FCC Test Report

Equipment	:	Whole Home Smart Wi-Fi Router
Brand Name	:	amped wireless
Model No.	:	AR1900L/ART19B
FCC ID	:	ZTT-AR1900L
Standard	:	47 CFR FCC Part 15.247
Operating Band	:	2400 MHz – 2483.5 MHz
Function	:	☒ Point-to-multipoint; ☐ Point-to-point
Applicant	:	Amped Wireless 13089 Peyton Dr. #C307 Chino Hills, CA 91709 USA
Manufacturer	:	Amped Wireless 13089 Peyton Dr. #C307 Chino Hills, CA 91709 USA

The product sample received on Jan. 06, 2017 and completely tested on Mar. 09. 2017. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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

Cliff Chang
SPORTON INTERNATIONAL INC.

Testing Laboratory
1190

Table of Contents

Summary of Test Result

Conformance Test Specifications				
Report Clause	**Ref. Std. Clause**	**Description**	**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
FR710613AA	Rev. 01	Initial issue of report	Apr. 13, 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	802.11n HT20	20	3TX
2.4-2.4835GHz	802.11ac VHT20	20	3TX
2.4-2.4835GHz	802.11n HT40	40	3TX
2.4-2.4835GHz	802.11ac VHT40	40	3TX

Note:
- 2.4G is the 2.4GHz Band (2.4-2.4835GHz).
- 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	P/N	Antenna Type	Connector	Gain (dBi)		
					2.4GHz	5GHz B1	5GHz B4
1	Airgain	N2420DG-G150U	PIFA Antenna	I-PEX	2.71	3.05	4.20
2	Airgain	N2425DR-G200U	PIFA Antenna	I-PEX	2.71	3.05	4.20
3	Airgain	N2420DG-G50U	PIFA Antenna	I-PEX	2.71	3.05	4.20

Note: The EUT has three antennas.

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

Ant. 1 ~ Ant. 3 connect to port 1~port 3

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

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

Ant. 1 ~ Ant. 3 connect to port 1~port 3

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

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)
802.11b	0.952	0.214
802.11g	0.802	0.958
802.11ac VHT20	0.603	2.197
802.11ac VHT40	0.427	3.696

1.1.4 EUT Operational Condition

EUT Power Type	From Power Adapter			
Beamforming Function	☒	With beamforming for IEEE802.11n/ac in 5GHz	☐	Without beamforming

1.1.5 Table for Multiple Listing

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

Brand Name	Model Name	Description
amped wireless	AR1900L	All the models are identical, the difference model name for difference marketing strategy.
	ART19B	

From the above models, model: AR1900L 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	Ron Huang &Gino Huang	23°C / 56%	Mar. 07, 2017 ~ Mar. 08, 2017
Radiated	03CH01-CB	Paul Chen & Jeff Wu & Zero Chen & Justin Lin & Jay Luo	22°C / 54%	Jan. 06, 2017 ~ Mar. 09, 2017
AC Conduction	CO01-CB	GN Hou	23°C / 61%	Feb. 22, 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	23
2462MHz	20
802.11g_(6Mbps)_3TX	-
2412MHz	1A
2437MHz	24
2462MHz	1B
802.11ac VHT20_Nss1,(MCS0)_3TX	-
2412MHz	1A
2437MHz	24
2462MHz	1A
802.11ac VHT40_Nss1,(MCS0)_3TX	-
2422MHz	12
2437MHz	19
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.

The Worst Case Measurement ConfigurationThe 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
1	EUT in Y axis
2	EUT in Z axis
For operating mode 1 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX
	The EUT was performed at Y axis and Z axis position for Radiated emission above 1GHz test, and the worst case was found at Z axis. So the measurement will follow this same test configuration.
1	EUT in Z axis

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Radiated Emission Co-location
Test Condition	Radiated measurement
Operating Mode	Normal Link
1	EUT in Y axis - WLAN 2.4GHz + WLAN 5GHz
2	EUT in Z axis - 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.: FA710613 for Co-location RF Exposure Evaluation.	

2.2 EUT Operation during Test

For CTX Mode:

The EUT was programmed to be in continuously transmitting mode.

For Normal Link:

During the test, the EUT operation to normal function.

2.3 Accessories

Accessories			
Equipment Name	**Brand Name**	**Model Name**	**Rating**
Adapter	APD	WA-24Q12FU	INPUT: 100-240V ~ 50-60Hz, 0.7A Max OUTPUT: 12V, 2A

2.4 Support Equipment

For Test Site No: CO01-CB

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB*4	DELL	E6430	DoC

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

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB*2	DELL	E6430	DoC
2	NB*2	Apple	Mac Book	DoC

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

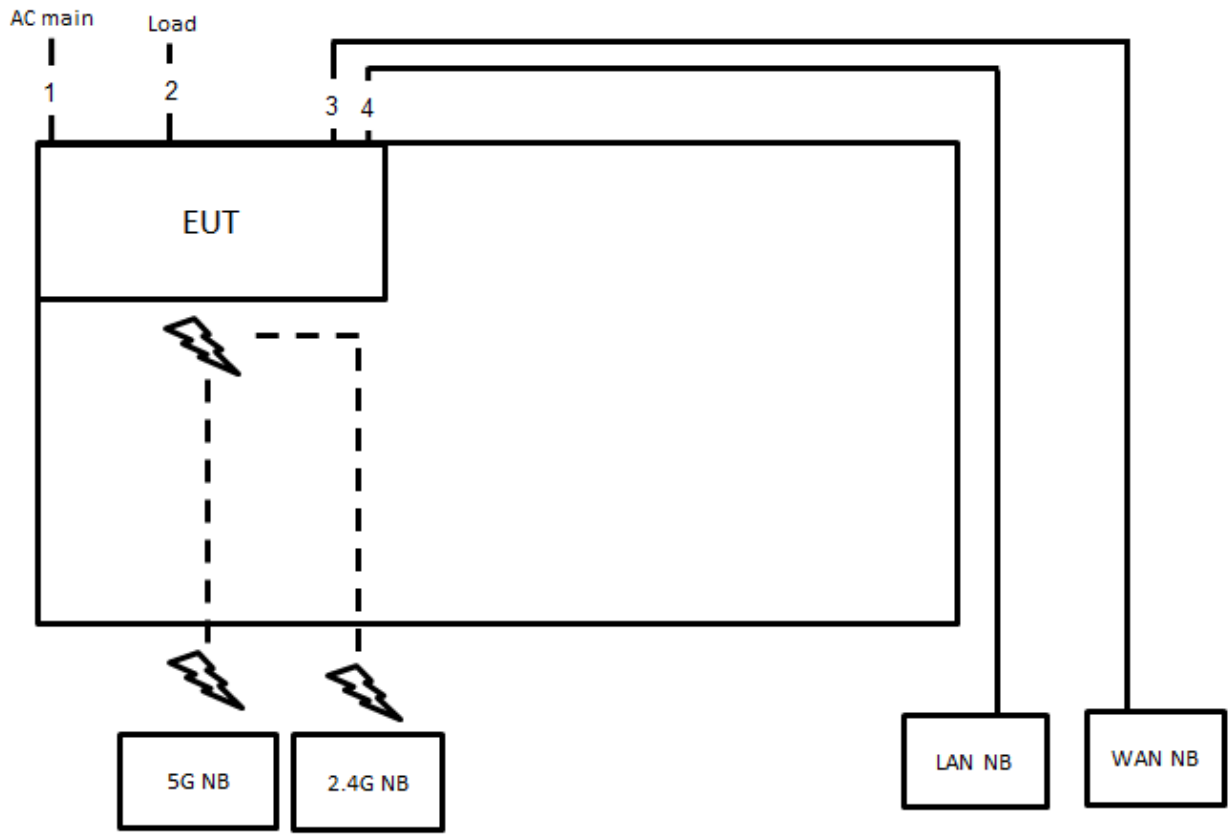
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB	DELL	E4300	DoC

For Test Site No: TH01-CB

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

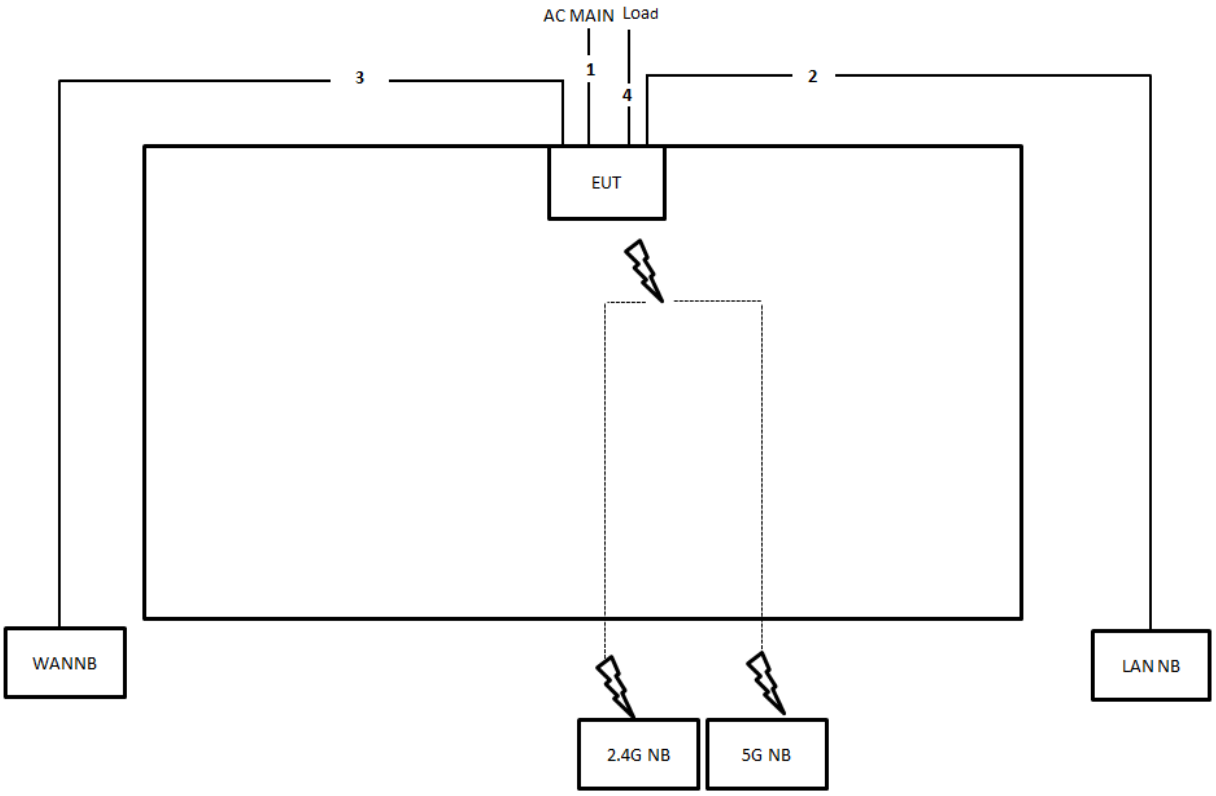
2.5 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



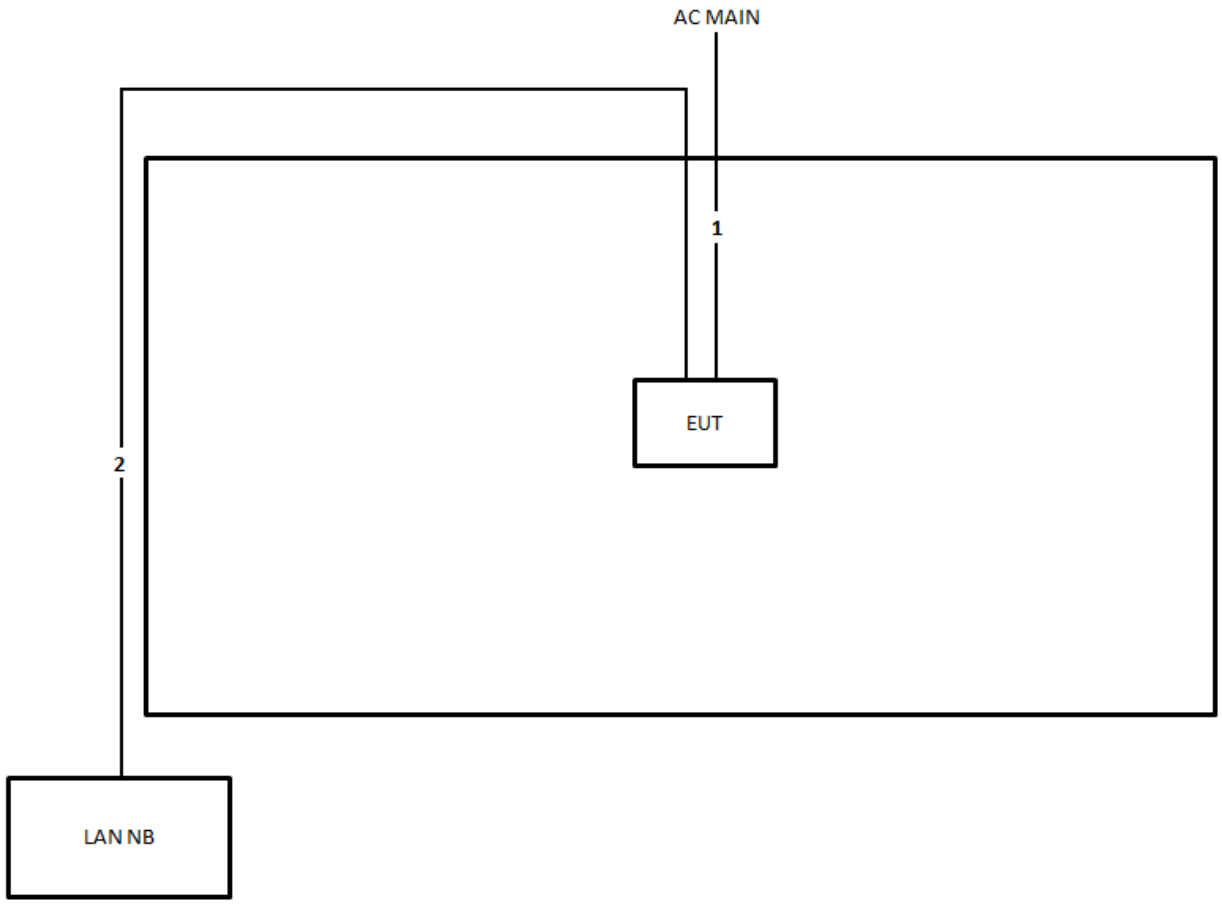
Item	Connection	Shielded	Length
1	Power cable	No	1.5m
2	RJ-45 cable *2	No	1.5m
3	RJ-45 cable	No	10m
4	RJ-45 cable	No	10m

Test Setup Diagram - Radiated Test < 1GHz



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

Test Setup Diagram - Radiated Test > 1GHz



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

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

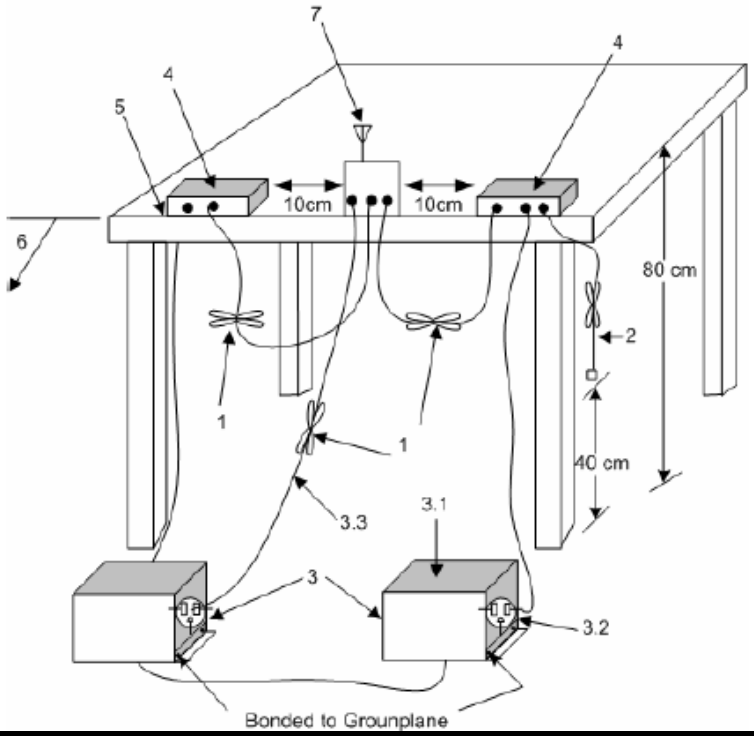
Refer a test equipment and calibration data table in this test report.

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.

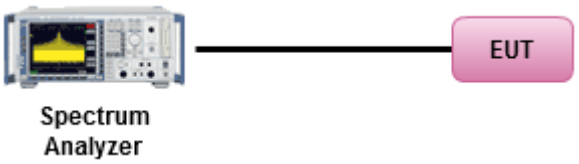
3.2.2 Measuring Instruments

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: $P_{total} = P_1 + P_2 + \ldots + P_n$ (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

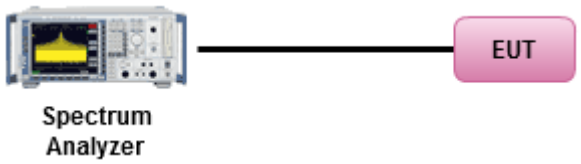
3.4.2 Measuring Instruments

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.	

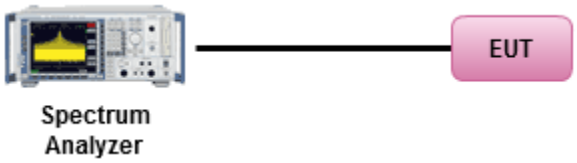
3.5.2 Measuring Instruments

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.

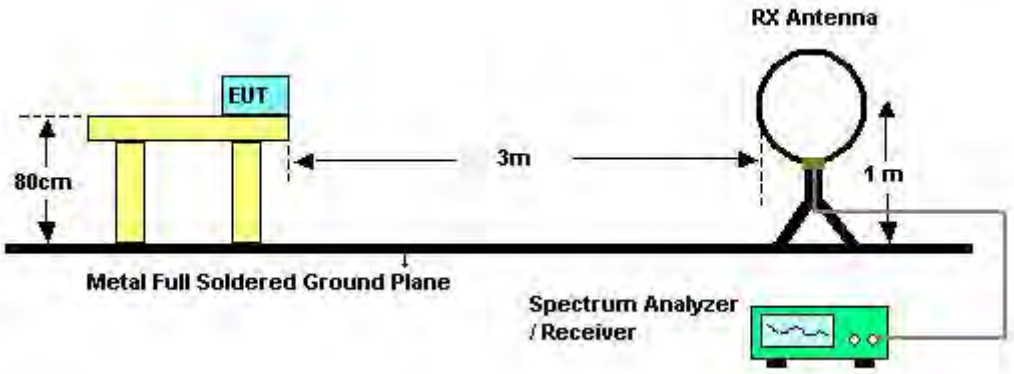
3.6.3 Test Procedures

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.	

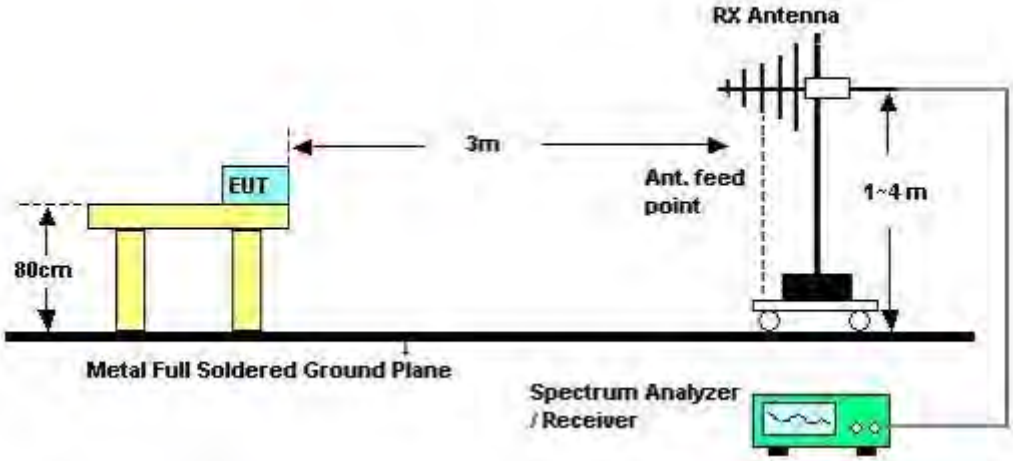
3.6.4 Test Setup

Transmitter Radiated Emissions

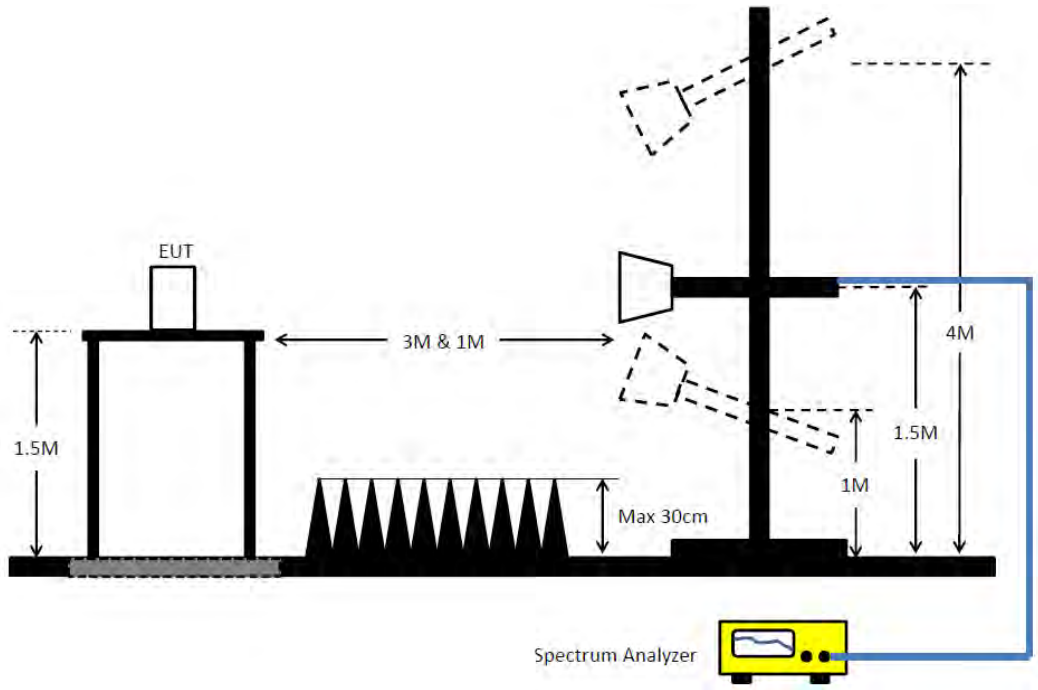
9kHz ~30MHz



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)
BILOG ANTENNA with 6dB Attenator	TESEQ & EMCI	CBL6112D & -6-06	37880 & AT-N0609	20MHz ~ 2GHz	Aug. 30, 2016	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 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. 15, 2016	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 18, 2016	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. 21, 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)

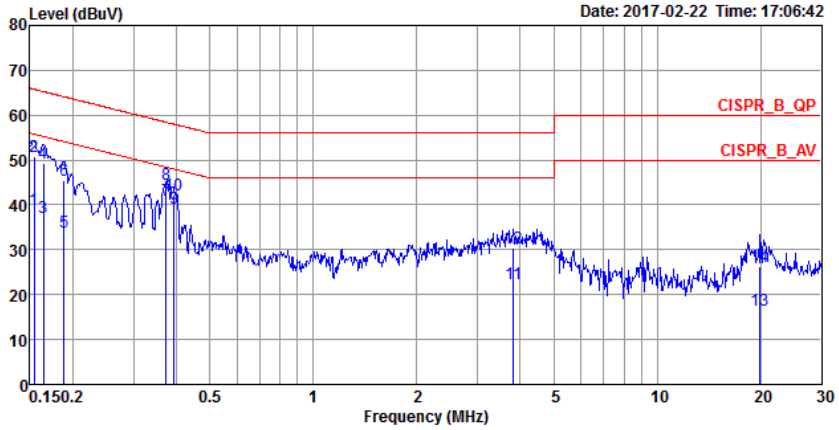
Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
Test Software	Audix	E3	6.2009-l0-7	N/A	N/A	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 26, 2016	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)
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.

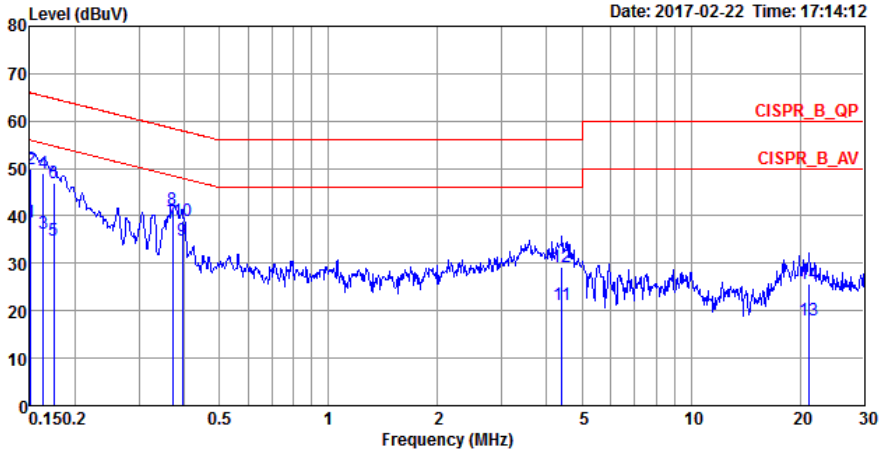
AC Power-line Conducted Emissions Result			
Operating Mode	1	**Power Phase**	Neutral
Operating Function	Normal Link		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1541	39.11	-16.67	55.78	29.13	9.94	0.04	Average	NEUTRAL
2	0.1541	50.88	-14.90	65.78	40.90	9.94	0.04	QP	NEUTRAL
3	0.1641	37.08	-18.17	55.25	27.09	9.95	0.04	Average	NEUTRAL
4	0.1641	49.44	-15.81	65.25	39.45	9.95	0.04	QP	NEUTRAL
5	0.1884	33.93	-20.18	54.11	23.91	9.97	0.05	Average	NEUTRAL
6	0.1884	45.59	-18.52	64.11	35.57	9.97	0.05	QP	NEUTRAL
7	0.3739	41.03	-7.38	48.41	31.03	9.96	0.04	Average	NEUTRAL
8	0.3739	44.59	-13.82	58.41	34.59	9.96	0.04	QP	NEUTRAL
9	0.3942	39.33	-8.65	47.98	29.33	9.96	0.04	Average	NEUTRAL
10	0.3942	42.27	-15.71	57.98	32.27	9.96	0.04	QP	NEUTRAL
11	3.8196	22.43	-23.57	46.00	12.23	10.07	0.13	Average	NEUTRAL
12	3.8196	30.33	-25.67	56.00	20.13	10.07	0.13	QP	NEUTRAL
13	19.9500	16.58	-33.42	50.00	6.04	10.29	0.25	Average	NEUTRAL
14	19.9500	26.20	-33.80	60.00	15.66	10.29	0.25	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	0.1508	38.62	-17.34	55.96	28.63	9.95	0.04	Average	LINE
2	0.1508	49.97	-15.99	65.96	39.98	9.95	0.04	QP	LINE
3	0.1632	36.45	-18.85	55.30	26.47	9.94	0.04	Average	LINE
4	0.1632	48.94	-16.36	65.30	38.96	9.94	0.04	QP	LINE
5	0.1749	34.90	-19.82	54.72	24.91	9.94	0.05	Average	LINE
6	0.1749	47.07	-17.65	64.72	37.08	9.94	0.05	QP	LINE
7	0.3712	38.63	-9.84	48.47	28.70	9.89	0.04	Average	LINE
8	0.3712	41.40	-17.07	58.47	31.47	9.89	0.04	QP	LINE
9	0.3955	34.95	-13.00	47.95	25.02	9.89	0.04	Average	LINE
10	0.3955	38.89	-19.06	57.95	28.96	9.89	0.04	QP	LINE
11	4.4071	21.30	-24.70	46.00	11.21	9.96	0.13	Average	LINE
12	4.4071	29.24	-26.76	56.00	19.15	9.96	0.13	QP	LINE
13	21.1472	18.10	-31.90	50.00	7.61	10.24	0.25	Average	LINE
14	21.1472	25.74	-34.26	60.00	15.25	10.24	0.25	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	9.075M	13.643M	13M6G1D	8.575M	13.218M
802.11g_(6Mbps)_3TX	-	-	-	-	-
2.4-2.4835GHz	15.75M	16.467M	16M5D1D	12.15M	16.342M
802.11ac VHT20_Nss1,(MCS0)_3TX	-	-	-	-	-
2.4-2.4835GHz	15.125M	17.566M	17M6D1D	15M	17.491M
802.11ac VHT40_Nss1,(MCS0)_3TX	-	-	-	-	-
2.4-2.4835GHz	35.1M	35.982M	36M0D1D	32.6M	35.732M

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;

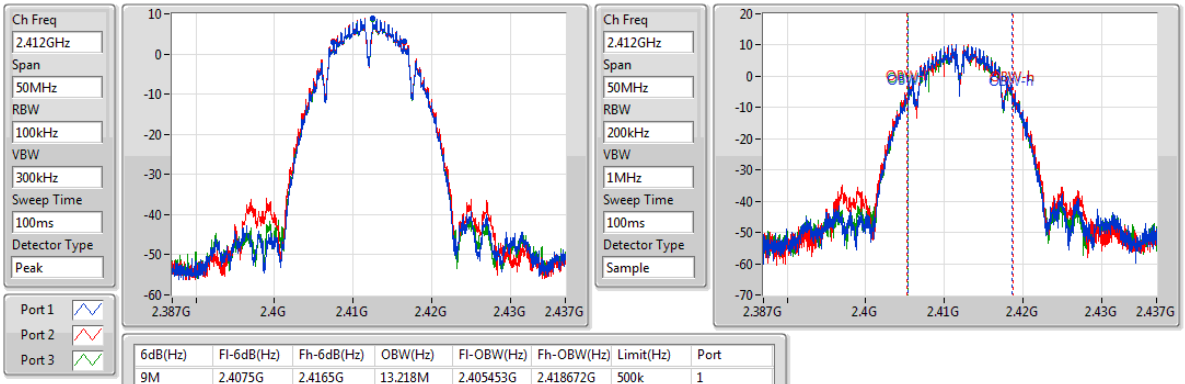
Result

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	9M	13.218M	9.075M	13.568M	9.075M	13.368M
2437MHz	Pass	500k	9.025M	13.368M	9.05M	13.643M	9.025M	13.393M
2462MHz	Pass	500k	8.575M	13.218M	9.075M	13.293M	9.05M	13.368M
802.11g_(6Mbps)_3TX	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	14.975M	16.342M	14.175M	16.342M	15.025M	16.367M
2437MHz	Pass	500k	15.05M	16.417M	15.1M	16.467M	15.45M	16.417M
2462MHz	Pass	500k	14.425M	16.342M	12.15M	16.417M	15.75M	16.342M
802.11ac VHT20_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	15.1M	17.566M	15.025M	17.541M	15.05M	17.541M
2437MHz	Pass	500k	15.125M	17.541M	15.025M	17.566M	15.075M	17.541M
2462MHz	Pass	500k	15M	17.541M	15.05M	17.566M	15M	17.491M
802.11ac VHT40_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-	-
2422MHz	Pass	500k	35.05M	35.782M	35.1M	35.882M	35.1M	35.882M
2437MHz	Pass	500k	35M	35.982M	35.05M	35.832M	33.8M	35.832M
2452MHz	Pass	500k	35.05M	35.732M	32.6M	35.932M	35.05M	35.932M

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

802.11b_(1Mbps)_3TX EBW

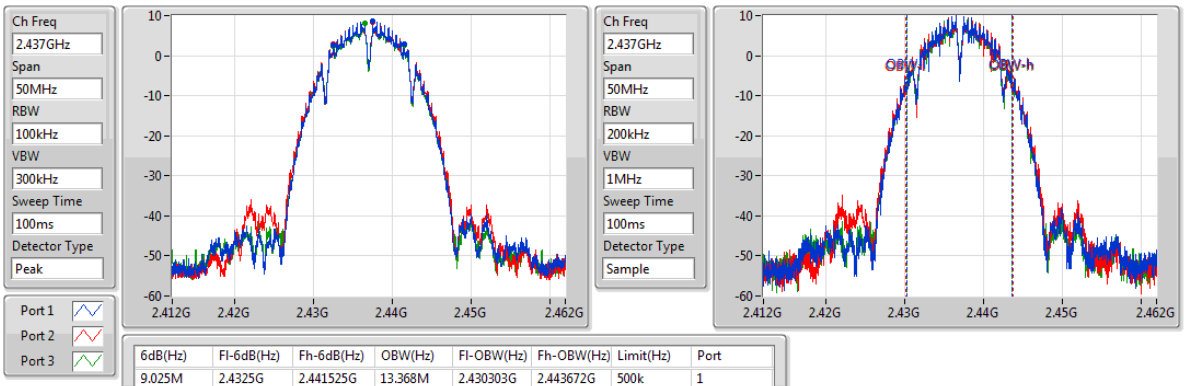
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
9M	2.4075G	2.4165G	13.218M	2.405453G	2.418672G	500k	1
9.075M	2.407475G	2.41655G	13.568M	2.405228G	2.418797G	500k	2
9.075M	2.407475G	2.41655G	13.368M	2.405328G	2.418697G	500k	3

802.11b_(1Mbps)_3TX EBW

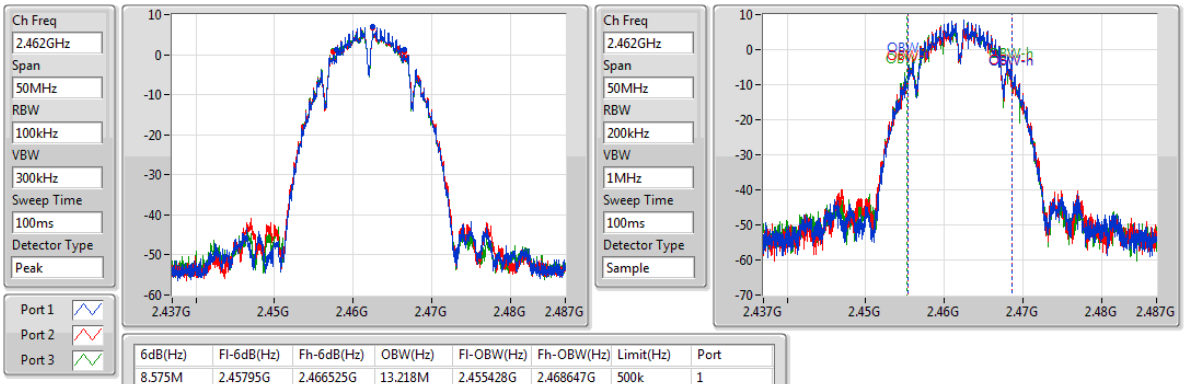
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
9.025M	2.4325G	2.441525G	13.368M	2.430303G	2.443672G	500k	1
9.05M	2.432475G	2.441525G	13.643M	2.430153G	2.443797G	500k	2
9.025M	2.432475G	2.4415G	13.393M	2.430278G	2.443672G	500k	3

802.11b_(1Mbps)_3TX EBW

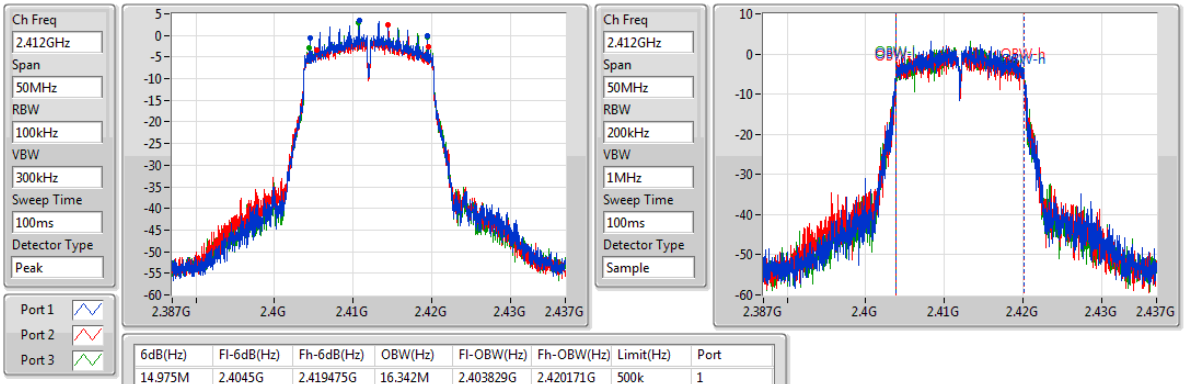
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8.575M	2.45795G	2.466525G	13.218M	2.455428G	2.468647G	500k	1
9.075M	2.457475G	2.46655G	13.293M	2.455378G	2.468672G	500k	2
9.05M	2.457475G	2.466525G	13.368M	2.455228G	2.468597G	500k	3

802.11g_(6Mbps)_3TX EBW

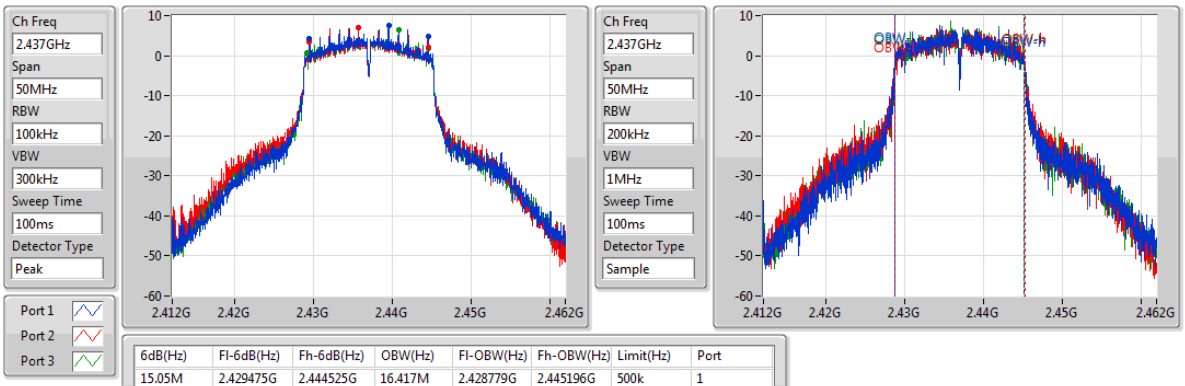
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
14.975M	2.4045G	2.419475G	16.342M	2.403829G	2.420171G	500k	1
14.175M	2.405375G	2.41955G	16.342M	2.403829G	2.420171G	500k	2
15.025M	2.40445G	2.419475G	16.367M	2.403804G	2.420171G	500k	3

802.11g_(6Mbps)_3TX EBW

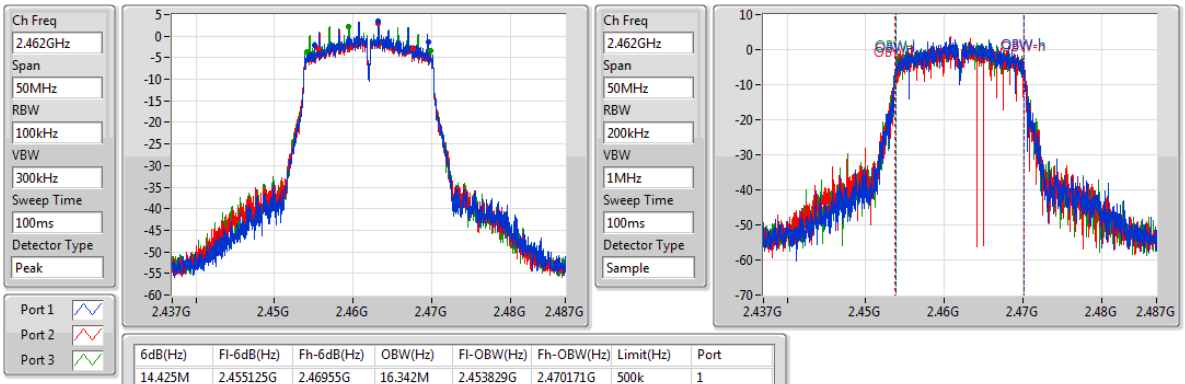
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.05M	2.429475G	2.444525G	16.417M	2.428779G	2.445196G	500k	1
15.1M	2.429475G	2.444575G	16.467M	2.428754G	2.445221G	500k	2
15.45M	2.429125G	2.444575G	16.417M	2.428779G	2.445196G	500k	3

802.11g_(6Mbps)_3TX EBW

2462MHz

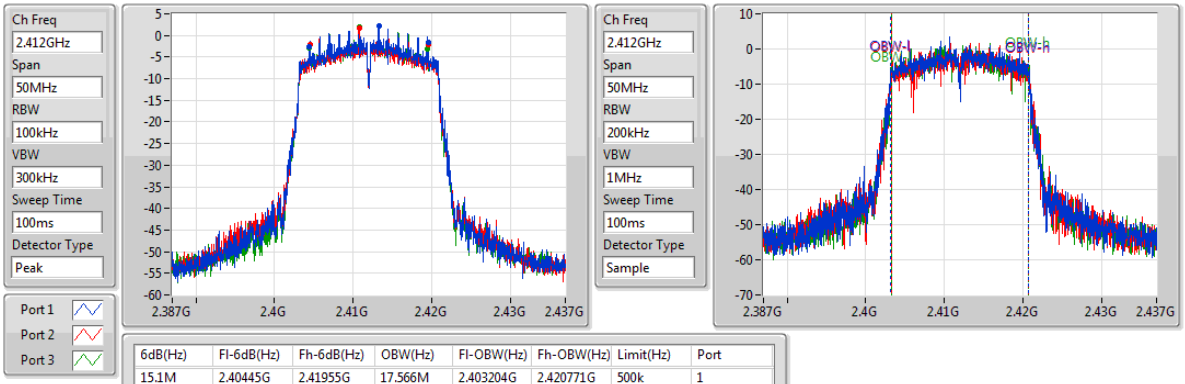


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
14.425M	2.455125G	2.46955G	16.342M	2.453829G	2.470171G	500k	1
12.15M	2.4555G	2.46765G	16.417M	2.453754G	2.470171G	500k	2
15.75M	2.454125G	2.469875G	16.342M	2.453829G	2.470171G	500k	3

802.11ac VHT20_Nss1,(MCS0)_3TX

EBW

2412MHz

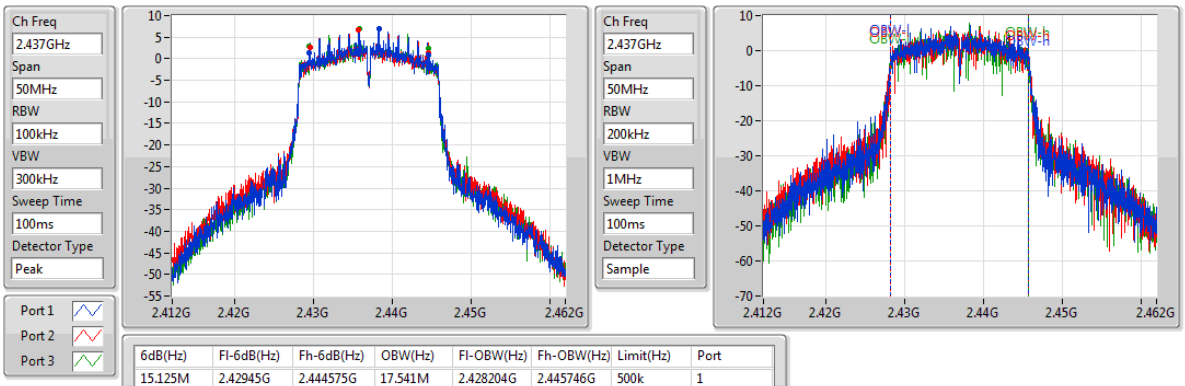


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.1M	2.40445G	2.41955G	17.566M	2.403204G	2.420771G	500k	1
15.025M	2.404525G	2.41955G	17.541M	2.403229G	2.420771G	500k	2
15.05M	2.40445G	2.4195G	17.541M	2.403229G	2.420771G	500k	3

802.11ac VHT20_Nss1,(MCS0)_3TX

EBW

2437MHz

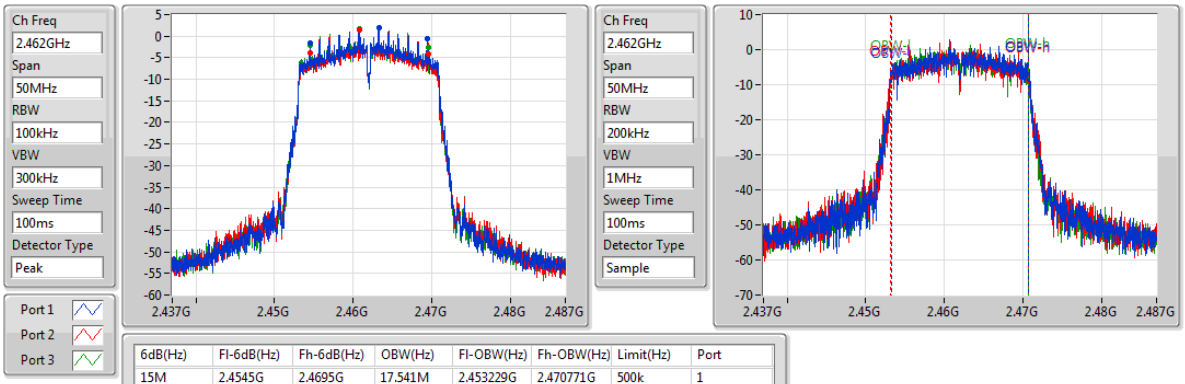


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.125M	2.42945G	2.444575G	17.541M	2.428204G	2.445746G	500k	1
15.025M	2.42955G	2.444575G	17.566M	2.428204G	2.445771G	500k	2
15.075M	2.429475G	2.44455G	17.541M	2.428204G	2.445746G	500k	3

802.11ac VHT20_Nss1,(MCS0)_3TX

EBW

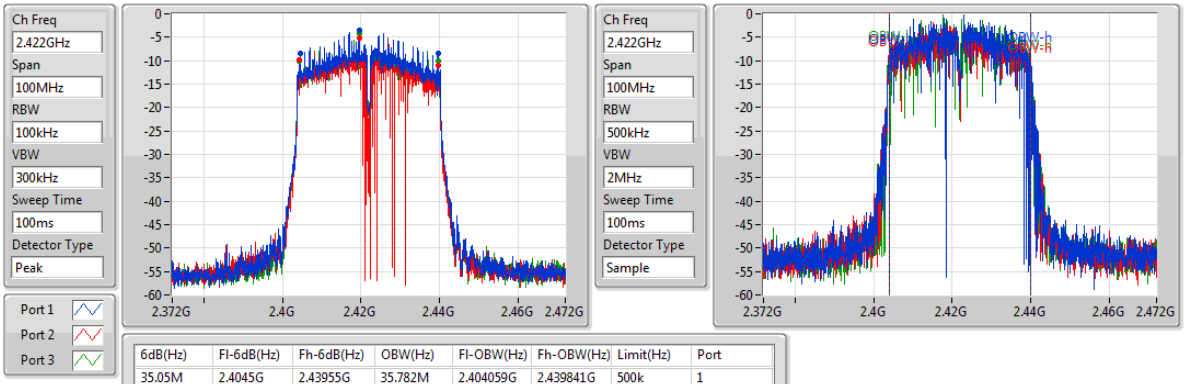
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15M	2.4545G	2.4695G	17.541M	2.453229G	2.470771G	500k	1
15.05M	2.454525G	2.469575G	17.566M	2.453204G	2.470771G	500k	2
15M	2.45455G	2.46955G	17.491M	2.453229G	2.470721G	500k	3

802.11ac VHT40_Nss1,(MCS0)_3TX EBW

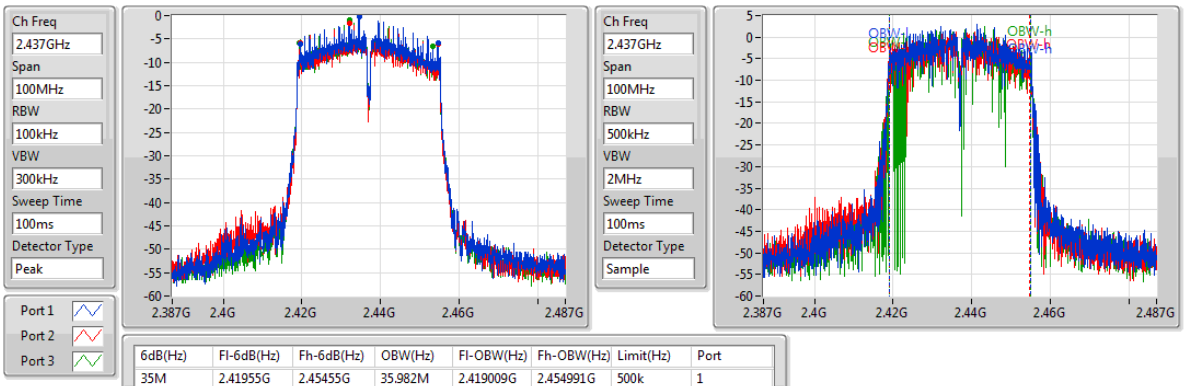
2422MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
35.05M	2.4045G	2.43955G	35.782M	2.404059G	2.439841G	500k	1
35.1M	2.40445G	2.43955G	35.882M	2.403959G	2.439841G	500k	2
35.1M	2.40445G	2.43955G	35.882M	2.404059G	2.439941G	500k	3

802.11ac VHT40_Nss1,(MCS0)_3TX EBW

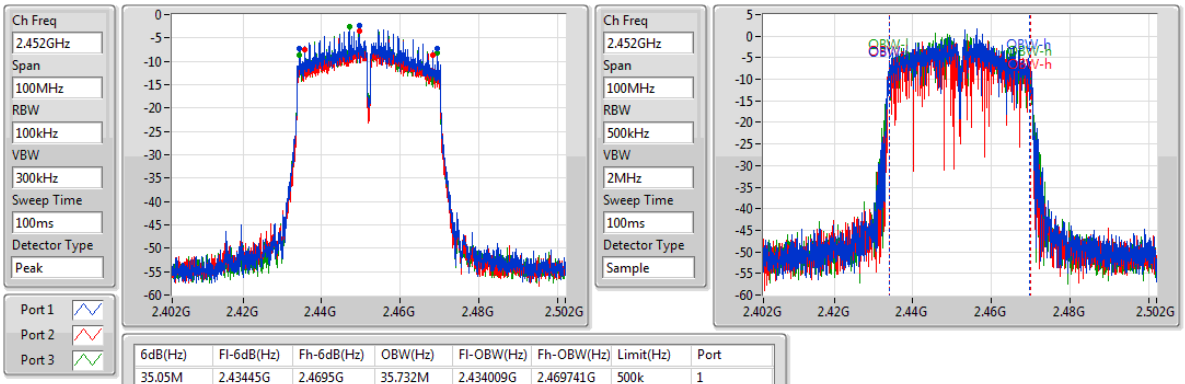
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
35M	2.41955G	2.45455G	35.982M	2.419009G	2.454991G	500k	1
35.05M	2.4195G	2.45455G	35.832M	2.418959G	2.454791G	500k	2
33.8M	2.41945G	2.45325G	35.832M	2.419009G	2.454841G	500k	3

802.11ac VHT40_Nss1,(MCS0)_3TX EBW

2452MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
35.05M	2.43445G	2.4695G	35.732M	2.434009G	2.469741G	500k	1
32.6M	2.4357G	2.4683G	35.932M	2.433959G	2.469891G	500k	2
35.05M	2.43445G	2.4695G	35.932M	2.433959G	2.469891G	500k	3

Summary

Mode	Total Power (dBm)	Total Power (W)
802.11b_(1Mbps)_3TX	-	-
2.4-2.4835GHz	27.19	0.52360
802.11g_(6Mbps)_3TX	-	-
2.4-2.4835GHz	26.69	0.46666
802.11ac VHT20_Nss1,(MCS0)_3TX	-	-
2.4-2.4835GHz	25.80	0.38019
802.11ac VHT40_Nss1,(MCS0)_3TX	-	-
2.4-2.4835GHz	20.87	0.12218

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	2.71	22.45	22.41	22.40	27.19	30.00
2437MHz	Pass	2.71	22.07	21.93	21.97	26.76	30.00
2462MHz	Pass	2.71	20.60	20.52	20.60	25.34	30.00
802.11g_(6Mbps)_3TX	-	-	-	-	-	-	-
2412MHz	Pass	2.71	17.15	17.64	17.52	22.21	30.00
2437MHz	Pass	2.71	21.77	22.03	21.96	26.69	30.00
2462MHz	Pass	2.71	17.83	18.04	18.05	22.75	30.00
802.11ac VHT20_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-
2412MHz	Pass	2.71	16.04	16.66	16.29	21.11	30.00
2437MHz	Pass	2.71	20.92	21.14	21.03	25.80	30.00
2462MHz	Pass	2.71	16.29	16.67	16.52	21.27	30.00
802.11ac VHT40_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-
2422MHz	Pass	2.71	12.25	13.07	12.79	17.49	30.00
2437MHz	Pass	2.71	15.93	16.25	16.10	20.87	30.00
2452MHz	Pass	2.71	13.86	14.37	14.22	18.93	30.00

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

Summary

Mode	PD (dBm/RBW)
802.11b_(1Mbps)_3TX	-
2.4-2.4835GHz	-3.21
802.11g_(6Mbps)_3TX	-
2.4-2.4835GHz	-4.90
802.11ac VHT20_Nss1,(MCS0)_3TX	-
2.4-2.4835GHz	-5.29
802.11ac VHT40_Nss1,(MCS0)_3TX	-
2.4-2.4835GHz	-11.48

RBW=3kHz.

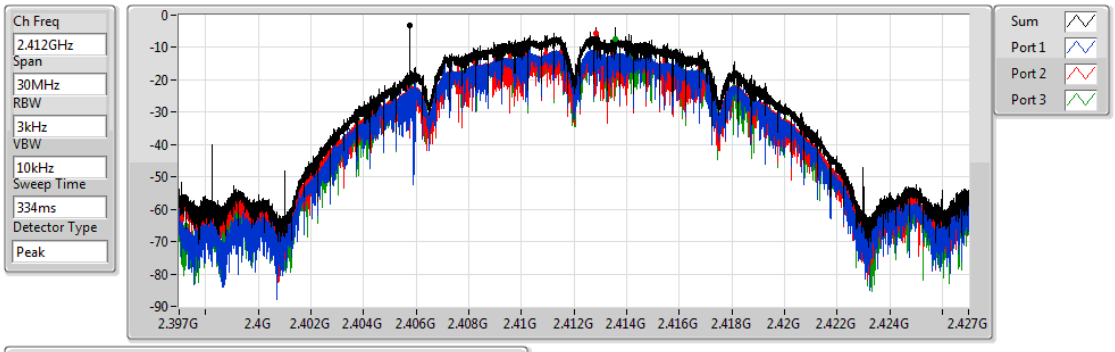
Result

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	7.48	-3.22	-5.67	-7.55	-3.21	6.52
2437MHz	Pass	7.48	-3.75	-6.99	-7.91	-3.74	6.52
2462MHz	Pass	7.48	-8.70	-5.28	-8.13	-5.28	6.52
802.11g_(6Mbps)_3TX	-	-	-	-	-	-	-
2412MHz	Pass	7.48	-12.56	-13.14	-13.24	-9.79	6.52
2437MHz	Pass	7.48	-8.67	-8.84	-8.35	-4.90	6.52
2462MHz	Pass	7.48	-13.56	-13.43	-12.90	-9.44	6.52
802.11ac VHT20_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-
2412MHz	Pass	7.48	-12.59	-13.33	-12.42	-9.99	6.52
2437MHz	Pass	7.48	-7.69	-8.70	-8.67	-5.29	6.52
2462MHz	Pass	7.48	-13.09	-13.41	-12.58	-9.69	6.52
802.11ac VHT40_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-
2422MHz	Pass	7.48	-16.79	-18.29	-16.61	-14.10	6.52
2437MHz	Pass	7.48	-14.68	-14.18	-12.79	-11.48	6.52
2452MHz	Pass	7.48	-15.50	-16.19	-14.92	-12.39	6.52

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

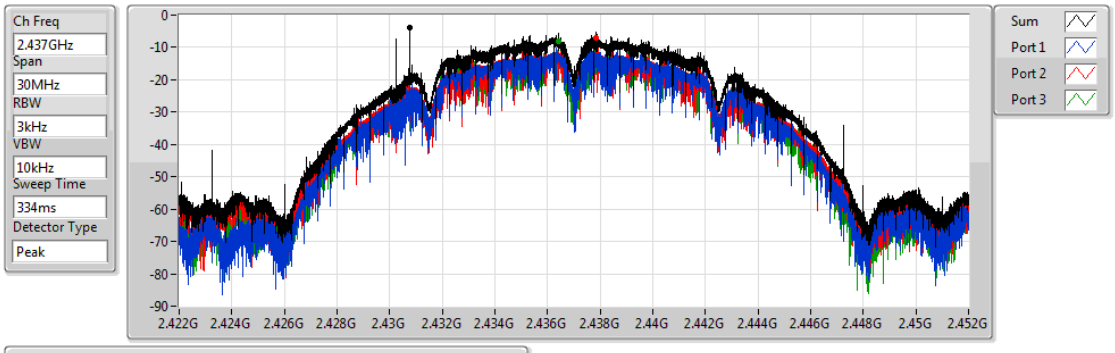
2412MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.21	-3.21	-3.22	-5.67	-7.55

802.11b_(1Mbps)_3TX PSD

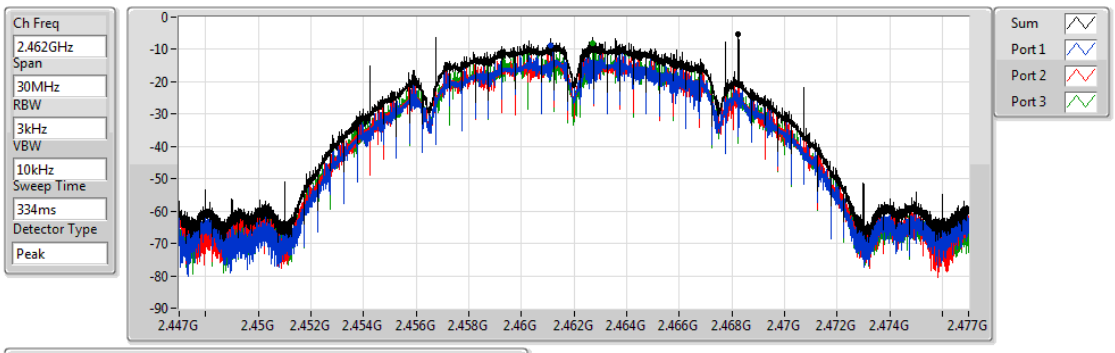
2437MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.74	-3.74	-3.75	-6.99	-7.91

802.11b_(1Mbps)_3TX PSD

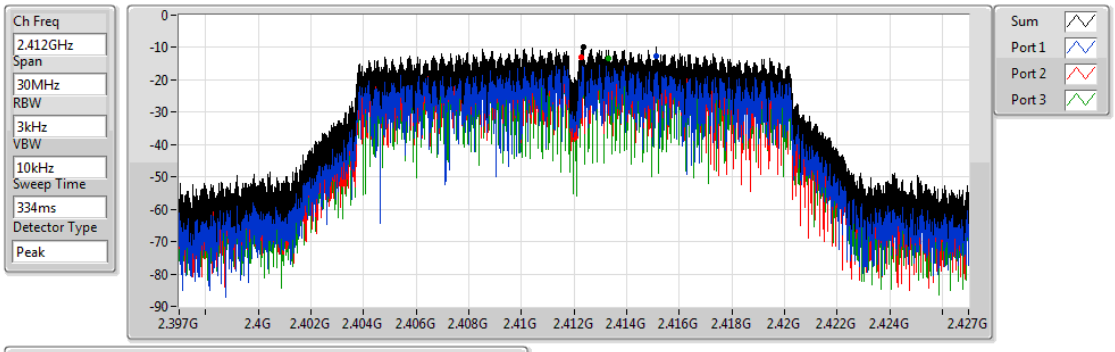
2462MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-5.28	-5.28	-8.70	-5.28	-8.13

802.11g_(6Mbps)_3TX PSD

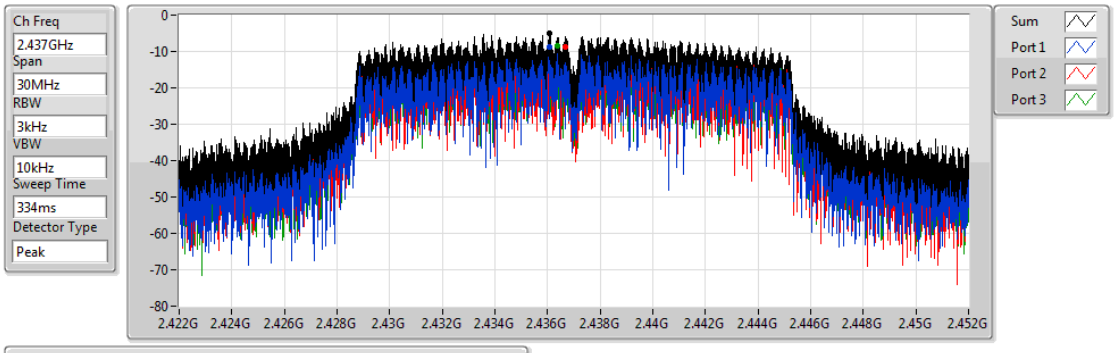
2412MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-9.79	-9.79	-12.56	-13.14	-13.24

802.11g_(6Mbps)_3TX PSD

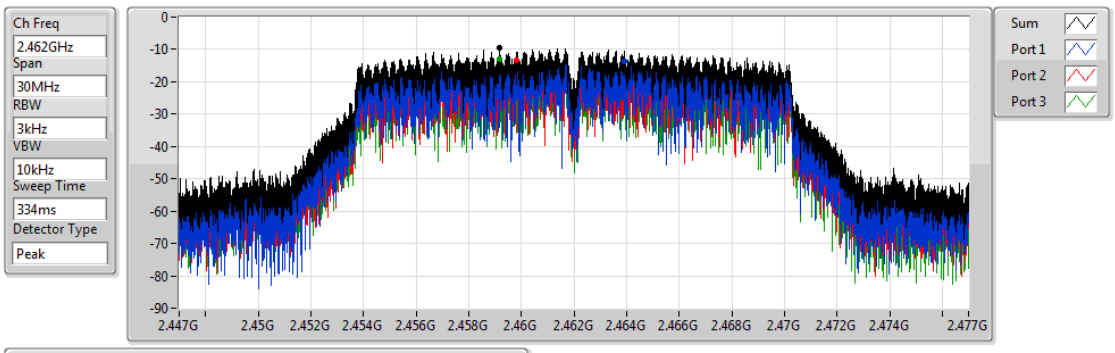
2437MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.90	-4.90	-8.67	-8.84	-8.35

802.11g_(6Mbps)_3TX PSD

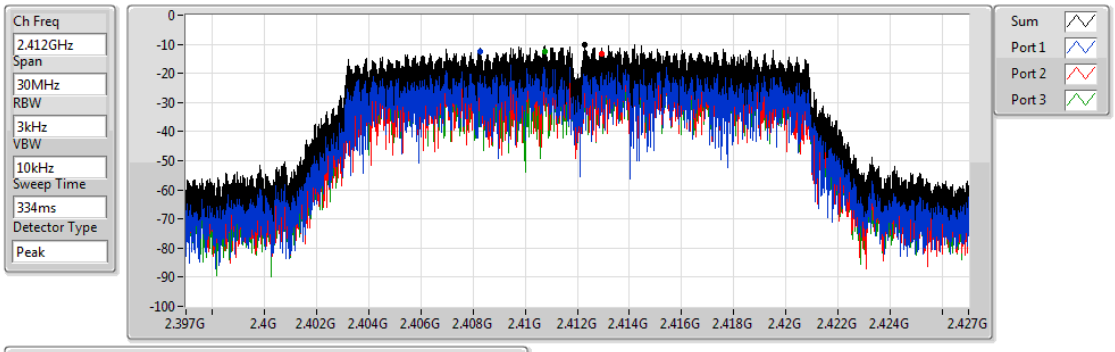
2462MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-9.44	-9.44	-13.56	-13.43	-12.90

802.11ac VHT20_Nss1,(MCS0)_3TX PSD

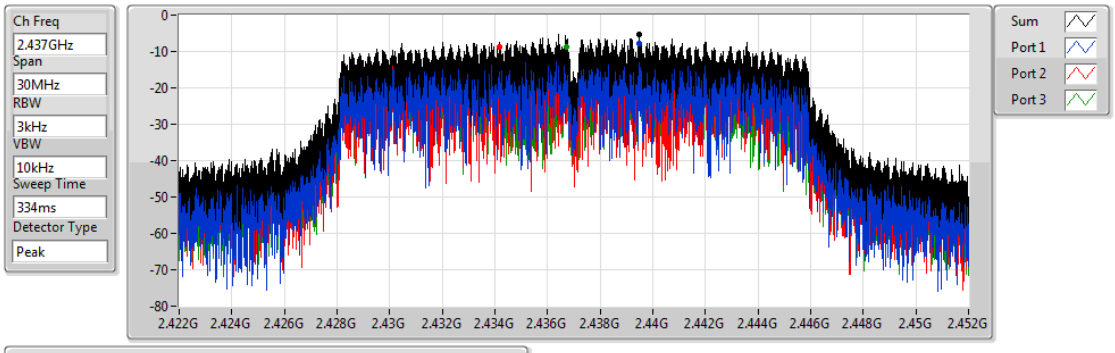
2412MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-9.99	-9.99	-12.59	-13.33	-12.42

802.11ac VHT20_Nss1,(MCS0)_3TX PSD

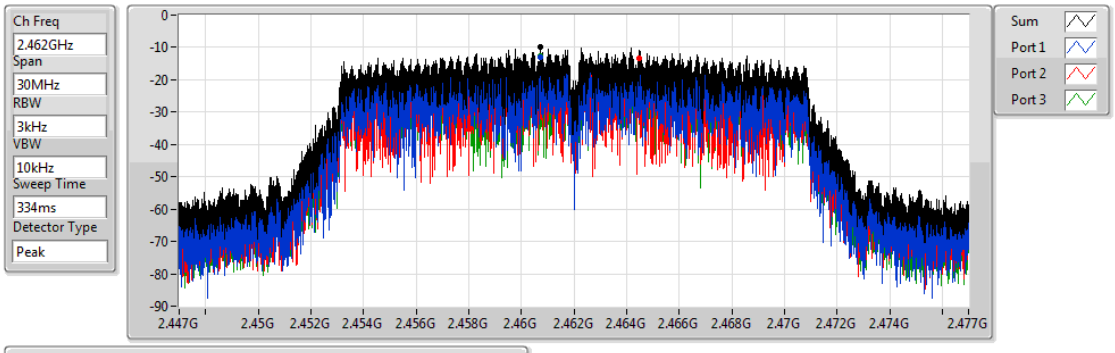
2437MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-5.29	-5.29	-7.69	-8.70	-8.67

802.11ac VHT20_Nss1,(MCS0)_3TX PSD

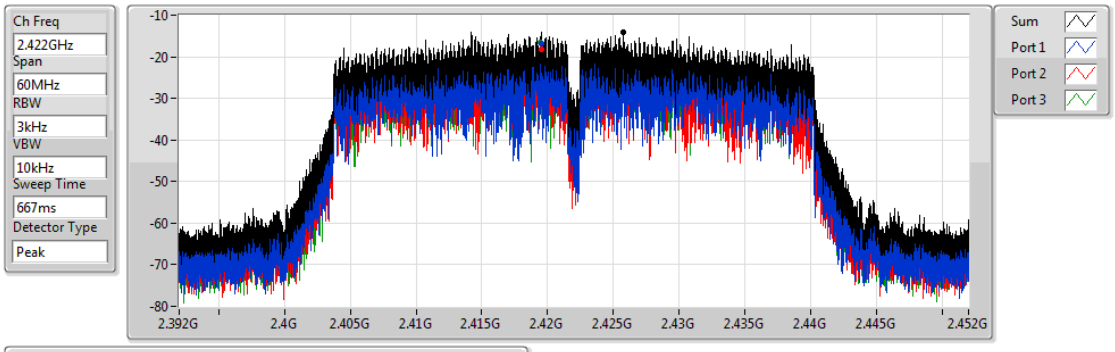
2462MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-9.69	-9.69	-13.09	-13.41	-12.58

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

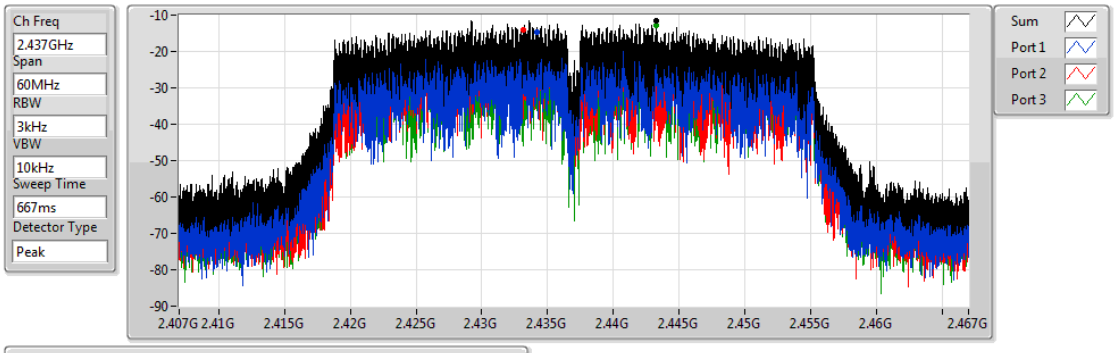
2422MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-14.10	-14.10	-16.79	-18.29	-16.61

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

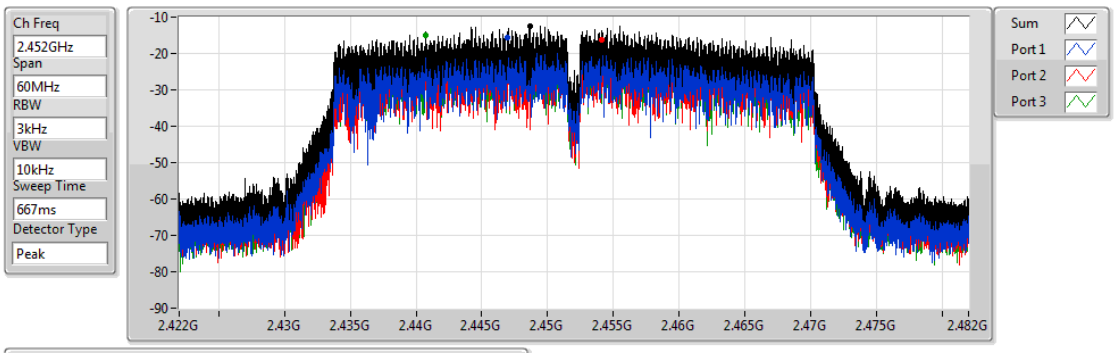
2437MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-11.48	-11.48	-14.68	-14.18	-12.79

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

2452MHz



Sum	PD	Port 1	Port 2	Port 3
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-12.39	-12.39	-15.50	-16.19	-14.92

Summary

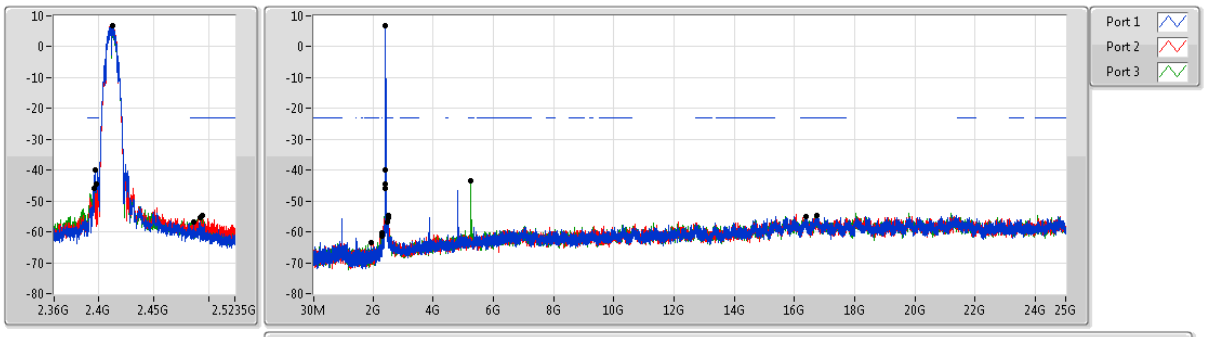
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
802.11g_(6Mbps)_3TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2.4-2.4835GHz	Pass	2.438243G	8.00	-22.00	2.30874G	-61.02	2.39768G	-37.18	2.48478G	-55.82	17.622089G	-54.86	2

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	2.412525G	6.93	-23.07	2.30641G	-61.41	2.39704G	-39.99	2.4859G	-56.69	16.720219G	-54.86	1
2412MHz	Pass	2.412525G	6.93	-23.07	1.9406G	-63.63	2.39656G	-45.75	2.49254G	-55.54	16.388691G	-54.93	2
2412MHz	Pass	2.412525G	6.93	-23.07	2.30641G	-60.47	2.39808G	-44.51	2.49398G	-54.85	5.243157G	-43.29	3
2437MHz	Pass	2.436072G	6.93	-23.07	2.30874G	-60.45	2.39704G	-56.38	2.5095G	-55.44	23.359216G	-54.29	1
2437MHz	Pass	2.436072G	6.93	-23.07	2.307575G	-61.63	2.39648G	-56.65	2.51502G	-53.65	16.346548G	-54.84	2
2437MHz	Pass	2.437575G	6.93	-23.07	2.30408G	-60.38	2.394G	-53.23	2.48902G	-56.01	16.621885G	-54.72	3
2462MHz	Pass	2.462625G	6.93	-23.07	190.77M	-62.97	2.39792G	-57.31	2.50294G	-55.06	24.822998G	-54.41	1
2462MHz	Pass	2.461122G	6.93	-23.07	634.635M	-63.03	2.39488G	-59.09	2.50246G	-55.18	16.765172G	-54.86	2
2462MHz	Pass	2.461623G	6.93	-23.07	777.93M	-63.54	2.39088G	-57.01	2.48398G	-52.52	16.804506G	-54.62	3
802.11g_(6Mbps)_3TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.438243G	8.00	-22.00	942.195M	-63.53	2.39776G	-38.80	2.49358G	-53.71	16.253832G	-54.78	1
2412MHz	Pass	2.438243G	8.00	-22.00	2.30874G	-61.02	2.39768G	-37.18	2.48478G	-55.82	17.622089G	-54.86	2
2412MHz	Pass	2.438243G	8.00	-22.00	2.30641G	-59.53	2.3968G	-39.70	2.48446G	-55.25	16.217308G	-55.18	3
2437MHz	Pass	2.438243G	8.00	-22.00	2.10836G	-62.69	2.39128G	-52.25	2.4939G	-51.07	16.228546G	-54.89	1
2437MHz	Pass	2.438243G	8.00	-22.00	2.30874G	-58.18	2.39448G	-53.29	2.49446G	-51.77	16.425215G	-54.08	2
2437MHz	Pass	2.438243G	8.00	-22.00	2.30408G	-57.91	2.39792G	-51.49	2.52078G	-51.49	16.39431G	-55.42	3
2462MHz	Pass	2.438243G	8.00	-22.00	2.309905G	-61.05	2.39528G	-55.31	2.48382G	-47.76	16.225736G	-54.90	1
2462MHz	Pass	2.438243G	8.00	-22.00	2.300585G	-61.56	2.3976G	-55.94	2.4851G	-53.56	16.371834G	-54.65	2
2462MHz	Pass	2.438243G	8.00	-22.00	2.302915G	-60.49	2.39768G	-55.72	2.48494G	-52.76	24.353801G	-54.50	3
802.11ac VHT20_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.439579G	6.42	-23.58	2.30874G	-59.91	2.39792G	-42.69	2.49694G	-52.48	17.683899G	-53.77	1
2412MHz	Pass	2.439579G	6.42	-23.58	2.307575G	-59.19	2.39704G	-41.96	2.4895G	-50.92	16.307214G	-54.44	2
2412MHz	Pass	2.439579G	6.42	-23.58	949.185M	-62.78	2.39784G	-44.06	2.48982G	-53.70	17.16413G	-54.90	3
2437MHz	Pass	2.439579G	6.42	-23.58	2.30641G	-60.08	2.39416G	-52.80	2.51454G	-51.35	17.397324G	-55.01	1
2437MHz	Pass	2.439579G	6.42	-23.58	2.30874G	-58.03	2.39448G	-52.42	2.49318G	-51.50	17.664232G	-54.11	2
2437MHz	Pass	2.439579G	6.42	-23.58	2.11768G	-63.00	2.39384G	-52.60	2.51758G	-53.08	2.52631G	-53.33	3
2462MHz	Pass	2.439579G	6.42	-23.58	2.30874G	-60.67	2.39072G	-52.99	2.50574G	-49.71	2.537548G	-52.98	1
2462MHz	Pass	2.439579G	6.42	-23.58	2.302915G	-61.10	2.3908G	-51.19	2.48358G	-50.62	2.534738G	-52.98	2
2462MHz	Pass	2.439579G	6.42	-23.58	2.004675G	-63.51	2.39616G	-54.05	2.5155G	-53.85	17.636137G	-54.81	3
802.11ac VHT40_Nss1,(MCS0)_3TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	2.434569G	-0.44	-30.44	916.23M	-63.54	2.39584G	-50.76	2.48542G	-58.72	17.351958G	-53.78	1
2422MHz	Pass	2.434569G	-0.44	-30.44	935.695M	-63.69	2.39456G	-49.19	2.48942G	-59.83	16.482544G	-54.96	2
2422MHz	Pass	2.434569G	-0.44	-30.44	888.75M	-64.15	2.39392G	-53.63	2.48382G	-59.43	16.266592G	-54.78	3
2437MHz	Pass	2.434569G	-0.44	-30.44	857.835M	-62.45	2.392G	-52.87	2.48638G	-52.34	17.666069G	-54.19	1
2437MHz	Pass	2.434569G	-0.44	-30.44	2.12993G	-63.69	2.39312G	-51.03	2.48814G	-54.33	16.260983G	-55.13	2
2437MHz	Pass	2.434569G	-0.44	-30.44	929.97M	-63.54	2.3944G	-53.94	2.51134G	-54.92	16.249765G	-54.16	3
2452MHz	Pass	2.434569G	-0.44	-30.44	946M	-62.72	2.39312G	-54.45	2.48414G	-52.26	16.25257G	-54.65	1
2452MHz	Pass	2.434569G	-0.44	-30.44	893.33M	-62.99	2.392G	-56.35	2.49806G	-54.45	17.657655G	-54.55	2
2452MHz	Pass	2.434569G	-0.44	-30.44	161.675M	-63.57	2.39648G	-56.02	2.48398G	-54.14	16.258179G	-54.34	3

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

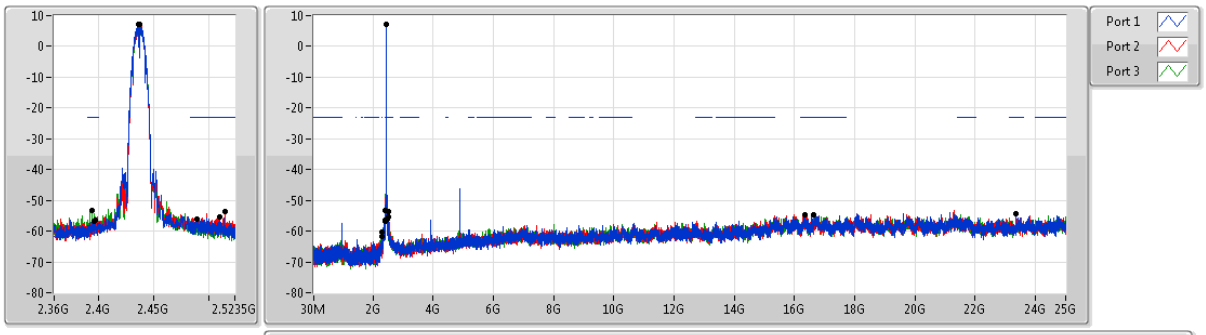
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.412525G	6.93	-23.07	2.30641G	-61.41	2.39704G	-39.99	2.4859G	-56.69	16.720219G	-54.86	1
2.412525G	6.93	-23.07	1.9406G	-63.63	2.39656G	-45.75	2.49254G	-55.54	16.388691G	-54.93	2
2.412525G	6.93	-23.07	2.30641G	-60.47	2.39808G	-44.51	2.49398G	-54.85	5.243157G	-43.29	3

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

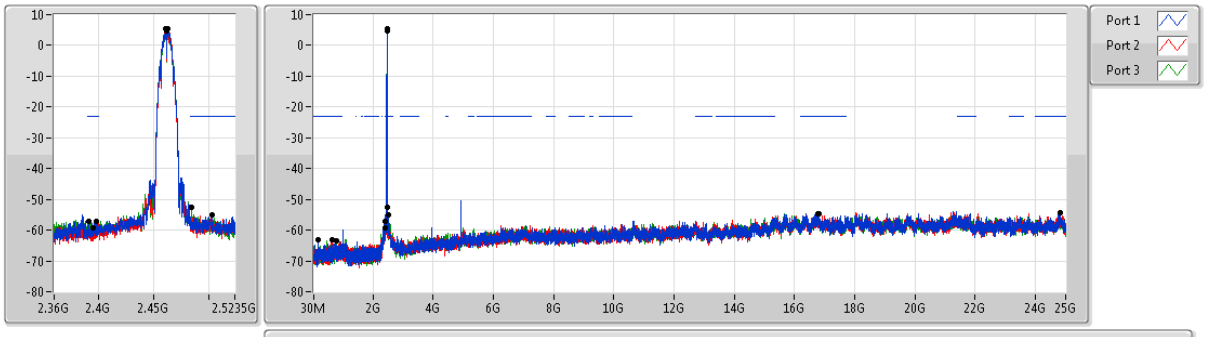
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.436072G	7.15	-23.07	2.30874G	-60.45	2.39704G	-56.38	2.5095G	-55.44	23.359216G	-54.29	1
2.436072G	7.10	-23.07	2.307575G	-61.63	2.39648G	-56.65	2.51502G	-53.65	16.346548G	-54.84	2
2.437575G	7.14	-23.07	2.30408G	-60.38	2.394G	-53.23	2.48902G	-56.01	16.621885G	-54.72	3

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

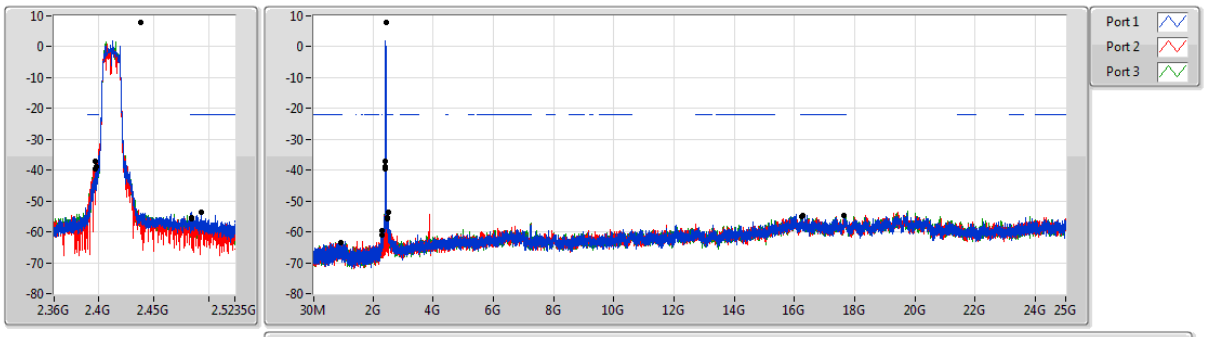
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.462625G	5.59	-23.07	190.77M	-62.97	2.39792G	-57.31	2.50294G	-55.06	24.822998G	-54.41	1
2.461122G	5.37	-23.07	634.635M	-63.03	2.39488G	-59.09	2.50246G	-55.18	16.765172G	-54.86	2
2.461623G	4.86	-23.07	777.93M	-63.54	2.39088G	-57.01	2.48398G	-52.52	16.804506G	-54.62	3

802.11g_(6Mbps)_3TX **CSE NdB**

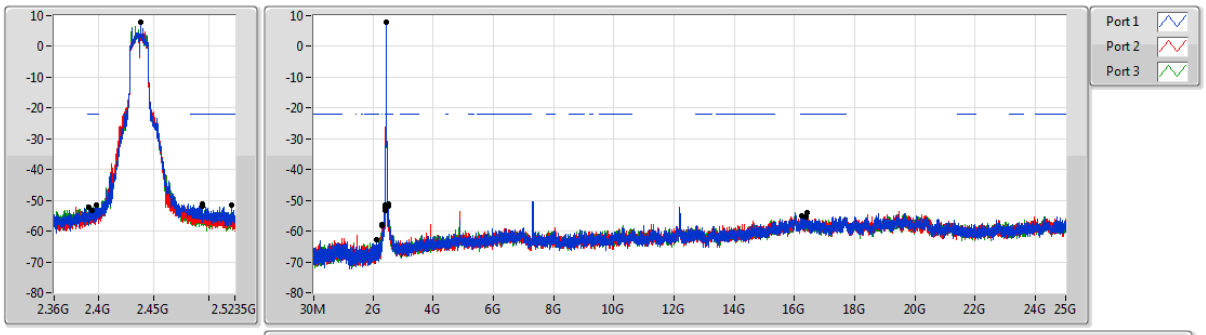
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.438243G	8.00	-22.00	942.195M	-63.53	2.39776G	-38.80	2.49358G	-53.71	16.253832G	-54.78	1
2.438243G	8.00	-22.00	2.30874G	-61.02	2.39768G	-37.18	2.48478G	-55.82	17.622089G	-54.86	2
2.438243G	8.00	-22.00	2.30641G	-59.53	2.3968G	-39.70	2.48446G	-55.25	16.217308G	-55.18	3

802.11g_(6Mbps)_3TX **CSE NdB**

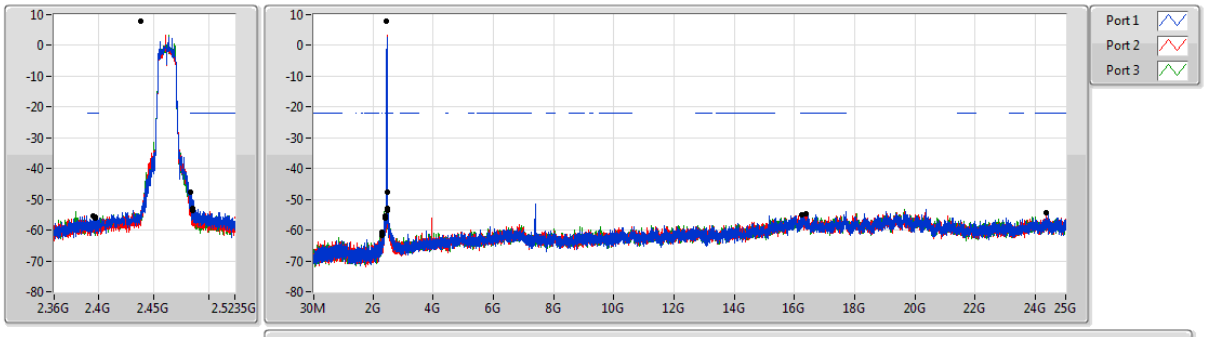
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.438243G	8.00	-22.00	2.10836G	-62.69	2.39128G	-52.25	2.4939G	-51.07	16.228546G	-54.89	1
2.438243G	8.00	-22.00	2.30874G	-58.18	2.39448G	-53.29	2.49446G	-51.77	16.425215G	-54.08	2
2.438243G	8.00	-22.00	2.30408G	-57.91	2.39792G	-51.49	2.52078G	-51.49	16.39431G	-55.42	3

802.11g_(6Mbps)_3TX **CSE NdB**

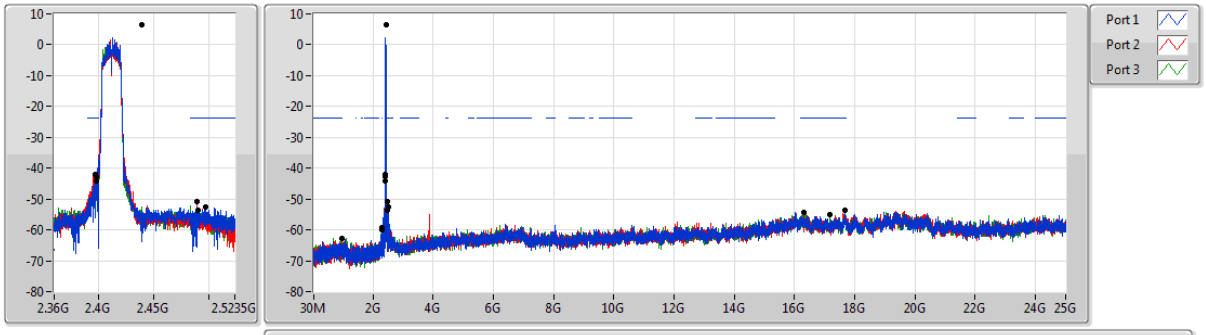
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.438243G	8.00	-22.00	2.309905G	-61.05	2.39528G	-55.31	2.48382G	-47.76	16.225736G	-54.90	1
2.438243G	8.00	-22.00	2.300585G	-61.56	2.3976G	-55.94	2.4851G	-53.56	16.371834G	-54.65	2
2.438243G	8.00	-22.00	2.302915G	-60.49	2.39768G	-55.72	2.48494G	-52.76	24.353801G	-54.50	3

802.11ac VHT20_Nss1,(MCS0)_3TX **CSE NdB**

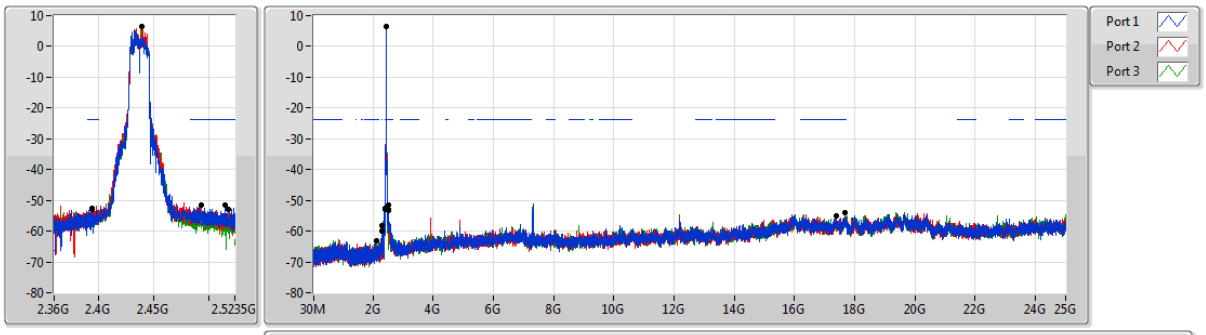
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.439579G	6.42	-23.58	2.30874G	-59.91	2.39792G	-42.69	2.49694G	-52.48	17.683899G	-53.77	1
2.439579G	6.42	-23.58	2.307575G	-59.19	2.39704G	-41.96	2.4895G	-50.92	16.307214G	-54.44	2
2.439579G	6.42	-23.58	949.185M	-62.78	2.39784G	-44.06	2.48982G	-53.70	17.16413G	-54.90	3

802.11ac VHT20_Nss1,(MCS0)_3TX **CSE NdB**

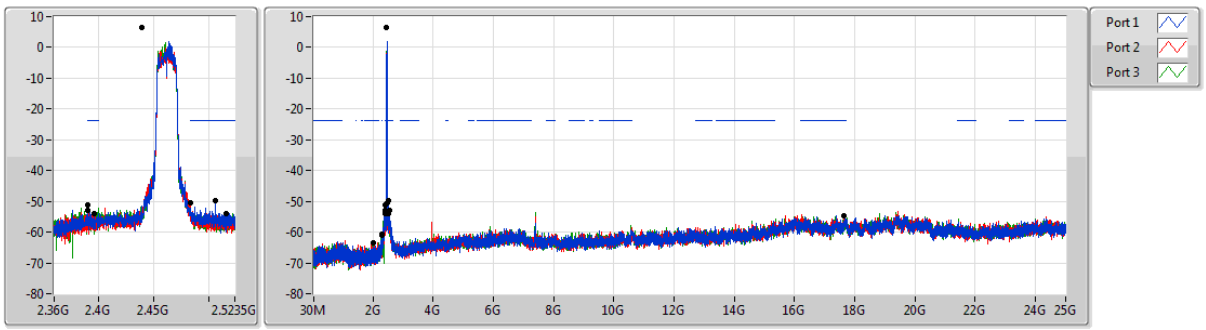
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.439579G	6.42	-23.58	2.30641G	-60.08	2.39416G	-52.80	2.51454G	-51.35	17.397324G	-55.01	1
2.439579G	6.42	-23.58	2.30874G	-58.03	2.39448G	-52.42	2.49318G	-51.50	17.664232G	-54.11	2
2.439579G	6.42	-23.58	2.11768G	-63.00	2.39384G	-52.60	2.51758G	-53.08	2.52631G	-53.33	3

802.11ac VHT20_Nss1,(MCS0)_3TX **CSE NdB**

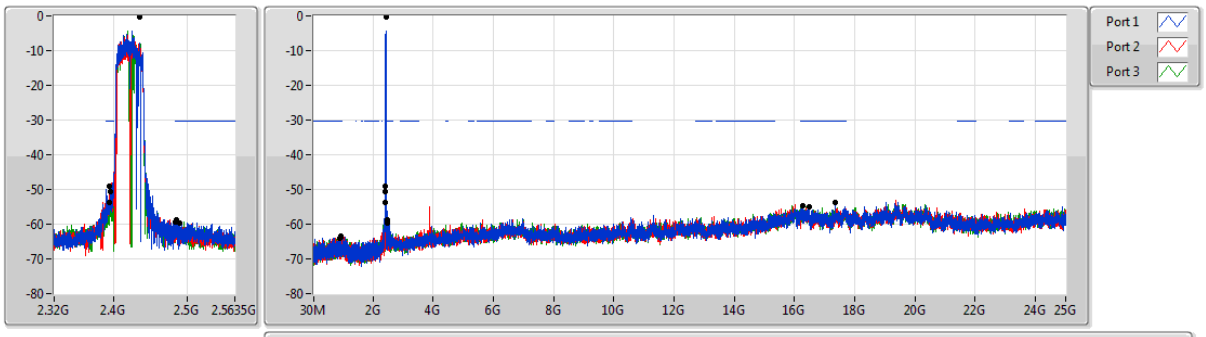
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.439579G	6.42	-23.58	2.30874G	-60.67	2.39072G	-52.99	2.50574G	-49.71	2.537548G	-52.98	1
2.439579G	6.42	-23.58	2.302915G	-61.10	2.3908G	-51.19	2.48358G	-50.62	2.534738G	-52.98	2
2.439579G	6.42	-23.58	2.004675G	-63.51	2.39616G	-54.05	2.5155G	-53.85	17.636137G	-54.81	3

802.11ac VHT40_Nss1,(MCS0)_3TX **CSE NdB**

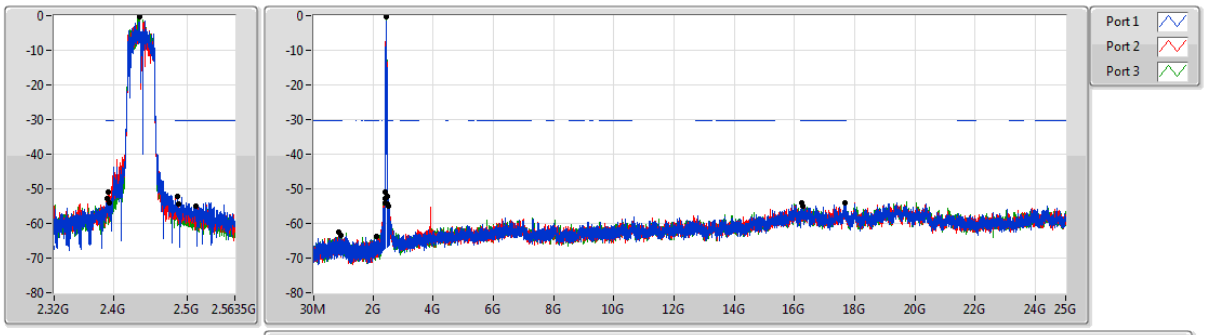
2422MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.434569G	-0.44	-30.44	916.23M	-63.54	2.39584G	-50.76	2.48542G	-58.72	17.351958G	-53.78	1
2.434569G	-0.44	-30.44	935.695M	-63.69	2.39456G	-49.19	2.48942G	-59.83	16.482544G	-54.96	2
2.434569G	-0.44	-30.44	888.75M	-64.15	2.39392G	-53.63	2.48382G	-59.43	16.266592G	-54.78	3

802.11ac VHT40_Nss1,(MCS0)_3TX **CSE NdB**

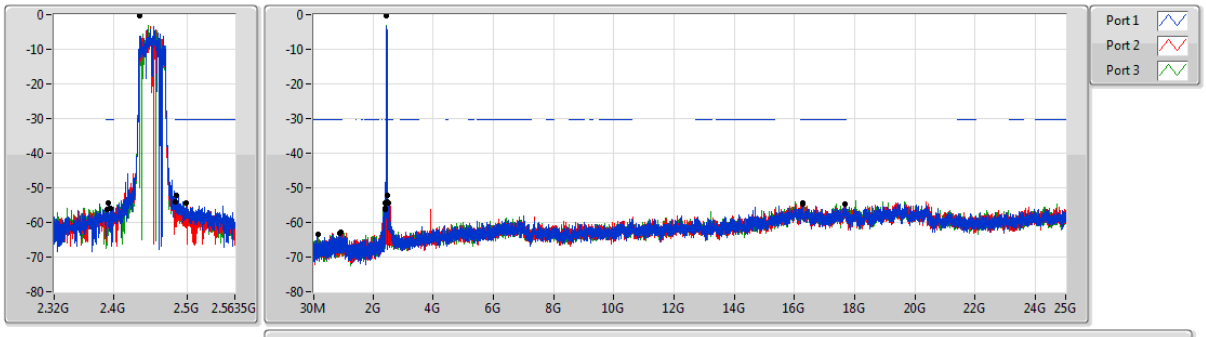
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.434569G	-0.44	-30.44	857.835M	-62.45	2.392G	-52.87	2.48638G	-52.34	17.666069G	-54.19	1
2.434569G	-0.44	-30.44	2.12993G	-63.69	2.39312G	-51.03	2.48814G	-54.33	16.260983G	-55.13	2
2.434569G	-0.44	-30.44	929.97M	-63.54	2.3944G	-53.94	2.51134G	-54.92	16.249765G	-54.16	3

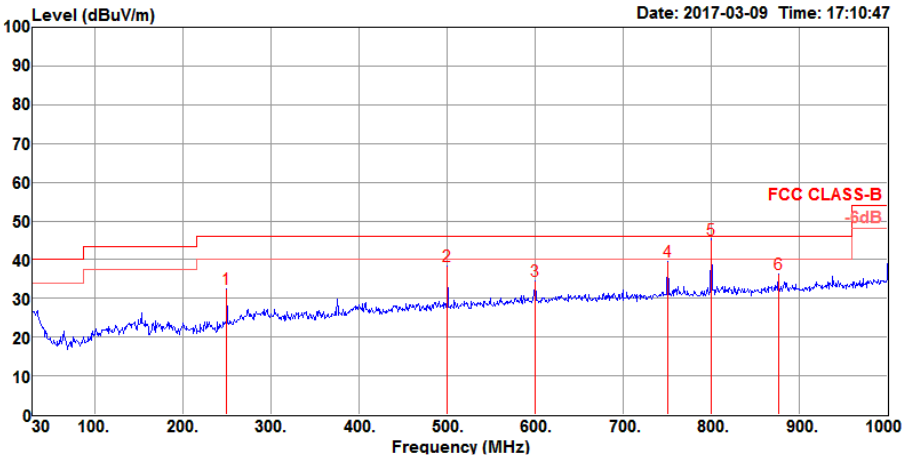
802.11ac VHT40_Nss1,(MCS0)_3TX **CSE NdB**

2452MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.434569G	-0.44	-30.44	946M	-62.72	2.39312G	-54.45	2.48414G	-52.26	16.25257G	-54.65	1
2.434569G	-0.44	-30.44	893.33M	-62.99	2.392G	-56.35	2.49806G	-54.45	17.657655G	-54.55	2
2.434569G	-0.44	-30.44	161.675M	-63.57	2.39648G	-56.02	2.48398G	-54.14	16.258179G	-54.34	3

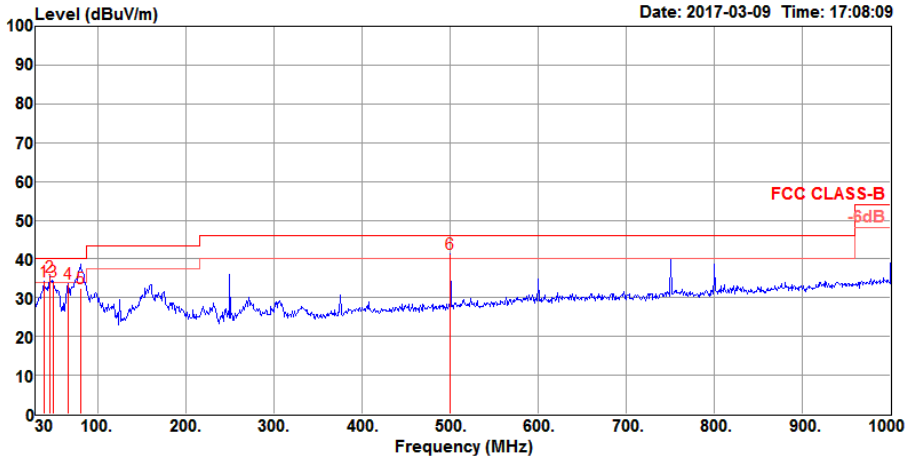
RSE below 1GHz Result			
Operating Mode	1	**Polarization**	Horizontal
Operating Function	Normal Link - EUT in Y axis		



	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	250.19	32.60	46.00	-13.40	44.33	1.50	19.10	32.33	125	4	Peak	HORIZONTAL
2	500.45	38.38	46.00	-7.62	44.47	2.18	24.03	32.30	100	324	Peak	HORIZONTAL
3	600.36	34.66	46.00	-11.34	39.23	2.44	25.40	32.41	150	336	Peak	HORIZONTAL
4	750.71	39.55	46.00	-6.45	42.70	2.73	26.40	32.28	100	42	Peak	HORIZONTAL
5	800.18	45.24	46.00	-0.76	47.60	3.02	26.80	32.18	125	359	QP	HORIZONTAL
6	875.84	36.21	46.00	-9.79	37.57	2.90	27.55	31.81	100	189	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 - EUT in Y axis		



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	38.73	34.25	40.00	-5.75	45.43	0.59	20.93	32.70	100	162	Peak	VERTICAL
2	45.52	35.49	40.00	-4.51	50.47	0.64	16.88	32.50	100	172	Peak	VERTICAL
3	50.37	34.22	40.00	-5.78	51.07	0.68	14.85	32.38	100	324	Peak	VERTICAL
4	66.86	33.78	40.00	-6.22	52.27	0.78	13.14	32.41	150	102	Peak	VERTICAL
5	80.44	32.60	40.00	-7.40	50.50	0.87	13.66	32.43	113	95	QP	VERTICAL
6	500.45	41.35	46.00	-4.65	47.44	2.18	24.03	32.30	125	8	Peak	VERTICAL

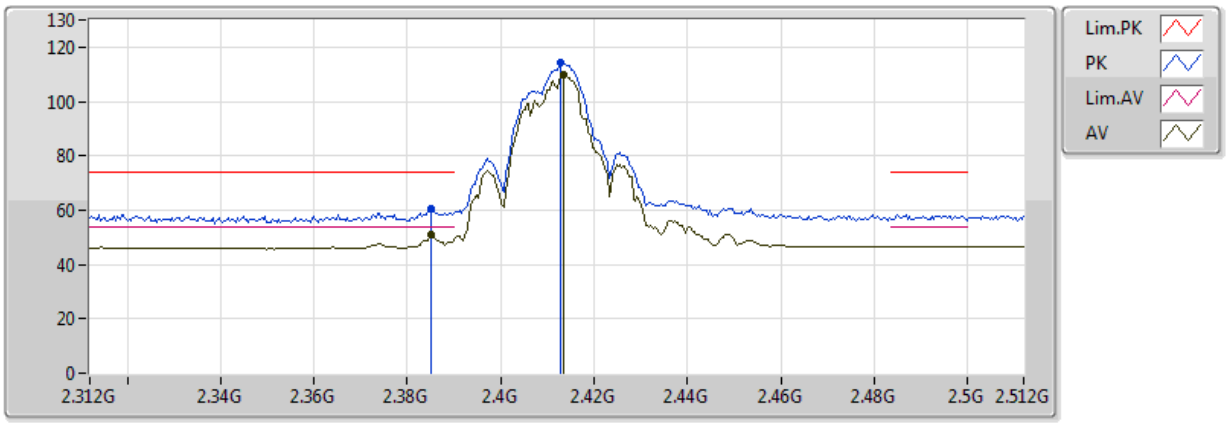
Note 1: “>20dB” means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: “N/F” means Nothing Found emissions (No emissions were detected.)

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_(6Mbps)_3TX	-	-	-	-	-	-	-	-	-	-	-	-
2.4-2.4835GHz	Pass	AV	2.39G	53.96	54.00	-0.04	31.87	3	H	323	1.09	-

802.11b_(1Mbps)_3TX

2412MHz_TX

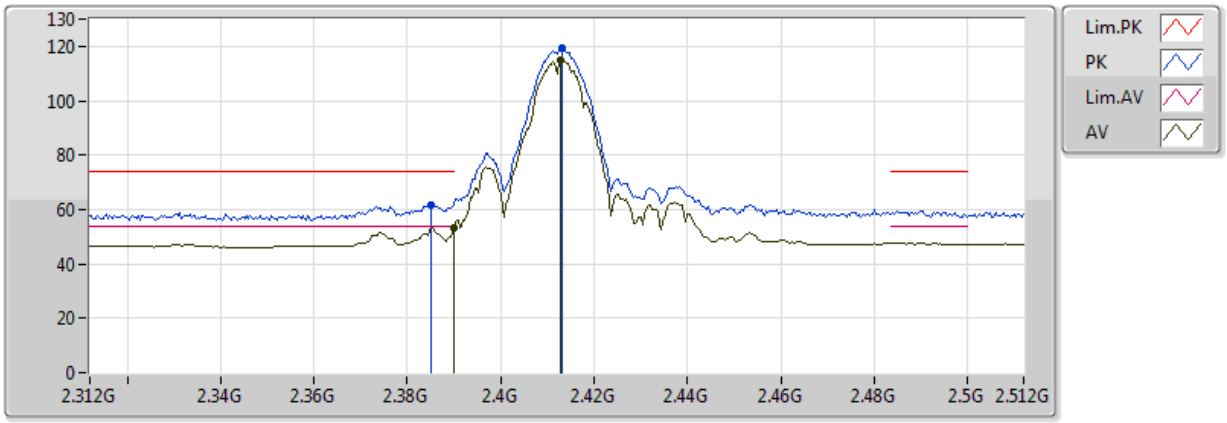


20170111
EUT Z 3TX
Setting 24
03-W-3
#9
c207 add 2.2pF

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3852G	50.82	54.00	-3.18	34.10	3	V	344	2.97	-
AV	2.4136G	110.09	Inf	-Inf	34.19	3	V	344	2.97	-
PK	2.3852G	60.57	74.00	-13.43	34.10	3	V	344	2.97	-
PK	2.4128G	114.11	Inf	-Inf	34.18	3	V	344	2.97	-

802.11b_(1Mbps)_3TX

2412MHz_TX

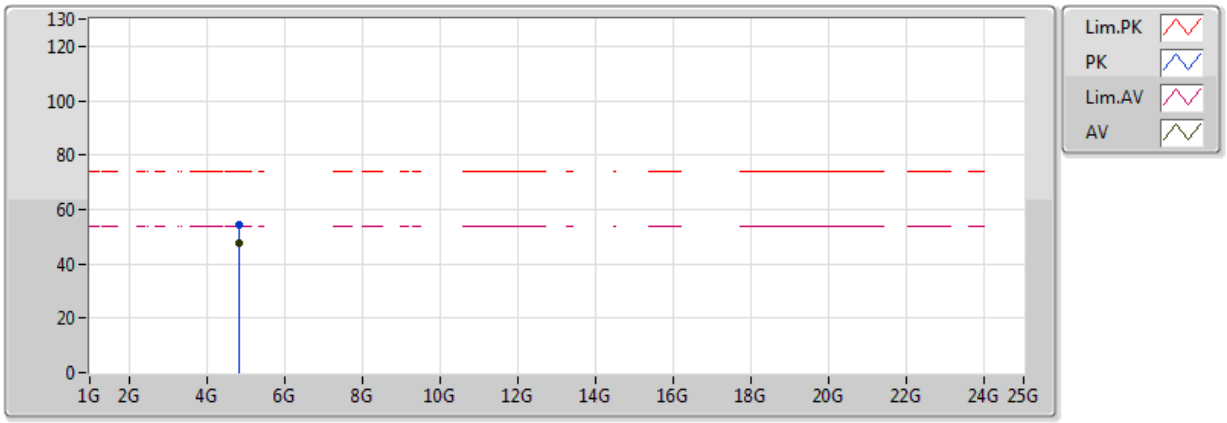


20170111
EUT Z 3TX
Setting 24
03-W-3
#9
c207 add 2.2pF

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	53.44	54.00	-0.56	34.11	3	H	331	1.16	-
AV	2.4128G	114.93	Inf	-Inf	34.18	3	H	331	1.16	-
PK	2.3852G	61.82	74.00	-12.18	34.10	3	H	331	1.16	-
PK	2.4132G	119.13	Inf	-Inf	34.18	3	H	331	1.16	-

802.11b_(1Mbps)_3TX

2412MHz_TX

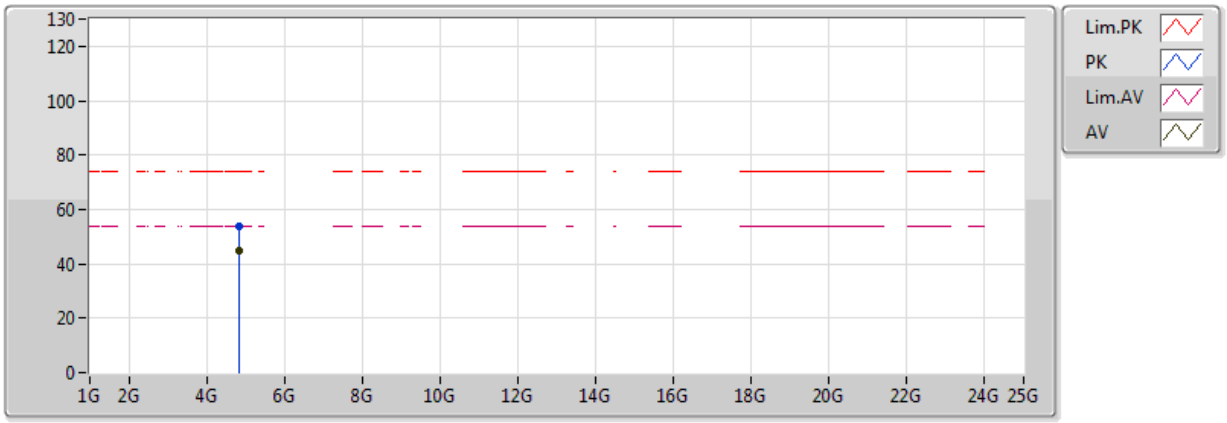


20170111
EUT Z 3TX
Setting 24
03-W-3
#9
c207 add 2.2pF

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.823972G	47.83	54.00	-6.17	11.95	3	V	308	1.03	-
PK	4.823956G	54.35	74.00	-19.65	11.95	3	V	308	1.03	-

802.11b_(1Mbps)_3TX

2412MHz_TX

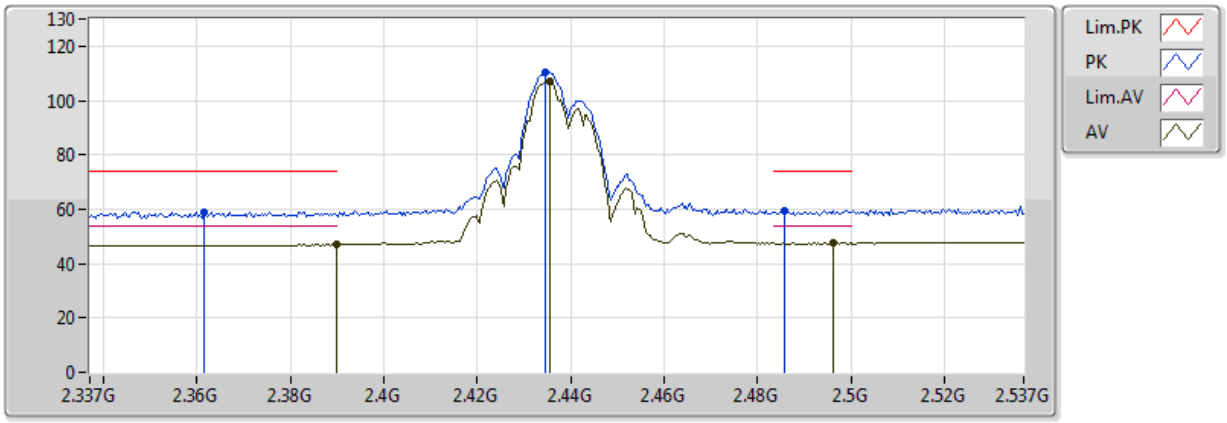


20170111
EUT Z 3TX
Setting 24
03-W-3
#9
c207 add 2.2pF

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.824012G	44.73	54.00	-9.27	11.95	3	H	44	1.07	-
PK	4.823916G	53.89	74.00	-20.11	11.95	3	H	44	1.07	-

802.11b_(1Mbps)_3TX

2437MHz_TX

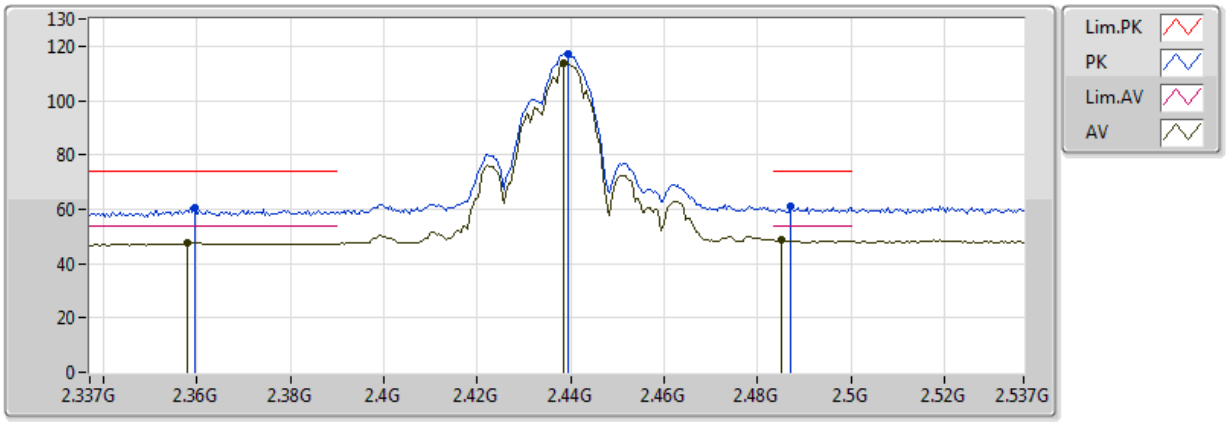


20170120
EUT Z_3TX
Setting 23
02-P-2
FSU

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	46.91	54.00	-7.09	31.87	3	V	239	2.82	-
AV	2.4354G	107.14	Inf	-Inf	32.00	3	V	239	2.82	-
AV	2.4962G	47.46	54.00	-6.54	32.16	3	V	239	2.82	-
PK	2.3614G	59.02	74.00	-14.98	31.80	3	V	239	2.82	-
PK	2.4346G	110.47	Inf	-Inf	31.99	3	V	239	2.82	-
PK	2.4858G	59.62	74.00	-14.38	32.13	3	V	239	2.82	-

802.11b_(1Mbps)_3TX

2437MHz_TX

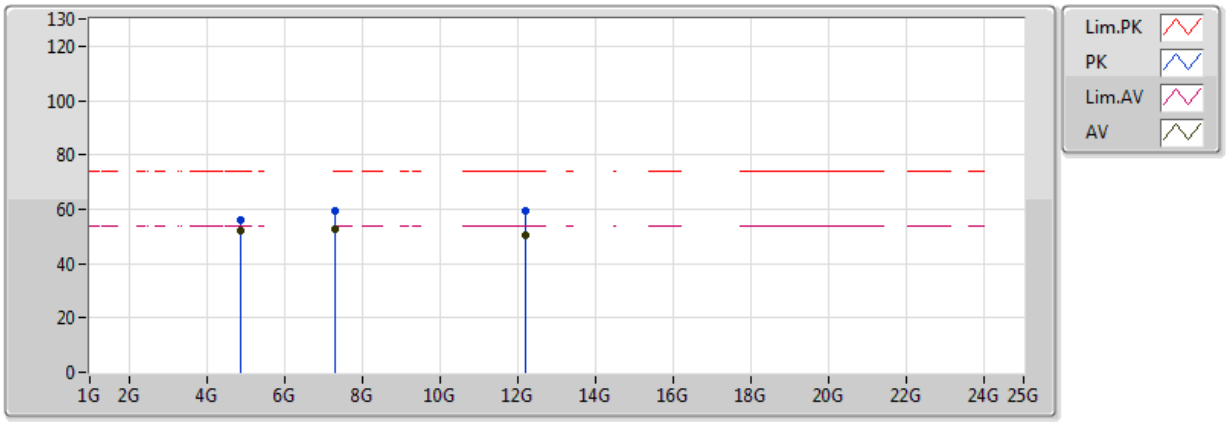


20170120
EUT Z_3TX
Setting 23
02-P-2
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3578G	47.85	54.00	-6.15	31.79	3	H	319	1.08	-
AV	2.4386G	113.70	Inf	-Inf	32.00	3	H	319	1.08	-
AV	2.485G	48.55	54.00	-5.45	32.13	3	H	319	1.08	-
PK	2.3594G	60.45	74.00	-13.55	31.79	3	H	319	1.08	-
PK	2.4394G	117.14	Inf	-Inf	32.01	3	H	319	1.08	-
PK	2.487G	60.94	74.00	-13.06	32.13	3	H	319	1.08	-

802.11b_(1Mbps)_3TX

2437MHz_TX

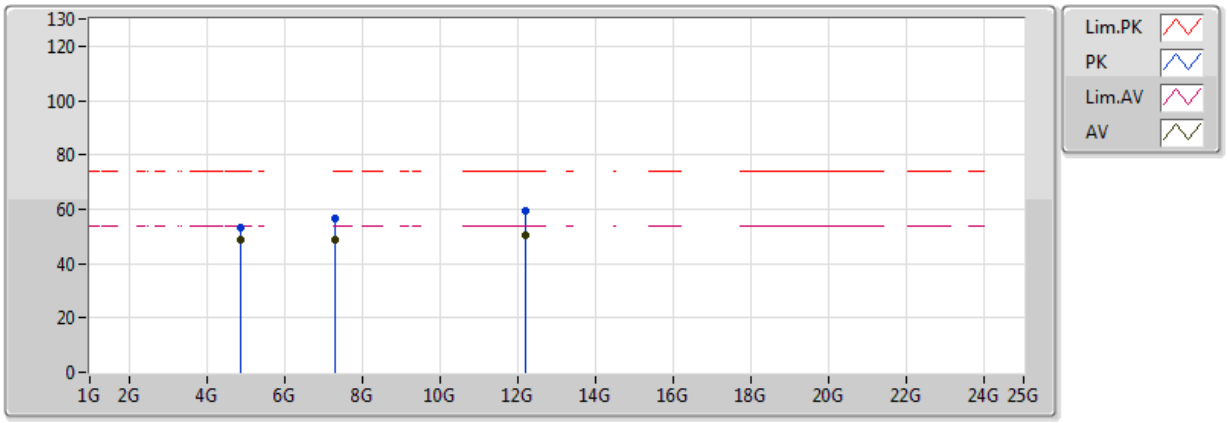


20170120
EUT Z_3TX
Setting 23
02-P-2
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.87406G	52.32	54.00	-1.68	6.25	3	V	308	1.02	-
PK	4.87403G	56.02	74.00	-17.98	6.25	3	V	308	1.02	-
AV	7.31282G	52.87	54.00	-1.13	10.53	3	V	359	2.34	-
PK	7.3119G	59.30	74.00	-14.70	10.52	3	V	359	2.34	-
AV	12.18582G	50.50	54.00	-3.50	14.94	3	V	189	1.08	-
PK	12.18612G	59.43	74.00	-14.57	14.94	3	V	189	1.08	-

802.11b_(1Mbps)_3TX

2437MHz_TX

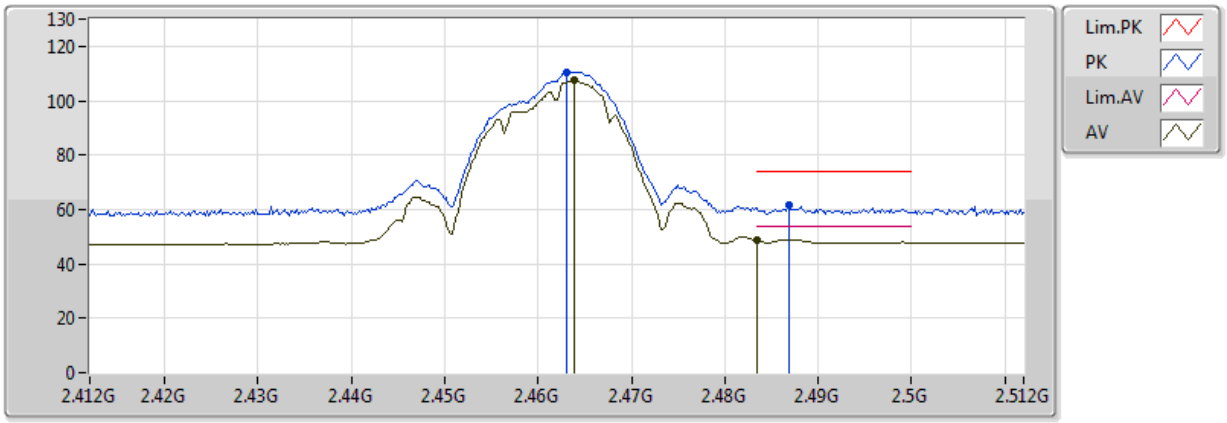


20170120
EUT Z_3TX
Setting 23
02-P-2
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.874044G	48.68	54.00	-5.32	6.25	3	H	313	1.00	-
PK	4.874004G	53.44	74.00	-20.56	6.25	3	H	313	1.00	-
AV	7.3118G	48.72	54.00	-5.28	10.52	3	H	359	1.13	-
PK	7.31192G	56.46	74.00	-17.54	10.53	3	H	359	1.13	-
AV	12.18438G	50.54	54.00	-3.46	14.94	3	H	65	2.30	-
PK	12.18436G	59.59	74.00	-14.41	14.94	3	H	65	2.30	-

802.11b_(1Mbps)_3TX

2462MHz_TX

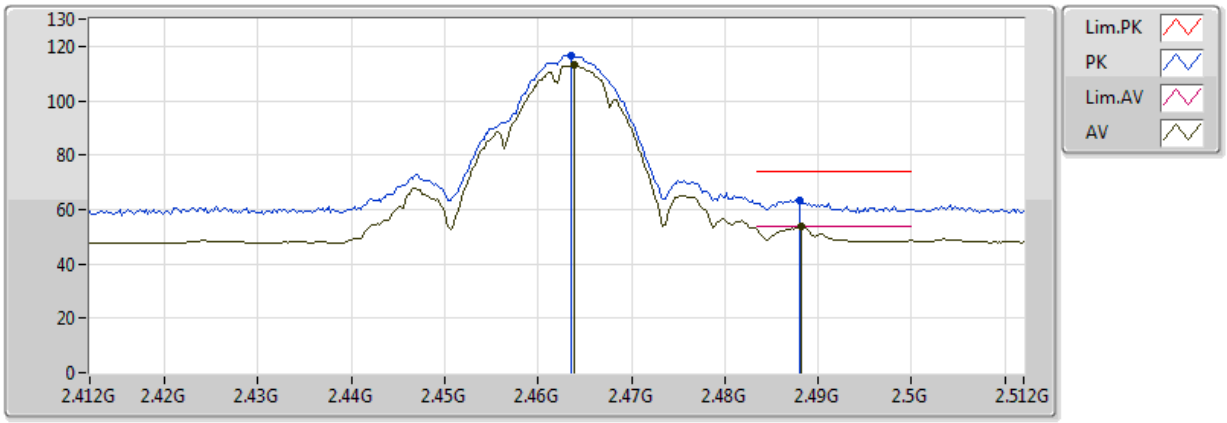


20170120
EUT Z_3TX
Setting 20
02-P-2
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.4638G	107.33	Inf	-Inf	32.07	3	V	39	2.70	-
AV	2.483502G	48.97	54.00	-5.03	32.13	3	V	39	2.70	-
PK	2.463G	110.64	Inf	-Inf	32.07	3	V	39	2.70	-
PK	2.4868G	61.64	74.00	-12.36	32.13	3	V	39	2.70	-

802.11b_(1Mbps)_3TX

2462MHz_TX

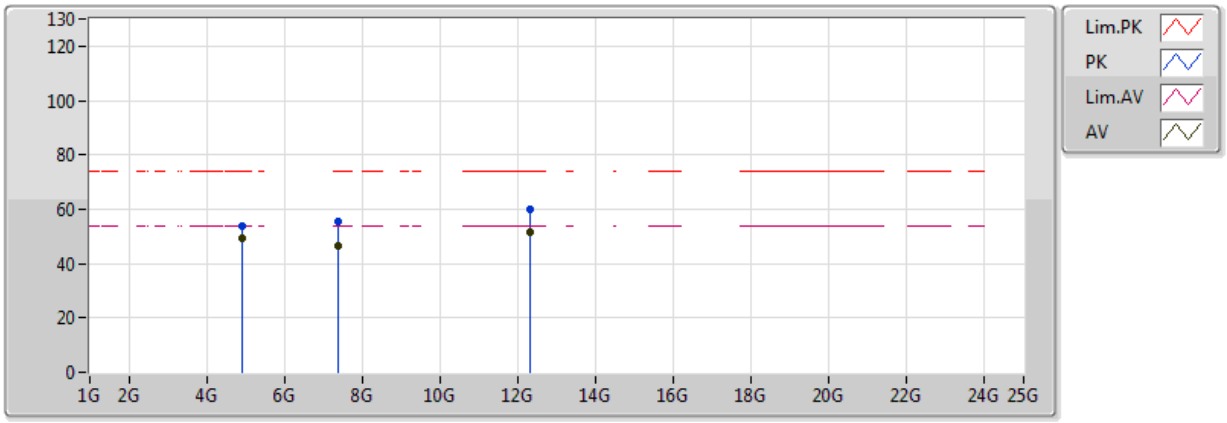


20170120
EUT Z_3TX
Setting 20
02-P-2
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.4638G	112.96	Inf	-Inf	32.07	3	H	332	1.01	-
AV	2.4882G	53.61	54.00	-0.39	32.14	3	H	332	1.01	-
PK	2.4636G	116.62	Inf	-Inf	32.07	3	H	332	1.01	-
PK	2.488G	63.27	74.00	-10.73	32.14	3	H	332	1.01	-

802.11b_(1Mbps)_3TX

2462MHz_TX

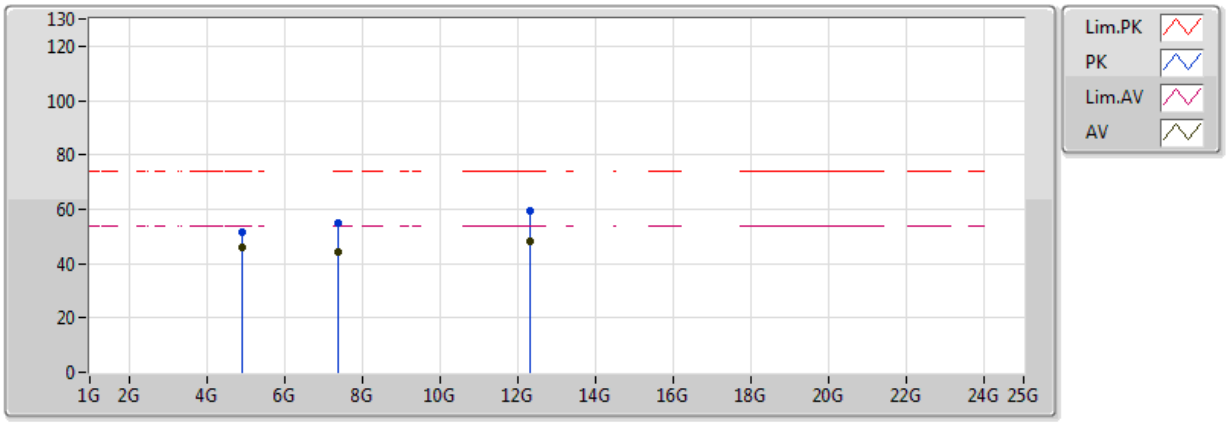


20170120
EUT Z_3TX
Setting 20
02-P-2
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.924084G	49.24	54.00	-4.76	6.39	3	V	241	1.10	-
PK	4.923904G	53.97	74.00	-20.03	6.39	3	V	241	1.10	-
AV	12.30928G	51.40	54.00	-2.60	15.04	3	V	29	1.07	-
PK	12.30904G	60.13	74.00	-13.87	15.04	3	V	29	1.07	-
AV	7.3878G	46.58	54.00	-7.42	10.68	3	V	9	1.24	-
PK	7.38748G	55.27	74.00	-18.73	10.68	3	V	9	1.24	-

802.11b_(1Mbps)_3TX

2462MHz_TX

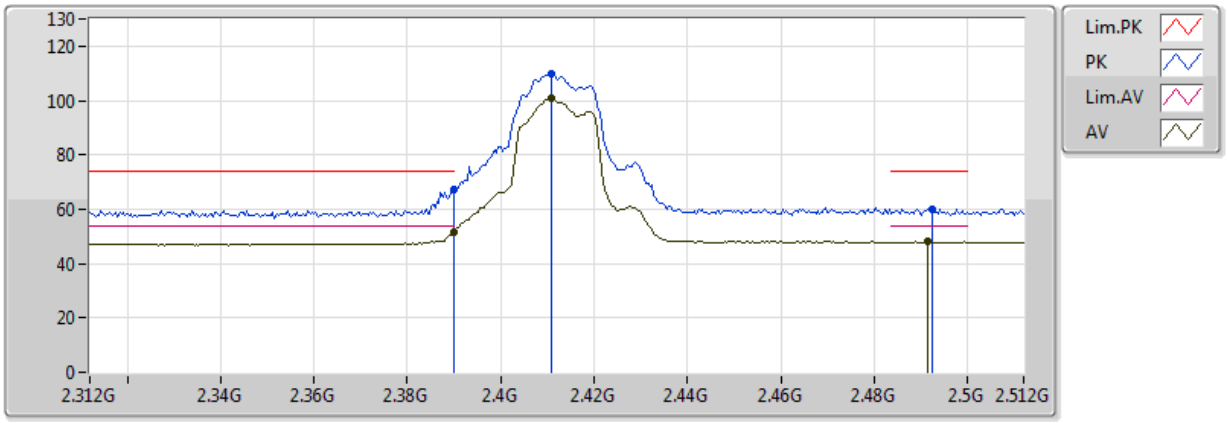


20170120
EUT Z_3TX
Setting 20
02-P-2
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.92406G	46.20	54.00	-7.80	6.39	3	H	319	1.00	-
PK	4.92401G	51.48	74.00	-22.52	6.39	3	H	319	1.00	-
AV	12.30927G	48.25	54.00	-5.75	15.04	3	H	74	2.05	-
PK	12.31102G	59.67	74.00	-14.33	15.04	3	H	74	2.05	-
AV	7.3868G	44.10	54.00	-9.90	10.68	3	H	345	1.00	-
PK	7.38806G	54.88	74.00	-19.12	10.68	3	H	345	1.00	-

802.11g_(6Mbps)_3TX

2412MHz_TX

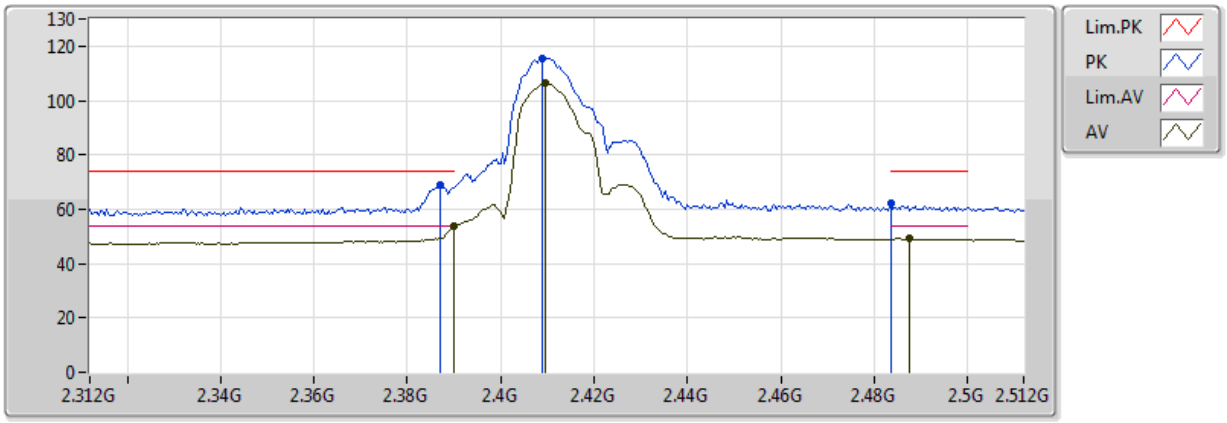


20170120
EUT Z_3TX
Setting 1A
02-P-2
FSU

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	51.71	54.00	-2.29	31.87	3	V	351	2.77	-
AV	2.4108G	100.75	Inf	-Inf	31.93	3	V	351	2.77	-
AV	2.4916G	47.94	54.00	-6.06	32.15	3	V	351	2.77	-
PK	2.39G	67.30	74.00	-6.70	31.87	3	V	351	2.77	-
PK	2.4108G	110.02	Inf	-Inf	31.93	3	V	351	2.77	-
PK	2.4924G	60.19	74.00	-13.81	32.15	3	V	351	2.77	-

802.11g_(6Mbps)_3TX

2412MHz_TX

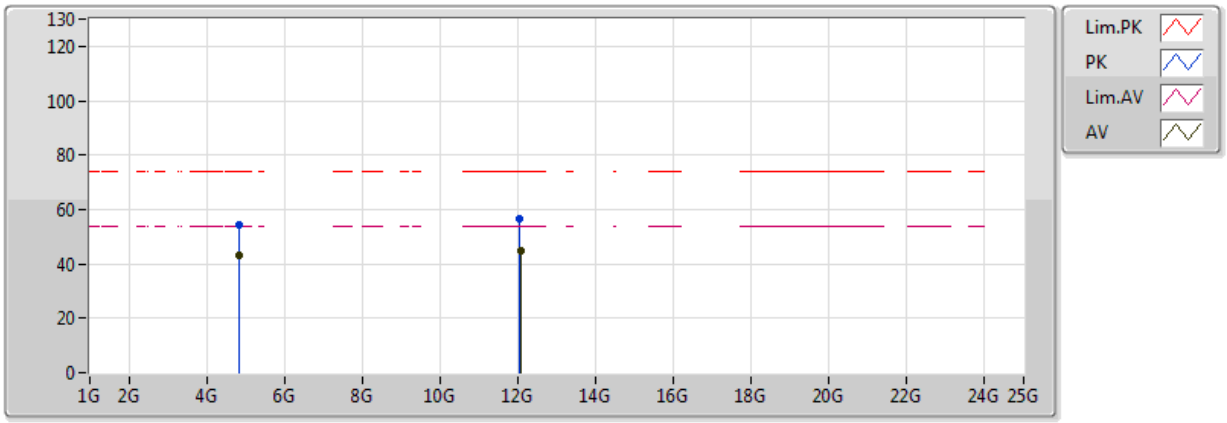


20170120
EUT Z_3TX
Setting 1A
02-P-2
FSU

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	53.96	54.00	-0.04	31.87	3	H	323	1.09	-
AV	2.4096G	106.26	Inf	-Inf	31.93	3	H	323	1.09	-
AV	2.4876G	49.20	54.00	-4.80	32.14	3	H	323	1.09	-
PK	2.3872G	68.86	74.00	-5.14	31.87	3	H	323	1.09	-
PK	2.4088G	115.61	Inf	-Inf	31.92	3	H	323	1.09	-
PK	2.4836G	62.06	74.00	-11.94	32.13	3	H	323	1.09	-

802.11g_(6Mbps)_3TX

2412MHz_TX

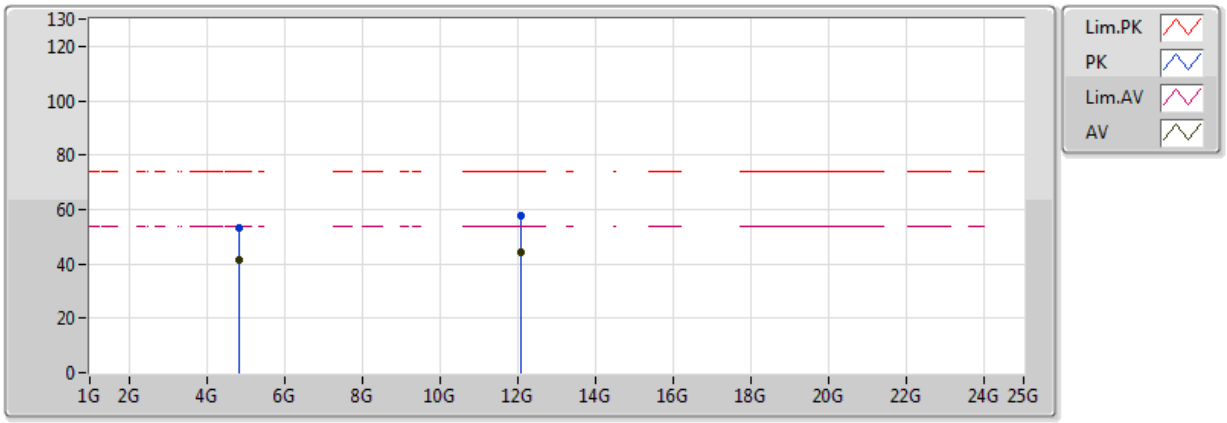


20170120
EUT Z_3TX
Setting 1A
02-P-2
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.8275G	42.88	54.00	-11.12	6.12	3	V	322	1.09	-
PK	4.8271G	54.59	74.00	-19.41	6.12	3	V	322	1.09	-
AV	12.06438G	44.56	54.00	-9.44	14.85	3	V	79	1.01	-
PK	12.06G	56.54	74.00	-17.46	14.85	3	V	79	1.01	-

802.11g_(6Mbps)_3TX

2412MHz_TX

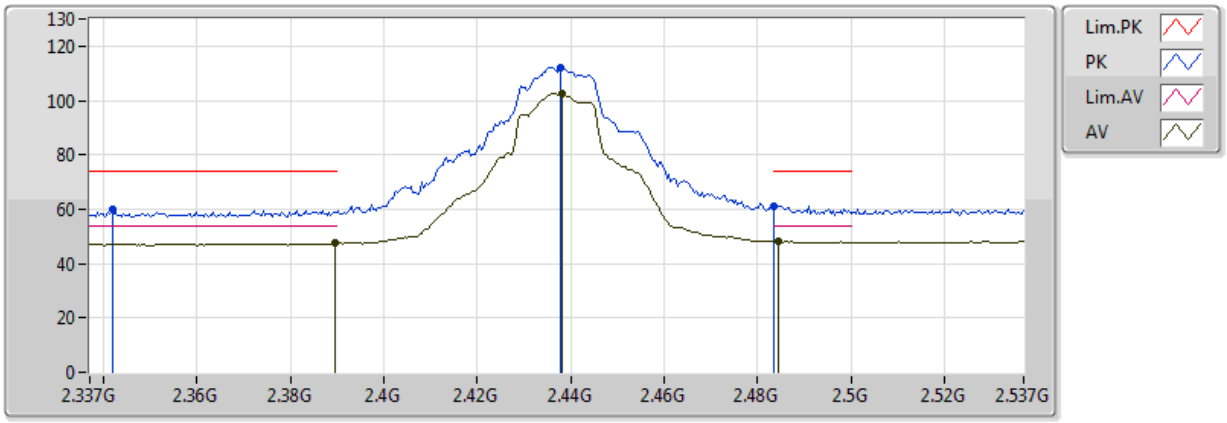


20170120
EUT Z_3TX
Setting 1A
02-P-2
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.8298G	41.32	54.00	-12.68	6.13	3	H	251	1.01	-
PK	4.8283G	53.07	74.00	-20.93	6.13	3	H	251	1.01	-
AV	12.06436G	44.12	54.00	-9.88	14.85	3	H	37	1.34	-
PK	12.0612G	57.66	74.00	-16.34	14.85	3	H	37	1.34	-

802.11g_(6Mbps)_3TX

2437MHz_TX

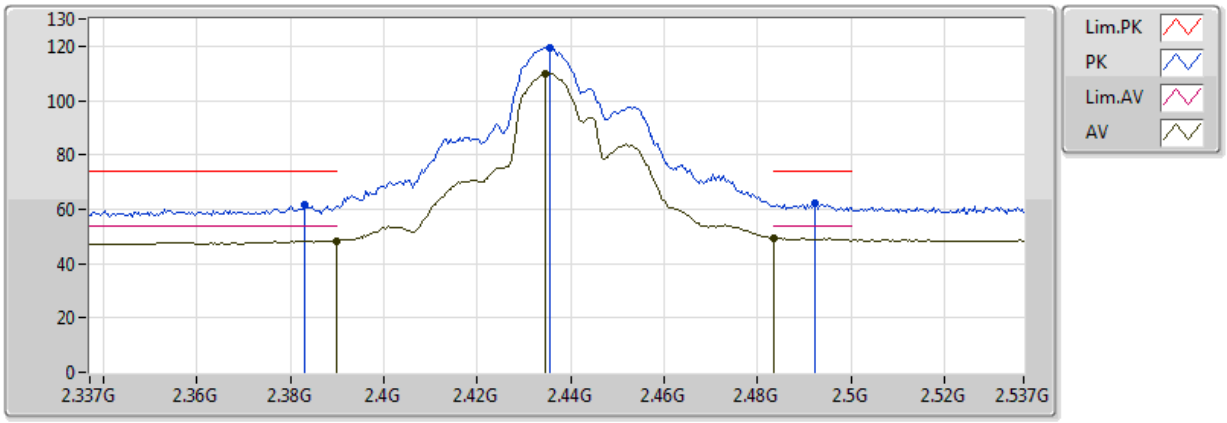


20170120
EUT Z_3TX
Setting 24
02-P-2
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3894G	47.35	54.00	-6.65	31.87	3	V	356	1.93	-
AV	2.4382G	102.57	Inf	-Inf	32.00	3	V	356	1.93	-
AV	2.4846G	48.25	54.00	-5.75	32.13	3	V	356	1.93	-
PK	2.3418G	60.05	74.00	-13.95	31.75	3	V	356	1.93	-
PK	2.4378G	111.98	Inf	-Inf	32.00	3	V	356	1.93	-
PK	2.483502G	61.09	74.00	-12.91	32.13	3	V	356	1.93	-

802.11g_(6Mbps)_3TX

2437MHz_TX

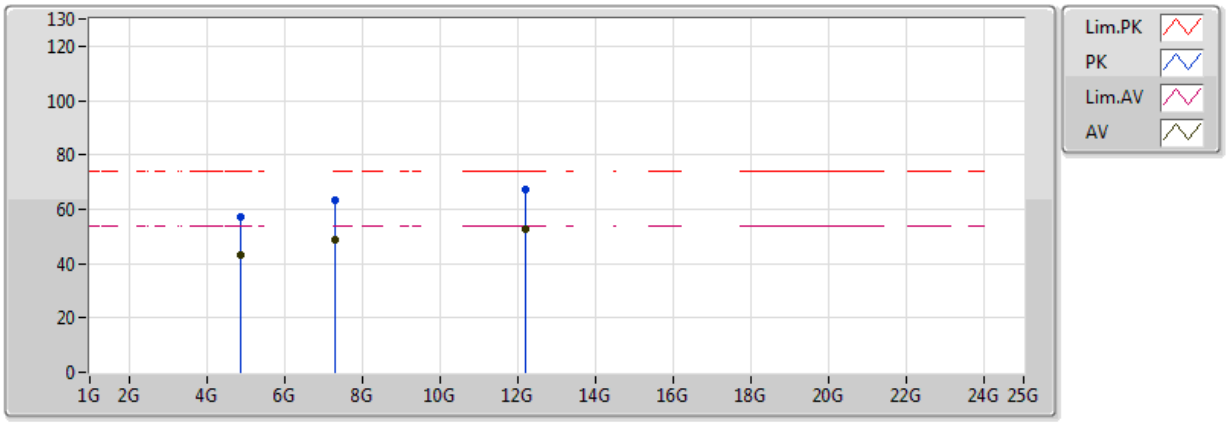


20170120
EUT Z_3TX
Setting 24
02-P-2
FSU

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	48.45	54.00	-5.55	31.87	3	H	335	1.47	-
AV	2.4346G	110.02	Inf	-Inf	31.99	3	H	335	1.47	-
AV	2.483502G	49.39	54.00	-4.61	32.13	3	H	335	1.47	-
PK	2.383G	61.83	74.00	-12.17	31.86	3	H	335	1.47	-
PK	2.4354G	119.61	Inf	-Inf	32.00	3	H	335	1.47	-
PK	2.4922G	62.04	74.00	-11.96	32.15	3	H	335	1.47	-

802.11g_(6Mbps)_3TX

2437MHz_TX

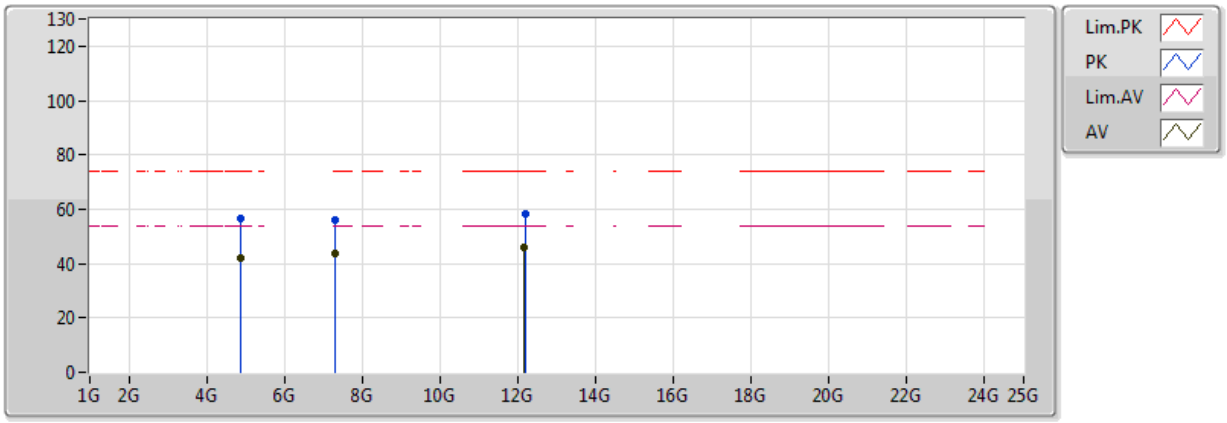


20170120
EUT Z_3TX
Setting 24
02-P-2
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.8698G	43.34	54.00	-10.66	6.24	3	V	9	1.00	-
PK	4.8695G	57.40	74.00	-16.60	6.24	3	V	9	1.00	-
AV	7.3154G	48.95	54.00	-5.05	10.53	3	V	4	1.18	-
PK	7.3148G	63.57	74.00	-10.43	10.53	3	V	4	1.18	-
AV	12.1864G	52.91	54.00	-1.09	14.94	3	V	37	1.00	-
PK	12.178G	67.43	74.00	-6.57	14.94	3	V	37	1.00	-

802.11g_(6Mbps)_3TX

2437MHz_TX

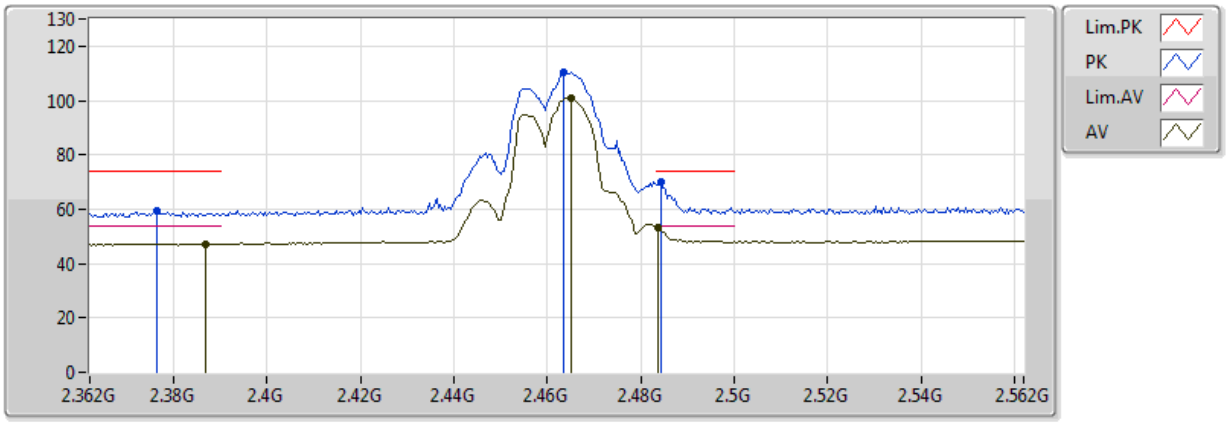


20170120
EUT Z_3TX
Setting 24
02-P-2
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.8699G	42.18	54.00	-11.82	6.24	3	H	201	1.01	-
PK	4.8697G	56.38	74.00	-17.62	6.24	3	H	201	1.01	-
AV	7.3104G	43.60	54.00	-10.40	10.52	3	H	3	1.01	-
PK	7.3091G	56.23	74.00	-17.77	10.52	3	H	3	1.01	-
AV	12.1774G	45.71	54.00	-8.29	14.94	3	H	237	1.14	-
PK	12.1782G	58.34	74.00	-15.66	14.94	3	H	237	1.14	-

802.11g_(6Mbps)_3TX

2462MHz_TX

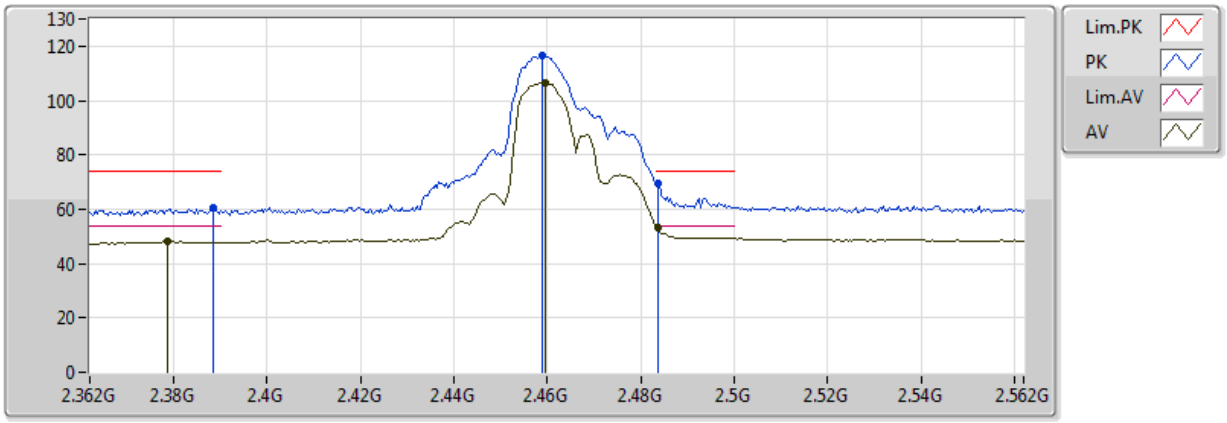


20170120
EUT Z_3TX
Setting 1B
02-P-2
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3868G	47.23	54.00	-6.77	31.87	3	V	240	3.12	-
AV	2.4652G	100.85	Inf	-Inf	32.08	3	V	240	3.12	-
AV	2.4836G	53.06	54.00	-0.94	32.13	3	V	240	3.12	-
PK	2.3764G	59.15	74.00	-14.85	31.84	3	V	240	3.12	-
PK	2.4636G	110.33	Inf	-Inf	32.07	3	V	240	3.12	-
PK	2.4844G	69.96	74.00	-4.04	32.13	3	V	240	3.12	-

802.11g_(6Mbps)_3TX

2462MHz_TX

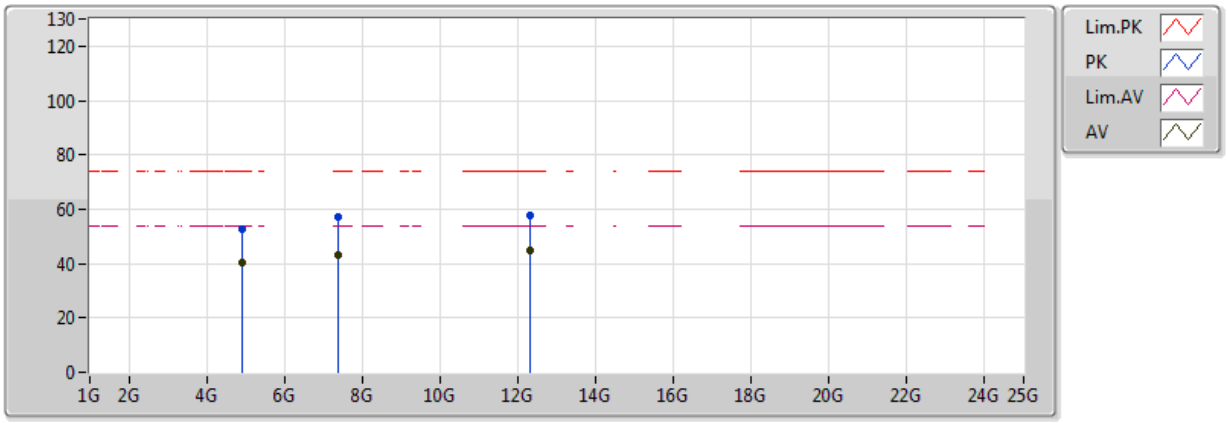


20170120
EUT Z_3TX
Setting 1B
02-P-2
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3788G	48.19	54.00	-5.81	31.84	3	H	327	1.00	-
AV	2.4596G	106.66	Inf	-Inf	32.06	3	H	327	1.00	-
AV	2.4836G	53.24	54.00	-0.76	32.13	3	H	327	1.00	-
PK	2.3884G	60.37	74.00	-13.63	31.87	3	H	327	1.00	-
PK	2.4588G	116.38	Inf	-Inf	32.06	3	H	327	1.00	-
PK	2.4836G	69.49	74.00	-4.51	32.13	3	H	327	1.00	-

802.11g_(6Mbps)_3TX

2462MHz_TX

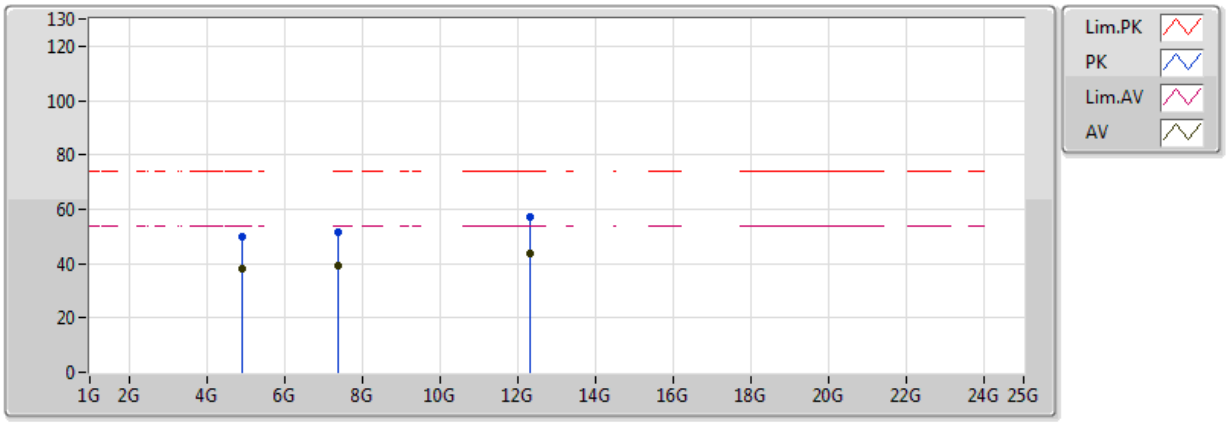


20170120
EUT Z_3TX
Setting 1B
02-P-2
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.918G	40.59	54.00	-13.41	6.38	3	V	357	2.47	-
PK	4.918G	52.85	74.00	-21.15	6.38	3	V	357	2.47	-
AV	7.3898G	42.87	54.00	-11.13	10.69	3	V	42	1.00	-
PK	7.3899G	56.88	74.00	-17.12	10.69	3	V	42	1.00	-
AV	12.30256G	44.68	54.00	-9.32	15.03	3	V	295	1.06	-
PK	12.30568G	57.53	74.00	-16.47	15.04	3	V	295	1.06	-

802.11g_(6Mbps)_3TX

2462MHz_TX

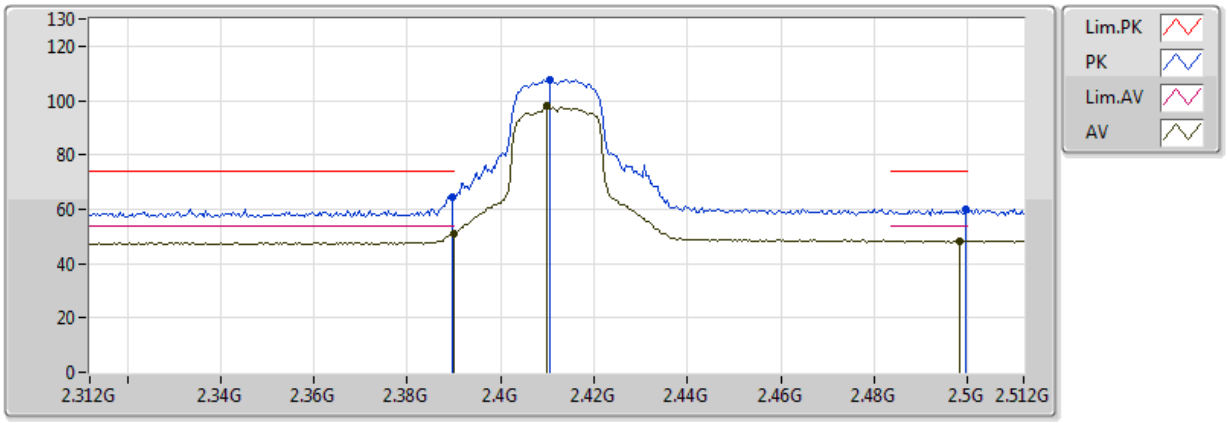


20170120
EUT Z_3TX
Setting 1B
02-P-2
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.93G	38.07	54.00	-15.93	6.41	3	H	135	2.63	-
PK	4.9312G	49.93	74.00	-24.07	6.42	3	H	135	2.63	-
AV	7.3845G	39.40	54.00	-14.60	10.68	3	H	358	1.17	-
PK	7.3835G	51.44	74.00	-22.56	10.68	3	H	358	1.17	-
AV	12.31258G	43.97	54.00	-10.03	15.04	3	H	258	1.72	-
PK	12.3087G	57.38	74.00	-16.62	15.04	3	H	258	1.72	-

802.11ac VHT20_Nss1,(MCS0)_3TX

2412MHz_TX

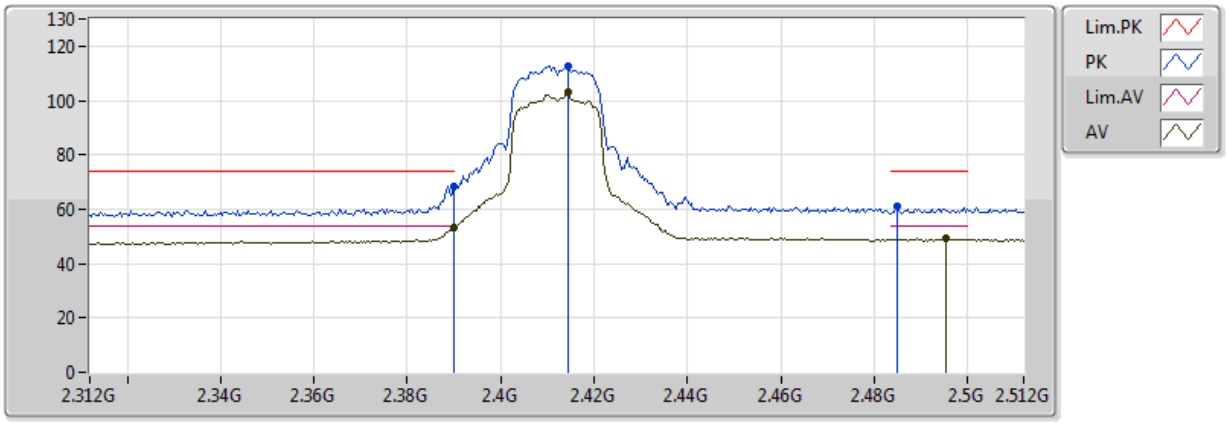


20170120
EUT Z_3TX
Setting 1A
02-P-2
FSU

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	51.13	54.00	-2.87	31.87	3	V	346	3.14	-
AV	2.41G	97.89	Inf	-Inf	31.93	3	V	346	3.14	-
AV	2.4984G	48.40	54.00	-5.60	32.17	3	V	346	3.14	-
PK	2.3896G	64.62	74.00	-9.38	31.87	3	V	346	3.14	-
PK	2.4104G	107.84	Inf	-Inf	31.93	3	V	346	3.14	-
PK	2.4996G	59.80	74.00	-14.20	32.17	3	V	346	3.14	-

802.11ac VHT20_Nss1,(MCS0)_3TX

2412MHz_TX

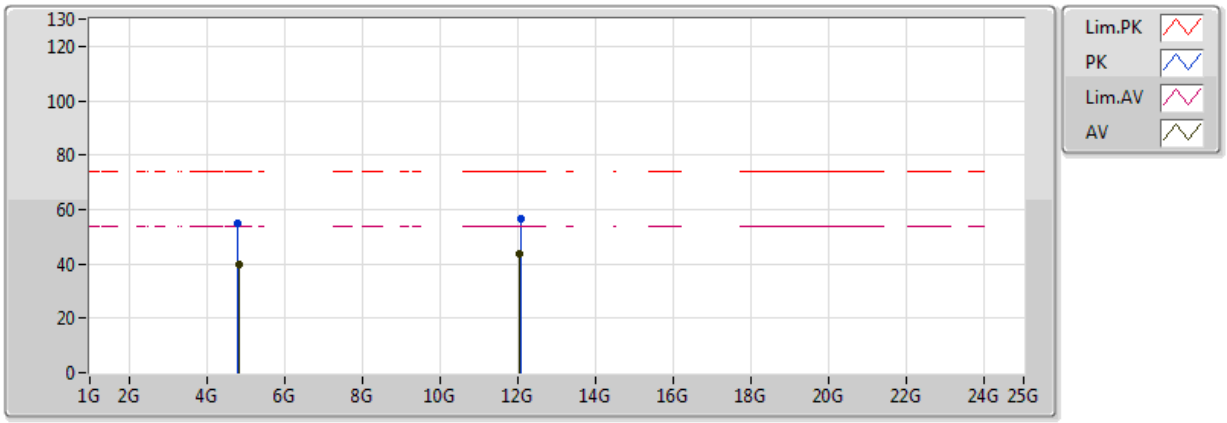


20170120
EUT Z_3TX
Setting 1A
02-P-2
FSU

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	31.87	3	H	317	1.13	-
AV	2.4144G	103.05	Inf	-Inf	31.94	3	H	317	1.13	-
AV	2.4952G	49.26	54.00	-4.74	32.16	3	H	317	1.13	-
PK	2.39G	68.43	74.00	-5.57	31.87	3	H	317	1.13	-
PK	2.4144G	112.65	Inf	-Inf	31.94	3	H	317	1.13	-
PK	2.4848G	60.85	74.00	-13.15	32.13	3	H	317	1.13	-

802.11ac VHT20_Nss1,(MCS0)_3TX

2412MHz_TX

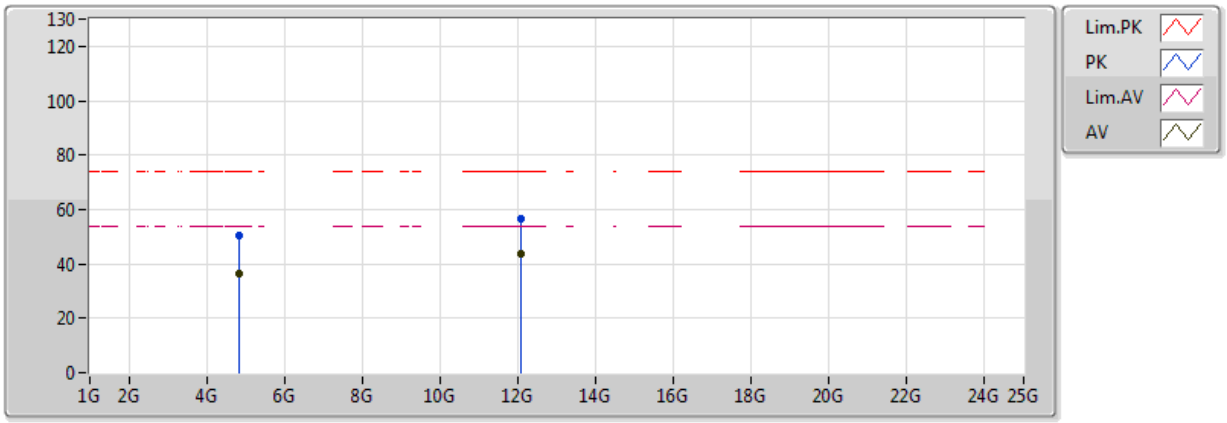


20170120
EUT Z_3TX
Setting 1A
02-P-2
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.8195G	39.91	54.00	-14.09	6.10	3	V	340	1.00	-
PK	4.815G	54.76	74.00	-19.24	6.09	3	V	340	1.00	-
AV	12.05558G	43.68	54.00	-10.32	14.84	3	V	250	1.17	-
PK	12.06142G	56.32	74.00	-17.68	14.85	3	V	250	1.17	-

802.11ac VHT20_Nss1,(MCS0)_3TX

2412MHz_TX

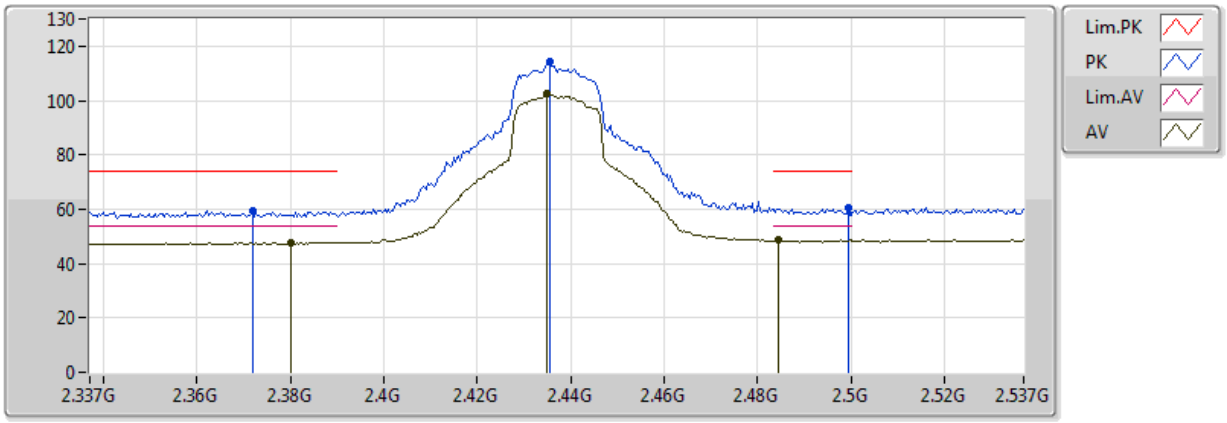


20170120
EUT Z_3TX
Setting 1A
02-P-2
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.823G	36.35	54.00	-17.65	6.11	3	H	173	1.40	-
PK	4.8187G	50.19	74.00	-23.81	6.10	3	H	173	1.40	-
AV	12.06482G	43.65	54.00	-10.35	14.85	3	H	259	1.20	-
PK	12.06394G	56.78	74.00	-17.22	14.85	3	H	259	1.20	-

802.11ac VHT20_Nss1,(MCS0)_3TX

2437MHz_TX

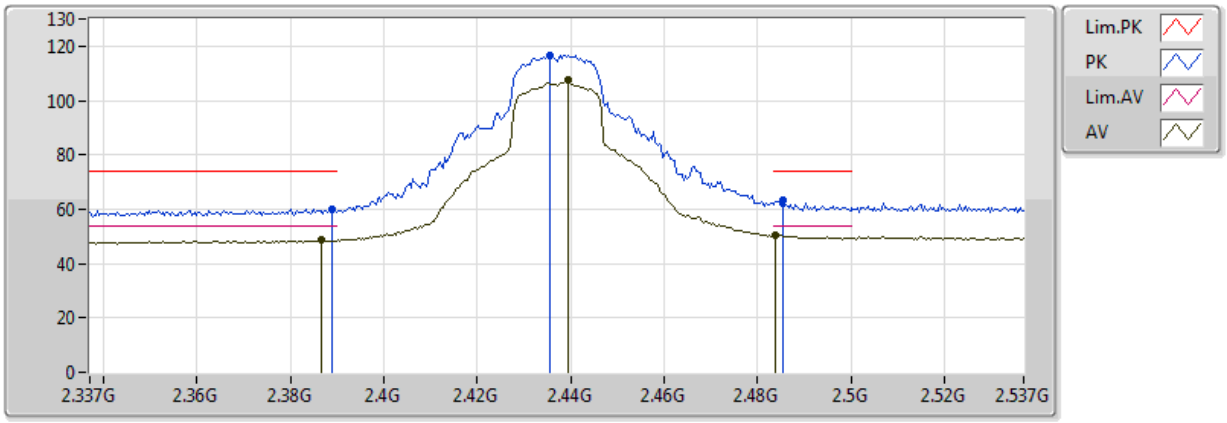


20170120
EUT Z_3TX
Setting 24
02-P-2
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3802G	47.77	54.00	-6.23	31.85	3	V	55	3.06	-
AV	2.435G	102.62	Inf	-Inf	31.99	3	V	55	3.06	-
AV	2.4846G	48.53	54.00	-5.47	32.13	3	V	55	3.06	-
PK	2.3718G	59.45	74.00	-14.55	31.83	3	V	55	3.06	-
PK	2.4354G	114.08	Inf	-Inf	32.00	3	V	55	3.06	-
PK	2.4994G	60.67	74.00	-13.33	32.17	3	V	55	3.06	-

802.11ac VHT20_Nss1,(MCS0)_3TX

2437MHz_TX

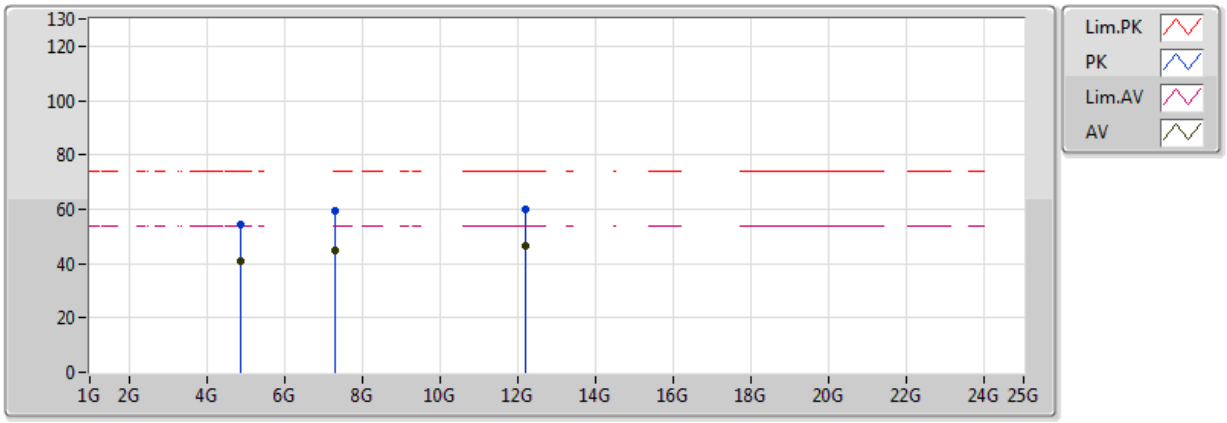


20170120
EUT Z_3TX
Setting 24
02-P-2
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3866G	48.48	54.00	-5.52	31.87	3	H	1	1.66	-
AV	2.4394G	107.39	Inf	-Inf	32.01	3	H	1	1.66	-
AV	2.4838G	50.66	54.00	-3.34	32.13	3	H	1	1.66	-
PK	2.389G	60.21	74.00	-13.79	31.87	3	H	1	1.66	-
PK	2.4354G	116.60	Inf	-Inf	32.00	3	H	1	1.66	-
PK	2.4854G	63.10	74.00	-10.90	32.13	3	H	1	1.66	-

802.11ac VHT20_Nss1,(MCS0)_3TX

2437MHz_TX

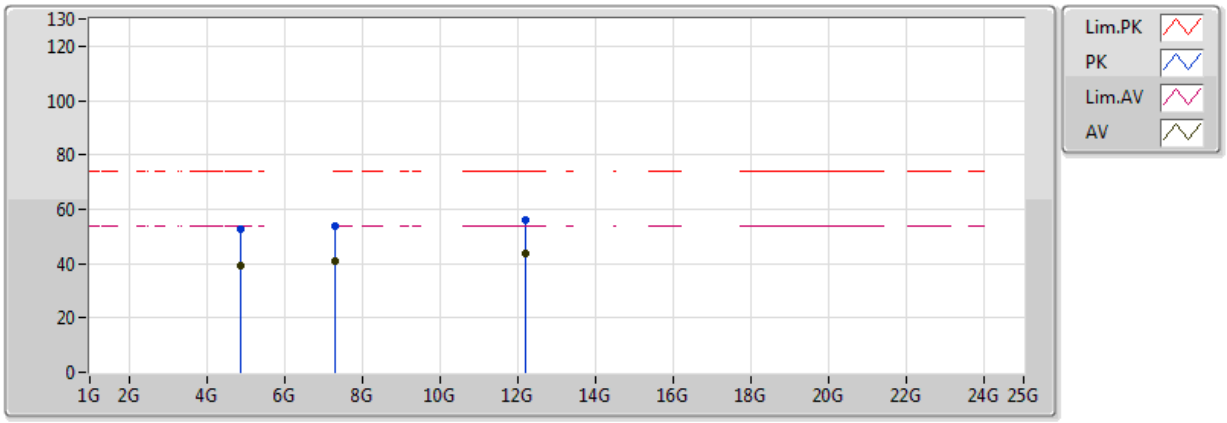


20170120
EUT Z_3TX
Setting 24
02-P-2
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.8734G	40.86	54.00	-13.14	6.25	3	V	322	1.15	-
PK	4.8732G	54.56	74.00	-19.44	6.25	3	V	322	1.15	-
AV	7.3086G	44.64	54.00	-9.36	10.52	3	V	4	1.10	-
PK	7.3133G	59.29	74.00	-14.71	10.53	3	V	4	1.10	-
AV	12.1894G	46.25	54.00	-7.75	14.95	3	V	293	1.11	-
PK	12.1899G	60.06	74.00	-13.94	14.95	3	V	293	1.11	-

802.11ac VHT20_Nss1,(MCS0)_3TX

2437MHz_TX

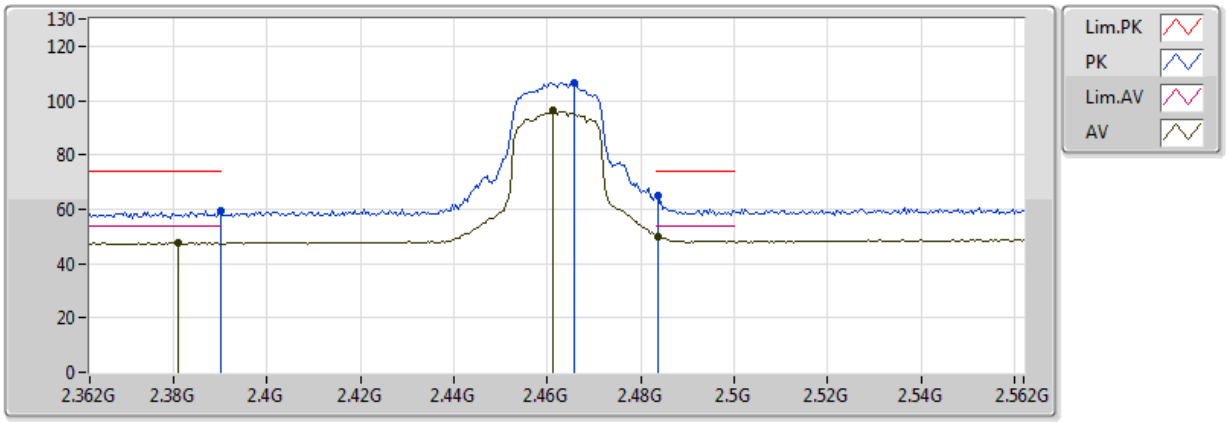


20170120
EUT Z_3TX
Setting 24
02-P-2
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.8734G	38.96	54.00	-15.04	6.25	3	H	129	3.01	-
PK	4.873G	52.83	74.00	-21.17	6.25	3	H	129	3.01	-
AV	7.3107G	40.79	54.00	-13.21	10.52	3	H	283	1.04	-
PK	7.3045G	54.04	74.00	-19.96	10.51	3	H	283	1.04	-
AV	12.1819G	43.62	54.00	-10.38	14.94	3	H	156	1.29	-
PK	12.1838G	55.99	74.00	-18.01	14.94	3	H	156	1.29	-

802.11ac VHT20_Nss1,(MCS0)_3TX

2462MHz_TX

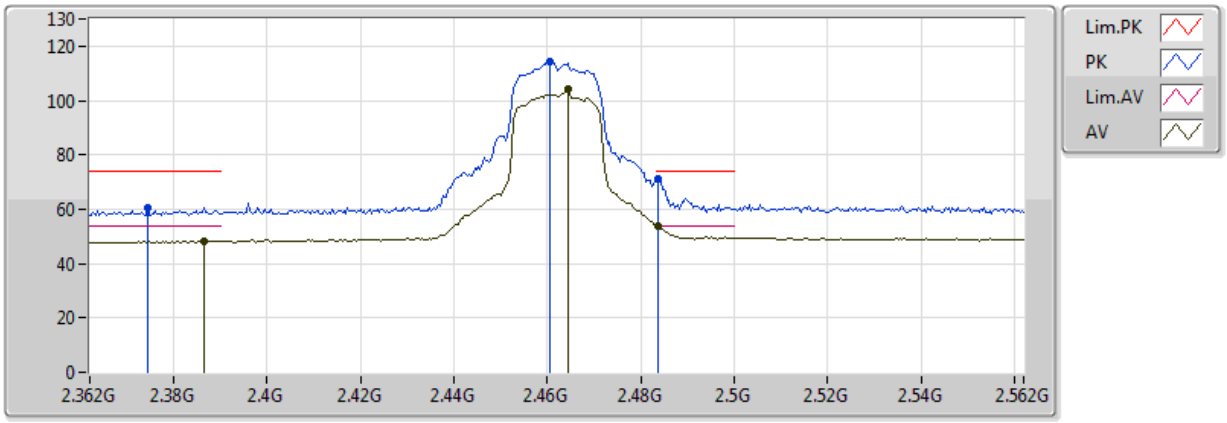


20170120
EUT Z_3TX
Setting 1A
02-P-2
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3808G	47.75	54.00	-6.25	31.85	3	V	202	3.11	-
AV	2.4612G	96.16	Inf	-Inf	32.07	3	V	202	3.11	-
AV	2.4836G	49.83	54.00	-4.17	32.13	3	V	202	3.11	-
PK	2.39G	59.48	74.00	-14.52	31.87	3	V	202	3.11	-
PK	2.4656G	106.65	Inf	-Inf	32.08	3	V	202	3.11	-
PK	2.4836G	64.99	74.00	-9.01	32.13	3	V	202	3.11	-

802.11ac VHT20_Nss1,(MCS0)_3TX

2462MHz_TX

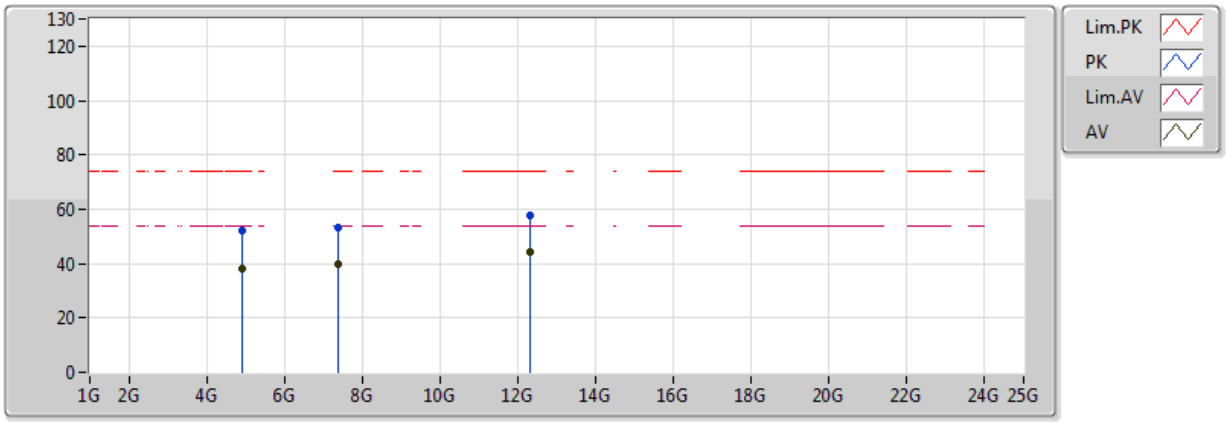


20170120
EUT Z_3TX
Setting 1A
02-P-2
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3864G	48.23	54.00	-5.77	31.86	3	H	321	1.01	-
AV	2.4644G	104.17	Inf	-Inf	32.07	3	H	321	1.01	-
AV	2.4836G	53.58	54.00	-0.42	32.13	3	H	321	1.01	-
PK	2.3744G	60.54	74.00	-13.46	31.83	3	H	321	1.01	-
PK	2.4604G	114.55	Inf	-Inf	32.06	3	H	321	1.01	-
PK	2.4836G	70.94	74.00	-3.06	32.13	3	H	321	1.01	-

802.11ac VHT20_Nss1,(MCS0)_3TX

2462MHz_TX

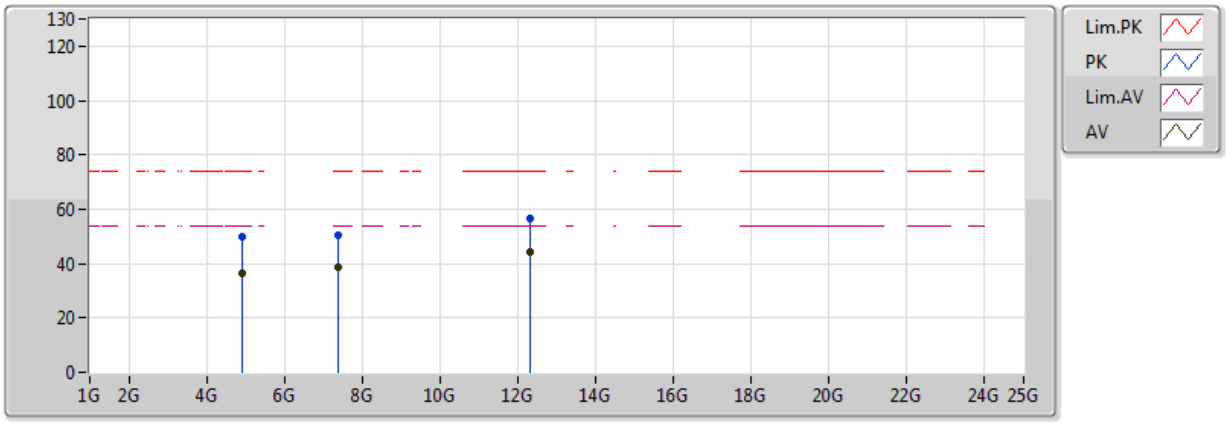


20170120
EUT Z_3TX
Setting 1A
02-P-2
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.9245G	38.38	54.00	-15.62	6.40	3	V	318	1.01	-
PK	4.9265G	52.37	74.00	-21.63	6.40	3	V	318	1.01	-
AV	7.38796G	39.75	54.00	-14.25	10.68	3	V	62	1.00	-
PK	7.38972G	53.38	74.00	-20.62	10.69	3	V	62	1.00	-
AV	12.3078G	44.30	54.00	-9.70	15.04	3	V	175	1.47	-
PK	12.3112G	57.53	74.00	-16.47	15.04	3	V	175	1.47	-

802.11ac VHT20_Nss1,(MCS0)_3TX

2462MHz_TX

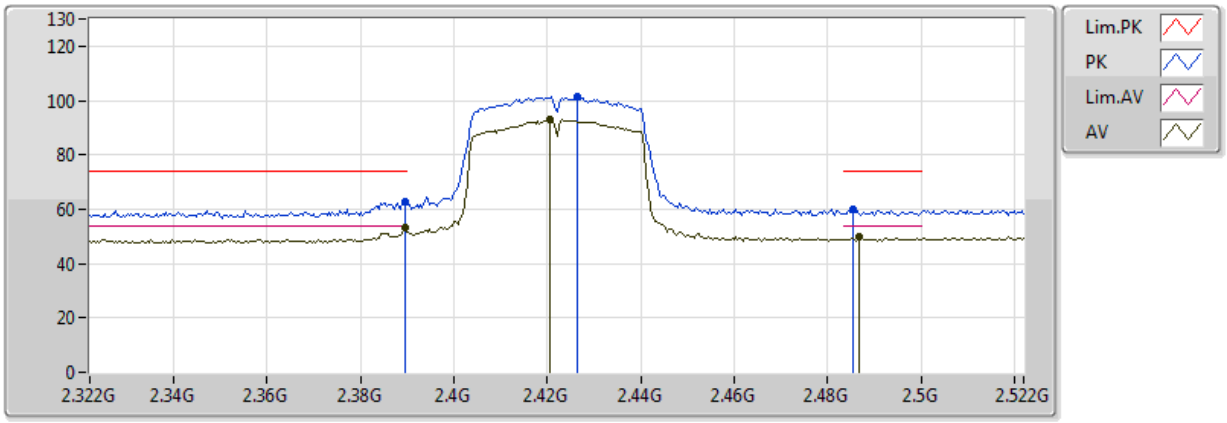


20170120
EUT Z_3TX
Setting 1A
02-P-2
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.9191G	36.60	54.00	-17.40	6.38	3	H	177	1.00	-
PK	4.9285G	49.79	74.00	-24.21	6.41	3	H	177	1.00	-
AV	7.38648G	38.46	54.00	-15.54	10.68	3	H	259	1.42	-
PK	7.38598G	50.62	74.00	-23.38	10.68	3	H	259	1.42	-
AV	12.30994G	44.07	54.00	-9.93	15.04	3	H	171	1.09	-
PK	12.30646G	56.72	74.00	-17.28	15.04	3	H	171	1.09	-

802.11ac VHT40_Nss1,(MCS0)_3TX

2422MHz_TX

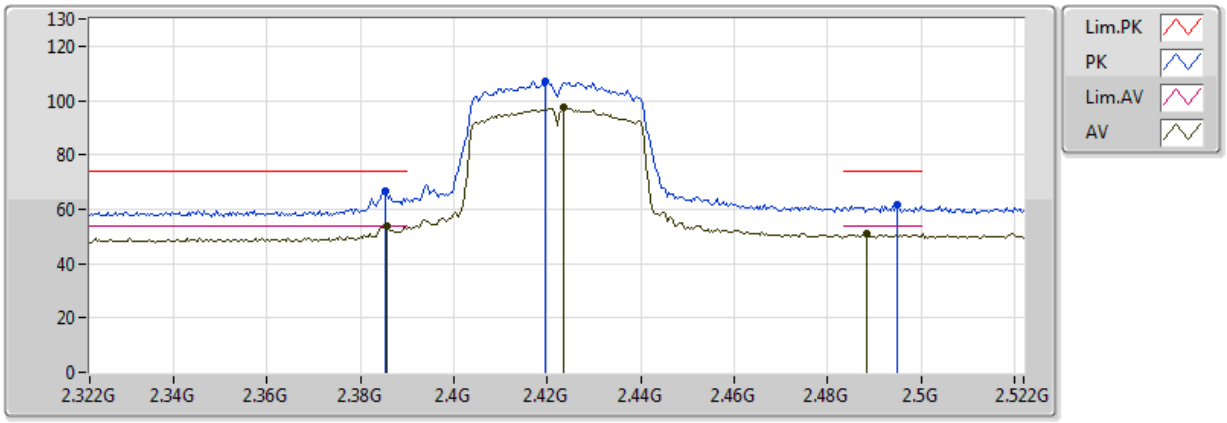


20170120
EUT Z_3TX
Setting 12
02-P-2
FSU

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	53.24	54.00	-0.76	31.87	3	V	347	2.50	-
AV	2.4204G	93.11	Inf	-Inf	31.96	3	V	347	2.50	-
AV	2.4868G	49.68	54.00	-4.32	32.13	3	V	347	2.50	-
PK	2.3896G	63.03	74.00	-10.97	31.87	3	V	347	2.50	-
PK	2.4264G	101.41	Inf	-Inf	31.97	3	V	347	2.50	-
PK	2.4856G	59.75	74.00	-14.25	32.13	3	V	347	2.50	-

802.11ac VHT40_Nss1,(MCS0)_3TX

2422MHz_TX

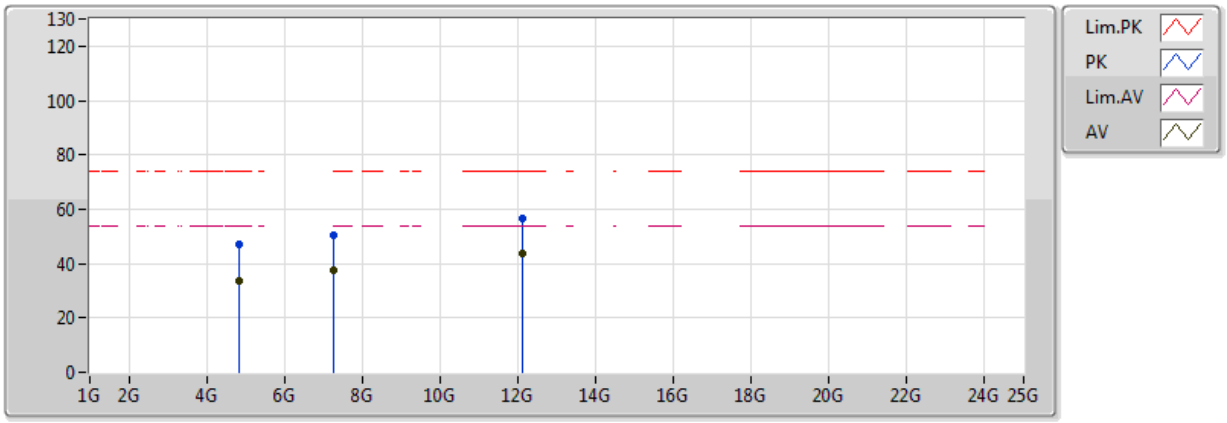


20170120
EUT Z_3TX
Setting 12
02-P-2
FSU

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	53.94	54.00	-0.06	31.86	3	H	17	1.02	-
AV	2.4236G	97.46	Inf	-Inf	31.96	3	H	17	1.02	-
AV	2.4884G	51.05	54.00	-2.95	32.14	3	H	17	1.02	-
PK	2.3852G	66.85	74.00	-7.15	31.86	3	H	17	1.02	-
PK	2.4196G	106.99	Inf	-Inf	31.95	3	H	17	1.02	-
PK	2.4948G	61.70	74.00	-12.30	32.16	3	H	17	1.02	-

802.11ac VHT40_Nss1,(MCS0)_3TX

2422MHz_TX

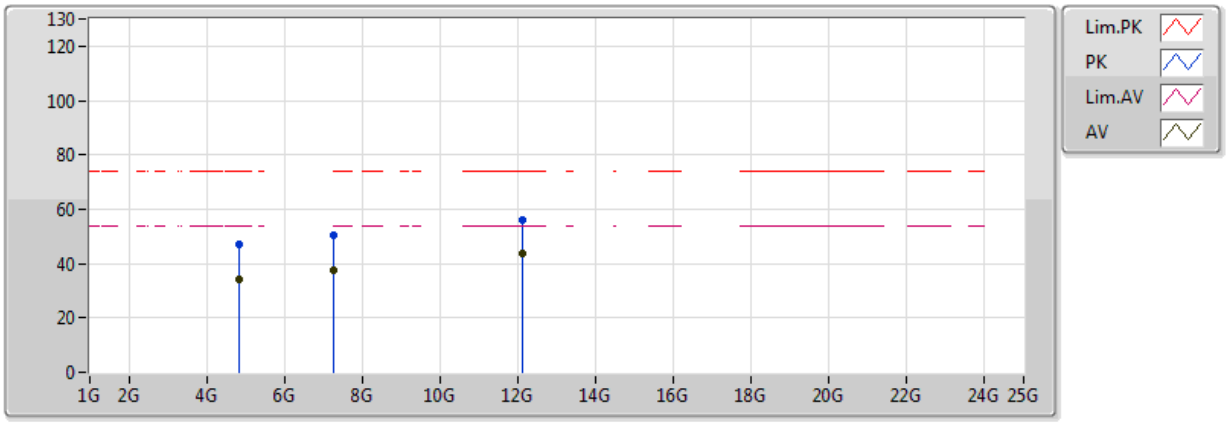


20170120
EUT Z_3TX
Setting 12
02-P-2
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.83936G	33.79	54.00	-20.21	6.16	3	V	266	1.17	-
PK	4.84402G	47.23	74.00	-26.77	6.17	3	V	266	1.17	-
AV	7.26616G	37.70	54.00	-16.30	10.41	3	V	178	1.47	-
PK	7.2681G	50.57	74.00	-23.43	10.42	3	V	178	1.47	-
AV	12.11186G	43.47	54.00	-10.53	14.89	3	V	320	1.01	-
PK	12.11498G	56.54	74.00	-17.46	14.89	3	V	320	1.01	-

802.11ac VHT40_Nss1,(MCS0)_3TX

2422MHz_TX

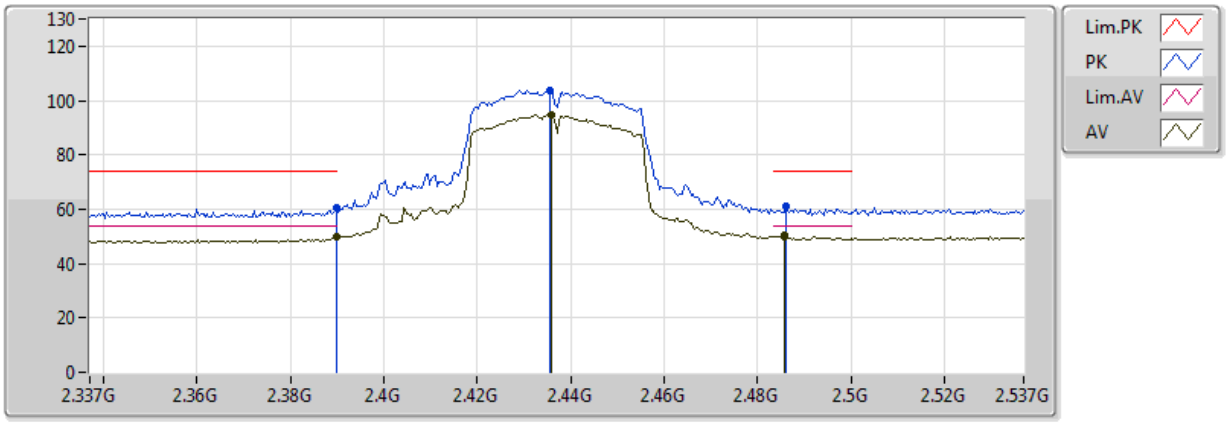


20170120
EUT Z_3TX
Setting 12
02-P-2
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.83936G	33.97	54.00	-20.03	6.16	3	H	107	1.15	-
PK	4.84518G	46.84	74.00	-27.16	6.17	3	H	107	1.15	-
AV	7.26764G	37.69	54.00	-16.31	10.42	3	H	208	1.02	-
PK	7.26332G	50.48	74.00	-23.52	10.40	3	H	208	1.02	-
AV	12.11044G	43.65	54.00	-10.35	14.89	3	H	149	1.46	-
PK	12.1112G	56.19	74.00	-17.81	14.89	3	H	149	1.46	-

802.11ac VHT40_Nss1,(MCS0)_3TX

2437MHz_TX

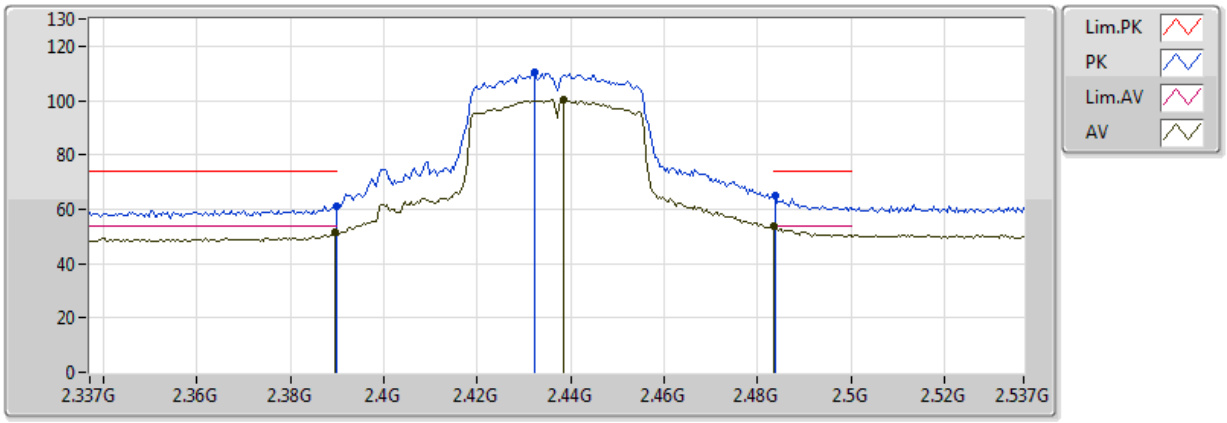


20170120
EUT Z_3TX
Setting 19
02-P-2
FSU

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	49.87	54.00	-4.13	31.87	3	V	50	3.06	-
AV	2.4358G	94.60	Inf	-Inf	32.00	3	V	50	3.06	-
AV	2.4858G	50.16	54.00	-3.84	32.13	3	V	50	3.06	-
PK	2.389998G	60.44	74.00	-13.56	31.87	3	V	50	3.06	-
PK	2.4354G	103.57	Inf	-Inf	32.00	3	V	50	3.06	-
PK	2.4862G	61.13	74.00	-12.87	32.13	3	V	50	3.06	-

802.11ac VHT40_Nss1,(MCS0)_3TX

2437MHz_TX

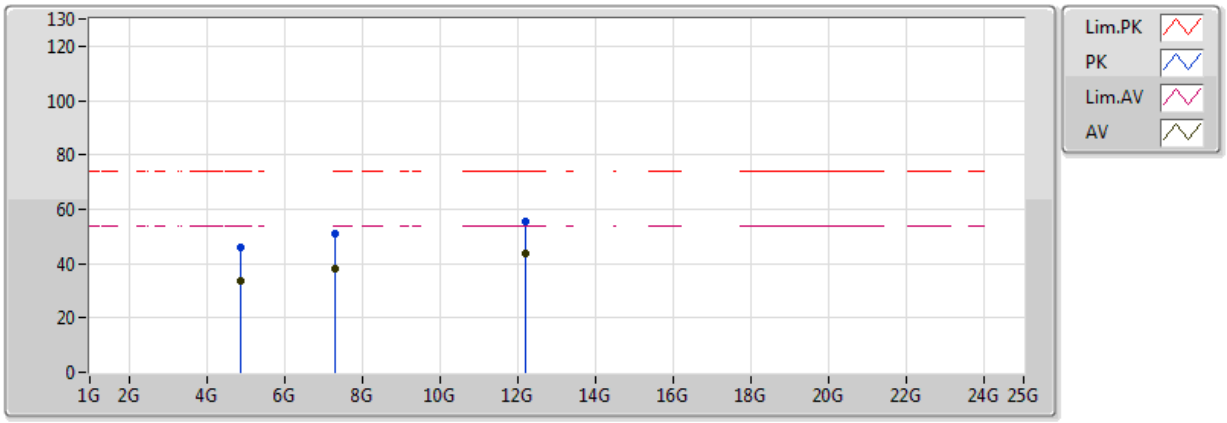


20170120
EUT Z_3TX
Setting 19
02-P-2
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3894G	51.33	54.00	-2.67	31.87	3	H	11	1.17	-
AV	2.4386G	100.27	Inf	-Inf	32.00	3	H	11	1.17	-
AV	2.483502G	53.56	54.00	-0.44	32.13	3	H	11	1.17	-
PK	2.389998G	61.29	74.00	-12.71	31.87	3	H	11	1.17	-
PK	2.4322G	110.62	Inf	-Inf	31.99	3	H	11	1.17	-
PK	2.4838G	65.26	74.00	-8.74	32.13	3	H	11	1.17	-

802.11ac VHT40_Nss1,(MCS0)_3TX

2437MHz_TX

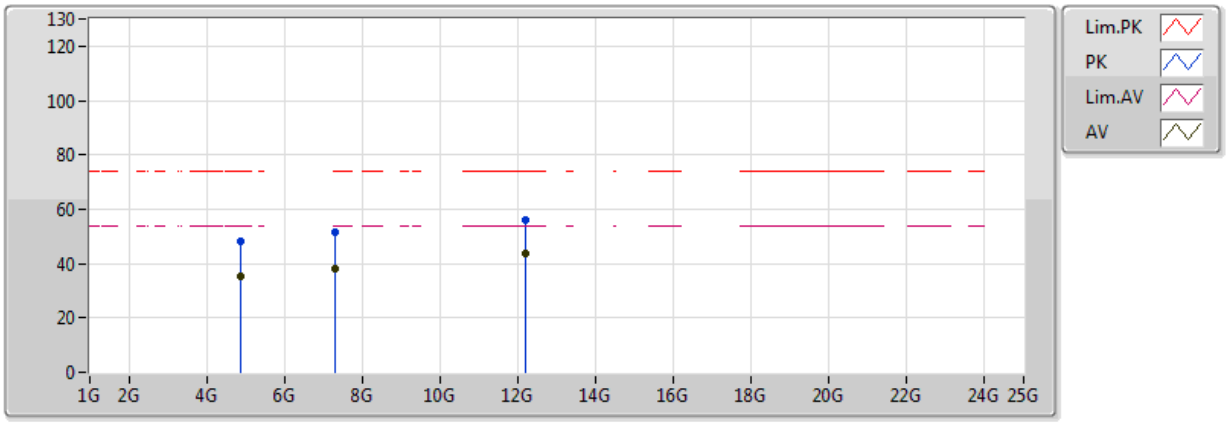


20170120
EUT Z_3TX
Setting 19
02-P-2
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.87234G	33.55	54.00	-20.45	6.25	3	V	139	1.10	-
PK	4.8782G	46.09	74.00	-27.91	6.26	3	V	139	1.10	-
AV	7.3062G	37.99	54.00	-16.01	10.51	3	V	247	1.36	-
PK	7.30786G	51.20	74.00	-22.80	10.52	3	V	247	1.36	-
AV	12.18074G	43.57	54.00	-10.43	14.94	3	V	134	1.52	-
PK	12.18036G	55.69	74.00	-18.31	14.94	3	V	134	1.52	-

802.11ac VHT40_Nss1,(MCS0)_3TX

2437MHz_TX

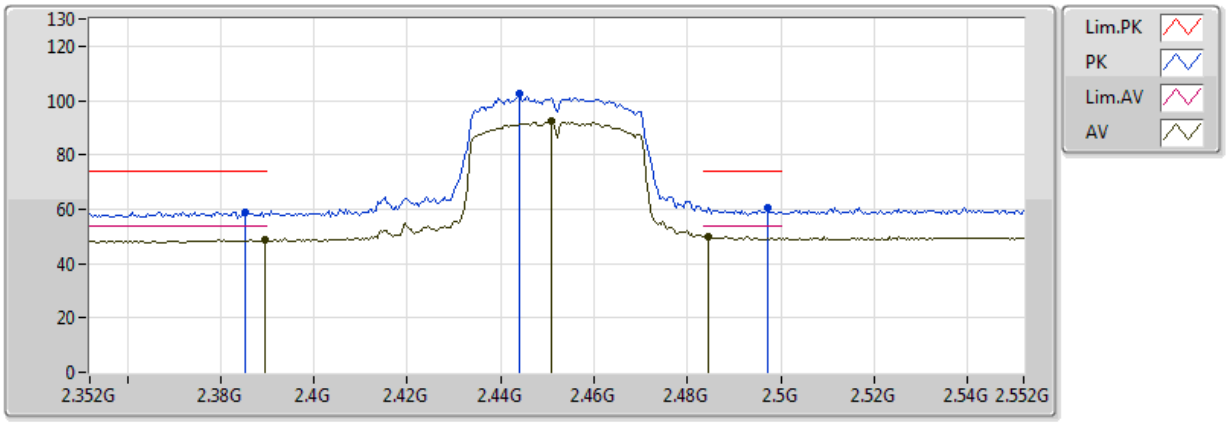


20170120
EUT Z_3TX
Setting 19
02-P-2
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.8676G	35.12	54.00	-18.88	6.23	3	H	91	1.05	-
PK	4.8754G	48.42	74.00	-25.58	6.25	3	H	91	1.05	-
AV	7.31218G	38.22	54.00	-15.78	10.53	3	H	242	1.24	-
PK	7.31366G	51.68	74.00	-22.32	10.53	3	H	242	1.24	-
AV	12.1815G	43.69	54.00	-10.31	14.94	3	H	275	1.76	-
PK	12.18464G	56.23	74.00	-17.77	14.94	3	H	275	1.76	-

802.11ac VHT40_Nss1,(MCS0)_3TX

2452MHz_TX

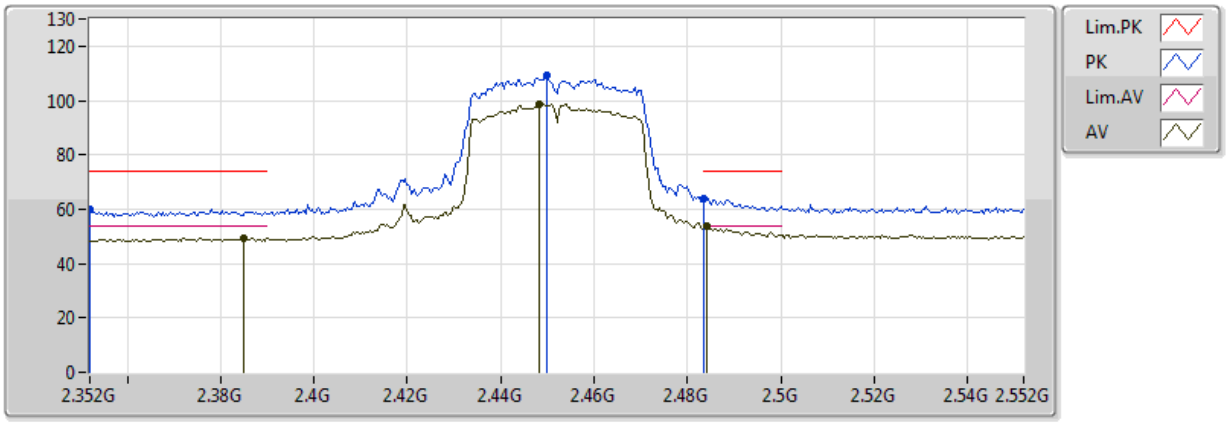


20170120
EUT Z_3TX
Setting 15
02-P-2
FSU

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	48.70	54.00	-5.30	31.87	3	V	52	2.97	-
AV	2.4508G	92.18	Inf	-Inf	32.04	3	V	52	2.97	-
AV	2.4844G	49.98	54.00	-4.02	32.13	3	V	52	2.97	-
PK	2.3852G	59.08	74.00	-14.92	31.86	3	V	52	2.97	-
PK	2.444G	102.49	Inf	-Inf	32.02	3	V	52	2.97	-
PK	2.4972G	60.65	74.00	-13.35	32.16	3	V	52	2.97	-

802.11ac VHT40_Nss1,(MCS0)_3TX

2452MHz_TX

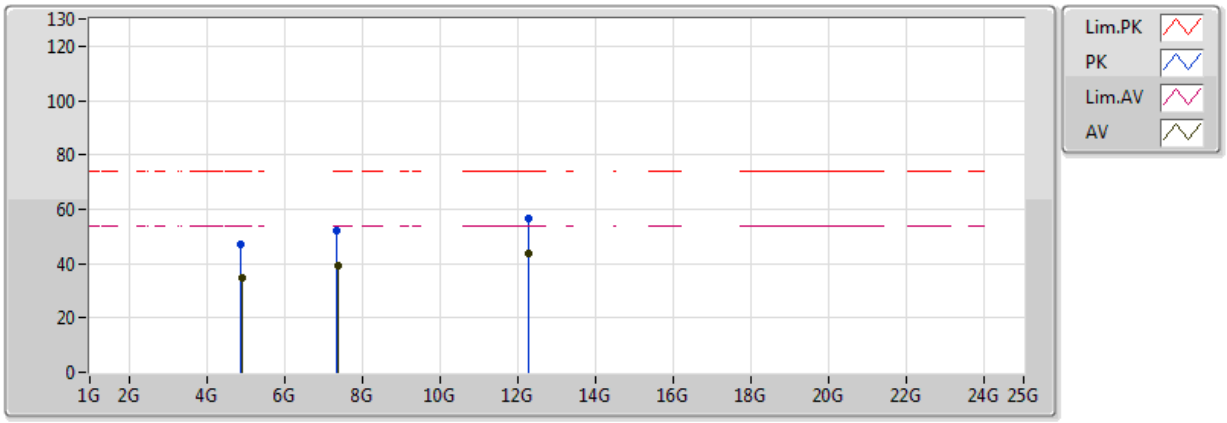


20170120
EUT Z_3TX
Setting 15
02-P-2
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3848G	49.27	54.00	-4.73	31.86	3	H	326	1.13	-
AV	2.4484G	98.59	Inf	-Inf	32.03	3	H	326	1.13	-
AV	2.484G	53.69	54.00	-0.31	32.13	3	H	326	1.13	-
PK	2.352G	59.88	74.00	-14.12	31.78	3	H	326	1.13	-
PK	2.45G	109.07	Inf	-Inf	32.04	3	H	326	1.13	-
PK	2.4836G	63.79	74.00	-10.21	32.13	3	H	326	1.13	-

802.11ac VHT40_Nss1,(MCS0)_3TX

2452MHz_TX

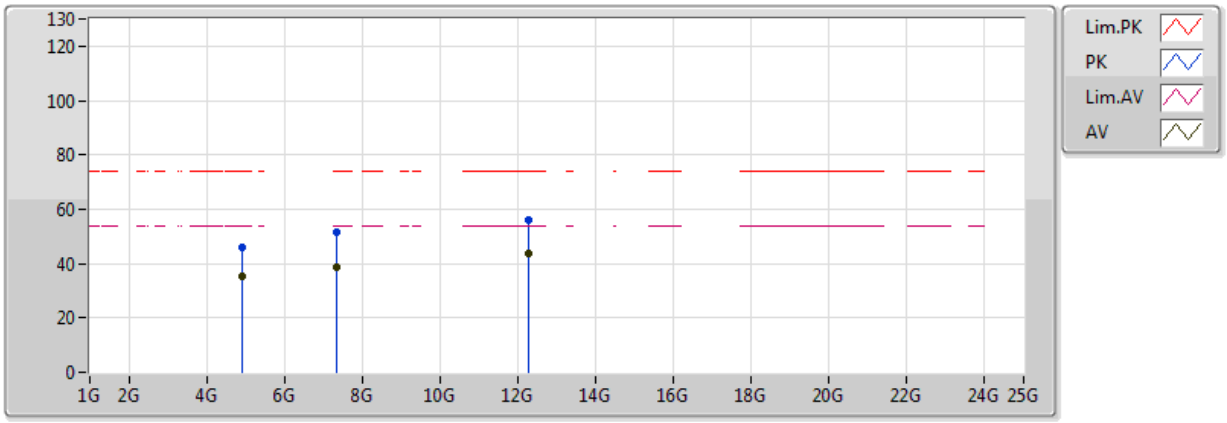


20170120
EUT Z_3TX
Setting 15
02-P-2
FSU

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.9012G	34.87	54.00	-19.13	6.32	3	V	331	1.21	-
PK	4.8947G	47.10	74.00	-26.90	6.31	3	V	331	1.21	-
AV	7.3723G	39.36	54.00	-14.64	10.65	3	V	56	1.08	-
PK	7.3347G	52.37	74.00	-21.63	10.57	3	V	56	1.08	-
AV	12.26438G	43.91	54.00	-10.09	15.00	3	V	143	1.48	-
PK	12.26446G	56.34	74.00	-17.66	15.00	3	V	143	1.48	-

802.11ac VHT40_Nss1,(MCS0)_3TX

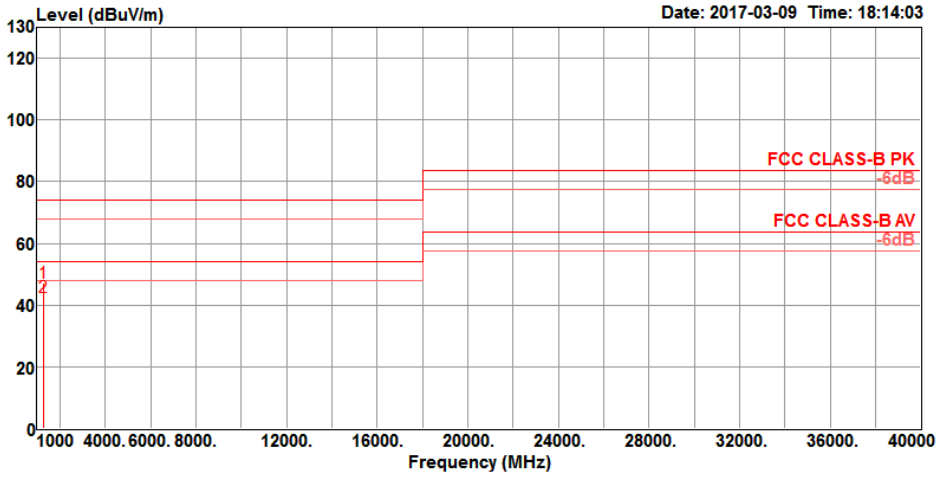
2452MHz_TX



20170120
EUT Z_3TX
Setting 15
02-P-2
FSU

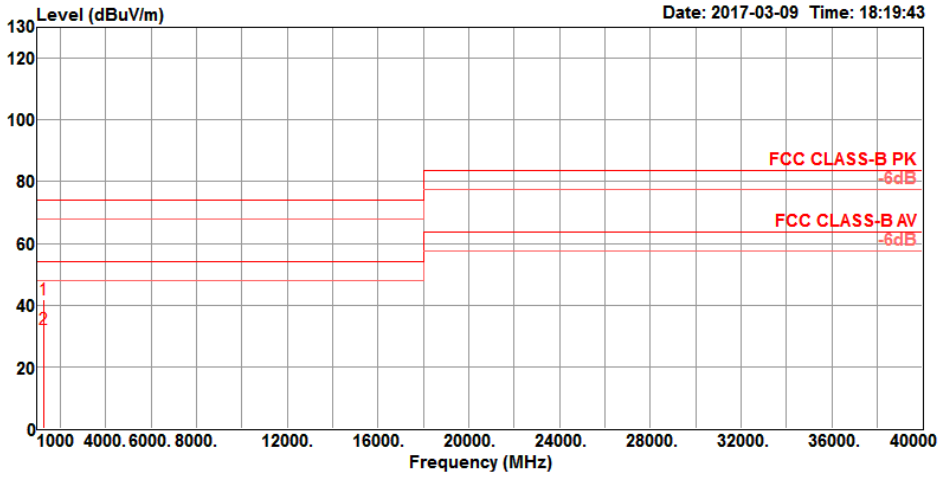
Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.90886G	35.25	54.00	-18.75	6.35	3	H	142	1.38	-
PK	4.9017G	46.21	74.00	-27.79	6.33	3	H	142	1.38	-
AV	7.35604G	38.63	54.00	-15.37	10.62	3	H	267	1.08	-
PK	7.35916G	51.56	74.00	-22.44	10.62	3	H	267	1.08	-
AV	12.25776G	43.78	54.00	-10.22	15.00	3	H	306	1.29	-
PK	12.25684G	56.31	74.00	-17.69	15.00	3	H	306	1.29	-

RSE Co-location Result			
Operating Mode	1	**Polarization**	Horizontal
Operating Function	CTX - EUT in Y axis - WLAN 2.4GHz + WLAN 5GHz		



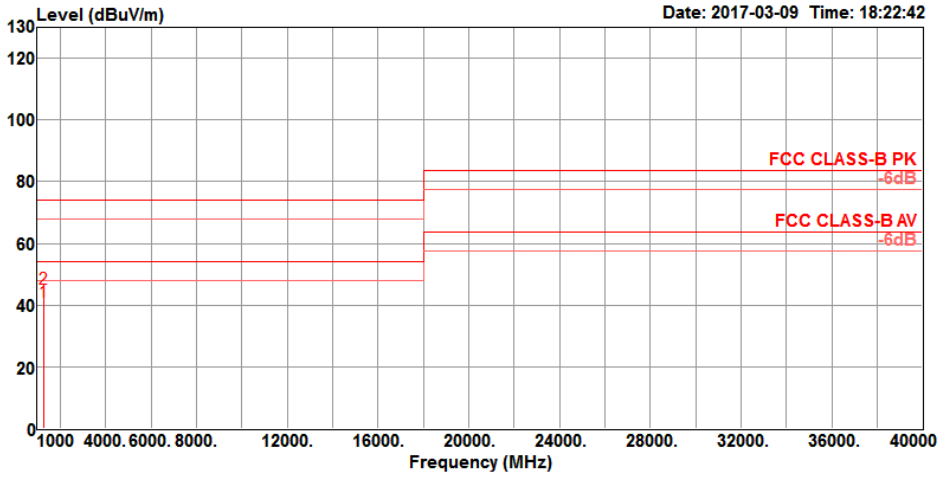
	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	1249.96	47.38	74.00	-26.62	54.09	4.30	24.99	36.00	112	189	Peak	HORIZONTAL
2	1250.10	42.48	54.00	-11.52	49.19	4.30	24.99	36.00	112	189	Average	HORIZONTAL

RSE Co-location Result			
Operating Mode	1	**Polarization**	Vertical
Operating Function	EUT in Y axis - WLAN 2.4GHz + WLAN 5GHz		



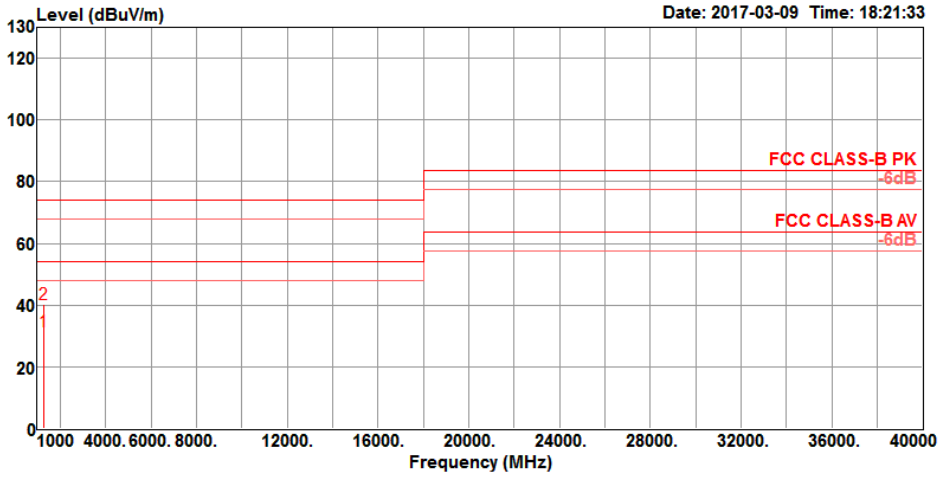
	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	1249.80	41.90	74.00	-32.10	48.61	4.30	24.99	36.00	103	65	Peak	VERTICAL
2	1249.98	32.39	54.00	-21.61	39.10	4.30	24.99	36.00	103	65	Average	VERTICAL

RSE Co-location Result			
Operating Mode	2	**Polarization**	Horizontal
Operating Function	CTX - EUT in Z axis - WLAN 2.4GHz + WLAN 5GHz		



	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	1251.10	41.21	54.00	-12.79	47.90	4.31	25.00	36.00	131	189	Average	HORIZONTAL
2	1251.11	45.45	74.00	-28.55	52.14	4.31	25.00	36.00	131	334	Peak	HORIZONTAL

RSE Co-location Result			
Operating Mode	2	**Polarization**	Vertical
Operating Function	EUT in Z axis - WLAN 2.4GHz + WLAN 5GHz		



	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	1250.01	31.33	54.00	-22.67	38.04	4.30	24.99	36.00	124	221	Average	VERTICAL
2	1250.01	40.33	74.00	-33.67	47.04	4.30	24.99	36.00	124	221	Peak	VERTICAL