FCC Test Report

FCC ID	:	**2AEUPBHASC061**
Equipment	:	**Stick Up Cam Battery**
Brand Name	:	**Ring**
Model Name	:	**Stick Up Cam Battery**
Applicant	:	**Ring, Inc** **1523 26th St, Santa Monica, CA 90404, USA**
Manufacturer	:	**Chicony Electronics (Dong Guan) Co.,Ltd.** **San Zhong Guan Li Qu, Qingxi Town, Dongguan City Guangdong 523651 China**
Standard	:	**47 CFR FCC Part 15.247**

The product was received on Aug. 22, 2018, and testing was started from Sep. 20, 2018 and completed on Oct. 13, 2018. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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

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

Approved by: Allen Lin

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

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

Table of Contents

History of this test report

Report No.	Version	Description	Issued Date
FR882221AC	01	Initial issue of report	Oct. 08, 2018
FR882221AC	02	9K~30M data was added (This report is the latest version replacing for the report issued on Oct. 08, 2018)	Oct. 15, 2018

Summary of Test Result

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

Reviewed by: Sam Tsai

Report Producer: Debby Hung

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]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	802.11b	20	1TX
2.4-2.4835GHz	802.11g	20	1TX
2.4-2.4835GHz	802.11n HT20	20	1TX

Note:
- 11b mode uses a combination of DSSS-DBPSK, DQPSK, CCK modulation.
- 11g, HT20 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector
1	-	Lunar	PCB antenna	fixed on board
2	-	Lunar	PCB antenna	fixed on board

Ant.	Port	Gain (dBi)	
		2.4G	BT
1	1	0.57	0.57
2	2	0.57	0.57

For 2.4GHz function:

For IEEE 802.11 b/g/n mode (1TX/1RX)

Support diversity function and pre-tested on each single chain, the worst case was Ant. 2(port 2) and it was record in this test report.

For BT function:

For IEEE 802.15.1 Bluetooth mode (1TX/1RX)

Support diversity function and pre-tested on each single chain, the worst case was Ant. 2(port 2) and it was record in this test report.

1.1.3 EUT Information

Operational Condition				
EUT Power Type	From Battery			
EUT Function	☒	Point-to-multipoint	☐	Point-to-point
Beamforming Function	☐	With beamforming	☒	Without beamforming

Type of EUT		
☒	Stand-alone	
☐	Combined (EUT where the radio part is fully integrated within another device)	
	Combined Equipment - Brand Name / Model No.:	…
☐	Plug-in radio (EUT intended for a variety of host systems)	
	Host System - Brand Name / Model No.:	…
☐	Other:	

1.1.4 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11b	0.697	1.568	1.026m	1k
802.11g	0.308	5.114	165.625u	10k
802.11n HT20	0.311	5.072	170.312u	10k

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
- KDB 558074 D01 v05

1.3 Testing Location Information

Testing Location			
☒	HWA YA	ADD : No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)	
		TEL : 886-3-327-3456	FAX : 886-3-327-0973
Test site Designation No. TW1190 with FCC.			
☐	JHUBEI	ADD : No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County, Taiwan (R.O.C.)	
		TEL : 886-3-656-9065	FAX : 886-3-656-9085
Test site Designation No. TW0006 with FCC.			

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH06-HY	Dexter	25°C / 60%	20/Sep/2018
Radiated	03CH09-HY	Andy	22.8°C / 62%	21/Sep/2018
Radiated <9k-30M>	03CH09-HY	Andy	23.6C / 59%	13/Oct/2018

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)	3.6 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	3.0 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	4.3 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.9 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.3 dB	Confidence levels of 95%
Temperature	0.7 ℃	Confidence levels of 95%
Humidity	4 %	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Condition

RF Conducted	Abbreviation	Remark
TnomVnom	Tnom	20°C
-	Vnom	120V

2.2 Test Channel Mode

Test Software Version	bluetool1.8.7.2

Mode	PowerSetting
802.11b_Nss1,(1Mbps)_1TX	-
2412MHz	0
2437MHz	0
2462MHz	0
802.11g_Nss1,(6Mbps)_1TX	-
2412MHz	0
2437MHz	0
2462MHz	0
802.11n HT20_Nss1,(MCS0)_1TX	-
2412MHz	0
2437MHz	0
2462MHz	0

2.3 The Worst Case Measurement Configuration

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

The Worst Case Mode for Following Conformance Tests			
Tests Item	Emissions in Restricted Frequency Bands		
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.		
Operating Mode < 1GHz	CTX		
1	Battery		
Operating Mode > 1GHz	CTX		
Orthogonal Planes of EUT	**X Plane**	**Y Plane**	**Z Plane**
			
Worst Planes of EUT	V		

2.4 Accessories

Accessories				
Battery	**Brand Name**	ring	**Model Name**	V4
	Power Rating	3.65V 6040 mAh 22.046 Wh 1ICR19/66-2		
	Type	Rechargeable Lithium-ion		
USB cable	**Power Cord**	0.45 meter, non-shielded cable, w/o ferrite core		

Reminder: Regarding to more detail and other information, please refer to user manual.

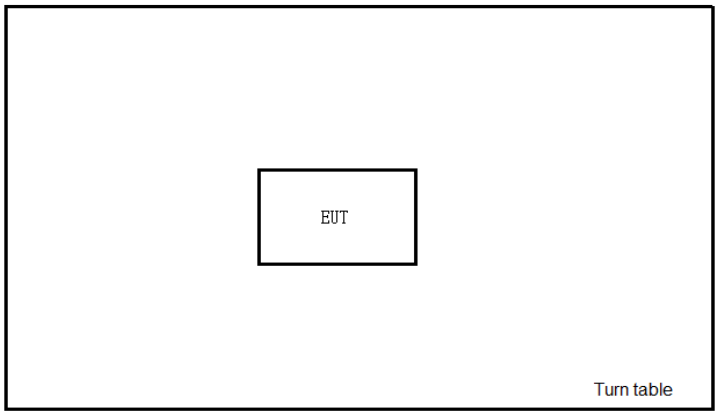
2.5 Support Equipment

Support Equipment – RF Conducted				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	Notebook	DELL	E5410	R33002 / DOC
2	Adapter for NB	DELL	HA65NM130	R35737 / DOC
3	AC Power Source	GW	APS-9102	-
4	Fixture	-	-	-

Note.Support equipment No.4 was provided by customer.

2.6 Test Setup Diagram

Test Setup Diagram - Radiated Test



3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line Conducted Emissions Limit		
Frequency Emission (MHz)	**Quasi-Peak**	**Average**
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50
Note 1: * Decreases with the logarithm of the frequency.		

3.1.2 Measuring Instruments

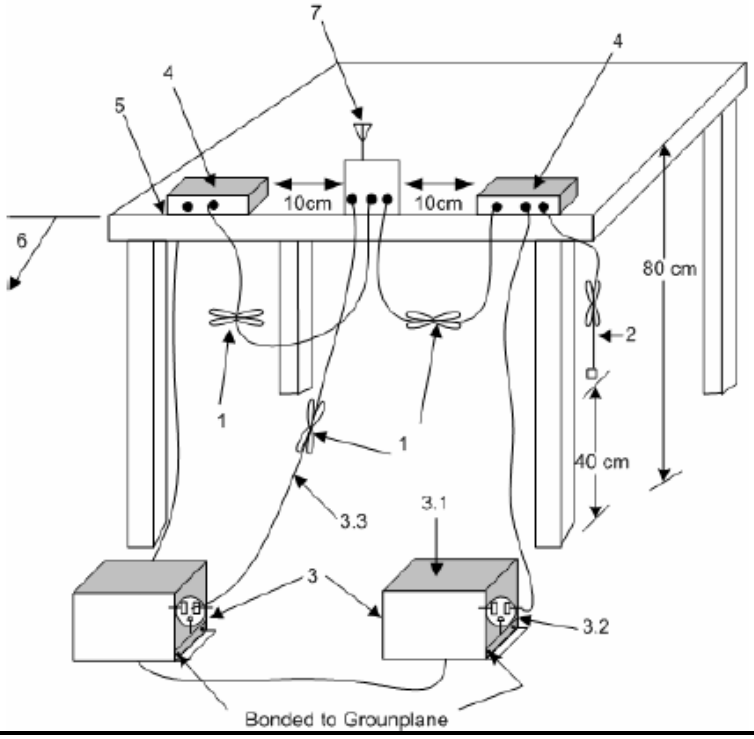
Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

Test Method
☒ Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

3.1.4 Test Setup

AC Power-line Conducted Emissions



3.1.5 Test Result of AC Power-line Conducted Emissions

Please refer to FCC 15.207 which states, “Measurements to demonstrate compliance with the conducted limits are not required for devices employ Battery for operation and which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines”.
Therefore, for this device, AC Power Line Conducted Emissions investigation is not required.

3.2 DTS Bandwidth

3.2.1 6dB Bandwidth Limit

6dB Bandwidth Limit
Systems using digital modulation techniques:
▪ 6 dB bandwidth ≥ 500 kHz.

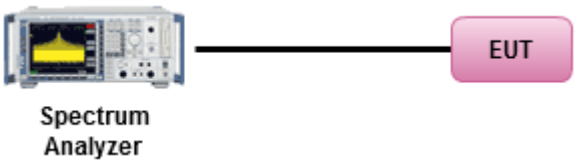
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method	
▪ For the emission bandwidth shall be measured using one of the options below:	
	☒ Refer as KDB 558074. clause 8.2 (11.9.2.2 of ANSI C63.10) DTS bandwidth measurement.
	☐ Refer as RSS-Gen, clause 6.7 for for occupied bandwidth testing.
	☐ Refer as ANSI C63.10, clause 6.9.3 for occupied bandwidth testing.

3.2.4 Test Setup

Emission Bandwidth


3.2.5 Test Result of Emission Bandwidth

Refer as Appendix A

3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit			
	▪ If $G_{TX} \leq 6$ dBi, then $P_{Out} \leq 30$ dBm (1 W)		
	▪ Point-to-multipoint systems (P2M): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)$ dBm		
	▪ Point-to-point systems (P2P): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm		
	▪ Smart antenna system (SAS):		
		- Single beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm	
		- Overlap beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm	
		- Aggregate power on all beams: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3 + 8$dB dBm	
e.i.r.p. Power Limit:			
▪ 2400-2483.5 MHz Band			
	▪ Point-to-multipoint systems (P2M): $P_{eirp} \leq 36$ dBm (4 W)		
	▪ Point-to-point systems (P2P): $P_{eirp} \leq MAX(36, [P_{Out} + G_{TX}])$ dBm		
	▪ Smart antenna system (SAS)		
		- Single beam: $P_{eirp} \leq MAX(36, P_{Out} + G_{TX})$ dBm	
		- Overlap beam: $P_{eirp} \leq MAX(36, P_{Out} + G_{TX})$ dBm	
		- Aggregate power on all beams: $P_{eirp} \leq MAX(36, [P_{Out} + G_{TX} + 8])$ dBm	
P_{Out} = maximum peak conducted output power or maximum conducted output power in dBm, **G_{TX}** = the maximum transmitting antenna directional gain in dBi.			

3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method	
▪ Maximum Peak Conducted Output Power	
☐	Refer as KDB 558074, clause 8.3.1.1 (11.9.1.1 of ANSI C63.10) RBW ≥ EBW method.
☐	Refer as KDB 558074, clause 8.3.1.2 (11.9.1.2 of ANSI C63.10) integrated band power method.
☐	Refer as KDB 558074, clause 8.3.1.3 (11.9.1.3 of ANSI C63.10) peak power meter.
▪ Maximum Average Conducted Output Power	
☐	Refer as KDB 558074, clause 8.3.2.2 (11.9.2.2 of ANSI C63.10) using a spectrum analyzer.
☒	Refer as KDB 558074, clause 8.3.2.3 (11.9.2.3 of ANSI C63.10) using a power meter.
▪ For conducted measurement.	
	▪ If the EUT supports multiple transmit chains using options given below: Refer as KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.
	▪ If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \ldots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

3.3.4 Test Setup

Maximum Conducted Output Power (Power Meter)


3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix B

3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

Power Spectral Density Limit
▪ Power Spectral Density (PSD) ≤ 8 dBm/3kHz

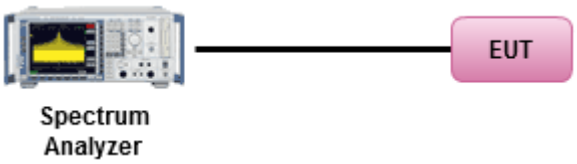
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method		
▪ Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option).		
	☒ Refer as KDB 558074, clause 8.4 (11.10 of ANSI C63.10) Method PKPSD.	
▪ For conducted measurement.		
	▪ If The EUT supports multiple transmit chains using options given below:	
		▪ Measure and sum the spectra across the outputs. Refer as 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.

3.4.4 Test Setup

Power Spectral Density


3.4.5 Test Result of Power Spectral Density

Refer as Appendix C

3.5 Emissions in Non-restricted Frequency Bands

3.5.1 Emissions in Non-restricted Frequency Bands Limit

Un-restricted Band Emissions Limit	
RF output power procedure	**Limit (dB)**
Peak output power procedure	20
Average output power procedure	30
Note 1: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak PSD level. Note 2: If the average output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the power in any 100 kHz outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum measured in-band average PSD level.	

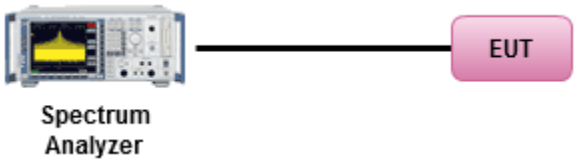
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

Test Method
▪ Refer as KDB 558074, clause 8.5 (11.11 of ANSI C63.10) for non-restricted frequency bands.

3.5.4 Test Setup

Emissions in Non-restricted Frequency Bands


3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix D

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

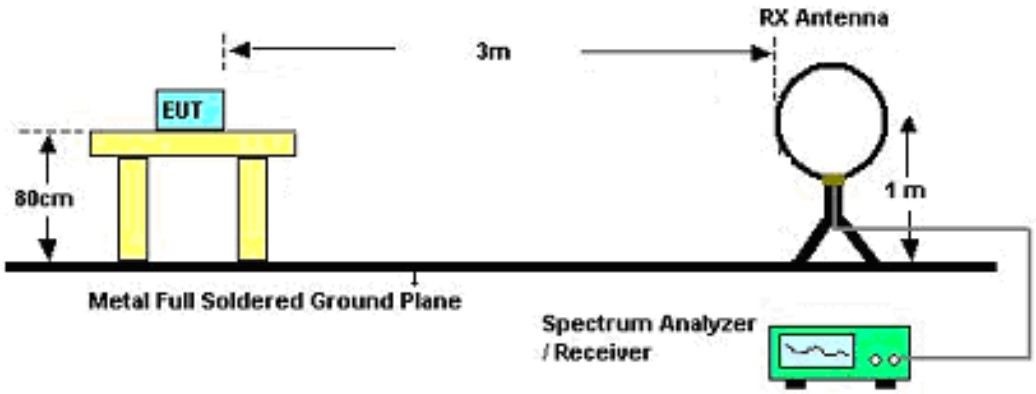
Refer a test equipment and calibration data table in this test report.

3.6.3 Test Procedures

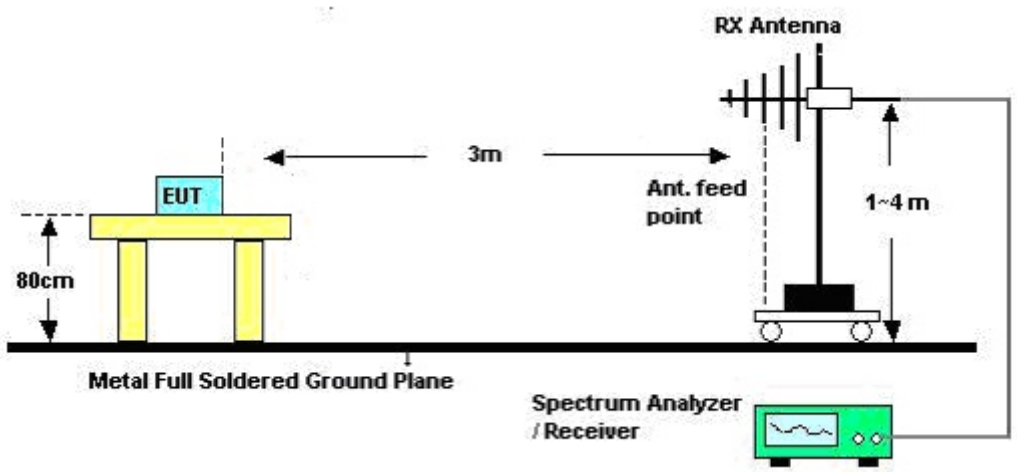
Test Method	
▪ The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].	
▪ Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.	
▪ For the transmitter unwanted emissions shall be measured using following options below:	
	▪ Refer as KDB 558074, clause 8.6 (11.12 of ANSI C63.10) for restricted frequency bands.
▪ For the transmitter band-edge emissions shall be measured using following options below:	
	▪ Refer as KDB 558074 clause 8.7.1, When the performing peak or average radiated measurements, emissions within 2 MHz of the authorized band edge may be measured using the marker-delta method described below.
	▪ Refer as KDB 558074, clause 8.7.2 (6.10.6 of ANSI C63.10) for marker-delta method for band-edge measurements.
	▪ Refer as KDB 558074, clause 8.7.3 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).

3.6.4 Test Setup

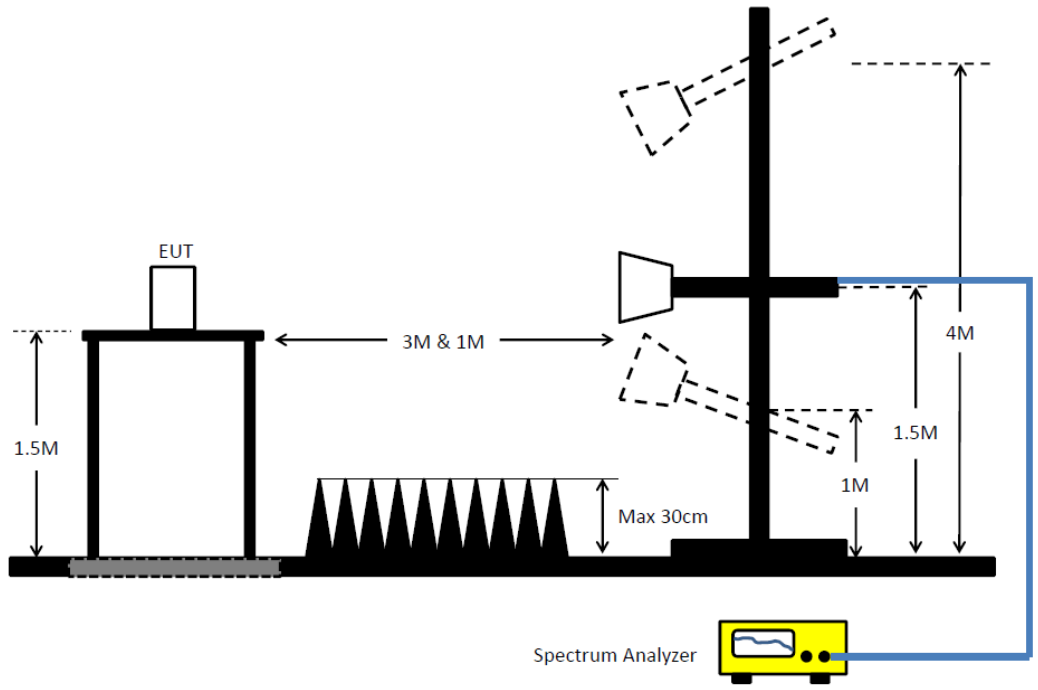
Emissions in Restricted Frequency Bands
9kHz ~30MHz



30MHz~1GHz



Above 1GHz



3.6.5 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix E

4 Test Equipment and Calibration Data

Instrument for Radiated Test

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	30MHz ~ 1GHz	23/Apr/2018	22/Apr/2019
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	1GHz ~ 18GHz	14/Jun/2018	13/Jun/2019
Microwave Preamplifier	Agilent	8449B	3008A02096	1GHz ~ 26.5GHz	10/May/2018	09/May/2019
Amplifier	EMC	EMC9135	980232	9KHz~1GHz	27/Apr/2018	26/Apr/2019
EXA Signal Analyzer	KEYSIGHT	N9010A	MY54200885	10Hz ~ 44GHz	31/Jul/2018	30/Jul/2019
Bilog Antenna & 6dB Attenuator	SCHAFFNER/Yi Chang	CBL6111C / MTJ61202	2724 / MTJ61202-06	30MHz~1GHz	07/Jul/2018	06/Jul/2019
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA9120 D 1534	1GHz~18GHz	30/Apr/2018	29/Apr/2019
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170614	18GHz~40GHz	09/Feb/2018	08/Feb/2019
Loop Antenna	TESEQ	HLA 6120	31244	9k-30MHz	29/Mar/2018	28/Mar/2019
RF Cable-R03m	Jye Bao	RG142	CB031	9kHz ~ 1GHz	1/Feb/2018	31/Jan/2019
RF Cable-high	HUBER+SUHNER	SUCOFLEX104	SN 556626/4 + 556627	1GHz ~ 40GHz	14/Mar/2018	13/Mar/2019

Instrument for Conducted Test

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Signal Analyzer	R&S	FSV40	101500	10Hz ~ 40GHz	18/Jul/2018	17/Jul/2019
Power Sensor	Anritsu	MA2411B	1339407	300MHz ~ 40GHz	06/Nov/2017	05/Nov/2018
Power Meter	Anritsu	ML2495A	1517010	300MHz ~ 40GHz	06/Nov/2017	05/Nov/2018
RF Cable-1.5m	HUBER+SUHNER	SUCOFLEX_104	MY12585/4	30MHz ~ 26.5GHz	26/Jan/2018	25/Jan/2019
RF Cable-0.2m	HUBER+SUHNER	SUCOFLEX_104	MY10710/4	30MHz ~ 26.5GHz	26/Jan/2018	25/Jan/2019
RF Cable-0.2m	HUBER+SUHNER	SUCOFLEX_104	MY10709/4	30MHz ~ 26.5GHz	26/Jan/2018	25/Jan/2019
Signal Generator	R&S	SMB100A	175727	100kHz~40GHz	26/Oct/2017	25/Oct/2018

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	9.075M	14.118M	14M1G1D	9.075M	14.043M
802.11g_Nss1,(6Mbps)_1TX	15.1M	16.492M	16M5D1D	15.075M	16.317M
802.11n HT20_Nss1,(MCS0)_1TX	15.1M	17.641M	17M6D1D	15.1M	17.441M

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

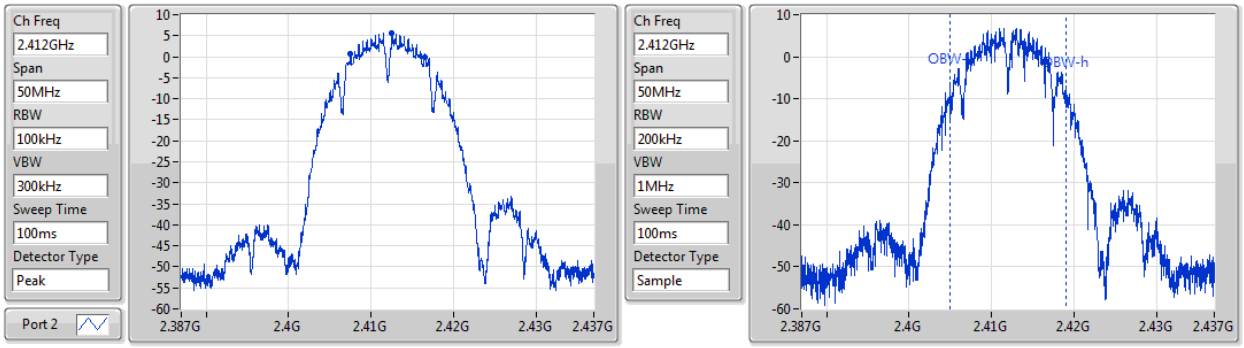
Mode	Result	Limit (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-
2412MHz_TnomVnom	Pass	500k	9.075M	14.043M
2437MHz_TnomVnom	Pass	500k	9.075M	14.118M
2462MHz_TnomVnom	Pass	500k	9.075M	14.118M
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-
2412MHz_TnomVnom	Pass	500k	15.1M	16.317M
2437MHz_TnomVnom	Pass	500k	15.075M	16.492M
2462MHz_TnomVnom	Pass	500k	15.1M	16.317M
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-
2412MHz_TnomVnom	Pass	500k	15.1M	17.441M
2437MHz_TnomVnom	Pass	500k	15.1M	17.641M
2462MHz_TnomVnom	Pass	500k	15.1M	17.441M

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

802.11b_Nss1,(1Mbps)_1TX(Port2) EBW

2412MHz

20/09/2018

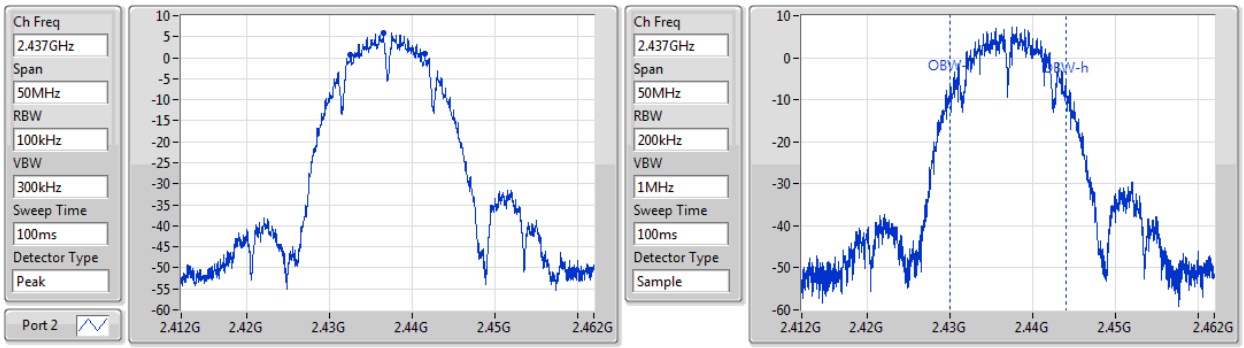


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
9.075M	2.4075G	2.416575G	14.043M	2.405003G	2.419046G	500k	2

802.11b_Nss1,(1Mbps)_1TX(Port2) EBW

2437MHz

20/09/2018

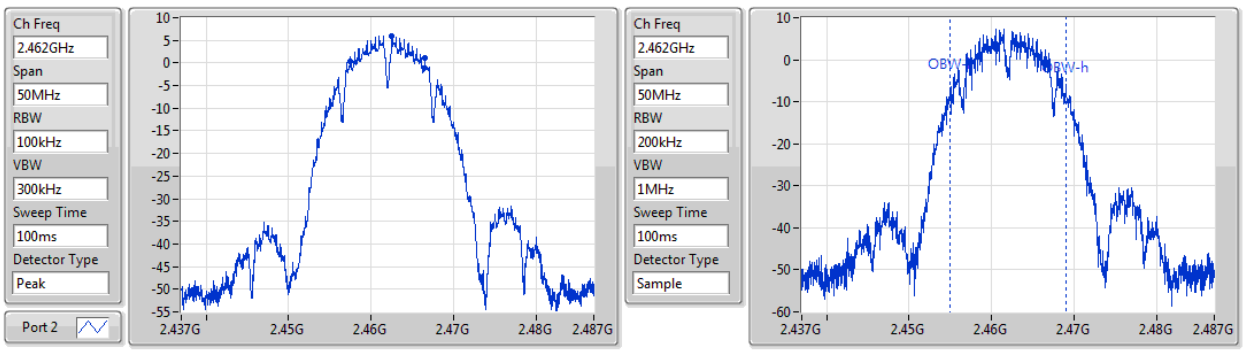


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
9.075M	2.432475G	2.44155G	14.118M	2.429979G	2.444096G	500k	2

802.11b_Nss1,(1Mbps)_1TX(Port2) EBW

2462MHz

20/09/2018

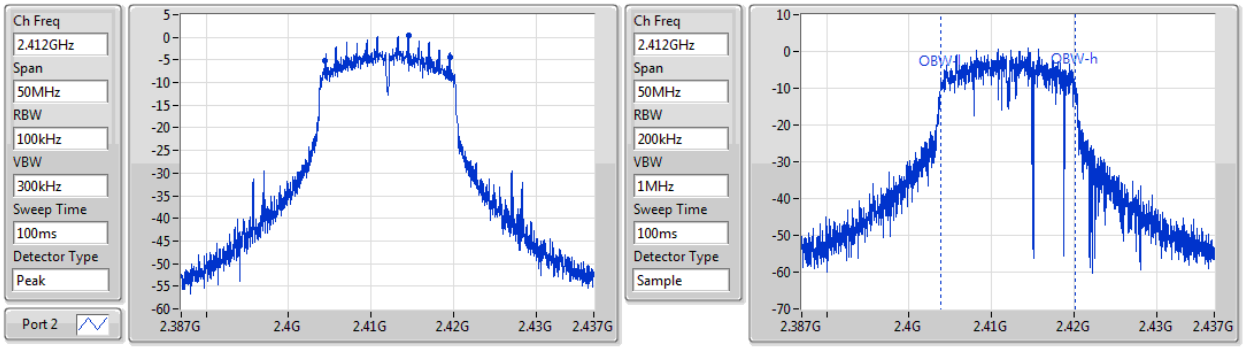


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
9.075M	2.457475G	2.46655G	14.118M	2.454979G	2.469096G	500k	2

802.11g_Nss1,(6Mbps)_1TX(Port2) EBW

2412MHz

20/09/2018

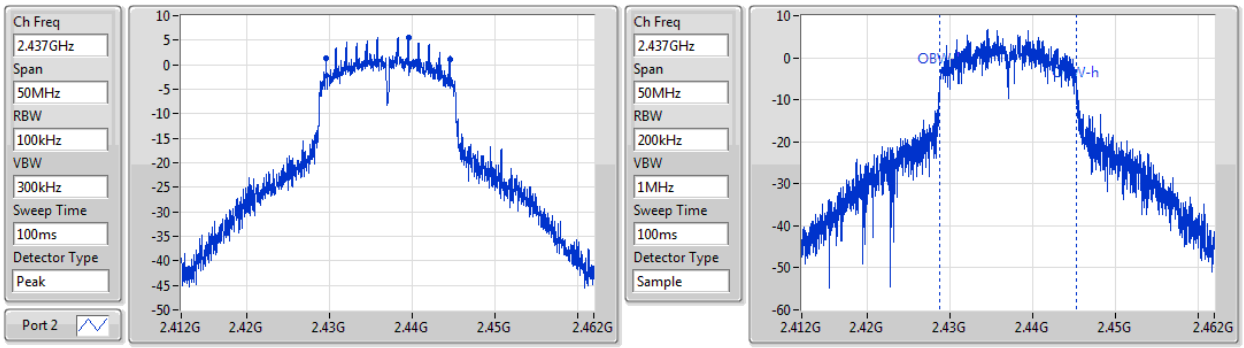


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.1M	2.404475G	2.419575G	16.317M	2.403854G	2.420171G	500k	2

802.11g_Nss1,(6Mbps)_1TX(Port2) EBW

2437MHz

20/09/2018

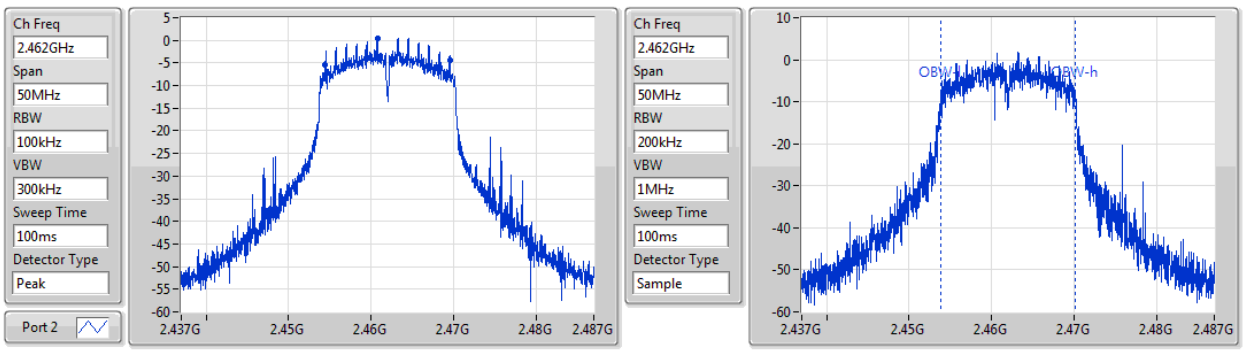


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.075M	2.4295G	2.444575G	16.492M	2.428779G	2.445271G	500k	2

802.11g_Nss1,(6Mbps)_1TX(Port2) EBW

2462MHz

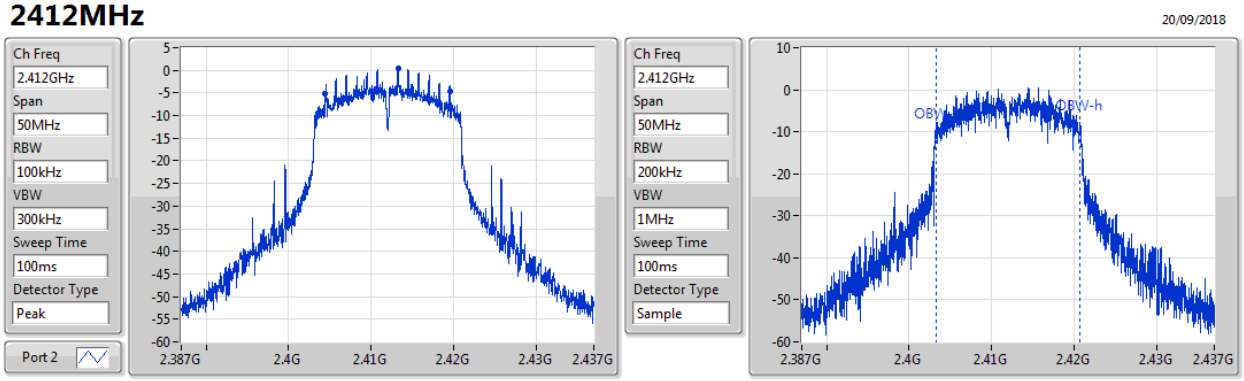
20/09/2018



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.1M	2.454475G	2.469575G	16.317M	2.453829G	2.470146G	500k	2

802.11n HT20_Nss1,(MCS0)_1TX(Port2) EBW

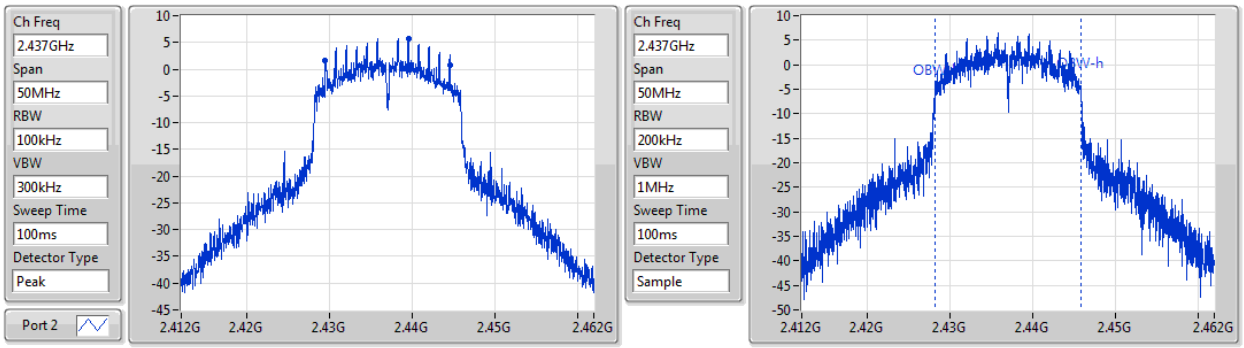
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.1M	2.404475G	2.419575G	17.441M	2.403304G	2.420746G	500k	2

802.11n HT20_Nss1,(MCS0)_1TX(Port2) EBW

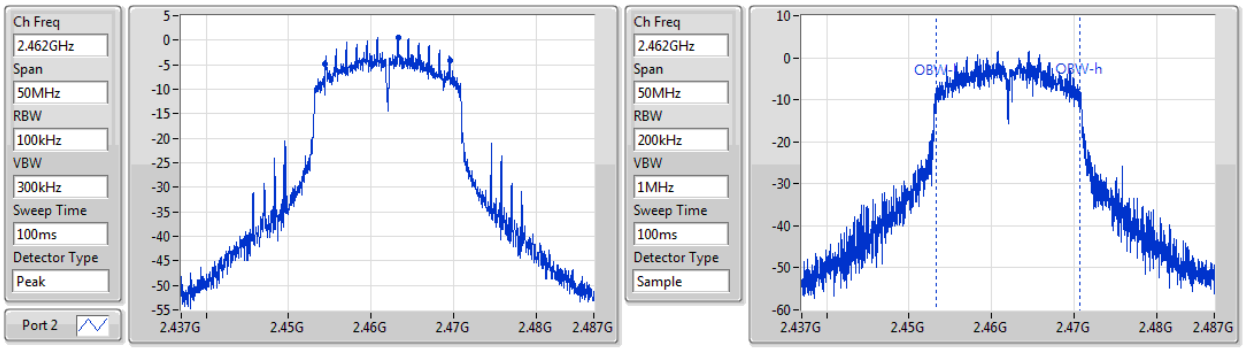
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.1M	2.429475G	2.444575G	17.641M	2.428179G	2.445821G	500k	2

802.11n HT20_Nss1,(MCS0)_1TX(Port2) EBW

2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.1M	2.454475G	2.469575G	17.441M	2.453279G	2.470721G	500k	2

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	16.14	0.04111
802.11g_Nss1,(6Mbps)_1TX	15.39	0.03459
802.11n HT20_Nss1,(MCS0)_1TX	15.16	0.03281

Result

Mode	Result	DG (dBi)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-
2412MHz_TnomVnom	Pass	0.57	15.64	15.64	30.00
2437MHz_TnomVnom	Pass	0.57	16.14	16.14	30.00
2462MHz_TnomVnom	Pass	0.57	16.12	16.12	30.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-
2412MHz_TnomVnom	Pass	0.57	10.59	10.59	30.00
2437MHz_TnomVnom	Pass	0.57	15.39	15.39	30.00
2462MHz_TnomVnom	Pass	0.57	10.69	10.69	30.00
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-
2412MHz_TnomVnom	Pass	0.57	10.54	10.54	30.00
2437MHz_TnomVnom	Pass	0.57	15.16	15.16	30.00
2462MHz_TnomVnom	Pass	0.57	10.63	10.63	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	-8.71
802.11g_Nss1,(6Mbps)_1TX	-11.07
802.11n HT20_Nss1,(MCS0)_1TX	-11.33

RBW=3kHz.

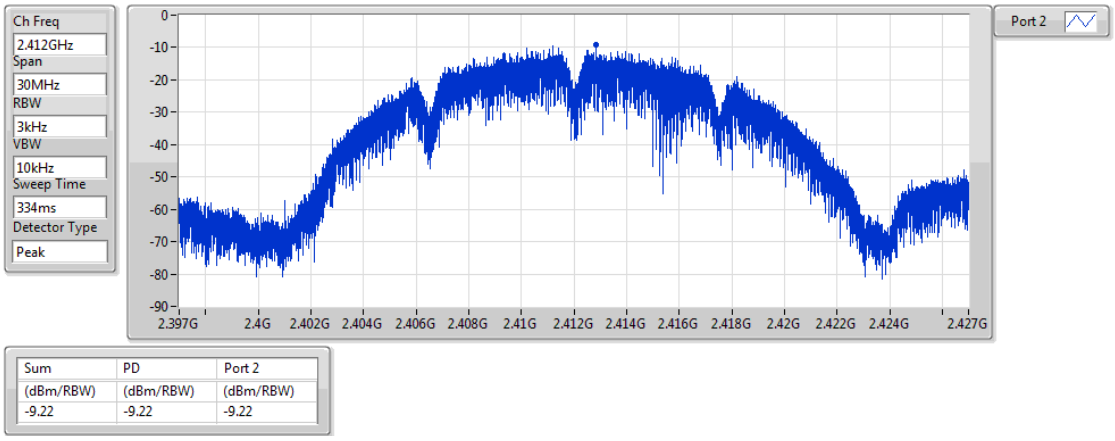
Result

Mode	Result	DG (dBi)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-
2412MHz_TnomVnom	Pass	0.57	-9.22	-9.22	8.00
2437MHz_TnomVnom	Pass	0.57	-9.89	-9.89	8.00
2462MHz_TnomVnom	Pass	0.57	-8.71	-8.71	8.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-
2412MHz_TnomVnom	Pass	0.57	-14.32	-14.32	8.00
2437MHz_TnomVnom	Pass	0.57	-11.07	-11.07	8.00
2462MHz_TnomVnom	Pass	0.57	-15.51	-15.51	8.00
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-
2412MHz_TnomVnom	Pass	0.57	-14.74	-14.74	8.00
2437MHz_TnomVnom	Pass	0.57	-11.33	-11.33	8.00
2462MHz_TnomVnom	Pass	0.57	-15.23	-15.23	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 Xpower density;

802.11b_Nss1,(1Mbps)_1TX(Port2) PSD

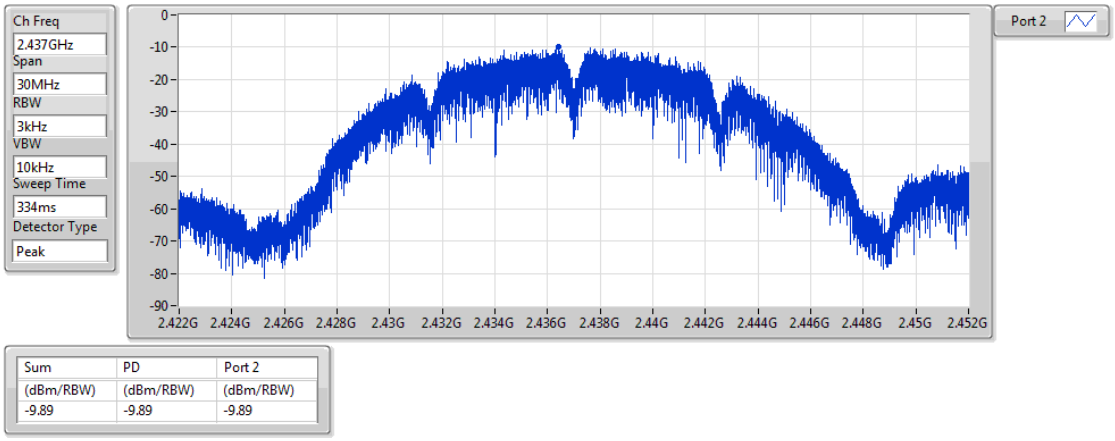
2412MHz



Sum	PD	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-9.22	-9.22	-9.22

802.11b_Nss1,(1Mbps)_1TX(Port2) PSD

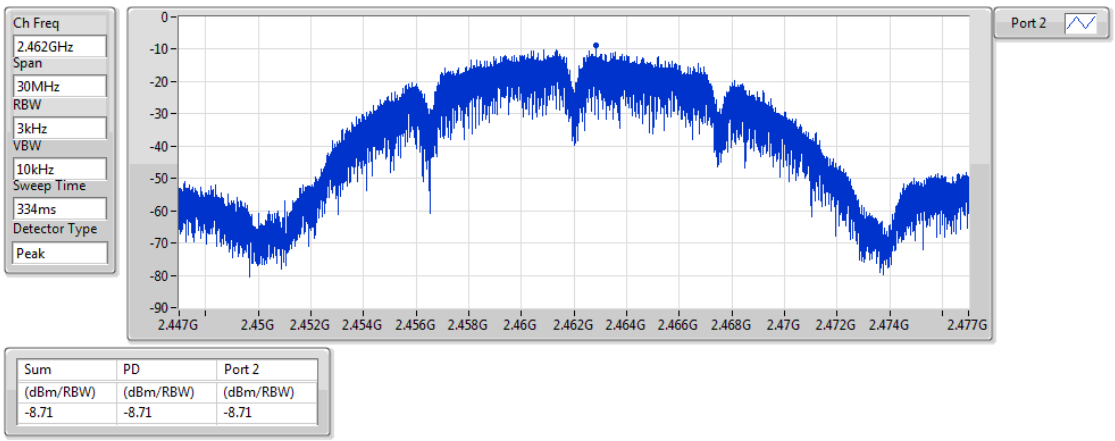
2437MHz



Sum	PD	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-9.89	-9.89	-9.89

802.11b_Nss1,(1Mbps)_1TX(Port2) PSD

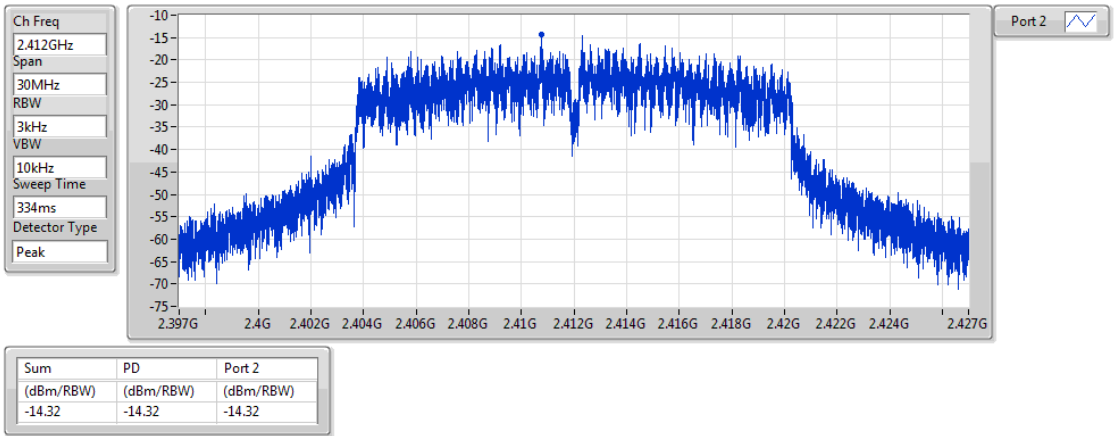
2462MHz



Sum	PD	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-8.71	-8.71	-8.71

802.11g_Nss1,(6Mbps)_1TX(Port2) PSD

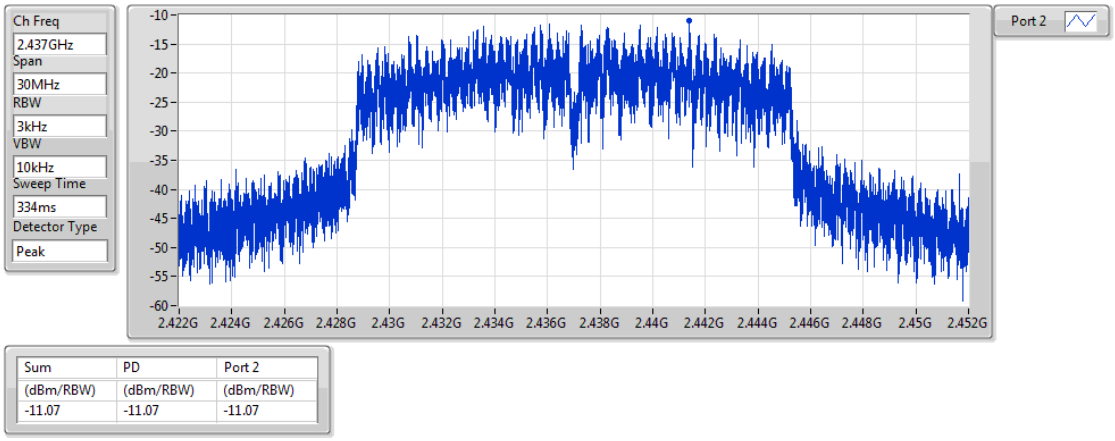
2412MHz



Sum	PD	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-14.32	-14.32	-14.32

802.11g_Nss1,(6Mbps)_1TX(Port2) PSD

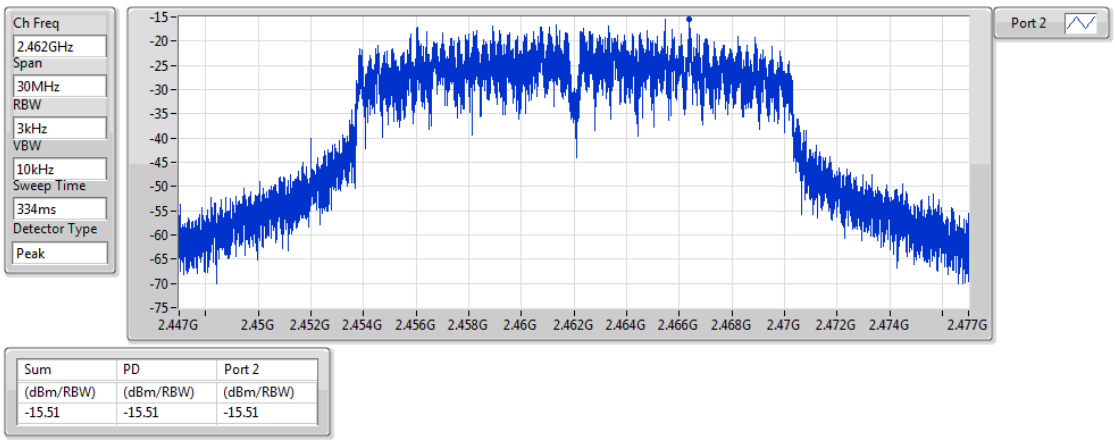
2437MHz



Sum	PD	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-11.07	-11.07	-11.07

802.11g_Nss1,(6Mbps)_1TX(Port2) PSD

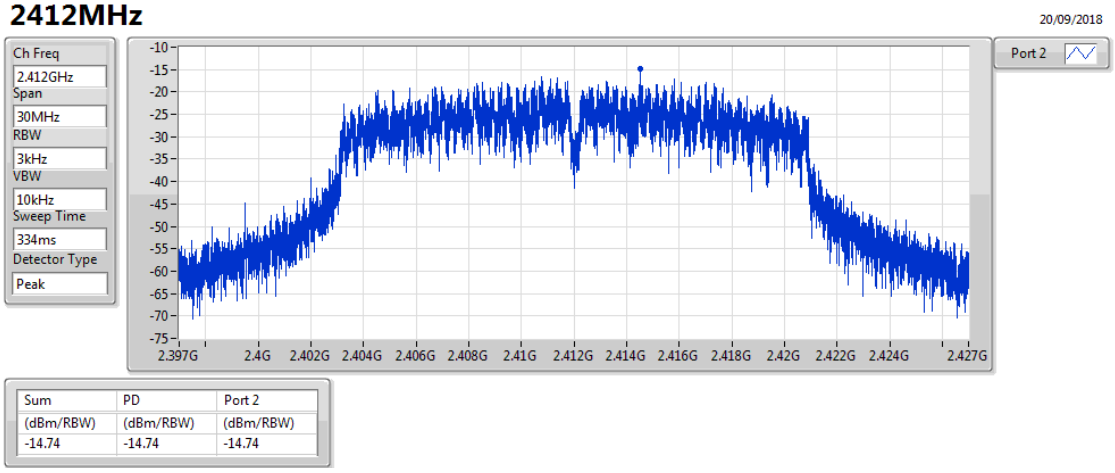
2462MHz



Sum	PD	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-15.51	-15.51	-15.51

802.11n HT20_Nss1,(MCS0)_1TX(Port2) **PSD**

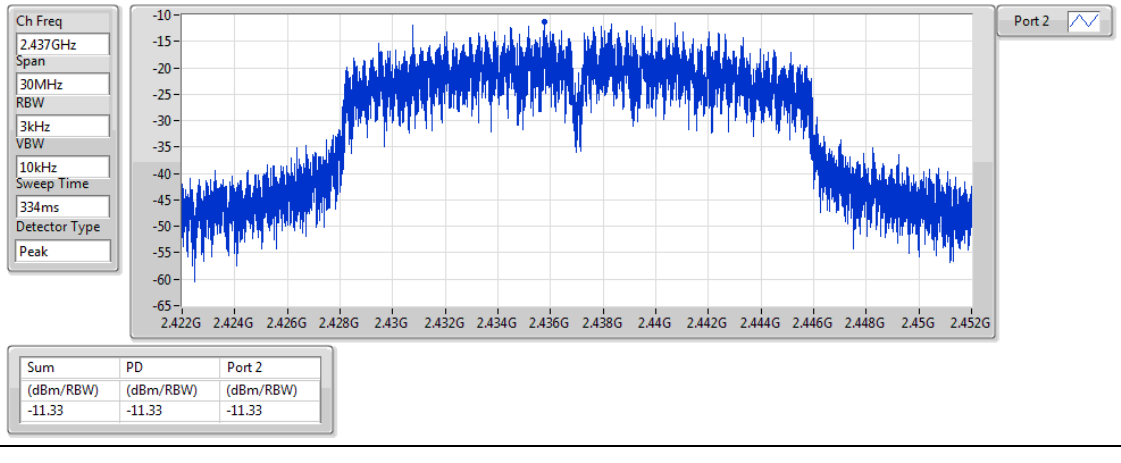
2412MHz



Sum	PD	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-14.74	-14.74	-14.74

802.11n HT20_Nss1,(MCS0)_1TX(Port2) **PSD**

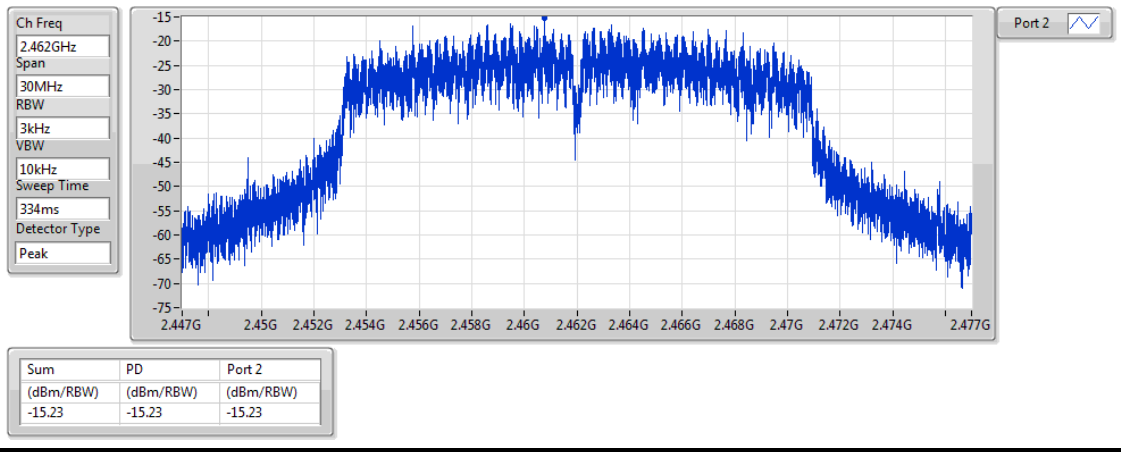
2437MHz



Sum	PD	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-11.33	-11.33	-11.33

802.11n HT20_Nss1,(MCS0)_1TX(Port2) **PSD**

2462MHz



Sum	PD	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-15.23	-15.23	-15.23

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	2.437575G	5.93	-24.07	2.307575G	-53.17	2.39656G	-39.94	2.5043G	-50.86	2.574072G	-51.90	2
802.11g_Nss1,(6Mbps)_1TX	Pass	2.435738G	5.60	-24.40	2.30874G	-58.03	2.39824G	-25.56	2.48638G	-53.32	6.926084G	-51.83	2
802.11n HT20_Nss1,(MCS0)_1TX	Pass	2.438243G	5.67	-24.33	2.30408G	-57.86	2.39944G	-24.75	2.49606G	-52.21	23.308643G	-53.07	2

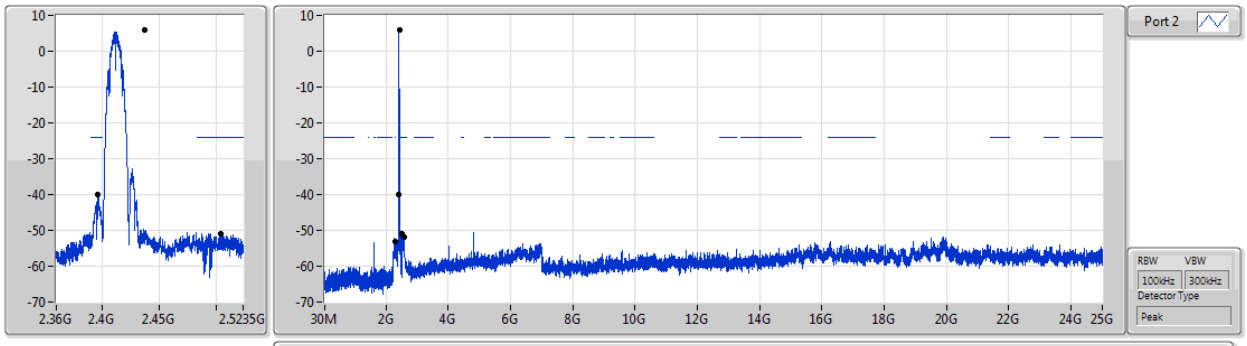
Result

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_TnomVnom	Pass	2.437575G	5.93	-24.07	2.307575G	-53.17	2.39656G	-39.94	2.5043G	-50.86	2.574072G	-51.90	2
2437MHz_TnomVnom	Pass	2.437575G	5.93	-24.07	1.624885G	-51.88	2.39608G	-52.62	2.49966G	-50.82	2.529119G	-52.77	2
2462MHz_TnomVnom	Pass	2.437575G	5.93	-24.07	2.30408G	-50.48	2.39928G	-52.45	2.48606G	-48.85	6.906418G	-51.99	2
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	2.435738G	5.60	-24.40	2.30874G	-58.03	2.39824G	-25.56	2.48638G	-53.32	6.926084G	-51.83	2
2437MHz_TnomVnom	Pass	2.435738G	5.60	-24.40	2.30175G	-51.61	2.39744G	-51.46	2.51166G	-50.11	16.259451G	-52.04	2
2462MHz_TnomVnom	Pass	2.435738G	5.60	-24.40	2.300585G	-57.91	2.39704G	-55.25	2.48382G	-50.92	16.543217G	-53.35	2
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	2.438243G	5.67	-24.33	2.30408G	-57.86	2.39944G	-24.75	2.49606G	-52.21	23.308643G	-53.07	2
2437MHz_TnomVnom	Pass	2.438243G	5.67	-24.33	2.300585G	-54.33	2.39456G	-50.89	2.5031G	-50.66	6.95418G	-51.99	2
2462MHz_TnomVnom	Pass	2.438243G	5.67	-24.33	2.300585G	-57.25	2.39344G	-56.71	2.4839G	-48.38	16.298785G	-52.73	2

802.11b_Nss1,(1Mbps)_1TX(Port2) CSE NdB

2412MHz

20/09/2018

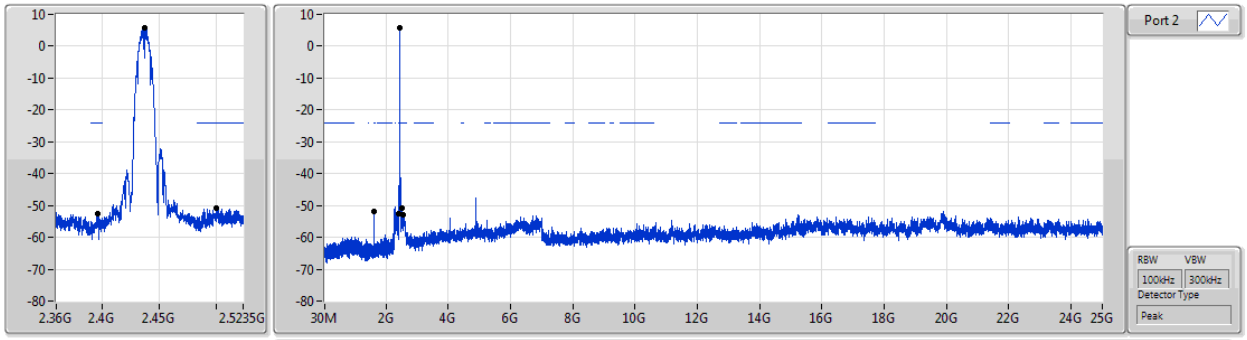


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.437575G	5.93	-24.07	2.307575G	-53.17	2.39656G	-39.94	2.5043G	-50.86	2.574072G	-51.90	2

802.11b_Nss1,(1Mbps)_1TX(Port2) CSE NdB

2437MHz

20/09/2018

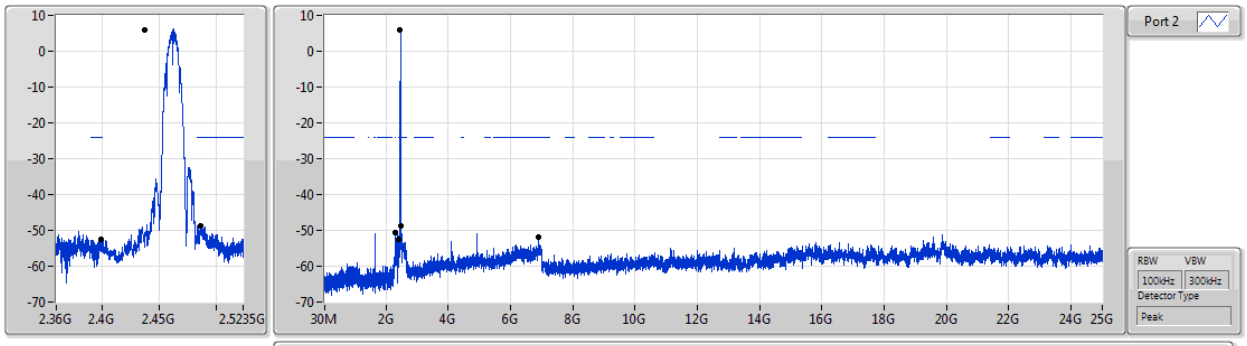


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.437575G	5.93	-24.07	1.624885G	-51.88	2.39608G	-52.62	2.49966G	-50.82	2.529119G	-52.77	2

802.11b_Nss1,(1Mbps)_1TX(Port2) CSE NdB

2462MHz

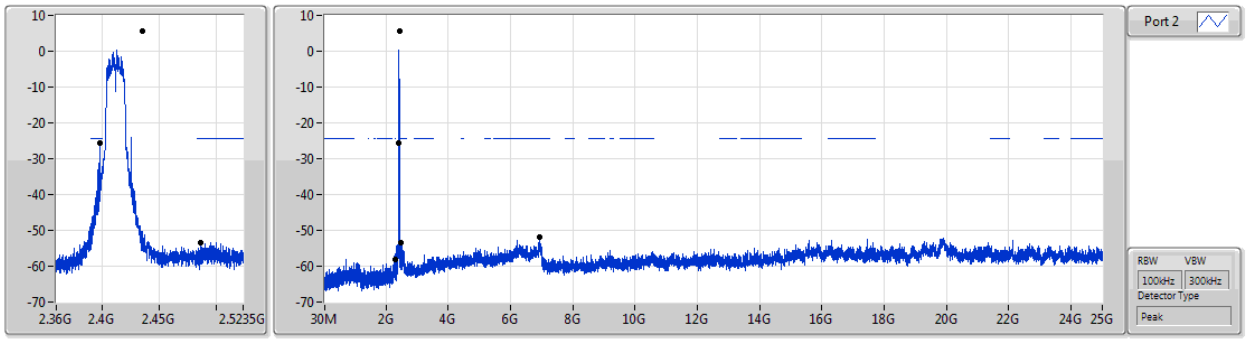
20/09/2018



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.437575G	5.93	-24.07	2.30408G	-50.48	2.39928G	-52.45	2.48606G	-48.85	6.906418G	-51.99	2

802.11g_Nss1,(6Mbps)_1TX(Port2) **CSE NdB**

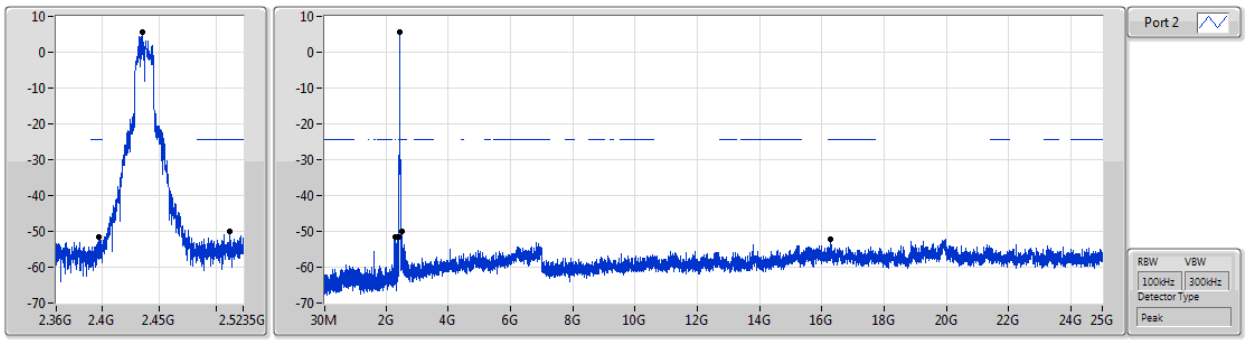
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.435738G	5.60	-24.40	2.30874G	-58.03	2.39824G	-25.56	2.48638G	-53.32	6.926084G	-51.83	2

802.11g_Nss1,(6Mbps)_1TX(Port2) **CSE NdB**

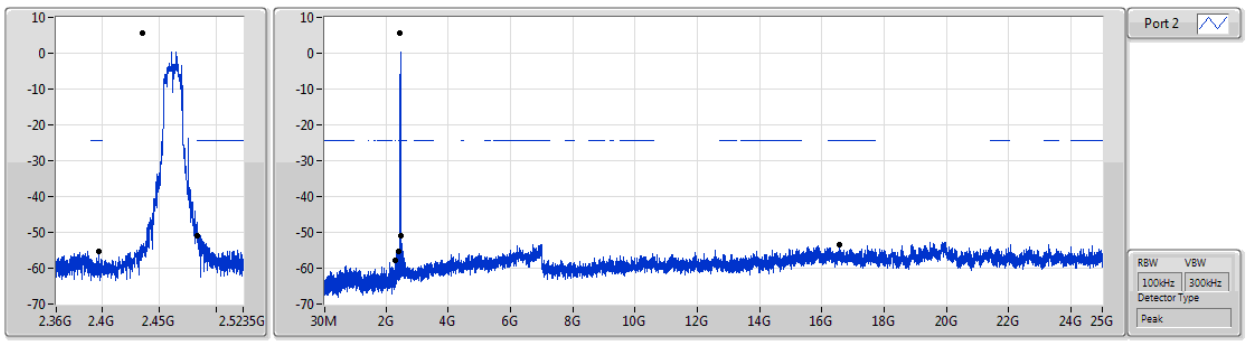
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.435738G	5.60	-24.40	2.30175G	-51.61	2.39744G	-51.46	2.51166G	-50.11	16.259451G	-52.04	2

802.11g_Nss1,(6Mbps)_1TX(Port2) **CSE NdB**

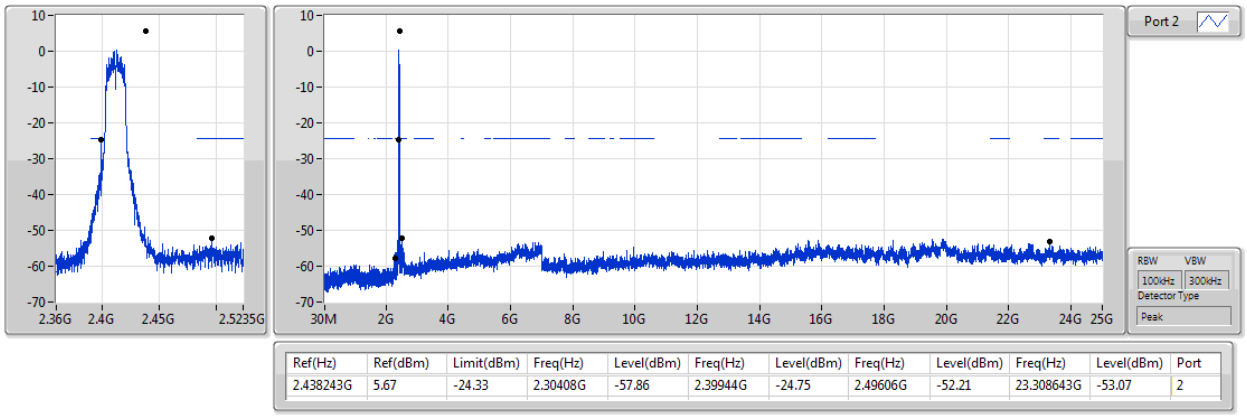
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.435738G	5.60	-24.40	2.300585G	-57.91	2.39704G	-55.25	2.48382G	-50.92	16.543217G	-53.35	2

802.11n HT20_Nss1,(MCS0)_1TX(Port2) CSE NdB

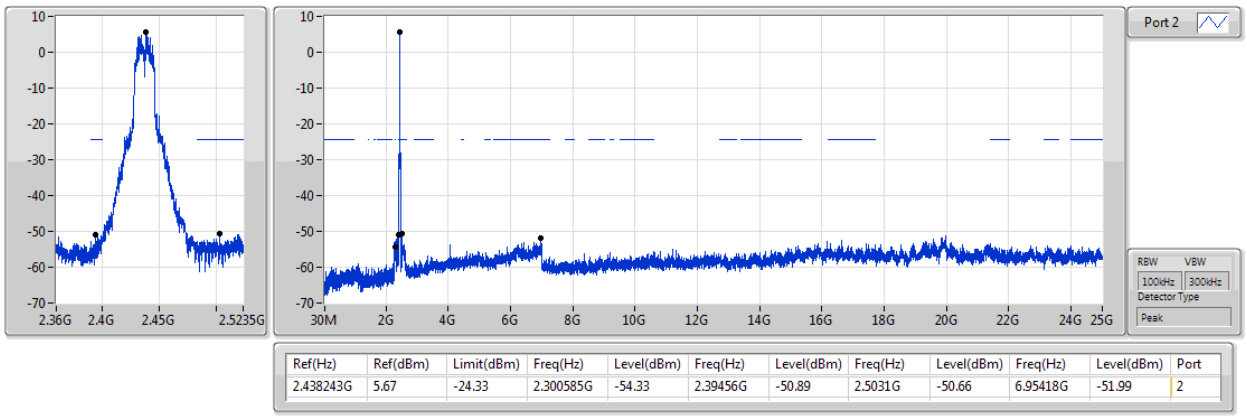
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.438243G	5.67	-24.33	2.30408G	-57.86	2.39944G	-24.75	2.49606G	-52.21	23.308643G	-53.07	2

802.11n HT20_Nss1,(MCS0)_1TX(Port2) CSE NdB

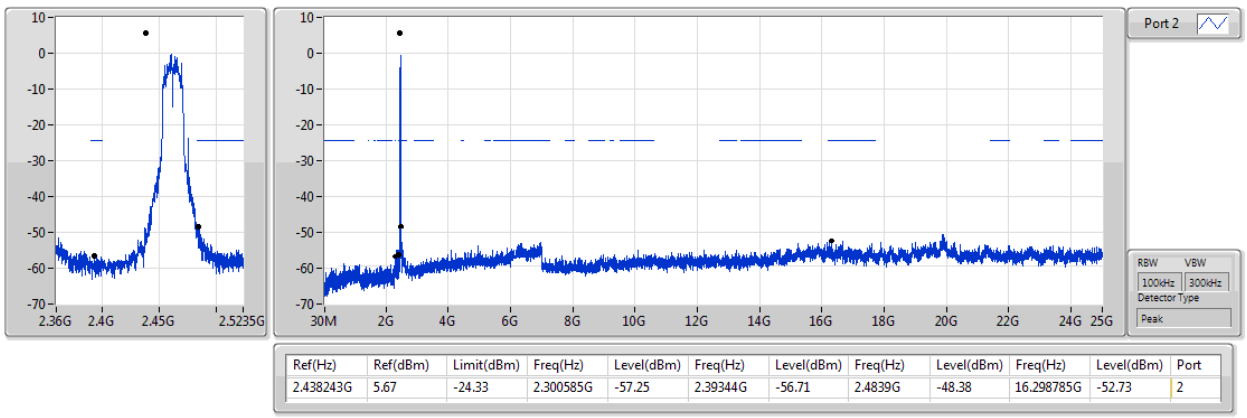
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.438243G	5.67	-24.33	2.300585G	-54.33	2.39456G	-50.89	2.5031G	-50.66	6.95418G	-51.99	2

802.11n HT20_Nss1,(MCS0)_1TX(Port2) CSE NdB

2462MHz

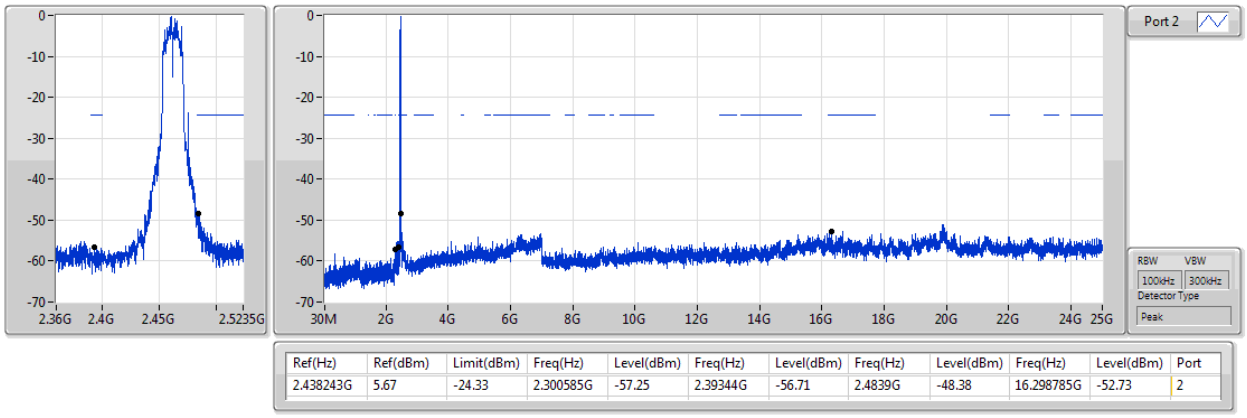


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.438243G	5.67	-24.33	2.300585G	-57.25	2.39344G	-56.71	2.4839G	-48.38	16.298785G	-52.73	2

802.11n HT20_Nss1,(MCS0)_1TX(Port2) CSE NdB

2462MHz

20/09/2018



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.438243G	5.67	-24.33	2.300585G	-57.25	2.39344G	-56.71	2.4839G	-48.38	16.298785G	-52.73	2

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 HT20_Nss1,(MCS0)_1TX(Port2)	Pass	PK	953.44M	36.07	46.00	-9.93	-4.71	3	Horizontal	146	1.00	-

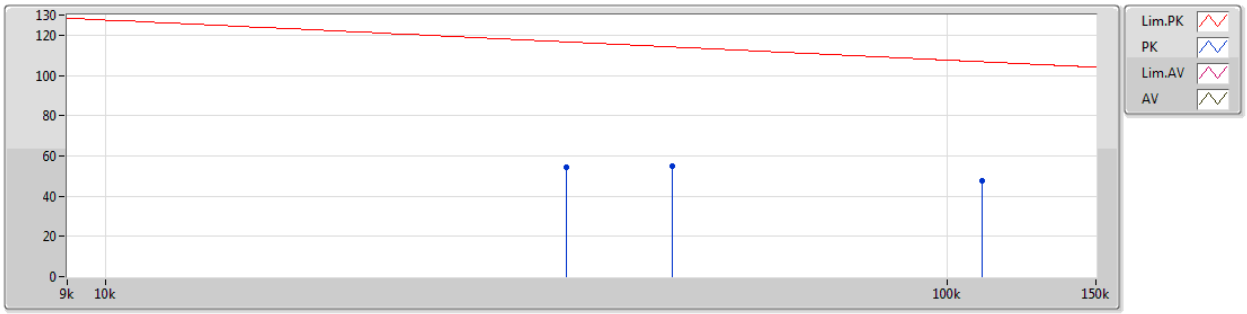
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
802.11n HT20_Nss1,(MCS0)_1TX(Port2)	-	-	-	-	-	-	-	-	-	-	-	-
2437MHz	Pass	PK	35.226k	54.50	116.65	-62.15	21.82	3	Horizontal	0	1.00	-
2437MHz	Pass	PK	47.07k	54.64	114.13	-59.49	21.29	3	Horizontal	0	1.00	-
2437MHz	Pass	PK	109.956k	47.40	106.77	-59.37	20.77	3	Horizontal	0	1.00	-
2437MHz	Pass	PK	2.001M	41.55	69.50	-27.95	20.91	3	Horizontal	360	1.00	-
2437MHz	Pass	PK	3.314M	41.59	69.50	-27.91	20.83	3	Horizontal	360	1.00	-
2437MHz	Pass	PK	11.732M	42.63	69.50	-26.87	22.30	3	Horizontal	360	1.00	-
2437MHz	Pass	PK	53.28M	21.17	40.00	-18.83	-24.56	3	Vertical	360	1.00	-
2437MHz	Pass	PK	266.68M	25.76	46.00	-20.24	-16.12	3	Vertical	360	1.00	-
2437MHz	Pass	PK	288.02M	29.63	46.00	-16.37	-16.94	3	Vertical	360	1.00	-
2437MHz	Pass	PK	301.6M	23.01	46.00	-22.99	-16.63	3	Vertical	360	1.00	-
2437MHz	Pass	PK	569.32M	30.94	46.00	-15.06	-10.62	3	Vertical	360	1.00	-
2437MHz	Pass	PK	960M	35.18	46.00	-10.82	-4.52	3	Vertical	360	1.00	-
2437MHz	Pass	PK	57.16M	27.40	40.00	-12.60	-25.37	3	Horizontal	146	1.00	-
2437MHz	Pass	PK	134.76M	25.79	43.50	-17.71	-19.21	3	Horizontal	146	1.00	-
2437MHz	Pass	PK	245.34M	29.15	46.00	-16.85	-17.84	3	Horizontal	146	1.00	-
2437MHz	Pass	PK	305.48M	34.82	46.00	-11.18	-16.58	3	Horizontal	145	1.00	-
2437MHz	Pass	PK	433.52M	29.73	46.00	-16.27	-13.09	3	Horizontal	145	1.00	-
2437MHz	Pass	PK	953.44M	36.07	46.00	-9.93	-4.71	3	Horizontal	146	1.00	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

13/10/2018

2437MHz_Battery

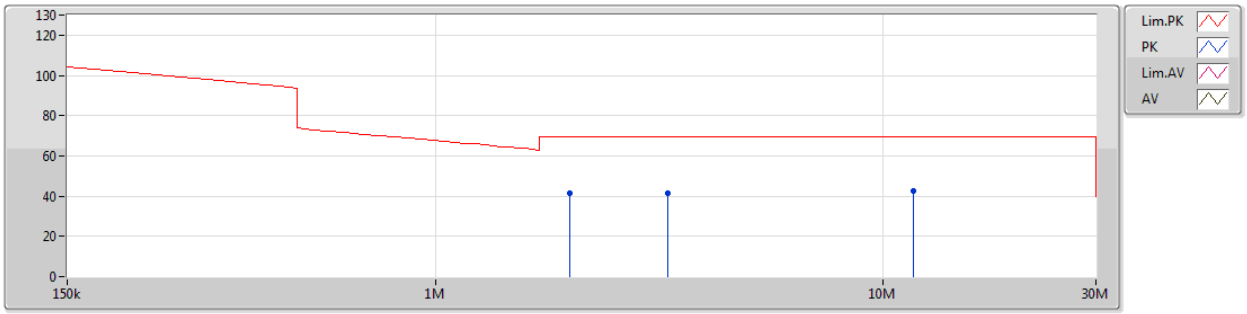


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	35.226k	54.50	116.65	-62.15	21.82	3	Horizontal	0	1.00	-
PK	47.07k	54.64	114.13	-59.49	21.29	3	Horizontal	0	1.00	-
PK	109.956k	47.40	106.77	-59.37	20.77	3	Horizontal	0	1.00	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

2437MHz_Battery

13/10/2018

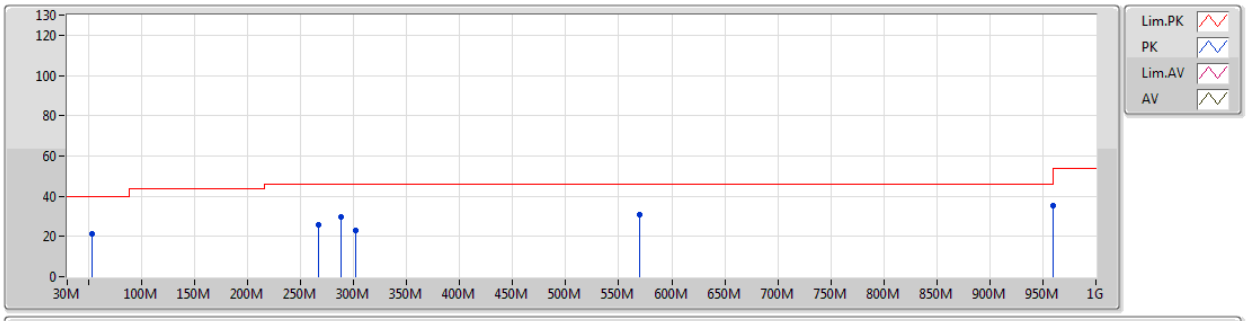


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.001M	41.55	69.50	-27.95	20.91	3	Horizontal	360	1.00	-
PK	3.314M	41.59	69.50	-27.91	20.83	3	Horizontal	360	1.00	-
PK	11.732M	42.63	69.50	-26.87	22.30	3	Horizontal	360	1.00	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

21/09/2018

2437MHz_Battery

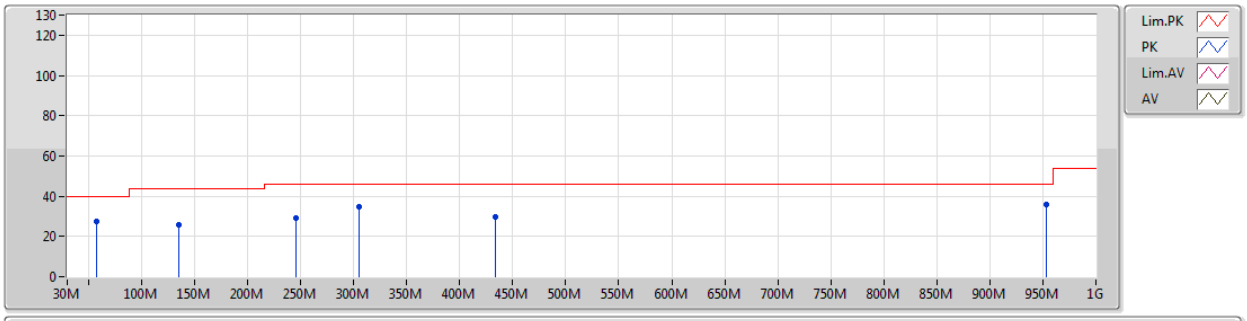


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	53.28M	21.17	40.00	-18.83	-24.56	3	Vertical	360	1.00	-
PK	266.68M	25.76	46.00	-20.24	-16.12	3	Vertical	360	1.00	-
PK	288.02M	29.63	46.00	-16.37	-16.94	3	Vertical	360	1.00	-
PK	301.6M	23.01	46.00	-22.99	-16.63	3	Vertical	360	1.00	-
PK	569.32M	30.94	46.00	-15.06	-10.62	3	Vertical	360	1.00	-
PK	960M	35.18	46.00	-10.82	-4.52	3	Vertical	360	1.00	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

21/09/2018

2437MHz_Battery



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	57.16M	27.40	40.00	-12.60	-25.37	3	Horizontal	146	1.00	-
PK	134.76M	25.79	43.50	-17.71	-19.21	3	Horizontal	146	1.00	-
PK	245.34M	29.15	46.00	-16.85	-17.84	3	Horizontal	146	1.00	-
PK	305.48M	34.82	46.00	-11.18	-16.58	3	Horizontal	145	1.00	-
PK	433.52M	29.73	46.00	-16.27	-13.09	3	Horizontal	145	1.00	-
PK	953.44M	36.07	46.00	-9.93	-4.71	3	Horizontal	146	1.00	-

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	-	-	-	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)_Nss1_1TX(Port2)	Pass	PK	771.08M	38.12	46.00	-7.88	-8.18	3	Horizontal	0	1.00	-

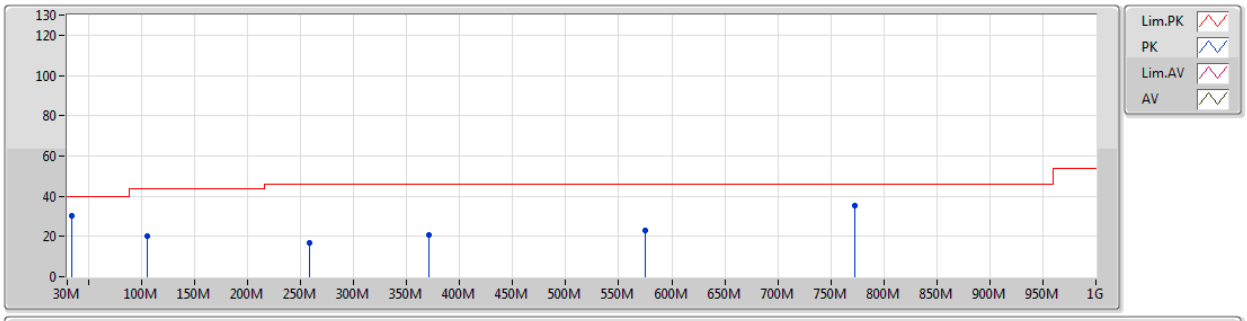
Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
BT-LE(1Mbps)_Nss1_1TX(Port2)	-	-	-	-	-	-	-	-	-	-	-	-
2440MHz	Pass	PK	33.88M	30.33	40.00	-9.67	-15.32	3	Vertical	360	1.00	-
2440MHz	Pass	PK	105.66M	20.44	43.50	-23.06	-20.46	3	Vertical	360	1.00	-
2440MHz	Pass	PK	258.92M	16.57	46.00	-29.43	-15.81	3	Vertical	360	1.00	-
2440MHz	Pass	PK	371.44M	20.88	46.00	-25.12	-14.94	3	Vertical	360	1.00	-
2440MHz	Pass	PK	575.14M	23.02	46.00	-22.98	-10.84	3	Vertical	360	1.00	-
2440MHz	Pass	PK	773.02M	35.29	46.00	-10.71	-8.16	3	Vertical	360	1.00	-
2440MHz	Pass	PK	115.36M	27.63	43.50	-15.87	-19.61	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	245.34M	24.08	46.00	-21.92	-17.84	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	291.9M	26.16	46.00	-19.84	-16.85	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	493.66M	24.09	46.00	-21.91	-12.19	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	559.62M	22.62	46.00	-23.38	-10.31	3	Horizontal	0	1.00	-
2440MHz	Pass	PK	771.08M	38.12	46.00	-7.88	-8.18	3	Horizontal	0	1.00	-

BT-LE(1Mbps)_Nss1_1TX(Port2)

21/09/2018

2440MHz_Battery

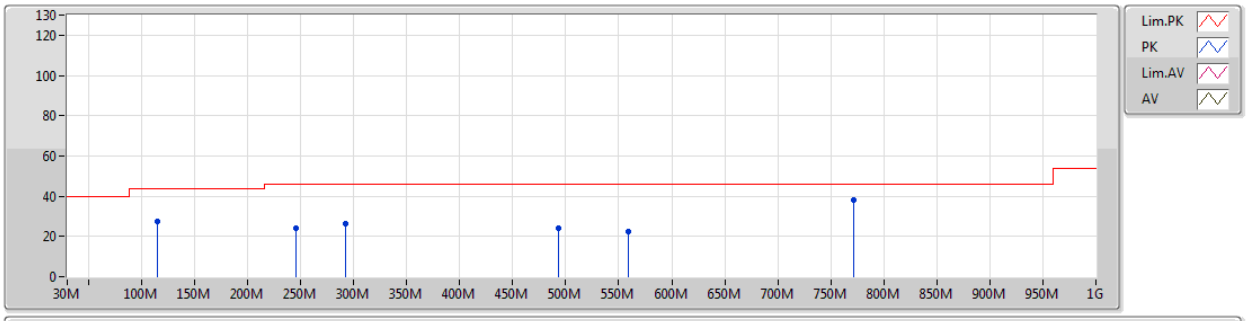


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	33.88M	30.33	40.00	-9.67	-15.32	3	Vertical	360	1.00	-
PK	105.66M	20.44	43.50	-23.06	-20.46	3	Vertical	360	1.00	-
PK	258.92M	16.57	46.00	-29.43	-15.81	3	Vertical	360	1.00	-
PK	371.44M	20.88	46.00	-25.12	-14.94	3	Vertical	360	1.00	-
PK	575.14M	23.02	46.00	-22.98	-10.84	3	Vertical	360	1.00	-
PK	773.02M	35.29	46.00	-10.71	-8.16	3	Vertical	360	1.00	-

BT-LE(1Mbps)_Nss1_1TX(Port2)

2440MHz_Battery

21/09/2018



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	115.36M	27.63	43.50	-15.87	-19.61	3	Horizontal	0	1.00	-
PK	245.34M	24.08	46.00	-21.92	-17.84	3	Horizontal	0	1.00	-
PK	291.9M	26.16	46.00	-19.84	-16.85	3	Horizontal	0	1.00	-
PK	493.66M	24.09	46.00	-21.91	-12.19	3	Horizontal	0	1.00	-
PK	559.62M	22.62	46.00	-23.38	-10.31	3	Horizontal	0	1.00	-
PK	771.08M	38.12	46.00	-7.88	-8.18	3	Horizontal	0	1.00	-

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	-	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX(Port2)	Pass	AV	2.4835G	49.98	54.00	-4.02	31.11	3	Vertical	174	1.10	-
802.11g_Nss1,(6Mbps)_1TX(Port2)	Pass	AV	2.4836G	49.52	54.00	-4.48	31.11	3	Vertical	140	2.83	-
802.11n HT20_Nss1,(MCS0)_1TX(Port2)	Pass	AV	2.4836G	49.95	54.00	-4.05	31.11	3	Vertical	141	2.82	-

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
802.11b_Nss1,(1Mbps)_1TX(Port2)	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	AV	2.386G	47.13	54.00	-6.87	30.76	3	Vertical	170	1.05	-
2412MHz	Pass	AV	2.4112G	100.48	Inf	-Inf	30.85	3	Vertical	170	1.05	-
2412MHz	Pass	PK	2.386G	56.07	74.00	-17.93	30.76	3	Vertical	170	1.05	-
2412MHz	Pass	PK	2.411G	102.26	Inf	-Inf	30.85	3	Vertical	170	1.05	-
2412MHz	Pass	AV	2.3848G	46.17	54.00	-7.83	30.76	3	Horizontal	42	2.48	-
2412MHz	Pass	AV	2.4112G	96.98	Inf	-Inf	30.85	3	Horizontal	42	2.48	-
2412MHz	Pass	PK	2.3834G	56.59	74.00	-17.41	30.75	3	Horizontal	42	2.48	-
2412MHz	Pass	PK	2.413G	98.82	Inf	-Inf	30.86	3	Horizontal	42	2.48	-
2412MHz	Pass	AV	4.82405G	43.31	54.00	-10.69	2.13	3	Vertical	297	1.47	-
2412MHz	Pass	PK	4.82411G	47.91	74.00	-26.09	2.13	3	Vertical	297	1.47	-
2412MHz	Pass	AV	4.82404G	47.95	54.00	-6.05	2.13	3	Horizontal	330	2.14	-
2412MHz	Pass	PK	4.82402G	51.37	74.00	-22.63	2.13	3	Horizontal	330	2.14	-
2437MHz	Pass	AV	2.3802G	45.73	54.00	-8.27	30.74	3	Vertical	22	1.16	-
2437MHz	Pass	AV	2.4378G	94.87	Inf	-Inf	30.95	3	Vertical	22	1.16	-
2437MHz	Pass	AV	2.4998G	46.81	54.00	-7.19	31.17	3	Vertical	22	1.16	-
2437MHz	Pass	PK	2.3818G	56.00	74.00	-18.00	30.75	3	Vertical	22	1.16	-
2437MHz	Pass	PK	2.4378G	96.75	Inf	-Inf	30.95	3	Vertical	22	1.16	-
2437MHz	Pass	PK	2.495G	56.38	74.00	-17.62	31.16	3	Vertical	22	1.16	-
2437MHz	Pass	AV	2.3786G	45.70	54.00	-8.30	30.74	3	Horizontal	59	2.95	-
2437MHz	Pass	AV	2.4362G	97.13	Inf	-Inf	30.94	3	Horizontal	59	2.95	-
2437MHz	Pass	AV	2.4986G	46.41	54.00	-7.59	31.17	3	Horizontal	59	2.95	-
2437MHz	Pass	PK	2.3686G	55.63	74.00	-18.37	30.70	3	Horizontal	59	2.95	-
2437MHz	Pass	PK	2.4362G	98.96	Inf	-Inf	30.94	3	Horizontal	59	2.95	-
2437MHz	Pass	PK	2.4854G	55.67	74.00	-18.33	31.12	3	Horizontal	59	2.95	-
2437MHz	Pass	AV	4.87406G	41.91	54.00	-12.09	2.25	3	Vertical	299	1.37	-
2437MHz	Pass	PK	4.87406G	48.09	74.00	-25.91	2.25	3	Vertical	299	1.37	-
2437MHz	Pass	AV	4.87404G	46.25	54.00	-7.75	2.25	3	Horizontal	45	1.25	-
2437MHz	Pass	PK	4.87404G	49.92	74.00	-24.08	2.25	3	Horizontal	45	1.25	-
2462MHz	Pass	AV	2.4612G	101.89	Inf	-Inf	31.03	3	Vertical	174	1.10	-
2462MHz	Pass	AV	2.4835G	49.98	54.00	-4.02	31.11	3	Vertical	174	1.10	-
2462MHz	Pass	PK	2.4612G	103.72	Inf	-Inf	31.03	3	Vertical	174	1.10	-
2462MHz	Pass	PK	2.4866G	58.76	74.00	-15.24	31.12	3	Vertical	174	1.10	-
2462MHz	Pass	AV	2.4612G	93.34	Inf	-Inf	31.03	3	Horizontal	327	2.00	-
2462MHz	Pass	AV	2.4835G	45.96	54.00	-8.04	31.11	3	Horizontal	327	2.00	-
2462MHz	Pass	PK	2.4612G	96.56	Inf	-Inf	31.03	3	Horizontal	327	2.00	-
2462MHz	Pass	PK	2.4954G	57.15	74.00	-16.85	31.16	3	Horizontal	327	2.00	-
2462MHz	Pass	AV	4.924G	40.68	54.00	-13.32	2.38	3	Vertical	336	1.42	-
2462MHz	Pass	PK	4.92394G	46.14	74.00	-27.86	2.38	3	Vertical	336	1.42	-
2462MHz	Pass	AV	4.92406G	46.64	54.00	-7.36	2.38	3	Horizontal	333	2.56	-
2462MHz	Pass	PK	4.92406G	50.30	74.00	-23.70	2.38	3	Horizontal	333	2.56	-
802.11g_Nss1,(6Mbps)_1TX(Port2)	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	AV	2.3882G	48.25	54.00	-5.75	30.77	3	Vertical	22	1.04	-
2412MHz	Pass	AV	2.4128G	89.95	Inf	-Inf	30.86	3	Vertical	22	1.04	-
2412MHz	Pass	PK	2.387G	55.74	74.00	-18.26	30.76	3	Vertical	22	1.04	-
2412MHz	Pass	PK	2.4134G	95.68	Inf	-Inf	30.86	3	Vertical	22	1.04	-
2412MHz	Pass	AV	2.3894G	49.07	54.00	-4.93	30.77	3	Horizontal	124	1.28	-
2412MHz	Pass	AV	2.4138G	92.34	Inf	-Inf	30.86	3	Horizontal	124	1.28	-

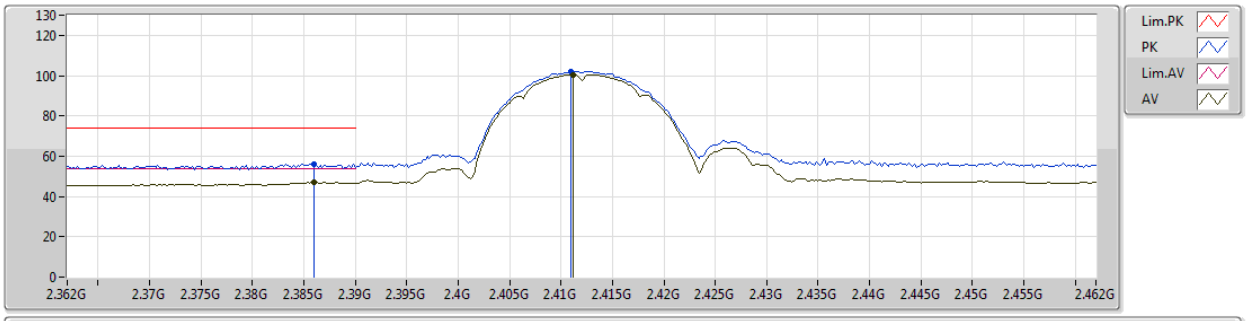
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2412MHz	Pass	PK	2.3896G	56.45	74.00	-17.55	30.77	3	Horizontal	124	1.28	-
2412MHz	Pass	PK	2.412G	98.89	Inf	-Inf	30.85	3	Horizontal	124	1.28	-
2412MHz	Pass	AV	4.8257G	35.07	54.00	-18.93	2.14	3	Vertical	322	2.43	-
2412MHz	Pass	PK	4.82608G	44.25	74.00	-29.75	2.14	3	Vertical	322	2.43	-
2412MHz	Pass	AV	4.8284G	34.26	54.00	-19.74	2.15	3	Horizontal	3	2.50	-
2412MHz	Pass	PK	4.82456G	43.23	74.00	-30.77	2.13	3	Horizontal	3	2.50	-
2437MHz	Pass	AV	2.3806G	47.96	54.00	-6.04	30.75	3	Vertical	135	2.93	-
2437MHz	Pass	AV	2.435G	97.04	Inf	-Inf	30.94	3	Vertical	135	2.93	-
2437MHz	Pass	AV	2.4894G	48.98	54.00	-5.02	31.13	3	Vertical	135	2.93	-
2437MHz	Pass	PK	2.3462G	56.58	74.00	-17.42	30.62	3	Vertical	135	2.93	-
2437MHz	Pass	PK	2.437G	102.85	Inf	-Inf	30.94	3	Vertical	135	2.93	-
2437MHz	Pass	PK	2.4914G	56.41	74.00	-17.59	31.14	3	Vertical	135	2.93	-
2437MHz	Pass	AV	2.3838G	48.06	54.00	-5.94	30.75	3	Horizontal	1	2.94	-
2437MHz	Pass	AV	2.4342G	97.55	Inf	-Inf	30.94	3	Horizontal	1	2.94	-
2437MHz	Pass	AV	2.4906G	48.99	54.00	-5.01	31.13	3	Horizontal	1	2.94	-
2437MHz	Pass	PK	2.3822G	56.11	74.00	-17.89	30.75	3	Horizontal	1	2.94	-
2437MHz	Pass	PK	2.4386G	102.85	Inf	-Inf	30.95	3	Horizontal	1	2.94	-
2437MHz	Pass	PK	2.4914G	56.38	74.00	-17.62	31.14	3	Horizontal	1	2.94	-
2437MHz	Pass	AV	4.87522G	34.40	54.00	-19.60	2.26	3	Vertical	326	2.37	-
2437MHz	Pass	PK	4.8725G	43.17	74.00	-30.83	2.25	3	Vertical	326	2.37	-
2437MHz	Pass	AV	4.87784G	34.17	54.00	-19.83	2.26	3	Horizontal	155	1.61	-
2437MHz	Pass	PK	4.87388G	43.12	74.00	-30.88	2.25	3	Horizontal	155	1.61	-
2462MHz	Pass	AV	2.4614G	93.32	Inf	-Inf	31.03	3	Vertical	140	2.83	-
2462MHz	Pass	AV	2.4836G	49.52	54.00	-4.48	31.11	3	Vertical	140	2.83	-
2462MHz	Pass	PK	2.4618G	99.11	Inf	-Inf	31.03	3	Vertical	140	2.83	-
2462MHz	Pass	PK	2.484G	58.69	74.00	-15.31	31.12	3	Vertical	140	2.83	-
2462MHz	Pass	AV	2.4628G	91.10	Inf	-Inf	31.04	3	Horizontal	0	2.02	-
2462MHz	Pass	AV	2.4842G	48.90	54.00	-5.10	31.12	3	Horizontal	0	2.02	-
2462MHz	Pass	PK	2.462G	97.26	Inf	-Inf	31.03	3	Horizontal	0	2.02	-
2462MHz	Pass	PK	2.4838G	56.84	74.00	-17.16	31.11	3	Horizontal	0	2.02	-
2462MHz	Pass	AV	4.92702G	34.64	54.00	-19.36	2.39	3	Vertical	11	1.12	-
2462MHz	Pass	PK	4.92134G	43.09	74.00	-30.91	2.36	3	Vertical	11	1.12	-
2462MHz	Pass	AV	4.92224G	34.81	54.00	-19.19	2.38	3	Horizontal	181	1.61	-
2462MHz	Pass	PK	4.9208G	44.08	74.00	-29.92	2.36	3	Horizontal	181	1.61	-
802.11n HT20_Nss1,(MCS0)_1TX(Port2)	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	AV	2.389G	48.46	54.00	-5.54	30.77	3	Vertical	128	2.06	-
2412MHz	Pass	AV	2.4112G	91.37	Inf	-Inf	30.85	3	Vertical	128	2.06	-
2412MHz	Pass	PK	2.3892G	57.74	74.00	-16.26	30.77	3	Vertical	128	2.06	-
2412MHz	Pass	PK	2.4132G	97.02	Inf	-Inf	30.86	3	Vertical	128	2.06	-
2412MHz	Pass	AV	2.39G	48.89	54.00	-5.11	30.77	3	Horizontal	2	2.99	-
2412MHz	Pass	AV	2.4108G	92.64	Inf	-Inf	30.85	3	Horizontal	2	2.99	-
2412MHz	Pass	PK	2.389G	59.44	74.00	-14.56	30.77	3	Horizontal	2	2.99	-
2412MHz	Pass	PK	2.413G	98.68	Inf	-Inf	30.86	3	Horizontal	2	2.99	-
2412MHz	Pass	AV	4.8251G	34.66	54.00	-19.34	2.14	3	Vertical	293	1.19	-
2412MHz	Pass	PK	4.8242G	44.45	74.00	-29.55	2.13	3	Vertical	293	1.19	-
2412MHz	Pass	AV	4.82568G	36.47	54.00	-17.53	2.14	3	Horizontal	329	2.64	-
2412MHz	Pass	PK	4.81932G	45.57	74.00	-28.43	2.12	3	Horizontal	329	2.64	-
2437MHz	Pass	AV	2.3786G	47.71	54.00	-6.29	30.74	3	Vertical	138	2.92	-
2437MHz	Pass	AV	2.4362G	97.77	Inf	-Inf	30.94	3	Vertical	138	2.92	-

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2437MHz	Pass	AV	2.4954G	48.96	54.00	-5.04	31.16	3	Vertical	138	2.92	-
2437MHz	Pass	PK	2.3798G	55.67	74.00	-18.33	30.74	3	Vertical	138	2.92	-
2437MHz	Pass	PK	2.4358G	103.19	Inf	-Inf	30.94	3	Vertical	138	2.92	-
2437MHz	Pass	PK	2.4962G	56.37	74.00	-17.63	31.16	3	Vertical	138	2.92	-
2437MHz	Pass	AV	2.3538G	48.14	54.00	-5.86	30.65	3	Horizontal	90	1.44	-
2437MHz	Pass	AV	2.4362G	97.30	Inf	-Inf	30.94	3	Horizontal	90	1.44	-
2437MHz	Pass	AV	2.4894G	48.84	54.00	-5.16	31.13	3	Horizontal	90	1.44	-
2437MHz	Pass	PK	2.345G	56.11	74.00	-17.89	30.62	3	Horizontal	90	1.44	-
2437MHz	Pass	PK	2.4358G	102.81	Inf	-Inf	30.94	3	Horizontal	90	1.44	-
2437MHz	Pass	PK	2.4934G	57.14	74.00	-16.86	31.14	3	Horizontal	90	1.44	-
2437MHz	Pass	AV	4.87786G	34.45	54.00	-19.55	2.26	3	Vertical	355	1.16	-
2437MHz	Pass	PK	4.87044G	42.97	74.00	-31.03	2.24	3	Vertical	355	1.16	-
2437MHz	Pass	AV	4.87676G	34.55	54.00	-19.45	2.26	3	Horizontal	237	2.40	-
2437MHz	Pass	PK	4.87326G	42.70	74.00	-31.30	2.25	3	Horizontal	237	2.40	-
2462MHz	Pass	AV	2.4612G	93.59	Inf	-Inf	31.03	3	Vertical	141	2.82	-
2462MHz	Pass	AV	2.4836G	49.95	54.00	-4.05	31.11	3	Vertical	141	2.82	-
2462MHz	Pass	PK	2.4604G	99.02	Inf	-Inf	31.03	3	Vertical	141	2.82	-
2462MHz	Pass	PK	2.4836G	58.67	74.00	-15.33	31.11	3	Vertical	141	2.82	-
2462MHz	Pass	AV	2.461G	91.30	Inf	-Inf	31.03	3	Horizontal	5	2.02	-
2462MHz	Pass	AV	2.4836G	49.78	54.00	-4.22	31.11	3	Horizontal	5	2.02	-
2462MHz	Pass	PK	2.4632G	96.68	Inf	-Inf	31.04	3	Horizontal	5	2.02	-
2462MHz	Pass	PK	2.4836G	57.47	74.00	-16.53	31.11	3	Horizontal	5	2.02	-
2462MHz	Pass	AV	4.93516G	35.10	54.00	-18.90	2.41	3	Vertical	7	1.50	-
2462MHz	Pass	PK	4.93348G	44.64	74.00	-29.36	2.40	3	Vertical	7	1.50	-
2462MHz	Pass	AV	4.93432G	35.01	54.00	-18.99	2.40	3	Horizontal	332	1.50	-
2462MHz	Pass	PK	4.93066G	43.63	74.00	-30.37	2.40	3	Horizontal	332	1.50	-

802.11b_Nss1,(1Mbps)_1TX(Port2)

2412MHz_TX

10/09/2018

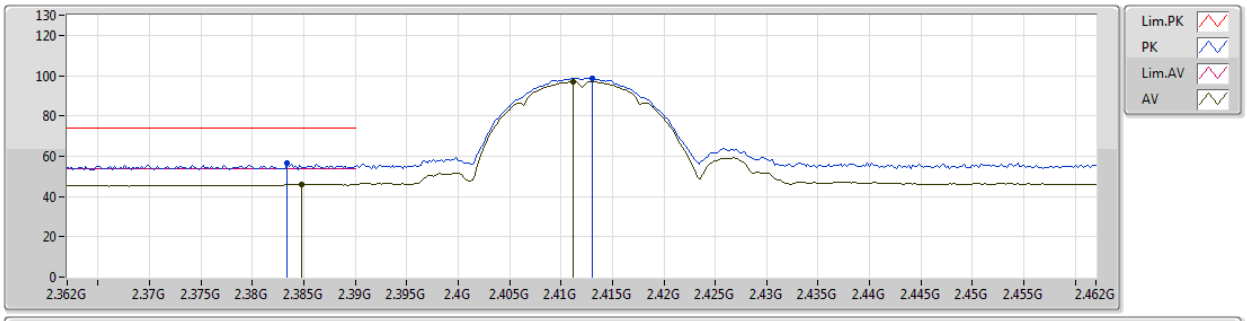


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.386G	47.13	54.00	-6.87	30.76	3	Vertical	170	1.05	-
AV	2.4112G	100.48	Inf	-Inf	30.85	3	Vertical	170	1.05	-
PK	2.386G	56.07	74.00	-17.93	30.76	3	Vertical	170	1.05	-
PK	2.411G	102.26	Inf	-Inf	30.85	3	Vertical	170	1.05	-

802.11b_Nss1,(1Mbps)_1TX(Port2)

2412MHz_TX

10/09/2018

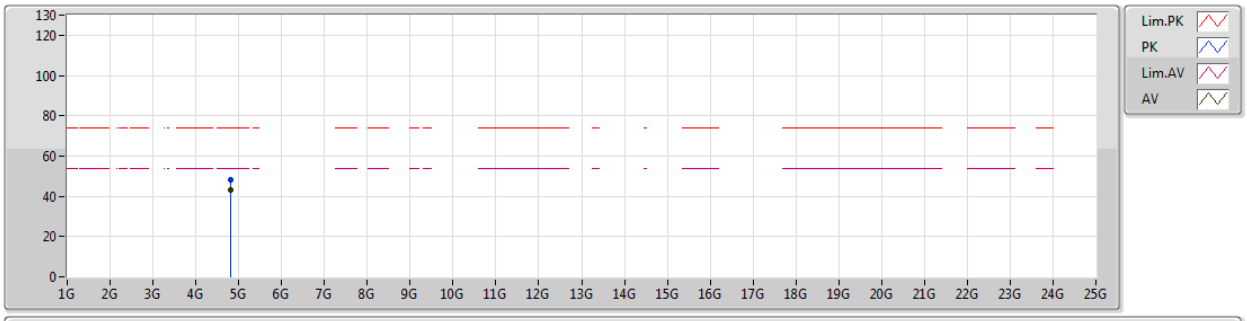


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.3848G	46.17	54.00	-7.83	30.76	3	Horizontal	42	2.48	-
AV	2.4112G	96.98	Inf	-Inf	30.85	3	Horizontal	42	2.48	-
PK	2.3834G	56.59	74.00	-17.41	30.75	3	Horizontal	42	2.48	-
PK	2.413G	98.82	Inf	-Inf	30.86	3	Horizontal	42	2.48	-

802.11b_Nss1,(1Mbps)_1TX(Port2)

2412MHz_TX

10/09/2018

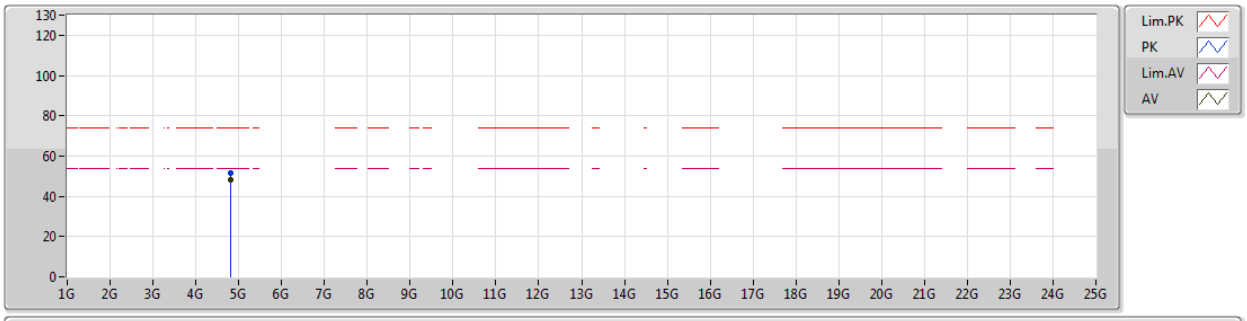


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.82405G	43.31	54.00	-10.69	2.13	3	Vertical	297	1.47	-
PK	4.82411G	47.91	74.00	-26.09	2.13	3	Vertical	297	1.47	-

802.11b_Nss1,(1Mbps)_1TX(Port2)

2412MHz_TX

10/09/2018

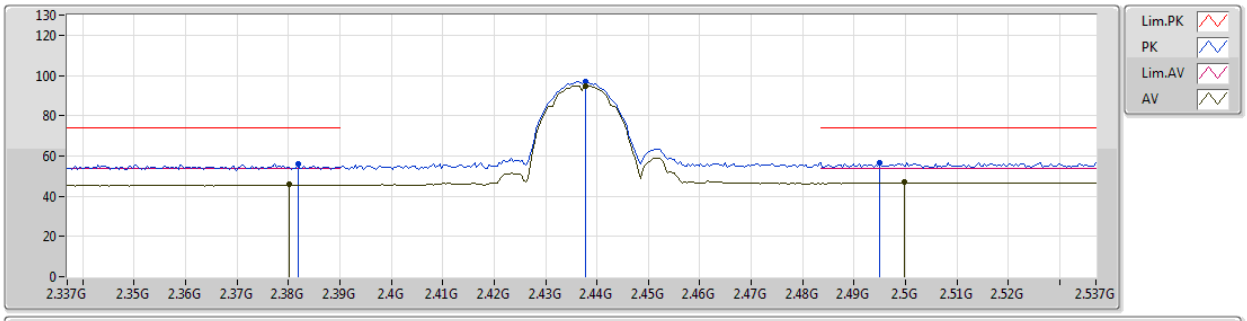


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.82404G	47.95	54.00	-6.05	2.13	3	Horizontal	330	2.14	-
PK	4.82402G	51.37	74.00	-22.63	2.13	3	Horizontal	330	2.14	-

802.11b_Nss1,(1Mbps)_1TX(Port2)

2437MHz_TX

10/09/2018

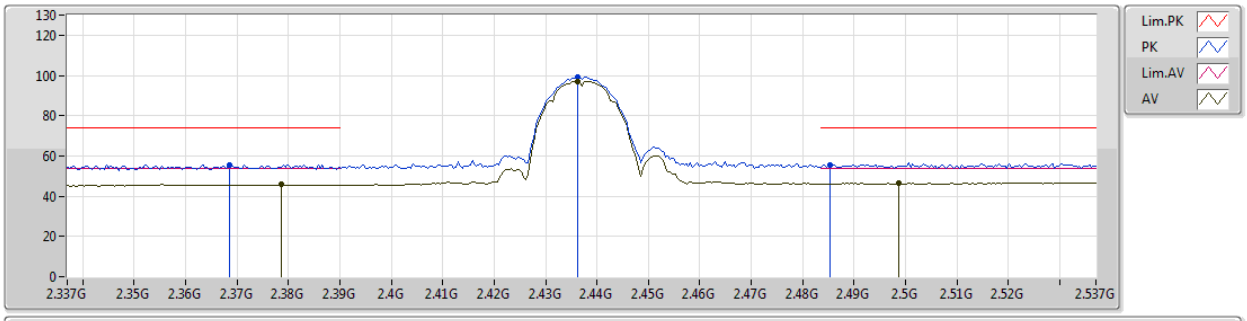


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.3802G	45.73	54.00	-8.27	30.74	3	Vertical	22	1.16	-
AV	2.4378G	94.87	Inf	-Inf	30.95	3	Vertical	22	1.16	-
AV	2.4998G	46.81	54.00	-7.19	31.17	3	Vertical	22	1.16	-
PK	2.3818G	56.00	74.00	-18.00	30.75	3	Vertical	22	1.16	-
PK	2.4378G	96.75	Inf	-Inf	30.95	3	Vertical	22	1.16	-
PK	2.495G	56.38	74.00	-17.62	31.16	3	Vertical	22	1.16	-

802.11b_Nss1,(1Mbps)_1TX(Port2)

2437MHz_TX

10/09/2018

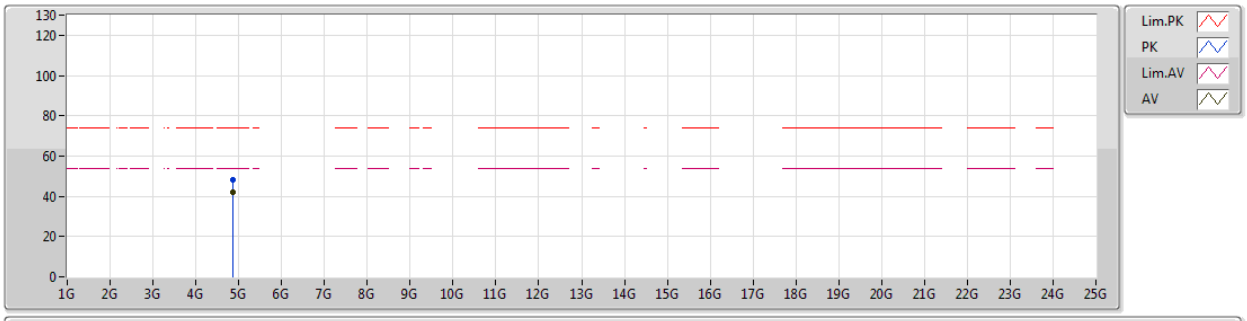


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.3786G	45.70	54.00	-8.30	30.74	3	Horizontal	59	2.95	-
AV	2.4362G	97.13	Inf	-Inf	30.94	3	Horizontal	59	2.95	-
AV	2.4986G	46.41	54.00	-7.59	31.17	3	Horizontal	59	2.95	-
PK	2.3686G	55.63	74.00	-18.37	30.70	3	Horizontal	59	2.95	-
PK	2.4362G	98.96	Inf	-Inf	30.94	3	Horizontal	59	2.95	-
PK	2.4854G	55.67	74.00	-18.33	31.12	3	Horizontal	59	2.95	-

802.11b_Nss1,(1Mbps)_1TX(Port2)

2437MHz_TX

10/09/2018

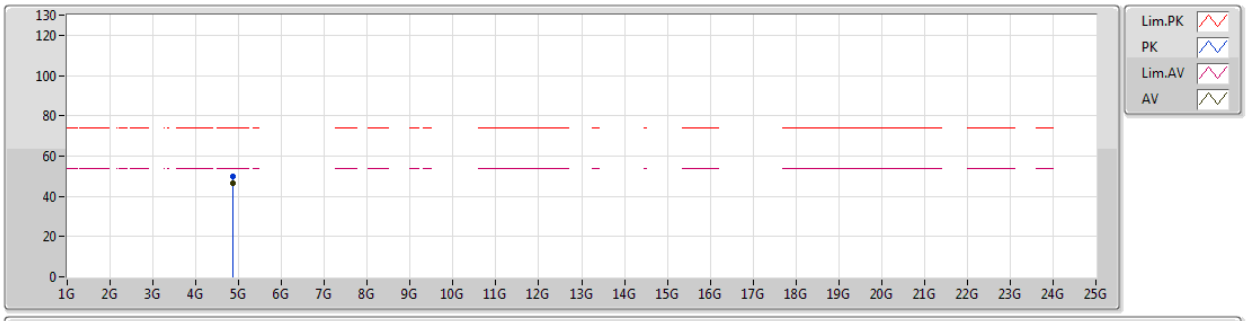


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.87406G	41.91	54.00	-12.09	2.25	3	Vertical	299	1.37	-
PK	4.87406G	48.09	74.00	-25.91	2.25	3	Vertical	299	1.37	-

802.11b_Nss1,(1Mbps)_1TX(Port2)

2437MHz_TX

10/09/2018

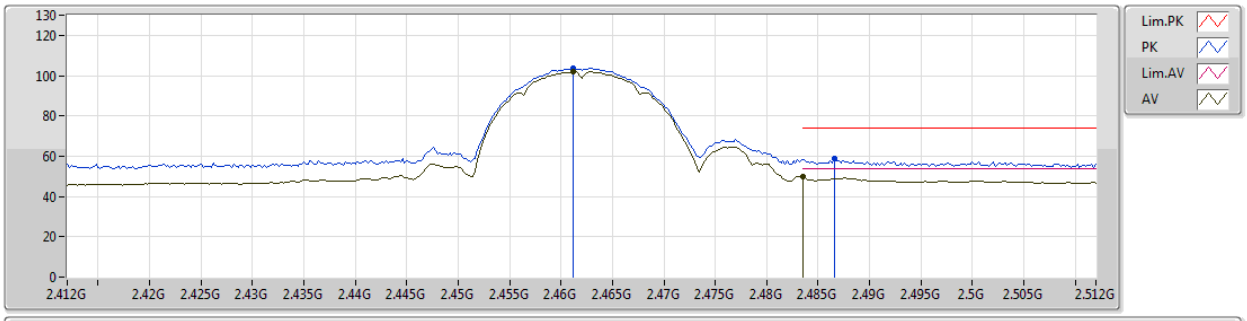


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.87404G	46.25	54.00	-7.75	2.25	3	Horizontal	45	1.25	-
PK	4.87404G	49.92	74.00	-24.08	2.25	3	Horizontal	45	1.25	-

802.11b_Nss1,(1Mbps)_1TX(Port2)

2462MHz_TX

10/09/2018

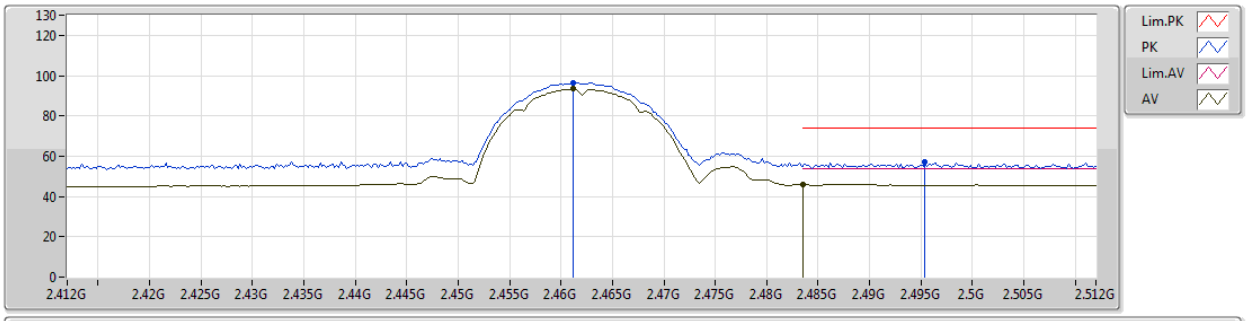


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.4612G	101.89	Inf	-Inf	31.03	3	Vertical	174	1.10	-
AV	2.4835G	49.98	54.00	-4.02	31.11	3	Vertical	174	1.10	-
PK	2.4612G	103.72	Inf	-Inf	31.03	3	Vertical	174	1.10	-
PK	2.4866G	58.76	74.00	-15.24	31.12	3	Vertical	174	1.10	-

802.11b_Nss1,(1Mbps)_1TX(Port2)

2462MHz_TX

10/09/2018

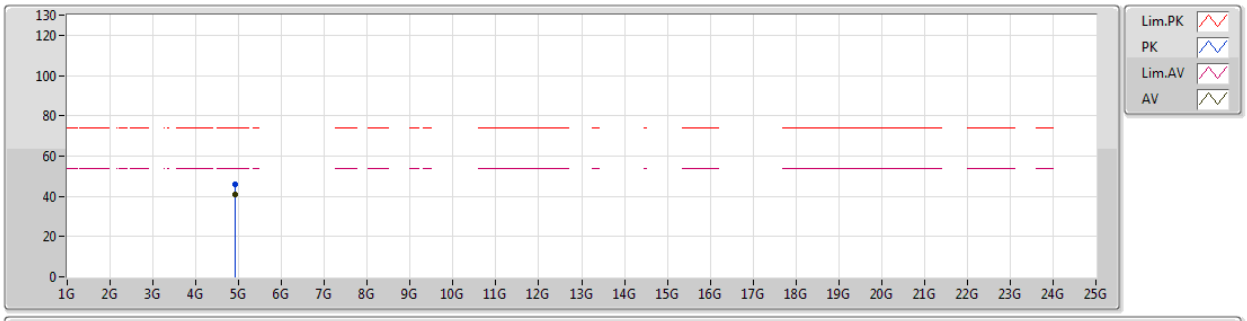


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.4612G	93.34	Inf	-Inf	31.03	3	Horizontal	327	2.00	-
AV	2.4835G	45.96	54.00	-8.04	31.11	3	Horizontal	327	2.00	-
PK	2.4612G	96.56	Inf	-Inf	31.03	3	Horizontal	327	2.00	-
PK	2.4954G	57.15	74.00	-16.85	31.16	3	Horizontal	327	2.00	-

802.11b_Nss1,(1Mbps)_1TX(Port2)

2462MHz_TX

10/09/2018

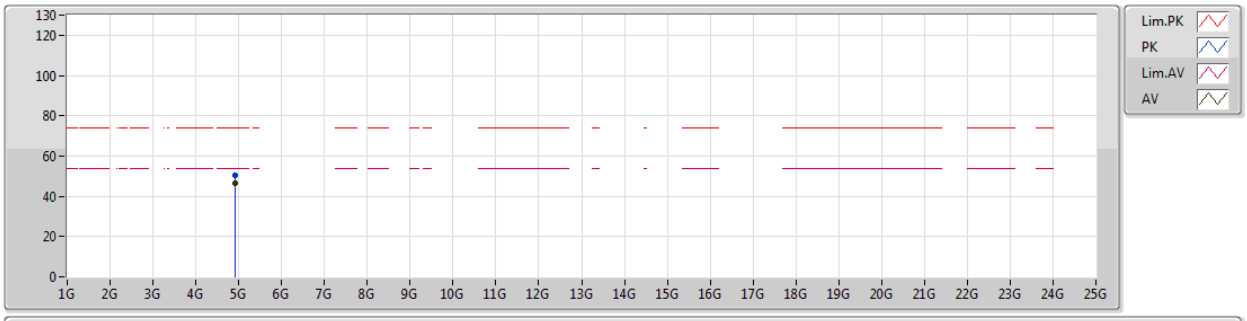


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.924G	40.68	54.00	-13.32	2.38	3	Vertical	336	1.42	-
PK	4.92394G	46.14	74.00	-27.86	2.38	3	Vertical	336	1.42	-

802.11b_Nss1,(1Mbps)_1TX(Port2)

2462MHz_TX

10/09/2018

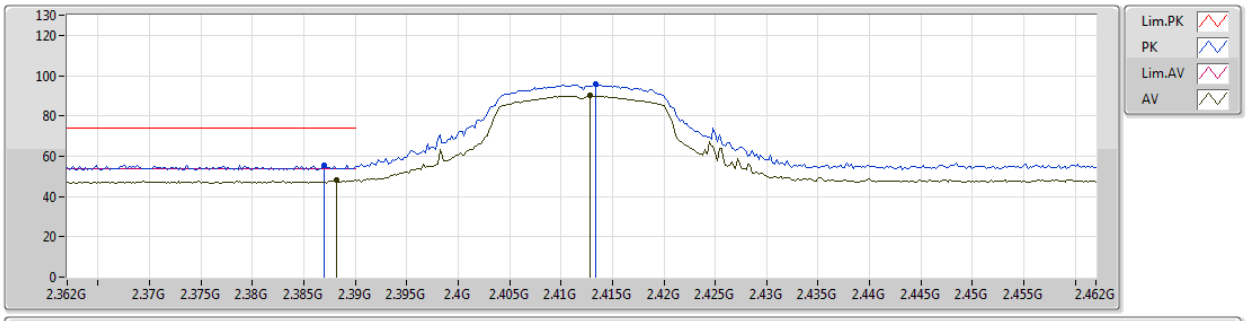


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.92406G	46.64	54.00	-7.36	2.38	3	Horizontal	333	2.56	-
PK	4.92406G	50.30	74.00	-23.70	2.38	3	Horizontal	333	2.56	-

802.11g_Nss1,(6Mbps)_1TX(Port2)

2412MHz_TX

10/09/2018

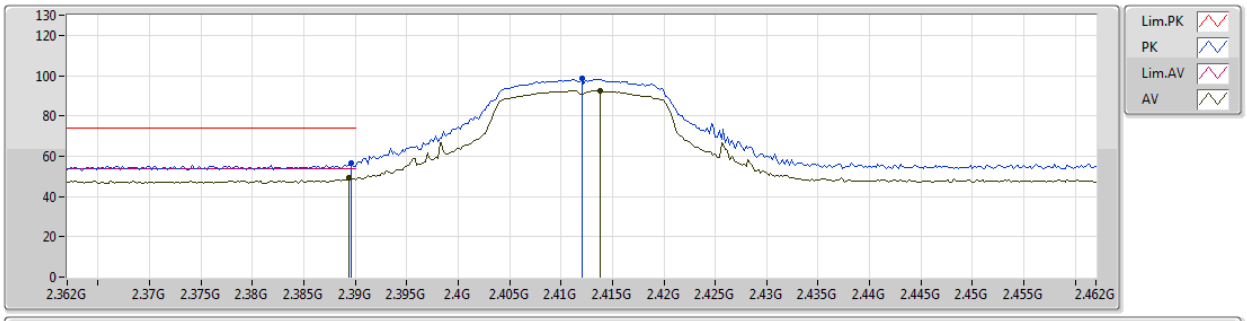


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.3882G	48.25	54.00	-5.75	30.77	3	Vertical	22	1.04	-
AV	2.4128G	89.95	Inf	-Inf	30.86	3	Vertical	22	1.04	-
PK	2.387G	55.74	74.00	-18.26	30.76	3	Vertical	22	1.04	-
PK	2.4134G	95.68	Inf	-Inf	30.86	3	Vertical	22	1.04	-

802.11g_Nss1,(6Mbps)_1TX(Port2)

2412MHz_TX

10/09/2018

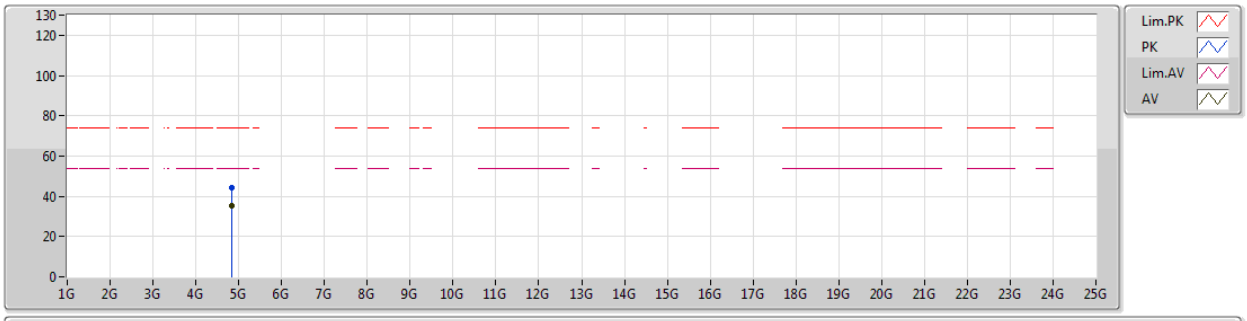


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.3894G	49.07	54.00	-4.93	30.77	3	Horizontal	124	1.28	-
AV	2.4138G	92.34	Inf	-Inf	30.86	3	Horizontal	124	1.28	-
PK	2.3896G	56.45	74.00	-17.55	30.77	3	Horizontal	124	1.28	-
PK	2.412G	98.89	Inf	-Inf	30.85	3	Horizontal	124	1.28	-

802.11g_Nss1,(6Mbps)_1TX(Port2)

2412MHz_TX

10/09/2018

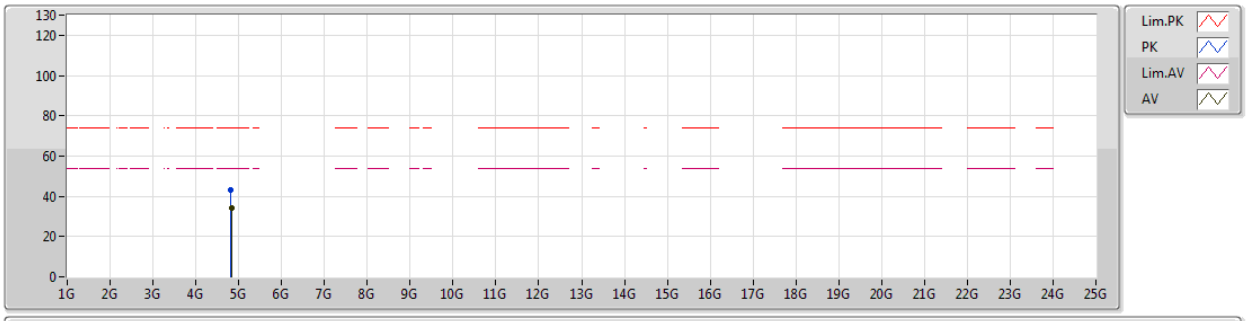


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.8257G	35.07	54.00	-18.93	2.14	3	Vertical	322	2.43	-
PK	4.82608G	44.25	74.00	-29.75	2.14	3	Vertical	322	2.43	-

802.11g_Nss1,(6Mbps)_1TX(Port2)

2412MHz_TX

10/09/2018

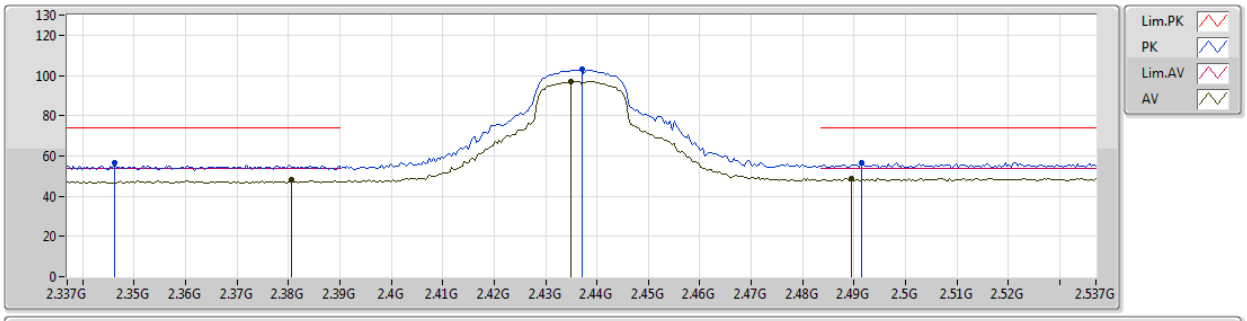


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.8284G	34.26	54.00	-19.74	2.15	3	Horizontal	3	2.50	-
PK	4.82456G	43.23	74.00	-30.77	2.13	3	Horizontal	3	2.50	-

802.11g_Nss1,(6Mbps)_1TX(Port2)

2437MHz_TX

10/09/2018

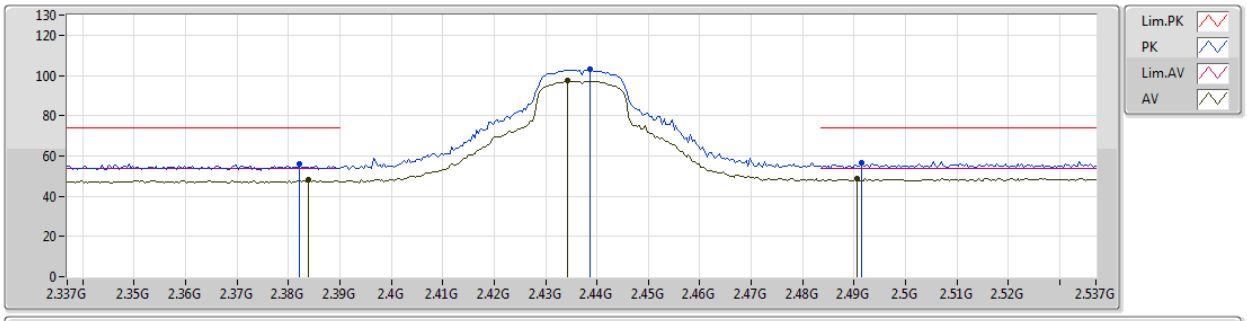


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.3806G	47.96	54.00	-6.04	30.75	3	Vertical	135	2.93	-
AV	2.435G	97.04	Inf	-Inf	30.94	3	Vertical	135	2.93	-
AV	2.4894G	48.98	54.00	-5.02	31.13	3	Vertical	135	2.93	-
PK	2.3462G	56.58	74.00	-17.42	30.62	3	Vertical	135	2.93	-
PK	2.437G	102.85	Inf	-Inf	30.94	3	Vertical	135	2.93	-
PK	2.4914G	56.41	74.00	-17.59	31.14	3	Vertical	135	2.93	-

802.11g_Nss1,(6Mbps)_1TX(Port2)

2437MHz_TX

10/09/2018

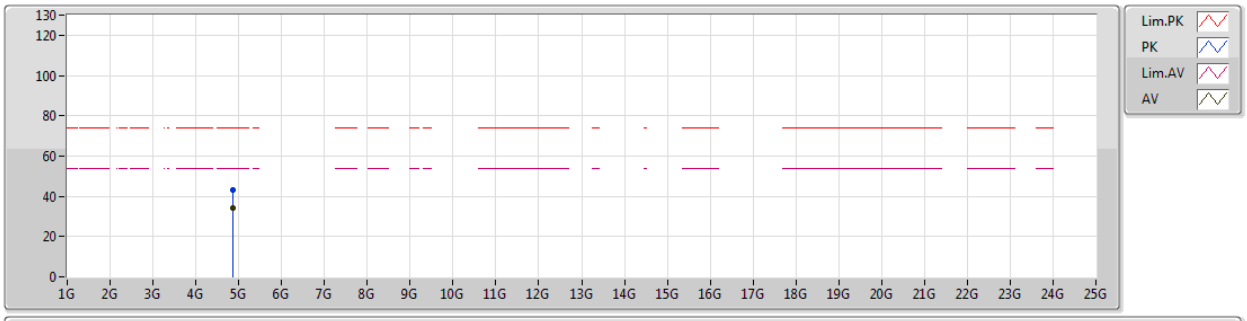


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.3838G	48.06	54.00	-5.94	30.75	3	Horizontal	1	2.94	-
AV	2.4342G	97.55	Inf	-Inf	30.94	3	Horizontal	1	2.94	-
AV	2.4906G	48.99	54.00	-5.01	31.13	3	Horizontal	1	2.94	-
PK	2.3822G	56.11	74.00	-17.89	30.75	3	Horizontal	1	2.94	-
PK	2.4386G	102.85	Inf	-Inf	30.95	3	Horizontal	1	2.94	-
PK	2.4914G	56.38	74.00	-17.62	31.14	3	Horizontal	1	2.94	-

802.11g_Nss1,(6Mbps)_1TX(Port2)

2437MHz_TX

10/09/2018

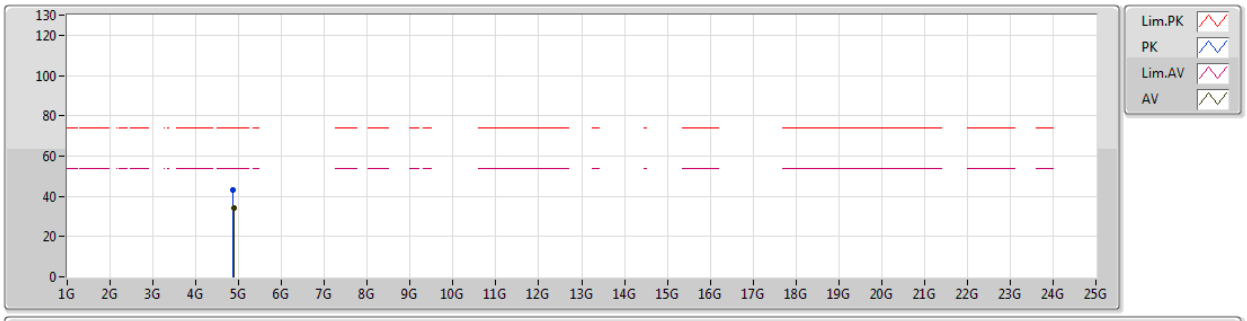


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.87522G	34.40	54.00	-19.60	2.26	3	Vertical	326	2.37	-
PK	4.8725G	43.17	74.00	-30.83	2.25	3	Vertical	326	2.37	-

802.11g_Nss1,(6Mbps)_1TX(Port2)

2437MHz_TX

10/09/2018

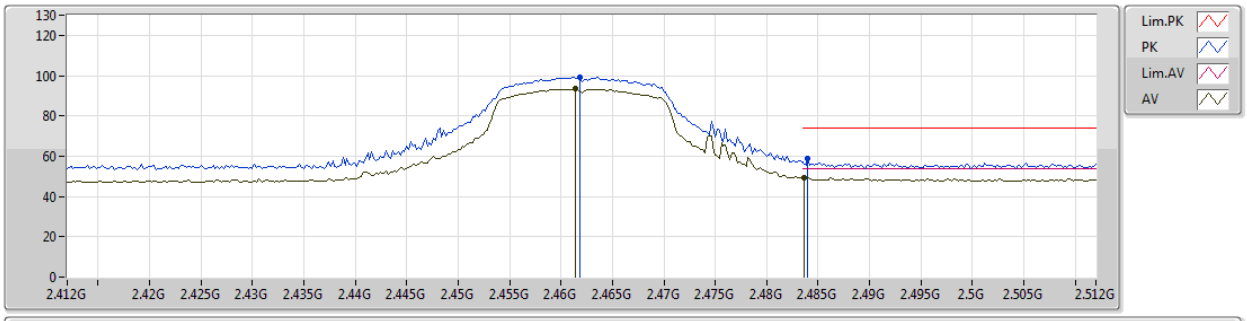


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.87784G	34.17	54.00	-19.83	2.26	3	Horizontal	155	1.61	-
PK	4.87388G	43.12	74.00	-30.88	2.25	3	Horizontal	155	1.61	-

802.11g_Nss1,(6Mbps)_1TX(Port2)

2462MHz_TX

10/09/2018

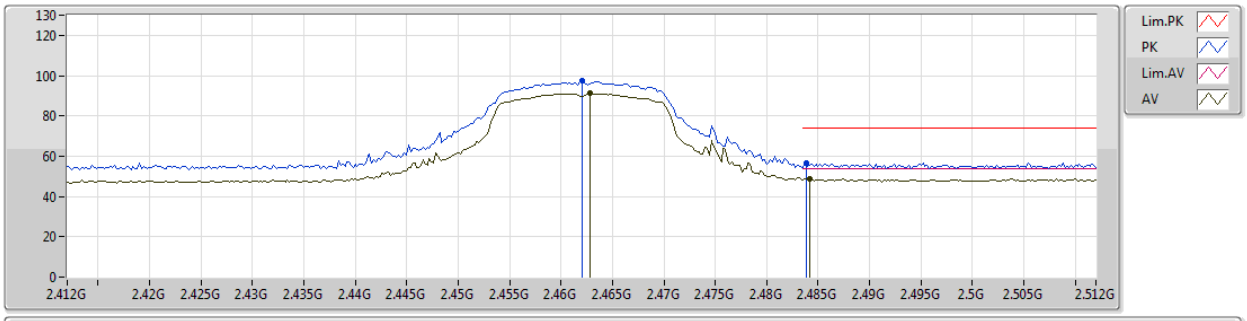


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.4614G	93.32	Inf	-Inf	31.03	3	Vertical	140	2.83	-
AV	2.4836G	49.52	54.00	-4.48	31.11	3	Vertical	140	2.83	-
PK	2.4618G	99.11	Inf	-Inf	31.03	3	Vertical	140	2.83	-
PK	2.484G	58.69	74.00	-15.31	31.12	3	Vertical	140	2.83	-

802.11g_Nss1,(6Mbps)_1TX(Port2)

2462MHz_TX

10/09/2018

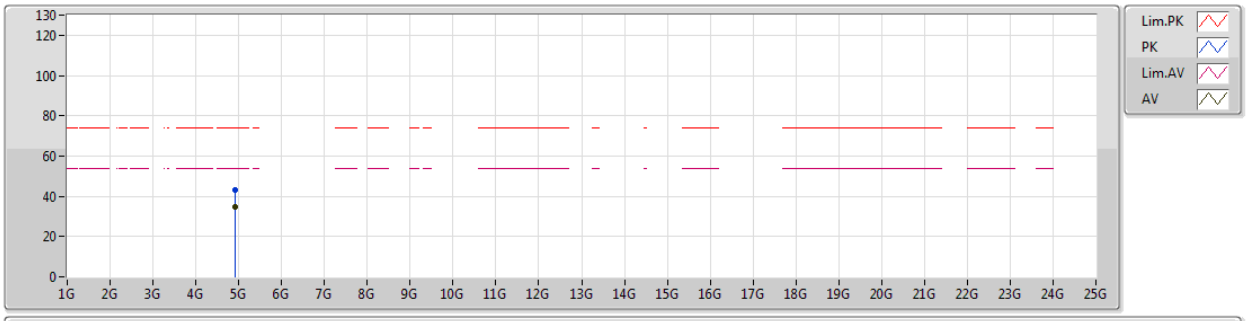


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.4628G	91.10	Inf	-Inf	31.04	3	Horizontal	0	2.02	-
AV	2.4842G	48.90	54.00	-5.10	31.12	3	Horizontal	0	2.02	-
PK	2.462G	97.26	Inf	-Inf	31.03	3	Horizontal	0	2.02	-
PK	2.4838G	56.84	74.00	-17.16	31.11	3	Horizontal	0	2.02	-

802.11g_Nss1,(6Mbps)_1TX(Port2)

2462MHz_TX

10/09/2018

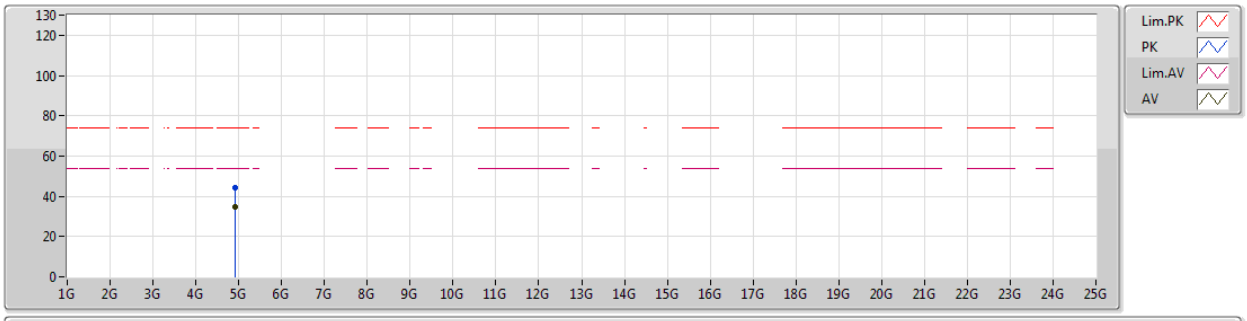


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.92702G	34.64	54.00	-19.36	2.39	3	Vertical	11	1.12	-
PK	4.92134G	43.09	74.00	-30.91	2.36	3	Vertical	11	1.12	-

802.11g_Nss1,(6Mbps)_1TX(Port2)

2462MHz_TX

10/09/2018

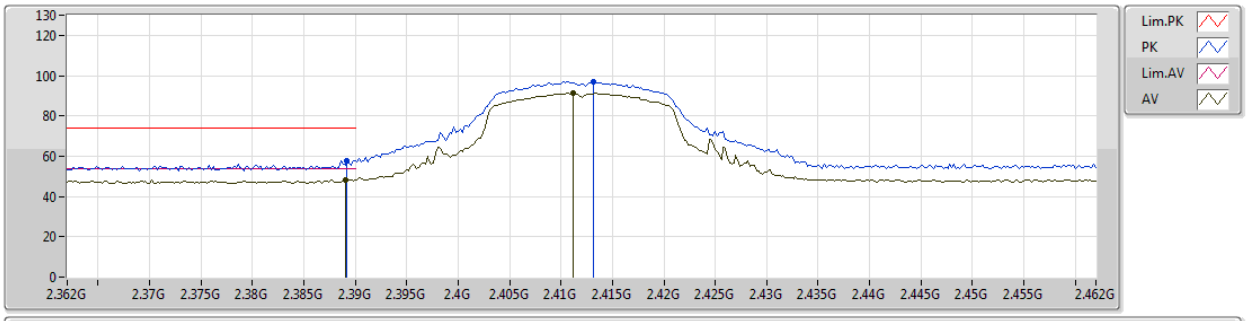


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.92224G	34.81	54.00	-19.19	2.38	3	Horizontal	181	1.61	-
PK	4.9208G	44.08	74.00	-29.92	2.36	3	Horizontal	181	1.61	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

2412MHz_TX

10/09/2018

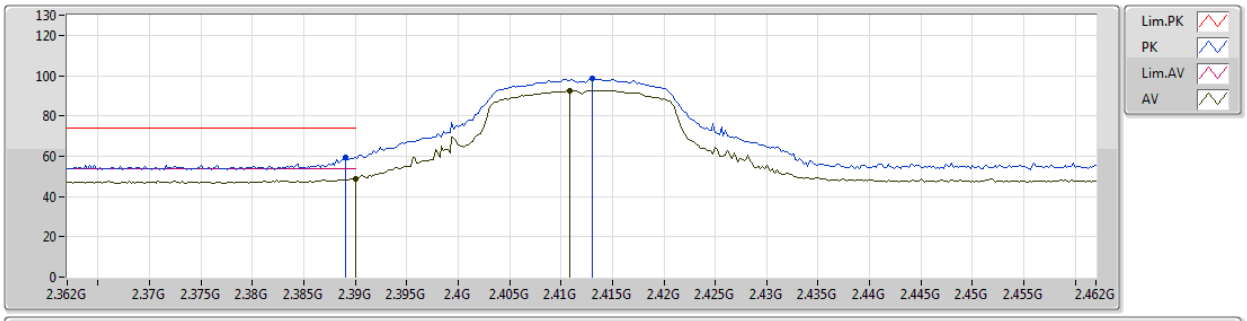


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.389G	48.46	54.00	-5.54	30.77	3	Vertical	128	2.06	-
AV	2.4112G	91.37	Inf	-Inf	30.85	3	Vertical	128	2.06	-
PK	2.3892G	57.74	74.00	-16.26	30.77	3	Vertical	128	2.06	-
PK	2.4132G	97.02	Inf	-Inf	30.86	3	Vertical	128	2.06	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

2412MHz_TX

10/09/2018

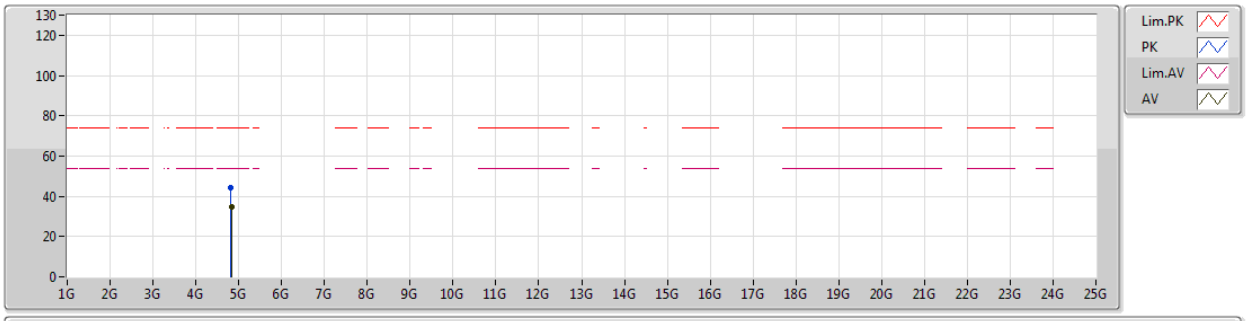


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.39G	48.89	54.00	-5.11	30.77	3	Horizontal	2	2.99	-
AV	2.4108G	92.64	Inf	-Inf	30.85	3	Horizontal	2	2.99	-
PK	2.389G	59.44	74.00	-14.56	30.77	3	Horizontal	2	2.99	-
PK	2.413G	98.68	Inf	-Inf	30.86	3	Horizontal	2	2.99	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

2412MHz_TX

10/09/2018

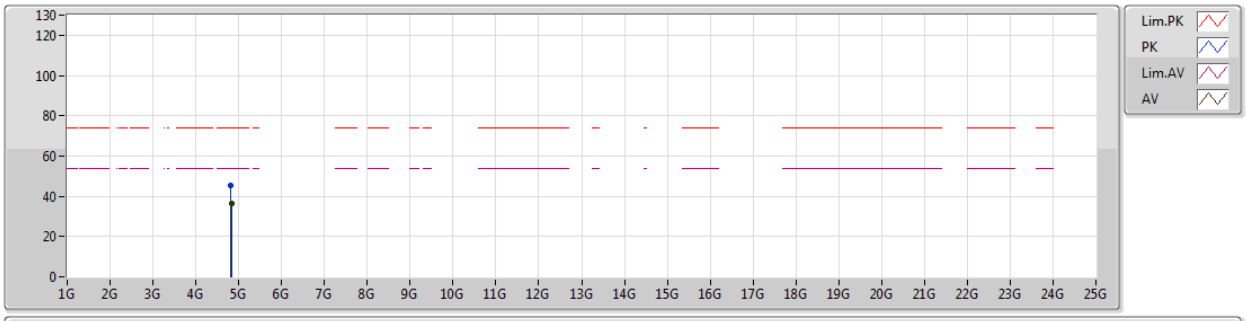


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.8251G	34.66	54.00	-19.34	2.14	3	Vertical	293	1.19	-
PK	4.8242G	44.45	74.00	-29.55	2.13	3	Vertical	293	1.19	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

2412MHz_TX

10/09/2018

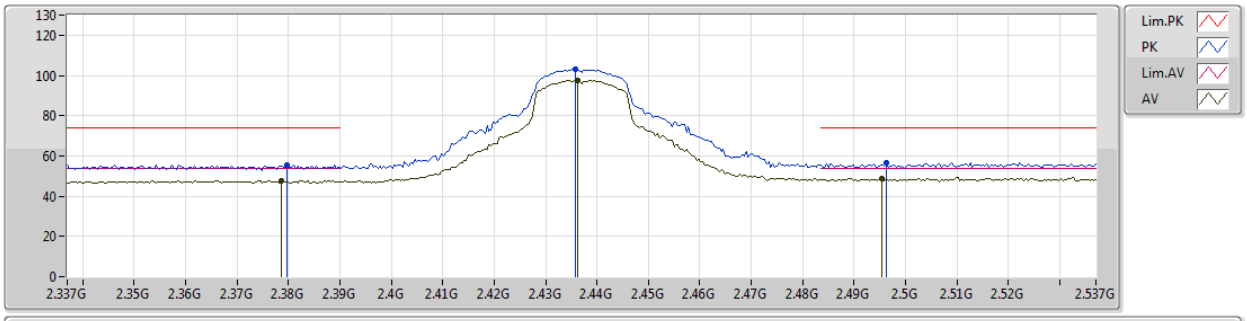


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.82568G	36.47	54.00	-17.53	2.14	3	Horizontal	329	2.64	-
PK	4.81932G	45.57	74.00	-28.43	2.12	3	Horizontal	329	2.64	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

2437MHz_TX

10/09/2018

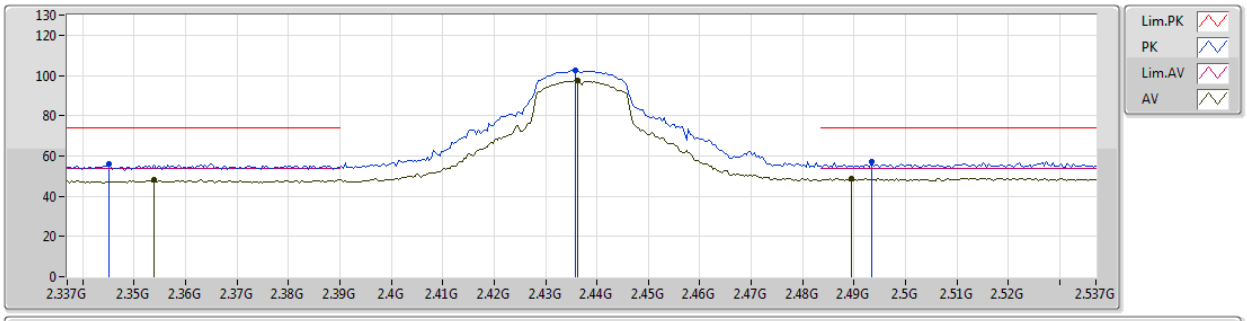


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.3786G	47.71	54.00	-6.29	30.74	3	Vertical	138	2.92	-
AV	2.4362G	97.77	Inf	-Inf	30.94	3	Vertical	138	2.92	-
AV	2.4954G	48.96	54.00	-5.04	31.16	3	Vertical	138	2.92	-
PK	2.3798G	55.67	74.00	-18.33	30.74	3	Vertical	138	2.92	-
PK	2.4358G	103.19	Inf	-Inf	30.94	3	Vertical	138	2.92	-
PK	2.4962G	56.37	74.00	-17.63	31.16	3	Vertical	138	2.92	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

2437MHz_TX

10/09/2018

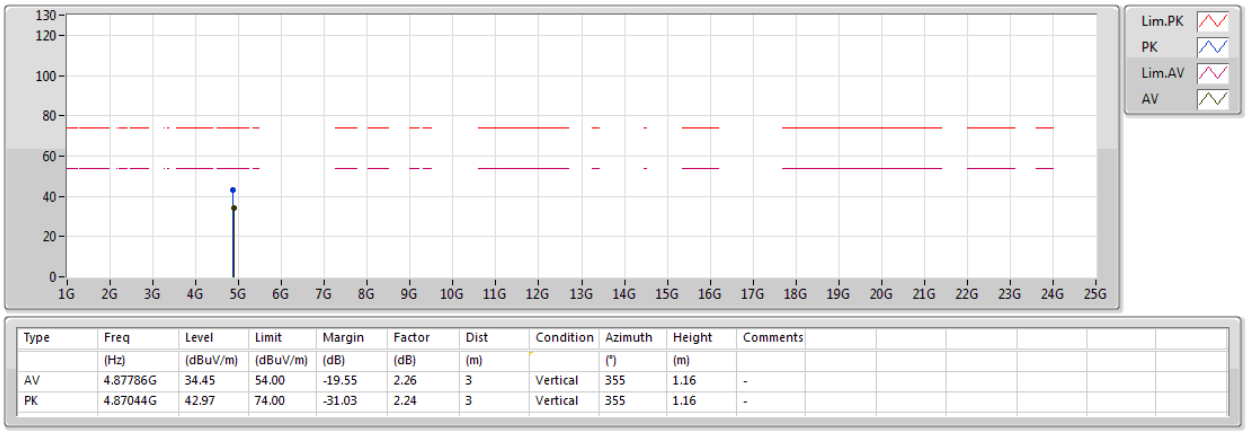


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.3538G	48.14	54.00	-5.86	30.65	3	Horizontal	90	1.44	-
AV	2.4362G	97.30	Inf	-Inf	30.94	3	Horizontal	90	1.44	-
AV	2.4894G	48.84	54.00	-5.16	31.13	3	Horizontal	90	1.44	-
PK	2.345G	56.11	74.00	-17.89	30.62	3	Horizontal	90	1.44	-
PK	2.4358G	102.81	Inf	-Inf	30.94	3	Horizontal	90	1.44	-
PK	2.4934G	57.14	74.00	-16.86	31.14	3	Horizontal	90	1.44	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

2437MHz_TX

10/09/2018

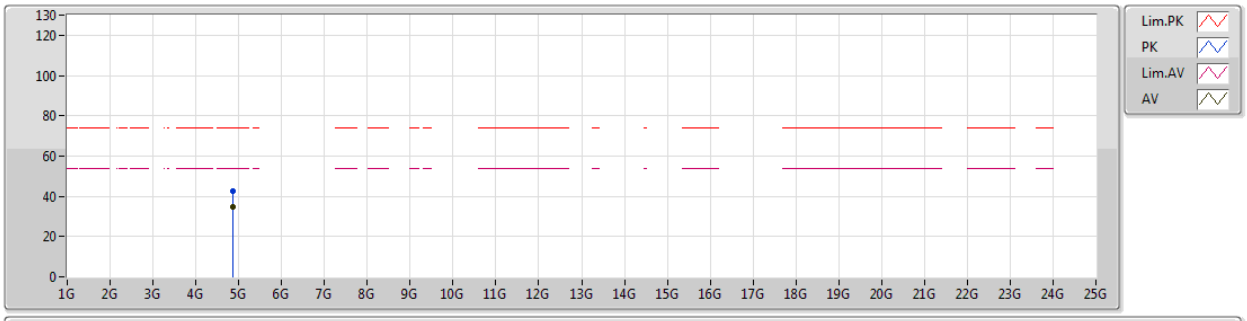


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.87786G	34.45	54.00	-19.55	2.26	3	Vertical	355	1.16	-
PK	4.87044G	42.97	74.00	-31.03	2.24	3	Vertical	355	1.16	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

2437MHz_TX

10/09/2018

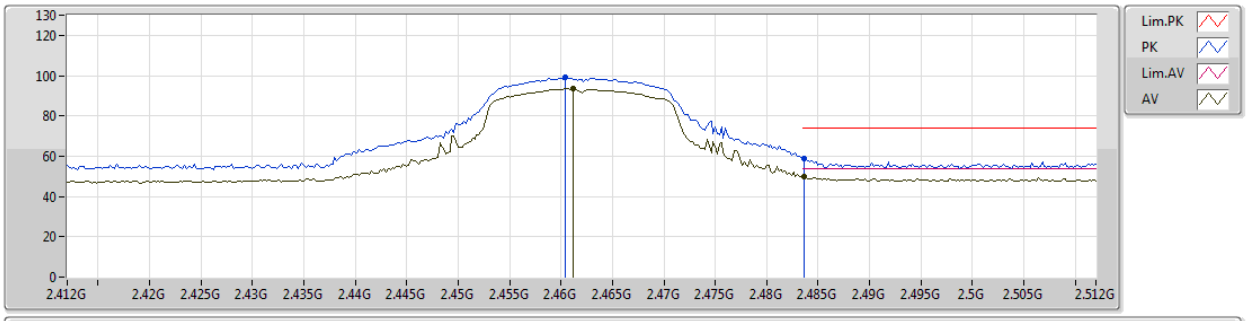


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.87676G	34.55	54.00	-19.45	2.26	3	Horizontal	237	2.40	-
PK	4.87326G	42.70	74.00	-31.30	2.25	3	Horizontal	237	2.40	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

2462MHz_TX

10/09/2018

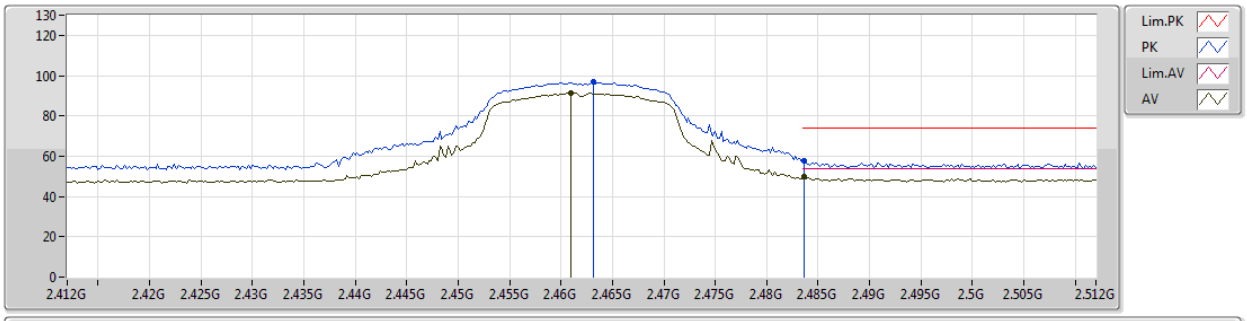


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.4612G	93.59	Inf	-Inf	31.03	3	Vertical	141	2.82	-
AV	2.4836G	49.95	54.00	-4.05	31.11	3	Vertical	141	2.82	-
PK	2.4604G	99.02	Inf	-Inf	31.03	3	Vertical	141	2.82	-
PK	2.4836G	58.67	74.00	-15.33	31.11	3	Vertical	141	2.82	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

2462MHz_TX

10/09/2018

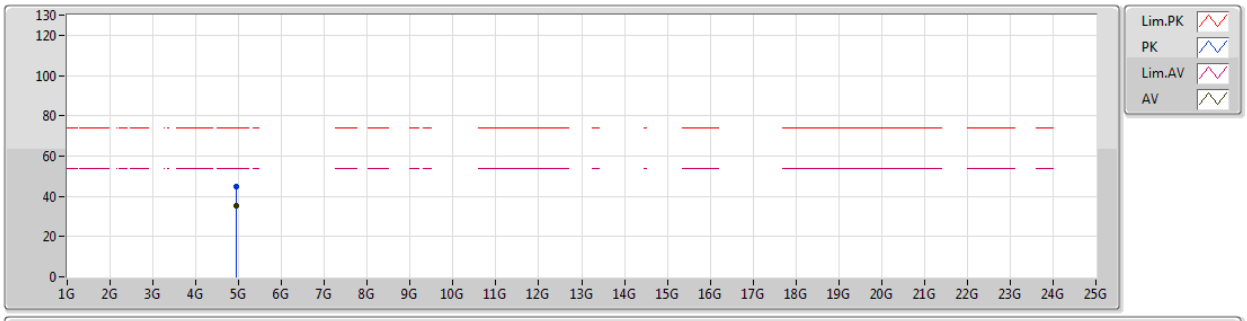


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.461G	91.30	Inf	-Inf	31.03	3	Horizontal	5	2.02	-
AV	2.4836G	49.78	54.00	-4.22	31.11	3	Horizontal	5	2.02	-
PK	2.4632G	96.68	Inf	-Inf	31.04	3	Horizontal	5	2.02	-
PK	2.4836G	57.47	74.00	-16.53	31.11	3	Horizontal	5	2.02	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

2462MHz_TX

10/09/2018

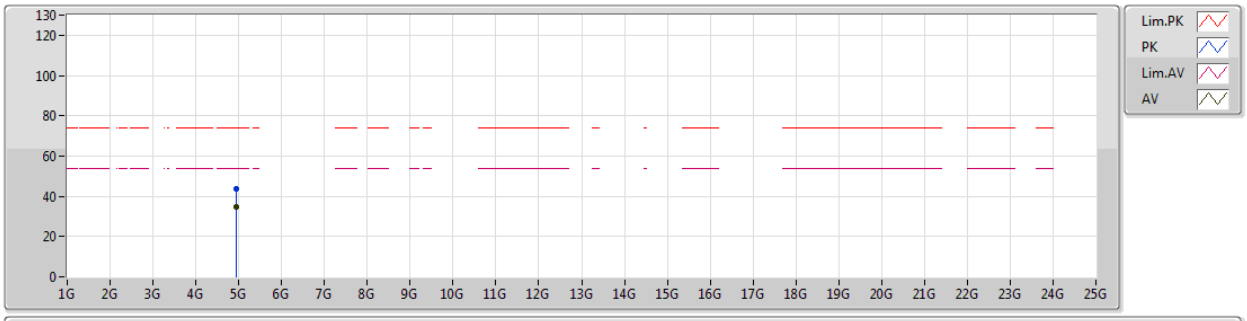


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.93516G	35.10	54.00	-18.90	2.41	3	Vertical	7	1.50	-
PK	4.93348G	44.64	74.00	-29.36	2.40	3	Vertical	7	1.50	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

2462MHz_TX

10/09/2018



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.93432G	35.01	54.00	-18.99	2.40	3	Horizontal	332	1.50	-
PK	4.93066G	43.63	74.00	-30.37	2.40	3	Horizontal	332	1.50	-