FCC Test Report

Equipment	:	Afterburner Wireless Home Gateway
Brand Name	:	ViaSat
Model No.	:	RG1100XXXXX (Where "X", may be 0~9, A~Z, blank or dash)
FCC ID	:	2ABLP-RG1100
Standard	:	47 CFR FCC Part 15.247
Operating Band	:	2400 MHz – 2483.5 MHz
Function	:	☒ Point-to-multipoint; ☐ Point-to-point
Applicant	:	ViaSat, Inc. 6155 El Camino Real Carlsbad, CA 92009 USA
Manufacturer	:	CyberTAN Technology, Inc. No. 99, Park Avenue III, Science-based Industrial Park, Hsinchu, 308 Taiwan

The product sample received on Apr. 11, 2017 and completely tested on May 12, 2017. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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

Cliff Chang
SPORTON INTERNATIONAL INC.

Testing Laboratory
1190

Table of Contents

1 GENERAL DESCRIPTION 5

1.1 Information 5
1.2 Testing Applied Standards 7
1.3 Testing Location Information 7
1.4 Measurement Uncertainty 7

2 TEST CONFIGURATION OF EUT 8

2.1 Test Channel Mode 8
2.2 The Worst Case Measurement Configuration 9
2.3 EUT Operation during Test 10
2.4 Accessories 10
2.5 Support Equipment 11
2.6 Test Setup Diagram 12

3 TRANSMITTER TEST RESULT 16

3.1 AC Power-line Conducted Emissions 16
3.2 DTS Bandwidth 18
3.3 Maximum Conducted Output Power 19
3.4 Power Spectral Density 21
3.5 Emissions in Non-restricted Frequency Bands 23
3.6 Emissions in Restricted Frequency Bands 24

4 TEST EQUIPMENT AND CALIBRATION DATA 28

APPENDIX A. TEST RESULTS OF AC POWER-LINE CONDUCTED EMISSIONS

APPENDIX B. TEST RESULTS OF DTS BANDWIDTH

APPENDIX C. TEST RESULTS OF MAXIMUM CONDUCTED OUTPUT POWER

APPENDIX D. TEST RESULTS OF POWER SPECTRAL DENSITY

APPENDIX E. TEST RESULTS OF EMISSIONS IN NON-RESTRICTED FREQUENCY BANDS

APPENDIX F. TEST RESULTS OF EMISSIONS IN RESTRICTED FREQUENCY BANDS

APPENDIX G. TEST RESULTS OF RADIATED EMISSION CO-LOCATION

APPENDIX H. TEST PHOTOS

PHOTOGRAPHS OF EUT V01

Summary of Test Result

Conformance Test Specifications				
Report Clause	**Ref. Std. Clause**	**Description**	**Limit**	**Result**
1.1.2	15.203	Antenna Requirement	FCC 15.203	Complied
3.1	15.207	AC Power-line Conducted Emissions	FCC 15.207	Complied
3.2	15.247(a)	DTS Bandwidth	≥500kHz	Complied
3.3	15.247(b)	Maximum Conducted Output Power	Power [dBm]:30	Complied
3.4	15.247(e)	Power Spectral Density	PSD [dBm/3kHz]:8	Complied
3.5	15.247(d)	Emissions in Non-restricted Frequency Bands	Non-Restricted Bands: > 30 dBc	Complied
3.6	15.247(d)	Emissions in Restricted Frequency Bands	Restricted Bands: FCC 15.209	Complied

Revision History

Report No.	Version	Description	Issued Date
FR750330AA	Rev. 01	Initial issue of report	Jul. 26, 2017
FR750330AA	Rev. 02	1. Revising information of Antenna (2.4G). 2. Revising information of support equipment (RX Device).	Jul. 31, 2017
FR750330AA	Rev. 03	Revising the information of Test Setup Diagram (AC Line Conducted Emission Test).	Aug. 07, 2017
FR750330AA	Rev. 04	Revising the length of the power cable to "0.95m" from "1m".	Aug. 15, 2017

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
2400-2483.5	b, g, n (HT20), ac (VHT20)	2412-2462	1-11 [11]
2400-2483.5	n (HT40), ac (VHT40)	2422-2452	3-9 [7]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	802.11b	20	3TX
2.4-2.4835GHz	802.11g	20	3TX
2.4-2.4835GHz	802.11g-BF	20	3TX
2.4-2.4835GHz	802.11n HT20	20	3TX
2.4-2.4835GHz	802.11n HT20-BF	20	3TX
2.4-2.4835GHz	802.11n HT40	20	3TX
2.4-2.4835GHz	802.11n HT40-BF	20	3TX
2.4-2.4835GHz	802.11ac VHT20	20	3TX
2.4-2.4835GHz	802.11ac VHT20-BF	20	3TX
2.4-2.4835GHz	802.11ac VHT40	40	3TX
2.4-2.4835GHz	802.11ac VHT40-BF	40	3TX

Note:
- 11b mode uses a combination of DSSS-DBPSK, DQPSK, CCK modulation.
- 11g, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- VHT20, VHT40 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	Model Name	Antenna Type	Connector	Gain (dBi)
1	Airgain	N2420DGLO-T6-PK1-B1XST55BUR3	PCB Dipole Antenna	I-PEX	Note
2	Airgain	N2420DGLO-T6-PK1-G1XST75BUR3	PCB Dipole Antenna	I-PEX	
3	Airgain	M2450DLCBMSU-T6-G1XST100BU	Metal PIFA Antenna	I-PEX	

Note:

Ant. / Gain	Gain (dBi)		
	2.4G	5G Band 1	5G Band 4
1	2.8	3.4	3.4
2	2.4	3.2	3.3
3	2.8	3.3	3.0

Note: The EUT has three antennas.

Ant.1 = Chain 1(port 1), Ant.2 = Chain 2(port 2), Ant.3 = Chain 3(port 3)

<For 2.4GHz Function>

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

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

<For 5GHz Function>

For IEEE 802.11a/n/ac mode (3TX, 3RX):

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

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)
802.11b	0.94	0.269
802.11g-BF	0.917	0.376
802.11ac VHT20-BF	0.895	0.482
802.11ac VHT40-BF	0.866	0.625

1.1.4 EUT Operational Condition

EUT Power Type	From Power Adapter			
Beamforming Function	☒	With beamforming for 802.11a/g/n/ac	☐	Without beamforming

1.1.5 Table for Multiple Listing

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

Model Name	Description
RG1100XXXXX (Where "X", may be 0~9, A~Z, blank or dash)	Selling in the U.S. market
RG1100	Selling in the Canadian market

From the above models, model: RG1100 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 558074 D01 v04
- FCC KDB 662911 D01 v02r01
- FCC KDB 644545 D01 v01r02
- FCC KDB 412172 D01 v01r01

1.3 Testing Location Information

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

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH01-CB	Serway Li	20°C / 55%	May 09, 2017~May 10, 2017
Radiated Below 1 GHz	03CH01-CB	Justin Lin / Joy Luo	22°C / 54%	Apr. 11, 2017~May 12, 2017
Radiated Above 1 GHz	03CH01-CB	Justin Lin / Joy Luo	22°C / 54%	May 08, 2017
AC Conduction	CO01-CB	Kane Liu	23°C / 58%	Apr. 11, 2017

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

1.4 Measurement Uncertainty

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

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

2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
802.11b_(1Mbps)_3TX	-
2412MHz	24
2437MHz	24.5
2462MHz	24
802.11g-BF_(6Mbps)_3TX	-
2412MHz	20
2437MHz	23.5
2462MHz	20
802.11ac VHT20-BF_Nss1,(MCS0)_3TX	-
2412MHz	21
2437MHz	23.5
2462MHz	20.5
802.11ac VHT40-BF_Nss1,(MCS0)_3TX	-
2422MHz	15.5
2437MHz	20
2452MHz	15

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/g/n/ac. One is beamforming mode, and the other is non-beamforming mode. Both modes have been tested and recorded 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

The Worst Case Mode for Following Conformance Tests	
Tests Item	DTS Bandwidth Maximum Conducted Output Power Power Spectral Density Emissions in Non-restricted Frequency Bands
Test Condition	Conducted measurement at transmit chains

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emissions in Restricted Frequency Bands
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
Operating Mode > 1GHz	CTX

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

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	WLAN 2.4GHz+WLAN 5GHz
Refer to Sporton Test Report No.: FA750330 for Co-location RF Exposure Evaluation.	

Note: The EUT can only be used in Z axis position.

2.3 EUT Operation during Test

For CTX Mode:

non-beamforming mode:

The EUT was programmed to be in continuously transmitting mode.

beamforming mode:

For Conducted Mode:

The EUT was programmed to be in continuously transmitting mode.

For Radiated 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 Telnet.
3. Executed "Telnet" to link with the remote workstation to transmit and receive packet by RX Device and transmit duty cycle no less 98%.

For Normal Link:

During the test, the EUT operation to normal function.

2.4 Accessories

Accessories				
No.	**Brand Name**	**Model Name**	**Rating**	**Remark**
1	CLiCK	CPI135001	Input: 100-240VAC 50/60Hz 2.0A MAX Output: 48.0 VDC, 1.875A MAX 12.0 VDC, 3.75A MAX	DC Power cable: Non-shielded, 1.6m
Others				
RJ-45 Cable*1, Non-shielded, 1.5m				
Power Cable*1, Non-shielded, 0.95m				

2.5 Support Equipment

For Test Site No: CO01-CB

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB*3	DELL	E6430	DoC
2	Simulated satellite	Viasat	SCOTTY	DoC
3	Flash disk3.0*2	Transcend	639205 7755	DoC
4	Phone	SAMPO	HT-B 907WL	DoC

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

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB*3	DELL	E4300	DoC
2	Flash disk*2	Silicon Power	I-Series	DoC
3	Phone	SAMPO	HT-B 907WL	N/A
4	Simulated satellite	Viasat	SCOTTY	DoC

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

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

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

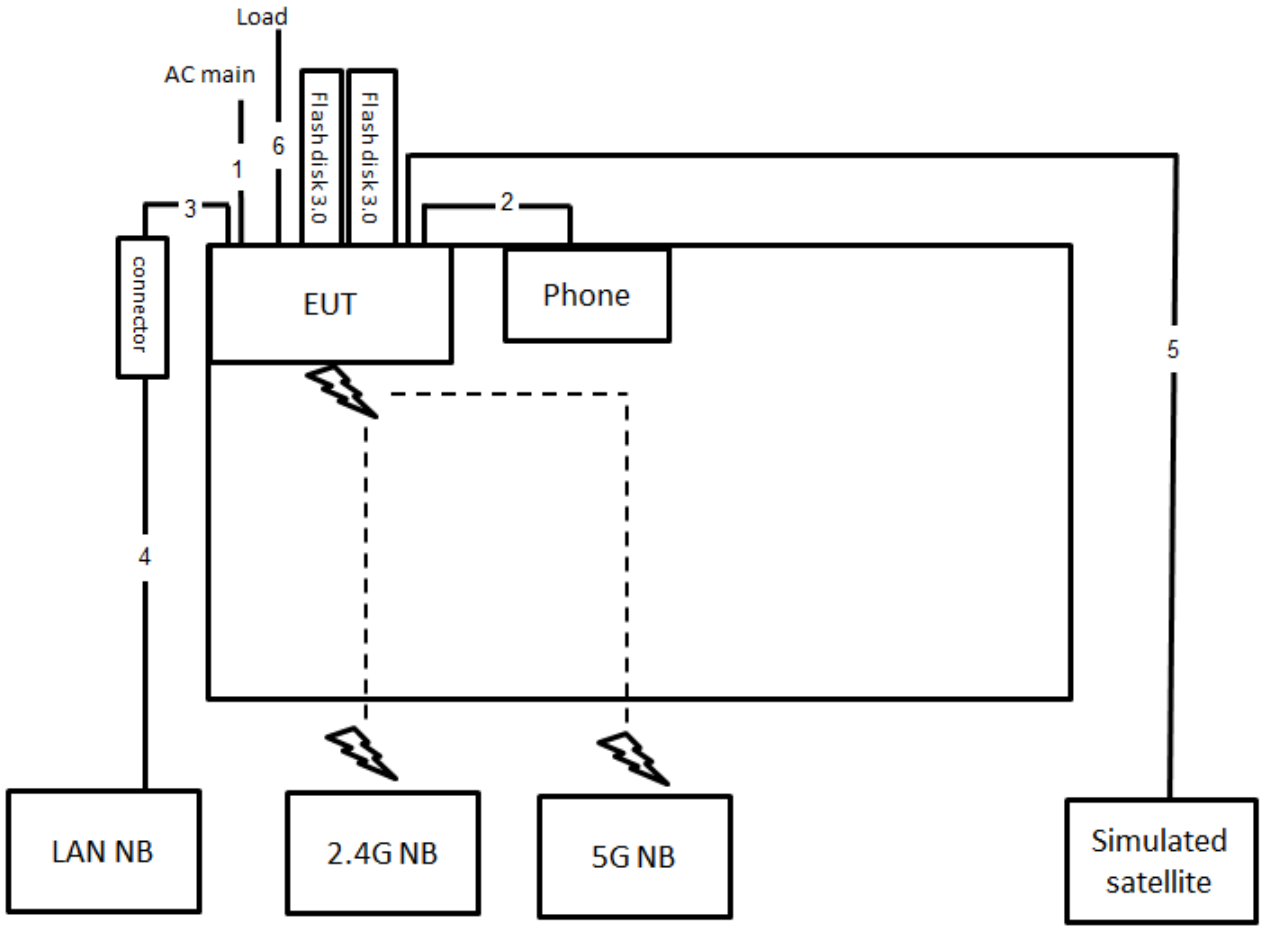
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB*2	DELL	E4300	DoC
2	RX Device	Linksys	EA8500	N/A

For Test Site No: TH01-CB

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

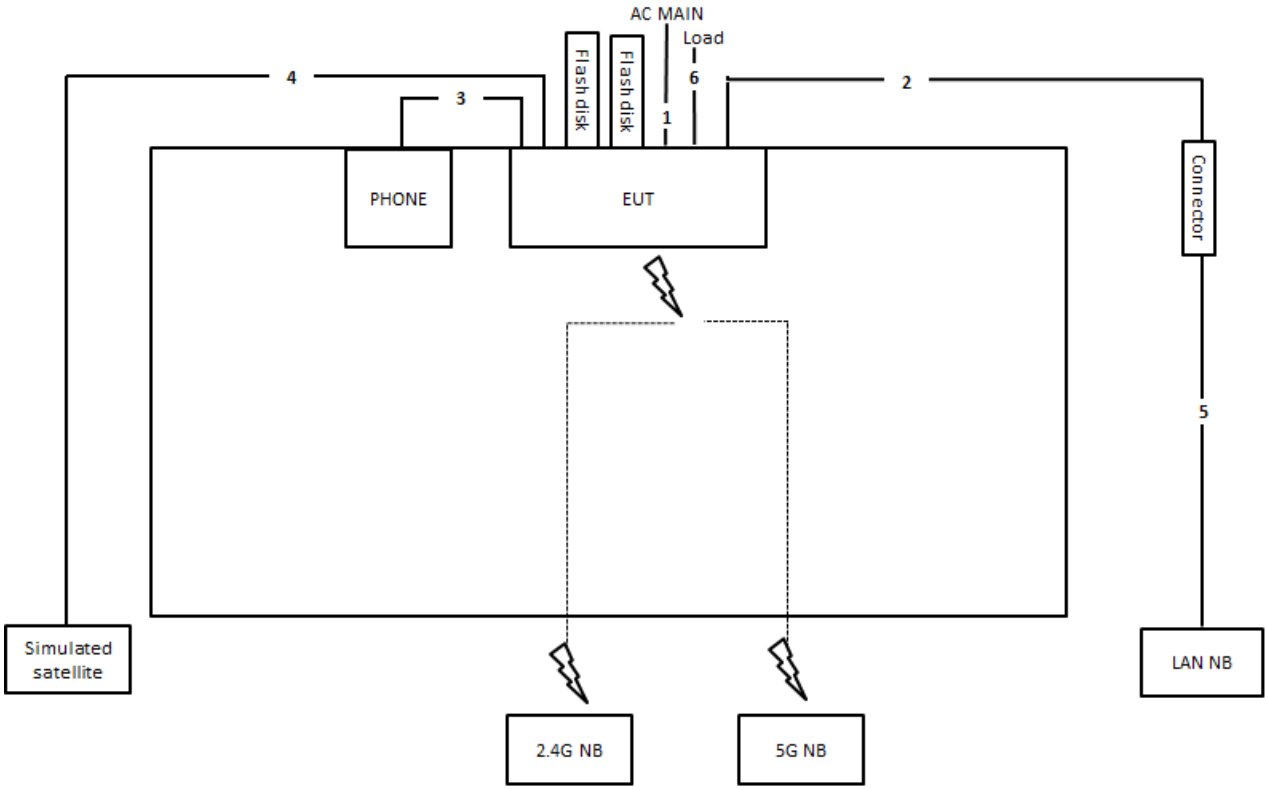
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



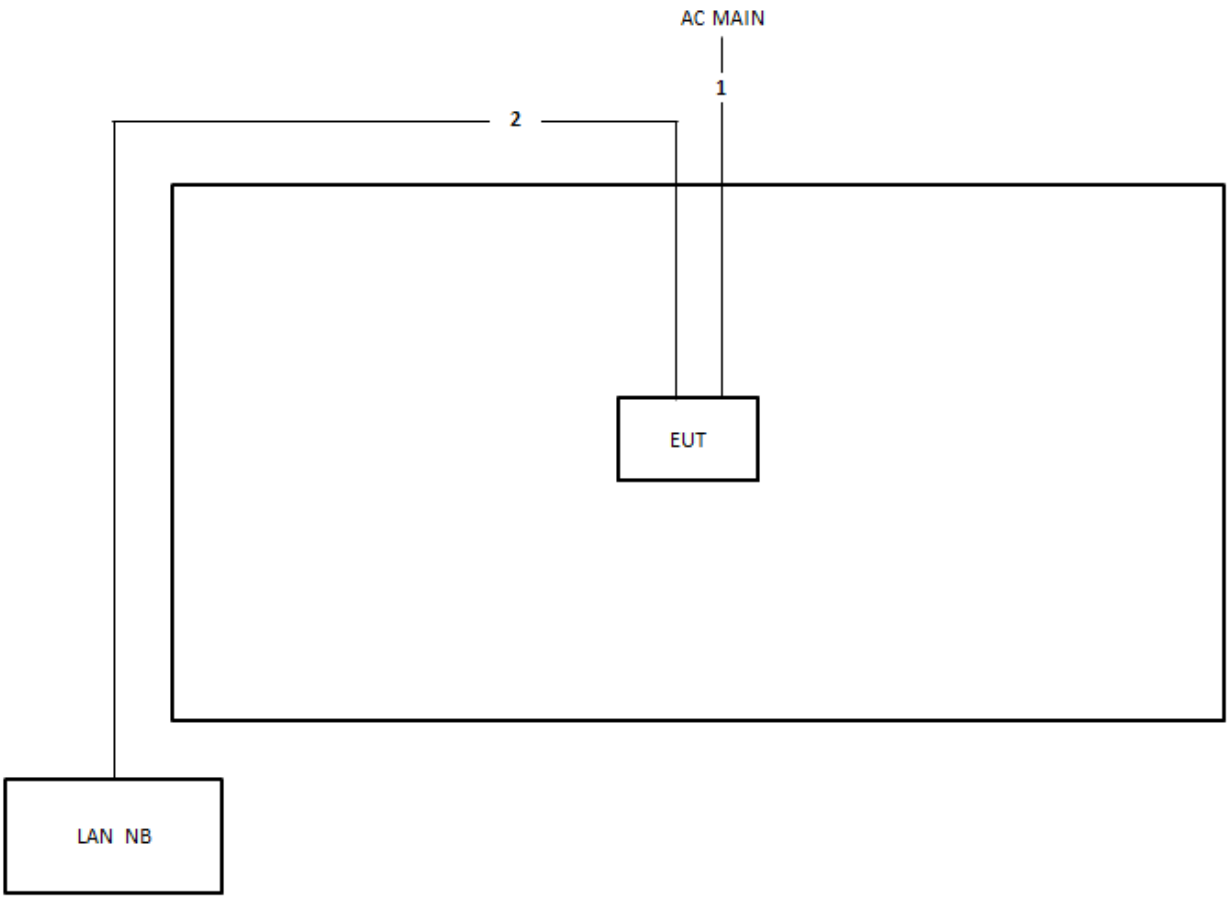
Item	Connection	Shielded	Length
1	Power cable	No	2.55m
2	RJ-11 cable	No	1.5m
3	RJ-45 cable	No	1.5m
4	RJ-45 cable	No	10m
5	Coaxial cable	Yes	10m
6	RJ-45 cable	No	1.5m

Test Setup Diagram - Radiated Test < 1GHz



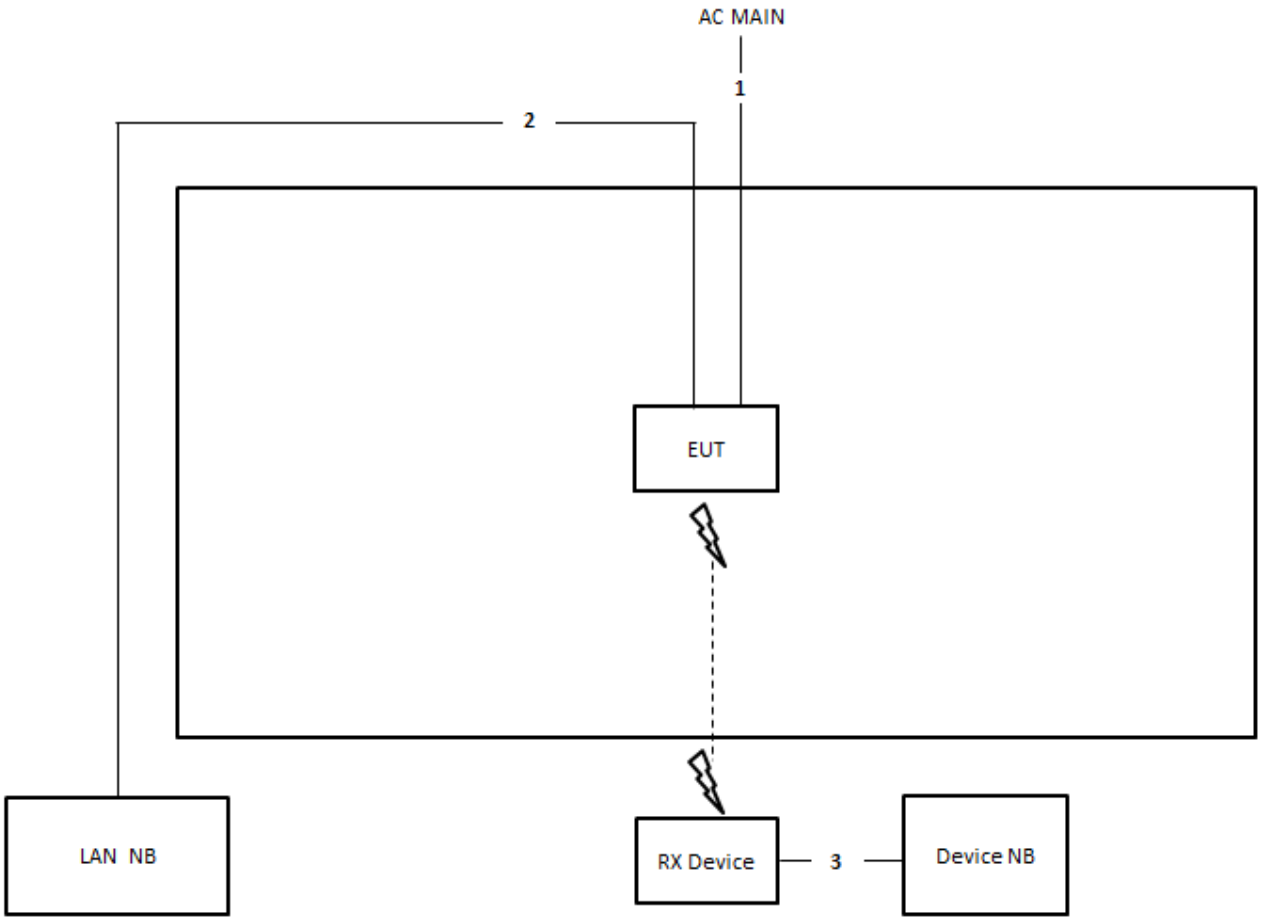
Item	Connection	Shielded	Length
1	Power cable	No	2.55m
2	RJ-45 cable	No	1.5m
3	RJ-11 cable	No	1.5m
4	Coaxial cable	Yes	10m
5	RJ-45 cable	No	10m
6	RJ-45 cable	No	1.5m

Test Setup Diagram - Radiated Test > 1GHz
(Non-Beamforming Mode)



Item	Connection	Shielded	Length
1	Power cable	No	2.55m
2	RJ-45 cable	No	10m

Test Setup Diagram - Radiated Test > 1GHz
(Beamforming Mode)



Item	Connection	Shielded	Length
1	Power cable	No	2.55m
2	RJ-45 cable	No	10m
3	RJ-45 cable	No	3m

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

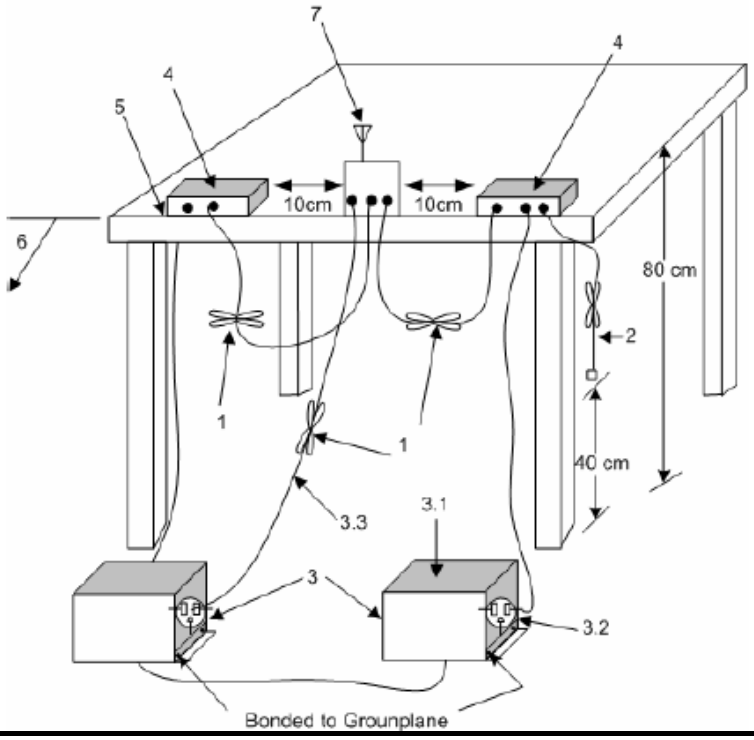
Refer a test equipment and calibration data table in this test report.

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



3.1.5 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 DTS Bandwidth

3.2.1 6dB Bandwidth Limit

6dB Bandwidth Limit
Systems using digital modulation techniques:
▪ 6 dB bandwidth ≥ 500 kHz.

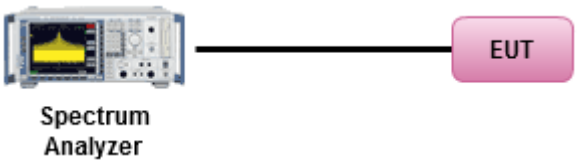
3.2.2 Measuring Instruments

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 558074, clause 8.1 Option 1 for 6 dB bandwidth measurement.
	☐ Refer as FCC KDB 558074, clause 8.2 Option 2 for 6 dB bandwidth measurement.
	☐ Refer as ANSI C63.10, clause 6.9.1 for occupied 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	
▪	If $G_{TX} \leq 6$ dBi, then $P_{Out} \leq 30$ dBm (1 W)
▪	Point-to-multipoint systems (P2M): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)$ dBm
▪	Point-to-point systems (P2P): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm
▪	Smart antenna system (SAS):
-	Single beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm
-	Overlap beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm
-	Aggregate power on all beams: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3 + 8$dB dBm
P_{Out} = maximum peak conducted output power or 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 Peak Conducted Output Power
☐	Refer as FCC KDB 558074, clause 9.1.1 Option 1 (RBW ≥ EBW method).
☐	Refer as FCC KDB 558074, clause 9.1.2 Option 2 (peak power meter for VBW ≥ DTS BW)
▪	Maximum Conducted Output Power
	[duty cycle ≥ 98% or external video / power trigger]
☐	Refer as FCC KDB 558074, clause 9.2.2.2 Method AVGSA-1 (spectral trace averaging).
☐	Refer as FCC KDB 558074, clause 9.2.2.3 Method AVGSA-1 Alt. (slow sweep speed)
	duty cycle < 98% and average over on/off periods with duty factor
☐	Refer as FCC KDB 558074, clause 9.2.2.4 Method AVGSA-2 (spectral trace averaging).
☐	Refer as FCC KDB 558074, clause 9.2.2.5 Method AVGSA-2 Alt. (slow sweep speed)
	RF power meter and average over on/off periods with duty factor or gated trigger
☒	Refer as FCC KDB 558074, clause 9.2.3 Method AVGPM-G (using an RF average power meter).
☐	Refer as FCC KDB 558074, clause 9.1.2 PKPM1 Peak power meter method.
▪	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: $P_{total} = P_1 + P_2 + … + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

3.3.4 Test Setup

Maximum Conducted Output Power (Power Meter)


3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

Power Spectral Density Limit
▪ Power Spectral Density (PSD) ≤ 8 dBm/3kHz

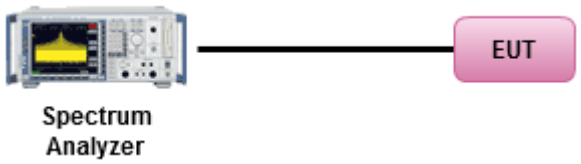
3.4.2 Measuring Instruments

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. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option).		
	☒ Refer as FCC KDB 558074, clause 10.2 Method PKPSD (RBW=3-100kHz; Detector=peak).	
	[duty cycle ≥ 98% or external video / power trigger]	
	☐ Refer as FCC KDB 558074, clause 10.3 Method AVGPSD-1 (spectral trace averaging).	
	☐ Refer as FCC KDB 558074, clause 10.4 Method AVGPSD-2 (slow sweep speed)	
	duty cycle < 98% and average over on/off periods with duty factor	
	☐ Refer as FCC KDB 558074, clause 10.5 Method AVGPSD-1 Alt (spectral trace averaging).	
	☐ Refer as FCC KDB 558074, clause 10.6 Method AVGPSD-2 Alt. (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.

3.4.4 Test Setup

Power Spectral Density


3.4.5 Test Result of Power Spectral Density

Refer as Appendix D

3.5 Emissions in Non-restricted Frequency Bands

3.5.1 Emissions in Non-restricted Frequency Bands Limit

Un-restricted Band Emissions Limit	
RF output power procedure	**Limit (dB)**
Peak output power procedure	20
Average output power procedure	30
Note 1: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak PSD level. Note 2: If the average output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the power in any 100 kHz outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum measured in-band average PSD level.	

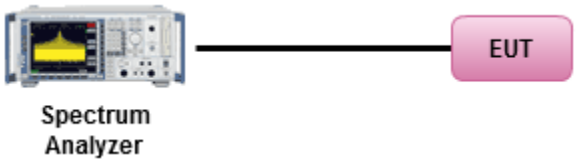
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

Test Method
▪ Refer as FCC KDB 558074, clause 11 for unwanted emissions into non-restricted bands.

3.5.4 Test Setup

Emissions in Non-restricted Frequency Bands


3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix E

3.6 Emissions in Restricted Frequency Bands

3.6.1 Emissions in Restricted Frequency Bands Limit

Restricted Band Emissions 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.

3.6.2 Measuring Instruments

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

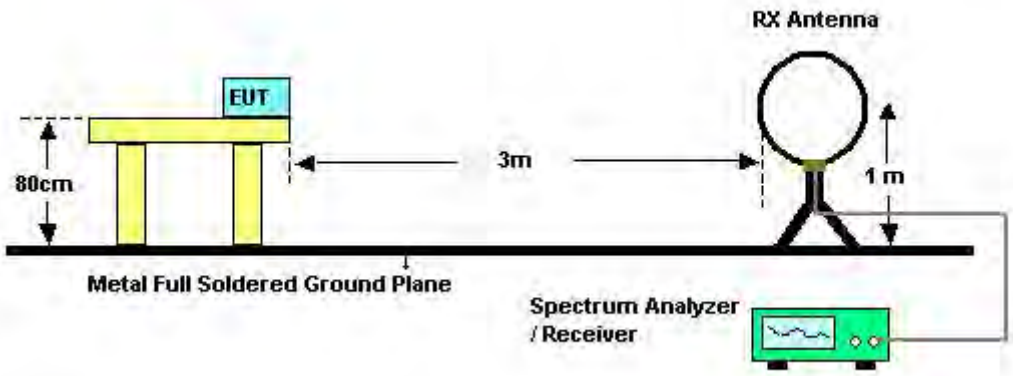
3.6.3 Test Procedures

Test Method		
▪ The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].		
▪ Refer as ANSI C63.10, clause 6.9.2.2 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.		
▪ For the transmitter unwanted emissions shall be measured using following options below:		
	▪ Refer as FCC KDB 558074, clause 12 for unwanted emissions into restricted bands.	
		☐ Refer as FCC KDB 558074, clause 12.2.5.1 Option 1 (trace averaging for duty cycle ≥98%)
		☐ Refer as FCC KDB 558074, clause 12.2.5.2 Option 2 (trace averaging + duty factor).
		☒ Refer as FCC KDB 558074, clause 12.2.5.3 Option 3 (Reduced VBW≥1/T).
		☐ Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time.
		☐ Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions.
		☒ Refer as FCC KDB 558074, clause 12.2.4 measurement procedure peak limit.
▪ For the transmitter band-edge emissions shall be measured using following options below:		
	▪ Refer as FCC KDB 558074 clause 13.1, When the performing peak or average radiated measurements, emissions within 2 MHz of the authorized band edge may be measured using the marker-delta method described below.	
	▪ Refer as FCC KDB 558074, clause 13.2 (ANSI C63.10, clause 6.9.3) for marker-delta method for band-edge measurements.	
	▪ Refer as FCC KDB 558074, clause 13.3 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).	
▪ For conducted and cabinet radiation measurement, refer as FCC KDB 558074, clause 12.2.2.		
	▪ For conducted unwanted emissions into restricted bands (absolute emission limits). Devices with multiple transmit chains using options given below: (1) Measure and sum the spectra across the outputs or (2) Measure and add 10 log(N) dB	
	▪ For FCC KDB 662911 The methodology described here may overestimate array gain, thereby resulting in apparent failures to satisfy the out-of-band limits even if the device is actually compliant. In such cases, compliance may be demonstrated by performing radiated tests around the frequencies at which the apparent failures occurred.	

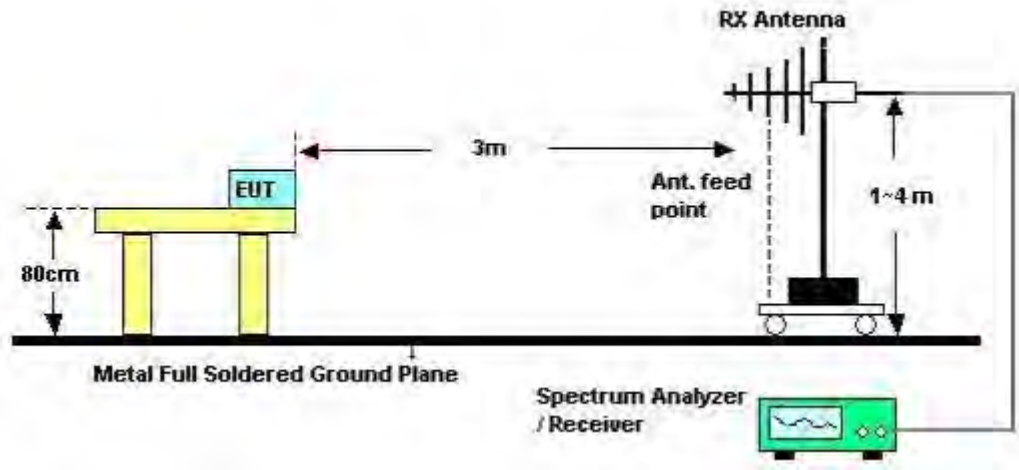
3.6.4 Test Setup

Transmitter Radiated Emissions

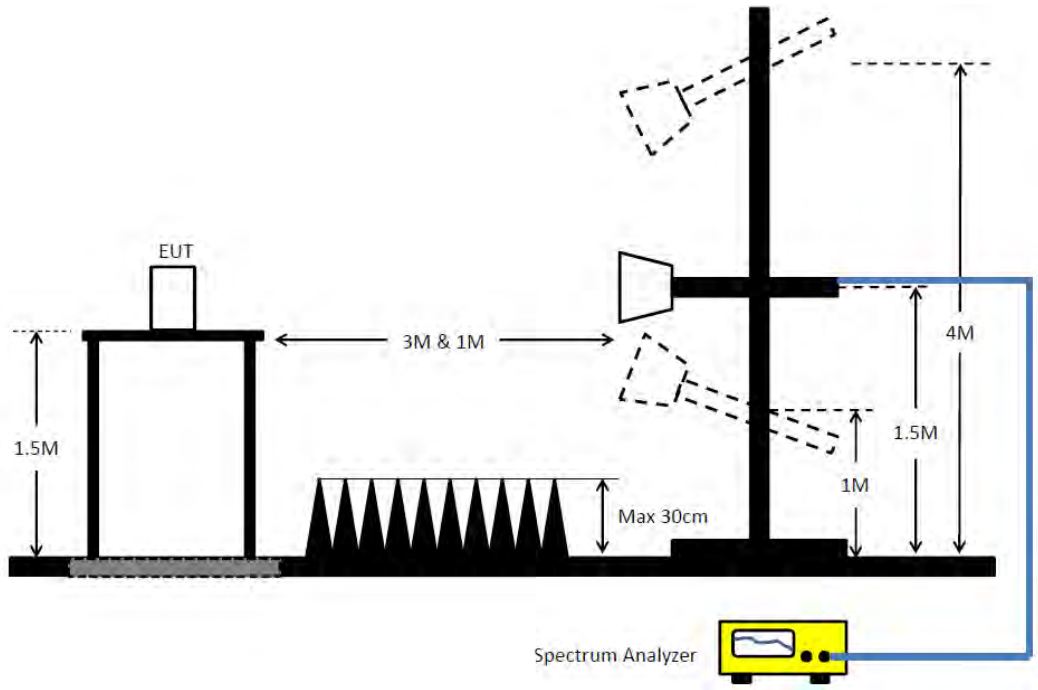
9kHz ~30MHz



30MHz~1GHz



Above 1GHz



3.6.5 Transmitter Radiated Unwanted Emissions (Below 30MHz)

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

3.6.6 Test Result of Transmitter Radiated Unwanted Emissions

Refer as Appendix F

4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.45GHz	Jan. 23, 2017	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Dec. 14, 2016	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Dec. 21, 2016	Conduction (CO01-CB)
COND Cable	Woken	Cable	01	150kHz ~ 30MHz	May 24, 2016	Conduction (CO01-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	Conduction (CO01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2016*	Radiation (03CH01-CB)
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Aug. 30, 2016	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 10, 2016	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 25, 2016	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8447D	2944A10991	0.1MHz ~ 1.3GHz	Mar. 13, 2017	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 16, 2017	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jun. 28, 2016	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Nov. 22, 2016	Radiation (03CH01-CB)
EMI Test	R&S	ESCS	100355	9kHz ~ 2.75GHz	May 16, 2016	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~ 1 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz ~ 40 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
Test Software	Audix	E3	6.2009-l0-7	N/A	N/A	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 26, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-6	1 GHz – 26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-7	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-8	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)

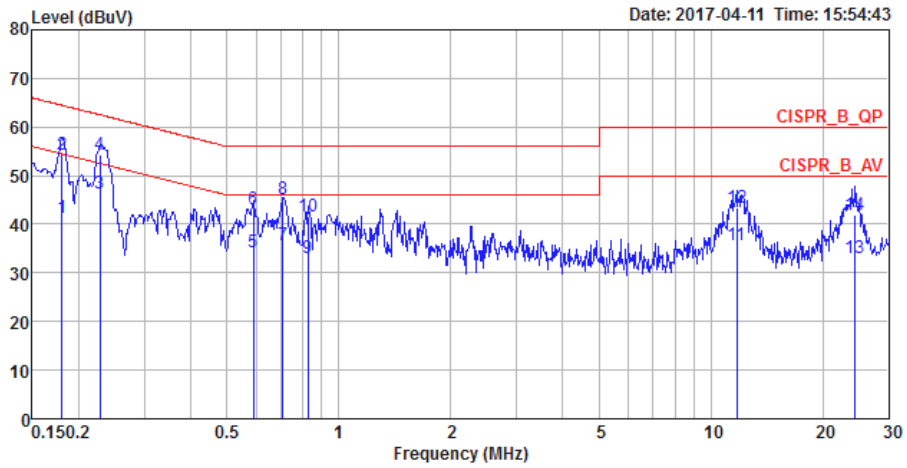
Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
RF Cable-high	Woken	RG402	High Cable-9	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001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

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

"*" Calibration Interval of instruments listed above is two years.

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

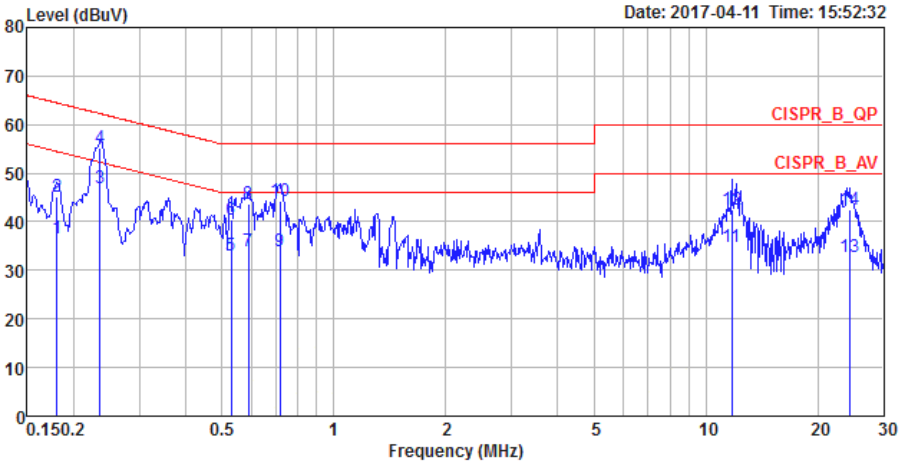
AC Power-line Conducted Emissions Result			
Operating Mode	1	**Power Phase**	Neutral
Operating Function	Normal Link		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1806	41.31	-13.15	54.46	31.29	9.97	0.05	Average	NEUTRAL
2	0.1806	54.31	-10.15	64.46	44.29	9.97	0.05	QP	NEUTRAL
3	0.2280	46.33	-6.19	52.52	36.30	9.98	0.05	Average	NEUTRAL
4	0.2280	54.32	-8.20	62.52	44.29	9.98	0.05	QP	NEUTRAL
5	0.5885	34.22	-11.78	46.00	24.20	9.97	0.05	Average	NEUTRAL
6	0.5885	43.16	-12.84	56.00	33.14	9.97	0.05	QP	NEUTRAL
7	0.7084	35.69	-10.31	46.00	25.66	9.98	0.05	Average	NEUTRAL
8	0.7084	45.31	-10.69	56.00	35.28	9.98	0.05	QP	NEUTRAL
9	0.8261	32.96	-13.04	46.00	22.93	9.98	0.05	Average	NEUTRAL
10	0.8261	41.77	-14.23	56.00	31.74	9.98	0.05	QP	NEUTRAL
11	11.7446	35.68	-14.32	50.00	25.29	10.19	0.20	Average	NEUTRAL
12	11.7446	43.49	-16.51	60.00	33.10	10.19	0.20	QP	NEUTRAL
13	24.3995	32.95	-17.05	50.00	22.37	10.31	0.27	Average	NEUTRAL
14	24.3995	41.81	-18.19	60.00	31.23	10.31	0.27	QP	NEUTRAL

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

AC Power-line Conducted Emissions Result			
Operating Mode	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	0.1806	36.56	-17.90	54.46	26.57	9.94	0.05	Average	LINE
2	0.1806	45.09	-19.37	64.46	35.10	9.94	0.05	QP	LINE
3	0.2353	47.00	-5.26	52.26	37.03	9.92	0.05	Average	LINE
4	0.2353	55.08	-7.18	62.26	45.11	9.92	0.05	QP	LINE
5	0.5293	33.00	-13.00	46.00	23.05	9.91	0.04	Average	LINE
6	0.5293	40.58	-15.42	56.00	30.63	9.91	0.04	QP	LINE
7	0.5885	33.91	-12.09	46.00	23.94	9.92	0.05	Average	LINE
8	0.5885	43.56	-12.44	56.00	33.59	9.92	0.05	QP	LINE
9	0.7160	34.07	-11.93	46.00	24.08	9.94	0.05	Average	LINE
10	0.7160	44.18	-11.82	56.00	34.19	9.94	0.05	QP	LINE
11	11.7446	34.81	-15.19	50.00	24.51	10.10	0.20	Average	LINE
12	11.7446	42.37	-17.63	60.00	32.07	10.10	0.20	QP	LINE
13	24.3995	32.69	-17.31	50.00	22.12	10.30	0.27	Average	LINE
14	24.3995	42.57	-17.43	60.00	32.00	10.30	0.27	QP	LINE

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

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
802.11b_(1Mbps)_3TX	-	-	-	-	-
2.4-2.4835GHz	8.575M	13.118M	13M1G1D	7.075M	12.719M
802.11g-BF_(6Mbps)_3TX	-	-	-	-	-
2.4-2.4835GHz	16.425M	16.417M	16M4D1D	15.65M	16.367M
802.11ac VHT20-BF_Nss1,(MCS0)_3TX	-	-	-	-	-
2.4-2.4835GHz	17.675M	17.766M	17M8D1D	16.35M	17.541M
802.11ac VHT40-BF_Nss1,(MCS0)_3TX	-	-	-	-	-
2.4-2.4835GHz	34.9M	36.132M	36M1D1D	30.05M	35.482M

Max-N dB = Maximum 6dB down bandwidth; **Max-OBW** = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth; **Min-OBW** = Minimum 99% occupied bandwidth;

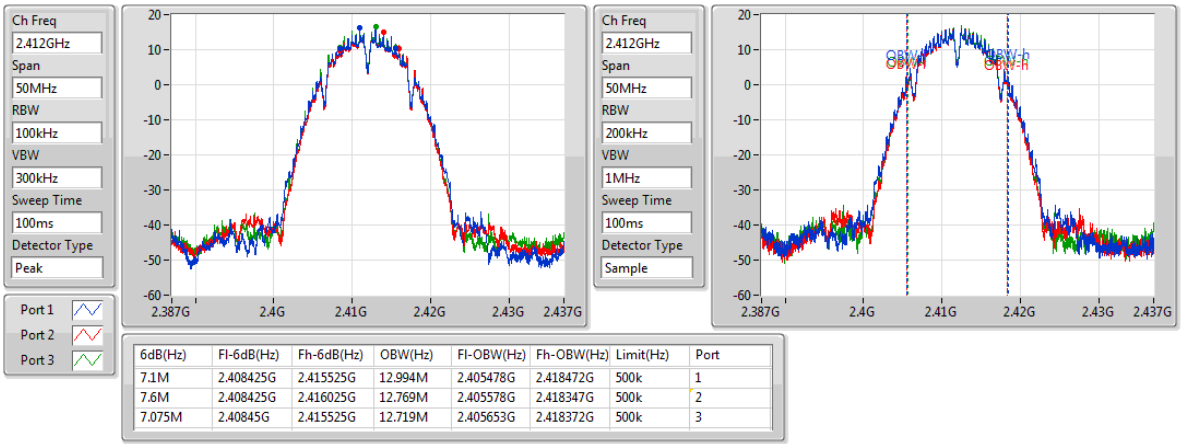
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)
802.11b_(1Mbps)_3TX	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	7.1M	12.994M	7.6M	12.769M	7.075M	12.719M
2437MHz	Pass	500k	7.55M	12.919M	7.55M	12.819M	8.025M	12.844M
2462MHz	Pass	500k	7.575M	13.118M	8.575M	12.819M	7.575M	12.719M
802.11g-BF_(6Mbps)_3TX	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	15.7M	16.367M	16.275M	16.392M	16.3M	16.392M
2437MHz	Pass	500k	16.275M	16.417M	16.325M	16.392M	15.9M	16.417M
2462MHz	Pass	500k	16.425M	16.417M	16.275M	16.392M	15.65M	16.417M
802.11ac VHT20-BF_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	16.35M	17.591M	16.825M	17.641M	17.25M	17.541M
2437MHz	Pass	500k	16.95M	17.566M	17.55M	17.591M	16.825M	17.591M
2462MHz	Pass	500k	17.675M	17.766M	16.6M	17.591M	16.825M	17.541M
802.11ac VHT40-BF_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-	-
2422MHz	Pass	500k	34.9M	35.882M	32.1M	36.132M	32.55M	35.782M
2437MHz	Pass	500k	34.9M	35.982M	30.05M	35.482M	31.3M	35.782M
2452MHz	Pass	500k	31.9M	35.882M	30.05M	35.782M	33.75M	35.882M

Port X-N dB = Port **X** 6dB down bandwidth; **Port X-OBW** = Port **X** 99% occupied bandwidth;

802.11b_(1Mbps)_3TX EBW

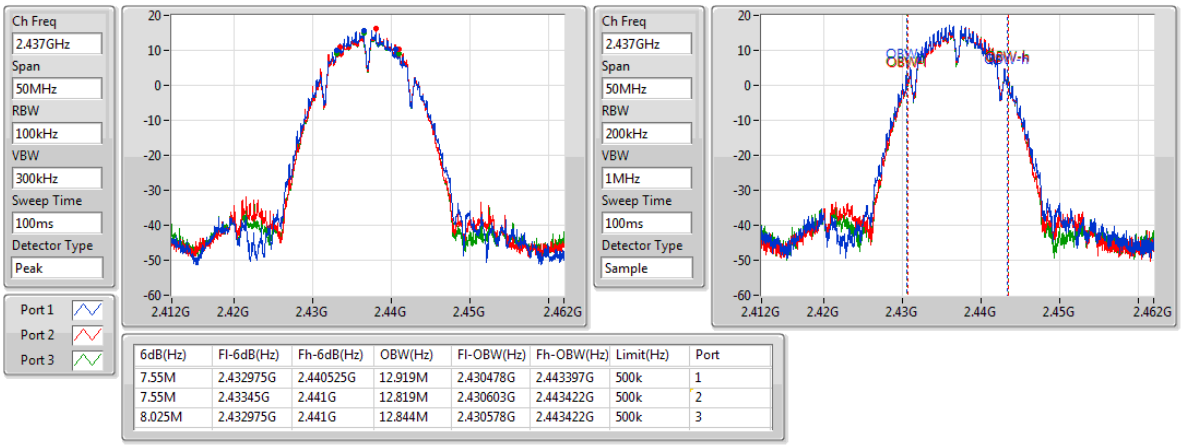
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
7.1M	2.408425G	2.415525G	12.994M	2.405478G	2.418472G	500k	1
7.6M	2.408425G	2.416025G	12.769M	2.405578G	2.418347G	500k	2
7.075M	2.40845G	2.415525G	12.719M	2.405653G	2.418372G	500k	3

802.11b_(1Mbps)_3TX EBW

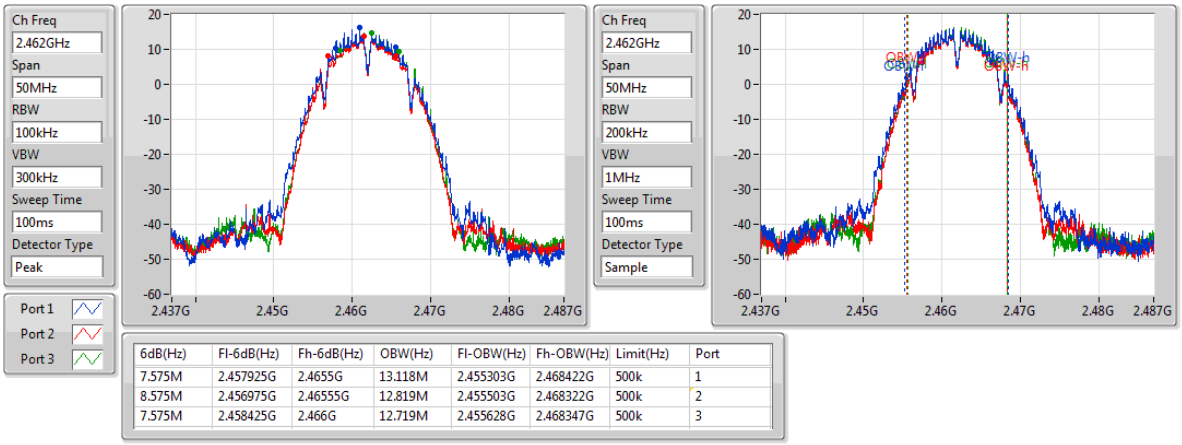
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
7.55M	2.432975G	2.440525G	12.919M	2.430478G	2.443397G	500k	1
7.55M	2.43345G	2.441G	12.819M	2.430603G	2.443422G	500k	2
8.025M	2.432975G	2.441G	12.844M	2.430578G	2.443422G	500k	3

802.11b_(1Mbps)_3TX EBW

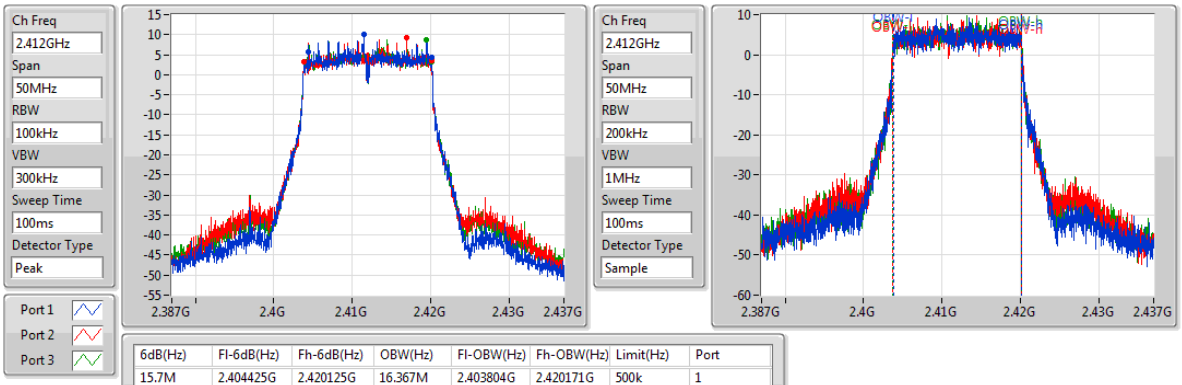
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
7.575M	2.457925G	2.4655G	13.118M	2.455303G	2.468422G	500k	1
8.575M	2.456975G	2.46555G	12.819M	2.455503G	2.468322G	500k	2
7.575M	2.458425G	2.466G	12.719M	2.455628G	2.468347G	500k	3

802.11g-BF_(6Mbps)_3TX **EBW**

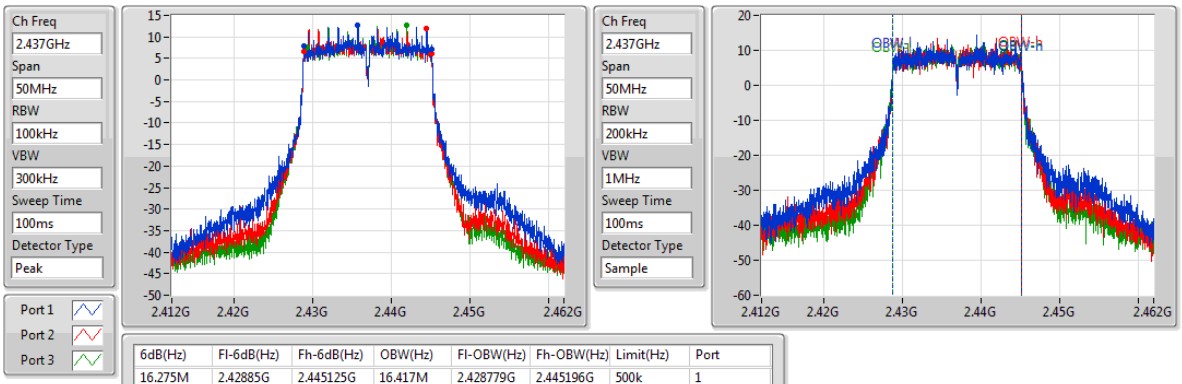
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.7M	2.404425G	2.420125G	16.367M	2.403804G	2.420171G	500k	1
16.275M	2.403825G	2.4201G	16.392M	2.403779G	2.420171G	500k	2
16.3M	2.403825G	2.420125G	16.392M	2.403779G	2.420171G	500k	3

802.11g-BF_(6Mbps)_3TX **EBW**

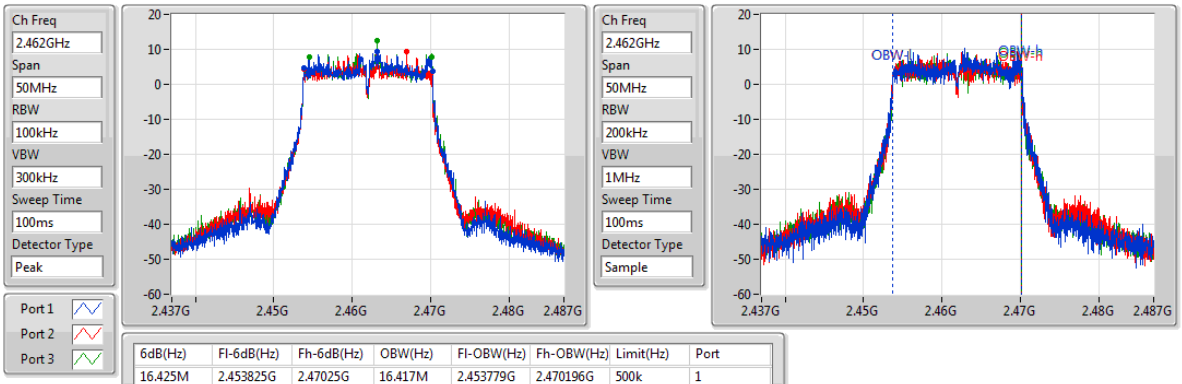
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.275M	2.42885G	2.445125G	16.417M	2.428779G	2.445196G	500k	1
16.325M	2.428825G	2.44515G	16.392M	2.428779G	2.445171G	500k	2
15.9M	2.429225G	2.445125G	16.417M	2.428754G	2.445171G	500k	3

802.11g-BF_(6Mbps)_3TX **EBW**

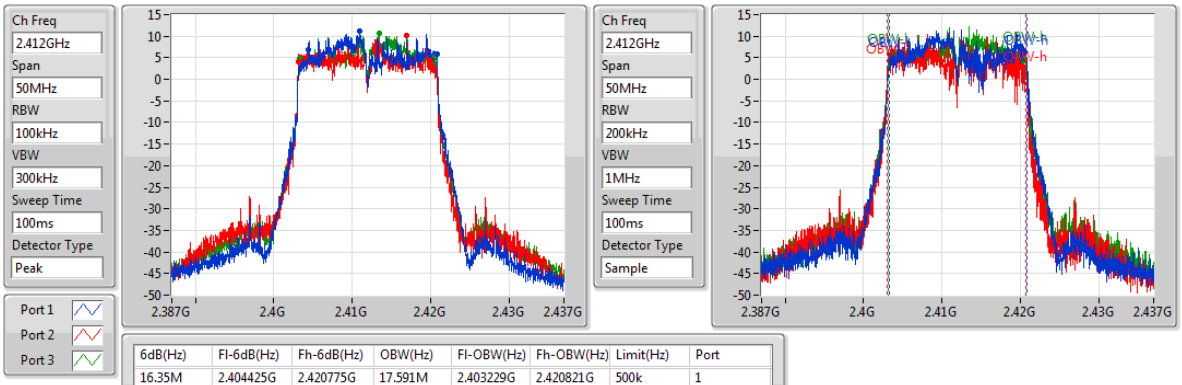
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.425M	2.453825G	2.47025G	16.417M	2.453779G	2.470196G	500k	1
16.275M	2.45385G	2.470125G	16.392M	2.453754G	2.470146G	500k	2
15.65M	2.4545G	2.47015G	16.417M	2.453754G	2.470171G	500k	3

802.11ac VHT20-BF_Nss1,(MCS0)_3TX EBW

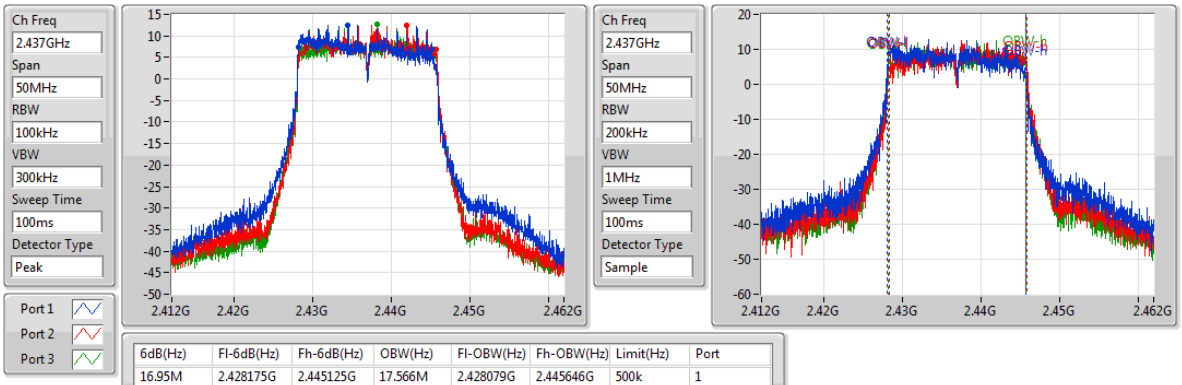
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.35M	2.404425G	2.420775G	17.591M	2.403229G	2.420821G	500k	1
16.825M	2.403175G	2.42G	17.641M	2.403079G	2.420721G	500k	2
17.25M	2.40335G	2.4206G	17.541M	2.403179G	2.420721G	500k	3

802.11ac VHT20-BF_Nss1,(MCS0)_3TX EBW

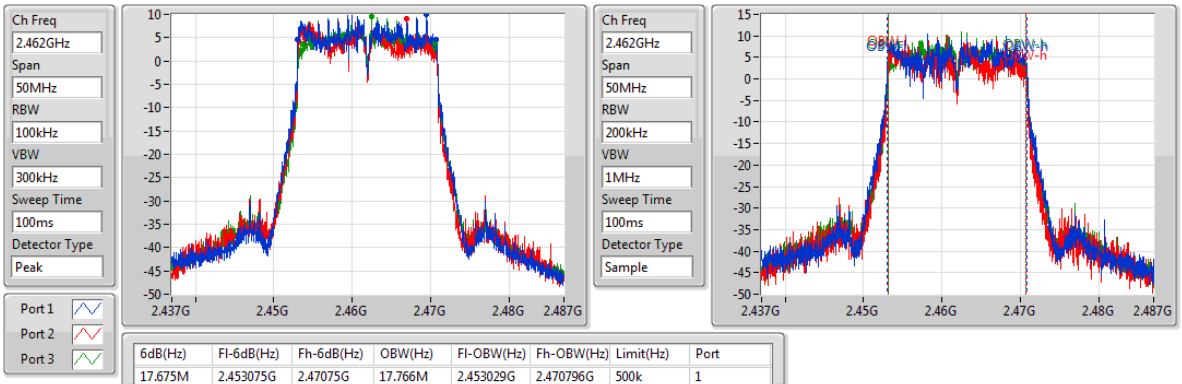
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.95M	2.428175G	2.445125G	17.566M	2.428079G	2.445646G	500k	1
17.55M	2.4282G	2.44575G	17.591M	2.428229G	2.445821G	500k	2
16.825M	2.4285G	2.445325G	17.591M	2.428154G	2.445746G	500k	3

802.11ac VHT20-BF_Nss1,(MCS0)_3TX EBW

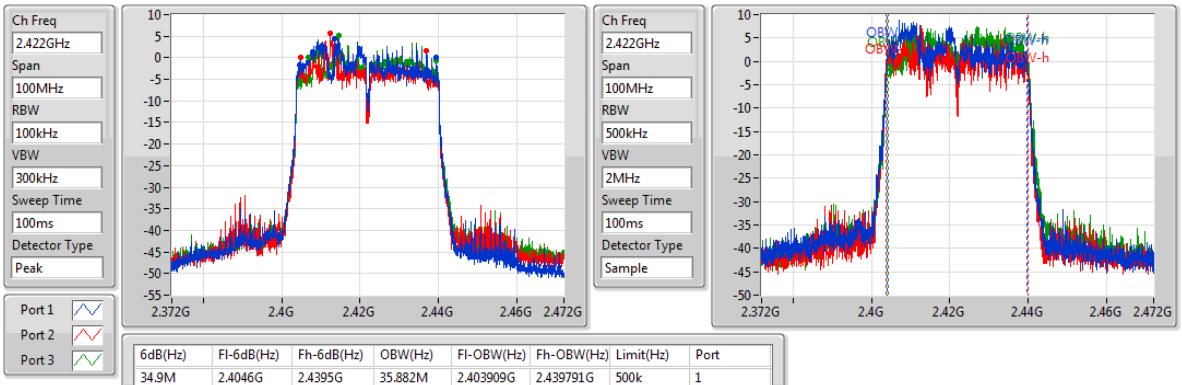
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.675M	2.453075G	2.47075G	17.766M	2.453029G	2.470796G	500k	1
16.6M	2.45315G	2.46975G	17.591M	2.453129G	2.470721G	500k	2
16.825M	2.453775G	2.4706G	17.541M	2.453204G	2.470746G	500k	3

802.11ac VHT40-BF_Nss1,(MCS0)_3TX **EBW**

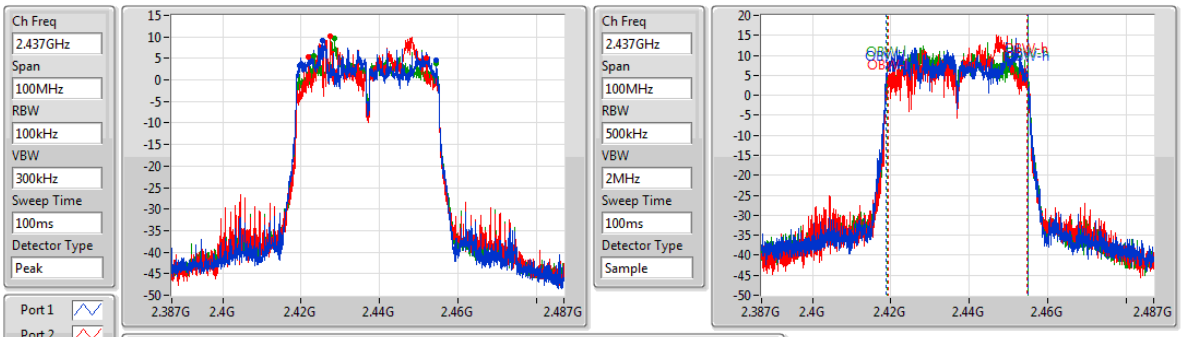
2422MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
34.9M	2.4046G	2.4395G	35.882M	2.403909G	2.439791G	500k	1
32.1M	2.4049G	2.437G	36.132M	2.403809G	2.439941G	500k	2
32.55M	2.40695G	2.4395G	35.782M	2.404209G	2.439991G	500k	3

802.11ac VHT40-BF_Nss1,(MCS0)_3TX **EBW**

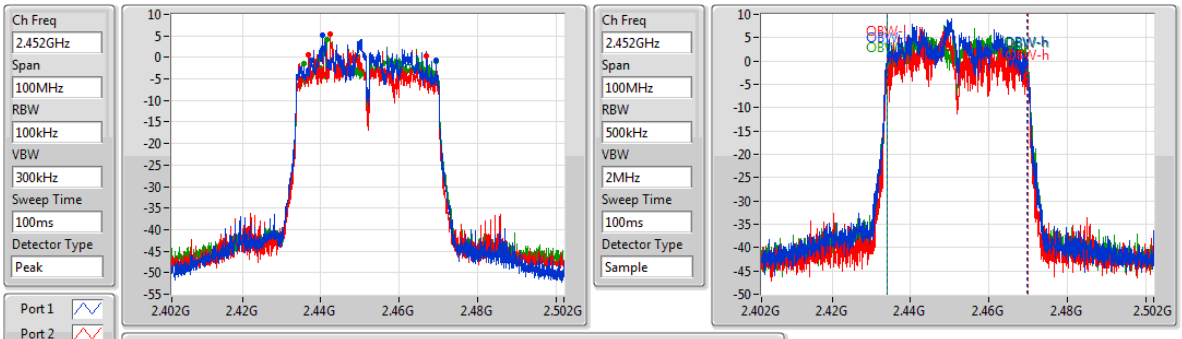
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
34.9M	2.4196G	2.4545G	35.982M	2.418859G	2.454841G	500k	1
30.05M	2.42195G	2.452G	35.482M	2.419259G	2.454741G	500k	2
31.3M	2.4232G	2.4545G	35.782M	2.419109G	2.454891G	500k	3

802.11ac VHT40-BF_Nss1,(MCS0)_3TX **EBW**

2452MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
31.9M	2.43755G	2.46945G	35.882M	2.433909G	2.469791G	500k	1
30.05M	2.43695G	2.467G	35.782M	2.434059G	2.469841G	500k	2
33.75M	2.43575G	2.4695G	35.882M	2.434059G	2.469941G	500k	3

Summary

Mode	Total Power (dBm)	Total Power (W)
802.11b_(1Mbps)_3TX	-	-
2.4-2.4835GHz	29.73	0.93972
802.11g-BF_(6Mbps)_3TX	-	-
2.4-2.4835GHz	28.52	0.71121
802.11ac VHT20-BF_Nss1,(MCS0)_3TX	-	-
2.4-2.4835GHz	28.41	0.69343
802.11ac VHT40-BF_Nss1,(MCS0)_3TX	-	-
2.4-2.4835GHz	25.77	0.37757

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_(1Mbps)_3TX	-	-	-	-	-	-	-
2412MHz	Pass	2.80	24.84	24.53	24.52	29.40	30.00
2437MHz	Pass	2.80	25.07	24.92	24.89	29.73	30.00
2462MHz	Pass	2.80	24.52	24.18	24.53	29.18	30.00
802.11g-BF_(6Mbps)_3TX	-	-	-	-	-	-	-
2412MHz	Pass	7.44	20.04	20.17	19.8	24.78	28.56
2437MHz	Pass	7.44	23.74	23.88	23.61	28.52	28.56
2462MHz	Pass	7.44	19.97	19.87	19.92	24.69	28.56
802.11ac VHT20-BF_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-
2412MHz	Pass	7.44	20.89	21.10	21.01	25.77	28.56
2437MHz	Pass	7.44	23.62	23.74	23.56	28.41	28.56
2462MHz	Pass	7.44	20.56	20.42	20.35	25.22	28.56
802.11ac VHT40-BF_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-
2422MHz	Pass	7.44	16.59	16.55	16.44	21.30	28.56
2437MHz	Pass	7.44	20.94	20.84	21.22	25.77	28.56
2452MHz	Pass	7.44	16.49	16.23	16.50	21.18	28.56

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

Summary

Mode	PD (dBm/RBW)
802.11b_(1Mbps)_3TX	-
2.4-2.4835GHz	1.56
802.11g-BF_(6Mbps)_3TX	-
2.4-2.4835GHz	1.83
802.11ac VHT20-BF_Nss1,(MCS0)_3TX	-
2.4-2.4835GHz	1.97
802.11ac VHT40-BF_Nss1,(MCS0)_3TX	-
2.4-2.4835GHz	-2.77

RBW=3kHz.

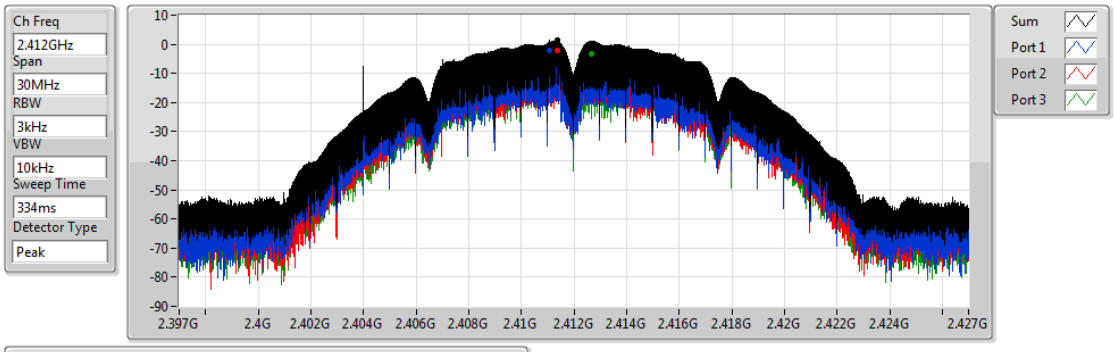
Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_(1Mbps)_3TX	-	-	-	-	-	-	-
2412MHz	Pass	7.44	-2.02	-1.96	-3.35	1.55	6.56
2437MHz	Pass	7.44	-3.13	-2.37	-0.39	1.56	6.56
2462MHz	Pass	7.44	-2.97	-2.85	-2.94	0.67	6.56
802.11g-BF_(6Mbps)_3TX	-	-	-	-	-	-	-
2412MHz	Pass	7.44	-4.52	-5.67	-2.92	-1.64	6.56
2437MHz	Pass	7.44	-1.12	-0.08	-1.30	1.83	6.56
2462MHz	Pass	7.44	-5.51	-5.05	-3.07	-1.80	6.56
802.11ac VHT20-BF_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-
2412MHz	Pass	7.44	-1.65	-4.11	-2.99	-1.03	6.56
2437MHz	Pass	7.44	1.13	-1.90	-0.67	1.97	6.56
2462MHz	Pass	7.44	-4.88	-5.08	-4.51	-2.06	6.56
802.11ac VHT40-BF_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-
2422MHz	Pass	7.44	-9.41	-9.70	-10.46	-7.96	6.56
2437MHz	Pass	7.44	-5.22	-3.43	-5.12	-2.77	6.56
2452MHz	Pass	7.44	-8.85	-9.80	-11.56	-7.76	6.56

DG = Directional Gain; RBW=3kHz;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port X power density;

802.11b_(1Mbps)_3TX **PSD**

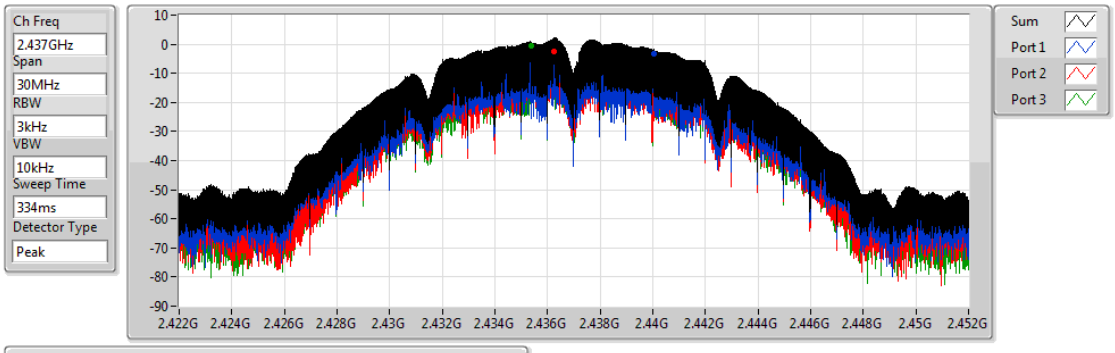
2412MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.55	1.55	-2.02	-1.96	-3.35

802.11b_(1Mbps)_3TX **PSD**

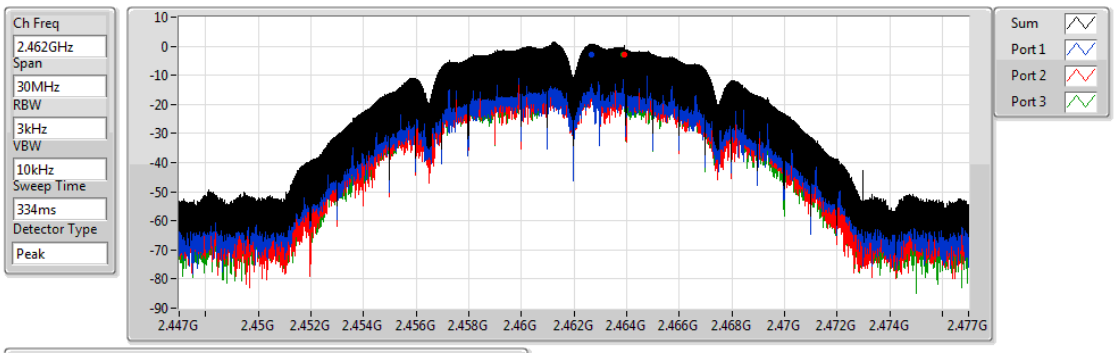
2437MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.56	1.56	-3.13	-2.37	-0.39

802.11b_(1Mbps)_3TX **PSD**

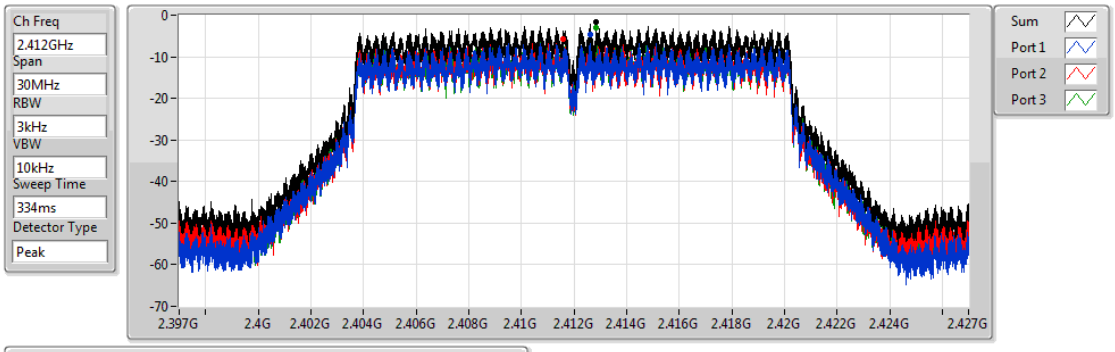
2462MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.67	0.67	-2.97	-2.85	-2.94

802.11g-BF_(6Mbps)_3TX PSD

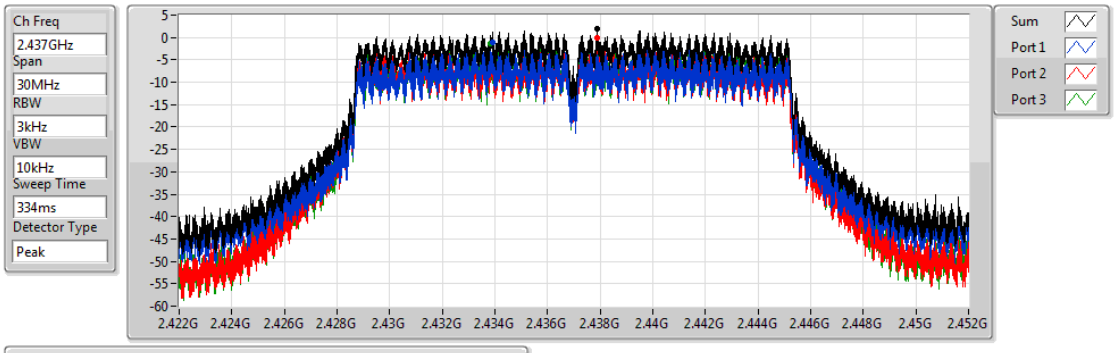
2412MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.64	-1.64	-4.52	-5.67	-2.92

802.11g-BF_(6Mbps)_3TX PSD

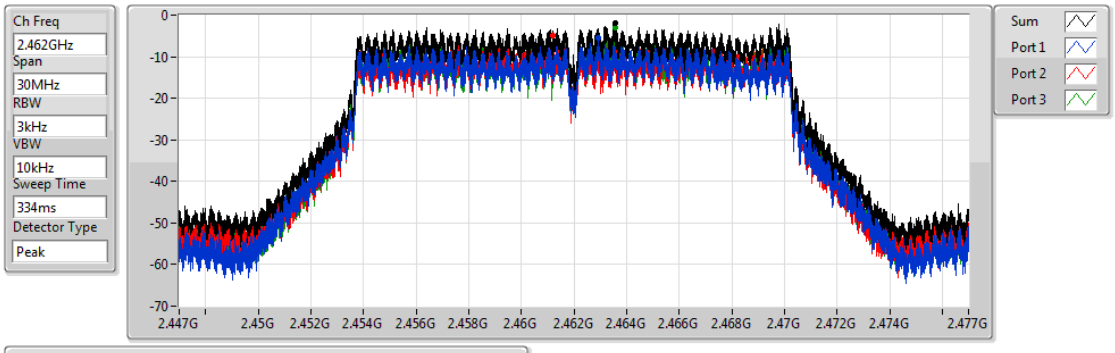
2437MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.83	1.83	-1.12	-0.08	-1.30

802.11g-BF_(6Mbps)_3TX PSD

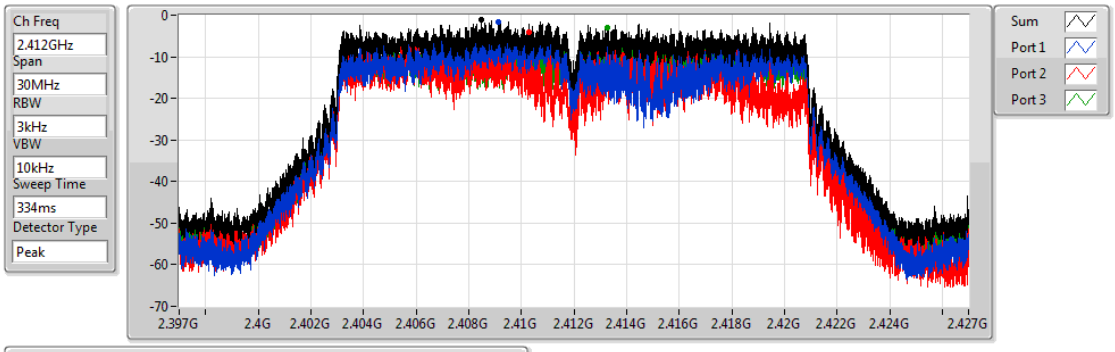
2462MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.80	-1.80	-5.51	-5.05	-3.07

802.11ac VHT20-BF_Nss1,(MCS0)_3TX PSD

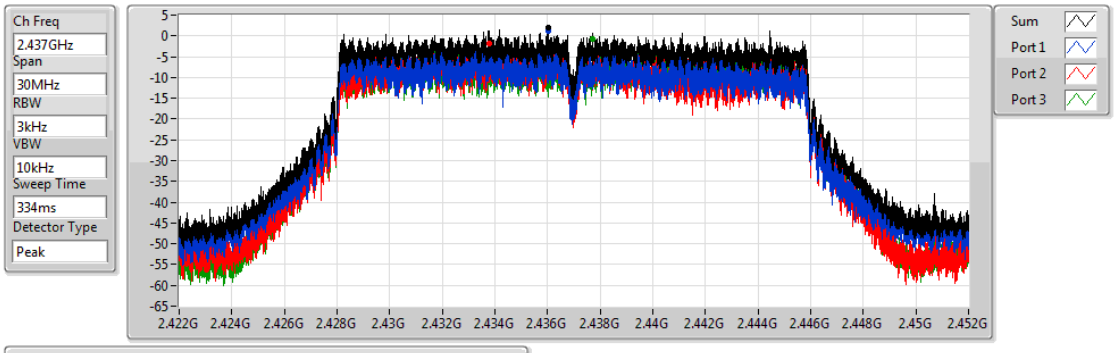
2412MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.03	-1.03	-1.65	-4.11	-2.99

802.11ac VHT20-BF_Nss1,(MCS0)_3TX PSD

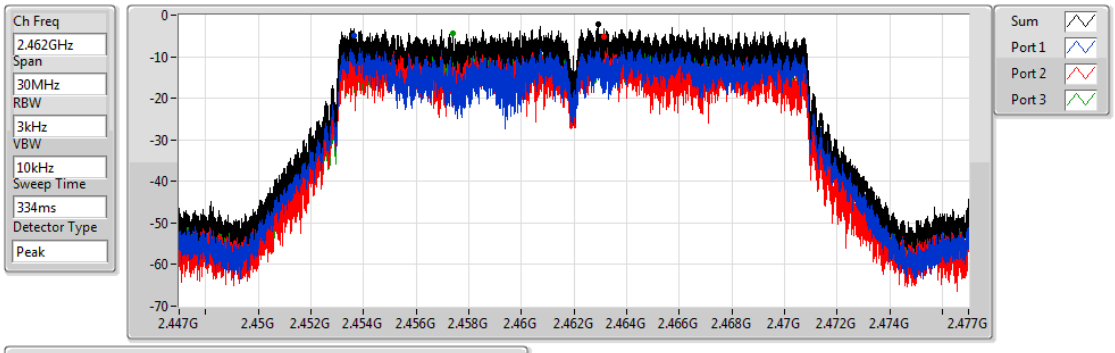
2437MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.97	1.97	1.13	-1.90	-0.67

802.11ac VHT20-BF_Nss1,(MCS0)_3TX PSD

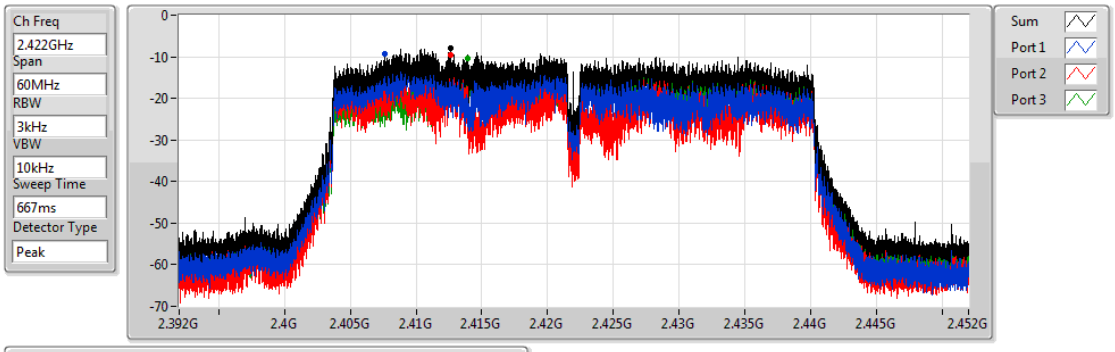
2462MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.06	-2.06	-4.88	-5.08	-4.51

802.11ac VHT40-BF_Nss1,(MCS0)_3TX PSD

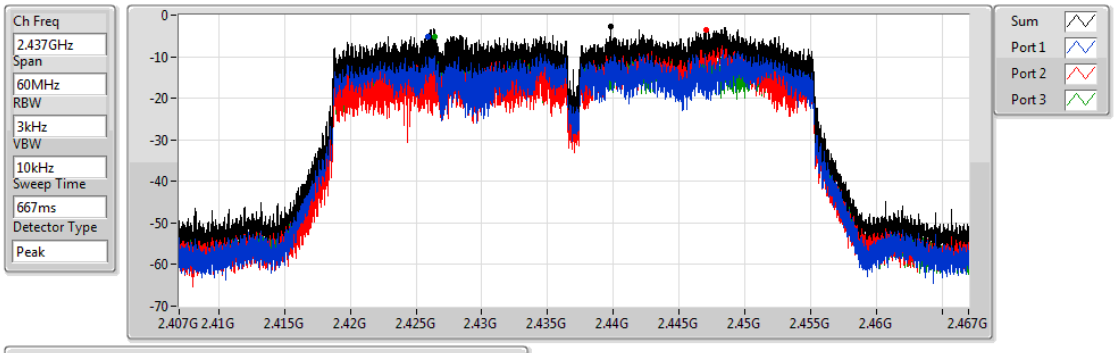
2422MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-7.96	-7.96	-9.41	-9.70	-10.46

802.11ac VHT40-BF_Nss1,(MCS0)_3TX PSD

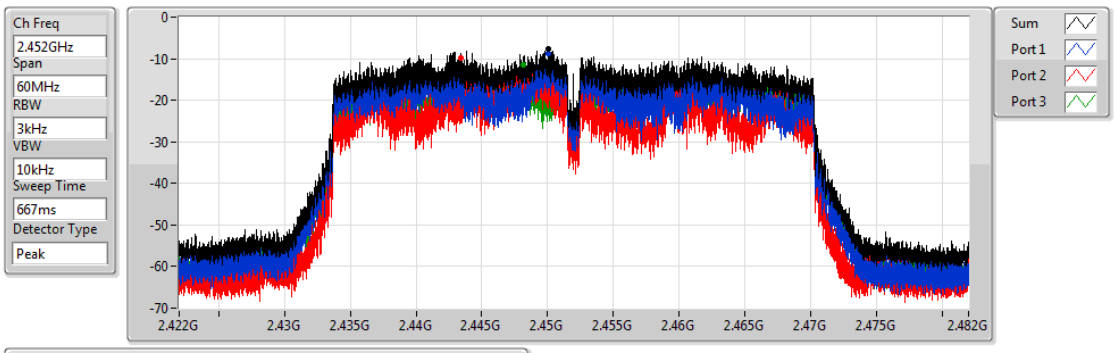
2437MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.77	-2.77	-5.22	-3.43	-5.12

802.11ac VHT40-BF_Nss1,(MCS0)_3TX PSD

2452MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-7.76	-7.76	-8.85	-9.80	-11.56

Summary

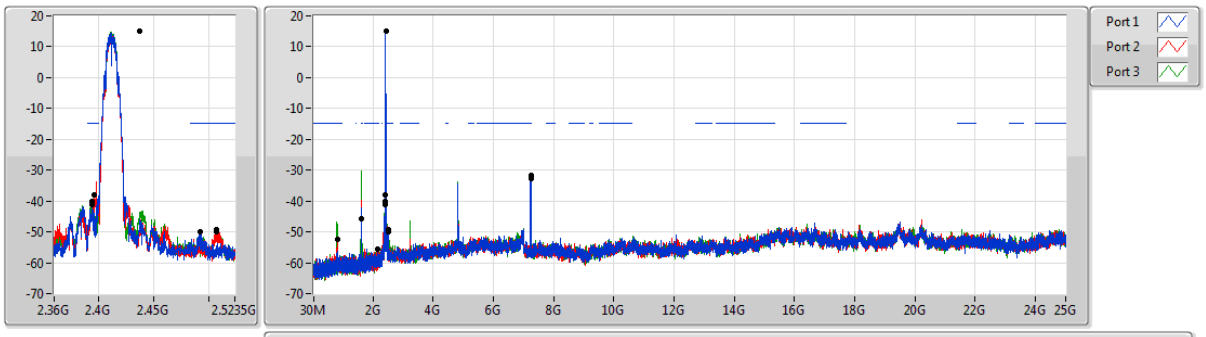
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
802.11ac VHT20-BF_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2.4-2.4835GHz	Pass	2.436072G	12.46	-17.54	2.30408G	-53.94	2.39704G	-27.16	2.51294G	-52.30	7.223898G	-44.60	2

Result

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
802.11b_(1Mbps)_3TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.437408G	15.22	-14.78	2.14098G	-55.71	2.39448G	-41.20	2.49262G	-50.05	7.235136G	-32.72	1
2412MHz	Pass	2.437408G	15.22	-14.78	804.725M	-52.41	2.39648G	-38.03	2.50646G	-49.95	7.235136G	-32.49	2
2412MHz	Pass	2.437408G	15.22	-14.78	1.61906G	-45.58	2.39456G	-40.29	2.50718G	-49.32	7.235136G	-31.78	3
2437MHz	Pass	2.437408G	15.22	-14.78	1.624885G	-43.76	2.398G	-49.41	2.51646G	-50.82	16.711791G	-48.41	1
2437MHz	Pass	2.437408G	15.22	-14.78	1.624885G	-40.50	2.39096G	-47.35	2.48446G	-48.26	16.647171G	-48.02	2
2437MHz	Pass	2.437408G	15.22	-14.78	1.624885G	-34.07	2.39008G	-50.34	2.48542G	-48.42	16.689314G	-46.88	3
2462MHz	Pass	2.437408G	15.22	-14.78	1.641195G	-45.17	2.39136G	-53.69	2.4875G	-47.51	16.279118G	-47.99	1
2462MHz	Pass	2.437408G	15.22	-14.78	1.641195G	-41.92	2.39256G	-53.52	2.49198G	-45.32	16.711791G	-47.74	2
2462MHz	Pass	2.437408G	15.22	-14.78	1.641195G	-36.51	2.39048G	-54.73	2.49046G	-44.44	16.678076G	-48.34	3
802.11g-BF_(6Mbps)_3TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.44008G	12.93	-17.07	1.62139G	-56.13	2.39824G	-34.28	2.51038G	-52.33	7.232327G	-40.44	1
2412MHz	Pass	2.44008G	12.93	-17.07	798.9M	-53.51	2.39832G	-32.61	2.51606G	-52.65	7.235136G	-40.24	2
2412MHz	Pass	2.44008G	12.93	-17.07	1.617895G	-44.94	2.39712G	-32.67	2.48646G	-49.01	7.235136G	-40.83	3
2437MHz	Pass	2.44008G	12.93	-17.07	1.624885G	-55.43	2.39832G	-47.21	2.51822G	-51.10	6.987895G	-48.81	1
2437MHz	Pass	2.44008G	12.93	-17.07	1.62372G	-51.93	2.39512G	-48.62	2.49182G	-50.78	16.683695G	-49.18	2
2437MHz	Pass	2.44008G	12.93	-17.07	1.627215G	-44.52	2.39576G	-45.70	2.4847G	-49.83	16.3325G	-48.58	3
2462MHz	Pass	2.44008G	12.93	-17.07	1.64003G	-52.49	2.39192G	-54.14	2.48414G	-45.02	16.683695G	-48.10	1
2462MHz	Pass	2.44008G	12.93	-17.07	1.64003G	-52.26	2.39696G	-53.21	2.48382G	-44.79	16.433644G	-47.78	2
2462MHz	Pass	2.44008G	12.93	-17.07	1.6377G	-50.00	2.39784G	-52.78	2.48446G	-44.26	16.711791G	-47.25	3
802.11ac VHT20-BF_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.436072G	12.46	-17.54	1.815945G	-56.20	2.39704G	-32.28	2.4895G	-51.20	7.235136G	-35.79	1
2412MHz	Pass	2.436072G	12.46	-17.54	2.30408G	-53.94	2.39704G	-27.16	2.51294G	-52.30	7.223898G	-44.60	2
2412MHz	Pass	2.436072G	12.46	-17.54	1.61673G	-44.12	2.39704G	-31.11	2.48518G	-49.44	7.243565G	-40.31	3
2437MHz	Pass	2.436072G	12.46	-17.54	1.617895G	-55.93	2.39784G	-49.40	2.5103G	-52.38	16.363405G	-48.27	1
2437MHz	Pass	2.436072G	12.46	-17.54	2.30408G	-52.54	2.3944G	-48.21	2.48614G	-50.02	16.408358G	-48.89	2
2437MHz	Pass	2.436072G	12.46	-17.54	1.622555G	-47.37	2.3964G	-46.79	2.48782G	-49.97	16.425215G	-48.36	3
2462MHz	Pass	2.436072G	12.46	-17.54	1.99186G	-55.28	2.39192G	-53.20	2.48374G	-43.83	16.711791G	-48.06	1
2462MHz	Pass	2.436072G	12.46	-17.54	1.64935G	-53.40	2.39432G	-52.37	2.48358G	-44.20	16.697743G	-48.25	2
2462MHz	Pass	2.436072G	12.46	-17.54	1.629545G	-48.71	2.39072G	-53.75	2.4851G	-44.74	16.270689G	-48.23	3
802.11ac VHT40-BF_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	2.448263G	9.89	-20.11	712.42M	-56.24	2.392G	-39.43	2.49198G	-51.11	16.401211G	-48.06	1
2422MHz	Pass	2.448263G	9.89	-20.11	1.62613G	-54.66	2.39008G	-39.42	2.49518G	-52.12	16.690081G	-47.40	2
2422MHz	Pass	2.448263G	9.89	-20.11	794.86M	-46.11	2.39584G	-39.11	2.4915G	-47.91	3.228181G	-43.22	3
2437MHz	Pass	2.448263G	9.89	-20.11	1.82078G	-55.40	2.39568G	-41.50	2.49198G	-42.18	6.997513G	-48.63	1
2437MHz	Pass	2.448263G	9.89	-20.11	1.650175G	-52.99	2.39456G	-41.22	2.49454G	-44.65	16.409625G	-48.30	2
2437MHz	Pass	2.448263G	9.89	-20.11	1.63071G	-48.28	2.39648G	-41.10	2.4843G	-44.66	16.277811G	-47.47	3
2452MHz	Pass	2.448263G	9.89	-20.11	2.1597G	-55.63	2.39568G	-52.94	2.48942G	-42.71	16.737759G	-48.17	1
2452MHz	Pass	2.448263G	9.89	-20.11	1.84139G	-56.65	2.39648G	-52.62	2.48542G	-43.00	6.975077G	-48.22	2
2452MHz	Pass	2.448263G	9.89	-20.11	1.634145G	-55.56	2.39584G	-48.52	2.48942G	-43.38	6.963859G	-48.17	3

802.11b_(1Mbps)_3TX **CSE NdB**

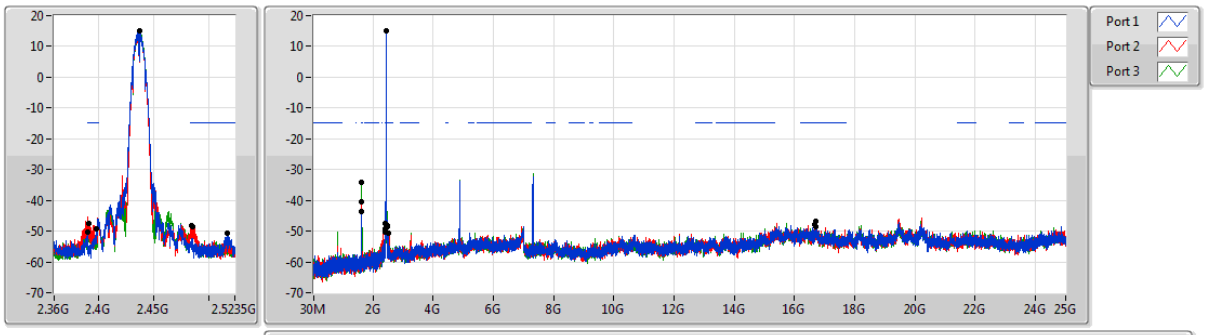
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.437408G	15.22	-14.78	2.14098G	-55.71	2.39448G	-41.20	2.49262G	-50.05	7.235136G	-32.72	1
2.437408G	15.22	-14.78	804.725M	-52.41	2.39648G	-38.03	2.50646G	-49.95	7.235136G	-32.49	2
2.437408G	15.22	-14.78	1.61906G	-45.58	2.39456G	-40.29	2.50718G	-49.32	7.235136G	-31.78	3

802.11b_(1Mbps)_3TX **CSE NdB**

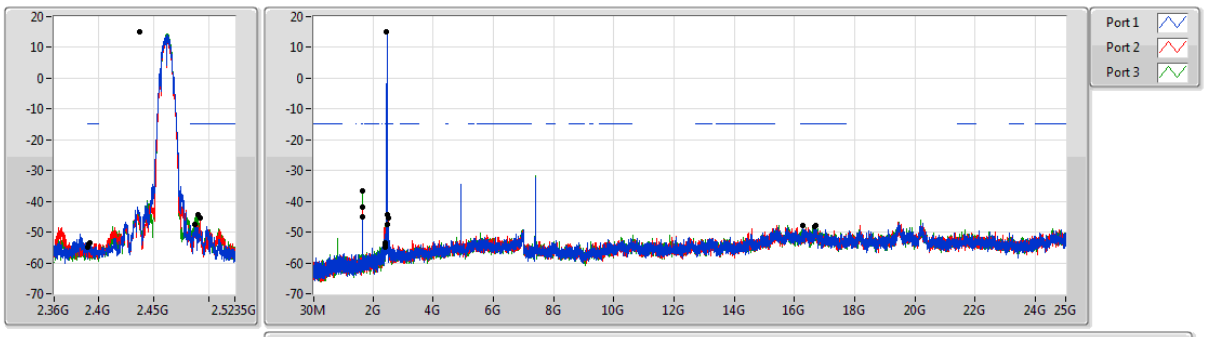
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.437408G	15.22	-14.78	1.624885G	-43.76	2.398G	-49.41	2.51646G	-50.82	16.711791G	-48.41	1
2.437408G	15.22	-14.78	1.624885G	-40.50	2.39096G	-47.35	2.48446G	-48.26	16.647171G	-48.02	2
2.437408G	15.22	-14.78	1.624885G	-34.07	2.39008G	-50.34	2.48542G	-48.42	16.689314G	-46.88	3

802.11b_(1Mbps)_3TX **CSE NdB**

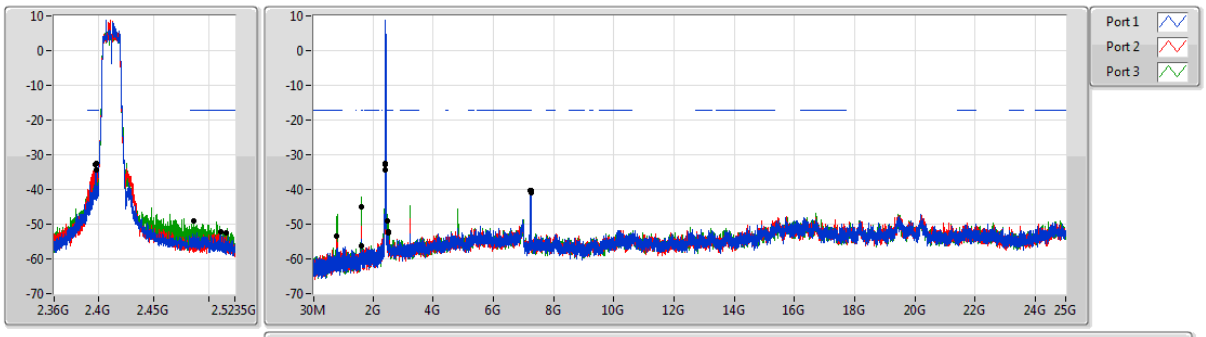
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.437408G	15.22	-14.78	1.641195G	-45.17	2.39136G	-53.69	2.4875G	-47.51	16.279118G	-47.99	1
2.437408G	15.22	-14.78	1.641195G	-41.92	2.39256G	-53.52	2.49198G	-45.32	16.711791G	-47.74	2
2.437408G	15.22	-14.78	1.641195G	-36.51	2.39048G	-54.73	2.49046G	-44.44	16.678076G	-48.34	3

802.11g-BF_(6Mbps)_3TX **CSE NdB**

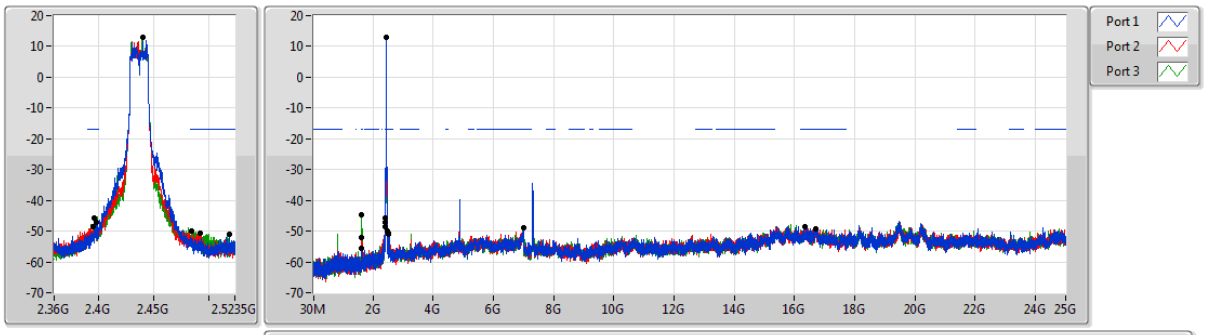
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44008G	12.93	-17.07	1.62139G	-56.13	2.39824G	-34.28	2.51038G	-52.33	7.232327G	-40.44	1
2.44008G	12.93	-17.07	798.9M	-53.51	2.39832G	-32.61	2.51606G	-52.65	7.235136G	-40.24	2
2.44008G	12.93	-17.07	1.617895G	-44.94	2.39712G	-32.67	2.48646G	-49.01	7.235136G	-40.83	3

802.11g-BF_(6Mbps)_3TX **CSE NdB**

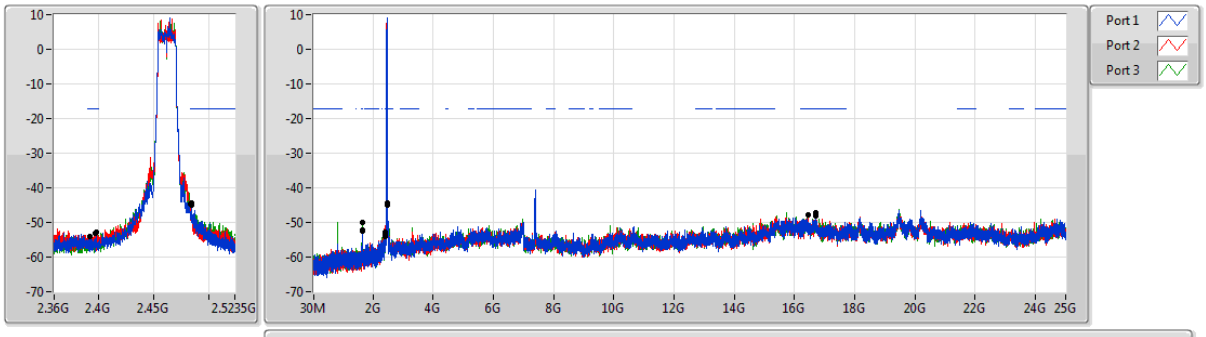
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44008G	12.93	-17.07	1.624885G	-55.43	2.39832G	-47.21	2.51822G	-51.10	6.987895G	-48.81	1
2.44008G	12.93	-17.07	1.62372G	-51.93	2.39512G	-48.62	2.49182G	-50.78	16.683695G	-49.18	2
2.44008G	12.93	-17.07	1.627215G	-44.52	2.39576G	-45.70	2.4847G	-49.83	16.3325G	-48.58	3

802.11g-BF_(6Mbps)_3TX **CSE NdB**

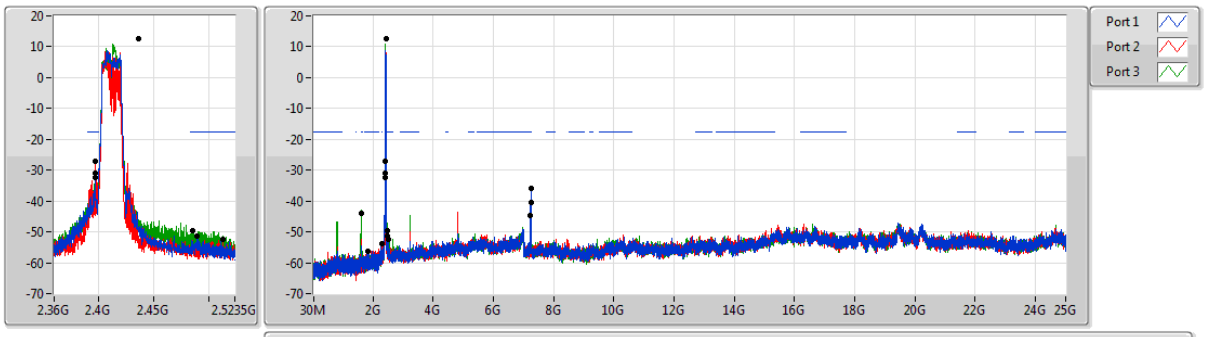
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44008G	12.93	-17.07	1.64003G	-52.49	2.39192G	-54.14	2.48414G	-45.02	16.683695G	-48.10	1
2.44008G	12.93	-17.07	1.64003G	-52.26	2.39696G	-53.21	2.48382G	-44.79	16.433644G	-47.78	2
2.44008G	12.93	-17.07	1.6377G	-50.00	2.39784G	-52.78	2.48446G	-44.26	16.711791G	-47.25	3

802.11ac VHT20-BF_Nss1,(MCS0)_3TX **CSE NdB**

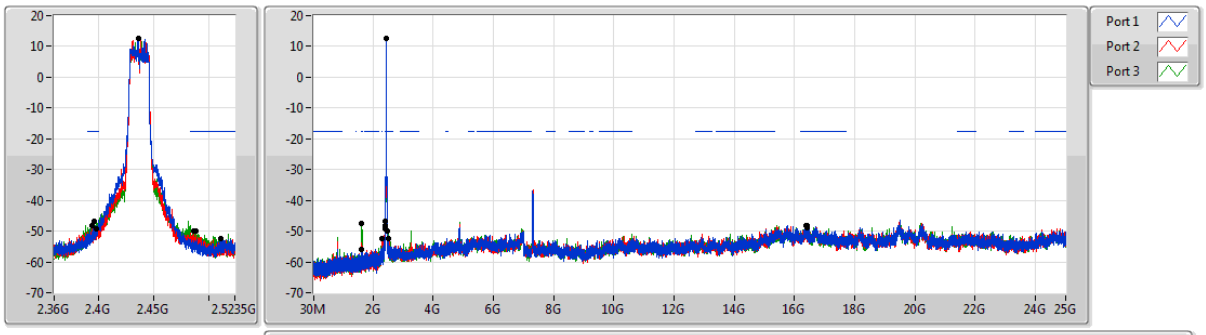
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.436072G	12.46	-17.54	1.815945G	-56.20	2.39704G	-32.28	2.4895G	-51.20	7.235136G	-35.79	1
2.436072G	12.46	-17.54	2.30408G	-53.94	2.39704G	-27.16	2.51294G	-52.30	7.223898G	-44.60	2
2.436072G	12.46	-17.54	1.61673G	-44.12	2.39704G	-31.11	2.48518G	-49.44	7.243565G	-40.31	3

802.11ac VHT20-BF_Nss1,(MCS0)_3TX **CSE NdB**

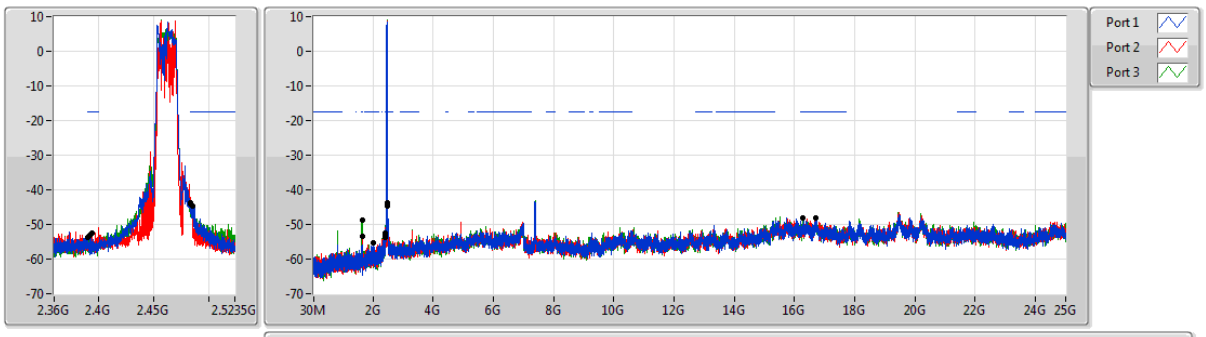
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.436072G	12.46	-17.54	1.617895G	-55.93	2.39784G	-49.40	2.5103G	-52.38	16.363405G	-48.27	1
2.436072G	12.46	-17.54	2.30408G	-52.54	2.3944G	-48.21	2.48614G	-50.02	16.408358G	-48.89	2
2.436072G	12.46	-17.54	1.622555G	-47.37	2.3964G	-46.79	2.48782G	-49.97	16.425215G	-48.36	3

802.11ac VHT20-BF_Nss1,(MCS0)_3TX **CSE NdB**

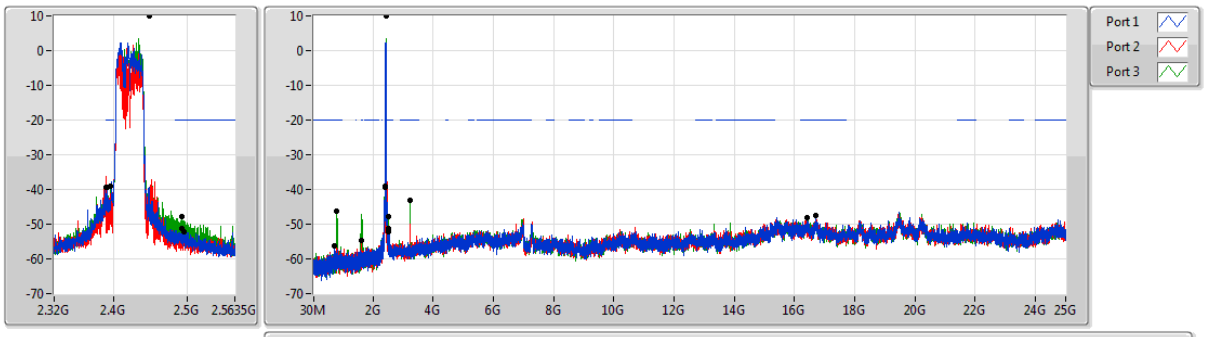
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.436072G	12.46	-17.54	1.99186G	-55.28	2.39192G	-53.20	2.48374G	-43.83	16.711791G	-48.06	1
2.436072G	12.46	-17.54	1.64935G	-53.40	2.39432G	-52.37	2.48358G	-44.20	16.697743G	-48.25	2
2.436072G	12.46	-17.54	1.629545G	-48.71	2.39072G	-53.75	2.4851G	-44.74	16.270689G	-48.23	3

802.11ac VHT40-BF_Nss1,(MCS0)_3TX **CSE NdB**

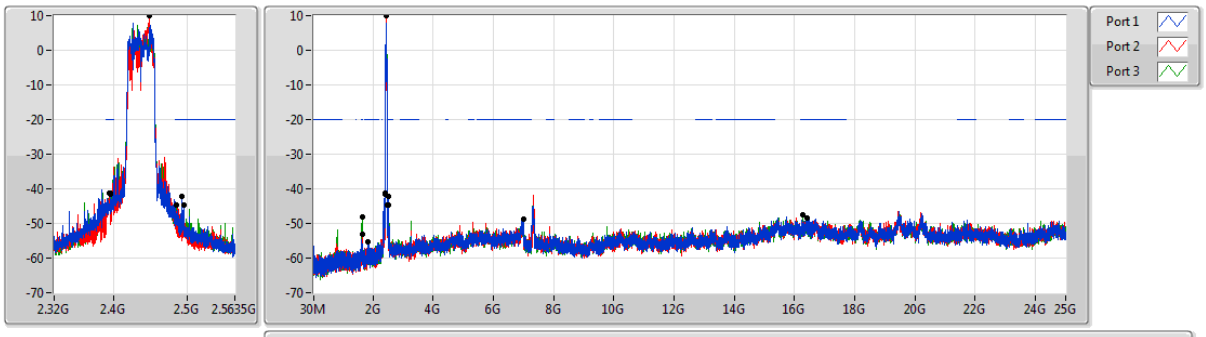
2422MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.448263G	9.89	-20.11	712.42M	-56.24	2.392G	-39.43	2.49198G	-51.11	16.401211G	-48.06	1
2.448263G	9.89	-20.11	1.62613G	-54.66	2.39008G	-39.42	2.49518G	-52.12	16.690081G	-47.40	2
2.448263G	9.89	-20.11	794.86M	-46.11	2.39584G	-39.11	2.4915G	-47.91	3.228181G	-43.22	3

802.11ac VHT40-BF_Nss1,(MCS0)_3TX **CSE NdB**

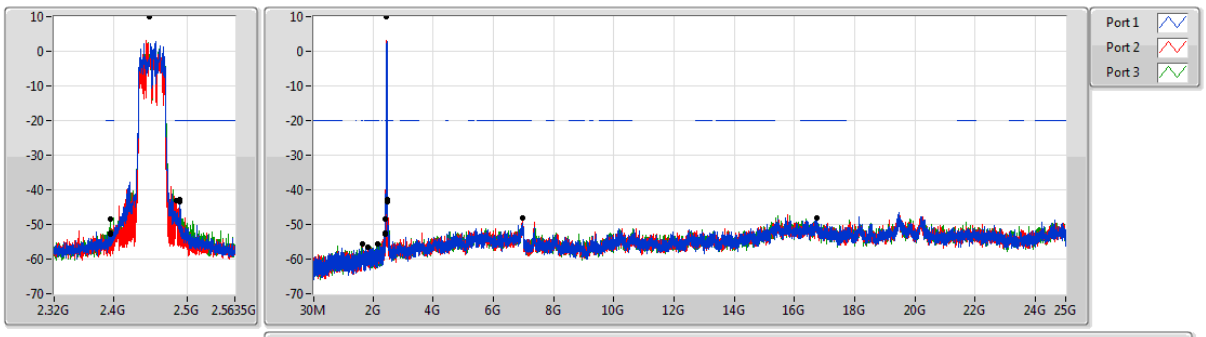
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.448263G	9.89	-20.11	1.82078G	-55.40	2.39568G	-41.50	2.49198G	-42.18	6.997513G	-48.63	1
2.448263G	9.89	-20.11	1.650175G	-52.99	2.39456G	-41.22	2.49454G	-44.65	16.409625G	-48.30	2
2.448263G	9.89	-20.11	1.63071G	-48.28	2.39648G	-41.10	2.4843G	-44.66	16.277811G	-47.47	3

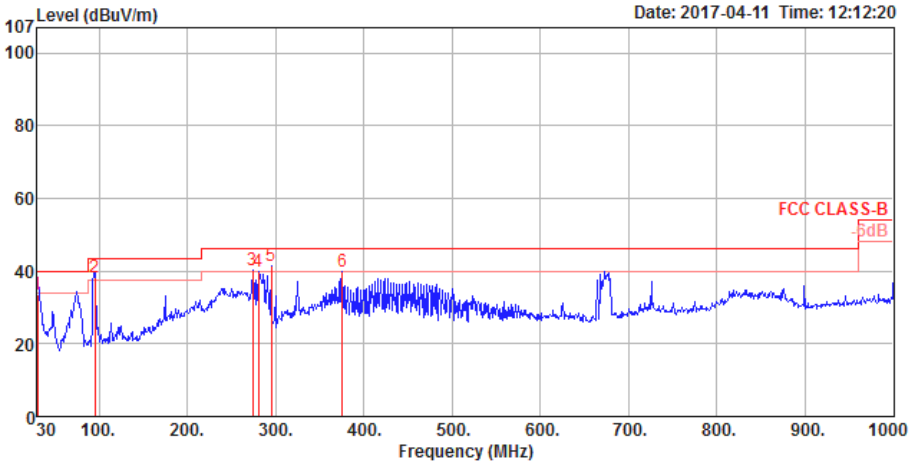
802.11ac VHT40-BF_Nss1,(MCS0)_3TX **CSE NdB**

2452MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.448263G	9.89	-20.11	2.1597G	-55.63	2.39568G	-52.94	2.48942G	-42.71	16.737759G	-48.17	1
2.448263G	9.89	-20.11	1.84139G	-56.65	2.39648G	-52.62	2.48542G	-43.00	6.975077G	-48.22	2
2.448263G	9.89	-20.11	1.634145G	-55.56	2.39584G	-48.52	2.48942G	-43.38	6.963859G	-48.17	3

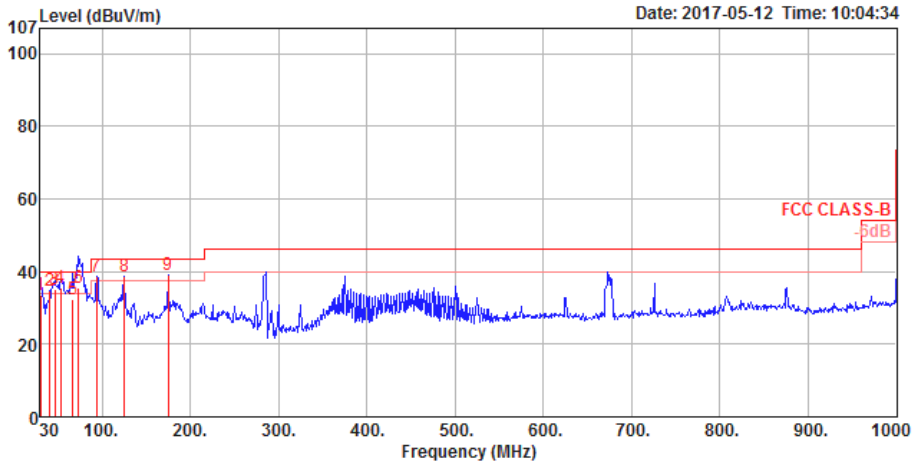
RSE below 1GHz Result			
Operating Mode	1	**Polarization**	Horizontal
Operating Function	Normal Link		



	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	30.00	33.66	40.00	-6.34	39.00	0.53	25.60	31.47	125	150	QP	HORIZONTAL
2	94.99	38.13	43.50	-5.37	53.00	0.87	16.11	31.85	125	146	QP	HORIZONTAL
3	274.44	40.11	46.00	-5.89	51.58	1.31	19.24	32.02	125	146	Peak	HORIZONTAL
4	280.26	39.88	46.00	-6.12	51.29	1.32	19.30	32.03	125	118	Peak	HORIZONTAL
5	294.81	41.49	46.00	-4.51	52.66	1.36	19.50	32.03	125	147	Peak	HORIZONTAL
6	375.32	39.89	46.00	-6.11	48.78	1.50	21.73	32.12	100	250	Peak	HORIZONTAL

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

RSE below 1GHz Result			
Operating Mode	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	30.00	33.66	40.00	-6.34	39.00	0.53	25.60	31.47	125	23	QP	VERTICAL
2	40.67	34.82	40.00	-5.18	46.66	0.54	19.29	31.67	100	155	Peak	VERTICAL
3	46.49	35.16	40.00	-4.84	50.00	0.61	16.27	31.72	100	246	QP	VERTICAL
4	53.28	35.38	40.00	-4.62	52.50	0.61	14.04	31.77	100	207	QP	VERTICAL
5	66.86	32.38	40.00	-7.62	51.00	0.67	12.53	31.82	150	232	QP	VERTICAL
6	73.65	35.71	40.00	-4.29	54.01	0.75	12.79	31.84	122	87	QP	VERTICAL
7	94.02	38.65	43.50	-4.85	53.73	0.85	15.92	31.85	125	180	Peak	VERTICAL
8	125.06	38.57	43.50	-4.93	51.12	0.89	18.45	31.89	100	75	Peak	VERTICAL
9	174.53	39.23	43.50	-4.27	54.50	1.05	15.61	31.93	150	13	Peak	VERTICAL

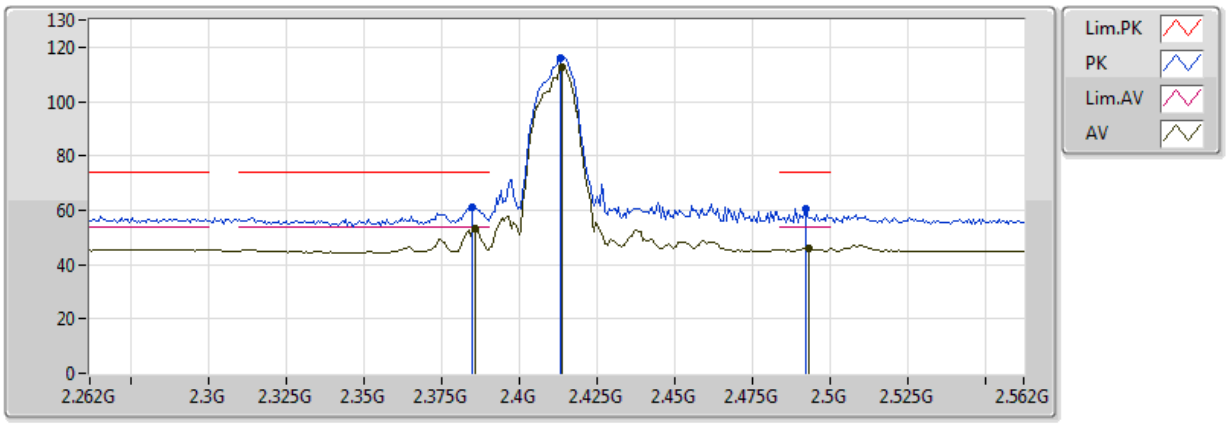
Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
802.11g-BF_(6Mbps)_3TX	-	-	-	-	-	-	-	-	-	-	-	-
2.4-2.4835GHz	Pass	AV	2.4836G	53.43	54.00	-0.57	32.14	3	V	7	2.76	-

802.11b_(1Mbps)_3TX

2412MHz_TX

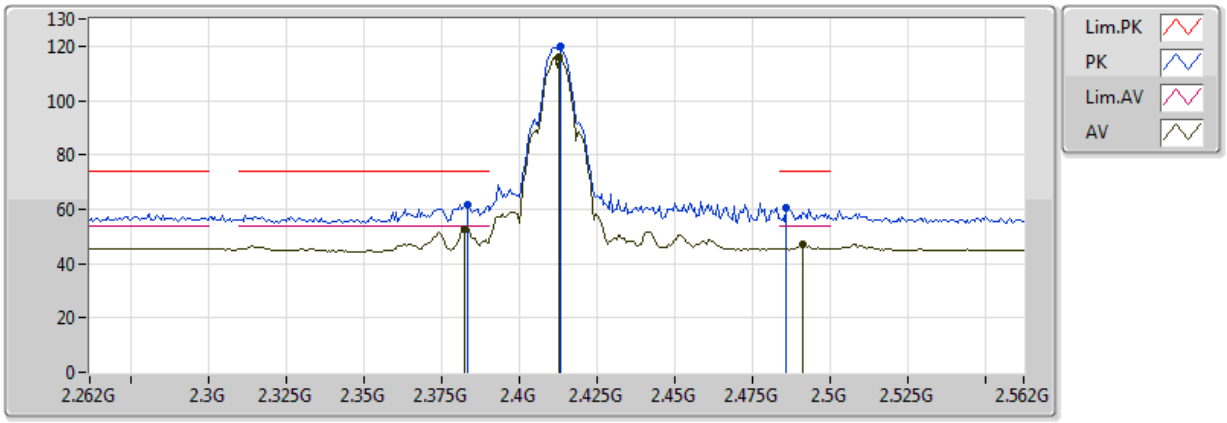


20170414
EUT Z_3TX
Non-TXBF
Setting 24
04-J-6
FSP(100142) #28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3856G	53.40	54.00	-0.60	32.67	3	V	15	2.62	-
AV	2.4138G	112.76	Inf	-Inf	32.69	3	V	15	2.62	-
AV	2.493G	46.00	54.00	-8.00	32.79	3	V	15	2.62	-
PK	2.385G	60.80	74.00	-13.20	32.67	3	V	15	2.62	-
PK	2.4132G	116.18	Inf	-Inf	32.69	3	V	15	2.62	-
PK	2.4918G	60.70	74.00	-13.30	32.79	3	V	15	2.62	-

802.11b_(1Mbps)_3TX

2412MHz_TX

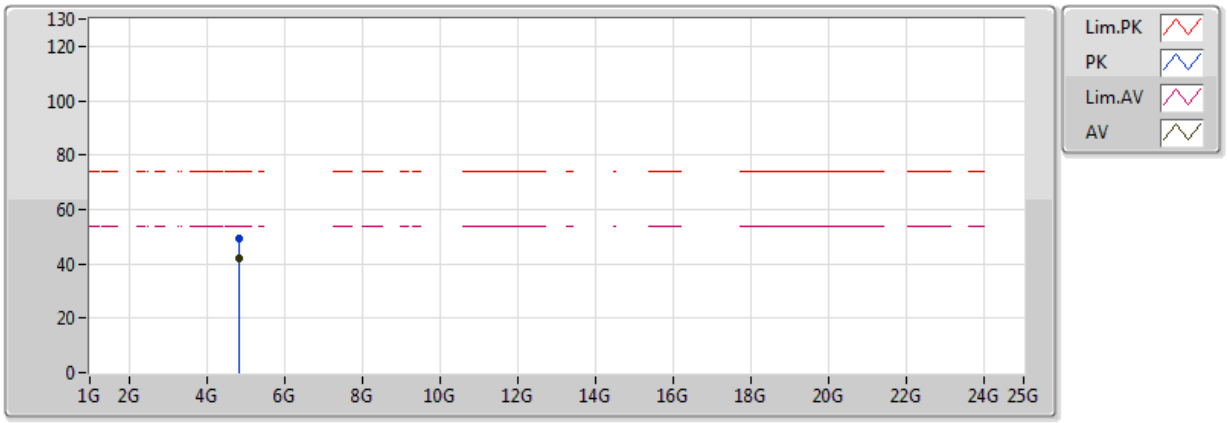


20170414
EUT Z_3TX
Non-TXBF
Setting 24
04-J-6
FSP(100142) #28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3826G	52.94	54.00	-1.06	32.66	3	H	253	2.43	-
AV	2.4126G	115.92	Inf	-Inf	32.69	3	H	253	2.43	-
AV	2.4912G	46.97	54.00	-7.03	32.79	3	H	253	2.43	-
PK	2.3832G	61.44	74.00	-12.56	32.66	3	H	253	2.43	-
PK	2.4132G	119.94	Inf	-Inf	32.69	3	H	253	2.43	-
PK	2.4858G	60.65	74.00	-13.35	32.78	3	H	253	2.43	-

802.11b_(1Mbps)_3TX

2412MHz_TX

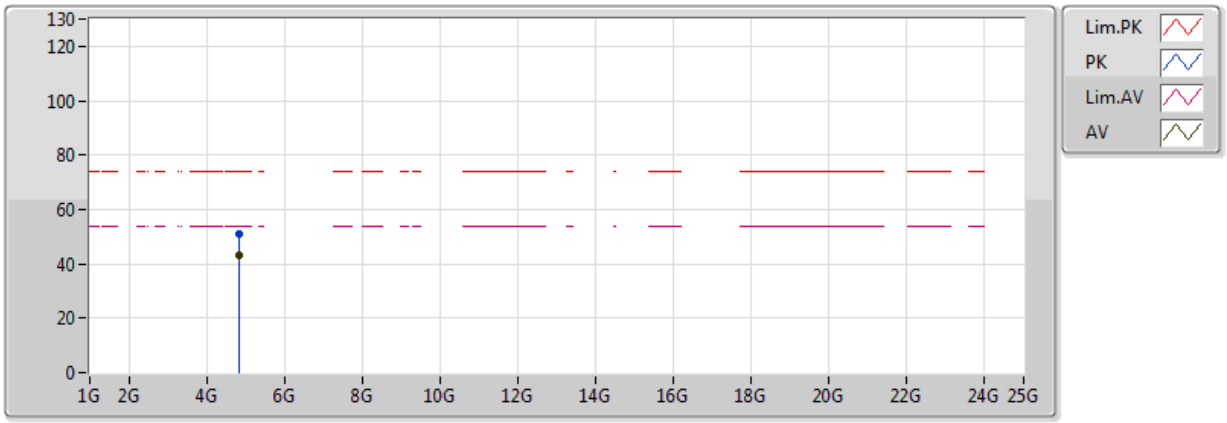


20170509
EUT Z_3TX
Non-TXBF
Setting 24
04-J-6
FSP(100142) #28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.83096G	42.16	54.00	-11.84	3.72	3	V	270	1.25	-
PK	4.8186G	49.07	74.00	-24.93	3.68	3	V	270	1.25	-

802.11b_(1Mbps)_3TX

2412MHz_TX

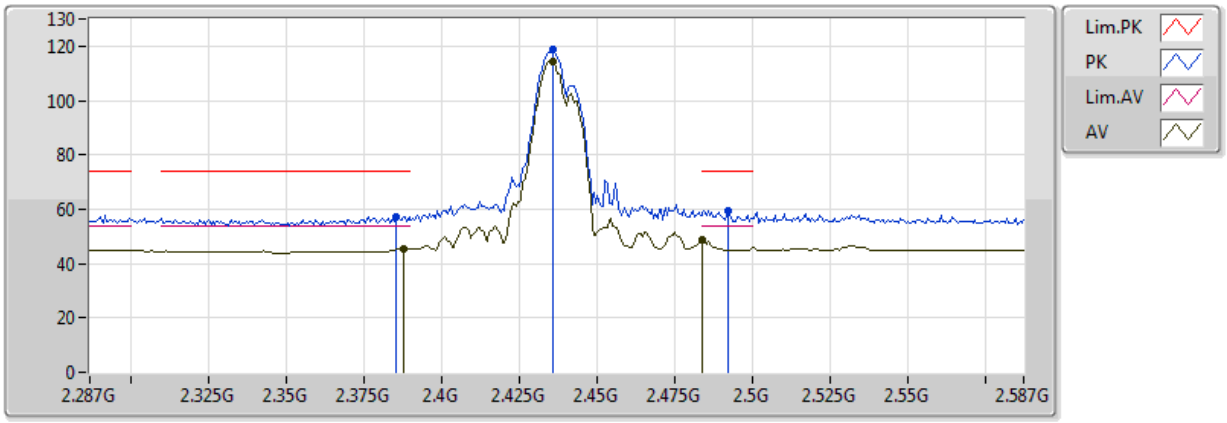


20170509
EUT Z_3TX
Non-TXBF
Setting 24
04-J-6
FSP(100142) #28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.83018G	43.16	54.00	-10.84	3.71	3	H	116	1.14	-
PK	4.82508G	50.97	74.00	-23.03	3.70	3	H	116	1.14	-

802.11b_(1Mbps)_3TX

2437MHz_TX

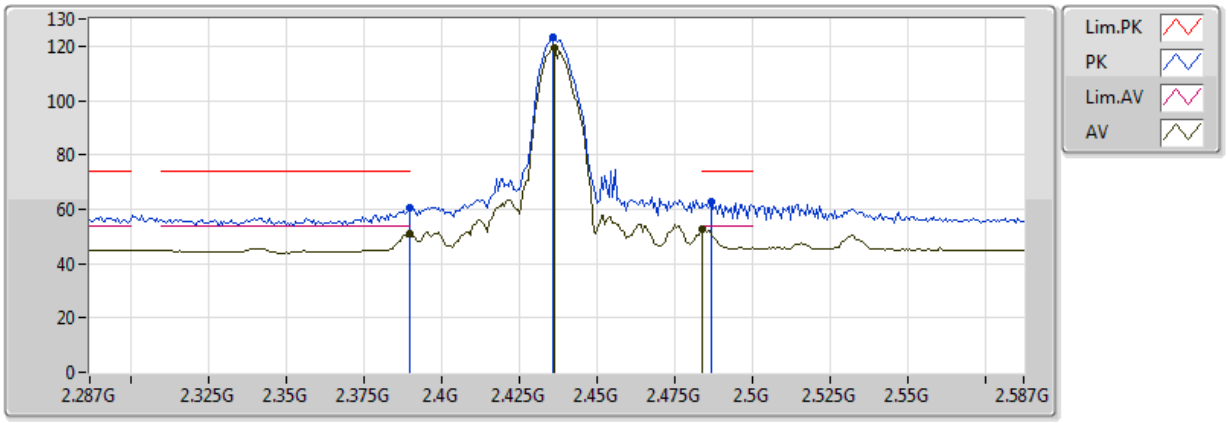


20170418
EUT Z_3TX
Setting 25
03-P-2
FSP(100142)
#28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3878G	45.62	54.00	-8.38	31.91	3	V	28	2.56	-
AV	2.4358G	114.51	Inf	-Inf	32.03	3	V	28	2.56	-
AV	2.4838G	48.72	54.00	-5.28	32.14	3	V	28	2.56	-
PK	2.3854G	57.21	74.00	-16.79	31.90	3	V	28	2.56	-
PK	2.4358G	118.69	Inf	-Inf	32.03	3	V	28	2.56	-
PK	2.4922G	59.44	74.00	-14.56	32.16	3	V	28	2.56	-

802.11b_(1Mbps)_3TX

2437MHz_TX

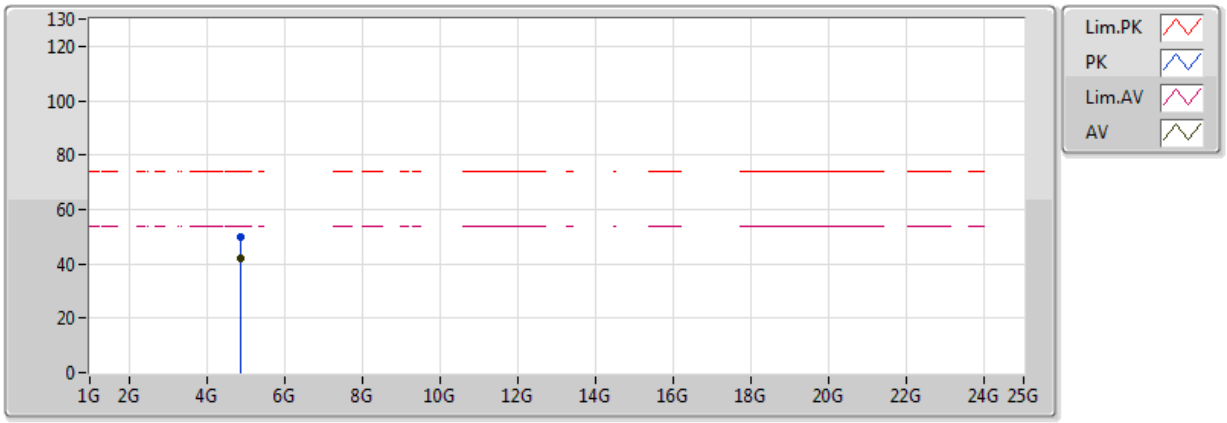


20170418
EUT Z_3TX
Setting 25
03-P-2
FSP(100142)
#28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3896G	50.98	54.00	-3.02	31.91	3	H	32	2.50	-
AV	2.4364G	119.37	Inf	-Inf	32.03	3	H	32	2.50	-
AV	2.4838G	52.67	54.00	-1.33	32.14	3	H	32	2.50	-
PK	2.389998G	60.64	74.00	-13.36	31.91	3	H	32	2.50	-
PK	2.4358G	123.21	Inf	-Inf	32.03	3	H	32	2.50	-
PK	2.4868G	62.82	74.00	-11.18	32.15	3	H	32	2.50	-

802.11b_(1Mbps)_3TX

2437MHz_TX

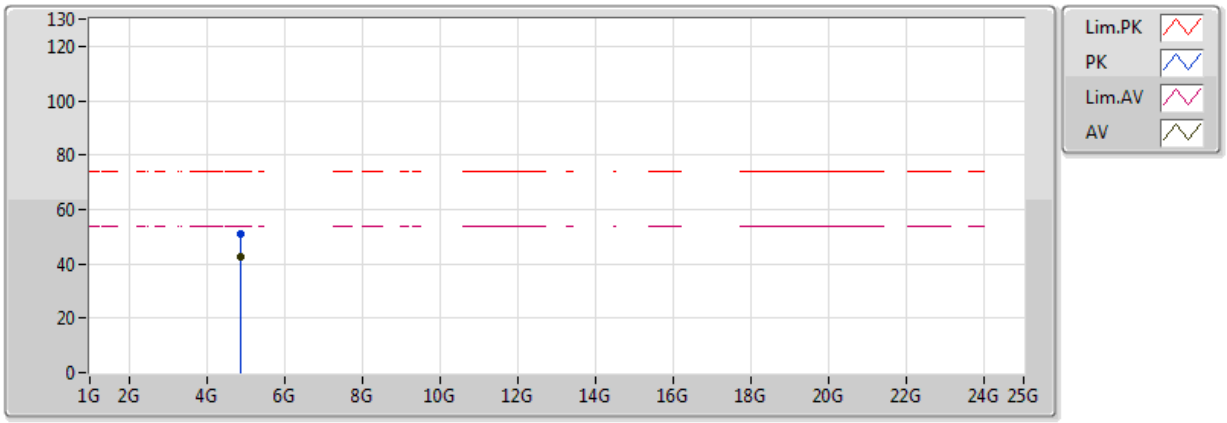


20170418
EUT Z_3TX
Setting 25
03-P-2
FSP(100142)
#28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.87401G	41.78	54.00	-12.22	4.82	3	V	85	2.86	-
PK	4.87391G	49.83	74.00	-24.17	4.82	3	V	85	2.86	-

802.11b_(1Mbps)_3TX

2437MHz_TX

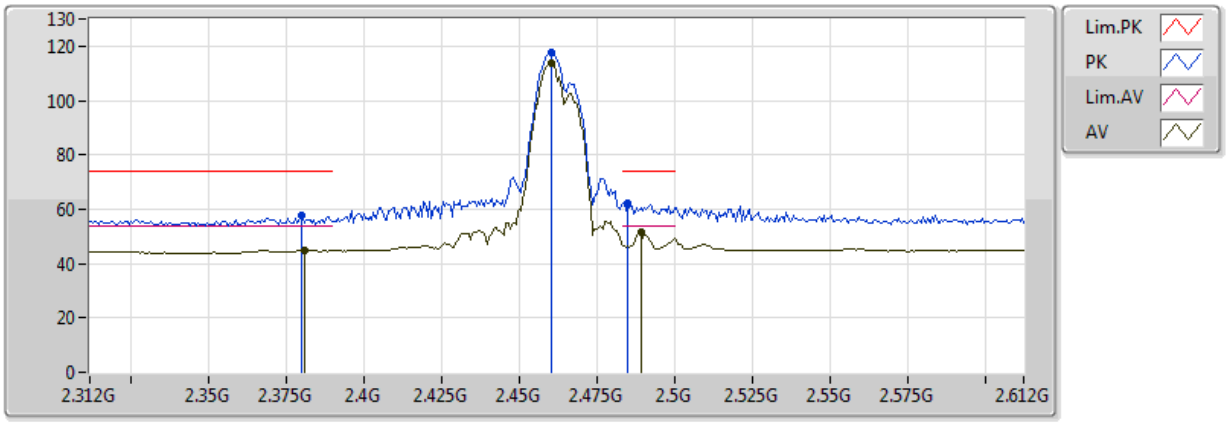


20170418
EUT Z_3TX
Setting 25
03-P-2
FSP(100142)
#28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.87393G	42.59	54.00	-11.41	4.82	3	H	72	2.47	-
PK	4.87418G	51.08	74.00	-22.92	4.82	3	H	72	2.47	-

802.11b_(1Mbps)_3TX

2462MHz_TX

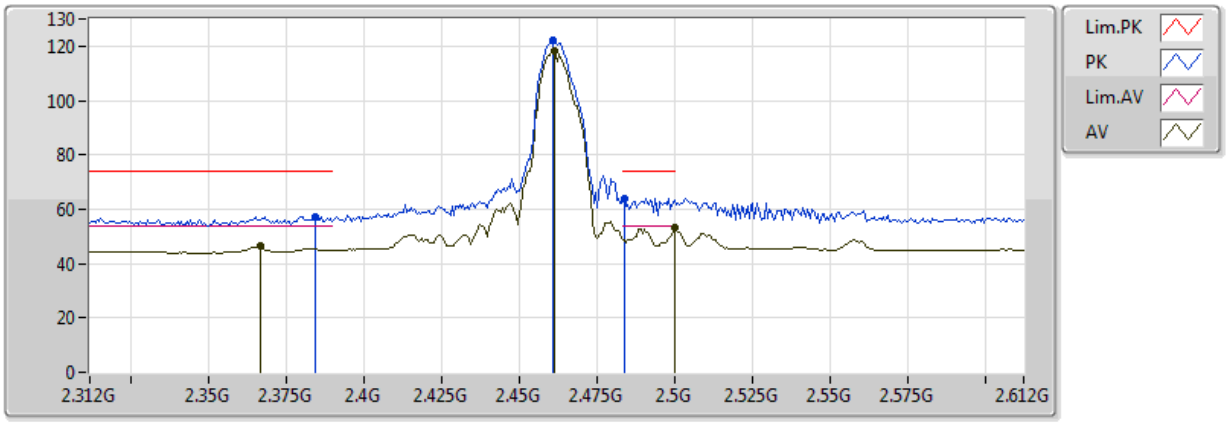


20170418
EUT Z_3TX
Setting 24
03-P-2
FSP(100142)
#28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.381G	44.90	54.00	-9.10	31.89	3	V	17	2.78	-
AV	2.4602G	114.00	Inf	-Inf	32.08	3	V	17	2.78	-
AV	2.489G	51.79	54.00	-2.21	32.15	3	V	17	2.78	-
PK	2.3798G	57.89	74.00	-16.11	31.89	3	V	17	2.78	-
PK	2.4602G	117.69	Inf	-Inf	32.08	3	V	17	2.78	-
PK	2.4848G	62.22	74.00	-11.78	32.14	3	V	17	2.78	-

802.11b_(1Mbps)_3TX

2462MHz_TX

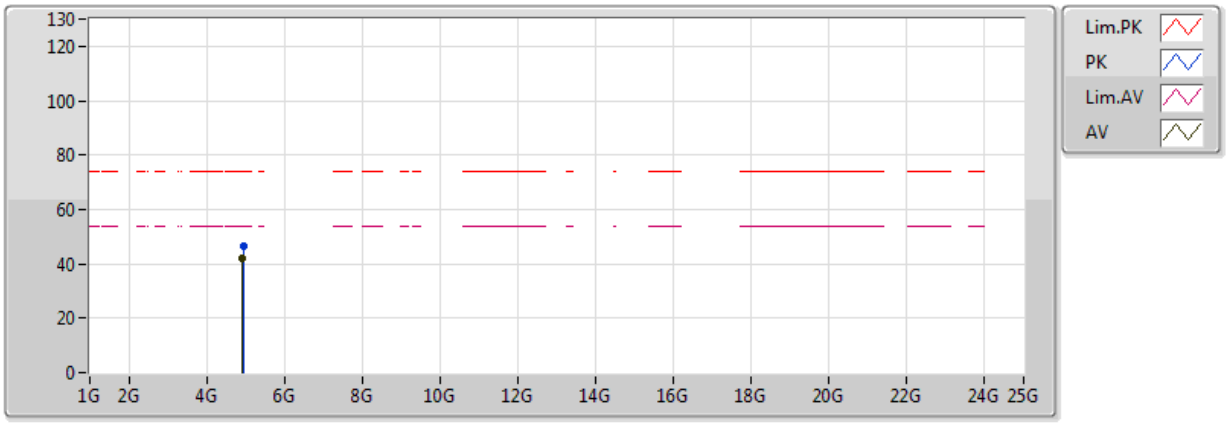


20170418
EUT Z_3TX
Setting 24
03-P-2
FSP(100142)
#28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3666G	46.29	54.00	-7.71	31.85	3	H	39	2.68	-
AV	2.4614G	118.26	Inf	-Inf	32.09	3	H	39	2.68	-
AV	2.499998G	53.16	54.00	-0.84	32.18	3	H	39	2.68	-
PK	2.3846G	57.40	74.00	-16.60	31.90	3	H	39	2.68	-
PK	2.4608G	122.32	Inf	-Inf	32.09	3	H	39	2.68	-
PK	2.4836G	63.91	74.00	-10.09	32.14	3	H	39	2.68	-

802.11b_(1Mbps)_3TX

2462MHz_TX

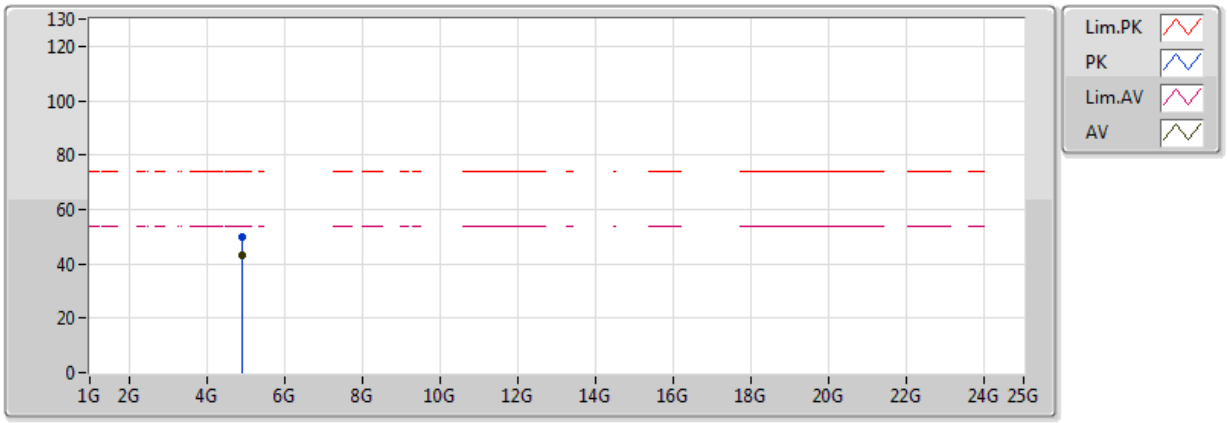


20170509
EUT Z_3TX
Non-TXBF
Setting 24
04-J-6
FSP(100142) #28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.91068G	42.21	54.00	-11.79	4.89	3	V	233	1.55	-
PK	4.93804G	46.63	74.00	-27.37	4.95	3	V	233	1.55	-

802.11b_(1Mbps)_3TX

2462MHz_TX

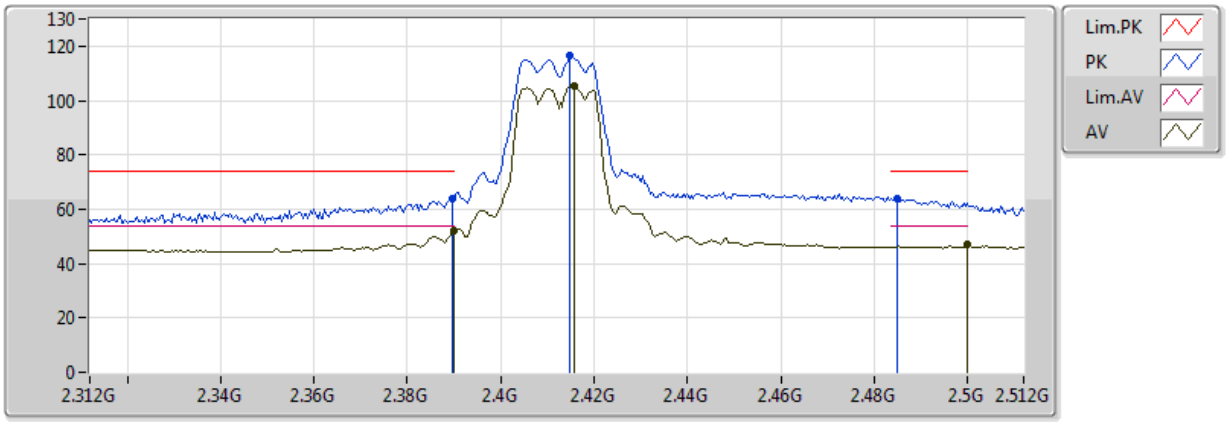


20170509
EUT Z_3TX
Non-TXBF
Setting 24
04-J-6
FSP(100142) #28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.9111G	43.25	54.00	-10.75	4.89	3	H	180	1.81	-
PK	4.91302G	49.68	74.00	-24.32	4.90	3	H	180	1.81	-

802.11g-BF_(6Mbps)_3TX

2412MHz_TX

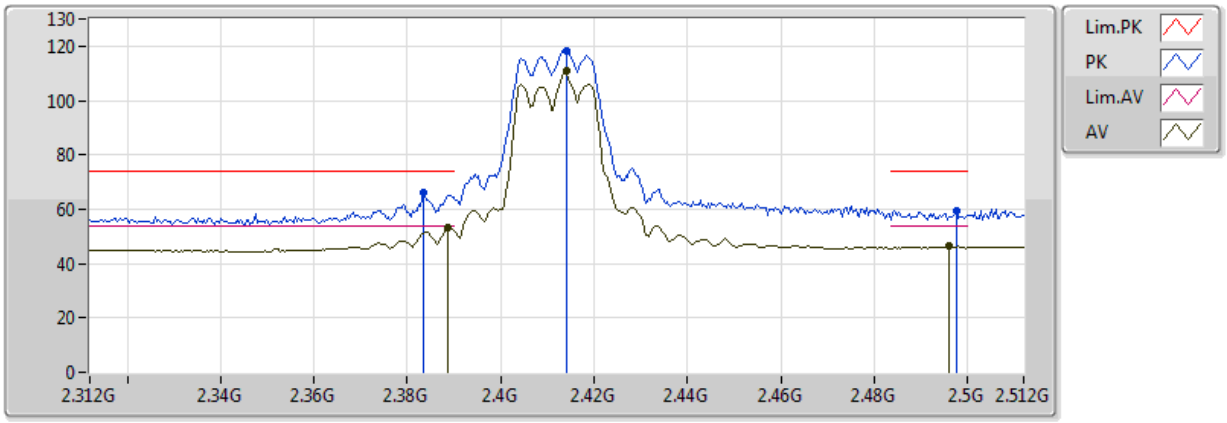


20170420
EUT Z_3TX
Setting 20
03-P-2
FSP(100142)
#28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.39G	51.97	54.00	-2.03	31.91	3	V	3	2.99	-
AV	2.4156G	105.60	Inf	-Inf	31.98	3	V	3	2.99	-
AV	2.5G	47.08	54.00	-6.92	32.18	3	V	3	2.99	-
PK	2.3896G	64.15	74.00	-9.85	31.91	3	V	3	2.99	-
PK	2.4148G	116.35	Inf	-Inf	31.98	3	V	3	2.99	-
PK	2.4848G	63.89	74.00	-10.11	32.14	3	V	3	2.99	-

802.11g-BF_(6Mbps)_3TX

2412MHz_TX

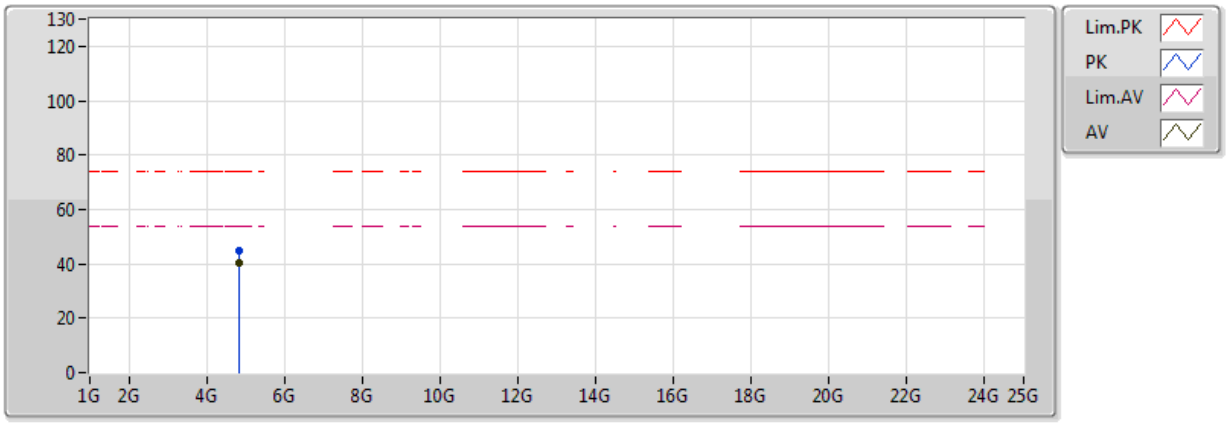


20170420
EUT Z_3TX
Setting 20
03-P-2
FSP(100142)
#28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3888G	53.37	54.00	-0.63	31.91	3	H	262	2.85	-
AV	2.414G	111.03	Inf	-Inf	31.97	3	H	262	2.85	-
AV	2.496G	46.39	54.00	-7.61	32.17	3	H	262	2.85	-
PK	2.3836G	65.89	74.00	-8.11	31.90	3	H	262	2.85	-
PK	2.414G	118.46	Inf	-Inf	31.97	3	H	262	2.85	-
PK	2.4976G	59.48	74.00	-14.52	32.17	3	H	262	2.85	-

802.11g-BF_(6Mbps)_3TX

2412MHz_TX

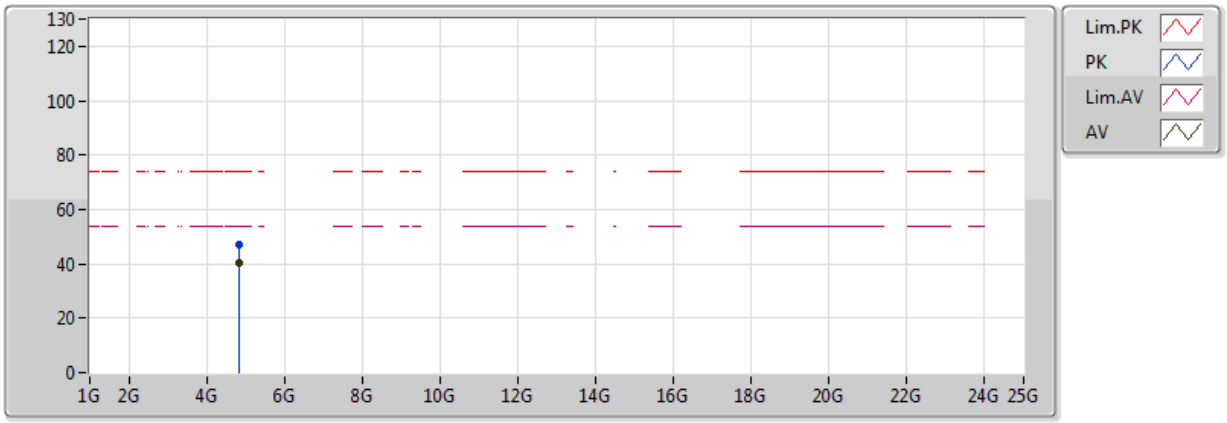


20170509
EUT Z_3TX
Non-TXBF
Setting 20
04-J-6
FSP(100142) #28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.83066G	40.47	54.00	-13.53	4.73	3	V	240	1.41	-
PK	4.8228G	44.65	74.00	-29.35	4.72	3	V	240	1.41	-

802.11g-BF_(6Mbps)_3TX

2412MHz_TX

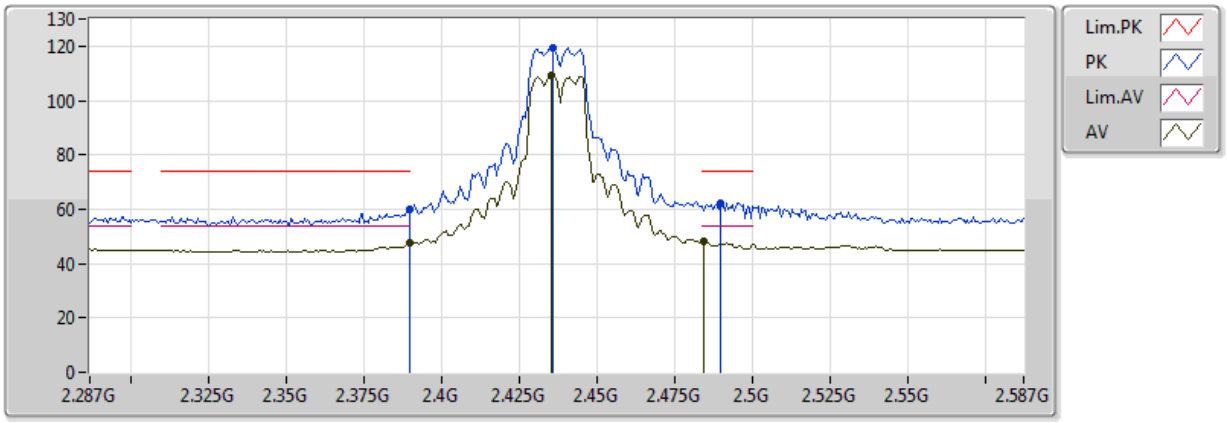


20170509
EUT Z_3TX
Non-TXBF
Setting 20
04-J-6
FSP(100142) #28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.83378G	40.32	54.00	-13.68	4.74	3	H	242	1.57	-
PK	4.82478G	47.12	74.00	-26.88	4.72	3	H	242	1.57	-

802.11g-BF_(6Mbps)_3TX

2437MHz_TX

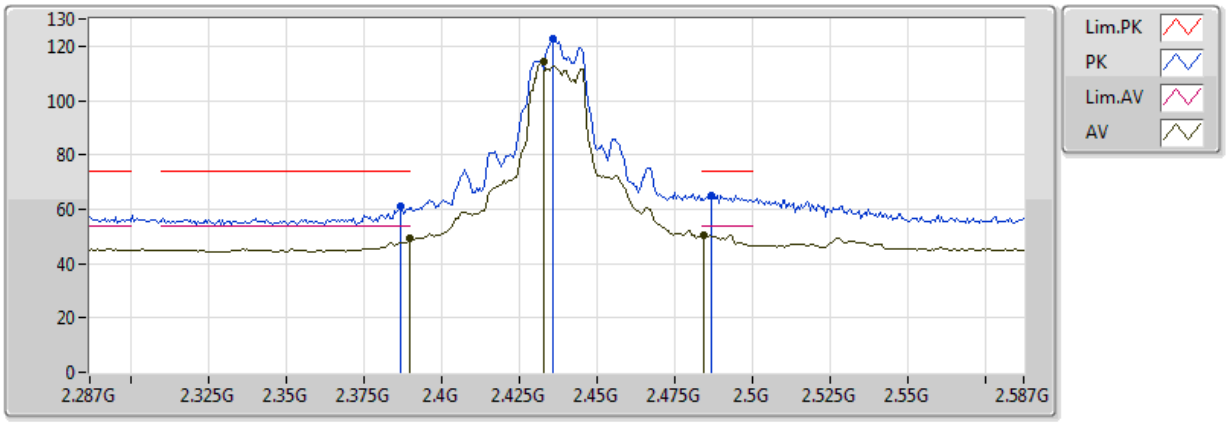


20170418
EUT Z_3TX
Setting 25
03-P-2
FSP(100142)
#28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.389998G	47.80	54.00	-6.20	31.91	3	V	12	2.60	-
AV	2.4352G	109.38	Inf	-Inf	32.02	3	V	12	2.60	-
AV	2.4844G	48.17	54.00	-5.83	32.14	3	V	12	2.60	-
PK	2.389998G	59.93	74.00	-14.07	31.91	3	V	12	2.60	-
PK	2.4358G	119.62	Inf	-Inf	32.03	3	V	12	2.60	-
PK	2.4898G	62.25	74.00	-11.75	32.16	3	V	12	2.60	-

802.11g-BF_(6Mbps)_3TX

2437MHz_TX

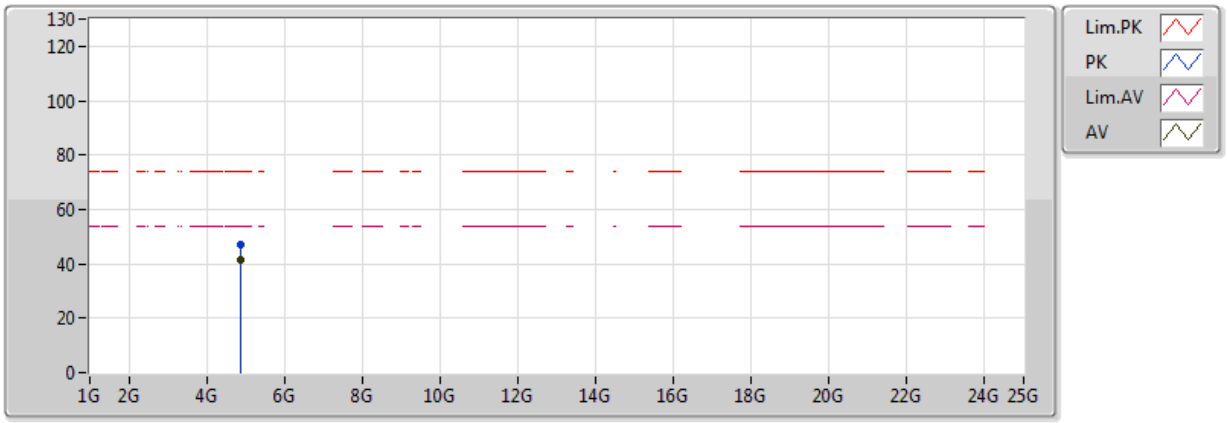


20170418
EUT Z_3TX
Setting 25
03-P-2
FSP(100142)
#28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3896G	49.33	54.00	-4.67	31.91	3	H	31	2.66	-
AV	2.4328G	114.08	Inf	-Inf	32.02	3	H	31	2.66	-
AV	2.4844G	50.70	54.00	-3.30	32.14	3	H	31	2.66	-
PK	2.3866G	60.85	74.00	-13.15	31.91	3	H	31	2.66	-
PK	2.4358G	122.82	Inf	-Inf	32.03	3	H	31	2.66	-
PK	2.4868G	65.05	74.00	-8.95	32.15	3	H	31	2.66	-

802.11g-BF_(6Mbps)_3TX

2437MHz_TX

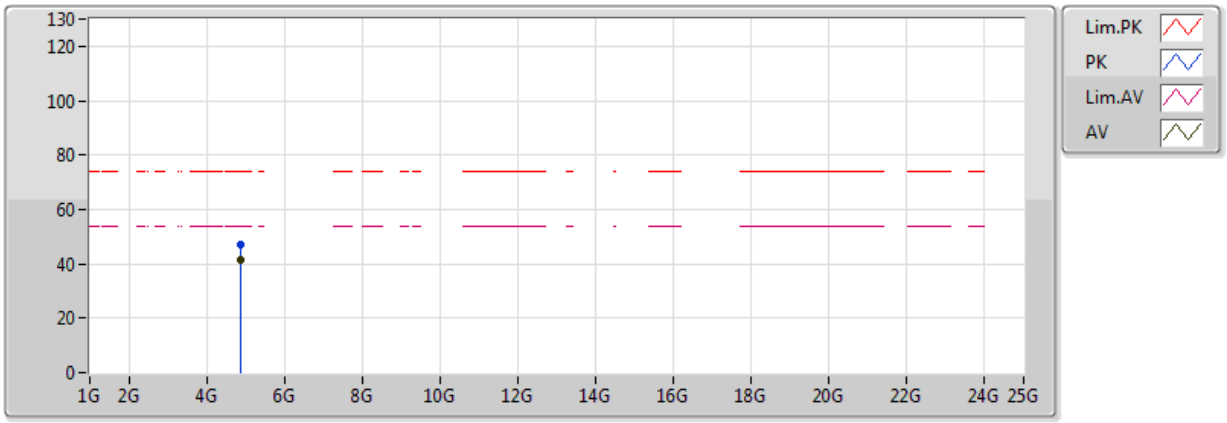


20170509
EUT Z_3TX
Non-TXBF
Setting 25
04-J-6
FSP(100142) #28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.88792G	41.31	54.00	-12.69	4.85	3	V	318	2.40	-
PK	4.86038G	46.92	74.00	-27.08	4.79	3	V	318	2.40	-

802.11g-BF_(6Mbps)_3TX

2437MHz_TX

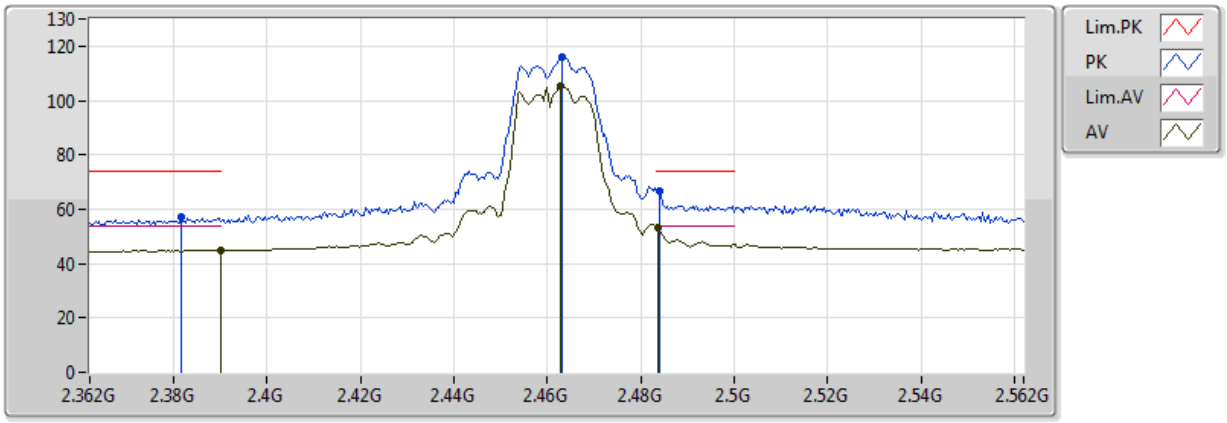


20170509
EUT Z_3TX
Non-TXBF
Setting 25
04-J-6
FSP(100142) #28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.8875G	41.48	54.00	-12.52	4.85	3	H	202	2.26	-
PK	4.87232G	47.02	74.00	-26.98	4.81	3	H	202	2.26	-

802.11g-BF_(6Mbps)_3TX

2462MHz_TX

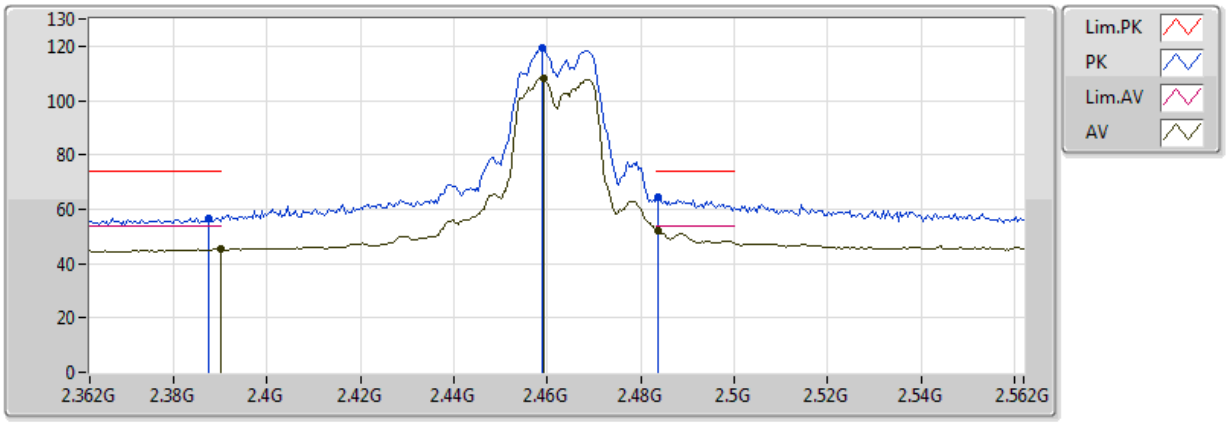


20170418
EUT Z_3TX
Setting 20
03-P-2
FSP(100142)
#28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.39G	44.98	54.00	-9.02	31.91	3	V	7	2.76	-
AV	2.4628G	105.53	Inf	-Inf	32.09	3	V	7	2.76	-
AV	2.4836G	53.43	54.00	-0.57	32.14	3	V	7	2.76	-
PK	2.3816G	57.05	74.00	-16.95	31.89	3	V	7	2.76	-
PK	2.4632G	116.13	Inf	-Inf	32.09	3	V	7	2.76	-
PK	2.484G	66.53	74.00	-7.47	32.14	3	V	7	2.76	-

802.11g-BF_(6Mbps)_3TX

2462MHz_TX

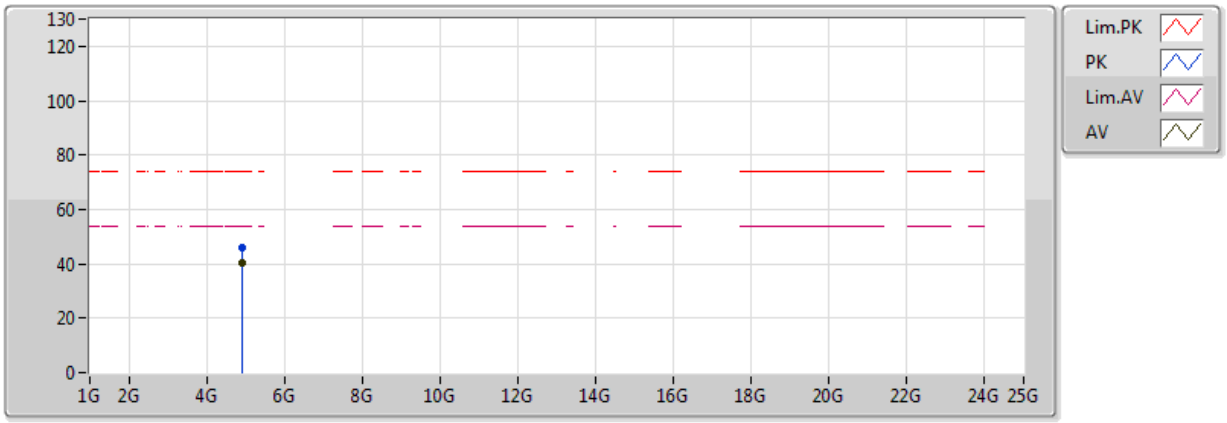


20170418
EUT Z_3TX
Setting 20
03-P-2
FSP(100142)
#28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.39G	45.27	54.00	-8.73	31.91	3	H	46	3.00	-
AV	2.4592G	108.27	Inf	-Inf	32.08	3	H	46	3.00	-
AV	2.4836G	52.25	54.00	-1.75	32.14	3	H	46	3.00	-
PK	2.3876G	56.87	74.00	-17.13	31.91	3	H	46	3.00	-
PK	2.4588G	119.13	Inf	-Inf	32.08	3	H	46	3.00	-
PK	2.4836G	64.47	74.00	-9.53	32.14	3	H	46	3.00	-

802.11g-BF_(6Mbps)_3TX

2462MHz_TX

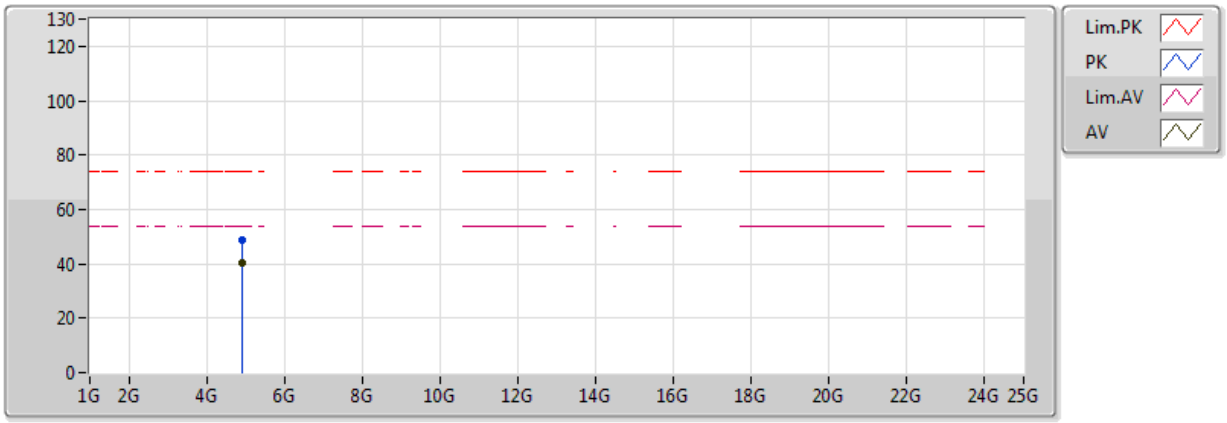


20170509
EUT Z_3TX
Non-TXBF
Setting 25
04-J-6
FSP(100142) #28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.9216G	40.24	54.00	-13.76	4.92	3	V	75	2.30	-
PK	4.91626G	45.76	74.00	-28.24	4.91	3	V	75	2.30	-

802.11g-BF_(6Mbps)_3TX

2462MHz_TX

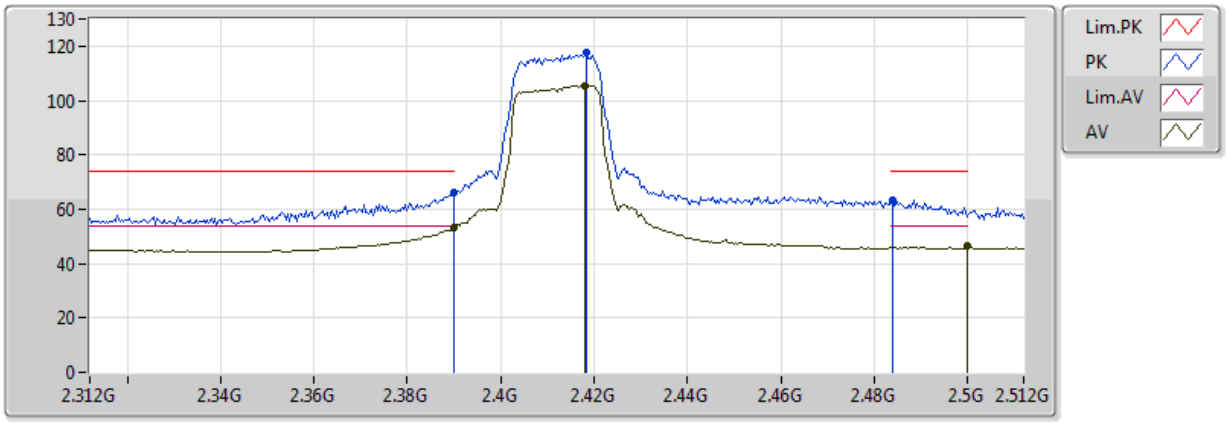


20170509
EUT Z_3TX
Non-TXBF
Setting 20
04-J-6
FSP(100142) #28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.91524G	40.12	54.00	-13.88	4.90	3	H	263	1.31	-
PK	4.91782G	48.80	74.00	-25.20	4.91	3	H	263	1.31	-

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

2412MHz_TX

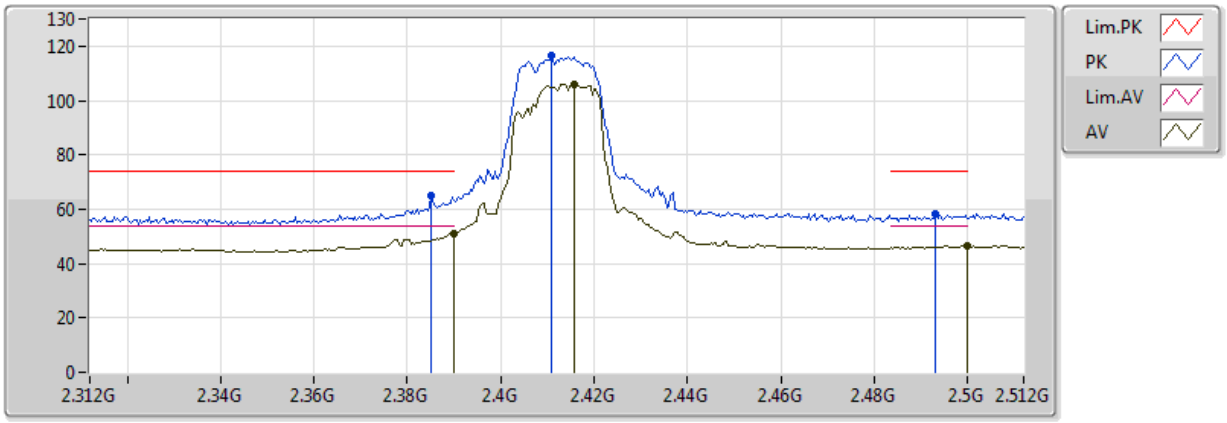


20170418
EUT Z_3TX
Setting 21
03-P-2
FSP(100142)
#28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.39G	53.28	54.00	-0.72	31.91	3	V	23	2.88	-
AV	2.418G	105.58	Inf	-Inf	31.98	3	V	23	2.88	-
AV	2.5G	46.60	54.00	-7.40	32.18	3	V	23	2.88	-
PK	2.39G	66.33	74.00	-7.67	31.91	3	V	23	2.88	-
PK	2.4184G	117.61	Inf	-Inf	31.98	3	V	23	2.88	-
PK	2.484G	63.47	74.00	-10.53	32.14	3	V	23	2.88	-

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

2412MHz_TX

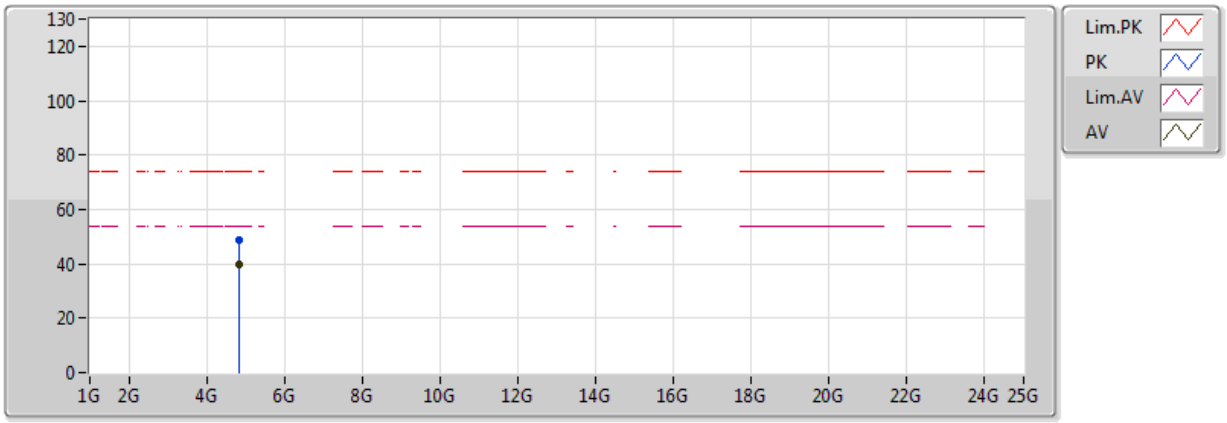


20170418
EUT Z_3TX
Setting 21
03-P-2
FSP(100142)
#28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.39G	51.05	54.00	-2.95	31.91	3	H	126	2.93	-
AV	2.4156G	105.91	Inf	-Inf	31.98	3	H	126	2.93	-
AV	2.5G	46.45	54.00	-7.55	32.18	3	H	126	2.93	-
PK	2.3852G	64.90	74.00	-9.10	31.90	3	H	126	2.93	-
PK	2.4108G	116.35	Inf	-Inf	31.97	3	H	126	2.93	-
PK	2.4932G	58.00	74.00	-16.00	32.16	3	H	126	2.93	-

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

2412MHz_TX

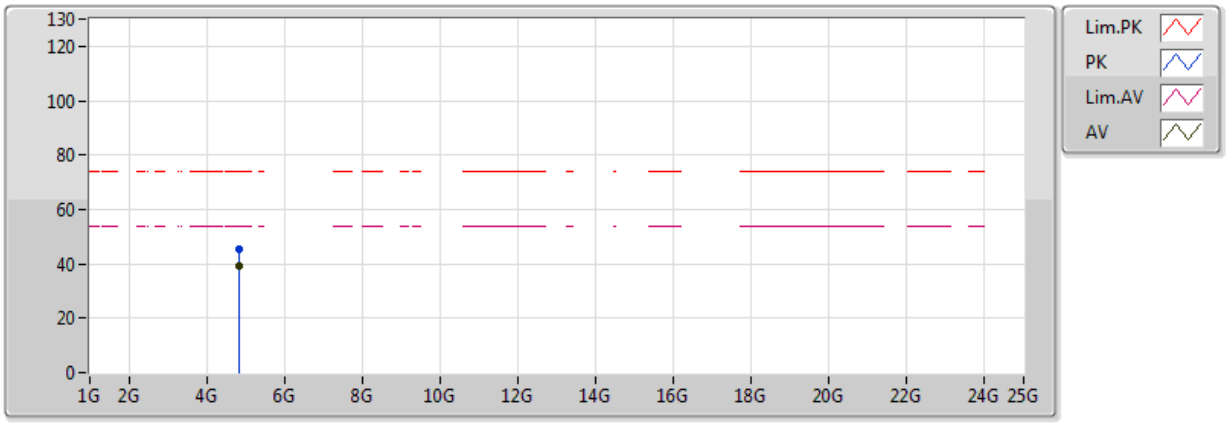


20170509
EUT Z_3TX
Non-TXBF
Setting 21
04-J-6
FSP(100142) #28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.83876G	40.04	54.00	-13.96	4.75	3	V	316	1.36	-
PK	4.82472G	48.56	74.00	-25.44	4.72	3	V	316	1.36	-

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

2412MHz_TX

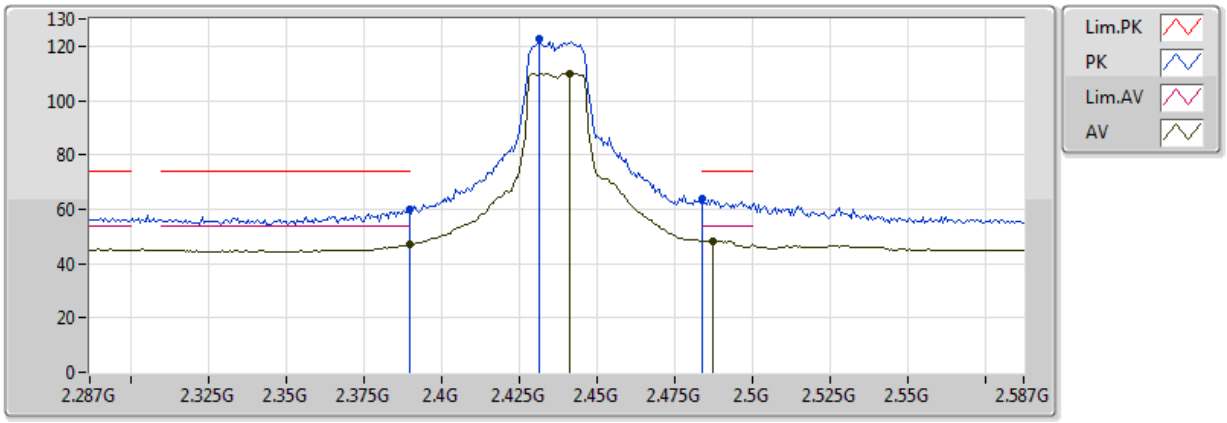


20170509
EUT Z_3TX
Non-TXBF
Setting 21
04-J-6
FSP(100142) #28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.82874G	39.43	54.00	-14.57	4.73	3	H	169	2.46	-
PK	4.83336G	45.33	74.00	-28.67	4.74	3	H	169	2.46	-

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

2437MHz_TX

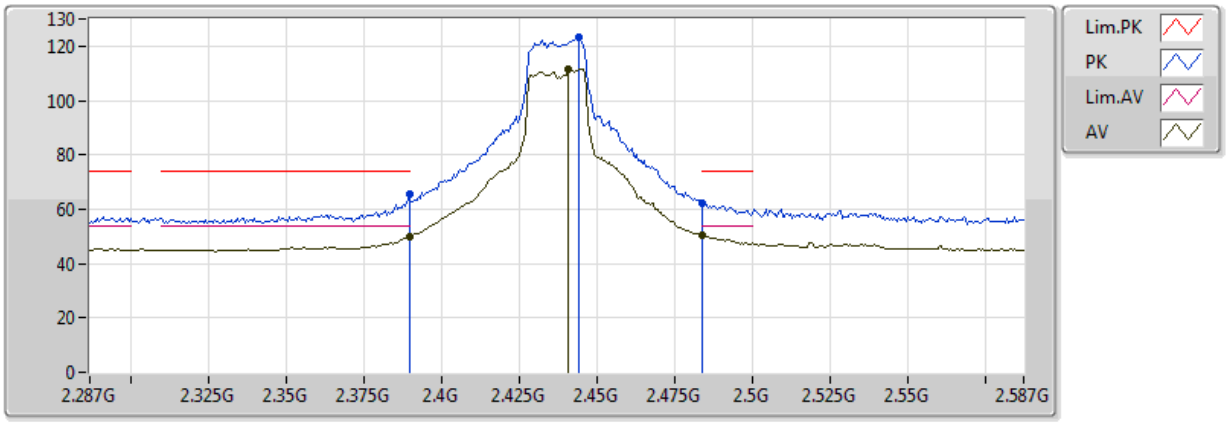


20170418
EUT Z_3TX
Setting 25
03-P-2
FSP(100142)
#28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.389998G	47.23	54.00	-6.77	31.91	3	V	353	3.00	-
AV	2.4412G	109.99	Inf	-Inf	32.04	3	V	353	3.00	-
AV	2.4874G	48.43	54.00	-5.57	32.15	3	V	353	3.00	-
PK	2.3896G	60.18	74.00	-13.82	31.91	3	V	353	3.00	-
PK	2.4316G	122.61	Inf	-Inf	32.02	3	V	353	3.00	-
PK	2.4838G	63.66	74.00	-10.34	32.14	3	V	353	3.00	-

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

2437MHz_TX

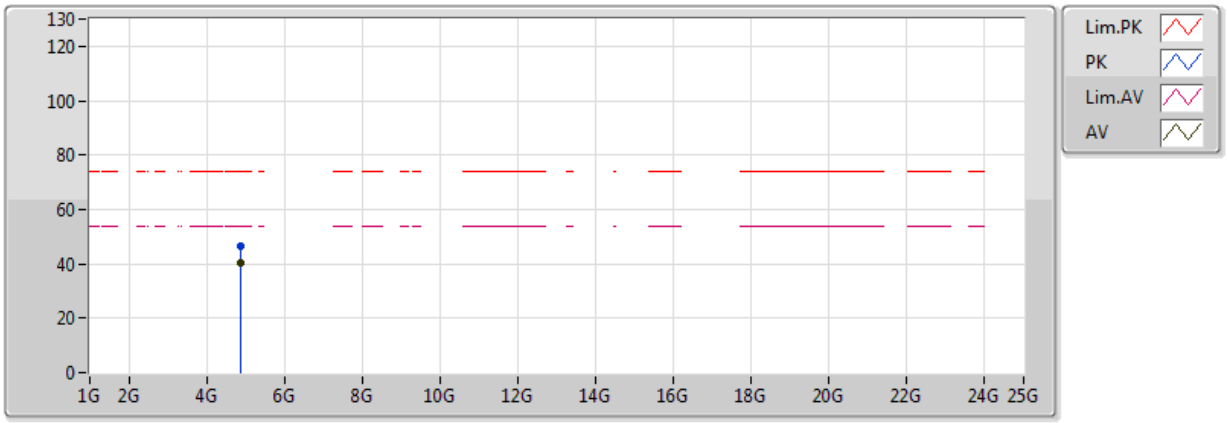


20170418
EUT Z_3TX
Setting 25
03-P-2
FSP(100142)
#28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.389998G	49.96	54.00	-4.04	31.91	3	H	99	2.72	-
AV	2.4406G	111.75	Inf	-Inf	32.04	3	H	99	2.72	-
AV	2.483502G	50.47	54.00	-3.53	32.14	3	H	99	2.72	-
PK	2.3896G	65.35	74.00	-8.65	31.91	3	H	99	2.72	-
PK	2.4442G	123.08	Inf	-Inf	32.05	3	H	99	2.72	-
PK	2.483502G	62.45	74.00	-11.55	32.14	3	H	99	2.72	-

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

2437MHz_TX

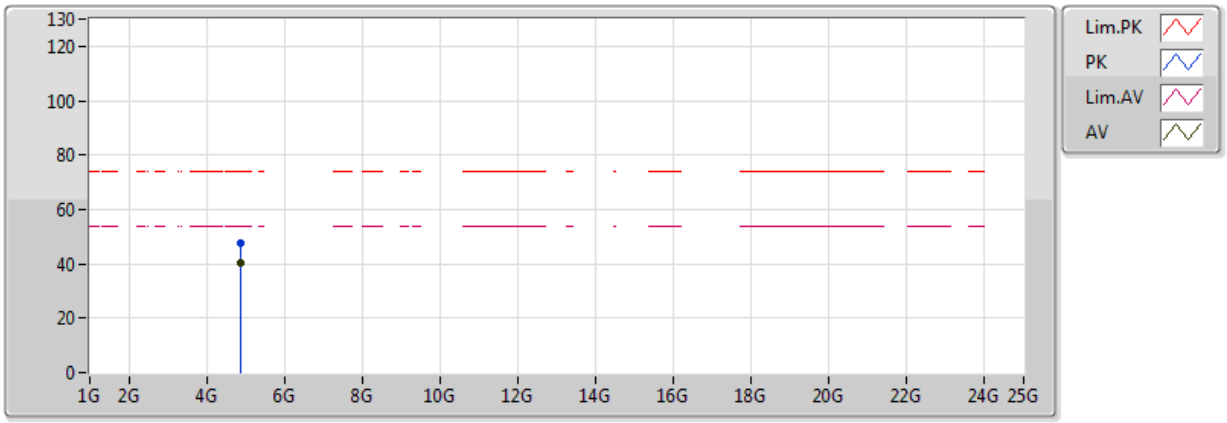


20170509
EUT Z_3TX
Non-TXBF
Setting 25
04-J-6
FSP(100142) #28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.88552G	40.43	54.00	-13.57	4.84	3	V	44	1.66	-
PK	4.88264G	46.49	74.00	-27.51	4.84	3	V	44	1.66	-

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

2437MHz_TX

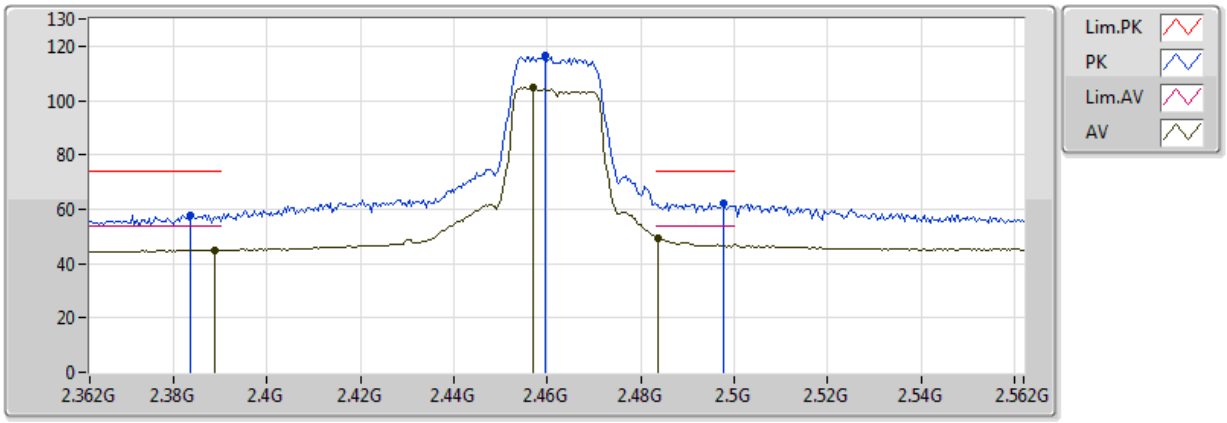


20170509
EUT Z_3TX
Non-TXBF
Setting 25
04-J-6
FSP(100142) #28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.88828G	40.32	54.00	-13.68	4.85	3	H	145	1.60	-
PK	4.86062G	47.41	74.00	-26.59	4.79	3	H	145	1.60	-

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

2462MHz_TX

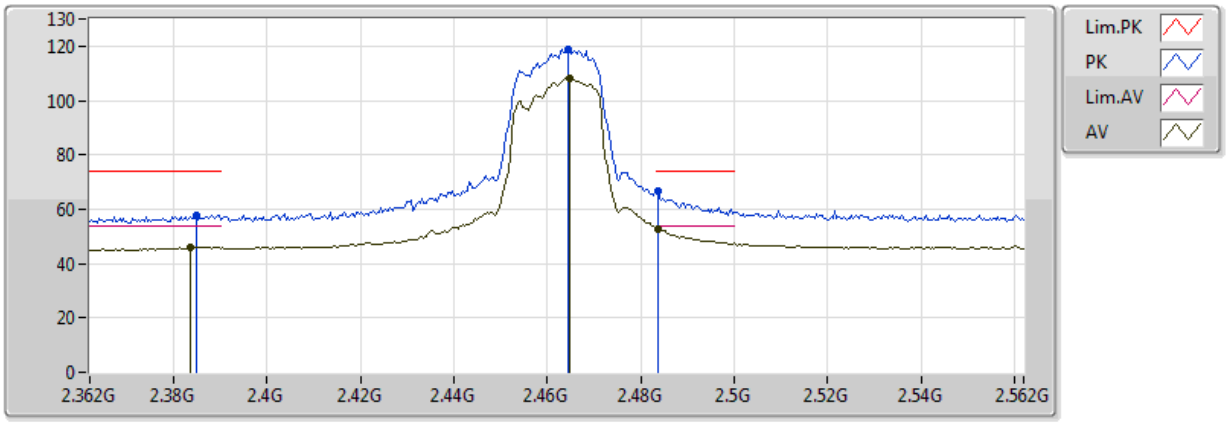


20170418
EUT Z_3TX
Setting 20.5
03-P-2
FSP(100142)
#28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3888G	44.89	54.00	-9.11	31.91	3	V	23	2.82	-
AV	2.4568G	104.77	Inf	-Inf	32.08	3	V	23	2.82	-
AV	2.4836G	49.44	54.00	-4.56	32.14	3	V	23	2.82	-
PK	2.3836G	57.71	74.00	-16.29	31.90	3	V	23	2.82	-
PK	2.4596G	116.75	Inf	-Inf	32.08	3	V	23	2.82	-
PK	2.4976G	62.37	74.00	-11.63	32.17	3	V	23	2.82	-

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

2462MHz_TX

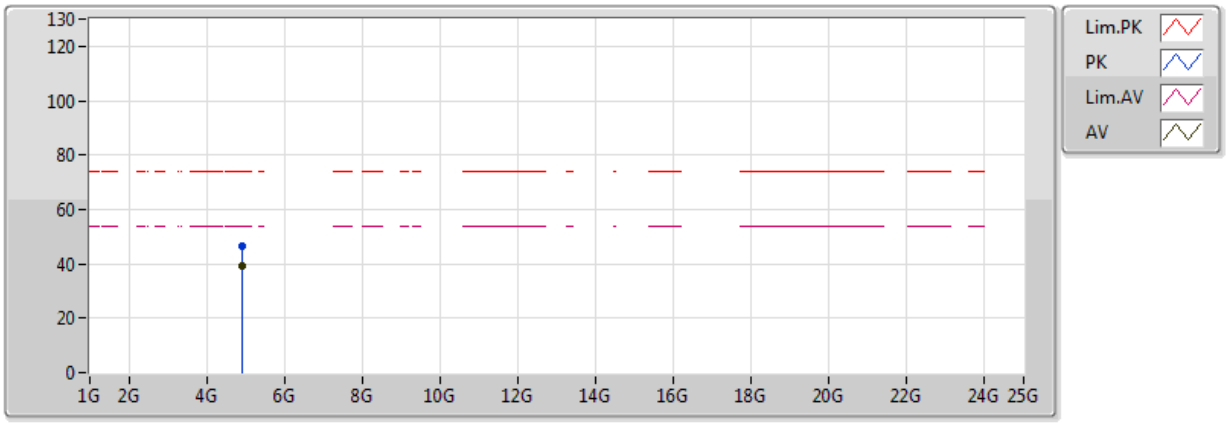


20170418
EUT Z_3TX
Setting 20.5
03-P-2
FSP(100142)
#28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3836G	46.05	54.00	-7.95	31.90	3	H	88	2.80	-
AV	2.4648G	108.08	Inf	-Inf	32.10	3	H	88	2.80	-
AV	2.4836G	52.64	54.00	-1.36	32.14	3	H	88	2.80	-
PK	2.3848G	57.64	74.00	-16.36	31.90	3	H	88	2.80	-
PK	2.4644G	118.99	Inf	-Inf	32.09	3	H	88	2.80	-
PK	2.4836G	66.55	74.00	-7.45	32.14	3	H	88	2.80	-

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

2462MHz_TX

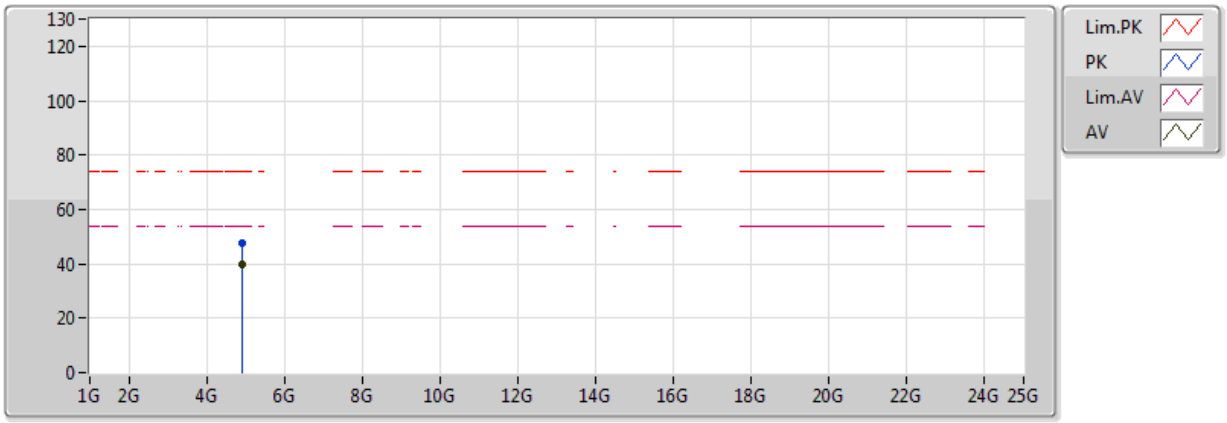


20170509
EUT Z_3TX
Non-TXBF
Setting 20.5
04-J-6
FSP(100142) #28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.91104G	39.18	54.00	-14.82	4.89	3	V	44	1.87	-
PK	4.92532G	46.59	74.00	-27.41	4.93	3	V	44	1.87	-

802.11ac VHT20-BF_Nss1,(MCS0)_3TX

2462MHz_TX

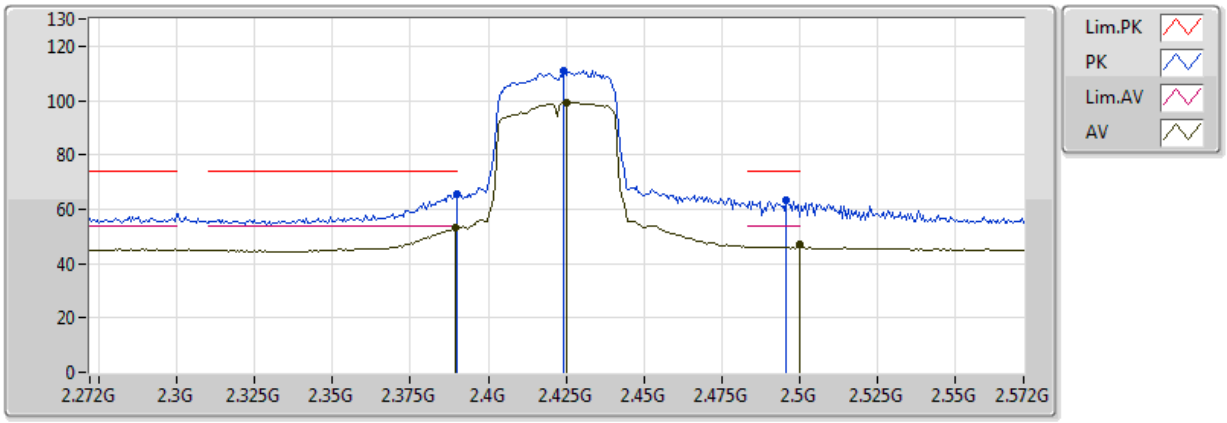


20170509
EUT Z_3TX
Non-TXBF
Setting 20.5
04-J-6
FSP(100142) #28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.9093G	39.76	54.00	-14.24	4.89	3	H	349	1.72	-
PK	4.91908G	47.66	74.00	-26.34	4.91	3	H	349	1.72	-

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

2422MHz_TX

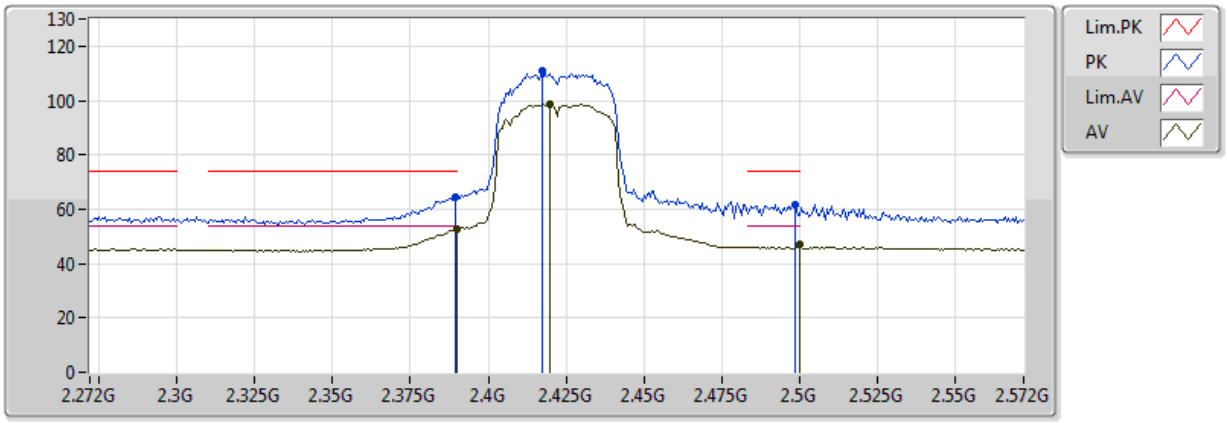


20170418
EUT Z_3TX
Setting 15.5
03-P-2
FSP(100142)
#28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3896G	53.18	54.00	-0.82	31.91	3	V	25	2.82	-
AV	2.425G	99.30	Inf	-Inf	32.00	3	V	25	2.82	-
AV	2.5G	47.05	54.00	-6.95	32.18	3	V	25	2.82	-
PK	2.389998G	65.42	74.00	-8.58	31.91	3	V	25	2.82	-
PK	2.4244G	110.98	Inf	-Inf	32.00	3	V	25	2.82	-
PK	2.4958G	63.27	74.00	-10.73	32.17	3	V	25	2.82	-

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

2422MHz_TX

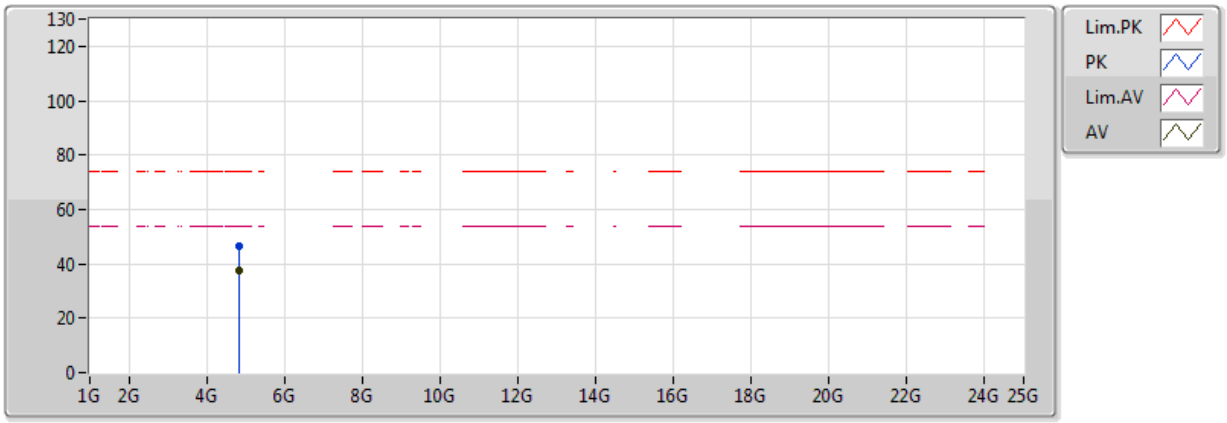


20170418
EUT Z_3TX
Setting 15.5
03-P-2
FSP(100142)
#28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.389998G	52.92	54.00	-1.08	31.91	3	H	161	2.58	-
AV	2.4196G	98.48	Inf	-Inf	31.99	3	H	161	2.58	-
AV	2.5G	47.00	54.00	-7.00	32.18	3	H	161	2.58	-
PK	2.3896G	64.71	74.00	-9.29	31.91	3	H	161	2.58	-
PK	2.4172G	110.79	Inf	-Inf	31.98	3	H	161	2.58	-
PK	2.4988G	61.61	74.00	-12.39	32.18	3	H	161	2.58	-

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

2422MHz_TX

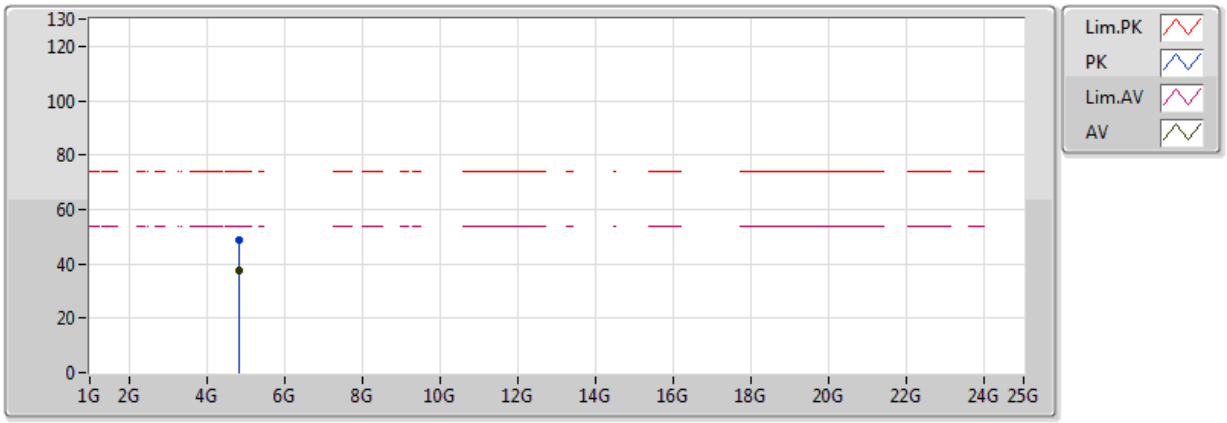


20170509
EUT Z_3TX
Non-TXBF
Setting 15.5
04-J-6
FSP(100142) #28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.83386G	37.41	54.00	-16.59	4.74	3	V	53	2.43	-
PK	4.83158G	46.37	74.00	-27.63	4.73	3	V	53	2.43	-

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

2422MHz_TX

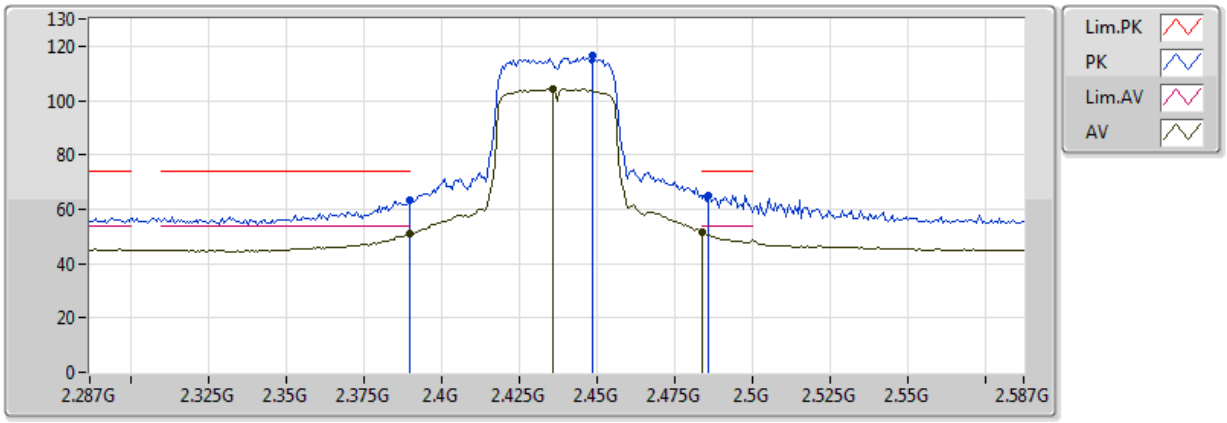


20170509
EUT Z_3TX
Non-TXBF
Setting 15.5
04-J-6
FSP(100142) #28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.83596G	37.52	54.00	-16.48	4.74	3	H	230	1.93	-
PK	4.85114G	48.69	74.00	-25.31	4.77	3	H	230	1.93	-

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

2437MHz_TX

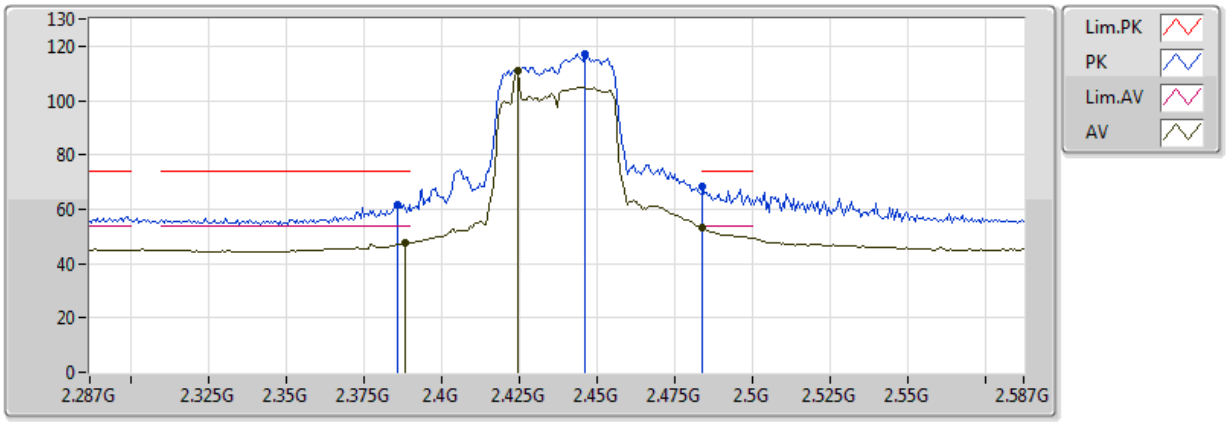


20170418
EUT Z_3TX
Setting 20
03-P-2
FSP(100142)
#28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.389998G	50.92	54.00	-3.08	31.91	3	V	355	2.95	-
AV	2.4358G	104.50	Inf	-Inf	32.03	3	V	355	2.95	-
AV	2.483502G	51.81	54.00	-2.19	32.14	3	V	355	2.95	-
PK	2.389998G	63.56	74.00	-10.44	31.91	3	V	355	2.95	-
PK	2.4484G	116.75	Inf	-Inf	32.06	3	V	355	2.95	-
PK	2.4856G	65.26	74.00	-8.74	32.15	3	V	355	2.95	-

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

2437MHz_TX

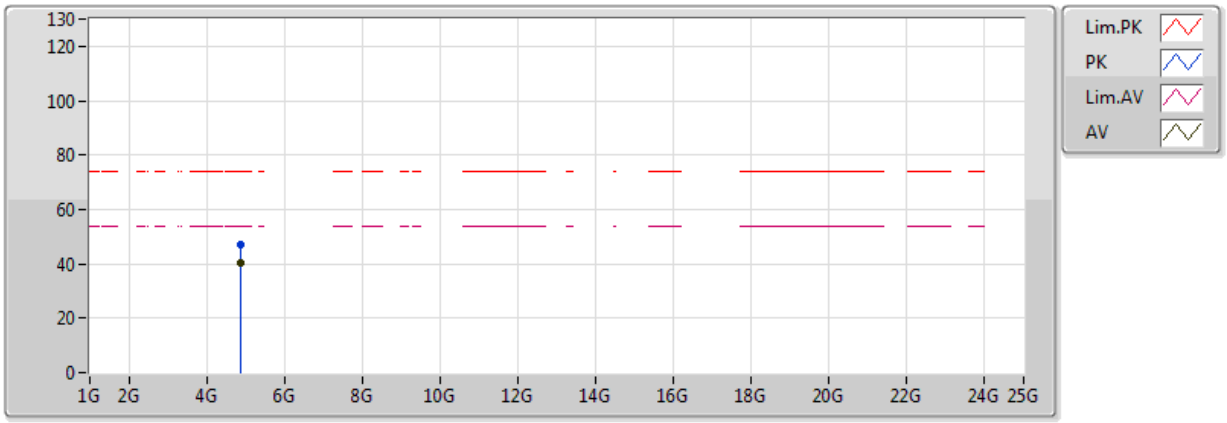


20170418
EUT Z_3TX
Setting 20
03-P-2
FSP(100142)
#28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3884G	47.65	54.00	-6.35	31.91	3	H	24	2.68	-
AV	2.4244G	111.05	Inf	-Inf	32.00	3	H	24	2.68	-
AV	2.483502G	53.42	54.00	-0.58	32.14	3	H	24	2.68	-
PK	2.386G	61.78	74.00	-12.22	31.90	3	H	24	2.68	-
PK	2.446G	117.12	Inf	-Inf	32.05	3	H	24	2.68	-
PK	2.4838G	68.52	74.00	-5.48	32.14	3	H	24	2.68	-

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

2437MHz_TX

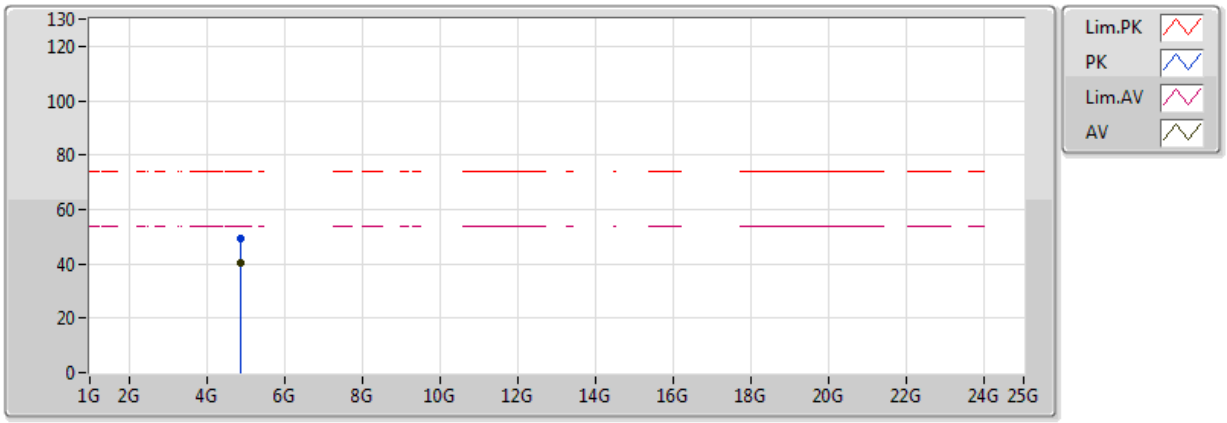


20170509
EUT Z_3TX
Non-TXBF
Setting 20
04-J-6
FSP(100142) #28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.889G	40.19	54.00	-13.81	4.85	3	V	78	1.20	-
PK	4.87466G	46.98	74.00	-27.02	4.82	3	V	78	1.20	-

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

2437MHz_TX

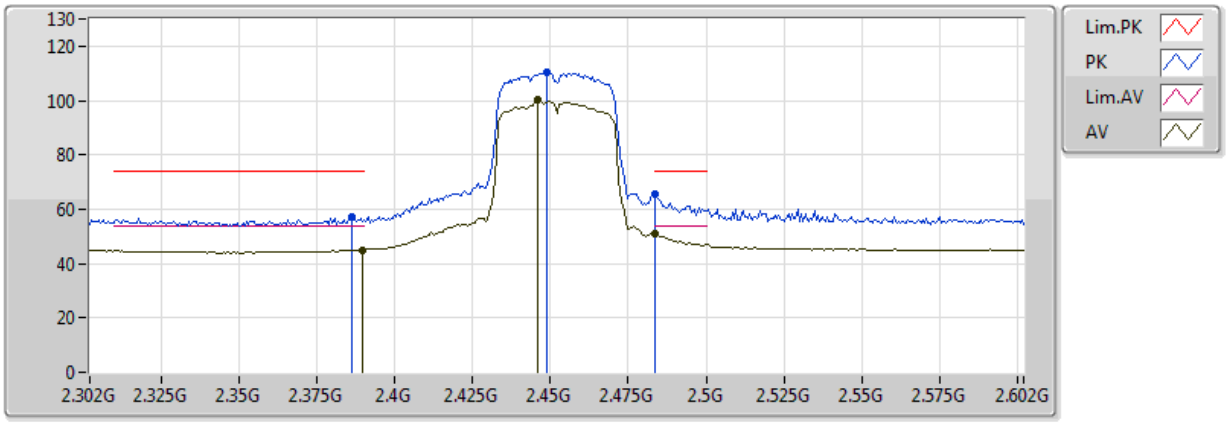


20170509
EUT Z_3TX
Non-TXBF
Setting 20
04-J-6
FSP(100142) #28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.88798G	40.61	54.00	-13.39	4.85	3	H	290	2.31	-
PK	4.87682G	49.45	74.00	-24.55	4.82	3	H	290	2.31	-

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

2452MHz_TX

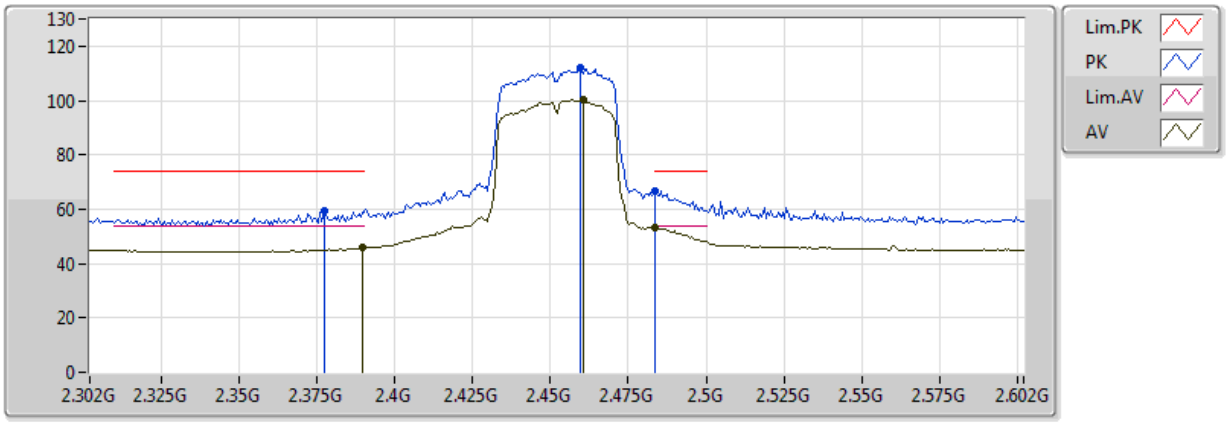


20170420
EUT Z_3TX
Setting 15
03-P-2
FSP(100142)
#28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3896G	44.98	54.00	-9.02	31.91	3	V	351	3.00	-
AV	2.446G	100.35	Inf	-Inf	32.05	3	V	351	3.00	-
AV	2.483502G	50.75	54.00	-3.25	32.14	3	V	351	3.00	-
PK	2.386G	56.94	74.00	-17.06	31.90	3	V	351	3.00	-
PK	2.449G	110.15	Inf	-Inf	32.06	3	V	351	3.00	-
PK	2.483502G	65.34	74.00	-8.66	32.14	3	V	351	3.00	-

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

2452MHz_TX

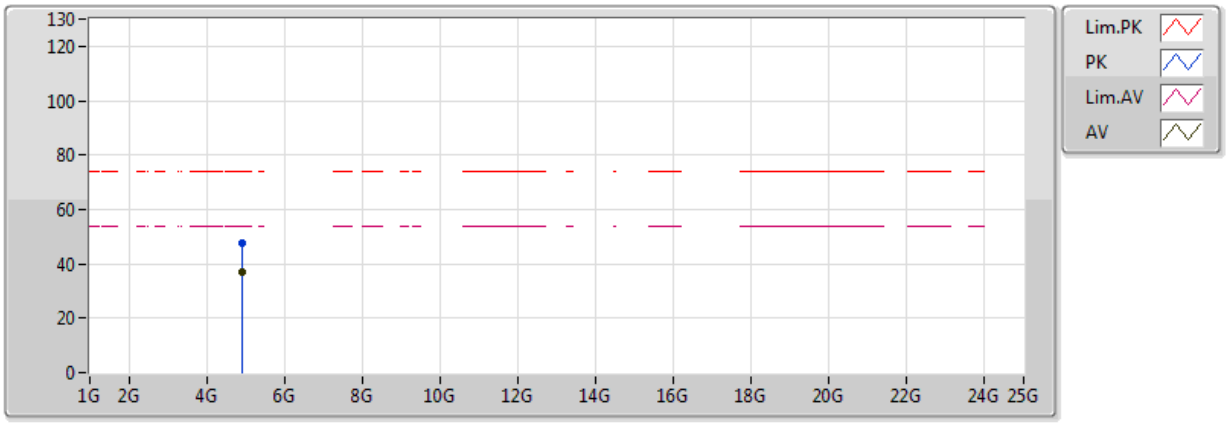


20170420
EUT Z_3TX
Setting 15
03-P-2
FSP(100142)
#28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3896G	45.82	54.00	-8.18	31.91	3	H	92	2.75	-
AV	2.4604G	100.32	Inf	-Inf	32.08	3	H	92	2.75	-
AV	2.483502G	53.43	54.00	-0.57	32.14	3	H	92	2.75	-
PK	2.3776G	59.47	74.00	-14.53	31.88	3	H	92	2.75	-
PK	2.4598G	112.12	Inf	-Inf	32.08	3	H	92	2.75	-
PK	2.4838G	66.52	74.00	-7.48	32.14	3	H	92	2.75	-

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

2452MHz_TX

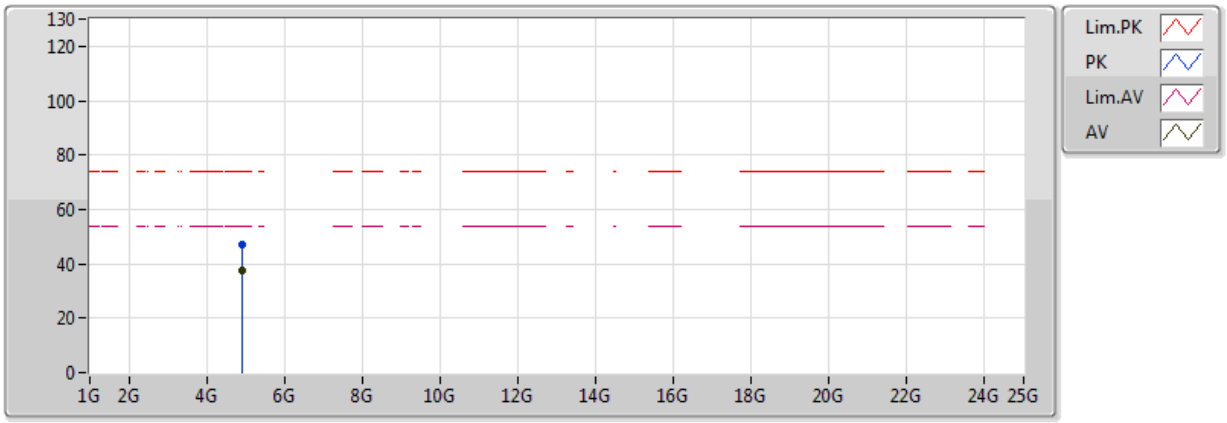


20170509
EUT Z_3TX
Non-TXBF
Setting 15
04-J-6
FSP(100142) #28

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.90802G	37.11	54.00	-16.89	4.89	3	V	302	1.19	-
PK	4.904G	47.81	74.00	-26.19	4.88	3	V	302	1.19	-

802.11ac VHT40-BF_Nss1,(MCS0)_3TX

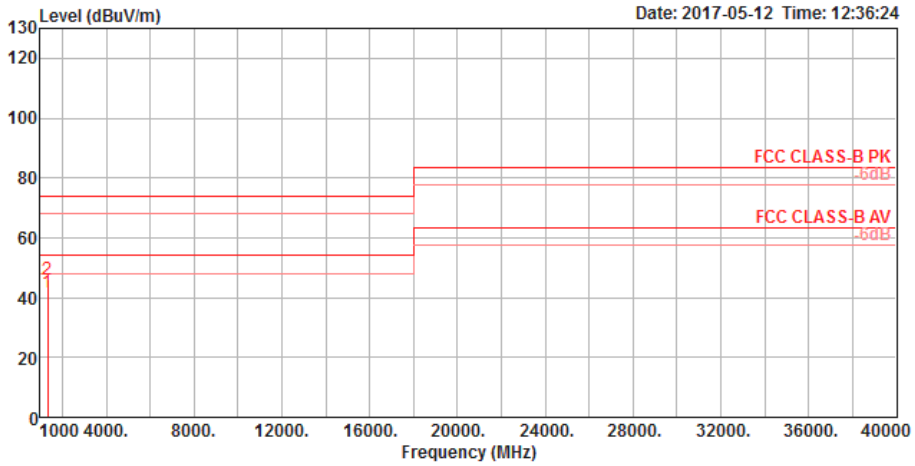
2452MHz_TX



20170509
EUT Z_3TX
Non-TXBF
Setting 15
04-J-6
FSP(100142) #28

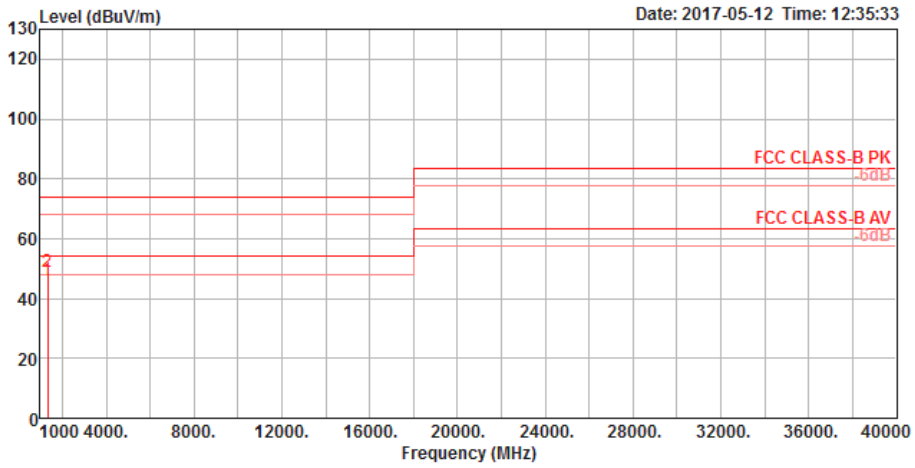
Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.89776G	37.80	54.00	-16.20	4.87	3	H	255	1.41	-
PK	4.90514G	47.02	74.00	-26.98	4.88	3	H	255	1.41	-

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	1333.12	41.79	54.00	-12.21	49.87	3.84	24.90	36.82	156	201	Average	HORIZONTAL
2	1333.59	46.15	74.00	-27.85	54.22	3.84	24.91	36.82	156	201	Peak	HORIZONTAL

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



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	1333.12	45.95	54.00	-8.05	54.03	3.84	24.90	36.82	156	52	Average	VERTICAL
2	1333.26	48.78	74.00	-25.22	56.85	3.84	24.91	36.82	156	52	Peak	VERTICAL