FCC Test Report

Equipment	:	MAP-AC1750
Brand Name	:	ASUS
Model No.	:	MAP-AC1750
FCC ID	:	MSQ-RTACRW00
Standard	:	47 CFR FCC Part 15.407
Operating Band	:	5150 MHz – 5250 MHz 5725 MHz – 5850 MHz
Applicant	:	ASUSTeK Computer Inc 4F, No. 150, Li-Te Rd., Peitou, Taipei 112, Taiwan
Manufacturer	:	ASUSTeK Computer Inc 4F, No. 150, Li-Te Rd., Peitou, Taipei 112, Taiwan
Function	:	☐ Outdoor; ☒ Indoor; ☐ Fixed P2P ☒ Client

The product sample received on Oct. 03, 2017 and completely tested on Dec. 20, 2017. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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

Cliff Chang
SPORTON INTERNATIONAL INC.

Testing Laboratory
1190

Table of Contents

Summary of Test Result

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

Revision History

Report No.	Version	Description	Issued Date
FR7N0218AB	Rev. 01	Initial issue of report	Jan. 12, 2018

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	3TX
5.15-5.25GHz	802.11n HT20	20	3TX
5.15-5.25GHz	802.11ac VHT20	20	3TX
5.15-5.25GHz	802.11n HT40	40	3TX
5.15-5.25GHz	802.11ac VHT40	40	3TX
5.15-5.25GHz	802.11ac VHT80	80	3TX
5.725-5.85GHz	802.11a	20	3TX
5.725-5.85GHz	802.11n HT20	20	3TX
5.725-5.85GHz	802.11ac VHT20	20	3TX
5.725-5.85GHz	802.11n HT40	40	3TX
5.725-5.85GHz	802.11ac VHT40	40	3TX
5.725-5.85GHz	802.11ac VHT80	80	3TX

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.	2.4GHz Port	5GHz Port	Brand	Part Number	Antenna Type	Connector	Gain (dBi)			
							WLAN 2.4GHz	5GHz Band 1	5GHz Band 4	BT
1	1	2	WHA YU	C059-510402-A	Dipole Antenna	I-PEX	2.21	2.70	2.80	-
2	2	3	WHA YU	C059-510402-A	Dipole Antenna	I-PEX	2.28	2.81	2.34	-
3	3	1	WHA YU	C059-510402-A	Dipole Antenna	I-PEX	2.41	1.97	2.51	-
4	1	-	WHA YU	C059-510402-A	PIFA Antenna	I-PEX	-	-	-	2

Note: The EUT has four antennas.

For WLAN function (3TX, 3RX):

Ant. 1 ~ Ant. 3 can be used as transmitting/receiving antenna.

Ant. 1 ~ Ant. 3 could transmit/receive simultaneously.

For Bluetooth function (1TX, 1RX):

Only Ant. 4 can be used as transmitting/receiving functions.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11a	0.964	0.159	2.065m	1k
802.11ac VHT20	0.961	0.173	1.933m	1k
802.11ac VHT40	0.902	0.448	945u	3k
802.11ac VHT80	0.82	0.862	449.375u	3k

1.1.4 EUT Operational Condition

EUT Power Type	From Power Adapter			
Beamforming Function	☐	With beamforming	☒	Without beamforming
Test Software Version	QRCT			

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 662911 D01 v02r01

1.3 Testing Location Information

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

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH01-CB	Paul Chen	22°C / 54%	Nov. 21, 2017~Dec. 20, 2017
Radiated	03CH01-CB	Zero Chen / Gino Huang / Mason Chen / Edidie Weng / Brian Sun	22°C / 54%	Nov. 02, 2017~Dec. 15, 2017
AC Conduction	CO02-CB	Rick Yeh	26°C / 60%	Dec. 13, 2017

Test site Designation No. TW0006 with FCC
Test site registered number IC 4086D with Industry Canada.

1.4 Measurement Uncertainty

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

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.2 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.7 dB	Confidence levels of 95%
Output Power Measurement	1.33 dB	Confidence levels of 95%
Power Density Measurement	1.27 dB	Confidence levels of 95%
Bandwidth Measurement	9.74×10^{-8}	Confidence levels of 95%
Frequency Stability	6.06×10^{-8}	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

For Master Mode Band 1 and Mater Mode, Client Mode Band 4

Mode	Power Setting
802.11a_Nss1,(6Mbps)_3TX	-
5180MHz	21
5200MHz	23
5240MHz	23.5
5745MHz	25
5785MHz	24.5
5825MHz	24.5
802.11ac VHT20_Nss1,(MCS0)_3TX	-
5180MHz	20.5
5200MHz	23.5
5240MHz	24
5745MHz	25
5785MHz	25
5825MHz	24.5
802.11ac VHT40_Nss1,(MCS0)_3TX	-
5190MHz	19
5230MHz	24.5
5755MHz	24.5
5795MHz	24.5
802.11ac VHT80_Nss1,(MCS0)_3TX	-
5210MHz	18.5
5775MHz	22.5

For Client Mode Band 1:

Mode	Power Setting
802.11a_Nss1,(6Mbps)_3TX	-
5180MHz	17.5
5200MHz	17
5240MHz	17
802.11ac VHT20_Nss1,(MCS0)_3TX	-
5180MHz	17.5
5200MHz	17.5
5240MHz	17.5
802.11ac VHT40_Nss1,(MCS0)_3TX	-
5190MHz	19
5230MHz	19
802.11ac VHT80_Nss1,(MCS0)_3TX	-
5210MHz	18.5

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

2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral
Operating Mode	Normal Link
1	Repeater Mode (2.4GHz + Bluetooth) + Adapter 1
2	Repeater Mode (5GHz + Bluetooth) + Adapter 1
Mode 2 has been evaluated to be the worst case among Mode 1~2, thus measurement for Mode 3 will follow this same test mode.	
3	Repeater Mode (5GHz + Bluetooth) + Adapter 2
For operating mode 2 is the worst case and it was record in this test report.	

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

The Worst Case Mode for Following Conformance Tests	
Tests Item	Unwanted Emissions
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	Normal Link
1	Repeater Mode (2.4GHz + Bluetooth) + Adapter 1
2	Repeater Mode (5GHz + Bluetooth) + Adapter 1
Mode 2 has been evaluated to be the worst case among Mode 1~2, thus measurement for Mode 3 will follow this same test mode.	
3	Repeater Mode (5GHz + Bluetooth) + Adapter 2
For operating mode 2 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX
1	CTX

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

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	WLAN 2.4GHz + WLAN 5GHz + Bluetooth
Refer to Sporton Test Report No.: FA7N0218 for Co-location RF Exposure Evaluation.	

Note 1: The EUT supports AP/Repeater/slave without radar detection/Mesh, only Repeater mode has been tested and recorded in this test report.
Note 2: The EUT can only be used in Z axis position.

2.3 EUT Operation during Test

For CTX Mode:

The EUT was programmed to be in continuously transmitting mode.

For Normal Link:

During the test, the EUT operation to normal function.

2.4 Accessories

Accessories				
No.	**Equipment Name**	**Brand Name**	**Model Name**	**Rating**
1	Adapter 1	DVE	DSA-18PFR-12 FUS 120150	INPUT: 100-240V~50/60Hz, 0.6A Output: +12V, 1.5A
2	Adapter 2	DVE	DSA-18CB-12 FCA 120150	INPUT: 100-240V~50/60Hz, 0.6A Output: +12V, 1.5A
Others				
US Plug*1 (For adapter 2 use)				
RJ-45 cable*1, Non Shielded, 1m				

2.5 Support Equipment

For Test Site No: CO02-CB

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB*4	DELL	E6430	DoC
2	Device NB	DELL	E6430	DoC
3	Smart phone	Samsung	Galaxy J2	DoC
4	Device	ASUS	MAP-AC1750	DoC

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

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB*5	DELL	E4300	DoC
2	Device	ASUS	MAP-AC1750	DoC
3	Smart phone	Samsung	Galaxy J2	DoC

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

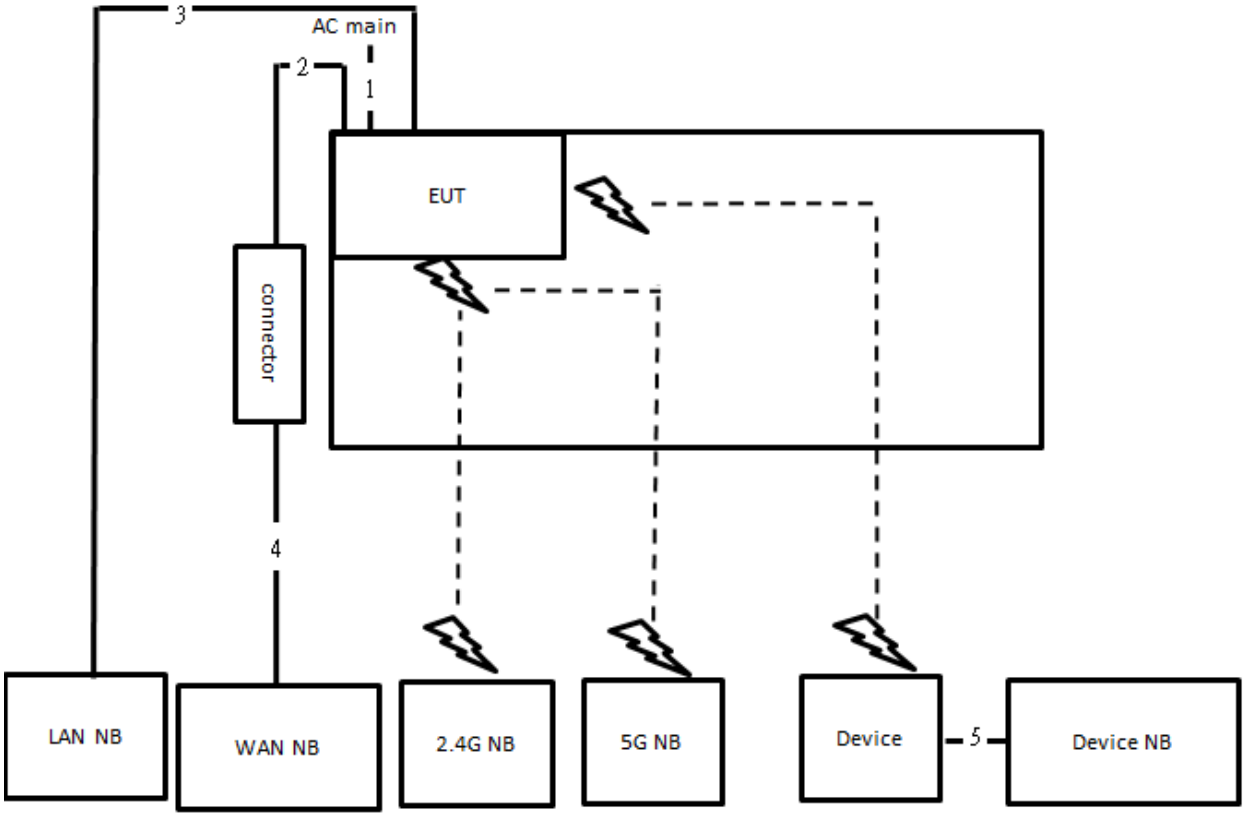
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB	DELL	E4300	DoC

For Test Site No: TH01-CB

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

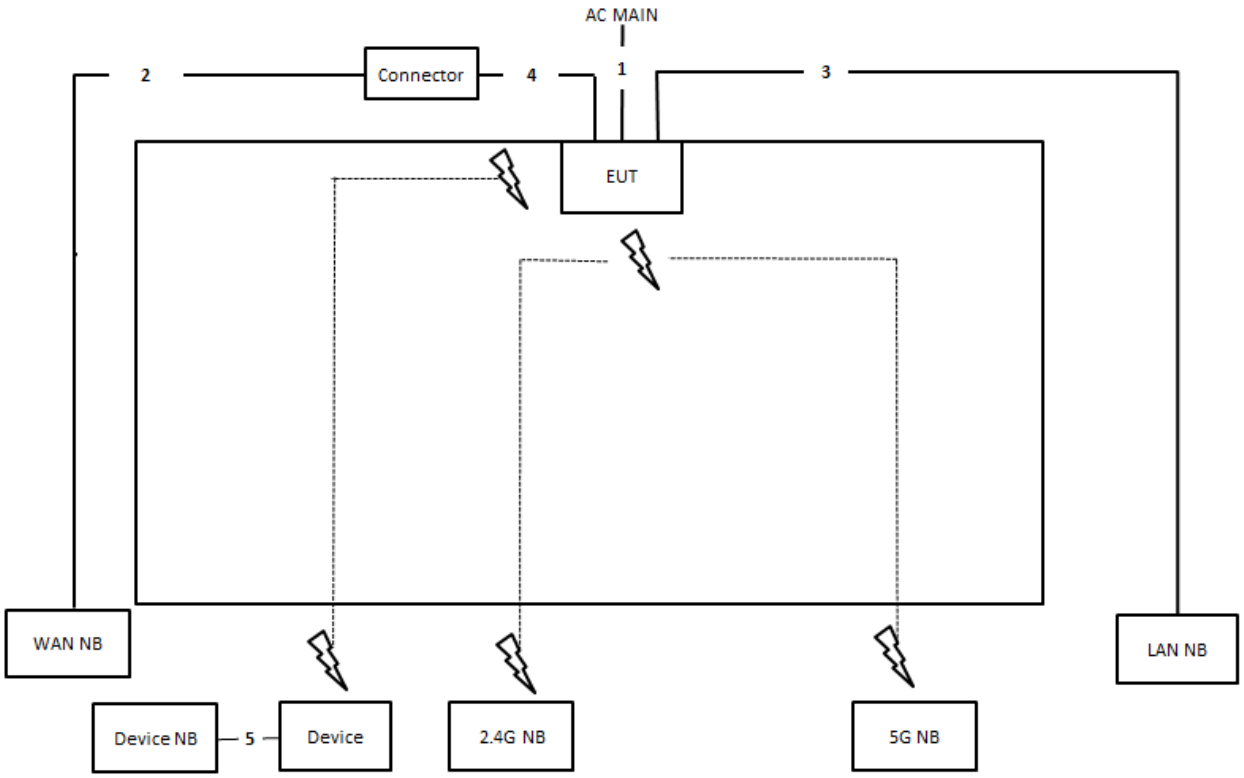
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



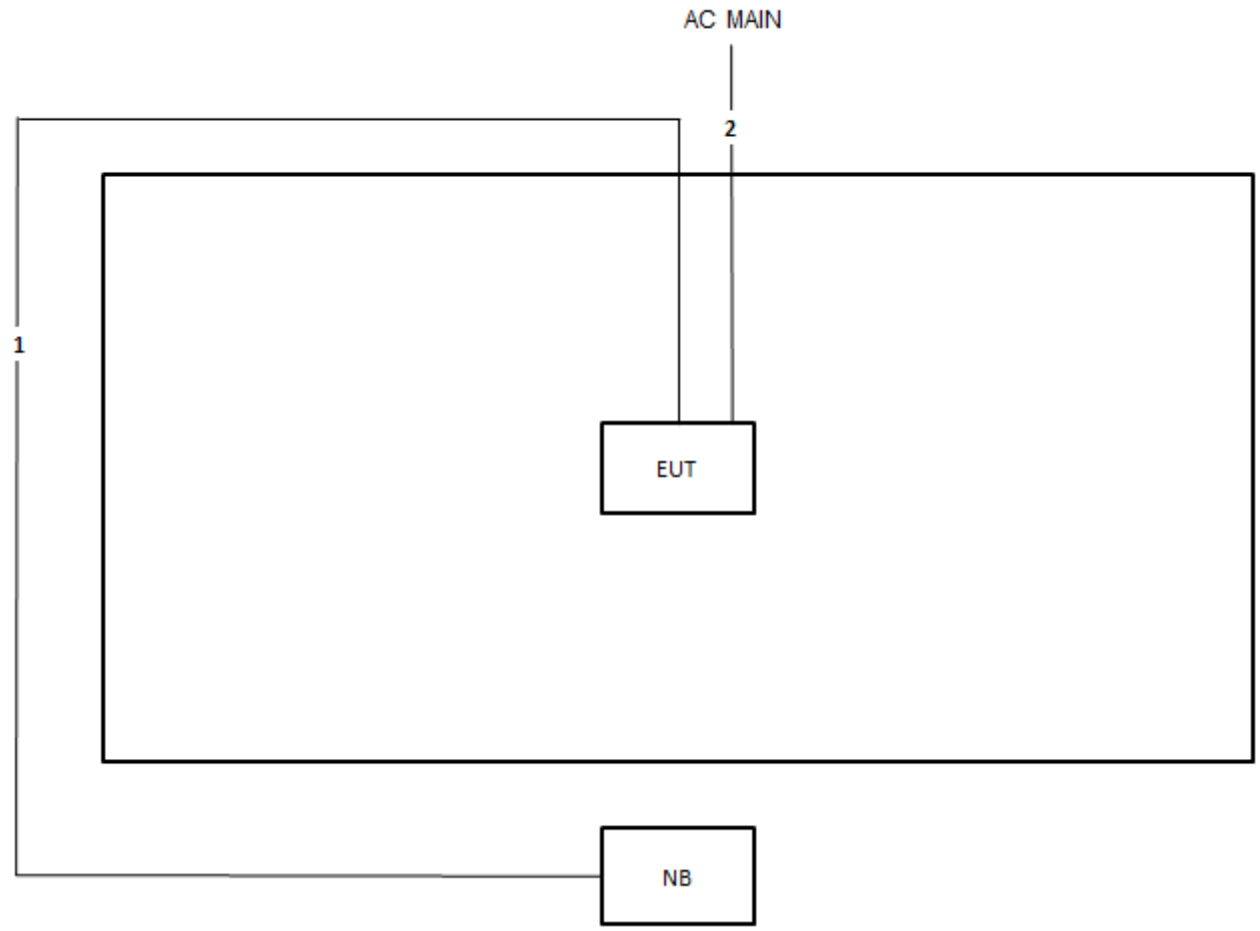
Item	Connection	Shielded	Length
1	Power cable	No	1.5m
2	RJ-45 cable	No	1m
3	RJ-45 cable	No	10m
4	RJ-45 cable	No	10m
5	RJ-45 cable	No	1m

Test Setup Diagram - Radiated Test < 1GHz



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

Test Setup Diagram - Radiated Test > 1GHz



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

3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line Conducted Emissions Limit		
Frequency Emission (MHz)	**Quasi-Peak**	**Average**
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50
Note 1: * Decreases with the logarithm of the frequency.		

3.1.2 Measuring Instruments

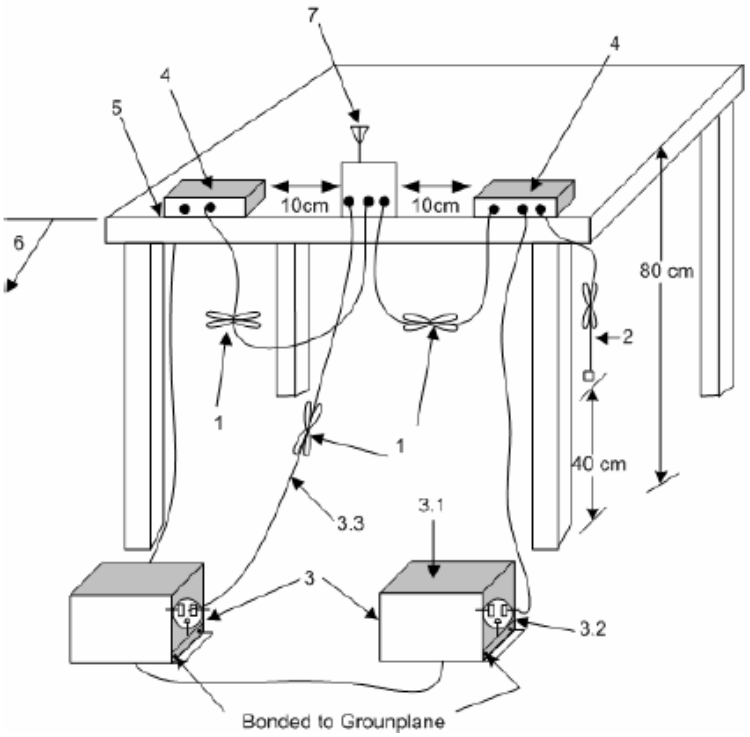
Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

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

3.1.4 Test Setup

AC Power-line Conducted Emissions



1—Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 cm to 40 cm long.
2—The I/O cables that are not connected to an accessory shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
3—EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50 Ω loads. LISN may be placed on top of, or immediately beneath, reference ground plane.
3.1—All other equipment powered from additional LISN(s).
3.2—A multiple-outlet strip may be used for multiple power cords of non-EUT equipment.
3.3—LISN at least 80 cm from nearest part of EUT chassis.
4—Non-EUT components of EUT system being tested.
5—Rear of EUT, including peripherals, shall all be aligned and flush with edge of tabletop.
6—Edge of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.
7—Antenna can be integral or detachable. If detachable, then the antenna shall be attached for this test.

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 ≥ 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 ≥ 500kHz.

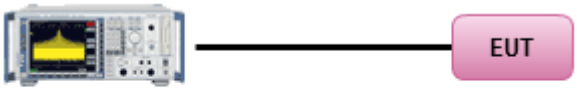
3.2.2 Measuring Instruments

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

Emission Bandwidth
 Spectrum Analyzer

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: $P_{total} = P_1 + P_2 + \ldots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

3.3.4 Test Setup

RF Output Power (Power Meter)


3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

3.4 Peak Power Spectral Density

3.4.1 Peak Power Spectral Density Limit

Peak Power Spectral Density Limit	
UNII Devices	
☒	For the 5.15-5.25 GHz band:
	▪ Outdoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If G_{TX} > 6 dBi, then P_{Out} = 17 – (G_{TX} – 6).
	▪ Indoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If G_{TX} > 6 dBi, then P_{Out} = 17 – (G_{TX} – 6).
	▪ Point-to-point AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If G_{TX} > 23 dBi, then P_{Out} = 17 – (G_{TX} – 23).
	▪ Mobile or Portable Client: the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If G_{TX} > 6 dBi, then PPSD= 11 – (G_{TX} – 6)..
☐	For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If G_{TX} > 6 dBi, then PPSD= 11 – (G_{TX} – 6).
☐	For the 5.47-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If G_{TX} > 6 dBi, then PPSD= 11 – (G_{TX} – 6).
☒	For the 5.725-5.85 GHz band:
	▪ Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If G_{TX} > 6 dBi, then PPSD= 30 – (G_{TX} – 6).
	▪ Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.
LE-LAN Devices	
☐	For the 5.15-5.25 GHz band, the peak power spectral density (PPSD) ≤ 4 dBm/MHz and the e.i.r.p. peak power spectral density (PPSD) ≤ 10 dBm/MHz.
☐	For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz and the e.i.r.p. peak power spectral density (PPSD) ≤ 17 dBm/MHz.
	▪ e.i.r.p. greater than 200 mW shall comply with the following e.i.r.p. at different elevations, where θ is the angle above the local horizontal plane (of the Earth) as shown below: -13 dBW/MHz for 0° ≤ θ < 8° ; -13 − 0.716 (θ-8) dBW/MHz for 8° ≤ θ < 40° -35.9 − 1.22 (θ-40) dBW/MHz for 40° ≤ θ ≤ 45° ; -42 dBW/MHz for θ > 45°
☐	For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz and the e.i.r.p. peak power spectral density (PPSD) ≤ 17 dBm/MHz.
☐	For the 5.725-5.85 GHz band:
	▪ Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If G_{TX} > 6 dBi, then PPSD= 30 – (G_{TX} – 6).
	▪ Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.
PPSD = peak power spectral density that he same method as used to determine the conducted output power shall be used to determine the power spectral density. And power spectral density in dBm/MHz **G_{TX}** = the maximum transmitting antenna directional gain in dBi.	

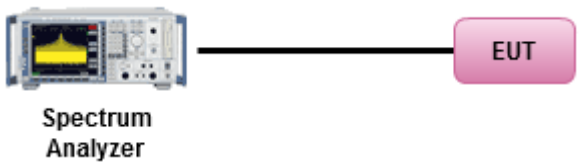
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method	
▪ Peak power spectral density procedures that the same method as used to determine the conducted output power shall be used to determine the peak power spectral density and use the peak search function on the spectrum analyzer to find the peak of the spectrum. For the peak power spectral density shall be measured using below options:	
☐ Refer as FCC KDB 789033, 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: $PPSD_{total} = PPSD_1 + PPSD_2 + \ldots + PPSD_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = PPSD_{total} + DG$

3.4.4 Test Setup

Power Spectral Density


3.4.5 Test Result of Peak Power Spectral Density

Refer as Appendix D

3.5 Unwanted Emissions

3.5.1 Transmitter Radiated Unwanted Emissions Limit

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

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

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

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

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

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

3.5.2 Measuring Instruments

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

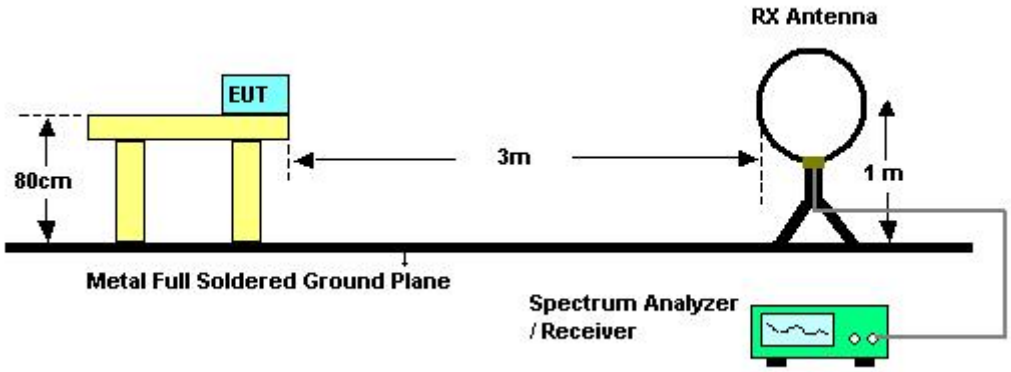
3.5.3 Test Procedures

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

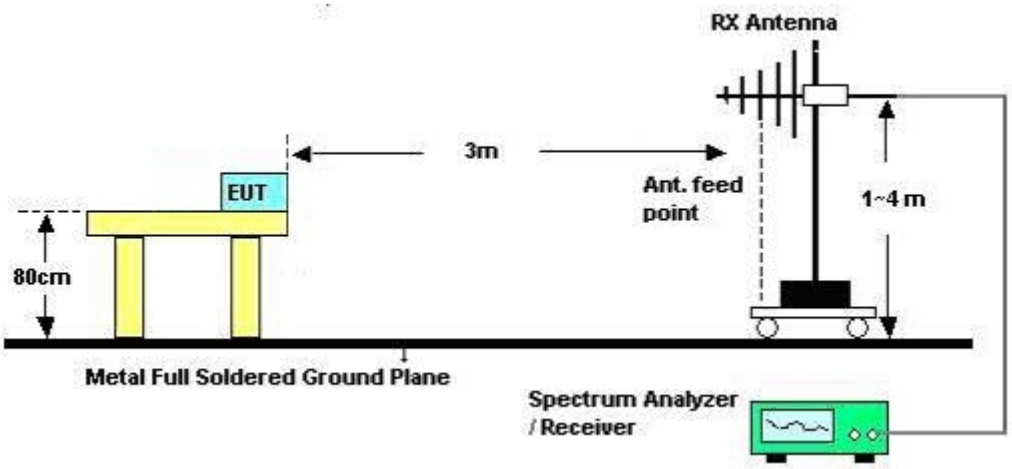
3.5.4 Test Setup

Transmitter Radiated Unwanted Emissions

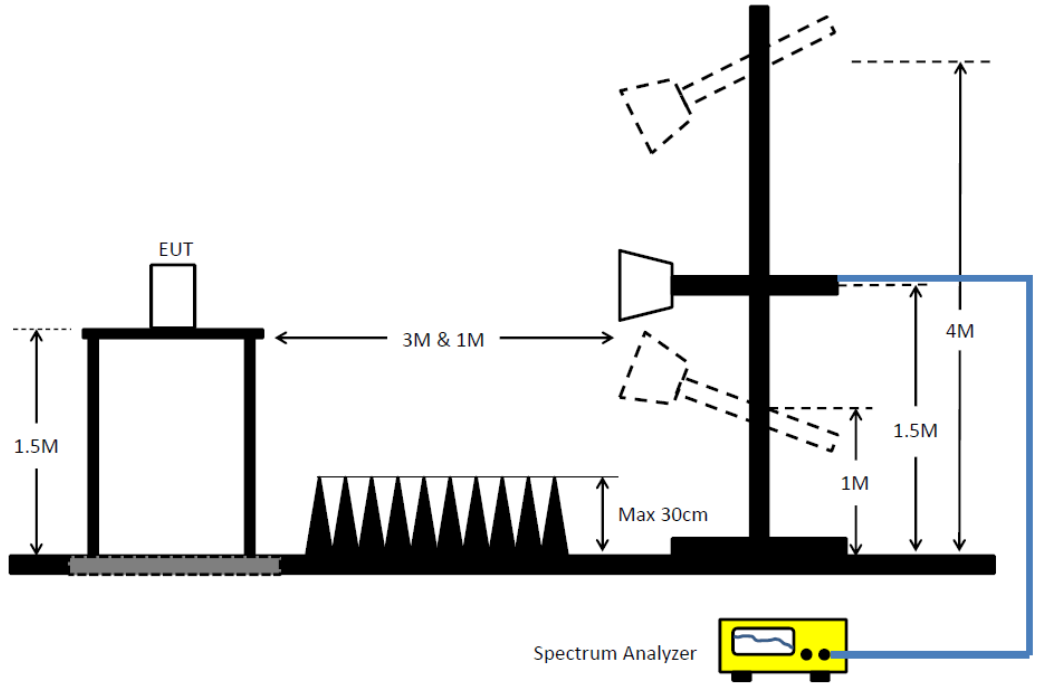
9kHz ~30MHz



30MHz~1GHz



Above 1GHz



3.5.5 Transmitter Unwanted Emissions (Below 30MHz)

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

3.5.6 Test Result of Transmitter Unwanted Emissions

Refer as Appendix E

3.6 Frequency Stability

3.6.1 Frequency Stability Limit

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

3.6.2 Measuring Instruments

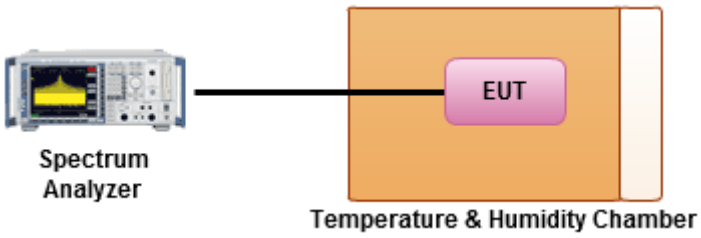
Refer a test equipment and calibration data table in this test report.

3.6.3 Test Procedures

Test Method	
▪ Refer as ANSI C63.10, clause 6.8 for frequency stability tests	
	▪ Frequency stability with respect to ambient temperature
	▪ Frequency stability when varying supply voltage
	▪ Extreme temperature is 0℃~40℃.

3.6.4 Test Setup

Frequency Stability



3.6.5 Test Result of Frequency Stability

Refer as Appendix F

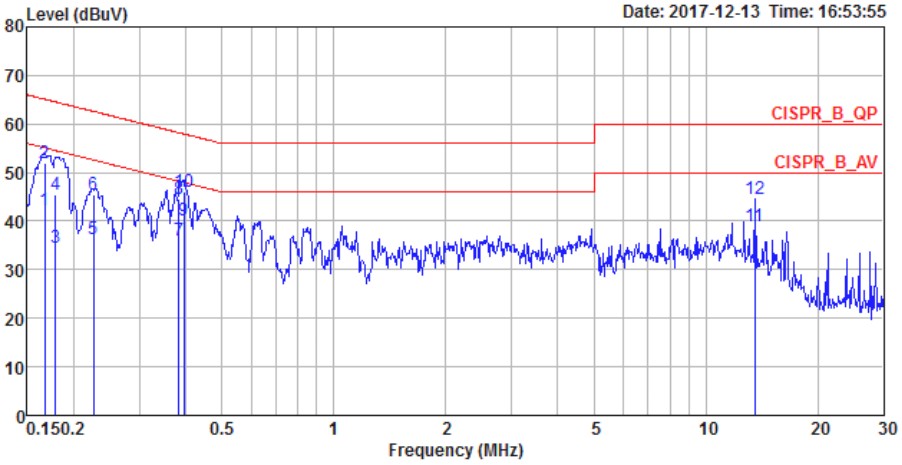
4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
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. 16, 2017	Jan. 15, 2018	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)
Pulse Limiter	Schwarzbeck	VTSD 9561F	9561-F073	9kHz ~ 30MHz	Oct. 03, 2017	Oct. 02, 2018	Conduction (CO02-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2016*	Mar. 15, 2018*	Radiation (03CH01-CB)
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Aug. 30, 2017	Aug. 29, 2018	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 10, 2016	Nov. 09, 2017	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 20, 2017	Nov. 19, 2018	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 05, 2017	Jul. 04, 2018	Radiation (03CH01-CB)
Pre-Amplifier	EMCI	EMC330N	980332	20MHz ~ 3GHz	May 02, 2017	May 01, 2018	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 16, 2017	Jan. 15, 2018	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 10, 2017	Jul. 09, 2018	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Nov. 22, 2016	Nov. 21, 2017	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Nov. 23, 2017	Nov. 22, 2018	Radiation (03CH01-CB)
EMI Test	R&S	ESCS	100355	9kHz ~ 2.75GHz	May 06, 2017	May 05, 2018	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~ 1 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz ~ 40 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
Test Software	Audix	E3	6.2009-l0-7	N/A	N/A	N/A	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 26, 2016	Dec. 25, 2017	Conducted (TH01-CB)
Temp. and Humidity Chamber	Ten Billion	TTH-D3SP	TBN-931011	-30~100 degree	Jun. 02, 2017	Jun. 01, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz – 26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz –26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz –26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz –26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 20, 2017	Nov. 19, 2018	Conducted (TH01-CB)

Note: Calibration Interval of instruments listed above is one year.
"*" Calibration Interval of instruments listed above is two years.
N.C.R. means Non-Calibration required.

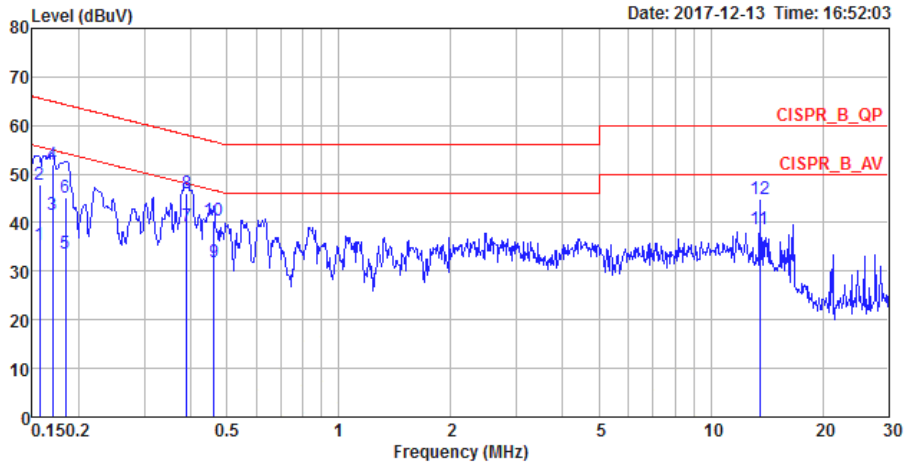
AC Power-line Conducted Emissions Result			
Operating Mode	2	**Power Phase**	Neutral
Operating Function	Normal Link		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1668	42.12	-13.00	55.12	32.10	10.01	0.01	Average	NEUTRAL
2	0.1668	52.03	-13.09	65.12	42.01	10.01	0.01	QP	NEUTRAL
3	0.1787	34.60	-19.95	54.55	24.60	9.99	0.01	Average	NEUTRAL
4	0.1787	45.57	-18.98	64.55	35.57	9.99	0.01	QP	NEUTRAL
5	0.2256	36.40	-16.21	52.61	26.43	9.96	0.01	Average	NEUTRAL
6	0.2256	45.34	-17.27	62.61	35.37	9.96	0.01	QP	NEUTRAL
7	0.3832	35.99	-12.22	48.21	26.02	9.94	0.03	Average	NEUTRAL
8	0.3832	44.69	-13.52	58.21	34.72	9.94	0.03	QP	NEUTRAL
9	0.3955	40.14	-7.81	47.95	30.17	9.94	0.03	Average	NEUTRAL
10	0.3955	46.08	-11.87	57.95	36.11	9.94	0.03	QP	NEUTRAL
11	13.5601	38.91	-11.09	50.00	28.62	10.20	0.09	Average	NEUTRAL
12	13.5601	44.58	-15.42	60.00	34.29	10.20	0.09	QP	NEUTRAL

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

AC Power-line Conducted Emissions Result			
Operating Mode	2	**Power Phase**	Line
Operating Function	Normal Link		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1573	35.44	-20.16	55.60	25.45	9.98	0.01	Average	LINE
2	0.1573	47.84	-17.76	65.60	37.85	9.98	0.01	QP	LINE
3	0.1699	41.58	-13.39	54.97	31.61	9.96	0.01	Average	LINE
4	0.1699	51.98	-12.99	64.97	42.01	9.96	0.01	QP	LINE
5	0.1844	33.69	-20.59	54.28	23.75	9.93	0.01	Average	LINE
6	0.1844	45.30	-18.98	64.28	35.36	9.93	0.01	QP	LINE
7	0.3896	39.23	-8.84	48.07	29.33	9.87	0.03	Average	LINE
8	0.3896	46.12	-11.95	58.07	36.22	9.87	0.03	QP	LINE
9	0.4612	31.82	-14.85	46.67	21.91	9.88	0.03	Average	LINE
10	0.4612	40.37	-16.30	56.67	30.46	9.88	0.03	QP	LINE
11	13.5600	38.82	-11.18	50.00	28.61	10.12	0.09	Average	LINE
12	13.5600	44.76	-15.24	60.00	34.55	10.12	0.09	QP	LINE

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

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)_3TX	28.225M	16.617M	16M6D1D	21.275M	16.492M
802.11ac VHT20_Nss1,(MCS0)_3TX	37.575M	17.891M	17M9D1D	22.15M	17.666M
802.11ac VHT40_Nss1,(MCS0)_3TX	63.35M	36.432M	36M4D1D	43.45M	36.182M
802.11ac VHT80_Nss1,(MCS0)_3TX	89.7M	76M	76M0D1D	86.9M	75.8M
5.725-5.85GHz	-	-	-	-	-
802.11a_Nss1,(6Mbps)_3TX	16.325M	18.491M	18M5D1D	16.025M	16.642M
802.11ac VHT20_Nss1,(MCS0)_3TX	17.55M	19.065M	19M1D1D	16.275M	17.841M
802.11ac VHT40_Nss1,(MCS0)_3TX	36.05M	37.231M	37M2D1D	35M	36.332M
802.11ac VHT80_Nss1,(MCS0)_3TX	75.7M	76M	76M0D1D	74.1M	75.8M

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Max-OBW = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Min-OBW = Minimum 99% occupied bandwidth;

Result

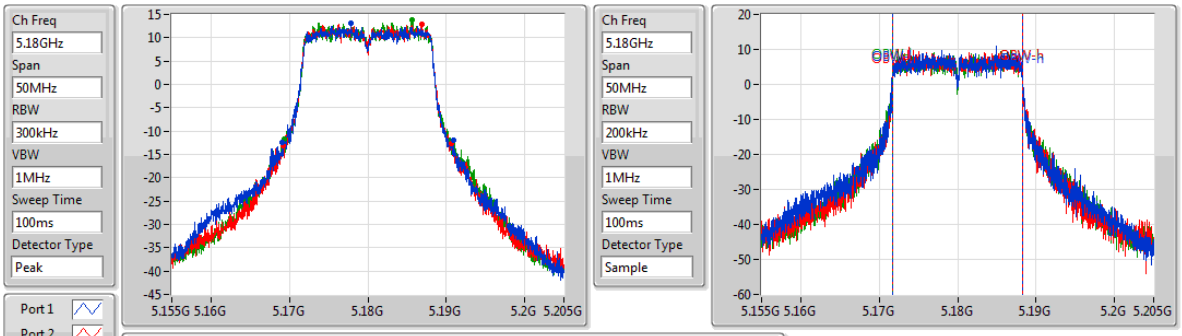
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)
802.11a_Nss1,(6Mbps)_3TX	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.8M	16.492M	21.375M	16.517M	21.275M	16.492M
5200MHz	Pass	Inf	26.275M	16.617M	25.05M	16.517M	25.175M	16.567M
5240MHz	Pass	Inf	25.475M	16.617M	28.225M	16.592M	26M	16.617M
5745MHz	Pass	500k	16.3M	16.717M	16.3M	16.917M	16.325M	18.491M
5785MHz	Pass	500k	16.025M	16.642M	16.3M	17.041M	16.325M	17.491M
5825MHz	Pass	500k	16.325M	16.667M	16.325M	16.842M	16.3M	18.441M
802.11ac VHT20_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	22.575M	17.691M	22.575M	17.666M	22.15M	17.666M
5200MHz	Pass	Inf	37.575M	17.866M	29.35M	17.741M	28.75M	17.791M
5240MHz	Pass	Inf	36.075M	17.891M	35.425M	17.841M	31.725M	17.866M
5745MHz	Pass	500k	16.8M	17.866M	16.8M	18.041M	17.55M	18.966M
5785MHz	Pass	500k	16.525M	17.841M	17.275M	18.691M	17.125M	18.841M
5825MHz	Pass	500k	17.3M	17.841M	16.275M	17.891M	17.525M	19.065M
802.11ac VHT40_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	44.3M	36.232M	43.45M	36.182M	43.6M	36.232M
5230MHz	Pass	Inf	63.35M	36.432M	56.3M	36.382M	55.65M	36.182M
5755MHz	Pass	500k	35.35M	36.332M	35.65M	36.482M	35.1M	37.031M
5795MHz	Pass	500k	36.05M	36.482M	35.7M	37.231M	35M	37.131M
802.11ac VHT80_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	88.2M	76M	89.7M	76M	86.9M	75.8M
5775MHz	Pass	500k	75.4M	75.8M	75.7M	76M	74.1M	76M

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)_3TX **EBW**

5180MHz

21/11/2017

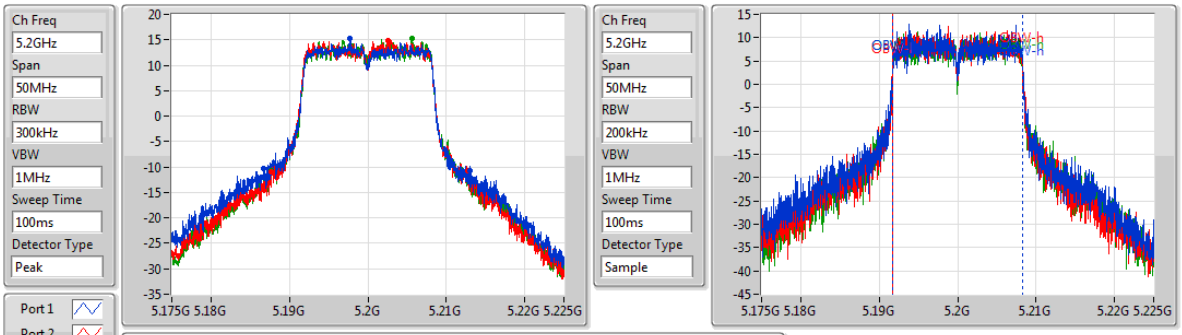


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.8M	5.1691G	5.1909G	16.492M	5.171754G	5.188246G	Inf	1
21.375M	5.16925G	5.190625G	16.517M	5.171729G	5.188246G	Inf	2
21.275M	5.169375G	5.19065G	16.492M	5.171754G	5.188246G	Inf	3

802.11a_Nss1,(6Mbps)_3TX **EBW**

5200MHz

21/11/2017

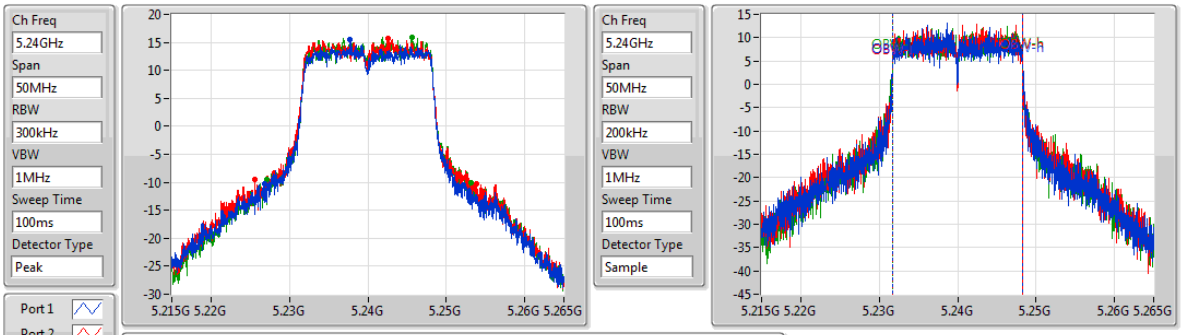


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
26.275M	5.186725G	5.213G	16.617M	5.191704G	5.208321G	Inf	1
25.05M	5.1877G	5.21275G	16.517M	5.191729G	5.208246G	Inf	2
25.175M	5.18765G	5.212825G	16.567M	5.191704G	5.208271G	Inf	3

802.11a_Nss1,(6Mbps)_3TX **EBW**

5240MHz

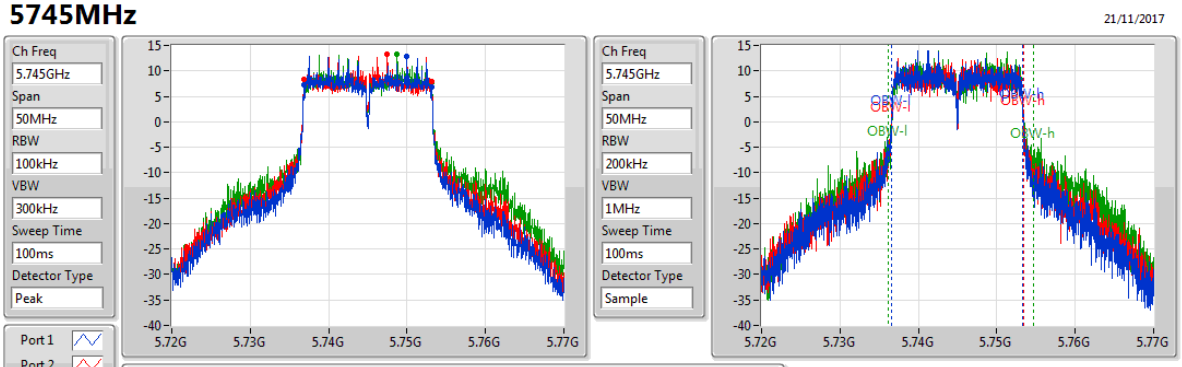
21/11/2017



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
25.475M	5.226775G	5.25225G	16.617M	5.231679G	5.248296G	Inf	1
28.225M	5.225625G	5.25385G	16.592M	5.231679G	5.248271G	Inf	2
26M	5.227125G	5.253125G	16.617M	5.231679G	5.248296G	Inf	3

802.11a_Nss1,(6Mbps)_3TX **EBW**

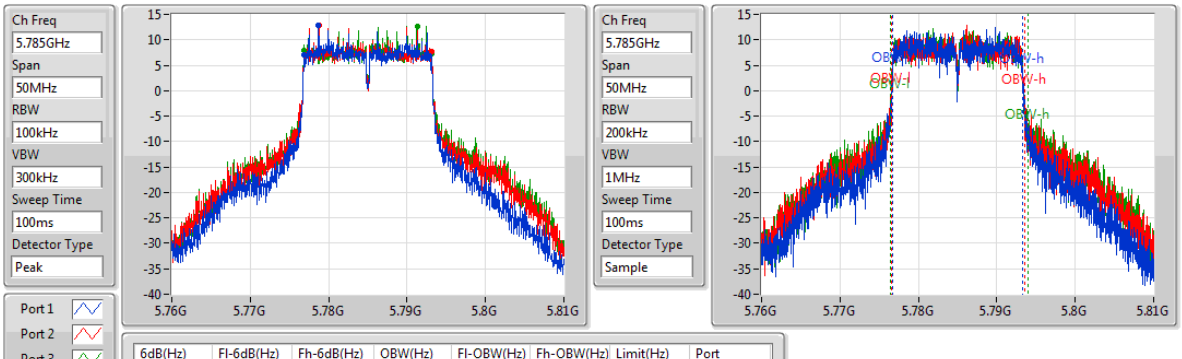
5745MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.3M	5.73685G	5.75315G	16.717M	5.736604G	5.753321G	500k	1
16.3M	5.73685G	5.75315G	16.917M	5.736504G	5.753421G	500k	2
16.325M	5.73685G	5.753175G	18.491M	5.736129G	5.75462G	500k	3

802.11a_Nss1,(6Mbps)_3TX **EBW**

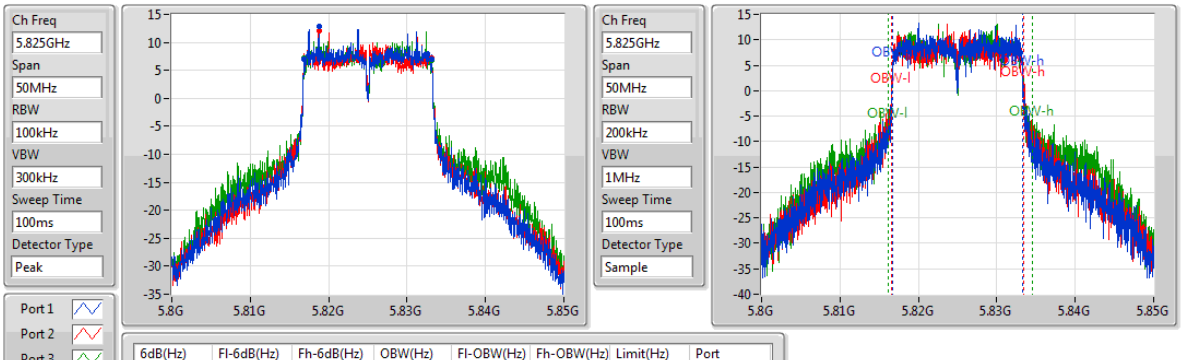
5785MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.025M	5.776875G	5.7929G	16.642M	5.776679G	5.793321G	500k	1
16.3M	5.77685G	5.79315G	17.041M	5.776504G	5.793546G	500k	2
16.325M	5.77685G	5.793175G	17.491M	5.776454G	5.793946G	500k	3

802.11a_Nss1,(6Mbps)_3TX **EBW**

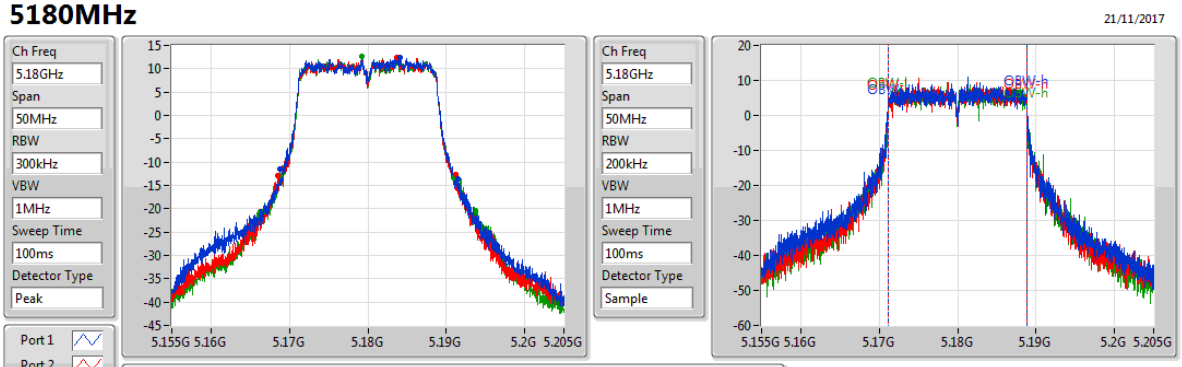
5825MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.325M	5.81685G	5.833175G	16.667M	5.816654G	5.833321G	500k	1
16.325M	5.81685G	5.833175G	16.842M	5.816579G	5.833421G	500k	2
16.3M	5.816875G	5.833175G	18.441M	5.816154G	5.834595G	500k	3

802.11ac VHT20_Nss1,(MCS0)_3TX **EBW**

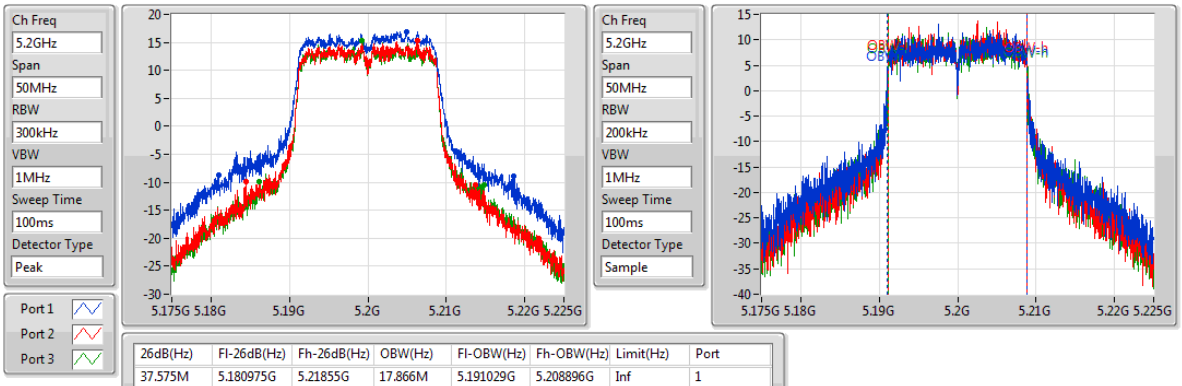
5180MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
22.575M	5.16885G	5.191425G	17.691M	5.171129G	5.188821G	Inf	1
22.575M	5.168575G	5.19115G	17.666M	5.171154G	5.188821G	Inf	2
22.15M	5.16885G	5.191G	17.666M	5.171154G	5.188821G	Inf	3

802.11ac VHT20_Nss1,(MCS0)_3TX **EBW**

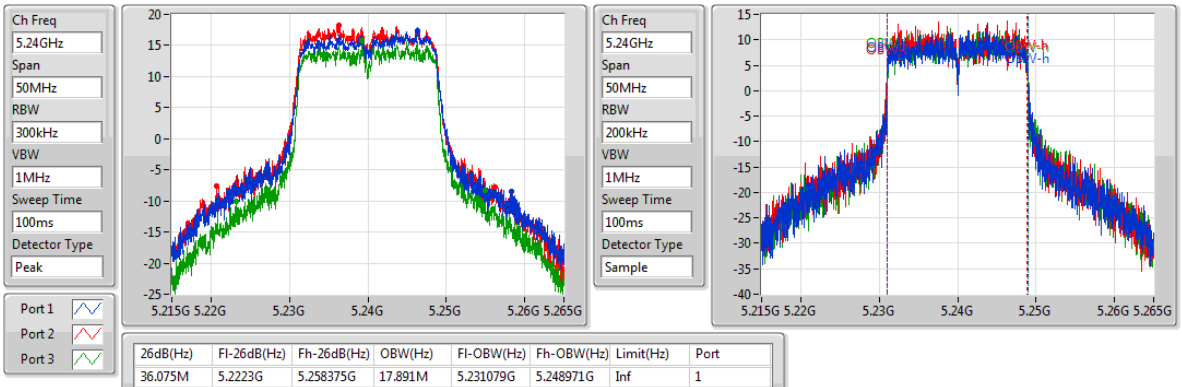
5200MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
37.575M	5.180975G	5.21855G	17.866M	5.191029G	5.208896G	Inf	1
29.35M	5.184425G	5.213775G	17.741M	5.191129G	5.208871G	Inf	2
28.75M	5.1861G	5.21485G	17.791M	5.191104G	5.208896G	Inf	3

802.11ac VHT20_Nss1,(MCS0)_3TX **EBW**

5240MHz

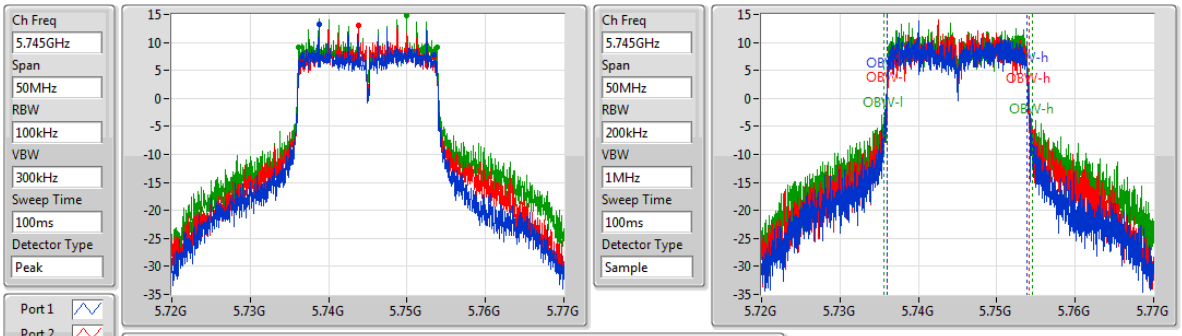


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
36.075M	5.2223G	5.258375G	17.891M	5.231079G	5.248971G	Inf	1
35.425M	5.220775G	5.2562G	17.841M	5.231054G	5.248896G	Inf	2
31.725M	5.2232G	5.254925G	17.866M	5.231054G	5.248921G	Inf	3

802.11ac VHT20_Nss1,(MCS0)_3TX **EBW**

5745MHz

21/11/2017

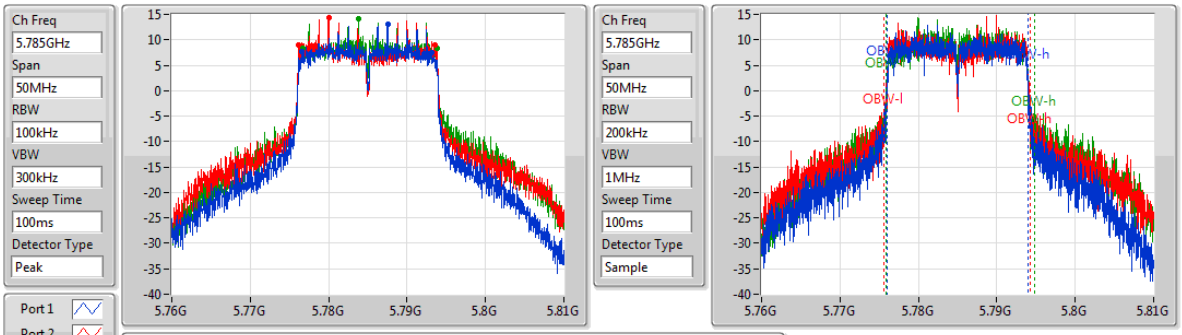


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.8M	5.7366G	5.7534G	17.866M	5.736029G	5.753896G	500k	1
16.8M	5.7366G	5.7534G	18.041M	5.736029G	5.75407G	500k	2
17.55M	5.736225G	5.753775G	18.966M	5.735605G	5.75457G	500k	3

802.11ac VHT20_Nss1,(MCS0)_3TX **EBW**

5785MHz

21/11/2017

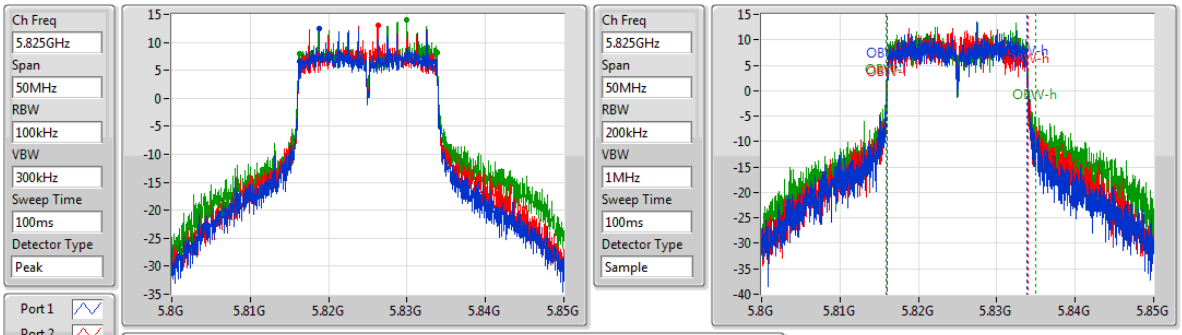


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.525M	5.776625G	5.79315G	17.841M	5.776079G	5.793921G	500k	1
17.275M	5.776225G	5.7935G	18.691M	5.77558G	5.79427G	500k	2
17.125M	5.77665G	5.793775G	18.841M	5.77593G	5.79477G	500k	3

802.11ac VHT20_Nss1,(MCS0)_3TX **EBW**

5825MHz

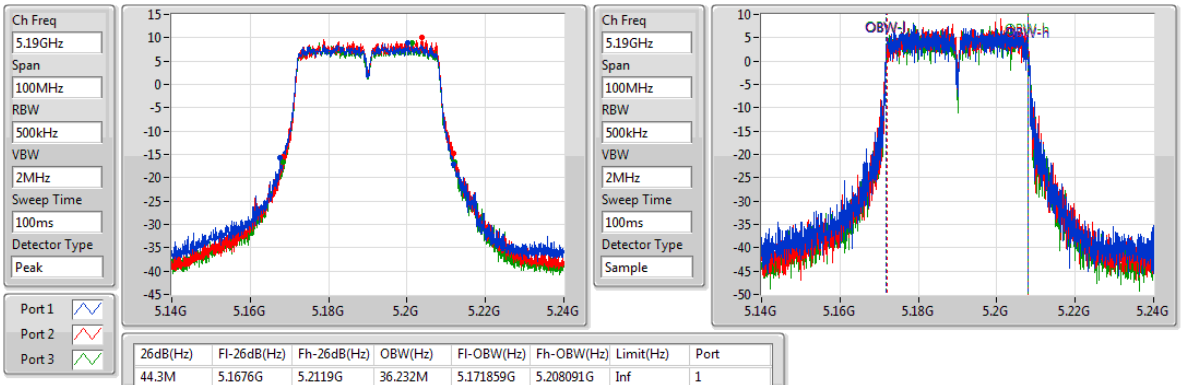
21/11/2017



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.3M	5.81625G	5.83355G	17.841M	5.816054G	5.833896G	500k	1
16.275M	5.816875G	5.83315G	17.891M	5.816054G	5.833946G	500k	2
17.525M	5.816275G	5.8338G	19.065M	5.81588G	5.834945G	500k	3

802.11ac VHT40_Nss1,(MCS0)_3TX **EBW**

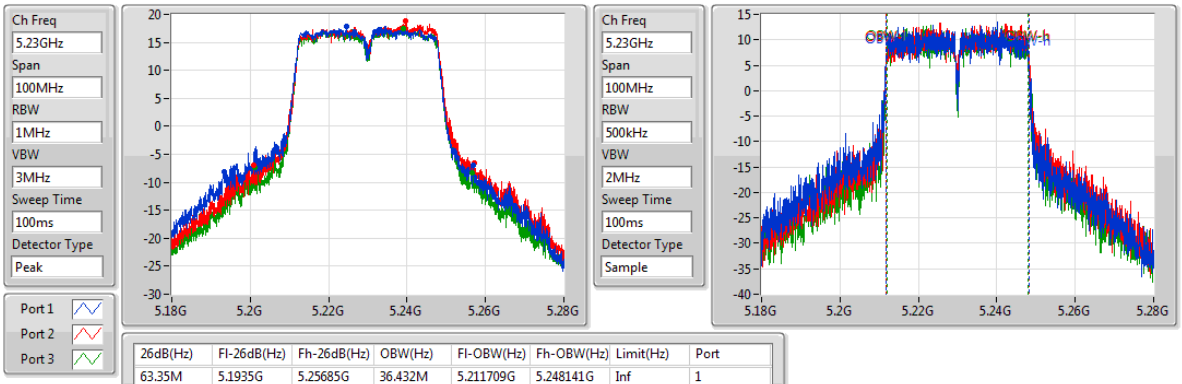
5190MHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
44.3M	5.1676G	5.2119G	36.232M	5.171859G	5.208091G	Inf	1
43.45M	5.16835G	5.2118G	36.182M	5.171909G	5.208091G	Inf	2
43.6M	5.16855G	5.21215G	36.232M	5.171859G	5.208091G	Inf	3

802.11ac VHT40_Nss1,(MCS0)_3TX **EBW**

5230MHz

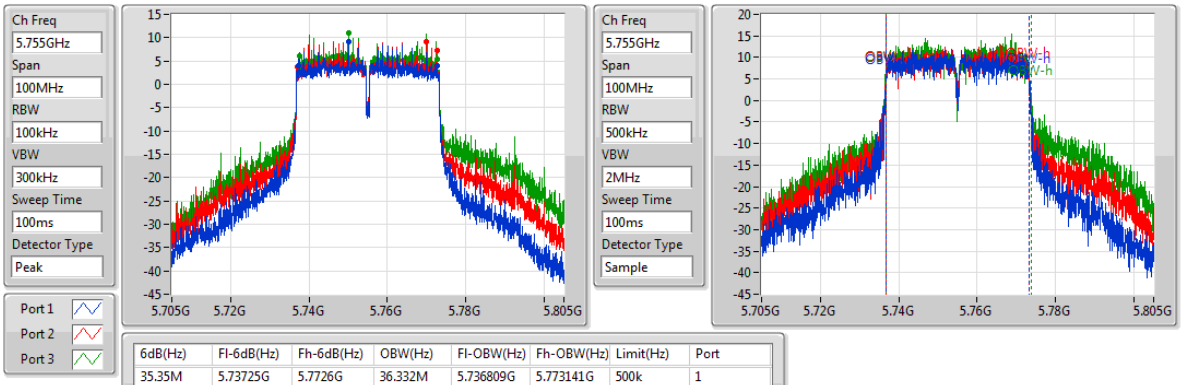


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
63.35M	5.1935G	5.25685G	36.432M	5.211709G	5.248141G	Inf	1
56.3M	5.2008G	5.2571G	36.382M	5.211809G	5.248191G	Inf	2
55.65M	5.20105G	5.2567G	36.182M	5.211909G	5.248091G	Inf	3

802.11ac VHT40_Nss1,(MCS0)_3TX **EBW**

5755MHz

21/11/2017

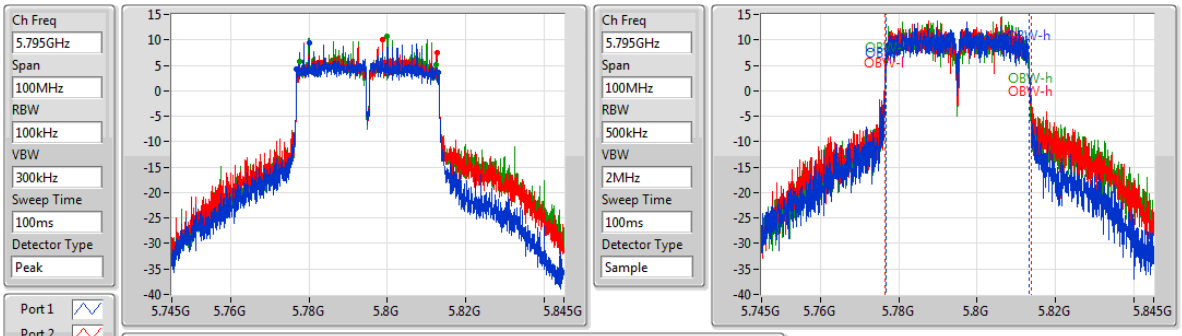


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
35.35M	5.73725G	5.7726G	36.332M	5.736809G	5.773141G	500k	1
35.65M	5.7369G	5.77255G	36.482M	5.736759G	5.773241G	500k	2
35.1M	5.7375G	5.7726G	37.031M	5.736659G	5.773691G	500k	3

802.11ac VHT40_Nss1,(MCS0)_3TX **EBW**

5795MHz

21/11/2017

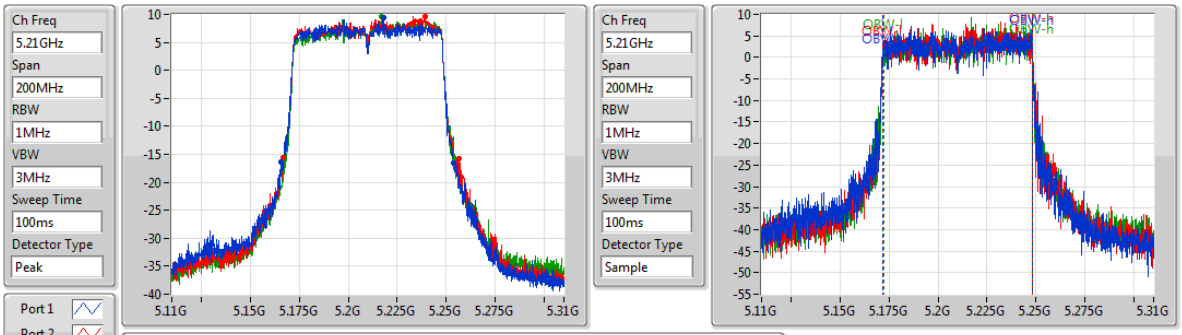


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
36.05M	5.77685G	5.8129G	36.482M	5.776659G	5.813141G	500k	1
35.7M	5.77685G	5.81255G	37.231M	5.776559G	5.813791G	500k	2
35M	5.7775G	5.8125G	37.131M	5.776659G	5.813791G	500k	3

802.11ac VHT80_Nss1,(MCS0)_3TX **EBW**

5210MHz

01/12/2017

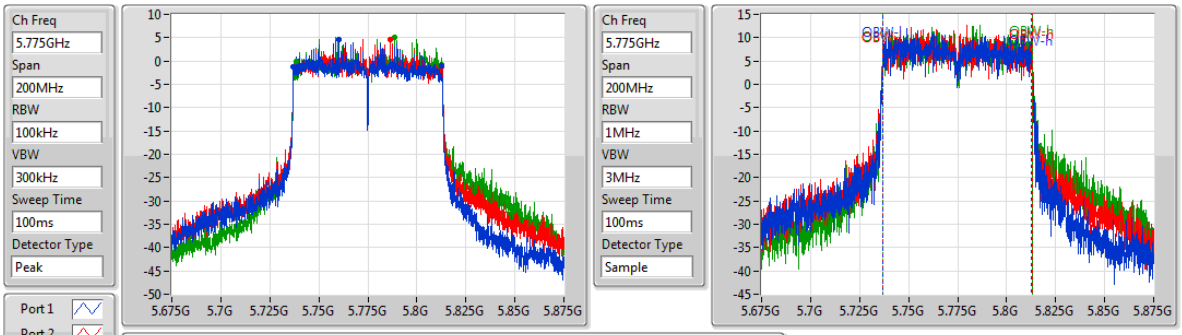


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
88.2M	5.1658G	5.254G	76M	5.172G	5.248G	Inf	1
89.7M	5.1667G	5.2564G	76M	5.1719G	5.2479G	Inf	2
86.9M	5.1675G	5.2544G	75.8M	5.1722G	5.248G	Inf	3

802.11ac VHT80_Nss1,(MCS0)_3TX **EBW**

5775MHz

01/12/2017



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
75.4M	5.7371G	5.8125G	75.8M	5.737G	5.8128G	500k	1
75.7M	5.7371G	5.8128G	76M	5.7369G	5.8129G	500k	2
74.1M	5.7387G	5.8128G	76M	5.7371G	5.8131G	500k	3

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)_3TX	21.75M	16.542M	16M5D1D	20.95M	16.442M
802.11ac VHT20_Nss1,(MCS0)_3TX	22.975M	17.716M	17M7D1D	22.15M	17.666M
802.11ac VHT40_Nss1,(MCS0)_3TX	44.3M	36.282M	36M3D1D	43.05M	36.182M
802.11ac VHT80_Nss1,(MCS0)_3TX	89.7M	76M	76M0D1D	86.9M	75.8M

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Max-OBW = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Min-OBW = Minimum 99% occupied bandwidth;

Result

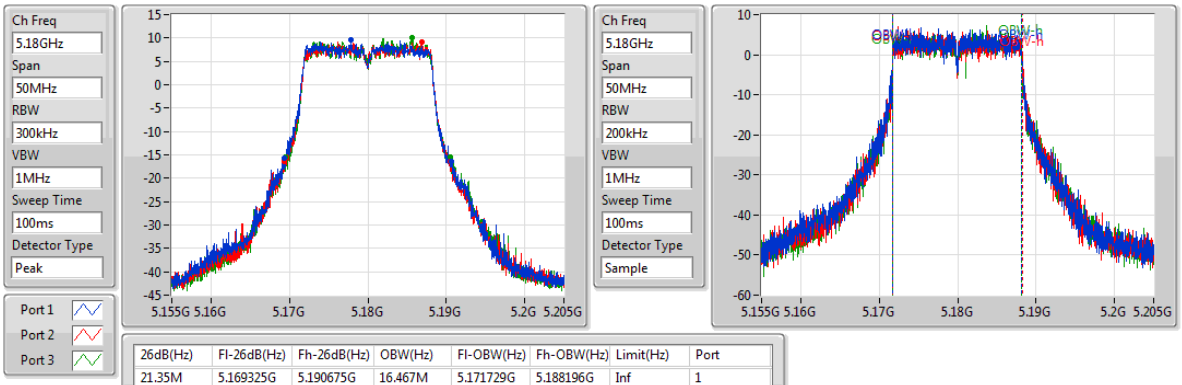
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)
802.11a_Nss1,(6Mbps)_3TX	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	21.35M	16.467M	21.275M	16.492M	20.95M	16.442M
5200MHz	Pass	Inf	21.75M	16.492M	21.725M	16.492M	21.15M	16.517M
5240MHz	Pass	Inf	21.275M	16.467M	21.625M	16.492M	21.05M	16.542M
802.11ac VHT20_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-	-
5180MHz	Pass	Inf	22.15M	17.716M	22.975M	17.691M	22.275M	17.691M
5200MHz	Pass	Inf	22.275M	17.691M	22.925M	17.691M	22.65M	17.691M
5240MHz	Pass	Inf	22.4M	17.716M	22.75M	17.691M	22.425M	17.666M
802.11ac VHT40_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-	-
5190MHz	Pass	Inf	44.3M	36.232M	43.45M	36.182M	43.6M	36.232M
5230MHz	Pass	Inf	44.25M	36.232M	44.3M	36.282M	43.05M	36.232M
802.11ac VHT80_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-	-
5210MHz	Pass	Inf	88.2M	76M	89.7M	76M	86.9M	75.8M

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)_3TX **EBW**

5180MHz

20/12/2017

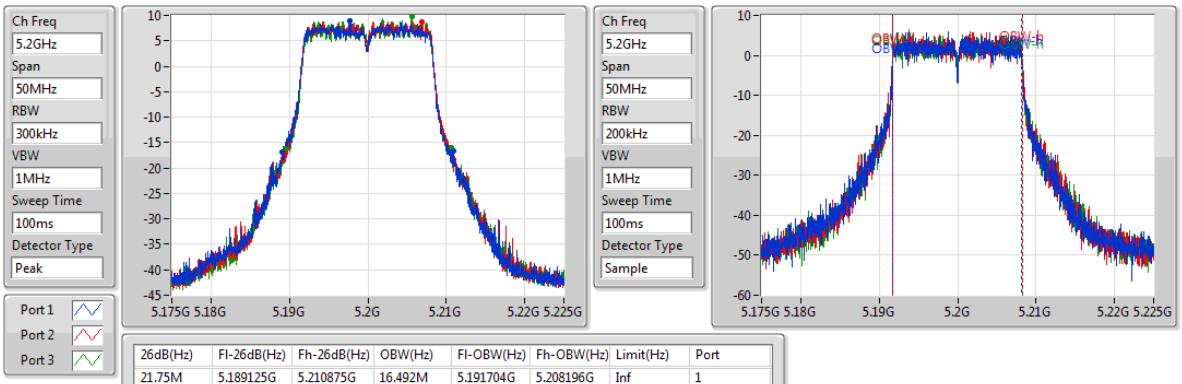


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.35M	5.169325G	5.190675G	16.467M	5.171729G	5.188196G	Inf	1
21.275M	5.1693G	5.190575G	16.492M	5.171754G	5.188246G	Inf	2
20.95M	5.169525G	5.190475G	16.442M	5.171754G	5.188196G	Inf	3

802.11a_Nss1,(6Mbps)_3TX **EBW**

5200MHz

20/12/2017

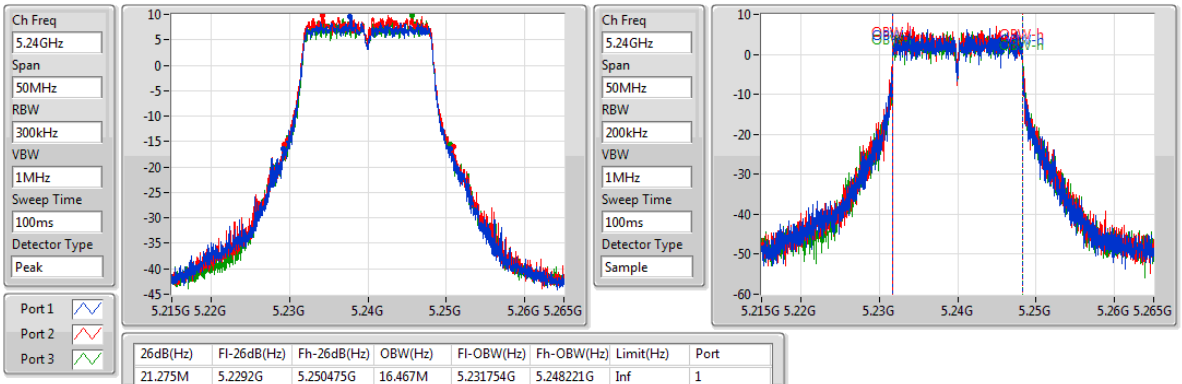


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.75M	5.189125G	5.210875G	16.492M	5.191704G	5.208196G	Inf	1
21.725M	5.189275G	5.211G	16.492M	5.191729G	5.208221G	Inf	2
21.15M	5.18945G	5.2106G	16.517M	5.191729G	5.208246G	Inf	3

802.11a_Nss1,(6Mbps)_3TX **EBW**

5240MHz

20/12/2017

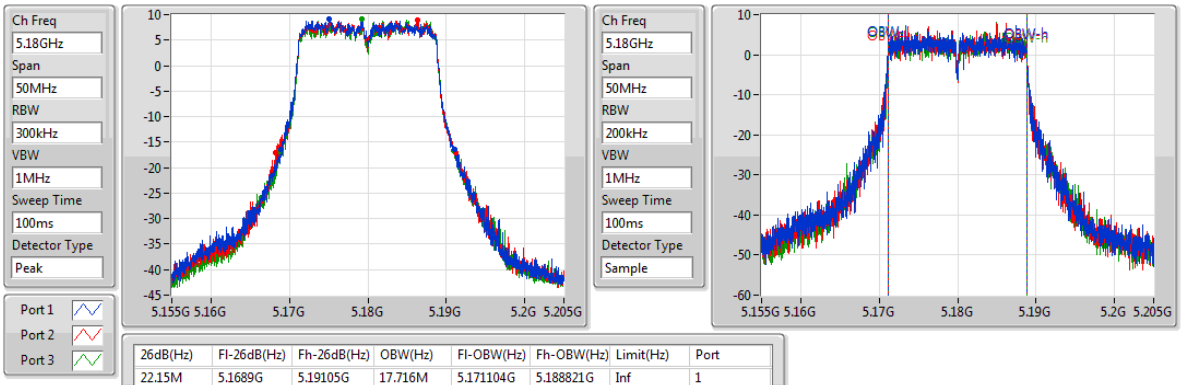


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
21.275M	5.2292G	5.250475G	16.467M	5.231754G	5.248221G	Inf	1
21.625M	5.229325G	5.25095G	16.492M	5.231729G	5.248221G	Inf	2
21.05M	5.2294G	5.25045G	16.542M	5.231729G	5.248271G	Inf	3

802.11ac VHT20_Nss1,(MCS0)_3TX EBW

5180MHz

20/12/2017

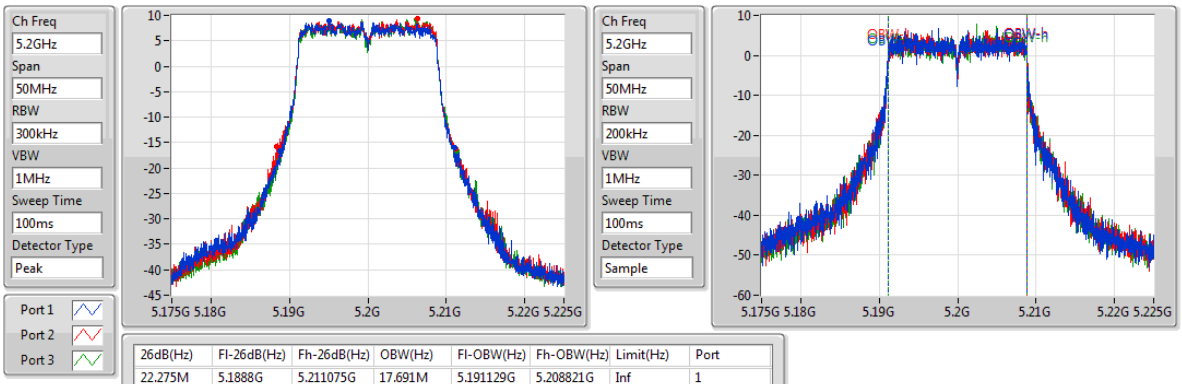


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
22.15M	5.1689G	5.19105G	17.716M	5.171104G	5.188821G	Inf	1
22.975M	5.168225G	5.1912G	17.691M	5.171129G	5.188821G	Inf	2
22.275M	5.1687G	5.190975G	17.691M	5.171154G	5.188846G	Inf	3

802.11ac VHT20_Nss1,(MCS0)_3TX EBW

5200MHz

20/12/2017

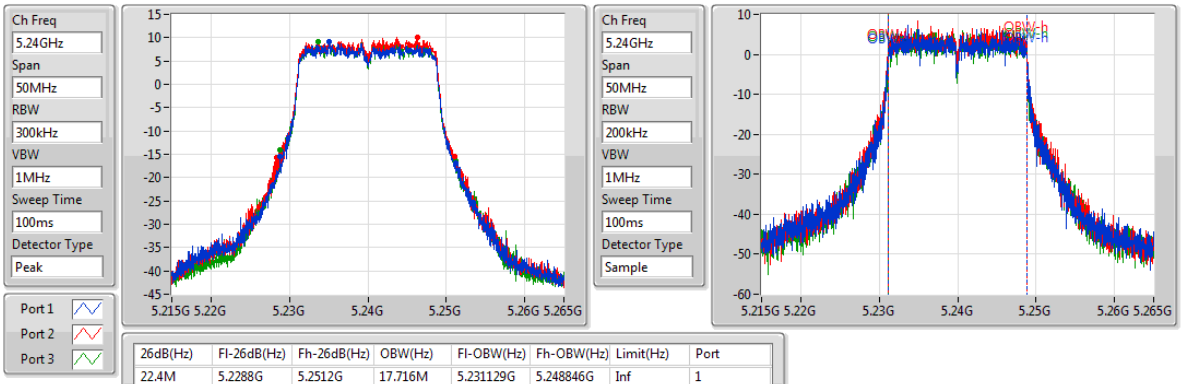


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
22.275M	5.1888G	5.211075G	17.691M	5.191129G	5.208821G	Inf	1
22.925M	5.188325G	5.21125G	17.691M	5.191129G	5.208821G	Inf	2
22.65M	5.188725G	5.211375G	17.691M	5.191154G	5.208846G	Inf	3

802.11ac VHT20_Nss1,(MCS0)_3TX EBW

5240MHz

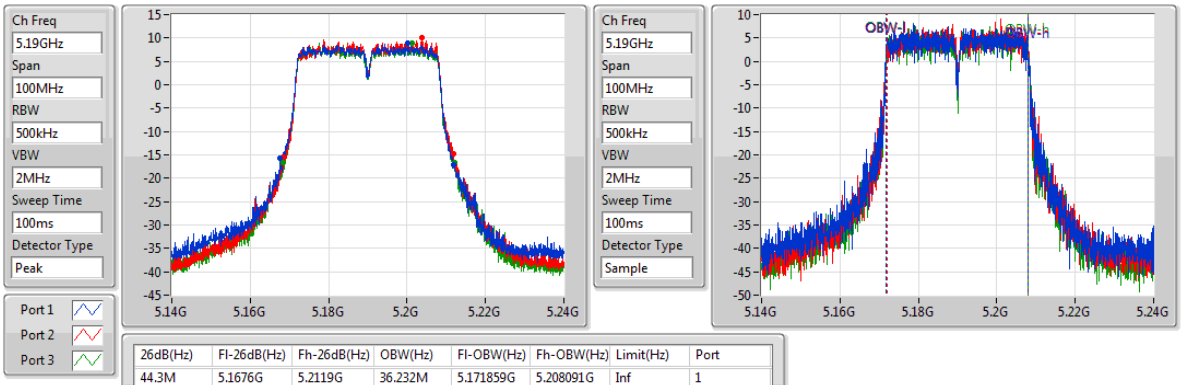
20/12/2017



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
22.4M	5.2288G	5.2512G	17.716M	5.231129G	5.248846G	Inf	1
22.75M	5.228375G	5.251125G	17.691M	5.231129G	5.248821G	Inf	2
22.425M	5.228825G	5.25125G	17.666M	5.231154G	5.248821G	Inf	3

802.11ac VHT40_Nss1,(MCS0)_3TX EBW

5190MHz

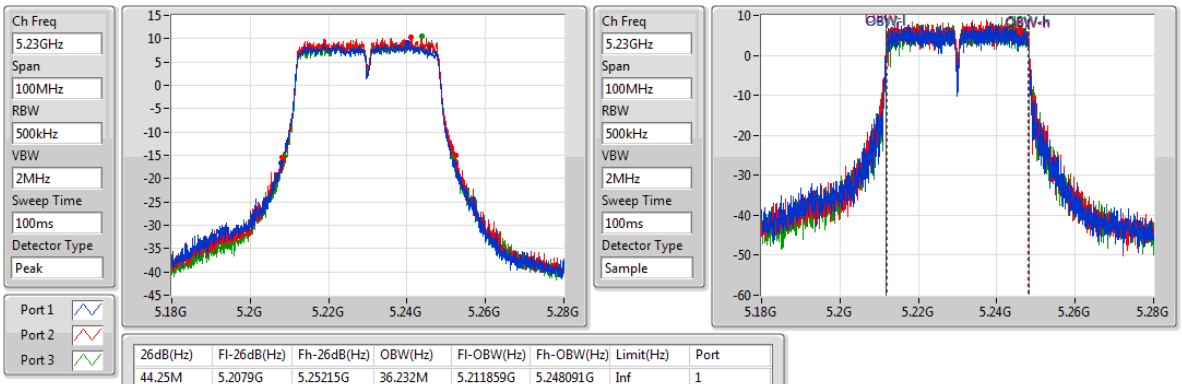


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
44.3M	5.1676G	5.2119G	36.232M	5.171859G	5.208091G	Inf	1
43.45M	5.16835G	5.2118G	36.182M	5.171909G	5.208091G	Inf	2
43.6M	5.16855G	5.21215G	36.232M	5.171859G	5.208091G	Inf	3

802.11ac VHT40_Nss1,(MCS0)_3TX EBW

5230MHz

20/12/2017

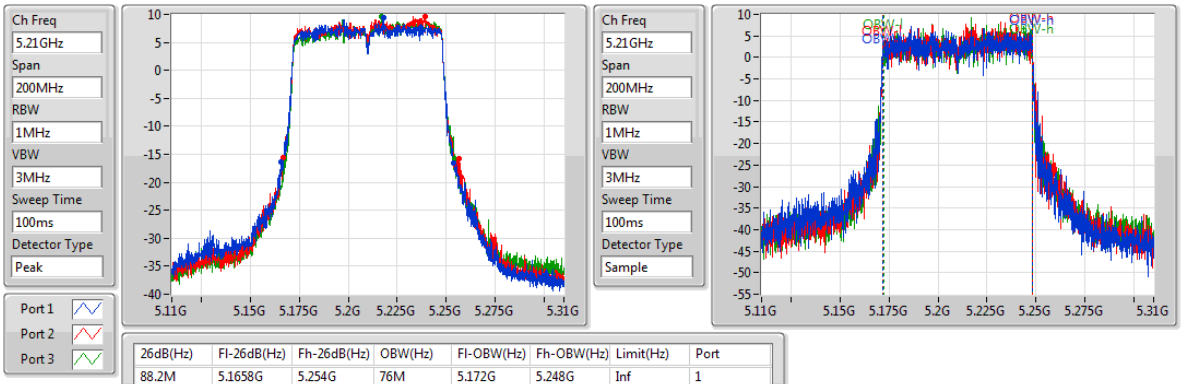


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
44.25M	5.2079G	5.25215G	36.232M	5.211859G	5.248091G	Inf	1
44.3M	5.2081G	5.2524G	36.282M	5.211859G	5.248141G	Inf	2
43.05M	5.2087G	5.25175G	36.232M	5.211909G	5.248141G	Inf	3

802.11ac VHT80_Nss1,(MCS0)_3TX EBW

5210MHz

01/12/2017



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
88.2M	5.1658G	5.254G	76M	5.172G	5.248G	Inf	1
89.7M	5.1667G	5.2564G	76M	5.1719G	5.2479G	Inf	2
86.9M	5.1675G	5.2544G	75.8M	5.1722G	5.248G	Inf	3

Summary

Mode	Total Power (dBm)	Total Power (W)
5.15-5.25GHz	-	-
802.11a_Nss1,(6Mbps)_3TX	28.51	0.70958
802.11ac VHT20_Nss1,(MCS0)_3TX	28.98	0.79068
802.11ac VHT40_Nss1,(MCS0)_3TX	28.98	0.79068
802.11ac VHT80_Nss1,(MCS0)_3TX	22.83	0.19187
5.725-5.85GHz	-	-
802.11a_Nss1,(6Mbps)_3TX	28.89	0.77446
802.11ac VHT20_Nss1,(MCS0)_3TX	29.15	0.82224
802.11ac VHT40_Nss1,(MCS0)_3TX	28.83	0.76384
802.11ac VHT80_Nss1,(MCS0)_3TX	26.71	0.46881

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11a_Nss1,(6Mbps)_3TX	-	-	-	-	-	-	-
5180MHz	Pass	2.81	21.29	21.32	21.43	26.12	30.00
5200MHz	Pass	2.81	23.10	23.38	23.06	27.95	30.00
5240MHz	Pass	2.81	23.32	23.98	23.90	28.51	30.00
5745MHz	Pass	2.80	23.84	24.07	24.43	28.89	30.00
5785MHz	Pass	2.80	23.64	23.67	24.53	28.74	30.00
5825MHz	Pass	2.80	23.69	23.42	24.18	28.55	30.00
802.11ac VHT20_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-
5180MHz	Pass	2.81	21.06	20.99	20.99	25.78	30.00
5200MHz	Pass	2.81	23.51	23.77	23.53	28.38	30.00
5240MHz	Pass	2.81	23.77	24.48	24.33	28.98	30.00
5745MHz	Pass	2.80	23.75	24.25	25.04	29.15	30.00
5785MHz	Pass	2.80	23.71	23.95	24.78	28.94	30.00
5825MHz	Pass	2.80	23.40	23.65	24.12	28.50	30.00
802.11ac VHT40_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-
5190MHz	Pass	2.81	18.89	19.09	18.70	23.67	30.00
5230MHz	Pass	2.81	24.01	24.55	24.06	28.98	30.00
5755MHz	Pass	2.80	22.81	23.54	24.59	28.48	30.00
5795MHz	Pass	2.80	23.69	24.10	24.35	28.83	30.00
802.11ac VHT80_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-
5210MHz	Pass	2.81	17.90	18.38	17.89	22.83	30.00
5775MHz	Pass	2.80	21.72	22.15	21.95	26.71	30.00

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

Summary

Mode	Total Power (dBm)	Total Power (W)
5.15-5.25GHz	-	-
802.11a_Nss1,(6Mbps)_3TX	22.60	0.18197
802.11ac VHT20_Nss1,(MCS0)_3TX	22.89	0.19454
802.11ac VHT40_Nss1,(MCS0)_3TX	23.91	0.24604
802.11ac VHT80_Nss1,(MCS0)_3TX	22.83	0.19187

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11a_Nss1,(6Mbps)_3TX	-	-	-	-	-	-	-
5180MHz	Pass	2.81	17.90	17.84	17.75	22.60	23.98
5200MHz	Pass	2.81	17.38	17.64	17.40	22.25	23.98
5240MHz	Pass	2.81	17.20	18.10	17.27	22.31	23.98
802.11ac VHT20_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-
5180MHz	Pass	2.81	17.97	17.93	17.66	22.63	23.98
5200MHz	Pass	2.81	17.90	17.47	17.88	22.53	23.98
5240MHz	Pass	2.81	17.68	18.63	17.98	22.89	23.98
802.11ac VHT40_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-
5190MHz	Pass	2.81	18.89	19.09	18.70	23.67	23.98
5230MHz	Pass	2.81	18.78	19.68	18.90	23.91	23.98
802.11ac VHT80_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-
5210MHz	Pass	2.81	17.90	18.38	17.89	22.83	23.98

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

Summary

Mode	PD (dBm/RBW)
5.15-5.25GHz	-
802.11a_Nss1,(6Mbps)_3TX	15.57
802.11ac VHT20_Nss1,(MCS0)_3TX	15.65
802.11ac VHT40_Nss1,(MCS0)_3TX	12.63
802.11ac VHT80_Nss1,(MCS0)_3TX	3.39
5.725-5.85GHz	-
802.11a_Nss1,(6Mbps)_3TX	13.80
802.11ac VHT20_Nss1,(MCS0)_3TX	14.17
802.11ac VHT40_Nss1,(MCS0)_3TX	11.11
802.11ac VHT80_Nss1,(MCS0)_3TX	4.66

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

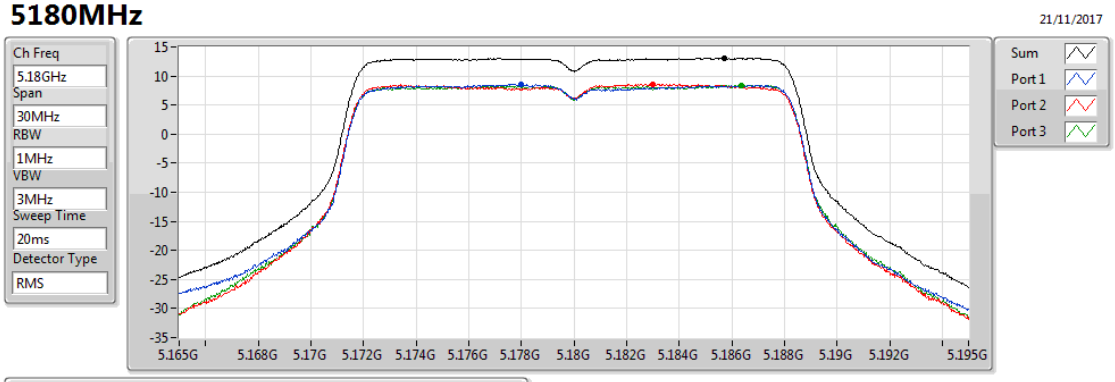
Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11a_Nss1,(6Mbps)_3TX	-	-	-	-	-	-	-
5180MHz	Pass	7.27	8.53	8.62	8.43	13.08	15.73
5200MHz	Pass	7.27	10.14	10.44	10.17	14.87	15.73
5240MHz	Pass	7.27	10.70	11.17	10.98	15.57	15.73
5745MHz	Pass	7.32	9.32	9.66	9.27	13.69	28.68
5785MHz	Pass	7.32	9.38	8.92	9.84	13.74	28.68
5825MHz	Pass	7.32	9.21	9.54	9.76	13.80	28.68
802.11ac VHT20_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-
5180MHz	Pass	7.27	7.91	7.81	7.68	12.44	15.73
5200MHz	Pass	7.27	10.48	10.65	10.25	15.11	15.73
5240MHz	Pass	7.27	10.87	11.22	11.21	15.65	15.73
5745MHz	Pass	7.32	9.12	9.69	10.14	14.17	28.68
5785MHz	Pass	7.32	9.21	9.68	10.49	14.14	28.68
5825MHz	Pass	7.32	8.88	9.39	9.95	13.69	28.68
802.11ac VHT40_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-
5190MHz	Pass	7.27	2.65	3.02	2.69	7.42	15.73
5230MHz	Pass	7.27	7.85	8.28	7.89	12.63	15.73
5755MHz	Pass	7.32	5.23	5.75	7.09	10.61	28.68
5795MHz	Pass	7.32	5.92	6.51	7.10	11.11	28.68
802.11ac VHT80_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-
5210MHz	Pass	7.27	-1.39	-0.84	-1.52	3.39	15.73
5775MHz	Pass	7.32	0.13	0.41	0.67	4.66	28.68

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)_3TX **PSD**

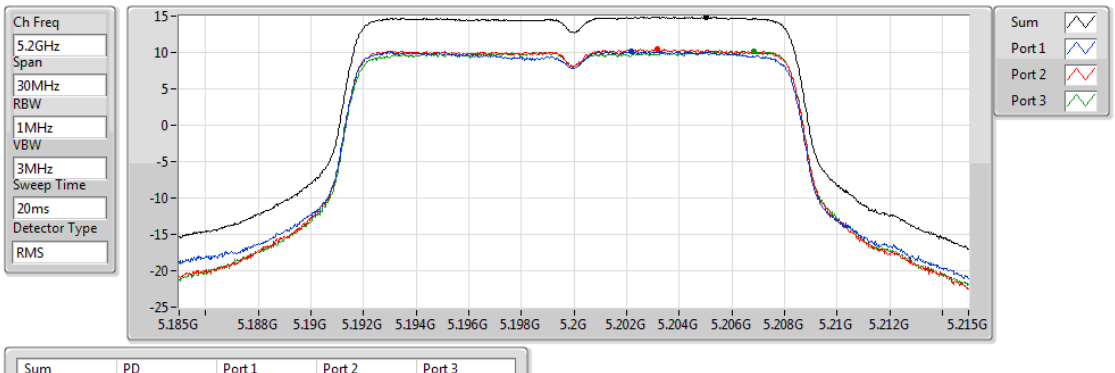
5180MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
13.08	13.08	8.53	8.62	8.43

802.11a_Nss1,(6Mbps)_3TX **PSD**

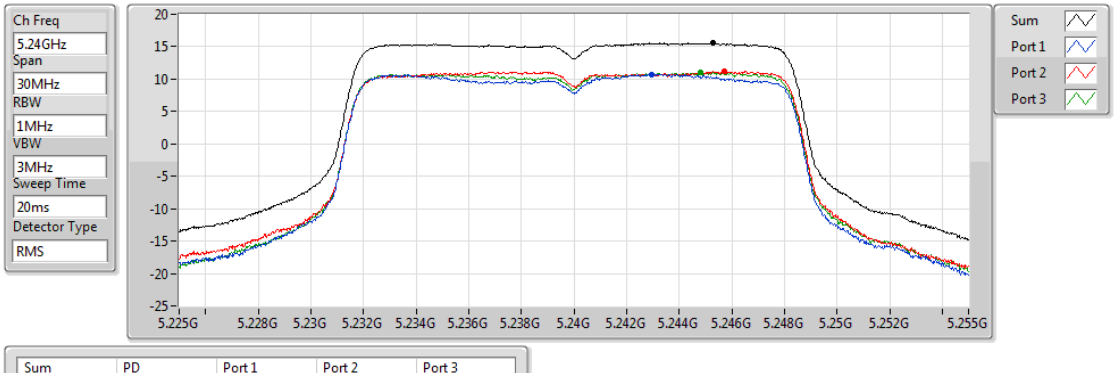
5200MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
14.87	14.87	10.14	10.44	10.17

802.11a_Nss1,(6Mbps)_3TX **PSD**

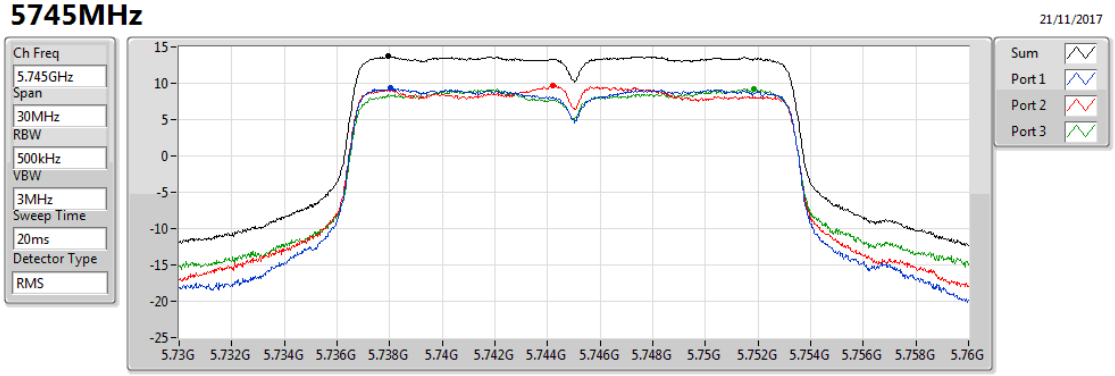
5240MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
15.57	15.57	10.70	11.17	10.98

802.11a_Nss1,(6Mbps)_3TX **PSD**

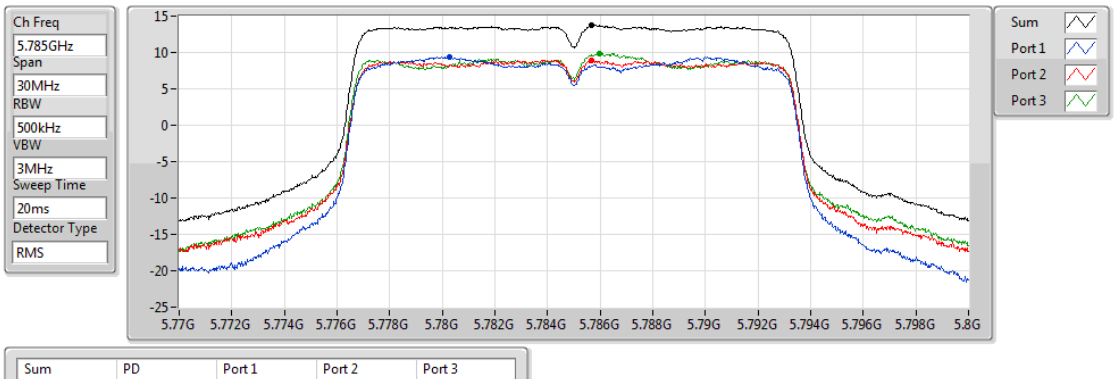
5745MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
13.69	13.69	9.32	9.66	9.27

802.11a_Nss1,(6Mbps)_3TX **PSD**

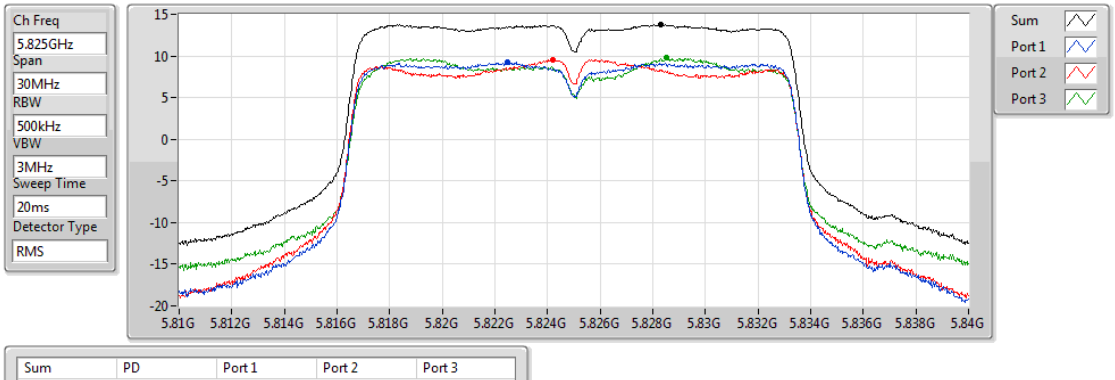
5785MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
13.74	13.74	9.38	8.92	9.84

802.11a_Nss1,(6Mbps)_3TX **PSD**

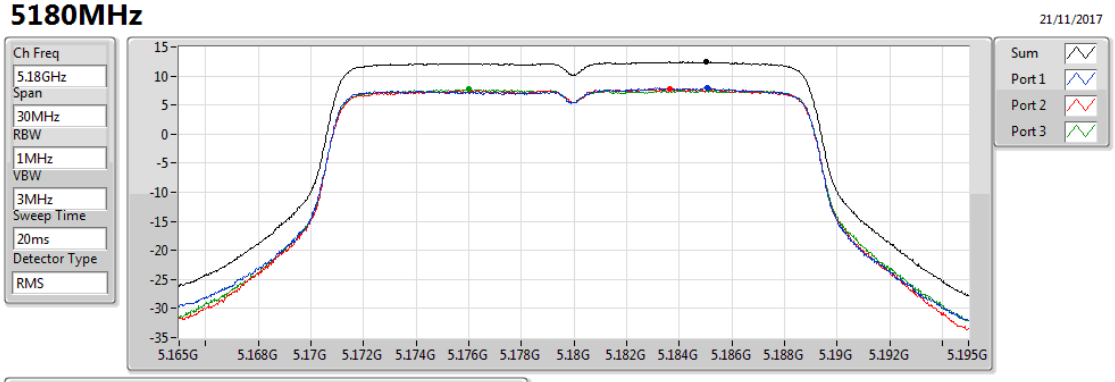
5825MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
13.80	13.80	9.21	9.54	9.76

802.11ac VHT20_Nss1,(MCS0)_3TX **PSD**

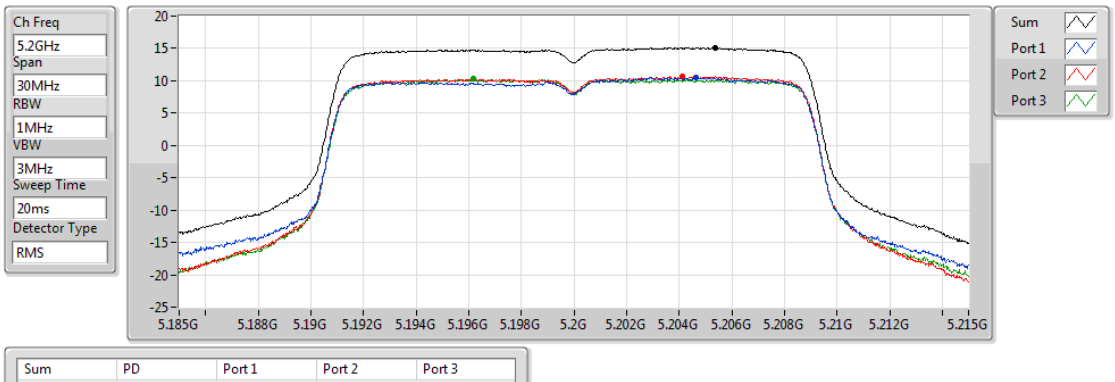
5180MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
12.44	12.44	7.91	7.81	7.68

802.11ac VHT20_Nss1,(MCS0)_3TX **PSD**

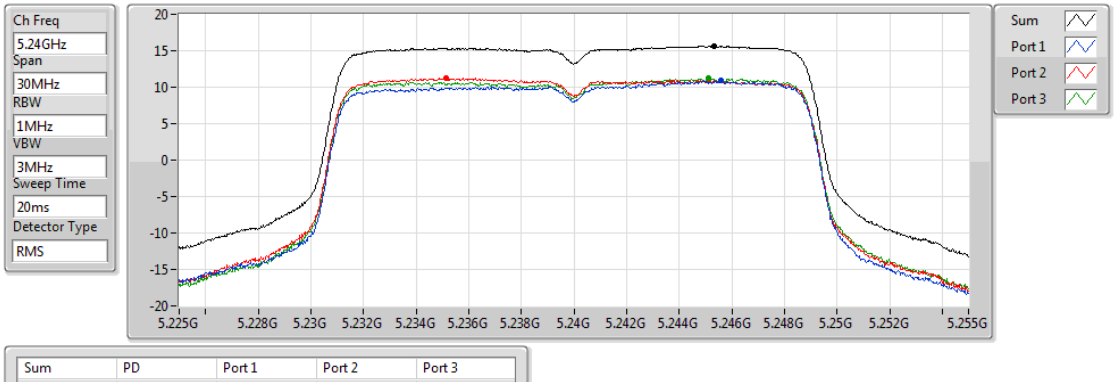
5200MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
15.11	15.11	10.48	10.65	10.25

802.11ac VHT20_Nss1,(MCS0)_3TX **PSD**

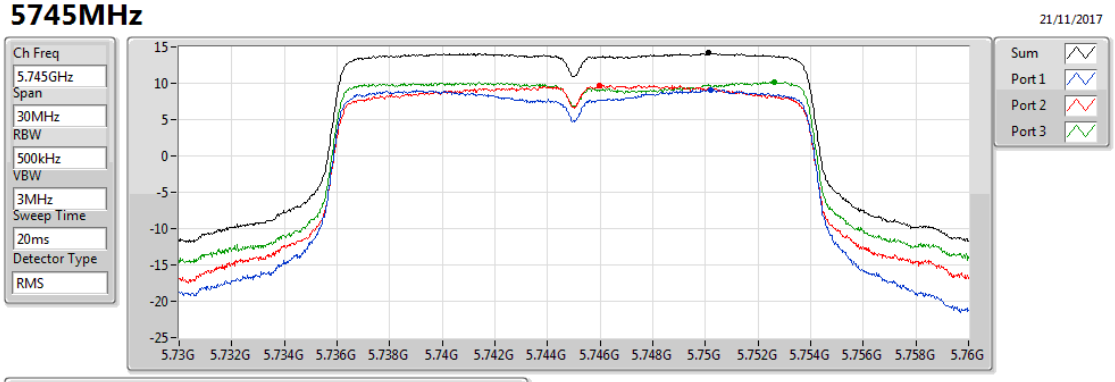
5240MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
15.65	15.65	10.87	11.22	11.21

802.11ac VHT20_Nss1,(MCS0)_3TX **PSD**

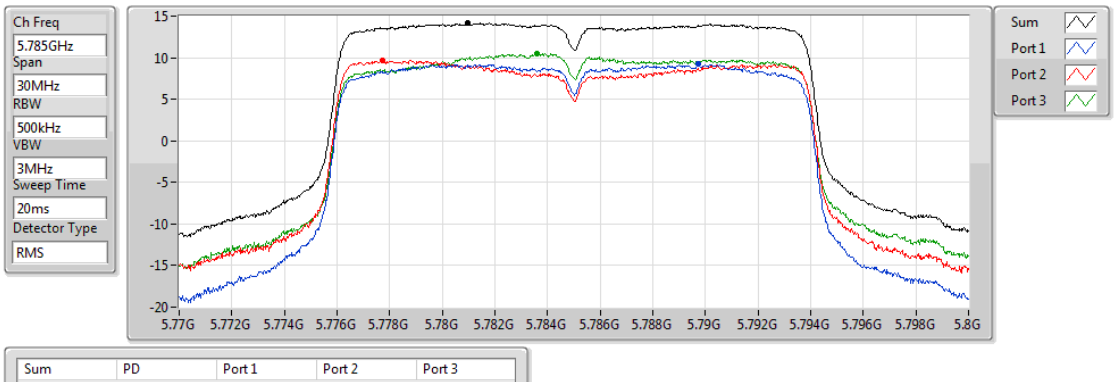
5745MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
14.17	14.17	9.12	9.69	10.14

802.11ac VHT20_Nss1,(MCS0)_3TX **PSD**

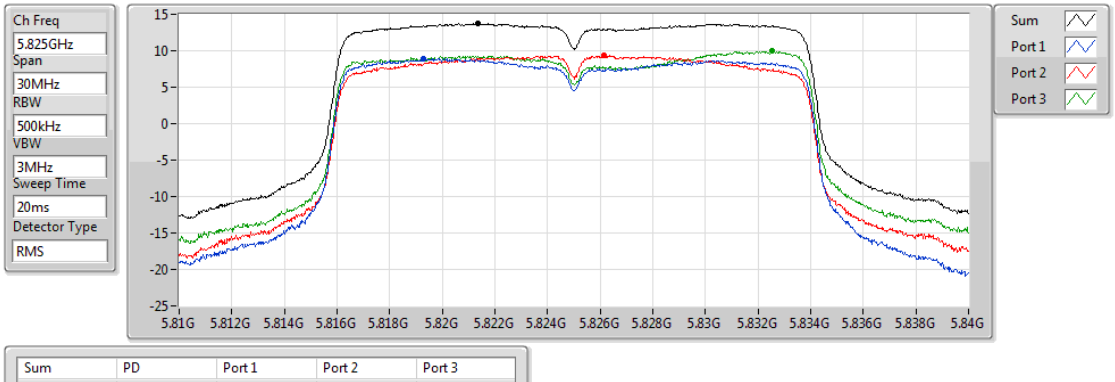
5785MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
14.14	14.14	9.21	9.68	10.49

802.11ac VHT20_Nss1,(MCS0)_3TX **PSD**

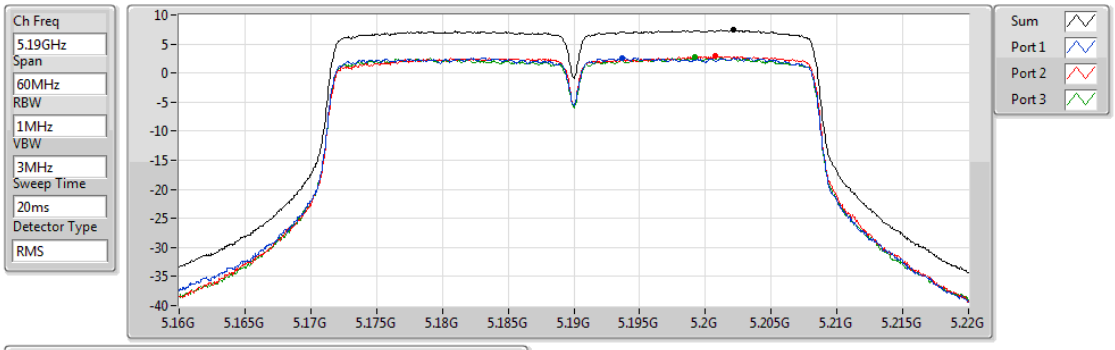
5825MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
13.69	13.69	8.88	9.39	9.95

802.11ac VHT40_Nss1,(MCS0)_3TX **PSD**

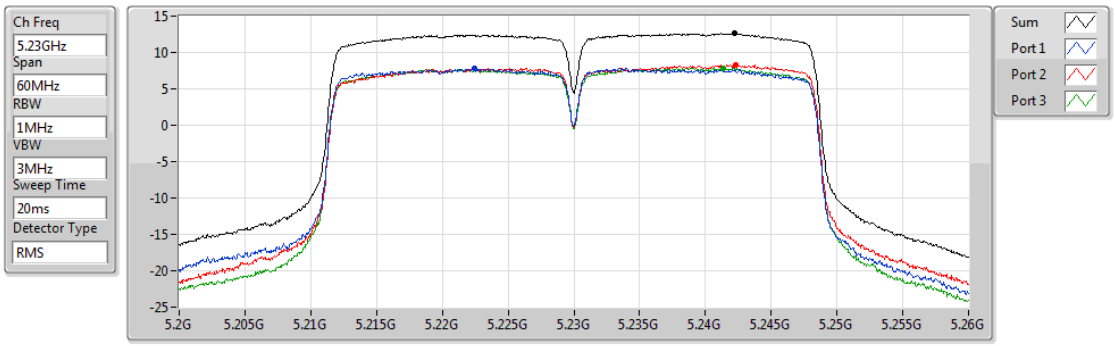
5190MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.42	7.42	2.65	3.02	2.69

802.11ac VHT40_Nss1,(MCS0)_3TX **PSD**

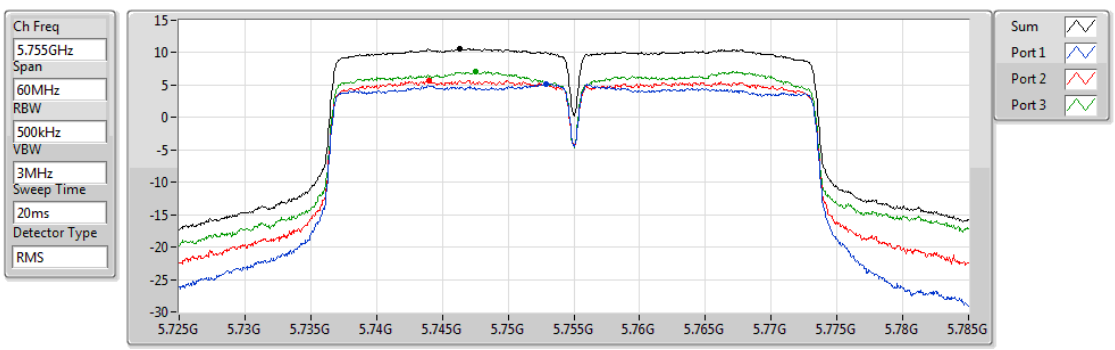
5230MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
12.63	12.63	7.85	8.28	7.89

802.11ac VHT40_Nss1,(MCS0)_3TX **PSD**

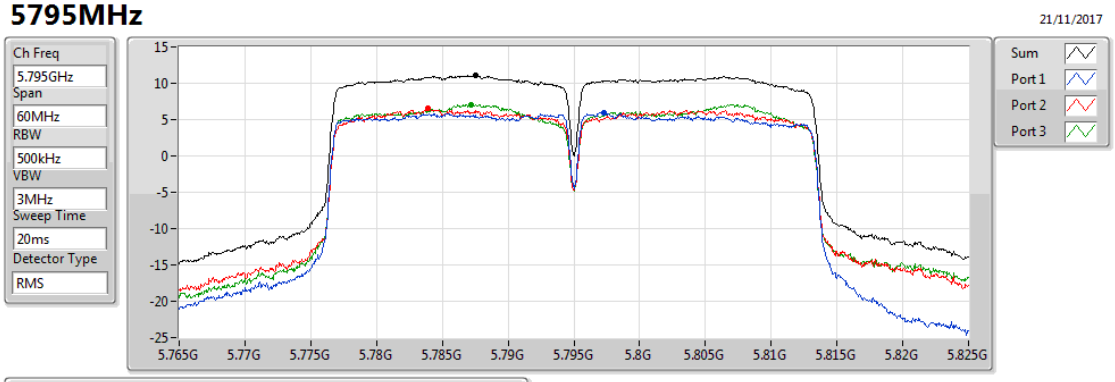
5755MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
10.61	10.61	5.23	5.75	7.09

802.11ac VHT40_Nss1,(MCS0)_3TX **PSD**

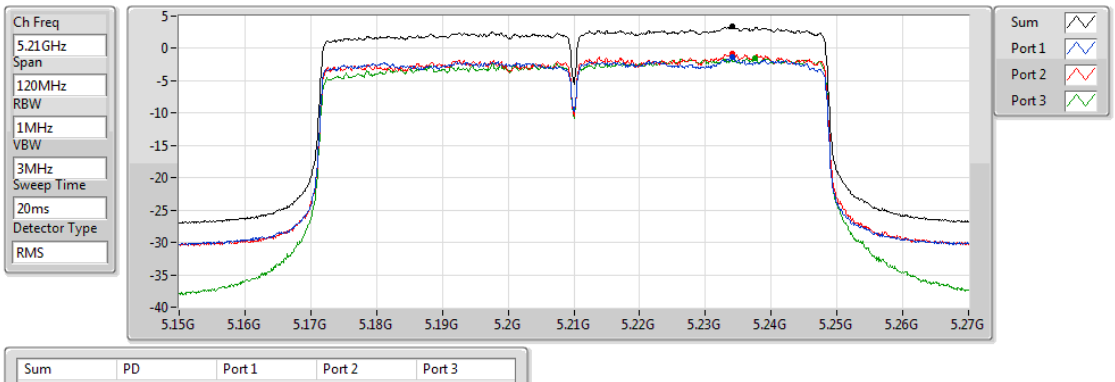
5795MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
11.11	11.11	5.92	6.51	7.10

802.11ac VHT80_Nss1,(MCS0)_3TX **PSD**

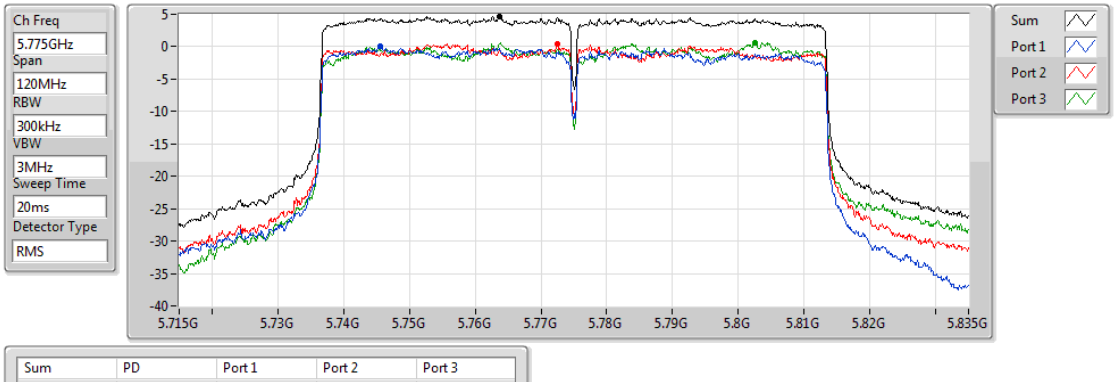
5210MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.39	3.39	-1.39	-0.84	-1.52

802.11ac VHT80_Nss1,(MCS0)_3TX **PSD**

5775MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.66	4.66	0.13	0.41	0.67

Summary

Mode	PD (dBm/RBW)
5.15-5.25GHz	-
802.11a_Nss1,(6Mbps)_3TX	9.68
802.11ac VHT20_Nss1,(MCS0)_3TX	9.65
802.11ac VHT40_Nss1,(MCS0)_3TX	7.88
802.11ac VHT80_Nss1,(MCS0)_3TX	3.39

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

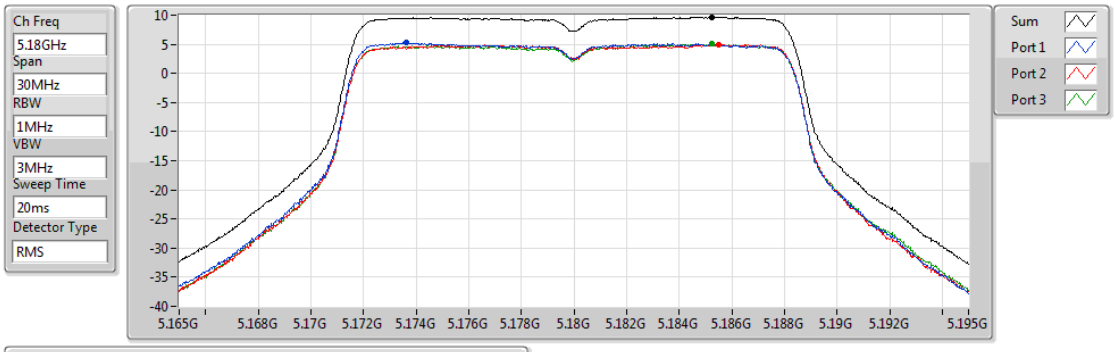
Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11a_Nss1,(6Mbps)_3TX	-	-	-	-	-	-	-
5180MHz	Pass	7.27	5.24	4.93	5.03	9.68	9.73
5200MHz	Pass	7.27	4.57	4.74	4.56	9.27	9.73
5240MHz	Pass	7.27	4.43	5.46	4.62	9.38	9.73
802.11ac VHT20_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-
5180MHz	Pass	7.27	5.02	4.77	4.77	9.40	9.73
5200MHz	Pass	7.27	4.80	4.94	5.03	9.52	9.73
5240MHz	Pass	7.27	4.73	5.69	4.82	9.65	9.73
802.11ac VHT40_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-
5190MHz	Pass	7.27	2.65	3.02	2.69	7.42	9.73
5230MHz	Pass	7.27	2.90	3.73	3.14	7.88	9.73
802.11ac VHT80_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-
5210MHz	Pass	7.27	-1.39	-0.84	-1.52	3.39	9.73

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)_3TX **PSD**

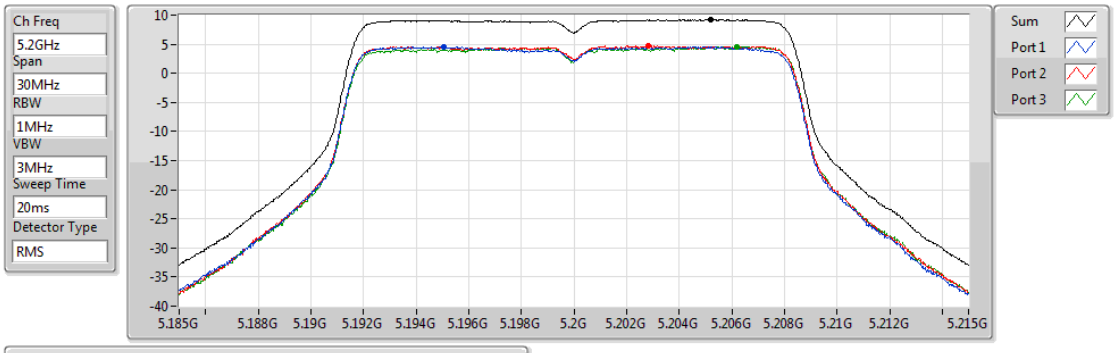
5180MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
9.68	9.68	5.24	4.93	5.03

802.11a_Nss1,(6Mbps)_3TX **PSD**

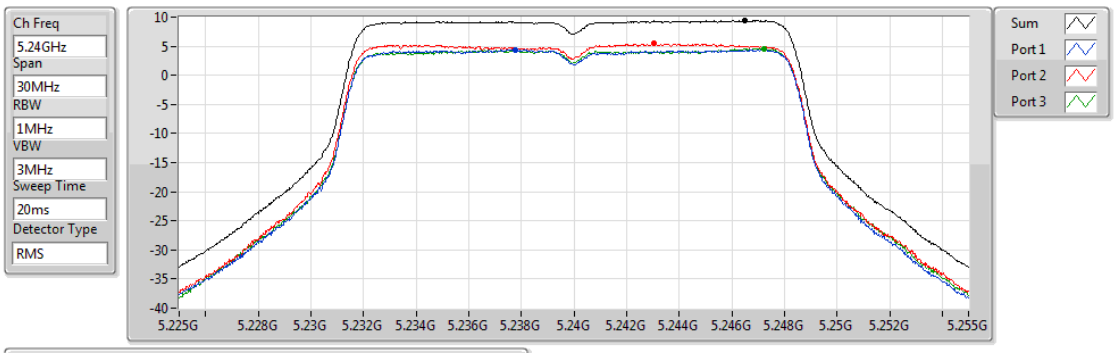
5200MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
9.27	9.27	4.57	4.74	4.56

802.11a_Nss1,(6Mbps)_3TX **PSD**

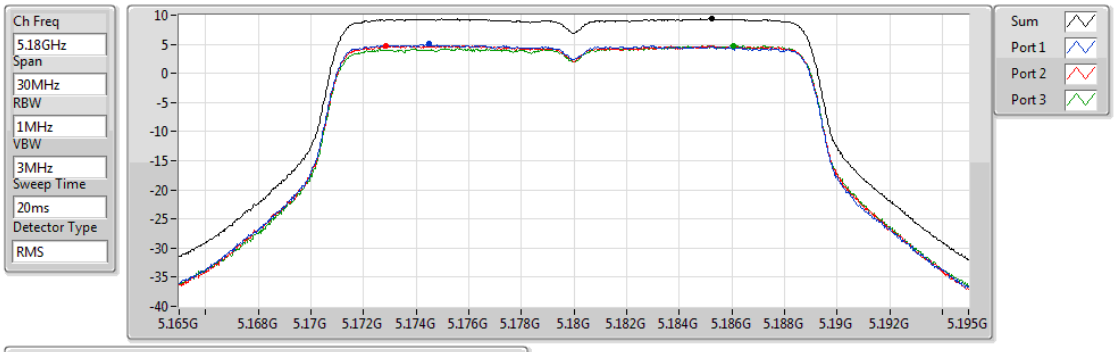
5240MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
9.38	9.38	4.43	5.46	4.62

802.11ac VHT20_Nss1,(MCS0)_3TX **PSD**

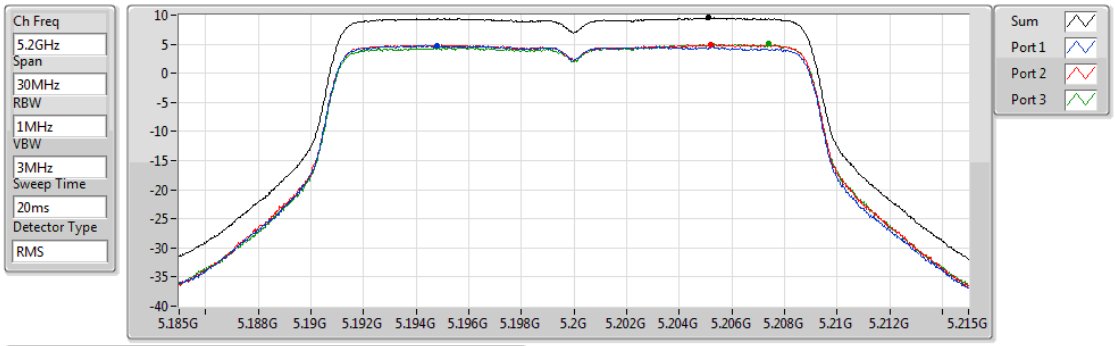
5180MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
9.40	9.40	5.02	4.77	4.77

802.11ac VHT20_Nss1,(MCS0)_3TX **PSD**

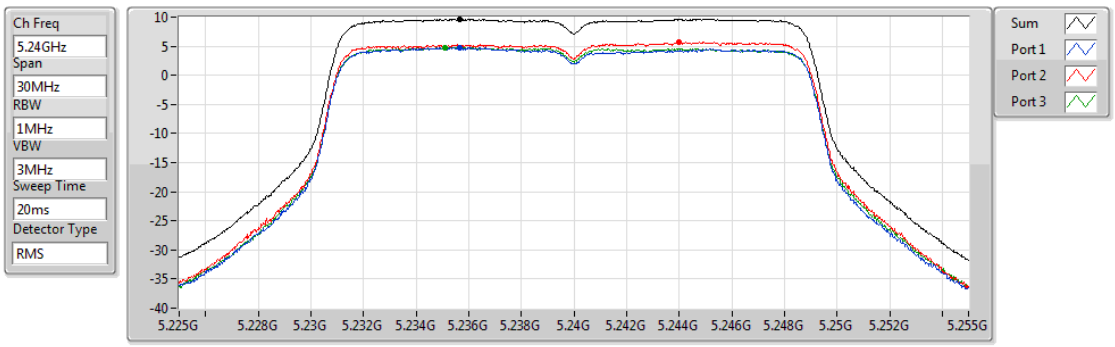
5200MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
9.52	9.52	4.80	4.94	5.03

802.11ac VHT20_Nss1,(MCS0)_3TX **PSD**

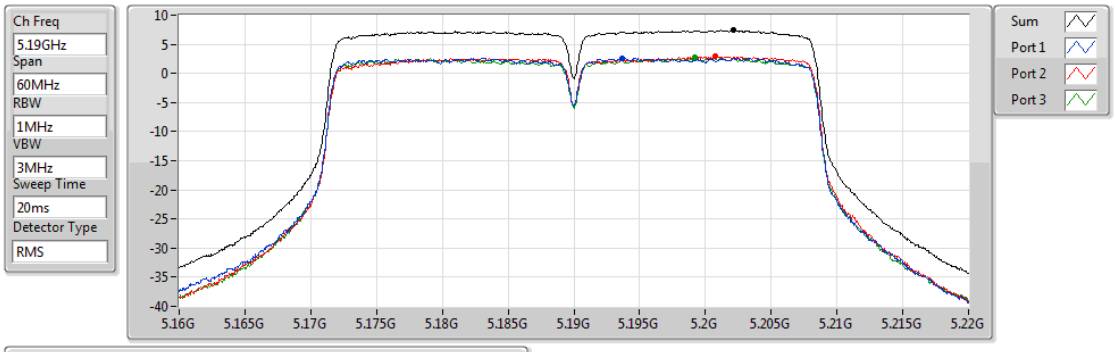
5240MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
9.65	9.65	4.73	5.69	4.82

802.11ac VHT40_Nss1,(MCS0)_3TX **PSD**

5190MHz

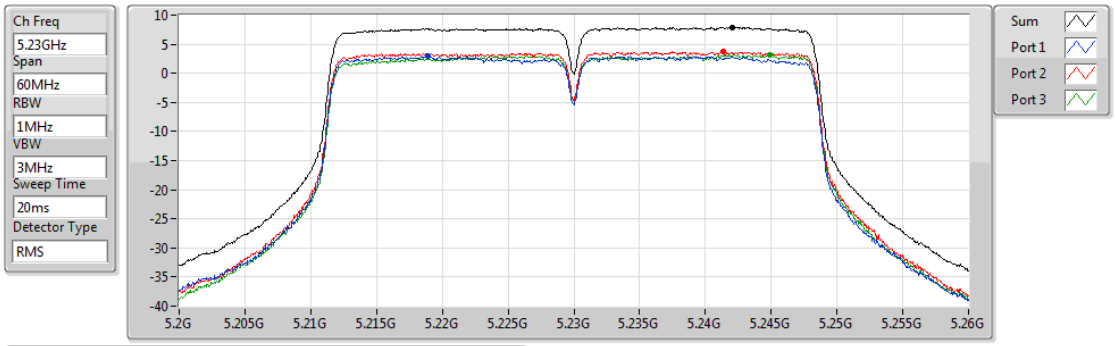


Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.42	7.42	2.65	3.02	2.69

802.11ac VHT40_Nss1,(MCS0)_3TX **PSD**

5230MHz

20/12/2017

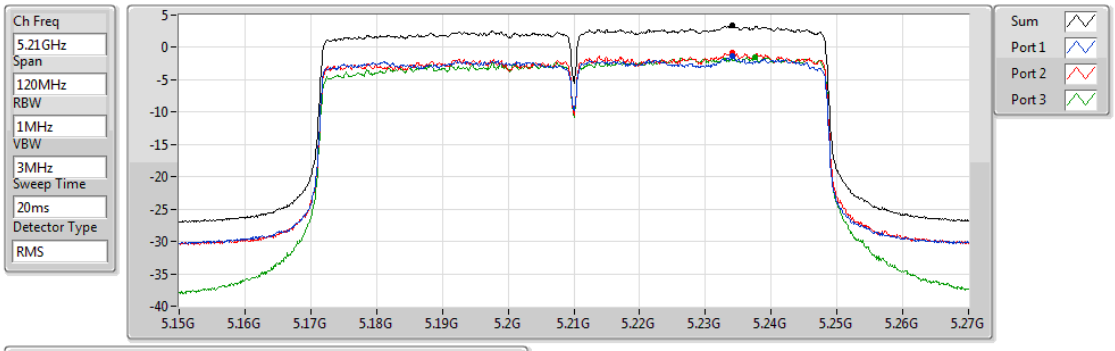


Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.88	7.88	2.90	3.73	3.14

802.11ac VHT80_Nss1,(MCS0)_3TX **PSD**

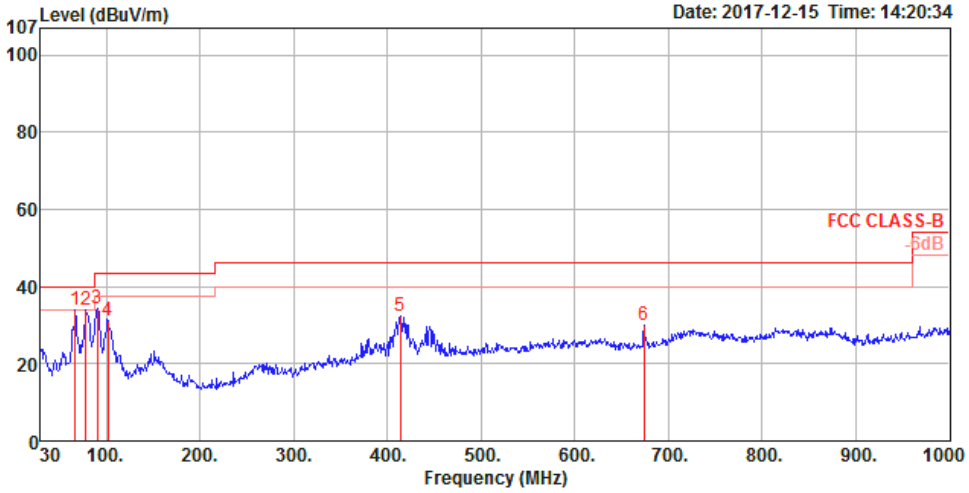
5210MHz

01/12/2017



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.39	3.39	-1.39	-0.84	-1.52

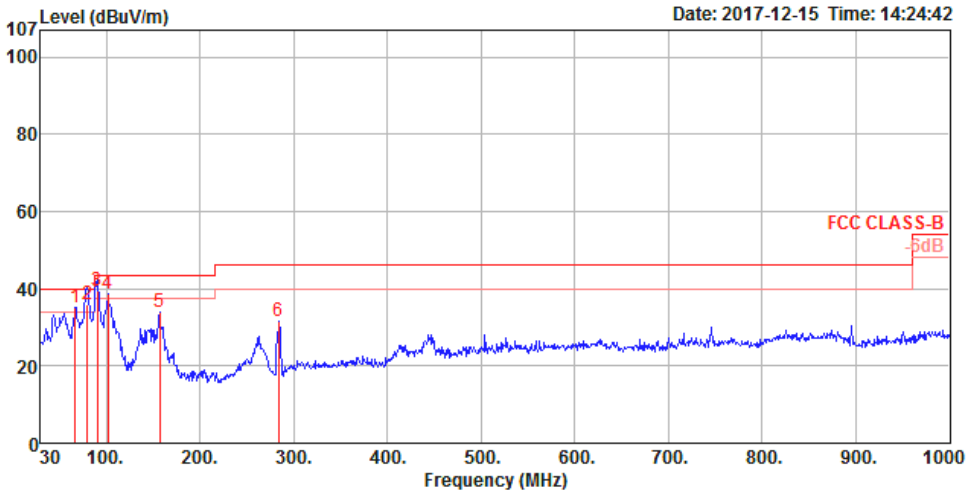
RSE below 1GHz Result			
Operating Mode	2	**Polarization**	Horizontal
Operating Function	Normal Link		



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	66.86	33.87	40.00	-6.13	52.22	1.02	12.29	31.66	200	62	Peak	HORIZONTAL
2	78.50	33.97	40.00	-6.03	52.01	1.10	12.55	31.69	200	0	Peak	HORIZONTAL
3	90.14	34.29	43.50	-9.21	50.00	1.16	14.84	31.71	150	96	Peak	HORIZONTAL
4	101.78	31.24	43.50	-12.26	44.61	1.25	17.11	31.73	200	200	Peak	HORIZONTAL
5	414.12	32.33	46.00	-13.67	39.85	2.50	22.05	32.07	125	0	Peak	HORIZONTAL
6	674.08	29.83	46.00	-16.17	33.73	3.22	25.29	32.41	300	224	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.)

RSE below 1GHz Result			
Operating Mode	2	**Polarization**	Vertical
Operating Function	Normal Link		



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	66.86	35.25	40.00	-4.75	53.60	1.02	12.29	31.66	100	279	Peak	VERTICAL
2	79.47	35.92	40.00	-4.08	53.82	1.11	12.68	31.69	100	103	QP	VERTICAL
3	90.14	39.40	43.50	-4.10	55.11	1.16	14.84	31.71	115	150	QP	VERTICAL
4	101.78	38.75	43.50	-4.75	52.12	1.25	17.11	31.73	100	0	Peak	VERTICAL
5	157.07	33.77	43.50	-9.73	47.90	1.53	16.12	31.78	100	135	Peak	VERTICAL
6	284.14	31.69	46.00	-14.31	42.72	2.07	18.80	31.90	100	38	Peak	VERTICAL

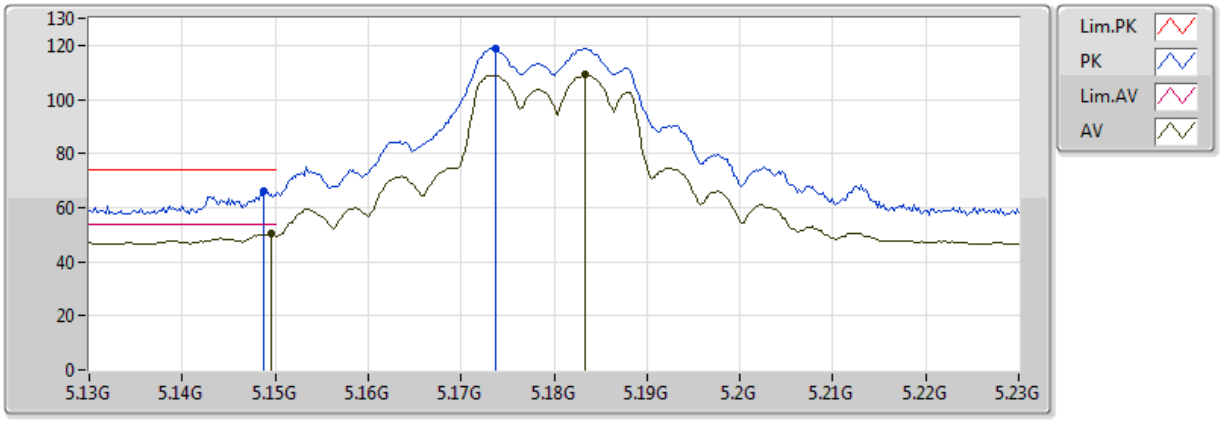
Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

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)_3TX	Pass	AV	5.1488G	52.99	54.00	-1.01	3.43	3	Vertical	295	2.12	-

802.11a_Nss1,(6Mbps)_3TX

5180MHz_TX

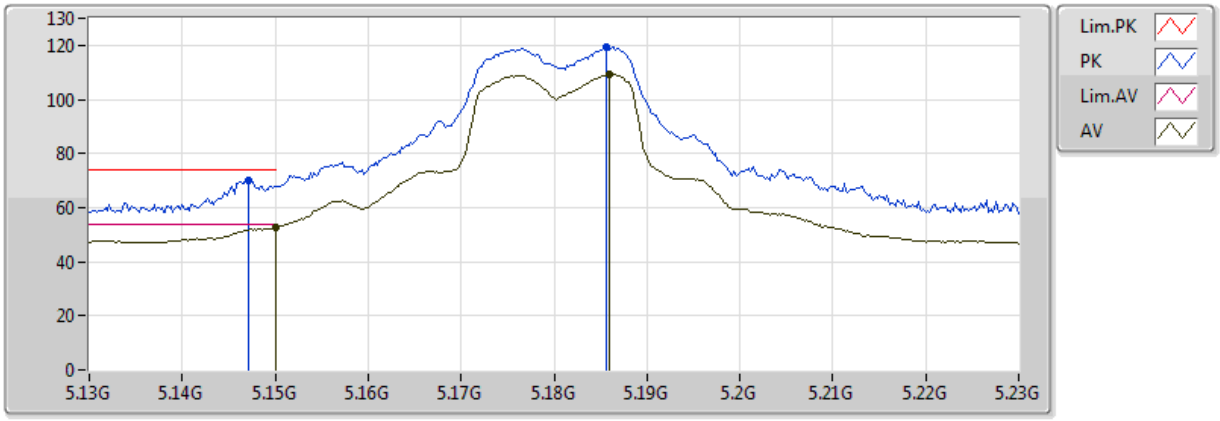


20171120
EUT Z_3TX
Setting 21
01-M-1-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.1496G	50.25	54.00	-3.75	3.43	3	Vertical	174	2.71
AV	5.1834G	109.16	Inf	-Inf	3.41	3	Vertical	174	2.71
PK	5.1488G	66.01	74.00	-7.99	3.43	3	Vertical	174	2.71
PK	5.1738G	119.01	Inf	-Inf	3.42	3	Vertical	174	2.71

802.11a_Nss1,(6Mbps)_3TX

5180MHz_TX

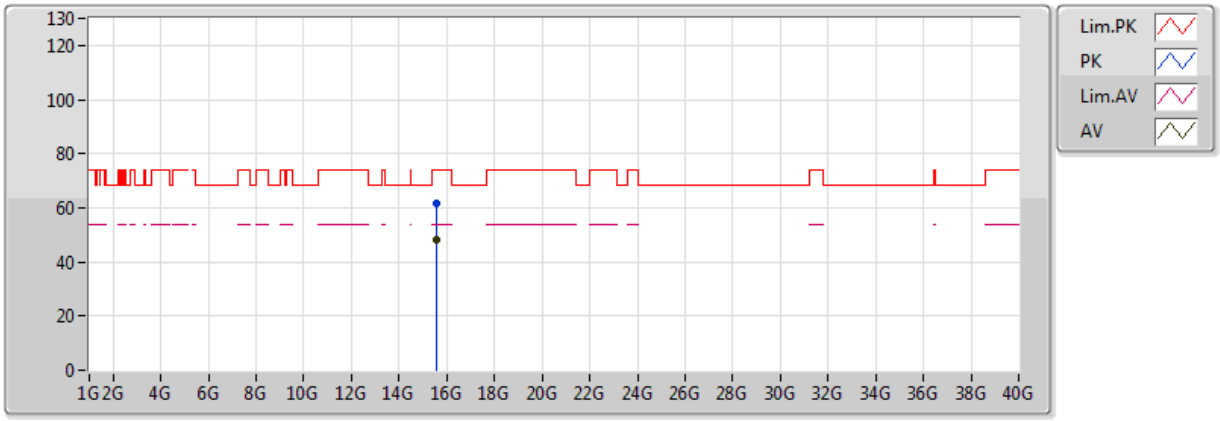


20171120
EUT Z_3TX
Setting 21
01-M-1-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.149995G	52.41	54.00	-1.59	3.43	3	Horizontal	224	2.11
AV	5.186G	109.22	Inf	-Inf	3.41	3	Horizontal	224	2.11
PK	5.1472G	70.31	74.00	-3.69	3.43	3	Horizontal	224	2.11
PK	5.1856G	119.24	Inf	-Inf	3.41	3	Horizontal	224	2.11

802.11a_Nss1,(6Mbps)_3TX

5180MHz_TX

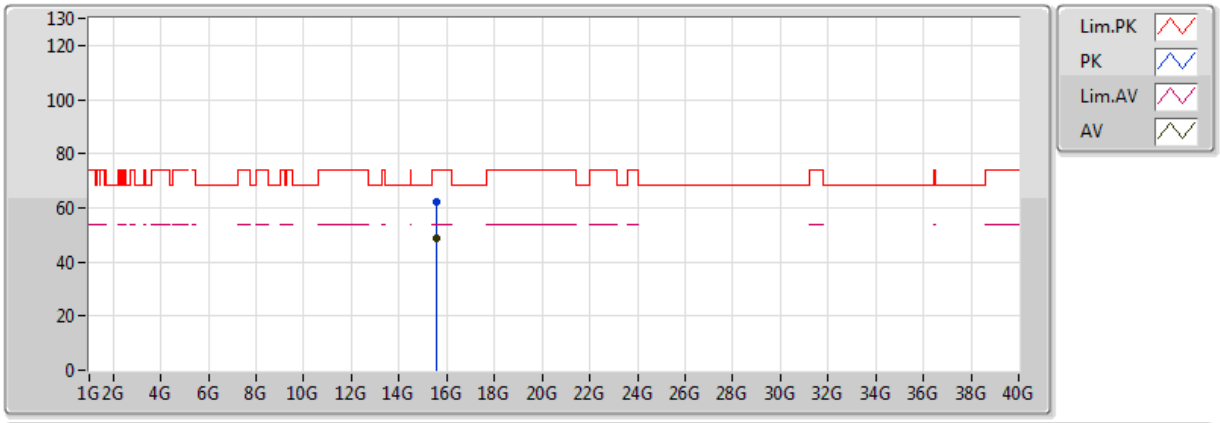


20171120
EUT Z_3TX
Setting 21
01-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	15.53864G	48.45	54.00	-5.55	15.88	3	Vertical	127	1.11
PK	15.53764G	61.45	74.00	-12.55	15.88	3	Vertical	127	1.11

802.11a_Nss1,(6Mbps)_3TX

5180MHz_TX

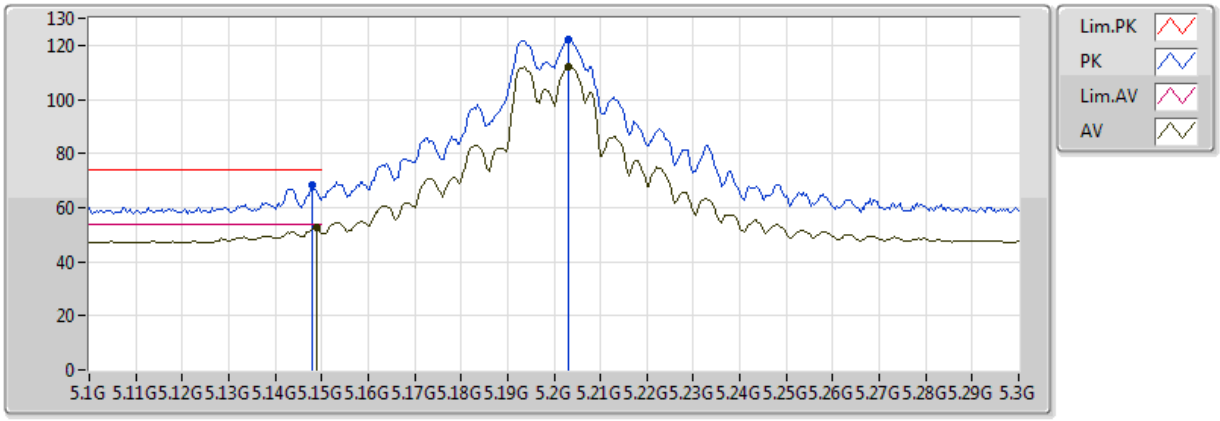


20171120
EUT Z_3TX
Setting 21
01-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	15.53918G	48.86	54.00	-5.14	15.88	3	Horizontal	41	1.24
PK	15.54024G	62.08	74.00	-11.92	15.87	3	Horizontal	41	1.24

802.11a_Nss1,(6Mbps)_3TX

5200MHz_TX

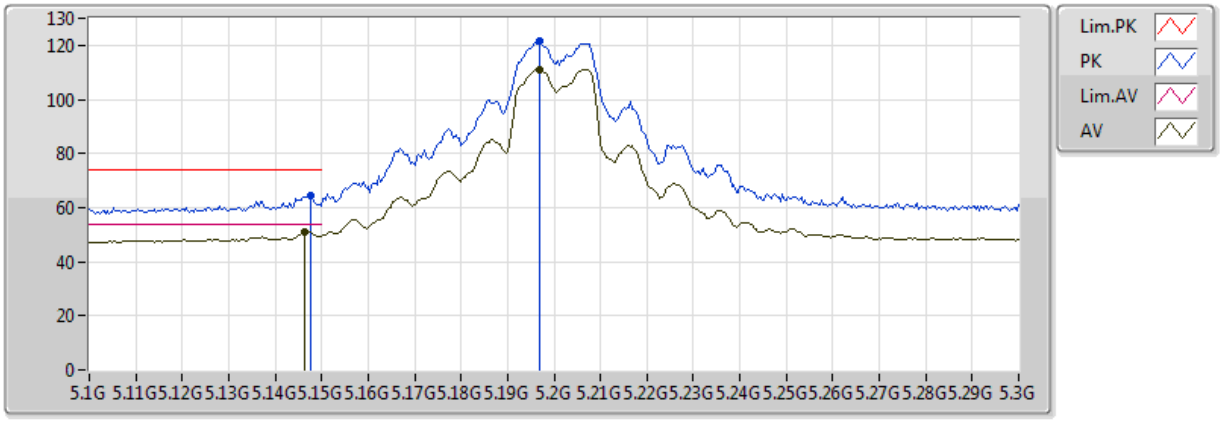


20171120
EUT Z_3TX
Setting 23
01-M-1-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.1488G	52.52	54.00	-1.48	3.43	3	Vertical	175	2.80
AV	5.2032G	112.25	Inf	-Inf	3.41	3	Vertical	175	2.80
PK	5.148G	68.10	74.00	-5.90	3.43	3	Vertical	175	2.80
PK	5.2032G	122.07	Inf	-Inf	3.41	3	Vertical	175	2.80

802.11a_Nss1,(6Mbps)_3TX

5200MHz_TX

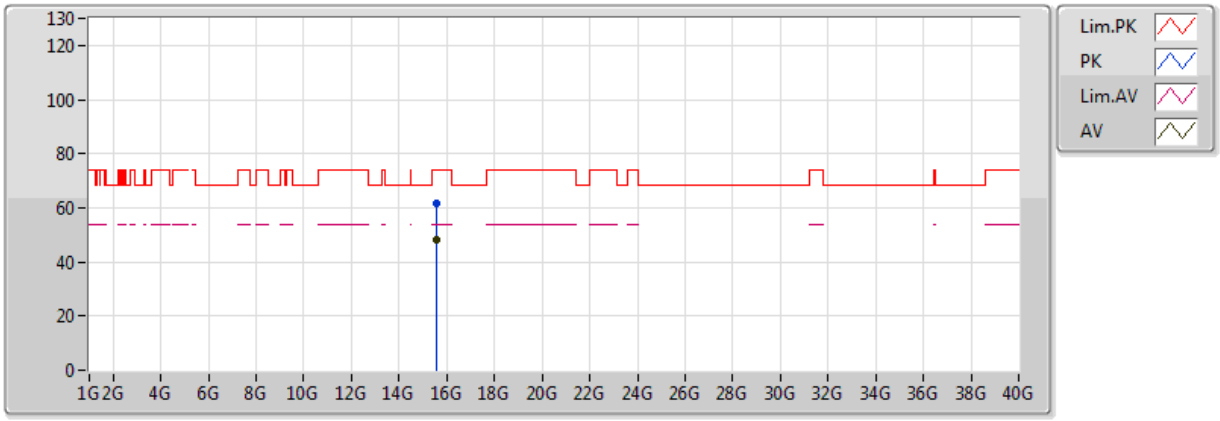


20171120
EUT Z_3TX
Setting 23
01-M-1-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.1464G	50.96	54.00	-3.04	3.43	3	Horizontal	144	1.97
AV	5.1968G	111.20	Inf	-Inf	3.40	3	Horizontal	144	1.97
PK	5.1476G	64.16	74.00	-9.84	3.43	3	Horizontal	144	1.97
PK	5.1968G	121.32	Inf	-Inf	3.40	3	Horizontal	144	1.97

802.11a_Nss1,(6Mbps)_3TX

5200MHz_TX

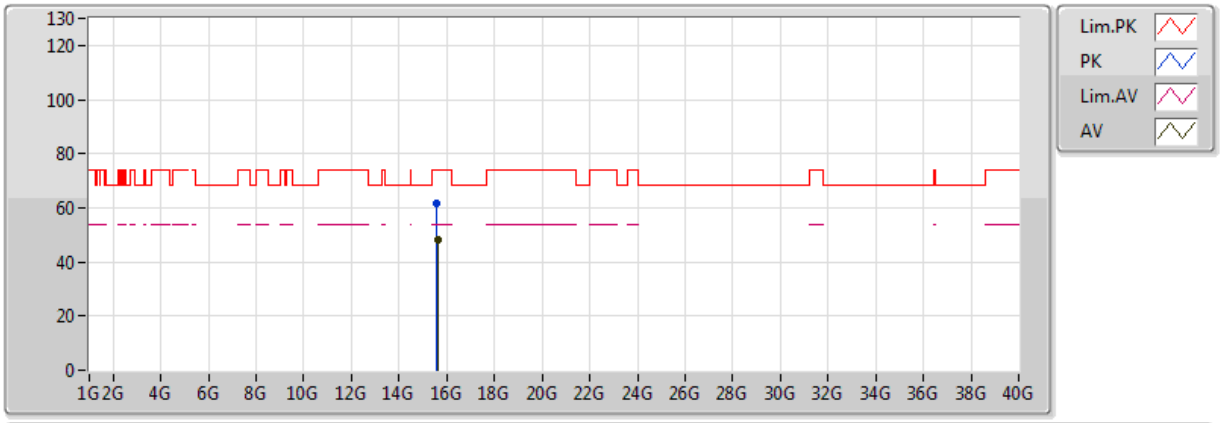


20171120
EUT Z_3TX
Setting 23
01-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	15.59996G	48.27	54.00	-5.73	15.58	3	Vertical	3	1.12
PK	15.59862G	61.40	74.00	-12.60	15.58	3	Vertical	3	1.12

802.11a_Nss1,(6Mbps)_3TX

5200MHz_TX

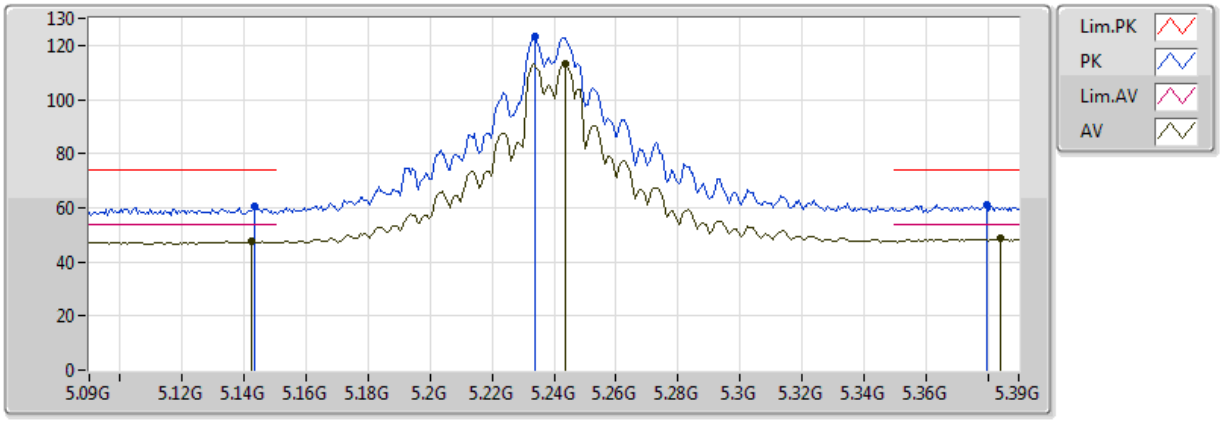


20171120
EUT Z_3TX
Setting 23
01-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	15.60145G	48.19	54.00	-5.81	15.57	3	Horizontal	121	1.32
PK	15.59765G	61.66	74.00	-12.34	15.59	3	Horizontal	121	1.32

802.11a_Nss1,(6Mbps)_3TX

5240MHz_TX

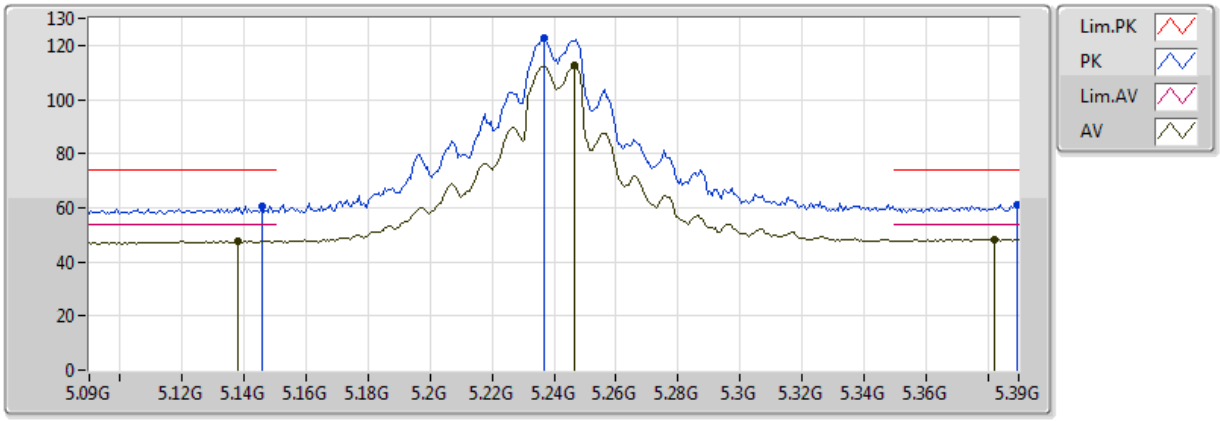


20171120
EUT Z_3TX
Setting 24.5
01-M-1-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.1422G	47.62	54.00	-6.38	3.43	3	Vertical	173	2.75
AV	5.2436G	113.03	Inf	-Inf	3.50	3	Vertical	173	2.75
AV	5.384G	48.48	54.00	-5.52	3.79	3	Vertical	173	2.75
PK	5.1434G	60.29	74.00	-13.71	3.43	3	Vertical	173	2.75
PK	5.234G	123.40	Inf	-Inf	3.47	3	Vertical	173	2.75
PK	5.3798G	61.32	74.00	-12.68	3.78	3	Vertical	173	2.75

802.11a_Nss1,(6Mbps)_3TX

5240MHz_TX

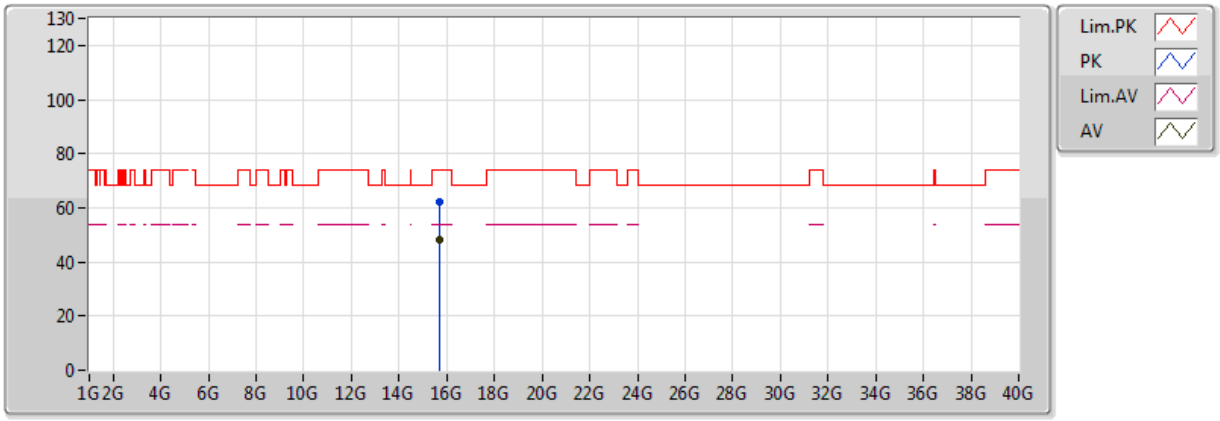


20171120
EUT Z_3TX
Setting 24.5
01-M-1-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.138G	47.68	54.00	-6.32	3.44	3	Horizontal	143	2.00
AV	5.2466G	112.49	Inf	-Inf	3.50	3	Horizontal	143	2.00
AV	5.3822G	48.43	54.00	-5.57	3.78	3	Horizontal	143	2.00
PK	5.1458G	60.52	74.00	-13.48	3.43	3	Horizontal	143	2.00
PK	5.237G	122.53	Inf	-Inf	3.48	3	Horizontal	143	2.00
PK	5.3894G	60.98	74.00	-13.02	3.80	3	Horizontal	143	2.00

802.11a_Nss1,(6Mbps)_3TX

5240MHz_TX

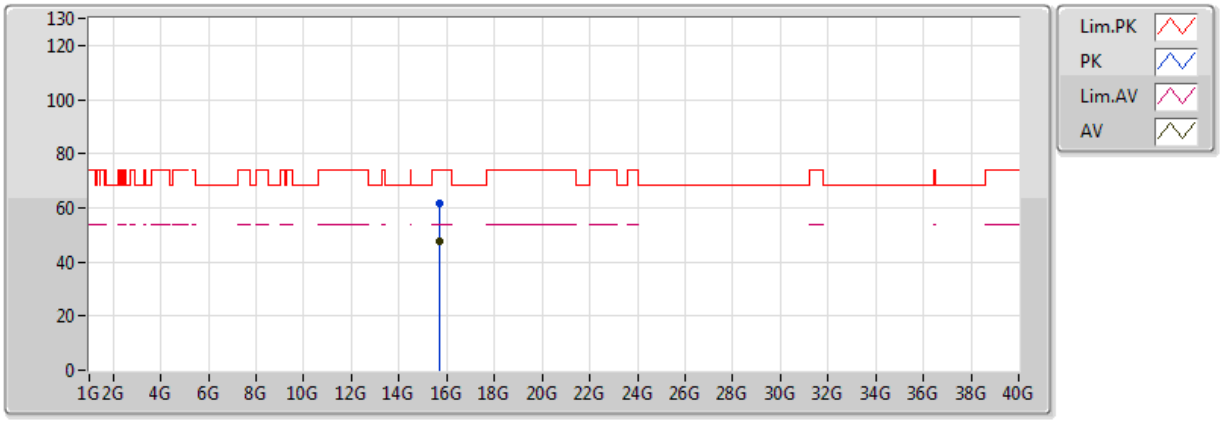


20171120
EUT Z_3TX
Setting 24.5
01-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	15.71797G	48.00	54.00	-6.00	14.99	3	Vertical	11	2.45
PK	15.71854G	62.13	74.00	-11.87	14.99	3	Vertical	11	2.45

802.11a_Nss1,(6Mbps)_3TX

5240MHz_TX

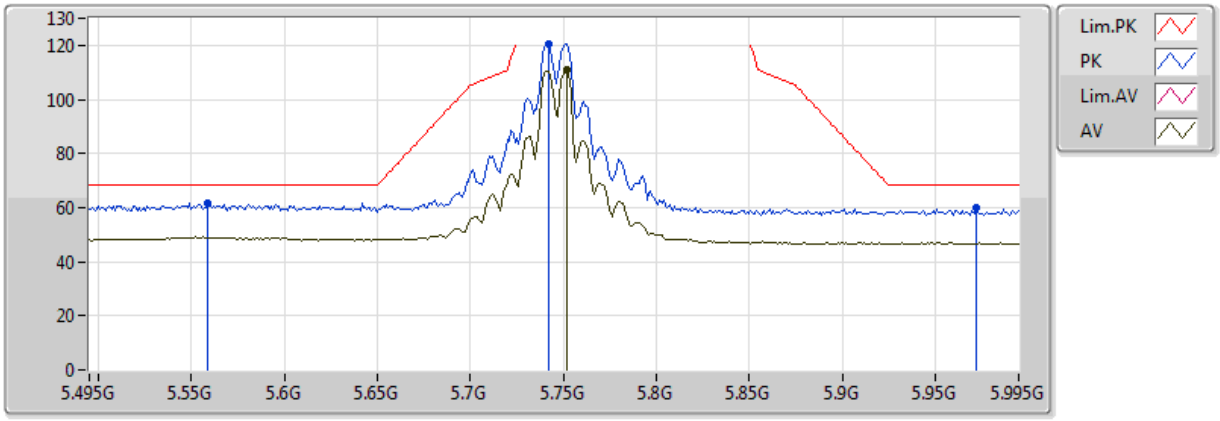


20171120
EUT Z_3TX
Setting 24.5
01-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	15.71812G	47.79	54.00	-6.21	14.99	3	Horizontal	274	2.25
PK	15.71776G	61.67	74.00	-12.33	14.99	3	Horizontal	274	2.25

802.11a_Nss1,(6Mbps)_3TX

5745MHz_TX

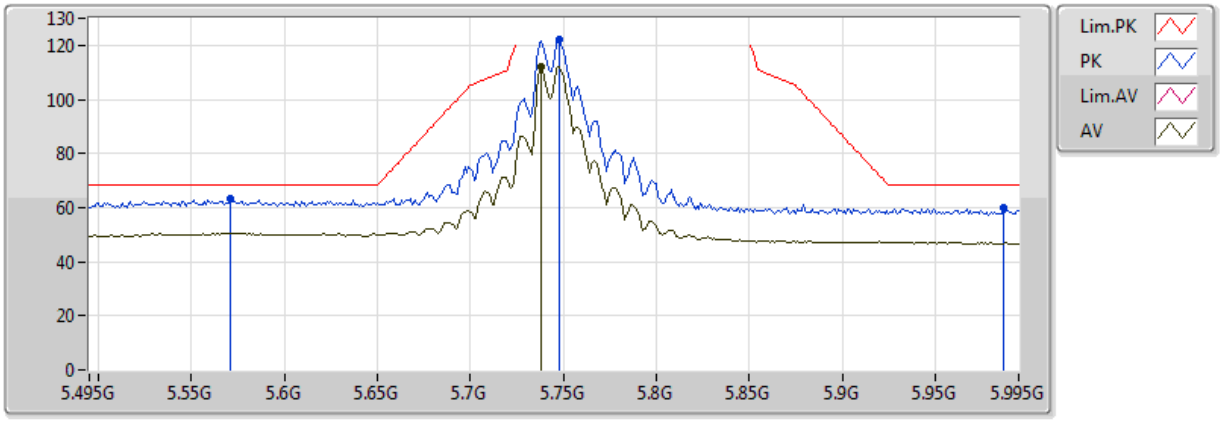


20171120
EUT Z_3TX
Setting 25
01-M-1-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.752G	110.77	Inf	-Inf	4.46	3	Vertical	87	1.90
PK	5.559G	61.71	68.20	-6.49	3.91	3	Vertical	87	1.90
PK	5.742G	120.47	Inf	-Inf	4.43	3	Vertical	87	1.90
PK	5.972G	59.85	68.20	-8.35	4.77	3	Vertical	87	1.90

802.11a_Nss1,(6Mbps)_3TX

5745MHz_TX

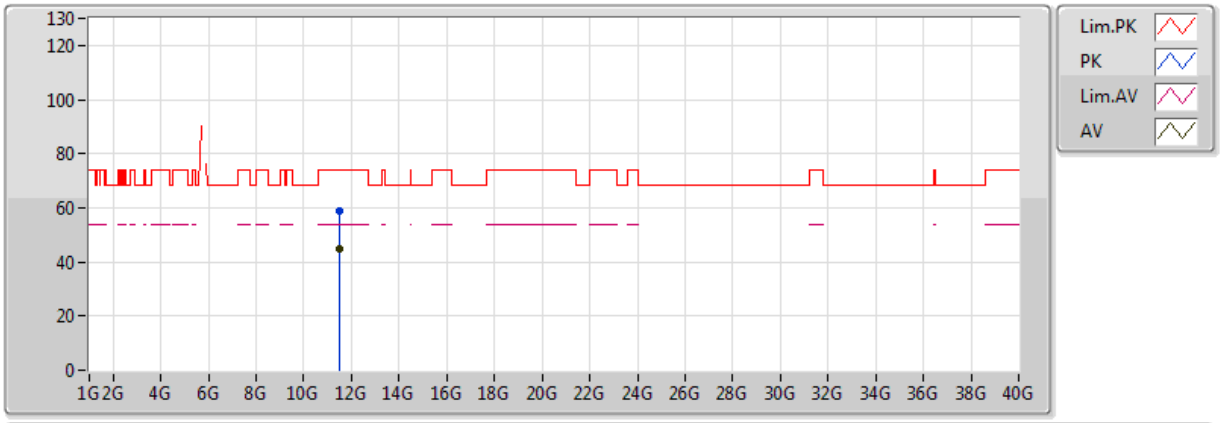


20171120
EUT Z_3TX
Setting 25
01-M-1-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.738G	112.22	Inf	-Inf	4.42	3	Horizontal	94	2.14
PK	5.571G	63.51	68.20	-4.69	3.93	3	Horizontal	94	2.14
PK	5.748G	121.93	Inf	-Inf	4.45	3	Horizontal	94	2.14
PK	5.987G	60.15	68.20	-8.05	4.79	3	Horizontal	94	2.14

802.11a_Nss1,(6Mbps)_3TX

5745MHz_TX

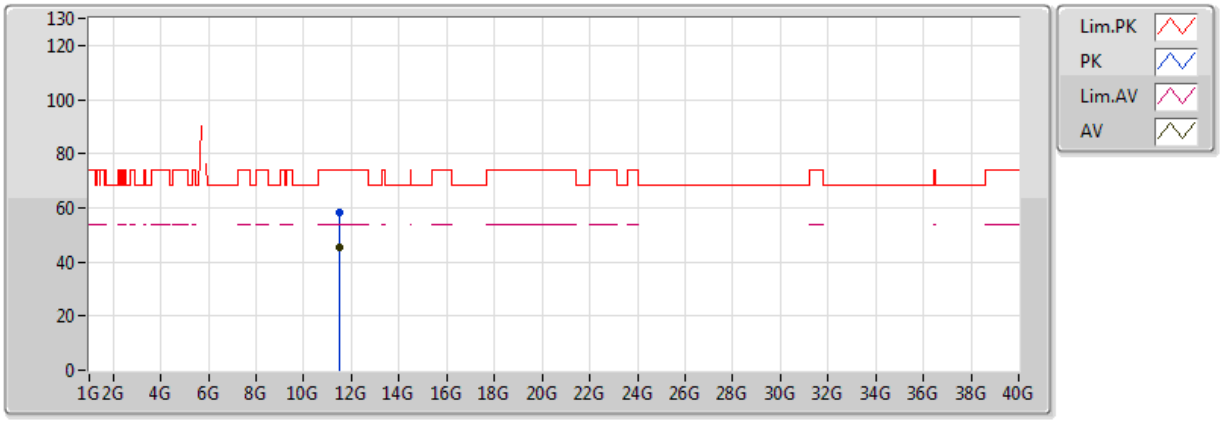


20171120
EUT Z_3TX
Setting 25
01-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	11.4882G	44.89	54.00	-9.11	14.25	3	Vertical	198	1.78
PK	11.48996G	58.84	74.00	-15.16	14.25	3	Vertical	198	1.78

802.11a_Nss1,(6Mbps)_3TX

5745MHz_TX

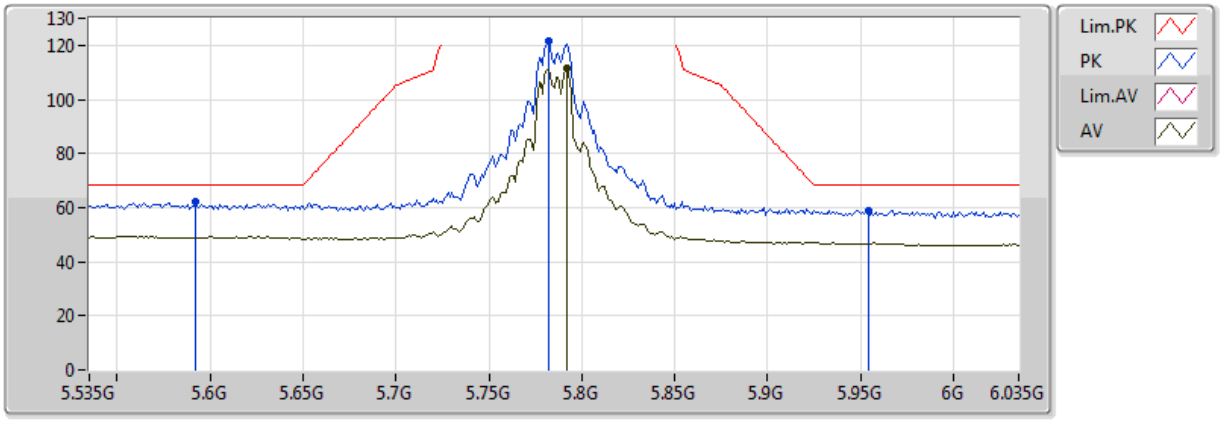


20171120
EUT Z_3TX
Setting 25
01-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	11.49G	45.12	54.00	-8.88	14.25	3	Horizontal	49	1.88
PK	11.48978G	58.08	74.00	-15.92	14.25	3	Horizontal	49	1.88

802.11a_Nss1,(6Mbps)_3TX

5785MHz_TX

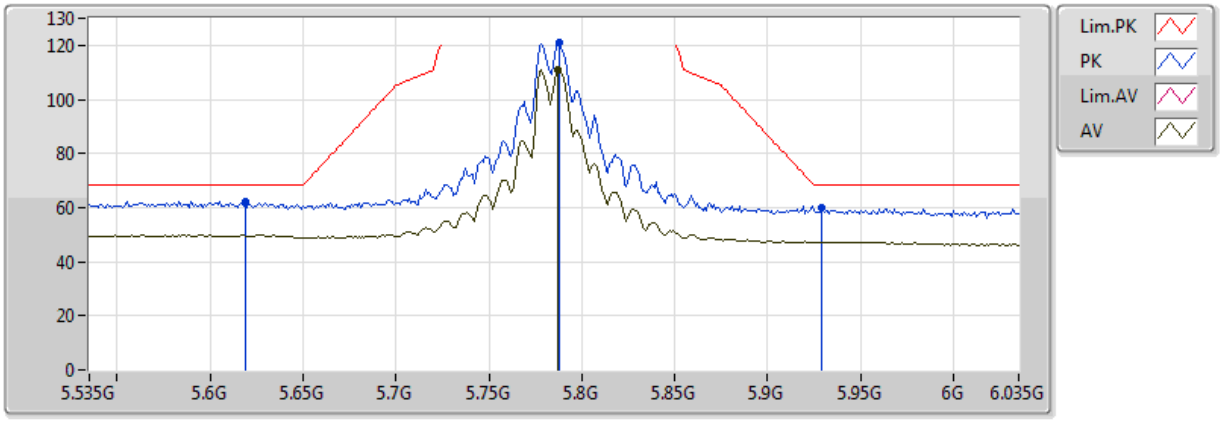


20171120
EUT Z_3TX
Setting 24.5
01-M-1-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.792G	111.26	Inf	-Inf	4.59	3	Vertical	46	2.04
PK	5.592G	62.05	68.20	-6.15	3.97	3	Vertical	46	2.04
PK	5.782G	121.39	Inf	-Inf	4.55	3	Vertical	46	2.04
PK	5.954G	58.99	68.20	-9.21	4.75	3	Vertical	46	2.04

802.11a_Nss1,(6Mbps)_3TX

5785MHz_TX

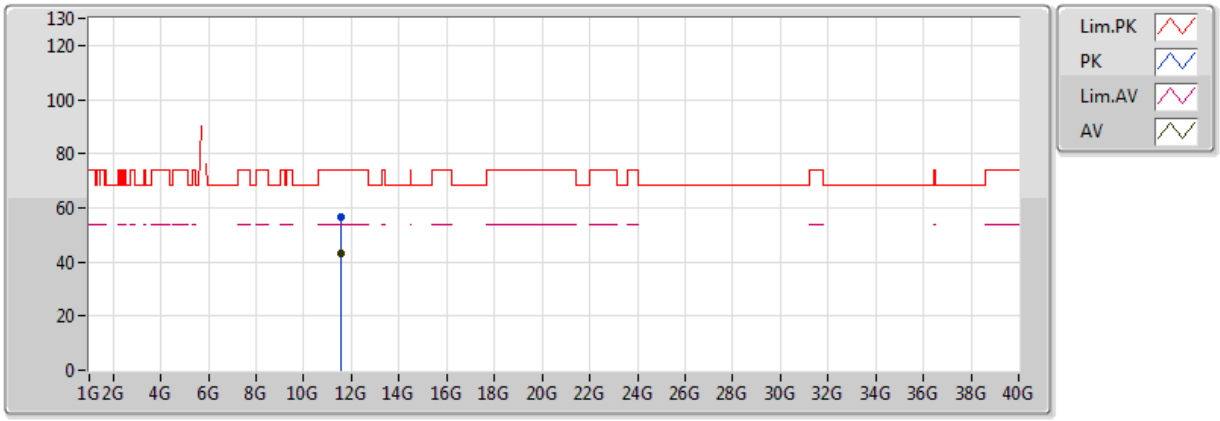


20171120
EUT Z_3TX
Setting 24.5
01-M-1-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.787G	110.93	Inf	-Inf	4.57	3	Horizontal	96	2.11
PK	5.619G	62.33	68.20	-5.87	4.04	3	Horizontal	96	2.11
PK	5.788G	120.80	Inf	-Inf	4.57	3	Horizontal	96	2.11
PK	5.929G	59.84	68.20	-8.36	4.73	3	Horizontal	96	2.11

802.11a_Nss1,(6Mbps)_3TX

5785MHz_TX

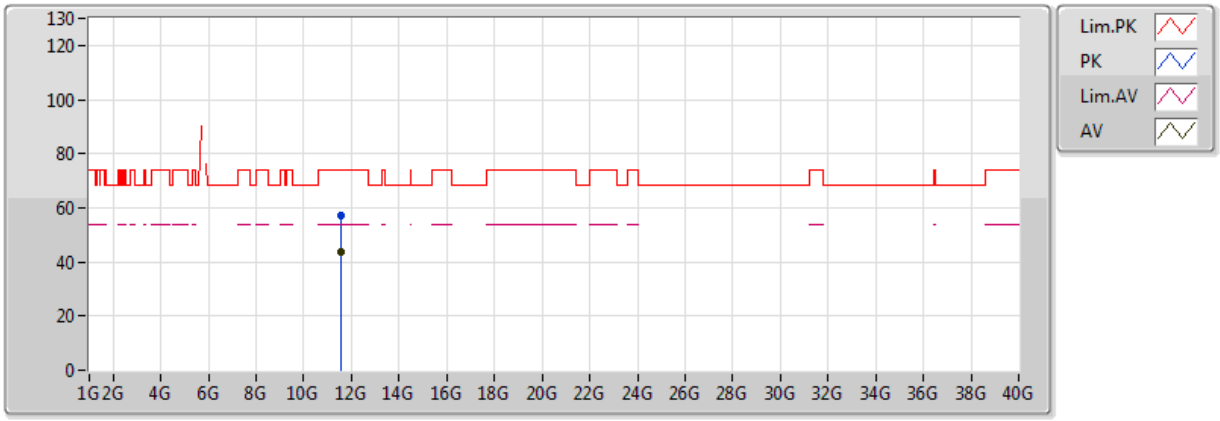


20171120
EUT Z_3TX
Setting 24.5
01-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	11.56864G	42.89	54.00	-11.11	14.10	3	Vertical	193	2.91
PK	11.56798G	56.35	74.00	-17.65	14.10	3	Vertical	193	2.91

802.11a_Nss1,(6Mbps)_3TX

5785MHz_TX

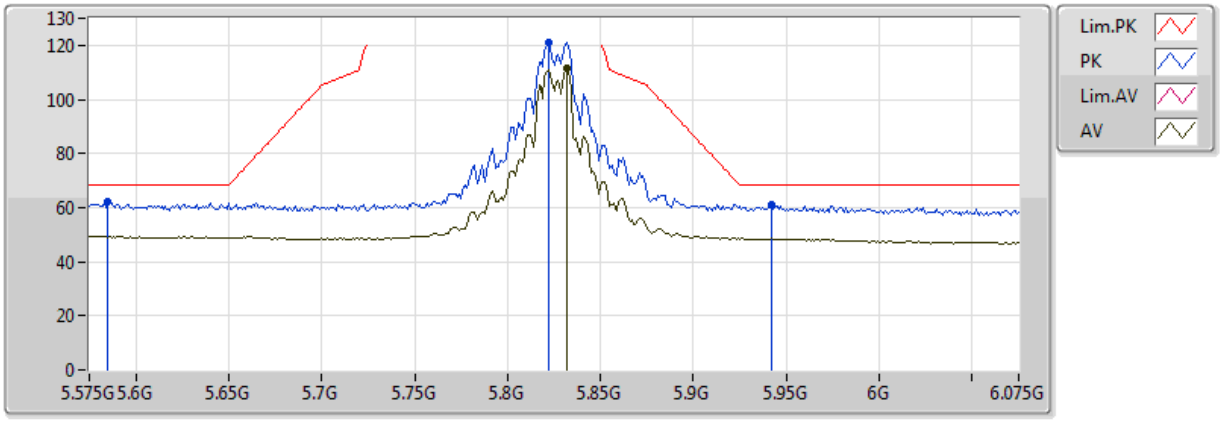


20171120
EUT Z_3TX
Setting 24.5
01-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	11.5703G	43.72	54.00	-10.28	14.10	3	Horizontal	51	1.80
PK	11.57086G	57.03	74.00	-16.97	14.10	3	Horizontal	51	1.80

802.11a_Nss1,(6Mbps)_3TX

5825MHz_TX

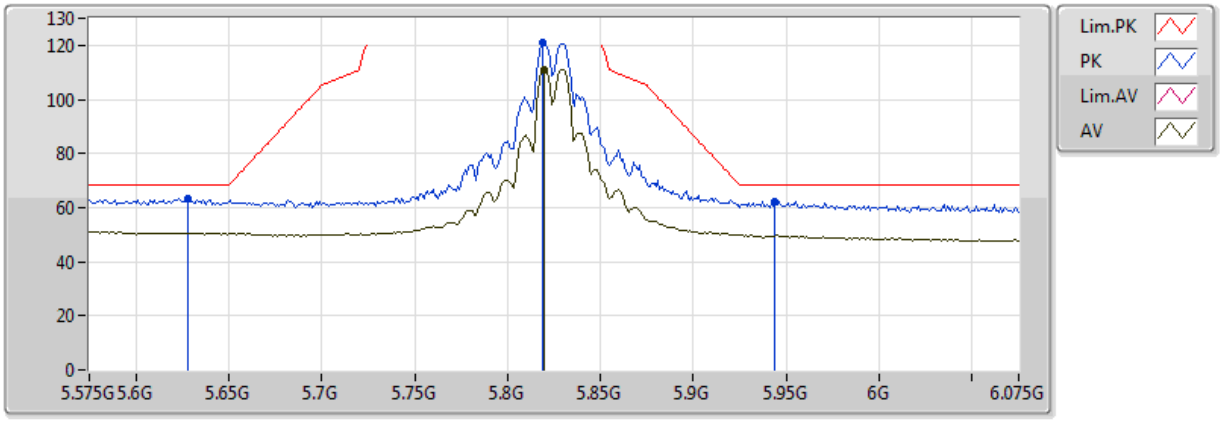


20171120
EUT Z_3TX
Setting 24.5
01-M-1-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.832G	111.37	Inf	-Inf	4.64	3	Vertical	312	1.98
PK	5.585G	62.44	68.20	-5.76	3.95	3	Vertical	312	1.98
PK	5.822G	121.30	Inf	-Inf	4.63	3	Vertical	312	1.98
PK	5.942G	61.21	68.20	-6.99	4.74	3	Vertical	312	1.98

802.11a_Nss1,(6Mbps)_3TX

5825MHz_TX



20171120
EUT Z_3TX
Setting 24.5
01-M-1-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.82G	110.94	Inf	-Inf	4.63	3	Horizontal	75	2.06
PK	5.628G	63.50	68.20	-4.70	4.07	3	Horizontal	75	2.06
PK	5.819G	121.29	Inf	-Inf	4.63	3	Horizontal	75	2.06
PK	5.944G	62.40	68.20	-5.80	4.74	3	Horizontal	75	2.06

802.11a_Nss1,(6Mbps)_3TX

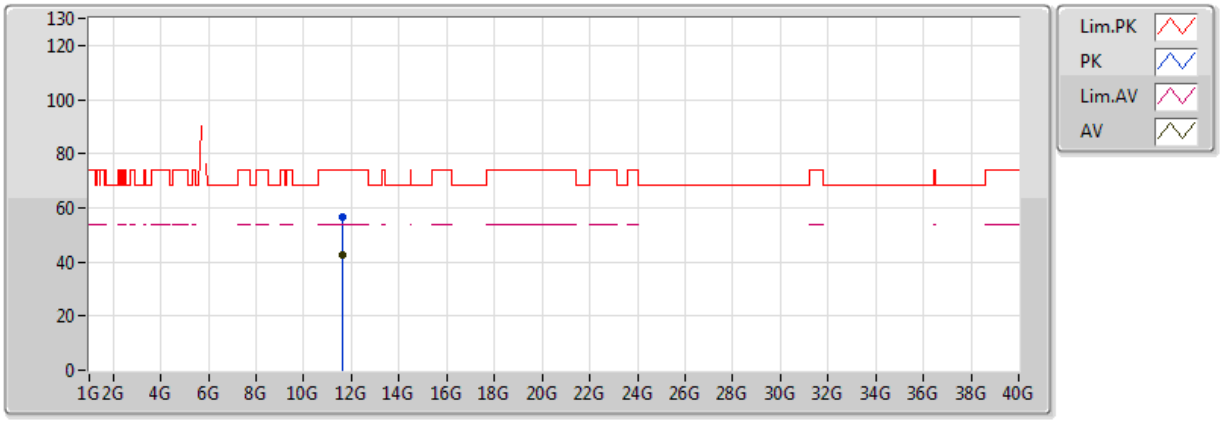
5825MHz_TX

20171120
EUT Z_3TX
Setting 24.5
01-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	11.65012G	42.73	54.00	-11.27	13.95	3	Vertical	208	2.27
PK	11.65158G	55.95	74.00	-18.05	13.95	3	Vertical	208	2.27

802.11a_Nss1,(6Mbps)_3TX

5825MHz_TX

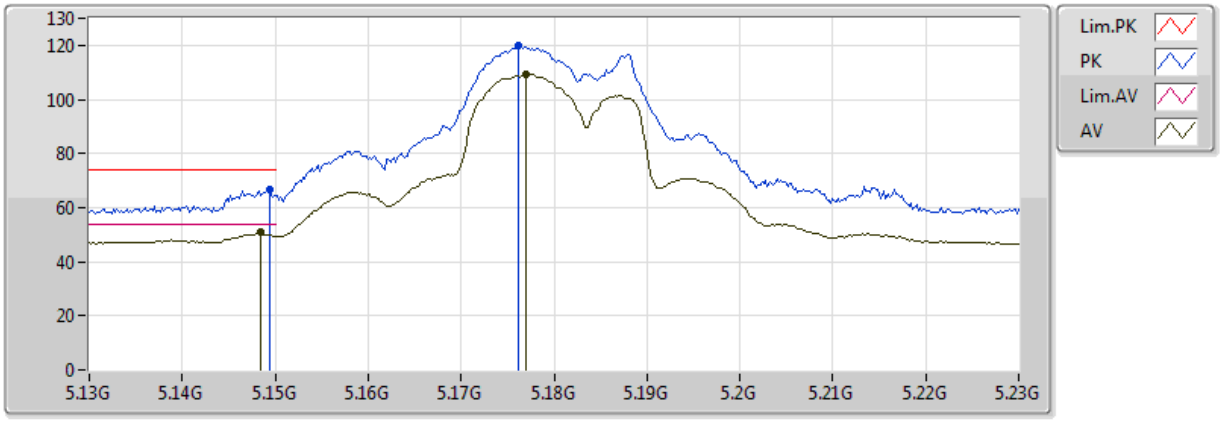


20171120
EUT Z_3TX
Setting 24.5
01-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	11.64742G	42.58	54.00	-11.42	13.96	3	Horizontal	360	1.38
PK	11.64648G	56.35	74.00	-17.65	13.96	3	Horizontal	360	1.38

802.11ac VHT20_Nss1,(MCS0)_3TX

5180MHz_TX

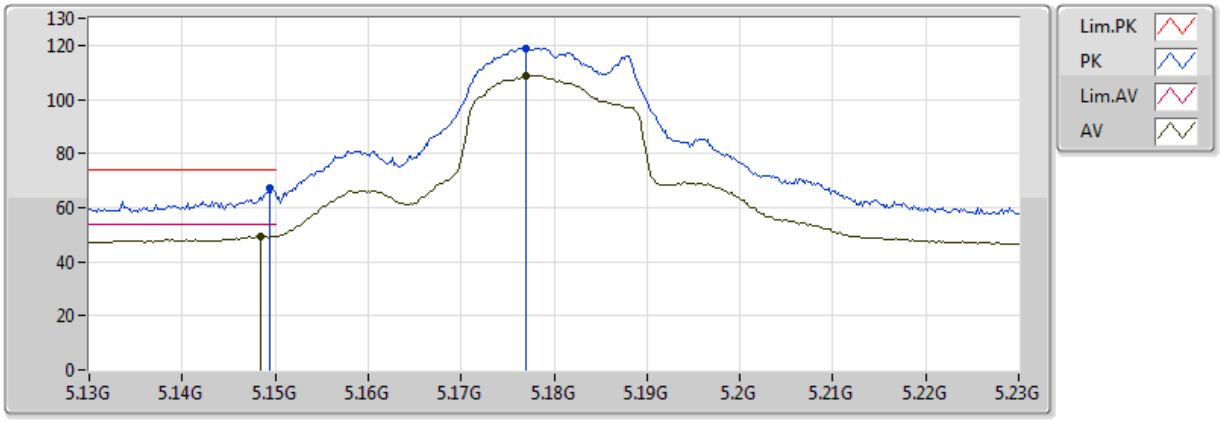


20171120
EUT Z_3TX
Setting 20.5
01-M-1-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.1484G	50.85	54.00	-3.15	3.43	3	Vertical	173	2.82
AV	5.177G	109.46	Inf	-Inf	3.41	3	Vertical	173	2.82
PK	5.1494G	66.87	74.00	-7.13	3.43	3	Vertical	173	2.82
PK	5.1762G	119.69	Inf	-Inf	3.41	3	Vertical	173	2.82

802.11ac VHT20_Nss1,(MCS0)_3TX

5180MHz_TX

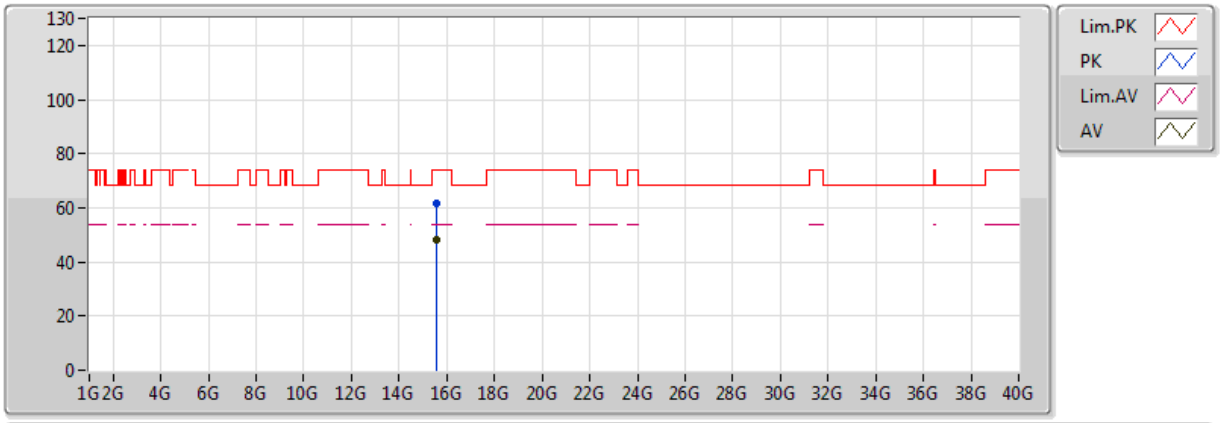


20171120
EUT Z_3TX
Setting 20.5
01-M-1-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.1484G	49.51	54.00	-4.49	3.43	3	Horizontal	146	2.15
AV	5.177G	108.88	Inf	-Inf	3.41	3	Horizontal	146	2.15
PK	5.1494G	67.21	74.00	-6.79	3.43	3	Horizontal	146	2.15
PK	5.177G	119.00	Inf	-Inf	3.41	3	Horizontal	146	2.15

802.11ac VHT20_Nss1,(MCS0)_3TX

5180MHz_TX

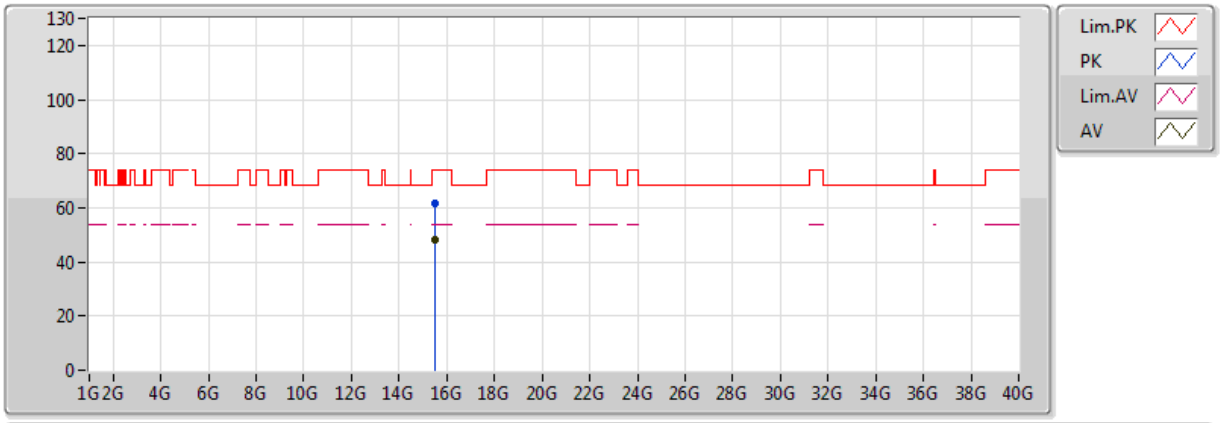


20171120
EUT Z_3TX
Setting 20.5
01-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	15.53858G	48.32	54.00	-5.68	15.88	3	Vertical	355	1.69
PK	15.54062G	61.78	74.00	-12.22	15.87	3	Vertical	355	1.69

802.11ac VHT20_Nss1,(MCS0)_3TX

5180MHz_TX

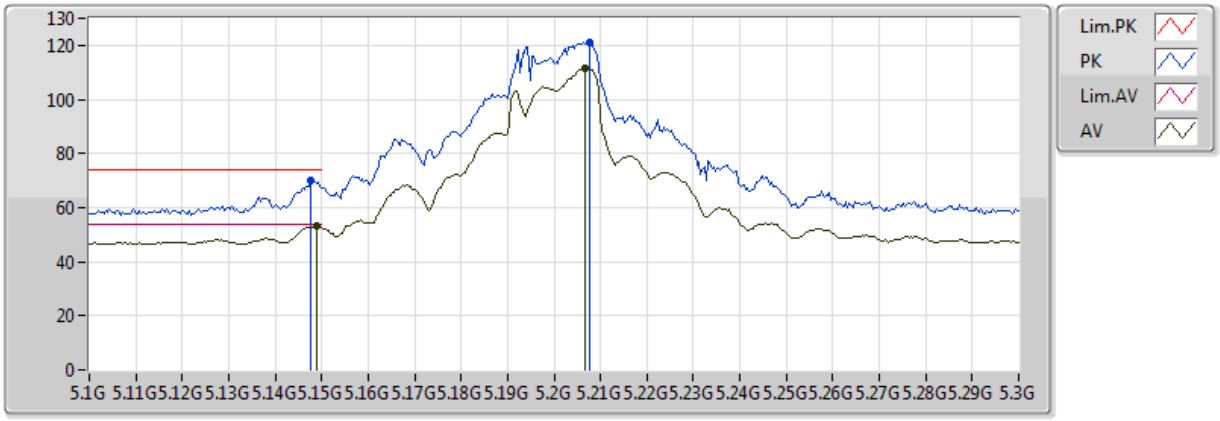


20171120
EUT Z_3TX
Setting 20.5
01-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	15.53532G	48.28	54.00	-5.72	15.90	3	Horizontal	146	2.07
PK	15.53596G	61.90	74.00	-12.10	15.89	3	Horizontal	146	2.07

802.11ac VHT20_Nss1,(MCS0)_3TX

5200MHz_TX

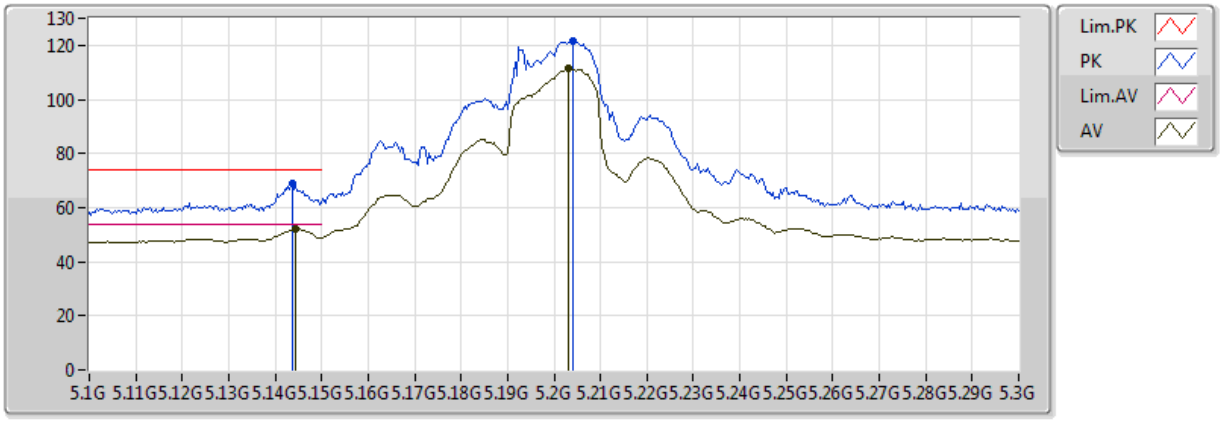


20171120
EUT Z_3TX
Setting 23.5
01-M-1-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.1488G	52.99	54.00	-1.01	3.43	3	Vertical	295	2.12
AV	5.2068G	111.30	Inf	-Inf	3.41	3	Vertical	295	2.12
PK	5.1476G	70.21	74.00	-3.79	3.43	3	Vertical	295	2.12
PK	5.2076G	121.25	Inf	-Inf	3.42	3	Vertical	295	2.12

802.11ac VHT20_Nss1,(MCS0)_3TX

5200MHz_TX

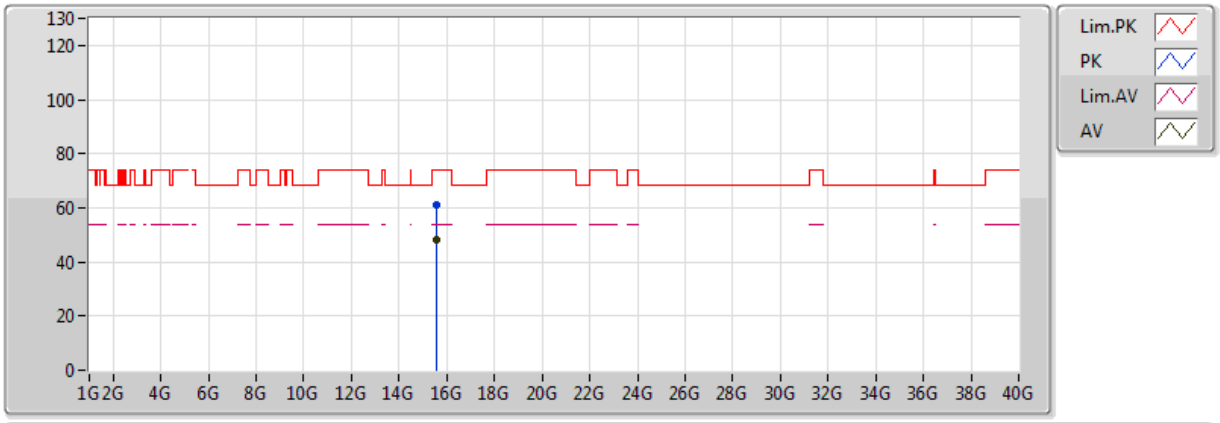


20171120
EUT Z_3TX
Setting 23.5
01-M-1-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.1444G	52.25	54.00	-1.75	3.43	3	Horizontal	141	1.94
AV	5.2032G	111.45	Inf	-Inf	3.41	3	Horizontal	141	1.94
PK	5.1436G	68.77	74.00	-5.23	3.43	3	Horizontal	141	1.94
PK	5.204G	121.60	Inf	-Inf	3.41	3	Horizontal	141	1.94

802.11ac VHT20_Nss1,(MCS0)_3TX

5200MHz_TX

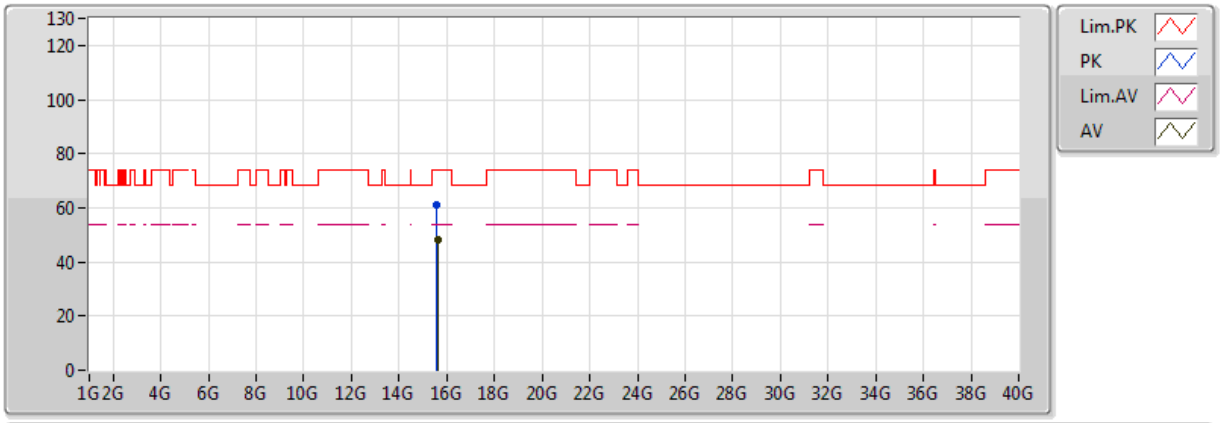


20171120
EUT Z_3TX
Setting 23.5
01-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	15.59672G	48.19	54.00	-5.81	15.59	3	Vertical	344	1.81
PK	15.5971G	61.10	74.00	-12.90	15.59	3	Vertical	344	1.81

802.11ac VHT20_Nss1,(MCS0)_3TX

5200MHz_TX

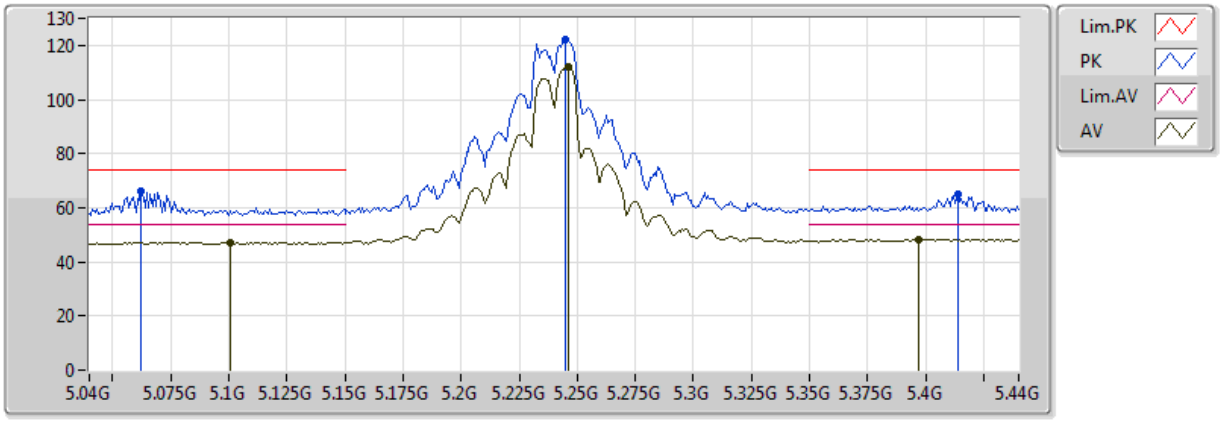


20171120
EUT Z_3TX
Setting 23.5
01-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	15.60288G	47.99	54.00	-6.01	15.56	3	Horizontal	161	1.62
PK	15.60042G	61.27	74.00	-12.73	15.57	3	Horizontal	161	1.62

802.11ac VHT20_Nss1,(MCS0)_3TX

5240MHz_TX

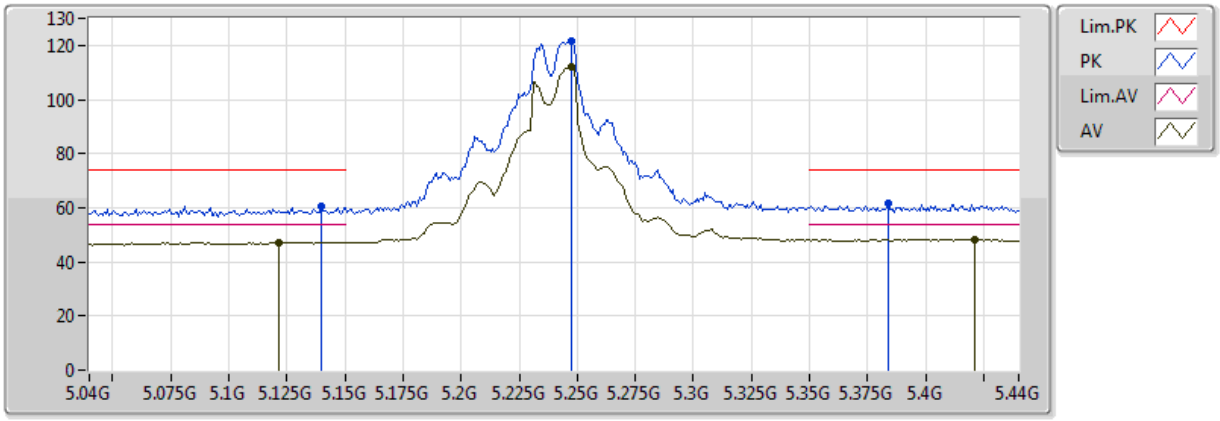


20171120
EUT Z_3TX
Setting 24
01-M-1-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.1008G	47.20	54.00	-6.80	3.46	3	Vertical	178	2.25
AV	5.2464G	112.19	Inf	-Inf	3.50	3	Vertical	178	2.25
AV	5.3968G	48.28	54.00	-5.72	3.81	3	Vertical	178	2.25
PK	5.0624G	66.13	74.00	-7.87	3.49	3	Vertical	178	2.25
PK	5.2448G	122.08	Inf	-Inf	3.50	3	Vertical	178	2.25
PK	5.4136G	65.15	74.00	-8.85	3.82	3	Vertical	178	2.25

802.11ac VHT20_Nss1,(MCS0)_3TX

5240MHz_TX

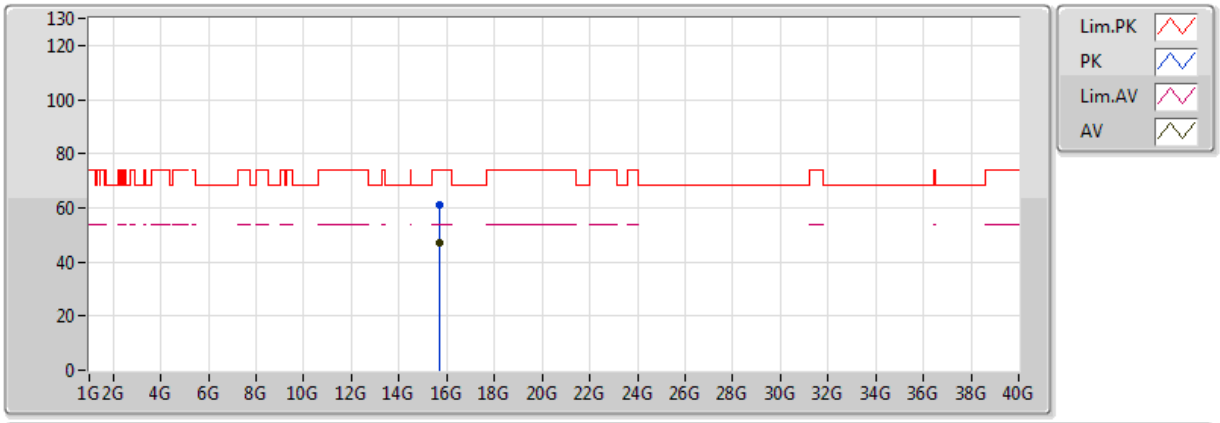


20171120
EUT Z_3TX
Setting 24
01-M-1-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.1216G	47.31	54.00	-6.69	3.45	3	Horizontal	147	2.11
AV	5.2472G	111.90	Inf	-Inf	3.50	3	Horizontal	147	2.11
AV	5.4208G	48.33	54.00	-5.67	3.82	3	Horizontal	147	2.11
PK	5.14G	60.72	74.00	-13.28	3.44	3	Horizontal	147	2.11
PK	5.2472G	121.60	Inf	-Inf	3.50	3	Horizontal	147	2.11
PK	5.384G	61.62	74.00	-12.38	3.79	3	Horizontal	147	2.11

802.11ac VHT20_Nss1,(MCS0)_3TX

5240MHz_TX

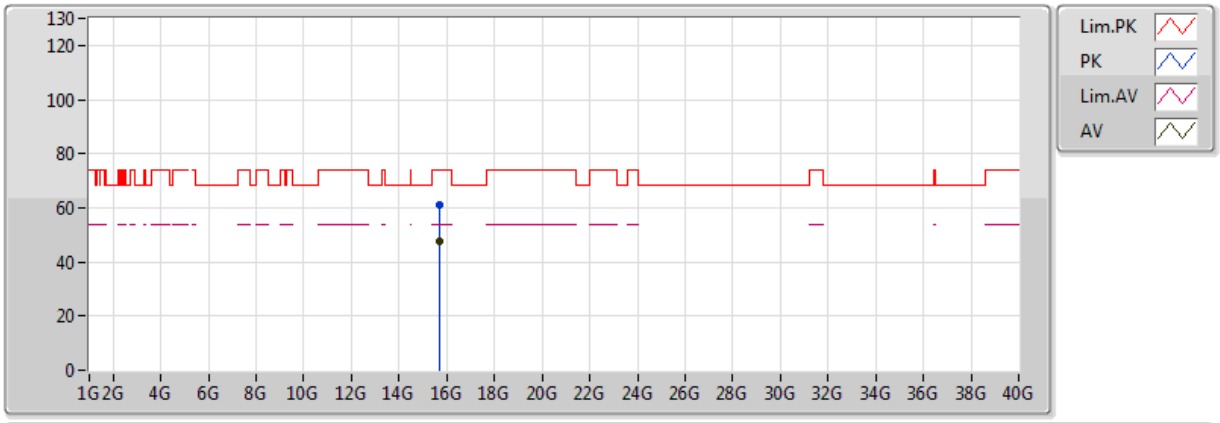


20171120
EUT Z_3TX
Setting 24
01-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	15.71714G	47.15	54.00	-6.85	15.00	3	Vertical	329	2.24
PK	15.72018G	61.34	74.00	-12.66	14.98	3	Vertical	329	2.24

802.11ac VHT20_Nss1,(MCS0)_3TX

5240MHz_TX

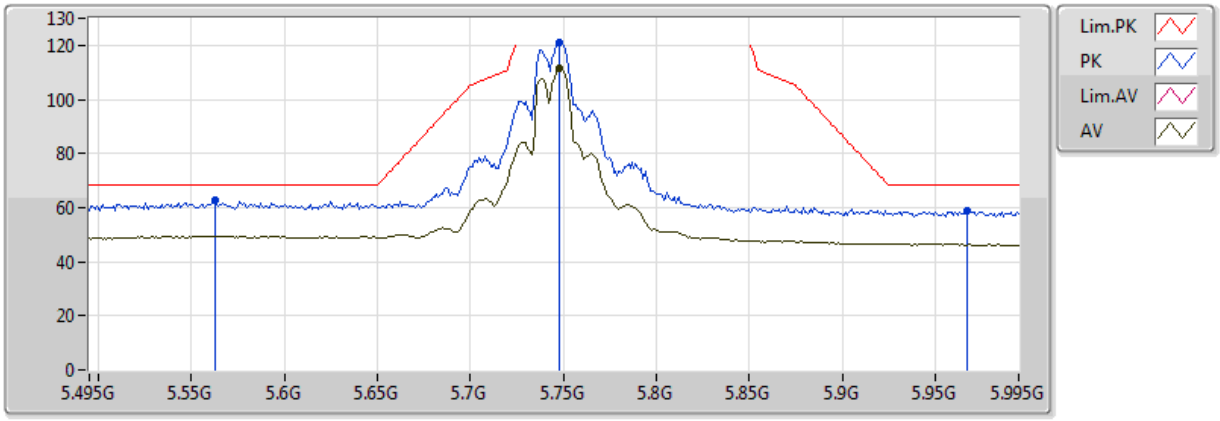


20171120
EUT Z_3TX
Setting 24
01-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	15.71874G	47.59	54.00	-6.41	14.99	3	Horizontal	252	1.29
PK	15.72056G	60.96	74.00	-13.04	14.98	3	Horizontal	252	1.29

802.11ac VHT20_Nss1,(MCS0)_3TX

5745MHz_TX

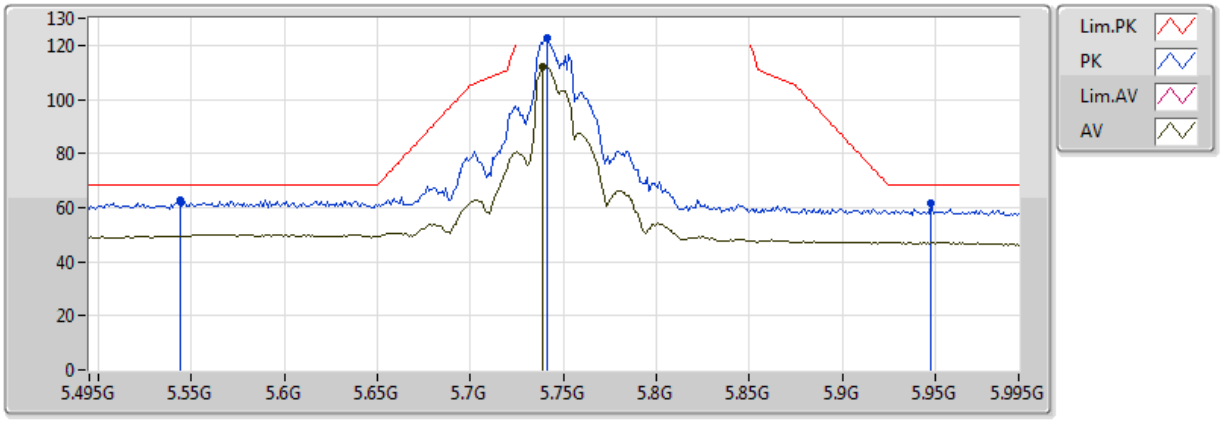


20171120
EUT Z_3TX
Setting 25
01-M-1-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.748G	111.48	Inf	-Inf	4.45	3	Vertical	46	2.10
PK	5.563G	62.58	68.20	-5.62	3.92	3	Vertical	46	2.10
PK	5.748G	121.00	Inf	-Inf	4.45	3	Vertical	46	2.10
PK	5.967G	58.63	68.20	-9.57	4.77	3	Vertical	46	2.10

802.11ac VHT20_Nss1,(MCS0)_3TX

5745MHz_TX

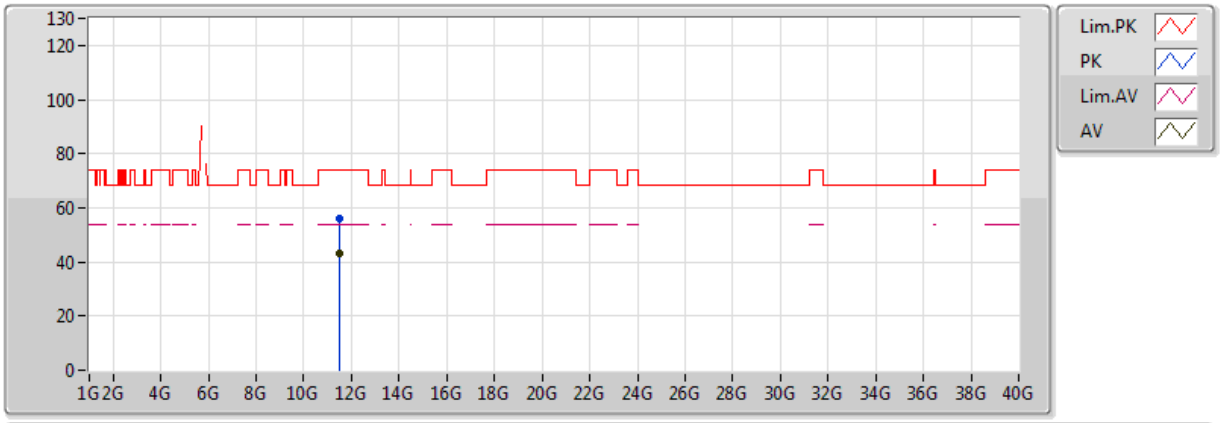


20171120
EUT Z_3TX
Setting 25
01-M-1-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.739G	112.11	Inf	-Inf	4.42	3	Horizontal	91	2.02
PK	5.544G	62.73	68.20	-5.47	3.88	3	Horizontal	91	2.02
PK	5.741G	122.68	Inf	-Inf	4.43	3	Horizontal	91	2.02
PK	5.948G	61.87	68.20	-6.33	4.75	3	Horizontal	91	2.02

802.11ac VHT20_Nss1,(MCS0)_3TX

5745MHz_TX

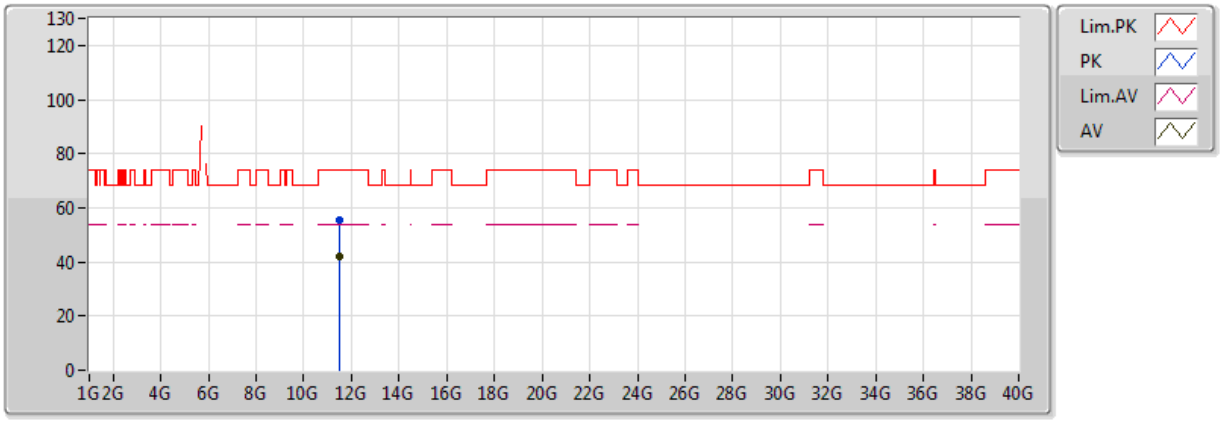


20171120
EUT Z_3TX
Setting 25
01-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	11.49156G	42.98	54.00	-11.02	14.25	3	Vertical	16	2.24
PK	11.49262G	55.84	74.00	-18.16	14.24	3	Vertical	16	2.24

802.11ac VHT20_Nss1,(MCS0)_3TX

5745MHz_TX

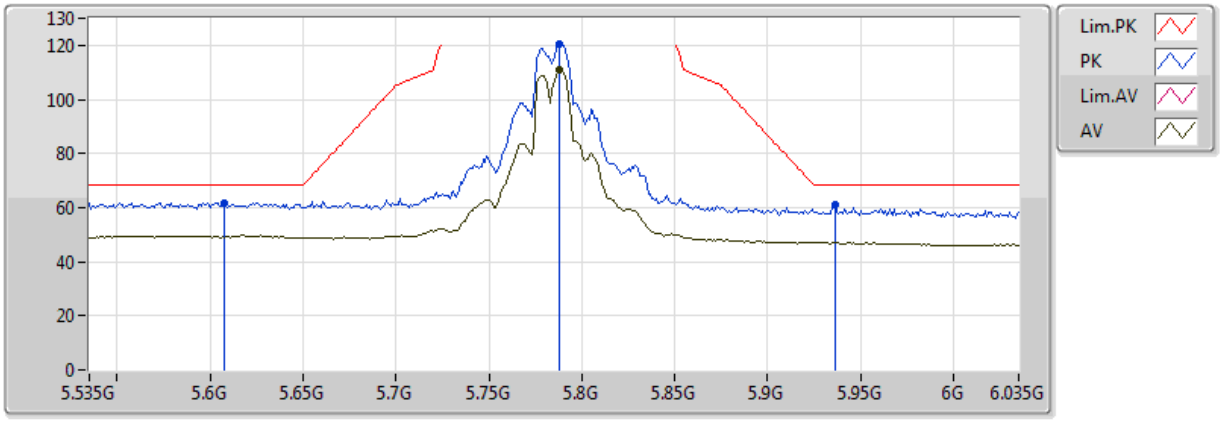


20171120
EUT Z_3TX
Setting 25
01-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	11.48938G	42.30	54.00	-11.70	14.25	3	Horizontal	346	1.74
PK	11.4903G	55.74	74.00	-18.26	14.25	3	Horizontal	346	1.74

802.11ac VHT20_Nss1,(MCS0)_3TX

5785MHz_TX

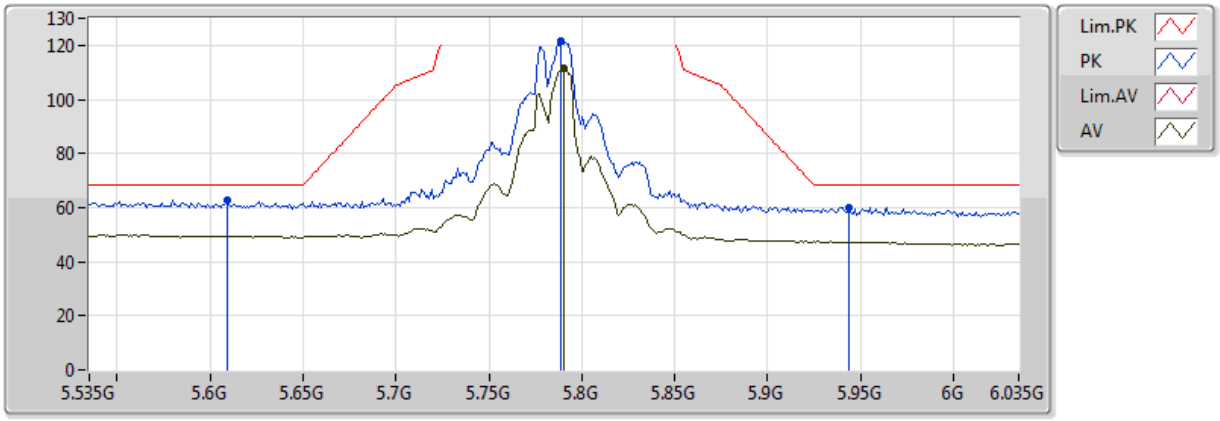


20171120
EUT Z_3TX
Setting 25
01-M-1-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.788G	111.03	Inf	-Inf	4.57	3	Vertical	49	1.95
PK	5.608G	61.91	68.20	-6.29	4.01	3	Vertical	49	1.95
PK	5.788G	120.43	Inf	-Inf	4.57	3	Vertical	49	1.95
PK	5.936G	60.96	68.20	-7.24	4.74	3	Vertical	49	1.95

802.11ac VHT20_Nss1,(MCS0)_3TX

5785MHz_TX

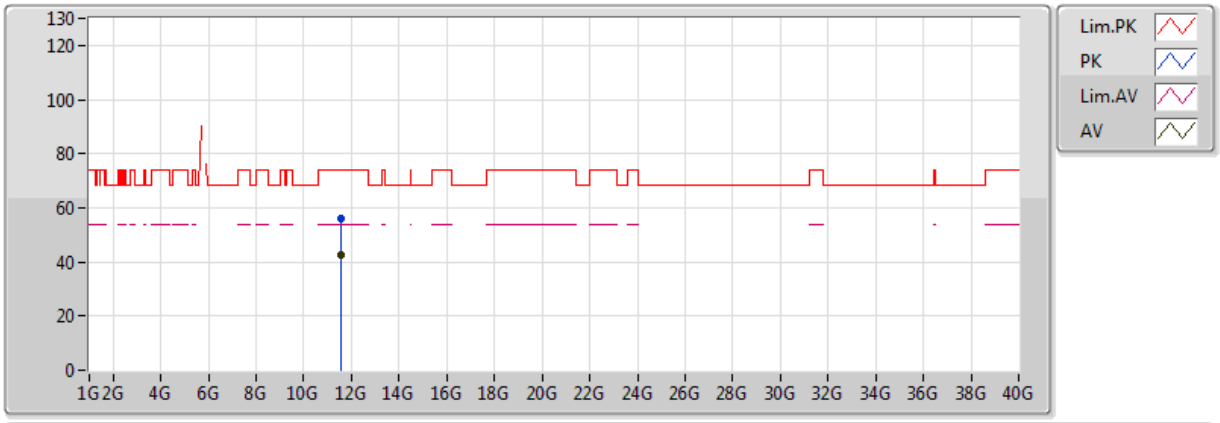


20171120
EUT Z_3TX
Setting 25
01-M-1-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.79G	111.58	Inf	-Inf	4.58	3	Horizontal	97	2.03
PK	5.609G	62.66	68.20	-5.54	4.01	3	Horizontal	97	2.03
PK	5.789G	121.33	Inf	-Inf	4.58	3	Horizontal	97	2.03
PK	5.944G	59.82	68.20	-8.38	4.74	3	Horizontal	97	2.03

802.11ac VHT20_Nss1,(MCS0)_3TX

5785MHz_TX

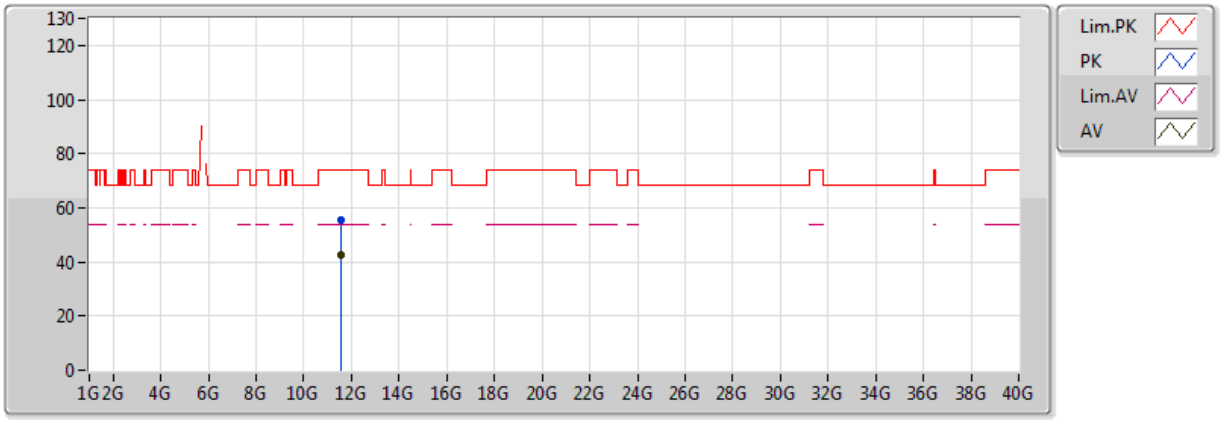


20171120
EUT Z_3TX
Setting 25
01-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	11.56588G	42.51	54.00	-11.49	14.11	3	Vertical	251	1.31
PK	11.56892G	55.85	74.00	-18.15	14.10	3	Vertical	251	1.31

802.11ac VHT20_Nss1,(MCS0)_3TX

5785MHz_TX

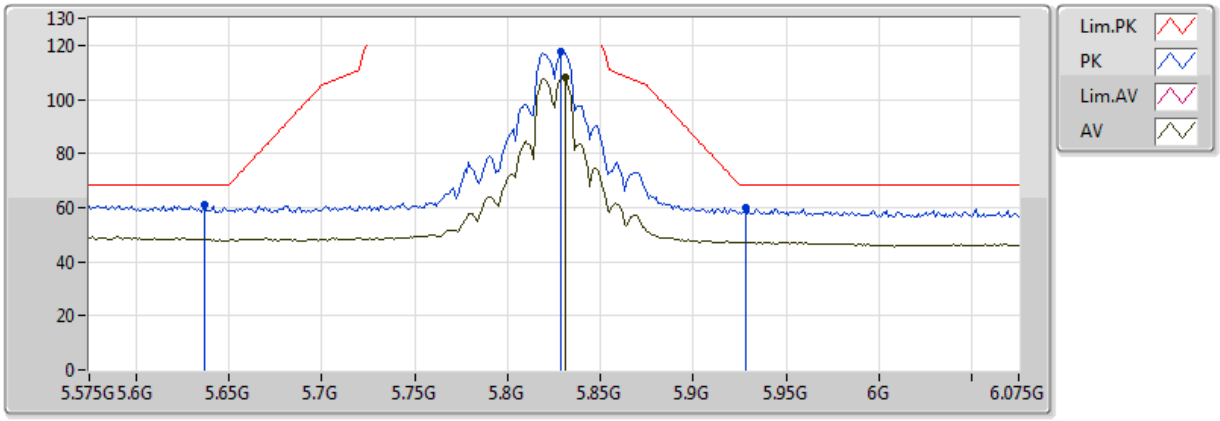


20171120
EUT Z_3TX
Setting 25
01-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	11.57268G	42.36	54.00	-11.64	14.09	3	Horizontal	66	1.36
PK	11.56952G	55.34	74.00	-18.66	14.10	3	Horizontal	66	1.36

802.11ac VHT20_Nss1,(MCS0)_3TX

5825MHz_TX

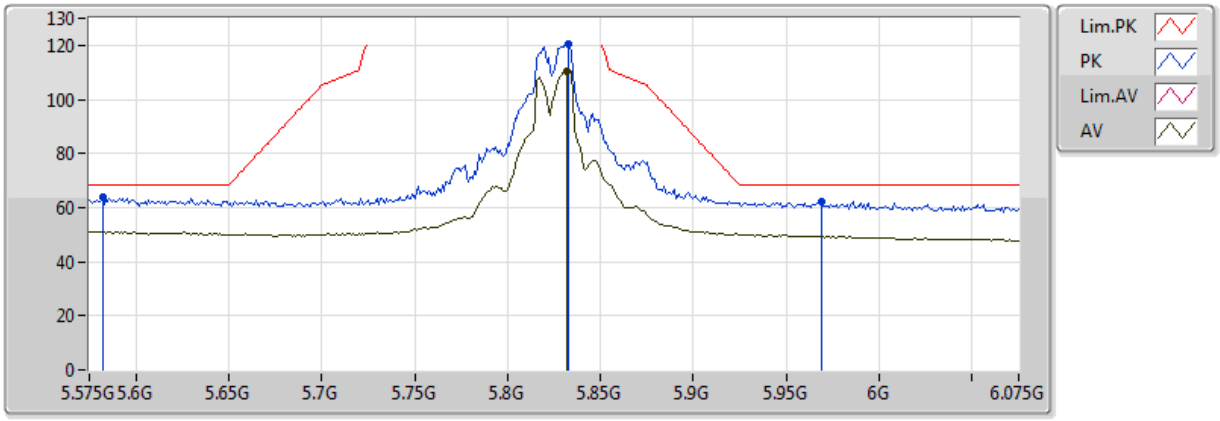


20171120
EUT Z_3TX
Setting 24.5
01-M-1-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.831G	107.96	Inf	-Inf	4.64	3	Vertical	276	2.02
PK	5.637G	61.12	68.20	-7.08	4.10	3	Vertical	276	2.02
PK	5.829G	117.51	Inf	-Inf	4.64	3	Vertical	276	2.02
PK	5.928G	60.19	68.20	-8.01	4.73	3	Vertical	276	2.02

802.11ac VHT20_Nss1,(MCS0)_3TX

5825MHz_TX

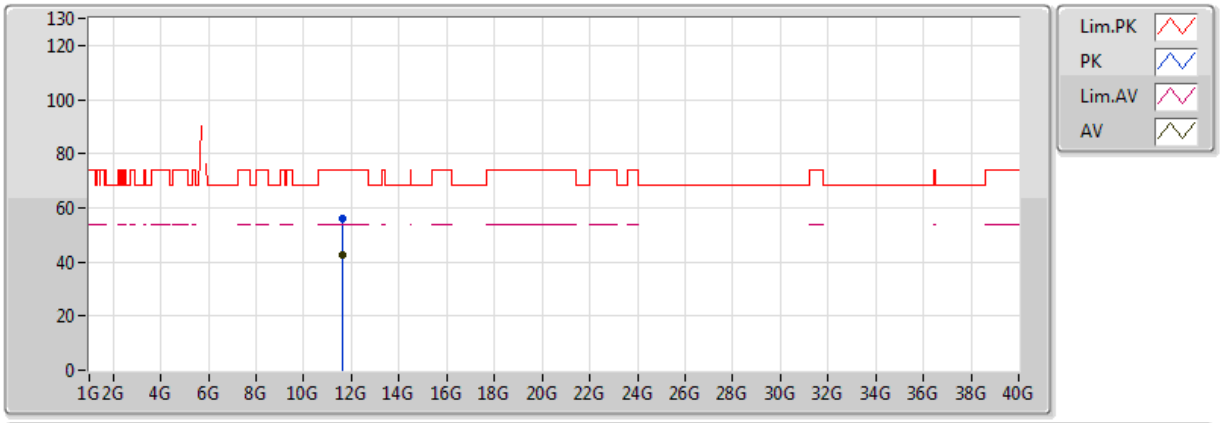


20171120
EUT Z_3TX
Setting 24.5
01-M-1-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.832G	110.55	Inf	-Inf	4.64	3	Horizontal	72	2.06
PK	5.582G	63.75	68.20	-4.45	3.95	3	Horizontal	72	2.06
PK	5.833G	120.48	Inf	-Inf	4.64	3	Horizontal	72	2.06
PK	5.969G	62.27	68.20	-5.93	4.77	3	Horizontal	72	2.06

802.11ac VHT20_Nss1,(MCS0)_3TX

5825MHz_TX

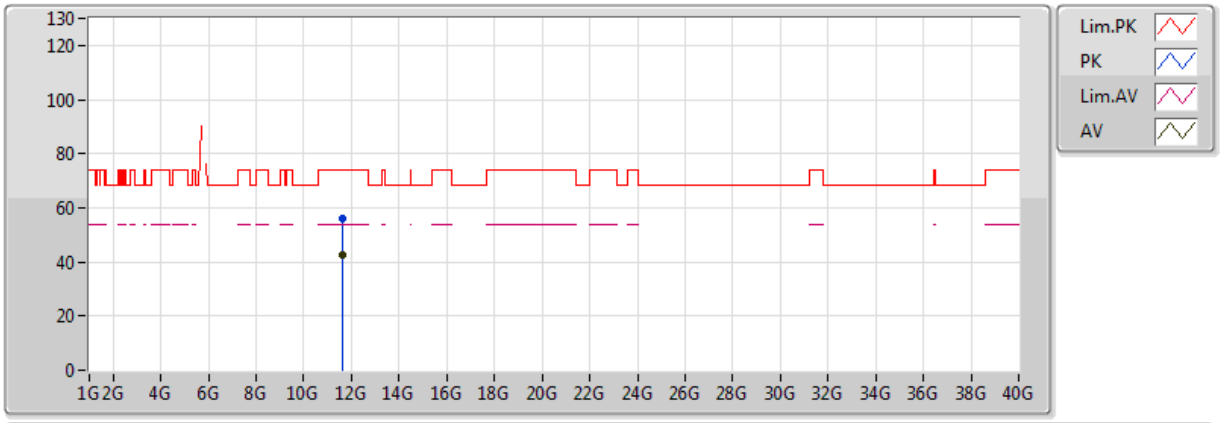


20171120
EUT Z_3TX
Setting 24.5
01-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	11.65316G	42.61	54.00	-11.39	13.95	3	Vertical	198	1.42
PK	11.6496G	55.82	74.00	-18.18	13.95	3	Vertical	198	1.42

802.11ac VHT20_Nss1,(MCS0)_3TX

5825MHz_TX

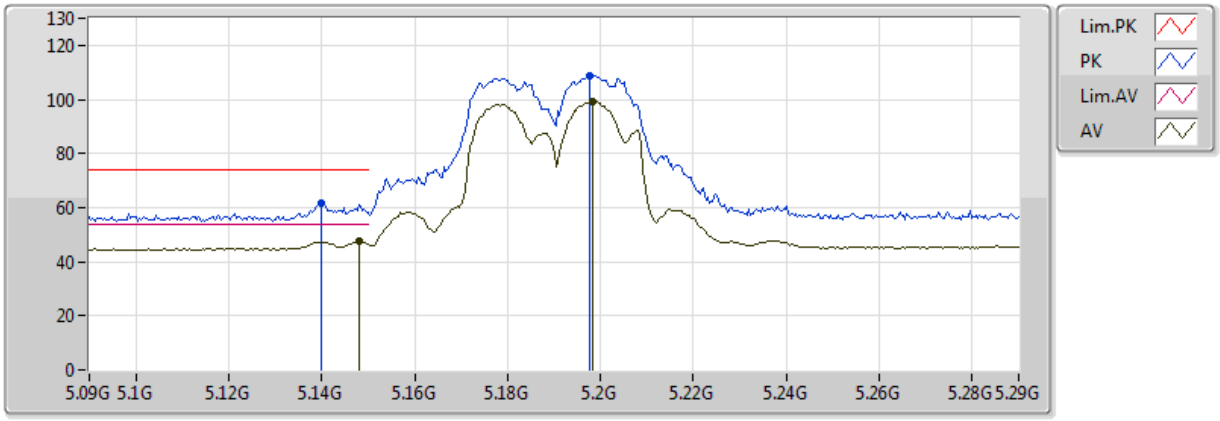


20171120
EUT Z_3TX
Setting 24.5
01-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	11.64678G	42.62	54.00	-11.38	13.96	3	Horizontal	229	2.14
PK	11.6478G	56.26	74.00	-17.74	13.96	3	Horizontal	229	2.14

802.11ac VHT40_Nss1,(MCS0)_3TX

5190MHz_TX

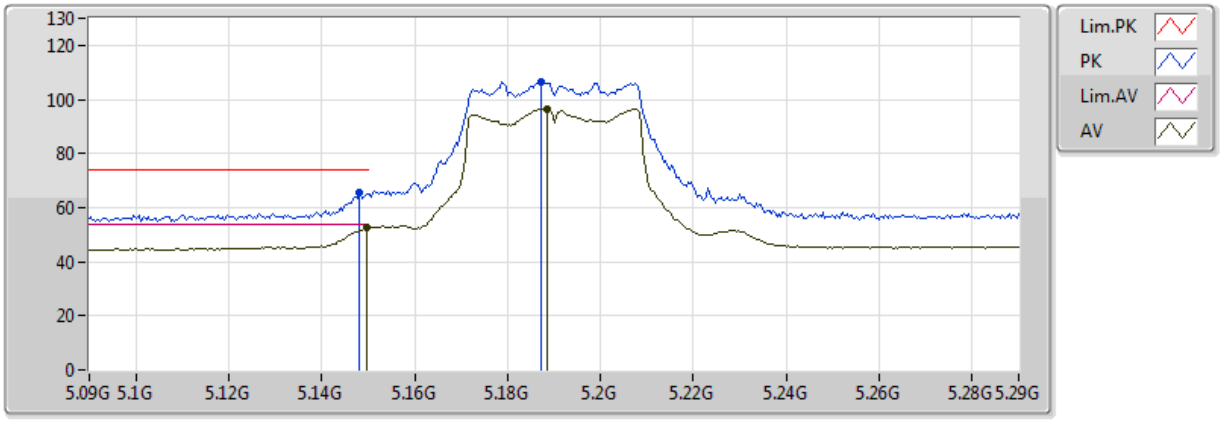


20171129
EUT Z_3TX
Setting 19
03-R-5-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.148G	47.74	54.00	-6.26	5.22	3	Vertical	254	1.04
AV	5.1984G	99.31	Inf	-Inf	5.26	3	Vertical	254	1.04
PK	5.14G	61.38	74.00	-12.62	5.21	3	Vertical	254	1.04
PK	5.1976G	108.69	Inf	-Inf	5.26	3	Vertical	254	1.04

802.11ac VHT40_Nss1,(MCS0)_3TX

5190MHz_TX

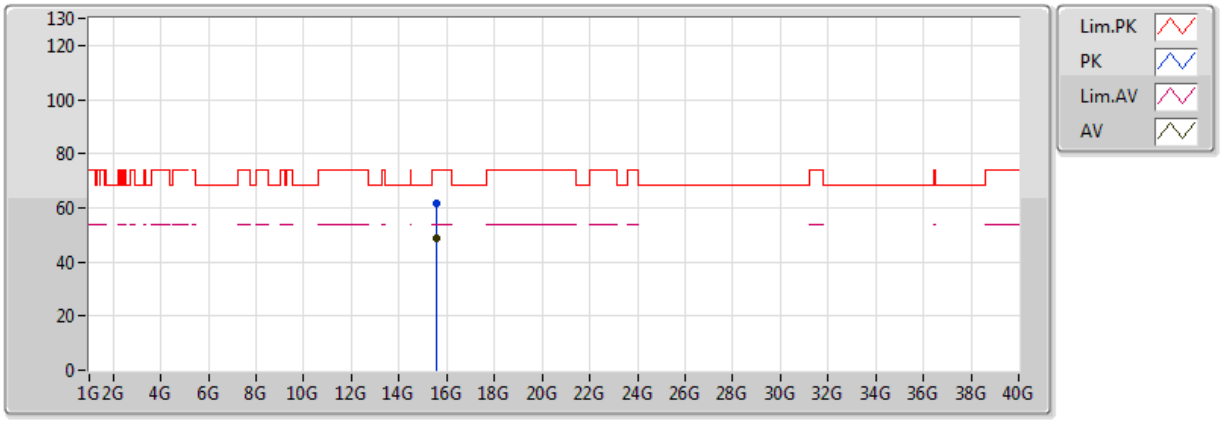


20171129
EUT Z_3TX
Setting 19
03-R-5-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.1496G	52.65	54.00	-1.35	5.22	3	Horizontal	251	2.23
AV	5.1884G	96.64	Inf	-Inf	5.25	3	Horizontal	251	2.23
PK	5.148G	65.58	74.00	-8.42	5.22	3	Horizontal	251	2.23
PK	5.1872G	106.47	Inf	-Inf	5.25	3	Horizontal	251	2.23

802.11ac VHT40_Nss1,(MCS0)_3TX

5190MHz_TX

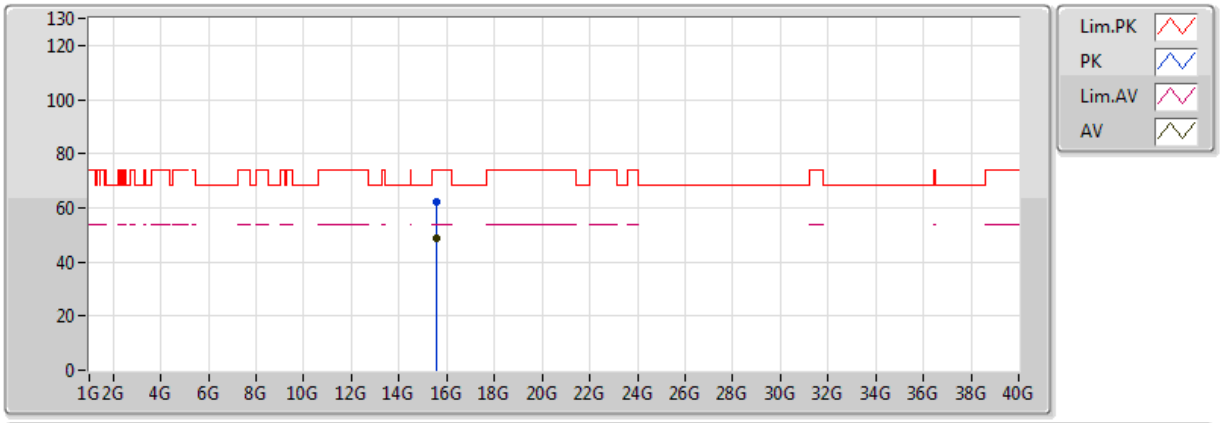


20171120
EUT Z_3TX
Setting 19
01-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	15.57358G	49.01	54.00	-4.99	15.71	3	Vertical	287	1.70
PK	15.57232G	61.49	74.00	-12.51	15.71	3	Vertical	287	1.70

802.11ac VHT40_Nss1,(MCS0)_3TX

5190MHz_TX

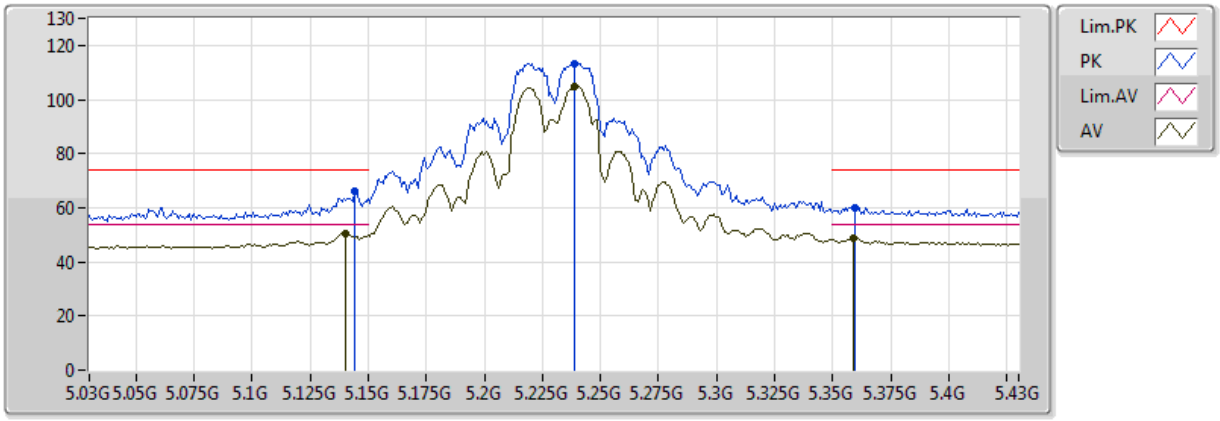


20171120
EUT Z_3TX
Setting 19
01-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	15.56664G	48.90	54.00	-5.10	15.74	3	Horizontal	109	1.87
PK	15.5659G	62.23	74.00	-11.77	15.74	3	Horizontal	109	1.87

802.11ac VHT40_Nss1,(MCS0)_3TX

5230MHz_TX

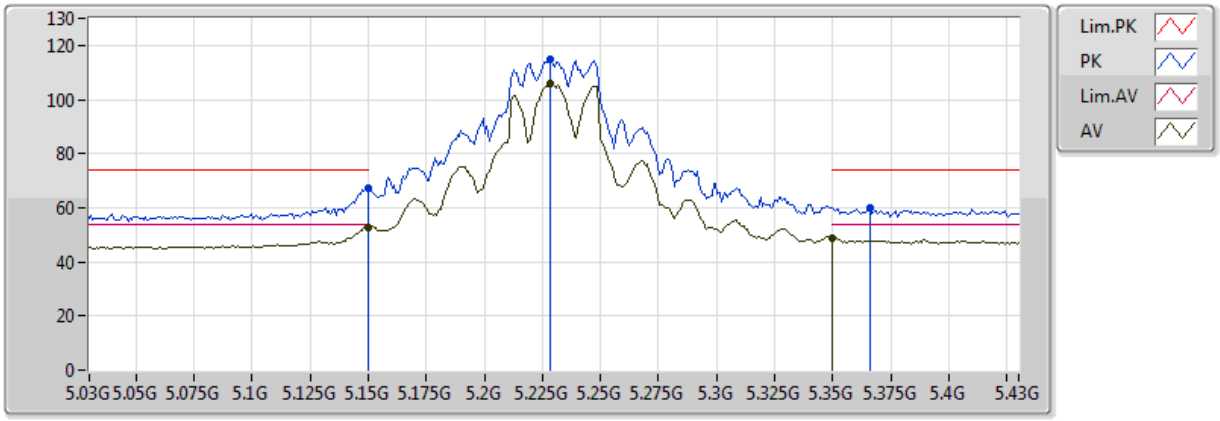


20171129
EUT Z_3TX
Setting 24.5
03-R-5-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.1404G	50.59	54.00	-3.41	5.21	3	Vertical	278	1.04
AV	5.2388G	105.02	Inf	-Inf	5.41	3	Vertical	278	1.04
AV	5.3588G	48.72	54.00	-5.28	5.85	3	Vertical	278	1.04
PK	5.1444G	66.07	74.00	-7.93	5.22	3	Vertical	278	1.04
PK	5.2388G	113.46	Inf	-Inf	5.41	3	Vertical	278	1.04
PK	5.3596G	60.17	74.00	-13.83	5.85	3	Vertical	278	1.04

802.11ac VHT40_Nss1,(MCS0)_3TX

5230MHz_TX

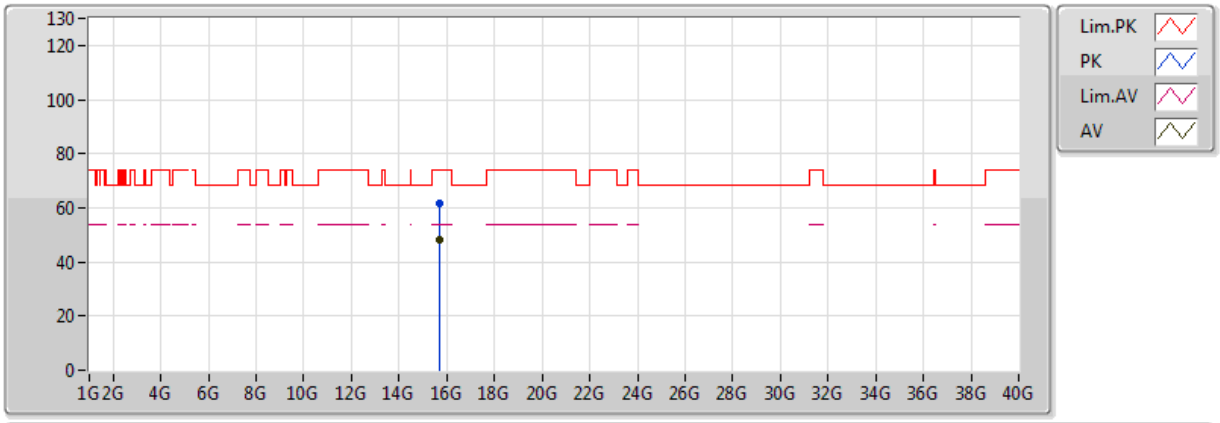


20171129
EUT Z_3TX
Setting 24.5
03-R-5-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.149995G	52.84	54.00	-1.16	5.22	3	Horizontal	259	2.31
AV	5.2284G	106.02	Inf	-Inf	5.37	3	Horizontal	259	2.31
AV	5.350005G	48.87	54.00	-5.13	5.82	3	Horizontal	259	2.31
PK	5.149995G	66.97	74.00	-7.03	5.22	3	Horizontal	259	2.31
PK	5.2284G	115.05	Inf	-Inf	5.37	3	Horizontal	259	2.31
PK	5.366G	59.83	74.00	-14.17	5.87	3	Horizontal	259	2.31

802.11ac VHT40_Nss1,(MCS0)_3TX

5230MHz_TX

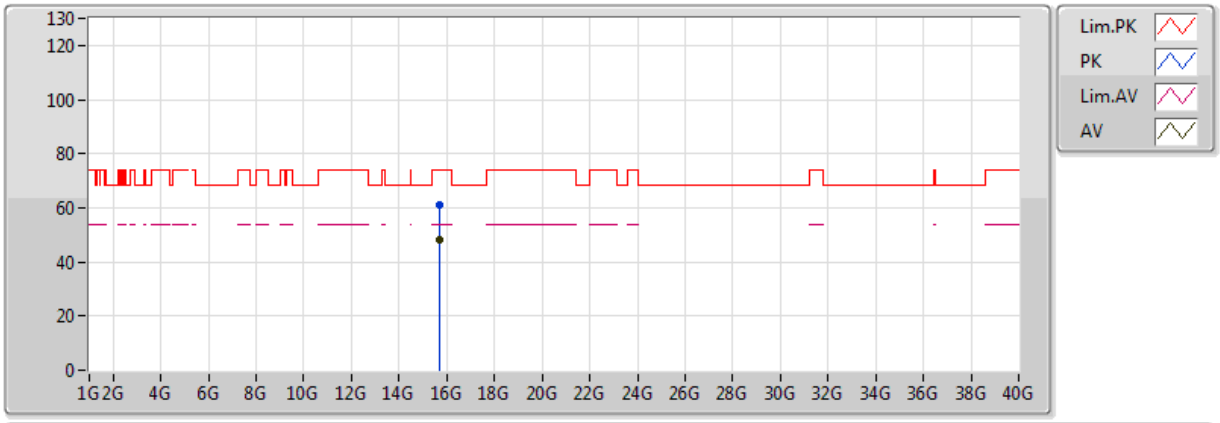


20171120
EUT Z_3TX
Setting 24.5
01-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	15.6926G	48.38	54.00	-5.62	15.12	3	Vertical	43	1.95
PK	15.68968G	61.87	74.00	-12.13	15.13	3	Vertical	43	1.95

802.11ac VHT40_Nss1,(MCS0)_3TX

5230MHz_TX

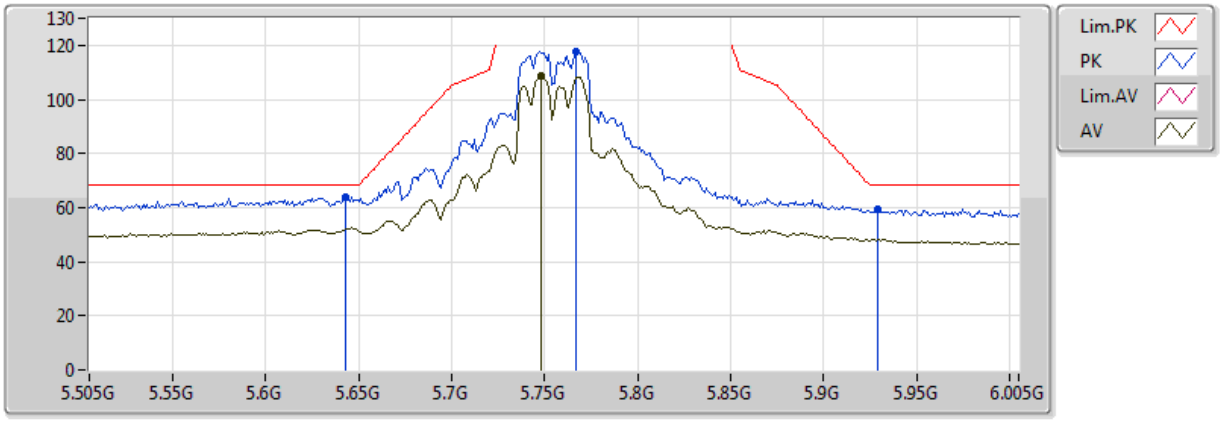


20171120
EUT Z_3TX
Setting 24.5
01-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	15.6927G	48.31	54.00	-5.69	15.12	3	Horizontal	60	1.57
PK	15.6853G	61.30	74.00	-12.70	15.15	3	Horizontal	60	1.57

802.11ac VHT40_Nss1,(MCS0)_3TX

5755MHz_TX

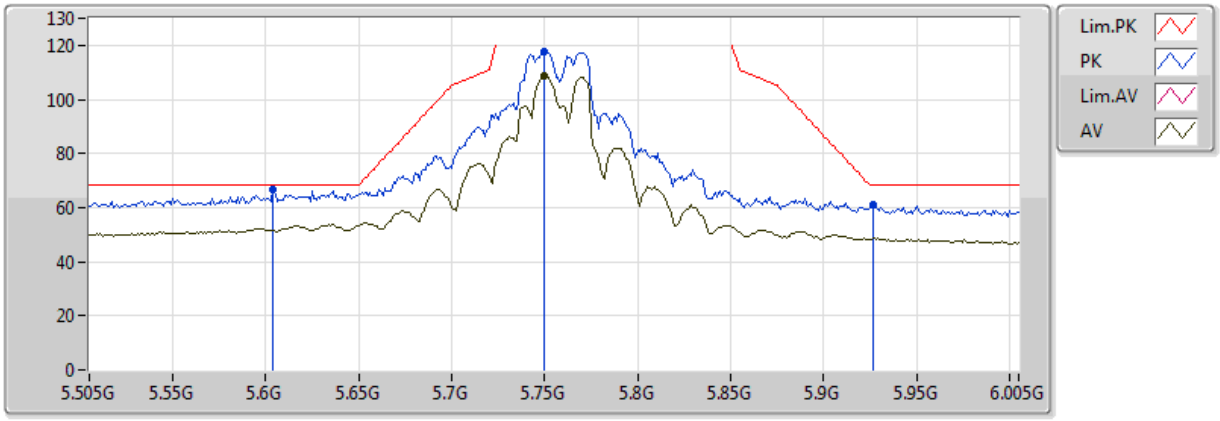


20171120
EUT Z_3TX
Setting 24.5
01-M-1-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.748G	108.60	Inf	-Inf	4.45	3	Vertical	46	2.06
PK	5.643G	63.80	68.20	-4.40	4.12	3	Vertical	46	2.06
PK	5.767G	117.59	Inf	-Inf	4.51	3	Vertical	46	2.06
PK	5.929G	59.40	68.20	-8.80	4.73	3	Vertical	46	2.06

802.11ac VHT40_Nss1,(MCS0)_3TX

5755MHz_TX

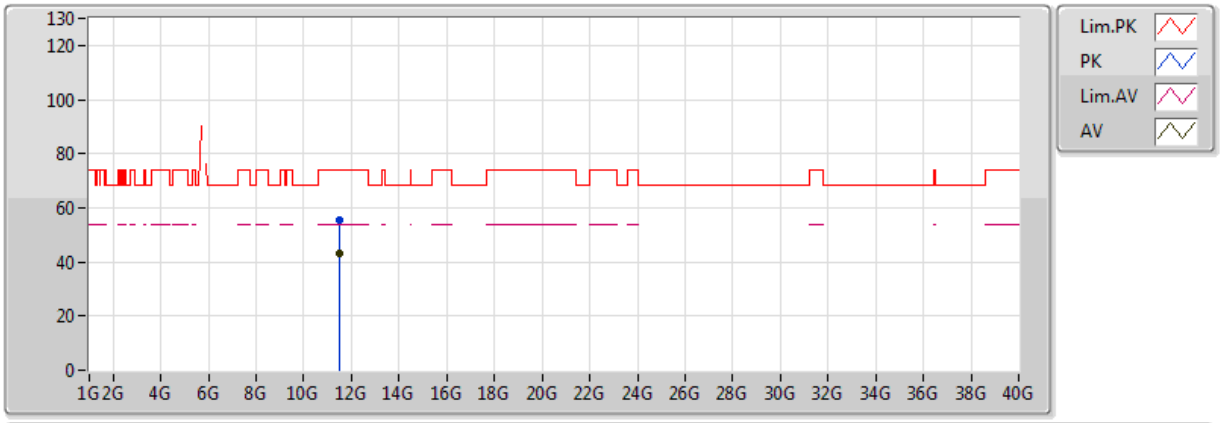


20171120
EUT Z_3TX
Setting 24.5
01-M-1-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.75G	108.90	Inf	-Inf	4.46	3	Horizontal	94	2.10
PK	5.604G	66.84	68.20	-1.36	3.99	3	Horizontal	94	2.10
PK	5.75G	117.90	Inf	-Inf	4.46	3	Horizontal	94	2.10
PK	5.927G	61.09	68.20	-7.11	4.73	3	Horizontal	94	2.10

802.11ac VHT40_Nss1,(MCS0)_3TX

5755MHz_TX

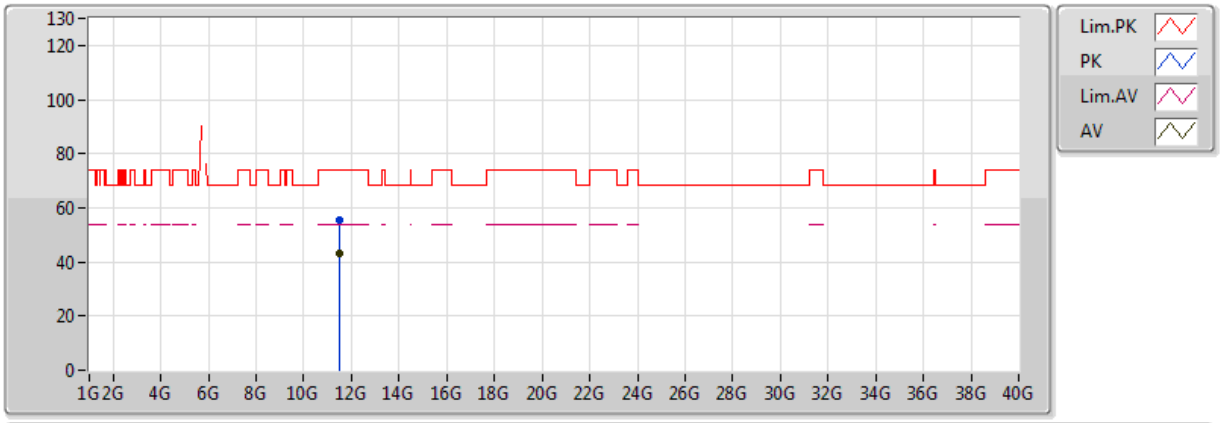


20171120
EUT Z_3TX
Setting 24.5
01-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	11.5071G	43.01	54.00	-10.99	14.22	3	Vertical	251	2.33
PK	11.5103G	55.57	74.00	-18.43	14.21	3	Vertical	251	2.33

802.11ac VHT40_Nss1,(MCS0)_3TX

5755MHz_TX

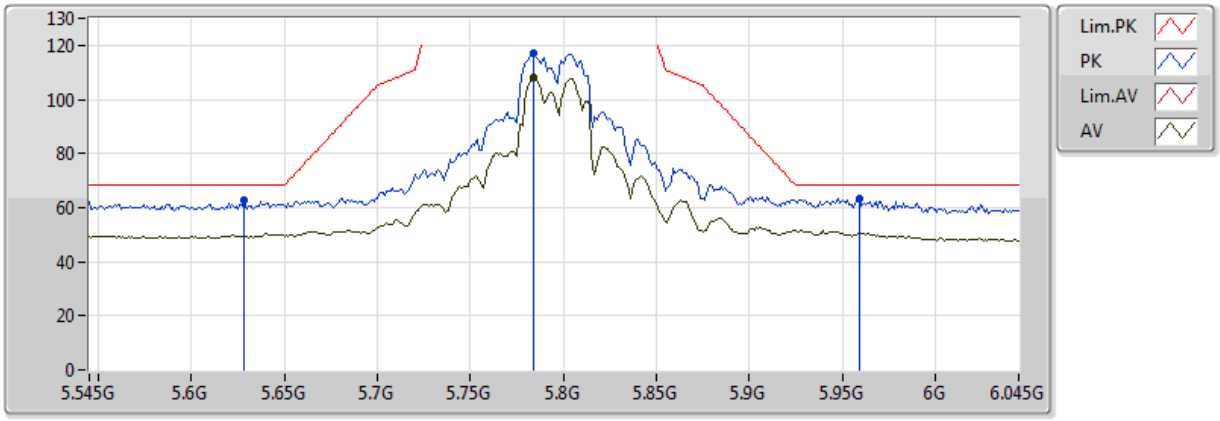


20171120
EUT Z_3TX
Setting 24.5
01-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	11.50816G	42.88	54.00	-11.12	14.21	3	Horizontal	129	1.57
PK	11.5059G	55.69	74.00	-18.31	14.22	3	Horizontal	129	1.57

802.11ac VHT40_Nss1,(MCS0)_3TX

5795MHz_TX

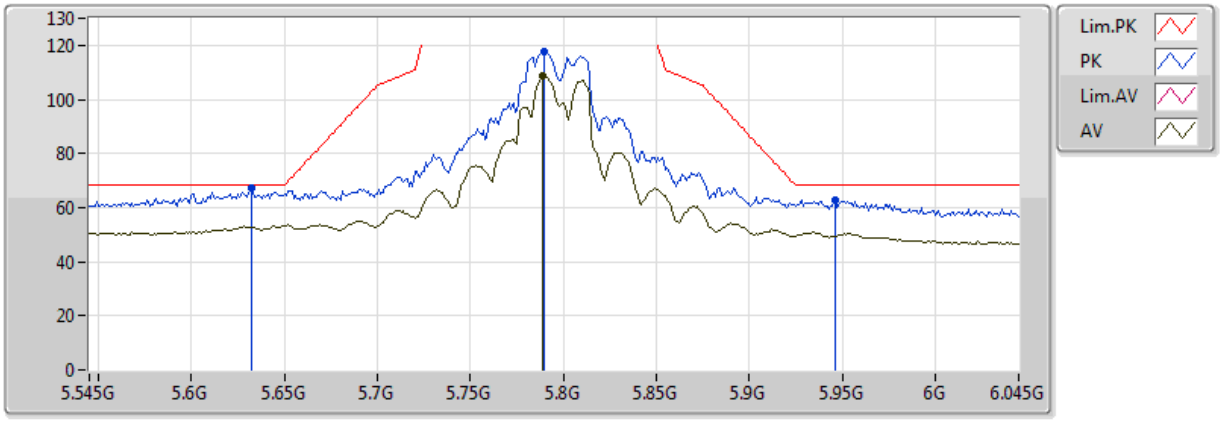


20171120
EUT Z_3TX
Setting 24.5
01-M-1-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.784G	108.13	Inf	-Inf	4.56	3	Vertical	158	2.08
PK	5.628G	62.79	68.20	-5.41	4.07	3	Vertical	158	2.08
PK	5.784G	117.36	Inf	-Inf	4.56	3	Vertical	158	2.08
PK	5.959G	63.29	68.20	-4.91	4.76	3	Vertical	158	2.08

802.11ac VHT40_Nss1,(MCS0)_3TX

5795MHz_TX

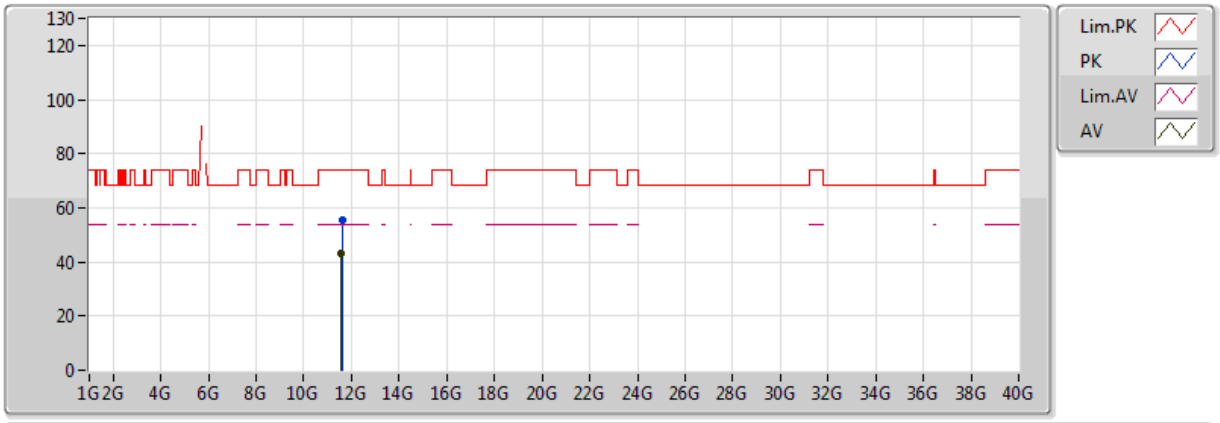


20171120
EUT Z_3TX
Setting 24.5
01-M-1-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.789G	108.55	Inf	-Inf	4.58	3	Horizontal	94	2.09
PK	5.632G	67.03	68.20	-1.17	4.08	3	Horizontal	94	2.09
PK	5.79G	117.83	Inf	-Inf	4.58	3	Horizontal	94	2.09
PK	5.946G	62.77	68.20	-5.43	4.75	3	Horizontal	94	2.09

802.11ac VHT40_Nss1,(MCS0)_3TX

5795MHz_TX

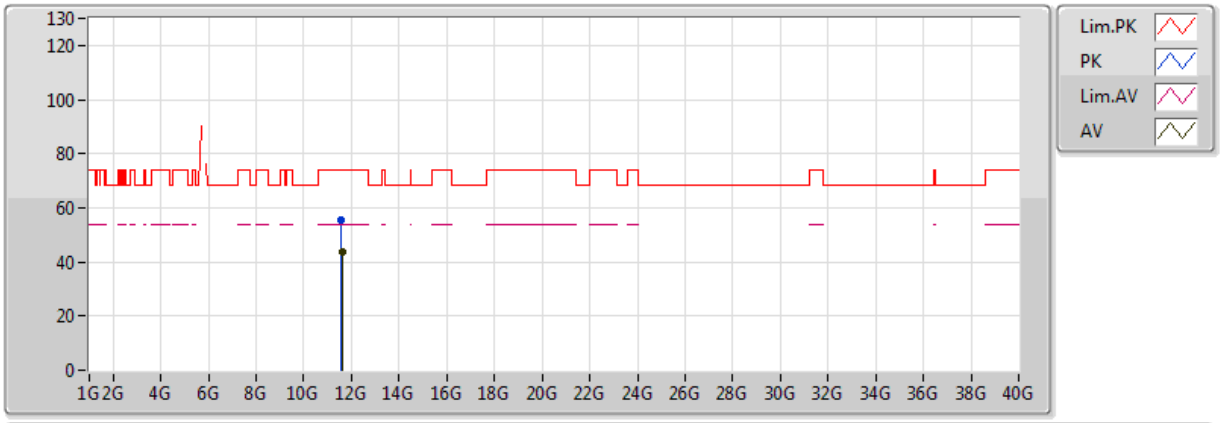


20171120
EUT Z_3TX
Setting 24.5
01-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	11.58822G	43.16	54.00	-10.84	14.07	3	Vertical	16	1.12
PK	11.59368G	55.60	74.00	-18.40	14.06	3	Vertical	16	1.12

802.11ac VHT40_Nss1,(MCS0)_3TX

5795MHz_TX

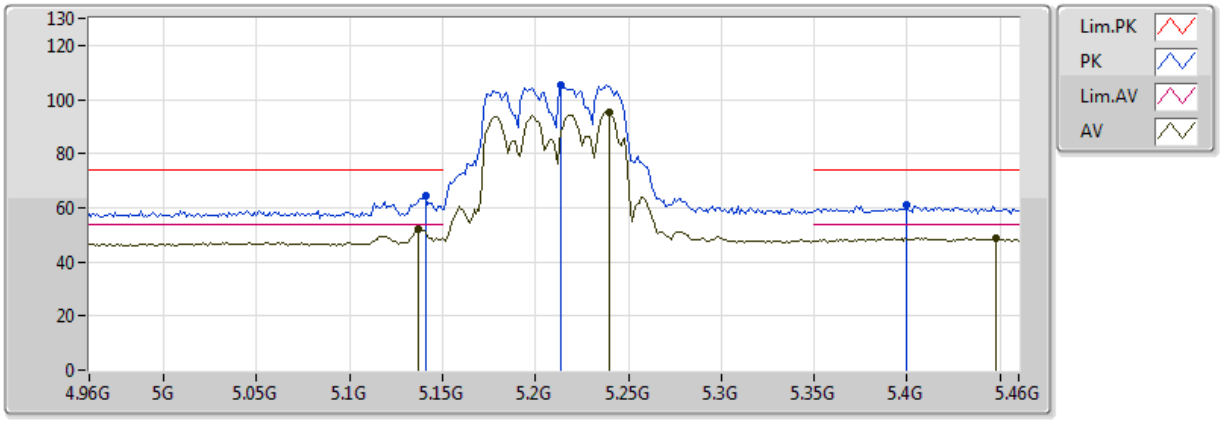


20171120
EUT Z_3TX
Setting 24.5
01-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	11.59318G	43.85	54.00	-10.15	14.06	3	Horizontal	243	1.26
PK	11.58724G	55.75	74.00	-18.25	14.07	3	Horizontal	243	1.26

802.11ac VHT80_Nss1,(MCS0)_3TX

5210MHz_TX

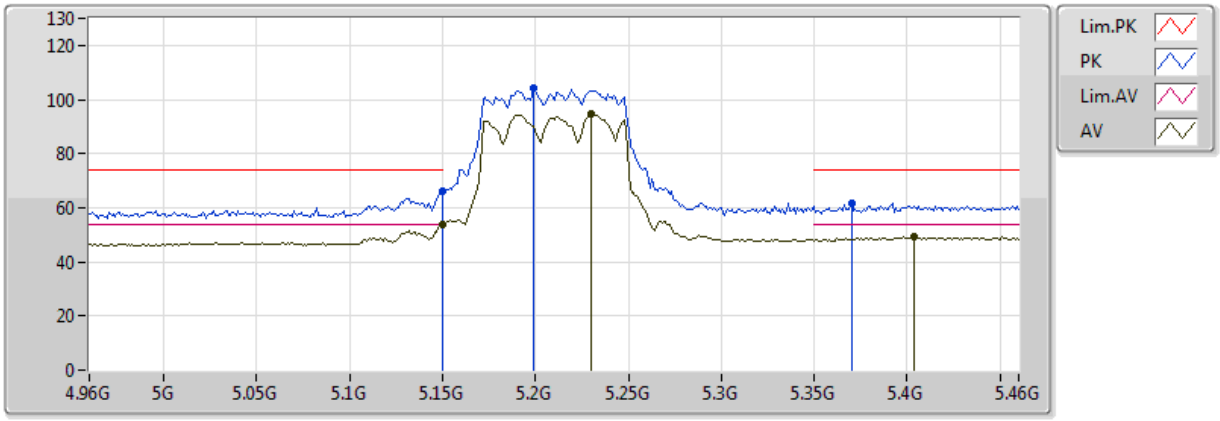


20171130
EUT Z_3TX
Setting 18.5
01-M-1-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.137G	52.31	54.00	-1.69	5.21	3	Vertical	141	1.08
AV	5.24G	95.13	Inf	-Inf	5.42	3	Vertical	141	1.08
AV	5.448G	48.75	54.00	-5.25	6.07	3	Vertical	141	1.08
PK	5.141G	64.42	74.00	-9.58	5.21	3	Vertical	141	1.08
PK	5.214G	105.40	Inf	-Inf	5.31	3	Vertical	141	1.08
PK	5.4G	61.00	74.00	-13.00	5.99	3	Vertical	141	1.08

802.11ac VHT80_Nss1,(MCS0)_3TX

5210MHz_TX

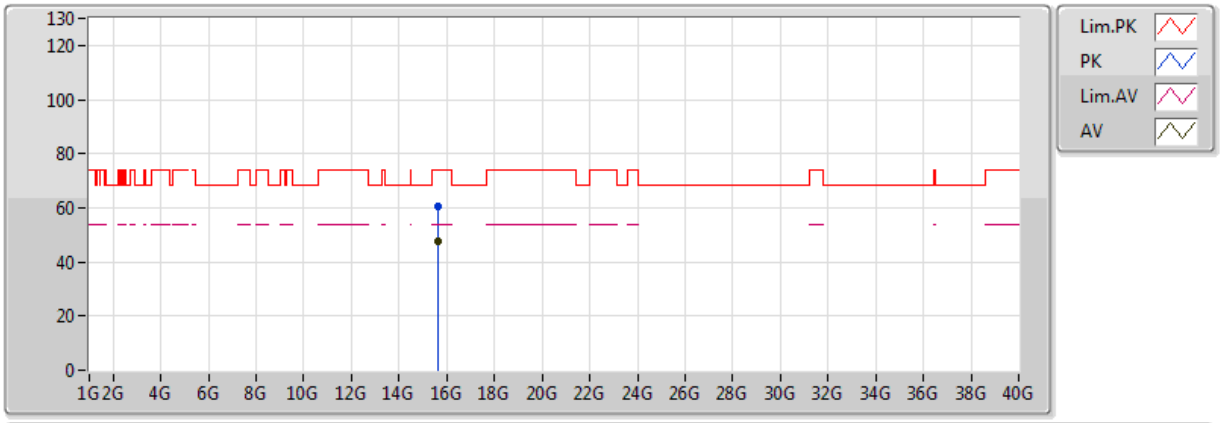


20171130
EUT Z_3TX
Setting 18.5
01-M-1-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.149995G	53.57	54.00	-0.43	4.93	3	Horizontal	217	2.31
AV	5.23G	94.47	Inf	-Inf	5.12	3	Horizontal	217	2.31
AV	5.404G	49.22	54.00	-4.78	5.82	3	Horizontal	217	2.31
PK	5.149995G	65.86	74.00	-8.14	4.93	3	Horizontal	217	2.31
PK	5.199G	104.45	Inf	-Inf	4.99	3	Horizontal	217	2.31
PK	5.37G	61.80	74.00	-12.20	5.70	3	Horizontal	217	2.31

802.11ac VHT80_Nss1,(MCS0)_3TX

5210MHz_TX

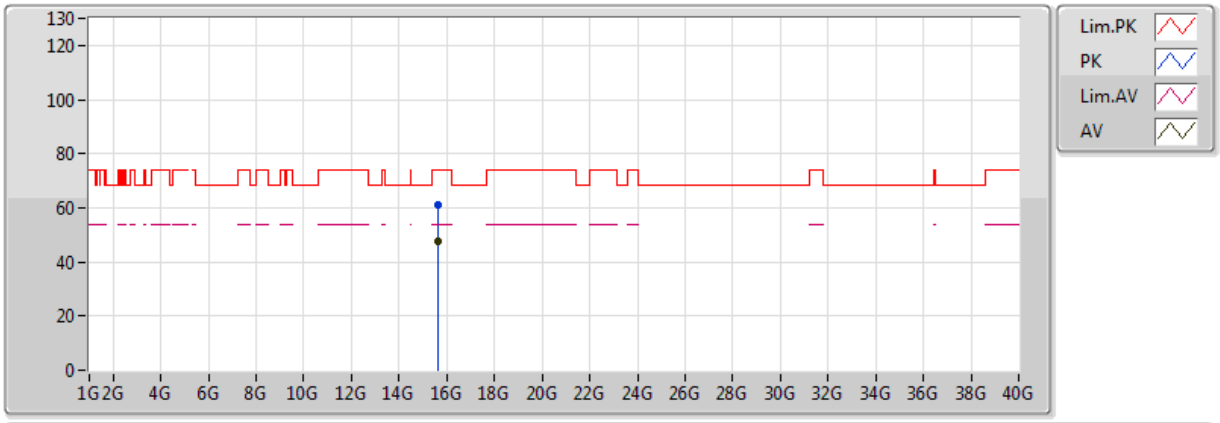


20171130
EUT Z_3TX
Setting 18.5
01-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	15.62885G	47.52	54.00	-6.48	15.43	3	Vertical	213	1.81
PK	15.6296G	60.54	74.00	-13.46	15.43	3	Vertical	213	1.81

802.11ac VHT80_Nss1,(MCS0)_3TX

5210MHz_TX

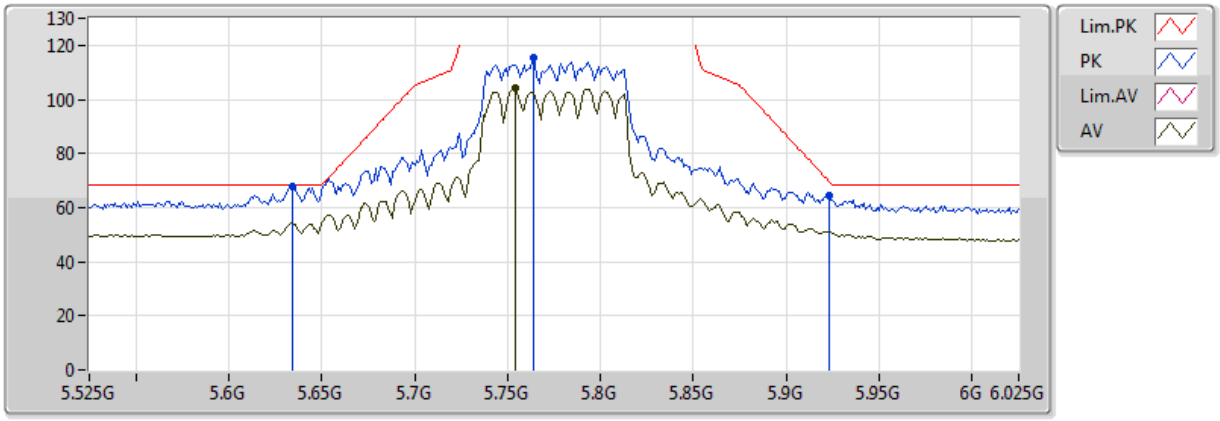


20171130
EUT Z_3TX
Setting 18.5
01-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	15.62906G	47.71	54.00	-6.29	15.43	3	Horizontal	354	1.59
PK	15.63008G	61.01	74.00	-12.99	15.43	3	Horizontal	354	1.59

802.11ac VHT80_Nss1,(MCS0)_3TX

5775MHz_TX

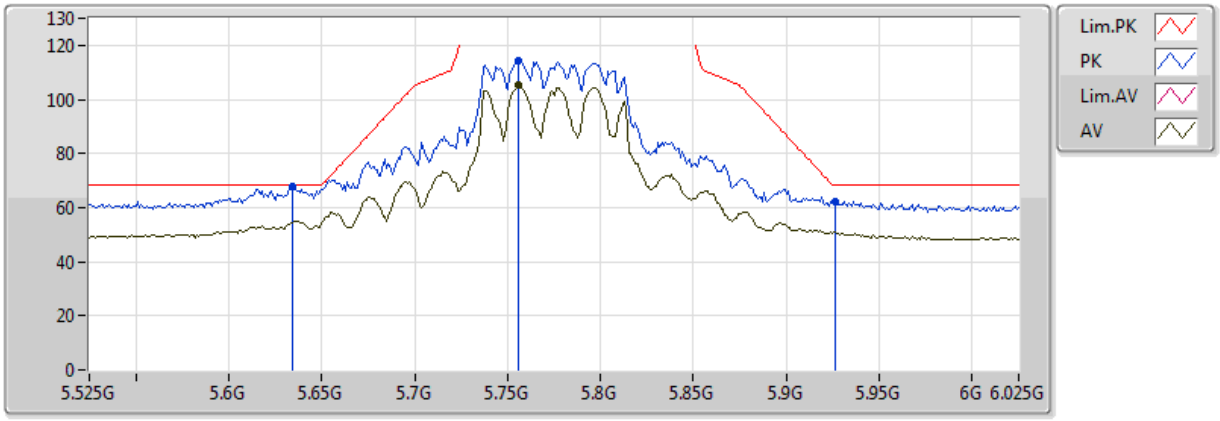


20171130
EUT Z_3TX
Setting 22.5
01-M-1-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.754G	104.11	Inf	-Inf	6.42	3	Vertical	49	1.06
PK	5.634G	67.91	68.20	-0.29	6.22	3	Vertical	49	1.06
PK	5.764G	115.42	Inf	-Inf	6.43	3	Vertical	49	1.06
PK	5.923G	64.49	69.68	-5.19	6.41	3	Vertical	49	1.06

802.11ac VHT80_Nss1,(MCS0)_3TX

5775MHz_TX

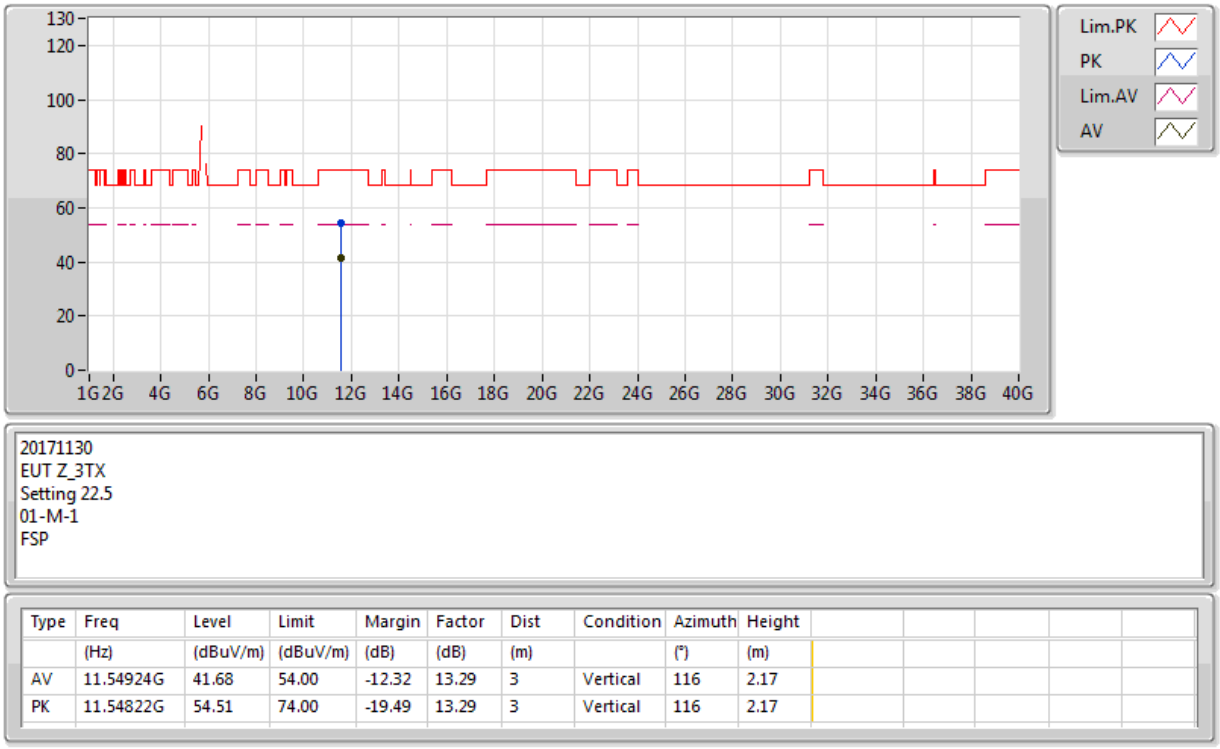


20171130
EUT Z_3TX
Setting 22.5
01-M-1-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	5.756G	105.19	Inf	-Inf	6.98	3	Horizontal	236	2.39
PK	5.634G	67.57	68.20	-0.63	6.45	3	Horizontal	236	2.39
PK	5.756G	114.37	Inf	-Inf	6.98	3	Horizontal	236	2.39
PK	5.926G	62.37	68.20	-5.83	7.44	3	Horizontal	236	2.39

802.11ac VHT80_Nss1,(MCS0)_3TX

5775MHz_TX

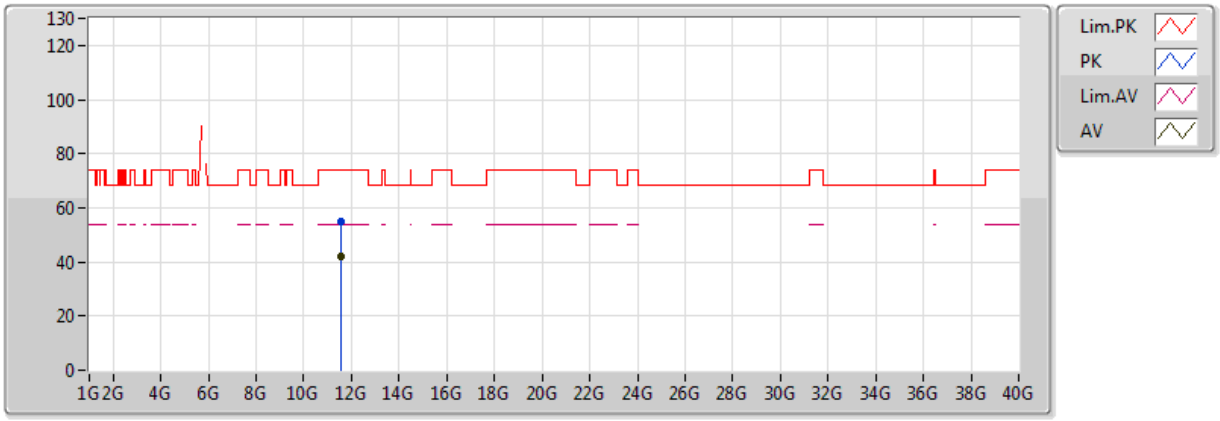


20171130
EUT Z_3TX
Setting 22.5
01-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	11.54924G	41.68	54.00	-12.32	13.29	3	Vertical	116	2.17
PK	11.54822G	54.51	74.00	-19.49	13.29	3	Vertical	116	2.17

802.11ac VHT80_Nss1,(MCS0)_3TX

5775MHz_TX



20171130
EUT Z_3TX
Setting 22.5
01-M-1
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)
AV	11.55037G	41.86	54.00	-12.14	13.29	3	Horizontal	183	1.23
PK	11.54801G	54.79	74.00	-19.21	13.29	3	Horizontal	183	1.23

Mode: 20 MHz / Port 1

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5200 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5199.9949	5199.9947	5199.9940	5199.9933
110.00	5199.9941	5199.9936	5199.9929	5199.9921
93.50	5199.9932	5199.9924	5199.9915	5199.9912
Max. Deviation (MHz)	0.0068	0.0076	0.0085	0.0088
Max. Deviation (ppm)	1.31	1.46	1.63	1.69
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(℃)	5200 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5199.9960	5199.9957	5199.9954	5199.9951
10	5199.9953	5199.9952	5199.9950	5199.9943
20	5199.9941	5199.9937	5199.9936	5199.9929
30	5199.9913	5199.9903	5199.9894	5199.9886
40	5199.9907	5199.9897	5199.9891	5199.9889
Max. Deviation (MHz)	0.0093	0.0103	0.0109	0.0114
Max. Deviation (ppm)	1.79	1.98	2.10	2.19
Result	Pass			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5785 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5784.9950	5784.9945	5784.9937	5784.9934
110.00	5784.9941	5784.9939	5784.9934	5784.9926
93.50	5784.9932	5784.9929	5784.9922	5784.9921
Max. Deviation (MHz)	0.0068	0.0071	0.0078	0.0079
Max. Deviation (ppm)	1.18	1.23	1.35	1.37
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(℃)	5785 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5784.9968	5784.9961	5784.9956	5784.9952
10	5784.9950	5784.9943	5784.9940	5784.9935
20	5784.9941	5784.9935	5784.9926	5784.9924
30	5784.9913	5784.9906	5784.9896	5784.9886
40	5784.9904	5784.9903	5784.9899	5784.9893
Max. Deviation (MHz)	0.0096	0.0097	0.0104	0.0114
Max. Deviation (ppm)	1.66	1.68	1.80	1.97
Result	Pass			

Mode: 40 MHz / Port 1

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5190 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5189.9946	5189.9942	5189.9933	5189.9931
110.00	5189.9941	5189.9934	5189.9932	5189.9924
93.50	5189.9940	5189.9933	5189.9927	5189.9926
Max. Deviation (MHz)	0.0060	0.0067	0.0073	0.0076
Max. Deviation (ppm)	1.16	1.29	1.41	1.46
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(℃)	5190 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5189.9964	5189.9956	5189.9953	5189.9948
10	5189.9951	5189.9949	5189.9944	5189.9937
20	5189.9941	5189.9936	5189.9927	5189.9921
30	5189.9913	5189.9903	5189.9894	5189.9889
40	5189.9900	5189.9895	5189.9885	5189.9881
Max. Deviation (MHz)	0.0100	0.0105	0.0115	0.0119
Max. Deviation (ppm)	1.93	2.02	2.22	2.29
Result	Pass			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5755 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5754.9948	5754.9944	5754.9938	5754.9928
110.00	5754.9941	5754.9937	5754.9931	5754.9927
93.50	5754.9940	5754.9934	5754.9928	5754.9927
Max. Deviation (MHz)	0.0060	0.0066	0.0072	0.0073
Max. Deviation (ppm)	1.04	1.15	1.25	1.27
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(℃)	5755 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5754.9950	5754.9944	5754.9940	5754.9931
10	5754.9944	5754.9938	5754.9934	5754.9930
20	5754.9941	5754.9940	5754.9935	5754.9931
30	5754.9913	5754.9908	5754.9901	5754.9898
40	5754.9893	5754.9886	5754.9884	5754.9876
Max. Deviation (MHz)	0.0107	0.0114	0.0116	0.0124
Max. Deviation (ppm)	1.86	1.98	2.02	2.15
Result	Pass			

Mode: 80 MHz / Port 1

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5210 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5209.9943	5209.9935	5209.9933	5209.9927
110.00	5209.9941	5209.9938	5209.9934	5209.9933
93.50	5209.9937	5209.9930	5209.9924	5209.9914
Max. Deviation (MHz)	0.0063	0.0070	0.0076	0.0086
Max. Deviation (ppm)	1.21	1.34	1.46	1.65
Result	Pass			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(℃)	5210 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5209.9964	5209.9958	5209.9949	5209.9943
10	5209.9944	5209.9943	5209.9939	5209.9935
20	5209.9941	5209.9933	5209.9926	5209.9920
30	5209.9913	5209.9908	5209.9905	5209.9897
40	5209.9902	5209.9899	5209.9896	5209.9895
Max. Deviation (MHz)	0.0098	0.0101	0.0104	0.0105
Max. Deviation (ppm)	1.88	1.94	2.00	2.02
Result	Pass			

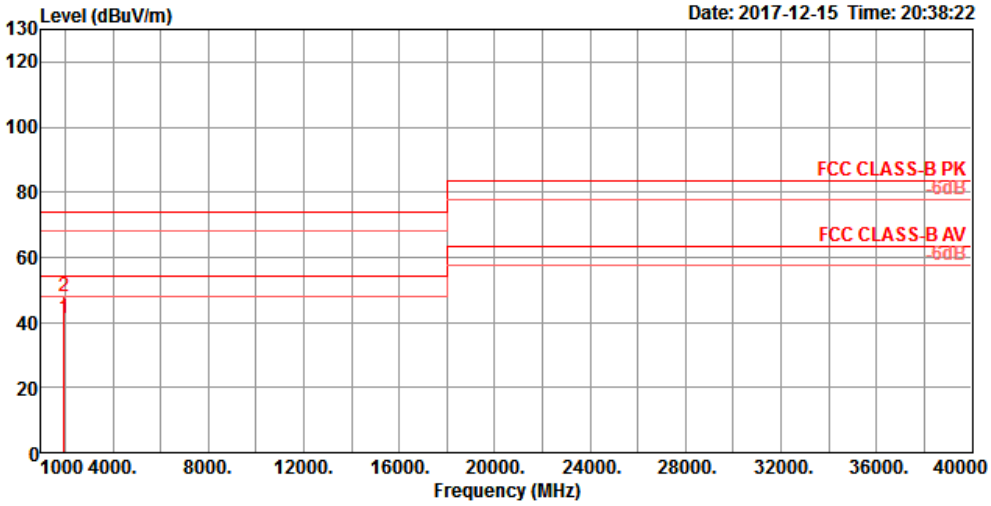
Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5775 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5774.9947	5774.9944	5774.9937	5774.9929
110.00	5774.9941	5774.9933	5774.9930	5774.9929
93.50	5774.9935	5774.9931	5774.9927	5774.9926
Max. Deviation (MHz)	0.0065	0.0069	0.0073	0.0074
Max. Deviation (ppm)	1.13	1.19	1.26	1.28
Result	Pass			

Temperature vs. Frequency Stability

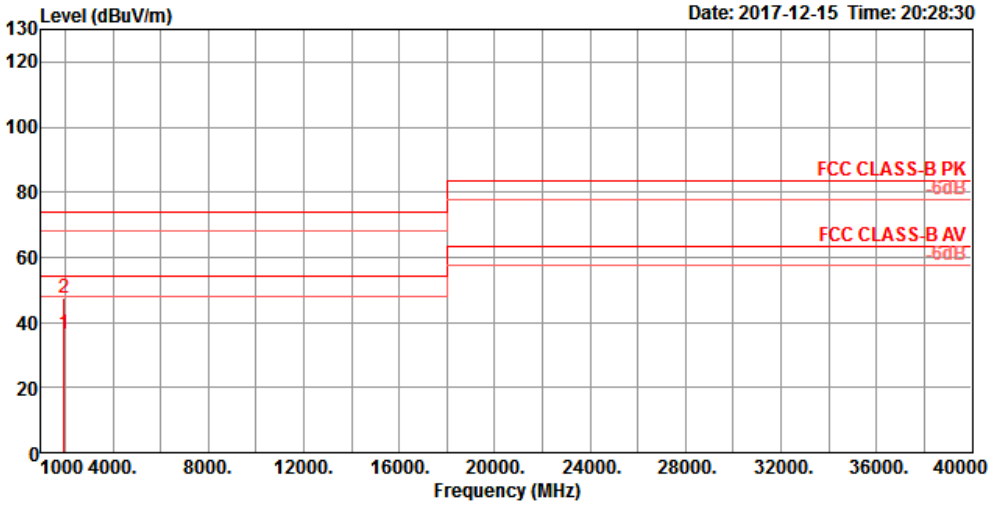
Temperature	Measurement Frequency (MHz)			
(℃)	5775 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
0	5774.9954	5774.9947	5774.9942	5774.9932
10	5774.9943	5774.9938	5774.9933	5774.9927
20	5774.9941	5774.9940	5774.9932	5774.9926
30	5774.9913	5774.9910	5774.9900	5774.9894
40	5774.9907	5774.9900	5774.9892	5774.9884
Max. Deviation (MHz)	0.0093	0.0100	0.0108	0.0116
Max. Deviation (ppm)	1.61	1.73	1.87	2.01
Result	Pass			

RSE Co-location Result			
Operating Mode	1	**Polarization**	Horizontal
Operating Function	Normal Link		



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	1949.98	41.22	54.00	-12.78	45.89	4.30	28.41	37.38	100	175	Average	HORIZONTAL
2	1950.14	47.90	74.00	-26.10	52.57	4.30	28.41	37.38	100	175	Peak	HORIZONTAL

RSE Co-location Result			
Operating Mode	1	**Polarization**	Vertical
Operating Function	Normal Link		



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	1950.10	36.57	54.00	-17.43	41.24	4.30	28.41	37.38	100	280	Average	VERTICAL
2	1950.24	47.33	74.00	-26.67	52.00	4.30	28.41	37.38	100	280	Peak	VERTICAL