



# FCC Test Report

**Equipment** : Digital Satellite Receiver  
**Brand Name** : AT&T  
**Model No.** : HR54-500  
**FCC ID** : O6ZHR54R1  
**Standard** : 47 CFR FCC Part 15.247  
**Operating Band** : 2400 MHz – 2483.5 MHz  
**Function** :  Point-to-multipoint;  Point-to-point  
**Applicant** : Humax Co., Ltd.  
HUMAX Village, 11-4, Sunae-dong, Bundang-gu  
Seongnam city, Gyeonggi-do  
South Korea  
463-825  
**Manufacturer** : Humax Co., Ltd.  
HUMAX Village, 11-4, Sunae-dong, Bundang-gu  
Seongnam city, Gyeonggi-do  
South Korea  
463-825

The product sample received on Oct. 25, 2017 and completely tested on Nov. 28, 2017. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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

  
Cliff Chang  
SPORTON INTERNATIONAL INC.





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**PHOTOGRAPHS OF EUT V01**



### Summary of Test Result

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





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

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	802.11b	20	1TX
2.4-2.4835GHz	802.11g	20	1TX (Port 2)
2.4-2.4835GHz	802.11n HT20	20	2TX
2.4-2.4835GHz	802.11n HT40	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.
- 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	Part Number	Antenna Type	Connector	
1	2	Airgain	N2425HMHRA-290	PCB Antenna	I-PEX	
2	1	Airgain	N2425HMHRD-190	PCB Antenna	I-PEX	
Ant.	Port	Brand	Part Number	Antenna Type	Connector	Gain (dBi)
3	1	-	-	Printed Antenna	N/A	5.2
4	2	-	-	Printed Antenna	N/A	4.8

Frequency (MHz)	Ant. 1 Gain (dBi)	Ant. 2 Gain (dBi)	Composite Gain (dBi)
2400	2.1	4.0	4.2
2410	2.2	3.8	
2420	2.3	3.7	
2430	2.6	3.7	
2440	2.7	3.7	
2450	2.7	3.7	
2460	2.8	3.8	
2470	3.0	3.8	
2480	3.1	3.8	
2490	3.2	3.8	
5150	4.0	3.2	5.5
5200	3.8	3.7	
5300	3.6	3.3	5.4
5400	3.6	4.1	
5500	3.1	4.0	5.6
5600	3.4	4.2	
5700	3.3	3.7	
5800	3.9	3.6	5.5
5850	4.1	3.8	



<For 2.4GHz function>

For IEEE 802.11b mode <1TX/1RX>:

Only Port 1 can be used as transmitting/receiving antenna.

For IEEE 802.11g mode <1TX/1RX>:

The EUT supports the antenna with TX and RX diversity functions.

Both Port 1 and Port 2 support transmit and receive functions, but only one of them will be used at one time.

The Port 2 generated the worst case, so it was selected to test and record in the report.

For IEEE 802.11n mode <2TX/2RX>:

Port 1 and Port 2 will transmit/receive the same signal simultaneously.

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

<For 5GHz function>

For IEEE 802.11a mode <1TX/1RX>:

The EUT supports the antenna with TX and RX diversity functions.

Both Port 1 and Port 2 support transmit and receive functions, but only one of them will be used at one time.

The Port 1 generated the worst case, so it was selected to test and record in the report.

For IEEE 802.11n mode <2TX/2RX>:

Port 1 and Port 2 will transmit/receive the same signal simultaneously.

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

<For RF4CE funciton>

For RF4CE mode <1TX/1RX>:

The EUT supports the antenna with TX and RX diversity functions.

Both Port 1 and Port 2 support transmit and receive functions, but only one of them will be used at one time.

The Port 2 generated the worst case, so it was selected to test and record in the report.

1.1.3 Mode Test Duty Cycle

802.11b/g

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11b	0.979	0.092	20.001m	100
802.11g	0.98	0.088	n/a (DC>=0.98)	n/a (DC>=0.98)

802.11n

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11n HT20	0.968	0.141	1.929m	1k
802.11n HT40	0.937	0.283	921.25u	3k

1.1.4 EUT Operational Condition

EUT Power Type	From Power Adapter			
Beamforming Function	<input type="checkbox"/>	With beamforming	<input checked="" type="checkbox"/>	Without beamforming
Test Software Version	ttermpro			



## 1.2 Testing Applied Standards

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

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

## 1.3 Testing Location Information

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

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH01-CB	Gino Huang	22°C / 55%	Oct. 31, 2017~Nov. 28, 2017
Radiated	03CH01-CB	Gino Huang / Zero Chen / Joy Tseng	22°C / 54%	Oct. 31, 2017~Nov. 25, 2017
AC Conduction	CO02-CB	Peter Wu / GN Hou	24°C / 56%	Oct. 27, 2017~Nov. 28, 2017

Test site Designation No. TW0006 with FCC.

Test site registered number IC 4086D with Industry Canada.

## 1.4 Measurement Uncertainty

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

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.2 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.7 dB	Confidence levels of 95%
Output Power Measurement	1.33 dB	Confidence levels of 95%
Power Density Measurement	1.27 dB	Confidence levels of 95%
Bandwidth Measurement	9.74 x10 <sup>-8</sup>	Confidence levels of 95%





## 2 Test Configuration of EUT

### 2.1 Test Channel Mode

802.11b/g

Mode	Power Setting
802.11b_Nss1,(1Mbps)_1TX	-
2412MHz	90
2437MHz	90
2462MHz	90
802.11g_Nss1,(6Mbps)_1TX(Port2)	-
2412MHz	76
2417MHz	87
2422MHz	90
2437MHz	90
2442MHz	90
2447MHz	86
2452MHz	81
2457MHz	77
2462MHz	74

802.11n

Mode	Power Setting
802.11n HT20_Nss1,(MCS0)_2TX	-
2412MHz	75
2417MHz	83
2422MHz	86
2427MHz	90
2437MHz	90
2442MHz	89
2447MHz	87
2452MHz	81
2457MHz	77
2462MHz	70
802.11n HT40_Nss1,(MCS0)_2TX	-
2422MHz	67
2427MHz	74
2432MHz	77
2437MHz	77
2442MHz	75
2447MHz	70
2452MHz	68



## 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>	CTX
1	CTX - 2.4GHz
2	CTX - 5GHz
3	CTX - RF4CE
Mode 1 generated the worst test result, so it was recorded in this 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>	CTX
1	CTX - 2.4GHz
2	CTX - 5GHz
3	CTX - RF4CE
Mode 2 generated the worst test result, so it was recorded in this report.	
<b>Operating Mode &gt; 1GHz</b>	CTX

The Worst Case Mode for Following Conformance Tests	
<b>Tests Item</b>	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
<b>Operating Mode</b>	
1	WLAN 2.4GHz + RF4CE
2	WLAN 5GHz + RF4CE
Refer to Sporton Test Report No.: FA7O2406 for Co-location RF Exposure Evaluation.	

Note1: The EUT can only use Z axis position.

### 2.3 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

### 2.4 Accessories

Accessories			
Equipment Name	Brand Name	Model Name	Rating
Adapter	DIRECTV	EPS44R3-16	INPUT: 120V ~ 1.1A, 60Hz OUTPUT: 12V, 4A
Equipment Name	Brand Name	Part Number	Rating
Hard Disk	SEAGATE	1SD102-500	-

### 2.5 Support Equipment

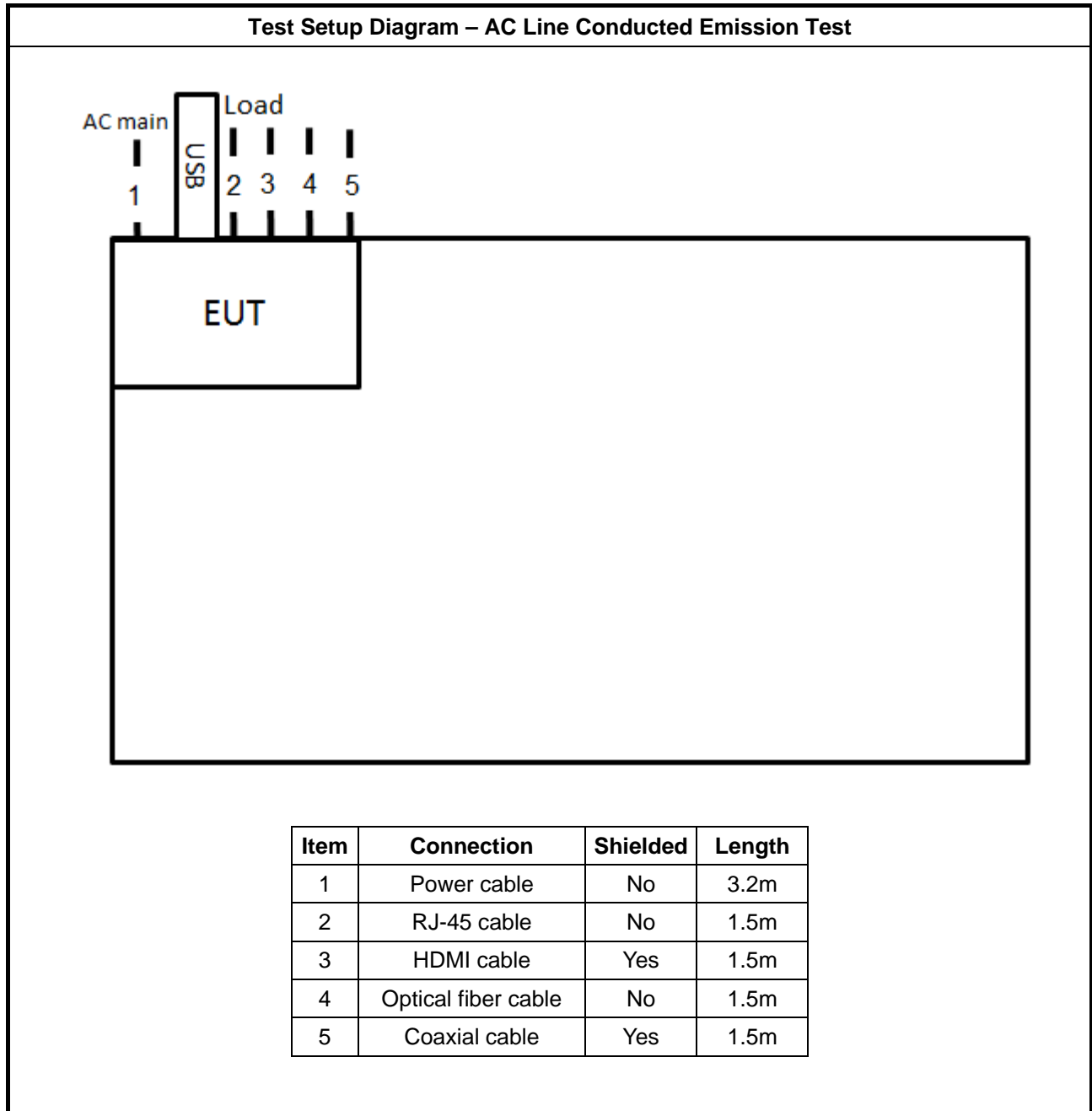
For Test Site No: CO01-CB

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E6430	DoC
2	Flash disk	Silicon	I-Series	DoC

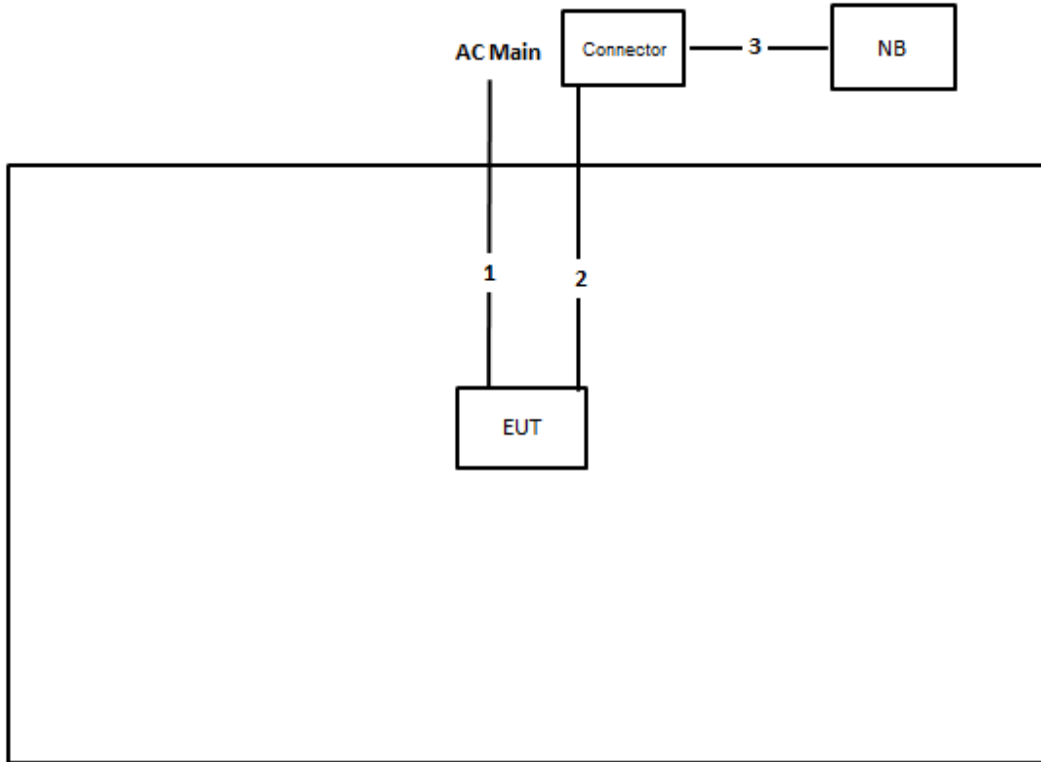
For Test Site No: 03CH01-CB and TH01-CB

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

## 2.6 Test Setup Diagram



Test Setup Diagram - Radiated Test



Item	Connection	Shielded	Length
1	Power cable	No	3.2m
2	RS232 to USB cable	No	0.45m
3	USB cable	No	1.8m

### 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.

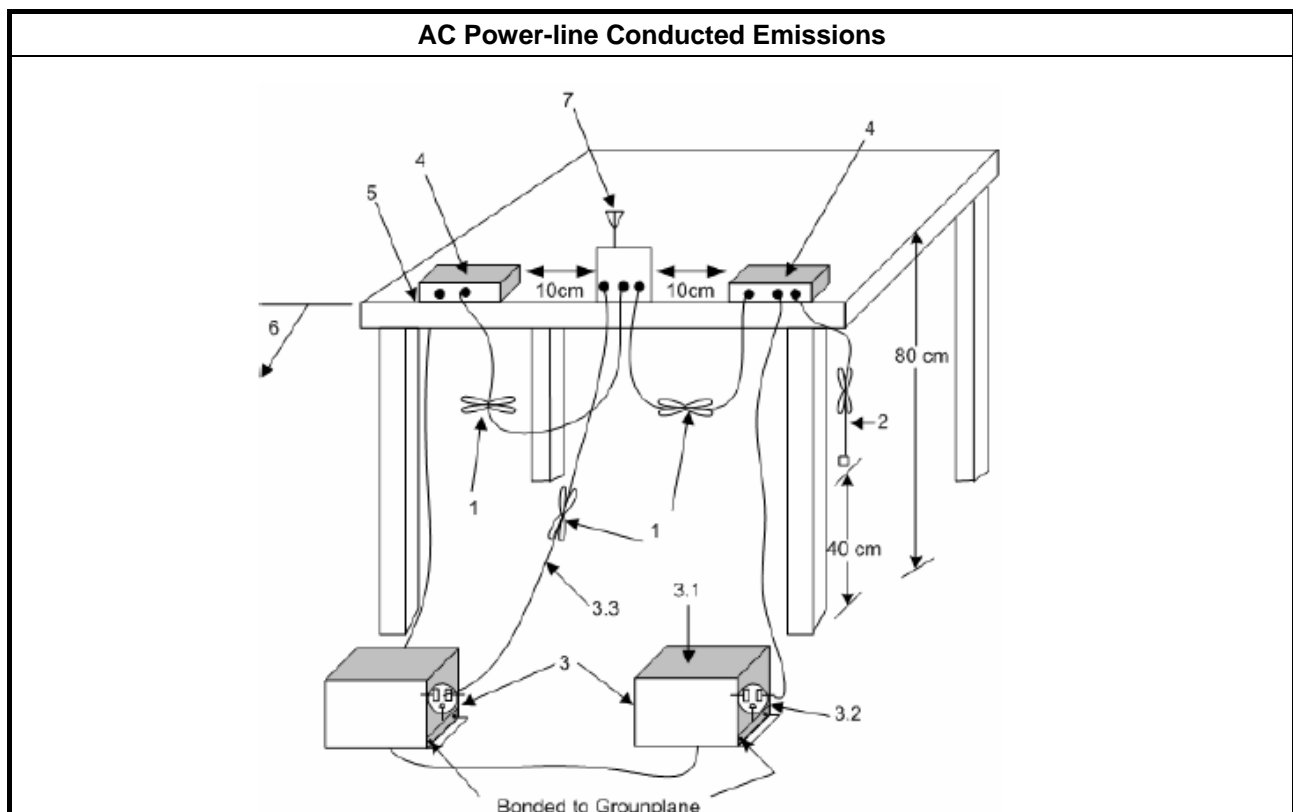
##### 3.1.2 Measuring Instruments

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>

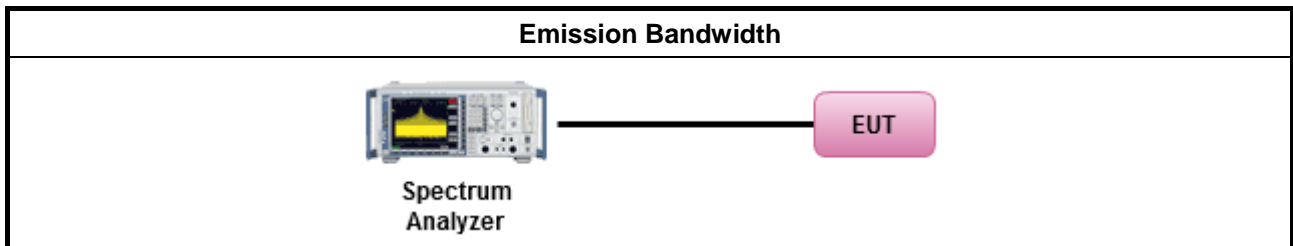
#### 3.2.2 Measuring Instruments

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

#### 3.2.4 Test Setup



#### 3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B



### 3.3 Maximum Conducted Output Power

#### 3.3.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit	
	<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>	

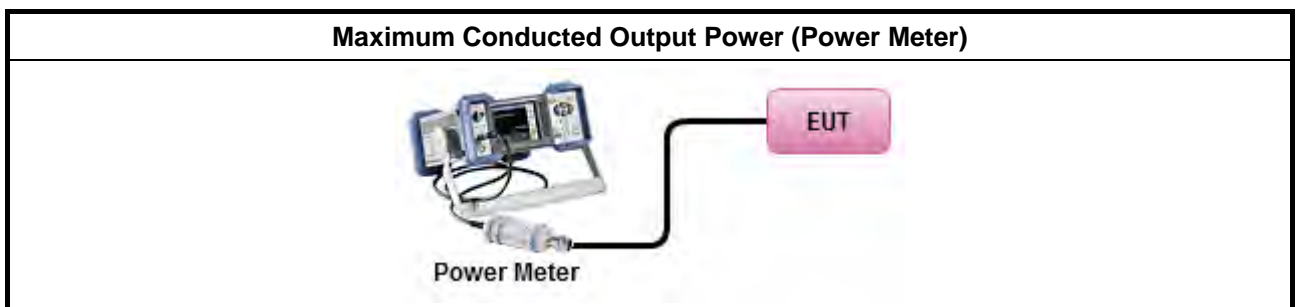
#### 3.3.2 Measuring Instruments

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 9.1.1 Option 1 (RBW ≥ EBW method).
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 9.1.2 Option 2 (peak power meter for VBW ≥ DTS BW)
<ul style="list-style-type: none"> <li>▪ Maximum Conducted Output Power</li> </ul>	
[duty cycle ≥ 98% or external video / power trigger]	
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 9.2.2.2 Method AVGSA-1 (spectral trace averaging).
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 9.2.2.3 Method AVGSA-1 Alt. (slow sweep speed)
duty cycle < 98% and average over on/off periods with duty factor	
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 9.2.2.4 Method AVGSA-2 (spectral trace averaging).
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 9.2.2.5 Method AVGSA-2 Alt. (slow sweep speed)
RF power meter and average over on/off periods with duty factor or gated trigger	
<input checked="" type="checkbox"/>	Refer as FCC KDB 558074, clause 9.2.3 Method AVGPM-G (using an RF average power meter).
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 9.1.2 PKPM1 Peak power meter method.
<ul style="list-style-type: none"> <li>▪ For conducted measurement.</li> </ul>	
<ul style="list-style-type: none"> <li>▪ If the EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.</li> </ul>	
<ul style="list-style-type: none"> <li>▪ If multiple transmit chains, EIRP calculation could be following as methods:  <math display="block">P_{total} = P_1 + P_2 + \dots + P_n</math>                     (calculated in linear unit [mW] and transfer to log unit [dBm])  <math display="block">EIRP_{total} = P_{total} + DG</math> </li> </ul>	

### 3.3.4 Test Setup



### 3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

### 3.4 Power Spectral Density

#### 3.4.1 Power Spectral Density Limit

Power Spectral Density Limit
<ul style="list-style-type: none"> <li>▪ Power Spectral Density (PSD) <math>\leq</math> 8 dBm/3kHz</li> </ul>

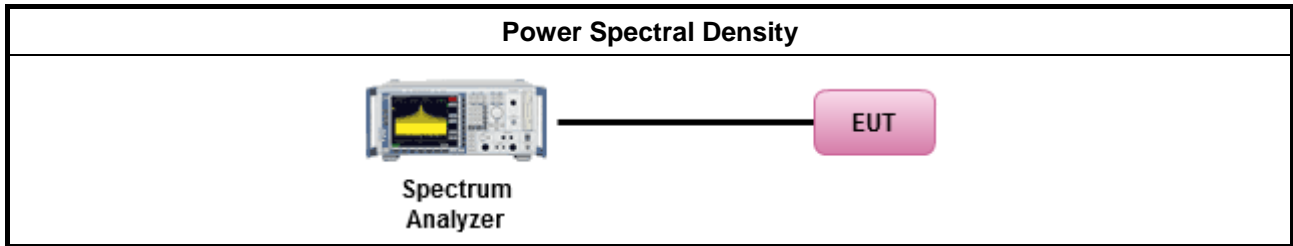
#### 3.4.2 Measuring Instruments

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 10.2 Method PKPSD (RBW=3-100kHz; Detector=peak). [duty cycle $\geq$ 98% or external video / power trigger]
<input type="checkbox"/> Refer as FCC KDB 558074, clause 10.3 Method AVGPSD-1 (spectral trace averaging).
<input type="checkbox"/> Refer as FCC KDB 558074, clause 10.4 Method AVGPSD-2 (slow sweep speed) duty cycle < 98% and average over on/off periods with duty factor
<input type="checkbox"/> Refer as FCC KDB 558074, clause 10.5 Method AVGPSD-1 Alt (spectral trace averaging).
<input type="checkbox"/> Refer as FCC KDB 558074, clause 10.6 Method AVGPSD-2 Alt. (slow sweep speed)
<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:           <ul style="list-style-type: none"> <li> <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.               </li> <li> <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,               </li> <li> <input type="checkbox"/> Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.               </li> </ul> </li> </ul>

### 3.4.4 Test Setup



### 3.4.5 Test Result of Power Spectral Density

Refer as Appendix D

### 3.5 Emissions in Non-restricted Frequency Bands

#### 3.5.1 Emissions in Non-restricted Frequency Bands Limit

Un-restricted Band Emissions Limit	
RF output power procedure	Limit (dB)
Peak output power procedure	20
Average output power procedure	30

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.

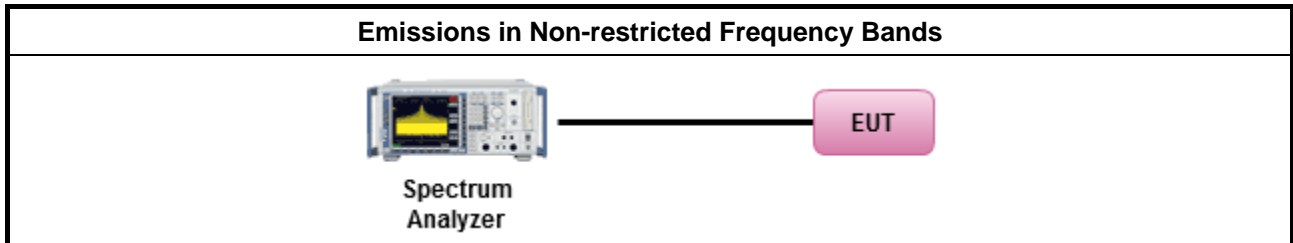
#### 3.5.2 Measuring Instruments

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 11 for unwanted emissions into non-restricted bands.</li> </ul>

#### 3.5.4 Test Setup



#### 3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix E

### 3.6 Emissions in Restricted Frequency Bands

#### 3.6.1 Emissions in Restricted Frequency Bands Limit

Restricted Band Emissions Limit			
Frequency Range (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measure Distance (m)
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

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.

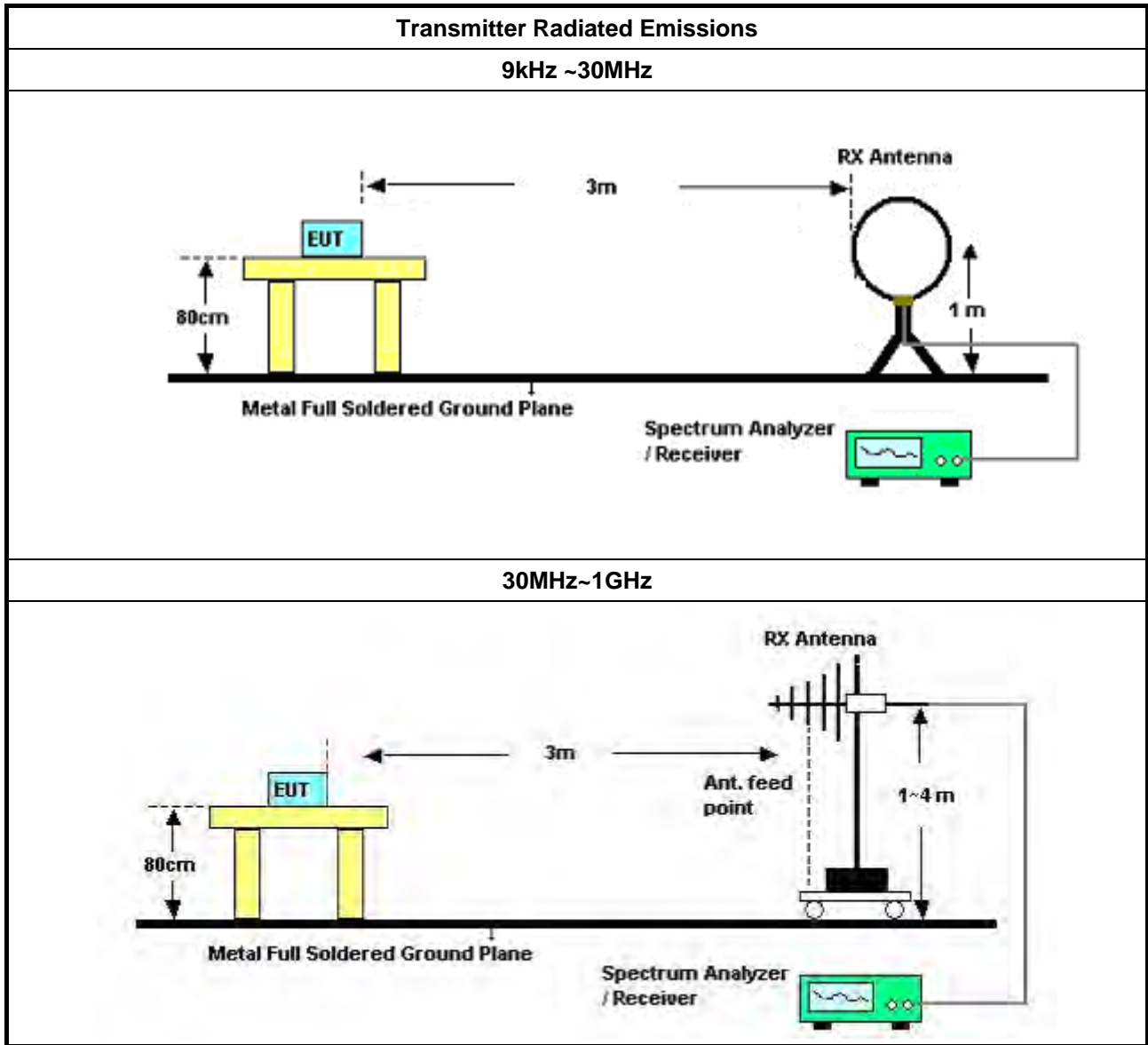
#### 3.6.2 Measuring Instruments

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

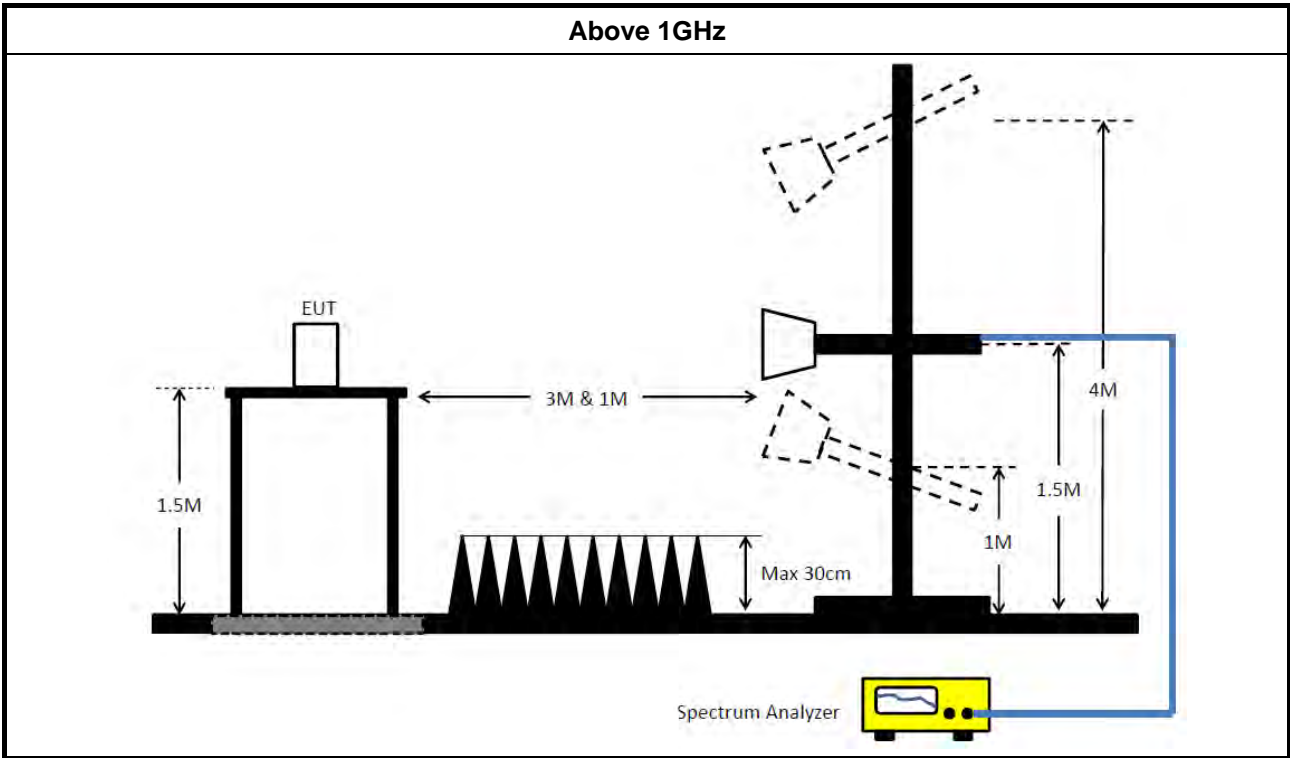
### 3.6.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> <li>▪ The average emission levels shall be measured in [duty cycle <math>\geq 98</math> or duty factor].</li> </ul>	
<ul style="list-style-type: none"> <li>▪ Refer as ANSI C63.10, clause 6.9.2.2 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.</li> </ul>	
<ul style="list-style-type: none"> <li>▪ For the transmitter unwanted emissions shall be measured using following options below:</li> </ul>	
	<ul style="list-style-type: none"> <li>▪ Refer as FCC KDB 558074, clause 12 for unwanted emissions into restricted bands.</li> </ul>
	<input type="checkbox"/> Refer as FCC KDB 558074, clause 12.2.5.1 Option 1 (trace averaging for duty cycle $\geq 98\%$ )
	<input type="checkbox"/> Refer as FCC KDB 558074, clause 12.2.5.2 Option 2 (trace averaging + duty factor).
	<input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 12.2.5.3 Option 3 (Reduced VBW $\geq 1/T$ ).
	<input type="checkbox"/> Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW $\geq 1/T$ , where T is pulse time.
	<input type="checkbox"/> Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions.
	<input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 12.2.4 measurement procedure peak limit.
<ul style="list-style-type: none"> <li>▪ For the transmitter band-edge emissions shall be measured using following options below:</li> </ul>	
	<ul style="list-style-type: none"> <li>▪ Refer as FCC KDB 558074 clause 13.1, When the performing peak or average radiated measurements, emissions within 2 MHz of the authorized band edge may be measured using the marker-delta method described below.</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Refer as FCC KDB 558074, clause 13.2 (ANSI C63.10, clause 6.9.3) for marker-delta method for band-edge measurements.</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Refer as FCC KDB 558074, clause 13.3 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).</li> </ul>
<ul style="list-style-type: none"> <li>▪ For conducted and cabinet radiation measurement, refer as FCC KDB 558074, clause 12.2.2.</li> </ul>	
	<ul style="list-style-type: none"> <li>▪ For conducted unwanted emissions into restricted bands (absolute emission limits). Devices with multiple transmit chains using options given below: (1) Measure and sum the spectra across the outputs or (2) Measure and add 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 Transmitter Radiated Unwanted Emissions (Below 30MHz)

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

### 3.6.6 Test Result of Transmitter Radiated Unwanted Emissions

Refer as Appendix F



## 4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Dec. 14, 2016	Dec. 13, 2017	Conduction (CO02-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Dec. 21, 2016	Dec. 20, 2017	Conduction (CO02-CB)
EMI Receiver	Agilent	N9038A	MY52260140	9kHz ~ 8.4GHz	Jan. 16, 2017	Jan. 15, 2018	Conduction (CO02-CB)
COND Cable	Woken	Cable	01	0.15MHz ~ 30MHz	Nov. 30, 2016	Nov. 29, 2017	Conduction (CO02-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	N.C.R.	Conduction (CO02-CB)
Pulse Limiter	Schwarzbeck	VTSD 9561F	9561-F073	9kHz ~ 30MHz	Oct. 03, 2017	Oct. 02, 2018	Conduction (CO02-CB)
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Aug. 30, 2017	Aug. 29, 2018	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2016*	Mar. 15, 2018*	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	9610-4976	1GHz ~ 18GHz	Apr. 27, 2017	Apr. 26, 2018	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 05, 2017	Jul. 04, 2018	Radiation (03CH01-CB)
Pre-Amplifier	EMCI	EMC330N	980332	20MHz ~ 3GHz	May 02, 2017	May 01, 2018	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 16, 2017	Jan. 15, 2018	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 10, 2017	Jul. 09, 2018	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSV40	101024	9kHz ~ 40GHz	Aug. 31, 2017	Aug. 30, 2018	Radiation (03CH01-CB)
EMI Test	R&S	ESCS	100355	9kHz ~ 2.75GHz	May 06, 2017	May 05, 2018	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~ 1 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz ~ 40 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 26, 2016	Dec. 25, 2017	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz ~ 26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)



Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-07	1 GHz –26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz –26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz –26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY54320015	50MHz~18GHz	Apr. 24, 2017	Apr. 23, 2018	Conducted (TH01-CB)

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

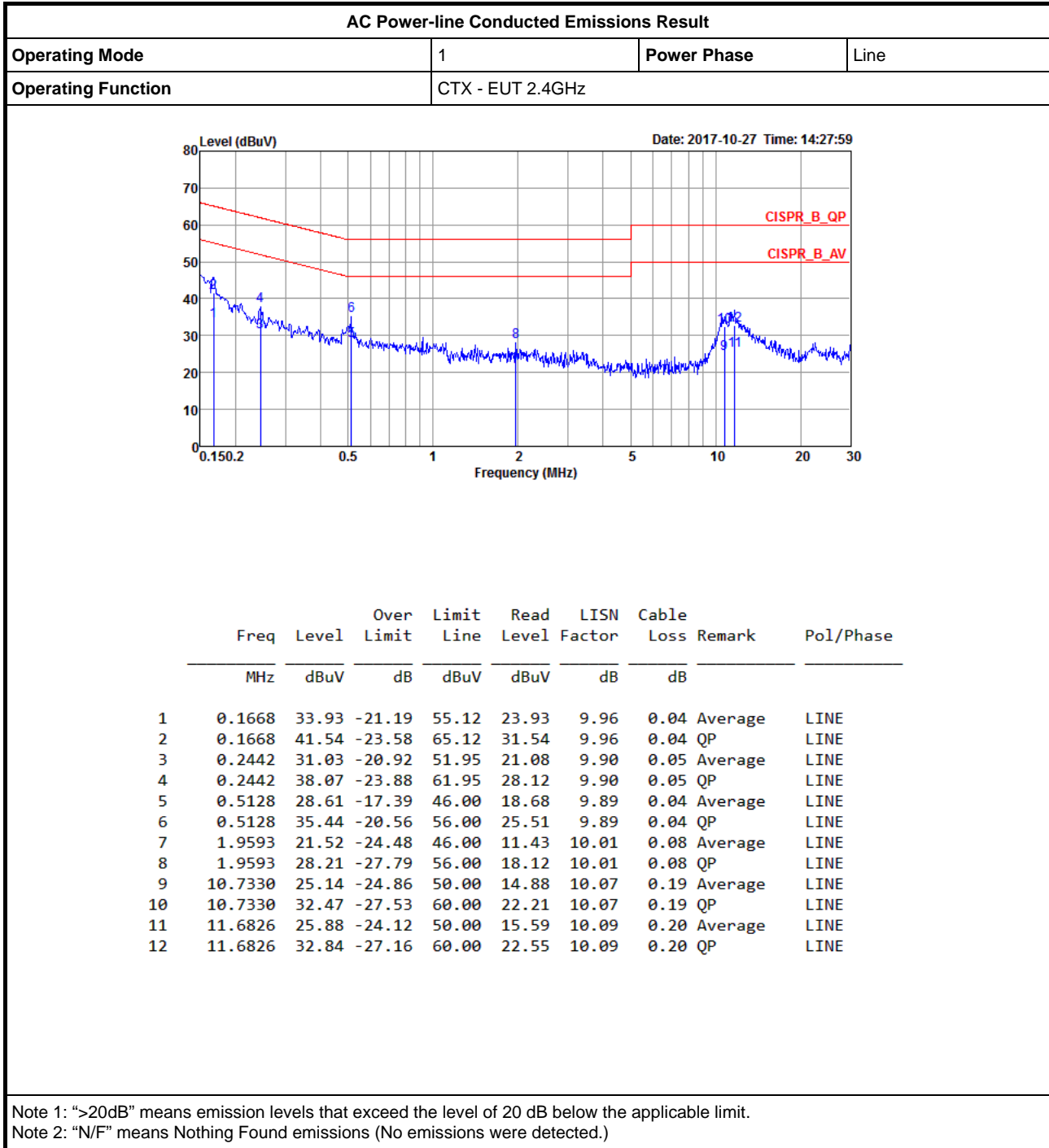
\*Calibration Interval of instruments listed above is two year.

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



# AC Power-line Conducted Emissions Result

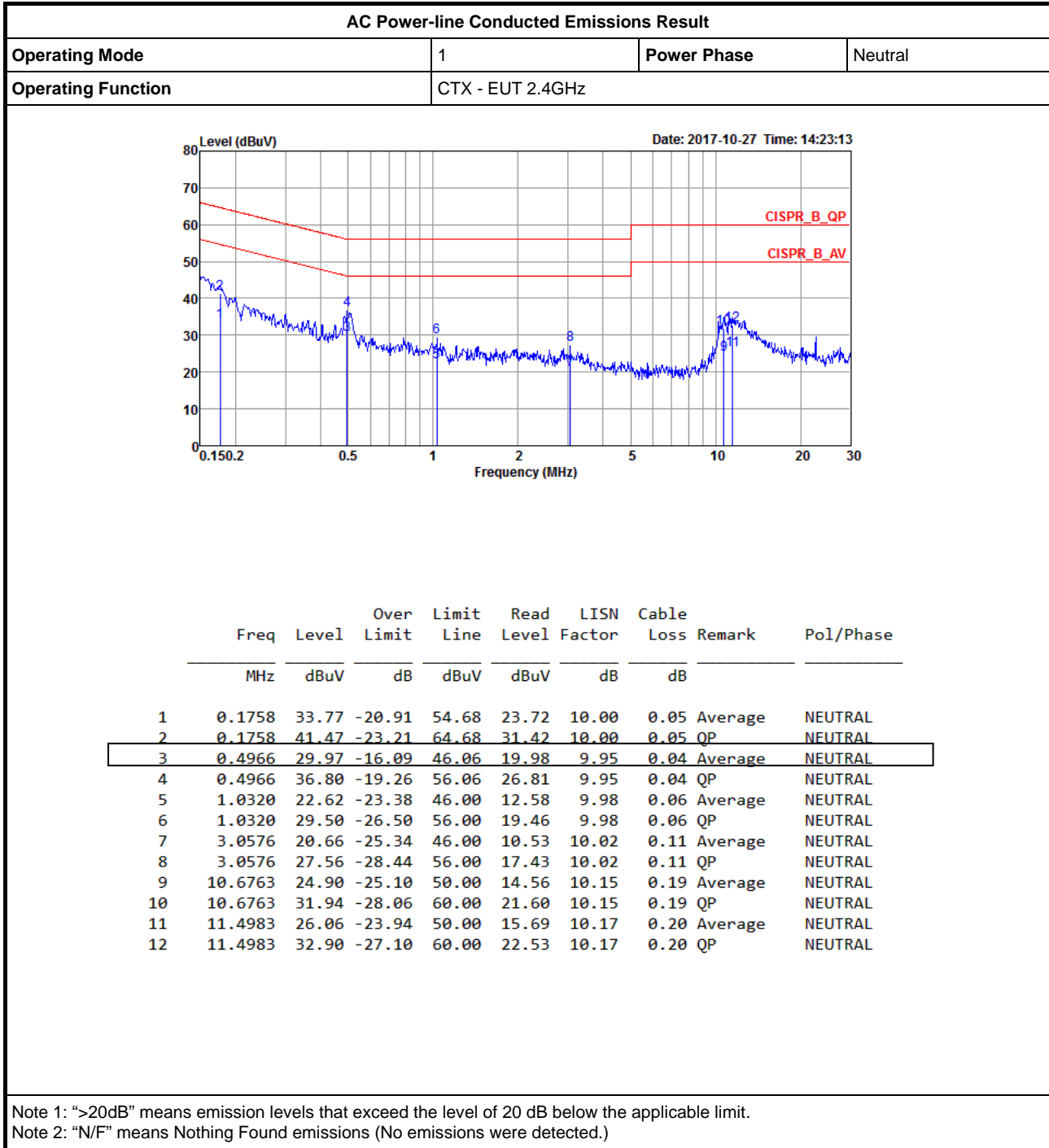
Appendix A





# AC Power-line Conducted Emissions Result

Appendix A





**Summary**

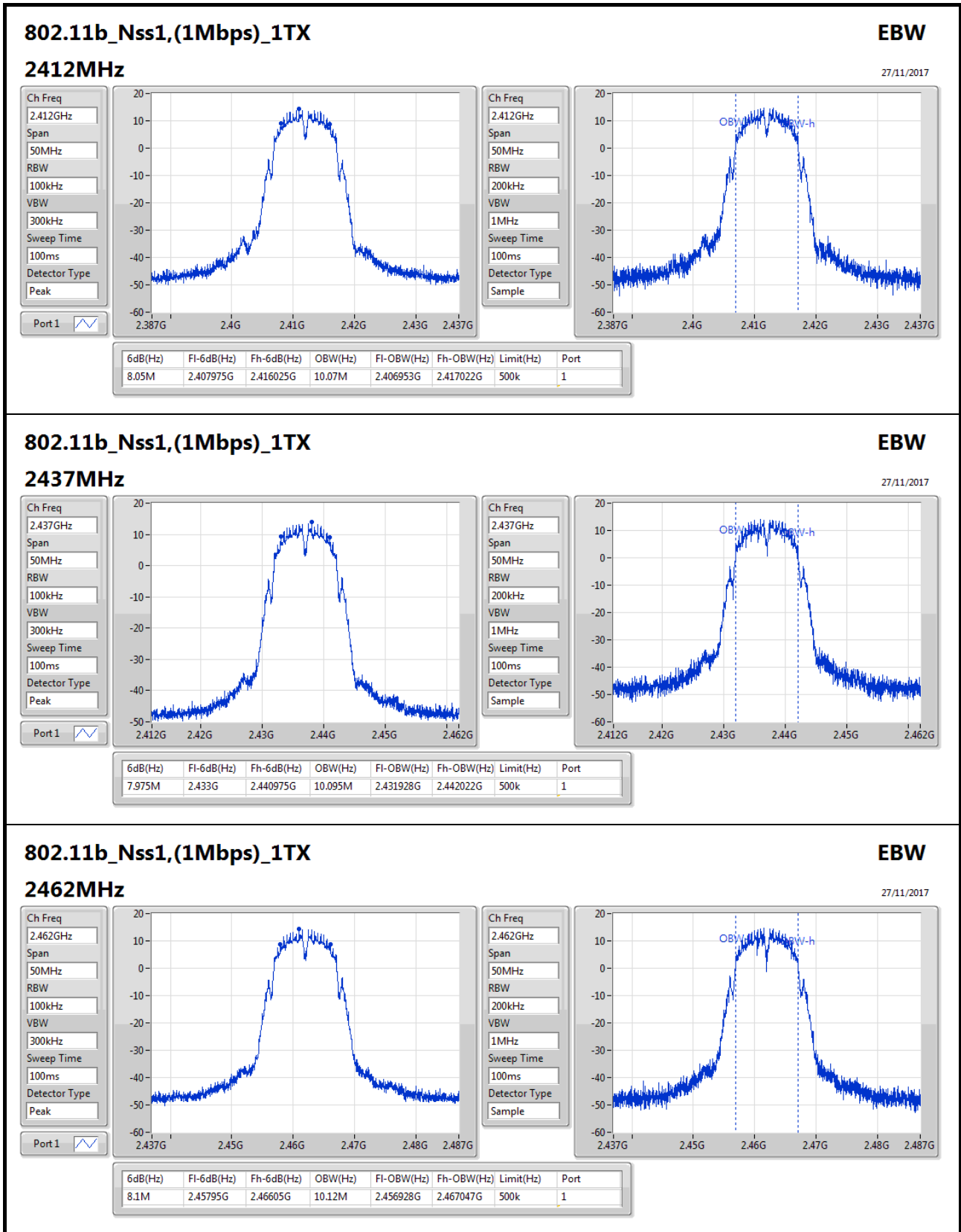
Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX	8.1M	10.12M	10M1G1D	7.975M	10.07M
802.11g_Nss1,(6Mbps)_1TX(Port2)	16.35M	17.116M	17M1D1D	16.325M	16.542M

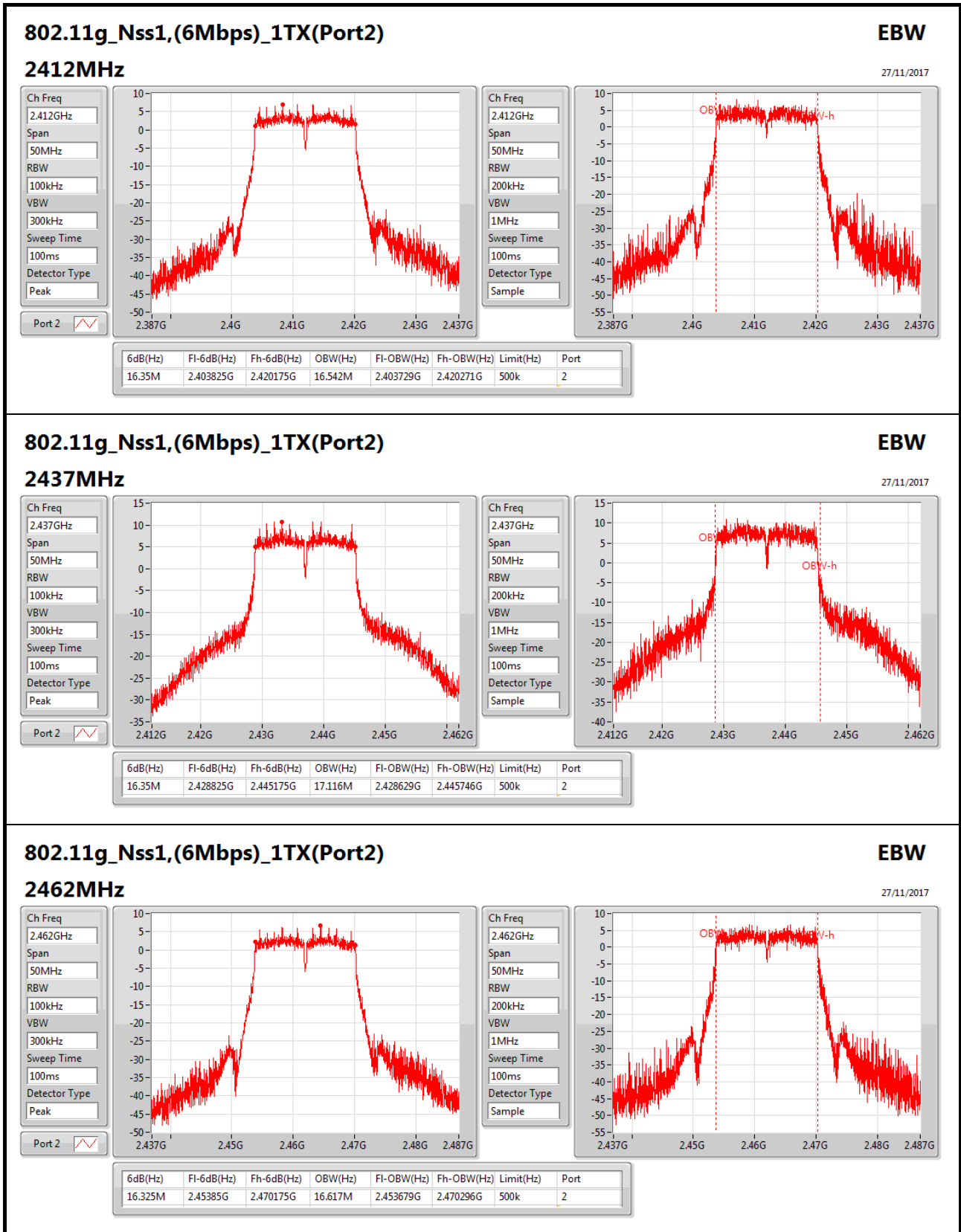
**Max-N dB** = Maximum 6dB down bandwidth; **Max-OBW** = Maximum 99% occupied bandwidth;  
**Min-N dB** = Minimum 6dB down bandwidth; **Min-OBW** = Minimum 99% occupied bandwidth;

**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)_1TX	-	-	-	-	-	-
2412MHz	Pass	500k	8.05M	10.07M		
2437MHz	Pass	500k	7.975M	10.095M		
2462MHz	Pass	500k	8.1M	10.12M		
802.11g_Nss1,(6Mbps)_1TX(Port2)	-	-	-	-	-	-
2412MHz	Pass	500k			16.35M	16.542M
2437MHz	Pass	500k			16.35M	17.116M
2462MHz	Pass	500k			16.325M	16.617M

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




**802.11g\_Nss1,(6Mbps)\_1TX(Port2)**
**EBW**

27/11/2017

**2462MHz**

Ch Freq: 2.462GHz

Span: 50MHz

RBW: 100kHz

VBW: 300kHz

Sweep Time: 100ms

Detector Type: Peak

Port 2

Ch Freq: 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
16.325M	2.45385G	2.470175G	16.617M	2.453679G	2.470296G	500k	2





**Summary**

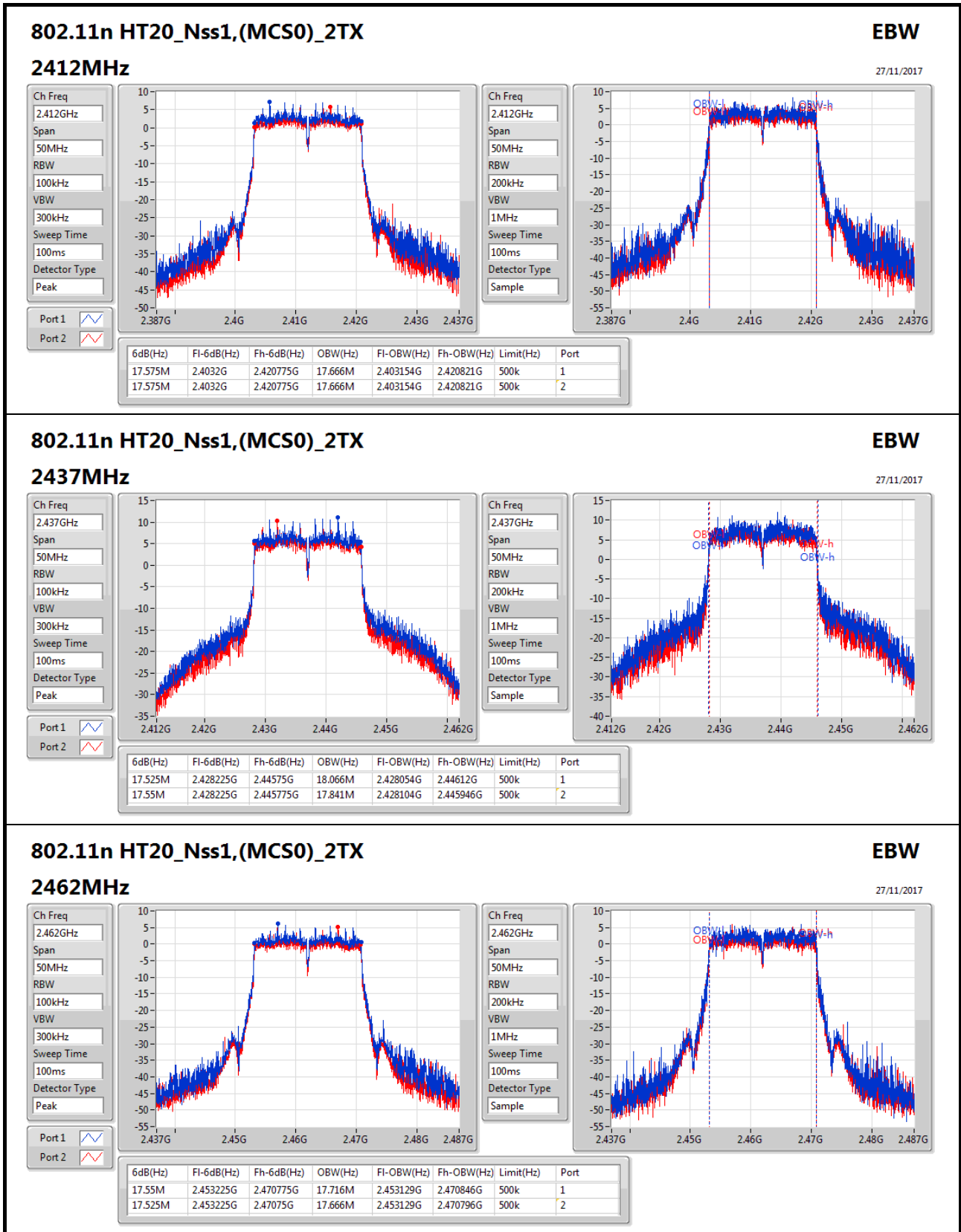
Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.11n HT20_Nss1,(MCS0)_2TX	17.575M	18.066M	18M1D1D	17.525M	17.666M
802.11n HT40_Nss1,(MCS0)_2TX	36.3M	36.182M	36M2D1D	35.05M	36.082M

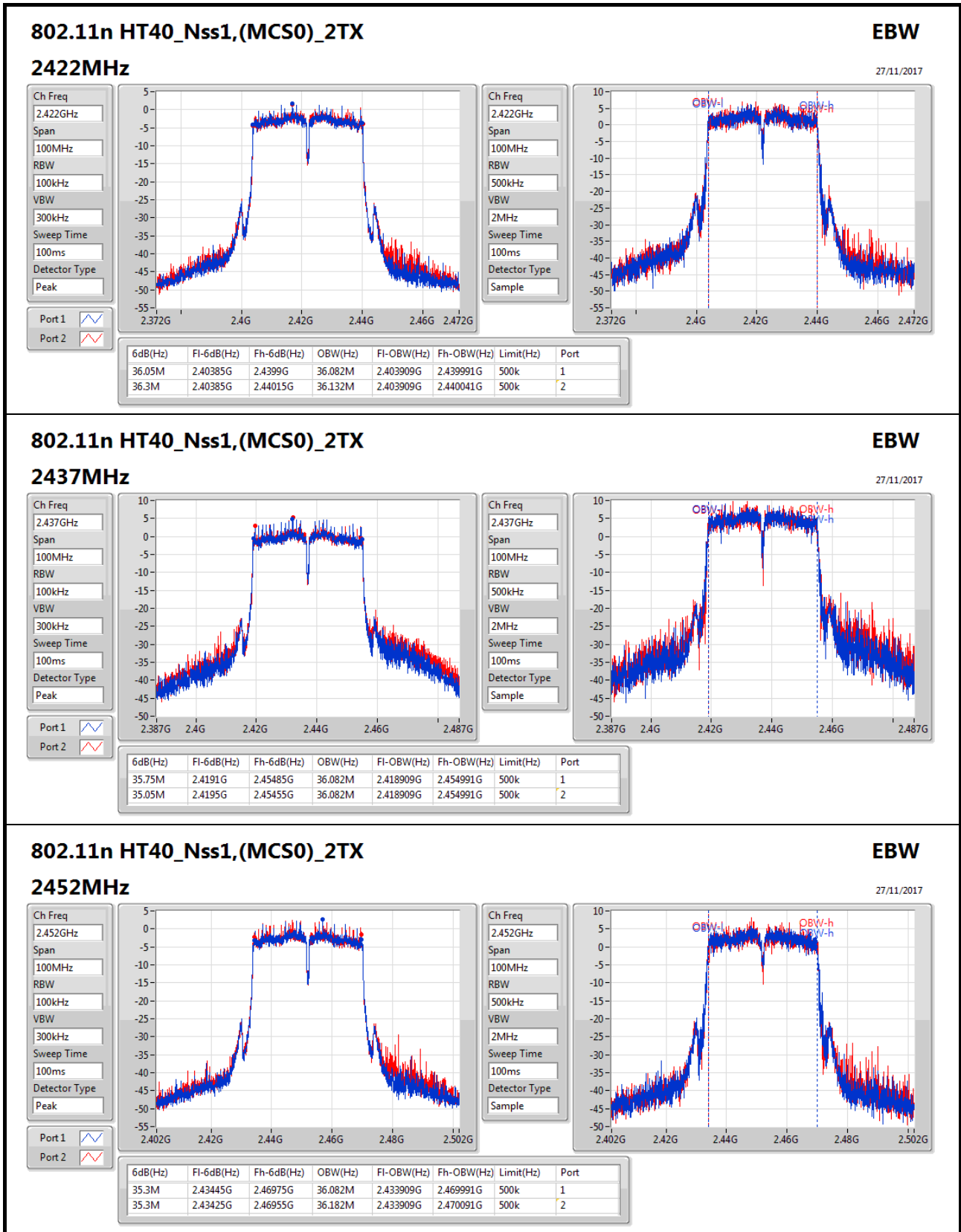
**Max-N dB** = Maximum 6dB down bandwidth; **Max-OBW** = Maximum 99% occupied bandwidth;  
**Min-N dB** = Minimum 6dB down bandwidth; **Min-OBW** = Minimum 99% occupied bandwidth;

**Result**

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	17.575M	17.666M	17.575M	17.666M
2437MHz	Pass	500k	17.525M	18.066M	17.55M	17.841M
2462MHz	Pass	500k	17.55M	17.716M	17.525M	17.666M
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	500k	36.05M	36.082M	36.3M	36.132M
2437MHz	Pass	500k	35.75M	36.082M	35.05M	36.082M
2452MHz	Pass	500k	35.3M	36.082M	35.3M	36.182M

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







Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	23.09	0.20370
802.11g_Nss1,(6Mbps)_1TX(Port2)	22.23	0.16711

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-
2412MHz	Pass	3.80	23.09		23.09	30.00
2437MHz	Pass	3.70	23.02		23.02	30.00
2462MHz	Pass	3.80	23.04		23.04	30.00
802.11g_Nss1,(6Mbps)_1TX(Port2)	-	-	-	-	-	-
2412MHz	Pass	3.80		19.33	19.33	30.00
2417MHz	Pass	3.70		22.05	22.05	30.00
2422MHz	Pass	3.70		22.21	22.21	30.00
2437MHz	Pass	3.70		22.23	22.23	30.00
2442MHz	Pass	3.70		22.15	22.15	30.00
2447MHz	Pass	3.70		21.63	21.63	30.00
2452MHz	Pass	3.70		20.47	20.47	30.00
2457MHz	Pass	3.80		19.39	19.39	30.00
2462MHz	Pass	3.80		18.78	18.78	30.00

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



Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11n HT20_Nss1,(MCS0)_2TX	25.63	0.36559
802.11n HT40_Nss1,(MCS0)_2TX	22.19	0.16558

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	3.80	19.10	18.43	21.79	30.00
2417MHz	Pass	3.70	21.24	20.71	23.99	30.00
2422MHz	Pass	3.70	21.89	21.31	24.62	30.00
2427MHz	Pass	3.70	22.45	22.79	25.63	30.00
2437MHz	Pass	3.70	22.55	21.85	25.22	30.00
2442MHz	Pass	3.70	22.20	21.50	24.87	30.00
2447MHz	Pass	3.70	21.45	21.39	24.43	30.00
2452MHz	Pass	3.70	20.52	20.26	23.40	30.00
2457MHz	Pass	3.80	19.81	19.18	22.52	30.00
2462MHz	Pass	3.80	17.91	17.04	20.51	30.00
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	3.70	16.42	16.40	19.42	30.00
2427MHz	Pass	3.70	18.87	18.72	21.81	30.00
2432MHz	Pass	3.70	18.99	19.28	22.15	30.00
2437MHz	Pass	3.70	19.05	19.31	22.19	30.00
2442MHz	Pass	3.70	18.52	18.87	21.71	30.00
2447MHz	Pass	3.70	17.69	18.04	20.88	30.00
2452MHz	Pass	3.70	16.88	16.95	19.93	30.00

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



**Summary**

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_1TX	-0.02
802.11g_Nss1,(6Mbps)_1TX(Port2)	-3.14

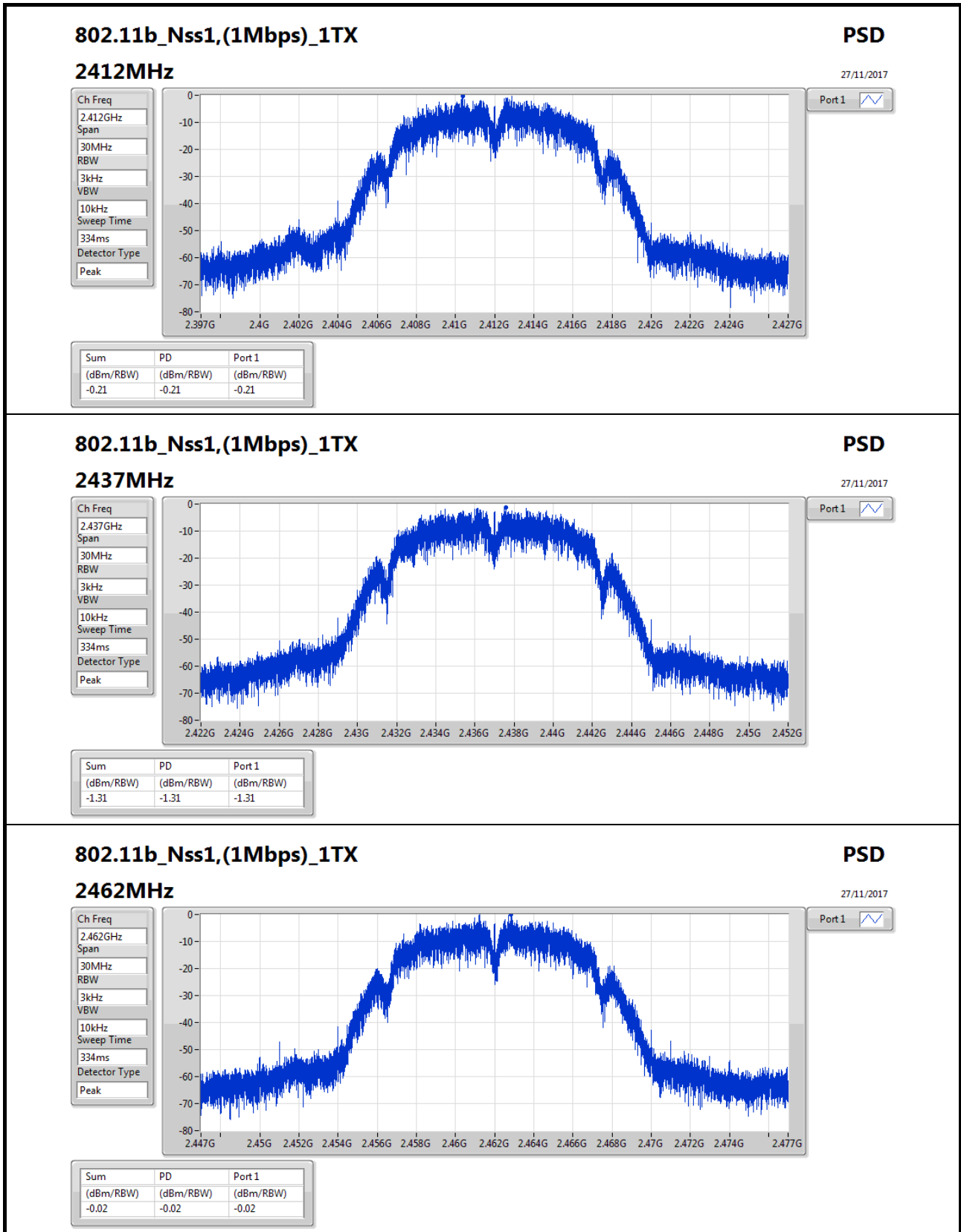
RBW=3kHz.

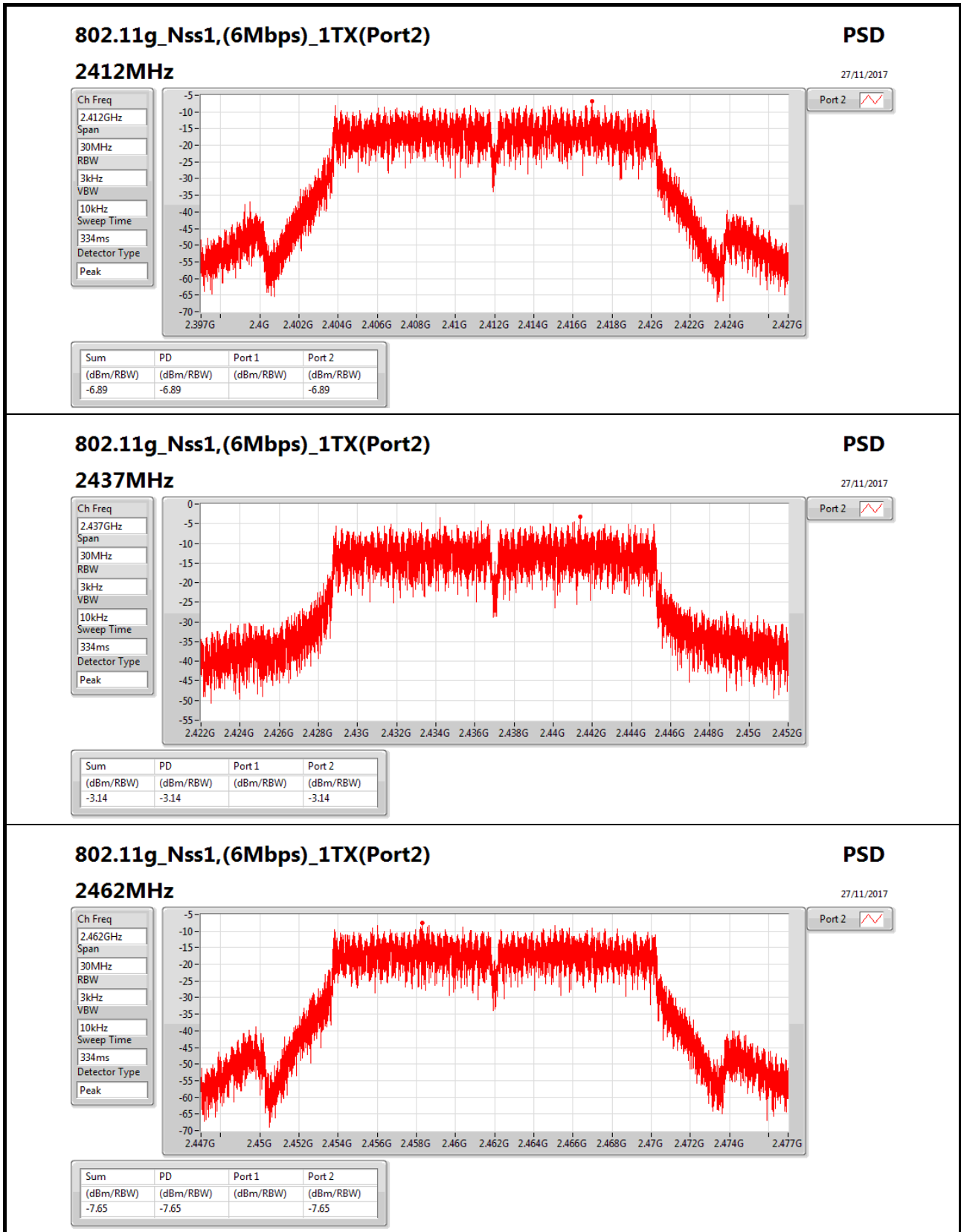
**Result**

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-
2412MHz	Pass	3.80	-0.21		-0.21	8.00
2437MHz	Pass	3.70	-1.31		-1.31	8.00
2462MHz	Pass	3.80	-0.02		-0.02	8.00
802.11g_Nss1,(6Mbps)_1TX(Port2)	-	-	-	-	-	-
2412MHz	Pass	3.80		-6.89	-6.89	8.00
2437MHz	Pass	3.70		-3.14	-3.14	8.00
2462MHz	Pass	3.80		-7.65	-7.65	8.00

DG = Directional Gain; RBW=3kHz;

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









**Summary**

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11n HT20_Nss1,(MCS0)_2TX	-2.85
802.11n HT40_Nss1,(MCS0)_2TX	-8.68

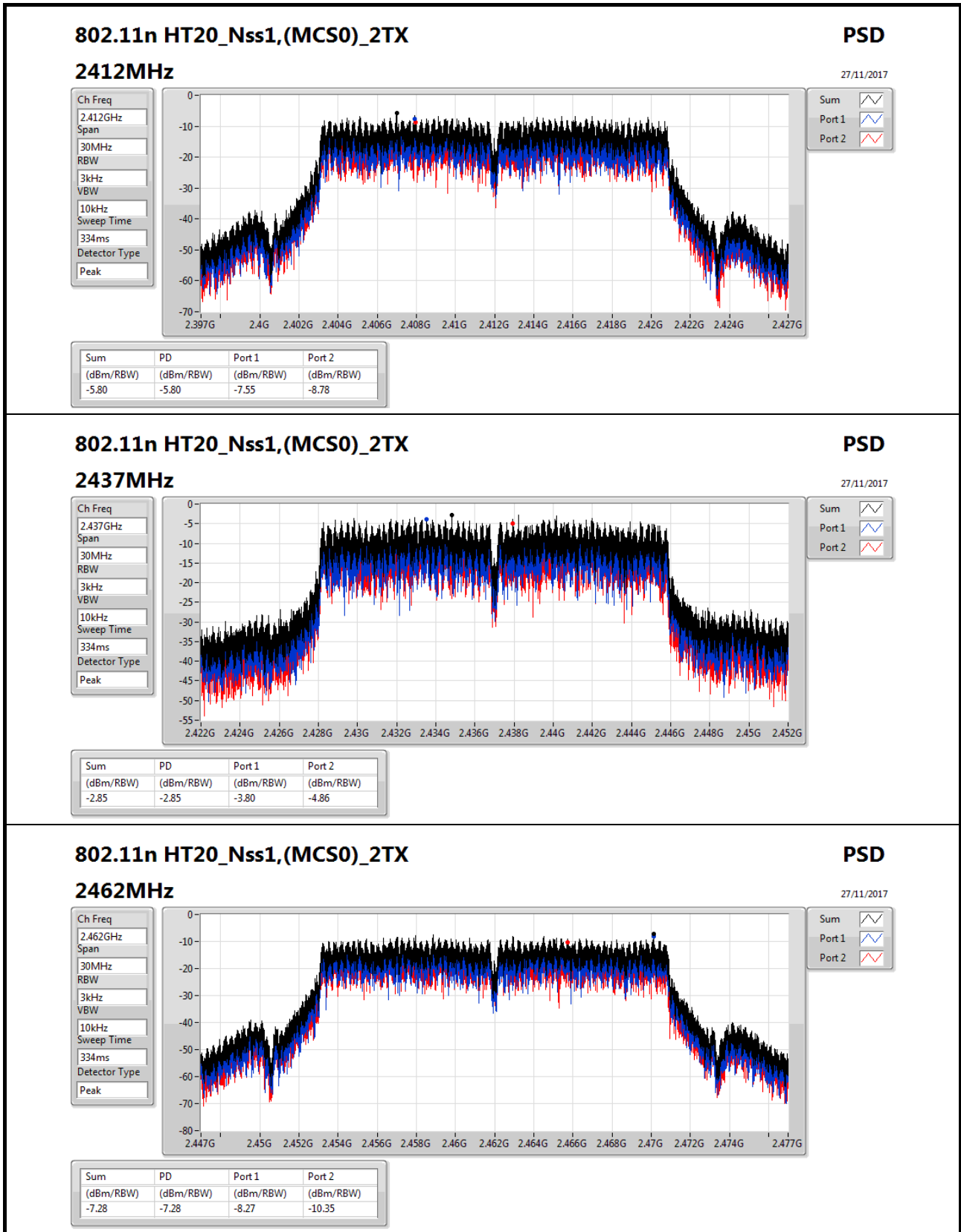
RBW=3kHz.

**Result**

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	4.20	-7.55	-8.78	-5.80	8.00
2437MHz	Pass	4.20	-3.80	-4.86	-2.85	8.00
2462MHz	Pass	4.20	-8.27	-10.35	-7.28	8.00
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	4.20	-12.33	-11.63	-9.83	8.00
2437MHz	Pass	4.20	-10.04	-9.26	-8.68	8.00
2452MHz	Pass	4.20	-11.63	-10.57	-9.95	8.00

DG = Directional Gain; RBW=3kHz;

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



### 802.11n HT20\_Nss1,(MCS0)\_2TX

#### 2462MHz

### PSD

27/11/2017

Ch Freq  
2.462GHz

Span  
30MHz

RBW  
3kHz

VBW  
10kHz

Sweep Time  
334ms

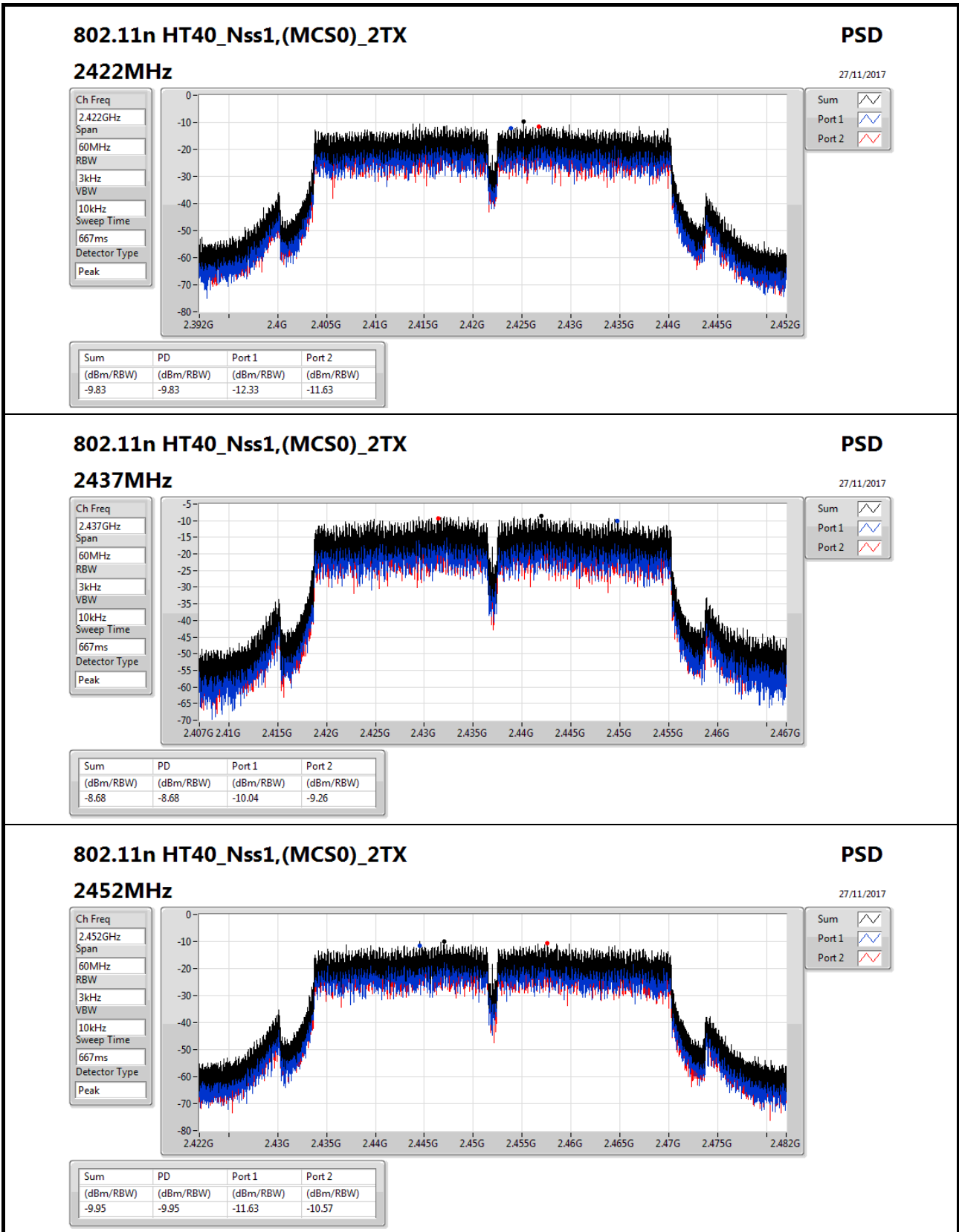
Detector Type  
Peak

Sum

Port 1

Port 2

Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-7.28	-7.28	-8.27	-10.35



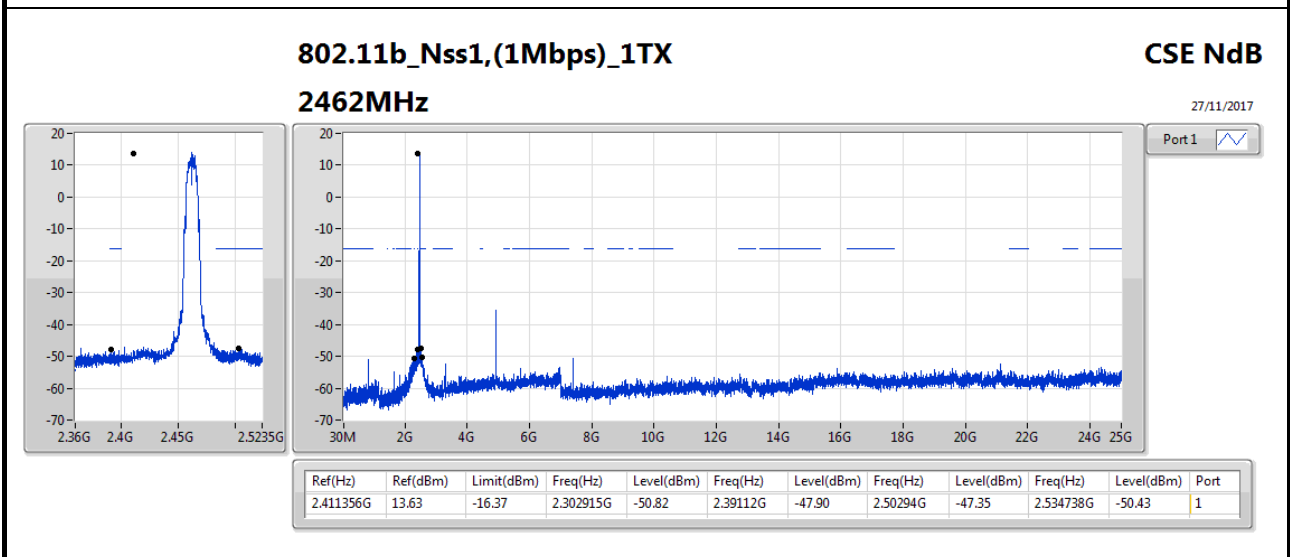
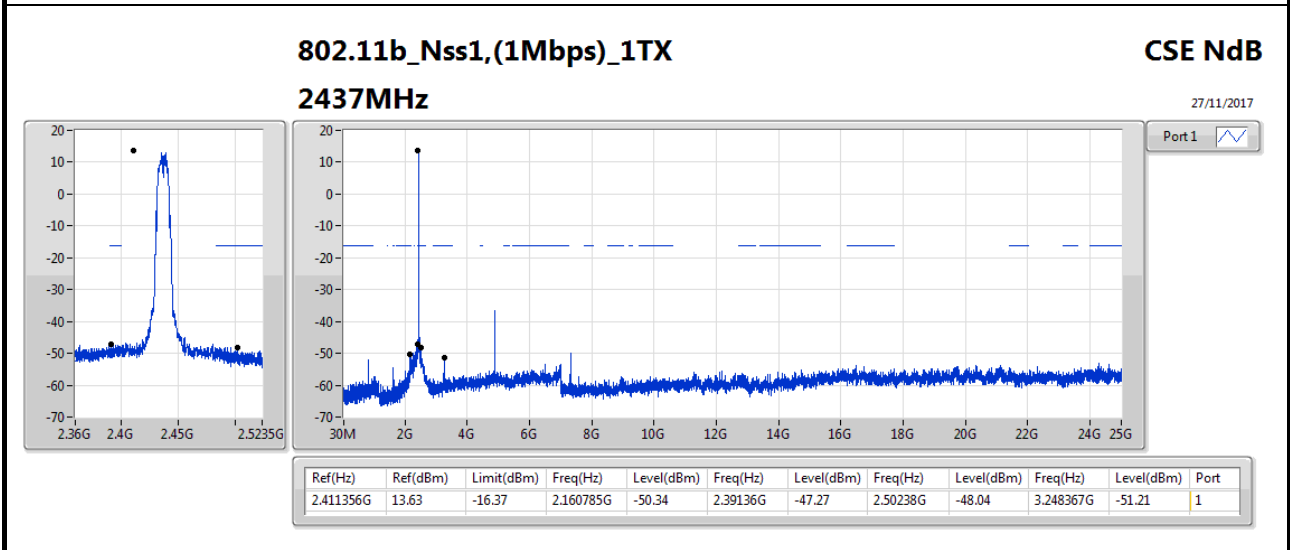
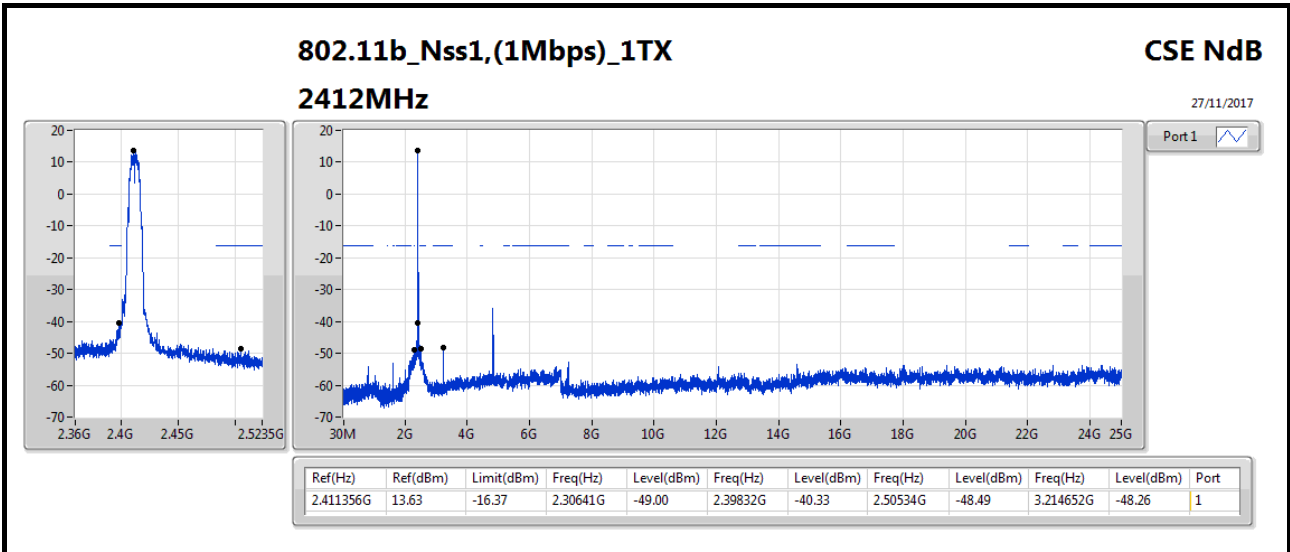


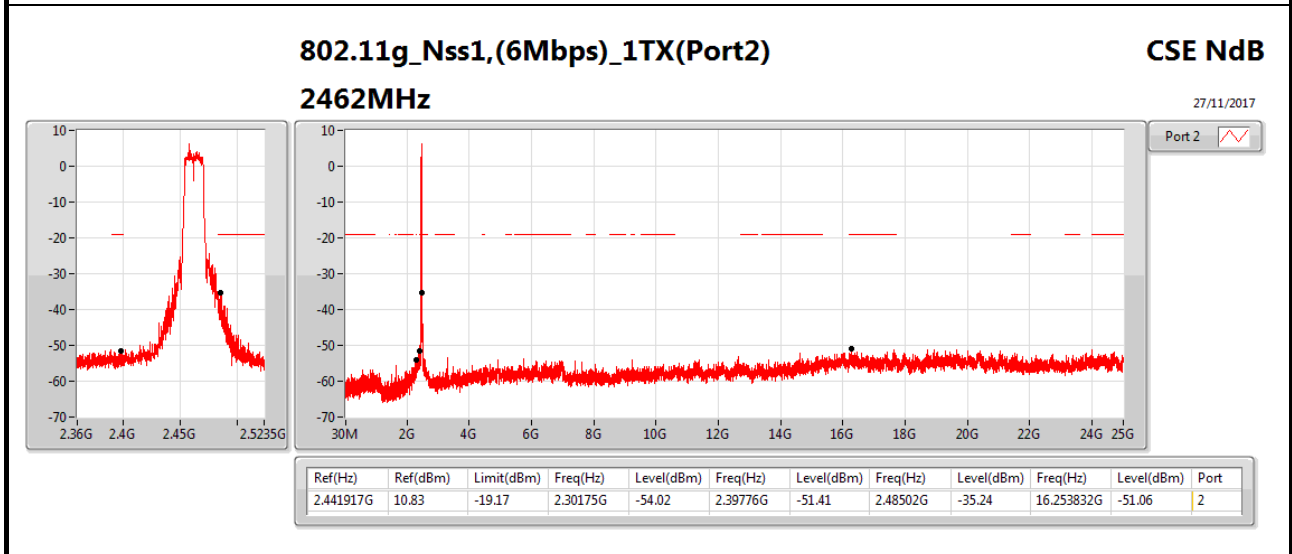
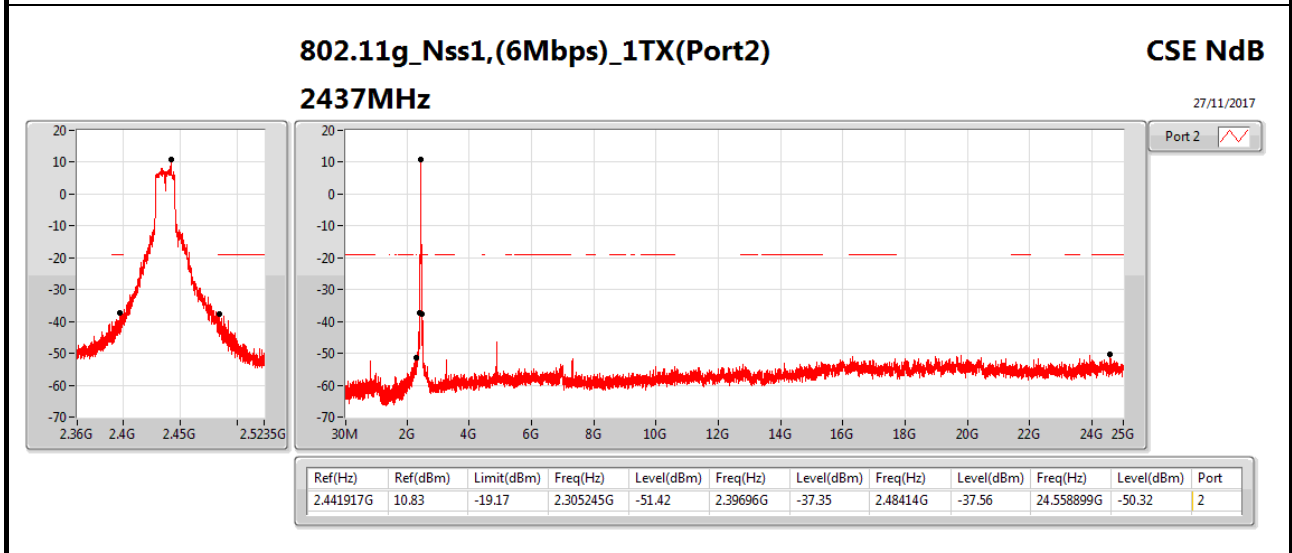
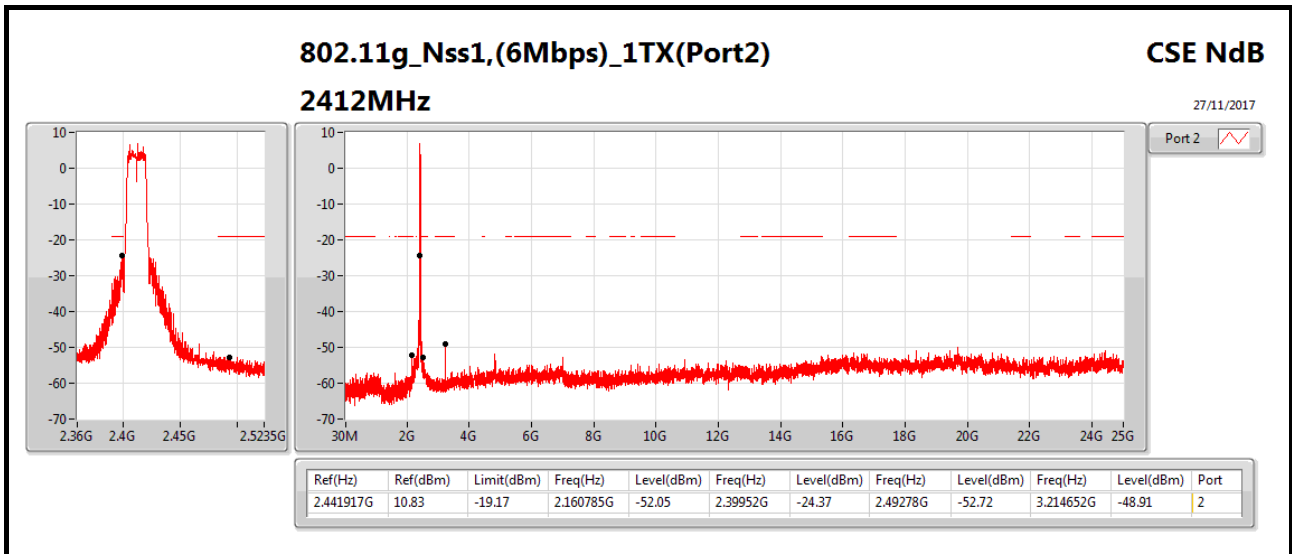
**Summary**

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)_1TX	Pass	2.411356G	13.63	-16.37	2.30641G	-49.00	2.39832G	-40.33	2.50534G	-48.49	3.214652G	-48.26	1
802.11g_Nss1,(6Mbps)_1TX(Port2)	Pass	2.441917G	10.83	-19.17	2.160785G	-52.05	2.39952G	-24.37	2.49278G	-52.72	3.214652G	-48.91	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)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.411356G	13.63	-16.37	2.30641G	-49.00	2.39832G	-40.33	2.50534G	-48.49	3.214652G	-48.26	1
2437MHz	Pass	2.411356G	13.63	-16.37	2.160785G	-50.34	2.39136G	-47.27	2.50238G	-48.04	3.248367G	-51.21	1
2462MHz	Pass	2.411356G	13.63	-16.37	2.302915G	-50.82	2.39112G	-47.90	2.50294G	-47.35	2.534738G	-50.43	1
802.11g_Nss1,(6Mbps)_1TX(Port2)	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.441917G	10.83	-19.17	2.160785G	-52.05	2.39952G	-24.37	2.49278G	-52.72	3.214652G	-48.91	2
2437MHz	Pass	2.441917G	10.83	-19.17	2.305245G	-51.42	2.39696G	-37.35	2.48414G	-37.56	24.558899G	-50.32	2
2462MHz	Pass	2.441917G	10.83	-19.17	2.30175G	-54.02	2.39776G	-51.41	2.48502G	-35.24	16.253832G	-51.06	2





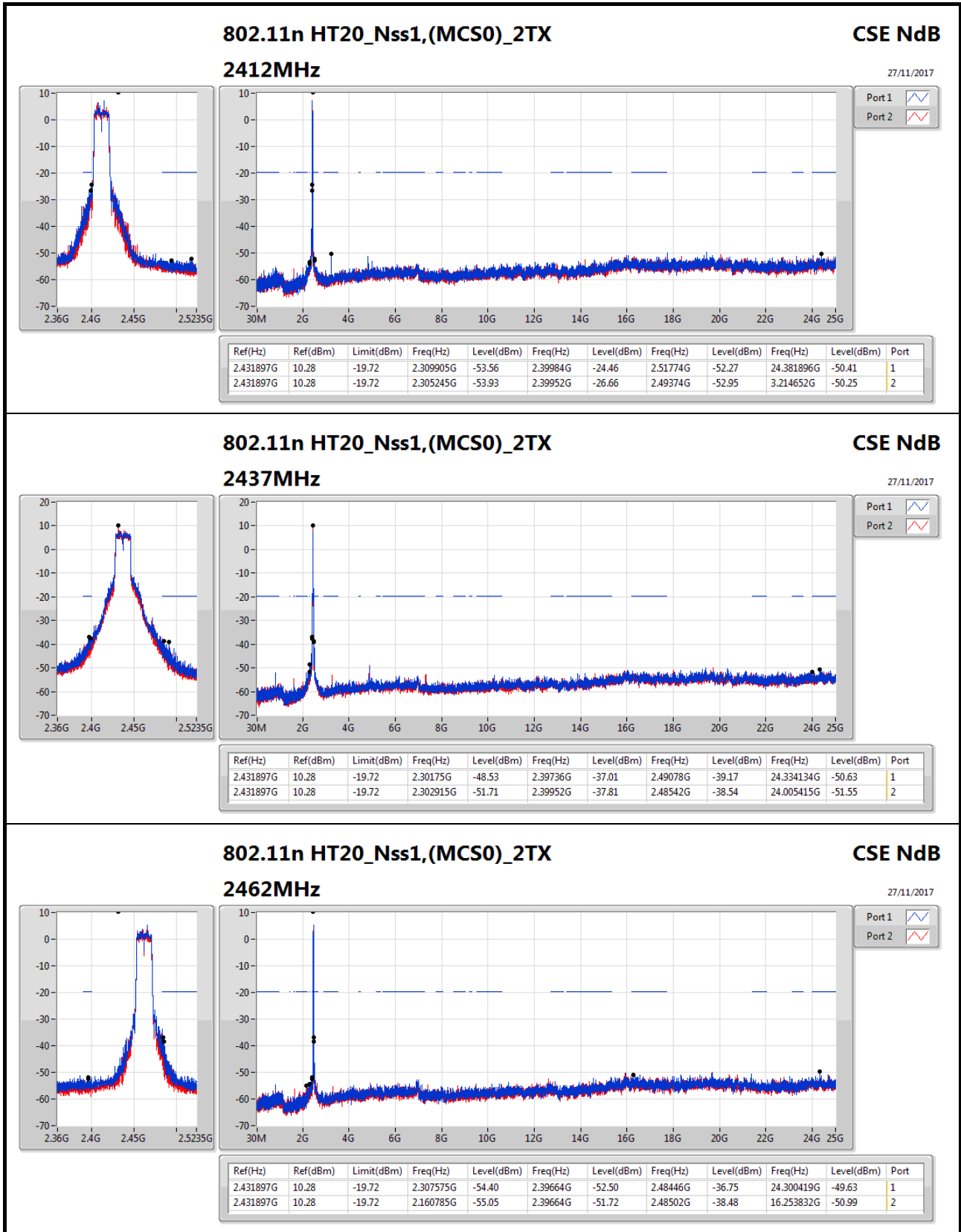


**Summary**

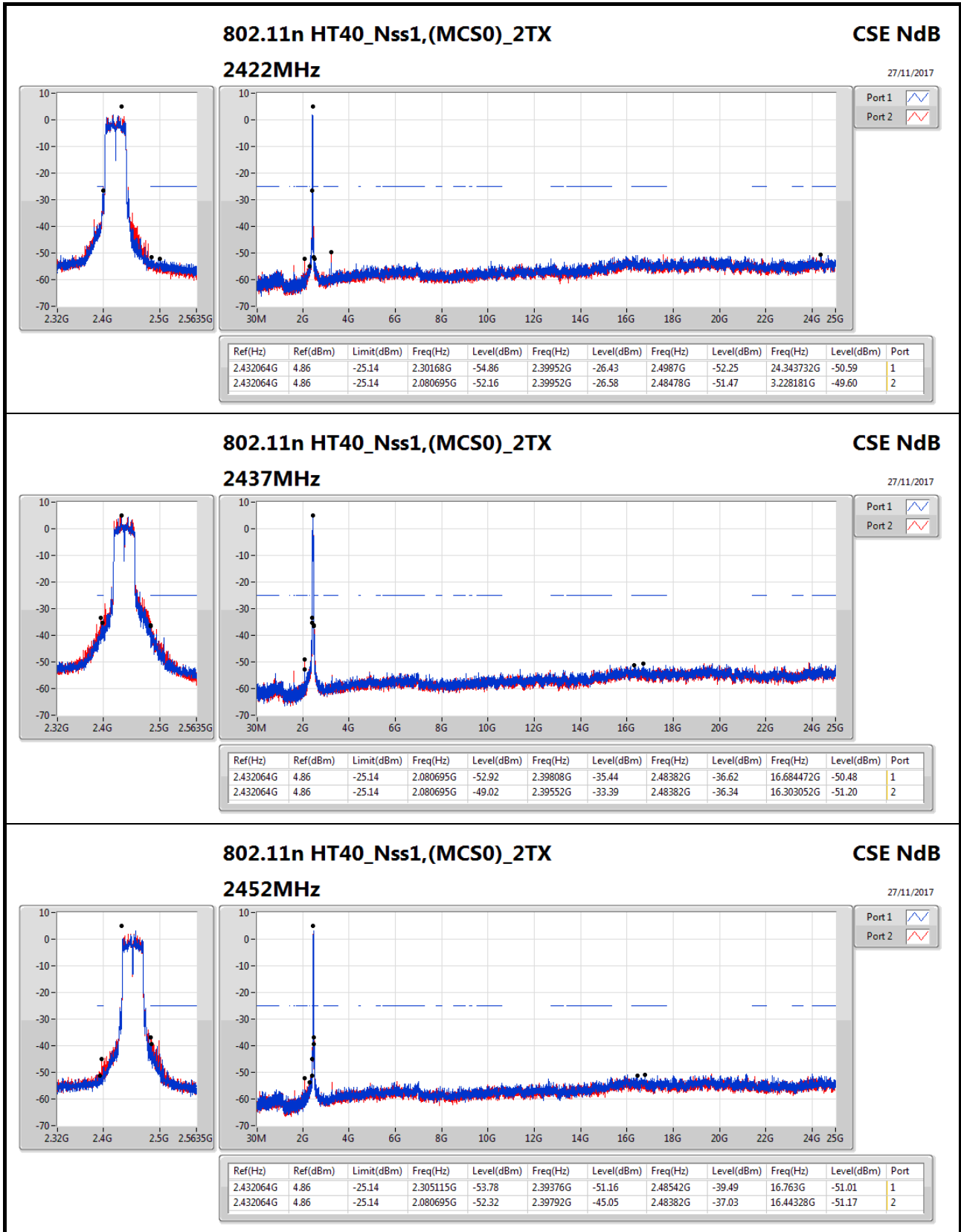
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-
802.11n HT20_Nss1,(MCS0)_2TX	Pass	2.431897G	10.28	-19.72	2.309905G	-53.56	2.39984G	-24.46	2.51774G	-52.27	24.381896G	-50.41	1
802.11n HT40_Nss1,(MCS0)_2TX	Pass	2.432064G	4.86	-25.14	2.30168G	-54.86	2.39952G	-26.43	2.4987G	-52.25	24.343732G	-50.59	1

**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
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.431897G	10.28	-19.72	2.309905G	-53.56	2.39984G	-24.46	2.51774G	-52.27	24.381896G	-50.41	1
2412MHz	Pass	2.431897G	10.28	-19.72	2.305245G	-53.93	2.39952G	-26.66	2.49374G	-52.95	3.214652G	-50.25	2
2437MHz	Pass	2.431897G	10.28	-19.72	2.30175G	-48.53	2.39736G	-37.01	2.49078G	-39.17	24.334134G	-50.63	1
2437MHz	Pass	2.431897G	10.28	-19.72	2.302915G	-51.71	2.39952G	-37.81	2.48542G	-38.54	24.005415G	-51.55	2
2462MHz	Pass	2.431897G	10.28	-19.72	2.307575G	-54.40	2.39664G	-52.50	2.48446G	-36.75	24.300419G	-49.63	1
2462MHz	Pass	2.431897G	10.28	-19.72	2.160785G	-55.05	2.39664G	-51.72	2.48502G	-38.48	16.253832G	-50.99	2
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	2.432064G	4.86	-25.14	2.30168G	-54.86	2.39952G	-26.43	2.4987G	-52.25	24.343732G	-50.59	1
2422MHz	Pass	2.432064G	4.86	-25.14	2.080695G	-52.16	2.39952G	-26.58	2.48478G	-51.47	3.228181G	-49.60	2
2437MHz	Pass	2.432064G	4.86	-25.14	2.080695G	-52.92	2.39808G	-35.44	2.48382G	-36.62	16.684472G	-50.48	1
2437MHz	Pass	2.432064G	4.86	-25.14	2.080695G	-49.02	2.39552G	-33.39	2.48382G	-36.34	16.303052G	-51.20	2
2452MHz	Pass	2.432064G	4.86	-25.14	2.305115G	-53.78	2.39376G	-51.16	2.48542G	-39.49	16.763G	-51.01	1
2452MHz	Pass	2.432064G	4.86	-25.14	2.080695G	-52.32	2.39792G	-45.05	2.48382G	-37.03	16.44328G	-51.17	2







**802.11n HT40\_Nss1,(MCS0)\_2TX**

**2452MHz**

**CSE NdB**

27/11/2017

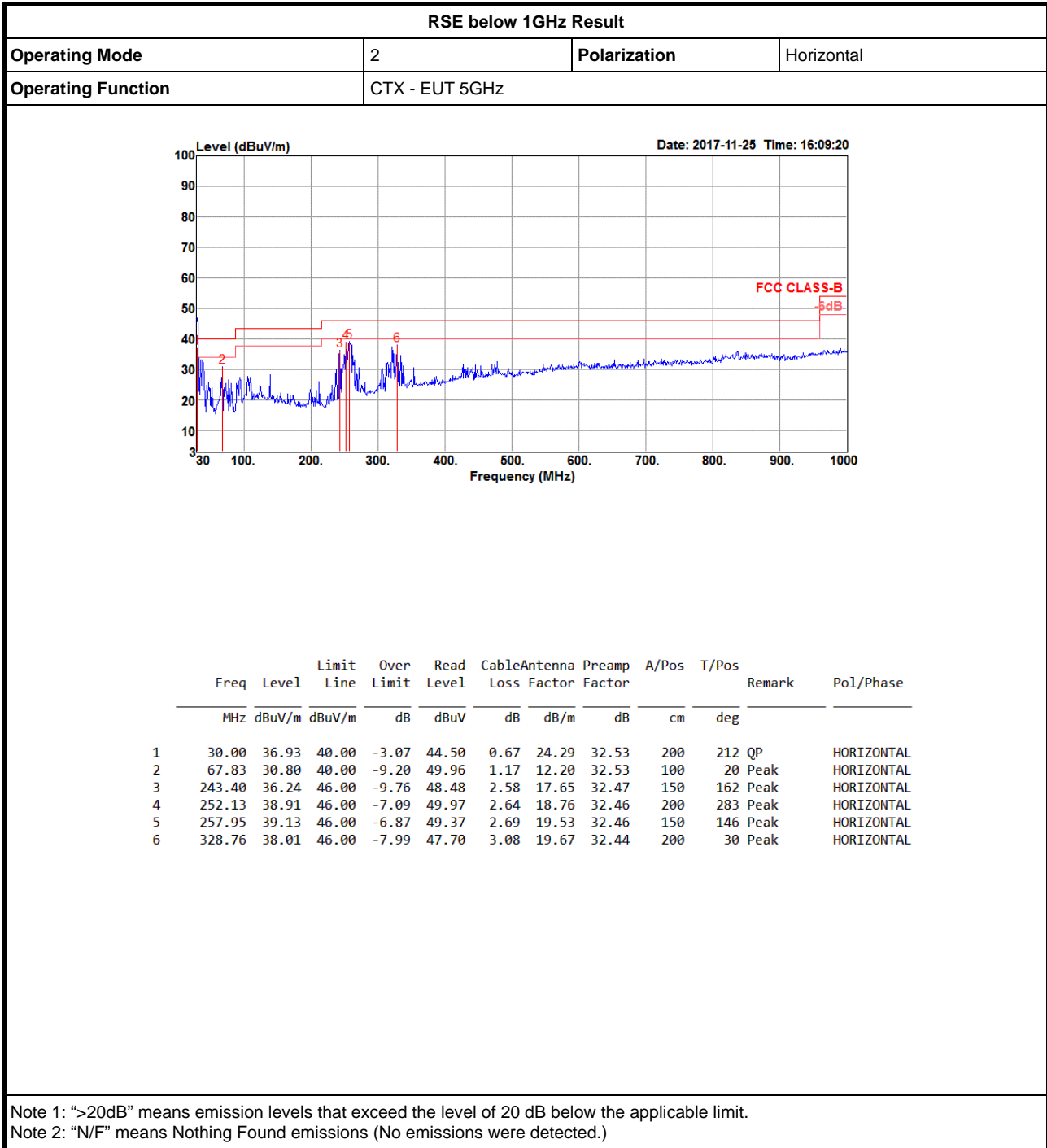



Port 1

Port 2



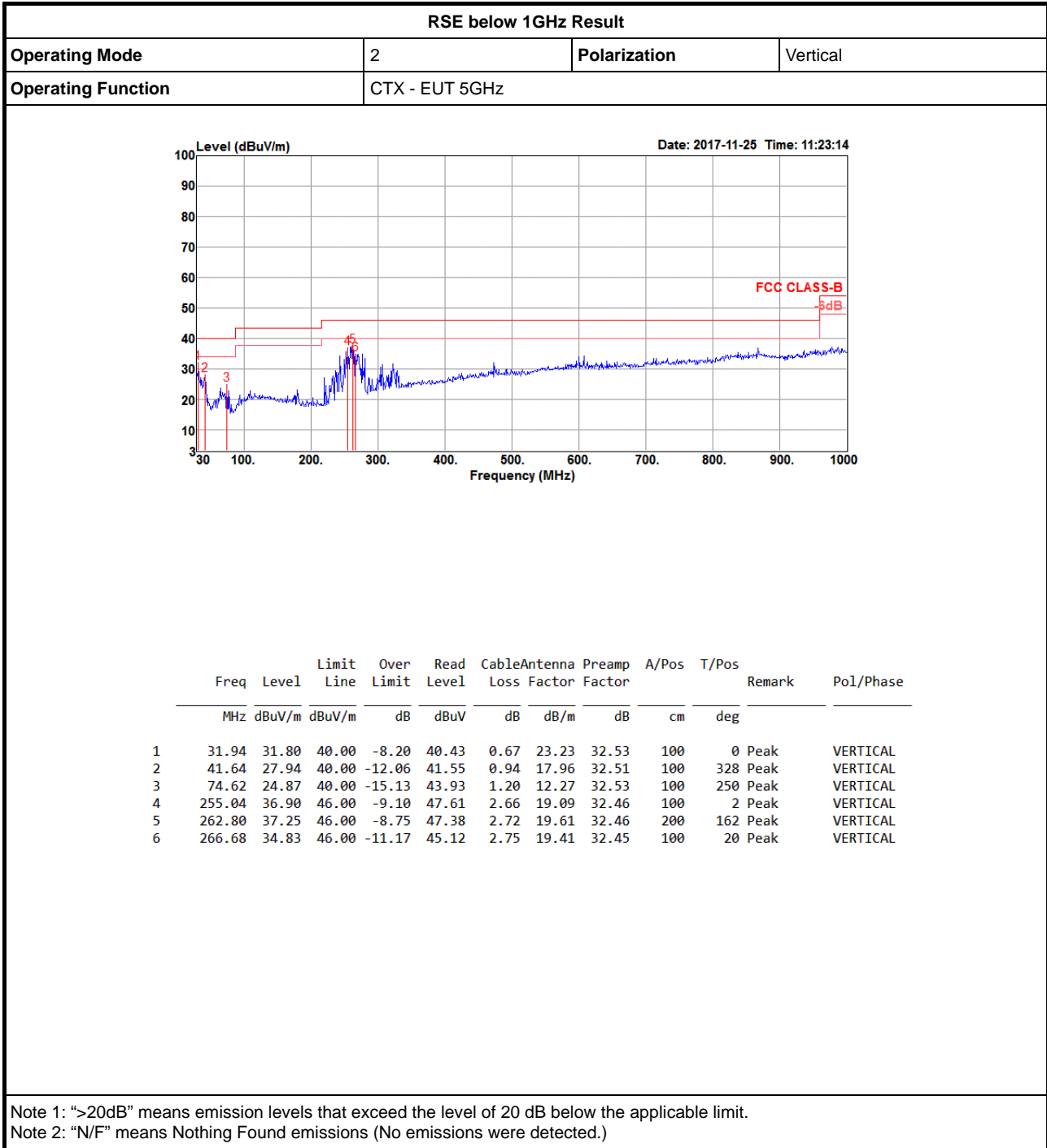
# RSE below 1GHz Result





# RSE below 1GHz Result

Appendix F.1



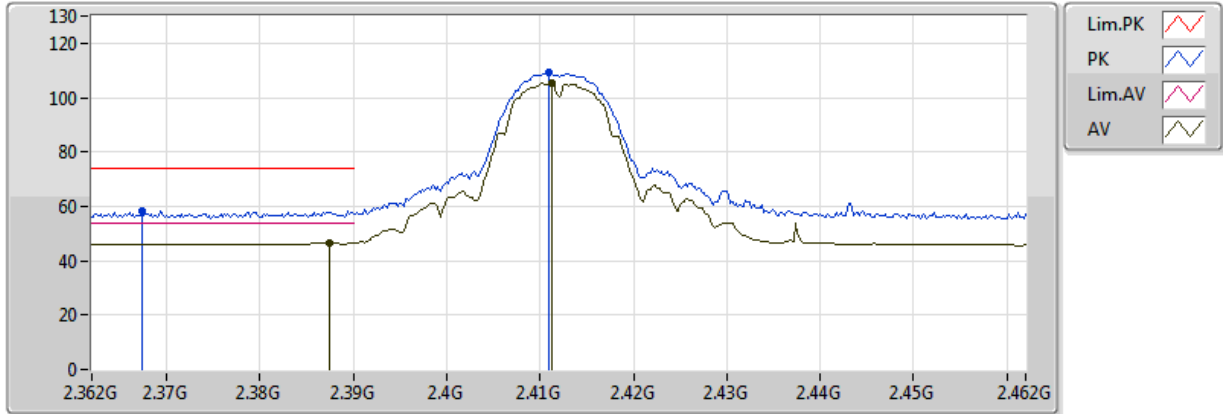


Summary

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	-	-	-	-	-	-	-	-	-	-	-	-
802.11n HT40_Nss1,(MCS0)_2TX	Pass	AV	2.3896G	53.99	54.00	-0.01	33.16	3	Horizontal	35	2.94	-

### 802.11b\_Nss1,(1Mbps)\_1TX

### 2412MHz\_TX

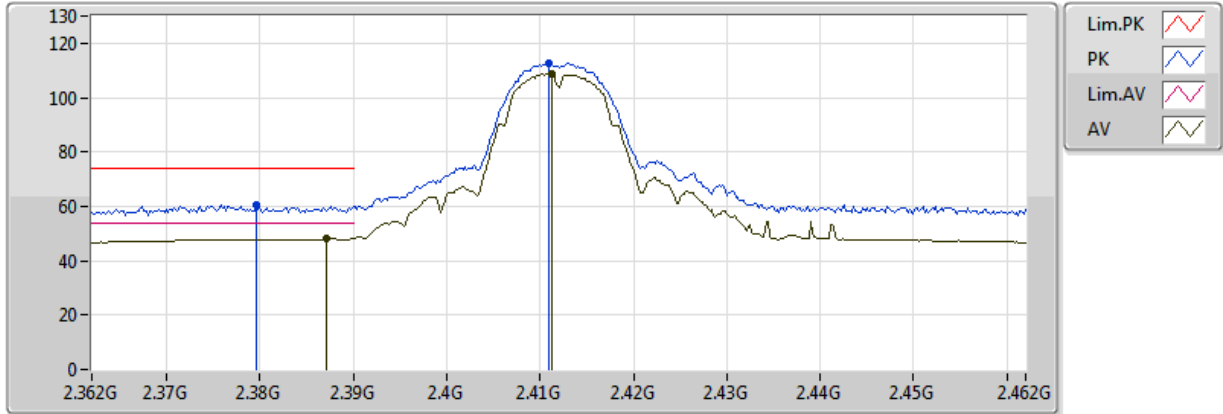


20171120  
 EUT\_Z\_1TX\_WiFi 1  
 Setting 90(Max setting)  
 04-W-3  
 FSP(100142)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.3874G	46.78	54.00	-7.22	33.16	3	Vertical	331	1.17
AV	2.4112G	105.30	Inf	-Inf	33.17	3	Vertical	331	1.17
PK	2.3674G	58.28	74.00	-15.72	33.15	3	Vertical	331	1.17
PK	2.411G	109.15	Inf	-Inf	33.17	3	Vertical	331	1.17

### 802.11b\_Nss1,(1Mbps)\_1TX

### 2412MHz\_TX

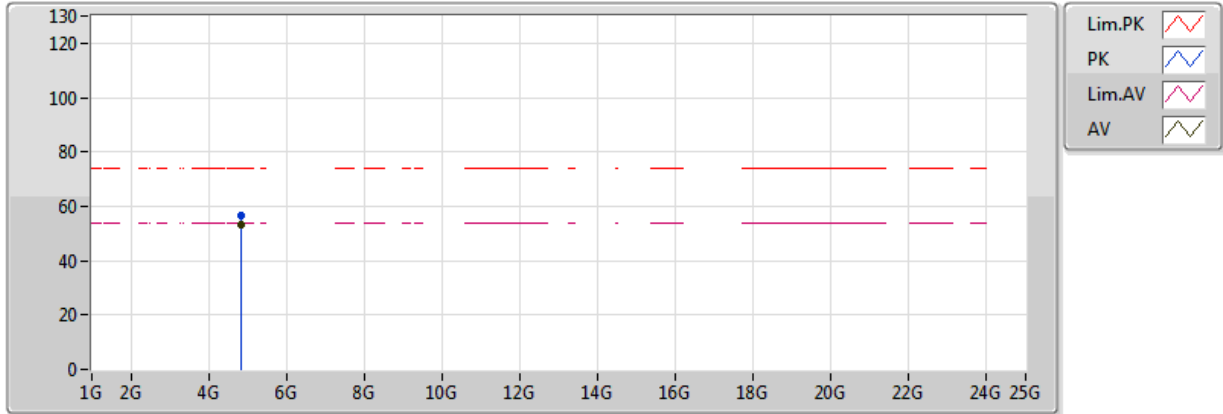


20171120  
 EUT\_Z\_1TX\_WiFi 1  
 Setting 90(Max setting)  
 04-W-3  
 FSP(100142)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.3872G	48.37	54.00	-5.63	33.16	3	Horizontal	39	1.48
AV	2.4112G	108.74	Inf	-Inf	33.17	3	Horizontal	39	1.48
PK	2.3796G	60.41	74.00	-13.59	33.16	3	Horizontal	39	1.48
PK	2.411G	112.62	Inf	-Inf	33.17	3	Horizontal	39	1.48

### 802.11b\_Nss1,(1Mbps)\_1TX

### 2412MHz\_TX

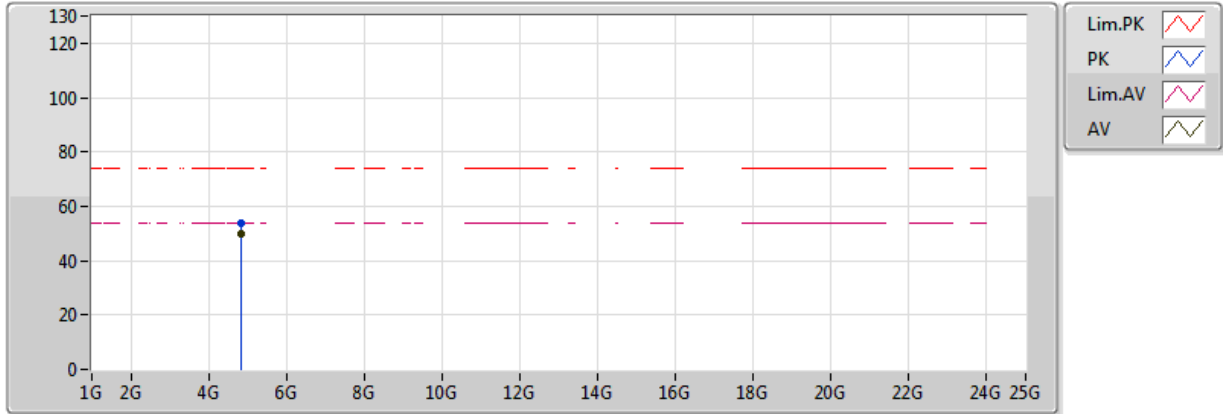


20171120  
 EUT\_Z\_1TX\_WiFi 1  
 Setting 90(Max setting)  
 04-W-3  
 FSP(100142)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	4.823978G	53.39	54.00	-0.61	3.16	3	Vertical	116	1.00
PK	4.823971G	56.38	74.00	-17.62	3.16	3	Vertical	116	1.00

### 802.11b\_Nss1,(1Mbps)\_1TX

### 2412MHz\_TX



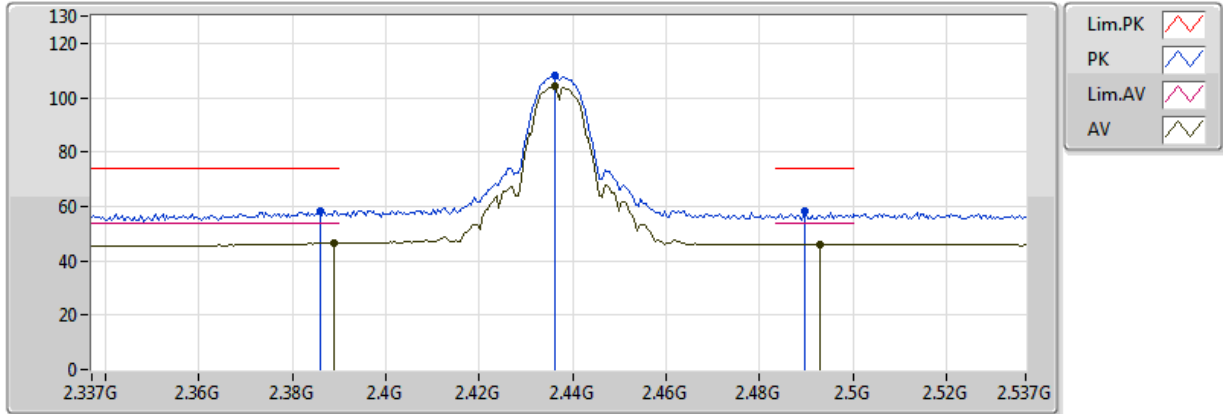
20171120  
 EUT\_Z\_1TX\_WiFi 1  
 Setting 90(Max setting)  
 04-W-3  
 FSP(100142)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	4.823994G	49.69	54.00	-4.31	3.16	3	Horizontal	185	1.01
PK	4.823972G	53.68	74.00	-20.32	3.16	3	Horizontal	185	1.01



### 802.11b\_Nss1,(1Mbps)\_1TX

### 2437MHz\_TX

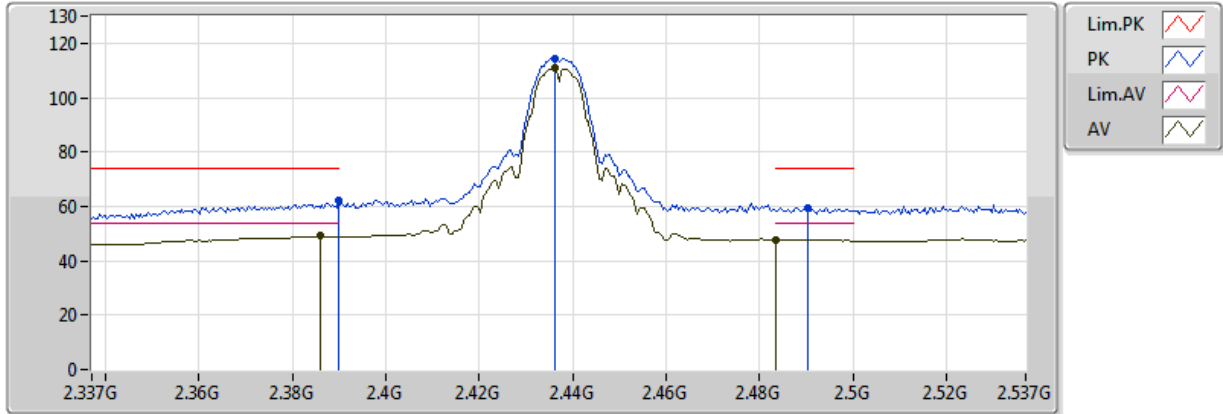


20171120  
 EUT\_Z\_1TX\_WiFi 1  
 Setting 90(Max setting)  
 04-W-3  
 FSP(100142)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.389G	46.39	54.00	-7.61	33.16	3	Vertical	174	1.27
AV	2.4362G	103.95	Inf	-Inf	33.18	3	Vertical	174	1.27
AV	2.493G	45.92	54.00	-8.08	33.19	3	Vertical	174	1.27
PK	2.3858G	58.03	74.00	-15.97	33.16	3	Vertical	174	1.27
PK	2.4362G	107.91	Inf	-Inf	33.18	3	Vertical	174	1.27
PK	2.4898G	58.11	74.00	-15.89	33.19	3	Vertical	174	1.27

### 802.11b\_Nss1,(1Mbps)\_1TX

### 2437MHz\_TX

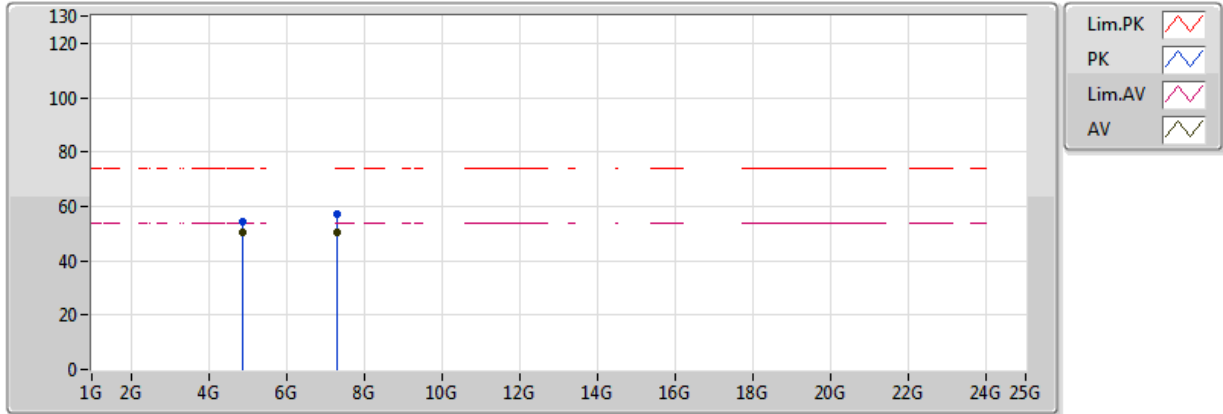


20171120  
 EUT\_Z\_1TX\_WiFi 1  
 Setting 90(Max setting)  
 04-W-3  
 FSP(100142)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.3858G	49.08	54.00	-4.92	33.16	3	Horizontal	171	2.69
AV	2.4362G	110.67	Inf	-Inf	33.18	3	Horizontal	171	2.69
AV	2.483502G	47.86	54.00	-6.14	33.19	3	Horizontal	171	2.69
PK	2.389998G	62.07	74.00	-11.93	33.16	3	Horizontal	171	2.69
PK	2.4362G	114.57	Inf	-Inf	33.18	3	Horizontal	171	2.69
PK	2.4902G	59.50	74.00	-14.50	33.19	3	Horizontal	171	2.69

### 802.11b\_Nss1,(1Mbps)\_1TX

### 2437MHz\_TX

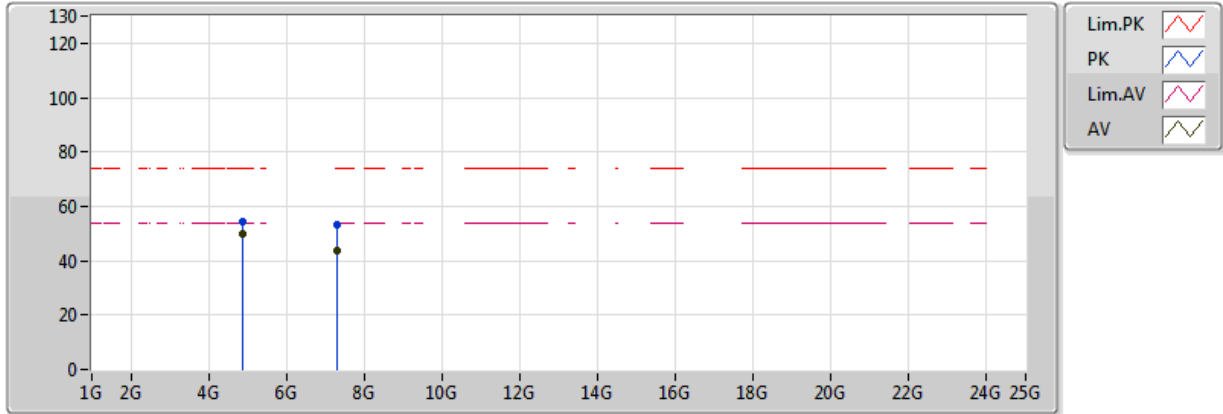


20171120  
 EUT\_Z\_1TX\_WiFi1  
 Setting 90(Max setting)  
 04-W-3  
 FSP(100142)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	4.873982G	50.62	54.00	-3.38	3.27	3	Vertical	146	1.50
AV	7.310238G	50.46	54.00	-3.54	9.48	3	Vertical	161	1.05
PK	4.87405G	54.35	74.00	-19.65	3.27	3	Vertical	146	1.50
PK	7.311288G	57.25	74.00	-16.75	9.48	3	Vertical	161	1.05

### 802.11b\_Nss1,(1Mbps)\_1TX

### 2437MHz\_TX

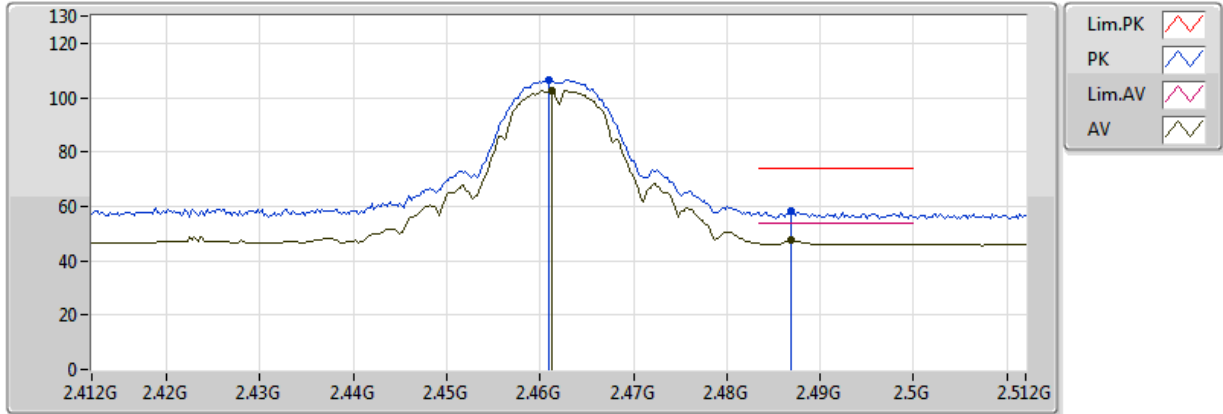


20171120  
 EUT\_Z\_1TX\_WiFi1  
 Setting 90(Max setting)  
 04-W-3  
 FSP(100142)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	4.873982G	50.09	54.00	-3.91	3.27	3	Horizontal	184	1.10
AV	7.311762G	43.50	54.00	-10.50	9.48	3	Horizontal	52	1.20
PK	4.873996G	54.23	74.00	-19.77	3.27	3	Horizontal	184	1.10
PK	7.311786G	53.31	74.00	-20.69	9.48	3	Horizontal	52	1.20

### 802.11b\_Nss1,(1Mbps)\_1TX

### 2462MHz\_TX

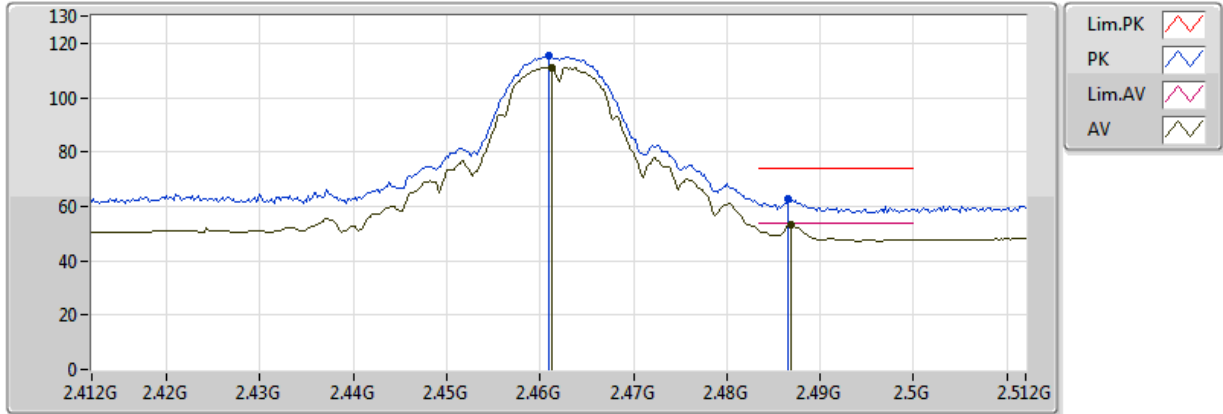


20171120  
 EUT\_Z\_1TX\_WiFi 1  
 Setting 90(Max setting)  
 04-W-3  
 FSP(100142)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.4612G	102.66	Inf	-Inf	33.18	3	Vertical	230	1.48
AV	2.4868G	47.48	54.00	-6.52	33.19	3	Vertical	230	1.48
PK	2.461G	106.55	Inf	-Inf	33.18	3	Vertical	230	1.48
PK	2.4868G	58.30	74.00	-15.70	33.19	3	Vertical	230	1.48

### 802.11b\_Nss1,(1Mbps)\_1TX

### 2462MHz\_TX

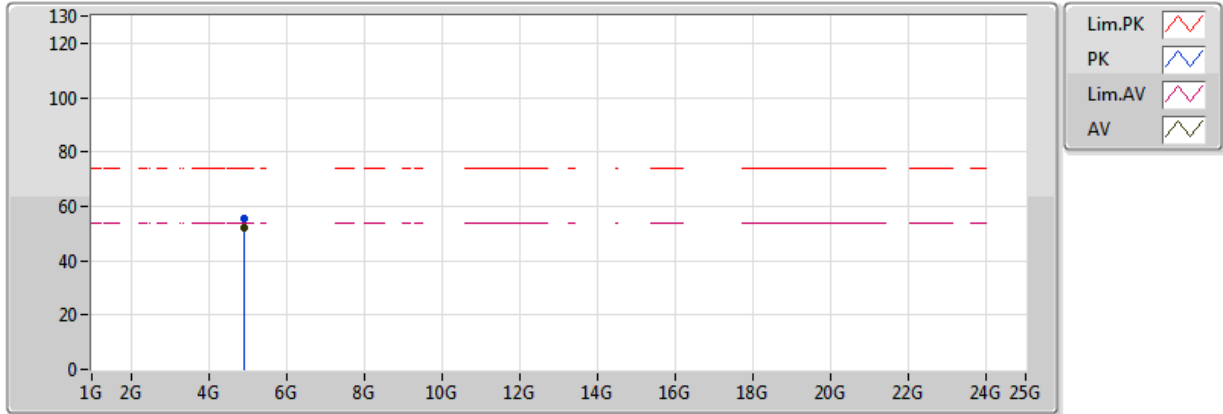


20171120  
 EUT\_Z\_1TX\_WiFi 1  
 Setting 90(Max setting)  
 04-W-3  
 FSP(100142)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.4612G	111.16	Inf	-Inf	33.18	3	Horizontal	171	2.99
AV	2.4868G	53.31	54.00	-0.69	33.19	3	Horizontal	171	2.99
PK	2.461G	115.23	Inf	-Inf	33.18	3	Horizontal	171	2.99
PK	2.4866G	62.52	74.00	-11.48	33.19	3	Horizontal	171	2.99

### 802.11b\_Nss1,(1Mbps)\_1TX

### 2462MHz\_TX

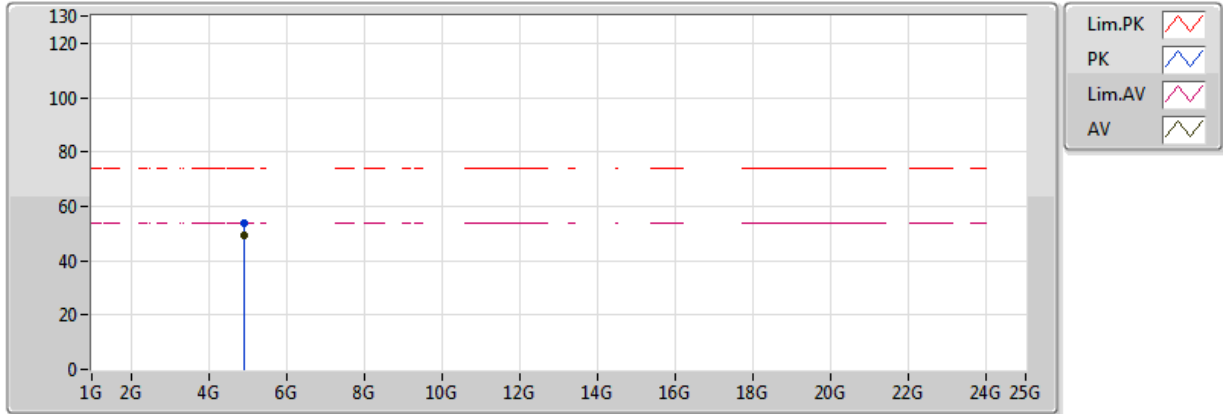


20171120  
 EUT\_Z\_1TX\_WiFi 1  
 Setting 90(Max setting)  
 04-W-3  
 FSP(100142)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	4.923978G	51.95	54.00	-2.05	3.38	3	Vertical	143	1.22
PK	4.92398G	55.51	74.00	-18.49	3.38	3	Vertical	143	1.22

### 802.11b\_Nss1,(1Mbps)\_1TX

### 2462MHz\_TX



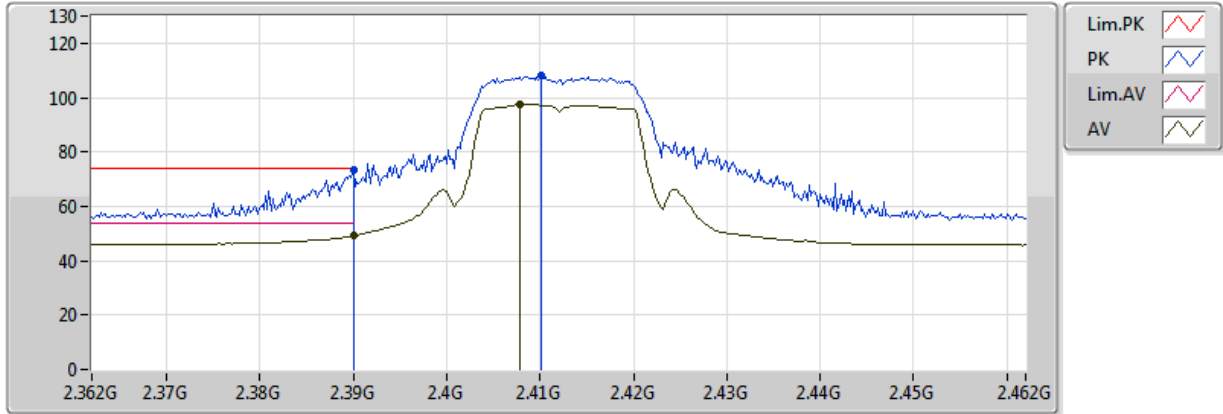
20171120  
 EUT\_Z\_1TX\_WiFi 1  
 Setting 90(Max setting)  
 04-W-3  
 FSP(100142)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	4.923978G	49.49	54.00	-4.51	3.38	3	Horizontal	189	2.99
PK	4.923947G	53.94	74.00	-20.06	3.38	3	Horizontal	189	2.99



### 802.11g\_Nss1,(6Mbps)\_1TX

### 2412MHz\_TX

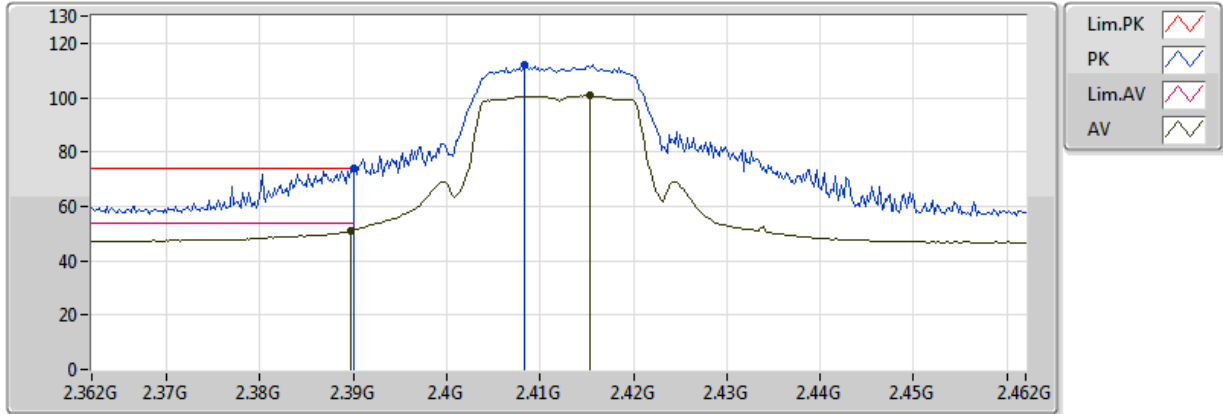


20171120  
 EUT\_Z\_1TX\_WiFi 2  
 Setting 76  
 04-W-3  
 FSP(100142)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.39G	49.29	54.00	-4.71	33.16	3	Vertical	123	2.75
AV	2.4078G	97.44	Inf	-Inf	33.17	3	Vertical	123	2.75
PK	2.39G	73.31	74.00	-0.69	33.16	3	Vertical	123	2.75
PK	2.4102G	107.98	Inf	-Inf	33.17	3	Vertical	123	2.75

### 802.11g\_Nss1,(6Mbps)\_1TX

### 2412MHz\_TX

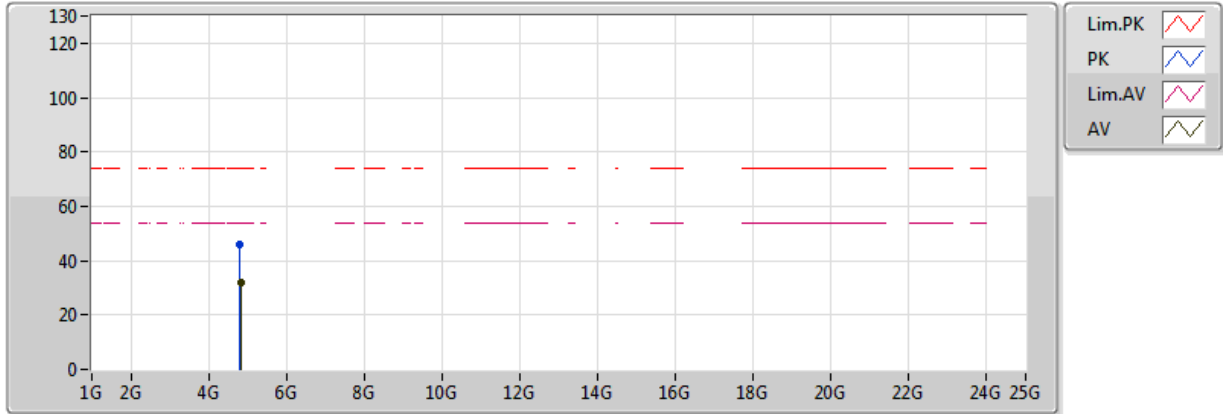


20171120  
 EUT\_Z\_1TX\_WiFi 2  
 Setting 76  
 04-W-3  
 FSP(100142)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.3898G	51.12	54.00	-2.88	33.16	3	Horizontal	72	1.01
AV	2.4154G	100.68	Inf	-Inf	33.17	3	Horizontal	72	1.01
PK	2.39G	73.98	74.00	-0.02	33.16	3	Horizontal	72	1.01
PK	2.4084G	112.24	Inf	-Inf	33.17	3	Horizontal	72	1.01

### 802.11g\_Nss1,(6Mbps)\_1TX

### 2412MHz\_TX

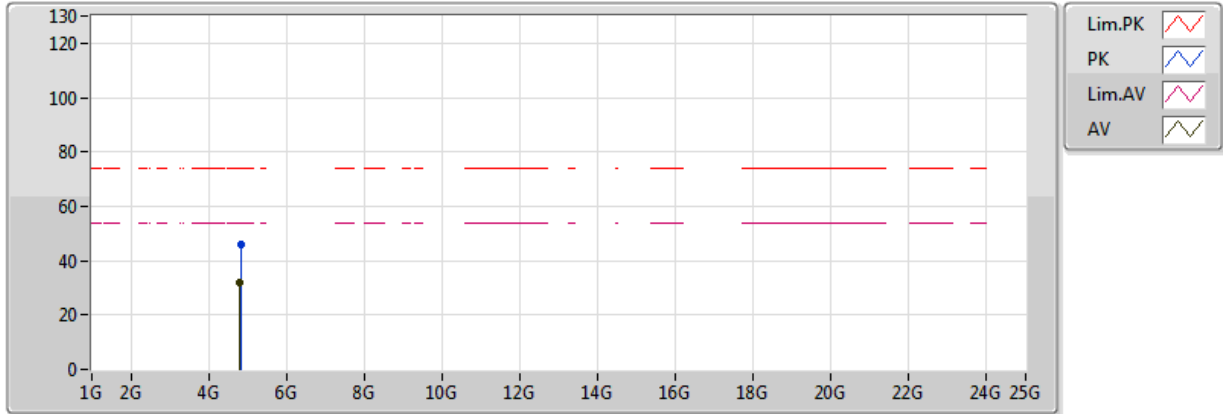


20171120  
 EUT\_Z\_1TX\_WiFi 2  
 Setting 76  
 04-Z-1  
 FSP(100142)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	4.84384G	32.16	54.00	-21.84	3.21	3	Vertical	183	1.41
PK	4.81648G	45.73	74.00	-28.27	3.15	3	Vertical	183	1.41

### 802.11g\_Nss1,(6Mbps)\_1TX

### 2412MHz\_TX

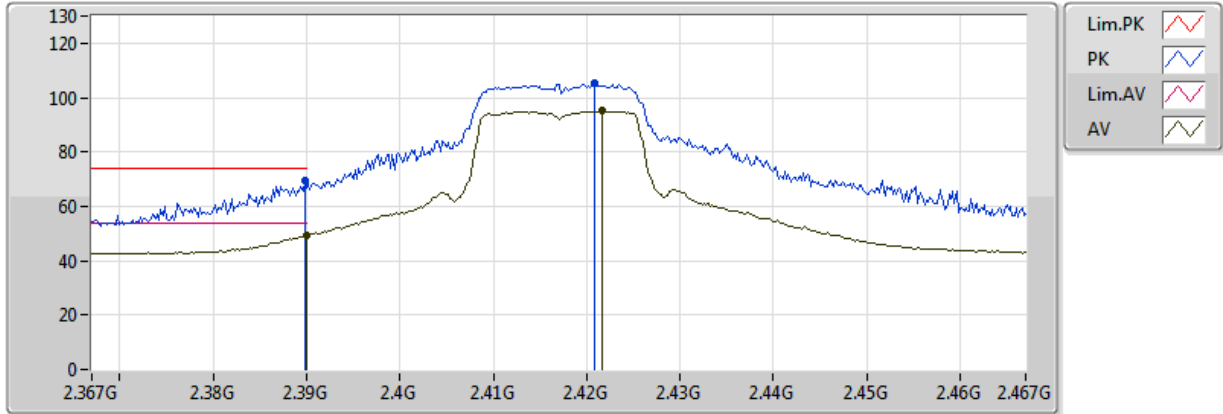


20171120  
 EUT\_Z\_1TX\_WiFi 2  
 Setting 76  
 04-Z-1  
 FSP(100142)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	4.80776G	32.12	54.00	-21.88	3.13	3	Horizontal	56	1.69
PK	4.8284G	45.85	74.00	-28.15	3.17	3	Horizontal	56	1.69

### 802.11g\_Nss1,(6Mbps)\_1TX

### 2417MHz\_TX

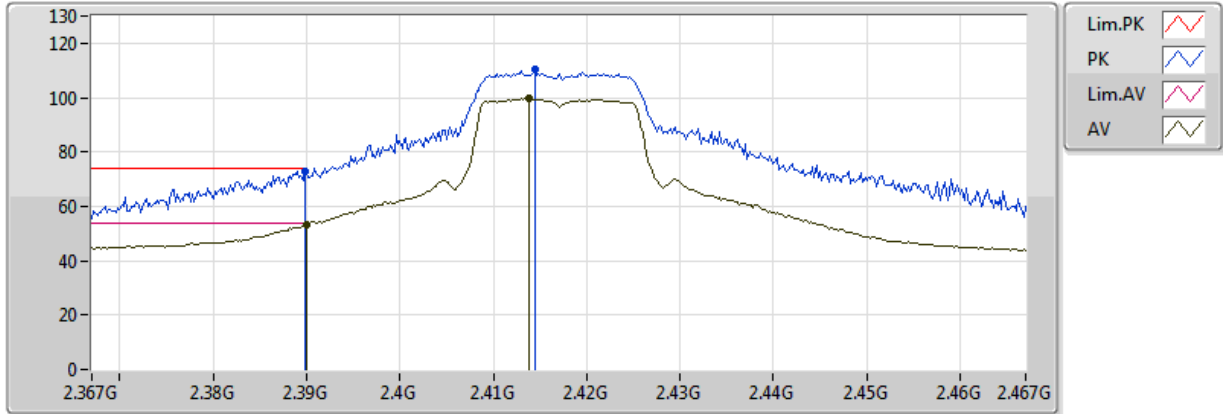


20171124  
 EUT\_Z\_1TX\_WiFi 2  
 Setting 87  
 05-C-4  
 FSP(3G)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.39G	49.34	54.00	-4.66	29.93	3	Vertical	128	1.99
AV	2.4216G	95.03	Inf	-Inf	30.09	3	Vertical	128	1.99
PK	2.3898G	69.61	74.00	-4.39	29.93	3	Vertical	128	1.99
PK	2.4208G	105.19	Inf	-Inf	30.08	3	Vertical	128	1.99

### 802.11g\_Nss1,(6Mbps)\_1TX

### 2417MHz\_TX

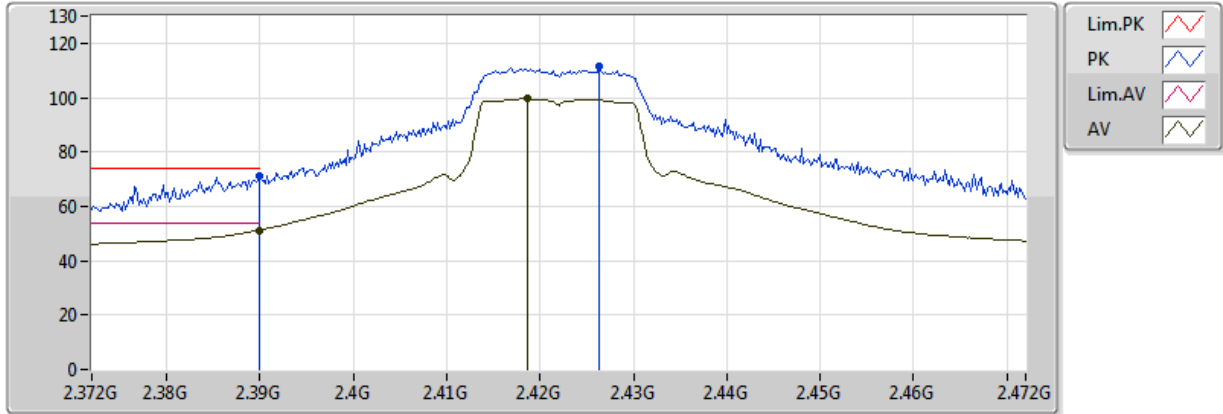


20171124  
 EUT\_Z\_1TX\_WiFi 2  
 Setting 87  
 05-C-4  
 FSP(3G)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.39G	53.41	54.00	-0.59	29.93	3	Horizontal	257	1.50
AV	2.4138G	99.55	Inf	-Inf	30.03	3	Horizontal	257	1.50
PK	2.3898G	73.00	74.00	-1.00	29.93	3	Horizontal	257	1.50
PK	2.4144G	110.24	Inf	-Inf	30.04	3	Horizontal	257	1.50

### 802.11g\_Nss1,(6Mbps)\_1TX

### 2422MHz\_TX

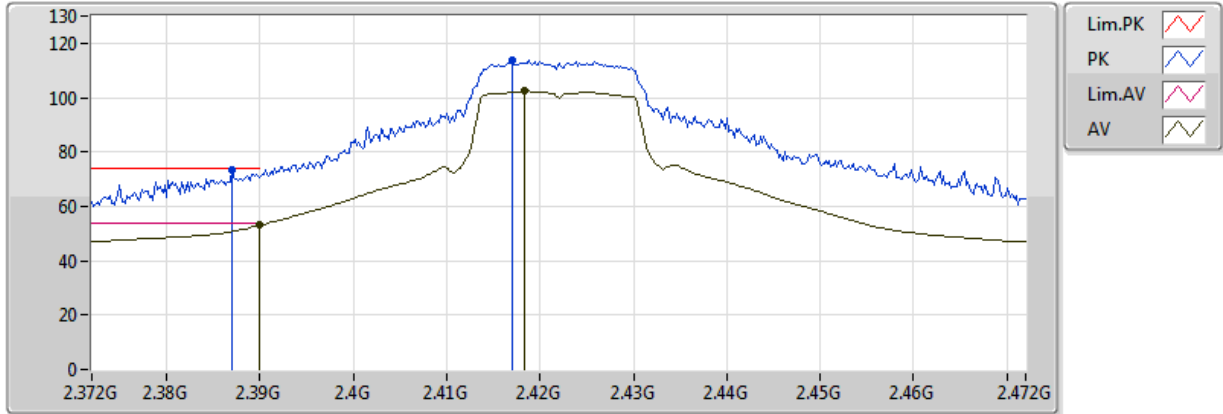


20171124  
 EUT\_Z\_1TX\_WiFi 2  
 Setting 90  
 06-L-3  
 FSP(100080)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.39G	51.27	54.00	-2.73	32.12	3	Vertical	122	1.07
AV	2.4186G	99.57	Inf	-Inf	32.21	3	Vertical	122	1.07
PK	2.39G	70.92	74.00	-3.08	32.12	3	Vertical	122	1.07
PK	2.4264G	111.30	Inf	-Inf	32.24	3	Vertical	122	1.07

### 802.11g\_Nss1,(6Mbps)\_1TX

### 2422MHz\_TX



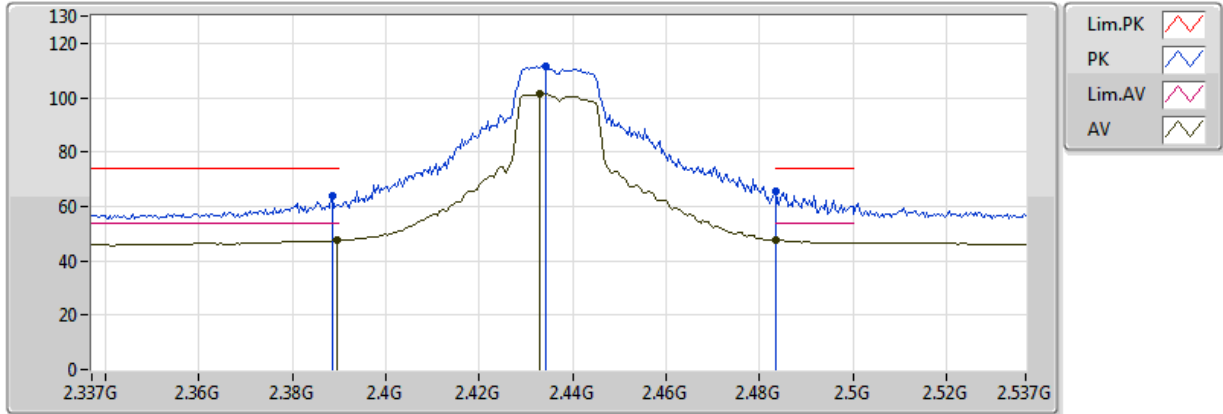
20171124  
 EUT\_Z\_1TX\_WiFi 2  
 Setting 90  
 06-L-3  
 FSP(100080)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.39G	53.05	54.00	-0.95	32.12	3	Horizontal	257	2.45
AV	2.4184G	102.34	Inf	-Inf	32.21	3	Horizontal	257	2.45
PK	2.387G	73.33	74.00	-0.67	32.11	3	Horizontal	257	2.45
PK	2.417G	113.54	Inf	-Inf	32.21	3	Horizontal	257	2.45



### 802.11g\_Nss1,(6Mbps)\_1TX

### 2437MHz\_TX

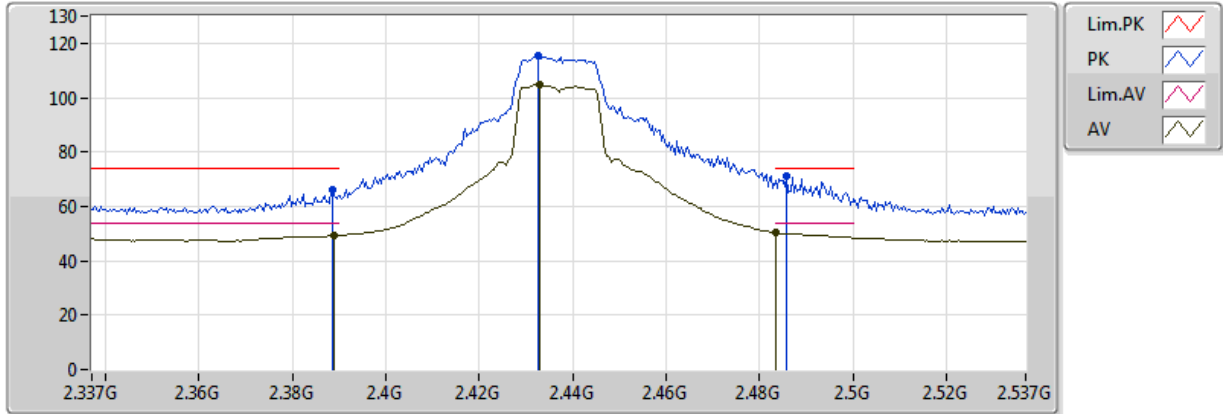


20171120  
 EUT\_Z\_1TX\_WiFi 2  
 Setting 90(Max setting)  
 04-W-3  
 FSP(100142)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.3894G	47.42	54.00	-6.58	33.16	3	Vertical	353	2.42
AV	2.433G	101.44	Inf	-Inf	33.18	3	Vertical	353	2.42
AV	2.483502G	47.60	54.00	-6.40	33.19	3	Vertical	353	2.42
PK	2.3886G	63.98	74.00	-10.02	33.16	3	Vertical	353	2.42
PK	2.4342G	111.54	Inf	-Inf	33.18	3	Vertical	353	2.42
PK	2.483502G	65.48	74.00	-8.52	33.19	3	Vertical	353	2.42

### 802.11g\_Nss1,(6Mbps)\_1TX

### 2437MHz\_TX

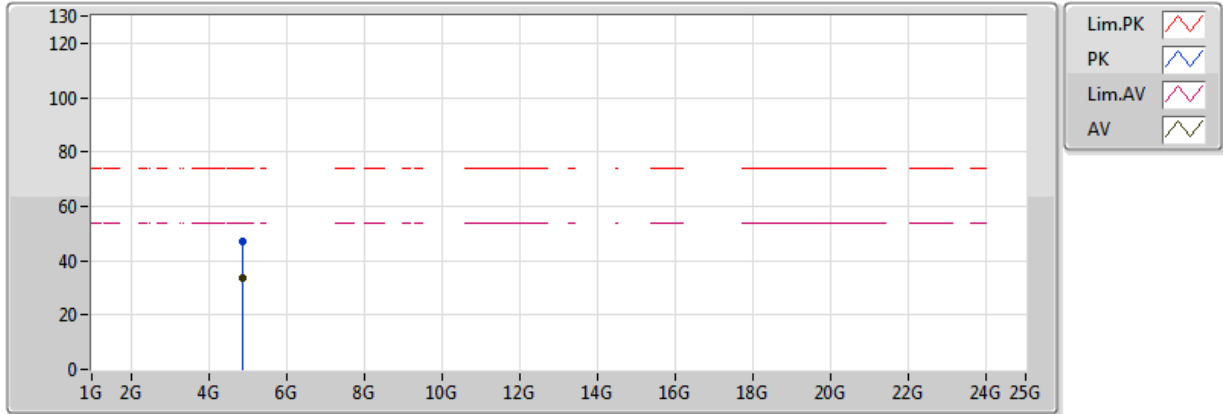


20171120  
 EUT\_Z\_1TX\_WiFi 2  
 Setting 90(Max setting)  
 04-W-3  
 FSP(100142)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.389G	49.32	54.00	-4.68	33.16	3	Horizontal	271	1.50
AV	2.433G	104.54	Inf	-Inf	33.18	3	Horizontal	271	1.50
AV	2.483502G	50.38	54.00	-3.62	33.19	3	Horizontal	271	1.50
PK	2.3886G	65.92	74.00	-8.08	33.16	3	Horizontal	271	1.50
PK	2.4326G	115.47	Inf	-Inf	33.18	3	Horizontal	271	1.50
PK	2.4858G	71.40	74.00	-2.60	33.19	3	Horizontal	271	1.50

### 802.11g\_Nss1,(6Mbps)\_1TX

### 2437MHz\_TX

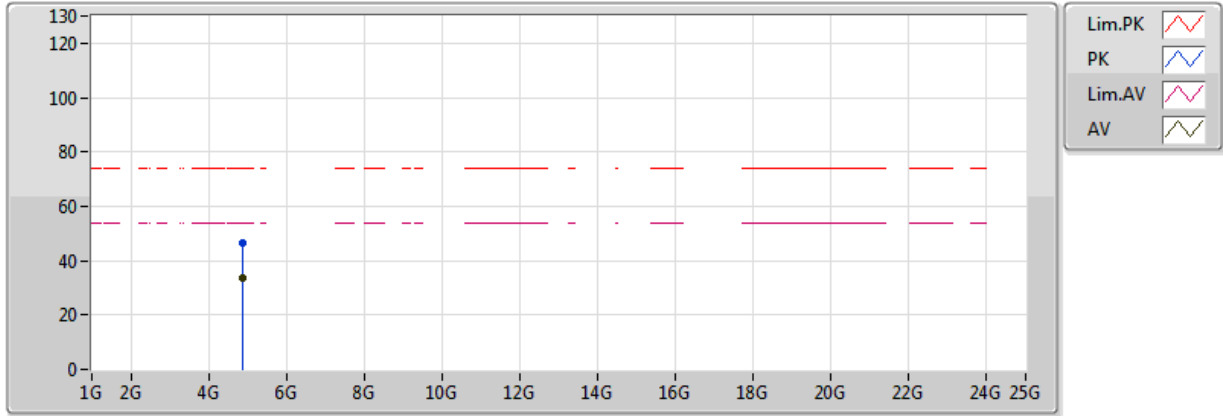


20171120  
 EUT\_Z\_1TX\_WiFi 2  
 Setting 90(Max setting)  
 04-Z-1  
 FSP(100142)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	4.89376G	33.49	54.00	-20.51	3.32	3	Vertical	308	1.61
PK	4.89064G	47.02	74.00	-26.98	3.31	3	Vertical	308	1.61

### 802.11g\_Nss1,(6Mbps)\_1TX

### 2437MHz\_TX

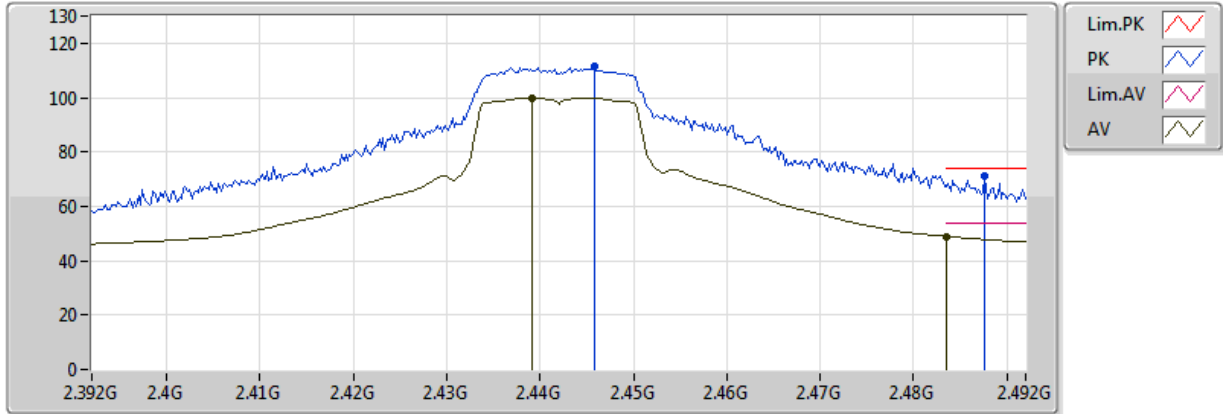


20171120  
 EUT\_Z\_1TX\_WiFi 2  
 Setting 90(Max setting)  
 04-Z-1  
 FSP(100142)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	4.89336G	33.45	54.00	-20.55	3.32	3	Horizontal	252	1.91
PK	4.89224G	46.55	74.00	-27.45	3.31	3	Horizontal	252	1.91

### 802.11g\_Nss1,(6Mbps)\_1TX

### 2442MHz\_TX

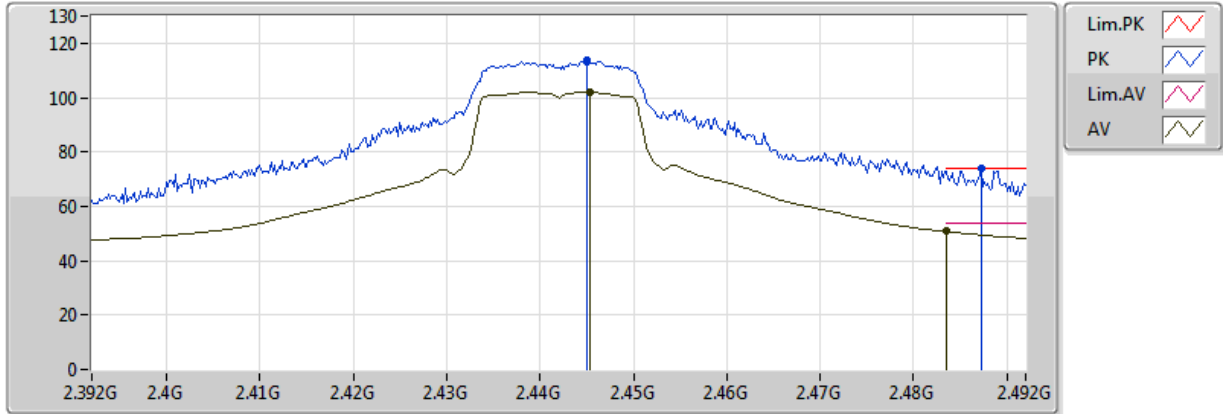


20171124  
 EUT\_Z\_1TX\_WiFi 2  
 Setting 90  
 06-L-3  
 FSP(100080)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.4392G	99.85	Inf	-Inf	32.28	3	Vertical	123	1.01
AV	2.483502G	49.01	54.00	-4.99	32.42	3	Vertical	123	1.01
PK	2.4458G	111.32	Inf	-Inf	32.30	3	Vertical	123	1.01
PK	2.4876G	70.97	74.00	-3.03	32.43	3	Vertical	123	1.01

### 802.11g\_Nss1,(6Mbps)\_1TX

### 2442MHz\_TX

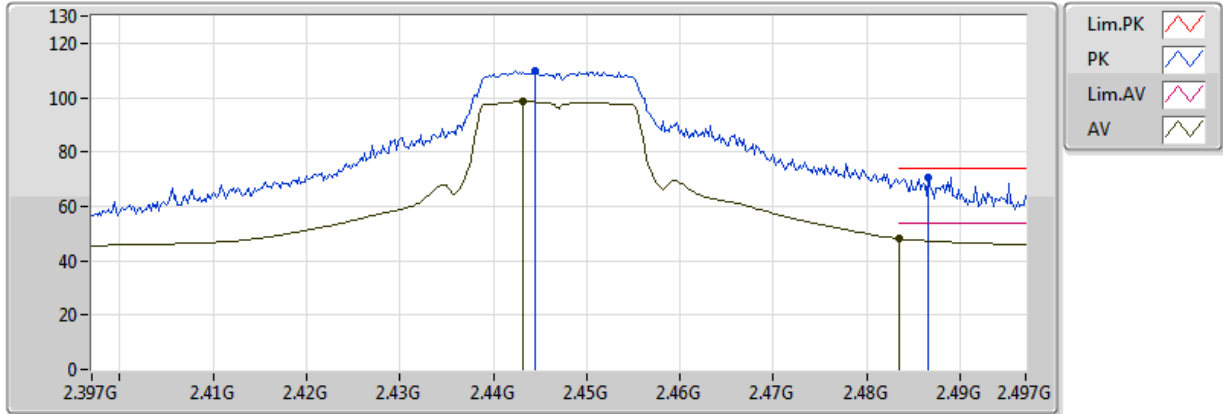


20171124  
 EUT\_Z\_1TX\_WiFi 2  
 Setting 90  
 06-L-3  
 FSP(100080)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.4454G	102.01	Inf	-Inf	32.30	3	Horizontal	62	1.09
AV	2.483502G	50.83	54.00	-3.17	32.42	3	Horizontal	62	1.09
PK	2.445G	113.79	Inf	-Inf	32.30	3	Horizontal	62	1.09
PK	2.4872G	73.84	74.00	-0.16	32.43	3	Horizontal	62	1.09

### 802.11g\_Nss1,(6Mbps)\_1TX

### 2447MHz\_TX

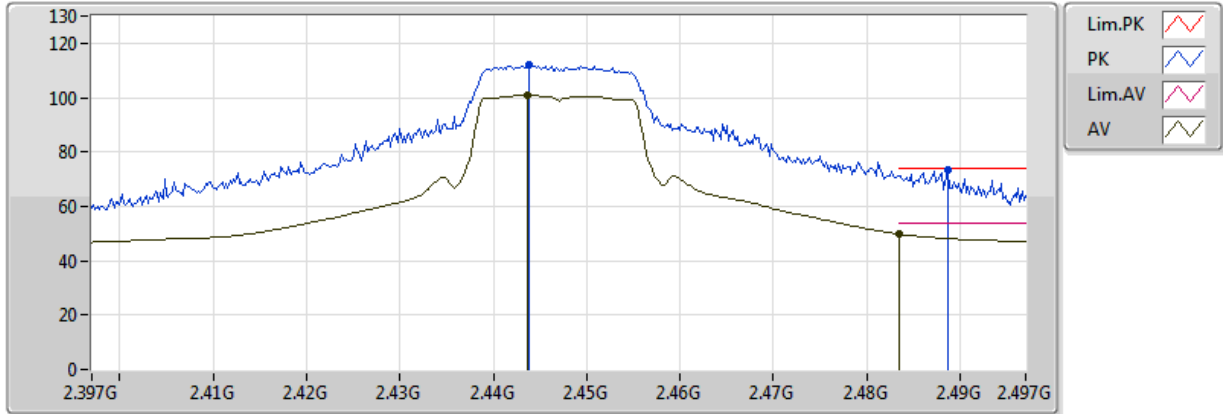


20171124  
 EUT\_Z\_1TX\_WiFi 2  
 Setting 86  
 06-L-3  
 FSP(100080)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.4432G	98.61	Inf	-Inf	32.29	3	Vertical	121	1.01
AV	2.483502G	48.18	54.00	-5.82	32.42	3	Vertical	121	1.01
PK	2.4444G	109.81	Inf	-Inf	32.29	3	Vertical	121	1.01
PK	2.4866G	70.45	74.00	-3.55	32.43	3	Vertical	121	1.01

### 802.11g\_Nss1,(6Mbps)\_1TX

### 2447MHz\_TX



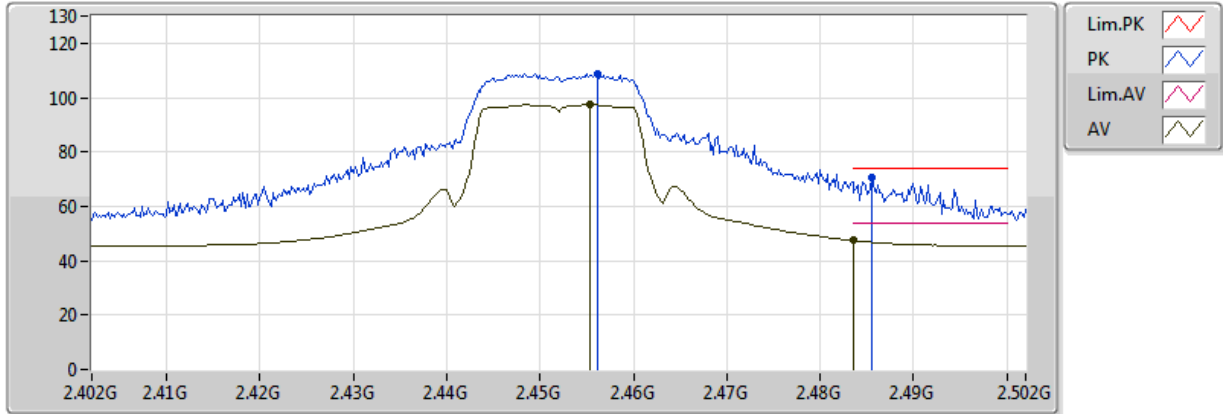
20171124  
 EUT\_Z\_1TX\_WiFi 2  
 Setting 86  
 06-L-3  
 FSP(100080)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.4436G	100.92	Inf	-Inf	32.29	3	Horizontal	62	1.09
AV	2.483502G	49.82	54.00	-4.18	32.42	3	Horizontal	62	1.09
PK	2.4438G	112.03	Inf	-Inf	32.29	3	Horizontal	62	1.09
PK	2.4886G	73.13	74.00	-0.87	32.44	3	Horizontal	62	1.09



### 802.11g\_Nss1,(6Mbps)\_1TX

### 2452MHz\_TX

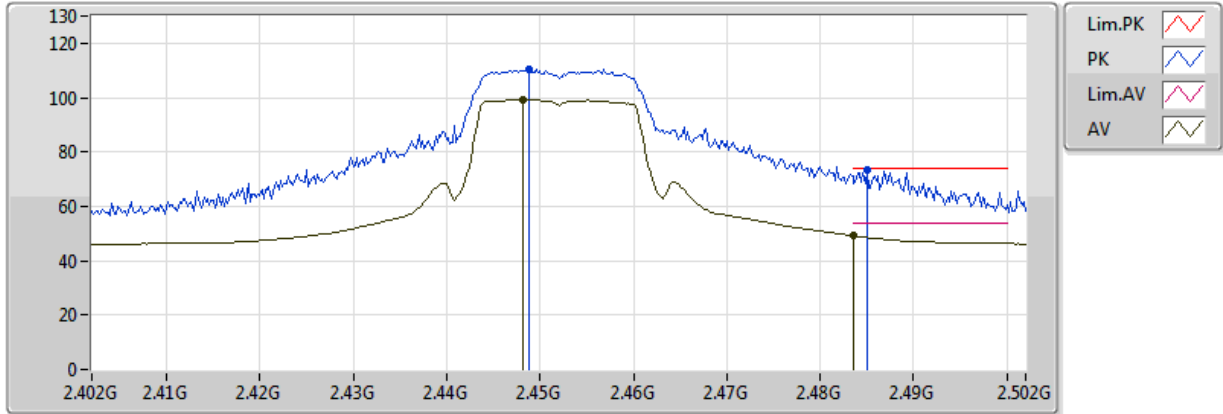


20171124  
 EUT\_Z\_1TX\_WiFi 2  
 Setting 81  
 06-L-3  
 FSP(100080)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.4554G	97.35	Inf	-Inf	32.33	3	Vertical	124	1.06
AV	2.483502G	47.46	54.00	-6.54	32.42	3	Vertical	124	1.06
PK	2.4562G	108.91	Inf	-Inf	32.33	3	Vertical	124	1.06
PK	2.4856G	70.53	74.00	-3.47	32.43	3	Vertical	124	1.06

### 802.11g\_Nss1,(6Mbps)\_1TX

### 2452MHz\_TX

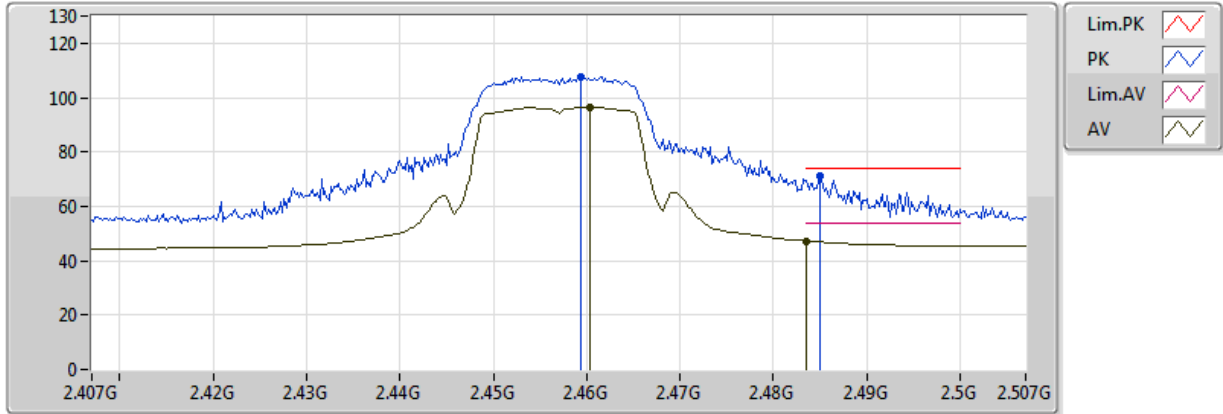


20171124  
 EUT\_Z\_1TX\_WiFi 2  
 Setting 81  
 06-L-3  
 FSP(100080)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.4482G	99.45	Inf	-Inf	32.31	3	Horizontal	66	1.09
AV	2.483502G	49.29	54.00	-4.71	32.42	3	Horizontal	66	1.09
PK	2.4488G	110.64	Inf	-Inf	32.31	3	Horizontal	66	1.09
PK	2.485G	73.57	74.00	-0.43	32.43	3	Horizontal	66	1.09

### 802.11g\_Nss1,(6Mbps)\_1TX

### 2457MHz\_TX

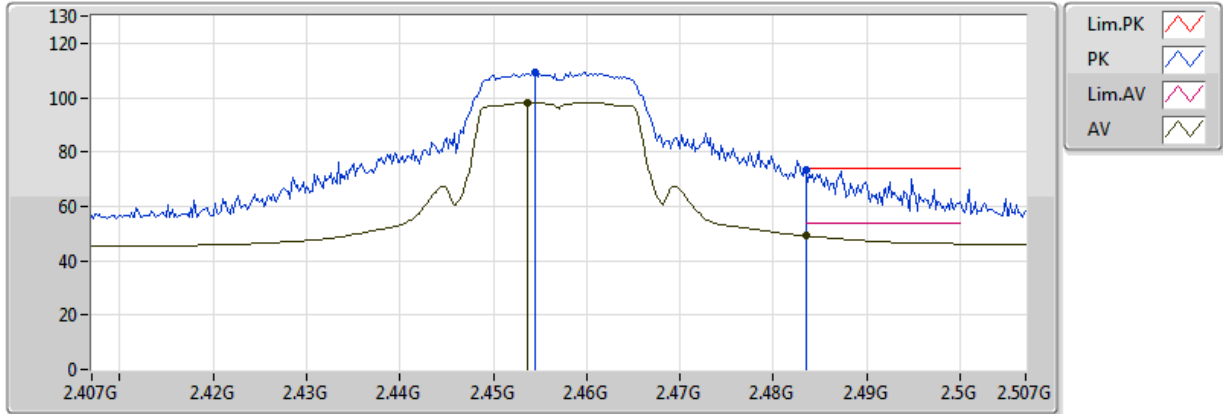


20171124  
 EUT\_Z\_1TX\_WiFi 2  
 Setting 77  
 06-L-3  
 FSP(100080)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.4604G	96.56	Inf	-Inf	32.35	3	Vertical	349	2.74
AV	2.483502G	47.31	54.00	-6.69	32.42	3	Vertical	349	2.74
PK	2.4594G	107.43	Inf	-Inf	32.34	3	Vertical	349	2.74
PK	2.485G	70.95	74.00	-3.05	32.43	3	Vertical	349	2.74

### 802.11g\_Nss1,(6Mbps)\_1TX

### 2457MHz\_TX

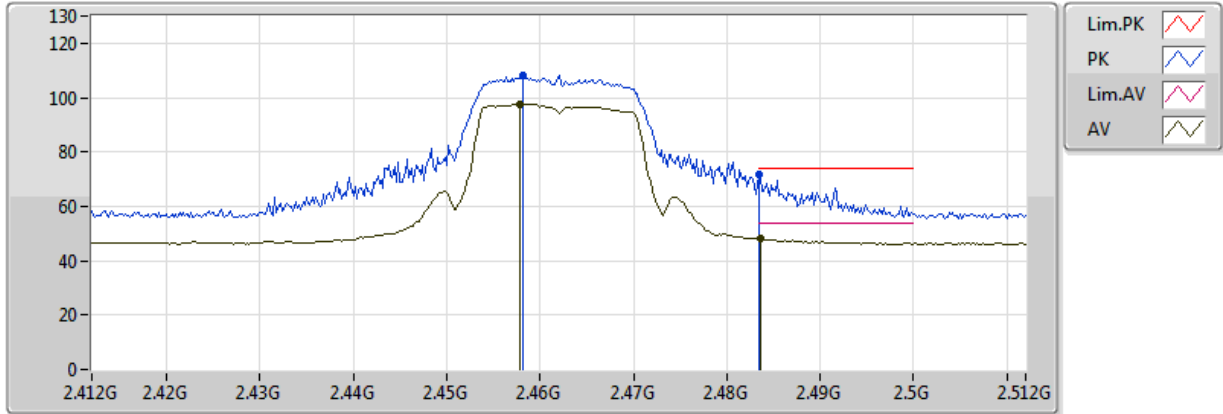


20171124  
 EUT\_Z\_1TX\_WiFi 2  
 Setting 77  
 06-L-3  
 FSP(100080)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.4536G	98.25	Inf	-Inf	32.32	3	Horizontal	251	1.25
AV	2.483502G	49.18	54.00	-4.82	32.42	3	Horizontal	251	1.25
PK	2.4544G	109.47	Inf	-Inf	32.33	3	Horizontal	251	1.25
PK	2.483502G	73.60	74.00	-0.40	32.42	3	Horizontal	251	1.25

### 802.11g\_Nss1,(6Mbps)\_1TX

### 2462MHz\_TX

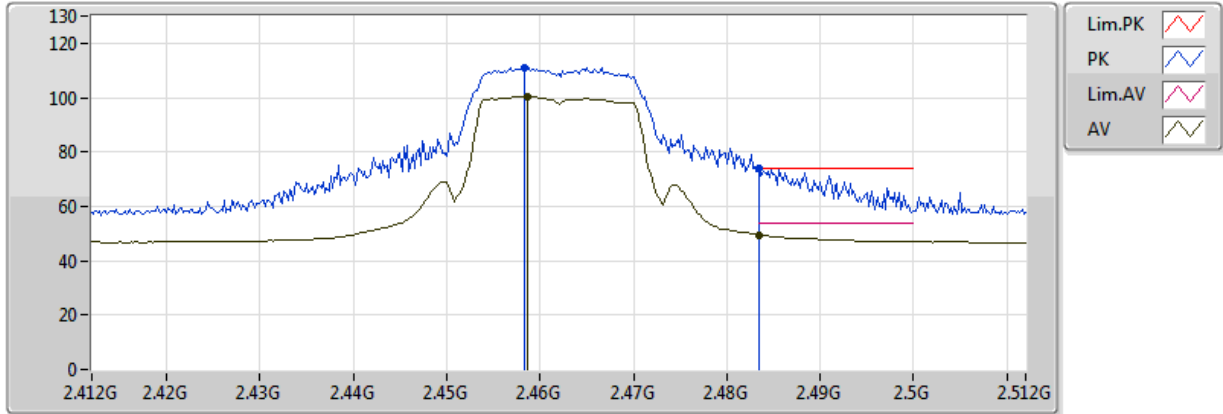


20171121  
 EUT\_Z\_1TX\_WiFi 2  
 Setting 74  
 04-W-3  
 FSP(100142)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.4578G	97.65	Inf	-Inf	33.18	3	Vertical	353	2.72
AV	2.4836G	47.98	54.00	-6.02	33.19	3	Vertical	353	2.72
PK	2.4582G	108.12	Inf	-Inf	33.18	3	Vertical	353	2.72
PK	2.483502G	71.50	74.00	-2.50	33.19	3	Vertical	353	2.72

### 802.11g\_Nss1,(6Mbps)\_1TX

### 2462MHz\_TX

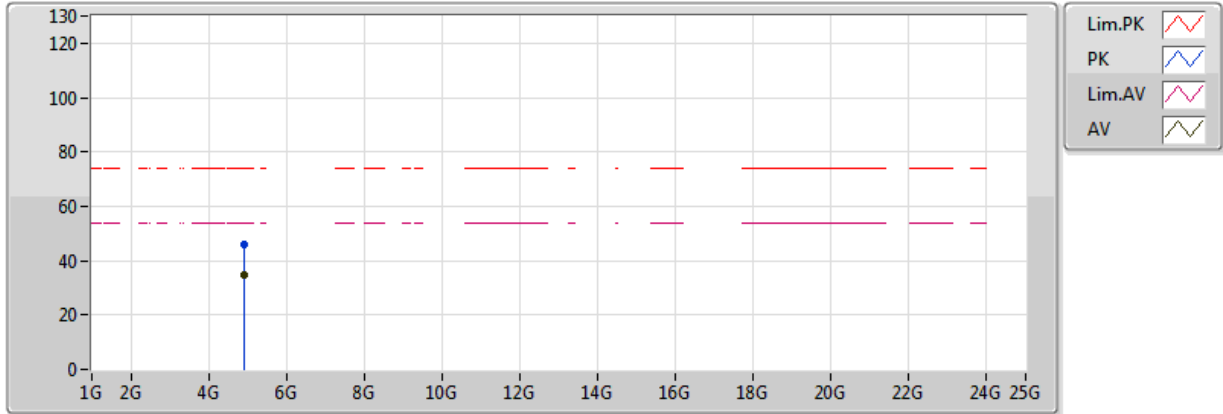


20171121  
 EUT\_Z\_1TX\_WiFi 2  
 Setting 74  
 04-W-3  
 FSP(100142)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.4586G	100.39	Inf	-Inf	33.18	3	Horizontal	256	1.50
AV	2.483502G	49.48	54.00	-4.52	33.19	3	Horizontal	256	1.50
PK	2.4584G	111.12	Inf	-Inf	33.18	3	Horizontal	256	1.50
PK	2.483502G	73.96	74.00	-0.04	33.19	3	Horizontal	256	1.50

### 802.11g\_Nss1,(6Mbps)\_1TX

### 2462MHz\_TX



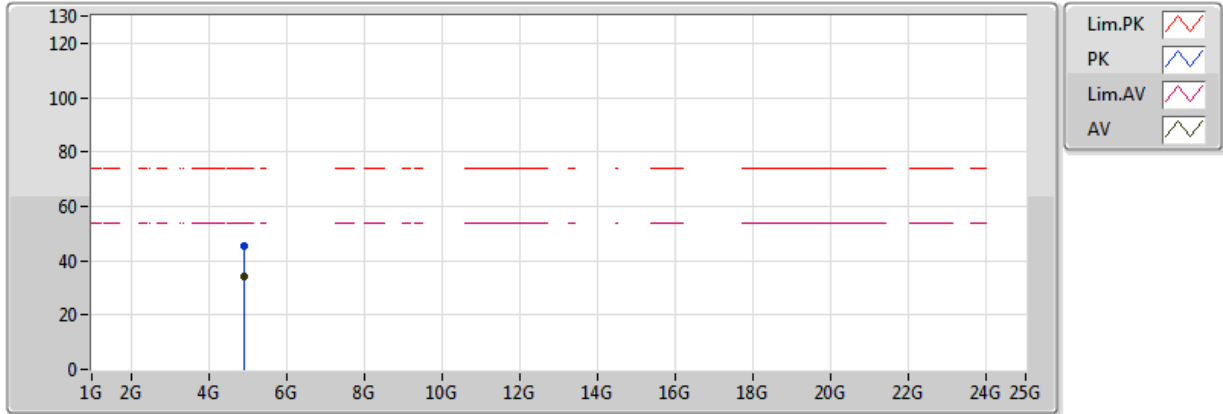
20171121  
 EUT\_Z\_1TX\_WiFi 2  
 Setting 74  
 04-W-3  
 FSP(100142)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	4.924628G	34.50	54.00	-19.50	3.38	3	Vertical	179	2.36
PK	4.924656G	45.81	74.00	-28.19	3.38	3	Vertical	179	2.36



### 802.11g\_Nss1,(6Mbps)\_1TX

### 2462MHz\_TX



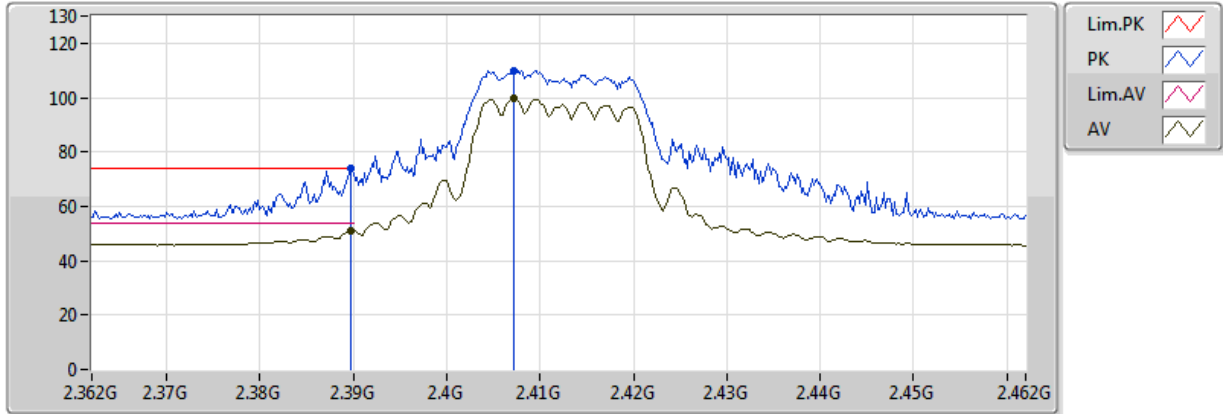
20171121  
 EUT\_Z\_1TX\_WiFi 2  
 Setting 74  
 04-W-3  
 FSP(100142)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	4.923088G	34.21	54.00	-19.79	3.38	3	Horizontal	163	1.58
PK	4.924112G	45.54	74.00	-28.46	3.38	3	Horizontal	163	1.58



### 802.11n HT20\_Nss1,(MCS0)\_2TX

### 2412MHz\_TX

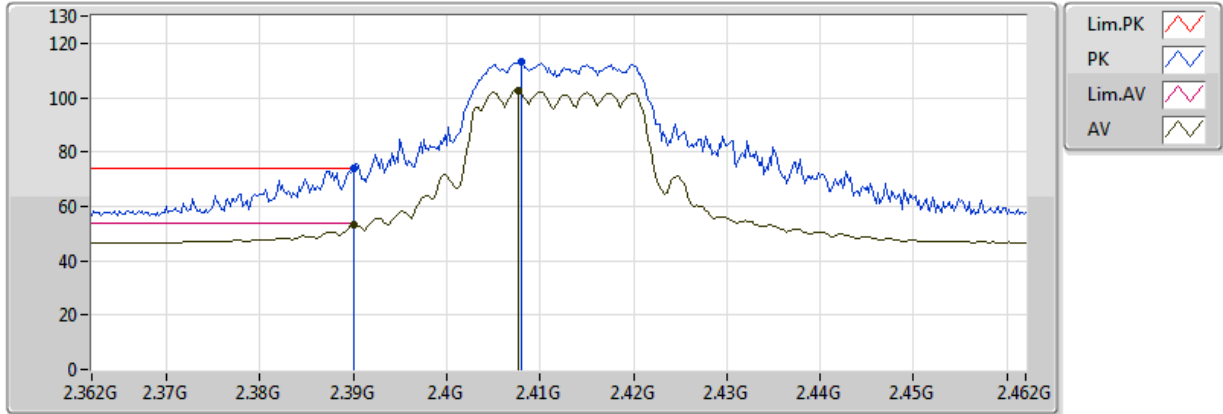


20171120  
 EUT\_Z\_2TX  
 Setting 75  
 04-W-3  
 FSP(100142)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.3898G	51.27	54.00	-2.73	33.16	3	Vertical	21	1.12	-
AV	2.4072G	99.68	Inf	-Inf	33.17	3	Vertical	21	1.12	-
PK	2.3898G	73.91	74.00	-0.09	33.16	3	Vertical	21	1.12	-
PK	2.4072G	110.05	Inf	-Inf	33.17	3	Vertical	21	1.12	-

### 802.11n HT20\_Nss1,(MCS0)\_2TX

### 2412MHz\_TX

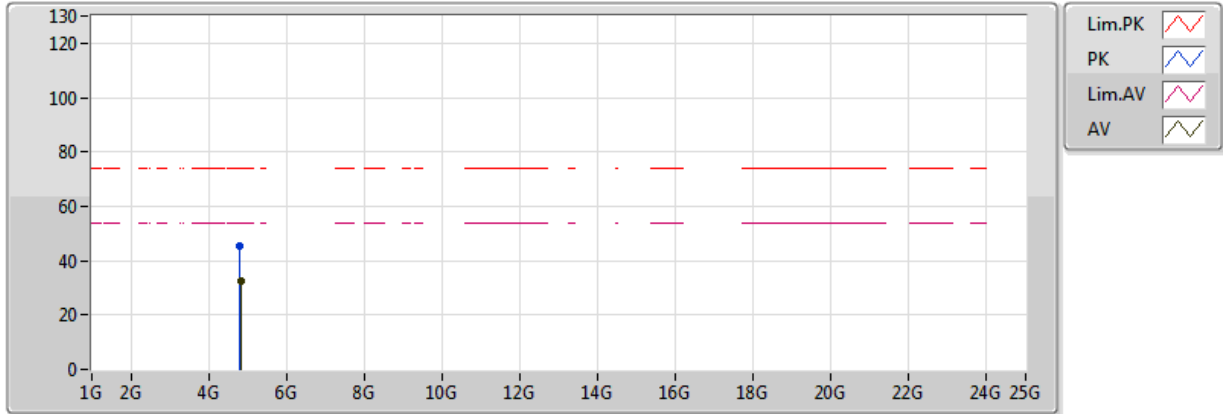


20171120  
 EUT\_Z\_2TX  
 Setting 75  
 04-W-3  
 FSP(100142)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.39G	53.02	54.00	-0.98	33.16	3	Horizontal	35	1.48	-
AV	2.4076G	102.73	Inf	-Inf	33.17	3	Horizontal	35	1.48	-
PK	2.39G	73.85	74.00	-0.15	33.16	3	Horizontal	35	1.48	-
PK	2.408G	113.09	Inf	-Inf	33.17	3	Horizontal	35	1.48	-

### 802.11n HT20\_Nss1,(MCS0)\_2TX

### 2412MHz\_TX

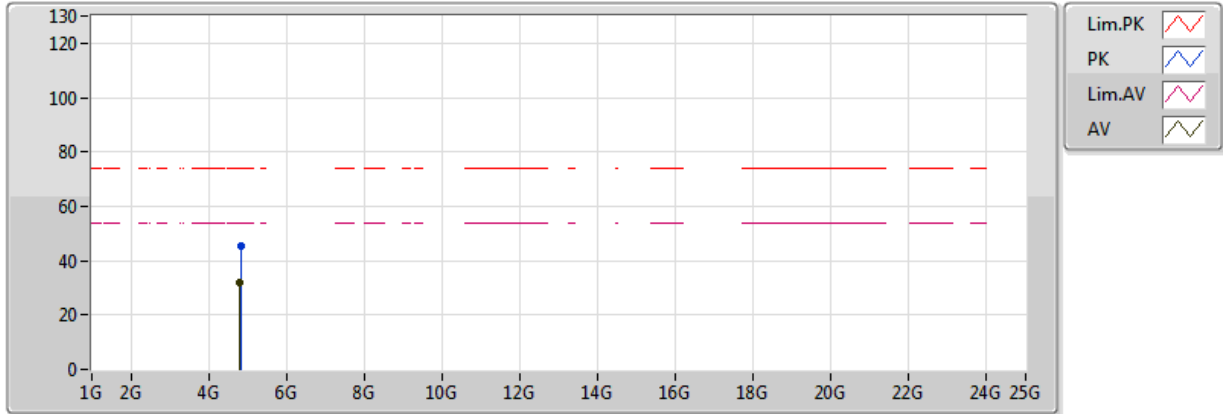


20171120  
EUT\_Z\_2TX  
Setting 75  
04-Z-1  
FSP(100142)  
R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.84296G	32.27	54.00	-21.73	3.20	3	Vertical	321	2.09	-
PK	4.80664G	45.20	74.00	-28.80	3.12	3	Vertical	321	2.09	-

### 802.11n HT20\_Nss1,(MCS0)\_2TX

### 2412MHz\_TX

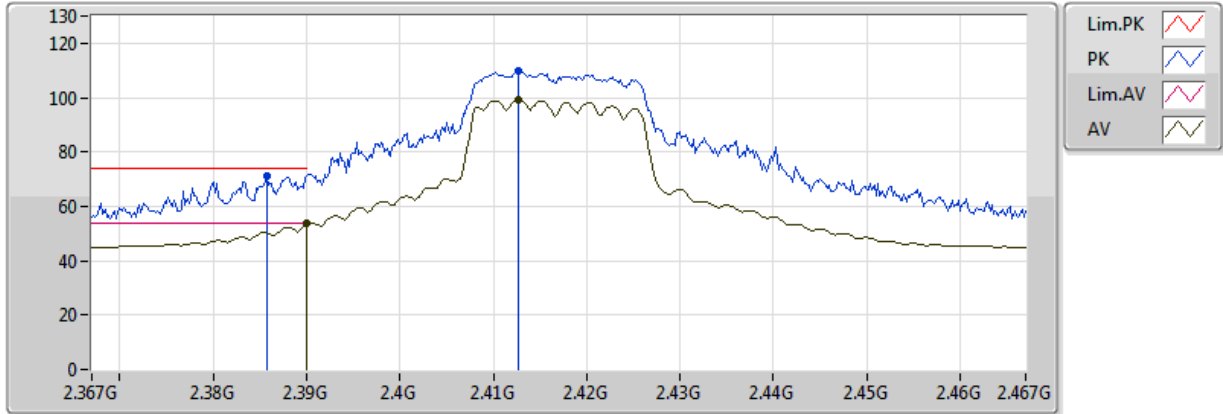


20171120  
EUT\_Z\_2TX  
Setting 75  
04-Z-1  
FSP(100142)  
R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.8052G	32.12	54.00	-21.88	3.12	3	Horizontal	357	1.86	-
PK	4.82472G	45.40	74.00	-28.60	3.16	3	Horizontal	357	1.86	-

### 802.11n HT20\_Nss1,(MCS0)\_2TX

### 2417MHz\_TX

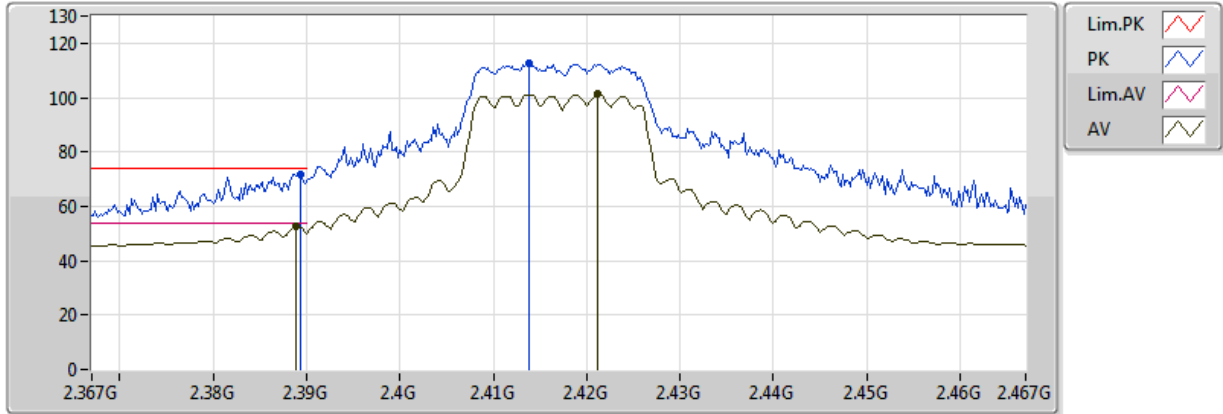


20171124  
 EUT\_Z\_2TX  
 Setting 83  
 06-L-3  
 FSP(100080)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.39G	53.63	54.00	-0.37	32.12	3	Vertical	118	2.88
AV	2.4126G	99.38	Inf	-Inf	32.19	3	Vertical	118	2.88
PK	2.3858G	71.26	74.00	-2.74	32.10	3	Vertical	118	2.88
PK	2.4126G	109.82	Inf	-Inf	32.19	3	Vertical	118	2.88

### 802.11n HT20\_Nss1,(MCS0)\_2TX

### 2417MHz\_TX

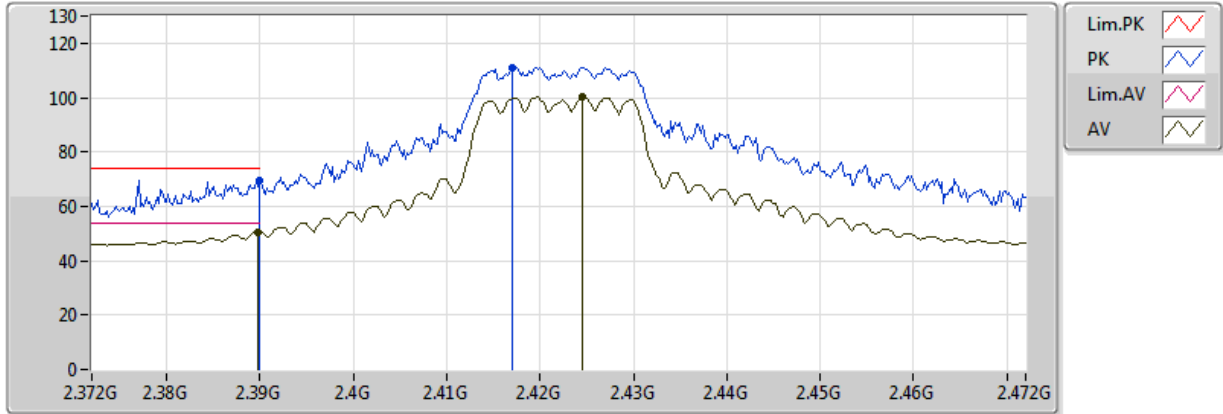


20171124  
EUT\_Z\_2TX  
Setting 83  
06-L-3  
FSP(100080)  
R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.3888G	52.49	54.00	-1.51	32.11	3	Horizontal	258	2.43
AV	2.4212G	101.16	Inf	-Inf	32.22	3	Horizontal	258	2.43
PK	2.3894G	71.96	74.00	-2.04	32.12	3	Horizontal	258	2.43
PK	2.4138G	112.84	Inf	-Inf	32.19	3	Horizontal	258	2.43

### 802.11n HT20\_Nss1,(MCS0)\_2TX

### 2422MHz\_TX

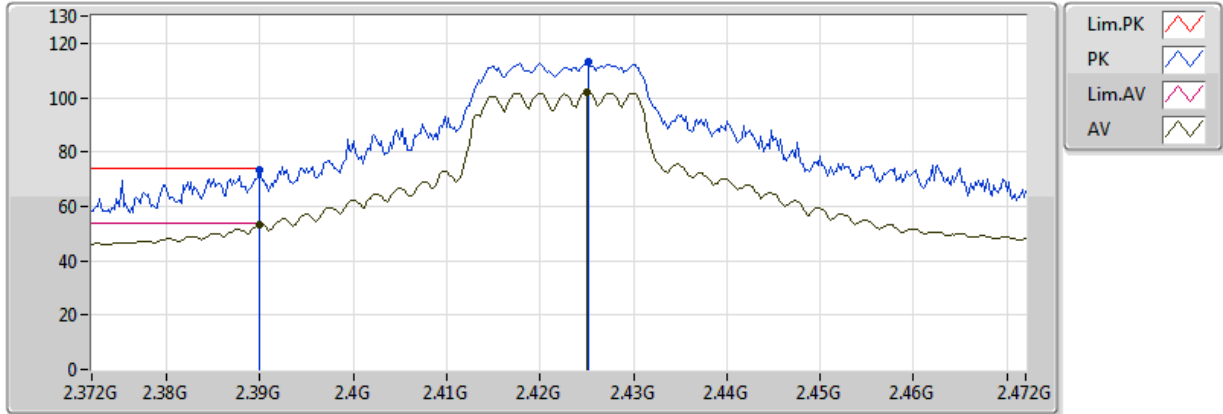


20171124  
 EUT\_Z\_2TX  
 Setting 86  
 06-L-3  
 FSP(100080)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.3898G	50.67	54.00	-3.33	32.12	3	Vertical	121	1.23
AV	2.4246G	100.12	Inf	-Inf	32.23	3	Vertical	121	1.23
PK	2.39G	69.63	74.00	-4.37	32.12	3	Vertical	121	1.23
PK	2.417G	111.16	Inf	-Inf	32.21	3	Vertical	121	1.23

### 802.11n HT20\_Nss1,(MCS0)\_2TX

### 2422MHz\_TX



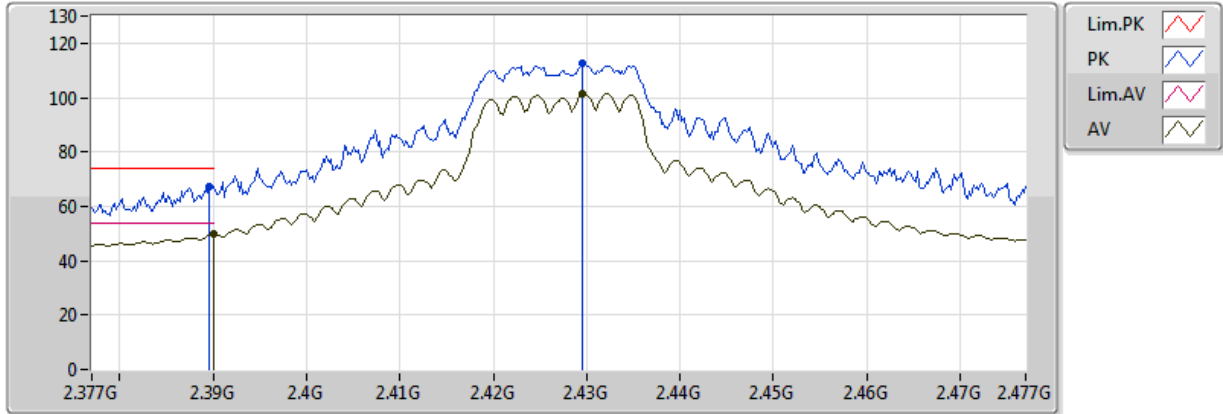
20171124  
 EUT\_Z\_2TX  
 Setting 86  
 06-L-3  
 FSP(100080)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.39G	53.27	54.00	-0.73	32.12	3	Horizontal	33	1.50
AV	2.425G	102.04	Inf	-Inf	32.23	3	Horizontal	33	1.50
PK	2.39G	73.25	74.00	-0.75	32.12	3	Horizontal	33	1.50
PK	2.425G	113.33	Inf	-Inf	32.23	3	Horizontal	33	1.50



### 802.11n HT20\_Nss1,(MCS0)\_2TX

### 2427MHz\_TX

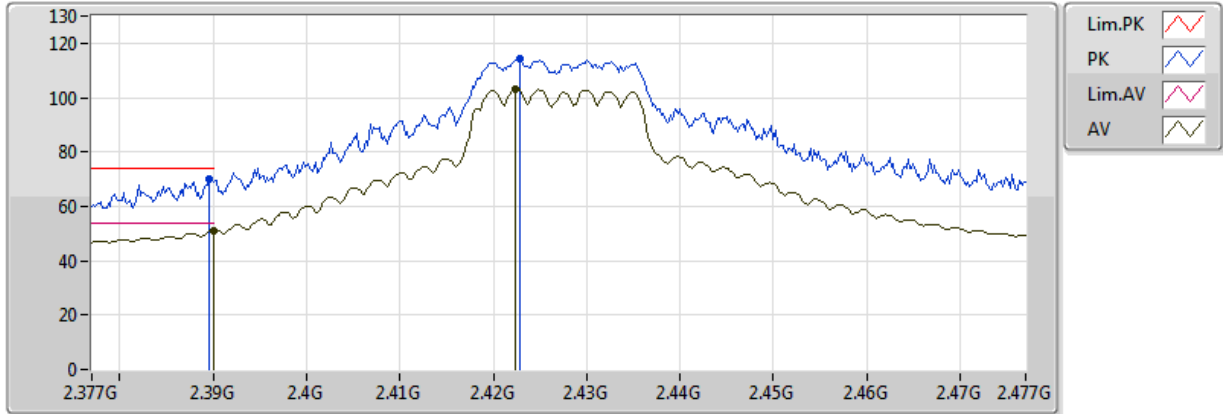


20171124  
 EUT\_Z\_2TX  
 Setting 90 (Max setting)  
 06-L-3  
 FSP(100080)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.39G	49.74	54.00	-4.26	32.12	3	Vertical	123	1.50
AV	2.4296G	101.24	Inf	-Inf	32.25	3	Vertical	123	1.50
PK	2.3896G	67.34	74.00	-6.66	32.12	3	Vertical	123	1.50
PK	2.4296G	112.66	Inf	-Inf	32.25	3	Vertical	123	1.50

### 802.11n HT20\_Nss1,(MCS0)\_2TX

### 2427MHz\_TX

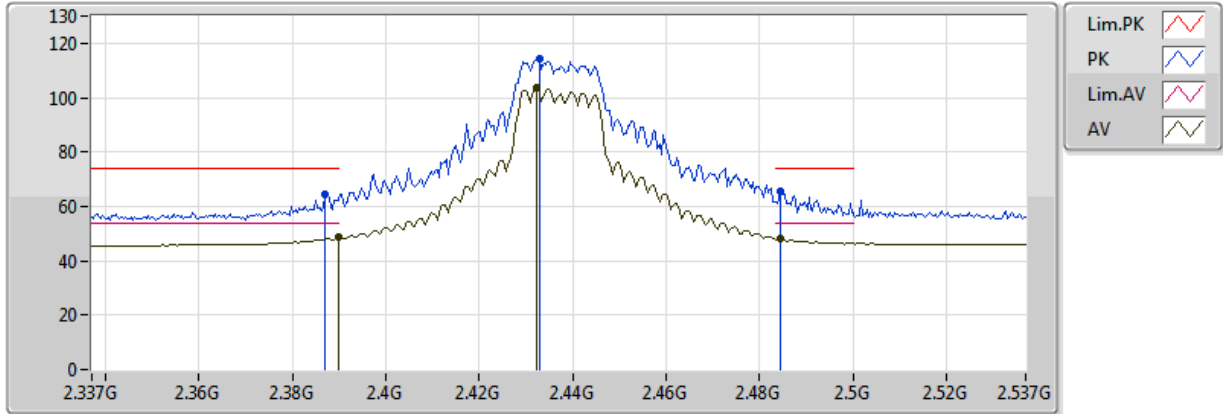


20171124  
 EUT\_Z\_2TX  
 Setting 90 (Max setting)  
 06-L-3  
 FSP(100080)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.39G	51.25	54.00	-2.75	32.12	3	Horizontal	36	2.74
AV	2.4224G	103.25	Inf	-Inf	32.22	3	Horizontal	36	2.74
PK	2.3896G	70.10	74.00	-3.90	32.12	3	Horizontal	36	2.74
PK	2.4228G	114.05	Inf	-Inf	32.22	3	Horizontal	36	2.74

### 802.11n HT20\_Nss1,(MCS0)\_2TX

### 2437MHz\_TX

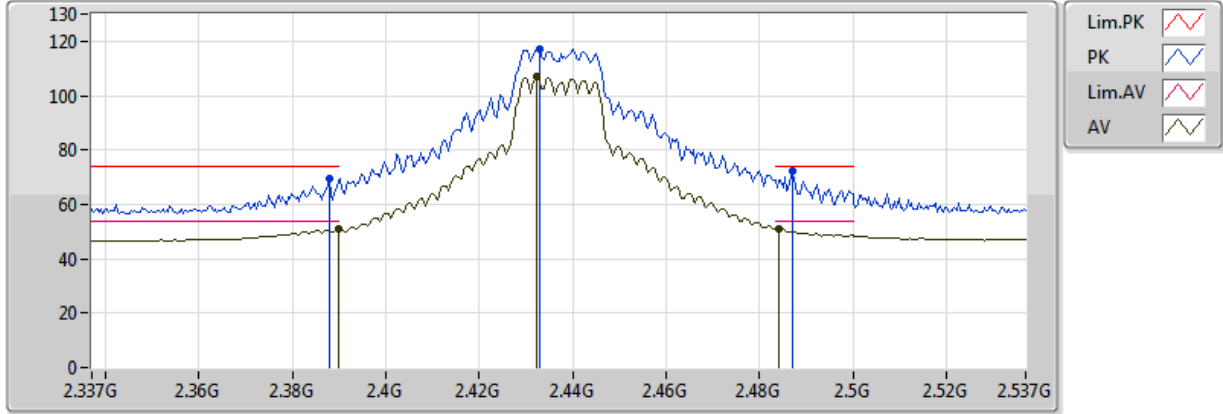


20171120  
 EUT\_Z\_2TX  
 Setting 90(Max setting)  
 04-W-3  
 FSP(100142)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.389998G	48.53	54.00	-5.47	33.16	3	Vertical	354	1.20	-
AV	2.4322G	103.59	Inf	-Inf	33.18	3	Vertical	354	1.20	-
AV	2.4846G	48.14	54.00	-5.86	33.19	3	Vertical	354	1.20	-
PK	2.387G	64.45	74.00	-9.55	33.16	3	Vertical	354	1.20	-
PK	2.433G	114.11	Inf	-Inf	33.18	3	Vertical	354	1.20	-
PK	2.4846G	65.62	74.00	-8.38	33.19	3	Vertical	354	1.20	-

### 802.11n HT20\_Nss1,(MCS0)\_2TX

### 2437MHz\_TX

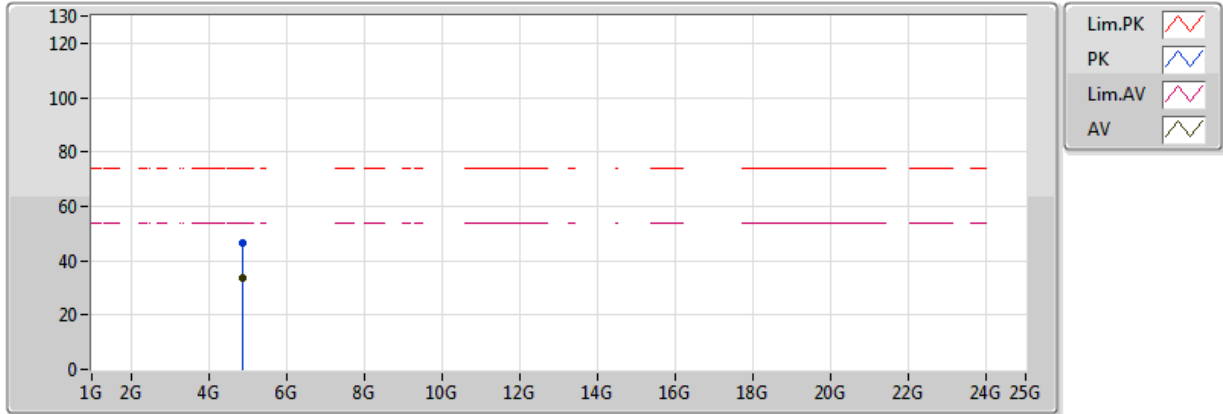


20171120  
 EUT\_Z\_2TX  
 Setting 90(Max setting)  
 04-W-3  
 FSP(100142)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.389998G	50.77	54.00	-3.23	33.16	3	Horizontal	37	2.95	-
AV	2.4322G	106.88	Inf	-Inf	33.18	3	Horizontal	37	2.95	-
AV	2.4842G	51.07	54.00	-2.93	33.19	3	Horizontal	37	2.95	-
PK	2.3878G	69.27	74.00	-4.73	33.16	3	Horizontal	37	2.95	-
PK	2.433G	117.27	Inf	-Inf	33.18	3	Horizontal	37	2.95	-
PK	2.487G	72.09	74.00	-1.91	33.19	3	Horizontal	37	2.95	-

### 802.11n HT20\_Nss1,(MCS0)\_2TX

### 2437MHz\_TX

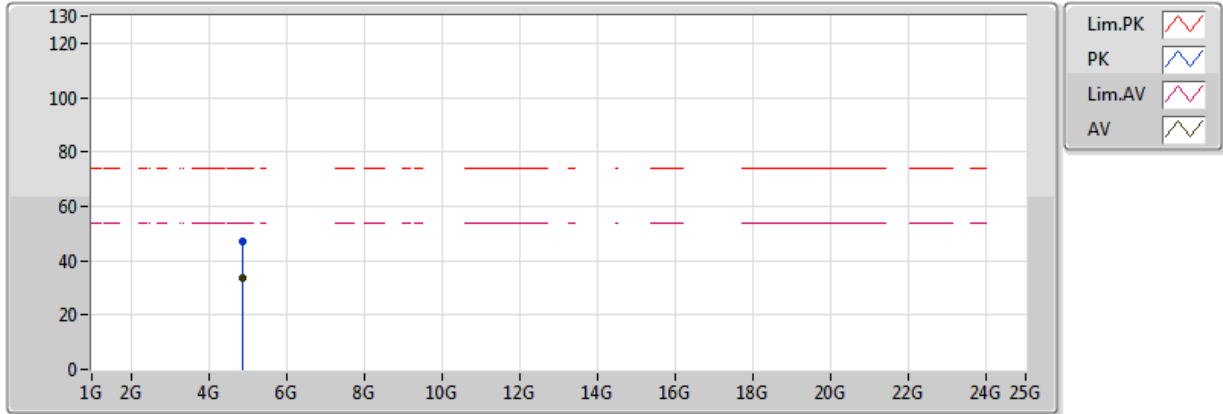


20171120  
 EUT\_Z\_2TX  
 Setting 90(Max setting)  
 04-Z-1  
 FSP(100142)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.8928G	33.54	54.00	-20.46	3.31	3	Vertical	252	2.36	-
PK	4.88632G	46.52	74.00	-27.48	3.30	3	Vertical	252	2.36	-

### 802.11n HT20\_Nss1,(MCS0)\_2TX

### 2437MHz\_TX

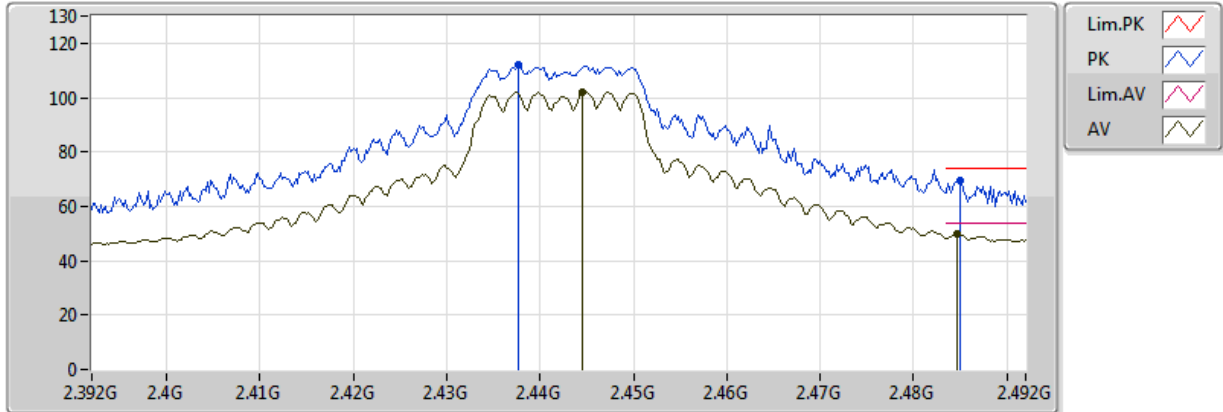


20171120  
 EUT\_Z\_2TX  
 Setting 90(Max setting)  
 04-Z-1  
 FSP(100142)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.8932G	33.59	54.00	-20.41	3.32	3	Horizontal	223	1.90	-
PK	4.89336G	47.17	74.00	-26.83	3.32	3	Horizontal	223	1.90	-

### 802.11n HT20\_Nss1,(MCS0)\_2TX

### 2442MHz\_TX

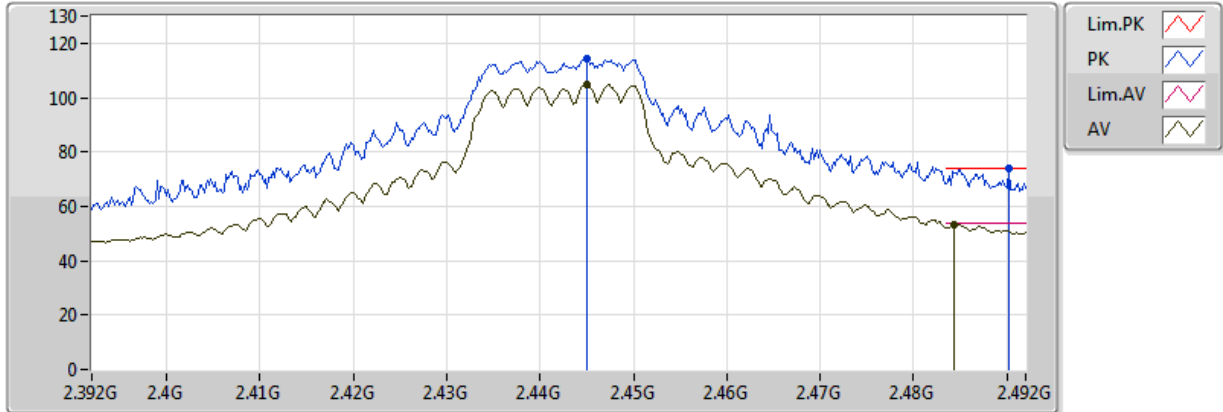


20171125  
 EUT\_Z\_2TX  
 Setting 89  
 06-C-4  
 FSP(100080)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.4446G	102.26	Inf	-Inf	32.29	3	Vertical	121	1.50
AV	2.4846G	49.90	54.00	-4.10	32.42	3	Vertical	121	1.50
PK	2.4376G	112.04	Inf	-Inf	32.27	3	Vertical	121	1.50
PK	2.485G	69.23	74.00	-4.77	32.43	3	Vertical	121	1.50

### 802.11n HT20\_Nss1,(MCS0)\_2TX

### 2442MHz\_TX



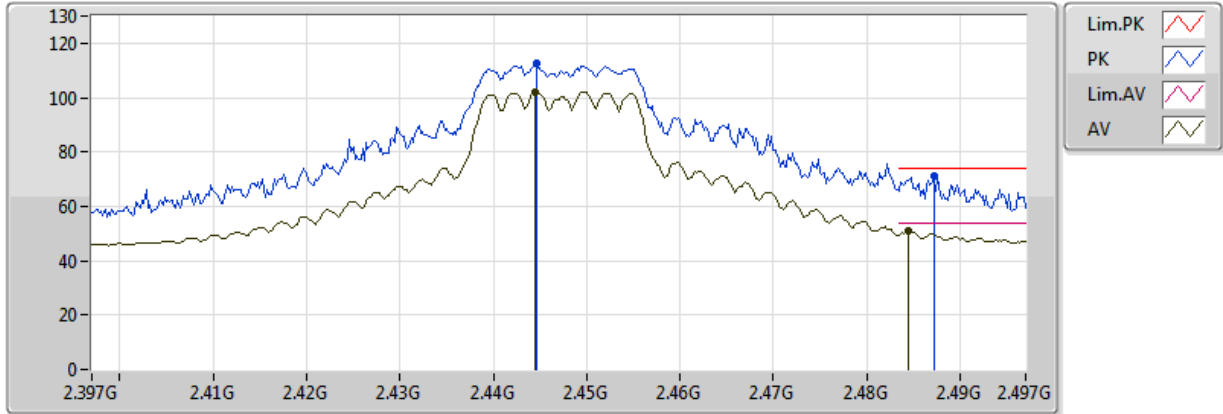
20171125  
 EUT\_Z\_2TX  
 Setting 89  
 06-C-4  
 FSP(100080)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.445G	104.66	Inf	-Inf	32.30	3	Horizontal	34	2.63
AV	2.4844G	53.21	54.00	-0.79	32.42	3	Horizontal	34	2.63
PK	2.445G	114.13	Inf	-Inf	32.30	3	Horizontal	34	2.63
PK	2.4902G	73.69	74.00	-0.31	32.44	3	Horizontal	34	2.63



### 802.11n HT20\_Nss1,(MCS0)\_2TX

### 2447MHz\_TX

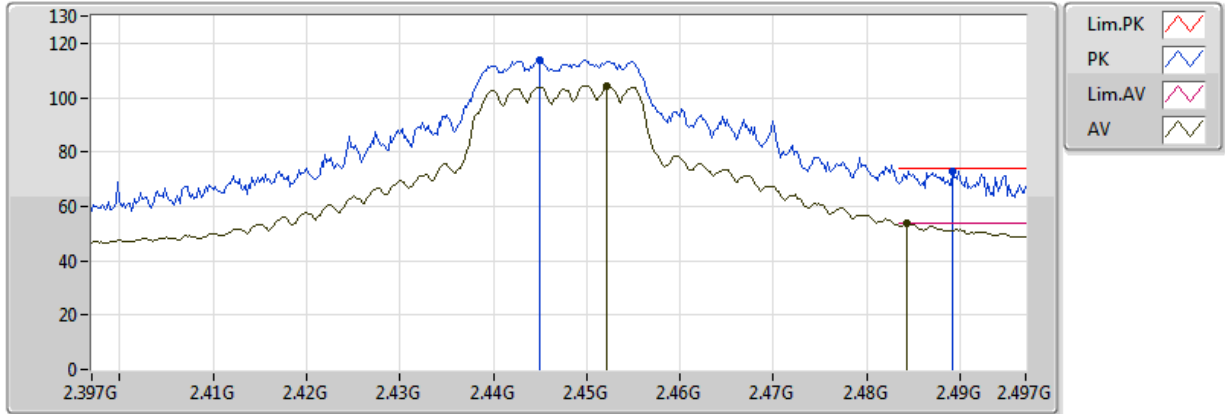


20171125  
 EUT\_Z\_2TX  
 Setting 87  
 06-C-4  
 FSP(100080)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.4444G	102.08	Inf	-Inf	32.29	3	Vertical	123	1.40
AV	2.4844G	51.06	54.00	-2.94	32.42	3	Vertical	123	1.40
PK	2.4446G	112.38	Inf	-Inf	32.29	3	Vertical	123	1.40
PK	2.4872G	71.36	74.00	-2.64	32.43	3	Vertical	123	1.40

802.11n HT20\_Nss1,(MCS0)\_2TX

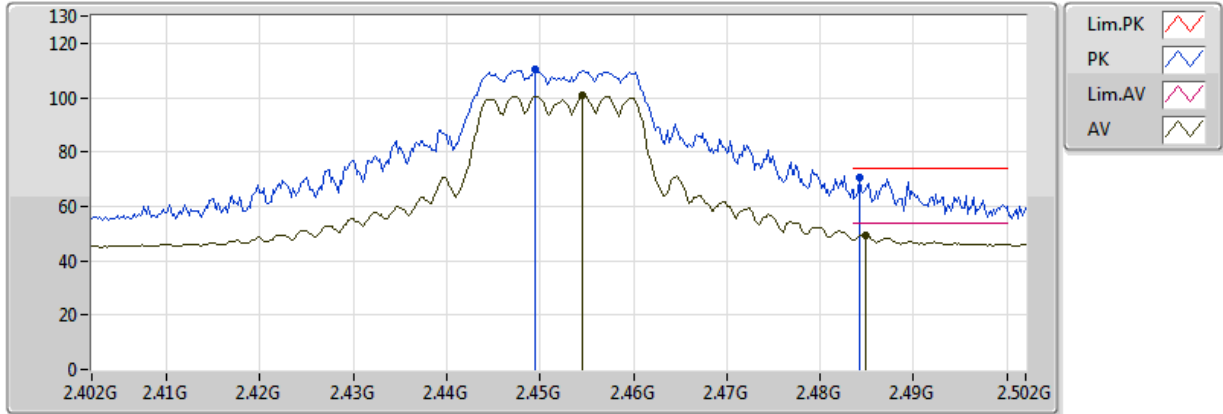
2447MHz\_TX



20171125  
 EUT\_Z\_2TX  
 Setting 87  
 06-C-4  
 FSP(100080)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.4522G	104.47	Inf	-Inf	32.32	3	Horizontal	33	2.67
AV	2.4842G	53.80	54.00	-0.20	32.42	3	Horizontal	33	2.67
PK	2.445G	113.49	Inf	-Inf	32.30	3	Horizontal	33	2.67
PK	2.4892G	72.90	74.00	-1.10	32.44	3	Horizontal	33	2.67

**802.11n HT20\_Nss1,(MCS0)\_2TX  
2452MHz\_TX**

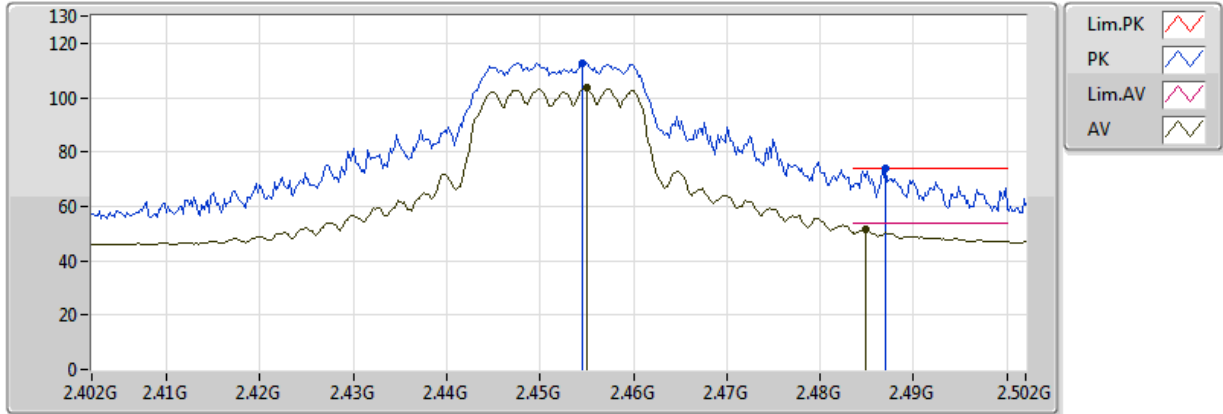


20171125  
EUT\_Z\_2TX  
Setting 81  
06-C-4  
FSP(100080)  
R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.4546G	100.59	Inf	-Inf	32.33	3	Vertical	122	1.40
AV	2.4848G	49.31	54.00	-4.69	32.43	3	Vertical	122	1.40
PK	2.4494G	110.28	Inf	-Inf	32.31	3	Vertical	122	1.40
PK	2.4842G	70.56	74.00	-3.44	32.42	3	Vertical	122	1.40

### 802.11n HT20\_Nss1,(MCS0)\_2TX

### 2452MHz\_TX

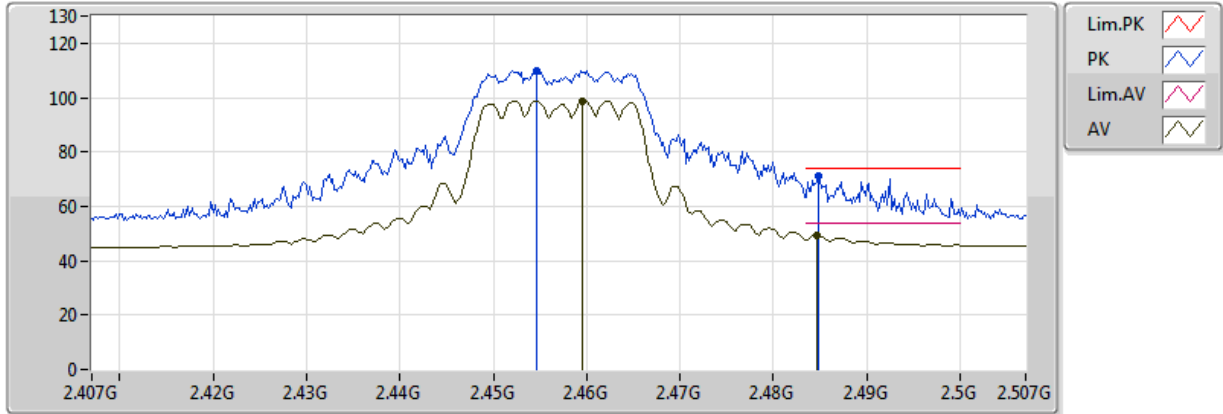


20171125  
 EUT\_Z\_2TX  
 Setting 81  
 06-C-4  
 FSP(100080)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.455G	103.56	Inf	-Inf	32.33	3	Horizontal	33	2.66
AV	2.4848G	51.83	54.00	-2.17	32.43	3	Horizontal	33	2.66
PK	2.4546G	112.74	Inf	-Inf	32.33	3	Horizontal	33	2.66
PK	2.487G	73.75	74.00	-0.25	32.43	3	Horizontal	33	2.66

### 802.11n HT20\_Nss1,(MCS0)\_2TX

### 2457MHz\_TX

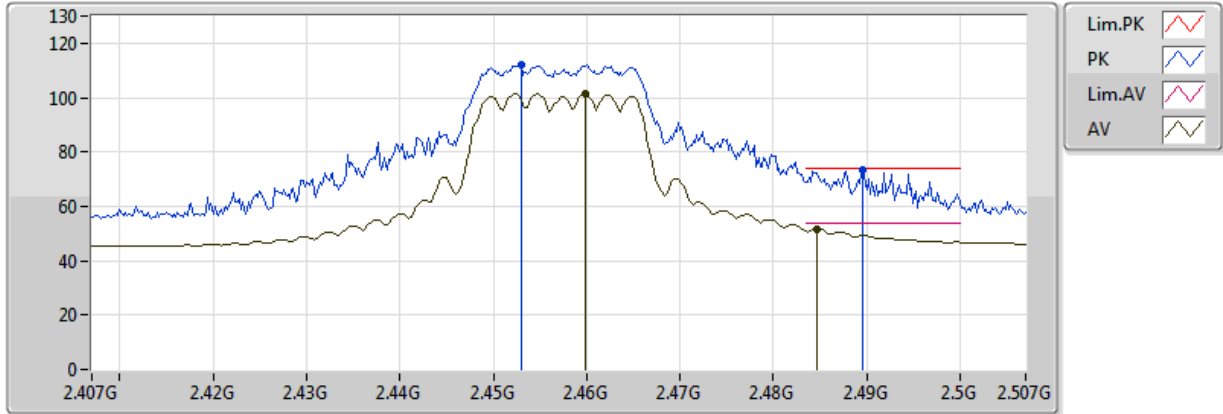


20171124  
 EUT\_Z\_2TX  
 Setting 77  
 06-L-3  
 FSP(100080)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.4596G	98.86	Inf	-Inf	32.34	3	Vertical	122	1.38
AV	2.4846G	49.35	54.00	-4.65	32.42	3	Vertical	122	1.38
PK	2.4546G	109.94	Inf	-Inf	32.33	3	Vertical	122	1.38
PK	2.4848G	70.97	74.00	-3.03	32.43	3	Vertical	122	1.38

### 802.11n HT20\_Nss1,(MCS0)\_2TX

### 2457MHz\_TX

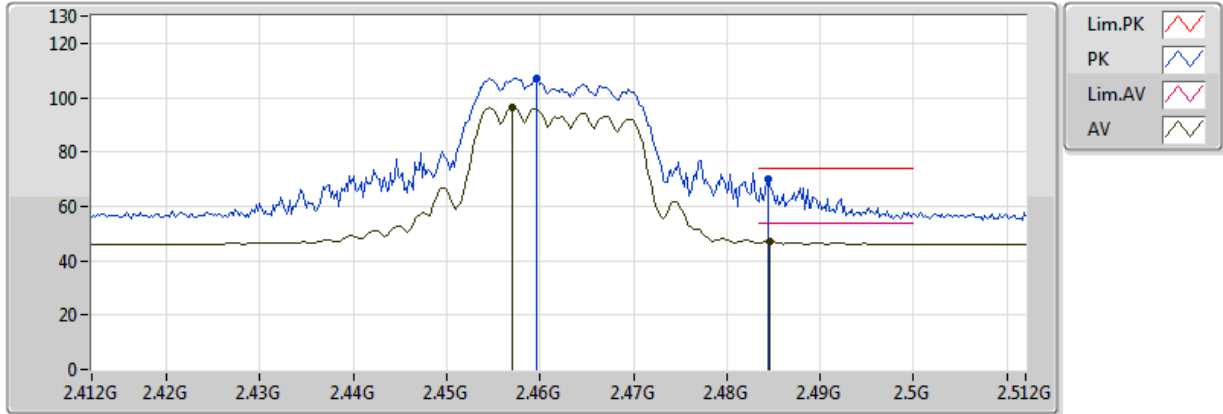


20171124  
 EUT\_Z\_2TX  
 Setting 77  
 06-L-3  
 FSP(100080)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.4598G	101.41	Inf	-Inf	32.34	3	Horizontal	32	2.65
AV	2.4846G	51.78	54.00	-2.22	32.42	3	Horizontal	32	2.65
PK	2.453G	112.22	Inf	-Inf	32.32	3	Horizontal	32	2.65
PK	2.4896G	73.15	74.00	-0.85	32.44	3	Horizontal	32	2.65

### 802.11n HT20\_Nss1,(MCS0)\_2TX

### 2462MHz\_TX

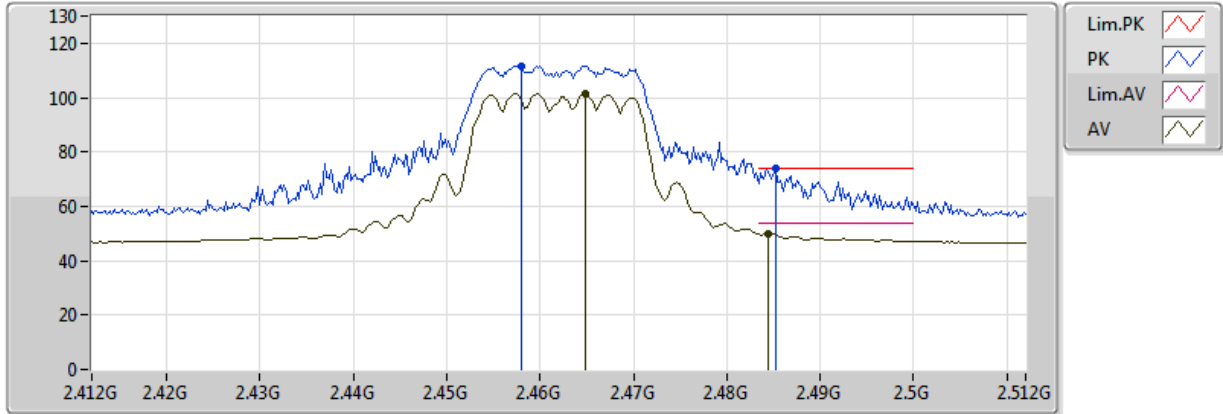


20171120  
 EUT\_Z\_2TX  
 Setting 70  
 04-Z-1  
 FSP(100142)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.457G	96.51	Inf	-Inf	33.18	3	Vertical	353	1.45	-
AV	2.4846G	47.26	54.00	-6.74	33.19	3	Vertical	353	1.45	-
PK	2.4596G	107.05	Inf	-Inf	33.18	3	Vertical	353	1.45	-
PK	2.4844G	69.81	74.00	-4.19	33.19	3	Vertical	353	1.45	-

### 802.11n HT20\_Nss1,(MCS0)\_2TX

### 2462MHz\_TX



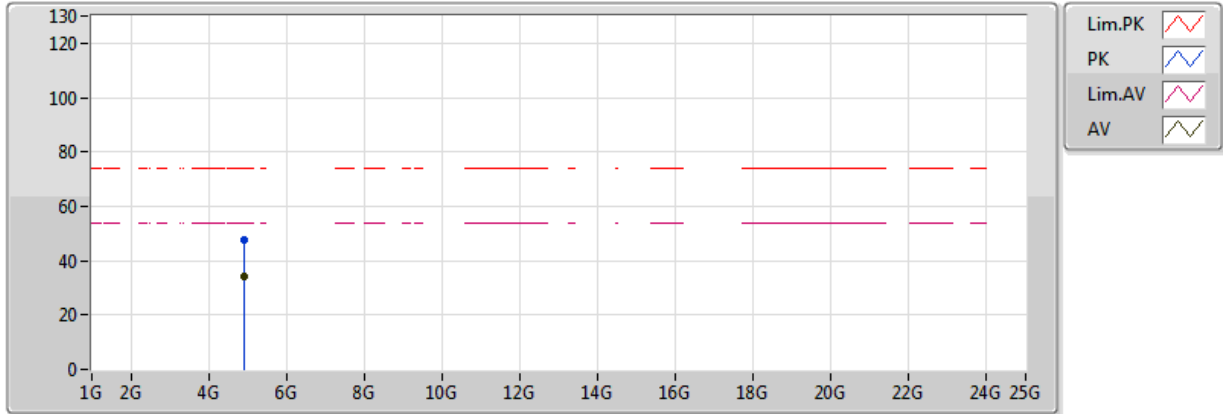
20171120  
EUT\_Z\_2TX  
Setting 70  
04-Z-1  
FSP(100142)  
R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.4648G	101.50	Inf	-Inf	33.18	3	Horizontal	34	2.88	-
AV	2.4844G	50.01	54.00	-3.99	33.19	3	Horizontal	34	2.88	-
PK	2.458G	111.69	Inf	-Inf	33.18	3	Horizontal	34	2.88	-
PK	2.4852G	73.86	74.00	-0.14	33.19	3	Horizontal	34	2.88	-



### 802.11n HT20\_Nss1,(MCS0)\_2TX

### 2462MHz\_TX

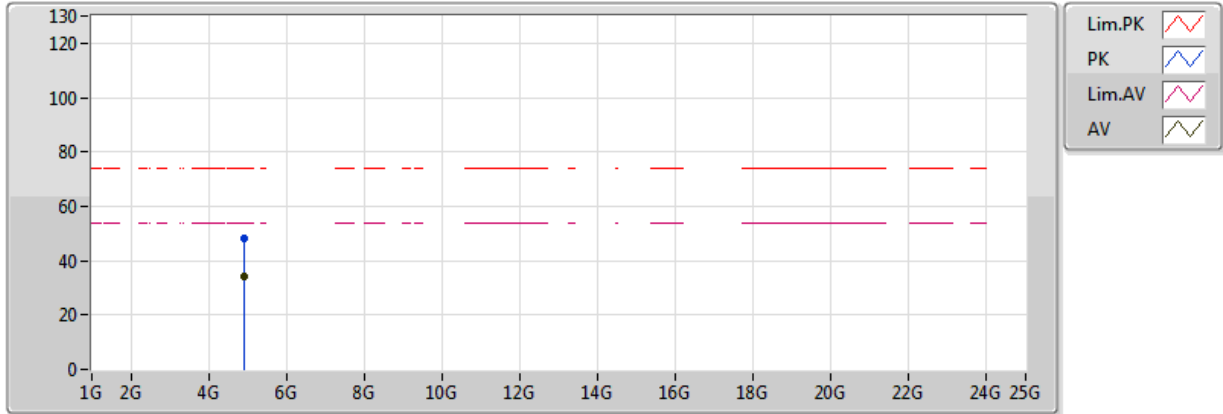


20171120  
EUT\_Z\_2TX  
Setting 70  
04-Z-1  
FSP(100142)  
R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.91648G	34.40	54.00	-19.60	3.37	3	Vertical	247	2.23	-
PK	4.91672G	47.70	74.00	-26.30	3.37	3	Vertical	247	2.23	-

### 802.11n HT20\_Nss1,(MCS0)\_2TX

### 2462MHz\_TX

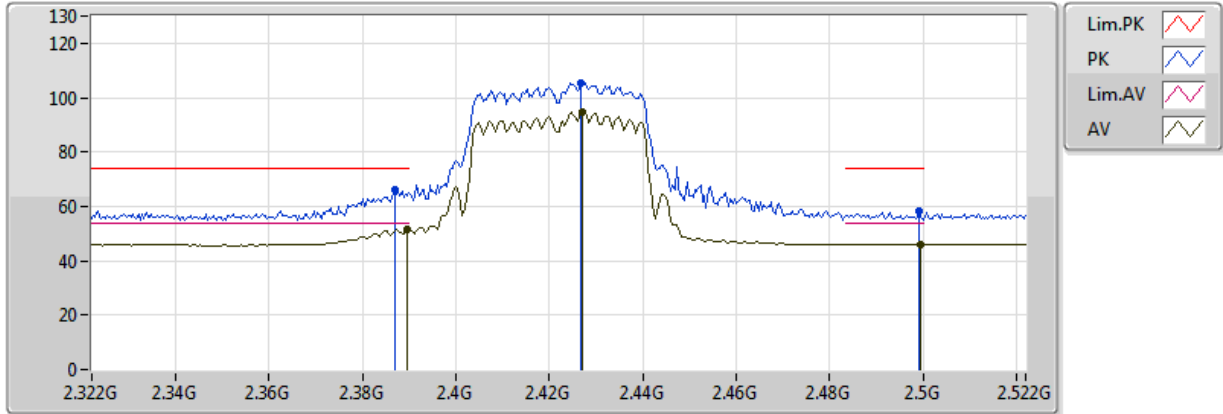


20171120  
 EUT\_Z\_2TX  
 Setting 70  
 04-Z-1  
 FSP(100142)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.91584G	34.40	54.00	-19.60	3.36	3	Horizontal	41	1.57	-
PK	4.91664G	47.92	74.00	-26.08	3.37	3	Horizontal	41	1.57	-

### 802.11n HT40\_Nss1,(MCS0)\_2TX

### 2422MHz\_TX

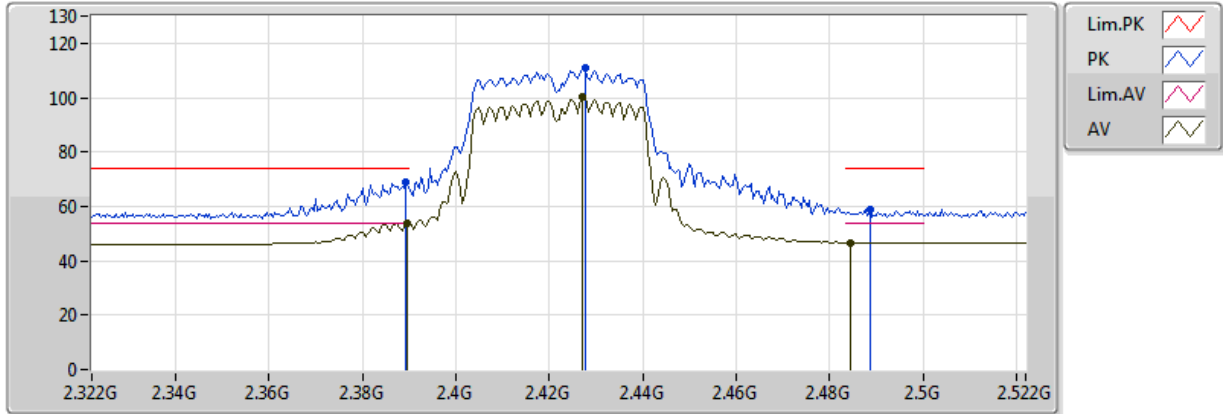


20171120  
EUT\_Z\_2TX  
Setting 67  
04-Z-1  
FSP(100142)  
R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.3896G	51.62	54.00	-2.38	33.16	3	Vertical	349	1.50	-
AV	2.4272G	94.66	Inf	-Inf	33.18	3	Vertical	349	1.50	-
AV	2.4996G	46.01	54.00	-7.99	33.19	3	Vertical	349	1.50	-
PK	2.3868G	66.30	74.00	-7.70	33.16	3	Vertical	349	1.50	-
PK	2.4268G	105.40	Inf	-Inf	33.18	3	Vertical	349	1.50	-
PK	2.4992G	58.19	74.00	-15.81	33.19	3	Vertical	349	1.50	-

### 802.11n HT40\_Nss1,(MCS0)\_2TX

### 2422MHz\_TX

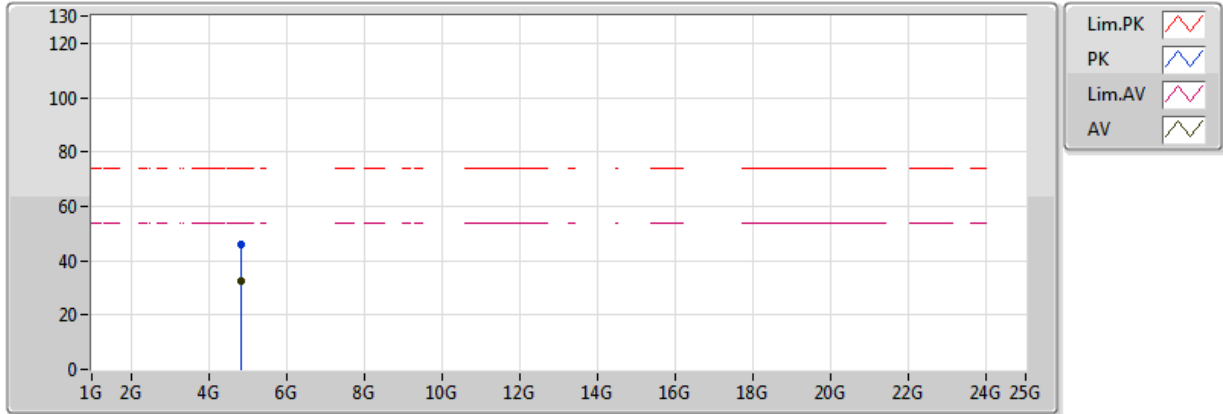


20171120  
EUT\_Z\_2TX  
Setting 67  
04-Z-1  
FSP(100142)  
R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.3896G	53.99	54.00	-0.01	33.16	3	Horizontal	35	2.94	-
AV	2.4272G	100.08	Inf	-Inf	33.18	3	Horizontal	35	2.94	-
AV	2.4844G	46.75	54.00	-7.25	33.19	3	Horizontal	35	2.94	-
PK	2.3892G	69.02	74.00	-4.98	33.16	3	Horizontal	35	2.94	-
PK	2.4276G	111.06	Inf	-Inf	33.18	3	Horizontal	35	2.94	-
PK	2.4888G	58.77	74.00	-15.23	33.19	3	Horizontal	35	2.94	-

### 802.11n HT40\_Nss1,(MCS0)\_2TX

### 2422MHz\_TX

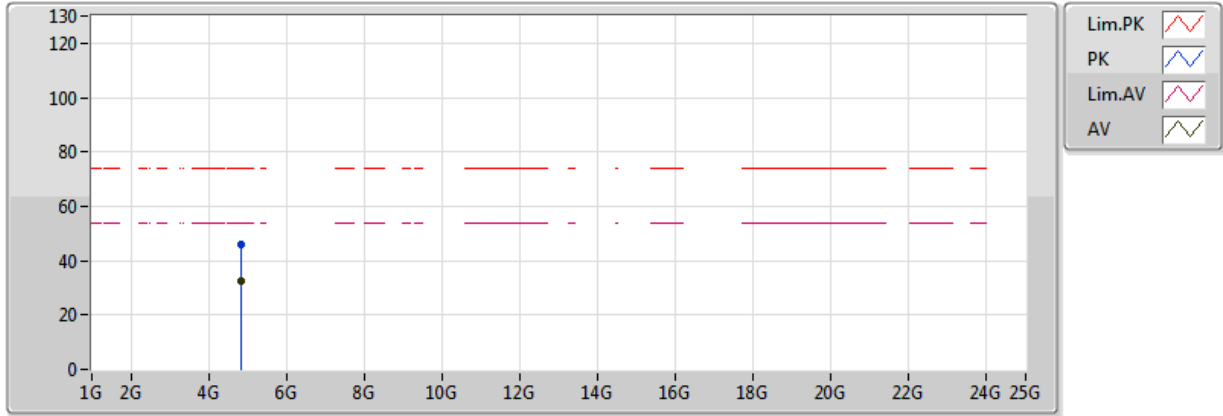


20171120  
EUT\_Z\_2TX  
Setting 67  
04-Z-1  
FSP(100142)  
R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.84568G	32.44	54.00	-21.56	3.21	3	Vertical	357	1.66	-
PK	4.84256G	45.94	74.00	-28.06	3.20	3	Vertical	357	1.66	-

### 802.11n HT40\_Nss1,(MCS0)\_2TX

### 2422MHz\_TX

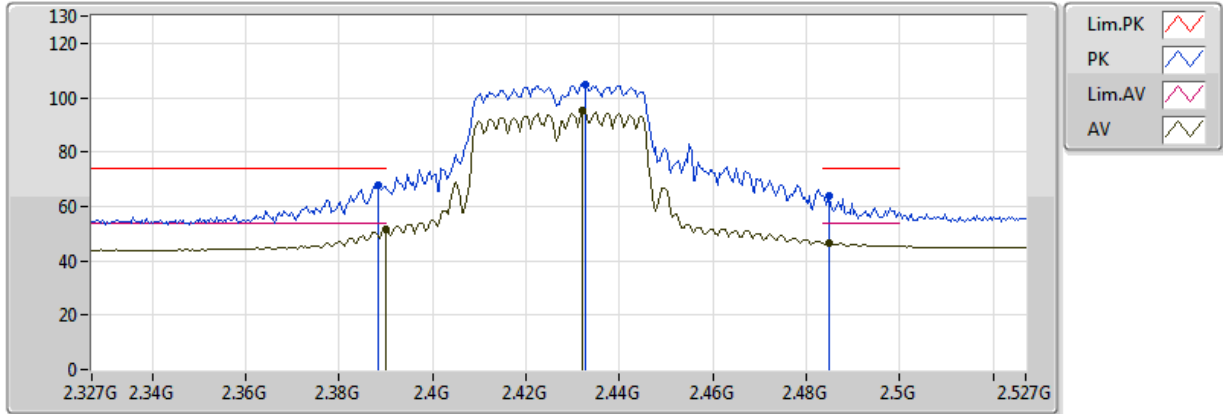


20171120  
EUT\_Z\_2TX  
Setting 67  
04-Z-1  
FSP(100142)  
R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.84792G	32.47	54.00	-21.53	3.22	3	Horizontal	318	2.07	-
PK	4.83776G	45.96	74.00	-28.04	3.19	3	Horizontal	318	2.07	-

### 802.11n HT40\_Nss1,(MCS0)\_2TX

### 2427MHz\_TX

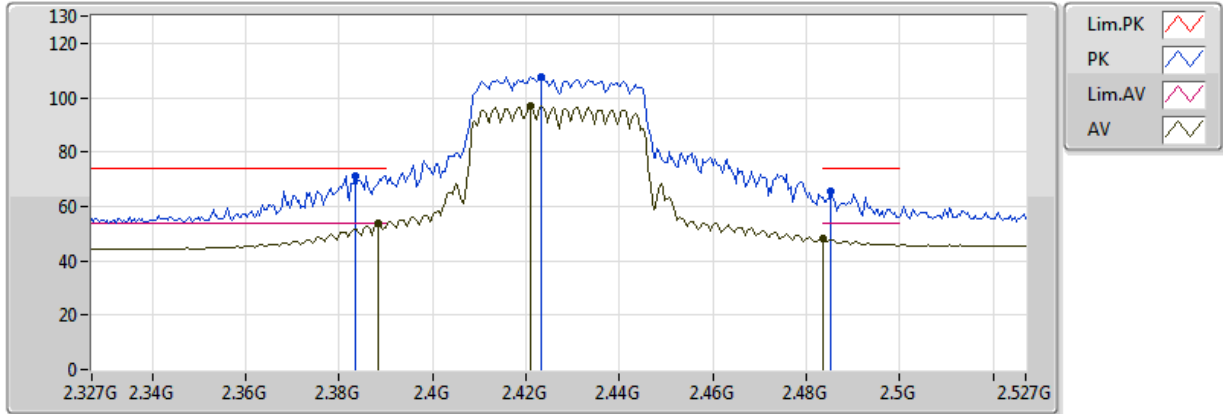


20171125  
 EUT\_Z\_2TX  
 Setting 74  
 06-C-4  
 FSP(100080)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.389998G	51.63	54.00	-2.37	32.12	3	Vertical	123	1.62
AV	2.4322G	95.11	Inf	-Inf	32.25	3	Vertical	123	1.62
AV	2.485G	46.73	54.00	-7.27	32.43	3	Vertical	123	1.62
PK	2.3882G	68.07	74.00	-5.93	32.11	3	Vertical	123	1.62
PK	2.4326G	105.03	Inf	-Inf	32.26	3	Vertical	123	1.62
PK	2.485G	63.96	74.00	-10.04	32.43	3	Vertical	123	1.62

### 802.11n HT40\_Nss1,(MCS0)\_2TX

### 2427MHz\_TX



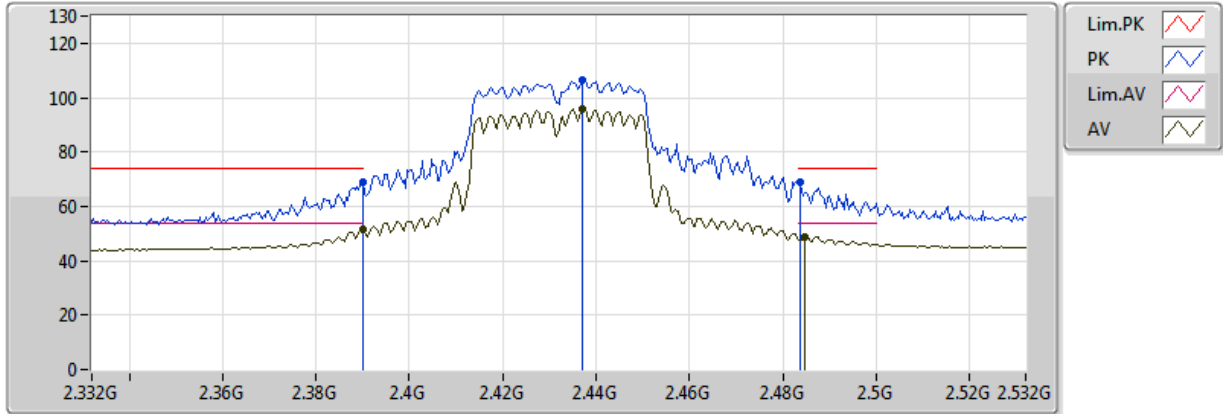
20171125  
EUT\_Z\_2TX  
Setting 74  
06-C-4  
FSP(100080)  
R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.3882G	53.63	54.00	-0.37	32.11	3	Horizontal	303	1.08
AV	2.421G	97.07	Inf	-Inf	32.22	3	Horizontal	303	1.08
AV	2.483502G	47.95	54.00	-6.05	32.42	3	Horizontal	303	1.08
PK	2.3834G	71.41	74.00	-2.59	32.10	3	Horizontal	303	1.08
PK	2.4234G	107.61	Inf	-Inf	32.23	3	Horizontal	303	1.08
PK	2.4854G	65.83	74.00	-8.17	32.43	3	Horizontal	303	1.08



### 802.11n HT40\_Nss1,(MCS0)\_2TX

### 2432MHz\_TX

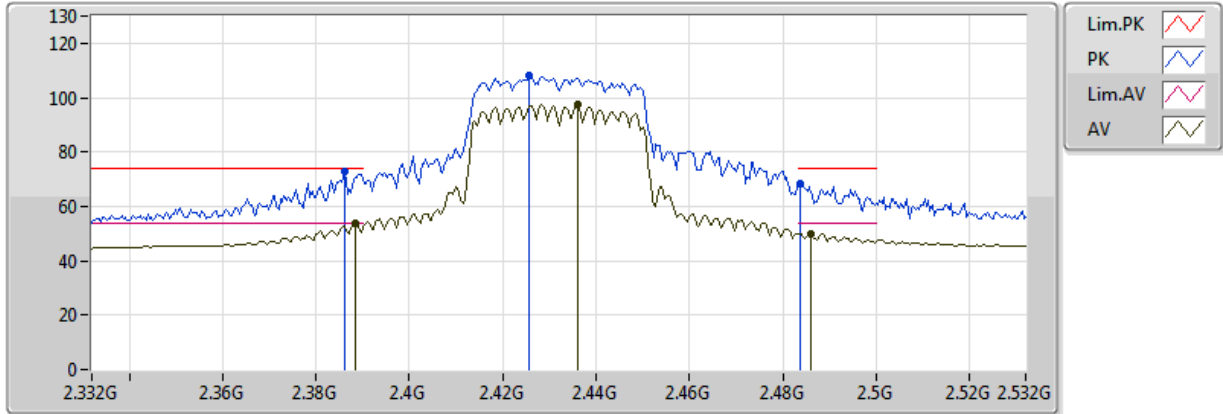


20171125  
EUT\_Z\_2TX  
Setting 77  
06-C-4  
FSP(100080)  
R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.39G	51.49	54.00	-2.51	32.12	3	Vertical	122	1.61
AV	2.4372G	96.07	Inf	-Inf	32.27	3	Vertical	122	1.61
AV	2.4848G	48.87	54.00	-5.13	32.43	3	Vertical	122	1.61
PK	2.39G	69.07	74.00	-4.93	32.12	3	Vertical	122	1.61
PK	2.4372G	106.46	Inf	-Inf	32.27	3	Vertical	122	1.61
PK	2.4836G	69.03	74.00	-4.97	32.42	3	Vertical	122	1.61

### 802.11n HT40\_Nss1,(MCS0)\_2TX

### 2432MHz\_TX

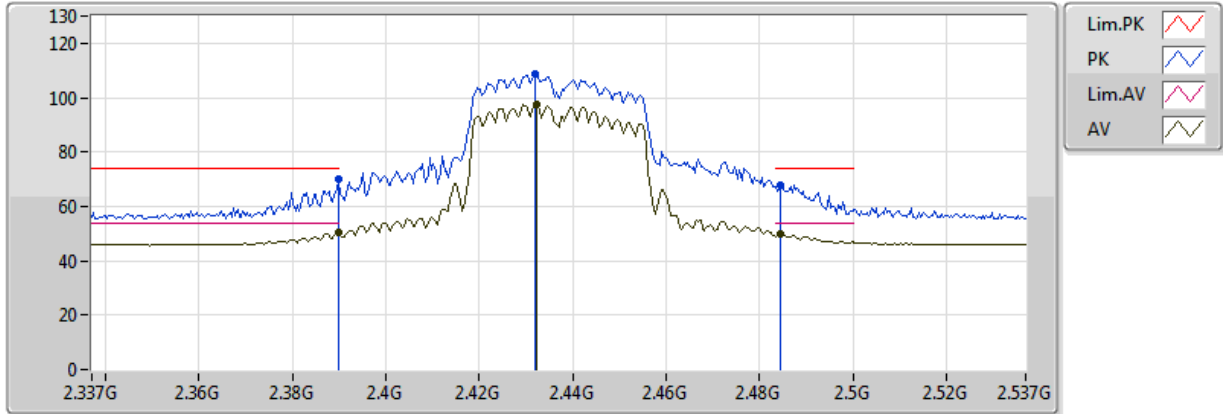


20171125  
EUT\_Z\_2TX  
Setting 77  
06-C-4  
FSP(100080)  
R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.3884G	53.82	54.00	-0.18	32.11	3	Horizontal	305	1.49
AV	2.436G	97.26	Inf	-Inf	32.27	3	Horizontal	305	1.49
AV	2.486G	49.99	54.00	-4.01	32.43	3	Horizontal	305	1.49
PK	2.386G	72.74	74.00	-1.26	32.11	3	Horizontal	305	1.49
PK	2.4256G	108.20	Inf	-Inf	32.23	3	Horizontal	305	1.49
PK	2.4836G	68.23	74.00	-5.77	32.42	3	Horizontal	305	1.49

### 802.11n HT40\_Nss1,(MCS0)\_2TX

### 2437MHz\_TX

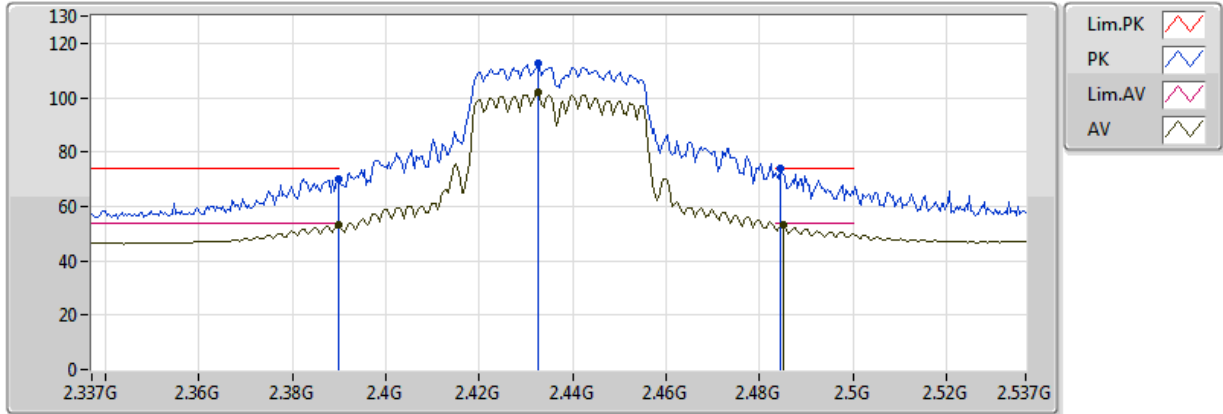


20171120  
EUT\_Z\_2TX  
Setting 77  
04-Z-1  
FSP(100142)  
R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.389998G	50.48	54.00	-3.52	33.16	3	Vertical	353	1.54	-
AV	2.4322G	97.70	Inf	-Inf	33.18	3	Vertical	353	1.54	-
AV	2.4846G	50.09	54.00	-3.91	33.19	3	Vertical	353	1.54	-
PK	2.389998G	70.24	74.00	-3.76	33.16	3	Vertical	353	1.54	-
PK	2.4318G	108.70	Inf	-Inf	33.18	3	Vertical	353	1.54	-
PK	2.4846G	67.60	74.00	-6.40	33.19	3	Vertical	353	1.54	-

### 802.11n HT40\_Nss1,(MCS0)\_2TX

### 2437MHz\_TX

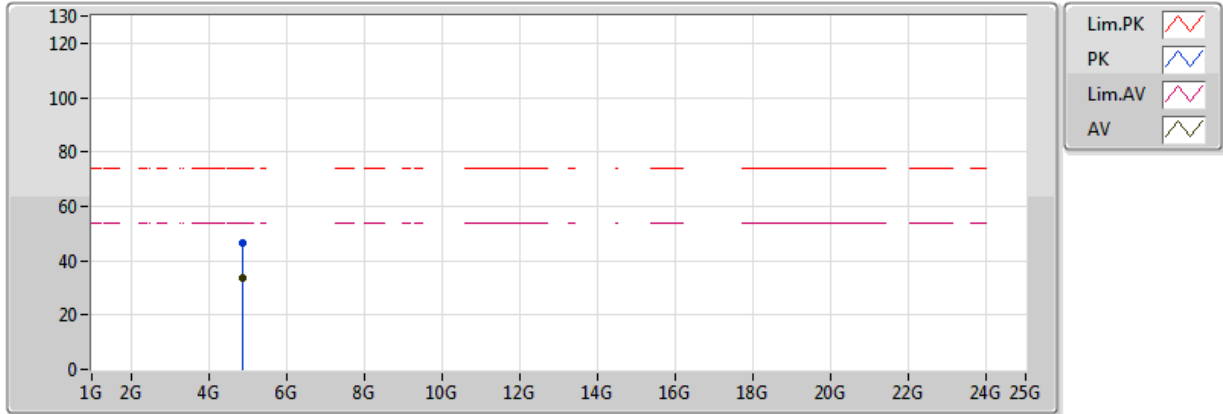


20171120  
EUT\_Z\_2TX  
Setting 77  
04-Z-1  
FSP(100142)  
R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.389998G	53.10	54.00	-0.90	33.16	3	Horizontal	40	2.96	-
AV	2.4326G	101.84	Inf	-Inf	33.18	3	Horizontal	40	2.96	-
AV	2.485G	53.06	54.00	-0.94	33.19	3	Horizontal	40	2.96	-
PK	2.389998G	70.28	74.00	-3.72	33.16	3	Horizontal	40	2.96	-
PK	2.4326G	112.42	Inf	-Inf	33.18	3	Horizontal	40	2.96	-
PK	2.4846G	73.85	74.00	-0.15	33.19	3	Horizontal	40	2.96	-

### 802.11n HT40\_Nss1,(MCS0)\_2TX

### 2437MHz\_TX

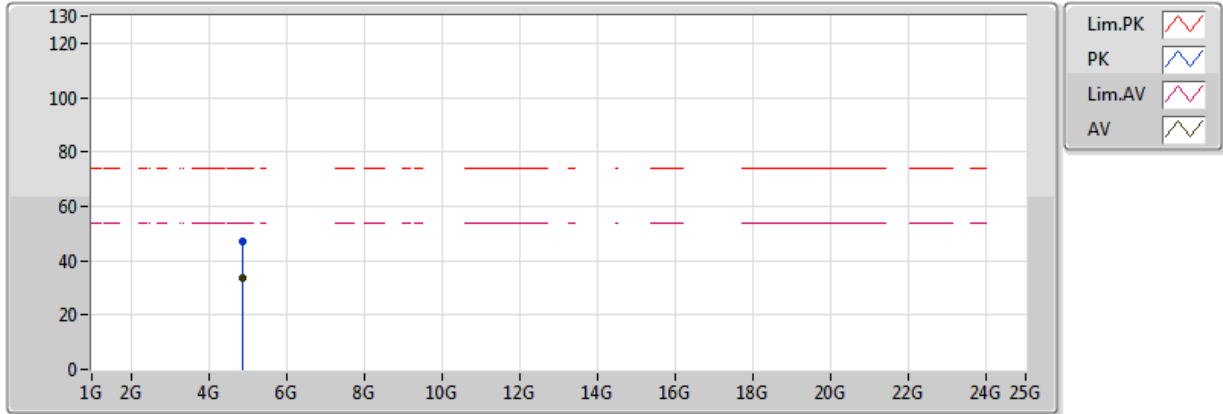


20171120  
EUT\_Z\_2TX  
Setting 77  
04-Z-1  
FSP(100142)  
R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.89272G	33.44	54.00	-20.56	3.31	3	Vertical	313	2.19	-
PK	4.88552G	46.46	74.00	-27.54	3.30	3	Vertical	313	2.19	-

### 802.11n HT40\_Nss1,(MCS0)\_2TX

### 2437MHz\_TX

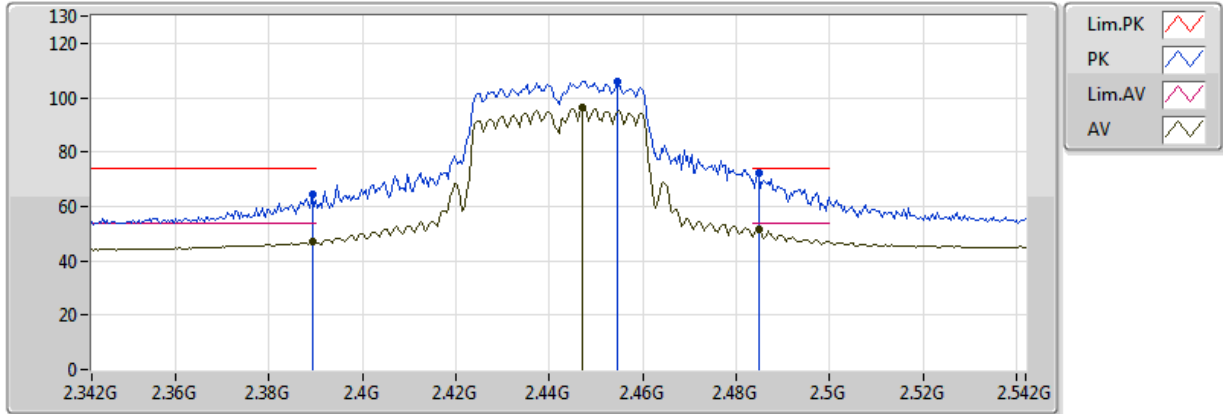


20171120  
 EUT\_Z\_2TX  
 Setting 77  
 04-Z-1  
 FSP(100142)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.89344G	33.56	54.00	-20.44	3.32	3	Horizontal	269	1.04	-
PK	4.89288G	47.34	74.00	-26.66	3.31	3	Horizontal	269	1.04	-

### 802.11n HT40\_Nss1,(MCS0)\_2TX

### 2442MHz\_TX

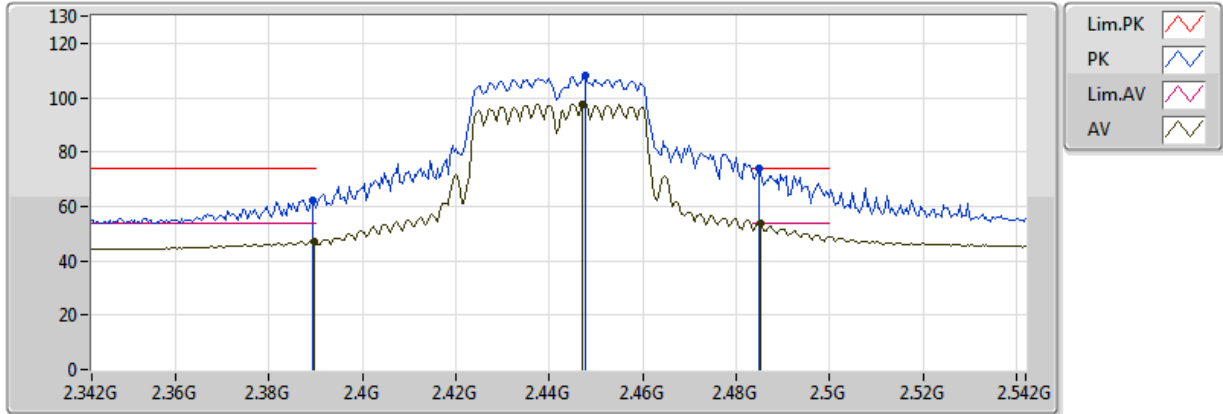


20171125  
 EUT\_Z\_2TX  
 Setting 75  
 06-C-4  
 FSP(100080)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.3892G	47.11	54.00	-6.89	32.12	3	Vertical	120	1.19
AV	2.4472G	96.17	Inf	-Inf	32.30	3	Vertical	120	1.19
AV	2.4848G	51.49	54.00	-2.51	32.43	3	Vertical	120	1.19
PK	2.3892G	64.50	74.00	-9.50	32.12	3	Vertical	120	1.19
PK	2.4544G	105.84	Inf	-Inf	32.33	3	Vertical	120	1.19
PK	2.4848G	72.25	74.00	-1.75	32.43	3	Vertical	120	1.19

### 802.11n HT40\_Nss1,(MCS0)\_2TX

### 2442MHz\_TX



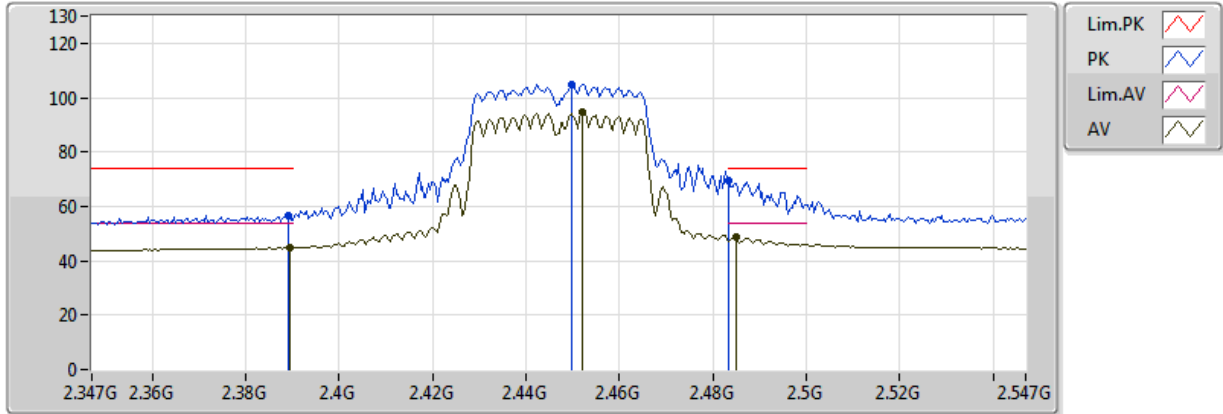
20171125  
 EUT\_Z\_2TX  
 Setting 75  
 06-C-4  
 FSP(100080)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.3896G	47.26	54.00	-6.74	32.12	3	Horizontal	34	2.68
AV	2.4472G	97.67	Inf	-Inf	32.30	3	Horizontal	34	2.68
AV	2.4852G	53.83	54.00	-0.17	32.43	3	Horizontal	34	2.68
PK	2.3892G	62.31	74.00	-11.69	32.12	3	Horizontal	34	2.68
PK	2.4476G	108.00	Inf	-Inf	32.30	3	Horizontal	34	2.68
PK	2.4848G	73.86	74.00	-0.14	32.43	3	Horizontal	34	2.68



### 802.11n HT40\_Nss1,(MCS0)\_2TX

### 2447MHz\_TX

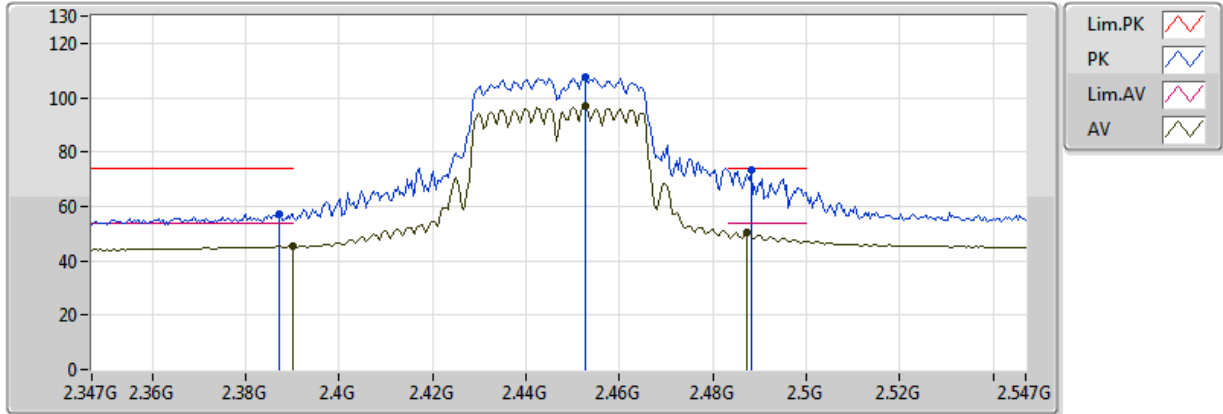


20171125  
 EUT\_Z\_2TX  
 Setting 70  
 06-C-4  
 FSP(100080)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.3894G	44.77	54.00	-9.23	32.12	3	Vertical	123	1.49
AV	2.4522G	94.71	Inf	-Inf	32.32	3	Vertical	123	1.49
AV	2.485G	48.50	54.00	-5.50	32.43	3	Vertical	123	1.49
PK	2.389G	56.67	74.00	-17.33	32.11	3	Vertical	123	1.49
PK	2.4498G	104.76	Inf	-Inf	32.31	3	Vertical	123	1.49
PK	2.483502G	69.46	74.00	-4.54	32.42	3	Vertical	123	1.49

### 802.11n HT40\_Nss1,(MCS0)\_2TX

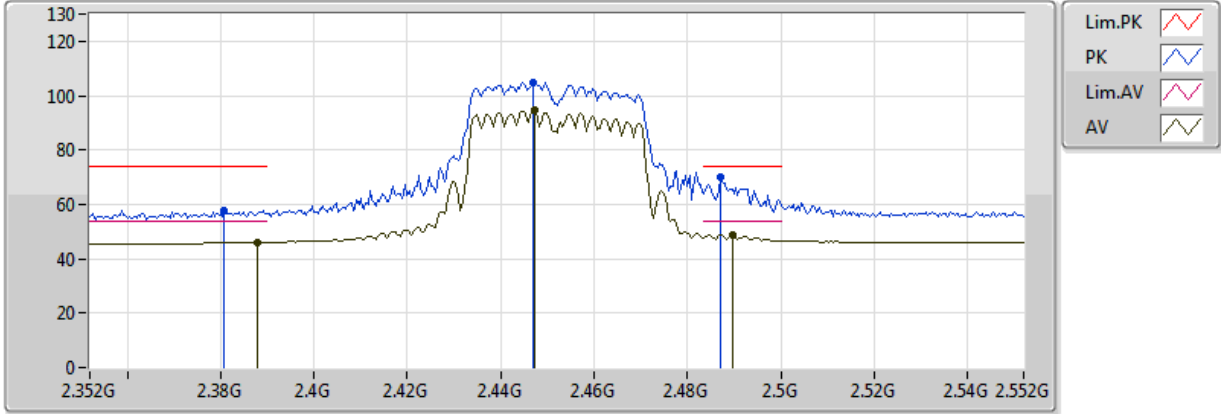
### 2447MHz\_TX



20171125  
 EUT\_Z\_2TX  
 Setting 70  
 06-C-4  
 FSP(100080)  
 R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
AV	2.389998G	45.28	54.00	-8.72	32.12	3	Horizontal	37	2.68
AV	2.4526G	96.89	Inf	-Inf	32.32	3	Horizontal	37	2.68
AV	2.4874G	50.39	54.00	-3.61	32.43	3	Horizontal	37	2.68
PK	2.387G	57.30	74.00	-16.70	32.11	3	Horizontal	37	2.68
PK	2.4526G	107.31	Inf	-Inf	32.32	3	Horizontal	37	2.68
PK	2.4882G	73.36	74.00	-0.64	32.44	3	Horizontal	37	2.68

**802.11n HT40\_Nss1,(MCS0)\_2TX  
2452MHz\_TX**

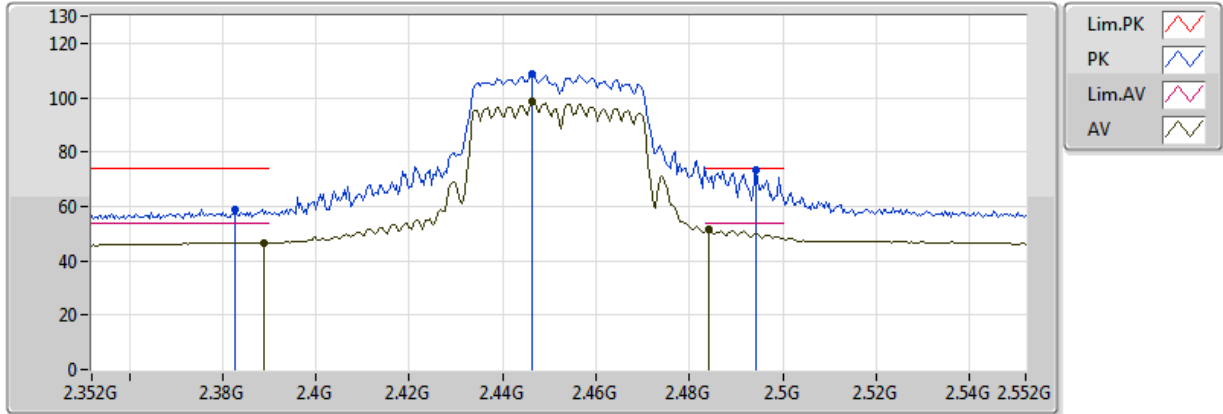


20171120  
EUT\_Z\_2TX  
Setting 68  
04-Z-1  
FSP(100142)  
R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.388G	46.11	54.00	-7.89	33.16	3	Vertical	302	1.50	-
AV	2.4472G	94.88	Inf	-Inf	33.18	3	Vertical	302	1.50	-
AV	2.4896G	48.59	54.00	-5.41	33.19	3	Vertical	302	1.50	-
PK	2.3808G	57.72	74.00	-16.28	33.16	3	Vertical	302	1.50	-
PK	2.4468G	104.95	Inf	-Inf	33.18	3	Vertical	302	1.50	-
PK	2.4872G	70.09	74.00	-3.91	33.19	3	Vertical	302	1.50	-

### 802.11n HT40\_Nss1,(MCS0)\_2TX

### 2452MHz\_TX

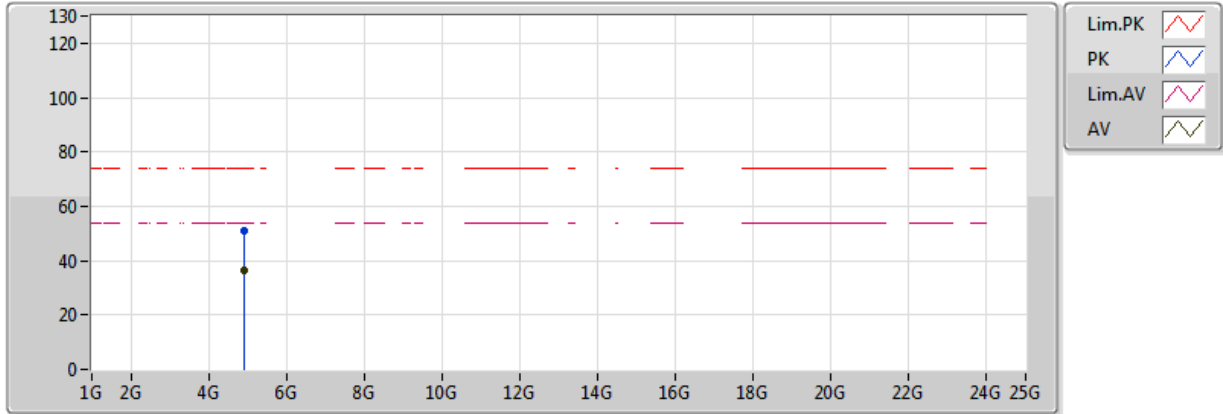


20171120  
EUT\_Z\_2TX  
Setting 68  
04-Z-1  
FSP(100142)  
R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	2.3888G	46.56	54.00	-7.44	33.16	3	Horizontal	340	1.15	-
AV	2.4464G	98.51	Inf	-Inf	33.18	3	Horizontal	340	1.15	-
AV	2.484G	51.35	54.00	-2.65	33.19	3	Horizontal	340	1.15	-
PK	2.3828G	59.03	74.00	-14.97	33.16	3	Horizontal	340	1.15	-
PK	2.4464G	108.54	Inf	-Inf	33.18	3	Horizontal	340	1.15	-
PK	2.4944G	73.63	74.00	-0.37	33.19	3	Horizontal	340	1.15	-

### 802.11n HT40\_Nss1,(MCS0)\_2TX

### 2452MHz\_TX

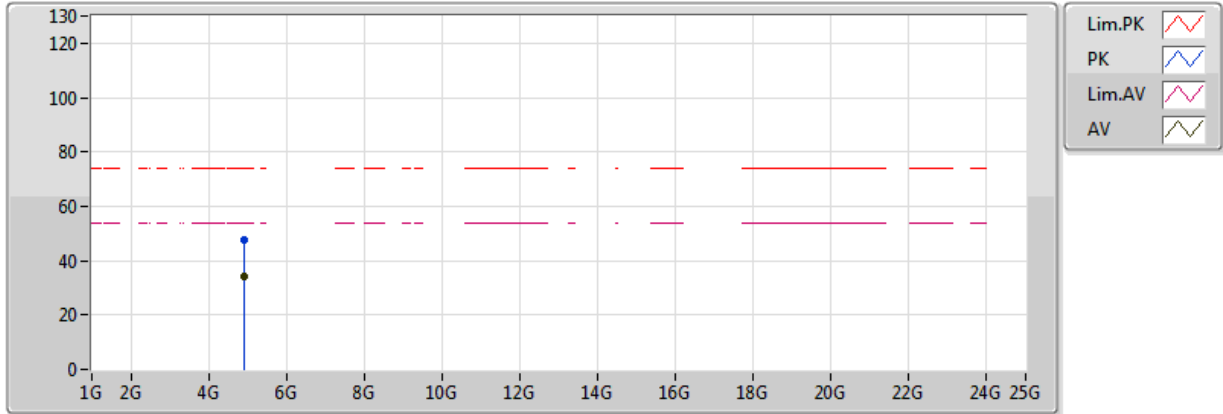


20171120  
EUT\_Z\_2TX  
Setting 68  
04-Z-1  
FSP(100142)  
R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.9156G	36.65	54.00	-17.35	3.36	3	Vertical	143	1.11	-
PK	4.90264G	50.89	74.00	-23.11	3.34	3	Vertical	143	1.11	-

### 802.11n HT40\_Nss1,(MCS0)\_2TX

### 2452MHz\_TX



20171120  
EUT\_Z\_2TX  
Setting 68  
04-Z-1  
FSP(100142)  
R1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
AV	4.91432G	34.41	54.00	-19.59	3.36	3	Horizontal	177	1.01	-
PK	4.92056G	47.74	74.00	-26.26	3.38	3	Horizontal	177	1.01	-