

FCC Test Report

FCC ID : N7NBX3210
Equipment : AirPrime BX3210 Module
Brand Name : Sierra Wireless Inc.
Model Name : AirPrime BX3210 Module
**Applicant/
Manufacturer** : Sierra Wireless Inc.
13811 Wireless Way, Richmond,
BC V6V 3A4, Canada
Standard : 47 CFR FCC Part 15.247

The product was received on Feb. 27, 2019, and testing was started from Feb. 28, 2019 and completed on Mar. 06, 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.)



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PHOTOGRAPHS OF EUT V01



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	Not Required	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: Michelle Tsai



1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
2400-2483.5	b, g, n (HT20)	2412-2462	1-11 [11]

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

Note:

- ◆ 11b mode uses a combination of DSSS-DBPSK, DQPSK, CCK modulation.
- ◆ 11g and 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	SmartAnt	USI05-220170	Dipole	Reversed-SMA

Ant.	Port	Gain (dBi)		
		2.4G	BT	5G
1	1	2.5	2.5	5

For 2.4GHz function:

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

Ant. 1 (port 1) and could transmit/receive simultaneously.

For BT function:

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

Ant. 1 (port 1) and could transmit/receive simultaneously.

For 5GHz function:

For IEEE 802.11 a/n/ac mode (1TX/1RX)

Ant. 1 (port 1) and could transmit/receive simultaneously.



1.1.3 EUT Information

Operational Condition				
EUT Power Type	For DC Power Supply Mode			
EUT Function	<input checked="" type="checkbox"/>	Point-to-multipoint	<input type="checkbox"/>	Point-to-point
Beamforming Function	<input type="checkbox"/>	With beamforming	<input checked="" type="checkbox"/>	Without beamforming
Type of EUT				
<input checked="" type="checkbox"/>	Stand-alone			
<input type="checkbox"/>	Combined (EUT where the radio part is fully integrated within another device)			
	Combined Equipment - Brand Name / Model No.: ...			
<input type="checkbox"/>	Plug-in radio (EUT intended for a variety of host systems)			
	Host System - Brand Name / Model No.: ...			
<input type="checkbox"/>	Other:			

1.1.4 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11b	0.992	0.035	n/a (DC≥0.98)	n/a (DC≥0.98)
802.11g	0.937	0.283	2.049m	1k
802.11n HT20	0.935	0.292	1.91m	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			
<input checked="" type="checkbox"/>	HWA YA	ADD : No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)	
		TEL : 886-3-327-3456	FAX : 886-3-327-0973
Test site Designation No. TW1190 with FCC.			
<input type="checkbox"/>	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	Andy	20.7~23.5°C / 59.1~63.5%	05/Mar/2019~06/Mar/2019
Radiated	03CH03-HY	Edward	21.6~23.5°C / 55~60.6%	28/Feb/2019~05/Mar/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 °C	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	3.3V


2.2 Test Channel Mode

Test Software	DoS
---------------	-----

Mode	PowerSetting
802.11b_Nss1,(1Mbps)_1TX	-
2412MHz	18
2417MHz	18
2437MHz	18
2457MHz	18
2462MHz	18
802.11g_Nss1,(6Mbps)_1TX	-
2412MHz	17
2417MHz	17
2437MHz	17
2457MHz	17
2462MHz	15.5
802.11n HT20_Nss1,(MCS0)_1TX	-
2412MHz	17
2417MHz	17
2437MHz	17
2457MHz	17
2462MHz	14.5

2.3 The Worst Case Measurement Configuration

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

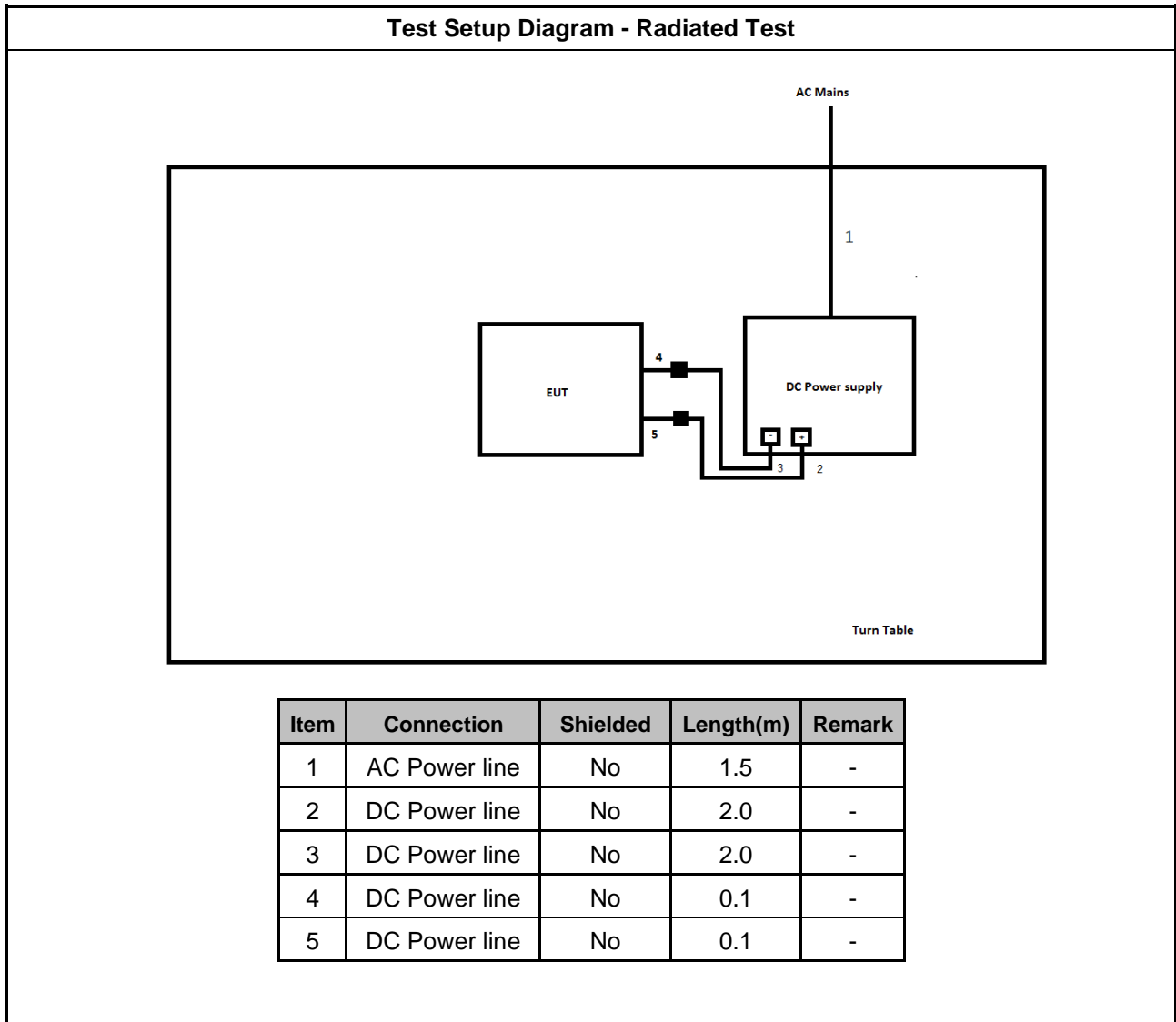
The Worst Case Mode for Following Conformance Tests	
Tests Item	Emissions in Restricted Frequency Bands
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be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

2.4 Support Equipment

Support Equipment – RF Conducted				
No.	Equipment	Brand Name	Model Name	FCC ID
1	Notebook	DELL	E5410	DoC
2	Adapter for NB	DELL	HA65NM130	DoC
3	DC Power Supply	GW	GPS-3030DD	N/A

Support Equipment – Radiated Emission				
No.	Equipment	Brand Name	Model Name	FCC ID
1	DC Power Supply	GW	GPS-3030DD	N/A

2.5 Test Setup Diagram



3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

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

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

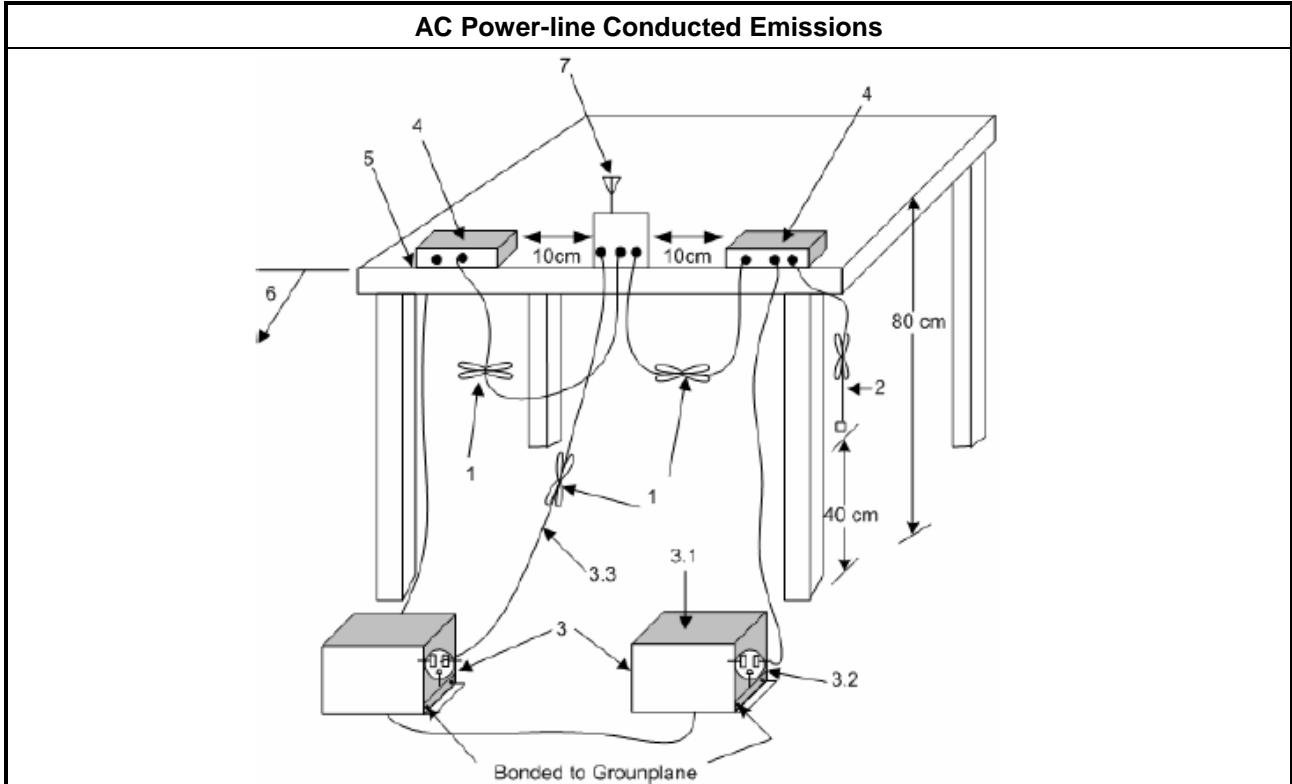
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

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

3.1.4 Test Setup





3.1.5 Test Result of AC Power-line Conducted Emissions

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

3.2 DTS Bandwidth

3.2.1 6dB Bandwidth Limit

6dB Bandwidth Limit	
Systems using digital modulation techniques:	
<ul style="list-style-type: none"> ▪ 6 dB bandwidth \geq 500 kHz. 	

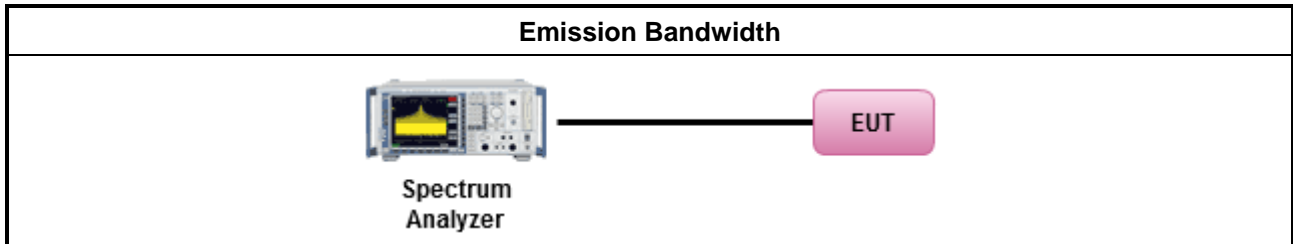
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> ▪ For the emission bandwidth shall be measured using one of the options below: 	
<input checked="" type="checkbox"/>	Refer as KDB 558074. clause 8.2 (11.8 of ANSI C63.10) DTS bandwidth measurement.
<input type="checkbox"/>	Refer as RSS-Gen, clause 6.7 for for occupied bandwidth testing.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 6.9.3 for occupied bandwidth testing.

3.2.4 Test Setup



3.2.5 Test Result of Emission Bandwidth

Refer as Appendix A

3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit	
	<ul style="list-style-type: none"> ▪ If $G_{TX} \leq 6$ dBi, then $P_{Out} \leq 30$ dBm (1 W)
	<ul style="list-style-type: none"> ▪ Point-to-multipoint systems (P2M): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$ dBm
	<ul style="list-style-type: none"> ▪ Point-to-point systems (P2P): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	<ul style="list-style-type: none"> ▪ Smart antenna system (SAS):
	<ul style="list-style-type: none"> - Single beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	<ul style="list-style-type: none"> - Overlap beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	<ul style="list-style-type: none"> - 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:	
	<ul style="list-style-type: none"> ▪ 2400-2483.5 MHz Band
	<ul style="list-style-type: none"> ▪ Point-to-multipoint systems (P2M): $P_{eirp} \leq 36$ dBm (4 W)
	<ul style="list-style-type: none"> ▪ Point-to-point systems (P2P): $P_{eirp} \leq \text{MAX}(36, [P_{Out} + G_{TX}])$ dBm
	<ul style="list-style-type: none"> ▪ Smart antenna system (SAS)
	<ul style="list-style-type: none"> - Single beam: $P_{eirp} \leq \text{MAX}(36, P_{Out} + G_{TX})$ dBm
	<ul style="list-style-type: none"> - Overlap beam: $P_{eirp} \leq \text{MAX}(36, P_{Out} + G_{TX})$ dBm
	<ul style="list-style-type: none"> - Aggregate power on all beams: $P_{eirp} \leq \text{MAX}(36, [P_{Out} + G_{TX} + 8])$ 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.	

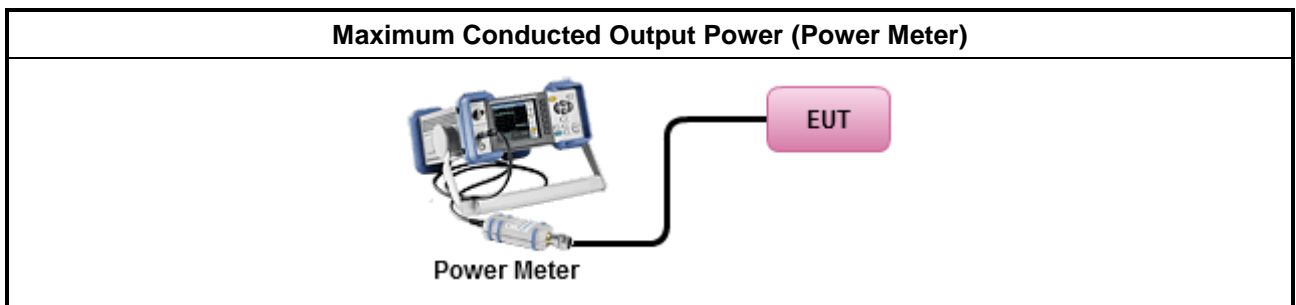
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> ▪ Maximum Peak Conducted Output Power 	
<input type="checkbox"/>	Refer as KDB 558074, clause 8.3.1.1 (11.9.1.1 of ANSI C63.10) RBW ≥ EBW method.
<input type="checkbox"/>	Refer as KDB 558074, clause 8.3.1.2 (11.9.1.2 of ANSI C63.10) integrated band power method.
<input type="checkbox"/>	Refer as KDB 558074, clause 8.3.1.3 (11.9.1.3 of ANSI C63.10) peak power meter.
<ul style="list-style-type: none"> ▪ Maximum Average Conducted Output Power 	
<input type="checkbox"/>	Refer as KDB 558074, clause 8.3.2.2 (11.9.2.2 of ANSI C63.10) using a spectrum analyzer.
<input checked="" type="checkbox"/>	Refer as KDB 558074, clause 8.3.2.3 (11.9.2.3 of ANSI C63.10) using a power meter.
<ul style="list-style-type: none"> ▪ For conducted measurement. 	
<ul style="list-style-type: none"> ▪ 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. 	
<ul style="list-style-type: none"> ▪ If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$ 	

3.3.4 Test Setup



3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix B

3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

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

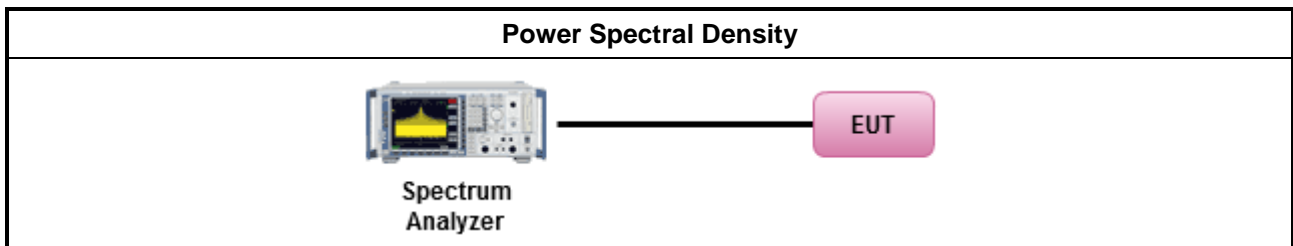
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method
<ul style="list-style-type: none"> Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option).
<input checked="" type="checkbox"/> Refer as KDB 558074, clause 8.4 (11.10 of ANSI C63.10) Method PKPSD.
<ul style="list-style-type: none"> For conducted measurement.
<ul style="list-style-type: none"> If The EUT supports multiple transmit chains using options given below: <ul style="list-style-type: none"> 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



3.4.5 Test Result of Power Spectral Density

Refer as Appendix C

3.5 Emissions in Non-restricted Frequency Bands

3.5.1 Emissions in Non-restricted Frequency Bands Limit

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

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

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

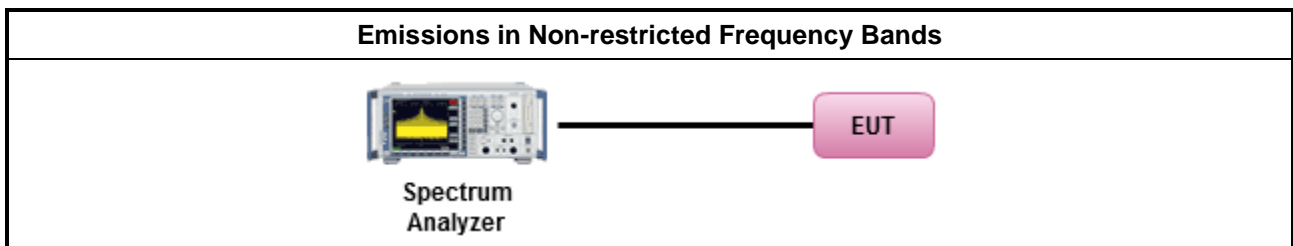
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

Test Method
<ul style="list-style-type: none"> Refer as KDB 558074, clause 8.5 (11.11 of ANSI C63.10) for non-restricted frequency bands.

3.5.4 Test Setup



3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix D



3.6 Emissions in Restricted Frequency Bands

3.6.1 Emissions in Restricted Frequency Bands Limit

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

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

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

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

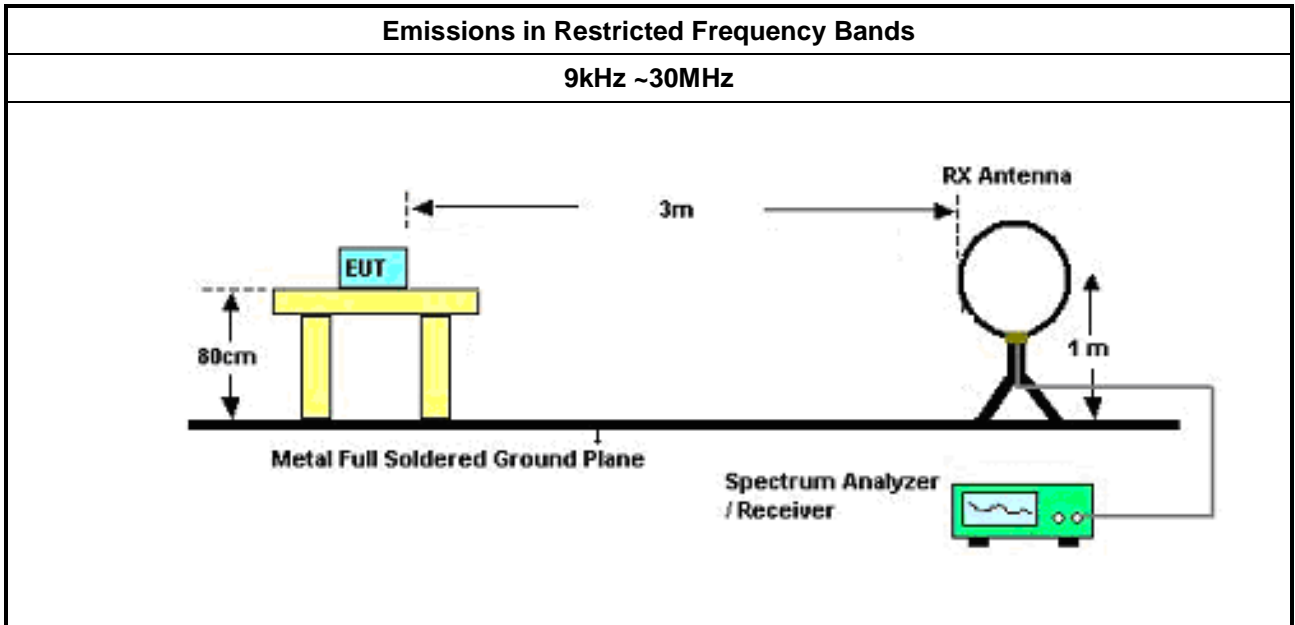
3.6.2 Measuring Instruments

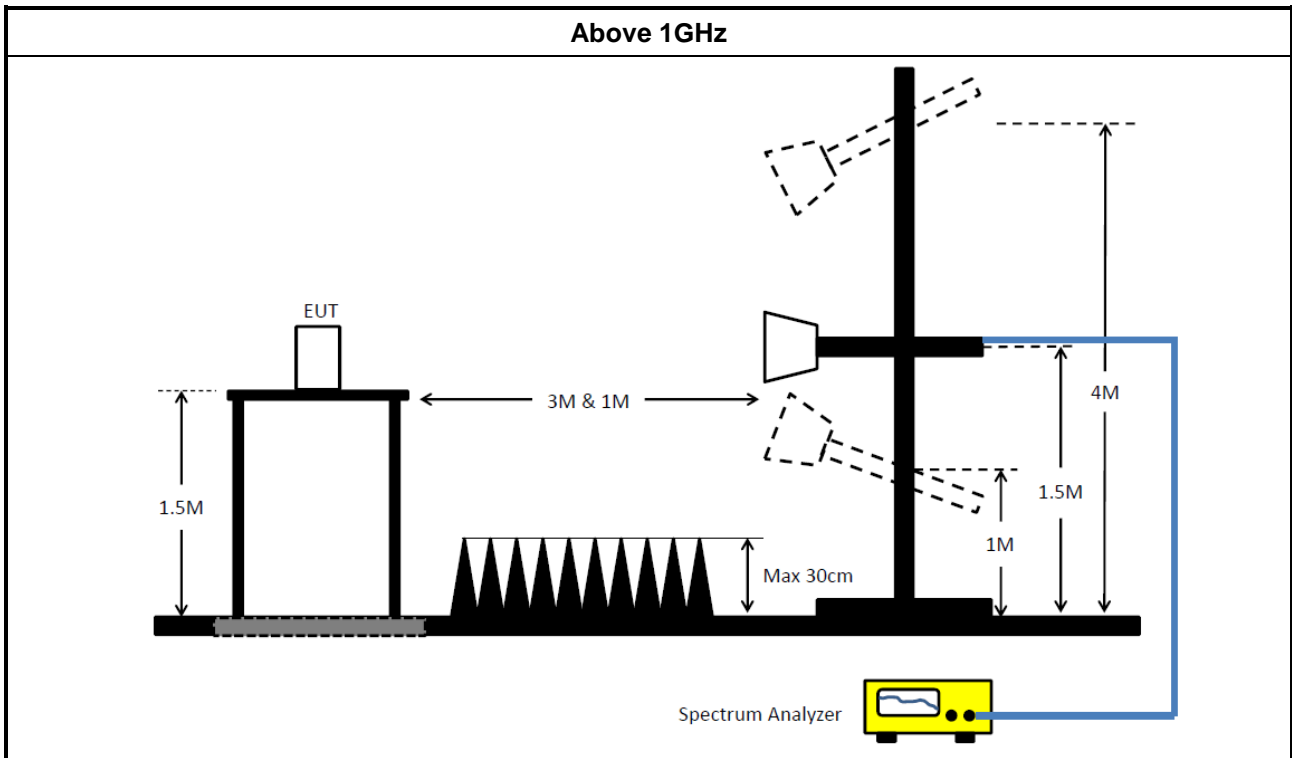
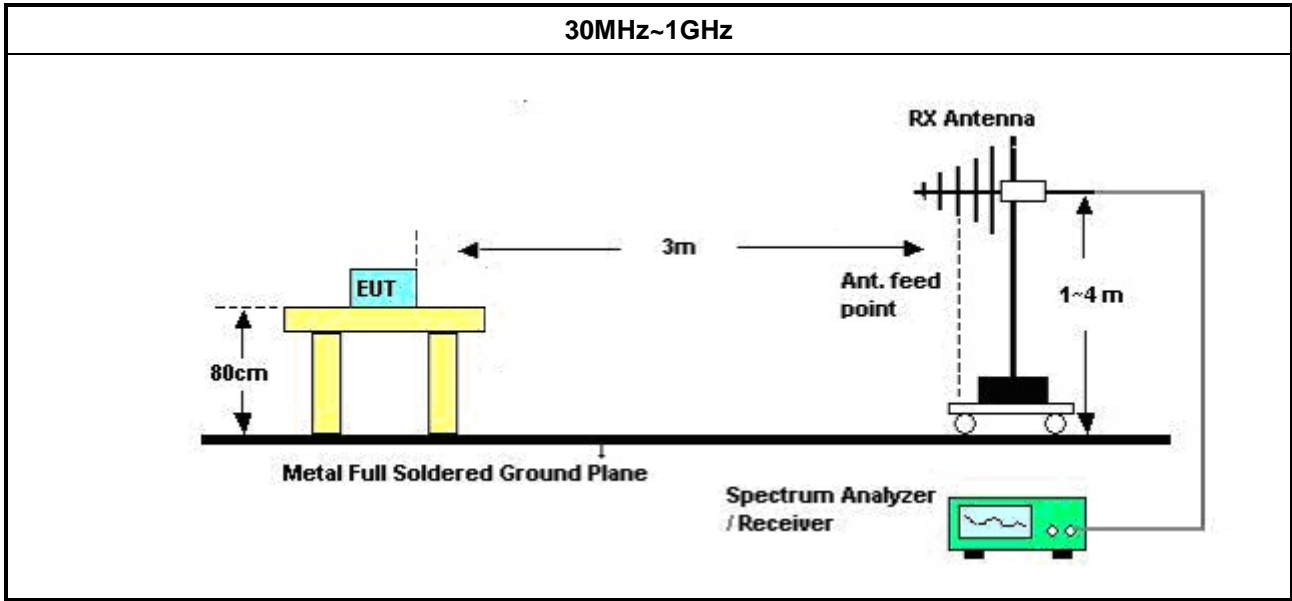
Refer a test equipment and calibration data table in this test report.

3.6.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> The average emission levels shall be measured in [duty cycle \geq 98 or duty factor]. 	
<ul style="list-style-type: none"> 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. 	
<ul style="list-style-type: none"> For the transmitter unwanted emissions shall be measured using following options below: 	
	<ul style="list-style-type: none"> Refer as KDB 558074, clause 8.6 (11.12 of ANSI C63.10) for restricted frequency bands.
<ul style="list-style-type: none"> For the transmitter band-edge emissions shall be measured using following options below: 	
	<ul style="list-style-type: none"> 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.
	<ul style="list-style-type: none"> Refer as KDB 558074, clause 8.7.2 (6.10.6 of ANSI C63.10) for marker-delta method for band-edge measurements.
	<ul style="list-style-type: none"> 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).
<ul style="list-style-type: none"> Use the following spectrum analyzer settings: 	
	<ul style="list-style-type: none"> Set RBW=100 kHz for $f < 1$ GHz; VBW=3 * RBW; Sweep = auto; Detector function = peak; Trace = max hold.
	<ul style="list-style-type: none"> Set RBW = 1 MHz, VBW= 3MHz for $f \geq 1$ GHz for peak measurement. For average measurement, refer as 1.1.4.

3.6.4 Test Setup





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 E



4 Test Equipment and Calibration Data

Instrument for Radiated Test

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	30MHz ~ 1GHz 3m	30/Oct/2018	29/Oct/2019
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	1GHz ~ 18GHz 3m	30/Oct/2018	29/Oct/2019
Amplifier	IFI	SCCX150	03CH03-HY	10KHz ~ 100MHz	14/Sep/2017	13/Sep/2019
Amplifier	HP	8447D	2944A08033	10kHz ~ 1.3GHz	23/Apr/2018	19/Apr/2019
EMI Test Receiver	R&S	ESR3	102052	9kHz ~ 3.6GHz	10/Apr/2018	09/Apr/2019
Bilog Antenna with 5dB Pad	ETS	3142B & MTJ6102-05	00022055	26 MHz - 3 GHz	19/Nov/2018	18/Nov/2019
Microwave System Preamplifier	KEYSIGHT	83017A	MY53270196	1GHz ~ 26.5GHz	05/Sep/2018	04/Sep/2019
Signal Analyzer	R&S	FSV40	101500	10Hz ~ 40GHz	18/Jul/2018	17/Jul/2019
RF Cable-R03m	Jye Bao	RG142	CB021	9kHz ~ 1GHz	28/Jan/2019	27/Jan/2020
RF Cable-high	SUHNER	SUCOFLEX 106	CB222	1GHz ~ 40GHz	28/Jan/2019	27/Jan/2020
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170221	15GHz ~ 40GHz	12/Mar/2018	11/Mar/2019
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1531	1GHz ~ 18GHz	18/Apr/ 2018	17/Apr/2019
Preamplifier	MITEQ	TTA1840-35-HG	1864481	18GHz ~ 40GHz	24/Aug/2018	23/Aug/2019
Loop Antenna	TESEQ	HLA 6120	31244	9kHz ~ 30MHz	28/Mar/2018	27/Mar/2019

Instrument for Conducted Test

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Spectrum Analyzer	R&S	FSV 40	101500	10Hz~40GHz	18/Jul/2018	17/Jul/2019
Power Sensor	Anritsu	MA2411B	1339407	300MHz ~ 40GHz	17/Nov/2018	16/Nov/2019
Power Meter	Anritsu	ML2495A	1517010	300MHz ~ 40GHz	17/Nov/2018	16/Nov/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



Summary

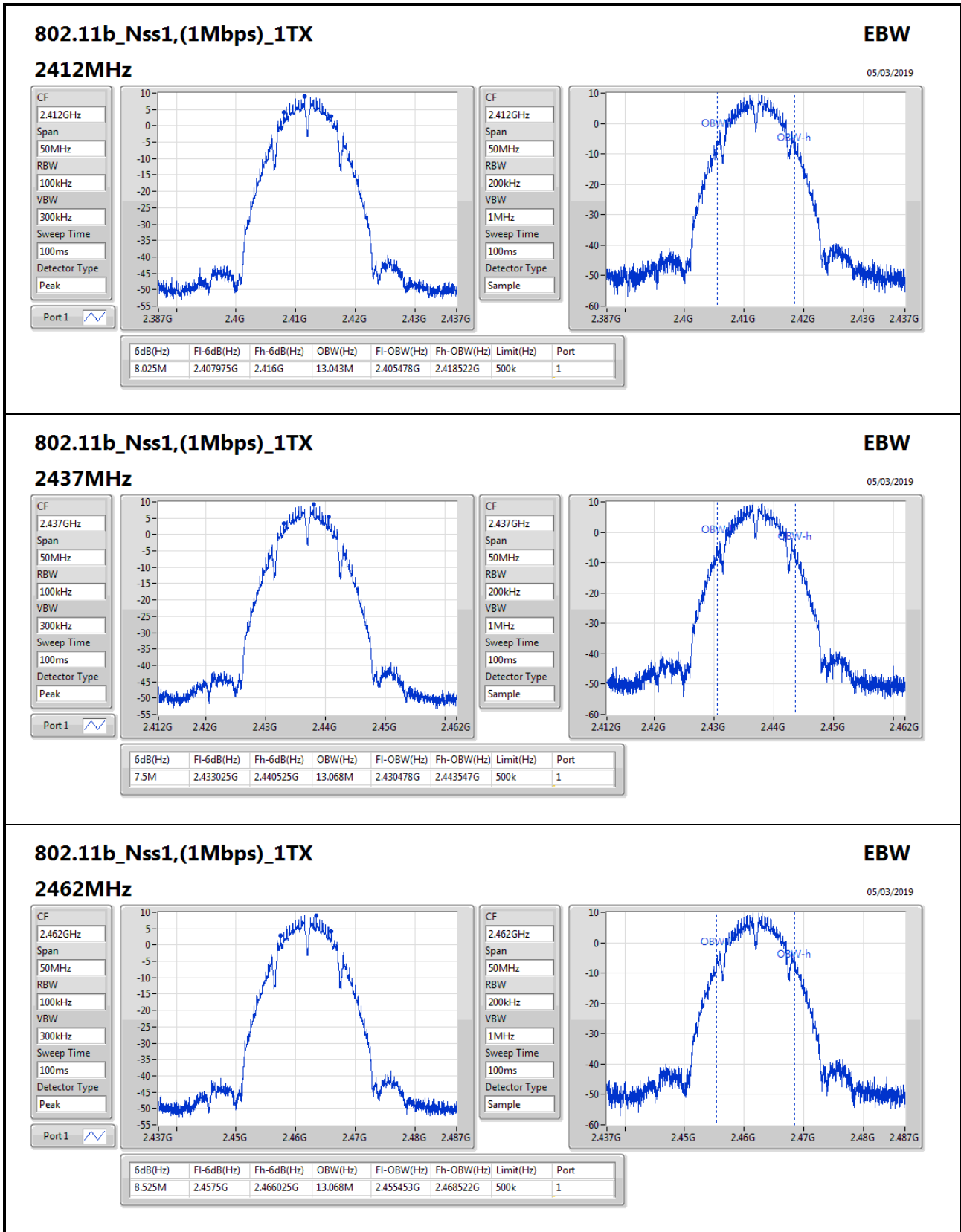
Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX	8.525M	13.068M	13M1G1D	7.5M	13.043M
802.11g_Nss1,(6Mbps)_1TX	15.5M	16.317M	16M3D1D	14.95M	16.267M
802.11n HT20_Nss1,(MCS0)_1TX	15.125M	17.441M	17M4D1D	15.025M	17.416M

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

Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	8.025M	13.043M
2437MHz	Pass	500k	7.5M	13.068M
2462MHz	Pass	500k	8.525M	13.068M
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	14.95M	16.267M
2437MHz	Pass	500k	15.025M	16.317M
2462MHz	Pass	500k	15.5M	16.292M
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-
2412MHz	Pass	500k	15.125M	17.416M
2437MHz	Pass	500k	15.075M	17.441M
2462MHz	Pass	500k	15.025M	17.441M

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



802.11b_Nss1,(1Mbps)_1TX

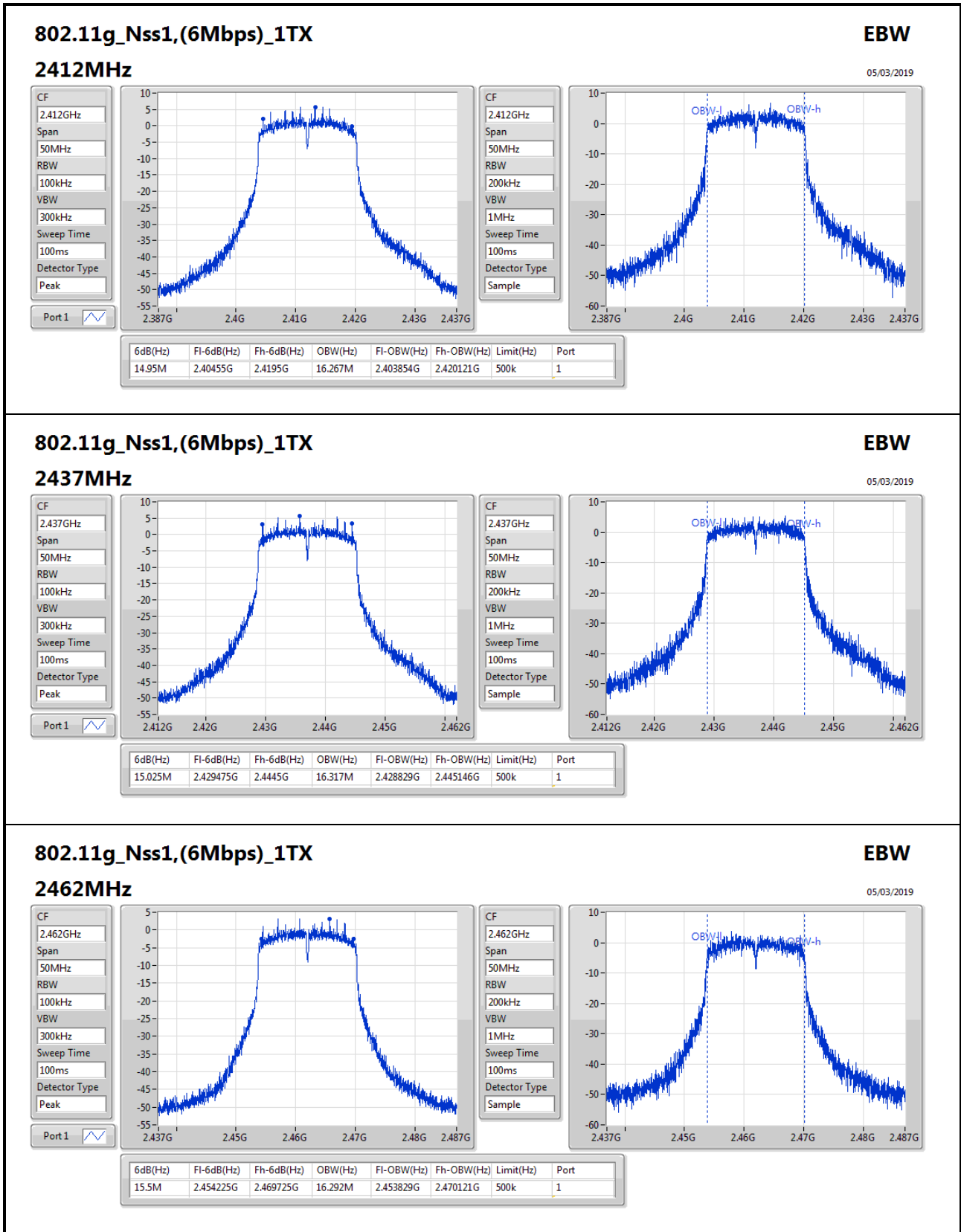
2462MHz

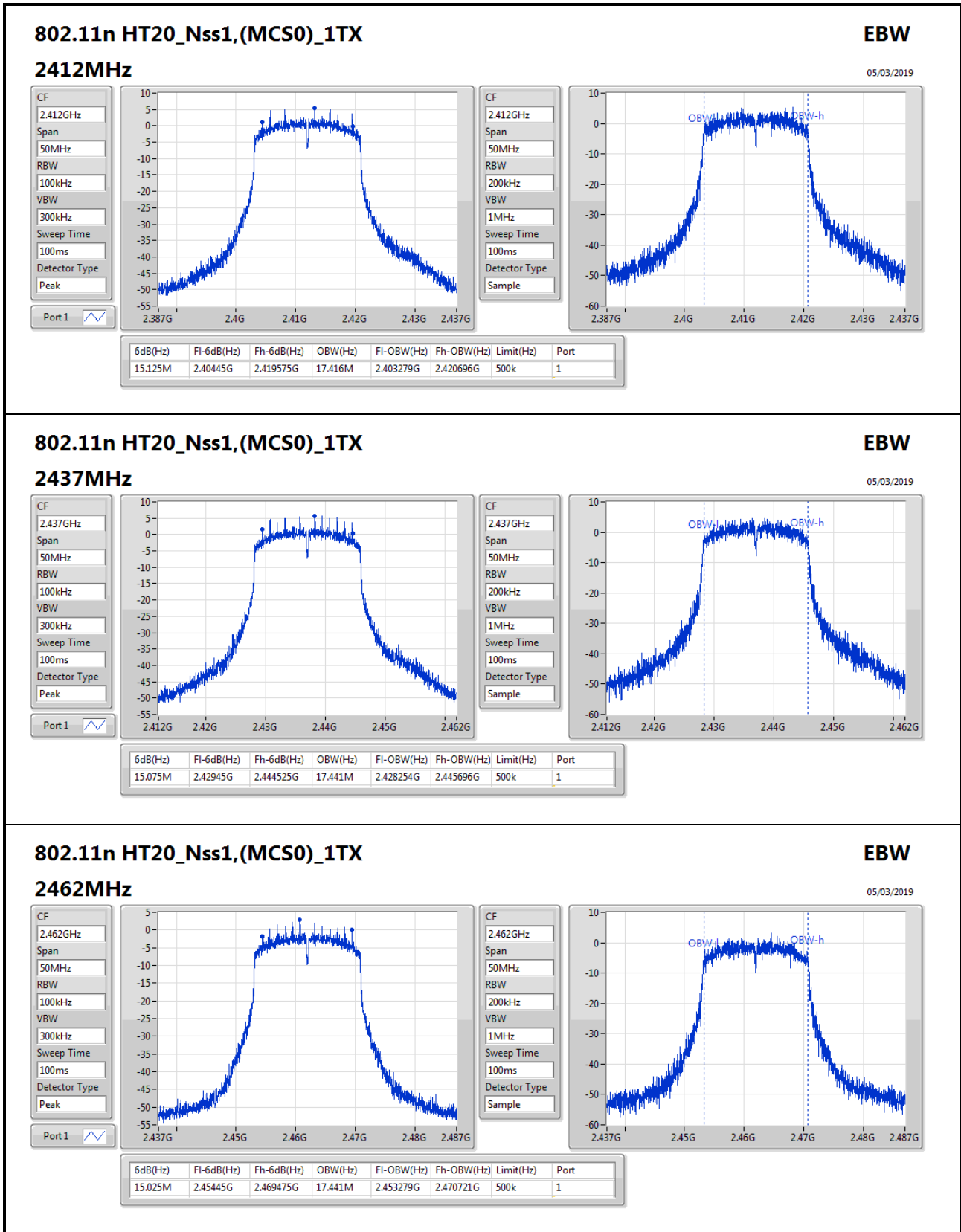
EBW

05/03/2019

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

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







Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	17.96	0.06252
802.11g_Nss1,(6Mbps)_1TX	16.40	0.04365
802.11n HT20_Nss1,(MCS0)_1TX	16.13	0.04102

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	2.50	17.92	17.92	30.00
2417MHz	Pass	2.50	17.88	17.88	30.00
2437MHz	Pass	2.50	17.83	17.83	30.00
2457MHz	Pass	2.50	17.76	17.76	30.00
2462MHz	Pass	2.50	17.96	17.96	30.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	2.50	16.40	16.40	30.00
2417MHz	Pass	2.50	16.30	16.30	30.00
2437MHz	Pass	2.50	16.35	16.35	30.00
2457MHz	Pass	2.50	16.21	16.21	30.00
2462MHz	Pass	2.50	14.50	14.50	30.00
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-
2412MHz	Pass	2.50	16.13	16.13	30.00
2417MHz	Pass	2.50	16.09	16.09	30.00
2437MHz	Pass	2.50	16.06	16.06	30.00
2457MHz	Pass	2.50	15.90	15.90	30.00
2462MHz	Pass	2.50	13.31	13.31	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	-5.23
802.11g_Nss1,(6Mbps)_1TX	-9.53
802.11n HT20_Nss1,(MCS0)_1TX	-9.60

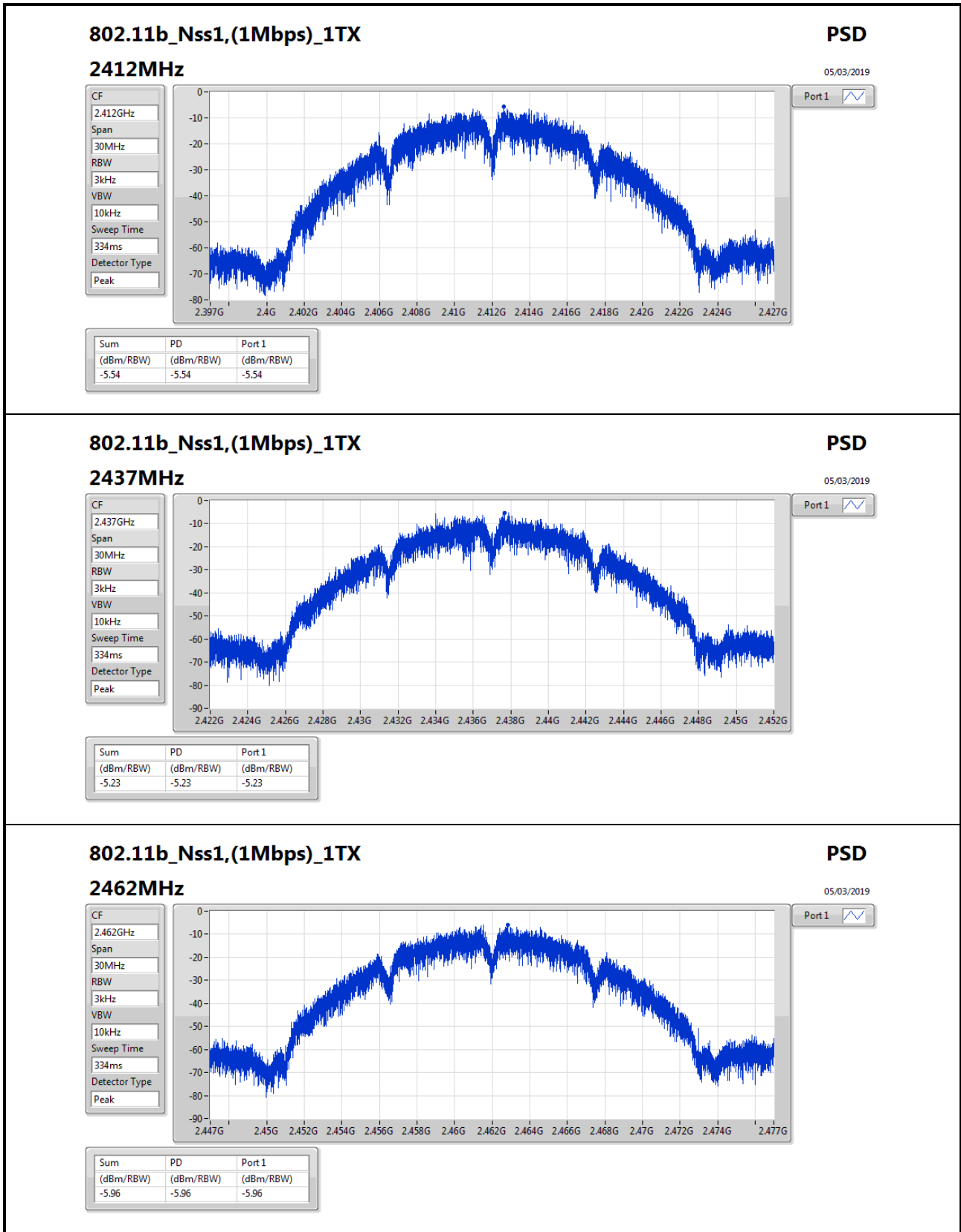
RBW=3kHz.

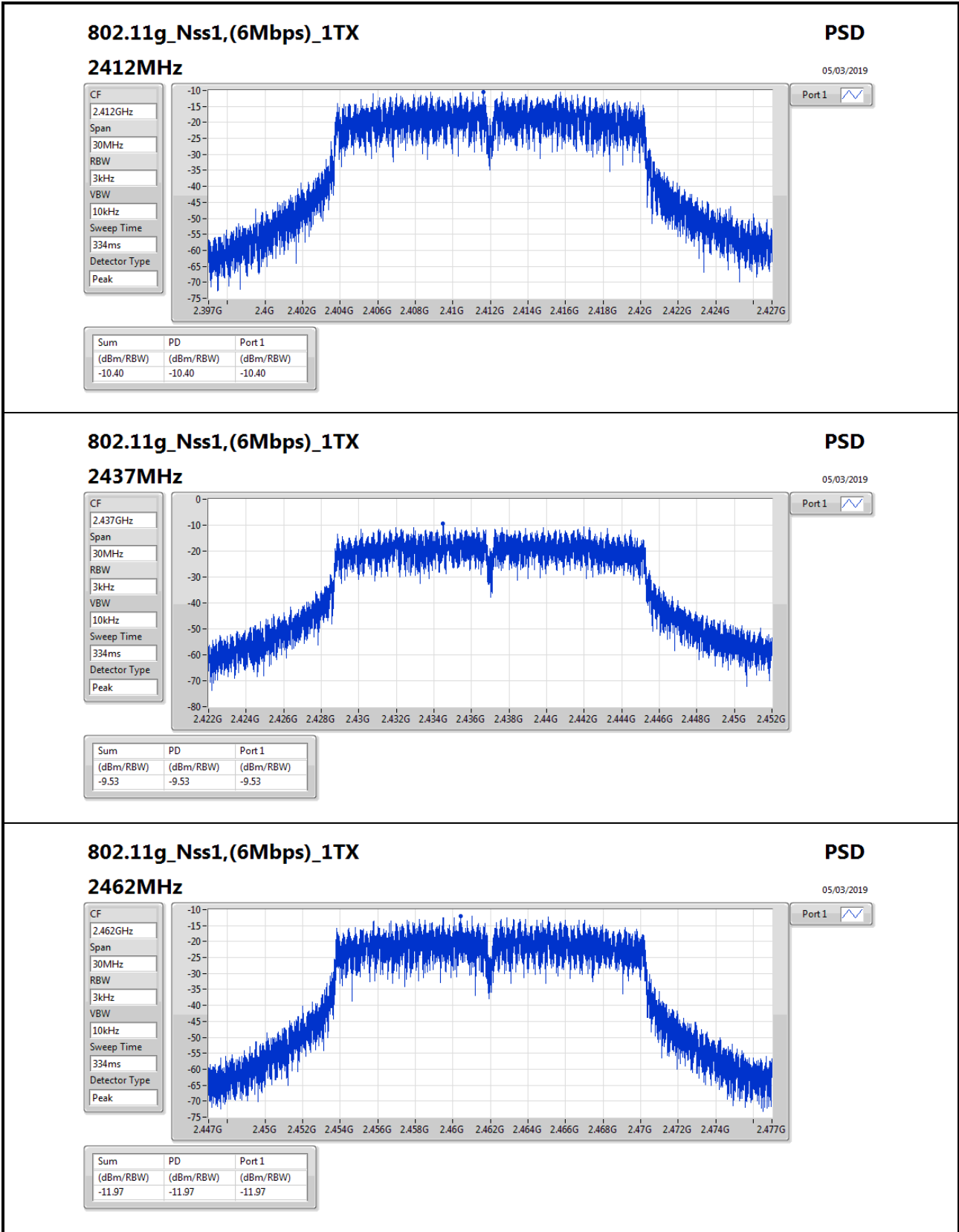
Result

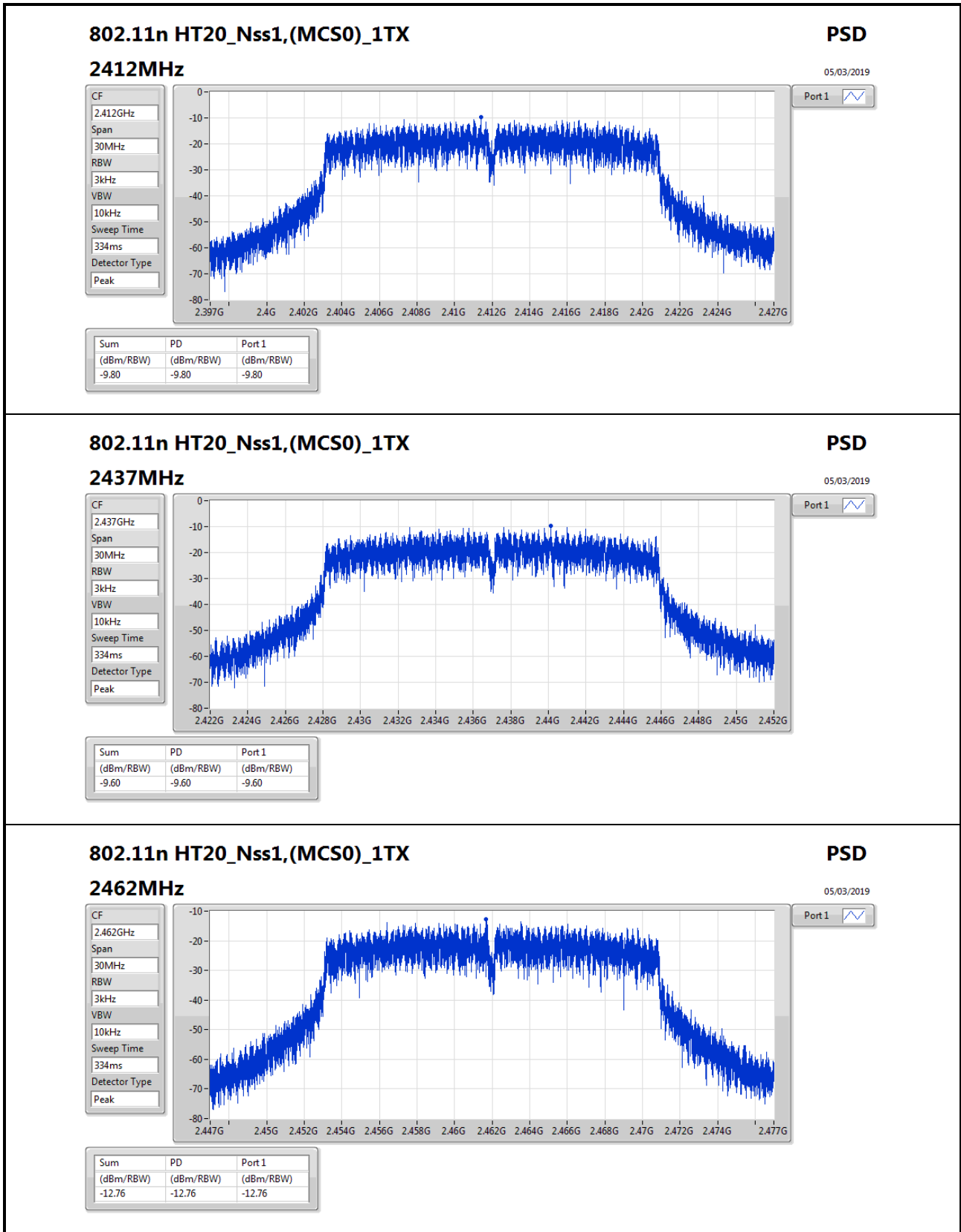
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	2.50	-5.54	-5.54	8.00
2437MHz	Pass	2.50	-5.23	-5.23	8.00
2462MHz	Pass	2.50	-5.96	-5.96	8.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	2.50	-10.40	-10.40	8.00
2437MHz	Pass	2.50	-9.53	-9.53	8.00
2462MHz	Pass	2.50	-11.97	-11.97	8.00
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-
2412MHz	Pass	2.50	-9.80	-9.80	8.00
2437MHz	Pass	2.50	-9.60	-9.60	8.00
2462MHz	Pass	2.50	-12.76	-12.76	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;







802.11n HT20_Nss1,(MCS0)_1TX

2462MHz

PSD

05/03/2019

CF

2.462GHz

Span

30MHz

RBW

3kHz

VBW

10kHz

Sweep Time

334ms

Detector Type

Peak



Port 1

Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-12.76	-12.76	-12.76

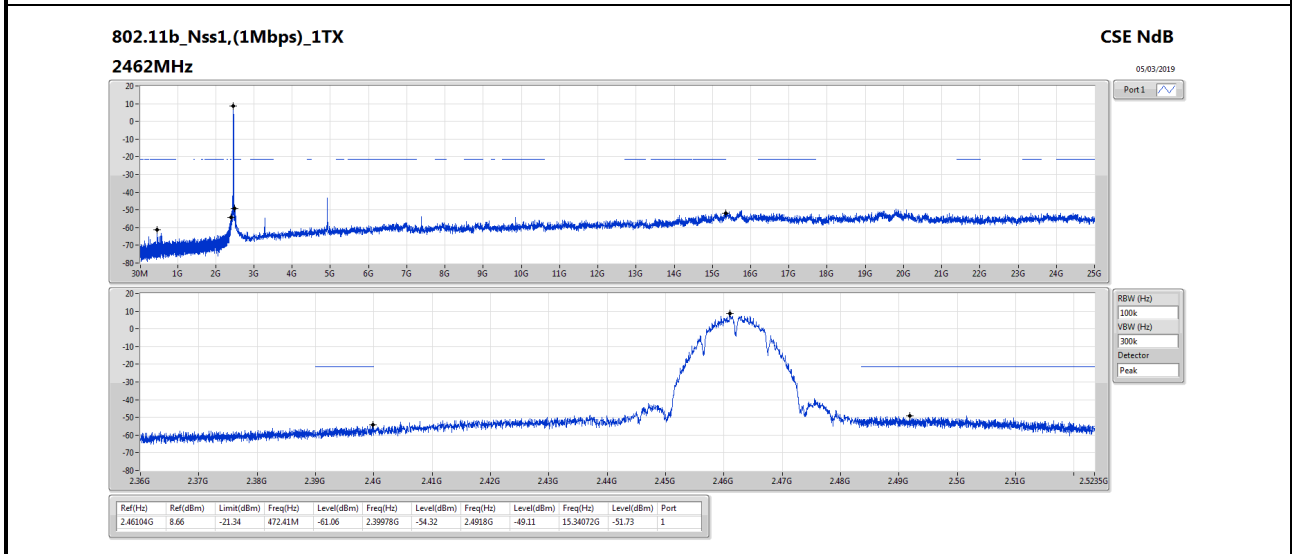
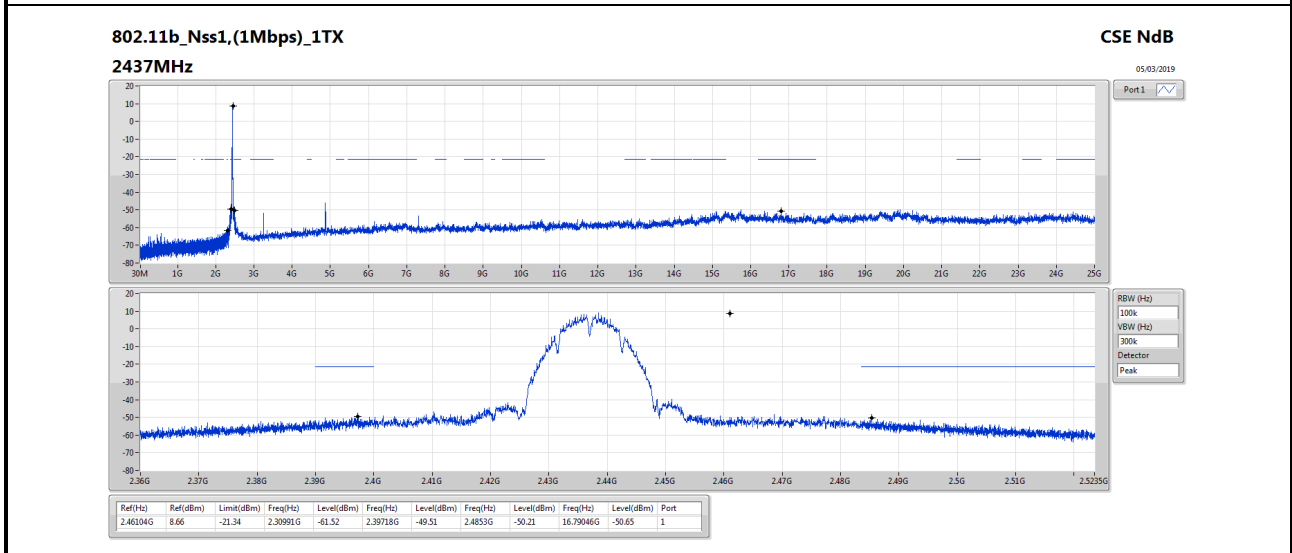
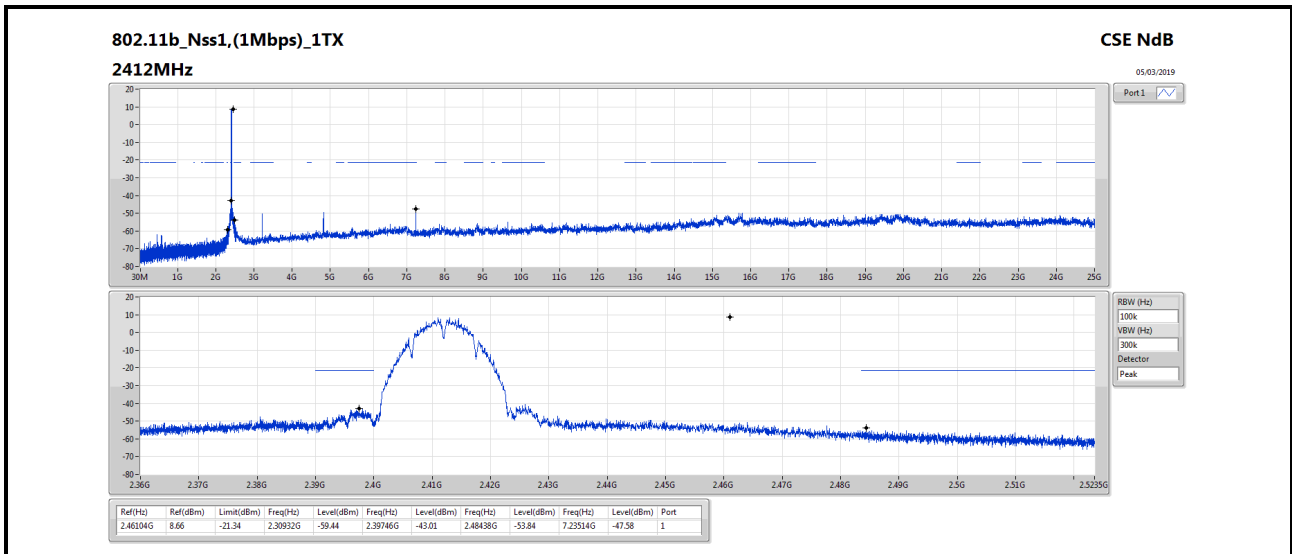


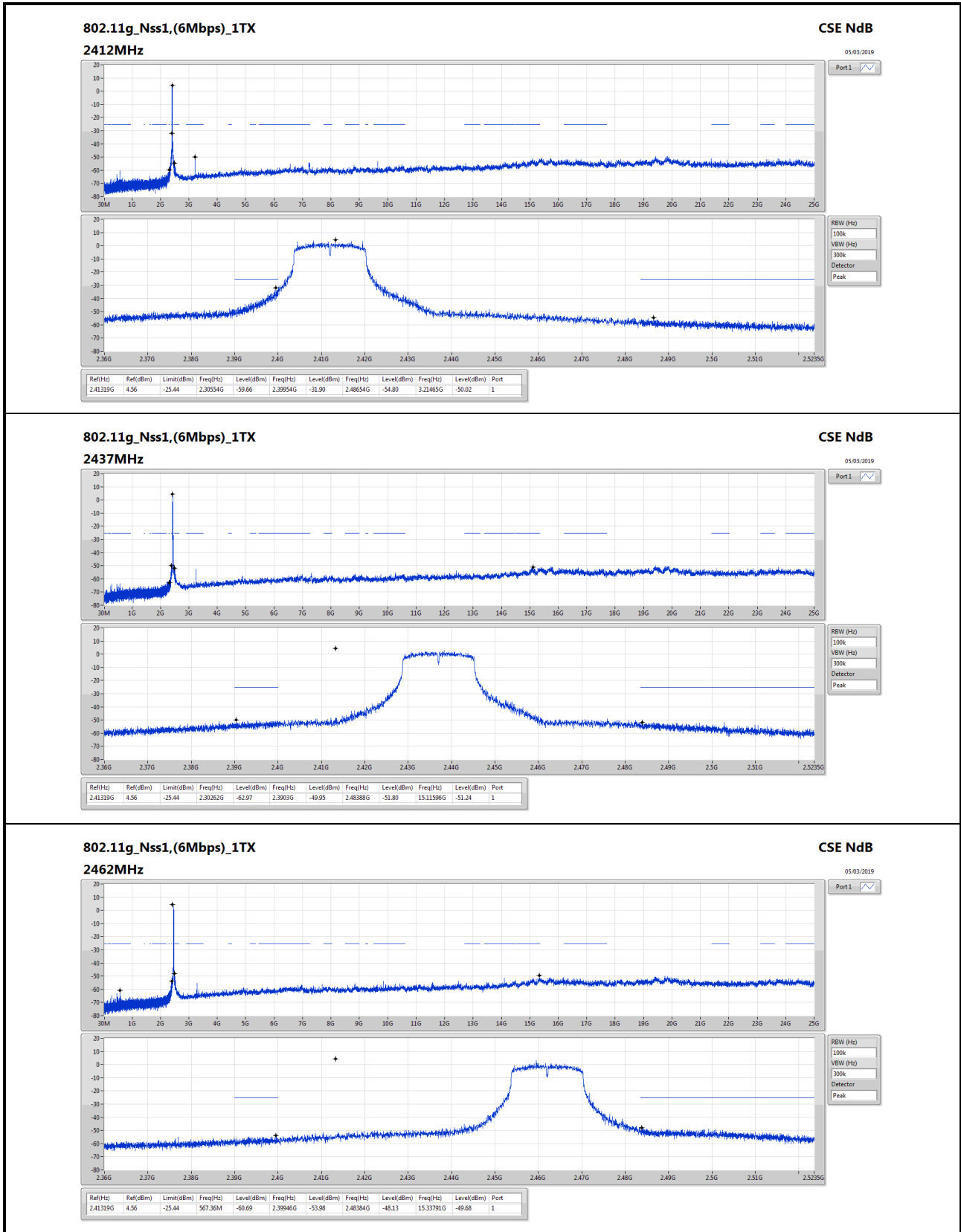
Summary

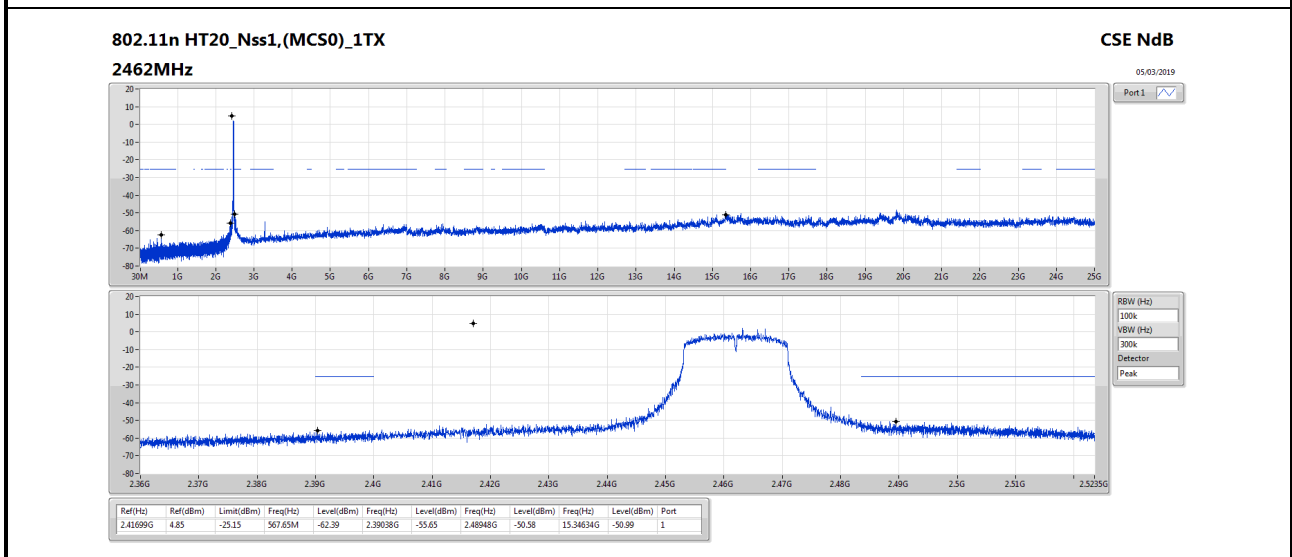
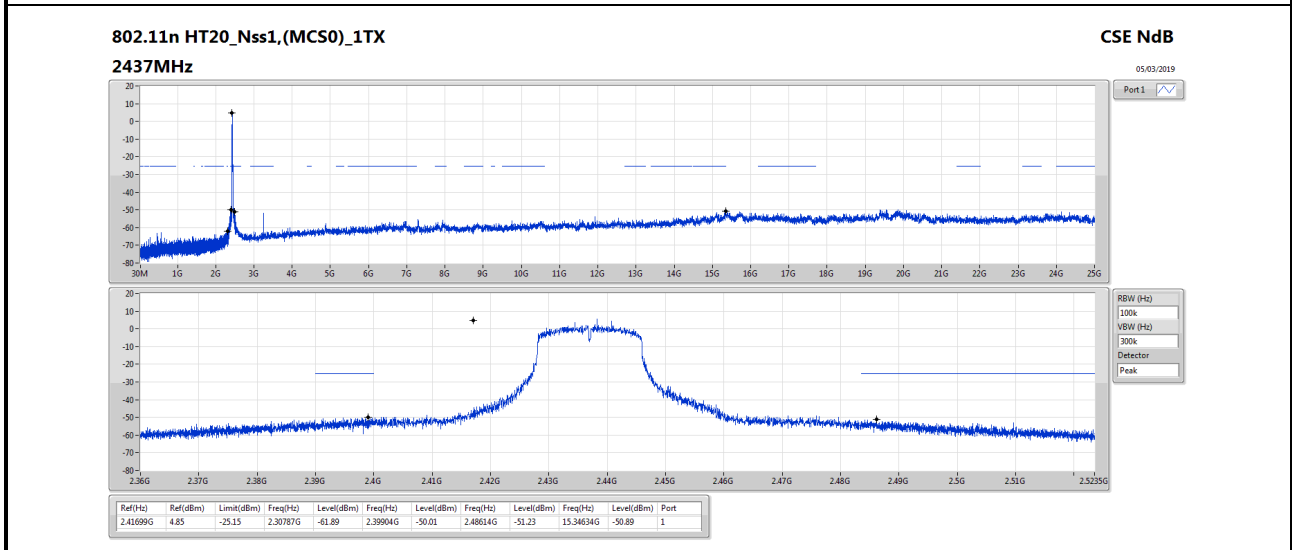
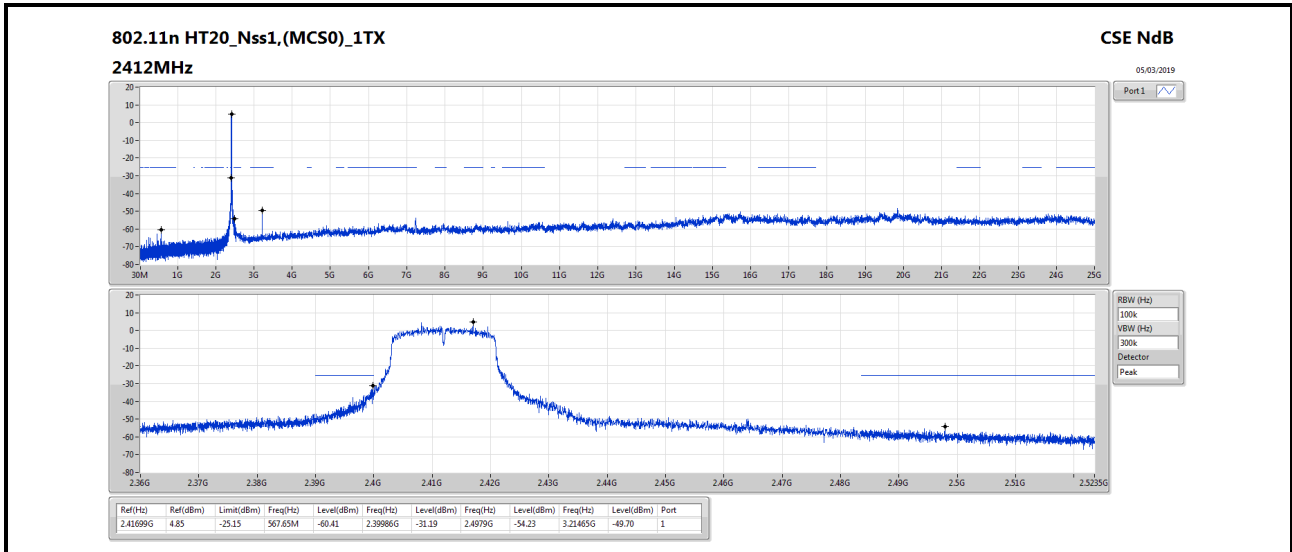
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX	Pass	2.46104G	8.66	-21.34	2.30932G	-59.44	2.39746G	-43.01	2.48438G	-53.84	7.23514G	-47.58	1
802.11g_Nss1,(6Mbps)_1TX	Pass	2.41319G	4.56	-25.44	2.30554G	-59.66	2.39954G	-31.90	2.48654G	-54.80	3.21465G	-50.02	1
802.11n HT20_Nss1,(MCS0)_1TX	Pass	2.41699G	4.85	-25.15	567.65M	-60.41	2.39986G	-31.19	2.4979G	-54.23	3.21465G	-49.70	1

Result

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.46104G	8.66	-21.34	2.30932G	-59.44	2.39746G	-43.01	2.48438G	-53.84	7.23514G	-47.58	1
2437MHz	Pass	2.46104G	8.66	-21.34	2.30991G	-61.52	2.39718G	-49.51	2.4853G	-50.21	16.79046G	-50.65	1
2462MHz	Pass	2.46104G	8.66	-21.34	472.41M	-61.06	2.39978G	-54.32	2.4918G	-49.11	15.34072G	-51.73	1
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.41319G	4.56	-25.44	2.30554G	-59.66	2.39954G	-31.90	2.48654G	-54.80	3.21465G	-50.02	1
2437MHz	Pass	2.41319G	4.56	-25.44	2.30262G	-62.97	2.3903G	-49.95	2.48388G	-51.80	15.11596G	-51.24	1
2462MHz	Pass	2.41319G	4.56	-25.44	567.36M	-60.69	2.39946G	-53.98	2.48384G	-48.13	15.33791G	-49.68	1
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.41699G	4.85	-25.15	567.65M	-60.41	2.39986G	-31.19	2.4979G	-54.23	3.21465G	-49.70	1
2437MHz	Pass	2.41699G	4.85	-25.15	2.30787G	-61.89	2.39904G	-50.01	2.48614G	-51.23	15.34634G	-50.89	1
2462MHz	Pass	2.41699G	4.85	-25.15	567.65M	-62.39	2.39038G	-55.65	2.48948G	-50.58	15.34634G	-50.99	1









Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11n HT20_Nss1,(MCS0)_1TX	Pass	PK	98.88M	32.49	43.50	-11.01	-9.51	3	Horizontal	360	3.00	-



Result

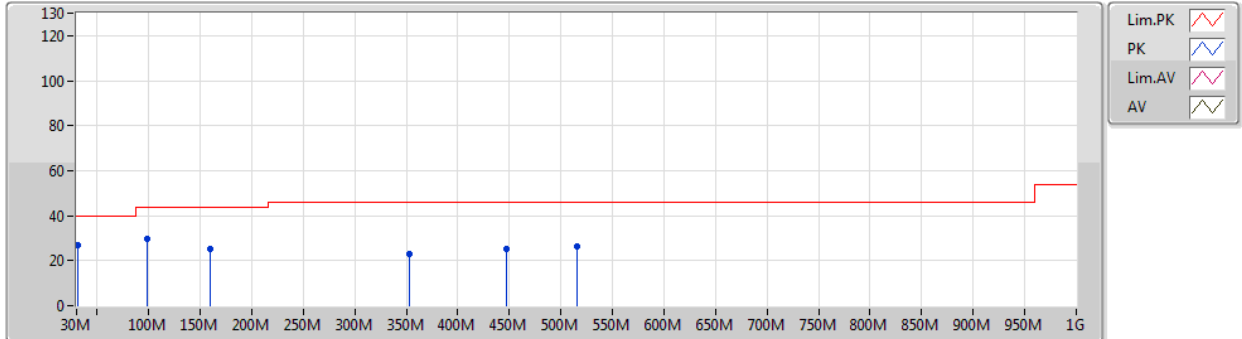
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-	-	-	-	-	-
2437MHz	Pass	PK	31.41M	27.01	40.00	-12.99	-3.62	3	Vertical	0	3.00	-
2437MHz	Pass	PK	98.88M	29.68	43.50	-13.82	-9.51	3	Vertical	0	3.00	-
2437MHz	Pass	PK	159.33M	24.95	43.50	-18.55	-9.85	3	Vertical	0	3.00	-
2437MHz	Pass	PK	353.33M	22.90	46.00	-23.10	-4.40	3	Vertical	0	3.00	-
2437MHz	Pass	PK	447.52M	25.21	46.00	-20.79	-2.28	3	Vertical	0	3.00	-
2437MHz	Pass	PK	515M	26.16	46.00	-19.84	-1.64	3	Vertical	0	3.00	-
2437MHz	Pass	PK	30M	23.88	40.00	-16.12	-2.85	3	Horizontal	360	3.00	-
2437MHz	Pass	PK	98.88M	32.49	43.50	-11.01	-9.51	3	Horizontal	360	3.00	-
2437MHz	Pass	PK	164.96M	20.19	43.50	-23.31	-9.81	3	Horizontal	360	3.00	-
2437MHz	Pass	PK	329.43M	21.19	46.00	-24.81	-5.36	3	Horizontal	360	3.00	-
2437MHz	Pass	PK	419.41M	25.08	46.00	-20.92	-2.29	3	Horizontal	360	3.00	-
2437MHz	Pass	PK	551.55M	27.84	46.00	-18.16	-0.25	3	Horizontal	360	3.00	-



802.11n HT20_Nss1,(MCS0)_1TX

05/03/2019

2437MHz_DC Power Supply



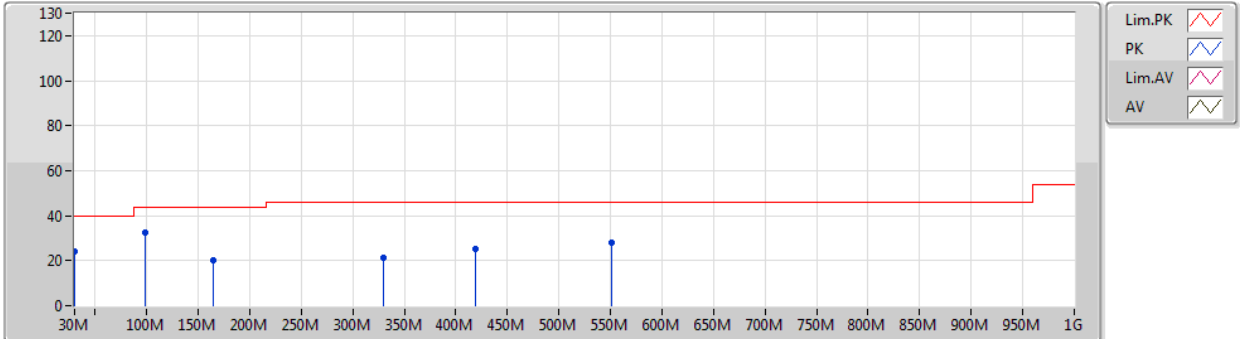
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
PK	31.41M	27.01	40.00	-12.99	-3.62	3	Vertical	0	3.00	-
PK	98.88M	29.68	43.50	-13.82	-9.51	3	Vertical	0	3.00	-
PK	159.33M	24.95	43.50	-18.55	-9.85	3	Vertical	0	3.00	-
PK	353.33M	22.90	46.00	-23.10	-4.40	3	Vertical	0	3.00	-
PK	447.52M	25.21	46.00	-20.79	-2.28	3	Vertical	0	3.00	-
PK	515M	26.16	46.00	-19.84	-1.64	3	Vertical	0	3.00	-



802.11n HT20_Nss1,(MCS0)_1TX

05/03/2019

2437MHz_DC Power Supply



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
PK	30M	23.88	40.00	-16.12	-2.85	3	Horizontal	360	3.00	-
PK	98.88M	32.49	43.50	-11.01	-9.51	3	Horizontal	360	3.00	-
PK	164.96M	20.19	43.50	-23.31	-9.81	3	Horizontal	360	3.00	-
PK	329.43M	21.19	46.00	-24.81	-5.36	3	Horizontal	360	3.00	-
PK	419.41M	25.08	46.00	-20.92	-2.29	3	Horizontal	360	3.00	-
PK	551.55M	27.84	46.00	-18.16	-0.25	3	Horizontal	360	3.00	-



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	Pass	AV	2.3828G	52.46	54.00	-1.54	30.67	3	Vertical	71	2.20	-
802.11g_Nss1,(6Mbps)_1TX	Pass	AV	2.4838G	52.24	54.00	-1.76	30.97	3	Vertical	71	1.80	-
802.11n HT20_Nss1,(MCS0)_1TX	Pass	AV	2.4835G	52.24	54.00	-1.76	30.97	3	Vertical	71	1.77	-



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	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz_TX	Pass	AV	2.3828G	52.46	54.00	-1.54	30.67	3	Vertical	71	2.20	-
2412MHz_TX	Pass	AV	2.4112G	112.10	Inf	-Inf	30.76	3	Vertical	71	2.20	-
2412MHz_TX	Pass	PK	2.3834G	63.00	74.00	-11.00	30.67	3	Vertical	71	2.20	-
2412MHz_TX	Pass	PK	2.4112G	114.08	Inf	-Inf	30.76	3	Vertical	71	2.20	-
2412MHz_TX	Pass	AV	2.3836G	46.97	54.00	-7.03	30.67	3	Horizontal	55	1.36	-
2412MHz_TX	Pass	AV	2.4112G	99.32	Inf	-Inf	30.76	3	Horizontal	55	1.36	-
2412MHz_TX	Pass	PK	2.3894G	58.19	74.00	-15.81	30.68	3	Horizontal	55	1.36	-
2412MHz_TX	Pass	PK	2.4112G	101.36	Inf	-Inf	30.76	3	Horizontal	55	1.36	-
2412MHz_TX	Pass	AV	4.824G	43.80	54.00	-10.20	6.56	3	Vertical	16	1.69	-
2412MHz_TX	Pass	PK	4.82394G	49.54	74.00	-24.46	6.56	3	Vertical	16	1.69	-
2412MHz_TX	Pass	AV	4.80966G	34.64	54.00	-19.36	6.53	3	Horizontal	282	1.46	-
2412MHz_TX	Pass	PK	4.81356G	46.96	74.00	-27.04	6.53	3	Horizontal	282	1.46	-
2417MHz_TX	Pass	AV	2.3876G	51.19	54.00	-2.81	30.68	3	Vertical	65	2.20	-
2417MHz_TX	Pass	AV	2.4162G	110.79	Inf	-Inf	30.77	3	Vertical	65	2.20	-
2417MHz_TX	Pass	PK	2.39G	61.10	74.00	-12.90	30.69	3	Vertical	65	2.20	-
2417MHz_TX	Pass	PK	2.4162G	112.81	Inf	-Inf	30.77	3	Vertical	65	2.20	-
2417MHz_TX	Pass	AV	2.388G	46.76	54.00	-7.24	30.68	3	Horizontal	178	1.49	-
2417MHz_TX	Pass	AV	2.4162G	99.36	Inf	-Inf	30.77	3	Horizontal	178	1.49	-
2417MHz_TX	Pass	PK	2.3878G	58.95	74.00	-15.05	30.68	3	Horizontal	178	1.49	-
2417MHz_TX	Pass	PK	2.4162G	101.37	Inf	-Inf	30.77	3	Horizontal	178	1.49	-
2437MHz_TX	Pass	AV	2.3882G	49.45	54.00	-4.55	30.68	3	Vertical	71	1.76	-
2437MHz_TX	Pass	AV	2.4378G	113.77	Inf	-Inf	30.83	3	Vertical	71	1.76	-
2437MHz_TX	Pass	AV	2.4858G	51.07	54.00	-2.93	30.98	3	Vertical	71	1.76	-
2437MHz_TX	Pass	PK	2.387G	60.15	74.00	-13.85	30.68	3	Vertical	71	1.76	-
2437MHz_TX	Pass	PK	2.4378G	115.77	Inf	-Inf	30.83	3	Vertical	71	1.76	-
2437MHz_TX	Pass	PK	2.485G	60.87	74.00	-13.13	30.97	3	Vertical	71	1.76	-
2437MHz_TX	Pass	AV	2.3882G	46.22	54.00	-7.78	30.68	3	Horizontal	55	1.49	-
2437MHz_TX	Pass	AV	2.4362G	100.81	Inf	-Inf	30.83	3	Horizontal	55	1.49	-
2437MHz_TX	Pass	AV	2.4862G	47.27	54.00	-6.73	30.98	3	Horizontal	55	1.49	-
2437MHz_TX	Pass	PK	2.383G	57.58	74.00	-16.42	30.67	3	Horizontal	55	1.49	-
2437MHz_TX	Pass	PK	2.4362G	102.81	Inf	-Inf	30.83	3	Horizontal	55	1.49	-
2437MHz_TX	Pass	PK	2.4854G	58.30	74.00	-15.70	30.97	3	Horizontal	55	1.49	-
2437MHz_TX	Pass	AV	4.874G	42.81	54.00	-11.19	6.70	3	Vertical	67	1.50	-
2437MHz_TX	Pass	PK	4.874G	49.11	74.00	-24.89	6.70	3	Vertical	67	1.50	-
2437MHz_TX	Pass	AV	4.874G	35.42	54.00	-18.58	6.70	3	Horizontal	92	2.25	-
2437MHz_TX	Pass	PK	4.8641G	46.87	74.00	-27.13	6.68	3	Horizontal	92	2.25	-
2457MHz_TX	Pass	AV	2.4562G	110.41	Inf	-Inf	30.97	3	Vertical	170	1.81	-
2457MHz_TX	Pass	AV	2.484G	51.68	54.00	-2.32	31.07	3	Vertical	170	1.81	-
2457MHz_TX	Pass	PK	2.4562G	112.42	Inf	-Inf	30.97	3	Vertical	170	1.81	-
2457MHz_TX	Pass	PK	2.49G	62.03	74.00	-11.97	31.08	3	Vertical	170	1.81	-
2457MHz_TX	Pass	AV	2.4578G	101.00	Inf	-Inf	30.89	3	Horizontal	171	1.32	-
2457MHz_TX	Pass	AV	2.4842G	48.06	54.00	-5.94	30.97	3	Horizontal	171	1.32	-
2457MHz_TX	Pass	PK	2.4578G	102.98	Inf	-Inf	30.89	3	Horizontal	171	1.32	-
2457MHz_TX	Pass	PK	2.4864G	60.25	74.00	-13.75	30.98	3	Horizontal	171	1.32	-
2462MHz_TX	Pass	AV	2.4628G	110.39	Inf	-Inf	30.90	3	Vertical	72	1.96	-
2462MHz_TX	Pass	AV	2.4902G	51.43	54.00	-2.57	30.99	3	Vertical	72	1.96	-
2462MHz_TX	Pass	PK	2.4612G	112.43	Inf	-Inf	30.90	3	Vertical	72	1.96	-



RSE TX above 1GHz Result

Appendix E.2

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2462MHz_TX	Pass	PK	2.4886G	63.04	74.00	-10.96	30.98	3	Vertical	72	1.96	-
2462MHz_TX	Pass	AV	2.4628G	96.75	Inf	-Inf	30.90	3	Horizontal	57	1.15	-
2462MHz_TX	Pass	AV	2.4928G	47.28	54.00	-6.72	30.99	3	Horizontal	57	1.15	-
2462MHz_TX	Pass	PK	2.4628G	98.75	Inf	-Inf	30.90	3	Horizontal	57	1.15	-
2462MHz_TX	Pass	PK	2.488G	58.75	74.00	-15.25	30.98	3	Horizontal	57	1.15	-
2462MHz_TX	Pass	AV	4.92376G	34.22	54.00	-19.78	6.84	3	Vertical	185	1.50	-
2462MHz_TX	Pass	PK	4.92568G	46.66	74.00	-27.34	6.85	3	Vertical	185	1.50	-
2462MHz_TX	Pass	AV	4.91038G	34.10	54.00	-19.90	6.80	3	Horizontal	74	1.21	-
2462MHz_TX	Pass	PK	4.9201G	46.66	74.00	-27.34	6.83	3	Horizontal	74	1.21	-
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz_TX	Pass	AV	2.39G	51.54	54.00	-2.46	30.69	3	Vertical	71	2.07	-
2412MHz_TX	Pass	AV	2.4106G	103.10	Inf	-Inf	30.76	3	Vertical	71	2.07	-
2412MHz_TX	Pass	PK	2.3898G	62.06	74.00	-11.94	30.69	3	Vertical	71	2.07	-
2412MHz_TX	Pass	PK	2.4108G	112.49	Inf	-Inf	30.76	3	Vertical	71	2.07	-
2412MHz_TX	Pass	AV	2.3896G	46.79	54.00	-7.21	30.69	3	Horizontal	55	1.35	-
2412MHz_TX	Pass	AV	2.4106G	90.10	Inf	-Inf	30.76	3	Horizontal	55	1.35	-
2412MHz_TX	Pass	PK	2.373G	58.23	74.00	-15.77	30.64	3	Horizontal	55	1.35	-
2412MHz_TX	Pass	PK	2.4104G	99.97	Inf	-Inf	30.75	3	Horizontal	55	1.35	-
2412MHz_TX	Pass	AV	4.81224G	34.81	54.00	-19.19	6.53	3	Vertical	210	1.46	-
2412MHz_TX	Pass	PK	4.81662G	46.23	74.00	-27.77	6.54	3	Vertical	210	1.46	-
2412MHz_TX	Pass	AV	4.80978G	34.75	54.00	-19.25	6.53	3	Horizontal	282	2.19	-
2412MHz_TX	Pass	PK	4.81686G	46.22	74.00	-27.78	6.54	3	Horizontal	282	2.19	-
2417MHz_TX	Pass	AV	2.39G	51.38	54.00	-2.62	30.69	3	Vertical	72	2.20	-
2417MHz_TX	Pass	AV	2.4154G	104.72	Inf	-Inf	30.77	3	Vertical	72	2.20	-
2417MHz_TX	Pass	PK	2.39G	62.56	74.00	-11.44	30.69	3	Vertical	72	2.20	-
2417MHz_TX	Pass	PK	2.4158G	114.32	Inf	-Inf	30.77	3	Vertical	72	2.20	-
2417MHz_TX	Pass	AV	2.39G	46.79	54.00	-7.21	30.69	3	Horizontal	55	1.81	-
2417MHz_TX	Pass	AV	2.4188G	91.69	Inf	-Inf	30.78	3	Horizontal	55	1.81	-
2417MHz_TX	Pass	PK	2.3862G	57.81	74.00	-16.19	30.68	3	Horizontal	55	1.81	-
2417MHz_TX	Pass	PK	2.4154G	101.24	Inf	-Inf	30.77	3	Horizontal	55	1.81	-
2437MHz_TX	Pass	AV	2.3898G	50.40	54.00	-3.60	30.69	3	Vertical	71	1.80	-
2437MHz_TX	Pass	AV	2.4394G	108.50	Inf	-Inf	30.83	3	Vertical	71	1.80	-
2437MHz_TX	Pass	AV	2.4838G	52.24	54.00	-1.76	30.97	3	Vertical	71	1.80	-
2437MHz_TX	Pass	PK	2.3898G	62.23	74.00	-11.77	30.69	3	Vertical	71	1.80	-
2437MHz_TX	Pass	PK	2.4386G	117.15	Inf	-Inf	30.83	3	Vertical	71	1.80	-
2437MHz_TX	Pass	PK	2.4835G	64.39	74.00	-9.61	30.97	3	Vertical	71	1.80	-
2437MHz_TX	Pass	AV	2.389G	46.77	54.00	-7.23	30.68	3	Horizontal	56	1.31	-
2437MHz_TX	Pass	AV	2.4354G	95.29	Inf	-Inf	30.82	3	Horizontal	56	1.31	-
2437MHz_TX	Pass	AV	2.4946G	47.57	54.00	-6.43	31.00	3	Horizontal	56	1.31	-
2437MHz_TX	Pass	PK	2.357G	57.52	74.00	-16.48	30.59	3	Horizontal	56	1.31	-
2437MHz_TX	Pass	PK	2.4338G	104.11	Inf	-Inf	30.82	3	Horizontal	56	1.31	-
2437MHz_TX	Pass	PK	2.4894G	58.39	74.00	-15.61	30.98	3	Horizontal	56	1.31	-
2437MHz_TX	Pass	AV	4.87502G	35.26	54.00	-18.74	6.71	3	Vertical	274	1.85	-
2437MHz_TX	Pass	PK	4.87316G	46.99	74.00	-27.01	6.70	3	Vertical	274	1.85	-
2437MHz_TX	Pass	AV	4.85942G	34.60	54.00	-19.40	6.67	3	Horizontal	101	2.35	-
2437MHz_TX	Pass	PK	4.86518G	46.73	74.00	-27.27	6.69	3	Horizontal	101	2.35	-
2457MHz_TX	Pass	AV	2.4546G	102.54	Inf	-Inf	30.88	3	Vertical	237	1.75	-
2457MHz_TX	Pass	AV	2.4835G	51.75	54.00	-2.25	30.97	3	Vertical	237	1.75	-
2457MHz_TX	Pass	PK	2.4556G	112.35	Inf	-Inf	30.88	3	Vertical	237	1.75	-



RSE TX above 1GHz Result

Appendix E.2

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2457MHz_TX	Pass	PK	2.4835G	62.58	74.00	-11.42	30.97	3	Vertical	237	1.75	-
2457MHz_TX	Pass	AV	2.4544G	92.00	Inf	-Inf	30.88	3	Horizontal	253	1.24	-
2457MHz_TX	Pass	AV	2.4878G	47.82	54.00	-6.18	30.98	3	Horizontal	253	1.24	-
2457MHz_TX	Pass	PK	2.4552G	100.90	Inf	-Inf	30.88	3	Horizontal	253	1.24	-
2457MHz_TX	Pass	PK	2.4858G	59.10	74.00	-14.90	30.98	3	Horizontal	253	1.24	-
2462MHz_TX	Pass	AV	2.4604G	101.23	Inf	-Inf	30.89	3	Vertical	72	1.96	-
2462MHz_TX	Pass	AV	2.4835G	52.24	54.00	-1.76	30.97	3	Vertical	72	1.96	-
2462MHz_TX	Pass	PK	2.4592G	110.17	Inf	-Inf	30.89	3	Vertical	72	1.96	-
2462MHz_TX	Pass	PK	2.4835G	63.41	74.00	-10.59	30.97	3	Vertical	72	1.96	-
2462MHz_TX	Pass	AV	2.4596G	87.47	Inf	-Inf	30.89	3	Horizontal	56	1.46	-
2462MHz_TX	Pass	AV	2.4986G	47.58	54.00	-6.42	31.01	3	Horizontal	56	1.46	-
2462MHz_TX	Pass	PK	2.459G	96.65	Inf	-Inf	30.89	3	Horizontal	56	1.46	-
2462MHz_TX	Pass	PK	2.4884G	59.03	74.00	-14.97	30.98	3	Horizontal	56	1.46	-
2462MHz_TX	Pass	AV	4.9129G	34.57	54.00	-19.43	6.81	3	Vertical	273	1.63	-
2462MHz_TX	Pass	PK	4.9264G	46.44	74.00	-27.56	6.85	3	Vertical	273	1.63	-
2462MHz_TX	Pass	AV	4.921G	34.60	54.00	-19.40	6.83	3	Horizontal	116	2.41	-
2462MHz_TX	Pass	PK	4.93648G	46.18	74.00	-27.82	6.88	3	Horizontal	116	2.41	-
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz_TX	Pass	AV	2.39G	51.98	54.00	-2.02	30.69	3	Vertical	72	2.08	-
2412MHz_TX	Pass	AV	2.4092G	102.75	Inf	-Inf	30.75	3	Vertical	72	2.08	-
2412MHz_TX	Pass	PK	2.39G	62.15	74.00	-11.85	30.69	3	Vertical	72	2.08	-
2412MHz_TX	Pass	PK	2.4132G	111.53	Inf	-Inf	30.76	3	Vertical	72	2.08	-
2412MHz_TX	Pass	AV	2.3896G	46.79	54.00	-7.21	30.69	3	Horizontal	56	1.35	-
2412MHz_TX	Pass	AV	2.4098G	89.94	Inf	-Inf	30.75	3	Horizontal	56	1.35	-
2412MHz_TX	Pass	PK	2.378G	58.44	74.00	-15.56	30.65	3	Horizontal	56	1.35	-
2412MHz_TX	Pass	PK	2.4098G	99.29	Inf	-Inf	30.75	3	Horizontal	56	1.35	-
2412MHz_TX	Pass	AV	4.80936G	34.75	54.00	-19.25	6.53	3	Vertical	88	1.36	-
2412MHz_TX	Pass	PK	4.8126G	46.22	74.00	-27.78	6.53	3	Vertical	88	1.36	-
2412MHz_TX	Pass	AV	4.81584G	34.67	54.00	-19.33	6.54	3	Horizontal	119	1.94	-
2412MHz_TX	Pass	PK	4.82616G	46.48	74.00	-27.52	6.57	3	Horizontal	119	1.94	-
2417MHz_TX	Pass	AV	2.39G	51.74	54.00	-2.26	30.74	3	Vertical	171	1.93	-
2417MHz_TX	Pass	AV	2.4148G	103.88	Inf	-Inf	30.83	3	Vertical	171	1.93	-
2417MHz_TX	Pass	PK	2.3888G	63.15	74.00	-10.85	30.74	3	Vertical	171	1.93	-
2417MHz_TX	Pass	PK	2.4148G	112.65	Inf	-Inf	30.83	3	Vertical	171	1.93	-
2417MHz_TX	Pass	AV	2.39G	47.35	54.00	-6.65	30.74	3	Horizontal	179	1.49	-
2417MHz_TX	Pass	AV	2.4142G	93.19	Inf	-Inf	30.83	3	Horizontal	179	1.49	-
2417MHz_TX	Pass	PK	2.388G	58.17	74.00	-15.83	30.74	3	Horizontal	179	1.49	-
2417MHz_TX	Pass	PK	2.416G	102.04	Inf	-Inf	30.83	3	Horizontal	179	1.49	-
2437MHz_TX	Pass	AV	2.3898G	50.40	54.00	-3.60	30.69	3	Vertical	71	1.77	-
2437MHz_TX	Pass	AV	2.4386G	108.26	Inf	-Inf	30.83	3	Vertical	71	1.77	-
2437MHz_TX	Pass	AV	2.4835G	52.24	54.00	-1.76	30.97	3	Vertical	71	1.77	-
2437MHz_TX	Pass	PK	2.385G	61.36	74.00	-12.64	30.67	3	Vertical	71	1.77	-
2437MHz_TX	Pass	PK	2.4394G	116.66	Inf	-Inf	30.83	3	Vertical	71	1.77	-
2437MHz_TX	Pass	PK	2.4838G	63.20	74.00	-10.80	30.97	3	Vertical	71	1.77	-
2437MHz_TX	Pass	AV	2.3898G	46.52	54.00	-7.48	30.69	3	Horizontal	56	1.48	-
2437MHz_TX	Pass	AV	2.4354G	94.98	Inf	-Inf	30.82	3	Horizontal	56	1.48	-
2437MHz_TX	Pass	AV	2.499G	47.58	54.00	-6.42	31.01	3	Horizontal	56	1.48	-
2437MHz_TX	Pass	PK	2.3674G	58.15	74.00	-15.85	30.62	3	Horizontal	56	1.48	-
2437MHz_TX	Pass	PK	2.4398G	104.31	Inf	-Inf	30.84	3	Horizontal	56	1.48	-



RSE TX above 1GHz Result

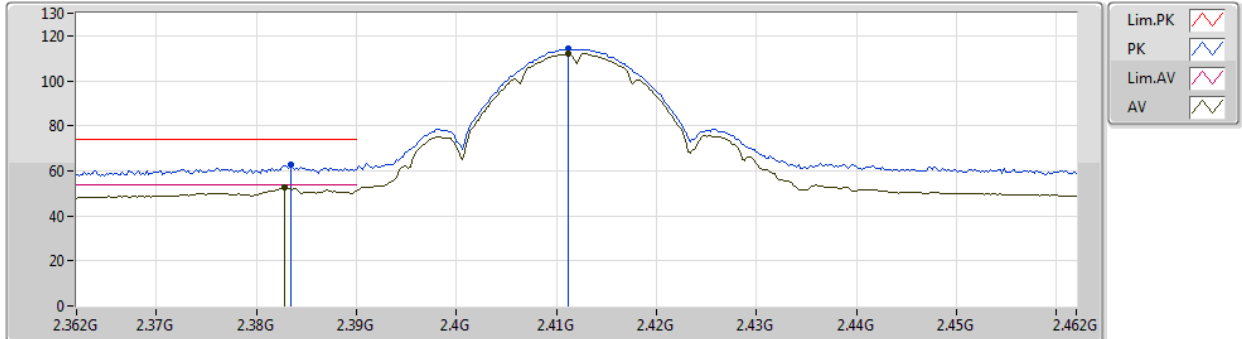
Appendix E.2

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2437MHz_TX	Pass	PK	2.4934G	59.38	74.00	-14.62	30.99	3	Horizontal	56	1.48	-
2437MHz_TX	Pass	AV	4.86764G	34.84	54.00	-19.16	6.69	3	Vertical	40	2.20	-
2437MHz_TX	Pass	PK	4.8611G	46.21	74.00	-27.79	6.67	3	Vertical	40	2.20	-
2437MHz_TX	Pass	AV	4.85906G	34.60	54.00	-19.40	6.67	3	Horizontal	318	2.42	-
2437MHz_TX	Pass	PK	4.86644G	46.82	74.00	-27.18	6.69	3	Horizontal	318	2.42	-
2457MHz_TX	Pass	AV	2.4554G	103.24	Inf	-Inf	30.97	3	Vertical	171	1.81	-
2457MHz_TX	Pass	AV	2.4838G	51.84	54.00	-2.16	31.06	3	Vertical	171	1.81	-
2457MHz_TX	Pass	PK	2.4556G	112.19	Inf	-Inf	30.97	3	Vertical	171	1.81	-
2457MHz_TX	Pass	PK	2.4835G	62.94	74.00	-11.06	31.06	3	Vertical	171	1.81	-
2457MHz_TX	Pass	AV	2.4542G	88.41	Inf	-Inf	30.96	3	Horizontal	178	1.48	-
2457MHz_TX	Pass	AV	2.4918G	47.66	54.00	-6.34	31.09	3	Horizontal	178	1.48	-
2457MHz_TX	Pass	PK	2.4546G	97.50	Inf	-Inf	30.96	3	Horizontal	178	1.48	-
2457MHz_TX	Pass	PK	2.4892G	58.56	74.00	-15.44	31.08	3	Horizontal	178	1.48	-
2462MHz_TX	Pass	AV	2.4608G	99.76	Inf	-Inf	30.90	3	Vertical	71	2.09	-
2462MHz_TX	Pass	AV	2.4835G	51.06	54.00	-2.94	30.97	3	Vertical	71	2.09	-
2462MHz_TX	Pass	PK	2.4592G	108.77	Inf	-Inf	30.89	3	Vertical	71	2.09	-
2462MHz_TX	Pass	PK	2.4835G	62.31	74.00	-11.69	30.97	3	Vertical	71	2.09	-
2462MHz_TX	Pass	AV	2.4632G	85.52	Inf	-Inf	30.90	3	Horizontal	57	1.48	-
2462MHz_TX	Pass	AV	2.4942G	47.57	54.00	-6.43	31.00	3	Horizontal	57	1.48	-
2462MHz_TX	Pass	PK	2.4634G	94.22	Inf	-Inf	30.90	3	Horizontal	57	1.48	-
2462MHz_TX	Pass	PK	2.494G	58.70	74.00	-15.30	31.00	3	Horizontal	57	1.48	-
2462MHz_TX	Pass	AV	4.91158G	34.54	54.00	-19.46	6.80	3	Vertical	32	1.71	-
2462MHz_TX	Pass	PK	4.9249G	46.46	74.00	-27.54	6.84	3	Vertical	32	1.71	-
2462MHz_TX	Pass	AV	4.91026G	34.52	54.00	-19.48	6.80	3	Horizontal	249	1.04	-
2462MHz_TX	Pass	PK	4.924G	46.19	74.00	-27.81	6.84	3	Horizontal	249	1.04	-

802.11b_Nss1,(1Mbps)_1TX

28/02/2019

2412MHz_TX



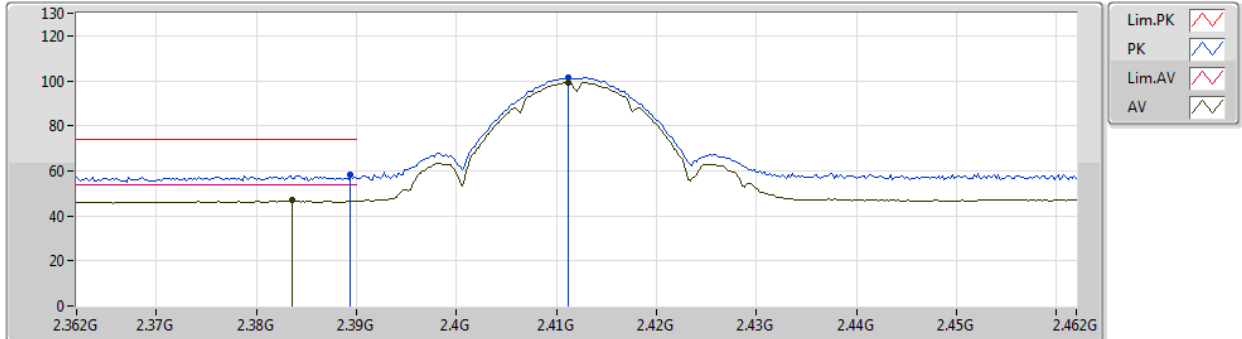
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	2.3828G	52.46	54.00	-1.54	30.67	3	Vertical	71	2.20	-
AV	2.4112G	112.10	Inf	-Inf	30.76	3	Vertical	71	2.20	-
PK	2.3834G	63.00	74.00	-11.00	30.67	3	Vertical	71	2.20	-
PK	2.4112G	114.08	Inf	-Inf	30.76	3	Vertical	71	2.20	-



802.11b_Nss1,(1Mbps)_1TX

28/02/2019

2412MHz_TX



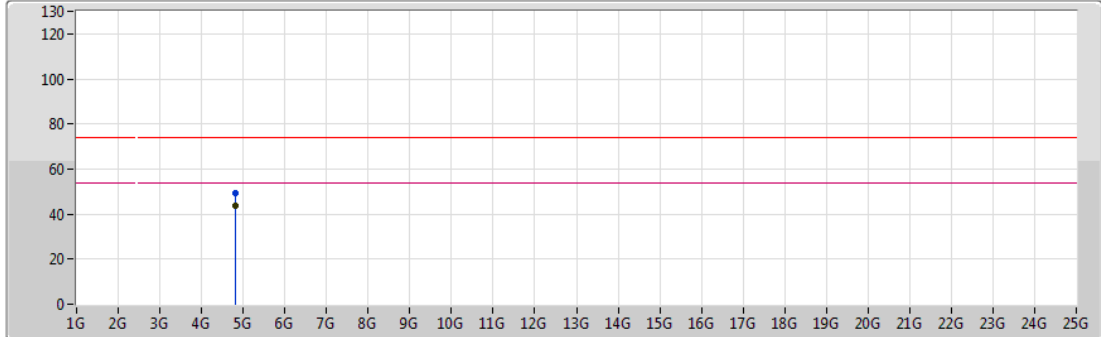
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	2.3836G	46.97	54.00	-7.03	30.67	3	Horizontal	55	1.36	-
AV	2.4112G	99.32	Inf	-Inf	30.76	3	Horizontal	55	1.36	-
PK	2.3894G	58.19	74.00	-15.81	30.68	3	Horizontal	55	1.36	-
PK	2.4112G	101.36	Inf	-Inf	30.76	3	Horizontal	55	1.36	-



802.11b_Nss1,(1Mbps)_1TX

28/02/2019

2412MHz_TX



Legend for the spectrum plot:

- Lim.PK: Red line with a peak icon
- PK: Blue line with a peak icon
- Lim.AV: Pink line with a peak icon
- AV: Grey line with a peak icon

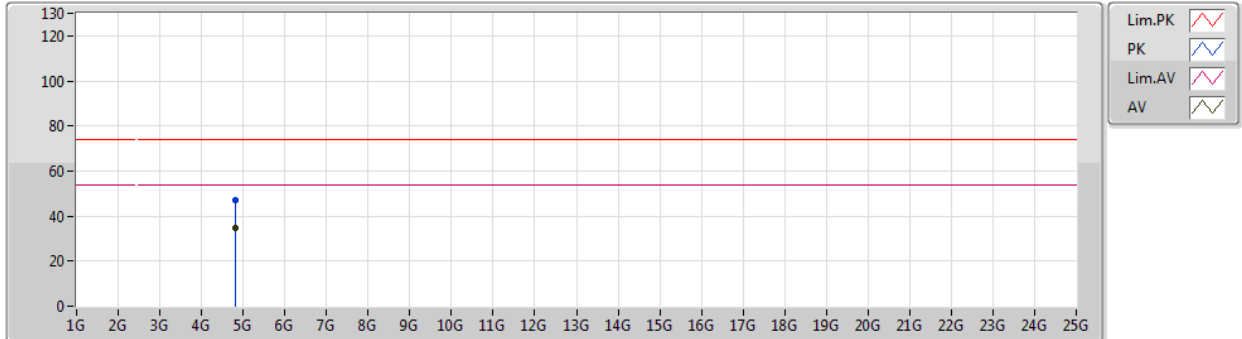
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	4.824G	43.80	54.00	-10.20	6.56	3	Vertical	16	1.69	-
PK	4.82394G	49.54	74.00	-24.46	6.56	3	Vertical	16	1.69	-



802.11b_Nss1,(1Mbps)_1TX

28/02/2019

2412MHz_TX

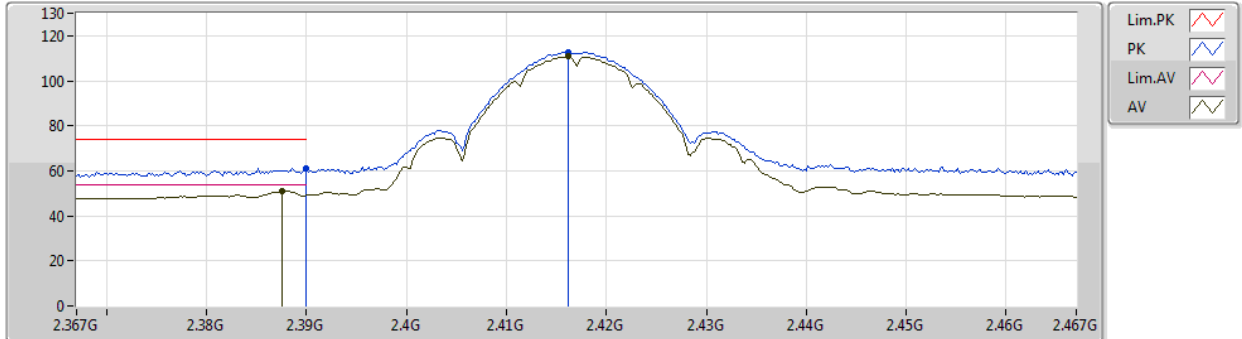


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	4.80966G	34.64	54.00	-19.36	6.53	3	Horizontal	282	1.46	-
PK	4.81356G	46.96	74.00	-27.04	6.53	3	Horizontal	282	1.46	-

802.11b_Nss1,(1Mbps)_1TX

01/03/2019

2417MHz_TX



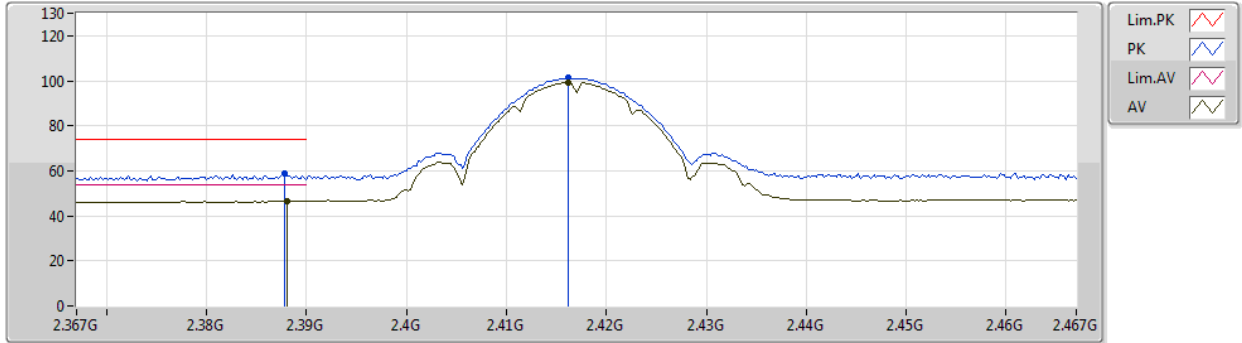
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	2.3876G	51.19	54.00	-2.81	30.68	3	Vertical	65	2.20	-
AV	2.4162G	110.79	Inf	-Inf	30.77	3	Vertical	65	2.20	-
PK	2.39G	61.10	74.00	-12.90	30.69	3	Vertical	65	2.20	-
PK	2.4162G	112.81	Inf	-Inf	30.77	3	Vertical	65	2.20	-



802.11b_Nss1,(1Mbps)_1TX

01/03/2019

2417MHz_TX

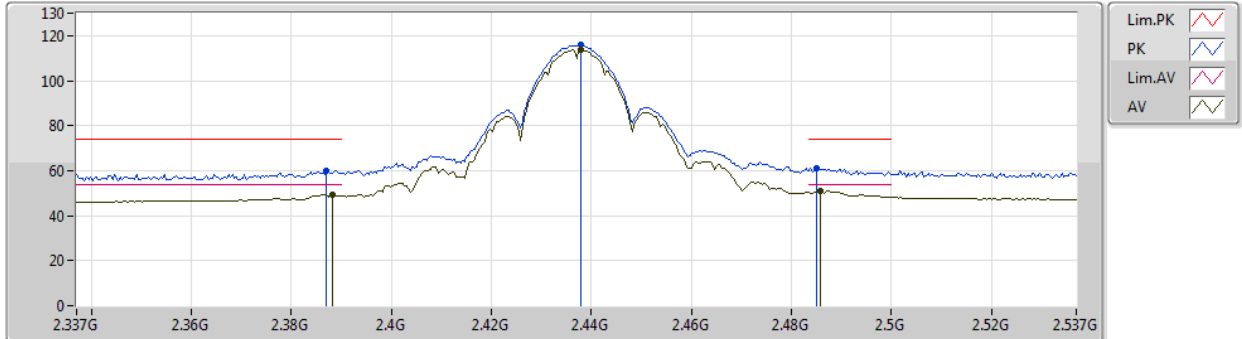


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	2.388G	46.76	54.00	-7.24	30.68	3	Horizontal	178	1.49	-
AV	2.416G	99.36	Inf	-Inf	30.77	3	Horizontal	178	1.49	-
PK	2.3878G	58.95	74.00	-15.05	30.68	3	Horizontal	178	1.49	-
PK	2.4162G	101.37	Inf	-Inf	30.77	3	Horizontal	178	1.49	-

802.11b_Nss1,(1Mbps)_1TX

28/02/2019

2437MHz_TX

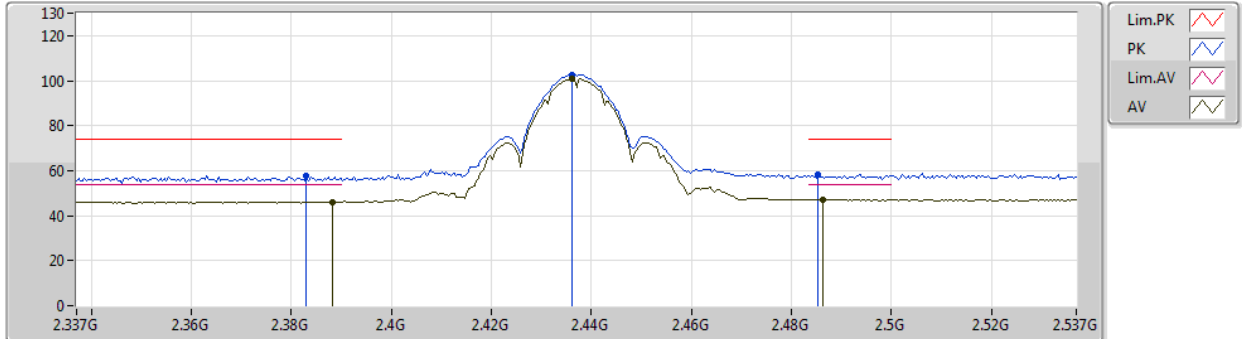


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	2.3882G	49.45	54.00	-4.55	30.68	3	Vertical	71	1.76	-
AV	2.4378G	113.77	Inf	-Inf	30.83	3	Vertical	71	1.76	-
AV	2.4858G	51.07	54.00	-2.93	30.98	3	Vertical	71	1.76	-
PK	2.387G	60.15	74.00	-13.85	30.68	3	Vertical	71	1.76	-
PK	2.4378G	115.77	Inf	-Inf	30.83	3	Vertical	71	1.76	-
PK	2.485G	60.87	74.00	-13.13	30.97	3	Vertical	71	1.76	-

802.11b_Nss1,(1Mbps)_1TX

28/02/2019

2437MHz_TX



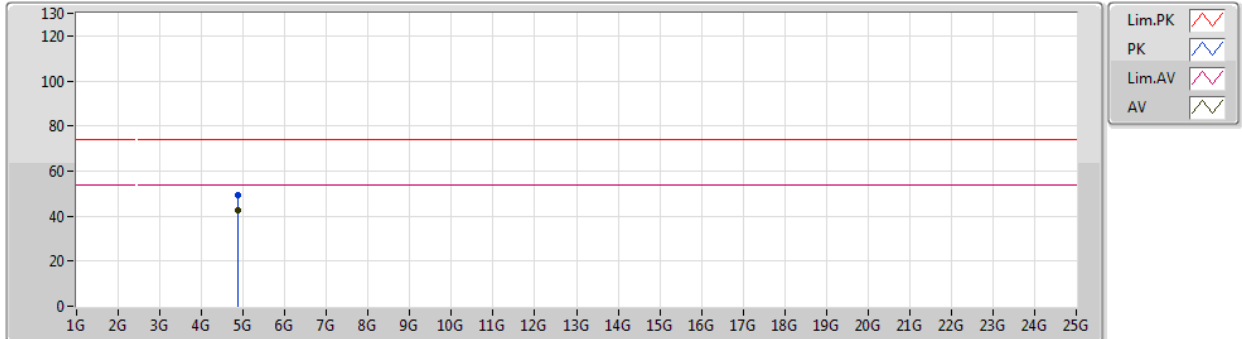
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	2.3882G	46.22	54.00	-7.78	30.68	3	Horizontal	55	1.49	-
AV	2.4362G	100.81	Inf	-Inf	30.83	3	Horizontal	55	1.49	-
AV	2.4862G	47.27	54.00	-6.73	30.98	3	Horizontal	55	1.49	-
PK	2.383G	57.58	74.00	-16.42	30.67	3	Horizontal	55	1.49	-
PK	2.4362G	102.81	Inf	-Inf	30.83	3	Horizontal	55	1.49	-
PK	2.4854G	58.30	74.00	-15.70	30.97	3	Horizontal	55	1.49	-



802.11b_Nss1,(1Mbps)_1TX

28/02/2019

2437MHz_TX



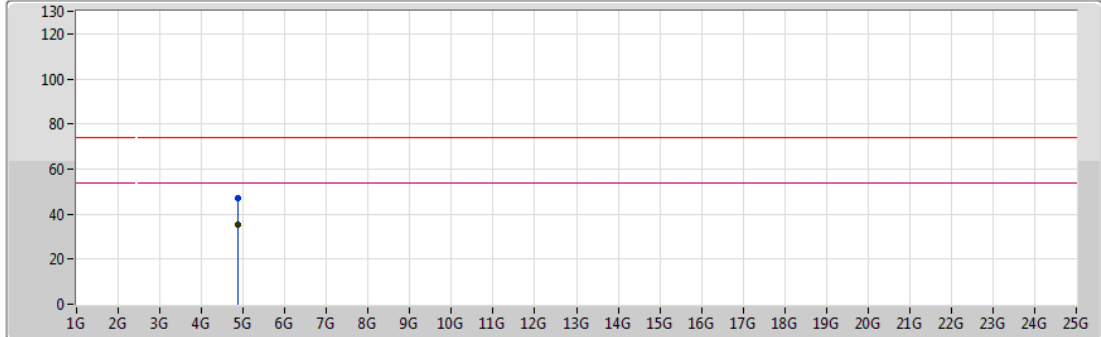
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	4.874G	42.81	54.00	-11.19	6.70	3	Vertical	67	1.50	-
PK	4.874G	49.11	74.00	-24.89	6.70	3	Vertical	67	1.50	-



802.11b_Nss1,(1Mbps)_1TX

28/02/2019

2437MHz_TX

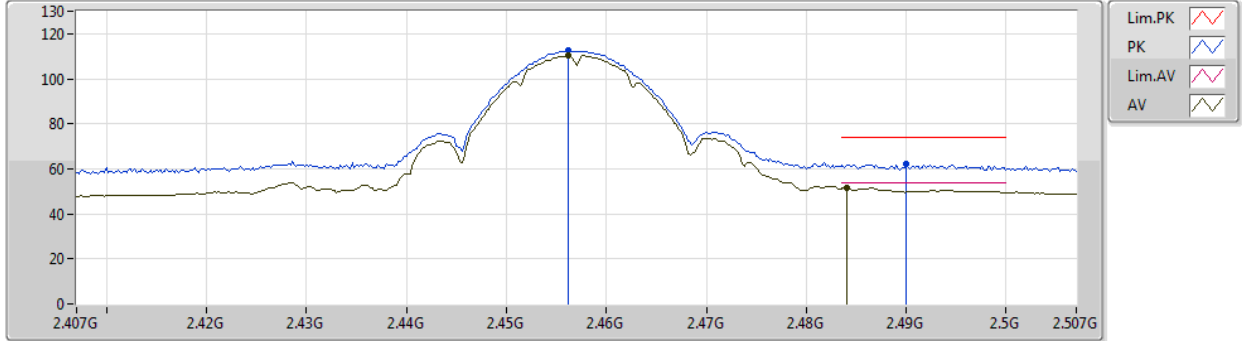


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	4.874G	35.42	54.00	-18.58	6.70	3	Horizontal	92	2.25	-
PK	4.8641G	46.87	74.00	-27.13	6.68	3	Horizontal	92	2.25	-

802.11b_Nss1,(1Mbps)_1TX

01/03/2019

2457MHz_TX

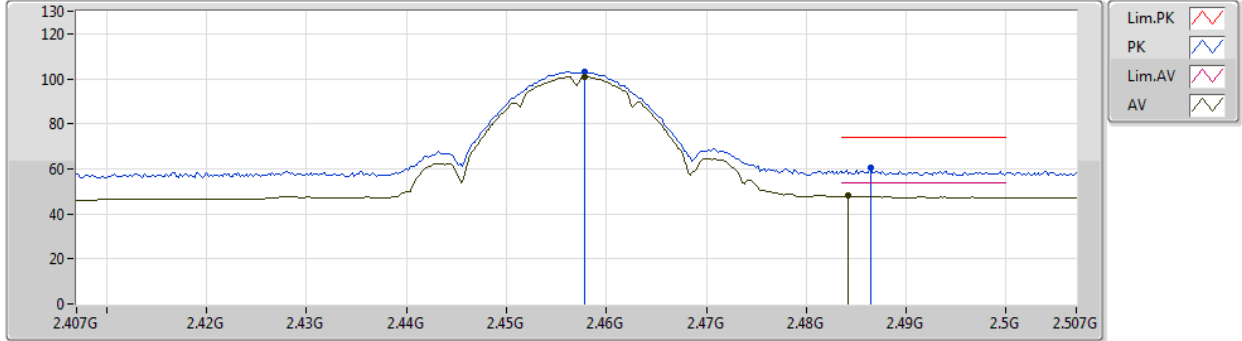


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	2.4562G	110.41	Inf	-Inf	30.97	3	Vertical	170	1.81	-
AV	2.484G	51.68	54.00	-2.32	31.07	3	Vertical	170	1.81	-
PK	2.4562G	112.42	Inf	-Inf	30.97	3	Vertical	170	1.81	-
PK	2.49G	62.03	74.00	-11.97	31.08	3	Vertical	170	1.81	-

802.11b_Nss1,(1Mbps)_1TX

01/03/2019

2457MHz_TX

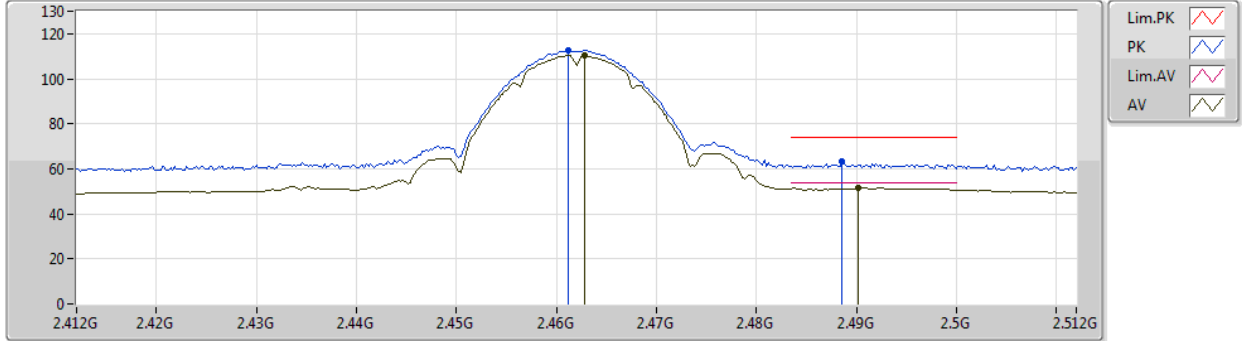


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	2.4578G	101.00	Inf	-Inf	30.89	3	Horizontal	171	1.32	-
AV	2.4842G	48.06	54.00	-5.94	30.97	3	Horizontal	171	1.32	-
PK	2.4578G	102.98	Inf	-Inf	30.89	3	Horizontal	171	1.32	-
PK	2.4864G	60.25	74.00	-13.75	30.98	3	Horizontal	171	1.32	-

802.11b_Nss1,(1Mbps)_1TX

28/02/2019

2462MHz_TX

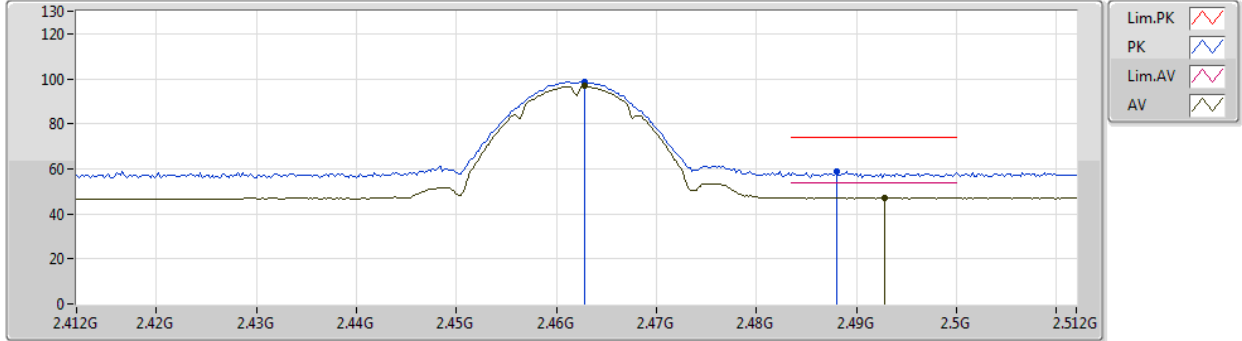


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	2.4628G	110.39	Inf	-Inf	30.90	3	Vertical	72	1.96	-
AV	2.4902G	51.43	54.00	-2.57	30.99	3	Vertical	72	1.96	-
PK	2.4612G	112.43	Inf	-Inf	30.90	3	Vertical	72	1.96	-
PK	2.4886G	63.04	74.00	-10.96	30.98	3	Vertical	72	1.96	-

802.11b_Nss1,(1Mbps)_1TX

28/02/2019

2462MHz_TX



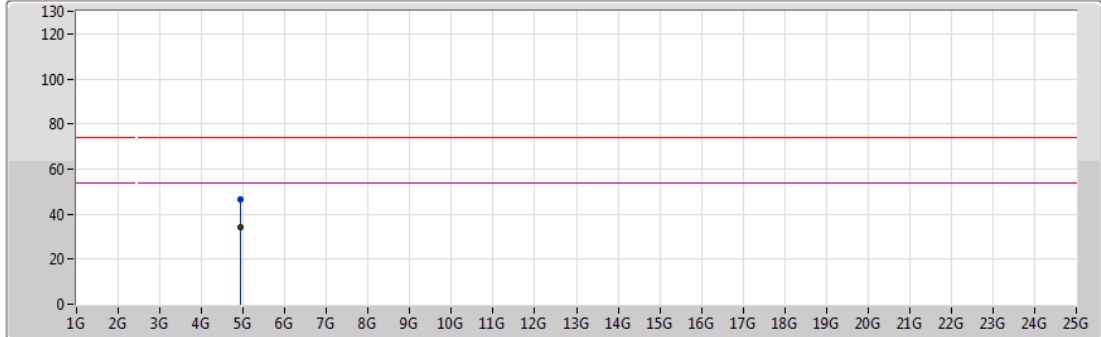
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	2.4628G	96.75	Inf	-Inf	30.90	3	Horizontal	57	1.15	-
AV	2.4928G	47.28	54.00	-6.72	30.99	3	Horizontal	57	1.15	-
PK	2.4628G	98.75	Inf	-Inf	30.90	3	Horizontal	57	1.15	-
PK	2.488G	58.75	74.00	-15.25	30.98	3	Horizontal	57	1.15	-



802.11b_Nss1,(1Mbps)_1TX

28/02/2019

2462MHz_TX



Legend for the spectrum plot:

- Lim.PK: Red line with a peak icon
- PK: Blue line with a peak icon
- Lim.AV: Pink line with a peak icon
- AV: Grey line with a peak icon

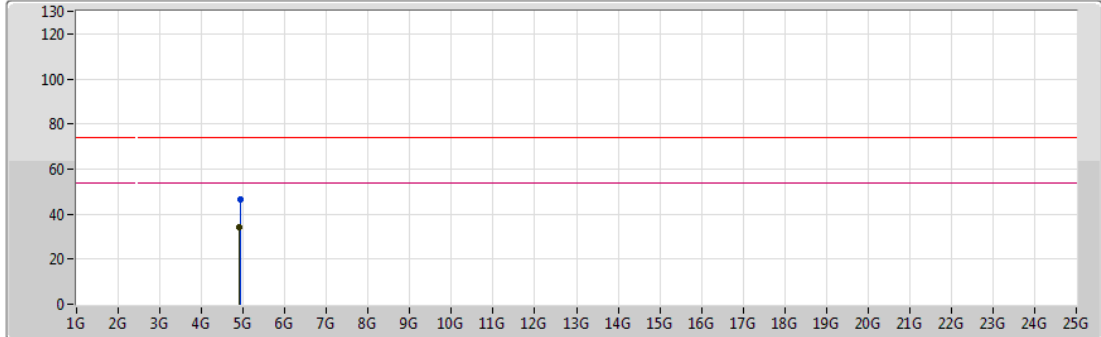
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	4.92376G	34.22	54.00	-19.78	6.84	3	Vertical	185	1.50	-
PK	4.92568G	46.66	74.00	-27.34	6.85	3	Vertical	185	1.50	-



802.11b_Nss1,(1Mbps)_1TX

28/02/2019

2462MHz_TX



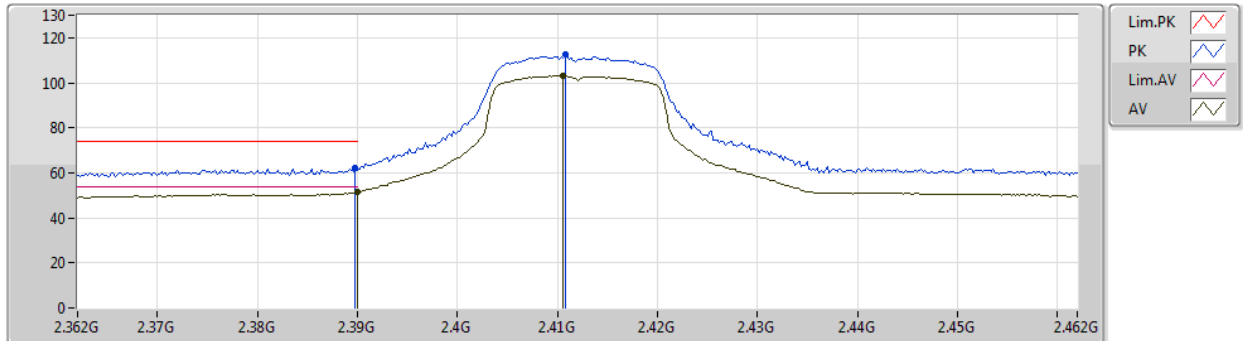
Lim.PK
 PK
 Lim.AV
 AV

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	4.91038G	34.10	54.00	-19.90	6.80	3	Horizontal	74	1.21	-
PK	4.9201G	46.66	74.00	-27.34	6.83	3	Horizontal	74	1.21	-

802.11g_Nss1,(6Mbps)_1TX

28/02/2019

2412MHz_TX

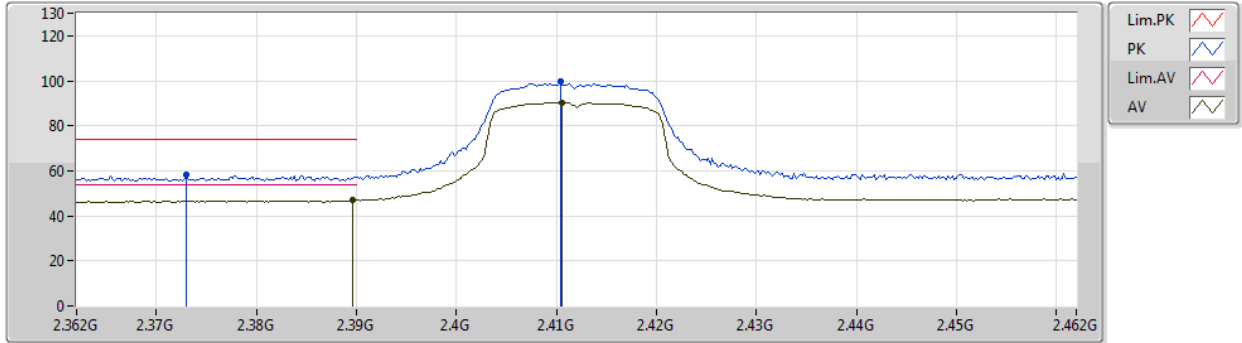


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	2.39G	51.54	54.00	-2.46	30.69	3	Vertical	71	2.07	-
AV	2.4106G	103.10	Inf	-Inf	30.76	3	Vertical	71	2.07	-
PK	2.3898G	62.06	74.00	-11.94	30.69	3	Vertical	71	2.07	-
PK	2.4108G	112.49	Inf	-Inf	30.76	3	Vertical	71	2.07	-

802.11g_Nss1,(6Mbps)_1TX

28/02/2019

2412MHz_TX



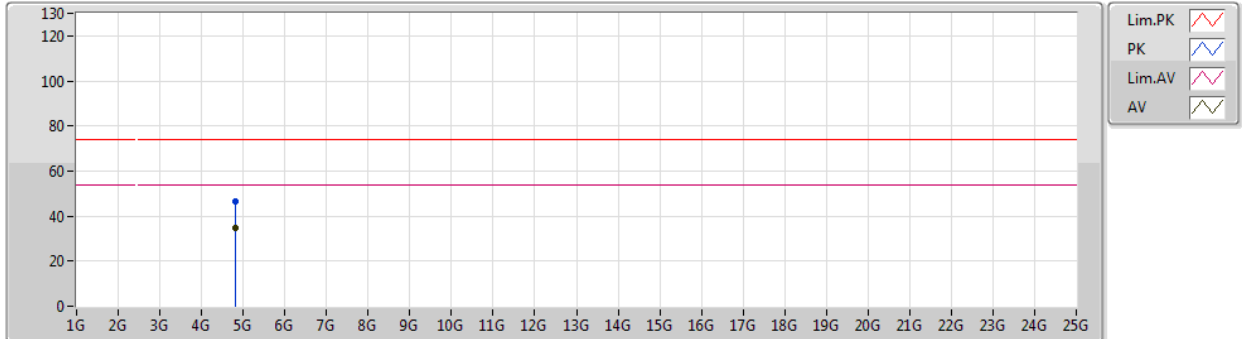
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	2.3896G	46.79	54.00	-7.21	30.69	3	Horizontal	55	1.35	-
AV	2.4106G	90.10	Inf	-Inf	30.76	3	Horizontal	55	1.35	-
PK	2.373G	58.23	74.00	-15.77	30.64	3	Horizontal	55	1.35	-
PK	2.4104G	99.97	Inf	-Inf	30.75	3	Horizontal	55	1.35	-



802.11g_Nss1,(6Mbps)_1TX

28/02/2019

2412MHz_TX



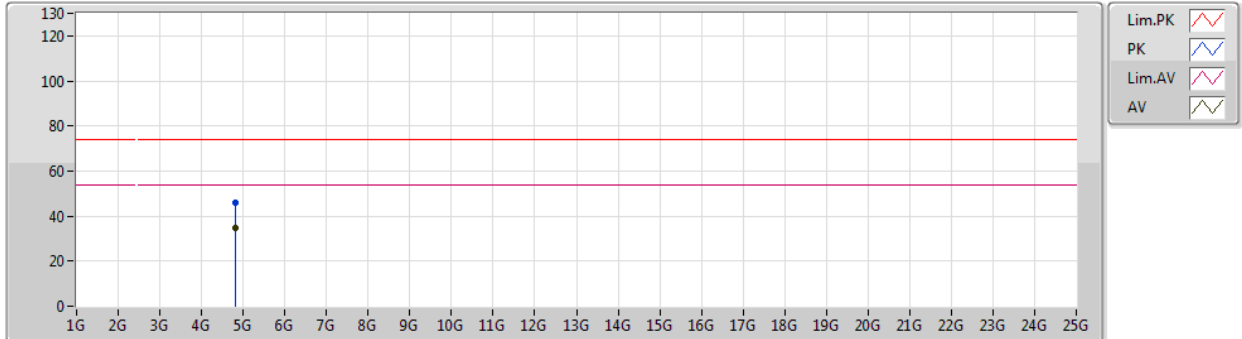
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	4.81224G	34.81	54.00	-19.19	6.53	3	Vertical	210	1.46	-
PK	4.81662G	46.23	74.00	-27.77	6.54	3	Vertical	210	1.46	-



802.11g_Nss1,(6Mbps)_1TX

28/02/2019

2412MHz_TX



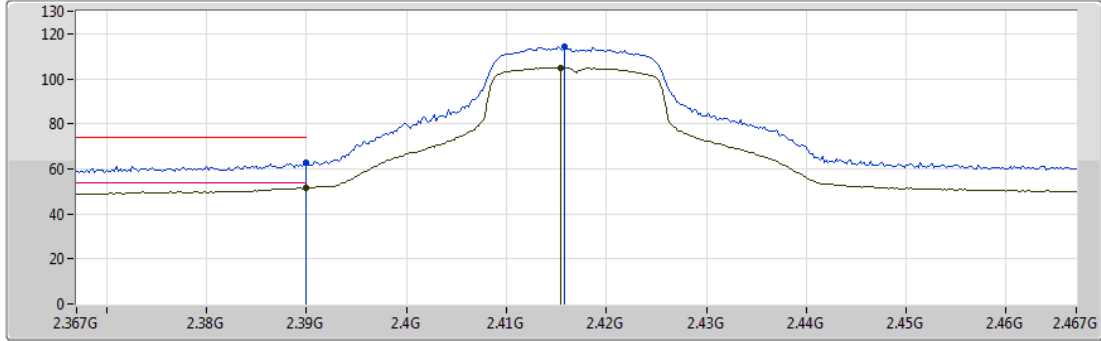
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	4.80978G	34.75	54.00	-19.25	6.53	3	Horizontal	282	2.19	-
PK	4.81686G	46.22	74.00	-27.78	6.54	3	Horizontal	282	2.19	-



802.11g_Nss1,(6Mbps)_1TX

28/02/2019

2417MHz_TX

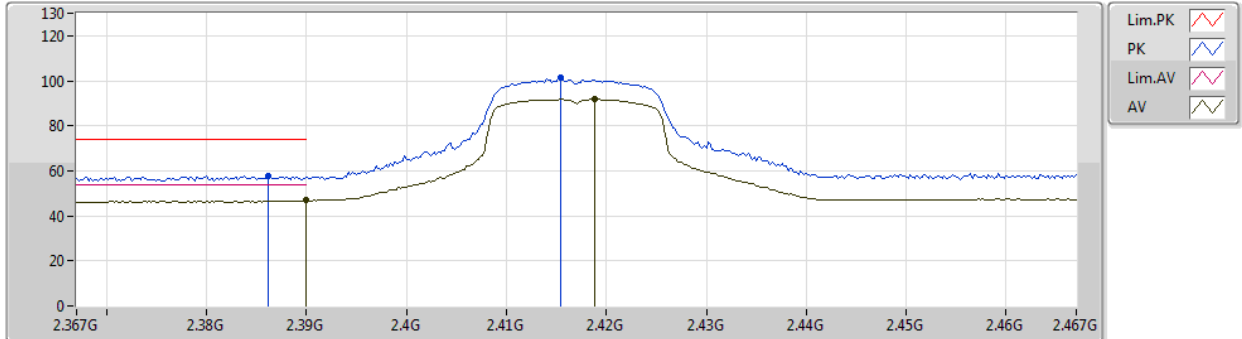


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	2.39G	51.38	54.00	-2.62	30.69	3	Vertical	72	2.20	-
AV	2.4154G	104.72	Inf	-Inf	30.77	3	Vertical	72	2.20	-
PK	2.39G	62.56	74.00	-11.44	30.69	3	Vertical	72	2.20	-
PK	2.4158G	114.32	Inf	-Inf	30.77	3	Vertical	72	2.20	-

802.11g_Nss1,(6Mbps)_1TX

28/02/2019

2417MHz_TX

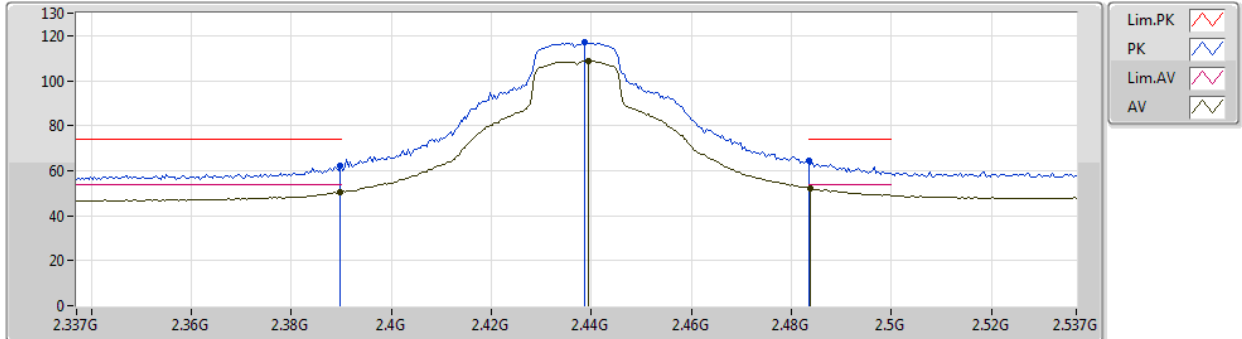


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	2.39G	46.79	54.00	-7.21	30.69	3	Horizontal	55	1.81	-
AV	2.4188G	91.69	Inf	-Inf	30.78	3	Horizontal	55	1.81	-
PK	2.3862G	57.81	74.00	-16.19	30.68	3	Horizontal	55	1.81	-
PK	2.4154G	101.24	Inf	-Inf	30.77	3	Horizontal	55	1.81	-

802.11g_Nss1,(6Mbps)_1TX

28/02/2019

2437MHz_TX

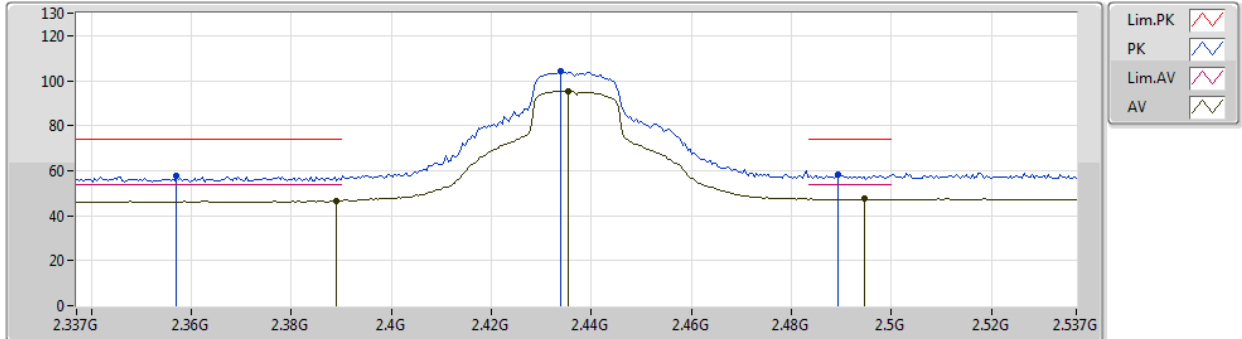


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	2.3898G	50.40	54.00	-3.60	30.69	3	Vertical	71	1.80	-
AV	2.4394G	108.50	Inf	-Inf	30.83	3	Vertical	71	1.80	-
AV	2.4838G	52.24	54.00	-1.76	30.97	3	Vertical	71	1.80	-
PK	2.3898G	62.23	74.00	-11.77	30.69	3	Vertical	71	1.80	-
PK	2.4386G	117.15	Inf	-Inf	30.83	3	Vertical	71	1.80	-
PK	2.4835G	64.39	74.00	-9.61	30.97	3	Vertical	71	1.80	-

802.11g_Nss1,(6Mbps)_1TX

28/02/2019

2437MHz_TX



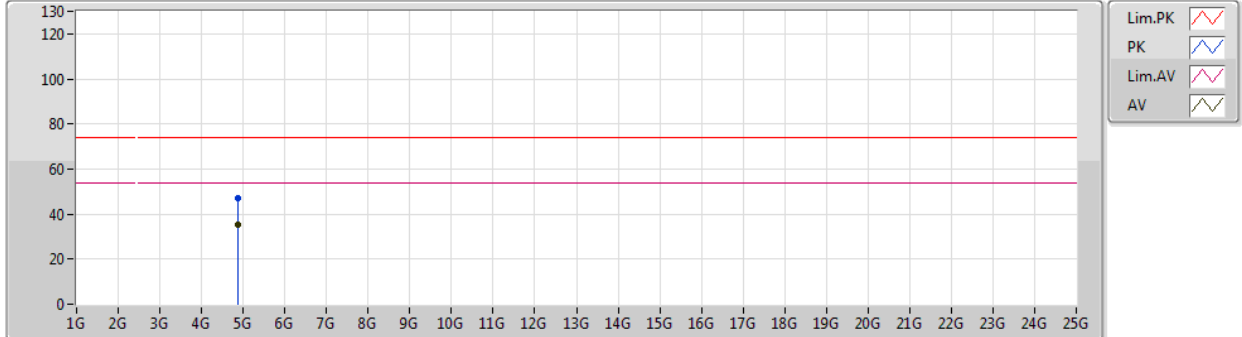
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	2.389G	46.77	54.00	-7.23	30.68	3	Horizontal	56	1.31	-
AV	2.4354G	95.29	Inf	-Inf	30.82	3	Horizontal	56	1.31	-
AV	2.4946G	47.57	54.00	-6.43	31.00	3	Horizontal	56	1.31	-
PK	2.357G	57.52	74.00	-16.48	30.59	3	Horizontal	56	1.31	-
PK	2.4338G	104.11	Inf	-Inf	30.82	3	Horizontal	56	1.31	-
PK	2.4894G	58.39	74.00	-15.61	30.98	3	Horizontal	56	1.31	-



802.11g_Nss1,(6Mbps)_1TX

28/02/2019

2437MHz_TX



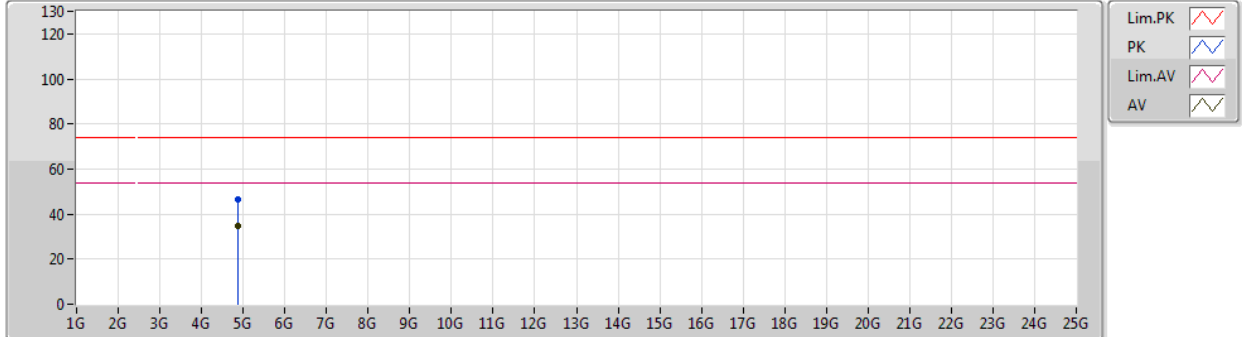
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	4.87502G	35.26	54.00	-18.74	6.71	3	Vertical	274	1.85	-
PK	4.87316G	46.99	74.00	-27.01	6.70	3	Vertical	274	1.85	-



802.11g_Nss1,(6Mbps)_1TX

28/02/2019

2437MHz_TX

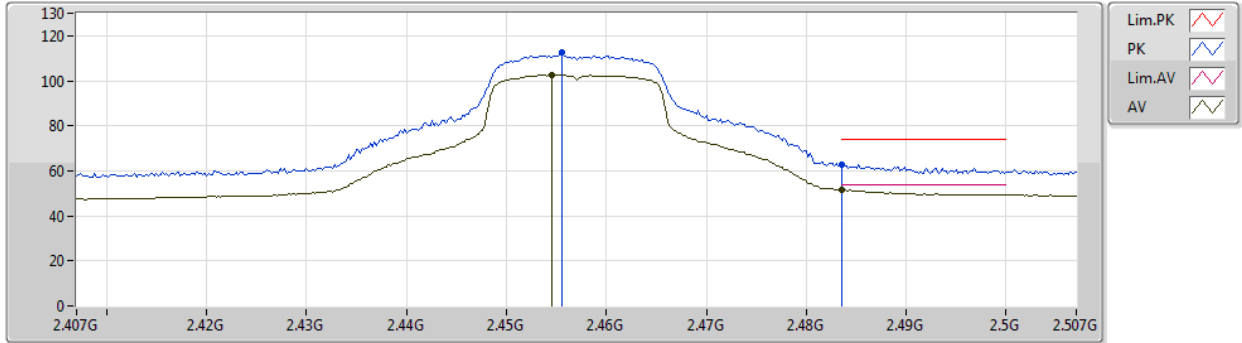


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	4.85942G	34.60	54.00	-19.40	6.67	3	Horizontal	101	2.35	-
PK	4.86518G	46.73	74.00	-27.27	6.69	3	Horizontal	101	2.35	-

802.11g_Nss1,(6Mbps)_1TX

28/02/2019

2457MHz_TX

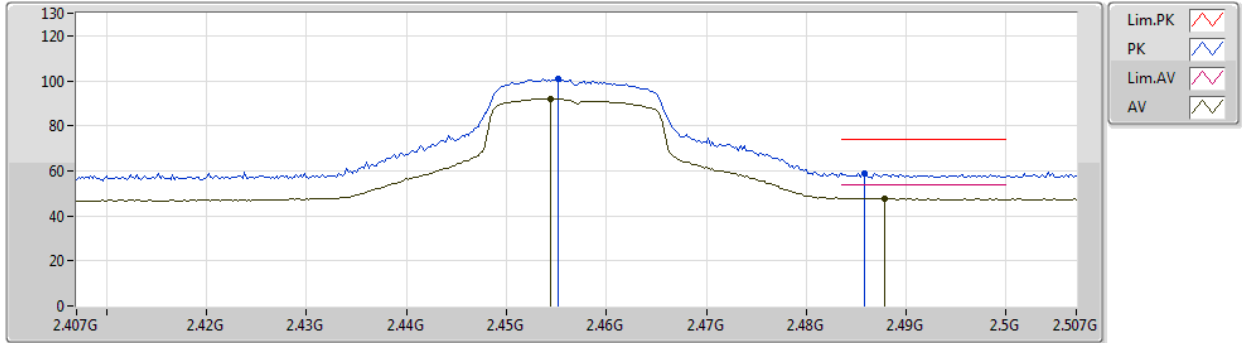


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	2.4546G	102.54	Inf	-Inf	30.88	3	Vertical	237	1.75	-
AV	2.4835G	51.75	54.00	-2.25	30.97	3	Vertical	237	1.75	-
PK	2.4556G	112.35	Inf	-Inf	30.88	3	Vertical	237	1.75	-
PK	2.4835G	62.58	74.00	-11.42	30.97	3	Vertical	237	1.75	-

802.11g_Nss1,(6Mbps)_1TX

28/02/2019

2457MHz_TX

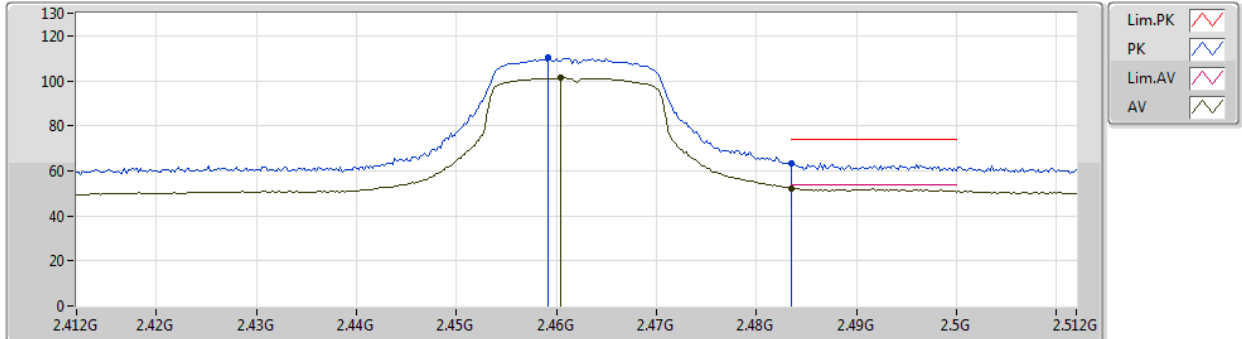


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	2.4544G	92.00	Inf	-Inf	30.88	3	Horizontal	253	1.24	-
AV	2.4878G	47.82	54.00	-6.18	30.98	3	Horizontal	253	1.24	-
PK	2.4552G	100.90	Inf	-Inf	30.88	3	Horizontal	253	1.24	-
PK	2.4858G	59.10	74.00	-14.90	30.98	3	Horizontal	253	1.24	-

802.11g_Nss1,(6Mbps)_1TX

28/02/2019

2462MHz_TX

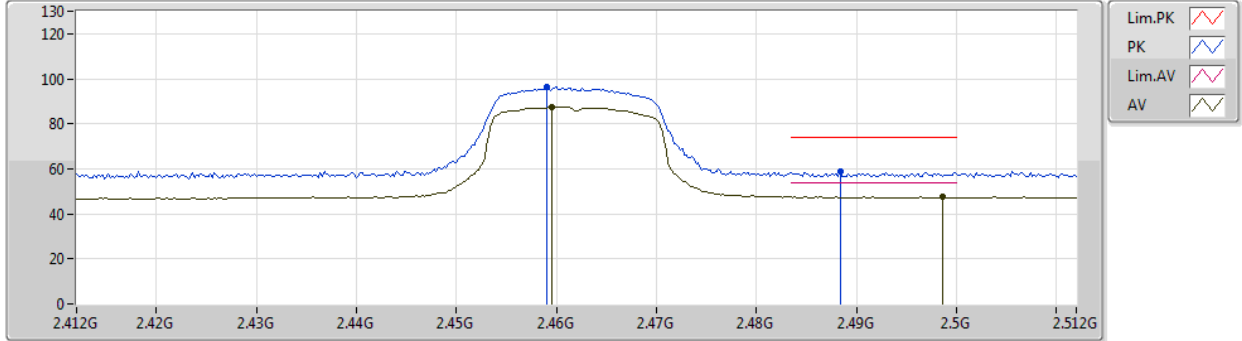


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	2.4604G	101.23	Inf	-Inf	30.89	3	Vertical	72	1.96	-
AV	2.4835G	52.24	54.00	-1.76	30.97	3	Vertical	72	1.96	-
PK	2.4592G	110.17	Inf	-Inf	30.89	3	Vertical	72	1.96	-
PK	2.4835G	63.41	74.00	-10.59	30.97	3	Vertical	72	1.96	-

802.11g_Nss1,(6Mbps)_1TX

28/02/2019

2462MHz_TX



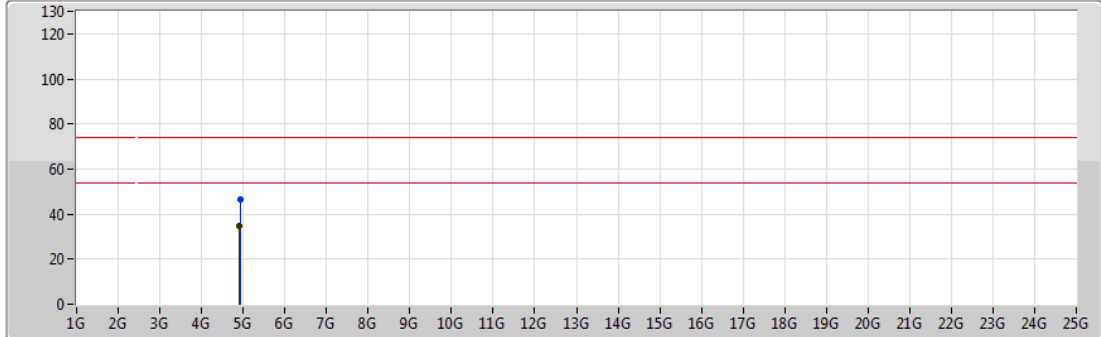
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	2.4596G	87.47	Inf	-Inf	30.89	3	Horizontal	56	1.46	-
AV	2.4986G	47.58	54.00	-6.42	31.01	3	Horizontal	56	1.46	-
PK	2.459G	96.65	Inf	-Inf	30.89	3	Horizontal	56	1.46	-
PK	2.4884G	59.03	74.00	-14.97	30.98	3	Horizontal	56	1.46	-



802.11g_Nss1,(6Mbps)_1TX

28/02/2019

2462MHz_TX



Lim.PK
 PK
 Lim.AV
 AV

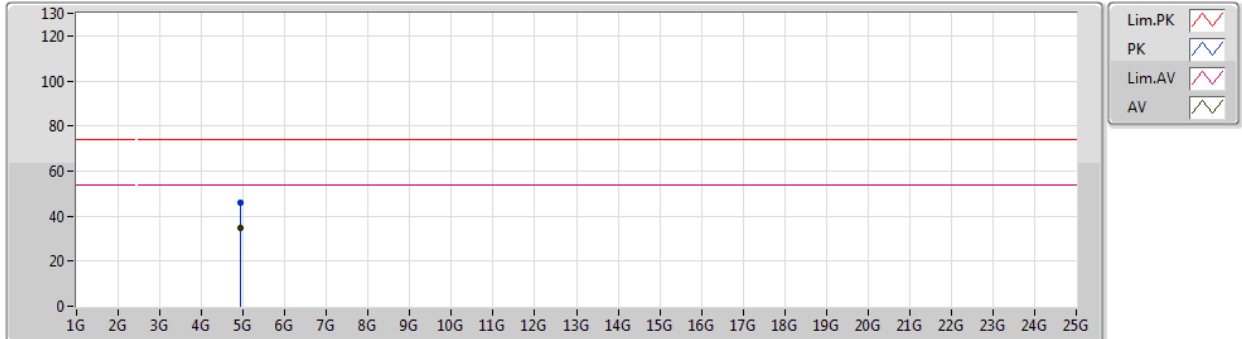
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	4.9129G	34.57	54.00	-19.43	6.81	3	Vertical	273	1.63	-
PK	4.9264G	46.44	74.00	-27.56	6.85	3	Vertical	273	1.63	-



802.11g_Nss1,(6Mbps)_1TX

28/02/2019

2462MHz_TX

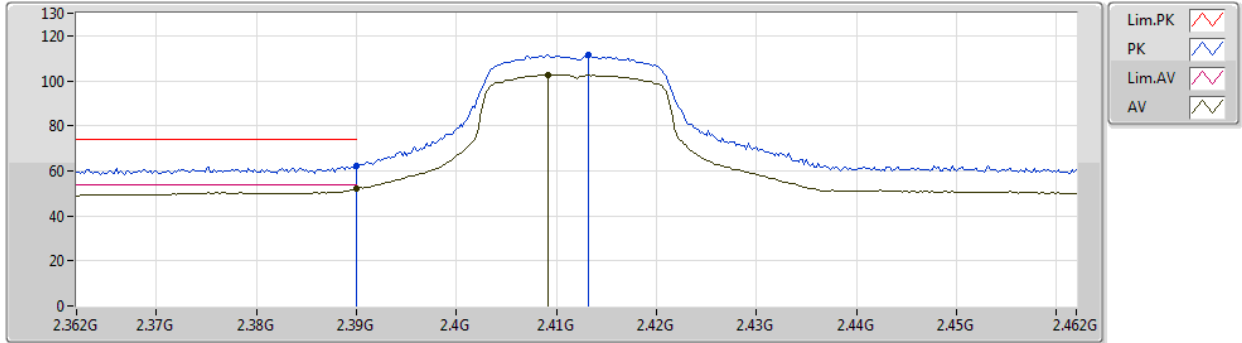


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	4.921G	34.60	54.00	-19.40	6.83	3	Horizontal	116	2.41	-
PK	4.93648G	46.18	74.00	-27.82	6.88	3	Horizontal	116	2.41	-

802.11n HT20_Nss1,(MCS0)_1TX

28/02/2019

2412MHz_TX

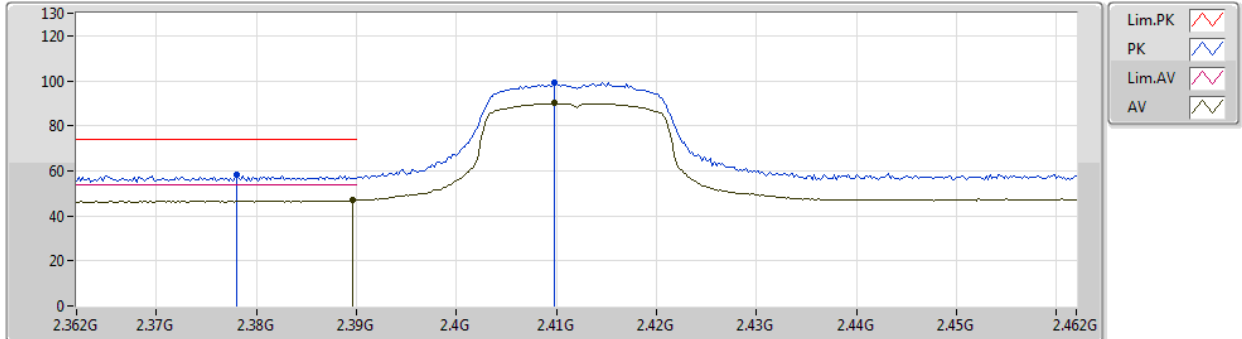


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	2.39G	51.98	54.00	-2.02	30.69	3	Vertical	72	2.08	-
AV	2.4092G	102.75	Inf	-Inf	30.75	3	Vertical	72	2.08	-
PK	2.39G	62.15	74.00	-11.85	30.69	3	Vertical	72	2.08	-
PK	2.4132G	111.53	Inf	-Inf	30.76	3	Vertical	72	2.08	-

802.11n HT20_Nss1,(MCS0)_1TX

28/02/2019

2412MHz_TX



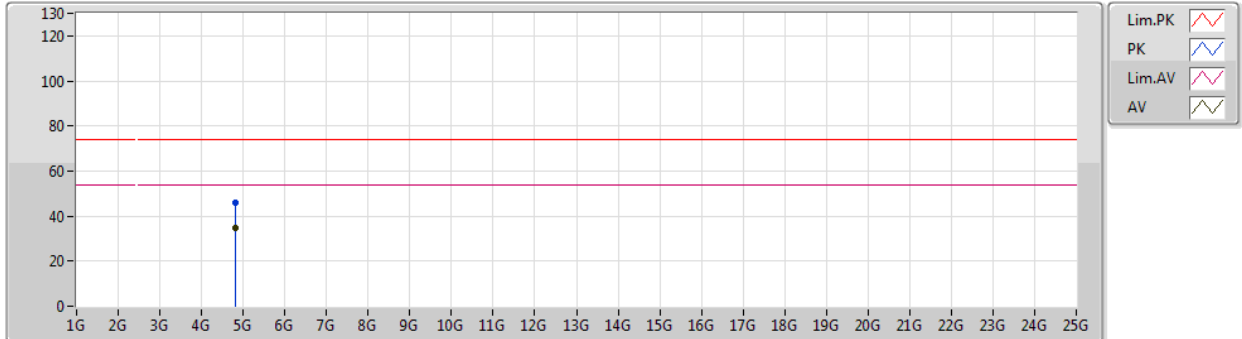
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	2.3896G	46.79	54.00	-7.21	30.69	3	Horizontal	56	1.35	-
AV	2.4098G	89.94	Inf	-Inf	30.75	3	Horizontal	56	1.35	-
PK	2.378G	58.44	74.00	-15.56	30.65	3	Horizontal	56	1.35	-
PK	2.4098G	99.29	Inf	-Inf	30.75	3	Horizontal	56	1.35	-



802.11n HT20_Nss1,(MCS0)_1TX

28/02/2019

2412MHz_TX



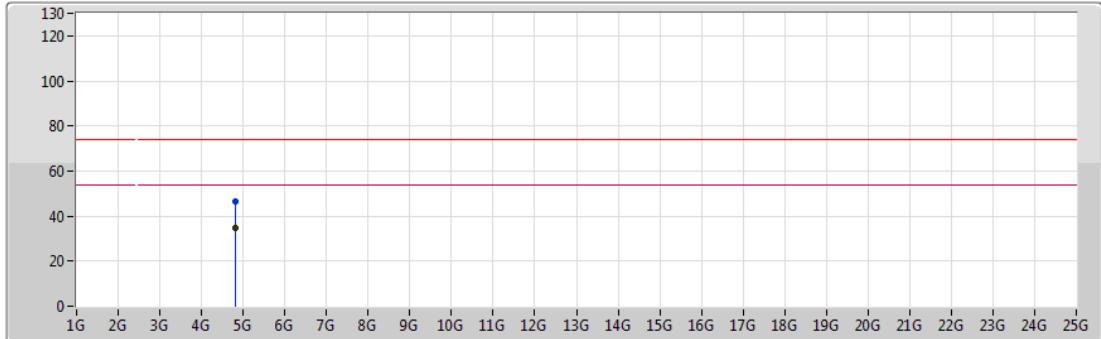
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	4.80936G	34.75	54.00	-19.25	6.53	3	Vertical	88	1.36	-
PK	4.8126G	46.22	74.00	-27.78	6.53	3	Vertical	88	1.36	-



802.11n HT20_Nss1,(MCS0)_1TX

28/02/2019

2412MHz_TX



Lim.PK
 PK
 Lim.AV
 AV

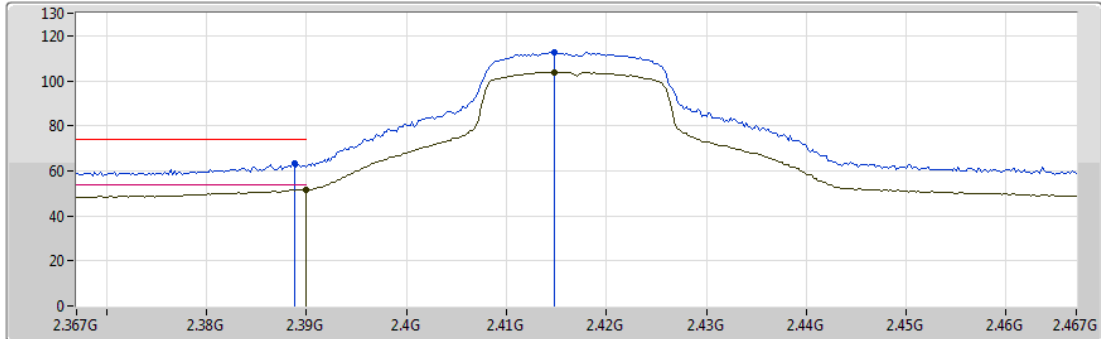
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	4.81584G	34.67	54.00	-19.33	6.54	3	Horizontal	119	1.94	-
PK	4.82616G	46.48	74.00	-27.52	6.57	3	Horizontal	119	1.94	-



802.11n HT20_Nss1,(MCS0)_1TX

01/03/2019

2417MHz_TX

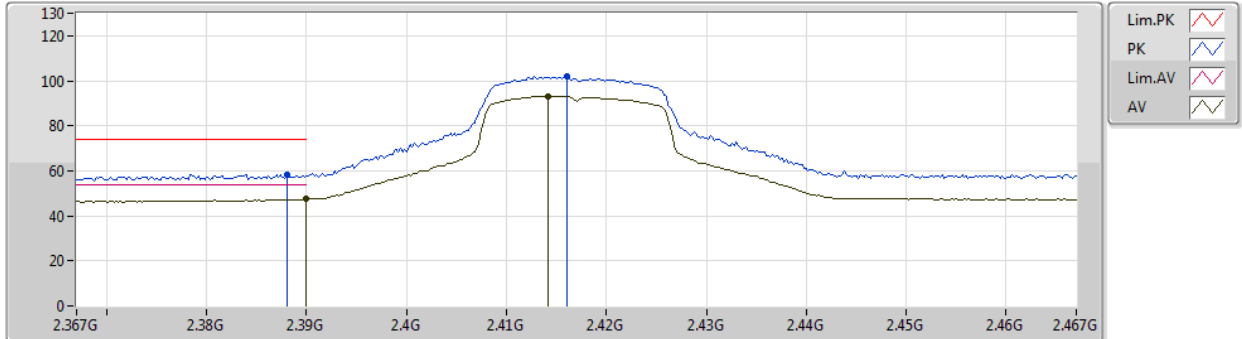


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	2.39G	51.74	54.00	-2.26	30.74	3	Vertical	171	1.93	-
AV	2.4148G	103.88	Inf	-Inf	30.83	3	Vertical	171	1.93	-
PK	2.3888G	63.15	74.00	-10.85	30.74	3	Vertical	171	1.93	-
PK	2.4148G	112.65	Inf	-Inf	30.83	3	Vertical	171	1.93	-

802.11n HT20_Nss1,(MCS0)_1TX

01/03/2019

2417MHz_TX

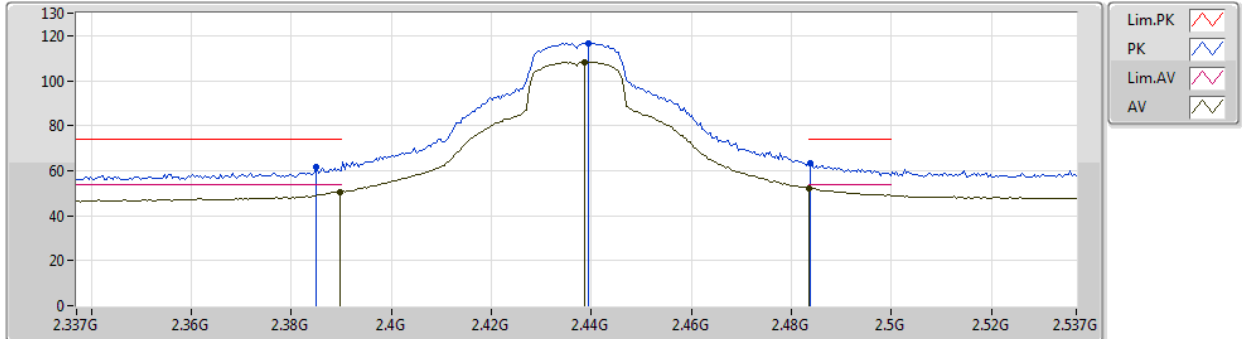


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	2.39G	47.35	54.00	-6.65	30.74	3	Horizontal	179	1.49	-
AV	2.4142G	93.19	Inf	-Inf	30.83	3	Horizontal	179	1.49	-
PK	2.388G	58.17	74.00	-15.83	30.74	3	Horizontal	179	1.49	-
PK	2.416G	102.04	Inf	-Inf	30.83	3	Horizontal	179	1.49	-

802.11n HT20_Nss1,(MCS0)_1TX

28/02/2019

2437MHz_TX

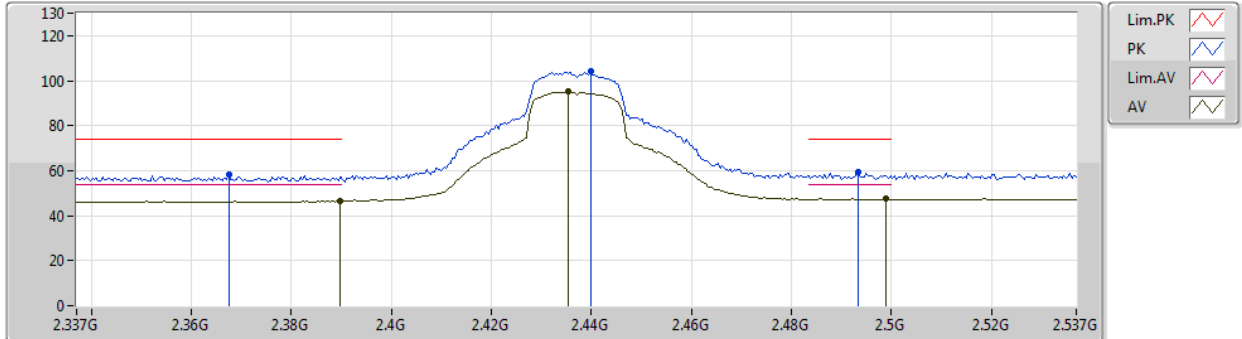


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	2.3898G	50.40	54.00	-3.60	30.69	3	Vertical	71	1.77	-
AV	2.4386G	108.26	Inf	-Inf	30.83	3	Vertical	71	1.77	-
AV	2.4835G	52.24	54.00	-1.76	30.97	3	Vertical	71	1.77	-
PK	2.385G	61.36	74.00	-12.64	30.67	3	Vertical	71	1.77	-
PK	2.4394G	116.66	Inf	-Inf	30.83	3	Vertical	71	1.77	-
PK	2.4838G	63.20	74.00	-10.80	30.97	3	Vertical	71	1.77	-

802.11n HT20_Nss1,(MCS0)_1TX

28/02/2019

2437MHz_TX



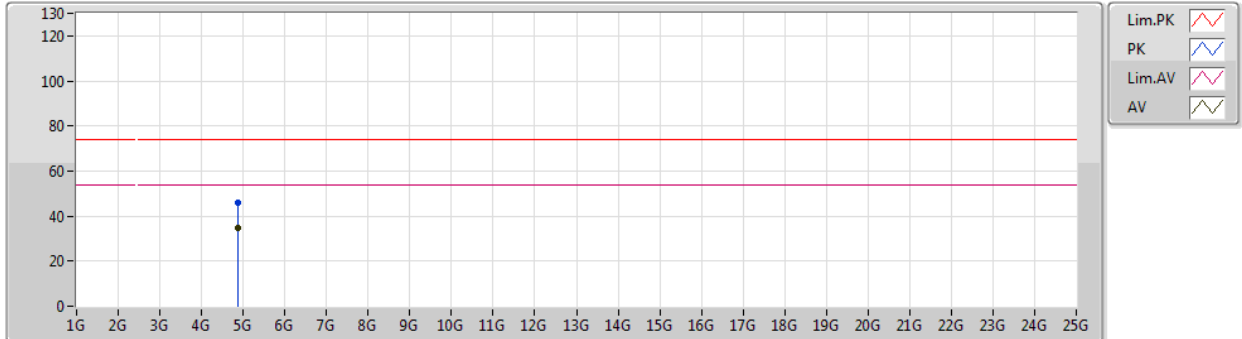
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	2.3898G	46.52	54.00	-7.48	30.69	3	Horizontal	56	1.48	-
AV	2.4354G	94.98	Inf	-Inf	30.82	3	Horizontal	56	1.48	-
AV	2.499G	47.58	54.00	-6.42	31.01	3	Horizontal	56	1.48	-
PK	2.3674G	58.15	74.00	-15.85	30.62	3	Horizontal	56	1.48	-
PK	2.4398G	104.31	Inf	-Inf	30.84	3	Horizontal	56	1.48	-
PK	2.4934G	59.38	74.00	-14.62	30.99	3	Horizontal	56	1.48	-



802.11n HT20_Nss1,(MCS0)_1TX

28/02/2019

2437MHz_TX



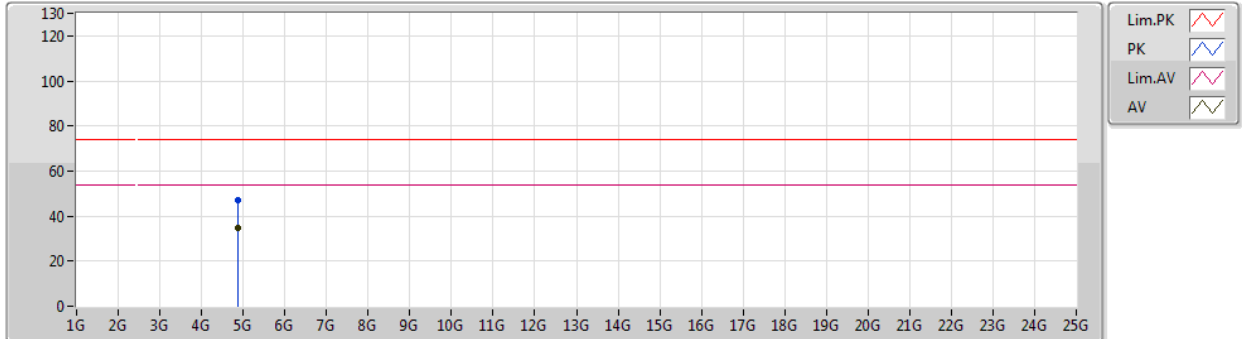
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	4.86764G	34.84	54.00	-19.16	6.69	3	Vertical	40	2.20	-
PK	4.8611G	46.21	74.00	-27.79	6.67	3	Vertical	40	2.20	-



802.11n HT20_Nss1,(MCS0)_1TX

28/02/2019

2437MHz_TX



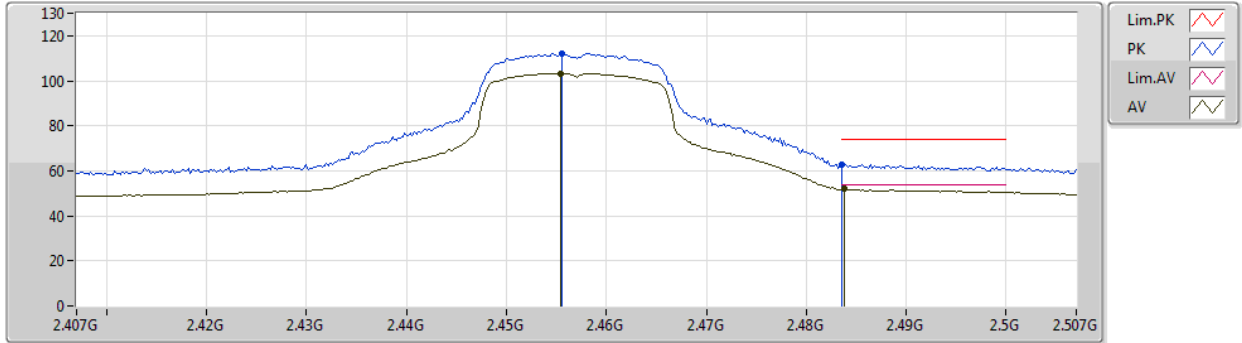
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	4.85906G	34.60	54.00	-19.40	6.67	3	Horizontal	318	2.42	-
PK	4.86644G	46.82	74.00	-27.18	6.69	3	Horizontal	318	2.42	-



802.11n HT20_Nss1,(MCS0)_1TX

01/03/2019

2457MHz_TX

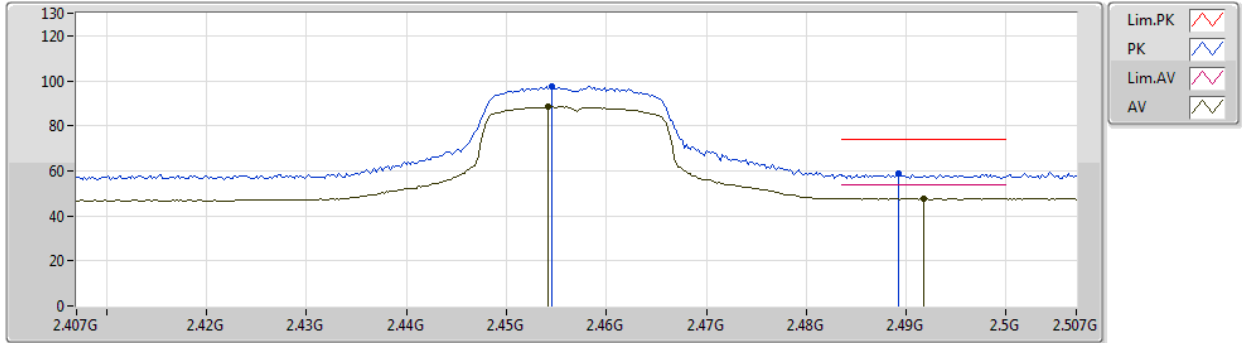


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	2.4554G	103.24	Inf	-Inf	30.97	3	Vertical	171	1.81	-
AV	2.4838G	51.84	54.00	-2.16	31.06	3	Vertical	171	1.81	-
PK	2.4556G	112.19	Inf	-Inf	30.97	3	Vertical	171	1.81	-
PK	2.4835G	62.94	74.00	-11.06	31.06	3	Vertical	171	1.81	-

802.11n HT20_Nss1,(MCS0)_1TX

01/03/2019

2457MHz_TX

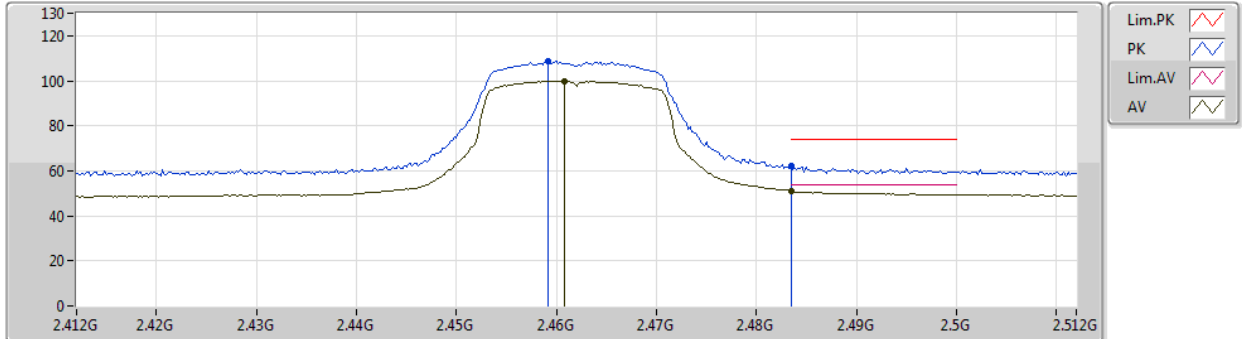


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	2.4542G	88.41	Inf	-Inf	30.96	3	Horizontal	178	1.48	-
AV	2.4918G	47.66	54.00	-6.34	31.09	3	Horizontal	178	1.48	-
PK	2.4546G	97.50	Inf	-Inf	30.96	3	Horizontal	178	1.48	-
PK	2.4892G	58.56	74.00	-15.44	31.08	3	Horizontal	178	1.48	-

802.11n HT20_Nss1,(MCS0)_1TX

28/02/2019

2462MHz_TX

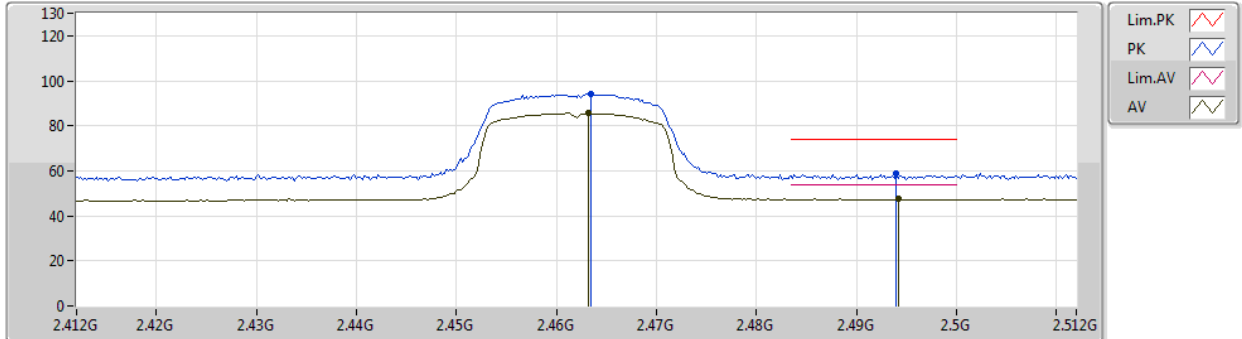


Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	2.4608G	99.76	Inf	-Inf	30.90	3	Vertical	71	2.09	-
AV	2.4835G	51.06	54.00	-2.94	30.97	3	Vertical	71	2.09	-
PK	2.4592G	108.77	Inf	-Inf	30.89	3	Vertical	71	2.09	-
PK	2.4835G	62.31	74.00	-11.69	30.97	3	Vertical	71	2.09	-

802.11n HT20_Nss1,(MCS0)_1TX

28/02/2019

2462MHz_TX



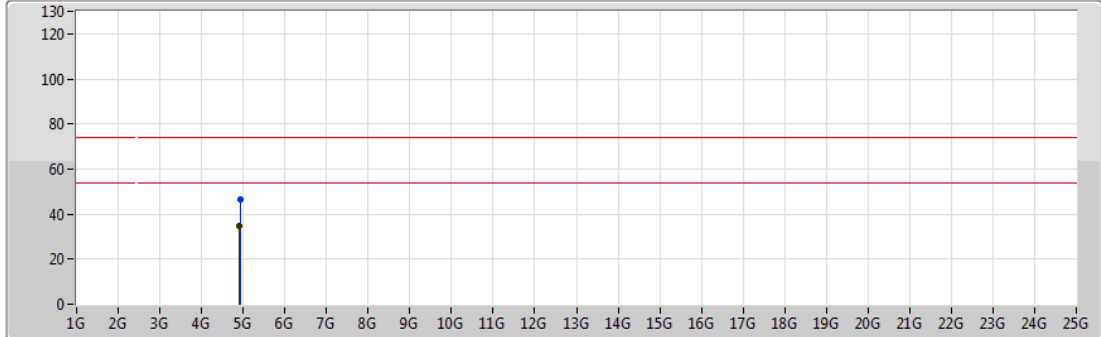
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	2.4632G	85.52	Inf	-Inf	30.90	3	Horizontal	57	1.48	-
AV	2.4942G	47.57	54.00	-6.43	31.00	3	Horizontal	57	1.48	-
PK	2.4634G	94.22	Inf	-Inf	30.90	3	Horizontal	57	1.48	-
PK	2.494G	58.70	74.00	-15.30	31.00	3	Horizontal	57	1.48	-



802.11n HT20_Nss1,(MCS0)_1TX

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2462MHz_TX



Legend for the spectrum plot:

- Lim.PK (Red line)
- PK (Blue line)
- Lim.AV (Pink line)
- AV (Grey line)

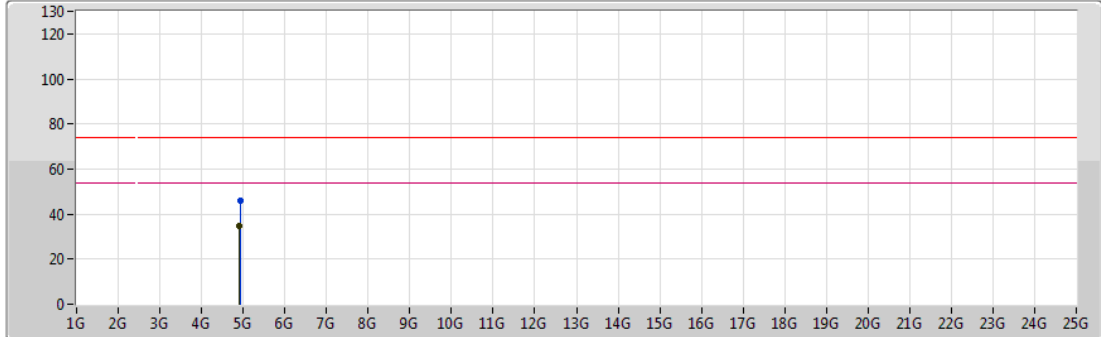
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	4.91158G	34.54	54.00	-19.46	6.80	3	Vertical	32	1.71	-
PK	4.9249G	46.46	74.00	-27.54	6.84	3	Vertical	32	1.71	-



802.11n HT20_Nss1,(MCS0)_1TX

28/02/2019

2462MHz_TX



Lim.PK
 PK
 Lim.AV
 AV

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment
AV	4.91026G	34.52	54.00	-19.48	6.80	3	Horizontal	249	1.04	-
PK	4.924G	46.19	74.00	-27.81	6.84	3	Horizontal	249	1.04	-