FCC Test Report

FCC ID	:	**BKMAE-WLU5630**
Equipment	:	**WLAN / BT Module**
Brand Name	:	**EPSON**
Model Name	:	**WLU5630B-D101(RoHS)**
Applicant	:	**SEIKO EPSON CORPORATION 3-3-5 Owa Suwa-shi, Nagano-ken 392-8502 Japan**
Manufacturer	:	**SEIKO EPSON CORPORATION 3-3-5 Owa Suwa-shi, Nagano-ken 392-8502 Japan**
Standard	:	**47 CFR FCC Part 15.247**

The product was received on Jan. 16, 2019, and testing was started from Jan. 24, 2019 and completed on Feb. 13, 2019. 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
FR8D2146AC	01	Initial issue of report	Mar. 04, 2019

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

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and explanations:
None

Reviewed by: Jackson 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(Port 2)
2.4-2.4835GHz	802.11g	20	1TX(Port 2)
2.4-2.4835GHz	802.11n HT20	20	1TX(Port 2)

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	EPSON	WLU5630B-D101(RoHS)	Printed Antenna	I-PEX

Ant.	Port	Gain (dBi)			
		2.4G	U-NII-1	U-NII-3	BT
1	1	1.92	1.42	2.21	-
2	2	2.22	2.11	2.00	2.22

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)

Ant. 2 (port 2) could transmit/receive simultaneously.

For 5GHz function:

For IEEE 802.11 a/an mode (1TX/1RX)

Support diversity function and pre-tested on each single chain, the worst case was Ant. 1(port 1) and it was record in this test report.

1.1.3 EUT Information

Operational Condition				
EUT Power Type	From Host System			
EUT Function	☒	Point-to-multipoint	☐	Point-to-point
Beamforming Function	☐	With beamforming	☒	Without beamforming
Software / Firmware Version			MP EPSON 01	

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	0.986	0.061	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11g	0.925	0.339	1.429m	1k
802.11n HT20	0.922	0.353	1.345m	1k

Note. If DC < 0.98, the DCF was added while measuring Output power and PSD.

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 v05r01

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	TH01-HY	Gary	23.1~23.8°C / 61~61.8%	28/Jan/2019~31/Jan/2019
Radiated	03CH09-HY	Kevin	21~23°C / 45~49%	24/Jan/2019~13/Feb/2019
AC Conduction	CO04-HY	Daniel	23.1~23.8°C / 61~61.8%	28/Jan/2019~31/Jan/2019

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)	3.54 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	1.6 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	5V

2.2 Test Channel Mode

Test Software	Dos

Mode	PowerSetting
802.11b_Nss1,(1Mbps)_1TX(Port2)	-
2412MHz	65
2437MHz	66
2457MHz	66
2462MHz	66
802.11g_Nss1,(6Mbps)_1TX(Port2)	-
2412MHz	61
2417MHz	61
2437MHz	61
2452MHz	61
2457MHz	61
2462MHz	61
802.11n HT20_Nss1,(MCS0)_1TX(Port2)	-
2412MHz	61
2417MHz	61
2422MHz	61
2437MHz	61
2452MHz	61
2457MHz	61
2462MHz	58

2.3 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral
Operating Mode	CTX
1	USB mode

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	USB mode		
Operating Mode > 1GHz	CTX		
Orthogonal Planes of EUT	**X Plane**	**Y Plane**	**Z Plane**
			
Worst Planes of EUT			V

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis
Test Condition	Radiated measurement
Operating Mode	CTX
1	WLAN 2.4G + BT BR/EDR
2	WLAN 2.4G + BT LE
3	WLAN 5G + BT BR/EDR
4	WLAN 5G + BT LE
Refer to Appendix G for Radiated Emission Co-location.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis
Operating Mode	CTX
1	WLAN 2.4G + Bluetooth
2	WLAN 5G + Bluetooth
Refer to Sporton Test Report No.: FA8D2146 for Co-location RF Exposure Evaluation.	

2.4 Support Equipment

Support Equipment – AC Conduction				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	Notebook	DELL	P40F	-
2	Adapter	DELL	LA65NS2-01	-
3	Test fixture	-	-	-

Note.Support equipment No.1,2,3 was provided by customer.

Support Equipment – RF Conducted				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	Notebook	ASUS	ASUSPRO	-
2	Adapter for NB	ASUS	ADP-90YD B	-
3	Test Fixture	-	-	-

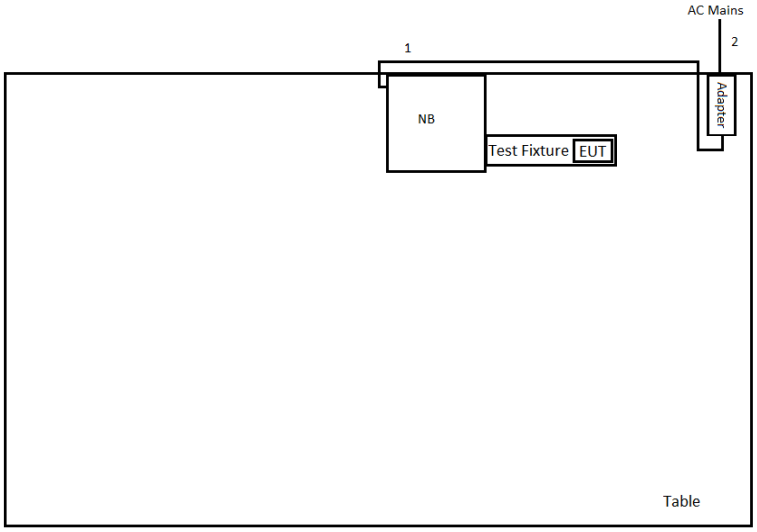
Note.Support equipment No.1,2,3 was provided by customer.

Support Equipment – Radiated Emission				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	Notebook	ASUS	ASUSPRO	-
2	Adapter	ASUS	ADP-90YD	-
3	Test fixture	-	-	-

Note.Support equipment No.1,2,3 was provided by customer.

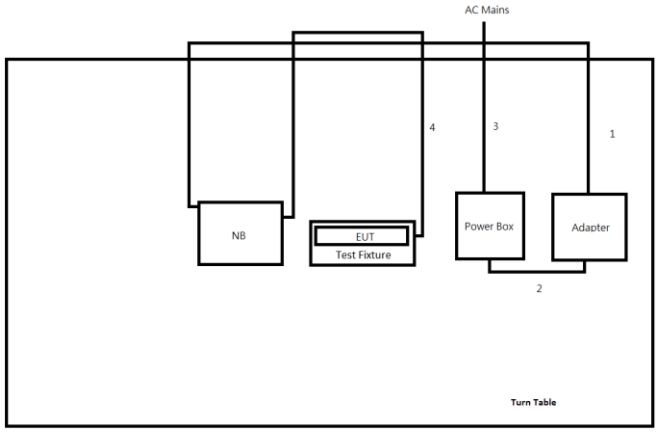
2.5 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



Item	Connection	Shielded	Length(m)	Remark
1	DC Power line	No	1.8	-
2	AC Power line	No	1.8	-

Test Setup Diagram - Radiated Test



Item	Connection	Shielded	Length(m)	Remark
1	DC Power line	No	1.8	-
2	AC Power line	No	0.75	-
3	AC Power line	No	1.8	-
4	USB cable	No	1.8	-

3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

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

3.1.2 Measuring Instruments

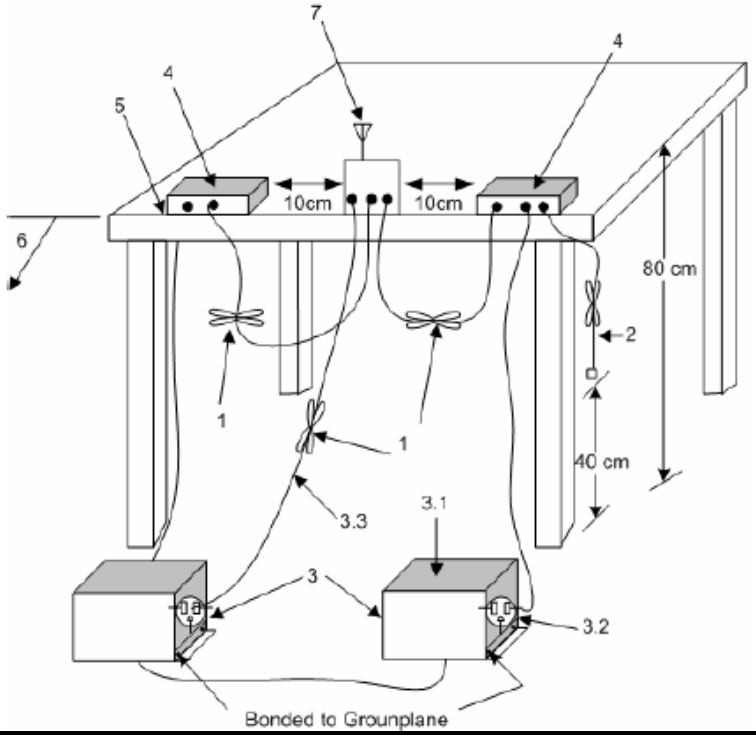
Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

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

3.1.4 Test Setup

AC Power-line Conducted Emissions



3.1.5 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 DTS Bandwidth

3.2.1 6dB Bandwidth Limit

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

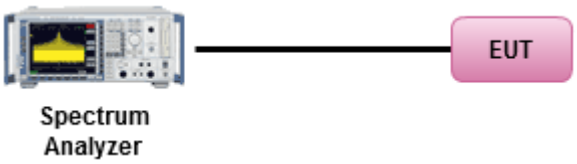
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method	
▪ For the emission bandwidth shall be measured using one of the options below:	
	☒ Refer as KDB 558074. clause 8.2 (11.8 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 B

3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit		
	▪ If $G_{TX} \leq 6$ dBi, then $P_{Out} \leq 30$ dBm (1 W)	
	▪ Point-to-multipoint systems (P2M): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)$ dBm	
	▪ Point-to-point systems (P2P): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm	
	▪ Smart antenna system (SAS):	
		- Single beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm
		- Overlap beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm
		- Aggregate power on all beams: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3 + 8$dB dBm
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 C

3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

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

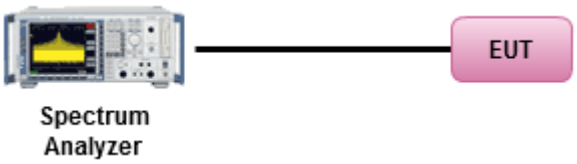
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method		
▪ Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option).		
	☒ Refer as 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 D

3.5 Emissions in Non-restricted Frequency Bands

3.5.1 Emissions in Non-restricted Frequency Bands Limit

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

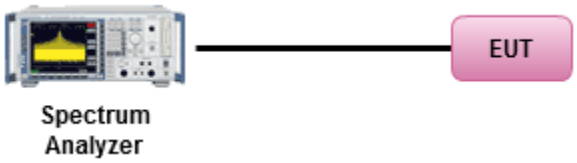
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

Test Method
▪ Refer as 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 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.

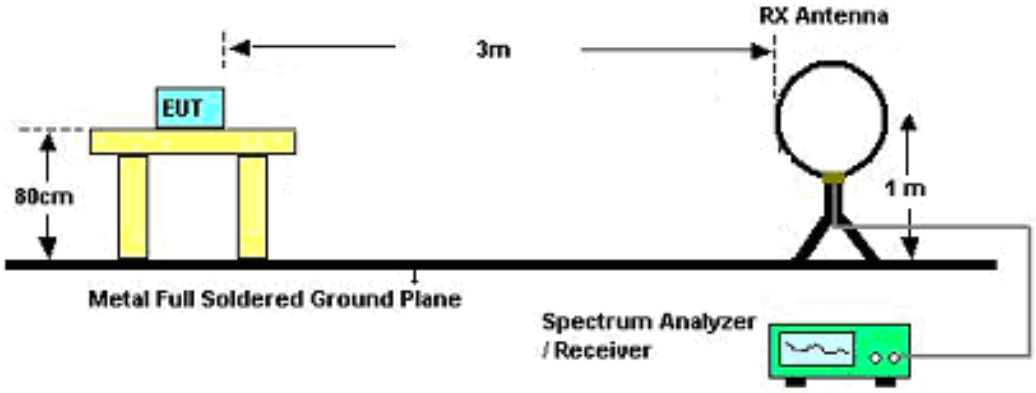
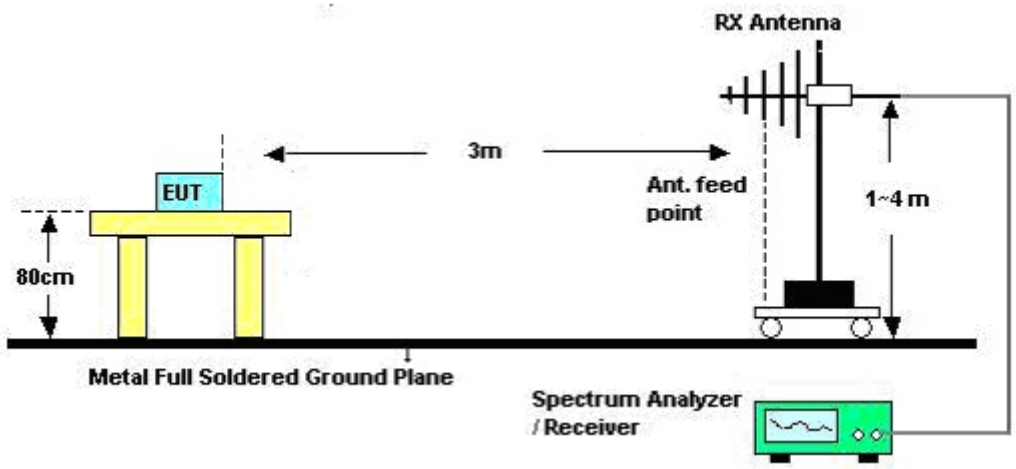
3.6.2 Measuring Instruments

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

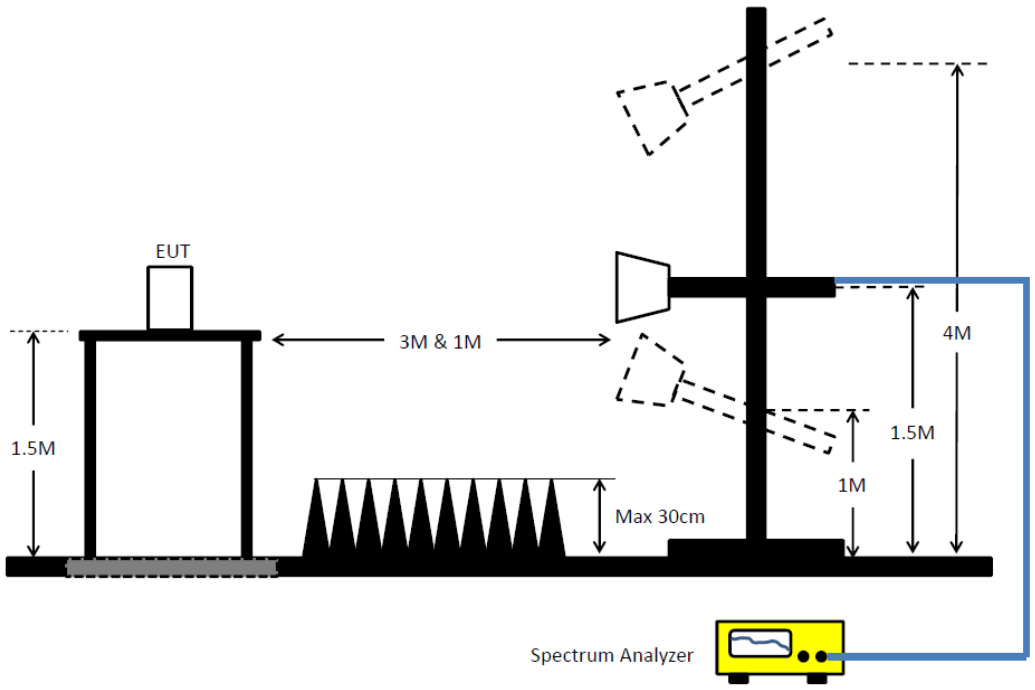
3.6.3 Test Procedures

Test Method	
▪ 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).
▪ Use the following spectrum analyzer settings:	
	▪ Set RBW=100 kHz for f < 1 GHz; VBW=3 * RBW; Sweep = auto; Detector function = peak; Trace = max hold.
	▪ Set RBW = 1 MHz, VBW= 3MHz for f ≥ 1 GHz for peak measurement. For average measurement, refer as 1.1.4.

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 (Below 30MHz)

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

3.6.6 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix F

4 Test Equipment and Calibration Data

Instrument for AC Conduction

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
EMC Receiver	R&S	ESR	102051	9KHz ~ 3.6GHz	03/May/2018	02/May/2019
LISN	R&S	ENV216	101295	9kHz ~ 30MHz	08/Nov/2018	07/Nov/2019
RF Cable-CON	MTJ	RG142	CB002-CO	9kHz ~ 200MHz	17/Sep/2018	16/Sep/2019
AC POWER	APC	AFC-11005G	F310050055	47Hz~63Hz 5~300V	NCR	NCR
Impuls Begrenzer Puls e Limiter	SCHWARZBECK	VTSD 9561-F	9561-F041	9 kHz ~ 30 MHz	12/Oct/2018	11/Oct/2019

NCR : Non-Calibration Require

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
EMI Test Receiver	R&S	ESR3	102052	9kHz ~ 3.6GHz	10/Apr/2018	09/Apr/2019
EXA Signal Analyzer	KEYSIGHT	N9010A	MY54200885	10Hz ~ 44GHz	31/Jul/2018	30/Jul/2019
Bilog Antenna & 5dB Attenuator	TESEQ & MTJ	CBL6111D & MTJ6102-05	35418 / 3	30MHz~1GHz	02/Oct/2018	03/Oct/2019
Double Ridged Guide Horn Antenna	SCHWARZBEC K	BBHA 9120 D	BBHA9120 D 1534	1GHz~18GHz	30/Apr/2018	29/Apr/2019
Broadband Horn Antenna	SCHWARZBEC K	BBHA 9170	BBHA9170614	18GHz~40GHz	09/Feb/2018	08/Feb/2019
Preamplifier	MITEQ	TTA1840-35-HG	1864481	18GHz ~ 40GHz	24/Aug/2018	23/Aug/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+SUHN ER	SUCOFLEX104	SN 556626/4 + 556627	1GHz ~ 40GHz	14/Mar/2018	13/Mar/2019

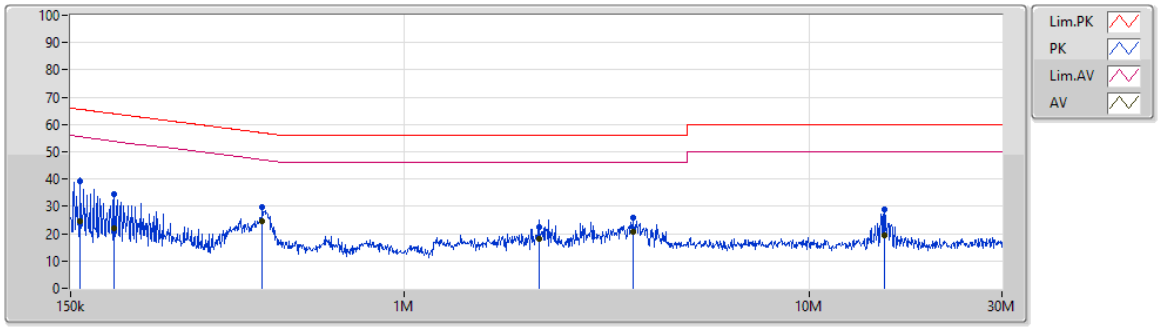
Instrument for Conducted Test

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Spectrum Analyzer	R&S	FSV 40	101013	10Hz~40GHz	05/Feb/2018	04/Feb/2019
Power Sensor	Anritsu	MA2411B	0917017	300MHz ~ 40GHz	05/Feb/2018	04/Feb/2019
Power Meter	Anritsu	ML2495A	0949003	300MHz ~ 40GHz	05/Feb/2018	04/Feb/2019
Cable 0.2m	HUBER	MY10710/4	RF Cable - 01	30MHz ~18G	10/Jan/2019	09/Jan/2020
Cable 0.2m	HUBER	MY10711/4	RF Cable - 02	30MHz ~18G	10/Jan/2019	09/Jan/2020
Cable 0.5m	HUBER	MY39470/4	RF Cable - 29	30MHz ~18G	10/Jan/2019	09/Jan/2020
SMB100A Signal Generator	R&S	SMB100A03	181147	100kHz~40GHz	12/Nov/2018	10/Nov/2020

AC Power-line Conducted Emissions Result			
Operating Mode	1	**Power Phase**	Neutral
Operating Function	USB Mode		

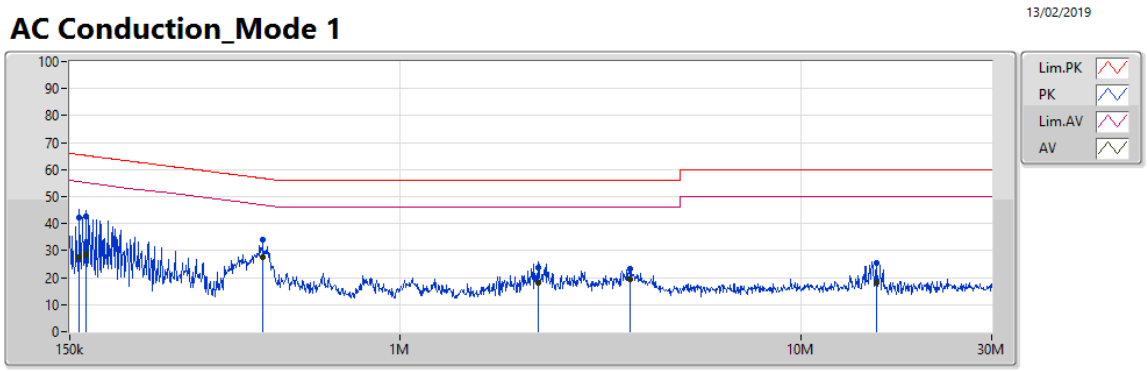
13/02/2019

AC Conduction_Mode 1



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	158.622k	39.12	65.54	-26.42	19.48	Neutral	-	19.64	9.60	0.01	9.87
AV	158.622k	24.77	55.54	-30.77	19.48	Neutral	-	5.29	9.60	0.01	9.87
QP	192.124k	34.37	63.93	-29.56	19.47	Neutral	-	14.90	9.59	0.01	9.87
AV	192.124k	22.10	53.93	-31.83	19.47	Neutral	-	2.63	9.59	0.01	9.87
QP	446.062k	29.72	56.96	-27.24	19.48	Neutral	-	10.24	9.59	0.01	9.88
AV	446.062k	24.58	46.96	-22.38	19.48	Neutral	"Worst"	5.10	9.59	0.01	9.88
QP	2.15M	22.61	56.00	-33.39	19.53	Neutral	-	3.08	9.61	0.03	9.89
AV	2.15M	18.02	46.00	-27.98	19.53	Neutral	-	-1.51	9.61	0.03	9.89
QP	3.671M	25.77	56.00	-30.23	19.54	Neutral	-	6.23	9.61	0.04	9.89
AV	3.671M	20.67	46.00	-25.33	19.54	Neutral	-	1.13	9.61	0.04	9.89
QP	15.389M	29.01	60.00	-30.99	19.67	Neutral	-	9.34	9.68	0.09	9.90
AV	15.389M	19.52	50.00	-30.48	19.67	Neutral	-	-0.15	9.68	0.09	9.90

AC Power-line Conducted Emissions Result			
Operating Mode	1	**Power Phase**	Line
Operating Function	USB Mode		



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	158.622k	42.45	65.54	-23.09	19.48	Line	-	22.97	9.60	0.01	9.87
AV	158.622k	27.68	55.54	-27.86	19.48	Line	-	8.20	9.60	0.01	9.87
QP	165.082k	42.75	65.20	-22.45	19.48	Line	-	23.27	9.60	0.01	9.87
AV	165.082k	28.40	55.20	-26.80	19.48	Line	-	8.92	9.60	0.01	9.87
QP	453.242k	33.93	56.82	-22.89	19.48	Line	-	14.45	9.59	0.01	9.88
AV	453.242k	27.69	46.82	-19.13	19.48	Line	"Worst"	8.21	9.59	0.01	9.88
QP	2.211M	23.85	56.00	-32.15	19.54	Line	-	4.31	9.62	0.03	9.89
AV	2.211M	18.09	46.00	-27.91	19.54	Line	-	-1.45	9.62	0.03	9.89
QP	3.76M	23.29	56.00	-32.71	19.56	Line	-	3.73	9.63	0.04	9.89
AV	3.76M	19.29	46.00	-26.71	19.56	Line	-	-0.27	9.63	0.04	9.89
QP	15.45M	25.33	60.00	-34.67	19.64	Line	-	5.69	9.65	0.09	9.90
AV	15.45M	17.92	50.00	-32.08	19.64	Line	-	-1.72	9.65	0.09	9.90

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(Port2)	9.025M	12.119M	12M1G1D	8.05M	12.044M
802.11g_Nss1,(6Mbps)_1TX(Port2)	16.325M	16.617M	16M6D1D	16.325M	16.567M
802.11n HT20_Nss1,(MCS0)_1TX(Port2)	17.575M	17.791M	17M8D1D	17.55M	17.716M

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;

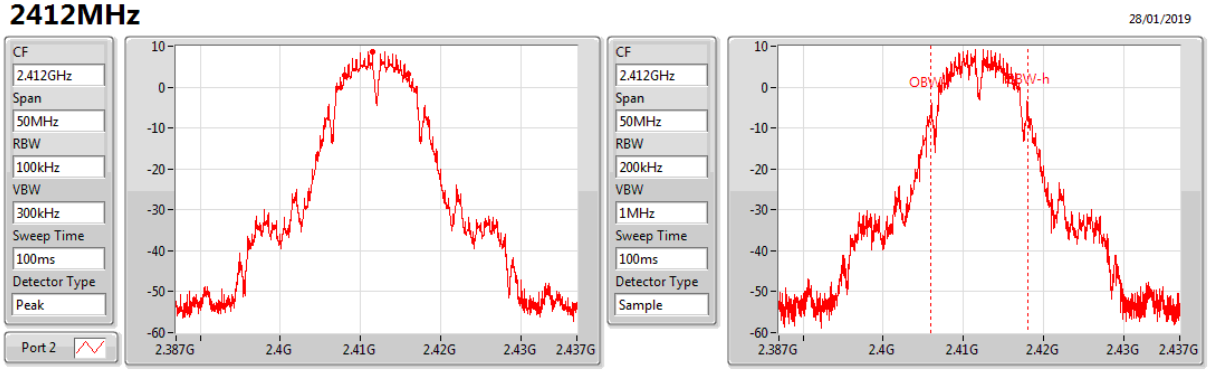
Result

Mode	Result	Limit (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11b_Nss1,(1Mbps)_1TX(Port2)	-	-	-	-
2412MHz	Pass	500k	8.05M	12.044M
2437MHz	Pass	500k	8.55M	12.119M
2462MHz	Pass	500k	9.025M	12.094M
802.11g_Nss1,(6Mbps)_1TX(Port2)	-	-	-	-
2412MHz	Pass	500k	16.325M	16.617M
2437MHz	Pass	500k	16.325M	16.567M
2462MHz	Pass	500k	16.325M	16.592M
802.11n HT20_Nss1,(MCS0)_1TX(Port2)	-	-	-	-
2412MHz	Pass	500k	17.55M	17.791M
2437MHz	Pass	500k	17.575M	17.741M
2462MHz	Pass	500k	17.575M	17.716M

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

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

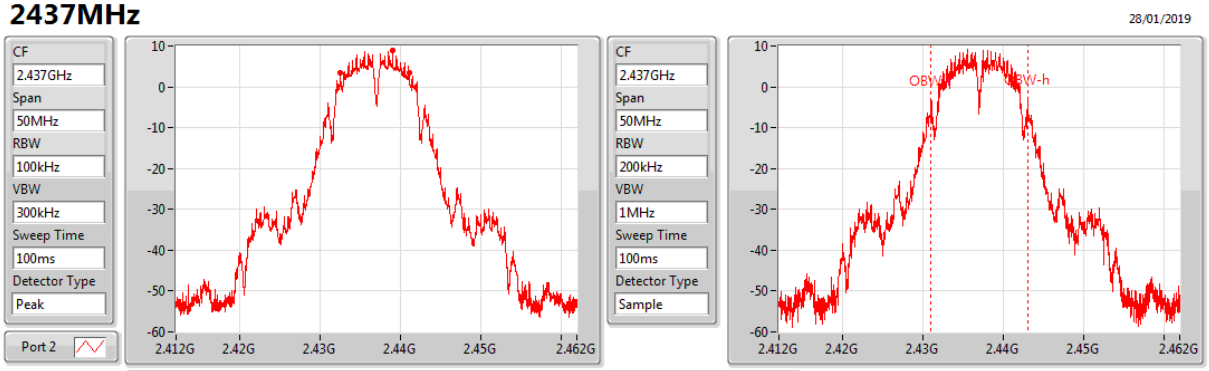
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8.05M	2.407975G	2.416025G	12.044M	2.405978G	2.418022G	500k	2

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

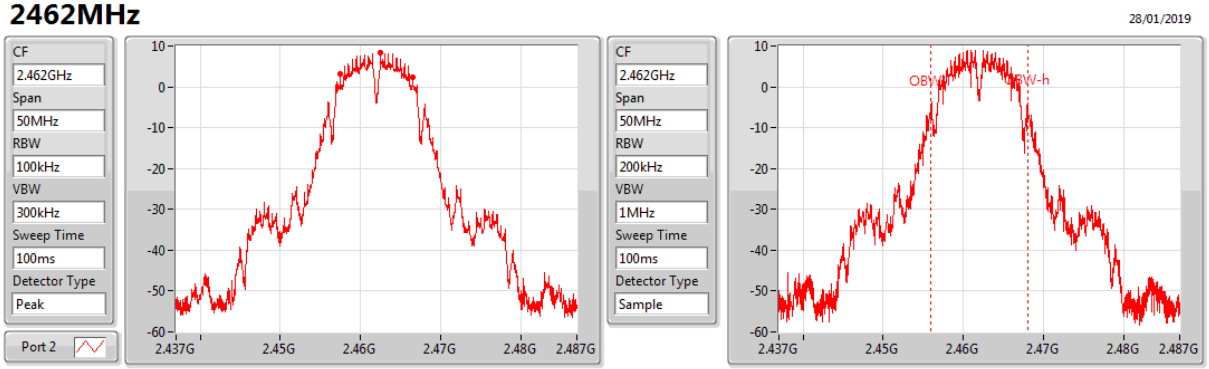
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8.55M	2.4325G	2.44105G	12.119M	2.430928G	2.443047G	500k	2

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

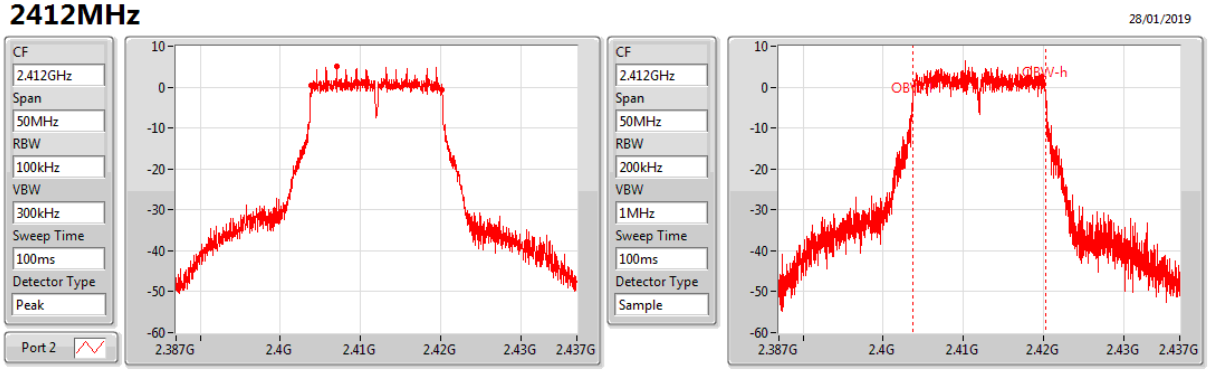
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
9.025M	2.4575G	2.466525G	12.094M	2.455953G	2.468047G	500k	2

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

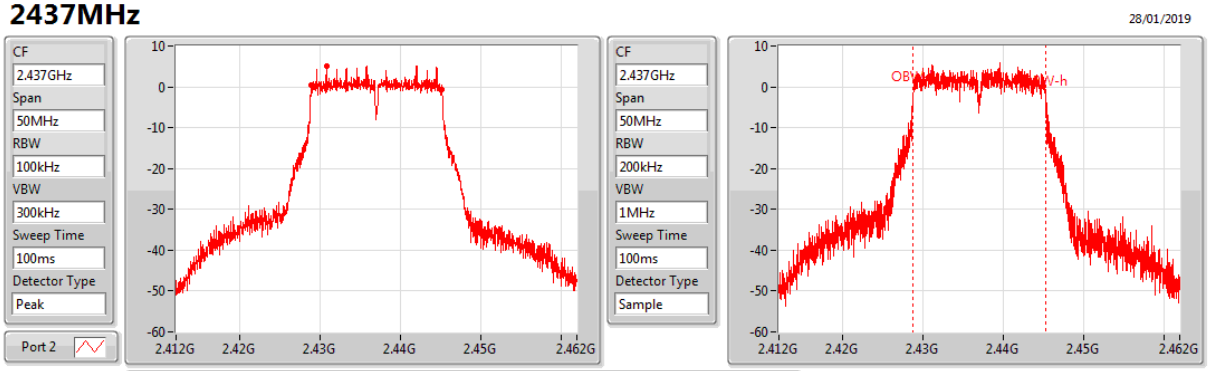
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.325M	2.40385G	2.420175G	16.617M	2.403679G	2.420296G	500k	2

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

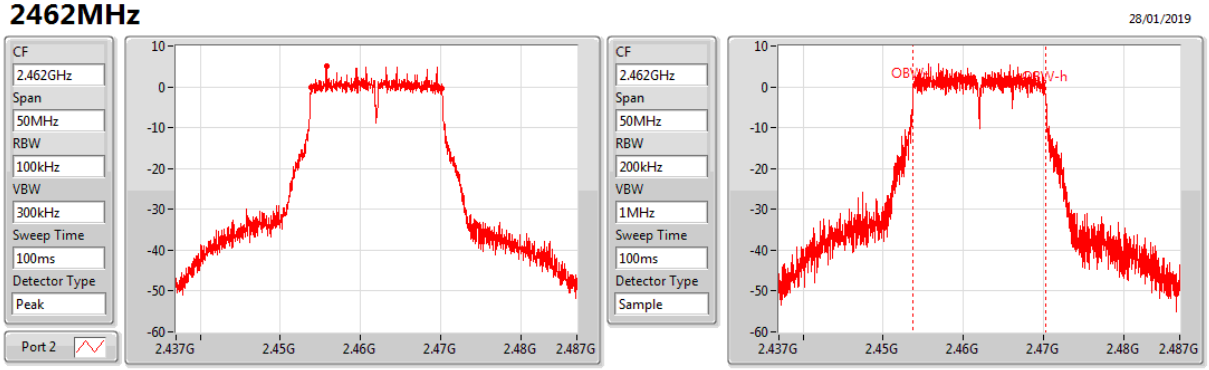
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.325M	2.42885G	2.445175G	16.567M	2.428729G	2.445296G	500k	2

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

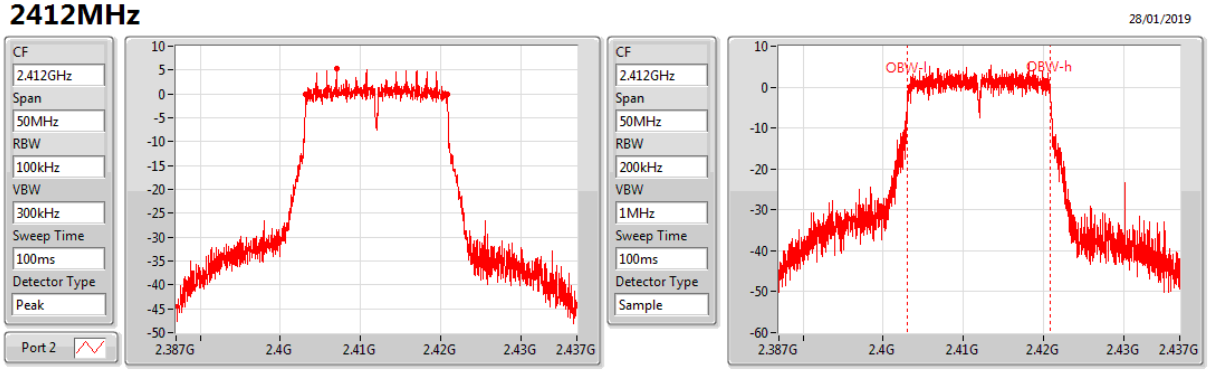
2462MHz



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	16.592M	2.453704G	2.470296G	500k	2

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

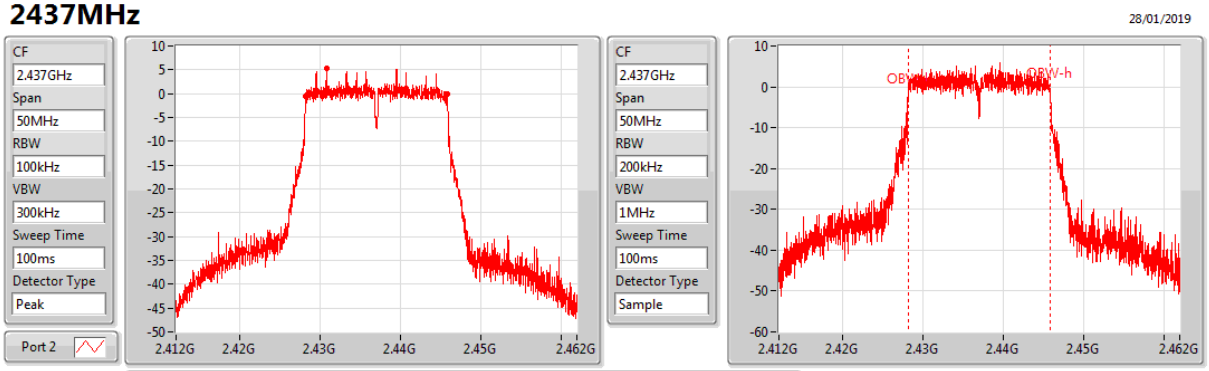
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.55M	2.403225G	2.420775G	17.791M	2.403079G	2.420871G	500k	2

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

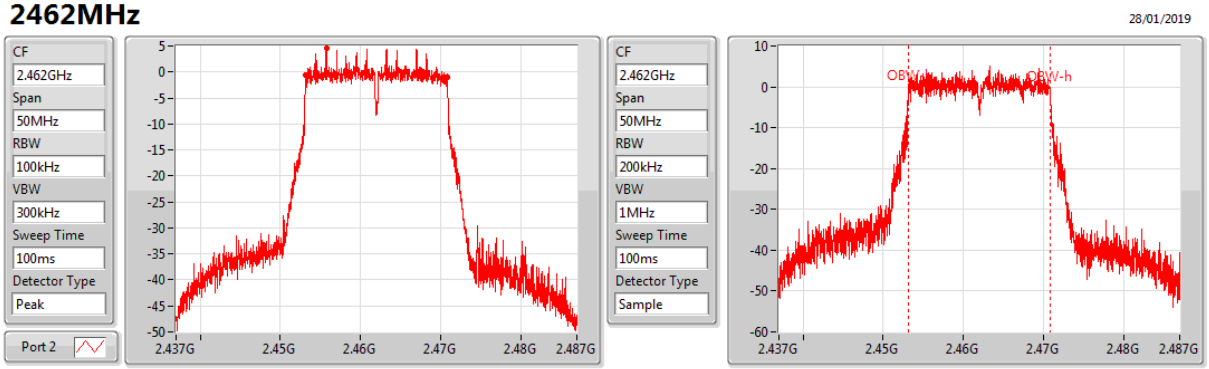
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.575M	2.428225G	2.4458G	17.741M	2.428104G	2.445846G	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
17.575M	2.453225G	2.4708G	17.716M	2.453129G	2.470846G	500k	2

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX(Port2)	17.93	0.06209
802.11g_Nss1,(6Mbps)_1TX(Port2)	16.97	0.04977
802.11n HT20_Nss1,(MCS0)_1TX(Port2)	16.90	0.04898

Result

Mode	Result	DG (dBi)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_1TX(Port2)	-	-	-	-	-
2412MHz	Pass	2.22	17.77	17.77	30.00
2437MHz	Pass	2.22	17.93	17.93	30.00
2457MHz	Pass	2.22	17.78	17.78	30.00
2462MHz	Pass	2.22	17.77	17.77	30.00
802.11g_Nss1,(6Mbps)_1TX(Port2)	-	-	-	-	-
2412MHz	Pass	2.22	16.86	16.86	30.00
2417MHz	Pass	2.22	16.97	16.97	30.00
2437MHz	Pass	2.22	16.84	16.84	30.00
2452MHz	Pass	2.22	16.83	16.83	30.00
2457MHz	Pass	2.22	16.77	16.77	30.00
2462MHz	Pass	2.22	16.73	16.73	30.00
802.11n HT20_Nss1,(MCS0)_1TX(Port2)	-	-	-	-	-
2412MHz	Pass	2.22	16.90	16.90	30.00
2417MHz	Pass	2.22	16.76	16.76	30.00
2422MHz	Pass	2.22	16.89	16.89	30.00
2437MHz	Pass	2.22	16.82	16.82	30.00
2452MHz	Pass	2.22	16.75	16.75	30.00
2457MHz	Pass	2.22	16.82	16.82	30.00
2462MHz	Pass	2.22	16.09	16.09	30.00

DG = Directional Gain; **Port X** = Port X output power
Note : Conducted average output power is for reference only

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_1TX(Port2)	-6.23
802.11g_Nss1,(6Mbps)_1TX(Port2)	-8.73
802.11n HT20_Nss1,(MCS0)_1TX(Port2)	-9.78

RBW=3kHz.

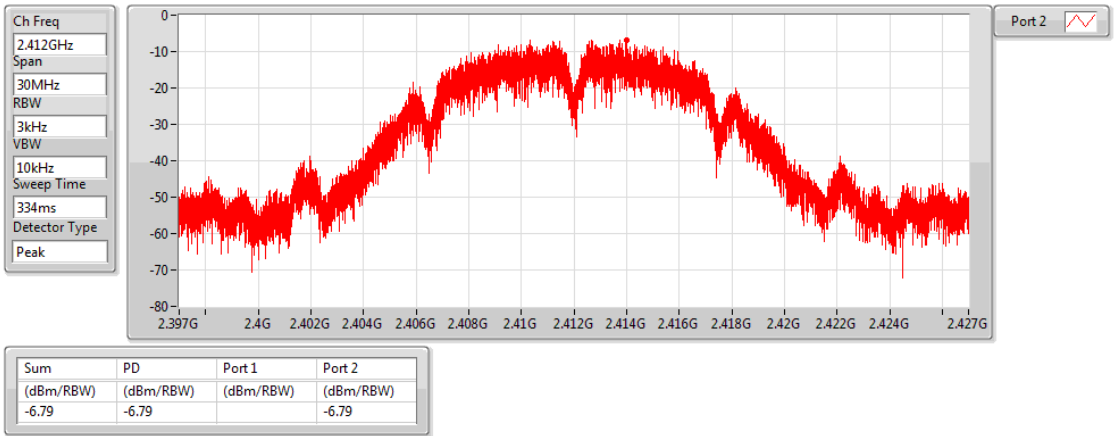
Result

Mode	Result	DG (dBi)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_1TX(Port2)	-	-	-	-	-
2412MHz	Pass	2.22	-6.79	-6.79	8.00
2437MHz	Pass	2.22	-6.48	-6.48	8.00
2462MHz	Pass	2.22	-6.23	-6.23	8.00
802.11g_Nss1,(6Mbps)_1TX(Port2)	-	-	-	-	-
2412MHz	Pass	2.22	-9.28	-9.28	8.00
2437MHz	Pass	2.22	-8.73	-8.73	8.00
2462MHz	Pass	2.22	-8.82	-8.82	8.00
802.11n HT20_Nss1,(MCS0)_1TX(Port2)	-	-	-	-	-
2412MHz	Pass	2.22	-9.93	-9.93	8.00
2437MHz	Pass	2.22	-10.00	-10.00	8.00
2462MHz	Pass	2.22	-9.78	-9.78	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

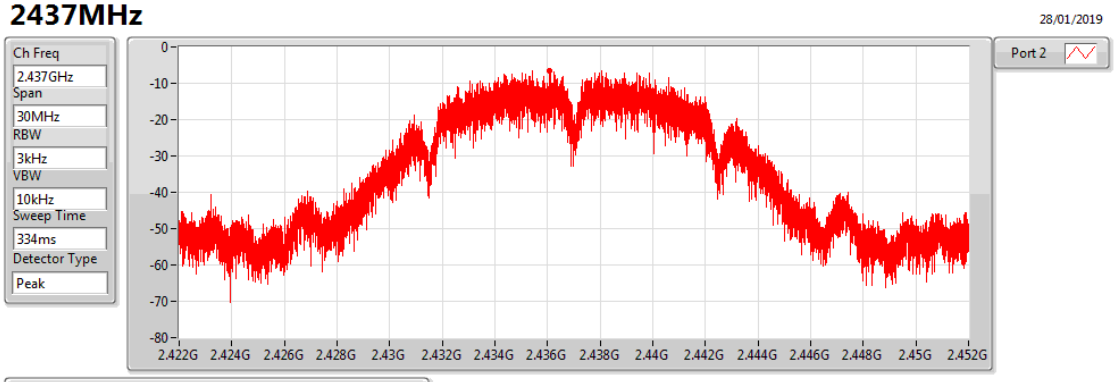
2412MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-6.79	-6.79		-6.79

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

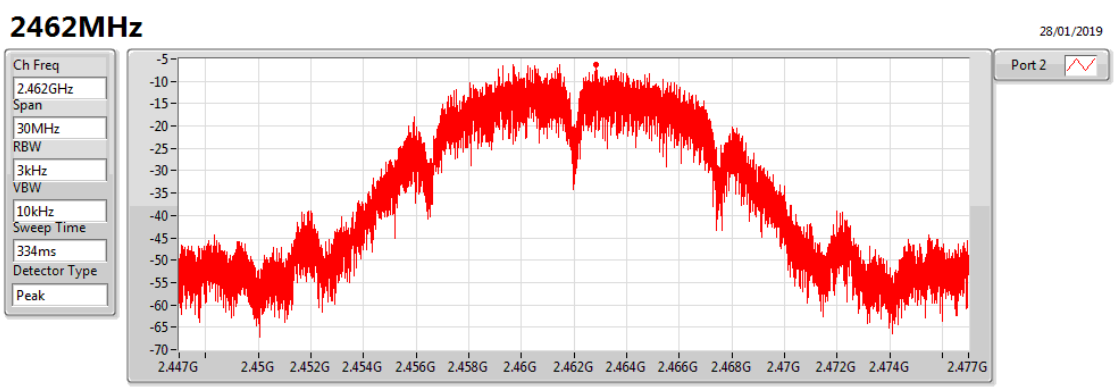
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-6.48	-6.48		-6.48

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

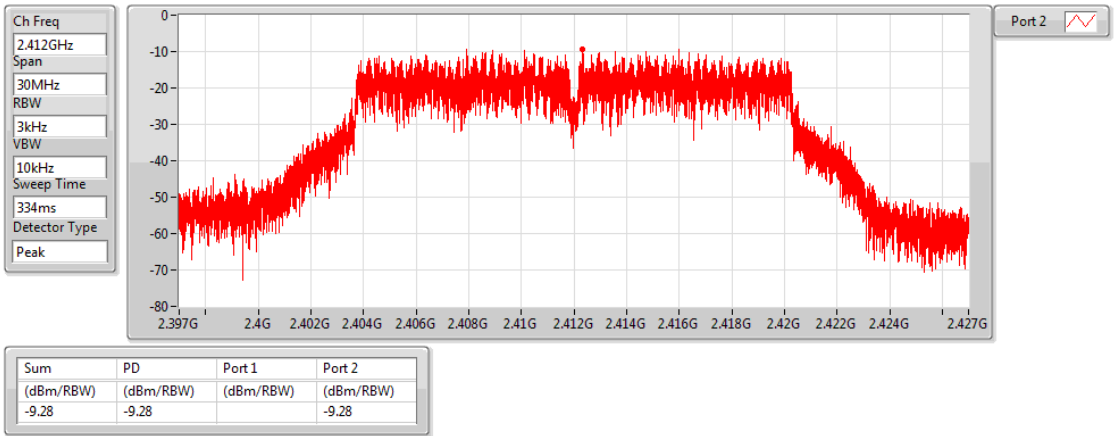
2462MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-6.23	-6.23		-6.23

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

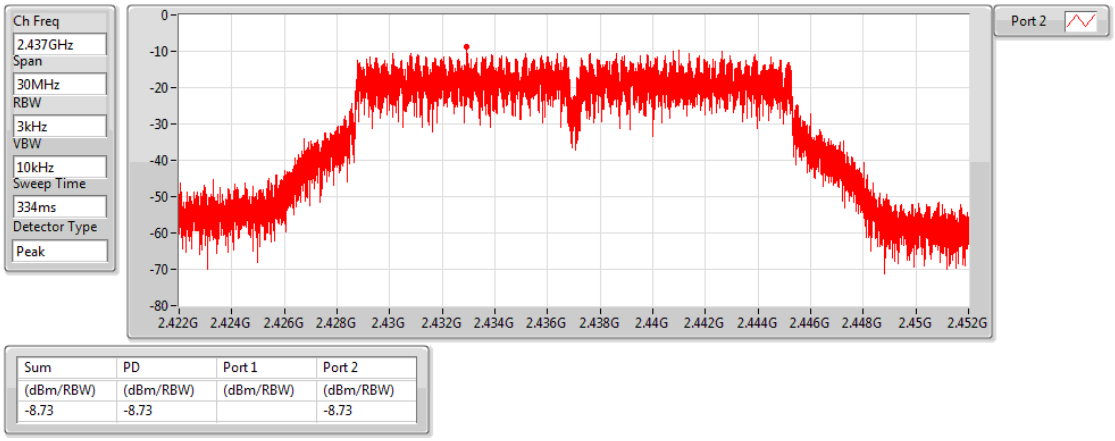
2412MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-9.28	-9.28		-9.28

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

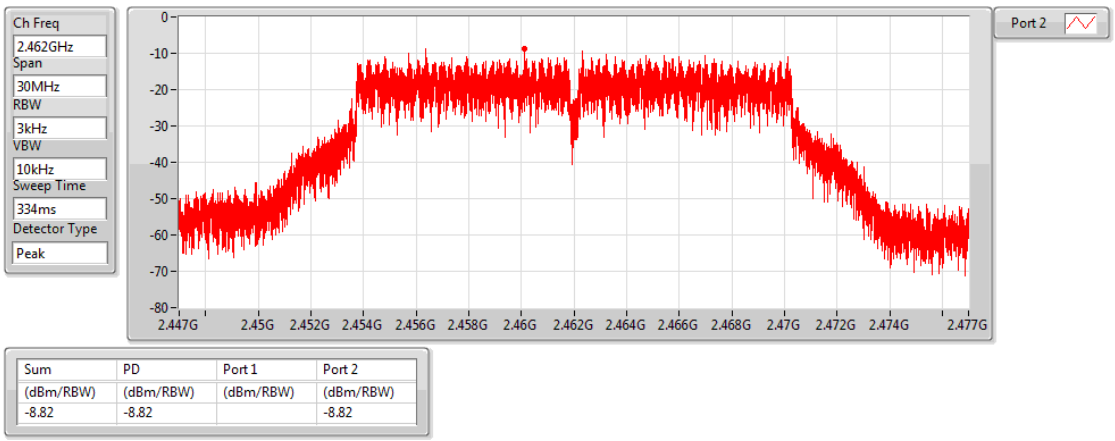
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-8.73	-8.73		-8.73

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

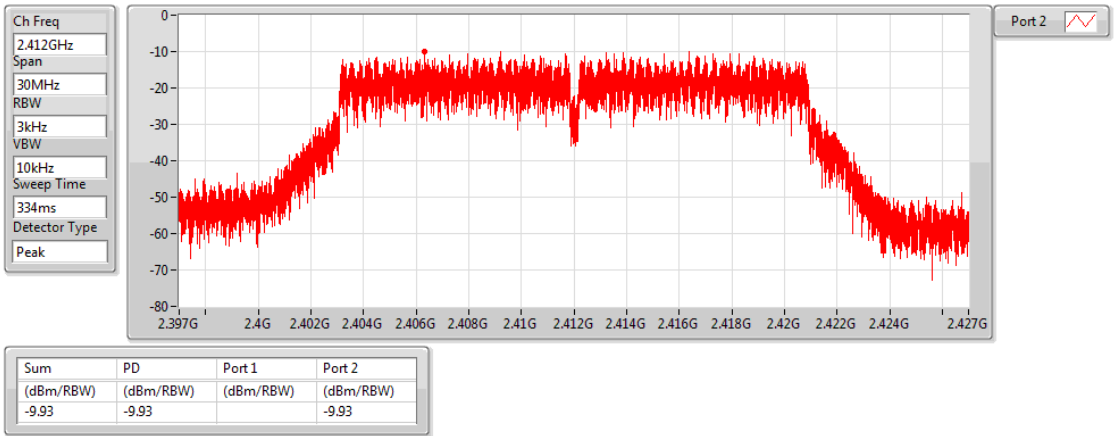
2462MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-8.82	-8.82		-8.82

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

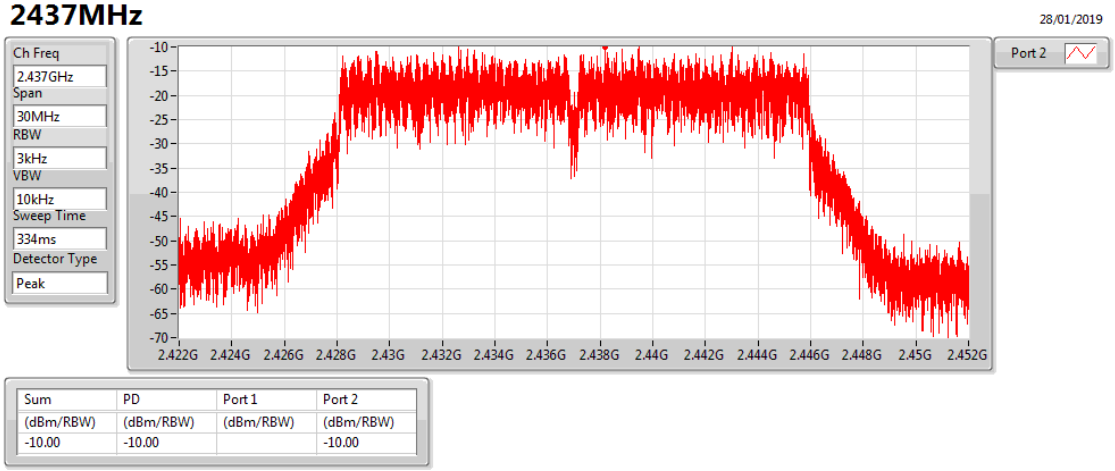
2412MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-9.93	-9.93		-9.93

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

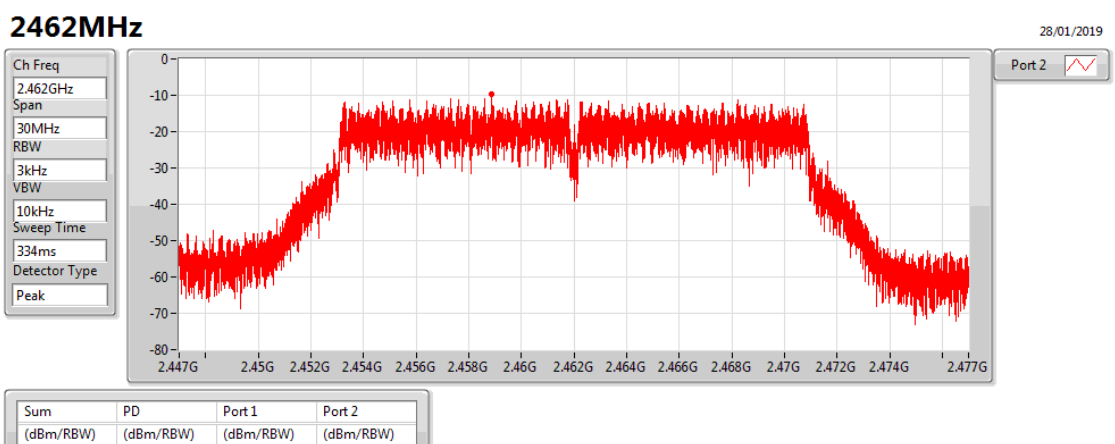
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.00	-10.00		-10.00

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

2462MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-9.78	-9.78		-9.78

Summary

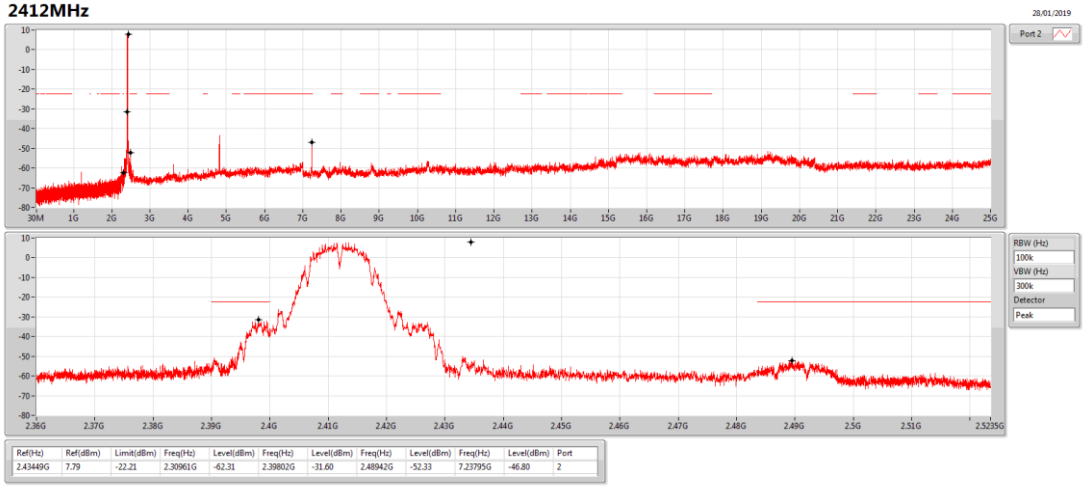
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX(Port2)	Pass	2.43449G	7.79	-22.21	2.30961G	-62.31	2.39802G	-31.60	2.48942G	-52.33	7.23795G	-46.80	2
802.11g_Nss1,(6Mbps)_1TX(Port2)	Pass	2.41954G	3.36	-26.64	2.30088G	-62.05	2.3998G	-28.27	2.48888G	-53.04	7.23233G	-51.05	2
802.11n HT20_Nss1,(MCS0)_1TX(Port2)	Pass	2.41699G	5.13	-24.87	2.30641G	-60.08	2.39698G	-26.37	2.4903G	-54.17	7.23514G	-50.51	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(Port2)	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43449G	7.79	-22.21	2.30961G	-62.31	2.39802G	-31.60	2.48942G	-52.33	7.23795G	-46.80	2
2437MHz	Pass	2.43449G	7.79	-22.21	2.30845G	-64.21	2.3975G	-54.00	2.51502G	-52.13	24.33975G	-53.07	2
2462MHz	Pass	2.43449G	7.79	-22.21	2.30903G	-61.13	2.39064G	-54.75	2.48352G	-49.33	15.29296G	-53.06	2
802.11g_Nss1,(6Mbps)_1TX(Port2)	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.41954G	3.36	-26.64	2.30088G	-62.05	2.3998G	-28.27	2.48888G	-53.04	7.23233G	-51.05	2
2437MHz	Pass	2.41954G	3.36	-26.64	2.15816G	-63.36	2.39886G	-51.38	2.51954G	-52.53	15.2761G	-53.27	2
2462MHz	Pass	2.41954G	3.36	-26.64	2.30845G	-60.33	2.3901G	-55.07	2.48384G	-37.67	15.31263G	-53.24	2
802.11n HT20_Nss1,(MCS0)_1TX(Port2)	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.41699G	5.13	-24.87	2.30641G	-60.08	2.39698G	-26.37	2.4903G	-54.17	7.23514G	-50.51	2
2437MHz	Pass	2.41699G	5.13	-24.87	2.30874G	-64.44	2.39262G	-51.25	2.48374G	-54.09	15.33791G	-52.73	2
2462MHz	Pass	2.41699G	5.13	-24.87	2.30845G	-60.68	2.39014G	-55.02	2.48388G	-38.82	15.29015G	-53.82	2

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

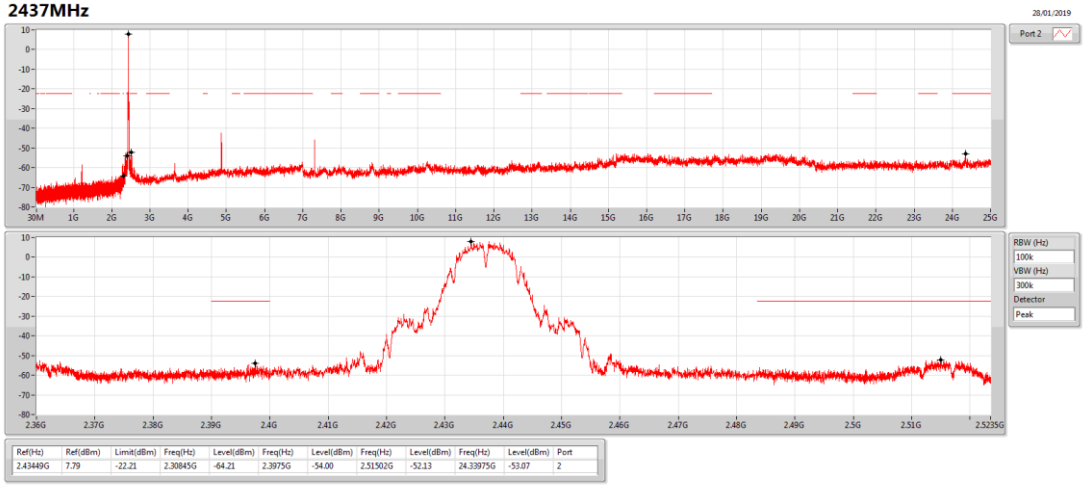
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43449G	7.79	-22.21	2.30961G	-62.31	2.39802G	-31.60	2.48942G	-52.33	7.23795G	-46.80	2

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

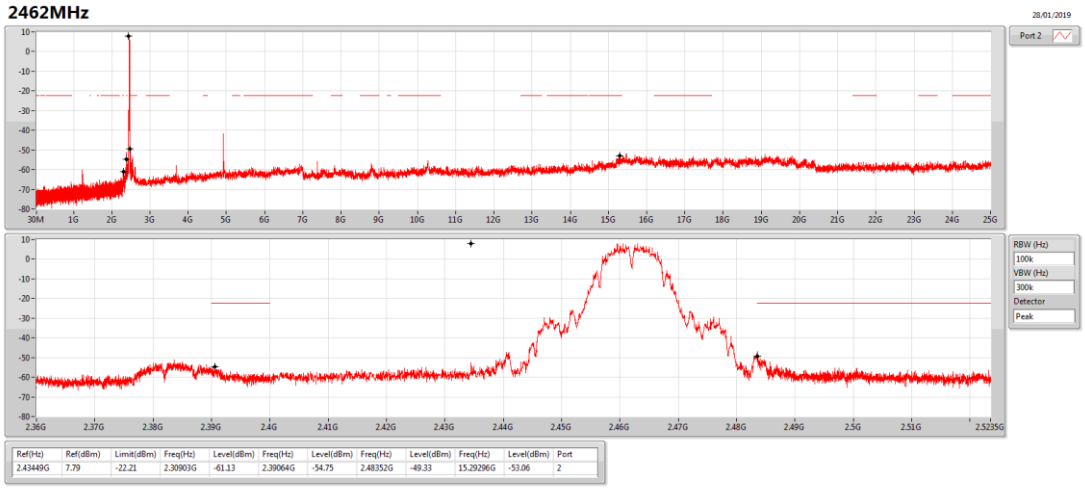
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43449G	7.79	-22.21	2.30845G	-64.21	2.3975G	-54.00	2.51502G	-52.13	24.33975G	-53.07	2

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

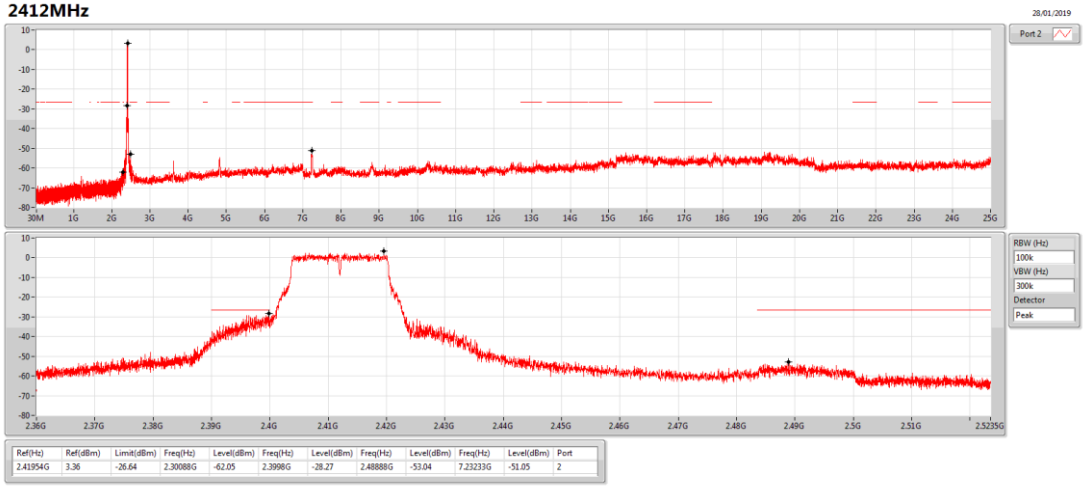
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43449G	7.79	-22.21	2.30903G	-61.13	2.39064G	-54.75	2.48352G	-49.33	15.29296G	-53.06	2

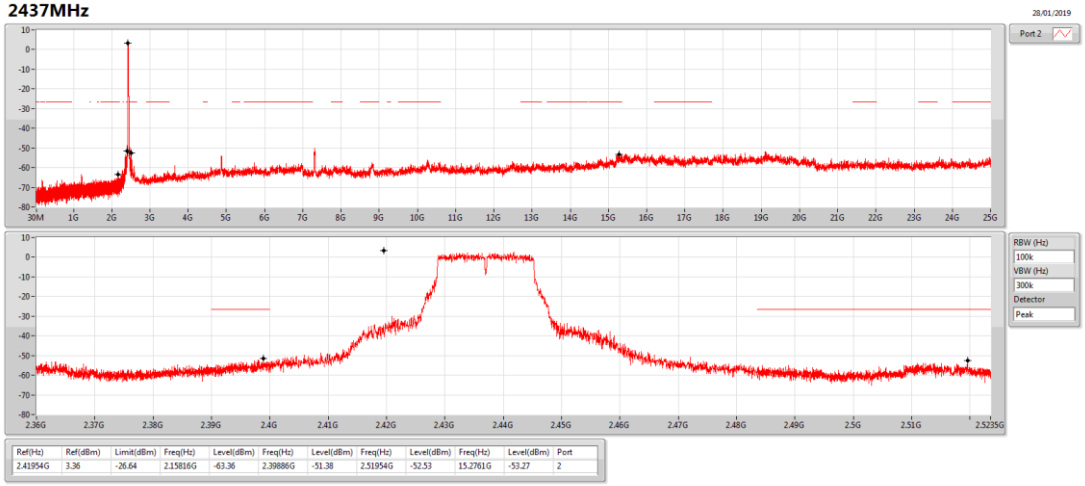
802.11g_Nss1,(6Mbps)_1TX(Port2) CSE NdB

2412MHz



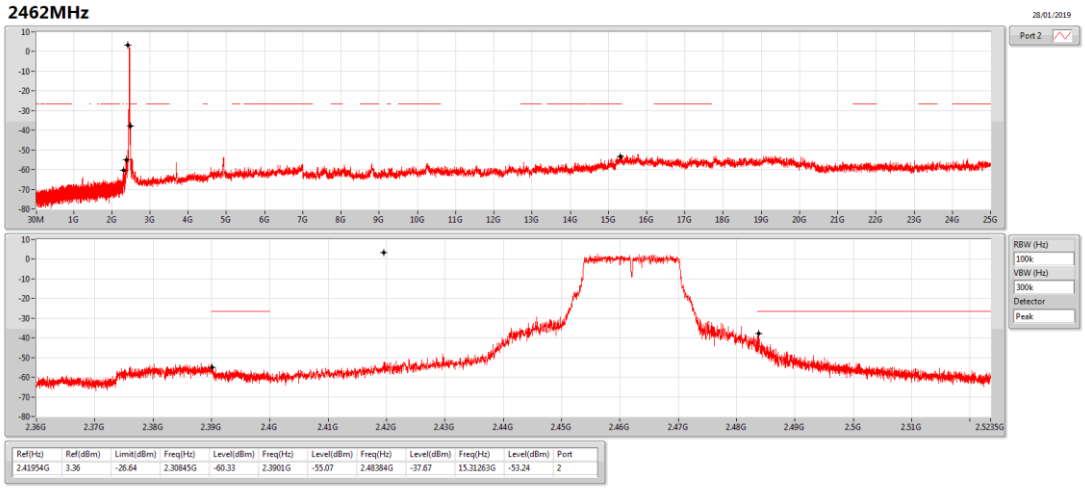
802.11g_Nss1,(6Mbps)_1TX(Port2) CSE NdB

2437MHz



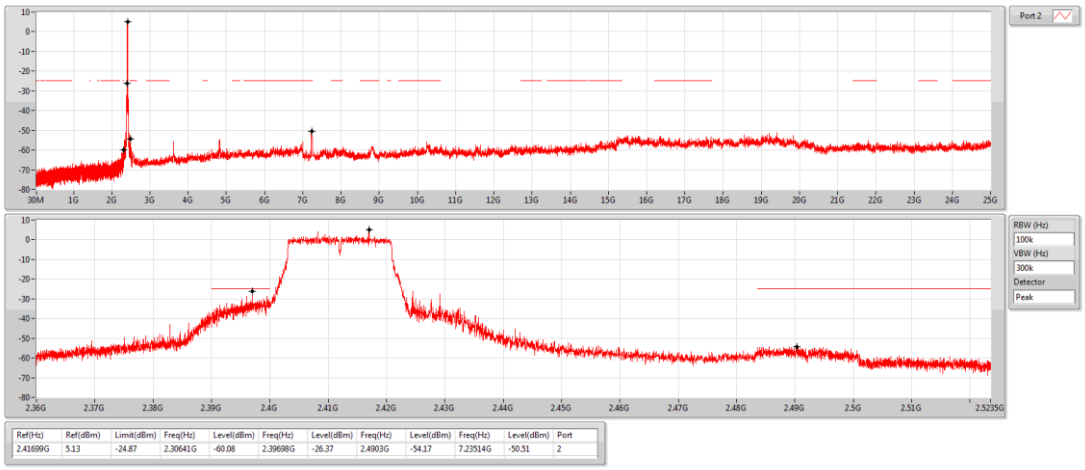
802.11g_Nss1,(6Mbps)_1TX(Port2) CSE NdB

2462MHz



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

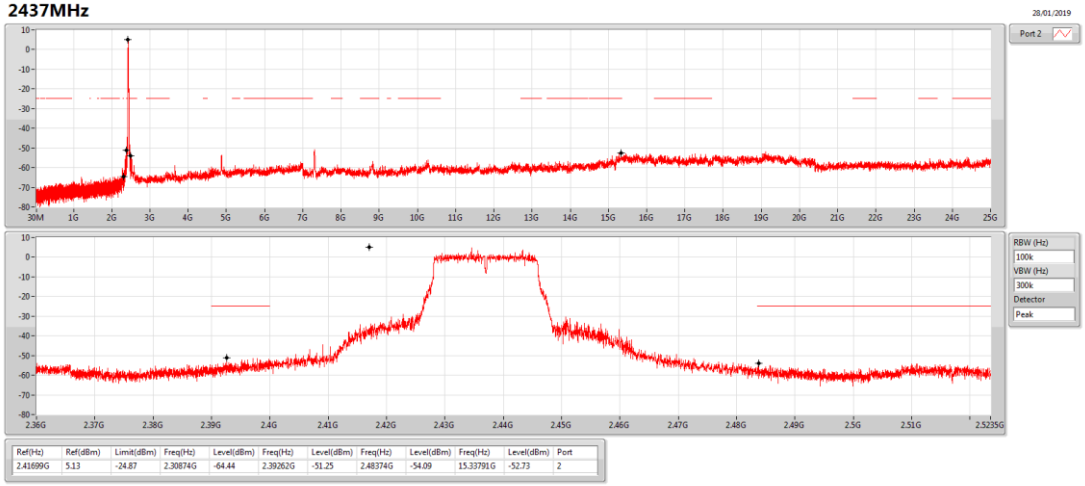
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.41699G	5.13	-24.87	2.30641G	-60.08	2.39698G	-26.37	2.4903G	-54.17	7.23514G	-50.51	2

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

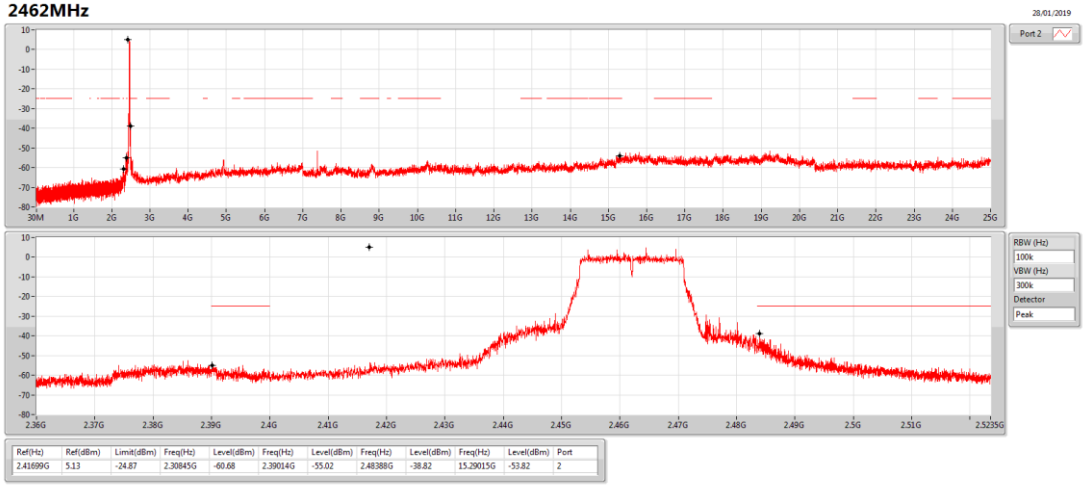
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.41699G	5.13	-24.87	2.30874G	-64.44	2.39262G	-51.25	2.48374G	-54.09	15.33791G	-52.73	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
2.41699G	5.13	-24.87	2.30845G	-60.68	2.39014G	-55.02	2.48388G	-38.82	15.29015G	-53.82	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	800.18M	41.17	46.00	-4.83	-8.13	3	Horizontal	360	1.00	-

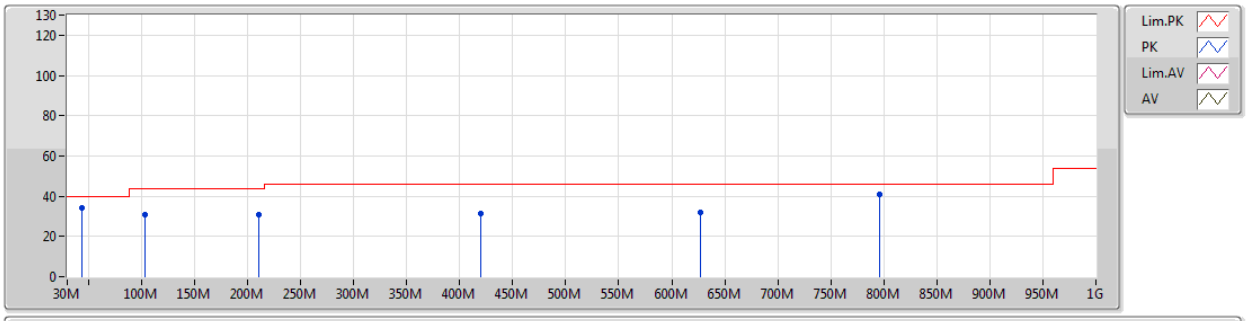
Result

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	43.58M	34.06	40.00	-5.94	-20.25	3	Vertical	0	2.00	-
2437MHz	Pass	PK	103.72M	30.68	43.50	-12.82	-20.68	3	Vertical	0	2.00	-
2437MHz	Pass	PK	210.42M	30.69	43.50	-12.81	-20.96	3	Vertical	0	2.00	-
2437MHz	Pass	PK	419.94M	31.58	46.00	-14.42	-13.22	3	Vertical	0	2.00	-
2437MHz	Pass	PK	627.52M	32.21	46.00	-13.79	-10.14	3	Vertical	0	2.00	-
2437MHz	Pass	PK	796.3M	40.96	46.00	-5.04	-8.13	3	Vertical	0	2.00	-
2437MHz	Pass	PK	43.58M	26.91	40.00	-13.09	-20.25	3	Horizontal	360	1.00	-
2437MHz	Pass	PK	103.72M	36.61	43.50	-6.89	-20.68	3	Horizontal	360	1.00	-
2437MHz	Pass	PK	256.98M	36.42	46.00	-9.58	-16.11	3	Horizontal	360	1.00	-
2437MHz	Pass	PK	445.16M	32.00	46.00	-14.00	-12.95	3	Horizontal	360	1.00	-
2437MHz	Pass	PK	600.36M	33.18	46.00	-12.82	-10.88	3	Horizontal	360	1.00	-
2437MHz	Pass	PK	800.18M	41.17	46.00	-4.83	-8.13	3	Horizontal	360	1.00	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

2437MHz_USB

25/01/2019

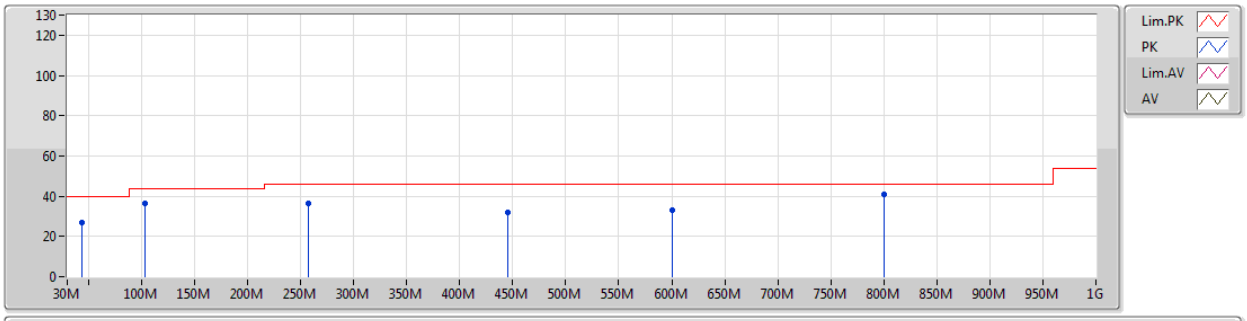


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	43.58M	34.06	40.00	-5.94	-20.25	3	Vertical	0	2.00	-
PK	103.72M	30.68	43.50	-12.82	-20.68	3	Vertical	0	2.00	-
PK	210.42M	30.69	43.50	-12.81	-20.96	3	Vertical	0	2.00	-
PK	419.94M	31.58	46.00	-14.42	-13.22	3	Vertical	0	2.00	-
PK	627.52M	32.21	46.00	-13.79	-10.14	3	Vertical	0	2.00	-
PK	796.3M	40.96	46.00	-5.04	-8.13	3	Vertical	0	2.00	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

2437MHz_USB

25/01/2019



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	43.58M	26.91	40.00	-13.09	-20.25	3	Horizontal	360	1.00	-
PK	103.72M	36.61	43.50	-6.89	-20.68	3	Horizontal	360	1.00	-
PK	256.98M	36.42	46.00	-9.58	-16.11	3	Horizontal	360	1.00	-
PK	445.16M	32.00	46.00	-14.00	-12.95	3	Horizontal	360	1.00	-
PK	600.36M	33.18	46.00	-12.82	-10.88	3	Horizontal	360	1.00	-
PK	800.18M	41.17	46.00	-4.83	-8.13	3	Horizontal	360	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	53.38	54.00	-0.62	31.11	3	Horizontal	65	1.46	-
802.11g_Nss1,(6Mbps)_1TX(Port2)	Pass	AV	2.4835G	53.49	54.00	-0.51	31.11	3	Horizontal	61	1.22	-
802.11n HT20_Nss1,(MCS0)_1TX(Port2)	Pass	PK	2.4836G	73.42	74.00	-0.58	31.11	3	Horizontal	64	1.49	-

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	2.39G	43.52	54.00	-10.48	30.77	3	Vertical	150	2.21	-
2412MHz	Pass	AV	2.4138G	97.64	Inf	-Inf	30.86	3	Vertical	150	2.21	-
2412MHz	Pass	PK	2.371G	56.42	74.00	-17.58	30.71	3	Vertical	150	2.21	-
2412MHz	Pass	PK	2.4128G	99.85	Inf	-Inf	30.86	3	Vertical	150	2.21	-
2412MHz	Pass	AV	2.39G	47.34	54.00	-6.66	30.77	3	Horizontal	208	1.50	-
2412MHz	Pass	AV	2.4138G	104.19	Inf	-Inf	30.86	3	Horizontal	208	1.50	-
2412MHz	Pass	PK	2.3882G	59.50	74.00	-14.50	30.77	3	Horizontal	208	1.50	-
2412MHz	Pass	PK	2.4128G	106.44	Inf	-Inf	30.86	3	Horizontal	208	1.50	-
2412MHz	Pass	AV	4.82398G	31.99	54.00	-22.01	2.13	3	Vertical	265	1.12	-
2412MHz	Pass	PK	4.82594G	44.02	74.00	-29.98	2.14	3	Vertical	265	1.12	-
2412MHz	Pass	AV	4.82403G	39.59	54.00	-14.41	2.13	3	Horizontal	330	2.12	-
2412MHz	Pass	PK	4.8241G	46.95	74.00	-27.05	2.13	3	Horizontal	330	2.12	-
2437MHz	Pass	AV	2.3854G	42.29	54.00	-11.71	30.76	3	Vertical	138	2.99	-
2437MHz	Pass	AV	2.4354G	99.13	Inf	-Inf	30.94	3	Vertical	138	2.99	-
2437MHz	Pass	AV	2.493G	43.11	54.00	-10.89	31.14	3	Vertical	138	2.99	-
2437MHz	Pass	PK	2.373G	55.28	74.00	-18.72	30.71	3	Vertical	138	2.99	-
2437MHz	Pass	PK	2.4362G	101.57	Inf	-Inf	30.94	3	Vertical	138	2.99	-
2437MHz	Pass	PK	2.4866G	56.25	74.00	-17.75	31.12	3	Vertical	138	2.99	-
2437MHz	Pass	AV	2.3586G	42.69	54.00	-11.31	30.66	3	Horizontal	60	1.06	-
2437MHz	Pass	AV	2.4354G	105.56	Inf	-Inf	30.94	3	Horizontal	60	1.06	-
2437MHz	Pass	AV	2.4862G	43.92	54.00	-10.08	31.12	3	Horizontal	60	1.06	-
2437MHz	Pass	PK	2.3622G	55.89	74.00	-18.11	30.67	3	Horizontal	60	1.06	-
2437MHz	Pass	PK	2.4362G	107.80	Inf	-Inf	30.94	3	Horizontal	60	1.06	-
2437MHz	Pass	PK	2.4866G	56.12	74.00	-17.88	31.12	3	Horizontal	60	1.06	-
2437MHz	Pass	AV	4.87154G	29.28	54.00	-24.72	2.24	3	Vertical	231	1.25	-
2437MHz	Pass	PK	4.87231G	42.96	74.00	-31.04	2.25	3	Vertical	231	1.25	-
2437MHz	Pass	AV	4.874G	35.99	54.00	-18.01	2.25	3	Horizontal	329	2.07	-
2437MHz	Pass	PK	4.87408G	44.63	74.00	-29.37	2.25	3	Horizontal	329	2.07	-
2457MHz	Pass	AV	2.4552G	98.19	Inf	-Inf	31.00	3	Vertical	145	2.04	-
2457MHz	Pass	AV	2.4835G	43.31	54.00	-10.69	31.11	3	Vertical	145	2.04	-
2457MHz	Pass	PK	2.456G	101.25	Inf	-Inf	31.01	3	Vertical	145	2.04	-
2457MHz	Pass	PK	2.489G	56.12	74.00	-17.88	31.13	3	Vertical	145	2.04	-
2457MHz	Pass	AV	2.4552G	104.70	Inf	-Inf	31.00	3	Horizontal	64	1.27	-
2457MHz	Pass	AV	2.4835G	46.35	54.00	-7.65	31.11	3	Horizontal	64	1.27	-
2457MHz	Pass	PK	2.4562G	108.03	Inf	-Inf	31.01	3	Horizontal	64	1.27	-
2457MHz	Pass	PK	2.484G	58.73	74.00	-15.27	31.12	3	Horizontal	64	1.27	-
2462MHz	Pass	AV	2.4612G	99.28	Inf	-Inf	31.03	3	Vertical	148	2.07	-
2462MHz	Pass	AV	2.4835G	47.55	54.00	-6.45	31.11	3	Vertical	148	2.07	-
2462MHz	Pass	PK	2.461G	101.52	Inf	-Inf	31.03	3	Vertical	148	2.07	-
2462MHz	Pass	PK	2.4836G	57.19	74.00	-16.81	31.11	3	Vertical	148	2.07	-
2462MHz	Pass	AV	2.4638G	105.67	Inf	-Inf	31.04	3	Horizontal	65	1.46	-
2462MHz	Pass	AV	2.4835G	53.38	54.00	-0.62	31.11	3	Horizontal	65	1.46	-
2462MHz	Pass	PK	2.4628G	107.97	Inf	-Inf	31.04	3	Horizontal	65	1.46	-
2462MHz	Pass	PK	2.4856G	61.09	74.00	-12.91	31.12	3	Horizontal	65	1.46	-
2462MHz	Pass	AV	4.92225G	29.84	54.00	-24.16	2.38	3	Vertical	326	2.19	-
2462MHz	Pass	PK	4.92222G	44.15	74.00	-29.85	2.38	3	Vertical	326	2.19	-
2462MHz	Pass	AV	4.9215G	36.84	54.00	-17.16	2.37	3	Horizontal	93	1.92	-

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2462MHz	Pass	PK	4.92189G	51.20	74.00	-22.80	2.38	3	Horizontal	93	1.92	-
802.11g_Nss1,(6Mbps)_1TX(Port2)	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	AV	2.39G	46.85	54.00	-7.15	30.77	3	Vertical	145	2.70	-
2412MHz	Pass	AV	2.4176G	91.71	Inf	-Inf	30.87	3	Vertical	145	2.70	-
2412MHz	Pass	PK	2.39G	62.76	74.00	-11.24	30.77	3	Vertical	145	2.70	-
2412MHz	Pass	PK	2.4182G	101.02	Inf	-Inf	30.87	3	Vertical	145	2.70	-
2412MHz	Pass	AV	2.39G	52.79	54.00	-1.21	30.77	3	Horizontal	207	1.28	-
2412MHz	Pass	AV	2.4176G	97.36	Inf	-Inf	30.87	3	Horizontal	207	1.28	-
2412MHz	Pass	PK	2.39G	69.74	74.00	-4.26	30.77	3	Horizontal	207	1.28	-
2412MHz	Pass	PK	2.4102G	106.66	Inf	-Inf	30.85	3	Horizontal	207	1.28	-
2412MHz	Pass	AV	4.82648G	30.94	54.00	-23.06	2.14	3	Vertical	176	1.06	-
2412MHz	Pass	PK	4.822G	42.92	74.00	-31.08	2.13	3	Vertical	176	1.06	-
2412MHz	Pass	AV	4.82625G	29.95	54.00	-24.05	2.14	3	Horizontal	323	2.33	-
2412MHz	Pass	PK	4.82631G	44.15	74.00	-29.85	2.14	3	Horizontal	323	2.33	-
2417MHz	Pass	AV	2.39G	46.43	54.00	-7.57	30.77	3	Vertical	138	2.99	-
2417MHz	Pass	AV	2.4202G	94.56	Inf	-Inf	30.89	3	Vertical	138	2.99	-
2417MHz	Pass	PK	2.3896G	63.38	74.00	-10.62	30.77	3	Vertical	138	2.99	-
2417MHz	Pass	PK	2.4152G	103.76	Inf	-Inf	30.86	3	Vertical	138	2.99	-
2417MHz	Pass	AV	2.389G	51.58	54.00	-2.42	30.77	3	Horizontal	205	1.49	-
2417MHz	Pass	AV	2.4196G	99.59	Inf	-Inf	30.88	3	Horizontal	205	1.49	-
2417MHz	Pass	PK	2.3898G	70.79	74.00	-3.21	30.77	3	Horizontal	205	1.49	-
2417MHz	Pass	PK	2.4152G	109.03	Inf	-Inf	30.86	3	Horizontal	205	1.49	-
2437MHz	Pass	AV	2.3882G	43.36	54.00	-10.64	30.77	3	Vertical	139	2.99	-
2437MHz	Pass	AV	2.4342G	94.98	Inf	-Inf	30.94	3	Vertical	139	2.99	-
2437MHz	Pass	AV	2.4874G	44.05	54.00	-9.95	31.12	3	Vertical	139	2.99	-
2437MHz	Pass	PK	2.347G	55.87	74.00	-18.13	30.62	3	Vertical	139	2.99	-
2437MHz	Pass	PK	2.4354G	104.42	Inf	-Inf	30.94	3	Vertical	139	2.99	-
2437MHz	Pass	PK	2.487G	56.76	74.00	-17.24	31.12	3	Vertical	139	2.99	-
2437MHz	Pass	AV	2.389G	44.74	54.00	-9.26	30.77	3	Horizontal	61	1.05	-
2437MHz	Pass	AV	2.4342G	101.05	Inf	-Inf	30.94	3	Horizontal	61	1.05	-
2437MHz	Pass	AV	2.4835G	46.33	54.00	-7.67	31.11	3	Horizontal	61	1.05	-
2437MHz	Pass	PK	2.387G	59.80	74.00	-14.20	30.76	3	Horizontal	61	1.05	-
2437MHz	Pass	PK	2.435G	110.49	Inf	-Inf	30.94	3	Horizontal	61	1.05	-
2437MHz	Pass	PK	2.4862G	61.25	74.00	-12.75	31.12	3	Horizontal	61	1.05	-
2437MHz	Pass	AV	4.87399G	31.55	54.00	-22.45	2.25	3	Vertical	13	1.82	-
2437MHz	Pass	PK	4.87159G	43.51	74.00	-30.49	2.24	3	Vertical	13	1.82	-
2437MHz	Pass	AV	4.874G	31.46	54.00	-22.54	2.25	3	Horizontal	130	1.44	-
2437MHz	Pass	PK	4.87381G	44.14	74.00	-29.86	2.25	3	Horizontal	130	1.44	-
2452MHz	Pass	AV	2.4492G	93.96	Inf	-Inf	30.99	3	Vertical	133	2.67	-
2452MHz	Pass	AV	2.4852G	44.80	54.00	-9.20	31.12	3	Vertical	133	2.67	-
2452MHz	Pass	PK	2.4502G	103.44	Inf	-Inf	30.99	3	Vertical	133	2.67	-
2452MHz	Pass	PK	2.4836G	58.80	74.00	-15.20	31.11	3	Vertical	133	2.67	-
2452MHz	Pass	AV	2.446G	101.30	Inf	-Inf	30.98	3	Horizontal	62	1.01	-
2452MHz	Pass	AV	2.4836G	51.19	54.00	-2.81	31.11	3	Horizontal	62	1.01	-
2452MHz	Pass	PK	2.4502G	110.58	Inf	-Inf	30.99	3	Horizontal	62	1.01	-
2452MHz	Pass	PK	2.4835G	68.37	74.00	-5.63	31.11	3	Horizontal	62	1.01	-
2457MHz	Pass	AV	2.451G	95.23	Inf	-Inf	30.99	3	Vertical	142	2.99	-
2457MHz	Pass	AV	2.4836G	47.72	54.00	-6.28	31.11	3	Vertical	142	2.99	-
2457MHz	Pass	PK	2.4526G	104.04	Inf	-Inf	31.00	3	Vertical	142	2.99	-

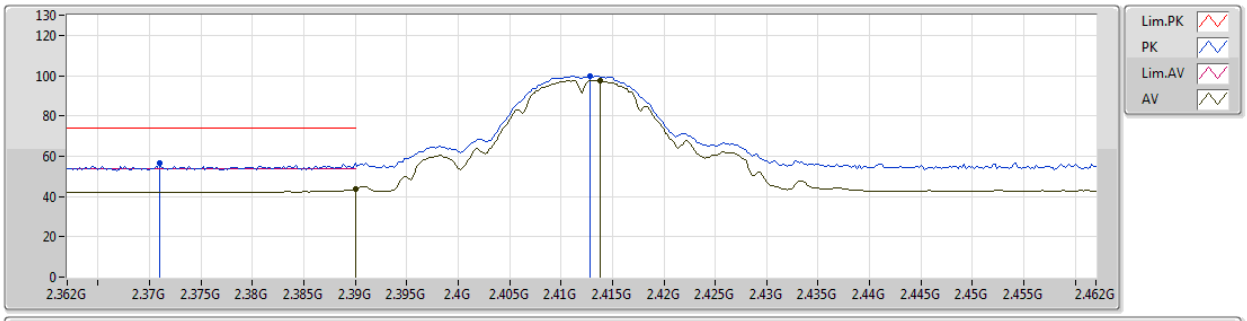
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2457MHz	Pass	PK	2.4842G	64.82	74.00	-9.18	31.12	3	Vertical	142	2.99	-
2457MHz	Pass	AV	2.4542G	101.46	Inf	-Inf	31.00	3	Horizontal	61	1.22	-
2457MHz	Pass	AV	2.4835G	53.49	54.00	-0.51	31.11	3	Horizontal	61	1.22	-
2457MHz	Pass	PK	2.4552G	110.93	Inf	-Inf	31.00	3	Horizontal	61	1.22	-
2457MHz	Pass	PK	2.4842G	73.32	74.00	-0.68	31.12	3	Horizontal	61	1.22	-
2462MHz	Pass	AV	2.4612G	91.24	Inf	-Inf	31.03	3	Vertical	144	2.33	-
2462MHz	Pass	AV	2.4835G	48.33	54.00	-5.67	31.11	3	Vertical	144	2.33	-
2462MHz	Pass	PK	2.4602G	100.57	Inf	-Inf	31.03	3	Vertical	144	2.33	-
2462MHz	Pass	PK	2.4836G	66.71	74.00	-7.29	31.11	3	Vertical	144	2.33	-
2462MHz	Pass	AV	2.4612G	98.58	Inf	-Inf	31.03	3	Horizontal	66	1.50	-
2462MHz	Pass	AV	2.4835G	53.04	54.00	-0.96	31.11	3	Horizontal	66	1.50	-
2462MHz	Pass	PK	2.4602G	107.91	Inf	-Inf	31.03	3	Horizontal	66	1.50	-
2462MHz	Pass	PK	2.4835G	73.04	74.00	-0.96	31.11	3	Horizontal	66	1.50	-
2462MHz	Pass	AV	4.92152G	29.98	54.00	-24.02	2.37	3	Vertical	91	1.72	-
2462MHz	Pass	PK	4.92581G	43.69	74.00	-30.31	2.39	3	Vertical	91	1.72	-
2462MHz	Pass	AV	4.92297G	30.44	54.00	-23.56	2.38	3	Horizontal	61	2.37	-
2462MHz	Pass	PK	4.92283G	44.03	74.00	-29.97	2.38	3	Horizontal	61	2.37	-
802.11n HT20_Nss1,(MCS0)_1TX(Port2)	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	AV	2.39G	47.54	54.00	-6.46	30.77	3	Vertical	145	2.72	-
2412MHz	Pass	AV	2.42G	90.77	Inf	-Inf	30.89	3	Vertical	145	2.72	-
2412MHz	Pass	PK	2.3894G	65.60	74.00	-8.40	30.77	3	Vertical	145	2.72	-
2412MHz	Pass	PK	2.4148G	100.59	Inf	-Inf	30.86	3	Vertical	145	2.72	-
2412MHz	Pass	AV	2.39G	53.41	54.00	-0.59	30.77	3	Horizontal	207	1.32	-
2412MHz	Pass	AV	2.4176G	96.38	Inf	-Inf	30.87	3	Horizontal	207	1.32	-
2412MHz	Pass	PK	2.3898G	71.98	74.00	-2.02	30.77	3	Horizontal	207	1.32	-
2412MHz	Pass	PK	2.4138G	106.15	Inf	-Inf	30.86	3	Horizontal	207	1.32	-
2412MHz	Pass	AV	4.82618G	30.54	54.00	-23.46	2.14	3	Vertical	125	2.30	-
2412MHz	Pass	PK	4.82241G	42.99	74.00	-31.01	2.13	3	Vertical	125	2.30	-
2412MHz	Pass	AV	4.82645G	30.43	54.00	-23.57	2.14	3	Horizontal	137	1.07	-
2412MHz	Pass	PK	4.82576G	43.04	74.00	-30.96	2.14	3	Horizontal	137	1.07	-
2417MHz	Pass	AV	2.39G	45.21	54.00	-8.79	30.77	3	Vertical	139	2.99	-
2417MHz	Pass	AV	2.4204G	93.81	Inf	-Inf	30.89	3	Vertical	139	2.99	-
2417MHz	Pass	PK	2.3898G	64.45	74.00	-9.55	30.77	3	Vertical	139	2.99	-
2417MHz	Pass	PK	2.4198G	104.05	Inf	-Inf	30.89	3	Vertical	139	2.99	-
2417MHz	Pass	AV	2.39G	51.32	54.00	-2.68	30.77	3	Horizontal	204	1.34	-
2417MHz	Pass	AV	2.4216G	99.06	Inf	-Inf	30.89	3	Horizontal	204	1.34	-
2417MHz	Pass	PK	2.389G	73.28	74.00	-0.72	30.77	3	Horizontal	204	1.34	-
2417MHz	Pass	PK	2.4204G	109.02	Inf	-Inf	30.89	3	Horizontal	204	1.34	-
2422MHz	Pass	AV	2.39G	45.87	54.00	-8.13	30.77	3	Vertical	137	2.99	-
2422MHz	Pass	AV	2.419G	94.64	Inf	-Inf	30.88	3	Vertical	137	2.99	-
2422MHz	Pass	PK	2.389G	62.99	74.00	-11.01	30.77	3	Vertical	137	2.99	-
2422MHz	Pass	PK	2.4262G	104.44	Inf	-Inf	30.90	3	Vertical	137	2.99	-
2422MHz	Pass	AV	2.39G	49.71	54.00	-4.29	30.77	3	Horizontal	59	1.03	-
2422MHz	Pass	AV	2.4244G	99.85	Inf	-Inf	30.90	3	Horizontal	59	1.03	-
2422MHz	Pass	PK	2.3894G	69.66	74.00	-4.34	30.77	3	Horizontal	59	1.03	-
2422MHz	Pass	PK	2.4242G	110.79	Inf	-Inf	30.90	3	Horizontal	59	1.03	-
2437MHz	Pass	AV	2.389G	43.40	54.00	-10.60	30.77	3	Vertical	144	2.65	-
2437MHz	Pass	AV	2.4394G	94.71	Inf	-Inf	30.95	3	Vertical	144	2.65	-
2437MHz	Pass	AV	2.4835G	44.24	54.00	-9.76	31.11	3	Vertical	144	2.65	-

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2437MHz	Pass	PK	2.389G	56.26	74.00	-17.74	30.77	3	Vertical	144	2.65	-
2437MHz	Pass	PK	2.4358G	104.88	Inf	-Inf	30.94	3	Vertical	144	2.65	-
2437MHz	Pass	PK	2.4835G	56.56	74.00	-17.44	31.11	3	Vertical	144	2.65	-
2437MHz	Pass	AV	2.389G	45.31	54.00	-8.69	30.77	3	Horizontal	62	1.08	-
2437MHz	Pass	AV	2.4342G	100.98	Inf	-Inf	30.94	3	Horizontal	62	1.08	-
2437MHz	Pass	AV	2.4835G	46.93	54.00	-7.07	31.11	3	Horizontal	62	1.08	-
2437MHz	Pass	PK	2.3898G	60.48	74.00	-13.52	30.77	3	Horizontal	62	1.08	-
2437MHz	Pass	PK	2.433G	110.73	Inf	-Inf	30.93	3	Horizontal	62	1.08	-
2437MHz	Pass	PK	2.4854G	63.83	74.00	-10.17	31.12	3	Horizontal	62	1.08	-
2437MHz	Pass	AV	4.874G	31.50	54.00	-22.50	2.25	3	Vertical	73	1.85	-
2437MHz	Pass	PK	4.87603G	43.28	74.00	-30.72	2.26	3	Vertical	73	1.85	-
2437MHz	Pass	AV	4.87393G	30.17	54.00	-23.83	2.25	3	Horizontal	37	1.74	-
2437MHz	Pass	PK	4.87406G	43.65	74.00	-30.35	2.25	3	Horizontal	37	1.74	-
2452MHz	Pass	AV	2.4536G	93.11	Inf	-Inf	31.00	3	Vertical	134	1.50	-
2452MHz	Pass	AV	2.4835G	46.81	54.00	-7.19	31.11	3	Vertical	134	1.50	-
2452MHz	Pass	PK	2.4536G	102.91	Inf	-Inf	31.00	3	Vertical	134	1.50	-
2452MHz	Pass	PK	2.4842G	63.99	74.00	-10.01	31.12	3	Vertical	134	1.50	-
2452MHz	Pass	AV	2.449G	100.96	Inf	-Inf	30.99	3	Horizontal	59	1.04	-
2452MHz	Pass	AV	2.4835G	52.14	54.00	-1.86	31.11	3	Horizontal	59	1.04	-
2452MHz	Pass	PK	2.4542G	111.77	Inf	-Inf	31.00	3	Horizontal	59	1.04	-
2452MHz	Pass	PK	2.4836G	71.68	74.00	-2.32	31.11	3	Horizontal	59	1.04	-
2457MHz	Pass	AV	2.45G	94.43	Inf	-Inf	30.99	3	Vertical	142	2.99	-
2457MHz	Pass	AV	2.4835G	47.77	54.00	-6.23	31.11	3	Vertical	142	2.99	-
2457MHz	Pass	PK	2.4506G	104.27	Inf	-Inf	30.99	3	Vertical	142	2.99	-
2457MHz	Pass	PK	2.4852G	68.94	74.00	-5.06	31.12	3	Vertical	142	2.99	-
2457MHz	Pass	AV	2.462G	100.39	Inf	-Inf	31.03	3	Horizontal	63	1.49	-
2457MHz	Pass	AV	2.4835G	53.35	54.00	-0.65	31.11	3	Horizontal	63	1.49	-
2457MHz	Pass	PK	2.4584G	110.45	Inf	-Inf	31.02	3	Horizontal	63	1.49	-
2457MHz	Pass	PK	2.4836G	73.30	74.00	-0.70	31.11	3	Horizontal	63	1.49	-
2462MHz	Pass	AV	2.4632G	89.53	Inf	-Inf	31.04	3	Vertical	144	2.11	-
2462MHz	Pass	AV	2.4835G	46.41	54.00	-7.59	31.11	3	Vertical	144	2.11	-
2462MHz	Pass	PK	2.465G	99.42	Inf	-Inf	31.04	3	Vertical	144	2.11	-
2462MHz	Pass	PK	2.484G	63.65	74.00	-10.35	31.12	3	Vertical	144	2.11	-
2462MHz	Pass	AV	2.4634G	97.37	Inf	-Inf	31.04	3	Horizontal	64	1.49	-
2462MHz	Pass	AV	2.4835G	51.30	54.00	-2.70	31.11	3	Horizontal	64	1.49	-
2462MHz	Pass	PK	2.4648G	107.47	Inf	-Inf	31.04	3	Horizontal	64	1.49	-
2462MHz	Pass	PK	2.4836G	73.42	74.00	-0.58	31.11	3	Horizontal	64	1.49	-
2462MHz	Pass	AV	4.92157G	29.96	54.00	-24.04	2.37	3	Vertical	85	2.37	-
2462MHz	Pass	PK	4.92319G	43.84	74.00	-30.16	2.38	3	Vertical	85	2.37	-
2462MHz	Pass	AV	4.92233G	29.94	54.00	-24.06	2.38	3	Horizontal	295	2.12	-
2462MHz	Pass	PK	4.92183G	43.48	74.00	-30.52	2.37	3	Horizontal	295	2.12	-

802.11b_Nss1,(1Mbps)_1TX(Port2)

24/01/2019

2412MHz_TX

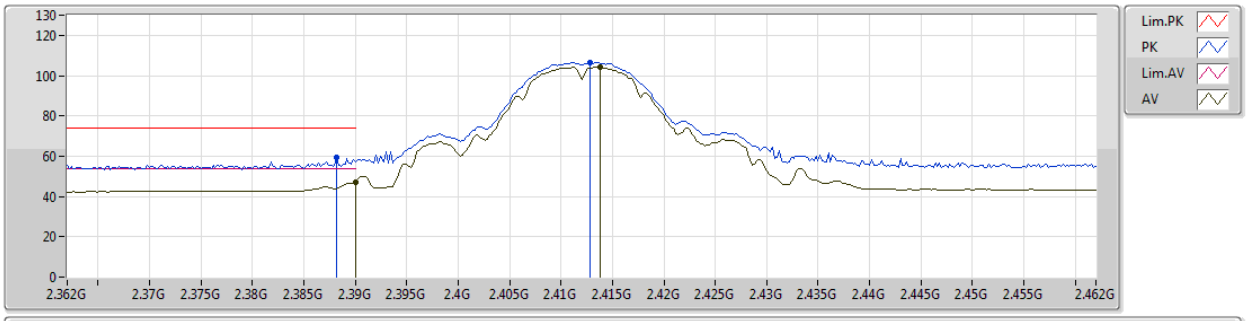


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.39G	43.52	54.00	-10.48	30.77	3	Vertical	150	2.21	-
AV	2.4138G	97.64	Inf	-Inf	30.86	3	Vertical	150	2.21	-
PK	2.371G	56.42	74.00	-17.58	30.71	3	Vertical	150	2.21	-
PK	2.4128G	99.85	Inf	-Inf	30.86	3	Vertical	150	2.21	-

802.11b_Nss1,(1Mbps)_1TX(Port2)

24/01/2019

2412MHz_TX

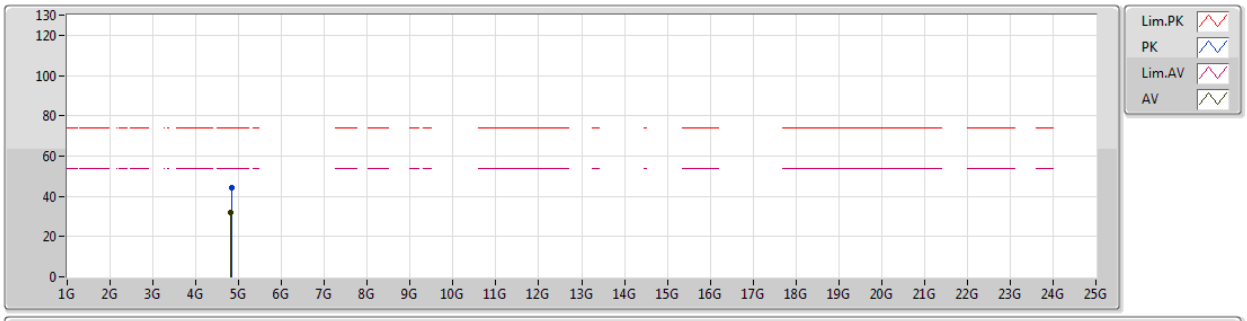


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.39G	47.34	54.00	-6.66	30.77	3	Horizontal	208	1.50	-
AV	2.4138G	104.19	Inf	-Inf	30.86	3	Horizontal	208	1.50	-
PK	2.3882G	59.50	74.00	-14.50	30.77	3	Horizontal	208	1.50	-
PK	2.4128G	106.44	Inf	-Inf	30.86	3	Horizontal	208	1.50	-

802.11b_Nss1,(1Mbps)_1TX(Port2)

24/01/2019

2412MHz_TX

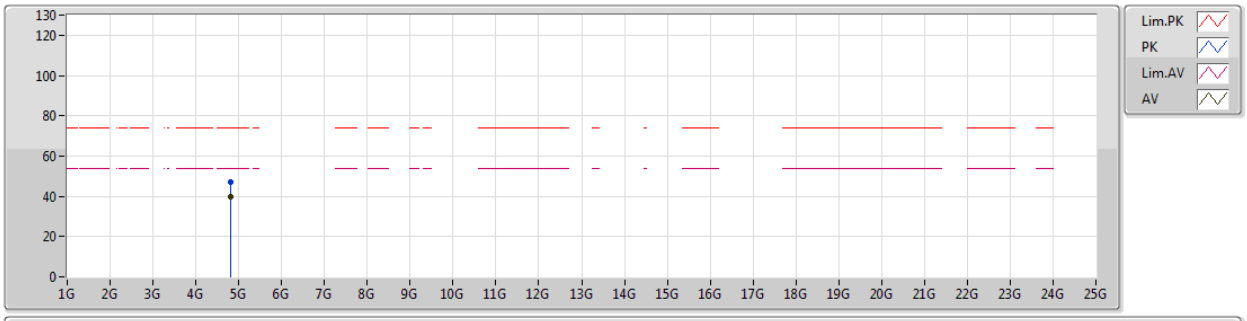


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.82398G	31.99	54.00	-22.01	2.13	3	Vertical	265	1.12	-
PK	4.82594G	44.02	74.00	-29.98	2.14	3	Vertical	265	1.12	-

802.11b_Nss1,(1Mbps)_1TX(Port2)

2412MHz_TX

24/01/2019

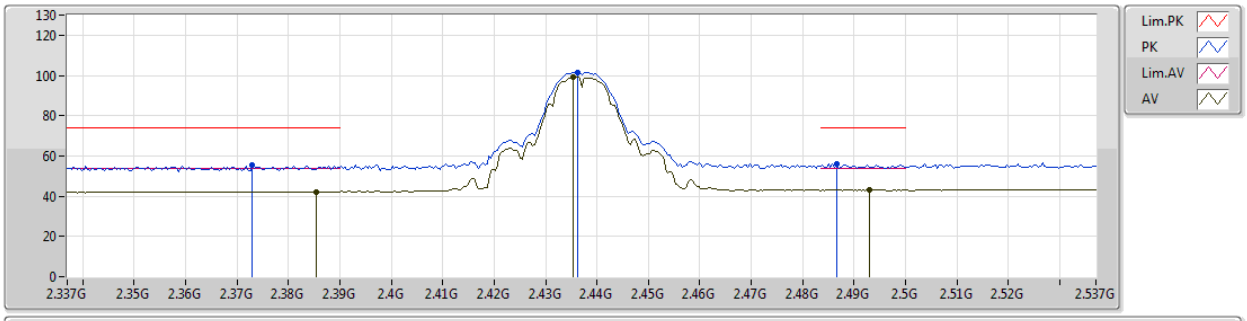


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.82403G	39.59	54.00	-14.41	2.13	3	Horizontal	330	2.12	-
PK	4.8241G	46.95	74.00	-27.05	2.13	3	Horizontal	330	2.12	-

802.11b_Nss1,(1Mbps)_1TX(Port2)

2437MHz_TX

24/01/2019

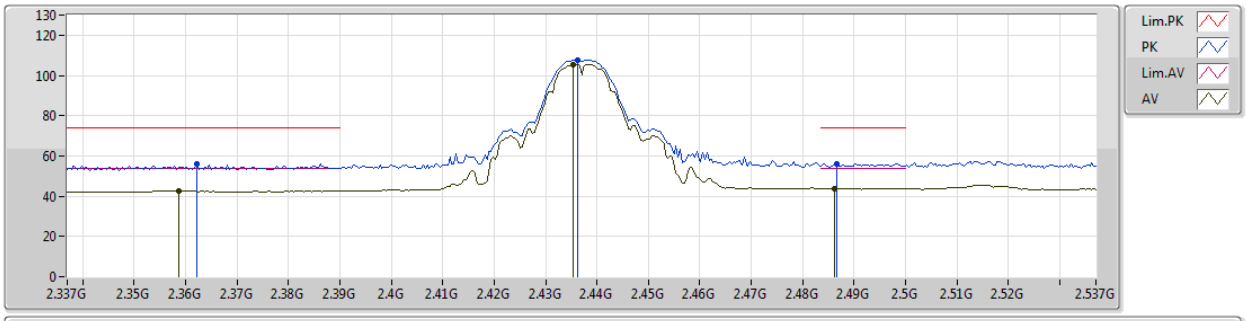


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.3854G	42.29	54.00	-11.71	30.76	3	Vertical	138	2.99	-
AV	2.4354G	99.13	Inf	-Inf	30.94	3	Vertical	138	2.99	-
AV	2.493G	43.11	54.00	-10.89	31.14	3	Vertical	138	2.99	-
PK	2.373G	55.28	74.00	-18.72	30.71	3	Vertical	138	2.99	-
PK	2.4362G	101.57	Inf	-Inf	30.94	3	Vertical	138	2.99	-
PK	2.4866G	56.25	74.00	-17.75	31.12	3	Vertical	138	2.99	-

802.11b_Nss1,(1Mbps)_1TX(Port2)

2437MHz_TX

24/01/2019

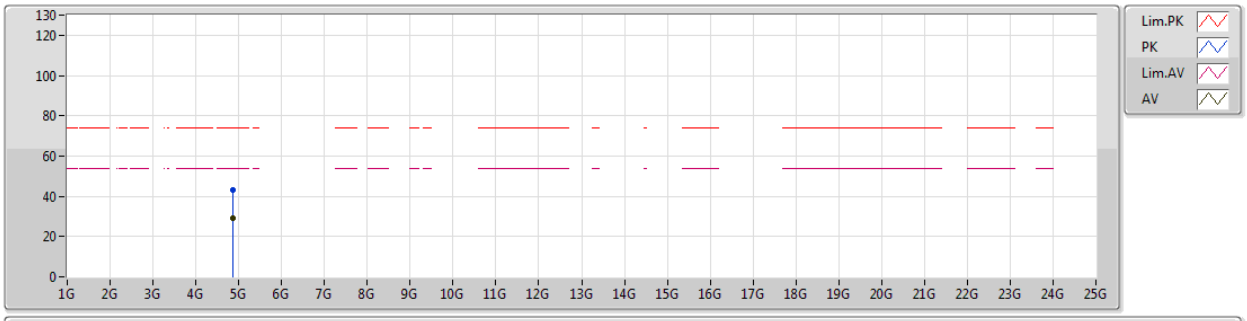


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.3586G	42.69	54.00	-11.31	30.66	3	Horizontal	60	1.06	-
AV	2.4354G	105.56	Inf	-Inf	30.94	3	Horizontal	60	1.06	-
AV	2.4862G	43.92	54.00	-10.08	31.12	3	Horizontal	60	1.06	-
PK	2.3622G	55.89	74.00	-18.11	30.67	3	Horizontal	60	1.06	-
PK	2.4362G	107.80	Inf	-Inf	30.94	3	Horizontal	60	1.06	-
PK	2.4866G	56.12	74.00	-17.88	31.12	3	Horizontal	60	1.06	-

802.11b_Nss1,(1Mbps)_1TX(Port2)

24/01/2019

2437MHz_TX

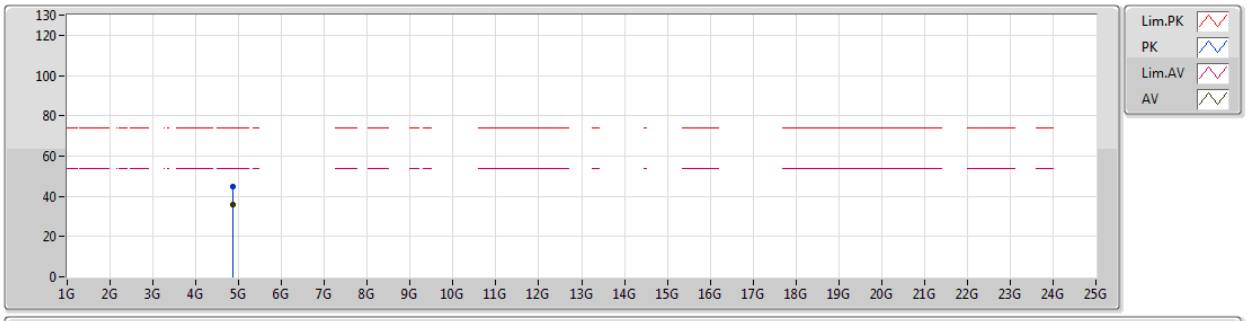


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.87154G	29.28	54.00	-24.72	2.24	3	Vertical	231	1.25	-
PK	4.87231G	42.96	74.00	-31.04	2.25	3	Vertical	231	1.25	-

802.11b_Nss1,(1Mbps)_1TX(Port2)

2437MHz_TX

24/01/2019

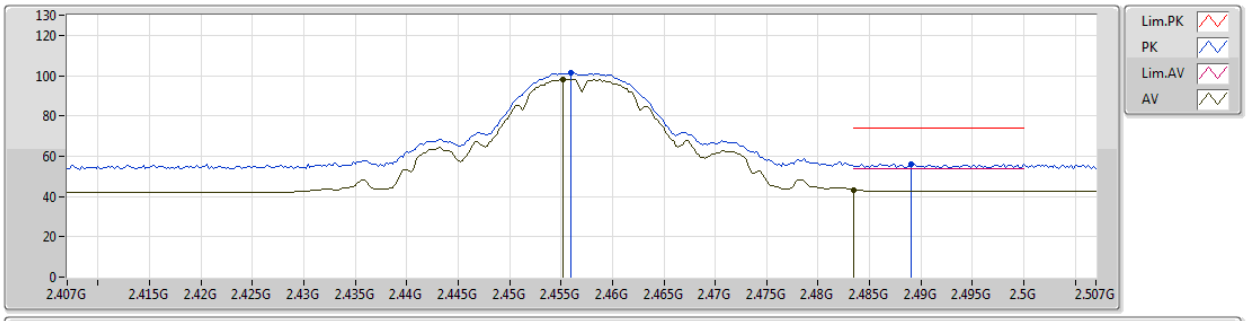


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.874G	35.99	54.00	-18.01	2.25	3	Horizontal	329	2.07	-
PK	4.87408G	44.63	74.00	-29.37	2.25	3	Horizontal	329	2.07	-

802.11b_Nss1,(1Mbps)_1TX(Port2)

2457MHz_TX

24/01/2019

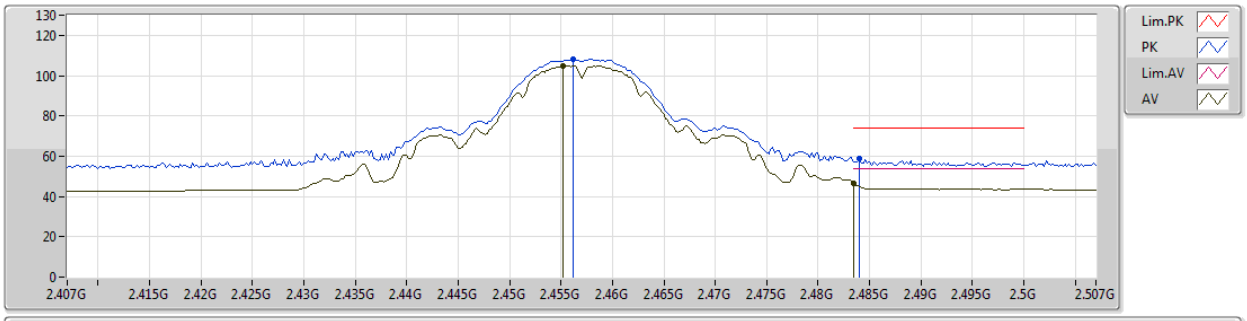


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.4552G	98.19	Inf	-Inf	31.00	3	Vertical	145	2.04	-
AV	2.4835G	43.31	54.00	-10.69	31.11	3	Vertical	145	2.04	-
PK	2.456G	101.25	Inf	-Inf	31.01	3	Vertical	145	2.04	-
PK	2.489G	56.12	74.00	-17.88	31.13	3	Vertical	145	2.04	-

802.11b_Nss1,(1Mbps)_1TX(Port2)

2457MHz_TX

24/01/2019

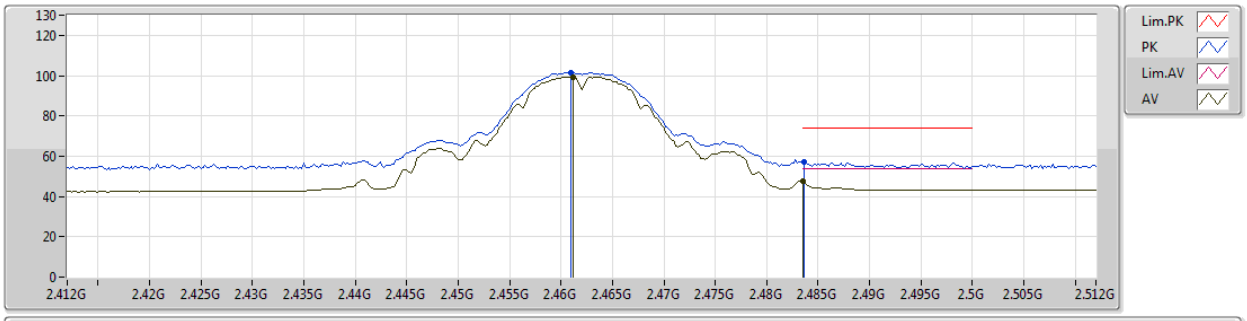


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.4552G	104.70	Inf	-Inf	31.00	3	Horizontal	64	1.27	-
AV	2.4835G	46.35	54.00	-7.65	31.11	3	Horizontal	64	1.27	-
PK	2.4562G	108.03	Inf	-Inf	31.01	3	Horizontal	64	1.27	-
PK	2.484G	58.73	74.00	-15.27	31.12	3	Horizontal	64	1.27	-

802.11b_Nss1,(1Mbps)_1TX(Port2)

24/01/2019

2462MHz_TX

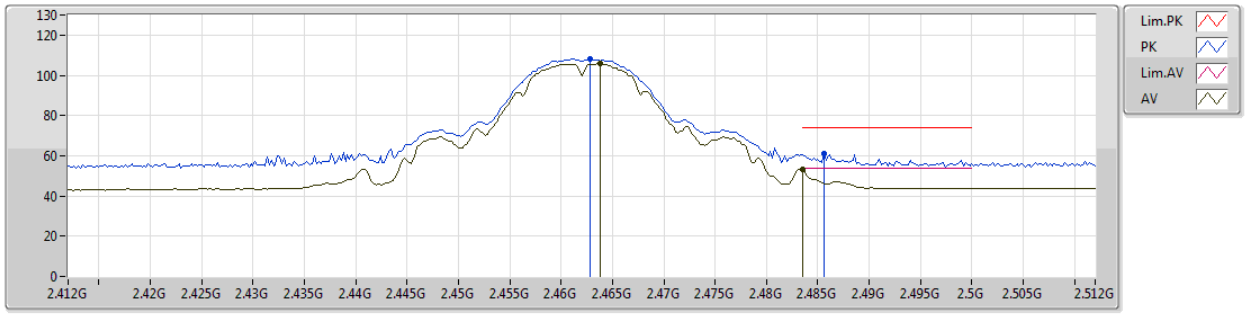


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.4612G	99.28	Inf	-Inf	31.03	3	Vertical	148	2.07	-
AV	2.4835G	47.55	54.00	-6.45	31.11	3	Vertical	148	2.07	-
PK	2.461G	101.52	Inf	-Inf	31.03	3	Vertical	148	2.07	-
PK	2.4836G	57.19	74.00	-16.81	31.11	3	Vertical	148	2.07	-

802.11b_Nss1,(1Mbps)_1TX(Port2)

24/01/2019

2462MHz_TX

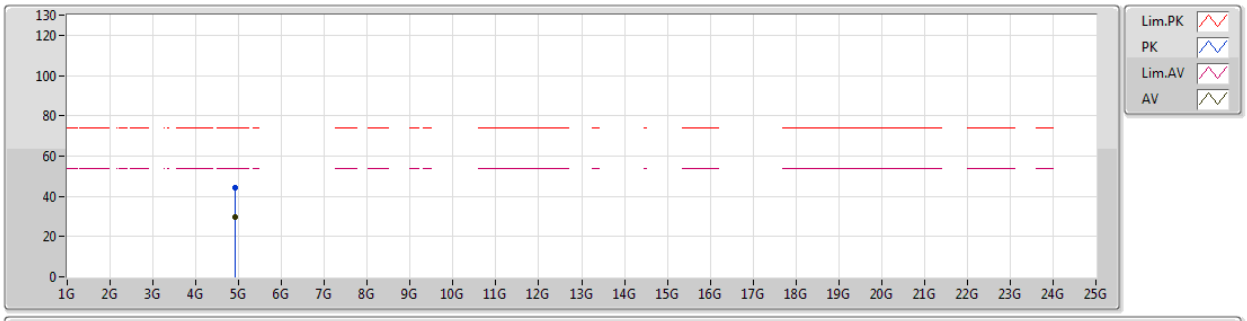


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.4638G	105.67	Inf	-Inf	31.04	3	Horizontal	65	1.46	-
AV	2.4835G	53.38	54.00	-0.62	31.11	3	Horizontal	65	1.46	-
PK	2.4628G	107.97	Inf	-Inf	31.04	3	Horizontal	65	1.46	-
PK	2.4856G	61.09	74.00	-12.91	31.12	3	Horizontal	65	1.46	-

802.11b_Nss1,(1Mbps)_1TX(Port2)

2462MHz_TX

24/01/2019

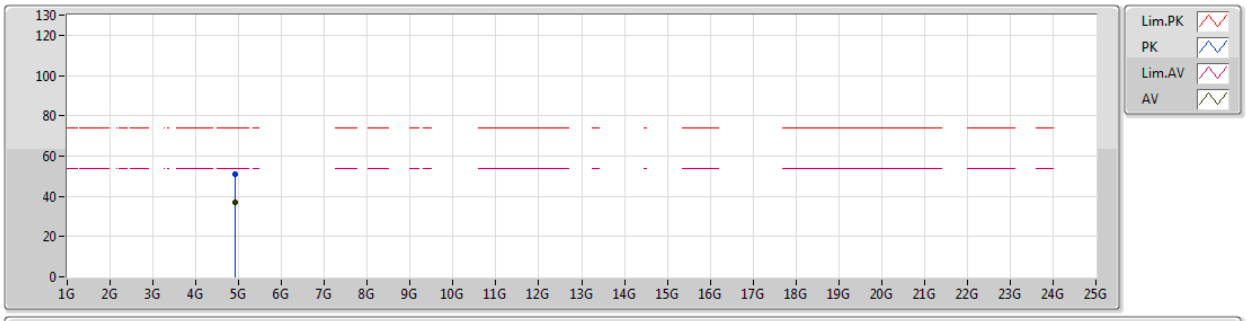


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.92225G	29.84	54.00	-24.16	2.38	3	Vertical	326	2.19	-
PK	4.92222G	44.15	74.00	-29.85	2.38	3	Vertical	326	2.19	-

802.11b_Nss1,(1Mbps)_1TX(Port2)

2462MHz_TX

24/01/2019

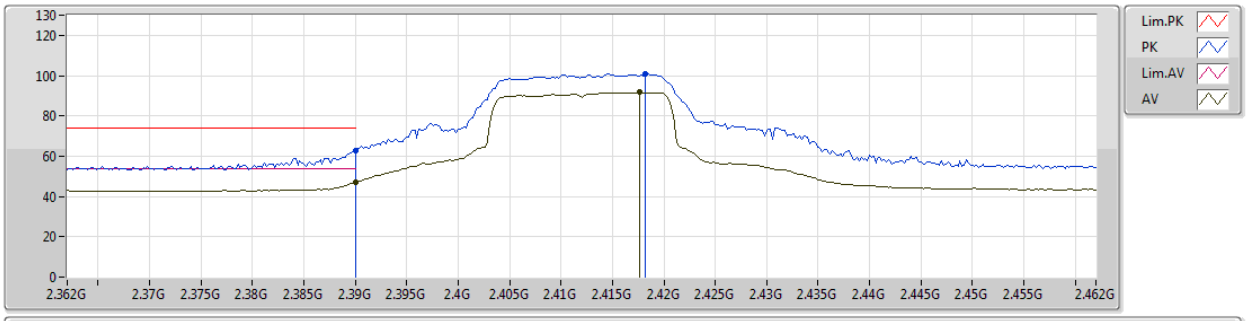


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.9215G	36.84	54.00	-17.16	2.37	3	Horizontal	93	1.92	-
PK	4.92189G	51.20	74.00	-22.80	2.38	3	Horizontal	93	1.92	-

802.11g_Nss1,(6Mbps)_1TX(Port2)

24/01/2019

2412MHz_TX

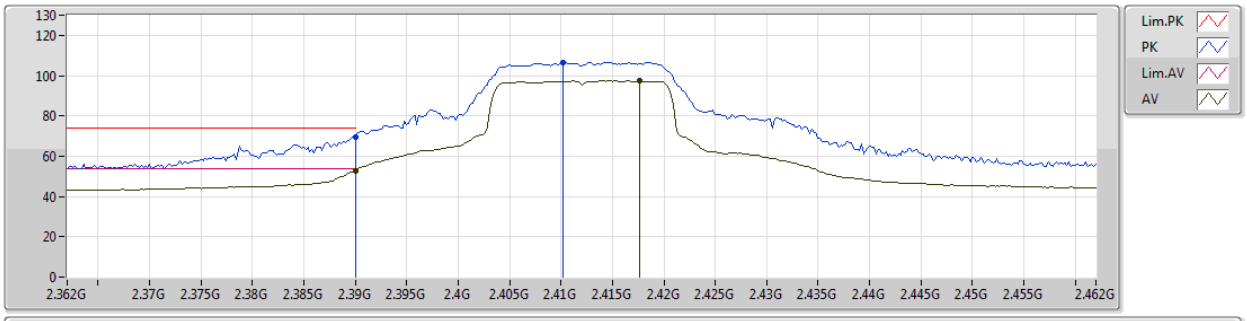


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.39G	46.85	54.00	-7.15	30.77	3	Vertical	145	2.70	-
AV	2.4176G	91.71	Inf	-Inf	30.87	3	Vertical	145	2.70	-
PK	2.39G	62.76	74.00	-11.24	30.77	3	Vertical	145	2.70	-
PK	2.4182G	101.02	Inf	-Inf	30.87	3	Vertical	145	2.70	-

802.11g_Nss1,(6Mbps)_1TX(Port2)

2412MHz_TX

24/01/2019

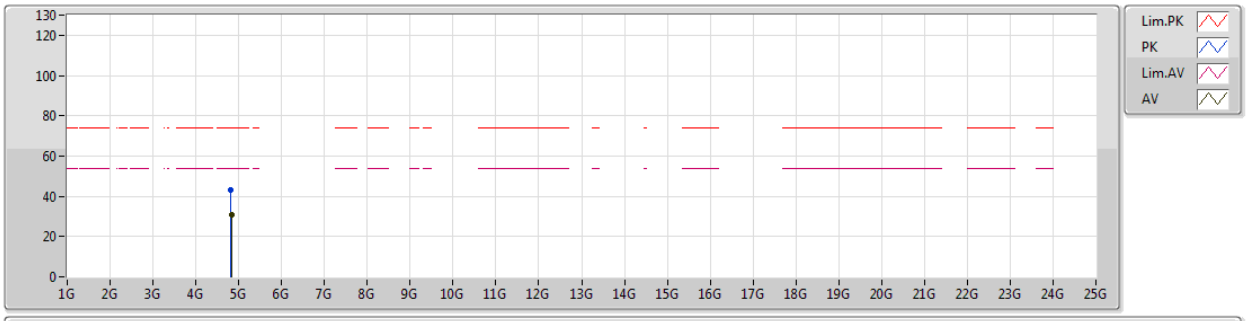


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.39G	52.79	54.00	-1.21	30.77	3	Horizontal	207	1.28	-
AV	2.4176G	97.36	Inf	-Inf	30.87	3	Horizontal	207	1.28	-
PK	2.39G	69.74	74.00	-4.26	30.77	3	Horizontal	207	1.28	-
PK	2.4102G	106.66	Inf	-Inf	30.85	3	Horizontal	207	1.28	-

802.11g_Nss1,(6Mbps)_1TX(Port2)

2412MHz_TX

24/01/2019

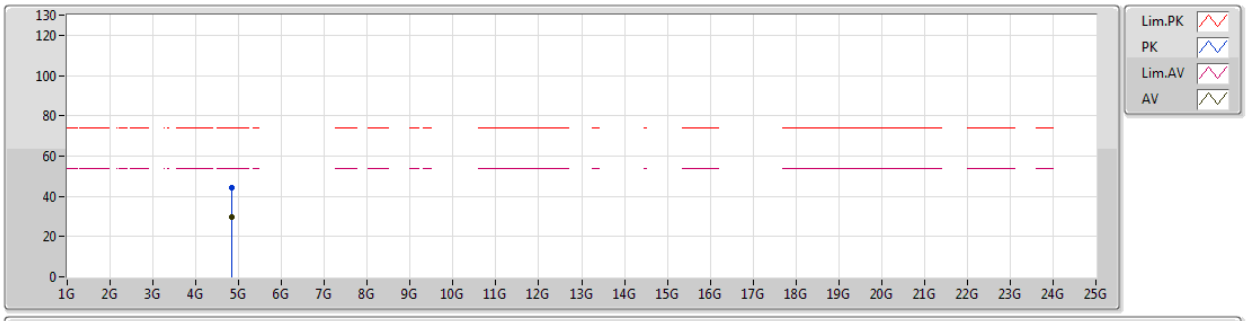


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.82648G	30.94	54.00	-23.06	2.14	3	Vertical	176	1.06	-
PK	4.822G	42.92	74.00	-31.08	2.13	3	Vertical	176	1.06	-

802.11g_Nss1,(6Mbps)_1TX(Port2)

2412MHz_TX

24/01/2019

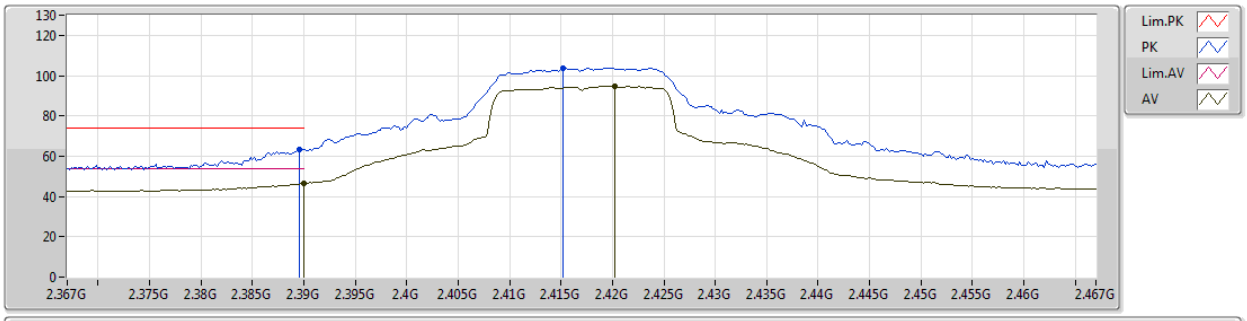


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.82625G	29.95	54.00	-24.05	2.14	3	Horizontal	323	2.33	-
PK	4.82631G	44.15	74.00	-29.85	2.14	3	Horizontal	323	2.33	-

802.11g_Nss1,(6Mbps)_1TX(Port2)

24/01/2019

2417MHz_TX

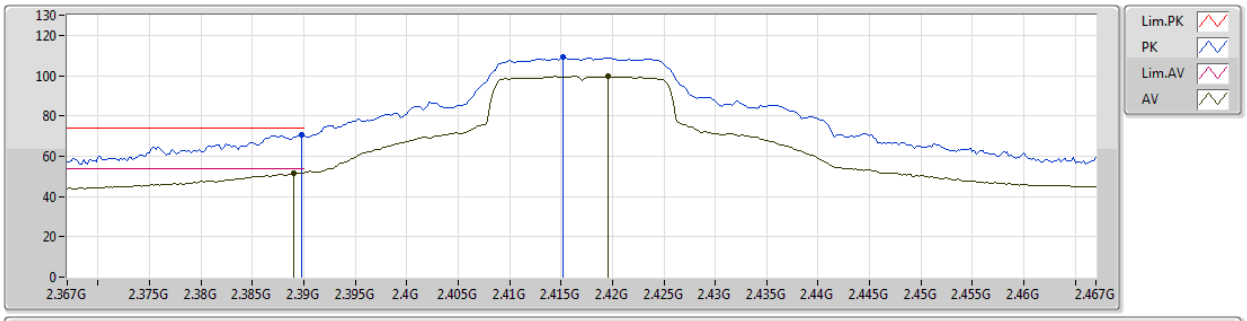


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.39G	46.43	54.00	-7.57	30.77	3	Vertical	138	2.99	-
AV	2.4202G	94.56	Inf	-Inf	30.89	3	Vertical	138	2.99	-
PK	2.3896G	63.38	74.00	-10.62	30.77	3	Vertical	138	2.99	-
PK	2.4152G	103.76	Inf	-Inf	30.86	3	Vertical	138	2.99	-

802.11g_Nss1,(6Mbps)_1TX(Port2)

24/01/2019

2417MHz_TX

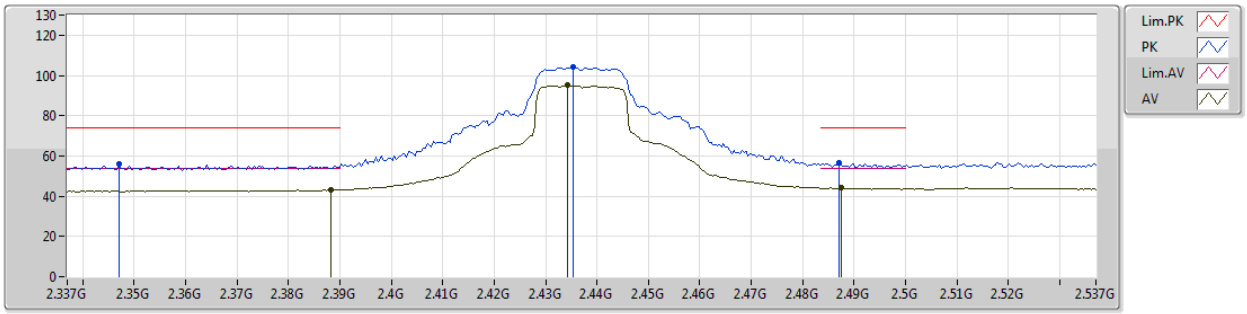


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.389G	51.58	54.00	-2.42	30.77	3	Horizontal	205	1.49	-
AV	2.4196G	99.59	Inf	-Inf	30.88	3	Horizontal	205	1.49	-
PK	2.3898G	70.79	74.00	-3.21	30.77	3	Horizontal	205	1.49	-
PK	2.4152G	109.03	Inf	-Inf	30.86	3	Horizontal	205	1.49	-

802.11g_Nss1,(6Mbps)_1TX(Port2)

24/01/2019

2437MHz_TX

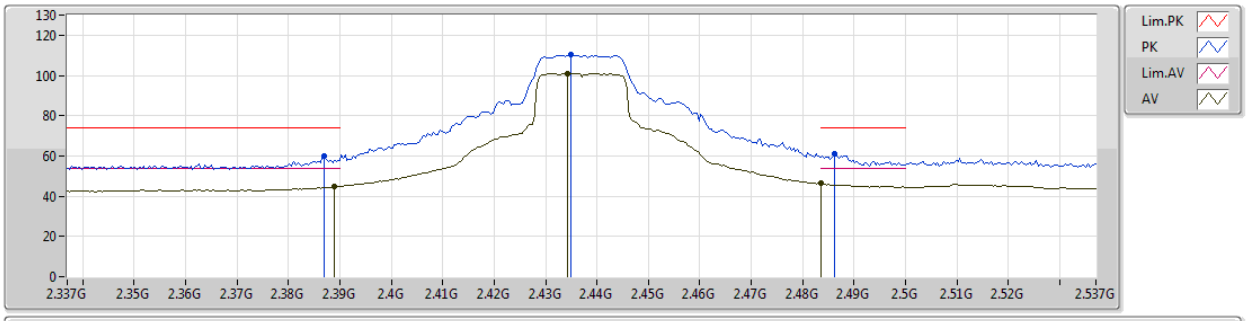


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.3882G	43.36	54.00	-10.64	30.77	3	Vertical	139	2.99	-
AV	2.4342G	94.98	Inf	-Inf	30.94	3	Vertical	139	2.99	-
AV	2.4874G	44.05	54.00	-9.95	31.12	3	Vertical	139	2.99	-
PK	2.347G	55.87	74.00	-18.13	30.62	3	Vertical	139	2.99	-
PK	2.4354G	104.42	Inf	-Inf	30.94	3	Vertical	139	2.99	-
PK	2.487G	56.76	74.00	-17.24	31.12	3	Vertical	139	2.99	-

802.11g_Nss1,(6Mbps)_1TX(Port2)

2437MHz_TX

24/01/2019

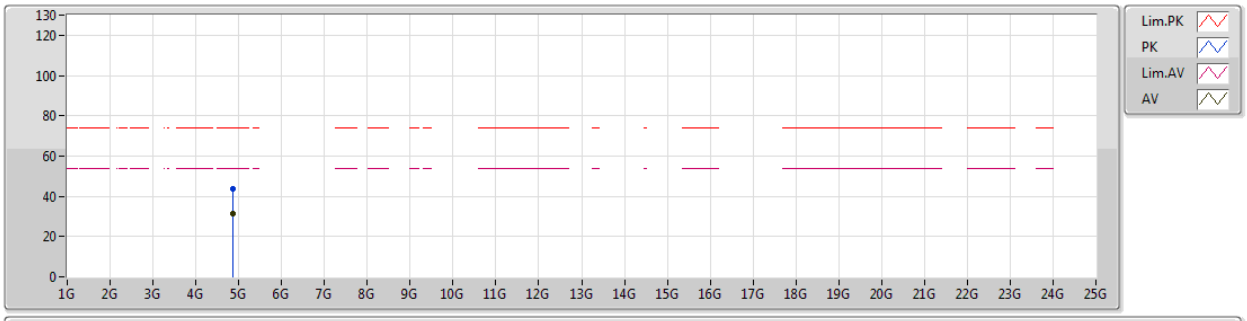


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.389G	44.74	54.00	-9.26	30.77	3	Horizontal	61	1.05	-
AV	2.4342G	101.05	Inf	-Inf	30.94	3	Horizontal	61	1.05	-
AV	2.4835G	46.33	54.00	-7.67	31.11	3	Horizontal	61	1.05	-
PK	2.387G	59.80	74.00	-14.20	30.76	3	Horizontal	61	1.05	-
PK	2.435G	110.49	Inf	-Inf	30.94	3	Horizontal	61	1.05	-
PK	2.4862G	61.25	74.00	-12.75	31.12	3	Horizontal	61	1.05	-

802.11g_Nss1,(6Mbps)_1TX(Port2)

2437MHz_TX

24/01/2019

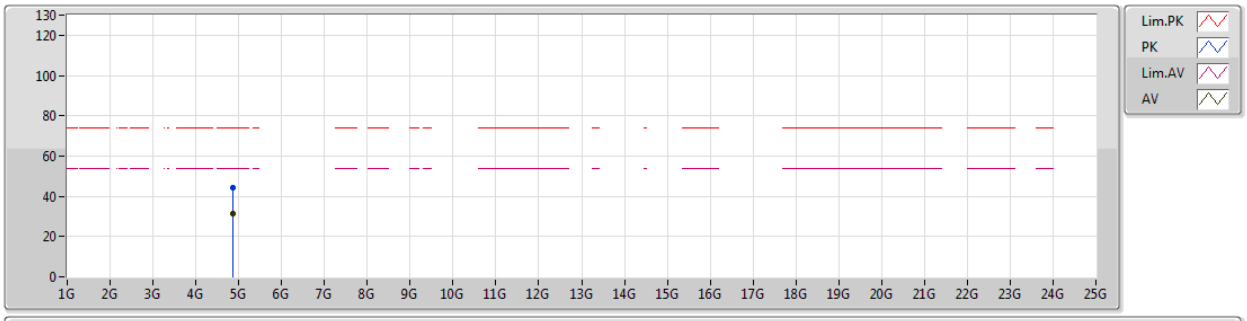


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.87399G	31.55	54.00	-22.45	2.25	3	Vertical	13	1.82	-
PK	4.87159G	43.51	74.00	-30.49	2.24	3	Vertical	13	1.82	-

802.11g_Nss1,(6Mbps)_1TX(Port2)

2437MHz_TX

24/01/2019

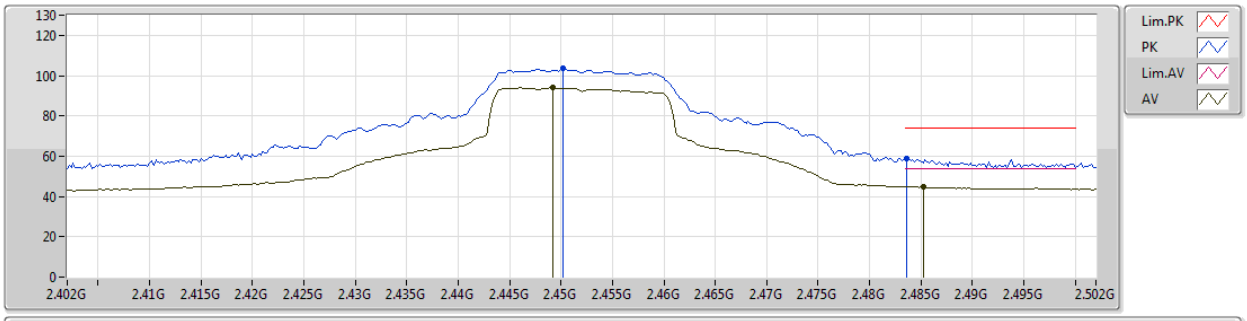


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.874G	31.46	54.00	-22.54	2.25	3	Horizontal	130	1.44	-
PK	4.87381G	44.14	74.00	-29.86	2.25	3	Horizontal	130	1.44	-

802.11g_Nss1,(6Mbps)_1TX(Port2)

24/01/2019

2452MHz_TX

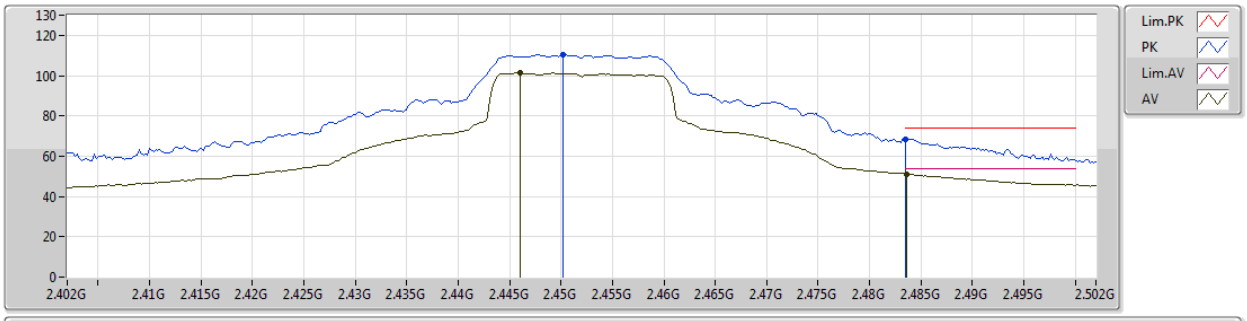


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.4492G	93.96	Inf	-Inf	30.99	3	Vertical	133	2.67	-
AV	2.4852G	44.80	54.00	-9.20	31.12	3	Vertical	133	2.67	-
PK	2.4502G	103.44	Inf	-Inf	30.99	3	Vertical	133	2.67	-
PK	2.4836G	58.80	74.00	-15.20	31.11	3	Vertical	133	2.67	-

802.11g_Nss1,(6Mbps)_1TX(Port2)

24/01/2019

2452MHz_TX

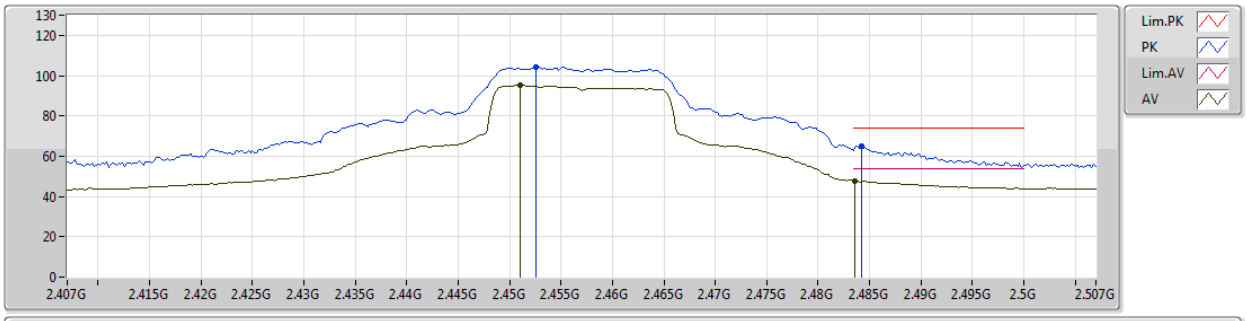


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.446G	101.30	Inf	-Inf	30.98	3	Horizontal	62	1.01	-
AV	2.4836G	51.19	54.00	-2.81	31.11	3	Horizontal	62	1.01	-
PK	2.4502G	110.58	Inf	-Inf	30.99	3	Horizontal	62	1.01	-
PK	2.4835G	68.37	74.00	-5.63	31.11	3	Horizontal	62	1.01	-

802.11g_Nss1,(6Mbps)_1TX(Port2)

24/01/2019

2457MHz_TX

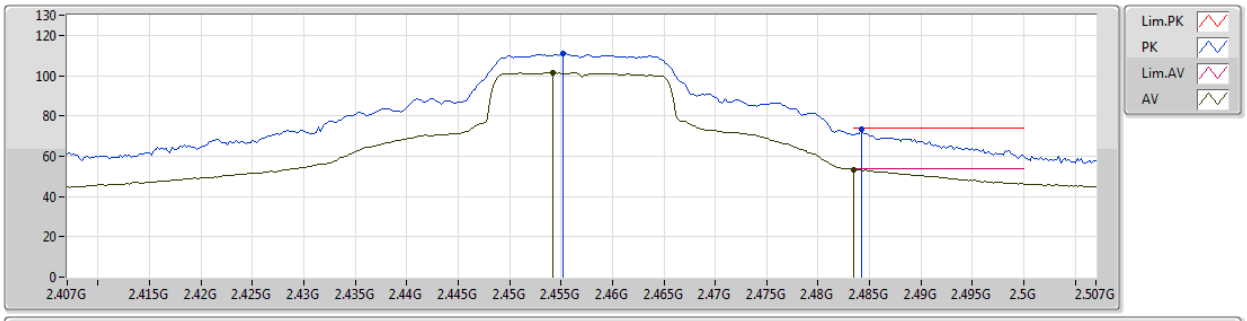


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.451G	95.23	Inf	-Inf	30.99	3	Vertical	142	2.99	-
AV	2.4836G	47.72	54.00	-6.28	31.11	3	Vertical	142	2.99	-
PK	2.4526G	104.04	Inf	-Inf	31.00	3	Vertical	142	2.99	-
PK	2.4842G	64.82	74.00	-9.18	31.12	3	Vertical	142	2.99	-

802.11g_Nss1,(6Mbps)_1TX(Port2)

24/01/2019

2457MHz_TX

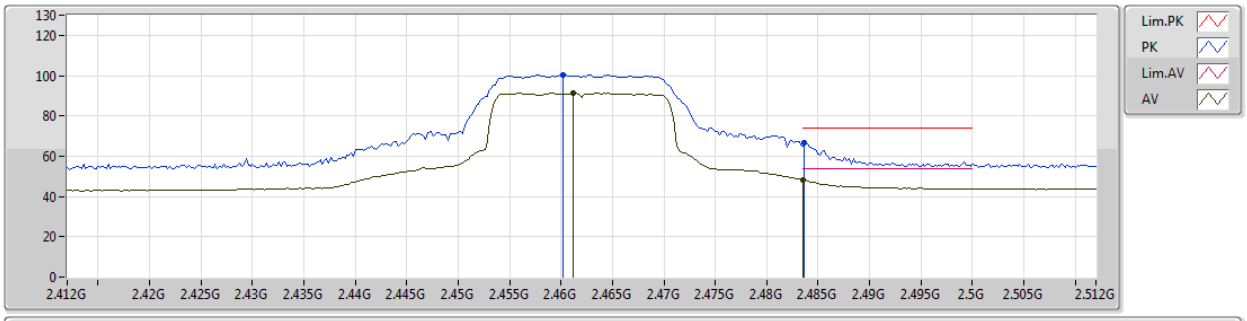


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.4542G	101.46	Inf	-Inf	31.00	3	Horizontal	61	1.22	-
AV	2.4835G	53.49	54.00	-0.51	31.11	3	Horizontal	61	1.22	-
PK	2.4552G	110.93	Inf	-Inf	31.00	3	Horizontal	61	1.22	-
PK	2.4842G	73.32	74.00	-0.68	31.12	3	Horizontal	61	1.22	-

802.11g_Nss1,(6Mbps)_1TX(Port2)

24/01/2019

2462MHz_TX

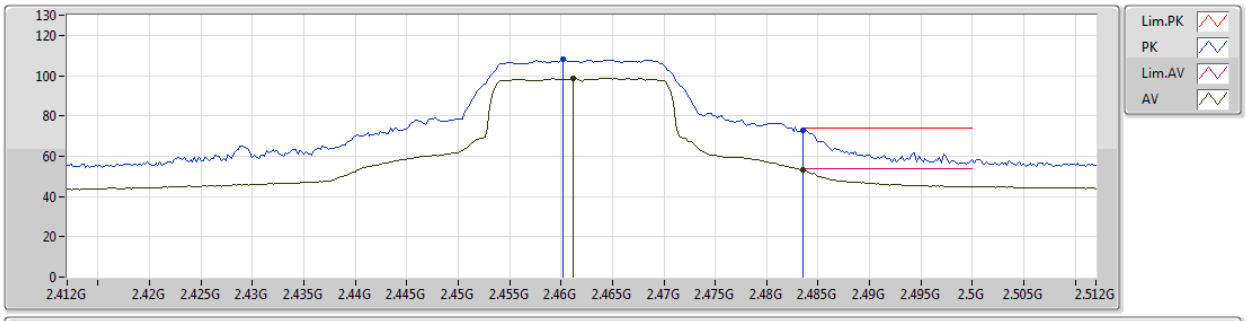


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.4612G	91.24	Inf	-Inf	31.03	3	Vertical	144	2.33	-
AV	2.4835G	48.33	54.00	-5.67	31.11	3	Vertical	144	2.33	-
PK	2.4602G	100.57	Inf	-Inf	31.03	3	Vertical	144	2.33	-
PK	2.4836G	66.71	74.00	-7.29	31.11	3	Vertical	144	2.33	-

802.11g_Nss1,(6Mbps)_1TX(Port2)

24/01/2019

2462MHz_TX

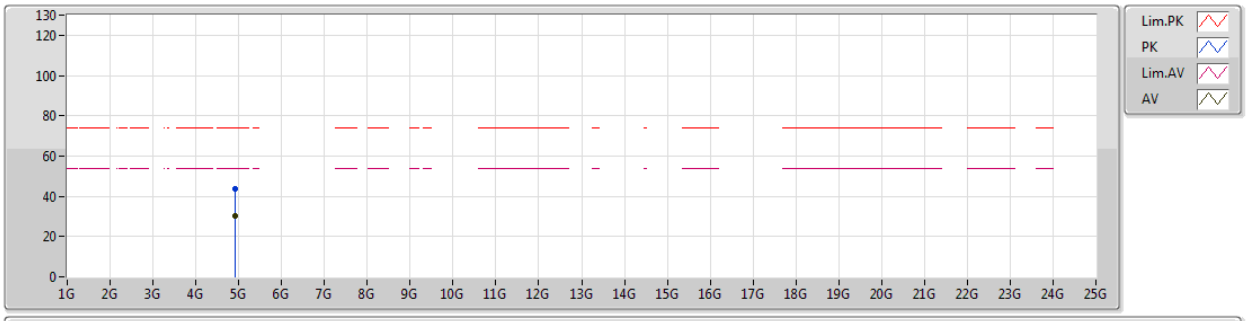


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.4612G	98.58	Inf	-Inf	31.03	3	Horizontal	66	1.50	-
AV	2.4835G	53.04	54.00	-0.96	31.11	3	Horizontal	66	1.50	-
PK	2.4602G	107.91	Inf	-Inf	31.03	3	Horizontal	66	1.50	-
PK	2.4835G	73.04	74.00	-0.96	31.11	3	Horizontal	66	1.50	-

802.11g_Nss1,(6Mbps)_1TX(Port2)

2462MHz_TX

24/01/2019

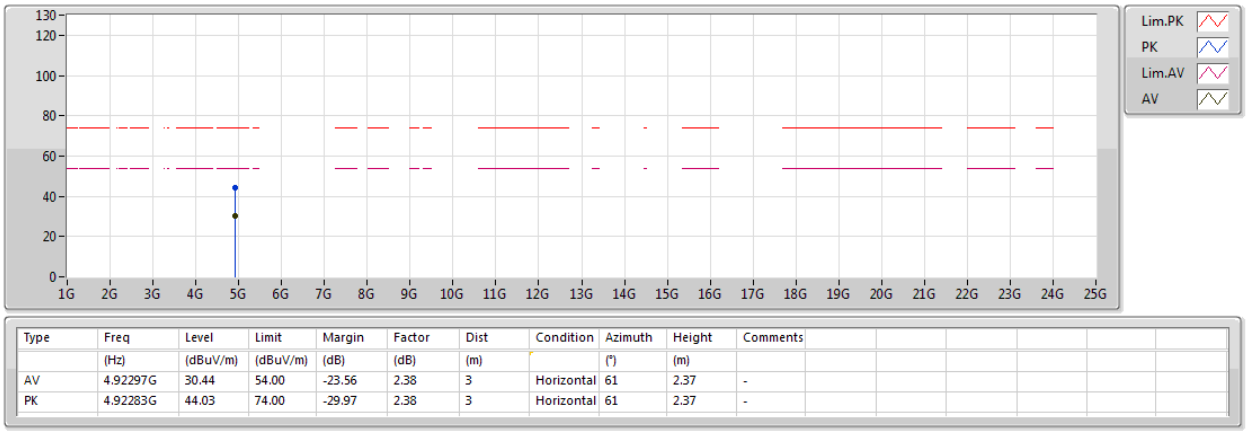


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.92152G	29.98	54.00	-24.02	2.37	3	Vertical	91	1.72	-
PK	4.92581G	43.69	74.00	-30.31	2.39	3	Vertical	91	1.72	-

802.11g_Nss1,(6Mbps)_1TX(Port2)

2462MHz_TX

24/01/2019

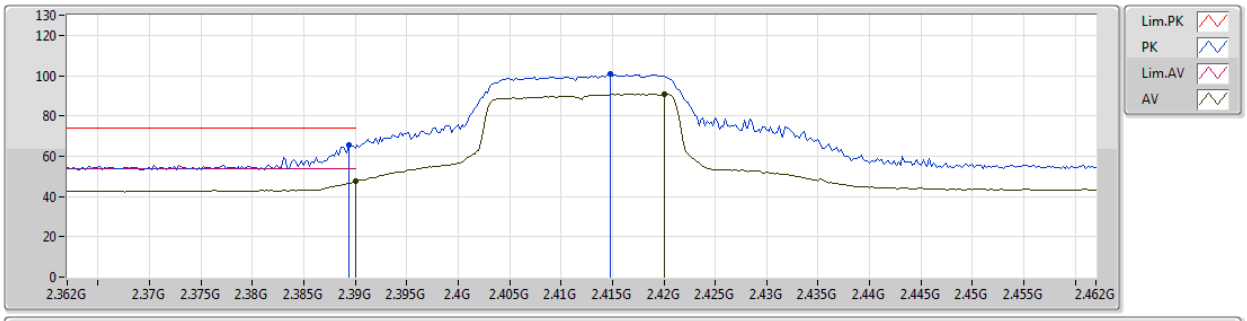


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.92297G	30.44	54.00	-23.56	2.38	3	Horizontal	61	2.37	-
PK	4.92283G	44.03	74.00	-29.97	2.38	3	Horizontal	61	2.37	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

24/01/2019

2412MHz_TX

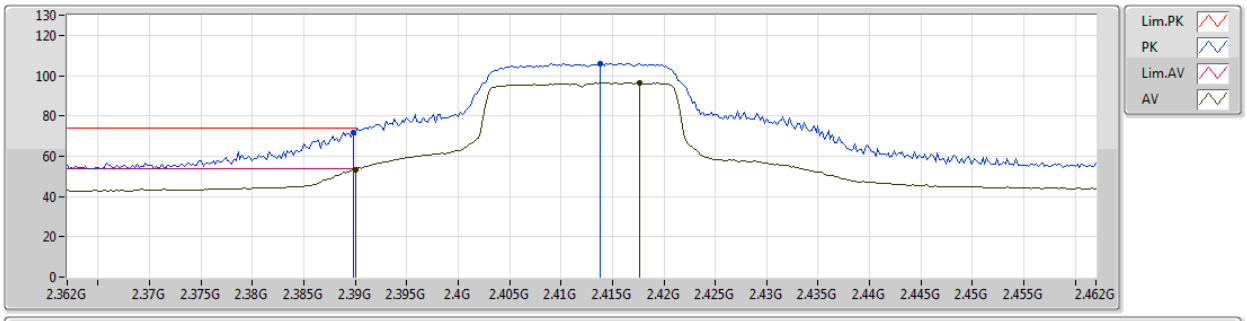


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.39G	47.54	54.00	-6.46	30.77	3	Vertical	145	2.72	-
AV	2.42G	90.77	Inf	-Inf	30.89	3	Vertical	145	2.72	-
PK	2.3894G	65.60	74.00	-8.40	30.77	3	Vertical	145	2.72	-
PK	2.4148G	100.59	Inf	-Inf	30.86	3	Vertical	145	2.72	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

24/01/2019

2412MHz_TX

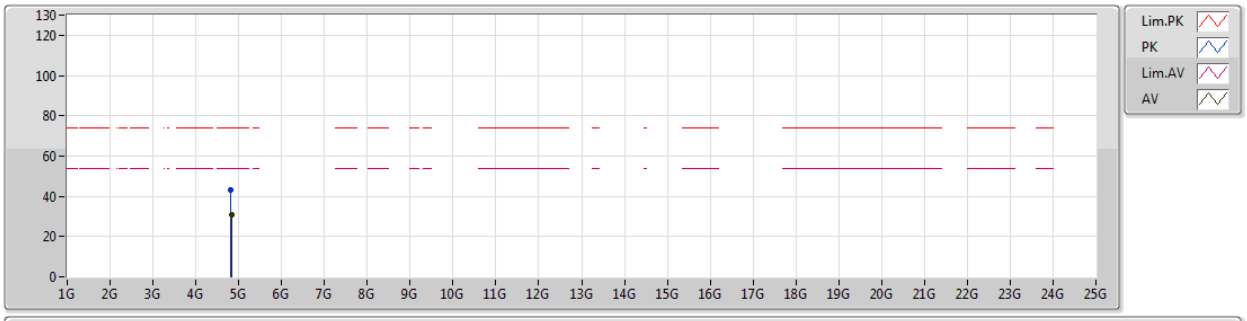


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.39G	53.41	54.00	-0.59	30.77	3	Horizontal	207	1.32	-
AV	2.4176G	96.38	Inf	-Inf	30.87	3	Horizontal	207	1.32	-
PK	2.3898G	71.98	74.00	-2.02	30.77	3	Horizontal	207	1.32	-
PK	2.4138G	106.15	Inf	-Inf	30.86	3	Horizontal	207	1.32	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

2412MHz_TX

24/01/2019

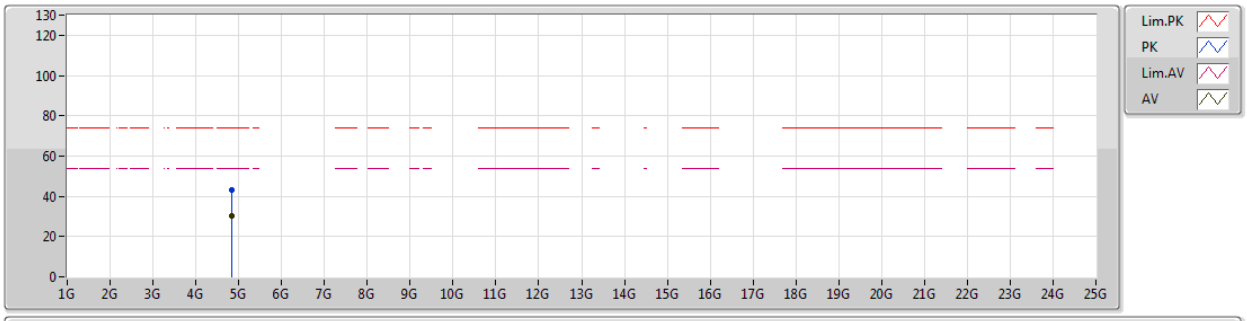


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.82618G	30.54	54.00	-23.46	2.14	3	Vertical	125	2.30	-
PK	4.82241G	42.99	74.00	-31.01	2.13	3	Vertical	125	2.30	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

24/01/2019

2412MHz_TX

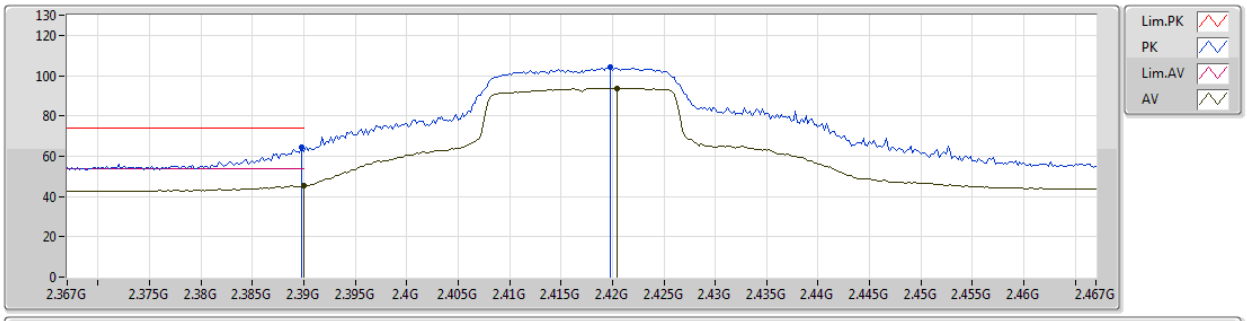


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.82645G	30.43	54.00	-23.57	2.14	3	Horizontal	137	1.07	-
PK	4.82576G	43.04	74.00	-30.96	2.14	3	Horizontal	137	1.07	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

24/01/2019

2417MHz_TX

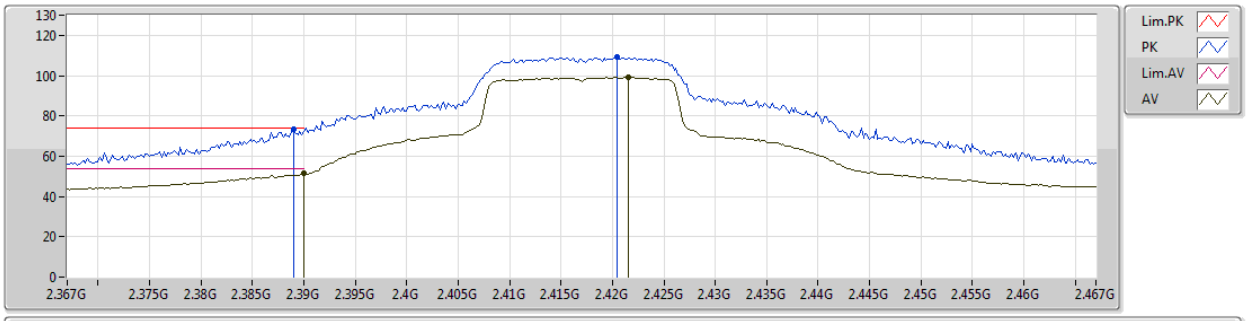


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.39G	45.21	54.00	-8.79	30.77	3	Vertical	139	2.99	-
AV	2.4204G	93.81	Inf	-Inf	30.89	3	Vertical	139	2.99	-
PK	2.3898G	64.45	74.00	-9.55	30.77	3	Vertical	139	2.99	-
PK	2.4198G	104.05	Inf	-Inf	30.89	3	Vertical	139	2.99	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

24/01/2019

2417MHz_TX

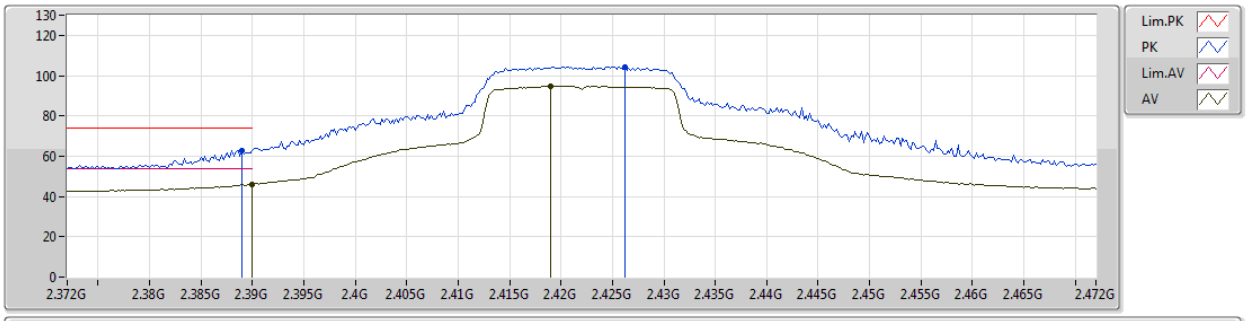


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.39G	51.32	54.00	-2.68	30.77	3	Horizontal	204	1.34	-
AV	2.4216G	99.06	Inf	-Inf	30.89	3	Horizontal	204	1.34	-
PK	2.389G	73.28	74.00	-0.72	30.77	3	Horizontal	204	1.34	-
PK	2.4204G	109.02	Inf	-Inf	30.89	3	Horizontal	204	1.34	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

24/01/2019

2422MHz_TX

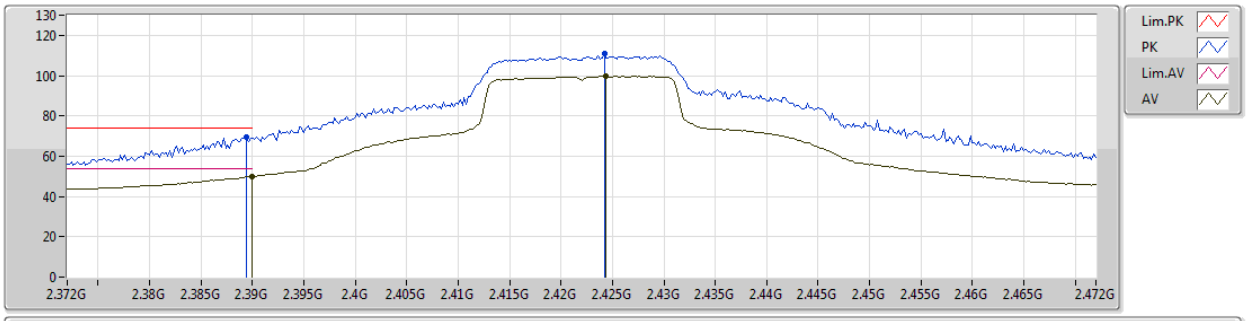


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.39G	45.87	54.00	-8.13	30.77	3	Vertical	137	2.99	-
AV	2.419G	94.64	Inf	-Inf	30.88	3	Vertical	137	2.99	-
PK	2.389G	62.99	74.00	-11.01	30.77	3	Vertical	137	2.99	-
PK	2.4262G	104.44	Inf	-Inf	30.90	3	Vertical	137	2.99	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

24/01/2019

2422MHz_TX

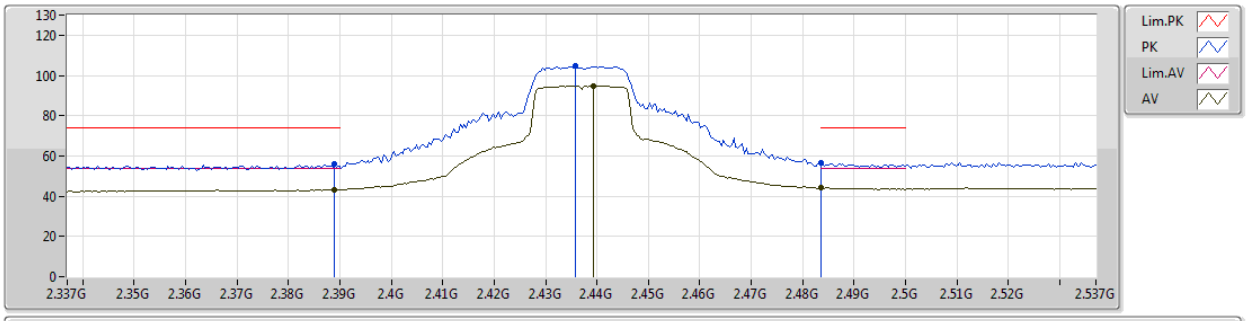


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.39G	49.71	54.00	-4.29	30.77	3	Horizontal	59	1.03	-
AV	2.4244G	99.85	Inf	-Inf	30.90	3	Horizontal	59	1.03	-
PK	2.3894G	69.66	74.00	-4.34	30.77	3	Horizontal	59	1.03	-
PK	2.4242G	110.79	Inf	-Inf	30.90	3	Horizontal	59	1.03	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

2437MHz_TX

24/01/2019

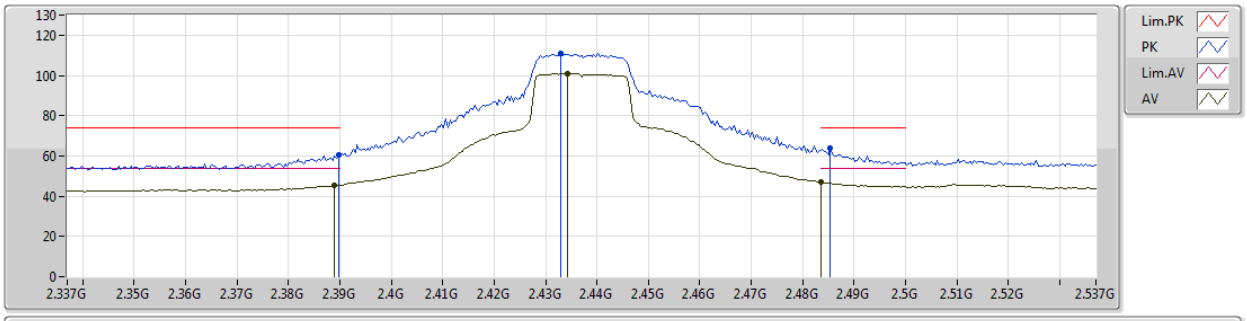


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.389G	43.40	54.00	-10.60	30.77	3	Vertical	144	2.65	-
AV	2.4394G	94.71	Inf	-Inf	30.95	3	Vertical	144	2.65	-
AV	2.4835G	44.24	54.00	-9.76	31.11	3	Vertical	144	2.65	-
PK	2.389G	56.26	74.00	-17.74	30.77	3	Vertical	144	2.65	-
PK	2.4358G	104.88	Inf	-Inf	30.94	3	Vertical	144	2.65	-
PK	2.4835G	56.56	74.00	-17.44	31.11	3	Vertical	144	2.65	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

24/01/2019

2437MHz_TX

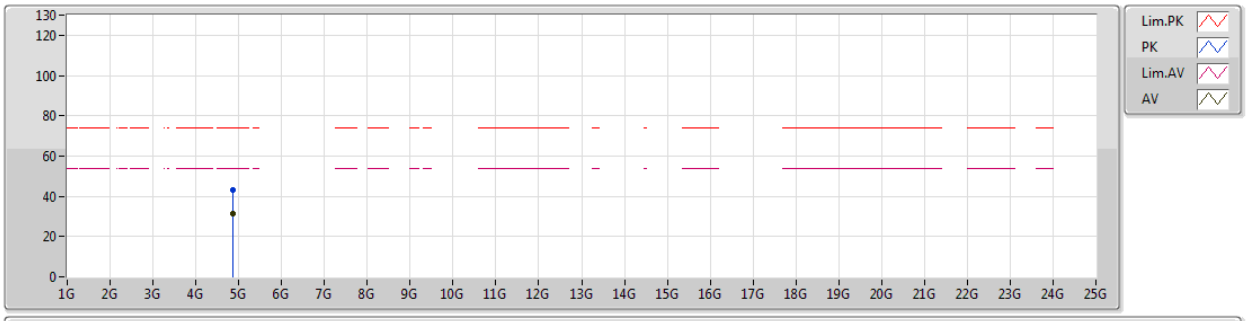


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.389G	45.31	54.00	-8.69	30.77	3	Horizontal	62	1.08	-
AV	2.4342G	100.98	Inf	-Inf	30.94	3	Horizontal	62	1.08	-
AV	2.4835G	46.93	54.00	-7.07	31.11	3	Horizontal	62	1.08	-
PK	2.3898G	60.48	74.00	-13.52	30.77	3	Horizontal	62	1.08	-
PK	2.433G	110.73	Inf	-Inf	30.93	3	Horizontal	62	1.08	-
PK	2.4854G	63.83	74.00	-10.17	31.12	3	Horizontal	62	1.08	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

2437MHz_TX

24/01/2019

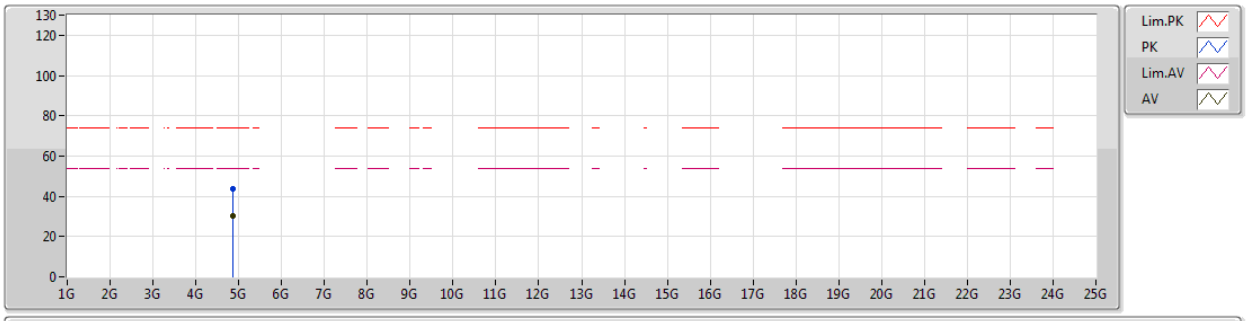


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.874G	31.50	54.00	-22.50	2.25	3	Vertical	73	1.85	-
PK	4.87603G	43.28	74.00	-30.72	2.26	3	Vertical	73	1.85	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

2437MHz_TX

24/01/2019

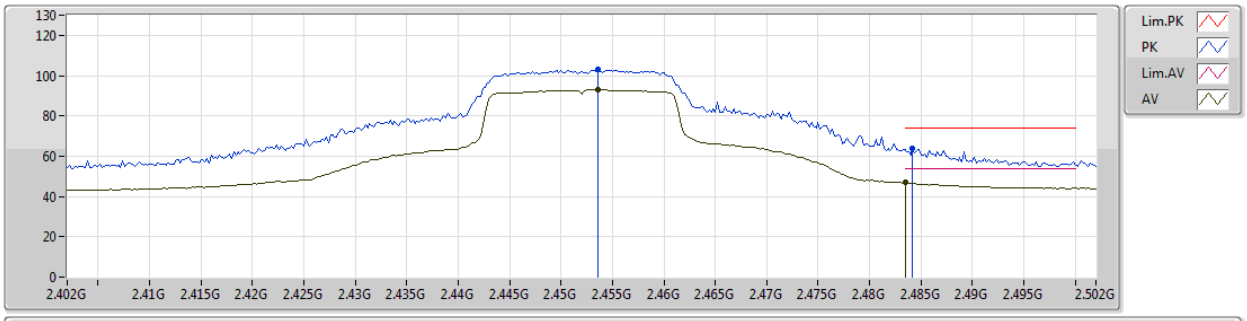


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.87393G	30.17	54.00	-23.83	2.25	3	Horizontal	37	1.74	-
PK	4.87406G	43.65	74.00	-30.35	2.25	3	Horizontal	37	1.74	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

24/01/2019

2452MHz_TX

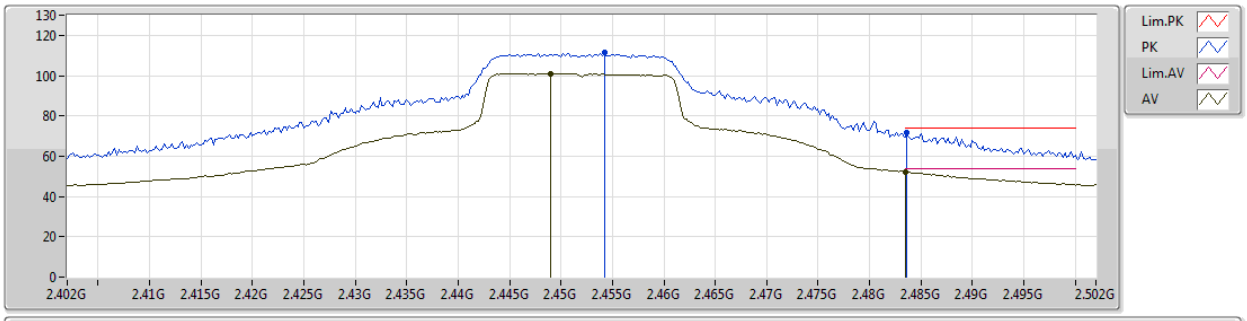


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.4536G	93.11	Inf	-Inf	31.00	3	Vertical	134	1.50	-
AV	2.4835G	46.81	54.00	-7.19	31.11	3	Vertical	134	1.50	-
PK	2.4536G	102.91	Inf	-Inf	31.00	3	Vertical	134	1.50	-
PK	2.4842G	63.99	74.00	-10.01	31.12	3	Vertical	134	1.50	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

24/01/2019

2452MHz_TX

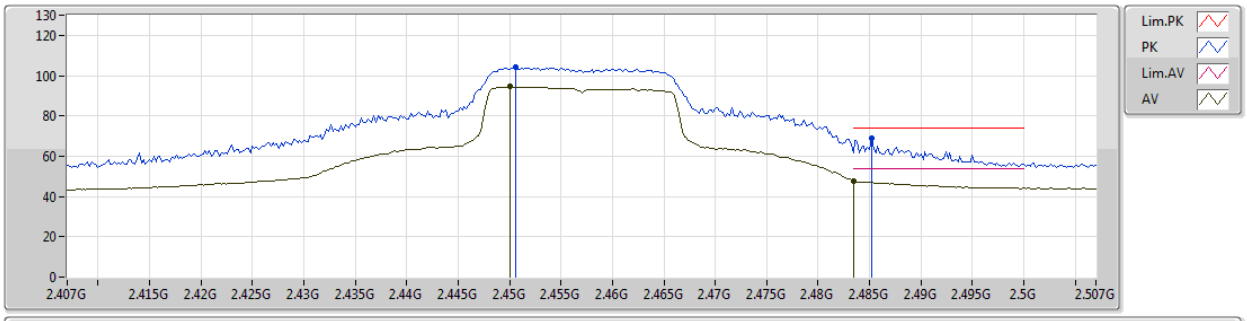


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.449G	100.96	Inf	-Inf	30.99	3	Horizontal	59	1.04	-
AV	2.4835G	52.14	54.00	-1.86	31.11	3	Horizontal	59	1.04	-
PK	2.4542G	111.77	Inf	-Inf	31.00	3	Horizontal	59	1.04	-
PK	2.4836G	71.68	74.00	-2.32	31.11	3	Horizontal	59	1.04	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

24/01/2019

2457MHz_TX

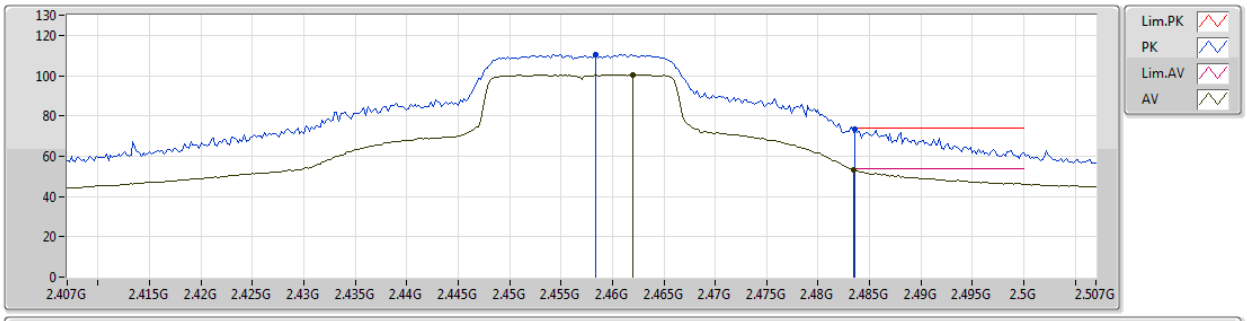


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.45G	94.43	Inf	-Inf	30.99	3	Vertical	142	2.99	-
AV	2.4835G	47.77	54.00	-6.23	31.11	3	Vertical	142	2.99	-
PK	2.4506G	104.27	Inf	-Inf	30.99	3	Vertical	142	2.99	-
PK	2.4852G	68.94	74.00	-5.06	31.12	3	Vertical	142	2.99	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

24/01/2019

2457MHz_TX

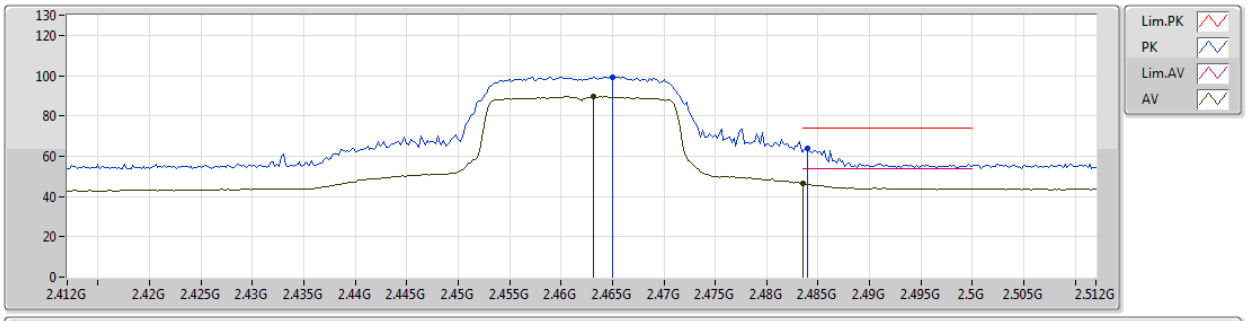


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.462G	100.39	Inf	-Inf	31.03	3	Horizontal	63	1.49	-
AV	2.4835G	53.35	54.00	-0.65	31.11	3	Horizontal	63	1.49	-
PK	2.4584G	110.45	Inf	-Inf	31.02	3	Horizontal	63	1.49	-
PK	2.4836G	73.30	74.00	-0.70	31.11	3	Horizontal	63	1.49	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

24/01/2019

2462MHz_TX

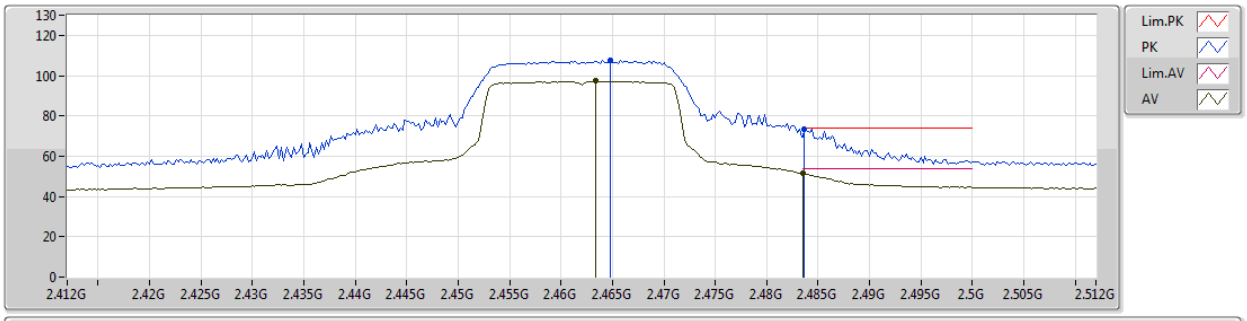


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.4632G	89.53	Inf	-Inf	31.04	3	Vertical	144	2.11	-
AV	2.4835G	46.41	54.00	-7.59	31.11	3	Vertical	144	2.11	-
PK	2.465G	99.42	Inf	-Inf	31.04	3	Vertical	144	2.11	-
PK	2.484G	63.65	74.00	-10.35	31.12	3	Vertical	144	2.11	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

24/01/2019

2462MHz_TX

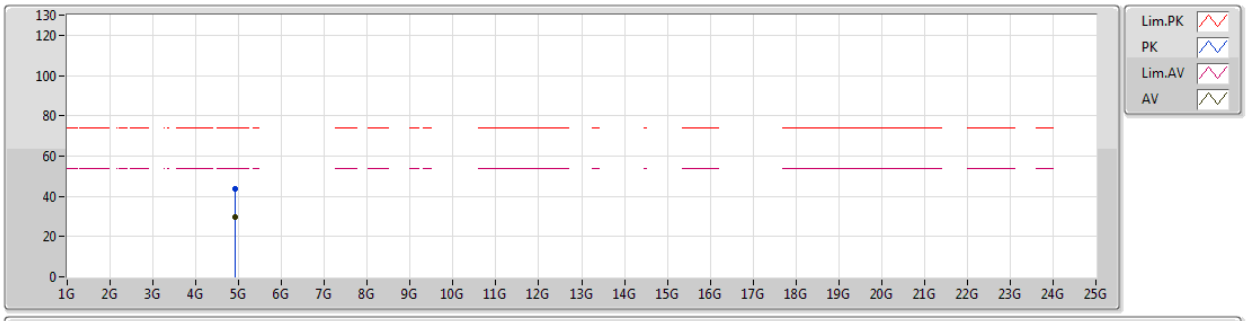


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	2.4634G	97.37	Inf	-Inf	31.04	3	Horizontal	64	1.49	-
AV	2.4835G	51.30	54.00	-2.70	31.11	3	Horizontal	64	1.49	-
PK	2.4648G	107.47	Inf	-Inf	31.04	3	Horizontal	64	1.49	-
PK	2.4836G	73.42	74.00	-0.58	31.11	3	Horizontal	64	1.49	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

2462MHz_TX

24/01/2019

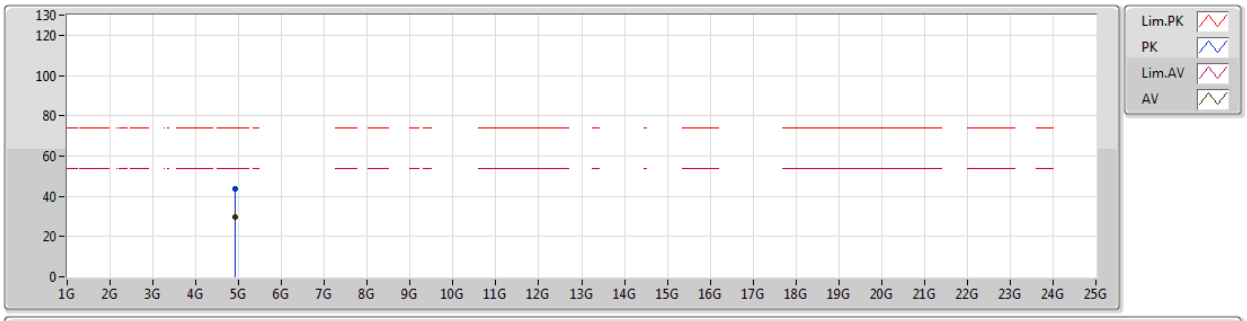


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.92157G	29.96	54.00	-24.04	2.37	3	Vertical	85	2.37	-
PK	4.92319G	43.84	74.00	-30.16	2.38	3	Vertical	85	2.37	-

802.11n HT20_Nss1,(MCS0)_1TX(Port2)

2462MHz_TX

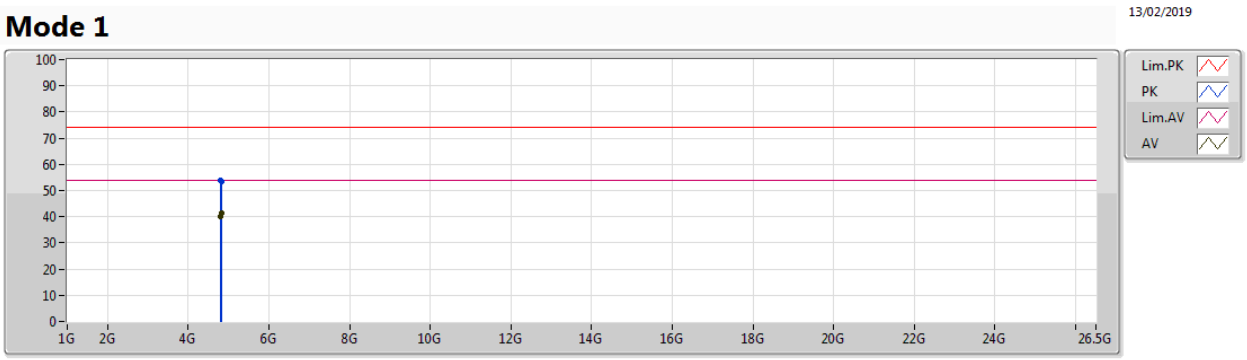
24/01/2019



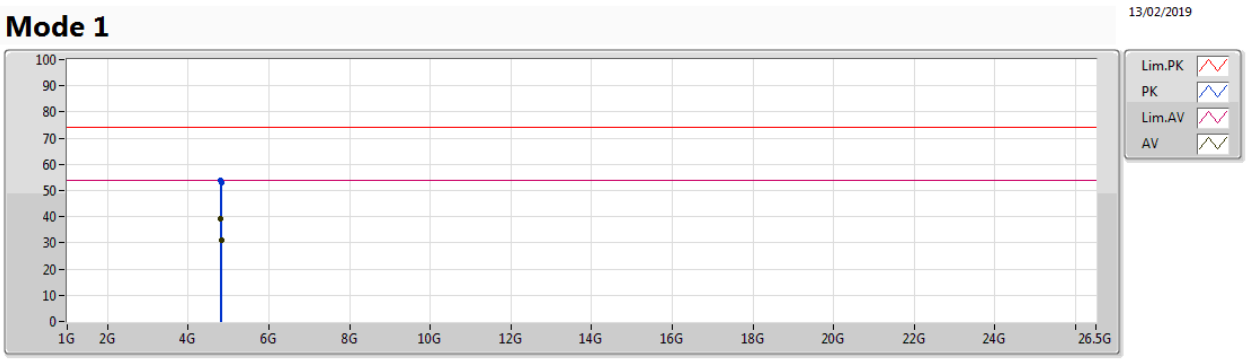
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
AV	4.92233G	29.94	54.00	-24.06	2.38	3	Horizontal	295	2.12	-
PK	4.92183G	43.48	74.00	-30.52	2.37	3	Horizontal	295	2.12	-

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
Mode 1	Pass	AV	4.8241G	41.42	54.00	-12.58	12.66	3	Vertical	189	1.44	-
Mode 2	Pass	AV	4.82457G	41.97	54.00	-12.03	2.13	3	Vertical	224	1.44	-
Mode 3	Pass	AV	10.36G	43.17	54.00	-10.83	12.63	3	Horizontal	154	1.96	-
Mode 4	Pass	AV	10.36G	43.62	54.00	-10.38	12.63	3	Horizontal	258	2.54	-



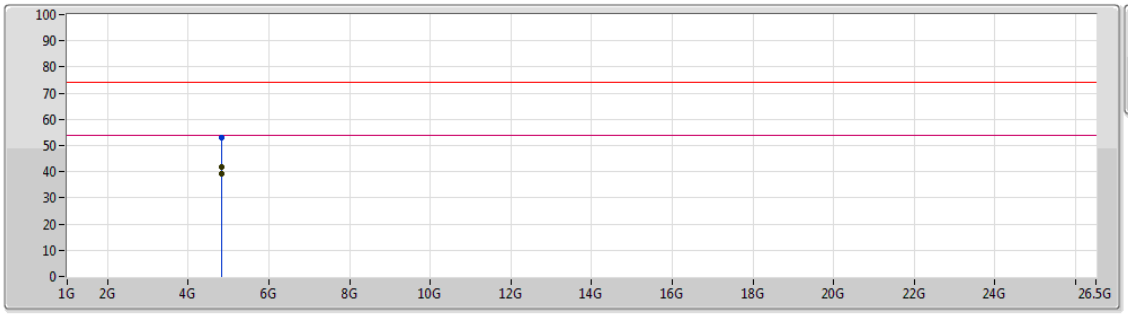
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.80871G	39.92	54.00	-14.08	2.08	3	Vertical	212	1.55	-	37.84	31.19	5.19	34.30
AV	4.8241G	41.42	54.00	-12.58	12.66	3	Vertical	189	1.44	-	28.76	39.42	8.00	34.76
PK	4.80876G	53.95	74.00	-20.05	2.08	3	Vertical	212	1.55	-	51.87	31.19	5.19	34.30
PK	4.82011G	53.62	74.00	-20.38	12.66	3	Vertical	189	1.44	-	40.96	39.42	8.00	34.76



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.80871G	39.30	54.00	-14.70	2.09	3	Horizontal	85	1.71	-	37.21	31.19	5.20	34.30
AV	4.8241G	31.14	54.00	-22.86	2.13	3	Horizontal	162	1.50	-	29.01	31.22	5.20	34.29
PK	4.8088G	53.90	74.00	-20.10	2.09	3	Horizontal	85	1.71	-	51.81	31.19	5.20	34.30
PK	4.82425G	53.04	74.00	-20.96	2.13	3	Horizontal	162	1.50	-	50.91	31.22	5.20	34.29

Mode 2

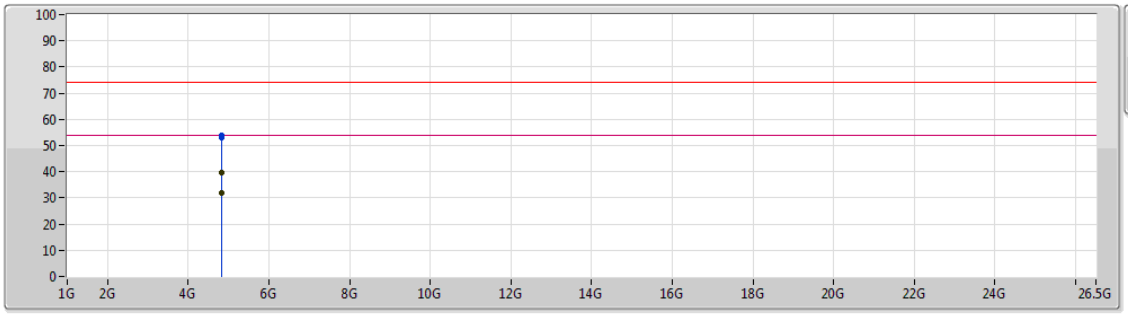
13/02/2019



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.826717G	39.12	54.00	-14.88	2.14	3	Vertical	159	1.55	-	36.98	31.22	5.21	34.29
AV	4.82457G	41.97	54.00	-12.03	2.13	3	Vertical	224	1.44	-	39.84	31.22	5.20	34.29
PK	4.82655G	53.16	74.00	-20.84	2.14	3	Vertical	159	1.55	-	51.02	31.22	5.21	34.29
PK	4.82321G	53.22	74.00	-20.78	2.13	3	Vertical	224	1.44	-	51.09	31.22	5.20	34.29

Mode 2

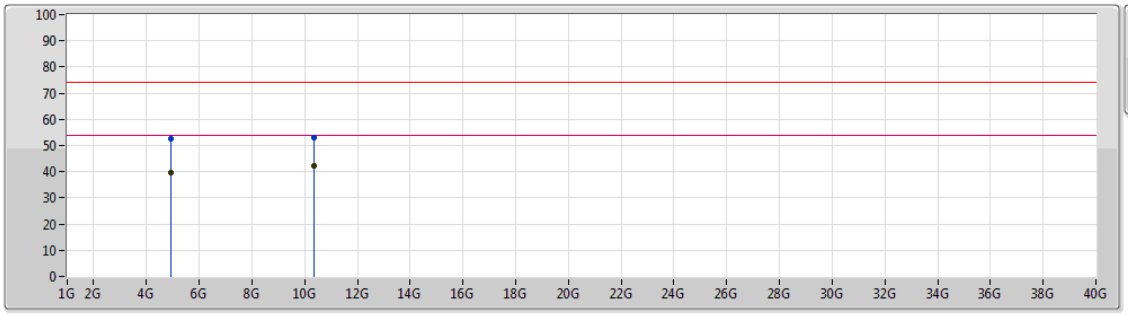
13/02/2019



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.82671G	39.58	54.00	-14.42	2.14	3	Horizontal	196	2.02	-	37.44	31.22	5.21	34.29
AV	4.824G	31.71	54.00	-22.29	2.13	3	Horizontal	311	1.91	-	29.58	31.22	5.20	34.29
PK	4.82596G	54.02	74.00	-19.98	2.14	3	Horizontal	196	2.02	-	51.88	31.22	5.21	34.29
PK	4.8252G	52.91	74.00	-21.09	2.14	3	Horizontal	311	1.91	-	50.77	31.22	5.21	34.29

Mode 3

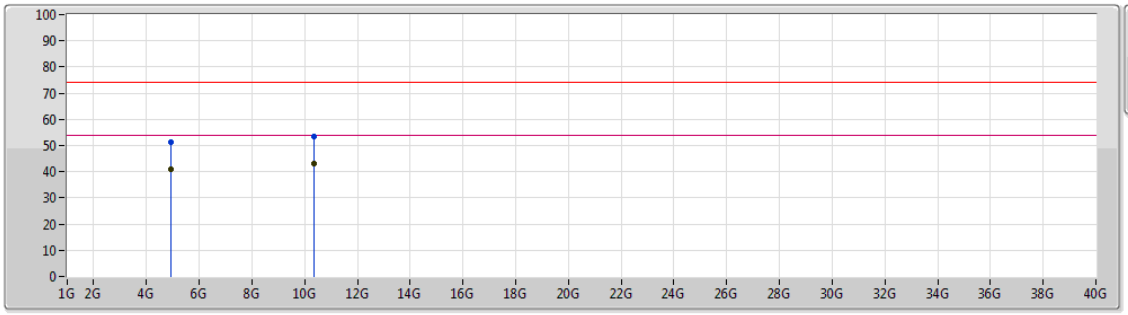
13/02/2019



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.948G	39.55	54.00	-14.45	2.44	3	Vertical	265	2.16	-	37.11	31.42	5.28	34.26
AV	10.36G	42.45	54.00	-11.55	12.63	3	Vertical	111	1.32	-	29.82	39.40	8.00	34.77
PK	4.94817G	52.69	74.00	-21.31	2.44	3	Vertical	265	2.16	-	50.25	31.42	5.28	34.26
PK	10.3654G	53.11	74.00	-20.89	12.64	3	Vertical	111	1.32	-	40.47	39.41	8.00	34.77

Mode 3

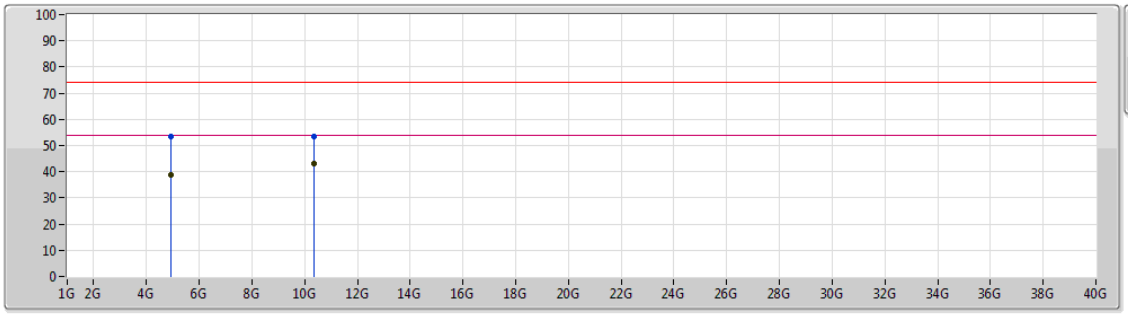
13/02/2019



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.948G	41.15	54.00	-12.85	2.44	3	Horizontal	332	1.50	-	38.71	31.42	5.28	34.26
AV	10.36G	43.17	54.00	-10.83	12.63	3	Horizontal	154	1.96	-	30.54	39.40	8.00	34.77
PK	4.94852G	51.15	74.00	-22.85	2.44	3	Horizontal	332	1.50	-	48.71	31.42	5.28	34.26
PK	10.3656G	53.58	74.00	-20.42	12.64	3	Horizontal	154	1.96	-	40.94	39.41	8.00	34.77

Mode 4

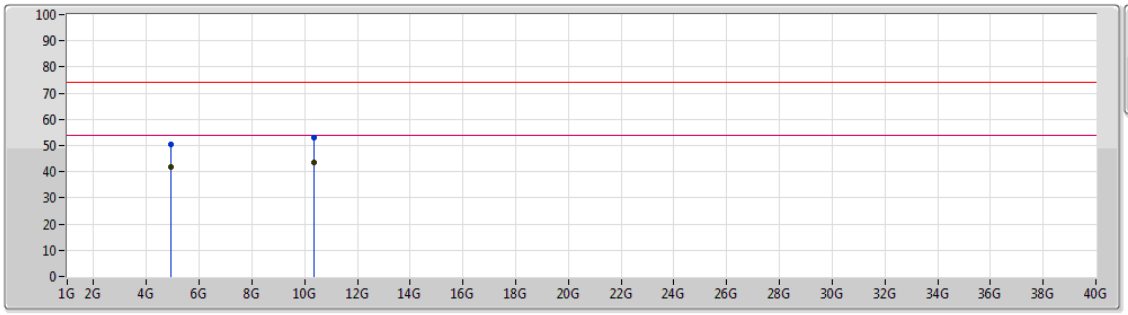
13/02/2019



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.920G	38.71	54.00	-15.29	2.36	3	Vertical	117	2.16	-	36.35	31.37	5.26	34.27
AV	10.36G	43.16	54.00	-10.84	12.63	3	Vertical	292	1.32	-	30.53	39.40	8.00	34.77
PK	4.92006G	53.29	74.00	-20.71	2.36	3	Vertical	117	2.16	-	50.93	31.37	5.26	34.27
PK	10.3602G	53.41	74.00	-20.59	12.63	3	Vertical	292	1.32	-	40.78	39.40	8.00	34.77

Mode 4

13/02/2019



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
AV	4.920G	41.81	54.00	-12.19	2.36	3	Horizontal	51	1.99	-	39.45	31.37	5.26	34.27
AV	10.36G	43.62	54.00	-10.38	12.63	3	Horizontal	258	2.54	-	30.99	39.40	8.00	34.77
PK	4.92034G	50.52	74.00	-23.48	2.36	3	Horizontal	51	1.99	-	48.16	31.37	5.26	34.27
PK	10.3622G	52.87	74.00	-21.13	12.64	3	Horizontal	258	2.54	-	40.23	39.41	8.00	34.77