FCC RADIO TEST REPORT

FCC ID	:	Q87-03418
Equipment	:	LINKSYS E2500 N600 Dual-Band WIFI ROUTER, LINKSYS E5350 AC1000 Dual-Band WIFI ROUTER, LINKSYS E5400 AC1200 Dual-Band WIFI ROUTER, LINKSYS E5300 AC750 Dual-Band WIFI ROUTER
Brand Name	:	LINKSYS
Model Name	:	E2500 V4, E5350, E5400, E5300
Applicant	:	Linksys LLC 121 Theory, Irvine CA 92617, United States
Standard	:	47 CFR FCC Part 15.407

The product was received on Oct. 31, 2018, and testing was started from Oct. 31, 2018 and completed on Dec. 27, 2018. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

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

Approved by: Sam Chen

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

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History of this test report

Report No.	Version	Description	Issued Date
FR8N1905AB	01	Initial issue of report	Jan. 25, 2019

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	-
3.1	15.207	AC Power-line Conducted Emissions	PASS	-
3.2	15.407(a)	Emission Bandwidth	PASS	-
3.3	15.407(a)	Maximum Conducted Output Power	PASS	-
3.4	15.407(a)	Peak Power Spectral Density	PASS	-
3.5	15.407(b)	Unwanted Emissions	PASS	-

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Sam Chen

Report Producer: Sandy Chuang

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
5150-5250	a, n (HT20), ac (VHT20)	5180-5240	36-48 [4]
5725-5850		5745-5825	149-165 [5]
5150-5250	n (HT40), ac (VHT40)	5190-5230	38-46 [2]
5725-5850		5755-5795	151-159 [2]
5150-5250	ac (VHT80)	5210	42 [1]
5725-5850		5775	155 [1]

Band	Mode	BWch (MHz)	Nant
5.15-5.25GHz	802.11a	20	2TX
5.15-5.25GHz	802.11a-BF	20	2TX
5.15-5.25GHz	802.11n HT20	20	2TX
5.15-5.25GHz	802.11n HT20-BF	20	2TX
5.15-5.25GHz	802.11ac VHT20	20	2TX
5.15-5.25GHz	802.11ac VHT20-BF	20	2TX
5.15-5.25GHz	802.11n HT40	40	2TX
5.15-5.25GHz	802.11n HT40-BF	40	2TX
5.15-5.25GHz	802.11ac VHT40	40	2TX
5.15-5.25GHz	802.11ac VHT40-BF	40	2TX
5.15-5.25GHz	802.11ac VHT80	80	2TX
5.15-5.25GHz	802.11ac VHT80-BF	80	2TX
5.725-5.85GHz	802.11a	20	2TX
5.725-5.85GHz	802.11a-BF	20	2TX
5.725-5.85GHz	802.11n HT20	20	2TX
5.725-5.85GHz	802.11n HT20-BF	20	2TX
5.725-5.85GHz	802.11ac VHT20	20	2TX
5.725-5.85GHz	802.11ac VHT20-BF	20	2TX
5.725-5.85GHz	802.11n HT40	40	2TX
5.725-5.85GHz	802.11n HT40-BF	40	2TX
5.725-5.85GHz	802.11ac VHT40	40	2TX
5.725-5.85GHz	802.11ac VHT40-BF	40	2TX
5.725-5.85GHz	802.11ac VHT80	80	2TX
5.725-5.85GHz	802.11ac VHT80-BF	80	2TX

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

1.1.2 Antenna Information

Ant.	Brand	P/N	Antenna Type	Connector	Gain (dBi)	
					2.4Gz	5GHz
1	FIT	4TS4009-A0001-JH	Dipole Antenna	I-PEX	2.52	3.37
2	FIT	4TS4009-A0002JH	Dipole Antenna	I-PEX	2.53	3.28

Note1: The above information was declared by manufacturer.

Note2: The EUT has two antennas.

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

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

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

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

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11a-BF	0.889	0.511	1.453m	1k
802.11ac VHT20-BF	0.937	0.283	3.618m	300
802.11ac VHT40-BF	0.938	0.278	4.058m	300
802.11ac VHT80-BF	0.927	0.329	4.008m	300

1.1.4 EUT Operational Condition

EUT Power Type	From Power Adapter			
Beamforming Function	☒	With beamforming for 802.11a/n/ac in 5GHz	☐	Without beamforming
Function	☐	Outdoor P2M	☒	Indoor P2M
	☐	Fixed P2P	☐	Client
Test Software Version	QATool_1.0.3.4			

Note: The above information was declared by manufacturer.

1.1.5 Table for Multiple Listing

The EUT has four equipment names and model names which are identical to each other in all aspects except for the following table:

Item	Equipment Name	Model Name
1	LINKSYS E2500 N600 Dual-Band WIFI ROUTER	E2500 V4
2	LINKSYS E5350 AC1000 Dual-Band WIFI ROUTER	E5350
3	LINKSYS E5400 AC1200 Dual-Band WIFI ROUTER	E5400
4	LINKSYS E5300 AC750 Dual-Band WIFI ROUTER	E5300

Item	Radio Type					Description
	802.11b	802.11g	802.11n	802.11a	802.11ac	
1	V	V	V	V	X	The difference equipment and model name served as marketing strategy and supporting radio type.
2	V	V	V	V	V	
3	V	V	V	V	V	
4	V	V	V	V	V	

From the above models, model: E5400 is the highest speed of this series and include all functions and standard, so it was selected as representative model for the test and its data was recorded in this report.

1.2 Testing Applied Standards

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

- 47 CFR FCC Part 15
- ANSI C63.10-2013
- FCC KDB 789033 D02 v02r01
- FCC KDB 662911 D01 v02r01
- FCC KDB 412172 D01 v01r01

1.3 Testing Location Information

Testing Location							
☐	HWA YA	ADD	:	No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)			
		TEL	:	886-3-327-3456	FAX	:	886-3-327-0973
☒	JHUBEI	ADD	:	No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C.			
		TEL	:	886-3-656-9065	FAX	:	886-3-656-9085

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date	Remark
RF Conducted	TH01-CB	Paul Chen	22°C / 64%	Nov. 23, 2018~ Dec. 04, 2018	-
Radiated	03CH01-CB (Below 1GHz)	Cola Fan	22°C / 54%	Dec. 01, 2018	-
	03CH01-CB (Above1GHz)	Stim Sung	22°C / 54%	Oct. 31, 2018~ Dec. 01, 2018	-
AC Conduction	CO01-CB	Peter Wu	23°C / 59%	Dec. 24, 2018	Adapter 1
				Dec. 27, 2018	Adapter 2

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)	2.0 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.7 dB	Confidence levels of 95%
Output Power Measurement	1.33 dB	Confidence levels of 95%
Power Density Measurement	1.27 dB	Confidence levels of 95%
Bandwidth Measurement	9.74×10^{-8}	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	PowerSetting
802.11a-BF_Nss1,(6Mbps)_2TX	-
5180MHz	27
5200MHz	30
5240MHz	35
5745MHz	35
5785MHz	35
5825MHz	30
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	-
5180MHz	29
5200MHz	34
5240MHz	35
5745MHz	30
5785MHz	30
5825MHz	30
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-
5190MHz	18
5230MHz	35
5755MHz	35
5795MHz	35
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-
5210MHz	15
5775MHz	28

Note:
- VHT20/VHT40 covers HT20/HT40, due to same modulation. The power setting for 802.11n HT20 and HT40 are the same or lower than 802.11ac VHT20 and VHT40.
- There are two modes of EUT for 802.11a/n/ac in 5GHz. One is beamforming mode, and the other is non-beamforming mode, after evaluating, beamforming mode has been evaluated to be the worst case, so it was selected to test and record in this test report.

2.2 The Worst Case Measurement Configuration

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

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emission Bandwidth Maximum Conducted Output Power Peak Power Spectral Density Unwanted Emissions
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
The EUT can be placed in Y-axis and Z-axis. After evaluating, “Z axis” generated the worst test result, So the measurement will follow this same test configuration.	
1	Place EUT in Z axis with Adapter 1
2	Place EUT in Z axis with Adapter 2
For operating mode 2 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX
The EUT can be placed in Y-axis and Z-axis. After evaluating, “Z axis” generated the worst test result, So the measurement will follow this same test configuration.	
1	Place EUT in Z axis

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
The EUT can be placed in Y-axis and Z-axis. After evaluating, “Z axis” generated the worst test result, So the measurement will follow this same test configuration.	
1	Place EUT in Z axis with WLAN 2.4GHz+ WLAN 5GHz
Refer to Appendix F for Radiated Emission Co-location.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	WLAN 2.4GHz+ WLAN 5GHz
Refer to Sporton Test Report No.: FA8N1905 for Co-location RF Exposure Evaluation.	

2.3 EUT Operation during Test

For CTX Mode:

<Non-beamforming mode>

The EUT was programmed to be in continuously transmitting mode.

<beamforming mode>

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

The program was executed as follows:

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

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	LEI	MU06AY120050-A1	INPUT: 100-240V~, 50/60Hz, 0.2A OUTPUT: 12V, 0.5A
2	Adapter	Ktec	KSAS0051200050VUD	INPUT: 100-240V~50/60Hz, 0.18A OUTPUT: 12V, 0.5A
Other				
RJ-45 cable*1, Non-shielded, 0.88m				

2.5 Support Equipment

For Test Site No: CO01-CB

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	LAN NB	DELL	E6430	N/A
B	WAN NB	DELL	E6430	N/A
C	2.4G NB	DELL	E6430	N/A
D	5G NB	DELL	E6430	N/A

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

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	NB	DELL	E4300	N/A
B	NB	DELL	E4300	N/A
C	NB	DELL	E4300	N/A
D	NB	DELL	E4300	N/A

For Test Site No: 03CH01-CB (above 1GHz) and TH01-CB
<Non-beamforming mode>

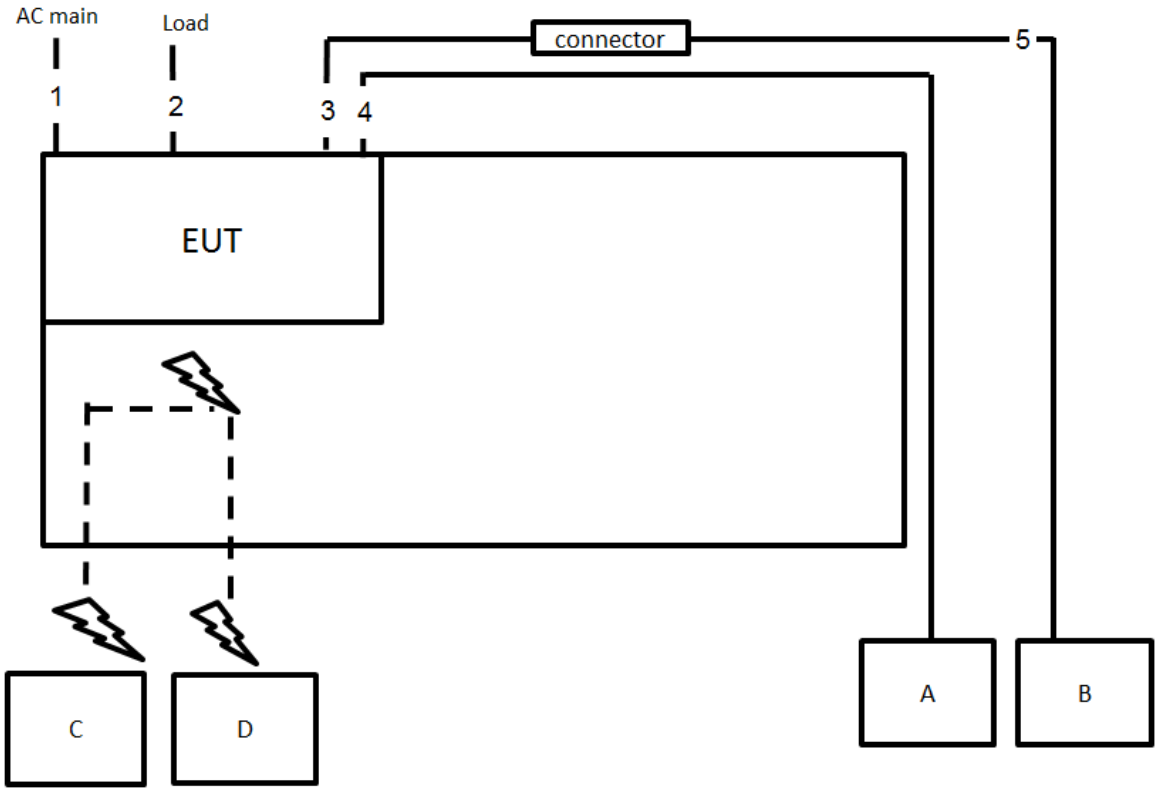
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	NB	DELL	E4300	N/A

<beamforming mode>

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	NB	DELL	E4300	N/A
B	NB	DELL	E4300	N/A
C	WLAN module	Boardcom	BCM943162ZP	QDS-BRCM1075

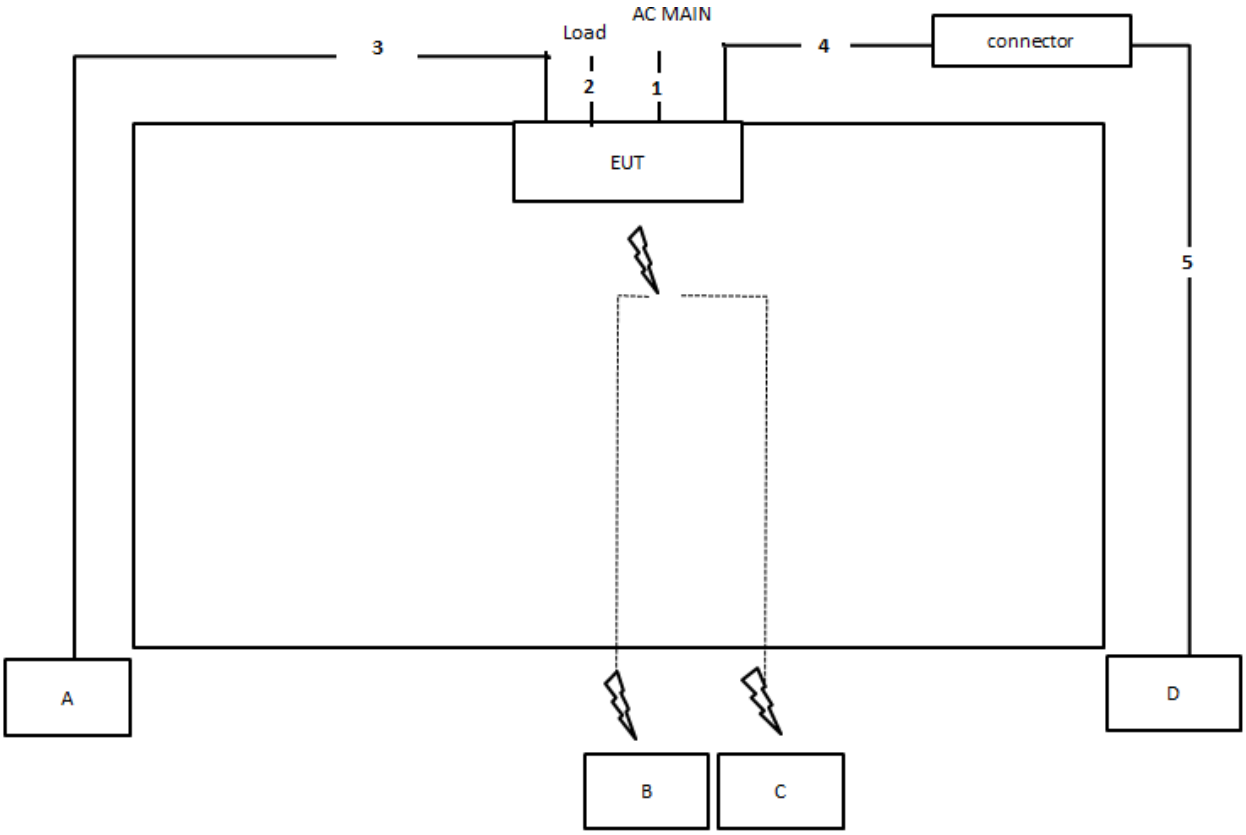
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



Item	Connection	Shielded	Length
1	Power cable	No	1.5m
2	RJ-45 cable*3	No	1.5m
3	RJ-45 cable	No	0.88m
4	RJ-45 cable	No	10m
5	RJ-45 cable	No	10m

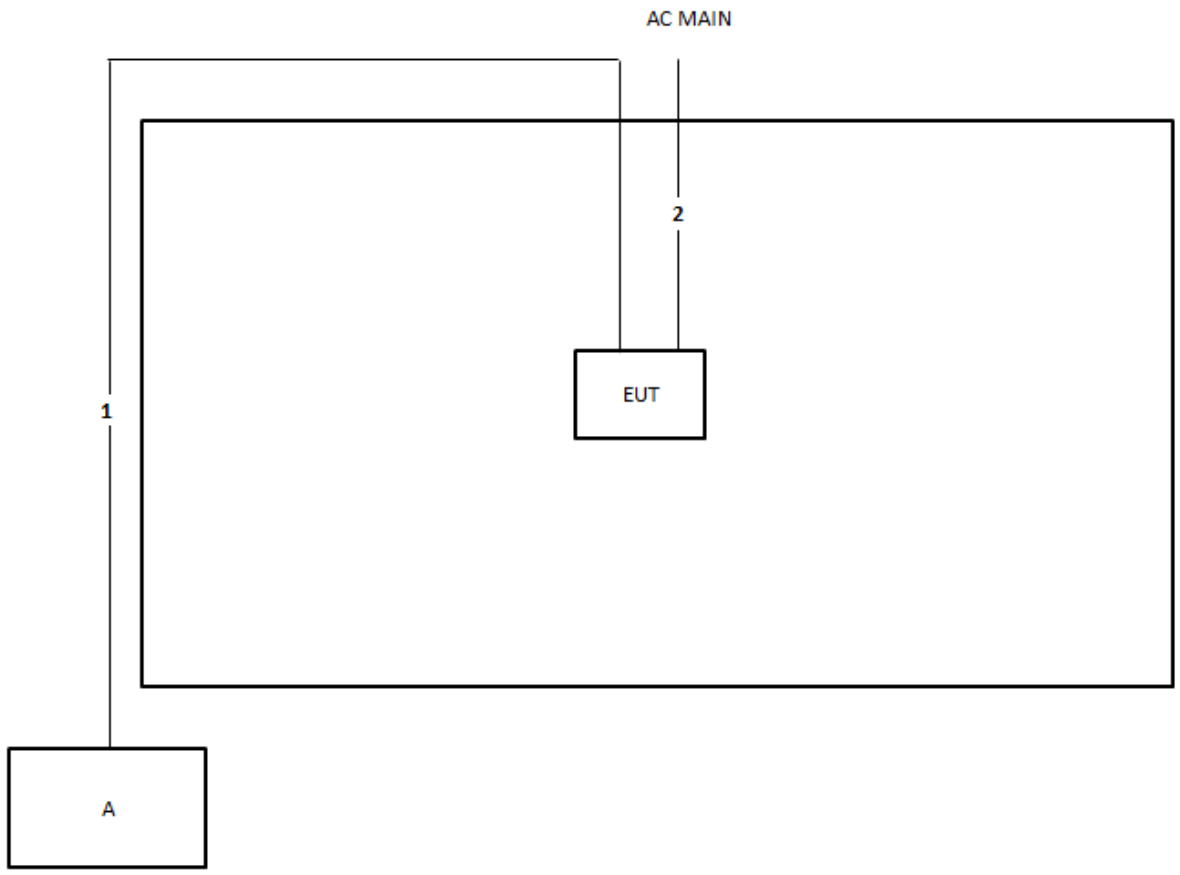
Test Setup Diagram - Radiated Test < 1GHz



Item	Connection	Shielded	Length
1	Power cable	No	1.5m
2	RJ-45 cable*3	No	1.5m
3	RJ-45 cable	No	10m
4	RJ-45 cable	No	0.88m
5	RJ-45 cable	No	10m

Test Setup Diagram - Radiated Test > 1GHz

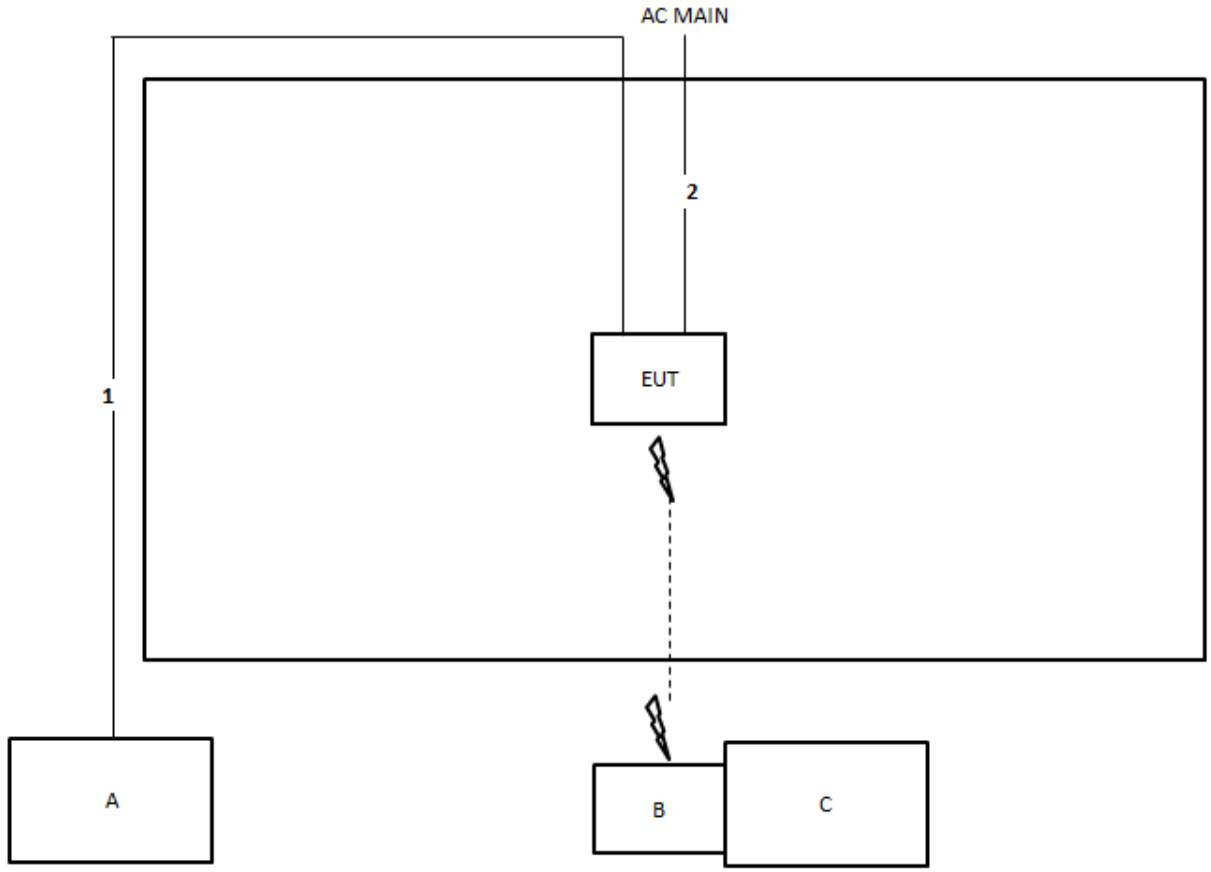
<Non-beamforming mode>



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

Test Setup Diagram - Radiated Test > 1GHz

<beamforming mode>



Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	Power cable	No	3.8m

3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

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

3.1.2 Measuring Instruments

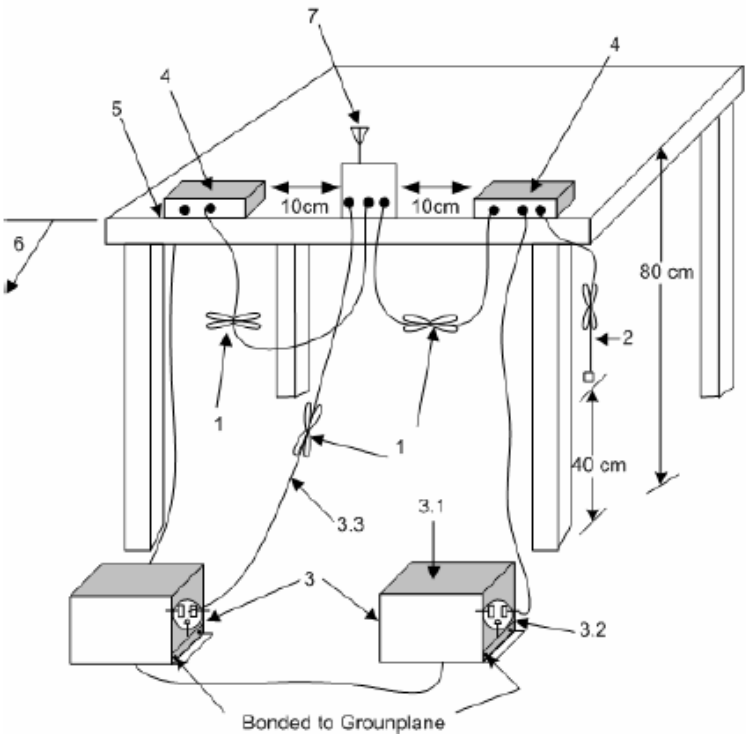
Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

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

3.1.4 Test Setup

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

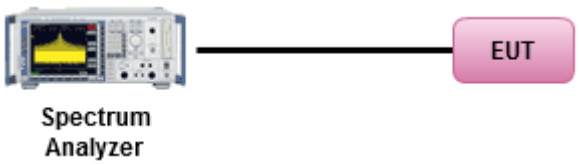
Refer a test equipment and calibration data table in this test report.

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



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

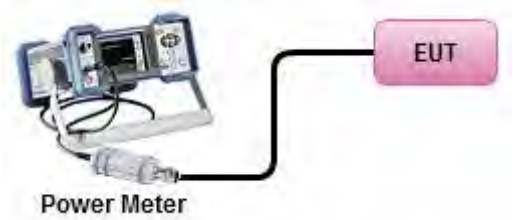
Refer a test equipment and calibration data table in this test report.

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 e.i.r.p. peak power spectral density (PPSD) ≤ 10 dBm/MHz.
☐	For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz.
	▪ e.i.r.p. greater than 200 mW shall comply with the following e.i.r.p. at different elevations, where θ is the angle above the local horizontal plane (of the Earth) as shown below: -13 dBW/MHz for 0° ≤ 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.
☐	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.	

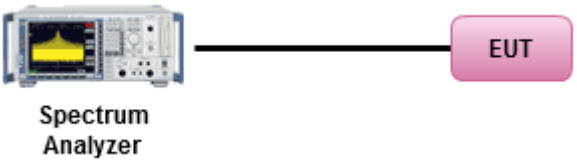
3.4.2 Measuring Instruments

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 Unwanted Emissions Limit

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

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

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

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

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

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

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

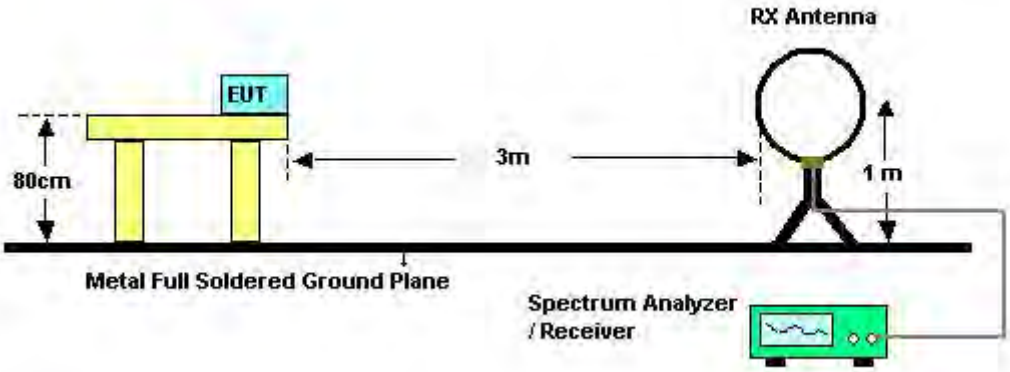
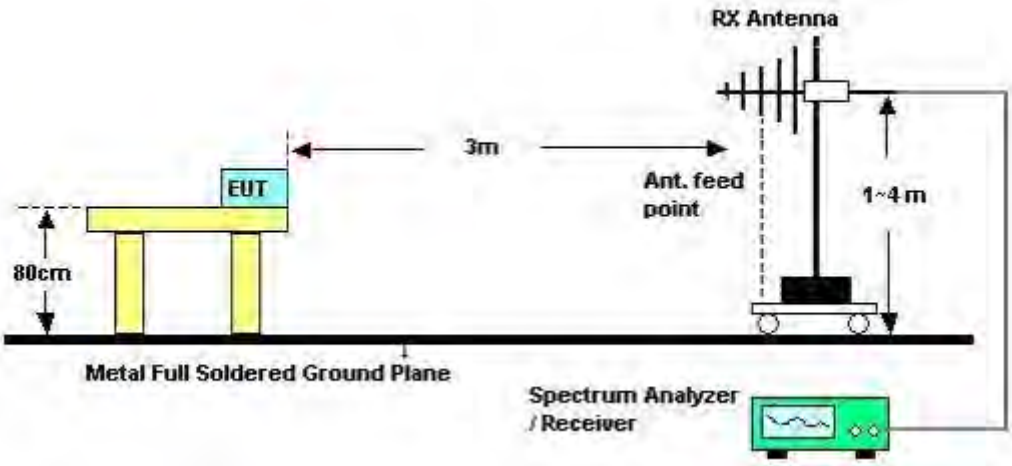
3.5.2 Measuring Instruments

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

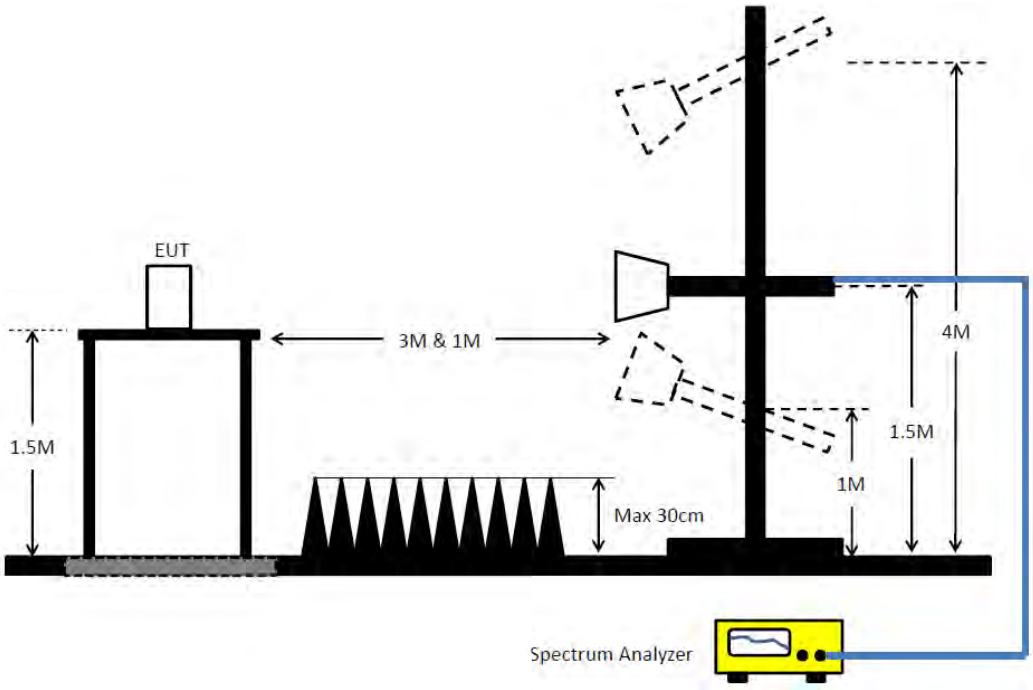
3.5.3 Test Procedures

Test Method		
▪ Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 m for frequencies above 30 MHz, unless it can be further demonstrated that measurements at a distance of 30 m or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).		
▪ The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].		
▪ For the transmitter unwanted emissions shall be measured using following options below:		
	▪ Refer as FCC KDB 789033, clause G)2) for unwanted emissions into non-restricted bands.	
	▪ Refer as FCC KDB 789033, clause G)1) for unwanted emissions into restricted bands.	
		☐ Refer as FCC KDB 789033, G)6) Method AD (Trace Averaging).
		☒ Refer as FCC KDB 789033, G)6) Method VB (Reduced VBW).
		☐ Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time.
		☐ Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions.
		☒ Refer as FCC KDB 789033, clause G)5) measurement procedure peak limit.
		☐ Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak limit.
▪ For radiated measurement.		
	▪ Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.	
	▪ Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.	
	▪ Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.	
▪ The any unwanted emissions level shall not exceed the fundamental emission level.		
▪ All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.		

3.5.4 Test Setup

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

3.5.6 Test Result of Transmitter Unwanted Emissions

Refer as Appendix E

4 Test Equipment and Calibration Data

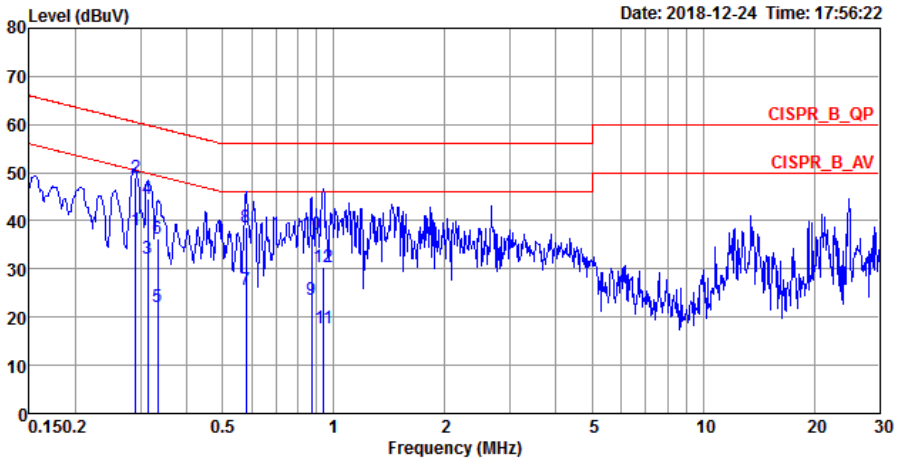
Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.45GHz	Jan. 31, 2018	Jan. 30, 2019	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Dec. 24, 2018	Dec. 23, 2019	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127478	9kHz ~ 30MHz	Nov. 05, 2018	Nov. 04, 2019	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	150kHz ~ 30MHz	May 22, 2018	May 21, 2019	Conduction (CO01-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Aug. 27, 2018	Aug. 26, 2019	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2018	Mar. 15, 2019	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	9610-4976	1GHz ~ 18GHz	Apr. 25, 2018	Apr. 24, 2019	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jun. 28, 2018	Jun. 27, 2019	Radiation (03CH01-CB)
Pre-Amplifier	EMCI	EMC330N	980332	20MHz ~ 3GHz	May 02, 2018	May 01, 2019	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 09, 2018	Jan. 08, 2019	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 04, 2018	Jul. 03, 2019	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSP40	100080	9kHz~40GHz	Oct. 03, 2018	Oct. 02, 2019	Radiation (03CH01-CB)
EMI Test Receiver	R&S	ESCS	100359	9kHz ~ 2.75GHz	Jul. 03, 2018	Jul. 02, 2019	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~ 1 GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 08, 2018	Oct. 07, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz ~ 40 GHz	Jul. 27, 2018	Jul. 26, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Jul. 27, 2018	Jul. 26, 2019	Radiation (03CH01-CB)
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. 21, 2017	Dec. 20, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz – 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-07	1 GHz –26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz –26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz –26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-28	1 GHz –26.5 GHz	Nov. 19, 2018	Nov. 18, 2019	Conducted (TH01-CB)

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

NCR means Non-Calibration required.

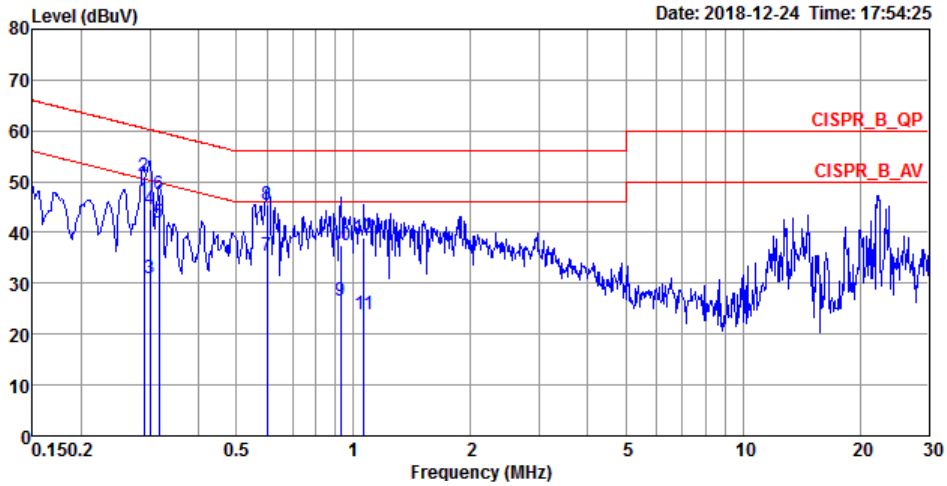
AC Power-line Conducted Emissions Result			
Operating Mode	1	**Power Phase**	Line
Operating Function	Normal Link		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.2909	37.94	-12.56	50.50	37.77	0.04	0.13	Average	LINE
2	0.2909	48.99	-11.51	60.50	48.82	0.04	0.13	QP	LINE
3	0.3133	32.22	-17.66	49.88	32.05	0.04	0.13	Average	LINE
4	0.3133	44.69	-15.19	59.88	44.52	0.04	0.13	QP	LINE
5	0.3338	22.18	-27.17	49.35	22.01	0.04	0.13	Average	LINE
6	0.3338	36.31	-23.04	59.35	36.14	0.04	0.13	QP	LINE
7	0.5792	25.81	-20.19	46.00	25.61	0.05	0.15	Average	LINE
8	0.5792	38.60	-17.40	56.00	38.40	0.05	0.15	QP	LINE
9	0.8710	23.50	-22.50	46.00	23.25	0.06	0.19	Average	LINE
10	0.8710	37.16	-18.84	56.00	36.91	0.06	0.19	QP	LINE
11	0.9381	17.76	-28.24	46.00	17.51	0.06	0.19	Average	LINE
12	0.9381	30.55	-25.45	56.00	30.30	0.06	0.19	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.)

AC Power-line Conducted Emissions Result			
Operating Mode	1	**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	0.2893	46.21	-4.33	50.54	46.03	0.05	0.13	Average	NEUTRAL
2	0.2893	51.19	-9.35	60.54	51.01	0.05	0.13	QP	NEUTRAL
3	0.3003	30.88	-19.36	50.24	30.70	0.05	0.13	Average	NEUTRAL
4	0.3003	44.48	-15.76	60.24	44.30	0.05	0.13	QP	NEUTRAL
5	0.3166	41.99	-7.81	49.80	41.81	0.05	0.13	Average	NEUTRAL
6	0.3166	47.65	-12.15	59.80	47.47	0.05	0.13	QP	NEUTRAL
7	0.6011	35.57	-10.43	46.00	35.36	0.05	0.16	Average	NEUTRAL
8	0.6011	45.44	-10.56	56.00	45.23	0.05	0.16	QP	NEUTRAL
9	0.9282	26.64	-19.36	46.00	26.39	0.06	0.19	Average	NEUTRAL
10	0.9282	37.43	-18.57	56.00	37.18	0.06	0.19	QP	NEUTRAL
11	1.0653	23.81	-22.19	46.00	23.55	0.06	0.20	Average	NEUTRAL
12	1.0653	39.03	-16.97	56.00	38.77	0.06	0.20	QP	NEUTRAL

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

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.15-5.25GHz	-	-	-	-	-
802.11a-BF_Nss1,(6Mbps)_2TX	36.45M	16.792M	16M8D1D	24.05M	16.517M
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	43.6M	21.489M	21M5D1D	29.975M	16.592M
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	47.5M	36.182M	36M2D1D	40.2M	35.932M
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	79.5M	74.863M	74M9D1D	79.3M	74.663M
5.725-5.85GHz	-	-	-	-	-
802.11a-BF_Nss1,(6Mbps)_2TX	16.3M	27.736M	27M7D1D	15.125M	16.567M
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	17.625M	18.341M	18M3D1D	16.075M	17.466M
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	35.7M	36.732M	36M7D1D	31.2M	36.432M
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	72.2M	75.562M	75M6D1D	70M	75.162M

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

Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11a-BF_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	29.225M	16.592M	24.05M	16.517M
5200MHz	Pass	Inf	36.45M	16.792M	30.55M	16.767M
5240MHz	Pass	Inf	36.3M	16.692M	34.875M	16.542M
5745MHz	Pass	500k	16.275M	22.639M	15.75M	27.736M
5785MHz	Pass	500k	15.125M	22.089M	16.125M	23.813M
5825MHz	Pass	500k	16.025M	16.567M	16.3M	16.667M
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	Inf	29.975M	16.592M	31.275M	16.642M
5200MHz	Pass	Inf	43.6M	20.065M	42.65M	21.489M
5240MHz	Pass	Inf	38.575M	18.291M	39.925M	19.99M
5745MHz	Pass	500k	16.325M	17.591M	16.575M	17.591M
5785MHz	Pass	500k	17.625M	18.341M	17.5M	17.791M
5825MHz	Pass	500k	16.075M	17.541M	16.375M	17.466M
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	Inf	40.2M	36.082M	40.45M	35.932M
5230MHz	Pass	Inf	44.4M	36.082M	47.5M	36.182M
5755MHz	Pass	500k	35.7M	36.532M	32.55M	36.632M
5795MHz	Pass	500k	34.95M	36.432M	31.2M	36.732M
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	Inf	79.3M	74.663M	79.5M	74.863M
5775MHz	Pass	500k	72.2M	75.162M	70M	75.562M

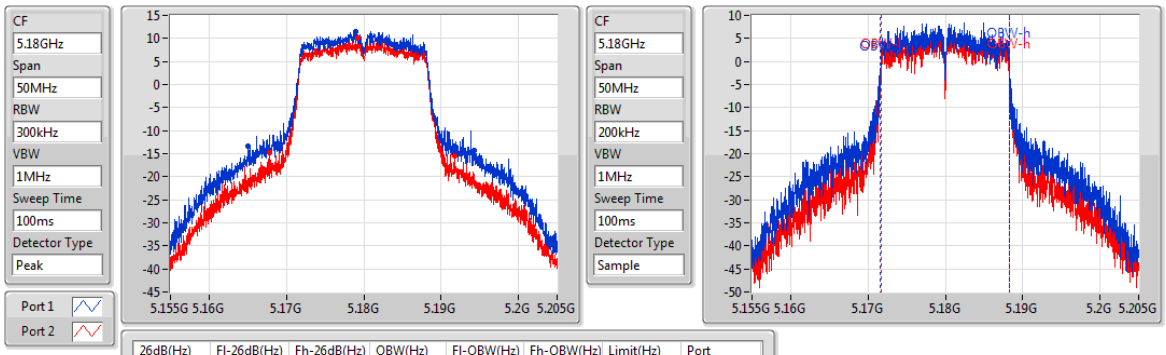
Port X-N dB = Port **X** 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port **X** 99% occupied bandwidth;

802.11a-BF_Nss1,(6Mbps)_2TX

EBW

5180MHz

03/12/2018



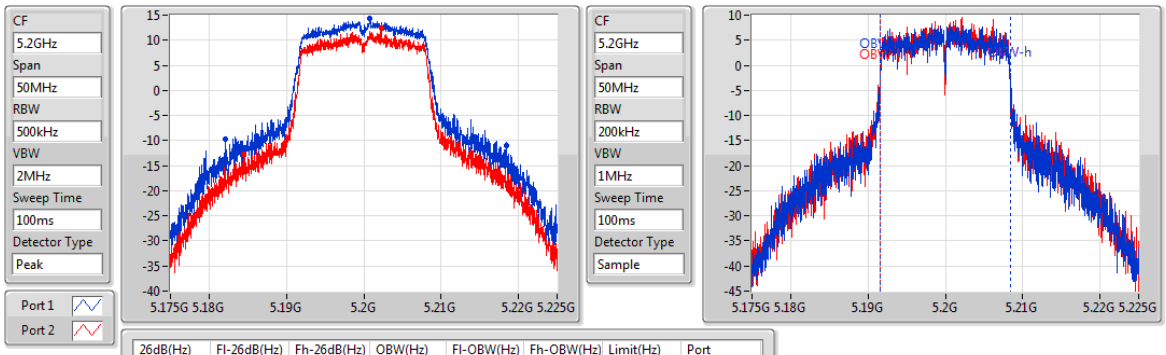
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
29.225M	5.165G	5.194225G	16.592M	5.171629G	5.188221G	Inf	1
24.05M	5.16775G	5.1918G	16.517M	5.171704G	5.188221G	Inf	2

802.11a-BF_Nss1,(6Mbps)_2TX

EBW

5200MHz

03/12/2018



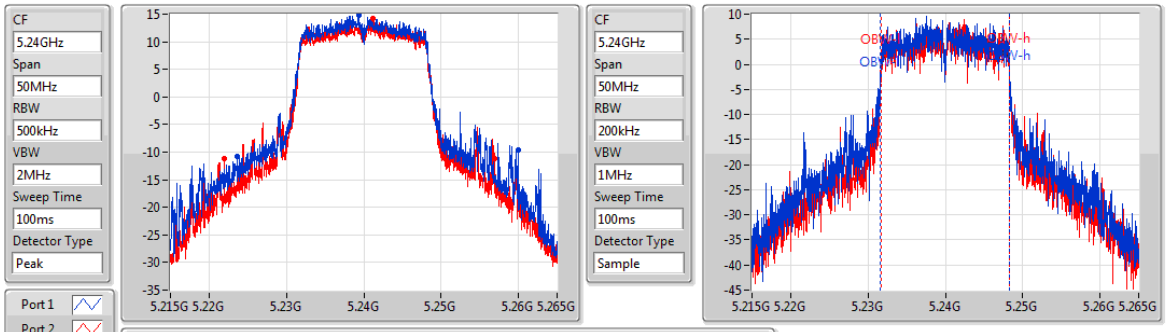
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
36.45M	5.18205G	5.2185G	16.792M	5.191579G	5.208371G	Inf	1
30.55M	5.184425G	5.214975G	16.767M	5.191604G	5.208371G	Inf	2

802.11a-BF_Nss1,(6Mbps)_2TX

EBW

5240MHz

04/12/2018



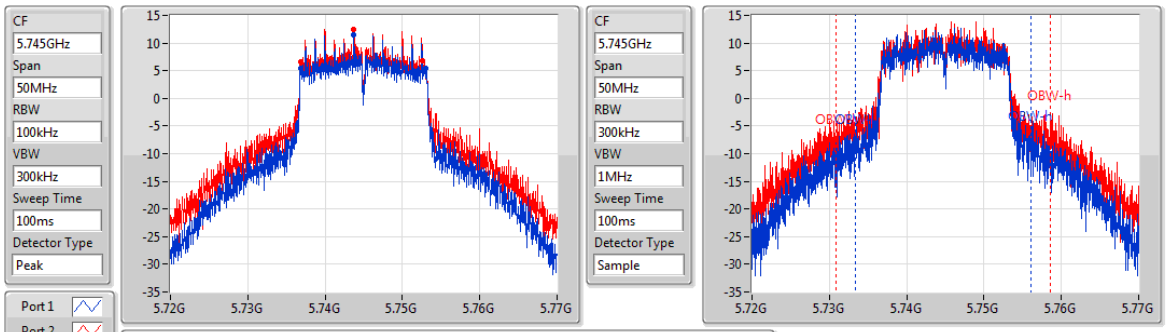
26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
36.3M	5.223675G	5.259975G	16.692M	5.231579G	5.248271G	Inf	1
34.875M	5.222G	5.256875G	16.542M	5.231704G	5.248246G	Inf	2

802.11a-BF_Nss1,(6Mbps)_2TX

EBW

5745MHz

03/12/2018



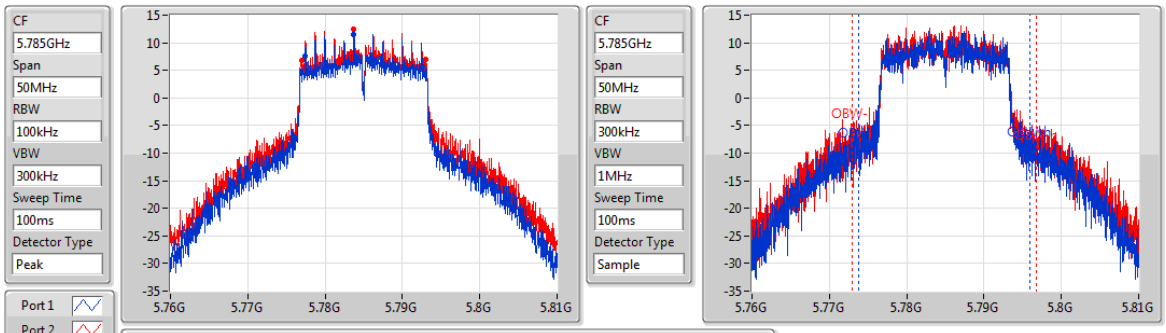
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.275M	5.7368G	5.753075G	22.639M	5.733431G	5.756069G	500k	1
15.75M	5.7368G	5.75255G	27.736M	5.730857G	5.758593G	500k	2

802.11a-BF_Nss1,(6Mbps)_2TX

EBW

5785MHz

03/12/2018



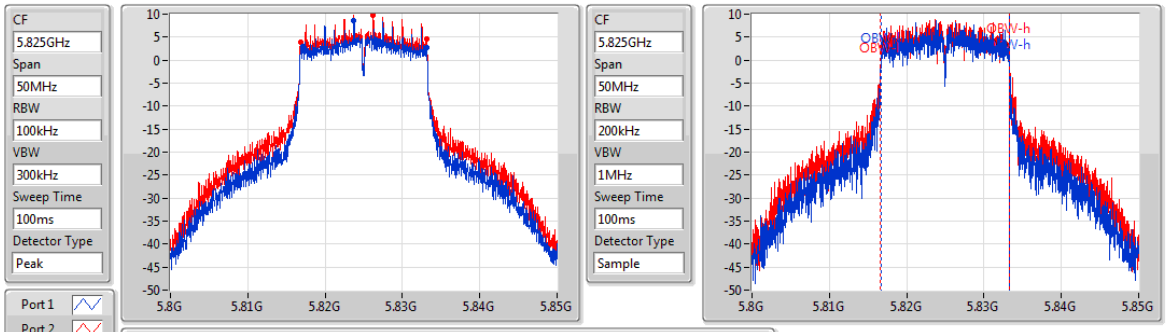
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.125M	5.77745G	5.792575G	22.089M	5.773856G	5.795945G	500k	1
16.125M	5.77695G	5.793075G	23.813M	5.772981G	5.796794G	500k	2

802.11a-BF_Nss1,(6Mbps)_2TX

EBW

5825MHz

03/12/2018

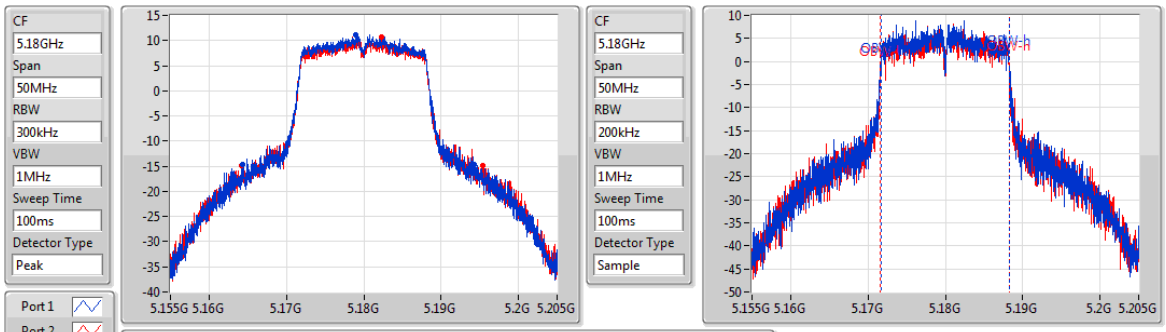


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.025M	5.8171G	5.833125G	16.567M	5.816679G	5.833246G	500k	1
16.3M	5.8168G	5.8331G	16.667M	5.816604G	5.833271G	500k	2

802.11ac VHT20-BF_Nss1,(MCS0)_2TX — EBW

5180MHz

03/12/2018

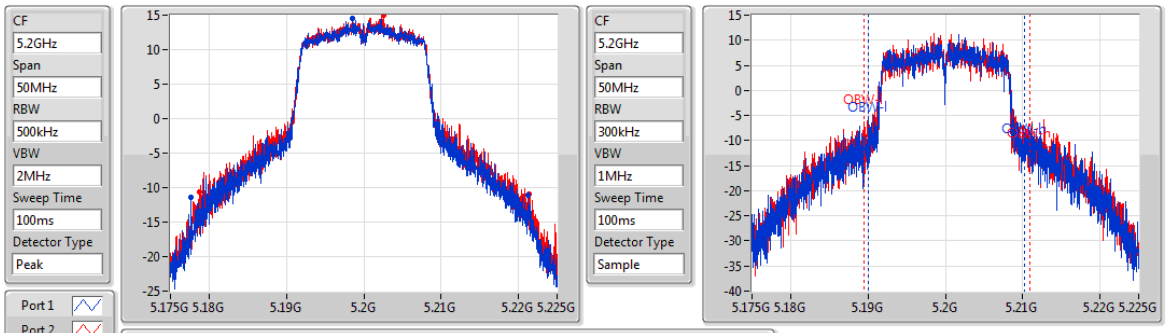


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
29.975M	5.164325G	5.1943G	16.592M	5.171654G	5.188246G	Inf	1
31.275M	5.164175G	5.19545G	16.642M	5.171629G	5.188271G	Inf	2

802.11ac VHT20-BF_Nss1,(MCS0)_2TX — EBW

5200MHz

03/12/2018

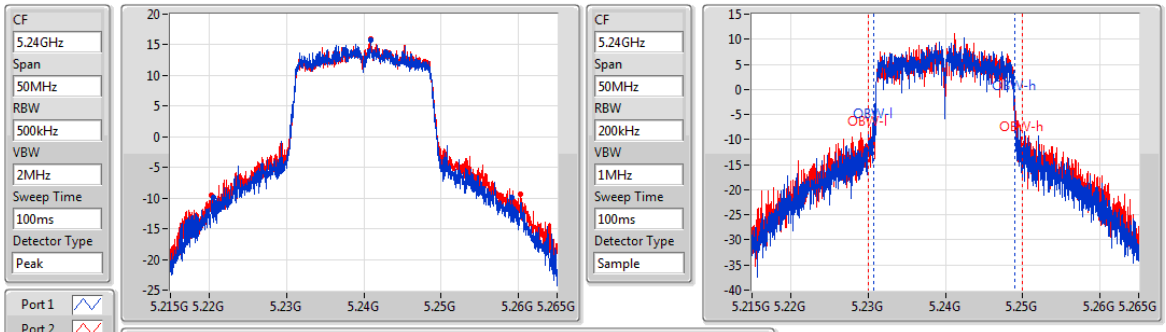


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
43.6M	5.177675G	5.221275G	20.065M	5.190105G	5.21017G	Inf	1
42.65M	5.1787G	5.22135G	21.489M	5.18943G	5.21092G	Inf	2

802.11ac VHT20-BF_Nss1,(MCS0)_2TX — EBW

5240MHz

03/12/2018

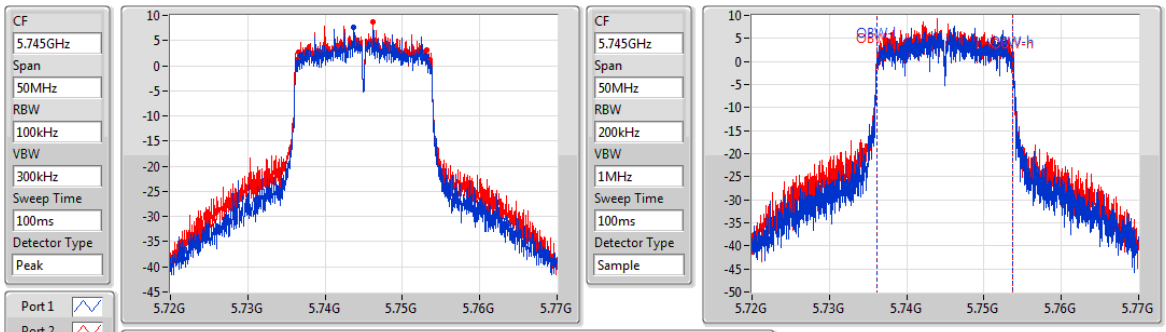


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
38.575M	5.22055G	5.259125G	18.291M	5.230705G	5.248996G	Inf	1
39.925M	5.220325G	5.26025G	19.99M	5.22998G	5.24997G	Inf	2

802.11ac VHT20-BF_Nss1,(MCS0)_2TX — EBW

5745MHz

03/12/2018

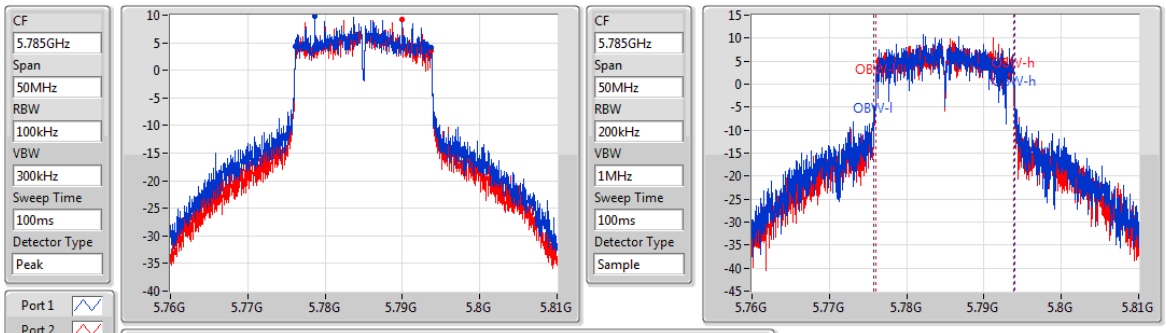


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.325M	5.7368G	5.753125G	17.591M	5.736179G	5.753771G	500k	1
16.575M	5.73655G	5.753125G	17.591M	5.736154G	5.753746G	500k	2

802.11ac VHT20-BF_Nss1,(MCS0)_2TX — EBW

5785MHz

03/12/2018

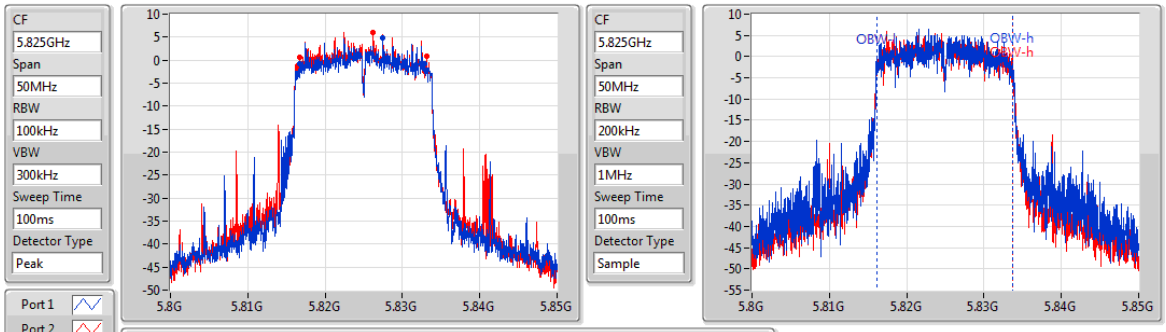


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.625M	5.776125G	5.79375G	18.341M	5.775705G	5.794045G	500k	1
17.5M	5.7762G	5.7937G	17.791M	5.776054G	5.793846G	500k	2

802.11ac VHT20-BF_Nss1,(MCS0)_2TX — EBW

5825MHz

03/12/2018

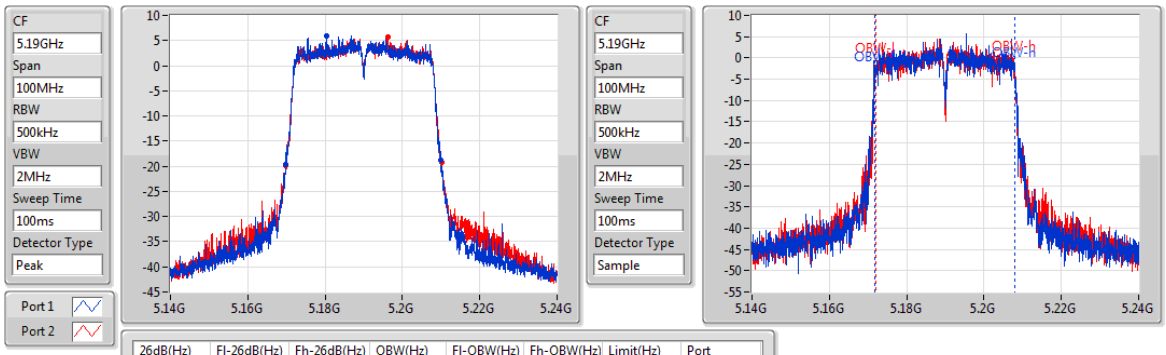


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.075M	5.816775G	5.83285G	17.541M	5.816154G	5.833696G	500k	1
16.375M	5.816775G	5.83315G	17.466M	5.816204G	5.833671G	500k	2

802.11ac VHT40-BF_Nss1,(MCS0)_2TX — EBW

5190MHz

03/12/2018

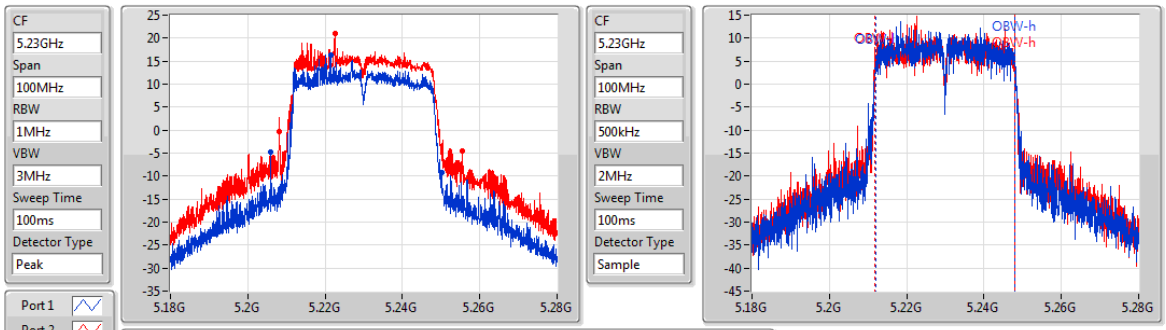


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
40.2M	5.1698G	5.21G	36.082M	5.171809G	5.207891G	Inf	1
40.45M	5.1698G	5.21025G	35.932M	5.172009G	5.207941G	Inf	2

802.11ac VHT40-BF_Nss1,(MCS0)_2TX — EBW

5230MHz

03/12/2018

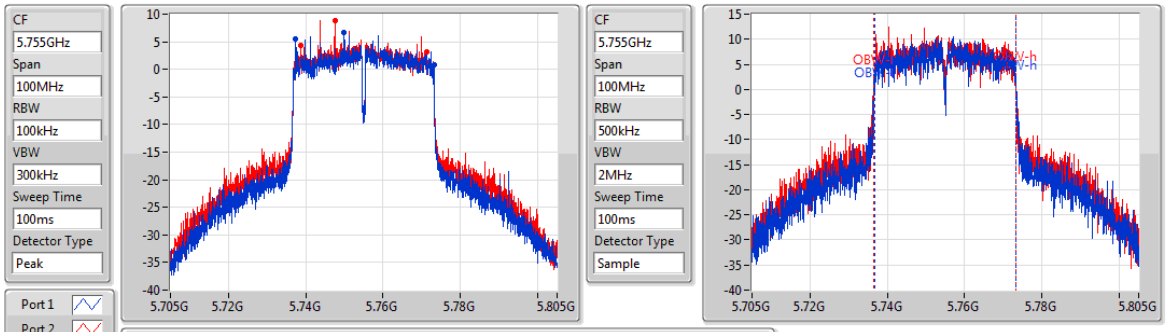


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
44.4M	5.20585G	5.25025G	36.082M	5.211909G	5.247991G	Inf	1
47.5M	5.208G	5.2555G	36.182M	5.211809G	5.247991G	Inf	2

802.11ac VHT40-BF_Nss1,(MCS0)_2TX — EBW

5755MHz

03/12/2018

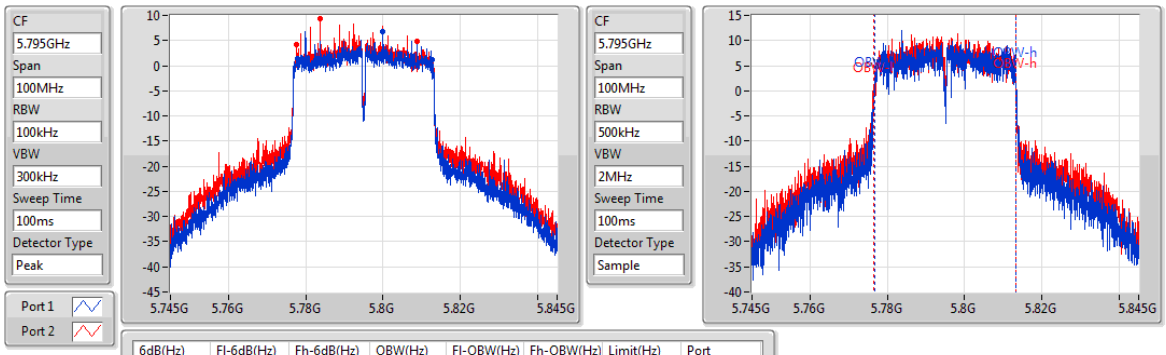


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
35.7M	5.73745G	5.77315G	36.532M	5.736659G	5.773191G	500k	1
32.55M	5.73865G	5.7712G	36.632M	5.736609G	5.773241G	500k	2

802.11ac VHT40-BF_Nss1,(MCS0)_2TX — EBW

5795MHz

03/12/2018

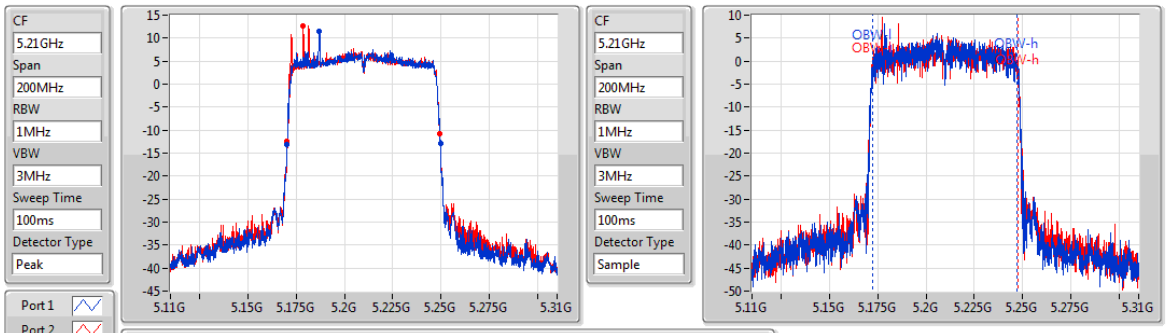


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
34.95M	5.77775G	5.8127G	36.432M	5.776709G	5.813141G	500k	1
31.2M	5.77755G	5.80875G	36.732M	5.776509G	5.813241G	500k	2

802.11ac VHT80-BF_Nss1,(MCS0)_2TX — EBW

5210MHz

03/12/2018

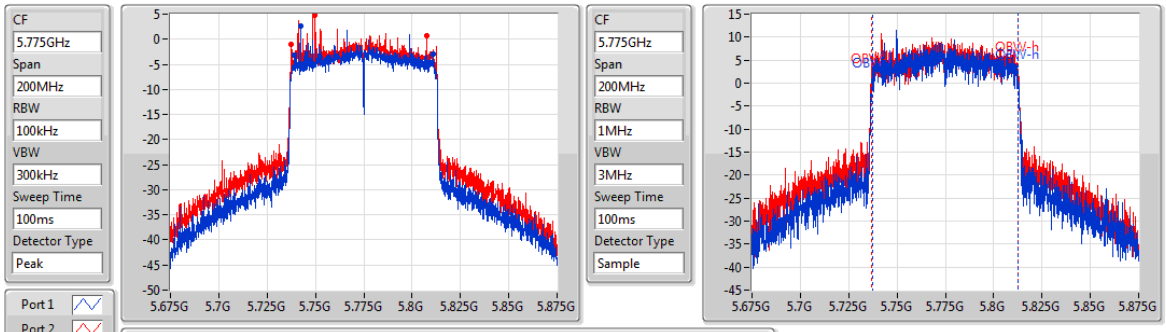


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
79.3M	5.1704G	5.2497G	74.663M	5.172619G	5.247281G	Inf	1
79.5M	5.17G	5.2495G	74.863M	5.172519G	5.247381G	Inf	2

802.11ac VHT80-BF_Nss1,(MCS0)_2TX — EBW

5775MHz

03/12/2018



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
72.2M	5.739G	5.8112G	75.162M	5.737319G	5.812481G	500k	1
70M	5.7375G	5.8075G	75.562M	5.737019G	5.812581G	500k	2

Summary

Mode	Total Power (dBm)	Total Power (W)
5.15-5.25GHz	-	-
802.11a-BF_Nss1,(6Mbps)_2TX	24.53	0.28379
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	24.16	0.26062
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	24.33	0.27102
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	16.73	0.04710
5.725-5.85GHz	-	-
802.11a-BF_Nss1,(6Mbps)_2TX	24.41	0.27606
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	23.31	0.21429
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	23.94	0.24774
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	21.29	0.13459

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11a-BF_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
5180MHz	Pass	6.34	19.20	18.98	22.10	29.66
5200MHz	Pass	6.34	20.20	20.25	23.24	29.66
5240MHz	Pass	6.34	21.70	21.33	24.53	29.66
5745MHz	Pass	6.34	21.40	21.20	24.31	29.66
5785MHz	Pass	6.34	21.60	21.20	24.41	29.66
5825MHz	Pass	6.34	20.46	20.42	23.45	29.66
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	6.34	18.70	19.01	21.87	29.66
5200MHz	Pass	6.34	20.80	20.74	23.78	29.66
5240MHz	Pass	6.34	21.20	21.09	24.16	29.66
5745MHz	Pass	6.34	20.40	20.20	23.31	29.66
5785MHz	Pass	6.34	20.12	19.87	23.01	29.66
5825MHz	Pass	6.34	19.20	19.03	22.13	29.66
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	6.34	14.69	13.82	17.29	29.66
5230MHz	Pass	6.34	21.46	21.18	24.33	29.66
5755MHz	Pass	6.34	21.08	20.77	23.94	29.66
5795MHz	Pass	6.34	20.79	20.27	23.55	29.66
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	6.34	14.08	13.32	16.73	29.66
5775MHz	Pass	6.34	18.64	17.88	21.29	29.66

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

Summary

Mode	PD (dBm/RBW)
5.15-5.25GHz	-
802.11a-BF_Nss1,(6Mbps)_2TX	10.97
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	11.35
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	8.45
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-1.74
5.725-5.85GHz	-
802.11a-BF_Nss1,(6Mbps)_2TX	11.20
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	8.43
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	6.66
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	2.03

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

Result

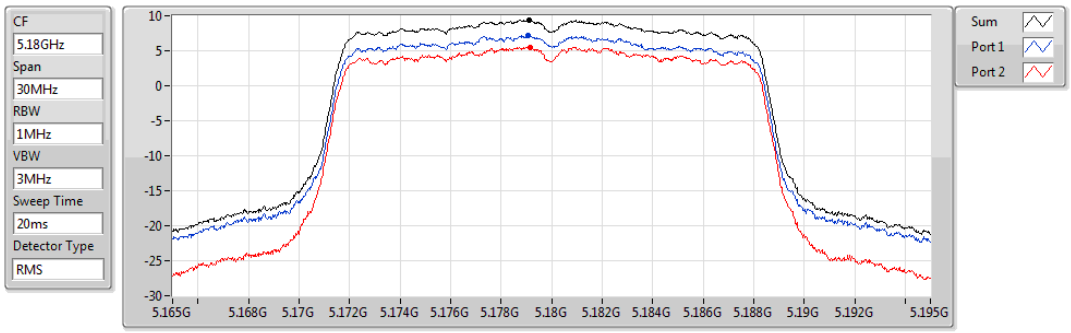
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11a-BF_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
5180MHz	Pass	6.34	7.22	5.48	9.42	16.66
5200MHz	Pass	6.34	7.97	8.10	10.95	16.66
5240MHz	Pass	6.34	8.18	8.23	10.97	16.66
5745MHz	Pass	6.34	7.60	8.61	11.09	29.66
5785MHz	Pass	6.34	7.83	8.84	11.20	29.66
5825MHz	Pass	6.34	5.39	5.96	8.59	29.66
802.11ac VHT20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5180MHz	Pass	6.34	5.91	6.44	9.12	16.66
5200MHz	Pass	6.34	8.56	8.15	11.35	16.66
5240MHz	Pass	6.34	7.98	8.04	10.98	16.66
5745MHz	Pass	6.34	4.38	5.30	7.79	29.66
5785MHz	Pass	6.34	5.66	5.25	8.43	29.66
5825MHz	Pass	6.34	3.20	2.97	5.98	29.66
802.11ac VHT40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5190MHz	Pass	6.34	-3.01	-1.43	0.77	16.66
5230MHz	Pass	6.34	5.57	5.50	8.45	16.66
5755MHz	Pass	6.34	3.18	4.07	6.66	29.66
5795MHz	Pass	6.34	3.23	4.10	6.59	29.66
802.11ac VHT80-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
5210MHz	Pass	6.34	-5.02	-4.40	-1.74	16.66
5775MHz	Pass	6.34	-1.56	-0.40	2.03	29.66

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-BF_Nss1,(6Mbps)_2TX PSD

5180MHz

03/12/2018

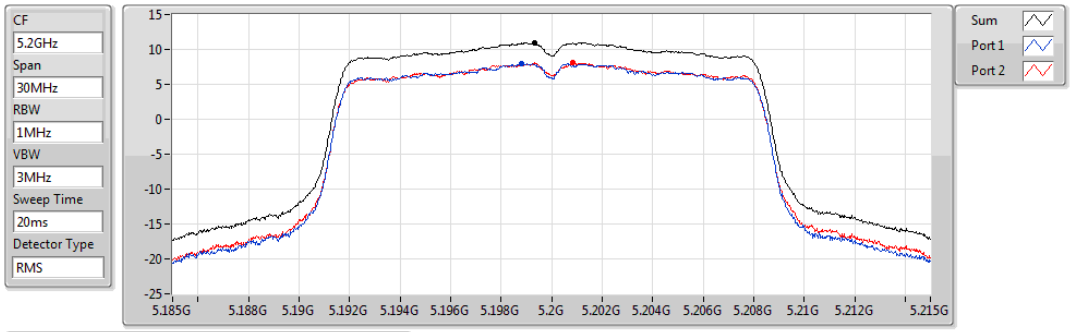


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
9.42	9.42	7.22	5.48

802.11a-BF_Nss1,(6Mbps)_2TX PSD

5200MHz

03/12/2018

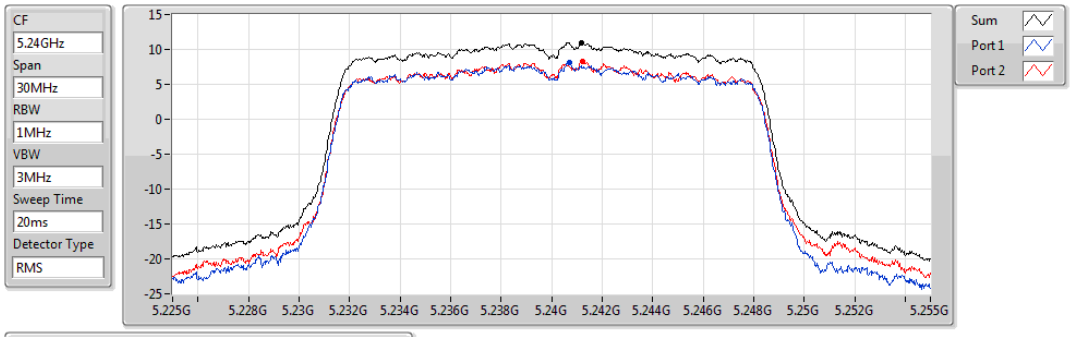


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
10.95	10.95	7.97	8.10

802.11a-BF_Nss1,(6Mbps)_2TX PSD

5240MHz

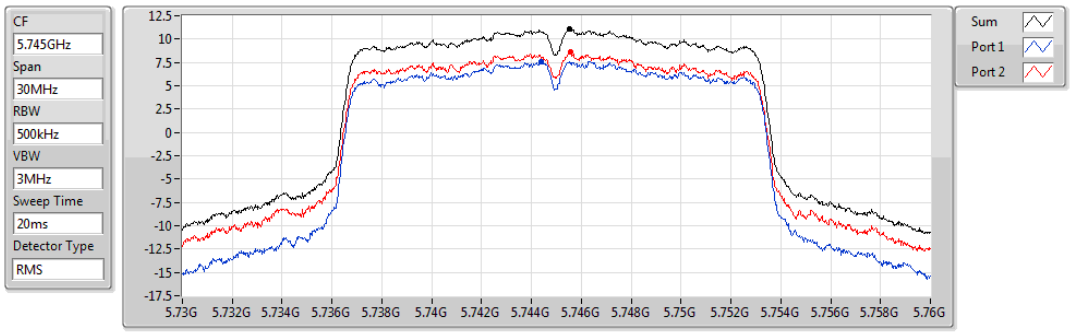
04/12/2018



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
10.97	10.97	8.18	8.23

802.11a-BF_Nss1,(6Mbps)_2TX PSD

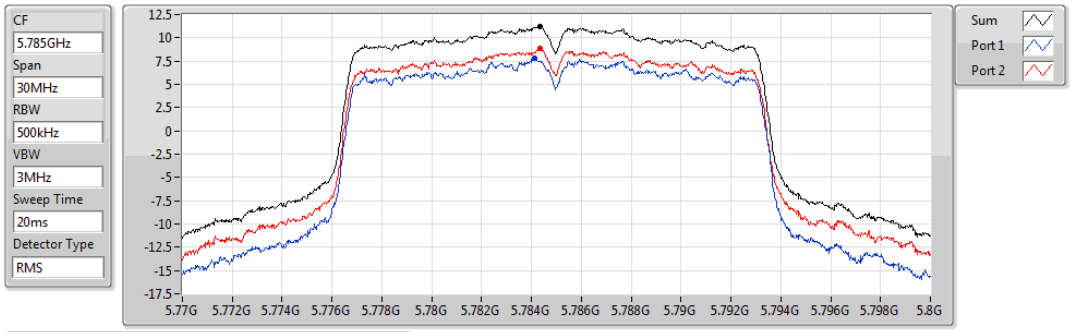
5745MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
11.09	11.09	7.60	8.61

802.11a-BF_Nss1,(6Mbps)_2TX PSD

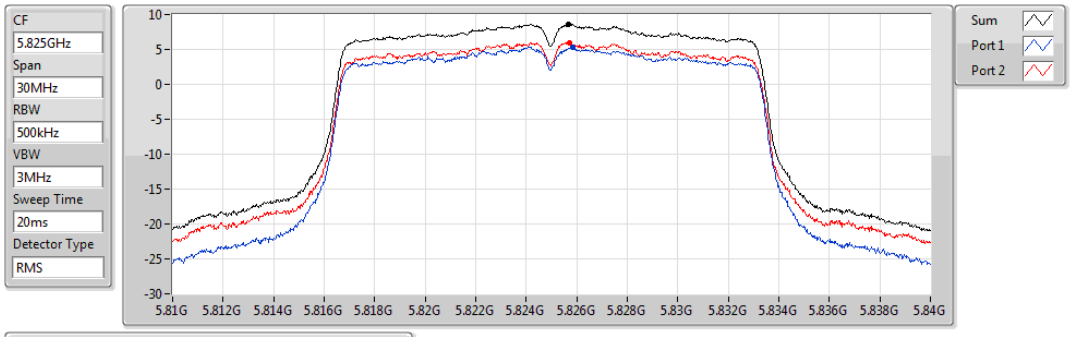
5785MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
11.20	11.20	7.83	8.84

802.11a-BF_Nss1,(6Mbps)_2TX PSD

5825MHz

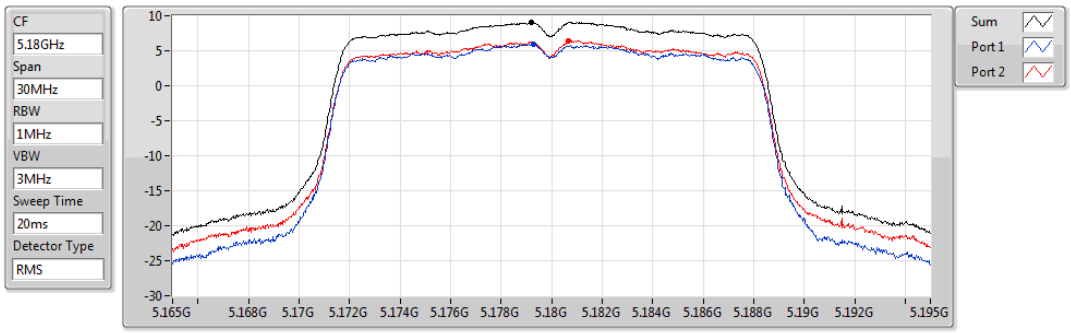


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
8.59	8.59	5.39	5.96

802.11ac VHT20-BF_Nss1,(MCS0)_2TX PSD

5180MHz

03/12/2018

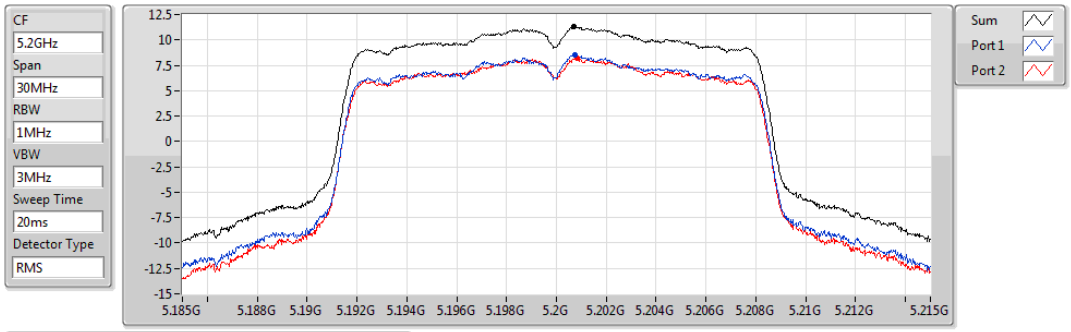


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
9.12	9.12	5.91	6.44

802.11ac VHT20-BF_Nss1,(MCS0)_2TX PSD

5200MHz

03/12/2018

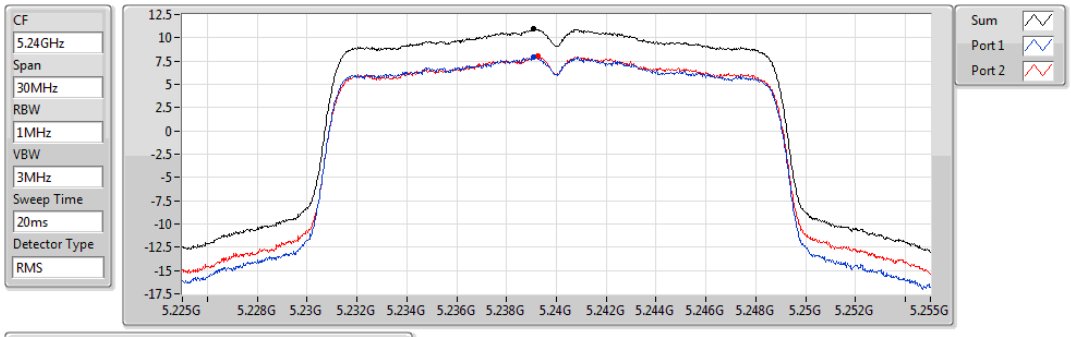


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
11.35	11.35	8.56	8.15

802.11ac VHT20-BF_Nss1,(MCS0)_2TX PSD

5240MHz

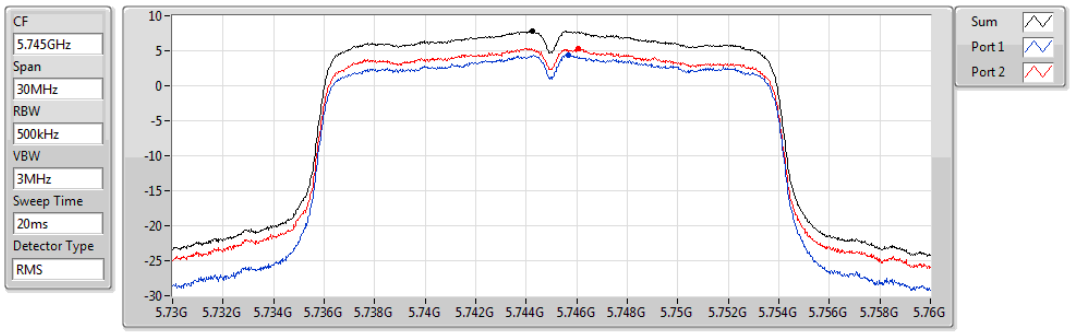
03/12/2018



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
10.98	10.98	7.98	8.04

802.11ac VHT20-BF_Nss1,(MCS0)_2TX PSD

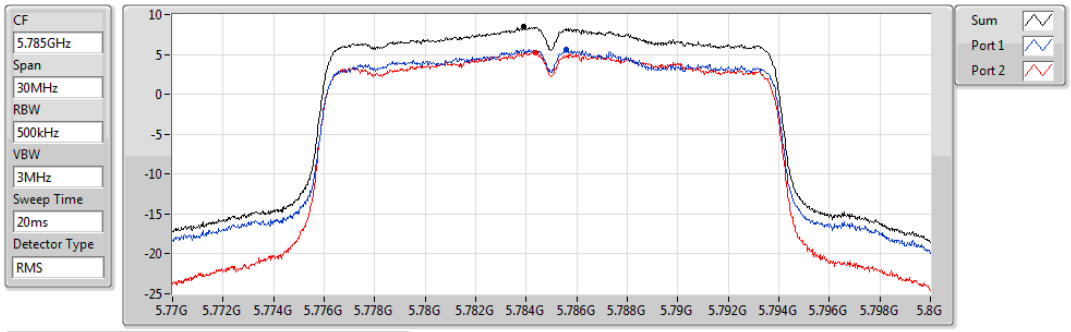
5745MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.79	7.79	4.38	5.30

802.11ac VHT20-BF_Nss1,(MCS0)_2TX PSD

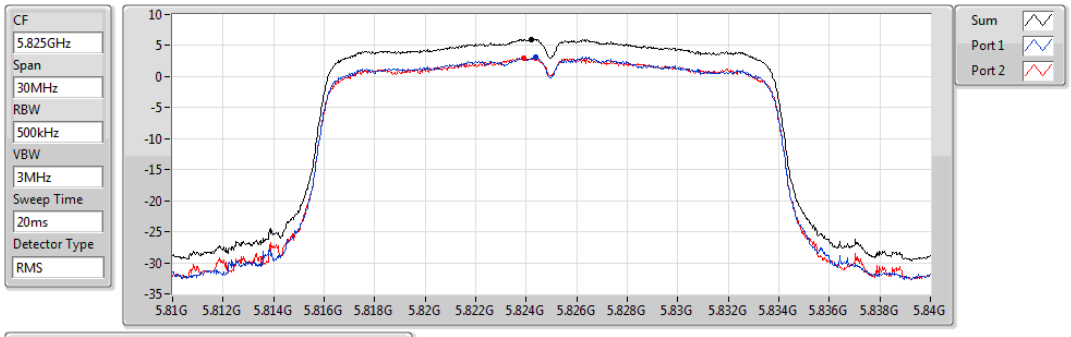
5785MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
8.43	8.43	5.66	5.25

802.11ac VHT20-BF_Nss1,(MCS0)_2TX PSD

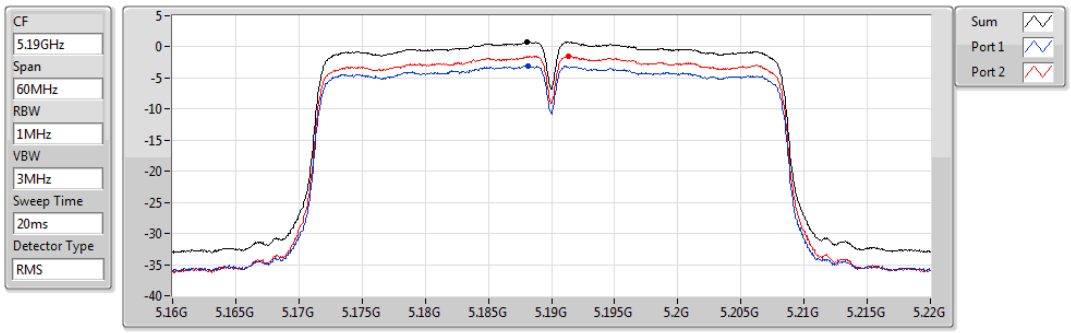
5825MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.98	5.98	3.20	2.97

802.11ac VHT40-BF_Nss1,(MCS0)_2TX PSD

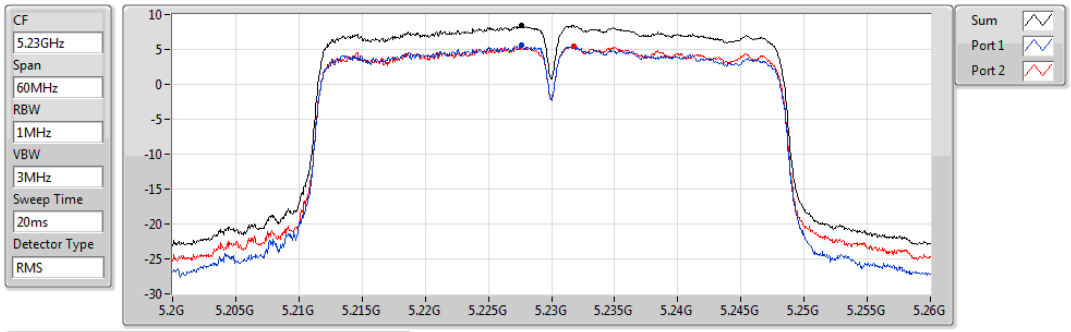
5190MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.77	0.77	-3.01	-1.43

802.11ac VHT40-BF_Nss1,(MCS0)_2TX PSD

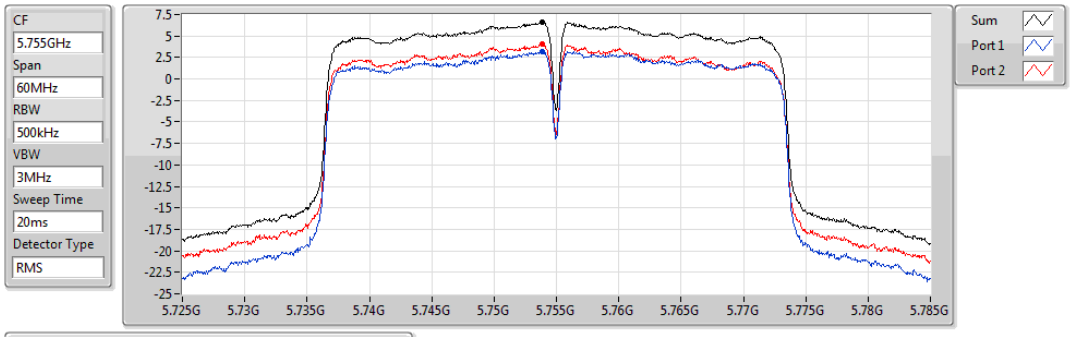
5230MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
8.45	8.45	5.57	5.50

802.11ac VHT40-BF_Nss1,(MCS0)_2TX PSD

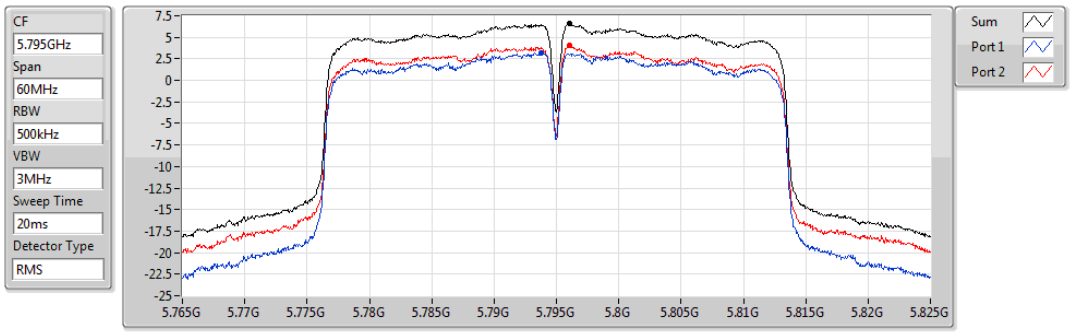
5755MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.66	6.66	3.18	4.07

802.11ac VHT40-BF_Nss1,(MCS0)_2TX PSD

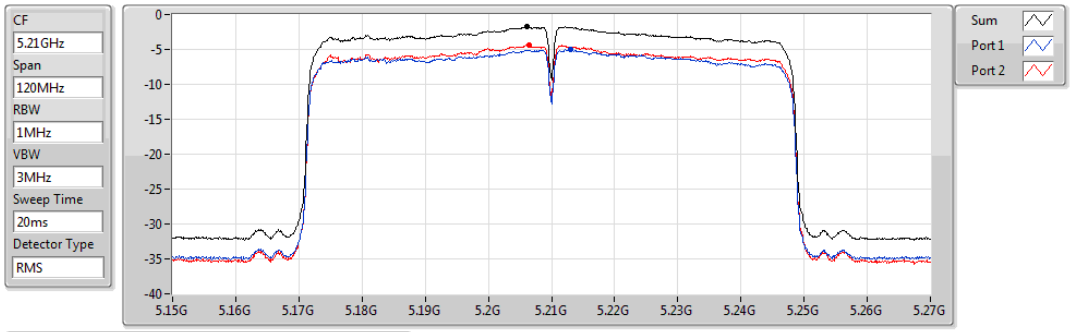
5795MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
6.59	6.59	3.23	4.10

802.11ac VHT80-BF_Nss1,(MCS0)_2TX PSD

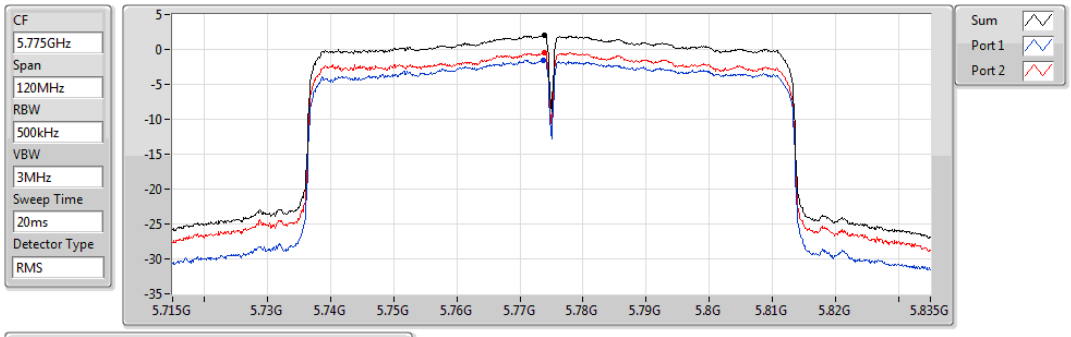
5210MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.74	-1.74	-5.02	-4.40

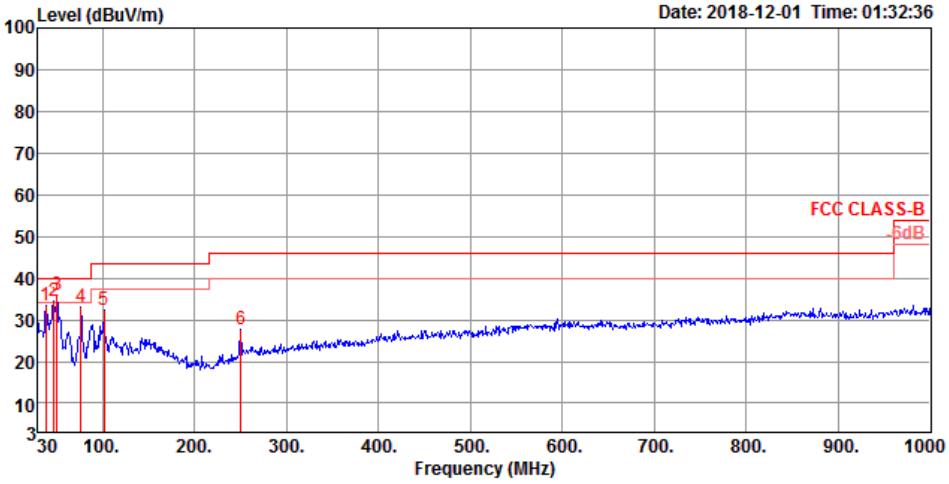
802.11ac VHT80-BF_Nss1,(MCS0)_2TX PSD

5775MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.03	2.03	-1.56	-0.40

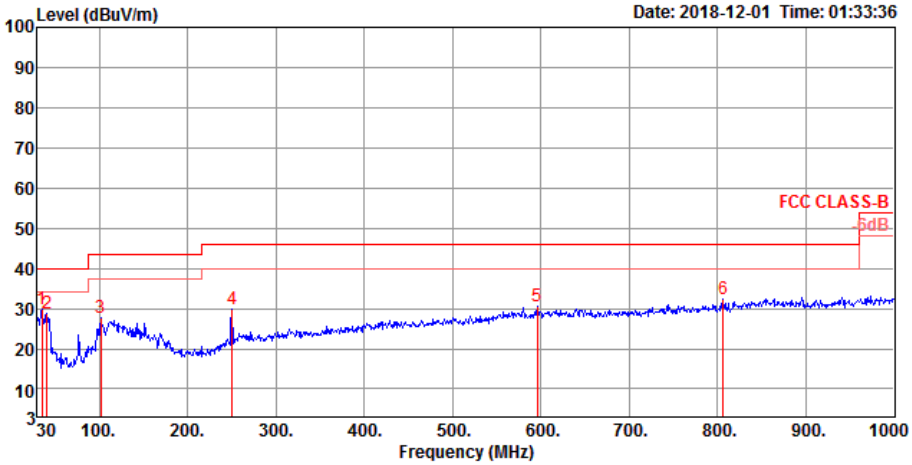
RSE below 1GHz Result			
Operating Mode	2	**Polarization**	Vertical
Operating Function	Normal Link		



	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	38.73	33.53	40.00	-6.47	41.14	0.72	20.21	28.54	100	185	Peak	VERTICAL
2	47.46	34.65	40.00	-5.35	46.93	0.92	15.34	28.54	100	338	Peak	VERTICAL
3	50.37	35.99	40.00	-4.01	49.43	0.94	14.16	28.54	100	338	Peak	VERTICAL
4	76.56	33.17	40.00	-6.83	47.90	1.07	12.69	28.49	150	155	Peak	VERTICAL
5	101.78	32.21	43.50	-11.29	42.55	1.24	16.85	28.43	100	1	Peak	VERTICAL
6	250.19	27.84	46.00	-18.16	36.03	1.73	18.03	27.95	100	40	Peak	VERTICAL

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

RSE below 1GHz Result			
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	34.85	29.99	40.00	-10.01	35.59	0.70	22.24	28.54	200	348	Peak	HORIZONTAL
2	40.67	28.83	40.00	-11.17	37.56	0.75	19.06	28.54	200	0	Peak	HORIZONTAL
3	101.78	27.71	43.50	-15.79	38.05	1.24	16.85	28.43	300	100	Peak	HORIZONTAL
4	250.19	29.76	46.00	-16.24	37.95	1.73	18.03	27.95	125	114	Peak	HORIZONTAL
5	595.51	30.50	46.00	-15.50	33.03	2.61	24.25	29.39	150	115	Peak	HORIZONTAL
6	806.00	32.44	46.00	-13.56	32.73	3.14	25.69	29.12	200	280	Peak	HORIZONTAL

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

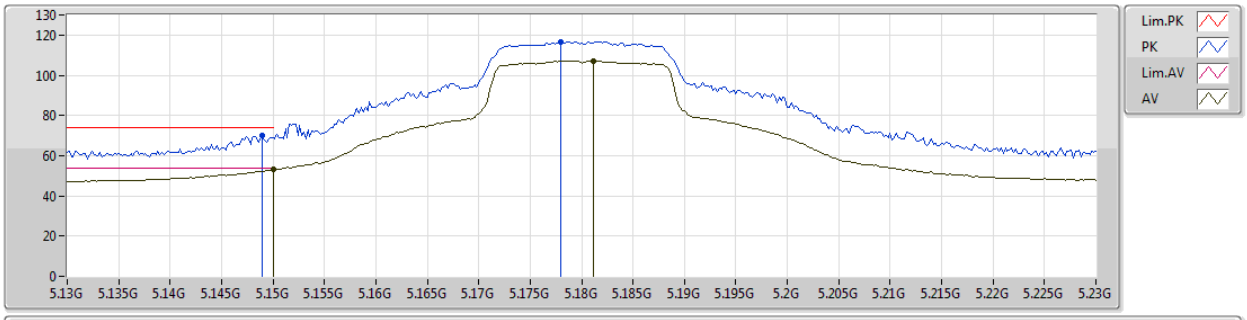
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
5.15-5.25GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11a-BF_Nss1,(6Mbps)_2TX	Pass	AV	5.15G	52.96	54.00	-1.04	7.27	3	Vertical	340	1.80	-

802.11a-BF_Nss1,(6Mbps)_2TX

5180MHz_TX

27/11/2018



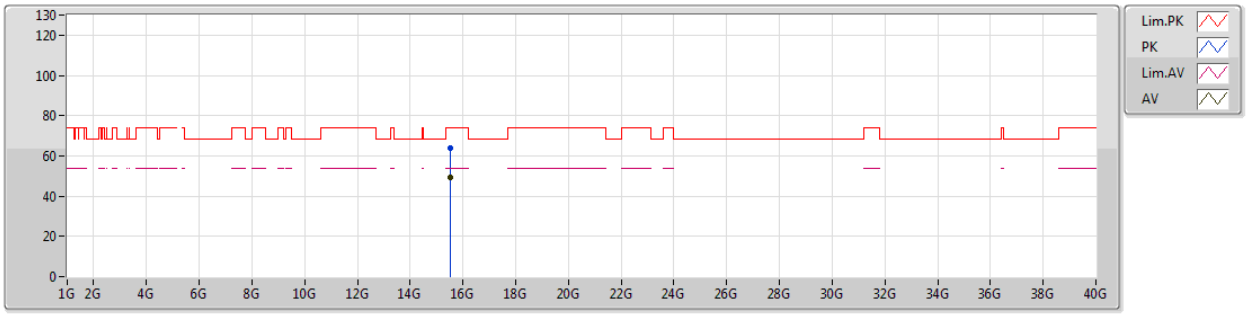
EUT Z_2TX
Setting 27
06-W-3-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.149G	69.90	74.00	-4.10	7.27	3	Vertical	340	1.80	-
AV	5.15G	52.96	54.00	-1.04	7.27	3	Vertical	340	1.80	-
PK	5.178G	116.67	Inf	-Inf	7.33	3	Vertical	340	1.80	-
AV	5.1812G	107.19	Inf	-Inf	7.33	3	Vertical	340	1.80	-

802.11a-BF_Nss1,(6Mbps)_2TX

5180MHz_TX

27/11/2018



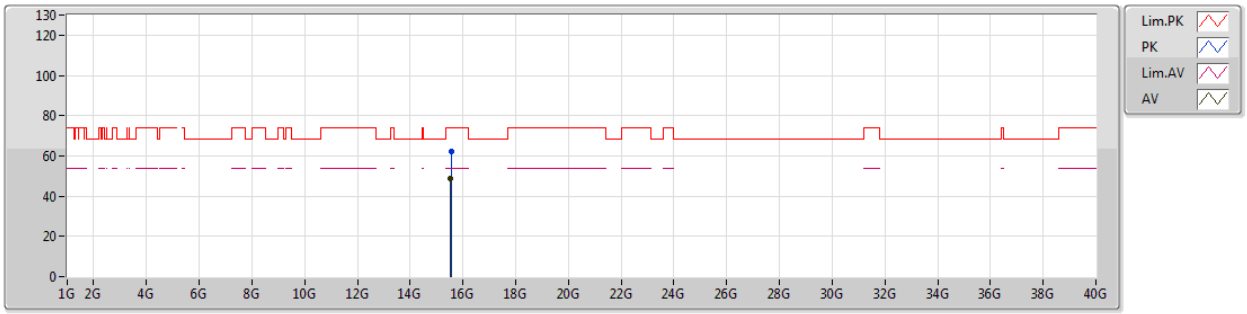
EUT Z_2TX
Setting 27
06-W-3
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.54198G	63.71	74.00	-10.29	17.22	3	Vertical	71	2.03	-
AV	15.54024G	49.48	54.00	-4.52	17.23	3	Vertical	71	2.03	-

802.11a-BF_Nss1,(6Mbps)_2TX

5180MHz_TX

27/11/2018



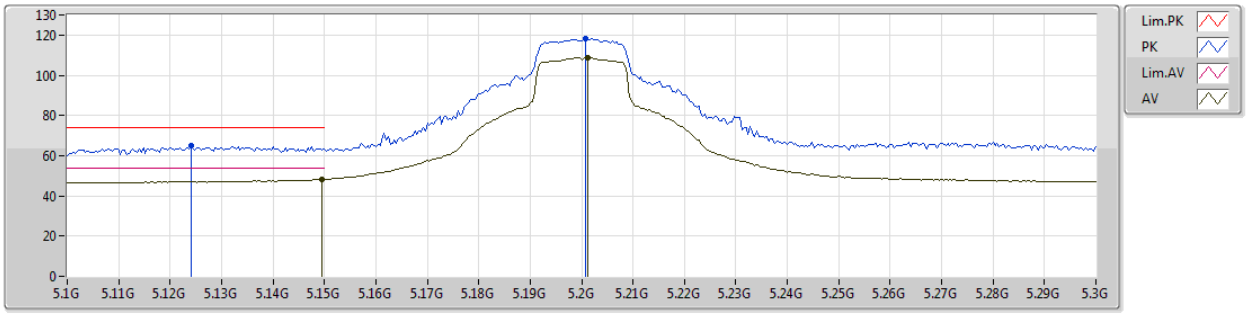
EUT Z_2TX
Setting 27
06-W-3
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.54546G	62.27	74.00	-11.73	17.22	3	Horizontal	40	2.61	-
AV	15.5406G	48.62	54.00	-5.38	17.23	3	Horizontal	40	2.61	-

802.11a-BF_Nss1,(6Mbps)_2TX

5200MHz_TX

28/11/2018



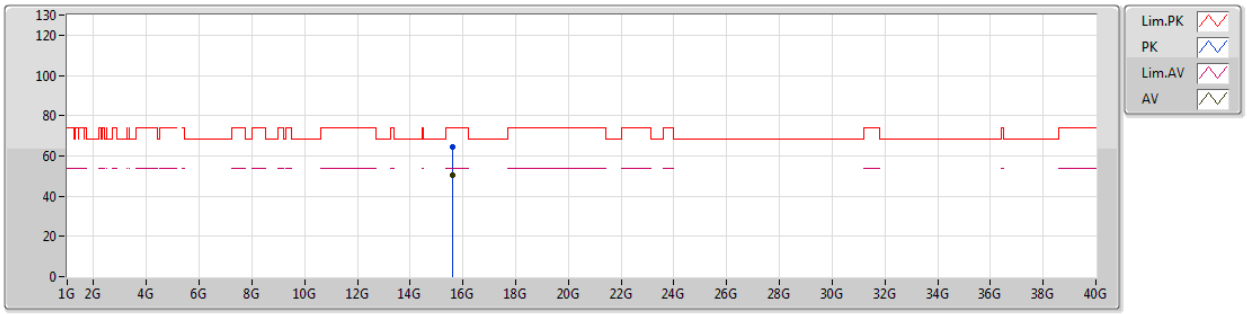
EUT Z_2TX
Setting 30
06-W-3-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.124G	64.75	74.00	-9.25	7.23	3	Vertical	339	1.81	-
AV	5.1496G	48.37	54.00	-5.63	7.27	3	Vertical	339	1.81	-
PK	5.2008G	118.14	Inf	-Inf	7.36	3	Vertical	339	1.81	-
AV	5.2012G	108.72	Inf	-Inf	7.36	3	Vertical	339	1.81	-

802.11a-BF_Nss1,(6Mbps)_2TX

5200MHz_TX

28/11/2018



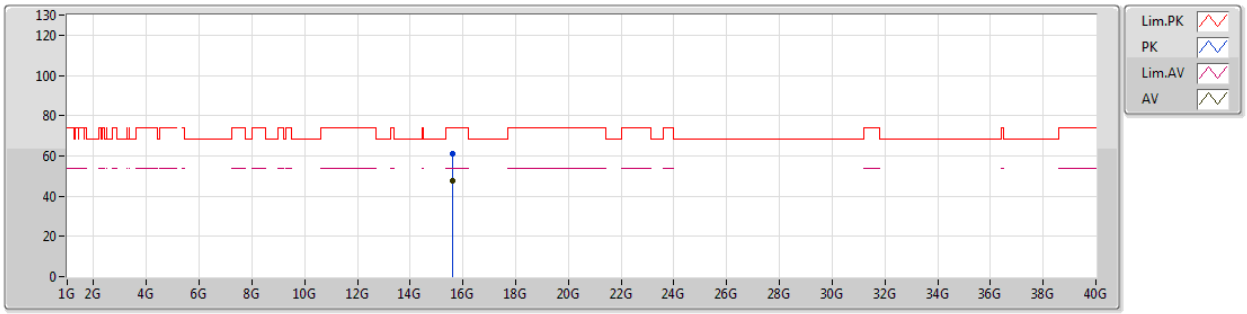
EUT Z_2TX
Setting 30
06-W-3
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.60102G	64.29	74.00	-9.71	17.15	3	Vertical	343	2.77	-
AV	15.60072G	50.65	54.00	-3.35	17.15	3	Vertical	343	2.77	-

802.11a-BF_Nss1,(6Mbps)_2TX

5200MHz_TX

28/11/2018



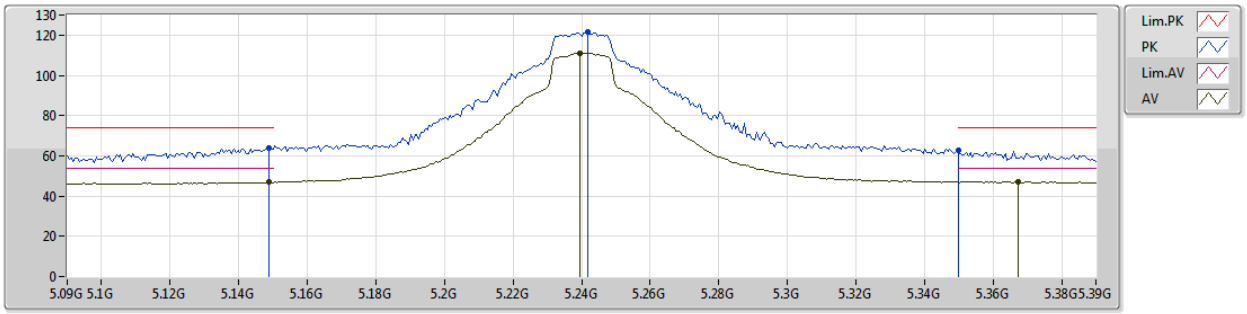
EUT Z_2TX
Setting 30
06-W-3
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.61062G	61.04	74.00	-12.96	17.13	3	Horizontal	1	1.50	-
AV	15.5883G	47.39	54.00	-6.61	17.17	3	Horizontal	1	1.50	-

802.11a-BF_Nss1,(6Mbps)_2TX

5240MHz_TX

28/11/2018



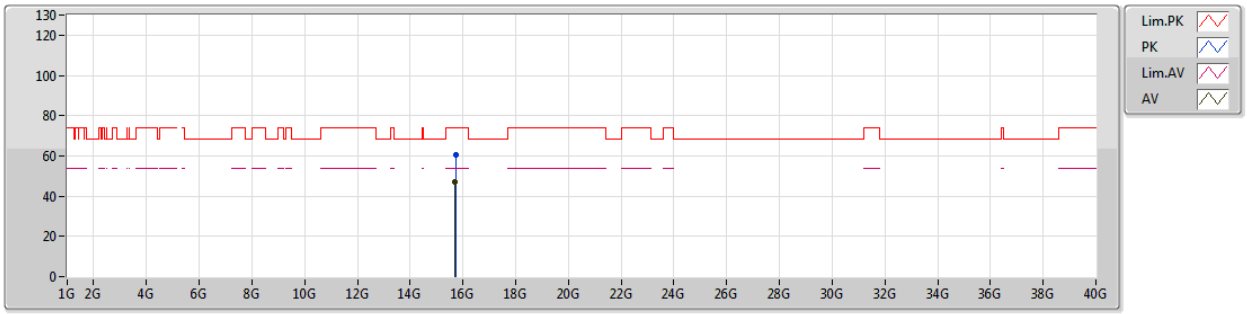
EUT Z_2TX
Setting 35
06-W-3-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.1488G	63.92	74.00	-10.08	7.27	3	Vertical	344	1.87	-
AV	5.1488G	46.82	54.00	-7.18	7.27	3	Vertical	344	1.87	-
PK	5.2418G	121.42	Inf	-Inf	7.42	3	Vertical	344	1.87	-
AV	5.2394G	111.05	Inf	-Inf	7.40	3	Vertical	344	1.87	-
PK	5.35G	62.49	74.00	-11.51	7.55	3	Vertical	344	1.87	-
AV	5.3672G	47.19	54.00	-6.81	7.57	3	Vertical	344	1.87	-

802.11a-BF_Nss1,(6Mbps)_2TX

5240MHz_TX

28/11/2018



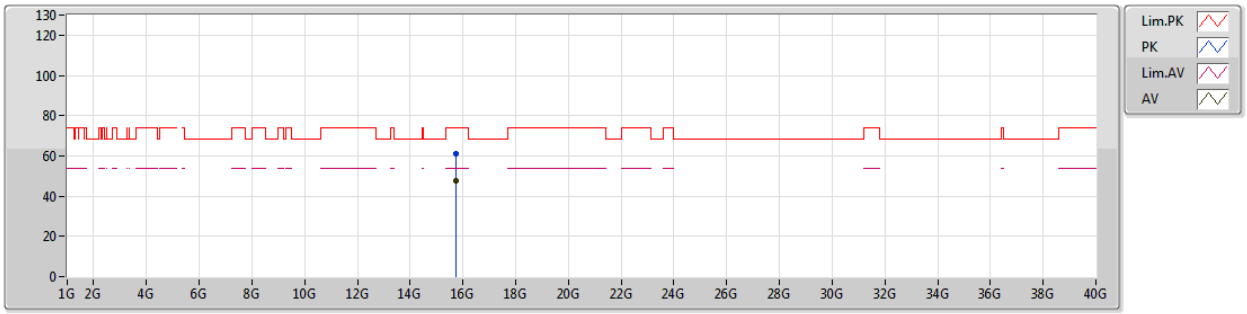
EUT Z_2TX
Setting 35
06-W-3
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.71892G	60.63	74.00	-13.37	16.91	3	Vertical	96	2.95	-
AV	15.71022G	46.79	54.00	-7.21	16.92	3	Vertical	96	2.95	-

802.11a-BF_Nss1,(6Mbps)_2TX

5240MHz_TX

28/11/2018



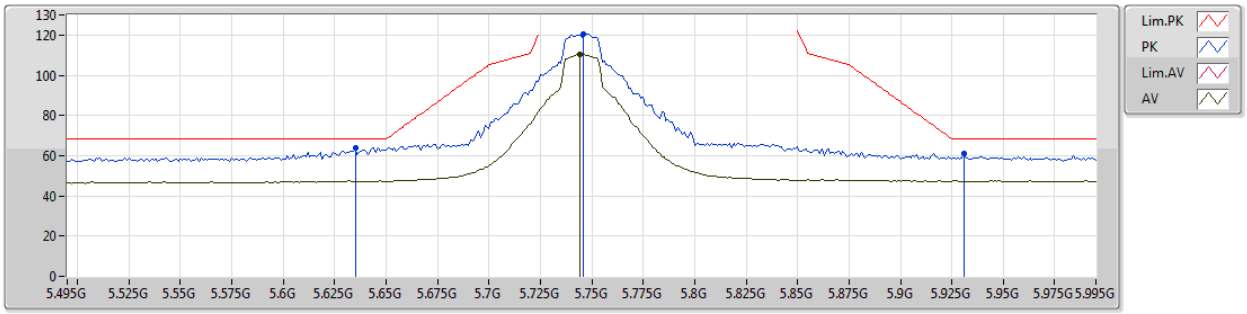
EUT Z_2TX
Setting 35
04-E-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.71936G	61.22	74.00	-12.78	15.91	3	Horizontal	58	1.34	-
AV	15.71728G	47.80	54.00	-6.20	15.92	3	Horizontal	58	1.34	-

802.11a-BF_Nss1,(6Mbps)_2TX

5745MHz_TX

27/11/2018



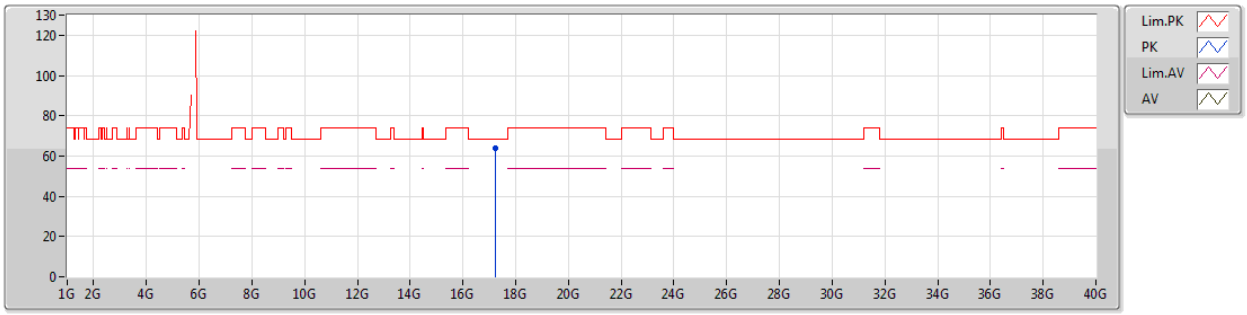
EUT Z_2TX
Setting 35
06-W-3-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.635G	63.97	68.20	-4.23	8.01	3	Vertical	21	1.93	-
PK	5.746G	120.56	Inf	-Inf	8.18	3	Vertical	21	1.93	-
AV	5.744G	110.30	Inf	-Inf	8.18	3	Vertical	21	1.93	-
PK	5.931G	60.94	68.20	-7.26	8.57	3	Vertical	21	1.93	-

802.11a-BF_Nss1,(6Mbps)_2TX

5745MHz_TX

27/11/2018



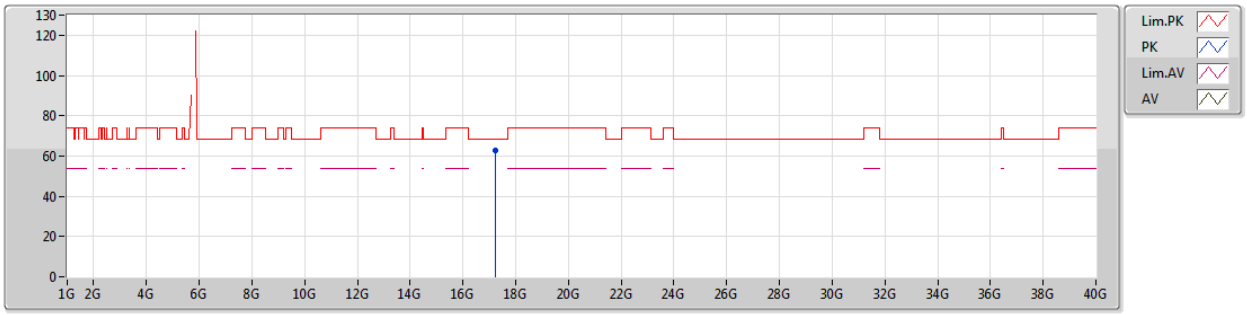
EUT Z_2TX
Setting 35
06-W-3
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	17.24712G	64.02	68.20	-4.18	21.39	3	Vertical	2	1.50	-

802.11a-BF_Nss1,(6Mbps)_2TX

5745MHz_TX

28/11/2018



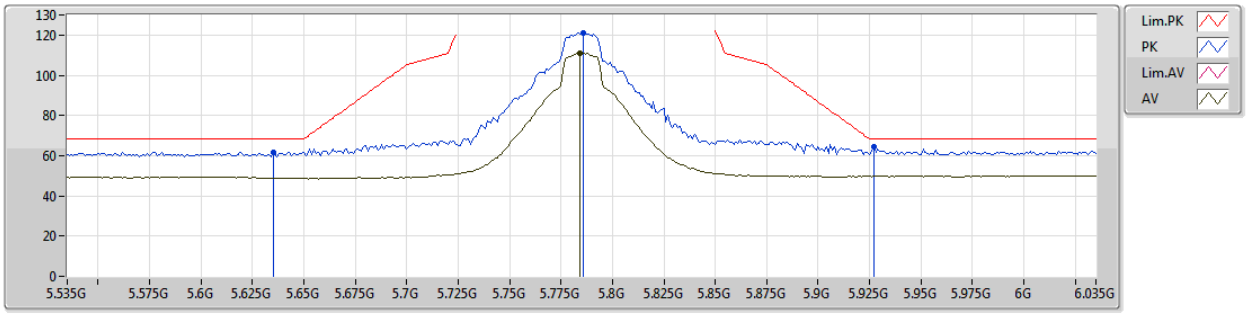
EUT Z_2TX
Setting 35
04-E-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	17.24448G	62.95	68.20	-5.25	18.17	3	Horizontal	109	2.94	-

802.11a-BF_Nss1,(6Mbps)_2TX

5785MHz_TX

28/11/2018



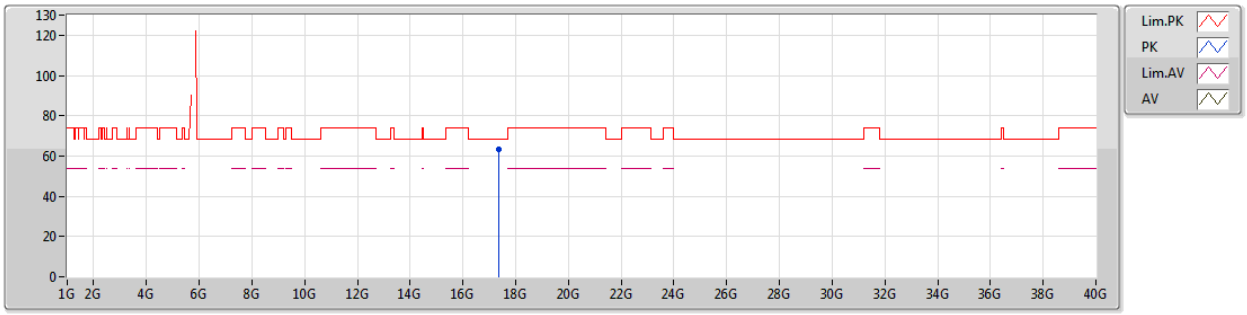
EUT Z_2TX
Setting 35
04-E-4-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.635G	61.88	68.20	-6.32	9.33	3	Vertical	9	2.08	-
PK	5.786G	121.26	Inf	-Inf	9.40	3	Vertical	9	2.08	-
AV	5.784G	111.03	Inf	-Inf	9.40	3	Vertical	9	2.08	-
PK	5.927G	64.33	68.20	-3.87	10.21	3	Vertical	9	2.08	-

802.11a-BF_Nss1,(6Mbps)_2TX

5785MHz_TX

28/11/2018



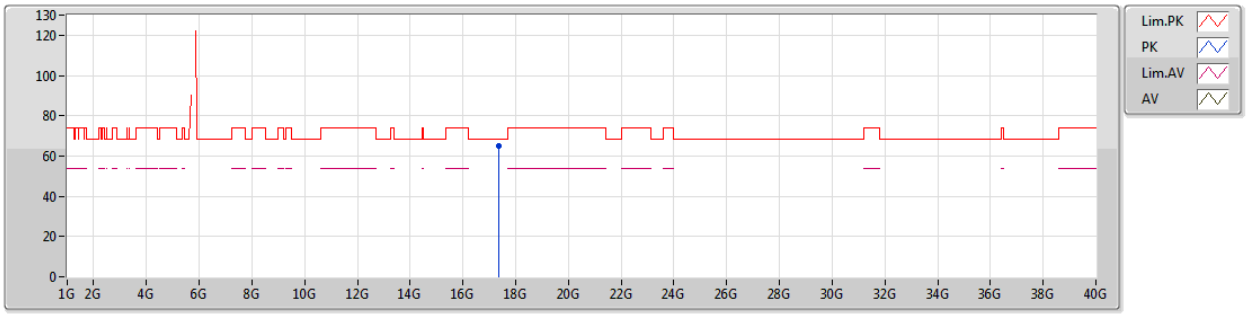
EUT Z_2TX
Setting 35
04-E-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	17.35544G	63.32	68.20	-4.88	18.35	3	Vertical	163	2.96	-

802.11a-BF_Nss1,(6Mbps)_2TX

5785MHz_TX

28/11/2018



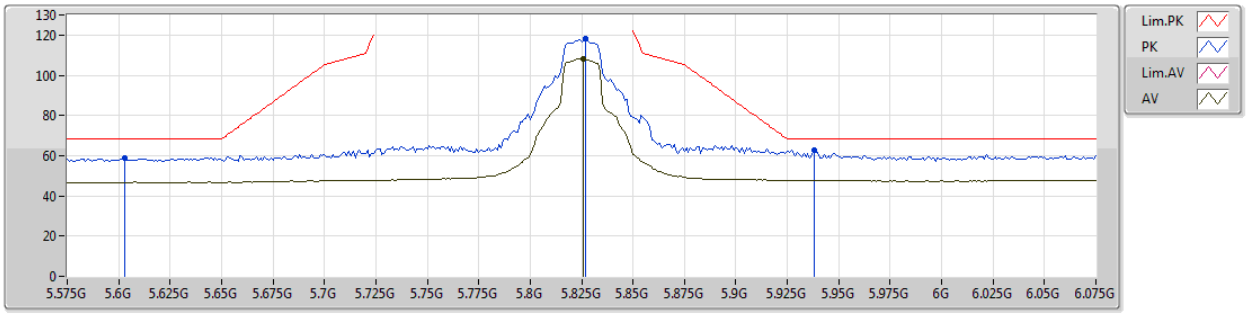
EUT Z_2TX
Setting 35
04-E-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	17.3522G	65.17	68.20	-3.03	18.33	3	Horizontal	68	2.92	-

802.11a-BF_Nss1,(6Mbps)_2TX

5825MHz_TX

27/11/2018



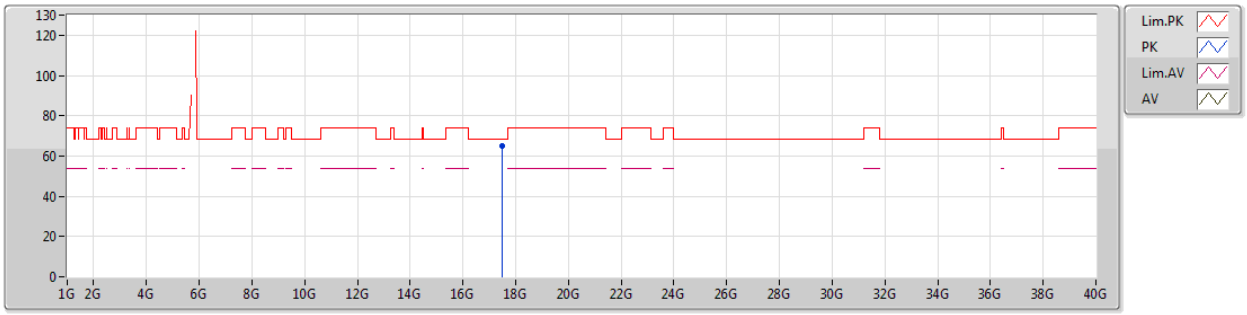
EUT Z_2TX
Setting 30
06-W-3-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.603G	58.90	68.20	-9.30	7.95	3	Vertical	357	1.88	-
PK	5.827G	118.22	Inf	-Inf	8.33	3	Vertical	357	1.88	-
AV	5.826G	108.13	Inf	-Inf	8.33	3	Vertical	357	1.88	-
PK	5.938G	62.98	68.20	-5.22	8.58	3	Vertical	357	1.88	-

802.11a-BF_Nss1,(6Mbps)_2TX

5825MHz_TX

27/11/2018



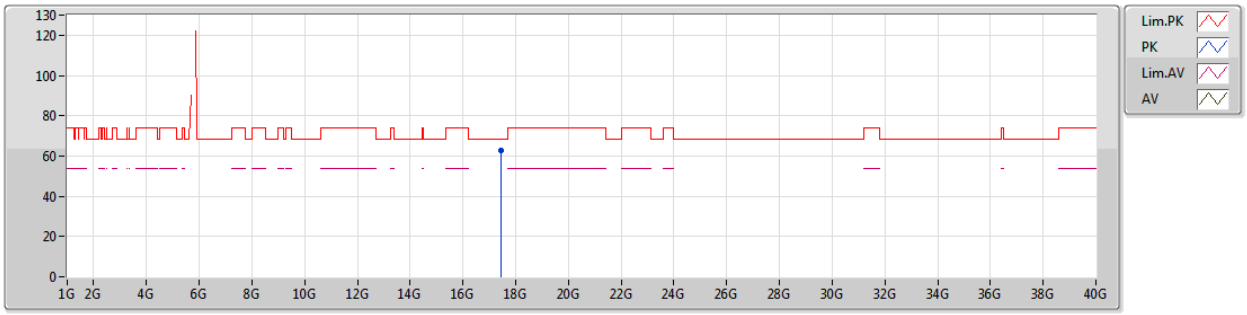
EUT Z_2TX
Setting 30
06-W-3
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	17.47422G	64.95	68.20	-3.25	22.29	3	Vertical	33	2.97	-

802.11a-BF_Nss1,(6Mbps)_2TX

5825MHz_TX

28/11/2018



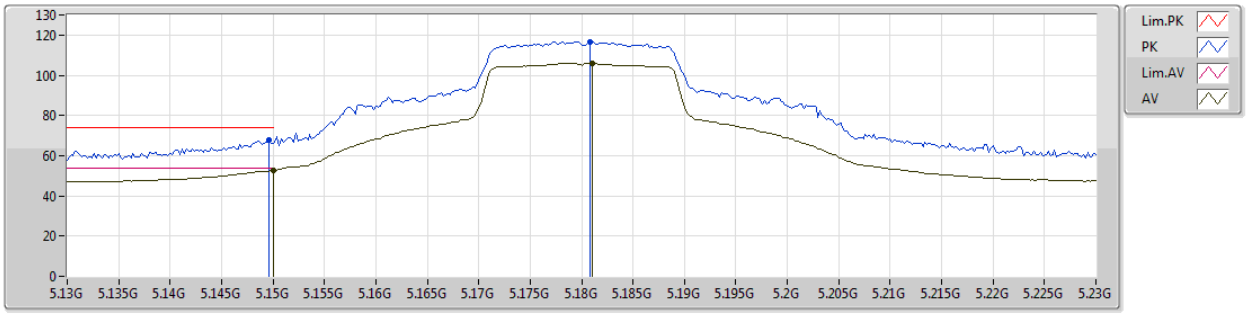
EUT Z_2TX
Setting 30
04-E-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	17.4583G	62.93	68.20	-5.27	18.50	3	Horizontal	164	1.50	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5180MHz_TX

27/11/2018



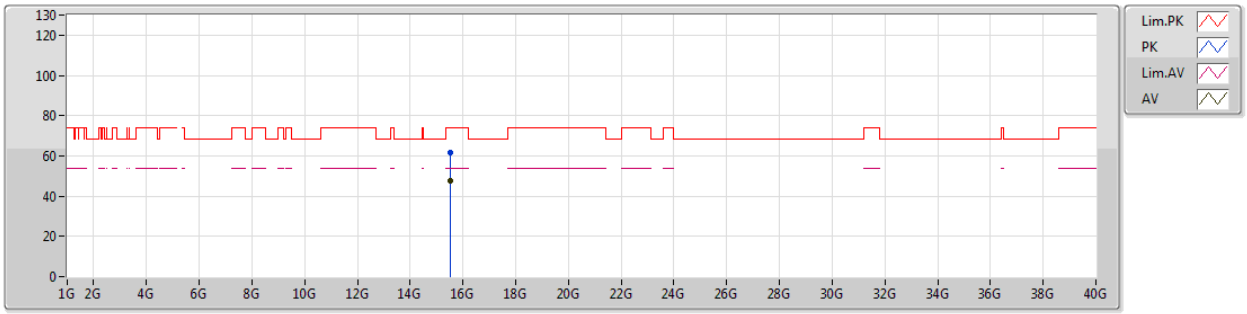
EUT Z_2TX
Setting 29
06-W-3-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.1496G	67.64	74.00	-6.36	7.27	3	Vertical	22	2.09	-
AV	5.15G	52.63	54.00	-1.37	7.27	3	Vertical	22	2.09	-
PK	5.1808G	116.44	Inf	-Inf	7.33	3	Vertical	22	2.09	-
AV	5.181G	106.05	Inf	-Inf	7.33	3	Vertical	22	2.09	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5180MHz_TX

27/11/2018



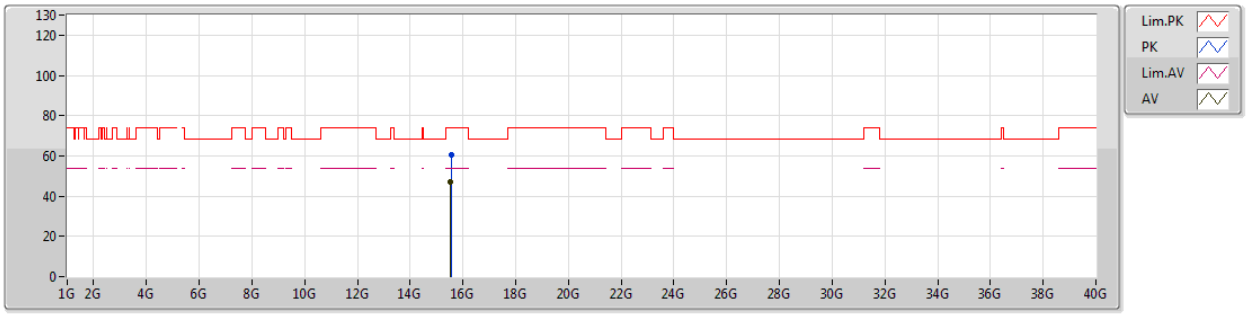
EUT Z_2TX
Setting 29
06-W-3
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.53934G	61.68	74.00	-12.32	17.23	3	Vertical	325	2.02	-
AV	15.53712G	47.64	54.00	-6.36	17.23	3	Vertical	325	2.02	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5180MHz_TX

27/11/2018



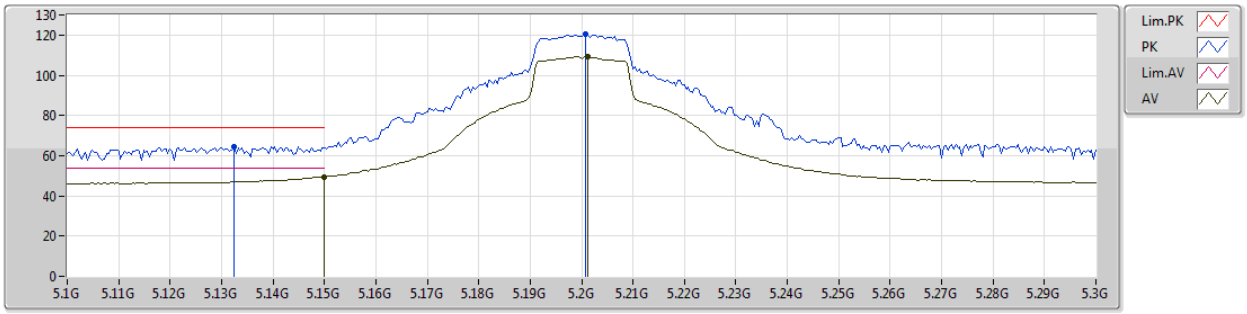
EUT Z_2TX
Setting 29
06-W-3
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.54828G	60.52	74.00	-13.48	17.21	3	Horizontal	170	2.51	-
AV	15.53226G	46.90	54.00	-7.10	17.24	3	Horizontal	170	2.51	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5200MHz_TX

27/11/2018



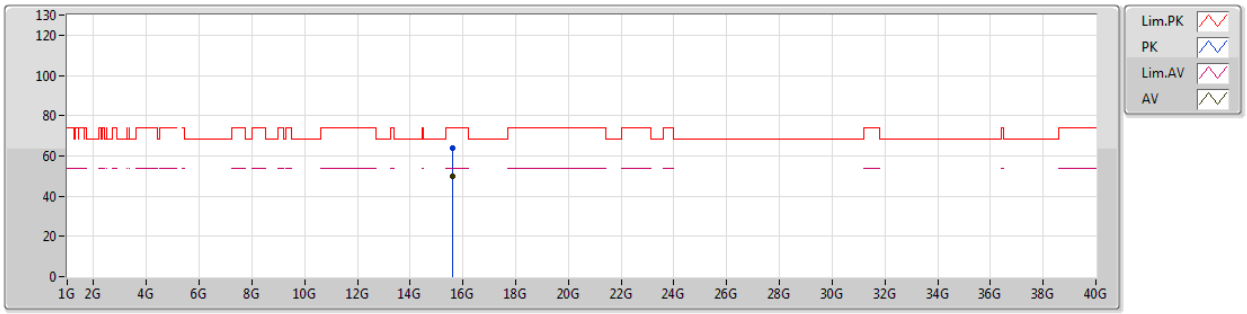
EUT Z_2TX
Setting 34
06-W-3-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.1324G	64.41	74.00	-9.59	7.25	3	Vertical	340	1.78	-
AV	5.15G	49.43	54.00	-4.57	7.27	3	Vertical	340	1.78	-
PK	5.2008G	120.46	Inf	-Inf	7.36	3	Vertical	340	1.78	-
AV	5.2012G	109.25	Inf	-Inf	7.36	3	Vertical	340	1.78	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5200MHz_TX

27/11/2018



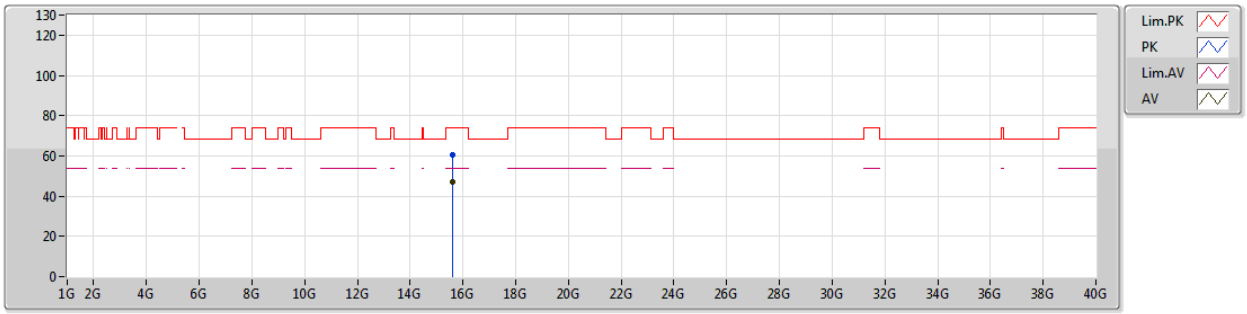
EUT Z_2TX
Setting 34
06-W-3
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.6048G	63.70	74.00	-10.30	17.15	3	Vertical	356	2.42	-
AV	15.59964G	50.08	54.00	-3.92	17.15	3	Vertical	356	2.42	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5200MHz_TX

28/11/2018



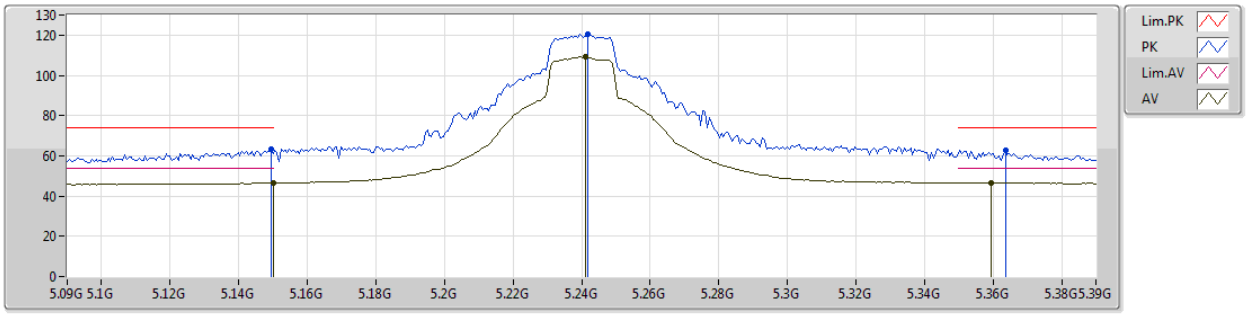
EUT Z_2TX
Setting 34
04-E-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.597G	60.67	74.00	-13.33	15.97	3	Horizontal	120	1.06	-
AV	15.60564G	46.93	54.00	-7.07	15.98	3	Horizontal	120	1.06	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5240MHz_TX

27/11/2018



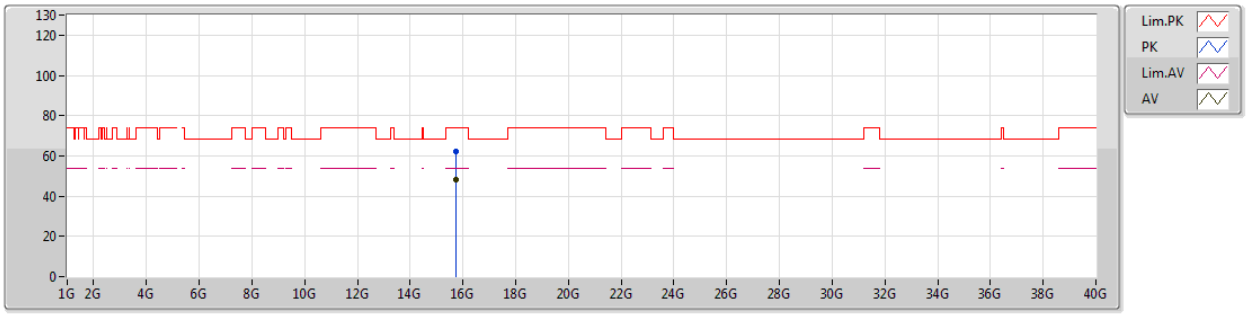
EUT Z_2TX
Setting 35
06-W-3-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.1494G	63.29	74.00	-10.71	7.27	3	Vertical	356	1.95	-
AV	5.15G	46.36	54.00	-7.64	7.27	3	Vertical	356	1.95	-
PK	5.2418G	120.68	Inf	-Inf	7.42	3	Vertical	356	1.95	-
AV	5.2412G	109.05	Inf	-Inf	7.40	3	Vertical	356	1.95	-
PK	5.3636G	62.73	74.00	-11.27	7.57	3	Vertical	356	1.95	-
AV	5.3594G	46.63	54.00	-7.37	7.57	3	Vertical	356	1.95	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5240MHz_TX

27/11/2018



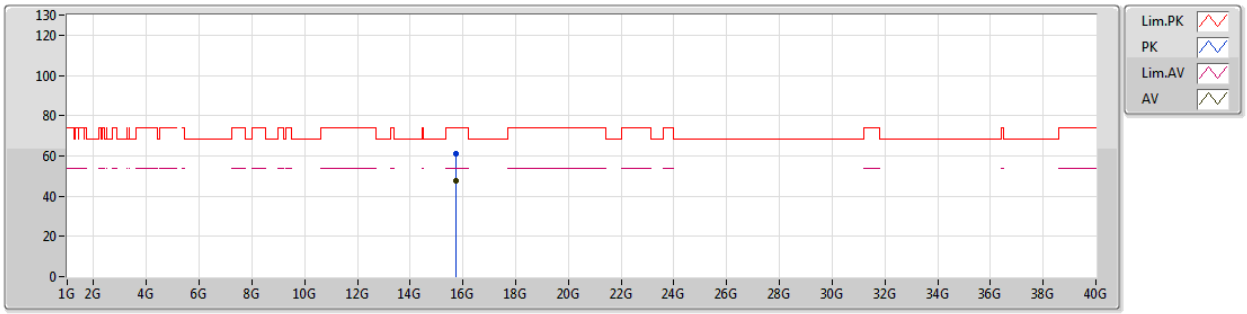
EUT Z_2TX
Setting 35
06-W-3
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.7263G	62.08	74.00	-11.92	16.91	3	Vertical	0	2.78	-
AV	15.71988G	48.01	54.00	-5.99	16.91	3	Vertical	0	2.78	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5240MHz_TX

28/11/2018



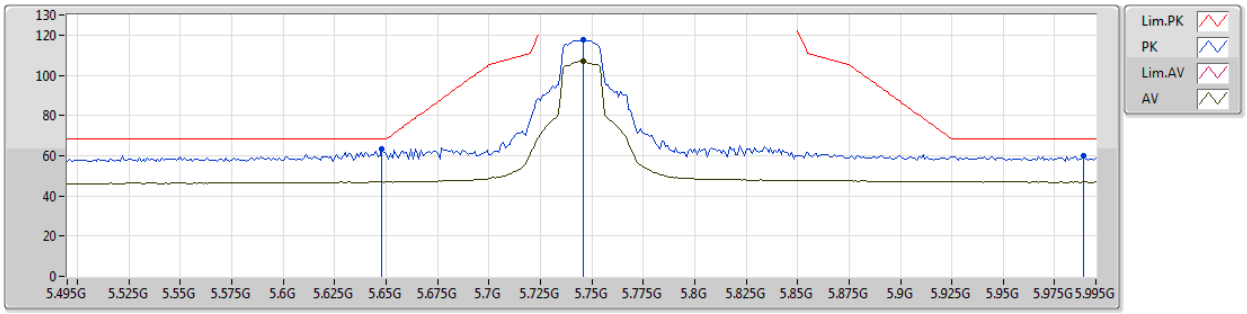
EUT Z_2TX
Setting 35
04-E-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.7243G	61.32	74.00	-12.68	15.91	3	Horizontal	121	1.50	-
AV	15.7422G	47.36	54.00	-6.64	15.90	3	Horizontal	121	1.50	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5745MHz_TX

28/11/2018



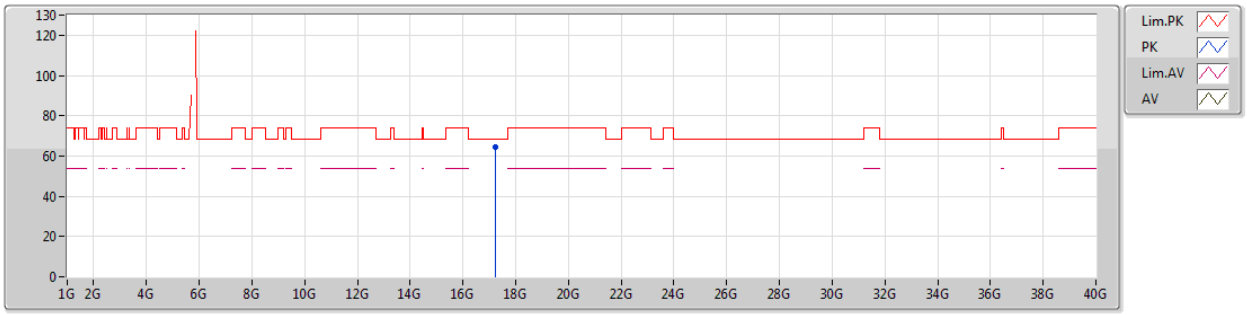
EUT Z_2TX
Setting 30
06-W-3-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.648G	63.07	68.20	-5.13	8.03	3	Vertical	358	1.98	-
PK	5.746G	117.55	Inf	-Inf	8.18	3	Vertical	358	1.98	-
AV	5.746G	106.81	Inf	-Inf	8.18	3	Vertical	358	1.98	-
PK	5.989G	59.80	68.20	-8.40	8.69	3	Vertical	358	1.98	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5745MHz_TX

28/11/2018



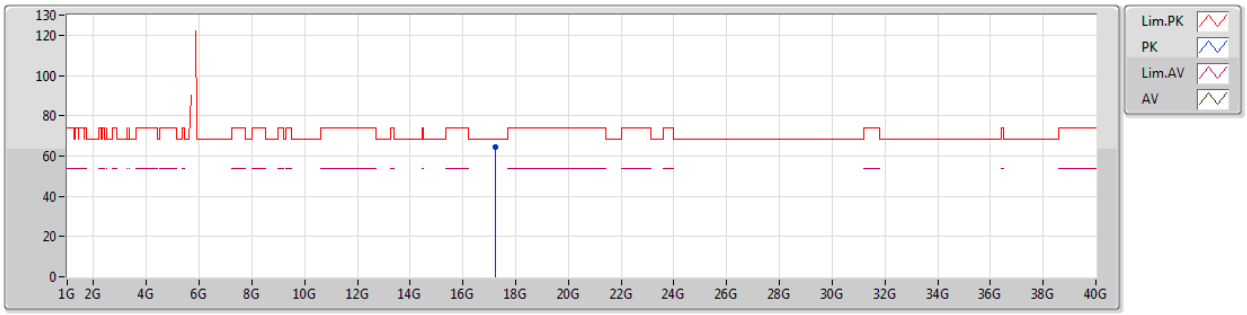
EUT Z_2TX
Setting 30
06-W-3
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	17.23158G	64.59	68.20	-3.61	21.33	3	Vertical	94	1.50	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5745MHz_TX

28/11/2018



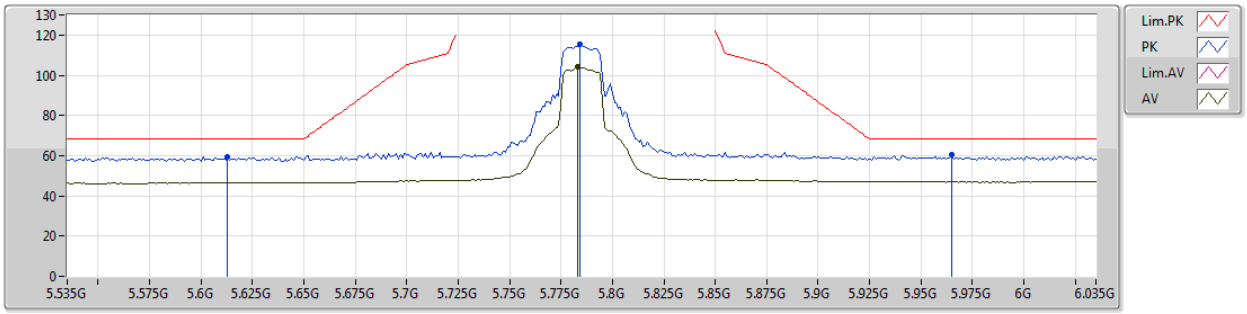
EUT Z_2TX
Setting 30
06-W-3
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	17.2395G	64.36	68.20	-3.84	21.36	3	Horizontal	14	1.06	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5785MHz_TX

28/11/2018



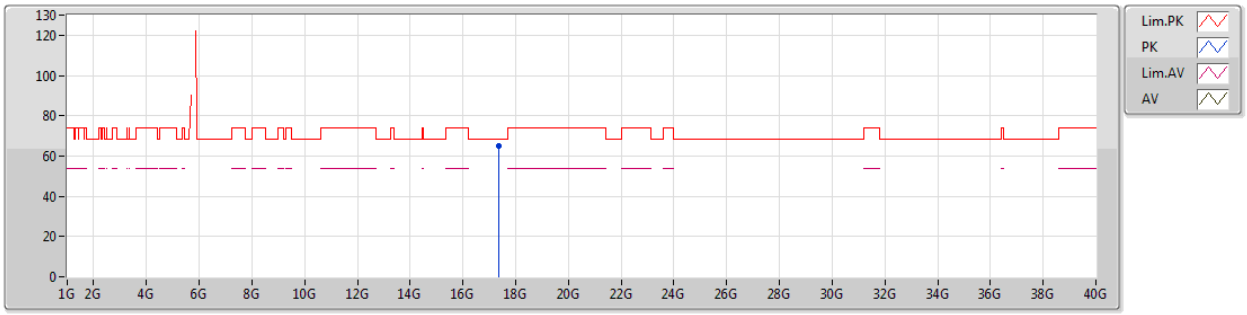
EUT Z_2TX
Setting 30
06-W-3-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.613G	59.41	68.20	-8.79	7.98	3	Vertical	0	1.89	-
PK	5.784G	115.32	Inf	-Inf	8.25	3	Vertical	0	1.89	-
AV	5.783G	104.01	Inf	-Inf	8.25	3	Vertical	0	1.89	-
PK	5.965G	60.58	68.20	-7.62	8.64	3	Vertical	0	1.89	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5785MHz_TX

28/11/2018



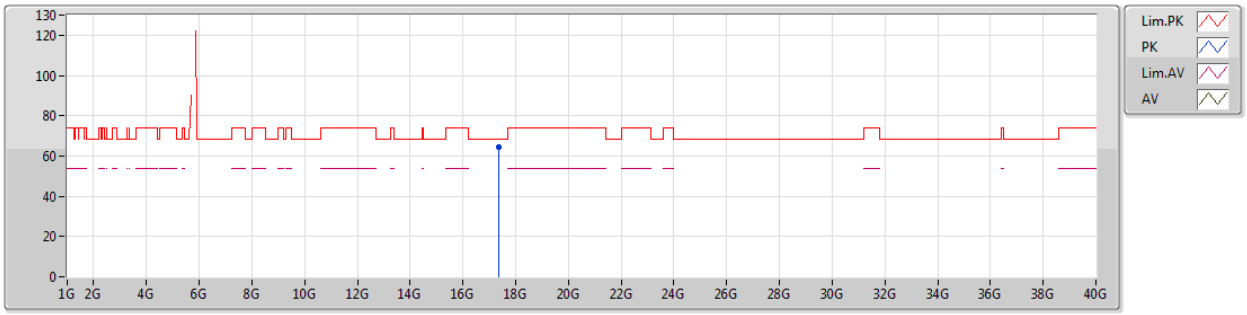
EUT Z_2TX
Setting 30
06-W-3
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	17.34036G	65.08	68.20	-3.12	21.76	3	Vertical	358	1.50	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5785MHz_TX

28/11/2018



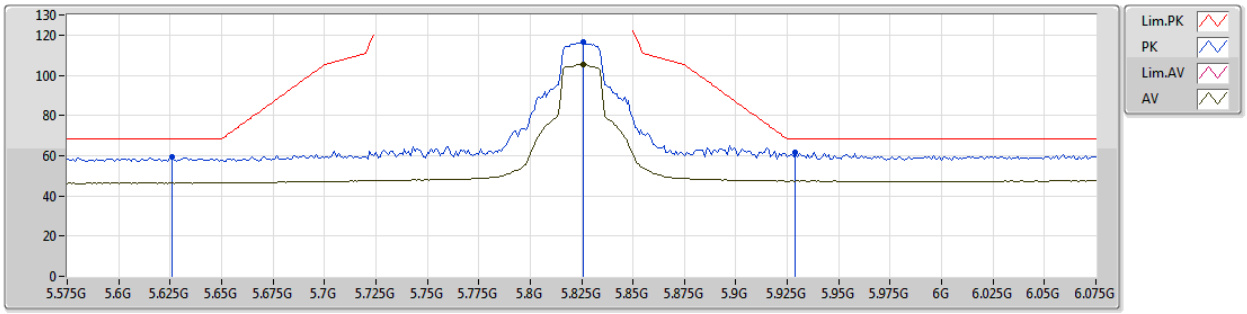
EUT Z_2TX
Setting 30
06-W-3
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	17.3442G	64.65	68.20	-3.55	21.78	3	Horizontal	188	1.51	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5825MHz_TX

28/11/2018



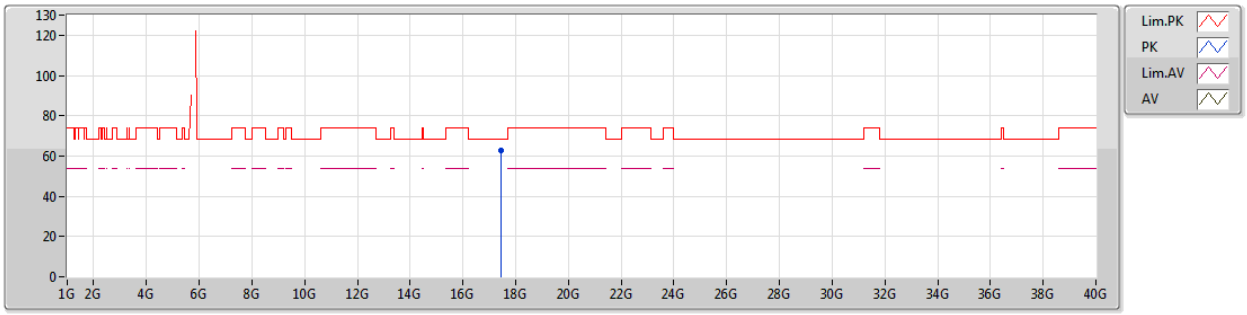
EUT Z_2TX
Setting 30
06-W-3-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.626G	59.22	68.20	-8.98	7.99	3	Vertical	316	2.24	-
PK	5.826G	116.71	Inf	-Inf	8.33	3	Vertical	316	2.24	-
AV	5.826G	105.44	Inf	-Inf	8.33	3	Vertical	316	2.24	-
PK	5.929G	61.85	68.20	-6.35	8.56	3	Vertical	316	2.24	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5825MHz_TX

28/11/2018



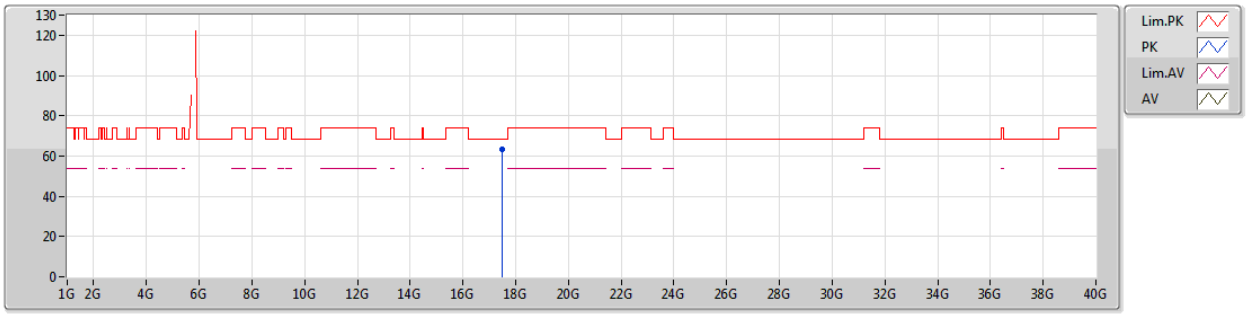
EUT Z_2TX
Setting 30
04-E-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	17.4558G	62.97	68.20	-5.23	18.50	3	Vertical	130	1.50	-

802.11ac VHT20-BF_Nss1,(MCS0)_2TX

5825MHz_TX

28/11/2018



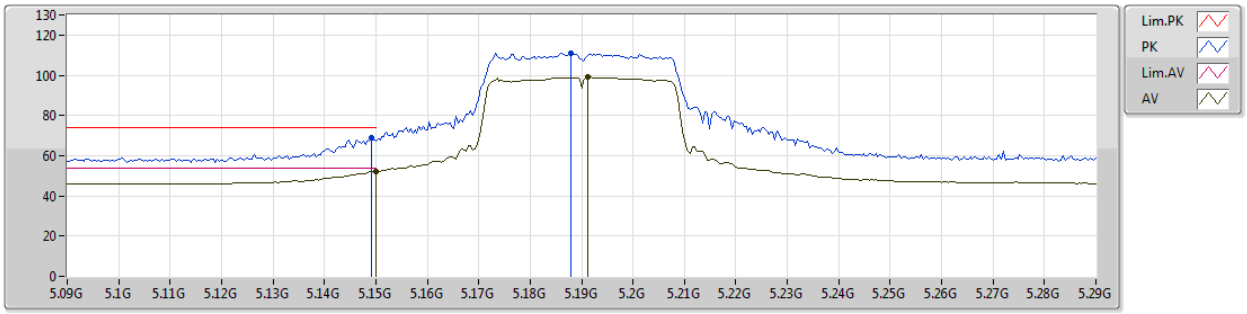
EUT Z_2TX
Setting 30
04-E-4
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	17.4921G	63.21	68.20	-4.99	18.55	3	Horizontal	359	1.50	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5190MHz_TX

28/11/2018



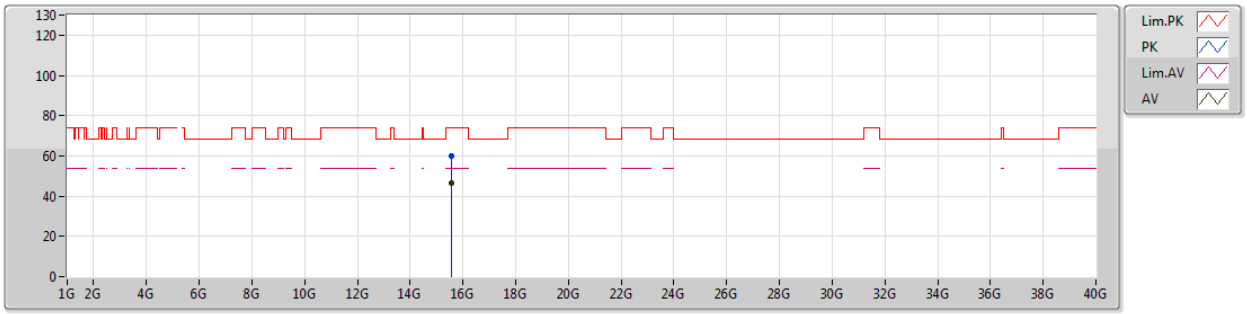
EUT Z_2TX
Setting 18
06-W-3-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.1492G	68.79	74.00	-5.21	7.27	3	Vertical	352	1.68	-
AV	5.15G	52.03	54.00	-1.97	7.27	3	Vertical	352	1.68	-
PK	5.188G	111.07	Inf	-Inf	7.34	3	Vertical	352	1.68	-
AV	5.1912G	99.13	Inf	-Inf	7.34	3	Vertical	352	1.68	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5190MHz_TX

28/11/2018



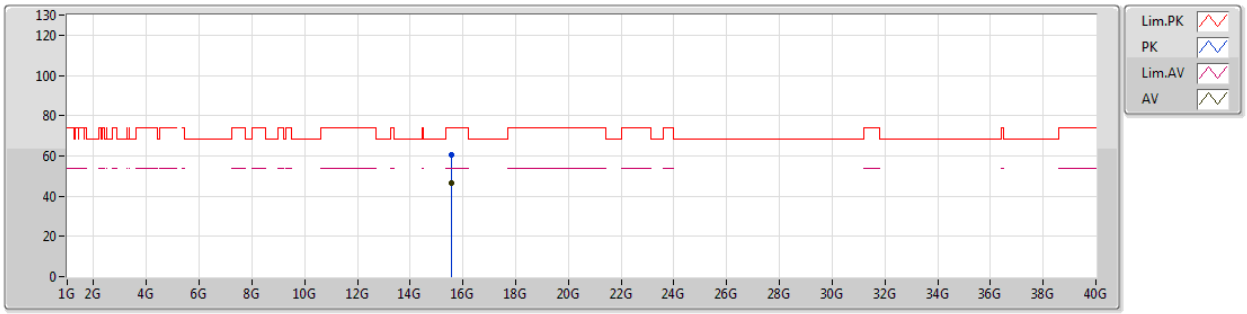
EUT Z_2TX
Setting 18
06-W-3
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.57228G	60.12	74.00	-13.88	17.18	3	Vertical	351	2.67	-
AV	15.55728G	46.53	54.00	-7.47	17.20	3	Vertical	351	2.67	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5190MHz_TX

28/11/2018



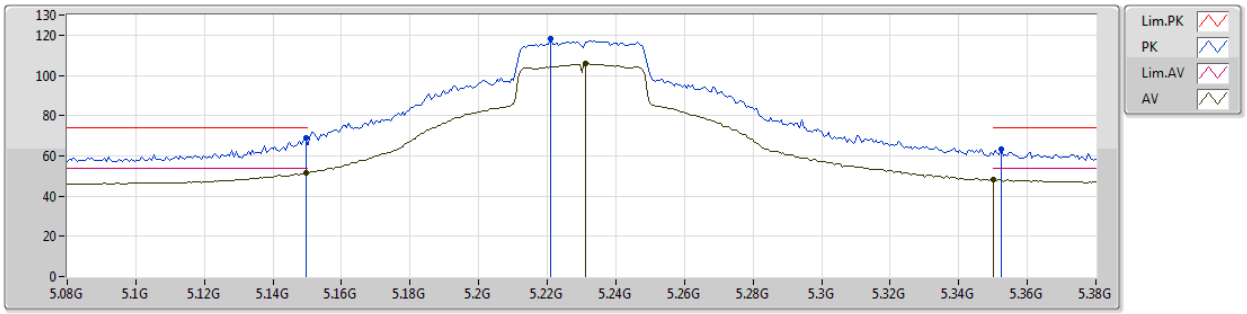
EUT Z_2TX
Setting 18
06-W-3
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.56616G	60.44	74.00	-13.56	17.19	3	Horizontal	338	1.50	-
AV	15.55722G	46.41	54.00	-7.59	17.20	3	Horizontal	338	1.50	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5230MHz_TX

28/11/2018



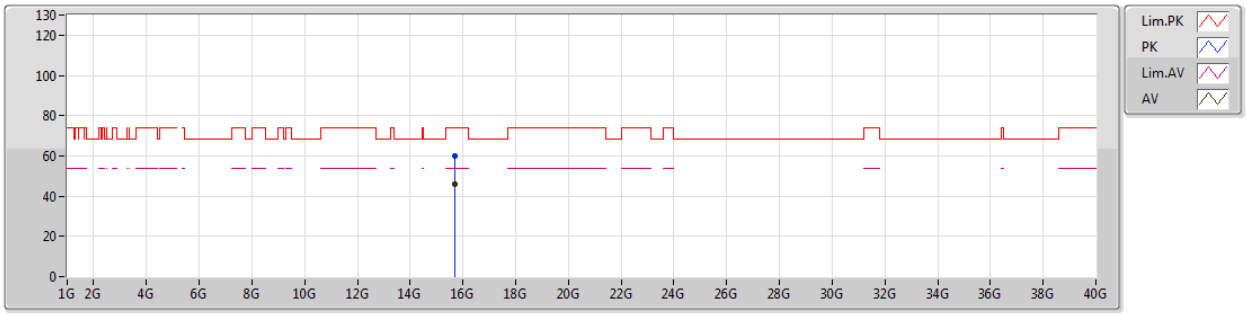
EUT Z_2TX
Setting 35
06-W-3-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.1496G	68.66	74.00	-5.34	7.27	3	Vertical	19	2.03	-
AV	5.1496G	51.50	54.00	-2.50	7.27	3	Vertical	19	2.03	-
PK	5.221G	118.33	Inf	-Inf	7.38	3	Vertical	19	2.03	-
AV	5.2312G	105.84	Inf	-Inf	7.40	3	Vertical	19	2.03	-
PK	5.3524G	63.20	74.00	-10.80	7.55	3	Vertical	19	2.03	-
AV	5.35G	48.22	54.00	-5.78	7.55	3	Vertical	19	2.03	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5230MHz_TX

28/11/2018



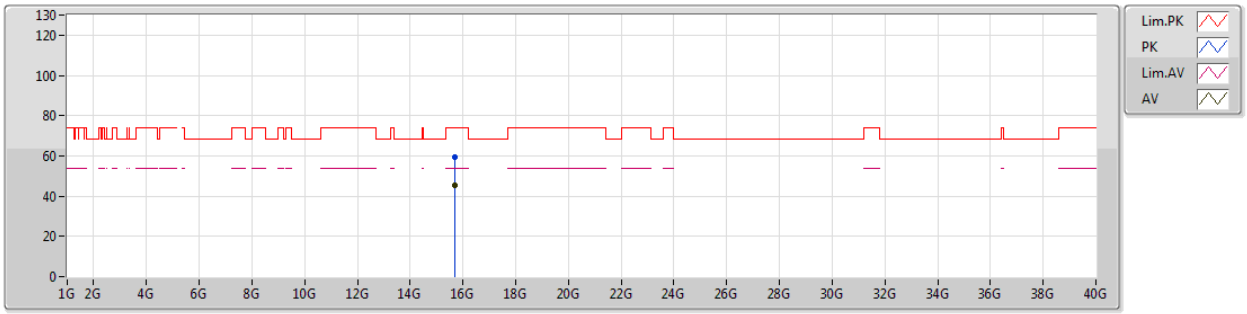
EUT Z_2TX
Setting 35
06-W-3
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.68568G	59.96	74.00	-14.04	16.98	3	Vertical	71	2.14	-
AV	15.68586G	46.20	54.00	-7.80	16.98	3	Vertical	71	2.14	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5230MHz_TX

28/11/2018



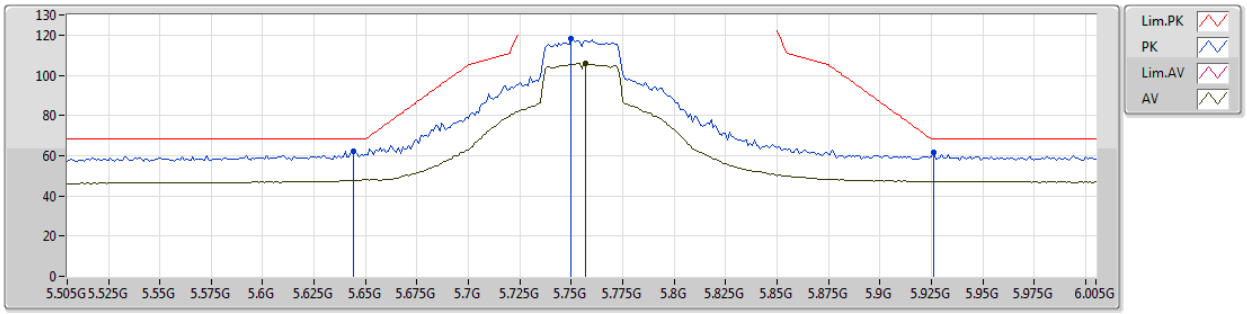
EUT Z_2TX
Setting 35
06-W-3
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.68934G	59.38	74.00	-14.62	16.97	3	Horizontal	98	1.50	-
AV	15.675G	45.48	54.00	-8.52	16.99	3	Horizontal	98	1.50	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5755MHz_TX

28/11/2018



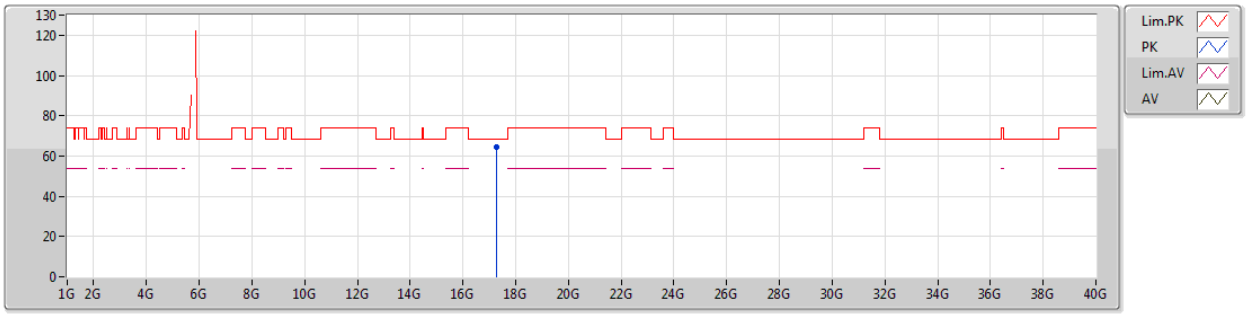
EUT Z_2TX
Setting 35
06-W-3-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.644G	62.31	68.20	-5.89	8.02	3	Vertical	356	1.98	-
PK	5.75G	118.21	Inf	-Inf	8.19	3	Vertical	356	1.98	-
AV	5.757G	106.04	Inf	-Inf	8.20	3	Vertical	356	1.98	-
PK	5.926G	61.53	68.20	-6.67	8.56	3	Vertical	356	1.98	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5755MHz_TX

28/11/2018



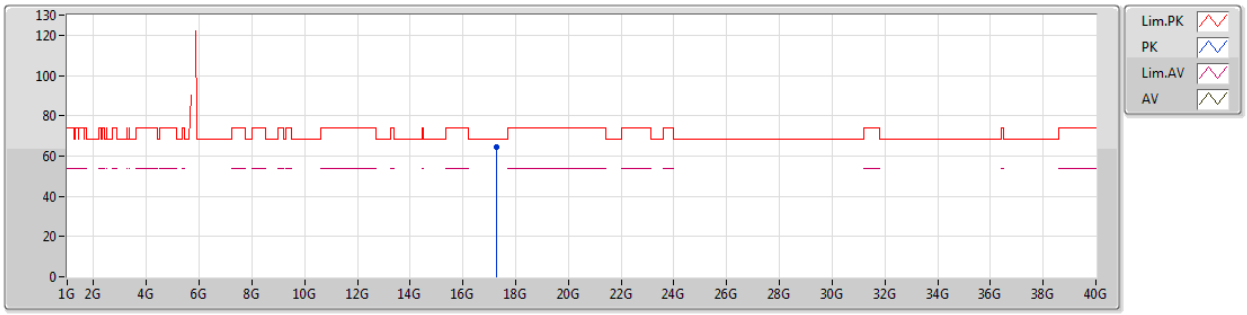
EUT Z_2TX
Setting 35
06-W-3
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	17.25384G	64.42	68.20	-3.78	21.41	3	Vertical	260	1.89	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5755MHz_TX

28/11/2018



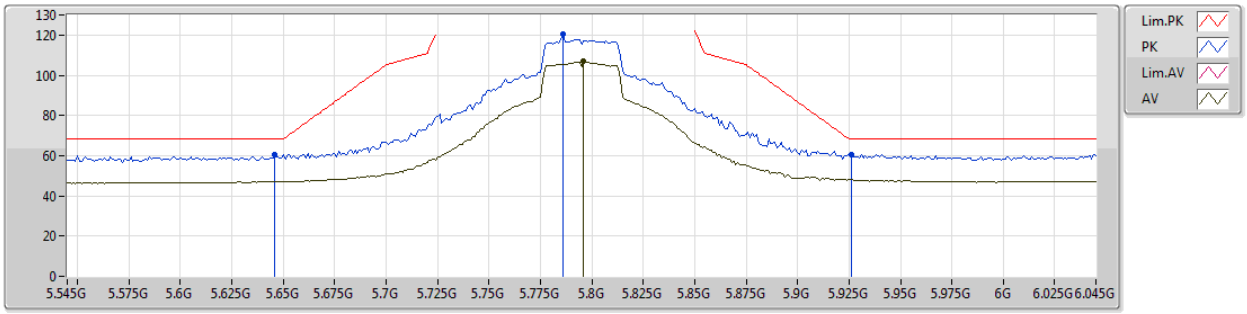
EUT Z_2TX
Setting 35
06-W-3
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	17.25792G	64.17	68.20	-4.03	21.43	3	Horizontal	3	2.90	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5795MHz_TX

28/11/2018



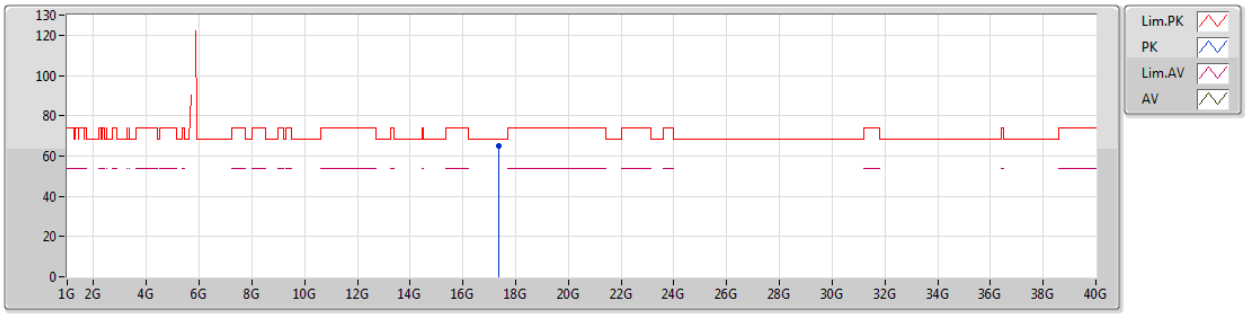
EUT Z_2TX
Setting 35
06-W-3-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.646G	60.40	68.20	-7.80	8.02	3	Vertical	6	2.06	-
PK	5.786G	120.34	Inf	-Inf	8.25	3	Vertical	6	2.06	-
AV	5.796G	106.75	Inf	-Inf	8.26	3	Vertical	6	2.06	-
PK	5.926G	60.62	68.20	-7.58	8.56	3	Vertical	6	2.06	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5795MHz_TX

28/11/2018



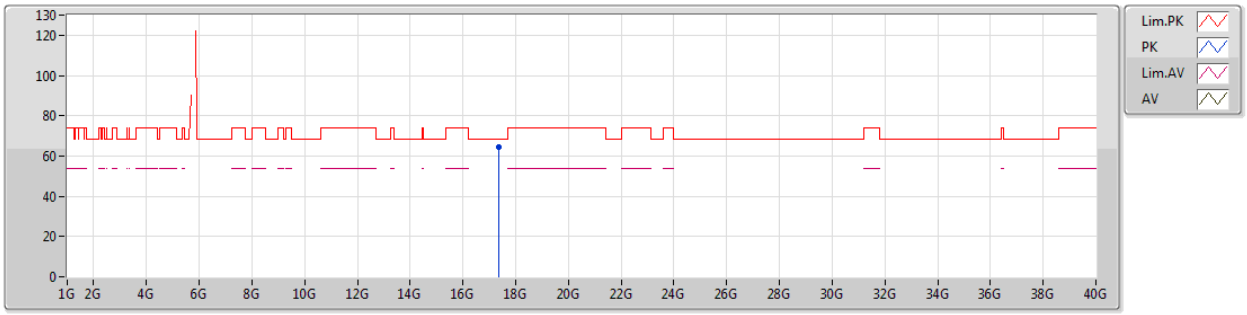
EUT Z_2TX
Setting 35
06-W-3
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	17.37144G	65.15	68.20	-3.05	21.88	3	Vertical	10	1.05	-

802.11ac VHT40-BF_Nss1,(MCS0)_2TX

5795MHz_TX

28/11/2018



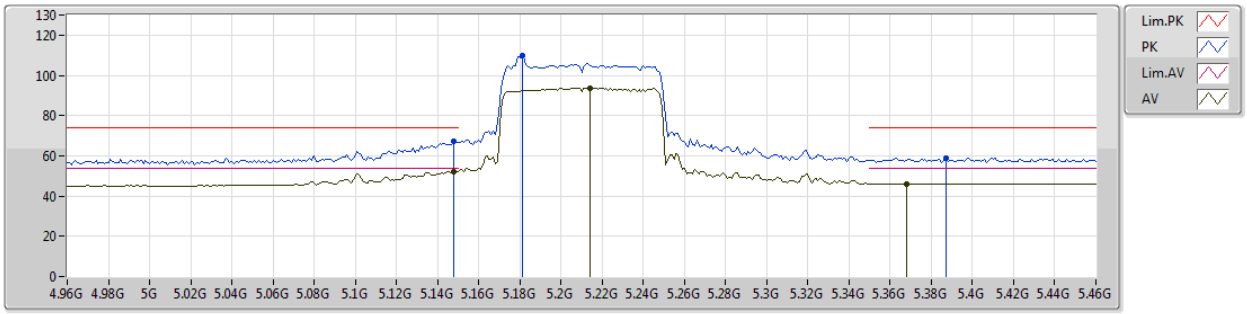
EUT Z_2TX
Setting 35
06-W-3
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	17.3763G	64.64	68.20	-3.56	21.91	3	Horizontal	68	2.89	-

802.11ac VHT80-BF_Nss1,(MCS0)_2TX

5210MHz_TX

28/11/2018



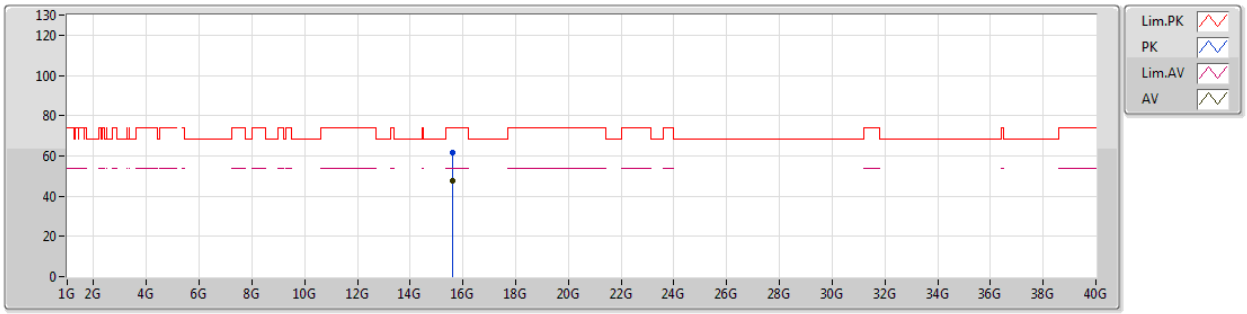
EUT Z_2TX
Setting 15
06-W-3-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.148G	67.12	74.00	-6.88	7.27	3	Vertical	322	2.02	-
AV	5.148G	52.31	54.00	-1.69	7.27	3	Vertical	322	2.02	-
PK	5.181G	109.82	Inf	-Inf	7.33	3	Vertical	322	2.02	-
AV	5.214G	93.85	Inf	-Inf	7.38	3	Vertical	322	2.02	-
PK	5.387G	58.82	74.00	-15.18	7.59	3	Vertical	322	2.02	-
AV	5.368G	46.19	54.00	-7.81	7.57	3	Vertical	322	2.02	-

802.11ac VHT80-BF_Nss1,(MCS0)_2TX

5210MHz_TX

28/11/2018



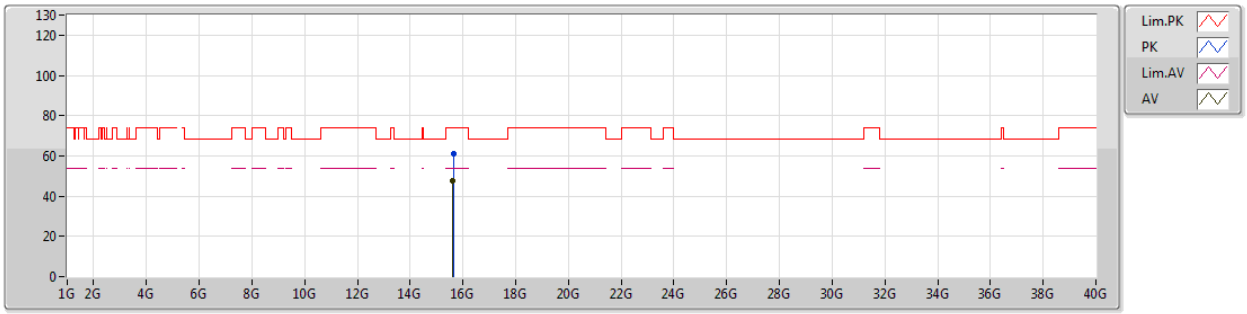
EUT Z_2TX
Setting 15
06-W-3
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.6204G	61.56	74.00	-12.44	17.11	3	Vertical	145	1.50	-
AV	15.6174G	47.47	54.00	-6.53	17.12	3	Vertical	145	1.50	-

802.11ac VHT80-BF_Nss1,(MCS0)_2TX

5210MHz_TX

28/11/2018



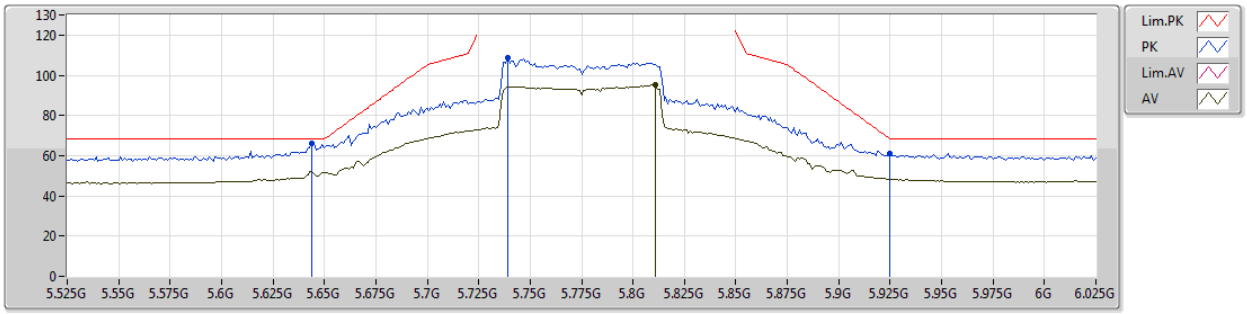
EUT Z_2TX
Setting 15
06-W-3
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	15.63144G	61.31	74.00	-12.69	17.08	3	Horizontal	173	1.50	-
AV	15.615G	47.48	54.00	-6.52	17.12	3	Horizontal	173	1.50	-

802.11ac VHT80-BF_Nss1,(MCS0)_2TX

5775MHz_TX

28/11/2018



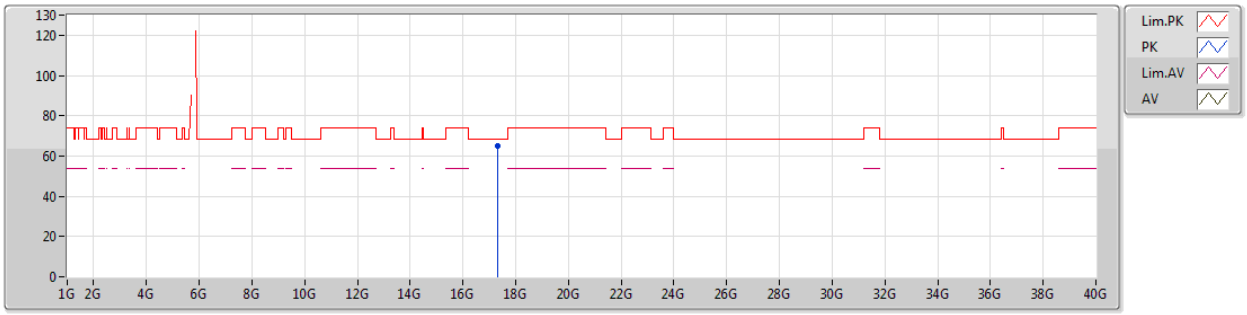
EUT Z_2TX
Setting 28
06-W-3-10
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	5.644G	65.99	68.20	-2.21	8.02	3	Vertical	360	2.02	-
PK	5.739G	108.61	Inf	-Inf	8.16	3	Vertical	360	2.02	-
AV	5.811G	95.17	Inf	-Inf	8.30	3	Vertical	360	2.02	-
PK	5.925G	61.28	68.20	-6.92	8.56	3	Vertical	360	2.02	-

802.11ac VHT80-BF_Nss1,(MCS0)_2TX

5775MHz_TX

28/11/2018



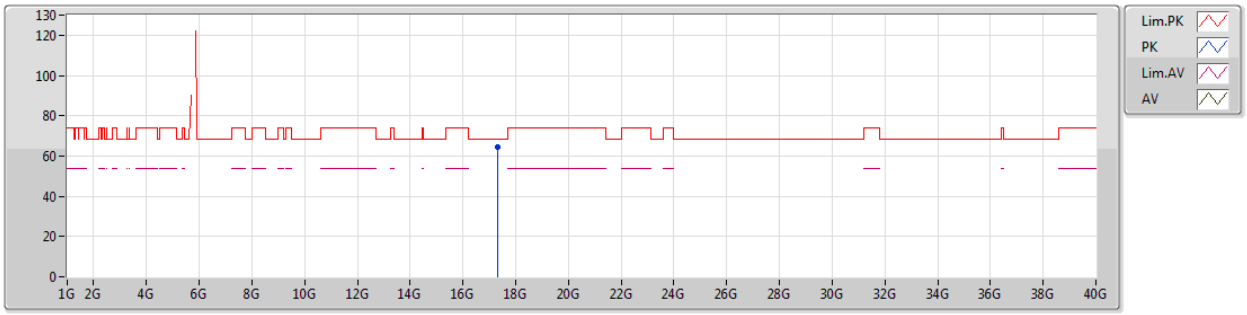
EUT Z_2TX
Setting 28
06-W-3
FSP

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	17.32488G	64.85	68.20	-3.35	21.70	3	Vertical	163	2.60	-

802.11ac VHT80-BF_Nss1,(MCS0)_2TX

5775MHz_TX

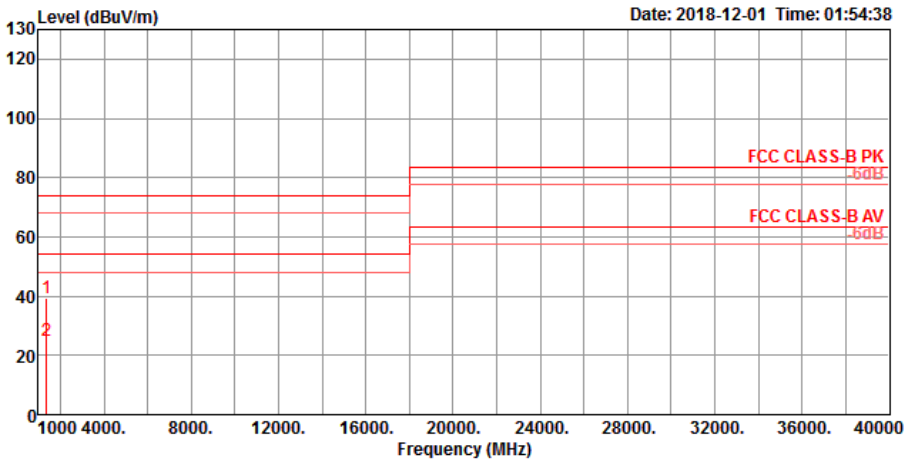
28/11/2018



EUT Z_2TX
Setting 28
06-W-3
FSP

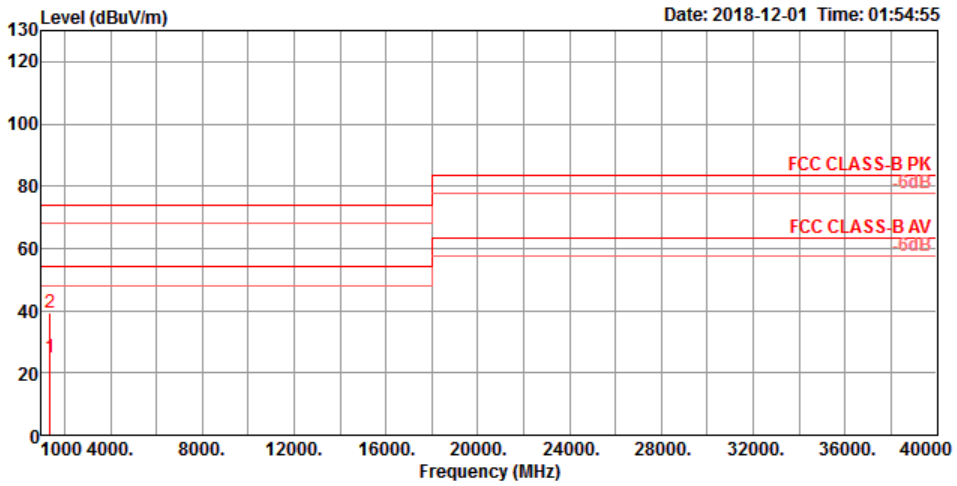
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	17.3265G	64.49	68.20	-3.71	21.71	3	Horizontal	315	2.88	-

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	1374.31	39.28	74.00	-34.72	45.68	3.38	24.69	34.47	105	245	Peak	HORIZONTAL
2	1376.14	25.18	54.00	-28.82	31.58	3.38	24.69	34.47	105	245	Average	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	1362.24	25.15	54.00	-28.85	31.62	3.36	24.63	34.46	112	21	Average	VERTICAL
2	1363.48	39.18	74.00	-34.82	45.65	3.36	24.63	34.46	112	21	Peak	VERTICAL