

# 2.4GHz Wi-Fi Radio FCC Test Report

**Equipment** : Norton Core Secure WiFi Router  
**Brand Name** : Norton Core  
**Model No.** : 517  
**FCC ID** : 2AI6F-517  
**Standard** : 47 CFR FCC Part 15.247  
**Operating Band** : 2400 MHz – 2483.5 MHz  
**Function** : ☒ Point-to-multipoint; ☐ Point-to-point  
**Applicant** : Symantec Corporation  
350 Ellis Street Mountain View, CA 94043 United States  
**Manufacturer** : CyberTAN Technology Inc.  
No. 99, Park Avenue III, Science-based Industrial Park, Hsinchu, 308 Taiwan

The product sample received on Aug. 18, 2016 and completely tested on Mar. 14, 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.





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## 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

[illegible]

# 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
2.4G	11b	20	4
2.4G	11g	20	4
2.4G	11g, BF	20	4
2.4G	11n20	20	4
2.4G	11n20, BF	20	4
2.4G	11ac VHT20	20	4
2.4G	11ac VHT20, BF	20	4
2.4G	11n40	40	4
2.4G	11n40, BF	40	4
2.4G	11ac VHT40	40	4
2.4G	11ac VHT40, BF	40	4

**Note:**

- ♦ 2.4G is the 2.4GHz Band (2.4-2.4835GHz).
- ♦ 11b mode uses a combination of DSSS-DBPSK, DQPSK, CCK modulation.
- ♦ 11g, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- ♦ VHT20, VHT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.
- ♦ BWch is the nominal channel bandwidth.
- ♦ Nss-Min is the minimum number of spatial streams.
- ♦ Nant is the number of outputs. e.g., 2(2,3) means have 2 outputs for port 2 and port 3. 2 means have 2 outputs for port 1 and port 2.

### 1.1.2 Antenna Information

Ant.	Brand	Model Name P/N	Antenna Type	Connector	Gain (dBi)			
					2.4GHz	5GHz B1	5GHz B4	BT
1	Airgain	M2410DCR-UV-G1XST125BU	Dual-band Dipole	I-PEX	1.5	2.3	3.3	-
2	Airgain	M2410DCR-UV-B1XST135BU	Dual-band Dipole	I-PEX	1.5	2.3	3.3	-
3	Airgain	M2410DCR-UV-A1XST115BU	Dual-band Dipole	I-PEX	1.5	2.3	3.3	-
4	Airgain	M2410DCR-UV-G1XST125BU	Dual-band Dipole	I-PEX	1.5	2.3	3.3	-
5	PSA	RFMTA271200NNAB003	PIFA Antenna	N/A	-	-	-	2.54

Note: The EUT has five antennas.

Ant.1 = Chain 1(port 1), Ant.2 = Chain 2(port 2), Ant.3 = Chain 3(port 3), Ant.4 = Chain 4(port 4), Ant.5= Chain 5(port 1).

#### For WLAN function (4TX, 4RX):

Chain 1 ~ Chain 4 can be used as transmitting/receiving antenna.

Chain 1 ~ Chain 4 could transmit/receive simultaneously.

#### For Bluetooth function (1TX, 1RX):

Only Chain 5 can be used as transmitting/receiving functions.

### 1.1.3 Mode Test Duty Cycle

Mode	DC	T(s)
802.11b	1	0
802.11g-BF	0.98	0.088
802.11ac VHT20-BF	0.965	0.155
802.11ac VHT40-BF	0.899	0.462

### 1.1.4 EUT Operational Condition

<b>EUT Power Type</b>	From Power Adapter		
<b>Beamforming Function</b>	<input checked="" type="checkbox"/> With beamforming	<input type="checkbox"/> Without beamforming	

Note: The product has beamforming function for 802.11a/g/n/ac in 2.4GHz and 5GHz.

### 1.1.5 Table for Multiple Listing

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

Brand Name	Model Name	EUT	Color
Norton Core	517	1	Granite Gray
		2	Titanium Gold

## 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 v03r05
- ♦ FCC KDB 662911 D01 v02r01
- ♦ FCC KDB 644545 D01 v01r02
- ♦ FCC KDB 412172 D01 v01r01

## 1.3 Testing Location Information

Testing Location				
<input type="checkbox"/>	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
<input checked="" type="checkbox"/>	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 / 60%	Mar. 07, 2017   Mar. 08, 2017
Radiated	03CH01-CB	Zero Chen, Nyle, Chang, Justin Lin	22°C / 54%	Dec. 26, 2016   Mar. 14, 2017
AC Conduction	CO01-CB	Ryo Fan	23°C / 61%	Dec. 28, 2016

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 x10 <sup>-8</sup>	Confidence levels of 95%

## 2 Test Configuration of EUT

### 2.1 Test Channel Mode

Mode	Power Setting
802.11b_Nss1_4TX	-
2412MHz	23.5
2437MHz	23.5
2462MHz	24
802.11g-BF_Nss1_4TX	-
2412MHz	20
2437MHz	23
2462MHz	20.5
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-
2412MHz	19
2437MHz	23
2462MHz	20
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-
2422MHz	15
2437MHz	21
2452MHz	15
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	-
2412MHz	20.5
2437MHz	25
2462MHz	20
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	-
2422MHz	16
2437MHz	20.5
2452MHz	15.5



## 2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
<b>Tests Item</b>	AC power-line conducted emissions
<b>Condition</b>	AC power-line conducted measurement for line and neutral
<b>Operating Mode</b>	Normal Link

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

The Worst Case Mode for Following Conformance Tests	
<b>Tests Item</b>	Emissions in Restricted Frequency Bands
<b>Test Condition</b>	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.
<b>Operating Mode &lt; 1GHz</b>	Normal Link
<b>Operating Mode &gt; 1GHz</b>	CTX

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

The Worst Case Mode for Following Conformance Tests	
<b>Tests Item</b>	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
<b>Operating Mode</b>	
<b>1</b>	Bluetooth+WLAN 2.4GHz+WLAN 5GHz
Refer to Sporton Test Report No.: FA681620 for Co-location RF Exposure Evaluation.	

- Note: 1. There are two modes one is beamforming mode, and the other is non-beamforming mode, after evaluating, beamforming mode has been evaluated to be the worst case, so it was selected to test and record in this test report.
2. 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.
3. The EUT can only be used at Z axis position.



## **2.3 EUT Operation during Test**

For CTX Mode:

non-beamforming mode:

The EUT was programmed to be in continuously transmitting mode.

beamforming mode:

For Conducted Mode:

The EUT was programmed to be in continuously transmitting mode.

For Radiated Mode:

During the test, the following programs under WIN 7 were executed.

The program was executed as follows:

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

For Normal Link:

During the test, the EUT operation to normal function.

## 2.4 Accessories

Accessories			
Equipment Name	Brand Name	Model Name	Rating
Adapter	Delta	ADP-360DW B2A	Input: 100-120V ~ 60Hz 0.9A Output: 12V, 3.0A
RJ-45 cable*1: Non-shielded 1.8m			

## 2.5 Support Equipment

For Test Site No: CO01-CB

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB*4	DELL	E6430	DoC
2	iPhone 4	Apple	A1332	BCG-E2380a
3	Flash Disk3.0*2	ADATA	C103	DoC

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

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB*2	DELL	E4300	DoC
2	NB*2	Apple	Mac Book	DoC
3	iPhone 4	Apple	A1332	BCG-E2380a
4	Flash Disk3.0*2	Silicon Power	B06	DoC

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

<For Non-Beamforming Mode>

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

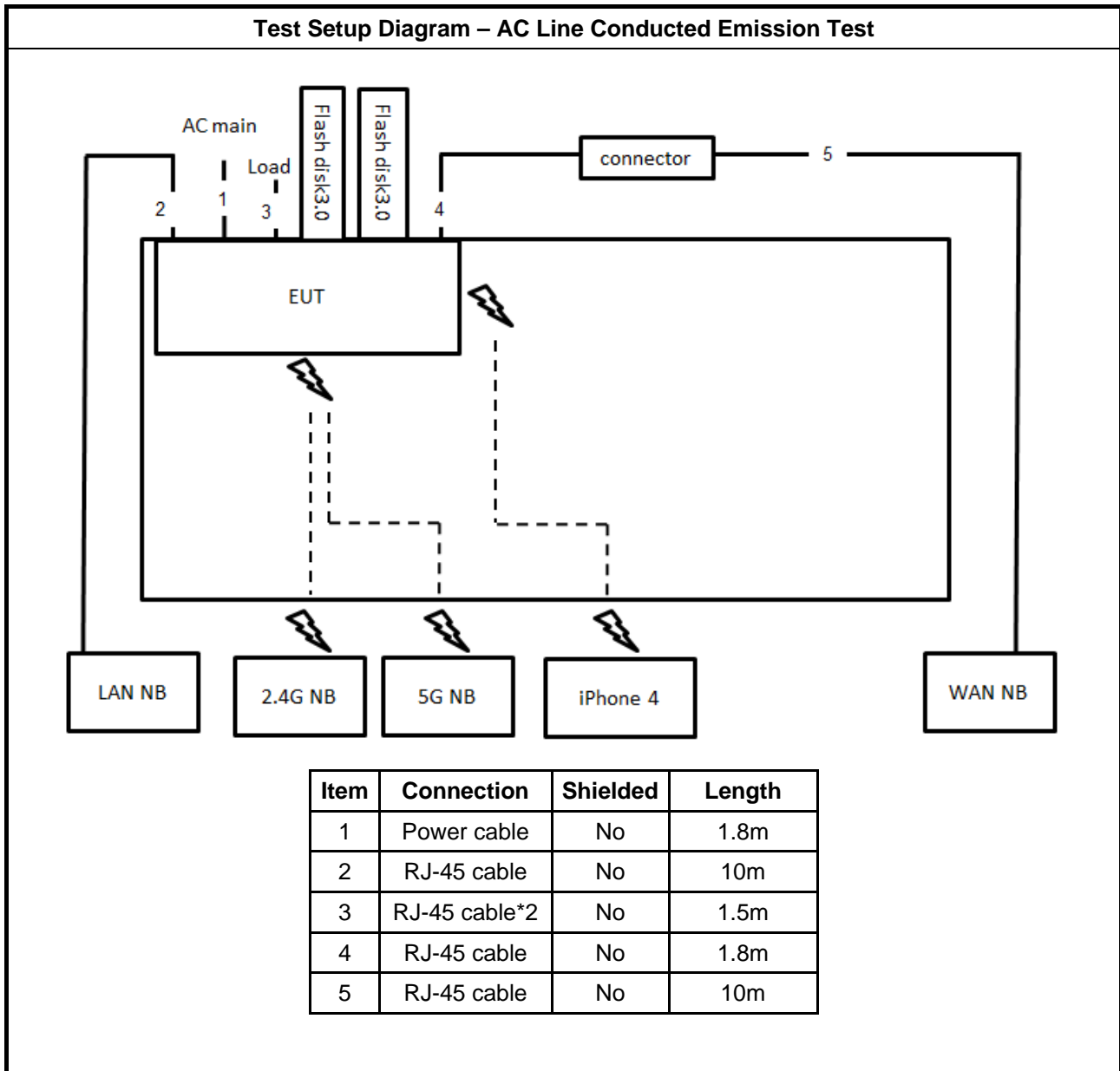
<For Beamforming Mode>

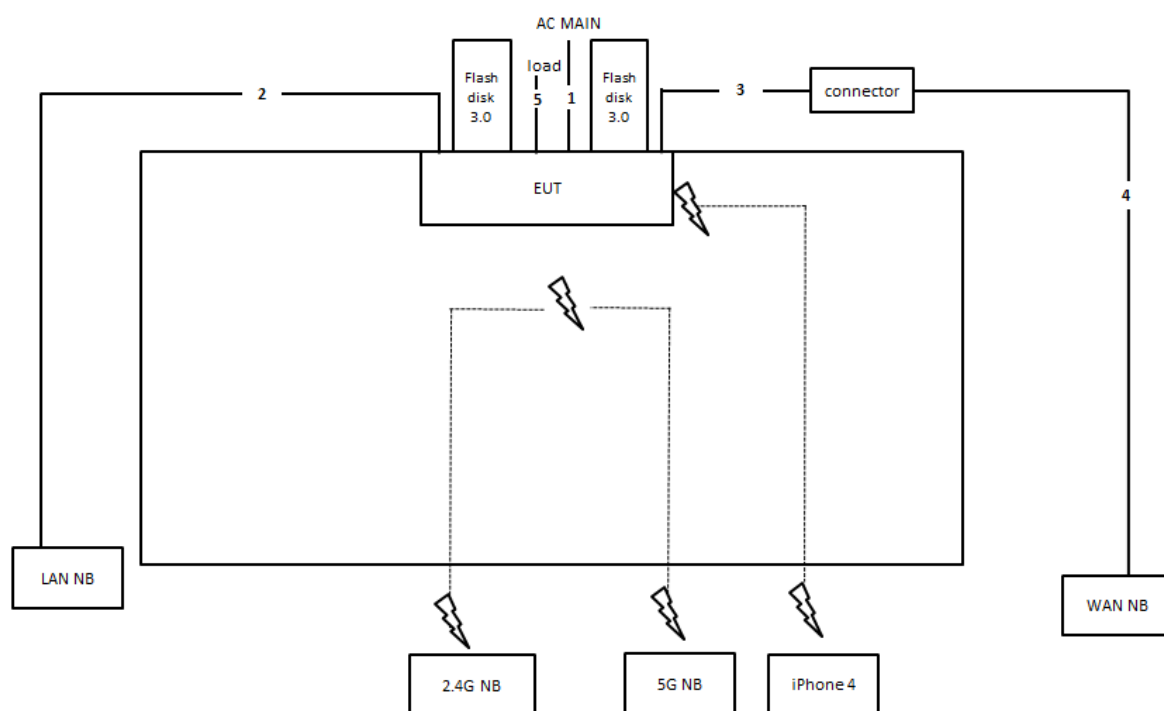
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB*2	DELL	E4300	DoC
3	Client	Norton	Rover	N/A

For Test Site No: TH01-CB

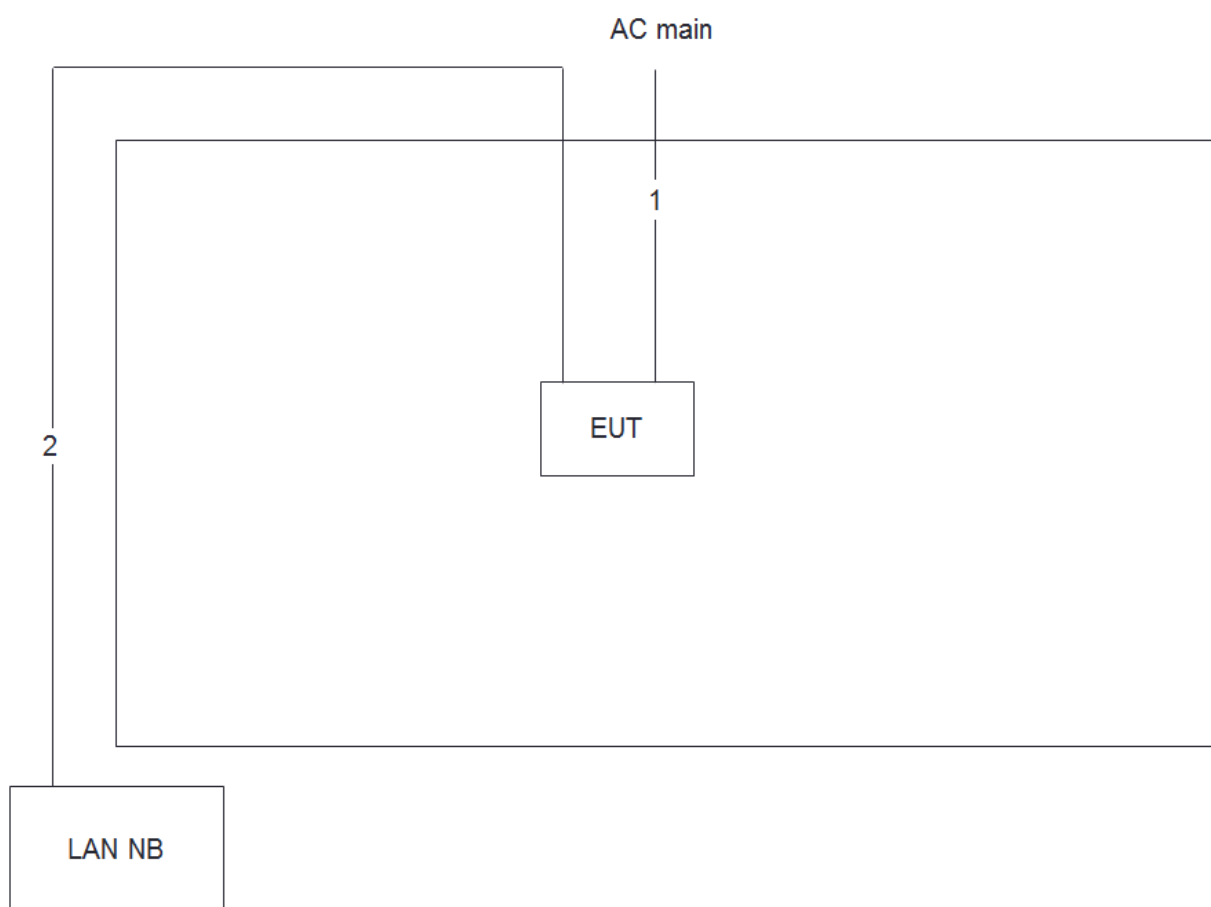
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E4300	DoC

## 2.6 Test Setup Diagram

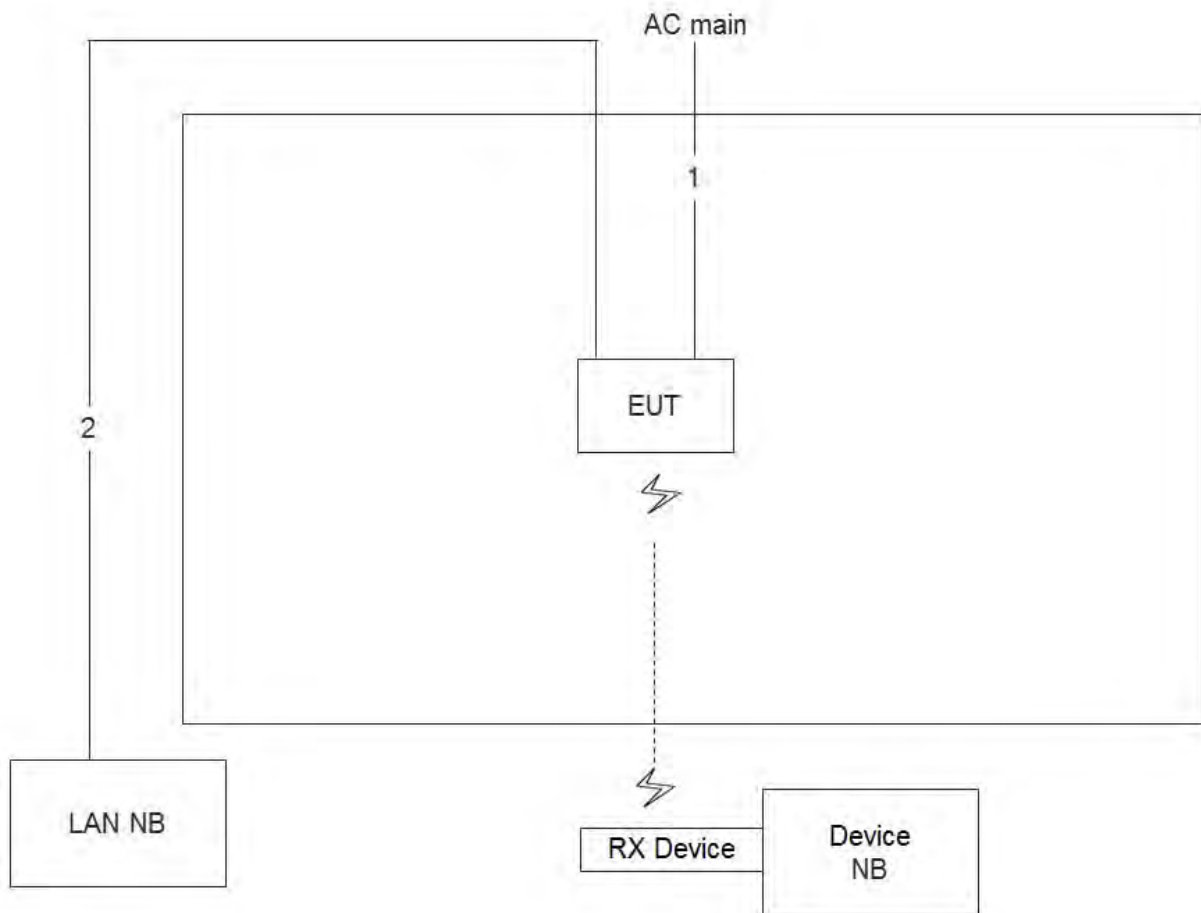


**Test Setup Diagram - Radiated Test < 1GHz**


Item	Connection	Shielded	Length
1	Power cable	No	1.8m
2	RJ-45 cable	No	10m
3	RJ-45 cable	No	1.8m
4	RJ-45 cable	No	10m
5	RJ-45 cable*2	No	1m

**Test Setup Diagram - Radiated Test > 1GHz / For Non-Beamforming Mode**


Item	Connection	Shielded	Length
1	Power cable	No	1.8m
2	RJ-45 cable	No	10m

**Test Setup Diagram - Radiated Test > 1GHz / For Beamforming Mode**


Item	Connection	Shielded	Length
1	Power cable	No	1.8m
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.

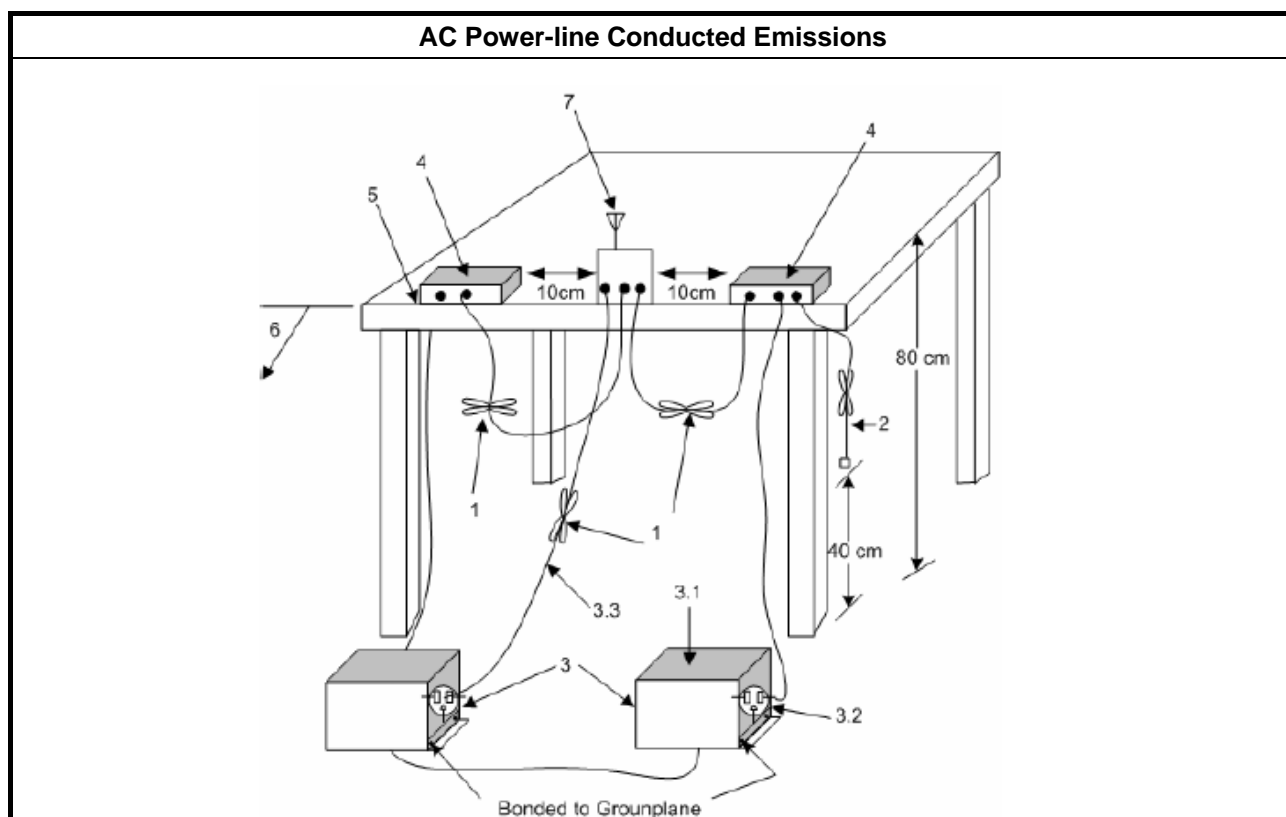
##### 3.1.2 Measuring Instruments

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

##### 3.1.3 Test Procedures

Test Method
<input checked="" type="checkbox"/> Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

##### 3.1.4 Test Setup







### **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	
<b>Systems using digital modulation techniques:</b>	
▪	6 dB bandwidth $\geq$ 500 kHz.

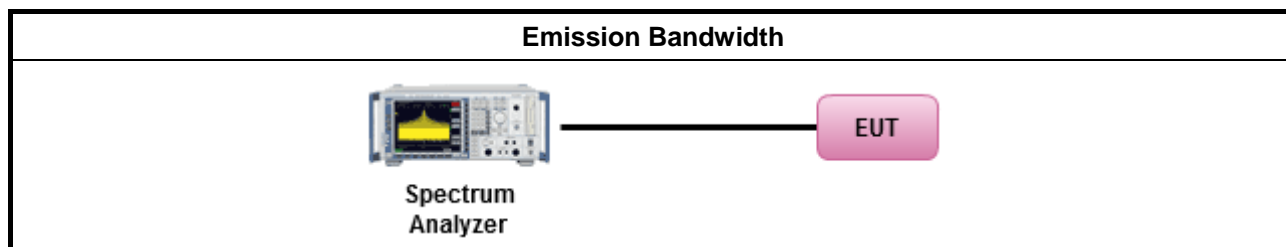
### 3.2.2 Measuring Instruments

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:
<input checked="" type="checkbox"/>	Refer as FCC KDB 558074, clause 8.1 Option 1 for 6 dB bandwidth measurement.
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 8.2 Option 2 for 6 dB bandwidth measurement.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.

### 3.2.4 Test Setup



### 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.	

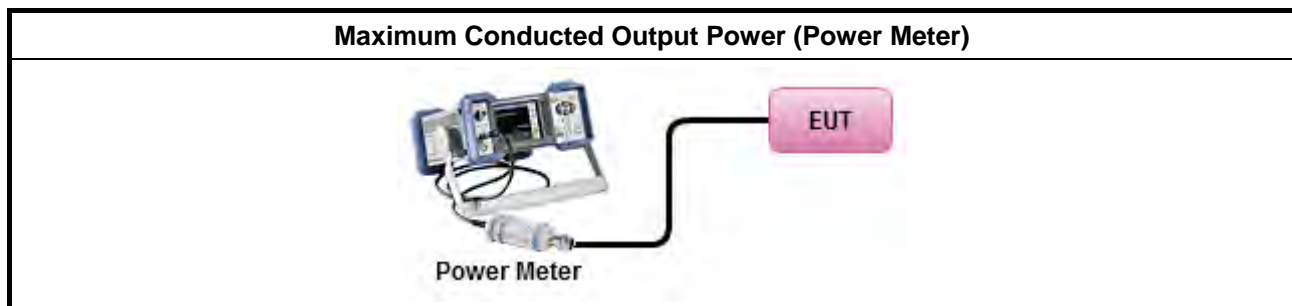
#### 3.3.2 Measuring Instruments

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

### 3.3.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> <li>Maximum Peak Conducted Output Power</li> </ul>	
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 9.1.1 Option 1 (RBW ≥ EBW method).
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 9.1.2 Option 2 (peak power meter for VBW ≥ DTS BW)
<ul style="list-style-type: none"> <li>Maximum Conducted Output Power</li> </ul>	
[duty cycle ≥ 98% or external video / power trigger]	
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 9.2.2.2 Method AVGSA-1 (spectral trace averaging).
<input type="checkbox"/>	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	
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 9.2.2.4 Method AVGSA-2 (spectral trace averaging).
<input type="checkbox"/>	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	
<input checked="" type="checkbox"/>	Refer as FCC KDB 558074, clause 9.2.3 Method AVGPM-G (using an RF average power meter).
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 9.1.2 PKPM1 Peak power meter method.
<ul style="list-style-type: none"> <li>For conducted measurement.</li> </ul>	
<ul style="list-style-type: none"> <li>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.</li> </ul>	
<ul style="list-style-type: none"> <li>If multiple transmit chains, EIRP calculation could be following as methods:  <math display="block">P_{total} = P_1 + P_2 + \dots + P_n</math> (calculated in linear unit [mW] and transfer to log unit [dBm])  <math display="block">EIRP_{total} = P_{total} + DG</math> </li> </ul>	

### 3.3.4 Test Setup



### 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) $\leq$ 8 dBm/3kHz

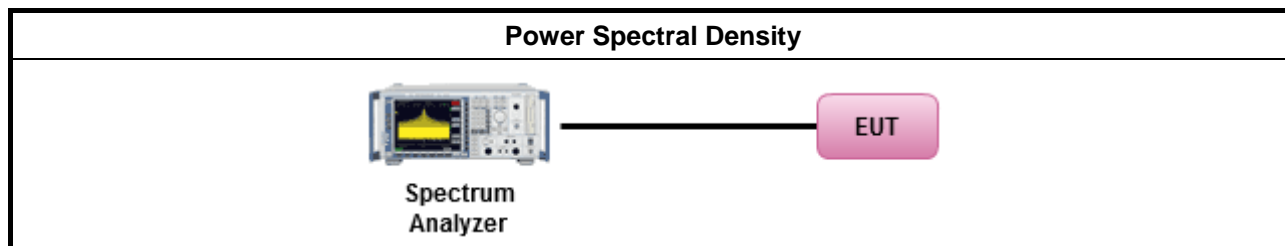
#### 3.4.2 Measuring Instruments

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).
<input checked="" type="checkbox"/>	Refer as FCC KDB 558074, clause 10.2 Method PKPSD (RBW=3-100kHz; Detector=peak). [duty cycle $\geq$ 98% or external video / power trigger]
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 10.3 Method AVGPS-1 (spectral trace averaging).
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 10.4 Method AVGPS-2 (slow sweep speed)
	duty cycle < 98% and average over on/off periods with duty factor
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 10.5 Method AVGPS-1 Alt (spectral trace averaging).
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 10.6 Method AVGPS-2 Alt. (slow sweep speed)
▪	For conducted measurement.
▪	If The EUT supports multiple transmit chains using options given below:
<input checked="" type="checkbox"/>	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.
<input type="checkbox"/>	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,
<input type="checkbox"/>	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



### 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
<p>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.</p> <p>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.</p>	

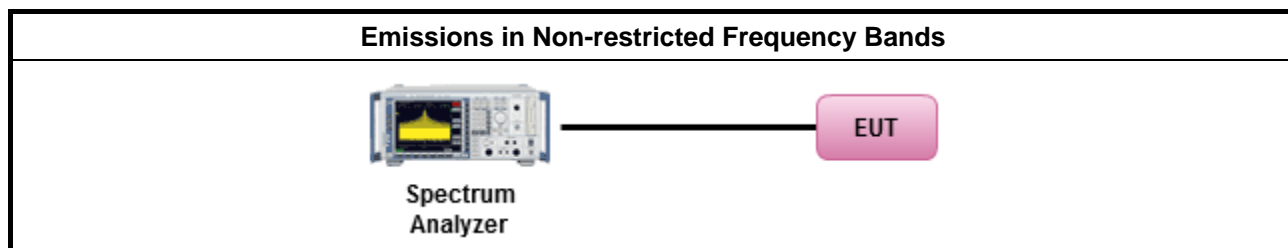
#### 3.5.2 Measuring Instruments

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

#### 3.5.3 Test Procedures

Test Method
<ul style="list-style-type: none"> <li>Refer as FCC KDB 558074, clause 11 for unwanted emissions into non-restricted bands.</li> </ul>

#### 3.5.4 Test Setup



#### 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

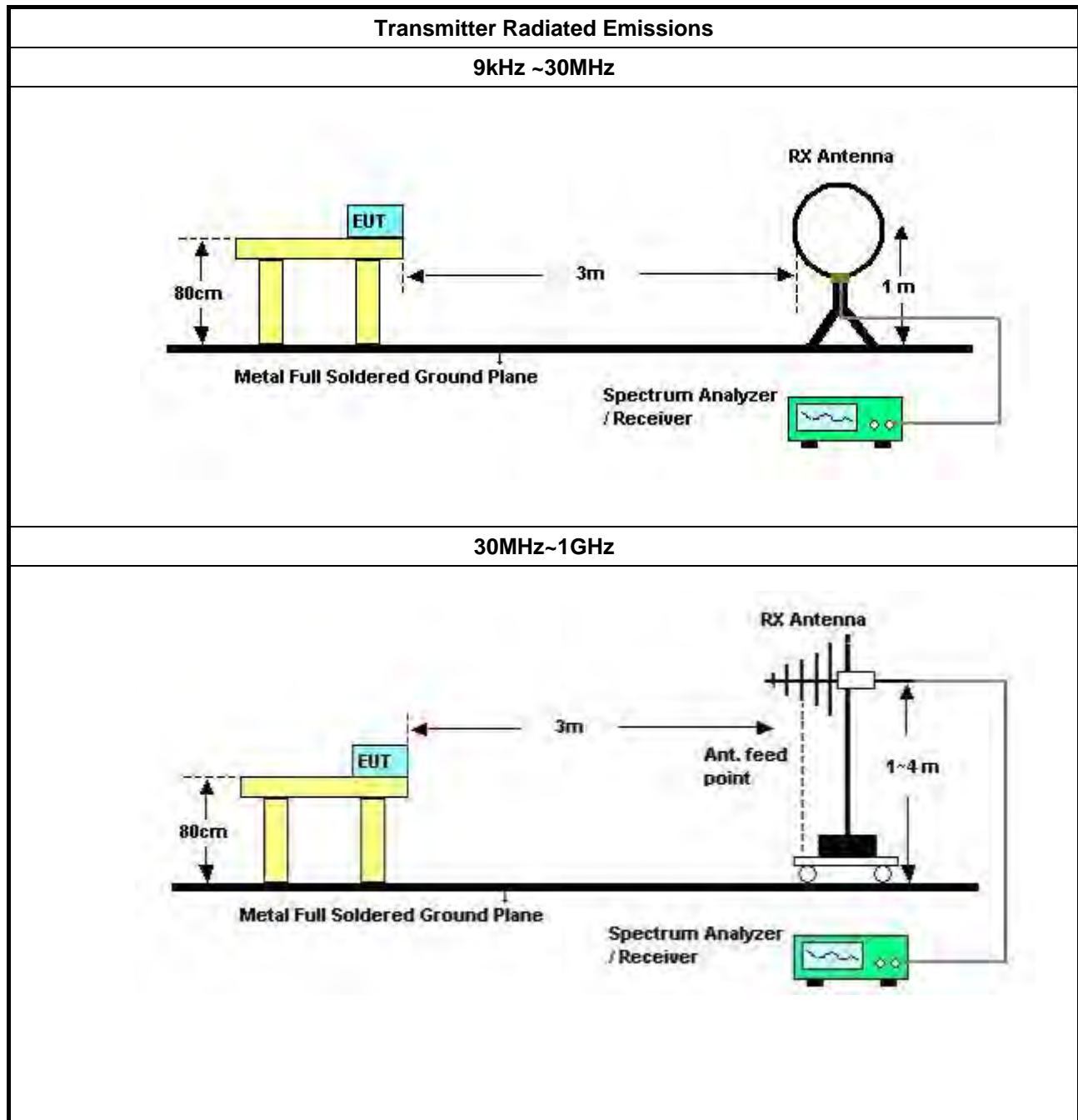
Refer a test equipment and calibration data table in this test report.

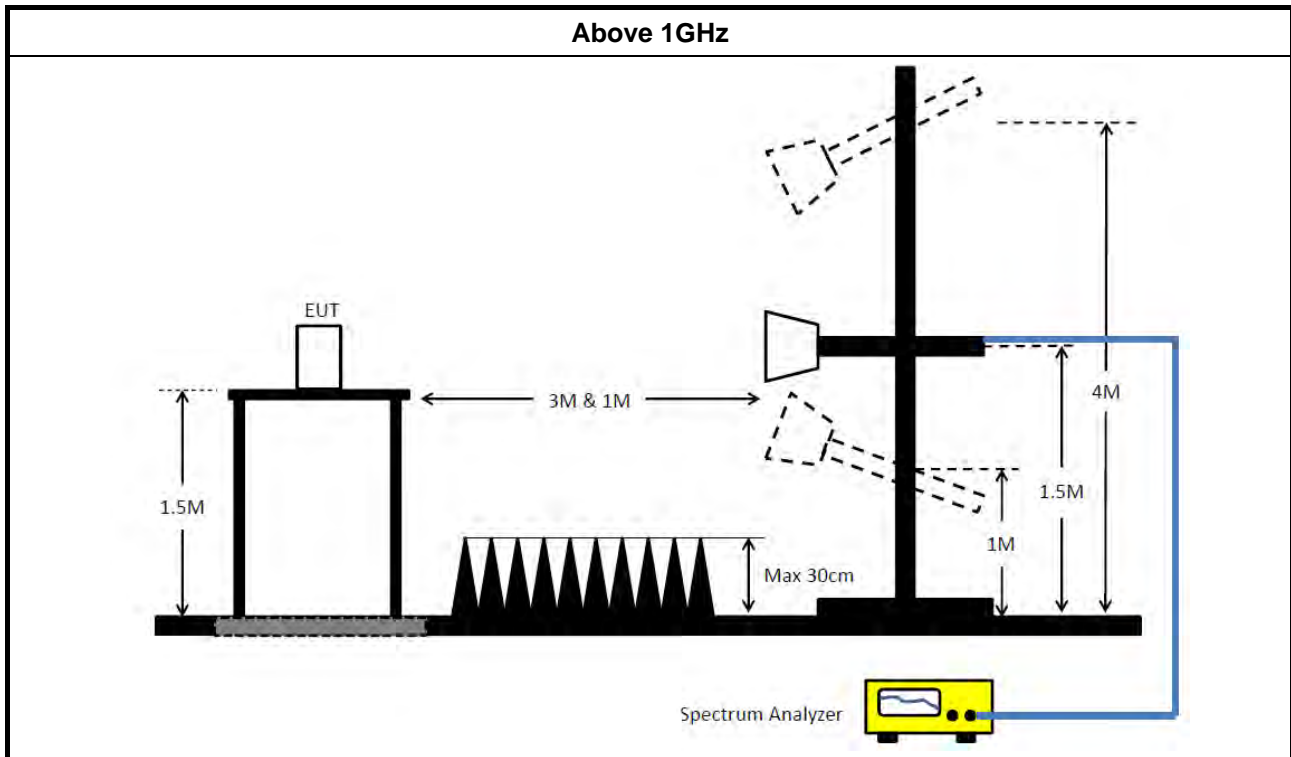


### 3.6.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> <li>The average emission levels shall be measured in [duty cycle <math>\geq 98</math> or duty factor].</li> </ul>	
<ul style="list-style-type: none"> <li>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.</li> </ul>	
<ul style="list-style-type: none"> <li>For the transmitter unwanted emissions shall be measured using following options below:</li> </ul>	
	<ul style="list-style-type: none"> <li>Refer as FCC KDB 558074, clause 12 for unwanted emissions into restricted bands.</li> </ul>
	<input type="checkbox"/> Refer as FCC KDB 558074, clause 12.2.5.1 Option 1 (trace averaging for duty cycle $\geq 98\%$ )
	<input type="checkbox"/> Refer as FCC KDB 558074, clause 12.2.5.2 Option 2 (trace averaging + duty factor).
	<input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 12.2.5.3 Option 3 (Reduced VBW $\geq 1/T$ ).
	<input type="checkbox"/> Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW $\geq 1/T$ , where T is pulse time.
	<input type="checkbox"/> Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions.
	<input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 12.2.4 measurement procedure peak limit.
<ul style="list-style-type: none"> <li>For the transmitter band-edge emissions shall be measured using following options below:</li> </ul>	
	<ul style="list-style-type: none"> <li>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.</li> </ul>
	<ul style="list-style-type: none"> <li>Refer as FCC KDB 558074, clause 13.2 (ANSI C63.10, clause 6.9.3) for marker-delta method for band-edge measurements.</li> </ul>
	<ul style="list-style-type: none"> <li>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).</li> </ul>
<ul style="list-style-type: none"> <li>For conducted and cabinet radiation measurement, refer as FCC KDB 558074, clause 12.2.2.</li> </ul>	
	<ul style="list-style-type: none"> <li>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 <math>10 \log(N)</math> dB</li> </ul>
	<ul style="list-style-type: none"> <li>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.</li> </ul>

### 3.6.4 Test Setup





### 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. 27, 2016	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. 15, 2016	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 18, 2016	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 16, 2017	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jun. 28, 2016	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Nov. 21, 2016	Radiation (03CH01-CB)
EMI Test	R&S	ESCS	100355	9kHz ~ 2.75GHz	May 16, 2016	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~ 1 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz ~ 40 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
Test Software	Audix	E3	6.2009-10-7	N/A	N/A	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2016*	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 26, 2016	Conducted (TH01-CB)



## 2.4GHz Wi-Fi Radio FCC Test Report

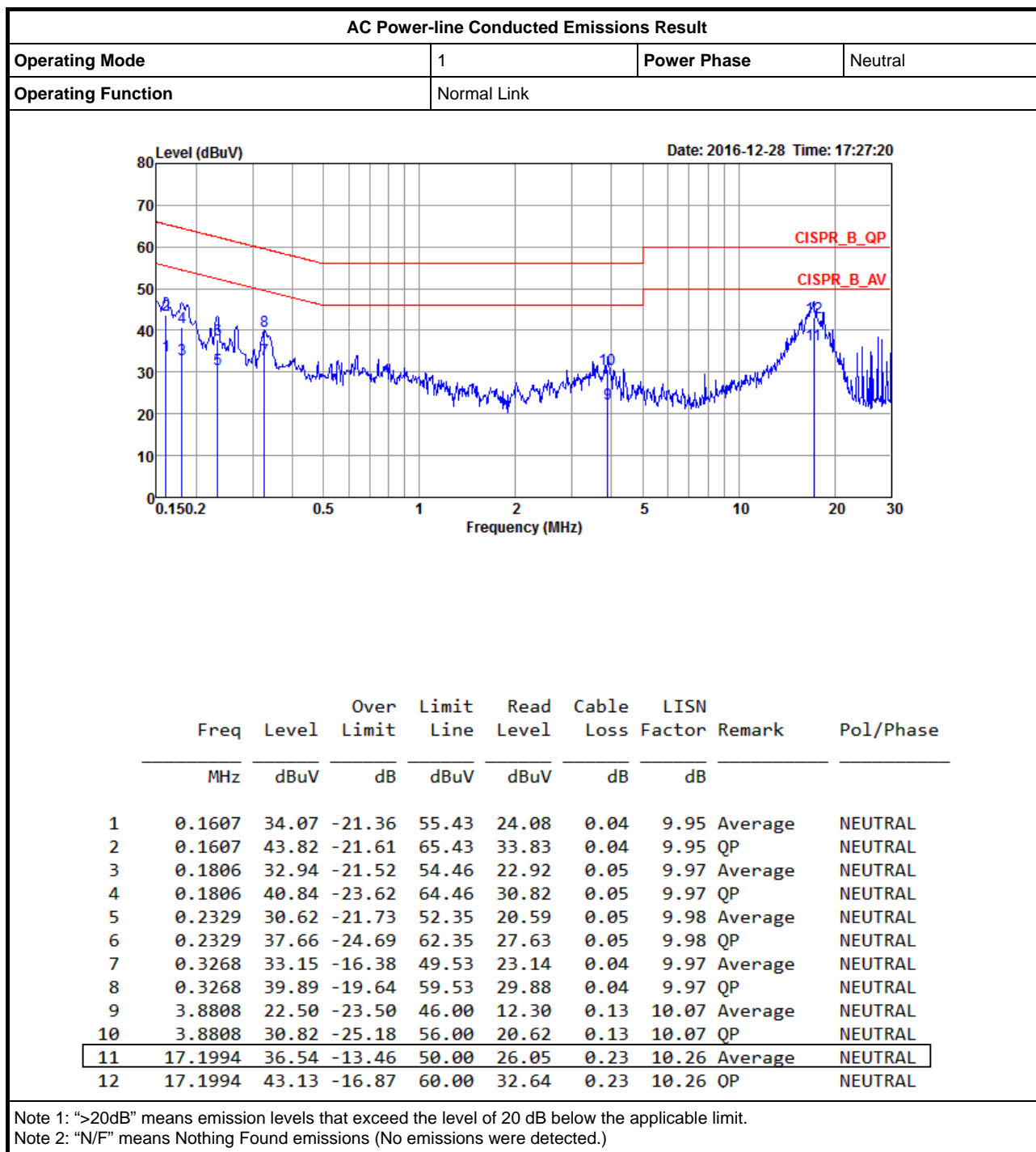
Report No. : FR681620AA

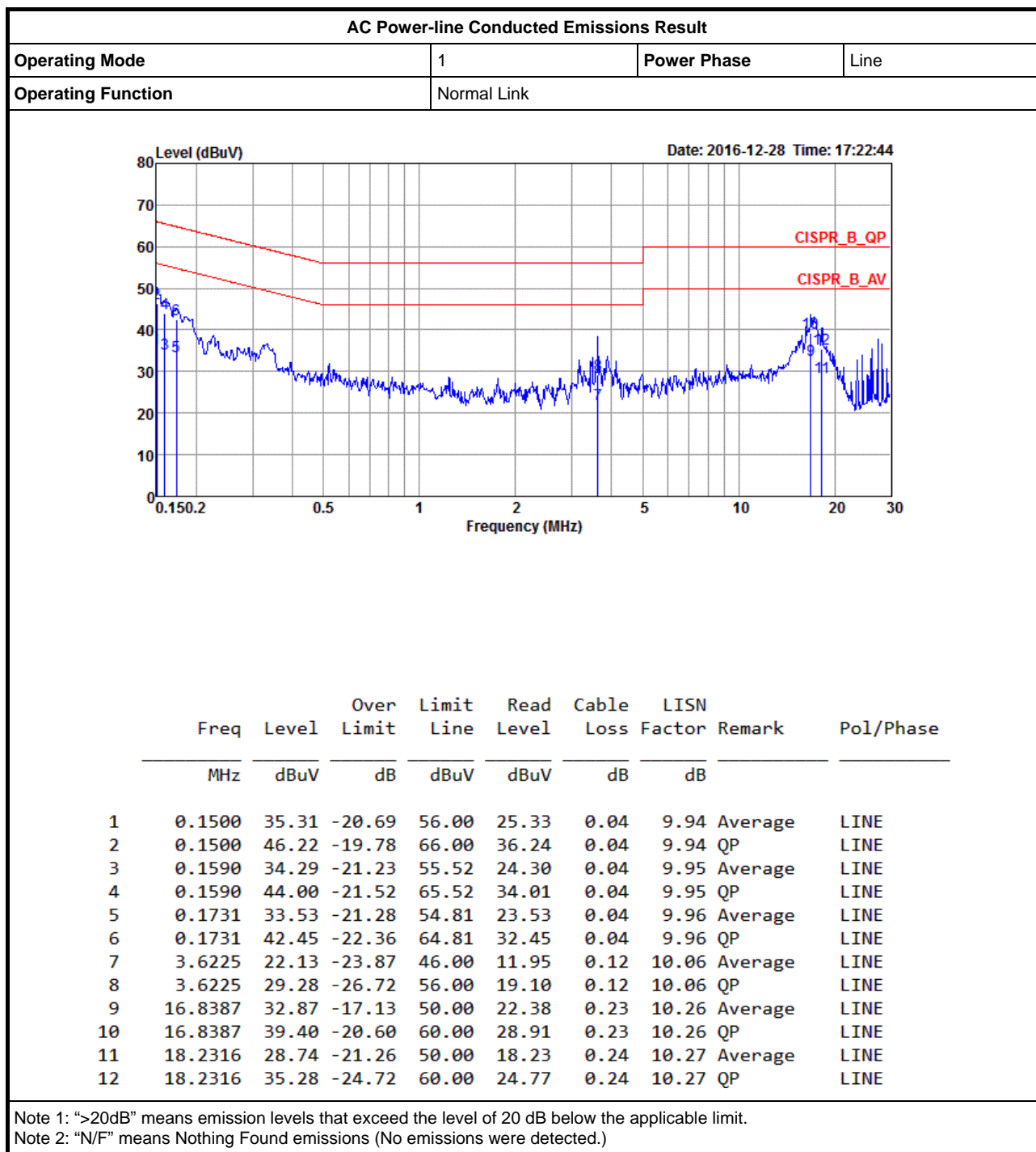
Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
RF Cable-high	Woken	RG402	High Cable-6	1 GHz – 26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-7	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-8	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-9	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 24, 2016	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 22, 2016	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410002	50MHz~18GHz	Nov. 22, 2016	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY54320014	50MHz~18GHz	Apr. 20, 2016	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY54320015	50MHz~18GHz	Apr. 20, 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.





**Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
802.11b_Nss1_4TX	-	-	-	-	-
2.4-2.4835GHz	9.05M	12.819M	12M8G1D	7.1M	12.519M
802.11g-BF_Nss1_4TX	-	-	-	-	-
2.4-2.4835GHz	16.275M	16.417M	16M4D1D	15.025M	16.367M
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-
2.4-2.4835GHz	17.525M	17.641M	17M6D1D	14.925M	17.566M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-
2.4-2.4835GHz	35.3M	36.032M	36M0D1D	30.65M	35.782M
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	-	-	-	-	-
2.4-2.4835GHz	17.65M	17.741M	17M7D1D	16.9M	17.666M
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	-	-	-	-	-
2.4-2.4835GHz	36.3M	36.332M	36M3D1D	35.3M	36.182M

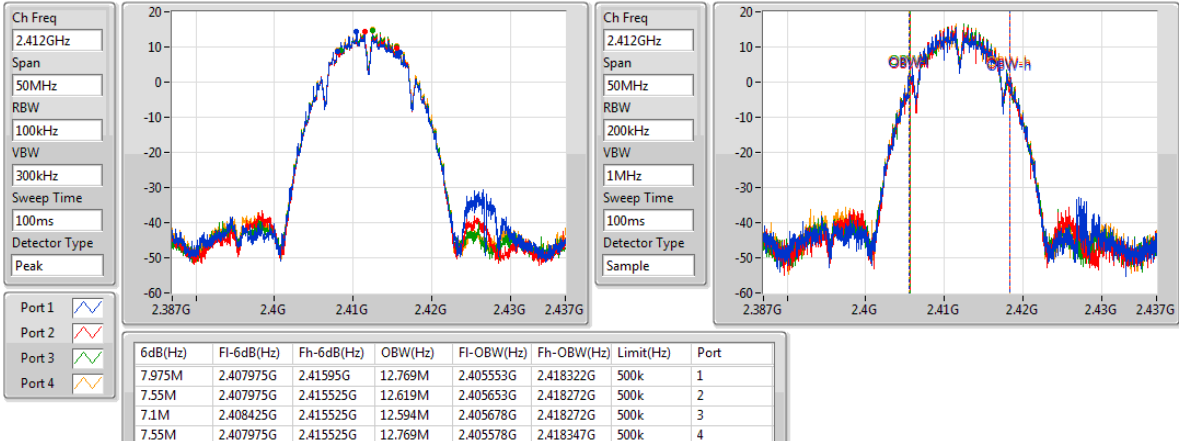
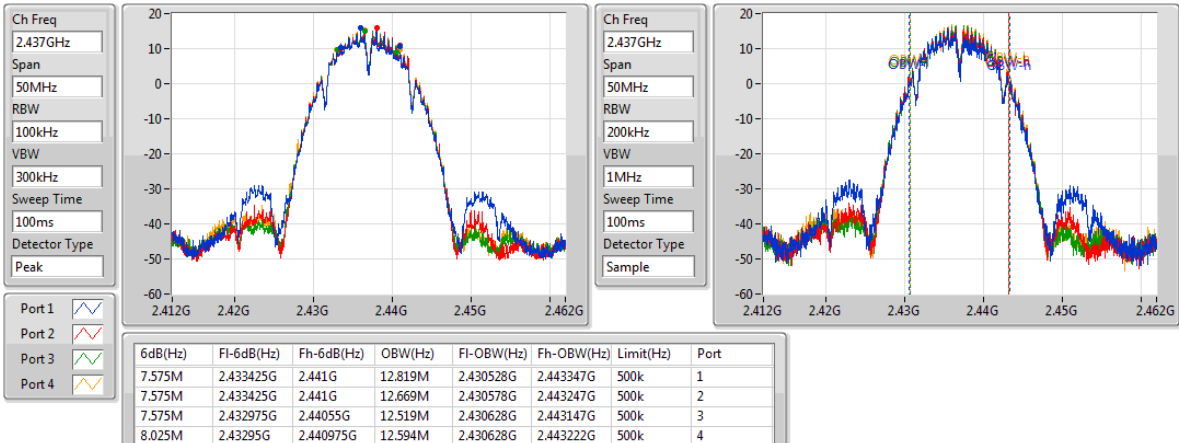
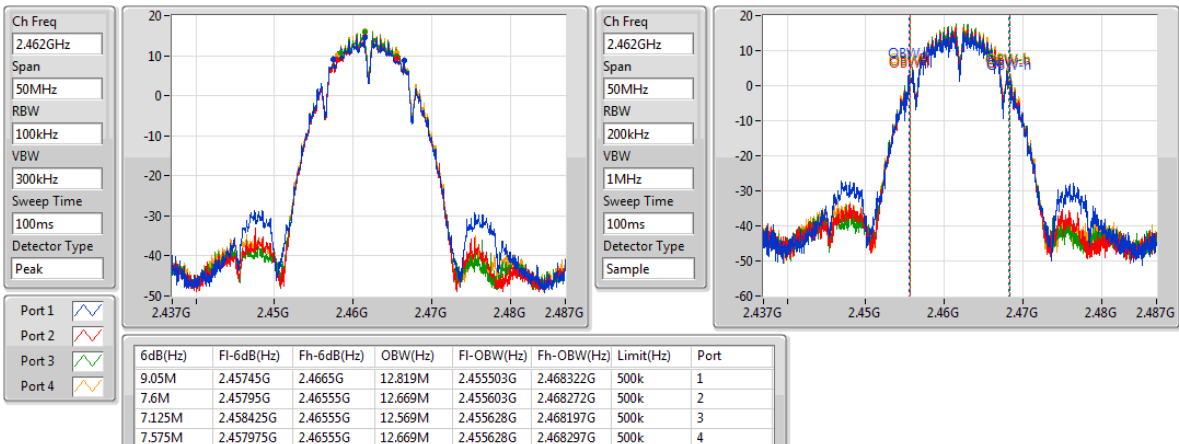
**Max-N dB** = Maximum 6dB down bandwidth; **Max-OBW** = Maximum 99% occupied bandwidth;  
**Min-N dB** = Minimum 6dB down bandwidth; **Min-OBW** = Minimum 99% occupied bandwidth;

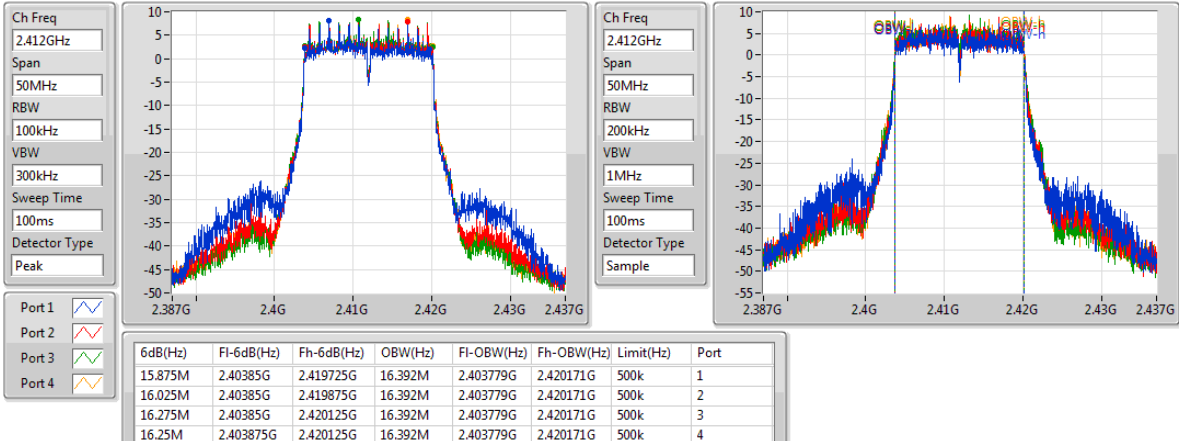
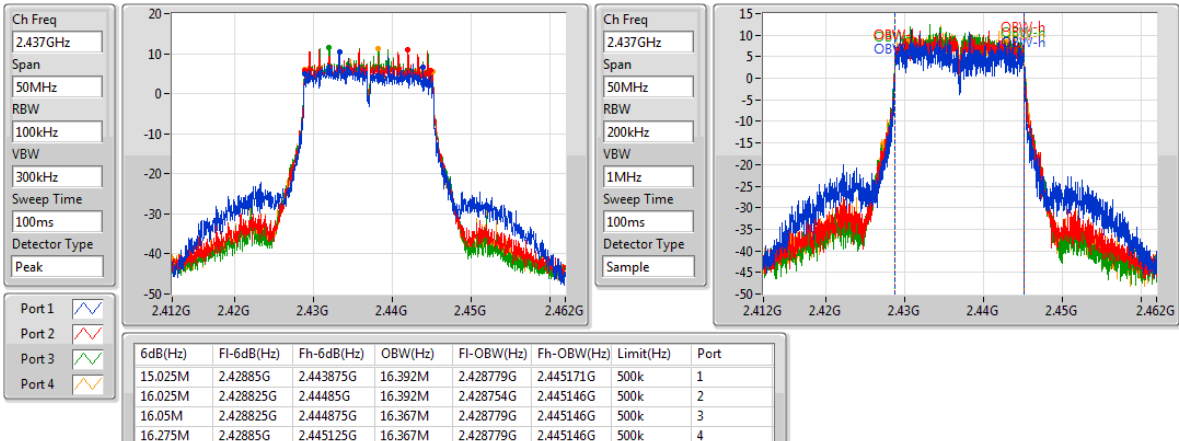
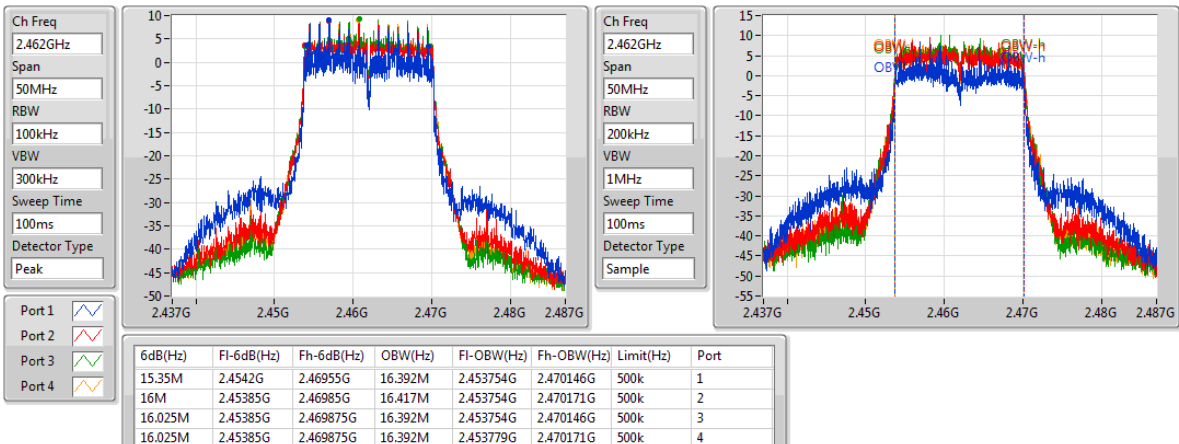
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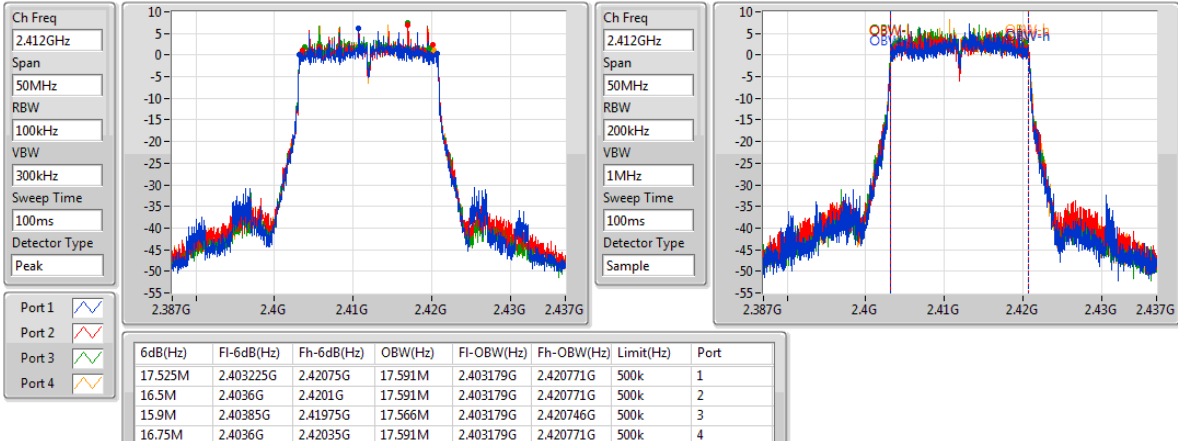
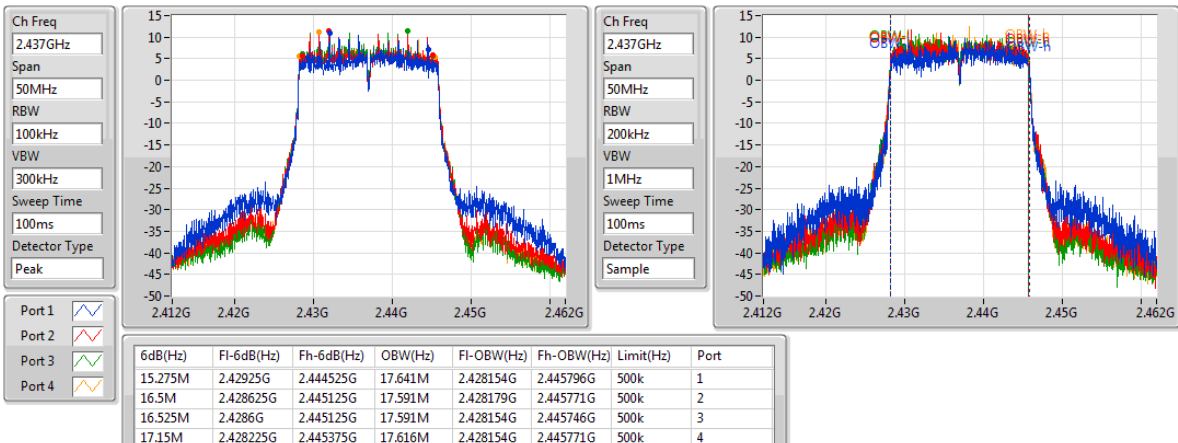
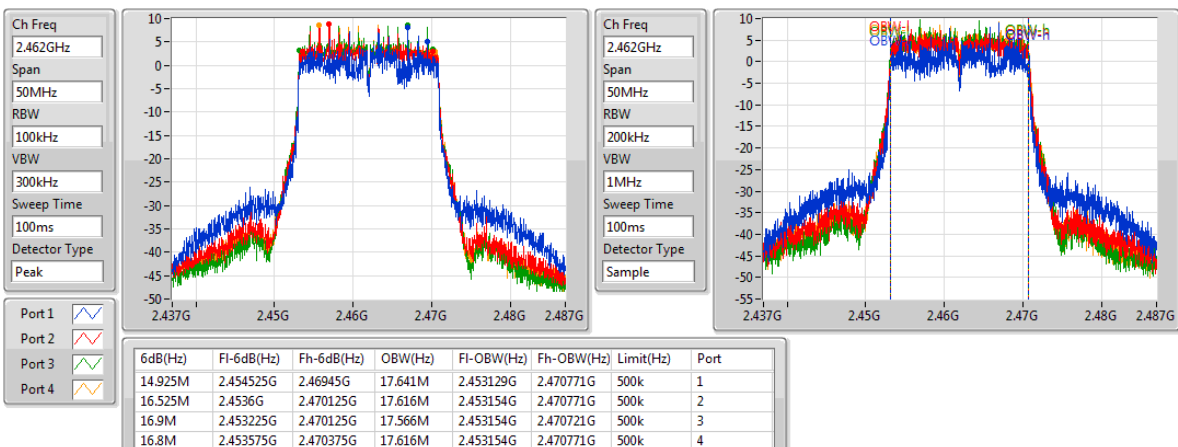
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11b_Nss1_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	7.975M	12.769M	7.55M	12.619M	7.1M	12.594M	7.55M	12.769M
2437MHz	Pass	500k	7.575M	12.819M	7.575M	12.669M	7.575M	12.519M	8.025M	12.594M
2462MHz	Pass	500k	9.05M	12.819M	7.6M	12.669M	7.125M	12.569M	7.575M	12.669M
802.11g-BF_Nss1_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	15.875M	16.392M	16.025M	16.392M	16.275M	16.392M	16.25M	16.392M
2437MHz	Pass	500k	15.025M	16.392M	16.025M	16.392M	16.05M	16.367M	16.275M	16.367M
2462MHz	Pass	500k	15.35M	16.392M	16M	16.417M	16.025M	16.392M	16.025M	16.392M
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	17.525M	17.591M	16.5M	17.591M	15.9M	17.566M	16.75M	17.591M
2437MHz	Pass	500k	15.275M	17.641M	16.5M	17.591M	16.525M	17.591M	17.15M	17.616M
2462MHz	Pass	500k	14.925M	17.641M	16.525M	17.616M	16.9M	17.566M	16.8M	17.616M
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	500k	35.05M	35.882M	35.1M	35.832M	30.65M	35.882M	35M	35.782M
2437MHz	Pass	500k	35.05M	36.032M	33.8M	35.832M	33.8M	35.982M	35.3M	35.882M
2452MHz	Pass	500k	35.1M	35.982M	33.8M	35.832M	35.3M	35.882M	31.25M	35.832M
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	17.65M	17.716M	17.575M	17.741M	17.575M	17.741M	17.525M	17.741M
2437MHz	Pass	500k	17.575M	17.716M	17.55M	17.716M	17.575M	17.691M	17.3M	17.741M
2462MHz	Pass	500k	16.9M	17.666M	17.575M	17.716M	17.55M	17.691M	17.575M	17.741M
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	500k	36.3M	36.232M	35.7M	36.282M	35.75M	36.282M	36.3M	36.182M
2437MHz	Pass	500k	36.3M	36.332M	36.25M	36.232M	36.3M	36.282M	35.3M	36.232M
2452MHz	Pass	500k	35.45M	36.232M	35.65M	36.332M	35.75M	36.282M	35.65M	36.232M

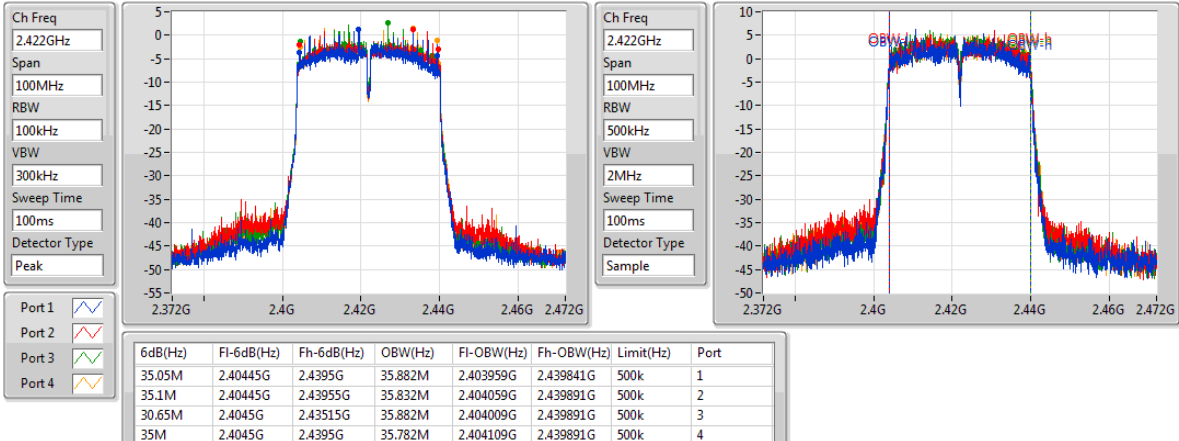
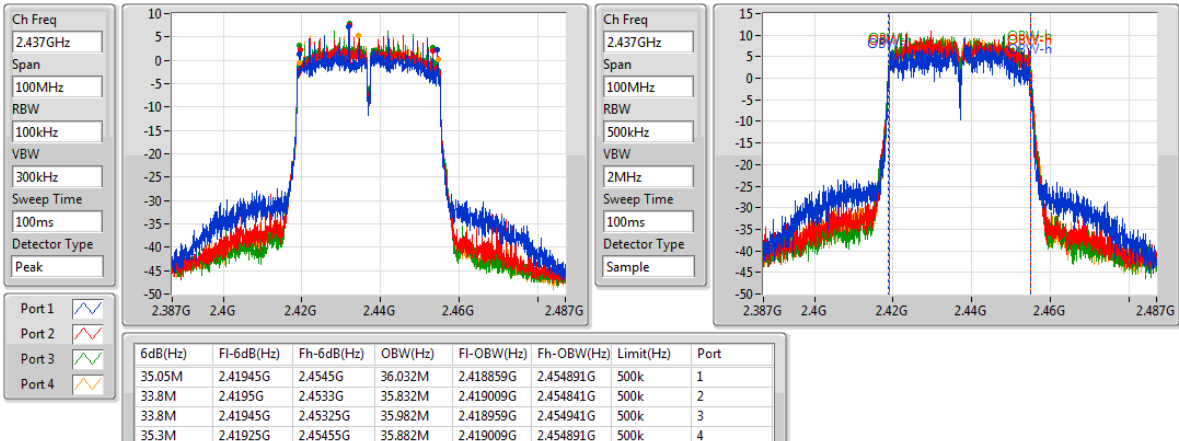
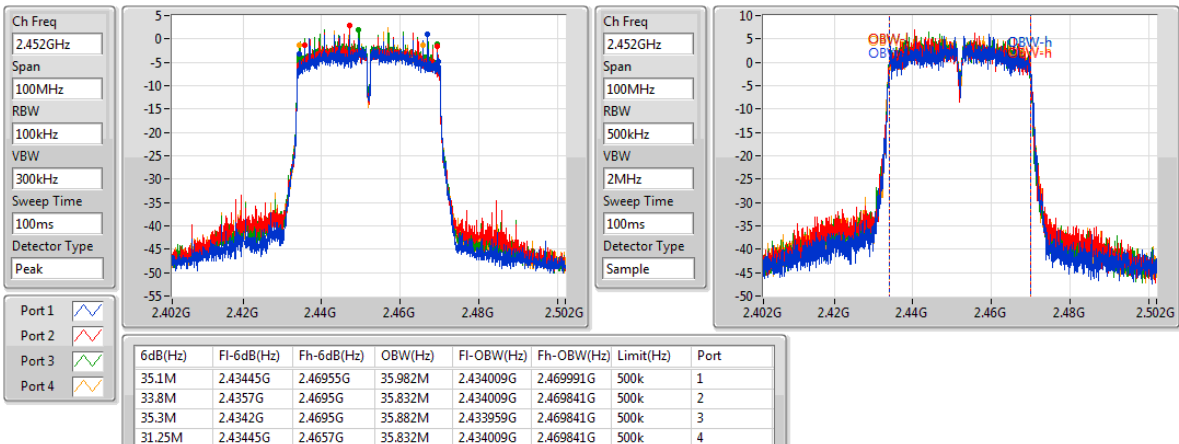
**Port X-N dB** = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

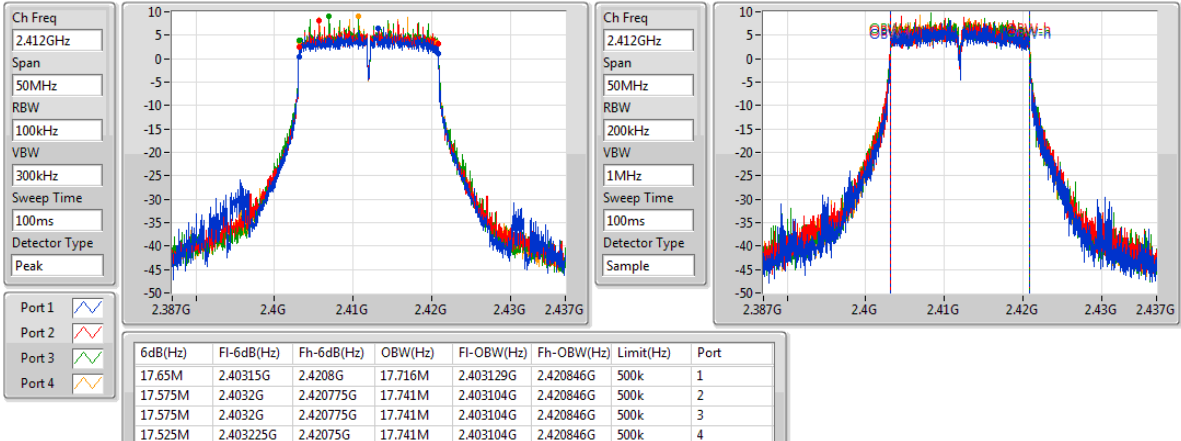
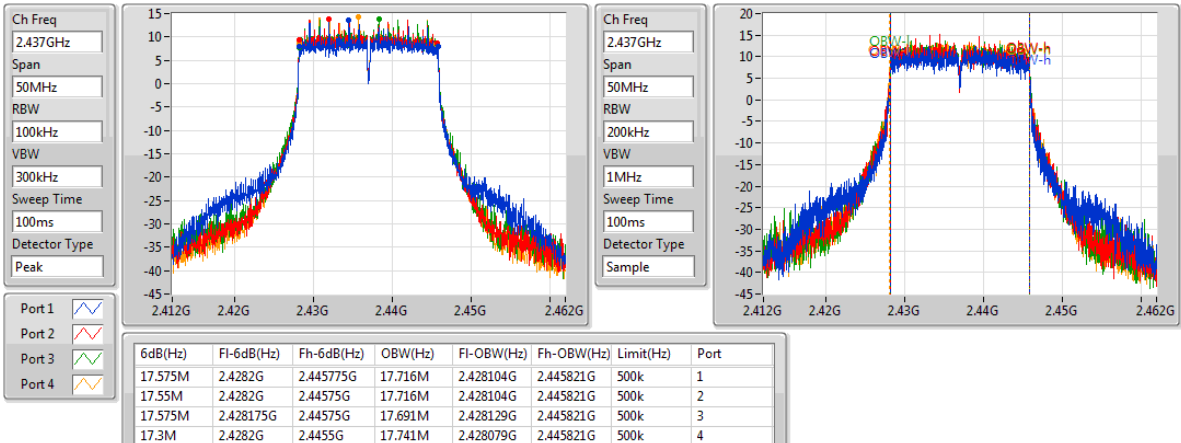
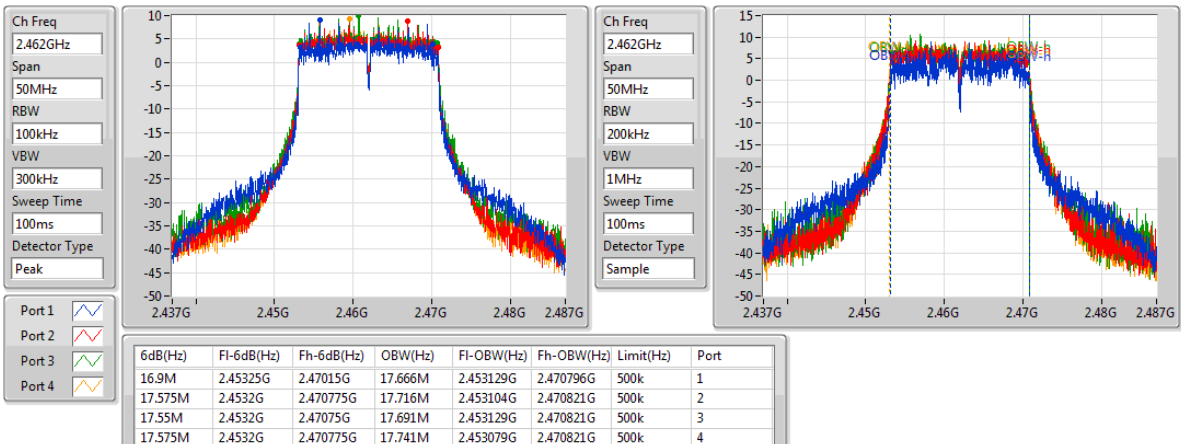


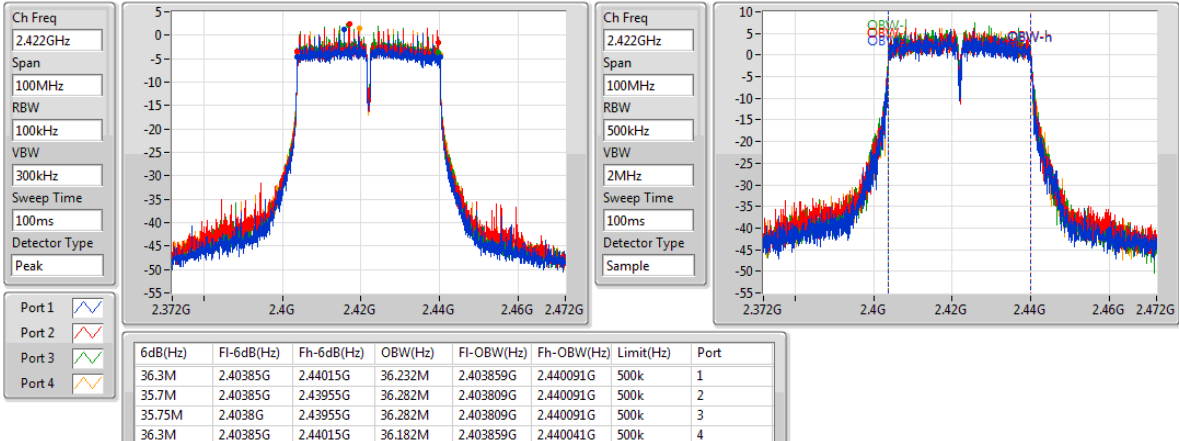
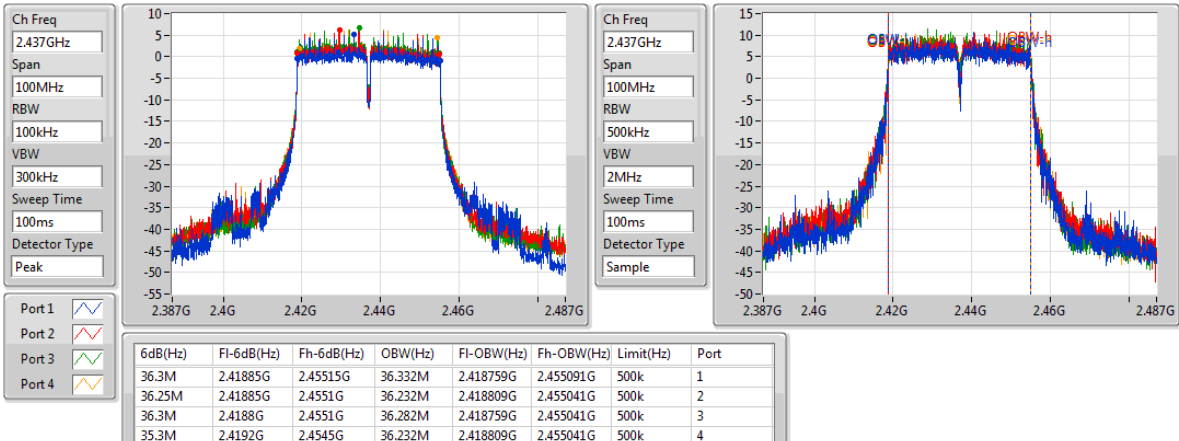
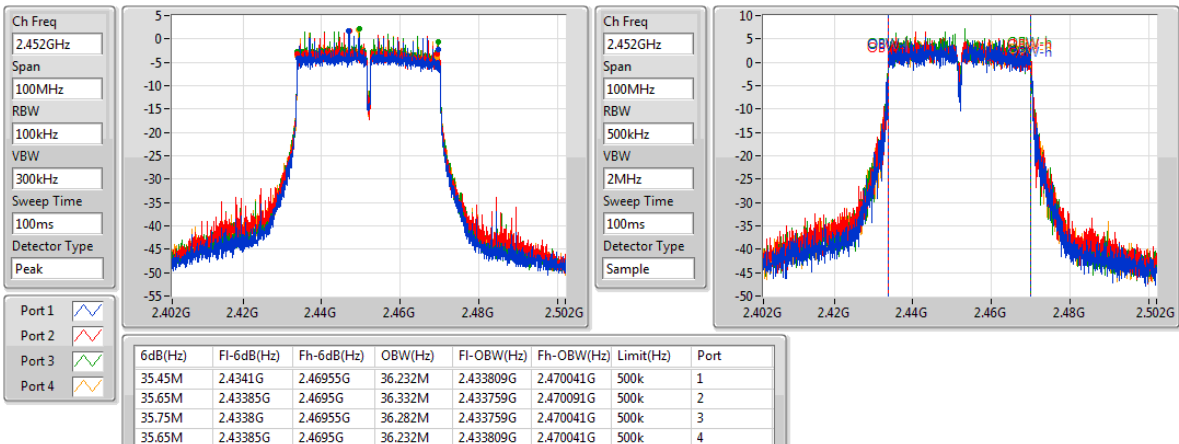
**802.11b\_Nss1\_4TX**
**EBW**
**2412MHz**

**802.11b\_Nss1\_4TX**
**EBW**
**2437MHz**

**802.11b\_Nss1\_4TX**
**EBW**
**2462MHz**


**802.11g-BF\_Nss1\_4TX**
**EBW**
**2412MHz**

**802.11g-BF\_Nss1\_4TX**
**EBW**
**2437MHz**

**802.11g-BF\_Nss1\_4TX**
**EBW**
**2462MHz**


**802.11ac VHT20-BF\_Nss1,(MCS0)\_4TX**
**EBW**
**2412MHz**

**802.11ac VHT20-BF\_Nss1,(MCS0)\_4TX**
**EBW**
**2437MHz**

**802.11ac VHT20-BF\_Nss1,(MCS0)\_4TX**
**EBW**
**2462MHz**


**802.11ac VHT40-BF\_Nss1,(MCS0)\_4TX**
**EBW**
**2422MHz**

**802.11ac VHT40-BF\_Nss1,(MCS0)\_4TX**
**EBW**
**2437MHz**

**802.11ac VHT40-BF\_Nss1,(MCS0)\_4TX**
**EBW**
**2452MHz**


**802.11ac VHT20-BF\_Nss2,(MCS0)\_4TX**
**EBW**
**2412MHz**

**802.11ac VHT20-BF\_Nss2,(MCS0)\_4TX**
**EBW**
**2437MHz**

**802.11ac VHT20-BF\_Nss2,(MCS0)\_4TX**
**EBW**
**2462MHz**


**802.11ac VHT40-BF\_Nss2,(MCS0)\_4TX**
**EBW**
**2422MHz**

**802.11ac VHT40-BF\_Nss2,(MCS0)\_4TX**
**EBW**
**2437MHz**

**802.11ac VHT40-BF\_Nss2,(MCS0)\_4TX**
**EBW**
**2452MHz**


**Summary**

Mode	Total Power (dBm)	Total Power (W)
802.11b_Nss1_4TX	-	-
2.4-2.4835GHz	29.96	0.99083
802.11g-BF_Nss1_4TX	-	-
2.4-2.4835GHz	28.41	0.69343
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-
2.4-2.4835GHz	28.25	0.66834
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-
2.4-2.4835GHz	27.21	0.52602
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	-	-
2.4-2.4835GHz	29.98	0.99541
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	-	-
2.4-2.4835GHz	27.05	0.50699

**Result**

Mode	Result	DG (dBi)	Total Power (dBm)	Power Limit (dBm)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)
802.11b_Nss1_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	1.50	29.26	30.00	23.64	23.34	23.21	22.70
2437MHz	Pass	1.50	29.25	30.00	23.24	23.31	23.61	22.73
2462MHz	Pass	1.50	29.96	30.00	23.88	24.06	23.58	24.20
802.11g-BF_Nss1_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	7.52	25.78	28.48	20.01	19.67	19.72	19.61
2437MHz	Pass	7.52	28.41	28.48	22.77	22.69	22.46	21.51
2462MHz	Pass	7.52	26.24	28.48	20.42	20.38	20.50	19.49
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	7.52	24.37	28.48	18.34	18.39	18.11	18.56
2437MHz	Pass	7.52	28.25	28.48	21.95	22.69	22.52	21.67
2462MHz	Pass	7.52	25.63	28.48	19.42	19.73	19.71	19.57
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
2422MHz	Pass	7.52	21.43	28.48	15.51	15.47	15.20	15.44
2437MHz	Pass	7.52	27.21	28.48	21.16	21.19	21.02	21.39
2452MHz	Pass	7.52	21.55	28.48	15.57	15.49	15.40	15.65
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	4.51	25.84	30.00	19.77	20.01	19.82	19.66
2437MHz	Pass	4.51	29.98	30.00	24.37	24.64	24.52	21.68
2462MHz	Pass	4.51	25.68	30.00	19.82	19.67	19.31	19.81
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
2422MHz	Pass	4.51	22.35	30.00	16.28	16.49	16.21	16.32
2437MHz	Pass	4.51	27.05	30.00	21.12	21.10	20.92	20.98
2452MHz	Pass	4.51	22.41	30.00	16.22	16.59	16.37	16.36

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



**Summary**

Mode	PD (dBm/RBW)
802.11b_Nss1_4TX	-
2.4-2.4835GHz	5.83
802.11g-BF_Nss1_4TX	-
2.4-2.4835GHz	-1.19
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-
2.4-2.4835GHz	-0.94
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-
2.4-2.4835GHz	-4.72
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	-
2.4-2.4835GHz	1.51
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	-
2.4-2.4835GHz	-5.01

RBW=3kHz.

**Result**

Mode	Result	DG (dBi)	PD (dBm/RBW)	PD Limit (dBm/RBW)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)
802.11b_Nss1_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	7.52	5.25	6.48	-0.76	0.51	1.99	1.13
2437MHz	Pass	7.52	5.44	6.48	-0.39	0.40	-0.02	0.09
2462MHz	Pass	7.52	5.83	6.48	1.43	1.10	1.11	1.04
802.11g-BF_Nss1_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	7.52	-4.05	6.48	-9.57	-9.41	-9.12	-8.74
2437MHz	Pass	7.52	-1.19	6.48	-6.90	-6.38	-5.66	-5.36
2462MHz	Pass	7.52	-3.59	6.48	-10.75	-9.13	-6.97	-7.62
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	7.52	-5.13	6.48	-10.51	-10.70	-10.05	-10.57
2437MHz	Pass	7.52	-0.94	6.48	-6.52	-6.08	-6.05	-6.21
2462MHz	Pass	7.52	-4.09	6.48	-9.28	-8.72	-8.44	-8.61
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
2422MHz	Pass	7.52	-9.04	6.48	-14.76	-14.18	-14.33	-12.73
2437MHz	Pass	7.52	-4.72	6.48	-11.40	-8.56	-8.35	-8.80
2452MHz	Pass	7.52	-9.07	6.48	-13.92	-14.34	-12.62	-13.57
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	4.51	-2.60	8.00	-7.91	-6.07	-7.41	-8.21
2437MHz	Pass	4.51	1.51	8.00	-3.66	-3.02	-2.41	-2.52
2462MHz	Pass	4.51	-2.85	8.00	-8.94	-7.76	-5.97	-7.50
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-
2422MHz	Pass	4.51	-9.58	8.00	-13.73	-12.84	-14.37	-14.56
2437MHz	Pass	4.51	-5.01	8.00	-11.20	-9.93	-9.31	-10.17
2452MHz	Pass	4.51	-9.42	8.00	-15.02	-12.92	-13.69	-14.71

**DG** = Directional Gain; RBW=3kHz;

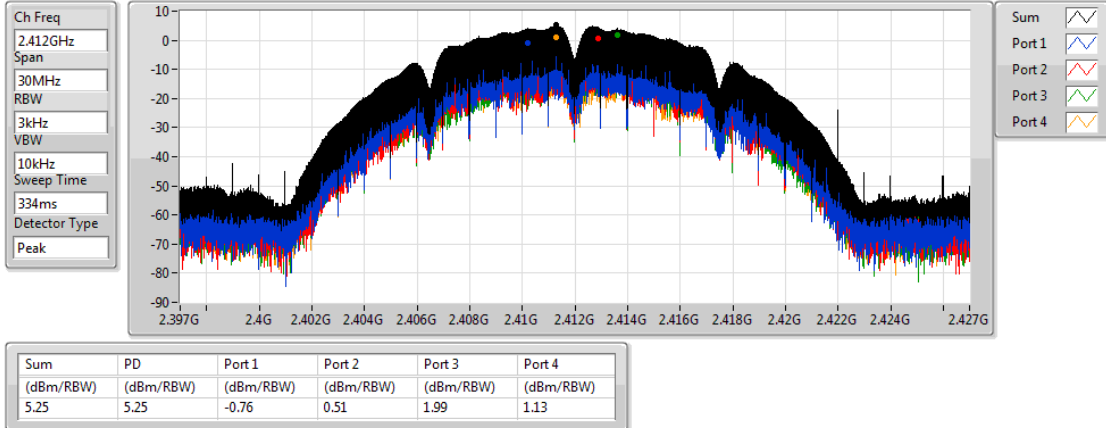
**PD** = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port X power density;



### 802.11b\_Nss1\_4TX

PSD

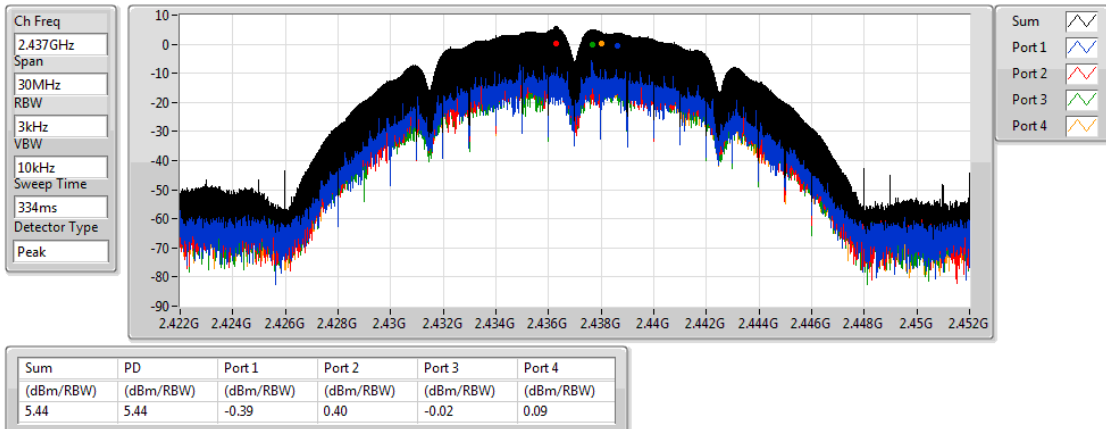
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### 802.11b\_Nss1\_4TX

PSD

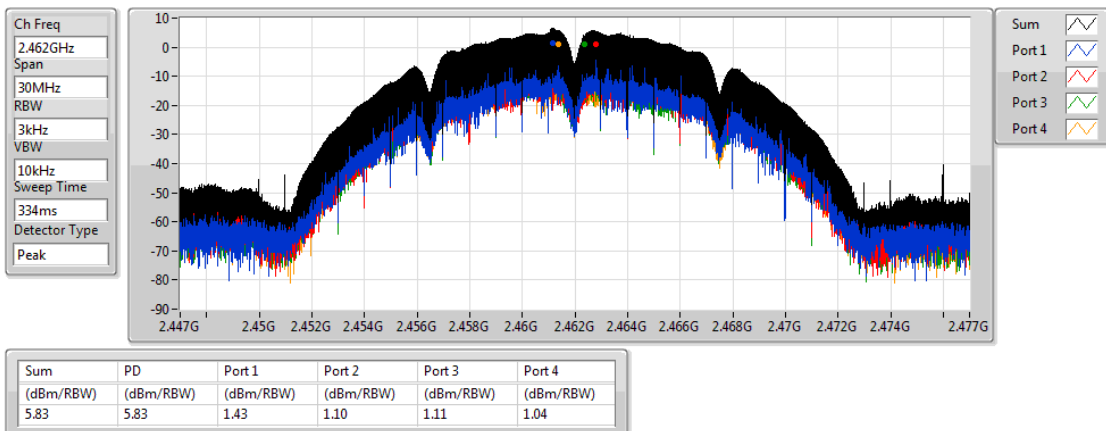
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### 802.11b\_Nss1\_4TX

PSD

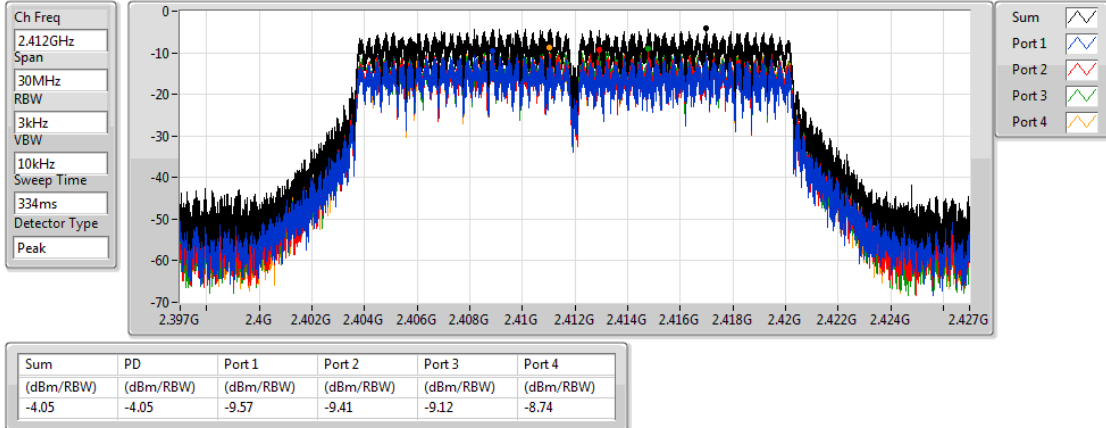
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### 802.11g-BF\_Nss1\_4TX

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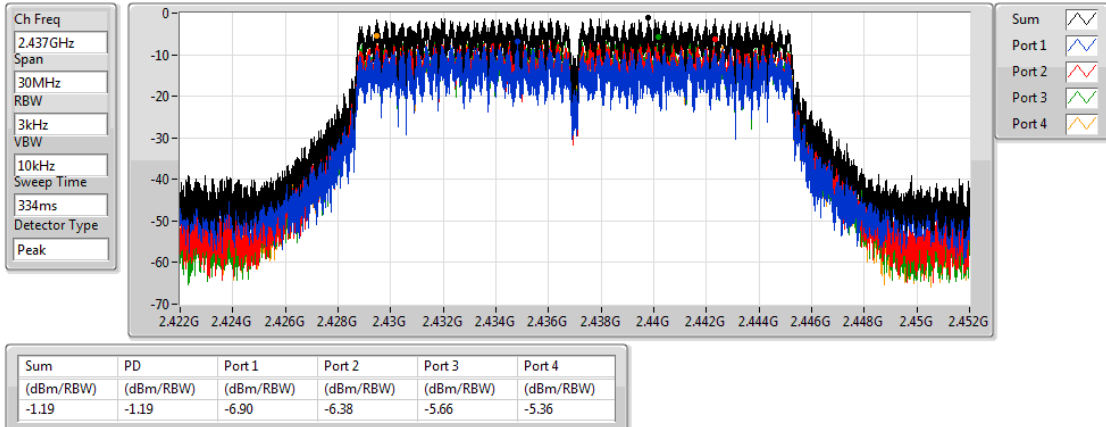
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### 802.11g-BF\_Nss1\_4TX

PSD

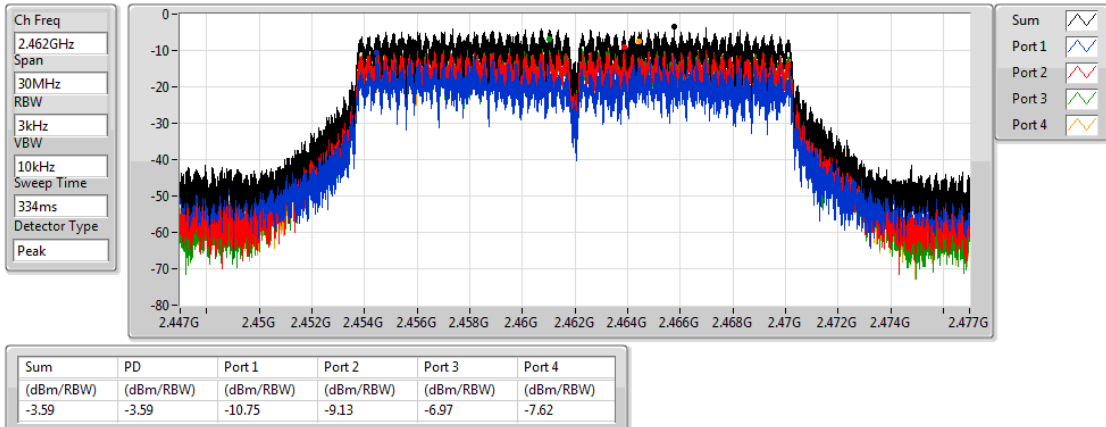
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### 802.11g-BF\_Nss1\_4TX

PSD

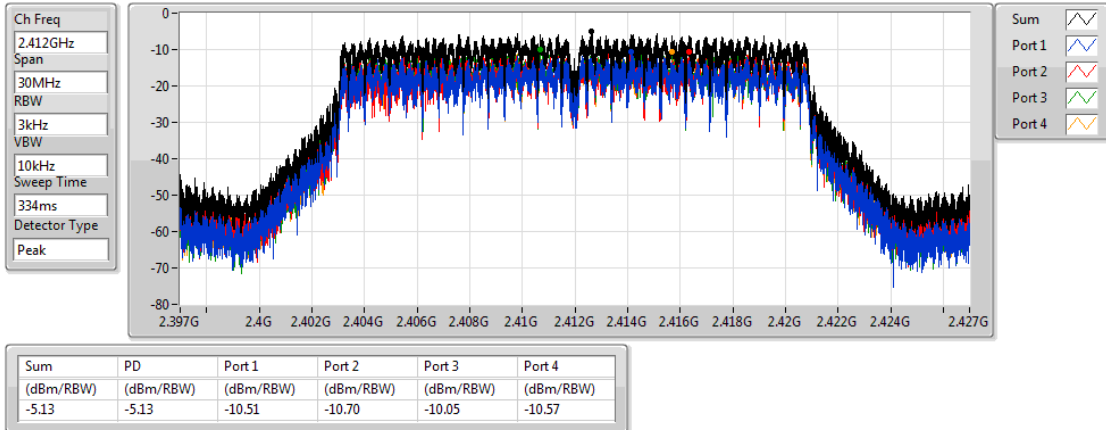
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### 802.11ac VHT20-BF\_Nss1,(MCS0)\_4TX

PSD

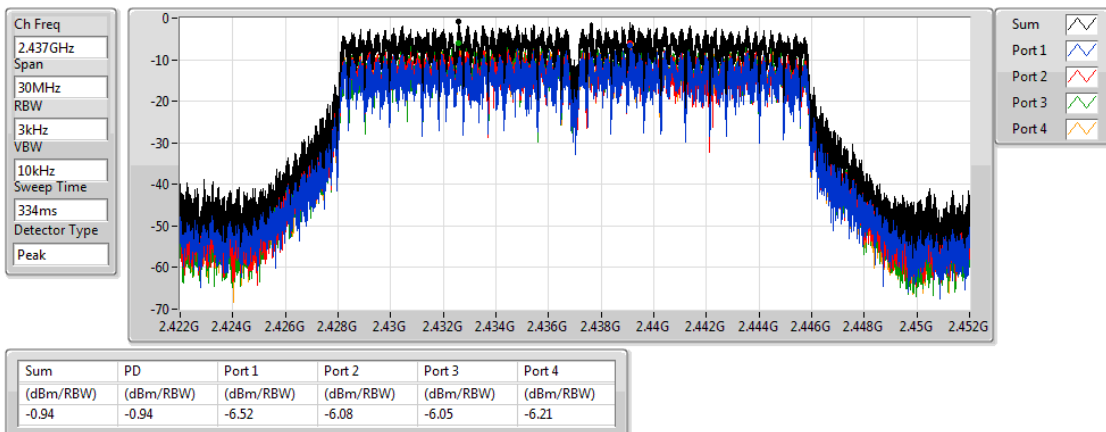
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### 802.11ac VHT20-BF\_Nss1,(MCS0)\_4TX

PSD

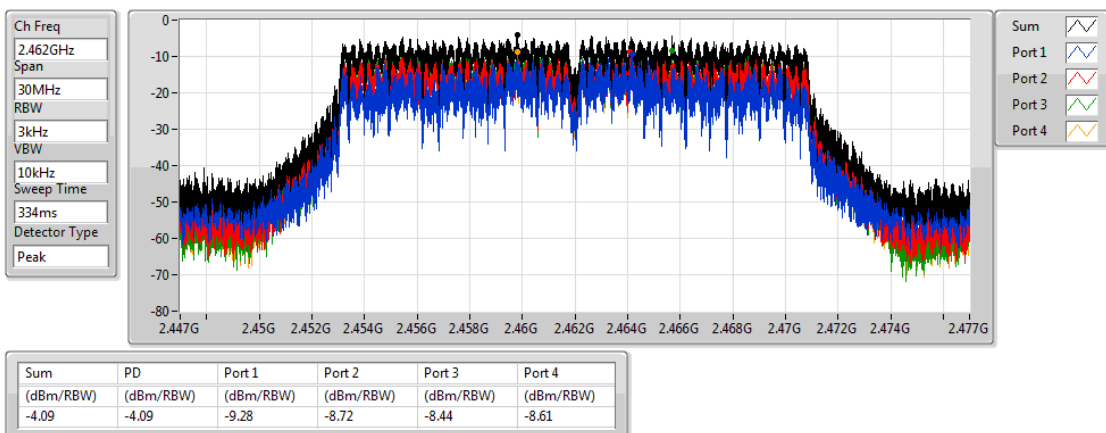
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### 802.11ac VHT20-BF\_Nss1,(MCS0)\_4TX

PSD

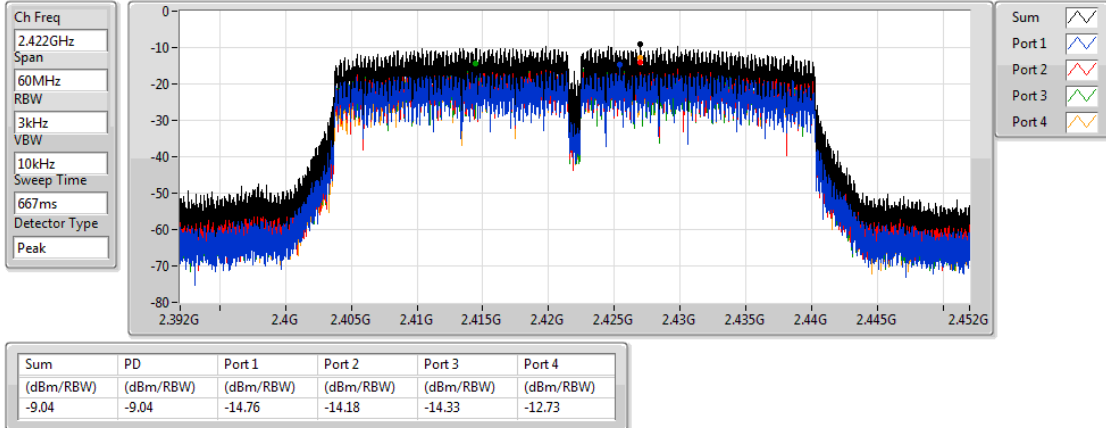
2462MHz



### 802.11ac VHT40-BF\_Nss1,(MCS0)\_4TX

PSD

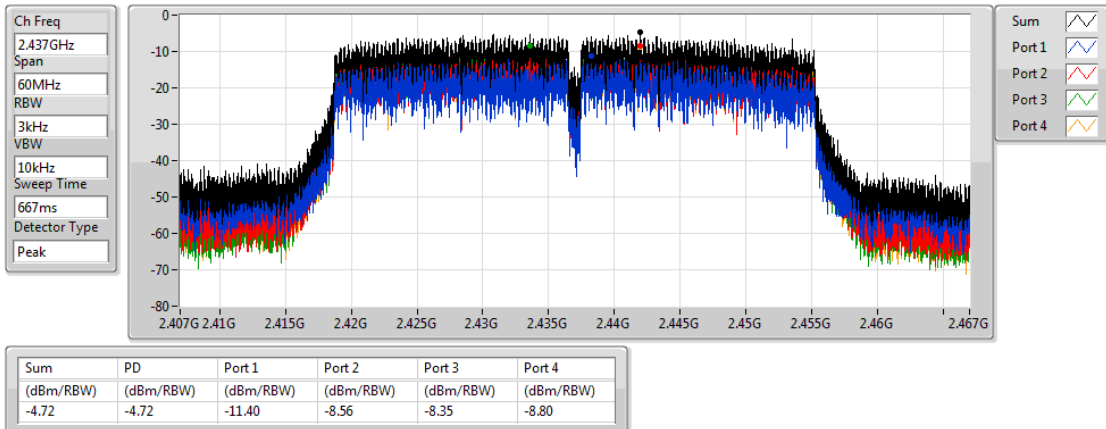
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### 802.11ac VHT40-BF\_Nss1,(MCS0)\_4TX

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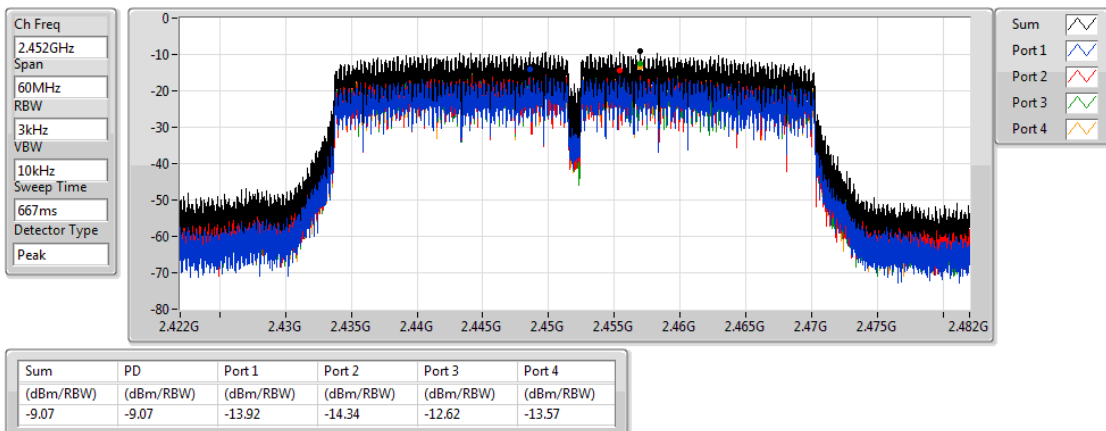
2437MHz



### 802.11ac VHT40-BF\_Nss1,(MCS0)\_4TX

PSD

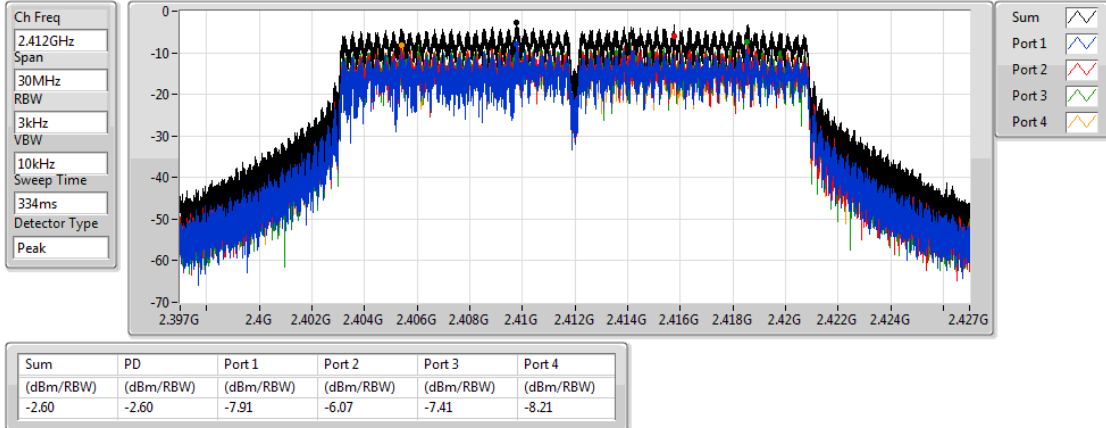
2452MHz



### 802.11ac VHT20-BF\_Nss2,(MCS0)\_4TX

PSD

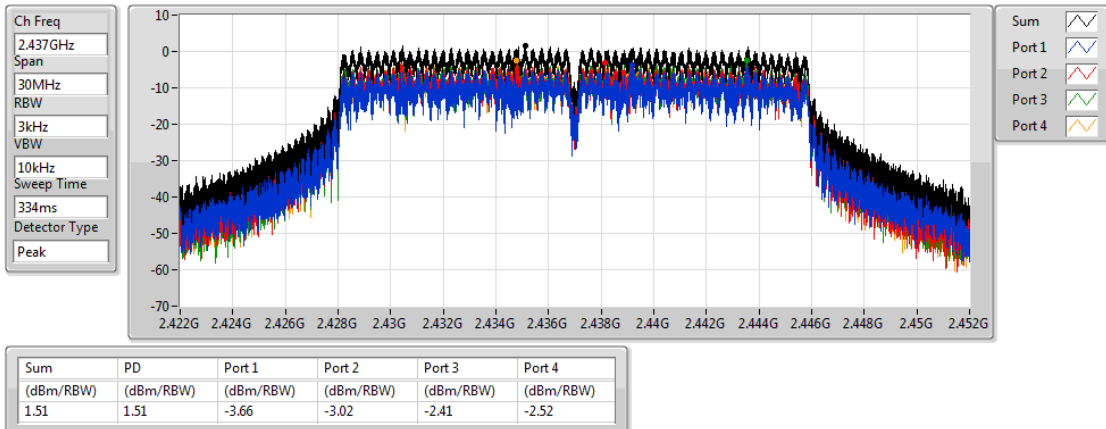
2412MHz



### 802.11ac VHT20-BF\_Nss2,(MCS0)\_4TX

PSD

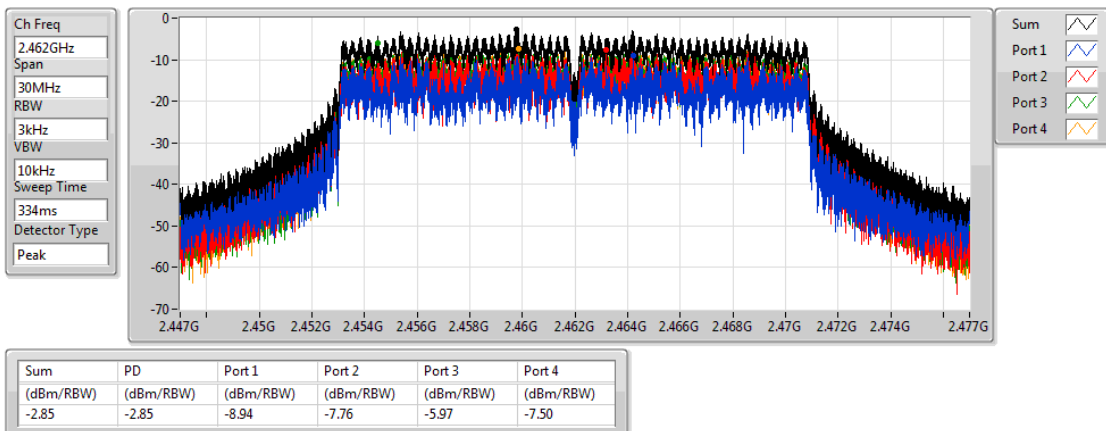
2437MHz



### 802.11ac VHT20-BF\_Nss2,(MCS0)\_4TX

PSD

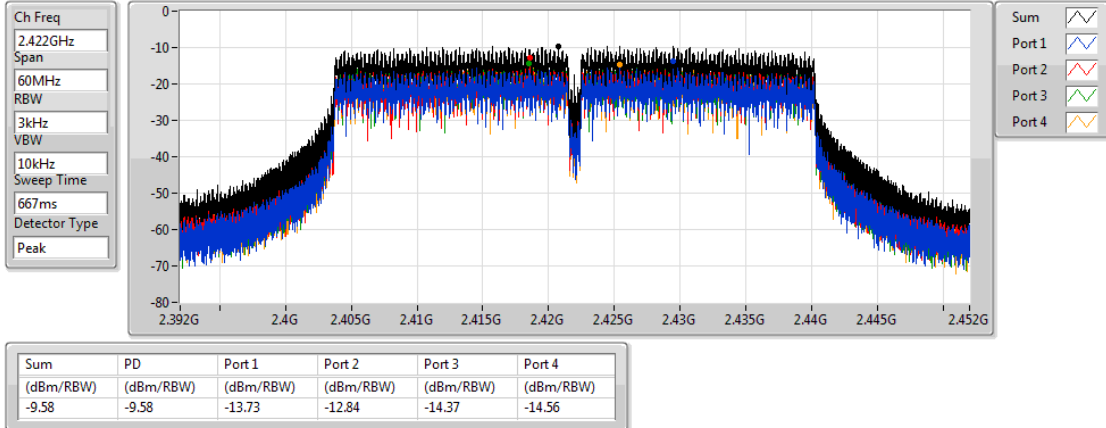
2462MHz



### 802.11ac VHT40-BF\_Nss2,(MCS0)\_4TX

PSD

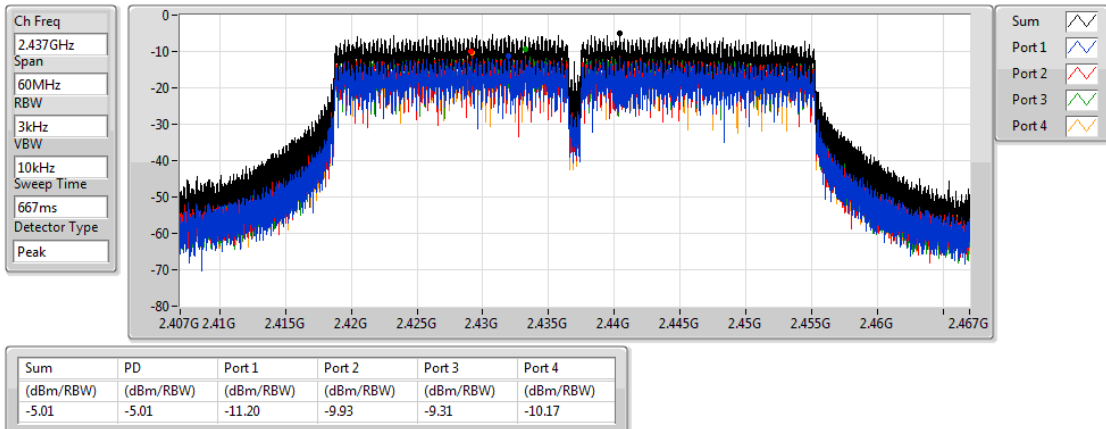
2422MHz



### 802.11ac VHT40-BF\_Nss2,(MCS0)\_4TX

PSD

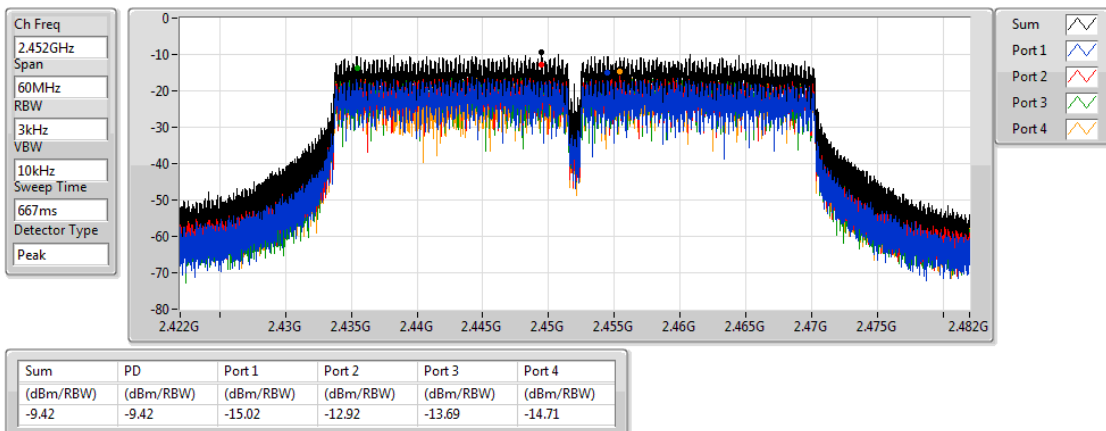
2437MHz



### 802.11ac VHT40-BF\_Nss2,(MCS0)\_4TX

PSD

2452MHz





## CSE 20dB/30dB Down Result

## Appendix E

### Summary

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2.4-2.4835GHz	Pass	2.441917G	14.10	-15.90	2.309905G	-54.44	2.39992G	-22.44	2.49094G	-52.05	6.990704G	-47.23	3

### 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_Nss1_4TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.437408G	16.08	-13.92	2.305245G	-53.64	2.39456G	-39.20	2.4939G	-51.03	16.666838G	-46.79	1
2412MHz	Pass	2.437408G	16.08	-13.92	2.307575G	-54.49	2.39856G	-38.62	2.5011G	-52.37	16.385881G	-48.48	2
2412MHz	Pass	2.437408G	16.08	-13.92	802.395M	-52.38	2.39496G	-39.23	2.48726G	-50.26	16.352167G	-48.26	3
2412MHz	Pass	2.437408G	16.08	-13.92	802.395M	-37.27	2.39456G	-37.08	2.4959G	-49.86	3.214652G	-36.94	4
2437MHz	Pass	2.437408G	16.08	-13.92	1.624885G	-49.26	2.39944G	-46.68	2.49278G	-50.89	16.666838G	-48.07	1
2437MHz	Pass	2.437408G	16.08	-13.92	1.624885G	-48.73	2.39952G	-46.02	2.48758G	-52.24	16.383072G	-48.71	2
2437MHz	Pass	2.437408G	16.08	-13.92	1.624885G	-44.15	2.3996G	-45.14	2.4859G	-48.90	16.354976G	-48.08	3
2437MHz	Pass	2.437408G	16.08	-13.92	1.624885G	-26.88	2.39952G	-46.53	2.4839G	-48.21	3.248367G	-40.84	4
2462MHz	Pass	2.437408G	16.08	-13.92	1.641195G	-41.76	2.3928G	-48.91	2.4847G	-46.70	16.422406G	-48.32	1
2462MHz	Pass	2.437408G	16.08	-13.92	1.641195G	-47.26	2.39696G	-50.97	2.49046G	-42.12	16.388691G	-48.50	2
2462MHz	Pass	2.437408G	16.08	-13.92	1.641195G	-44.24	2.39688G	-48.76	2.4875G	-43.57	16.377453G	-47.72	3
2462MHz	Pass	2.437408G	16.08	-13.92	1.641195G	-27.67	2.3968G	-49.01	2.48742G	-42.10	3.282082G	-43.62	4
802.11g-BF_Nss1_4TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.441917G	11.21	-18.79	2.30175G	-56.66	2.39824G	-25.84	2.48574G	-53.69	6.973847G	-50.20	1
2412MHz	Pass	2.441917G	11.21	-18.79	1.80779G	-57.28	2.39704G	-29.82	2.48446G	-54.63	6.996324G	-50.48	2
2412MHz	Pass	2.441917G	11.21	-18.79	2.300585G	-56.16	2.39888G	-35.44	2.4967G	-53.67	6.937323G	-50.12	3
2412MHz	Pass	2.441917G	11.21	-18.79	798.9M	-42.15	2.39704G	-30.55	2.49598G	-54.77	3.214652G	-43.92	4
2437MHz	Pass	2.441917G	11.21	-18.79	1.934775G	-54.27	2.39744G	-48.01	2.48438G	-51.44	6.993514G	-46.98	1
2437MHz	Pass	2.441917G	11.21	-18.79	2.307575G	-54.02	2.39728G	-48.60	2.48574G	-51.21	6.987895G	-46.73	2
2437MHz	Pass	2.441917G	11.21	-18.79	1.864875G	-54.17	2.39992G	-47.06	2.48518G	-50.75	6.931704G	-47.00	3
2437MHz	Pass	2.441917G	11.21	-18.79	1.622555G	-42.11	2.39608G	-47.53	2.48446G	-50.67	3.248367G	-44.07	4
2462MHz	Pass	2.441917G	11.21	-18.79	2.30874G	-56.51	2.39968G	-55.72	2.4839G	-39.76	6.95418G	-49.67	1
2462MHz	Pass	2.441917G	11.21	-18.79	2.30408G	-55.88	2.3992G	-53.41	2.48374G	-43.66	6.959799G	-49.50	2
2462MHz	Pass	2.441917G	11.21	-18.79	2.30641G	-56.21	2.39928G	-53.97	2.48382G	-44.61	6.982276G	-48.95	3
2462MHz	Pass	2.441917G	11.21	-18.79	1.64003G	-46.67	2.39856G	-53.30	2.48478G	-45.11	6.937323G	-49.20	4
802.11ac VHT20-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.435738G	11.19	-18.81	1.76818G	-58.10	2.39704G	-36.54	2.48694G	-55.48	6.985085G	-51.13	1
2412MHz	Pass	2.435738G	11.19	-18.81	2.305245G	-58.12	2.39704G	-34.59	2.50326G	-56.56	6.979466G	-50.46	2
2412MHz	Pass	2.435738G	11.19	-18.81	2.30408G	-57.21	2.39704G	-34.15	2.48798G	-55.51	6.999133G	-49.76	3
2412MHz	Pass	2.435738G	11.19	-18.81	808.22M	-46.74	2.39704G	-31.09	2.49598G	-55.56	3.214652G	-44.55	4
2437MHz	Pass	2.435738G	11.19	-18.81	1.95458G	-54.11	2.39816G	-47.64	2.48414G	-51.10	6.996324G	-45.20	1
2437MHz	Pass	2.435738G	11.19	-18.81	2.19923G	-54.35	2.39888G	-46.61	2.48382G	-50.87	6.979466G	-46.71	2
2437MHz	Pass	2.435738G	11.19	-18.81	1.806625G	-54.00	2.39568G	-47.40	2.48598G	-50.21	6.999133G	-47.52	3
2437MHz	Pass	2.435738G	11.19	-18.81	1.62372G	-42.02	2.39888G	-46.78	2.48566G	-49.77	3.248367G	-44.05	4
2462MHz	Pass	2.435738G	11.19	-18.81	2.30641G	-55.67	2.3976G	-54.05	2.48422G	-37.55	6.993514G	-48.05	1
2462MHz	Pass	2.435738G	11.19	-18.81	1.778665G	-56.38	2.3932G	-52.88	2.48414G	-42.89	6.987895G	-49.85	2
2462MHz	Pass	2.435738G	11.19	-18.81	2.30408G	-54.69	2.39936G	-53.74	2.48598G	-47.31	6.993514G	-49.30	3
2462MHz	Pass	2.435738G	11.19	-18.81	1.64003G	-44.23	2.39304G	-54.46	2.48382G	-44.86	6.940132G	-49.89	4
802.11ac VHT40-BF_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	2.441917G	5.80	-24.20	2.062375G	-57.16	2.39888G	-41.04	2.48366G	-54.47	6.972272G	-48.97	1
2422MHz	Pass	2.441917G	5.80	-24.20	2.030315G	-57.14	2.39792G	-37.29	2.4923G	-51.20	6.977881G	-50.41	2

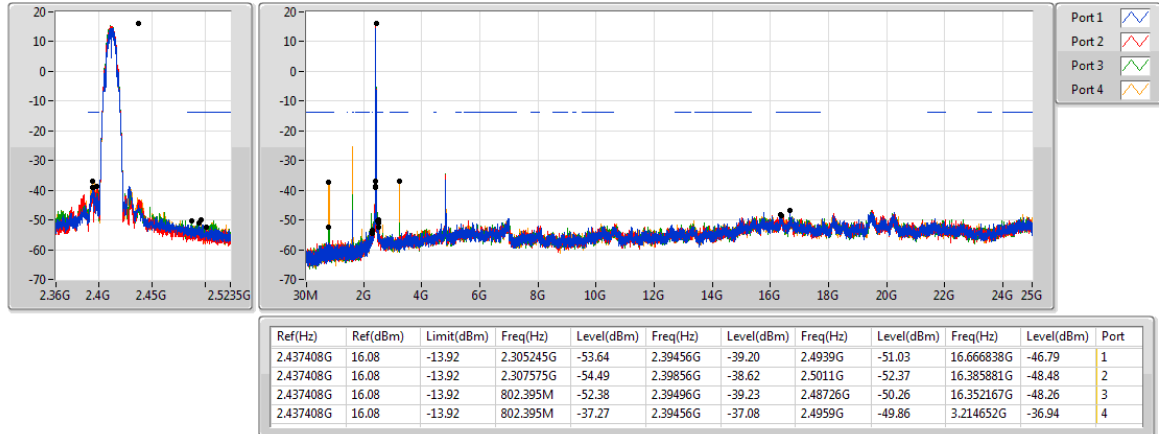
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2422MHz	Pass	2.441917G	5.80	-24.20	2.30168G	-56.11	2.39696G	-39.36	2.4931G	-53.22	6.947031G	-49.09	3
2422MHz	Pass	2.441917G	5.80	-24.20	1.620405G	-51.51	2.39888G	-36.87	2.49502G	-52.96	3.228181G	-46.26	4
2437MHz	Pass	2.441917G	5.80	-24.20	1.98566G	-55.05	2.39808G	-33.03	2.48382G	-43.29	6.994709G	-48.20	1
2437MHz	Pass	2.441917G	5.80	-24.20	2.17344G	-56.74	2.39936G	-38.67	2.48814G	-45.36	6.977881G	-48.28	2
2437MHz	Pass	2.441917G	5.80	-24.20	2.30168G	-55.06	2.39952G	-40.67	2.48446G	-48.89	6.972272G	-48.98	3
2437MHz	Pass	2.441917G	5.80	-24.20	1.62155G	-46.61	2.3984G	-39.72	2.48446G	-47.18	3.247813G	-47.39	4
2452MHz	Pass	2.441917G	5.80	-24.20	1.91238G	-57.30	2.39984G	-51.15	2.48446G	-37.56	6.975077G	-49.53	1
2452MHz	Pass	2.441917G	5.80	-24.20	2.30855G	-57.04	2.39952G	-49.02	2.4851G	-40.75	6.958249G	-49.69	2
2452MHz	Pass	2.441917G	5.80	-24.20	2.309695G	-54.70	2.39936G	-48.70	2.4843G	-42.41	6.947031G	-49.32	3
2452MHz	Pass	2.441917G	5.80	-24.20	1.634145G	-48.26	2.3992G	-49.64	2.48478G	-44.05	3.267445G	-47.94	4
802.11ac VHT20-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.441917G	14.10	-15.90	2.18059G	-54.78	2.39976G	-26.51	2.4907G	-52.62	6.982276G	-48.60	1
2412MHz	Pass	2.441917G	14.10	-15.90	1.885845G	-54.71	2.39992G	-24.47	2.4843G	-52.79	6.976657G	-47.84	2
2412MHz	Pass	2.441917G	14.10	-15.90	2.309905G	-54.44	2.39992G	-22.44	2.49094G	-52.05	6.990704G	-47.23	3
2412MHz	Pass	2.441917G	14.10	-15.90	800.065M	-43.38	2.39992G	-25.96	2.49294G	-51.40	3.214652G	-39.98	4
2437MHz	Pass	2.441917G	14.10	-15.90	2.302915G	-54.07	2.3964G	-45.31	2.48542G	-49.13	16.383072G	-48.25	1
2437MHz	Pass	2.441917G	14.10	-15.90	2.302915G	-52.22	2.39888G	-43.45	2.48414G	-47.77	16.346548G	-48.46	2
2437MHz	Pass	2.441917G	14.10	-15.90	2.30408G	-52.95	2.39976G	-42.77	2.48446G	-48.12	16.346548G	-47.64	3
2437MHz	Pass	2.441917G	14.10	-15.90	807.055M	-36.33	2.39984G	-42.03	2.48382G	-46.47	3.248367G	-39.44	4
2462MHz	Pass	2.441917G	14.10	-15.90	2.18758G	-54.70	2.39992G	-52.83	2.48358G	-34.73	6.965418G	-48.09	1
2462MHz	Pass	2.441917G	14.10	-15.90	2.305245G	-54.62	2.3996G	-50.63	2.48518G	-35.67	6.920465G	-48.11	2
2462MHz	Pass	2.441917G	14.10	-15.90	2.160785G	-53.94	2.39256G	-51.87	2.48358G	-32.85	6.979466G	-47.01	3
2462MHz	Pass	2.441917G	14.10	-15.90	1.643525G	-41.59	2.3916G	-50.55	2.48374G	-36.87	3.282082G	-47.04	4
802.11ac VHT40-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	2.434402G	6.73	-23.27	2.30168G	-57.18	2.39984G	-32.75	2.4907G	-51.27	6.991904G	-50.18	1
2422MHz	Pass	2.434402G	6.73	-23.27	1.72689G	-58.09	2.39984G	-30.29	2.48686G	-48.48	6.944227G	-49.10	2
2422MHz	Pass	2.434402G	6.73	-23.27	2.307405G	-55.97	2.39984G	-30.75	2.48574G	-52.90	6.92179G	-50.48	3
2422MHz	Pass	2.434402G	6.73	-23.27	1.620405G	-49.43	2.39968G	-30.34	2.48942G	-50.75	3.228181G	-44.57	4
2437MHz	Pass	2.434402G	6.73	-23.27	2.19634G	-53.78	2.39328G	-31.39	2.48446G	-43.43	6.963859G	-47.92	1
2437MHz	Pass	2.434402G	6.73	-23.27	2.302825G	-52.03	2.39824G	-36.37	2.48654G	-42.96	6.947031G	-46.94	2
2437MHz	Pass	2.434402G	6.73	-23.27	2.165425G	-54.98	2.3984G	-38.12	2.48542G	-42.92	6.955445G	-47.23	3
2437MHz	Pass	2.434402G	6.73	-23.27	1.62384G	-44.16	2.39952G	-37.88	2.49246G	-43.81	3.247813G	-44.00	4
2452MHz	Pass	2.434402G	6.73	-23.27	1.943295G	-57.69	2.39792G	-50.43	2.48686G	-43.05	6.949836G	-50.51	1
2452MHz	Pass	2.434402G	6.73	-23.27	2.307405G	-57.45	2.39872G	-48.95	2.48686G	-40.19	6.961054G	-51.10	2
2452MHz	Pass	2.434402G	6.73	-23.27	2.302825G	-57.19	2.3976G	-48.66	2.48574G	-43.00	6.95264G	-51.35	3
2452MHz	Pass	2.434402G	6.73	-23.27	1.64216G	-50.67	2.39744G	-48.34	2.48894G	-43.69	3.267445G	-49.09	4



### 802.11b\_Nss1\_4TX

CSE NdB

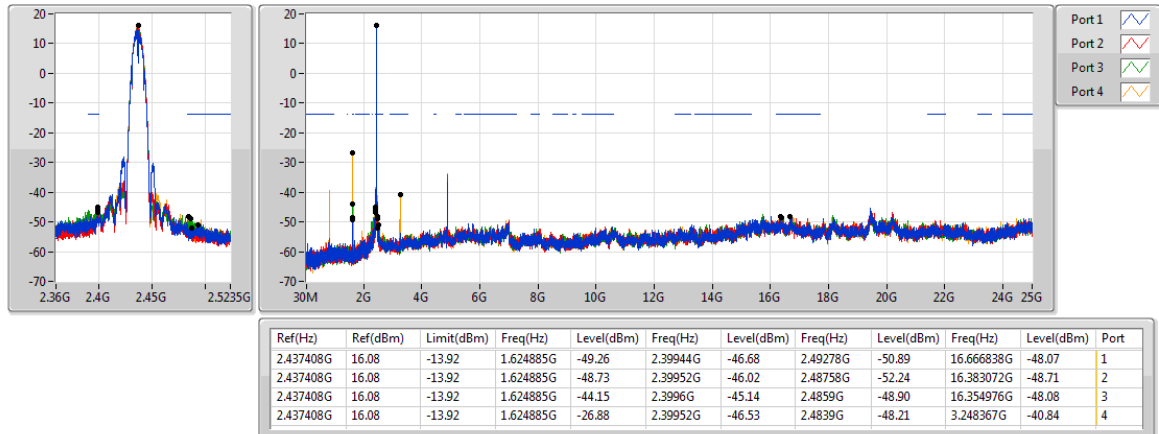
2412MHz



### 802.11b\_Nss1\_4TX

CSE NdB

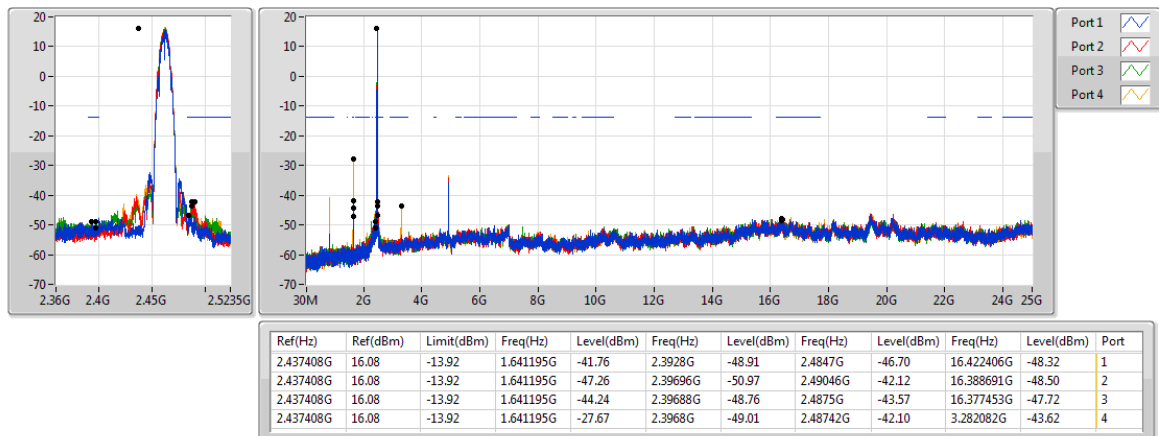
2437MHz



### 802.11b\_Nss1\_4TX

CSE NdB

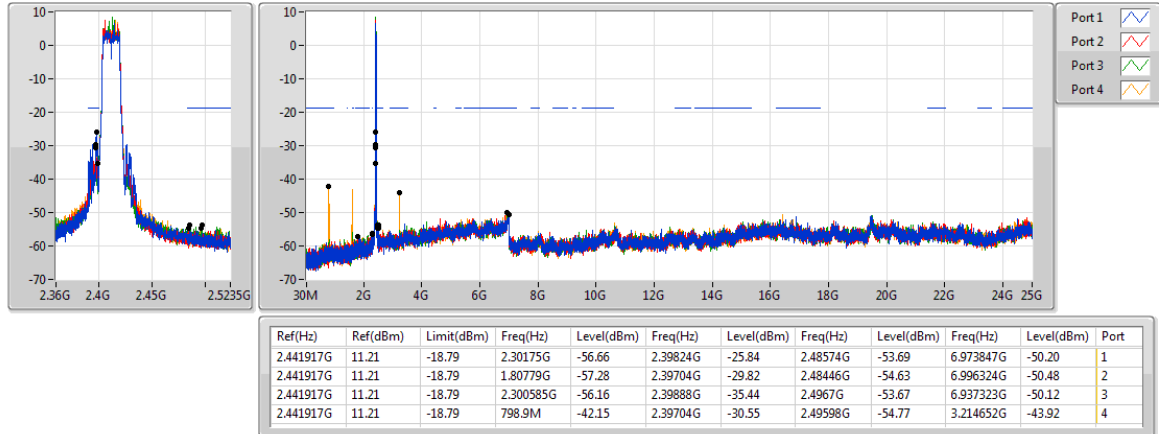
2462MHz



### 802.11g-BF\_Nss1\_4TX

CSE NdB

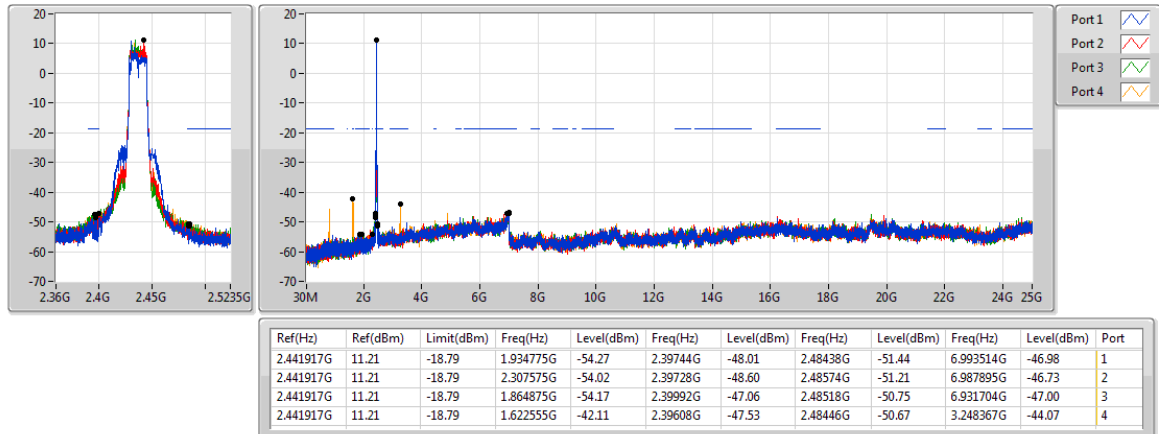
2412MHz



### 802.11g-BF\_Nss1\_4TX

CSE NdB

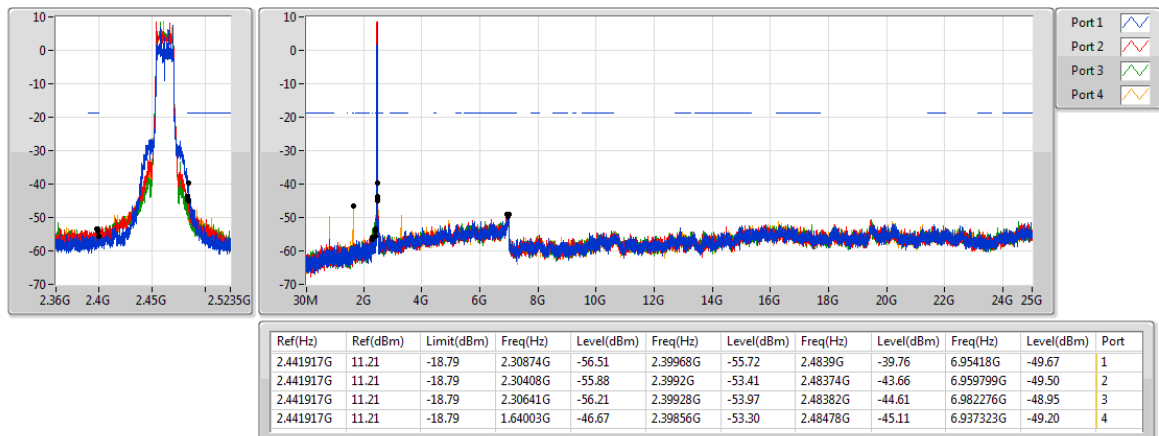
2437MHz



### 802.11g-BF\_Nss1\_4TX

CSE NdB

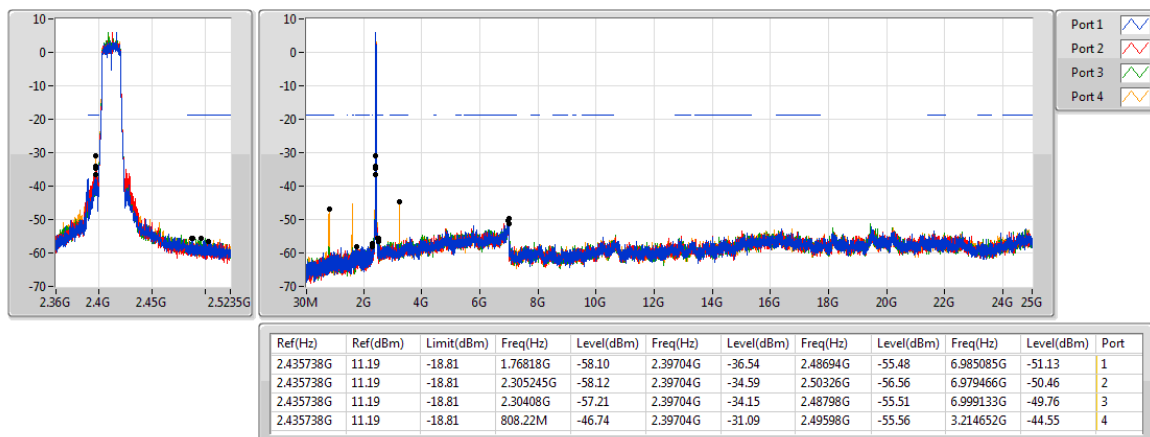
2462MHz



### 802.11ac VHT20-BF\_Nss1,(MCS0)\_4TX

CSE NdB

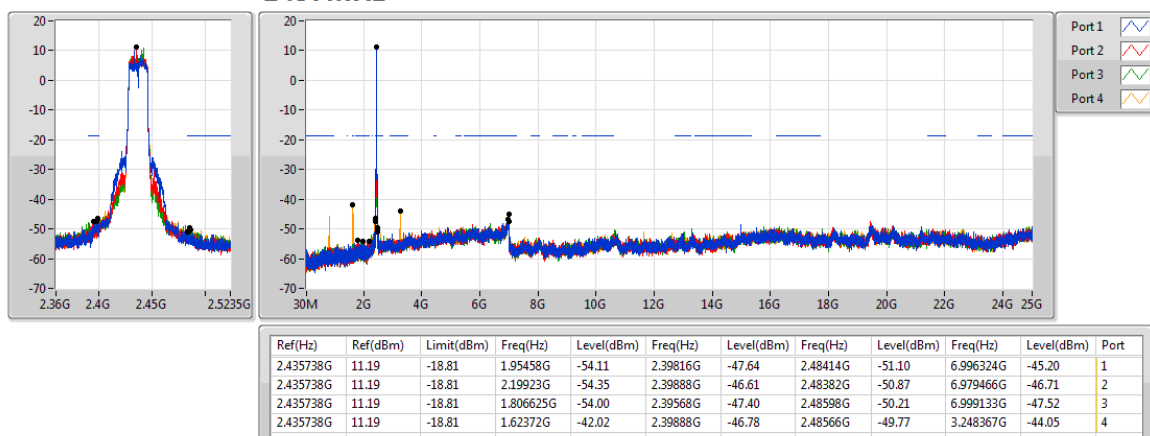
2412MHz



### 802.11ac VHT20-BF\_Nss1,(MCS0)\_4TX

CSE NdB

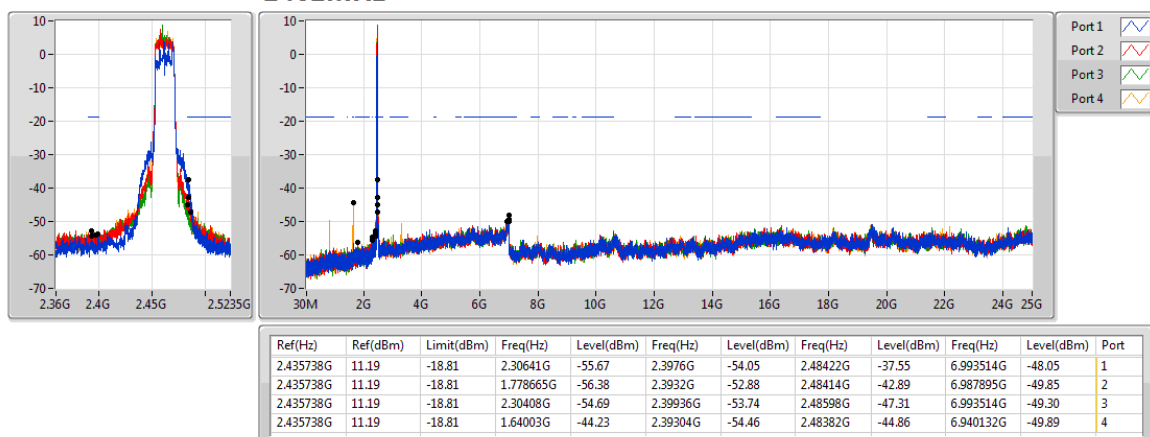
2437MHz



### 802.11ac VHT20-BF\_Nss1,(MCS0)\_4TX

CSE NdB

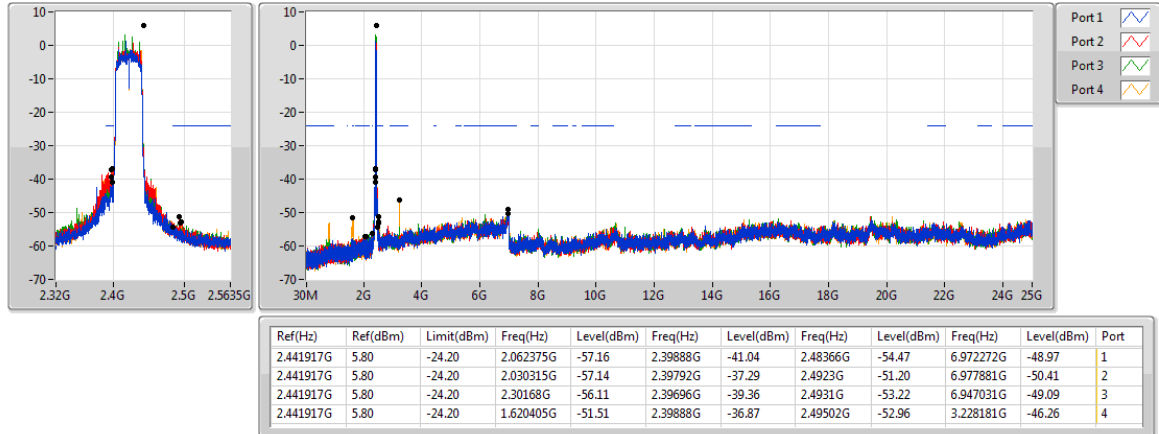
2462MHz



### 802.11ac VHT40-BF\_Nss1,(MCS0)\_4TX

CSE NdB

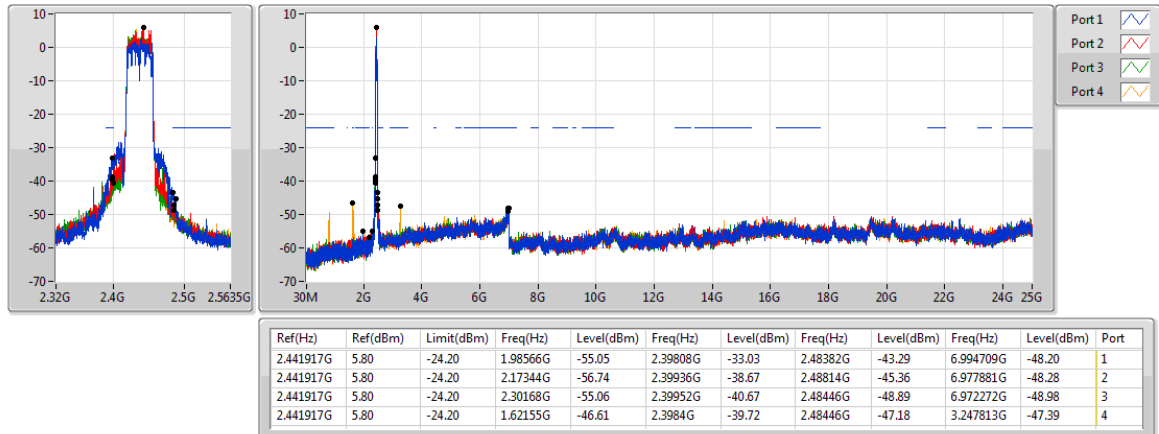
2422MHz



### 802.11ac VHT40-BF\_Nss1,(MCS0)\_4TX

CSE NdB

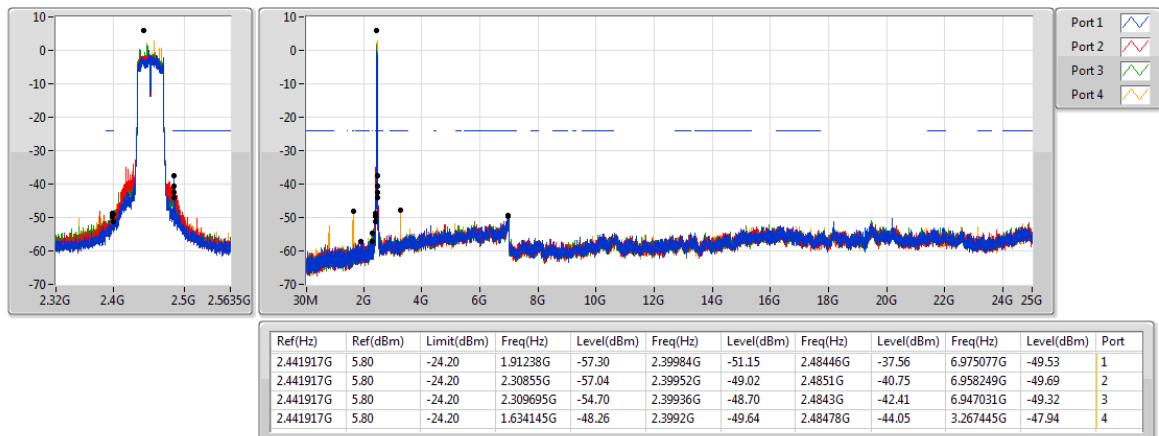
2437MHz



### 802.11ac VHT40-BF\_Nss1,(MCS0)\_4TX

CSE NdB

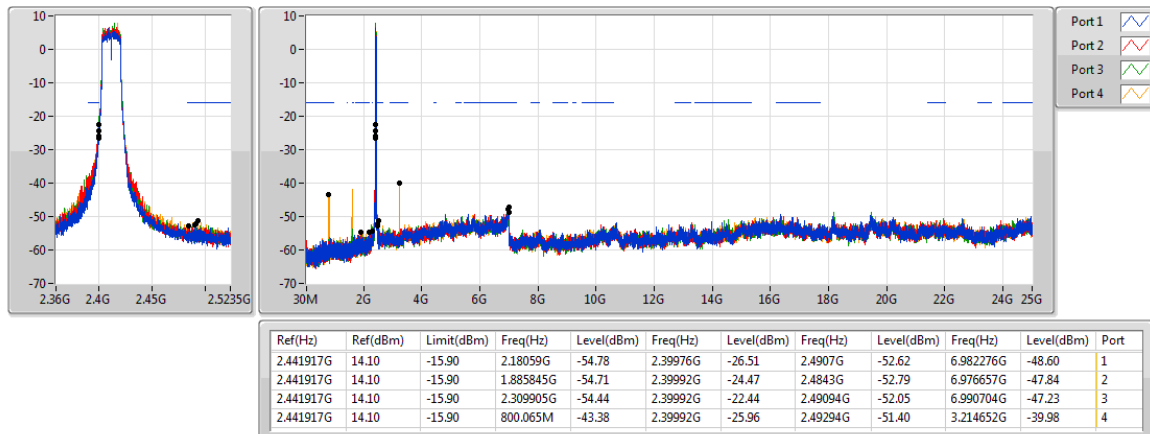
2452MHz



### 802.11ac VHT20-BF\_Nss2,(MCS0)\_4TX

CSE NdB

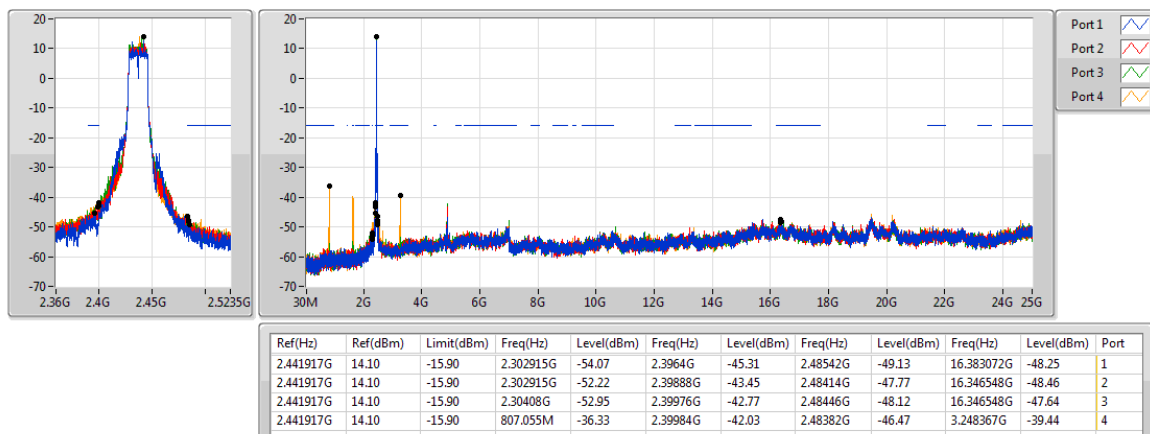
2412MHz



### 802.11ac VHT20-BF\_Nss2,(MCS0)\_4TX

CSE NdB

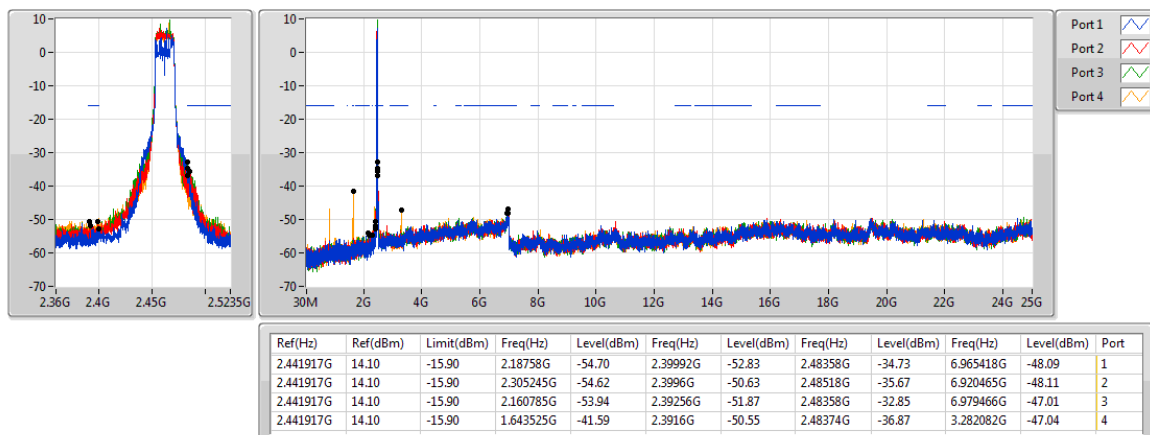
2437MHz



### 802.11ac VHT20-BF\_Nss2,(MCS0)\_4TX

CSE NdB

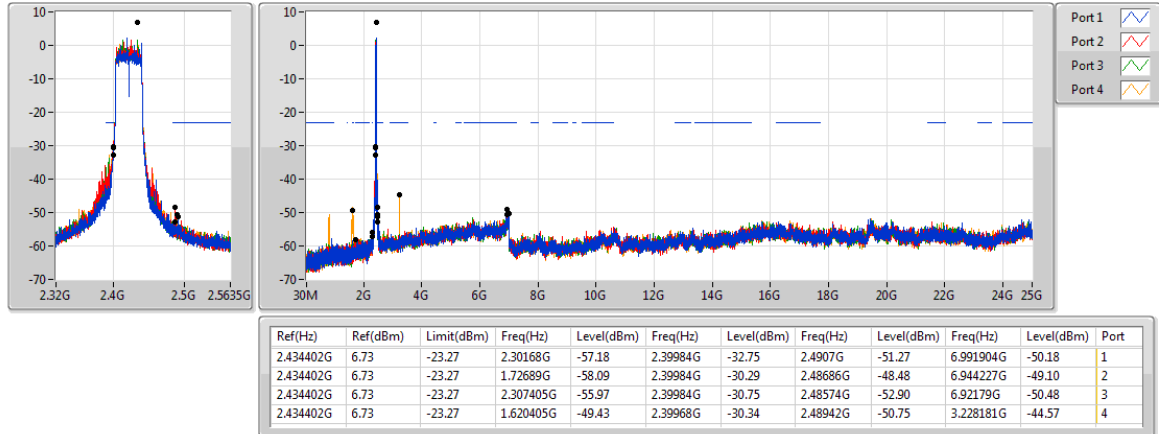
2462MHz



### 802.11ac VHT40-BF\_Nss2,(MCS0)\_4TX

CSE NdB

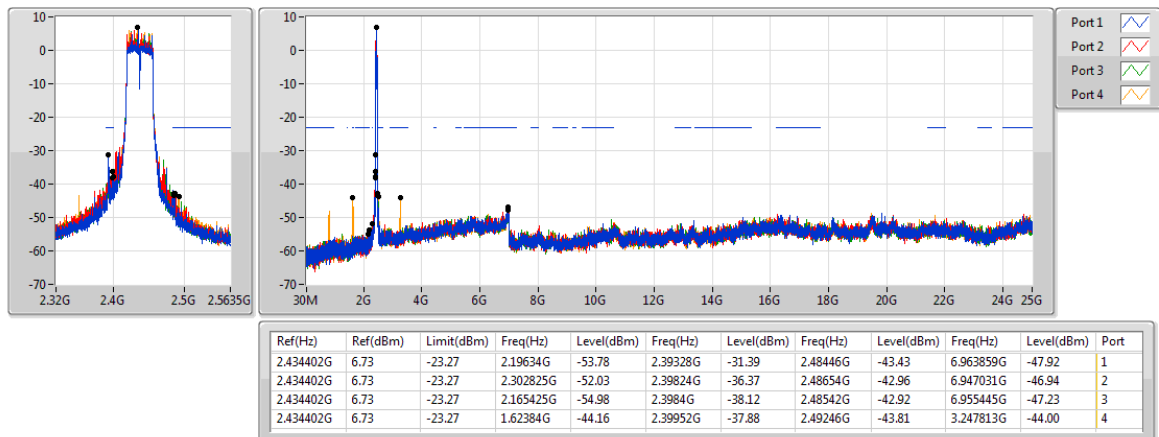
2422MHz



### 802.11ac VHT40-BF\_Nss2,(MCS0)\_4TX

CSE NdB

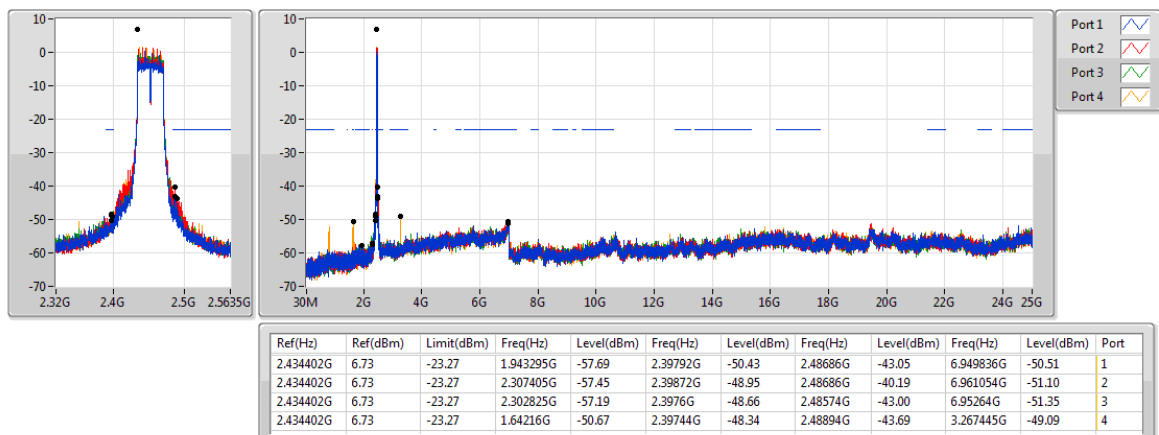
2437MHz

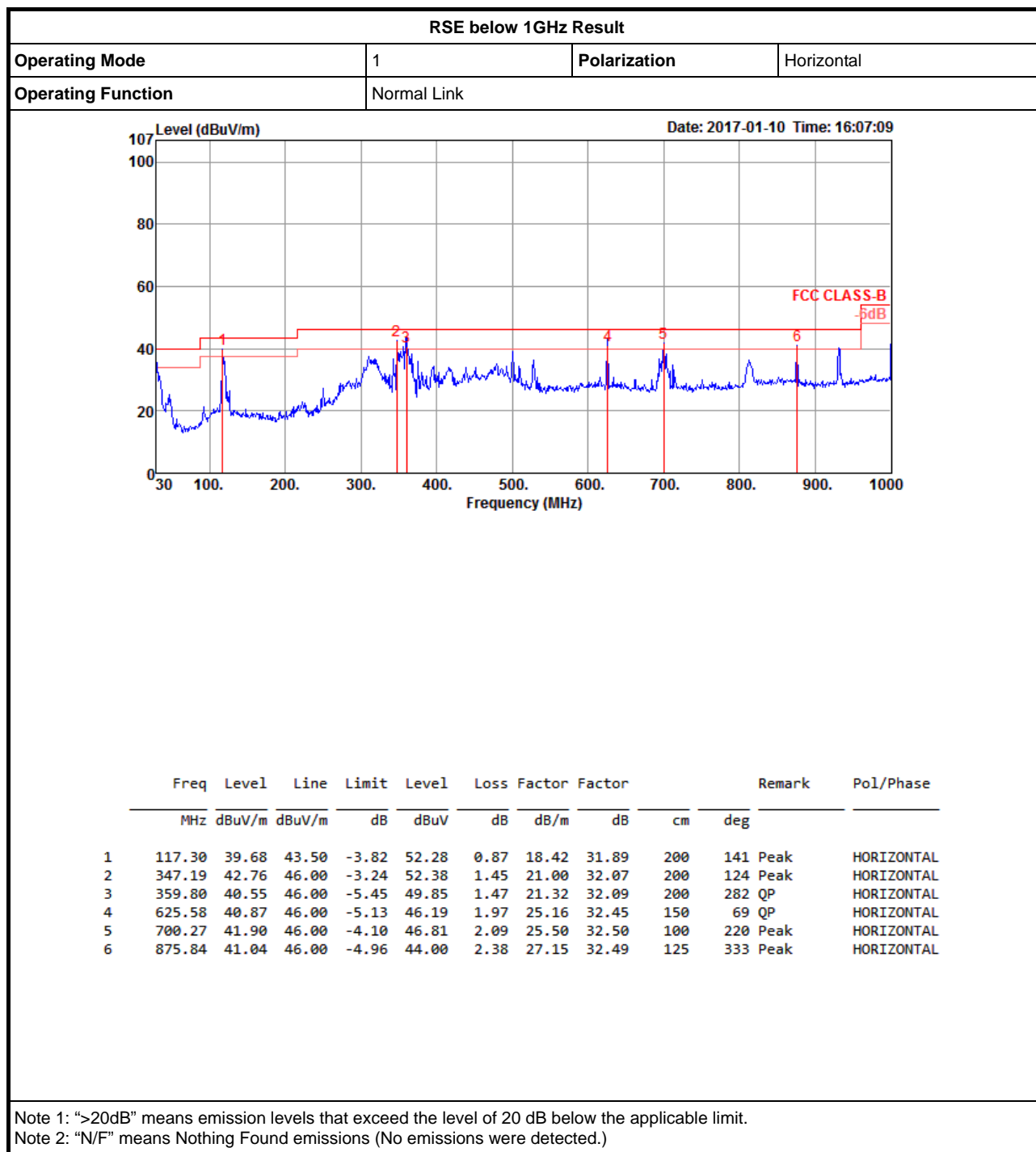


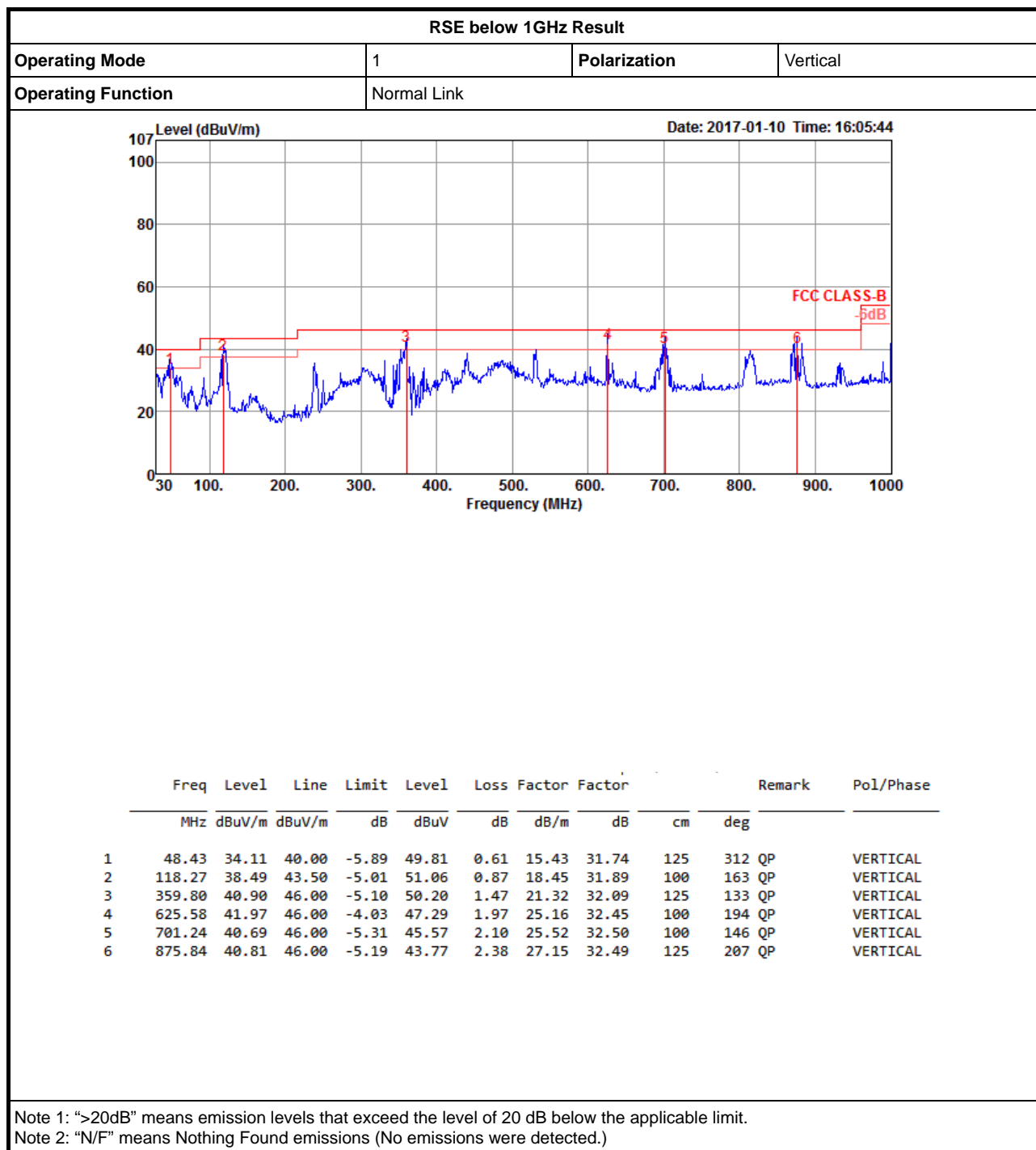
### 802.11ac VHT40-BF\_Nss2,(MCS0)\_4TX

CSE NdB

2452MHz











## RSE TX above 1GHz Result

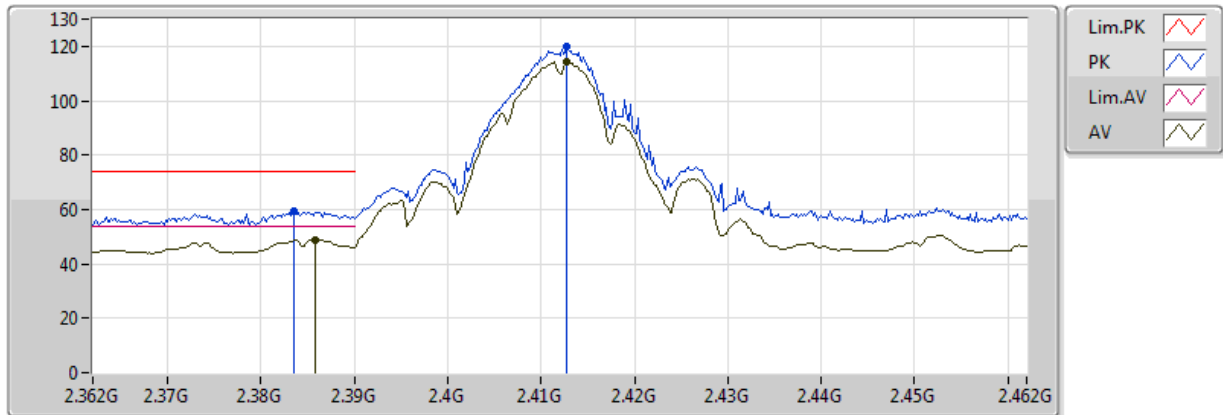
## Appendix F.2

### 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 VHT40-BF_Nss2,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-	-	-
2.4-2.4835GHz	Pass	AV	2.39G	53.73	54.00	-0.27	32.01	3	V	100	2.78	-

## 802.11b\_Nss1\_4TX

## 2412MHz\_TX

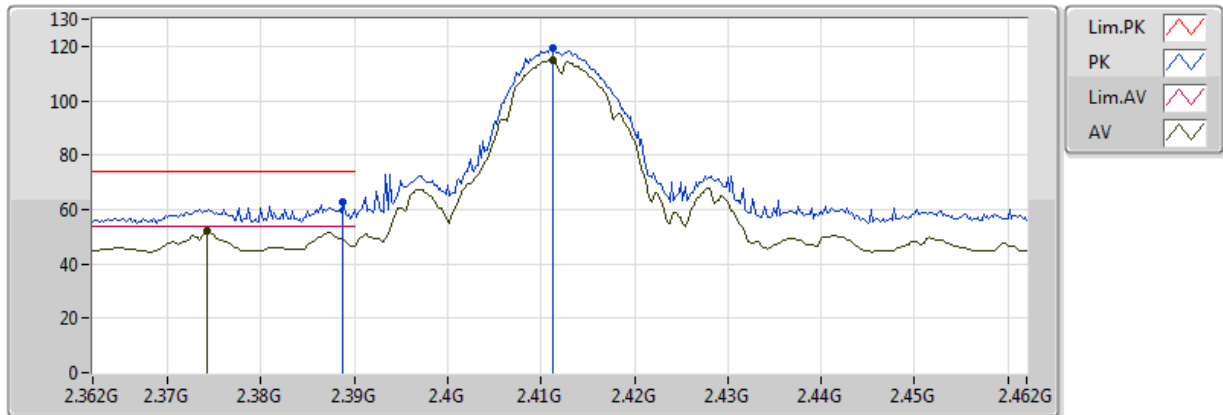


20170217  
EUT Z 4TX  
Setting 23.5  
01-Z-1  
FSP(100056)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3858G	48.87	54.00	-5.13	31.91	3	V	64	2.06	-
AV	2.4128G	114.14	Inf	-Inf	31.98	3	V	64	2.06	-
PK	2.3836G	59.35	74.00	-14.65	31.91	3	V	64	2.06	-
PK	2.4128G	120.06	Inf	-Inf	31.98	3	V	64	2.06	-

## 802.11b\_Nss1\_4TX

## 2412MHz\_TX

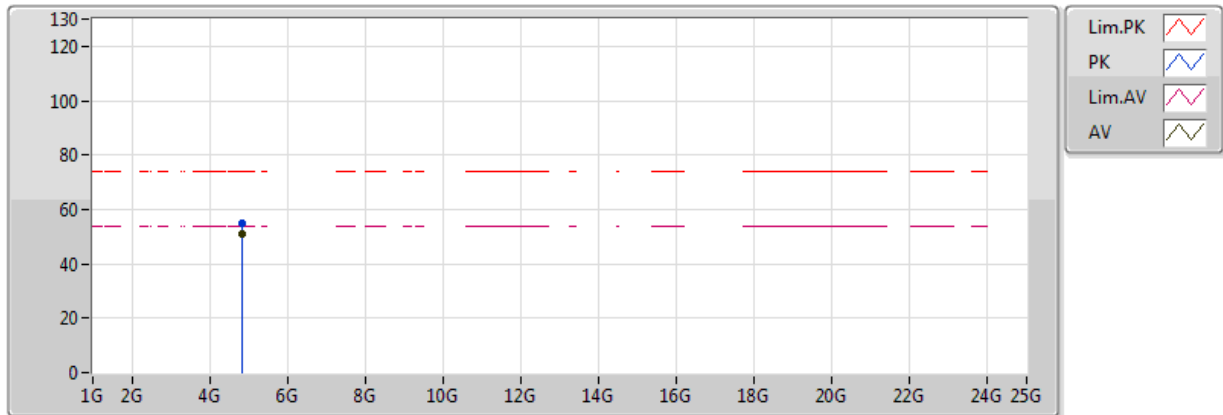


20170217  
EUT Z 4TX  
Setting 23.5  
01-Z-1  
FSP(100056)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3742G	52.12	54.00	-1.88	31.88	3	H	291	2.31	-
AV	2.4112G	114.99	Inf	-Inf	31.98	3	H	291	2.31	-
PK	2.3888G	62.79	74.00	-11.21	31.92	3	H	291	2.31	-
PK	2.4112G	119.56	Inf	-Inf	31.98	3	H	291	2.31	-

## 802.11b\_Nss1\_4TX

## 2412MHz\_TX

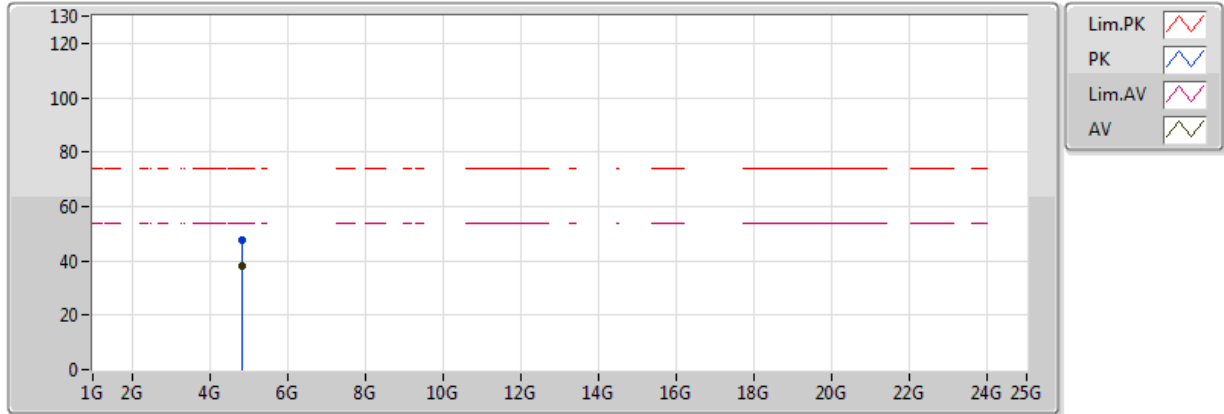


20170217  
EUT Z 4TX  
Setting 23.5  
01-Z-1  
FSP(100056)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.82412G	50.98	54.00	-3.02	3.38	3	V	59	1.09	-
PK	4.8243G	55.06	74.00	-18.94	3.38	3	V	59	1.09	-

## 802.11b\_Nss1\_4TX

## 2412MHz\_TX

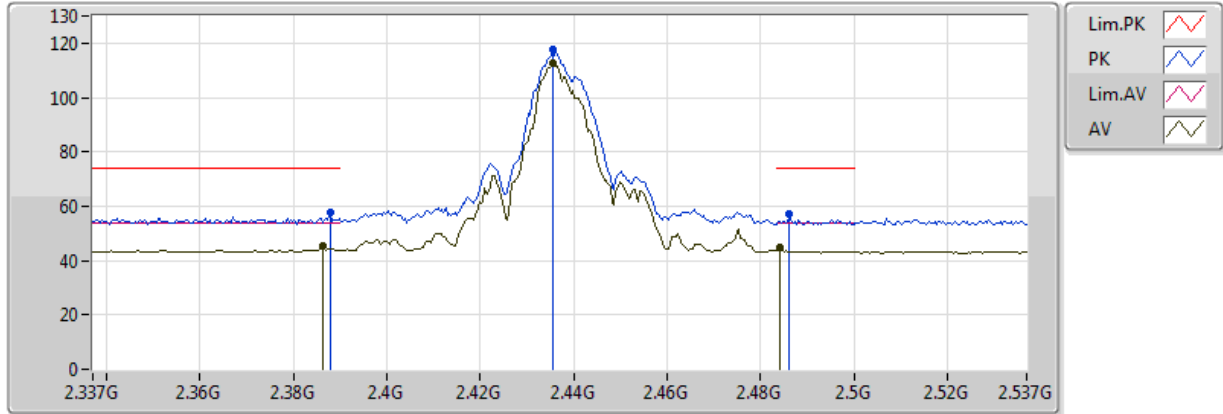


20170217  
EUT Z 4TX  
Setting 23.5  
01-Z-1  
FSP(100056)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.82412G	38.37	54.00	-15.63	3.44	3	H	46	2.10	-
PK	4.8242G	47.41	74.00	-26.59	3.44	3	H	46	2.10	-

## 802.11b\_Nss1\_4TX

## 2437MHz\_TX

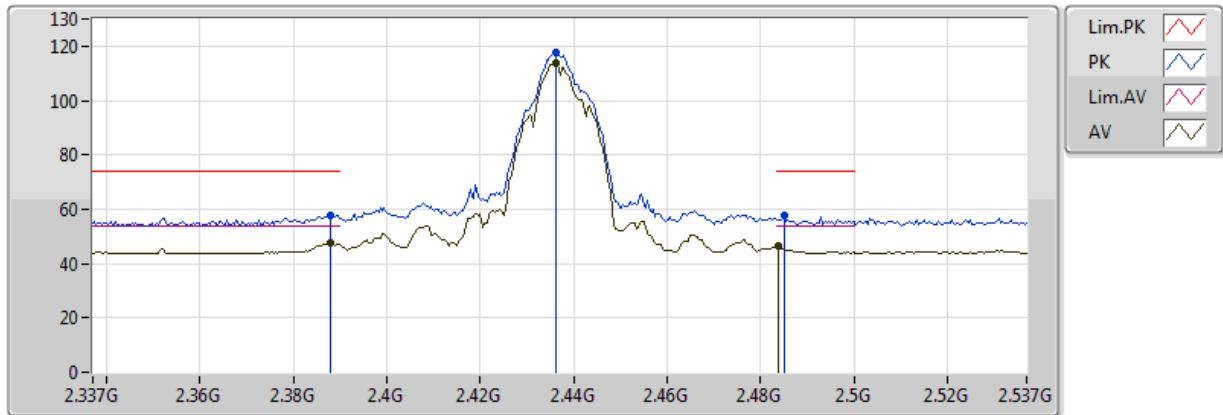


20170306  
EUT\_Z\_4TX  
Setting 23.5  
01-W-3  
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3862G	45.24	54.00	-8.76	31.90	3	V	276	1.91	-
AV	2.4354G	112.80	Inf	-Inf	32.02	3	V	276	1.91	-
AV	2.4842G	44.99	54.00	-9.01	32.14	3	V	276	1.91	-
PK	2.3878G	57.88	74.00	-16.12	31.91	3	V	276	1.91	-
PK	2.4354G	117.78	Inf	-Inf	32.02	3	V	276	1.91	-
PK	2.4862G	57.10	74.00	-16.90	32.15	3	V	276	1.91	-

## 802.11b\_Nss1\_4TX

## 2437MHz\_TX

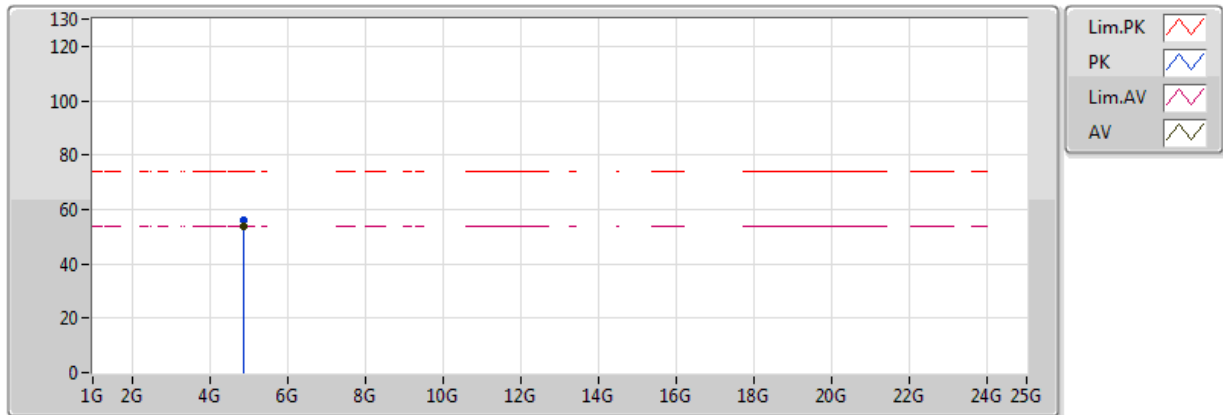


20170306  
EUT\_Z\_4TX  
Setting 23.5  
01-W-3  
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3878G	47.83	54.00	-6.17	31.04	3	H	301	2.39	-
AV	2.4362G	113.99	Inf	-Inf	30.98	3	H	301	2.39	-
AV	2.4838G	46.26	54.00	-7.74	30.92	3	H	301	2.39	-
PK	2.3878G	57.81	74.00	-16.19	31.04	3	H	301	2.39	-
PK	2.4362G	117.76	Inf	-Inf	30.98	3	H	301	2.39	-
PK	2.485G	57.45	74.00	-16.55	30.92	3	H	301	2.39	-

## 802.11b\_Nss1\_4TX

## 2437MHz\_TX



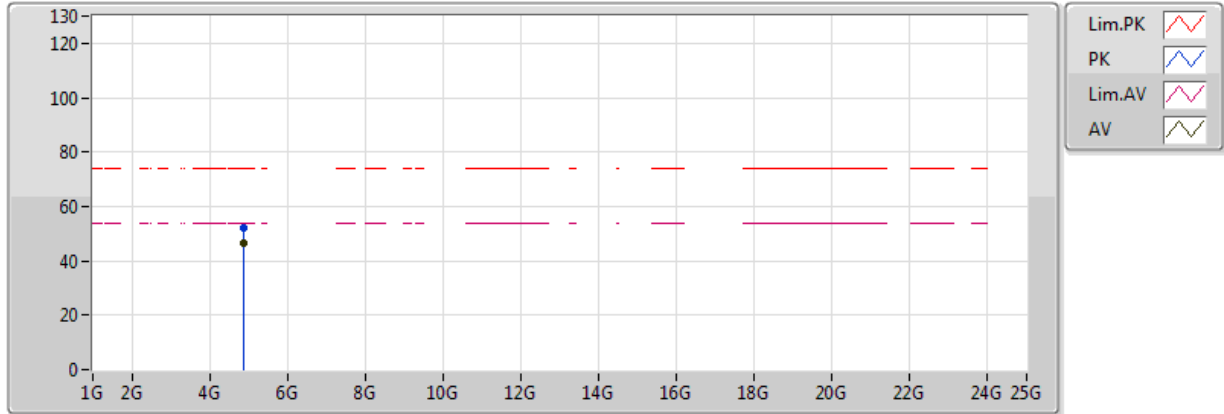
20170306  
EUT\_Z\_4TX  
Setting 23.5  
01-W-3  
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.873932G	53.56	54.00	-0.44	3.59	3	V	199	2.17	-
PK	4.873972G	56.00	74.00	-18.00	3.59	3	V	199	2.17	-



## 802.11b\_Nss1\_4TX

## 2437MHz\_TX

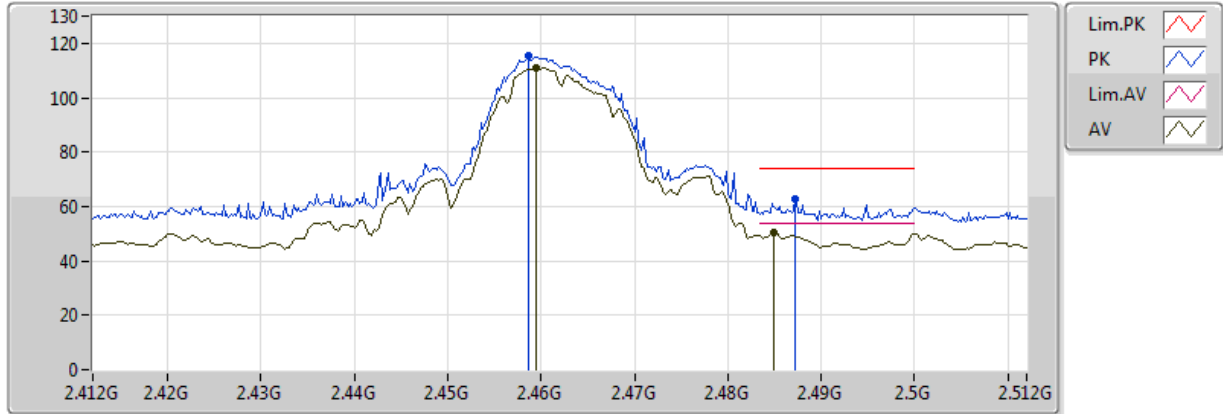


20170306  
EUT\_Z\_4TX  
Setting 23.5  
01-W-3  
FSP(100304)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.874028G	46.67	54.00	-7.33	4.82	3	H	1	2.36	-
PK	4.874008G	52.30	74.00	-21.70	4.82	3	H	1	2.36	-

## 802.11b\_Nss1\_4TX

## 2462MHz\_TX

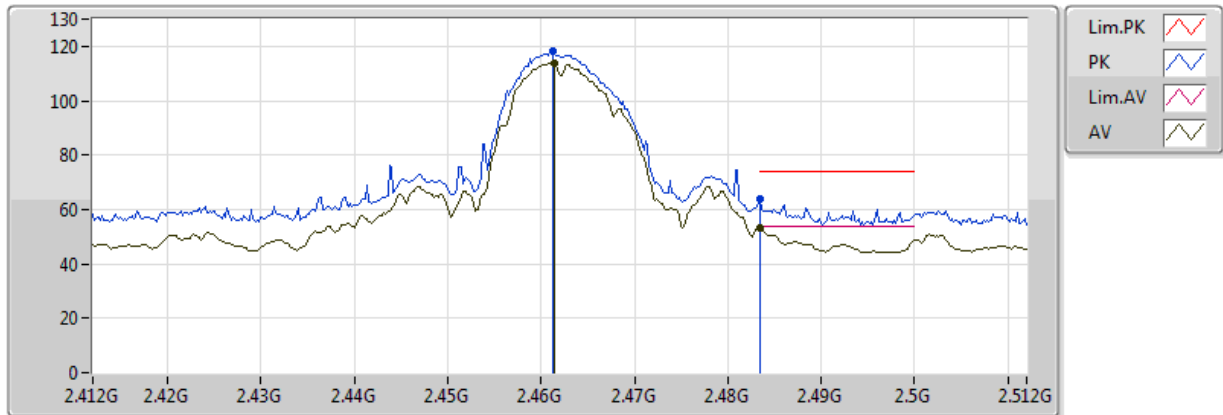


20170217  
EUT Z 4TX  
Setting 24  
01-Z-1  
FSP(100056)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.4594G	110.97	Inf	-Inf	30.95	3	V	270	2.70	-
AV	2.485G	50.64	54.00	-3.36	30.92	3	V	270	2.70	-
PK	2.4586G	115.36	Inf	-Inf	30.95	3	V	270	2.70	-
PK	2.4872G	62.82	74.00	-11.18	30.92	3	V	270	2.70	-

## 802.11b\_Nss1\_4TX

## 2462MHz\_TX

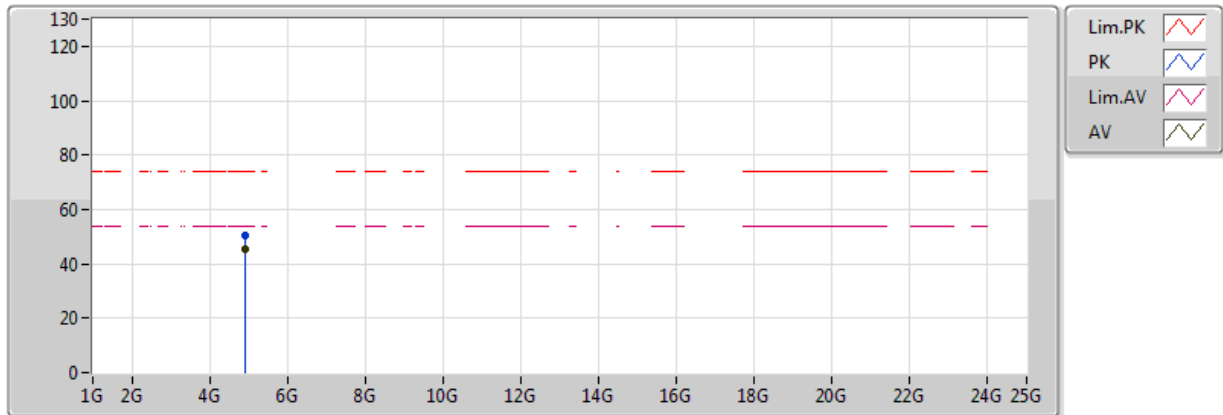


20170217  
EUT Z 4TX  
Setting 24  
01-Z-1  
FSP(100056)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.4614G	113.99	Inf	-Inf	30.95	3	H	296	2.50	-
AV	2.483502G	53.48	54.00	-0.52	30.92	3	H	296	2.50	-
PK	2.4612G	117.96	Inf	-Inf	30.95	3	H	296	2.50	-
PK	2.483502G	63.71	74.00	-10.29	30.92	3	H	296	2.50	-

## 802.11b\_Nss1\_4TX

## 2462MHz\_TX

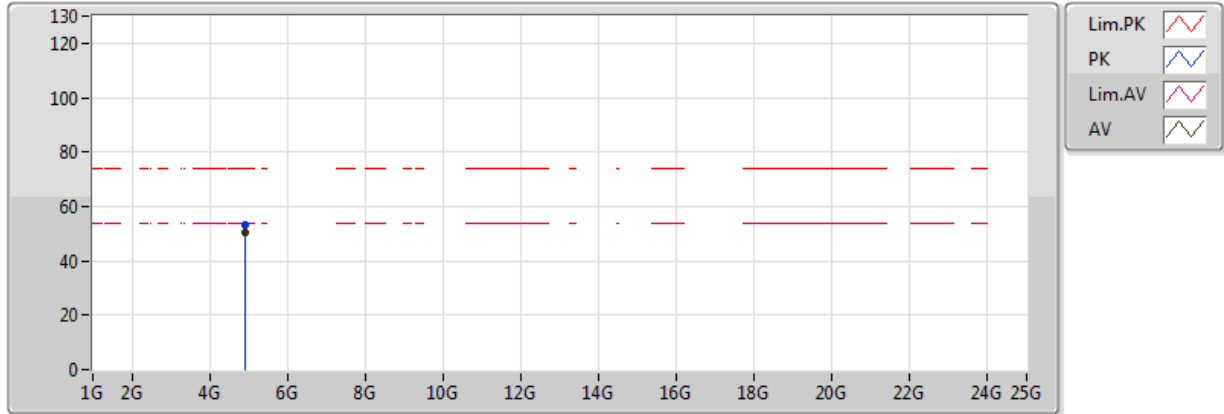


20170217  
EUT Z 4TX  
Setting 24  
01-Z-1  
FSP(100056)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.92412G	45.15	54.00	-8.85	3.74	3	V	335	2.18	-
PK	4.9241G	50.62	74.00	-23.38	3.74	3	V	335	2.18	-

## 802.11b\_Nss1\_4TX

## 2462MHz\_TX

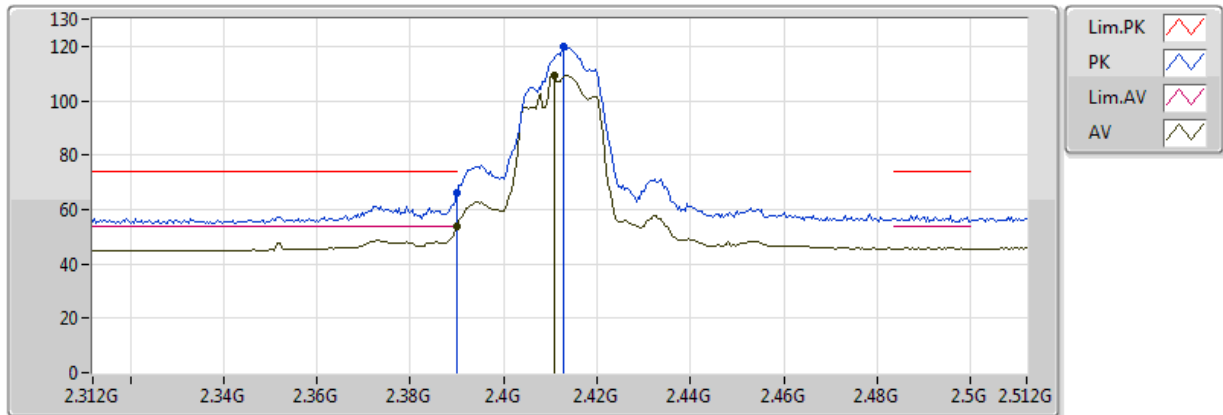


20170217  
EUT Z 4TX  
Setting 24  
01-Z-1  
FSP(100056)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.92418G	50.48	54.00	-3.52	3.74	3	H	195	2.24	-
PK	4.92416G	53.47	74.00	-20.53	3.74	3	H	195	2.24	-

## 802.11g-BF\_Nss1\_4TX

## 2412MHz\_TX

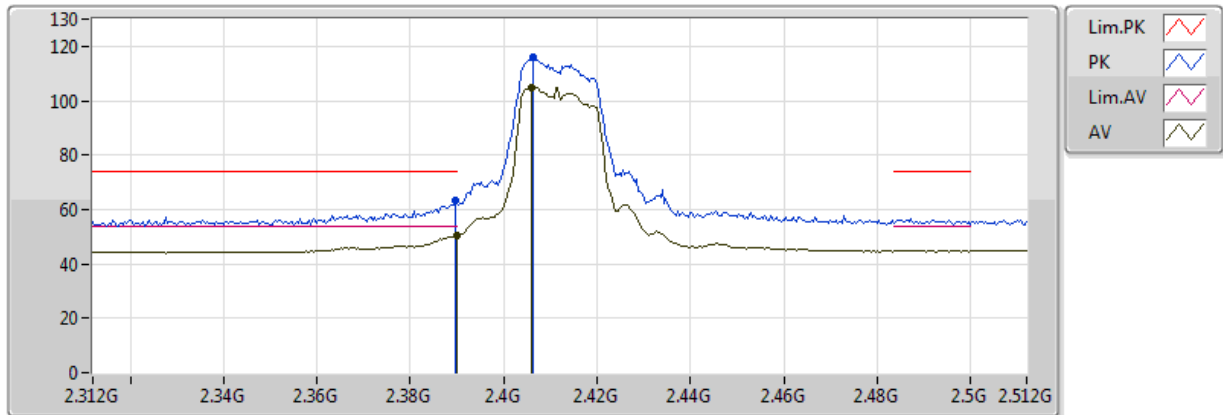


20170306  
EUT Z 4TX  
Setting 20  
01-S-6  
FSP(100080)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.39G	53.59	54.00	-0.41	32.01	3	V	264	2.56	-
AV	2.4108G	109.21	Inf	-Inf	32.07	3	V	264	2.56	-
PK	2.39G	66.22	74.00	-7.78	32.01	3	V	264	2.56	-
PK	2.4128G	120.09	Inf	-Inf	32.08	3	V	264	2.56	-

## 802.11g-BF\_Nss1\_4TX

## 2412MHz\_TX

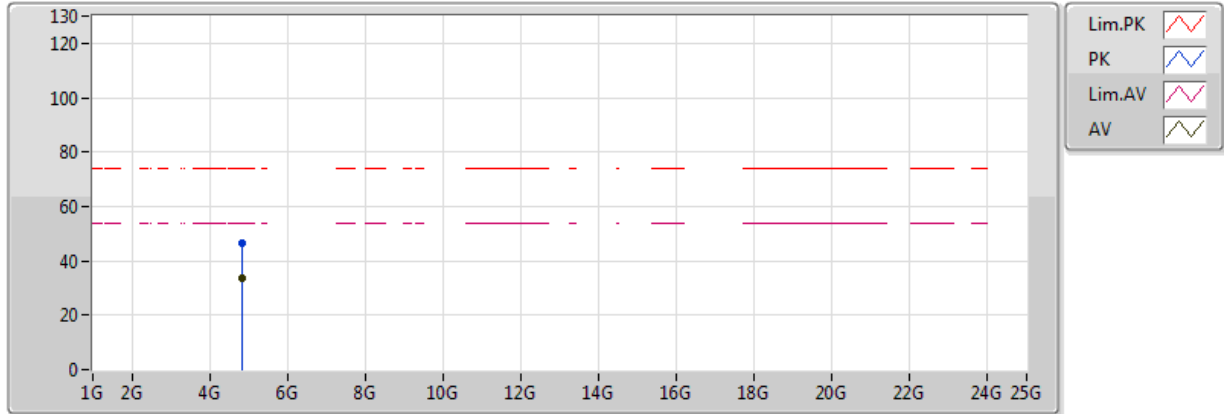


20170306  
EUT Z 4TX  
Setting 20  
01-S-6  
FSP(100080)

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	50.18	54.00	-3.82	31.91	3	H	123	2.45	-
AV	2.406G	104.84	Inf	-Inf	31.95	3	H	123	2.45	-
PK	2.3896G	63.18	74.00	-10.82	31.91	3	H	123	2.45	-
PK	2.4064G	115.93	Inf	-Inf	31.96	3	H	123	2.45	-

### 802.11g-BF\_Nss1\_4TX

### 2412MHz\_TX



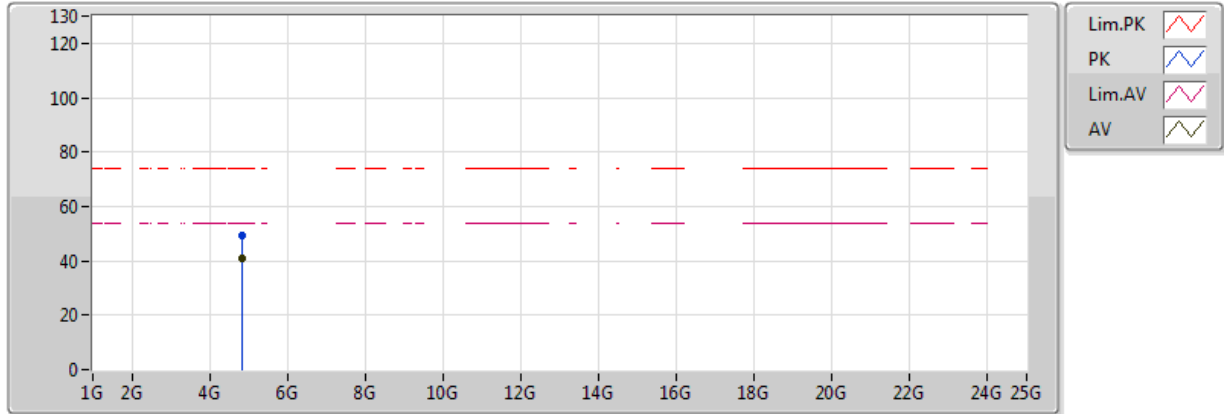
20170306  
EUT Z 4TX  
Setting 20  
01-S-6  
FSP(100080)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.82042G	33.44	54.00	-20.56	4.71	3	V	182	2.32	-
PK	4.82034G	46.60	74.00	-27.40	4.71	3	V	182	2.32	-



## 802.11g-BF\_Nss1\_4TX

## 2412MHz\_TX

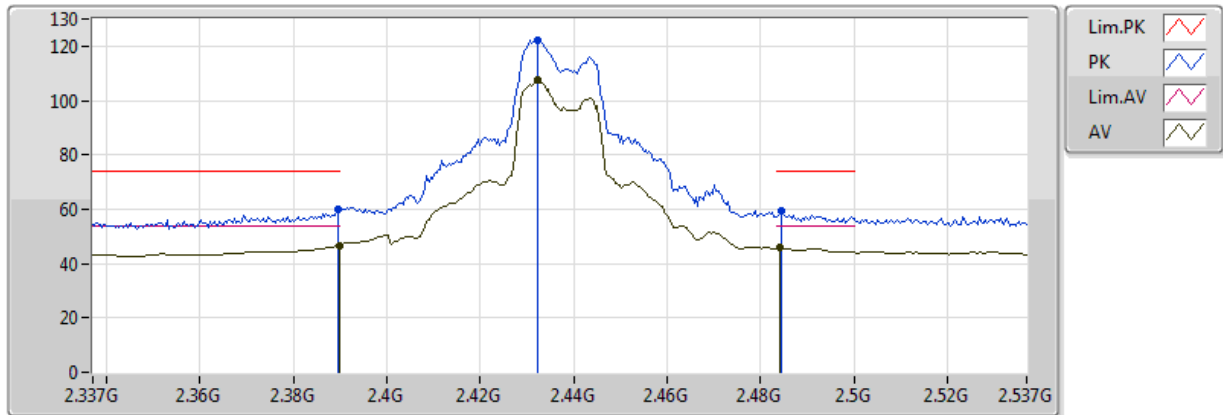


20170306  
EUT Z 4TX  
Setting 20  
01-S-6  
FSP(100080)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.82406G	41.06	54.00	-12.94	4.72	3	H	235	1.03	-
PK	4.82422G	49.40	74.00	-24.60	4.72	3	H	235	1.03	-

## 802.11g-BF\_Nss1\_4TX

## 2437MHz\_TX

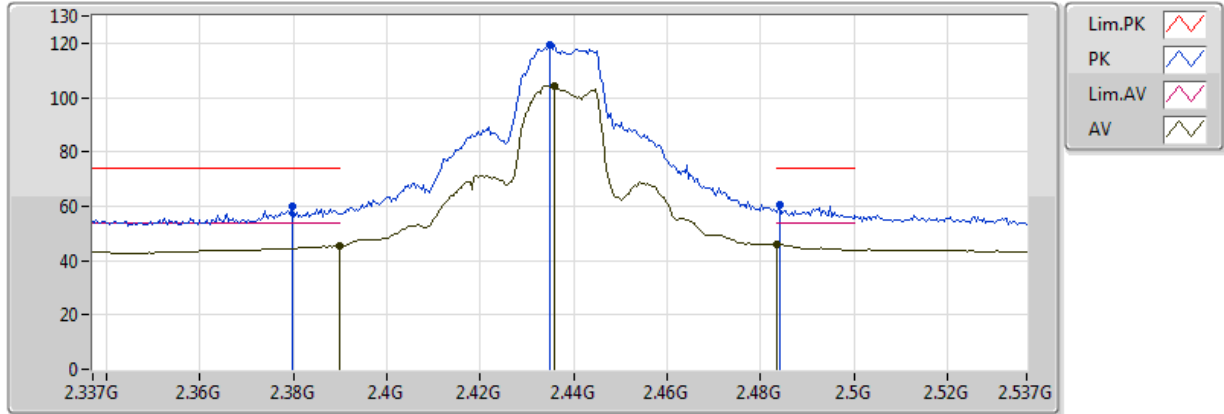


20170217  
EUT Z 4TX  
Setting 25  
01-Z-1  
FSP(100056)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3898G	46.58	54.00	-7.42	31.04	3	V	269	1.90	-
AV	2.4322G	107.76	Inf	-Inf	30.98	3	V	269	1.90	-
AV	2.4842G	45.68	54.00	-8.32	30.92	3	V	269	1.90	-
PK	2.3894G	60.06	74.00	-13.94	31.04	3	V	269	1.90	-
PK	2.4322G	122.27	Inf	-Inf	30.98	3	V	269	1.90	-
PK	2.4846G	59.37	74.00	-14.63	30.92	3	V	269	1.90	-

## 802.11g-BF\_Nss1\_4TX

## 2437MHz\_TX

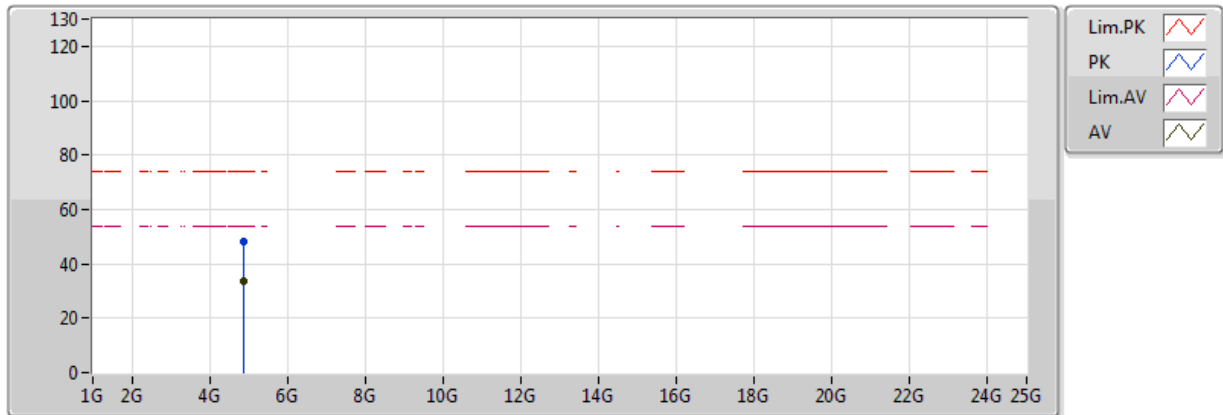


20170217  
EUT Z 4TX  
Setting 25  
01-Z-1  
FSP(100056)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3898G	45.37	54.00	-8.63	31.04	3	H	307	2.84	-
AV	2.4358G	104.27	Inf	-Inf	30.98	3	H	307	2.84	-
AV	2.483502G	45.96	54.00	-8.04	30.92	3	H	307	2.84	-
PK	2.3798G	59.94	74.00	-14.06	31.05	3	H	307	2.84	-
PK	2.435G	119.34	Inf	-Inf	30.98	3	H	307	2.84	-
PK	2.4842G	60.33	74.00	-13.67	30.92	3	H	307	2.84	-

## 802.11g-BF\_Nss1\_4TX

## 2437MHz\_TX

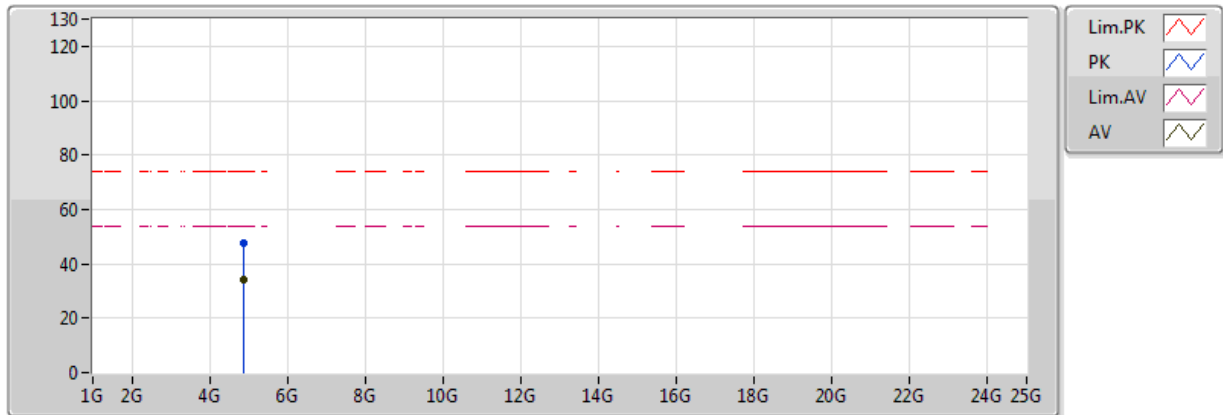


20170217  
EUT Z 4TX  
Setting 25  
01-Z-1  
FSP(100056)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.8752G	33.86	54.00	-20.14	2.73	3	V	68	1.01	-
PK	4.87536G	48.11	74.00	-25.89	2.73	3	V	68	1.01	-

## 802.11g-BF\_Nss1\_4TX

## 2437MHz\_TX

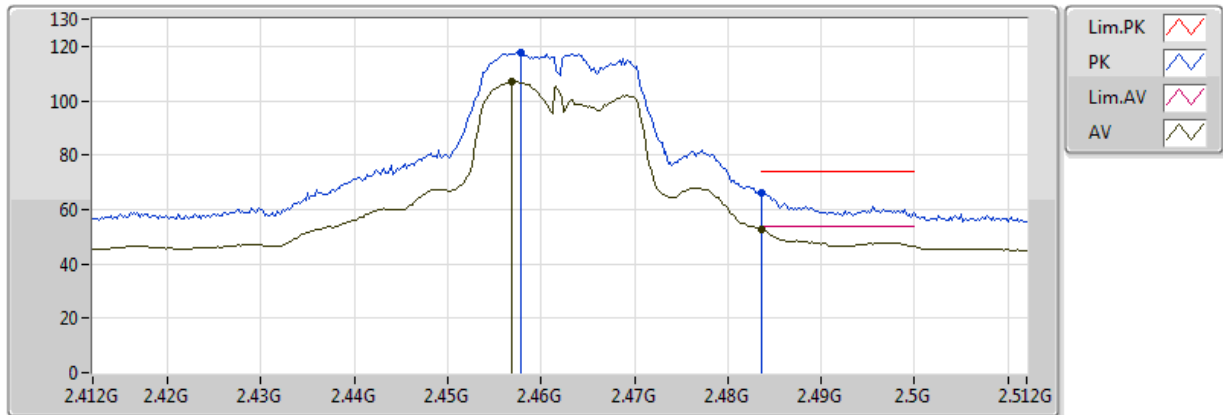


20170217  
EUT Z 4TX  
Setting 25  
01-Z-1  
FSP(100056)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.87216G	34.03	54.00	-19.97	3.59	3	H	311	1.66	-
PK	4.87408G	47.62	74.00	-26.38	3.59	3	H	311	1.66	-

## 802.11g-BF\_Nss1\_4TX

## 2462MHz\_TX

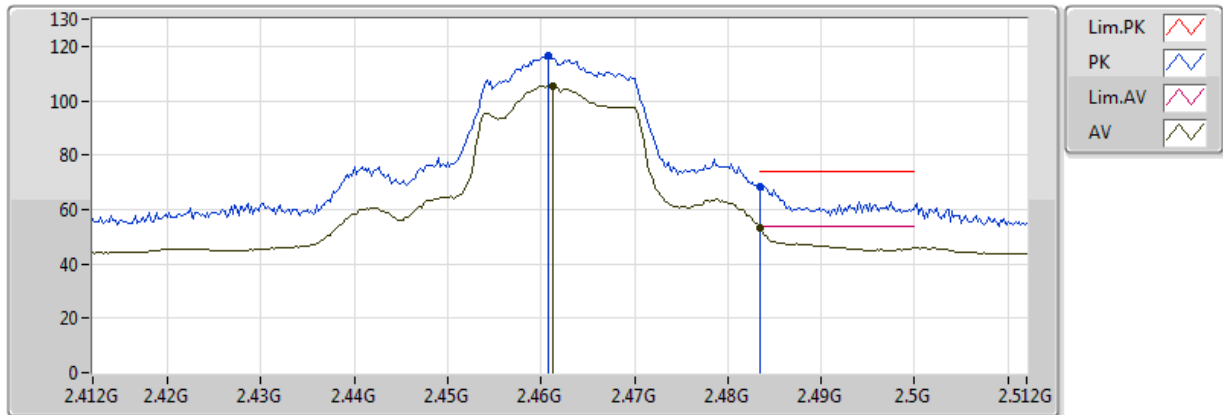


20161124  
EUT Z 4TX  
Setting 20.5  
02-M-1

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.4568G	107.15	Inf	-Inf	32.09	3	V	284	1.95	-
AV	2.4836G	52.42	54.00	-1.58	32.15	3	V	284	1.95	-
PK	2.4578G	117.45	Inf	-Inf	32.09	3	V	284	1.95	-
PK	2.4836G	66.33	74.00	-7.67	32.15	3	V	284	1.95	-

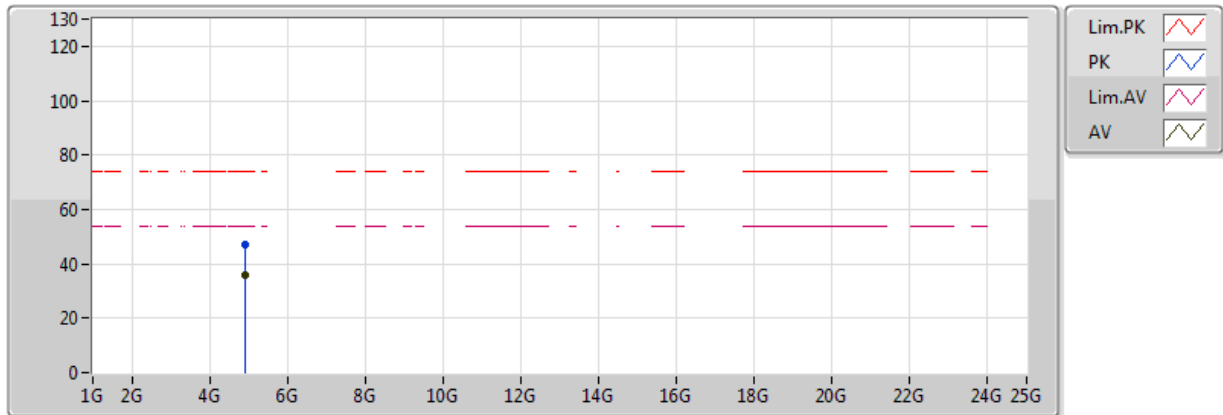
## 802.11g-BF\_Nss1\_4TX

## 2462MHz\_TX



## 802.11g-BF\_Nss1\_4TX

## 2462MHz\_TX



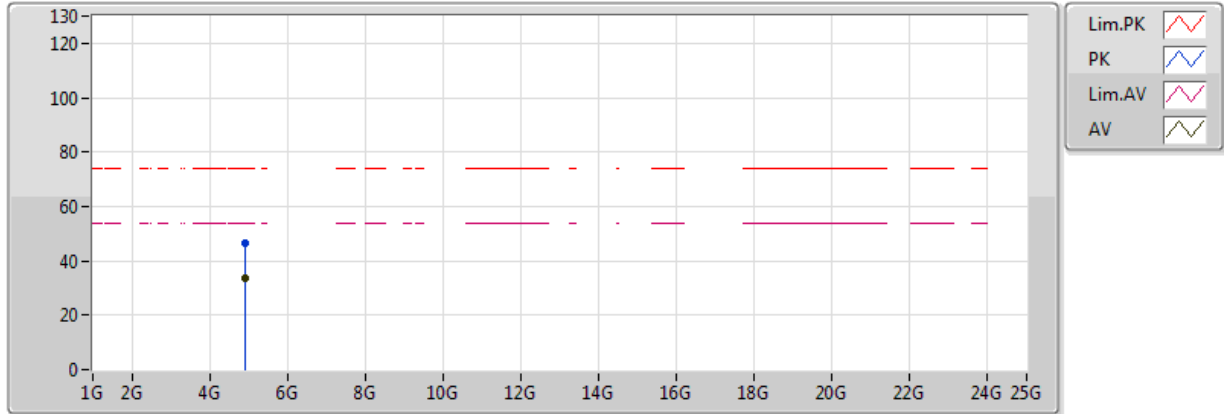
20170217  
EUT Z 4TX  
Setting 20.5  
01-Z-1  
FSP(100056)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.92422G	36.13	54.00	-17.87	3.74	3	V	223	2.44	-
PK	4.9227G	47.04	74.00	-26.96	3.74	3	V	223	2.44	-



## 802.11g-BF\_Nss1\_4TX

## 2462MHz\_TX

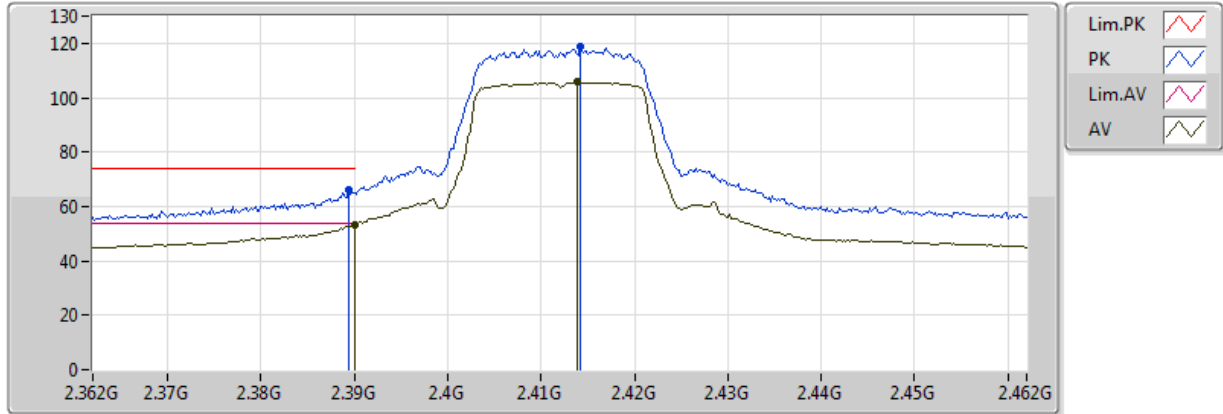


20170217  
EUT Z 4TX  
Setting 20.5  
01-Z-1  
FSP(100056)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.92406G	33.43	54.00	-20.57	3.74	3	H	319	2.44	-
PK	4.92608G	46.68	74.00	-27.32	3.75	3	H	319	2.44	-

## 802.11ac VHT20-BF\_Nss1,(MCS0)\_4TX

## 2412MHz\_TX

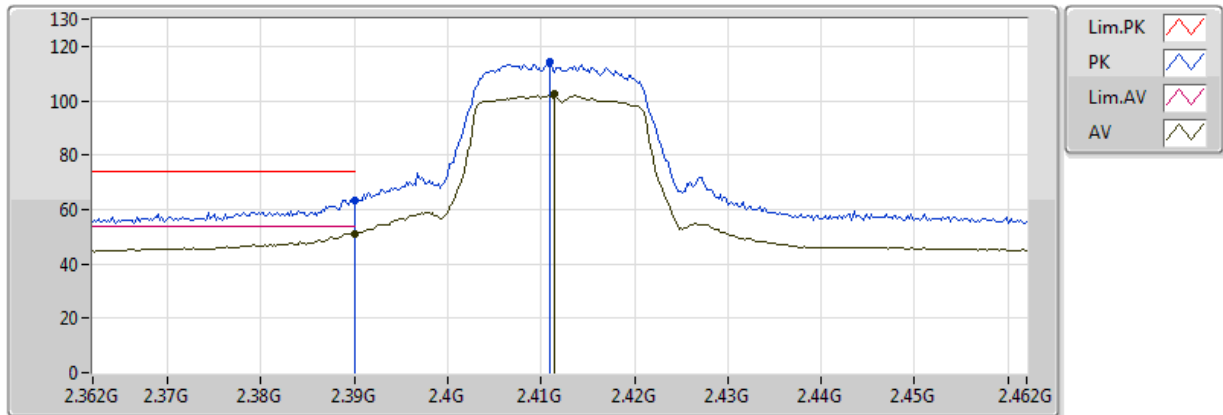


20170302  
EUT Z 4TX  
Setting 19  
03-W-3  
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.39G	53.42	54.00	-0.58	31.91	3	V	120	1.21	-
AV	2.4138G	105.78	Inf	-Inf	31.97	3	V	120	1.21	-
PK	2.3894G	65.85	74.00	-8.15	31.91	3	V	120	1.21	-
PK	2.4142G	118.85	Inf	-Inf	31.97	3	V	120	1.21	-

## 802.11ac VHT20-BF\_Nss1,(MCS0)\_4TX

## 2412MHz\_TX

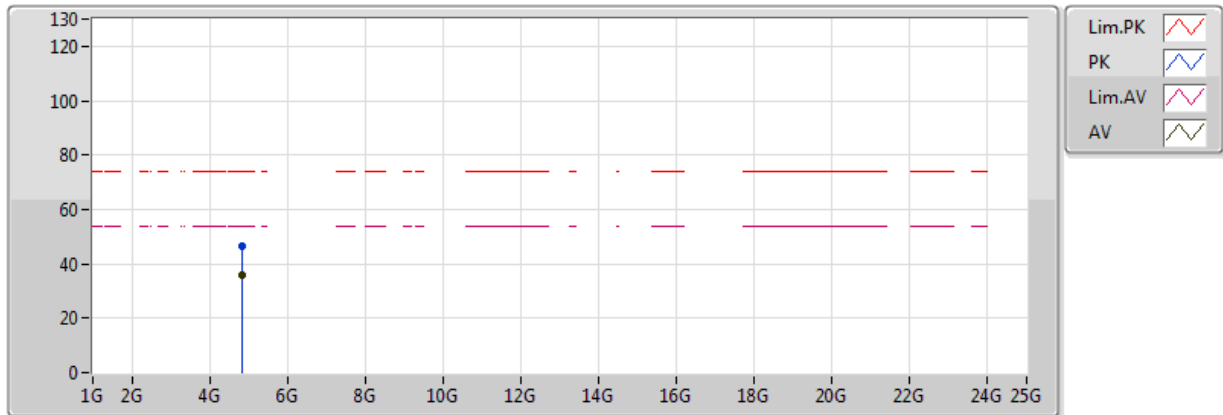


20170302  
EUT Z 4TX  
Setting 19  
03-W-3  
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.39G	51.24	54.00	-2.76	31.91	3	H	118	1.93	-
AV	2.4114G	102.46	Inf	-Inf	31.97	3	H	118	1.93	-
PK	2.39G	63.58	74.00	-10.42	31.91	3	H	118	1.93	-
PK	2.411G	114.33	Inf	-Inf	31.97	3	H	118	1.93	-

### 802.11ac VHT20-BF\_Nss1,(MCS0)\_4TX

### 2412MHz\_TX

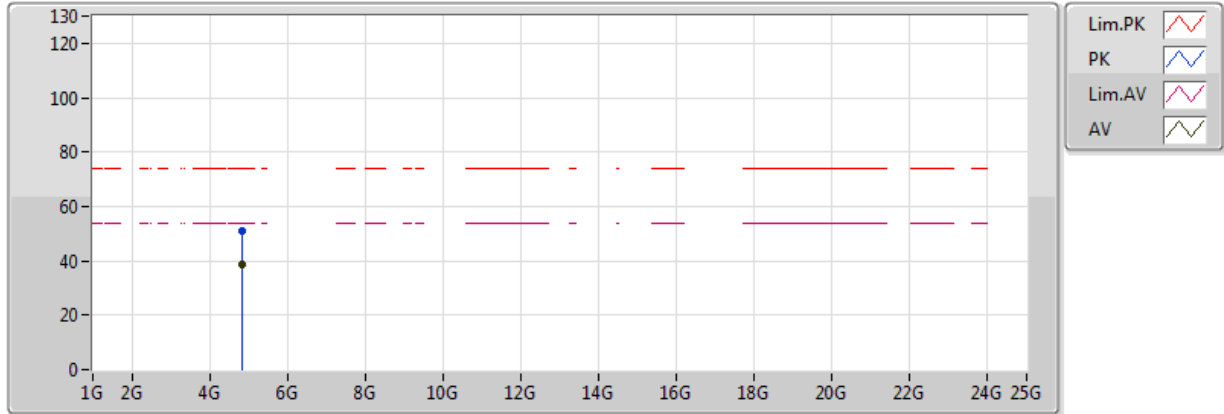


20170302  
EUT Z 4TX  
Setting 19  
03-W-3  
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.82402G	35.87	54.00	-18.13	4.72	3	V	178	1.87	-
PK	4.81934G	46.47	74.00	-27.53	4.71	3	V	178	1.87	-

## 802.11ac VHT20-BF\_Nss1,(MCS0)\_4TX

## 2412MHz\_TX

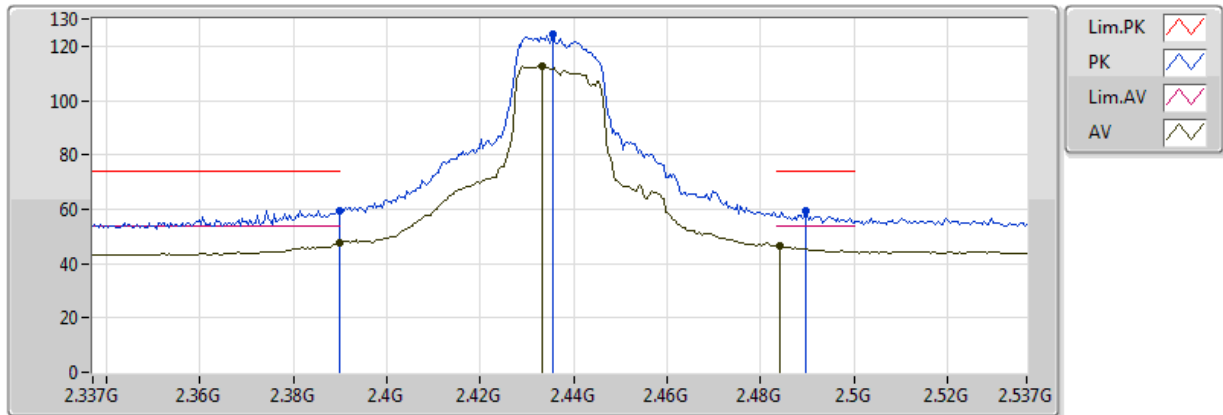


20170302  
EUT Z 4TX  
Setting 19  
03-W-3  
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.82364G	38.82	54.00	-15.18	4.72	3	H	225	1.01	-
PK	4.82564G	51.15	74.00	-22.85	4.72	3	H	225	1.01	-

## 802.11ac VHT20-BF\_Nss1,(MCS0)\_4TX

## 2437MHz\_TX

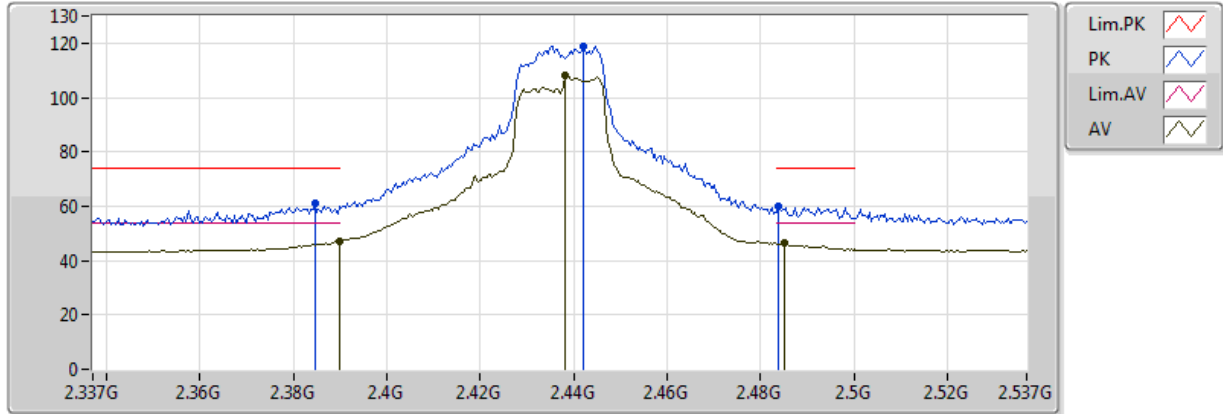


20170217  
EUT Z 4TX  
Setting 25  
01-Z-1  
FSP(100056)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3898G	47.78	54.00	-6.22	31.04	3	V	280	2.48	-
AV	2.4334G	112.82	Inf	-Inf	30.98	3	V	280	2.48	-
AV	2.4842G	46.23	54.00	-7.77	30.92	3	V	280	2.48	-
PK	2.3898G	59.45	74.00	-14.55	31.04	3	V	280	2.48	-
PK	2.4354G	124.24	Inf	-Inf	30.98	3	V	280	2.48	-
PK	2.4898G	59.44	74.00	-14.56	30.91	3	V	280	2.48	-

## 802.11ac VHT20-BF\_Nss1,(MCS0)\_4TX

## 2437MHz\_TX

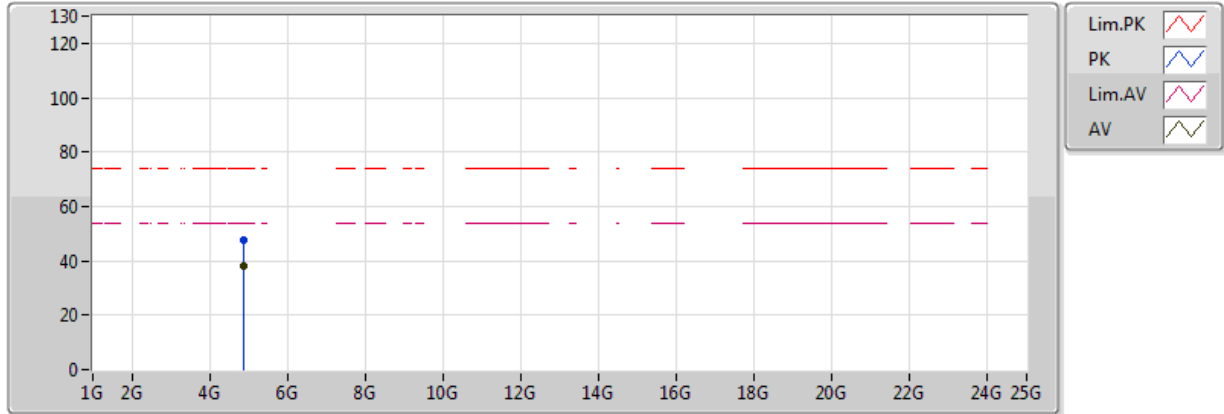


20170217  
EUT Z 4TX  
Setting 25  
01-Z-1  
FSP(100056)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3898G	47.17	54.00	-6.83	31.04	3	H	290	2.53	-
AV	2.4382G	108.07	Inf	-Inf	30.97	3	H	290	2.53	-
AV	2.485G	46.29	54.00	-7.71	30.92	3	H	290	2.53	-
PK	2.3846G	61.25	74.00	-12.75	31.04	3	H	290	2.53	-
PK	2.4422G	118.66	Inf	-Inf	30.97	3	H	290	2.53	-
PK	2.4838G	60.09	74.00	-13.91	30.92	3	H	290	2.53	-

## 802.11ac VHT20-BF\_Nss1,(MCS0)\_4TX

## 2437MHz\_TX



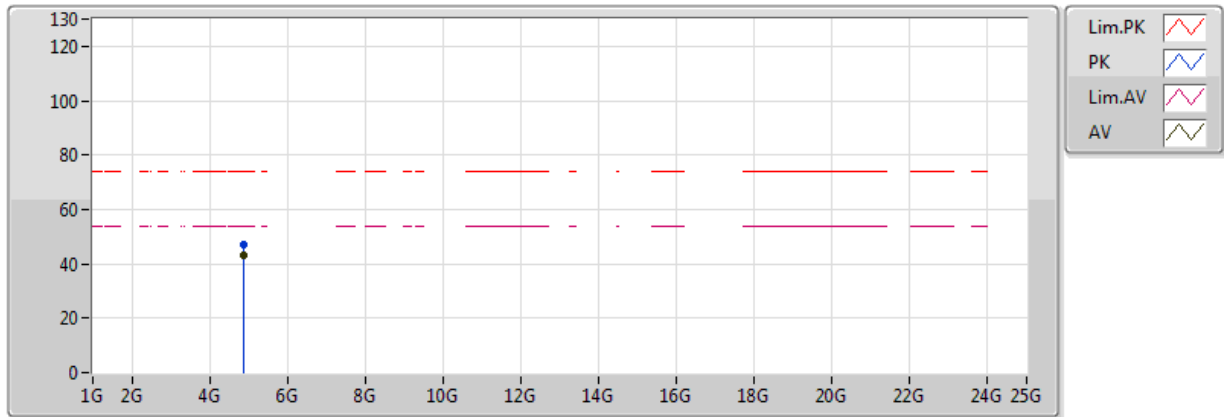
20170217  
EUT Z 4TX  
Setting 25  
01-Z-1  
FSP(100056)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.87432G	38.20	54.00	-15.80	3.59	3	V	129	1.39	-
PK	4.87376G	47.51	74.00	-26.49	3.59	3	V	129	1.39	-



## 802.11ac VHT20-BF\_Nss1,(MCS0)\_4TX

## 2437MHz\_TX

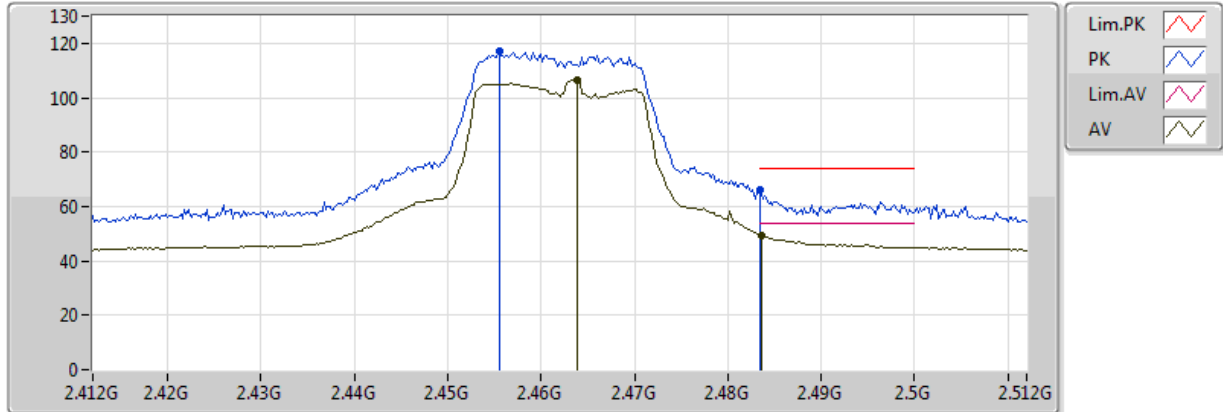


20170217  
EUT Z 4TX  
Setting 25  
01-Z-1  
FSP(100056)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.874G	43.41	54.00	-10.59	3.59	3	H	273	1.05	-
PK	4.87264G	46.90	74.00	-27.10	3.59	3	H	273	1.05	-

## 802.11ac VHT20-BF\_Nss1,(MCS0)\_4TX

## 2462MHz\_TX

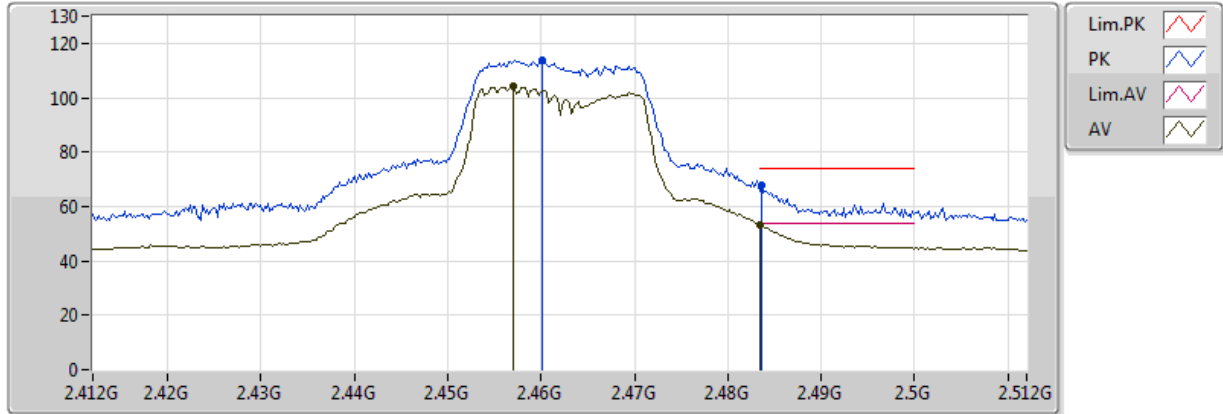


20170217  
EUT Z 4TX  
Setting 20  
01-Z-1  
FSP(100056)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.4638G	106.65	Inf	-Inf	30.94	3	V	124	2.60	-
AV	2.4836G	49.59	54.00	-4.41	30.92	3	V	124	2.60	-
PK	2.4556G	116.88	Inf	-Inf	30.95	3	V	124	2.60	-
PK	2.483502G	66.13	74.00	-7.87	30.92	3	V	124	2.60	-

## 802.11ac VHT20-BF\_Nss1,(MCS0)\_4TX

## 2462MHz\_TX

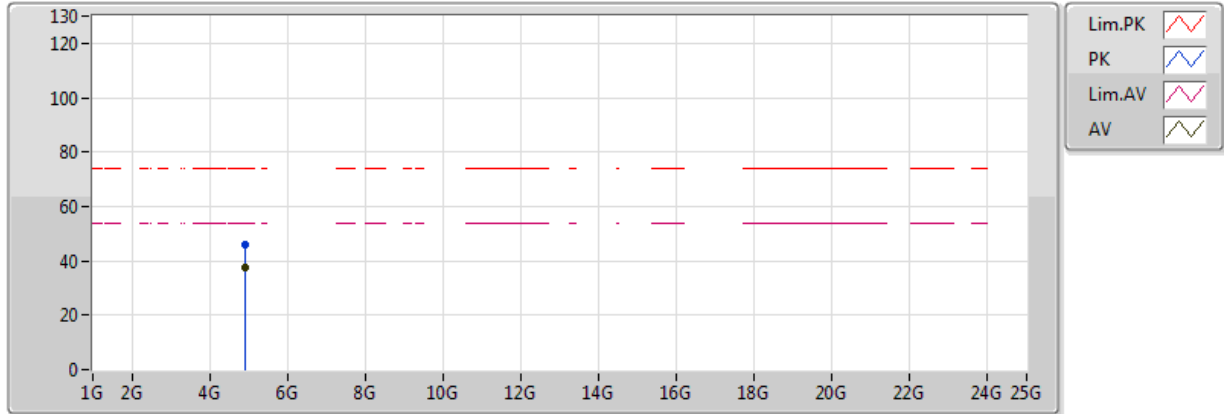


20170217  
EUT Z 4TX  
Setting 20  
01-Z-1  
FSP(100056)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.457G	103.99	Inf	-Inf	30.95	3	H	310	2.52	-
AV	2.483502G	53.44	54.00	-0.56	30.92	3	H	310	2.52	-
PK	2.4602G	113.71	Inf	-Inf	30.95	3	H	310	2.52	-
PK	2.4836G	67.97	74.00	-6.03	30.92	3	H	310	2.52	-

## 802.11ac VHT20-BF\_Nss1,(MCS0)\_4TX

## 2462MHz\_TX

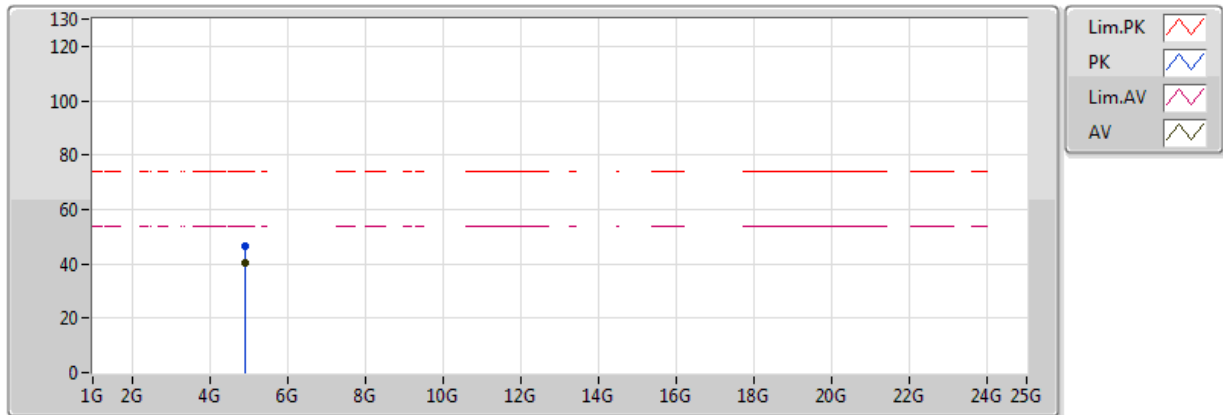


20170217  
EUT Z 4TX  
Setting 20  
01-Z-1  
FSP(100056)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.92372G	37.80	54.00	-16.20	3.74	3	V	208	2.42	-
PK	4.92888G	45.68	74.00	-28.32	3.75	3	V	208	2.42	-

## 802.11ac VHT20-BF\_Nss1,(MCS0)\_4TX

## 2462MHz\_TX

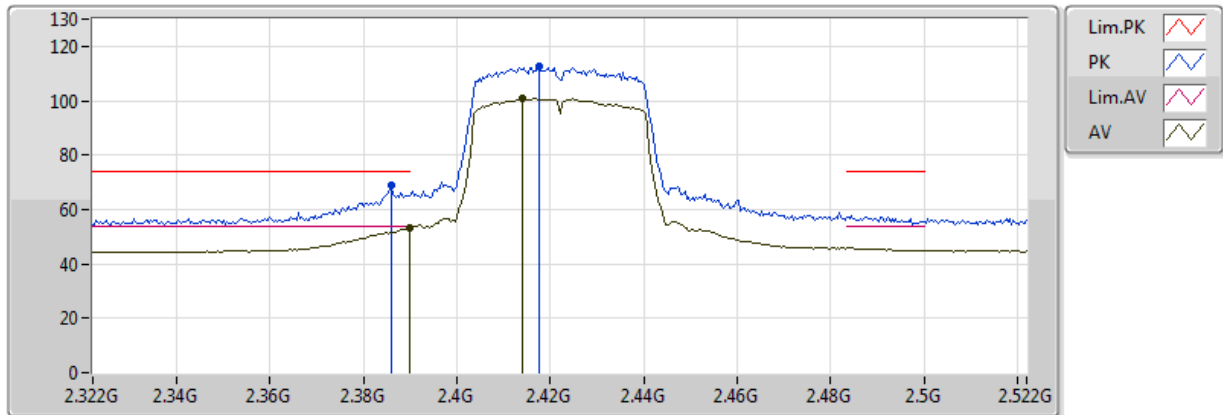


20170217  
EUT Z 4TX  
Setting 20  
01-Z-1  
FSP(100056)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.92396G	40.38	54.00	-13.62	3.74	3	H	310	1.39	-
PK	4.924G	46.55	74.00	-27.45	3.74	3	H	310	1.39	-

## 802.11ac VHT40-BF\_Nss1,(MCS0)\_4TX

## 2422MHz\_TX

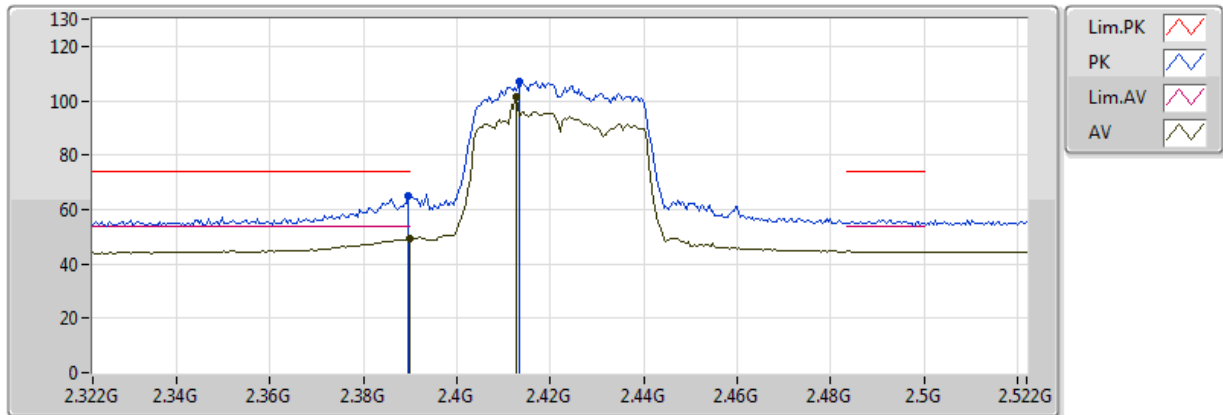


20170302  
EUT Z 4TX  
Setting 15  
03-W-3  
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.39G	53.41	54.00	-0.59	31.91	3	V	126	1.20	-
AV	2.414G	100.76	Inf	-Inf	31.97	3	V	126	1.20	-
PK	2.386G	68.78	74.00	-5.22	31.90	3	V	126	1.20	-
PK	2.4176G	112.40	Inf	-Inf	31.98	3	V	126	1.20	-

## 802.11ac VHT40-BF\_Nss1,(MCS0)\_4TX

## 2422MHz\_TX

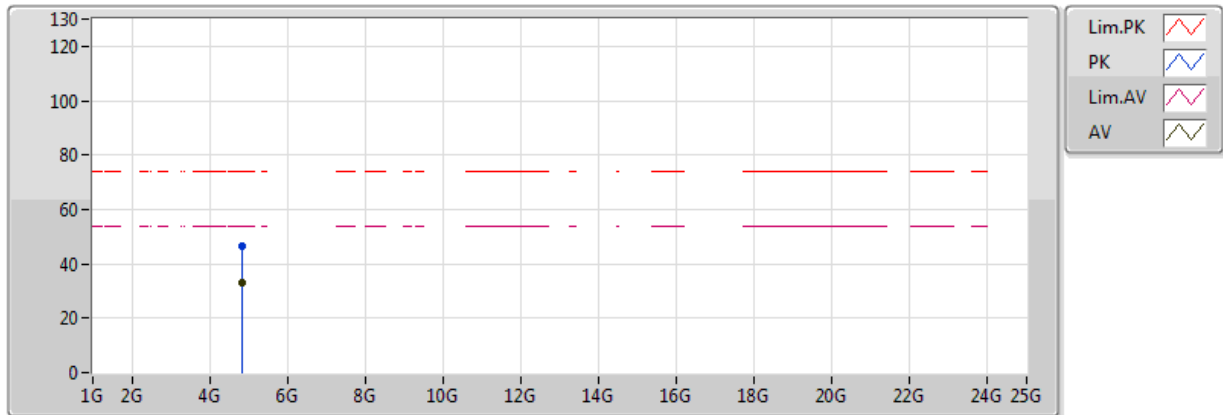


20170302  
EUT Z 4TX  
Setting 15  
03-W-3  
FSP(100019)

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	49.24	54.00	-4.76	31.91	3	H	295	1.74	-
AV	2.4128G	101.48	Inf	-Inf	31.97	3	H	295	1.74	-
PK	2.3896G	65.03	74.00	-8.97	31.91	3	H	295	1.74	-
PK	2.4132G	106.84	Inf	-Inf	31.97	3	H	295	1.74	-

## 802.11ac VHT40-BF\_Nss1,(MCS0)\_4TX

## 2422MHz\_TX



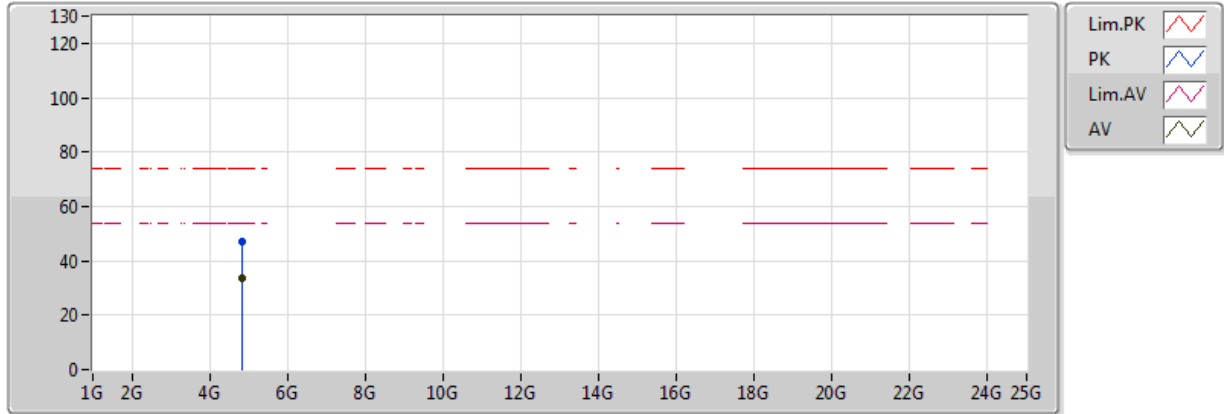
20170302  
EUT Z 4TX  
Setting 15  
03-W-3  
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.84164G	32.86	54.00	-21.14	4.75	3	V	272	1.95	-
PK	4.8445G	46.40	74.00	-27.60	4.76	3	V	272	1.95	-



## 802.11ac VHT40-BF\_Nss1,(MCS0)\_4TX

## 2422MHz\_TX

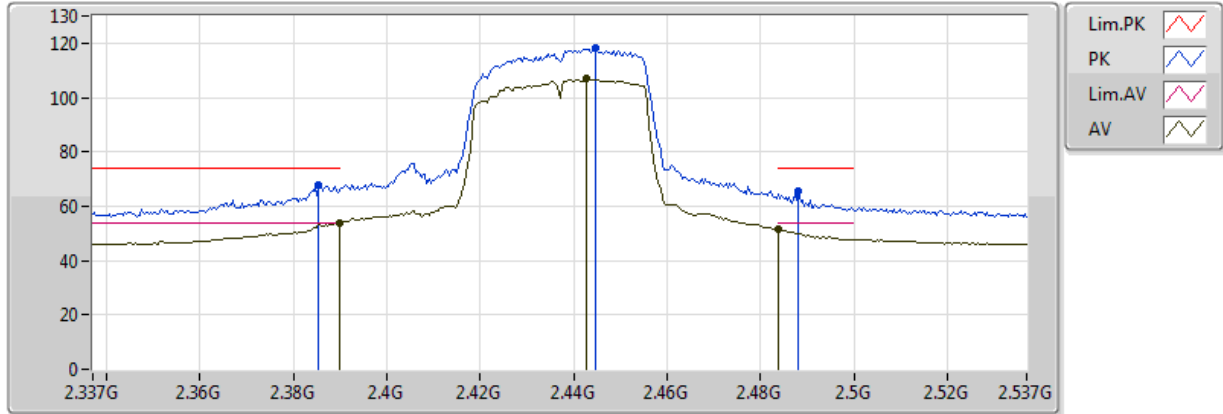


20170302  
EUT Z 4TX  
Setting 15  
03-W-3  
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.84798G	33.50	54.00	-20.50	4.77	3	H	242	1.00	-
PK	4.84756G	46.99	74.00	-27.01	4.77	3	H	242	1.00	-

## 802.11ac VHT40-BF\_Nss1,(MCS0)\_4TX

## 2437MHz\_TX

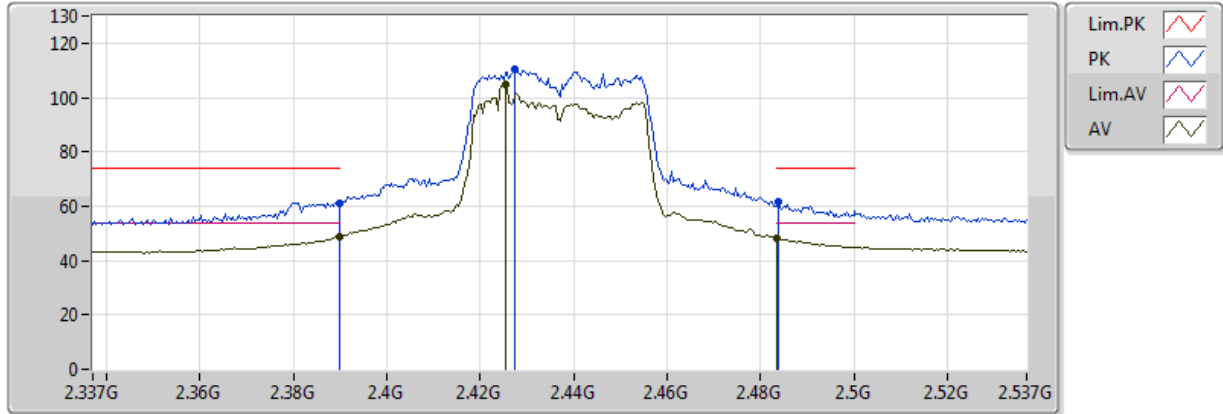


20170306  
EUT Z 4TX  
Setting 21  
01-S-6  
FSP(100080)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3898G	53.58	54.00	-0.42	32.01	3	V	92	2.23	-
AV	2.4426G	106.93	Inf	-Inf	32.17	3	V	92	2.23	-
AV	2.4838G	51.50	54.00	-2.50	32.30	3	V	92	2.23	-
PK	2.3854G	67.96	74.00	-6.04	31.99	3	V	92	2.23	-
PK	2.4446G	118.29	Inf	-Inf	32.18	3	V	92	2.23	-
PK	2.4882G	65.30	74.00	-8.70	32.31	3	V	92	2.23	-

## 802.11ac VHT40-BF\_Nss1,(MCS0)\_4TX

## 2437MHz\_TX

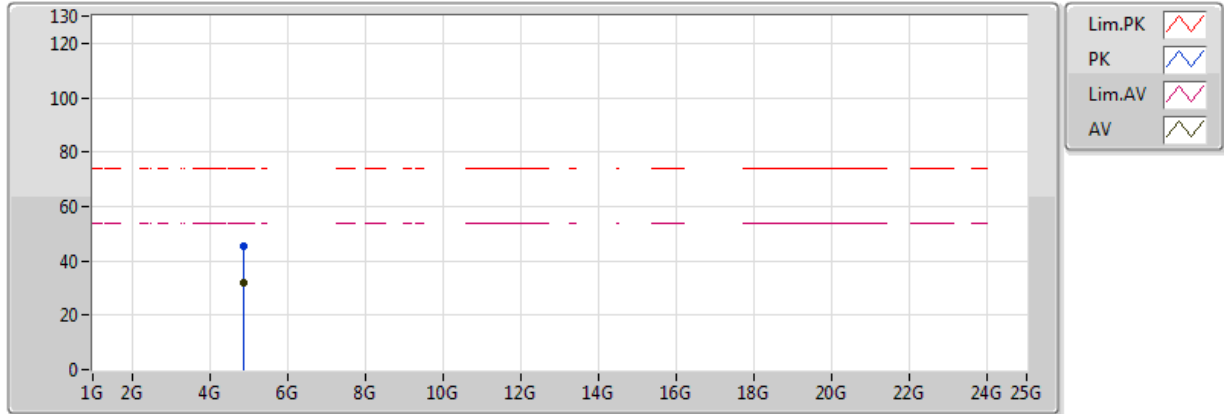


20170306  
EUT Z 4TX  
Setting 21  
01-S-6  
FSP(100080)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3898G	48.80	54.00	-5.20	31.04	3	H	131	2.62	-
AV	2.4254G	104.92	Inf	-Inf	30.99	3	H	131	2.62	-
AV	2.483502G	48.24	54.00	-5.76	30.92	3	H	131	2.62	-
PK	2.3898G	61.28	74.00	-12.72	31.04	3	H	131	2.62	-
PK	2.4274G	110.38	Inf	-Inf	30.99	3	H	131	2.62	-
PK	2.4838G	61.38	74.00	-12.62	30.92	3	H	131	2.62	-

## 802.11ac VHT40-BF\_Nss1,(MCS0)\_4TX

### 2437MHz\_TX

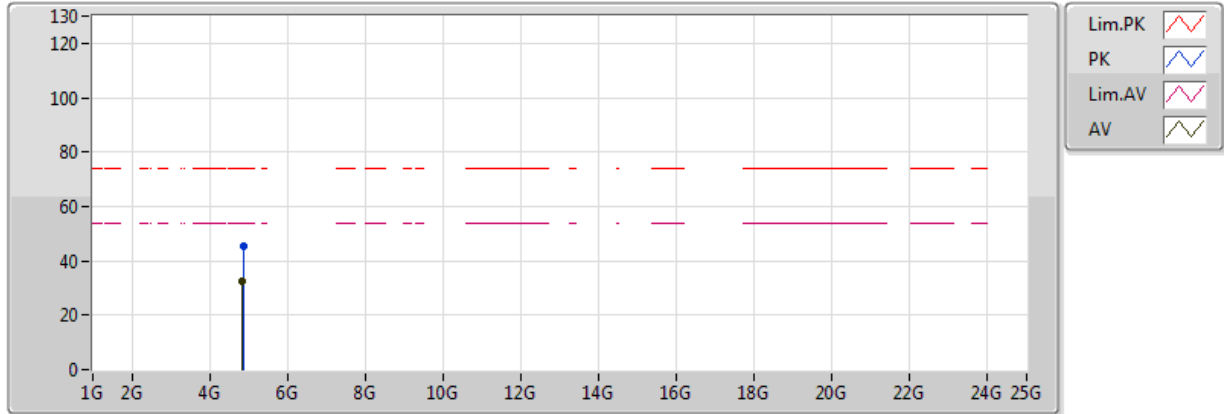


20170306  
EUT Z 4TX  
Setting 21  
01-S-6  
FSP(100080)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.85832G	32.11	54.00	-21.89	3.54	3	V	211	1.62	-
PK	4.86744G	45.50	74.00	-28.50	3.57	3	V	211	1.62	-

## 802.11ac VHT40-BF\_Nss1,(MCS0)\_4TX

## 2437MHz\_TX

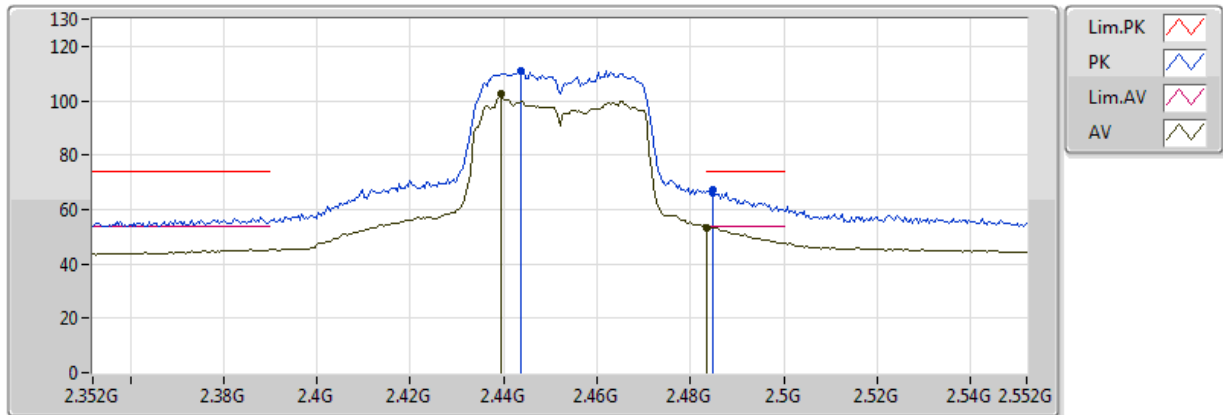


20170306  
EUT Z 4TX  
Setting 21  
01-S-6  
FSP(100080)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.854G	32.66	54.00	-21.34	3.53	3	H	345	2.14	-
PK	4.86512G	45.44	74.00	-28.56	3.57	3	H	345	2.14	-

## 802.11ac VHT40-BF\_Nss1,(MCS0)\_4TX

## 2452MHz\_TX

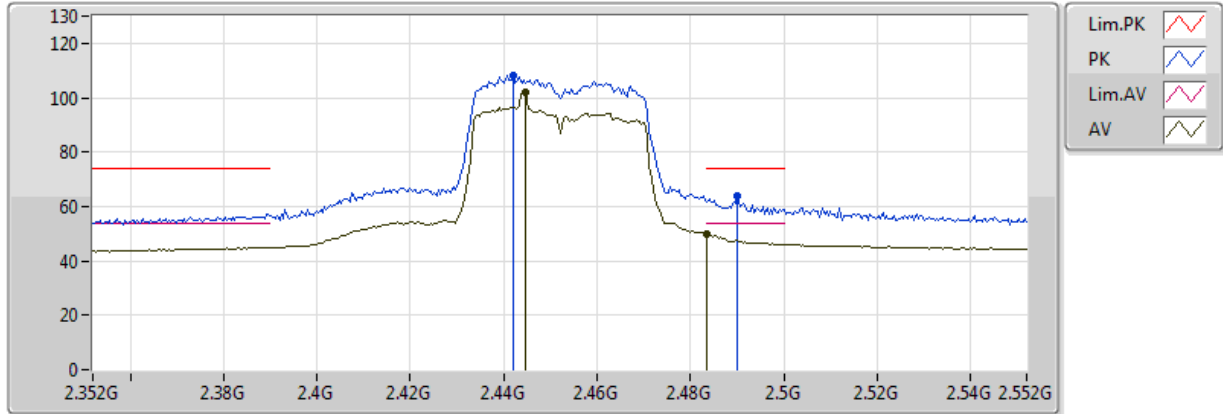


20170210  
EUT Z 4TX  
Setting 15  
01-Z-1

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.4396G	102.54	Inf	-Inf	32.05	3	V	318	1.00	-
AV	2.4836G	53.49	54.00	-0.51	32.15	3	V	318	1.00	-
PK	2.4436G	110.87	Inf	-Inf	32.05	3	V	318	1.00	-
PK	2.4848G	67.24	74.00	-6.76	32.15	3	V	318	1.00	-

## 802.11ac VHT40-BF\_Nss1,(MCS0)\_4TX

## 2452MHz\_TX

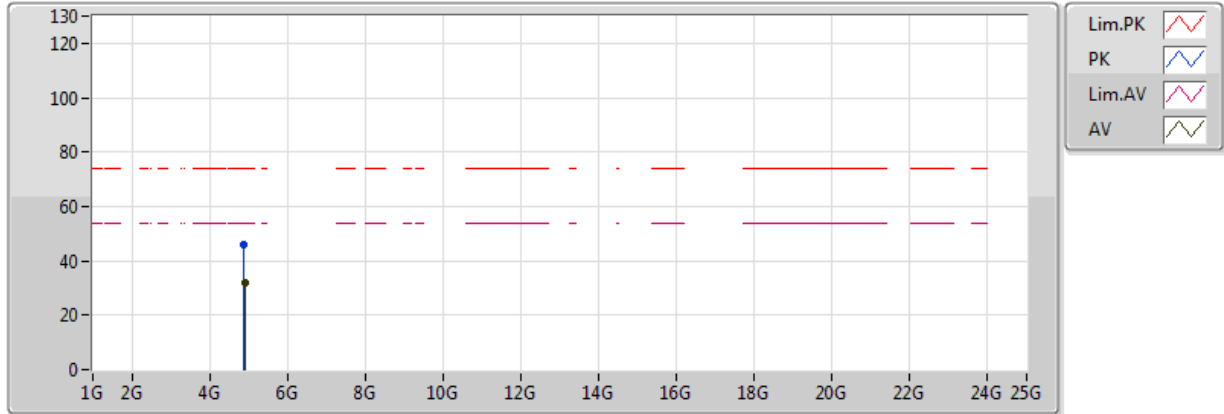


20170210  
EUT Z 4TX  
Setting 15  
01-Z-1

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.4448G	101.97	Inf	-Inf	32.06	3	H	277	2.89	-
AV	2.4836G	49.75	54.00	-4.25	32.15	3	H	277	2.89	-
PK	2.442G	108.28	Inf	-Inf	32.05	3	H	277	2.89	-
PK	2.49G	63.80	74.00	-10.20	32.17	3	H	277	2.89	-

## 802.11ac VHT40-BF\_Nss1,(MCS0)\_4TX

## 2452MHz\_TX



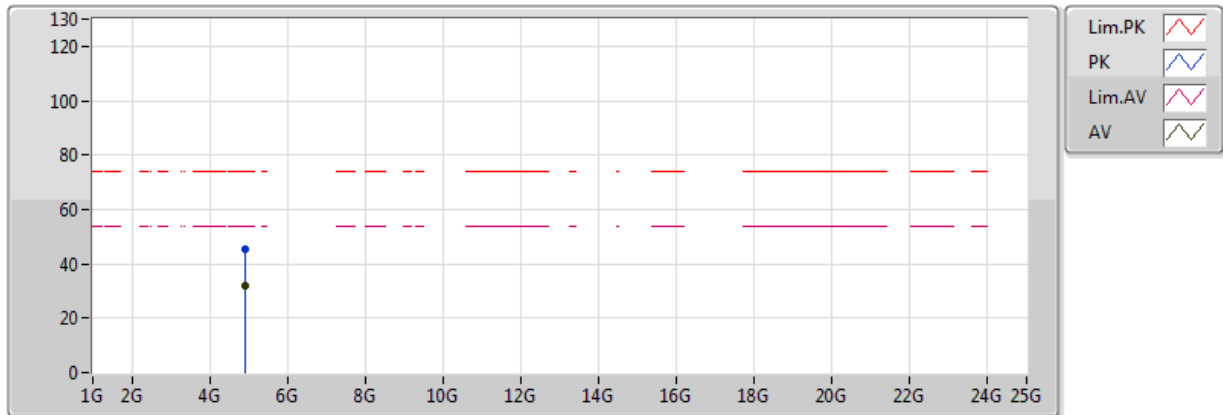
20170217  
EUT Z 4TX  
Setting 15  
01-Z-1  
FSP(100056)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.89968G	32.08	54.00	-21.92	3.67	3	V	203	2.48	-
PK	4.89424G	45.91	74.00	-28.09	3.65	3	V	203	2.48	-



## 802.11ac VHT40-BF\_Nss1,(MCS0)\_4TX

## 2452MHz\_TX

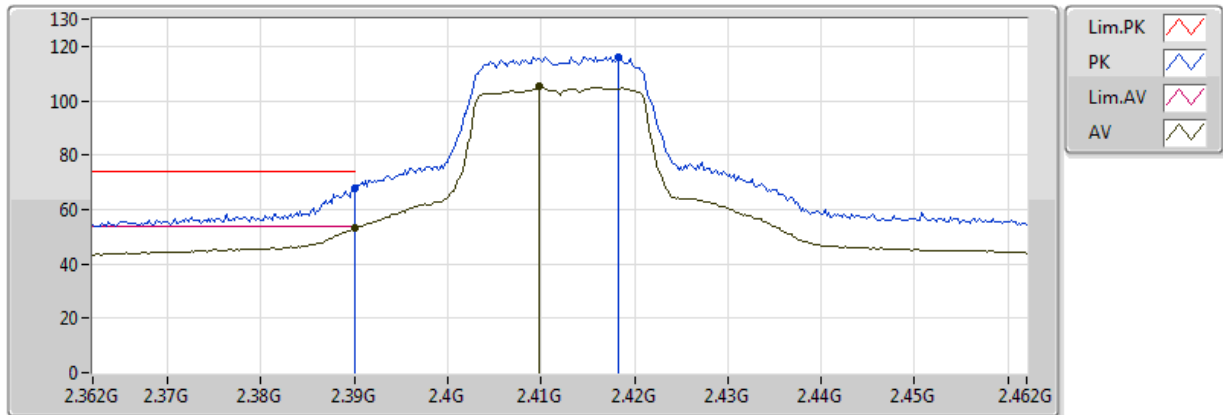


20170217  
EUT Z 4TX  
Setting 15  
01-Z-1  
FSP(100056)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.9136G	32.08	54.00	-21.92	3.71	3	H	57	1.69	-
PK	4.89712G	45.57	74.00	-28.43	3.66	3	H	57	1.69	-

## 802.11ac VHT20-BF\_Nss2,(MCS0)\_4TX

## 2412MHz\_TX

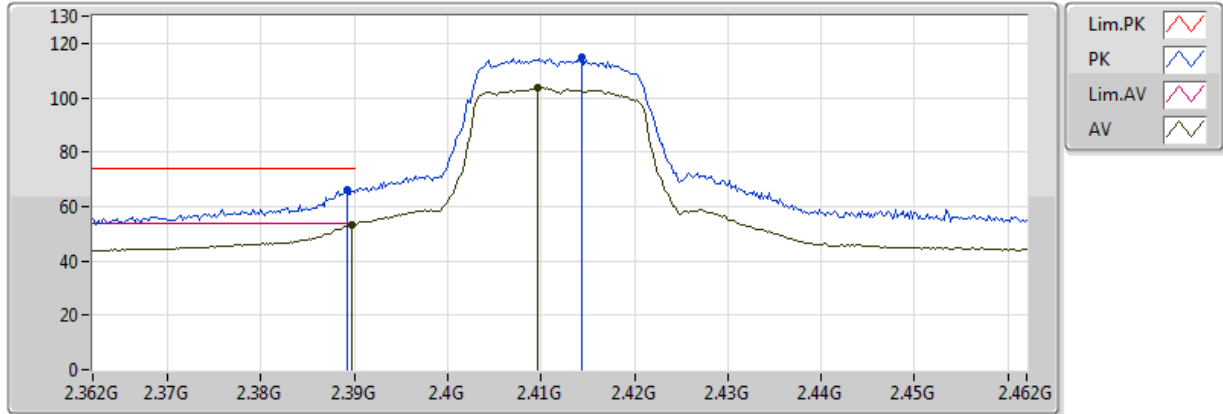


20170210  
EUT Z 4TX  
Setting 20.5  
01-Z-1

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	53.44	54.00	-0.56	31.04	3	V	310	1.20	-
AV	2.4098G	105.19	Inf	-Inf	31.01	3	V	310	1.20	-
PK	2.389998G	67.94	74.00	-6.06	31.04	3	V	310	1.20	-
PK	2.4182G	116.11	Inf	-Inf	31.00	3	V	310	1.20	-

## 802.11ac VHT20-BF\_Nss2,(MCS0)\_4TX

## 2412MHz\_TX

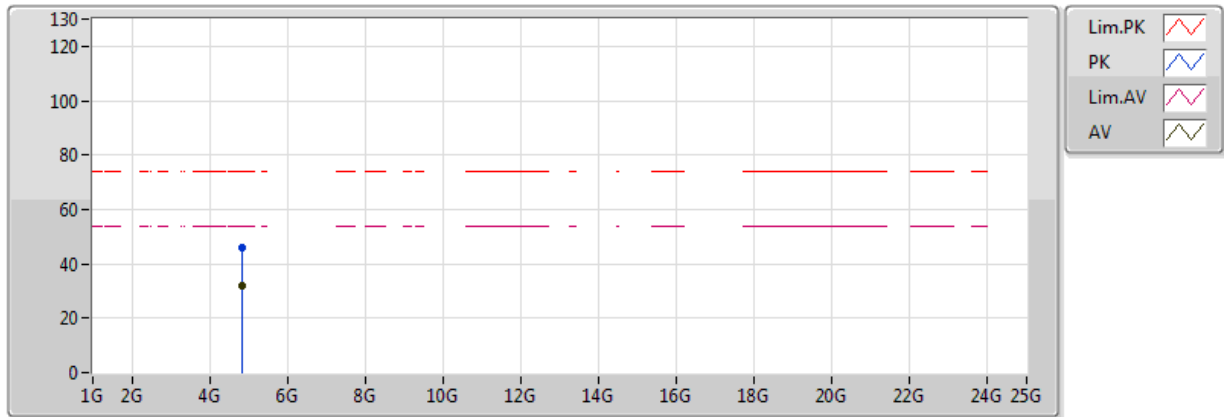


20170210  
EUT Z 4TX  
Setting 20.5  
01-Z-1

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3898G	53.36	54.00	-0.64	31.04	3	H	126	3.00	-
AV	2.4096G	103.70	Inf	-Inf	31.01	3	H	126	3.00	-
PK	2.3892G	66.40	74.00	-7.60	31.04	3	H	126	3.00	-
PK	2.4144G	114.83	Inf	-Inf	31.00	3	H	126	3.00	-

## 802.11ac VHT20-BF\_Nss2,(MCS0)\_4TX

## 2412MHz\_TX

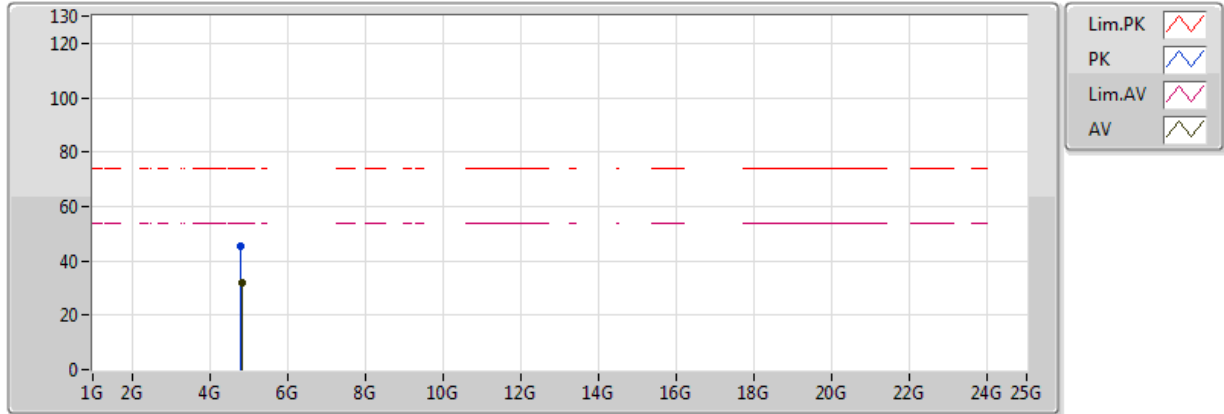


20170217  
EUT Z 4TX  
Setting 20.5  
01-Z-1  
FSP(100056)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.83248G	31.99	54.00	-22.01	3.47	3	V	134	2.19	-
PK	4.83048G	45.94	74.00	-28.06	3.46	3	V	134	2.19	-

## 802.11ac VHT20-BF\_Nss2,(MCS0)\_4TX

## 2412MHz\_TX

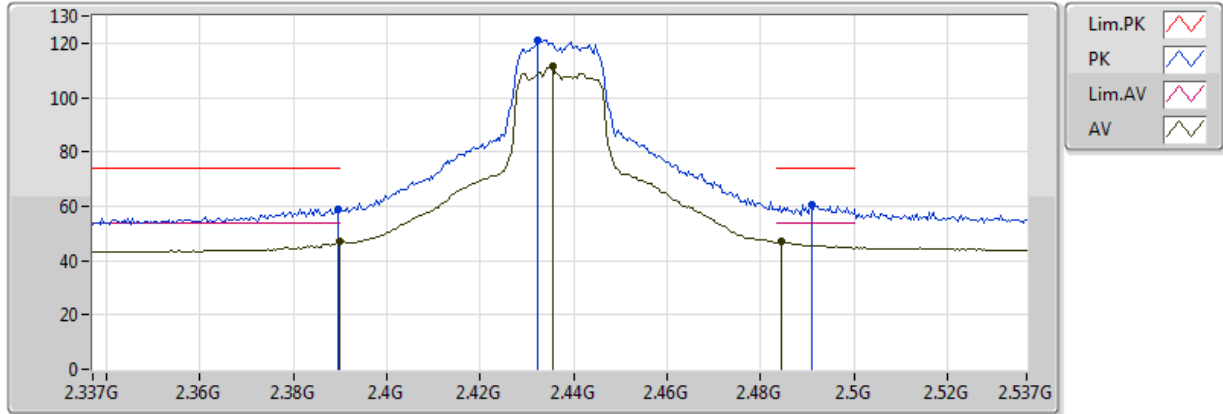


20170217  
EUT Z 4TX  
Setting 20.5  
01-Z-1  
FSP(100056)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.82304G	31.89	54.00	-22.11	3.44	3	H	275	2.22	-
PK	4.8164G	45.21	74.00	-28.79	3.42	3	H	275	2.22	-

## 802.11ac VHT20-BF\_Nss2,(MCS0)\_4TX

## 2437MHz\_TX

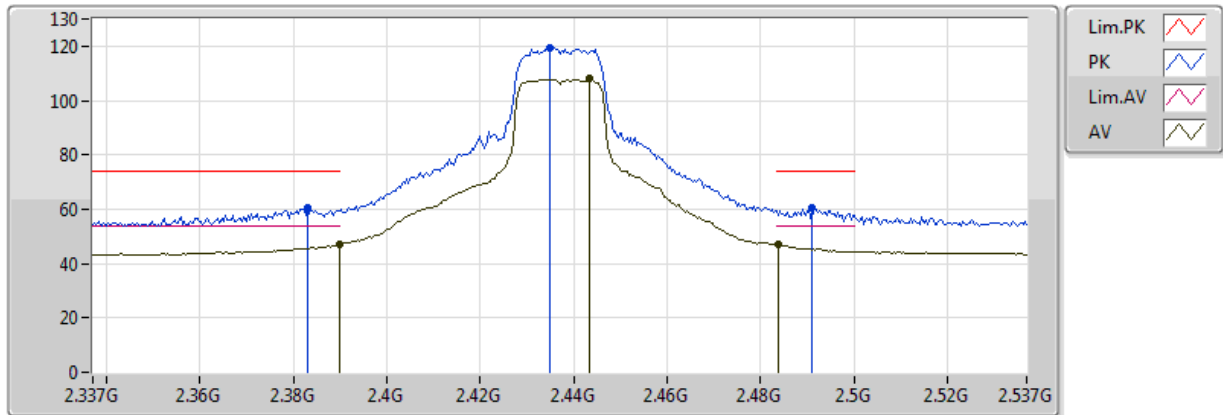


20170217  
EUT Z 4TX  
Setting 25  
01-Z-1  
FSP(100056)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3898G	46.95	54.00	-7.05	31.04	3	V	100	2.16	-
AV	2.4354G	111.46	Inf	-Inf	30.98	3	V	100	2.16	-
AV	2.4846G	47.20	54.00	-6.80	30.92	3	V	100	2.16	-
PK	2.3894G	59.03	74.00	-14.97	31.04	3	V	100	2.16	-
PK	2.4322G	121.01	Inf	-Inf	30.98	3	V	100	2.16	-
PK	2.491G	60.70	74.00	-13.30	30.91	3	V	100	2.16	-

## 802.11ac VHT20-BF\_Nss2,(MCS0)\_4TX

## 2437MHz\_TX

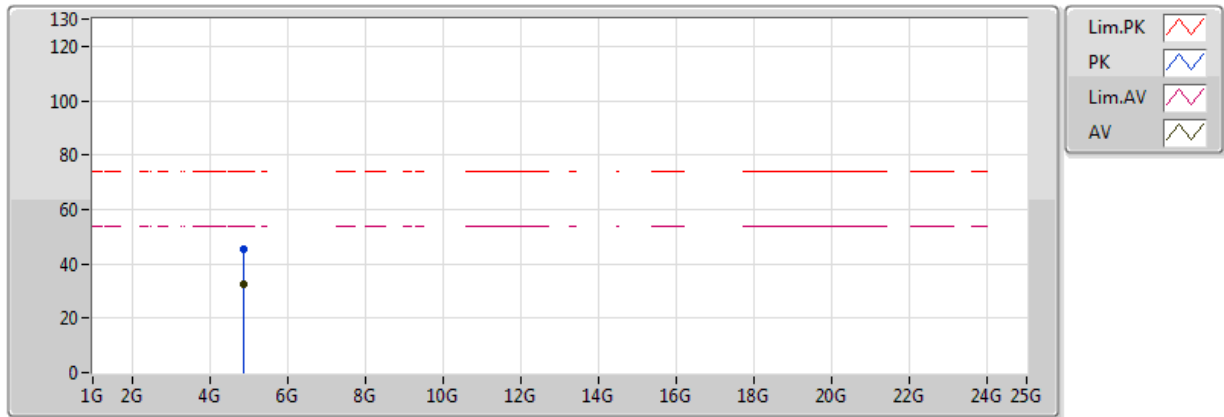


20170217  
EUT Z 4TX  
Setting 25  
01-Z-1  
FSP(100056)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3898G	47.34	54.00	-6.66	31.04	3	H	293	2.47	-
AV	2.4434G	107.98	Inf	-Inf	30.97	3	H	293	2.47	-
AV	2.4838G	46.85	54.00	-7.15	30.92	3	H	293	2.47	-
PK	2.383G	60.68	74.00	-13.32	31.05	3	H	293	2.47	-
PK	2.435G	119.35	Inf	-Inf	30.98	3	H	293	2.47	-
PK	2.491G	60.72	74.00	-13.28	30.91	3	H	293	2.47	-

## 802.11ac VHT20-BF\_Nss2,(MCS0)\_4TX

## 2437MHz\_TX



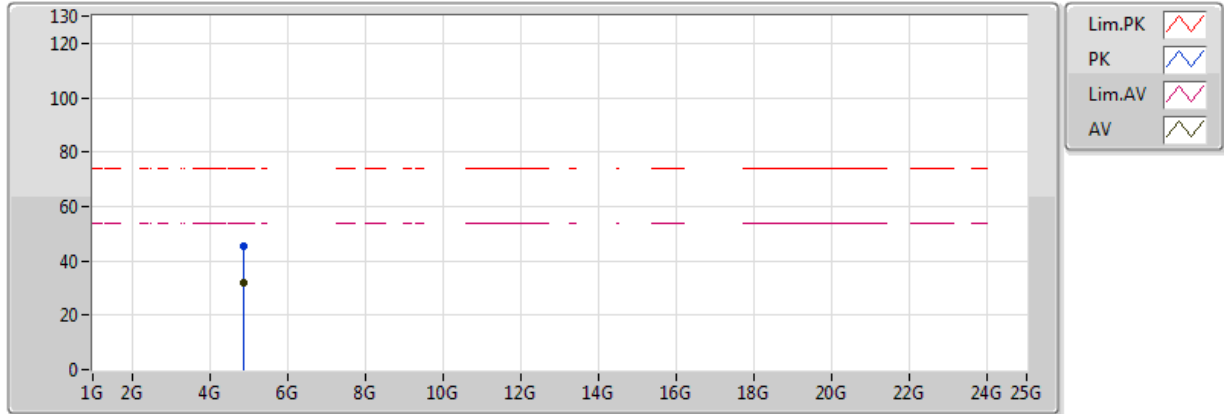
20170217  
EUT Z 4TX  
Setting 25  
01-Z-1  
FSP(100056)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.86352G	32.23	54.00	-21.77	3.56	3	V	72	2.45	-
PK	4.868G	45.65	74.00	-28.35	3.57	3	V	72	2.45	-



## 802.11ac VHT20-BF\_Nss2,(MCS0)\_4TX

## 2437MHz\_TX

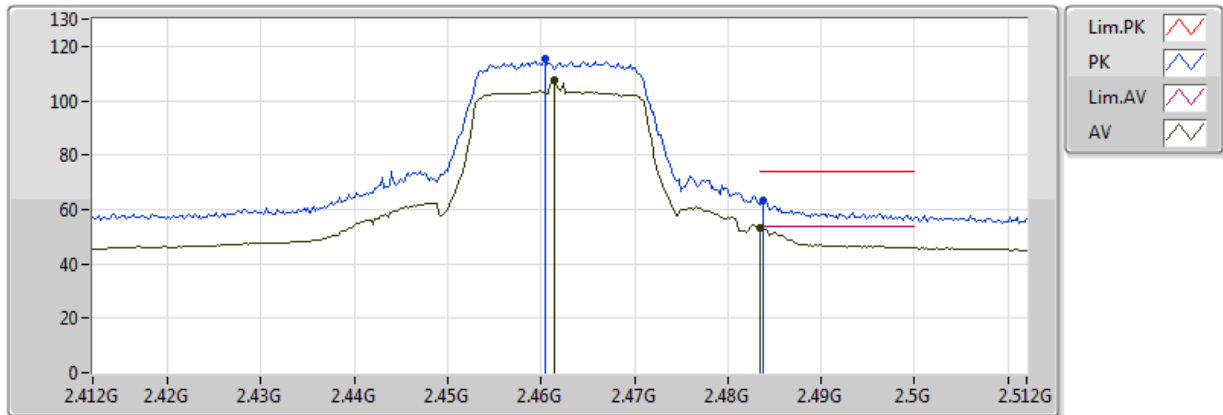


20170217  
EUT Z 4TX  
Setting 25  
01-Z-1  
FSP(100056)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.86176G	32.06	54.00	-21.94	3.56	3	H	351	1.61	-
PK	4.86536G	45.66	74.00	-28.34	3.57	3	H	351	1.61	-

## 802.11ac VHT20-BF\_Nss2,(MCS0)\_4TX

## 2462MHz\_TX

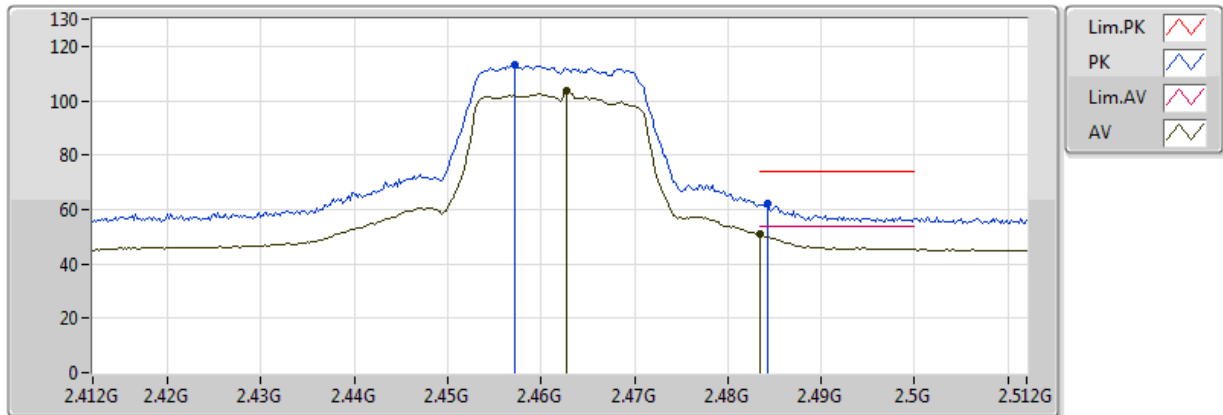


20170302  
EUT Z 4TX  
Setting 20  
03-W-3  
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.4614G	107.68	Inf	-Inf	32.09	3	V	130	1.54	-
AV	2.483502G	53.45	54.00	-0.55	32.14	3	V	130	1.54	-
PK	2.4604G	115.41	Inf	-Inf	32.08	3	V	130	1.54	-
PK	2.4838G	63.40	74.00	-10.60	32.14	3	V	130	1.54	-

## 802.11ac VHT20-BF\_Nss2,(MCS0)\_4TX

## 2462MHz\_TX

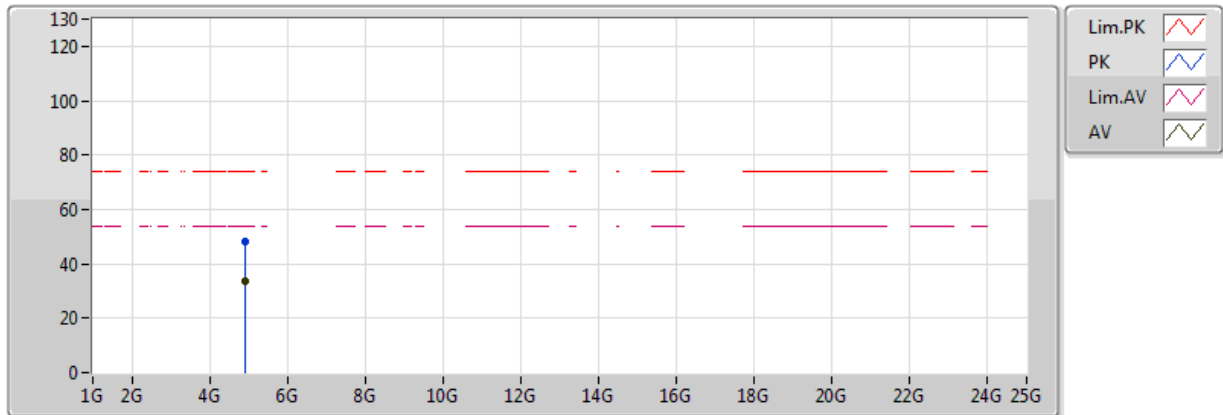


20170302  
EUT Z 4TX  
Setting 20  
03-W-3  
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.4628G	103.67	Inf	-Inf	32.09	3	H	297	2.99	-
AV	2.483502G	50.88	54.00	-3.12	32.14	3	H	297	2.99	-
PK	2.4572G	113.17	Inf	-Inf	32.08	3	H	297	2.99	-
PK	2.4842G	62.00	74.00	-12.00	32.14	3	H	297	2.99	-

## 802.11ac VHT20-BF\_Nss2,(MCS0)\_4TX

## 2462MHz\_TX

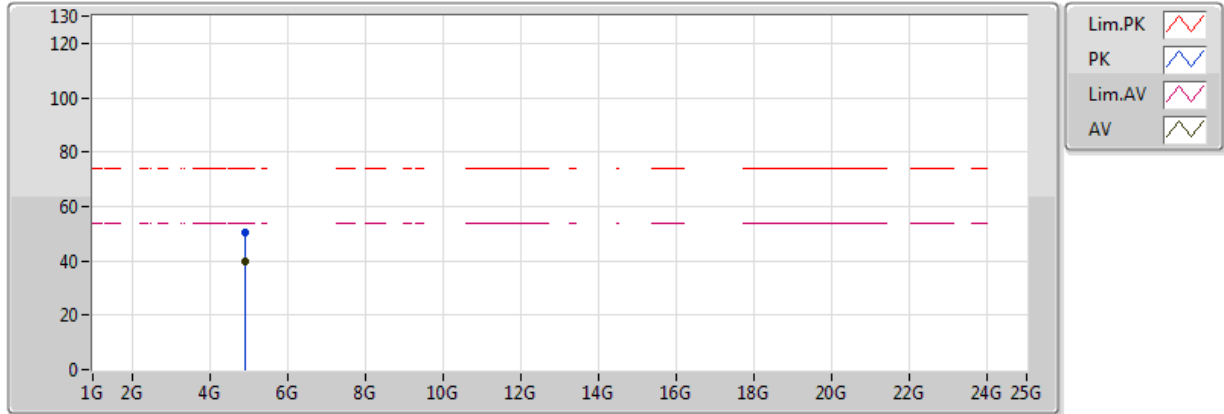


20170302  
EUT Z 4TX  
Setting 20  
03-W-3  
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.91998G	33.62	54.00	-20.38	4.91	3	V	245	1.61	-
PK	4.92364G	47.91	74.00	-26.09	4.92	3	V	245	1.61	-

## 802.11ac VHT20-BF\_Nss2,(MCS0)\_4TX

## 2462MHz\_TX

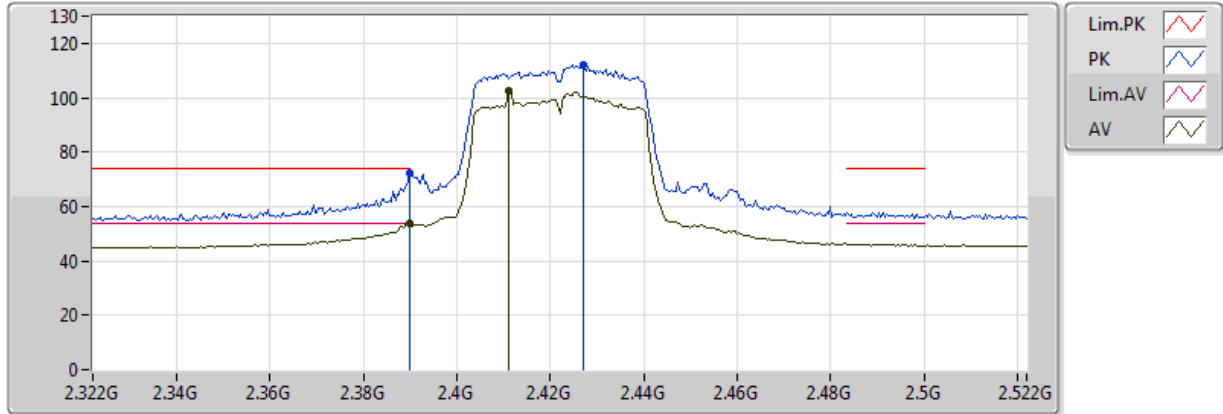


20170302  
EUT Z 4TX  
Setting 20  
03-W-3  
FSP(100019)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.92404G	39.96	54.00	-14.04	4.92	3	H	235	1.00	-
PK	4.9205G	50.62	74.00	-23.38	4.92	3	H	235	1.00	-

## 802.11ac VHT40-BF\_Nss2,(MCS0)\_4TX

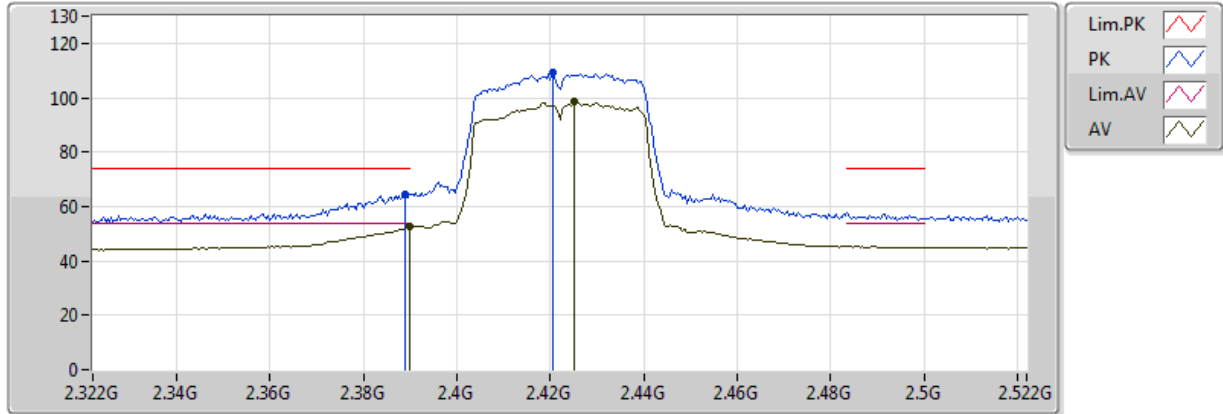
## 2422MHz\_TX



Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.39G	53.73	54.00	-0.27	32.01	3	V	100	2.78	-
AV	2.4112G	102.48	Inf	-Inf	32.07	3	V	100	2.78	-
PK	2.39G	72.50	74.00	-1.50	32.01	3	V	100	2.78	-
PK	2.4272G	112.08	Inf	-Inf	32.12	3	V	100	2.78	-

## 802.11ac VHT40-BF\_Nss2,(MCS0)\_4TX

## 2422MHz\_TX

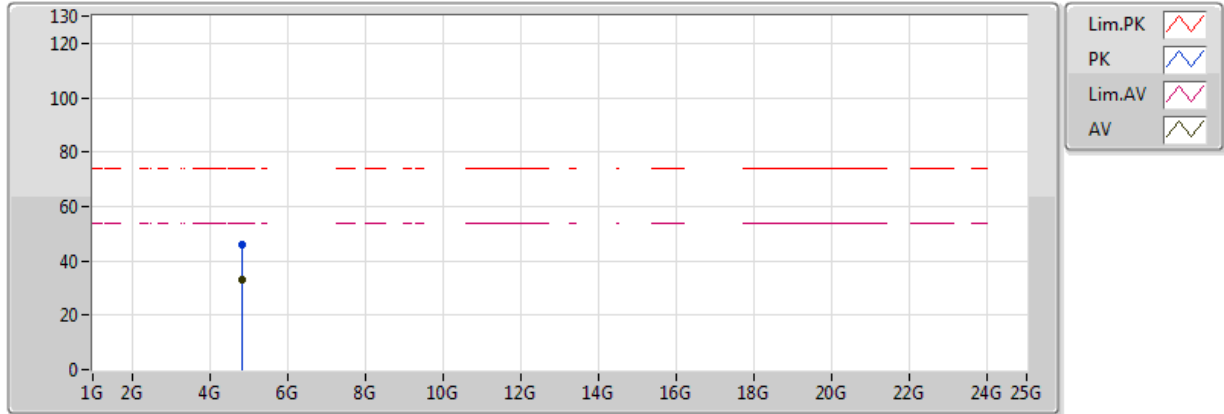


20170306  
EUT Z 4TX  
Setting 16  
01-S-6  
FSP(100080)

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	52.62	54.00	-1.38	31.91	3	H	116	2.57	-
AV	2.4252G	98.71	Inf	-Inf	32.00	3	H	116	2.57	-
PK	2.3888G	64.24	74.00	-9.76	31.91	3	H	116	2.57	-
PK	2.4204G	109.10	Inf	-Inf	31.99	3	H	116	2.57	-

## 802.11ac VHT40-BF\_Nss2,(MCS0)\_4TX

## 2422MHz\_TX



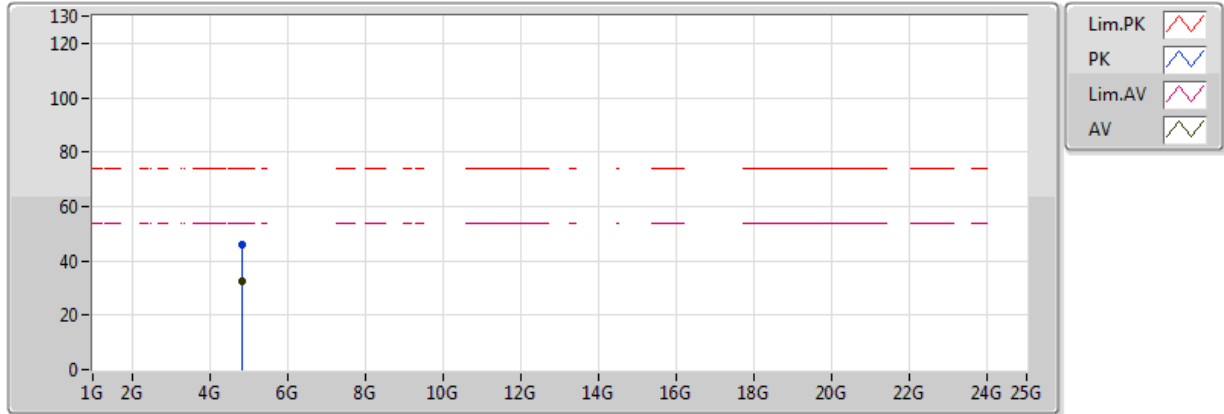
20170306  
EUT Z 4TX  
Setting 16  
01-S-6  
FSP(100080)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.84246G	32.89	54.00	-21.11	4.75	3	V	300	2.02	-
PK	4.8432G	45.99	74.00	-28.01	4.76	3	V	300	2.02	-



## 802.11ac VHT40-BF\_Nss2,(MCS0)\_4TX

## 2422MHz\_TX

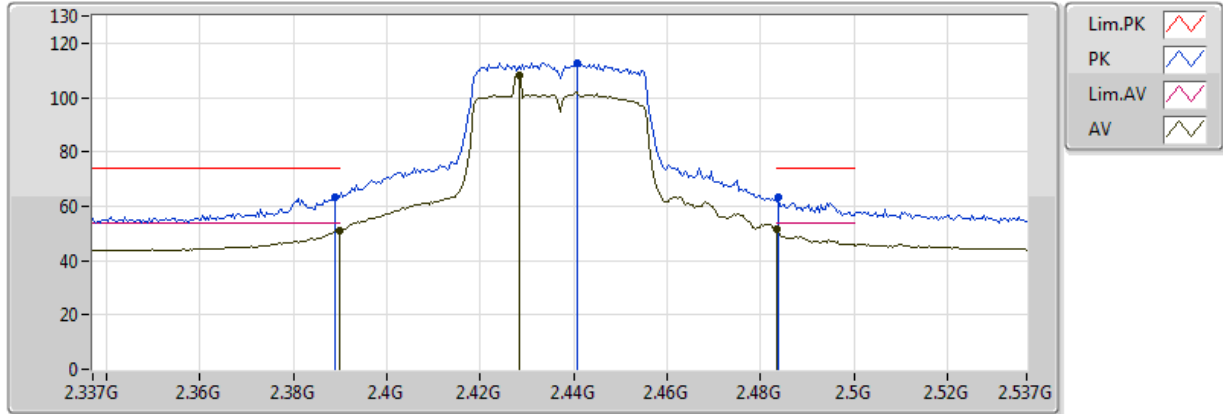


20170306  
EUT Z 4TX  
Setting 16  
01-S-6  
FSP(100080)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.8422G	32.73	54.00	-21.27	4.75	3	H	248	1.79	-
PK	4.84152G	45.75	74.00	-28.25	4.75	3	H	248	1.79	-

## 802.11ac VHT40-BF\_Nss2,(MCS0)\_4TX

## 2437MHz\_TX

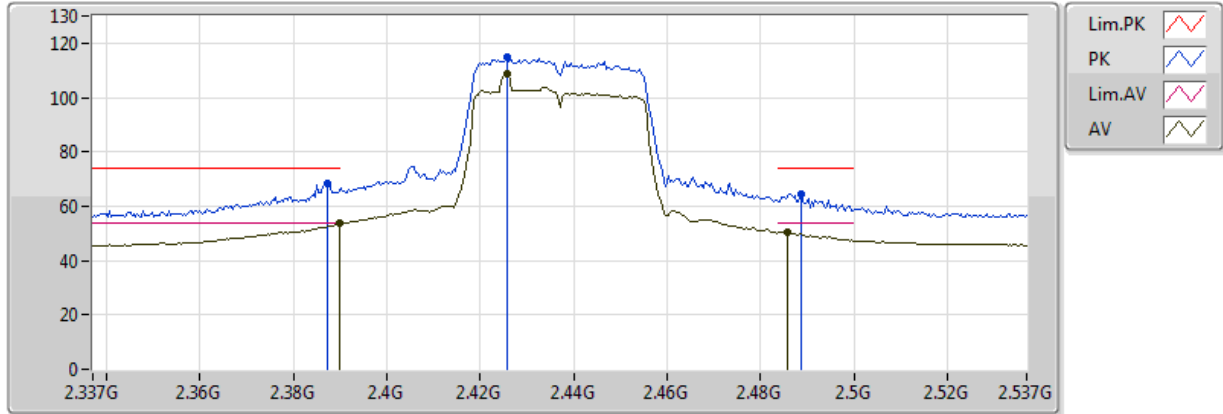


20170306  
EUT Z 4TX  
Setting 20.5  
01-S-6  
FSP(100080)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3898G	51.03	54.00	-2.97	31.70	3	V	122	1.30	-
AV	2.4282G	108.23	Inf	-Inf	31.66	3	V	122	1.30	-
AV	2.483502G	51.54	54.00	-2.46	31.61	3	V	122	1.30	-
PK	2.389G	63.33	74.00	-10.67	31.70	3	V	122	1.30	-
PK	2.4406G	112.65	Inf	-Inf	31.65	3	V	122	1.30	-
PK	2.4838G	63.15	74.00	-10.85	31.61	3	V	122	1.30	-

## 802.11ac VHT40-BF\_Nss2,(MCS0)\_4TX

## 2437MHz\_TX

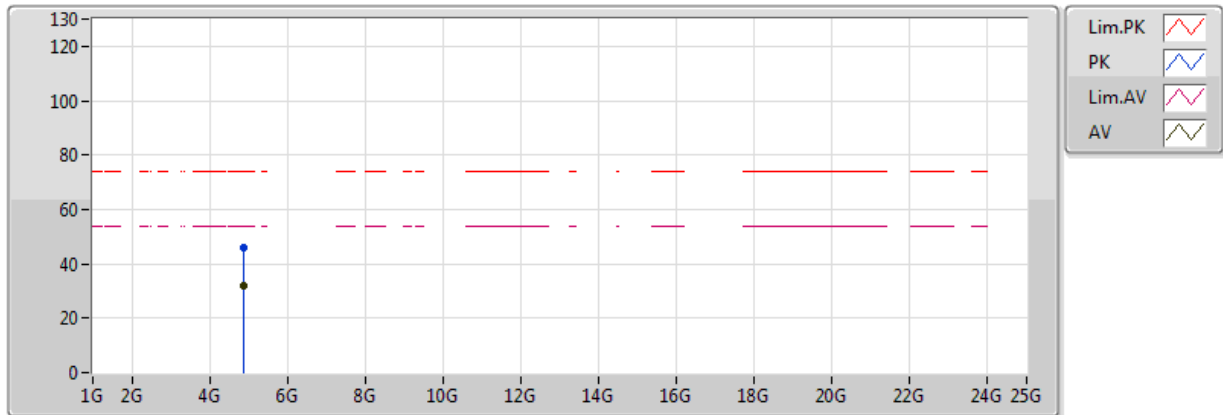


20170306  
EUT Z 4TX  
Setting 20.5  
01-S-6  
FSP(100080)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3898G	53.70	54.00	-0.30	32.01	3	H	305	2.63	-
AV	2.4258G	108.71	Inf	-Inf	32.12	3	H	305	2.63	-
AV	2.4858G	50.50	54.00	-3.50	32.31	3	H	305	2.63	-
PK	2.3874G	68.20	74.00	-5.80	32.00	3	H	305	2.63	-
PK	2.4258G	114.61	Inf	-Inf	32.12	3	H	305	2.63	-
PK	2.4886G	64.55	74.00	-9.45	32.31	3	H	305	2.63	-

## 802.11ac VHT40-BF\_Nss2,(MCS0)\_4TX

## 2437MHz\_TX

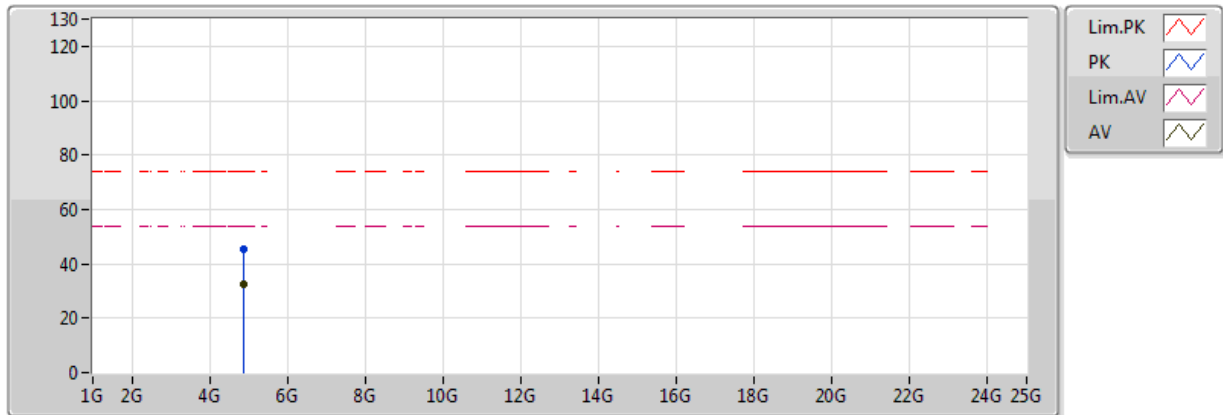


20170306  
EUT Z 4TX  
Setting 20.5  
01-S-6  
FSP(100080)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.87352G	32.11	54.00	-21.89	3.59	3	V	301	1.41	-
PK	4.86608G	45.91	74.00	-28.09	3.57	3	V	301	1.41	-

## 802.11ac VHT40-BF\_Nss2,(MCS0)\_4TX

## 2437MHz\_TX

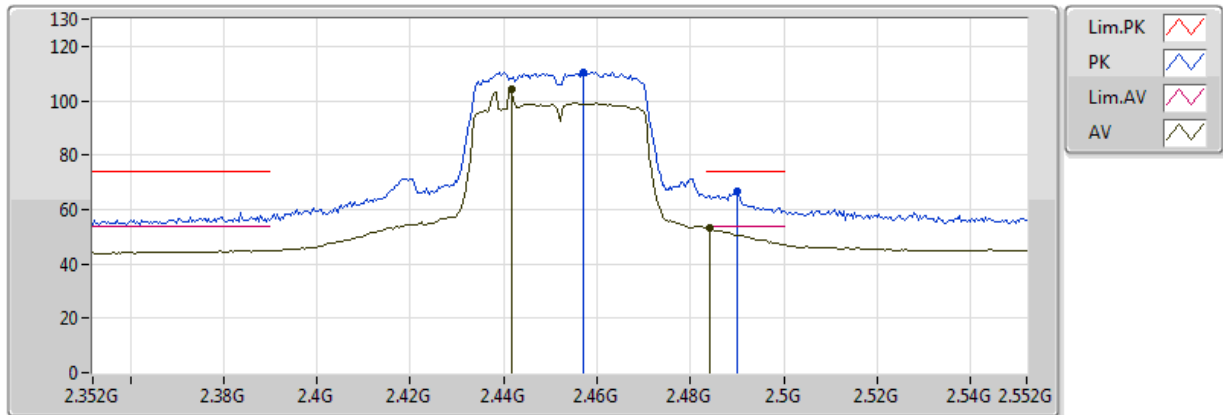


20170306  
EUT Z 4TX  
Setting 20.5  
01-S-6  
FSP(100080)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.87116G	32.23	54.00	-21.77	3.58	3	H	1	1.30	-
PK	4.86508G	45.59	74.00	-28.41	3.57	3	H	1	1.30	-

## 802.11ac VHT40-BF\_Nss2,(MCS0)\_4TX

## 2452MHz\_TX

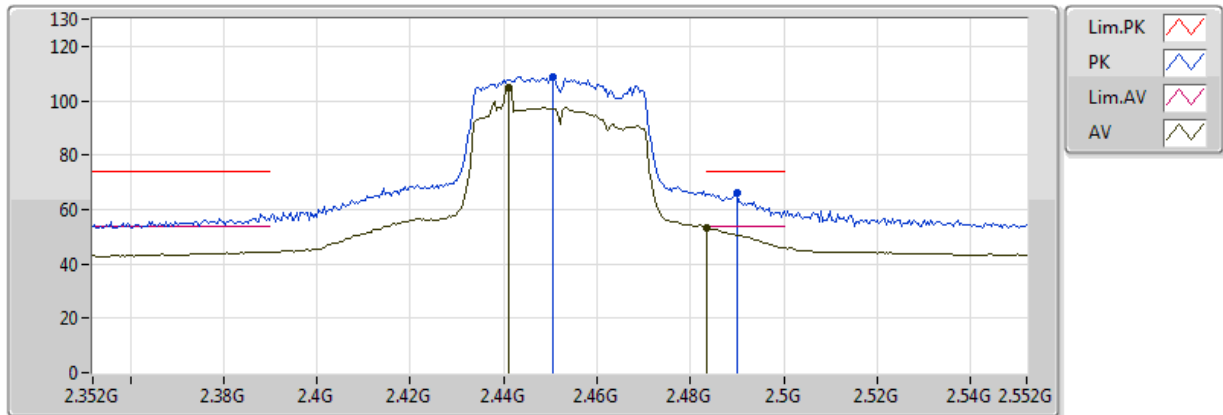


20161124  
EUT Z 4TX  
Setting 15.5  
02-M-1

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.4416G	104.26	Inf	-Inf	32.05	3	V	113	2.02	-
AV	2.484G	53.15	54.00	-0.85	32.15	3	V	113	2.02	-
PK	2.4572G	110.66	Inf	-Inf	32.09	3	V	113	2.02	-
PK	2.49G	66.91	74.00	-7.09	32.17	3	V	113	2.02	-

## 802.11ac VHT40-BF\_Nss2,(MCS0)\_4TX

## 2452MHz\_TX

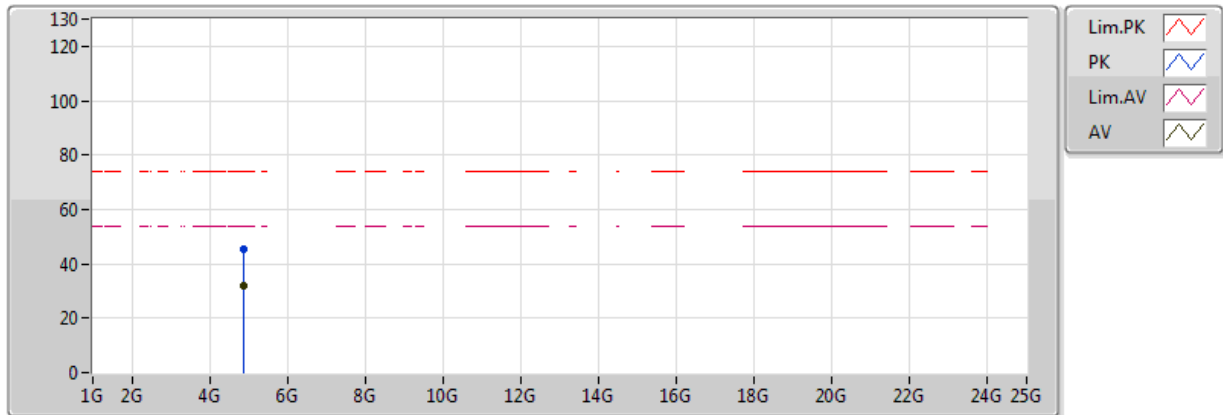


20170217  
EUT Z 4TX  
Setting 15.5  
01-Z-1  
FSP(100056)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.4412G	104.83	Inf	-Inf	30.97	3	H	304	2.60	-
AV	2.483502G	53.48	54.00	-0.52	30.92	3	H	304	2.60	-
PK	2.4504G	108.55	Inf	-Inf	30.96	3	H	304	2.60	-
PK	2.49G	66.01	74.00	-7.99	30.91	3	H	304	2.60	-

## 802.11ac VHT40-BF\_Nss2,(MCS0)\_4TX

## 2452MHz\_TX



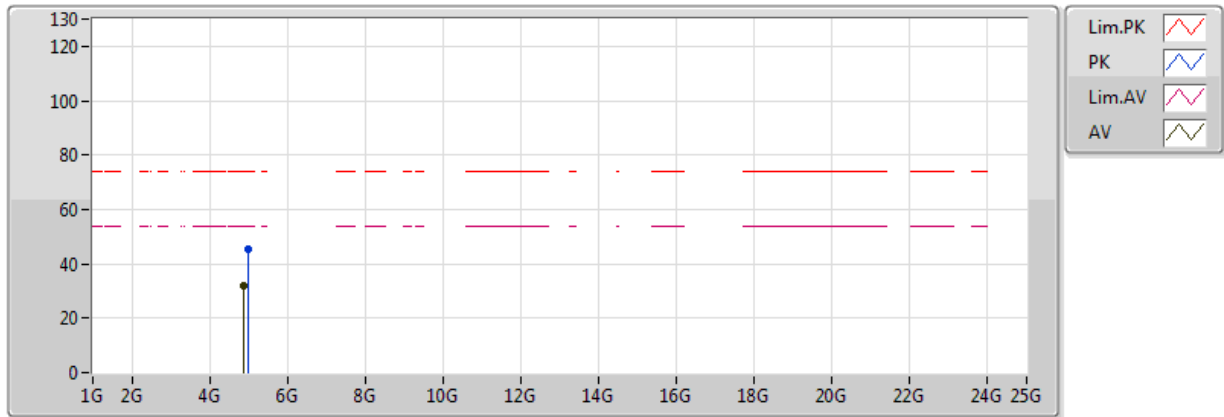
20170217  
EUT Z 4TX  
Setting 15.5  
01-Z-1  
FSP(100056)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.8912G	32.08	54.00	-21.92	3.64	3	V	304	2.60	-
PK	4.8896G	45.47	74.00	-28.53	3.64	3	V	304	2.60	-



## 802.11ac VHT40-BF\_Nss2,(MCS0)\_4TX

## 2452MHz\_TX



20170217  
EUT Z 4TX  
Setting 15.5  
01-Z-1  
FSP(100056)

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.8584G	32.12	54.00	-21.88	3.55	3	H	269	1.59	-
PK	5.0012G	45.31	74.00	-28.69	3.96	3	H	269	1.59	-

