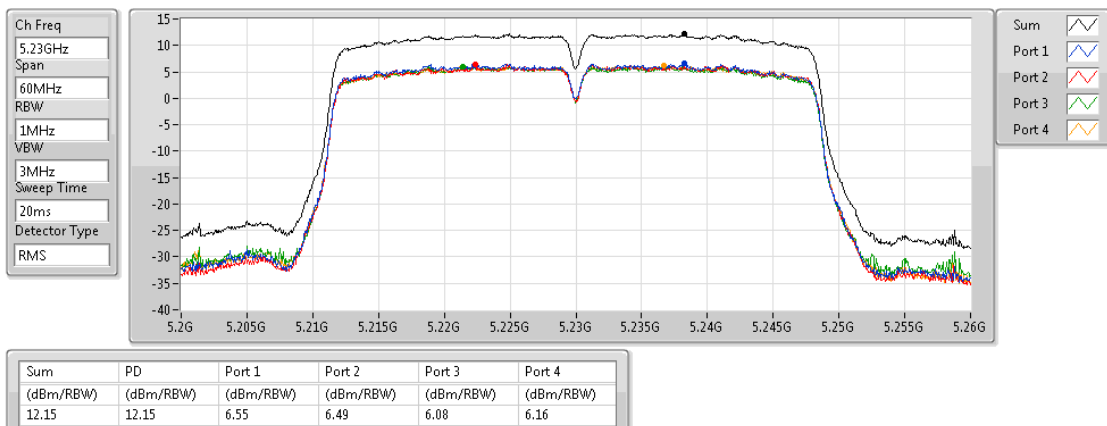
5190MHz



802.11ac VHT40_Nss1,(MCS0)_4TX

PSD

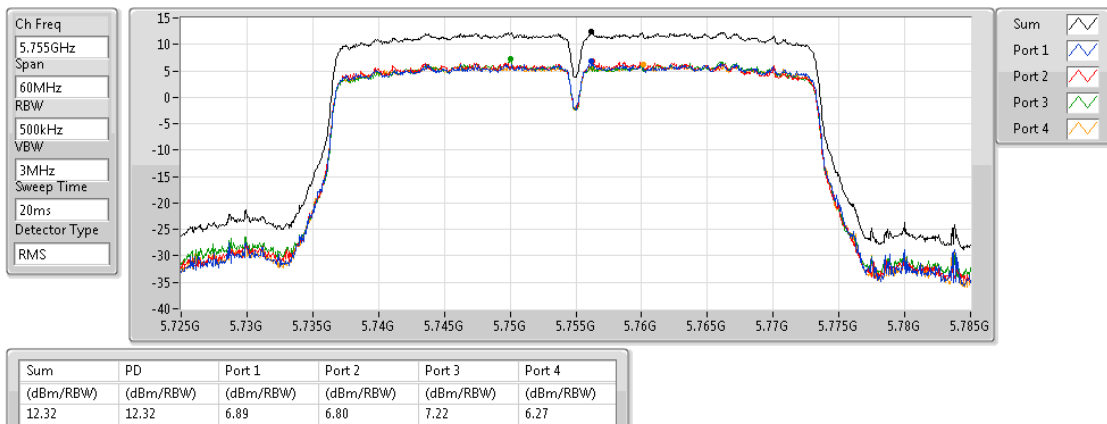
5230MHz



802.11ac VHT40_Nss1,(MCS0)_4TX

PSD

5755MHz



802.11ac VHT40_Nss1,(MCS0)_4TX

PSD

5795MHz

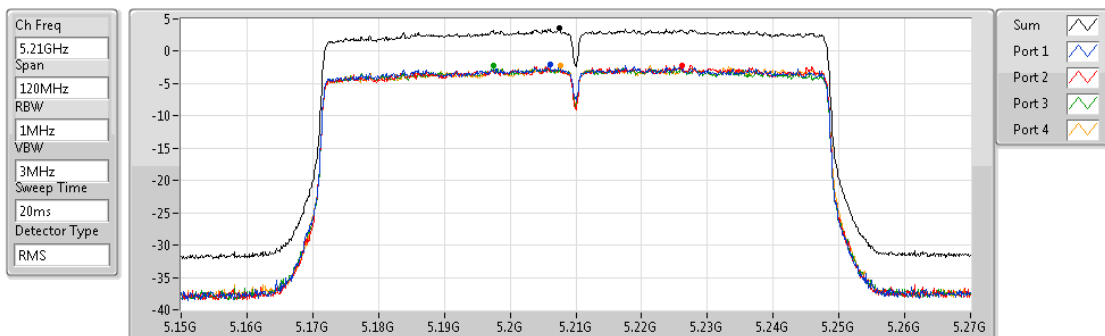


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
12.96	12.96	6.88	7.51	7.32	6.77

802.11ac VHT80_Nss1,(MCS0)_4TX

PSD

5210MHz

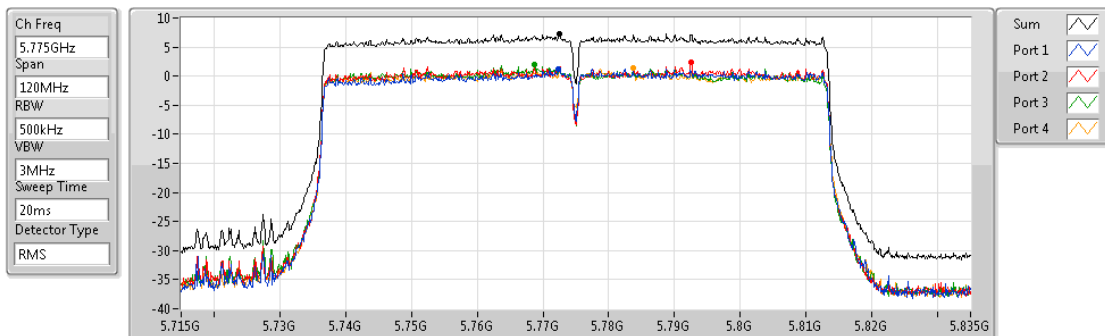


Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.62	3.62	-1.99	-2.12	-2.24	-2.22

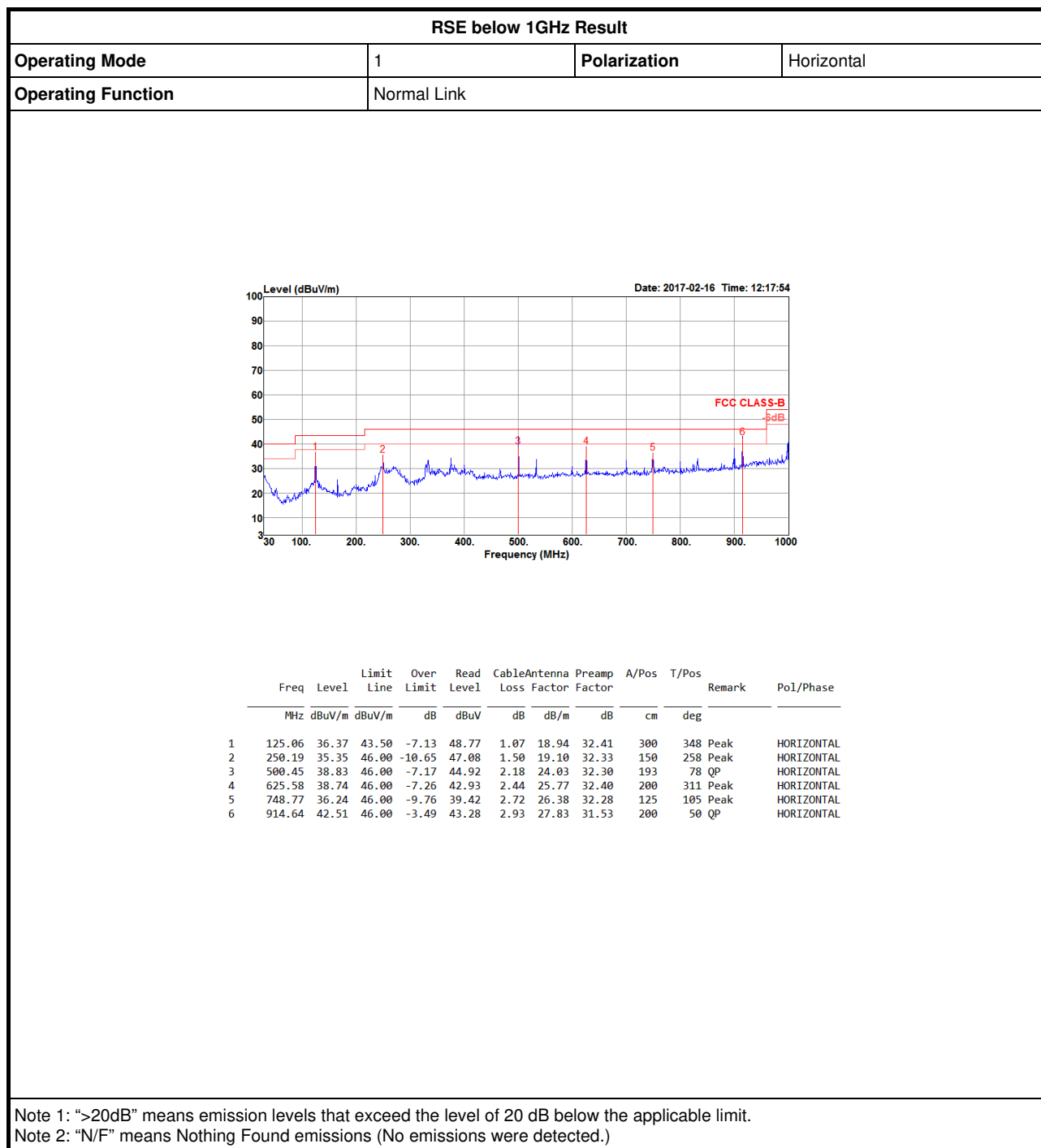
802.11ac VHT80_Nss1,(MCS0)_4TX

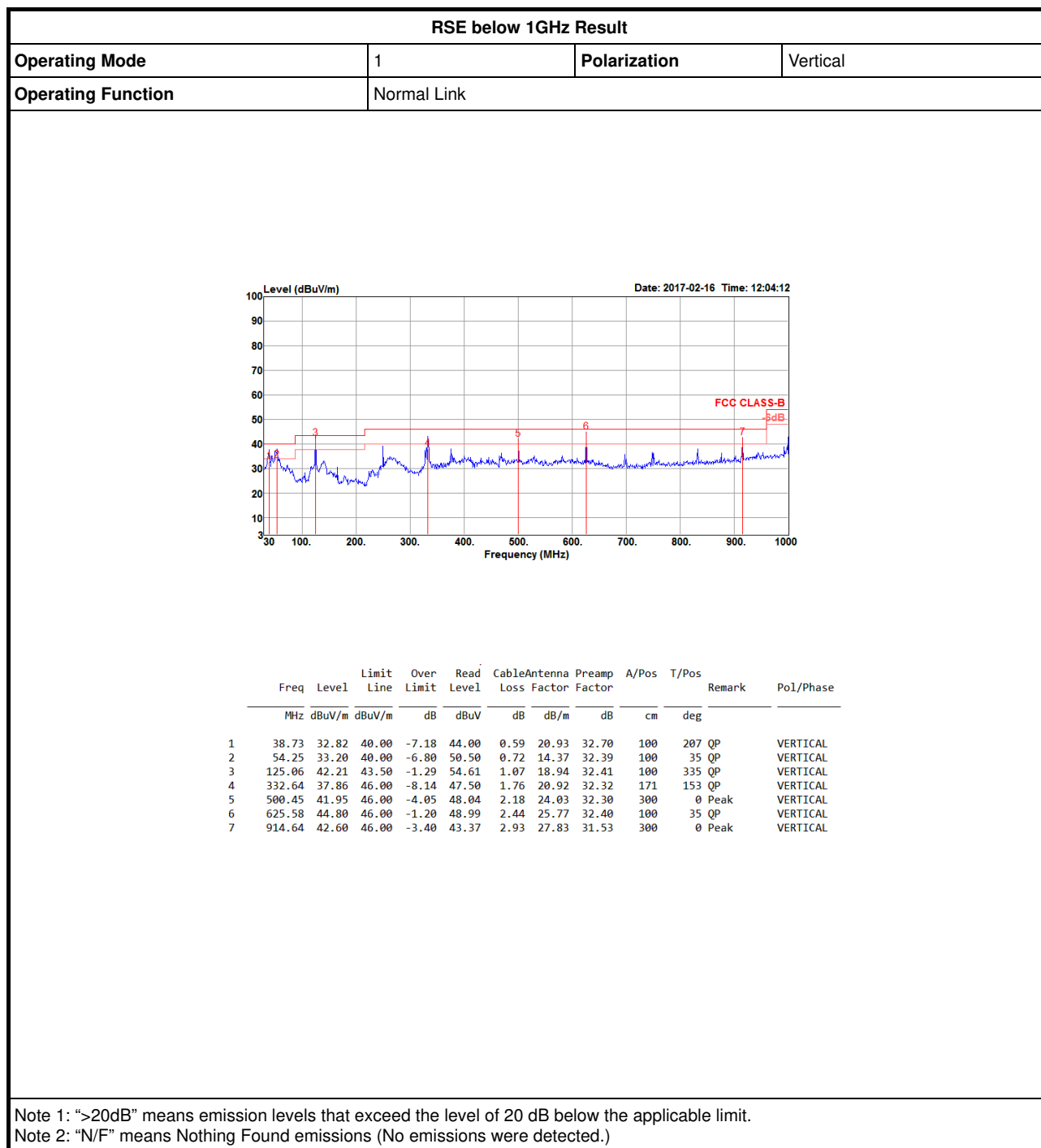
PSD

5775MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.21	7.21	1.29	2.37	1.93	1.38



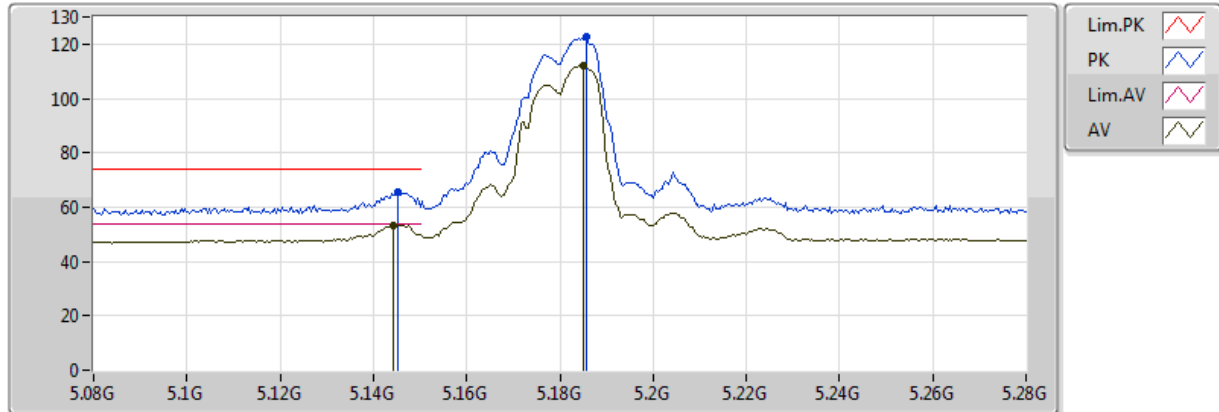


**11a, VHT20, VHT40 and VHT80****Summary**

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
802.11a_(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-	-	-
5.15-5.25GHz	Pass	AV	5.1468G	53.99	54.00	-0.01	6.30	3	V	201	1.50	-

802.11a_(6Mbps)_4TX

5180MHz_TX

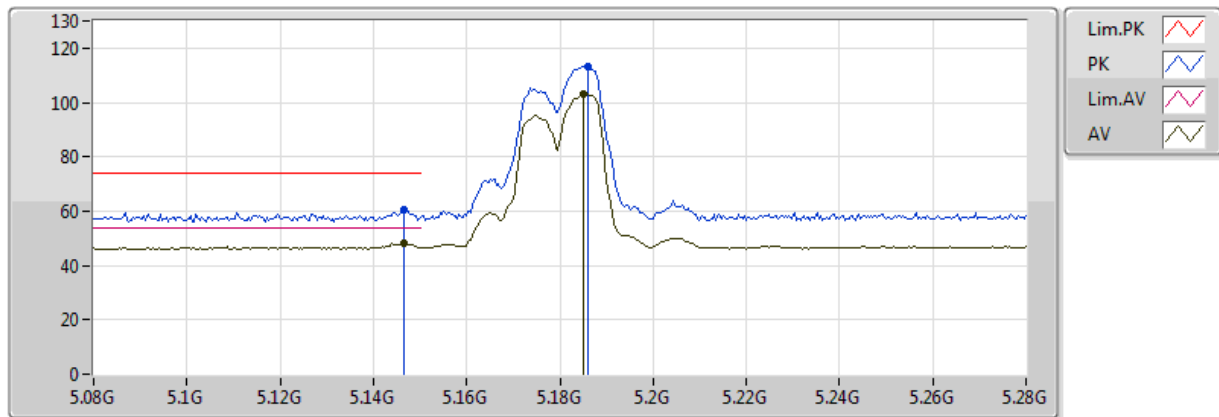


20160216
EUT Y 4TX NON-TXBF
Setting 19
03-M-01-10
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.1444G	53.51	54.00	-0.49	6.30	3	V	198	1.42	-
AV	5.1852G	112.02	Inf	-Inf	6.36	3	V	198	1.42	-
PK	5.1452G	65.40	74.00	-8.60	6.30	3	V	198	1.42	-
PK	5.1856G	122.47	Inf	-Inf	6.37	3	V	198	1.42	-

802.11a_(6Mbps)_4TX

5180MHz_TX

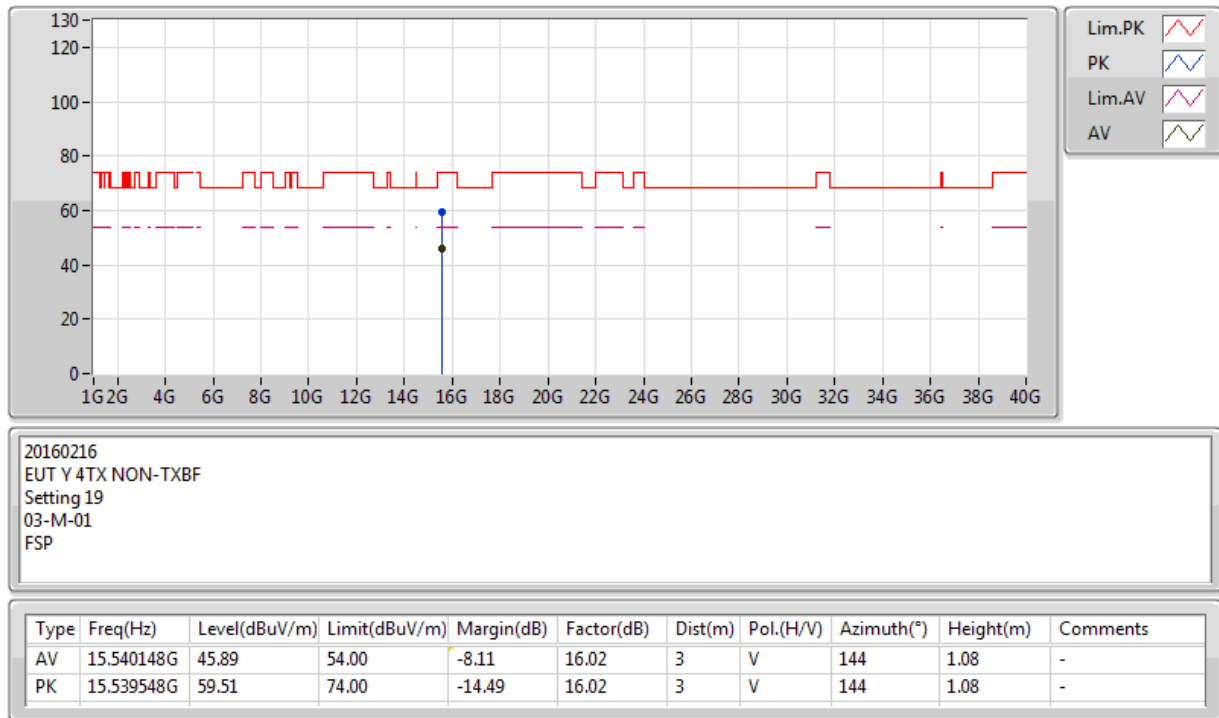


20160216
EUT Y 4TX NON-TXBF
Setting 19
03-M-01-10
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.1464G	48.36	54.00	-5.64	6.30	3	H	102	1.36	-
AV	5.1852G	103.06	Inf	-Inf	6.36	3	H	102	1.36	-
PK	5.1464G	60.61	74.00	-13.39	6.30	3	H	102	1.36	-
PK	5.186G	113.18	Inf	-Inf	6.37	3	H	102	1.36	-

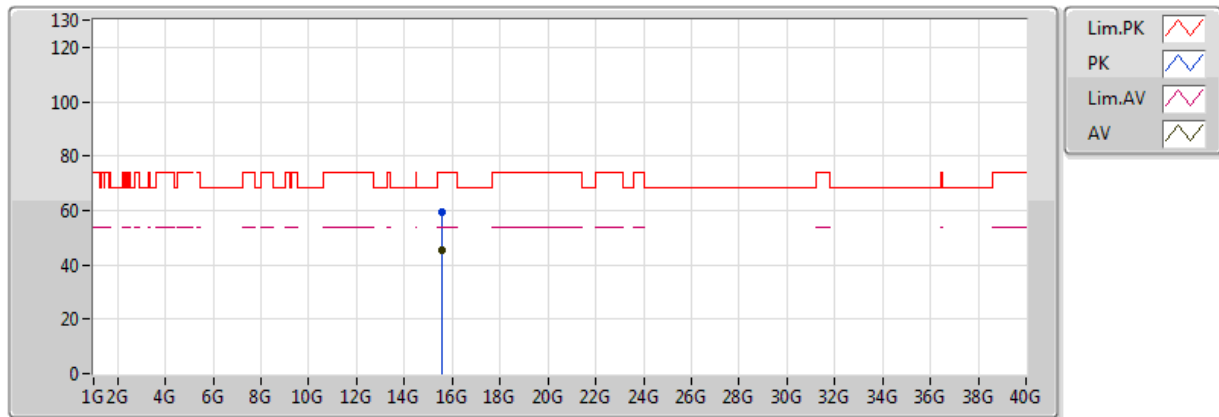
802.11a_(6Mbps)_4TX

5180MHz_TX



802.11a_(6Mbps)_4TX

5180MHz_TX

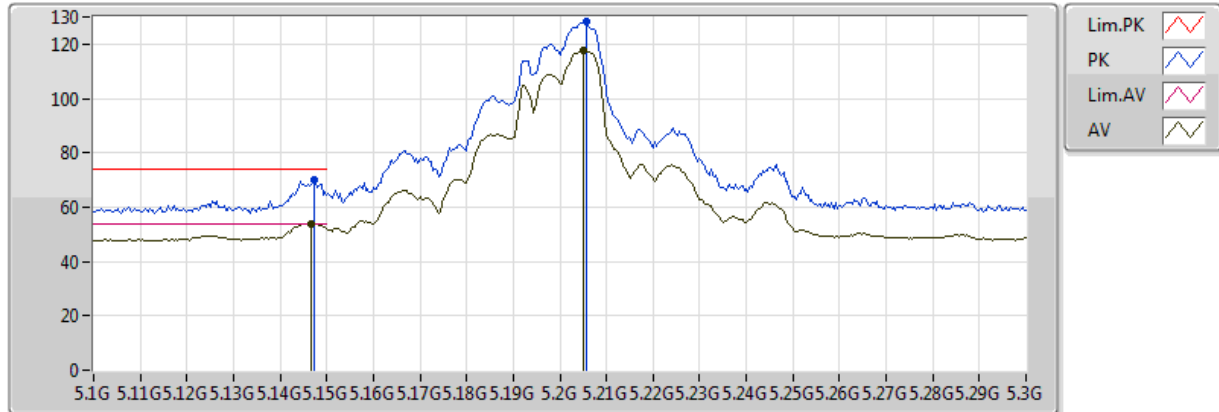


20160216
EUT Y 4TX NON-TXBF
Setting 19
03-M-01
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.53938G	45.57	54.00	-8.43	16.02	3	H	91	2.21	-
PK	15.539648G	59.28	74.00	-14.72	16.02	3	H	91	2.21	-

802.11a_(6Mbps)_4TX

5200MHz_TX

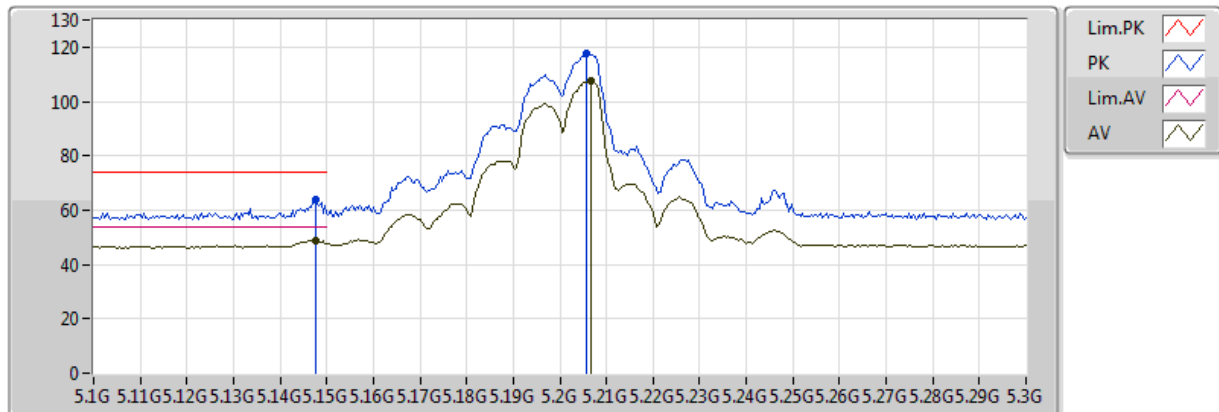


20160216
EUT Y 4TX NON-TXBF
Setting 25
03-M-01-10
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.1468G	53.99	54.00	-0.01	6.30	3	V	201	1.50	-
AV	5.2052G	117.94	Inf	-Inf	6.40	3	V	201	1.50	-
PK	5.1472G	69.93	74.00	-4.07	6.30	3	V	201	1.50	-
PK	5.2056G	128.44	Inf	-Inf	6.40	3	V	201	1.50	-

802.11a_(6Mbps)_4TX

5200MHz_TX

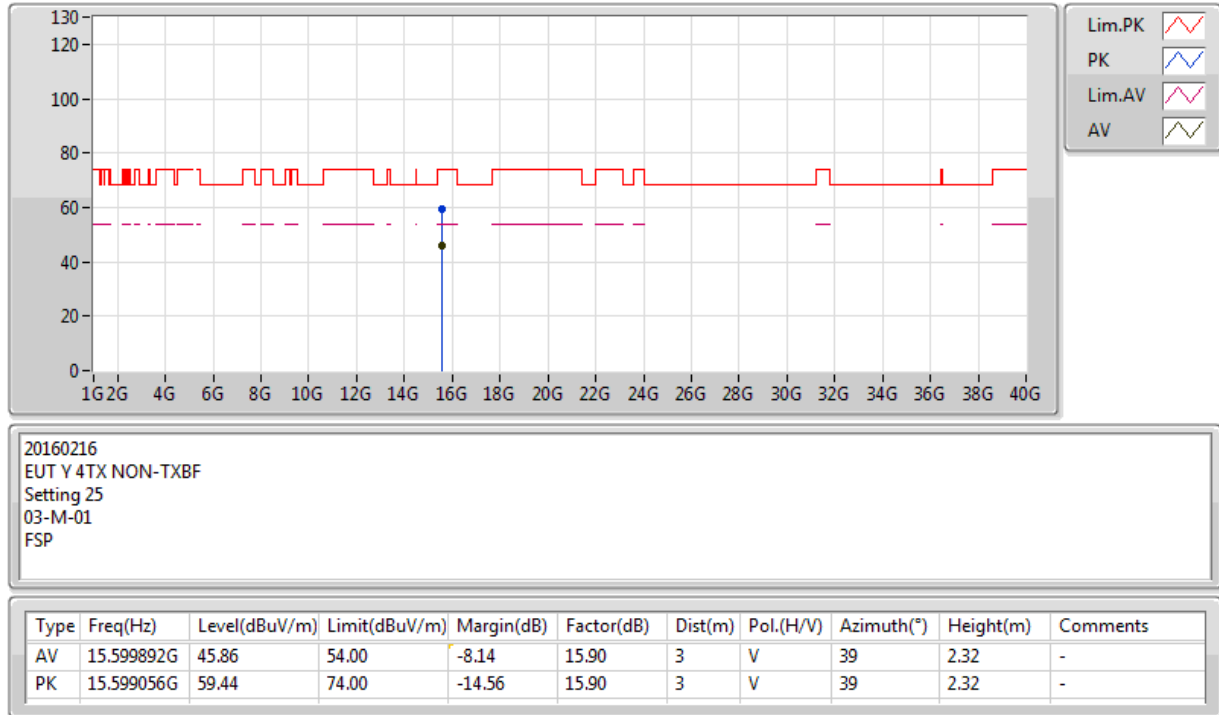


20160216
EUT Y 4TX NON-TXBF
Setting 25
03-M-01-10
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.1476G	48.93	54.00	-5.07	6.30	3	H	97	1.39	-
AV	5.2068G	107.39	Inf	-Inf	6.40	3	H	97	1.39	-
PK	5.1476G	64.02	74.00	-9.98	6.30	3	H	97	1.39	-
PK	5.2056G	117.64	Inf	-Inf	6.40	3	H	97	1.39	-

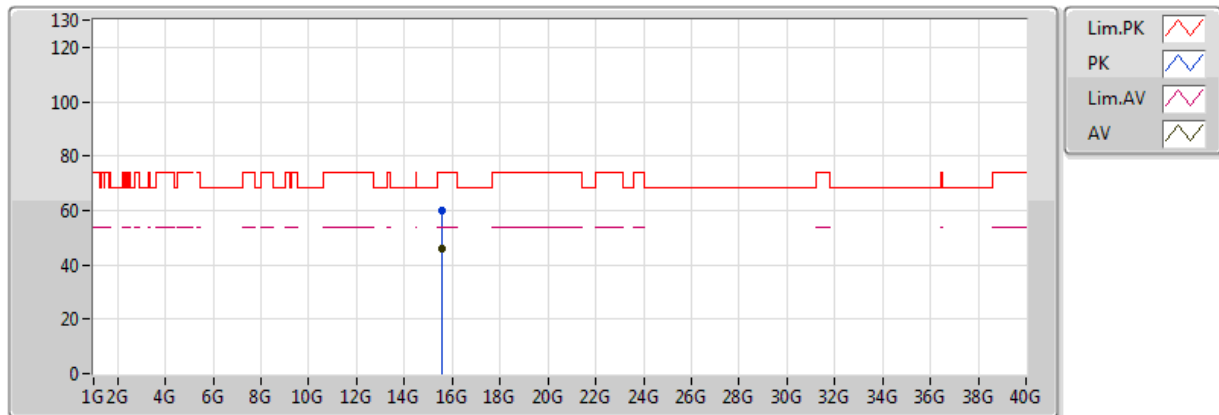
802.11a_(6Mbps)_4TX

5200MHz_TX



802.11a_(6Mbps)_4TX

5200MHz_TX

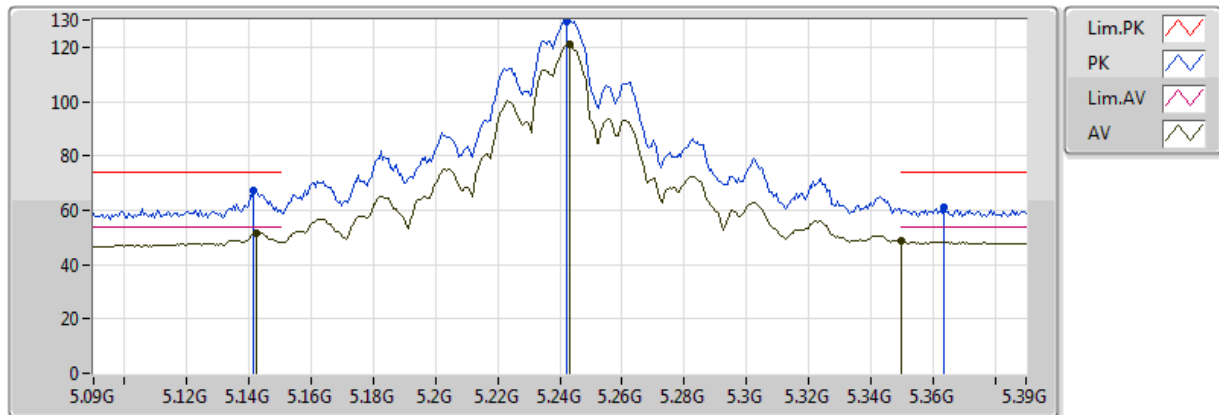


20160216
EUT Y 4TX NON-TXBF
Setting 25
03-M-01
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.600912G	45.85	54.00	-8.15	15.89	3	H	233	1.10	-
PK	15.599992G	59.75	74.00	-14.25	15.90	3	H	233	1.10	-

802.11a_(6Mbps)_4TX

5240MHz_TX

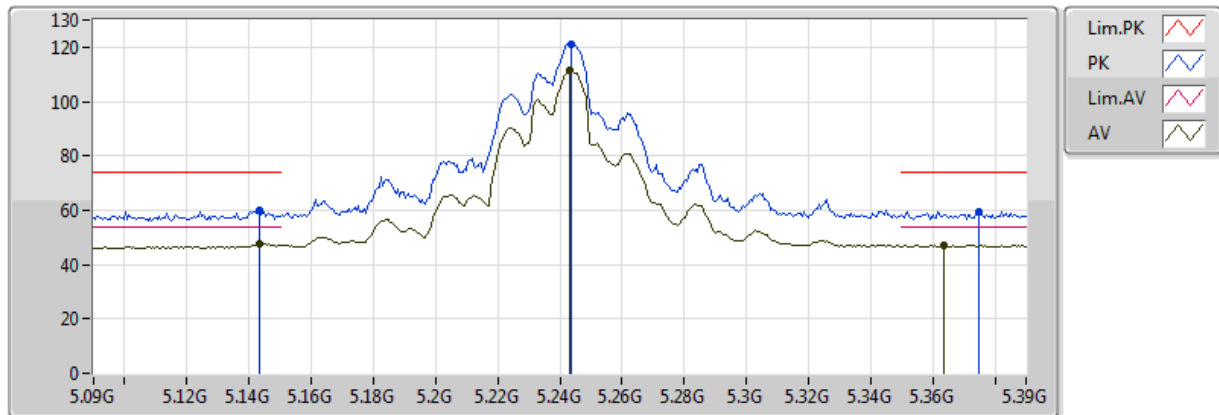


20160216
EUT Y 4TX NON-TXBF
Setting 30 Maxsetting
03-M-01-10
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.1422G	51.68	54.00	-2.32	6.29	3	V	200	1.45	-
AV	5.243G	121.07	Inf	-Inf	6.45	3	V	200	1.45	-
AV	5.350005G	48.61	54.00	-5.39	6.64	3	V	200	1.45	-
PK	5.1416G	67.23	74.00	-6.77	6.29	3	V	200	1.45	-
PK	5.2424G	129.58	Inf	-Inf	6.45	3	V	200	1.45	-
PK	5.3636G	60.81	74.00	-13.19	6.62	3	V	200	1.45	-

802.11a_(6Mbps)_4TX

5240MHz_TX

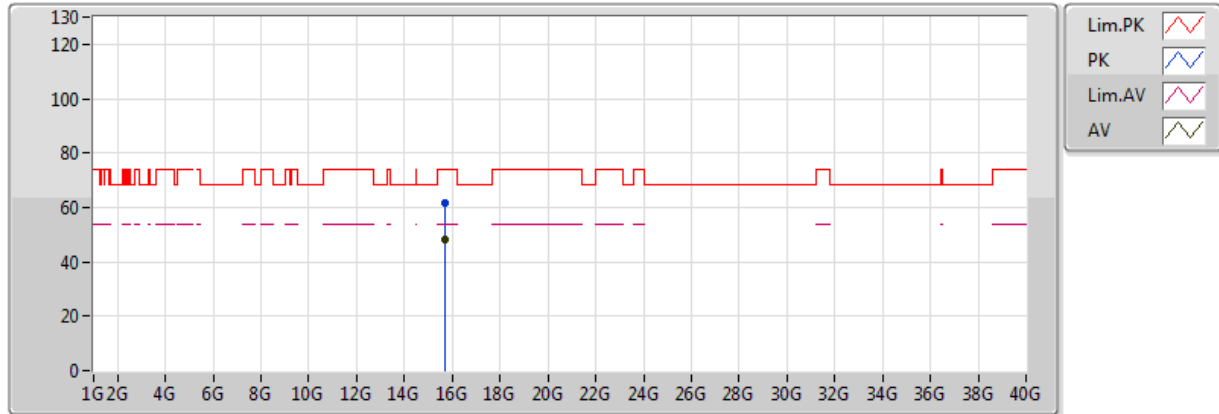


20160216
EUT Y 4TX NON-TXBF
Setting 30 Maxsetting
03-M-01-10
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.1434G	47.75	54.00	-6.25	6.29	3	H	99	1.24	-
AV	5.243G	111.32	Inf	-Inf	6.45	3	H	99	1.24	-
AV	5.3636G	46.98	54.00	-7.02	6.62	3	H	99	1.24	-
PK	5.1434G	60.00	74.00	-14.00	6.29	3	H	99	1.24	-
PK	5.2436G	121.27	Inf	-Inf	6.46	3	H	99	1.24	-
PK	5.375G	59.51	74.00	-14.49	6.64	3	H	99	1.24	-

802.11a_(6Mbps)_4TX

5240MHz_TX

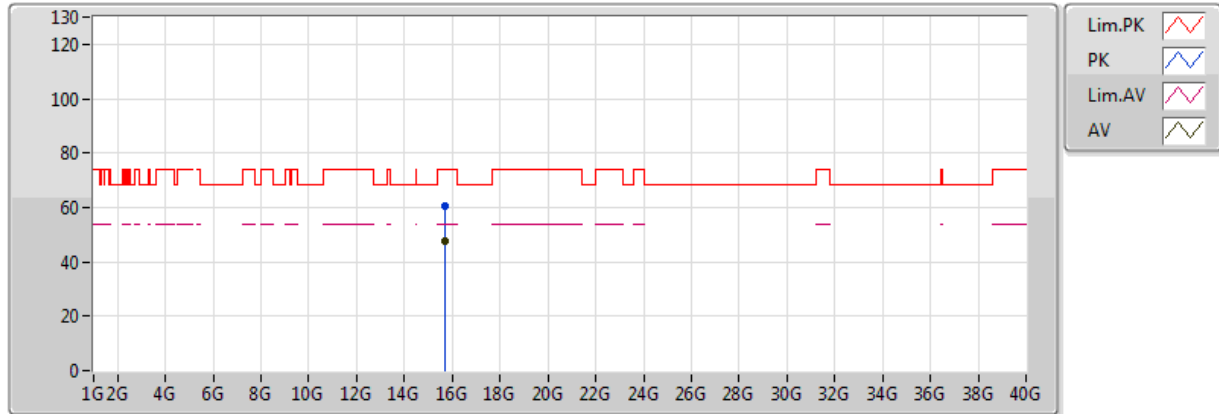


20160216
EUT Y 4TX NON-TXBF
Setting 30 Maxsetting
03-M-01
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.720448G	48.44	54.00	-5.56	15.66	3	V	70	1.34	-
PK	15.720132G	61.60	74.00	-12.40	15.66	3	V	70	1.34	-

802.11a_(6Mbps)_4TX

5240MHz_TX

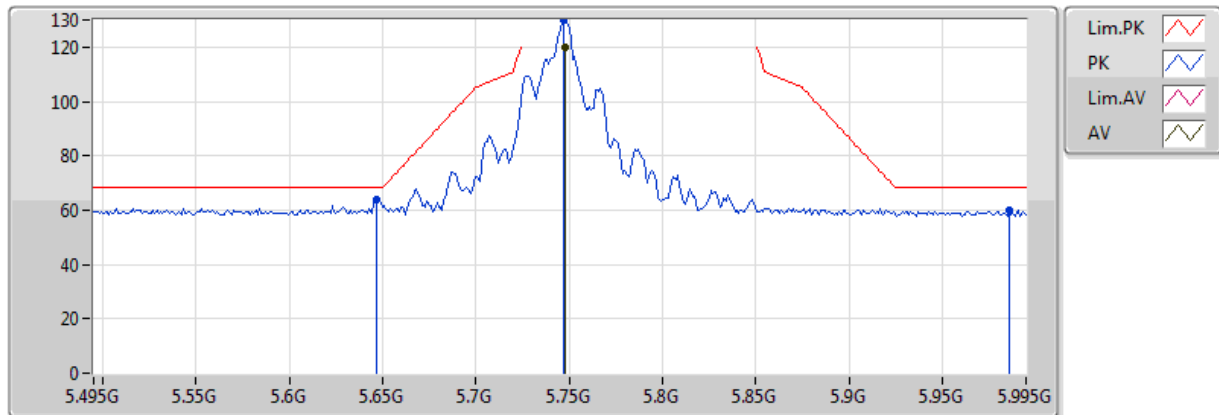


20160216
EUT Y 4TX NON-TXBF
Setting 30 Maxsetting
03-M-01
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.71918G	47.39	54.00	-6.61	15.66	3	H	132	2.36	-
PK	15.719648G	60.66	74.00	-13.34	15.66	3	H	132	2.36	-

802.11a_(6Mbps)_4TX

5745MHz_TX

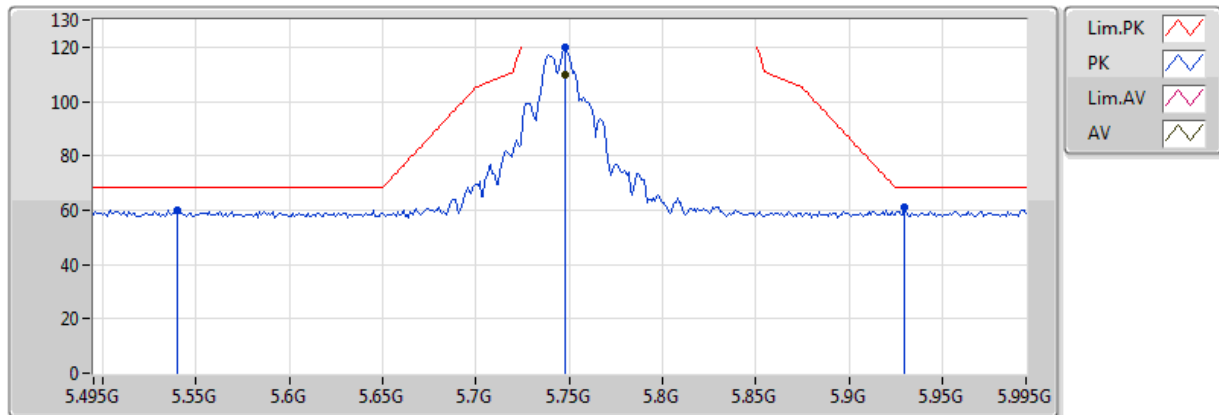


20160216
EUT Y 4TX NON-TXBF
Setting 30
03-M-01-10
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.748G	119.86	Inf	-Inf	6.98	3	V	192	1.49	-
PK	5.647G	64.06	68.20	-4.14	6.97	3	V	192	1.49	-
PK	5.747G	129.87	Inf	-Inf	6.98	3	V	192	1.49	-
PK	5.986G	59.74	68.20	-8.46	6.90	3	V	192	1.49	-

802.11a_(6Mbps)_4TX

5745MHz_TX

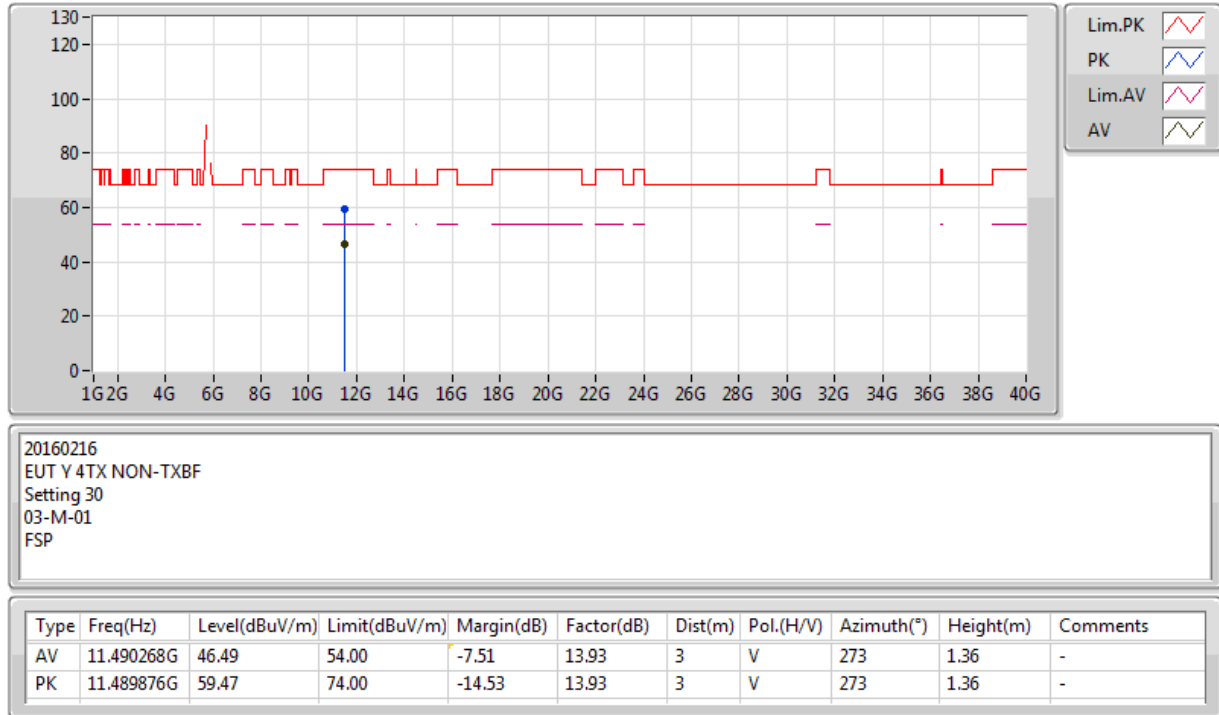


20160216
EUT Y 4TX NON-TXBF
Setting 30
03-M-01-10
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.748G	109.56	Inf	-Inf	6.98	3	H	228	1.55	-
PK	5.54G	59.93	68.20	-8.27	6.92	3	H	228	1.55	-
PK	5.748G	119.83	Inf	-Inf	6.98	3	H	228	1.55	-
PK	5.93G	60.88	68.20	-7.32	6.93	3	H	228	1.55	-

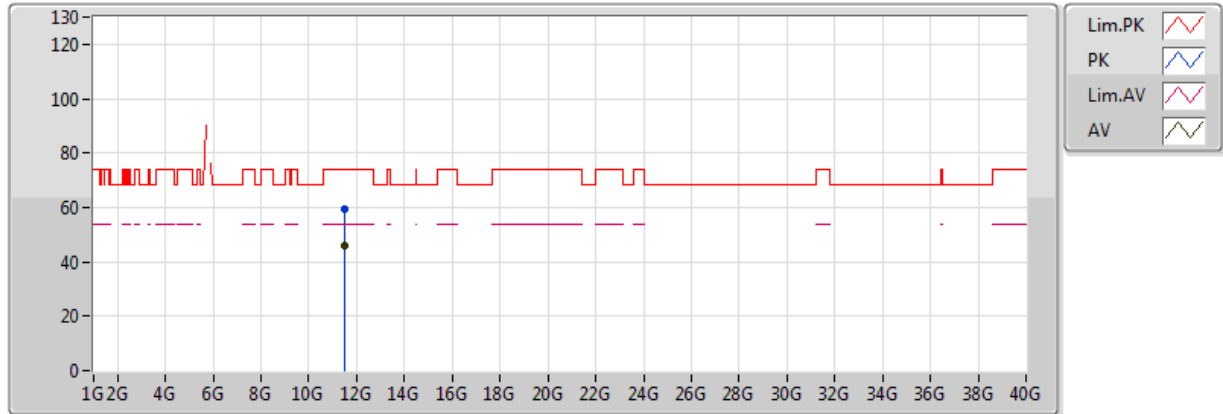
802.11a_(6Mbps)_4TX

5745MHz_TX



802.11a_(6Mbps)_4TX

5745MHz_TX

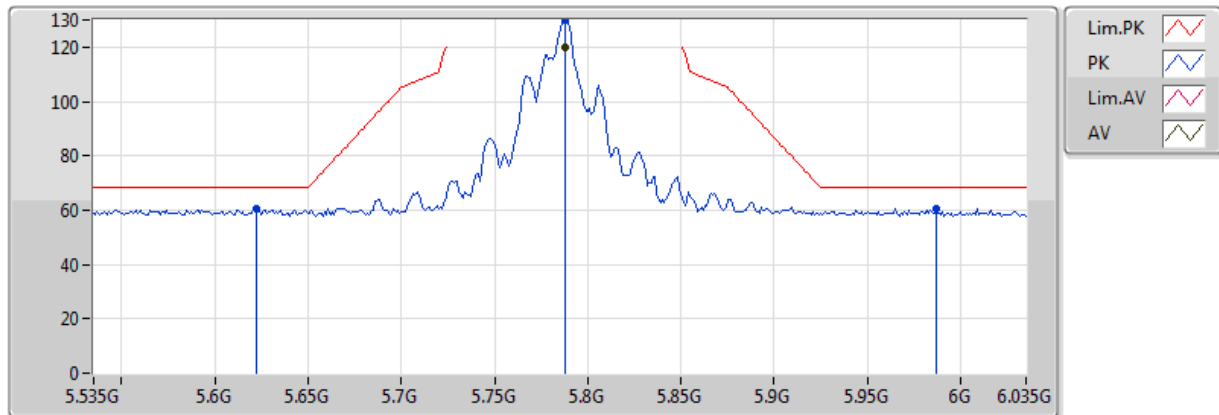


20160216
EUT Y 4TX NON-TXBF
Setting 30
03-M-01
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.489228G	45.72	54.00	-8.28	13.93	3	H	316	1.69	-
PK	11.48924G	59.30	74.00	-14.70	13.93	3	H	316	1.69	-

802.11a_(6Mbps)_4TX

5785MHz_TX

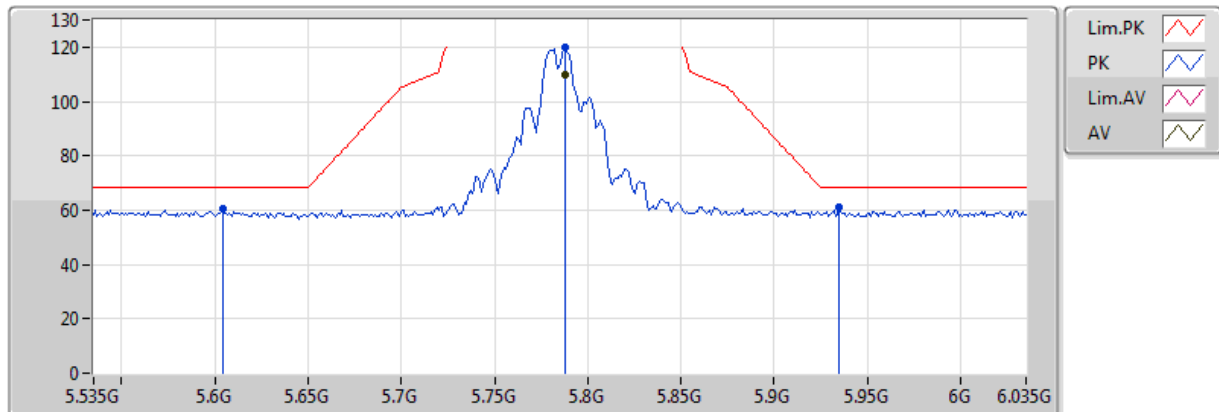


20160216
EUT Y 4TX NON-TXBF
Setting 30
03-M-01-10
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.788G	119.94	Inf	-Inf	6.98	3	V	189	1.44	-
PK	5.622G	60.60	68.20	-7.60	6.97	3	V	189	1.44	-
PK	5.788G	130.02	Inf	-Inf	6.98	3	V	189	1.44	-
PK	5.987G	60.74	68.20	-7.46	6.90	3	V	189	1.44	-

802.11a_(6Mbps)_4TX

5785MHz_TX

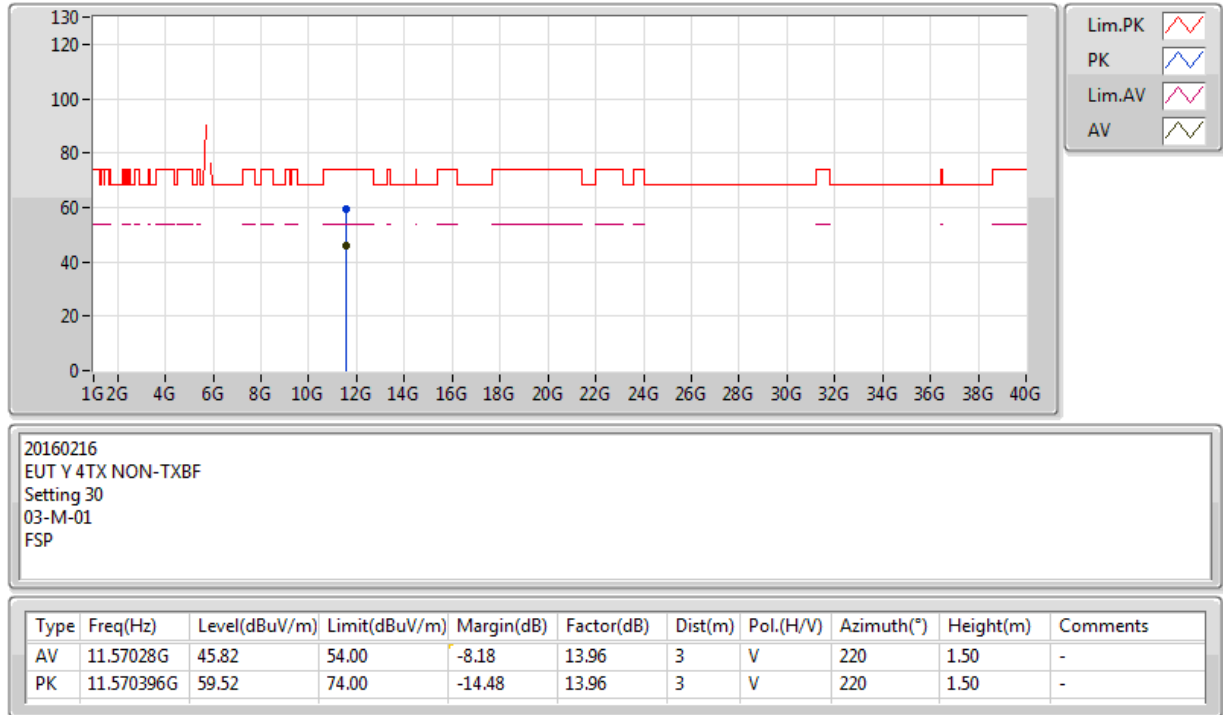


20160216
EUT Y 4TX NON-TXBF
Setting 30
03-M-01-10
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.788G	109.75	Inf	-Inf	6.98	3	H	229	1.36	-
PK	5.604G	60.29	68.20	-7.91	6.97	3	H	229	1.36	-
PK	5.788G	119.87	Inf	-Inf	6.98	3	H	229	1.36	-
PK	5.935G	60.98	68.20	-7.22	6.92	3	H	229	1.36	-

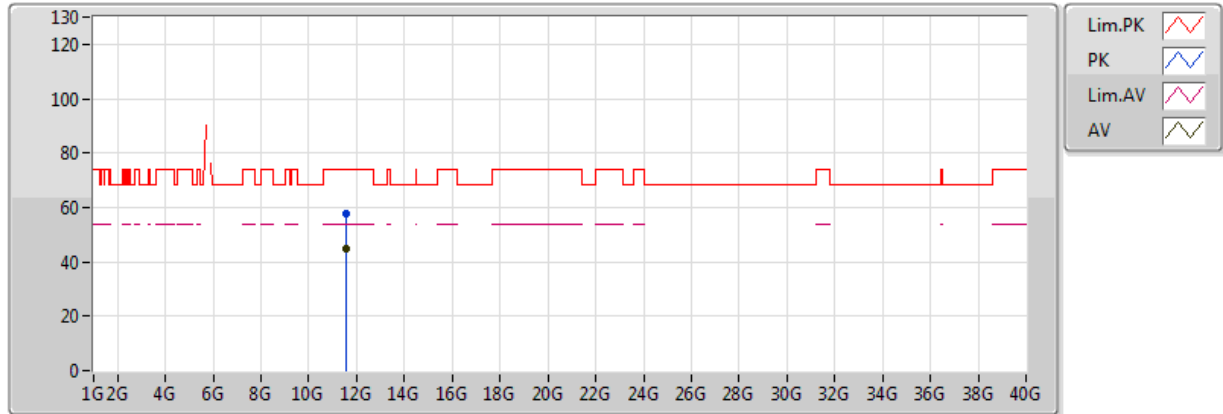
802.11a_(6Mbps)_4TX

5785MHz_TX



802.11a_(6Mbps)_4TX

5785MHz_TX

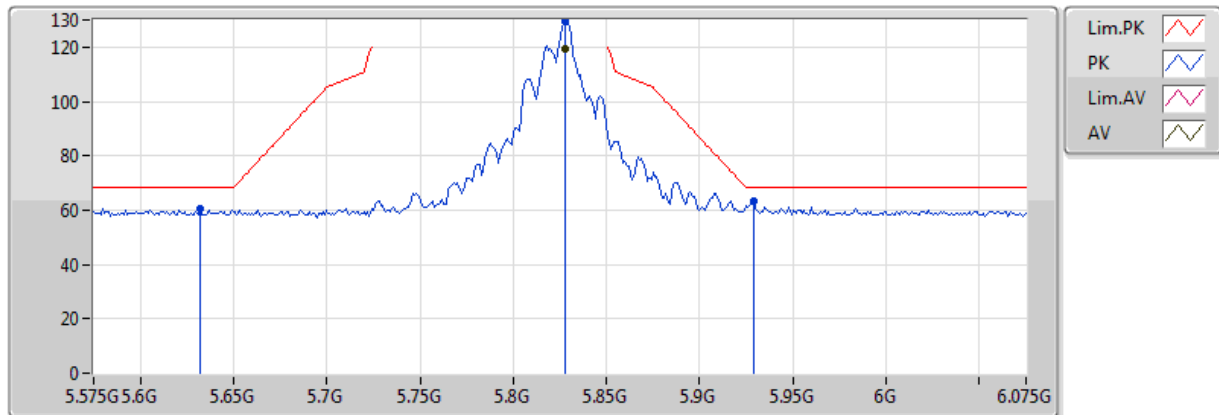


20160216
EUT Y 4TX NON-TXBF
Setting 30
03-M-01
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.569332G	44.92	54.00	-9.08	13.96	3	H	7	1.40	-
PK	11.569756G	57.90	74.00	-16.10	13.96	3	H	7	1.40	-

802.11a_(6Mbps)_4TX

5825MHz_TX

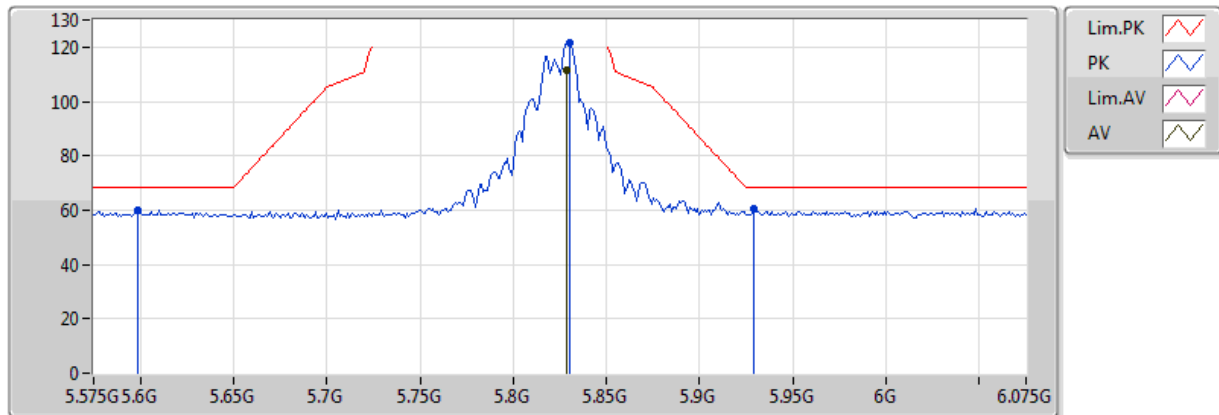


20160216
EUT Y 4TX NON-TXBF
Setting 30
03-M-01-10
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.828G	119.21	Inf	-Inf	6.97	3	V	189	1.50	-
PK	5.632G	60.78	68.20	-7.42	6.97	3	V	189	1.50	-
PK	5.828G	129.69	Inf	-Inf	6.97	3	V	189	1.50	-
PK	5.929G	63.40	68.20	-4.80	6.93	3	V	189	1.50	-

802.11a_(6Mbps)_4TX

5825MHz_TX

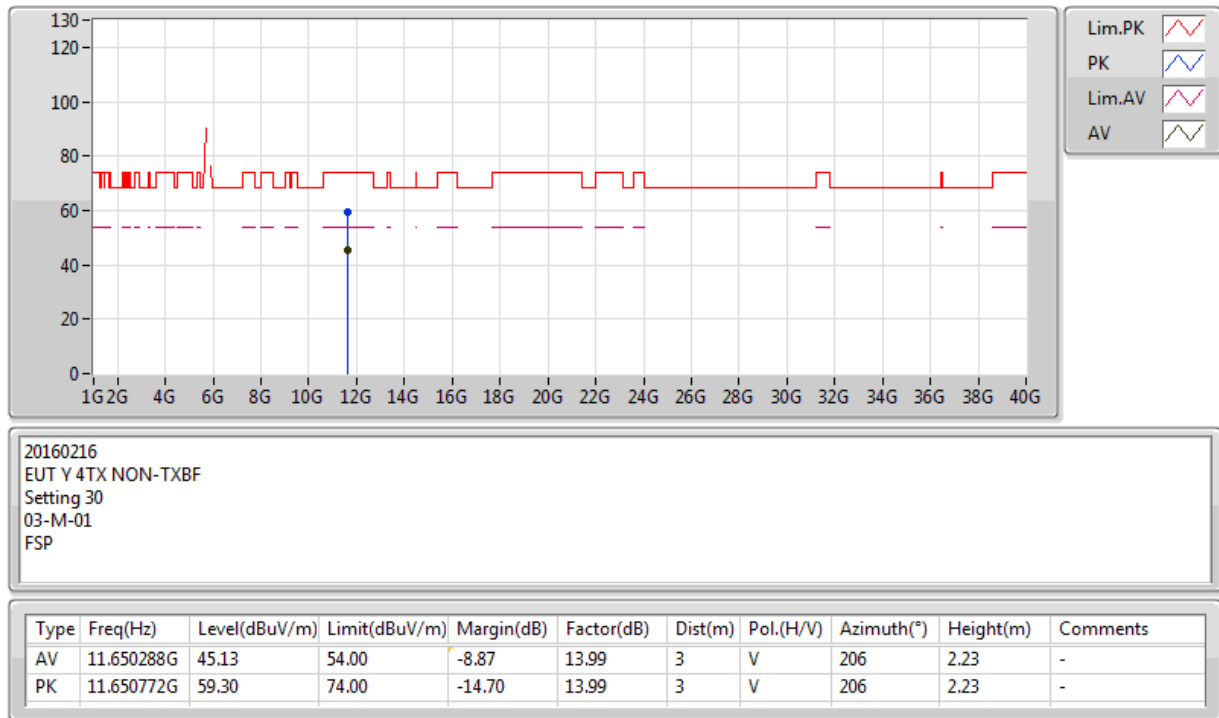


20160216
EUT Y 4TX NON-TXBF
Setting 30
03-M-01-10
FSP

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	111.38	Inf	-Inf	6.97	3	H	228	1.75	-
PK	5.599G	59.99	68.20	-8.21	6.97	3	H	228	1.75	-
PK	5.83G	121.58	Inf	-Inf	6.97	3	H	228	1.75	-
PK	5.929G	60.52	68.20	-7.68	6.93	3	H	228	1.75	-

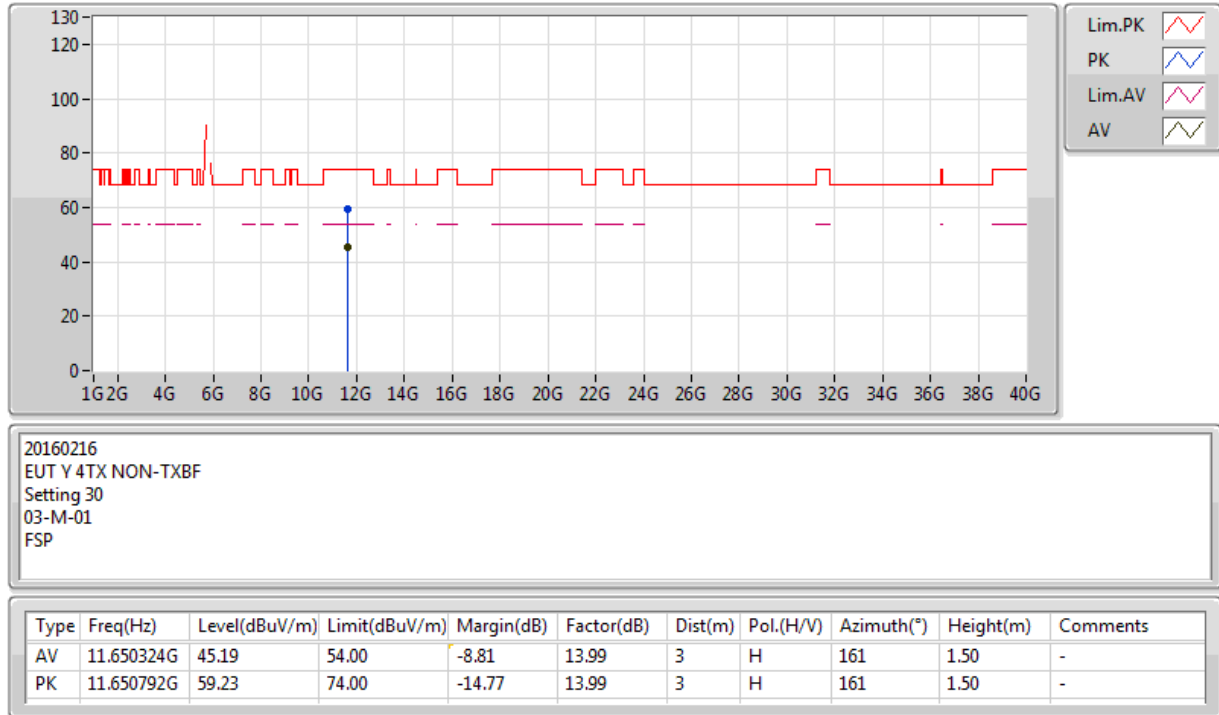
802.11a_(6Mbps)_4TX

5825MHz_TX



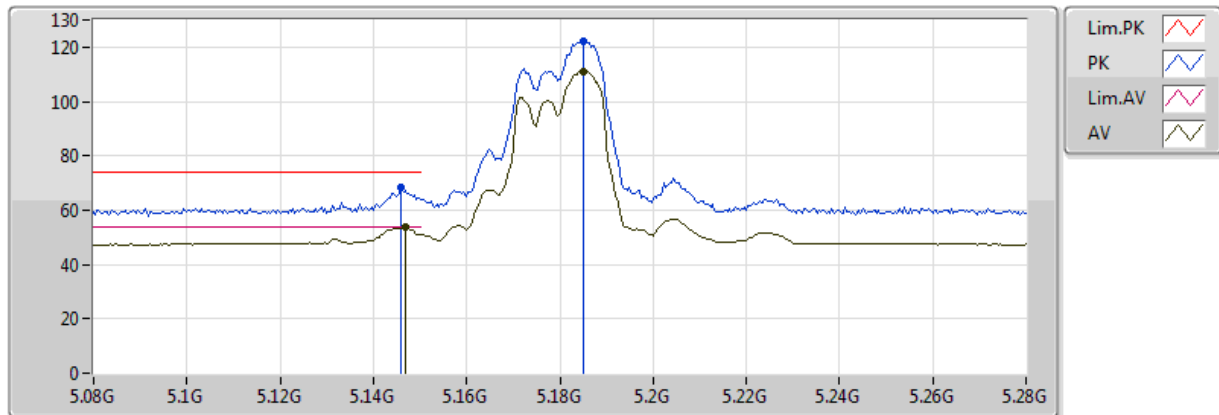
802.11a_(6Mbps)_4TX

5825MHz_TX



802.11ac VHT20_Nss1,(MCS0)_4TX

5180MHz_TX

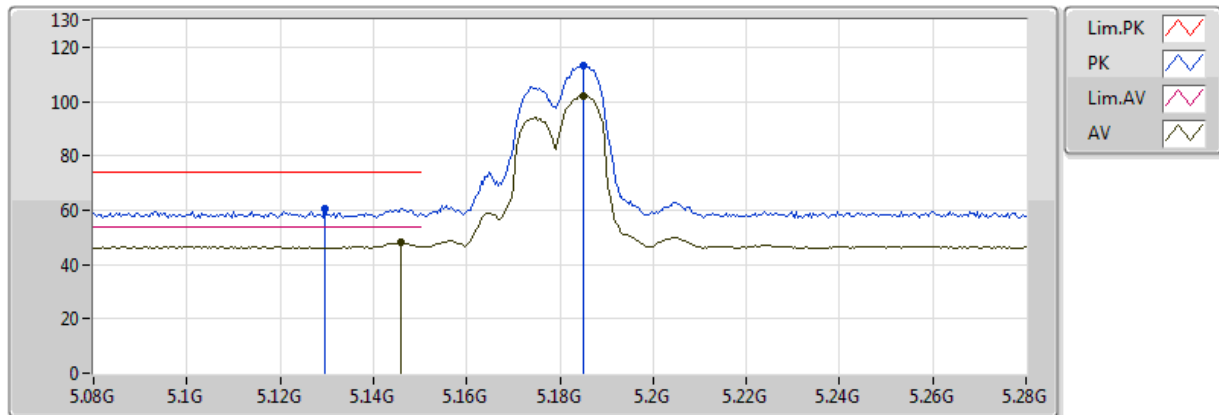


20160217
EUT Y 4TX NON-TXBF
Setting 19
03-M-01-10
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.1468G	53.52	54.00	-0.48	6.30	3	V	203	1.48	-
AV	5.1852G	111.13	Inf	-Inf	6.36	3	V	203	1.48	-
PK	5.146G	68.48	74.00	-5.52	6.30	3	V	203	1.48	-
PK	5.1852G	122.19	Inf	-Inf	6.36	3	V	203	1.48	-

802.11ac VHT20_Nss1,(MCS0)_4TX

5180MHz_TX

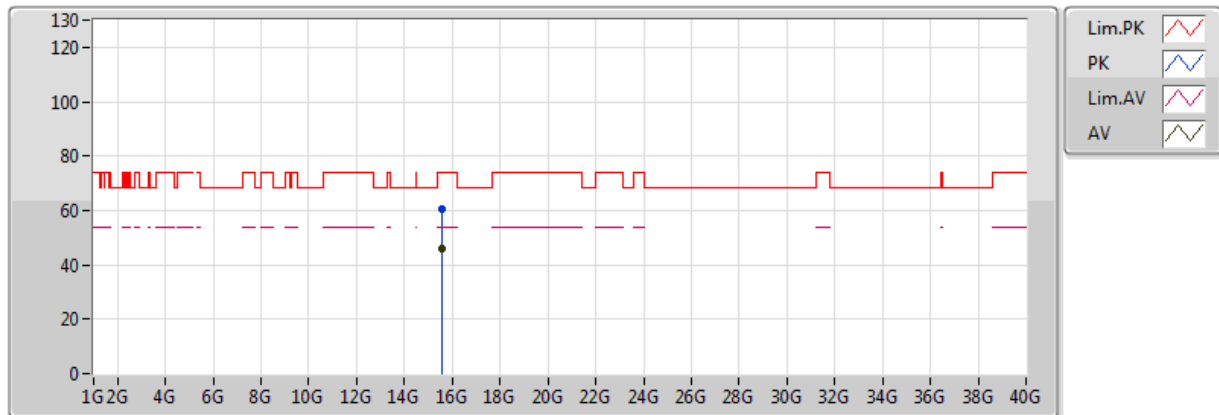


20160217
EUT Y 4TX NON-TXBF
Setting 19
03-M-01-10
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.146G	47.96	54.00	-6.04	6.30	3	H	101	1.45	-
AV	5.1852G	102.02	Inf	-Inf	6.36	3	H	101	1.45	-
PK	5.1296G	60.65	74.00	-13.35	6.27	3	H	101	1.45	-
PK	5.1852G	113.14	Inf	-Inf	6.36	3	H	101	1.45	-

802.11ac VHT20_Nss1,(MCS0)_4TX

5180MHz_TX

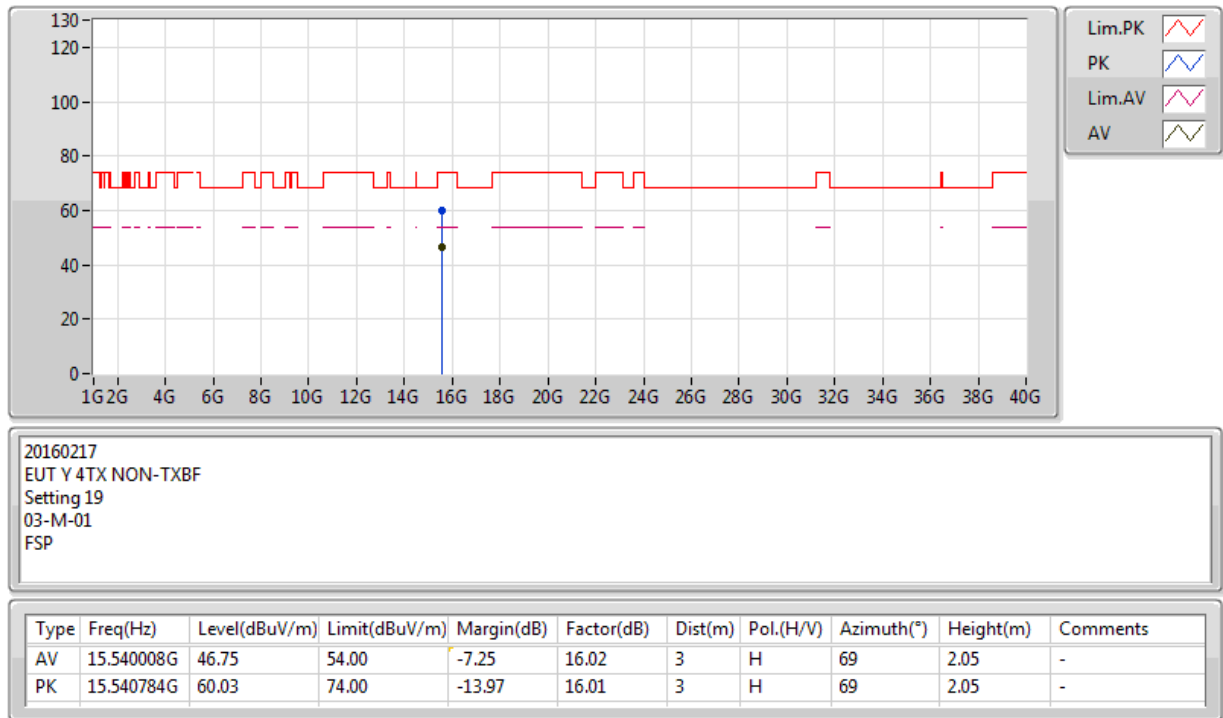


20160217
EUT Y 4TX NON-TXBF
Setting 19
03-M-01
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.539892G	46.12	54.00	-7.88	16.02	3	V	186	1.94	-
PK	15.539756G	60.29	74.00	-13.71	16.02	3	V	186	1.94	-

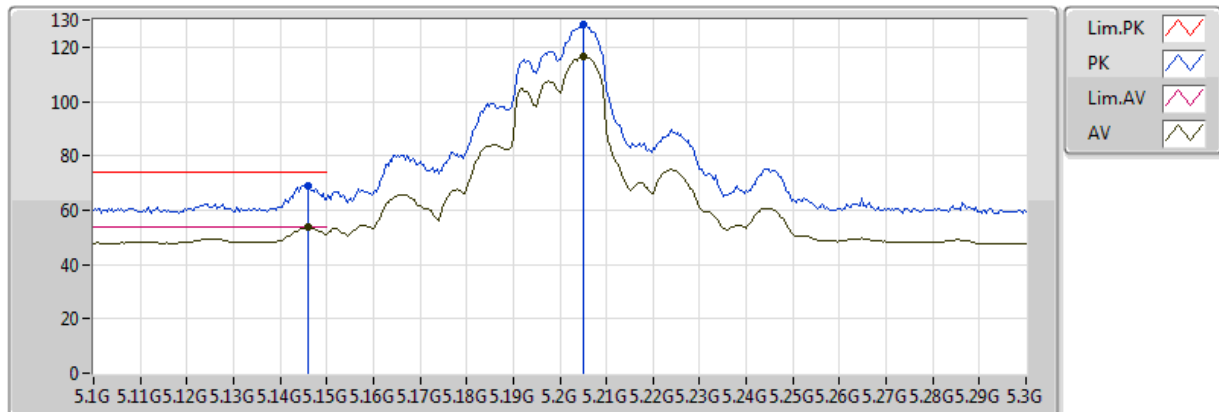
802.11ac VHT20_Nss1,(MCS0)_4TX

5180MHz_TX



802.11ac VHT20_Nss1,(MCS0)_4TX

5200MHz_TX

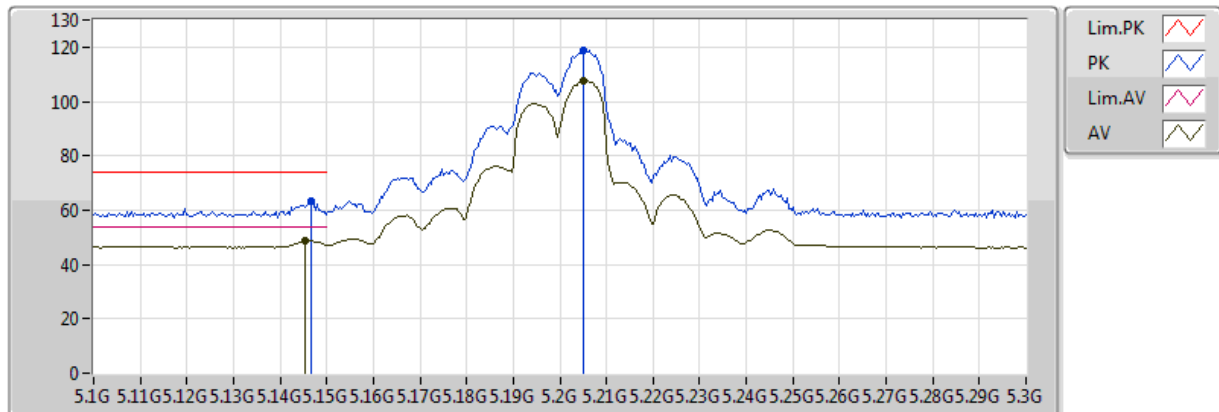


20160217
EUT Y 4TX NON-TXBF
Setting 25
03-M-01-10
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.146G	53.52	54.00	-0.48	6.30	3	V	205	1.43	-
AV	5.2052G	116.62	Inf	-Inf	6.40	3	V	205	1.43	-
PK	5.146G	69.06	74.00	-4.94	6.30	3	V	205	1.43	-
PK	5.2052G	128.23	Inf	-Inf	6.40	3	V	205	1.43	-

802.11ac VHT20_Nss1,(MCS0)_4TX

5200MHz_TX

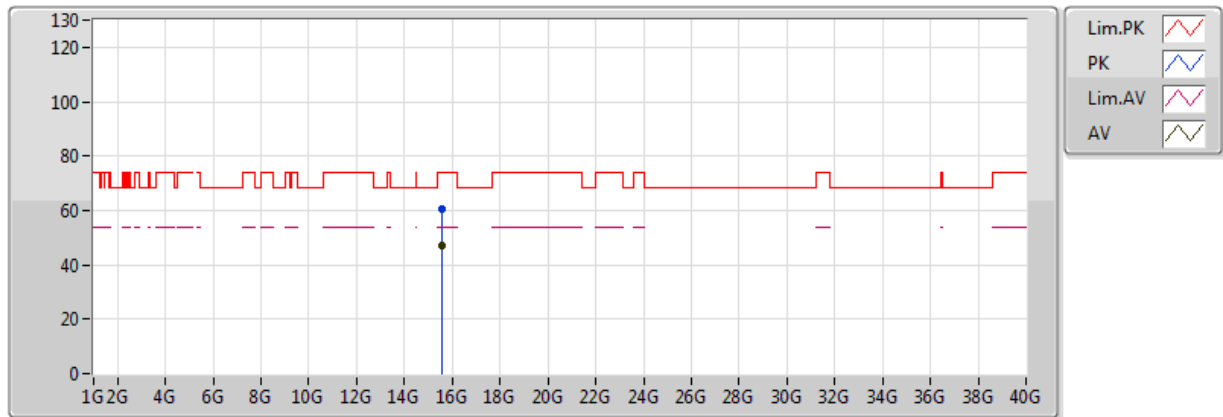


20160217
EUT Y 4TX NON-TXBF
Setting 25
03-M-01-10
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.1452G	48.71	54.00	-5.29	6.30	3	H	99	1.42	-
AV	5.2052G	107.63	Inf	-Inf	6.40	3	H	99	1.42	-
PK	5.1468G	63.24	74.00	-10.76	6.30	3	H	99	1.42	-
PK	5.2052G	118.74	Inf	-Inf	6.40	3	H	99	1.42	-

802.11ac VHT20_Nss1,(MCS0)_4TX

5200MHz_TX

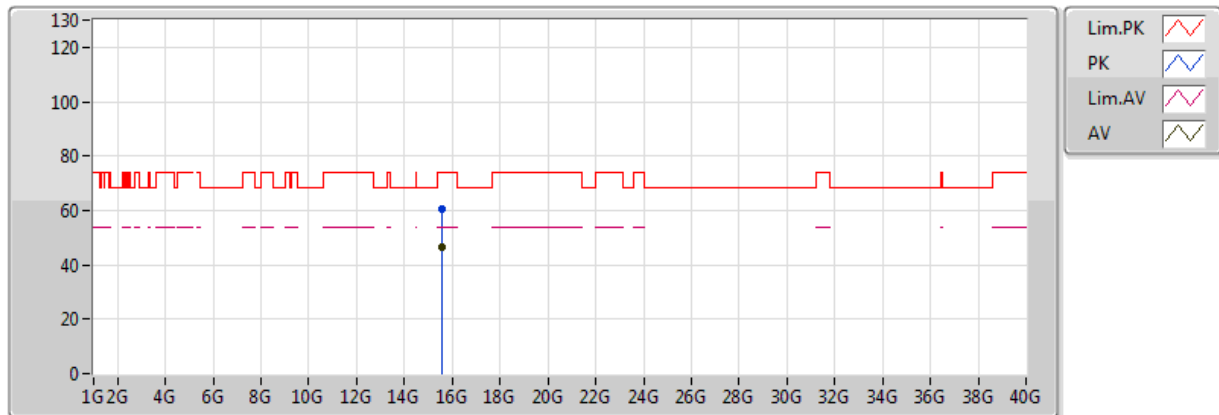


20160217
EUT Y 4TX NON-TXBF
Setting 25
03-M-01
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.600712G	47.12	54.00	-6.88	15.89	3	V	224	2.40	-
PK	15.59966G	60.70	74.00	-13.30	15.90	3	V	224	2.40	-

802.11ac VHT20_Nss1,(MCS0)_4TX

5200MHz_TX

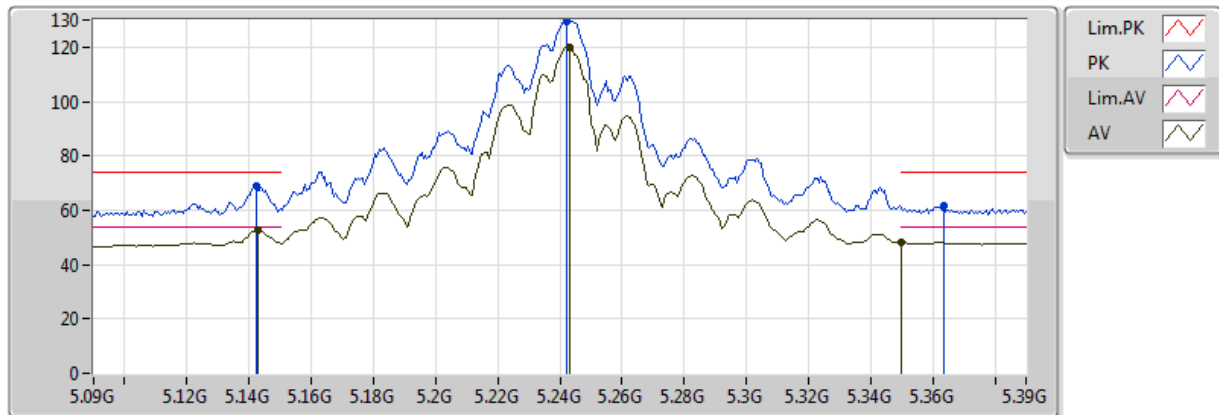


20160217
EUT Y 4TX NON-TXBF
Setting 25
03-M-01
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.60034G	46.55	54.00	-7.45	15.90	3	H	340	1.89	-
PK	15.600276G	60.52	74.00	-13.48	15.90	3	H	340	1.89	-

802.11ac VHT20_Nss1,(MCS0)_4TX

5240MHz_TX

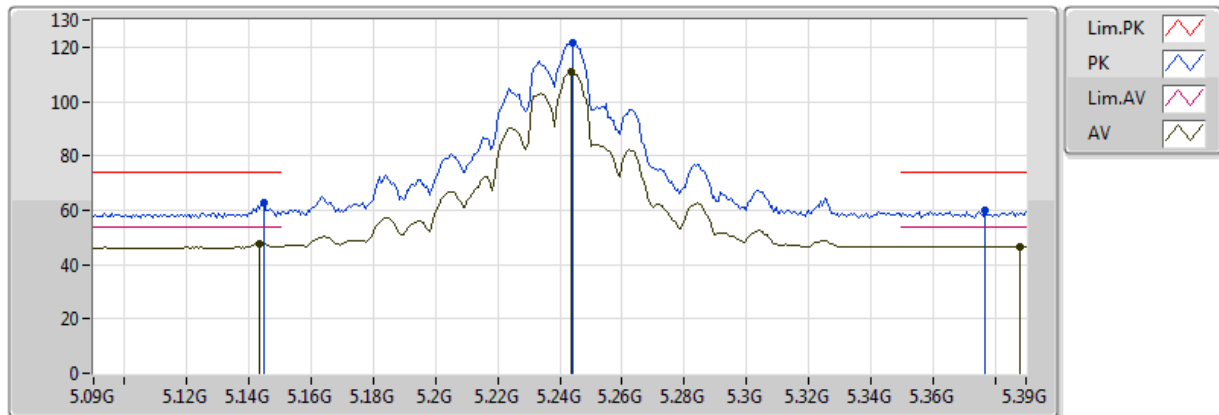


20160217
EUT Y 4TX NON-TXBF
Setting 30
03-M-01-10
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.1428G	52.57	54.00	-1.43	6.29	3	V	202	1.34	-
AV	5.243G	120.01	Inf	-Inf	6.45	3	V	202	1.34	-
AV	5.350005G	48.25	54.00	-5.75	6.61	3	V	202	1.34	-
PK	5.1422G	68.75	74.00	-5.25	6.29	3	V	202	1.34	-
PK	5.2424G	129.61	Inf	-Inf	6.45	3	V	202	1.34	-
PK	5.3636G	61.70	74.00	-12.30	6.62	3	V	202	1.34	-

802.11ac VHT20_Nss1,(MCS0)_4TX

5240MHz_TX

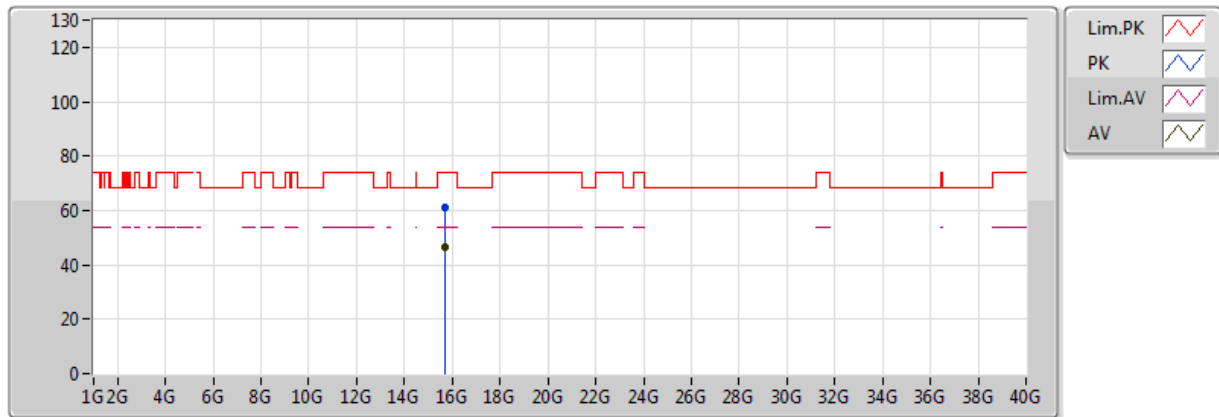


20160217
EUT Y 4TX NON-TXBF
Setting 30
03-M-01-10
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.1434G	47.69	54.00	-6.31	6.29	3	H	100	1.50	-
AV	5.2436G	110.73	Inf	-Inf	6.46	3	H	100	1.50	-
AV	5.3882G	46.76	54.00	-7.24	6.65	3	H	100	1.50	-
PK	5.1446G	62.55	74.00	-11.45	6.30	3	H	100	1.50	-
PK	5.2442G	121.74	Inf	-Inf	6.46	3	H	100	1.50	-
PK	5.3768G	60.00	74.00	-14.00	6.64	3	H	100	1.50	-

802.11ac VHT20_Nss1,(MCS0)_4TX

5240MHz_TX

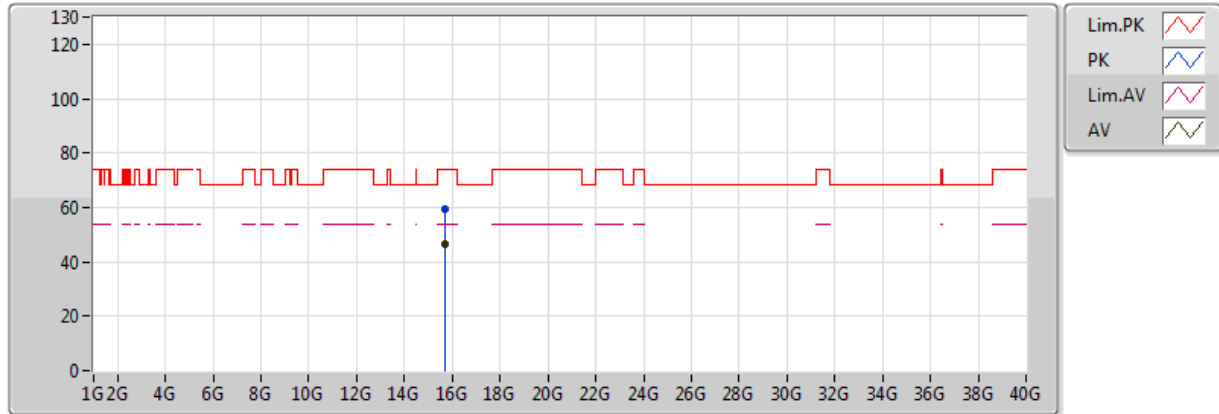


20160217
EUT Y 4TX NON-TXBF
Setting 30
03-M-01
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.719256G	46.61	54.00	-7.39	15.66	3	V	9	1.74	-
PK	15.719544G	60.89	74.00	-13.11	15.66	3	V	9	1.74	-

802.11ac VHT20_Nss1,(MCS0)_4TX

5240MHz_TX

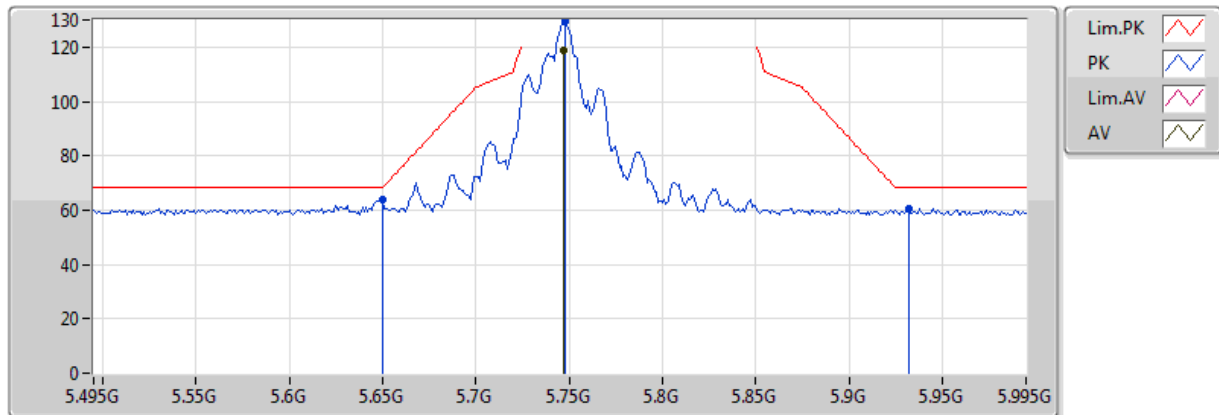


20160217
EUT Y 4TX NON-TXBF
Setting 30
03-M-01
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.719G	46.40	54.00	-7.60	15.66	3	H	207	1.71	-
PK	15.720444G	59.62	74.00	-14.38	15.66	3	H	207	1.71	-

802.11ac VHT20_Nss1,(MCS0)_4TX

5745MHz_TX

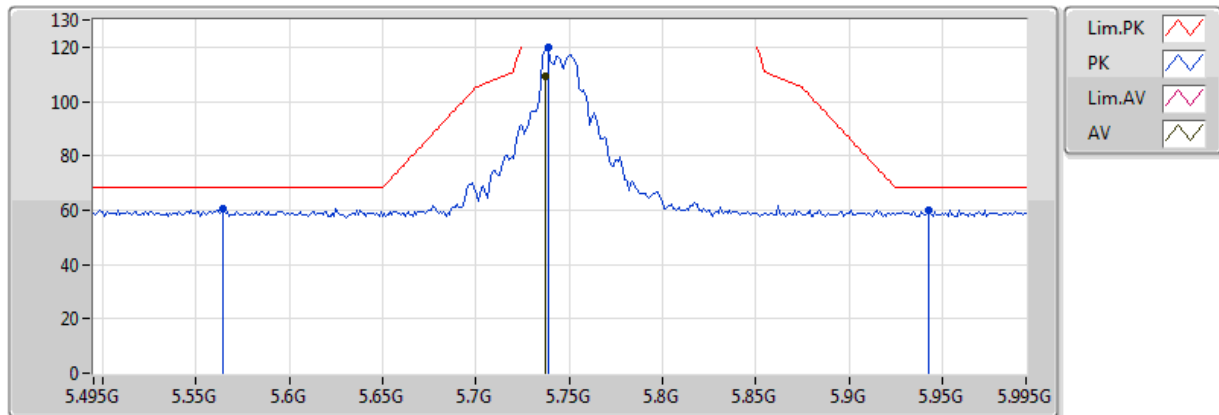


20160217
EUT Y 4TX NON-TXBF
Setting 30
03-M-01-10
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.747G	118.64	Inf	-Inf	6.98	3	V	191	1.37	-
PK	5.65G	64.08	68.20	-4.12	6.98	3	V	191	1.37	-
PK	5.748G	129.62	Inf	-Inf	6.98	3	V	191	1.37	-
PK	5.932G	60.73	68.20	-7.47	6.92	3	V	191	1.37	-

802.11ac VHT20_Nss1,(MCS0)_4TX

5745MHz_TX

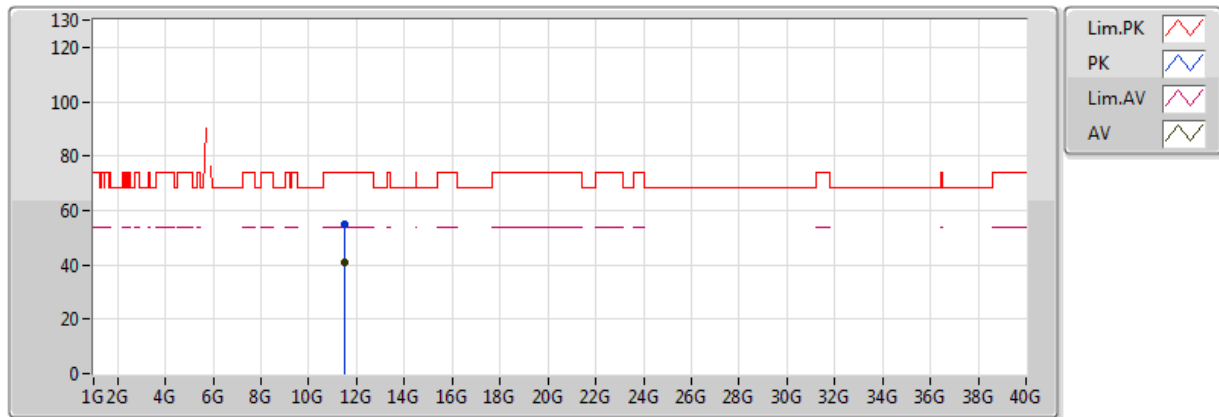


20160217
EUT Y 4TX NON-TXBF
Setting 30
03-M-01-10
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.737G	109.47	Inf	-Inf	6.98	3	H	232	2.03	-
PK	5.564G	60.62	68.20	-7.58	6.94	3	H	232	2.03	-
PK	5.739G	119.82	Inf	-Inf	6.98	3	H	232	2.03	-
PK	5.943G	60.08	68.20	-8.12	6.92	3	H	232	2.03	-

802.11ac VHT20_Nss1,(MCS0)_4TX

5745MHz_TX

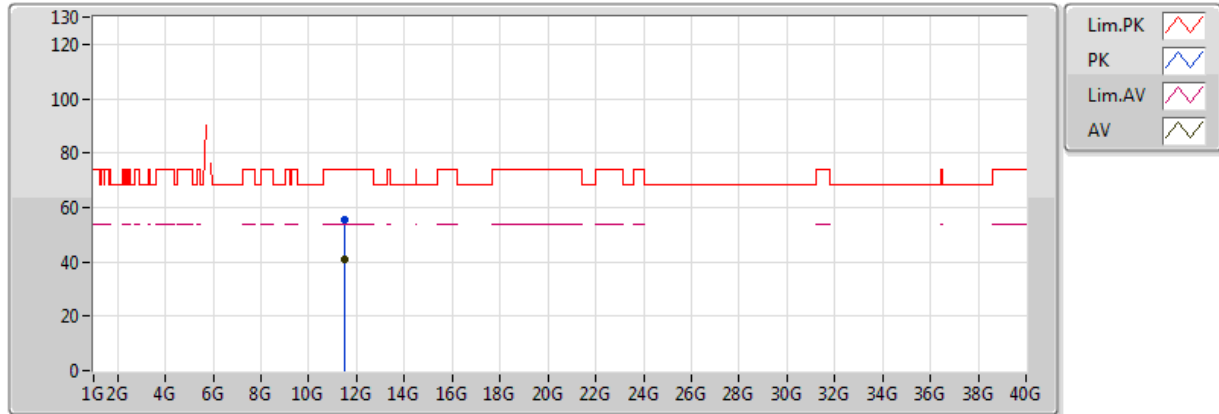


20160217
EUT Y 4TX NON-TXBF
Setting 30
03-M-01
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.490676G	40.78	54.00	-13.22	13.93	3	V	359	2.40	-
PK	11.489552G	55.01	74.00	-18.99	13.93	3	V	359	2.40	-

802.11ac VHT20_Nss1,(MCS0)_4TX

5745MHz_TX

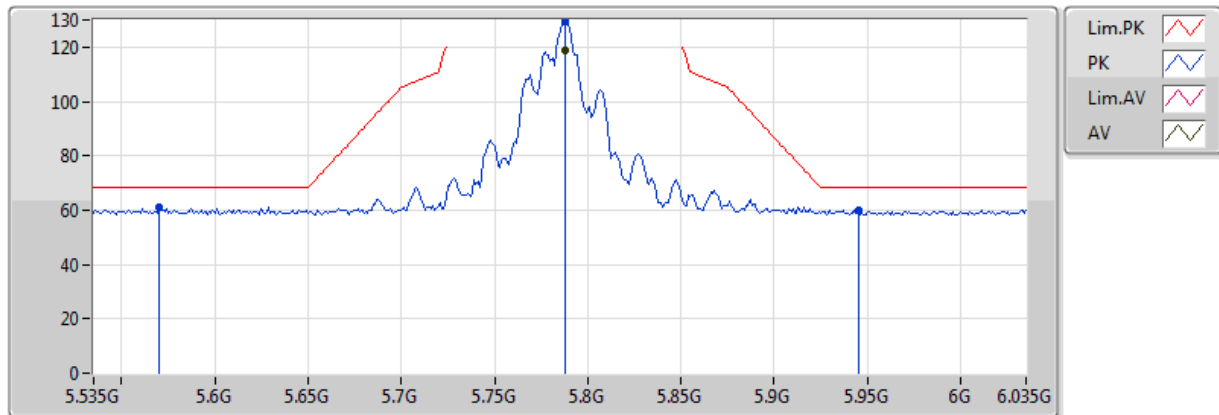


20160217
EUT Y 4TX NON-TXBF
Setting 30
03-M-01
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.490704G	40.81	54.00	-13.19	13.93	3	H	218	1.79	-
PK	11.490692G	55.34	74.00	-18.66	13.93	3	H	218	1.79	-

802.11ac VHT20_Nss1,(MCS0)_4TX

5785MHz_TX

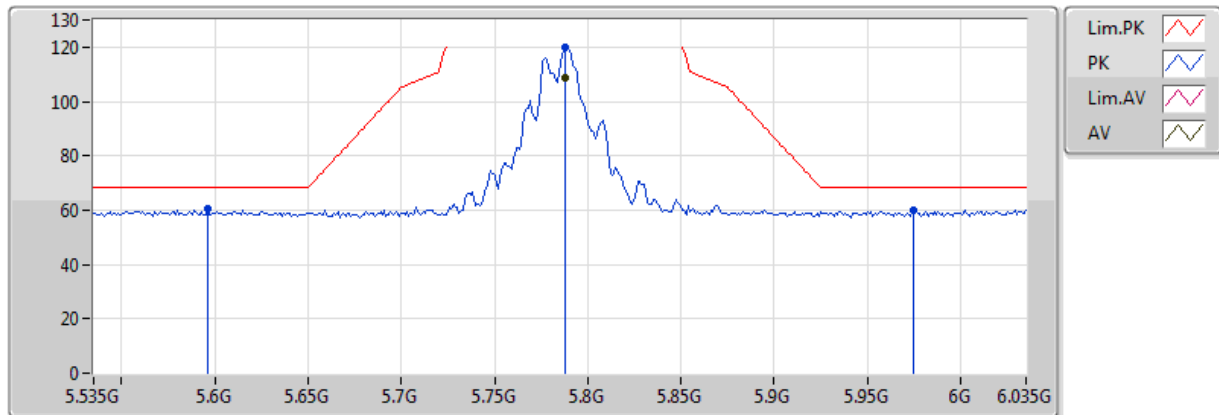


20160217
EUT Y 4TX NON-TXBF
Setting 30
03-M-01-10
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.788G	118.60	Inf	-Inf	6.98	3	V	191	1.38	-
PK	5.57G	61.15	68.20	-7.05	6.94	3	V	191	1.38	-
PK	5.788G	129.48	Inf	-Inf	6.98	3	V	191	1.38	-
PK	5.945G	60.21	68.20	-7.99	6.92	3	V	191	1.38	-

802.11ac VHT20_Nss1,(MCS0)_4TX

5785MHz_TX

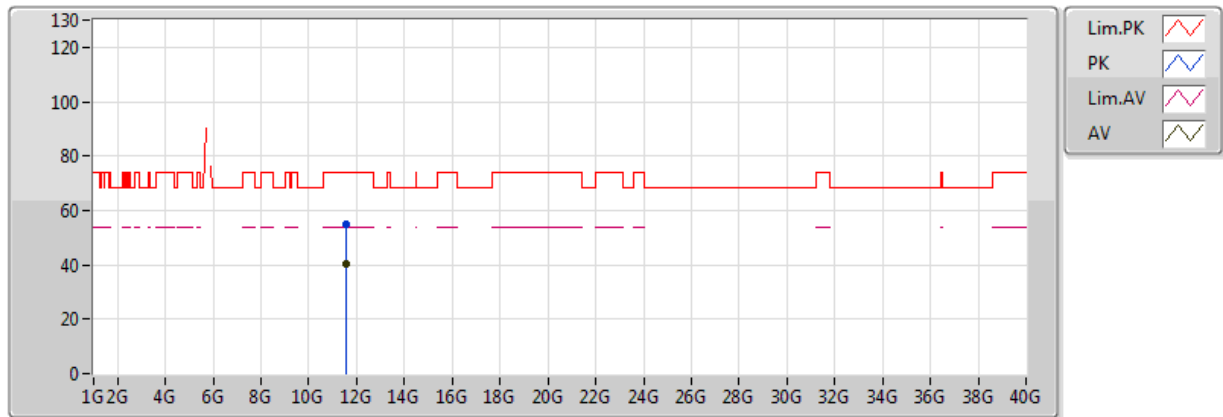


20160217
EUT Y 4TX NON-TXBF
Setting 30
03-M-01-10
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.788G	108.98	Inf	-Inf	6.98	3	H	229	1.66	-
PK	5.596G	60.58	68.20	-7.62	6.97	3	H	229	1.66	-
PK	5.788G	120.10	Inf	-Inf	6.98	3	H	229	1.66	-
PK	5.975G	59.83	68.20	-8.37	6.90	3	H	229	1.66	-

802.11ac VHT20_Nss1,(MCS0)_4TX

5785MHz_TX

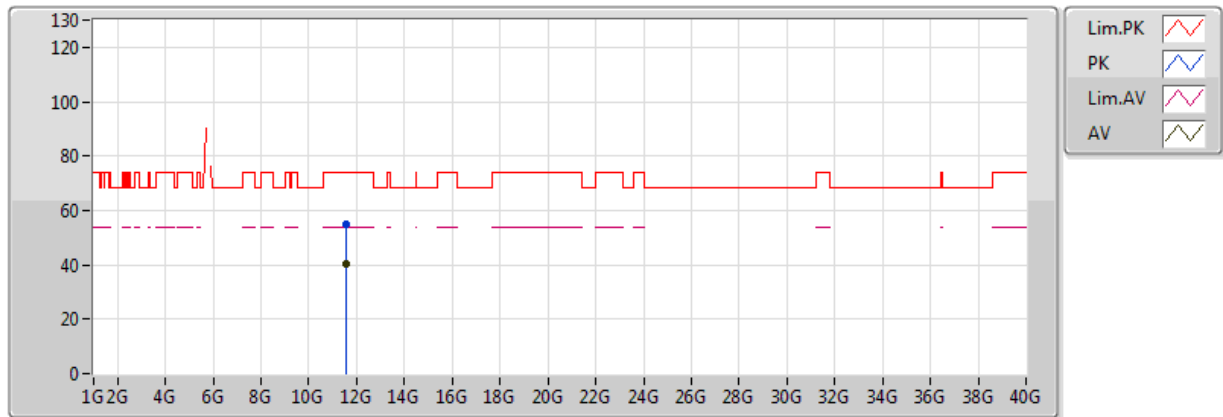


20160217
EUT Y 4TX NON-TXBF
Setting 30
03-M-01
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.57058G	40.62	54.00	-13.38	13.96	3	V	349	2.34	-
PK	11.570996G	54.68	74.00	-19.32	13.96	3	V	349	2.34	-

802.11ac VHT20_Nss1,(MCS0)_4TX

5785MHz_TX

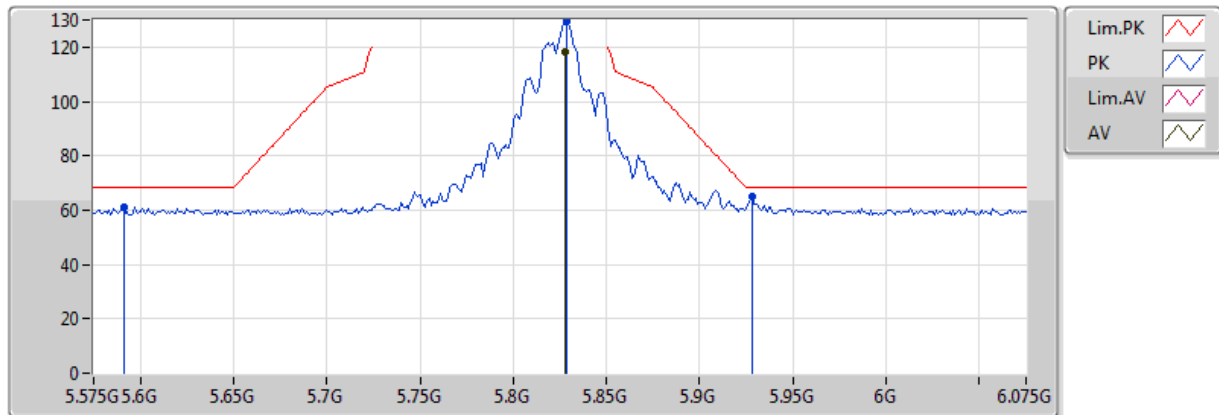


20160217
EUT Y 4TX NON-TXBF
Setting 30
03-M-01
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.570688G	40.60	54.00	-13.40	13.96	3	H	110	1.46	-
PK	11.57002G	54.69	74.00	-19.31	13.96	3	H	110	1.46	-

802.11ac VHT20_Nss1,(MCS0)_4TX

5825MHz_TX

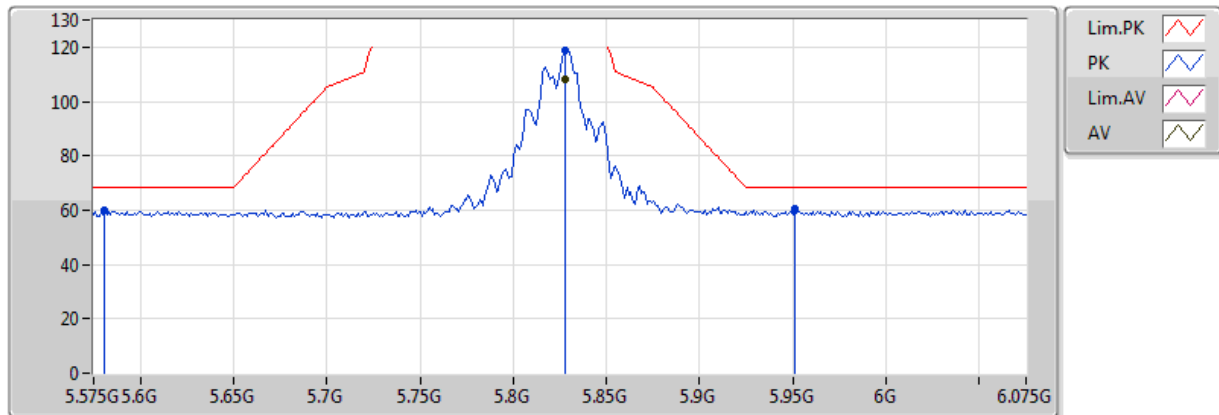


20160217
EUT Y 4TX NON-TXBF
Setting 30
03-M-01-10
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.828G	118.37	Inf	-Inf	6.97	3	V	190	1.50	-
PK	5.591G	61.10	68.20	-7.10	6.96	3	V	190	1.50	-
PK	5.829G	129.43	Inf	-Inf	6.97	3	V	190	1.50	-
PK	5.928G	65.11	68.20	-3.09	6.93	3	V	190	1.50	-

802.11ac VHT20_Nss1,(MCS0)_4TX

5825MHz_TX

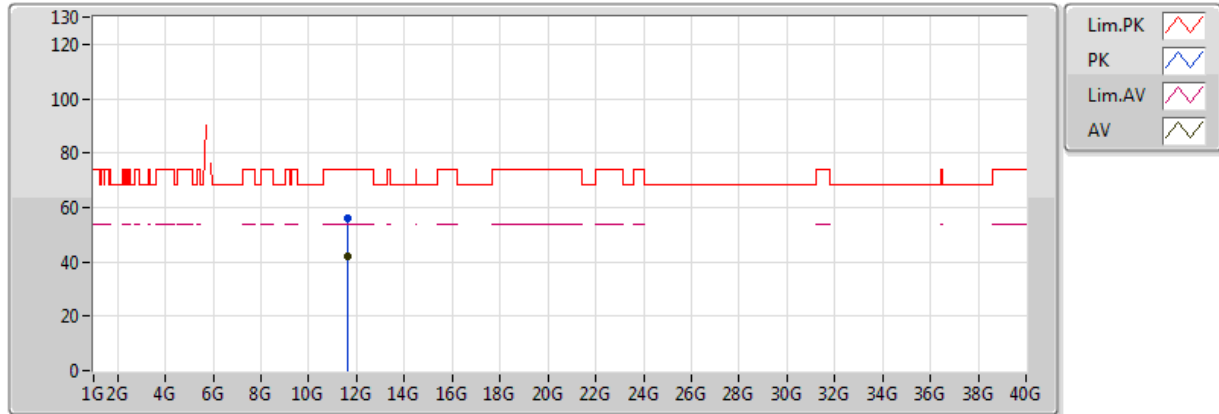


20160217
EUT Y 4TX NON-TXBF
Setting 30
03-M-01-10
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.828G	108.15	Inf	-Inf	6.97	3	H	224	1.59	-
PK	5.581G	60.02	68.20	-8.18	6.95	3	H	224	1.59	-
PK	5.828G	119.04	Inf	-Inf	6.97	3	H	224	1.59	-
PK	5.951G	60.51	68.20	-7.69	6.91	3	H	224	1.59	-

802.11ac VHT20_Nss1,(MCS0)_4TX

5825MHz_TX

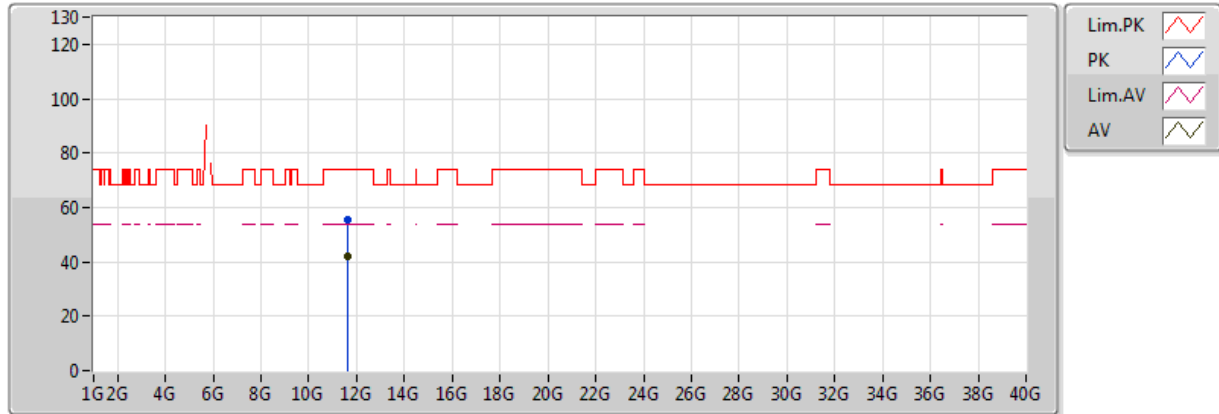


20160217
EUT Y 4TX NON-TXBF
Setting 30
03-M-01
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.65012G	41.87	54.00	-12.13	13.99	3	V	267	2.44	-
PK	11.650136G	56.17	74.00	-17.83	13.99	3	V	267	2.44	-

802.11ac VHT20_Nss1,(MCS0)_4TX

5825MHz_TX

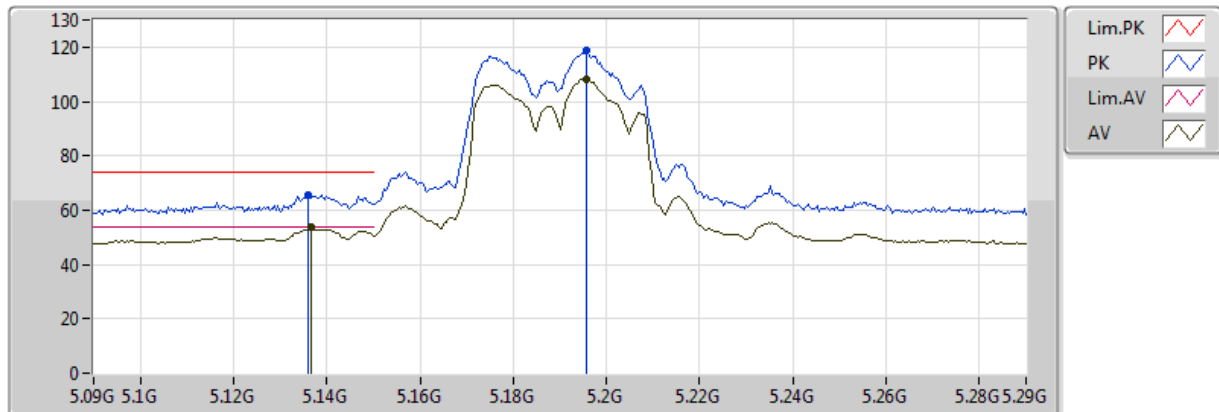


20160217
EUT Y 4TX NON-TXBF
Setting 30
03-M-01
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.650056G	41.75	54.00	-12.25	13.99	3	H	83	1.14	-
PK	11.64984G	55.62	74.00	-18.38	13.99	3	H	83	1.14	-

802.11ac VHT40_Nss1,(MCS0)_4TX

5190MHz_TX

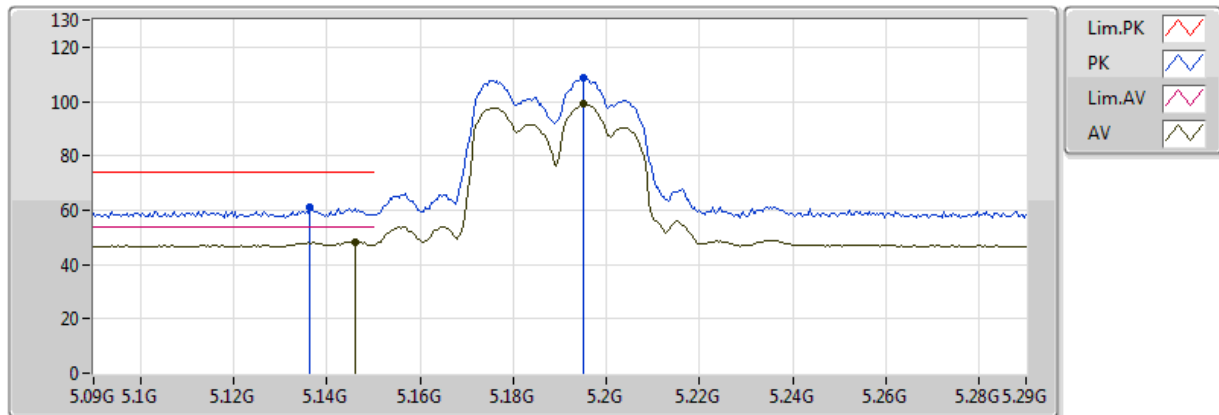


20160217
EUT Y 4TX Non-TXBF
Setting 18
03-M-01-10
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.1368G	53.57	54.00	-0.43	6.28	3	V	201	1.47	-
AV	5.1956G	108.03	Inf	-Inf	6.38	3	V	201	1.47	-
PK	5.136G	65.64	74.00	-8.36	6.28	3	V	201	1.47	-
PK	5.1956G	118.95	Inf	-Inf	6.38	3	V	201	1.47	-

802.11ac VHT40_Nss1,(MCS0)_4TX

5190MHz_TX

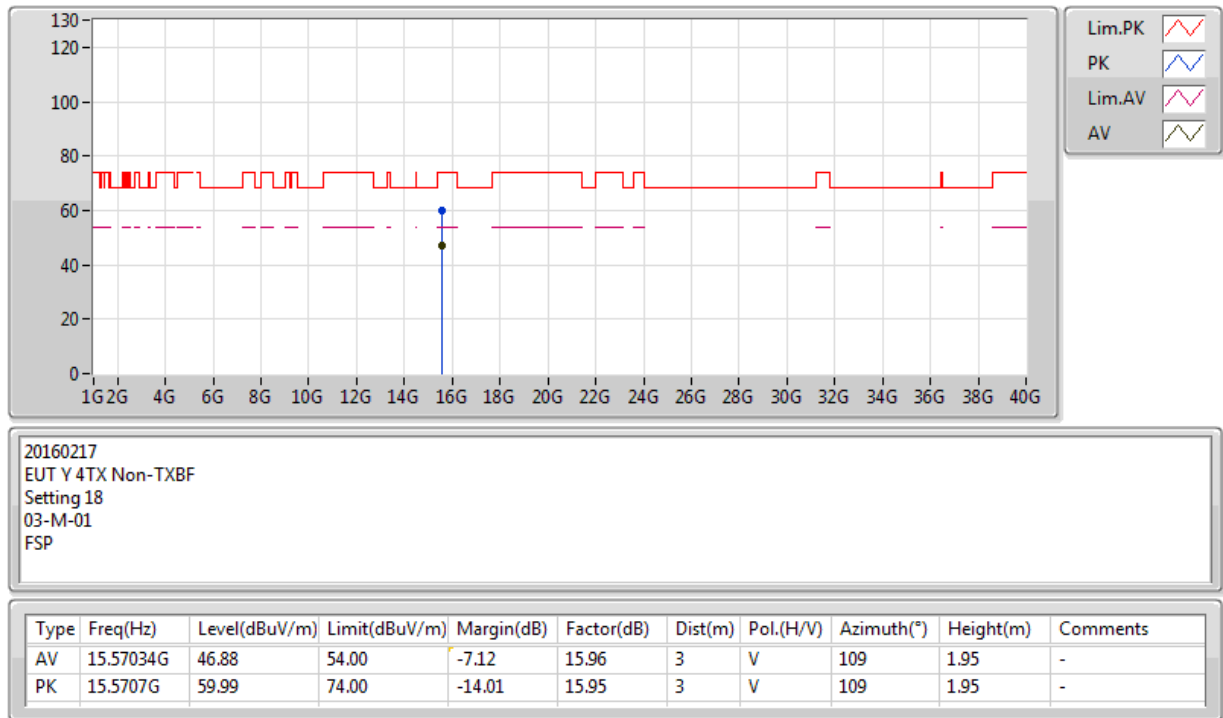


20160217
EUT Y 4TX Non-TXBF
Setting 18
03-M-01-10
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.146G	48.36	54.00	-5.64	6.30	3	H	101	1.33	-
AV	5.1952G	98.96	Inf	-Inf	6.38	3	H	101	1.33	-
PK	5.1364G	60.91	74.00	-13.09	6.28	3	H	101	1.33	-
PK	5.1952G	108.56	Inf	-Inf	6.38	3	H	101	1.33	-

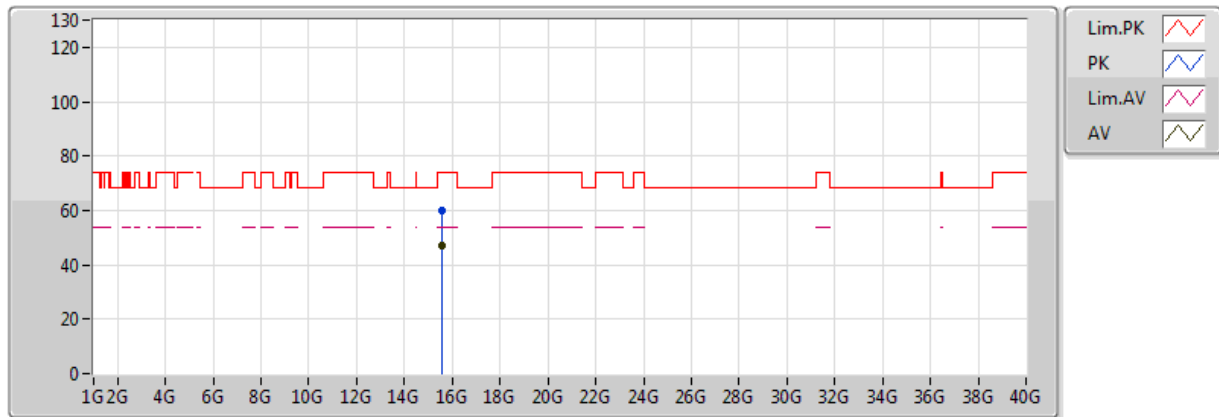
802.11ac VHT40_Nss1,(MCS0)_4TX

5190MHz_TX



802.11ac VHT40_Nss1,(MCS0)_4TX

5190MHz_TX

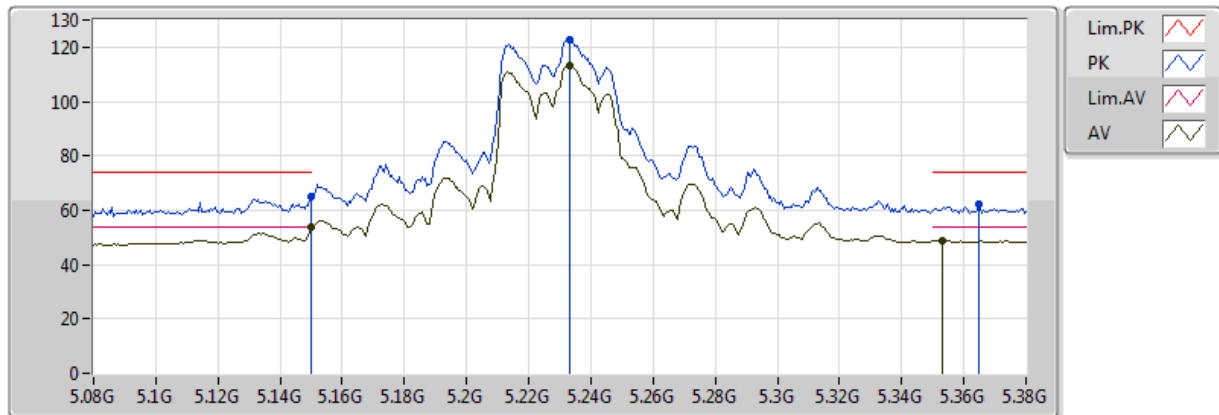


20160217
EUT Y 4TX Non-TXBF
Setting 18
03-M-01
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.570772G	46.87	54.00	-7.13	15.95	3	H	208	1.99	-
PK	15.570296G	59.92	74.00	-14.08	15.96	3	H	208	1.99	-

802.11ac VHT40_Nss1,(MCS0)_4TX

5230MHz_TX

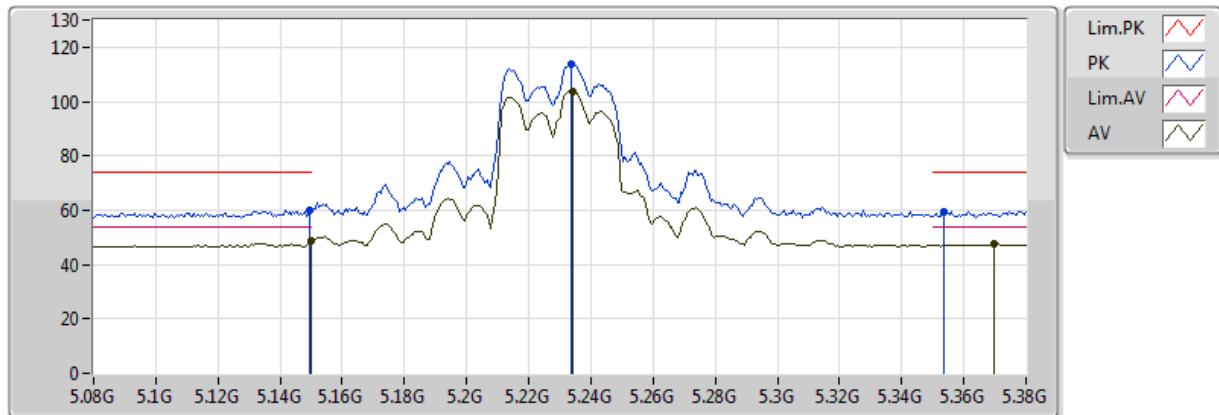


20160217
EUT Y 4TX Non-TXBF
Setting 23
03-M-01-10
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.149995G	53.52	54.00	-0.48	6.30	3	V	201	1.44	-
AV	5.233G	113.24	Inf	-Inf	6.44	3	V	201	1.44	-
AV	5.353G	48.84	54.00	-5.16	6.61	3	V	201	1.44	-
PK	5.149995G	64.72	74.00	-9.28	6.30	3	V	201	1.44	-
PK	5.233G	122.64	Inf	-Inf	6.44	3	V	201	1.44	-
PK	5.365G	62.21	74.00	-11.79	6.62	3	V	201	1.44	-

802.11ac VHT40_Nss1,(MCS0)_4TX

5230MHz_TX

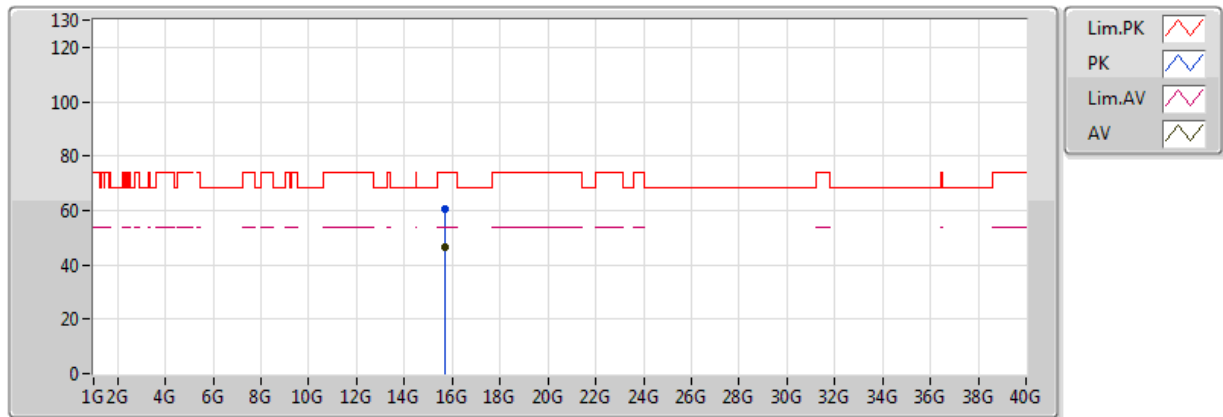


20160217
EUT Y 4TX Non-TXBF
Setting 23
03-M-01-10
FSP

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	48.67	54.00	-5.33	6.30	3	H	100	1.47	-
AV	5.2342G	103.83	Inf	-Inf	6.44	3	H	100	1.47	-
AV	5.3698G	47.37	54.00	-6.63	6.63	3	H	100	1.47	-
PK	5.1496G	59.97	74.00	-14.03	6.30	3	H	100	1.47	-
PK	5.2336G	113.86	Inf	-Inf	6.44	3	H	100	1.47	-
PK	5.3536G	59.46	74.00	-14.54	6.61	3	H	100	1.47	-

802.11ac VHT40_Nss1,(MCS0)_4TX

5230MHz_TX

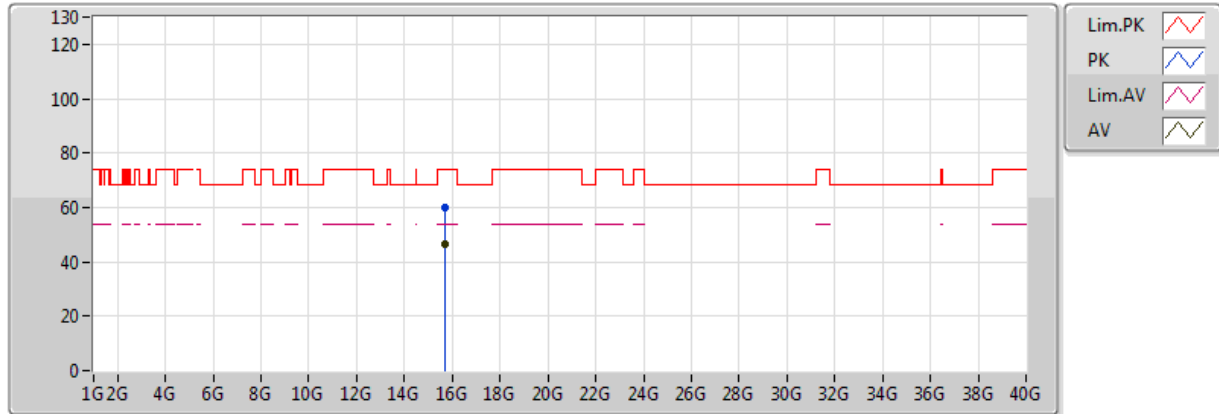


20160217
EUT Y 4TX Non-TXBF
Setting 23
03-M-01
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.689704G	46.55	54.00	-7.45	15.72	3	V	194	1.03	-
PK	15.690164G	60.77	74.00	-13.23	15.72	3	V	194	1.03	-

802.11ac VHT40_Nss1,(MCS0)_4TX

5230MHz_TX

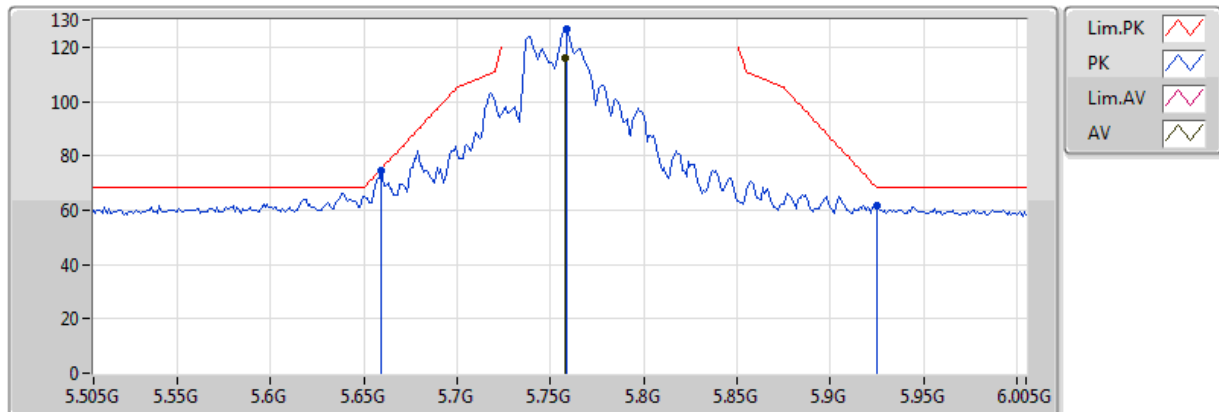


20160217
EUT Y 4TX Non-TXBF
Setting 23
03-M-01
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.689648G	46.53	54.00	-7.47	15.72	3	H	157	1.08	-
PK	15.68994G	60.22	74.00	-13.78	15.72	3	H	157	1.08	-

802.11ac VHT40_Nss1,(MCS0)_4TX

5755MHz_TX

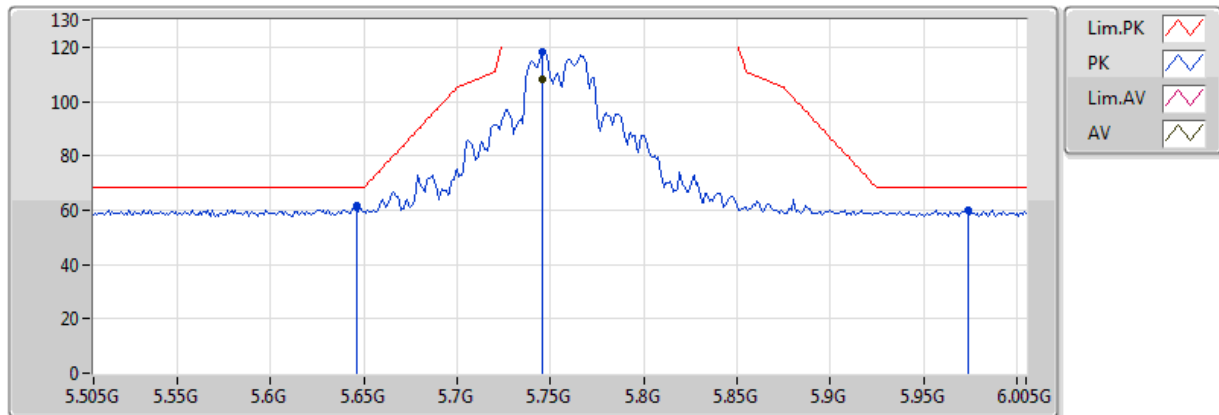


20160216
EUT Y 4TX Non-TXBF
Setting 27
03-M-01-10
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.758G	116.03	Inf	-Inf	6.98	3	V	193	1.46	-
PK	5.759G	126.46	Inf	-Inf	6.98	3	V	193	1.46	-
PK	5.925G	61.48	68.20	-6.72	6.93	3	V	193	1.46	-
PK	5.659G	74.38	74.86	-0.48	6.98	3	V	193	1.46	-

802.11ac VHT40_Nss1,(MCS0)_4TX

5755MHz_TX

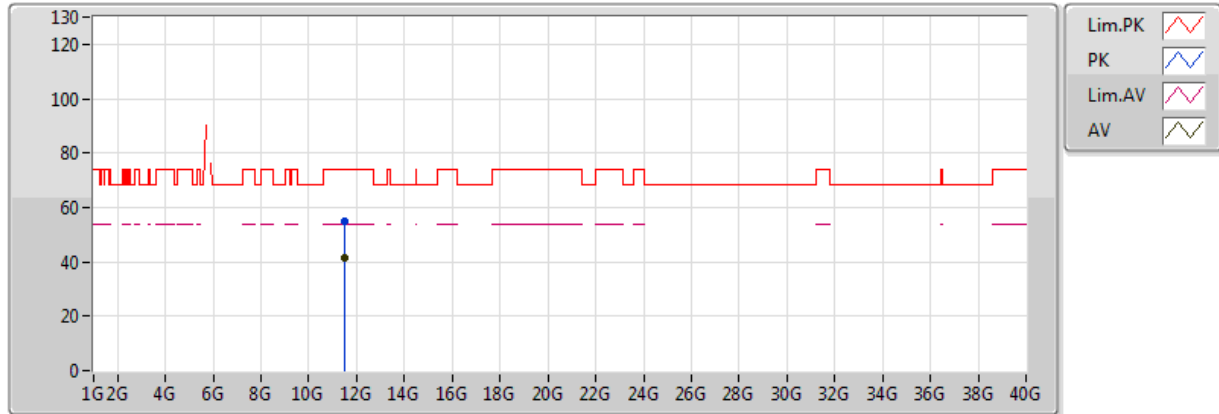


20160216
EUT Y 4TX Non-TXBF
Setting 27
03-M-01-10
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.746G	107.88	Inf	-Inf	6.98	3	H	233	1.89	-
PK	5.646G	61.71	68.20	-6.49	6.97	3	H	233	1.89	-
PK	5.746G	118.43	Inf	-Inf	6.98	3	H	233	1.89	-
PK	5.974G	60.20	68.20	-8.00	6.90	3	H	233	1.89	-

802.11ac VHT40_Nss1,(MCS0)_4TX

5755MHz_TX

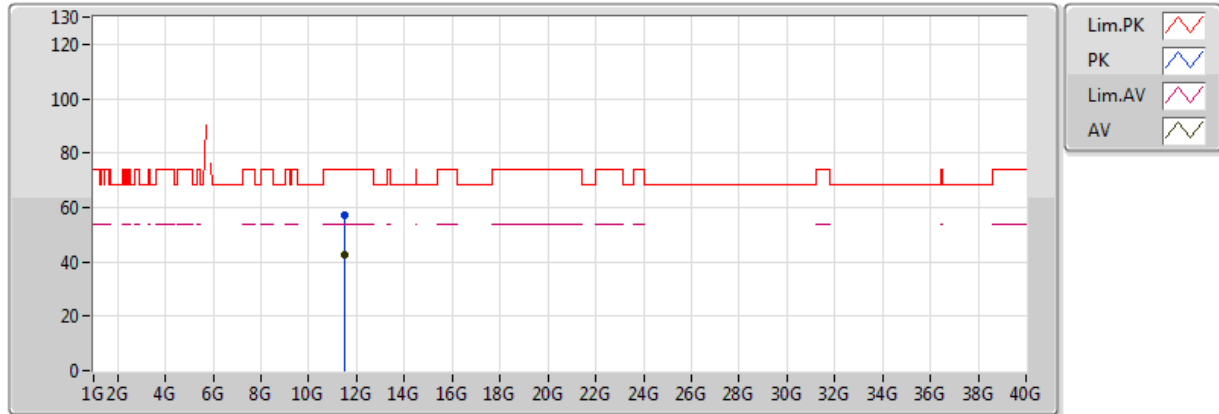


20160216
EUT Y 4TX Non-TXBF
Setting 27
03-M-01
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.510364G	41.61	54.00	-12.39	13.93	3	V	109	1.56	-
PK	11.51G	54.94	74.00	-19.06	13.93	3	V	109	1.56	-

802.11ac VHT40_Nss1,(MCS0)_4TX

5755MHz_TX

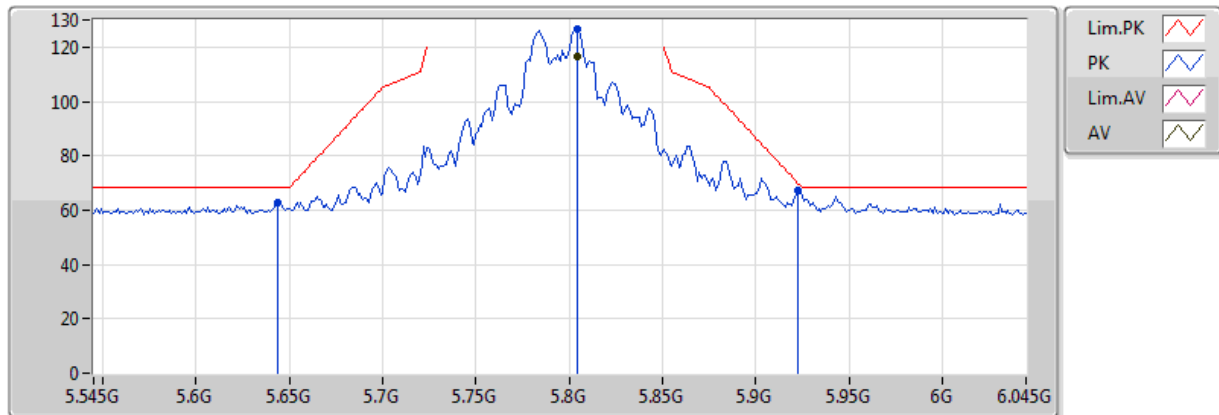


20160216
EUT Y 4TX Non-TXBF
Setting 27
03-M-01
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.509928G	42.61	54.00	-11.39	13.93	3	H	150	1.22	-
PK	11.510168G	56.90	74.00	-17.10	13.93	3	H	150	1.22	-

802.11ac VHT40_Nss1,(MCS0)_4TX

5795MHz_TX

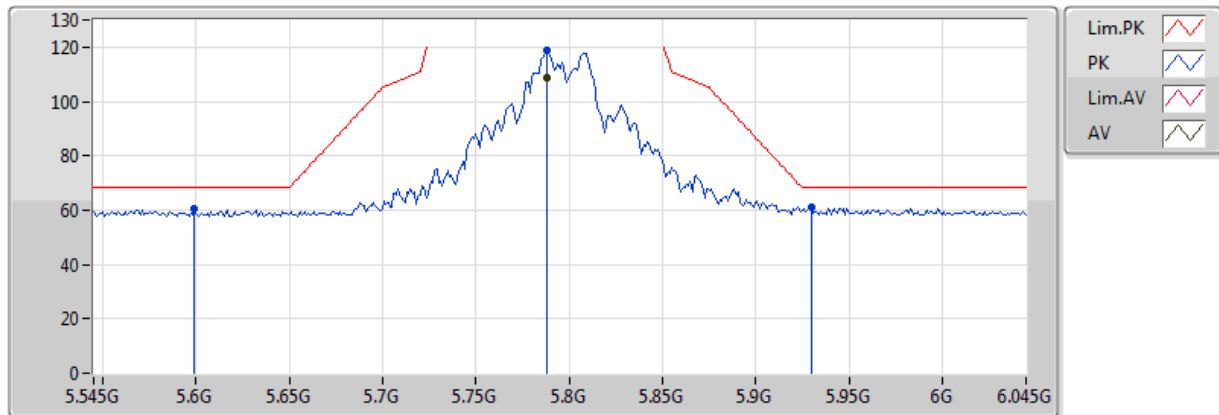


20160216
EUT Y 4TX Non-TXBF
Setting 30
03-M-01-10
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.804G	116.70	Inf	-Inf	6.98	3	V	170	1.59	-
PK	5.644G	62.95	68.20	-5.25	6.97	3	V	170	1.59	-
PK	5.804G	126.87	Inf	-Inf	6.98	3	V	170	1.59	-
PK	5.923G	67.51	69.68	-2.17	6.93	3	V	170	1.59	-

802.11ac VHT40_Nss1,(MCS0)_4TX

5795MHz_TX

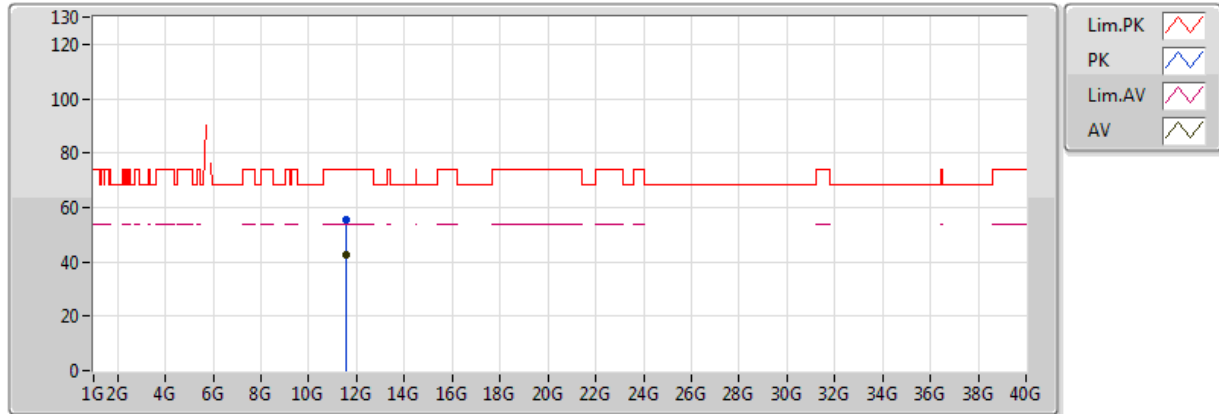


20160216
EUT Y 4TX Non-TXBF
Setting 30
03-M-01-10
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.788G	108.71	Inf	-Inf	6.98	3	H	240	2.12	-
PK	5.599G	60.59	68.20	-7.61	6.97	3	H	240	2.12	-
PK	5.788G	118.93	Inf	-Inf	6.98	3	H	240	2.12	-
PK	5.93G	61.30	68.20	-6.90	6.93	3	H	240	2.12	-

802.11ac VHT40_Nss1,(MCS0)_4TX

5795MHz_TX

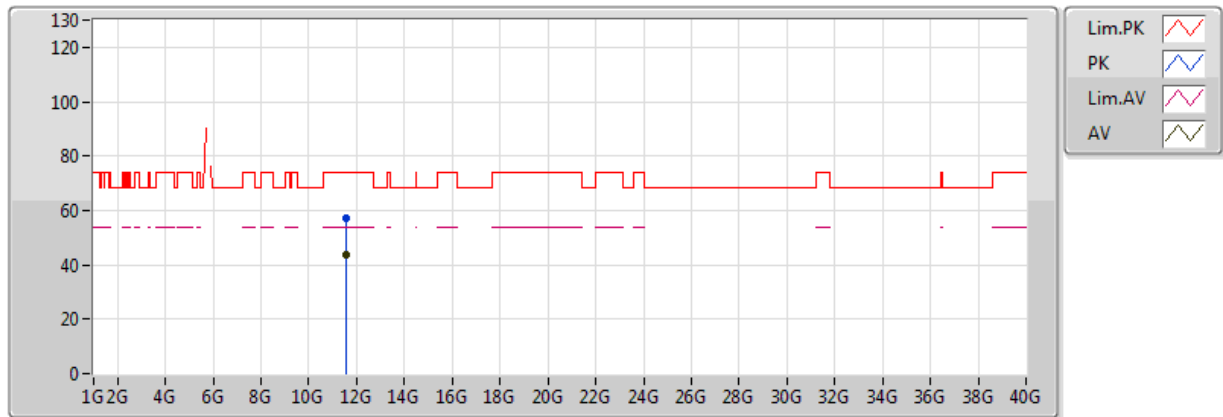


20160216
EUT Y 4TX Non-TXBF
Setting 30
03-M-01
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.590824G	42.59	54.00	-11.41	13.96	3	V	231	1.24	-
PK	11.590204G	55.27	74.00	-18.73	13.96	3	V	231	1.24	-

802.11ac VHT40_Nss1,(MCS0)_4TX

5795MHz_TX

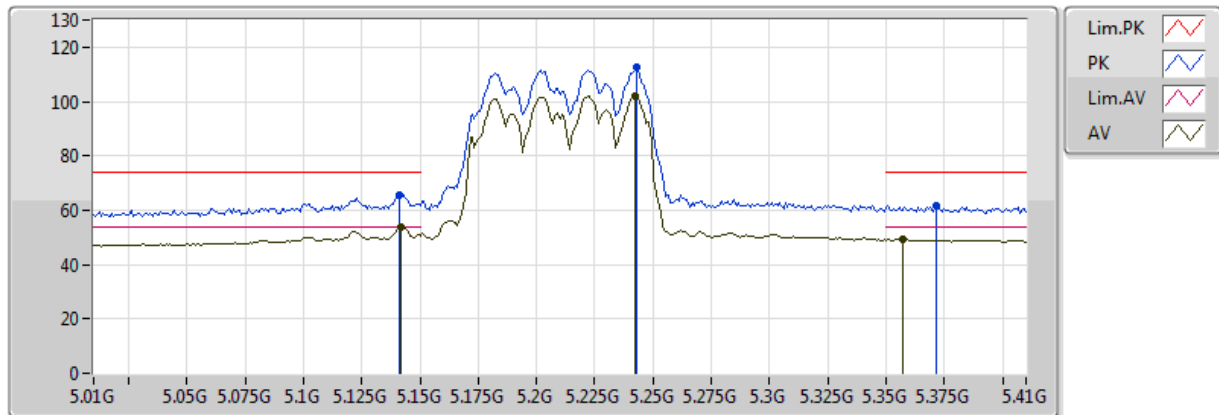


20160216
EUT Y 4TX Non-TXBF
Setting 30
03-M-01
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.58996G	43.82	54.00	-10.18	13.96	3	H	22	1.65	-
PK	11.589332G	57.31	74.00	-16.69	13.96	3	H	22	1.65	-

802.11ac VHT80_Nss1,(MCS0)_4TX

5210MHz_TX

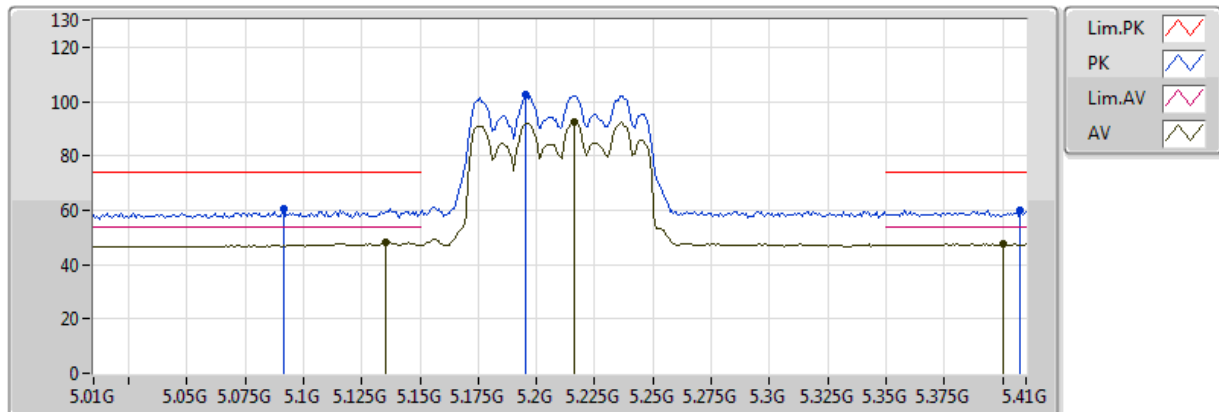


20160217
EUT Y 4TX Non-TXBF
Setting 15
03-M-01-10
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.142G	53.66	54.00	-0.34	6.29	3	V	198	2.06	-
AV	5.242G	101.76	Inf	-Inf	6.45	3	V	198	2.06	-
AV	5.3572G	49.22	54.00	-4.78	6.61	3	V	198	2.06	-
PK	5.1412G	65.48	74.00	-8.52	6.29	3	V	198	2.06	-
PK	5.2428G	112.52	Inf	-Inf	6.45	3	V	198	2.06	-
PK	5.3716G	61.69	74.00	-12.31	6.63	3	V	198	2.06	-

802.11ac VHT80_Nss1,(MCS0)_4TX

5210MHz_TX

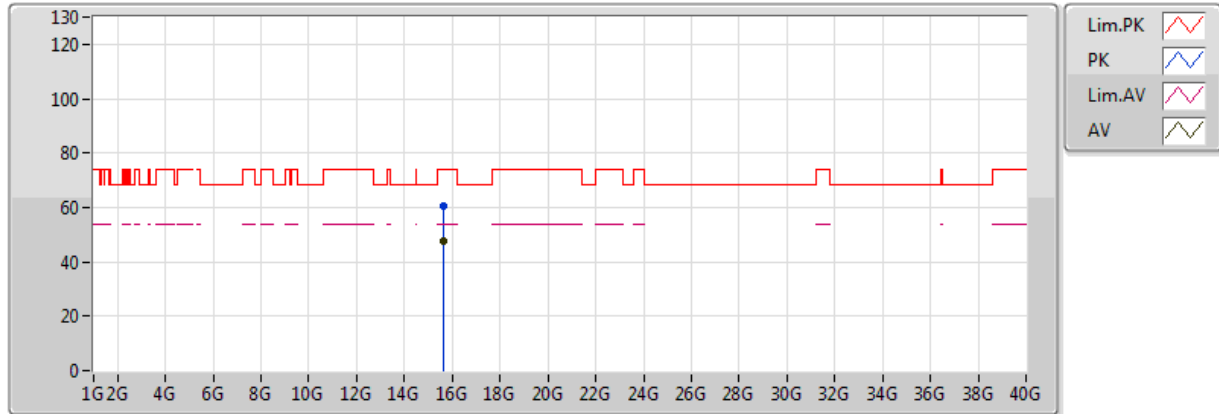


20160217
EUT Y 4TX Non-TXBF
Setting 15
03-M-01-10
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.1356G	48.15	54.00	-5.85	6.28	3	H	98	1.44	-
AV	5.2164G	92.35	Inf	-Inf	6.41	3	H	98	1.44	-
AV	5.4004G	47.56	54.00	-6.44	6.67	3	H	98	1.44	-
PK	5.0916G	60.51	74.00	-13.49	6.20	3	H	98	1.44	-
PK	5.1956G	102.35	Inf	-Inf	6.38	3	H	98	1.44	-
PK	5.4076G	60.19	74.00	-13.81	6.69	3	H	98	1.44	-

802.11ac VHT80_Nss1,(MCS0)_4TX

5210MHz_TX

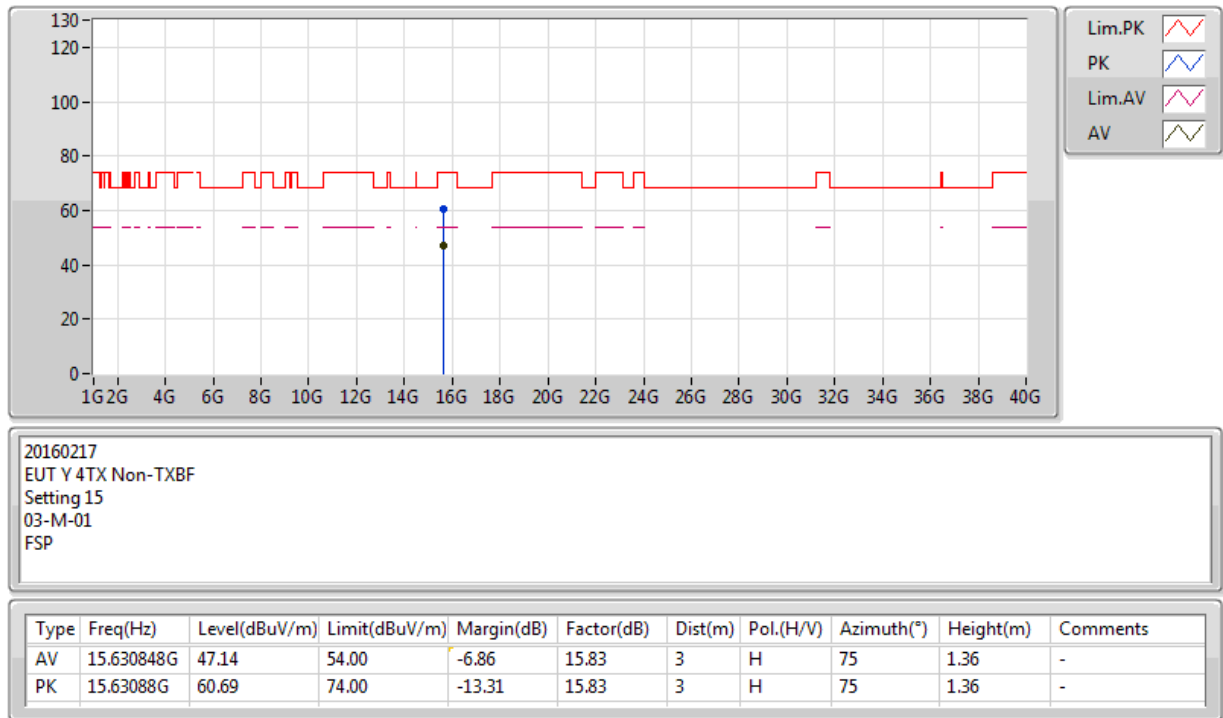


20160217
EUT Y 4TX Non-TXBF
Setting 15
03-M-01
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	15.611G	47.51	54.00	-6.49	15.87	3	V	279	1.45	-
PK	15.62G	60.28	74.00	-13.72	15.86	3	V	279	1.45	-

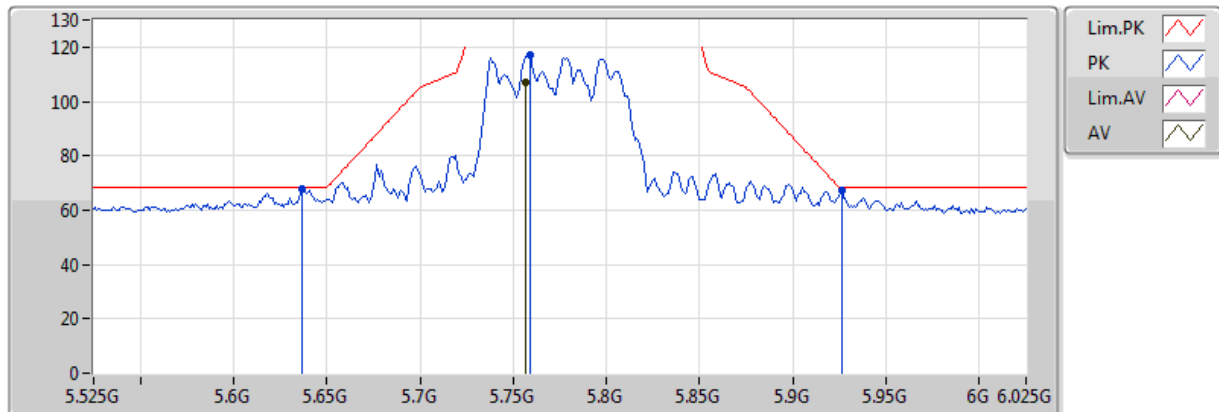
802.11ac VHT80_Nss1,(MCS0)_4TX

5210MHz_TX



802.11ac VHT80_Nss1,(MCS0)_4TX

5775MHz_TX

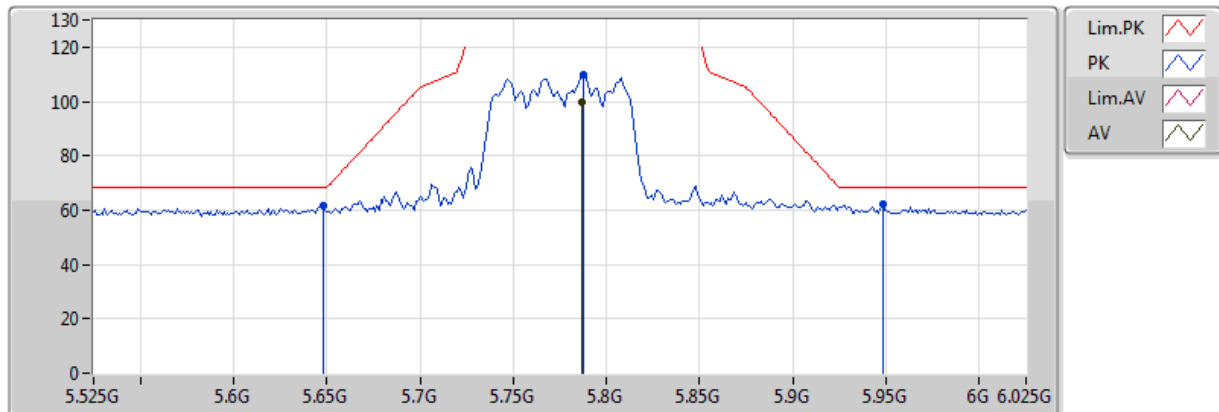


20160217
EUT Y 4TX Non-TXBF
Setting 21
03-M-01-10
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.757G	106.84	Inf	-Inf	6.98	3	V	194	1.48	-
PK	5.637G	67.72	68.20	-0.48	6.97	3	V	194	1.48	-
PK	5.759G	117.03	Inf	-Inf	6.98	3	V	194	1.48	-
PK	5.926G	67.01	68.20	-1.19	6.93	3	V	194	1.48	-

802.11ac VHT80_Nss1,(MCS0)_4TX

5775MHz_TX

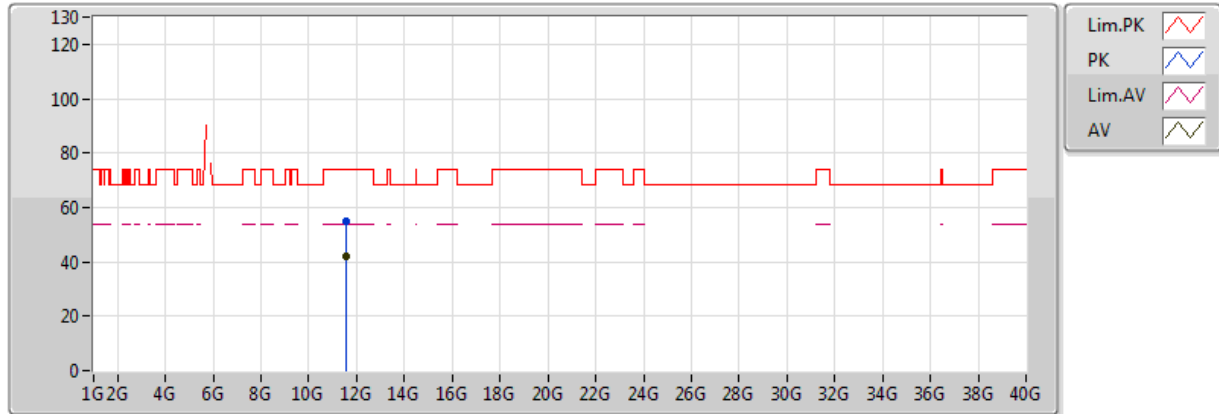


20160217
EUT Y 4TX Non-TXBF
Setting 21
03-M-01-10
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.787G	99.96	Inf	-Inf	6.98	3	H	237	2.07	-
PK	5.648G	61.49	68.20	-6.71	6.97	3	H	237	2.07	-
PK	5.788G	109.60	Inf	-Inf	6.98	3	H	237	2.07	-
PK	5.948G	62.01	68.20	-6.19	6.92	3	H	237	2.07	-

802.11ac VHT80_Nss1,(MCS0)_4TX

5775MHz_TX

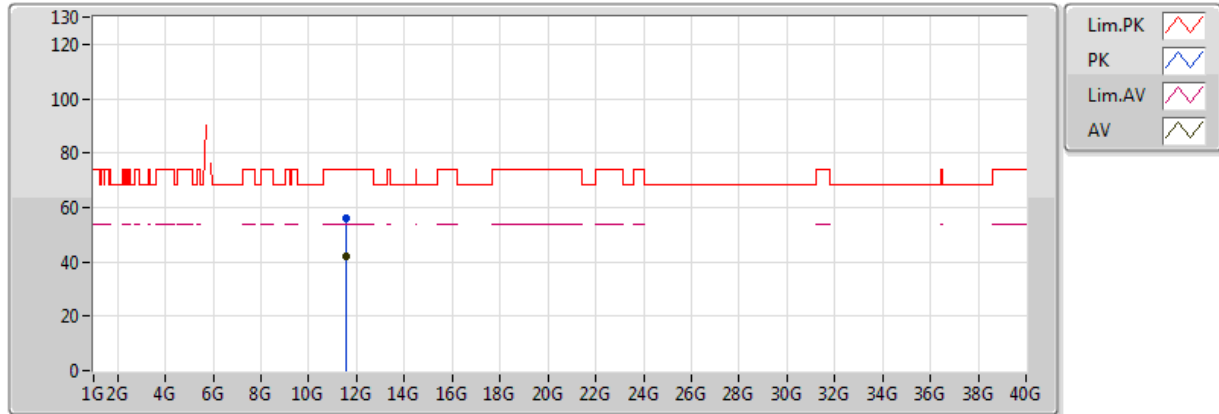


20160217
EUT Y 4TX Non-TXBF
Setting 21
03-M-01
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.55G	41.76	54.00	-12.24	13.95	3	V	117	2.48	-
PK	11.54858G	54.89	74.00	-19.11	13.95	3	V	117	2.48	-

802.11ac VHT80_Nss1,(MCS0)_4TX

5775MHz_TX



20160217
EUT Y 4TX Non-TXBF
Setting 21
03-M-01
FSP

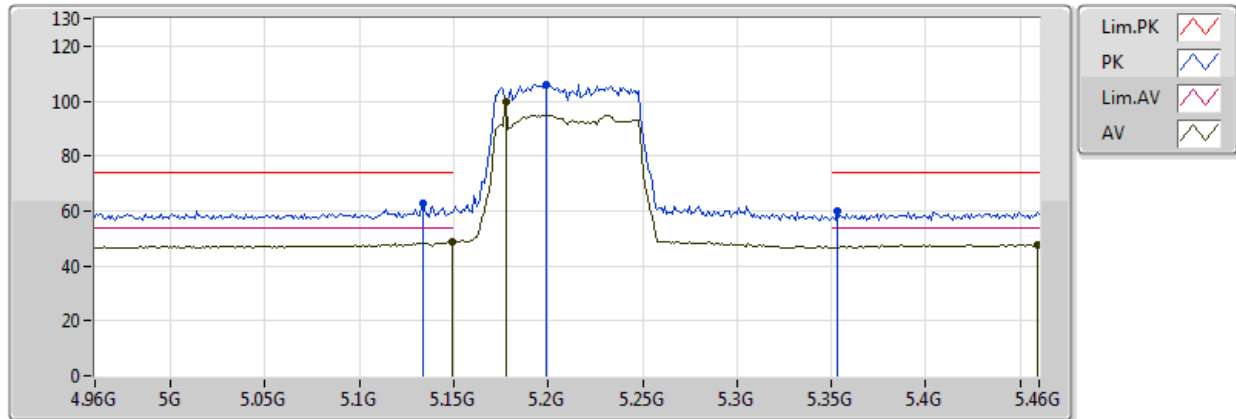
Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.54996G	42.03	54.00	-11.97	13.95	3	H	324	1.84	-
PK	11.55292G	56.07	74.00	-17.93	13.95	3	H	324	1.84	-

**VHT80+80
Summary**

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
802.11ac VHT80+80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-	-	-
5.15-5.25GHz	Pass	AV	15.61638G	49.96	54.00	-4.04	17.73	3	H	29	1.19	-

802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX

#5210MHz,5775MHz_TX

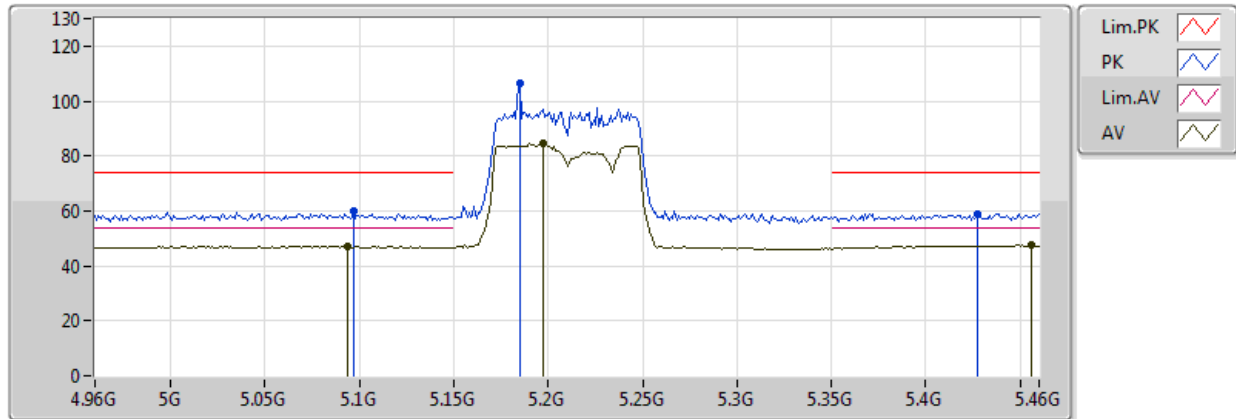


20170223
EUT_Y_4TX_TXBF
Setting 25
06-J-4-10
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.149G	48.59	54.00	-5.41	7.23	3	V	330	1.51	-
AV	5.178G	99.55	Inf	-Inf	7.26	3	V	330	1.51	-
AV	5.459G	47.60	54.00	-6.40	7.73	3	V	330	1.51	-
PK	5.134G	62.79	74.00	-11.21	7.22	3	V	330	1.51	-
PK	5.199G	106.18	Inf	-Inf	7.28	3	V	330	1.51	-
PK	5.353G	59.89	74.00	-14.11	7.52	3	V	330	1.51	-

802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX

#5210MHz,5775MHz_TX

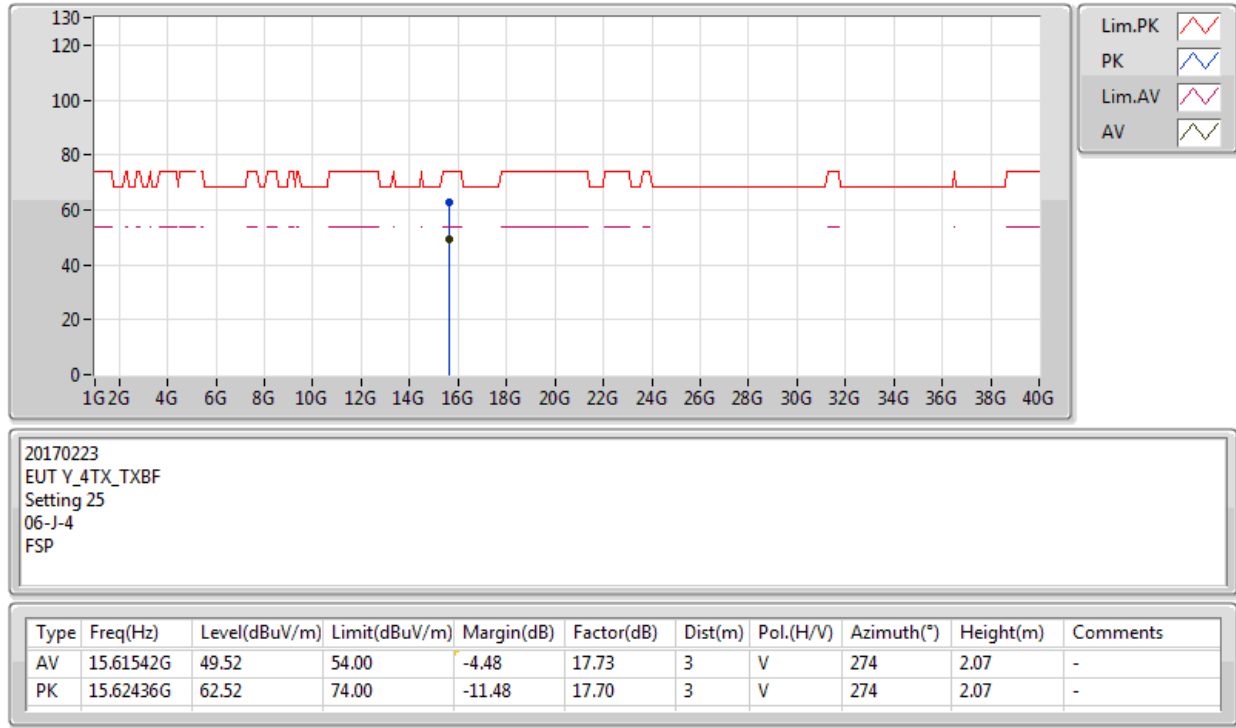


20170223
EUT_Y_4TX_TXBF
Setting 25
06-J-4-10
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.094G	47.12	54.00	-6.88	7.18	3	H	106	1.21	-
AV	5.197G	84.57	Inf	-Inf	7.28	3	H	106	1.21	-
AV	5.456G	47.54	54.00	-6.46	7.72	3	H	106	1.21	-
PK	5.097G	59.90	74.00	-14.10	7.19	3	H	106	1.21	-
PK	5.185G	106.19	Inf	-Inf	7.27	3	H	106	1.21	-
PK	5.427G	59.06	74.00	-14.94	7.65	3	H	106	1.21	-

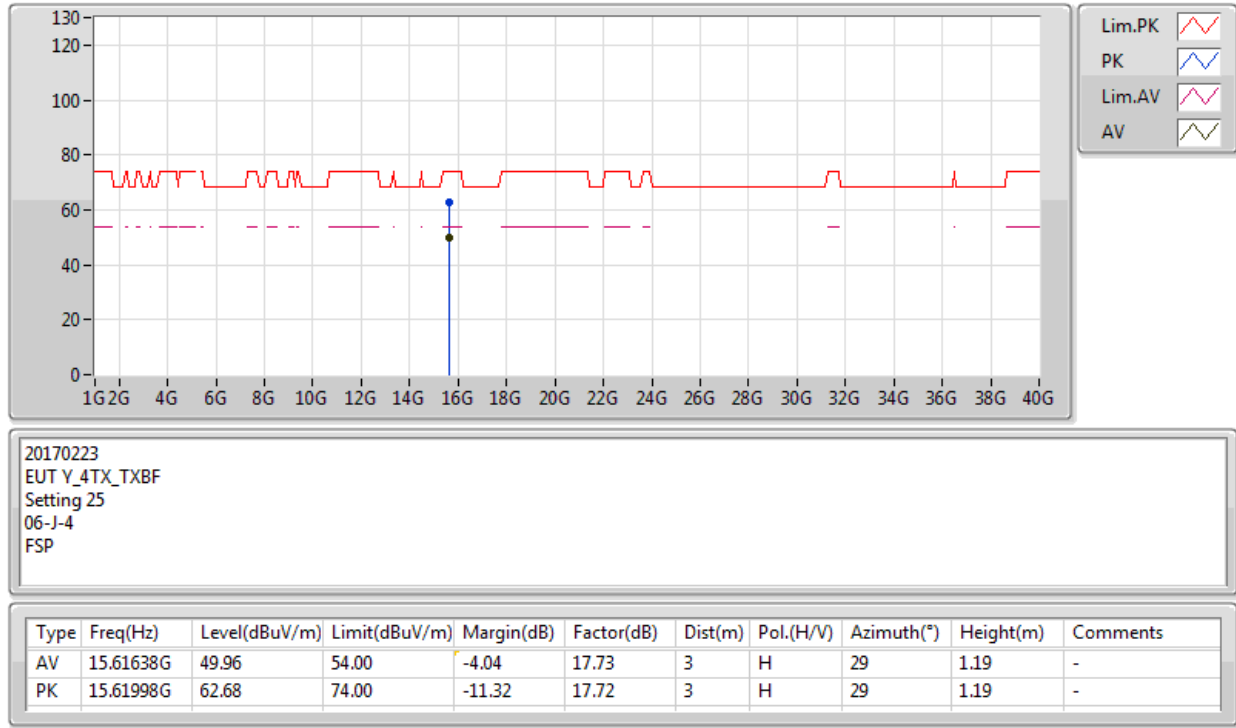
802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX

#5210MHz,5775MHz_TX



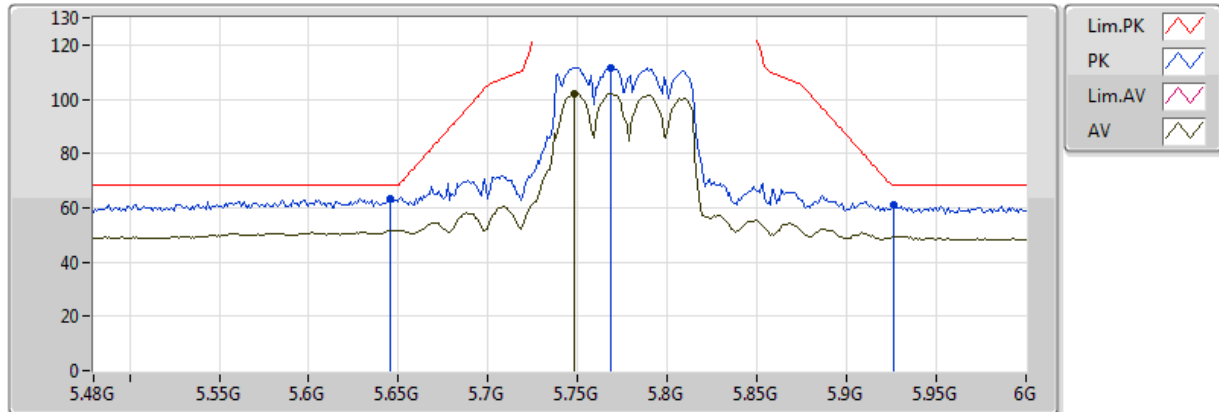
802.11ac VHT80+80-BF_Nss1,(MCS0)_4TX

#5210MHz,5775MHz_TX



802.11ac VHT80+80_Nss1,(MCS0)_4TX

5210MHz,#5775MHz_TX

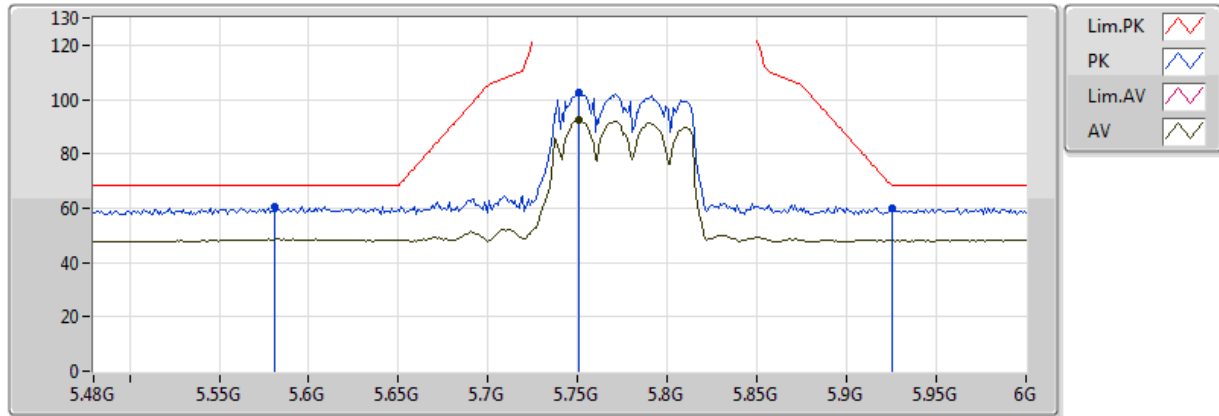


20170223
EUT_Y_4TX_Non-TXBF
Setting 19.5
06-J-4
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.74832G	102.26	Inf	-Inf	8.22	3	V	206	2.11	-
PK	5.64536G	63.20	68.20	-5.00	8.13	3	V	206	2.11	-
PK	5.76808G	111.71	Inf	-Inf	8.24	3	V	206	2.11	-
PK	5.92616G	61.32	68.20	-6.88	8.56	3	V	206	2.11	-

802.11ac VHT80+80_Nss1,(MCS0)_4TX

5210MHz,#5775MHz_TX

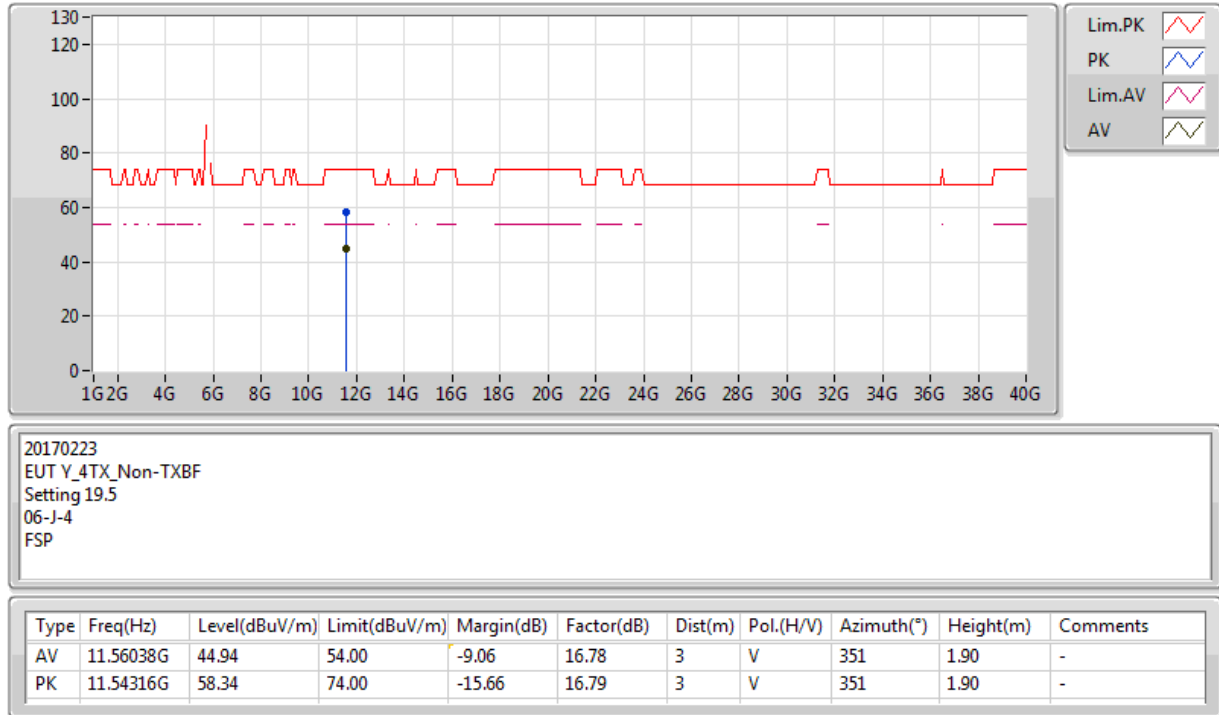


20170223
EUT_Y_4TX_Non-TXBF
Setting 19.5
06-J-4
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	5.7504G	92.58	Inf	-Inf	8.23	3	H	241	2.47	-
PK	5.58088G	60.56	68.20	-7.64	8.03	3	H	241	2.47	-
PK	5.7504G	102.53	Inf	-Inf	8.23	3	H	241	2.47	-
PK	5.92512G	60.15	68.20	-8.05	8.56	3	H	241	2.47	-

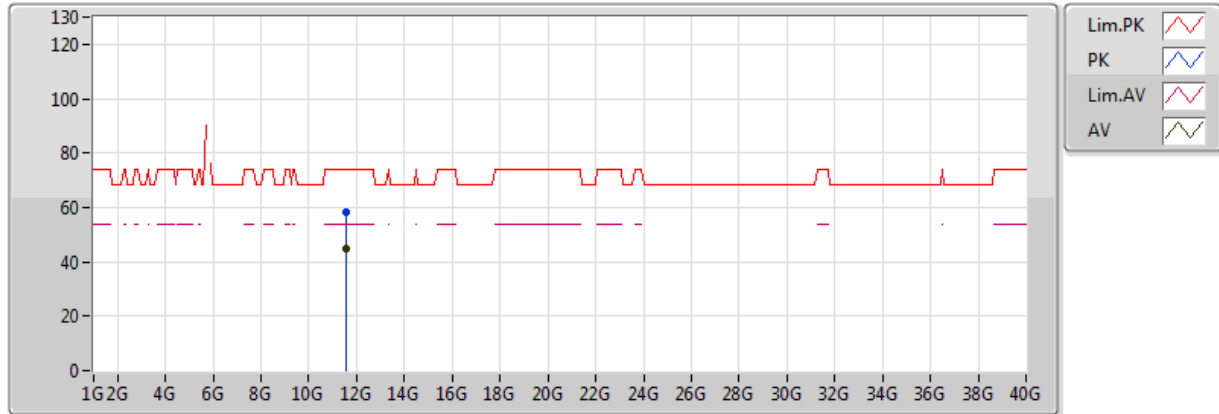
802.11ac VHT80+80_Nss1,(MCS0)_4TX

5210MHz,#5775MHz_TX



802.11ac VHT80+80_Nss1,(MCS0)_4TX

5210MHz,#5775MHz_TX



20170223
EUT_Y_4TX_Non-TXBF
Setting 19.5
06-J-4
FSP

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	11.54832G	44.97	54.00	-9.03	16.79	3	H	92	2.07	-
PK	11.5635G	58.18	74.00	-15.82	16.77	3	H	92	2.07	-

Mode: 20 MHz / Ant. 6

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5200 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5199.9799	5199.9795	5199.9791	5199.9786
110.00	5199.9791	5199.9789	5199.9779	5199.9772
93.50	5199.9783	5199.9778	5199.9774	5199.9769
Max. Deviation (MHz)	0.0217	0.0222	0.0226	0.0231
Max. Deviation (ppm)	4.17	4.27	4.35	4.44
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5200 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5199.9820	5199.9819	5199.9812	5199.9807
10	5199.9811	5199.9807	5199.9805	5199.9798
20	5199.9791	5199.9787	5199.9779	5199.9770
30	5199.9787	5199.9781	5199.9777	5199.9775
40	5199.9784	5199.9780	5199.9774	5199.9769
Max. Deviation (MHz)	0.0216	0.0220	0.0226	0.0231
Max. Deviation (ppm)	4.15	4.23	4.35	4.44
Result	Pass			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5785 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5784.9792	5784.9784	5784.9780	5784.9777
110.00	5784.9791	5784.9784	5784.9776	5784.9769
93.50	5784.9781	5784.9777	5784.9775	5784.9774
Max. Deviation (MHz)	0.0219	0.0223	0.0225	0.0231
Max. Deviation (ppm)	3.79	3.85	3.89	3.99
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5785 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5784.9813	5784.9811	5784.9808	5784.9801
10	5784.9798	5784.9797	5784.9792	5784.9783
20	5784.9791	5784.9785	5784.9777	5784.9774
30	5784.9787	5784.9778	5784.9771	5784.9761
40	5784.9772	5784.9769	5784.9763	5784.9756
Max. Deviation (MHz)	0.0228	0.0231	0.0237	0.0244
Max. Deviation (ppm)	3.94	3.99	4.10	4.22
Result	Pass			

Mode: 40 MHz / Ant. 6

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5190 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5189.9795	5189.9794	5189.9786	5189.9785
110.00	5189.9791	5189.9783	5189.9782	5189.9780
93.50	5189.9785	5189.9776	5189.9774	5189.9765
Max. Deviation (MHz)	0.0215	0.0224	0.0226	0.0235
Max. Deviation (ppm)	4.14	4.32	4.35	4.53
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5190 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5189.9826	5189.9817	5189.9816	5189.9810
10	5189.9806	5189.9802	5189.9796	5189.9790
20	5189.9791	5189.9785	5189.9783	5189.9777
30	5189.9787	5189.9786	5189.9779	5189.9770
40	5189.9775	5189.9774	5189.9764	5189.9756
Max. Deviation (MHz)	0.0225	0.0226	0.0236	0.0244
Max. Deviation (ppm)	4.34	4.35	4.55	4.70
Result	Pass			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5755 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5754.9792	5754.9782	5754.9779	5754.9778
110.00	5754.9791	5754.9781	5754.9777	5754.9776
93.50	5754.9789	5754.9785	5754.9775	5754.9769
Max. Deviation (MHz)	0.0211	0.0219	0.0225	0.0231
Max. Deviation (ppm)	3.67	3.81	3.91	4.01
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5755 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5754.9812	5754.9802	5754.9796	5754.9793
10	5754.9800	5754.9797	5754.9787	5754.9777
20	5754.9791	5754.9788	5754.9781	5754.9778
30	5754.9787	5754.9786	5754.9782	5754.9780
40	5754.9769	5754.9767	5754.9764	5754.9758
Max. Deviation (MHz)	0.0231	0.0233	0.0236	0.0242
Max. Deviation (ppm)	4.01	4.05	4.10	4.21
Result	Pass			

Mode: 80 MHz / Ant. 6

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5210 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5209.9798	5209.9789	5209.9779	5209.9776
110.00	5209.9791	5209.9782	5209.9773	5209.9766
93.50	5209.9788	5209.9786	5209.9776	5209.9769
Max. Deviation (MHz)	0.0212	0.0218	0.0227	0.0234
Max. Deviation (ppm)	4.07	4.18	4.36	4.49
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5210 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5209.9818	5209.9812	5209.9804	5209.9799
10	5209.9801	5209.9794	5209.9788	5209.9778
20	5209.9791	5209.9785	5209.9776	5209.9766
30	5209.9787	5209.9783	5209.9780	5209.9774
40	5209.9779	5209.9769	5209.9768	5209.9765
Max. Deviation (MHz)	0.0221	0.0231	0.0232	0.0235
Max. Deviation (ppm)	4.24	4.43	4.45	4.51
Result	Pass			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5775 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5774.9797	5774.9789	5774.9779	5774.9776
110.00	5774.9791	5774.9790	5774.9787	5774.9783
93.50	5774.9781	5774.9778	5774.9774	5774.9765
Max. Deviation (MHz)	0.0219	0.0222	0.0226	0.0235
Max. Deviation (ppm)	3.79	3.84	3.91	4.07
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5775 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5774.9813	5774.9805	5774.9797	5774.9792
10	5774.9801	5774.9800	5774.9794	5774.9784
20	5774.9791	5774.9781	5774.9774	5774.9770
30	5774.9787	5774.9780	5774.9773	5774.9768
40	5774.9781	5774.9778	5774.9773	5774.9771
Max. Deviation (MHz)	0.0219	0.0222	0.0227	0.0232
Max. Deviation (ppm)	3.79	3.84	3.93	4.02
Result	Pass			