



# FCC RADIO TEST REPORT

FCC ID : MXF-MCPV1  
Equipment : Motion Capture Plug  
Brand Name : Aerial  
Model Name : MCPv1  
Applicant : Gemtek Technology Co., Ltd.  
No.15-1 Zhonghua Road Hsinchu Industrial Park  
Hukou Hsinchu Taiwan 303  
Manufacturer : Gemtek Technology Co., Ltd.  
No.15-1 Zhonghua Road Hsinchu Industrial Park  
Hukou Hsinchu Taiwan 303  
Standard : 47 CFR FCC Part 15.247

The product was received on Nov. 12, 2019, and testing was started from Nov. 14, 2019 and completed on Jan. 17, 2020. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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

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

Approved by: Cliff Chang

**SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory**

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)



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**Photographs of EUT v01**

**History of this test report**

Report No.	Version	Description	Issued Date
FR9N2812AA	01	Initial issue of report	Apr. 08, 2020



### Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	-
3.1	15.207	AC Power-line Conducted Emissions	PASS	-
3.2	15.247(a)	DTS Bandwidth	PASS	-
3.3	15.247(b)	Maximum Conducted Output Power	PASS	-
3.4	15.247(e)	Power Spectral Density	PASS	-
3.5	15.247(d)	Emissions in Non-restricted Frequency Bands	PASS	-
3.6	15.247(d)	Emissions in Restricted Frequency Bands	PASS	-

**Declaration of Conformity:**

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

**Comments and Explanations:**

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: **Sam Chen**

Report Producer: **Wendy Pan**



# 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), VHT20	2412-2462	1-11 [11]
2400-2483.5	n (HT40), VHT40	2422-2452	3-9 [7]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	802.11b	20	2TX
2.4-2.4835GHz	802.11g	20	2TX
2.4-2.4835GHz	802.11n HT20	20	2TX
2.4-2.4835GHz	VHT20	20	2TX
2.4-2.4835GHz	802.11n HT40	40	2TX
2.4-2.4835GHz	VHT40	40	2TX

Note:

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

### 1.1.2 Antenna Information

Ant.	Port	Brand	P/N	Antenna Type	Connector	Gain (dBi)	
						WLAN 2.4GHz	WLAN 5GHz
1	1	LYNwave	AEX19P-222AA3-00	PIFA Antenna	I-PEX	3.5	6
2	2	LYNwave	AEX19P-222AA4-00	PIFA Antenna	I-PEX	3.5	6

Note: The above information was declared by manufacturer.

Port 1 and Port 2 can be used as transmitting/receiving antenna.

Port 1 and Port 2 could transmit/receive simultaneously.



### 1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11b	0.992	0.03	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11g	0.965	0.15	1.368m	1k
VHT20	0.994	0.03	n/a (DC>=0.98)	n/a (DC>=0.98)
VHT40	0.989	0.05	n/a (DC>=0.98)	n/a (DC>=0.98)

Note:

- ◆ DC is Duty Cycle.
- ◆ DCF is Duty Cycle Factor.

### 1.1.4 EUT Operational Condition

<b>EUT Power Type</b>	From Internal Power Supply		
<b>Beamforming Function</b>	<input checked="" type="checkbox"/> With beamforming	<input type="checkbox"/> Without beamforming	
	For 802.11n/ac in 5GHz.		
<b>Function</b>	<input type="checkbox"/> Point-to-multipoint	<input checked="" type="checkbox"/> Point-to-point	
<b>Test Software Version</b>	TeraTerm 4.75		

Note: The above information was declared by manufacturer.



## 1.2 Applicable 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 v05r02
- ◆ FCC KDB 662911 D01 v02r01
- ◆ FCC KDB 414788 D01 v01r01

## 1.3 Testing Location Information

Testing Location		
<input type="checkbox"/>	HWA YA	ADD : No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL : 886-3-327-3456 FAX : 886-3-327-0973
<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	TH03-CB	Serway Li	20.6~21.3°C / 59~61%	Dec. 06, 2019 ~ Jan. 17, 2020
Radiated<1GHz	03CH05-CB	Mason Chen	23.1~24.3°C / 58~62%	Jan. 03, 2020
Radiated>1GHz	03CH06-CB	Andy Zou	20.9~21.9°C / 57~62%	Nov. 14, 2019 ~ Jan. 16, 2020
AC Conduction	CO02-CB	Max Lin	21~22°C / 55~57%	Dec. 05, 2019

Test site Designation No. TW0006 with FCC.

Test site registered number IC 4086D with Industry Canada.

## 1.4 Measurement Uncertainty

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

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	2.0 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	4.3 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	4.3 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	5.1 dB	Confidence levels of 95%
Conducted Emission	2.4 dB	Confidence levels of 95%
Output Power Measurement	1.5 dB	Confidence levels of 95%
Power Density Measurement	2.4 dB	Confidence levels of 95%
Bandwidth Measurement	2%	Confidence levels of 95%



## 2 Test Configuration of EUT

### 2.1 Test Channel Mode

Mode	PowerSetting
802.11b_Nss1,(1Mbps)_2TX	-
2412MHz	21
2437MHz	23
2462MHz	21
802.11g_Nss1,(6Mbps)_2TX	-
2412MHz	19
2417MHz	21
2437MHz	25
2457MHz	21
2462MHz	18
VHT20_Nss1,(MCS0)_2TX	-
2412MHz	19
2417MHz	21
2437MHz	25
2457MHz	20
2462MHz	17
VHT40_Nss1,(MCS0)_2TX	-
2422MHz	16
2437MHz	18
2452MHz	17

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





## 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
1	EUT + 2.4GHz
2	EUT + 5GHz
For operating mode 1 is the worst case and it was record in this test report.	

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
The EUT has two WLAN functions (2.4GHz WLAN function and 5GHz WLAN function), and the EUT can be used in Y-axis and Z-axis. After evaluating, 5GHz WLAN function + Z-axis has been evaluated to be the worst case. Consequently, measurement will follow this same test configuration.	
1	EUT + 5GHz + Z-axis
<b>Operating Mode &gt; 1GHz</b>	CTX
The EUT was performed at Y axis and Z axis position and the worst case was found at Z axis. So the measurement will follow this same test configuration.	
1	EUT in Z-axis



### 2.3 EUT Operation during Test

For CTX Mode:

The EUT was programmed to be in continuously transmitting mode.

For Normal Link:

During the test, the EUT operation to normal function.

### 2.4 Accessories

Plug\*1

### 2.5 Support Equipment

For AC Conduction:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	AP Router	ASUS	RP-N53	MSQ-RPN53
B	AP NB	DELL	E6430	N/A

For Radiated (below 1GHz):

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	NB	DELL	E4300	N/A
B	WLAN AP	D-LINK	DIR860L	KA2IR860LA1

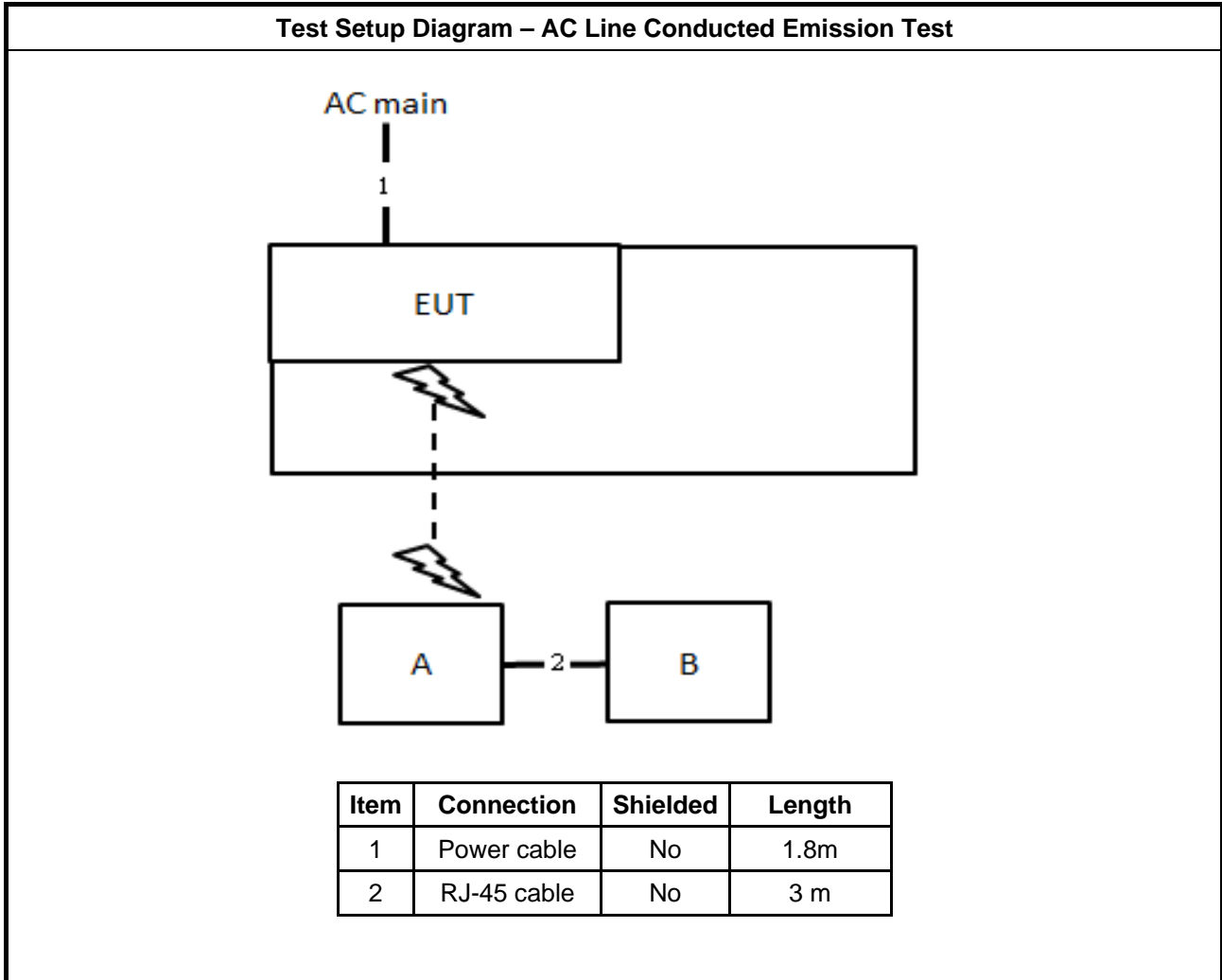
For Radiated (above 1GHz):

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

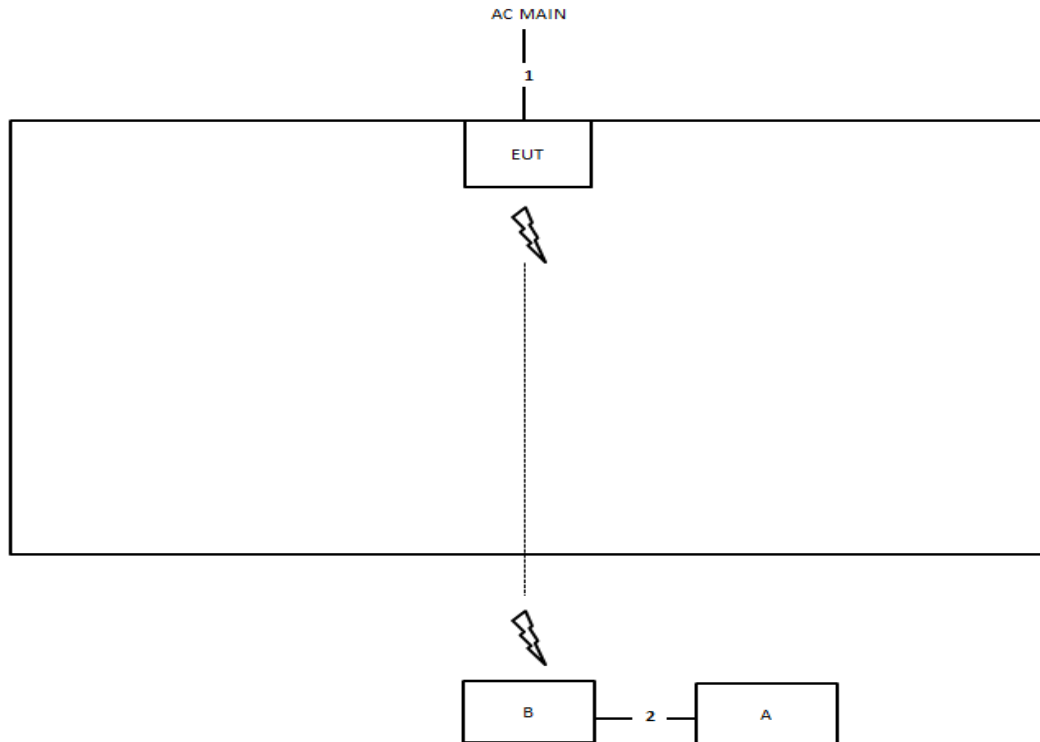
For RF Conducted:

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

## 2.6 Test Setup Diagram



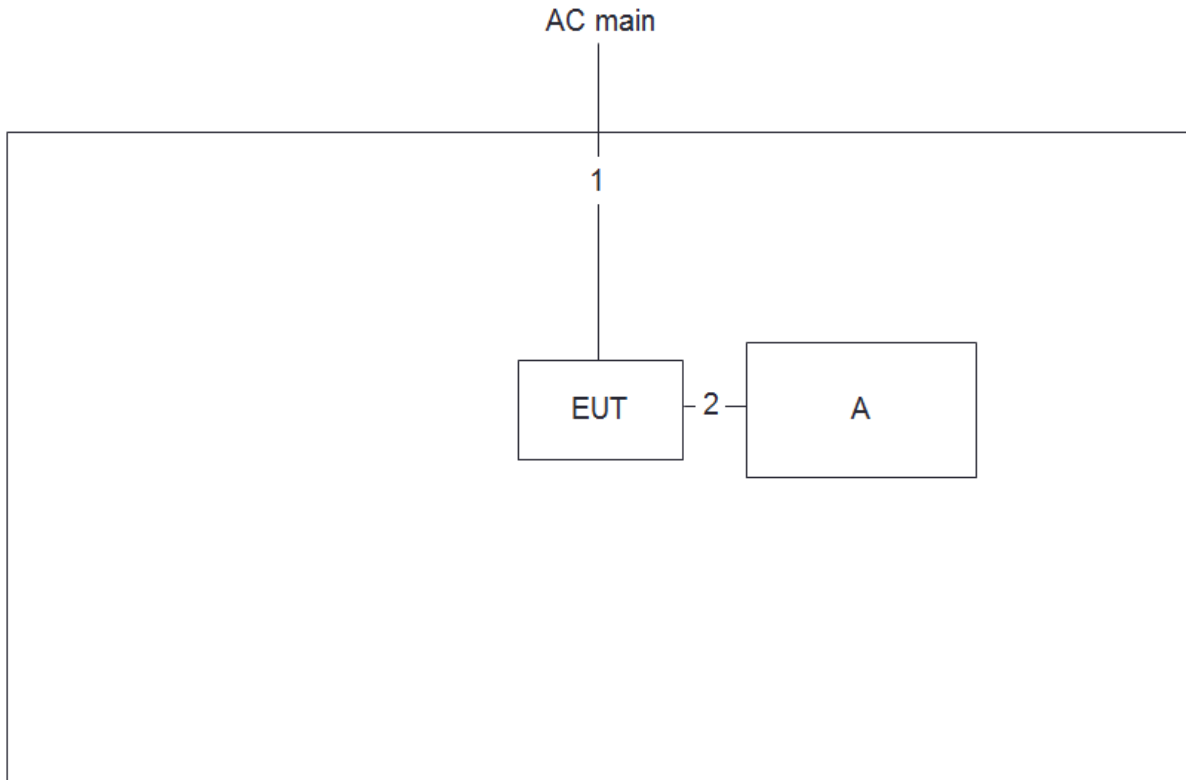
**Test Setup Diagram - Radiated Test < 1GHz**



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



Test Setup Diagram - Radiated Test > 1GHz



Item	Connection	Shielded	Length
1	Power cable	No	1.5m
2	Console cable	No	0.8m



### 3 Transmitter Test Result

#### 3.1 AC Power-line Conducted Emissions

##### 3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

Note 1: \* Decreases with the logarithm of the frequency.

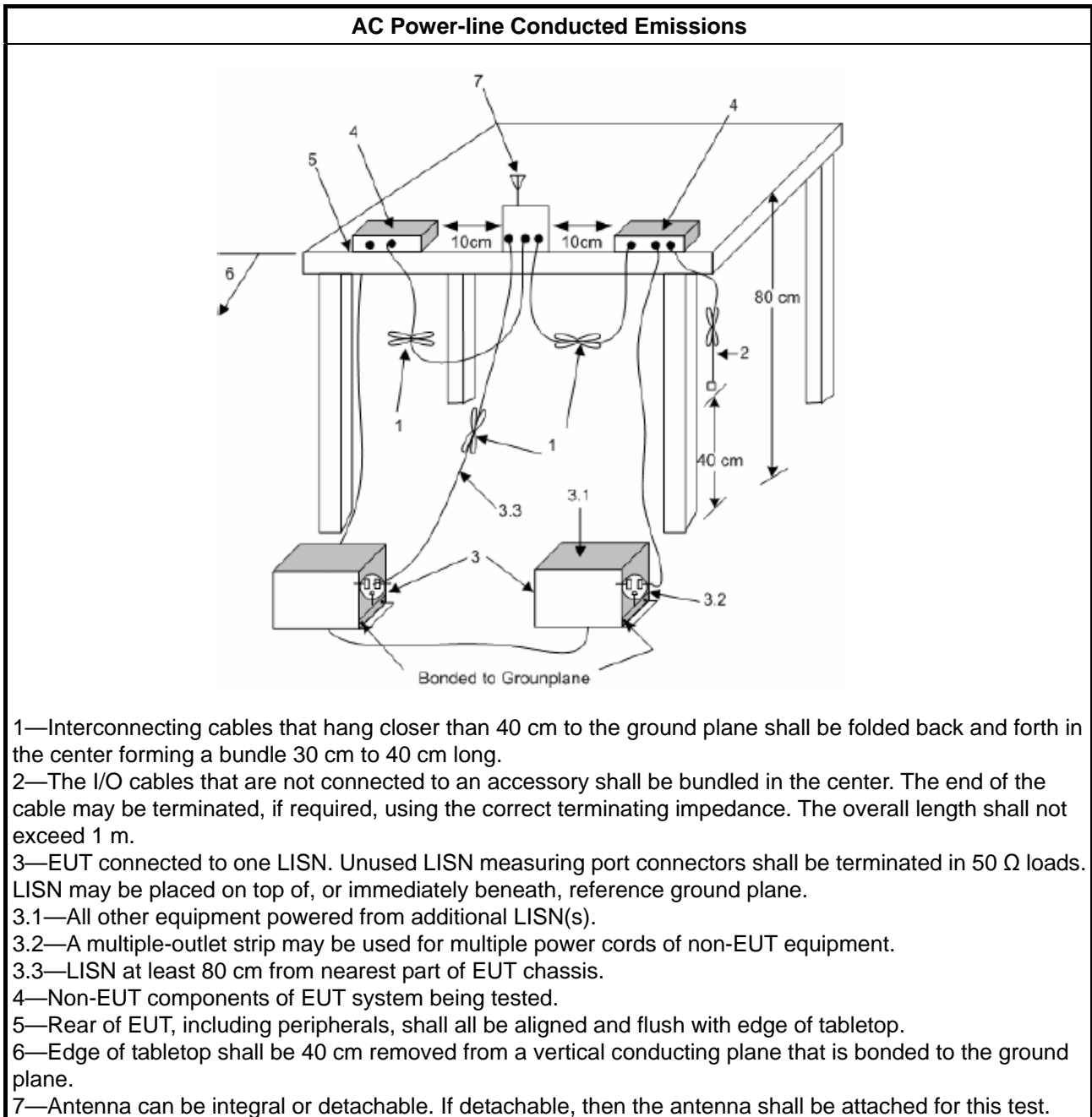
##### 3.1.2 Measuring Instruments

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

##### 3.1.3 Test Procedures

Test Method
<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>
<ul style="list-style-type: none"> <li>▪ 6 dB bandwidth <math>\geq</math> 500 kHz.</li> </ul>

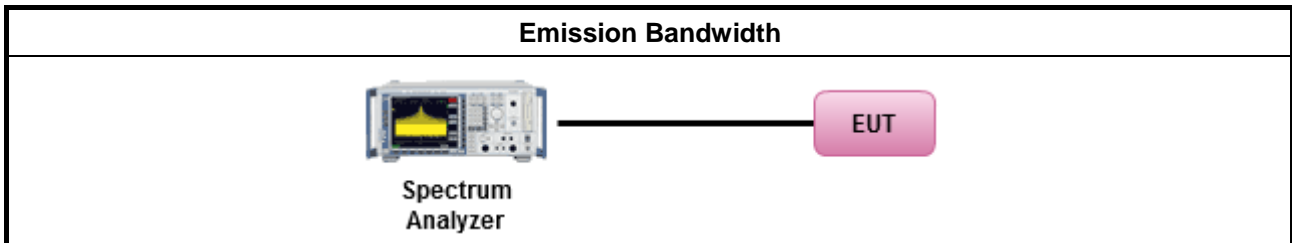
#### 3.2.2 Measuring Instruments

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

#### 3.2.3 Test Procedures

Test Method
<ul style="list-style-type: none"> <li>▪ For the emission bandwidth shall be measured using one of the options below:</li> </ul>
<input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 8.2 & C63.10 clause 11.8.1 Option 1 for 6 dB bandwidth measurement.
<input type="checkbox"/> Refer as FCC KDB 558074, clause 8.2 & C63.10 clause 11.8.2 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	
	<ul style="list-style-type: none"> <li>▪ If <math>G_{TX} \leq 6</math> dBi, then <math>P_{Out} \leq 30</math> dBm (1 W)</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Point-to-multipoint systems (P2M): If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{Out} = 30 - (G_{TX} - 6)</math> dBm</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Point-to-point systems (P2P): If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{Out} = 30 - (G_{TX} - 6)/3</math> dBm</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Smart antenna system (SAS):</li> </ul>
	<ul style="list-style-type: none"> <li>- Single beam: If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{Out} = 30 - (G_{TX} - 6)/3</math> dBm</li> </ul>
	<ul style="list-style-type: none"> <li>- Overlap beam: If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{Out} = 30 - (G_{TX} - 6)/3</math> dBm</li> </ul>
	<ul style="list-style-type: none"> <li>- Aggregate power on all beams: If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{Out} = 30 - (G_{TX} - 6)/3 + 8</math> dB dBm</li> </ul>
<p><math>P_{Out}</math> = maximum peak conducted output power or maximum conducted output power in dBm,  <math>G_{TX}</math> = the maximum transmitting antenna directional gain in dBi.</p>	

#### 3.3.2 Measuring Instruments

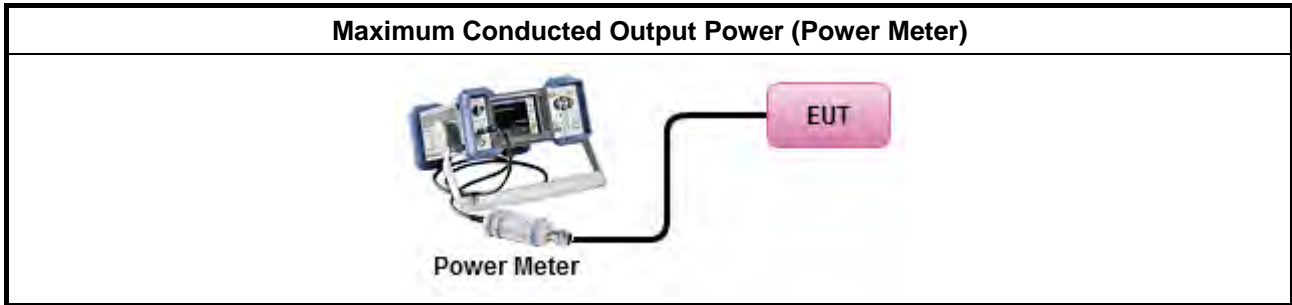
Refer a test equipment and calibration data table in this test report.



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 8.3.1.1 & C63.10 clause 11.9.1.1 (RBW ≥ EBW method).
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 8.3.1.3 & C63.10 clause 11.9.1.3 (peak power meter).
<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 8.3.2.2 & C63.10 clause 11.9.2.2 Method AVGSA-1.
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.3 Method AVGSA-1A. (alternative)
duty cycle < 98% and average over on/off periods with duty factor	
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.4 Method AVGSA-2.
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.5 Method AVGSA-2A (alternative)
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.6 Method AVGSA-3
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.7 Method AVGSA-3A (alternative)
Measurement using a power meter (PM)	
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 8.3.2.3 & C63.10 clause 11.9.2.3.1 Method AVGPM (using an RF average power meter).
<input checked="" type="checkbox"/>	Refer as FCC KDB 558074, clause 8.3.2.3 & C63.10 clause 11.9.2.3.2 Method AVGPM-G (using an gate RF average power meter).
<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
<ul style="list-style-type: none"> <li>▪ Power Spectral Density (PSD) <math>\leq</math> 8 dBm/3kHz</li> </ul>

#### 3.4.2 Measuring Instruments

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

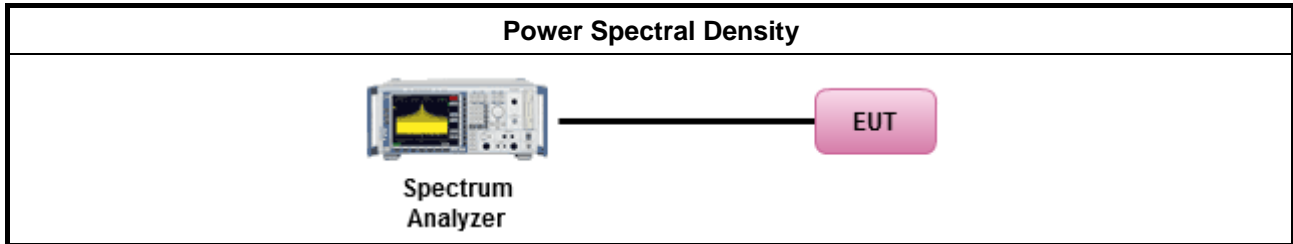
#### 3.4.3 Test Procedures

Test Method				
<ul style="list-style-type: none"> <li>▪ 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).</li> </ul>				
<input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.2 Method PKPSD. [duty cycle $\geq$ 98% or external video / power trigger]				
<input type="checkbox"/> Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.3 Method AVGPSD-1.				
<input type="checkbox"/> Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.5 Method AVGPSD-2.				
<input type="checkbox"/> Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.7 Method AVGPSD-3. duty cycle < 98% and average over on/off periods with duty factor				
<input type="checkbox"/> Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.4 Method AVGPSD-1A. (alternative).				
<input type="checkbox"/> Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.6 Method AVGPSD-2A. (alternative)				
<input type="checkbox"/> Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.8 Method AVGPSD-3A. (alternative)				
<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:           <table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 20px; text-align: center;"> <input checked="" type="checkbox"/> </td> <td>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.</td> </tr> <tr> <td style="width: 20px; text-align: center;"> <input type="checkbox"/> </td> <td>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,</td> </tr> </tbody> </table> </li> </ul>	<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 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.			
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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 (dBc)
Peak output power procedure	20
Average output power procedure	30

Note 1: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak PSD level.

Note 2: If the average output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the power in any 100 kHz outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum measured in-band average PSD level.

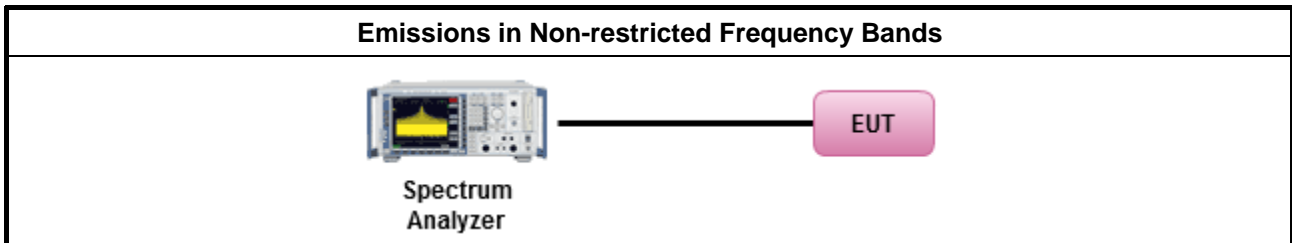
#### 3.5.2 Measuring Instruments

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

#### 3.5.3 Test Procedures

Test Method
<ul style="list-style-type: none"> <li>Refer as FCC KDB 558074, clause 8.5 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.

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

#### 3.6.2 Measuring Instruments

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

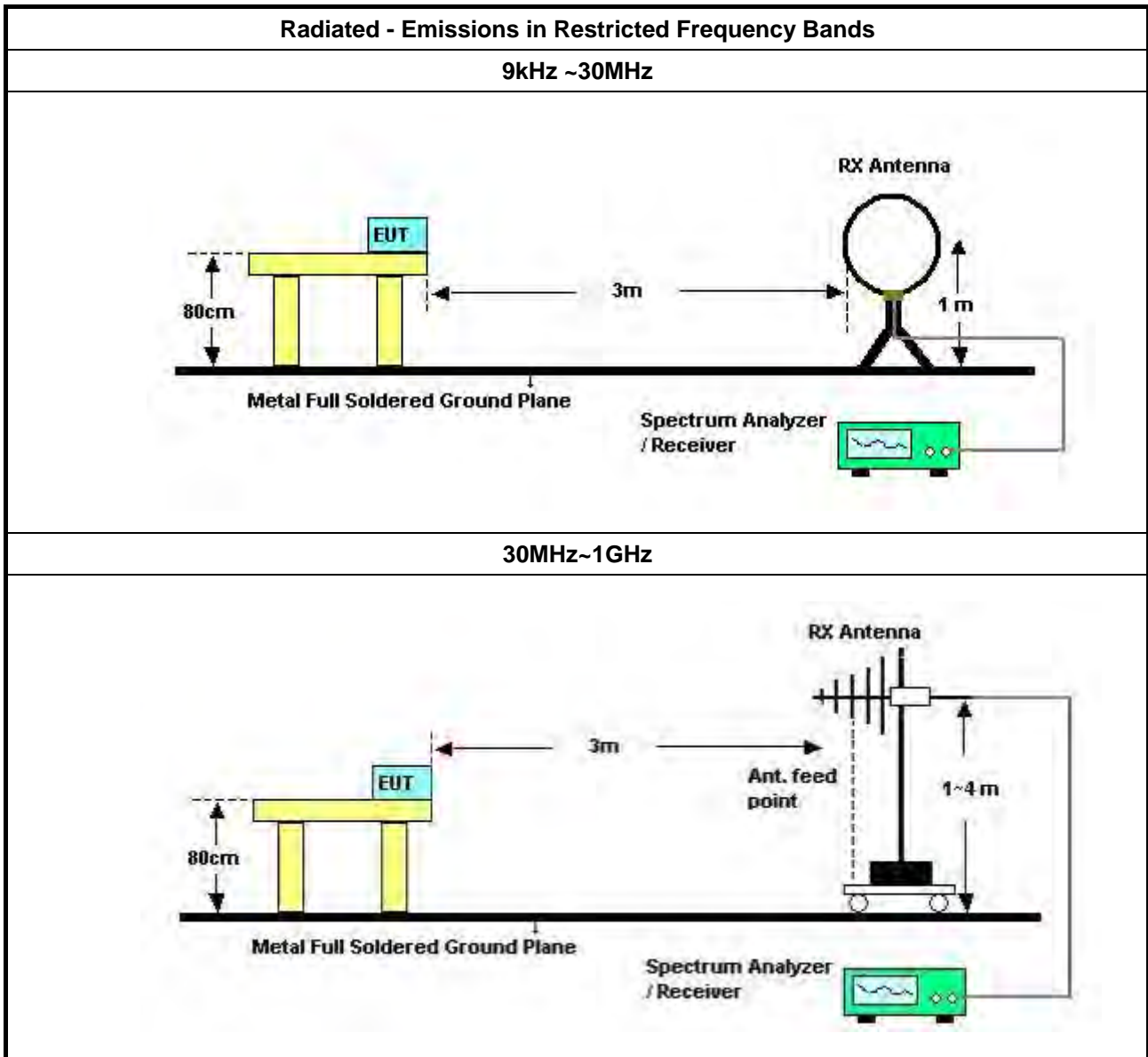


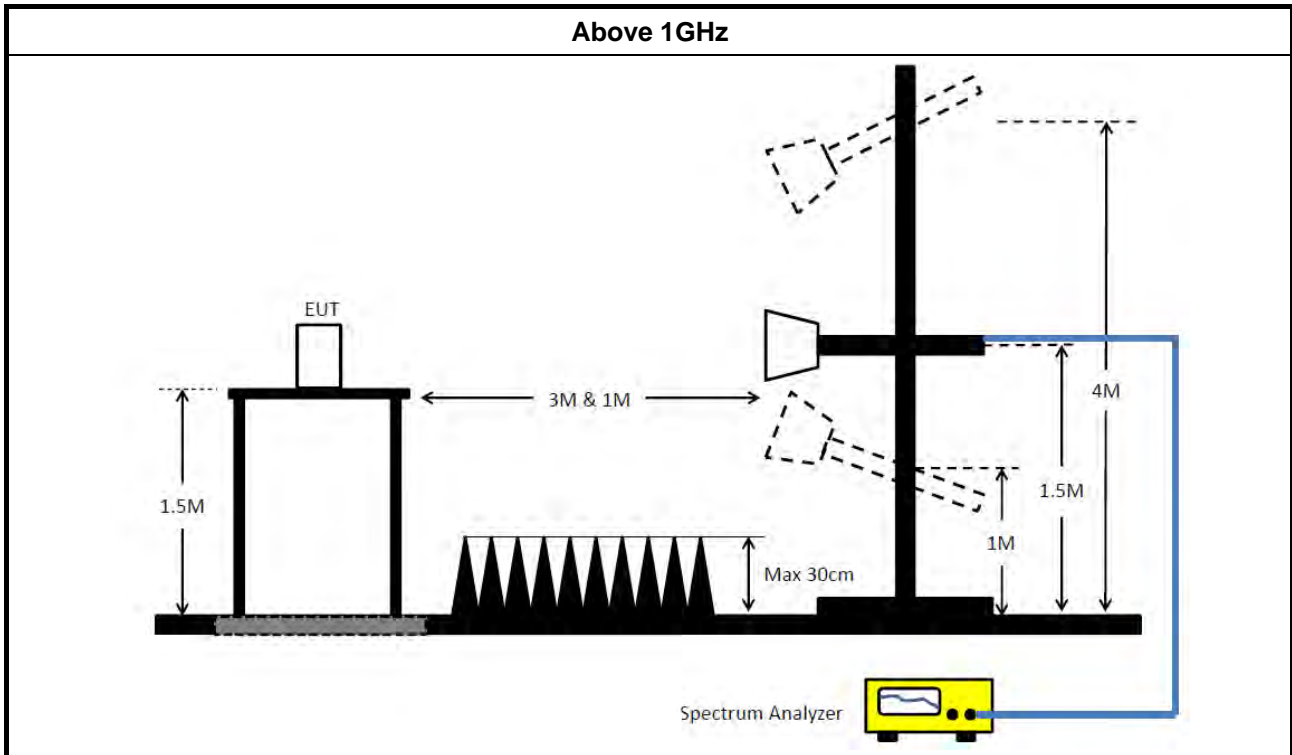
3.6.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> <li>▪ The average emission levels shall be measured in [duty cycle <math>\geq</math> 98 or duty factor].</li> </ul>	
<ul style="list-style-type: none"> <li>▪ Refer as ANSI C63.10, clause 6.10.3 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 8.6 for unwanted emissions into restricted bands.</li> </ul>
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.1(trace averaging for duty cycle $\geq$ 98%).
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.2(trace averaging + duty factor).
<input checked="" type="checkbox"/>	Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.3(Reduced VBW $\geq$ 1/T).
<input type="checkbox"/>	Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW $\geq$ 1/T, where T is pulse time.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions.
<input checked="" type="checkbox"/>	Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.4 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 8.7 &amp; C63.10 clause 11.13.1, 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 8.7 (ANSI C63.10, clause 6.10.6) for marker-delta method for band-edge measurements.</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Refer as FCC KDB 558074, clause 8.7 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 unwanted emissions into restricted bands (absolute emission limits). Devices with multiple transmit chains using options given below: (1) Measure and sum the spectra across the outputs or (2) Measure and add 10 log(N) dB</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 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

### 3.6.6 Emissions in Restricted Frequency Bands (Below 30MHz)

There is a comparison data of both open-field test site and alternative test site - semi-Anechoic chamber according to KDB414788 Radiated Test Site, and the result came out very similar.

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

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

### 3.6.7 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix F



## 4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
LISN	Schwarzbeck	NSLK 8127	8127650	9kHz ~ 30MHz	Nov. 21, 2019	Nov. 20, 2020	Conduction (CO02-CB)
LISN	Schwarzbeck	NSLK 8127	8127478	9kHz ~ 30MHz	Oct. 30, 2019	Oct. 29, 2020	Conduction (CO02-CB)
EMI Receiver	Agilent	N9038A	MY52260140	9kHz ~ 8.4GHz	Jan. 16, 2019	Jan. 15, 2020	Conduction (CO02-CB)
COND Cable	Woken	Cable	2	0.15MHz ~ 30MHz	Oct. 21, 2019	Oct. 20, 2020	Conduction (CO02-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	N.C.R.	Conduction (CO02-CB)
Bilog Antenna with 6dB Attenuator	TESE & EMCI	CBL 6112D & N-6-06	35236 & AT-N0610	30MHz ~ 2GHz	Mar. 28, 2019	Mar. 27, 2020	Radiation (03CH05-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 29, 2019	Mar. 28, 2020	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC330N	980331	20MHz ~ 3GHz	May 01, 2019	Apr. 30, 2020	Radiation (03CH05-CB)
Spectrum Analyzer	R&S	FSP40	100304	9kHz ~ 40GHz	Aug. 15, 2019	Aug. 14, 2020	Radiation (03CH05-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	May 15, 2019	May 14, 2020	Radiation (03CH05-CB)
RF Cable-low	Woken	RG402	LOW Cable-04+23	30MHz~1GHz	Oct. 07, 2019	Oct. 06, 2020	Radiation (03CH05-CB)
Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-1292	1GHz~18GHz	Jul. 17, 2019	Jul. 16, 2020	Radiation (03CH06-CB)
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170507	15GHz ~ 40GHz	Jun. 12, 2019	Jun. 11, 2020	Radiation (03CH06-CB)
Pre-Amplifier	Agilent	83017A	MY53270064	0.5GHz ~ 26.5GHz	May 08, 2019	May 07, 2020	Radiation (03CH06-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 03, 2019	Jul. 02, 2020	Radiation (03CH06-CB)
Spectrum analyzer	R&S	FSP40	100080	9kHz~40GHz	Oct. 21, 2019	Oct. 20, 2020	Radiation (03CH06-CB)
RF Cable-high	HUBER+SUHNER	RG402	High Cable-05	1GHz~18GHz	Oct. 07, 2019	Oct. 06, 2020	Radiation (03CH06-CB)
RF Cable-high	HUBER+SUHNER	RG402	High Cable-05+24	1GHz~18GHz	Oct. 07, 2019	Oct. 06, 2020	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 24, 2019	Jul. 23, 2020	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 24, 2019	Jul. 23, 2020	Radiation (03CH06-CB)
Spectrum analyzer	R&S	FSV40	101028	9kHz~40GHz	Nov. 01, 2019	Oct. 31, 2020	Conducted (TH03-CB)



Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Power Sensor	Anritsu	MA2411B	1726195	300MHz~40GHz	Aug. 13, 2019	Aug. 12, 2020	Conducted (TH03-CB)
Power Meter	Anritsu	ML2495A	1035008	300MHz~40GHz	Aug. 13, 2019	Aug. 12, 2020	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-11	1 GHz – 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-12	1 GHz – 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-13	1 GHz – 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-14	1 GHz – 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-15	1 GHz – 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH03-CB)

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

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



# AC Power Port Conducted Emission Result

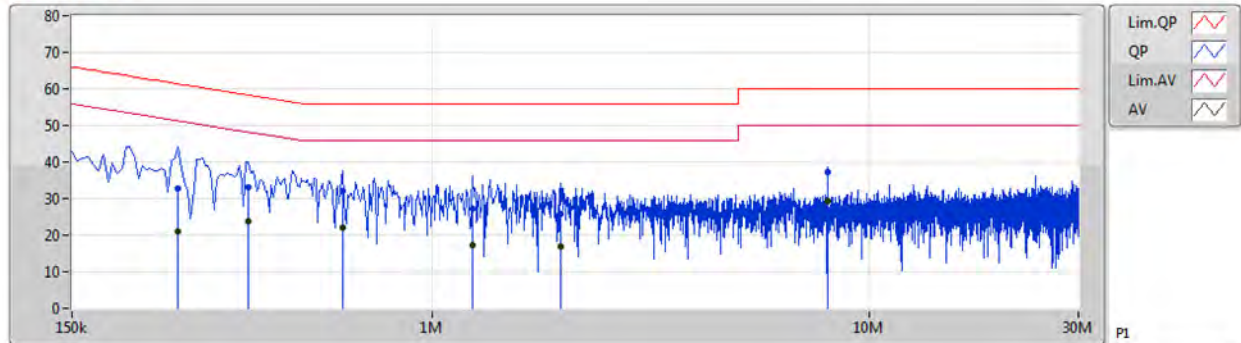
Appendix A

<b>Test Mode</b>	Mode 1	<b>Frequency Range</b>	0.15 MHz to 30 MHz
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Line

## Mode 1

05/12/2019



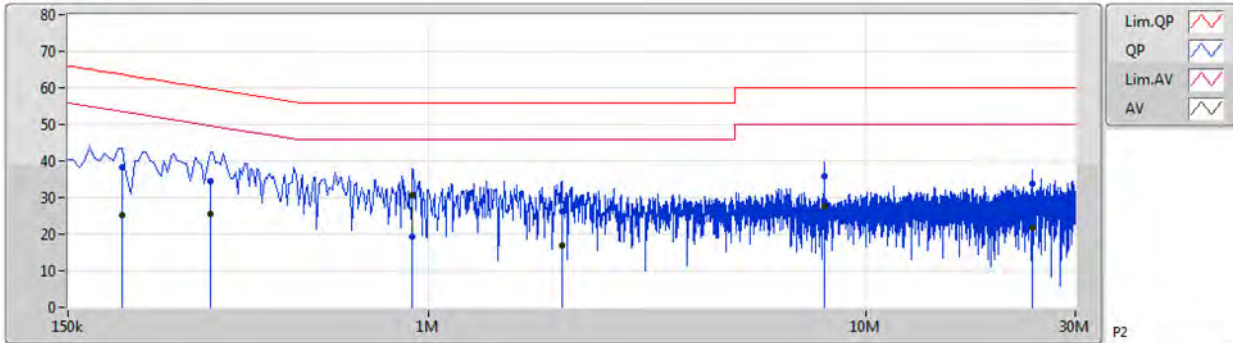
Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	AF (dB)	CL (dB)	AT (dB)
QP	262.5k	32.81	61.35	-28.54	10.22	Line	-	22.59	0.05	0.07	10.10
AV	262.5k	21.17	51.35	-30.18	10.22	Line	-	10.95	0.05	0.07	10.10
QP	379.5k	33.19	58.29	-25.10	10.24	Line	-	22.95	0.06	0.08	10.10
AV	379.5k	23.95	48.29	-24.34	10.24	Line	-	13.71	0.06	0.08	10.10
QP	622.5k	32.08	56.00	-23.92	10.26	Line	-	21.82	0.06	0.10	10.10
AV	622.5k	22.24	46.00	-23.76	10.26	Line	-	11.98	0.06	0.10	10.10
QP	1.239M	27.16	56.00	-28.84	10.31	Line	-	16.85	0.08	0.13	10.10
AV	1.239M	17.23	46.00	-28.77	10.31	Line	-	6.92	0.08	0.13	10.10
QP	1.964M	25.86	56.00	-30.14	10.35	Line	-	15.51	0.09	0.16	10.10
AV	1.964M	16.83	46.00	-29.17	10.35	Line	-	6.48	0.09	0.16	10.10
QP	7.998M	37.35	60.00	-22.65	10.45	Line	-	26.90	0.18	0.16	10.11
AV	7.998M	29.24	50.00	-20.76	10.45	Line	"Worst"	18.79	0.18	0.16	10.11



Neutral

Mode 1

05/12/2019



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	AF (dB)	CL (dB)	AT (dB)
QP	199.5k	38.15	63.63	-25.48	10.20	Neutral	-	27.95	0.03	0.07	10.10
AV	199.5k	25.13	53.63	-28.50	10.20	Neutral	-	14.93	0.03	0.07	10.10
QP	316.5k	34.47	59.80	-25.33	10.22	Neutral	-	24.25	0.04	0.08	10.10
AV	316.5k	25.39	49.80	-24.41	10.22	Neutral	-	15.17	0.04	0.08	10.10
QP	919.5k	19.40	56.00	-36.60	10.26	Neutral	-	9.14	0.04	0.12	10.10
AV	919.5k	30.55	46.00	-15.45	10.26	Neutral	"Worst"	20.29	0.04	0.12	10.10
QP	2.013M	26.11	56.00	-29.89	10.32	Neutral	-	15.79	0.06	0.16	10.10
AV	2.013M	17.06	46.00	-28.94	10.32	Neutral	-	6.74	0.06	0.16	10.10
QP	8.003M	35.70	60.00	-24.30	10.41	Neutral	-	25.29	0.14	0.16	10.11
AV	8.003M	27.63	50.00	-22.37	10.41	Neutral	-	17.22	0.14	0.16	10.11
QP	24M	33.76	60.00	-26.24	10.61	Neutral	-	23.15	0.26	0.23	10.12
AV	24M	21.60	50.00	-28.40	10.61	Neutral	-	10.99	0.26	0.23	10.12



Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.11b_Nss1,(1Mbps)_2TX	10.225M	11.419M	11M4G1D	10.175M	10.47M
802.11g_Nss1,(6Mbps)_2TX	16.35M	23.238M	23M2D1D	16.325M	16.567M
VHT20_Nss1,(MCS0)_2TX	17.625M	22.214M	22M2D1D	17.575M	17.766M
VHT40_Nss1,(MCS0)_2TX	36.35M	36.332M	36M3D1D	36.3M	36.282M

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

**Result**

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	10.225M	10.495M	10.225M	10.47M
2437MHz	Pass	500k	10.175M	11.419M	10.175M	11.069M
2462MHz	Pass	500k	10.225M	10.545M	10.225M	10.495M
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	16.325M	16.592M	16.35M	16.592M
2437MHz	Pass	500k	16.325M	23.238M	16.325M	21.639M
2462MHz	Pass	500k	16.35M	16.567M	16.325M	16.617M
VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	17.575M	17.791M	17.575M	17.791M
2437MHz	Pass	500k	17.625M	22.214M	17.575M	20.59M
2462MHz	Pass	500k	17.575M	17.791M	17.6M	17.766M
VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	500k	36.35M	36.282M	36.3M	36.332M
2437MHz	Pass	500k	36.35M	36.332M	36.35M	36.332M
2452MHz	Pass	500k	36.3M	36.282M	36.35M	36.282M

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



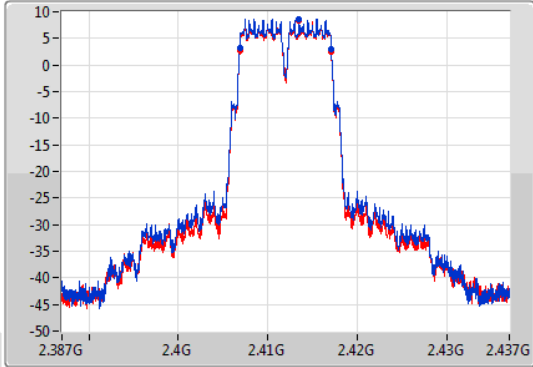
### 802.11b\_Nss1,(1Mbps)\_2TX

EBW

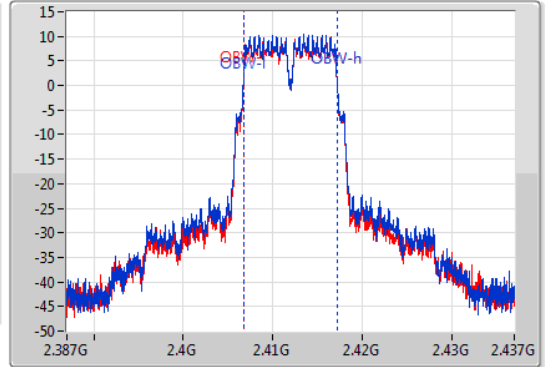
2412MHz

06/12/2019

CF  
2.412GHz  
Span  
50MHz  
RBW  
100kHz  
VBW  
300kHz  
Sweep Time  
100ms  
Detector Type  
Peak



CF  
2.412GHz  
Span  
50MHz  
RBW  
200kHz  
VBW  
1MHz  
Sweep Time  
100ms  
Detector Type  
Sample



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
10.225M	2.406875G	2.4171G	10.495M	2.406728G	2.417222G	500k	1
10.225M	2.406875G	2.4171G	10.47M	2.406753G	2.417222G	500k	2

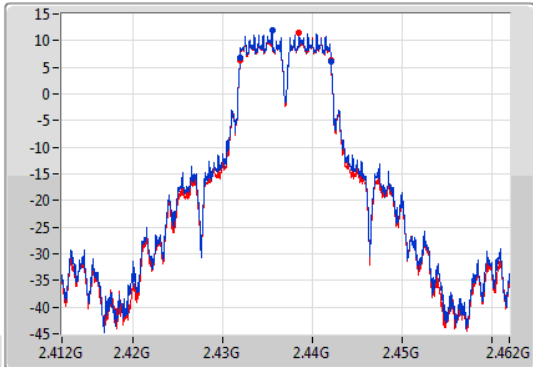
### 802.11b\_Nss1,(1Mbps)\_2TX

EBW

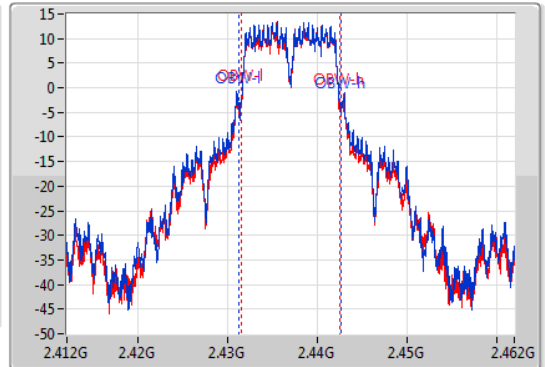
2437MHz

06/12/2019

CF  
2.437GHz  
Span  
50MHz  
RBW  
100kHz  
VBW  
300kHz  
Sweep Time  
100ms  
Detector Type  
Peak



CF  
2.437GHz  
Span  
50MHz  
RBW  
200kHz  
VBW  
1MHz  
Sweep Time  
100ms  
Detector Type  
Sample



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
10.175M	2.4319G	2.442075G	11.419M	2.431253G	2.442672G	500k	1
10.175M	2.4319G	2.442075G	11.069M	2.431453G	2.442522G	500k	2

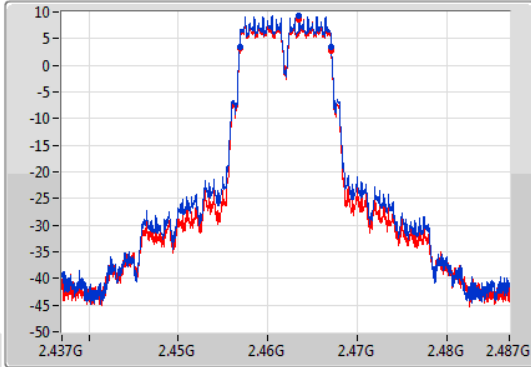
### 802.11b\_Nss1,(1Mbps)\_2TX

EBW

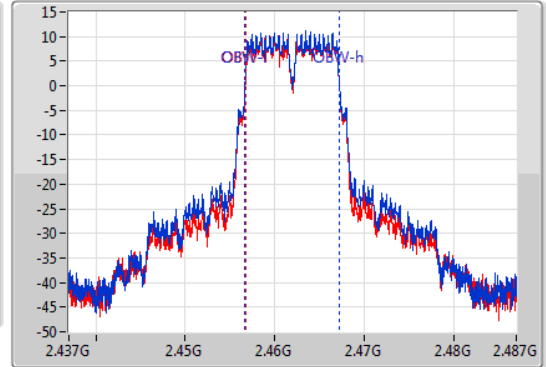
2462MHz

06/12/2019

CF  
2.462GHz  
Span  
50MHz  
RBW  
100kHz  
VBW  
300kHz  
Sweep Time  
100ms  
Detector Type  
Peak



CF  
2.462GHz  
Span  
50MHz  
RBW  
200kHz  
VBW  
1MHz  
Sweep Time  
100ms  
Detector Type  
Sample



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
10.225M	2.456875G	2.4671G	10.545M	2.456703G	2.467247G	500k	1
10.225M	2.456875G	2.4671G	10.495M	2.456728G	2.467222G	500k	2

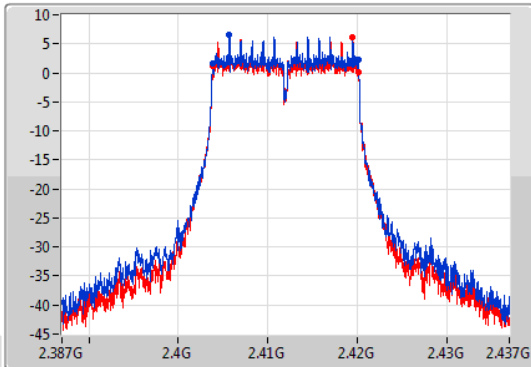
### 802.11g\_Nss1,(6Mbps)\_2TX

EBW

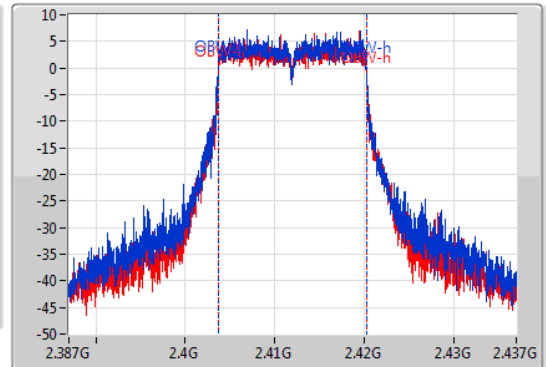
2412MHz

06/12/2019

CF  
2.412GHz  
Span  
50MHz  
RBW  
100kHz  
VBW  
300kHz  
Sweep Time  
100ms  
Detector Type  
Peak



CF  
2.412GHz  
Span  
50MHz  
RBW  
200kHz  
VBW  
1MHz  
Sweep Time  
100ms  
Detector Type  
Sample



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.325M	2.403825G	2.42015G	16.592M	2.403679G	2.420271G	500k	1
16.35M	2.403825G	2.420175G	16.592M	2.403679G	2.420271G	500k	2

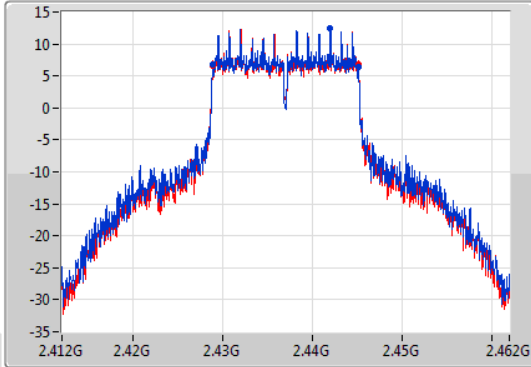
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EBW

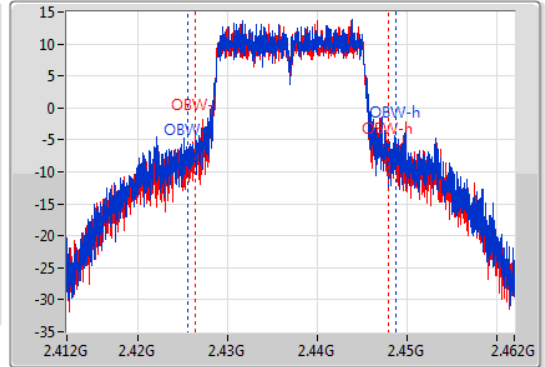
2437MHz

06/12/2019

CF  
2.437GHz  
Span  
50MHz  
RBW  
100kHz  
VBW  
300kHz  
Sweep Time  
100ms  
Detector Type  
Peak



CF  
2.437GHz  
Span  
50MHz  
RBW  
300kHz  
VBW  
1MHz  
Sweep Time  
100ms  
Detector Type  
Sample



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.325M	2.428825G	2.44515G	23.238M	2.425531G	2.448769G	500k	1
16.325M	2.428825G	2.44515G	21.639M	2.42633G	2.44797G	500k	2

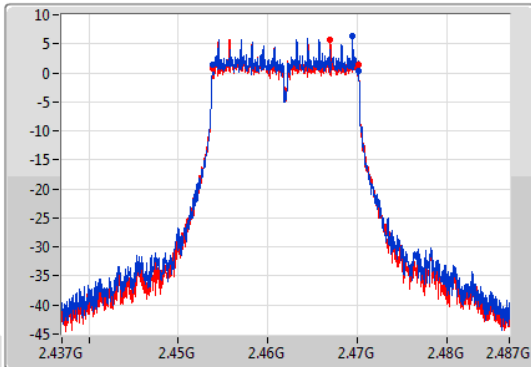
### 802.11g\_Nss1,(6Mbps)\_2TX

EBW

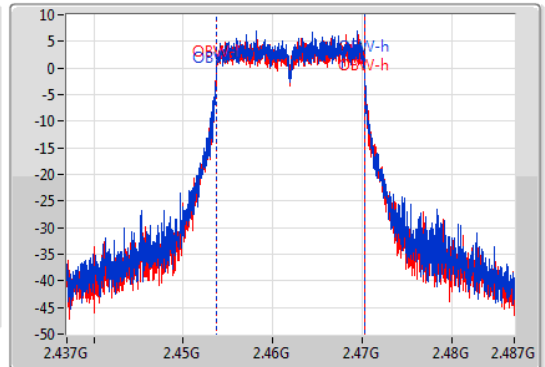
2462MHz

06/12/2019

CF  
2.462GHz  
Span  
50MHz  
RBW  
100kHz  
VBW  
300kHz  
Sweep Time  
100ms  
Detector Type  
Peak



CF  
2.462GHz  
Span  
50MHz  
RBW  
200kHz  
VBW  
1MHz  
Sweep Time  
100ms  
Detector Type  
Sample



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.35M	2.453825G	2.470175G	16.567M	2.453679G	2.470246G	500k	1
16.325M	2.453825G	2.47015G	16.617M	2.453679G	2.470296G	500k	2

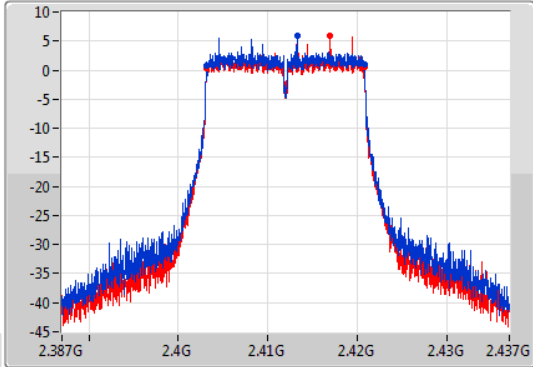
VHT20\_Nss1,(MCS0)\_2TX

EBW

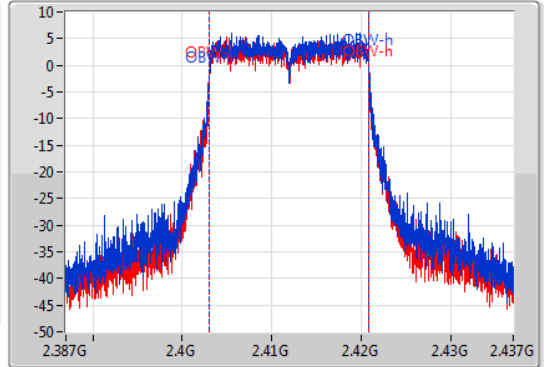
2412MHz

06/12/2019

CF  
2.412GHz  
Span  
50MHz  
RBW  
100kHz  
VBW  
300kHz  
Sweep Time  
100ms  
Detector Type  
Peak



CF  
2.412GHz  
Span  
50MHz  
RBW  
200kHz  
VBW  
1MHz  
Sweep Time  
100ms  
Detector Type  
Sample



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.575M	2.4032G	2.420775G	17.791M	2.403079G	2.420871G	500k	1
17.575M	2.4032G	2.420775G	17.791M	2.403079G	2.420871G	500k	2

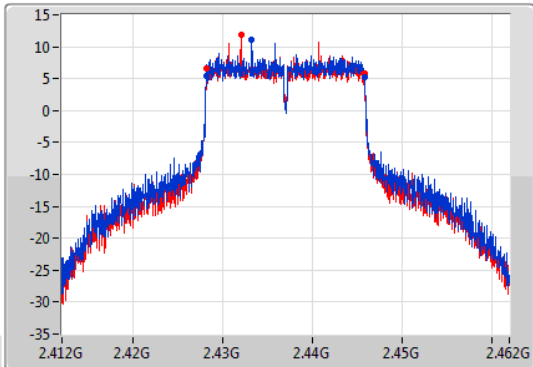
VHT20\_Nss1,(MCS0)\_2TX

EBW

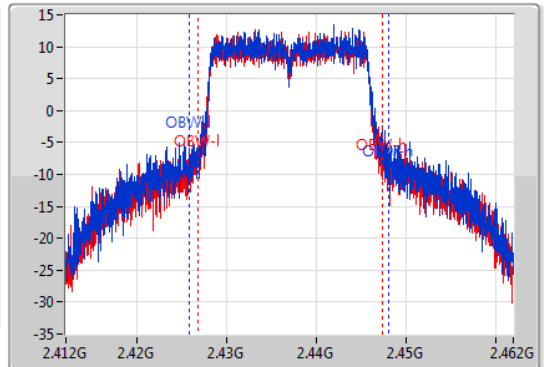
2437MHz

06/12/2019

CF  
2.437GHz  
Span  
50MHz  
RBW  
100kHz  
VBW  
300kHz  
Sweep Time  
100ms  
Detector Type  
Peak



CF  
2.437GHz  
Span  
50MHz  
RBW  
300kHz  
VBW  
1MHz  
Sweep Time  
100ms  
Detector Type  
Sample



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.625M	2.428175G	2.4458G	22.214M	2.425831G	2.448044G	500k	1
17.575M	2.4282G	2.445775G	20.59M	2.426805G	2.447395G	500k	2

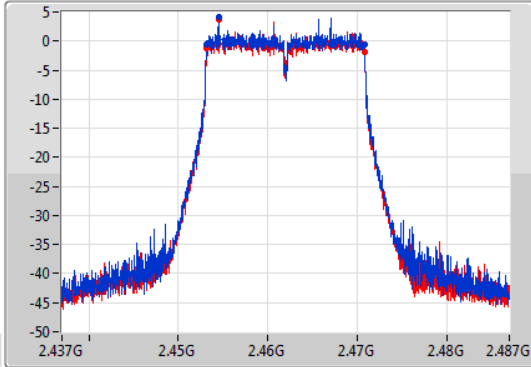
VHT20\_Nss1,(MCS0)\_2TX

EBW

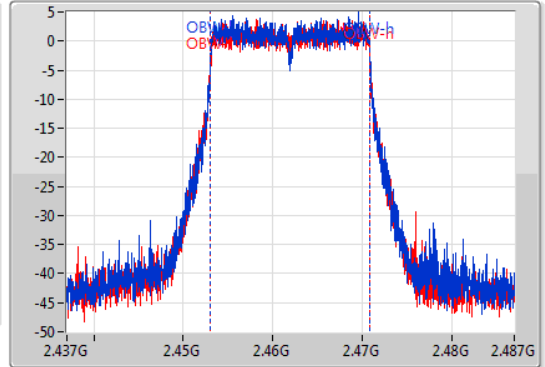
2462MHz

06/12/2019

CF  
2.462GHz  
Span  
50MHz  
RBW  
100kHz  
VBW  
300kHz  
Sweep Time  
100ms  
Detector Type  
Peak



CF  
2.462GHz  
Span  
50MHz  
RBW  
200kHz  
VBW  
1MHz  
Sweep Time  
100ms  
Detector Type  
Sample



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.575M	2.4532G	2.470775G	17.791M	2.453079G	2.470871G	500k	1
17.6M	2.4532G	2.4708G	17.766M	2.453079G	2.470846G	500k	2

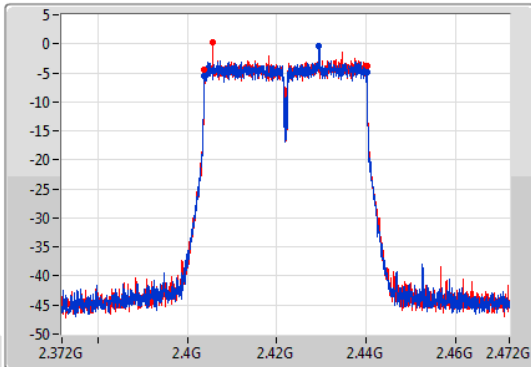
VHT40\_Nss1,(MCS0)\_2TX

EBW

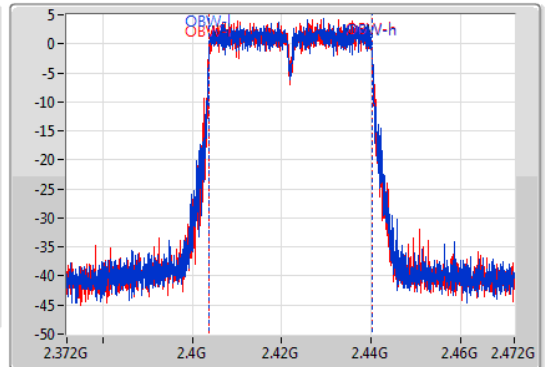
2422MHz

06/12/2019

CF  
2.422GHz  
Span  
100MHz  
RBW  
100kHz  
VBW  
300kHz  
Sweep Time  
100ms  
Detector Type  
Peak



CF  
2.422GHz  
Span  
100MHz  
RBW  
500kHz  
VBW  
2MHz  
Sweep Time  
100ms  
Detector Type  
Sample



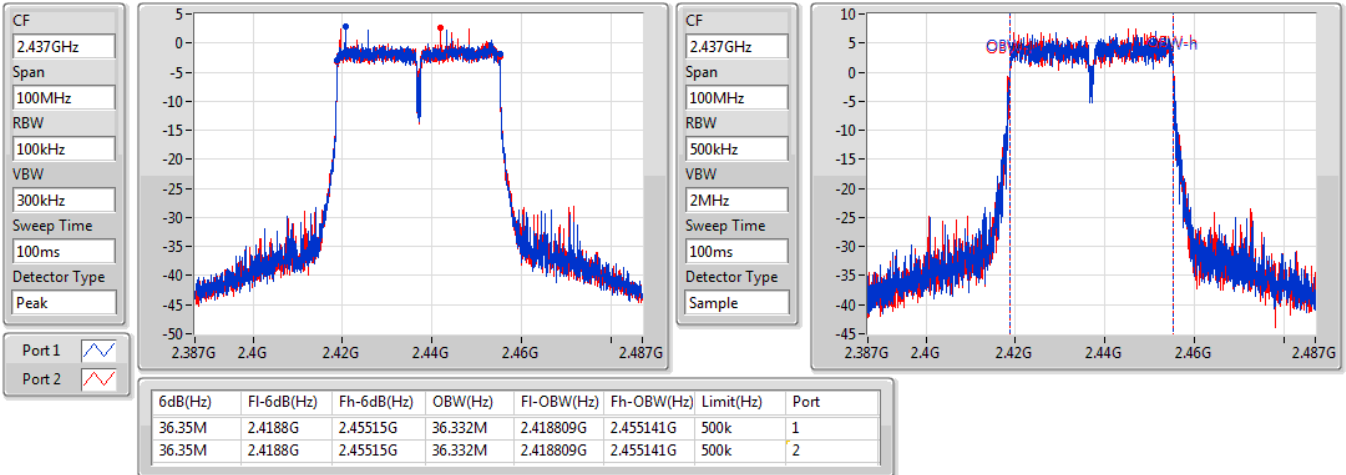
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
36.35M	2.4038G	2.44015G	36.282M	2.403859G	2.440141G	500k	1
36.3M	2.40385G	2.44015G	36.332M	2.403809G	2.440141G	500k	2

VHT40\_Nss1,(MCS0)\_2TX

EBW

2437MHz

06/12/2019

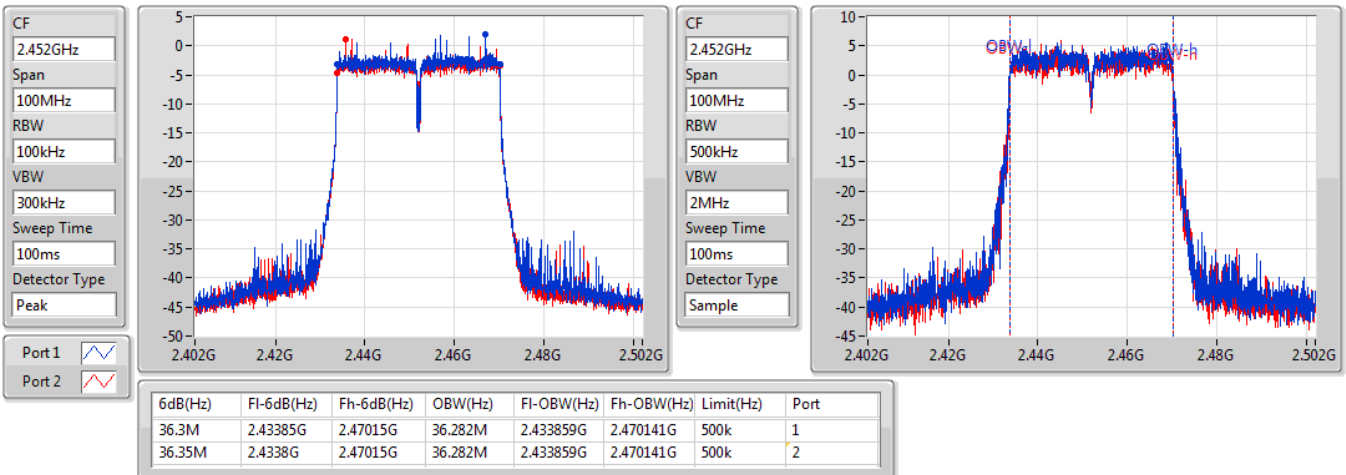


VHT40\_Nss1,(MCS0)\_2TX

EBW

2452MHz

06/12/2019





**Summary**

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_2TX	25.67	0.36898
802.11g_Nss1,(6Mbps)_2TX	26.15	0.41210
VHT20_Nss1,(MCS0)_2TX	25.97	0.39537
VHT40_Nss1,(MCS0)_2TX	20.52	0.11272



**Result**

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	3.50	20.38	20.16	23.28	30.00
2437MHz	Pass	3.50	22.81	22.51	25.67	30.00
2462MHz	Pass	3.50	20.74	20.25	23.51	30.00
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	3.50	18.24	18.05	21.16	30.00
2417MHz	Pass	3.50	20.31	20.01	23.17	30.00
2437MHz	Pass	3.50	23.27	23.01	26.15	30.00
2457MHz	Pass	3.50	20.34	20.15	23.26	30.00
2462MHz	Pass	3.50	17.78	17.34	20.58	30.00
VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	3.50	18.26	17.79	21.04	30.00
2417MHz	Pass	3.50	20.23	20.04	23.15	30.00
2437MHz	Pass	3.50	22.93	22.98	25.97	30.00
2457MHz	Pass	3.50	19.82	19.52	22.68	30.00
2462MHz	Pass	3.50	16.28	16.02	19.16	30.00
VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	3.50	15.11	15.05	18.09	30.00
2437MHz	Pass	3.50	17.45	17.56	20.52	30.00
2452MHz	Pass	3.50	16.47	16.13	19.31	30.00

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





Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_2TX	-2.47
802.11g_Nss1,(6Mbps)_2TX	-1.63
VHT20_Nss1,(MCS0)_2TX	-0.51
VHT40_Nss1,(MCS0)_2TX	-5.19

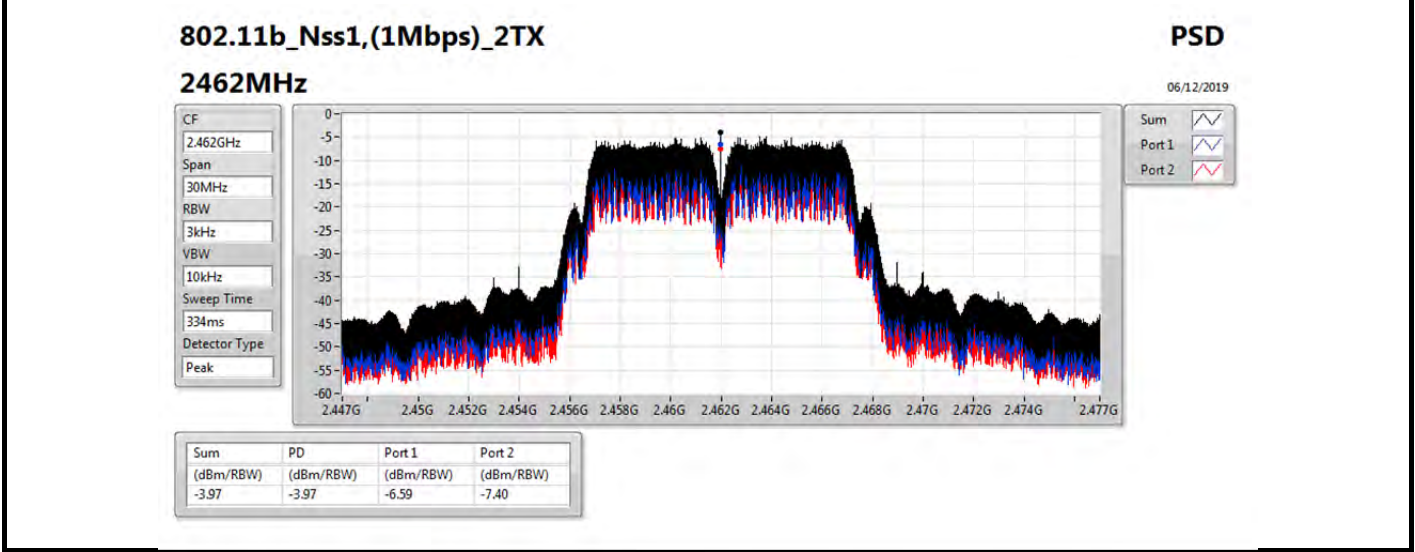
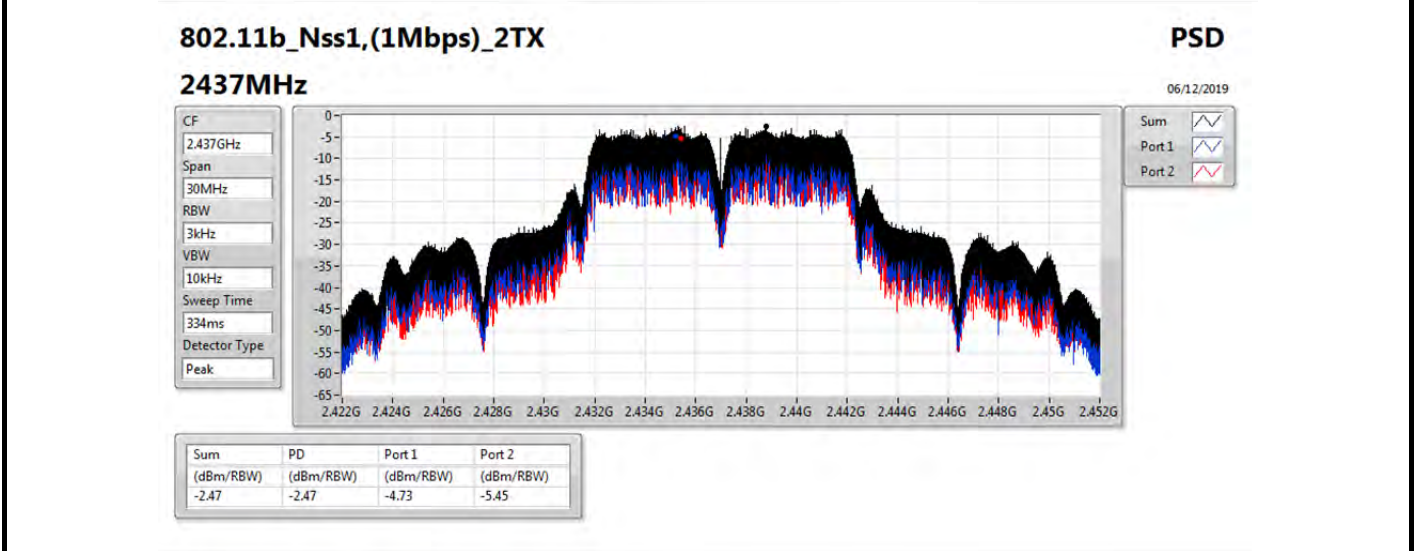
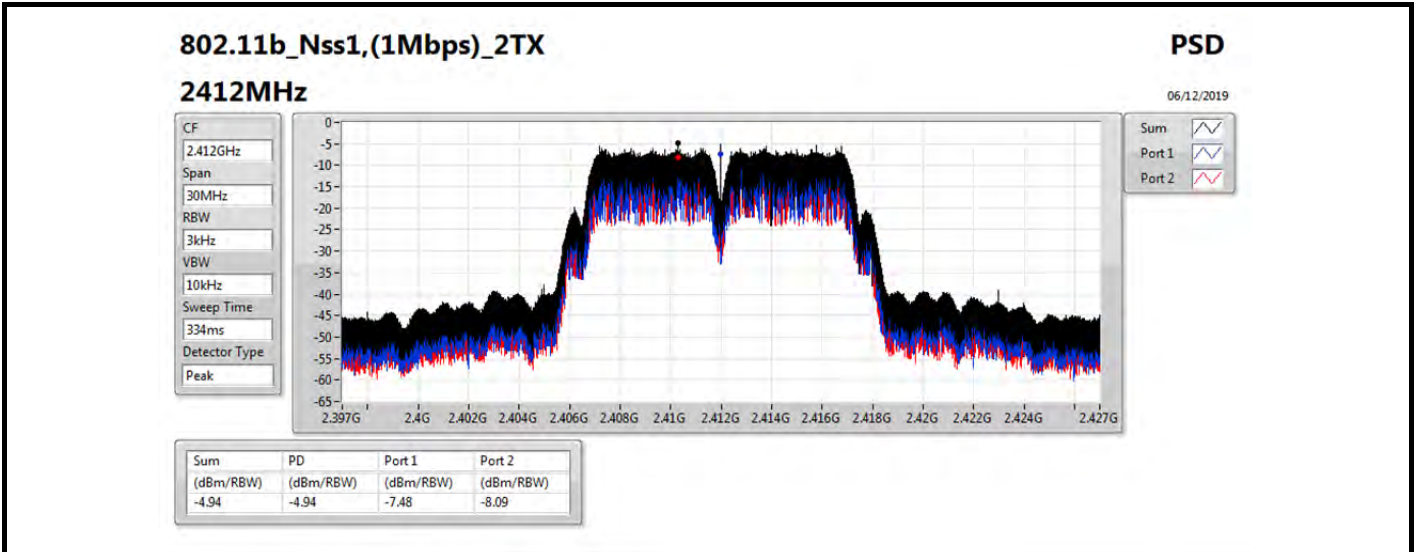
RBW=3 kHz.

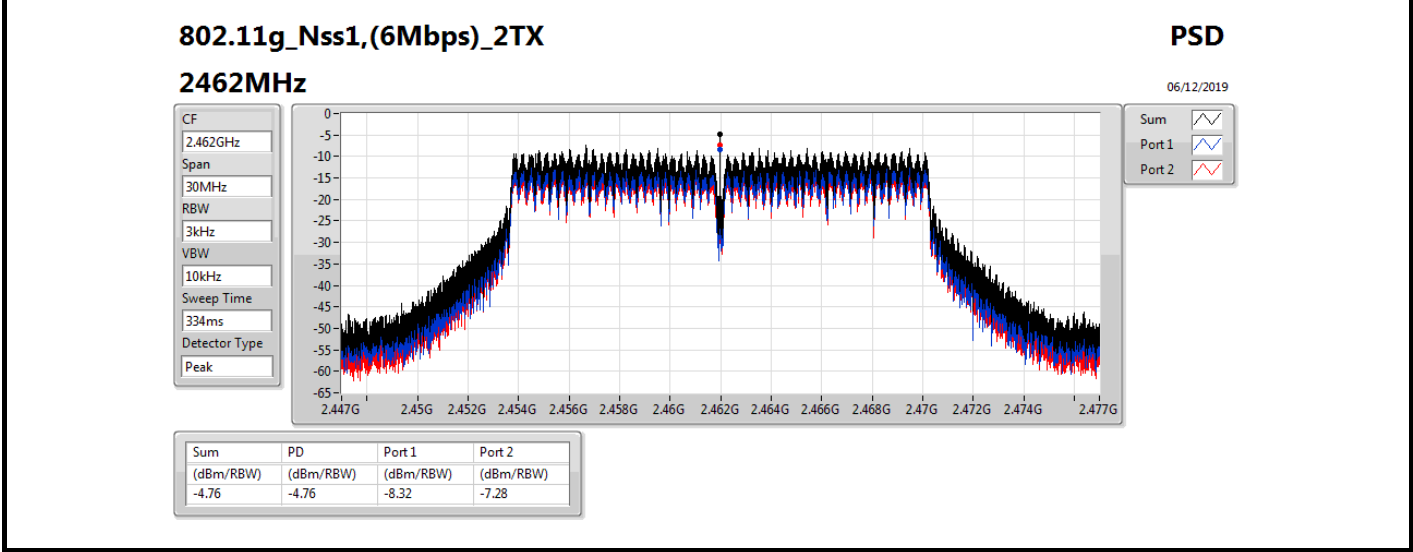
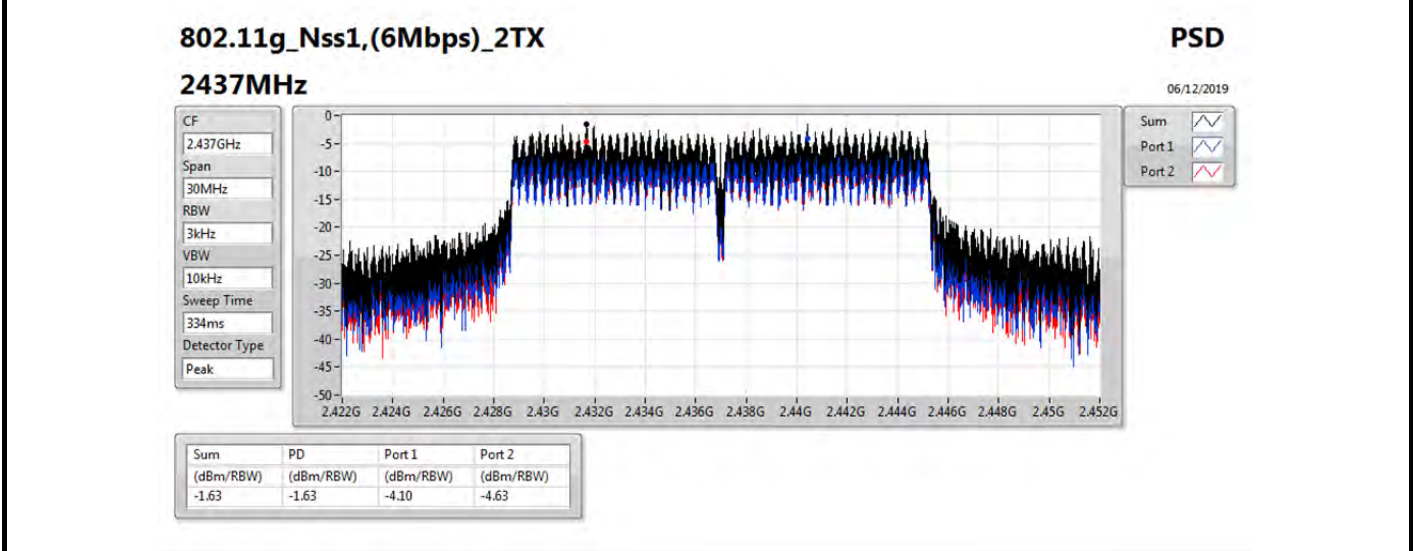
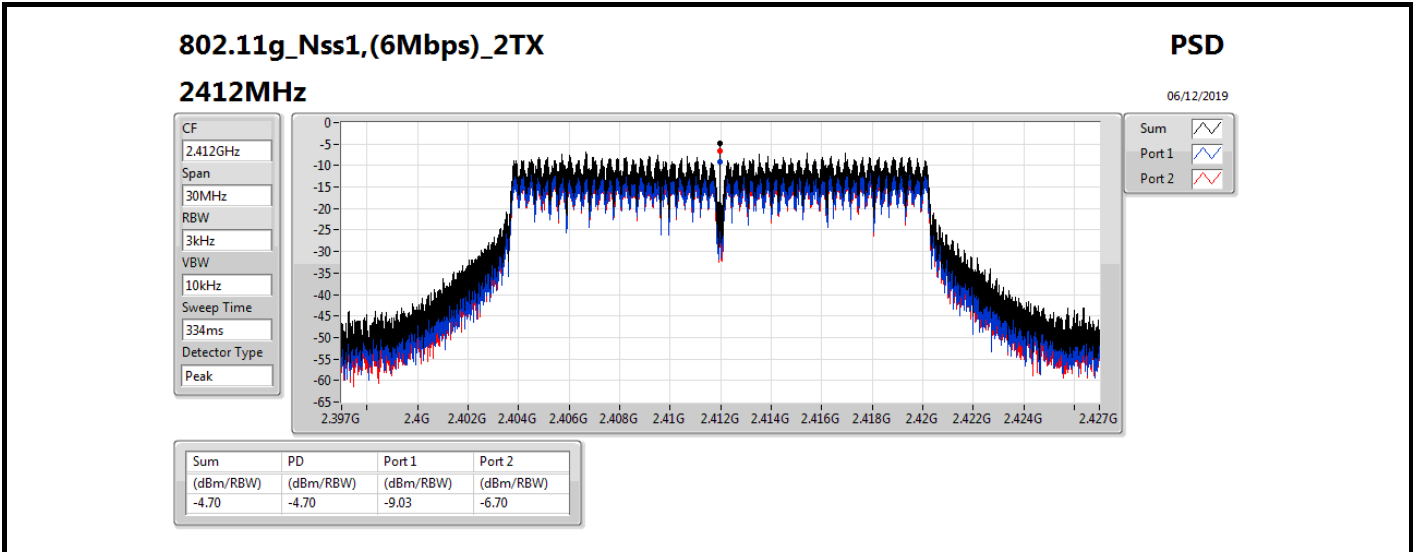
Result

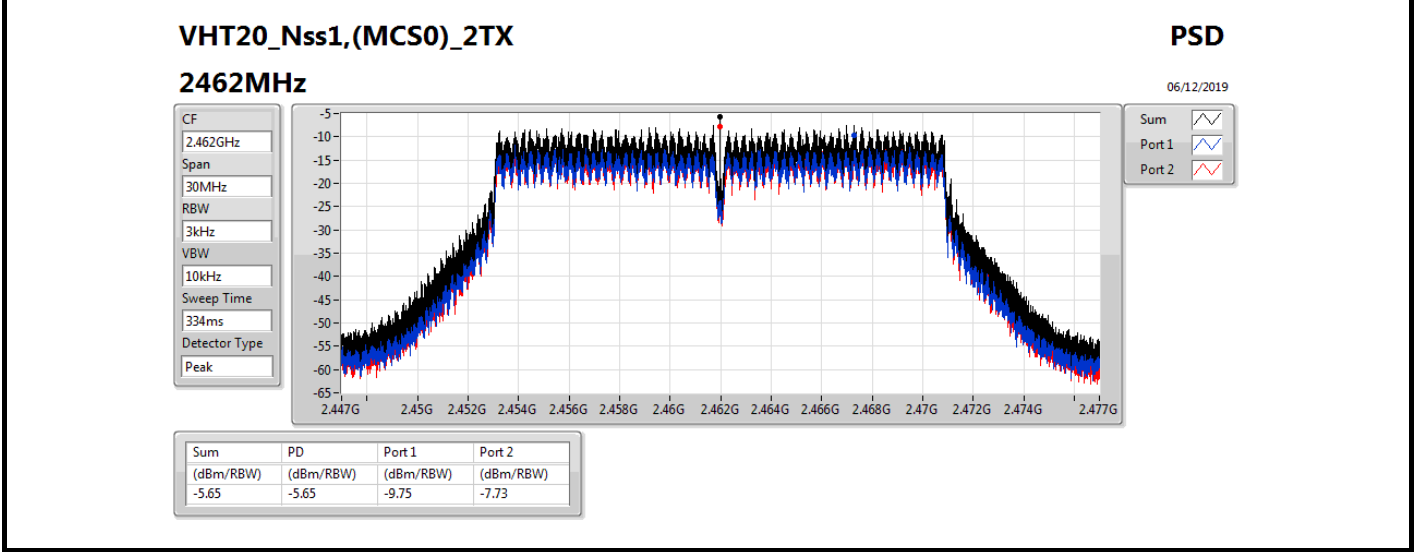
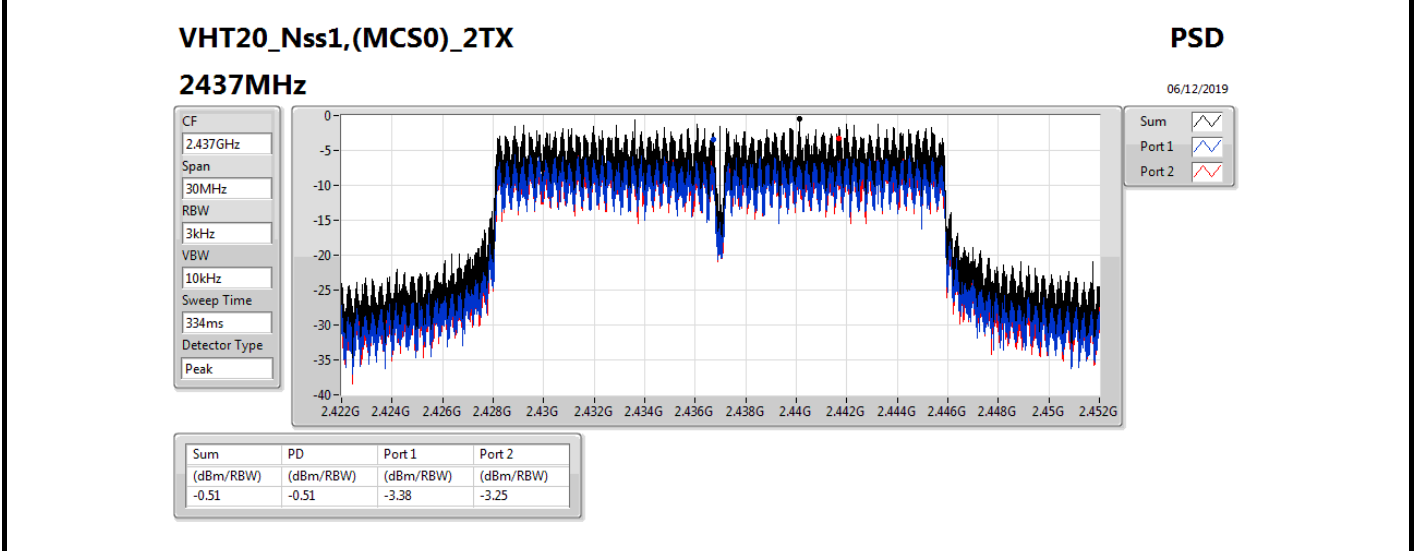
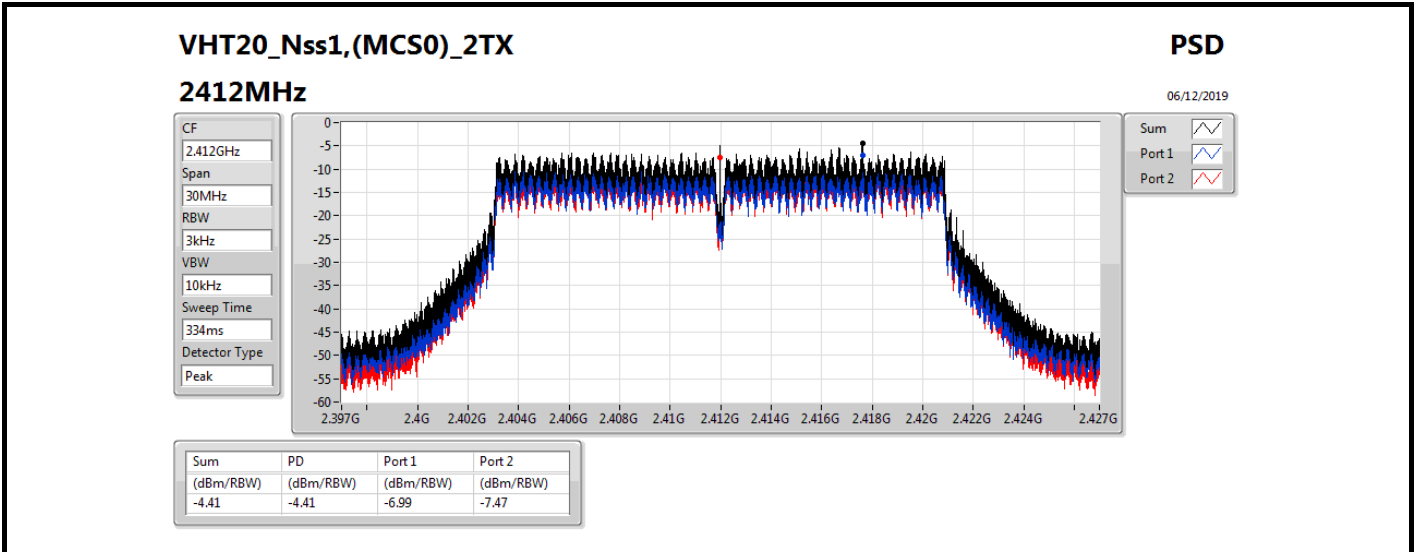
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	6.51	-7.48	-8.09	-4.94	8.00
2437MHz	Pass	6.51	-4.73	-5.45	-2.47	8.00
2462MHz	Pass	6.51	-6.59	-7.40	-3.97	8.00
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	6.51	-9.03	-6.70	-4.70	8.00
2437MHz	Pass	6.51	-4.10	-4.63	-1.63	8.00
2462MHz	Pass	6.51	-8.32	-7.28	-4.76	8.00
VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	6.51	-6.99	-7.47	-4.41	8.00
2437MHz	Pass	6.51	-3.38	-3.25	-0.51	8.00
2462MHz	Pass	6.51	-9.75	-7.73	-5.65	8.00
VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	6.51	-12.12	-10.68	-8.33	8.00
2437MHz	Pass	6.51	-8.66	-7.79	-5.19	8.00
2452MHz	Pass	6.51	-9.71	-8.63	-6.13	8.00

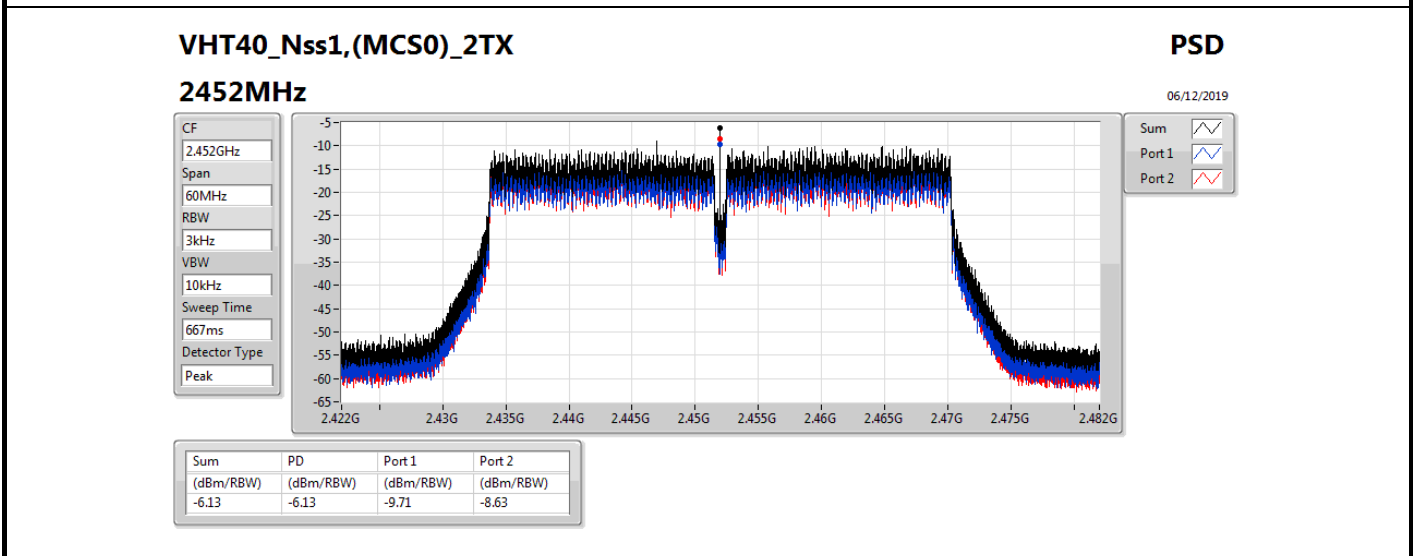
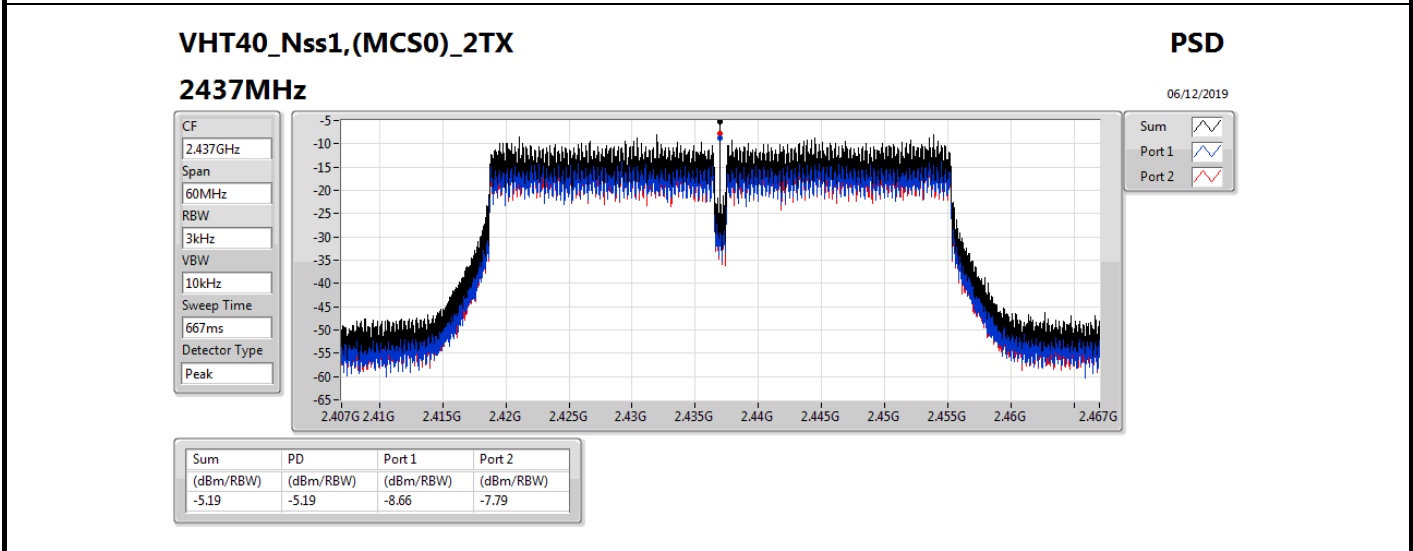
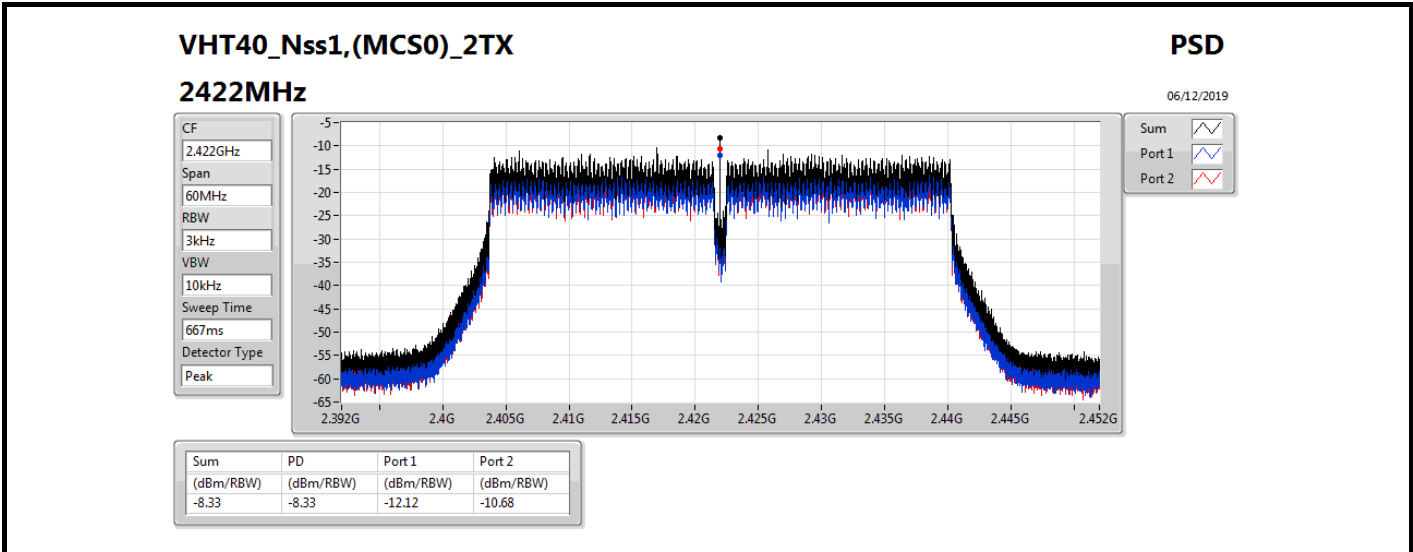
DG = Directional Gain; RBW=3 kHz;

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











Summary

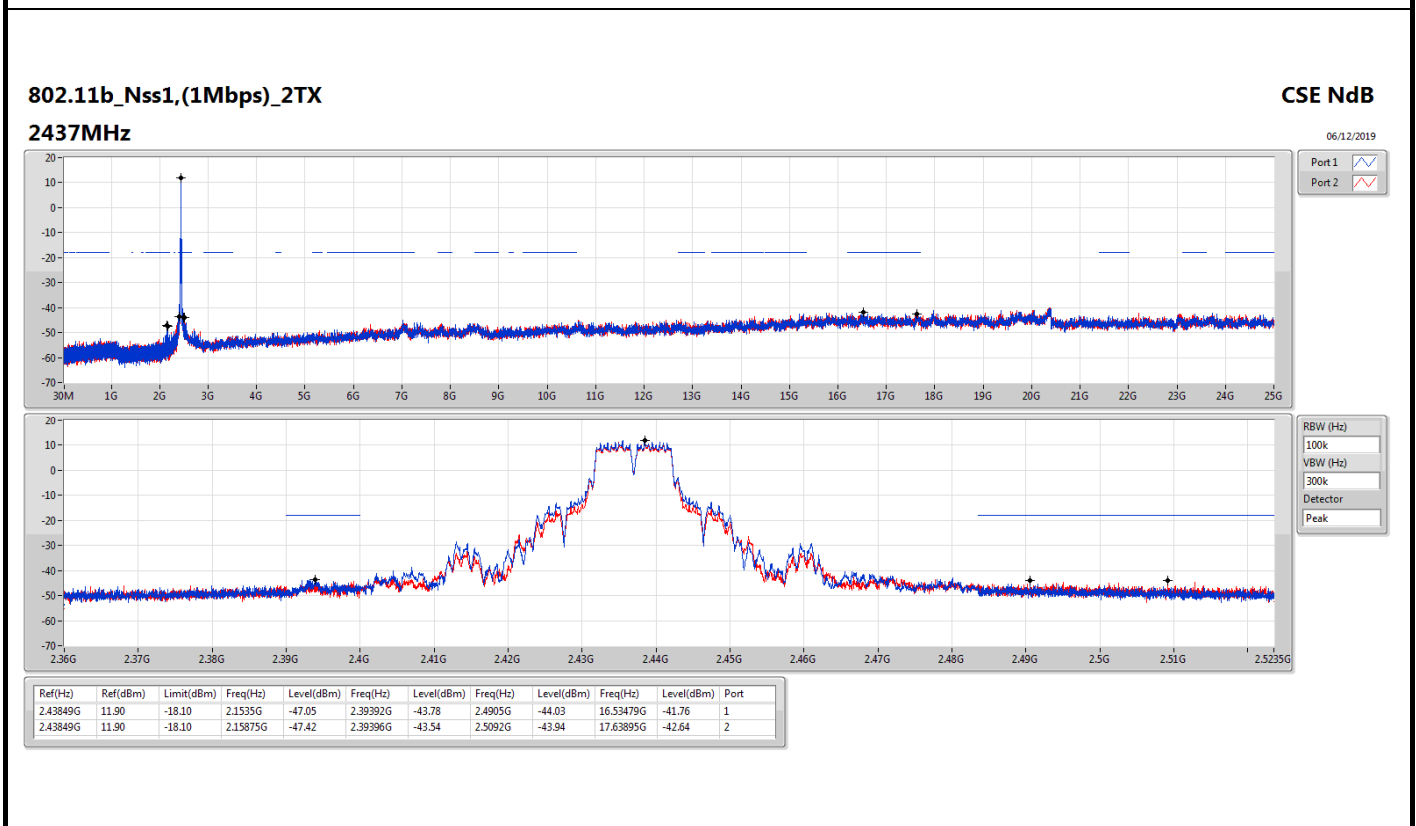
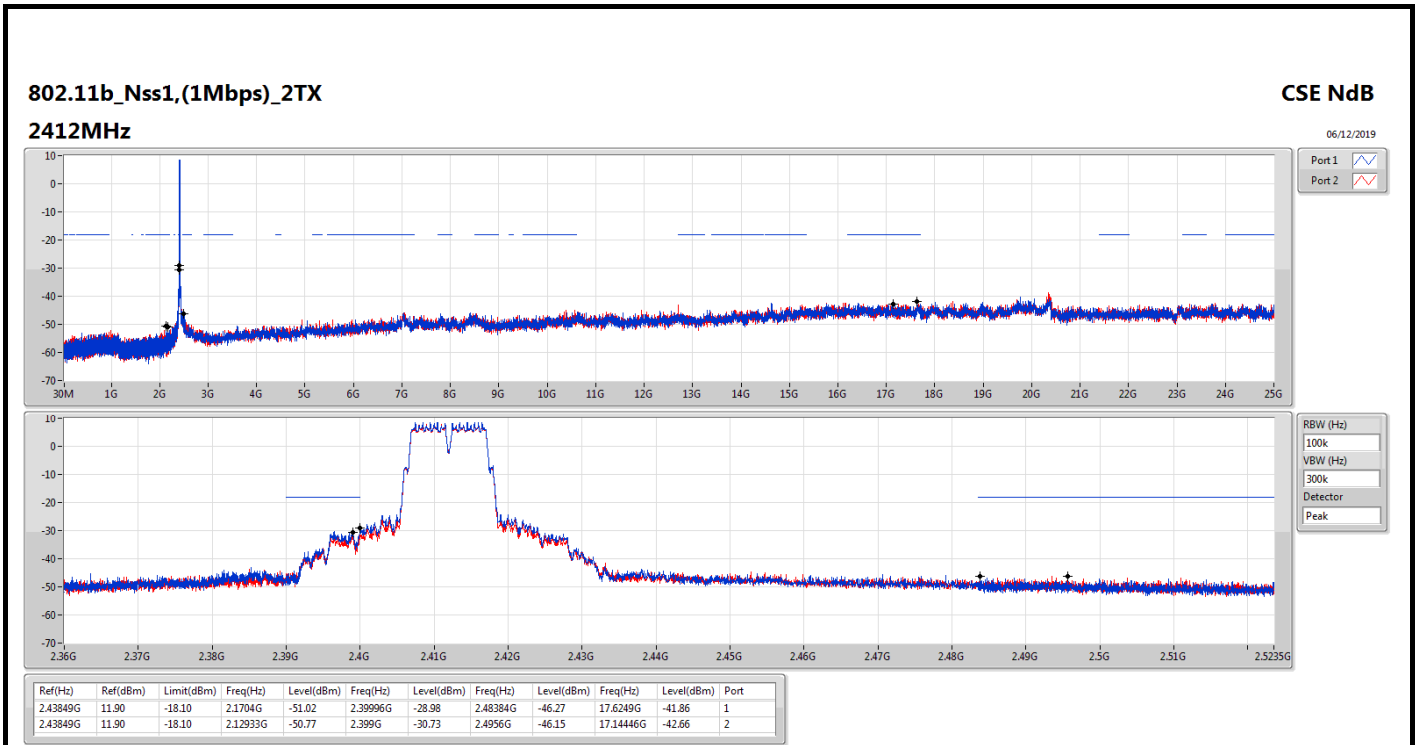
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_2TX	Pass	2.43849G	11.90	-18.10	2.1704G	-51.02	2.39996G	-28.98	2.48384G	-46.27	17.6249G	-41.86	1
802.11g_Nss1,(6Mbps)_2TX	Pass	2.43073G	11.86	-18.14	2.12496G	-52.04	2.39998G	-25.57	2.5G	-48.03	24.37347G	-41.10	1
VHT20_Nss1,(MCS0)_2TX	Pass	2.43574G	11.53	-18.47	2.30612G	-52.32	2.3995G	-26.26	2.48718G	-48.74	17.64737G	-42.15	1
VHT40_Nss1,(MCS0)_2TX	Pass	2.45448G	3.32	-26.68	632.84M	-52.74	2.39944G	-46.63	2.48442G	-34.40	17.63241G	-42.14	2

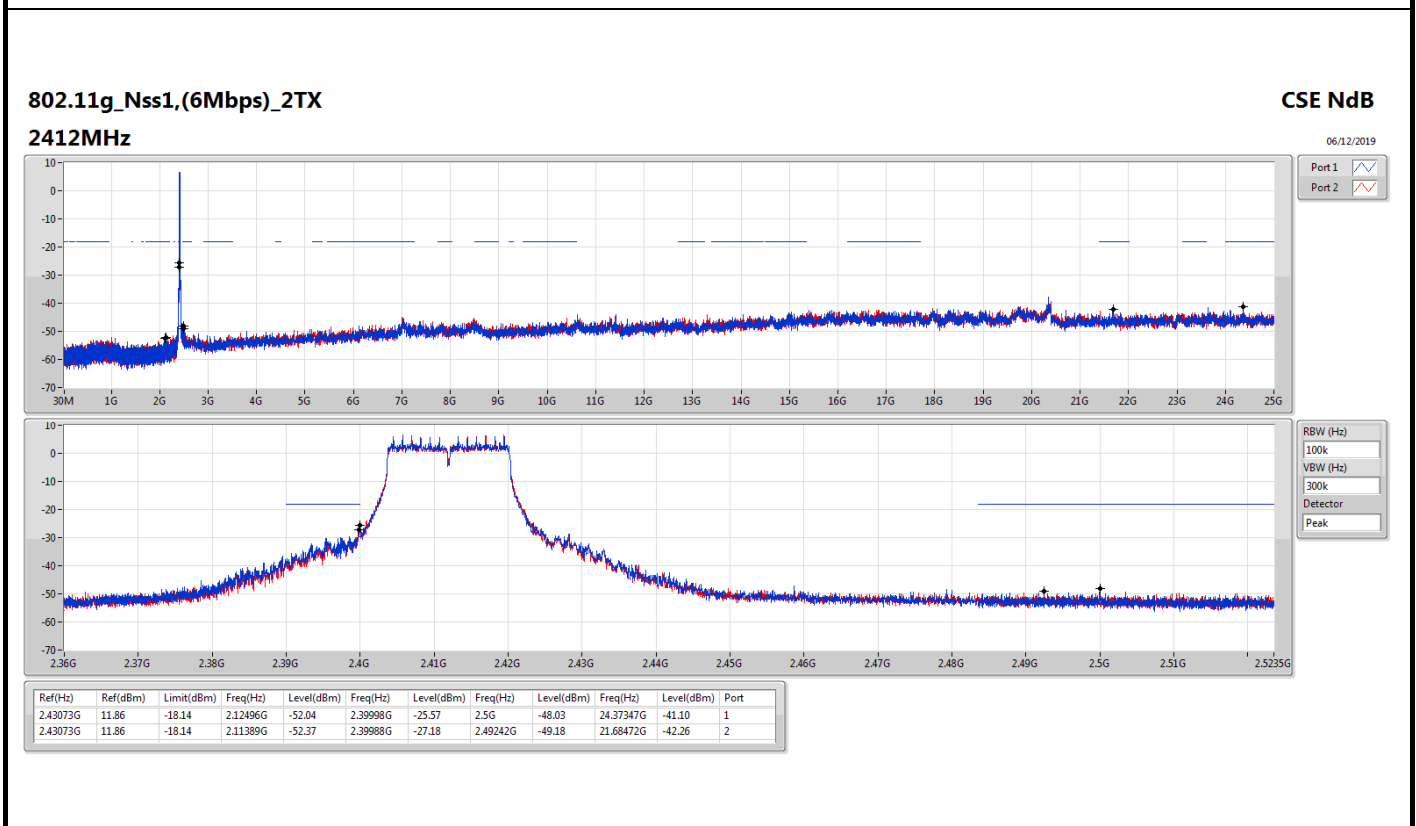
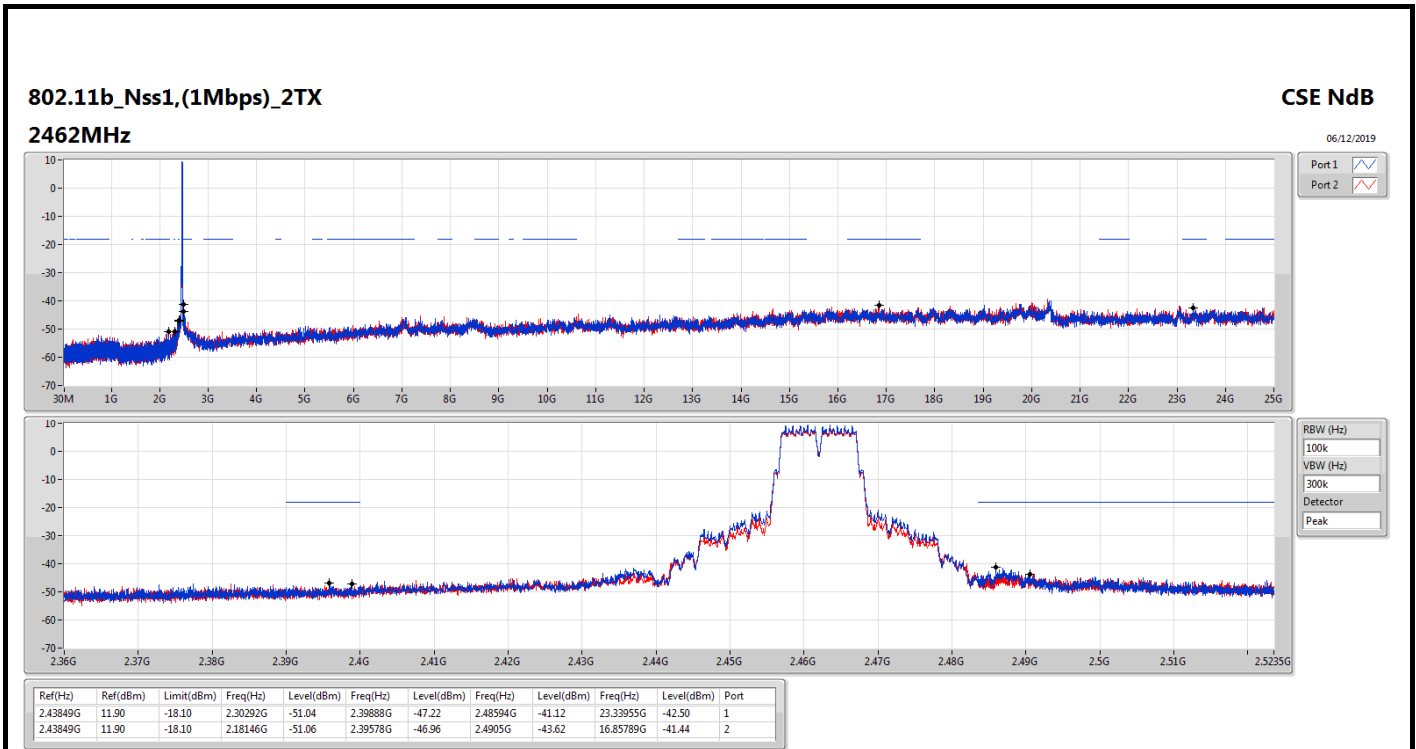


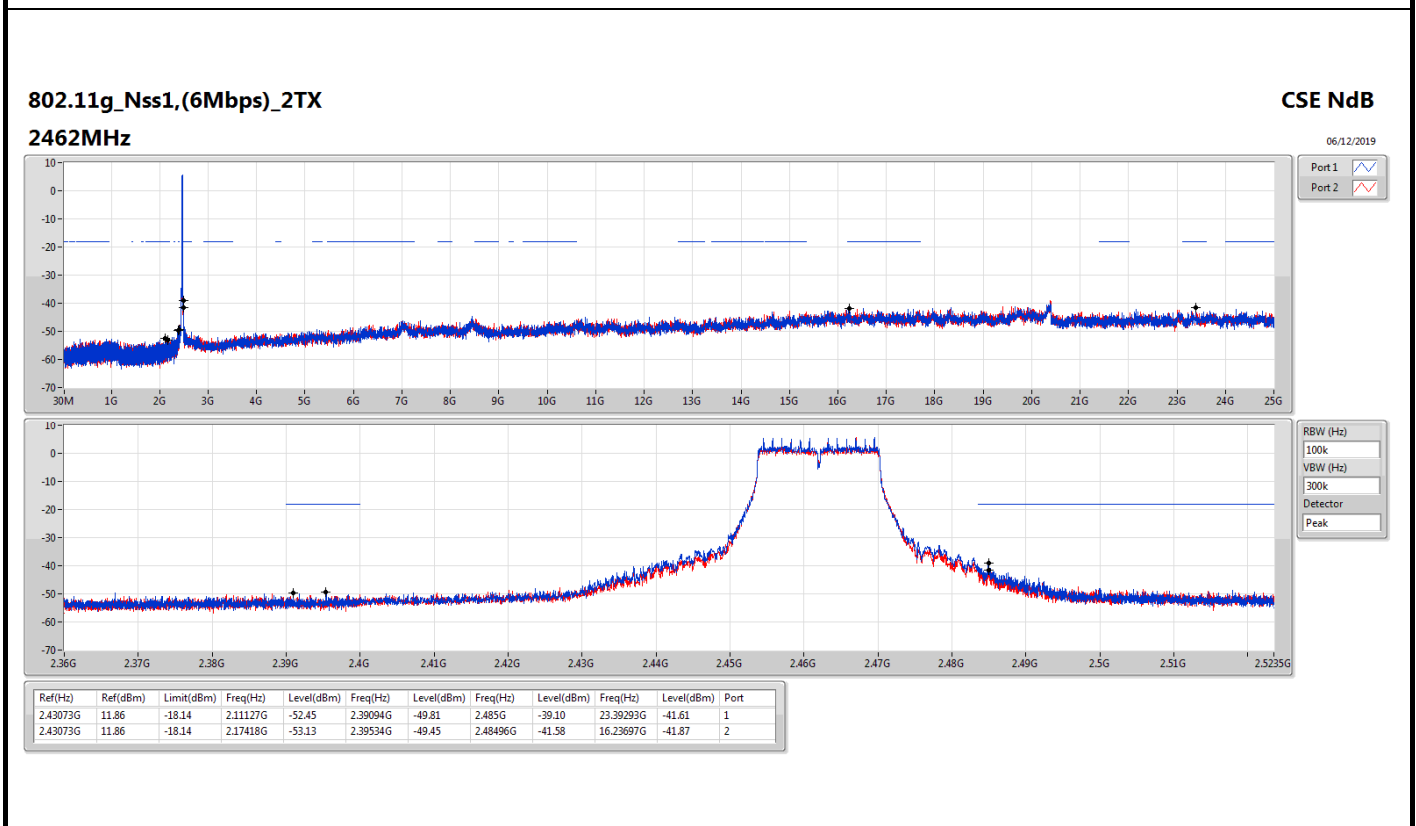
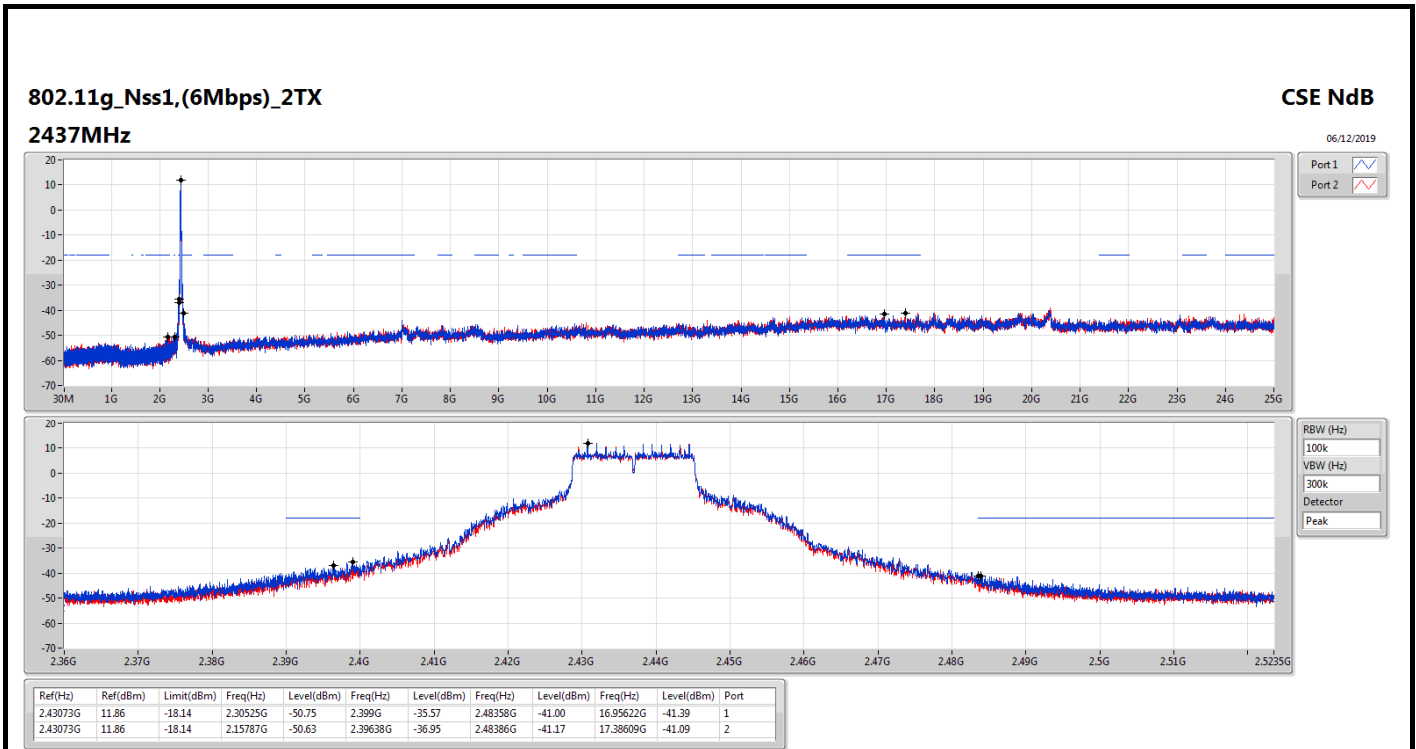
Result

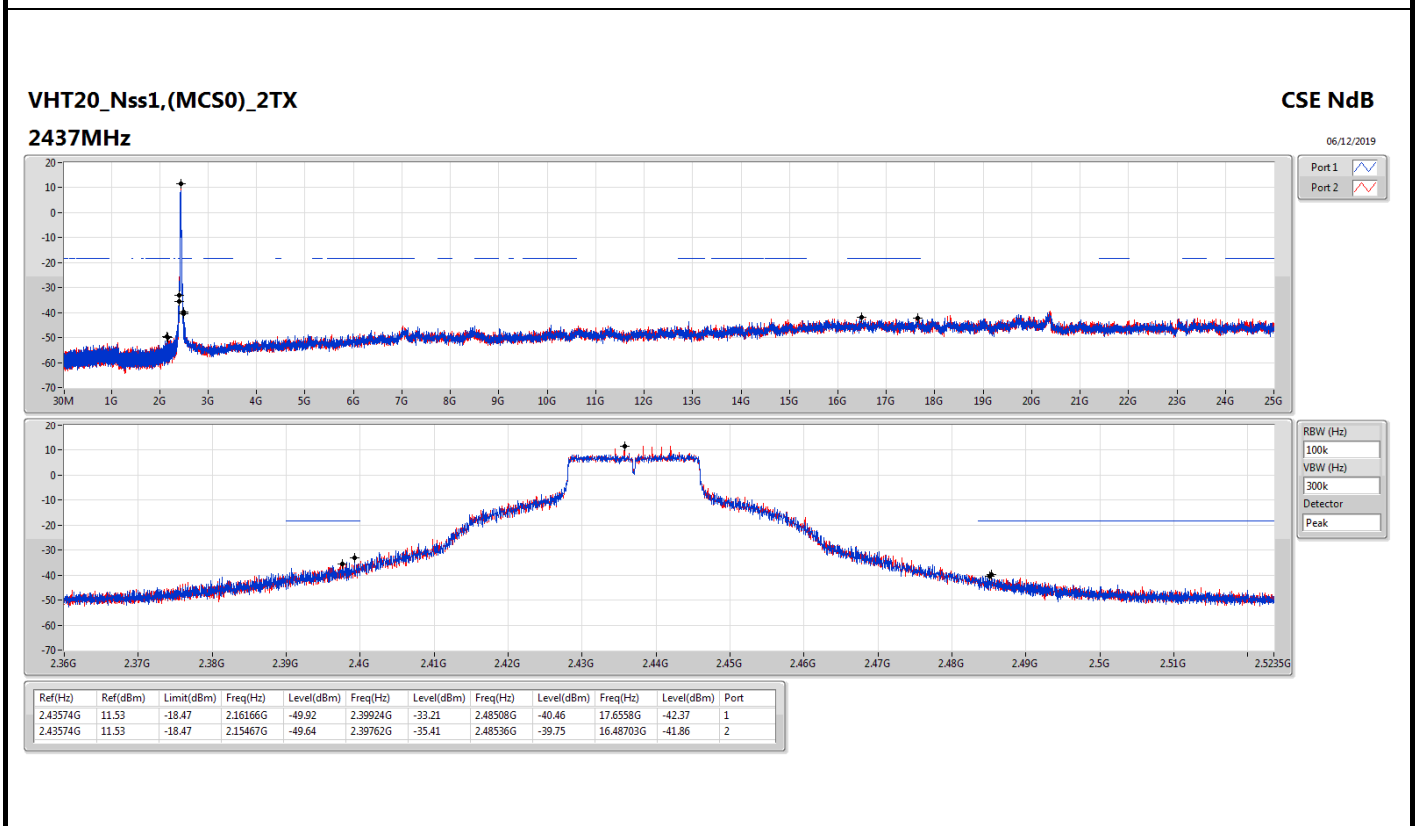
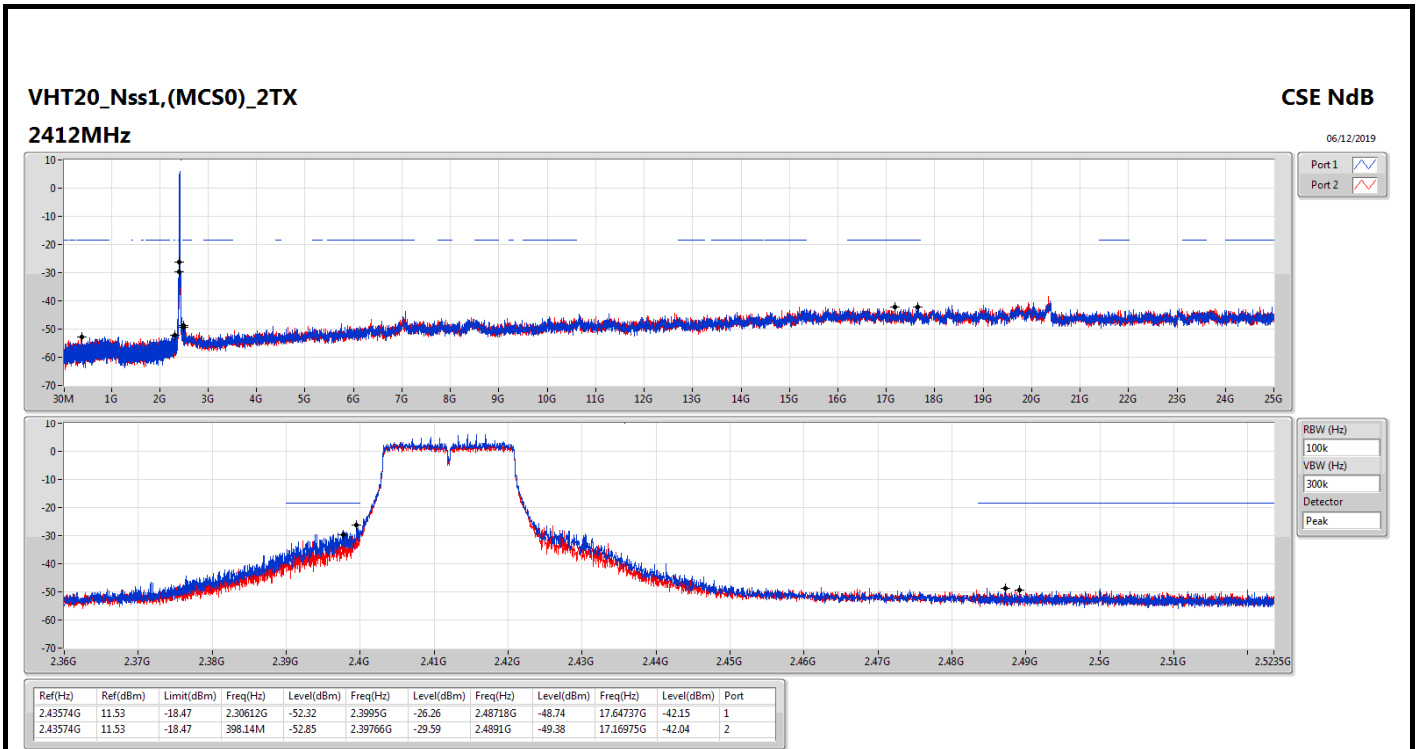
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43849G	11.90	-18.10	2.1704G	-51.02	2.39996G	-28.98	2.48384G	-46.27	17.6249G	-41.86	1
2412MHz	Pass	2.43849G	11.90	-18.10	2.12933G	-50.77	2.399G	-30.73	2.4956G	-46.15	17.14446G	-42.66	2
2437MHz	Pass	2.43849G	11.90	-18.10	2.1535G	-47.05	2.39392G	-43.78	2.4905G	-44.03	16.53479G	-41.76	1
2437MHz	Pass	2.43849G	11.90	-18.10	2.15875G	-47.42	2.39396G	-43.54	2.5092G	-43.94	17.63895G	-42.64	2
2462MHz	Pass	2.43849G	11.90	-18.10	2.30292G	-51.04	2.39888G	-47.22	2.48594G	-41.12	23.33955G	-42.50	1
2462MHz	Pass	2.43849G	11.90	-18.10	2.18146G	-51.06	2.39578G	-46.96	2.4905G	-43.62	16.85789G	-41.44	2
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43073G	11.86	-18.14	2.12496G	-52.04	2.39998G	-25.57	2.5G	-48.03	24.37347G	-41.10	1
2412MHz	Pass	2.43073G	11.86	-18.14	2.11389G	-52.37	2.39988G	-27.18	2.49242G	-49.18	21.68472G	-42.26	2
2437MHz	Pass	2.43073G	11.86	-18.14	2.30525G	-50.75	2.399G	-35.57	2.48358G	-41.00	16.95622G	-41.39	1
2437MHz	Pass	2.43073G	11.86	-18.14	2.15787G	-50.63	2.39638G	-36.95	2.48386G	-41.17	17.38609G	-41.09	2
2462MHz	Pass	2.43073G	11.86	-18.14	2.11127G	-52.45	2.39094G	-49.81	2.485G	-39.10	23.39293G	-41.61	1
2462MHz	Pass	2.43073G	11.86	-18.14	2.17418G	-53.13	2.39534G	-49.45	2.48496G	-41.58	16.23697G	-41.87	2
VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43574G	11.53	-18.47	2.30612G	-52.32	2.3995G	-26.26	2.48718G	-48.74	17.64737G	-42.15	1
2412MHz	Pass	2.43574G	11.53	-18.47	398.14M	-52.85	2.39766G	-29.59	2.4891G	-49.38	17.16975G	-42.04	2
2437MHz	Pass	2.43574G	11.53	-18.47	2.16166G	-49.92	2.39924G	-33.21	2.48508G	-40.46	17.6558G	-42.37	1
2437MHz	Pass	2.43574G	11.53	-18.47	2.15467G	-49.64	2.39762G	-35.41	2.48536G	-39.75	16.48703G	-41.86	2
2462MHz	Pass	2.43574G	11.53	-18.47	2.30612G	-52.47	2.39732G	-49.63	2.48446G	-40.35	17.4479G	-41.76	1
2462MHz	Pass	2.43574G	11.53	-18.47	2.30845G	-52.84	2.39748G	-50.38	2.48356G	-40.52	24.67971G	-42.33	2
VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	2.45448G	3.32	-26.68	2.30998G	-52.02	2.39892G	-37.69	2.49998G	-48.91	16.86957G	-40.96	1
2422MHz	Pass	2.45448G	3.32	-26.68	2.09358G	-52.44	2.39988G	-38.49	2.48898G	-49.31	17.62681G	-42.21	2
2437MHz	Pass	2.45448G	3.32	-26.68	803.45M	-53.00	2.39732G	-36.53	2.48546G	-42.06	16.59192G	-42.15	1
2437MHz	Pass	2.45448G	3.32	-26.68	868.71M	-52.58	2.39988G	-37.12	2.48538G	-42.09	17.007G	-42.45	2
2452MHz	Pass	2.45448G	3.32	-26.68	708.7M	-52.90	2.39772G	-45.60	2.48394G	-35.01	17.24819G	-41.83	1
2452MHz	Pass	2.45448G	3.32	-26.68	632.84M	-52.74	2.39944G	-46.63	2.48442G	-34.40	17.63241G	-42.14	2

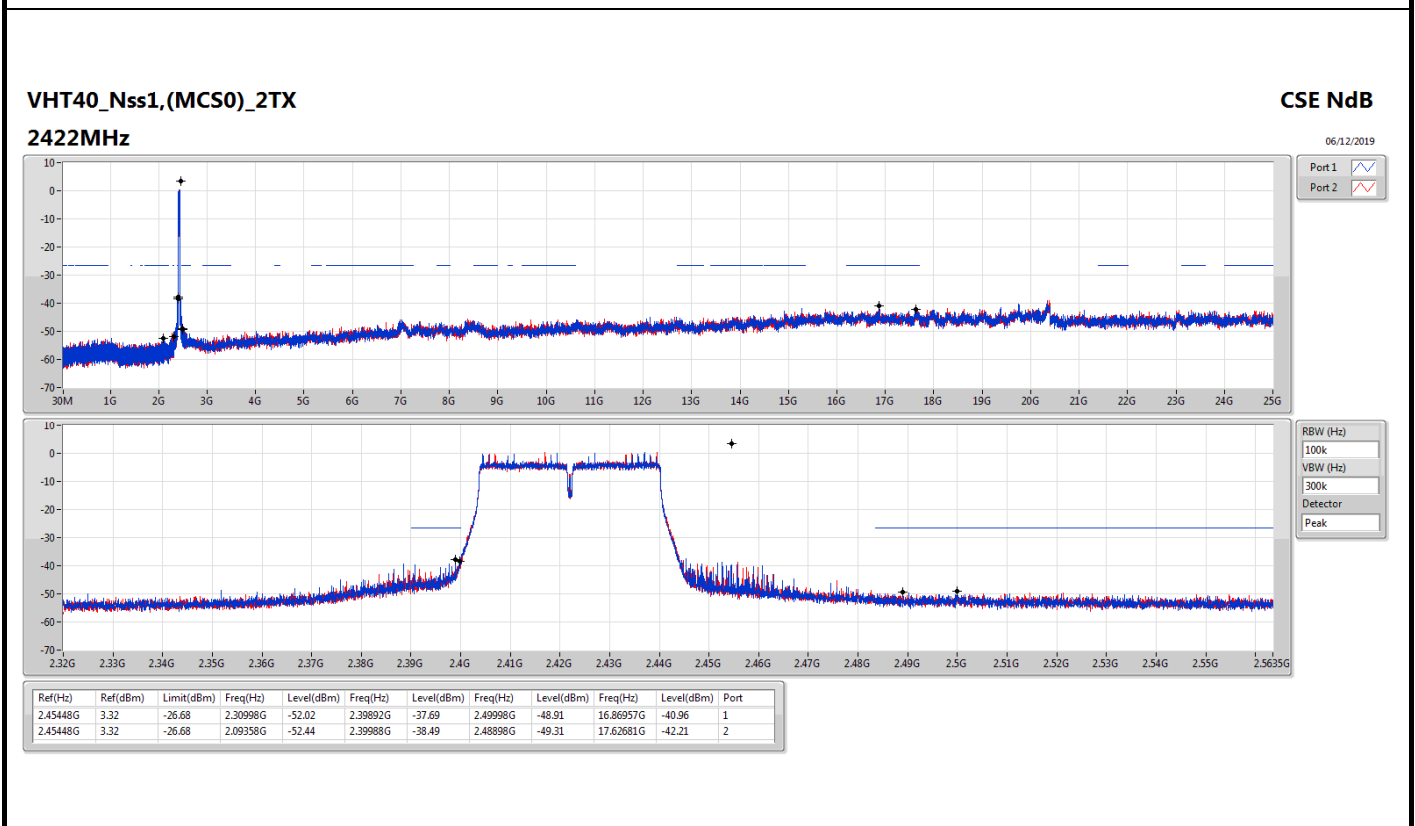
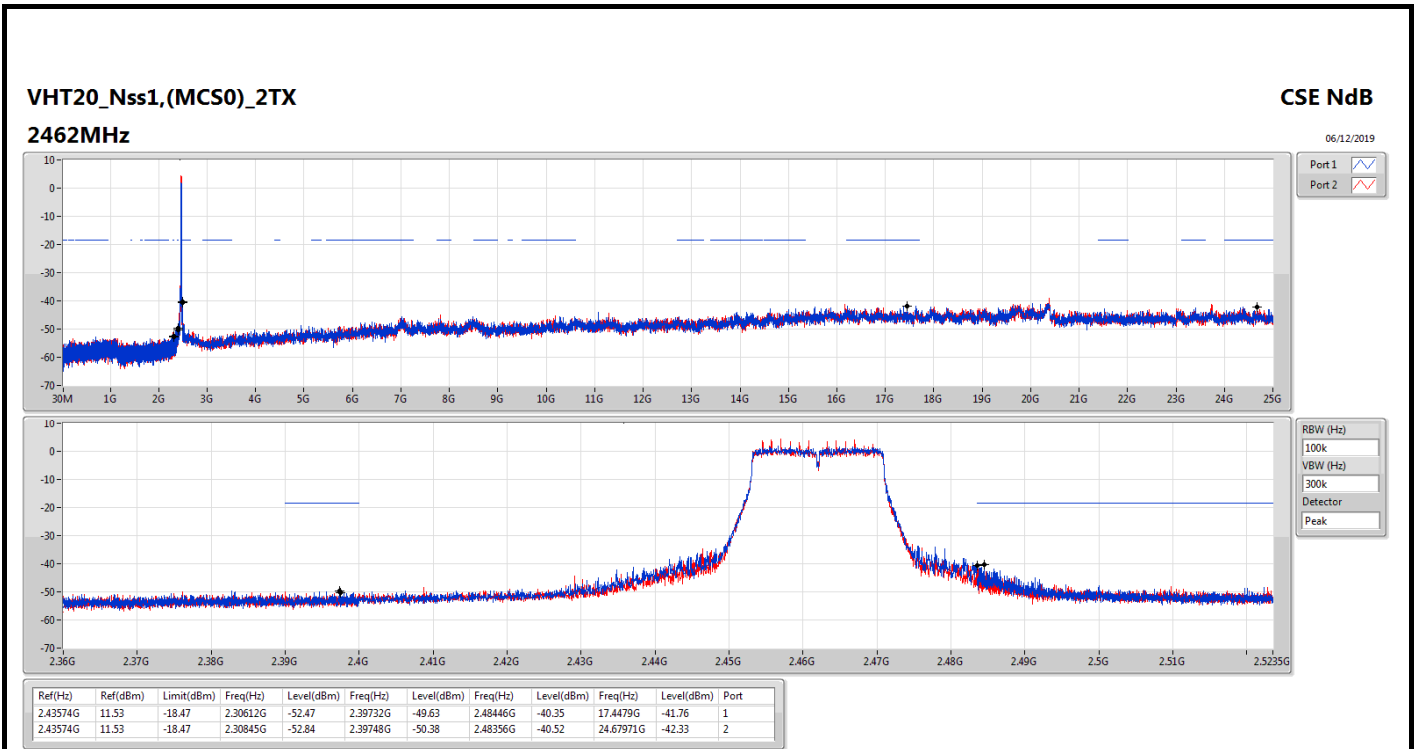


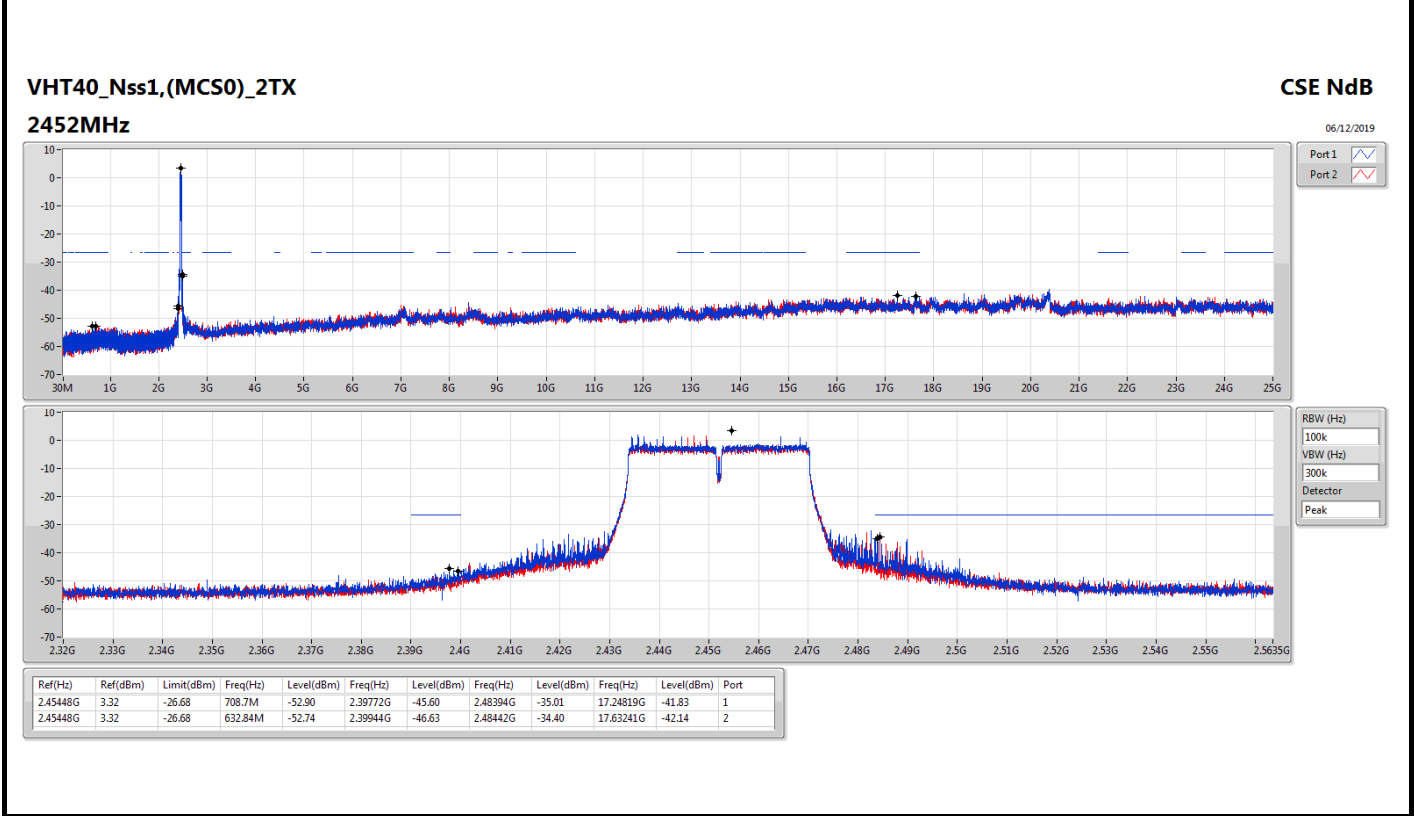
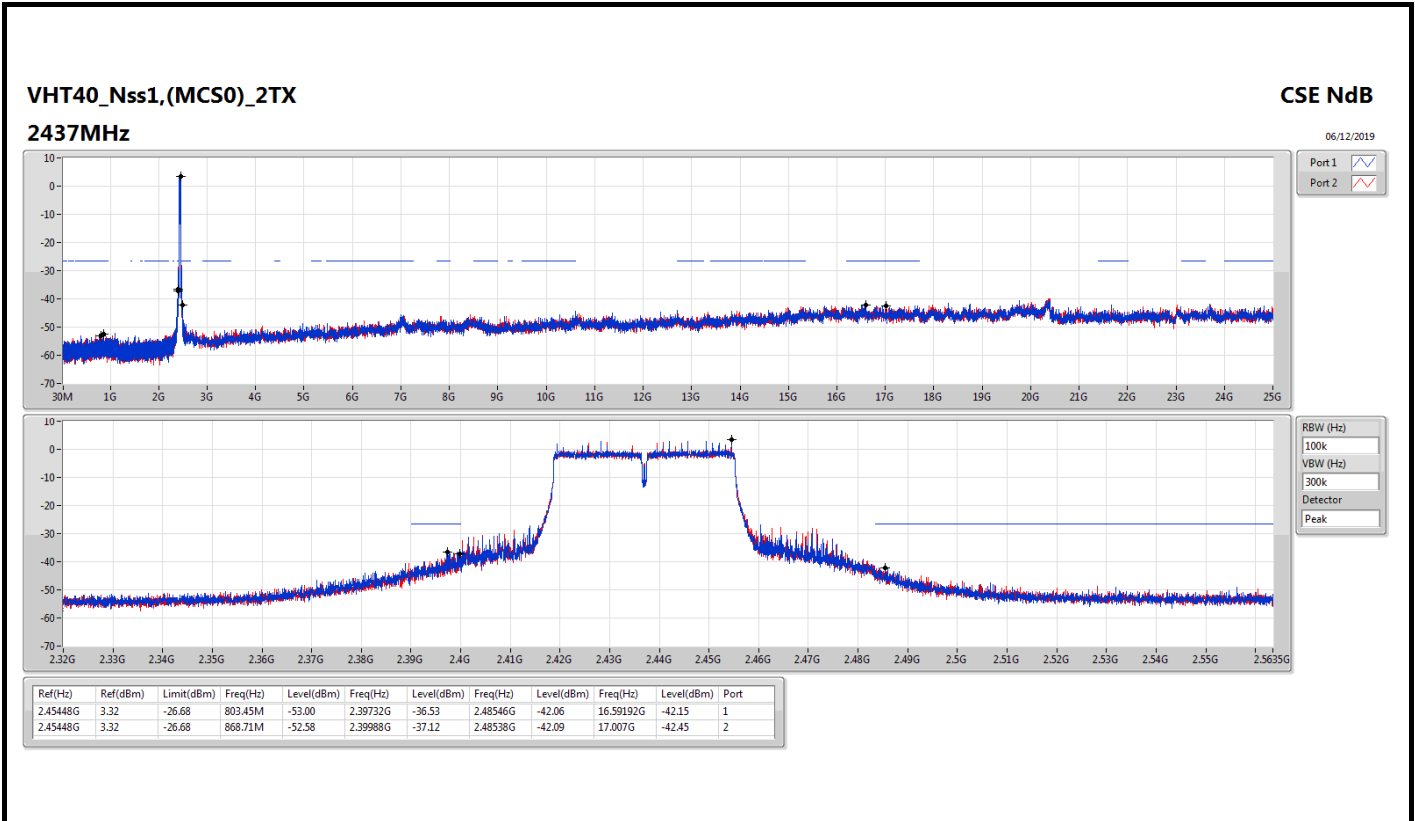












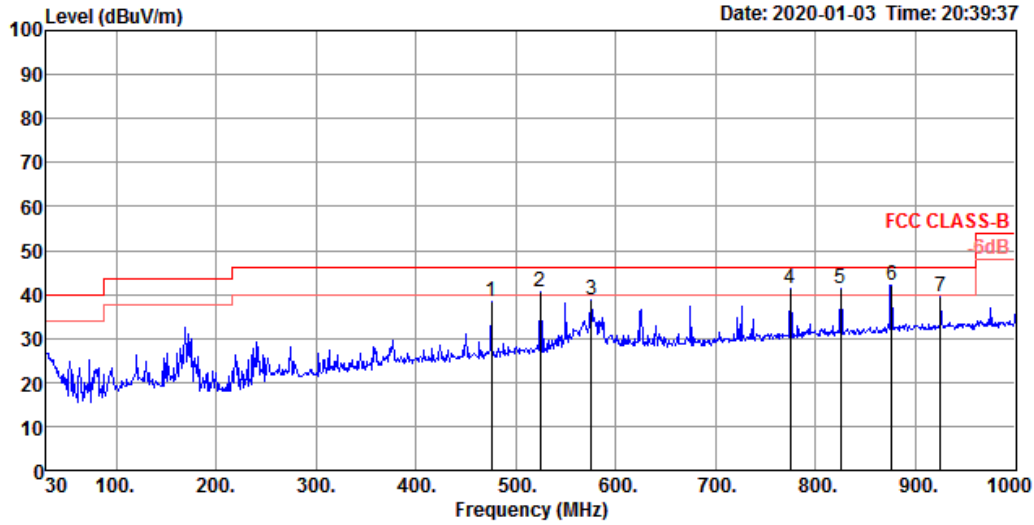


**Radiated Emission below 1GHz Result**

Appendix F.1

<b>Test Mode</b>	Mode 1	<b>Frequency Range</b>	30 MHz to 1,000 MHz
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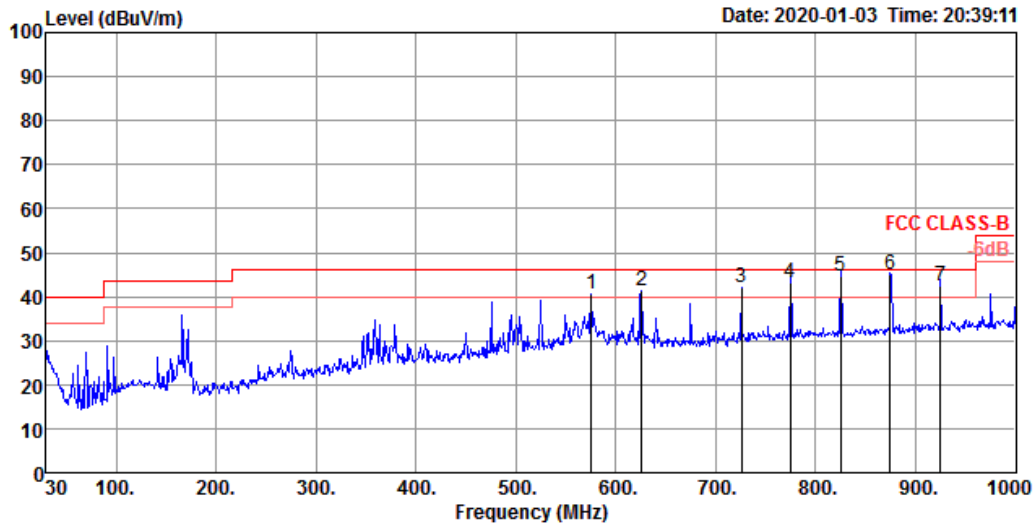
**Vertical 30 MHz to 1,000 MHz**



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	PoI/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	475.23	38.41	46.00	-7.59	44.51	2.86	23.43	32.39	100	215 Peak	VERTICAL
2	524.70	40.53	46.00	-5.47	45.73	3.02	24.20	32.42	100	189 Peak	VERTICAL
3	575.14	38.61	46.00	-7.39	42.98	3.20	24.75	32.32	100	179 Peak	VERTICAL
4	774.96	41.40	46.00	-4.60	43.59	3.68	26.45	32.32	100	154 Peak	VERTICAL
5	825.40	41.40	46.00	-4.60	43.01	3.74	27.00	32.35	100	306 Peak	VERTICAL
6	875.84	42.16	46.00	-3.84	43.14	3.92	27.50	32.40	125	188 Peak	VERTICAL
7	925.31	39.46	46.00	-6.54	39.73	4.10	27.86	32.23	125	134 Peak	VERTICAL



Horizontal 30 MHz to 1,000 MHz



	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	575.14	40.69	46.00	-5.31	45.06	3.20	24.75	32.32	150	99 Peak	HORIZONTAL
2	625.58	41.33	46.00	-4.67	45.27	3.28	25.21	32.43	150	121 Peak	HORIZONTAL
3	725.49	42.01	46.00	-3.99	44.97	3.55	25.90	32.41	125	85 Peak	HORIZONTAL
4	774.96	43.11	46.00	-2.89	45.30	3.68	26.45	32.32	125	107 QP	HORIZONTAL
5	825.40	44.73	46.00	-1.27	46.34	3.74	27.00	32.35	100	133 QP	HORIZONTAL
6	874.87	44.99	46.00	-1.01	45.97	3.92	27.50	32.40	100	129 QP	HORIZONTAL
7	925.31	42.31	46.00	-3.69	42.58	4.10	27.86	32.23	100	275 QP	HORIZONTAL





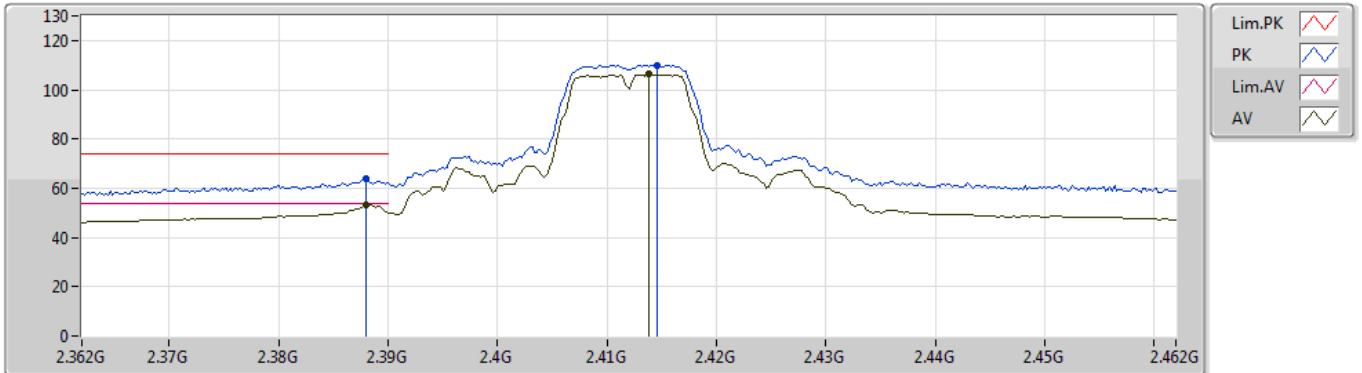
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11g_Nss1,(6Mbps)_2TX	Pass	AV	2.4838G	53.93	54.00	-0.07	32.23	3	Horizontal	269	1.54	-

### 802.11b\_Nss1,(1Mbps)\_2TX

14/11/2019

### 2412MHz\_TX



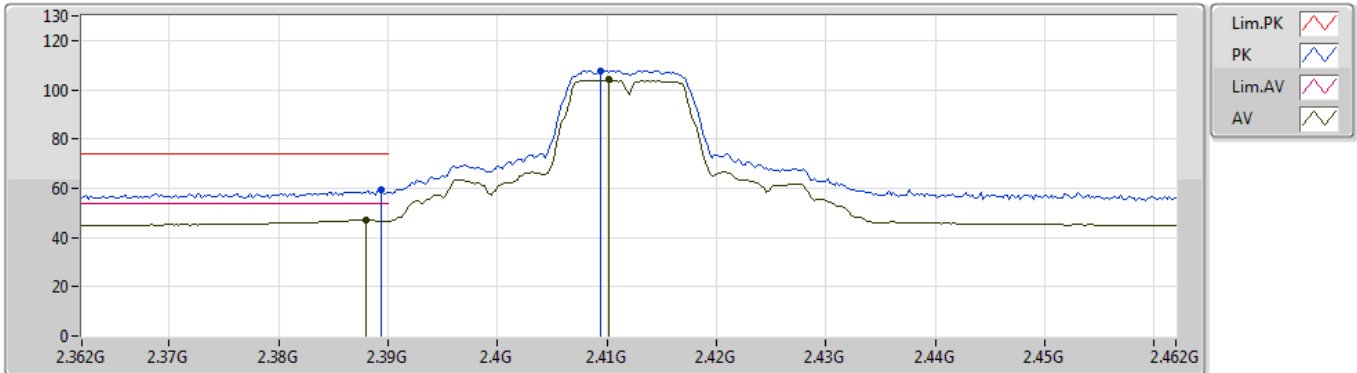
EUT\_Z\_2TX  
Setting 21  
03-E-2  
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.388G	63.90	74.00	-10.10	31.87	3	Vertical	209	1.12	-	32.03
AV	2.388G	53.51	54.00	-0.49	31.87	3	Vertical	209	1.12	-	21.64
PK	2.4146G	110.02	Inf	-Inf	31.95	3	Vertical	209	1.12	-	78.07
AV	2.4138G	106.28	Inf	-Inf	31.95	3	Vertical	209	1.12	-	74.33

### 802.11b\_Nss1,(1Mbps)\_2TX

14/11/2019

### 2412MHz\_TX



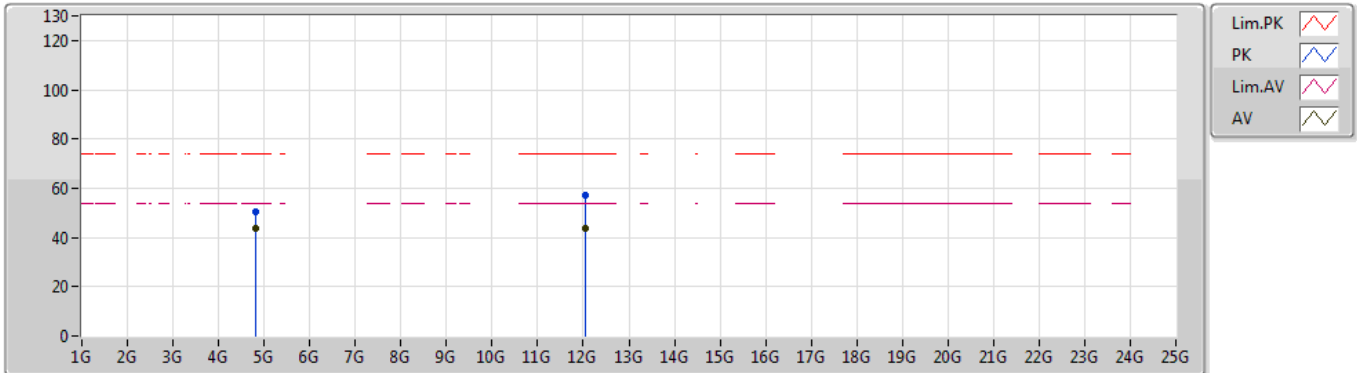
EUT\_Z\_2TX  
Setting 21  
03-E-2  
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.3894G	59.17	74.00	-14.83	31.87	3	Horizontal	83	1.92	-	27.30
AV	2.388G	47.32	54.00	-6.68	31.87	3	Horizontal	83	1.92	-	15.45
PK	2.4094G	107.68	Inf	-Inf	31.94	3	Horizontal	83	1.92	-	75.74
AV	2.4102G	103.96	Inf	-Inf	31.94	3	Horizontal	83	1.92	-	72.02

### 802.11b\_Nss1,(1Mbps)\_2TX

14/11/2019

### 2412MHz\_TX



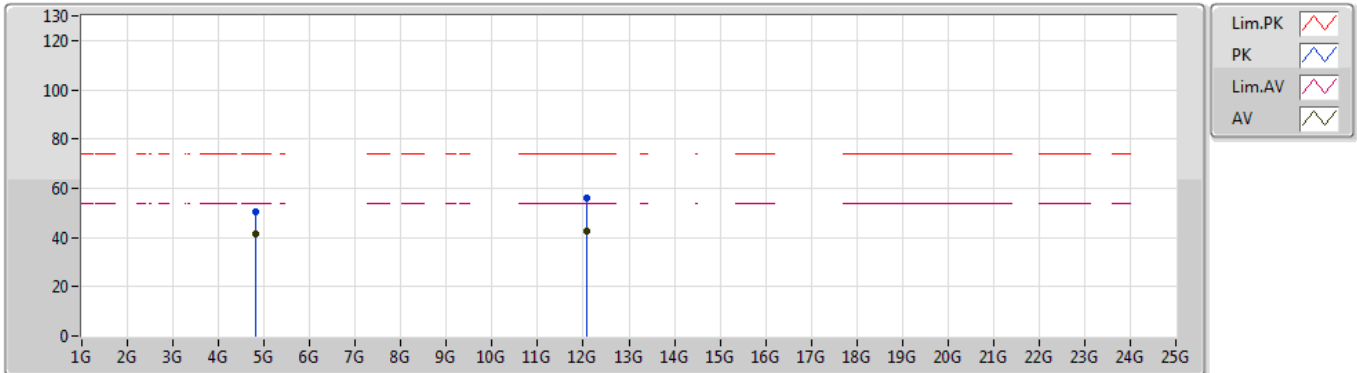
EUT\_Z\_2TX  
Setting 21  
03-E-2  
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	4.8238G	50.17	74.00	-23.83	4.97	3	Vertical	19	1.89	-	45.20
AV	4.824G	43.57	54.00	-10.43	4.97	3	Vertical	19	1.89	-	38.60
PK	12.05707G	57.03	74.00	-16.97	14.24	3	Vertical	22	1.59	-	42.79
AV	12.05914G	43.74	54.00	-10.26	14.24	3	Vertical	22	1.59	-	29.50

### 802.11b\_Nss1,(1Mbps)\_2TX

14/11/2019

### 2412MHz\_TX



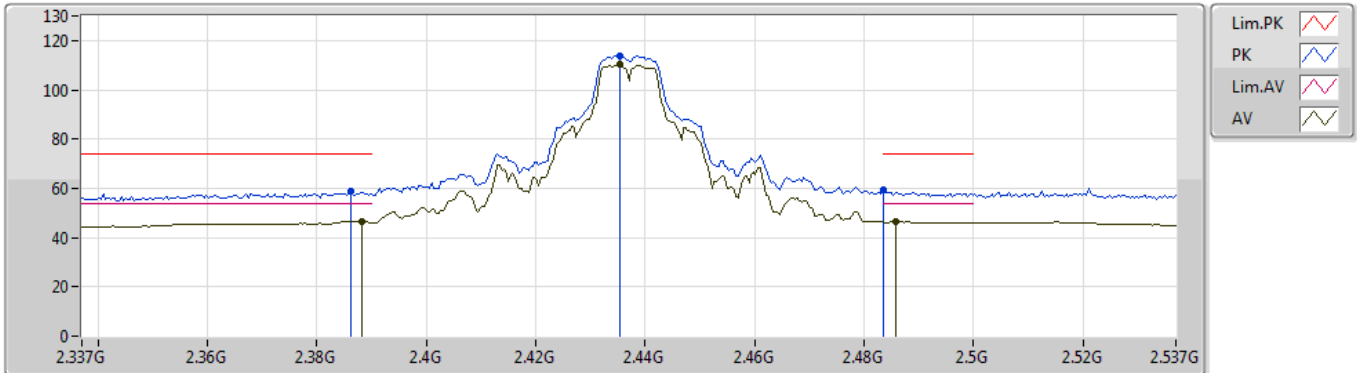
EUT\_Z\_2TX  
Setting 21  
03-E-2  
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	4.82406G	50.16	74.00	-23.84	4.97	3	Horizontal	151	1.88	-	45.19
AV	4.82396G	41.70	54.00	-12.30	4.97	3	Horizontal	151	1.88	-	36.73
PK	12.06482G	56.22	74.00	-17.78	14.26	3	Horizontal	7	2.98	-	41.96
AV	12.06281G	42.36	54.00	-11.64	14.26	3	Horizontal	7	2.98	-	28.10

### 802.11b\_Nss1,(1Mbps)\_2TX

14/11/2019

### 2437MHz\_TX



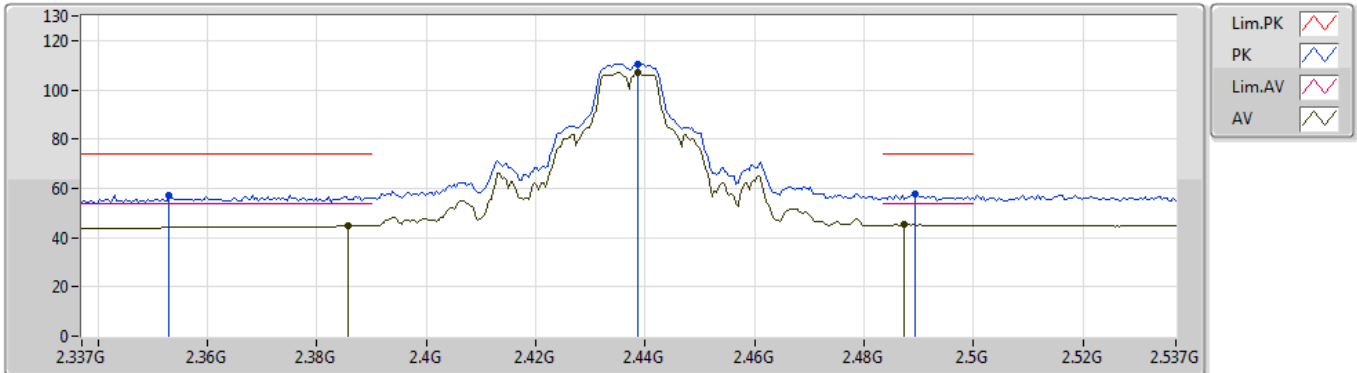
EUT\_Z\_2TX  
Setting 23  
03-E-2  
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.3862G	58.62	74.00	-15.38	31.86	3	Vertical	214	1.40	-	26.76
AV	2.3882G	46.64	54.00	-7.36	31.87	3	Vertical	214	1.40	-	14.77
PK	2.4354G	113.79	Inf	-Inf	32.05	3	Vertical	214	1.40	-	81.74
AV	2.4354G	110.31	Inf	-Inf	32.05	3	Vertical	214	1.40	-	78.26
PK	2.4835G	59.24	74.00	-14.76	32.23	3	Vertical	214	1.40	-	27.01
AV	2.4858G	46.52	54.00	-7.48	32.25	3	Vertical	214	1.40	-	14.27

### 802.11b\_Nss1,(1Mbps)\_2TX

14/11/2019

### 2437MHz\_TX



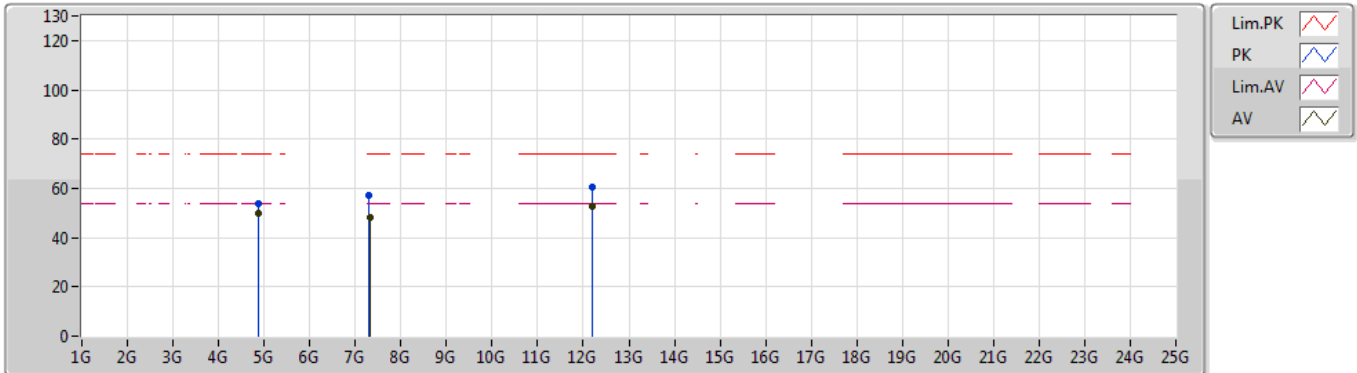
EUT\_Z\_2TX  
Setting 23  
03-E-2  
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.353G	57.38	74.00	-16.62	31.79	3	Horizontal	331	1.01	-	25.59
AV	2.3858G	44.96	54.00	-9.04	31.86	3	Horizontal	331	1.01	-	13.10
PK	2.4386G	110.40	Inf	-Inf	32.06	3	Horizontal	331	1.01	-	78.34
AV	2.4386G	106.88	Inf	-Inf	32.06	3	Horizontal	331	1.01	-	74.82
PK	2.4894G	57.44	74.00	-16.56	32.26	3	Horizontal	331	1.01	-	25.18
AV	2.4874G	45.18	54.00	-8.82	32.25	3	Horizontal	331	1.01	-	12.93

### 802.11b\_Nss1,(1Mbps)\_2TX

14/11/2019

### 2437MHz\_TX



EUT\_Z\_2TX  
Setting 23  
03-E-2  
FSP

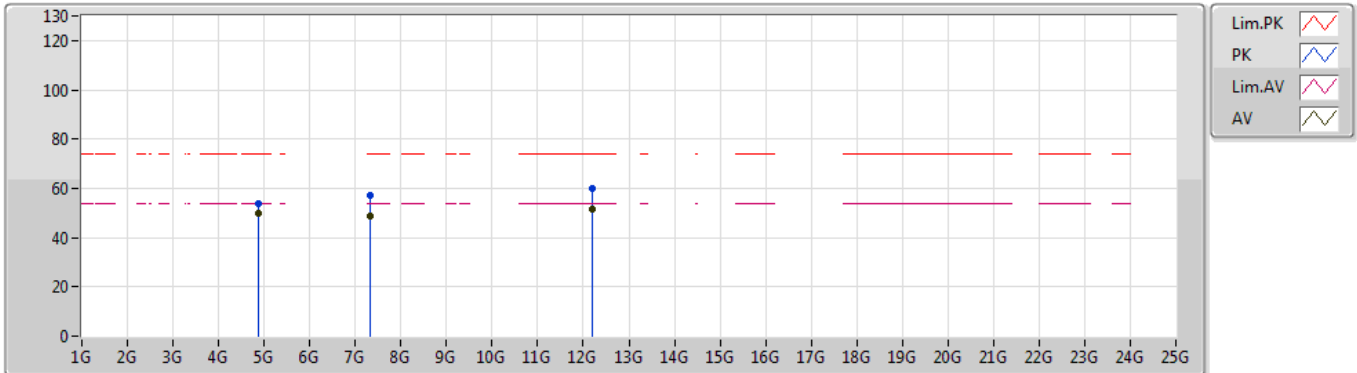
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	4.87402G	53.74	74.00	-20.26	5.04	3	Vertical	0	1.85	-	48.70
AV	4.87399G	49.73	54.00	-4.27	5.04	3	Vertical	0	1.85	-	44.69
PK	7.31018G	57.42	74.00	-16.58	9.34	3	Vertical	101	1.89	-	48.08
AV	7.3117G	48.15	54.00	-5.85	9.34	3	Vertical	101	1.89	-	38.81
PK	12.18466G	60.41	74.00	-13.59	14.49	3	Vertical	104	1.62	-	45.92
AV	12.18418G	52.72	54.00	-1.28	14.48	3	Vertical	104	1.62	-	38.24



### 802.11b\_Nss1,(1Mbps)\_2TX

14/11/2019

### 2437MHz\_TX



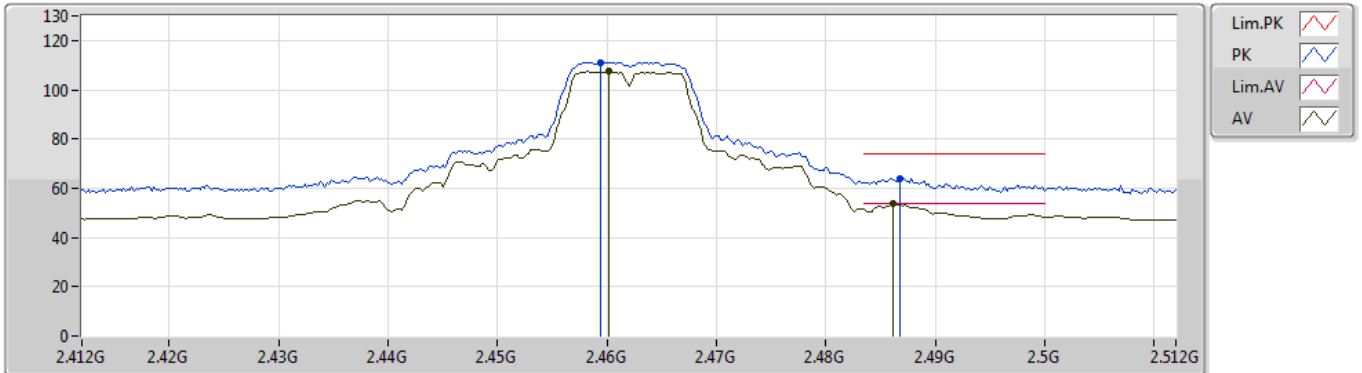
EUT\_Z\_2TX  
Setting 23  
03-E-2  
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	4.87402G	53.54	74.00	-20.46	5.04	3	Horizontal	139	2.18	-	48.50
AV	4.87399G	49.74	54.00	-4.26	5.04	3	Horizontal	139	2.18	-	44.70
PK	7.31146G	57.39	74.00	-16.61	9.34	3	Horizontal	10	2.05	-	48.05
AV	7.3117G	48.75	54.00	-5.25	9.34	3	Horizontal	10	2.05	-	39.41
PK	12.18512G	59.68	74.00	-14.32	14.49	3	Horizontal	331	2.67	-	45.19
AV	12.18418G	51.68	54.00	-2.32	14.48	3	Horizontal	331	2.67	-	37.20

### 802.11b\_Nss1,(1Mbps)\_2TX

14/11/2019

### 2462MHz\_TX



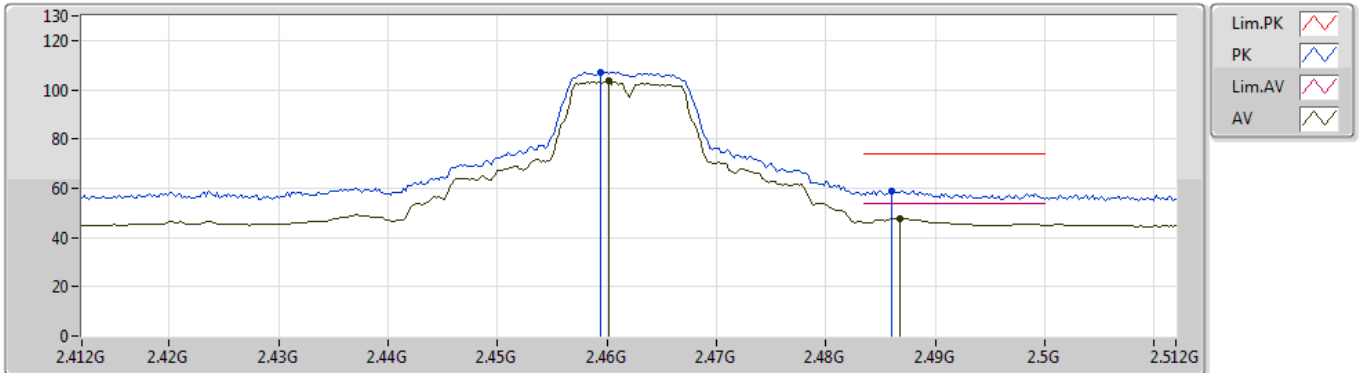
EUT\_Z\_2TX  
Setting 21  
03-E-2  
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.4594G	111.21	Inf	-Inf	32.14	3	Vertical	209	1.09	-	79.07
AV	2.4602G	107.46	Inf	-Inf	32.14	3	Vertical	209	1.09	-	75.32
PK	2.4868G	64.02	74.00	-9.98	32.25	3	Vertical	209	1.09	-	31.77
AV	2.4862G	53.53	54.00	-0.47	32.25	3	Vertical	209	1.09	-	21.28

### 802.11b\_Nss1,(1Mbps)\_2TX

14/11/2019

### 2462MHz\_TX



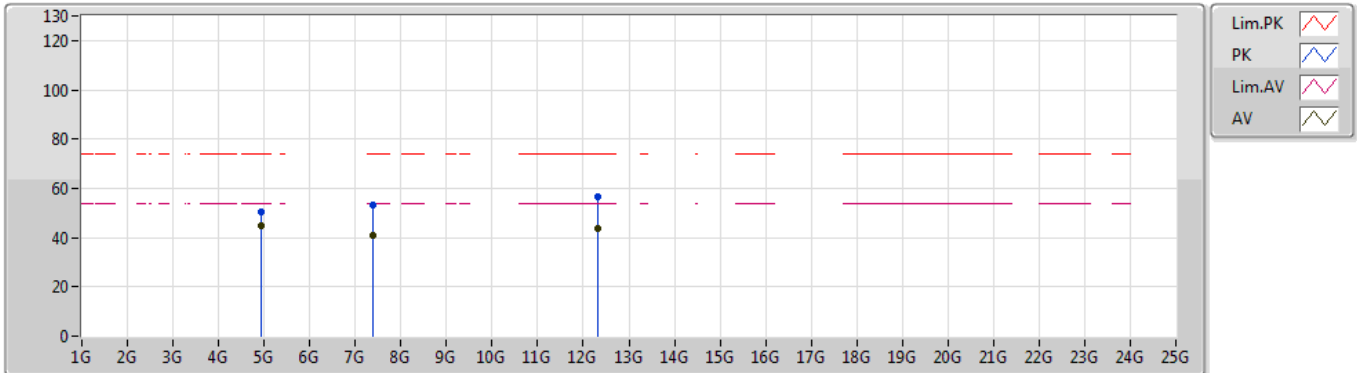
EUT\_Z\_2TX  
Setting 21  
03-E-2  
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.4594G	107.08	Inf	-Inf	32.14	3	Horizontal	84	1.50	-	74.94
AV	2.4602G	103.42	Inf	-Inf	32.14	3	Horizontal	84	1.50	-	71.28
PK	2.486G	59.03	74.00	-14.97	32.25	3	Horizontal	84	1.50	-	26.78
AV	2.4868G	47.83	54.00	-6.17	32.25	3	Horizontal	84	1.50	-	15.58

### 802.11b\_Nss1,(1Mbps)\_2TX

14/11/2019

### 2462MHz\_TX



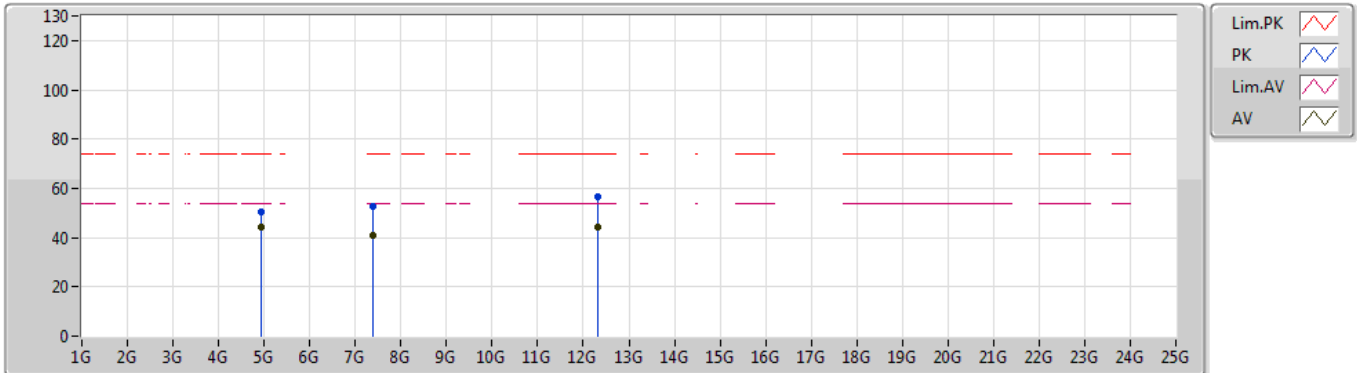
EUT\_Z\_2TX  
Setting 21  
03-E-2  
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	4.92393G	50.62	74.00	-23.38	5.12	3	Vertical	12	2.04	-	45.50
AV	4.92397G	44.81	54.00	-9.19	5.12	3	Vertical	12	2.04	-	39.69
PK	7.3825G	53.01	74.00	-20.99	9.47	3	Vertical	105	1.99	-	43.54
AV	7.38523G	40.83	54.00	-13.17	9.49	3	Vertical	105	1.99	-	31.34
PK	12.31048G	56.79	74.00	-17.21	14.71	3	Vertical	291	1.59	-	42.08
AV	12.30904G	43.97	54.00	-10.03	14.71	3	Vertical	291	1.59	-	29.26

### 802.11b\_Nss1,(1Mbps)\_2TX

14/11/2019

### 2462MHz\_TX



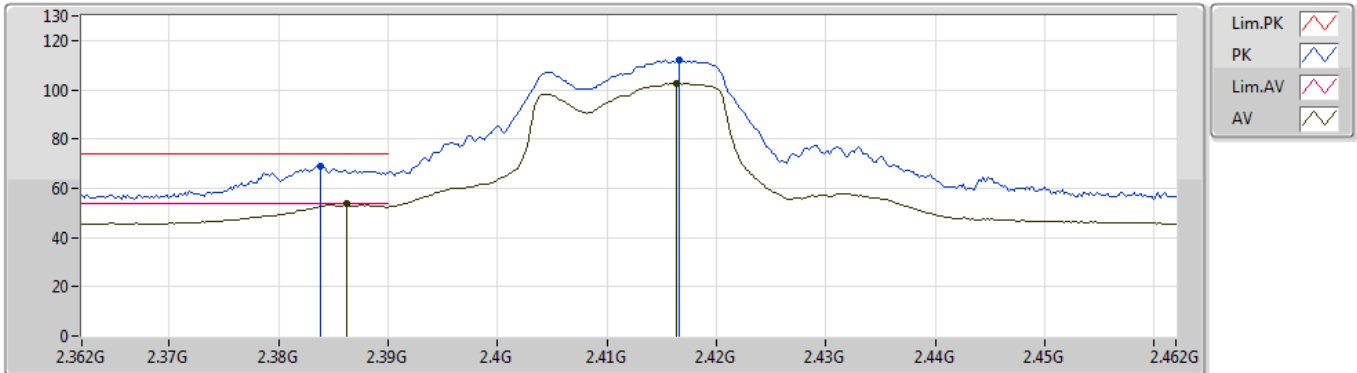
EUT\_Z\_2TX  
Setting 21  
03-E-2  
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	4.92393G	50.66	74.00	-23.34	5.12	3	Horizontal	150	2.06	-	45.54
AV	4.92396G	44.12	54.00	-9.88	5.12	3	Horizontal	150	2.06	-	39.00
PK	7.38559G	52.73	74.00	-21.27	9.49	3	Horizontal	8	1.91	-	43.24
AV	7.38521G	40.80	54.00	-13.20	9.49	3	Horizontal	8	1.91	-	31.31
PK	12.3065G	56.83	74.00	-17.17	14.70	3	Horizontal	330	2.17	-	42.13
AV	12.30894G	43.99	54.00	-10.01	14.71	3	Horizontal	330	2.17	-	29.28

### 802.11g\_Nss1,(6Mbps)\_2TX

14/11/2019

### 2412MHz\_TX



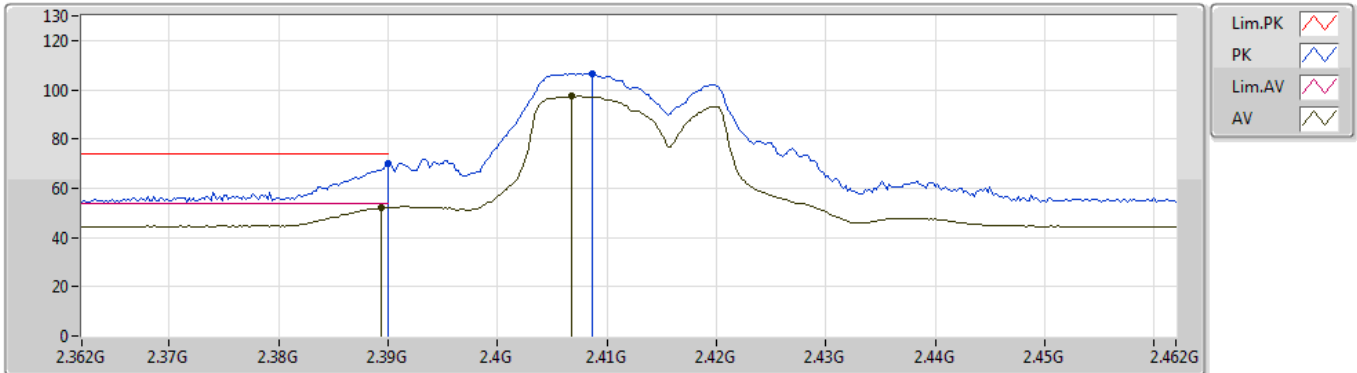
EUT\_Z\_2TX  
Setting 19  
03-E-2  
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.3838G	69.17	74.00	-4.83	31.86	3	Vertical	227	1.07	-	37.31
AV	2.3862G	53.56	54.00	-0.44	31.86	3	Vertical	227	1.07	-	21.70
PK	2.4166G	111.82	Inf	-Inf	31.97	3	Vertical	227	1.07	-	79.85
AV	2.4164G	102.40	Inf	-Inf	31.97	3	Vertical	227	1.07	-	70.43

### 802.11g\_Nss1,(6Mbps)\_2TX

14/11/2019

### 2412MHz\_TX



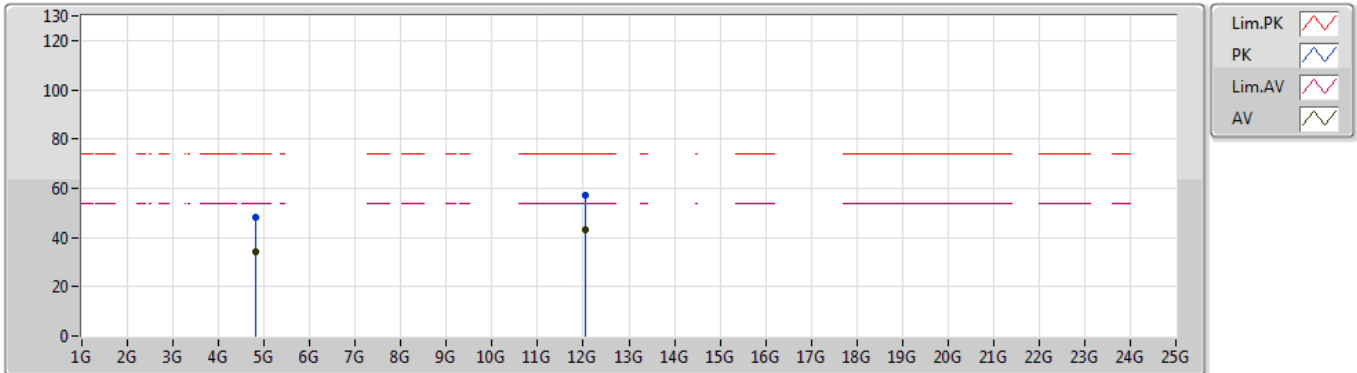
EUT\_Z\_2TX  
Setting 19  
03-E-2  
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.39G	70.04	74.00	-3.96	31.88	3	Horizontal	107	1.49	-	38.16
AV	2.3894G	52.08	54.00	-1.92	31.87	3	Horizontal	107	1.49	-	20.21
PK	2.4086G	106.61	Inf	-Inf	31.94	3	Horizontal	107	1.49	-	74.67
AV	2.4068G	97.37	Inf	-Inf	31.93	3	Horizontal	107	1.49	-	65.44

### 802.11g\_Nss1,(6Mbps)\_2TX

29/11/2019

### 2412MHz\_TX



EUT\_Z\_2TX  
Setting 19  
03-C-P-2

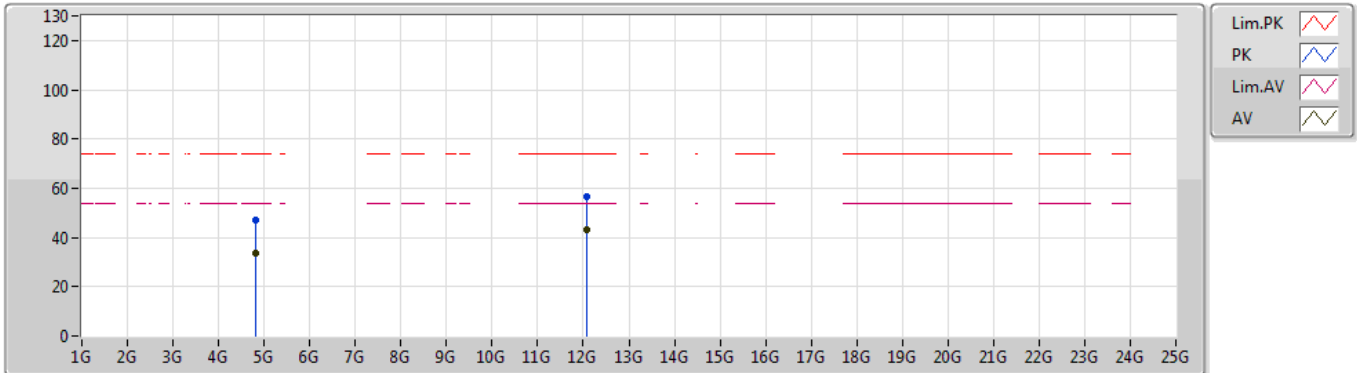
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	4.82364G	47.94	74.00	-26.06	4.97	3	Vertical	222	2.24	-	42.97
AV	4.82096G	34.25	54.00	-19.75	4.96	3	Vertical	222	2.24	-	29.29
PK	12.05622G	56.94	74.00	-17.06	14.24	3	Vertical	59	1.48	-	42.70
AV	12.05862G	43.24	54.00	-10.76	14.24	3	Vertical	59	1.48	-	29.00



### 802.11g\_Nss1,(6Mbps)\_2TX

29/11/2019

### 2412MHz\_TX



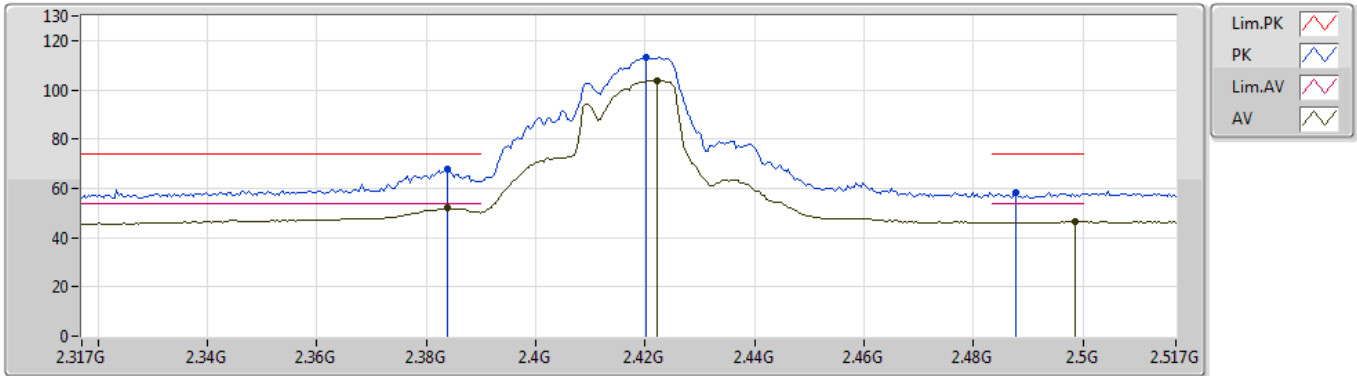
EUT\_Z\_2TX  
Setting 19  
03-C-P-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	4.82344G	47.32	74.00	-26.68	4.97	3	Horizontal	42	1.50	-	42.35
AV	4.81968G	33.79	54.00	-20.21	4.96	3	Horizontal	42	1.50	-	28.83
PK	12.06216G	56.69	74.00	-17.31	14.26	3	Horizontal	72	1.50	-	42.43
AV	12.06416G	43.23	54.00	-10.77	14.26	3	Horizontal	72	1.50	-	28.97

### 802.11g\_Nss1,(6Mbps)\_2TX

29/11/2019

### 2417MHz\_TX



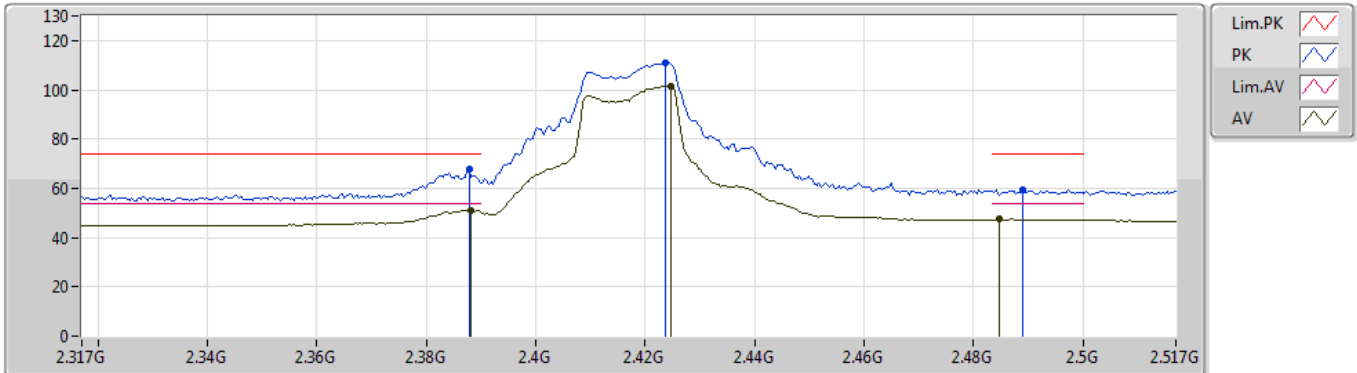
EUT\_Z\_2TX  
Setting 21  
03-A-3  
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.3838G	67.82	74.00	-6.18	31.86	3	Vertical	3	2.46	-	35.96
AV	2.3838G	52.07	54.00	-1.93	31.86	3	Vertical	3	2.46	-	20.21
PK	2.4202G	113.32	Inf	-Inf	31.98	3	Vertical	3	2.46	-	81.34
AV	2.4222G	103.77	Inf	-Inf	31.99	3	Vertical	3	2.46	-	71.78
PK	2.4878G	58.18	74.00	-15.82	32.25	3	Vertical	3	2.46	-	25.93
AV	2.4986G	46.51	54.00	-7.49	32.30	3	Vertical	3	2.46	-	14.21

### 802.11g\_Nss1,(6Mbps)\_2TX

29/11/2019

### 2417MHz\_TX



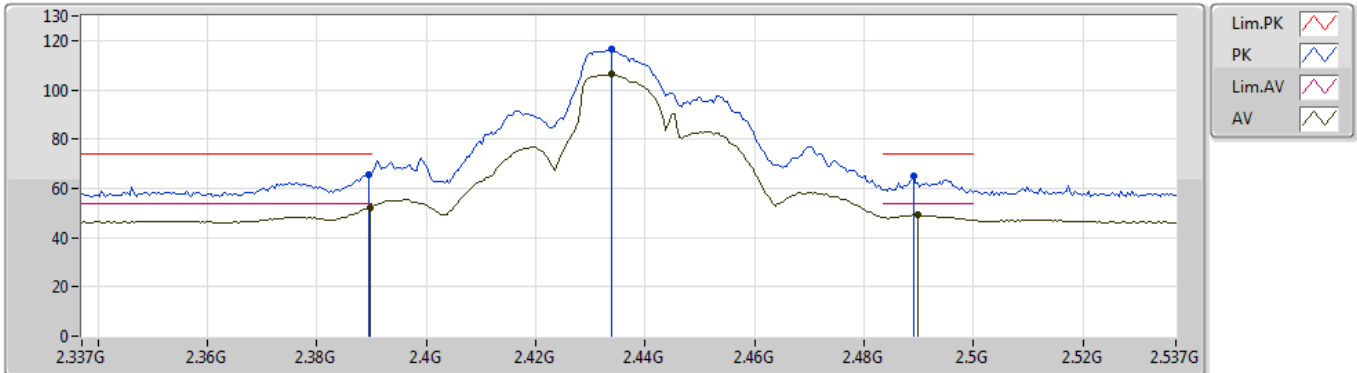
EUT\_Z\_2TX  
Setting 21  
03-A-3  
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.3878G	67.70	74.00	-6.30	31.87	3	Horizontal	274	1.32	-	35.83
AV	2.3882G	50.97	54.00	-3.03	31.87	3	Horizontal	274	1.32	-	19.10
PK	2.4238G	111.09	Inf	-Inf	31.99	3	Horizontal	274	1.32	-	79.10
AV	2.4246G	101.52	Inf	-Inf	31.99	3	Horizontal	274	1.32	-	69.53
PK	2.489G	59.58	74.00	-14.42	32.26	3	Horizontal	274	1.32	-	27.32
AV	2.4846G	47.53	54.00	-6.47	32.23	3	Horizontal	274	1.32	-	15.30

### 802.11g\_Nss1,(6Mbps)\_2TX

29/11/2019

### 2437MHz\_TX



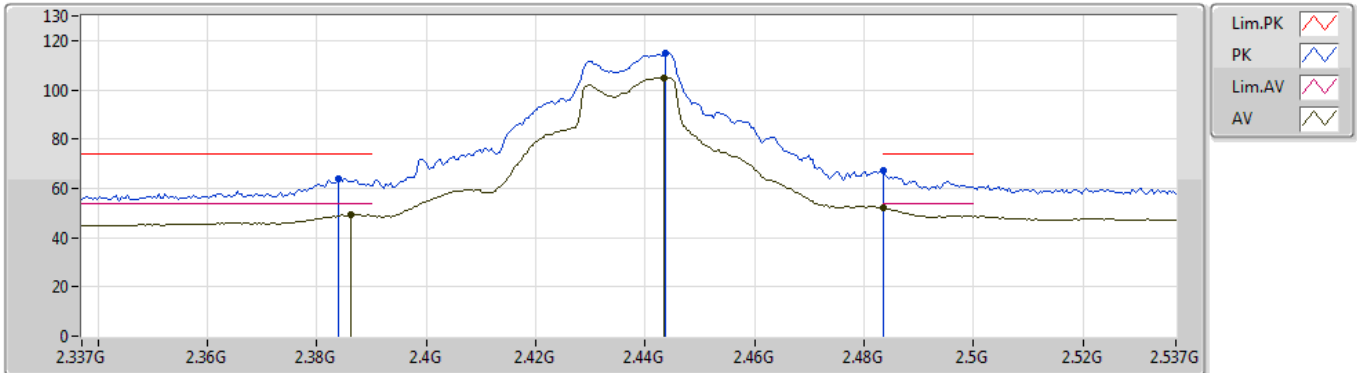
EUT\_Z\_2TX  
Setting 25  
03-A-3  
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.3894G	65.73	74.00	-8.27	31.87	3	Vertical	306	1.46	-	33.86
AV	2.3898G	52.24	54.00	-1.76	31.87	3	Vertical	306	1.46	-	20.37
PK	2.4338G	116.44	Inf	-Inf	32.03	3	Vertical	306	1.46	-	84.41
AV	2.4338G	106.28	Inf	-Inf	32.03	3	Vertical	306	1.46	-	74.25
PK	2.489G	64.86	74.00	-9.14	32.26	3	Vertical	306	1.46	-	32.60
AV	2.4898G	49.09	54.00	-4.91	32.26	3	Vertical	306	1.46	-	16.83

### 802.11g\_Nss1,(6Mbps)\_2TX

29/11/2019

### 2437MHz\_TX



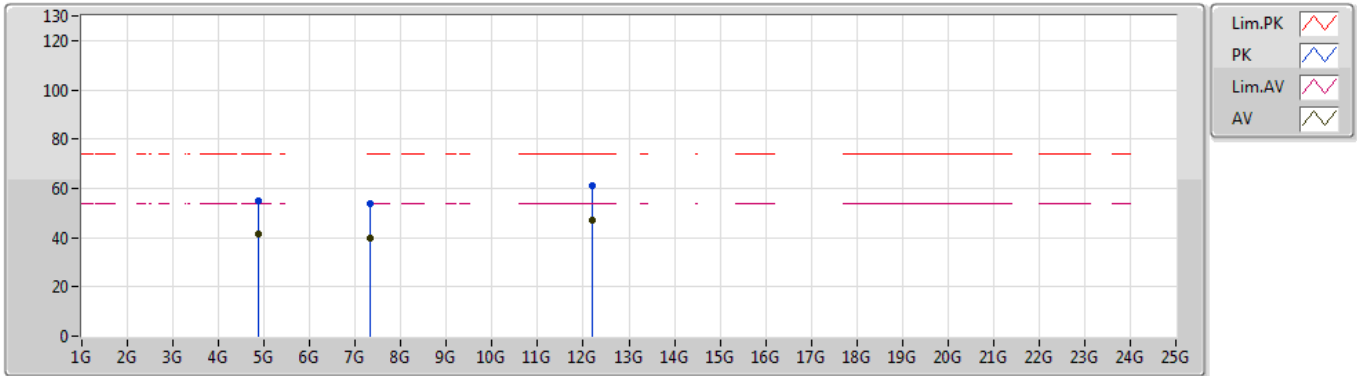
EUT\_Z\_2TX  
Setting 25  
03-A-3  
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.3838G	64.05	74.00	-9.95	31.86	3	Horizontal	273	1.36	-	32.19
AV	2.3862G	49.34	54.00	-4.66	31.86	3	Horizontal	273	1.36	-	17.48
PK	2.4438G	114.77	Inf	-Inf	32.07	3	Horizontal	273	1.36	-	82.70
AV	2.4434G	105.00	Inf	-Inf	32.07	3	Horizontal	273	1.36	-	72.93
PK	2.4835G	67.20	74.00	-6.80	32.23	3	Horizontal	273	1.36	-	34.97
AV	2.4835G	51.87	54.00	-2.13	32.23	3	Horizontal	273	1.36	-	19.64

### 802.11g\_Nss1,(6Mbps)\_2TX

29/11/2019

### 2437MHz\_TX



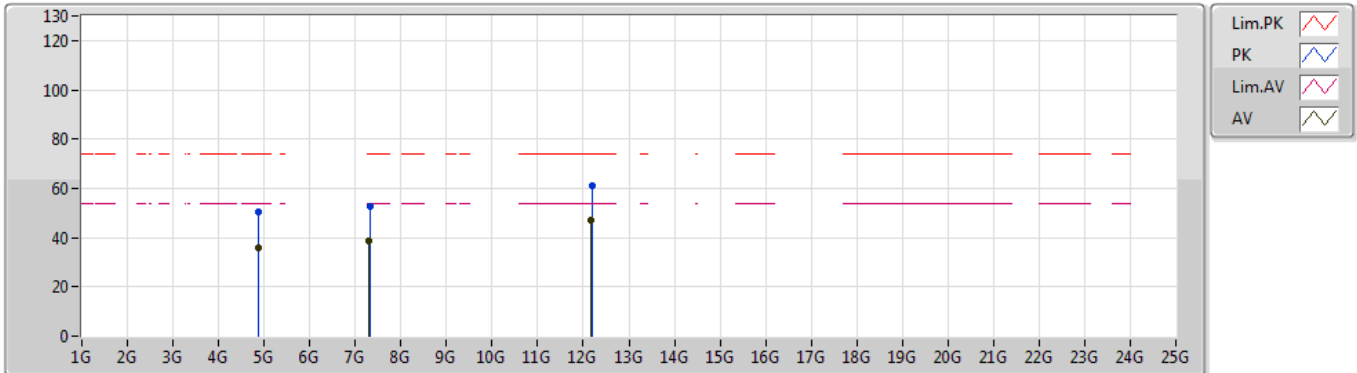
EUT\_Z\_2TX  
Setting 25  
03-A-3  
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	4.87586G	54.97	74.00	-19.03	5.04	3	Vertical	261	1.97	-	49.93
AV	4.87394G	41.69	54.00	-12.31	5.04	3	Vertical	261	1.97	-	36.65
PK	7.31172G	54.04	74.00	-19.96	9.34	3	Vertical	106	1.92	-	44.70
AV	7.31118G	39.81	54.00	-14.19	9.34	3	Vertical	106	1.92	-	30.47
PK	12.18482G	61.21	74.00	-12.79	14.49	3	Vertical	261	1.77	-	46.72
AV	12.18518G	47.17	54.00	-6.83	14.49	3	Vertical	261	1.77	-	32.68

### 802.11g\_Nss1,(6Mbps)\_2TX

29/11/2019

### 2437MHz\_TX



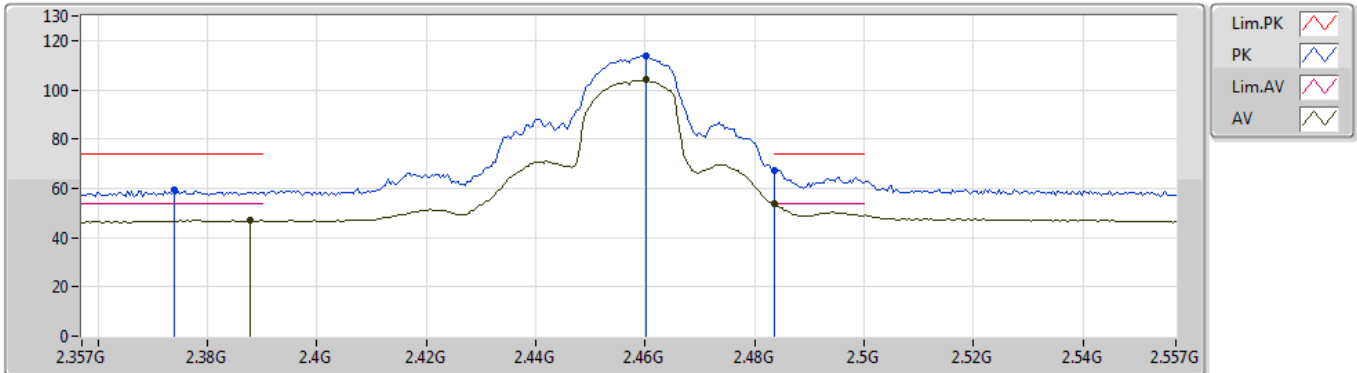
EUT\_Z\_2TX  
Setting 25  
03-A-3  
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	4.88438G	50.18	74.00	-23.82	5.06	3	Horizontal	230	2.31	-	45.12
AV	4.88294G	35.87	54.00	-18.13	5.06	3	Horizontal	230	2.31	-	30.81
PK	7.31022G	52.42	74.00	-21.58	9.34	3	Horizontal	305	1.48	-	43.08
AV	7.31004G	38.73	54.00	-15.27	9.34	3	Horizontal	305	1.48	-	29.39
PK	12.18494G	61.33	74.00	-12.67	14.49	3	Horizontal	304	2.80	-	46.84
AV	12.18284G	47.30	54.00	-6.70	14.47	3	Horizontal	304	2.80	-	32.83

### 802.11g\_Nss1,(6Mbps)\_2TX

29/11/2019

### 2457MHz\_TX



EUT\_Z\_2TX  
Setting 21  
03-C-P-2

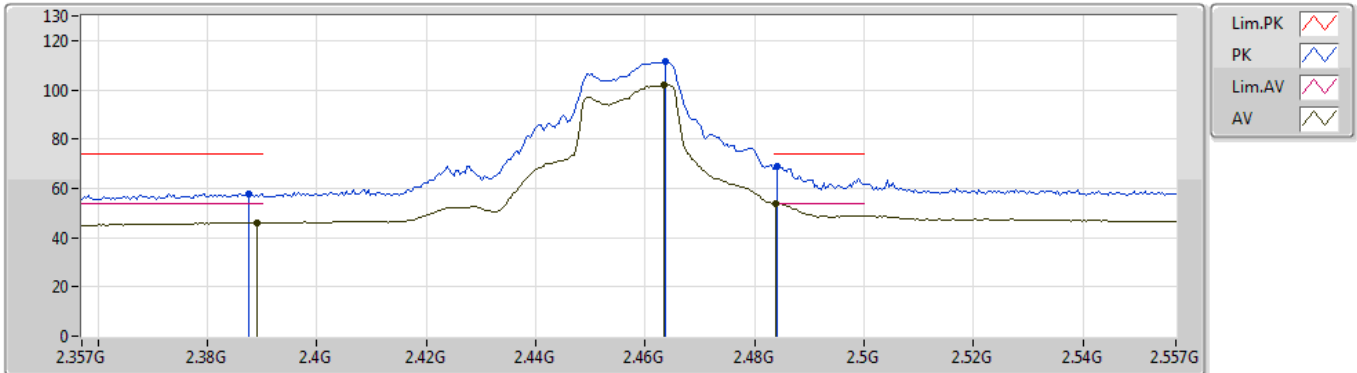
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.3738G	59.57	74.00	-14.43	31.84	3	Vertical	332	2.13	-	27.73
AV	2.3878G	47.02	54.00	-6.98	31.87	3	Vertical	332	2.13	-	15.15
PK	2.4602G	113.57	Inf	-Inf	32.14	3	Vertical	332	2.13	-	81.43
AV	2.4602G	104.02	Inf	-Inf	32.14	3	Vertical	332	2.13	-	71.88
PK	2.4835G	67.34	74.00	-6.66	32.23	3	Vertical	332	2.13	-	35.11
AV	2.4835G	53.59	54.00	-0.41	32.23	3	Vertical	332	2.13	-	21.36



### 802.11g\_Nss1,(6Mbps)\_2TX

29/11/2019

### 2457MHz\_TX



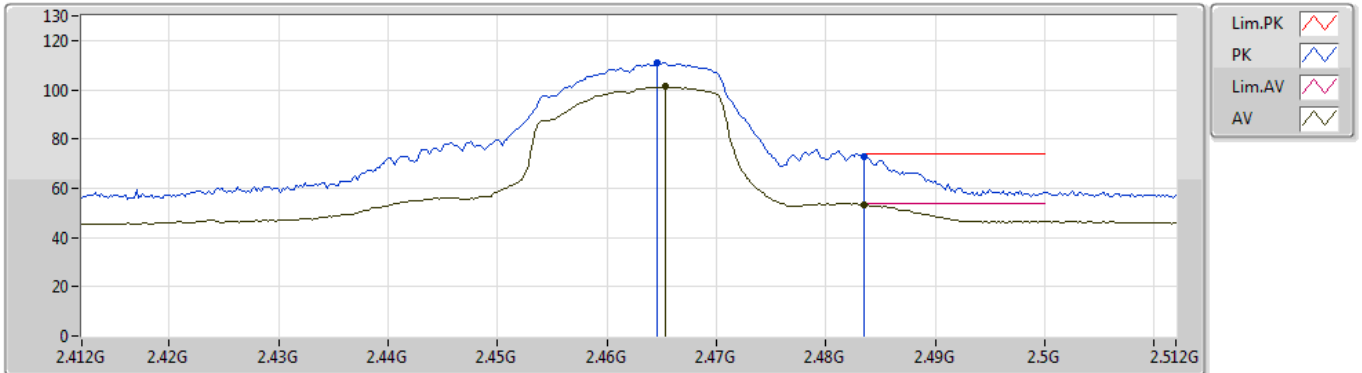
EUT\_Z\_2TX  
Setting 21  
03-C-P-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.3874G	57.94	74.00	-16.06	31.86	3	Horizontal	269	1.54	-	26.08
AV	2.389G	46.09	54.00	-7.91	31.87	3	Horizontal	269	1.54	-	14.22
PK	2.4638G	111.39	Inf	-Inf	32.15	3	Horizontal	269	1.54	-	79.24
AV	2.4634G	101.77	Inf	-Inf	32.15	3	Horizontal	269	1.54	-	69.62
PK	2.4842G	68.70	74.00	-5.30	32.23	3	Horizontal	269	1.54	-	36.47
AV	2.4838G	53.93	54.00	-0.07	32.23	3	Horizontal	269	1.54	-	21.70

### 802.11g\_Nss1,(6Mbps)\_2TX

14/11/2019

### 2462MHz\_TX



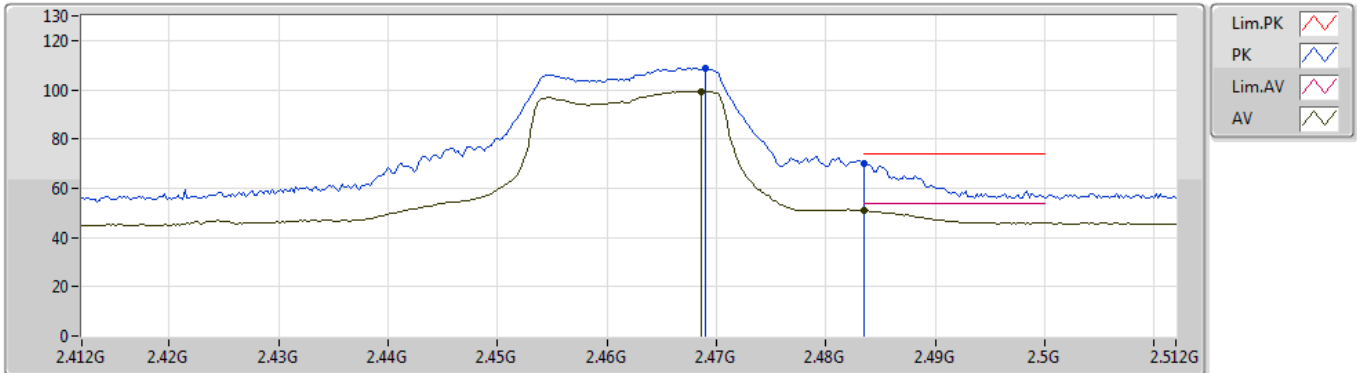
EUT\_Z\_2TX  
Setting 18  
03-E-2  
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.4646G	110.75	Inf	-Inf	32.15	3	Vertical	210	1.06	-	78.60
AV	2.4654G	101.24	Inf	-Inf	32.17	3	Vertical	210	1.06	-	69.07
PK	2.483501G	72.62	74.00	-1.38	32.23	3	Vertical	210	1.06	-	40.39
AV	2.483501G	53.51	54.00	-0.49	32.23	3	Vertical	210	1.06	-	21.28

### 802.11g\_Nss1,(6Mbps)\_2TX

14/11/2019

### 2462MHz\_TX



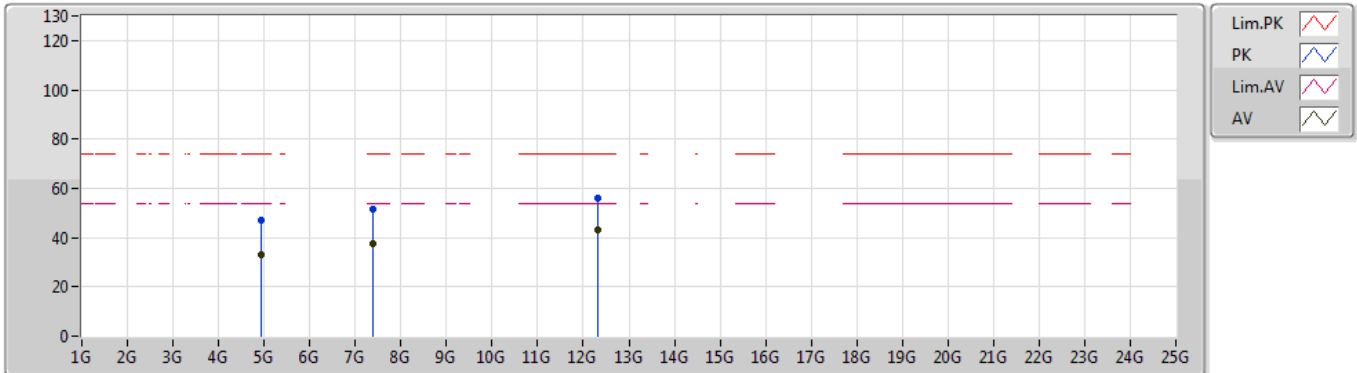
EUT\_Z\_2TX  
Setting 18  
03-E-2  
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.469G	108.89	Inf	-Inf	32.18	3	Horizontal	268	2.44	-	76.71
AV	2.4686G	99.34	Inf	-Inf	32.18	3	Horizontal	268	2.44	-	67.16
PK	2.4835G	70.24	74.00	-3.76	32.23	3	Horizontal	268	2.44	-	38.01
AV	2.4835G	50.91	54.00	-3.09	32.23	3	Horizontal	268	2.44	-	18.68

### 802.11g\_Nss1,(6Mbps)\_2TX

29/11/2019

### 2462MHz\_TX



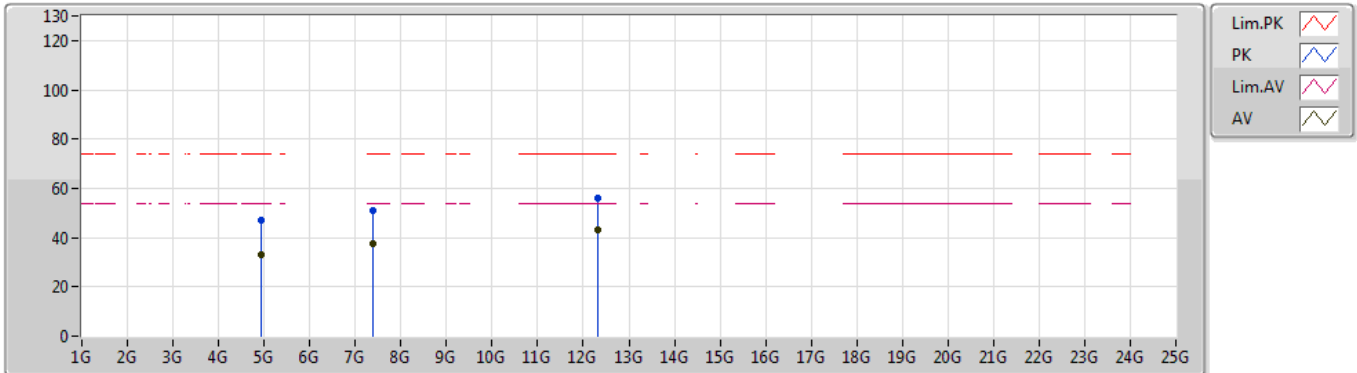
EUT\_Z\_2TX  
Setting 18  
03-C-P-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	4.92876G	46.87	74.00	-27.13	5.13	3	Vertical	316	1.49	-	41.74
AV	4.9205G	33.34	54.00	-20.66	5.11	3	Vertical	316	1.49	-	28.23
PK	7.38228G	51.31	74.00	-22.69	9.47	3	Vertical	268	1.50	-	41.84
AV	7.39468G	37.78	54.00	-16.22	9.50	3	Vertical	268	1.50	-	28.28
PK	12.31396G	56.08	74.00	-17.92	14.71	3	Vertical	264	2.98	-	41.37
AV	12.31376G	42.95	54.00	-11.05	14.71	3	Vertical	264	2.98	-	28.24

### 802.11g\_Nss1,(6Mbps)\_2TX

29/11/2019

### 2462MHz\_TX



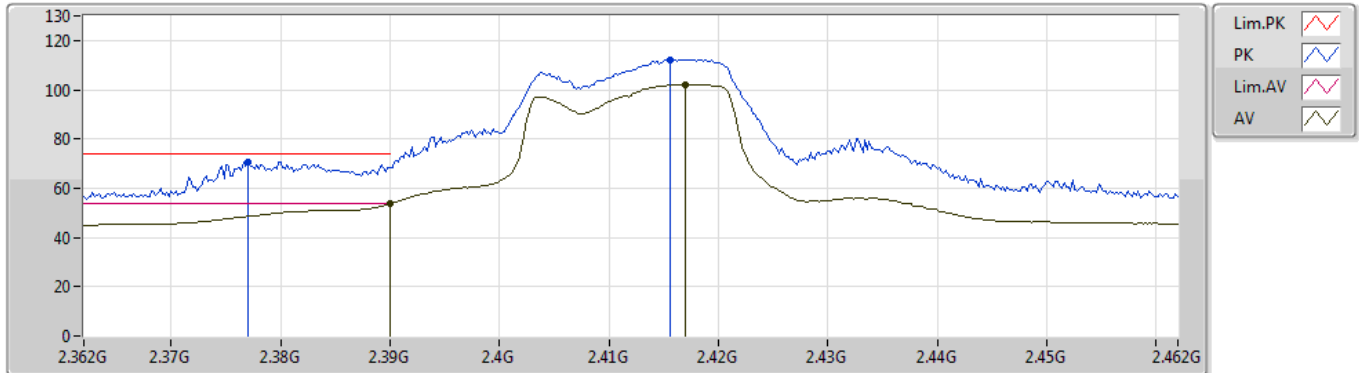
EUT\_Z\_2TX  
Setting 18  
03-C-P-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	4.92894G	47.24	74.00	-26.76	5.13	3	Horizontal	277	1.37	-	42.11
AV	4.9198G	33.31	54.00	-20.69	5.11	3	Horizontal	277	1.37	-	28.20
PK	7.385G	51.00	74.00	-23.00	9.48	3	Horizontal	256	2.01	-	41.52
AV	7.3858G	37.55	54.00	-16.45	9.49	3	Horizontal	256	2.01	-	28.06
PK	12.30542G	56.17	74.00	-17.83	14.70	3	Horizontal	128	1.50	-	41.47
AV	12.30604G	43.03	54.00	-10.97	14.70	3	Horizontal	128	1.50	-	28.33

VHT20\_Nss1,(MCS0)\_2TX

14/11/2019

2412MHz\_TX



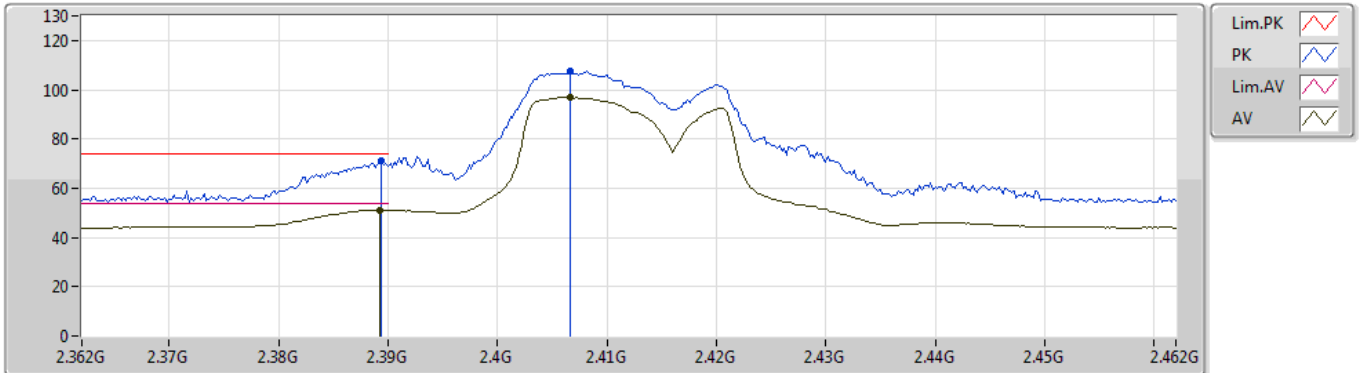
EUT\_Z\_2TX  
Setting 19  
03-E-2  
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.377G	70.74	74.00	-3.26	31.84	3	Vertical	227	1.07	-	38.90
AV	2.39G	53.64	54.00	-0.36	31.88	3	Vertical	227	1.07	-	21.76
PK	2.4156G	112.16	Inf	-Inf	31.97	3	Vertical	227	1.07	-	80.19
AV	2.417G	102.14	Inf	-Inf	31.97	3	Vertical	227	1.07	-	70.17

VHT20\_Nss1,(MCS0)\_2TX

14/11/2019

2412MHz\_TX



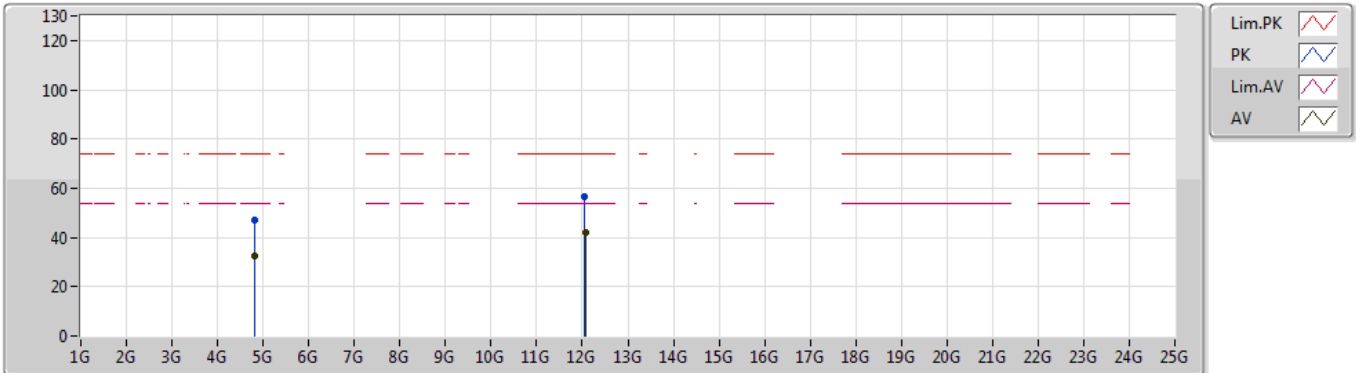
EUT\_Z\_2TX  
Setting 19  
03-E-2  
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.3894G	71.05	74.00	-2.95	31.87	3	Horizontal	107	1.51	-	39.18
AV	2.3892G	51.24	54.00	-2.76	31.87	3	Horizontal	107	1.51	-	19.37
PK	2.4066G	107.34	Inf	-Inf	31.93	3	Horizontal	107	1.51	-	75.41
AV	2.4066G	96.80	Inf	-Inf	31.93	3	Horizontal	107	1.51	-	64.87

VHT20\_Nss1,(MCS0)\_2TX

29/11/2019

2412MHz\_TX



EUT\_Z\_2TX  
Setting 19  
03-C-P-2

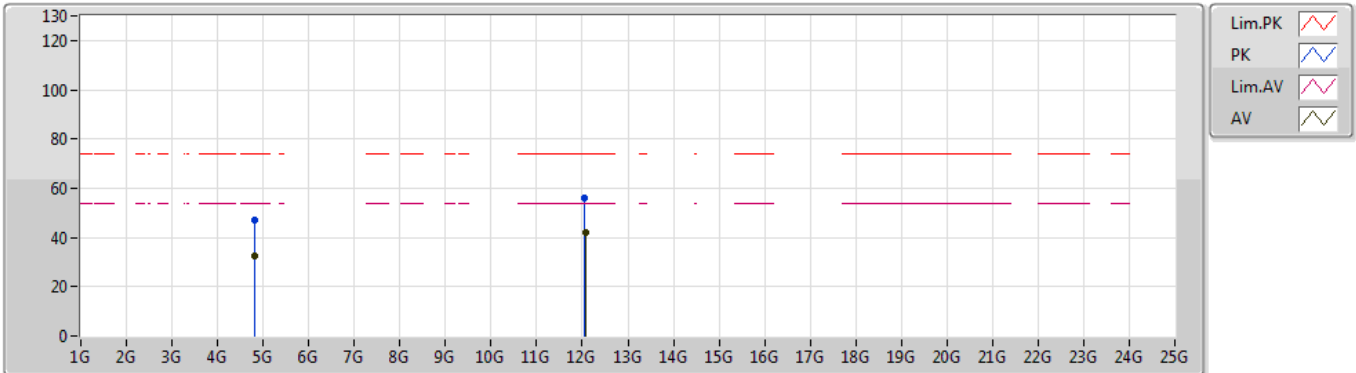
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	4.8219G	47.30	74.00	-26.70	4.96	3	Vertical	232	1.79	-	42.34
AV	4.82136G	32.75	54.00	-21.25	4.96	3	Vertical	232	1.79	-	27.79
PK	12.05834G	56.55	74.00	-17.45	14.24	3	Vertical	76	1.41	-	42.31
AV	12.06476G	42.22	54.00	-11.78	14.26	3	Vertical	76	1.41	-	27.96



VHT20\_Nss1,(MCS0)\_2TX

29/11/2019

2412MHz\_TX



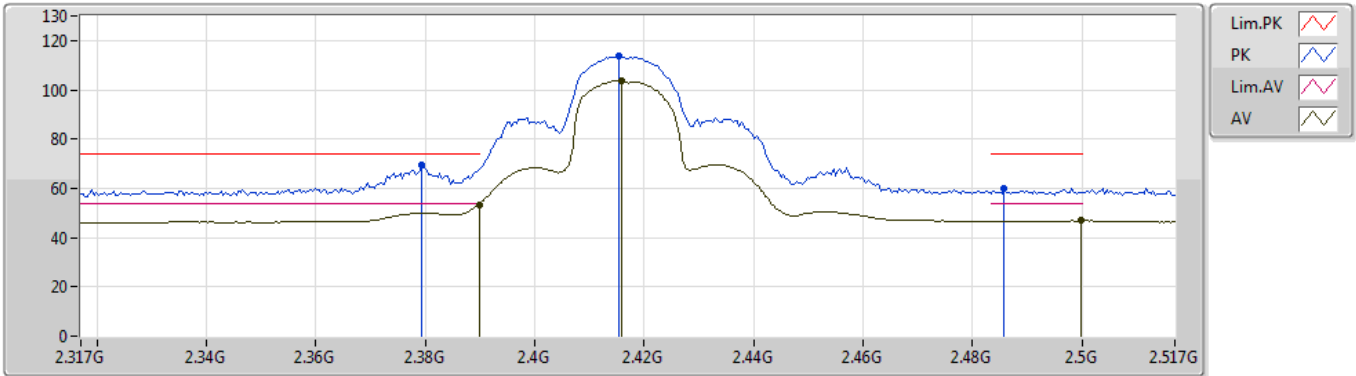
EUT\_Z\_2TX  
Setting 19  
03-C-P-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	4.8269G	46.84	74.00	-27.16	4.97	3	Horizontal	296	2.23	-	41.87
AV	4.82158G	32.77	54.00	-21.23	4.96	3	Horizontal	296	2.23	-	27.81
PK	12.05824G	56.27	74.00	-17.73	14.24	3	Horizontal	273	1.53	-	42.03
AV	12.06238G	42.29	54.00	-11.71	14.26	3	Horizontal	273	1.53	-	28.03

VHT20\_Nss1,(MCS0)\_2TX

29/11/2019

2417MHz\_TX



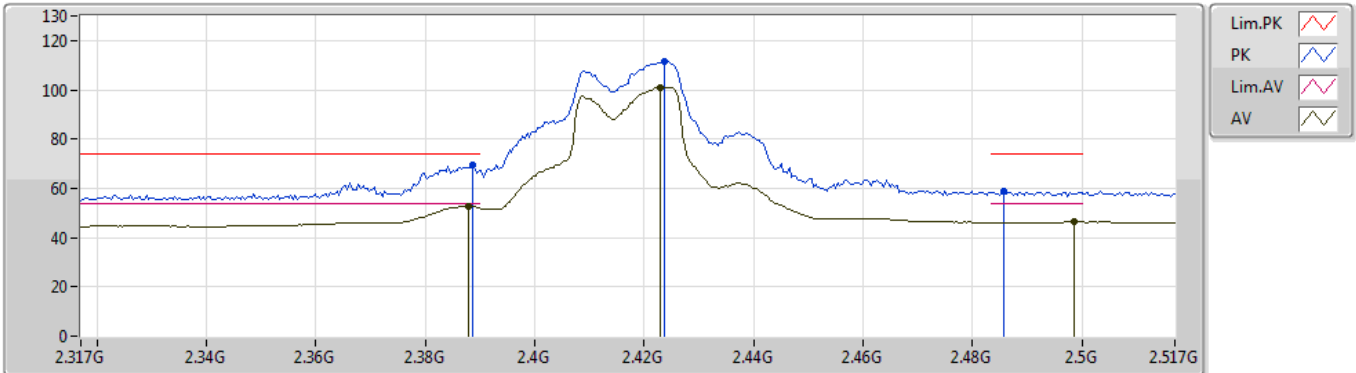
EUT Z\_2TX  
Setting 21  
03-C-P-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.3794G	69.26	74.00	-4.74	31.85	3	Vertical	321	2.67	-	37.41
AV	2.3898G	53.46	54.00	-0.54	31.87	3	Vertical	321	2.67	-	21.59
PK	2.4154G	113.87	Inf	-Inf	31.97	3	Vertical	321	2.67	-	81.90
AV	2.4158G	103.64	Inf	-Inf	31.97	3	Vertical	321	2.67	-	71.67
PK	2.4858G	59.86	74.00	-14.14	32.25	3	Vertical	321	2.67	-	27.61
AV	2.4998G	47.08	54.00	-6.92	32.30	3	Vertical	321	2.67	-	14.78

VHT20\_Nss1,(MCS0)\_2TX

29/11/2019

2417MHz\_TX



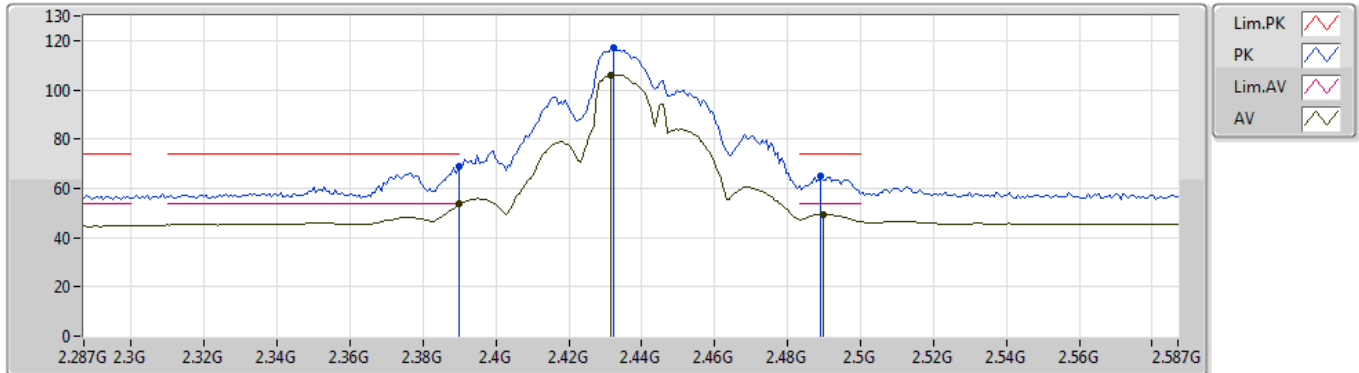
EUT Z\_2TX  
Setting 21  
03-C-P-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.3886G	69.41	74.00	-4.59	31.87	3	Horizontal	270	1.56	-	37.54
AV	2.3878G	52.74	54.00	-1.26	31.87	3	Horizontal	270	1.56	-	20.87
PK	2.4238G	111.41	Inf	-Inf	31.99	3	Horizontal	270	1.56	-	79.42
AV	2.423G	101.08	Inf	-Inf	31.99	3	Horizontal	270	1.56	-	69.09
PK	2.4858G	58.90	74.00	-15.10	32.25	3	Horizontal	270	1.56	-	26.65
AV	2.4986G	46.32	54.00	-7.68	32.30	3	Horizontal	270	1.56	-	14.02

VHT20\_Nss1,(MCS0)\_2TX

29/11/2019

2437MHz\_TX



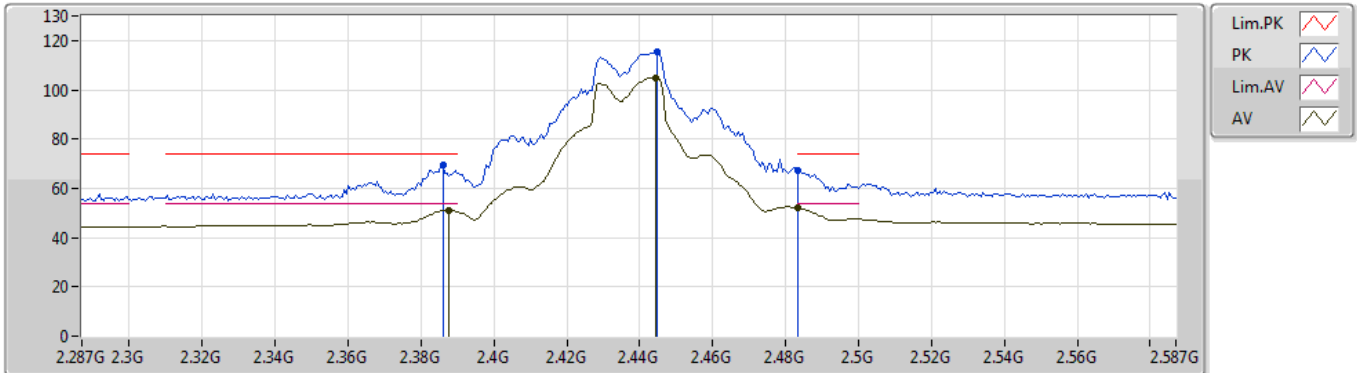
EUT Z\_2TX  
Setting 25  
03-C-P-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.39G	68.66	74.00	-5.34	31.87	3	Vertical	305	1.45	-	36.79
AV	2.39G	53.53	54.00	-0.47	31.87	3	Vertical	305	1.45	-	21.66
PK	2.4322G	116.98	Inf	-Inf	32.03	3	Vertical	305	1.45	-	84.95
AV	2.4316G	106.03	Inf	-Inf	32.02	3	Vertical	305	1.45	-	74.01
PK	2.4892G	65.27	74.00	-8.73	32.26	3	Vertical	305	1.45	-	33.01
AV	2.4898G	49.52	54.00	-4.48	32.26	3	Vertical	305	1.45	-	17.26

VHT20\_Nss1,(MCS0)\_2TX

29/11/2019

2437MHz\_TX



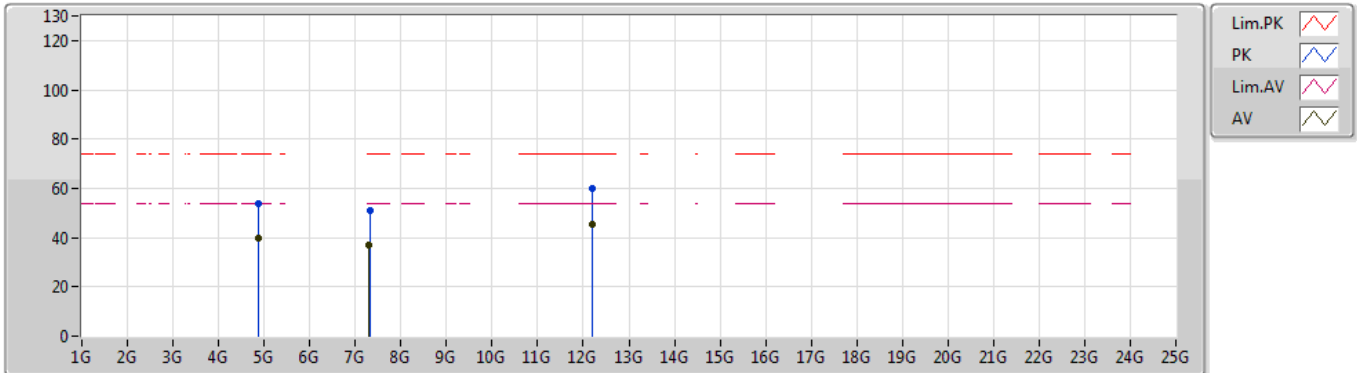
EUT Z\_2TX  
Setting 25  
03-C-P-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.386G	69.25	74.00	-4.75	31.86	3	Horizontal	265	1.17	-	37.39
AV	2.3878G	51.09	54.00	-2.91	31.87	3	Horizontal	265	1.17	-	19.22
PK	2.4448G	115.31	Inf	-Inf	32.07	3	Horizontal	265	1.17	-	83.24
AV	2.4442G	104.79	Inf	-Inf	32.07	3	Horizontal	265	1.17	-	72.72
PK	2.4835G	67.26	74.00	-6.74	32.23	3	Horizontal	265	1.17	-	35.03
AV	2.4835G	52.12	54.00	-1.88	32.23	3	Horizontal	265	1.17	-	19.89

VHT20\_Nss1,(MCS0)\_2TX

29/11/2019

2437MHz\_TX



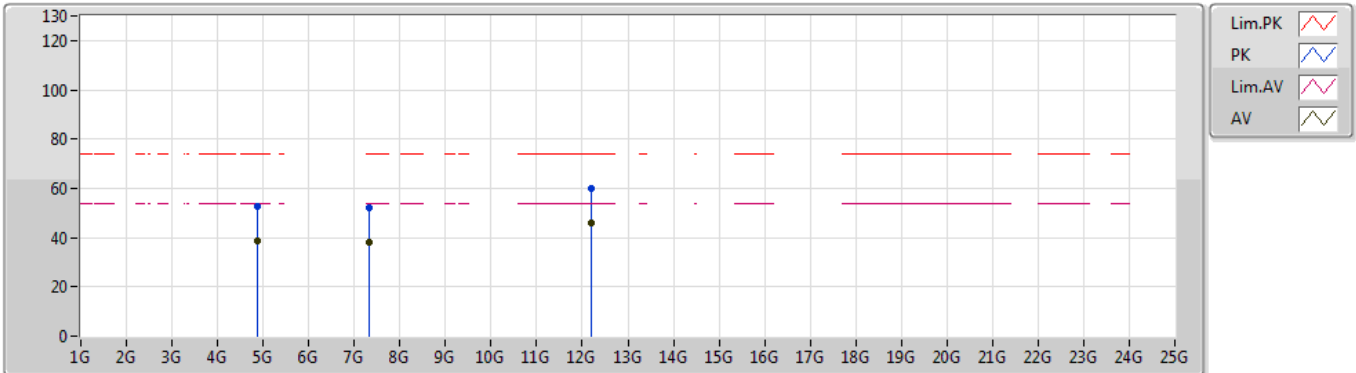
EUT\_Z\_2TX  
Setting 25  
03-C-P-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	4.8742G	54.00	74.00	-20.00	5.04	3	Vertical	262	1.95	-	48.96
AV	4.8734G	39.79	54.00	-14.21	5.04	3	Vertical	262	1.95	-	34.75
PK	7.31334G	50.92	74.00	-23.08	9.34	3	Vertical	152	1.01	-	41.58
AV	7.30878G	36.78	54.00	-17.22	9.34	3	Vertical	152	1.01	-	27.44
PK	12.183G	60.16	74.00	-13.84	14.48	3	Vertical	260	1.88	-	45.68
AV	12.1848G	45.66	54.00	-8.34	14.49	3	Vertical	260	1.88	-	31.17

### VHT20\_Nss1,(MCS0)\_2TX

29/11/2019

### 2437MHz\_TX



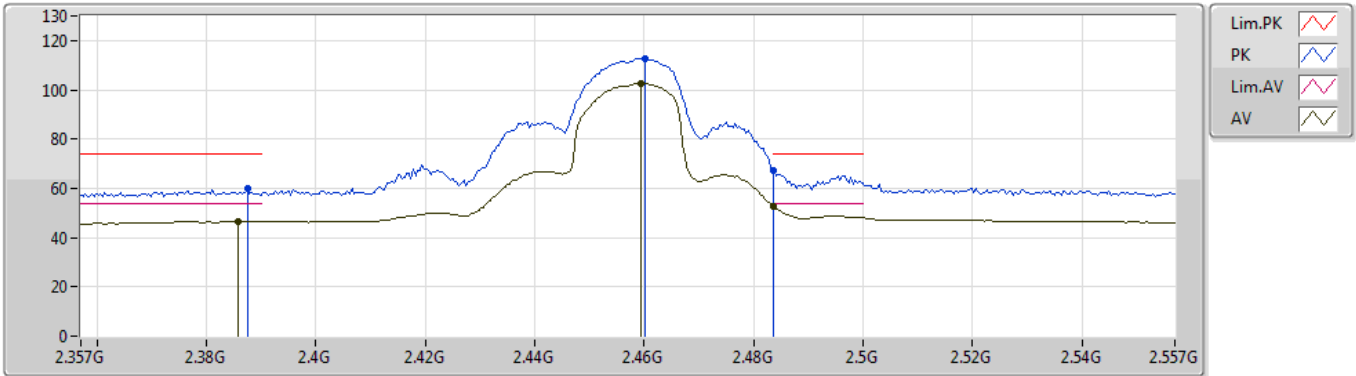
EUT\_Z\_2TX  
Setting 25  
03-C-P-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	4.8702G	52.44	74.00	-21.56	5.03	3	Horizontal	325	2.14	-	47.41
AV	4.8726G	38.52	54.00	-15.48	5.04	3	Horizontal	325	2.14	-	33.48
PK	7.3108G	52.31	74.00	-21.69	9.34	3	Horizontal	266	2.11	-	42.97
AV	7.3112G	38.02	54.00	-15.98	9.34	3	Horizontal	266	2.11	-	28.68
PK	12.1852G	60.17	74.00	-13.83	14.49	3	Horizontal	275	1.79	-	45.68
AV	12.184G	45.89	54.00	-8.11	14.48	3	Horizontal	275	1.79	-	31.41

VHT20\_Nss1,(MCS0)\_2TX

29/11/2019

2457MHz\_TX



EUT Z\_2TX  
Setting 20  
03-C-P-2

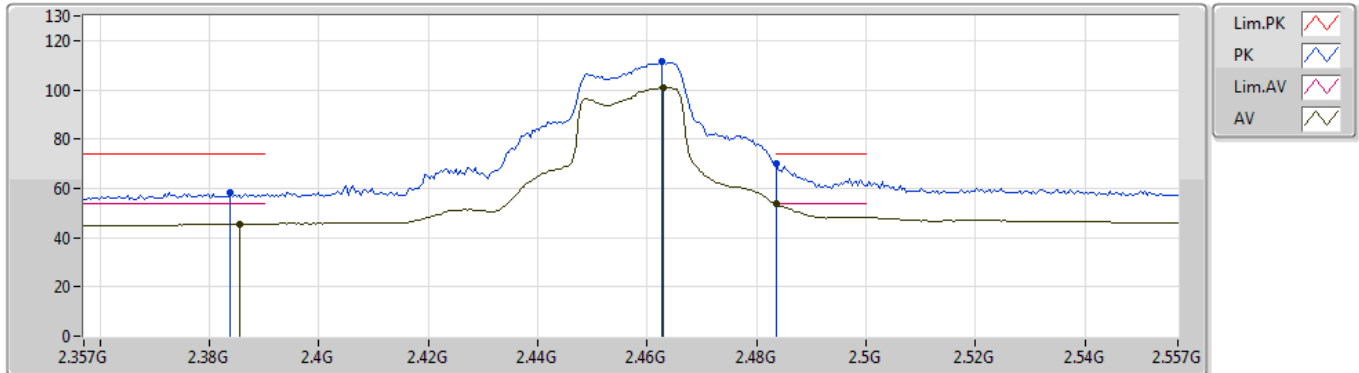
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.3874G	59.72	74.00	-14.28	31.86	3	Vertical	335	2.13	-	27.86
AV	2.3858G	46.38	54.00	-7.62	31.86	3	Vertical	335	2.13	-	14.52
PK	2.4602G	112.84	Inf	-Inf	32.14	3	Vertical	335	2.13	-	80.70
AV	2.4594G	102.63	Inf	-Inf	32.14	3	Vertical	335	2.13	-	70.49
PK	2.4835G	67.35	74.00	-6.65	32.23	3	Vertical	335	2.13	-	35.12
AV	2.4835G	52.84	54.00	-1.16	32.23	3	Vertical	335	2.13	-	20.61



VHT20\_Nss1,(MCS0)\_2TX

29/11/2019

2457MHz\_TX



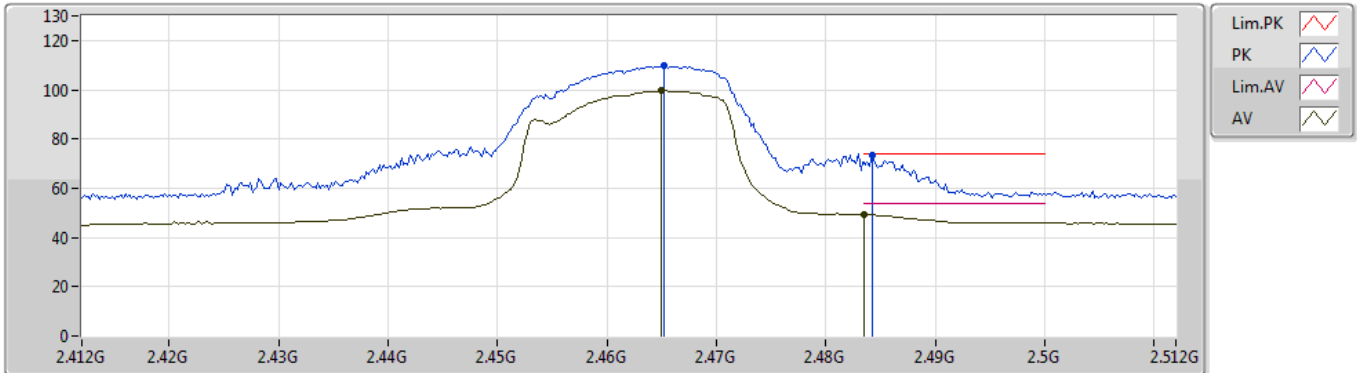
EUT Z\_2TX  
Setting 20  
03-C-P-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.3838G	58.17	74.00	-15.83	31.86	3	Horizontal	270	1.53	-	26.31
AV	2.3854G	45.60	54.00	-8.40	31.86	3	Horizontal	270	1.53	-	13.74
PK	2.4626G	111.38	Inf	-Inf	32.15	3	Horizontal	270	1.53	-	79.23
AV	2.463G	100.81	Inf	-Inf	32.15	3	Horizontal	270	1.53	-	68.66
PK	2.4835G	70.02	74.00	-3.98	32.23	3	Horizontal	270	1.53	-	37.79
AV	2.4835G	53.64	54.00	-0.36	32.23	3	Horizontal	270	1.53	-	21.41

VHT20\_Nss1,(MCS0)\_2TX

29/11/2019

2462MHz\_TX



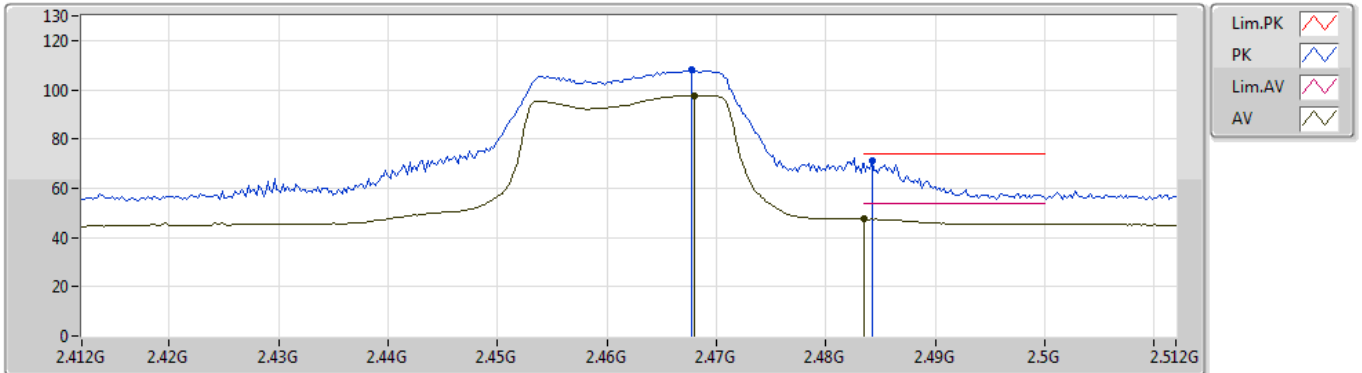
EUT Z\_2TX  
Setting 17  
03-E-2  
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.4652G	109.66	Inf	-Inf	32.17	3	Vertical	209	1.06	-	77.49
AV	2.465G	99.52	Inf	-Inf	32.17	3	Vertical	209	1.06	-	67.35
AV	2.48350G	49.38	54.00	-4.62	32.23	3	Vertical	209	1.06	-	17.15
PK	2.4842G	73.53	74.00	-0.47	32.23	3	Vertical	209	1.06	-	41.30

VHT20\_Nss1,(MCS0)\_2TX

29/11/2019

2462MHz\_TX



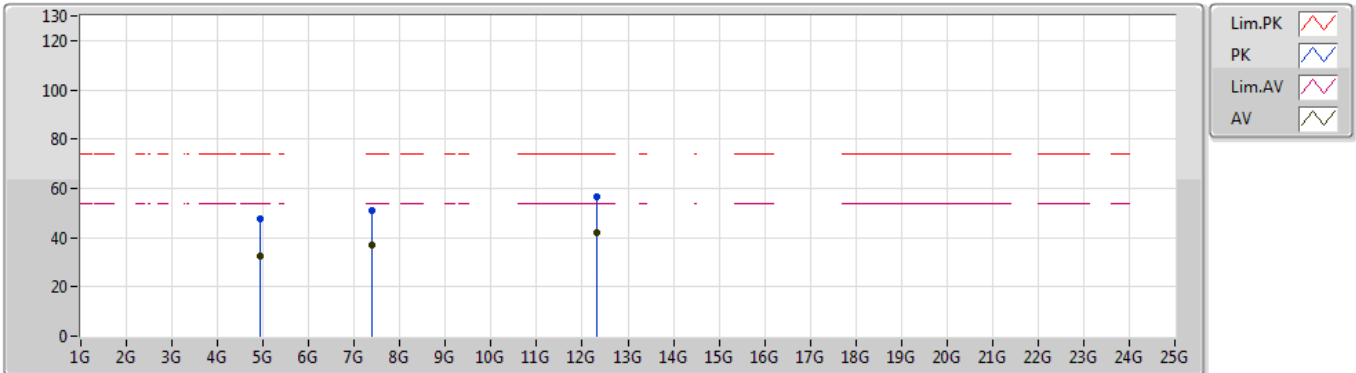
EUT Z\_2TX  
Setting 17  
03-E-2  
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.4678G	108.17	Inf	-Inf	32.17	3	Horizontal	268	2.44	-	76.00
AV	2.468G	97.67	Inf	-Inf	32.17	3	Horizontal	268	2.44	-	65.50
PK	2.4842G	70.97	74.00	-3.03	32.23	3	Horizontal	268	2.44	-	38.74
AV	2.4835G	47.50	54.00	-6.50	32.23	3	Horizontal	268	2.44	-	15.27

### VHT20\_Nss1,(MCS0)\_2TX

29/11/2019

### 2462MHz\_TX



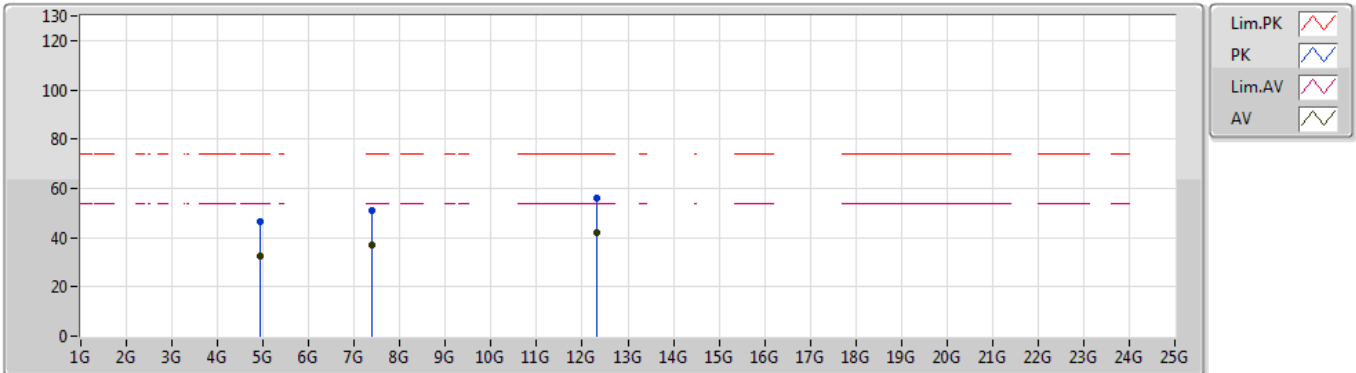
EUT\_Z\_2TX  
Setting 17  
03-C-P-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	4.92152G	47.42	74.00	-26.58	5.11	3	Vertical	168	2.08	-	42.31
AV	4.91934G	32.51	54.00	-21.49	5.11	3	Vertical	168	2.08	-	27.40
PK	7.38334G	50.97	74.00	-23.03	9.48	3	Vertical	209	1.57	-	41.49
AV	7.39098G	36.85	54.00	-17.15	9.49	3	Vertical	209	1.57	-	27.36
PK	12.31178G	56.41	74.00	-17.59	14.71	3	Vertical	213	1.05	-	41.70
AV	12.30766G	42.08	54.00	-11.92	14.71	3	Vertical	213	1.05	-	27.37

VHT20\_Nss1,(MCS0)\_2TX

29/11/2019

2462MHz\_TX



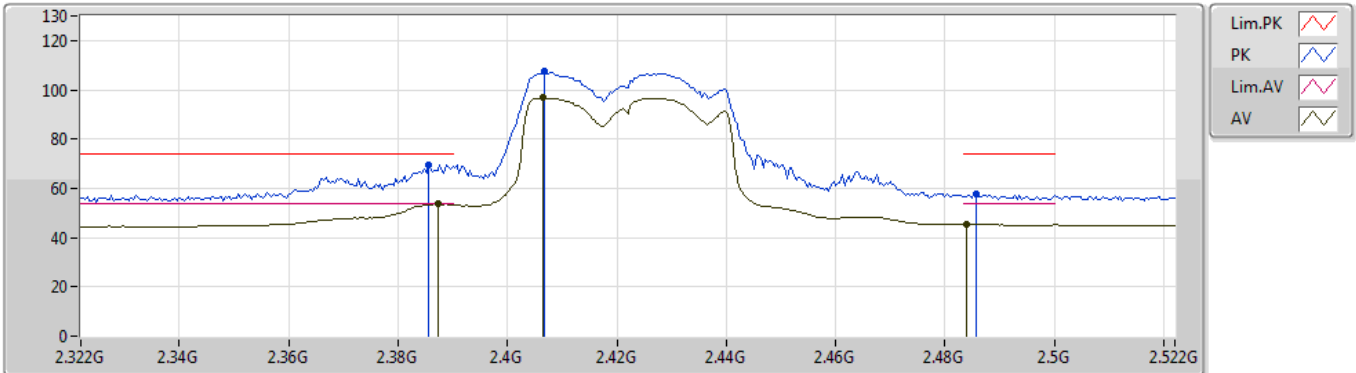
EUT\_Z\_2TX  
Setting 17  
03-C-P-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	4.92214G	46.38	74.00	-27.62	5.11	3	Horizontal	184	1.27	-	41.27
AV	4.91934G	32.49	54.00	-21.51	5.11	3	Horizontal	184	1.27	-	27.38
PK	7.39008G	51.15	74.00	-22.85	9.49	3	Horizontal	79	2.93	-	41.66
AV	7.38874G	36.96	54.00	-17.04	9.49	3	Horizontal	79	2.93	-	27.47
PK	12.31424G	56.16	74.00	-17.84	14.71	3	Horizontal	313	1.50	-	41.45
AV	12.30546G	42.14	54.00	-11.86	14.70	3	Horizontal	313	1.50	-	27.44

VHT40\_Nss1,(MCS0)\_2TX

29/11/2019

2422MHz\_TX



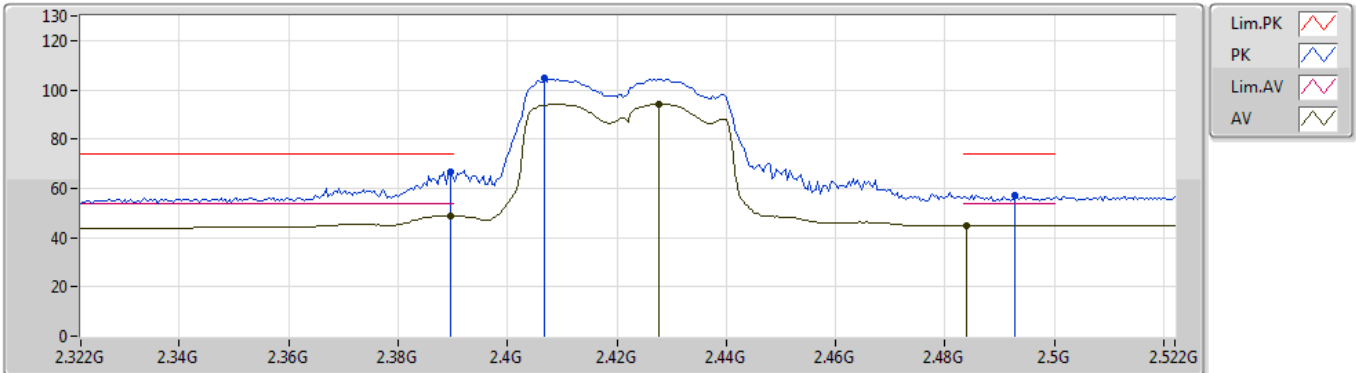
EUT\_Z\_2TX  
 Setting 16  
 03-E-2  
 FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.3856G	69.64	74.00	-4.36	31.86	3	Vertical	226	1.05	-	37.78
AV	2.3872G	53.68	54.00	-0.32	31.86	3	Vertical	226	1.05	-	21.82
PK	2.4068G	107.39	Inf	-Inf	31.93	3	Vertical	226	1.05	-	75.46
AV	2.4064G	96.67	Inf	-Inf	31.93	3	Vertical	226	1.05	-	64.74
PK	2.4856G	57.74	74.00	-16.26	32.25	3	Vertical	226	1.05	-	25.49
AV	2.484G	45.53	54.00	-8.47	32.23	3	Vertical	226	1.05	-	13.30

VHT40\_Nss1,(MCS0)\_2TX

29/11/2019

2422MHz\_TX



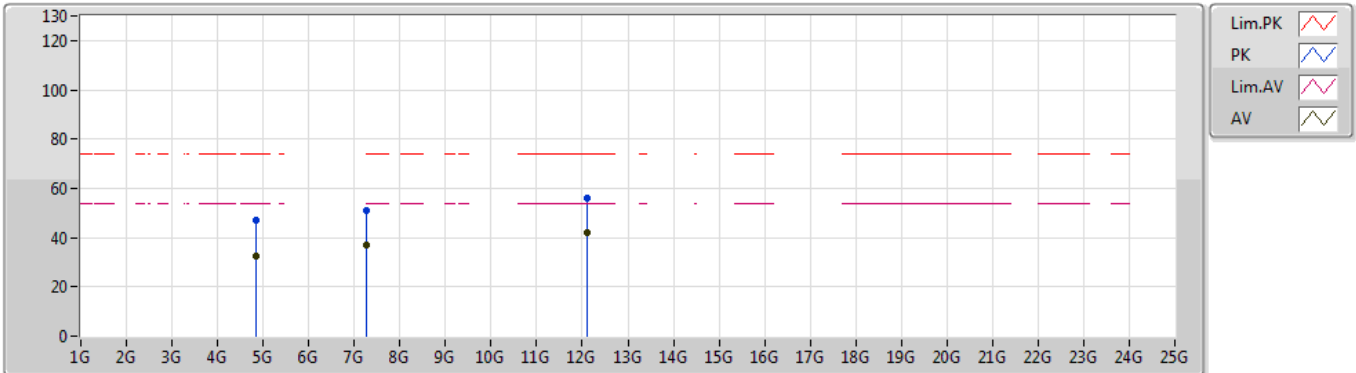
EUT Z\_2TX  
Setting 16  
03-E-2  
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.3896G	66.95	74.00	-7.05	31.87	3	Horizontal	268	2.53	-	35.08
AV	2.3896G	49.01	54.00	-4.99	31.87	3	Horizontal	268	2.53	-	17.14
PK	2.4068G	104.51	Inf	-Inf	31.93	3	Horizontal	268	2.53	-	72.58
AV	2.4276G	94.20	Inf	-Inf	32.01	3	Horizontal	268	2.53	-	62.19
PK	2.4928G	57.00	74.00	-17.00	32.27	3	Horizontal	268	2.53	-	24.73
AV	2.484G	44.85	54.00	-9.15	32.23	3	Horizontal	268	2.53	-	12.62

### VHT40\_Nss1,(MCS0)\_2TX

29/11/2019

### 2422MHz\_TX



EUT\_Z\_2TX  
Setting 16  
03-C-P-2

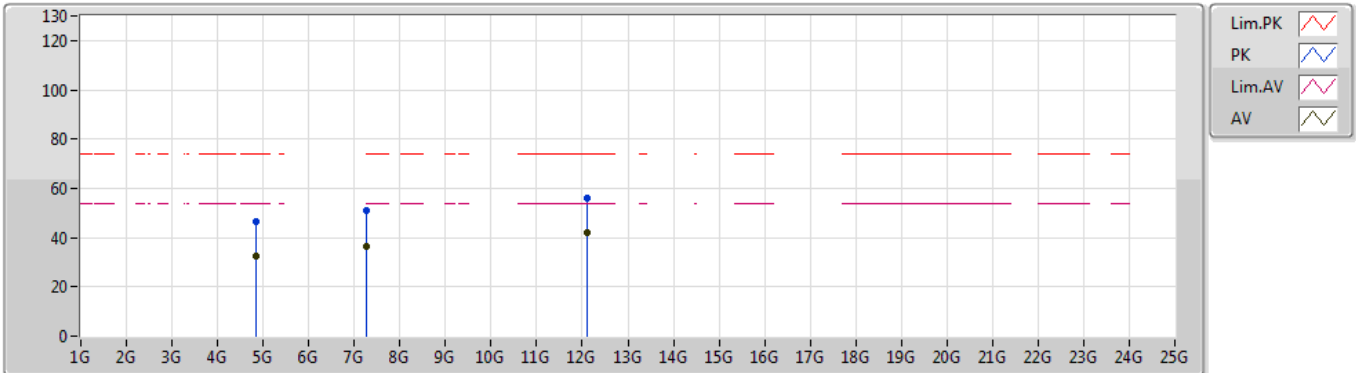
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	4.84788G	47.29	74.00	-26.71	5.01	3	Vertical	336	2.27	-	42.28
AV	4.8425G	32.57	54.00	-21.43	5.00	3	Vertical	336	2.27	-	27.57
PK	7.26626G	51.05	74.00	-22.95	9.11	3	Vertical	260	1.27	-	41.94
AV	7.26634G	36.79	54.00	-17.21	9.11	3	Vertical	260	1.27	-	27.68
PK	12.11384G	56.19	74.00	-17.81	14.35	3	Vertical	347	2.19	-	41.84
AV	12.11132G	41.93	54.00	-12.07	14.35	3	Vertical	347	2.19	-	27.58



### VHT40\_Nss1,(MCS0)\_2TX

29/11/2019

### 2422MHz\_TX



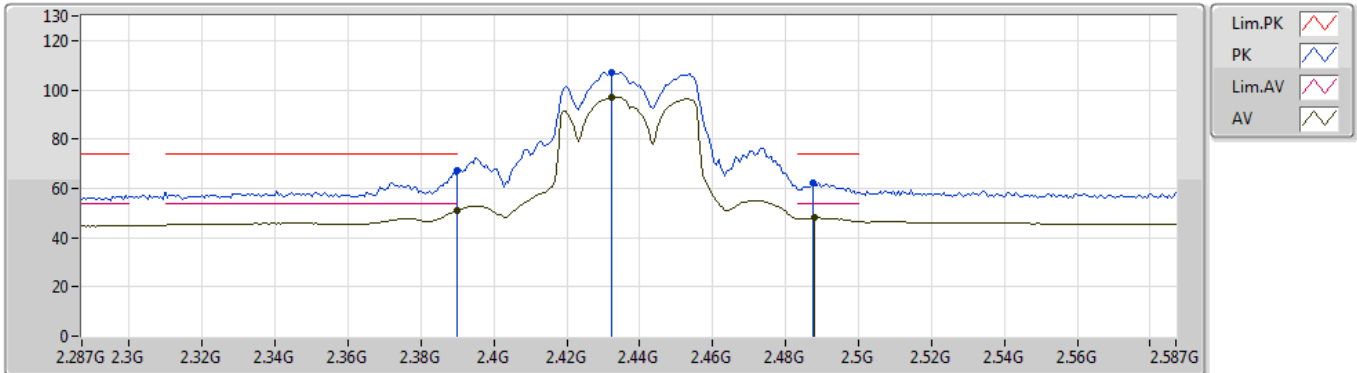
EUT\_Z\_2TX  
Setting 16  
03-C-P-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	4.8433G	46.73	74.00	-27.27	5.00	3	Horizontal	89	2.04	-	41.73
AV	4.84272G	32.61	54.00	-21.39	5.00	3	Horizontal	89	2.04	-	27.61
PK	7.26582G	51.12	74.00	-22.88	9.11	3	Horizontal	225	1.91	-	42.01
AV	7.26548G	36.68	54.00	-17.32	9.11	3	Horizontal	225	1.91	-	27.57
PK	12.10984G	55.83	74.00	-18.17	14.34	3	Horizontal	213	1.22	-	41.49
AV	12.10596G	41.87	54.00	-12.13	14.33	3	Horizontal	213	1.22	-	27.54

VHT40\_Nss1,(MCS0)\_2TX

29/11/2019

2437MHz\_TX



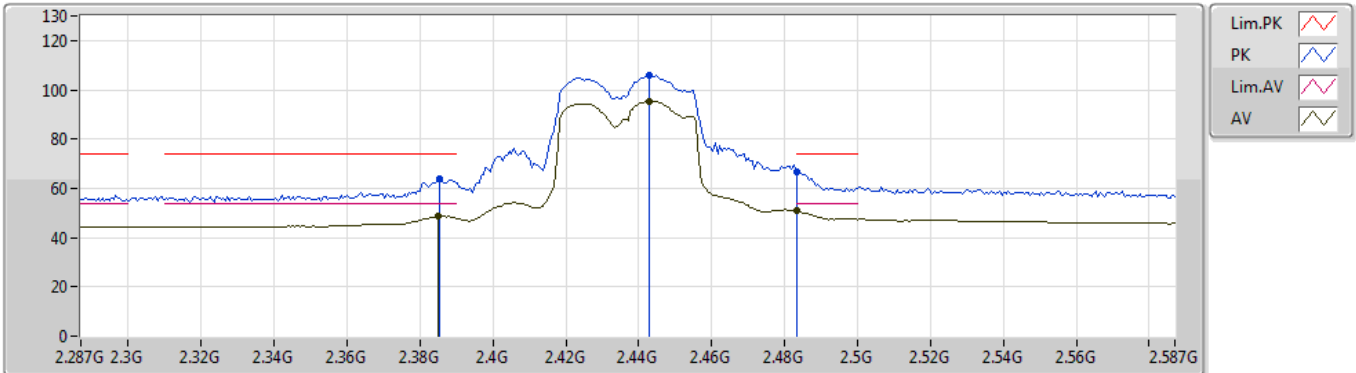
EUT\_Z\_2TX  
Setting 18  
03-C-P-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.39G	66.99	74.00	-7.01	31.87	3	Vertical	305	1.46	-	35.12
AV	2.39G	51.15	54.00	-2.85	31.87	3	Vertical	305	1.46	-	19.28
PK	2.4322G	107.21	Inf	-Inf	32.03	3	Vertical	305	1.46	-	75.18
AV	2.4322G	97.08	Inf	-Inf	32.03	3	Vertical	305	1.46	-	65.05
PK	2.4874G	62.42	74.00	-11.58	32.25	3	Vertical	305	1.46	-	30.17
AV	2.488G	47.94	54.00	-6.06	32.25	3	Vertical	305	1.46	-	15.69

### VHT40\_Nss1,(MCS0)\_2TX

29/11/2019

### 2437MHz\_TX



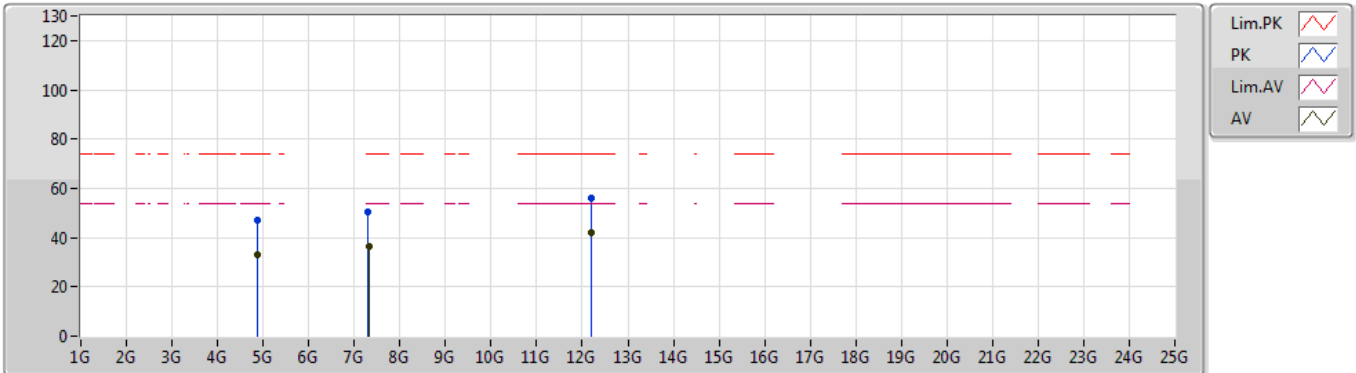
EUT\_Z\_2TX  
Setting 18  
03-C-P-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.3854G	63.93	74.00	-10.07	31.86	3	Horizontal	270	1.48	-	32.07
AV	2.3848G	48.65	54.00	-5.35	31.86	3	Horizontal	270	1.48	-	16.79
PK	2.443G	105.73	Inf	-Inf	32.07	3	Horizontal	270	1.48	-	73.66
AV	2.443G	95.32	Inf	-Inf	32.07	3	Horizontal	270	1.48	-	63.25
PK	2.4835G	66.47	74.00	-7.53	32.23	3	Horizontal	270	1.48	-	34.24
AV	2.4835G	50.90	54.00	-3.10	32.23	3	Horizontal	270	1.48	-	18.67

### VHT40\_Nss1,(MCS0)\_2TX

29/11/2019

### 2437MHz\_TX



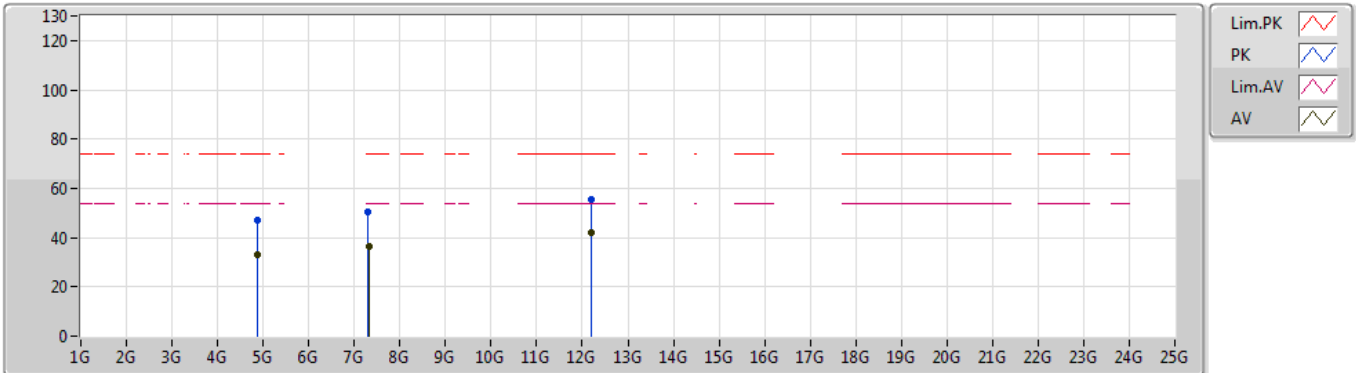
EUT\_Z\_2TX  
Setting 18  
03-C-P-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	4.86952G	46.89	74.00	-27.11	5.04	3	Vertical	45	1.33	-	41.85
AV	4.87176G	32.86	54.00	-21.14	5.03	3	Vertical	45	1.33	-	27.83
PK	7.30628G	50.46	74.00	-23.54	9.34	3	Vertical	300	2.06	-	41.12
AV	7.3141G	36.36	54.00	-17.64	9.34	3	Vertical	300	2.06	-	27.02
PK	12.18918G	56.12	74.00	-17.88	14.49	3	Vertical	141	1.58	-	41.63
AV	12.18576G	42.11	54.00	-11.89	14.49	3	Vertical	141	1.58	-	27.62

VHT40\_Nss1,(MCS0)\_2TX

29/11/2019

2437MHz\_TX



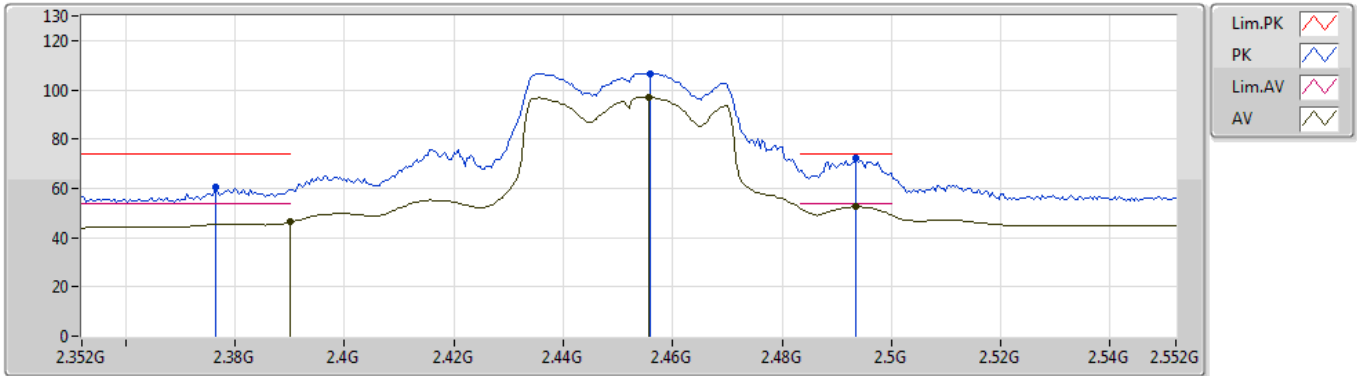
EUT\_Z\_2TX  
Setting 18  
03-C-P-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	4.87254G	47.17	74.00	-26.83	5.04	3	Horizontal	108	1.61	-	42.13
AV	4.87218G	32.90	54.00	-21.10	5.03	3	Horizontal	108	1.61	-	27.87
PK	7.30632G	50.43	74.00	-23.57	9.34	3	Horizontal	119	1.06	-	41.09
AV	7.31408G	36.25	54.00	-17.75	9.34	3	Horizontal	119	1.06	-	26.91
PK	12.18558G	55.70	74.00	-18.30	14.49	3	Horizontal	313	1.87	-	41.21
AV	12.18852G	42.12	54.00	-11.88	14.49	3	Horizontal	313	1.87	-	27.63

VHT40\_Nss1,(MCS0)\_2TX

29/11/2019

2452MHz\_TX



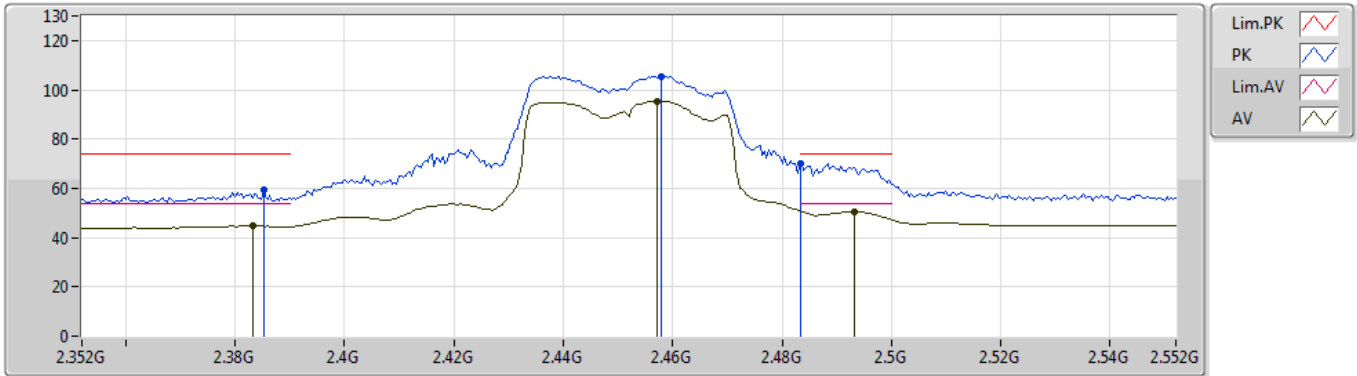
EUT Z\_2TX  
Setting 17  
03-E-2  
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.3764G	60.77	74.00	-13.23	31.84	3	Vertical	208	1.05	-	28.93
AV	2.39G	46.23	54.00	-7.77	31.88	3	Vertical	208	1.05	-	14.35
PK	2.456G	106.66	Inf	-Inf	32.13	3	Vertical	208	1.05	-	74.53
AV	2.4556G	96.84	Inf	-Inf	32.13	3	Vertical	208	1.05	-	64.71
PK	2.4936G	72.18	74.00	-1.82	32.27	3	Vertical	208	1.05	-	39.91
AV	2.4936G	52.58	54.00	-1.42	32.27	3	Vertical	208	1.05	-	20.31

VHT40\_Nss1,(MCS0)\_2TX

29/11/2019

2452MHz\_TX



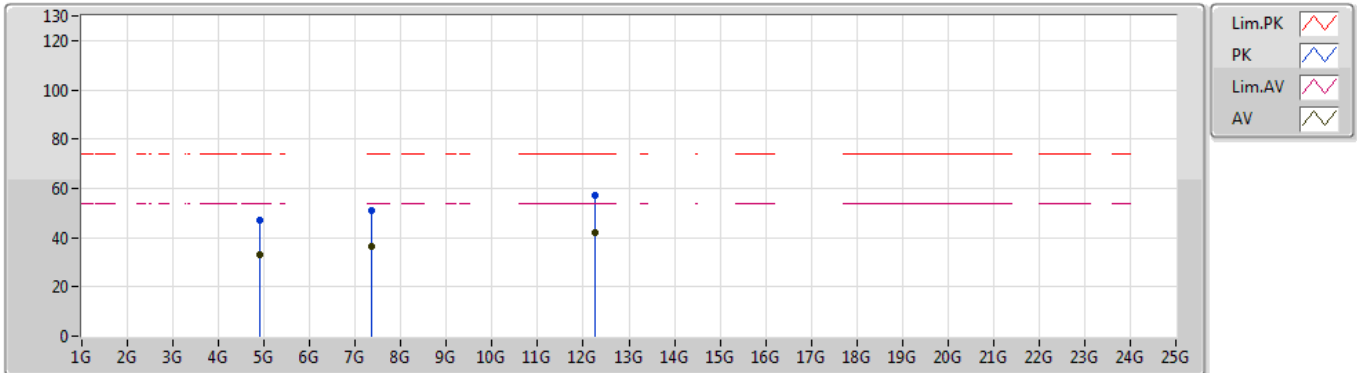
EUT\_Z\_2TX  
Setting 17  
03-E-2  
FSP

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	2.3852G	59.52	74.00	-14.48	31.86	3	Horizontal	267	2.49	-	27.66
AV	2.3832G	44.74	54.00	-9.26	31.86	3	Horizontal	267	2.49	-	12.88
PK	2.458G	105.52	Inf	-Inf	32.13	3	Horizontal	267	2.49	-	73.39
AV	2.4572G	95.49	Inf	-Inf	32.13	3	Horizontal	267	2.49	-	63.36
PK	2.4835G	69.90	74.00	-4.10	32.23	3	Horizontal	267	2.49	-	37.67
AV	2.4932G	50.51	54.00	-3.49	32.27	3	Horizontal	267	2.49	-	18.24

VHT40\_Nss1,(MCS0)\_2TX

29/11/2019

2452MHz\_TX



EUT\_Z\_2TX  
Setting 17  
03-C-P-2

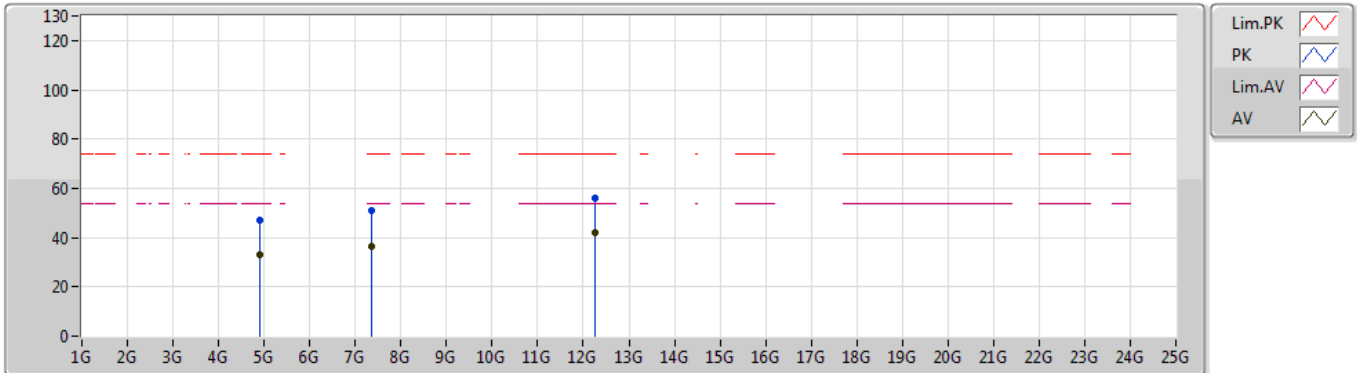
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	4.9048G	47.14	74.00	-26.86	5.09	3	Vertical	100	1.81	-	42.05
AV	4.90088G	32.88	54.00	-21.12	5.08	3	Vertical	100	1.81	-	27.80
PK	7.35554G	51.03	74.00	-22.97	9.43	3	Vertical	296	2.00	-	41.60
AV	7.35258G	36.68	54.00	-17.32	9.42	3	Vertical	296	2.00	-	27.26
PK	12.26G	56.89	74.00	-17.11	14.62	3	Vertical	268	1.03	-	42.27
AV	12.25552G	42.00	54.00	-12.00	14.60	3	Vertical	268	1.03	-	27.40



### VHT40\_Nss1,(MCS0)\_2TX

29/11/2019

### 2452MHz\_TX



EUT\_Z\_2TX  
Setting 17  
03-C-P-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)
PK	4.90094G	47.29	74.00	-26.71	5.08	3	Horizontal	265	1.56	-	42.21
AV	4.90096G	32.86	54.00	-21.14	5.08	3	Horizontal	265	1.56	-	27.78
PK	7.35206G	50.72	74.00	-23.28	9.42	3	Horizontal	159	1.24	-	41.30
AV	7.353G	36.47	54.00	-17.53	9.42	3	Horizontal	159	1.24	-	27.05
PK	12.25748G	56.19	74.00	-17.81	14.61	3	Horizontal	298	2.18	-	41.58
AV	12.26096G	41.96	54.00	-12.04	14.62	3	Horizontal	298	2.18	-	27.34