FCC Test Report

Equipment	:	Wireless-AC9600 Dual-band Gigabit Router, ROG Rapture Aura 10G Gaming Router, Ultimate Gaming Router, ASUS ROG Raputre AC9600 Ultimate 10G Gaming Router, Wireless-AC9600 Dual-band 10G Gigabit Router
Brand Name	:	ASUS
Model No.	:	GT-AC9600, RT-AC9600R, ROG Rapture GT-AC9600, ROG Aura Rapture GT-AC9600
FCC ID	:	MSQ-RTG03H
Standard	:	47 CFR FCC Part 15.247
Operating Band	:	2400 MHz – 2483.5 MHz
Function	:	☒ Point-to-multipoint; ☐ Point-to-point
Applicant	:	ASUSTeK COMPUTER INC. 4F, No. 150, Li-Te Rd., Peitou, Taipei 112, Taiwan
Manufacturer (1)	:	ASKEY TECHNOLOGY (JIANG SU) LTD NO1388, Jiao Tong Road, Wujiang Economic Technological Development Area Jiangsu Province 215200 China
Manufacturer (2)	:	Compal Networking (KunShan) Co., LTD. No. 520, Nabbang Rd., Economic & Technical Development Zone Kunshan, Jiangsu Province China

The product sample received on Jan. 09, 2017 and completely tested on Apr. 21, 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

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PHOTOGRAPHS OF EUT V01

Summary of Test Result

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

Revision History

Report No.	Version	Description	Issued Date
FR690618AA	Rev. 01	Initial issue of report	Apr. 26, 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	4TX
2.4-2.4835GHz	802.11g	20	4TX
2.4-2.4835GHz	802.11n HT20	20	4TX
2.4-2.4835GHz	802.11ac VHT20	20	4TX
2.4-2.4835GHz	802.11n HT40	40	4TX
2.4-2.4835GHz	802.11ac VHT40	40	4TX

Note:
- 11b mode uses a combination of DSSS-DBPSK, DQPSK, CCK modulation.
- 11g, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- VHT20, VHT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM 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	Type	Connector	Antenna Gain (dBi)		Cable Loss (dB)		True Gain (dBi)	
					2.4GHz	5GHz	2.4GHz	5GHz	2.4GHz	5GHz
1	Whayu	C660-510401-A	Dipole	I-PEX	-	3.5	-	1.13	-	2.37
2	Whayu	C660-510402-A	Dipole	I-PEX	-	3.5	-	0.9	-	2.6
3	Whayu	C660-510403-A	Dipole	I-PEX	-	3.5	-	0.6	-	2.9
4	Whayu	C660-510404-A	Dipole	I-PEX	-	3.5	-	0.5	-	3
5	Whayu	C660-510404-A	Dipole	I-PEX	2.5	3.5	0.37	0.5	2.13	3
6	Whayu	C660-510403-A	Dipole	I-PEX	2.5	3.5	0.4	0.6	2.1	2.9
7	Whayu	C660-510405-A	Dipole	I-PEX	2.5	3.5	0.48	0.68	2.02	2.82
8	Whayu	C660-510402-A	Dipole	I-PEX	2.5	3.5	0.6	0.9	1.9	2.6

Note: The EUT has eight antennas.

For 2.4GHz WLAN Function (4TX/4RX):

Ant. 5 (Port 1), Ant. 6 (Port 2), Ant. 7 (Port 3) and Ant. 8 (Port 4) could transmit/receive simultaneously.

For 5GHz WLAN Function (8TX/8RX):

Ant. 1 (Port 1), Ant. 2 (Port 2), Ant. 3 (Port 3), Ant. 4 (Port 4), Ant. 5 (Port 8), Ant. 6 (Port 7), Ant. 7 (Port 6) and Ant. 8 (Port 5) could transmit/receive simultaneously.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11b	0.986	0.061	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11g	0.912	0.4	433.75u	3k
802.11ac VHT20	0.991	0.039	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11ac VHT40	0.971	0.128	1.813m	1k

1.1.4 EUT Operational Condition

EUT Power Type	From power adapter			
Beamforming Function	☐	With beamforming	☒	Without beamforming

1.1.5 Table for Multiple Listing

1. The EUT has five equipment names which are identical to each other in all aspects except for the following table:

Equipment Name	Description
Wireless-AC9600 Dual-band Gigabit Router	All the equipment names are identical, the different equipment names served as marketing strategy.
ROG Rapture Aura 10G Gaming Router	
Ultimate Gaming Router	
ASUS ROG Raputre AC9600 Ultimate 10G Gaming Router	
Wireless-AC9600 Dual-band 10G Gigabit Router	

From the above models, equipment name: Wireless-AC9600 Dual-band Gigabit Router, model number: GT-AC9600 was selected as representative model for the test and its data was recorded in this report.

2. The EUT has four model numbers which are identical to each other in all aspects except for the following table:

Model No.	Description
GT-AC9600	All the models are identical, the different model numbers served as marketing strategy.
RT-AC9600R	
ROG Rapture GT-AC9600	
ROG Aura Rapture GT-AC9600	

From the above models, equipment name: Wireless-AC9600 Dual-band Gigabit Router, model number: GT-AC9600 was selected as representative model for the test and its data was recorded in this report.

3. The EUT has two SKU which are identical to each other in all aspects except for the following table:

SKU / Description	SKU 1	SKU 2
Vendor	MINGTEK	SWAP
LAN port transformer (Model No.)	HN8031VG	NS777202A

1.2 Testing Applied Standards

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

- 47 CFR FCC Part 15
- ANSI C63.10-2013
- FCC KDB 558074 D01 v04
- FCC KDB 662911 D01 v02r01
- FCC KDB 644545 D01 v01r02
- FCC KDB 412172 D01 v01r01

1.3 Testing Location Information

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

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH01-CB	Serway Li	20°C / 55%	Apr. 13, 2017~Apr. 18, 2017
Radiated	03CH01-CB	Mason Chen, Joy Tseng	21°C / 50%	Apr. 08, 2017~Apr. 21, 2017
AC Conduction	CO01-CB	Da Deng	23°C / 60%	Apr. 18, 2017~Apr. 20, 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)_4TX	-
2412MHz	24
2437MHz	24
2462MHz	24
802.11g_(6Mbps)_4TX	-
2412MHz	24
2437MHz	24
2462MHz	25
802.11ac VHT20_Nss1,(MCS0)_4TX	-
2412MHz	24
2437MHz	24
2462MHz	25
802.11ac VHT40_Nss1,(MCS0)_4TX	-
2422MHz	23
2437MHz	23
2452MHz	23

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

2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral
Operating Mode	CTX
1	SKU 1 + Adapter 1 - 2.4GHz WLAN Function
2	SKU 1 + Adapter 1 - 5GHz WLAN Function
3	SKU 1 + Adapter 2 - 2.4GHz WLAN Function
4	SKU 1 + Adapter 2 - 5GHz WLAN Function
5	SKU 1 + Adapter 3 - 2.4GHz WLAN Function
6	SKU 1 + Adapter 3 - 5GHz WLAN Function
For operating mode 4 is the worst case and it was record in this test report.	

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	CTX
1	SKU 1 + Adapter 1 - 2.4GHz WLAN Function
2	SKU 1 + Adapter 1 - 5GHz WLAN Function
3	SKU 1 + Adapter 2 - 2.4GHz WLAN Function
4	SKU 1 + Adapter 2 - 5GHz WLAN Function
5	SKU 1 + Adapter 3 - 2.4GHz WLAN Function
6	SKU 1 + Adapter 3 - 5GHz WLAN Function
For operating mode 4 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Radiated Emission Co-location
Test Condition	Radiated measurement
Operating Mode	Normal Link
1	2.4GHz WLAN + 5GHz WLAN
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	2.4GHz WLAN + 5GHz WLAN
Refer to Sporton Test Report No.: FA690618 for Co-location RF Exposure Evaluation.	

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

2.3 EUT Operation during Test

For CTX Mode:

The EUT was programmed to be in continuously transmitting mode.

For Normal Link:

During the test, the EUT operation to normal function.

2.4 Accessories

Accessories			
Power	**Brand**	**Model No.**	**Rating**
Adapter 1	DELTA	ADP-65DW B	INPUT: 100-240V~50-60Hz 1.5A OUTPUT: 19V, 3.42A
Adapter 2	LITEON	PA-1650-63	INPUT: 100-240V~50-60Hz 1.7A OUTPUT: 19V, 3.42A
Adapter 3	PI	AD887320	INPUT: 100-240V~50/60Hz 1.5A OUTPUT: 19V, 3.42A
Other			
RJ-45 cable*1: Non-shielded, 1.5m			

Note: Adapter does not affect the radio tests, there is only adapter 2 tested and recorded in this report.

2.5 Support Equipment

For Test Site No: CO01-CB

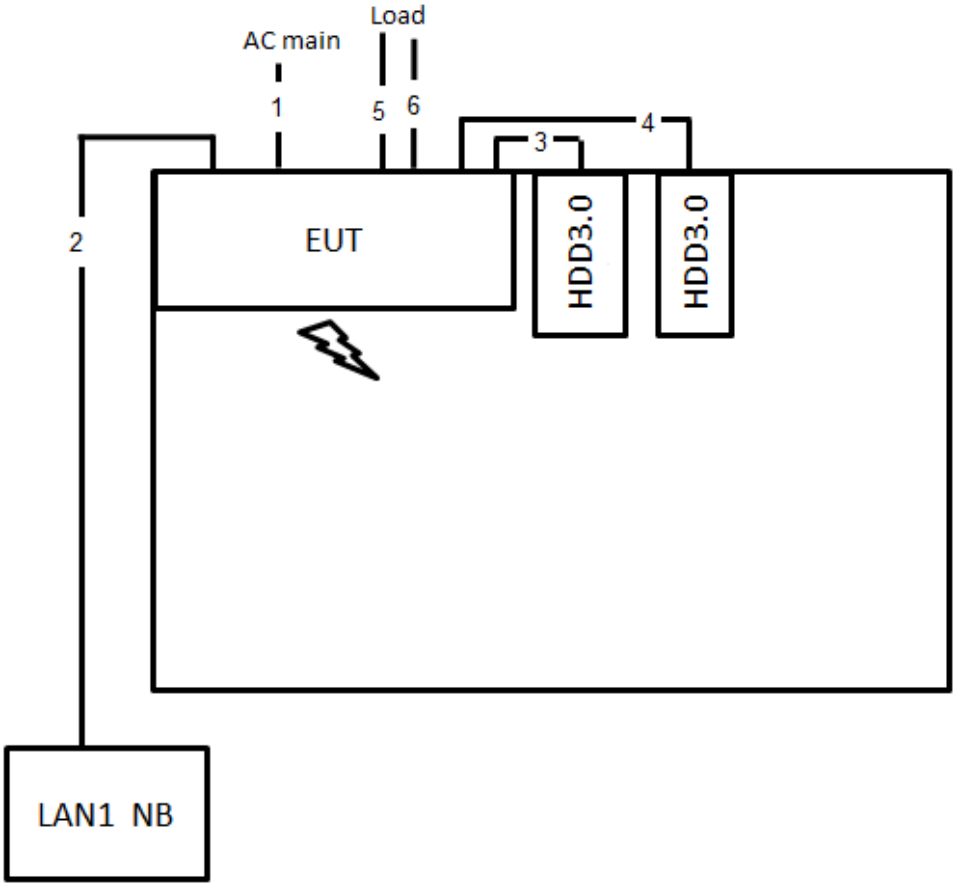
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB	DELL	E6430	DoC
2	HDD3.0*2	WD	WDBACY5000AWT	DoC

For Test Site No: 03CH01-CB and TH01-CB

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

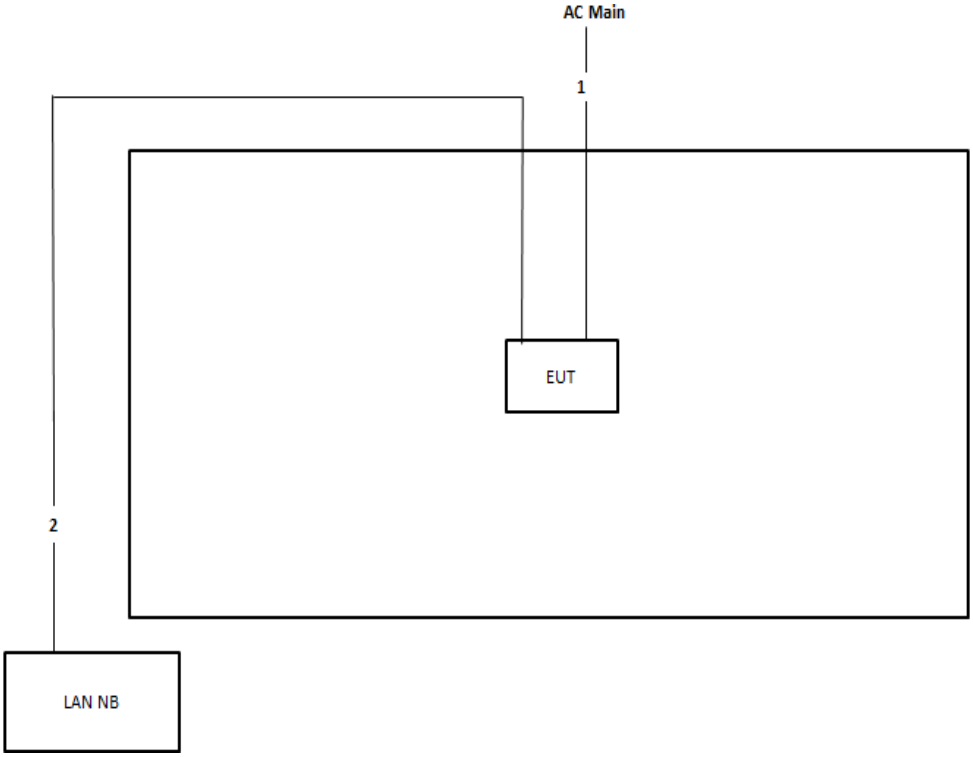
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



Item	Connection	Shielded	Length
1	Power cable	No	2.3m
2	RJ-45 cable	No	10m
3	USB cable	Yes	0.1m
4	USB cable	Yes	0.1m
5	RJ-45 cable*9	Yes	1m
6	Fiber cable	Yes	10m

Test Setup Diagram - Radiated Test



Item	Connection	Shielded	Length
1	Power cable	No	2.3m
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

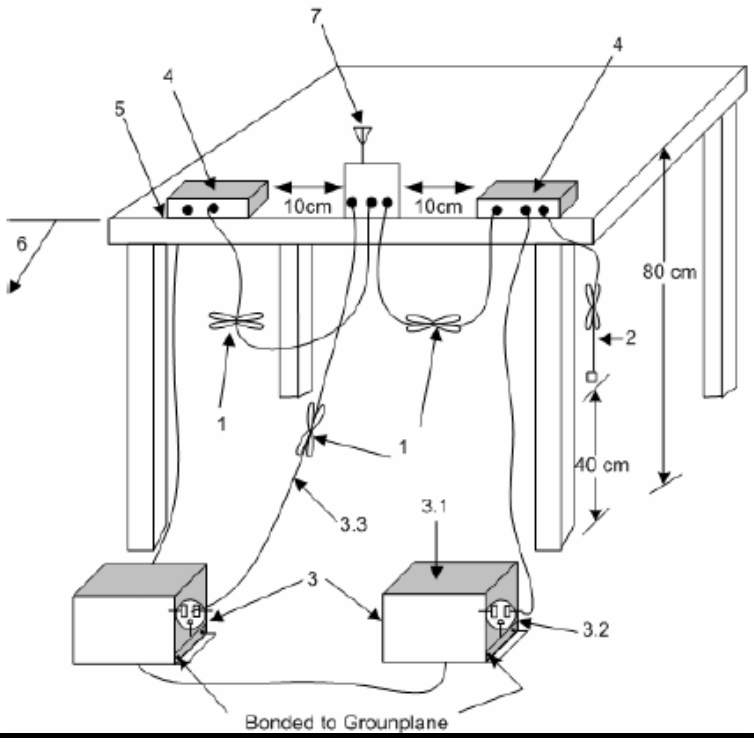
Refer a test equipment and calibration data table in this test report.

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

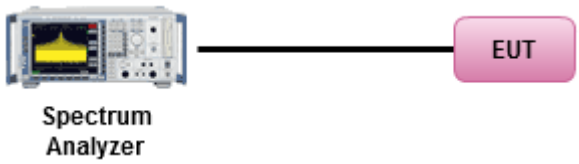
Refer a test equipment and calibration data table in this test report.

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

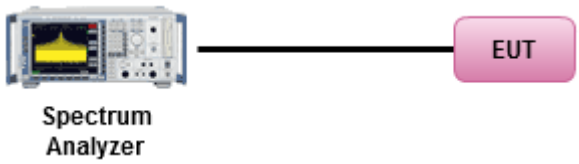
Refer a test equipment and calibration data table in this test report.

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

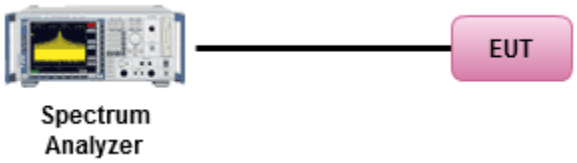
Refer a test equipment and calibration data table in this test report.

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.

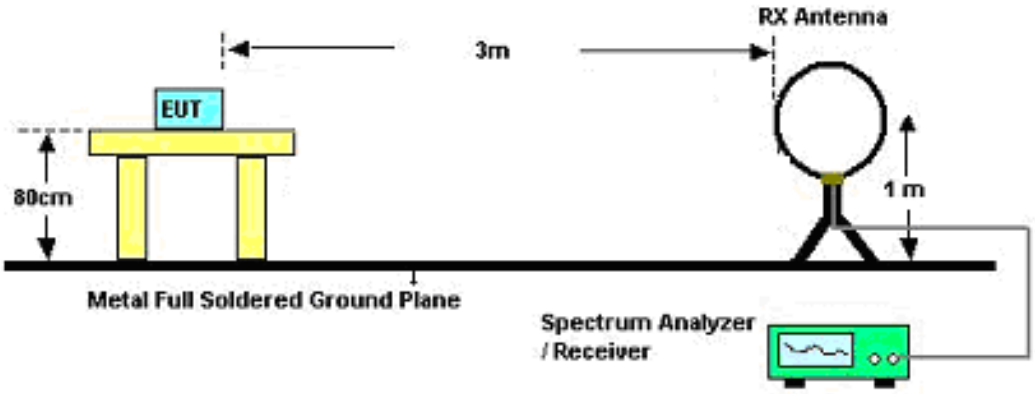
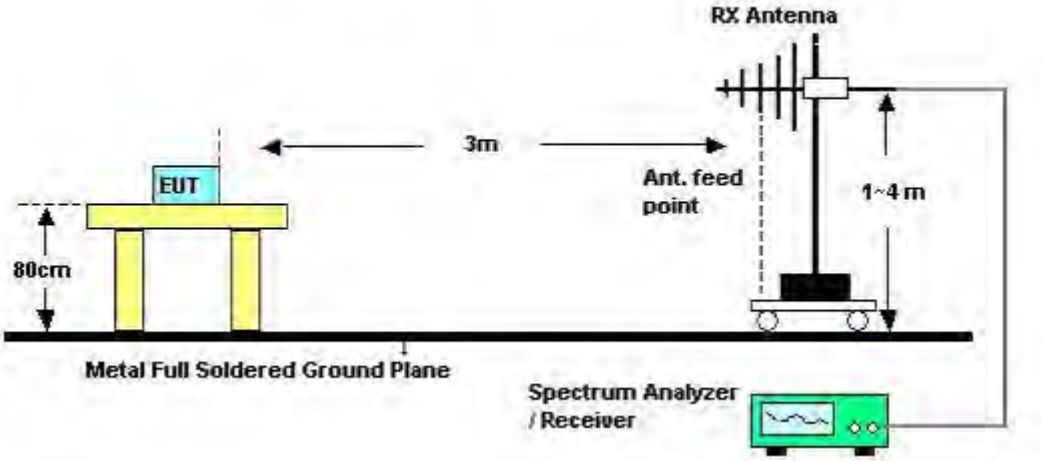
3.6.2 Measuring Instruments

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

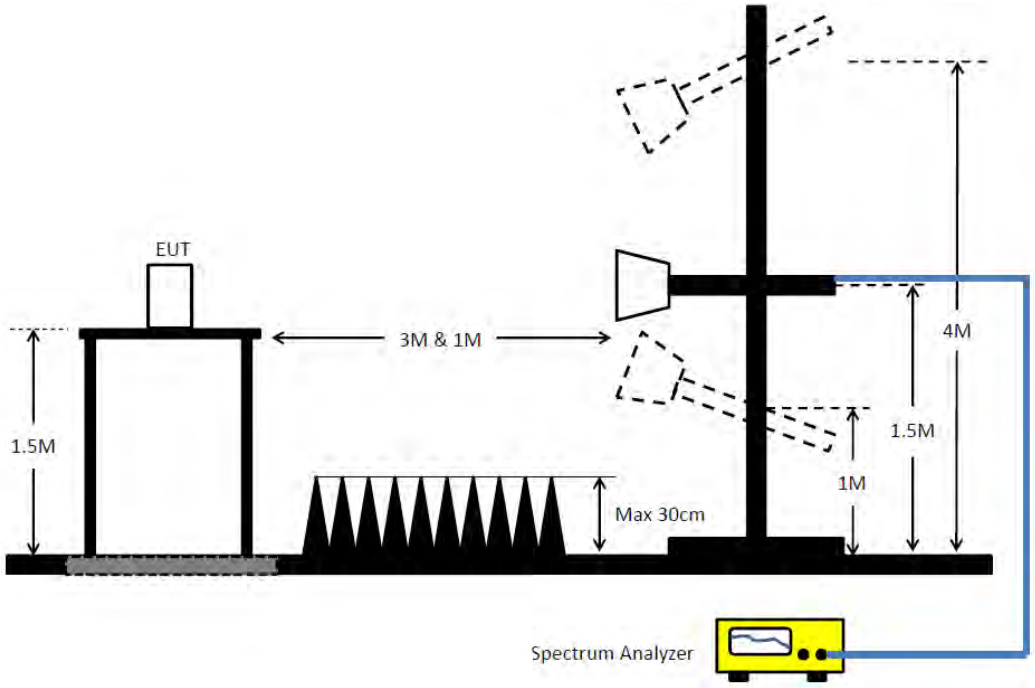
3.6.3 Test Procedures

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 Attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Aug. 30, 2016	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 10, 2016	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 25, 2016	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8447D	2944A10991	0.1MHz ~ 1.3GHz	Mar. 13, 2017	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 16, 2017	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jun. 28, 2016	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Nov. 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)
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2016*	Radiation (03CH01-CB)
Test Software	Audix	E3	6.2009-l0-7	N/A	N/A	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 26, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-6	1 GHz – 26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-7	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-8	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)

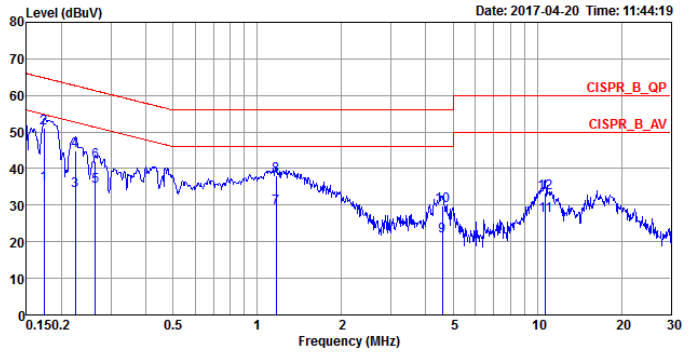
Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
RF Cable-high	Woken	RG402	High Cable-9	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001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

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

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

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

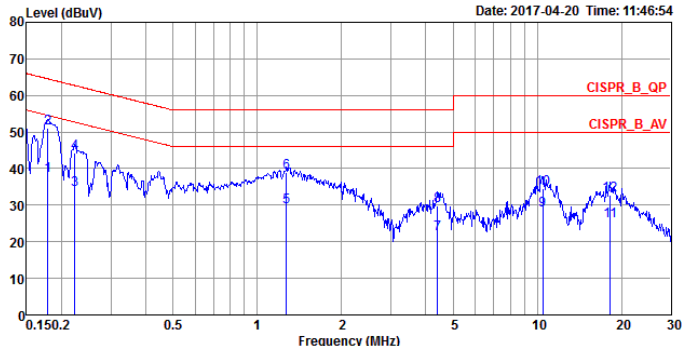
AC Power-line Conducted Emissions Result			
Operating Mode	4	**Power Phase**	Neutral
Operating Function	CTX		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1731	35.84	-18.97	54.81	25.84	9.96	0.04	Average	NEUTRAL
2	0.1731	50.98	-13.83	64.81	40.98	9.96	0.04	QP	NEUTRAL
3	0.2244	33.99	-18.67	52.66	23.96	9.98	0.05	Average	NEUTRAL
4	0.2244	44.90	-17.76	62.66	34.87	9.98	0.05	QP	NEUTRAL
5	0.2644	35.10	-16.19	51.29	25.08	9.97	0.05	Average	NEUTRAL
6	0.2644	42.05	-19.24	61.29	32.03	9.97	0.05	QP	NEUTRAL
7	1.1657	29.37	-16.63	46.00	19.33	9.98	0.06	Average	NEUTRAL
8	1.1657	38.10	-17.90	56.00	28.06	9.98	0.06	QP	NEUTRAL
9	4.5736	21.57	-24.43	46.00	11.34	10.09	0.14	Average	NEUTRAL
10	4.5736	29.83	-26.17	56.00	19.60	10.09	0.14	QP	NEUTRAL
11	10.6763	27.10	-22.90	50.00	16.74	10.17	0.19	Average	NEUTRAL
12	10.6763	33.38	-26.62	60.00	23.02	10.17	0.19	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	4	**Power Phase**	Line
Operating Function	CTX		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1787	38.02	-16.53	54.55	28.03	9.94	0.05	Average	LINE
2	0.1787	51.09	-13.46	64.55	41.10	9.94	0.05	QP	LINE
3	0.2232	34.33	-18.37	52.70	24.36	9.92	0.05	Average	LINE
4	0.2232	44.20	-18.50	62.70	34.23	9.92	0.05	QP	LINE
5	1.2688	29.55	-16.45	46.00	19.49	9.99	0.07	Average	LINE
6	1.2688	38.82	-17.18	56.00	28.76	9.99	0.07	QP	LINE
7	4.4071	22.04	-23.96	46.00	11.95	9.96	0.13	Average	LINE
8	4.4071	29.81	-26.19	56.00	19.72	9.96	0.13	QP	LINE
9	10.4524	28.75	-21.25	50.00	18.49	10.07	0.19	Average	LINE
10	10.4524	34.59	-25.41	60.00	24.33	10.07	0.19	QP	LINE
11	18.2316	25.82	-24.18	50.00	15.38	10.20	0.24	Average	LINE
12	18.2316	32.86	-27.14	60.00	22.42	10.20	0.24	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)_4TX	-	-	-	-	-
2.4-2.4835GHz	10.25M	10.495M	10M5G1D	10.2M	10.42M
802.11g_(6Mbps)_4TX	-	-	-	-	-
2.4-2.4835GHz	16.325M	16.717M	16M7D1D	16.05M	16.517M
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-
2.4-2.4835GHz	17.6M	17.866M	17M9D1D	17.2M	17.741M
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-
2.4-2.4835GHz	36.35M	36.332M	36M3D1D	32.7M	36.082M

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;

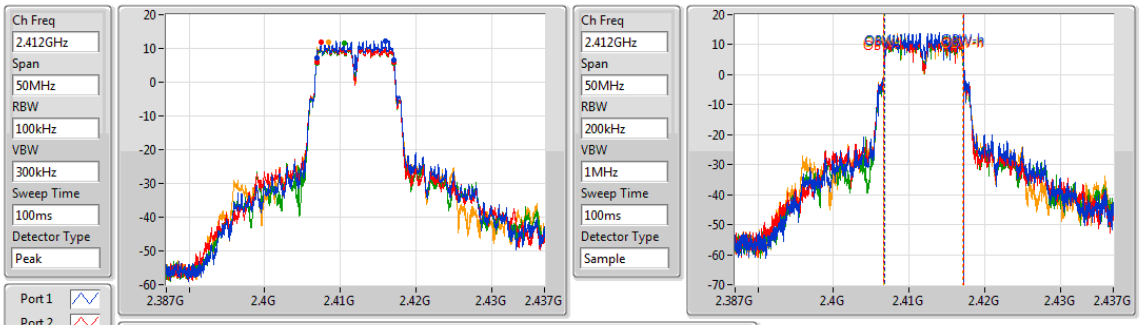
Result

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)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11b_(1Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	10.225M	10.445M	10.225M	10.47M	10.225M	10.445M	10.2M	10.445M
2437MHz	Pass	500k	10.225M	10.47M	10.225M	10.42M	10.225M	10.445M	10.225M	10.42M
2462MHz	Pass	500k	10.225M	10.445M	10.25M	10.495M	10.25M	10.495M	10.25M	10.495M
802.11g_(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	16.3M	16.517M	16.325M	16.592M	16.325M	16.617M	16.325M	16.567M
2437MHz	Pass	500k	16.325M	16.617M	16.3M	16.567M	16.325M	16.542M	16.3M	16.567M
2462MHz	Pass	500k	16.05M	16.617M	16.325M	16.667M	16.325M	16.642M	16.325M	16.717M
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	17.575M	17.766M	17.575M	17.791M	17.6M	17.791M	17.575M	17.766M
2437MHz	Pass	500k	17.6M	17.866M	17.55M	17.741M	17.575M	17.766M	17.55M	17.791M
2462MHz	Pass	500k	17.2M	17.841M	17.6M	17.866M	17.575M	17.841M	17.575M	17.866M
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	500k	35.65M	36.182M	36.35M	36.332M	36.35M	36.282M	36.25M	36.282M
2437MHz	Pass	500k	35.8M	36.232M	36.25M	36.132M	36.3M	36.132M	35.4M	36.182M
2452MHz	Pass	500k	32.7M	36.082M	35.35M	36.182M	35.7M	36.282M	35.75M	36.182M

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

802.11b_(1Mbps)_4TX — EBW

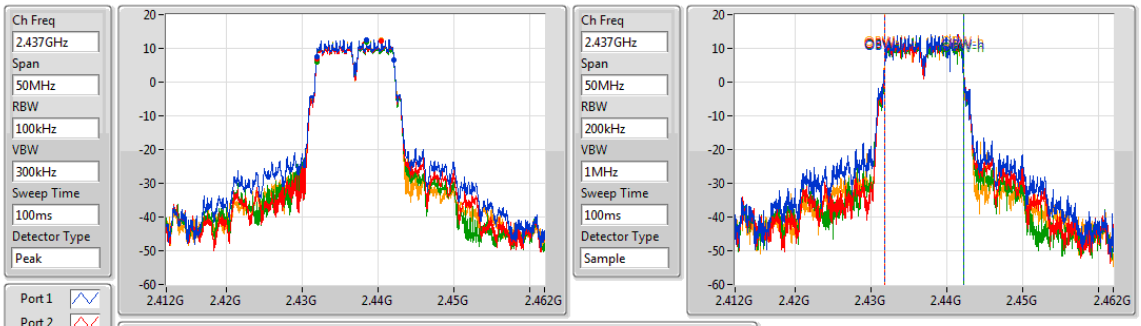
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
10.225M	2.406875G	2.4171G	10.445M	2.406753G	2.417197G	500k	1
10.225M	2.40685G	2.417075G	10.47M	2.406703G	2.417172G	500k	2
10.225M	2.40685G	2.417075G	10.445M	2.406728G	2.417172G	500k	3
10.2M	2.40685G	2.41705G	10.445M	2.406703G	2.417147G	500k	4

802.11b_(1Mbps)_4TX — EBW

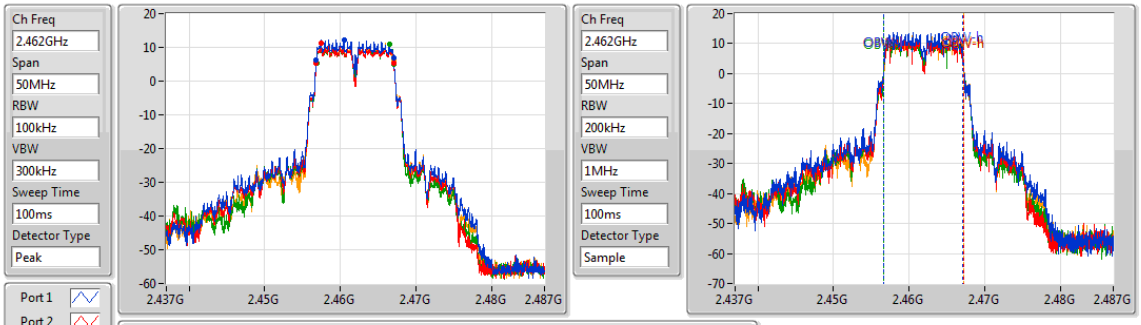
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
10.225M	2.431875G	2.4421G	10.47M	2.431728G	2.442197G	500k	1
10.225M	2.431875G	2.4421G	10.42M	2.431778G	2.442197G	500k	2
10.225M	2.43185G	2.442075G	10.445M	2.431753G	2.442197G	500k	3
10.225M	2.431875G	2.4421G	10.42M	2.431753G	2.442172G	500k	4

802.11b_(1Mbps)_4TX — EBW

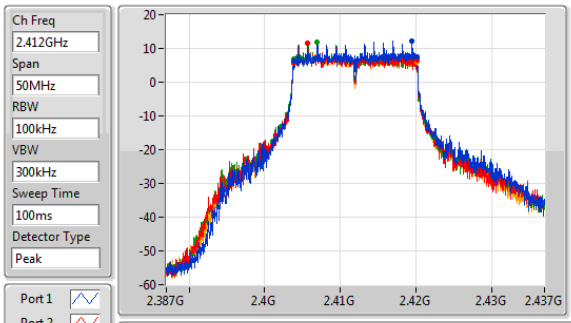
2462MHz

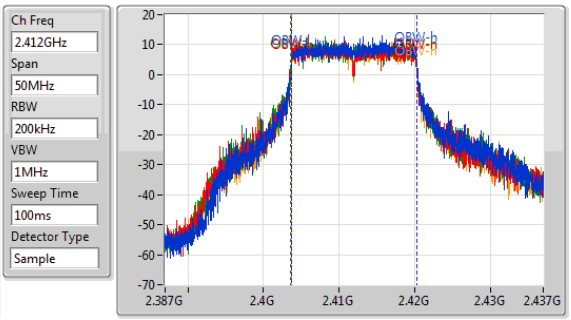


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
10.225M	2.456825G	2.46705G	10.445M	2.456703G	2.467147G	500k	1
10.25M	2.456825G	2.467075G	10.495M	2.456703G	2.467197G	500k	2
10.25M	2.45685G	2.4671G	10.495M	2.456703G	2.467197G	500k	3
10.25M	2.456825G	2.467075G	10.495M	2.456703G	2.467197G	500k	4

802.11g_(6Mbps)_4TX — EBW

2412MHz

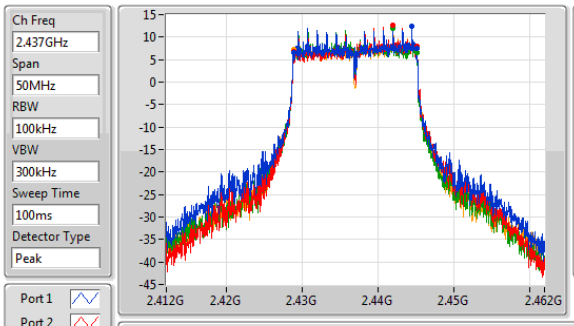


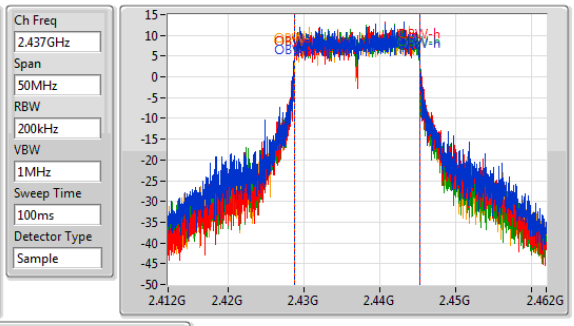


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.3M	2.403825G	2.420125G	16.517M	2.403754G	2.420271G	500k	1
16.325M	2.4038G	2.420125G	16.592M	2.403679G	2.420271G	500k	2
16.325M	2.4038G	2.420125G	16.617M	2.403629G	2.420246G	500k	3
16.325M	2.4038G	2.420125G	16.567M	2.403679G	2.420246G	500k	4

802.11g_(6Mbps)_4TX — EBW

2437MHz

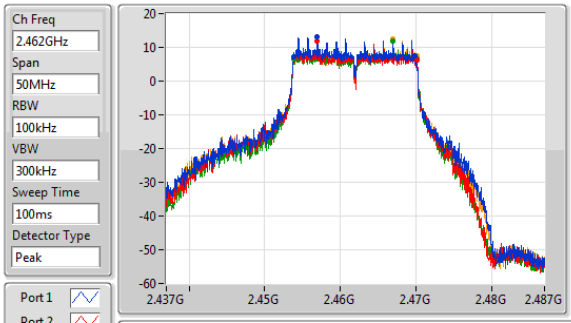


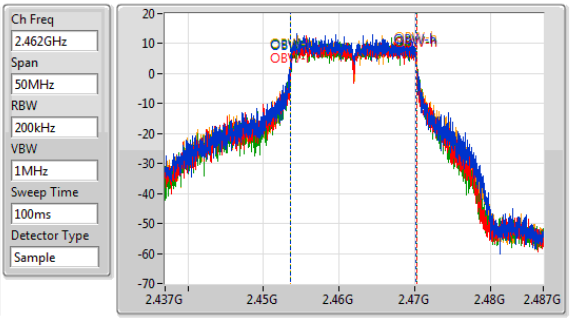


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.325M	2.4288G	2.445125G	16.617M	2.428654G	2.445271G	500k	1
16.3M	2.428825G	2.445125G	16.567M	2.428729G	2.445296G	500k	2
16.325M	2.4288G	2.445125G	16.542M	2.428679G	2.445221G	500k	3
16.3M	2.428825G	2.445125G	16.567M	2.428704G	2.445271G	500k	4

802.11g_(6Mbps)_4TX — EBW

2462MHz

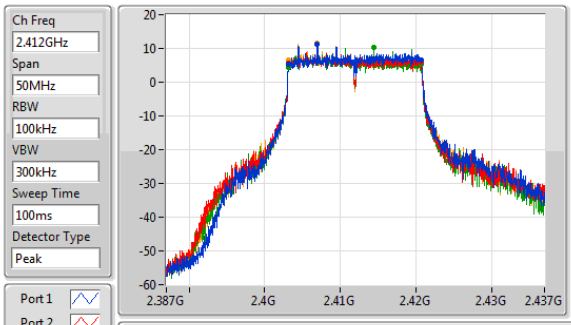


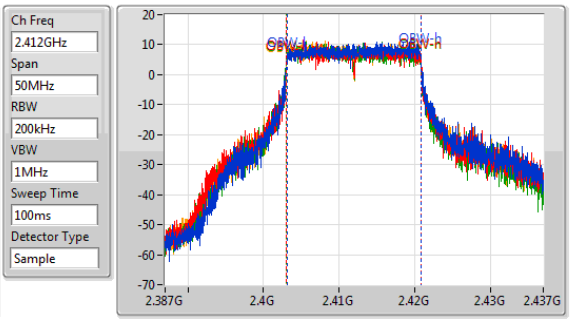


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.05M	2.4538G	2.46985G	16.617M	2.453579G	2.470196G	500k	1
16.325M	2.4538G	2.470125G	16.667M	2.453554G	2.470221G	500k	2
16.325M	2.4538G	2.470125G	16.642M	2.453604G	2.470246G	500k	3
16.325M	2.4538G	2.470125G	16.717M	2.453529G	2.470246G	500k	4

802.11ac VHT20_Nss1,(MCS0)_4TX — EBW

2412MHz

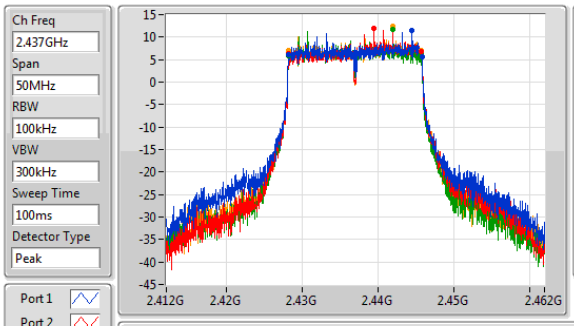


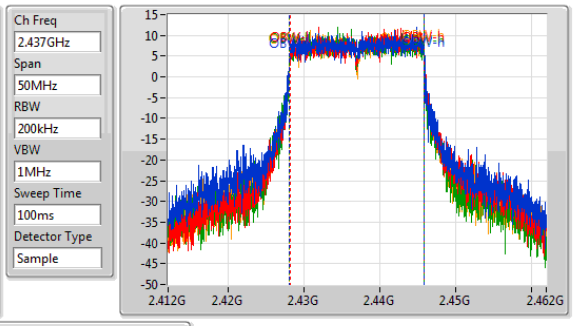


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.575M	2.403175G	2.42075G	17.766M	2.403104G	2.420871G	500k	1
17.575M	2.403175G	2.42075G	17.791M	2.403054G	2.420846G	500k	2
17.6M	2.40315G	2.42075G	17.791M	2.403029G	2.420821G	500k	3
17.575M	2.403175G	2.42075G	17.766M	2.403054G	2.420821G	500k	4

802.11ac VHT20_Nss1,(MCS0)_4TX — EBW

2437MHz

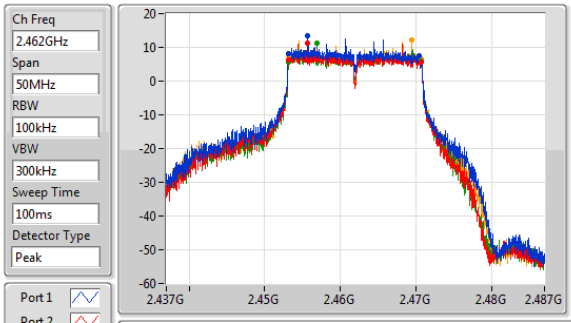


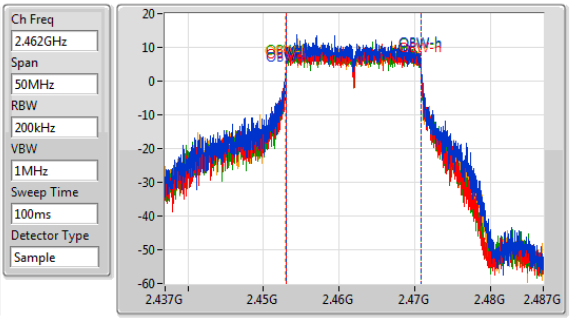


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.6M	2.428175G	2.445775G	17.866M	2.428029G	2.445896G	500k	1
17.55M	2.4282G	2.44575G	17.741M	2.428129G	2.445871G	500k	2
17.575M	2.428175G	2.44575G	17.766M	2.428079G	2.445846G	500k	3
17.55M	2.4282G	2.44575G	17.791M	2.428079G	2.445871G	500k	4

802.11ac VHT20_Nss1,(MCS0)_4TX — EBW

2462MHz

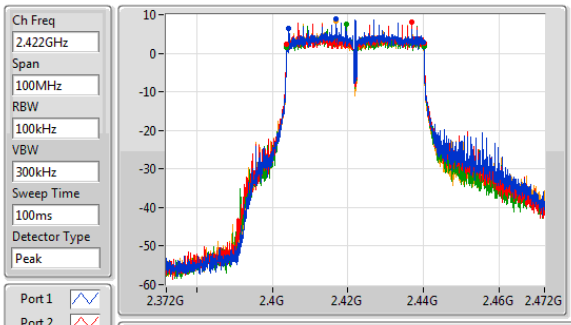


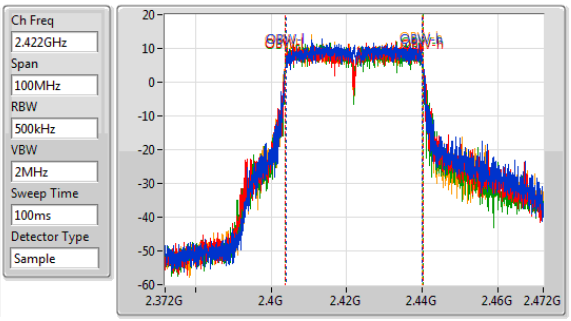


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.2M	2.453175G	2.470375G	17.841M	2.452955G	2.470796G	500k	1
17.6M	2.45315G	2.47075G	17.866M	2.452955G	2.470821G	500k	2
17.575M	2.453175G	2.47075G	17.841M	2.45298G	2.470821G	500k	3
17.575M	2.453175G	2.47075G	17.866M	2.45293G	2.470796G	500k	4

802.11ac VHT40_Nss1,(MCS0)_4TX — EBW

2422MHz

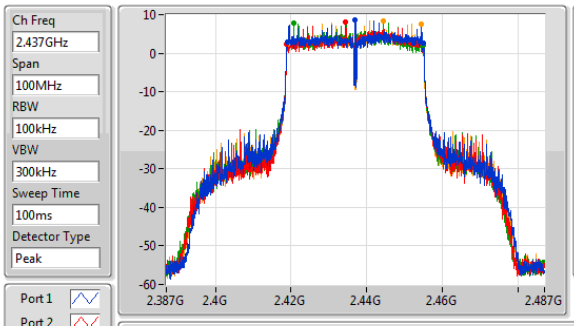


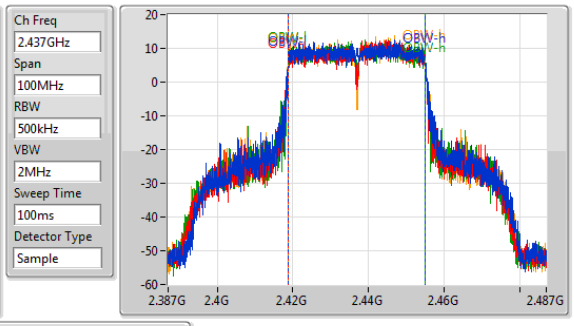


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
35.65M	2.40445G	2.4401G	36.182M	2.403909G	2.440091G	500k	1
36.35M	2.4038G	2.44015G	36.332M	2.403809G	2.440141G	500k	2
36.35M	2.4038G	2.44015G	36.282M	2.403859G	2.440141G	500k	3
36.25M	2.40385G	2.4401G	36.282M	2.403809G	2.440091G	500k	4

802.11ac VHT40_Nss1,(MCS0)_4TX — EBW

2437MHz

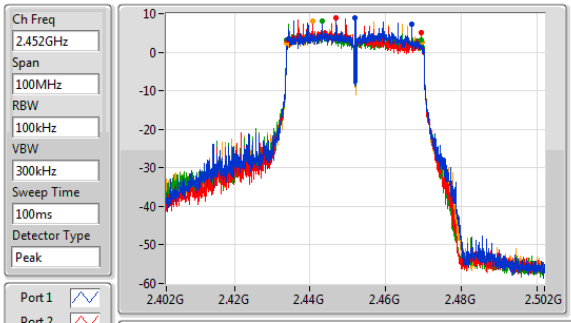


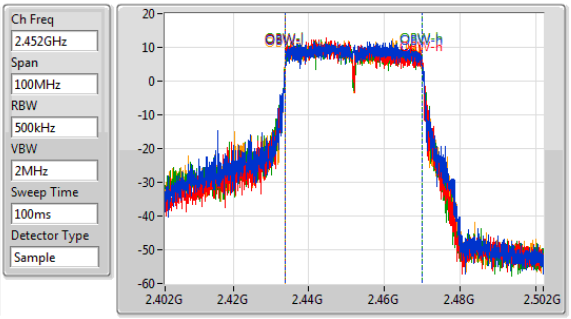


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
35.8M	2.41905G	2.45485G	36.232M	2.418809G	2.455041G	500k	1
36.25M	2.41885G	2.4551G	36.132M	2.418859G	2.454991G	500k	2
36.3M	2.4188G	2.4551G	36.132M	2.418859G	2.454991G	500k	3
35.4M	2.4191G	2.4545G	36.182M	2.418859G	2.455041G	500k	4

802.11ac VHT40_Nss1,(MCS0)_4TX — EBW

2452MHz





6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
32.7M	2.43425G	2.46695G	36.082M	2.433859G	2.469941G	500k	1
35.35M	2.4341G	2.46945G	36.182M	2.433809G	2.469991G	500k	2
35.7M	2.4338G	2.4695G	36.282M	2.433759G	2.470041G	500k	3
35.75M	2.4338G	2.46955G	36.182M	2.433809G	2.469991G	500k	4

AV Power Result

Summary

Mode	Total Power (dBm)	Total Power (W)
802.11b_(1Mbps)_4TX	-	-
2.4-2.4835GHz	29.97	0.99312
802.11g_(6Mbps)_4TX	-	-
2.4-2.4835GHz	29.83	0.96161
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-
2.4-2.4835GHz	29.89	0.97499
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-
2.4-2.4835GHz	29.37	0.86497

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_(1Mbps)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	2.13	24.49	23.53	23.67	23.71	29.89	30.00
2437MHz	Pass	2.13	24.41	23.94	23.72	23.69	29.97	30.00
2462MHz	Pass	2.13	24.05	23.17	23.21	23.45	29.51	30.00
802.11g_(6Mbps)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	2.13	23.91	23.09	23.34	23.05	29.38	30.00
2437MHz	Pass	2.13	23.87	23.82	23.78	23.76	29.83	30.00
2462MHz	Pass	2.13	24.37	23.35	23.42	23.88	29.80	30.00
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	2.13	23.81	23.23	23.02	23.49	29.42	30.00
2437MHz	Pass	2.13	23.92	23.89	23.76	23.91	29.89	30.00
2462MHz	Pass	2.13	24.63	23.34	23.45	23.88	29.88	30.00
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
2422MHz	Pass	2.13	23.64	23.28	23.12	23.24	29.34	30.00
2437MHz	Pass	2.13	23.51	23.37	23.25	23.28	29.37	30.00
2452MHz	Pass	2.13	23.68	23.17	22.97	23.39	29.33	30.00

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

Summary

Mode	PD (dBm/RBW)
802.11b_(1Mbps)_4TX	-
2.4-2.4835GHz	5.27
802.11g_(6Mbps)_4TX	-
2.4-2.4835GHz	5.25
802.11ac VHT20_Nss1,(MCS0)_4TX	-
2.4-2.4835GHz	5.32
802.11ac VHT40_Nss1,(MCS0)_4TX	-
2.4-2.4835GHz	-2.84

RBW=3kHz.

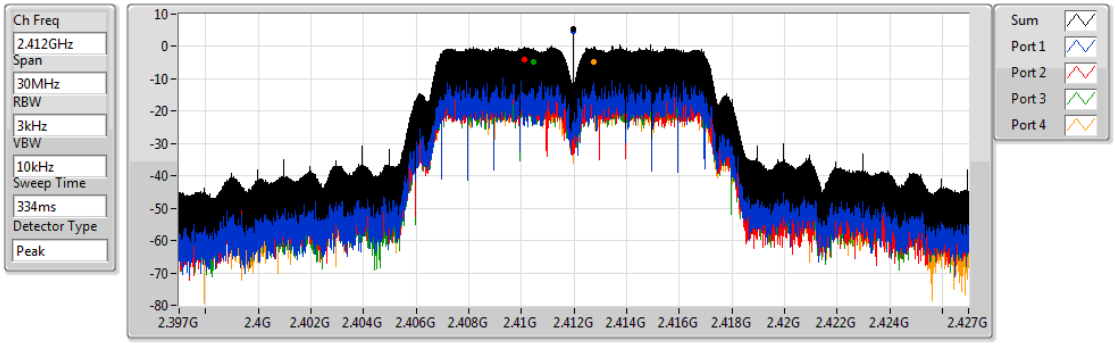
Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_(1Mbps)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	8.06	4.85	-4.02	-4.89	-4.61	5.27	5.94
2437MHz	Pass	8.06	0.02	-3.88	-4.26	-3.60	2.17	5.94
2462MHz	Pass	8.06	4.30	-5.50	-3.56	-5.18	5.22	5.94
802.11g_(6Mbps)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	8.06	4.66	-5.32	-3.82	-3.87	5.25	5.94
2437MHz	Pass	8.06	4.42	-3.51	-3.68	-4.35	5.08	5.94
2462MHz	Pass	8.06	0.57	-4.00	-4.24	-3.83	2.04	5.94
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	8.06	4.94	-5.20	-5.42	-4.95	5.21	5.94
2437MHz	Pass	8.06	4.75	-4.28	-4.65	-4.46	5.32	5.94
2462MHz	Pass	8.06	0.04	-5.08	-5.24	-5.62	0.94	5.94
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
2422MHz	Pass	8.06	-7.63	-8.33	-8.41	-8.91	-3.86	5.94
2437MHz	Pass	8.06	-8.33	-6.45	-8.69	-6.61	-2.84	5.94
2452MHz	Pass	8.06	-8.01	-7.87	-8.88	-8.33	-3.35	5.94

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)_4TX PSD

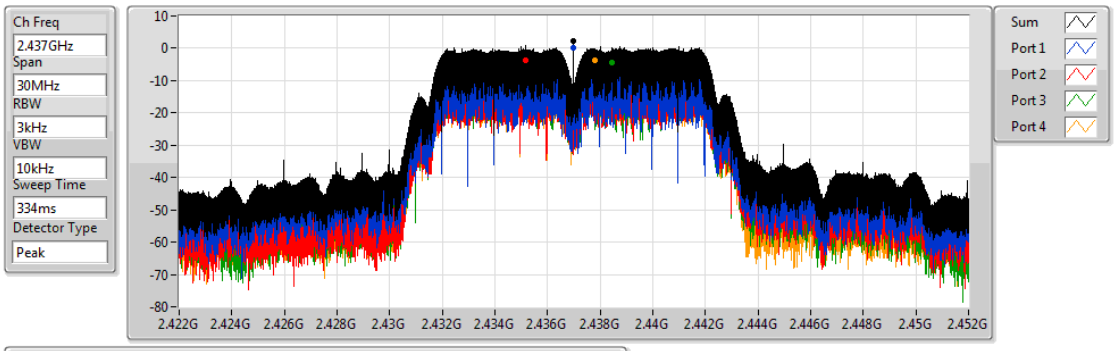
2412MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.27	5.27	4.85	-4.02	-4.89	-4.61

802.11b_(1Mbps)_4TX PSD

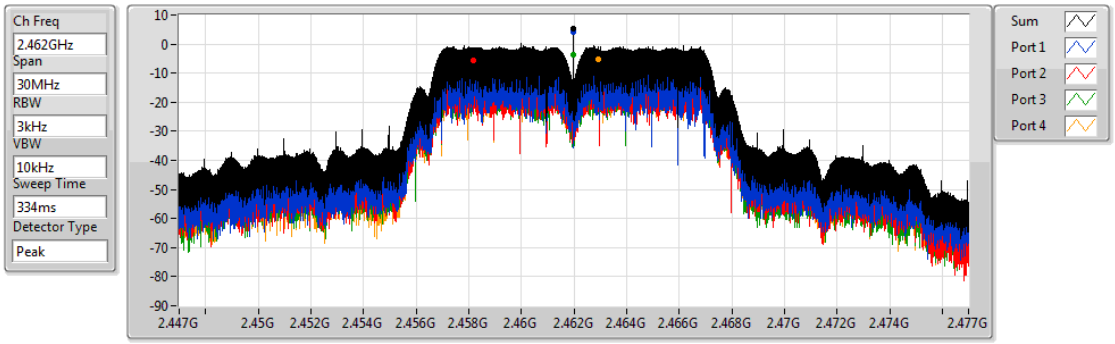
2437MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.17	2.17	0.02	-3.88	-4.26	-3.60

802.11b_(1Mbps)_4TX PSD

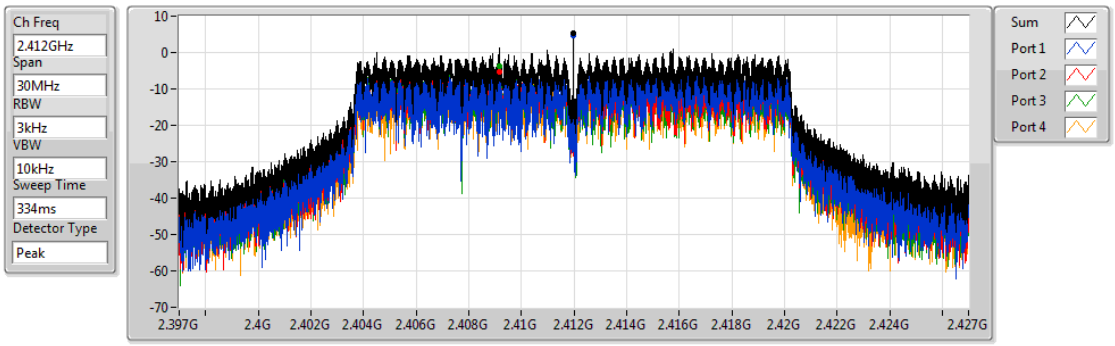
2462MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.22	5.22	4.30	-5.50	-3.56	-5.18

802.11g_(6Mbps)_4TX PSD

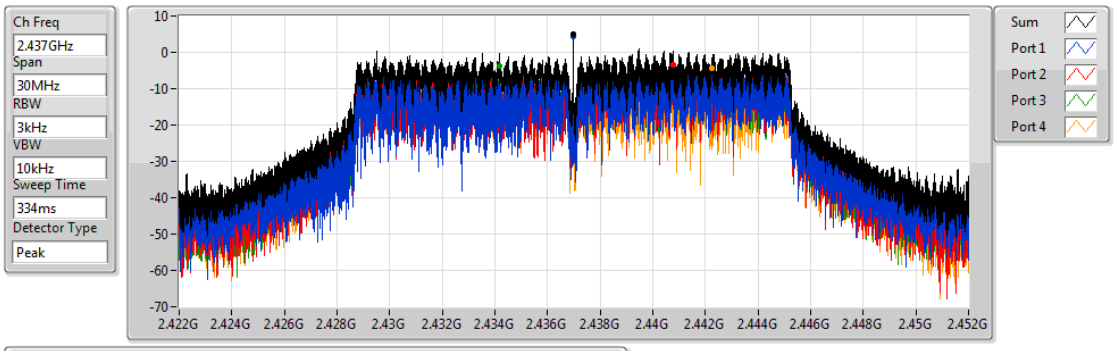
2412MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.25	5.25	4.66	-5.32	-3.82	-3.87

802.11g_(6Mbps)_4TX PSD

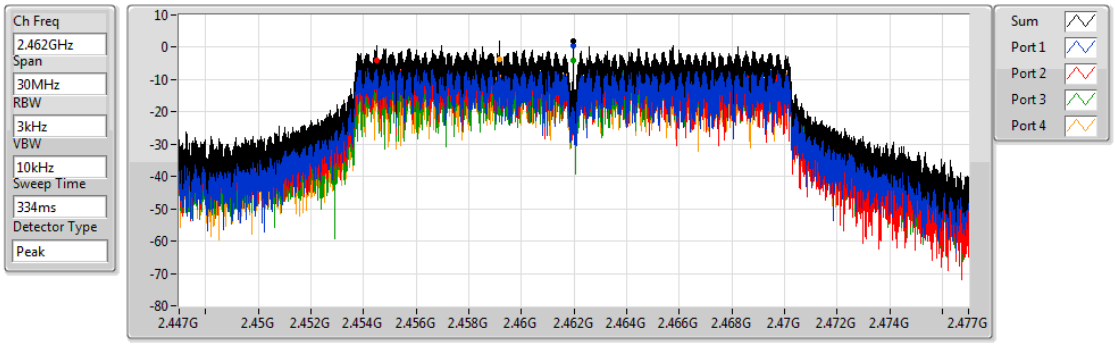
2437MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.08	5.08	4.42	-3.51	-3.68	-4.35

802.11g_(6Mbps)_4TX PSD

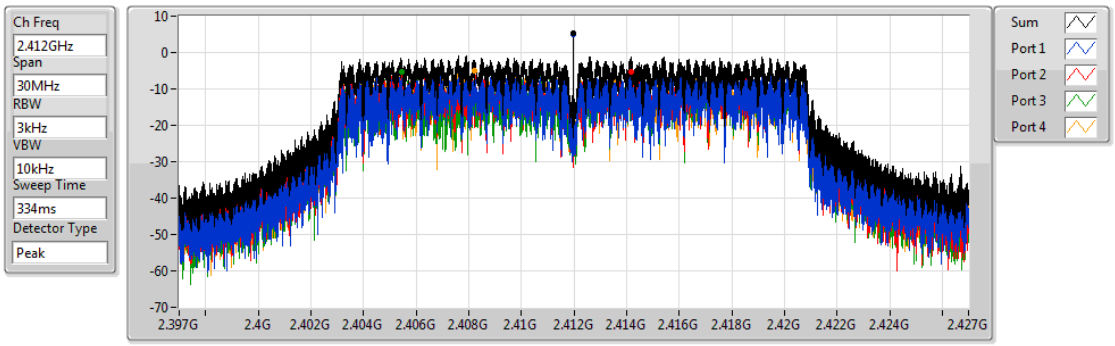
2462MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.04	2.04	0.57	-4.00	-4.24	-3.83

802.11ac VHT20_Nss1,(MCS0)_4TX PSD

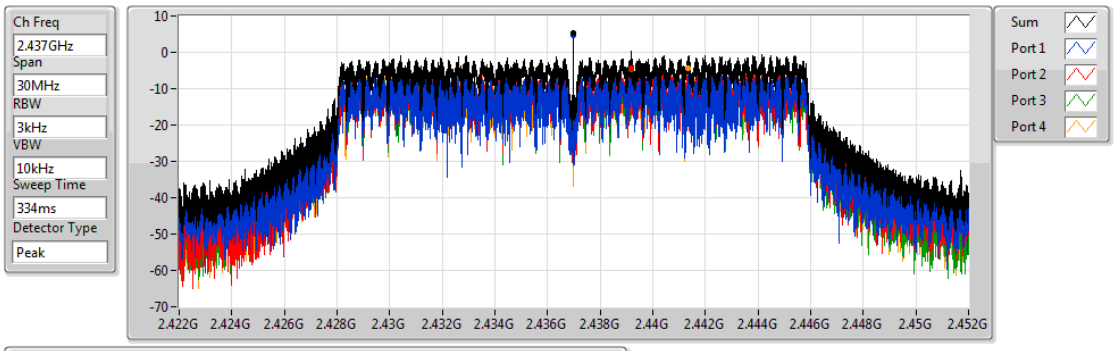
2412MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.21	5.21	4.94	-5.20	-5.42	-4.95

802.11ac VHT20_Nss1,(MCS0)_4TX PSD

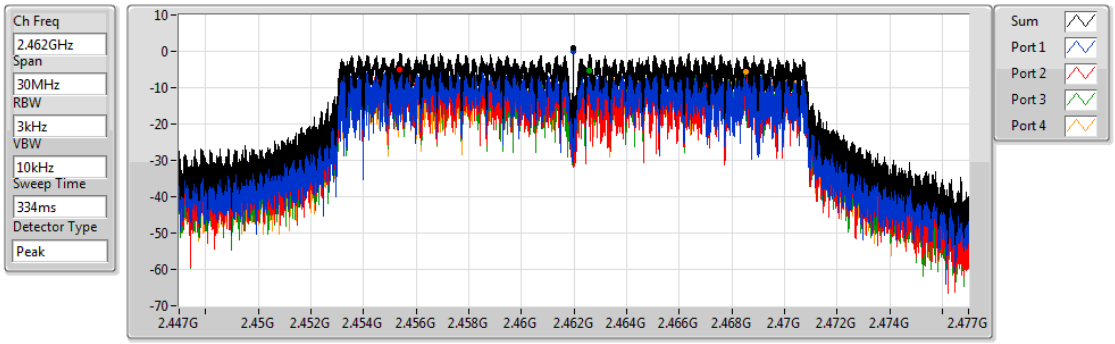
2437MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
5.32	5.32	4.75	-4.28	-4.65	-4.46

802.11ac VHT20_Nss1,(MCS0)_4TX PSD

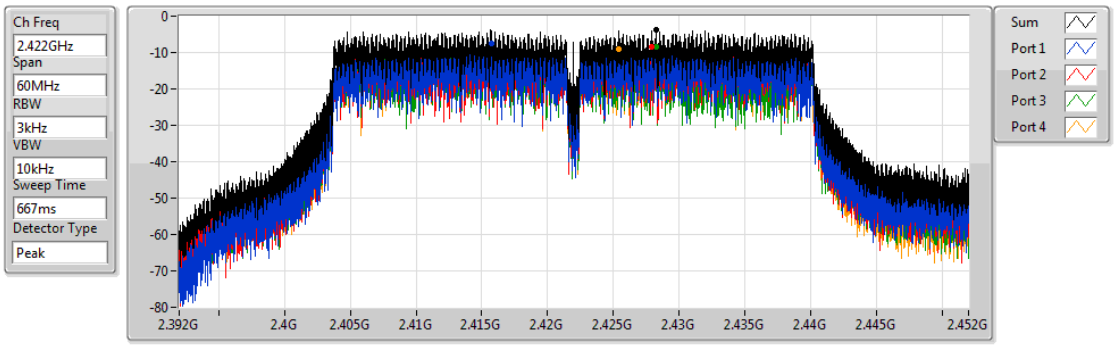
2462MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.94	0.94	0.04	-5.08	-5.24	-5.62

802.11ac VHT40_Nss1,(MCS0)_4TX PSD

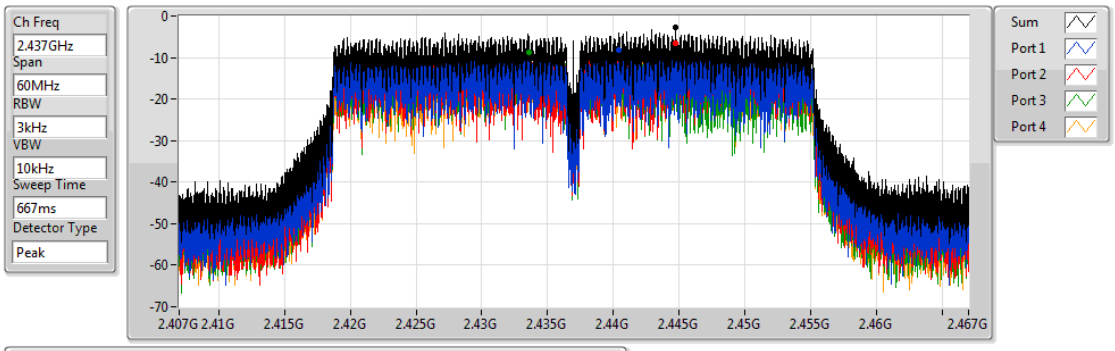
2422MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.86	-3.86	-7.63	-8.33	-8.41	-8.91

802.11ac VHT40_Nss1,(MCS0)_4TX PSD

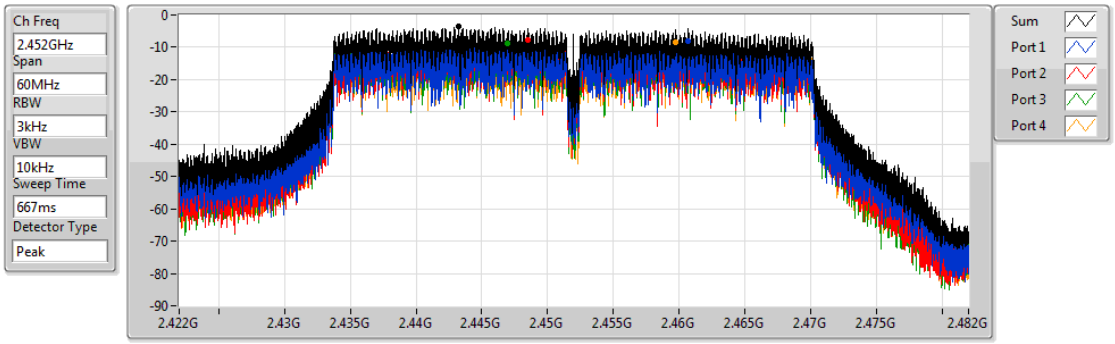
2437MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.84	-2.84	-8.33	-6.45	-8.69	-6.61

802.11ac VHT40_Nss1,(MCS0)_4TX PSD

2452MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.35	-3.35	-8.01	-7.87	-8.88	-8.33

Summary

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2.4-2.4835GHz	Pass	2.441917G	10.85	-19.15	2.144475G	-64.56	2.39952G	-19.15	2.4891G	-62.81	7.235136G	-40.93	4

Result

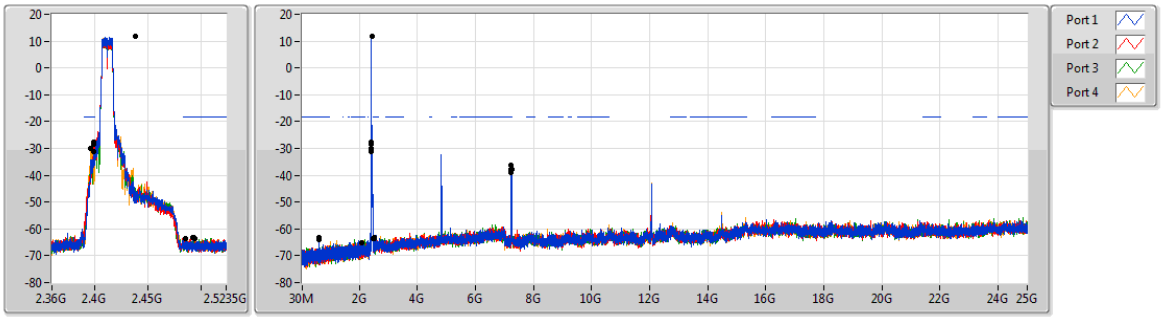
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
802.11b_(1Mbps)_4TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43841G	11.74	-18.26	618.325M	-63.32	2.39904G	-31.00	2.49198G	-63.26	7.232327G	-36.18	1
2412MHz	Pass	2.43841G	11.74	-18.26	2.088555G	-65.18	2.39904G	-27.84	2.48494G	-63.41	7.232327G	-37.99	2
2412MHz	Pass	2.43841G	11.74	-18.26	618.325M	-64.08	2.39904G	-28.46	2.4935G	-63.38	7.232327G	-39.12	3
2412MHz	Pass	2.43841G	11.74	-18.26	614.83M	-64.14	2.39648G	-30.08	2.49398G	-63.44	7.235136G	-37.79	4
2437MHz	Pass	2.43841G	11.74	-18.26	668.42M	-61.65	2.39992G	-48.34	2.48358G	-62.60	14.621476G	-50.51	1
2437MHz	Pass	2.43841G	11.74	-18.26	668.42M	-63.21	2.39552G	-49.08	2.49774G	-63.30	14.621476G	-52.84	2
2437MHz	Pass	2.43841G	11.74	-18.26	675.41M	-64.67	2.39984G	-48.16	2.48398G	-62.69	14.621476G	-51.89	3
2437MHz	Pass	2.43841G	11.74	-18.26	668.42M	-62.00	2.39856G	-47.40	2.48398G	-62.96	14.621476G	-52.01	4
2462MHz	Pass	2.43841G	11.74	-18.26	718.515M	-64.49	2.39992G	-50.66	2.48542G	-60.03	17.234369G	-54.60	1
2462MHz	Pass	2.43841G	11.74	-18.26	2.127G	-64.53	2.39832G	-50.78	2.48598G	-58.87	15.295771G	-55.72	2
2462MHz	Pass	2.43841G	11.74	-18.26	2.14331G	-64.22	2.39992G	-49.24	2.48566G	-58.99	16.737077G	-55.92	3
2462MHz	Pass	2.43841G	11.74	-18.26	1.98021G	-64.31	2.39888G	-50.45	2.48598G	-58.80	24.258276G	-56.80	4
802.11g_(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.441917G	11.91	-18.09	619.49M	-64.46	2.39984G	-19.26	2.48598G	-63.31	7.232327G	-37.71	1
2412MHz	Pass	2.441917G	11.91	-18.09	1.84507G	-63.65	2.39992G	-18.57	2.50318G	-63.57	7.240755G	-40.61	2
2412MHz	Pass	2.441917G	11.91	-18.09	2.19224G	-64.71	2.39992G	-18.85	2.48438G	-63.47	7.232327G	-42.04	3
2412MHz	Pass	2.441917G	11.91	-18.09	2.044285G	-64.34	2.39968G	-19.40	2.49078G	-63.43	7.237946G	-38.34	4
2437MHz	Pass	2.441917G	11.91	-18.09	1.918465G	-64.84	2.39984G	-45.00	2.49966G	-63.83	15.315438G	-56.10	1
2437MHz	Pass	2.441917G	11.91	-18.09	2.177095G	-64.24	2.39992G	-46.37	2.48414G	-62.58	17.068605G	-56.58	2
2437MHz	Pass	2.441917G	11.91	-18.09	2.17593G	-64.59	2.39704G	-46.57	2.50158G	-63.67	24.738711G	-56.13	3
2437MHz	Pass	2.441917G	11.91	-18.09	1.923125G	-64.75	2.39976G	-44.77	2.48446G	-62.52	24.193656G	-55.70	4
2462MHz	Pass	2.441917G	11.91	-18.09	1.71459G	-64.65	2.39992G	-49.79	2.4839G	-50.82	24.123417G	-56.20	1
2462MHz	Pass	2.441917G	11.91	-18.09	1.99186G	-65.18	2.39992G	-47.30	2.48358G	-50.63	24.283562G	-56.63	2
2462MHz	Pass	2.441917G	11.91	-18.09	2.17127G	-63.54	2.39952G	-49.44	2.48358G	-52.82	24.117797G	-56.85	3
2462MHz	Pass	2.441917G	11.91	-18.09	2.17826G	-64.91	2.39888G	-49.06	2.48358G	-50.09	24.778045G	-57.07	4
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.441917G	10.85	-19.15	2.14797G	-64.75	2.39984G	-23.12	2.49838G	-62.49	7.235136G	-38.57	1
2412MHz	Pass	2.441917G	10.85	-19.15	2.051275G	-64.24	2.39952G	-20.60	2.5123G	-63.47	7.240755G	-40.83	2
2412MHz	Pass	2.441917G	10.85	-19.15	1.850895G	-64.84	2.3996G	-21.37	2.52038G	-63.24	7.232327G	-38.37	3
2412MHz	Pass	2.441917G	10.85	-19.15	2.144475G	-64.56	2.39952G	-19.15	2.4891G	-62.81	7.235136G	-40.93	4
2437MHz	Pass	2.441917G	10.85	-19.15	2.151465G	-64.98	2.39992G	-43.50	2.4851G	-62.56	24.980333G	-56.18	1
2437MHz	Pass	2.441917G	10.85	-19.15	1.74954G	-64.77	2.39984G	-43.70	2.4851G	-62.49	24.80895G	-56.74	2
2437MHz	Pass	2.441917G	10.85	-19.15	2.04778G	-64.36	2.39952G	-45.41	2.5075G	-62.60	16.402739G	-55.56	3
2437MHz	Pass	2.441917G	10.85	-19.15	2.18059G	-64.49	2.39984G	-41.86	2.4947G	-62.81	16.633123G	-56.77	4
2462MHz	Pass	2.441917G	10.85	-19.15	1.65401G	-64.01	2.39936G	-50.44	2.48382G	-45.27	24.322895G	-55.91	1
2462MHz	Pass	2.441917G	10.85	-19.15	1.9173G	-64.25	2.3996G	-49.57	2.48358G	-47.88	16.925317G	-55.76	2
2462MHz	Pass	2.441917G	10.85	-19.15	2.142145G	-64.51	2.39984G	-48.75	2.48382G	-47.01	16.39431G	-56.38	3
2462MHz	Pass	2.441917G	10.85	-19.15	2.13632G	-64.64	2.3996G	-49.99	2.48406G	-46.36	24.238609G	-55.91	4
802.11ac VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	2.436907G	7.43	-22.57	1.86887G	-64.59	2.3968G	-24.12	2.48446G	-61.91	7.247119G	-43.36	1
2422MHz	Pass	2.436907G	7.43	-22.57	1.931845G	-64.17	2.39984G	-25.77	2.4843G	-61.10	7.244315G	-45.40	2

CSE Non-restricted Band 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
2422MHz	Pass	2.436907G	7.43	-22.57	1.785285G	-64.51	2.39888G	-25.36	2.48558G	-62.82	7.249924G	-44.70	3
2422MHz	Pass	2.436907G	7.43	-22.57	2.179165G	-64.93	2.39808G	-24.41	2.49838G	-62.09	7.249924G	-44.19	4
2437MHz	Pass	2.436907G	7.43	-22.57	1.74292G	-65.07	2.39872G	-29.39	2.48382G	-57.12	15.327064G	-56.18	1
2437MHz	Pass	2.436907G	7.43	-22.57	1.920395G	-64.61	2.39712G	-30.45	2.48382G	-57.41	24.374583G	-55.64	2
2437MHz	Pass	2.436907G	7.43	-22.57	2.09787G	-63.98	2.39984G	-29.72	2.48478G	-56.88	16.981756G	-55.34	3
2437MHz	Pass	2.436907G	7.43	-22.57	2.176875G	-63.08	2.39792G	-30.89	2.48478G	-58.74	24.270814G	-55.98	4
2452MHz	Pass	2.436907G	7.43	-22.57	1.849405G	-64.88	2.39856G	-39.55	2.48798G	-48.44	15.299018G	-55.81	1
2452MHz	Pass	2.436907G	7.43	-22.57	1.766965G	-65.05	2.39952G	-40.25	2.48878G	-51.38	24.997195G	-56.62	2
2452MHz	Pass	2.436907G	7.43	-22.57	1.99711G	-65.30	2.39872G	-37.56	2.48446G	-49.64	16.967733G	-56.17	3
2452MHz	Pass	2.436907G	7.43	-22.57	2.309695G	-63.89	2.39952G	-36.03	2.48878G	-50.90	15.327064G	-56.43	4

802.11b_(1Mbps)_4TX **CSE NdB**

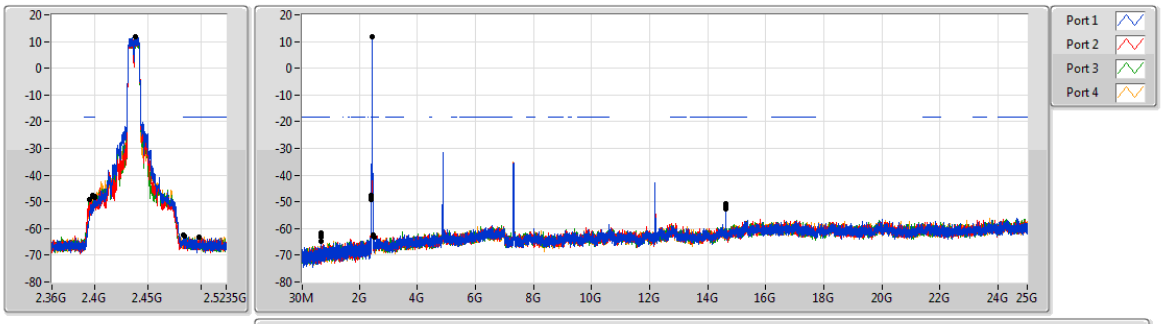
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43841G	11.74	-18.26	618.325M	-63.32	2.39904G	-31.00	2.49198G	-63.26	7.232327G	-36.18	1
2.43841G	11.74	-18.26	2.088555G	-65.18	2.39904G	-27.84	2.48494G	-63.41	7.232327G	-37.99	2
2.43841G	11.74	-18.26	618.325M	-64.08	2.39904G	-28.46	2.4935G	-63.38	7.232327G	-39.12	3
2.43841G	11.74	-18.26	614.83M	-64.14	2.39648G	-30.08	2.49398G	-63.44	7.235136G	-37.79	4

802.11b_(1Mbps)_4TX **CSE NdB**

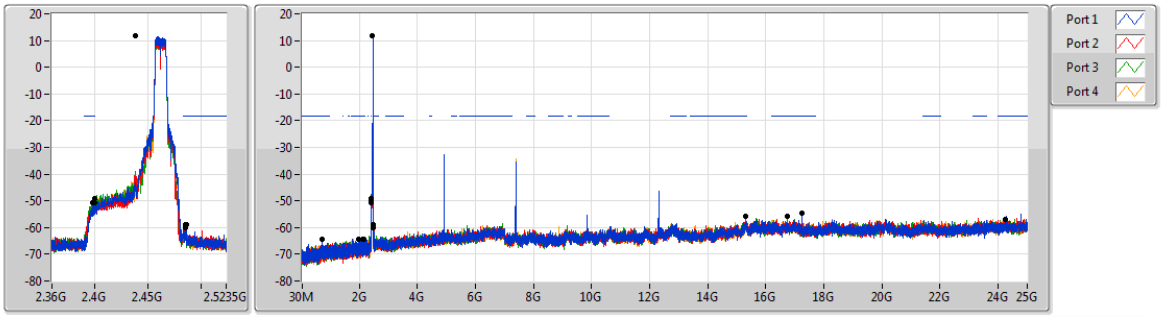
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43841G	11.74	-18.26	668.42M	-61.65	2.39992G	-48.34	2.48358G	-62.60	14.621476G	-50.51	1
2.43841G	11.74	-18.26	668.42M	-63.21	2.39552G	-49.08	2.49774G	-63.30	14.621476G	-52.84	2
2.43841G	11.74	-18.26	675.41M	-64.67	2.39984G	-48.16	2.48398G	-62.69	14.621476G	-51.89	3
2.43841G	11.74	-18.26	668.42M	-62.00	2.39856G	-47.40	2.48398G	-62.96	14.621476G	-52.01	4

802.11b_(1Mbps)_4TX **CSE NdB**

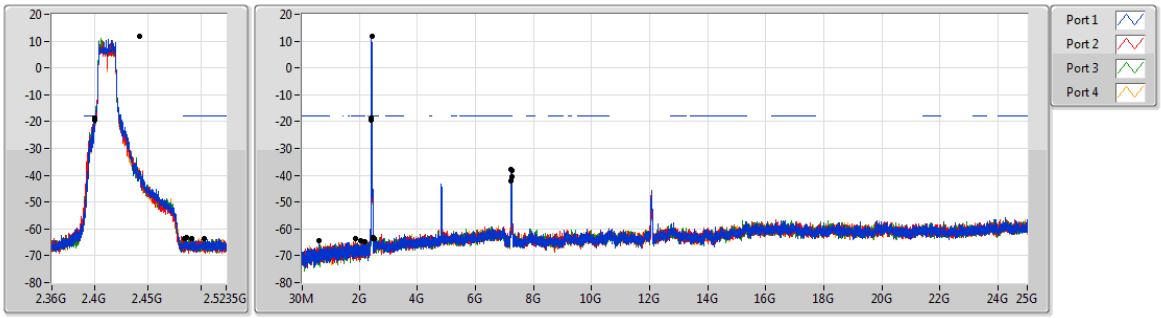
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43841G	11.74	-18.26	718.515M	-64.49	2.39992G	-50.66	2.48542G	-60.03	17.234369G	-54.60	1
2.43841G	11.74	-18.26	2.127G	-64.53	2.39832G	-50.78	2.48598G	-58.87	15.295771G	-55.72	2
2.43841G	11.74	-18.26	2.14331G	-64.22	2.39992G	-49.24	2.48566G	-58.99	16.737077G	-55.92	3
2.43841G	11.74	-18.26	1.98021G	-64.31	2.39888G	-50.45	2.48598G	-58.80	24.258276G	-56.80	4

802.11g_(6Mbps)_4TX **CSE NdB**

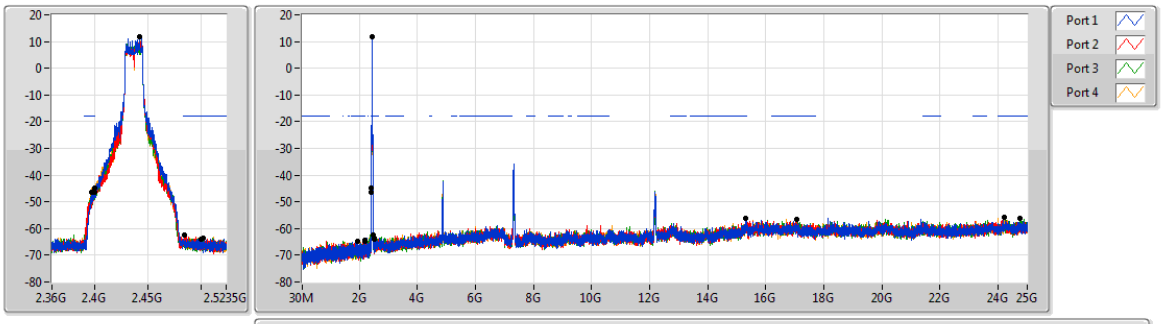
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.441917G	11.91	-18.09	619.49M	-64.46	2.39984G	-19.26	2.48598G	-63.31	7.232327G	-37.71	1
2.441917G	11.91	-18.09	1.84507G	-63.65	2.39992G	-18.57	2.50318G	-63.57	7.240755G	-40.61	2
2.441917G	11.91	-18.09	2.19224G	-64.71	2.39992G	-18.85	2.48438G	-63.47	7.232327G	-42.04	3
2.441917G	11.91	-18.09	2.044285G	-64.34	2.39968G	-19.40	2.49078G	-63.43	7.237946G	-38.34	4

802.11g_(6Mbps)_4TX **CSE NdB**

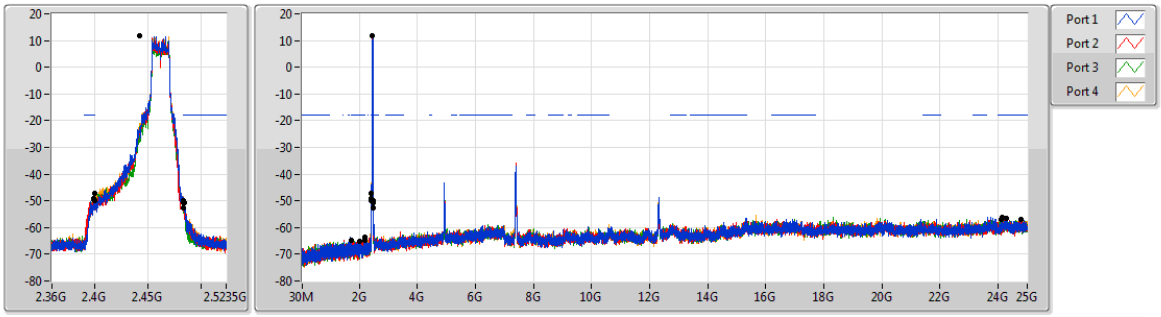
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.441917G	11.91	-18.09	1.918465G	-64.84	2.39984G	-45.00	2.49966G	-63.83	15.315438G	-56.10	1
2.441917G	11.91	-18.09	2.177095G	-64.24	2.39992G	-46.37	2.48414G	-62.58	17.068605G	-56.58	2
2.441917G	11.91	-18.09	2.17593G	-64.59	2.39704G	-46.57	2.50158G	-63.67	24.738711G	-56.13	3
2.441917G	11.91	-18.09	1.923125G	-64.75	2.39976G	-44.77	2.48446G	-62.52	24.193656G	-55.70	4

802.11g_(6Mbps)_4TX **CSE NdB**

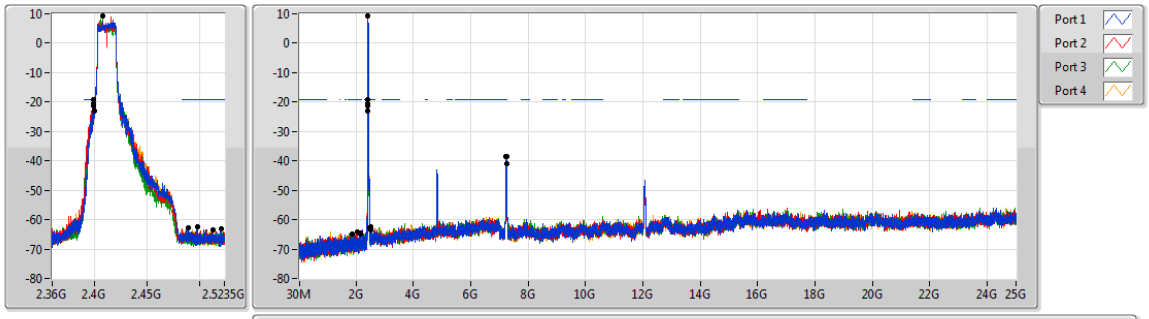
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.441917G	11.91	-18.09	1.71459G	-64.65	2.39992G	-49.79	2.4839G	-50.82	24.123417G	-56.20	1
2.441917G	11.91	-18.09	1.99186G	-65.18	2.39992G	-47.30	2.48358G	-50.63	24.283562G	-56.63	2
2.441917G	11.91	-18.09	2.17127G	-63.54	2.39952G	-49.44	2.48358G	-52.82	24.117797G	-56.85	3
2.441917G	11.91	-18.09	2.17826G	-64.91	2.39888G	-49.06	2.48358G	-50.09	24.778045G	-57.07	4

802.11ac VHT20_Nss1,(MCS0)_4TX **CSE NdB**

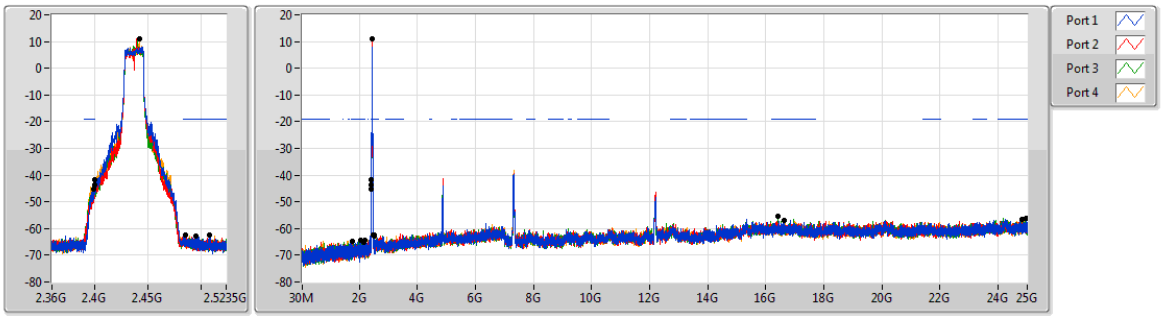
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.441917G	10.85	-19.15	2.14797G	-64.75	2.39984G	-23.12	2.49838G	-62.49	7.235136G	-38.57	1
2.441917G	10.85	-19.15	2.051275G	-64.24	2.39952G	-20.60	2.5123G	-63.47	7.240755G	-40.83	2
2.441917G	10.85	-19.15	1.850895G	-64.84	2.3996G	-21.37	2.52038G	-63.24	7.232327G	-38.37	3
2.441917G	10.85	-19.15	2.144475G	-64.56	2.39952G	-19.15	2.4891G	-62.81	7.235136G	-40.93	4

802.11ac VHT20_Nss1,(MCS0)_4TX **CSE NdB**

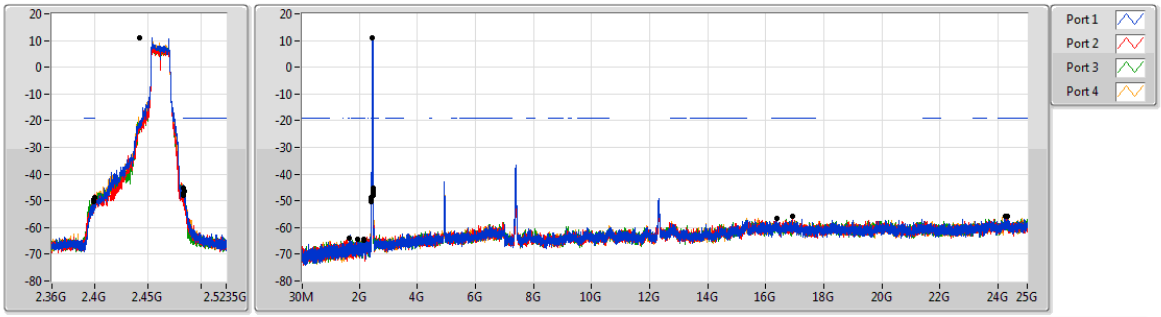
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.441917G	10.85	-19.15	2.151465G	-64.98	2.39992G	-43.50	2.4851G	-62.56	24.980333G	-56.18	1
2.441917G	10.85	-19.15	1.74954G	-64.77	2.39984G	-43.70	2.4851G	-62.49	24.80895G	-56.74	2
2.441917G	10.85	-19.15	2.04778G	-64.36	2.39952G	-45.41	2.5075G	-62.60	16.402739G	-55.56	3
2.441917G	10.85	-19.15	2.18059G	-64.49	2.39984G	-41.86	2.4947G	-62.81	16.633123G	-56.77	4

802.11ac VHT20_Nss1,(MCS0)_4TX **CSE NdB**

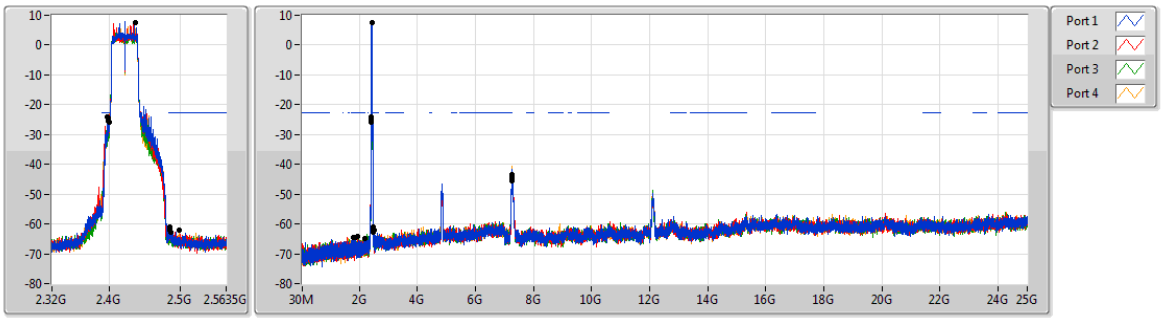
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.441917G	10.85	-19.15	1.65401G	-64.01	2.39936G	-50.44	2.48382G	-45.27	24.322895G	-55.91	1
2.441917G	10.85	-19.15	1.9173G	-64.25	2.3996G	-49.57	2.48358G	-47.88	16.925317G	-55.76	2
2.441917G	10.85	-19.15	2.142145G	-64.51	2.39984G	-48.75	2.48382G	-47.01	16.39431G	-56.38	3
2.441917G	10.85	-19.15	2.13632G	-64.64	2.3996G	-49.99	2.48406G	-46.36	24.238609G	-55.91	4

802.11ac VHT40_Nss1,(MCS0)_4TX **CSE NdB**

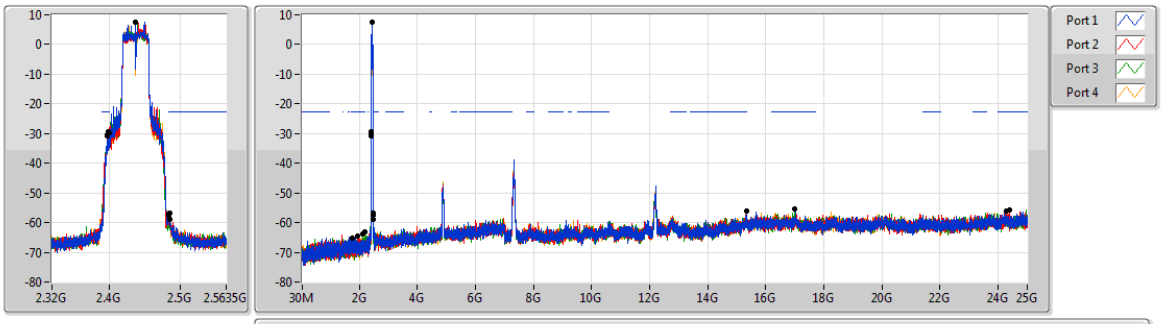
2422MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.436907G	7.43	-22.57	1.86887G	-64.59	2.3968G	-24.12	2.48446G	-61.91	7.247119G	-43.36	1
2.436907G	7.43	-22.57	1.931845G	-64.17	2.39984G	-25.77	2.4843G	-61.10	7.244315G	-45.40	2
2.436907G	7.43	-22.57	1.785285G	-64.51	2.39888G	-25.36	2.48558G	-62.82	7.249924G	-44.70	3
2.436907G	7.43	-22.57	2.179165G	-64.93	2.39808G	-24.41	2.49838G	-62.09	7.249924G	-44.19	4

802.11ac VHT40_Nss1,(MCS0)_4TX **CSE NdB**

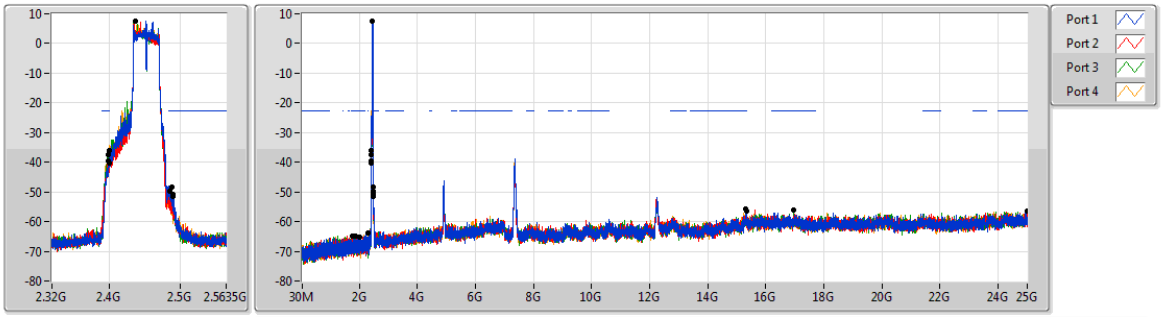
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.436907G	7.43	-22.57	1.74292G	-65.07	2.39872G	-29.39	2.48382G	-57.12	15.327064G	-56.18	1
2.436907G	7.43	-22.57	1.920395G	-64.61	2.39712G	-30.45	2.48382G	-57.41	24.374583G	-55.64	2
2.436907G	7.43	-22.57	2.09787G	-63.98	2.39984G	-29.72	2.48478G	-56.88	16.981756G	-55.34	3
2.436907G	7.43	-22.57	2.176875G	-63.08	2.39792G	-30.89	2.48478G	-58.74	24.270814G	-55.98	4

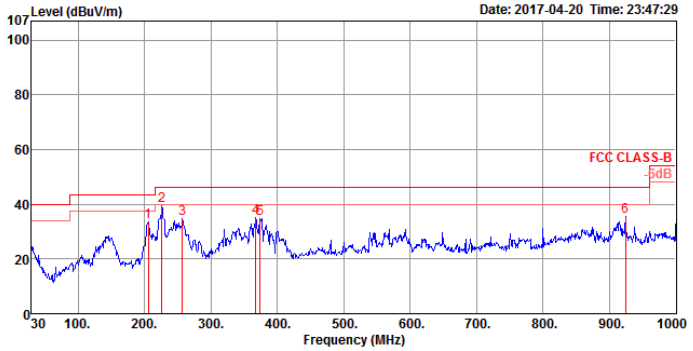
802.11ac VHT40_Nss1,(MCS0)_4TX **CSE NdB**

2452MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.436907G	7.43	-22.57	1.849405G	-64.88	2.39856G	-39.55	2.48798G	-48.44	15.299018G	-55.81	1
2.436907G	7.43	-22.57	1.766965G	-65.05	2.39952G	-40.25	2.48878G	-51.38	24.997195G	-56.62	2
2.436907G	7.43	-22.57	1.99711G	-65.30	2.39872G	-37.56	2.48446G	-49.64	16.967733G	-56.17	3
2.436907G	7.43	-22.57	2.309695G	-63.89	2.39952G	-36.03	2.48878G	-50.90	15.327064G	-56.43	4

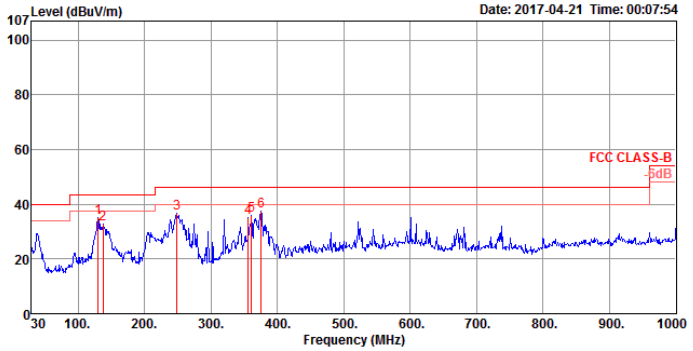
RSE below 1GHz Result			
Operating Mode	4	**Polarization**	Horizontal
Operating Function	CTX		



	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	205.57	33.41	43.50	-10.09	47.95	1.14	16.31	31.99	100	16	Peak	HORIZONTAL
2	225.94	39.43	46.00	-6.57	53.47	1.20	16.73	31.97	100	55	Peak	HORIZONTAL
3	256.98	34.58	46.00	-11.42	45.93	1.27	19.35	31.97	100	129	Peak	HORIZONTAL
4	367.56	35.15	46.00	-10.85	44.23	1.49	21.54	32.11	100	208	Peak	HORIZONTAL
5	374.35	34.94	46.00	-11.06	43.86	1.50	21.70	32.12	100	177	Peak	HORIZONTAL
6	924.34	35.51	46.00	-10.49	38.06	2.42	27.49	32.46	100	114	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	4	**Polarization**	Vertical
Operating Function	CTX		



	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	129.91	35.09	43.50	-8.41	47.67	0.90	18.40	31.88	100	147	Peak	VERTICAL
2	137.67	32.87	43.50	-10.63	46.00	0.92	17.83	31.88	100	162	Peak	VERTICAL
3	249.22	36.73	46.00	-9.27	48.81	1.25	18.64	31.97	100	221	Peak	VERTICAL
4	355.92	35.33	46.00	-10.67	44.71	1.47	21.23	32.08	100	200	Peak	VERTICAL
5	360.77	35.78	46.00	-10.22	45.04	1.48	21.35	32.09	100	178	Peak	VERTICAL
6	375.32	37.33	46.00	-8.67	46.22	1.50	21.73	32.12	100	165	Peak	VERTICAL

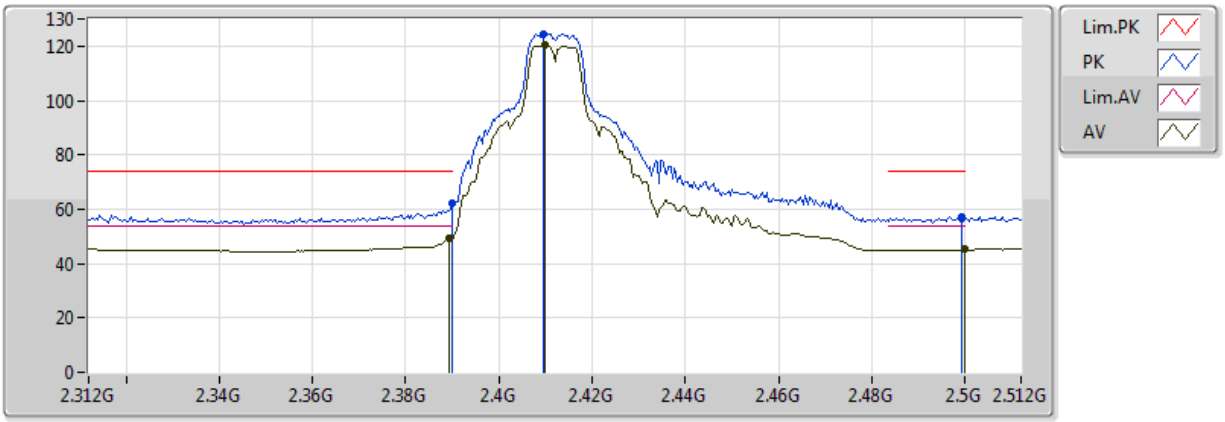
Note 1: “>20dB” means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: “N/F” means Nothing Found emissions (No emissions were detected.)

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
802.11ac VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-	-	-
2.4-2.4835GHz	Pass	AV	2.39G	52.99	54.00	-1.01	32.67	3	V	289	1.97	-

802.11b_(1Mbps)_4TX

2412MHz_TX

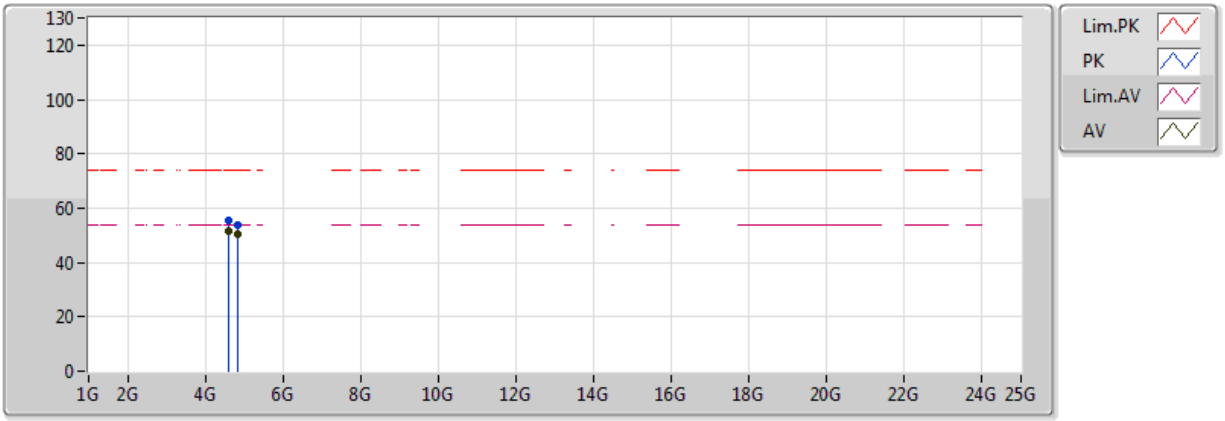


20170408
EUT Z 4TX Non_TXBF
Setting 26
04-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3892G	49.06	54.00	-4.94	32.67	3	V	190	2.34	-
AV	2.41G	120.51	Inf	-Inf	32.68	3	V	190	2.34	-
AV	2.5G	45.12	54.00	-8.88	32.80	3	V	190	2.34	-
PK	2.39G	61.93	74.00	-12.07	32.67	3	V	190	2.34	-
PK	2.4096G	124.54	Inf	-Inf	32.68	3	V	190	2.34	-
PK	2.4992G	57.17	74.00	-16.83	32.80	3	V	190	2.34	-

802.11b_(1Mbps)_4TX

2412MHz_TX

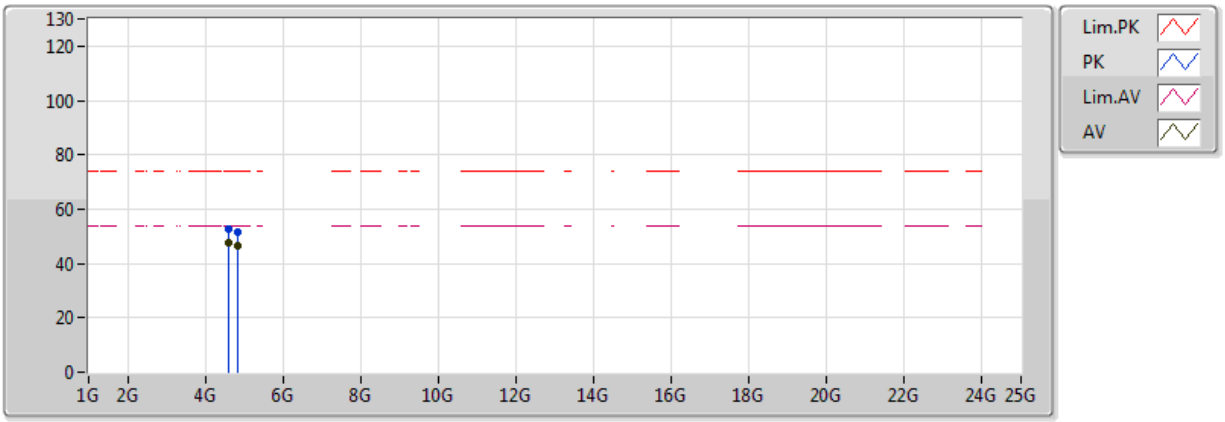


20170408
EUT Z 4TX Non_TXBF
Setting 26
04-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.59692G	51.69	54.00	-2.31	3.07	3	V	202	1.02	-
AV	4.82392G	50.57	54.00	-3.43	3.70	3	V	83	1.01	-
PK	4.5972G	55.60	74.00	-18.40	3.07	3	V	202	1.02	-
PK	4.82396G	53.98	74.00	-20.02	3.70	3	V	83	1.01	-

802.11b_(1Mbps)_4TX

2412MHz_TX

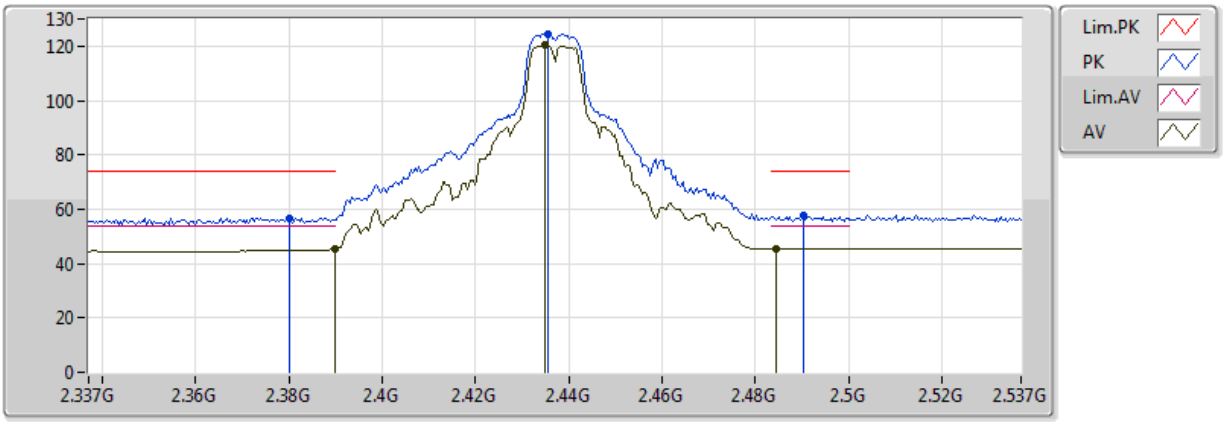


20170408
EUT Z 4TX Non_TXBF
Setting 26
04-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.59684G	47.51	54.00	-6.49	3.07	3	H	228	2.95	-
AV	4.82392G	46.55	54.00	-7.45	3.70	3	H	52	1.02	-
PK	4.59724G	52.60	74.00	-21.40	3.07	3	H	228	2.95	-
PK	4.8238G	51.29	74.00	-22.71	3.70	3	H	52	1.02	-

802.11b_(1Mbps)_4TX

2437MHz_TX

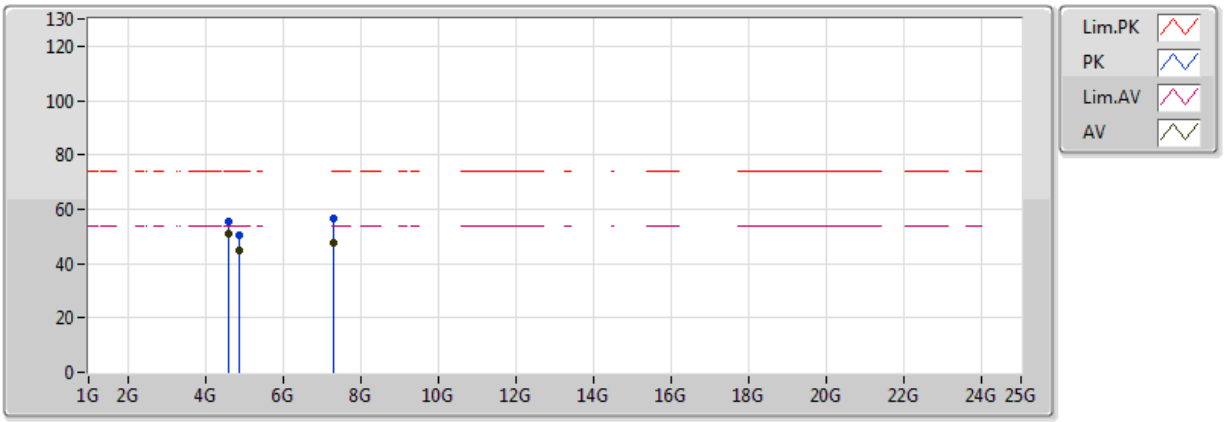


20170408
EUT Z 4TX Non_TXBF
Setting 26
04-M-01

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	45.33	54.00	-8.67	32.67	3	V	180	1.76	-
AV	2.435G	120.52	Inf	-Inf	32.72	3	V	180	1.76	-
AV	2.4846G	45.47	54.00	-8.53	32.78	3	V	180	1.76	-
PK	2.3802G	56.87	74.00	-17.13	32.66	3	V	180	1.76	-
PK	2.4354G	124.50	Inf	-Inf	32.72	3	V	180	1.76	-
PK	2.4902G	57.55	74.00	-16.45	32.79	3	V	180	1.76	-

802.11b_(1Mbps)_4TX

2437MHz_TX

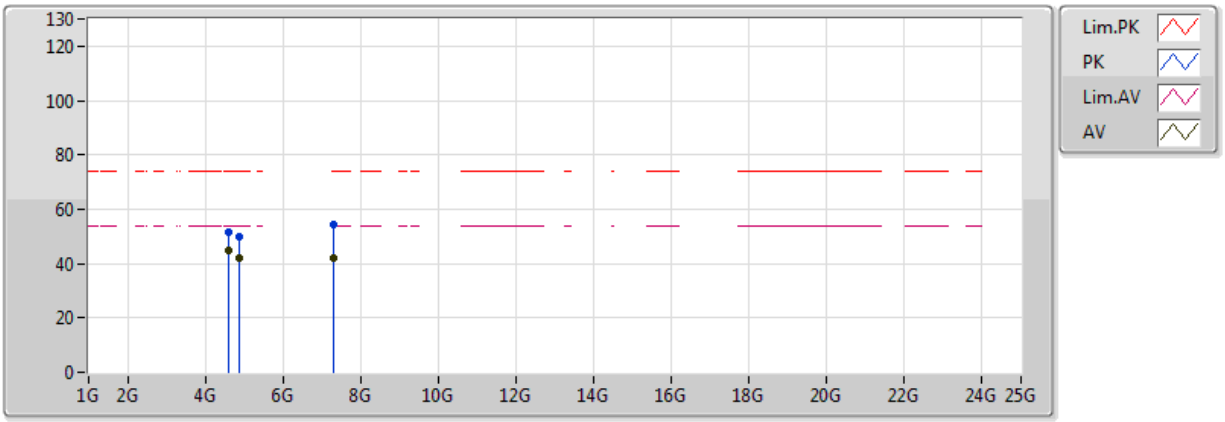


20170408
EUT Z 4TX Non_TXBF
Setting 26
04-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.5992G	50.93	54.00	-3.07	3.08	3	V	315	1.39	-
AV	4.87392G	44.57	54.00	-9.43	3.84	3	V	200	1.50	-
AV	7.30916G	47.50	54.00	-6.50	10.33	3	V	131	1.01	-
PK	4.59908G	55.38	74.00	-18.62	3.08	3	V	315	1.39	-
PK	4.87412G	50.40	74.00	-23.60	3.84	3	V	200	1.50	-
PK	7.30888G	56.69	74.00	-17.31	10.33	3	V	131	1.01	-

802.11b_(1Mbps)_4TX

2437MHz_TX

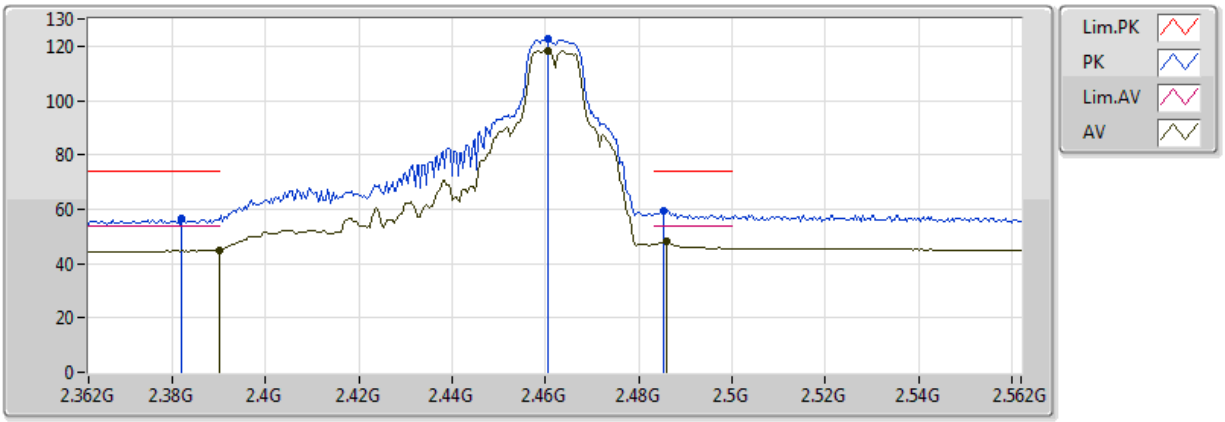


20170408
EUT Z 4TX Non_TXBF
Setting 26
04-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.59784G	45.04	54.00	-8.96	3.07	3	H	289	1.01	-
AV	4.87392G	42.25	54.00	-11.75	3.84	3	H	27	2.96	-
AV	7.30908G	42.11	54.00	-11.89	10.33	3	H	14	1.02	-
PK	4.59756G	51.58	74.00	-22.42	3.07	3	H	289	1.01	-
PK	4.87396G	49.77	74.00	-24.23	3.84	3	H	27	2.96	-
PK	7.30892G	54.51	74.00	-19.49	10.33	3	H	14	1.02	-

802.11b_(1Mbps)_4TX

2462MHz_TX

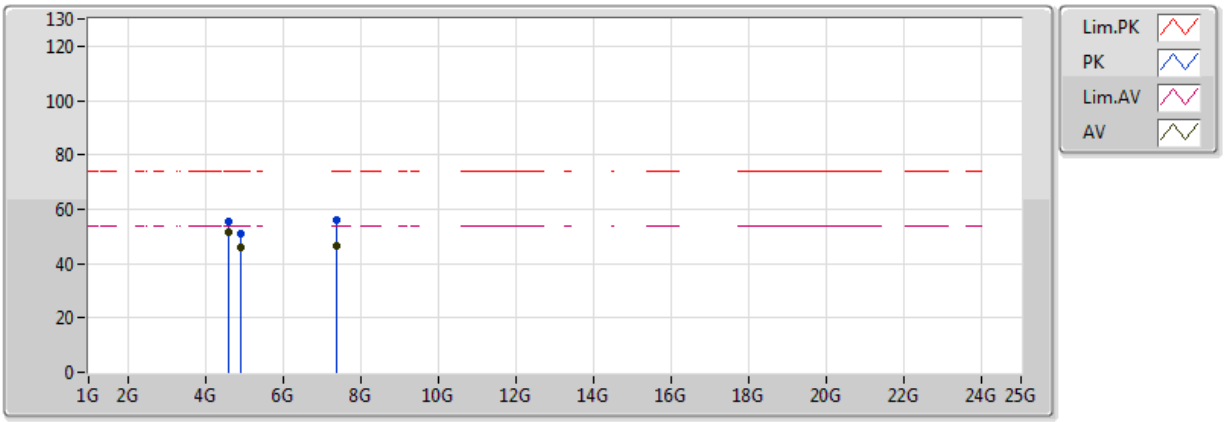


20170408
EUT Z 4TX Non_TXBF
Setting 26
04-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.39G	44.82	54.00	-9.18	32.67	3	V	299	1.50	-
AV	2.4604G	118.38	Inf	-Inf	32.75	3	V	299	1.50	-
AV	2.486G	48.07	54.00	-5.93	32.78	3	V	299	1.50	-
PK	2.382G	56.35	74.00	-17.65	32.66	3	V	299	1.50	-
PK	2.4604G	122.46	Inf	-Inf	32.75	3	V	299	1.50	-
PK	2.4852G	59.46	74.00	-14.54	32.78	3	V	299	1.50	-

802.11b_(1Mbps)_4TX

2462MHz_TX

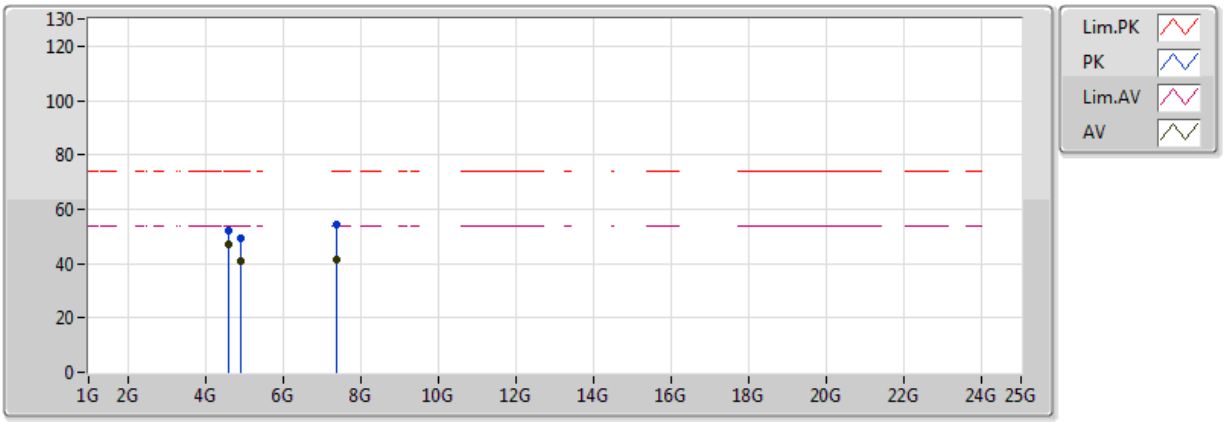


20170408
EUT Z 4TX Non_TXBF
Setting 26
04-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.59528G	51.52	54.00	-2.48	3.07	3	V	202	1.01	-
AV	4.92392G	45.92	54.00	-8.08	3.98	3	V	88	1.07	-
AV	7.38416G	46.76	54.00	-7.24	10.44	3	V	131	1.02	-
PK	4.59536G	55.66	74.00	-18.34	3.07	3	V	202	1.01	-
PK	4.92384G	51.14	74.00	-22.86	3.98	3	V	88	1.07	-
PK	7.38396G	56.23	74.00	-17.77	10.44	3	V	131	1.02	-

802.11b_(1Mbps)_4TX

2462MHz_TX

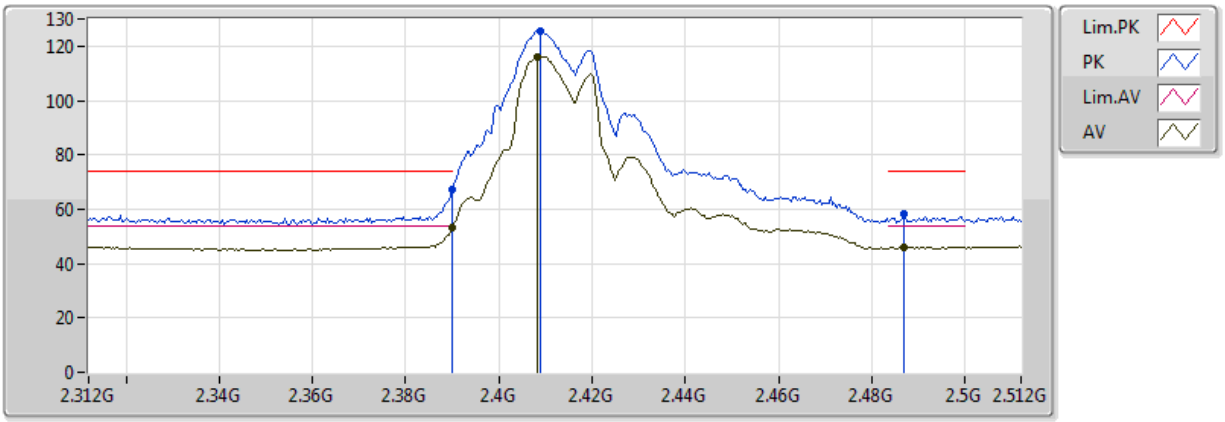


20170408
EUT Z 4TX Non_TXBF
Setting 26
04-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.59008G	46.89	54.00	-7.11	3.05	3	H	281	2.87	-
AV	4.92396G	41.11	54.00	-12.89	3.98	3	H	26	1.03	-
AV	7.38408G	41.34	54.00	-12.66	10.44	3	H	49	1.07	-
PK	4.58976G	52.34	74.00	-21.66	3.05	3	H	281	2.87	-
PK	4.92392G	49.51	74.00	-24.49	3.98	3	H	26	1.03	-
PK	7.3838G	54.50	74.00	-19.50	10.44	3	H	49	1.07	-

802.11g_(6Mbps)_4TX

2412MHz_TX

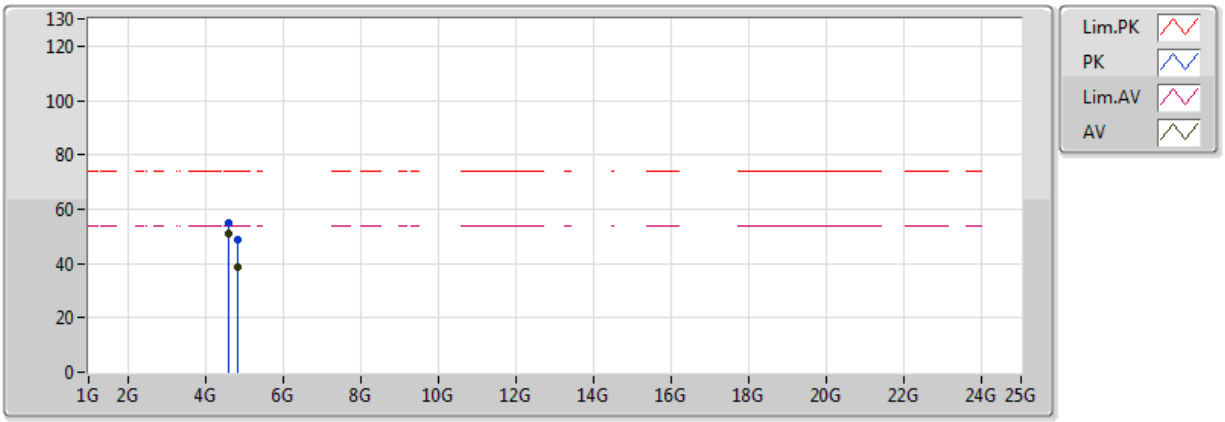


20170408
EUT Z 4TX Non_TXBF
Setting 24
04-M-01

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	52.98	54.00	-1.02	32.67	3	V	287	1.95	-
AV	2.4084G	116.23	Inf	-Inf	32.68	3	V	287	1.95	-
AV	2.4868G	46.10	54.00	-7.90	32.78	3	V	287	1.95	-
PK	2.39G	67.28	74.00	-6.72	32.67	3	V	287	1.95	-
PK	2.4088G	125.68	Inf	-Inf	32.68	3	V	287	1.95	-
PK	2.4868G	58.28	74.00	-15.72	32.78	3	V	287	1.95	-

802.11g_(6Mbps)_4TX

2412MHz_TX

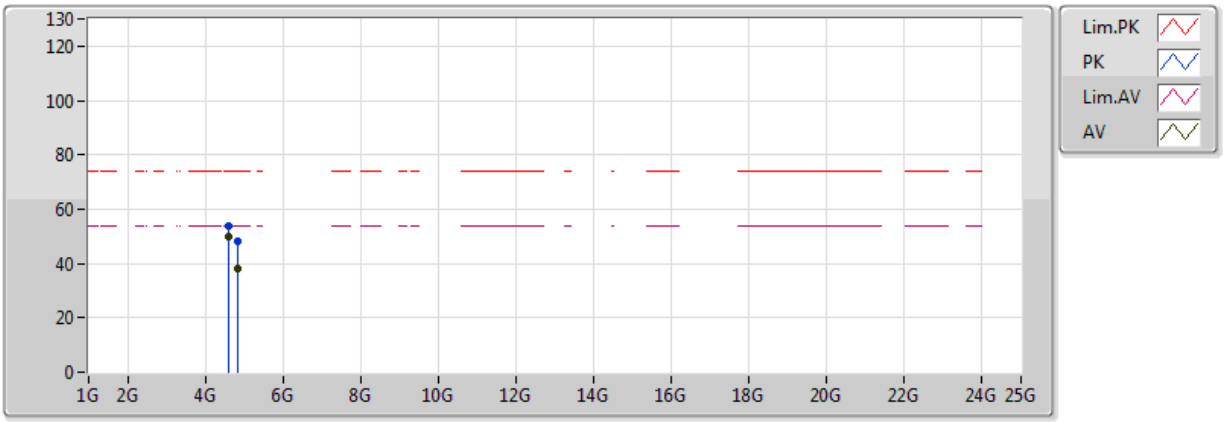


20170408
EUT Z 4TX Non_TXBF
Setting 24
04-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.59108G	51.00	54.00	-3.00	3.05	3	V	316	1.38	-
AV	4.82396G	38.51	54.00	-15.49	3.70	3	V	84	1.02	-
PK	4.59108G	54.71	74.00	-19.29	3.05	3	V	316	1.38	-
PK	4.82376G	48.78	74.00	-25.22	3.70	3	V	84	1.02	-

802.11g_(6Mbps)_4TX

2412MHz_TX

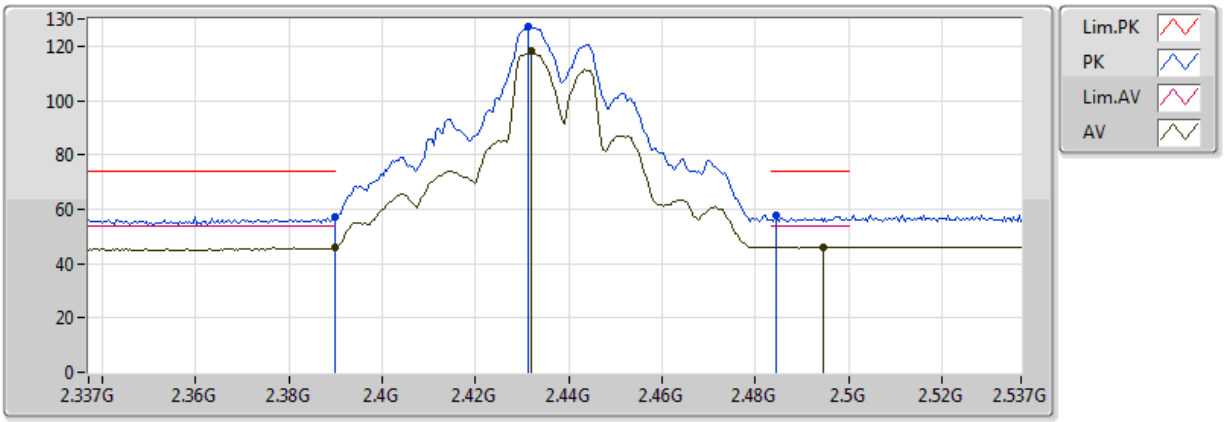


20170408
EUT Z 4TX Non_TXBF
Setting 24
04-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.59504G	49.79	54.00	-4.21	3.07	3	H	280	2.88	-
AV	4.824G	38.02	54.00	-15.98	3.70	3	H	21	1.01	-
PK	4.59512G	53.84	74.00	-20.16	3.07	3	H	280	2.88	-
PK	4.82396G	48.06	74.00	-25.94	3.70	3	H	21	1.01	-

802.11g_(6Mbps)_4TX

2437MHz_TX

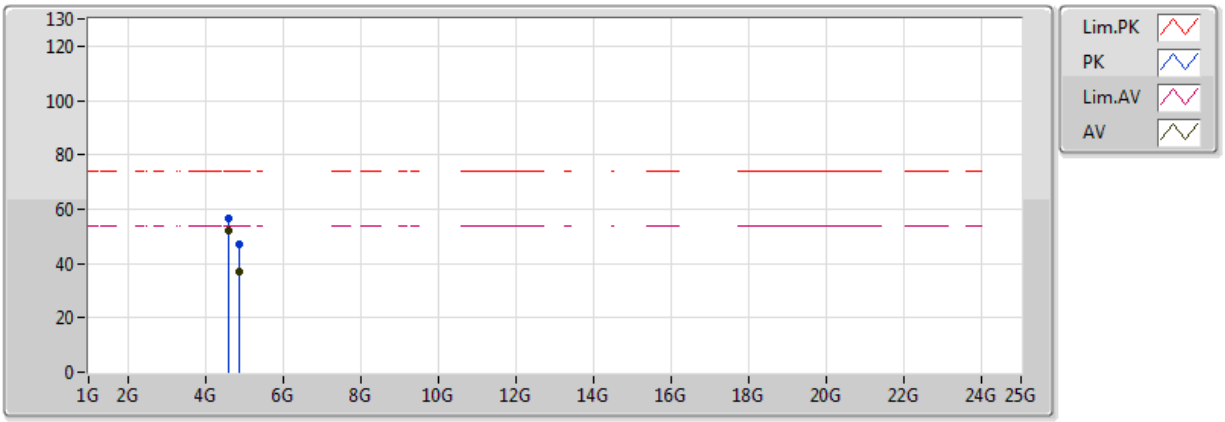


20170408
EUT Z 4TX Non_TXBF
Setting 26
04-M-01

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	46.16	54.00	-7.84	32.67	3	V	280	1.91	-
AV	2.4318G	118.08	Inf	-Inf	32.71	3	V	280	1.91	-
AV	2.4946G	46.14	54.00	-7.86	32.79	3	V	280	1.91	-
PK	2.389998G	57.04	74.00	-16.96	32.67	3	V	280	1.91	-
PK	2.4314G	127.14	Inf	-Inf	32.71	3	V	280	1.91	-
PK	2.4846G	57.56	74.00	-16.44	32.78	3	V	280	1.91	-

802.11g_(6Mbps)_4TX

2437MHz_TX

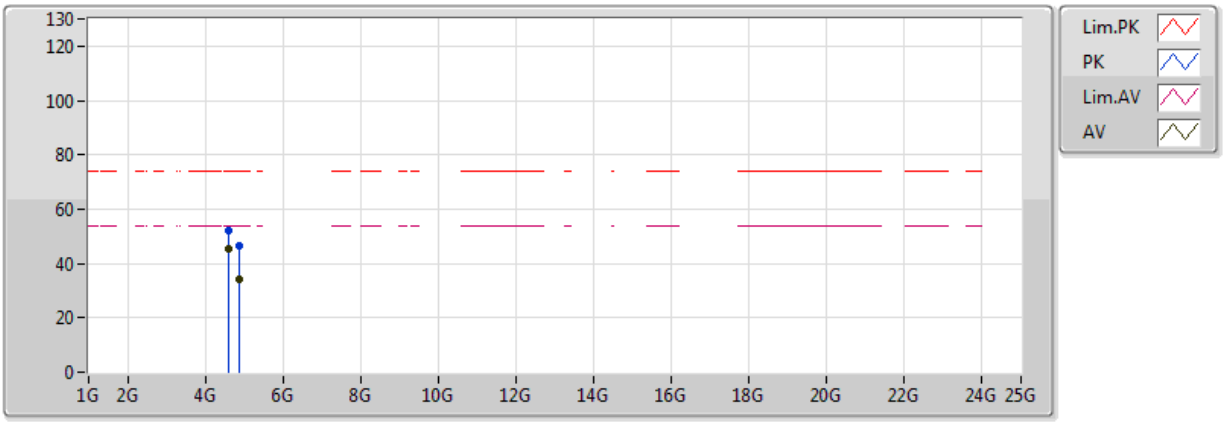


20170408
EUT Z 4TX Non_TXBF
Setting 26
04-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.595G	51.85	54.00	-2.15	3.07	3	V	239	1.85	-
AV	4.87396G	36.80	54.00	-17.20	3.84	3	V	359	1.58	-
PK	4.5952G	56.35	74.00	-17.65	3.07	3	V	239	1.85	-
PK	4.87424G	46.87	74.00	-27.13	3.84	3	V	359	1.58	-

802.11g_(6Mbps)_4TX

2437MHz_TX

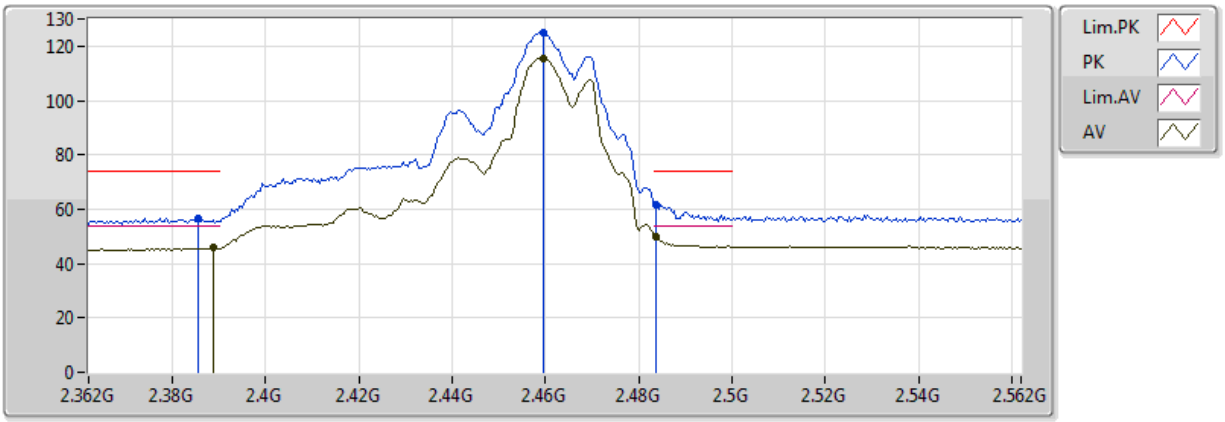


20170408
EUT Z 4TX Non_TXBF
Setting 26
04-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.59492G	45.31	54.00	-8.69	3.07	3	H	78	2.19	-
AV	4.87388G	34.19	54.00	-19.81	3.84	3	H	245	1.83	-
PK	4.60032G	52.25	74.00	-21.75	3.08	3	H	78	2.19	-
PK	4.87036G	46.58	74.00	-27.42	3.83	3	H	245	1.83	-

802.11g_(6Mbps)_4TX

2462MHz_TX

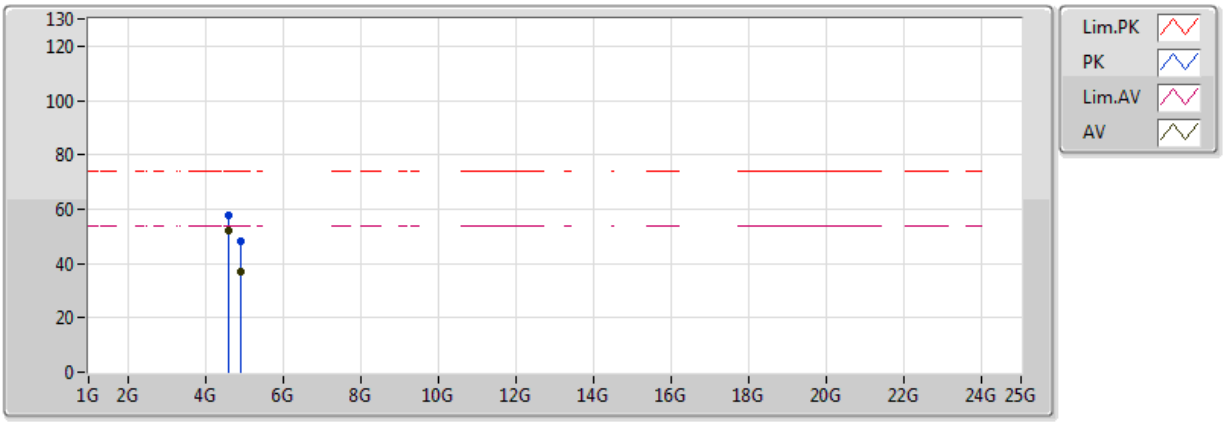


20170408
EUT Z 4TX Non_TXBF
Setting 26
04-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3888G	45.68	54.00	-8.32	32.67	3	V	288	1.50	-
AV	2.4596G	115.69	Inf	-Inf	32.75	3	V	288	1.50	-
AV	2.4836G	50.07	54.00	-3.93	32.78	3	V	288	1.50	-
PK	2.3856G	56.83	74.00	-17.17	32.67	3	V	288	1.50	-
PK	2.4596G	125.12	Inf	-Inf	32.75	3	V	288	1.50	-
PK	2.4836G	61.63	74.00	-12.37	32.78	3	V	288	1.50	-

802.11g_(6Mbps)_4TX

2462MHz_TX

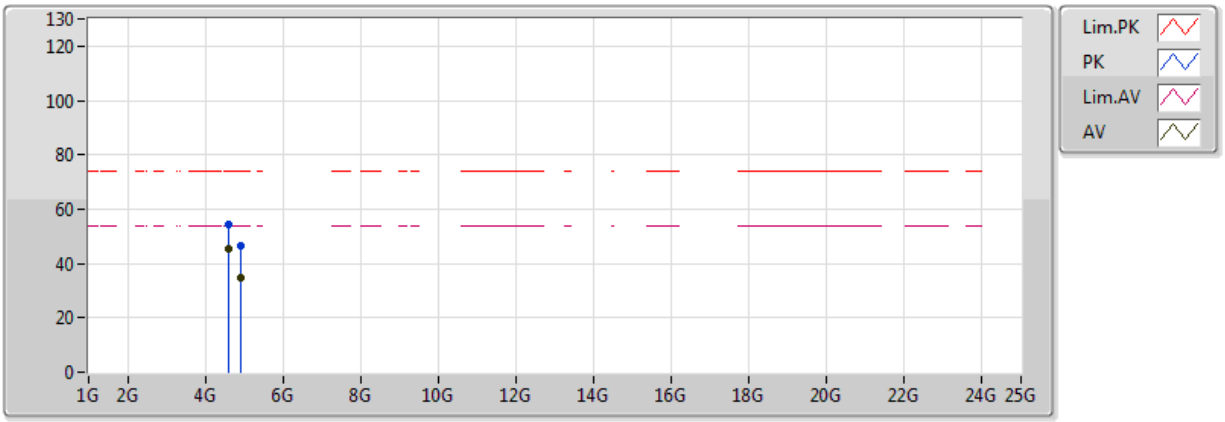


20170408
EUT Z 4TX Non_TXBF
Setting 26
04-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.59536G	51.96	54.00	-2.04	3.07	3	V	58	2.15	-
AV	4.92396G	36.91	54.00	-17.09	3.98	3	V	289	1.22	-
PK	4.59544G	57.69	74.00	-16.31	3.07	3	V	58	2.15	-
PK	4.9238G	47.96	74.00	-26.04	3.98	3	V	289	1.22	-

802.11g_(6Mbps)_4TX

2462MHz_TX

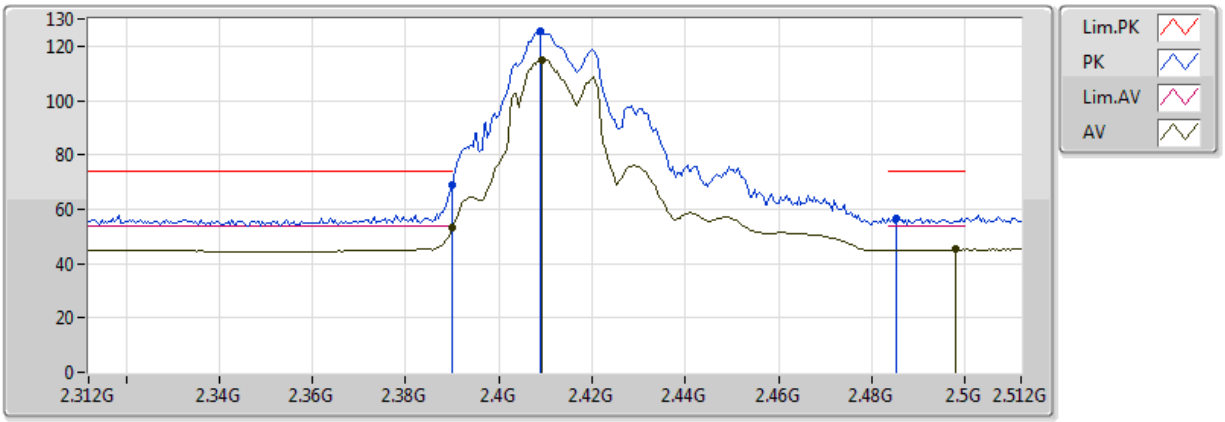


20170408
EUT Z 4TX Non_TXBF
Setting 26
04-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.59484G	45.15	54.00	-8.85	3.07	3	H	300	2.00	-
AV	4.924G	34.77	54.00	-19.23	3.98	3	H	77	2.36	-
PK	4.59508G	54.31	74.00	-19.69	3.07	3	H	300	2.00	-
PK	4.93276G	46.62	74.00	-27.38	4.01	3	H	77	2.36	-

802.11ac VHT20_Nss1,(MCS0)_4TX

2412MHz_TX

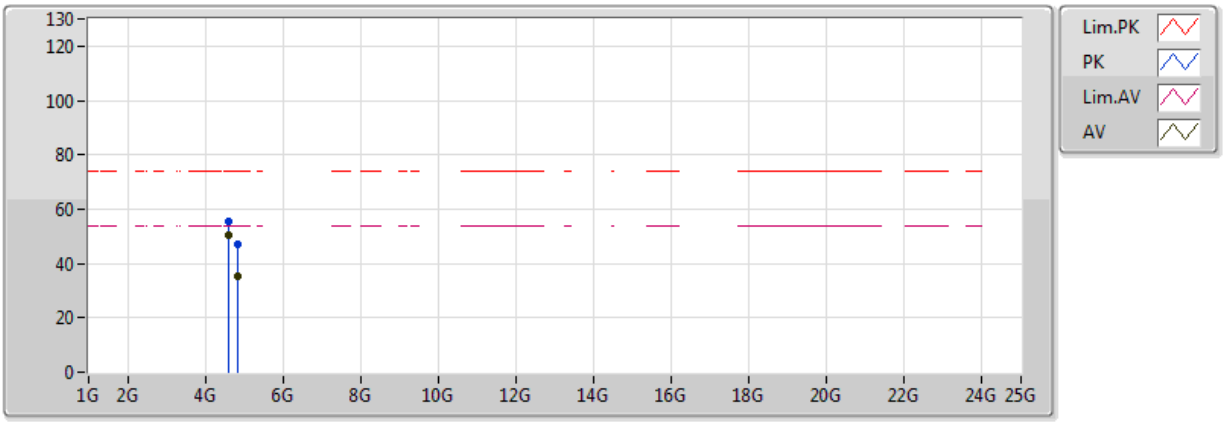


20170408
EUT Z 4TX Non_TXBF
Setting 24
04-M-01

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	52.99	54.00	-1.01	32.67	3	V	289	1.97	-
AV	2.4092G	114.97	Inf	-Inf	32.68	3	V	289	1.97	-
AV	2.498G	45.13	54.00	-8.87	32.80	3	V	289	1.97	-
PK	2.39G	69.09	74.00	-4.91	32.67	3	V	289	1.97	-
PK	2.4088G	125.28	Inf	-Inf	32.68	3	V	289	1.97	-
PK	2.4852G	56.70	74.00	-17.30	32.78	3	V	289	1.97	-

802.11ac VHT20_Nss1,(MCS0)_4TX

2412MHz_TX

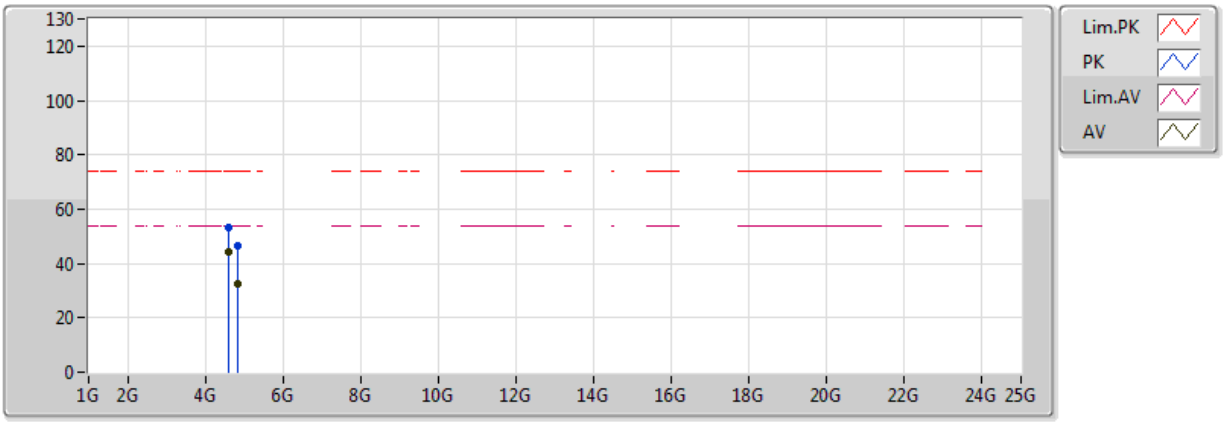


20170408
EUT Z 4TX Non_TXBF
Setting 24
04-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.59524G	50.52	54.00	-3.48	3.07	3	V	339	1.73	-
AV	4.82396G	35.29	54.00	-18.71	3.70	3	V	271	1.58	-
PK	4.595G	55.33	74.00	-18.67	3.07	3	V	339	1.73	-
PK	4.82384G	47.30	74.00	-26.70	3.70	3	V	271	1.58	-

802.11ac VHT20_Nss1,(MCS0)_4TX

2412MHz_TX

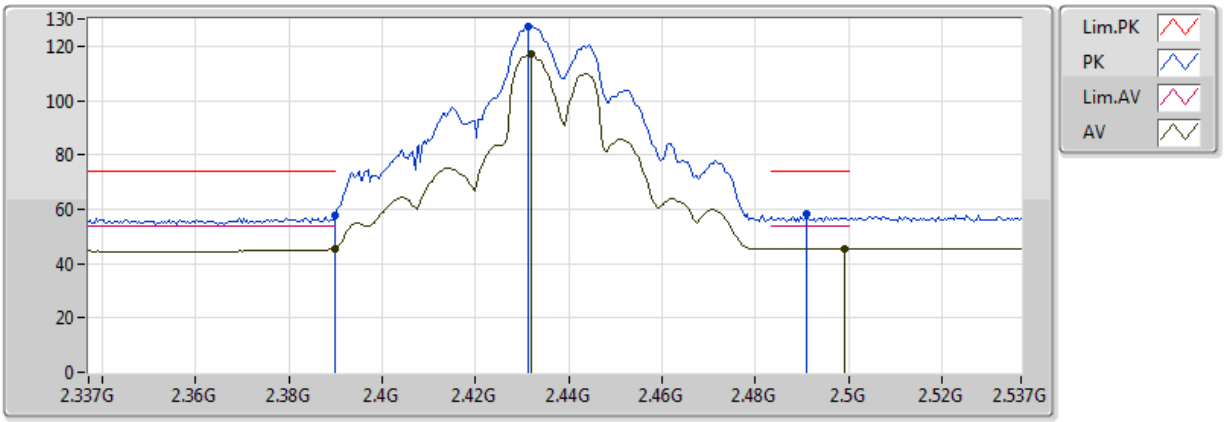


20170408
EUT Z 4TX Non_TXBF
Setting 24
04-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.59476G	44.45	54.00	-9.55	3.06	3	H	124	1.12	-
AV	4.824G	32.29	54.00	-21.71	3.70	3	H	86	1.95	-
PK	4.60108G	53.11	74.00	-20.89	3.08	3	H	124	1.12	-
PK	4.81984G	46.68	74.00	-27.32	3.69	3	H	86	1.95	-

802.11ac VHT20_Nss1,(MCS0)_4TX

2437MHz_TX

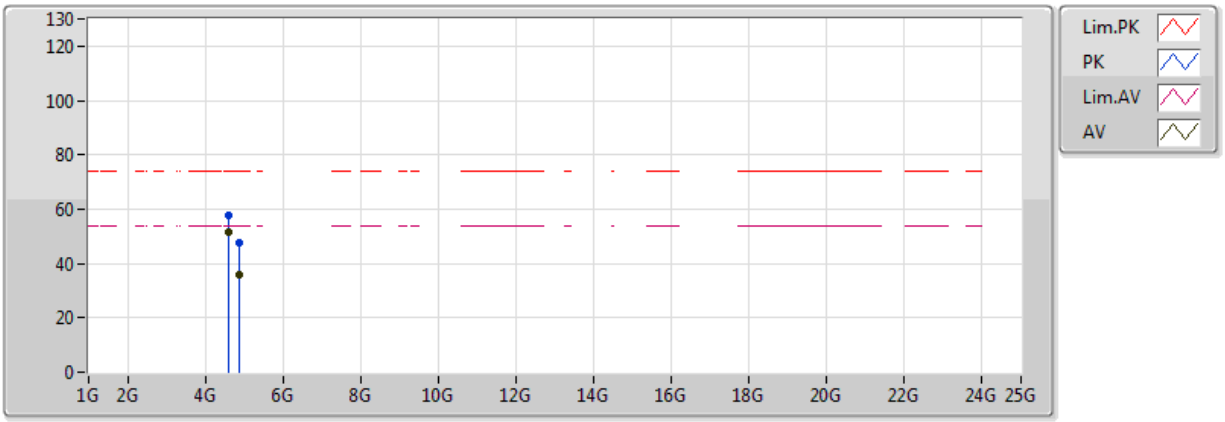


20170408
EUT Z 4TX Non_TXBF
Setting 26
04-M-01

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	45.51	54.00	-8.49	32.67	3	V	280	1.93	-
AV	2.4318G	117.02	Inf	-Inf	32.71	3	V	280	1.93	-
AV	2.499G	45.30	54.00	-8.70	32.80	3	V	280	1.93	-
PK	2.389998G	57.66	74.00	-16.34	32.67	3	V	280	1.93	-
PK	2.4314G	127.27	Inf	-Inf	32.71	3	V	280	1.93	-
PK	2.491G	58.10	74.00	-15.90	32.79	3	V	280	1.93	-

802.11ac VHT20_Nss1,(MCS0)_4TX

2437MHz_TX

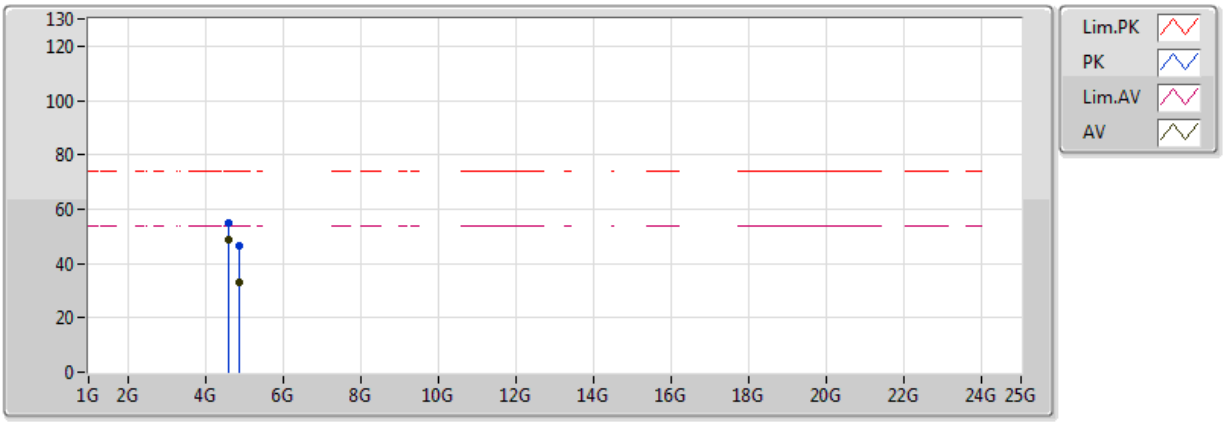


20170408
EUT Z 4TX Non_TXBF
Setting 26
04-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.59396G	51.65	54.00	-2.35	3.06	3	V	222	1.66	-
AV	4.87396G	36.03	54.00	-17.97	3.84	3	V	212	1.05	-
PK	4.59412G	57.53	74.00	-16.47	3.06	3	V	222	1.66	-
PK	4.874G	47.45	74.00	-26.55	3.84	3	V	212	1.05	-

802.11ac VHT20_Nss1,(MCS0)_4TX

2437MHz_TX

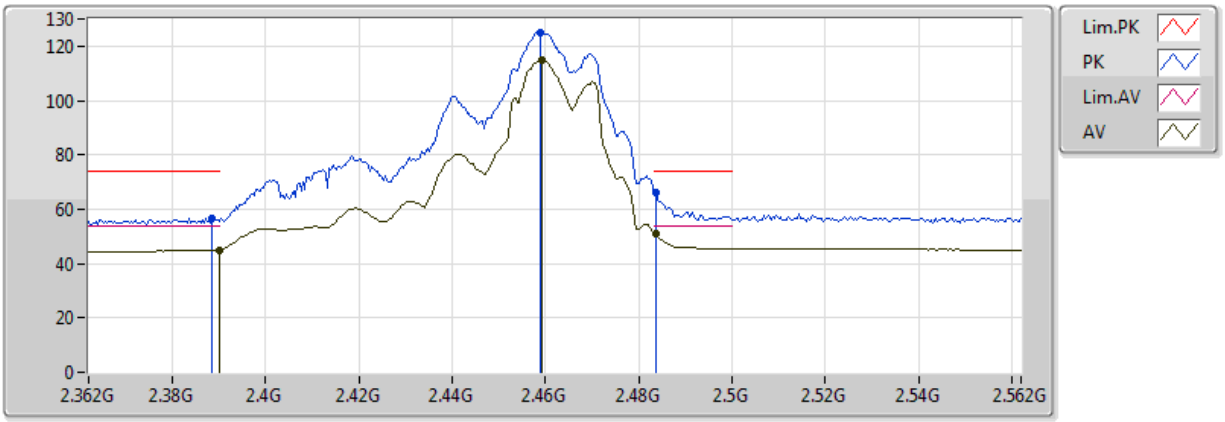


20170408
EUT Z 4TX Non_TXBF
Setting 26
04-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.59336G	48.54	54.00	-5.46	3.06	3	H	311	1.12	-
AV	4.87392G	33.15	54.00	-20.85	3.84	3	H	229	1.41	-
PK	4.59356G	54.80	74.00	-19.20	3.06	3	H	311	1.12	-
PK	4.87416G	46.70	74.00	-27.30	3.84	3	H	229	1.41	-

802.11ac VHT20_Nss1,(MCS0)_4TX

2462MHz_TX

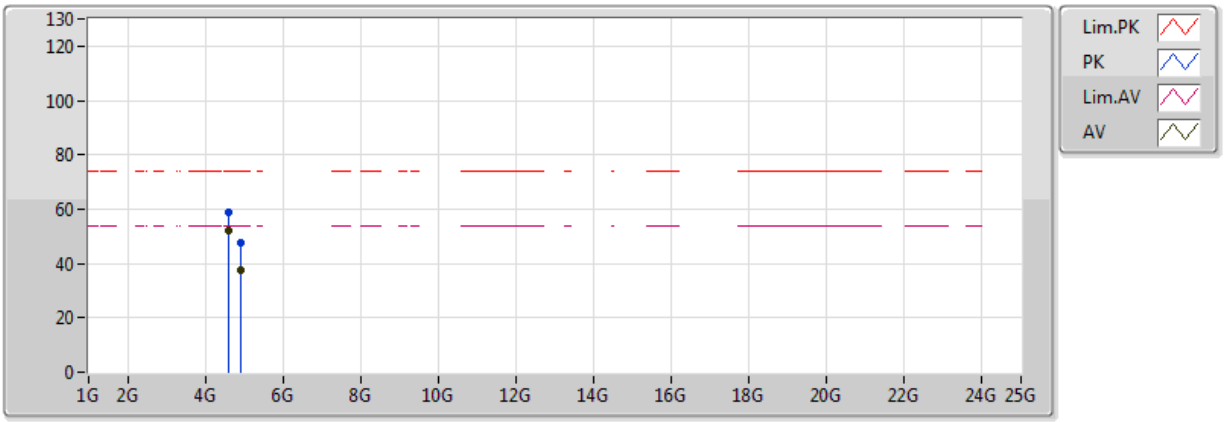


20170408
EUT Z 4TX Non_TXBF
Setting 26
04-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.39G	44.97	54.00	-9.03	32.67	3	V	288	1.50	-
AV	2.4592G	114.74	Inf	-Inf	32.75	3	V	288	1.50	-
AV	2.4836G	50.85	54.00	-3.15	32.78	3	V	288	1.50	-
PK	2.3884G	56.61	74.00	-17.39	32.67	3	V	288	1.50	-
PK	2.4588G	125.04	Inf	-Inf	32.75	3	V	288	1.50	-
PK	2.4836G	65.86	74.00	-8.14	32.78	3	V	288	1.50	-

802.11ac VHT20_Nss1,(MCS0)_4TX

2462MHz_TX

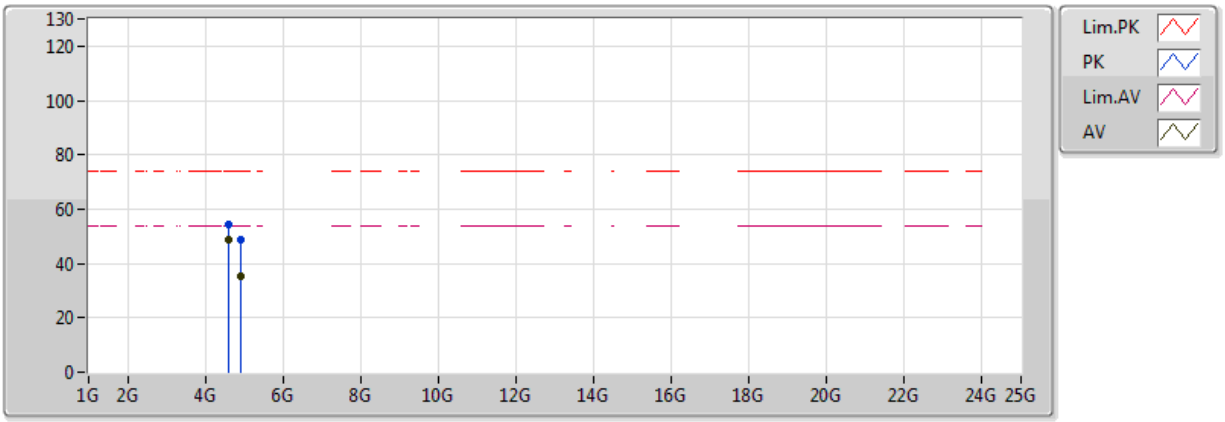


20170408
EUT Z 4TX Non_TXBF
Setting 26
04-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.59292G	51.89	54.00	-2.11	3.06	3	V	75	1.60	-
AV	4.92396G	37.30	54.00	-16.70	3.98	3	V	148	1.48	-
PK	4.59332G	58.56	74.00	-15.44	3.06	3	V	75	1.60	-
PK	4.91704G	47.79	74.00	-26.21	3.96	3	V	148	1.48	-

802.11ac VHT20_Nss1,(MCS0)_4TX

2462MHz_TX

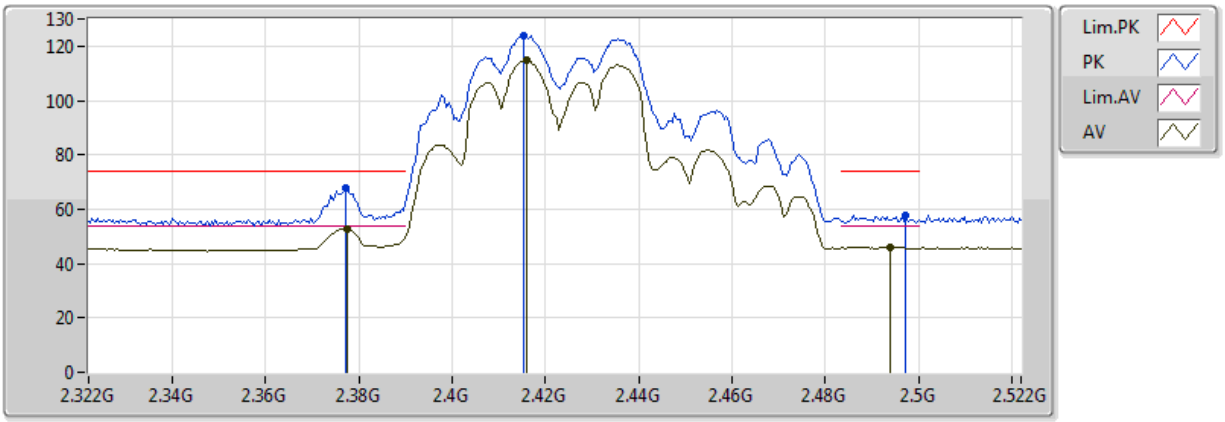


20170408
EUT Z 4TX Non_TXBF
Setting 26
04-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.59288G	48.57	54.00	-5.43	3.06	3	H	192	2.30	-
AV	4.92392G	35.09	54.00	-18.91	3.98	3	H	25	1.21	-
PK	4.5924G	54.58	74.00	-19.42	3.06	3	H	192	2.30	-
PK	4.92092G	48.81	74.00	-25.19	3.97	3	H	25	1.21	-

802.11ac VHT40_Nss1,(MCS0)_4TX

2422MHz_TX

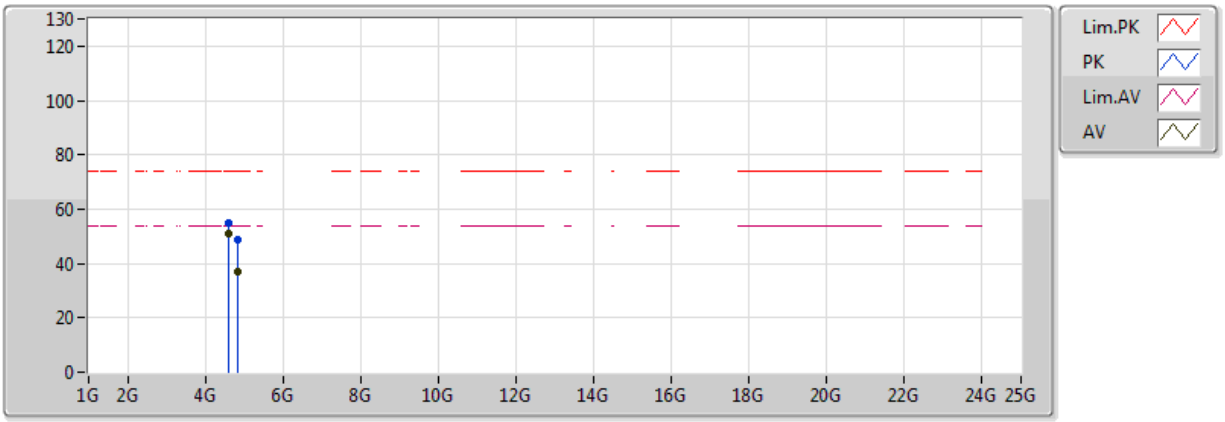


20170408
EUT Z 4TX Non_TXBF
Setting 25
04-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3776G	52.87	54.00	-1.13	32.66	3	V	276	1.75	-
AV	2.416G	114.63	Inf	-Inf	32.69	3	V	276	1.75	-
AV	2.494G	46.09	54.00	-7.91	32.79	3	V	276	1.75	-
PK	2.3772G	67.71	74.00	-6.29	32.66	3	V	276	1.75	-
PK	2.4152G	123.77	Inf	-Inf	32.69	3	V	276	1.75	-
PK	2.4972G	57.68	74.00	-16.32	32.80	3	V	276	1.75	-

802.11ac VHT40_Nss1,(MCS0)_4TX

2422MHz_TX

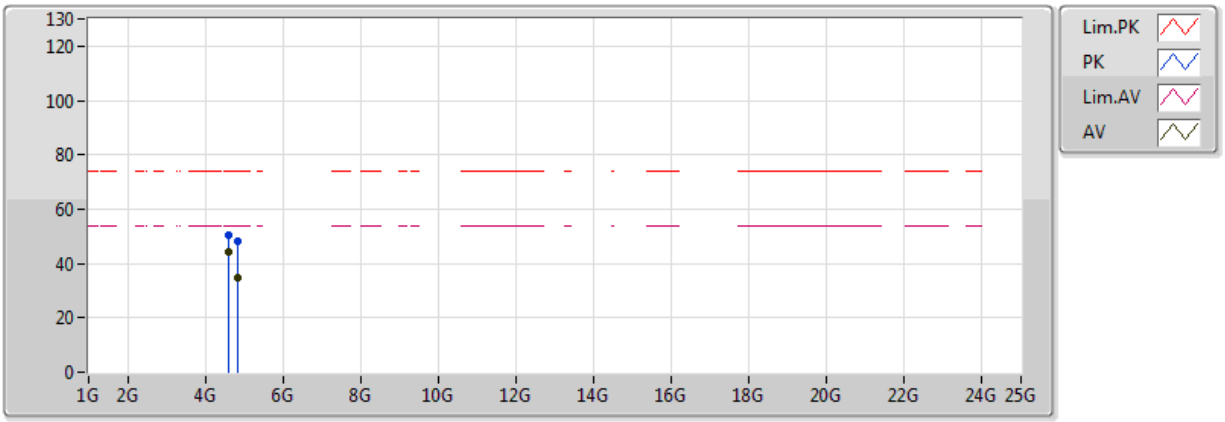


20170408
EUT Z 4TX Non_TXBF
Setting 25
04-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.5924G	50.79	54.00	-3.21	3.06	3	V	115	2.25	-
AV	4.84396G	36.73	54.00	-17.27	3.75	3	V	317	1.78	-
PK	4.59232G	54.73	74.00	-19.27	3.06	3	V	115	2.25	-
PK	4.84388G	48.92	74.00	-25.08	3.75	3	V	317	1.78	-

802.11ac VHT40_Nss1,(MCS0)_4TX

2422MHz_TX

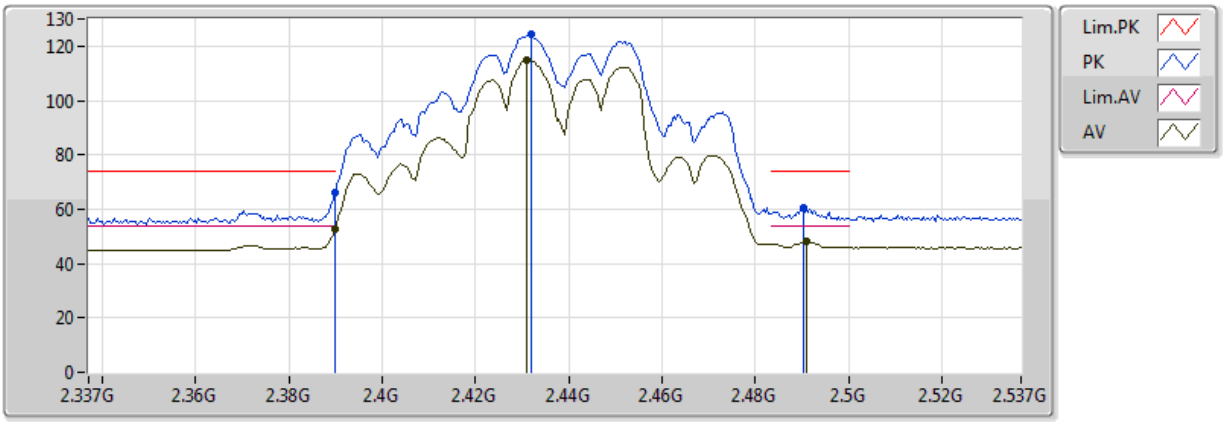


20170408
EUT Z 4TX Non_TXBF
Setting 25
04-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.59232G	44.39	54.00	-9.61	3.06	3	H	134	2.25	-
AV	4.844G	35.00	54.00	-19.00	3.75	3	H	144	1.91	-
PK	4.59232G	50.52	74.00	-23.48	3.06	3	H	134	2.25	-
PK	4.85072G	47.93	74.00	-26.07	3.77	3	H	144	1.91	-

802.11ac VHT40_Nss1,(MCS0)_4TX

2437MHz_TX

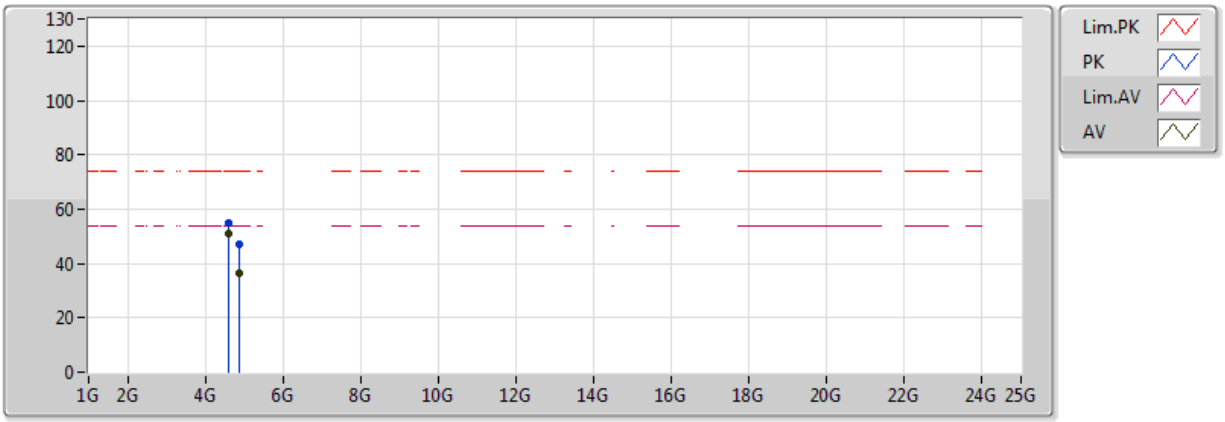


20170408
EUT Z 4TX Non_TXBF
Setting 25
04-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.389998G	52.83	54.00	-1.17	32.67	3	V	279	1.94	-
AV	2.431G	114.91	Inf	-Inf	32.71	3	V	279	1.94	-
AV	2.491G	48.16	54.00	-5.84	32.79	3	V	279	1.94	-
PK	2.389998G	66.15	74.00	-7.85	32.67	3	V	279	1.94	-
PK	2.4318G	124.32	Inf	-Inf	32.71	3	V	279	1.94	-
PK	2.4902G	60.52	74.00	-13.48	32.79	3	V	279	1.94	-

802.11ac VHT40_Nss1,(MCS0)_4TX

2437MHz_TX

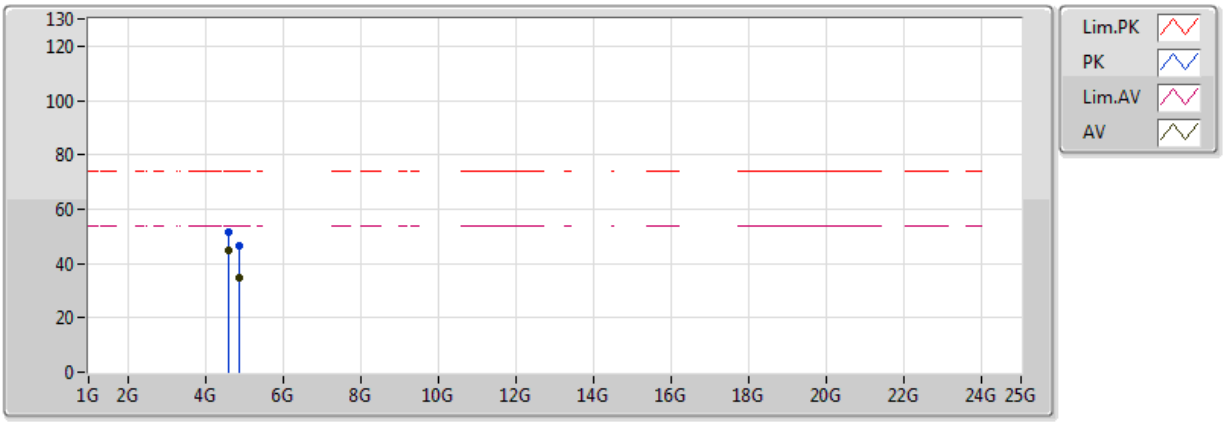


20170408
EUT Z 4TX Non_TXBF
Setting 25
04-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.5916G	51.06	54.00	-2.94	3.06	3	V	108	1.95	-
AV	4.874G	36.42	54.00	-17.58	3.84	3	V	251	2.03	-
PK	4.59148G	54.97	74.00	-19.03	3.06	3	V	108	1.95	-
PK	4.87392G	47.28	74.00	-26.72	3.84	3	V	251	2.03	-

802.11ac VHT40_Nss1,(MCS0)_4TX

2437MHz_TX

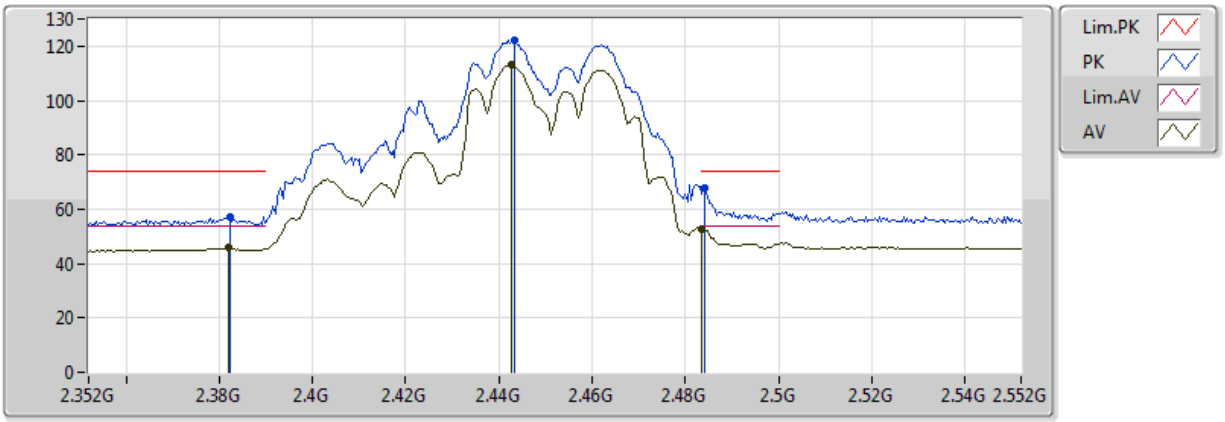


20170408
EUT Z 4TX Non_TXBF
Setting 25
04-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.59184G	44.72	54.00	-9.28	3.06	3	H	74	1.62	-
AV	4.874G	34.99	54.00	-19.01	3.84	3	H	304	1.37	-
PK	4.59124G	51.33	74.00	-22.67	3.05	3	H	74	1.62	-
PK	4.87388G	46.50	74.00	-27.50	3.84	3	H	304	1.37	-

802.11ac VHT40_Nss1,(MCS0)_4TX

2452MHz_TX

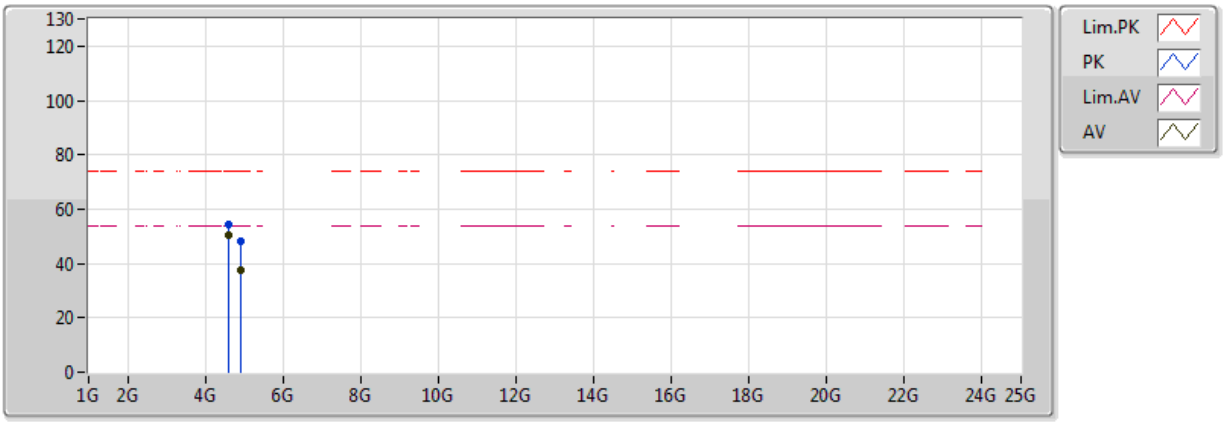


20170408
EUT Z 4TX Non_TXBF
Setting 24
04-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.382G	45.69	54.00	-8.31	32.66	3	V	264	2.38	-
AV	2.4428G	112.98	Inf	-Inf	32.73	3	V	264	2.38	-
AV	2.4836G	52.94	54.00	-1.06	32.78	3	V	264	2.38	-
PK	2.3824G	57.32	74.00	-16.68	32.66	3	V	264	2.38	-
PK	2.4432G	122.27	Inf	-Inf	32.73	3	V	264	2.38	-
PK	2.484G	67.74	74.00	-6.26	32.78	3	V	264	2.38	-

802.11ac VHT40_Nss1,(MCS0)_4TX

2452MHz_TX

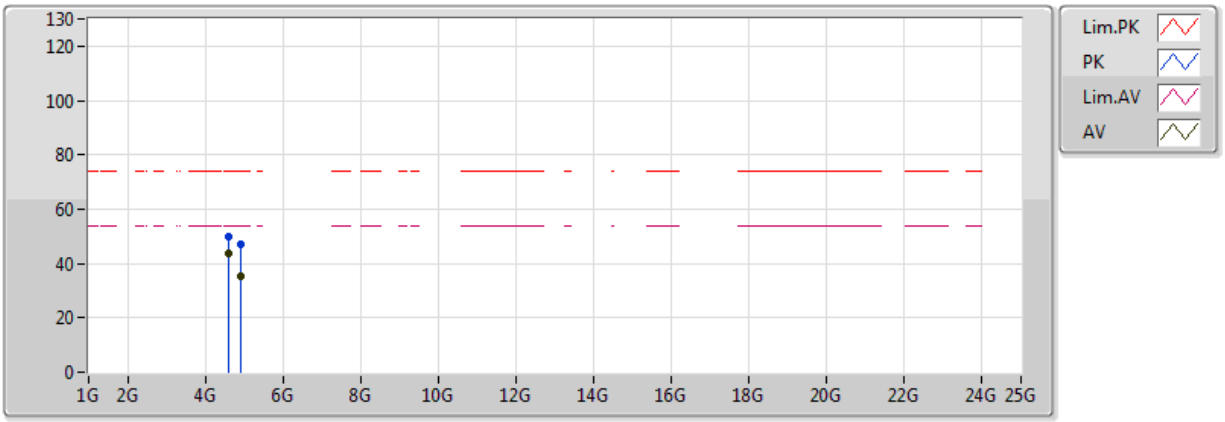


20170408
EUT Z 4TX Non_TXBF
Setting 24
04-M-01

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.59196G	50.53	54.00	-3.47	3.06	3	V	225	1.87	-
AV	4.904G	37.48	54.00	-16.52	3.92	3	V	75	1.49	-
PK	4.592G	54.33	74.00	-19.67	3.06	3	V	225	1.87	-
PK	4.9036G	48.31	74.00	-25.69	3.92	3	V	75	1.49	-

802.11ac VHT40_Nss1,(MCS0)_4TX

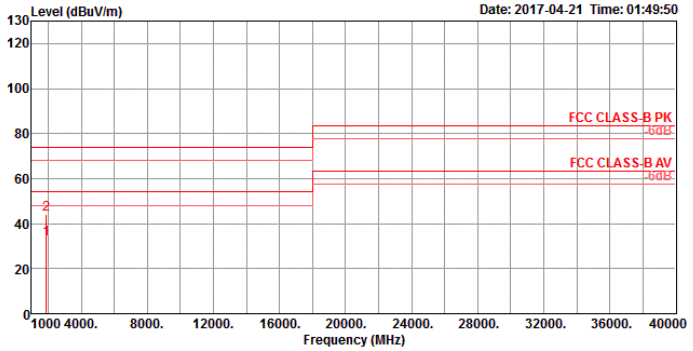
2452MHz_TX



20170408
EUT Z 4TX Non_TXBF
Setting 24
04-M-01

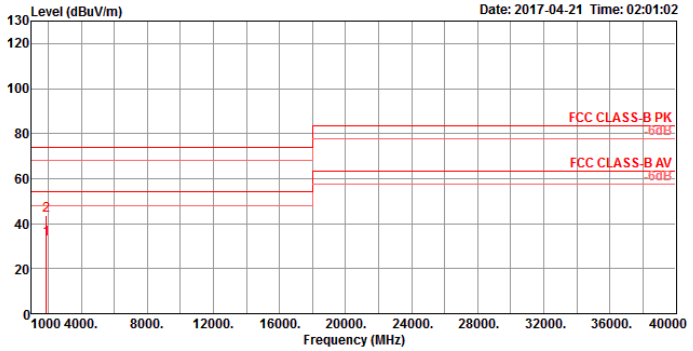
Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.59184G	43.55	54.00	-10.45	3.06	3	H	281	2.16	-
AV	4.904G	35.25	54.00	-18.75	3.92	3	H	20	1.19	-
PK	4.59172G	49.92	74.00	-24.08	3.06	3	H	281	2.16	-
PK	4.9064G	47.32	74.00	-26.68	3.93	3	H	20	1.19	-

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



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	1890.11	33.15	54.00	-20.85	37.60	4.68	27.72	36.85	150	256	Average	HORIZONTAL
2	1890.11	44.03	74.00	-29.97	48.48	4.68	27.72	36.85	150	256	Peak	HORIZONTAL

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



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	1890.19	32.98	54.00	-21.02	37.43	4.68	27.72	36.85	150	146	Average	VERTICAL
2	1890.19	43.55	74.00	-30.45	48.00	4.68	27.72	36.85	150	146	Peak	VERTICAL