

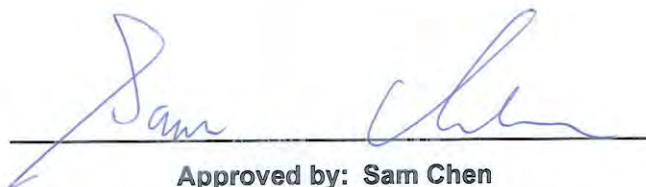


FCC RADIO TEST REPORT

FCC ID : TLZ-CU442
Equipment : IEEE 802.11 b/g/n 1T1R WLAN and Bluetooth Low Energy Microcontroller Module
Brand Name : AzureWave
Model Name : AW-CU442
Applicant : AzureWave Technologies, Inc.
8F., No.94, Baozhong Rd. , Xindian Dist., New Taipei City, Taiwan 231
Standard : 47 CFR FCC Part 15.247

The product was received on Jun. 10, 2020, and testing was started from Jun. 10, 2020 and completed on Jun. 30, 2020. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The 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: Sam Chen

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

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



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TEL : 886-3-656-9065
FAX : 886-3-656-9085
Report Template No.: CB-A10_10 Ver1.2



Summary of Test Result

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

Declaration of Conformity:

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

Comments and Explanations:

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

Reviewed by: Sam Chen

Report Producer: Vicky Huang



1 General Description

1.1 Information

1.1.1 RF General Information

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

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

Note:

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

1.1.2 Antenna Information

Ant.	Port	Brand	Part No.	Antenna Type	Connector	Gain (dBi)
1	1	LNywave	AOX20-054AA0	Chip Antenna	N/A	3.62

Note: The above information was declared by manufacturer.

For 2.4GHz function:

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

Only Port 1 can be use as transmit and receive antenna.

For BT function:

For BT mode (1TX/1RX):

Only Port 1 can be use as transmit and receive antenna.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11b	1	0	n/a (DC \geq 0.98)	n/a (DC \geq 0.98)
802.11g	1	0	n/a (DC \geq 0.98)	n/a (DC \geq 0.98)
802.11n HT20	1	0	n/a (DC \geq 0.98)	n/a (DC \geq 0.98)

Note:

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

**1.1.4 EUT Operational Condition**

EUT Power Type	From host system		
Beamforming Function	<input type="checkbox"/> With beamforming	<input checked="" type="checkbox"/> Without beamforming	
Function	<input checked="" type="checkbox"/> Point-to-multipoint	<input type="checkbox"/> Point-to-point	
Test Software Version	AmebaD_mptool_2V0		

Note: The above information was declared by manufacturer.

1.1.5 Table for EUT source

This product is a transformer that has the following two Sources

EUT	Source	Description
1	Main Source	Which are identical to each other in all aspects except Y1, L1, C27, C36, C37, C40, C41, C42.
2	Second Source	



1.2 Applicable Standards

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

- ♦ 47 CFR FCC Part 15
- ♦ ANSI C63.10-2013

The following reference test guidance is not within the scope of accreditation of TAF.

- ♦ FCC KDB 558074 D01 v05r02
- ♦ FCC KDB 414788 D01 v01r01

1.3 Testing Location Information

Testing Location				
<input type="checkbox"/>	HWA YA	ADD : No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)	TEL : 886-3-327-3456	FAX : 886-3-327-0973
<input checked="" type="checkbox"/>	JHUBEI	ADD : No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C.	TEL : 886-3-656-9065	FAX : 886-3-656-9085

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH03-CB	Benson Su	29.8~31.7°C / 39~42%	Jun. 25, 2020
Radiated (below 1GHz)	03CH06-CB	Nyle Chang	28.9~31°C / 39~43%	Jun. 24, 2020~ Jun. 25, 2020
Radiated (above 1GHz)	03CH04-CB	Stim Sung	29.2~30.9°C / 40~43%	Jun. 10, 2020~ Jun. 24, 2020
AC Conduction	CO01-CB	Peter Wu	23~24°C / 57~58%	Jun. 30, 2020

Test site Designation No. TW0006 with FCC.

Test site registered number IC 4086D with Industry Canada.

1.4 Measurement Uncertainty

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

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



2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
802.11b_Nss1,(1Mbps)_1TX	-
2412MHz	118
2417MHz	118
2437MHz	127
2457MHz	119
2462MHz	117
802.11g_Nss1,(6Mbps)_1TX	-
2412MHz	106
2417MHz	113
2437MHz	126
2457MHz	106
2462MHz	100
802.11n HT20_Nss1,(MCS0)_1TX	-
2412MHz	102
2417MHz	112
2437MHz	127
2457MHz	106
2462MHz	99

2.2 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	Normal Link
1	Normal Link-EUT 1
2	Normal Link-EUT 2
For operating mode 1 is the worst case and it was record in this test report.	

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 EUT has two sources, after evaluating, EUT 1 has been evaluated to be the worst case, so it was selected to test and record in this test report.	
Operating Mode	EUT 1

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	Normal Link
1	Normal Link-EUT 1 at Z-axis
2	Normal Link-EUT 1 at Y-axis
Mode 1 has been evaluated to be the worst case between Mode 1~2, thus measurement for Mode 3 will follow this same test mode.	
3	Normal Link-EUT 2 at Z-axis
For operating mode 3 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX
1. The EUT was performed at X axis, Y axis and Z axis position test, and the worst case was found at Y axis. So the measurement will follow this same test configuration. 2. The EUT has two sources, after evaluating, EUT 1 has been evaluated to be the worst case, so it was selected to test and record in this test report.	
1	EUT 1 at Y-axis



2.3 EUT Operation during Test

For CTX Mode:

The EUT was programmed to be in continuously transmitting mode.

For Normal Link:

During the test, the EUT operation to normal function.

2.4 Accessories

N/A

2.5 Support Equipment

For AC Conduction:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Fixture	Azurewave	AW-CU462-I1	N/A
B	NB	DELL	E6430	N/A
C	Earphone	e-Power	S90W	N/A
D	Mouse	HP	FM100	N/A
E	AP Router	ASUS	RP-N53	MSQ-RPN53
F	Smart phone	Samsung	Galaxy J2	A3LSMJ200F
G	AP NB	DELL	E6430	N/A

For Radiated (below 1GHz):

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	NB	DELL	E4300	N/A
B	NB	DELL	E4300	N/A
C	AP Router	ASUS	RP-N53	MSQ-RPN53
D	Earphone	e-Power	S90W	N/A
E	Mouse	Logitech	M-U0026	N/A
F	Fixture	Azurewave	AW-CU462-I1	N/A
G	Smart phone	Samsung	Galaxy J2	A3LSMJ200F

For Radiated (above 1GHz) and RF Conducted:

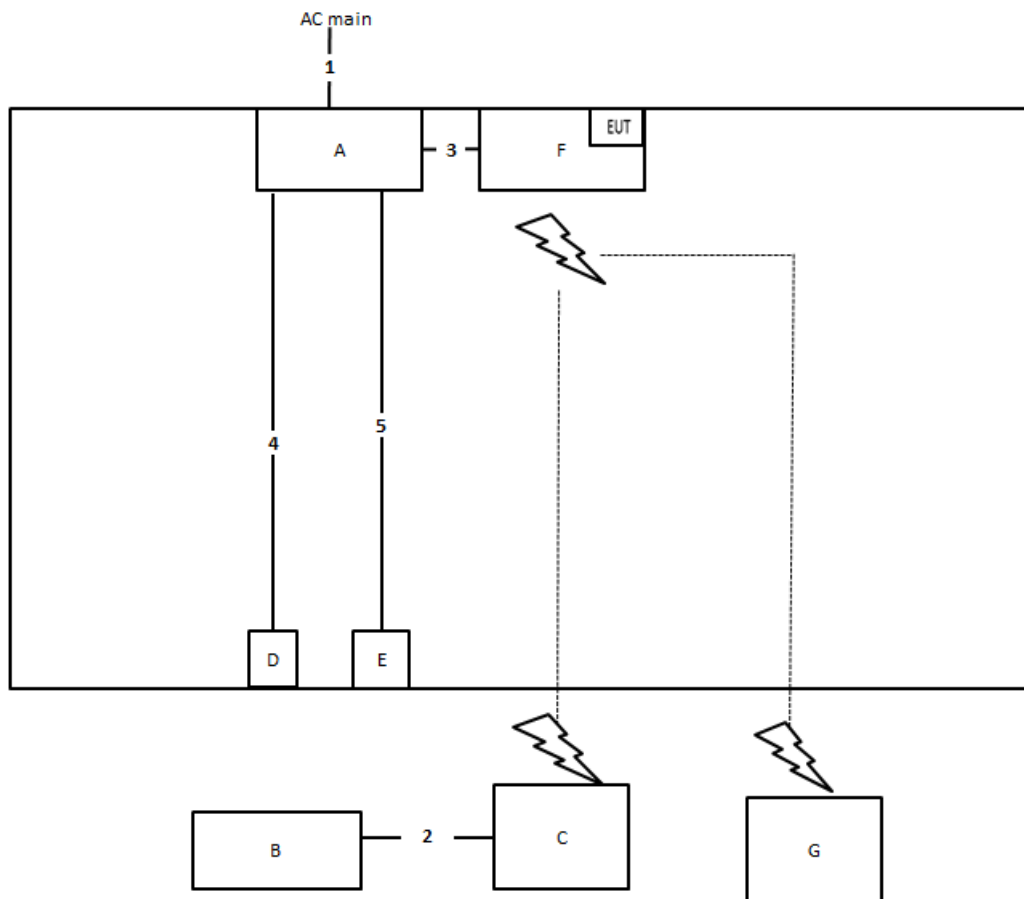
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	NB	DELL	E4300	N/A
B	Fixture	Azurewave	AW-CU462-I1	N/A



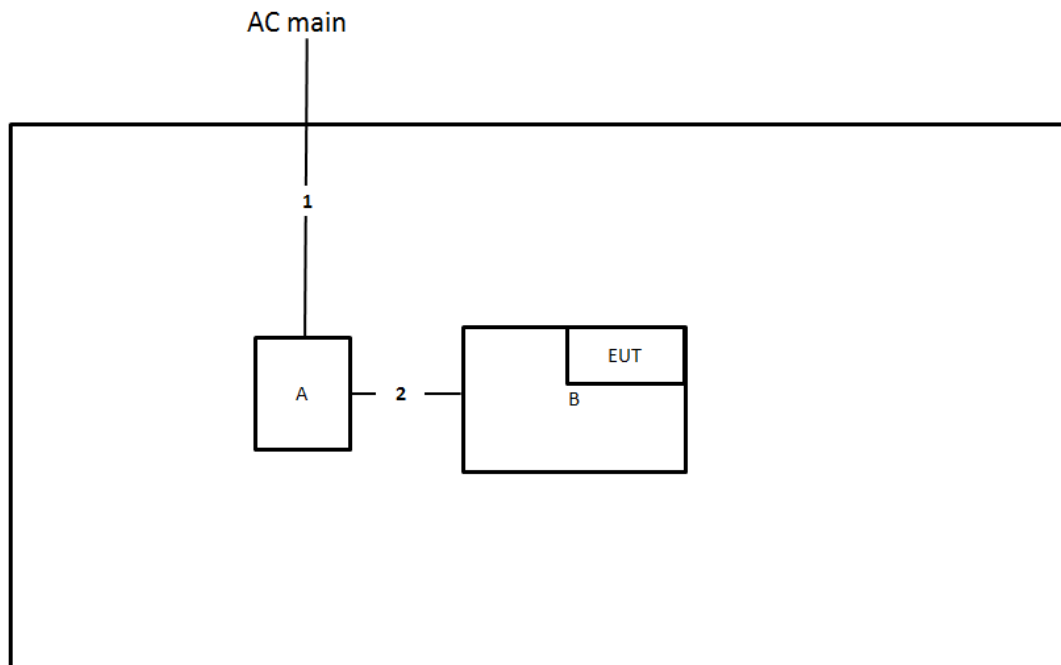
Test Setup Diagram – AC Line Conducted Emission Test

Item	Connection	Shielded	Length
1	Power cable	No	2.6m
2	USB cable	Yes	1.5m
3	RJ-45 cable	No	3m
4	Audio cable	No	1.5m
5	USB cable	Yes	1.5m

Item	Connection	Shielded	Length
1	Power cable	No	2.6m
2	USB cable	Yes	1.5m
3	RJ-45 cable	No	3m
4	Audio cable	No	1.5m
5	USB cable	Yes	1.5m

Test Setup Diagram - Radiated Test < 1GHz


Item	Connection	Shielded	Length
1	Power cable	No	2.6m
2	RJ-45 cable	No	1.5m
3	USB cable	Yes	1.7m
4	Audio cable	No	1.4m
5	USB cable	Yes	1.8m

Test Setup Diagram - Radiated Test > 1GHz


Item	Connection	Shielded	Length
1	Power cable	No	2.6m
2	USB cable	Yes	0.95m



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.

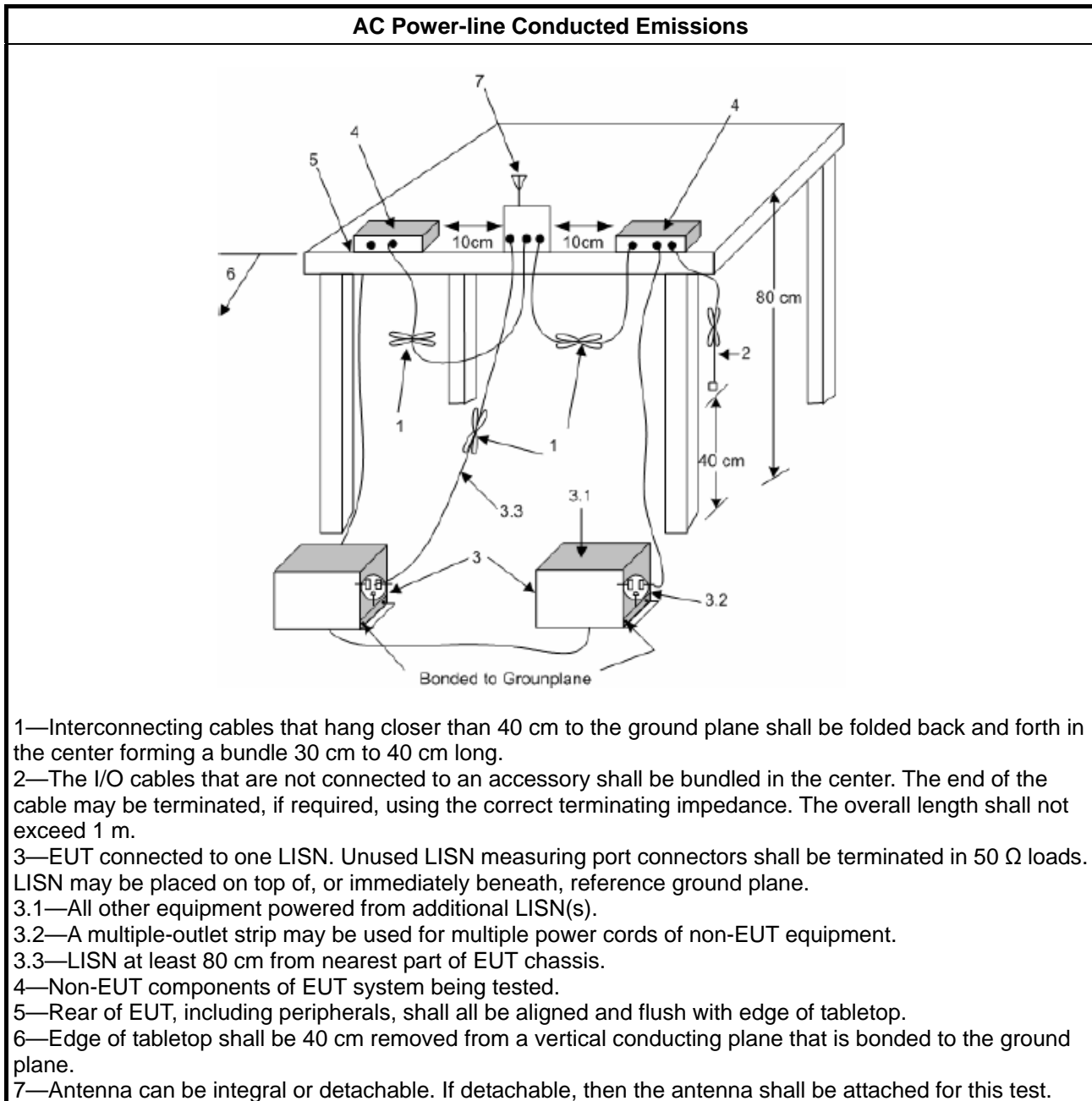
3.1.2 Measuring Instruments

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 Measurement Results Calculation

The measured Level is calculated using:

- Corrected Reading (dBuV) = LISN Factor + Cable Loss + Read Level = Level
- Margin = - Limit + (Read Level + LISN Factor + Cable Loss)

3.1.6 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:
<ul style="list-style-type: none"> 6 dB bandwidth \geq 500 kHz.

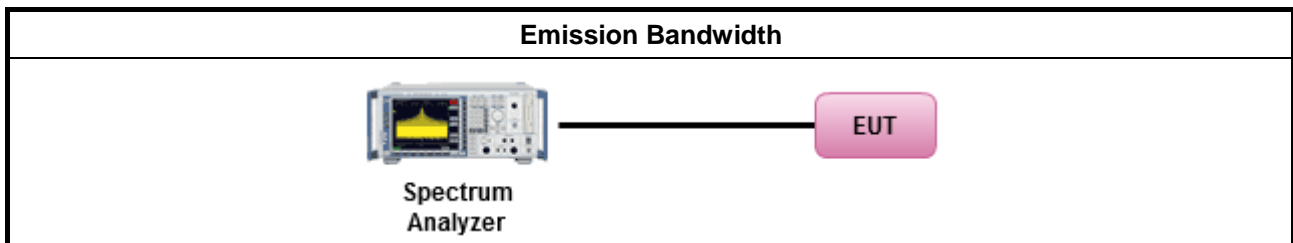
3.2.2 Measuring Instruments

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 FCC KDB 558074, clause 8.2 & C63.10 clause 11.8.1 Option 1 for 6 dB bandwidth measurement.
<input type="checkbox"/> Refer as FCC KDB 558074, clause 8.2 & C63.10 clause 11.8.2 Option 2 for 6 dB bandwidth measurement.
<input type="checkbox"/> Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.

3.2.4 Test Setup



3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B



3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit	
	▪ 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):
	<ul style="list-style-type: none"> - 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
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	
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 8.3.1.1 & C63.10 clause 11.9.1.1 (RBW \geq EBW method).
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 8.3.1.3 & C63.10 clause 11.9.1.3 (peak power meter).
▪ Maximum Conducted Output Power	
[duty cycle \geq 98% or external video / power trigger]	
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.2 Method AVGSA-1.
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.3 Method AVGSA-1A. (alternative)
duty cycle < 98% and average over on/off periods with duty factor	
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.4 Method AVGSA-2.
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.5 Method AVGSA-2A (alternative)
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.6 Method AVGSA-3
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.7 Method AVGSA-3A (alternative)
Measurement using a power meter (PM)	
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 8.3.2.3 & C63.10 clause 11.9.2.3.1 Method AVGPM (using an RF average power meter).
<input checked="" type="checkbox"/>	Refer as FCC KDB 558074, clause 8.3.2.3 & C63.10 clause 11.9.2.3.2 Method AVGPM-G (using an gate RF average power meter).

▪ For conducted measurement.

- If the EUT supports multiple transmit chains using options given below:
Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.
- If multiple transmit chains, EIRP calculation could be following as methods:

$$P_{\text{total}} = P_1 + P_2 + \dots + P_n$$
 (calculated in linear unit [mW] and transfer to log unit [dBm])

$$\text{EIRP}_{\text{total}} = P_{\text{total}} + \text{DG}$$

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

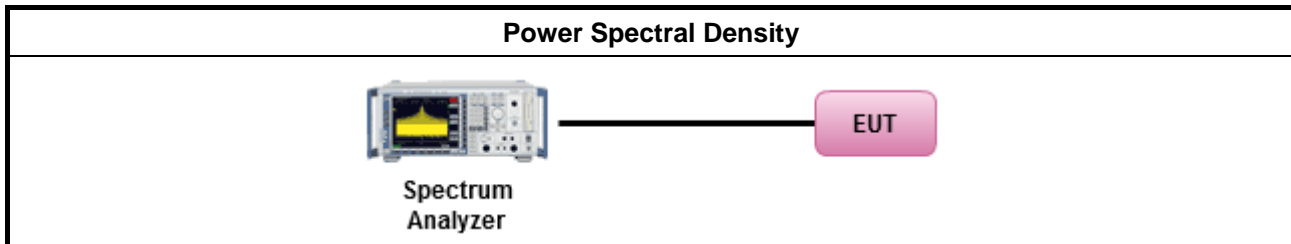
3.4.2 Measuring Instruments

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).	
<input checked="" type="checkbox"/>	Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10 Method Max. PSD.
▪ For conducted measurement.	
▪ If The EUT supports multiple transmit chains using options given below:	
<input type="checkbox"/>	Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.
<input type="checkbox"/>	Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits,
<input type="checkbox"/>	Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.

3.4.4 Test Setup



3.4.5 Test Result of Power Spectral Density

Refer as Appendix D

3.5 Emissions in Non-restricted Frequency Bands

3.5.1 Emissions in Non-restricted Frequency Bands Limit

Un-restricted Band Emissions Limit	
RF output power procedure	Limit (dBc)
Peak output power procedure	20
Average output power procedure	30
<p>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.</p> <p>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.</p>	

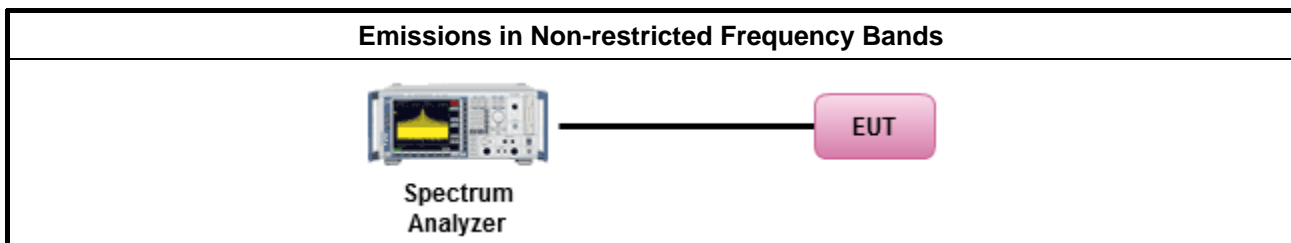
3.5.2 Measuring Instruments

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 FCC KDB 558074, clause 8.5 for unwanted emissions into non-restricted bands.

3.5.4 Test Setup



3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix E

3.6 Emissions in Restricted Frequency Bands

3.6.1 Emissions in Restricted Frequency Bands Limit

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

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

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

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

3.6.2 Measuring Instruments

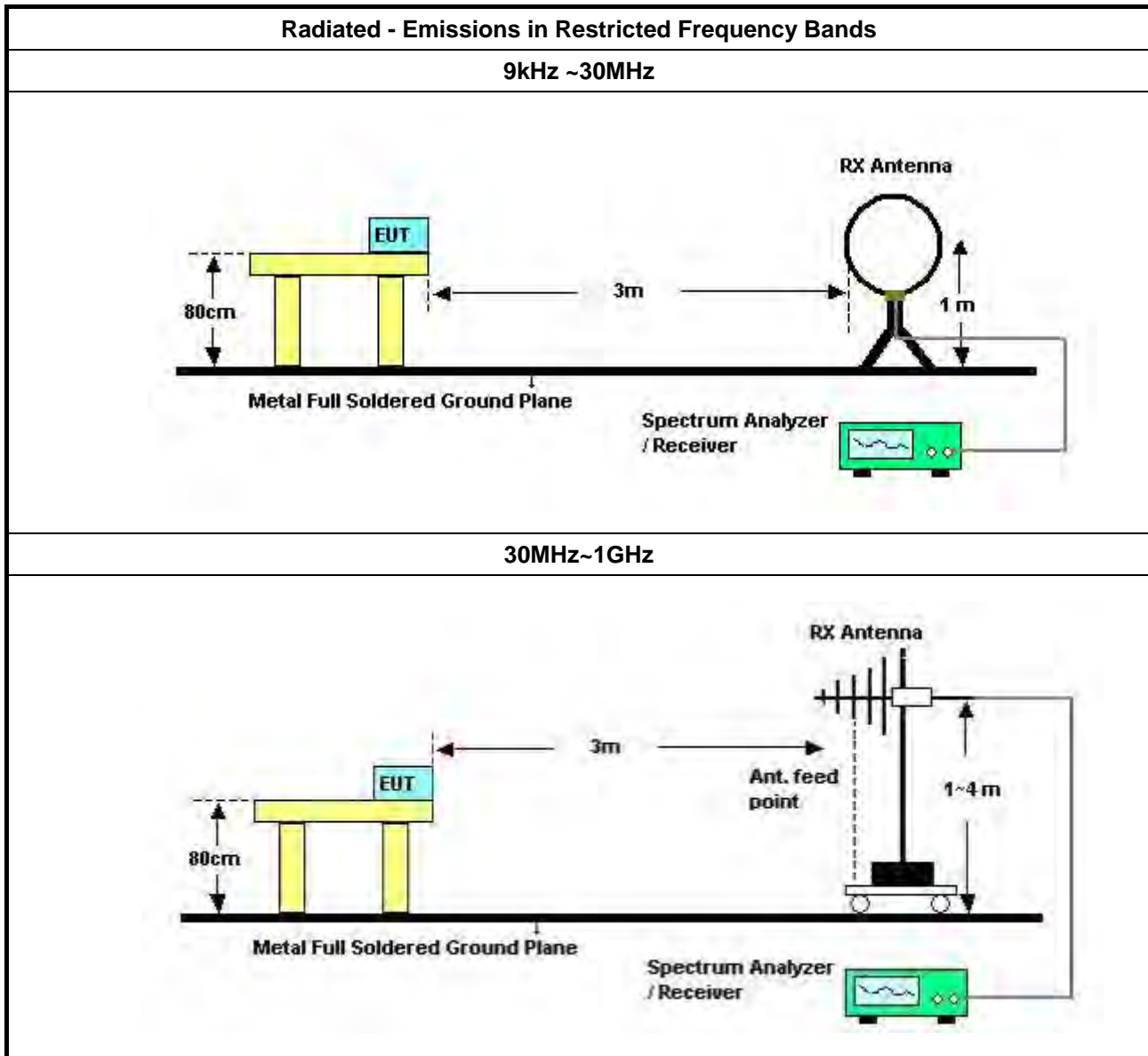
Refer a test equipment and calibration data table in this test report.

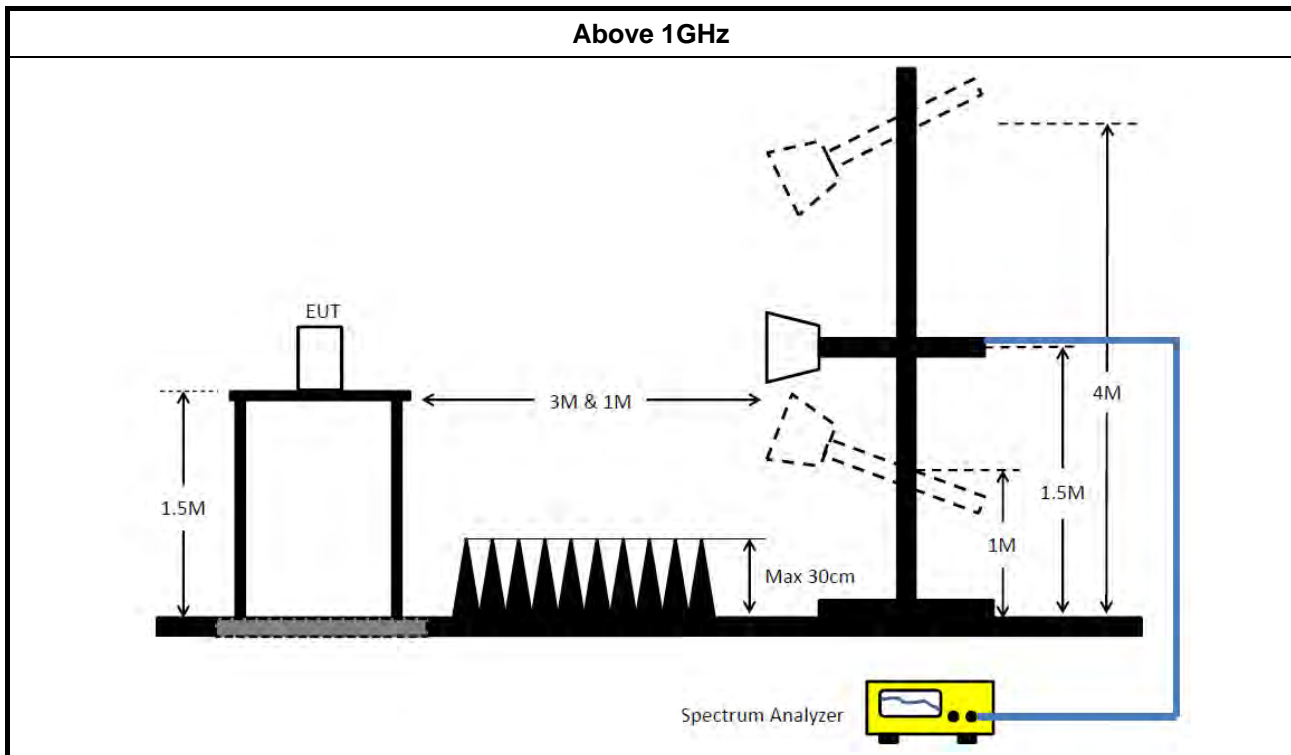


3.6.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> The average emission levels shall be measured in [duty cycle ≥ 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 FCC KDB 558074, clause 8.6 for unwanted emissions into restricted bands.
	<input type="checkbox"/> Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.1(trace averaging for duty cycle $\geq 98\%$).
	<input type="checkbox"/> Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.2(trace averaging + duty factor).
	<input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.3(Reduced VBW $\geq 1/T$).
	<input type="checkbox"/> Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW $\geq 1/T$, where T is pulse time.
	<input type="checkbox"/> Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions.
	<input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.4 measurement procedure peak limit.
<ul style="list-style-type: none"> For the transmitter band-edge emissions shall be measured using following options below: 	
	<ul style="list-style-type: none"> Refer as FCC KDB 558074 clause 8.7 & C63.10 clause 11.13.1, When the performing peak or average radiated measurements, emissions within 2 MHz of the authorized band edge may be measured using the marker-delta method described below.
	<ul style="list-style-type: none"> Refer as FCC KDB 558074, clause 8.7 (ANSI C63.10, clause 6.10.6) for marker-delta method for band-edge measurements.
	<ul style="list-style-type: none"> Refer as FCC KDB 558074, clause 8.7 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).
	<ul style="list-style-type: none"> For conducted unwanted emissions into restricted bands (absolute emission limits). Devices with multiple transmit chains using options given below: (1) Measure and sum the spectra across the outputs or (2) Measure and add 10 log(N) dB
	<ul style="list-style-type: none"> For FCC KDB 662911 The methodology described here may overestimate array gain, thereby resulting in apparent failures to satisfy the out-of-band limits even if the device is actually compliant. In such cases, compliance may be demonstrated by performing radiated tests around the frequencies at which the apparent failures occurred.

3.6.4 Test Setup





3.6.5 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamplifier Factor (if applicable) = Level.

3.6.6 Emissions in Restricted Frequency Bands (Below 30MHz)

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

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

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

3.6.7 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix F



4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.45GHz	Feb. 26, 2020	Feb. 25, 2021	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Dec. 25, 2019	Dec. 24, 2020	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Feb. 25, 2020	Feb. 24, 2021	Conduction (CO01-CB)
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100430	9kHz ~ 30MHz	Jan. 31, 2020	Jan. 30, 2021	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	9kHz ~ 30MHz	May 20, 2020	May 19, 2021	Conduction (CO01-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
Bilog Antenna with 6 dB attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37878 & AT-N0606	20MHz ~ 2GHz	Aug. 03, 2019	Aug. 02, 2020	Radiation (03CH06-CB)
Pre-Amplifier	Agilent	310N	187290	0.1MHz ~ 1GHz	Apr. 28, 2020	Apr. 27, 2021	Radiation (03CH06-CB)
Spectrum analyzer	R&S	FSP40	100080	9kHz~40GHz	Oct. 21, 2019	Oct. 20, 2020	Radiation (03CH06-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	May 13, 2020	May 12, 2021	Radiation (03CH06-CB)
RF Cable-low	HUBER+SUHNER	RG402	Low Cable-05+24	30MHz~1GHz	Oct. 07, 2019	Oct. 06, 2020	Radiation (03CH06-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Apr. 13, 2020	Apr. 12, 2021	Radiation (03CH06-CB)
Horn Antenna	ETS • Lindgren	3115	00143147	750MHz~18GHz	Oct. 22, 2019	Oct. 21, 2020	Radiation (03CH04-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jun. 27, 2019	Jun. 26, 2020	Radiation (03CH04-CB)
Pre-Amplifier	Agilent	83017A	MY53270063	0.5GHz ~ 26.5GHz	Mar. 11, 2020	Mar. 10, 2021	Radiation (03CH04-CB)
Pre-Amplifier	MITEQ	TTA1840-35-H G	1864479	18GHz ~ 40GHz	Jul. 03, 2019	Jul. 02, 2020	Radiation (03CH04-CB)
Spectrum Analyzer	R&S	FSP40	100142	9kHz~40GHz	Dec. 18, 2019	Dec. 17, 2020	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-21	1GHz - 18GHz	Feb. 01, 2020	Jan. 31, 2021	Radiation (03CH04-CB)



Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 24, 2019	Jul. 23, 2020	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 24, 2019	Jul. 23, 2020	Radiation (03CH04-CB)
Spectrum analyzer	R&S	FSV40	101028	9kHz~40GHz	Nov. 01, 2019	Oct. 31, 2020	Conducted (TH03-CB)
Power Sensor	Anritsu	MA2411B	1726195	300MHz~40GHz	Aug. 13, 2019	Aug. 12, 2020	Conducted (TH03-CB)
Power Meter	Anritsu	ML2495A	1035008	300MHz~40GHz	Aug. 13, 2019	Aug. 12, 2020	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-11	1 GHz – 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-12	1 GHz – 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-13	1 GHz – 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-14	1 GHz – 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-15	1 GHz – 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH03-CB)

Note: Calibration Interval of instruments listed above is one year.
NCR means Non-Calibration required.



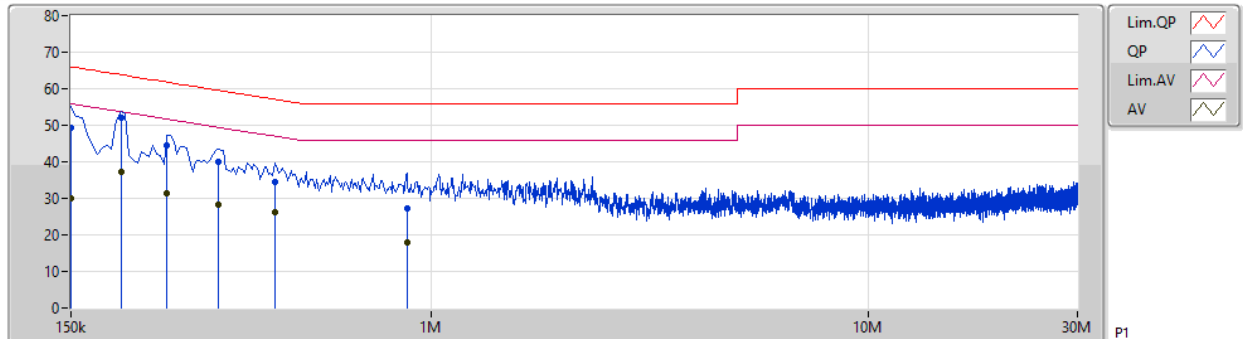
AC Power Port Conducted Emission Result

Appendix A

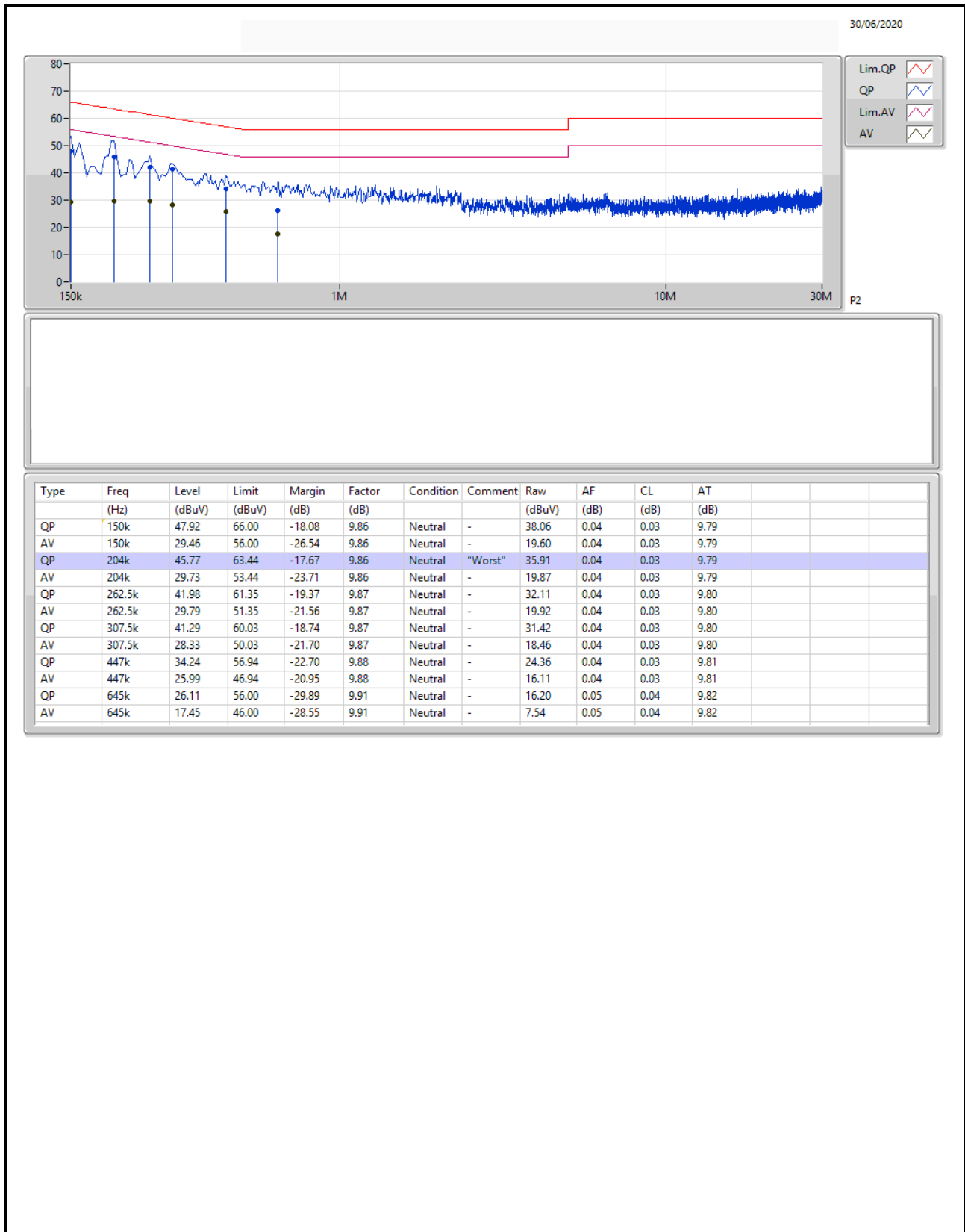
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition
Mode 1	Pass	QP	195k	52.08	63.82	-11.74	9.86	Line

30/06/2020



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	AF (dB)	CL (dB)	AT (dB)			
QP	150k	49.29	66.00	-16.71	9.87	Line	-	39.42	0.05	0.03	9.79			
AV	150k	29.99	56.00	-26.01	9.87	Line	-	20.12	0.05	0.03	9.79			
QP	195k	52.08	63.82	-11.74	9.86	Line	"Worst"	42.22	0.04	0.03	9.79			
AV	195k	37.40	53.82	-16.42	9.86	Line	-	27.54	0.04	0.03	9.79			
QP	249k	44.48	61.79	-17.31	9.87	Line	-	34.61	0.04	0.03	9.80			
AV	249k	31.35	51.79	-20.44	9.87	Line	-	21.48	0.04	0.03	9.80			
QP	325.5k	39.92	59.56	-19.64	9.87	Line	-	30.05	0.04	0.03	9.80			
AV	325.5k	28.38	49.56	-21.18	9.87	Line	-	18.51	0.04	0.03	9.80			
QP	438k	34.57	57.11	-22.54	9.88	Line	-	24.69	0.04	0.03	9.81			
AV	438k	26.06	47.11	-21.05	9.88	Line	-	16.18	0.04	0.03	9.81			
QP	879k	27.26	56.00	-28.74	9.91	Line	-	17.35	0.05	0.04	9.82			
AV	879k	17.81	46.00	-28.19	9.91	Line	-	7.90	0.05	0.04	9.82			



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	10.075M	15.117M	15M1G1D	10.05M	14.643M
802.11g_Nss1,(6Mbps)_1TX	16.45M	27.561M	27M6D1D	16.425M	16.642M
802.11n HT20_Nss1,(MCS0)_1TX	17.825M	29.935M	29M9D1D	17.6M	17.766M

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;

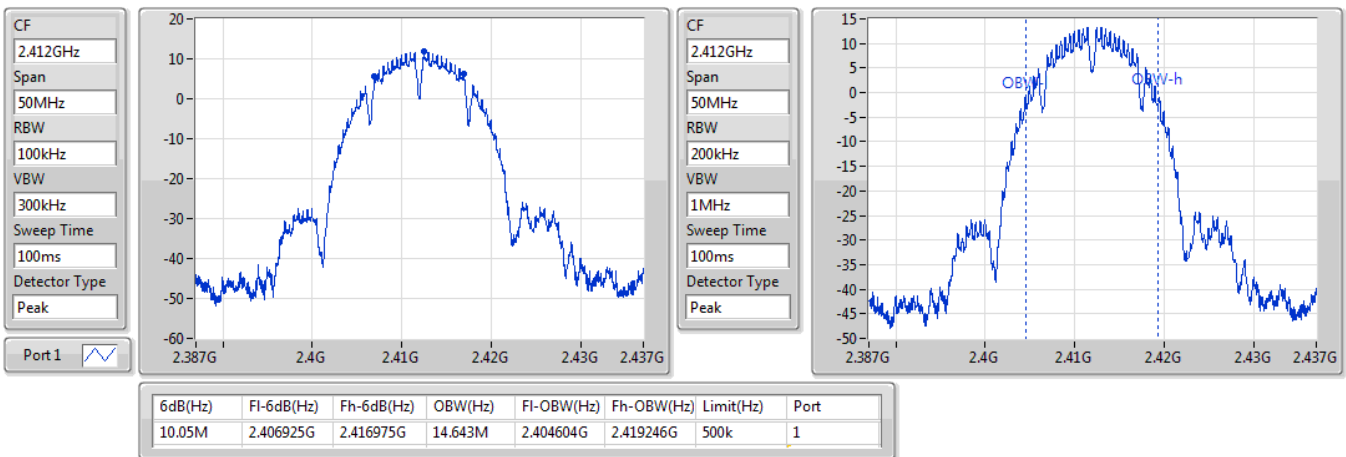
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	10.05M	14.643M
2437MHz	Pass	500k	10.075M	15.117M
2462MHz	Pass	500k	10.05M	14.818M
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	16.45M	16.742M
2437MHz	Pass	500k	16.425M	27.561M
2462MHz	Pass	500k	16.45M	16.642M
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-
2412MHz	Pass	500k	17.6M	17.766M
2437MHz	Pass	500k	17.825M	29.935M
2462MHz	Pass	500k	17.625M	17.766M

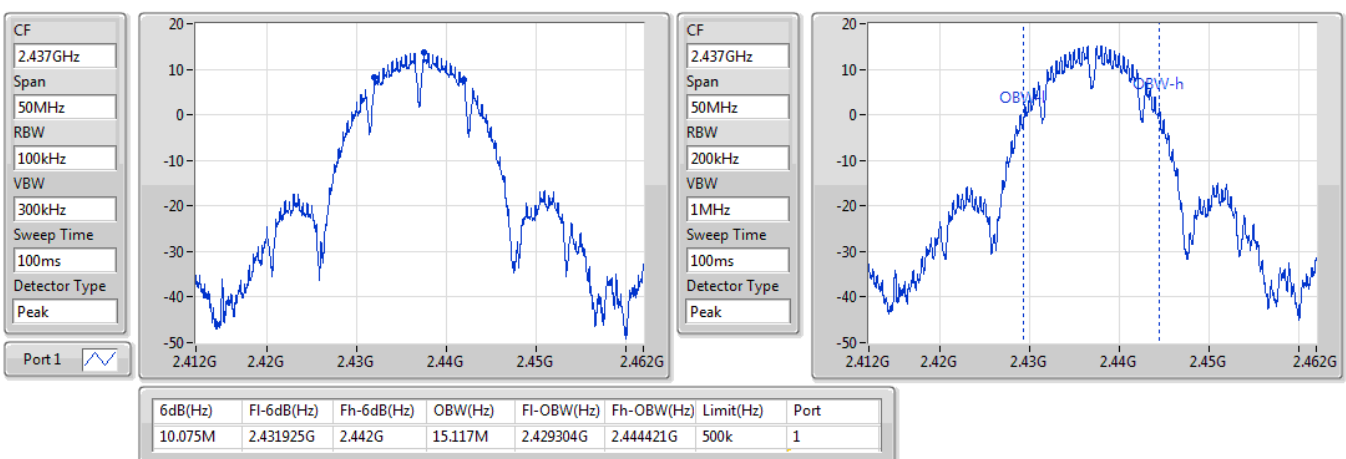
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

802.11b_Nss1,(1Mbps)_1TX
EBW
2412MHz

26/06/2020


802.11b_Nss1,(1Mbps)_1TX
EBW
2437MHz

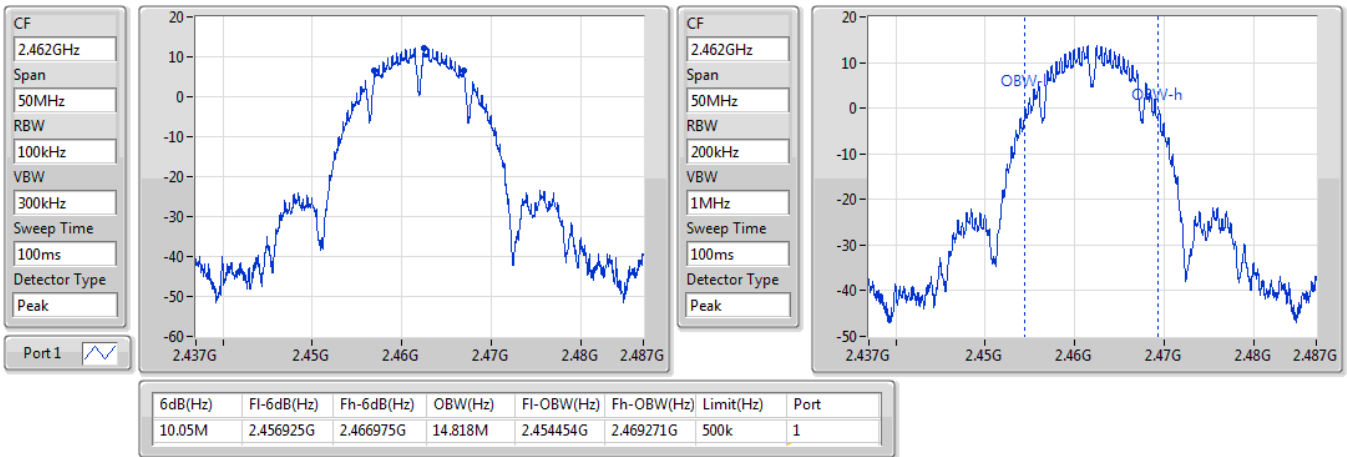
26/06/2020



802.11b_Nss1,(1Mbps)_1TX

EBW
2462MHz

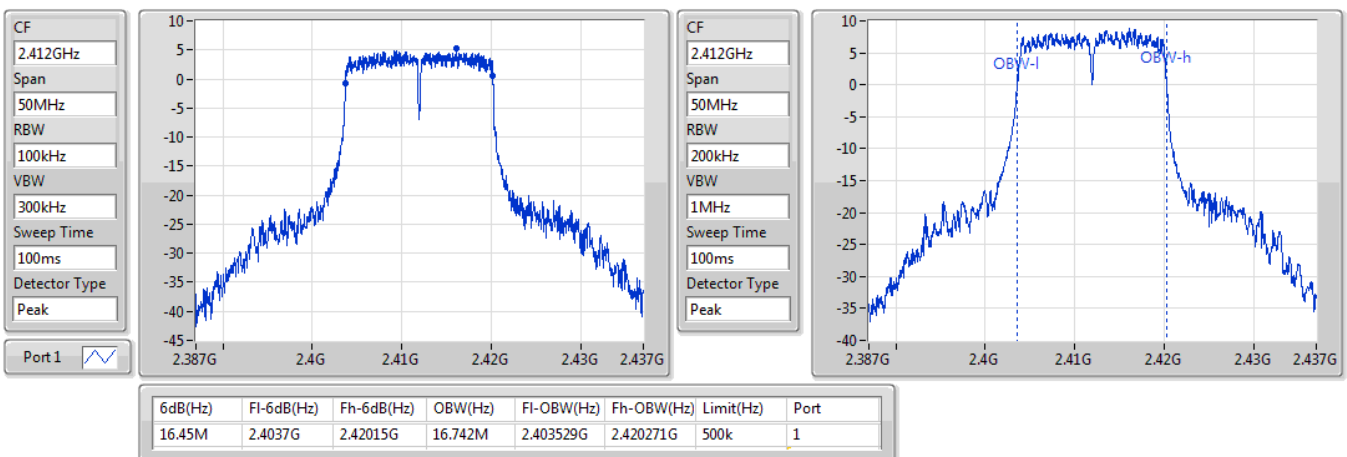
26/06/2020



802.11g_Nss1,(6Mbps)_1TX

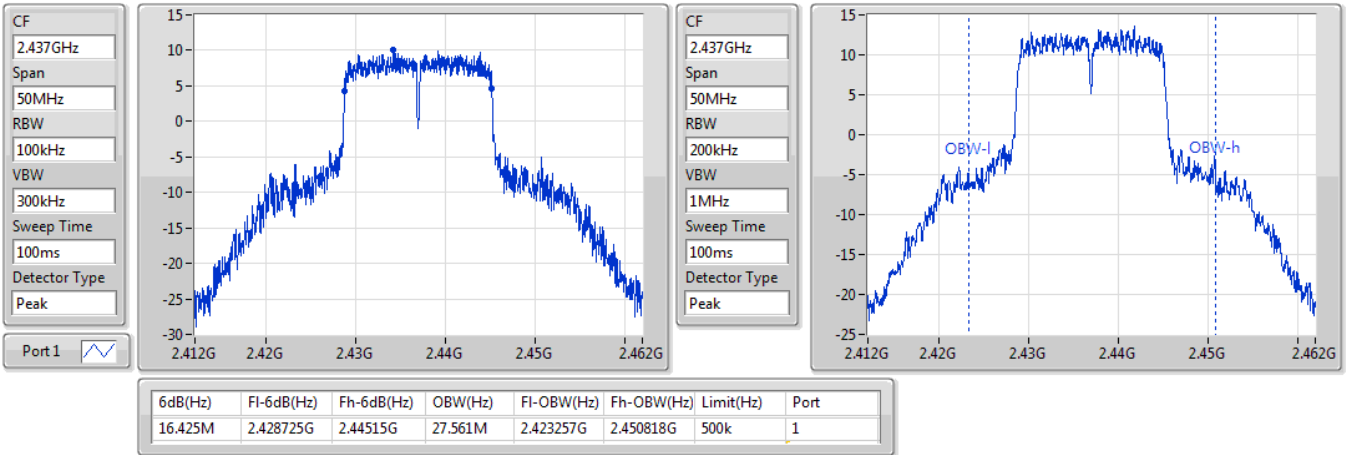
EBW
2412MHz

26/06/2020

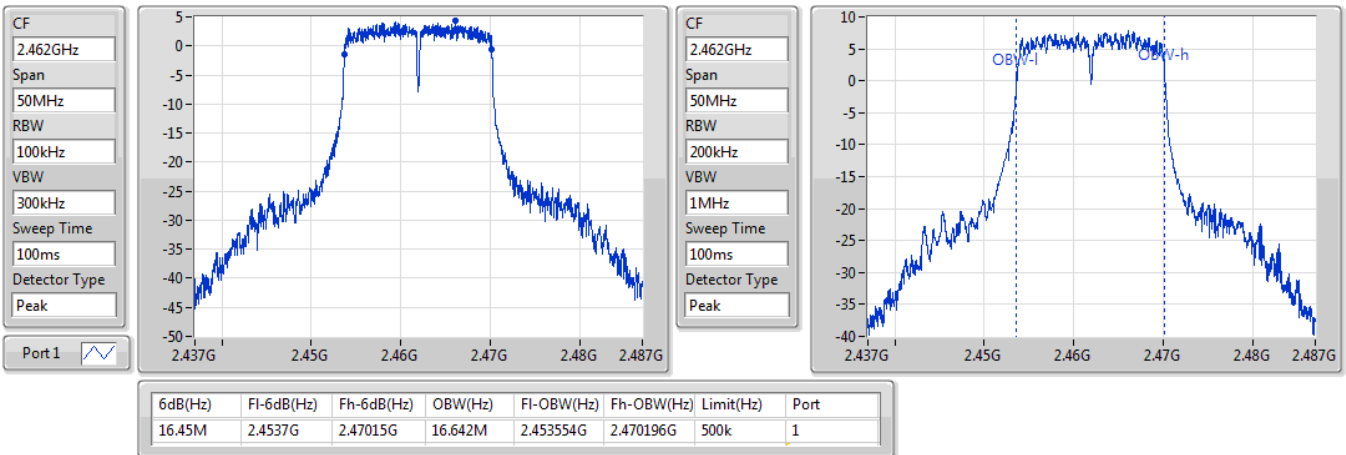


802.11g_Nss1,(6Mbps)_1TX
EBW
2437MHz

26/06/2020

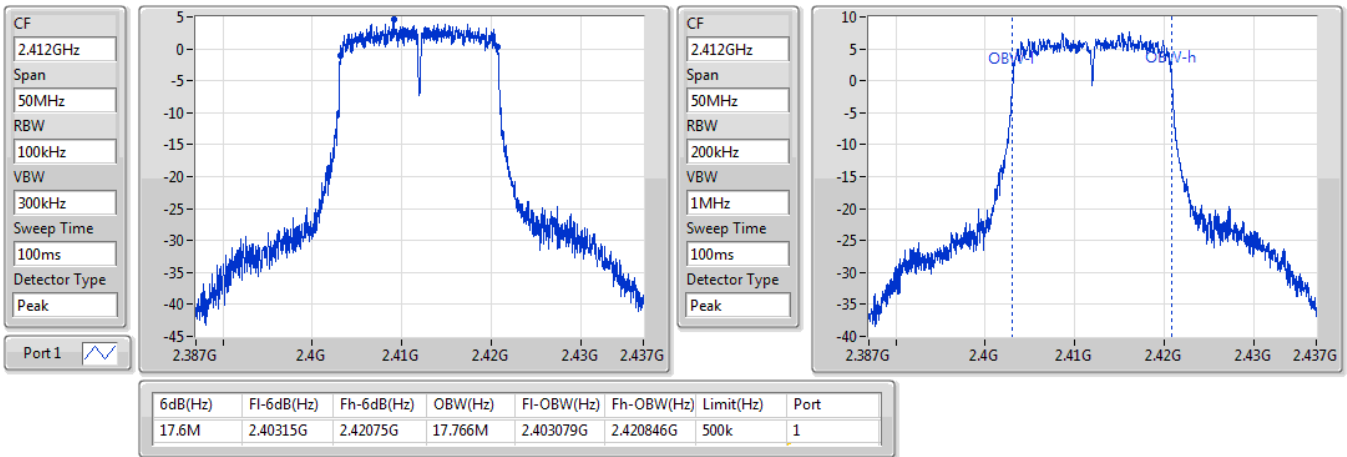

802.11g_Nss1,(6Mbps)_1TX
EBW
2462MHz

26/06/2020

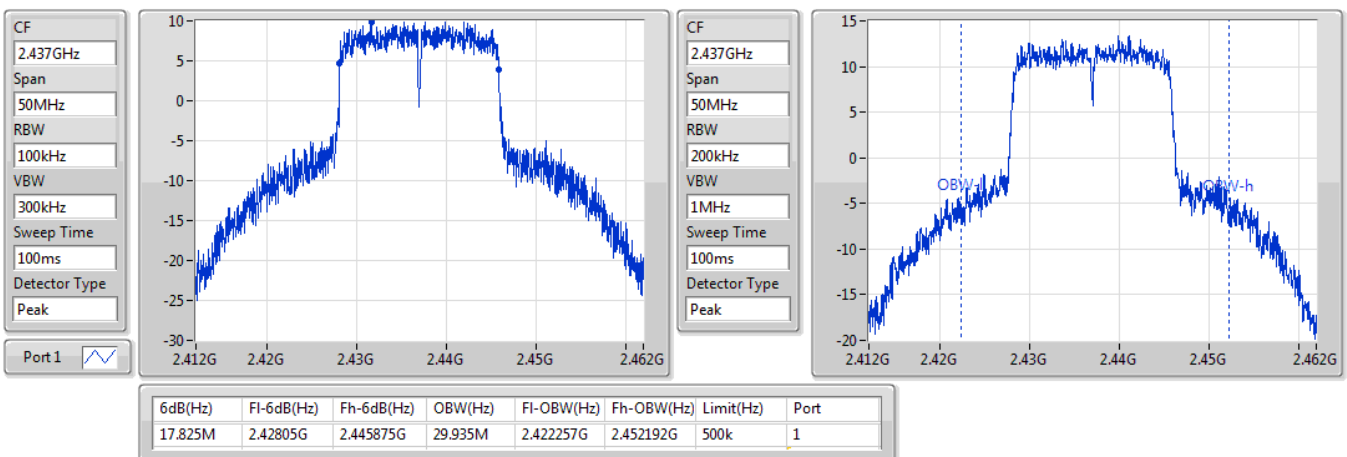


802.11n HT20_Nss1,(MCS0)_1TX
EBW
2412MHz

26/06/2020


802.11n HT20_Nss1,(MCS0)_1TX
EBW
2437MHz

26/06/2020

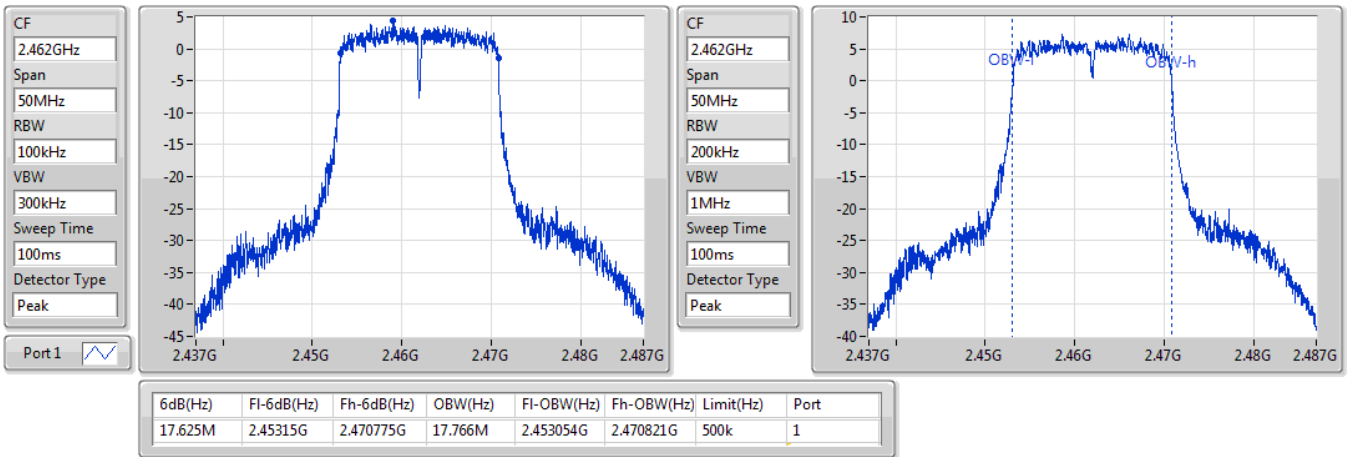


802.11n HT20_Nss1,(MCS0)_1TX

EBW

2462MHz

26/06/2020





Average Power

Appendix C

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	23.57	0.22751
802.11g_Nss1,(6Mbps)_1TX	23.69	0.23388
802.11n HT20_Nss1,(MCS0)_1TX	23.84	0.24210

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	3.62	21.67	21.67	30.00
2417MHz	Pass	3.62	21.78	21.78	30.00
2437MHz	Pass	3.62	23.57	23.57	30.00
2457MHz	Pass	3.62	22.24	22.24	30.00
2462MHz	Pass	3.62	22.16	22.16	30.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	3.62	19.26	19.26	30.00
2417MHz	Pass	3.62	20.92	20.92	30.00
2437MHz	Pass	3.62	23.69	23.69	30.00
2457MHz	Pass	3.62	19.83	19.83	30.00
2462MHz	Pass	3.62	18.42	18.42	30.00
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-
2412MHz	Pass	3.62	18.41	18.41	30.00
2417MHz	Pass	3.62	20.60	20.60	30.00
2437MHz	Pass	3.62	23.84	23.84	30.00
2457MHz	Pass	3.62	19.69	19.69	30.00
2462MHz	Pass	3.62	18.16	18.16	30.00

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

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_1TX	-6.96
802.11g_Nss1,(6Mbps)_1TX	-4.91
802.11n HT20_Nss1,(MCS0)_1TX	-4.94

RBW = 500 kHz for 5.725-5.85GHz band / 1MHz for other band;

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	3.62	-8.81	-8.81	8.00
2437MHz	Pass	3.62	-6.96	-6.96	8.00
2462MHz	Pass	3.62	-8.36	-8.36	8.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	3.62	-9.49	-9.49	8.00
2437MHz	Pass	3.62	-4.91	-4.91	8.00
2462MHz	Pass	3.62	-10.52	-10.52	8.00
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-
2412MHz	Pass	3.62	-10.57	-10.57	8.00
2437MHz	Pass	3.62	-4.94	-4.94	8.00
2462MHz	Pass	3.62	-10.61	-10.61	8.00

DG = Directional Gain; **RBW** = 500 kHz for 5.725-5.85GHz band / 1MHz for other band;

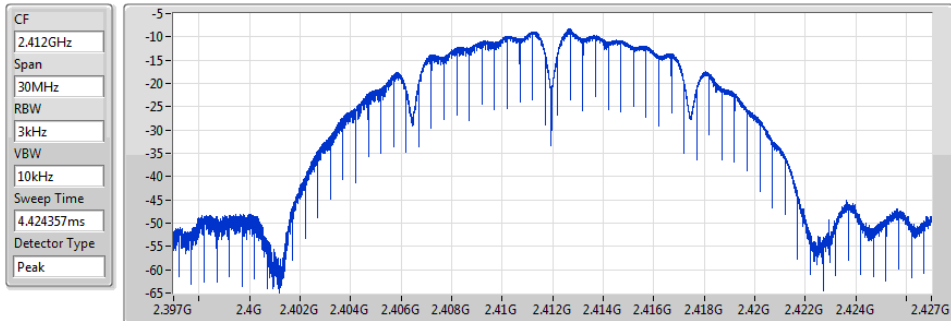
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port X power density;

802.11b_Nss1,(1Mbps)_1TX

PSD

2412MHz

26/06/2020



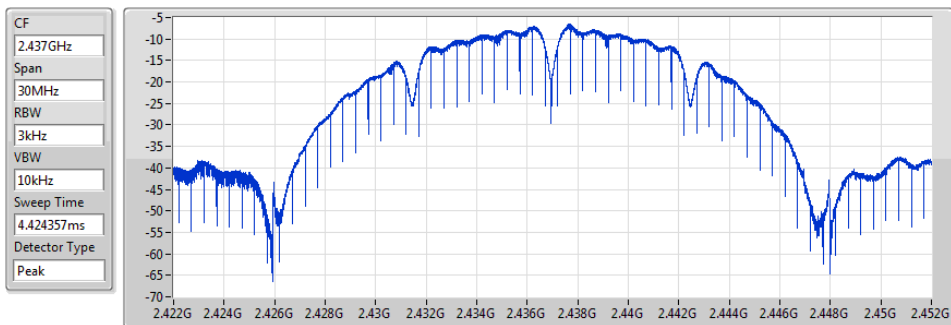
Sum	PD	Port 1
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
-8.81	-8.81	-8.81

802.11b_Nss1,(1Mbps)_1TX

PSD

2437MHz

26/06/2020



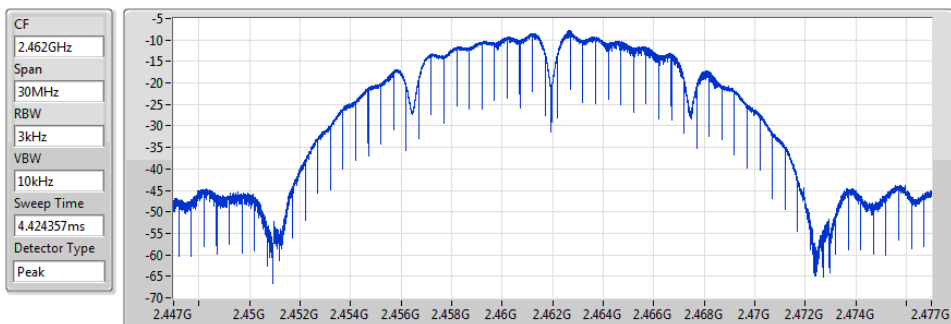
Sum	PD	Port 1
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
-6.96	-6.96	-6.96

802.11b_Nss1,(1Mbps)_1TX

PSD

2462MHz

26/06/2020



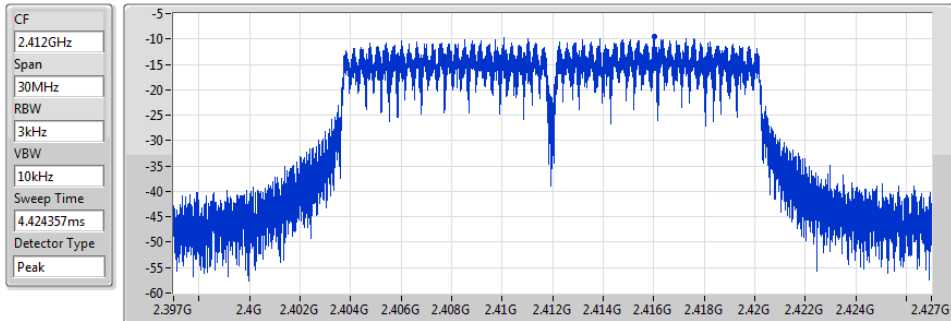
Sum	PD	Port 1
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
-8.36	-8.36	-8.36

802.11g_Nss1,(6Mbps)_1TX

PSD

2412MHz

26/06/2020



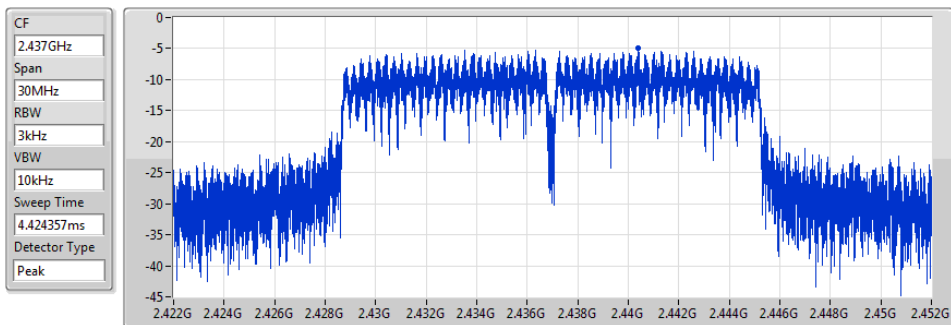
Sum	PD	Port 1
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
-9.49	-9.49	-9.49

802.11g_Nss1,(6Mbps)_1TX

PSD

2437MHz

26/06/2020



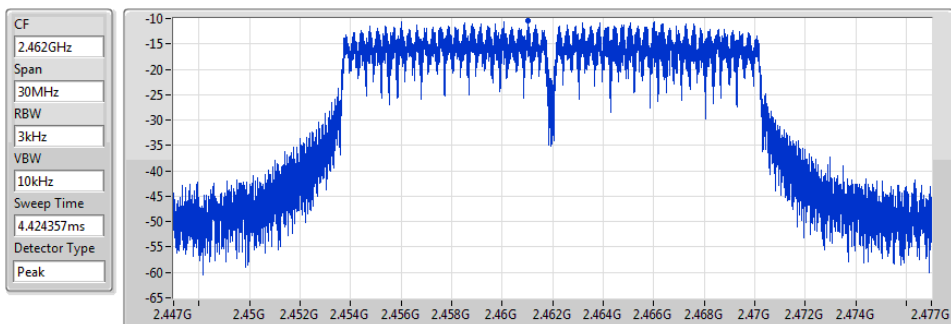
Sum	PD	Port 1
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
-4.91	-4.91	-4.91

802.11g_Nss1,(6Mbps)_1TX

PSD

2462MHz

26/06/2020



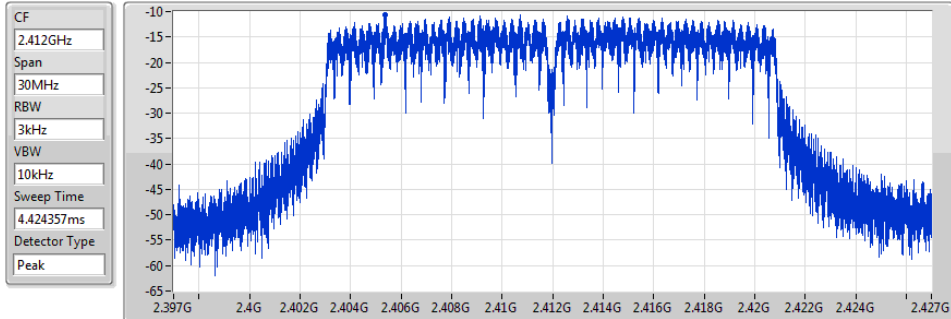
Sum	PD	Port 1
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
-10.52	-10.52	-10.52

802.11n HT20_Nss1,(MCS0)_1TX

PSD

2412MHz

26/06/2020



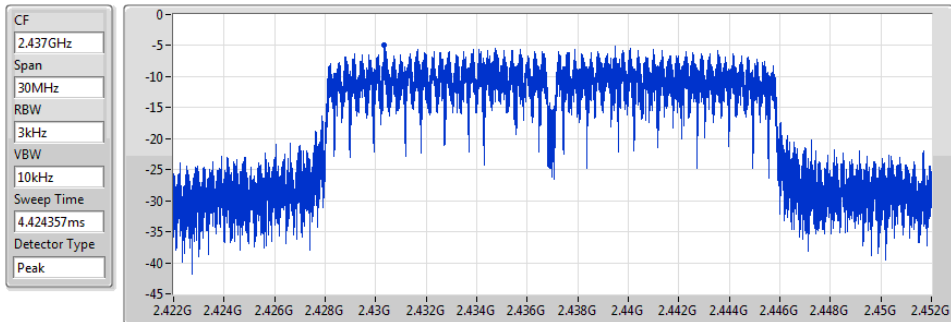
Sum	PD	Port 1
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
-10.57	-10.57	-10.57

802.11n HT20_Nss1,(MCS0)_1TX

PSD

2437MHz

26/06/2020



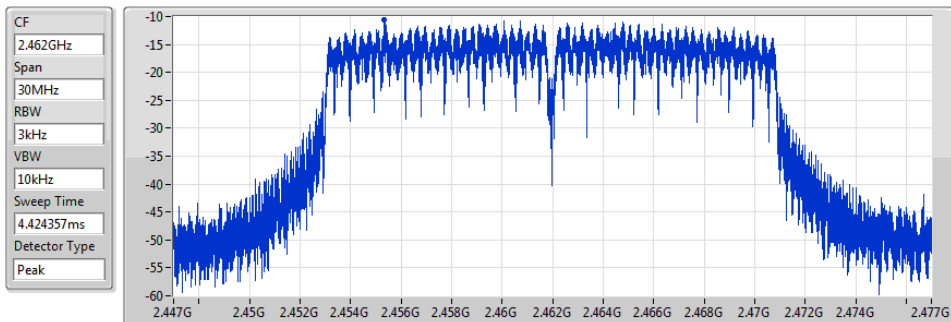
Sum	PD	Port 1
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
-4.94	-4.94	-4.94

802.11n HT20_Nss1,(MCS0)_1TX

PSD

2462MHz

26/06/2020



Sum	PD	Port 1
(dBm/Hz)	(dBm/Hz)	(dBm/Hz)
-10.61	-10.61	-10.61

**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)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX	Pass	2.43745G	13.55	-16.45	159.9M	-35.90	2.39846G	-27.51	2.4G	-29.69	2.49532G	-48.58	24.86514G	-42.95	1
802.11g_Nss1,(6Mbps)_1TX	Pass	2.43419G	9.94	-20.06	159.9M	-36.57	2.39988G	-22.35	2.4G	-22.81	2.51454G	-49.30	16.2145G	-42.93	1
802.11n HT20_Nss1,(MCS0)_1TX	Pass	2.43156G	9.88	-20.12	159.9M	-36.16	2.3993G	-24.38	2.4G	-28.57	2.48546G	-49.82	16.20888G	-42.78	1

Result

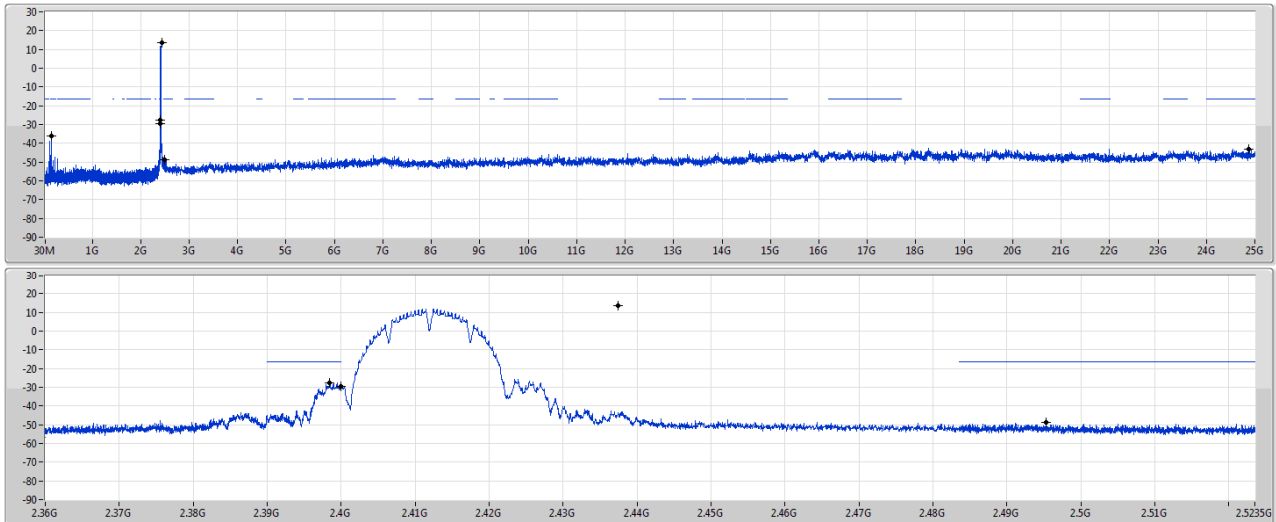
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43745G	13.55	-16.45	159.9M	-35.90	2.39846G	-27.51	2.4G	-29.69	2.49532G	-48.58	24.86514G	-42.95	1
2437MHz	Pass	2.43745G	13.55	-16.45	159.9M	-36.64	2.39944G	-45.78	2.4835G	-48.55	2.48488G	-46.91	16.24259G	-43.12	1
2462MHz	Pass	2.43745G	13.55	-16.45	159.9M	-35.88	2.39056G	-50.61	2.4835G	-40.56	2.48694G	-39.17	24.52799G	-42.98	1
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43419G	9.94	-20.06	159.9M	-36.57	2.39988G	-22.35	2.4G	-22.81	2.51454G	-49.30	16.2145G	-42.93	1
2437MHz	Pass	2.43419G	9.94	-20.06	159.9M	-35.94	2.39912G	-34.62	2.4G	-36.51	2.48478G	-37.81	24.60104G	-42.86	1
2462MHz	Pass	2.43419G	9.94	-20.06	159.9M	-35.96	2.396G	-49.73	2.4835G	-36.67	2.48408G	-35.33	16.26788G	-41.43	1
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43156G	9.88	-20.12	159.9M	-36.16	2.3993G	-24.38	2.4G	-28.57	2.48546G	-49.82	16.20888G	-42.78	1
2437MHz	Pass	2.43156G	9.88	-20.12	159.9M	-35.20	2.39848G	-34.24	2.4G	-34.94	2.48378G	-35.21	24.62071G	-43.07	1
2462MHz	Pass	2.43156G	9.88	-20.12	159.9M	-36.48	2.39478G	-50.46	2.4835G	-35.22	2.48384G	-33.89	23.4126G	-43.00	1

802.11b_Nss1,(1Mbps)_1TX

2412MHz

CSE NdB

26/06/2020

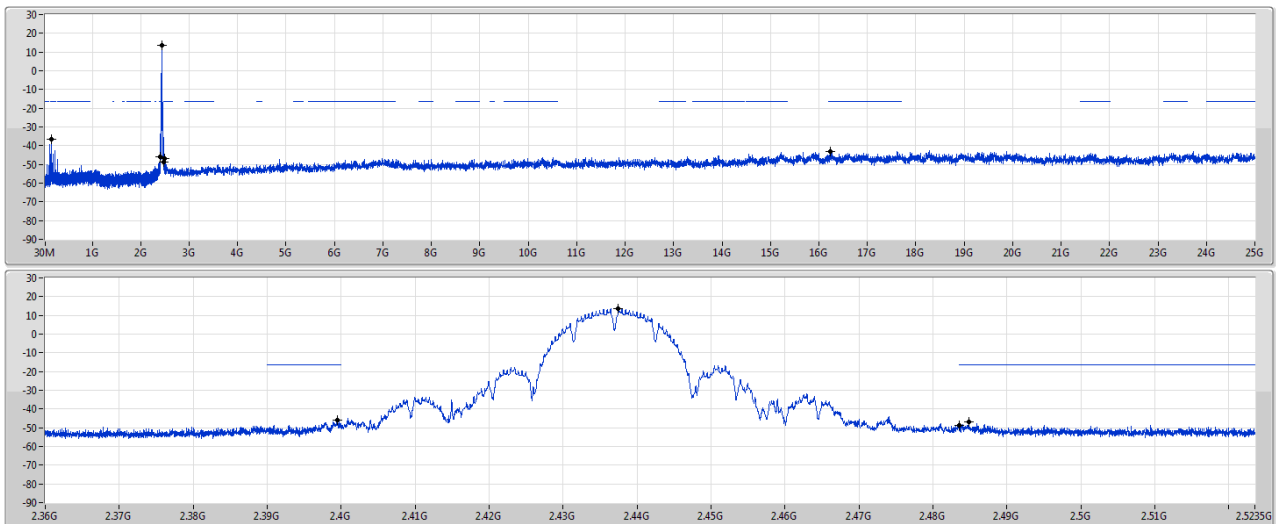


802.11b_Nss1,(1Mbps)_1TX

2437MHz

CSE NdB

26/06/2020

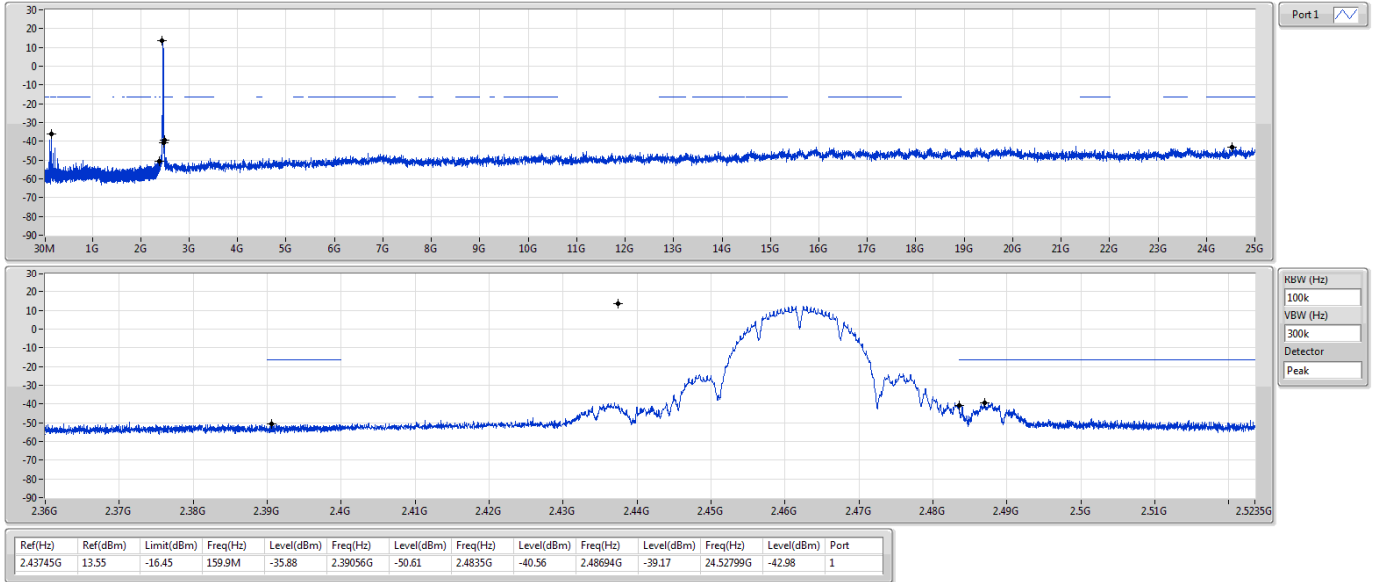


802.11b_Nss1,(1Mbps)_1TX

2462MHz

CSE NdB

26/06/2020

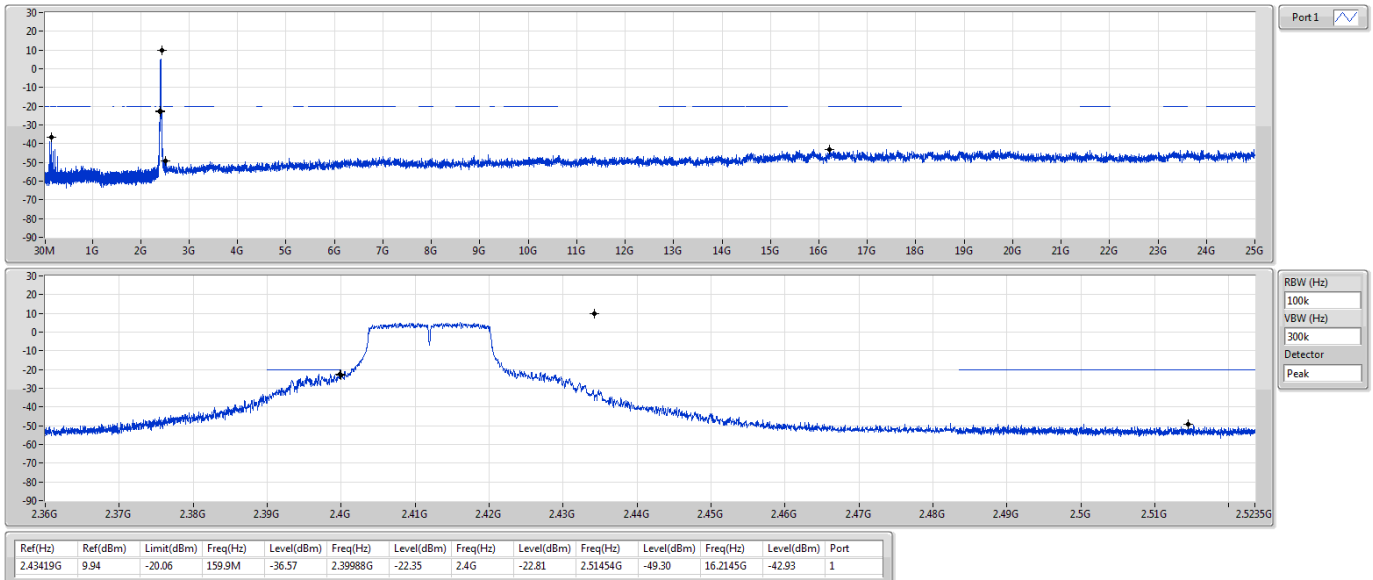


802.11g_Nss1,(6Mbps)_1TX

2412MHz

CSE NdB

26/06/2020

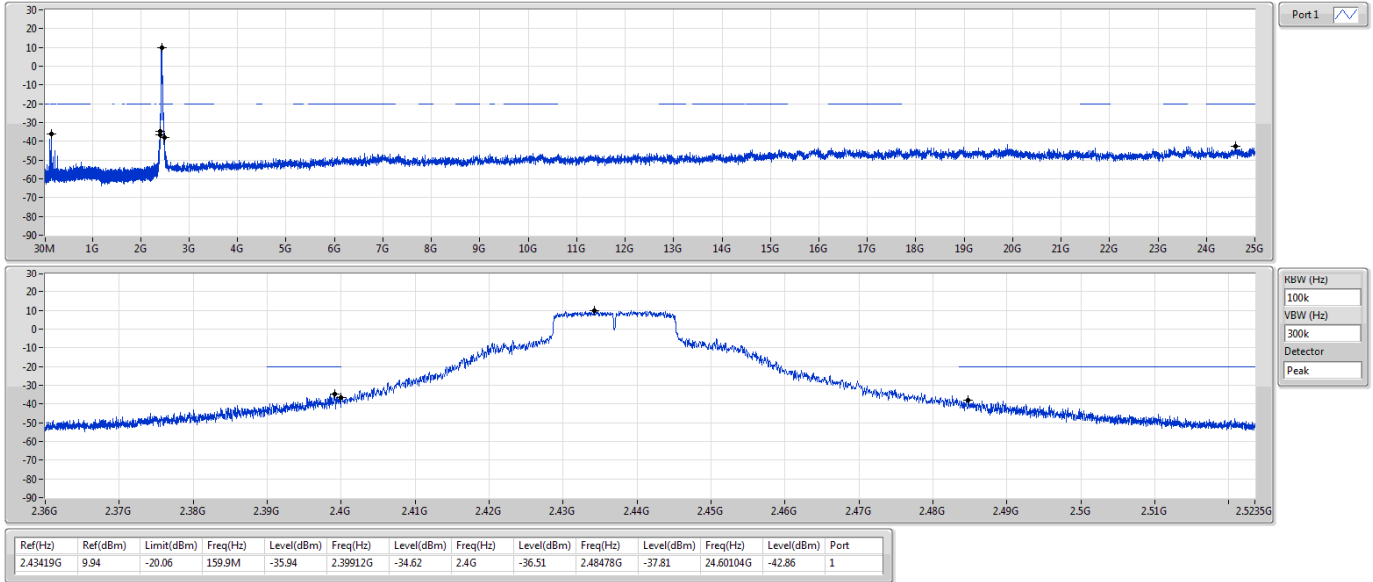


802.11g_Nss1,(6Mbps)_1TX

2437MHz

CSE NdB

26/06/2020

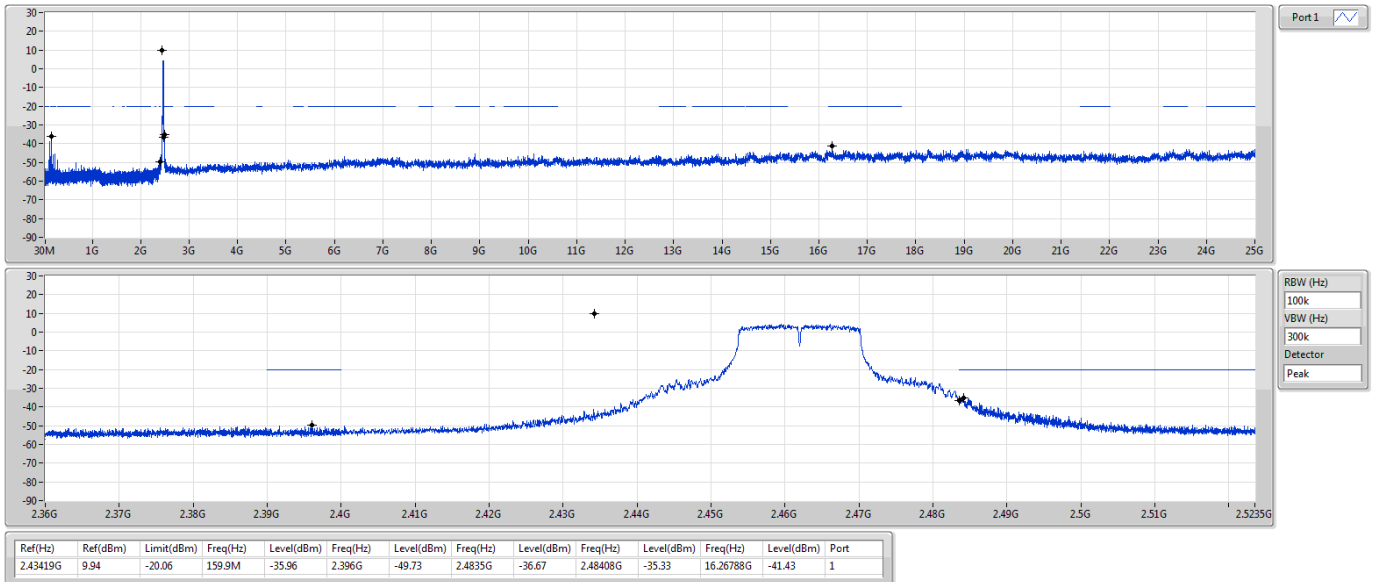


802.11g_Nss1,(6Mbps)_1TX

2462MHz

CSE NdB

26/06/2020

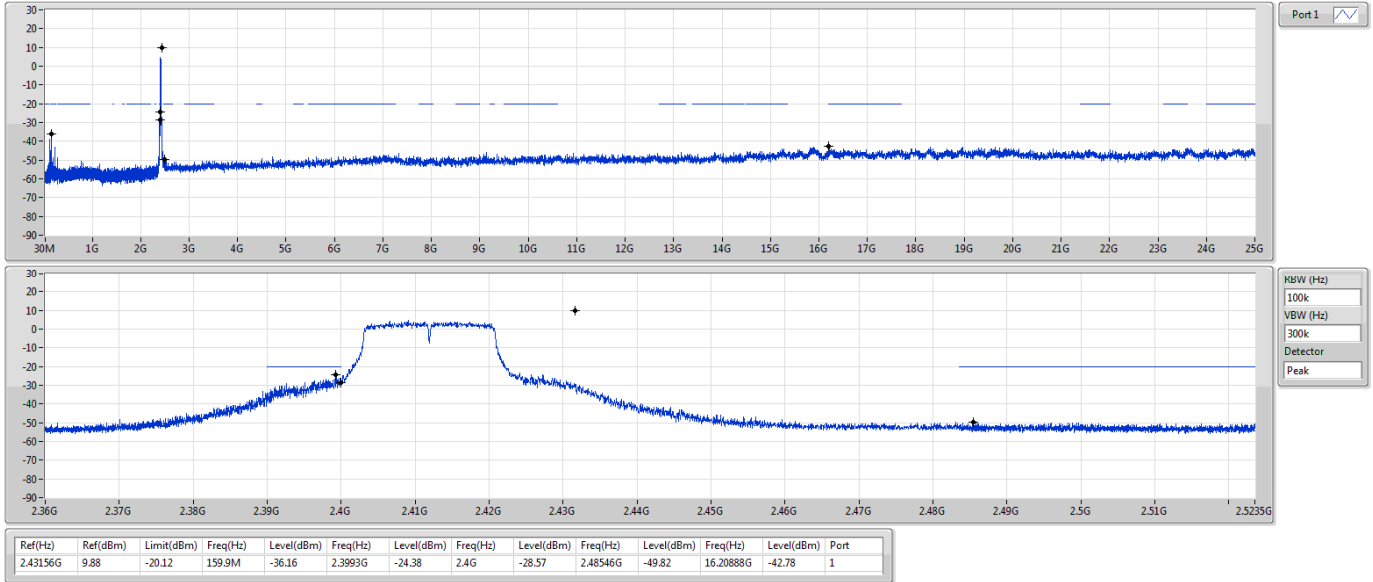


802.11n HT20_Nss1,(MCS0)_1TX

2412MHz

CSE NdB

26/06/2020

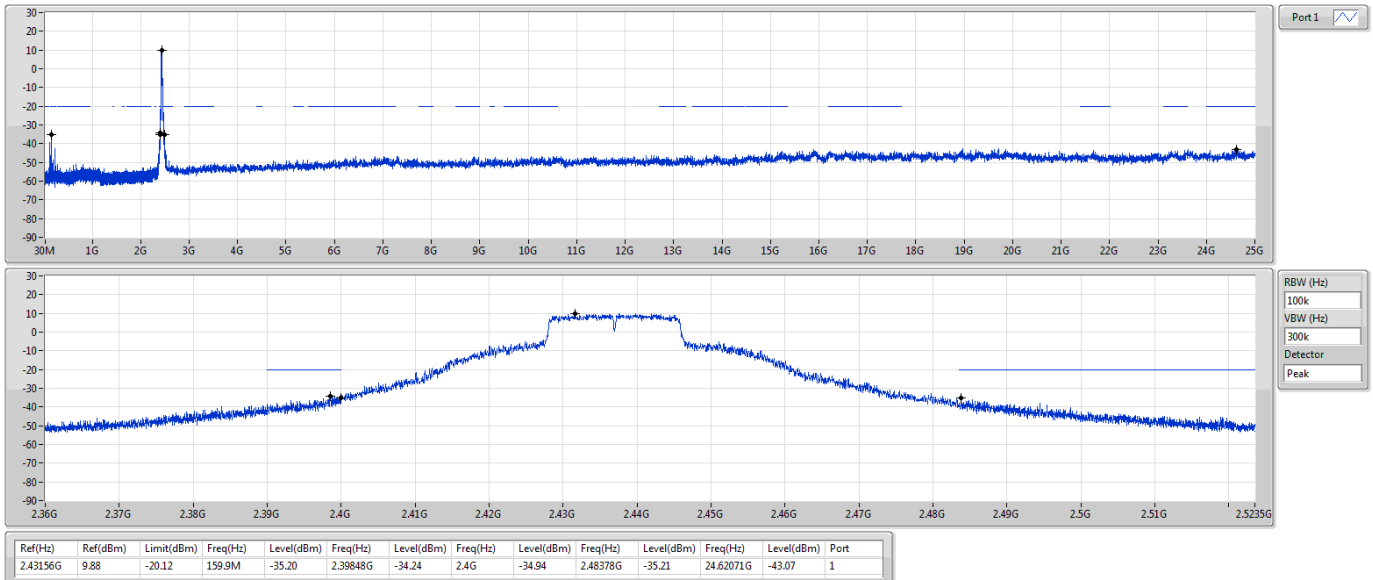


802.11n HT20_Nss1,(MCS0)_1TX

2437MHz

CSE NdB

26/06/2020

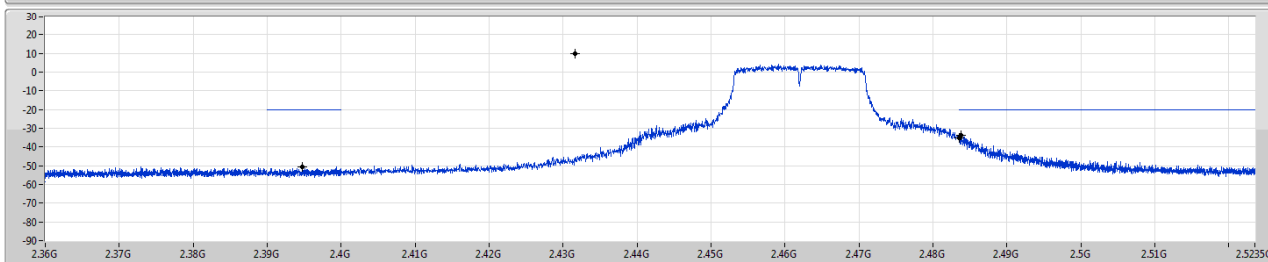
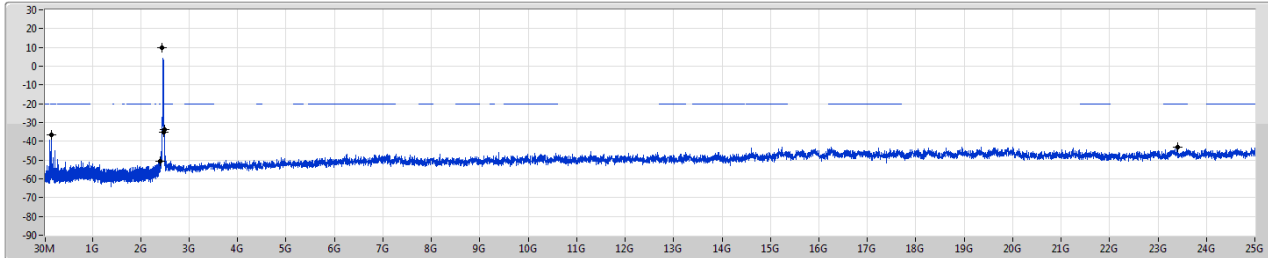


802.11n HT20_Nss1,(MCS0)_1TX

2462MHz

CSE NdB

26/06/2020



RBW (Hz)
100k
VBW (Hz)
300k
Detector
Peak

Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43156G	9.88	-20.12	159.9M	-36.48	2.39478G	-50.46	2.4835G	-35.22	2.48384G	-33.89	2.4126G	-43.00	1



Radiated Emission below 1GHz Result

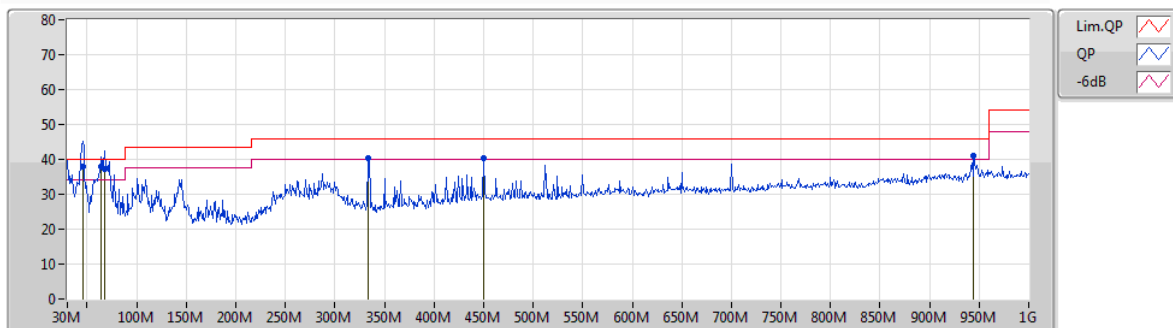
Appendix F.1

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 3	Pass	QP	45.52M	37.87	40.00	-2.13	Vertical

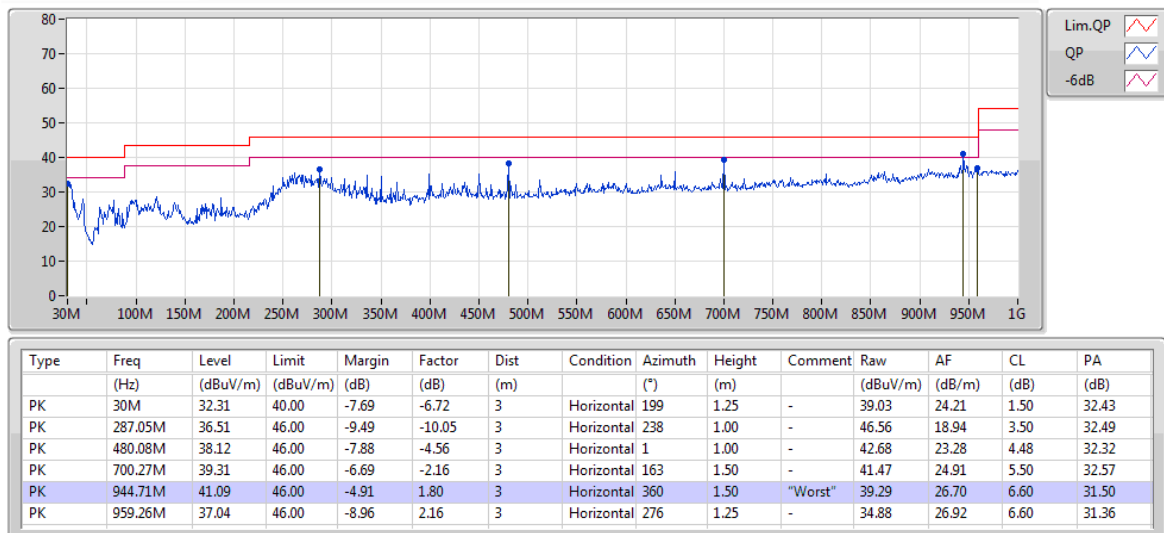
Test Mode: Mode 3

25/06/2020



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
QP	45.52M	37.87	40.00	-2.13	-15.01	3	Vertical	255	1.00	"Worst"	52.88	16.13	1.58	32.72
QP	63.95M	37.82	40.00	-2.18	-18.85	3	Vertical	195	1.50	-	56.67	11.99	1.68	32.52
QP	67.83M	37.40	40.00	-2.60	-18.76	3	Vertical	256	1.25	-	56.16	12.06	1.70	32.52
PK	333.61M	40.39	46.00	-5.61	-8.98	3	Vertical	305	2.00	-	49.37	19.73	3.73	32.44
PK	450.01M	40.19	46.00	-5.81	-5.19	3	Vertical	192	1.00	-	45.38	22.78	4.30	32.27
PK	944.71M	41.03	46.00	-4.97	1.80	3	Vertical	276	2.00	-	39.23	26.70	6.60	31.50

25/06/2020





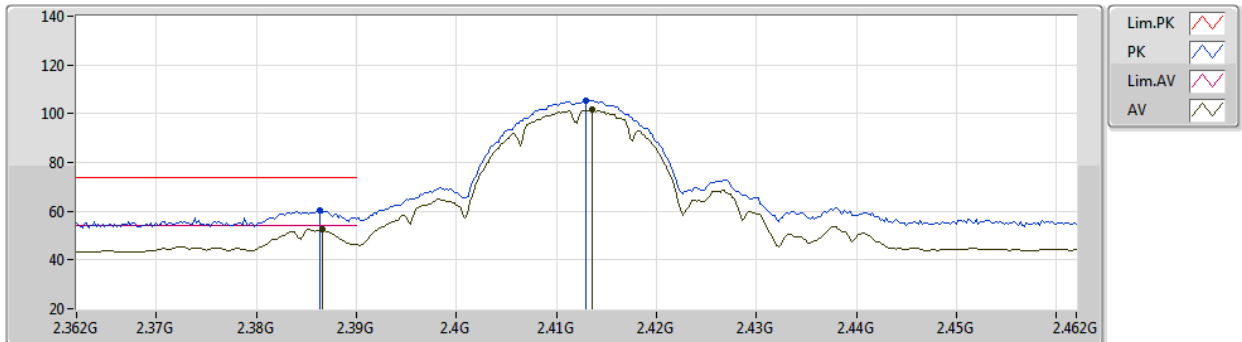
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
802.11n HT20_Nss1,(MCS0)_1TX	Pass	AV	2.4835G	52.99	54.00	-1.01	3	Horizontal	26	2.53	-

802.11b_Nss1,(1Mbps)_1TX

10/06/2020

2412MHz_TX



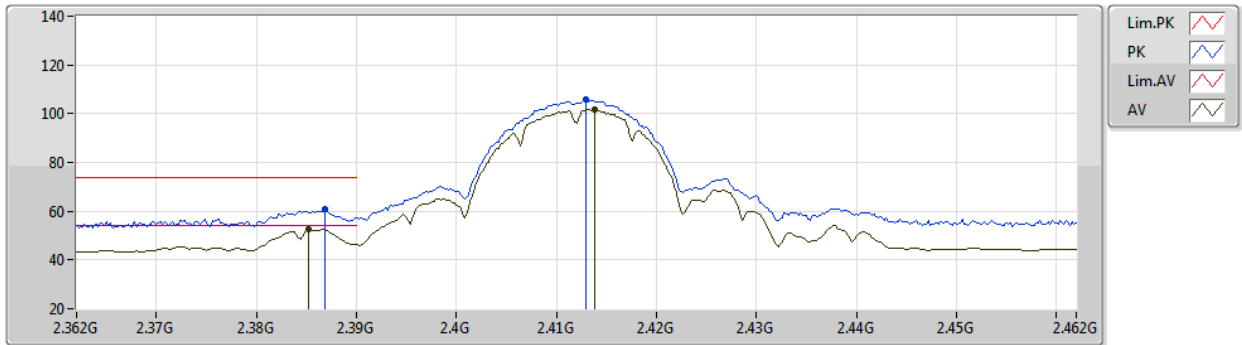
EUT Y_1TX
Setting 118
04-F-M-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3864G	60.12	74.00	-13.88	29.76	3	Vertical	202	2.26	-	27.51	2.85	-
AV	2.3866G	52.38	54.00	-1.62	22.02	3	Vertical	202	2.26	-	27.51	2.85	-
PK	2.413G	105.60	Inf	-Inf	75.18	3	Vertical	202	2.26	-	27.55	2.87	-
AV	2.4136G	101.51	Inf	-Inf	71.09	3	Vertical	202	2.26	-	27.55	2.87	-

802.11b_Nss1,(1Mbps)_1TX

10/06/2020

2412MHz_TX



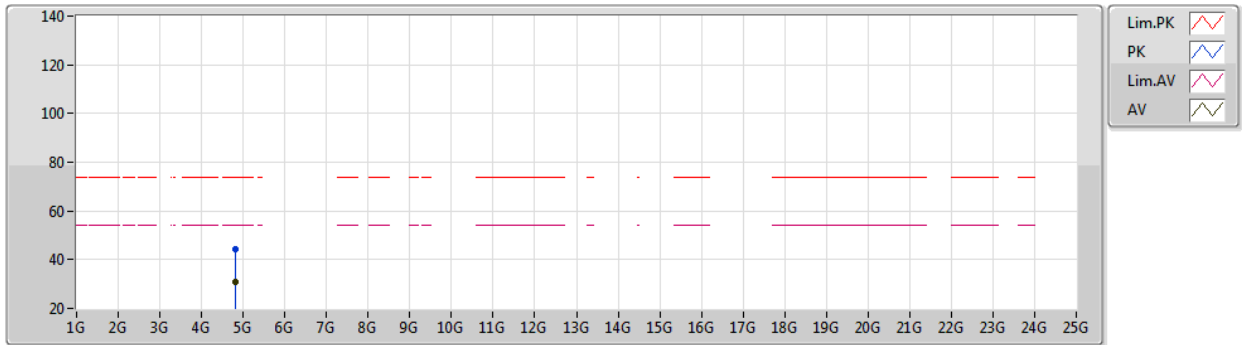
EUT Y_1TX
Setting 118
04-F-M-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3868G	60.76	74.00	-13.24	30.40	3	Horizontal	203	2.26	-	27.51	2.85	-
AV	2.3852G	52.53	54.00	-1.47	22.17	3	Horizontal	203	2.26	-	27.51	2.85	-
PK	2.413G	105.67	Inf	-Inf	75.25	3	Horizontal	203	2.26	-	27.55	2.87	-
AV	2.4138G	101.54	Inf	-Inf	71.11	3	Horizontal	203	2.26	-	27.56	2.87	-

802.11b_Nss1,(1Mbps)_1TX

10/06/2020

2412MHz_TX



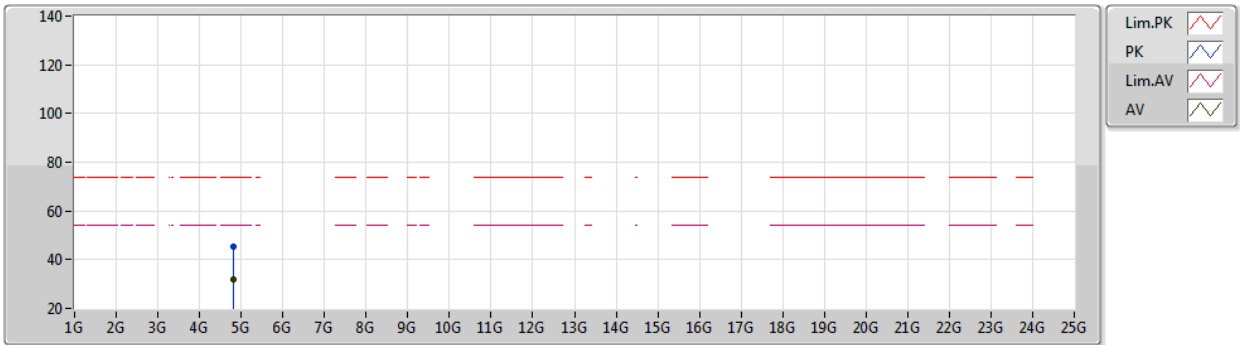
EUT Y_1TX
Setting 118
04-F-M-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.82487G	44.34	74.00	-29.66	40.29	3	Vertical	225	1.75	-	32.60	4.93	33.48
AV	4.82391G	31.01	54.00	-22.99	26.96	3	Vertical	225	1.75	-	32.60	4.93	33.48

802.11b_Nss1,(1Mbps)_1TX

10/06/2020

2412MHz_TX



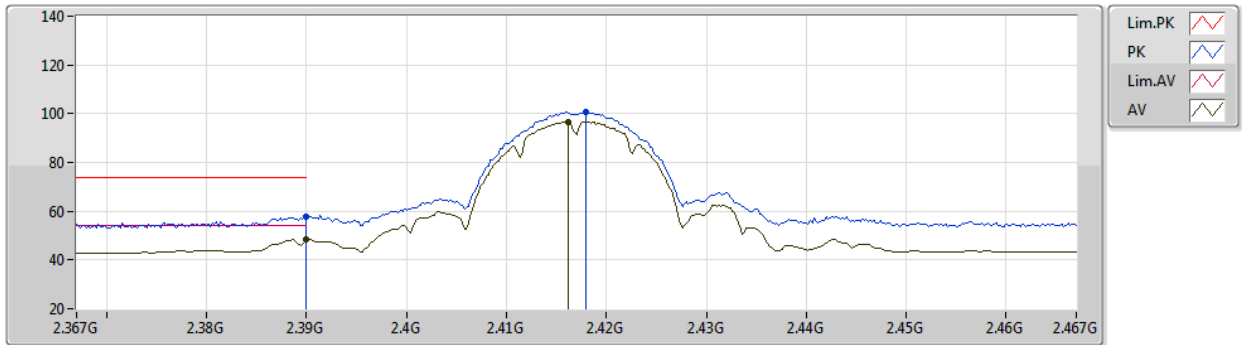
EUT Y_1TX
Setting 118
04-F-M-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.82196G	45.22	74.00	-28.78	41.18	3	Horizontal	69	2.47	-	32.59	4.93	33.48
AV	4.82389G	31.96	54.00	-22.04	27.91	3	Horizontal	69	2.47	-	32.60	4.93	33.48

802.11b_Nss1,(1Mbps)_1TX

10/06/2020

2417MHz_TX



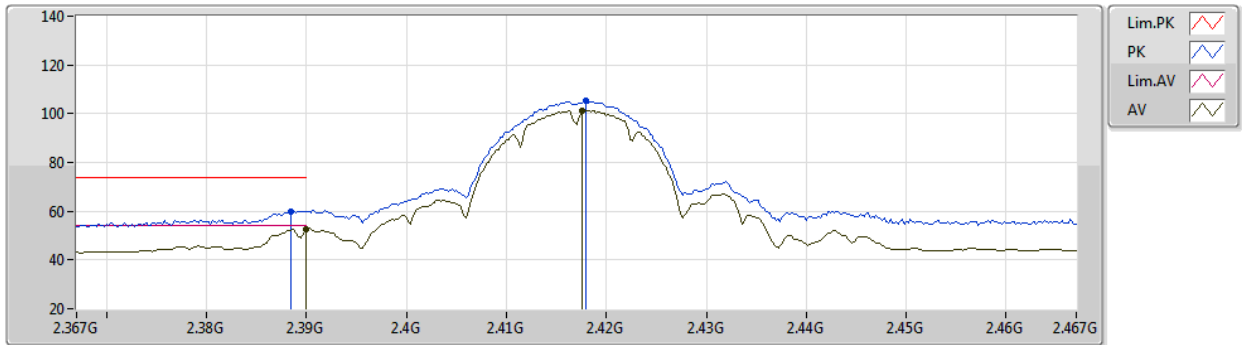
EUT Y_1TX
Setting 118
04-F-N-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.39G	57.70	74.00	-16.30	27.34	3	Vertical	95	2.65	-	27.51	2.85	-
AV	2.39G	48.36	54.00	-5.64	18.00	3	Vertical	95	2.65	-	27.51	2.85	-
PK	2.418G	100.84	Inf	-Inf	70.40	3	Vertical	95	2.65	-	27.57	2.87	-
AV	2.4162G	96.75	Inf	-Inf	66.32	3	Vertical	95	2.65	-	27.56	2.87	-

802.11b_Nss1,(1Mbps)_1TX

10/06/2020

2417MHz_TX



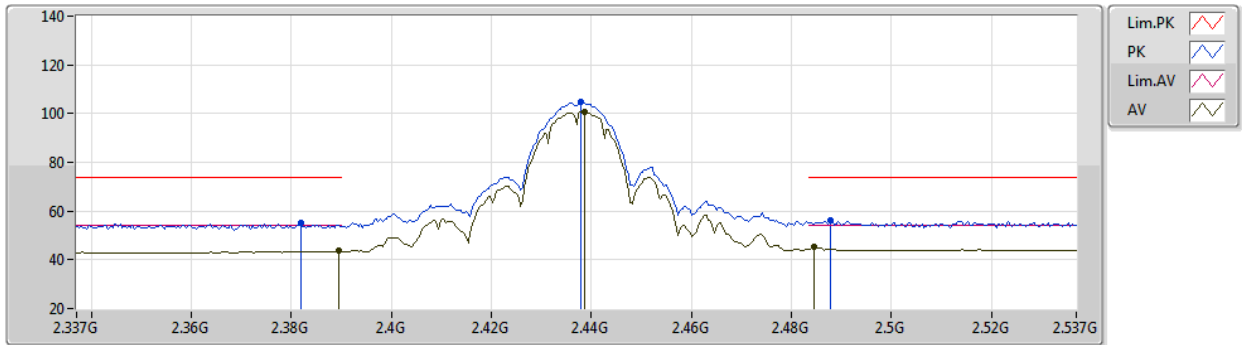
EUT Y_1TX
Setting 118
04-F-N-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3884G	59.81	74.00	-14.19	29.45	3	Horizontal	32	2.35	-	27.51	2.85	-
AV	2.39G	52.76	54.00	-1.24	22.40	3	Horizontal	32	2.35	-	27.51	2.85	-
PK	2.418G	105.30	Inf	-Inf	74.86	3	Horizontal	32	2.35	-	27.57	2.87	-
AV	2.4176G	101.14	Inf	-Inf	70.70	3	Horizontal	32	2.35	-	27.57	2.87	-

802.11b_Nss1,(1Mbps)_1TX

10/06/2020

2437MHz_TX



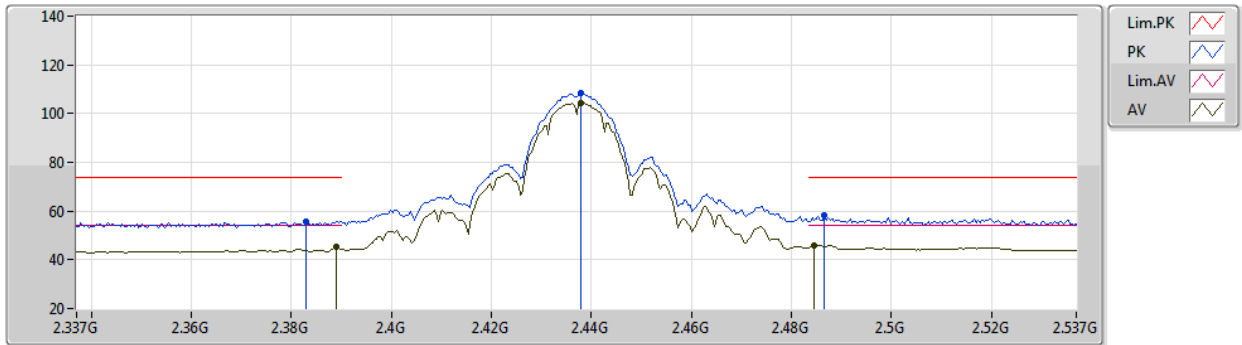
EUT Y_1TX
Setting 127
04-F-M-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3818G	55.13	74.00	-18.87	24.76	3	Vertical	262	2.13	-	27.52	2.85	-
AV	2.3894G	43.64	54.00	-10.36	13.28	3	Vertical	262	2.13	-	27.51	2.85	-
PK	2.4378G	104.65	Inf	-Inf	74.12	3	Vertical	262	2.13	-	27.65	2.88	-
AV	2.4386G	100.62	Inf	-Inf	70.09	3	Vertical	262	2.13	-	27.65	2.88	-
PK	2.4878G	55.98	74.00	-18.02	25.22	3	Vertical	262	2.13	-	27.85	2.91	-
AV	2.4846G	45.09	54.00	-8.91	14.34	3	Vertical	262	2.13	-	27.84	2.91	-

802.11b_Nss1,(1Mbps)_1TX

10/06/2020

2437MHz_TX



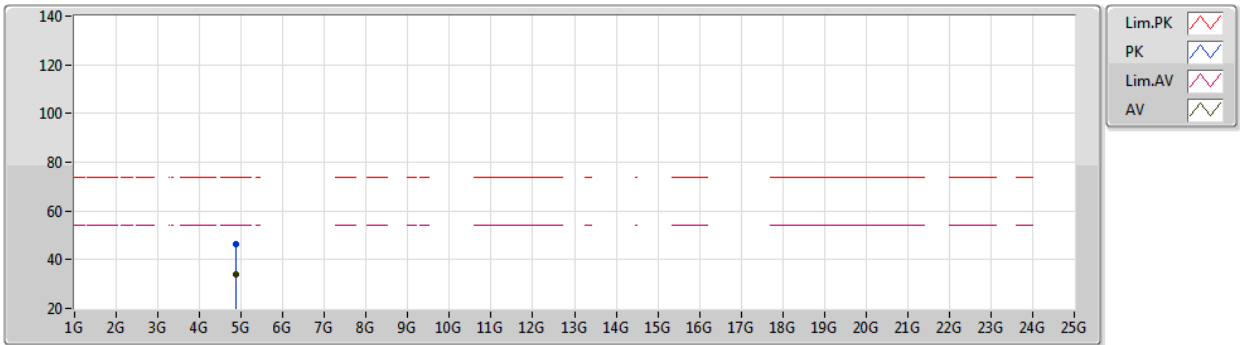
EUT Y_1TX
Setting 127
04-F-M-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.383G	55.94	74.00	-18.06	25.57	3	Horizontal	203	2.25	-	27.52	2.85	-
AV	2.389G	45.25	54.00	-8.75	14.89	3	Horizontal	203	2.25	-	27.51	2.85	-
PK	2.4378G	108.35	Inf	-Inf	77.82	3	Horizontal	203	2.25	-	27.65	2.88	-
AV	2.4378G	104.26	Inf	-Inf	73.73	3	Horizontal	203	2.25	-	27.65	2.88	-
PK	2.4866G	58.02	74.00	-15.98	27.26	3	Horizontal	203	2.25	-	27.85	2.91	-
AV	2.4846G	45.85	54.00	-8.15	15.10	3	Horizontal	203	2.25	-	27.84	2.91	-

802.11b_Nss1,(1Mbps)_1TX

10/06/2020

2437MHz_TX



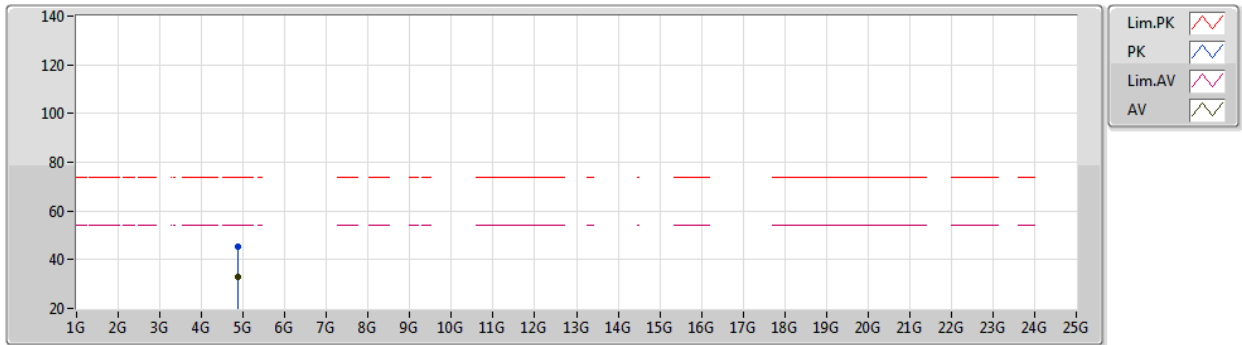
EUT Y_1TX
Setting 127
04-F-M-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.87396G	46.29	74.00	-27.71	41.98	3	Vertical	154	2.43	-	32.80	4.96	33.45
AV	4.87388G	33.99	54.00	-20.01	29.68	3	Vertical	154	2.43	-	32.80	4.96	33.45

802.11b_Nss1,(1Mbps)_1TX

10/06/2020

2437MHz_TX



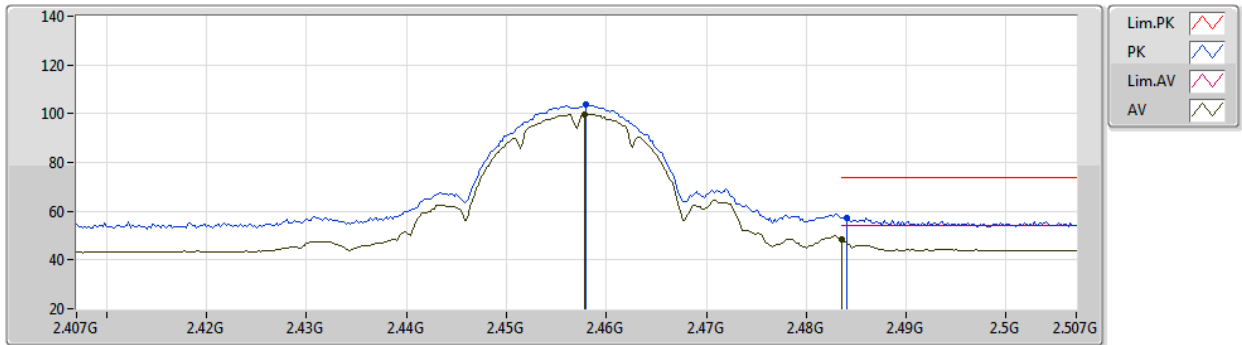
EUT Y_1TX
Setting 127
04-F-M-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.87376G	45.46	74.00	-28.54	41.15	3	Horizontal	49	1.80	-	32.80	4.96	33.45
AV	4.87396G	32.81	54.00	-21.19	28.50	3	Horizontal	49	1.80	-	32.80	4.96	33.45

802.11b_Nss1,(1Mbps)_1TX

10/06/2020

2457MHz_TX



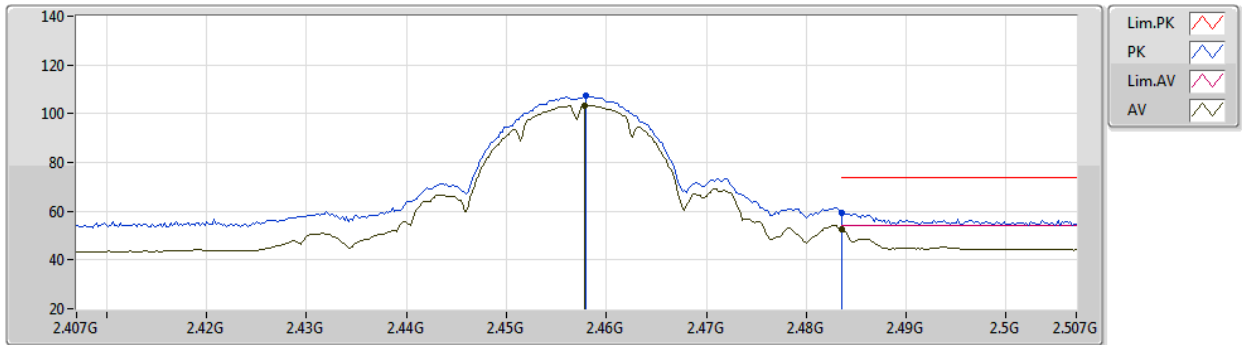
EUT Y_1TX
Setting 119
04-F-N-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.458G	103.69	Inf	-Inf	73.07	3	Vertical	100	2.54	-	27.73	2.89	-
AV	2.4578G	99.67	Inf	-Inf	69.05	3	Vertical	100	2.54	-	27.73	2.89	-
PK	2.484G	57.29	74.00	-16.71	26.54	3	Vertical	100	2.54	-	27.84	2.91	-
AV	2.4835G	48.62	54.00	-5.38	17.88	3	Vertical	100	2.54	-	27.83	2.91	-

802.11b_Nss1,(1Mbps)_1TX

10/06/2020

2457MHz_TX



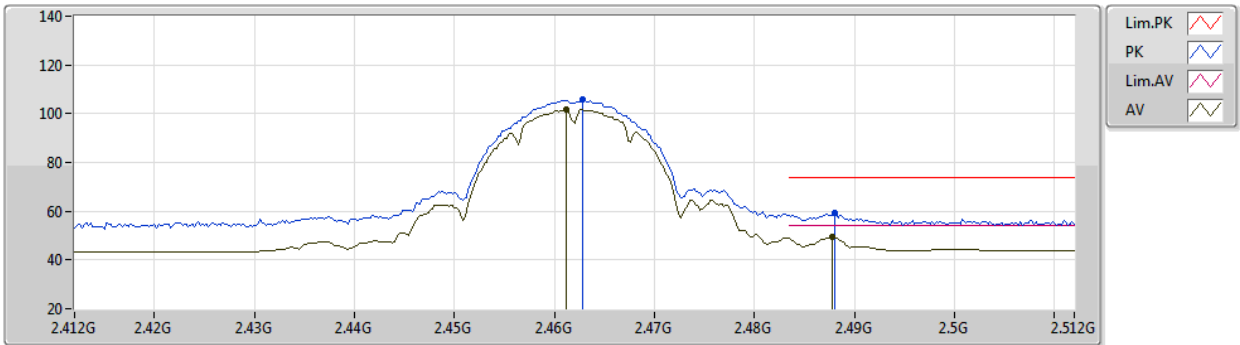
EUT Y_1TX
Setting 119
04-F-N-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.458G	107.45	Inf	-Inf	76.83	3	Horizontal	29	2.49	-	27.73	2.89	-
AV	2.4578G	103.41	Inf	-Inf	72.79	3	Horizontal	29	2.49	-	27.73	2.89	-
PK	2.4835G	59.42	74.00	-14.58	28.68	3	Horizontal	29	2.49	-	27.83	2.91	-
AV	2.4835G	52.81	54.00	-1.19	22.07	3	Horizontal	29	2.49	-	27.83	2.91	-

802.11b_Nss1,(1Mbps)_1TX

10/06/2020

2462MHz_TX



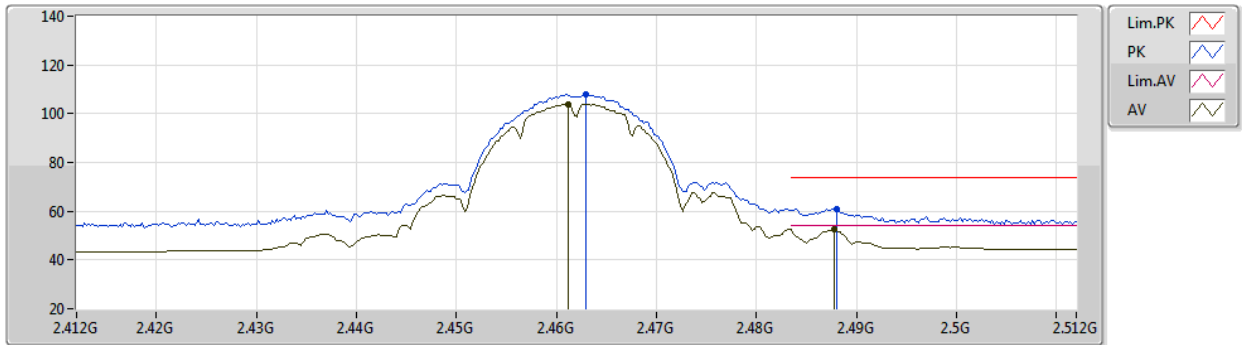
EUT Y_1TX
Setting 117
04-F-M-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.4628G	105.68	Inf	-Inf	75.03	3	Vertical	259	2.17	-	27.75	2.90	-
AV	2.4612G	101.67	Inf	-Inf	71.03	3	Vertical	259	2.17	-	27.74	2.90	-
PK	2.488G	59.11	74.00	-14.89	28.35	3	Vertical	259	2.17	-	27.85	2.91	-
AV	2.4878G	49.29	54.00	-4.71	18.53	3	Vertical	259	2.17	-	27.85	2.91	-

802.11b_Nss1,(1Mbps)_1TX

10/06/2020

2462MHz_TX



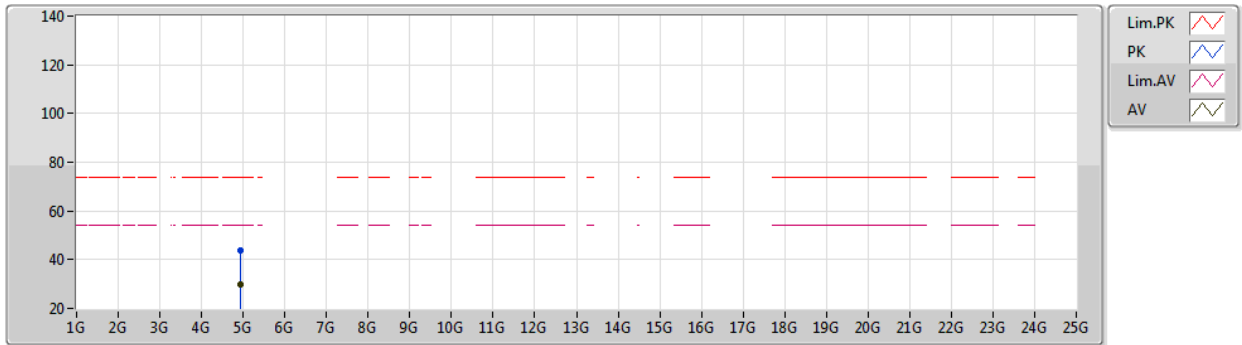
EUT Y_1TX
Setting 117
04-F-M-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.463G	108.12	Inf	-Inf	77.47	3	Horizontal	191	2.20	-	27.75	2.90	-
AV	2.4612G	104.01	Inf	-Inf	73.37	3	Horizontal	191	2.20	-	27.74	2.90	-
PK	2.488G	61.04	74.00	-12.96	30.28	3	Horizontal	191	2.20	-	27.85	2.91	-
AV	2.4878G	52.60	54.00	-1.40	21.84	3	Horizontal	191	2.20	-	27.85	2.91	-

802.11b_Nss1,(1Mbps)_1TX

10/06/2020

2462MHz_TX



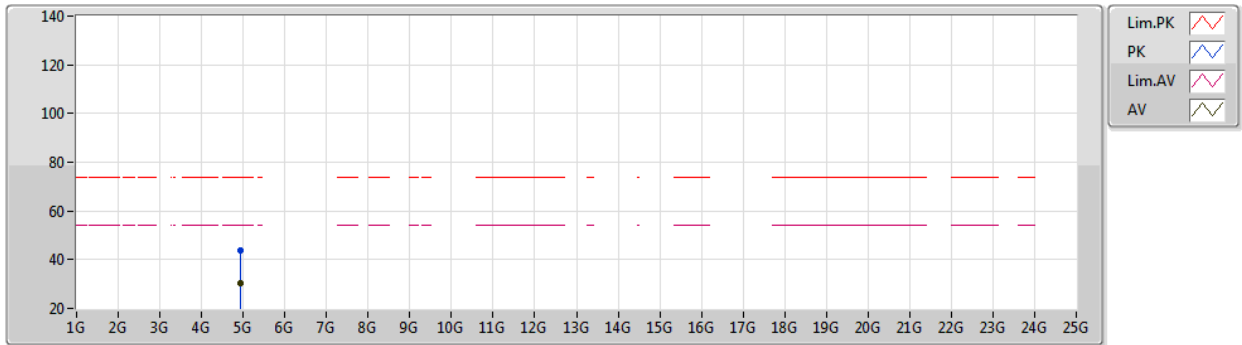
EUT Y_1TX
Setting 117
04-F-M-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.92479G	43.63	74.00	-30.37	39.12	3	Vertical	171	1.32	-	32.95	4.98	33.42
AV	4.9263G	29.74	54.00	-24.26	25.22	3	Vertical	171	1.32	-	32.95	4.98	33.41

802.11b_Nss1,(1Mbps)_1TX

10/06/2020

2462MHz_TX



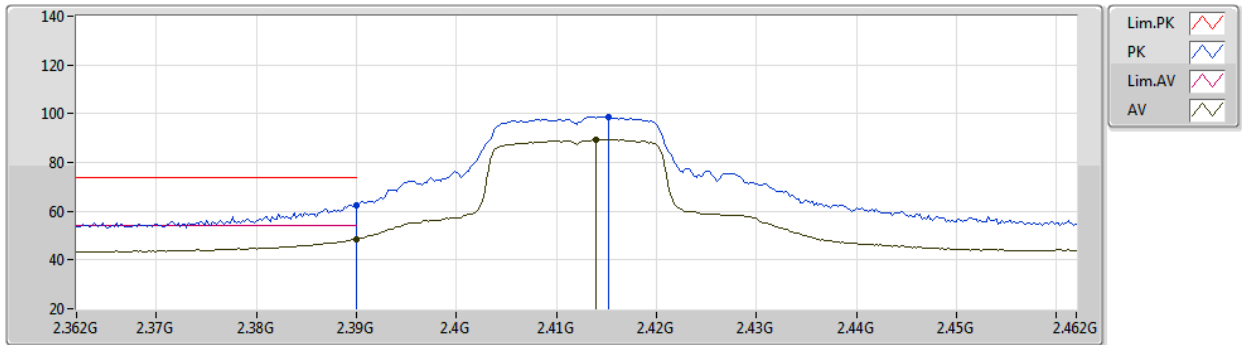
EUT Y_1TX
Setting 117
04-F-M-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.92578G	43.94	74.00	-30.06	39.42	3	Horizontal	355	2.33	-	32.95	4.98	33.41
AV	4.924G	30.24	54.00	-23.76	25.73	3	Horizontal	355	2.33	-	32.95	4.98	33.42

802.11g_Nss1,(6Mbps)_1TX

10/06/2020

2412MHz_TX



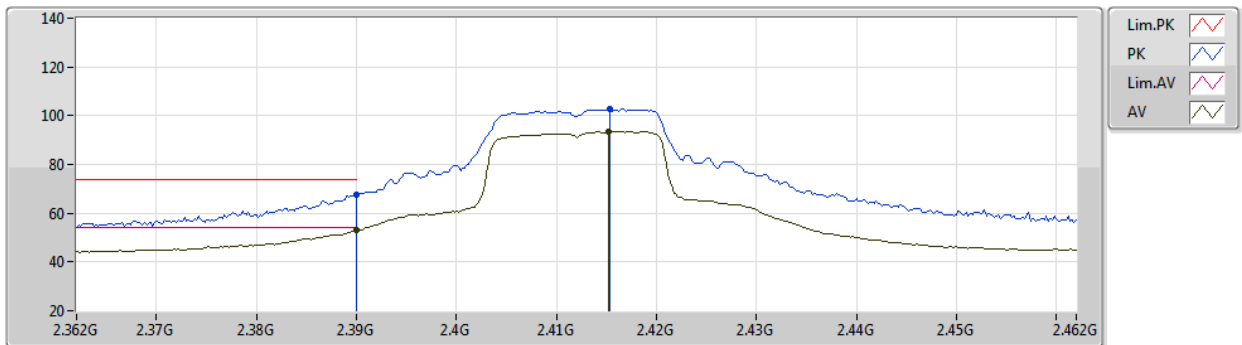
EUT Y_1TX
Setting 106
04-F-N-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.39G	62.51	74.00	-11.49	32.15	3	Vertical	105	1.01	-	27.51	2.85	-
AV	2.39G	48.65	54.00	-5.35	18.29	3	Vertical	105	1.01	-	27.51	2.85	-
PK	2.4152G	98.61	Inf	-Inf	68.18	3	Vertical	105	1.01	-	27.56	2.87	-
AV	2.414G	89.48	Inf	-Inf	59.05	3	Vertical	105	1.01	-	27.56	2.87	-

802.11g_Nss1,(6Mbps)_1TX

10/06/2020

2412MHz_TX



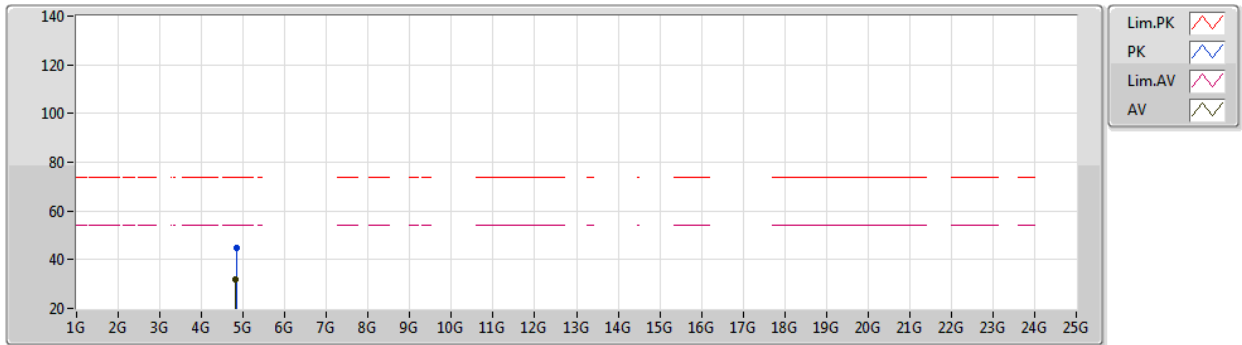
EUT Y_1TX
Setting 106
04-F-N-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.39G	67.75	74.00	-6.25	37.39	3	Horizontal	35	2.35	-	27.51	2.85	-
AV	2.39G	52.99	54.00	-1.01	22.63	3	Horizontal	35	2.35	-	27.51	2.85	-
PK	2.4154G	102.64	Inf	-Inf	72.21	3	Horizontal	35	2.35	-	27.56	2.87	-
AV	2.4152G	93.45	Inf	-Inf	63.02	3	Horizontal	35	2.35	-	27.56	2.87	-

802.11g_Nss1,(6Mbps)_1TX

10/06/2020

2412MHz_TX



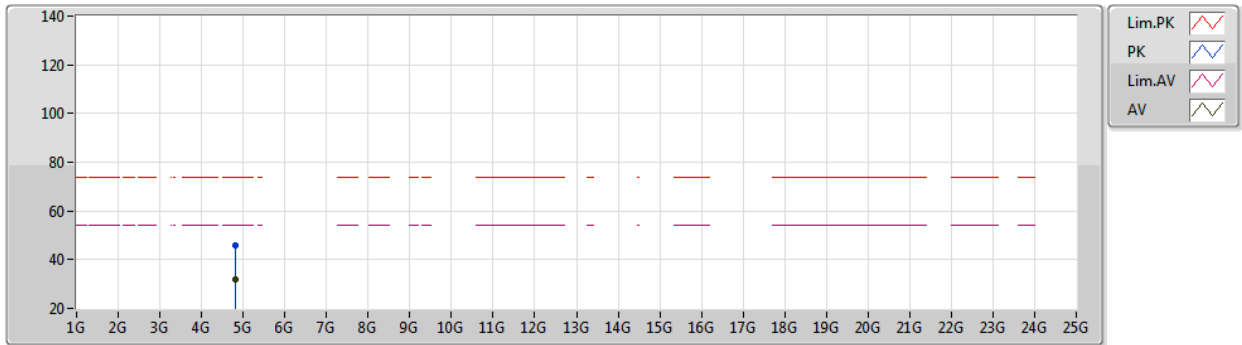
EUT Y_1TX
Setting 106
04-F-N-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.8287G	45.01	74.00	-28.99	40.95	3	Vertical	167	1.80	-	32.61	4.93	33.48
AV	4.82534G	31.91	54.00	-22.09	27.86	3	Vertical	167	1.80	-	32.60	4.93	33.48

802.11g_Nss1,(6Mbps)_1TX

10/06/2020

2412MHz_TX



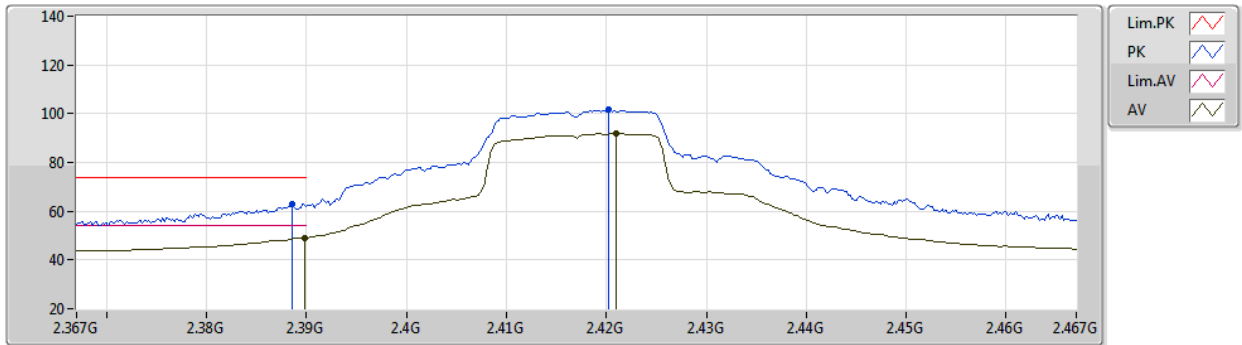
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Setting 106
04-F-N-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.82078G	45.83	74.00	-28.17	41.81	3	Horizontal	226	1.65	-	32.58	4.93	33.49
AV	4.82194G	31.83	54.00	-22.17	27.79	3	Horizontal	226	1.65	-	32.59	4.93	33.48

802.11g_Nss1,(6Mbps)_1TX

10/06/2020

2417MHz_TX



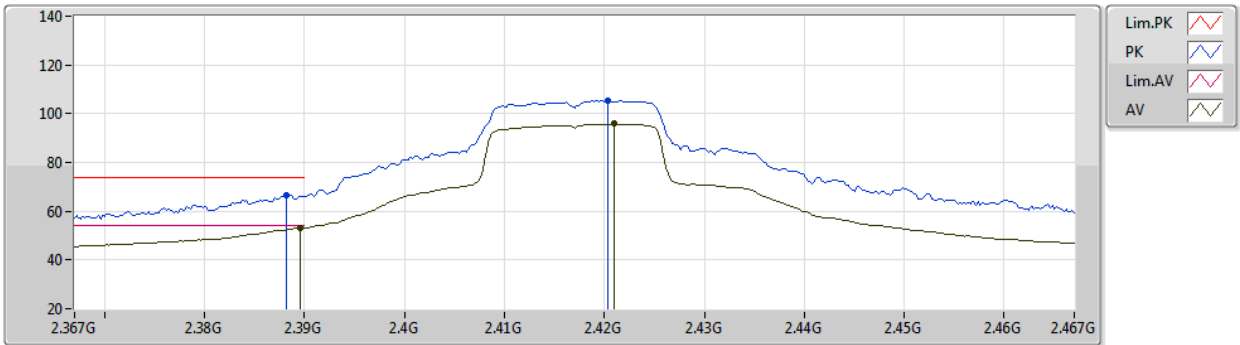
EUT Y_1TX
Setting 113
04-F-N-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3886G	63.07	74.00	-10.93	32.71	3	Vertical	88	2.90	-	27.51	2.85	-
AV	2.3898G	49.00	54.00	-5.00	18.64	3	Vertical	88	2.90	-	27.51	2.85	-
PK	2.4202G	101.49	Inf	-Inf	71.04	3	Vertical	88	2.90	-	27.58	2.87	-
AV	2.421G	91.69	Inf	-Inf	61.24	3	Vertical	88	2.90	-	27.58	2.87	-

802.11g_Nss1,(6Mbps)_1TX

10/06/2020

2417MHz_TX



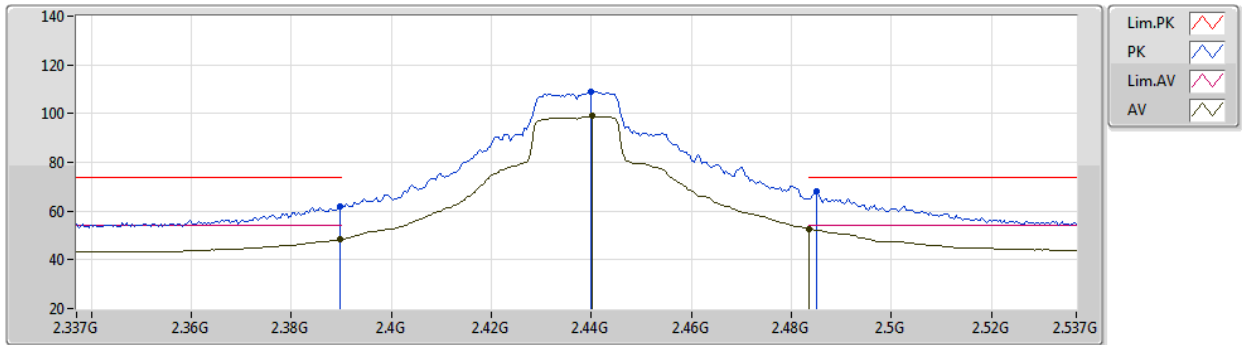
EUT Y_1TX
Setting 113
04-F-N-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3882G	66.73	74.00	-7.27	36.37	3	Horizontal	33	2.35	-	27.51	2.85	-
AV	2.3896G	52.96	54.00	-1.04	22.60	3	Horizontal	33	2.35	-	27.51	2.85	-
PK	2.4204G	105.55	Inf	-Inf	75.10	3	Horizontal	33	2.35	-	27.58	2.87	-
AV	2.421G	95.78	Inf	-Inf	65.33	3	Horizontal	33	2.35	-	27.58	2.87	-

802.11g_Nss1,(6Mbps)_1TX

10/06/2020

2437MHz_TX



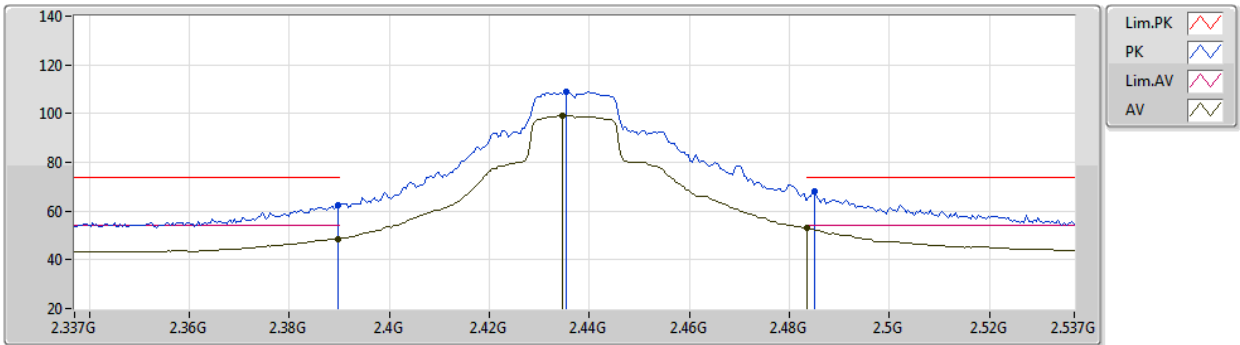
EUT Y_1TX
Setting 126
04-F-N-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3898G	61.71	74.00	-12.29	31.35	3	Vertical	30	1.83	-	27.51	2.85	-
AV	2.3898G	48.32	54.00	-5.68	17.96	3	Vertical	30	1.83	-	27.51	2.85	-
PK	2.4398G	108.84	Inf	-Inf	78.30	3	Vertical	30	1.83	-	27.66	2.88	-
AV	2.4402G	98.88	Inf	-Inf	68.34	3	Vertical	30	1.83	-	27.66	2.88	-
PK	2.485G	68.15	74.00	-5.85	37.40	3	Vertical	30	1.83	-	27.84	2.91	-
AV	2.4835G	52.61	54.00	-1.39	21.87	3	Vertical	30	1.83	-	27.83	2.91	-

802.11g_Nss1,(6Mbps)_1TX

10/06/2020

2437MHz_TX



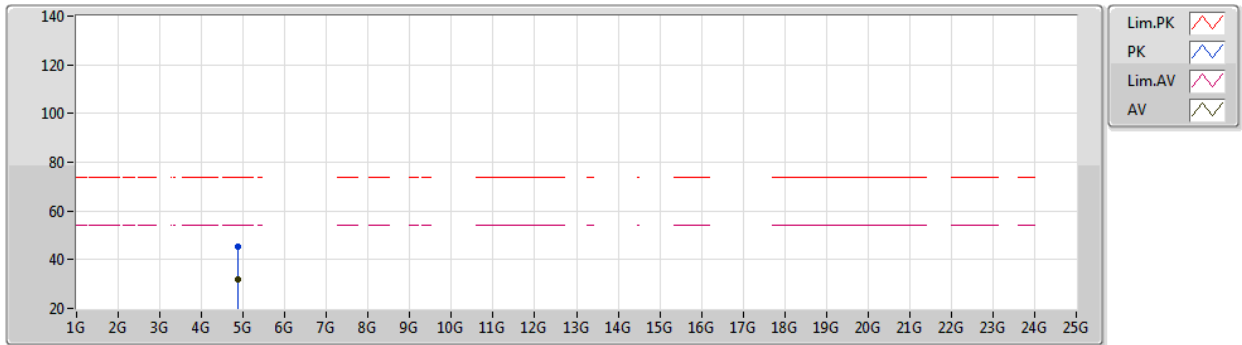
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Setting 126
04-F-N-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3898G	62.36	74.00	-11.64	32.00	3	Horizontal	35	2.28	-	27.51	2.85	-
AV	2.3898G	48.55	54.00	-5.45	18.19	3	Horizontal	35	2.28	-	27.51	2.85	-
PK	2.4354G	108.75	Inf	-Inf	78.23	3	Horizontal	35	2.28	-	27.64	2.88	-
AV	2.4346G	99.06	Inf	-Inf	68.54	3	Horizontal	35	2.28	-	27.64	2.88	-
PK	2.485G	68.02	74.00	-5.98	37.27	3	Horizontal	35	2.28	-	27.84	2.91	-
AV	2.4835G	52.96	54.00	-1.04	22.22	3	Horizontal	35	2.28	-	27.83	2.91	-

802.11g_Nss1,(6Mbps)_1TX

10/06/2020

2437MHz_TX



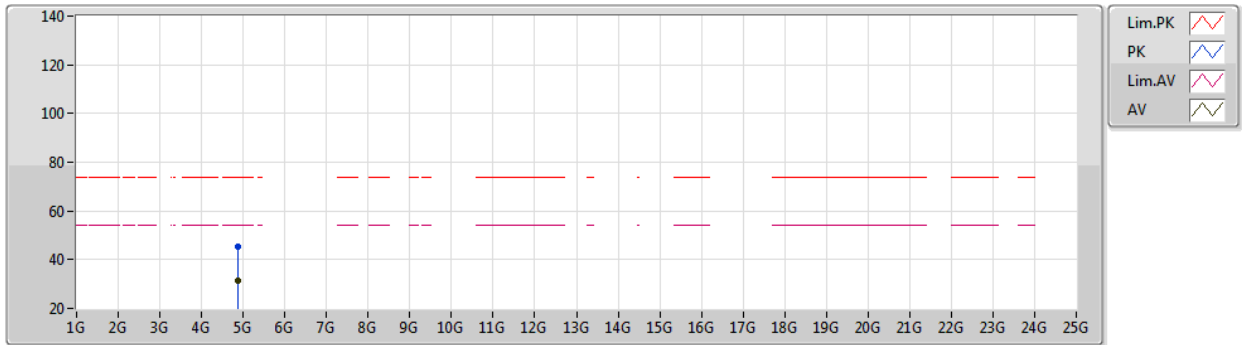
EUT Y_1TX
Setting 126
04-F-N-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.88216G	45.57	74.00	-28.43	41.22	3	Vertical	224	1.79	-	32.83	4.96	33.44
AV	4.8738G	31.70	54.00	-22.30	27.39	3	Vertical	224	1.79	-	32.80	4.96	33.45

802.11g_Nss1,(6Mbps)_1TX

10/06/2020

2437MHz_TX



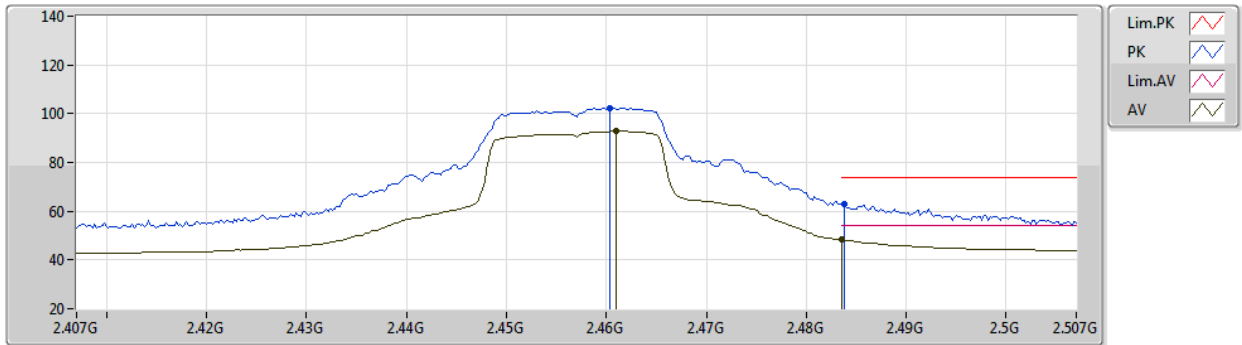
EUT Y_1TX
Setting 126
04-F-N-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.88008G	45.20	74.00	-28.80	40.86	3	Horizontal	221	1.88	-	32.82	4.96	33.44
AV	4.87428G	31.60	54.00	-22.40	27.29	3	Horizontal	221	1.88	-	32.80	4.96	33.45

802.11g_Nss1,(6Mbps)_1TX

10/06/2020

2457MHz_TX



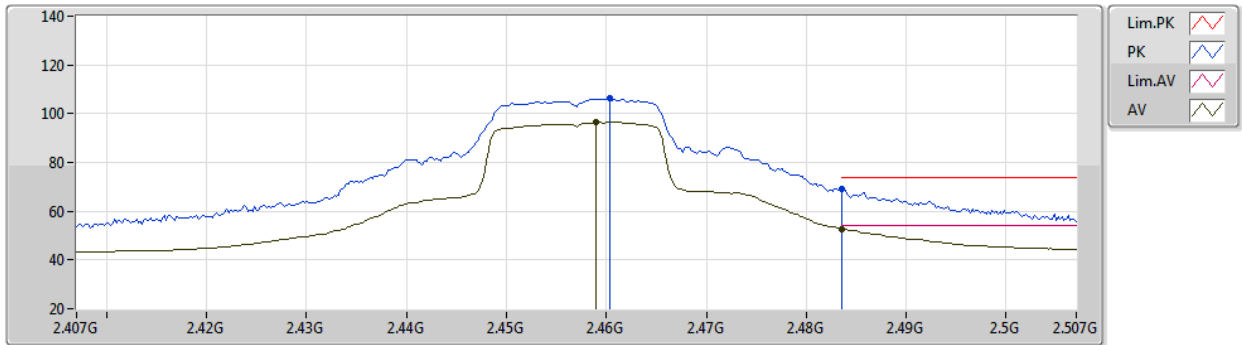
EUT Y_1TX
Setting 106
04-F-N-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.4604G	102.48	Inf	-Inf	71.84	3	Vertical	84	1.09	-	27.74	2.90	-
AV	2.461G	92.79	Inf	-Inf	62.15	3	Vertical	84	1.09	-	27.74	2.90	-
PK	2.4838G	63.08	74.00	-10.92	32.33	3	Vertical	84	1.09	-	27.84	2.91	-
AV	2.4835G	48.19	54.00	-5.81	17.45	3	Vertical	84	1.09	-	27.83	2.91	-

802.11g_Nss1,(6Mbps)_1TX

10/06/2020

2457MHz_TX



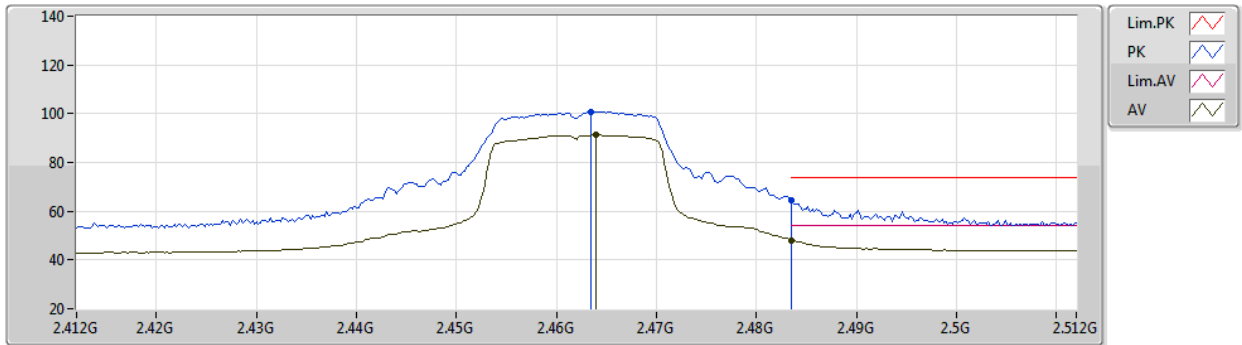
EUT Y_1TX
Setting 106
04-F-N-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.4604G	106.16	Inf	-Inf	75.52	3	Horizontal	26	2.51	-	27.74	2.90	-
AV	2.459G	96.44	Inf	-Inf	65.80	3	Horizontal	26	2.51	-	27.74	2.90	-
PK	2.4836G	69.04	74.00	-4.96	38.30	3	Horizontal	26	2.51	-	27.83	2.91	-
AV	2.4835G	52.84	54.00	-1.16	22.10	3	Horizontal	26	2.51	-	27.83	2.91	-

802.11g_Nss1,(6Mbps)_1TX

10/06/2020

2462MHz_TX



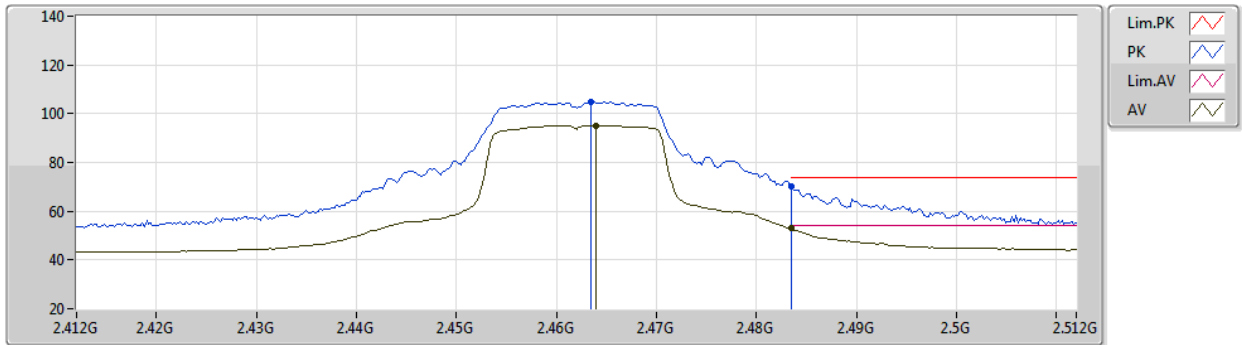
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Setting 100
04-F-N-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.4634G	100.85	Inf	-Inf	70.20	3	Vertical	96	1.79	-	27.75	2.90	-
AV	2.464G	91.33	Inf	-Inf	60.67	3	Vertical	96	1.79	-	27.76	2.90	-
PK	2.4835G	64.33	74.00	-9.67	33.59	3	Vertical	96	1.79	-	27.83	2.91	-
AV	2.4835G	48.16	54.00	-5.84	17.42	3	Vertical	96	1.79	-	27.83	2.91	-

802.11g_Nss1,(6Mbps)_1TX

10/06/2020

2462MHz_TX



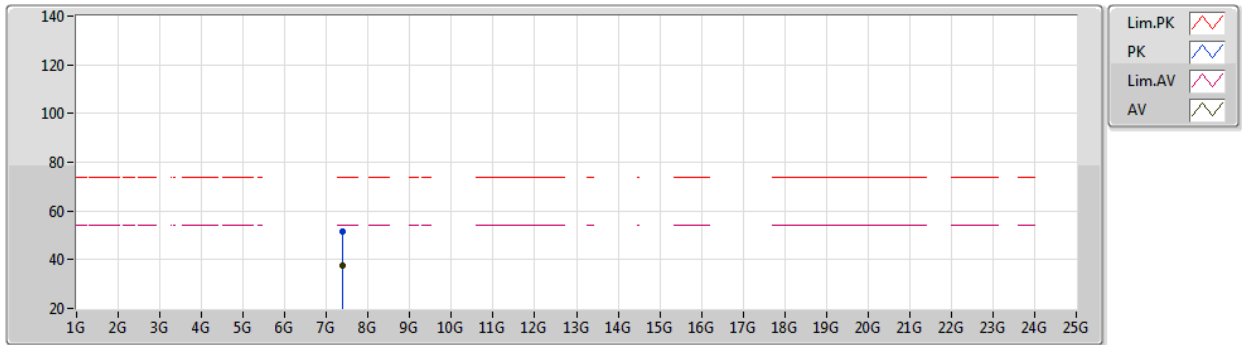
EUT Y_1TX
Setting 100
04-F-N-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.4634G	104.77	Inf	-Inf	74.12	3	Horizontal	29	2.45	-	27.75	2.90	-
AV	2.464G	95.19	Inf	-Inf	64.53	3	Horizontal	29	2.45	-	27.76	2.90	-
PK	2.4835G	70.12	74.00	-3.88	39.38	3	Horizontal	29	2.45	-	27.83	2.91	-
AV	2.4835G	52.88	54.00	-1.12	22.14	3	Horizontal	29	2.45	-	27.83	2.91	-

802.11g_Nss1,(6Mbps)_1TX

10/06/2020

2462MHz_TX



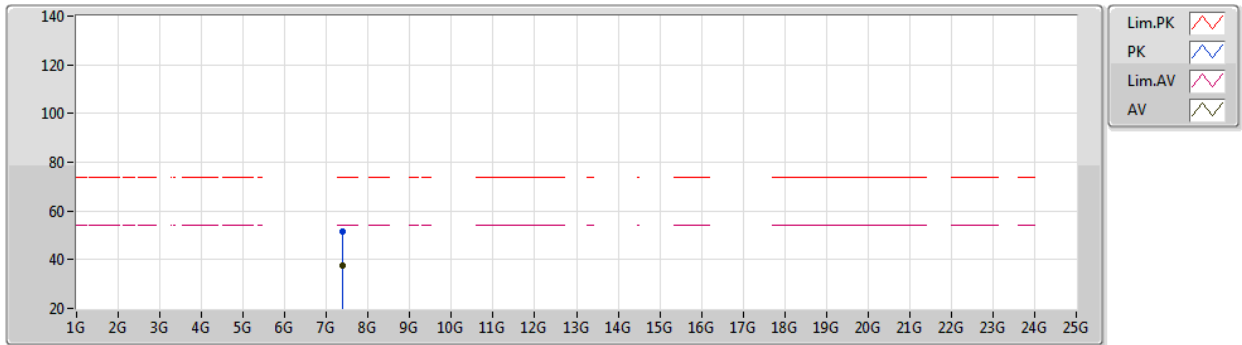
EUT Y_1TX
Setting 100
04-F-N-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	7.38988G	51.39	74.00	-22.61	41.56	3	Vertical	347	1.80	-	37.59	6.26	34.02
AV	7.39034G	37.68	54.00	-16.32	27.85	3	Vertical	347	1.80	-	37.59	6.26	34.02

802.11g_Nss1,(6Mbps)_1TX

10/06/2020

2462MHz_TX



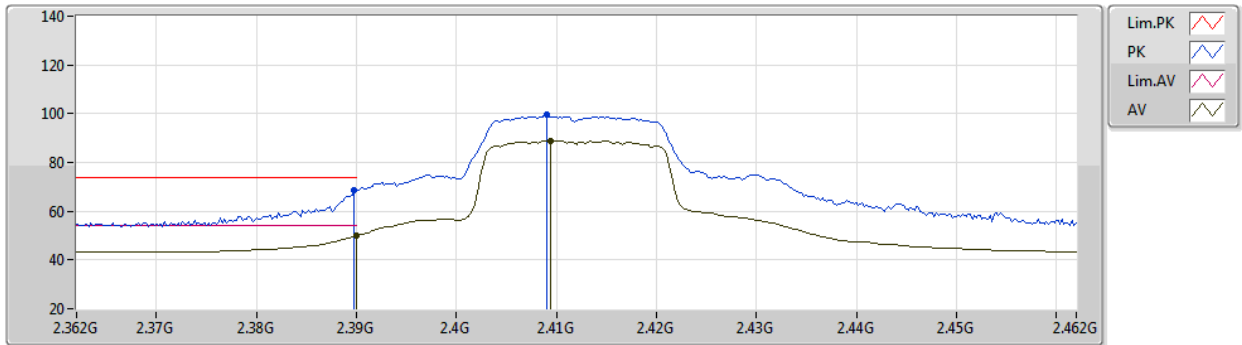
EUT Y_1TX
Setting 100
04-F-N-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	7.38574G	51.43	74.00	-22.57	41.61	3	Horizontal	307	1.94	-	37.59	6.25	34.02
AV	7.39062G	37.79	54.00	-16.21	27.96	3	Horizontal	307	1.94	-	37.59	6.26	34.02

802.11n HT20_Nss1,(MCS0)_1TX

10/06/2020

2412MHz_TX



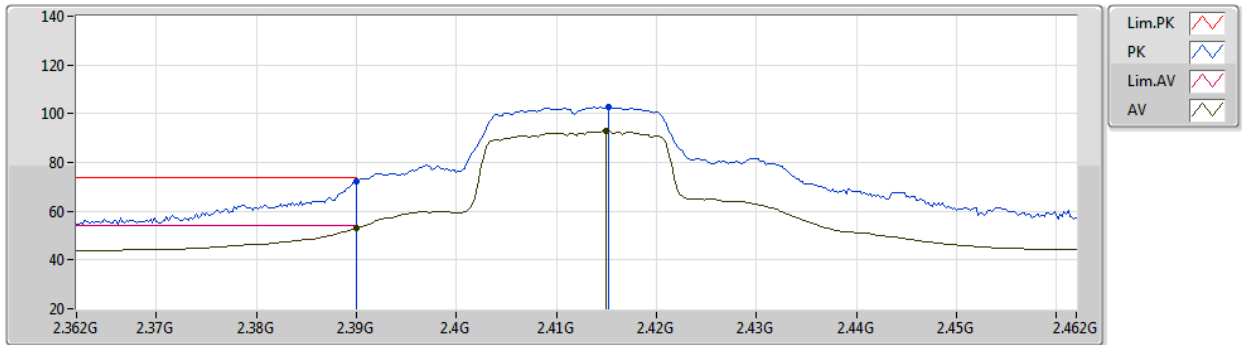
EUT Y_1TX
Setting 102
04-F-N-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3898G	68.80	74.00	-5.20	38.44	3	Vertical	112	2.39	-	27.51	2.85	-
AV	2.39G	49.79	54.00	-4.21	19.43	3	Vertical	112	2.39	-	27.51	2.85	-
PK	2.409G	99.60	Inf	-Inf	69.19	3	Vertical	112	2.39	-	27.54	2.87	-
AV	2.4094G	88.83	Inf	-Inf	58.42	3	Vertical	112	2.39	-	27.54	2.87	-

802.11n HT20_Nss1,(MCS0)_1TX

10/06/2020

2412MHz_TX



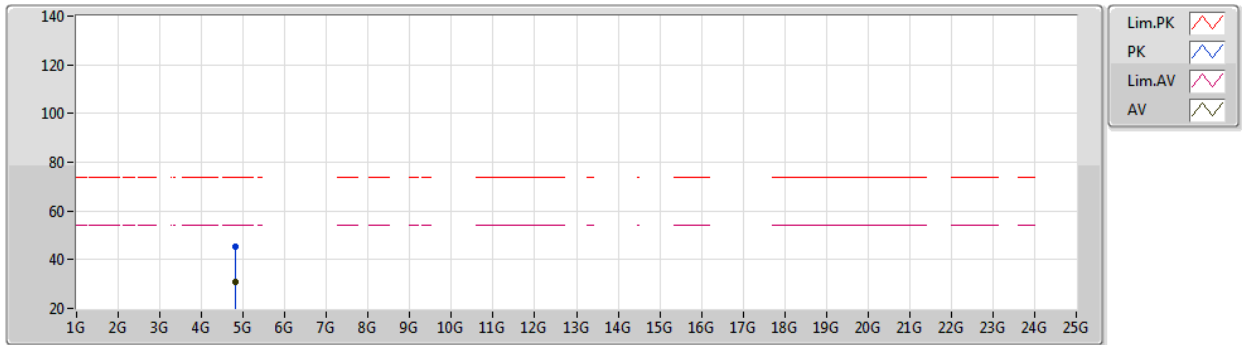
EUT Y_1TX
Setting 102
04-F-N-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.39G	72.14	74.00	-1.86	41.78	3	Horizontal	25	2.58	-	27.51	2.85	-
AV	2.39G	52.95	54.00	-1.05	22.59	3	Horizontal	25	2.58	-	27.51	2.85	-
PK	2.4152G	102.89	Inf	-Inf	72.46	3	Horizontal	25	2.58	-	27.56	2.87	-
AV	2.415G	92.86	Inf	-Inf	62.43	3	Horizontal	25	2.58	-	27.56	2.87	-

802.11n HT20_Nss1,(MCS0)_1TX

10/06/2020

2412MHz_TX



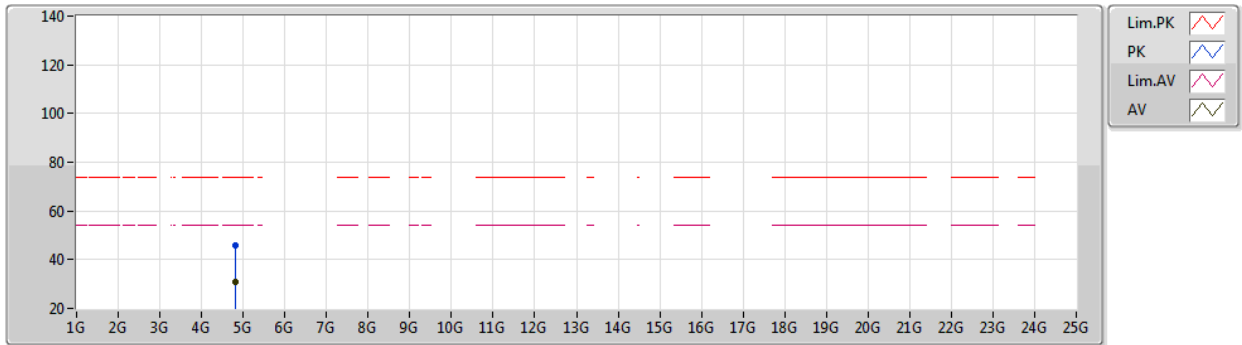
EUT Y_1TX
Setting 102
04-F-N-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.82278G	45.33	74.00	-28.67	41.29	3	Vertical	153	1.90	-	32.59	4.93	33.48
AV	4.82424G	30.94	54.00	-23.06	26.89	3	Vertical	153	1.90	-	32.60	4.93	33.48

802.11n HT20_Nss1,(MCS0)_1TX

10/06/2020

2412MHz_TX



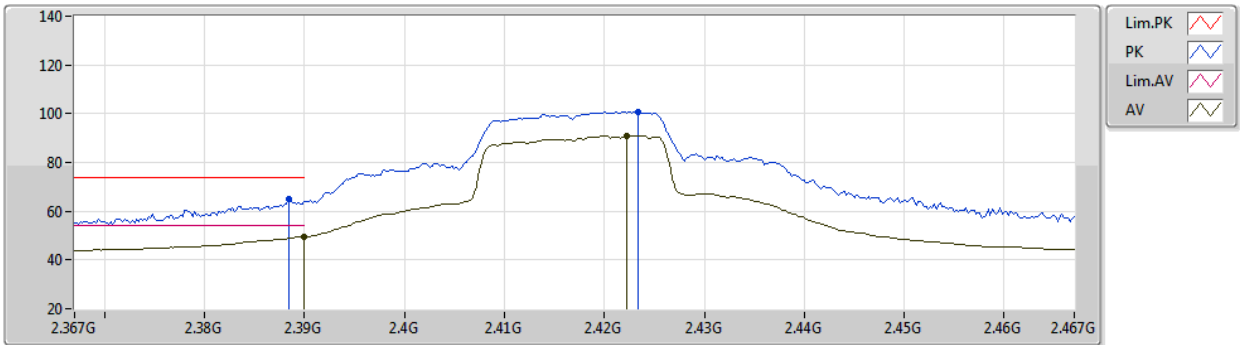
EUT Y_1TX
Setting 102
04-F-N-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.82658G	45.62	74.00	-28.38	41.56	3	Horizontal	271	2.18	-	32.61	4.93	33.48
AV	4.82342G	30.85	54.00	-23.15	26.81	3	Horizontal	271	2.18	-	32.59	4.93	33.48

802.11n HT20_Nss1,(MCS0)_1TX

10/06/2020

2417MHz_TX



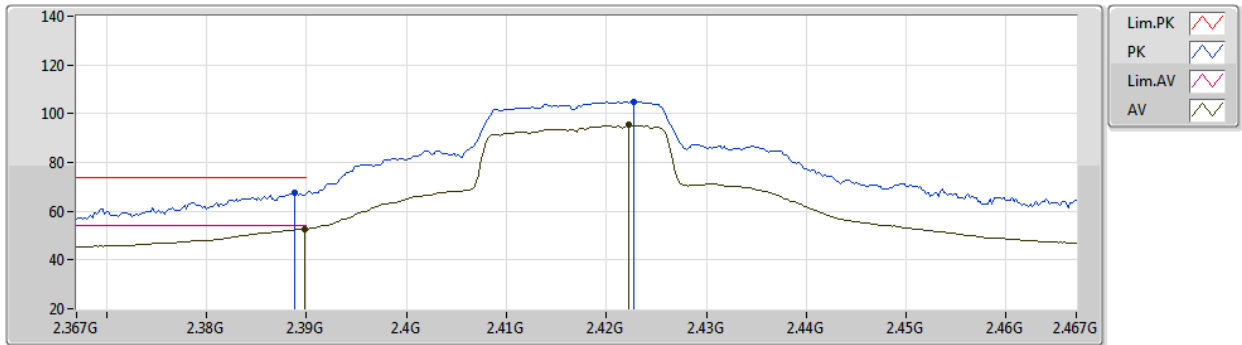
EUT Y_1TX
Setting 112
04-F-N-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3884G	64.95	74.00	-9.05	34.59	3	Vertical	74	2.91	-	27.51	2.85	-
AV	2.39G	49.59	54.00	-4.41	19.23	3	Vertical	74	2.91	-	27.51	2.85	-
PK	2.4234G	100.60	Inf	-Inf	70.14	3	Vertical	74	2.91	-	27.59	2.87	-
AV	2.4222G	91.08	Inf	-Inf	60.62	3	Vertical	74	2.91	-	27.59	2.87	-

802.11n HT20_Nss1,(MCS0)_1TX

10/06/2020

2417MHz_TX



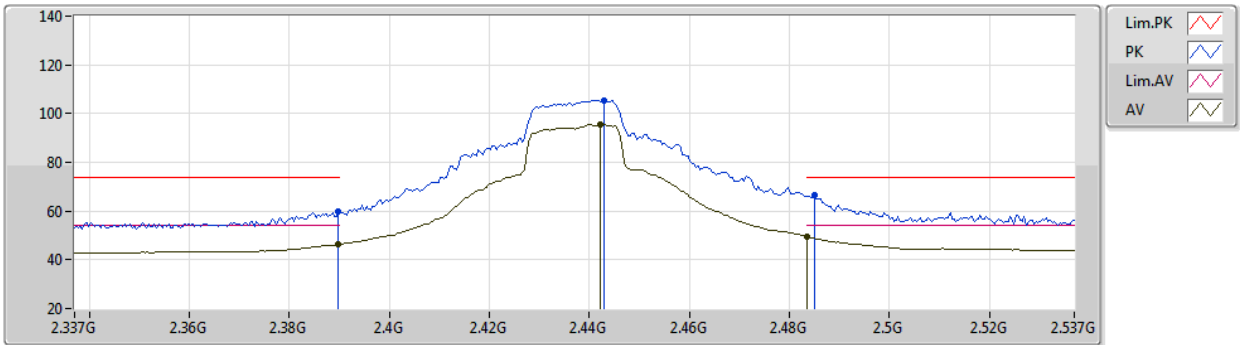
EUT Y_1TX
Setting 112
04-F-N-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3888G	67.83	74.00	-6.17	37.47	3	Horizontal	33	2.26	-	27.51	2.85	-
AV	2.3898G	52.79	54.00	-1.21	22.43	3	Horizontal	33	2.26	-	27.51	2.85	-
PK	2.4228G	104.82	Inf	-Inf	74.36	3	Horizontal	33	2.26	-	27.59	2.87	-
AV	2.4222G	95.29	Inf	-Inf	64.83	3	Horizontal	33	2.26	-	27.59	2.87	-

802.11n HT20_Nss1,(MCS0)_1TX

10/06/2020

2437MHz_TX



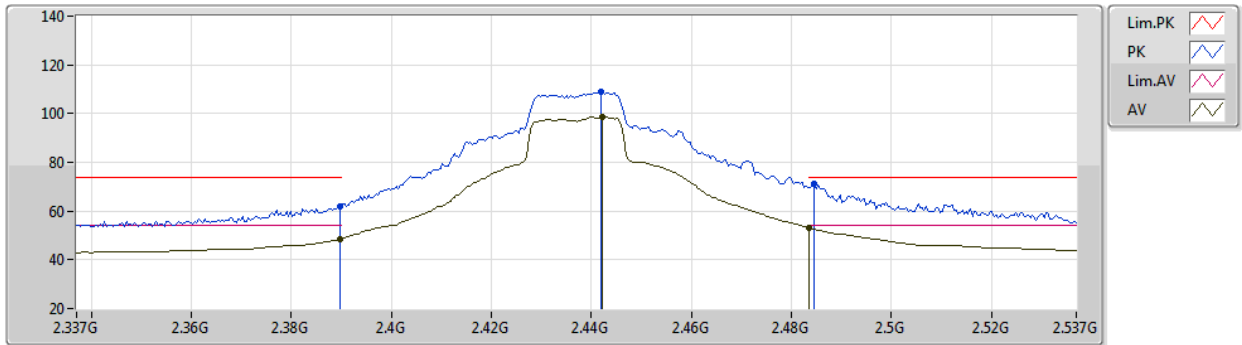
EUT Y_1TX
Setting 127
04-F-N-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3898G	59.81	74.00	-14.19	29.45	3	Vertical	92	2.61	-	27.51	2.85	-
AV	2.3898G	46.21	54.00	-7.79	15.85	3	Vertical	92	2.61	-	27.51	2.85	-
PK	2.443G	105.51	Inf	-Inf	74.95	3	Vertical	92	2.61	-	27.67	2.89	-
AV	2.4422G	95.70	Inf	-Inf	65.14	3	Vertical	92	2.61	-	27.67	2.89	-
PK	2.485G	66.52	74.00	-7.48	35.77	3	Vertical	92	2.61	-	27.84	2.91	-
AV	2.4835G	49.55	54.00	-4.45	18.81	3	Vertical	92	2.61	-	27.83	2.91	-

802.11n HT20_Nss1,(MCS0)_1TX

10/06/2020

2437MHz_TX



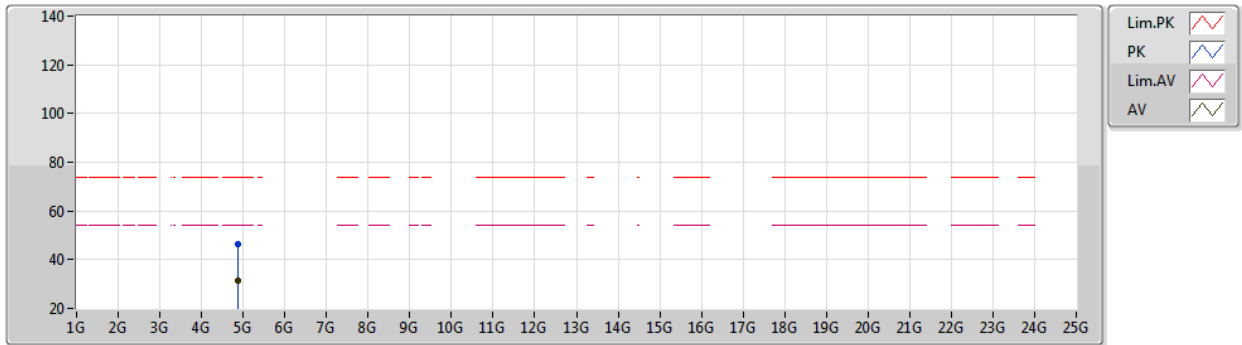
EUT Y_1TX
Setting 127
04-F-N-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3898G	61.82	74.00	-12.18	31.46	3	Horizontal	26	2.53	-	27.51	2.85	-
AV	2.3898G	48.57	54.00	-5.43	18.21	3	Horizontal	26	2.53	-	27.51	2.85	-
PK	2.4418G	108.74	Inf	-Inf	78.18	3	Horizontal	26	2.53	-	27.67	2.89	-
AV	2.4422G	98.86	Inf	-Inf	68.30	3	Horizontal	26	2.53	-	27.67	2.89	-
PK	2.4846G	71.36	74.00	-2.64	40.61	3	Horizontal	26	2.53	-	27.84	2.91	-
AV	2.4835G	52.99	54.00	-1.01	22.25	3	Horizontal	26	2.53	-	27.83	2.91	-

802.11n HT20_Nss1,(MCS0)_1TX

10/06/2020

2437MHz_TX



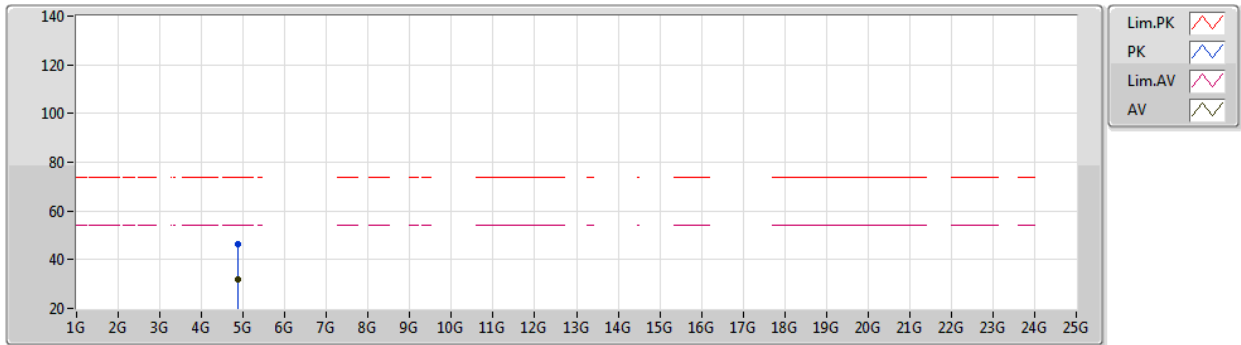
EUT Y_1TX
Setting 127
04-F-N-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.8749G	46.34	74.00	-27.66	42.03	3	Vertical	116	2.10	-	32.80	4.96	33.45
AV	4.87424G	31.52	54.00	-22.48	27.21	3	Vertical	116	2.10	-	32.80	4.96	33.45

802.11n HT20_Nss1,(MCS0)_1TX

10/06/2020

2437MHz_TX



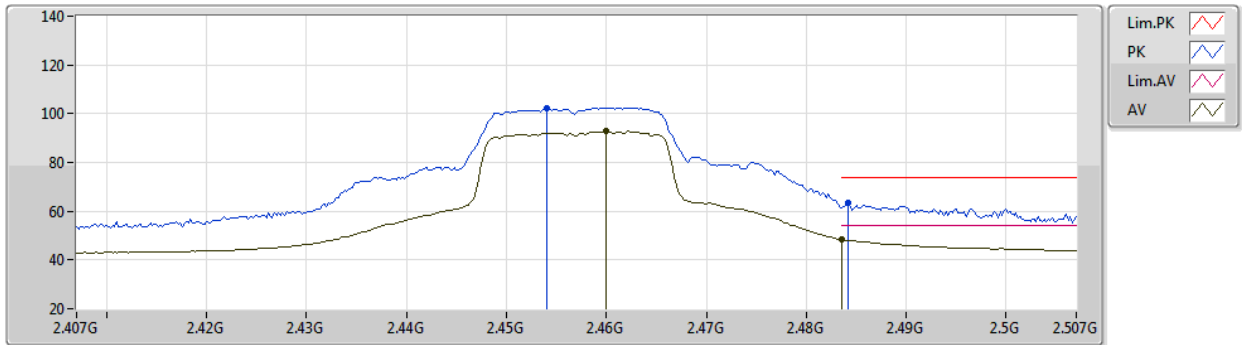
EUT Y_1TX
Setting 127
04-F-N-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.87548G	46.20	74.00	-27.80	41.89	3	Horizontal	299	1.20	-	32.80	4.96	33.45
AV	4.87344G	31.67	54.00	-22.33	27.37	3	Horizontal	299	1.20	-	32.79	4.96	33.45

802.11n HT20_Nss1,(MCS0)_1TX

10/06/2020

2457MHz_TX



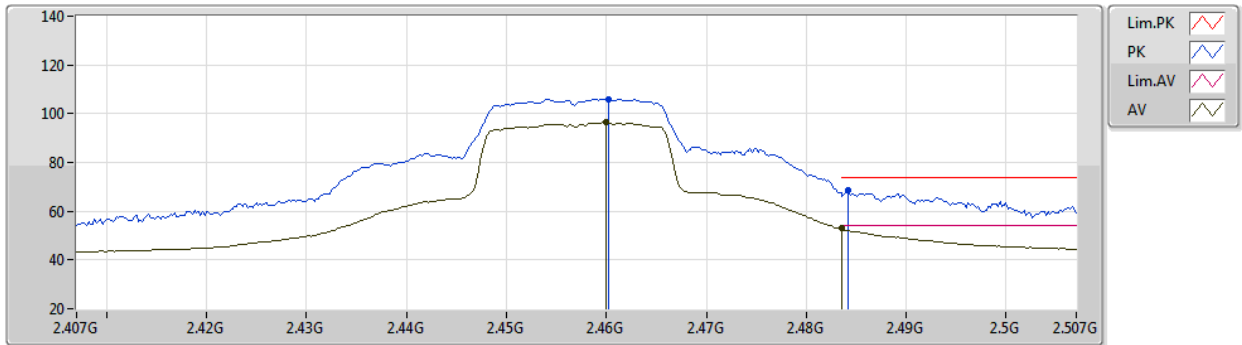
EUT Y_1TX
Setting 106
04-F-N-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.454G	102.44	Inf	-Inf	71.83	3	Vertical	92	1.09	-	27.72	2.89	-
AV	2.46G	92.86	Inf	-Inf	62.22	3	Vertical	92	1.09	-	27.74	2.90	-
PK	2.4842G	63.30	74.00	-10.70	32.55	3	Vertical	92	1.09	-	27.84	2.91	-
AV	2.4835G	48.33	54.00	-5.67	17.59	3	Vertical	92	1.09	-	27.83	2.91	-

802.11n HT20_Nss1,(MCS0)_1TX

10/06/2020

2457MHz_TX



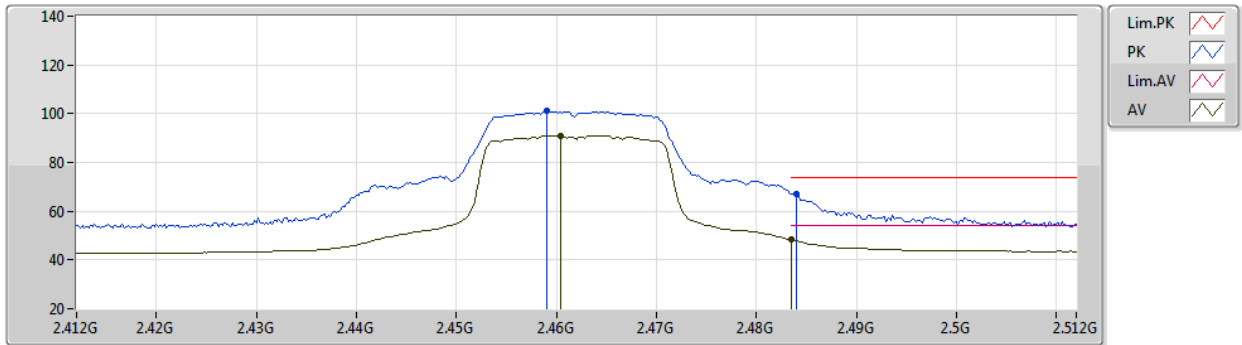
EUT Y_1TX
Setting 106
04-F-N-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.4602G	106.08	Inf	-Inf	75.44	3	Horizontal	25	2.49	-	27.74	2.90	-
AV	2.46G	96.46	Inf	-Inf	65.82	3	Horizontal	25	2.49	-	27.74	2.90	-
PK	2.4842G	68.48	74.00	-5.52	37.73	3	Horizontal	25	2.49	-	27.84	2.91	-
AV	2.4835G	52.88	54.00	-1.12	22.14	3	Horizontal	25	2.49	-	27.83	2.91	-

802.11n HT20_Nss1,(MCS0)_1TX

10/06/2020

2462MHz_TX



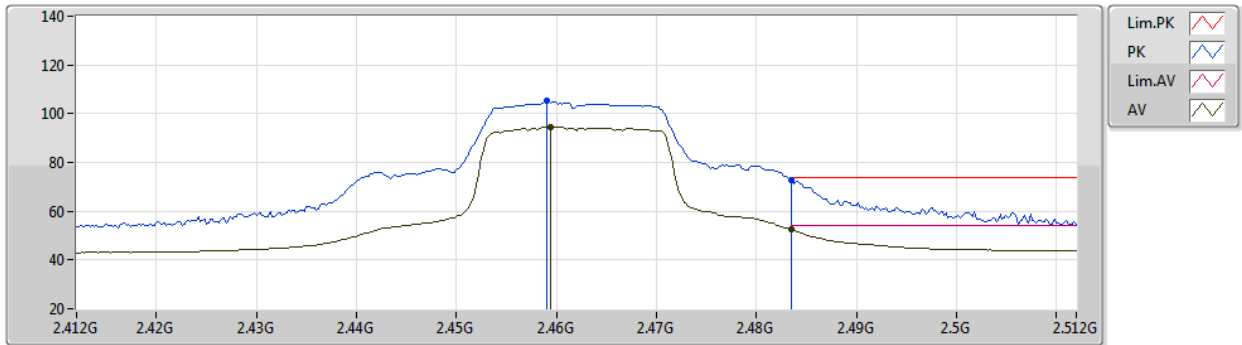
EUT Y_1TX
Setting 99
04-F-N-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.459G	101.45	Inf	-Inf	70.81	3	Vertical	90	1.09	-	27.74	2.90	-
AV	2.4604G	90.88	Inf	-Inf	60.24	3	Vertical	90	1.09	-	27.74	2.90	-
PK	2.484G	67.23	74.00	-6.77	36.48	3	Vertical	90	1.09	-	27.84	2.91	-
AV	2.4835G	48.26	54.00	-5.74	17.52	3	Vertical	90	1.09	-	27.83	2.91	-

802.11n HT20_Nss1,(MCS0)_1TX

10/06/2020

2462MHz_TX



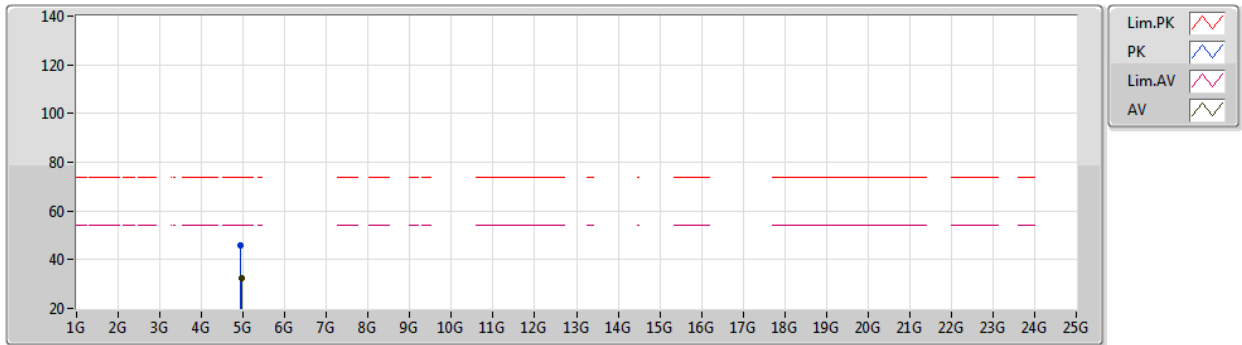
EUT Y_1TX
Setting 99
04-F-N-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.459G	105.18	Inf	-Inf	74.54	3	Horizontal	27	2.49	-	27.74	2.90	-
AV	2.4594G	94.52	Inf	-Inf	63.88	3	Horizontal	27	2.49	-	27.74	2.90	-
PK	2.4835G	72.81	74.00	-1.19	42.07	3	Horizontal	27	2.49	-	27.83	2.91	-
AV	2.4835G	52.39	54.00	-1.61	21.65	3	Horizontal	27	2.49	-	27.83	2.91	-

802.11n HT20_Nss1,(MCS0)_1TX

10/06/2020

2462MHz_TX



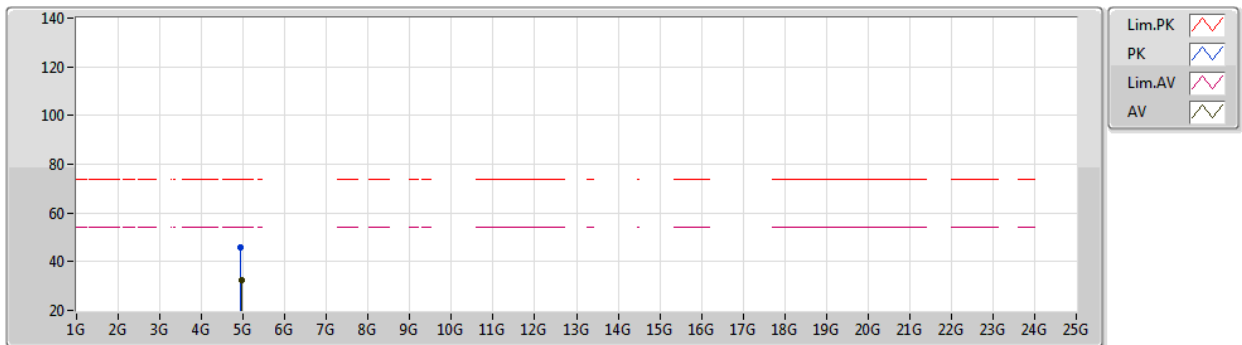
EUT Y_1TX
Setting 99
04-F-N-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.9218G	46.05	74.00	-27.95	41.55	3	Vertical	57	1.09	-	32.94	4.98	33.42
AV	4.9564G	32.28	54.00	-21.72	27.67	3	Vertical	57	1.09	-	33.01	5.00	33.40

802.11n HT20_Nss1,(MCS0)_1TX

10/06/2020

2462MHz_TX



EUT Y_1TX
Setting 99
04-F-N-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.9348G	46.01	74.00	-27.99	41.46	3	Horizontal	210	2.34	-	32.97	4.99	33.41
AV	4.956G	32.31	54.00	-21.69	27.70	3	Horizontal	210	2.34	-	33.01	5.00	33.40