



FCC RADIO TEST REPORT

FCC ID : O2U-8568
Equipment : Wireless Voice Gateway
Brand Name : cbn
Model Name : CH8568, CH8568XXXX (X= a~z , 0~9 , blank, "-")
Applicant : COMPAL BROADBAND NETWORKS, INC.
13F-1, No.1, Taiyuan 1st St., Zhubei City, Hsinchu
County 30288, Taiwan, R.O.C.
Manufacturer : COMPAL BROADBAND NETWORKS, INC.
13F-1, No.1, Taiyuan 1st St., Zhubei City, Hsinchu
County 30288, Taiwan, R.O.C.
Standard : 47 CFR FCC Part 15.407

The product was received on Mar. 27, 2020, and testing was started from Aug. 28, 2020 and completed on Sep. 01, 2020. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, 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 variant report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.


Approved by: Cliff Chang

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)



Table of Contents

History of this test report.....	3
Summary of Test Result.....	4
1 General Description	5
1.1 Information.....	5
1.2 Applicable Standards	8
1.3 Testing Location Information.....	8
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	13
3.1 Emission Bandwidth	13
3.2 Maximum Conducted Output Power	14
3.3 Peak Power Spectral Density.....	16
3.4 Unwanted Emissions	19
4 Test Equipment and Calibration Data	23

Appendix A. Test Results of Emission Bandwidth**Appendix B. Test Results of Maximum Conducted Output Power****Appendix C. Test Results of Peak Power Spectral Density****Appendix D. Test Results of Unwanted Emissions****Appendix E. Test Photos****Photographs of EUT v01**



History of this test report



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	-
3.1	15.407(a)	Emission Bandwidth	PASS	-
3.2	15.407(a)	Maximum Conducted Output Power	PASS	-
3.3	15.407(a)	Peak Power Spectral Density	PASS	-
3.4	15.407(b)	Unwanted Emissions	PASS	-

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Cliff Chang

Report Producer: Wendy Pan



1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
5250-5350	a, n (HT20), ac (VHT20)	5260-5320	52-64 [4]
5470-5725		5500-5700	100-140 [11]
5250-5350	n (HT40), ac (VHT40)	5270-5310	54-62 [2]
5470-5725		5510-5670	102-134 [5]
5250-5350	ac (VHT80)	5290	58 [1]
5470-5725		5530-5610	106-122 [2]

Band	Mode	BWch (MHz)	Nant
5.25-5.35GHz	802.11a	20	4TX
5.25-5.35GHz	802.11n HT20	20	4TX
5.25-5.35GHz	802.11ac VHT20	20	4TX
5.25-5.35GHz	802.11n HT40	40	4TX
5.25-5.35GHz	802.11ac VHT40	40	4TX
5.25-5.35GHz	802.11ac VHT80	80	4TX
5.47-5.725GHz	802.11a	20	4TX
5.47-5.725GHz	802.11n HT20	20	4TX
5.47-5.725GHz	802.11ac VHT20	20	4TX
5.47-5.725GHz	802.11n HT40	40	4TX
5.47-5.725GHz	802.11ac VHT40	40	4TX
5.47-5.725GHz	802.11ac VHT80	80	4TX

Note:

- 11a, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- VHT20, VHT40, VHT80 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.
- BWch is the nominal channel bandwidth.



1.1.2 Antenna Information

Ant.	Port		Brand	Model Name	Antenna Type	Connector	Gain (dBi)	
	2.4GHz	5GHz					2.4GHz	5GHz
1	1	1	YAGEO	ANTA0ZZ14022WLAN4	Dipole Antenna	I-PEX	4.6	4.6
2	2	3	YAGEO	ANTA0ZZ14022WLAN3	Dipole Antenna	I-PEX	4.4	5.6
3	3	4	YAGEO	ANTA0ZZ14022WLAN2	Dipole Antenna	I-PEX	3.2	5.7
4	-	2	YAGEO	ANTA0ZZ14021WLAN1	Dipole Antenna	I-PEX	-	5.7

Note: The above information was declared by manufacturer.

For 2.4GHz function:

For IEEE 802.11b/g/n mode (3TX/3RX):

Port 1, Port 2 and Port 3 can be used as transmitting/receiving antenna.

Port 1, Port 2 and Port 3 could transmit/receive simultaneously.

For 5GHz function:

For IEEE 802.11a/n/ac mode (4TX/4RX):

Port 1, Port 2, Port 3 and Port 4 can be used as transmitting/receiving antenna.

Port 1, Port 2, Port 3 and Port 4 could transmit/receive simultaneously.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11a	0.968	0.14	2.066m	1k
802.11ac VHT20	0.987	0.06	n/a (DC ≥ 0.98)	n/a (DC ≥ 0.98)
802.11ac VHT40	0.974	0.11	2.437m	1k
802.11ac VHT80	0.948	0.23	1.15m	1k

Note:

- DC is Duty Cycle.
- DCF is Duty Cycle Factor.



1.1.4 EUT Operational Condition

EUT Power Type	From Power Adapter			
Beamforming Function	<input type="checkbox"/>	With beamforming	<input checked="" type="checkbox"/>	Without beamforming
Function	<input type="checkbox"/>	Outdoor P2M	<input checked="" type="checkbox"/>	Indoor P2M
	<input type="checkbox"/>	Fixed P2P	<input type="checkbox"/>	Client
TPC Function	<input checked="" type="checkbox"/>	With TPC	<input type="checkbox"/>	Without TPC
Weather Band	<input checked="" type="checkbox"/>	With 5600~5650MHz	<input type="checkbox"/>	Without 5600~5650MHz
Test Software Version	QRCT(Version3.0.187.0)			
Serial Number	1418568200053			

Note: The above information was declared by manufacturer.

1.1.5 Table for Multiple Listing

The model names in the following table are all refer to the identical product.

Brand Name	Model Name	Description
	CH8568	All the models are identical, the difference model names served as marketing strategy.
	CH8568XXXX (X= a~z , 0~9 , blank, "-")	

Note: From the above models, model: CH8568 was selected as representative model for the test and its data was record in this report.

1.1.6 Table for Class II Change

This product is an extension of original one reported under Sporton project number: FR032025-03

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

Modifications	Performance Checking
Adding 5GHz band 2 and band 3 (5250~5350 MHz, 5470~5725 MHz) for this device.	<ol style="list-style-type: none">1. Emission Bandwidth.2. Maximum Conducted Output Power.3. Peak Power Spectral Density.4. Unwanted Emissions above 1GHz.



1.2 Applicable 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 v02r01

The following reference test guidance is not within the scope of accreditation of TAF.

- ♦ FCC KDB 662911 D01 v02r01
- ♦ FCC KDB 412172 D01 v01r01

1.3 Testing Location Information

Testing Location				
<input type="checkbox"/>	HWA YA	ADD : No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL : 886-3-327-3456 FAX : 886-3-327-0973		
<input checked="" type="checkbox"/>	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	RJ Huang	23.7-25.5°C / 53-58 %	Sep. 01, 2020
Radiated Above 1GHz	03CH03-CB	JN Du	23.6-25.5°C / 55-57%	Aug. 28, 2020 ~ Aug. 31, 2020

Test site Designation No. TW0006 with FCC

Test site registered number IC 4086D with Industry Canada.

1.4 Measurement Uncertainty

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

Test Items	Uncertainty	Remark
Radiated Emission (1GHz ~ 18GHz)	4.9 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.6 dB	Confidence levels of 95%
Conducted Emission	2.8 dB	Confidence levels of 95%
Output Power Measurement	1.4 dB	Confidence levels of 95%
Power Density Measurement	2.8 dB	Confidence levels of 95%
Bandwidth Measurement	0.39%	Confidence levels of 95%



2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
802.11a_Nss1,(6Mbps)_4TX	-
5260MHz	11
5300MHz	11
5320MHz	11.5
5500MHz	11.5
5580MHz	11.5
5700MHz	12
802.11ac VHT20_Nss1,(MCS0)_4TX	-
5260MHz	11.5
5300MHz	12
5320MHz	12
5500MHz	12.5
5580MHz	12.5
5700MHz	12.5
802.11ac VHT40_Nss1,(MCS0)_4TX	-
5270MHz	14.5
5310MHz	14.5
5510MHz	15
5550MHz	15
5670MHz	15
802.11ac VHT80_Nss1,(MCS0)_4TX	-
5290MHz	15
5530MHz	16.5
5610MHz	17.5

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	Emission Bandwidth Maximum Conducted Output Power Peak Power Spectral Density
Test Condition	Conducted measurement at transmit chains

The Worst Case Mode for Following Conformance Tests

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

The Worst Case Mode for Following Conformance Tests

Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	WLAN 2.4GHz + WLAN 5GHz

Refer to Sporton Test Report No.: FA032025-04 for Co-location RF Exposure Evaluation.

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



2.3 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

2.4 Accessories

Accessories			
Equipment Name	Brand Holder	Model Name	Rating
Adapter	ChenZhou Fecom Electronics Co., Ltd.	F42L1-120350SPAU	INPUT: 100-240V ~ 50/60Hz, 1.4A OUTPUT: 12V, 3.5A
Others			
RJ-45 cable, non-shielded, 1.8m			

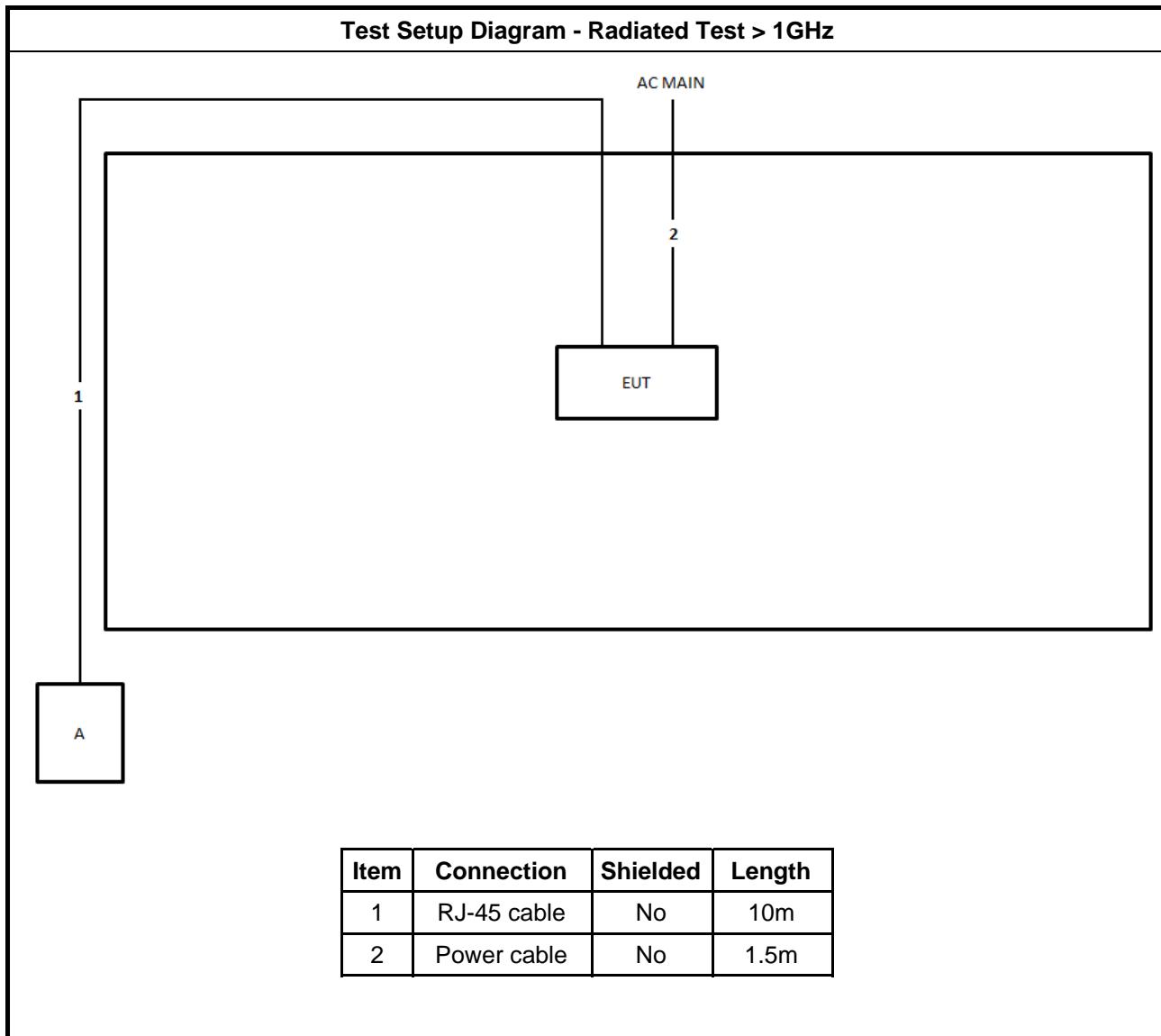
2.5 Support Equipment

For Radiated and RF Conducted:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	NB	DELL	E4300	N/A



2.6 Test Setup Diagram





3 Transmitter Test Result

3.1 Emission Bandwidth

3.1.1 Emission Bandwidth Limit

Emission Bandwidth Limit	
UNII Devices	
<input type="checkbox"/>	For the 5.15-5.25 GHz band, N/A
<input checked="" type="checkbox"/>	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.
<input checked="" type="checkbox"/>	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.
<input type="checkbox"/>	For the 5.725-5.85 GHz band, 6 dB emission bandwidth \geq 500kHz.
LE-LAN Devices	
<input type="checkbox"/>	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.
<input type="checkbox"/>	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
<input type="checkbox"/>	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
<input type="checkbox"/>	For the 5.725-5.85 GHz band, 6 dB emission bandwidth \geq 500kHz.

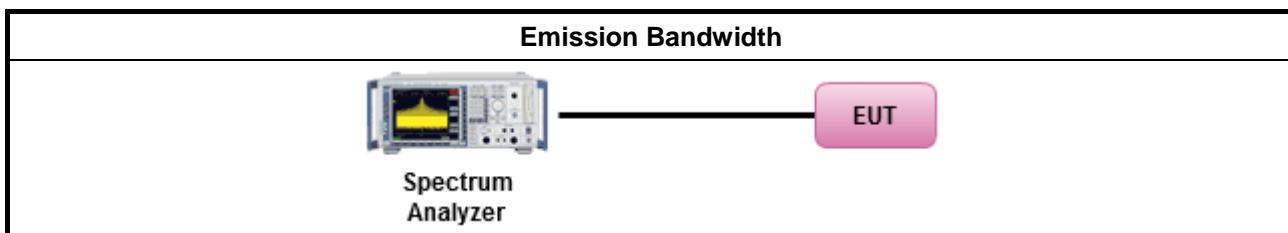
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

Test Method	
▪	For the emission bandwidth shall be measured using one of the options below:
<input checked="" type="checkbox"/>	Refer as FCC KDB 789033, clause C for EBW and clause D for OBW measurement.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.
<input type="checkbox"/>	Refer as IC RSS-Gen, clause 4.6 for bandwidth testing.

3.1.4 Test Setup



3.1.5 Test Result of Emission Bandwidth

Refer as Appendix A



3.2 Maximum Conducted Output Power

3.2.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit	
UNII Devices	
<input type="checkbox"/> For the 5.15-5.25 GHz band:	<ul style="list-style-type: none">Outdoor AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6 \text{ dBi}$, then $P_{Out} = 30 - (G_{TX} - 6)$. e.i.r.p. at any elevation angle above 30 degrees $\leq 125 \text{ mW}$ [21 dBm]Indoor AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6 \text{ dBi}$, 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 $G_{TX} > 23 \text{ dBi}$, 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 $G_{TX} > 6 \text{ dBi}$, then $P_{Out} = 24 - (G_{TX} - 6)$.
<input checked="" type="checkbox"/> For the 5.25-5.35 GHz band, the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in MHz. If $G_{TX} > 6 \text{ dBi}$, then $P_{Out} = 24 - (G_{TX} - 6)$.	
<input checked="" type="checkbox"/> For the 5.47-5.725 GHz band, the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in MHz. If $G_{TX} > 6 \text{ dBi}$, then $P_{Out} = 24 - (G_{TX} - 6)$.	
<input type="checkbox"/> For the 5.725-5.85 GHz band:	<ul style="list-style-type: none">Point-to-multipoint systems (P2M): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6 \text{ dBi}$, 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	
<input type="checkbox"/> 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.	
<input type="checkbox"/> 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	
<input type="checkbox"/> 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	
<input type="checkbox"/> For the 5.725-5.85 GHz band:	<ul style="list-style-type: none">Point-to-multipoint systems (P2M): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6 \text{ dBi}$, then $P_{Out} = 30 - (G_{TX} - 6)$.Point-to-point systems (P2P): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W.
P_{Out} = maximum conducted output power in dBm, G_{TX} = the maximum transmitting antenna directional gain in dBi.	



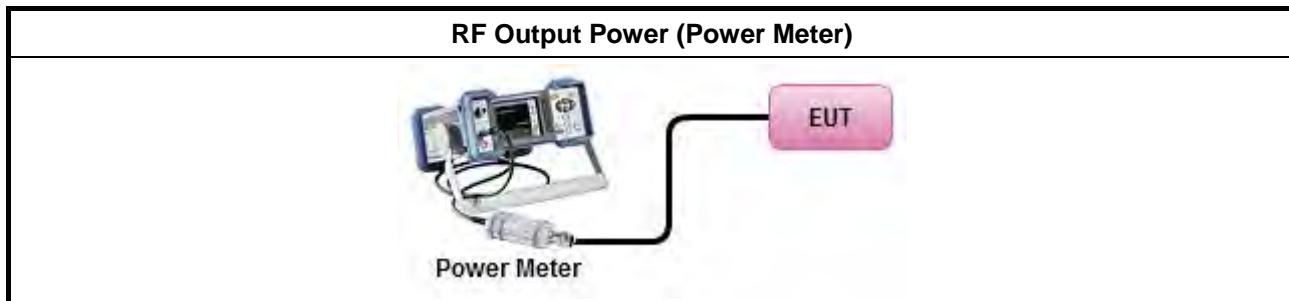
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method	
▪ Maximum Conducted Output Power	
	Average over on/off periods with duty factor
	<input type="checkbox"/> Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging).
	<input type="checkbox"/> 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
	<input checked="" type="checkbox"/> Refer as FCC KDB 789033, clause E Method PM-G (using an RF average power meter).
▪ For conducted measurement.	
	<ul style="list-style-type: none">▪ If the EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.▪ If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Refer as Appendix B



3.3 Peak Power Spectral Density

3.3.1 Peak Power Spectral Density Limit

Peak Power Spectral Density Limit	
UNII Devices	
<input type="checkbox"/> For the 5.15-5.25 GHz band:	<ul style="list-style-type: none">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 $PPSD = 11 - (G_{TX} - 6)$.
<input checked="" type="checkbox"/> For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.	
<input checked="" type="checkbox"/> For the 5.47-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.	
<input type="checkbox"/> For the 5.725-5.85 GHz band:	<ul style="list-style-type: none">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	
<input type="checkbox"/> For the 5.15-5.25 GHz band, the e.i.r.p. peak power spectral density (PPSD) ≤ 10 dBm/MHz.	
<input type="checkbox"/> For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz.	
<input type="checkbox"/> For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz.	<ul style="list-style-type: none">e.i.r.p. greater than 200 mW shall comply with the following e.i.r.p. at different elevations, where θ is the angle above the local horizontal plane (of the Earth) as shown below: -13 dBW/MHz for $0^\circ \leq \theta < 8^\circ$; -13 - 0.716 (θ-8) dBW/MHz for $8^\circ \leq \theta < 40^\circ$ -35.9 - 1.22 (θ-40) dBW/MHz for $40^\circ \leq \theta \leq 45^\circ$; -42 dBW/MHz for $\theta > 45^\circ$
<input type="checkbox"/> For the 5.725-5.85 GHz band:	<ul style="list-style-type: none">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 the same method as used to determine the conducted output power shall be used to determine the power spectral density. And power spectral density in dBm/MHz G_{TX} = the maximum transmitting antenna directional gain in dBi.	

3.3.2 Measuring Instruments

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

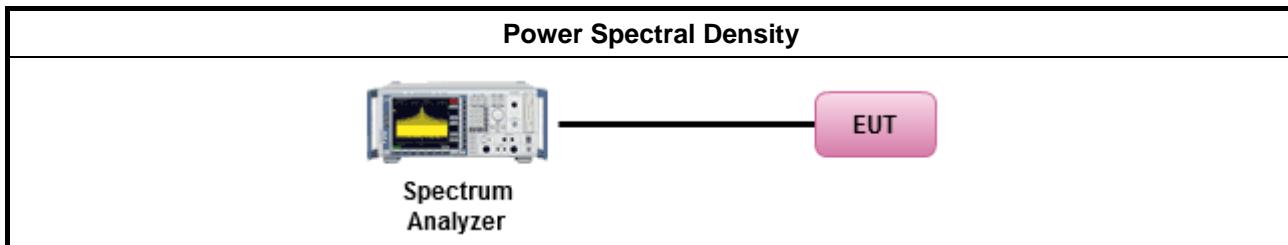


3.3.3 Test Procedures

Test Method	
<ul style="list-style-type: none">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:	
<ul style="list-style-type: none"><input type="checkbox"/> 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 \geq 98% or external video / power trigger]	
<ul style="list-style-type: none"><input checked="" type="checkbox"/> Refer as FCC KDB 789033, clause E Method SA-1 (spectral trace averaging).	
<ul style="list-style-type: none"><input type="checkbox"/> 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	
<ul style="list-style-type: none"><input checked="" type="checkbox"/> Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging).	
<ul style="list-style-type: none"><input type="checkbox"/> Refer as FCC KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)	
<ul style="list-style-type: none">For conducted measurement.	
<ul style="list-style-type: none">If the EUT supports multiple transmit chains using options given below:	
<ul style="list-style-type: none"><input checked="" type="checkbox"/> 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.	
<ul style="list-style-type: none"><input type="checkbox"/> 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,	
<ul style="list-style-type: none"><input type="checkbox"/> 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.	
<ul style="list-style-type: none">If multiple transmit chains, EIRP PPSD calculation could be following as methods: $PPSD_{total} = PPSD_1 + PPSD_2 + \dots + PPSD_n$(calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = PPSD_{total} + DG$	



3.3.4 Test Setup



3.3.5 Test Result of Peak Power Spectral Density

Refer as Appendix C



3.4 Unwanted Emissions

3.4.1 Transmitter Unwanted Emissions Limit

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

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

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

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



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

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

3.4.2 Measuring Instruments

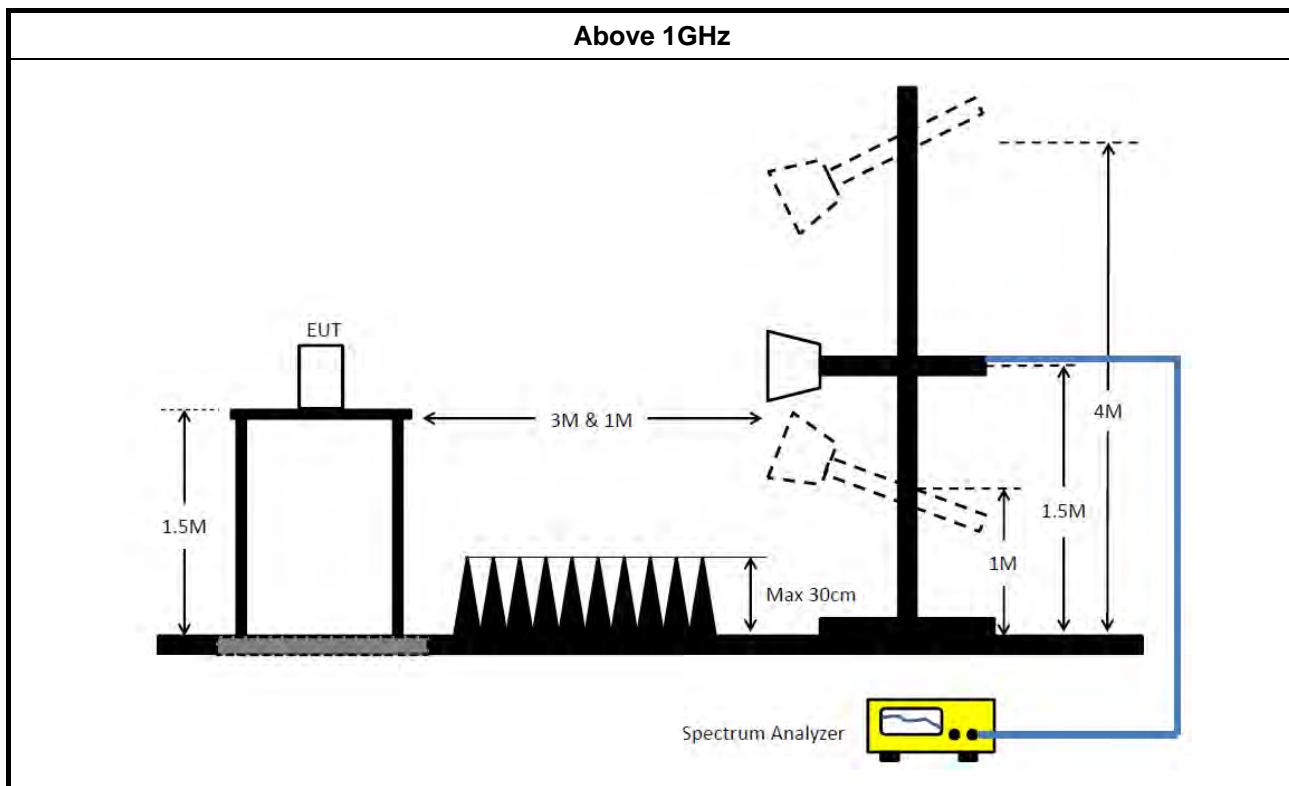
Refer a test equipment and calibration data table in this test report.



3.4.3 Test Procedures

Test Method	
<ul style="list-style-type: none">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).	
<ul style="list-style-type: none">The average emission levels shall be measured in [duty cycle \geq 98 or duty factor].	
<ul style="list-style-type: none">For the transmitter unwanted emissions shall be measured using following options below:	
<ul style="list-style-type: none">Refer as FCC KDB 789033, clause G2) for unwanted emissions into non-restricted bands.	
<ul style="list-style-type: none">Refer as FCC KDB 789033, clause G1) for unwanted emissions into restricted bands.	
	<input type="checkbox"/> Refer as FCC KDB 789033, G6) Method AD (Trace Averaging).
	<input checked="" type="checkbox"/> Refer as FCC KDB 789033, G6) Method VB (Reduced VBW).
	<input type="checkbox"/> Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). $VBW \geq 1/T$, where T is pulse time.
	<input type="checkbox"/> Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions.
	<input checked="" type="checkbox"/> Refer as FCC KDB 789033, clause G5) measurement procedure peak limit.
	<input type="checkbox"/> Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak limit.
	<ul style="list-style-type: none">For radiated measurement.
	<ul style="list-style-type: none">Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.
	<ul style="list-style-type: none">Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.
	<ul style="list-style-type: none">Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.
<ul style="list-style-type: none">The any unwanted emissions level shall not exceed the fundamental emission level.	
<ul style="list-style-type: none">All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.	

3.4.4 Test Setup



3.4.5 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Antenna factor (AF) + Cable loss (CL) + Read level (Raw) - Preamp factor (PA)(if applicable) = Level

3.4.6 Test Result of Transmitter Unwanted Emissions

Refer as Appendix D



4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Horn Antenna	ETS • Lindgren	3115	6821	750MHz~18GHz	Jan. 20, 2020	Jan. 19, 2021	Radiation (03CH03-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 21, 2020	Jul. 20, 2021	Radiation (03CH03-CB)
Pre-Amplifier	Agilent	8449B	3008A02097	1GHz ~ 26.5GHz	Jul. 03, 2020	Jun. 02, 2021	Radiation (03CH03-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 08, 2020	Jul. 07, 2021	Radiation (03CH03-CB)
Spectrum Analyzer	R&S	FSP40	100019	9kHz ~ 40GHz	Jun. 09, 2020	Jun. 08, 2021	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-20+29	1GHz ~ 18GHz	Jul. 28, 2020	Jul. 27, 2021	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-29	1GHz ~ 18GHz	Jul. 28, 2020	Jul. 27, 2021	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 16, 2020	Jul. 15, 2021	Radiation (03CH03-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 16, 2020	Jul. 15, 2021	Radiation (03CH03-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH03-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	May 05, 2020	May 04, 2021	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz – 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz –26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz –26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz –26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-28	1 GHz –26.5 GHz	Nov. 18, 2019	Nov. 17, 2020	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 06, 2019	Nov. 05, 2020	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410002	50MHz~18GHz	Nov. 06, 2019	Nov. 05, 2020	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY54320014	50MHz~18GHz	Mar. 31, 2020	Mar. 30, 2021	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY54320015	50MHz~18GHz	Mar. 31, 2020	Mar. 30, 2021	Conducted (TH01-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conducted (TH01-CB)

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

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

**Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.25-5.35GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	20.1M	16.432M	16M4D1D	19.32M	16.402M
802.11ac VHT20_Nss1,(MCS0)_4TX	20.46M	17.631M	17M6D1D	20.01M	17.571M
802.11ac VHT40_Nss1,(MCS0)_4TX	40.14M	35.922M	35M9D1D	39.18M	35.742M
802.11ac VHT80_Nss1,(MCS0)_4TX	84M	75.922M	75M9D1D	83.28M	75.802M
5.47-5.725GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	20.04M	16.432M	16M4D1D	19.44M	16.372M
802.11ac VHT20_Nss1,(MCS0)_4TX	20.49M	17.631M	17M6D1D	20.1M	17.571M
802.11ac VHT40_Nss1,(MCS0)_4TX	40.26M	35.982M	36M0D1D	39.24M	35.742M
802.11ac VHT80_Nss1,(MCS0)_4TX	84.12M	75.922M	75M9D1D	82.68M	75.682M

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

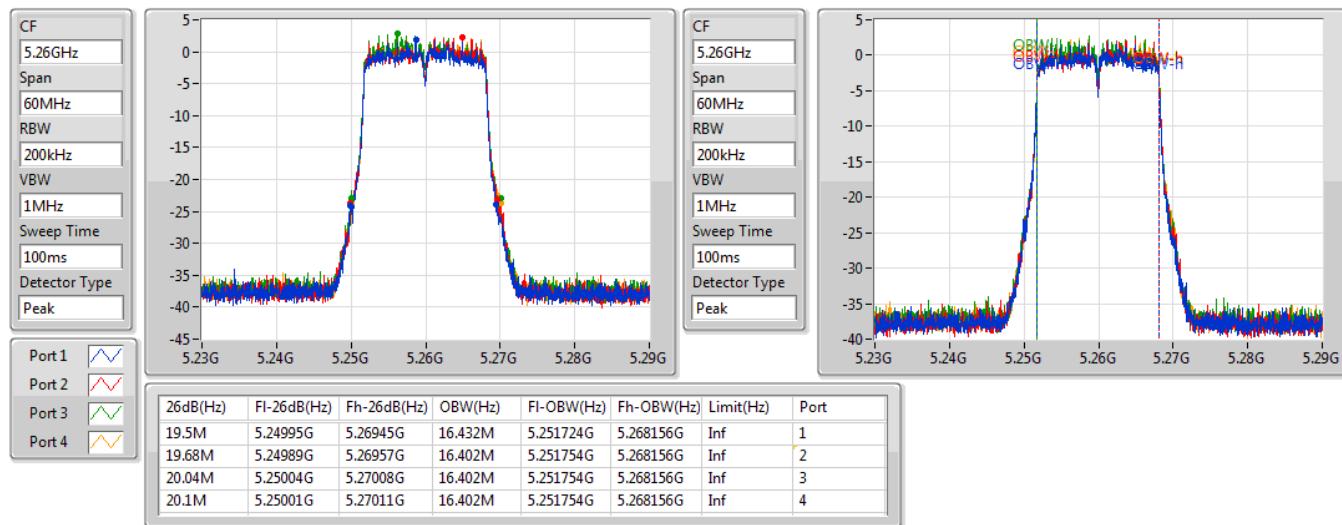
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	19.5M	16.432M	19.68M	16.402M	20.04M	16.402M	20.1M	16.402M
5300MHz	Pass	Inf	19.62M	16.432M	20.01M	16.432M	19.53M	16.432M	19.56M	16.402M
5320MHz	Pass	Inf	19.71M	16.432M	19.32M	16.402M	19.59M	16.432M	20.04M	16.402M
5500MHz	Pass	Inf	19.68M	16.432M	19.68M	16.432M	20.04M	16.432M	19.83M	16.402M
5580MHz	Pass	Inf	19.77M	16.432M	19.8M	16.402M	19.44M	16.432M	19.83M	16.402M
5700MHz	Pass	Inf	19.65M	16.402M	19.56M	16.432M	19.44M	16.402M	20.01M	16.372M
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5260MHz	Pass	Inf	20.01M	17.571M	20.25M	17.601M	20.4M	17.601M	20.16M	17.601M
5300MHz	Pass	Inf	20.04M	17.571M	20.22M	17.601M	20.31M	17.601M	20.31M	17.601M
5320MHz	Pass	Inf	20.25M	17.571M	20.16M	17.571M	20.46M	17.631M	20.16M	17.571M
5500MHz	Pass	Inf	20.13M	17.571M	20.13M	17.601M	20.49M	17.631M	20.22M	17.571M
5580MHz	Pass	Inf	20.1M	17.571M	20.25M	17.571M	20.49M	17.631M	20.16M	17.571M
5700MHz	Pass	Inf	20.19M	17.571M	20.16M	17.601M	20.13M	17.571M	20.16M	17.571M
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5270MHz	Pass	Inf	40.14M	35.922M	39.72M	35.802M	39.84M	35.742M	39.18M	35.742M
5310MHz	Pass	Inf	40.02M	35.922M	40.02M	35.862M	39.9M	35.742M	39.24M	35.802M
5510MHz	Pass	Inf	40.08M	35.922M	39.84M	35.862M	39.72M	35.802M	39.24M	35.742M
5550MHz	Pass	Inf	40.14M	35.982M	39.96M	35.862M	39.84M	35.802M	39.24M	35.862M
5670MHz	Pass	Inf	40.26M	35.922M	39.96M	35.982M	39.9M	35.922M	39.3M	35.802M
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
5290MHz	Pass	Inf	84M	75.922M	83.52M	75.802M	83.52M	75.802M	83.28M	75.802M
5530MHz	Pass	Inf	84.12M	75.802M	83.64M	75.682M	83.88M	75.682M	82.68M	75.802M
5610MHz	Pass	Inf	83.4M	75.922M	84.12M	75.802M	84M	75.922M	83.04M	75.802M

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

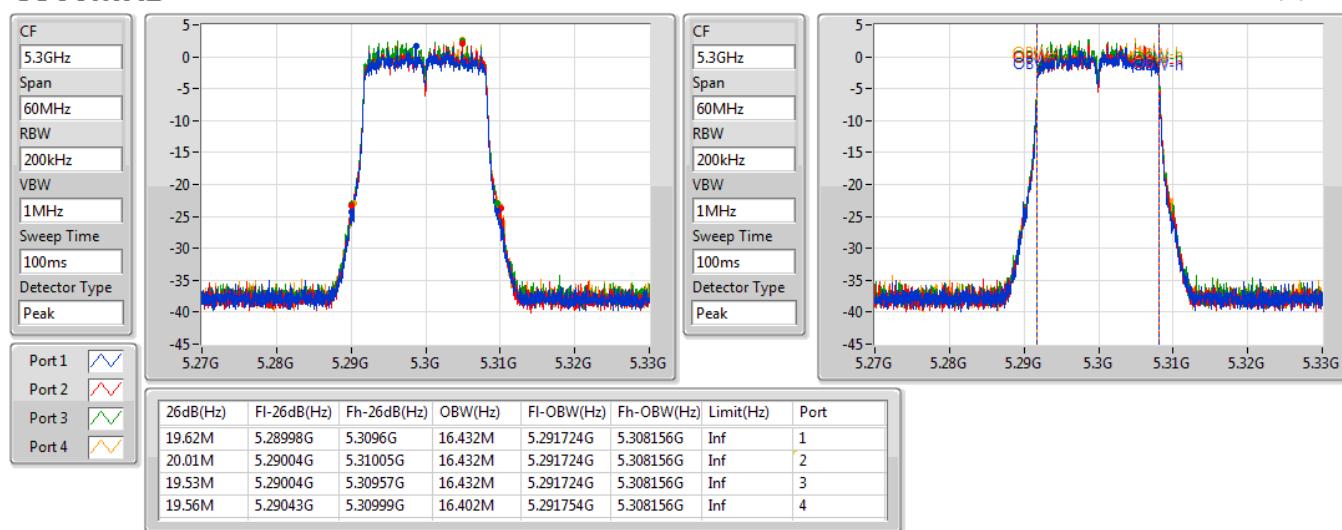
Port X-OBW = Port X 99% occupied bandwidth;

802.11a_Nss1,(6Mbps)_4TX
EBW
5260MHz

01/09/2020

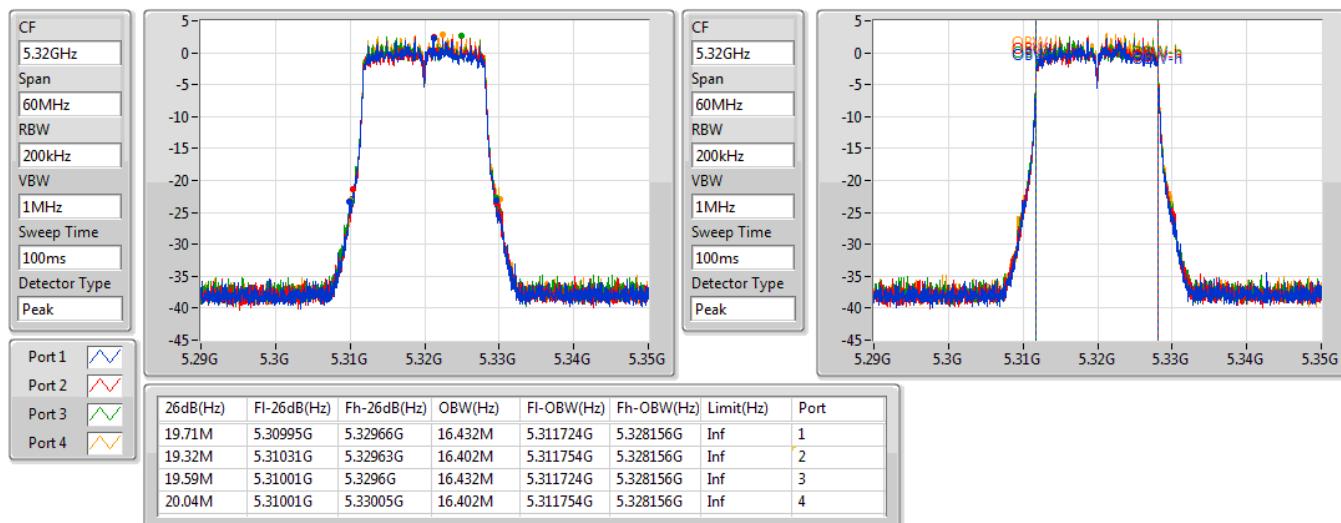

802.11a_Nss1,(6Mbps)_4TX
EBW
5300MHz

01/09/2020

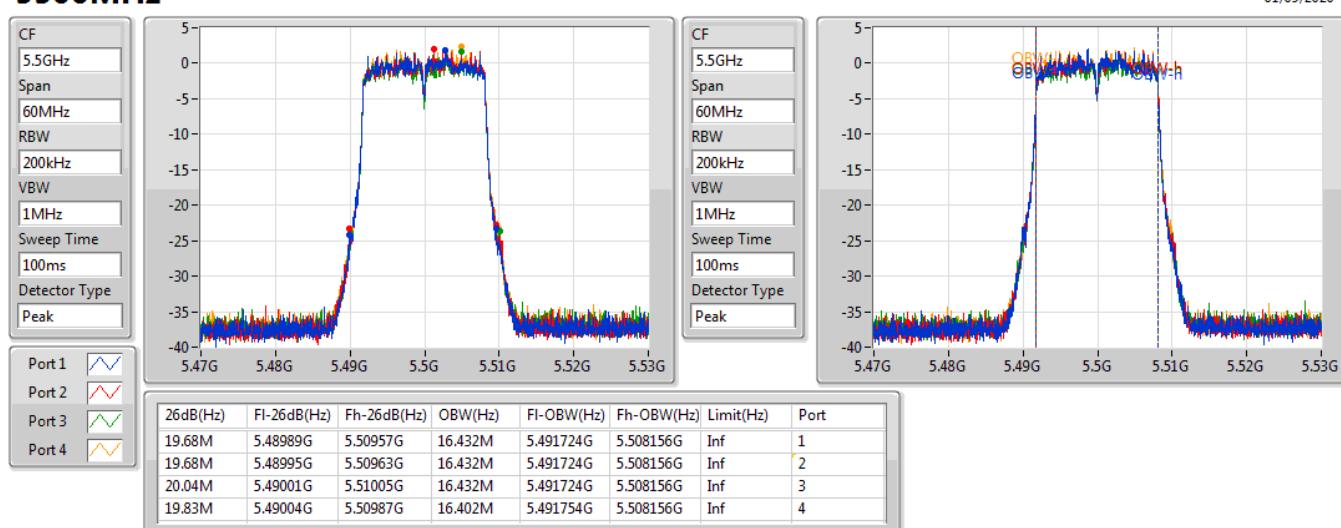


802.11a_Nss1,(6Mbps)_4TX
EBW
5320MHz

01/09/2020

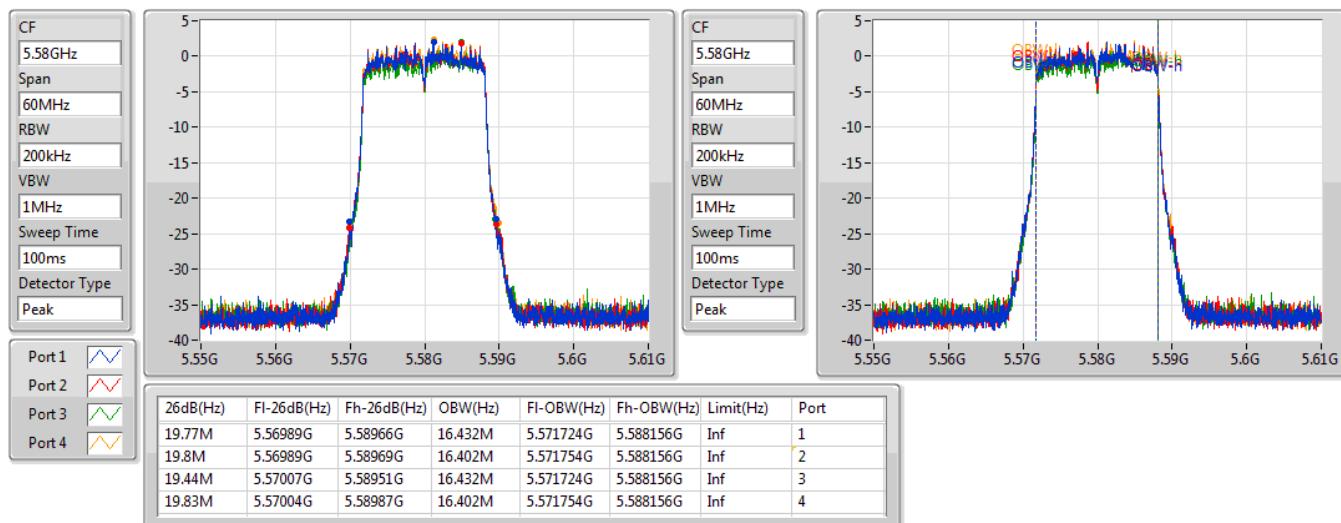

802.11a_Nss1,(6Mbps)_4TX
EBW
5500MHz

01/09/2020



802.11a_Nss1,(6Mbps)_4TX
EBW
5580MHz

01/09/2020

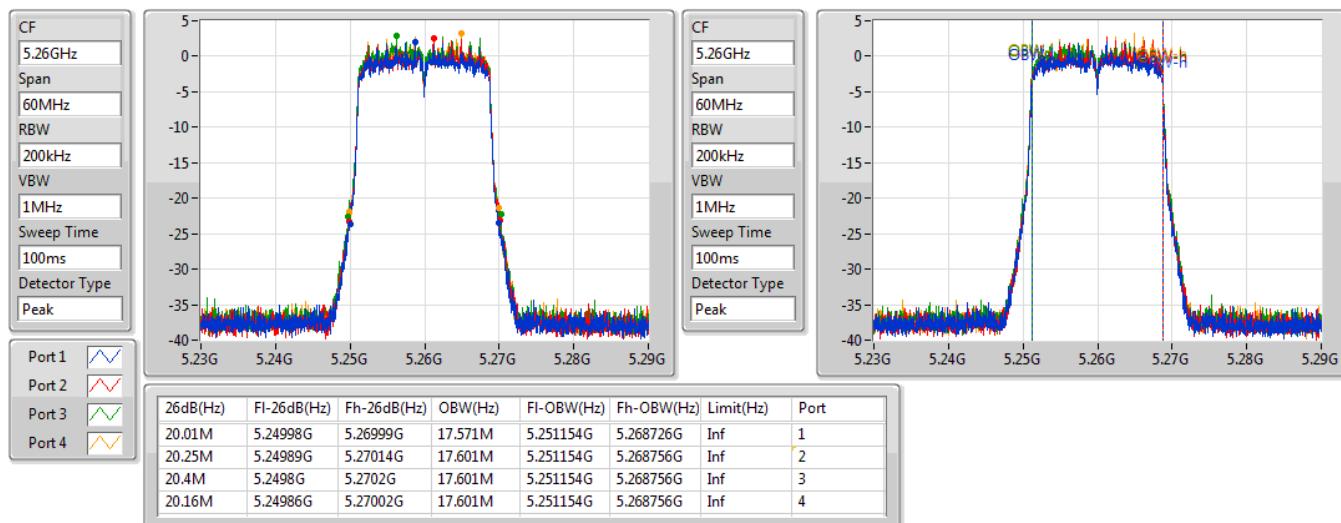

802.11a_Nss1,(6Mbps)_4TX
EBW
5700MHz

01/09/2020

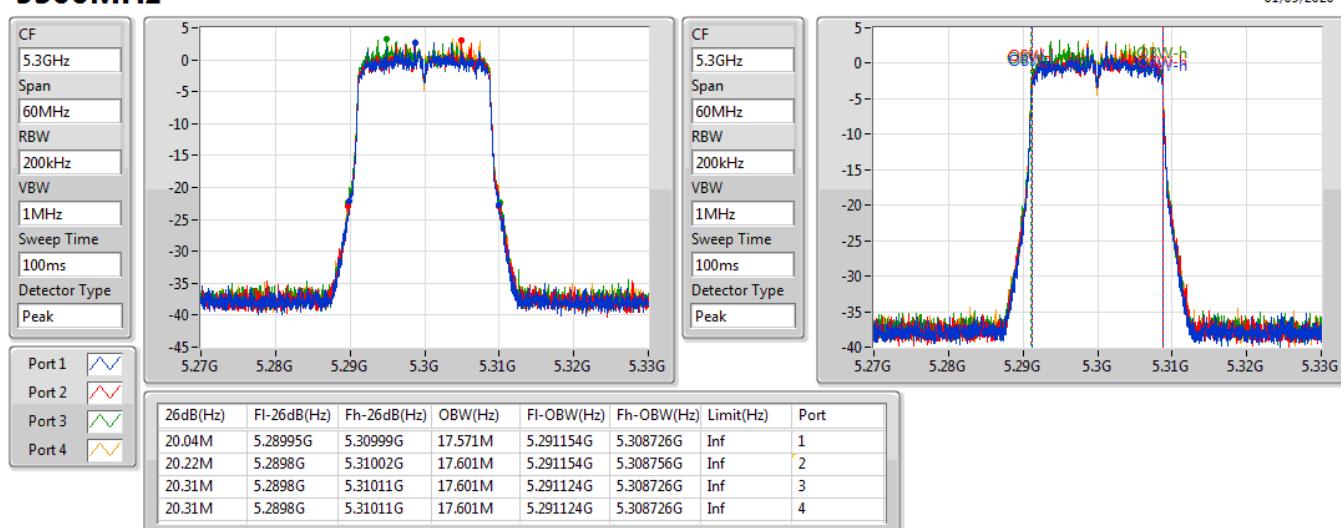


802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5260MHz

01/09/2020

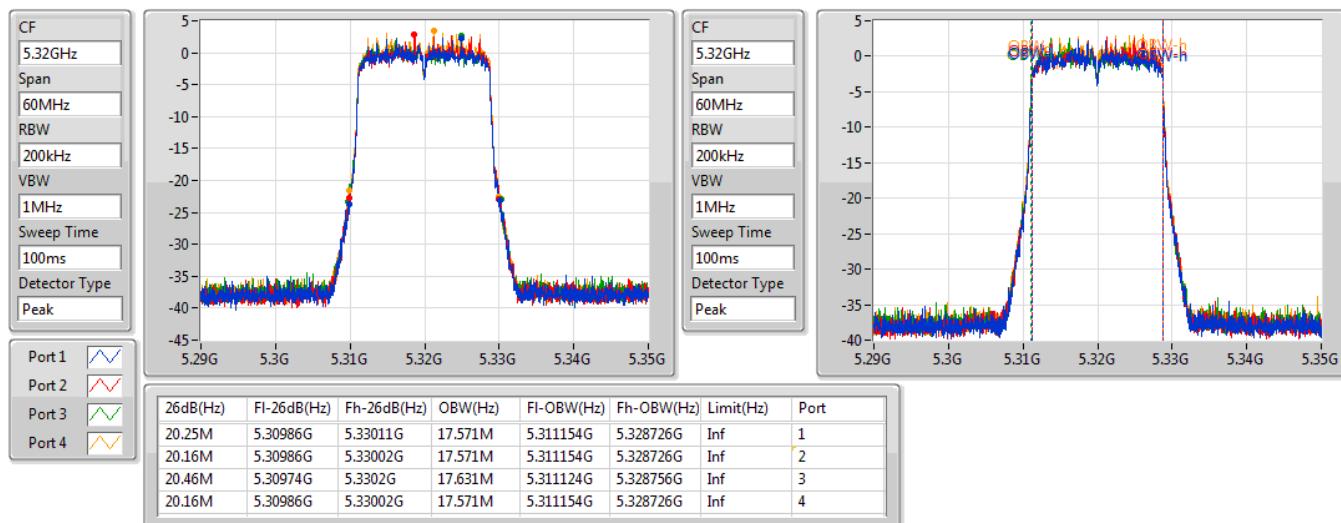

802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5300MHz

01/09/2020

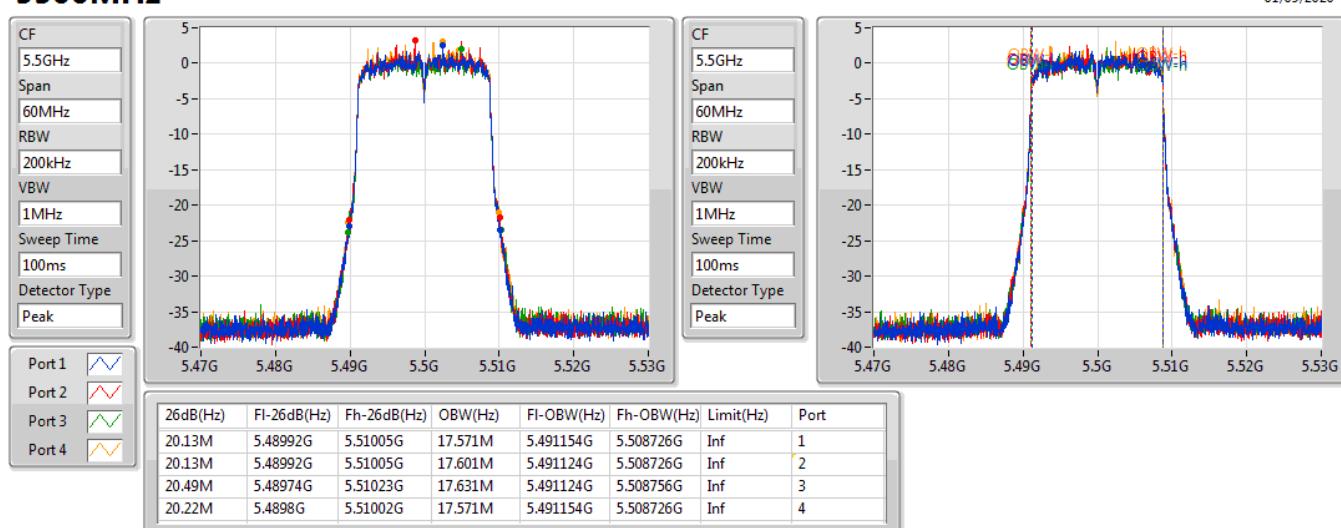


802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5320MHz

01/09/2020

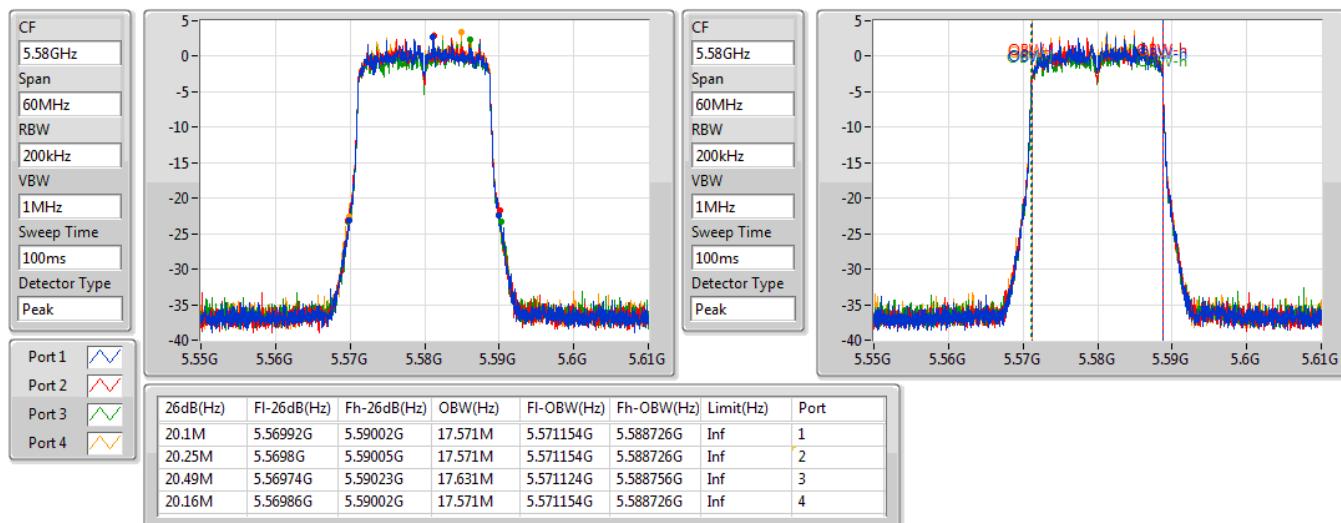

802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5500MHz

01/09/2020

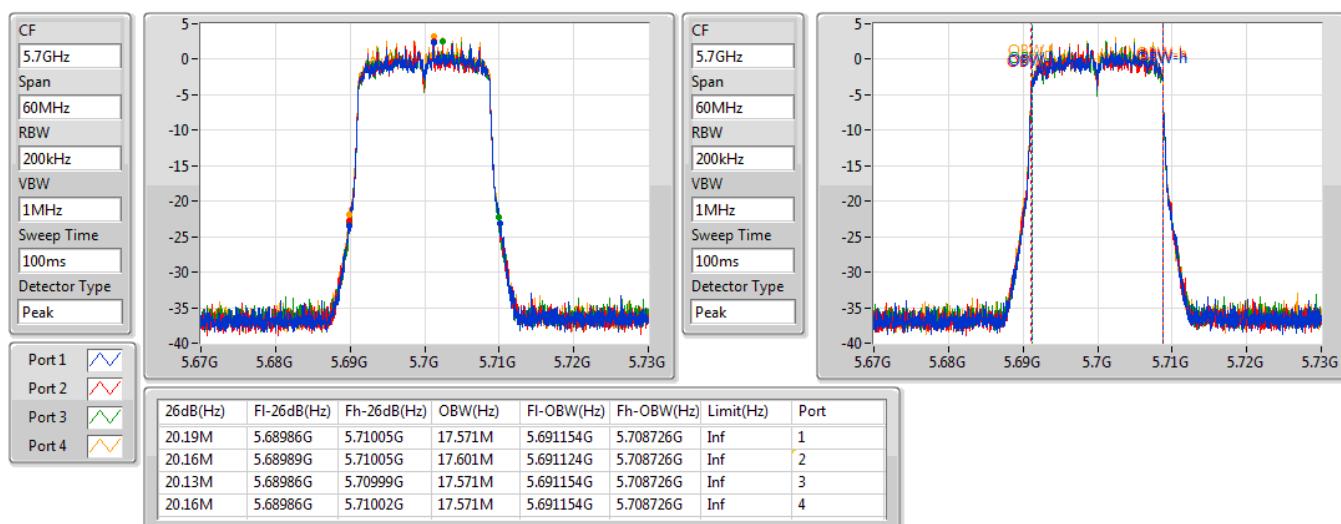


802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5580MHz

01/09/2020

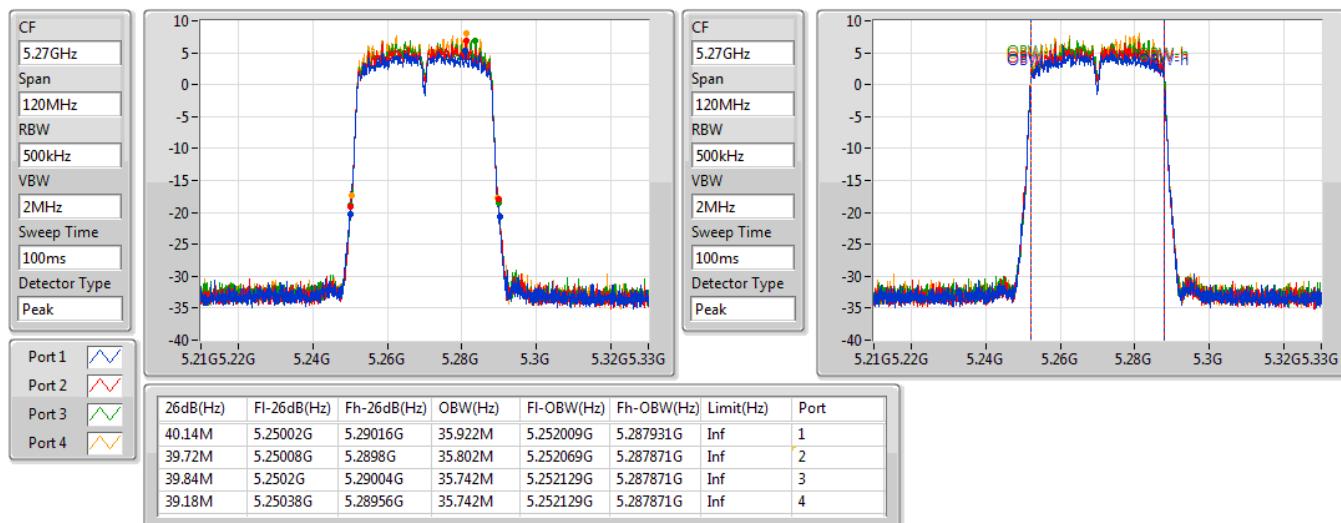

802.11ac VHT20_Nss1,(MCS0)_4TX
EBW
5700MHz

01/09/2020

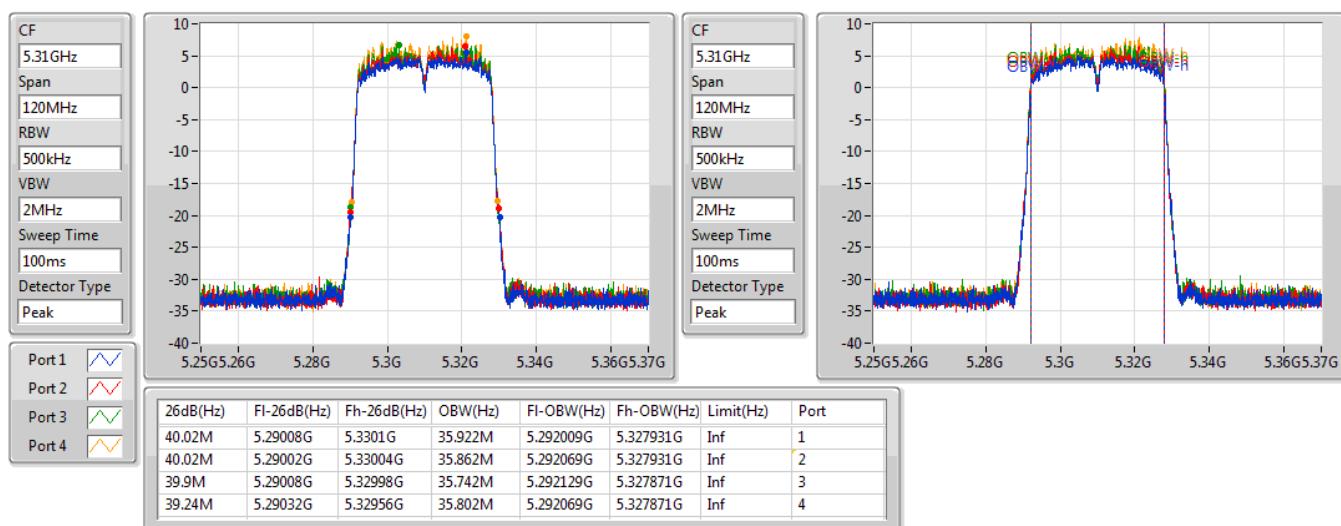


802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5270MHz

01/09/2020

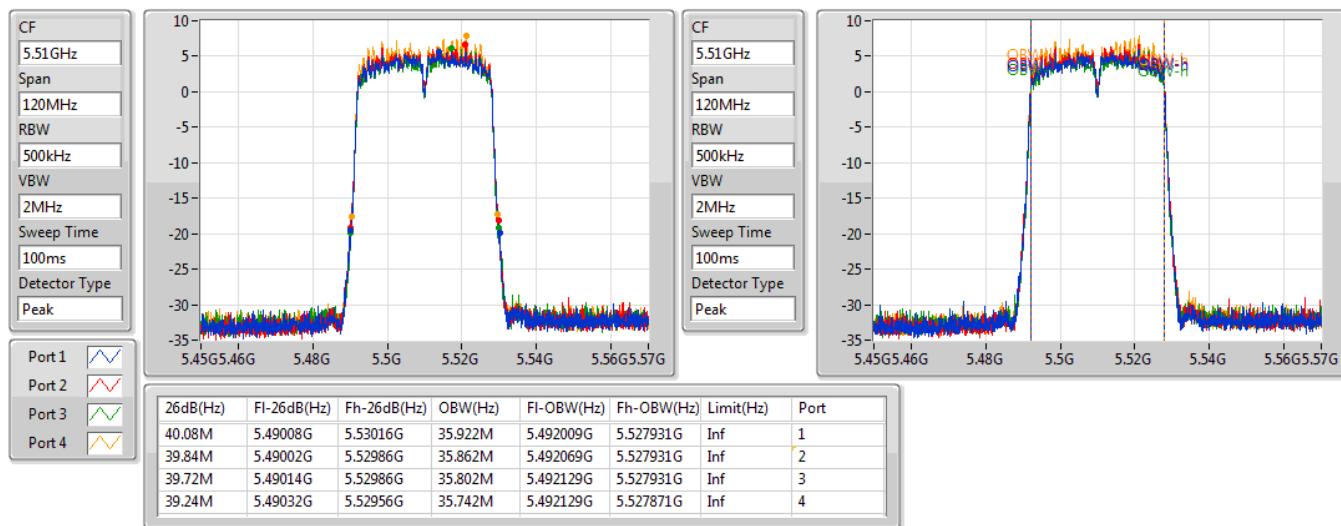

802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5310MHz

01/09/2020

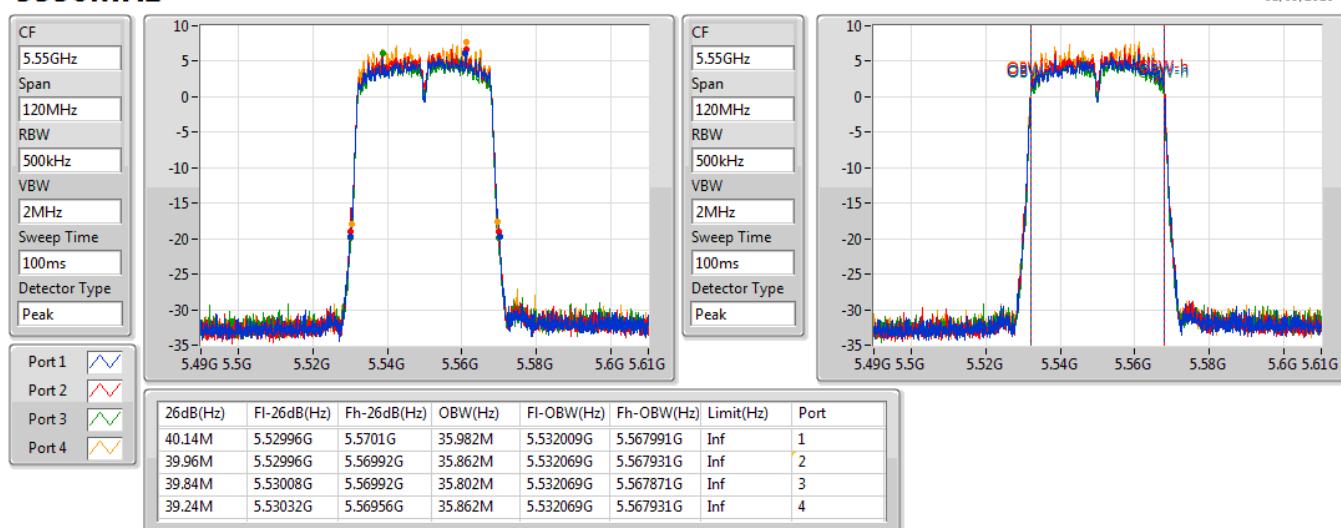


802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5510MHz

01/09/2020

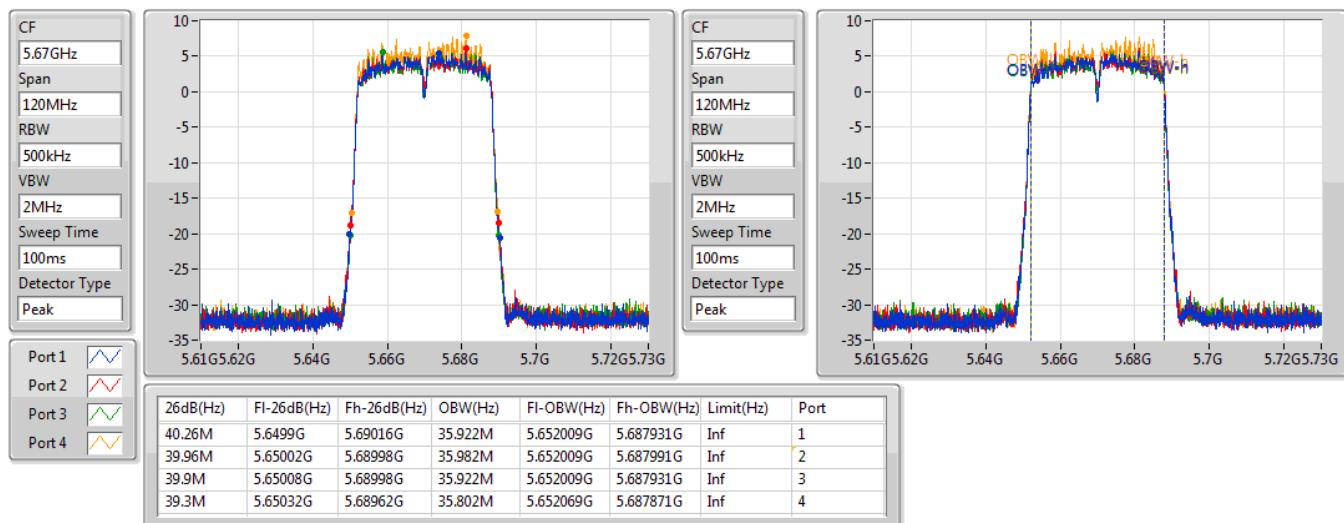

802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5550MHz

01/09/2020



802.11ac VHT40_Nss1,(MCS0)_4TX
EBW
5670MHz

01/09/2020

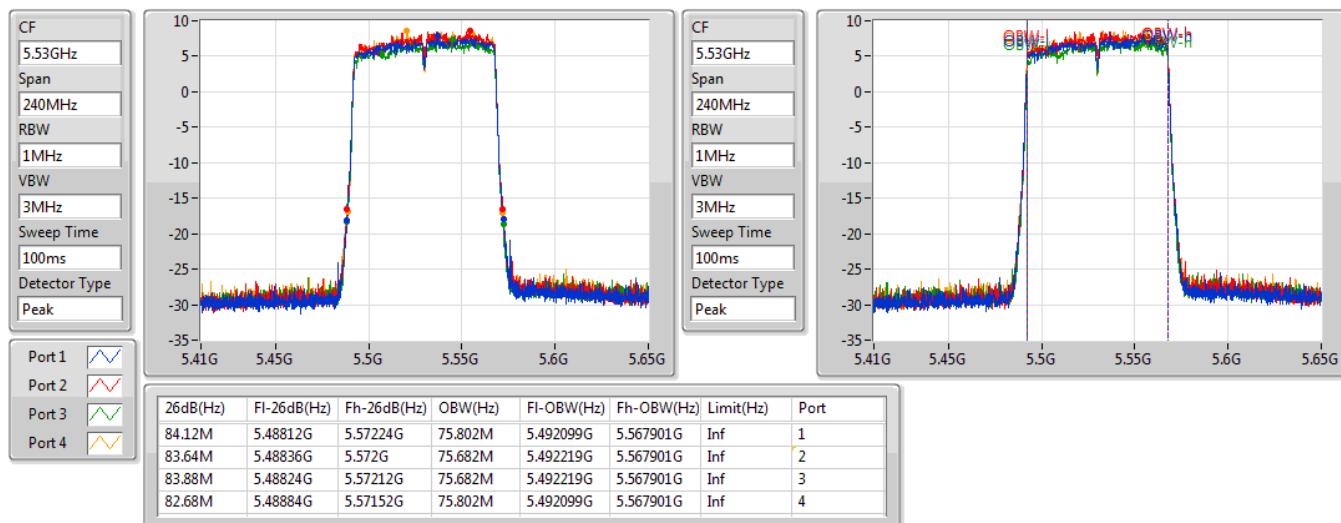

802.11ac VHT80_Nss1,(MCS0)_4TX
EBW
5290MHz

01/09/2020

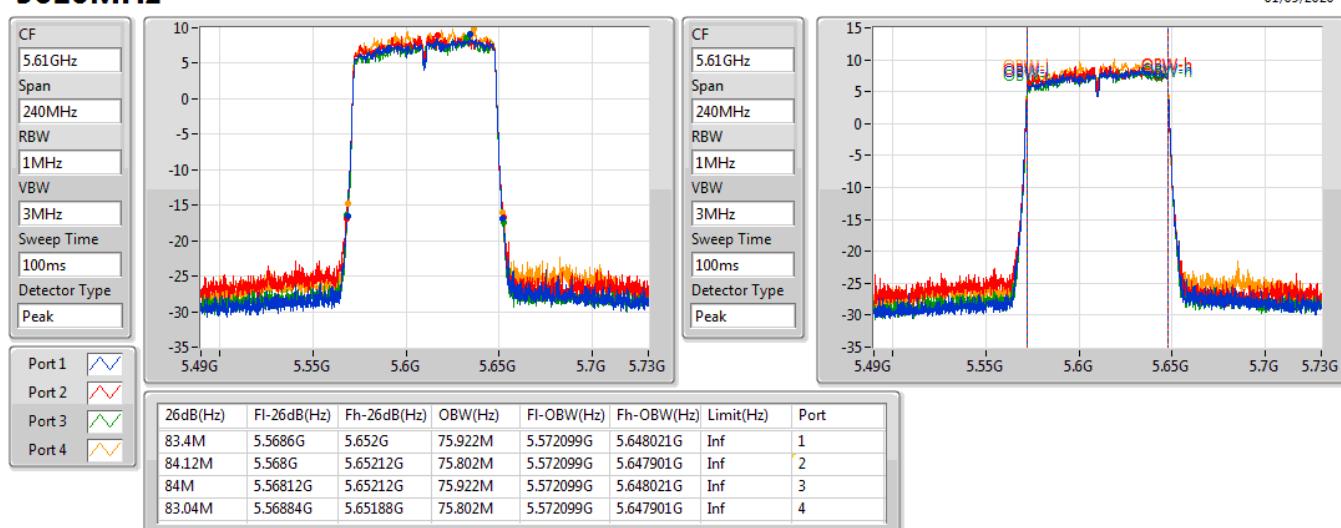


802.11ac VHT80_Nss1,(MCS0)_4TX
EBW
5530MHz

01/09/2020


802.11ac VHT80_Nss1,(MCS0)_4TX
EBW
5610MHz

01/09/2020



**Summary**

Mode	Total Power (dBm)	Total Power (W)
5.25-5.35GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	18.62	0.07278
802.11ac VHT20_Nss1,(MCS0)_4TX	18.90	0.07762
802.11ac VHT40_Nss1,(MCS0)_4TX	21.54	0.14256
802.11ac VHT80_Nss1,(MCS0)_4TX	21.84	0.15276
5.47-5.725GHz	-	-
802.11a_Nss1,(6Mbps)_4TX	18.22	0.06637
802.11ac VHT20_Nss1,(MCS0)_4TX	18.85	0.07674
802.11ac VHT40_Nss1,(MCS0)_4TX	21.37	0.13709
802.11ac VHT80_Nss1,(MCS0)_4TX	23.80	0.23988

**Result**

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-
5260MHz	Pass	5.70	11.76	12.08	12.60	12.55	18.28	23.90
5300MHz	Pass	5.70	11.69	12.01	12.58	12.53	18.24	23.91
5320MHz	Pass	5.70	12.17	12.34	12.77	13.07	18.62	23.86
5500MHz	Pass	5.70	11.95	12.09	11.76	12.12	18.00	23.94
5580MHz	Pass	5.70	11.93	12.12	11.52	12.22	17.98	23.89
5700MHz	Pass	5.70	12.06	12.01	12.04	12.64	18.22	23.89
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5260MHz	Pass	5.70	11.84	12.29	12.77	12.94	18.50	23.98
5300MHz	Pass	5.70	12.39	12.67	13.12	13.27	18.90	23.98
5320MHz	Pass	5.70	12.29	12.82	12.49	13.31	18.77	23.98
5500MHz	Pass	5.70	12.75	12.81	12.66	13.02	18.83	23.98
5580MHz	Pass	5.70	12.78	12.87	12.45	13.19	18.85	23.98
5700MHz	Pass	5.70	12.35	12.31	12.22	12.68	18.41	23.98
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5270MHz	Pass	5.70	14.84	15.58	15.72	15.87	21.54	23.98
5310MHz	Pass	5.70	14.83	15.04	15.56	15.72	21.32	23.98
5510MHz	Pass	5.70	15.13	15.60	14.97	15.64	21.37	23.98
5550MHz	Pass	5.70	15.10	15.64	14.80	15.56	21.31	23.98
5670MHz	Pass	5.70	15.07	14.87	14.81	15.82	21.18	23.98
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5290MHz	Pass	5.70	15.39	15.21	16.25	16.31	21.84	23.98
5530MHz	Pass	5.70	16.69	17.24	16.38	17.15	22.90	23.98
5610MHz	Pass	5.70	17.58	17.85	17.28	18.35	23.80	23.98

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



Summary

Mode	PD (dBm/RBW)
5.25-5.35GHz	-
802.11a_Nss1,(6Mbps)_4TX	5.54
802.11ac VHT20_Nss1,(MCS0)_4TX	5.47
802.11ac VHT40_Nss1,(MCS0)_4TX	5.39
802.11ac VHT80_Nss1,(MCS0)_4TX	2.51
5.47-5.725GHz	-
802.11a_Nss1,(6Mbps)_4TX	5.48
802.11ac VHT20_Nss1,(MCS0)_4TX	5.55
802.11ac VHT40_Nss1,(MCS0)_4TX	5.38
802.11ac VHT80_Nss1,(MCS0)_4TX	4.57

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

Result

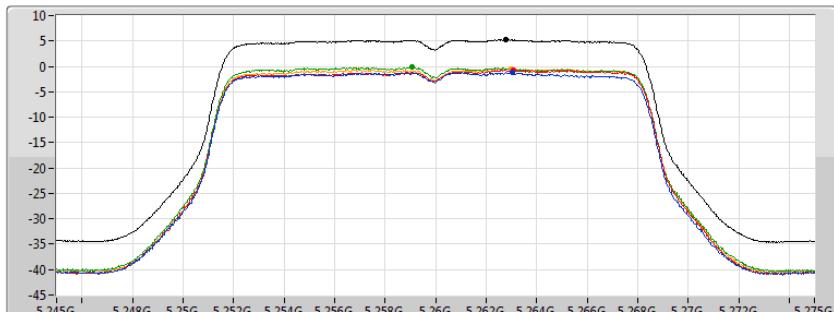
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11a_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-
5260MHz	Pass	11.43	-1.21	-0.74	-0.19	-0.51	5.24	5.57
5300MHz	Pass	11.43	-1.33	-0.99	-0.33	-0.41	5.14	5.57
5320MHz	Pass	11.43	-0.80	-0.36	-0.49	0.11	5.54	5.57
5500MHz	Pass	11.43	-0.82	-0.85	-1.26	-0.46	5.13	5.57
5580MHz	Pass	11.43	-0.92	-0.92	-1.17	-0.43	5.13	5.57
5700MHz	Pass	11.43	-0.60	-0.80	-0.57	0.15	5.48	5.57
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5260MHz	Pass	11.43	-1.30	-0.84	0.01	-0.21	5.27	5.57
5300MHz	Pass	11.43	-0.89	-0.61	0.01	0.06	5.47	5.57
5320MHz	Pass	11.43	-1.03	-0.49	-0.87	0.11	5.34	5.57
5500MHz	Pass	11.43	-0.55	-0.42	-0.79	0.05	5.55	5.57
5580MHz	Pass	11.43	-0.55	-0.51	-0.78	0.02	5.47	5.57
5700MHz	Pass	11.43	-0.84	-0.92	-0.70	-0.06	5.28	5.57
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5270MHz	Pass	11.43	-1.28	-0.31	-0.21	-0.13	5.39	5.57
5310MHz	Pass	11.43	-1.27	-0.68	-0.41	-0.15	5.26	5.57
5510MHz	Pass	11.43	-0.76	-0.33	-0.95	-0.14	5.38	5.57
5550MHz	Pass	11.43	-0.70	-0.34	-1.08	-0.25	5.31	5.57
5670MHz	Pass	11.43	-0.89	-1.26	-1.20	0.05	5.12	5.57
802.11ac VHT80_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
5290MHz	Pass	11.43	-3.94	-3.38	-2.99	-2.87	2.51	5.57
5530MHz	Pass	11.43	-2.04	-1.78	-2.79	-2.06	3.69	5.57
5610MHz	Pass	11.43	-1.30	-1.33	-1.73	-0.58	4.57	5.57

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

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

802.11a_Nss1,(6Mbps)_4TX
PSD
5260MHz

CF
5.26GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



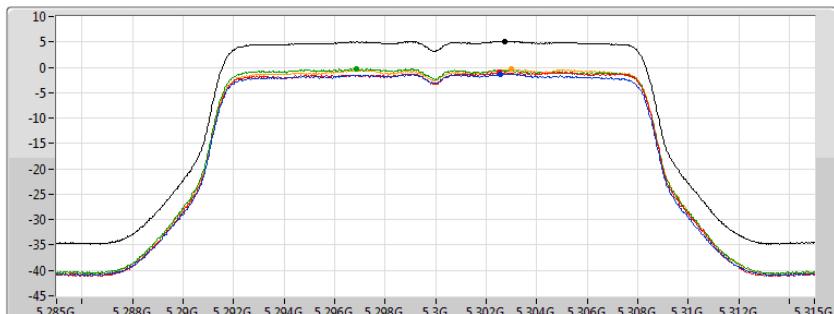
01/09/2020

Sum	<input checked="" type="checkbox"/>
Port 1	<input type="checkbox"/>
Port 2	<input type="checkbox"/>
Port 3	<input type="checkbox"/>
Port 4	<input type="checkbox"/>

Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.24	5.24	-1.21	-0.74	-0.19	-0.51

802.11a_Nss1,(6Mbps)_4TX
PSD
5300MHz

CF
5.3GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



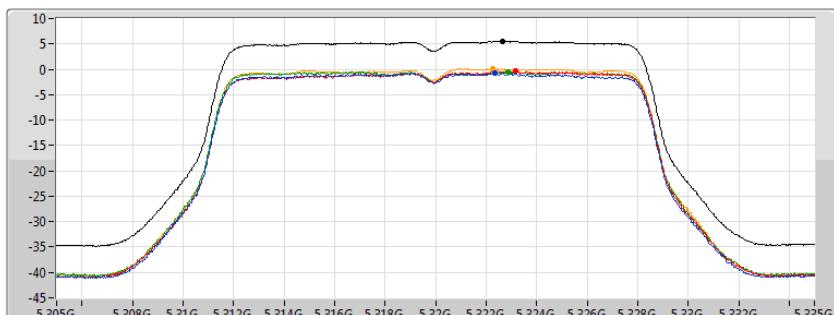
01/09/2020

Sum	<input checked="" type="checkbox"/>
Port 1	<input type="checkbox"/>
Port 2	<input type="checkbox"/>
Port 3	<input type="checkbox"/>
Port 4	<input type="checkbox"/>

Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.14	5.14	-1.33	-0.99	-0.33	-0.41

802.11a_Nss1,(6Mbps)_4TX
PSD
5320MHz

CF
5.32GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



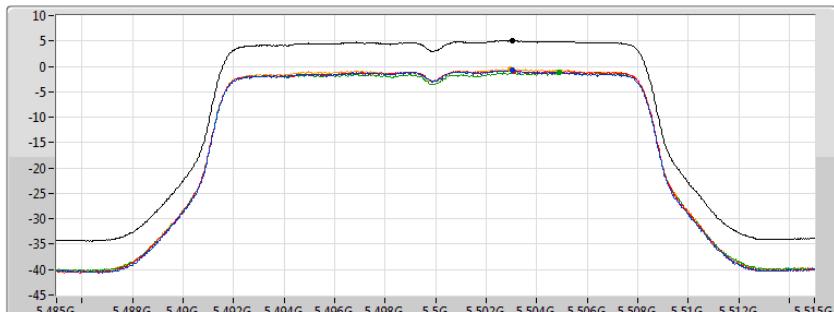
01/09/2020

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Port 1	<input type="checkbox"/>
Port 2	<input type="checkbox"/>
Port 3	<input type="checkbox"/>
Port 4	<input type="checkbox"/>

Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.54	5.54	-0.80	-0.36	-0.49	0.11

802.11a_Nss1,(6Mbps)_4TX
PSD
5500MHz

CF
5.5GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



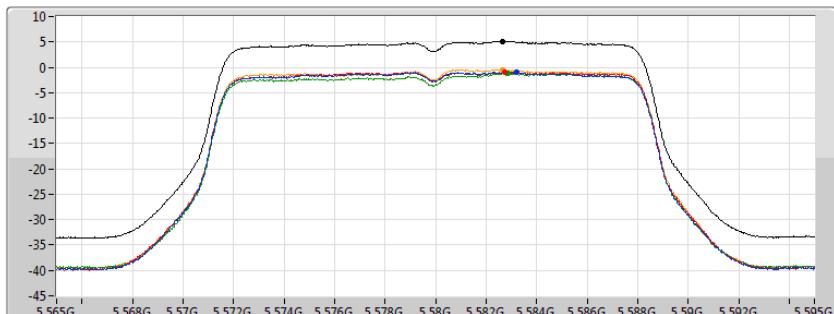
01/09/2020

Sum	✓
Port 1	✓
Port 2	✓
Port 3	✓
Port 4	✓

Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.13	5.13	-0.82	-0.85	-1.26	-0.46

802.11a_Nss1,(6Mbps)_4TX
PSD
5580MHz

CF
5.58GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



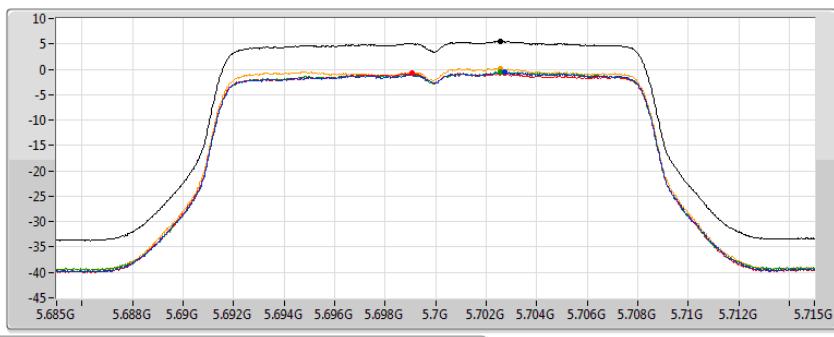
01/09/2020

Sum	✓
Port 1	✓
Port 2	✓
Port 3	✓
Port 4	✓

Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.13	5.13	-0.92	-0.92	-1.17	-0.43

802.11a_Nss1,(6Mbps)_4TX
PSD
5700MHz

CF
5.7GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



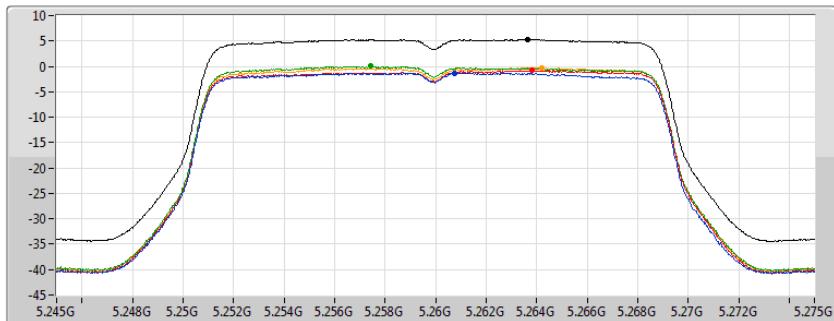
01/09/2020

Sum	✓
Port 1	✓
Port 2	✓
Port 3	✓
Port 4	✓

Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.48	5.48	-0.60	-0.80	-0.57	0.15

802.11ac VHT20_Nss1,(MCS0)_4TX
PSD
5260MHz

CF
5.26GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



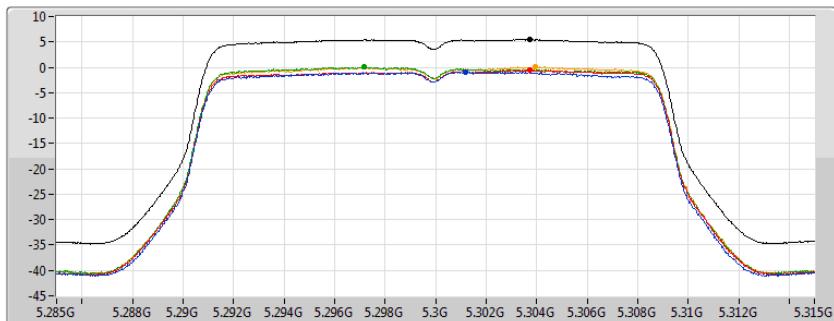
01/09/2020

Sum	<input checked="" type="checkbox"/>
Port 1	<input type="checkbox"/>
Port 2	<input type="checkbox"/>
Port 3	<input type="checkbox"/>
Port 4	<input type="checkbox"/>

Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.27	5.27	-1.30	-0.84	0.01	-0.21

802.11ac VHT20_Nss1,(MCS0)_4TX
PSD
5300MHz

CF
5.3GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



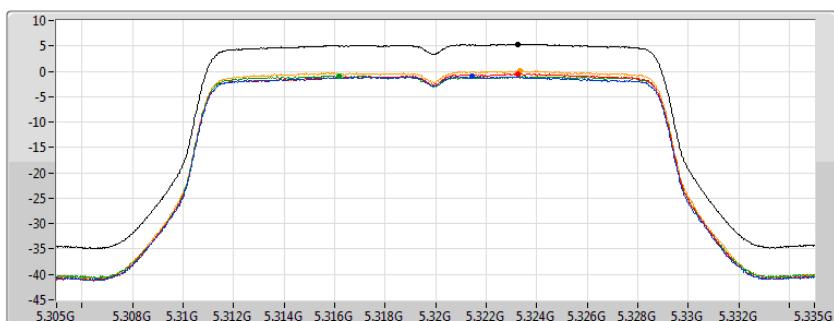
01/09/2020

Sum	<input checked="" type="checkbox"/>
Port 1	<input type="checkbox"/>
Port 2	<input type="checkbox"/>
Port 3	<input type="checkbox"/>
Port 4	<input type="checkbox"/>

Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.47	5.47	-0.89	-0.61	0.01	0.06

802.11ac VHT20_Nss1,(MCS0)_4TX
PSD
5320MHz

CF
5.32GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



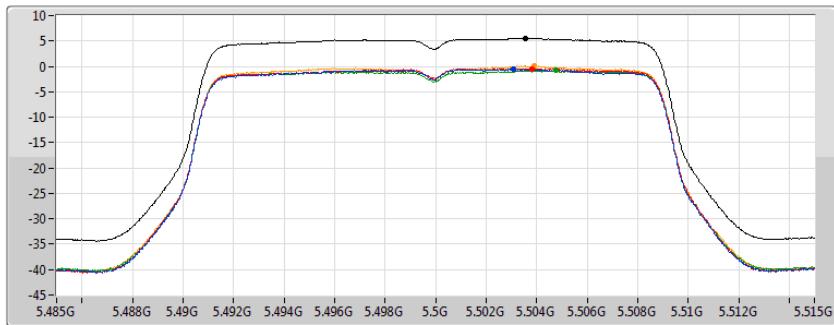
01/09/2020

Sum	<input checked="" type="checkbox"/>
Port 1	<input type="checkbox"/>
Port 2	<input type="checkbox"/>
Port 3	<input type="checkbox"/>
Port 4	<input type="checkbox"/>

Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.34	5.34	-1.03	-0.49	-0.87	0.11

802.11ac VHT20_Nss1,(MCS0)_4TX
PSD
5500MHz

CF
5.5GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS

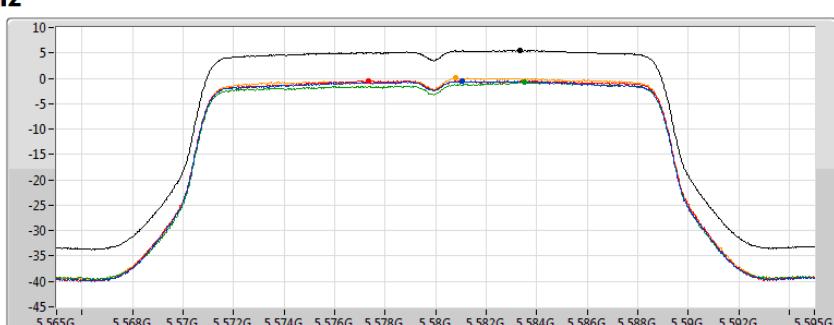


01/09/2020

Sum	<input checked="" type="checkbox"/>
Port 1	<input type="checkbox"/>
Port 2	<input type="checkbox"/>
Port 3	<input type="checkbox"/>
Port 4	<input type="checkbox"/>

802.11ac VHT20_Nss1,(MCS0)_4TX
PSD
5580MHz

CF
5.58GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS

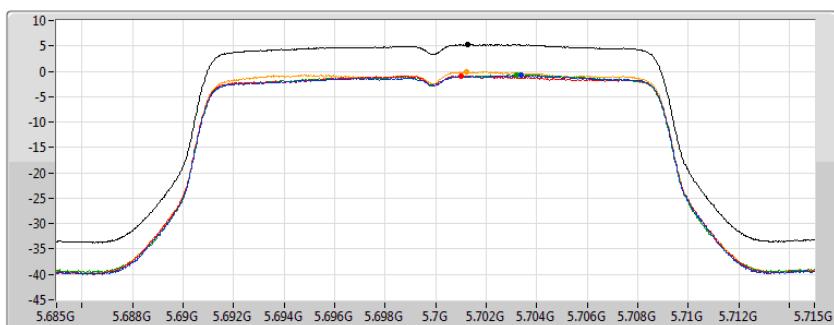


01/09/2020

Sum	<input checked="" type="checkbox"/>
Port 1	<input type="checkbox"/>
Port 2	<input type="checkbox"/>
Port 3	<input type="checkbox"/>
Port 4	<input type="checkbox"/>

802.11ac VHT20_Nss1,(MCS0)_4TX
PSD
5700MHz

CF
5.7GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



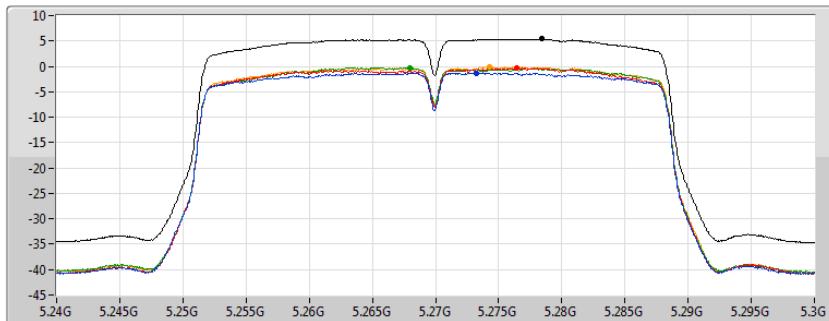
01/09/2020

Sum	<input checked="" type="checkbox"/>
Port 1	<input type="checkbox"/>
Port 2	<input type="checkbox"/>
Port 3	<input type="checkbox"/>
Port 4	<input type="checkbox"/>

802.11ac VHT40_Nss1,(MCS0)_4TX
PSD
5270MHz

01/09/2020

CF
5.27GHz
Span
60MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



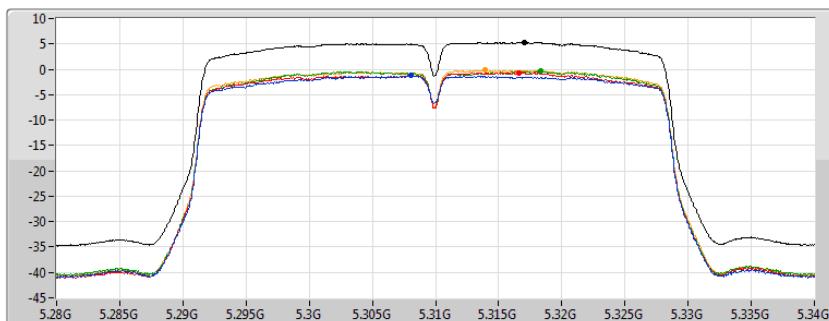
Sum	/\
Port 1	/\
Port 2	/\
Port 3	/\
Port 4	/\

Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.39	5.39	-1.28	-0.31	-0.21	-0.13

802.11ac VHT40_Nss1,(MCS0)_4TX
PSD
5310MHz

01/09/2020

CF
5.31GHz
Span
60MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



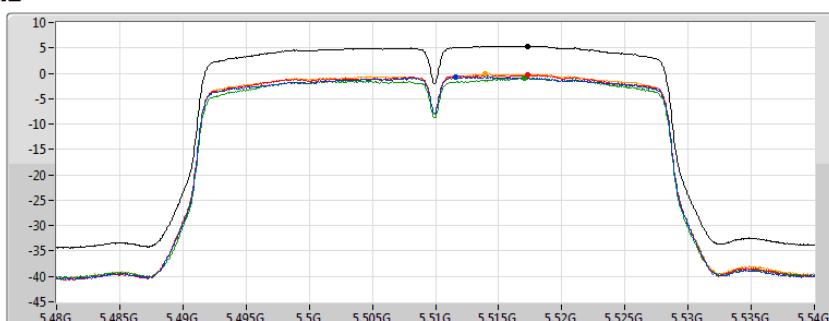
Sum	/\
Port 1	/\
Port 2	/\
Port 3	/\
Port 4	/\

Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.26	5.26	-1.27	-0.68	-0.41	-0.15

802.11ac VHT40_Nss1,(MCS0)_4TX
PSD
5510MHz

01/09/2020

CF
5.51GHz
Span
60MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



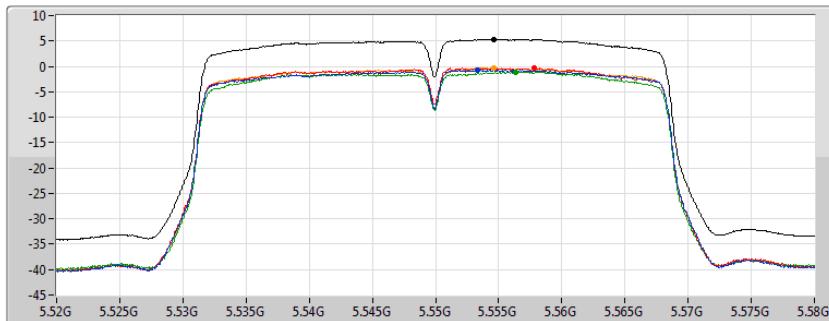
Sum	/\
Port 1	/\
Port 2	/\
Port 3	/\
Port 4	/\

Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.38	5.38	-0.76	-0.33	-0.95	-0.14

802.11ac VHT40_Nss1,(MCS0)_4TX
PSD
5550MHz

01/09/2020

CF
5.55GHz
Span
60MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



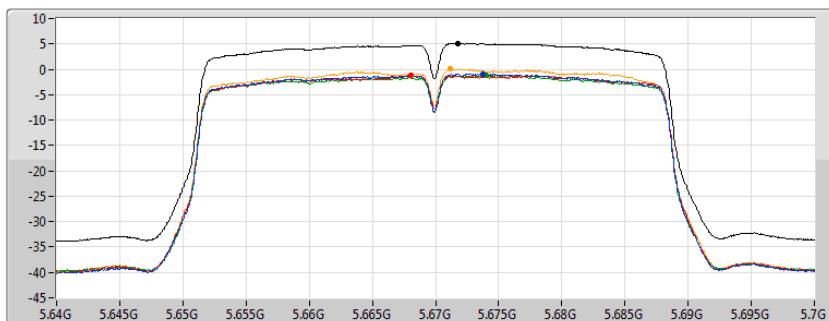
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Port 1	<input type="checkbox"/>
Port 2	<input checked="" type="checkbox"/>
Port 3	<input checked="" type="checkbox"/>
Port 4	<input checked="" type="checkbox"/>

Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.31	5.31	-0.70	-0.34	-1.08	-0.25

802.11ac VHT40_Nss1,(MCS0)_4TX
PSD
5670MHz

01/09/2020

CF
5.67GHz
Span
60MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



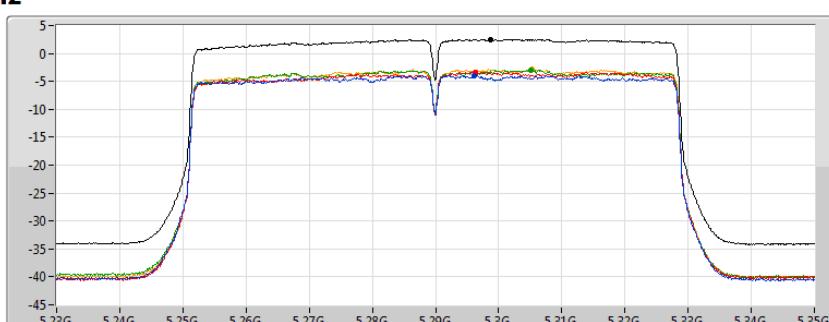
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Port 1	<input type="checkbox"/>
Port 2	<input checked="" type="checkbox"/>
Port 3	<input checked="" type="checkbox"/>
Port 4	<input checked="" type="checkbox"/>

Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.12	5.12	-0.89	-1.26	-1.20	0.05

802.11ac VHT80_Nss1,(MCS0)_4TX
PSD
5290MHz

01/09/2020

CF
5.29GHz
Span
120MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS

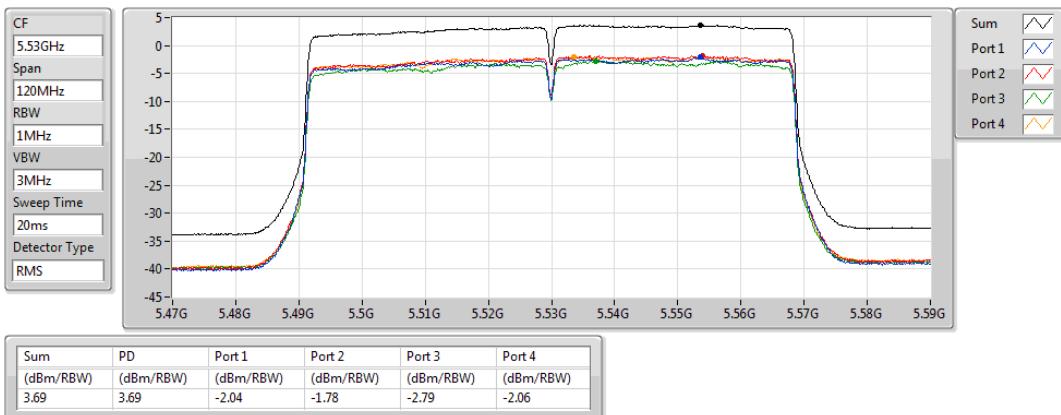


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Port 1	<input type="checkbox"/>
Port 2	<input checked="" type="checkbox"/>
Port 3	<input checked="" type="checkbox"/>
Port 4	<input checked="" type="checkbox"/>

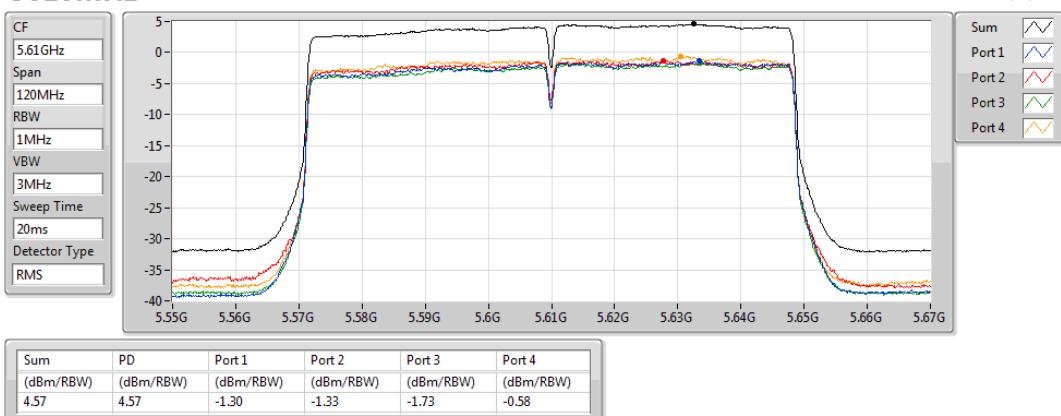
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.51	2.51	-3.94	-3.38	-2.99	-2.87

802.11ac VHT80_Nss1,(MCS0)_4TX
PSD
5530MHz

01/09/2020


802.11ac VHT80_Nss1,(MCS0)_4TX
PSD
5610MHz

01/09/2020

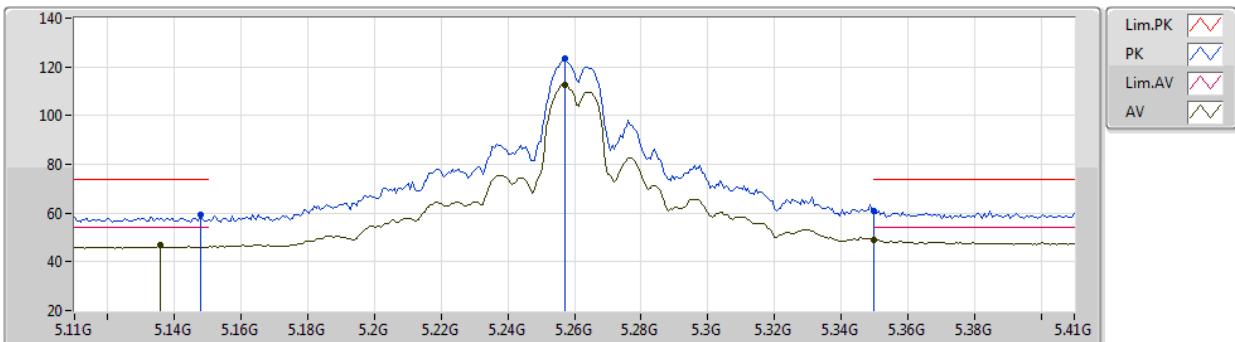


**Summary**

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
5.47-5.725GHz	-	-	-	-	-	-	-	-	-	-	-
802.11a_Nss1,(6Mbps)_4TX	Pass	AV	11.1658G	53.96	54.00	-0.04	3	Vertical	104	1.41	-

802.11a_Nss1,(6Mbps)_4TX

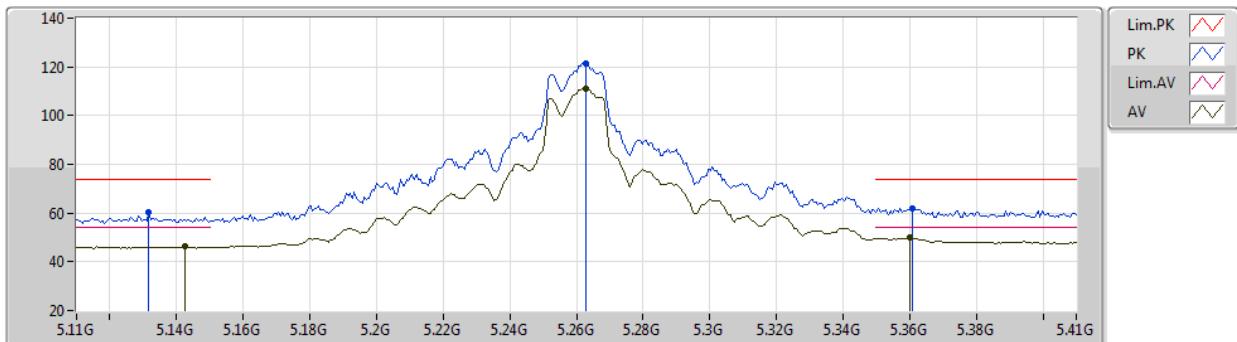
28/08/2020

5260MHz_TX

 EUT Y.4TX
 Setting 21.5
 03-A-L-3-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)	
PK	5.1478G	59.16	74.00	-14.84	53.84	3	Vertical	266	2.07	-	33.90	6.75	35.33	
AV	5.1358G	46.80	54.00	-7.20	41.50	3	Vertical	266	2.07	-	33.90	6.74	35.34	
PK	5.257G	123.28	Inf	-Inf	117.55	3	Vertical	266	2.07	-	34.03	6.91	35.21	
AV	5.257G	112.60	Inf	-Inf	106.87	3	Vertical	266	2.07	-	34.03	6.91	35.21	
PK	5.35G	61.00	74.00	-13.00	54.61	3	Vertical	266	2.07	-	34.40	7.10	35.11	
AV	5.35G	49.20	54.00	-4.80	42.81	3	Vertical	266	2.07	-	34.40	7.10	35.11	

802.11a_Nss1,(6Mbps)_4TX

28/08/2020

5260MHz_TX

 EUT Y_4TX
 Setting 21.5
 03-A-L-3-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)	
PK	5.1316G	60.21	74.00	-13.79	54.93	3	Horizontal	189	1.88	-	33.90	6.73	35.35	
AV	5.1424G	46.24	54.00	-7.76	40.94	3	Horizontal	189	1.88	-	33.90	6.74	35.34	
PK	5.263G	121.31	Inf	-Inf	115.54	3	Horizontal	189	1.88	-	34.05	6.93	35.21	
AV	5.263G	110.98	Inf	-Inf	105.21	3	Horizontal	189	1.88	-	34.05	6.93	35.21	
PK	5.3608G	61.91	74.00	-12.09	55.51	3	Horizontal	189	1.88	-	34.38	7.12	35.10	
AV	5.3602G	49.98	54.00	-4.02	43.58	3	Horizontal	189	1.88	-	34.38	7.12	35.10	

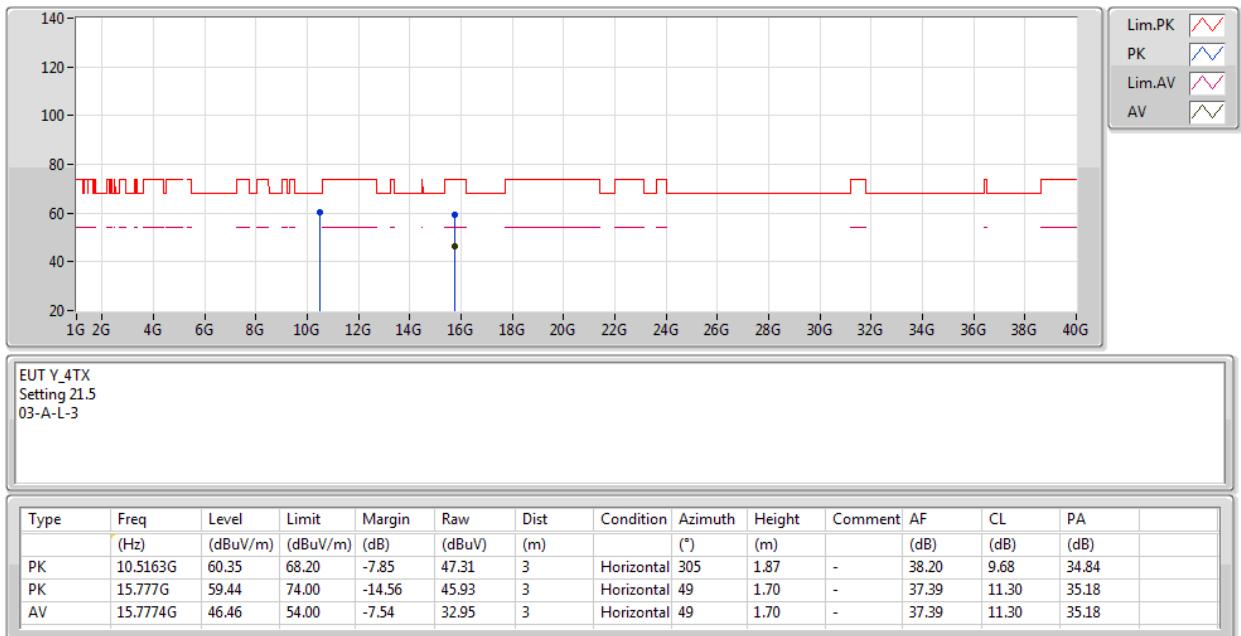
802.11a_Nss1,(6Mbps)_4TX

28/08/2020

5260MHz_TX


802.11a_Nss1,(6Mbps)_4TX

28/08/2020

5260MHz_TX


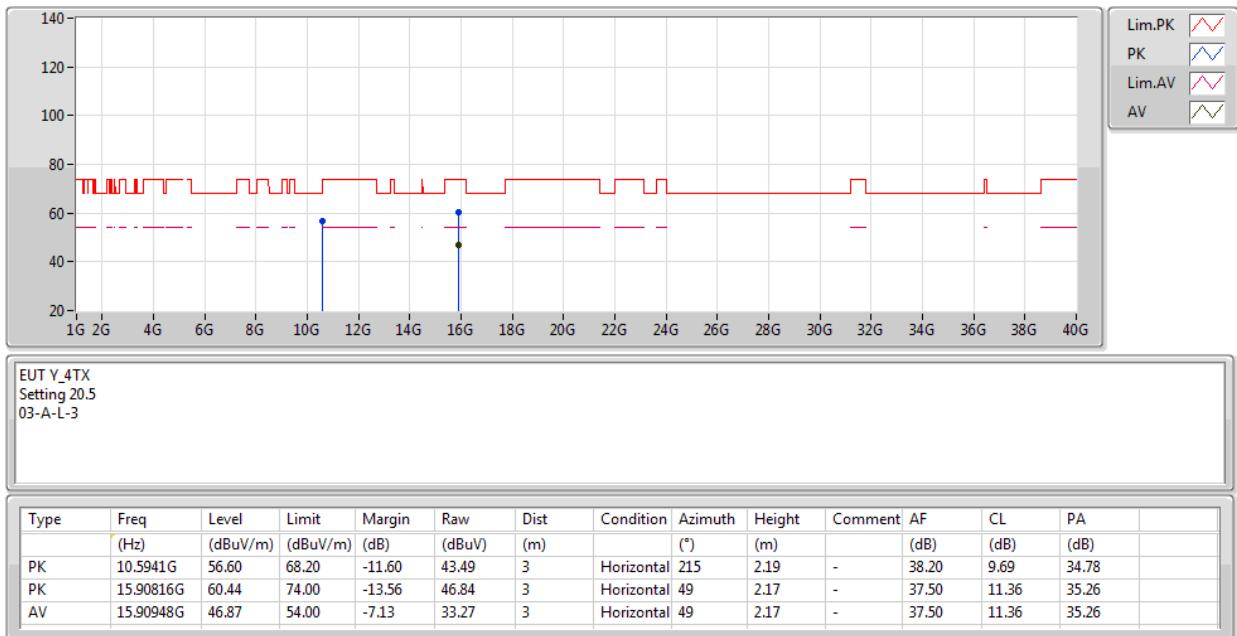
802.11a_Nss1,(6Mbps)_4TX

28/08/2020

5300MHz_TX

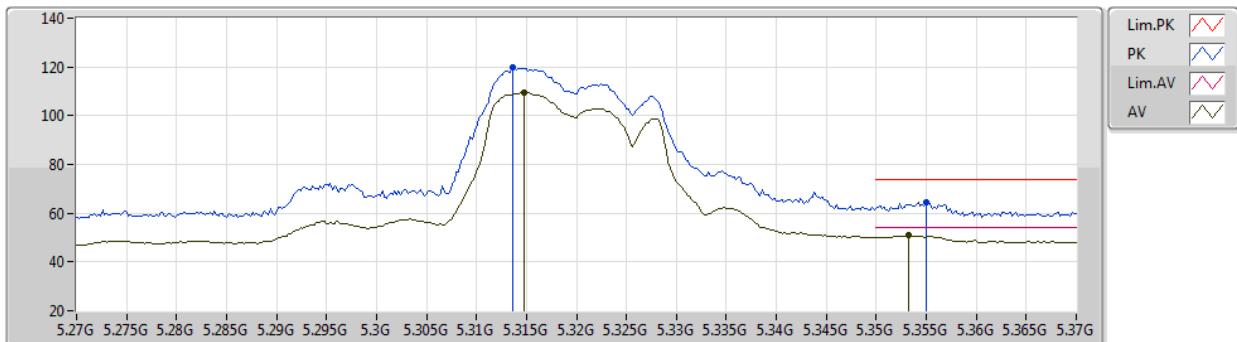

802.11a_Nss1,(6Mbps)_4TX

28/08/2020

5300MHz_TX


802.11a_Nss1,(6Mbps)_4TX

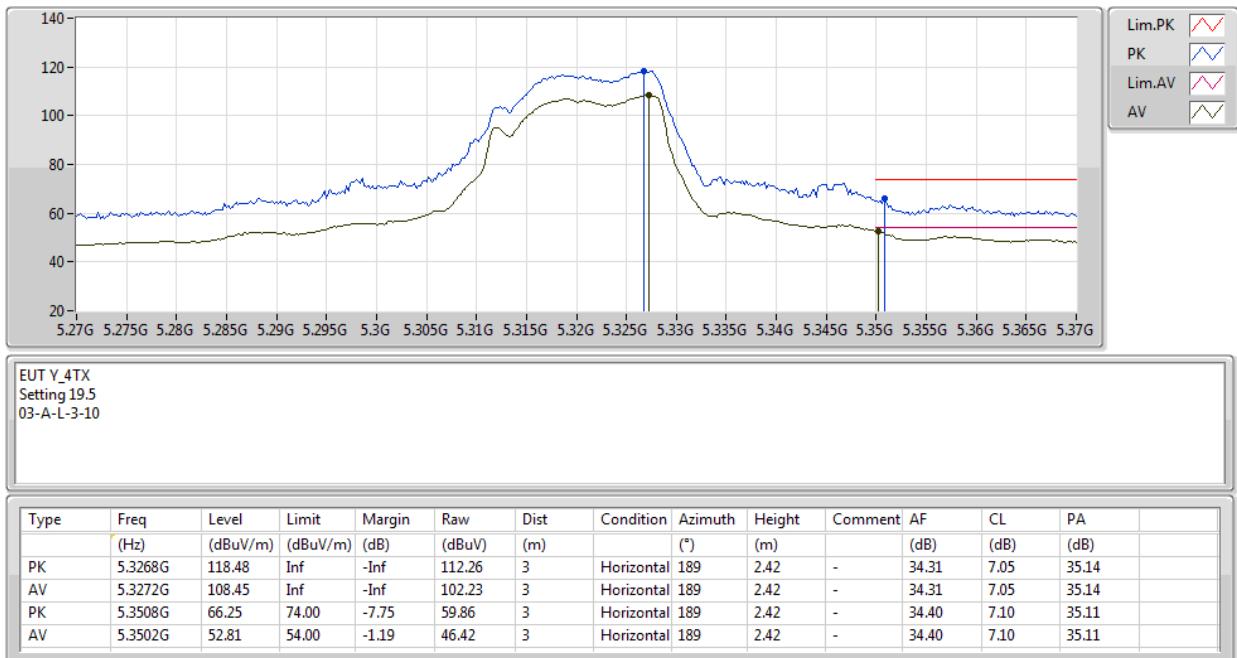
28/08/2020

5320MHz_TX

 EUT Y_4TX
 Setting 19.5
 03-A-L-3-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)	
PK	5.3136G	119.79	Inf	-Inf	113.66	3	Vertical	270	2.11	-	34.25	7.03	35.15	
AV	5.3148G	109.58	Inf	-Inf	103.44	3	Vertical	270	2.11	-	34.26	7.03	35.15	
PK	5.355G	64.38	74.00	-9.62	57.99	3	Vertical	270	2.11	-	34.39	7.11	35.11	
AV	5.3532G	50.86	54.00	-3.14	44.47	3	Vertical	270	2.11	-	34.39	7.11	35.11	

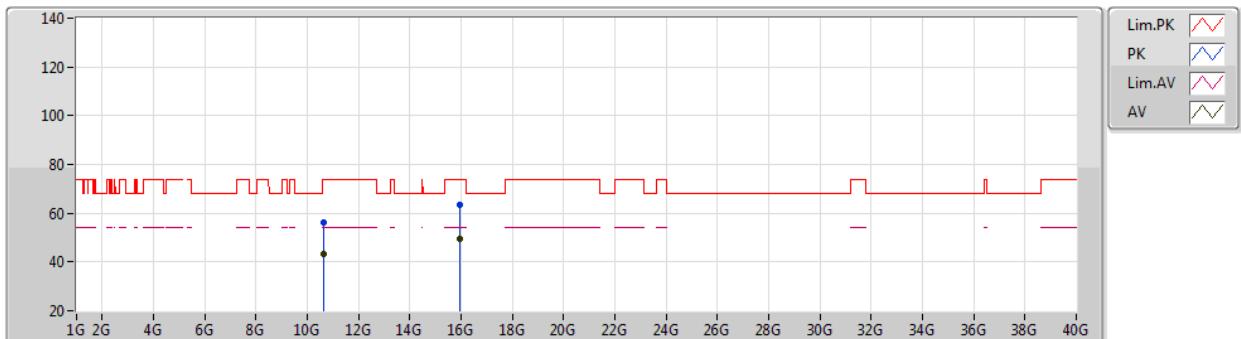
802.11a_Nss1,(6Mbps)_4TX

28/08/2020

5320MHz_TX


802.11a_Nss1,(6Mbps)_4TX

28/08/2020

5320MHz_TX

 EUT Y_4TX
 Setting 19.5
 03-A-L-3

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (*)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)	
PK	10.6451G	56.46	74.00	-17.54	43.25	3	Vertical	82	1.47	-	38.25	9.70	34.74	
AV	10.64666G	43.35	54.00	-10.65	30.14	3	Vertical	82	1.47	-	38.25	9.70	34.74	
PK	15.9642G	63.35	74.00	-10.65	49.77	3	Vertical	132	1.30	-	37.50	11.38	35.30	
AV	15.96396G	49.62	54.00	-4.38	36.04	3	Vertical	132	1.30	-	37.50	11.38	35.30	

802.11a_Nss1,(6Mbps)_4TX

28/08/2020

5320MHz_TX

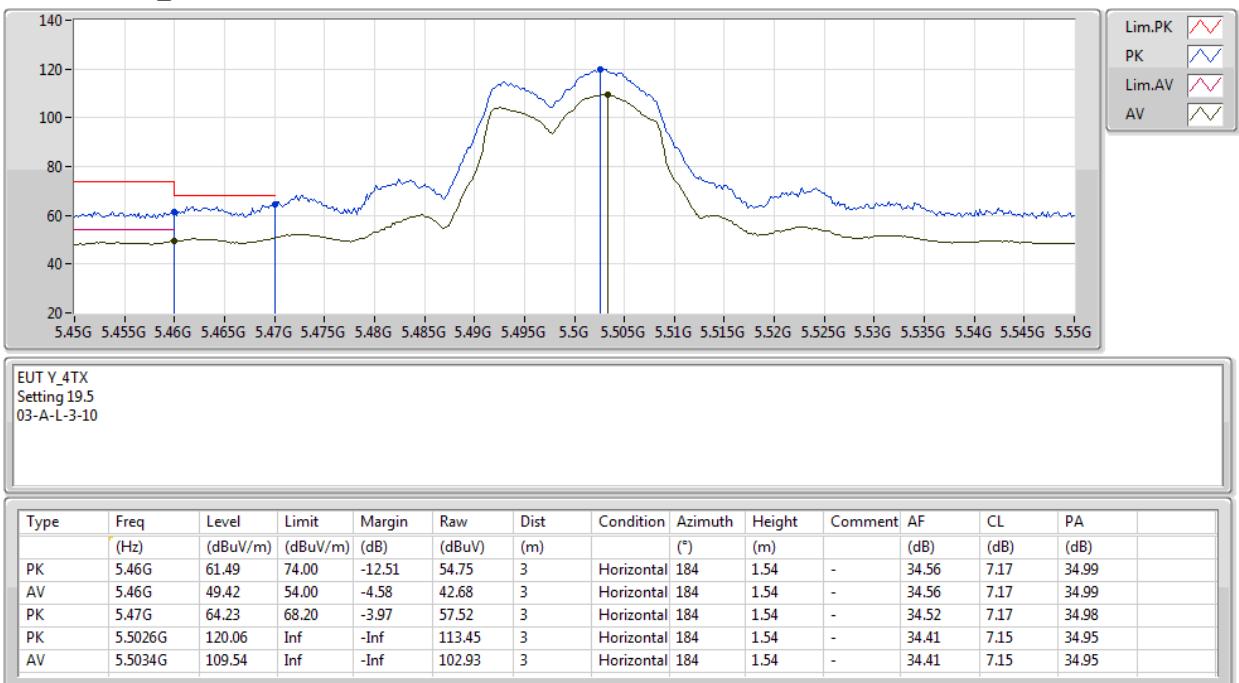

802.11a_Nss1,(6Mbps)_4TX

28/08/2020

5500MHz_TX

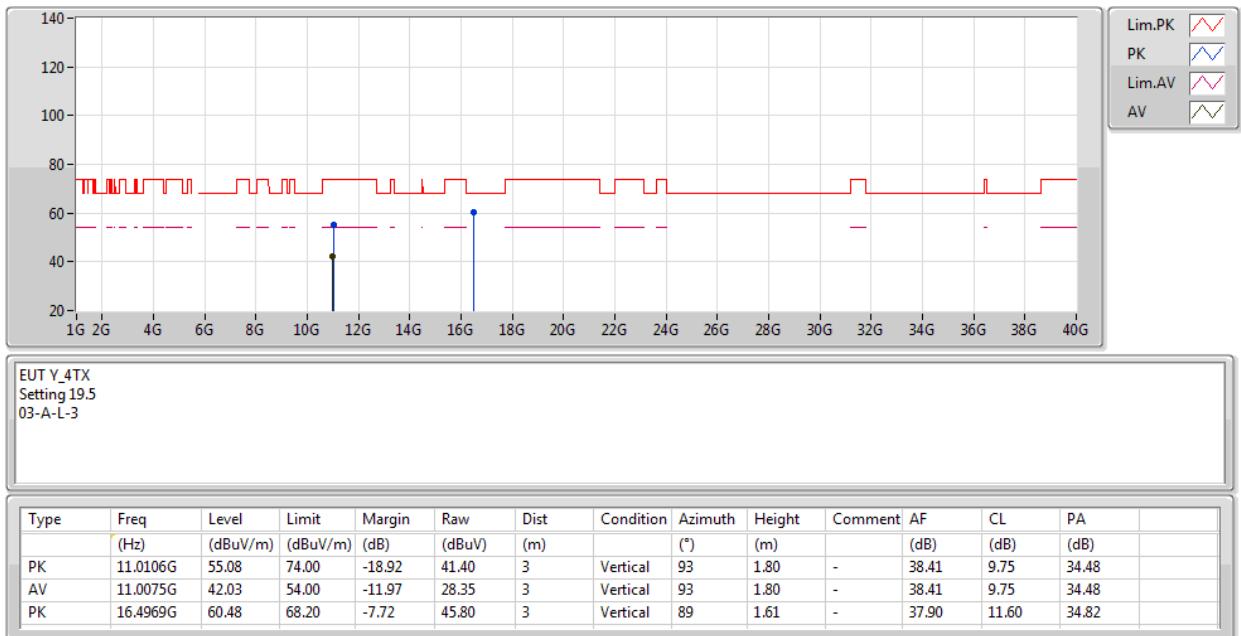

802.11a_Nss1,(6Mbps)_4TX

28/08/2020

5500MHz_TX


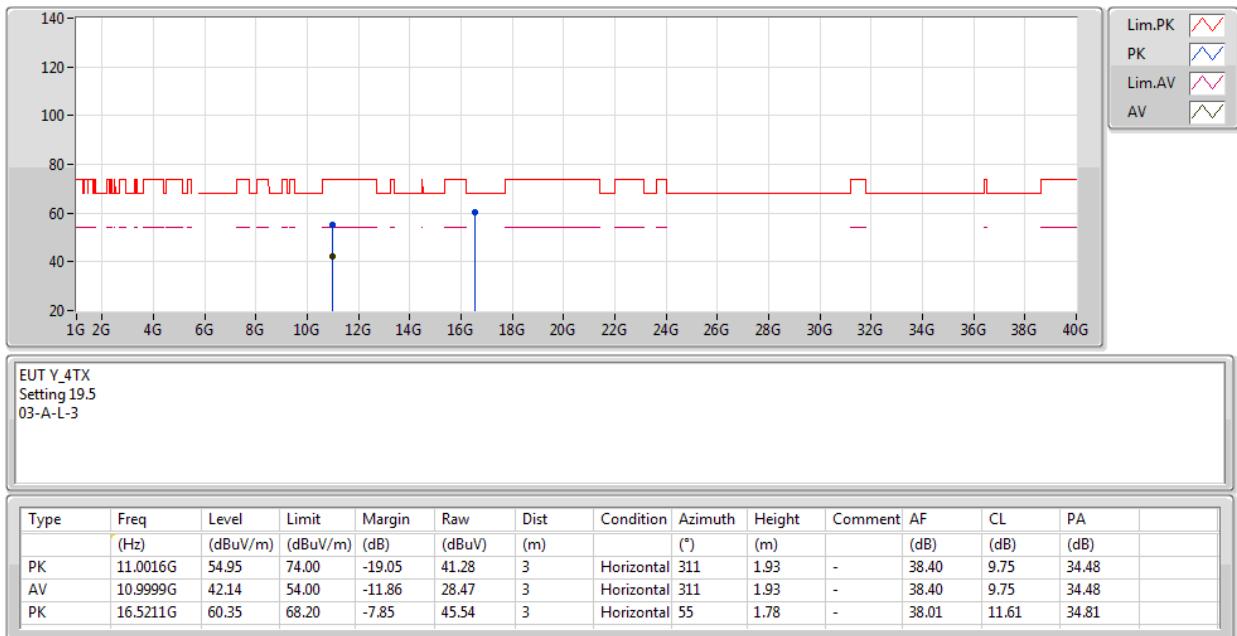
802.11a_Nss1,(6Mbps)_4TX

28/08/2020

5500MHz_TX


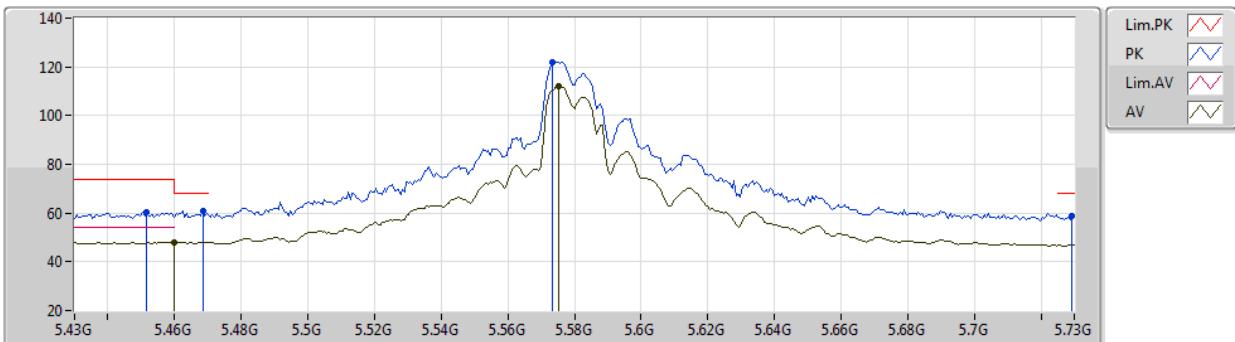
802.11a_Nss1,(6Mbps)_4TX

28/08/2020

5500MHz_TX


802.11a_Nss1,(6Mbps)_4TX

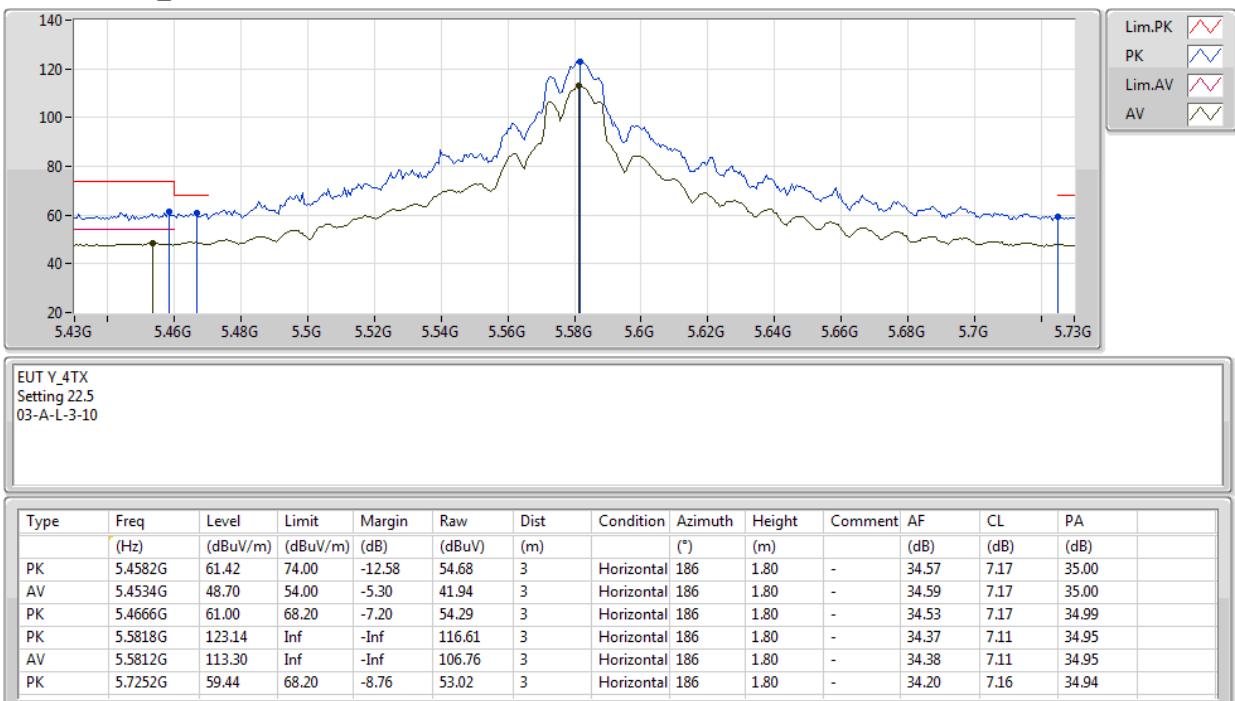
28/08/2020

5580MHz_TX

 EUT Y.4TX
 Setting 22.5
 03-A-L-3-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)	
PK	5.4516G	60.44	74.00	-13.56	53.68	3	Vertical	269	1.80	-	34.59	7.17	35.00	
AV	5.46G	48.08	54.00	-5.92	41.34	3	Vertical	269	1.80	-	34.56	7.17	34.99	
PK	5.4684G	60.64	68.20	-7.56	53.92	3	Vertical	269	1.80	-	34.53	7.17	34.98	
PK	5.5734G	121.95	Inf	-Inf	115.38	3	Vertical	269	1.80	-	34.41	7.11	34.95	
AV	5.5752G	112.11	Inf	-Inf	105.55	3	Vertical	269	1.80	-	34.40	7.11	34.95	
PK	5.7294G	59.02	68.20	-9.18	52.60	3	Vertical	269	1.80	-	34.20	7.16	34.94	

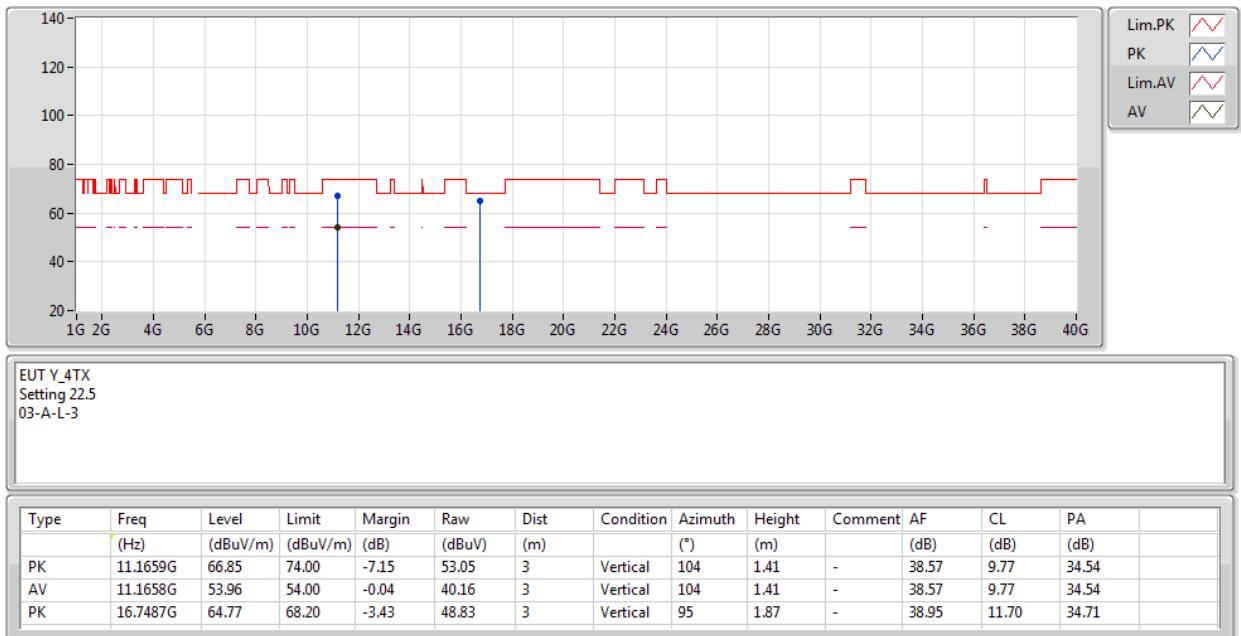
802.11a_Nss1,(6Mbps)_4TX

28/08/2020

5580MHz_TX


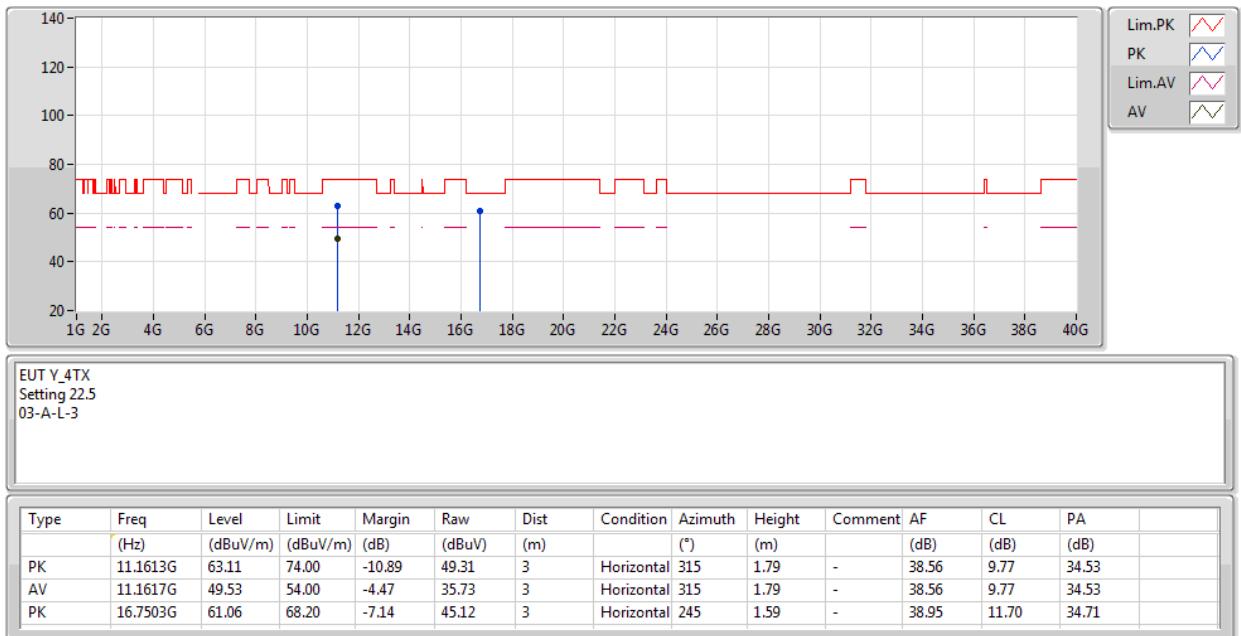
802.11a_Nss1,(6Mbps)_4TX

28/08/2020

5580MHz_TX


802.11a_Nss1,(6Mbps)_4TX

28/08/2020

5580MHz_TX


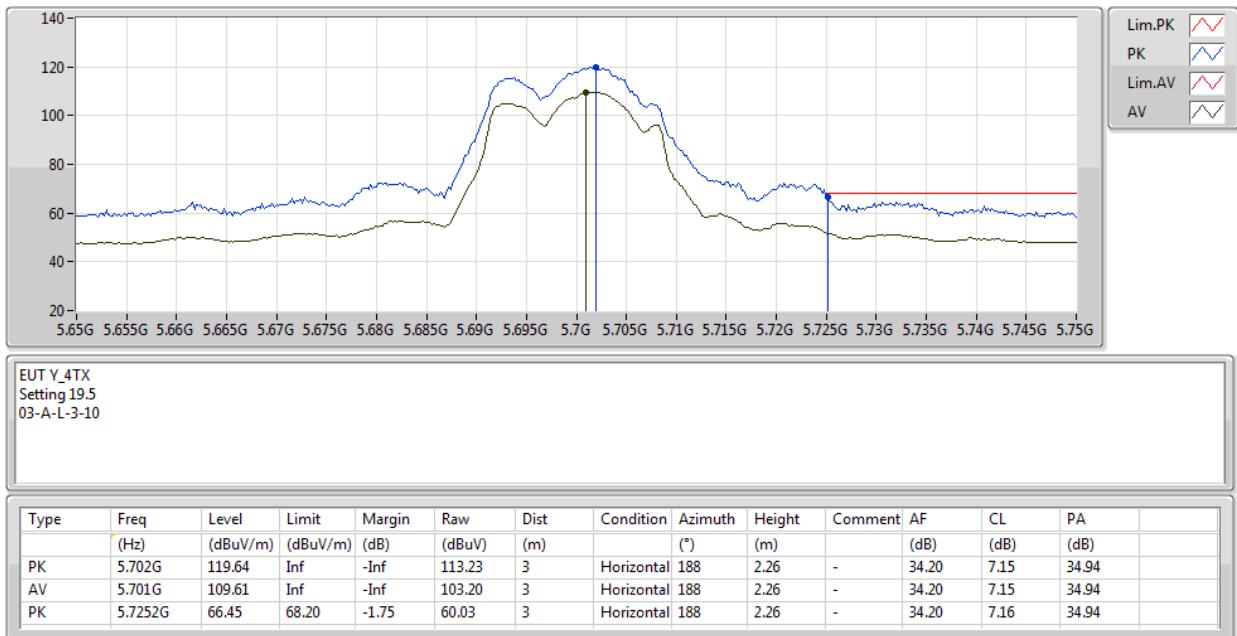
802.11a_Nss1,(6Mbps)_4TX

28/08/2020

5700MHz_TX

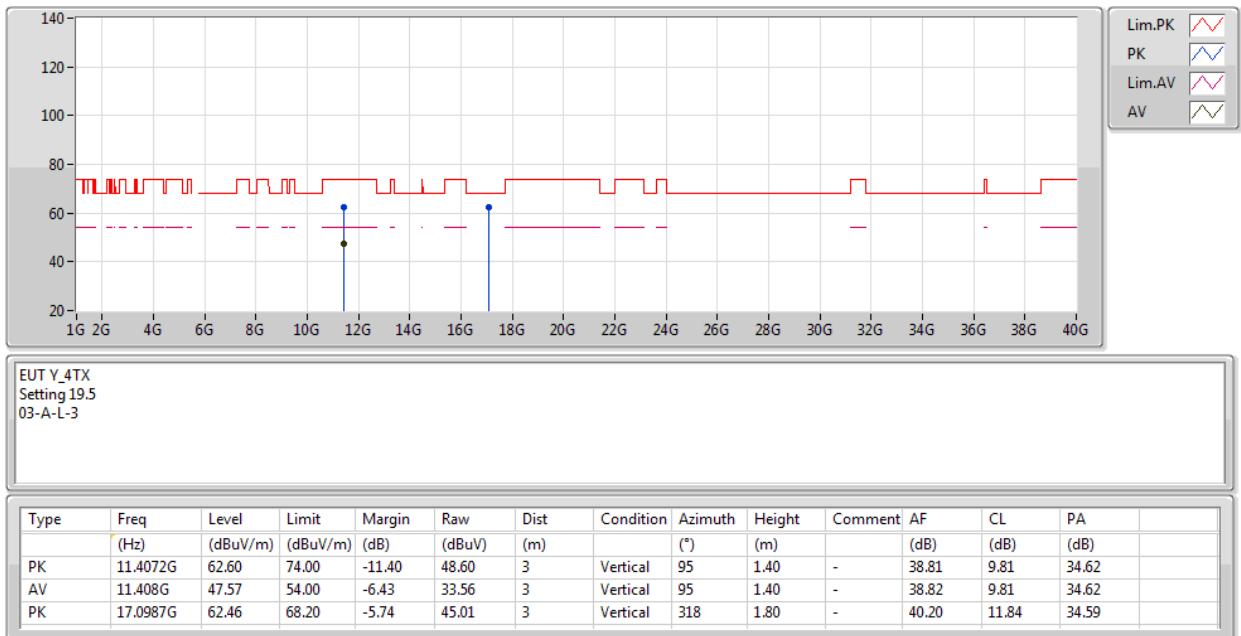

802.11a_Nss1,(6Mbps)_4TX

28/08/2020

5700MHz_TX


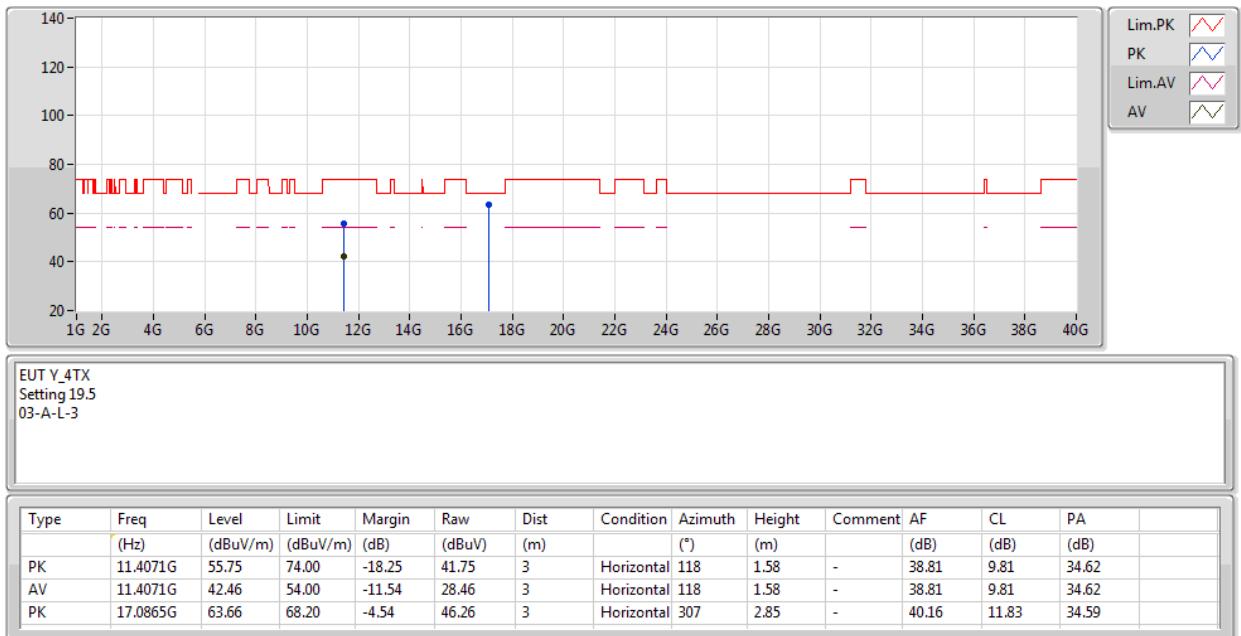
802.11a_Nss1,(6Mbps)_4TX

28/08/2020

5700MHz_TX


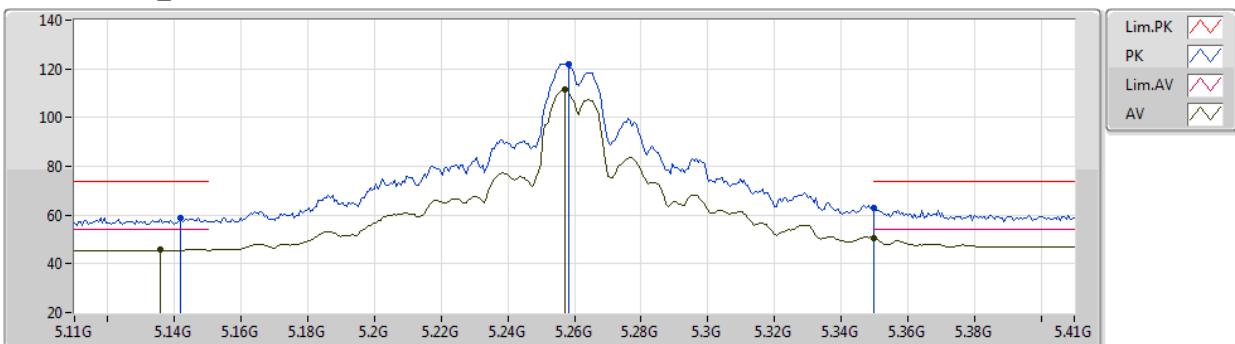
802.11a_Nss1,(6Mbps)_4TX

28/08/2020

5700MHz_TX


802.11ac VHT20_Nss1,(MCS0)_4TX

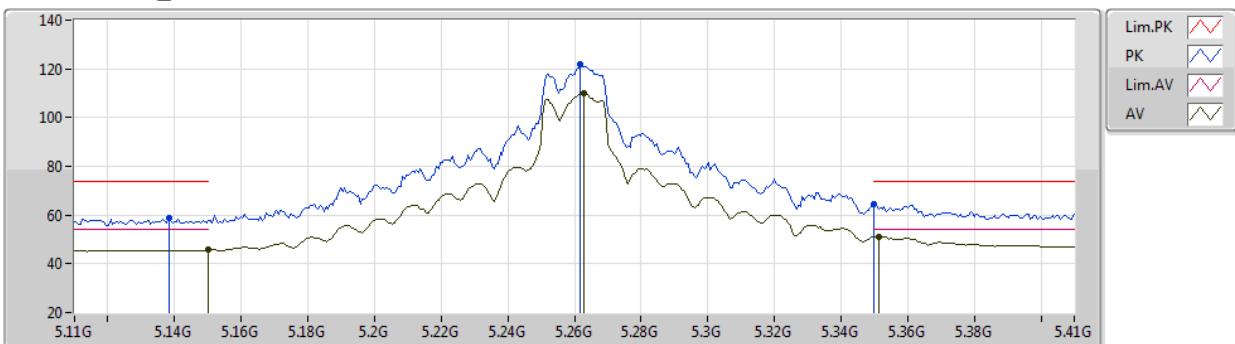
28/08/2020

5260MHz_TX

 EUT Y_4TX
 Setting 22
 03-A-L-3-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)	
PK	5.1418G	58.98	74.00	-15.02	53.68	3	Vertical	266	1.95	-	33.90	6.74	35.34	
AV	5.1358G	46.03	54.00	-7.97	40.73	3	Vertical	266	1.95	-	33.90	6.74	35.34	
PK	5.2582G	122.06	Inf	-Inf	116.32	3	Vertical	266	1.95	-	34.03	6.92	35.21	
AV	5.257G	111.51	Inf	-Inf	105.78	3	Vertical	266	1.95	-	34.03	6.91	35.21	
PK	5.35G	62.88	74.00	-11.12	56.49	3	Vertical	266	1.95	-	34.40	7.10	35.11	
AV	5.35G	50.43	54.00	-3.57	44.04	3	Vertical	266	1.95	-	34.40	7.10	35.11	

802.11ac VHT20_Nss1,(MCS0)_4TX

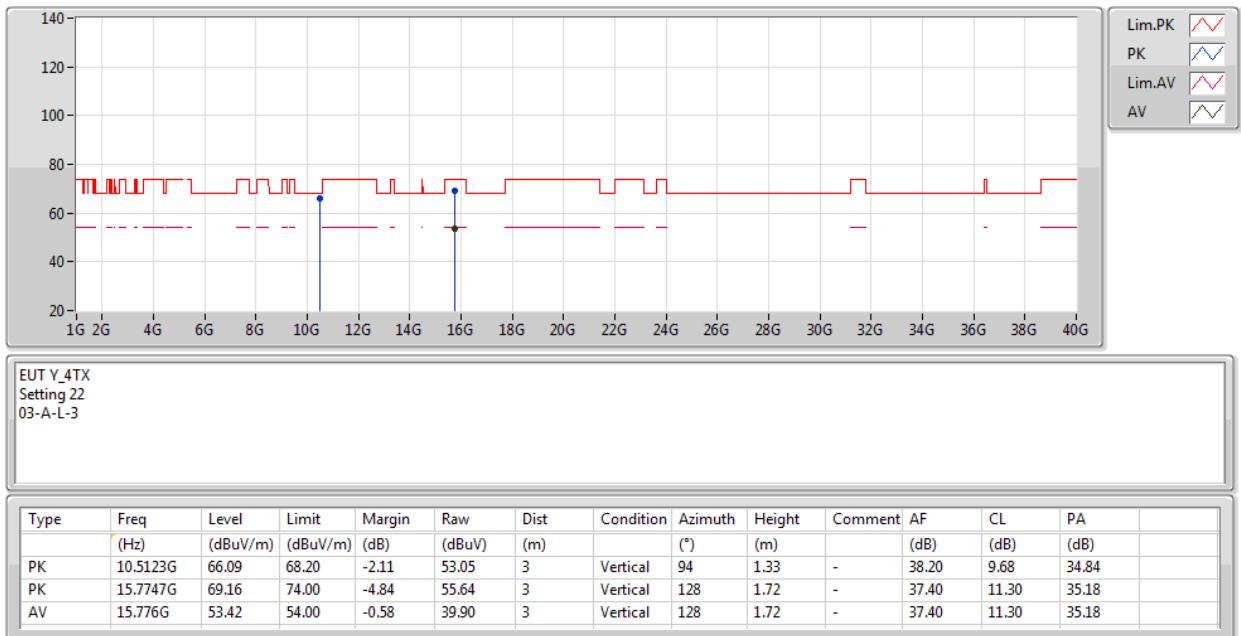
28/08/2020

5260MHz_TX

 EUT Y_4TX
 Setting 22
 03-A-L-3-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)	
PK	5.1382G	58.59	74.00	-15.41	53.29	3	Horizontal	188	1.86	-	33.90	6.74	35.34	
AV	5.15G	45.68	54.00	-8.32	40.36	3	Horizontal	188	1.86	-	33.90	6.75	35.33	
PK	5.2618G	121.76	Inf	-Inf	116.00	3	Horizontal	188	1.86	-	34.05	6.92	35.21	
AV	5.263G	110.01	Inf	-Inf	104.24	3	Horizontal	188	1.86	-	34.05	6.93	35.21	
PK	5.35G	64.29	74.00	-9.71	57.90	3	Horizontal	188	1.86	-	34.40	7.10	35.11	
AV	5.3512G	51.12	54.00	-2.88	44.73	3	Horizontal	188	1.86	-	34.40	7.10	35.11	

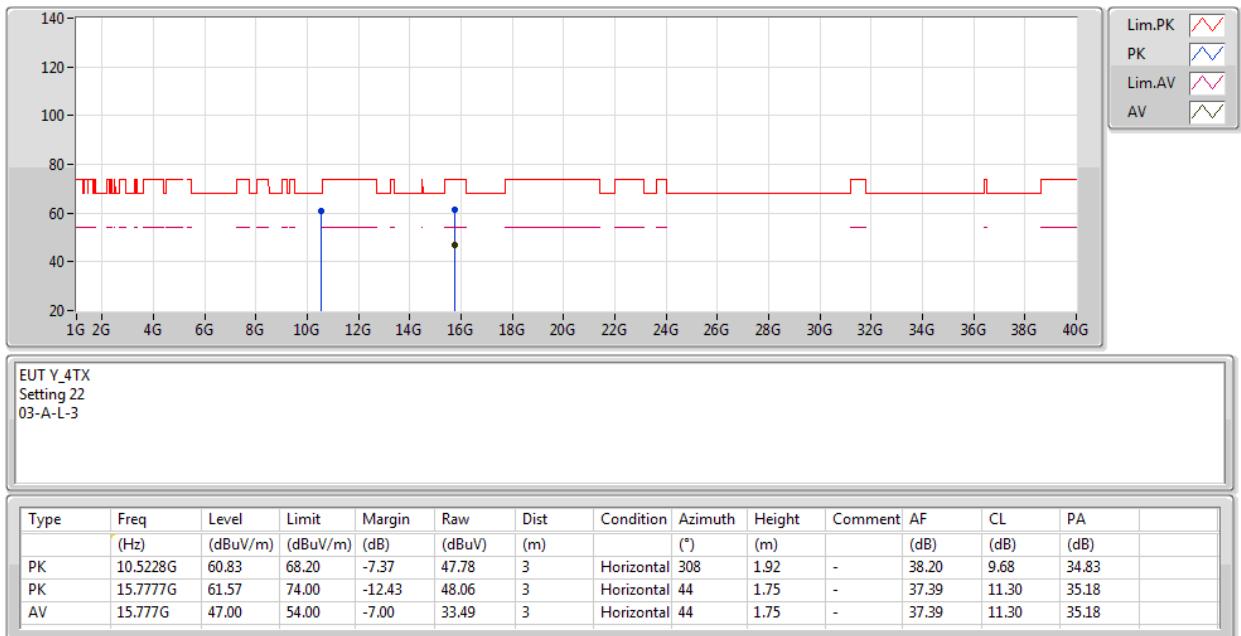
802.11ac VHT20_Nss1,(MCS0)_4TX

28/08/2020

5260MHz_TX


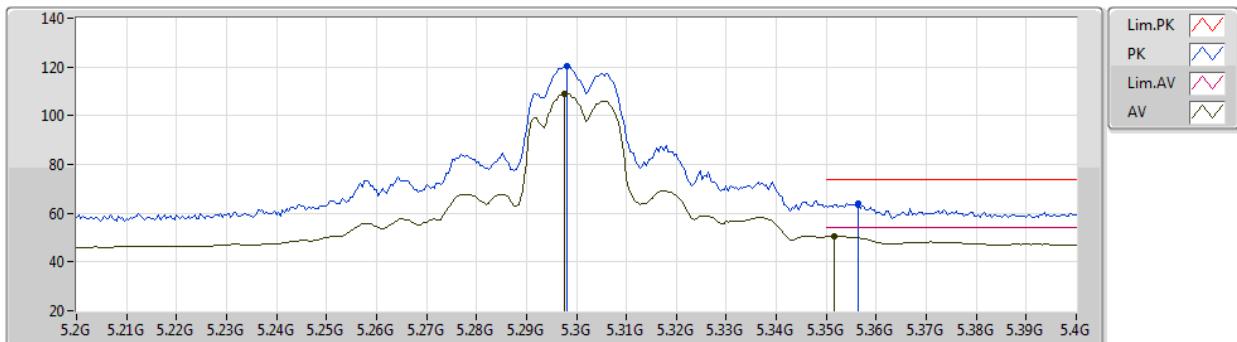
802.11ac VHT20_Nss1,(MCS0)_4TX

28/08/2020

5260MHz_TX


802.11ac VHT20_Nss1,(MCS0)_4TX

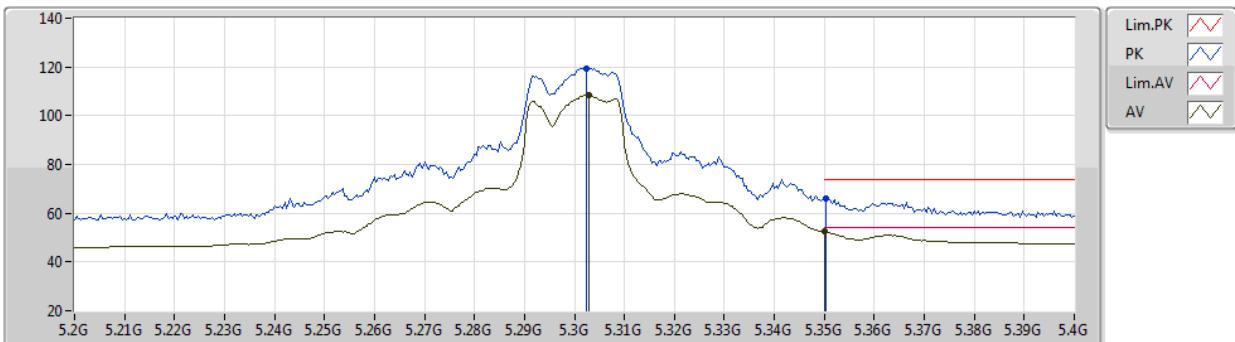
28/08/2020

5300MHz_TX

 EUT Y_4TX
 Setting 21
 03-A-L-3-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)	
PK	5.298G	120.22	Inf	-Inf	114.20	3	Vertical	264	1.80	-	34.19	7.00	35.17	
AV	5.2976G	108.98	Inf	-Inf	102.96	3	Vertical	264	1.80	-	34.19	7.00	35.17	
PK	5.3564G	63.92	74.00	-10.08	57.53	3	Vertical	264	1.80	-	34.39	7.11	35.11	
AV	5.3516G	50.46	54.00	-3.54	44.07	3	Vertical	264	1.80	-	34.40	7.10	35.11	

802.11ac VHT20_Nss1,(MCS0)_4TX

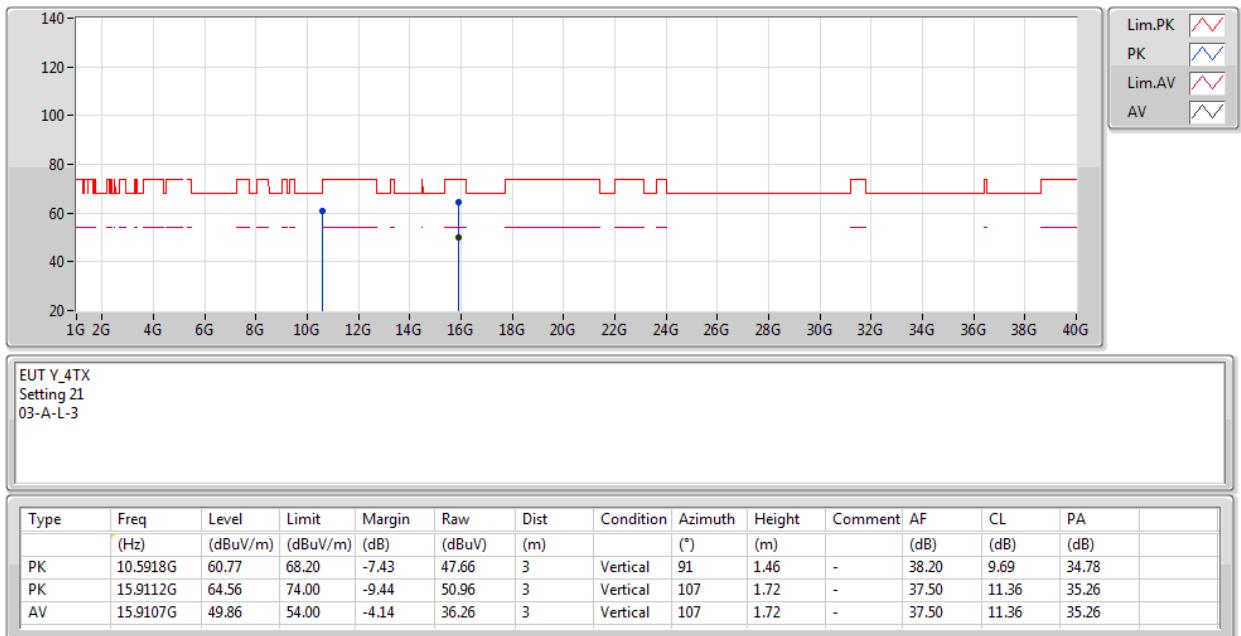
28/08/2020

5300MHz_TX

 EUT Y_4TX
 Setting 21
 03-A-L-3-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)	
PK	5.3024G	119.52	Inf	-Inf	113.47	3	Horizontal	184	1.94	-	34.21	7.00	35.16	
AV	5.3028G	108.48	Inf	-Inf	102.42	3	Horizontal	184	1.94	-	34.21	7.01	35.16	
PK	5.3504G	66.22	74.00	-7.78	59.83	3	Horizontal	184	1.94	-	34.40	7.10	35.11	
AV	5.35G	52.37	54.00	-1.63	45.98	3	Horizontal	184	1.94	-	34.40	7.10	35.11	

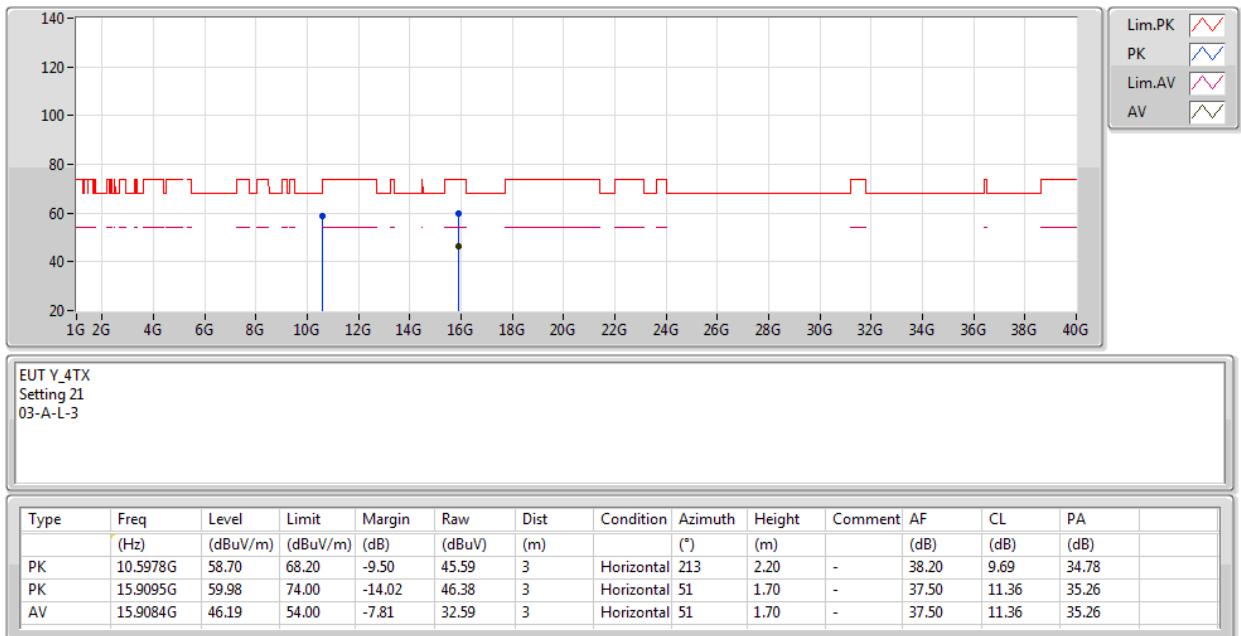
802.11ac VHT20_Nss1,(MCS0)_4TX

28/08/2020

5300MHz_TX


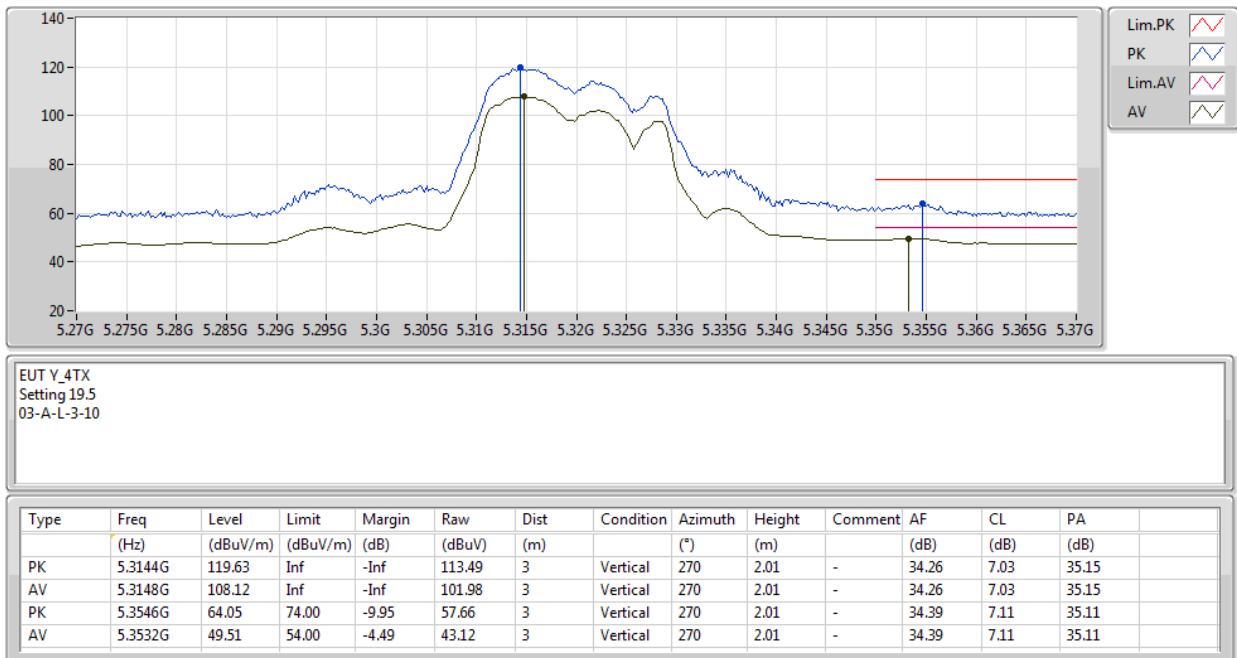
802.11ac VHT20_Nss1,(MCS0)_4TX

28/08/2020

5300MHz_TX


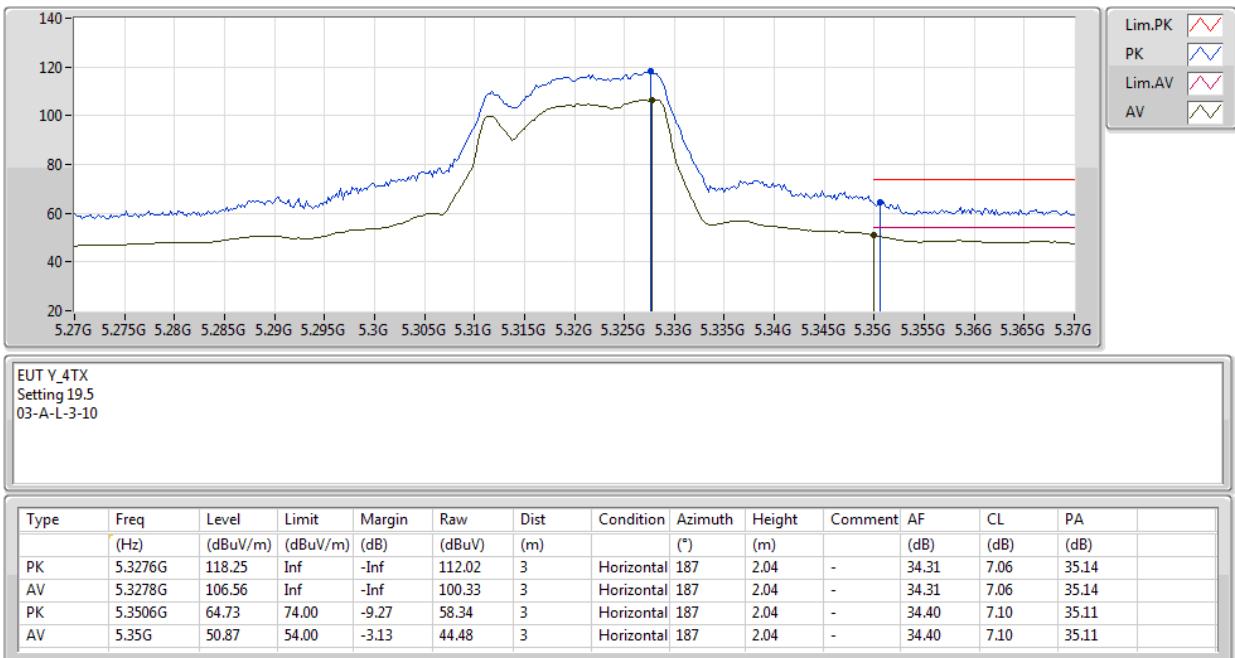
802.11ac VHT20_Nss1,(MCS0)_4TX

28/08/2020

5320MHz_TX


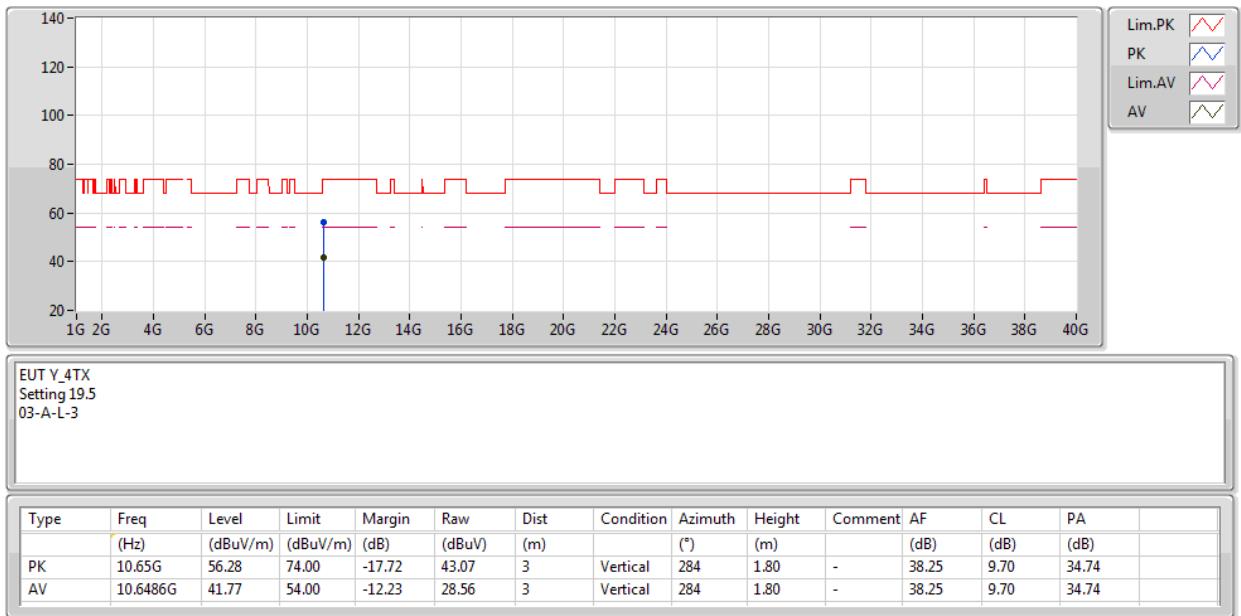
802.11ac VHT20_Nss1,(MCS0)_4TX

28/08/2020

5320MHz_TX


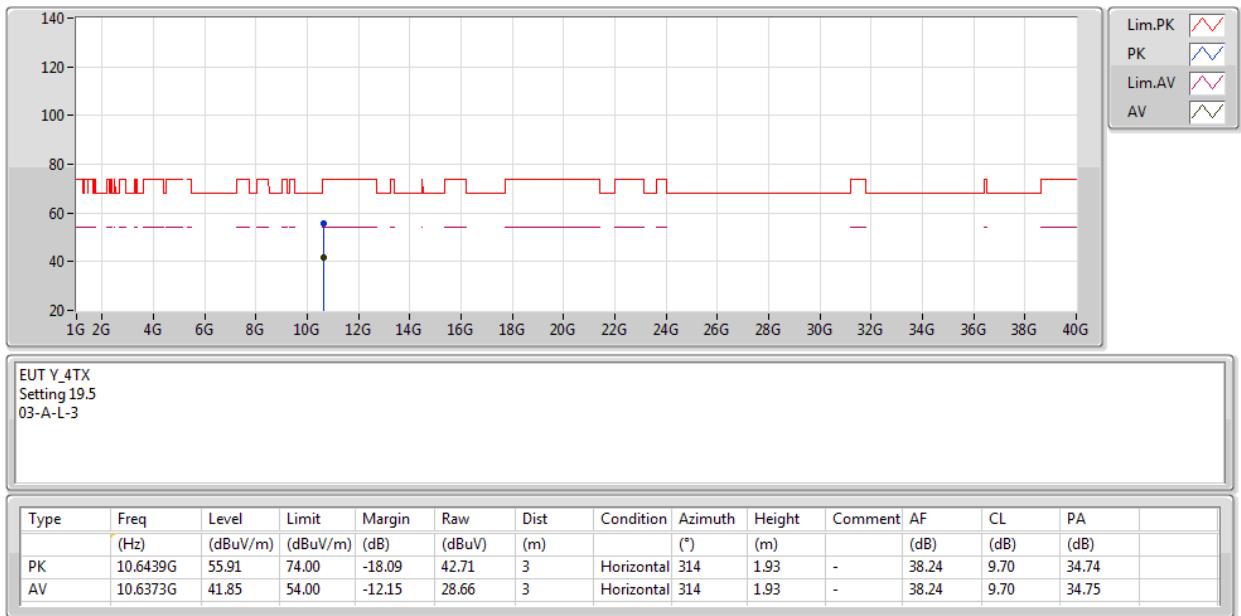
802.11ac VHT20_Nss1,(MCS0)_4TX

28/08/2020

5320MHz_TX


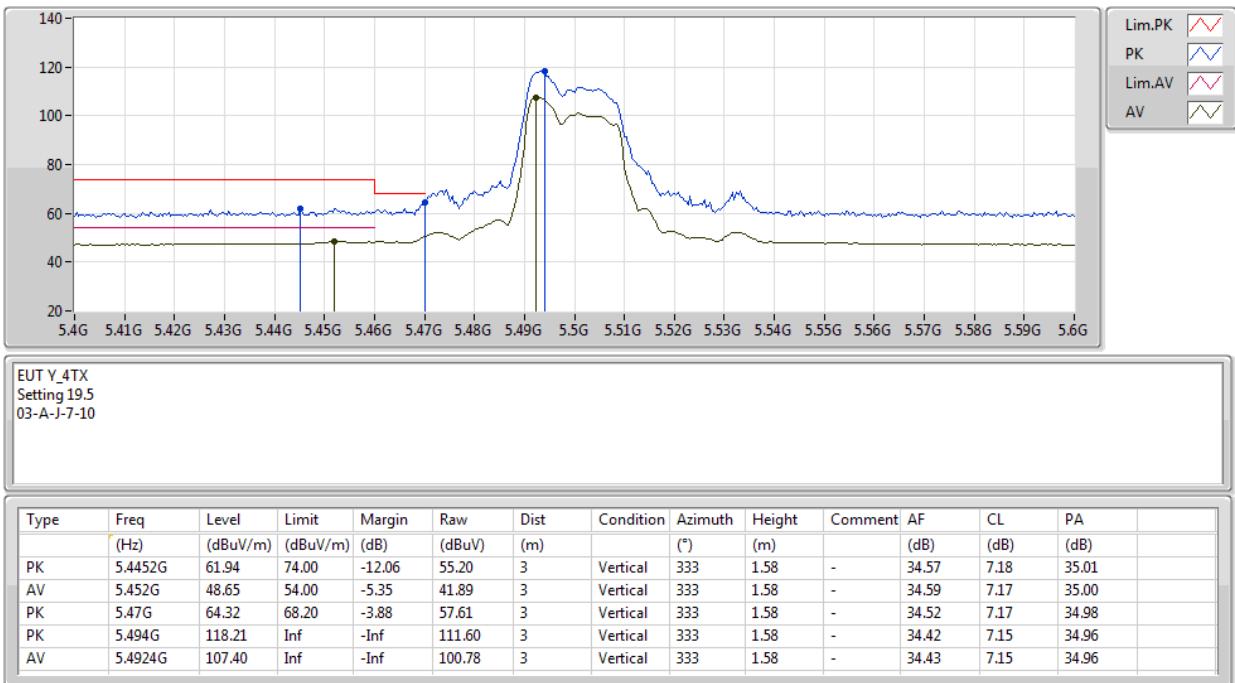
802.11ac VHT20_Nss1,(MCS0)_4TX

28/08/2020

5320MHz_TX


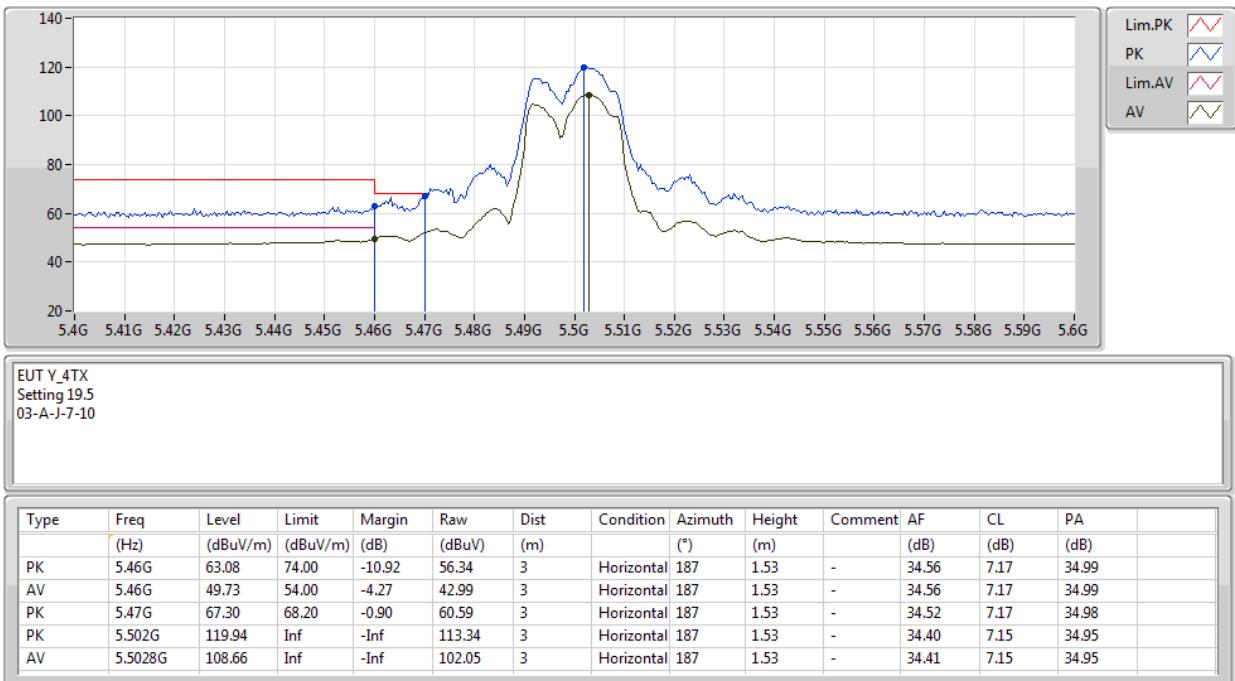
802.11ac VHT20_Nss1,(MCS0)_4TX

28/08/2020

5500MHz_TX


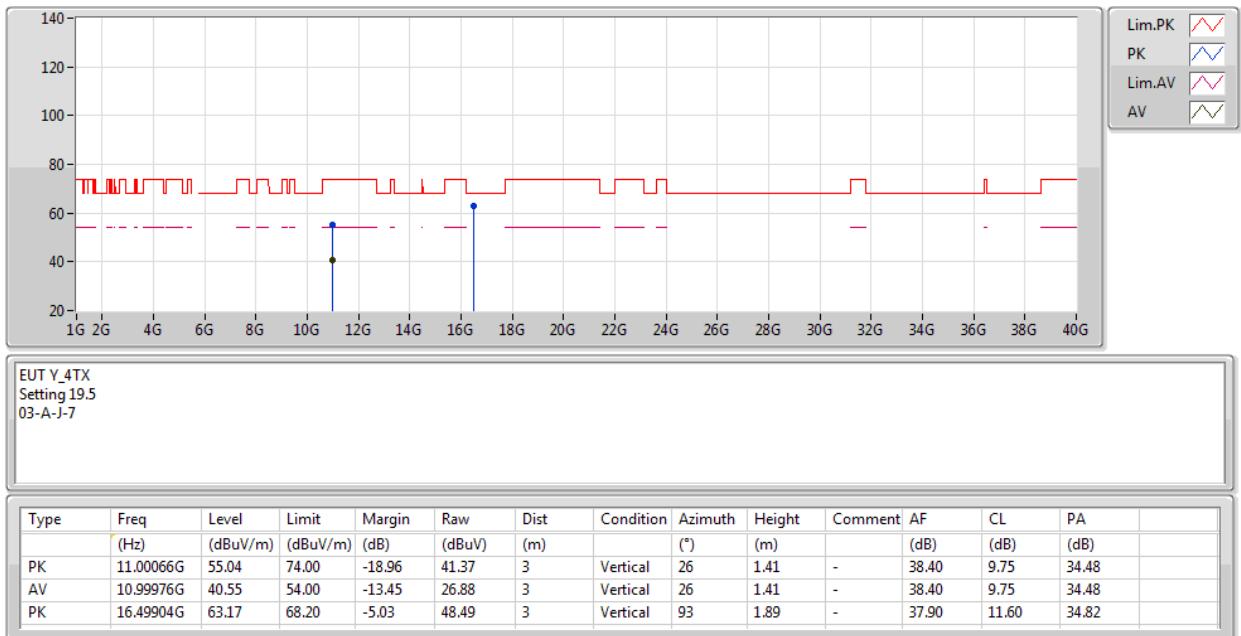
802.11ac VHT20_Nss1,(MCS0)_4TX

28/08/2020

5500MHz_TX


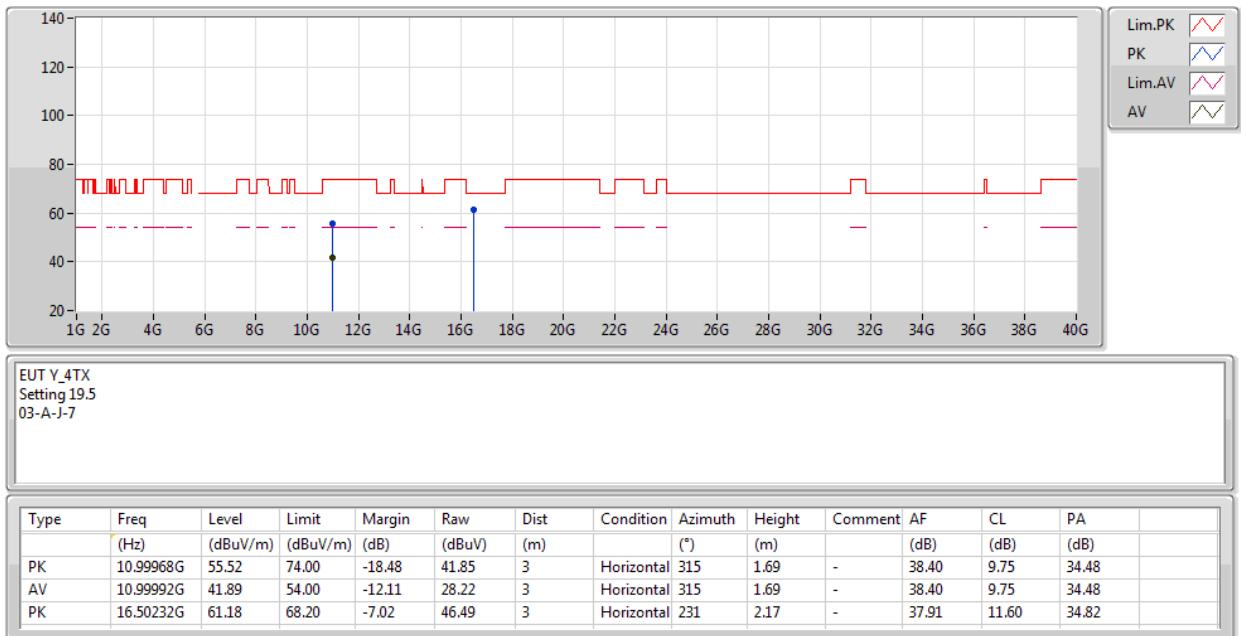
802.11ac VHT20_Nss1,(MCS0)_4TX

28/08/2020

5500MHz_TX


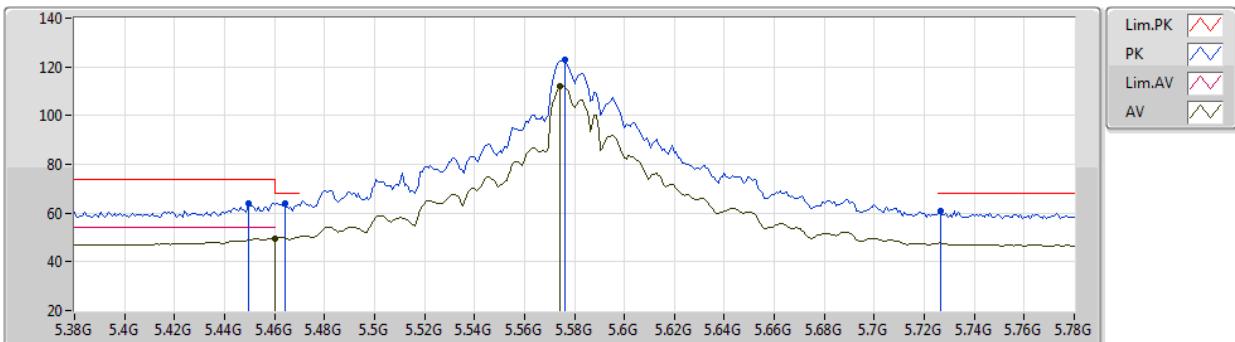
802.11ac VHT20_Nss1,(MCS0)_4TX

28/08/2020

5500MHz_TX


802.11ac VHT20_Nss1,(MCS0)_4TX

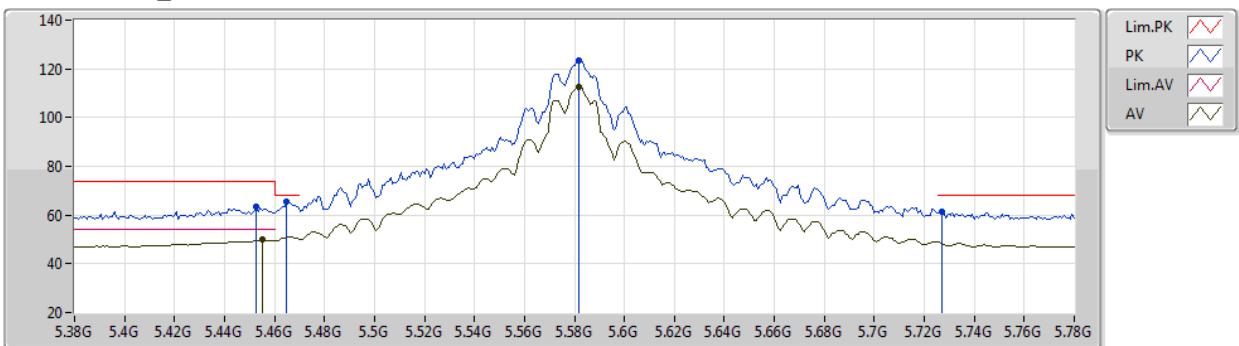
28/08/2020

5580MHz_TX

 EUT Y_4TX
 Setting 23
 03-A-J-7-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment (dB)	AF (dB)	CL (dB)	PA (dB)	
PK	5.4496G	63.89	74.00	-10.11	57.11	3	Vertical	270	1.79	-	34.60	7.18	35.00	
PK	5.464G	63.88	68.20	-4.32	57.16	3	Vertical	270	1.79	-	34.54	7.17	34.99	
AV	5.46G	49.58	54.00	-4.42	42.84	3	Vertical	270	1.79	-	34.56	7.17	34.99	
PK	5.576G	123.09	Inf	-Inf	116.53	3	Vertical	270	1.79	-	34.40	7.11	34.95	
AV	5.5744G	111.91	Inf	-Inf	105.35	3	Vertical	270	1.79	-	34.40	7.11	34.95	
PK	5.7264G	60.62	68.20	-7.58	54.20	3	Vertical	270	1.79	-	34.20	7.16	34.94	

802.11ac VHT20_Nss1,(MCS0)_4TX

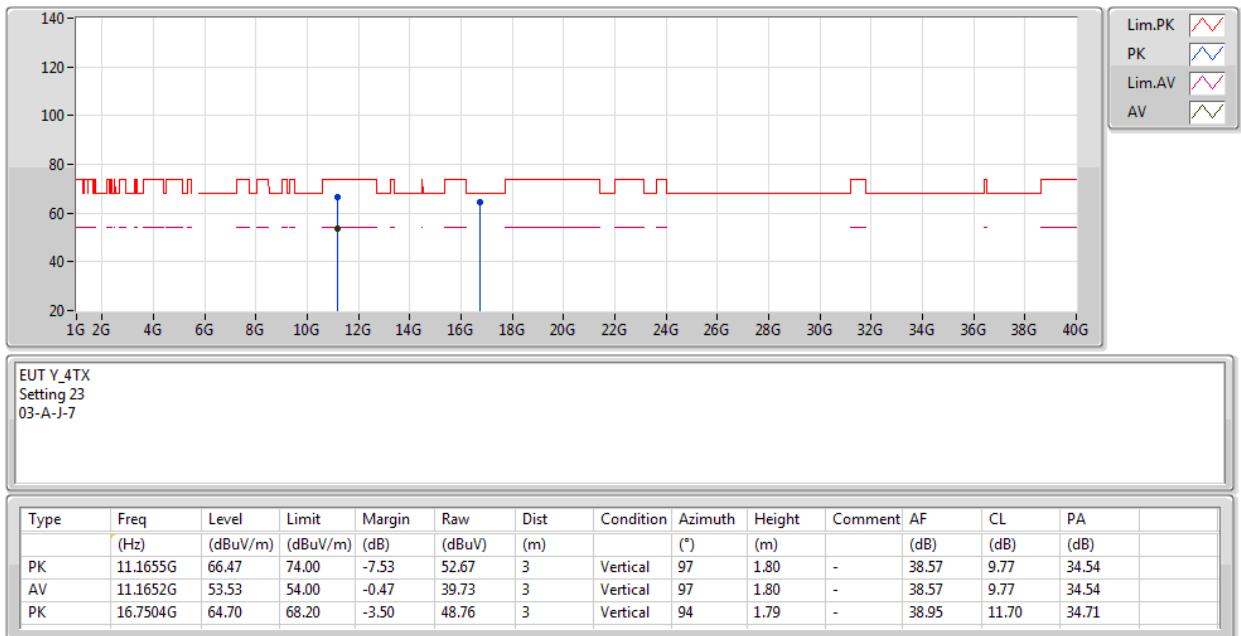
28/08/2020

5580MHz_TX

 EUT Y_4TX
 Setting 23
 03-A-J-7-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)	
PK	5.4528G	63.27	74.00	-10.73	56.51	3	Horizontal	184	1.80	-	34.59	7.17	35.00	
AV	5.4552G	49.81	54.00	-4.19	43.06	3	Horizontal	184	1.80	-	34.58	7.17	35.00	
PK	5.4648G	65.65	68.20	-2.55	58.93	3	Horizontal	184	1.80	-	34.54	7.17	34.99	
PK	5.5816G	123.53	Inf	-Inf	117.00	3	Horizontal	184	1.80	-	34.37	7.11	34.95	
AV	5.5816G	112.67	Inf	-Inf	106.14	3	Horizontal	184	1.80	-	34.37	7.11	34.95	
PK	5.7272G	61.31	68.20	-6.89	54.89	3	Horizontal	184	1.80	-	34.20	7.16	34.94	

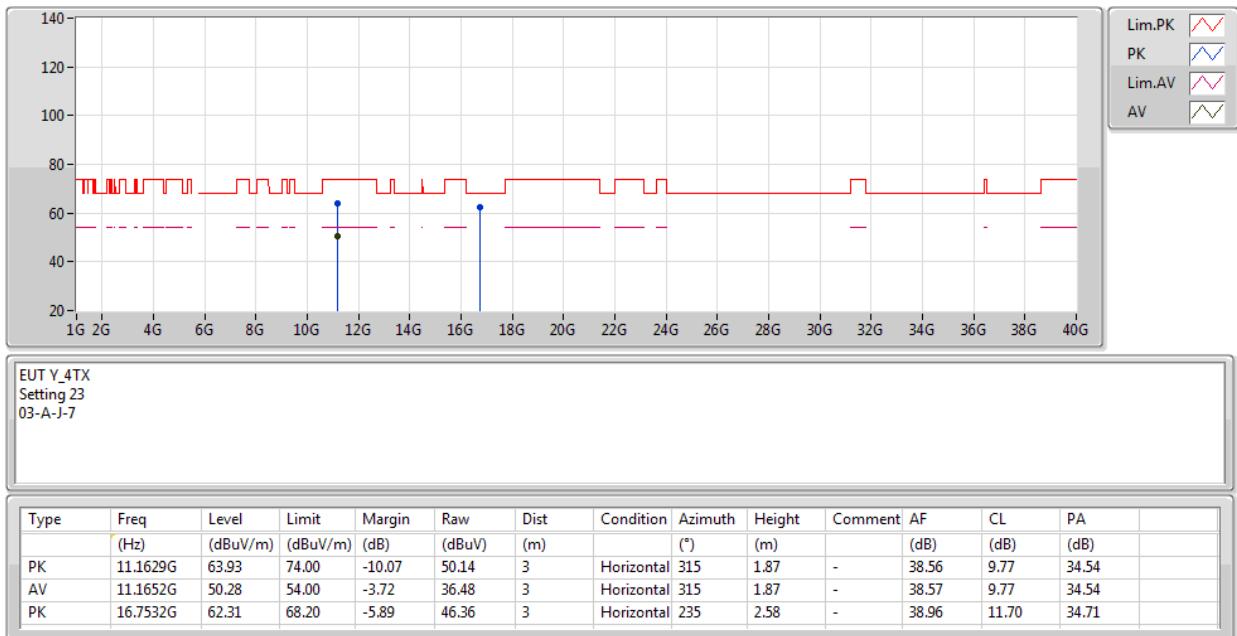
802.11ac VHT20_Nss1,(MCS0)_4TX

28/08/2020

5580MHz_TX


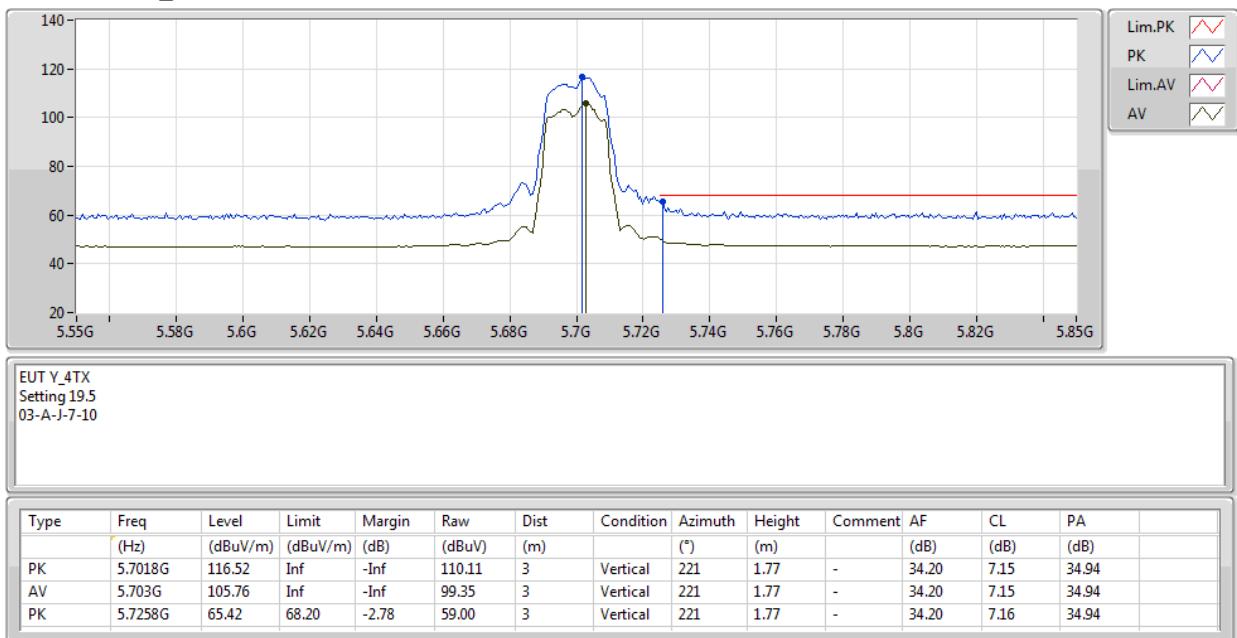
802.11ac VHT20_Nss1,(MCS0)_4TX

28/08/2020

5580MHz_TX


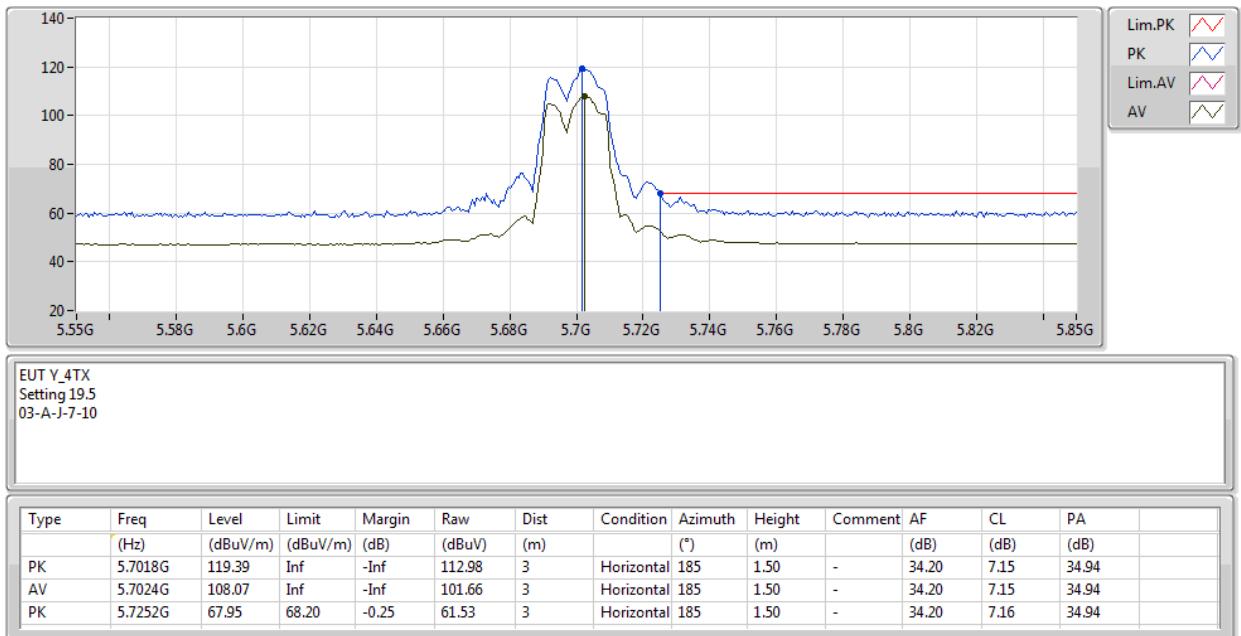
802.11ac VHT20_Nss1,(MCS0)_4TX

28/08/2020

5700MHz_TX


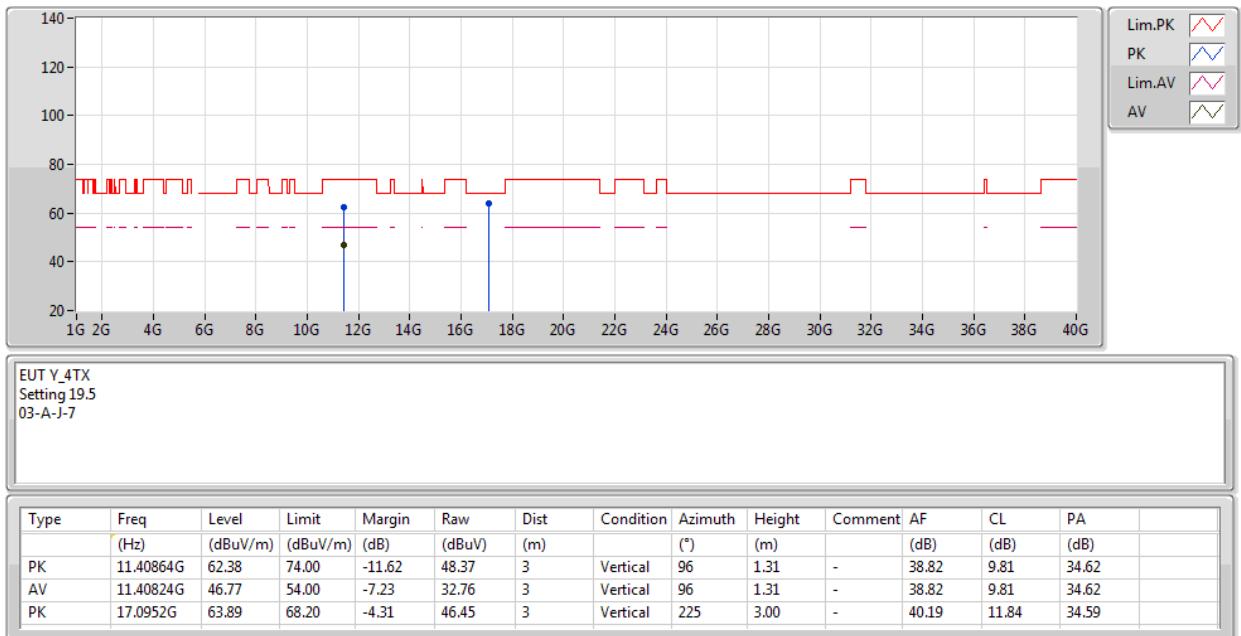
802.11ac VHT20_Nss1,(MCS0)_4TX

28/08/2020

5700MHz_TX


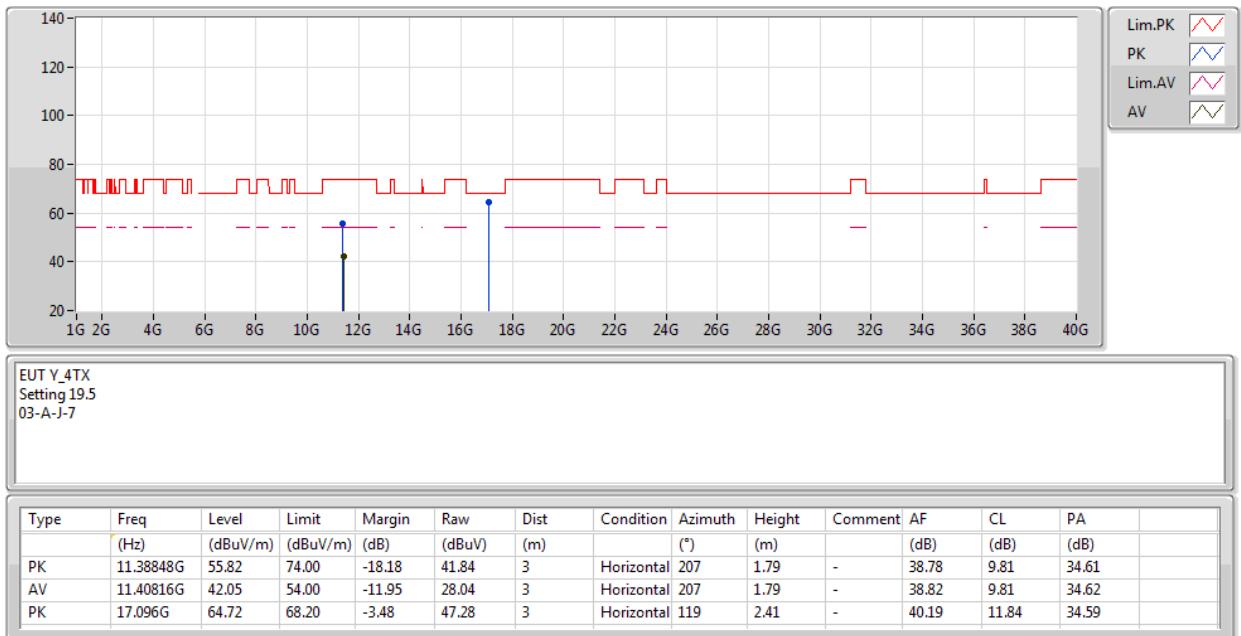
802.11ac VHT20_Nss1,(MCS0)_4TX

28/08/2020

5700MHz_TX


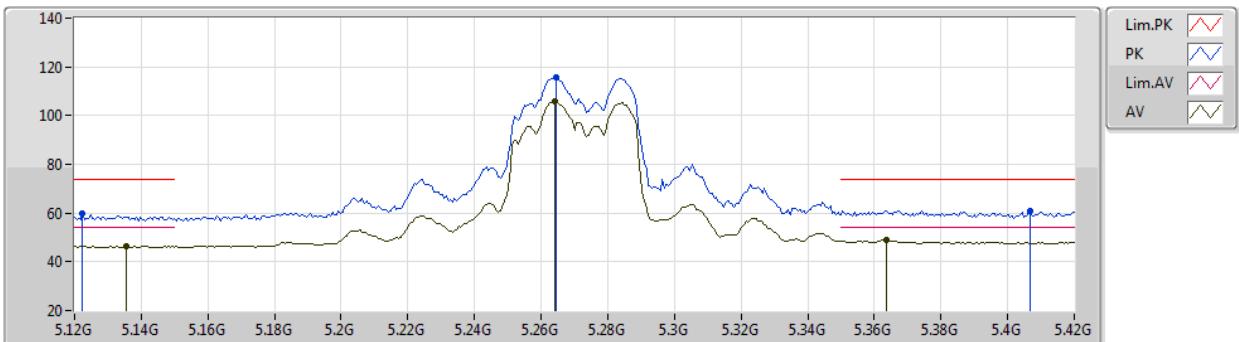
802.11ac VHT20_Nss1,(MCS0)_4TX

28/08/2020

5700MHz_TX


802.11ac VHT40_Nss1,(MCS0)_4TX

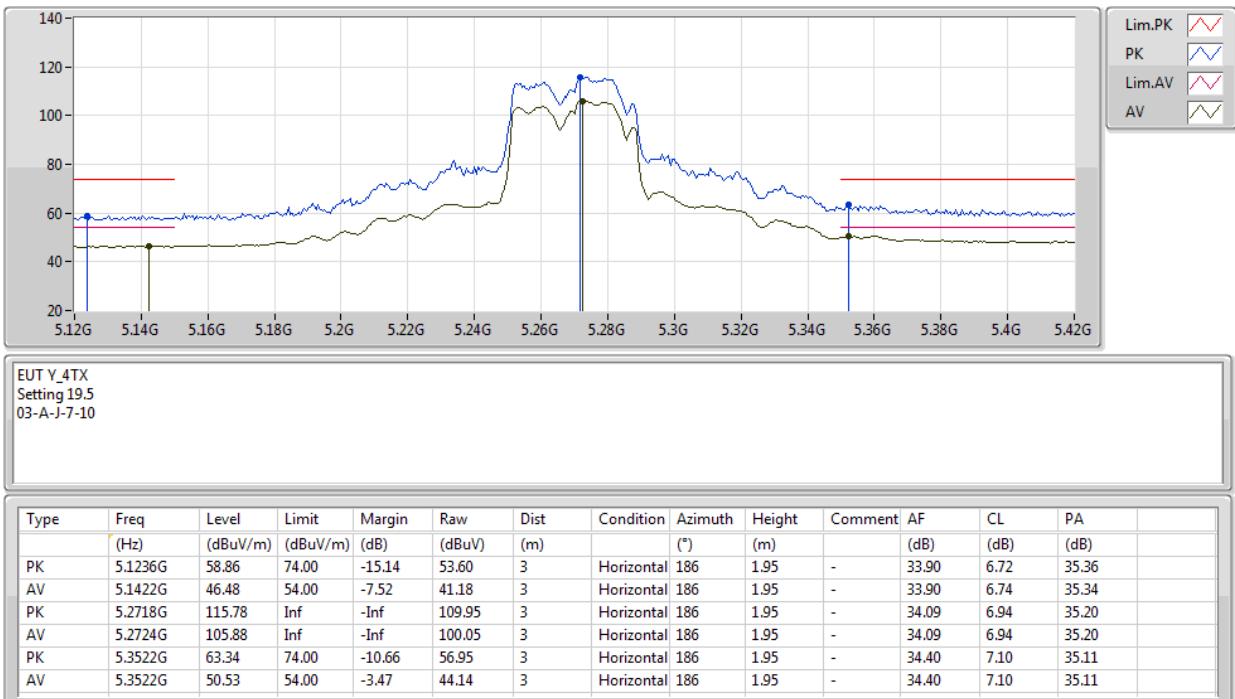
28/08/2020

5270MHz_TX

 EUT Y.4TX
 Setting 19.5
 03-A-J-7-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition (*)	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)	
PK	5.1224G	59.87	74.00	-14.13	54.61	3	Vertical	326	1.80	-	33.90	6.72	35.36	
AV	5.1356G	46.39	54.00	-7.61	41.09	3	Vertical	326	1.80	-	33.90	6.74	35.34	
PK	5.2646G	115.73	Inf	-Inf	109.94	3	Vertical	326	1.80	-	34.06	6.93	35.20	
AV	5.264G	105.82	Inf	-Inf	100.03	3	Vertical	326	1.80	-	34.06	6.93	35.20	
PK	5.4068G	61.12	74.00	-12.88	54.63	3	Vertical	326	1.80	-	34.34	7.20	35.05	
AV	5.3636G	48.95	54.00	-5.05	42.55	3	Vertical	326	1.80	-	34.37	7.13	35.10	

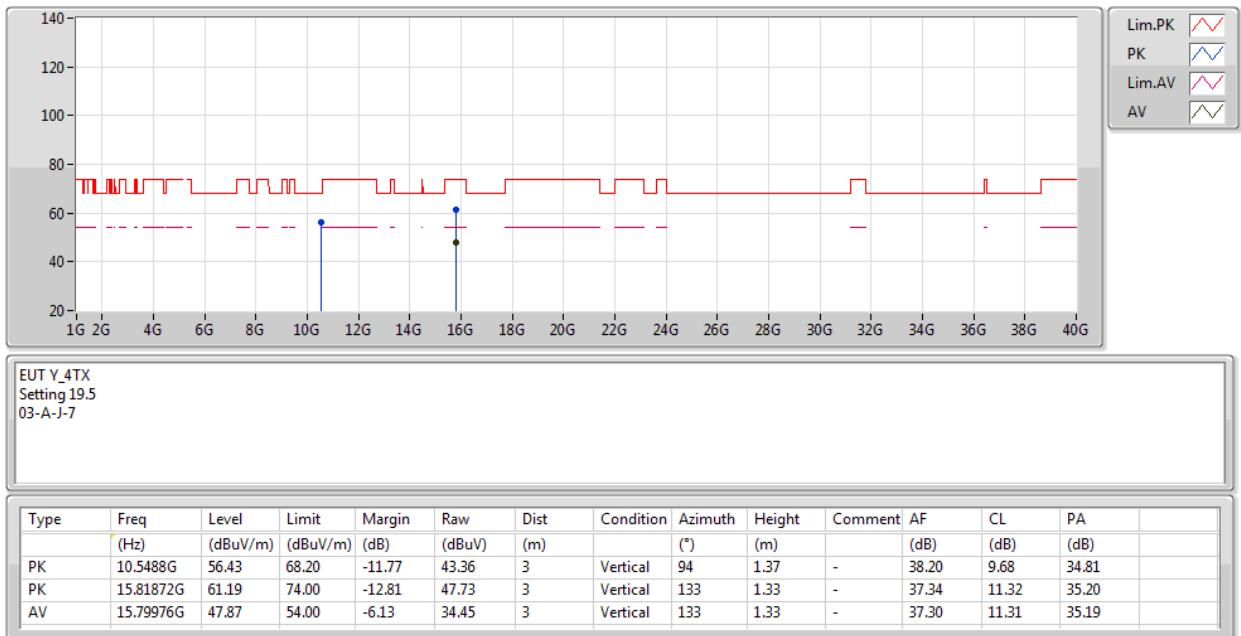
802.11ac VHT40_Nss1,(MCS0)_4TX

28/08/2020

5270MHz_TX


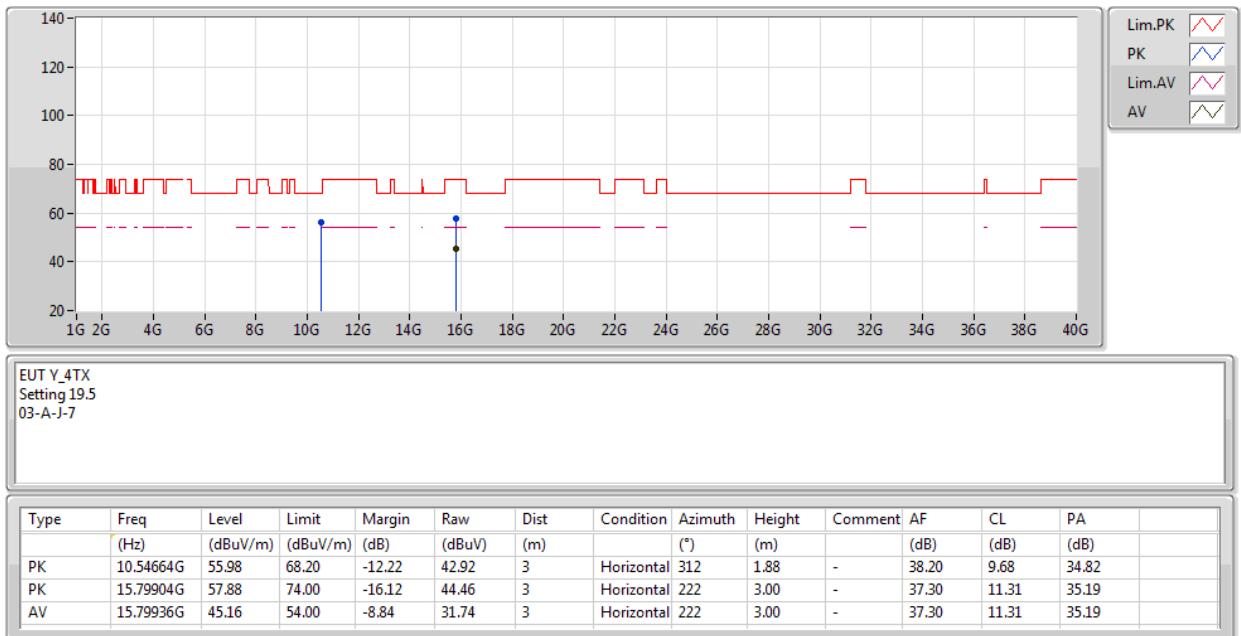
802.11ac VHT40_Nss1,(MCS0)_4TX

28/08/2020

5270MHz_TX


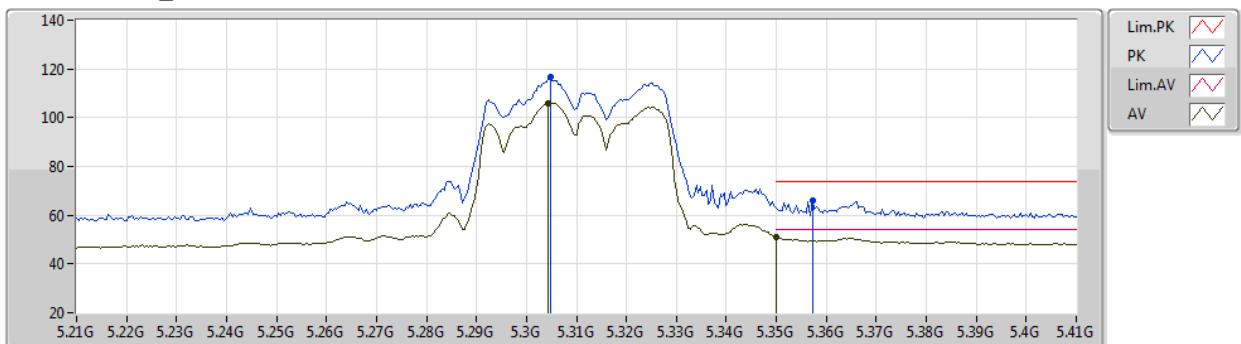
802.11ac VHT40_Nss1,(MCS0)_4TX

28/08/2020

5270MHz_TX


802.11ac VHT40_Nss1,(MCS0)_4TX

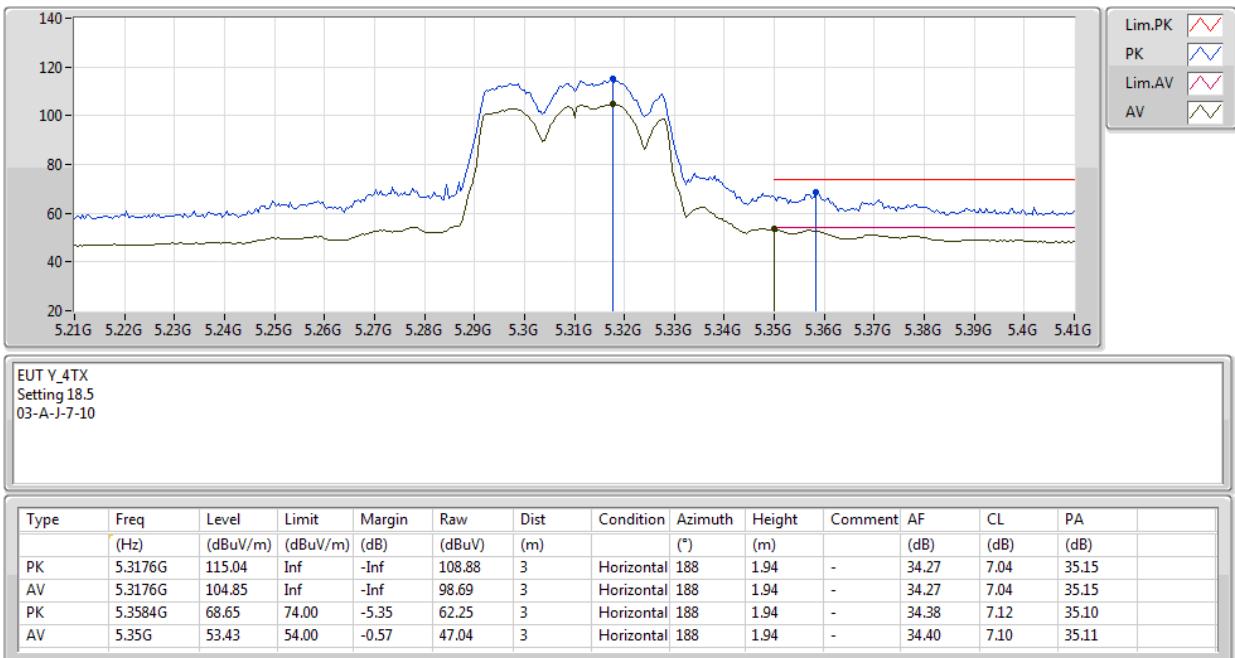
28/08/2020

5310MHz_TX

 EUT Y_4TX
 Setting 18.5
 03-A-J-7-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (*)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)	
PK	5.3048G	116.55	Inf	-Inf	110.48	3	Vertical	269	2.08	-	34.22	7.01	35.16	
AV	5.3044G	106.03	Inf	-Inf	99.96	3	Vertical	269	2.08	-	34.22	7.01	35.16	
PK	5.3572G	65.93	74.00	-8.07	59.53	3	Vertical	269	2.08	-	34.39	7.11	35.10	
AV	5.35G	51.00	54.00	-3.00	44.61	3	Vertical	269	2.08	-	34.40	7.10	35.11	

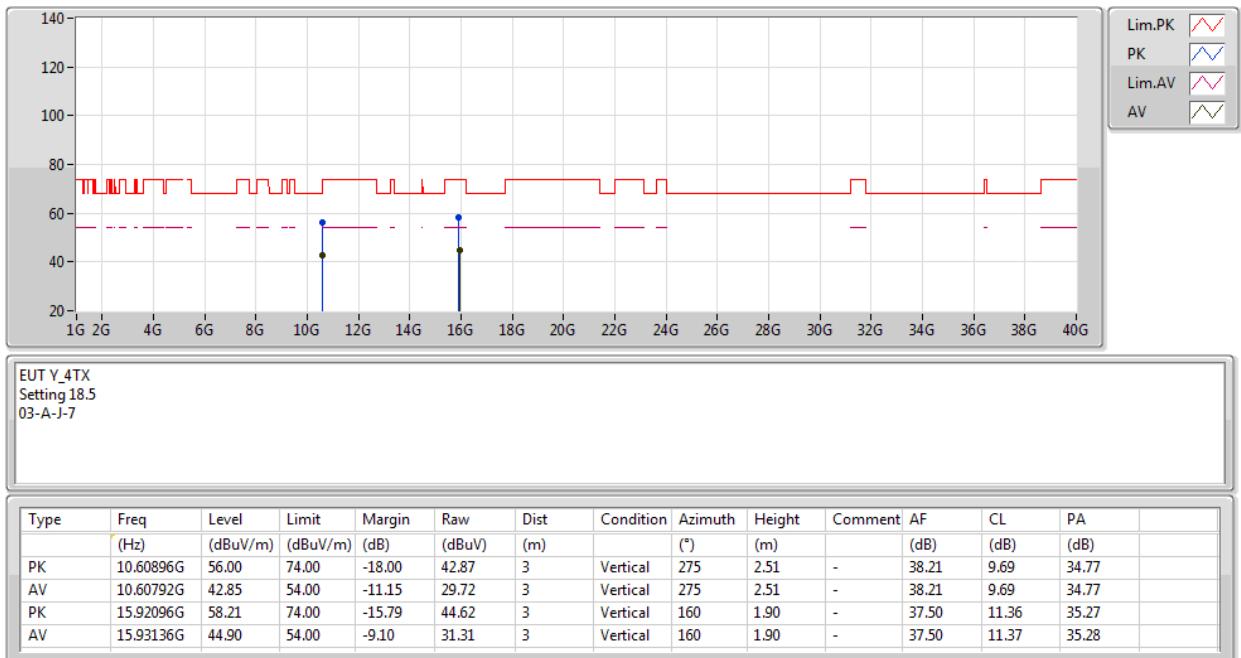
802.11ac VHT40_Nss1,(MCS0)_4TX

28/08/2020

5310MHz_TX


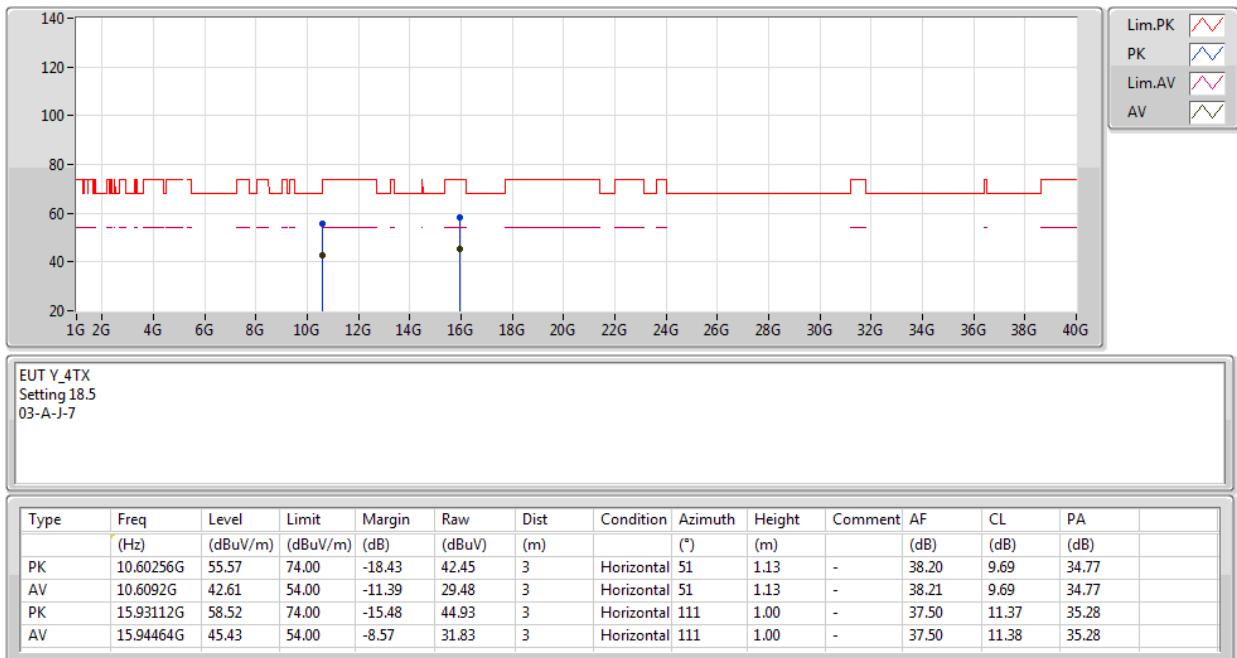
802.11ac VHT40_Nss1,(MCS0)_4TX

28/08/2020

5310MHz_TX


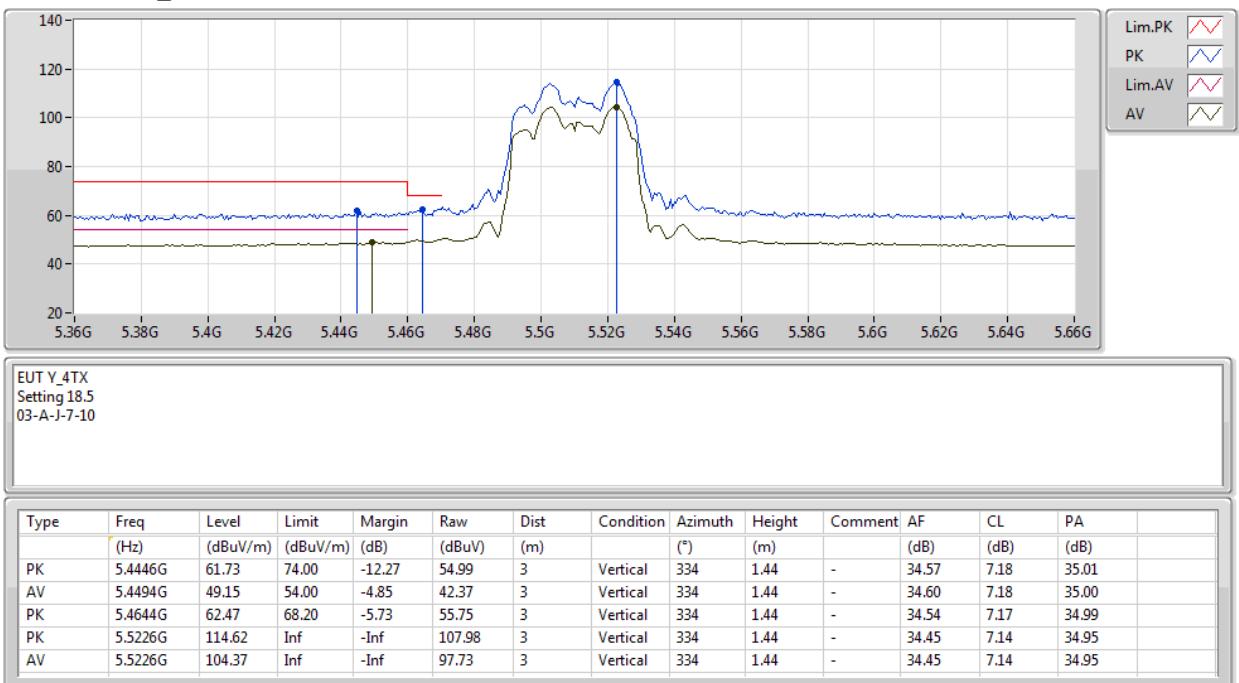
802.11ac VHT40_Nss1,(MCS0)_4TX

28/08/2020

5310MHz_TX


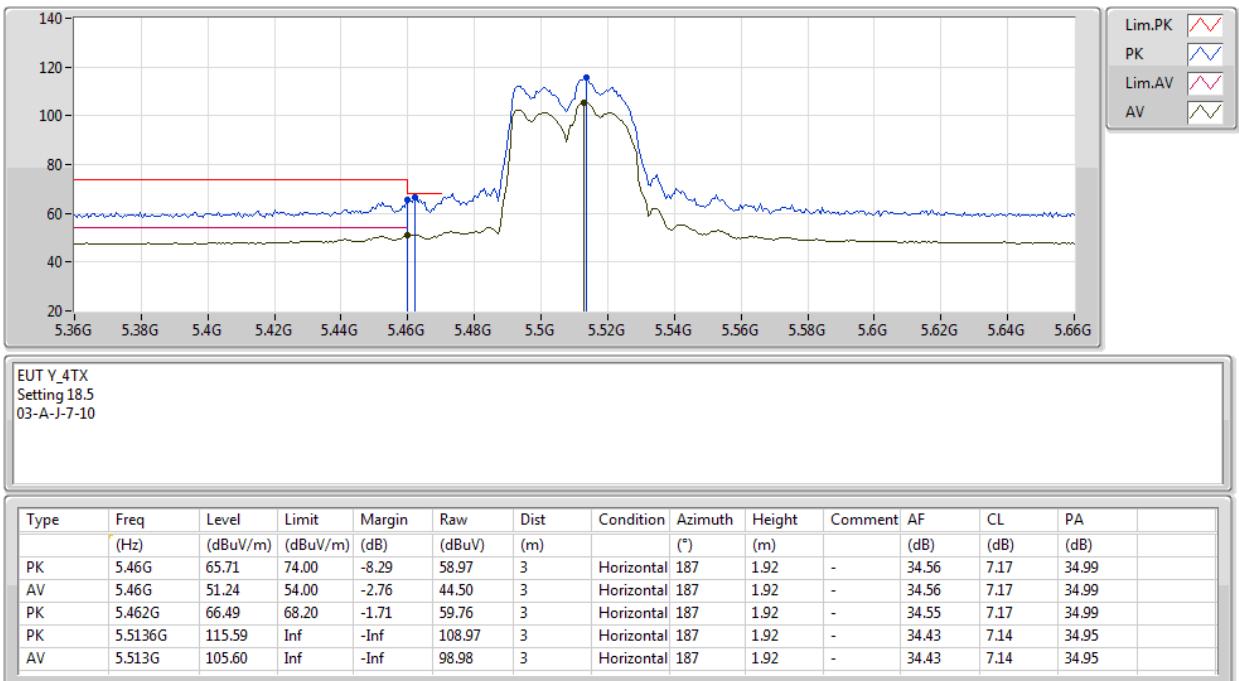
802.11ac VHT40_Nss1,(MCS0)_4TX

28/08/2020

5510MHz_TX


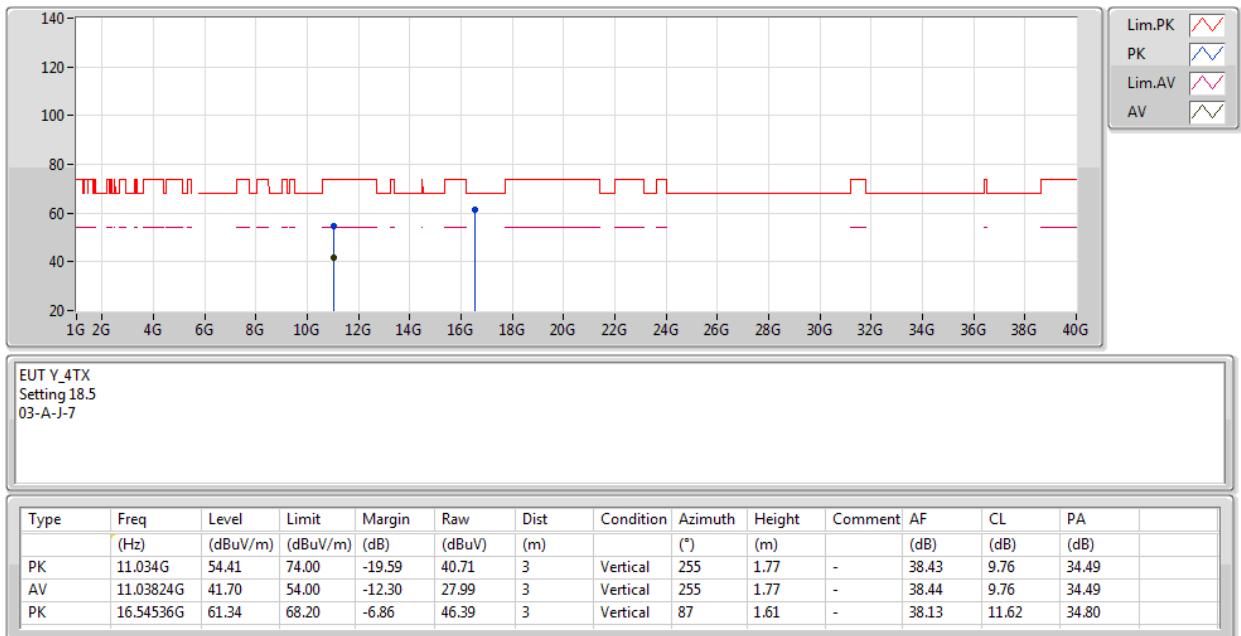
802.11ac VHT40_Nss1,(MCS0)_4TX

28/08/2020

5510MHz_TX


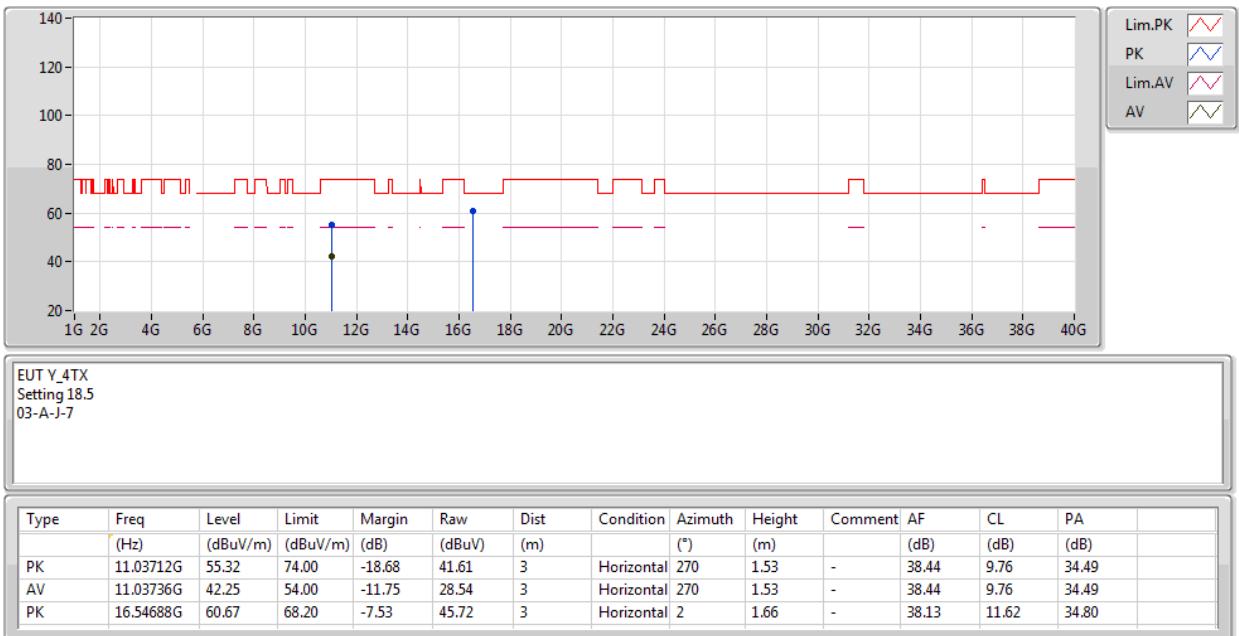
802.11ac VHT40_Nss1,(MCS0)_4TX

28/08/2020

5510MHz_TX


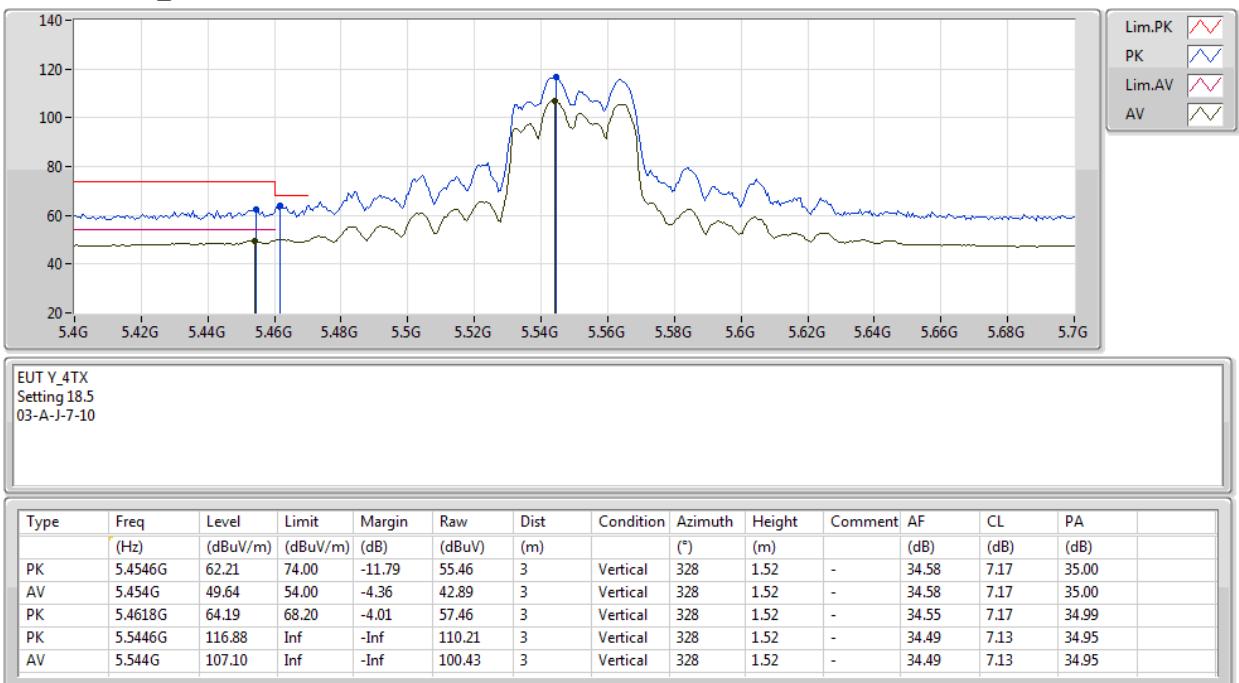
802.11ac VHT40_Nss1,(MCS0)_4TX

28/08/2020

5510MHz_TX


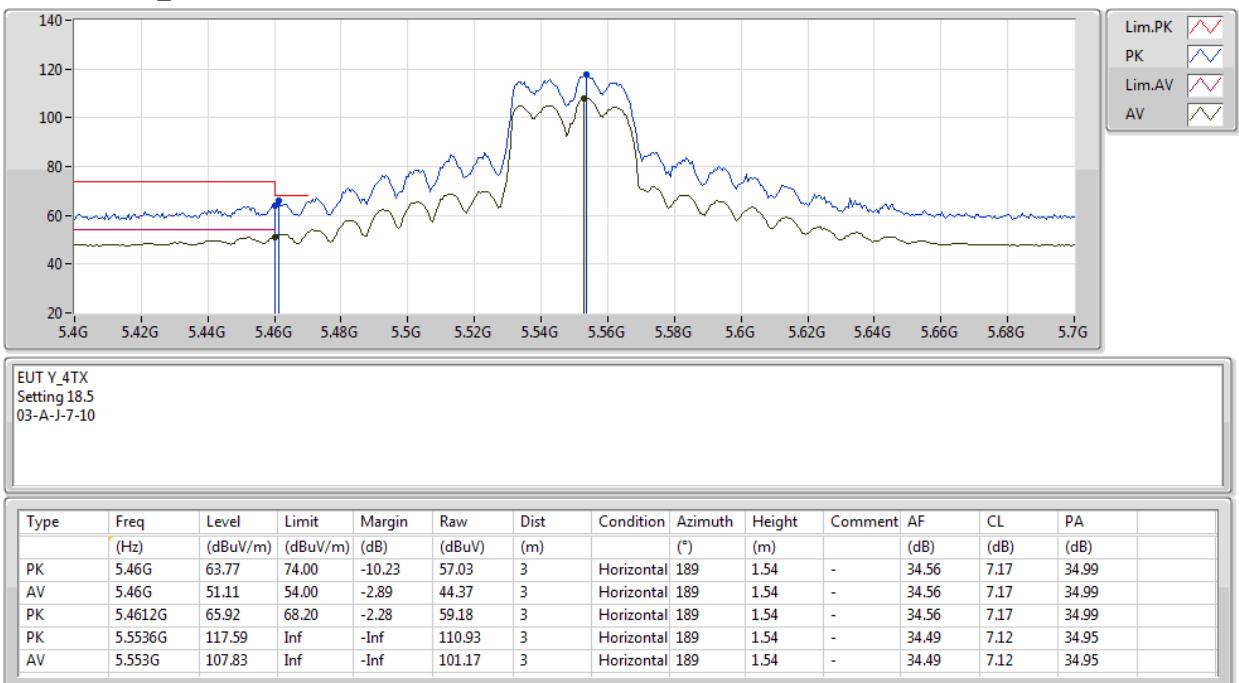
802.11ac VHT40_Nss1,(MCS0)_4TX

28/08/2020

5550MHz_TX


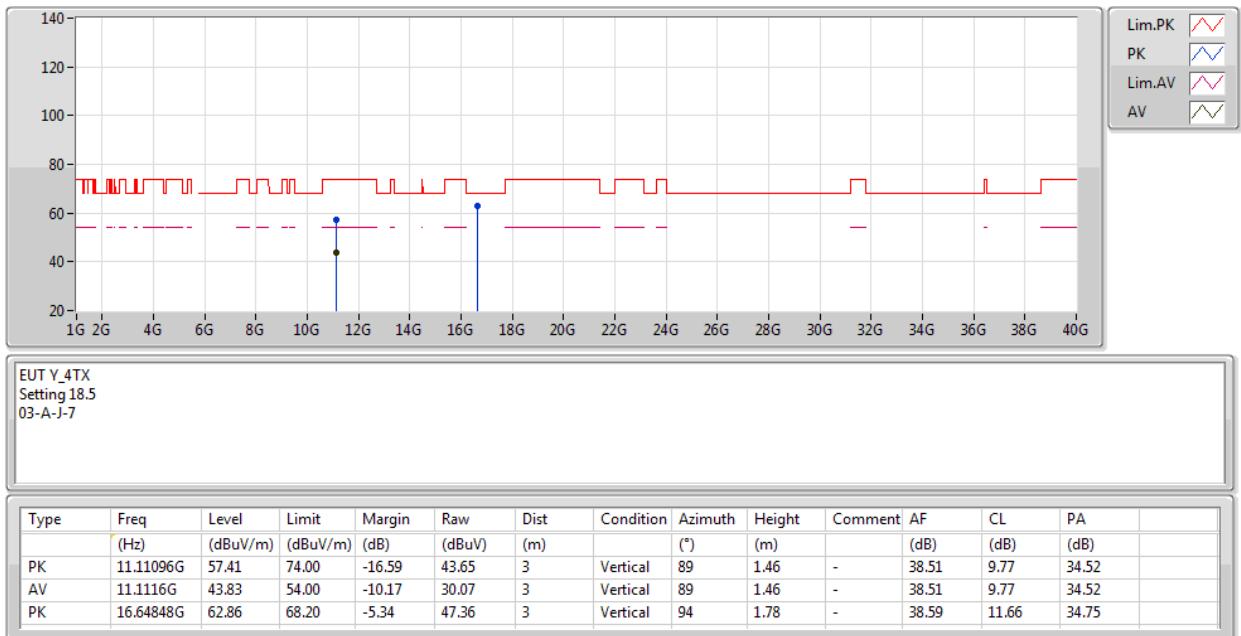
802.11ac VHT40_Nss1,(MCS0)_4TX

28/08/2020

5550MHz_TX


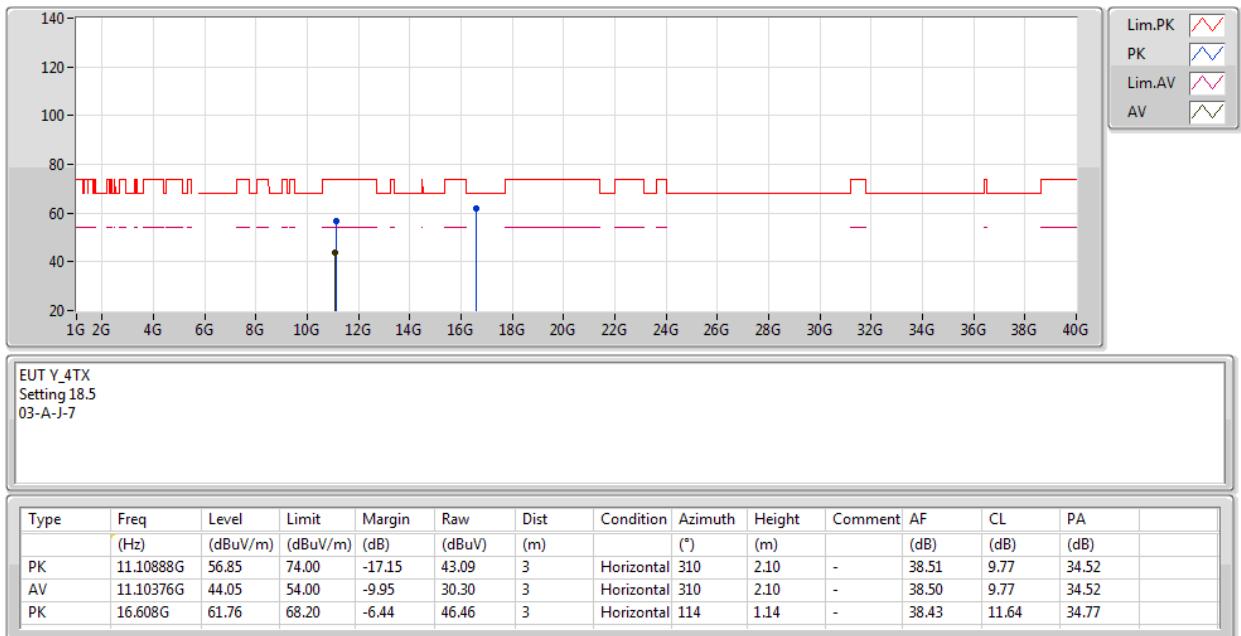
802.11ac VHT40_Nss1,(MCS0)_4TX

28/08/2020

5550MHz_TX


802.11ac VHT40_Nss1,(MCS0)_4TX

28/08/2020

5550MHz_TX


802.11ac VHT40_Nss1,(MCS0)_4TX

28/08/2020

5670MHz_TX

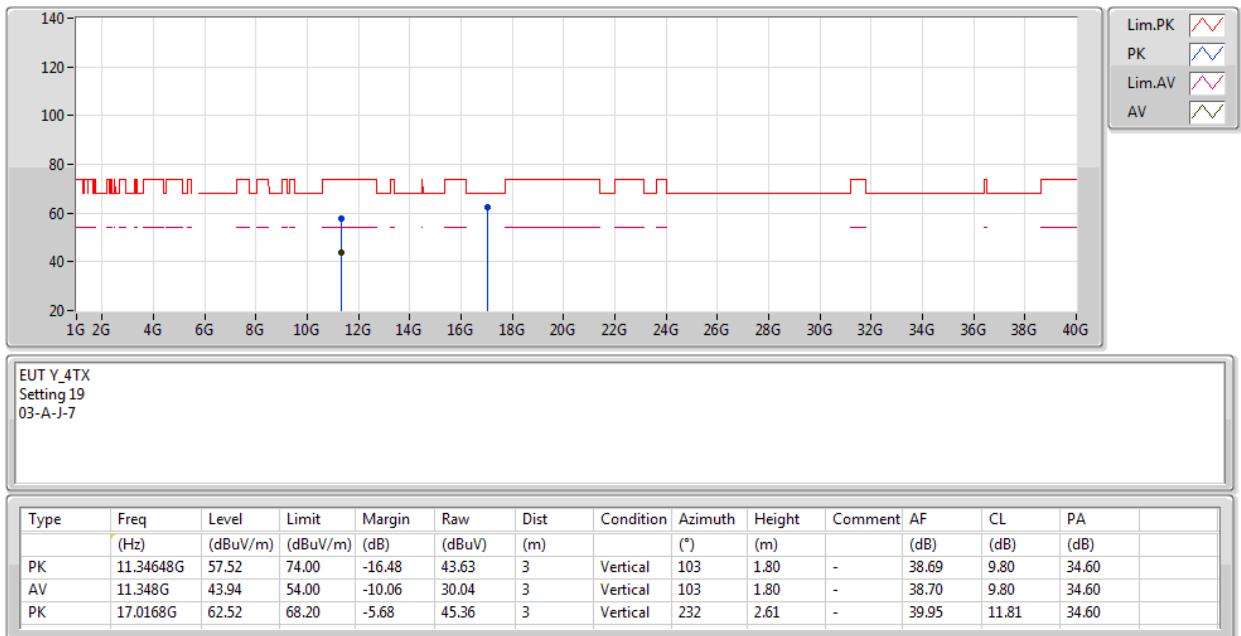

802.11ac VHT40_Nss1,(MCS0)_4TX

28/08/2020

5670MHz_TX

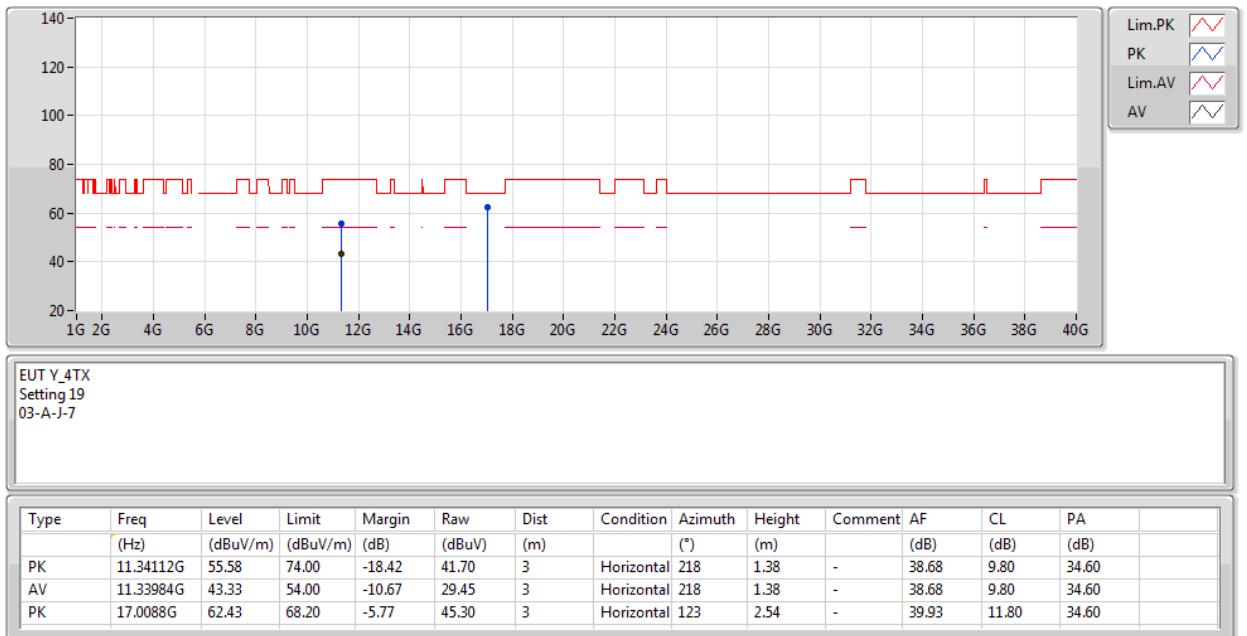

802.11ac VHT40_Nss1,(MCS0)_4TX

28/08/2020

5670MHz_TX


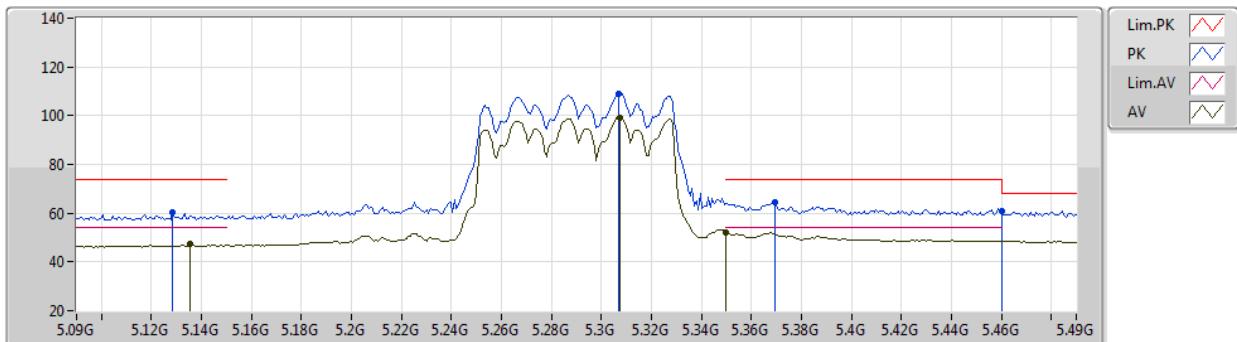
802.11ac VHT40_Nss1,(MCS0)_4TX

28/08/2020

5670MHz_TX


802.11ac VHT80_Nss1,(MCS0)_4TX

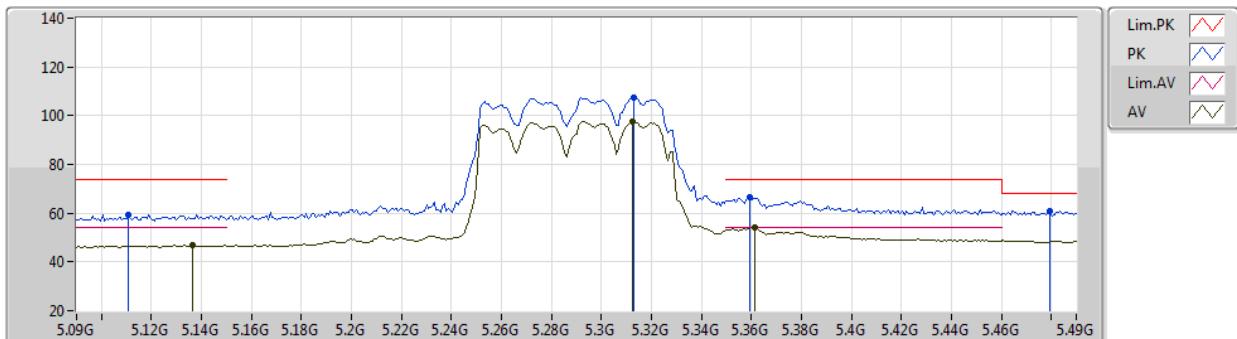
28/08/2020

5290MHz_TX

 EUT Y_4TX
 Setting 15
 03-A-J-7-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)	
PK	5.1284G	60.22	74.00	-13.78	54.94	3	Vertical	269	2.08	-	33.90	6.73	35.35	
AV	5.1356G	47.30	54.00	-6.70	42.00	3	Vertical	269	2.08	-	33.90	6.74	35.34	
PK	5.3068G	108.94	Inf	-Inf	102.86	3	Vertical	269	2.08	-	34.23	7.01	35.16	
AV	5.3076G	99.22	Inf	-Inf	93.13	3	Vertical	269	2.08	-	34.23	7.02	35.16	
PK	5.3692G	64.60	74.00	-9.40	58.19	3	Vertical	269	2.08	-	34.36	7.14	35.09	
AV	5.35G	52.28	54.00	-1.72	45.89	3	Vertical	269	2.08	-	34.40	7.10	35.11	
PK	5.46G	60.84	68.20	-7.36	54.10	3	Vertical	269	2.08	-	34.56	7.17	34.99	

802.11ac VHT80_Nss1,(MCS0)_4TX

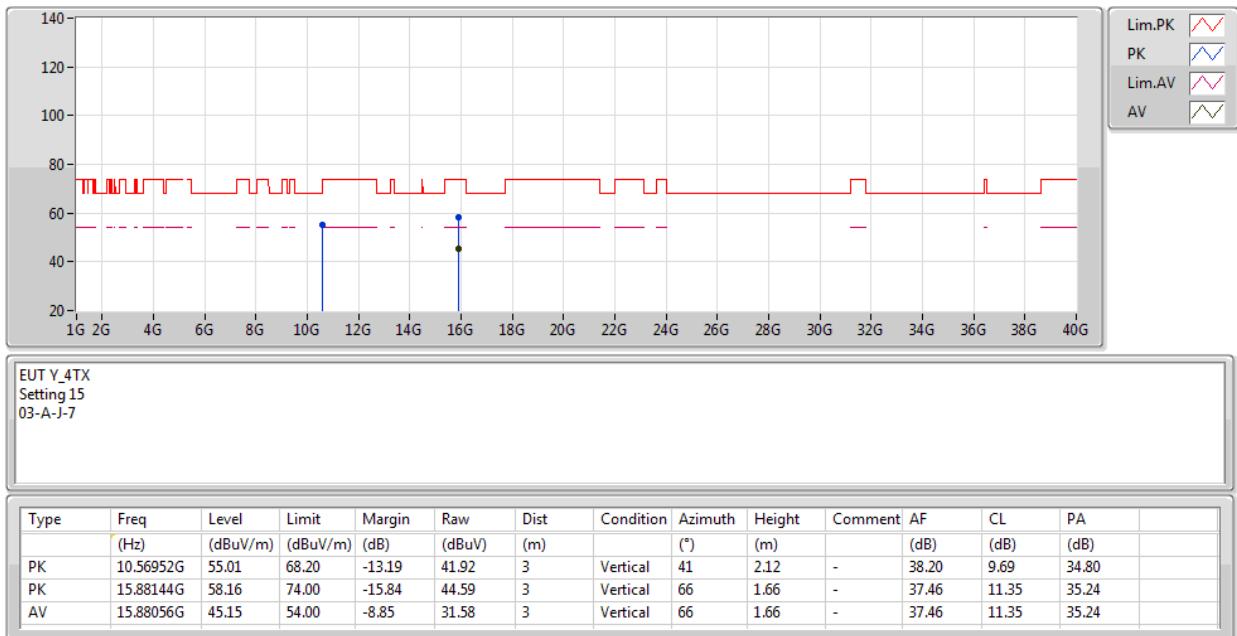
28/08/2020

5290MHz_TX

 EUT Y_4TX
 Setting 15
 03-A-J-7-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)	
PK	5.1108G	59.51	74.00	-14.49	54.27	3	Horizontal	187	1.89	-	33.90	6.71	35.37	
AV	5.1364G	46.79	54.00	-7.21	41.49	3	Horizontal	187	1.89	-	33.90	6.74	35.34	
PK	5.3132G	107.25	Inf	-Inf	101.12	3	Horizontal	187	1.89	-	34.25	7.03	35.15	
AV	5.3124G	97.58	Inf	-Inf	91.46	3	Horizontal	187	1.89	-	34.25	7.02	35.15	
PK	5.3596G	66.56	74.00	-7.44	60.16	3	Horizontal	187	1.89	-	34.38	7.12	35.10	
AV	5.3612G	53.93	54.00	-0.07	47.53	3	Horizontal	187	1.89	-	34.38	7.12	35.10	
PK	5.4796G	60.92	68.20	-7.28	54.25	3	Horizontal	187	1.89	-	34.48	7.16	34.97	

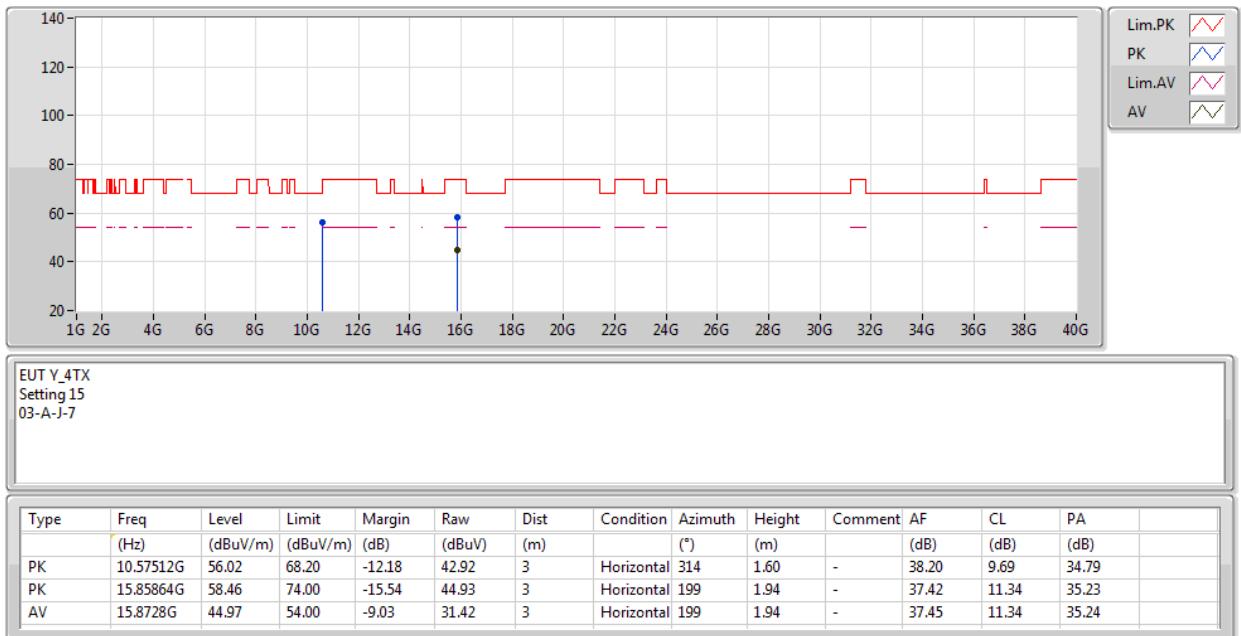
802.11ac VHT80_Nss1,(MCS0)_4TX

28/08/2020

5290MHz_TX


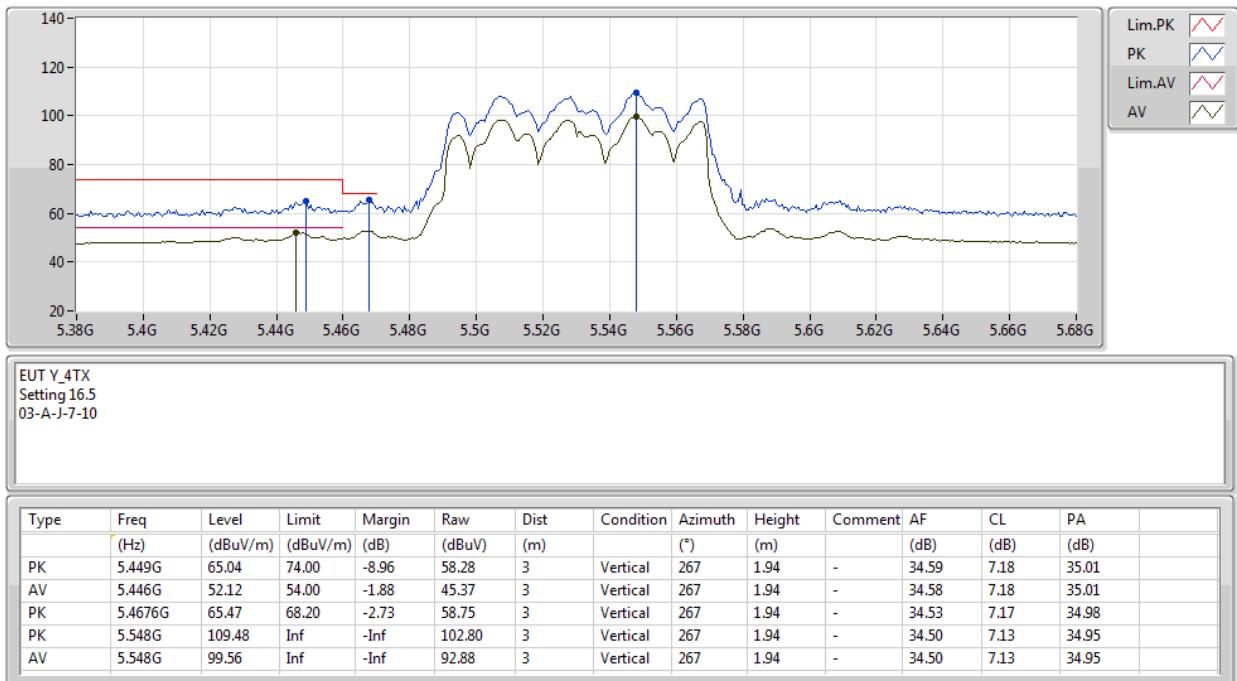
802.11ac VHT80_Nss1,(MCS0)_4TX

28/08/2020

5290MHz_TX


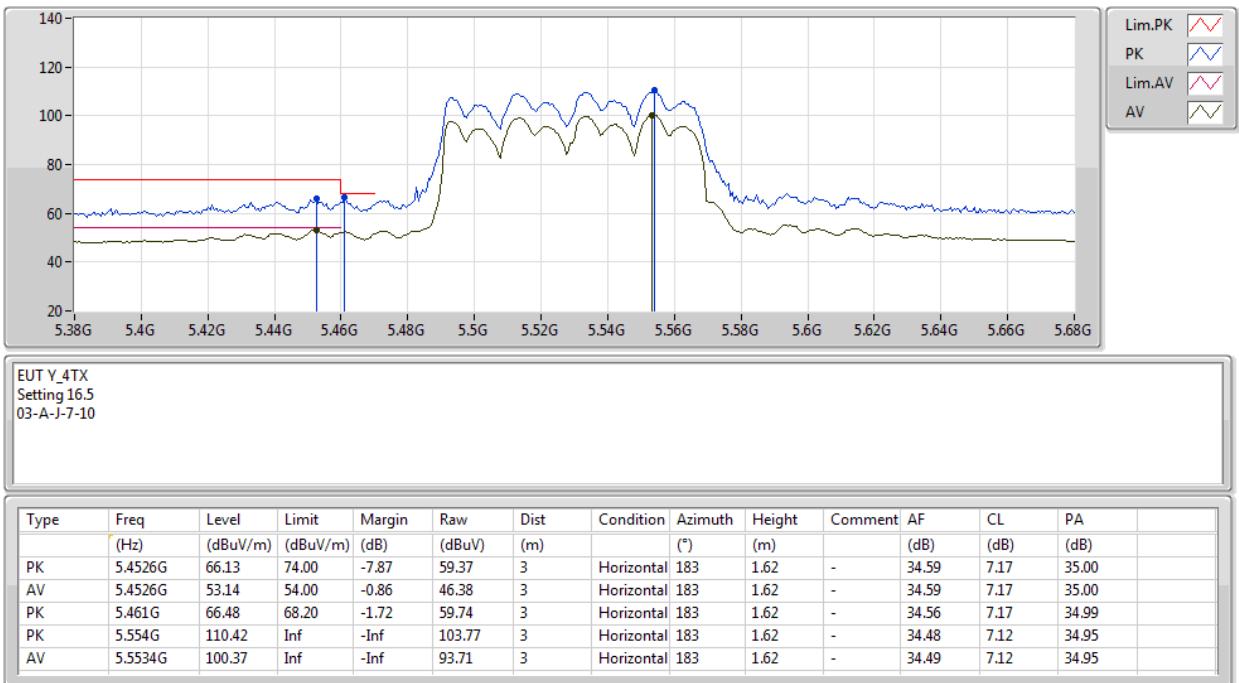
802.11ac VHT80_Nss1,(MCS0)_4TX

28/08/2020

5530MHz_TX


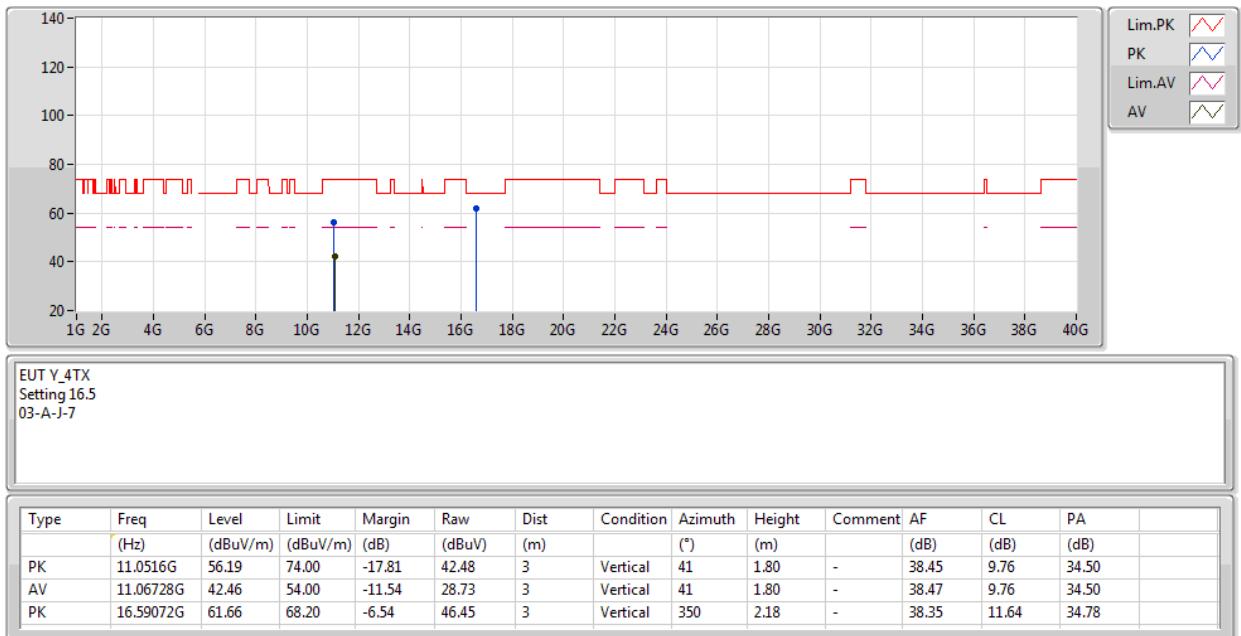
802.11ac VHT80_Nss1,(MCS0)_4TX

28/08/2020

5530MHz_TX


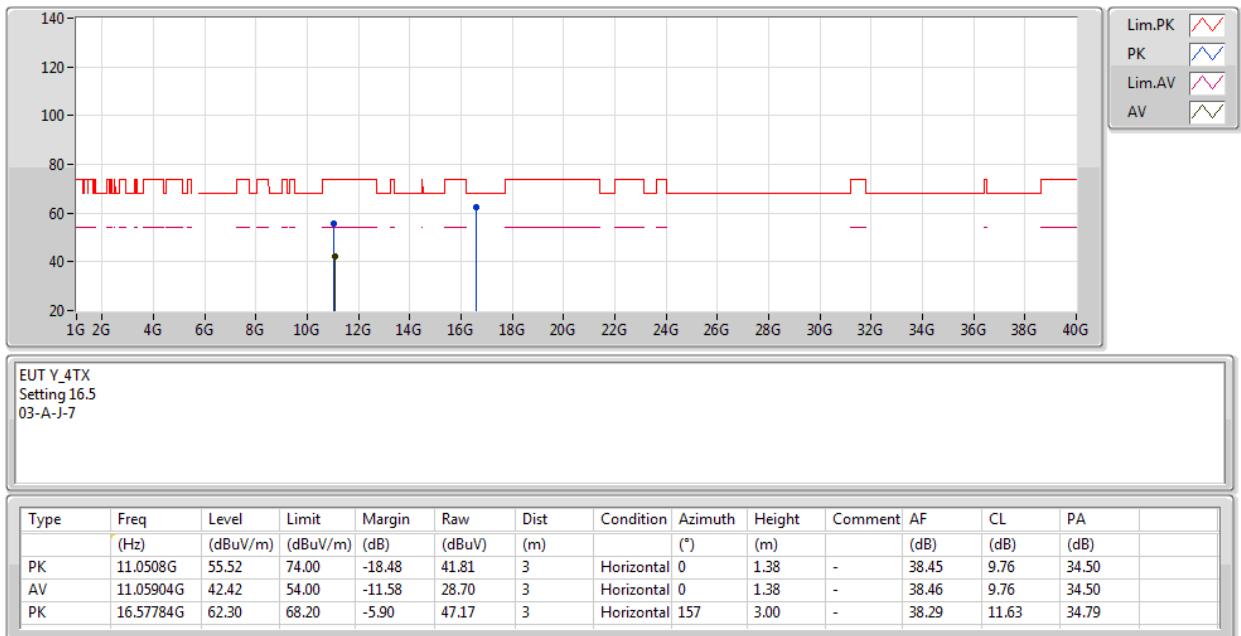
802.11ac VHT80_Nss1,(MCS0)_4TX

28/08/2020

5530MHz_TX


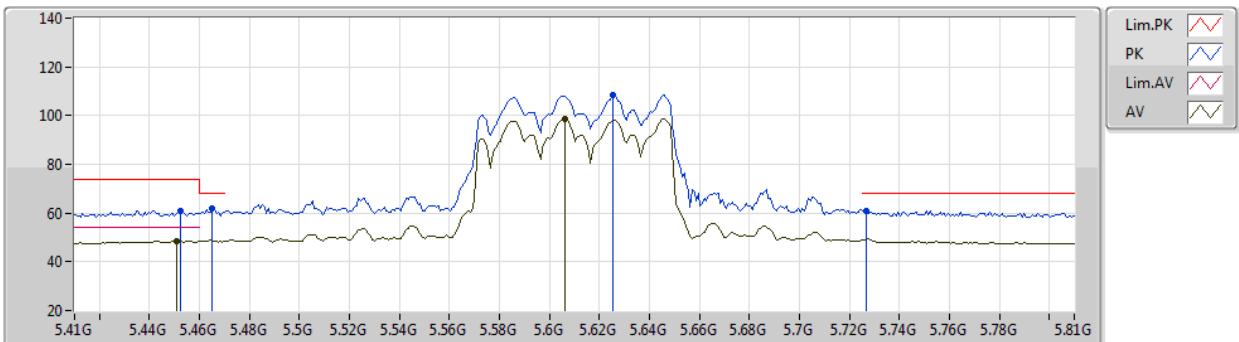
802.11ac VHT80_Nss1,(MCS0)_4TX

28/08/2020

5530MHz_TX


802.11ac VHT80_Nss1,(MCS0)_4TX

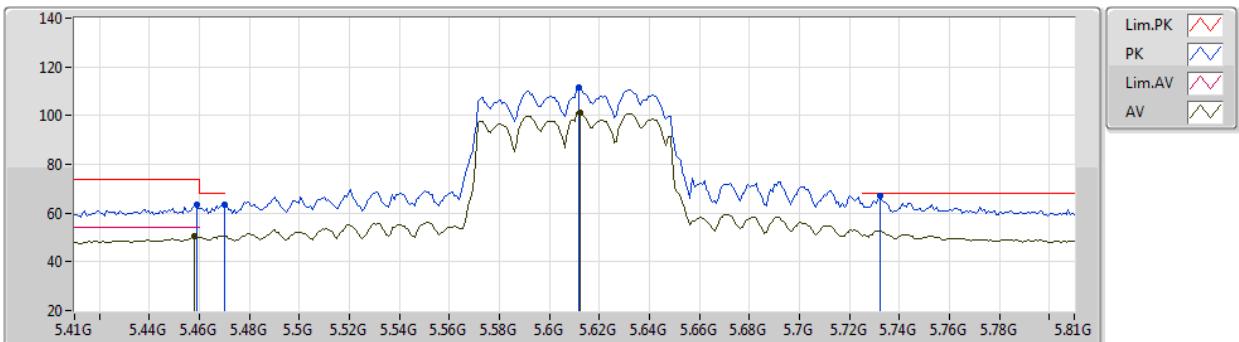
28/08/2020

5610MHz_TX

 EUT Y.4TX
 Setting 17.5
 03-A-J-7-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)	
PK	5.4524G	61.10	74.00	-12.90	54.34	3	Vertical	269	1.77	-	34.59	7.17	35.00	
AV	5.4508G	48.41	54.00	-5.59	41.64	3	Vertical	269	1.77	-	34.60	7.17	35.00	
PK	5.4652G	62.02	68.20	-6.18	55.30	3	Vertical	269	1.77	-	34.54	7.17	34.99	
PK	5.6252G	108.30	Inf	-Inf	101.78	3	Vertical	269	1.77	-	34.35	7.11	34.94	
AV	5.606G	98.71	Inf	-Inf	92.24	3	Vertical	269	1.77	-	34.31	7.10	34.94	
PK	5.7268G	60.94	68.20	-7.26	54.52	3	Vertical	269	1.77	-	34.20	7.16	34.94	

802.11ac VHT80_Nss1,(MCS0)_4TX

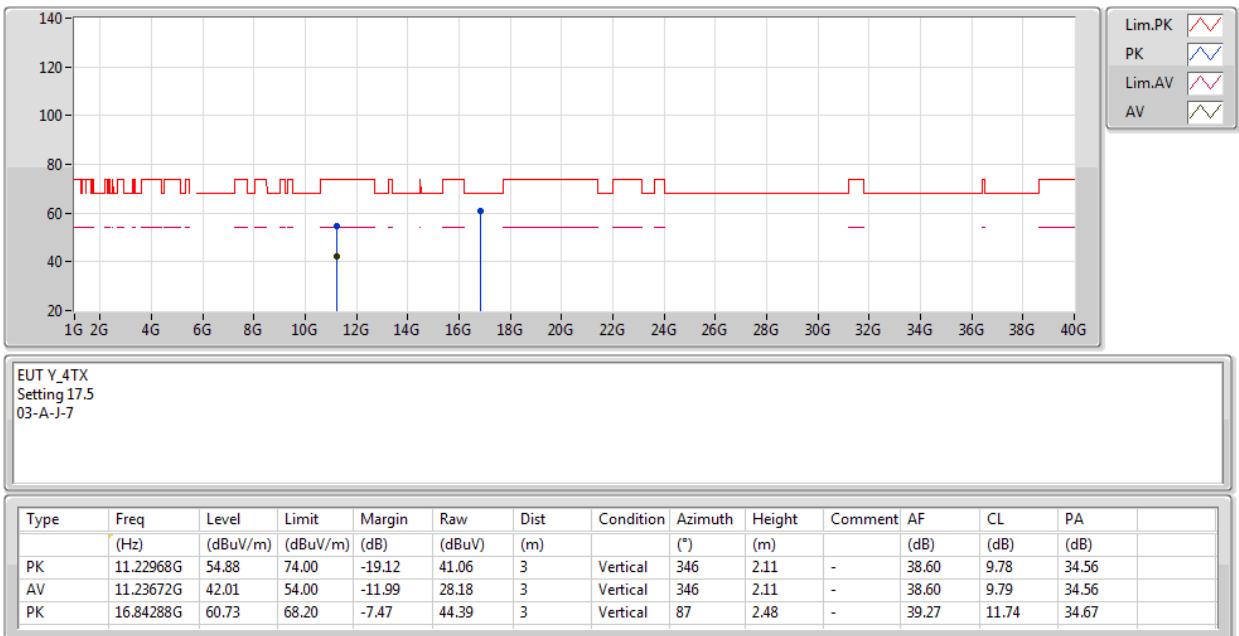
28/08/2020

5610MHz_TX

 EUT Y.4TX
 Setting 17.5
 03-A-J-7-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)	
PK	5.4588G	63.34	74.00	-10.66	56.60	3	Horizontal	190	1.49	-	34.56	7.17	34.99	
AV	5.458G	50.29	54.00	-3.71	43.55	3	Horizontal	190	1.49	-	34.57	7.17	35.00	
PK	5.47G	63.65	68.20	-4.55	56.94	3	Horizontal	190	1.49	-	34.52	7.17	34.98	
PK	5.6116G	111.38	Inf	-Inf	104.89	3	Horizontal	190	1.49	-	34.32	7.11	34.94	
AV	5.6124G	101.39	Inf	-Inf	94.90	3	Horizontal	190	1.49	-	34.32	7.11	34.94	
PK	5.7324G	67.21	68.20	-0.99	60.78	3	Horizontal	190	1.49	-	34.20	7.17	34.94	

802.11ac VHT80_Nss1,(MCS0)_4TX

28/08/2020

5610MHz_TX


802.11ac VHT80_Nss1,(MCS0)_4TX

28/08/2020

5610MHz_TX
