



FCC RADIO TEST REPORT

FCC ID : TE7RE220
Equipment : AC750 Wi-Fi Range Extender
Brand Name : tp-link
Model Name : RE200, RE220
Applicant : TP-Link Technologies Co., Ltd.
Building 24 (floors 1,3,4,5) and 28 (floors1-4),
Central Science and Technology Park,Nanshan
Shenzhen, 518057 China
Manufacturer : TP-Link Technologies Co., Ltd.
Building 24 (floors 1,3,4,5) and 28 (floors1-4),
Central Science and Technology Park,Nanshan
Shenzhen, 518057 China
Standard : 47 CFR FCC Part 15.407

The product was received on Oct. 15, 2018, and testing was started from Oct. 22, 2018 and completed on Dec. 18, 2018. 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 report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

The test results in this 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: Sam Chen

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 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
4 Test Equipment and Calibration Data	27
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 Photos	
Photographs of EUT v01	



TEL : 886-3-656-9065
FAX : 886-3-656-9085
Report Template No.: CB Ver1.0



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	15.207	AC Power-line Conducted Emissions	PASS	-
3.2	15.407(a)	Emission Bandwidth	PASS	-
3.3	15.407(a)	Maximum Conducted Output Power	PASS	-
3.4	15.407(a)	Peak Power Spectral Density	PASS	-
3.5	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 EUT supports AP mode and Extender mode.

For customer's request, only Extender mode was selected and recorded in this report.

Reviewed by: Sam Chen

Report Producer: Cindy Peng

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	1TX
5.15-5.25GHz	802.11n HT20	20	1TX
5.15-5.25GHz	802.11ac VHT20	20	1TX
5.15-5.25GHz	802.11n HT40	40	1TX
5.15-5.25GHz	802.11ac VHT40	40	1TX
5.15-5.25GHz	802.11ac VHT80	80	1TX
5.725-5.85GHz	802.11a	20	1TX
5.725-5.85GHz	802.11n HT20	20	1TX
5.725-5.85GHz	802.11ac VHT20	20	1TX
5.725-5.85GHz	802.11n HT40	40	1TX
5.725-5.85GHz	802.11ac VHT40	40	1TX
5.725-5.85GHz	802.11ac VHT80	80	1TX

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 Antenna Information**

Ant.	Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Remark
1	1	TP-LINK	-	Printed Antenna	N/A	1.95	WLAN 2.4GHz
2	2	TP-LINK	-	Printed Antenna	N/A	1.96	WLAN 2.4GHz
3	1	TP-LINK	-	Printed Antenna	I-PEX	2.98	WLAN 5GHz

Note: The EUT has three antennas.

Ant. 1 and Ant. 2 supports 2.4GHz WLAN function, and Ant. 3 supports 5GHz WLAN function.

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

Port 1 and Port 2 could transmit/receive simultaneously.

For WLAN 5GHz function (1TX/1RX):

Only Port 1 could transmit/receive.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11a	1	0	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ac VHT20	1	0	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ac VHT40	1	0	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11ac VHT80	1	0	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)

Note:

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

1.1.4 EUT Operational Condition

EUT Power Type	Internal power supply			
Beamforming Function	☐	With beamforming	☒	Without beamforming
Function	☐	Outdoor P2M	☒	Indoor P2M
	☐	Fixed P2P	☐	Client
Test Software Version	MT7xxE QA V2.0.10.0			

1.1.5 Table for Multiple Listing

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

Model Name	Description
RE200	There is nothing different of two models, just for different marketing use.
RE220	

From the above models, model: RE220 was selected as representative model for the test and its data was recorded in this report.



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 v02r01
- ♦ FCC KDB 412172 D01 v01r01

1.3 Testing Location Information

Testing Location		
☐	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
☒	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	Eason Chen	20°C / 60%	Oct. 25, 2018~Dec. 04, 2018
Radiated below 1GHz	03CH01-CB	Cola Fan	23°C / 55%	Oct. 22, 2018~Dec. 18, 2018
Radiated above 1GHz	03CH01-CB	Paul Chen	22°C / 54%	Oct. 22, 2018~Dec. 03, 2018
AC Conduction	CO02-CB	Rick Yeh	24°C / 52%	Oct. 25, 2018

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%



2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
802.11a_Nss1,(6Mbps)_1TX	-
5180MHz	15
5200MHz	15
5240MHz	18
5745MHz	0E
5785MHz	0F
5825MHz	0E
802.11ac VHT20_Nss1,(MCS0)_1TX	-
5180MHz	18
5200MHz	1C
5240MHz	1A
5745MHz	0E
5785MHz	0F
5825MHz	0E
802.11ac VHT40_Nss1,(MCS0)_1TX	-
5190MHz	0D
5230MHz	1A
5755MHz	13
5795MHz	12
802.11ac VHT80_Nss1,(MCS0)_1TX	-
5210MHz	0B
5775MHz	16

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	Normal Link - Extender mode

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	Normal Link
1	Normal Link - EUT in Z axis - Extender mode
2	Normal Link - EUT in Y axis - Extender mode
For operating mode 1 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX
1	CTX - EUT in Z axis
2	CTX - EUT in Y axis
Mode 2 has been evaluated to be the worst case after evaluating. Consequently, measurement will follow this same test mode.	

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.: FA8O1215 for Co-location RF Exposure Evaluation.	



2.3 EUT Operation during Test

For CTX Mode:

The EUT was programmed to be in continuously transmitting mode.

For Normal Link:

During the test, the EUT operation to normal function.

2.4 Accessories

N/A

2.5 Support Equipment

For Test Site No: CO02-CB

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E6430	N/A
2	NB	DELL	E6430	N/A
3	NB	DELL	E6430	N/A
4	AP Router	ASUS	RP-N53	MSQ-RPN53

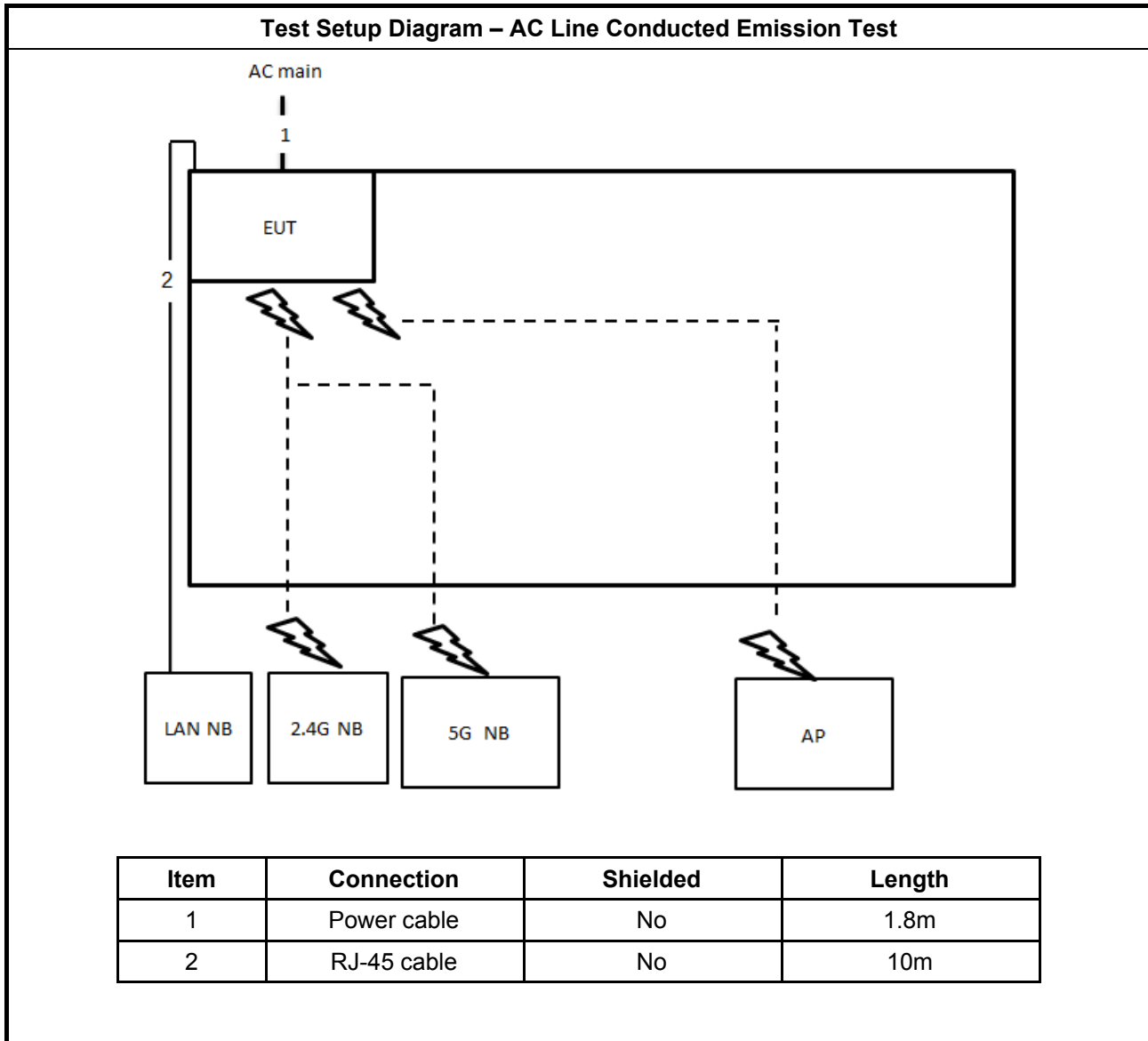
For Test Site No: 03CH01-CB (below 1GHz)

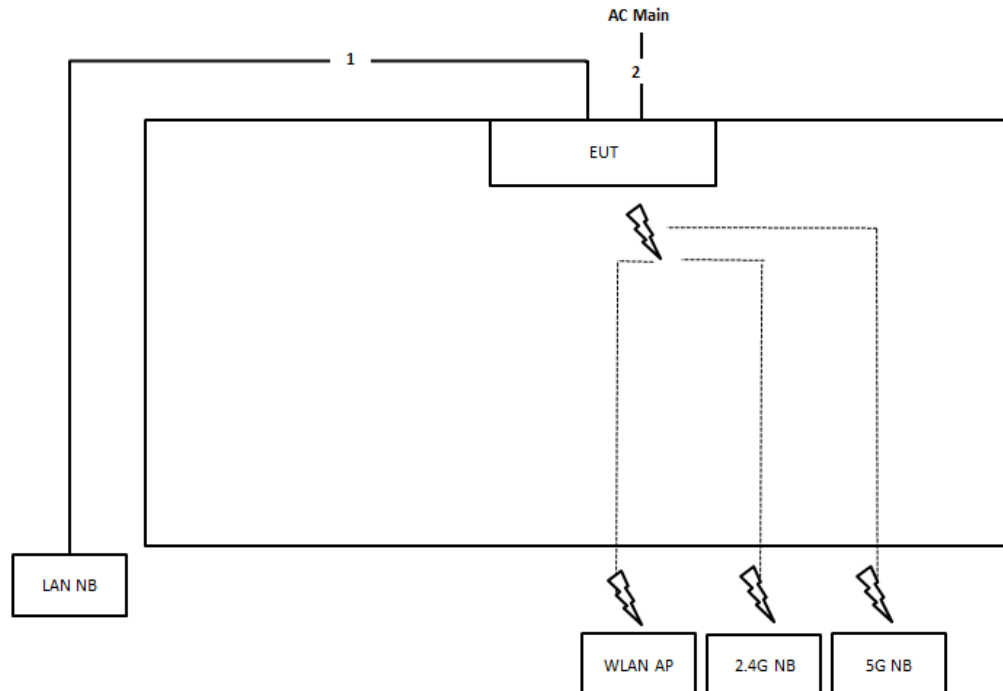
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E4300	N/A
2	NB	DELL	E4300	N/A
3	NB	DELL	E4300	N/A
4	WLAN AP	NETGEAR	WNDR3300v2	PY309300116

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

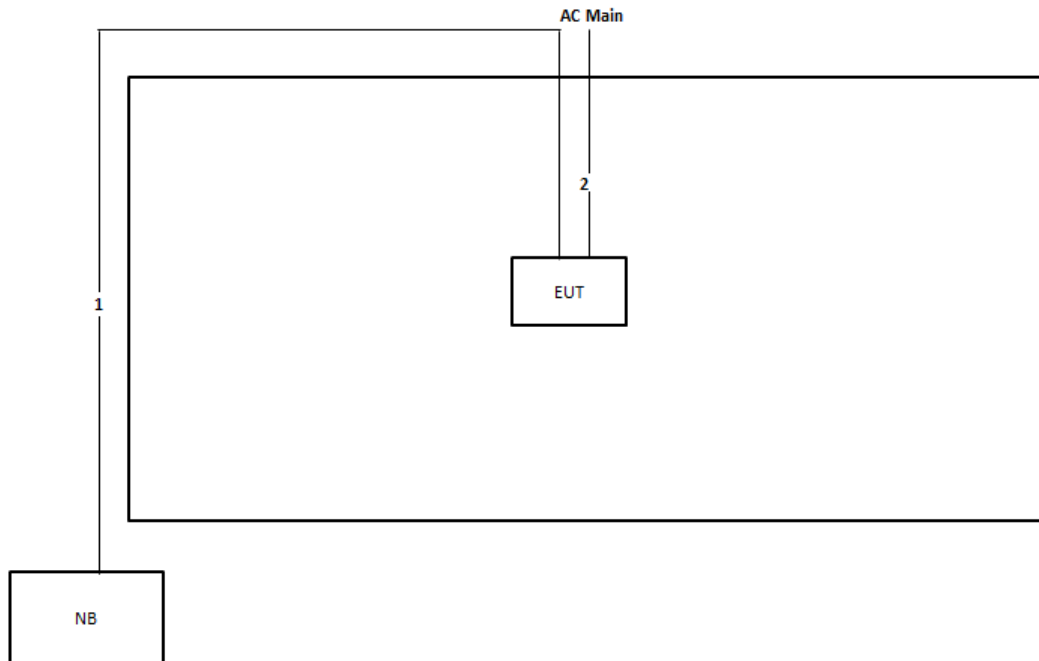
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E4300	N/A

2.6 Test Setup Diagram



Test Setup Diagram - Radiated Test < 1GHz


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

Test Setup Diagram - Radiated Test > 1GHz


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



3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

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

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

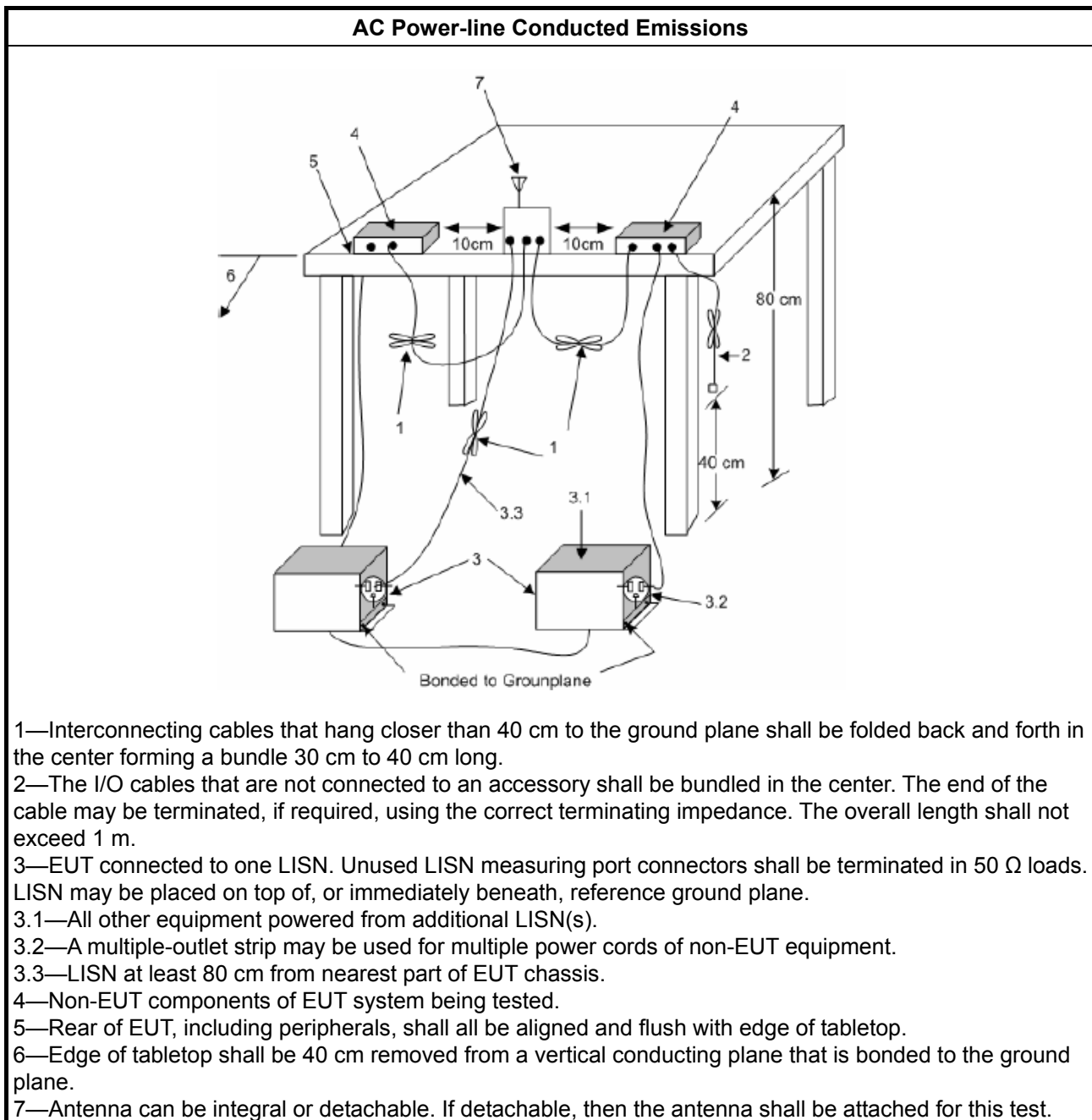
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

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

3.1.4 Test Setup



3.1.5 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 Emission Bandwidth

3.2.1 Emission Bandwidth Limit

Emission Bandwidth Limit	
UNII Devices	
☒	For the 5.15-5.25 GHz band, N/A
☐	For the 5.25-5.35 GHz band, the maximum conducted output power shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz.
☐	For the 5.47-5.725 GHz band, the maximum conducted output power shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz.
☒	For the 5.725-5.85 GHz band, 6 dB emission bandwidth $\geq$ 500kHz.
LE-LAN Devices	
☐	For the band 5.15-5.25 GHz, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.
☐	For the 5.25-5.35 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz
☐	For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz
☐	For the 5.725-5.85 GHz band, 6 dB emission bandwidth $\geq$ 500kHz.

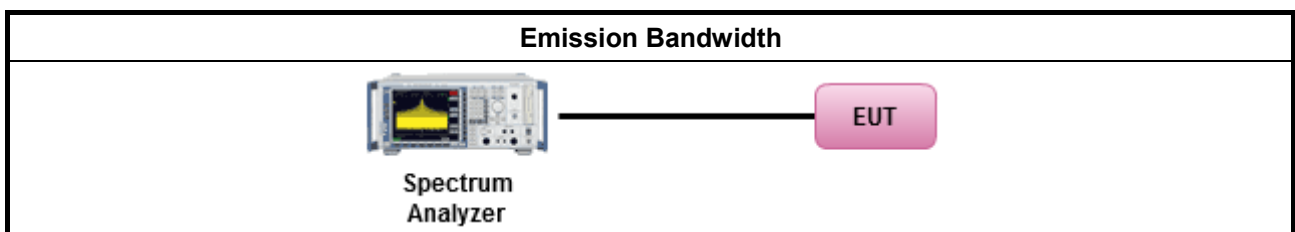
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method	
For the emission bandwidth shall be measured using one of the options below:	
☒	Refer as FCC KDB 789033, clause C for EBW and clause D for OBW measurement.
☐	Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.
☐	Refer as IC RSS-Gen, clause 4.6 for bandwidth testing.

3.2.4 Test Setup



3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B



3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit	
UNII Devices	
☒ For the 5.15-5.25 GHz band:	
☐	- Outdoor AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$. e.i.r.p. at any elevation angle above 30 degrees ≤ 125mW [21dBm] - Indoor AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$ - Point-to-point AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 23$ dBi, then $P_{Out} = 30 - (G_{TX} - 23)$. - Mobile or Portable Client: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$.
☐	For the 5.25-5.35 GHz band, the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$.
☐	For the 5.47-5.725 GHz band, the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$.
☒ For the 5.725-5.85 GHz band:	
☐	- Point-to-multipoint systems (P2M): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$. - Point-to-point systems (P2P): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W.
LE-LAN Devices	
☐	For the 5.15-5.25 GHz band, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.
☐	For the 5.25-5.35 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz
☐	For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz
☐ For the 5.725-5.85 GHz band:	
☐	- Point-to-multipoint systems (P2M): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$. - Point-to-point systems (P2P): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W.
P_{Out} = maximum conducted output power in dBm, G_{TX} = the maximum transmitting antenna directional gain in dBi.	

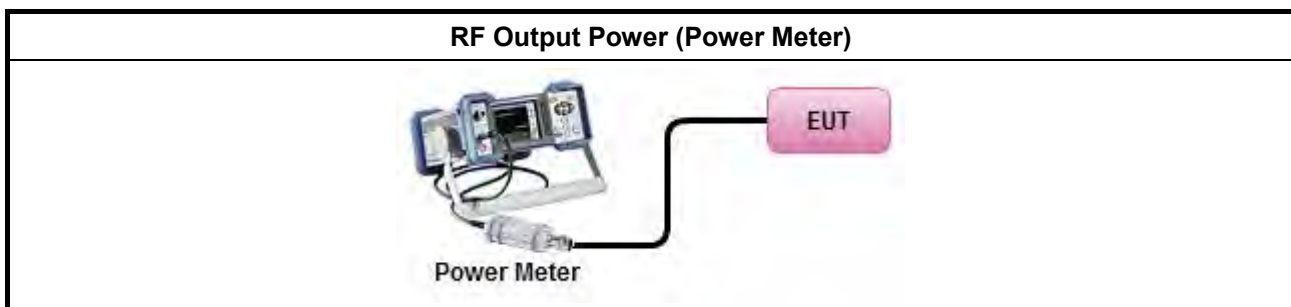
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

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

3.3.4 Test Setup



3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C



3.4 Peak Power Spectral Density

3.4.1 Peak Power Spectral Density Limit

Peak Power Spectral Density Limit	
UNII Devices	
☒ For the 5.15-5.25 GHz band:	
☐	- Outdoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$. - Indoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$. - Point-to-point AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 23$ dBi, then $P_{Out} = 17 - (G_{TX} - 23)$. - Mobile or Portable Client: the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.
☐	For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.
☐	For the 5.47-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then $PPSD = 11 - (G_{TX} - 6)$.
☒ For the 5.725-5.85 GHz band:	
☐	- Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If $G_{TX} > 6$ dBi, then $PPSD = 30 - (G_{TX} - 6)$. - Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.
LE-LAN Devices	
☐	For the 5.15-5.25 GHz band, the 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.
☐	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 (θ-40) dBW/MHz for $40^\circ \leq \theta \leq 45^\circ$; -42 dBW/MHz for $\theta > 45^\circ$
☐	For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz.
☐ 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 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.	

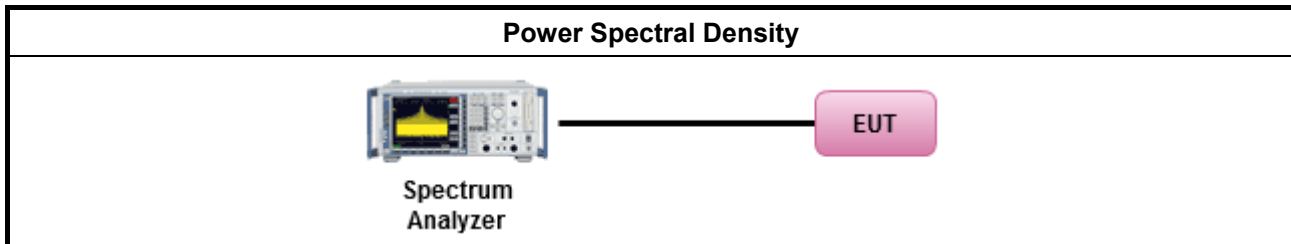
3.4.2 Measuring Instruments

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, F)5) 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 Unwanted Emissions Limit

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

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

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

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

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

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



linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

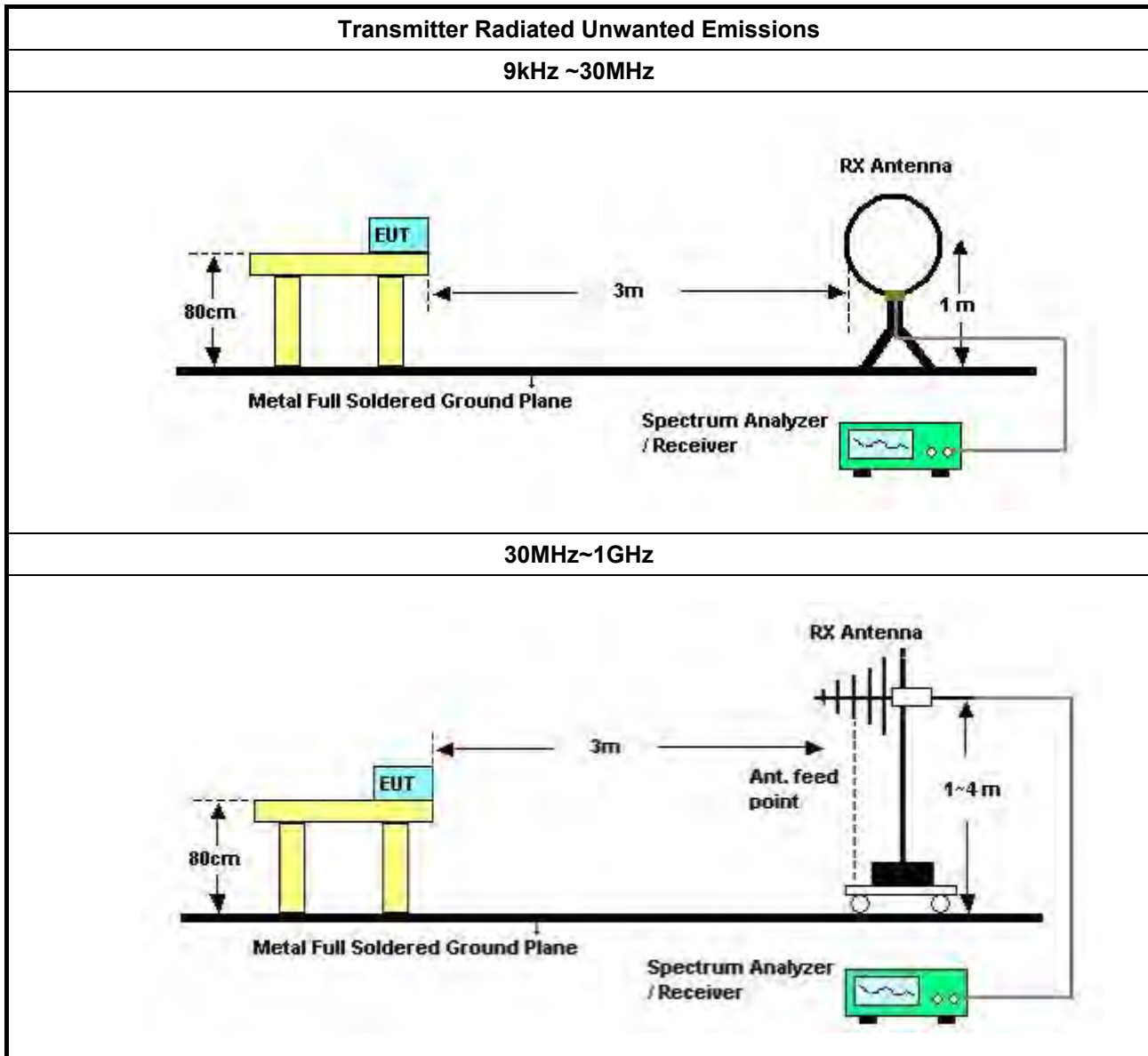
3.5.2 Measuring Instruments

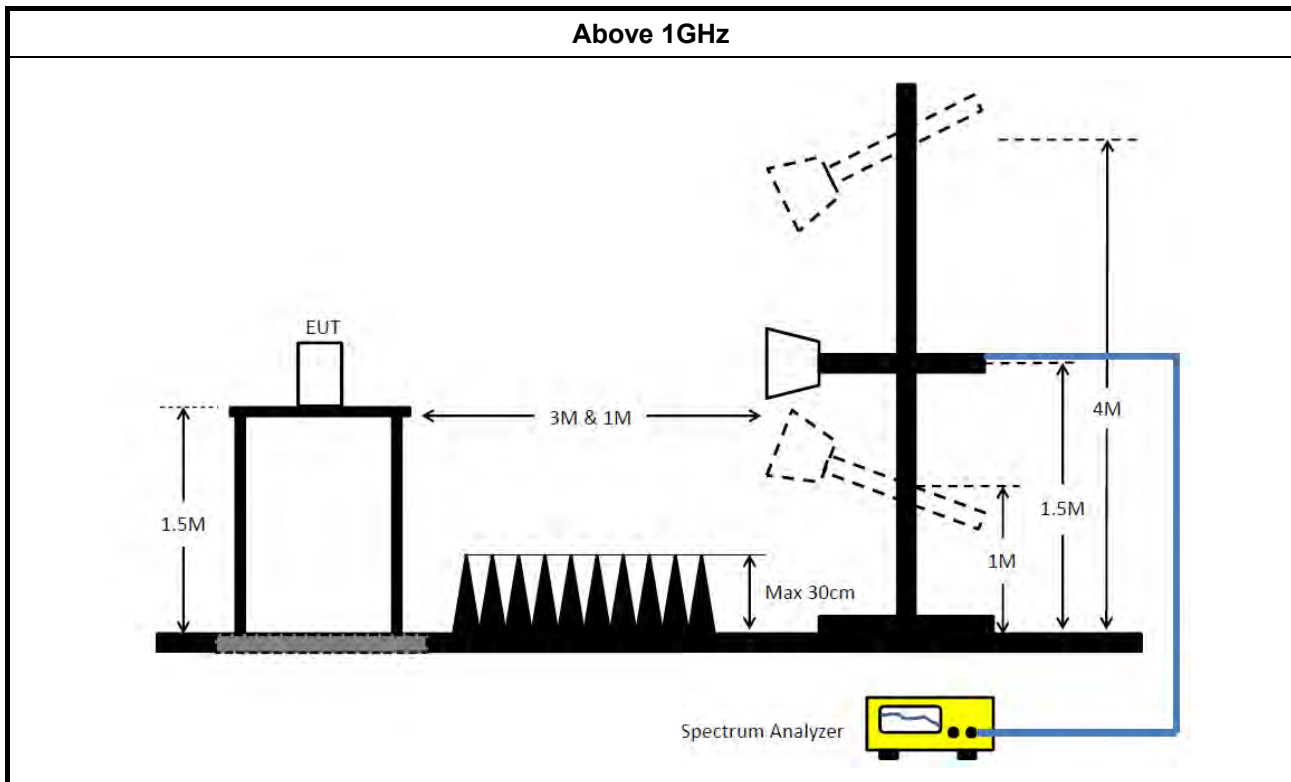
Refer a test equipment and calibration data table in this test report.

3.5.3 Test Procedures

Test Method	
Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 m for frequencies above 30 MHz, unless it can be further demonstrated that measurements at a distance of 30 m or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).	
The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].	
For the transmitter unwanted emissions shall be measured using following options below:	
	Refer as FCC KDB 789033, clause G)2) for unwanted emissions into non-restricted bands.
	Refer as FCC KDB 789033, clause G)1) for unwanted emissions into restricted bands.
	☐ Refer as FCC KDB 789033, G)6) Method AD (Trace Averaging).
	☒ Refer as FCC KDB 789033, G)6) Method VB (Reduced VBW).
	☐ Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW $\geq 1/T$, where T is pulse time.
	☐ Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions.
	☒ Refer as FCC KDB 789033, clause G)5) measurement procedure peak limit.
☐ Refer as ANSI C63.10, clause 4.1.4.2.2 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.

The radiated emissions were investigated from 9 kHz or the lowest frequency generated within the device, up to the 10 harmonic or 40 GHz, whichever is appropriate.

3.5.6 Test Result of Transmitter Unwanted Emissions

Refer as Appendix E



4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
LISN	Schwarzbeck	NSLK 8127	8127650	9kHz ~ 30MHz	Nov. 24, 2017	Nov. 23, 2018	Conduction (CO02-CB)
LISN	Schwarzbeck	NSLK 8127	8127478	9kHz ~ 30MHz	Nov. 13, 2017	Nov. 12, 2018	Conduction (CO02-CB)
EMI Receiver	Agilent	N9038A	MY52260140	9kHz ~ 8.4GHz	Jan. 17, 2018	Jan. 16, 2019	Conduction (CO02-CB)
COND Cable	Woken	Cable	2	0.15MHz ~ 30MHz	Nov. 10, 2017	Nov. 09, 2018	Conduction (CO02-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	N.C.R.	Conduction (CO02-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2018	Mar. 15, 2019	Radiation (03CH01-CB)
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCi	CBL6112D & N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Aug. 27, 2018	Aug. 26, 2019	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 20, 2017	Nov. 19, 2018	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 13, 2018	Nov. 12, 2019	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jun. 28, 2018	Jun. 27, 2019	Radiation (03CH01-CB)
Pre-Amplifier	EMCI	EMC330N	980332	20MHz ~ 3GHz	May 02, 2018	May 01, 2019	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 09, 2018	Jan. 08, 2019	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 04, 2018	Jul. 03, 2019	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSP40	100080	9kHz~40GHz	Oct. 03, 2018	Oct. 02, 2019	Radiation (03CH01-CB)
EMI Test Receiver	R&S	ESCS	100359	9kHz ~ 2.75GHz	Jul. 03, 2018	Jul. 02, 2019	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~ 1 GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz ~ 40 GHz	Jul. 27, 2018	Jul. 26, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Jul. 27, 2018	Jul. 26, 2019	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 21, 2017	Dec. 20, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz ~ 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)



Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-07	1 GHz –26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz –26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz –26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 20, 2017	Nov. 19, 2018	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 05, 2018	Nov. 04, 2019	Conducted (TH01-CB)

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

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



AC Power-line Conducted Emissions Result

Appendix A

AC Power-line Conducted Emissions Result									
Operating Mode			1			Power Phase		Line	
Operating Function			Normal Link						
Level (dBuV)									



AC Power-line Conducted Emissions Result

Appendix A

AC Power-line Conducted Emissions Result									
Operating Mode			1			Power Phase		Neutral	
Operating Function			Normal Link						
Level (dBuV) 80 70 60 50 40 30 20 10 0 0.150.2 0.5 1 2 5 10 20 30 Frequency (MHz) Date: 2018-10-25 Time: 17:10:17 CISPR_B_QP CISPR_B_AV 10 12 14 13 15									
	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1633	35.70	-19.60	55.30	25.52	10.17	0.01	Average	NEUTRAL
2	0.1633	47.11	-18.19	65.30	36.93	10.17	0.01	QP	NEUTRAL
3	0.1835	35.98	-18.35	54.33	25.80	10.17	0.01	Average	NEUTRAL
4	0.1835	47.44	-16.89	64.33	37.26	10.17	0.01	QP	NEUTRAL
5	0.1976	38.83	-14.88	53.71	28.65	10.17	0.01	Average	NEUTRAL
6	0.1976	47.49	-16.22	63.71	37.31	10.17	0.01	QP	NEUTRAL
7	0.5552	31.08	-14.92	46.00	20.88	10.17	0.03	Average	NEUTRAL
8	0.5552	40.15	-15.85	56.00	29.95	10.17	0.03	QP	NEUTRAL
9	7.9233	34.98	-15.02	50.00	24.62	10.29	0.07	Average	NEUTRAL
10	7.9233	42.93	-17.07	60.00	32.57	10.29	0.07	QP	NEUTRAL
11	11.7446	38.93	-11.07	50.00	28.51	10.34	0.08	Average	NEUTRAL
12	11.7446	45.03	-14.97	60.00	34.61	10.34	0.08	QP	NEUTRAL
13	16.4646	42.76	-7.24	50.00	32.27	10.38	0.11	Average	NEUTRAL
14	16.4646	46.04	-13.96	60.00	35.55	10.38	0.11	QP	NEUTRAL
15	27.5426	30.99	-19.01	50.00	20.28	10.49	0.22	Average	NEUTRAL
16	27.5426	43.85	-16.15	60.00	33.14	10.49	0.22	QP	NEUTRAL

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

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

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	38.35M	18.391M	18M4D1D	35.725M	16.692M
802.11ac VHT20_Nss1,(MCS0)_1TX	45.225M	23.163M	23M2D1D	43.15M	18.141M
802.11ac VHT40_Nss1,(MCS0)_1TX	95.9M	40.28M	40M3D1D	41.5M	36.082M
802.11ac VHT80_Nss1,(MCS0)_1TX	98.4M	75.562M	75M6D1D	98.4M	75.562M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	16.5M	16.642M	16M6D1D	16.475M	16.442M
802.11ac VHT20_Nss1,(MCS0)_1TX	17.6M	17.566M	17M6D1D	17.575M	17.541M
802.11ac VHT40_Nss1,(MCS0)_1TX	36.45M	36.232M	36M2D1D	36.4M	36.232M
802.11ac VHT80_Nss1,(MCS0)_1TX	76.4M	76.262M	76M3D1D	76.4M	76.262M

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

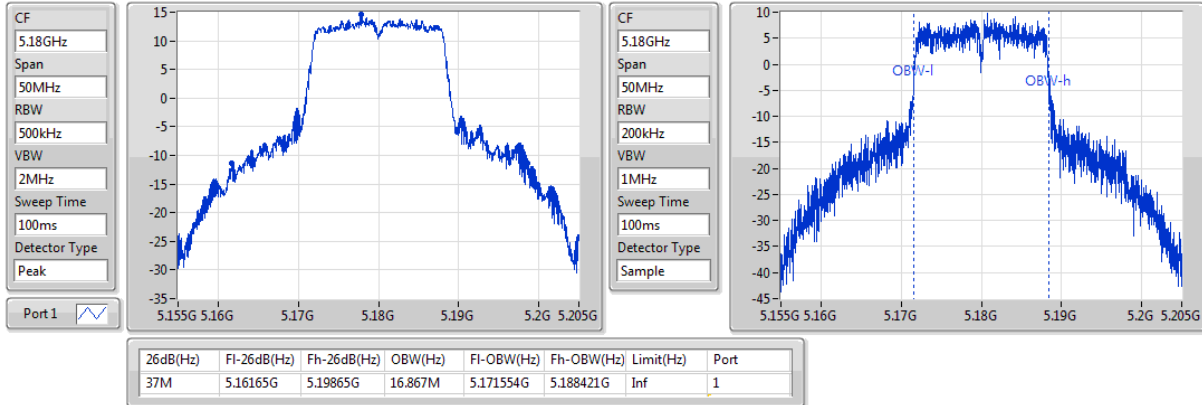
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11a_Nss1,(6Mbps)_1TX	-	-	-	-
5180MHz	Pass	Inf	37M	16.867M
5200MHz	Pass	Inf	35.725M	16.692M
5240MHz	Pass	Inf	38.35M	18.391M
5745MHz	Pass	500k	16.475M	16.467M
5785MHz	Pass	500k	16.5M	16.442M
5825MHz	Pass	500k	16.475M	16.642M
802.11ac VHT20_Nss1,(MCS0)_1TX	-	-	-	-
5180MHz	Pass	Inf	43.15M	18.141M
5200MHz	Pass	Inf	45.225M	23.163M
5240MHz	Pass	Inf	44.525M	19.79M
5745MHz	Pass	500k	17.6M	17.541M
5785MHz	Pass	500k	17.575M	17.541M
5825MHz	Pass	500k	17.6M	17.566M
802.11ac VHT40_Nss1,(MCS0)_1TX	-	-	-	-
5190MHz	Pass	Inf	41.5M	36.082M
5230MHz	Pass	Inf	95.9M	40.28M
5755MHz	Pass	500k	36.4M	36.232M
5795MHz	Pass	500k	36.45M	36.232M
802.11ac VHT80_Nss1,(MCS0)_1TX	-	-	-	-
5210MHz	Pass	Inf	98.4M	75.562M
5775MHz	Pass	500k	76.4M	76.262M

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

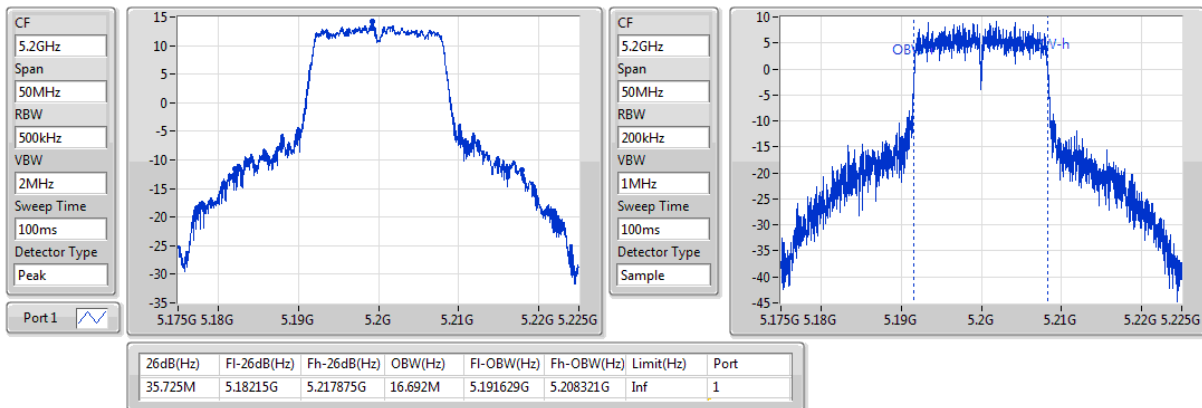
Port X-OBW = Port X 99% occupied bandwidth;

802.11a_Nss1,(6Mbps)_1TX
EBW
5180MHz

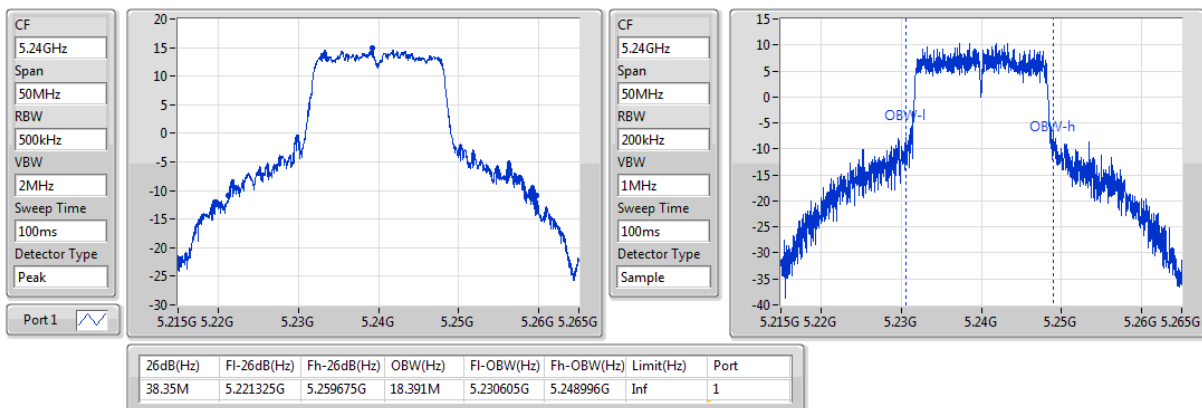
25/10/2018


802.11a_Nss1,(6Mbps)_1TX
EBW
5200MHz

25/10/2018

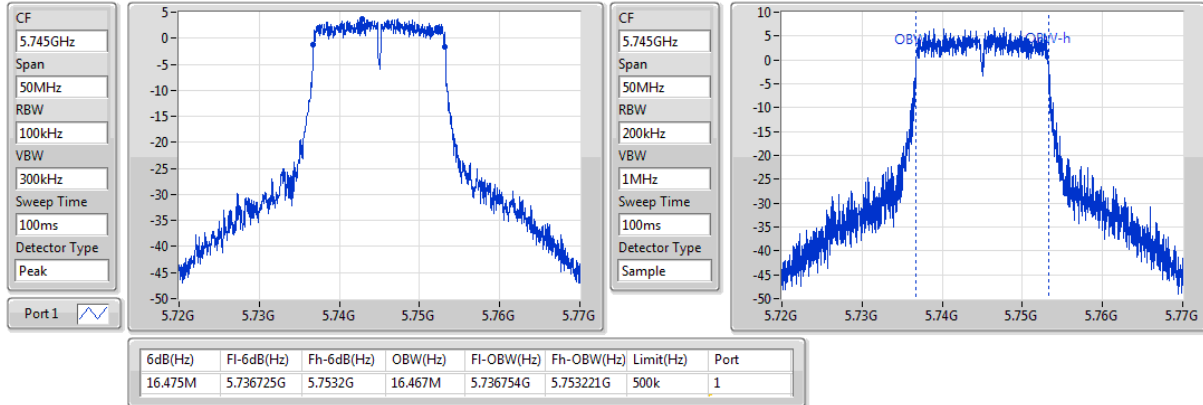

802.11a_Nss1,(6Mbps)_1TX
EBW
5240MHz

25/10/2018

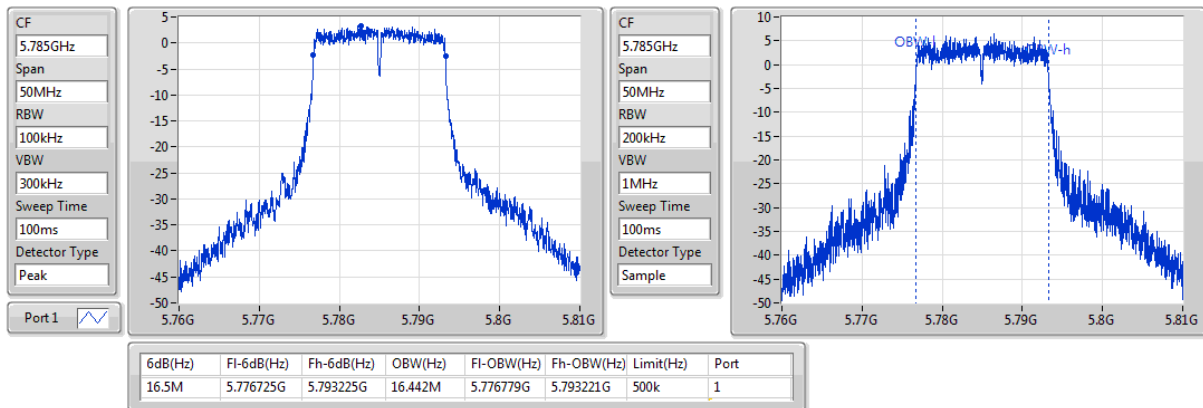


802.11a_Nss1,(6Mbps)_1TX
EBW
5745MHz

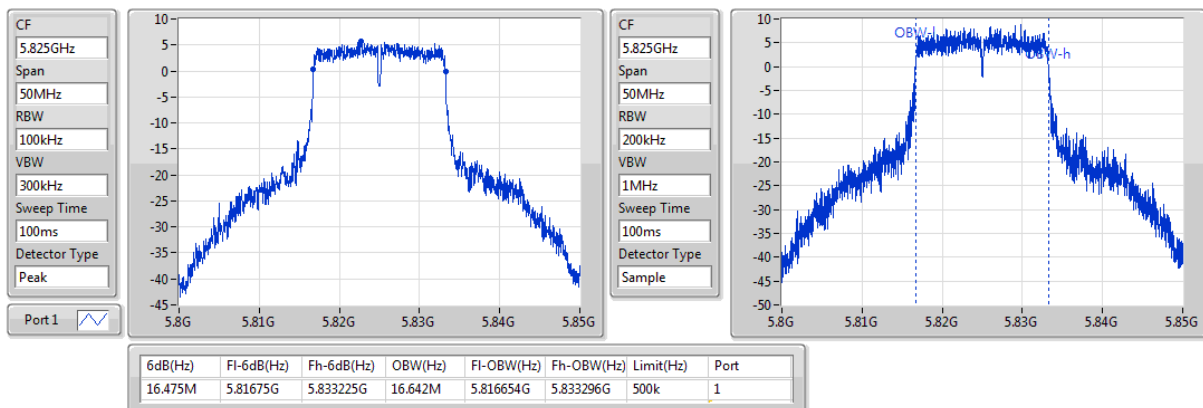
25/10/2018


802.11a_Nss1,(6Mbps)_1TX
EBW
5785MHz

25/10/2018

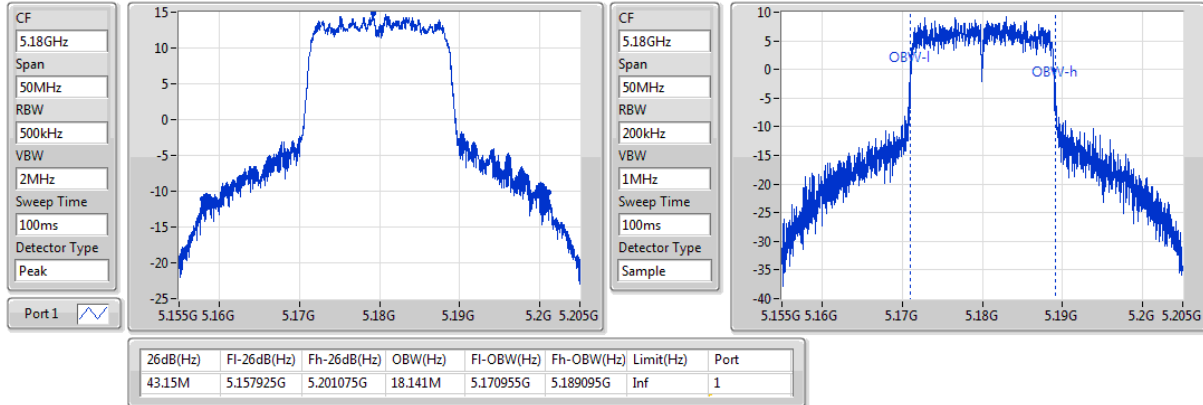

802.11a_Nss1,(6Mbps)_1TX
EBW
5825MHz

25/10/2018

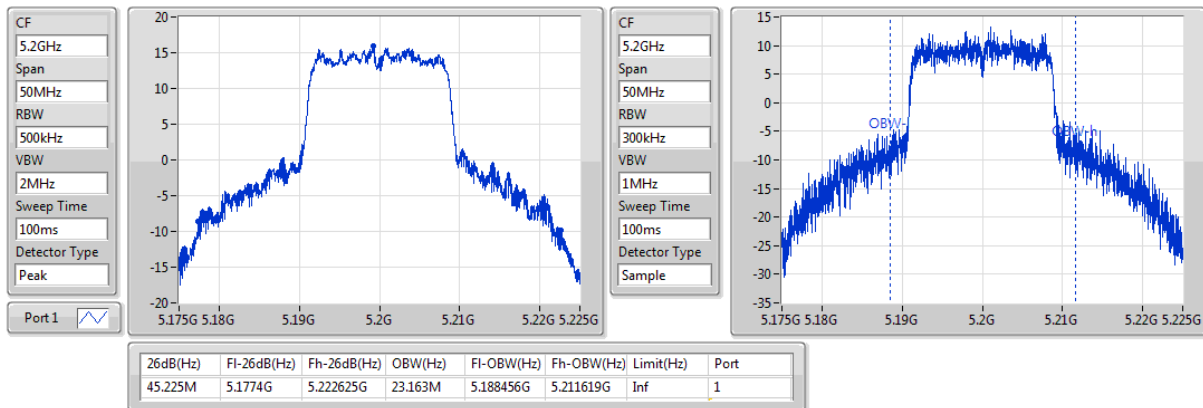


802.11ac VHT20_Nss1,(MCS0)_1TX
EBW
5180MHz

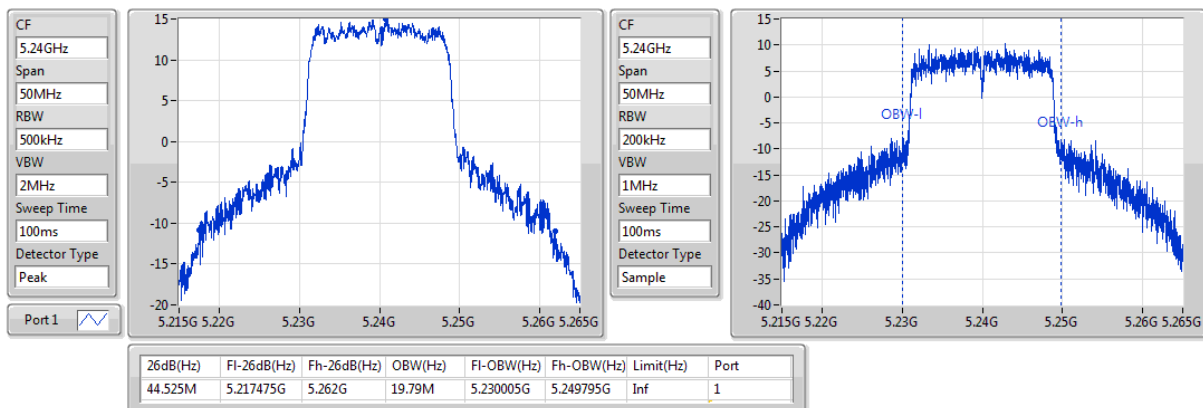
25/10/2018


802.11ac VHT20_Nss1,(MCS0)_1TX
EBW
5200MHz

25/10/2018

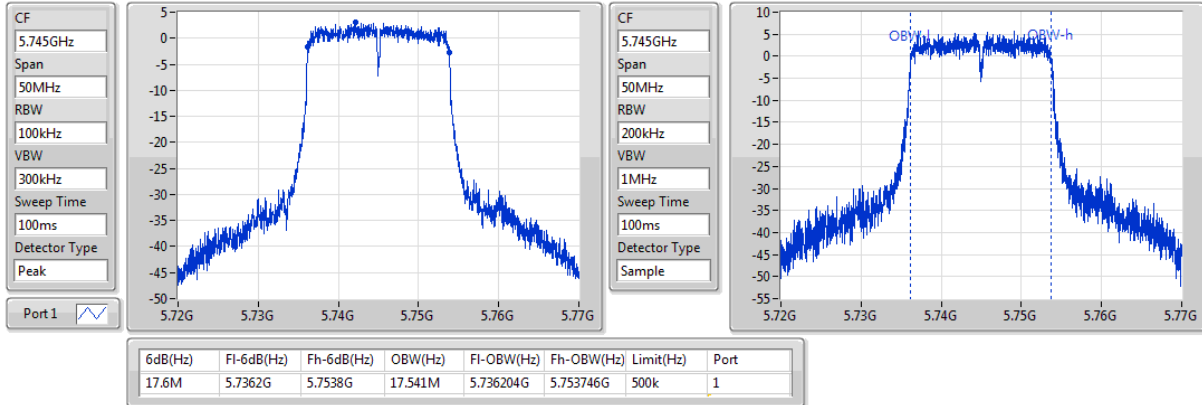

802.11ac VHT20_Nss1,(MCS0)_1TX
EBW
5240MHz

25/10/2018

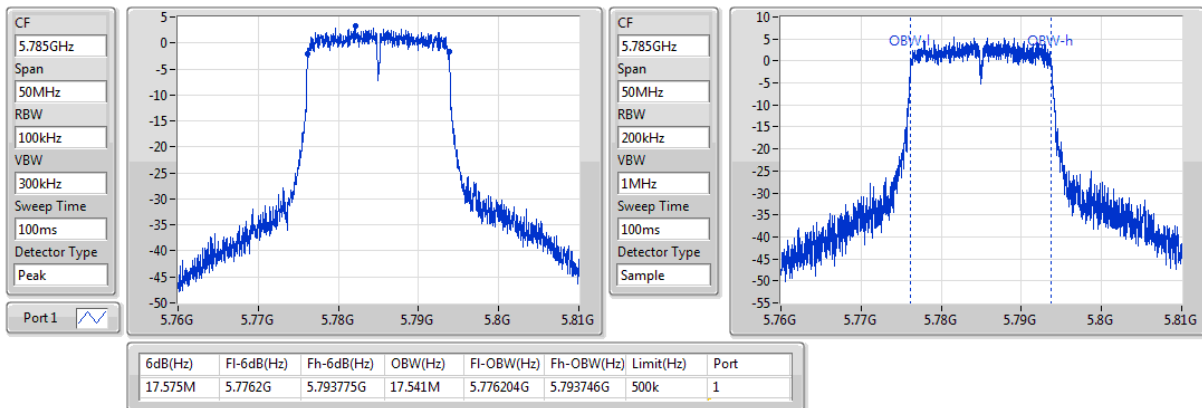


802.11ac VHT20_Nss1,(MCS0)_1TX
EBW
5745MHz

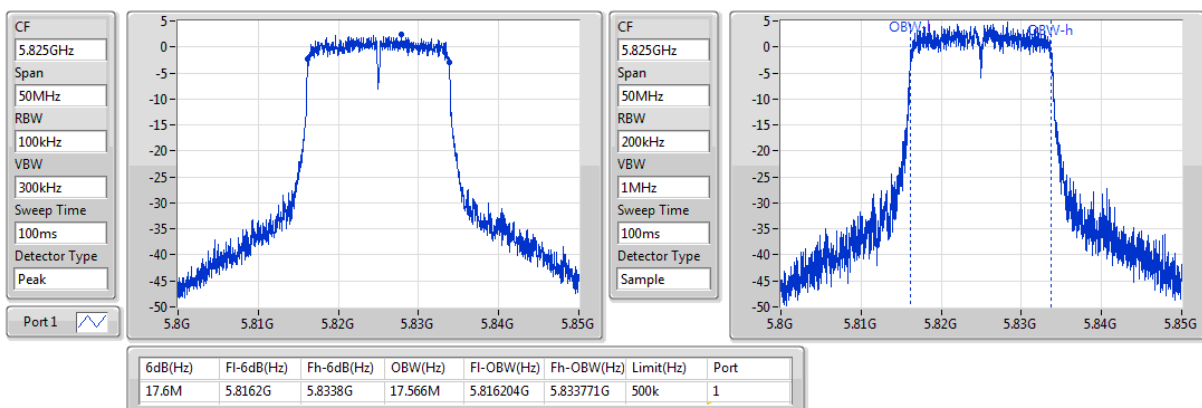
25/10/2018


802.11ac VHT20_Nss1,(MCS0)_1TX
EBW
5785MHz

25/10/2018

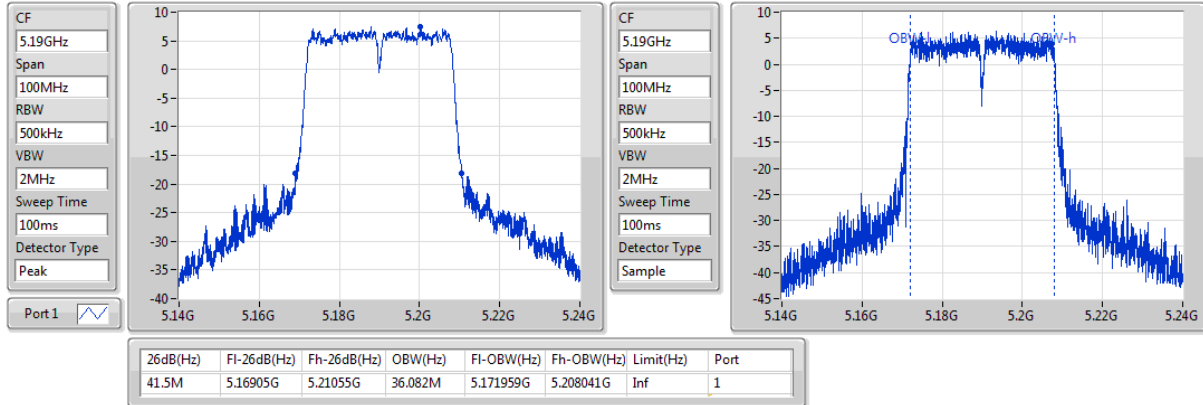

802.11ac VHT20_Nss1,(MCS0)_1TX
EBW
5825MHz

25/10/2018

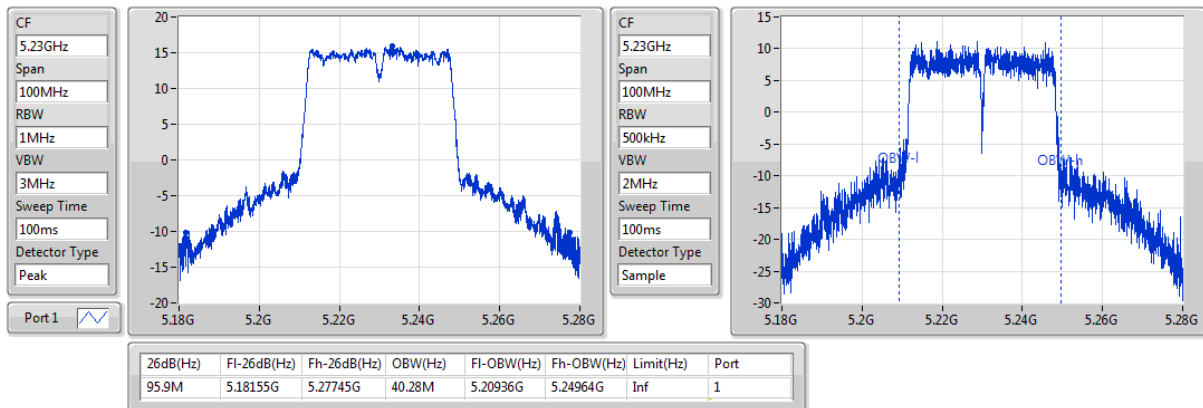


802.11ac VHT40_Nss1,(MCS0)_1TX
EBW
5190MHz

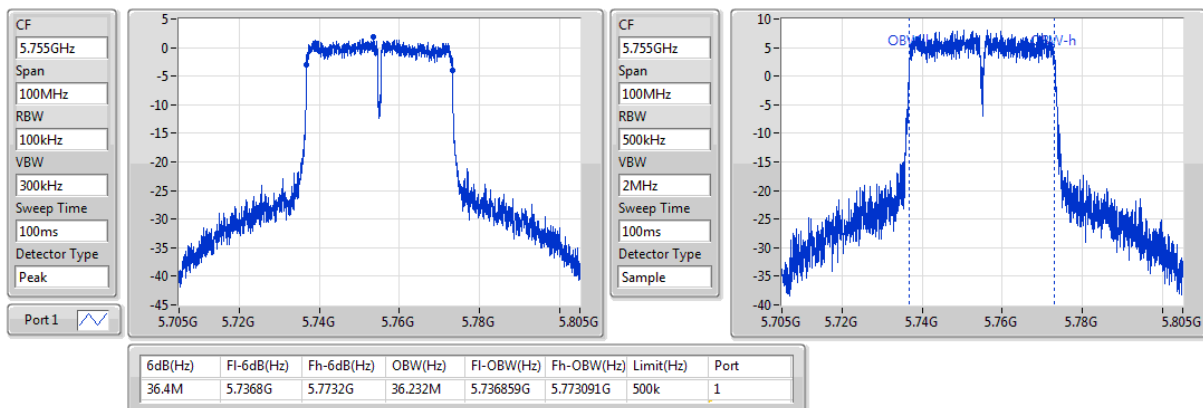
25/10/2018


802.11ac VHT40_Nss1,(MCS0)_1TX
EBW
5230MHz

25/10/2018

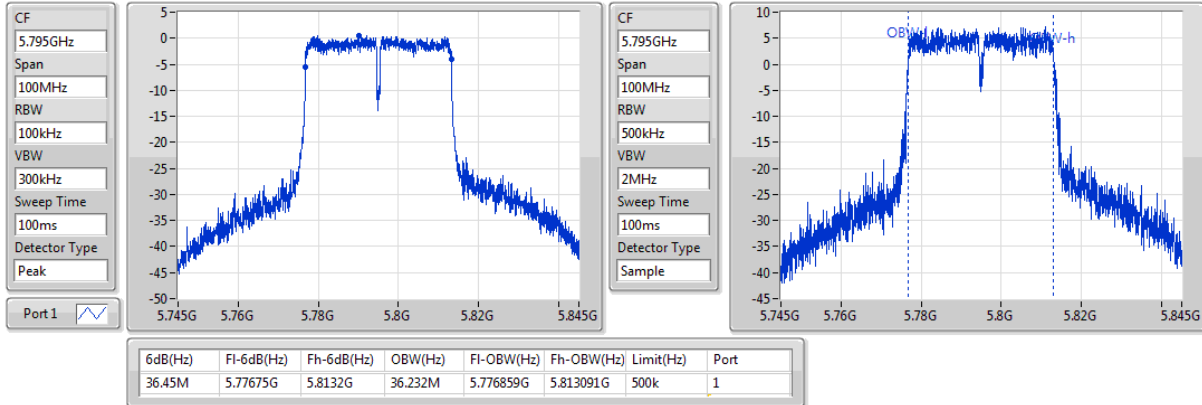

802.11ac VHT40_Nss1,(MCS0)_1TX
EBW
5755MHz

25/10/2018

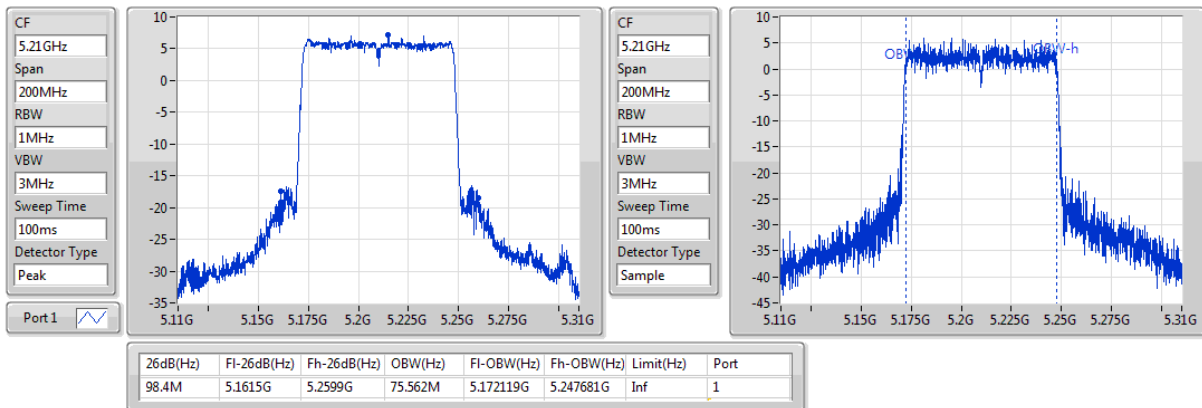


802.11ac VHT40_Nss1,(MCS0)_1TX
EBW
5795MHz

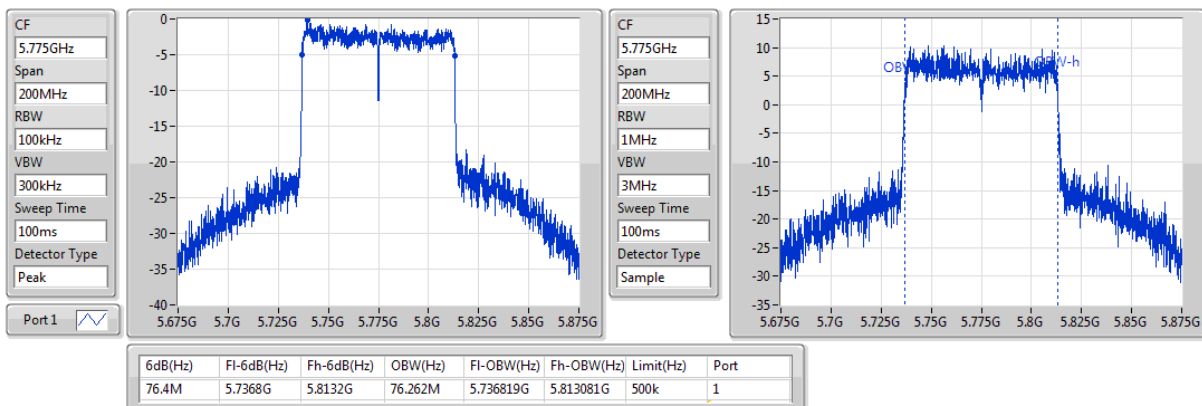
25/10/2018


802.11ac VHT80_Nss1,(MCS0)_1TX
EBW
5210MHz

25/10/2018


802.11ac VHT80_Nss1,(MCS0)_1TX
EBW
5775MHz

25/10/2018



Summary

Mode	Total Power (dBm)	Total Power (W)
5.15-5.25GHz	-	-
802.11a_Nss1,(6Mbps)_1TX	22.09	0.16181
802.11ac VHT20_Nss1,(MCS0)_1TX	22.91	0.19543
802.11ac VHT40_Nss1,(MCS0)_1TX	22.32	0.17061
802.11ac VHT80_Nss1,(MCS0)_1TX	16.64	0.04613
5.725-5.85GHz	-	-
802.11a_Nss1,(6Mbps)_1TX	18.78	0.07551
802.11ac VHT20_Nss1,(MCS0)_1TX	18.22	0.06637
802.11ac VHT40_Nss1,(MCS0)_1TX	19.84	0.09638
802.11ac VHT80_Nss1,(MCS0)_1TX	20.55	0.11350

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11a_Nss1,(6Mbps)_1TX	-	-	-	-	-
5180MHz	Pass	2.98	21.51	21.51	30.00
5200MHz	Pass	2.98	21.18	21.18	30.00
5240MHz	Pass	2.98	22.09	22.09	30.00
5745MHz	Pass	2.98	18.78	18.78	30.00
5785MHz	Pass	2.98	18.25	18.25	30.00
5825MHz	Pass	2.98	18.10	18.10	30.00
802.11ac VHT20_Nss1,(MCS0)_1TX	-	-	-	-	-
5180MHz	Pass	2.98	21.85	21.85	30.00
5200MHz	Pass	2.98	22.91	22.91	30.00
5240MHz	Pass	2.98	22.26	22.26	30.00
5745MHz	Pass	2.98	18.22	18.22	30.00
5785MHz	Pass	2.98	17.77	17.77	30.00
5825MHz	Pass	2.98	17.44	17.44	30.00
802.11ac VHT40_Nss1,(MCS0)_1TX	-	-	-	-	-
5190MHz	Pass	2.98	17.83	17.83	30.00
5230MHz	Pass	2.98	22.32	22.32	30.00
5755MHz	Pass	2.98	19.84	19.84	30.00
5795MHz	Pass	2.98	18.86	18.86	30.00
802.11ac VHT80_Nss1,(MCS0)_1TX	-	-	-	-	-
5210MHz	Pass	2.98	16.64	16.64	30.00
5775MHz	Pass	2.98	20.55	20.55	30.00

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

Summary

Mode	PD (dBm/RBW)
5.15-5.25GHz	-
802.11a_Nss1,(6Mbps)_1TX	8.89
802.11ac VHT20_Nss1,(MCS0)_1TX	9.35
802.11ac VHT40_Nss1,(MCS0)_1TX	5.58
802.11ac VHT80_Nss1,(MCS0)_1TX	-3.20
5.725-5.85GHz	-
802.11a_Nss1,(6Mbps)_1TX	4.03
802.11ac VHT20_Nss1,(MCS0)_1TX	3.25
802.11ac VHT40_Nss1,(MCS0)_1TX	1.65
802.11ac VHT80_Nss1,(MCS0)_1TX	-0.36

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

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11a_Nss1,(6Mbps)_1TX	-	-	-	-	-
5180MHz	Pass	2.98	8.33	8.33	17.00
5200MHz	Pass	2.98	7.94	7.94	17.00
5240MHz	Pass	2.98	8.89	8.89	17.00
5745MHz	Pass	2.98	4.03	4.03	30.00
5785MHz	Pass	2.98	3.58	3.58	30.00
5825MHz	Pass	2.98	3.36	3.36	30.00
802.11ac VHT20_Nss1,(MCS0)_1TX	-	-	-	-	-
5180MHz	Pass	2.98	8.34	8.34	17.00
5200MHz	Pass	2.98	9.35	9.35	17.00
5240MHz	Pass	2.98	8.71	8.71	17.00
5745MHz	Pass	2.98	3.25	3.25	30.00
5785MHz	Pass	2.98	2.71	2.71	30.00
5825MHz	Pass	2.98	2.50	2.50	30.00
802.11ac VHT40_Nss1,(MCS0)_1TX	-	-	-	-	-
5190MHz	Pass	2.98	1.13	1.13	17.00
5230MHz	Pass	2.98	5.58	5.58	17.00
5755MHz	Pass	2.98	1.65	1.65	30.00
5795MHz	Pass	2.98	0.60	0.60	30.00
802.11ac VHT80_Nss1,(MCS0)_1TX	-	-	-	-	-
5210MHz	Pass	2.98	-3.20	-3.20	17.00
5775MHz	Pass	2.98	-0.36	-0.36	30.00

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

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

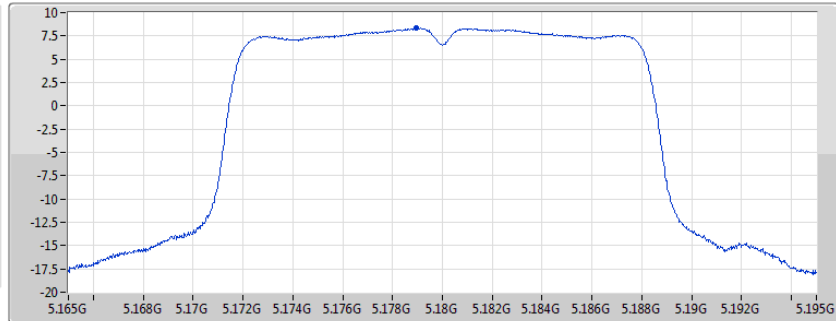
802.11a_Nss1,(6Mbps)_1TX

PSD

5180MHz

25/10/2018

CF
5.18GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



Port 1

Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
8.33	8.33	8.33

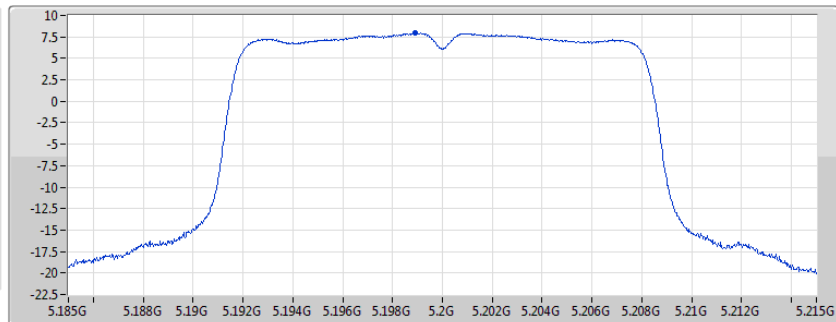
802.11a_Nss1,(6Mbps)_1TX

PSD

5200MHz

25/10/2018

CF
5.2GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



Port 1

Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.94	7.94	7.94

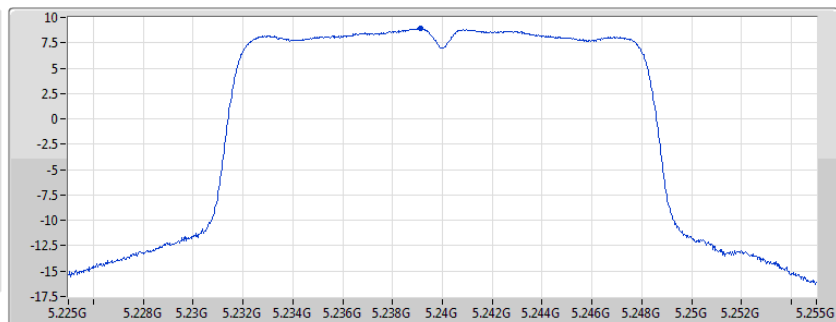
802.11a_Nss1,(6Mbps)_1TX

PSD

5240MHz

25/10/2018

CF
5.24GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



Port 1

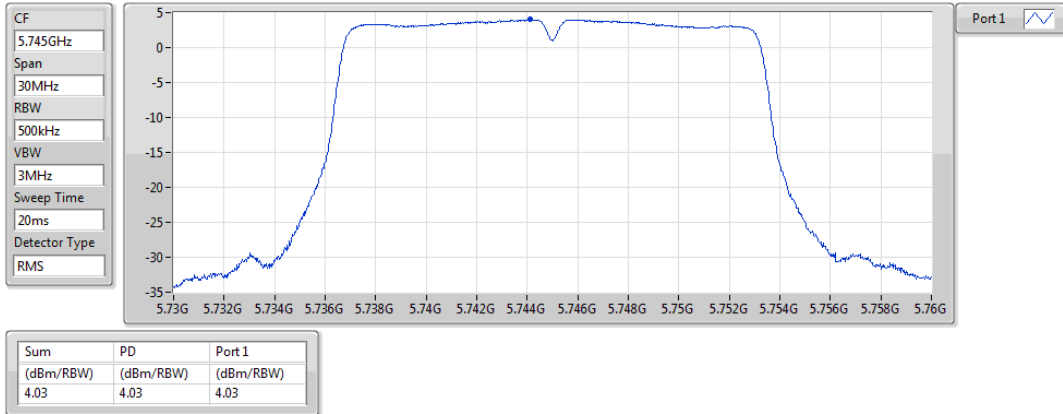
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
8.89	8.89	8.89

802.11a_Nss1,(6Mbps)_1TX

PSD

5745MHz

25/10/2018

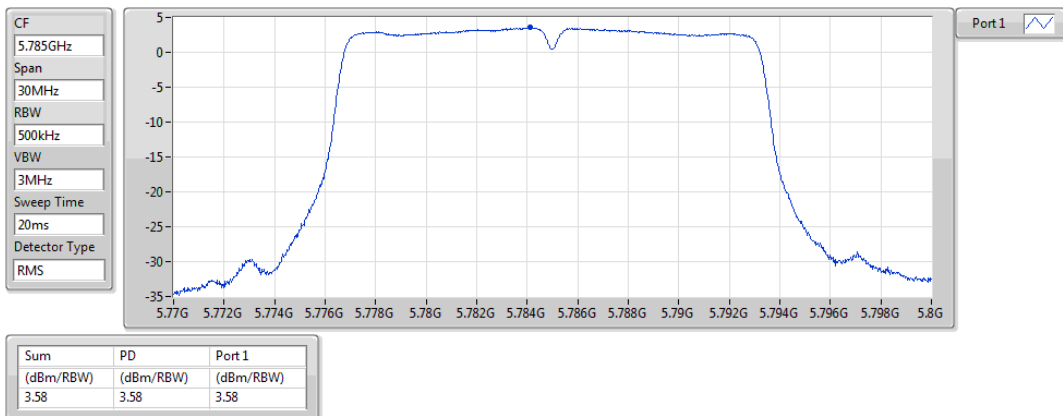


802.11a_Nss1,(6Mbps)_1TX

PSD

5785MHz

25/10/2018

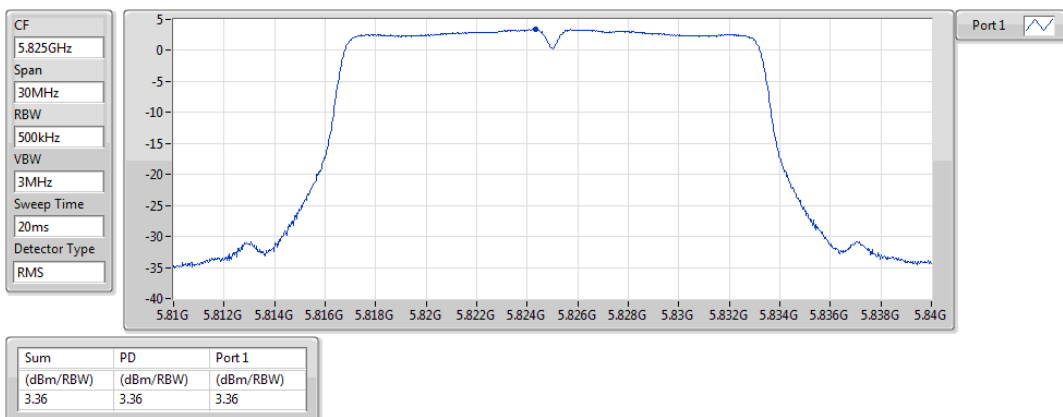


802.11a_Nss1,(6Mbps)_1TX

PSD

5825MHz

26/10/2018



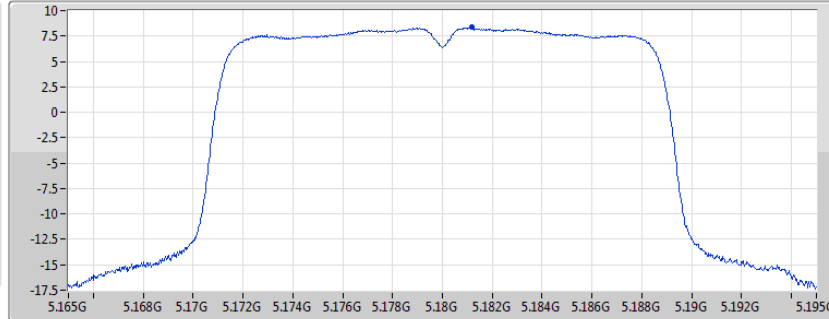
802.11ac VHT20_Nss1,(MCS0)_1TX

PSD

5180MHz

25/10/2018

CF
5.18GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



Port 1

Sum	PD	Port 1
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
8.34	8.34	8.34

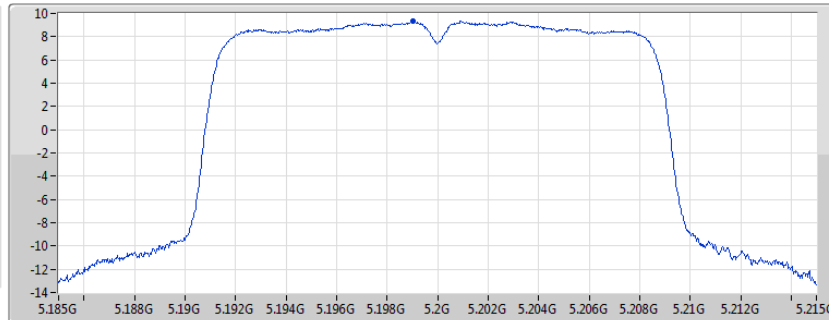
802.11ac VHT20_Nss1,(MCS0)_1TX

PSD

5200MHz

25/10/2018

CF
5.2GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



Port 1

Sum	PD	Port 1
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
9.35	9.35	9.35

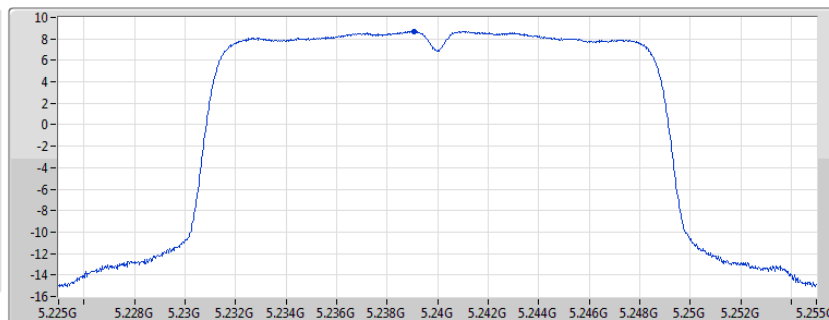
802.11ac VHT20_Nss1,(MCS0)_1TX

PSD

5240MHz

25/10/2018

CF
5.24GHz
Span
30MHz
RBW
1MHz
VBW
3MHz
Sweep Time
20ms
Detector Type
RMS



Port 1

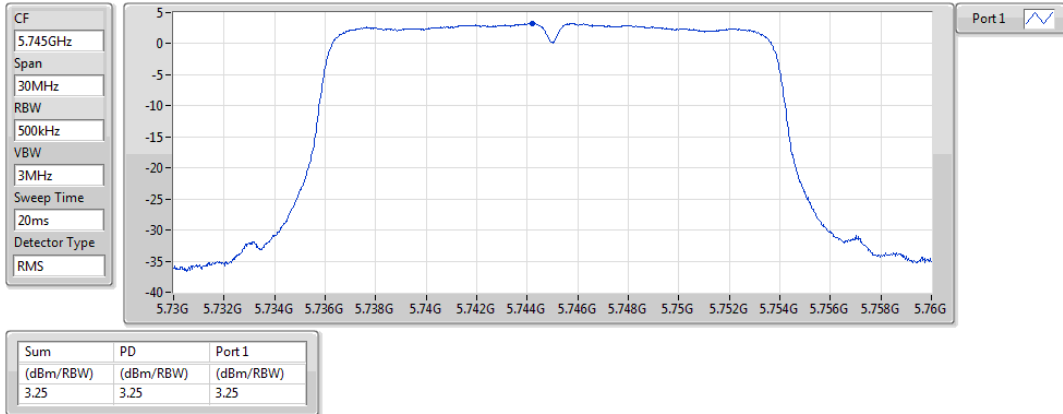
Sum	PD	Port 1
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
8.71	8.71	8.71

802.11ac VHT20_Nss1,(MCS0)_1TX

PSD

5745MHz

25/10/2018

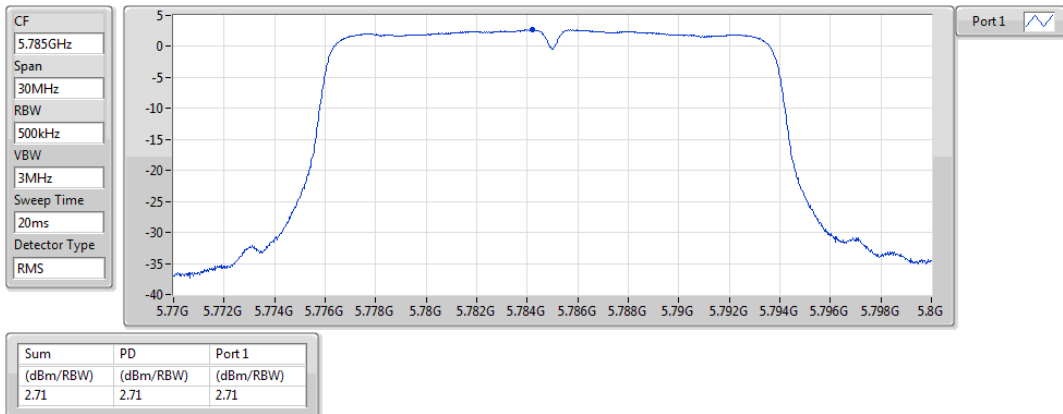


802.11ac VHT20_Nss1,(MCS0)_1TX

PSD

5785MHz

25/10/2018

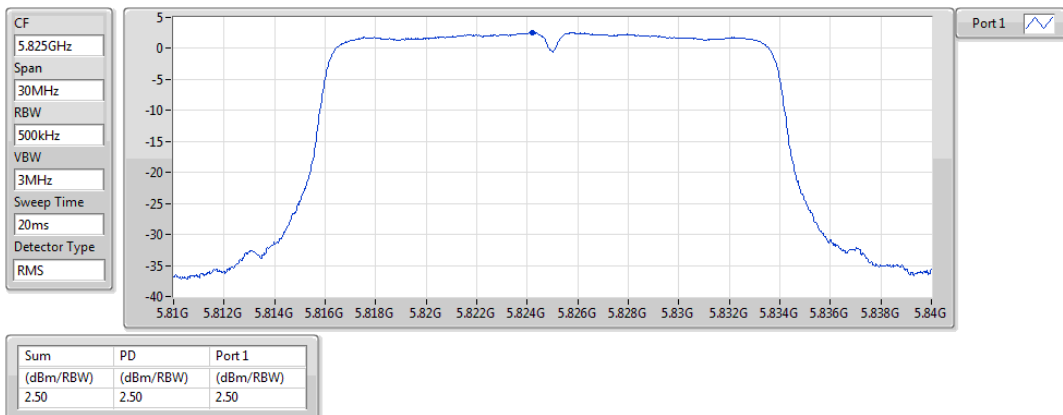


802.11ac VHT20_Nss1,(MCS0)_1TX

PSD

5825MHz

25/10/2018

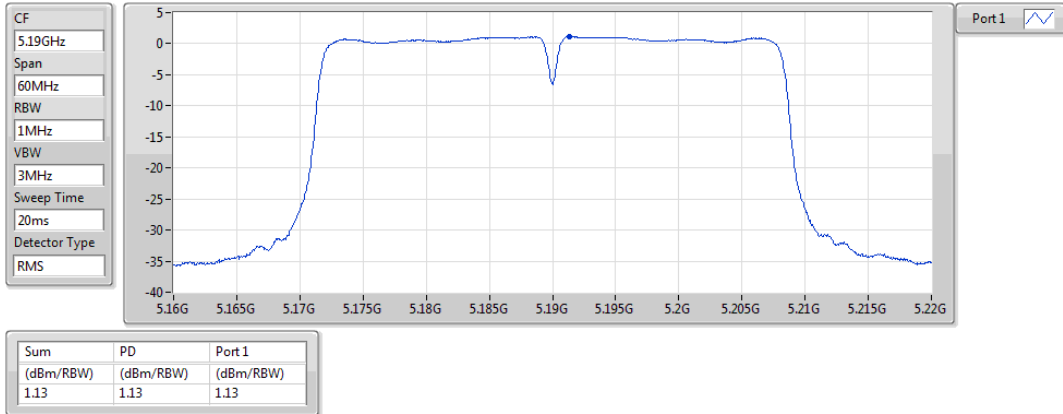


802.11ac VHT40_Nss1,(MCS0)_1TX

PSD

5190MHz

25/10/2018

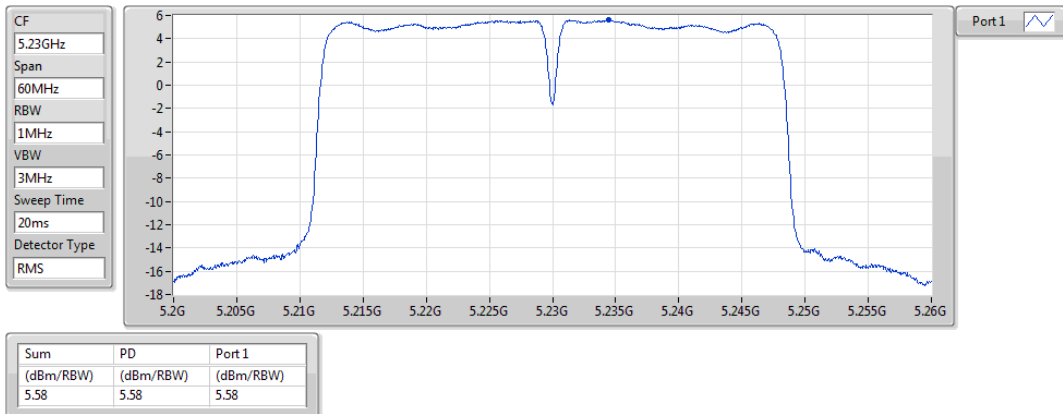


802.11ac VHT40_Nss1,(MCS0)_1TX

PSD

5230MHz

25/10/2018

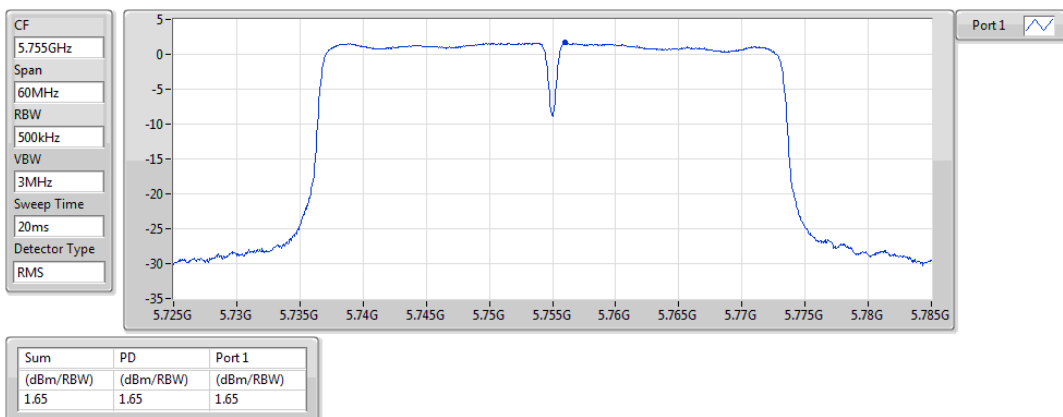


802.11ac VHT40_Nss1,(MCS0)_1TX

PSD

5755MHz

25/10/2018

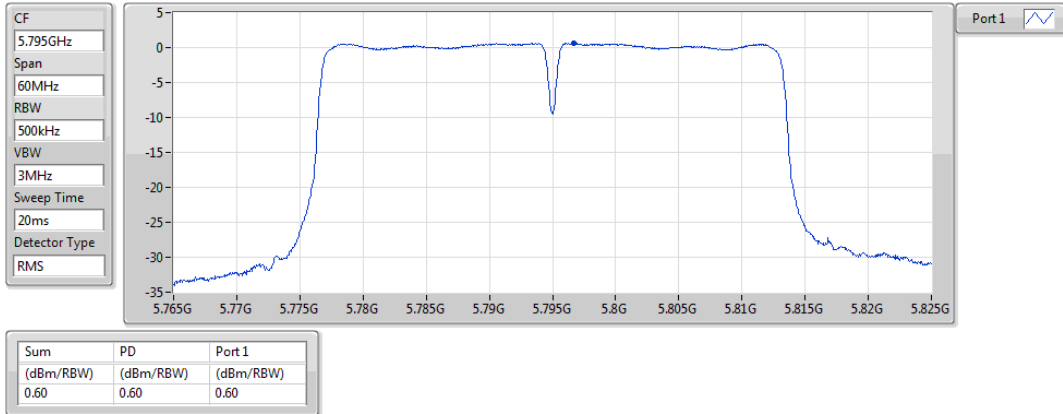


802.11ac VHT40_Nss1,(MCS0)_1TX

PSD

5795MHz

25/10/2018



802.11ac VHT80_Nss1,(MCS0)_1TX

PSD

5210MHz

25/10/2018



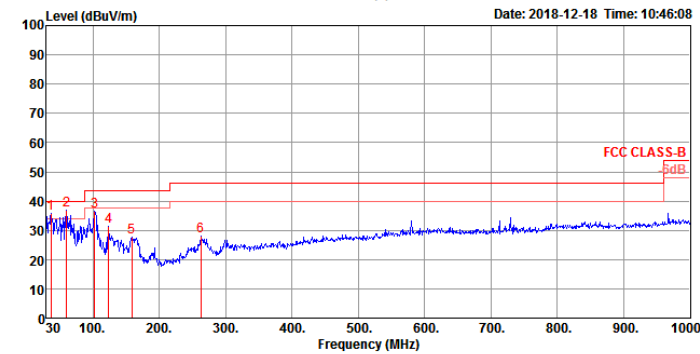
802.11ac VHT80_Nss1,(MCS0)_1TX

PSD

5775MHz

25/10/2018

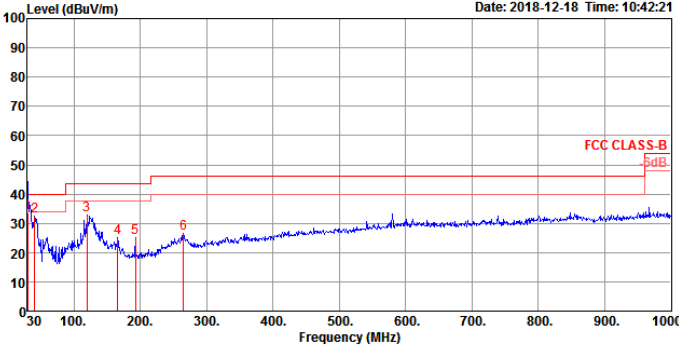


RSE below 1GHz Result																																																																																																												
Operating Mode			1			Polarization			Vertical																																																																																																			
Operating Function			Normal Link																																																																																																									
Data: 2File: D:\客户\信譽\RE200&RE220.EM6 (4)Date: 2018-12-18 Time: 10:46:08  <table><thead><tr><th></th><th>Freq</th><th>Level</th><th>Limit</th><th>Over</th><th>Read</th><th>CableAntenna</th><th>Preamp</th><th>A/Pos</th><th>T/Pos</th><th>Remark</th><th>Pol/Phase</th></tr><tr><th></th><th>MHz</th><th>dBuV/m</th><th>dBuV/m</th><th>dB</th><th>dBuV</th><th>dB</th><th>dB/m</th><th>dB</th><th>cm</th><th>deg</th><th></th></tr></thead><tbody><tr><td>1</td><td>36.79</td><td>35.76</td><td>40.00</td><td>-4.24</td><td>47.46</td><td>0.58</td><td>20.14</td><td>32.42</td><td>100</td><td>94 Peak</td><td>VERTICAL</td></tr><tr><td>2</td><td>60.07</td><td>36.85</td><td>40.00</td><td>-3.15</td><td>56.06</td><td>0.83</td><td>12.37</td><td>32.41</td><td>125</td><td>104 Peak</td><td>VERTICAL</td></tr><tr><td>3</td><td>102.75</td><td>36.53</td><td>43.50</td><td>-6.97</td><td>50.64</td><td>1.07</td><td>17.19</td><td>32.37</td><td>100</td><td>193 Peak</td><td>VERTICAL</td></tr><tr><td>4</td><td>124.09</td><td>31.21</td><td>43.50</td><td>-12.29</td><td>44.30</td><td>1.14</td><td>18.12</td><td>32.35</td><td>300</td><td>115 Peak</td><td>VERTICAL</td></tr><tr><td>5</td><td>159.01</td><td>27.74</td><td>43.50</td><td>-15.76</td><td>42.71</td><td>1.29</td><td>16.06</td><td>32.32</td><td>125</td><td>79 Peak</td><td>VERTICAL</td></tr><tr><td>6</td><td>262.80</td><td>27.93</td><td>46.00</td><td>-18.07</td><td>39.62</td><td>1.68</td><td>18.90</td><td>32.27</td><td>300</td><td>51 Peak</td><td>VERTICAL</td></tr></tbody></table>														Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		1	36.79	35.76	40.00	-4.24	47.46	0.58	20.14	32.42	100	94 Peak	VERTICAL	2	60.07	36.85	40.00	-3.15	56.06	0.83	12.37	32.41	125	104 Peak	VERTICAL	3	102.75	36.53	43.50	-6.97	50.64	1.07	17.19	32.37	100	193 Peak	VERTICAL	4	124.09	31.21	43.50	-12.29	44.30	1.14	18.12	32.35	300	115 Peak	VERTICAL	5	159.01	27.74	43.50	-15.76	42.71	1.29	16.06	32.32	125	79 Peak	VERTICAL	6	262.80	27.93	46.00	-18.07	39.62	1.68	18.90	32.27	300	51 Peak	VERTICAL
	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase																																																																																																	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg																																																																																																		
1	36.79	35.76	40.00	-4.24	47.46	0.58	20.14	32.42	100	94 Peak	VERTICAL																																																																																																	
2	60.07	36.85	40.00	-3.15	56.06	0.83	12.37	32.41	125	104 Peak	VERTICAL																																																																																																	
3	102.75	36.53	43.50	-6.97	50.64	1.07	17.19	32.37	100	193 Peak	VERTICAL																																																																																																	
4	124.09	31.21	43.50	-12.29	44.30	1.14	18.12	32.35	300	115 Peak	VERTICAL																																																																																																	
5	159.01	27.74	43.50	-15.76	42.71	1.29	16.06	32.32	125	79 Peak	VERTICAL																																																																																																	
6	262.80	27.93	46.00	-18.07	39.62	1.68	18.90	32.27	300	51 Peak	VERTICAL																																																																																																	
Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit. Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)																																																																																																												



RSE below 1GHz Result

Appendix E.1

RSE below 1GHz Result																																																																																																												
Operating Mode		1			Polarization			Horizontal																																																																																																				
Operating Function		Normal Link																																																																																																										
Data: 1 File: D:\客户\普聯\RE200&RE220.EM6 (4) Date: 2018-12-18 Time: 10:42:21  <table><thead><tr><th></th><th>Freq</th><th>Level</th><th>Limit</th><th>Over</th><th>Read</th><th>CableAntenna</th><th>Preamp</th><th>A/Pos</th><th>T/Pos</th><th>Remark</th><th>Pol/Phase</th></tr><tr><th></th><th>MHz</th><th>dBuV/m</th><th>dBuV/m</th><th>dB</th><th>dBuV</th><th>dB</th><th>dB/m</th><th>dB</th><th>cm</th><th>deg</th><th></th></tr></thead><tbody><tr><td>1</td><td>30.00</td><td>33.76</td><td>40.00</td><td>-6.24</td><td>41.60</td><td>0.49</td><td>24.10</td><td>32.43</td><td>100</td><td>153 QP</td><td>HORIZONTAL</td></tr><tr><td>2</td><td>40.67</td><td>32.59</td><td>40.00</td><td>-7.41</td><td>46.49</td><td>0.62</td><td>17.90</td><td>32.42</td><td>100</td><td>37 Peak</td><td>HORIZONTAL</td></tr><tr><td>3</td><td>119.24</td><td>32.90</td><td>43.50</td><td>-10.60</td><td>45.83</td><td>1.12</td><td>18.30</td><td>32.35</td><td>200</td><td>349 Peak</td><td>HORIZONTAL</td></tr><tr><td>4</td><td>165.80</td><td>25.09</td><td>43.50</td><td>-18.41</td><td>40.24</td><td>1.33</td><td>15.84</td><td>32.32</td><td>125</td><td>171 Peak</td><td>HORIZONTAL</td></tr><tr><td>5</td><td>192.96</td><td>24.94</td><td>43.50</td><td>-18.56</td><td>40.70</td><td>1.45</td><td>15.09</td><td>32.30</td><td>100</td><td>126 Peak</td><td>HORIZONTAL</td></tr><tr><td>6</td><td>264.74</td><td>26.41</td><td>46.00</td><td>-19.59</td><td>38.12</td><td>1.69</td><td>18.87</td><td>32.27</td><td>125</td><td>360 Peak</td><td>HORIZONTAL</td></tr></tbody></table>														Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		1	30.00	33.76	40.00	-6.24	41.60	0.49	24.10	32.43	100	153 QP	HORIZONTAL	2	40.67	32.59	40.00	-7.41	46.49	0.62	17.90	32.42	100	37 Peak	HORIZONTAL	3	119.24	32.90	43.50	-10.60	45.83	1.12	18.30	32.35	200	349 Peak	HORIZONTAL	4	165.80	25.09	43.50	-18.41	40.24	1.33	15.84	32.32	125	171 Peak	HORIZONTAL	5	192.96	24.94	43.50	-18.56	40.70	1.45	15.09	32.30	100	126 Peak	HORIZONTAL	6	264.74	26.41	46.00	-19.59	38.12	1.69	18.87	32.27	125	360 Peak	HORIZONTAL
	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase																																																																																																	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg																																																																																																		
1	30.00	33.76	40.00	-6.24	41.60	0.49	24.10	32.43	100	153 QP	HORIZONTAL																																																																																																	
2	40.67	32.59	40.00	-7.41	46.49	0.62	17.90	32.42	100	37 Peak	HORIZONTAL																																																																																																	
3	119.24	32.90	43.50	-10.60	45.83	1.12	18.30	32.35	200	349 Peak	HORIZONTAL																																																																																																	
4	165.80	25.09	43.50	-18.41	40.24	1.33	15.84	32.32	125	171 Peak	HORIZONTAL																																																																																																	
5	192.96	24.94	43.50	-18.56	40.70	1.45	15.09	32.30	100	126 Peak	HORIZONTAL																																																																																																	
6	264.74	26.41	46.00	-19.59	38.12	1.69	18.87	32.27	125	360 Peak	HORIZONTAL																																																																																																	
Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit. Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)																																																																																																												

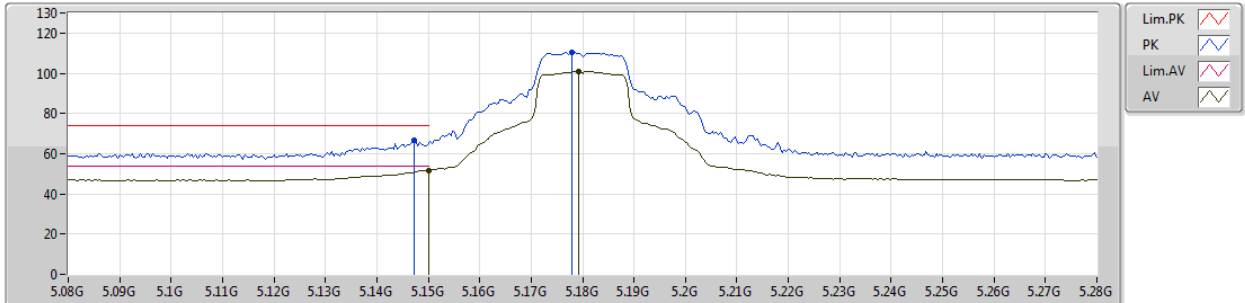
**Summary**

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
5.15-5.25GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11ac VHT20_Nss1,(MCS0)_1TX	Pass	AV	15.7156G	53.98	54.00	-0.02	15.61	3	Vertical	128	2.03	-

802.11a_Nss1,(6Mbps)_1TX

24/10/2018

5180MHz_TX



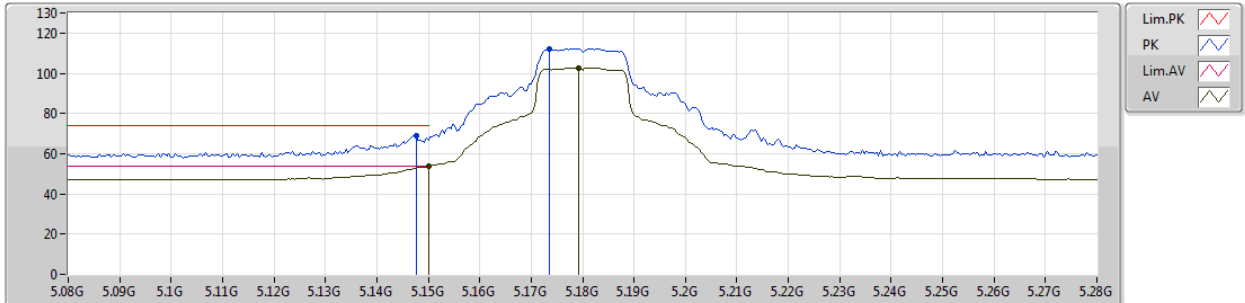
EUT Y_1TX
Setting 15
02-M-01-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.1472G	66.51	74.00	-7.49	8.56	3	Vertical	212	1.46	-
AV	5.15G	51.55	54.00	-2.45	8.56	3	Vertical	212	1.46	-
PK	5.178G	110.47	Inf	-Inf	8.63	3	Vertical	212	1.46	-
AV	5.1792G	100.86	Inf	-Inf	8.63	3	Vertical	212	1.46	-

802.11a_Nss1,(6Mbps)_1TX

24/10/2018

5180MHz_TX



EUT Y_1TX
Setting 15
02-M-01-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.1476G	68.98	74.00	-5.02	8.56	3	Horizontal	222	1.01	-
AV	5.15G	53.73	54.00	-0.27	8.56	3	Horizontal	222	1.01	-
PK	5.1736G	112.27	Inf	-Inf	8.61	3	Horizontal	222	1.01	-
AV	5.1792G	102.69	Inf	-Inf	8.63	3	Horizontal	222	1.01	-

802.11a_Nss1,(6Mbps)_1TX

24/10/2018

5180MHz_TX



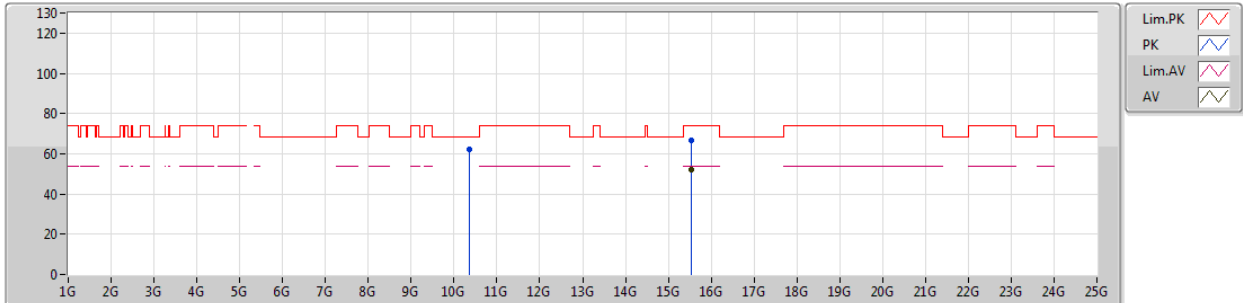
EUT Y_1TX
Setting 15
02-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	10.36208G	65.68	68.20	-2.52	14.60	3	Vertical	274	2.19	-
PK	15.54148G	68.80	74.00	-5.20	16.04	3	Vertical	189	1.99	-
AV	15.53784G	53.97	54.00	-0.03	16.04	3	Vertical	189	1.99	-

802.11a_Nss1,(6Mbps)_1TX

24/10/2018

5180MHz_TX



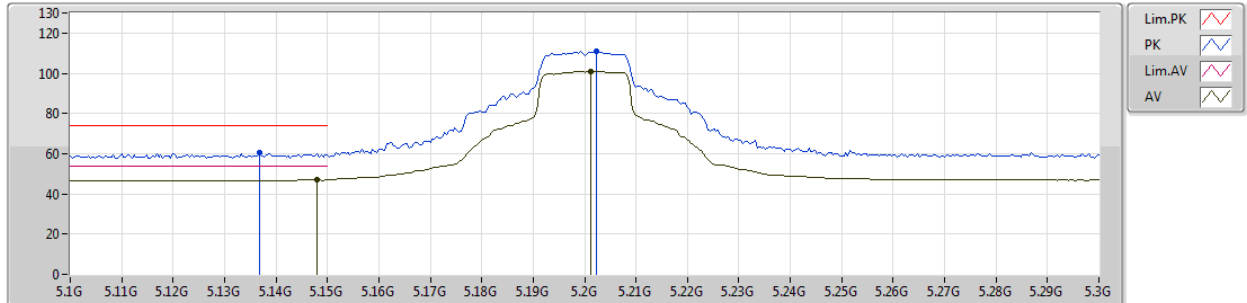
EUT V_1TX
Setting 15
02-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments								
PK	10.35356G	62.01	68.20	-6.19	14.61	3	Horizontal	122	1.04	-								
PK	15.54156G	66.41	74.00	-7.59	16.04	3	Horizontal	163	1.84	-								
AV	15.53764G	52.05	54.00	-1.95	16.04	3	Horizontal	163	1.84	-								

802.11a_Nss1,(6Mbps)_1TX

24/10/2018

5200MHz_TX



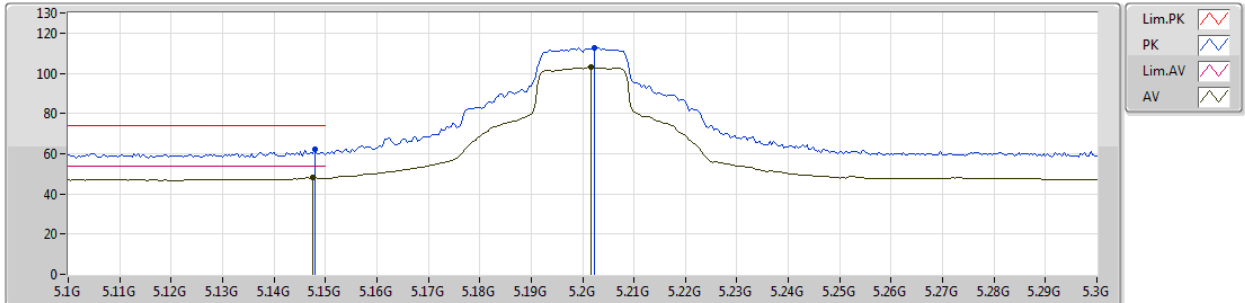
EUT Y_1TX
Setting 15
02-C-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments								
PK	5.1368G	60.27	74.00	-13.73	8.55	3	Vertical	215	1.88	-								
AV	5.148G	47.18	54.00	-6.82	8.56	3	Vertical	215	1.88	-								
PK	5.2024G	110.77	Inf	-Inf	8.66	3	Vertical	215	1.88	-								
AV	5.2012G	101.07	Inf	-Inf	8.66	3	Vertical	215	1.88	-								

802.11a_Nss1,(6Mbps)_1TX

24/10/2018

5200MHz_TX



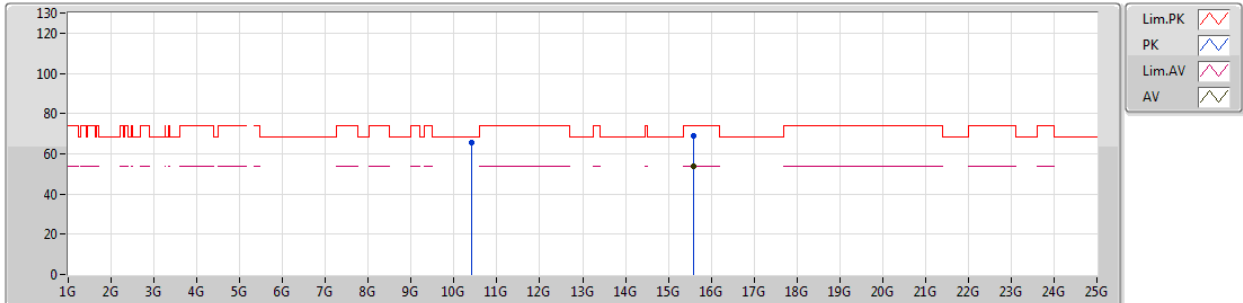
EUT V_1TX
Setting 15
02-C-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.148G	62.05	74.00	-11.95	8.56	3	Horizontal	221	1.15	-
AV	5.1476G	48.08	54.00	-5.92	8.56	3	Horizontal	221	1.15	-
PK	5.2024G	112.64	Inf	-Inf	8.66	3	Horizontal	221	1.15	-
AV	5.2016G	102.88	Inf	-Inf	8.66	3	Horizontal	221	1.15	-

802.11a_Nss1,(6Mbps)_1TX

24/10/2018

5200MHz_TX



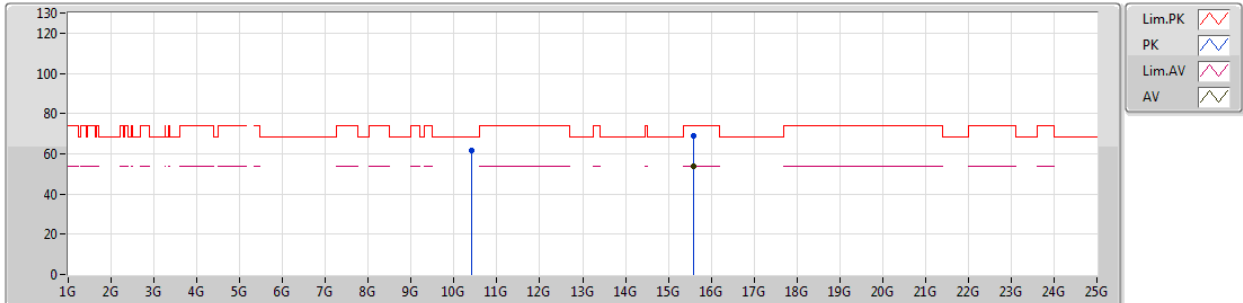
EUT Y_1TX
Setting 15
02-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments								
PK	10.40096G	65.39	68.20	-2.81	14.57	3	Vertical	283	2.21	-								
PK	15.6004G	68.66	74.00	-5.34	15.89	3	Vertical	162	1.96	-								
AV	15.5978G	53.57	54.00	-0.43	15.90	3	Vertical	162	1.96	-								

802.11a_Nss1,(6Mbps)_1TX

24/10/2018

5200MHz_TX



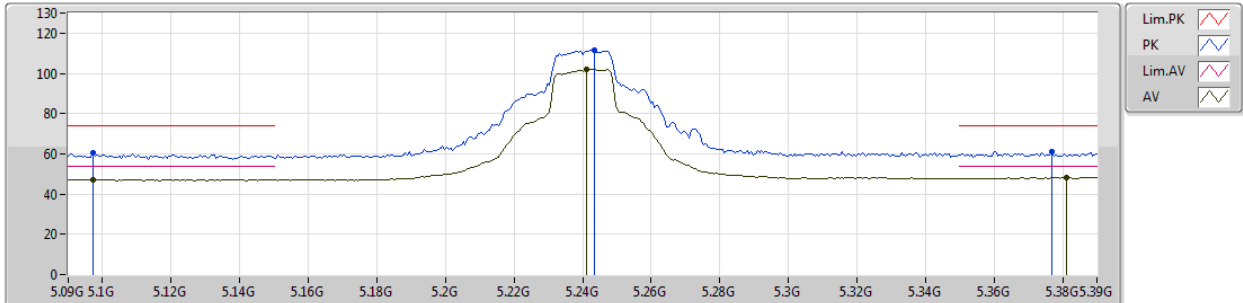
EUT V_1TX
Setting 15
02-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	10.40072G	61.78	68.20	-6.42	14.57	3	Horizontal	137	1.05	-
PK	15.60052G	68.91	74.00	-5.09	15.89	3	Horizontal	145	1.93	-
AV	15.59768G	53.91	54.00	-0.09	15.90	3	Horizontal	145	1.93	-

802.11a_Nss1,(6Mbps)_1TX

24/10/2018

5240MHz_TX



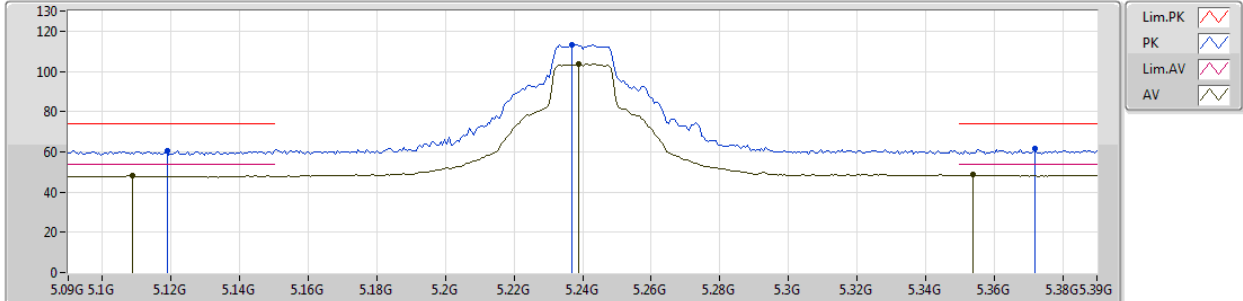
EUT Y_1TX
Setting 18
02-M-01-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.0972G	60.26	74.00	-13.74	8.48	3	Vertical	221	1.85	-
AV	5.0972G	47.31	54.00	-6.69	8.48	3	Vertical	221	1.85	-
PK	5.2436G	111.60	Inf	-Inf	8.72	3	Vertical	221	1.85	-
AV	5.2412G	101.88	Inf	-Inf	8.72	3	Vertical	221	1.85	-
PK	5.3768G	61.27	74.00	-12.73	8.92	3	Vertical	221	1.85	-
AV	5.381G	48.20	54.00	-5.80	8.93	3	Vertical	221	1.85	-

802.11a_Nss1,(6Mbps)_1TX

24/10/2018

5240MHz_TX



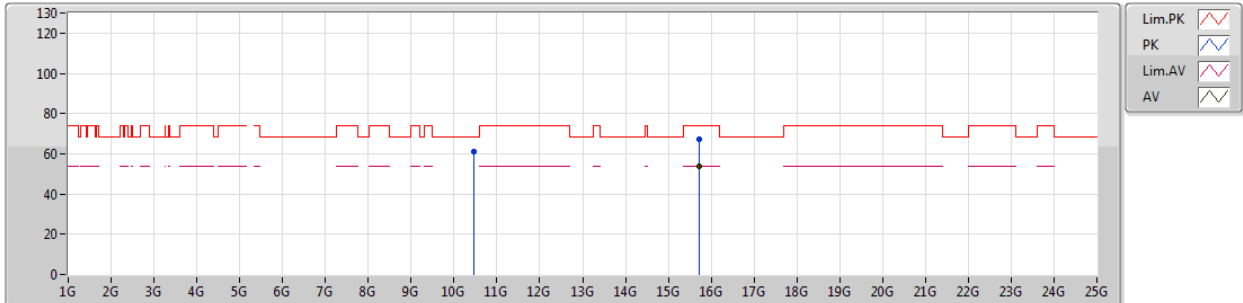
EUT Y_1TX
Setting 18
02-M-01-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.1188G	60.41	74.00	-13.59	8.51	3	Horizontal	222	1.07	-
AV	5.1086G	47.96	54.00	-6.04	8.49	3	Horizontal	222	1.07	-
PK	5.237G	113.06	Inf	-Inf	8.71	3	Horizontal	222	1.07	-
AV	5.2388G	103.52	Inf	-Inf	8.72	3	Horizontal	222	1.07	-
PK	5.372G	61.63	74.00	-12.37	8.91	3	Horizontal	222	1.07	-
AV	5.354G	48.47	54.00	-5.53	8.89	3	Horizontal	222	1.07	-

802.11a_Nss1,(6Mbps)_1TX

24/10/2018

5240MHz_TX



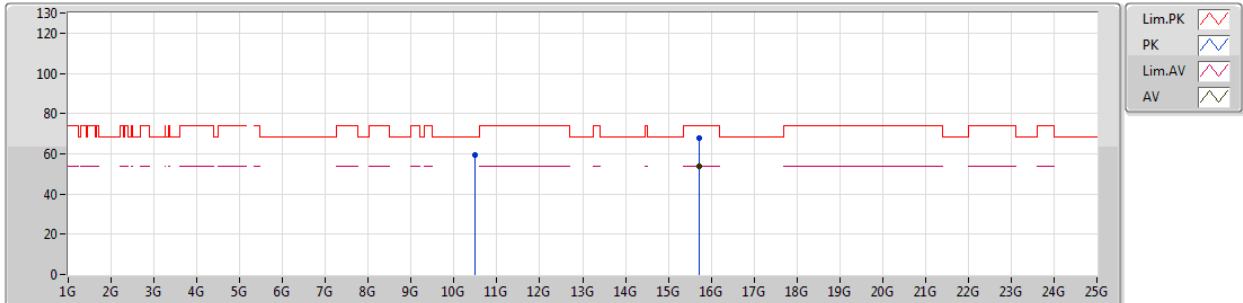
EUT Y_1TX
Setting 18
02-M-01
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	10.4755G	61.15	68.20	-7.05	14.50	3	Vertical	230	2.74	-
PK	15.7152G	67.44	74.00	-6.56	15.61	3	Vertical	195	2.00	-
AV	15.7194G	53.82	54.00	-0.18	15.60	3	Vertical	195	2.00	-

802.11a_Nss1,(6Mbps)_1TX

24/10/2018

5240MHz_TX



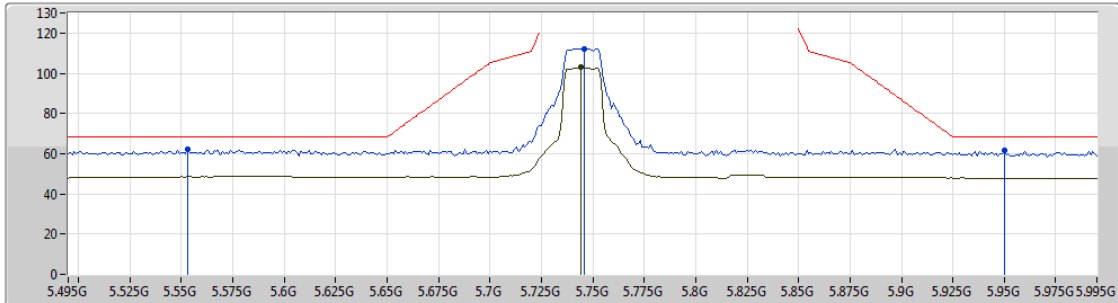
EUT Y_1TX
Setting 18
02-M-01
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	10.48056G	59.25	68.20	-8.95	14.50	3	Horizontal	136	1.00	-
PK	15.714G	67.63	74.00	-6.37	15.61	3	Horizontal	172	1.98	-
AV	15.7196G	53.68	54.00	-0.32	15.60	3	Horizontal	172	1.98	-

802.11a_Nss1,(6Mbps)_1TX

24/10/2018

5745MHz_TX



Lim.PK
PK
Lim.AV
AV

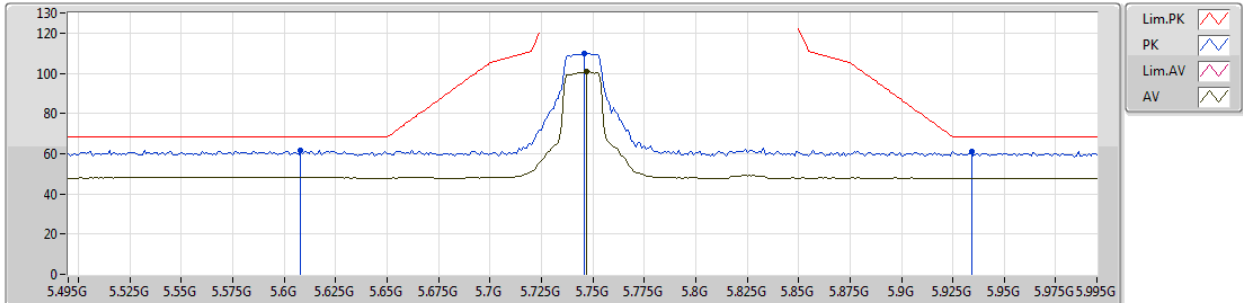
EUT Y_1TX
Setting 0E
02-C-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.553G	62.11	68.20	-6.09	9.24	3	Vertical	359	2.64	-
PK	5.746G	112.25	Inf	-Inf	9.32	3	Vertical	359	2.64	-
AV	5.744G	102.87	Inf	-Inf	9.32	3	Vertical	359	2.64	-
PK	5.95G	61.52	68.20	-6.68	9.47	3	Vertical	359	2.64	-

802.11a_Nss1,(6Mbps)_1TX

24/10/2018

5745MHz_TX



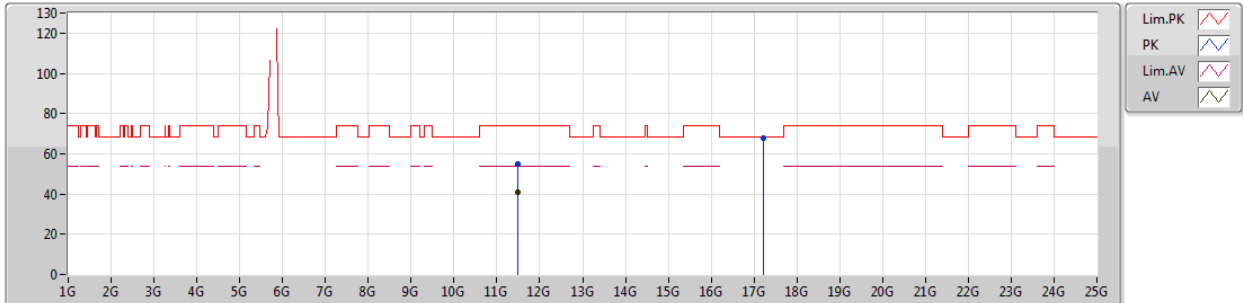
EUT Y_1TX
Setting 0E
02-C-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.608G	61.70	68.20	-6.50	9.28	3	Horizontal	209	2.28	-
PK	5.746G	110.07	Inf	-Inf	9.32	3	Horizontal	209	2.28	-
AV	5.747G	100.66	Inf	-Inf	9.32	3	Horizontal	209	2.28	-
PK	5.934G	60.80	68.20	-7.40	9.45	3	Horizontal	209	2.28	-

802.11a_Nss1,(6Mbps)_1TX

24/10/2018

5745MHz_TX



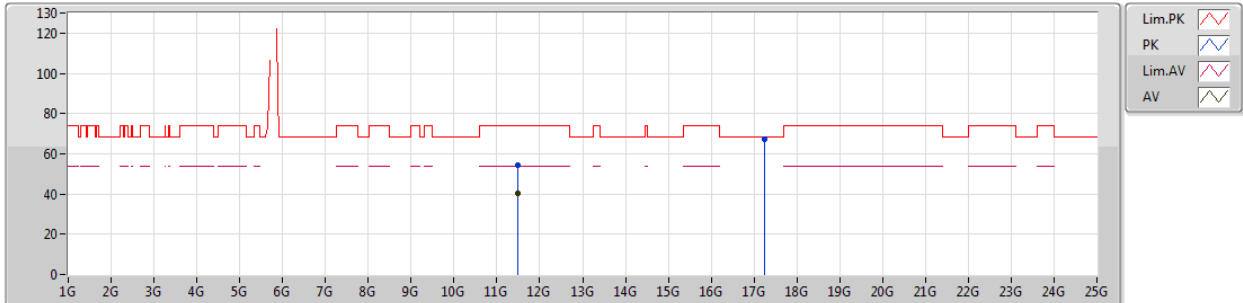
EUT V_1TX
Setting 0E
02-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	11.4885G	55.02	74.00	-18.98	14.66	3	Vertical	282	2.17	-
AV	11.4885G	41.14	54.00	-12.86	14.66	3	Vertical	282	2.17	-
PK	17.226G	67.78	68.20	-0.42	20.44	3	Vertical	201	2.40	-

802.11a_Nss1,(6Mbps)_1TX

24/10/2018

5745MHz_TX



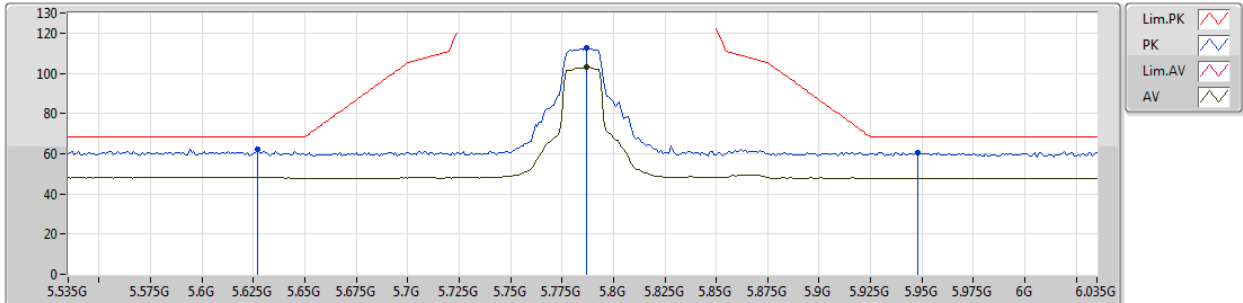
EUT V_1TX
Setting 0E
02-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	11.4933G	54.56	74.00	-19.44	14.66	3	Horizontal	232	2.99	-
AV	11.4902G	40.29	54.00	-13.71	14.66	3	Horizontal	232	2.99	-
PK	17.2355G	67.20	68.20	-1.00	20.50	3	Horizontal	92	1.90	-

802.11a_Nss1,(6Mbps)_1TX

24/10/2018

5785MHz_TX



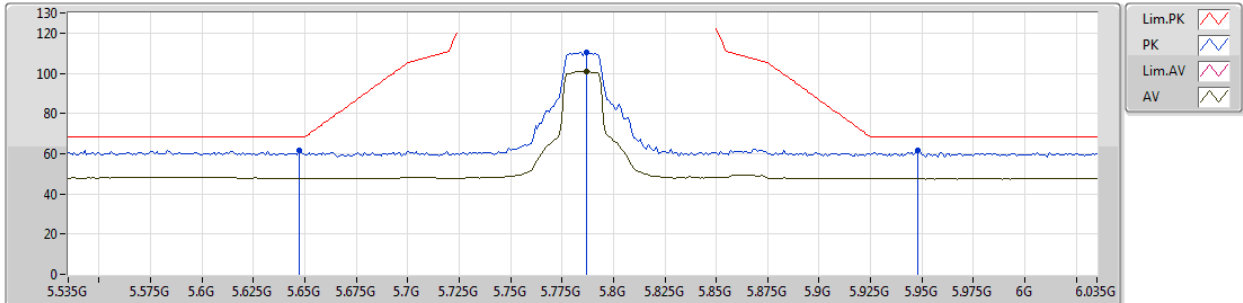
EUT Y_1TX
Setting 0F
02-C-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.627G	61.97	68.20	-6.23	9.29	3	Vertical	335	2.72	-
PK	5.787G	112.51	Inf	-Inf	9.33	3	Vertical	335	2.72	-
AV	5.787G	102.95	Inf	-Inf	9.33	3	Vertical	335	2.72	-
PK	5.948G	60.68	68.20	-7.52	9.47	3	Vertical	335	2.72	-

802.11a_Nss1,(6Mbps)_1TX

24/10/2018

5785MHz_TX



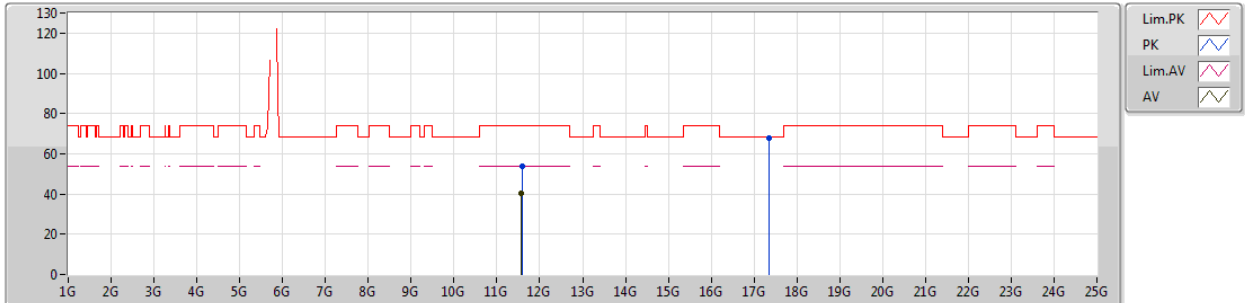
EUT Y_1TX
Setting 0F
02-C-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.647G	61.76	68.20	-6.44	9.30	3	Horizontal	195	2.29	-
PK	5.787G	110.56	Inf	-Inf	9.33	3	Horizontal	195	2.29	-
AV	5.787G	100.93	Inf	-Inf	9.33	3	Horizontal	195	2.29	-
PK	5.948G	61.56	68.20	-6.64	9.47	3	Horizontal	195	2.29	-

802.11a_Nss1,(6Mbps)_1TX

24/10/2018

5785MHz_TX



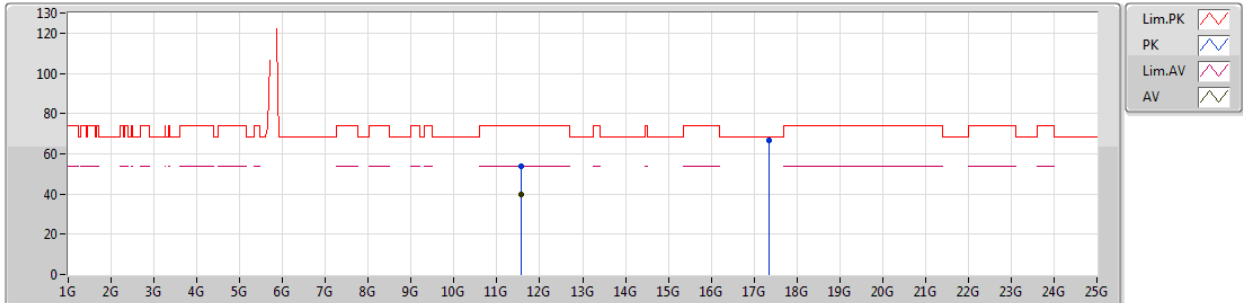
EUT V_1TX
Setting 0F
02-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	11.5842G	53.52	74.00	-20.48	14.78	3	Vertical	181	1.92	-
AV	11.5722G	40.07	54.00	-13.93	14.76	3	Vertical	181	1.92	-
PK	17.3514G	67.98	68.20	-0.22	21.19	3	Vertical	178	2.55	-

802.11a_Nss1,(6Mbps)_1TX

24/10/2018

5785MHz_TX



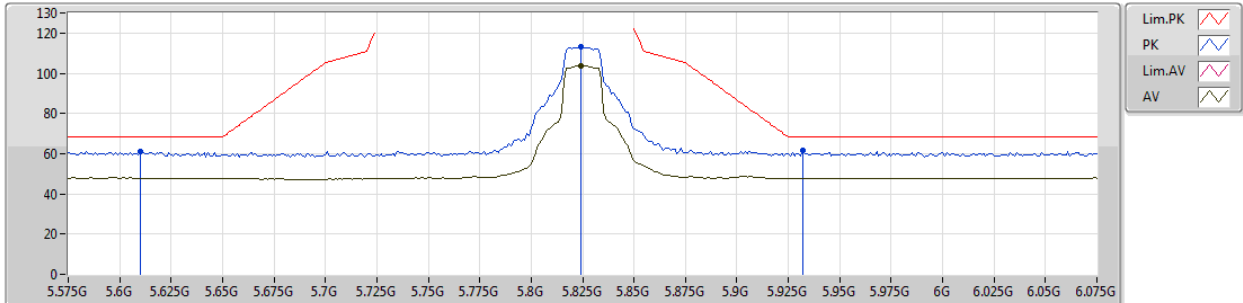
EUT V_1TX
Setting 0F
02-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	11.5636G	53.90	74.00	-20.10	14.75	3	Horizontal	237	2.60	-
AV	11.572G	39.69	54.00	-14.31	14.76	3	Horizontal	237	2.60	-
PK	17.3513G	66.87	68.20	-1.33	21.19	3	Horizontal	73	1.84	-

802.11a_Nss1,(6Mbps)_1TX

26/10/2018

5825MHz_TX



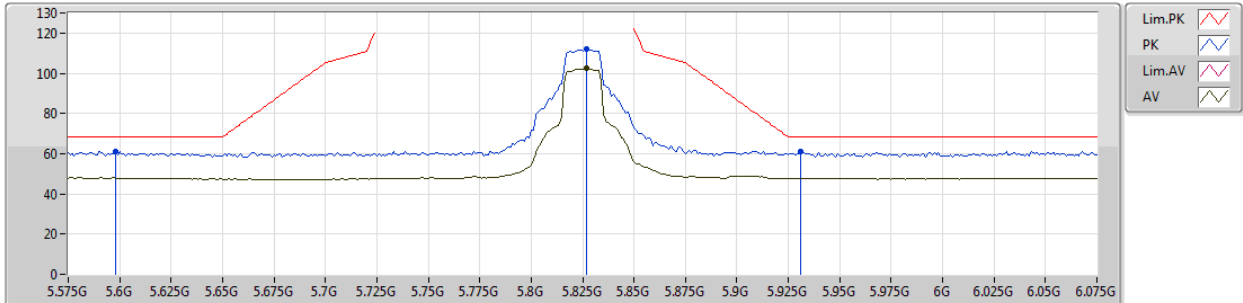
EUT Y_1TX
Setting 0E
02-C-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.61G	61.30	68.20	-6.90	9.28	3	Vertical	322	2.48	-
PK	5.824G	113.22	Inf	-Inf	9.34	3	Vertical	322	2.48	-
AV	5.824G	103.57	Inf	-Inf	9.34	3	Vertical	322	2.48	-
PK	5.932G	61.50	68.20	-6.70	9.45	3	Vertical	322	2.48	-

802.11a_Nss1,(6Mbps)_1TX

26/10/2018

5825MHz_TX



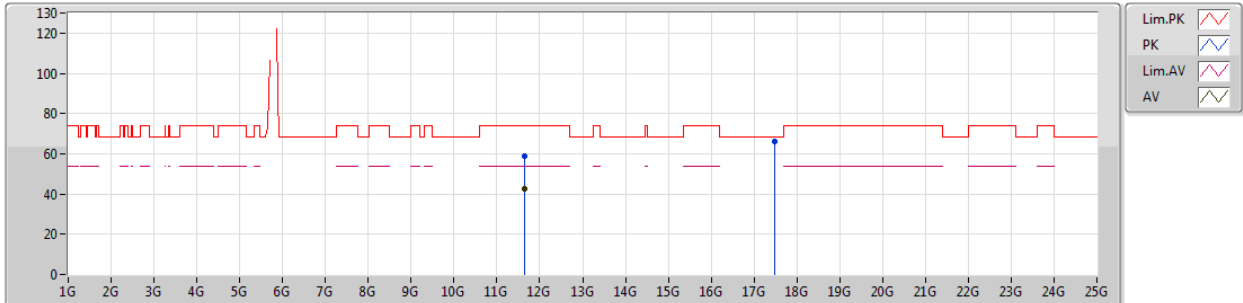
EUT Y_1TX
Setting 0E
02-C-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.598G	60.90	68.20	-7.30	9.28	3	Horizontal	182	2.32	-
PK	5.827G	111.79	Inf	-Inf	9.36	3	Horizontal	182	2.32	-
AV	5.827G	102.43	Inf	-Inf	9.36	3	Horizontal	182	2.32	-
PK	5.931G	60.83	68.20	-7.37	9.45	3	Horizontal	182	2.32	-

802.11a_Nss1,(6Mbps)_1TX

26/10/2018

5825MHz_TX



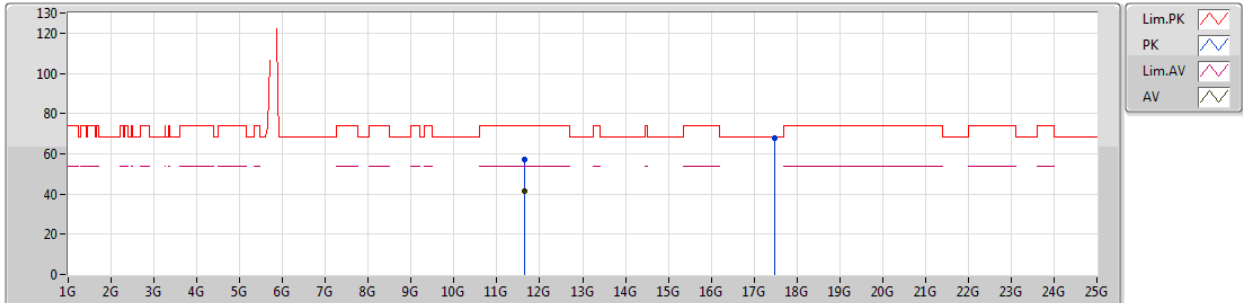
EUT V_1TX
Setting 0E
02-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	11.6525G	58.56	74.00	-15.44	14.85	3	Vertical	174	2.15	-
AV	11.6502G	42.86	54.00	-11.14	14.85	3	Vertical	174	2.15	-
PK	17.4781G	65.93	68.20	-2.27	21.93	3	Vertical	133	2.95	-

802.11a_Nss1,(6Mbps)_1TX

26/10/2018

5825MHz_TX



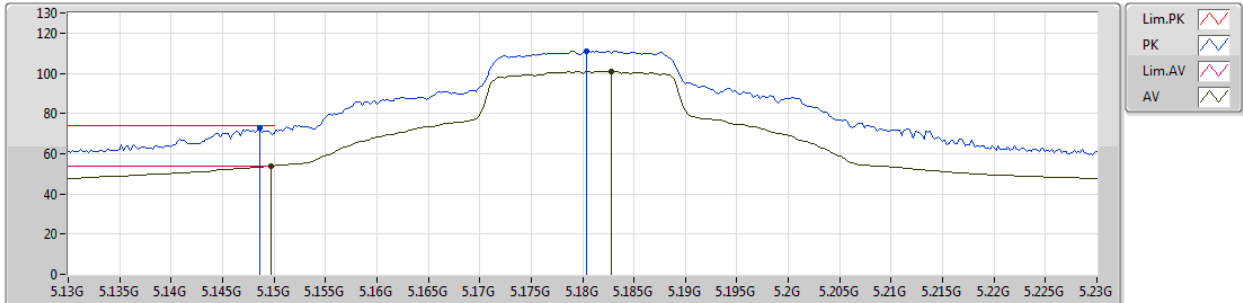
EUT V_1TX
Setting 0E
02-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	11.6484G	57.09	74.00	-16.91	14.84	3	Horizontal	241	2.78	-
AV	11.6505G	41.65	54.00	-12.35	14.85	3	Horizontal	241	2.78	-
PK	17.4813G	67.81	68.20	-0.39	21.95	3	Horizontal	46	1.88	-

802.11ac VHT20_Nss1,(MCS0)_1TX

24/10/2018

5180MHz_TX



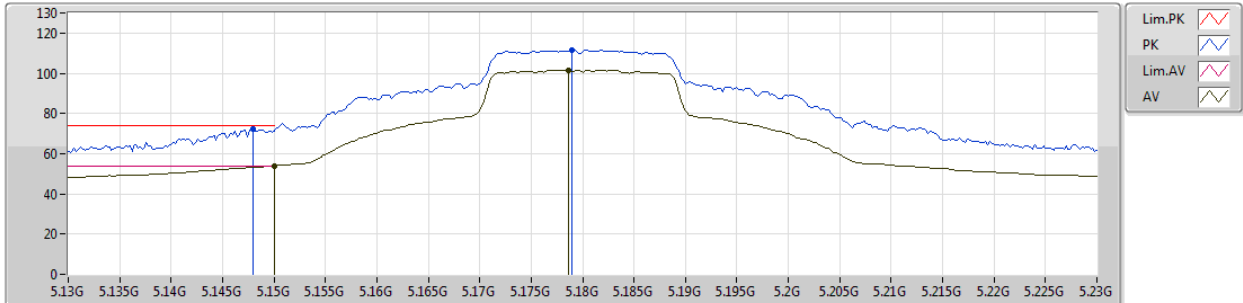
EUT Y_1TX
Setting 18
02-C-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.1486G	72.61	74.00	-1.39	8.56	3	Vertical	163	1.48	-
AV	5.1497G	53.85	54.00	-0.15	8.56	3	Vertical	163	1.48	-
PK	5.1804G	111.12	Inf	-Inf	8.63	3	Vertical	163	1.48	-
AV	5.1828G	101.03	Inf	-Inf	8.63	3	Vertical	163	1.48	-

802.11ac VHT20_Nss1,(MCS0)_1TX

24/10/2018

5180MHz_TX



EUT V_1TX
Setting 18
02-C-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.148G	72.02	74.00	-1.98	8.56	3	Horizontal	169	1.10	-
AV	5.15G	53.89	54.00	-0.11	8.56	3	Horizontal	169	1.10	-
PK	5.179G	111.67	Inf	-Inf	8.63	3	Horizontal	169	1.10	-
AV	5.1786G	101.45	Inf	-Inf	8.63	3	Horizontal	169	1.10	-

802.11ac VHT20_Nss1,(MCS0)_1TX

24/10/2018

5180MHz_TX



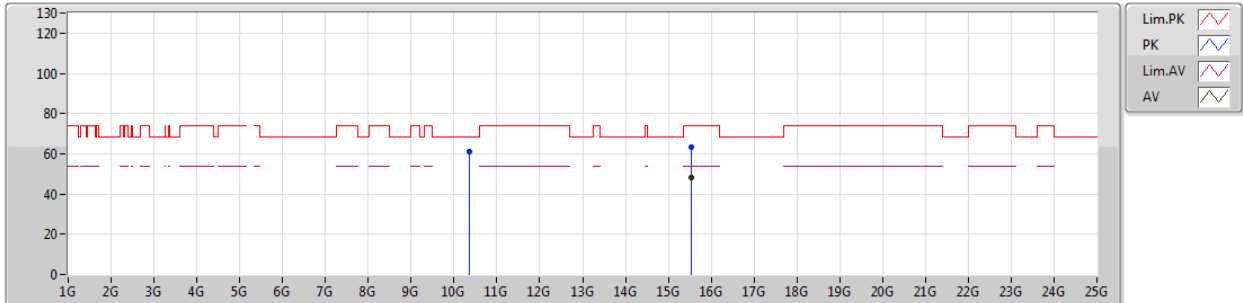
EUT Y_1TX
Setting 18
02-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	10.3582G	63.33	68.20	-4.87	14.60	3	Vertical	227	2.23	-
PK	15.5464G	67.36	74.00	-6.64	16.03	3	Vertical	145	1.96	-
AV	15.5356G	51.35	54.00	-2.65	16.05	3	Vertical	145	1.96	-

802.11ac VHT20_Nss1,(MCS0)_1TX

24/10/2018

5180MHz_TX



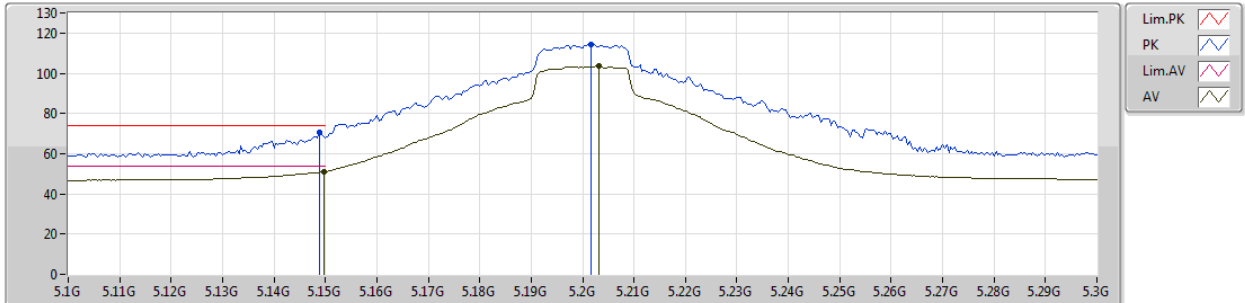
EUT V_1TX
Setting 18
02-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	10.3584G	61.05	68.20	-7.15	14.59	3	Horizontal	86	2.30	-
PK	15.5464G	63.10	74.00	-10.90	16.03	3	Horizontal	113	1.98	-
AV	15.5356G	48.20	54.00	-5.80	16.05	3	Horizontal	113	1.98	-

802.11ac VHT20_Nss1,(MCS0)_1TX

24/10/2018

5200MHz_TX



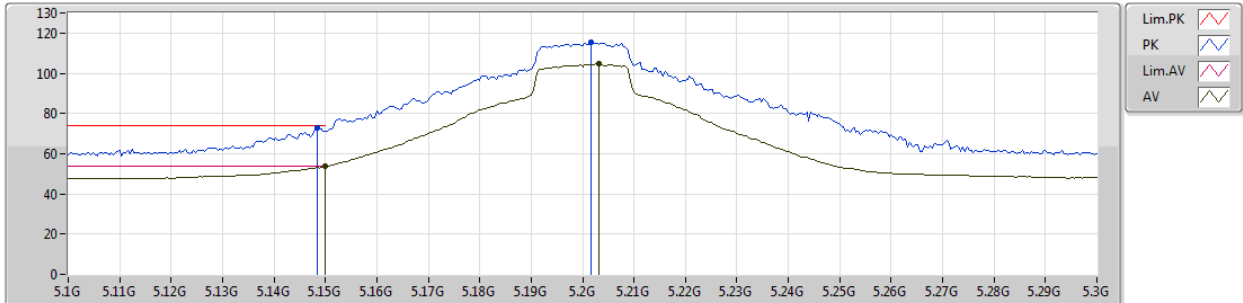
EUT V_1TX
Setting 1C
02-C-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.1488G	70.57	74.00	-3.43	8.56	3	Vertical	159	1.87	-
AV	5.1498G	51.12	54.00	-2.88	8.56	3	Vertical	159	1.87	-
PK	5.2016G	114.56	Inf	-Inf	8.66	3	Vertical	159	1.87	-
AV	5.2032G	103.56	Inf	-Inf	8.66	3	Vertical	159	1.87	-

802.11ac VHT20_Nss1,(MCS0)_1TX

24/10/2018

5200MHz_TX



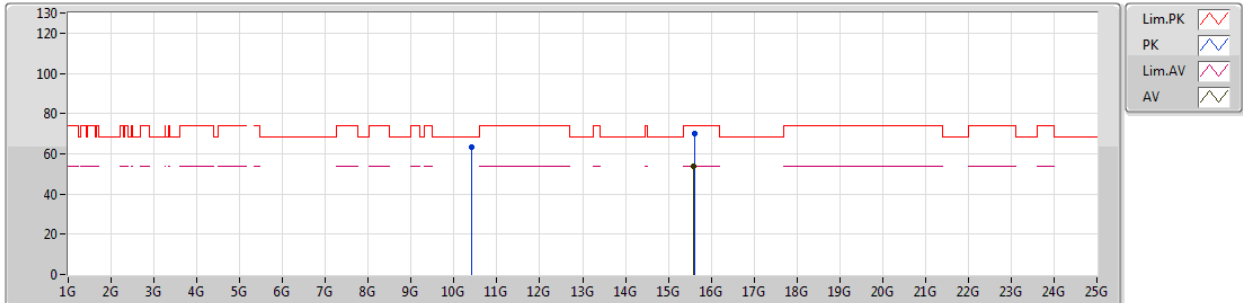
EUT V_1TX
Setting 1C
02-C-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.1484G	72.63	74.00	-1.37	8.56	3	Horizontal	161	1.16	-
AV	5.1499G	53.60	54.00	-0.40	8.56	3	Horizontal	161	1.16	-
PK	5.2016G	115.29	Inf	-Inf	8.66	3	Horizontal	161	1.16	-
AV	5.2032G	104.63	Inf	-Inf	8.66	3	Horizontal	161	1.16	-

802.11ac VHT20_Nss1,(MCS0)_1TX

24/10/2018

5200MHz_TX



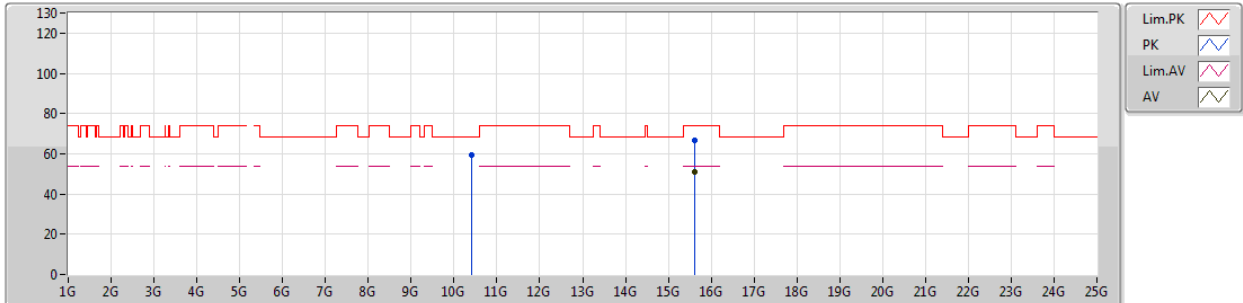
EUT Y_1TX
Setting 1C
02-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	10.4008G	63.23	68.20	-4.97	14.57	3	Vertical	212	2.21	-
PK	15.6066G	70.28	74.00	-3.72	15.87	3	Vertical	119	1.98	-
AV	15.6006G	53.92	54.00	-0.08	15.89	3	Vertical	119	1.98	-

802.11ac VHT20_Nss1,(MCS0)_1TX

24/10/2018

5200MHz_TX



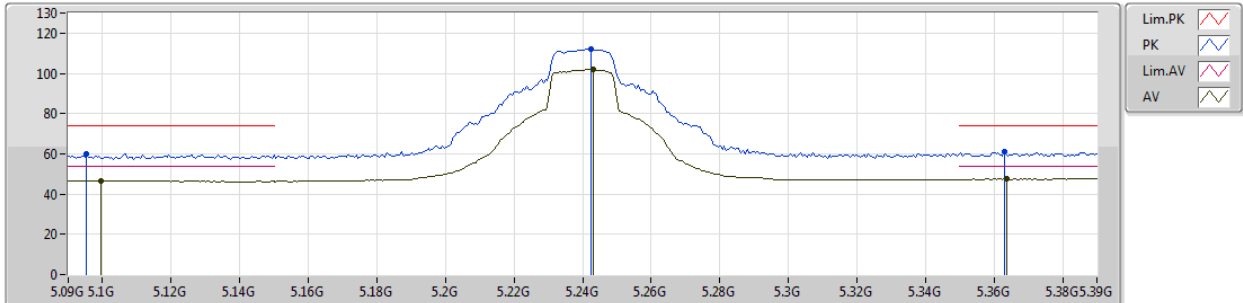
EUT V_1TX
Setting 1C
02-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	10.4053G	59.56	68.20	-8.64	14.57	3	Horizontal	237	2.96	-
PK	15.6066G	66.93	74.00	-7.07	15.87	3	Horizontal	43	1.95	-
AV	15.6033G	51.22	54.00	-2.78	15.88	3	Horizontal	43	1.95	-

802.11ac VHT20_Nss1,(MCS0)_1TX

24/10/2018

5240MHz_TX



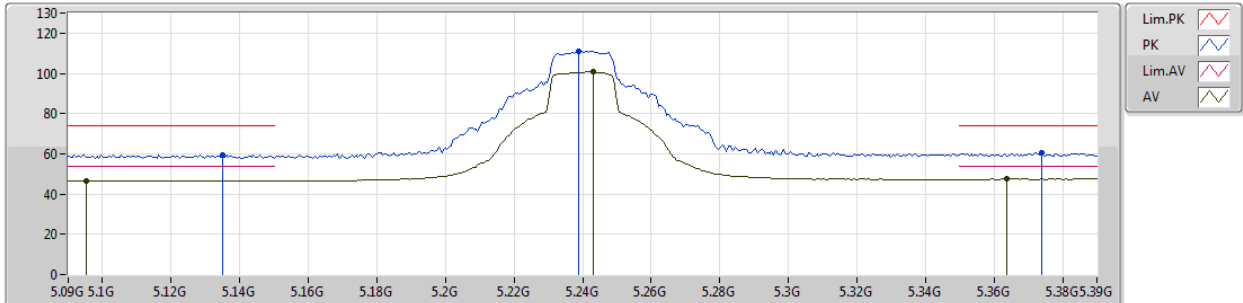
EUT V_1TX
Setting 18
02-C-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.0954G	60.02	74.00	-13.98	8.47	3	Vertical	209	2.49	-
AV	5.0996G	46.53	54.00	-7.47	8.48	3	Vertical	209	2.49	-
PK	5.2424G	112.16	Inf	-Inf	8.72	3	Vertical	209	2.49	-
AV	5.243G	102.15	Inf	-Inf	8.72	3	Vertical	209	2.49	-
PK	5.363G	61.13	74.00	-12.87	8.90	3	Vertical	209	2.49	-
AV	5.3636G	47.51	54.00	-6.49	8.90	3	Vertical	209	2.49	-

802.11ac VHT20_Nss1,(MCS0)_1TX

24/10/2018

5240MHz_TX



EUT_V_1TX
Setting 18
02-C-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.135G	59.66	74.00	-14.34	8.55	3	Horizontal	143	1.98	-
AV	5.0954G	46.58	54.00	-7.42	8.47	3	Horizontal	143	1.98	-
PK	5.2388G	110.93	Inf	-Inf	8.72	3	Horizontal	143	1.98	-
AV	5.243G	100.83	Inf	-Inf	8.72	3	Horizontal	143	1.98	-
PK	5.3738G	60.49	74.00	-13.51	8.91	3	Horizontal	143	1.98	-
AV	5.3636G	47.46	54.00	-6.54	8.90	3	Horizontal	143	1.98	-

802.11ac VHT20_Nss1,(MCS0)_1TX

24/10/2018

5240MHz_TX



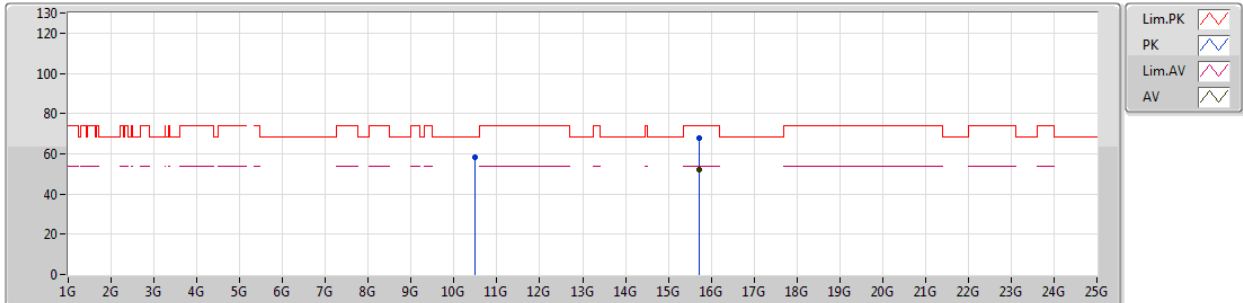
EUT Y_1TX
Setting 18
02-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	10.4853G	61.84	68.20	-6.36	14.51	3	Vertical	275	2.19	-
PK	15.7267G	70.07	74.00	-3.93	15.59	3	Vertical	128	2.03	-
AV	15.7156G	53.98	54.00	-0.02	15.61	3	Vertical	128	2.03	-

802.11ac VHT20_Nss1,(MCS0)_1TX

24/10/2018

5240MHz_TX



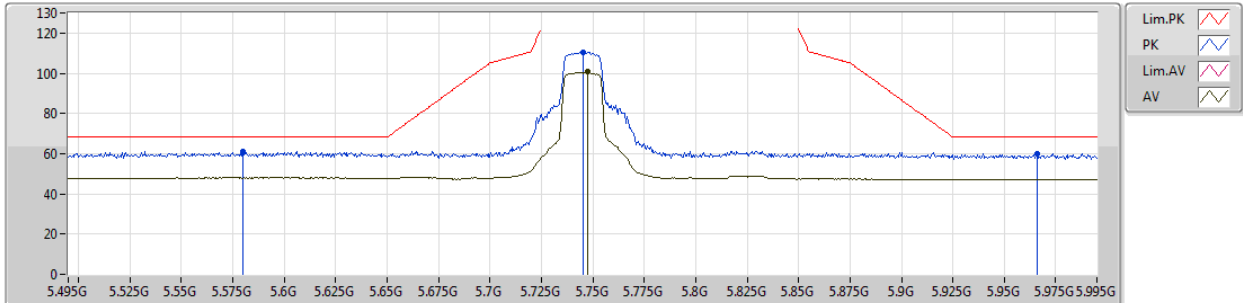
EUT Y_1TX
Setting 18
02-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	10.4766G	58.38	68.20	-9.82	14.50	3	Horizontal	141	2.23	-
PK	15.727G	68.05	74.00	-5.95	15.58	3	Horizontal	268	1.90	-
AV	15.7156G	51.99	54.00	-2.01	15.61	3	Horizontal	268	1.90	-

802.11ac VHT20_Nss1,(MCS0)_1TX

24/10/2018

5745MHz_TX



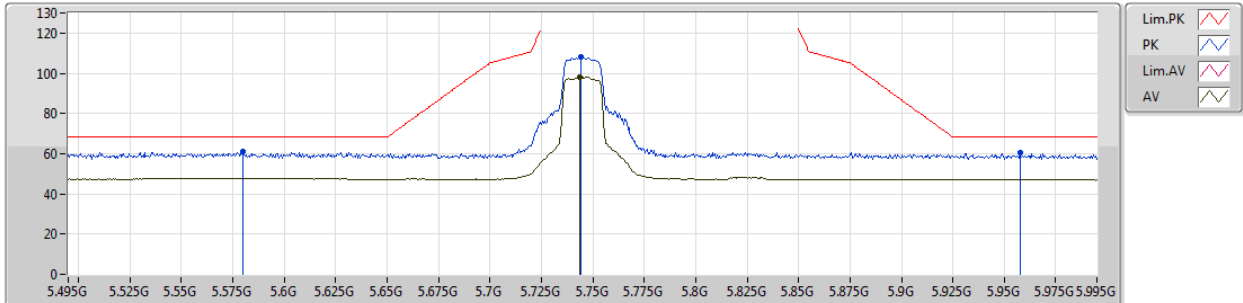
EUT Y_1TX
Setting 0E
03-R-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.58G	61.06	68.20	-7.14	7.07	3	Vertical	0	2.68	-
PK	5.745G	110.52	Inf	-Inf	7.25	3	Vertical	0	2.68	-
AV	5.7475G	100.72	Inf	-Inf	7.25	3	Vertical	0	2.68	-
PK	5.966G	60.03	68.20	-8.17	7.19	3	Vertical	0	2.68	-

802.11ac VHT20_Nss1,(MCS0)_1TX

24/10/2018

5745MHz_TX



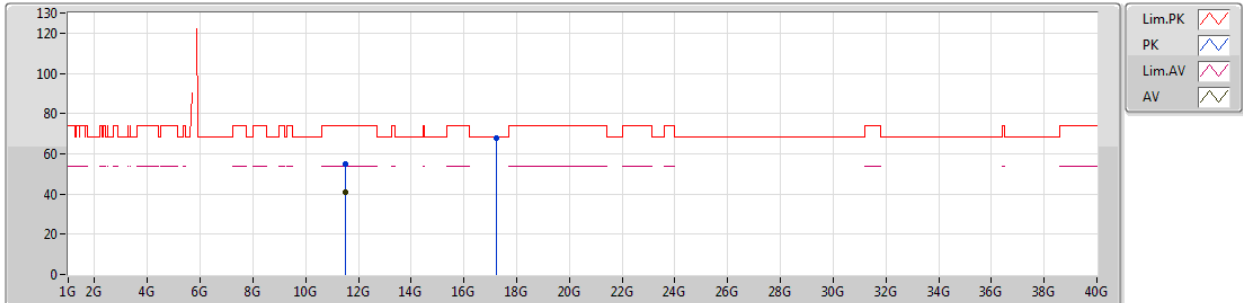
EUT Y_1TX
Setting 0E
03-R-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.58G	60.84	68.20	-7.36	7.07	3	Horizontal	155	2.17	-
PK	5.744G	107.92	Inf	-Inf	7.24	3	Horizontal	155	2.17	-
AV	5.7435G	97.95	Inf	-Inf	7.24	3	Horizontal	155	2.17	-
PK	5.9575G	60.67	68.20	-7.53	7.19	3	Horizontal	155	2.17	-

802.11ac VHT20_Nss1,(MCS0)_1TX

24/10/2018

5745MHz_TX



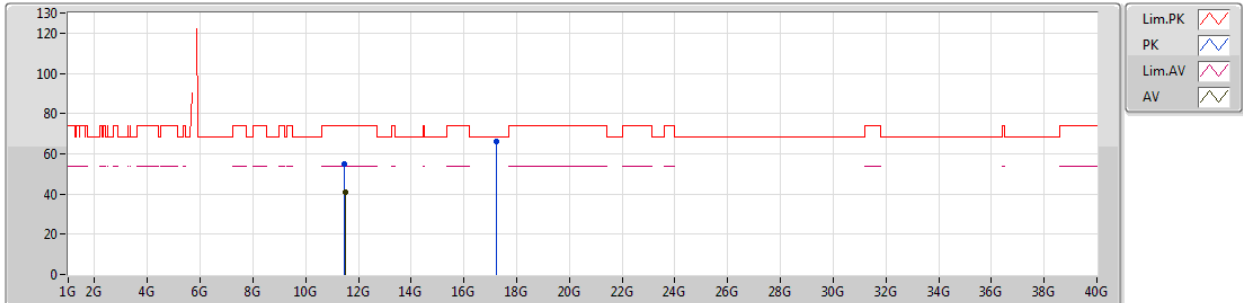
EUT Y_1TX
Setting 0E
03-R-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	11.48913G	54.83	74.00	-19.17	14.25	3	Vertical	75	2.99	-
AV	11.49006G	41.01	54.00	-12.99	14.25	3	Vertical	75	2.99	-
PK	17.22351G	68.03	68.20	-0.17	19.50	3	Vertical	163	1.85	-

802.11ac VHT20_Nss1,(MCS0)_1TX

24/10/2018

5745MHz_TX



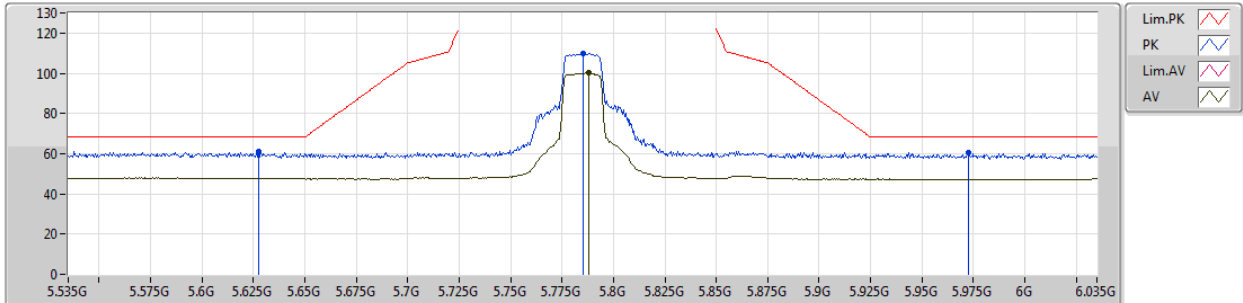
EUT Y_1TX
Setting 0E
03-R-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	11.47641G	55.07	74.00	-18.93	14.24	3	Horizontal	195	2.72	-
AV	11.48895G	40.73	54.00	-13.27	14.25	3	Horizontal	195	2.72	-
PK	17.22669G	66.21	68.20	-1.99	19.51	3	Horizontal	101	1.47	-

802.11ac VHT20_Nss1,(MCS0)_1TX

24/10/2018

5785MHz_TX



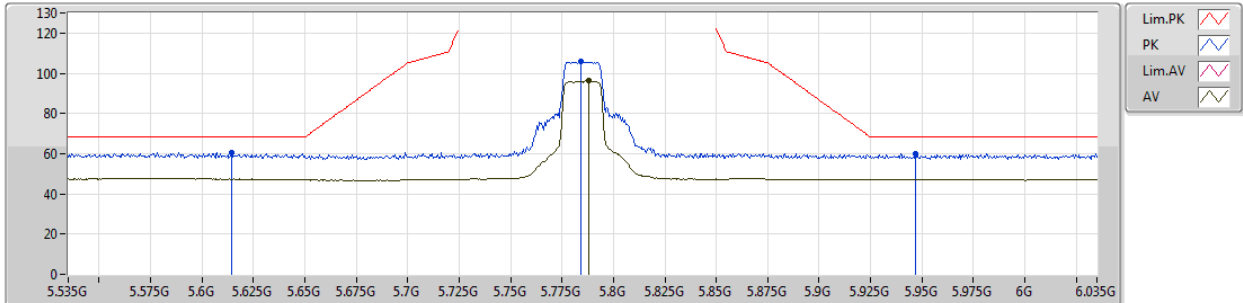
EUT Y_1TX
Setting 0F
03-R-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.6275G	61.28	68.20	-6.92	7.12	3	Vertical	360	2.61	-
PK	5.785G	109.93	Inf	-Inf	7.29	3	Vertical	360	2.61	-
AV	5.788G	100.22	Inf	-Inf	7.29	3	Vertical	360	2.61	-
PK	5.9725G	60.67	68.20	-7.53	7.18	3	Vertical	360	2.61	-

802.11ac VHT20_Nss1,(MCS0)_1TX

24/10/2018

5785MHz_TX



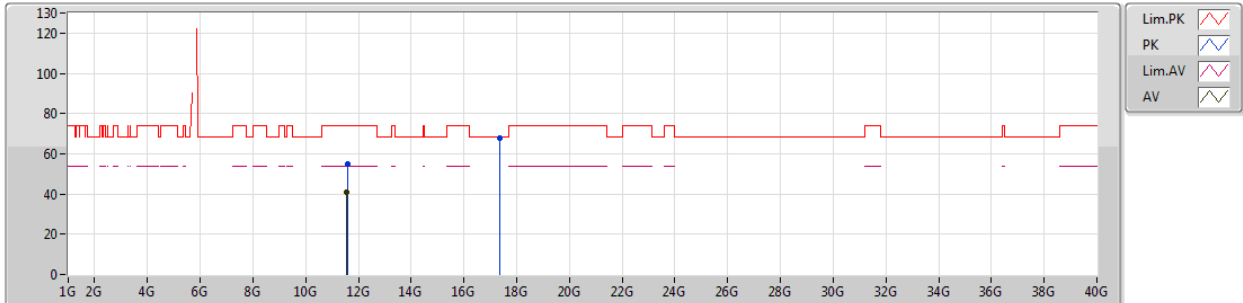
EUT_V_1TX
Setting 0F
03-R-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.6145G	60.62	68.20	-7.58	7.09	3	Horizontal	163	2.33	-
PK	5.784G	105.78	Inf	-Inf	7.28	3	Horizontal	163	2.33	-
AV	5.788G	96.41	Inf	-Inf	7.29	3	Horizontal	163	2.33	-
PK	5.947G	60.03	68.20	-8.17	7.21	3	Horizontal	163	2.33	-

802.11ac VHT20_Nss1,(MCS0)_1TX

24/10/2018

5785MHz_TX



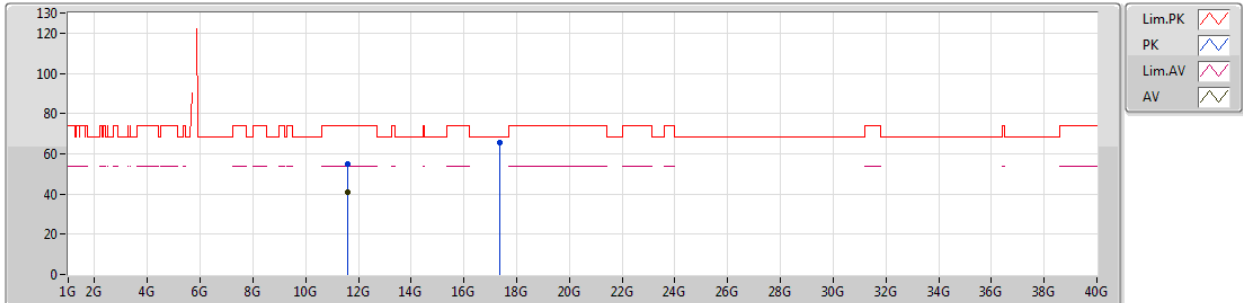
EUT Y_1TX
Setting 0F
03-R-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	11.57957G	54.98	74.00	-19.02	14.30	3	Vertical	82	1.96	-
AV	11.56988G	40.94	54.00	-13.06	14.30	3	Vertical	82	1.96	-
PK	17.36136G	67.86	68.20	-0.34	20.25	3	Vertical	166	1.80	-

802.11ac VHT20_Nss1,(MCS0)_1TX

24/10/2018

5785MHz_TX



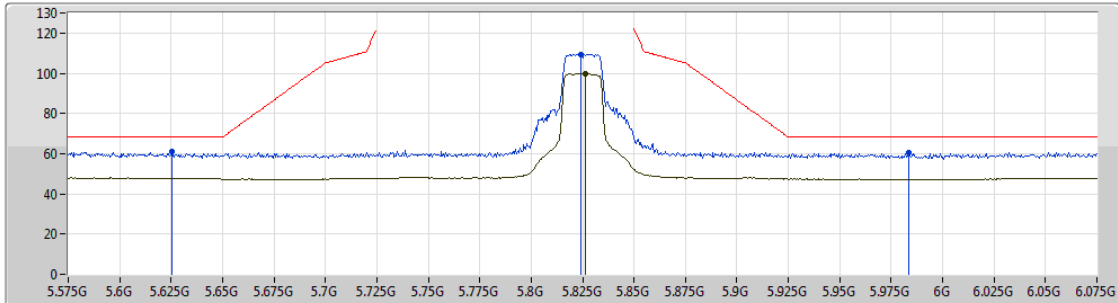
EUT_V_1TX
Setting 0F
03-R-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	11.58074G	54.91	74.00	-19.09	14.30	3	Horizontal	131	1.14	-
AV	11.58101G	40.79	54.00	-13.21	14.30	3	Horizontal	131	1.14	-
PK	17.35971G	65.42	68.20	-2.78	20.24	3	Horizontal	104	2.51	-

802.11ac VHT20_Nss1,(MCS0)_1TX

24/10/2018

5825MHz_TX



Lim.PK
PK
Lim.AV
AV

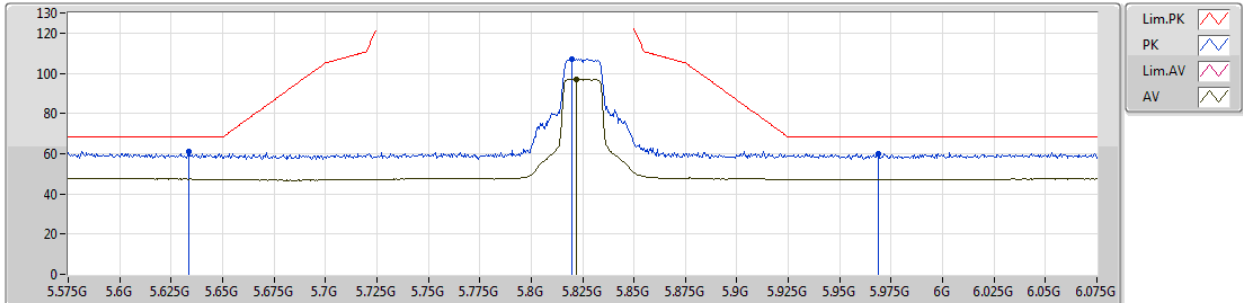
EUT Y_1TX
Setting 0E
03-R-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.6255G	61.21	68.20	-6.99	7.12	3	Vertical	0	2.56	-
PK	5.824G	109.54	Inf	-Inf	7.28	3	Vertical	0	2.56	-
AV	5.8265G	99.76	Inf	-Inf	7.29	3	Vertical	0	2.56	-
PK	5.9835G	60.68	68.20	-7.52	7.18	3	Vertical	0	2.56	-

802.11ac VHT20_Nss1,(MCS0)_1TX

24/10/2018

5825MHz_TX



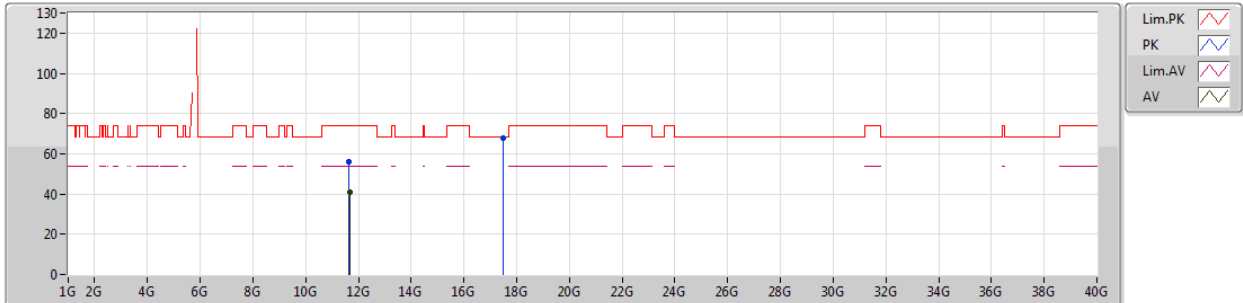
EUT Y_1TX
Setting 0E
03-R-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.6335G	61.14	68.20	-7.06	7.12	3	Horizontal	221	2.51	-
PK	5.82G	106.95	Inf	-Inf	7.29	3	Horizontal	221	2.51	-
AV	5.822G	97.19	Inf	-Inf	7.28	3	Horizontal	221	2.51	-
PK	5.969G	59.88	68.20	-8.32	7.18	3	Horizontal	221	2.51	-

802.11ac VHT20_Nss1,(MCS0)_1TX

24/10/2018

5825MHz_TX



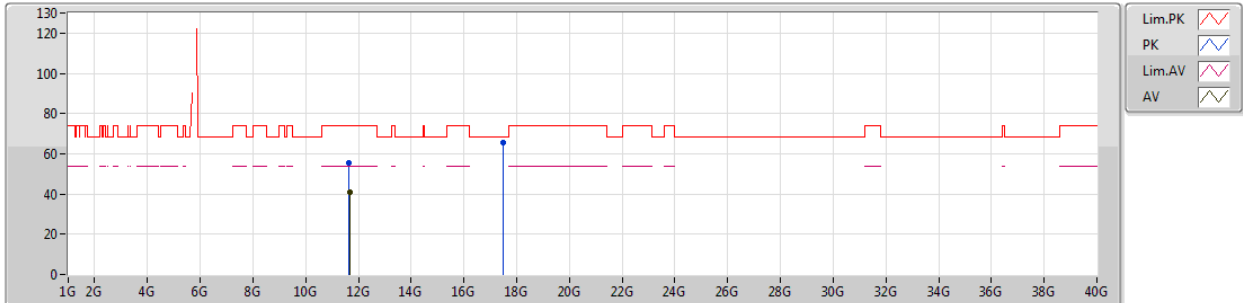
EUT Y_1TX
Setting 0E
03-R-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	11.63938G	56.05	74.00	-17.95	14.32	3	Vertical	121	1.22	-
AV	11.66485G	41.04	54.00	-12.96	14.34	3	Vertical	121	1.22	-
PK	17.48049G	67.82	68.20	-0.38	20.91	3	Vertical	165	1.86	-

802.11ac VHT20_Nss1,(MCS0)_1TX

24/10/2018

5825MHz_TX



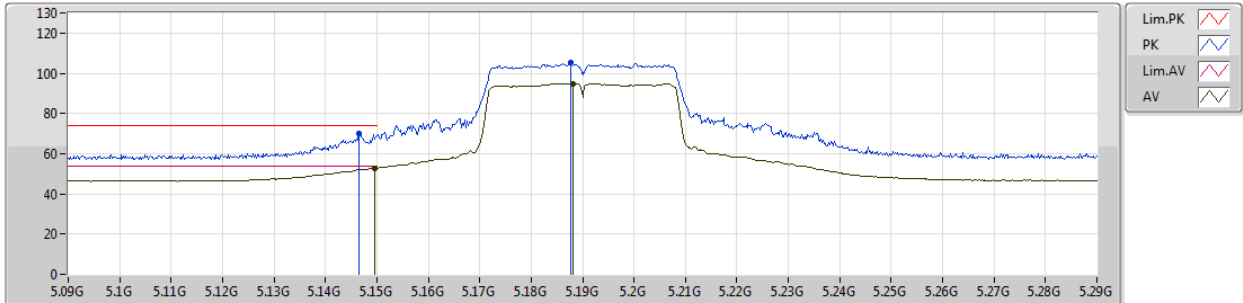
EUT Y_1TX
Setting 0E
03-R-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	11.64184G	55.41	74.00	-18.59	14.32	3	Horizontal	88	2.07	-
AV	11.66461G	41.00	54.00	-13.00	14.34	3	Horizontal	88	2.07	-
PK	17.46933G	65.40	68.20	-2.80	20.86	3	Horizontal	101	2.59	-

802.11ac VHT40_Nss1,(MCS0)_1TX

24/10/2018

5190MHz_TX



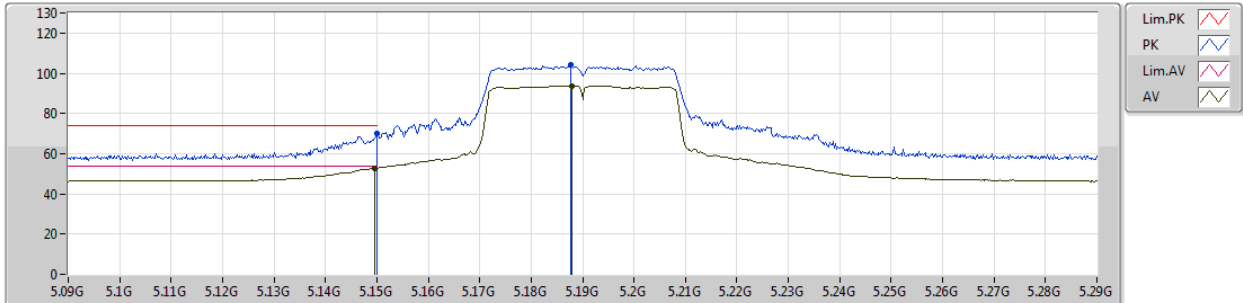
EUT Y_1TX
Setting 0D
03-R-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.1466G	70.13	74.00	-3.87	6.14	3	Vertical	0	2.47	-
AV	5.1496G	52.85	54.00	-1.15	6.15	3	Vertical	0	2.47	-
PK	5.1878G	105.35	Inf	-Inf	6.20	3	Vertical	0	2.47	-
AV	5.1882G	94.97	Inf	-Inf	6.20	3	Vertical	0	2.47	-

802.11ac VHT40_Nss1,(MCS0)_1TX

24/10/2018

5190MHz_TX



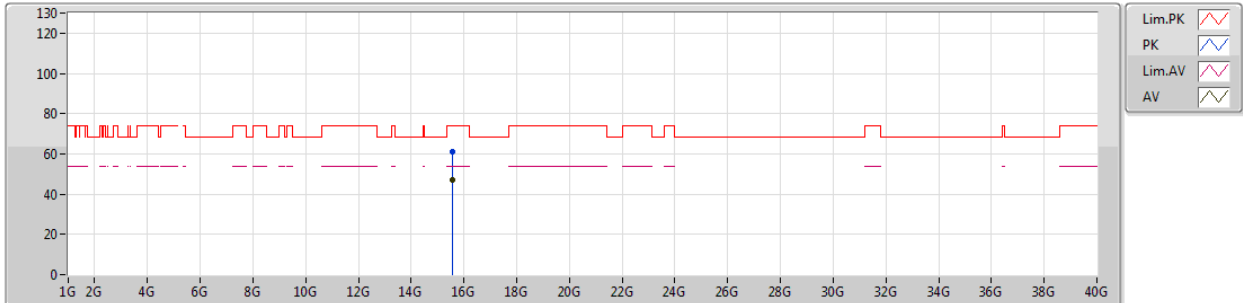
EUT Y_1TX
Setting 0D
03-R-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.15G	70.20	74.00	-3.80	6.15	3	Horizontal	222	2.13	-
AV	5.1496G	52.79	54.00	-1.21	6.15	3	Horizontal	222	2.13	-
PK	5.1878G	104.07	Inf	-Inf	6.20	3	Horizontal	222	2.13	-
AV	5.188G	93.72	Inf	-Inf	6.20	3	Horizontal	222	2.13	-

802.11ac VHT40_Nss1,(MCS0)_1TX

24/10/2018

5190MHz_TX



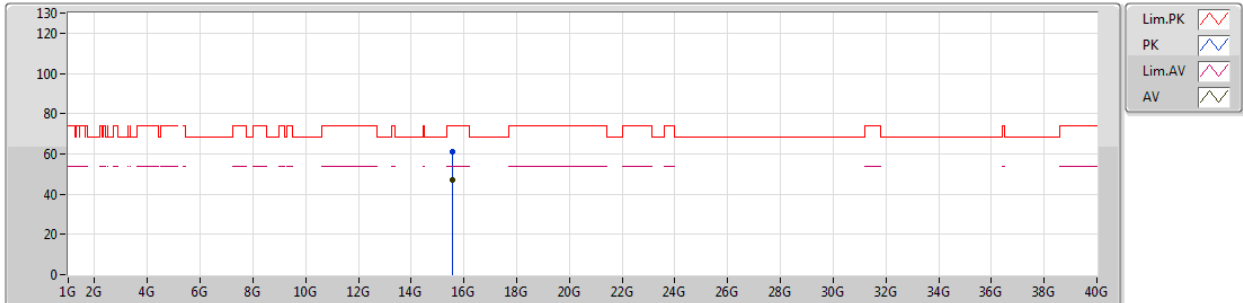
EUT Y_1TX
Setting 0D
03-R-5
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.56787G	61.00	74.00	-13.00	16.15	3	Vertical	256	1.50	-
AV	15.57297G	47.11	54.00	-6.89	16.14	3	Vertical	256	1.50	-

802.11ac VHT40_Nss1,(MCS0)_1TX

24/10/2018

5190MHz_TX



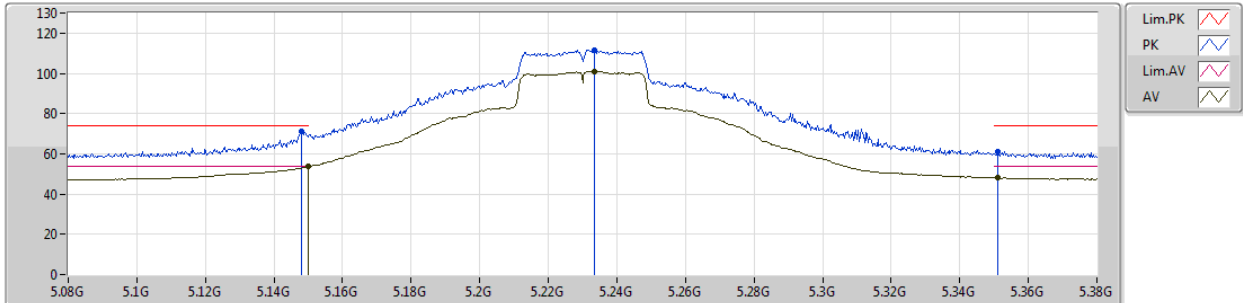
EUT Y_1TX
Setting 0D
03-R-5
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.58041G	60.90	74.00	-13.10	16.10	3	Horizontal	52	2.23	-
AV	15.57933G	46.99	54.00	-7.01	16.11	3	Horizontal	52	2.23	-

802.11ac VHT40_Nss1,(MCS0)_1TX

24/10/2018

5230MHz_TX



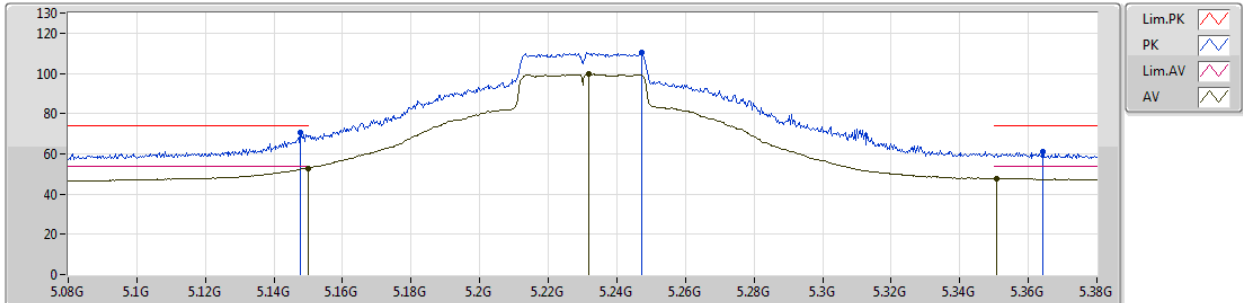
EUT_V_1TX
Setting 20
03-R-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.1481G	70.95	74.00	-3.05	6.15	3	Vertical	0	2.21	-
AV	5.1499G	53.59	54.00	-0.41	6.15	3	Vertical	0	2.21	-
PK	5.2336G	111.61	Inf	-Inf	6.31	3	Vertical	0	2.21	-
AV	5.2333G	101.05	Inf	-Inf	6.31	3	Vertical	0	2.21	-
PK	5.3512G	60.86	74.00	-13.14	6.61	3	Vertical	0	2.21	-
AV	5.351G	48.09	54.00	-5.91	6.61	3	Vertical	0	2.21	-

802.11ac VHT40_Nss1,(MCS0)_1TX

24/10/2018

5230MHz_TX



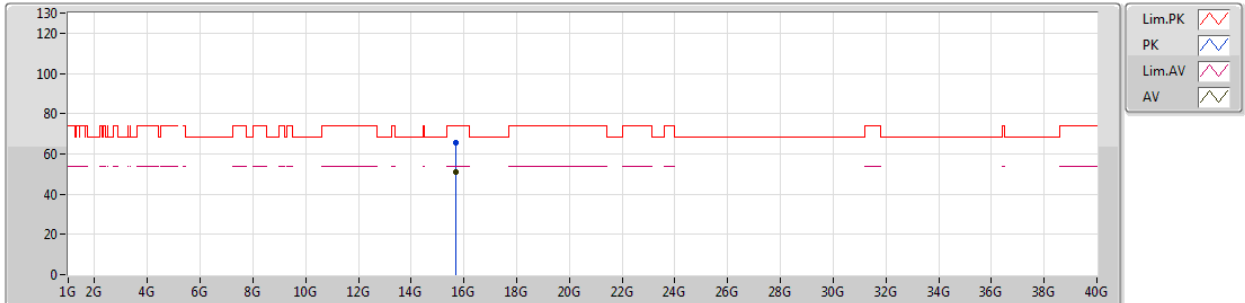
EUT Y_1TX
Setting 20
03-R-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.1478G	70.41	74.00	-3.59	6.15	3	Horizontal	220	2.13	-
AV	5.1499G	52.92	54.00	-1.08	6.15	3	Horizontal	220	2.13	-
PK	5.2474G	110.23	Inf	-Inf	6.35	3	Horizontal	220	2.13	-
AV	5.2318G	99.61	Inf	-Inf	6.31	3	Horizontal	220	2.13	-
PK	5.3641G	60.91	74.00	-13.09	6.64	3	Horizontal	220	2.13	-
AV	5.3509G	47.78	54.00	-6.22	6.61	3	Horizontal	220	2.13	-

802.11ac VHT40_Nss1,(MCS0)_1TX

24/10/2018

5230MHz_TX



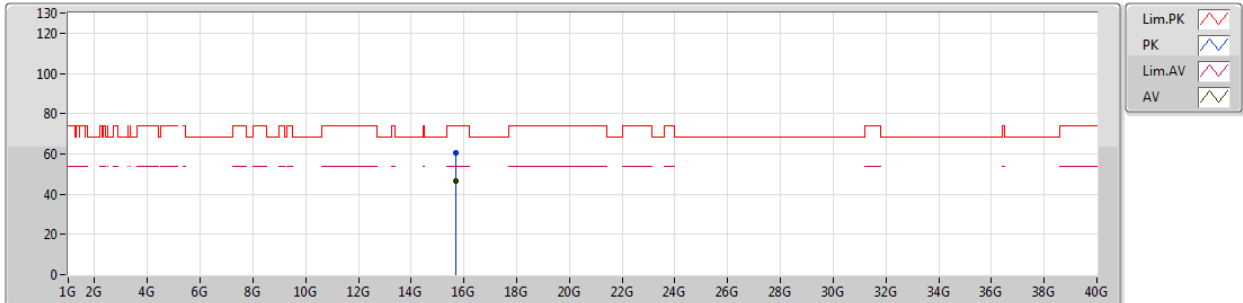
EUT Y_1TX
Setting 20
03-R-5
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.677G	65.50	74.00	-8.50	15.77	3	Vertical	163	1.83	-
AV	15.6935G	50.73	54.00	-3.27	15.73	3	Vertical	163	1.83	-

802.11ac VHT40_Nss1,(MCS0)_1TX

24/10/2018

5230MHz_TX



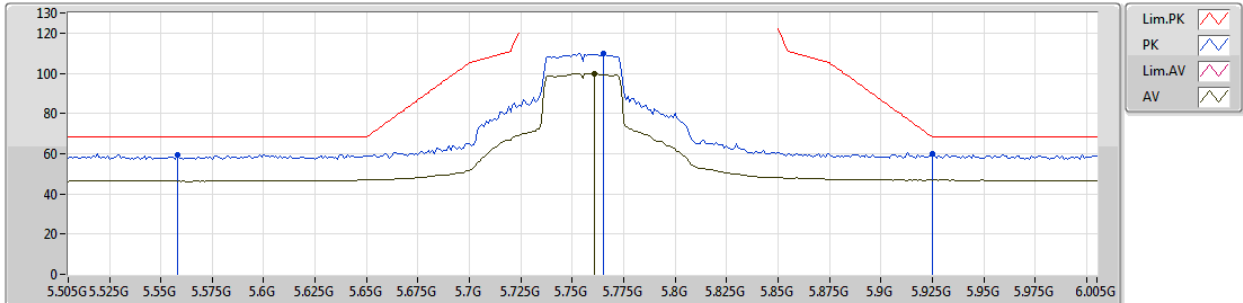
EUT Y_1TX
Setting 20
03-R-5
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.67935G	60.76	74.00	-13.24	15.78	3	Horizontal	295	2.38	-
AV	15.67911G	46.48	54.00	-7.52	15.78	3	Horizontal	295	2.38	-

802.11ac VHT40_Nss1,(MCS0)_1TX

24/10/2018

5755MHz_TX



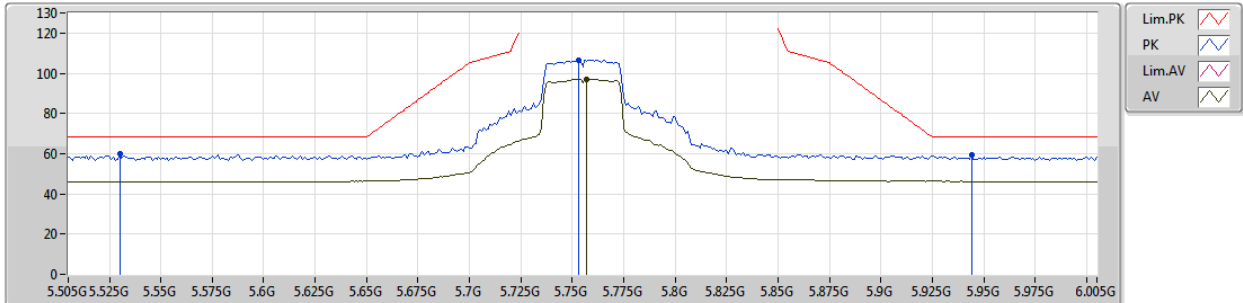
EUT Y_1TX
Setting 13
04-C-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.558G	59.12	68.20	-9.08	6.45	3	Vertical	3	2.12	-
PK	5.765G	110.07	Inf	-Inf	6.75	3	Vertical	3	2.12	-
AV	5.761G	99.94	Inf	-Inf	6.74	3	Vertical	3	2.12	-
PK	5.925G	59.91	68.20	-8.29	7.01	3	Vertical	3	2.12	-

802.11ac VHT40_Nss1,(MCS0)_1TX

24/10/2018

5755MHz_TX



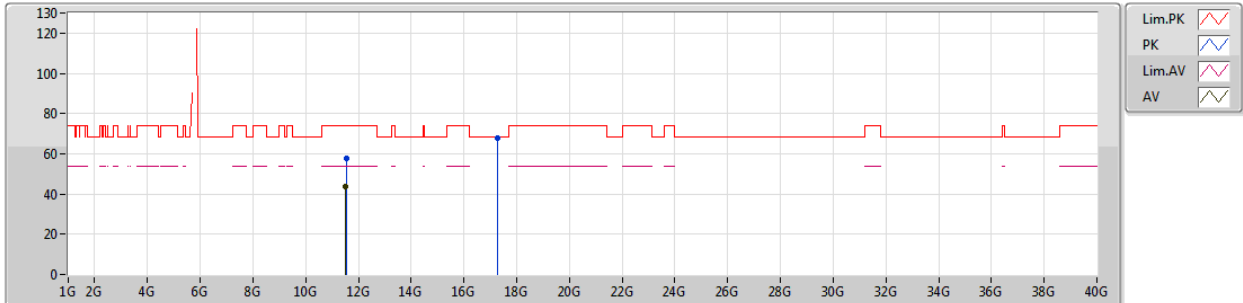
EUT Y_1TX
Setting 13
04-C-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.53G	60.03	68.20	-8.17	6.49	3	Horizontal	146	2.02	-
PK	5.753G	106.65	Inf	-Inf	6.73	3	Horizontal	146	2.02	-
AV	5.757G	97.17	Inf	-Inf	6.73	3	Horizontal	146	2.02	-
PK	5.944G	59.42	68.20	-8.78	7.05	3	Horizontal	146	2.02	-

802.11ac VHT40_Nss1,(MCS0)_1TX

24/10/2018

5755MHz_TX



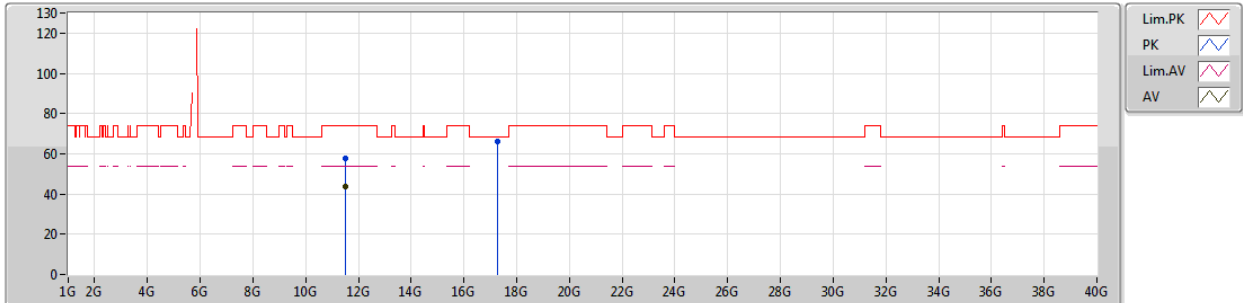
EUT Y_1TX
Setting 13
04-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	11.5327G	57.66	74.00	-16.34	14.22	3	Vertical	88	1.66	-
AV	11.503G	43.88	54.00	-10.12	14.26	3	Vertical	88	1.66	-
PK	17.2571G	67.90	68.20	-0.30	19.22	3	Vertical	182	2.72	-

802.11ac VHT40_Nss1,(MCS0)_1TX

24/10/2018

5755MHz_TX



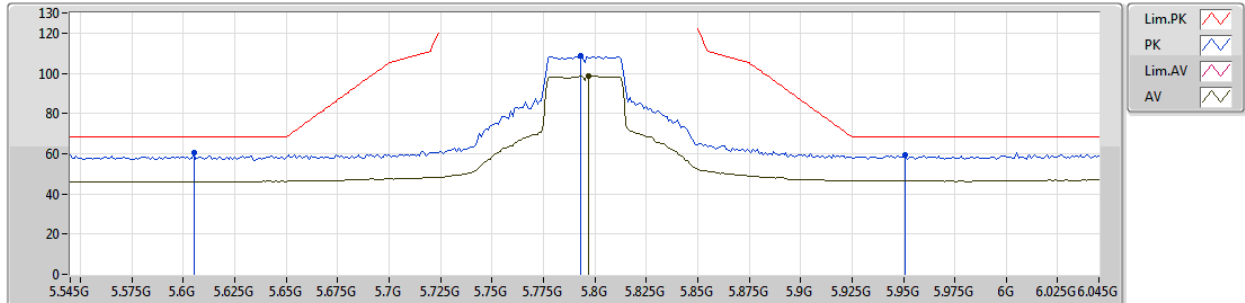
EUT Y_1TX
Setting 13
04-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	11.4903G	57.54	74.00	-16.46	14.26	3	Horizontal	76	1.50	-
AV	11.4882G	43.56	54.00	-10.44	14.26	3	Horizontal	76	1.50	-
PK	17.2785G	66.37	68.20	-1.83	19.44	3	Horizontal	265	1.49	-

802.11ac VHT40_Nss1,(MCS0)_1TX

24/10/2018

5795MHz_TX



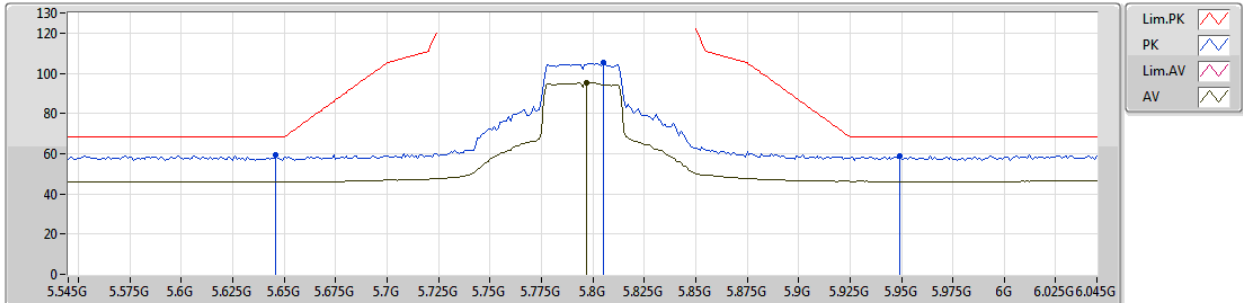
EUT Y_1TX
Setting 12
04-C-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.605G	60.37	68.20	-7.83	6.39	3	Vertical	359	2.19	-
PK	5.793G	108.43	Inf	-Inf	6.82	3	Vertical	359	2.19	-
AV	5.797G	98.55	Inf	-Inf	6.82	3	Vertical	359	2.19	-
PK	5.951G	59.25	68.20	-8.95	7.06	3	Vertical	359	2.19	-

802.11ac VHT40_Nss1,(MCS0)_1TX

24/10/2018

5795MHz_TX



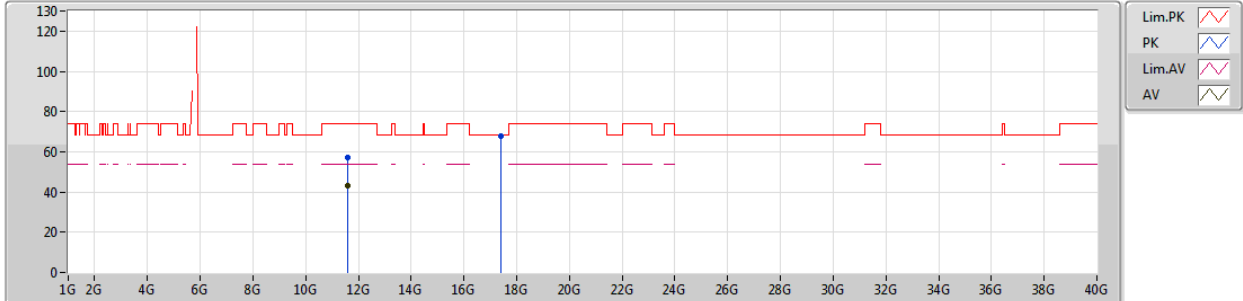
EUT Y_1TX
Setting 12
04-C-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.646G	59.51	68.20	-8.69	6.48	3	Horizontal	138	1.05	-
PK	5.805G	105.13	Inf	-Inf	6.84	3	Horizontal	138	1.05	-
AV	5.797G	95.37	Inf	-Inf	6.82	3	Horizontal	138	1.05	-
PK	5.949G	59.01	68.20	-9.19	7.06	3	Horizontal	138	1.05	-

802.11ac VHT40_Nss1,(MCS0)_1TX

24/10/2018

5795MHz_TX



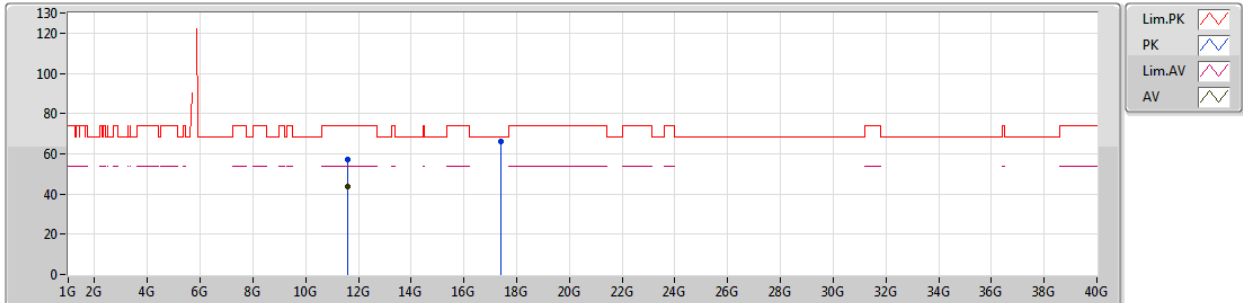
EUT Y_1TX
Setting 12
04-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	11.609G	57.30	74.00	-16.70	14.13	3	Vertical	82	1.47	-
AV	11.6016G	43.36	54.00	-10.64	14.15	3	Vertical	82	1.47	-
PK	17.3877G	67.93	68.20	-0.27	20.55	3	Vertical	183	2.69	-

802.11ac VHT40_Nss1,(MCS0)_1TX

24/10/2018

5795MHz_TX



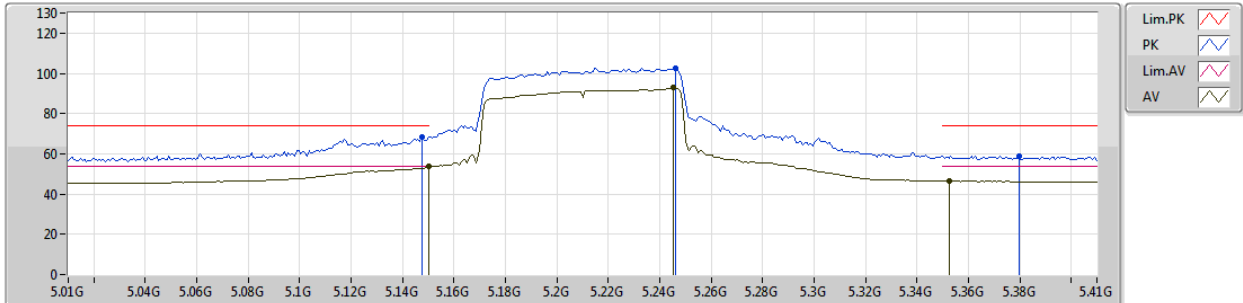
EUT Y_1TX
Setting 12
04-C-5
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	11.6038G	57.06	74.00	-16.94	14.14	3	Horizontal	136	2.25	-
AV	11.5901G	43.79	54.00	-10.21	14.15	3	Horizontal	136	2.25	-
PK	17.3891G	66.04	68.20	-2.16	20.56	3	Horizontal	264	1.50	-

802.11ac VHT80_Nss1,(MCS0)_1TX

24/10/2018

5210MHz_TX



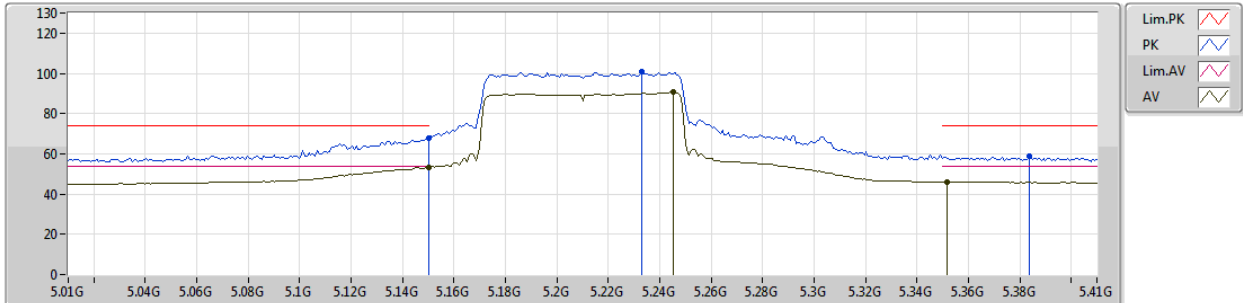
EUT Y_1TX
Setting 08
04-C-5-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.1476G	68.32	74.00	-5.68	6.22	3	Vertical	349	2.72	-
AV	5.15G	53.60	54.00	-0.40	6.22	3	Vertical	349	2.72	-
PK	5.246G	102.41	Inf	-Inf	6.12	3	Vertical	349	2.72	-
AV	5.2452G	92.84	Inf	-Inf	6.12	3	Vertical	349	2.72	-
PK	5.3796G	59.03	74.00	-14.97	6.30	3	Vertical	349	2.72	-
AV	5.3524G	46.43	54.00	-7.57	6.22	3	Vertical	349	2.72	-

802.11ac VHT80_Nss1,(MCS0)_1TX

24/10/2018

5210MHz_TX



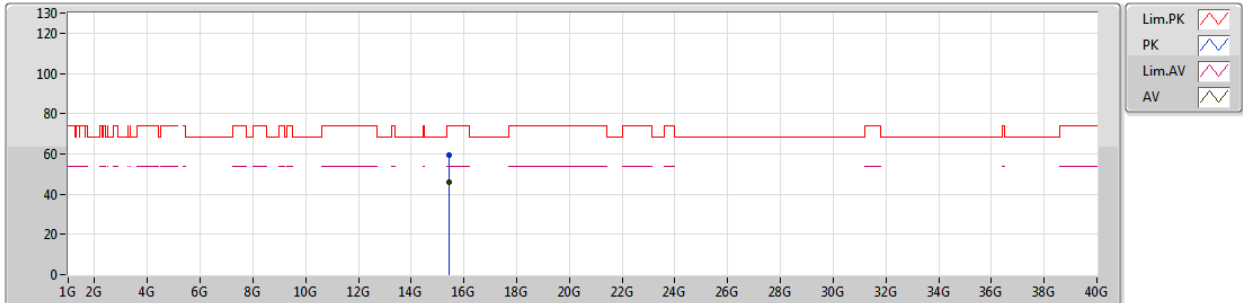
EUT Y_1TX
Setting 08
04-C-5-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.15G	68.04	74.00	-5.96	6.22	3	Horizontal	133	1.04	-
AV	5.15G	53.40	54.00	-0.60	6.22	3	Horizontal	133	1.04	-
PK	5.2332G	100.59	Inf	-Inf	6.14	3	Horizontal	133	1.04	-
AV	5.2452G	90.65	Inf	-Inf	6.12	3	Horizontal	133	1.04	-
PK	5.3836G	58.95	74.00	-15.05	6.32	3	Horizontal	133	1.04	-
AV	5.3516G	46.05	54.00	-7.95	6.21	3	Horizontal	133	1.04	-

802.11ac VHT80_Nss1,(MCS0)_1TX

24/10/2018

5210MHz_TX



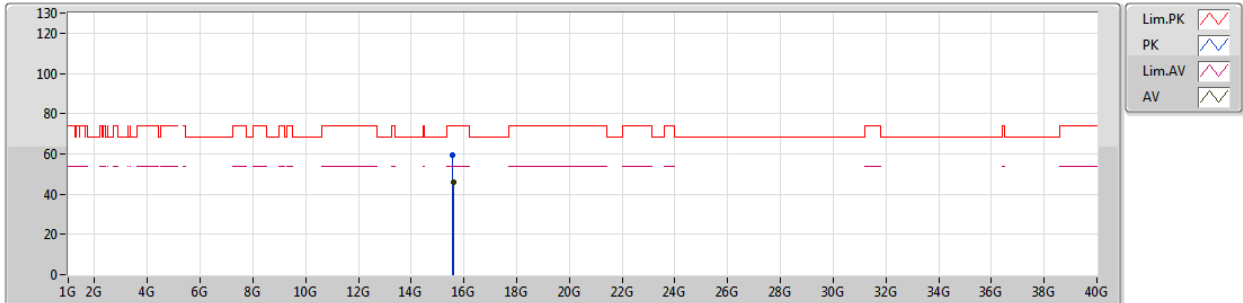
EUT Y_1TX
Setting 0B
04-C-5
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.4364G	59.61	74.00	-14.39	15.30	3	Vertical	189	2.57	-
AV	15.4588G	46.15	54.00	-7.85	15.20	3	Vertical	189	2.57	-

802.11ac VHT80_Nss1,(MCS0)_1TX

24/10/2018

5210MHz_TX



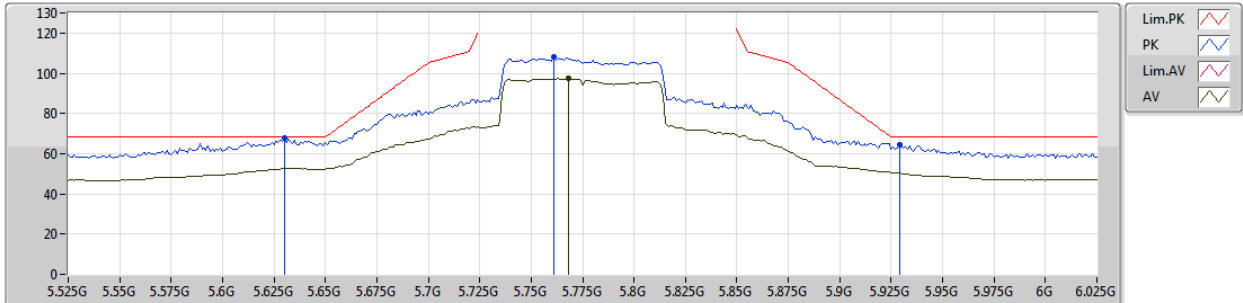
EUT Y_1TX
Setting 0B
04-C-5
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.5684G	59.60	74.00	-14.40	14.74	3	Horizontal	225	2.22	-
AV	15.606G	46.05	54.00	-7.95	14.58	3	Horizontal	225	2.22	-

802.11ac VHT80_Nss1,(MCS0)_1TX

25/10/2018

5775MHz_TX



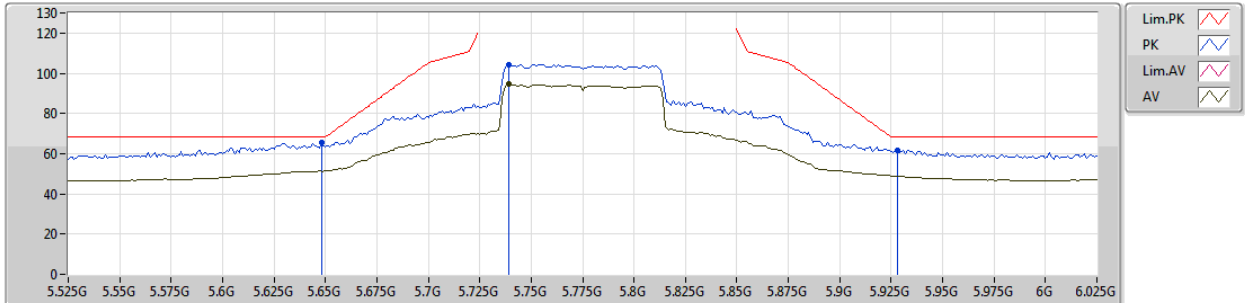
EUT Y_1TX
Setting 16
04-C-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.63G	68.04	68.20	-0.16	6.45	3	Vertical	359	2.66	-
PK	5.761G	108.27	Inf	-Inf	6.74	3	Vertical	359	2.66	-
AV	5.768G	97.25	Inf	-Inf	6.76	3	Vertical	359	2.66	-
PK	5.929G	64.28	68.20	-3.92	7.02	3	Vertical	359	2.66	-

802.11ac VHT80_Nss1,(MCS0)_1TX

25/10/2018

5775MHz_TX



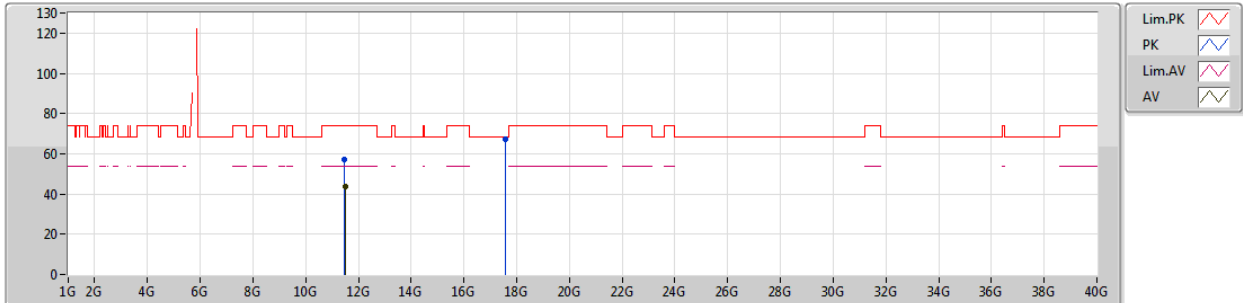
EUT Y_1TX
Setting 16
04-C-5-10
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	5.648G	65.51	68.20	-2.69	6.49	3	Horizontal	136	1.01	-
PK	5.739G	104.45	Inf	-Inf	6.70	3	Horizontal	136	1.01	-
AV	5.739G	94.57	Inf	-Inf	6.70	3	Horizontal	136	1.01	-
PK	5.928G	61.83	68.20	-6.37	7.02	3	Horizontal	136	1.01	-

802.11ac VHT80_Nss1,(MCS0)_1TX

25/10/2018

5775MHz_TX



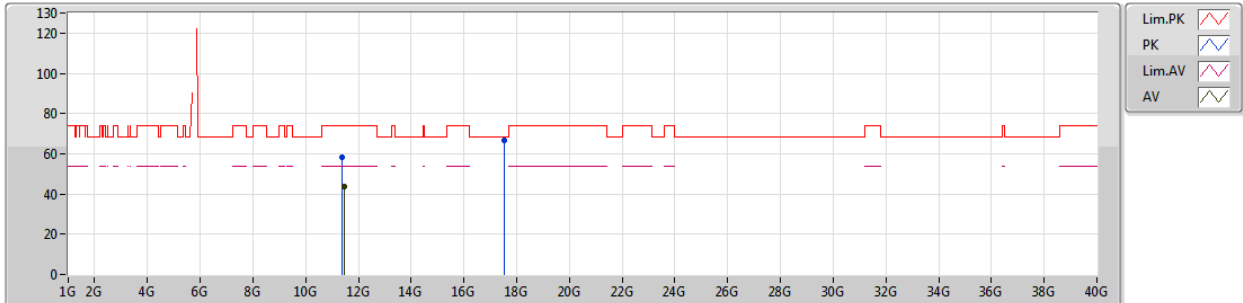
EUT Y_1TX
Setting 16
04-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	11.486G	56.94	74.00	-17.06	14.27	3	Vertical	117	1.50	-
AV	11.491G	43.55	54.00	-10.45	14.26	3	Vertical	117	1.50	-
PK	17.565G	67.13	68.20	-1.07	22.36	3	Vertical	57	1.50	-

802.11ac VHT80_Nss1,(MCS0)_1TX

25/10/2018

5775MHz_TX



EUT Y_1TX
Setting 16
04-C-5
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	11.377G	58.07	74.00	-15.93	14.39	3	Horizontal	202	1.79	-
AV	11.482G	43.62	54.00	-10.38	14.28	3	Horizontal	202	1.79	-
PK	17.533G	66.87	68.20	-1.33	22.02	3	Horizontal	267	1.59	-