



RADIO TEST REPORT

FCC ID : O6ZA21KW
Equipment : AT&T TV™ Device and Remote Control
Brand Name : AT&T
Model Name : A21KW-500
Applicant : Humax Co., Ltd.
HUMAX BLDG., 2, Yeongmun-ro, Cheoin-gu,
Yongin-si, Gyeonggi-do South Korea 17040
Manufacturer : Humax Co., Ltd.
HUMAX BLDG., 2, Yeongmun-ro, Cheoin-gu,
Yongin-si, Gyeonggi-do South Korea 17040
Standard : 47 CFR FCC Part 15.247

The product was received on Oct. 19, 2020, and testing was started from Oct. 22, 2020 and completed on Mar. 10, 2021. We, Sporton International Inc. Hsinchu 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. Hsinchu Laboratory, the test report shall not be reproduced except in full.


Approved by: Cliff Chang

Sporton International Inc. Hsinchu Laboratory
No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, 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	-
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: Wendy Pan



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), ax (HEW20)	2412-2462	1-11 [11]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	802.11b	20	2TX
2.4-2.4835GHz	802.11g	20	2TX
2.4-2.4835GHz	802.11n HT20	20	2TX
2.4-2.4835GHz	802.11n HT20-BF	20	2TX
2.4-2.4835GHz	802.11ax HEW20	20	2TX

Note:

- ♦ 11b mode uses a combination of DSSS-DBPSK, DQPSK, CCK modulation.
- ♦ 11g, HT20 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- ♦ HEW20, use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- ♦ BWch is the nominal channel bandwidth.



1.1.2 Antenna Information

Ant.	Port	Brand	Model Name	Antenna Type	Connector	Antenna Gain (dBi)					
						WLAN 2.4GHz	WLAN5GHz				Bluetooth
							Band 1	Band 2	Band 3	Band 4	
1	2	Galtronics	DB1	PCB	I-PEX	2.366	3.786	3.786	4.028	4.041	-
2	1	Galtronics	DB2	PCB	I-PEX	2.987	3.513	3.624	4.484	4.875	-
3	1	Galtronics	BT	Printed	I-PEX	-	-	-	-	-	2.867

Correlated Antenna Gain (dBi)				
WLAN 2.4GHz	WLAN5GHz			
	Band 1	Band 2	Band 3	Band 4
4.72	5.2	5.45	5.9	5.9

Note: The above information was declared by manufacturer.

For WLAN 2.4GHz function:

For IEEE 802.11b/g/n/ax mode (2TX/2RX):

Ant.1 and Ant.2 can be used as transmitting/receiving antenna.

Ant.1 and Ant.2 could transmit/receive simultaneously.

For WLAN 5GHz function:

For IEEE 802.11a/n/ac/ax mode (2TX/2RX):

Ant.1 and Ant.2 can be used as transmitting/receiving antenna.

Ant.1 and Ant.2 could transmit/receive simultaneously.

For Bluetooth (1TX/1RX):

Only Ant.3 can be used as transmitting/receiving antenna.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)
802.11b	0.957	0.19
802.11g	0.952	0.21
802.11ax HEW20	0.983	0.07
802.11n HT20-BF	0.951	0.22

Note:

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



1.1.4 EUT Operational Condition

EUT Power Type	From Power Adapter		
Beamforming Function	<input checked="" type="checkbox"/> With beamforming	<input type="checkbox"/> Without beamforming	
	For IEEE 802.11n in 2.4GHz and IEEE 802.11n/ac in 5GHz.		
Function	<input checked="" type="checkbox"/> Point-to-multipoint	<input type="checkbox"/> Point-to-point	
Test Software Version	For non-beamforming mode: PUTTY.exe_Release0.62 & accessMTool 3_2_0_2 For beamforming mode: PUTTY.exe_Release0.62 \ DOS_v6.1.7601		

Note: The above information was declared by manufacturer.

1.1.5 EUT Function

The EUT supports AP Router in WLAN 2.4GHz, WLAN 5GHz Band 1/ Band 4 and supports Client without radar detection in WLAN 5GHz Band 2 / Band 3 function.



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 662911 D01 v02r01
- ♦ FCC KDB 414788 D01 v01r01

1.3 Testing Location Information

Testing Location Information	
Test Lab. : Sporton International Inc. Hsinchu Laboratory	
Hsinchu	ADD: No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)
(TAF: 3787)	TEL: 886-3-656-9065 FAX: 886-3-656-9085
	Test site Designation No. TW3787 with FCC.
	Conformity Assessment Body Identifier (CABID) TW3787 with ISED.

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
RF Conducted	TH02-CB	Jeff Wu	21.2-21.8 / 62-65	Oct. 26, 2020 ~ Nov. 04, 2020
Radiated<1G	03CH06-CB	Eason Chen	20.3-21.5 / 56-58	Mar. 09, 2021
Radiated>1G	03CH02-CB	Eason Chen	20.4-21.4 / 55-57	Oct. 22, 2020 ~ Nov. 11, 2020
AC Conduction	CO02-CB	Wei Li	21~23 / 54~57	Mar. 10, 2021

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)_2TX	-
2412MHz	96
2417MHz	101
2437MHz	108
2462MHz	103
802.11g_Nss1,(6Mbps)_2TX	-
2412MHz	84
2417MHz	94
2437MHz	108
2457MHz	98
2462MHz	87
802.11ax HEW20_Nss1,(MCS0)_2TX	-
2412MHz	80
2417MHz	92
2437MHz	108
2457MHz	92
2462MHz	84
802.11n HT20-BF_Nss1,(MCS0)_2TX	-
2412MHz	79
2417MHz	86
2437MHz	102
2457MHz	90
2462MHz	81

Note: 1.For non-beamforming mode: HEW20 covers HT20, due to same modulation. The power setting for HT20 are the similar or lower than HEW20.

2.The EUT supports non-beamforming and beamforming modes, and both modes were tested and recorded in this report.



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	CTX
1	CTX - BT
2	CTX - WLAN 2.4GHz
3	CTX - WLAN 5GHz
For operating mode 3 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 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	CTX - BT
2	CTX - WLAN 2.4GHz
3	CTX - WLAN 5GHz
For operating mode 2 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	Bluetooth+WLAN 2.4GHz
2	Bluetooth+WLAN 5GHz
Refer to Sporton Test Report No.: FA001903 for Co-location RF Exposure Evaluation.	

Note: The EUT can only be used at Z axis position.



2.3 EUT Operation during Test

For CTX Mode:

non-beamforming mode:

The EUT was programmed to be in continuously transmitting mode.

beamforming mode:

For Conducted Mode:

The EUT was programmed to be in continuously transmitting mode.

For Radiated Mode:

During the test, the following programs under WIN 7 were executed.

The program was executed as follows:

1. During the test, the EUT operation to normal function.
2. Executed command fixed test channel under DOS_v6.1.7601.
3. Executed " PUTTY.exe_Release0.62 " to link with the remote workstation to transmit and receive packet by Wireless AP and transmit duty cycle no less than 98%.

2.4 Accessories

Accessories				
No.	Equipment Name	Brand Name	Model Name	Rating
1	Adapter	AT&T	EPS18R1B-16	INPUT: 120V~0.5A Max 60Hz OUTPUT: 12V, 15A 18W
Other				
Remote Controller*1				



2.5 Support Equipment

For AC Conduction:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Ethernet NB	DELL	E6430	N/A
B	Flash disk3.0	Transcend	639205 7755	N/A

For Radiated (below 1GHz) and Radiated (above 1GHz) non-beamforming mode:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Ethernet NB	DELL	E4300	N/A
B	Flash disk	Silicon Power	I-Series	N/A

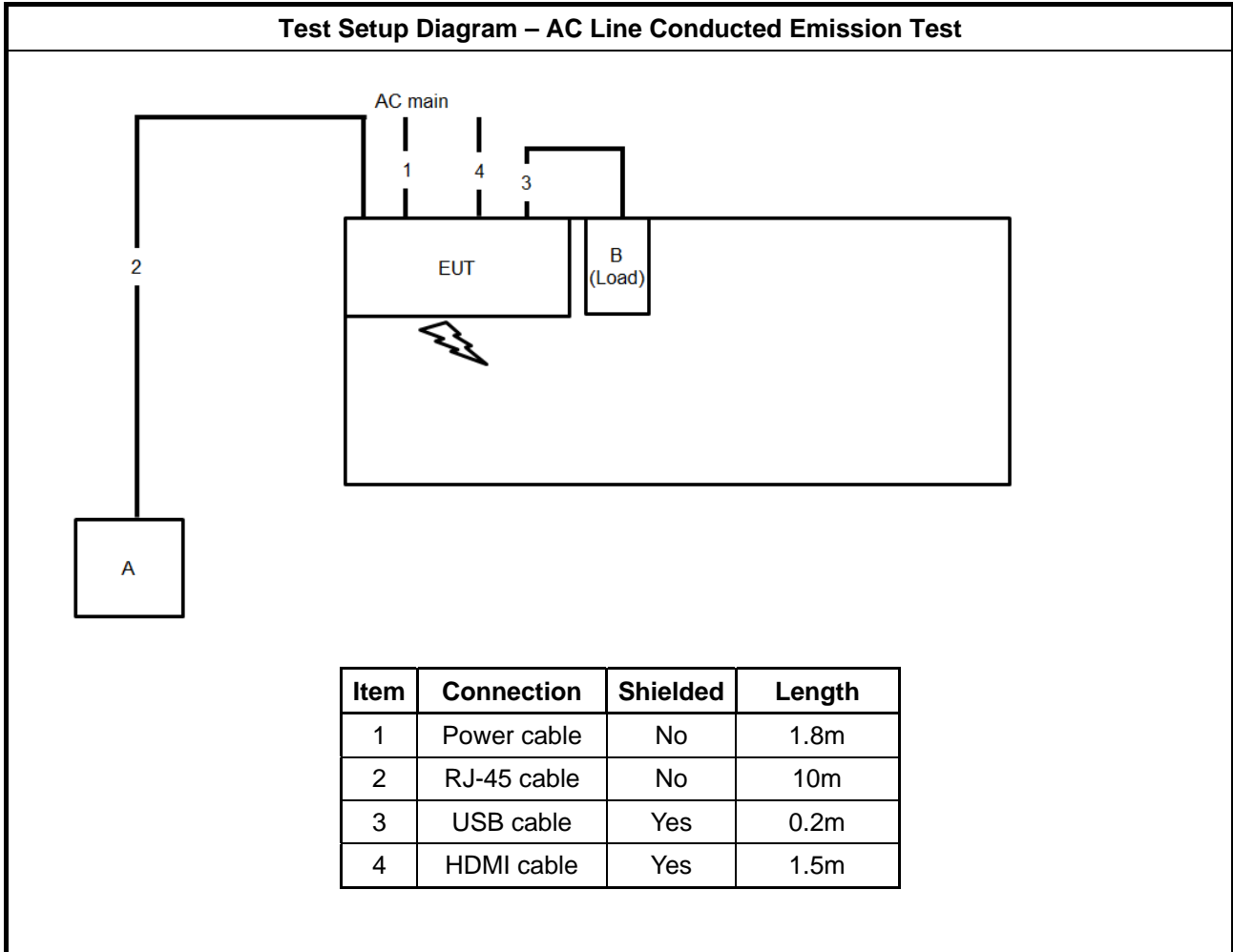
For Radiated (above 1GHz) beamforming mode:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Ethernet NB	DELL	E4300	DoC
B	Flash disk	Silicon Power	I-Series	N/A
C	WLAN AP NB	DELL	E4300	N/A
D	2.4G WLAN AP	ASUS	RT-AX88U	N/A

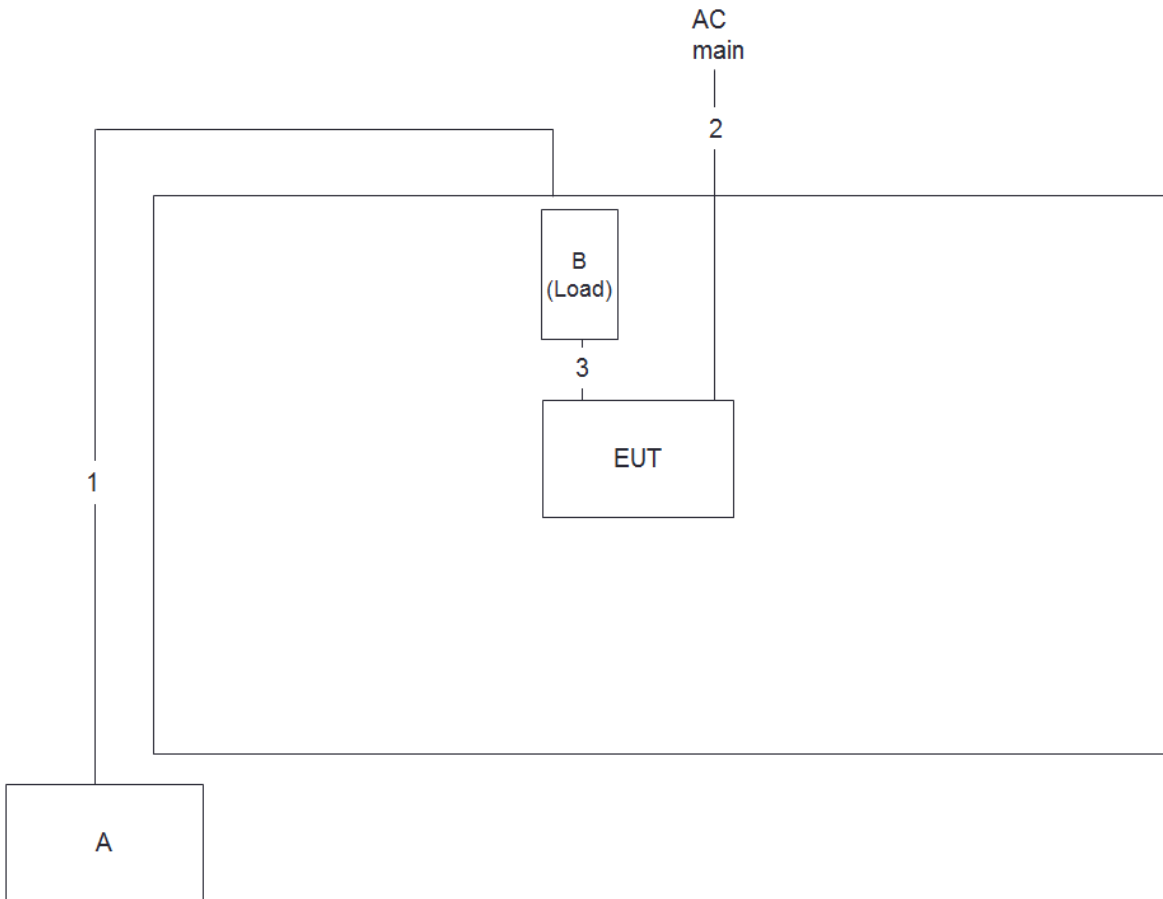
For RF Conducted:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	NB	DELL	E4300	N/A

2.6 Test Setup Diagram

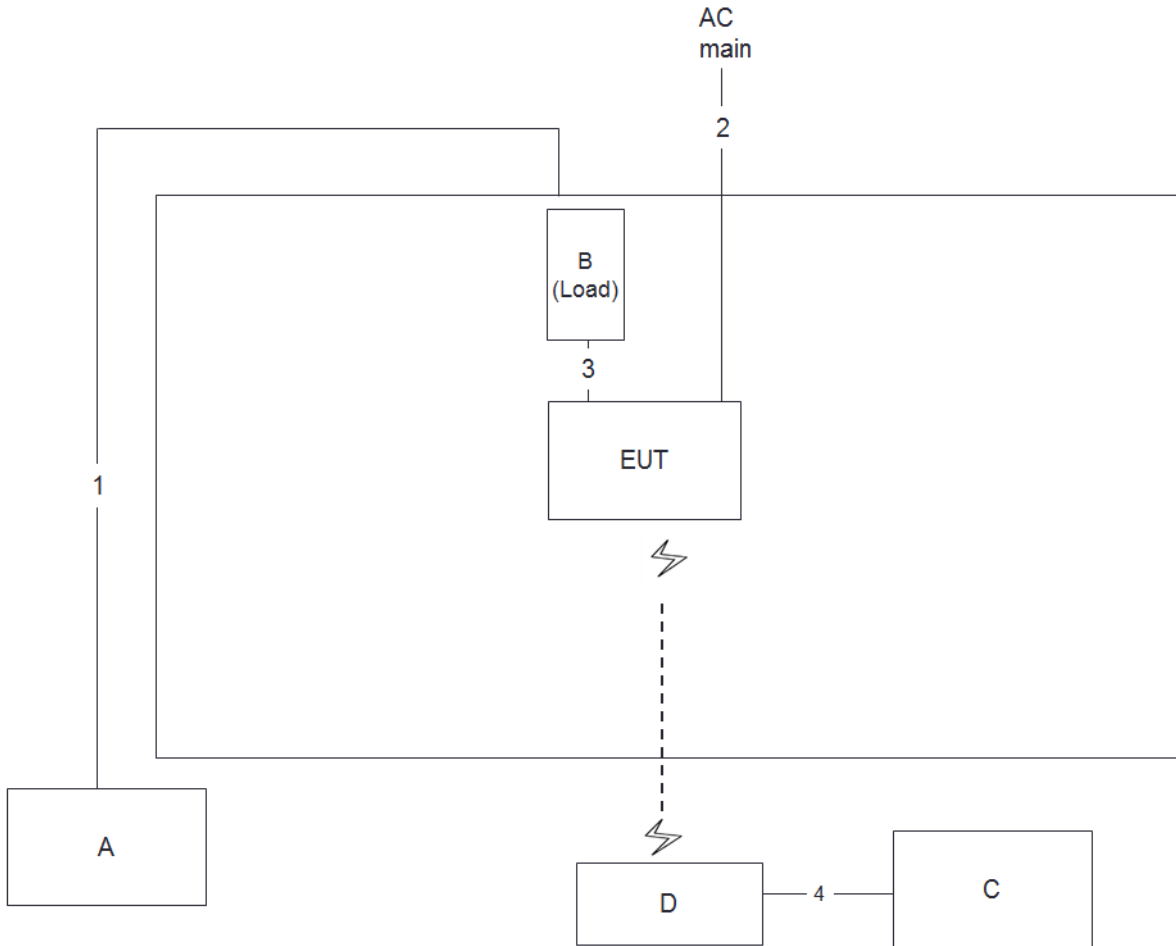


Test Setup Diagram - Radiated Test < 1GHz and > 1GHz non-beamforming mode



Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	Power cable	No	1.8m
3	USB cable	Yes	0.15m

Test Setup Diagram - Radiated Test > 1GHz beamforming mode



Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	Power cable	No	1.8m
3	USB cable	Yes	0.15m
4	RJ-45 cable	No	10m



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.

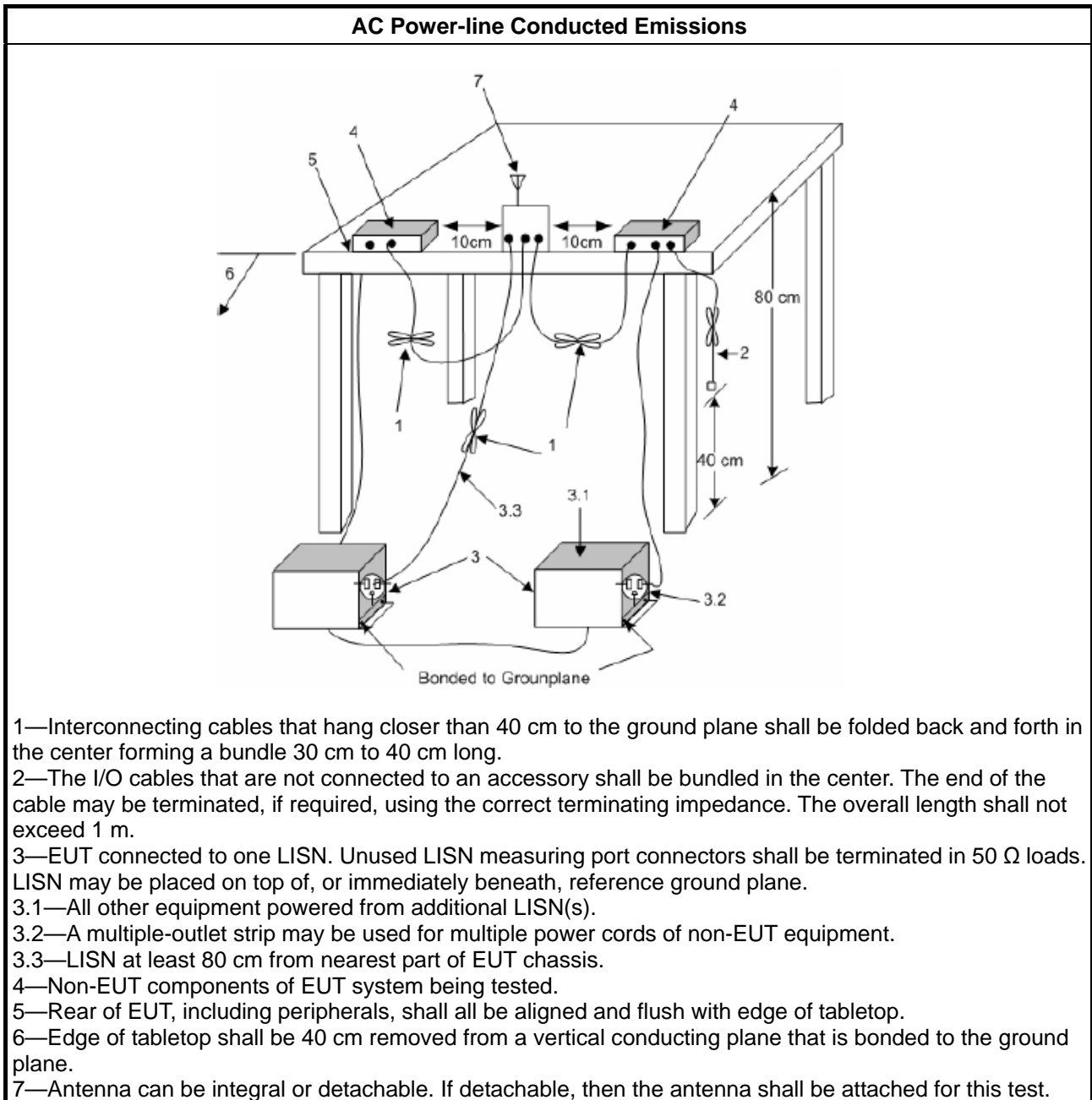
3.1.2 Measuring Instruments

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:

- a. Corrected Reading: LISN Factor (LISN) + Attenuator (AT/AUX) + Cable Loss (CL) + Read Level (Raw) = Level
- b. Margin = -Limit + Level

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.

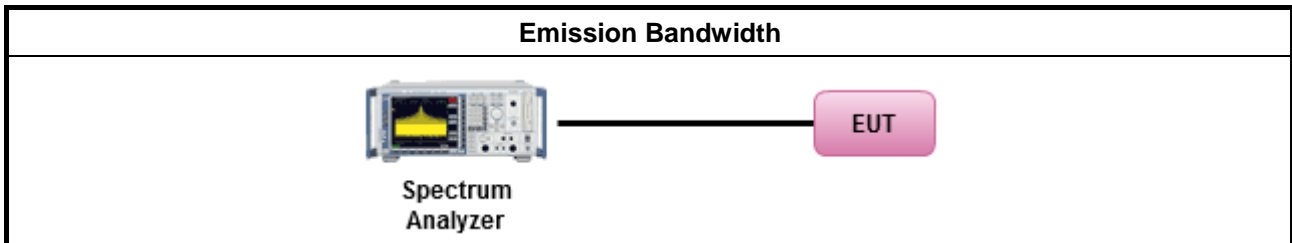
3.2.2 Measuring Instruments

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	
	<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
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

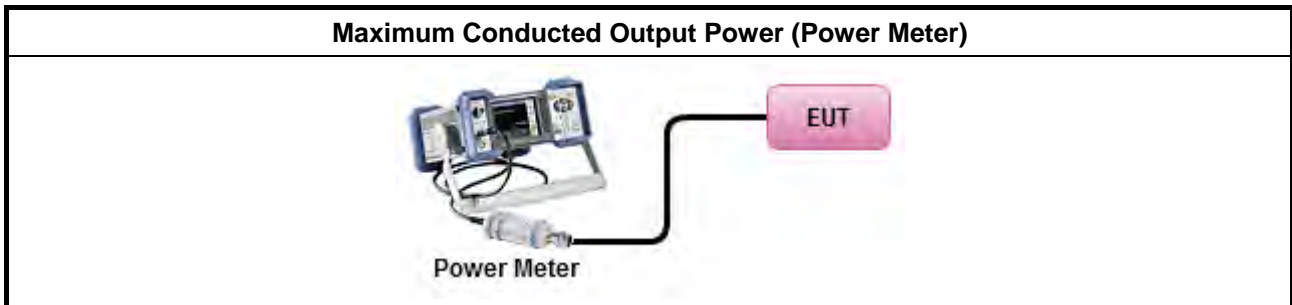
Refer a test equipment and calibration data table in this test report.



3.3.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> ▪ Maximum Peak Conducted Output Power 	
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 8.3.1.1 & C63.10 clause 11.9.1.1 (RBW ≥ 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).
<ul style="list-style-type: none"> ▪ Maximum Conducted Output Power 	
[duty cycle ≥ 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).
<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 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. 	
<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 C



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

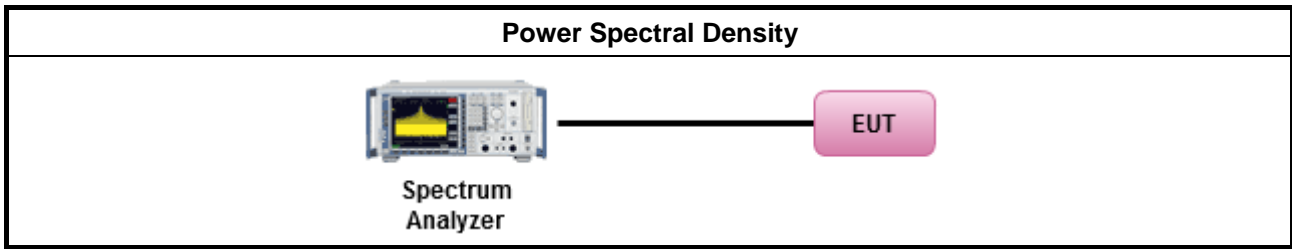
3.4.2 Measuring Instruments

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 FCC KDB 558074, clause 8.4 & C63.10 clause 11.10 Method Max. PSD.			
<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: <table border="1"> <tbody> <tr> <td> <input checked="" type="checkbox"/> Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace. </td> </tr> <tr> <td> <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, </td> </tr> <tr> <td> <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. </td> </tr> </tbody> </table> 	<input checked="" type="checkbox"/> Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.	<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.
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<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

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.

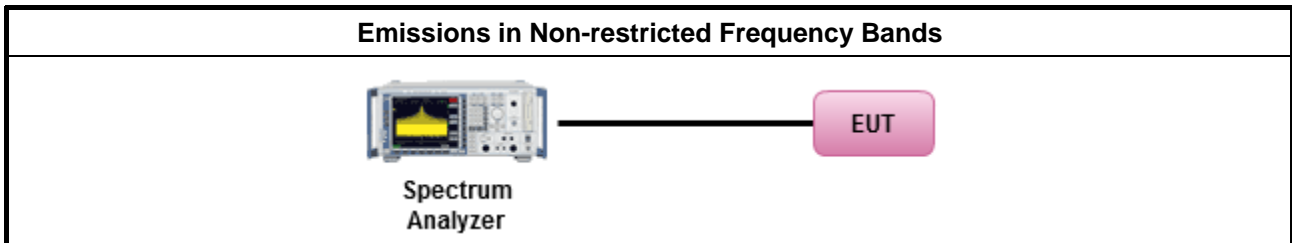
3.5.2 Measuring Instruments

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 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

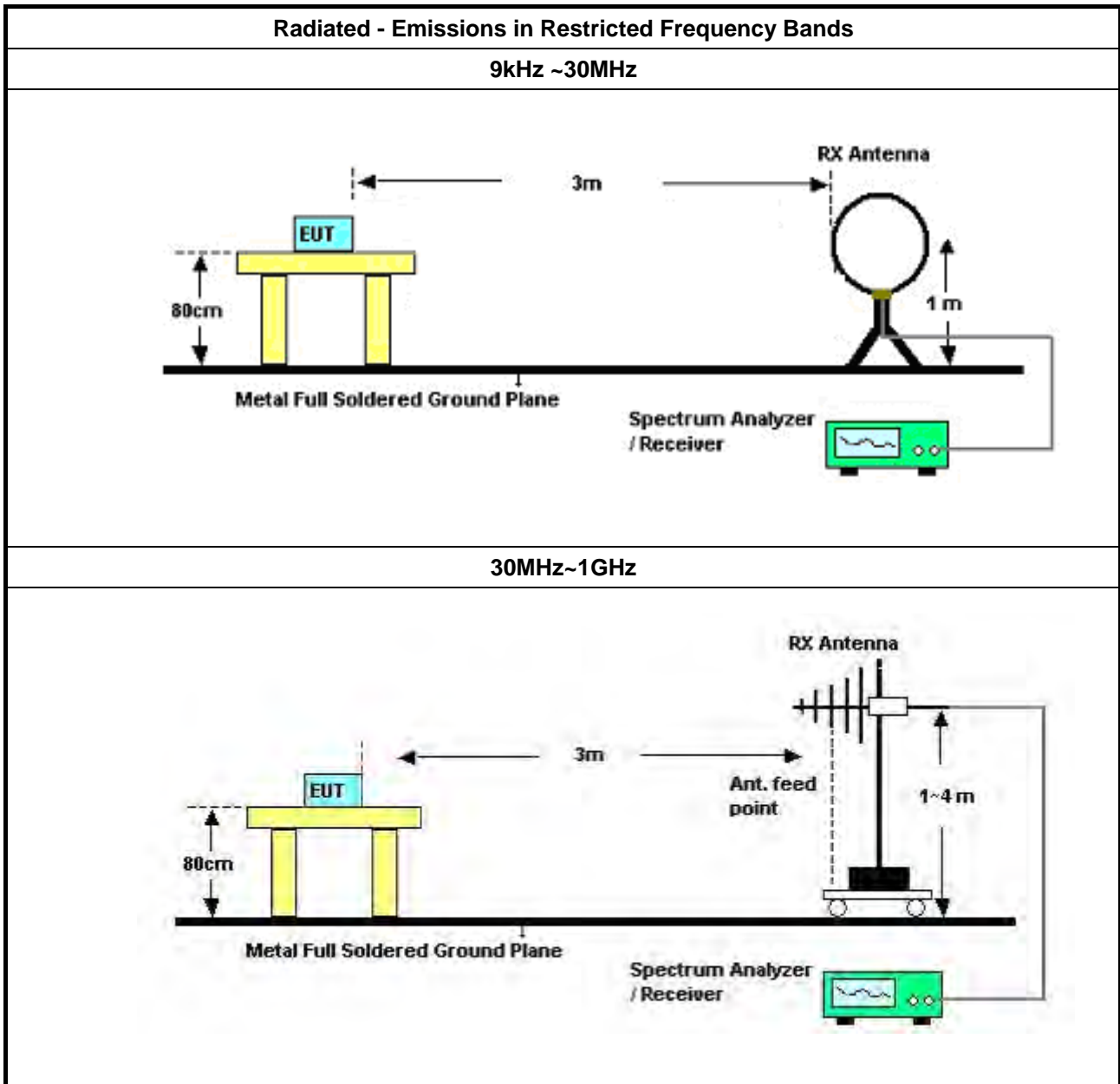
Refer a test equipment and calibration data table in this test report.

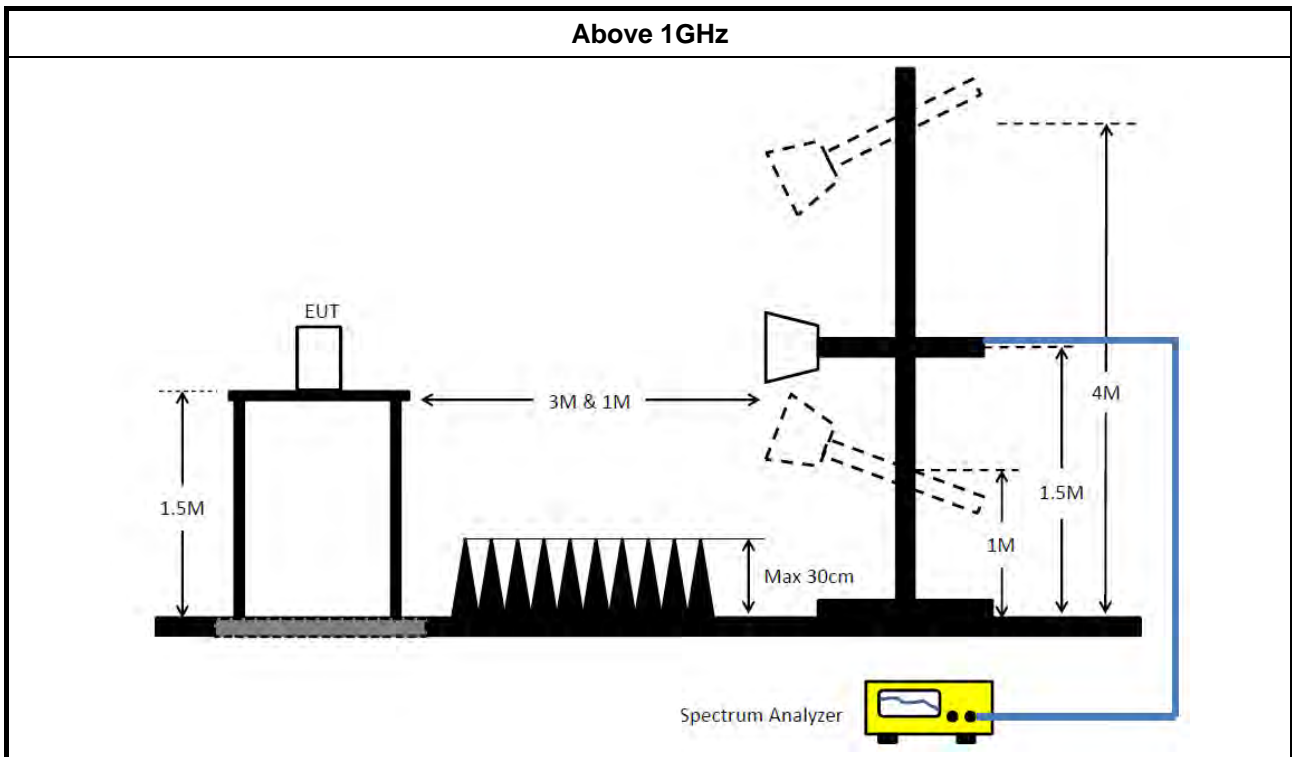


3.6.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> ▪ The average emission levels shall be measured in [duty cycle \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 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 (AF) + Cable loss (CL) + Read level (Raw) - Preamp factor (PA)(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 10th 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	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
LISN	Schwarzbeck	NSLK 8127	8127650	9kHz ~ 30MHz	Dec. 04, 2020	Dec. 03, 2021	Conduction (CO02-CB)
LISN	Schwarzbeck	NSLK 8127	8127478	9kHz ~ 30MHz	Nov. 20, 2020	Nov. 19, 2021	Conduction (CO02-CB)
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.4GHz	Mar. 03, 2021	Mar. 02, 2022	Conduction (CO02-CB)
COND Cable	Woken	Cable	2	0.15MHz ~ 30MHz	Oct. 20, 2020	Oct. 19, 2021	Conduction (CO02-CB)
Pulse Limiter	Schwarzbeck	VTSD 9561F-N	00378	9kHz ~ 30MHz	Mar. 19, 2020	Mar. 18, 2021	Conduction (CO02-CB)
Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conduction (CO02-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Apr. 13, 2020	Apr. 12, 2021	Radiation (03CH06-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH06-CB	30 MHz ~ 1 GHz	Aug. 10, 2020	Aug. 09, 2021	Radiation (03CH06-CB)
Bilog Antenna with 6 dB attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37878 & AT-N0606	20MHz ~ 2GHz	Aug. 02, 2020	Aug. 01, 2021	Radiation (03CH06-CB)
Pre-Amplifier	Agilent	310N	187290	0.1MHz ~ 1GHz	Nov. 05, 2020	Nov. 04, 2021	Radiation (03CH06-CB)
Spectrum analyzer	R&S	FSP40	100080	9kHz~40GHz	Dec. 15, 2020	Dec. 14, 2021	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	Woken	RG402	Low Cable-05+24	30MHz~1GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH06-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH06-CB)
3m Semi Anechoic Chamber VSWR	RIKEN	SAC-3M	03CH02-CB	1GHz ~18GHz 3m	Mar. 28, 2020	Mar. 27, 2021	Radiation (03CH02-CB)
Horn Antenna	EMCO	3115	9610-4976	1GHz ~ 18GHz	Apr. 21, 2020	Apr. 20, 2021	Radiation (03CH02-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 21, 2020	Jul. 20, 2021	Radiation (03CH02-CB)
Pre-Amplifier	Agilent	83017A	MY39501305	1GHz ~ 26.5GHz	Jul. 13, 2020	Jul. 12, 2021	Radiation (03CH02-CB)
Pre-Amplifier	MITEQ	TTA1840-35-H G	1864479	18GHz ~ 40GHz	Jul. 08, 2020	Jul. 07, 2021	Radiation (03CH02-CB)
Spectrum analyzer	R&S	FSU	100015	9kHz~26GHz	Oct. 15, 2020	Oct. 14, 2021	Radiation (03CH02-CB)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-18	1GHz ~ 18GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-18+19	1GHz ~ 18GHz	Oct. 05, 2020	Oct. 04, 2021	Radiation (03CH02-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 16, 2020	Jul. 15, 2021	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 16, 2020	Jul. 15, 2021	Radiation (03CH02-CB)
Spectrum analyzer	R&S	FSV40	101027	9kHz~40GHz	Jul. 27, 2020	Jul. 26, 2021	Conducted (TH02-CB)
Power Sensor	Anritsu	MA2411B	1126203	300MHz~40GHz	Sep. 17, 2020	Sep. 16, 2021	Conducted (TH02-CB)
Power Meter	Anritsu	ML2495A	1210004	300MHz~40GHz	Sep. 17, 2020	Sep. 16, 2021	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-01	1 GHz – 18 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-02	1 GHz – 18 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-03	1 GHz – 18 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-04	1 GHz – 18 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-05	1 GHz – 18 GHz	Oct. 05, 2020	Oct. 04, 2021	Conducted (TH02-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conducted (TH02-CB)

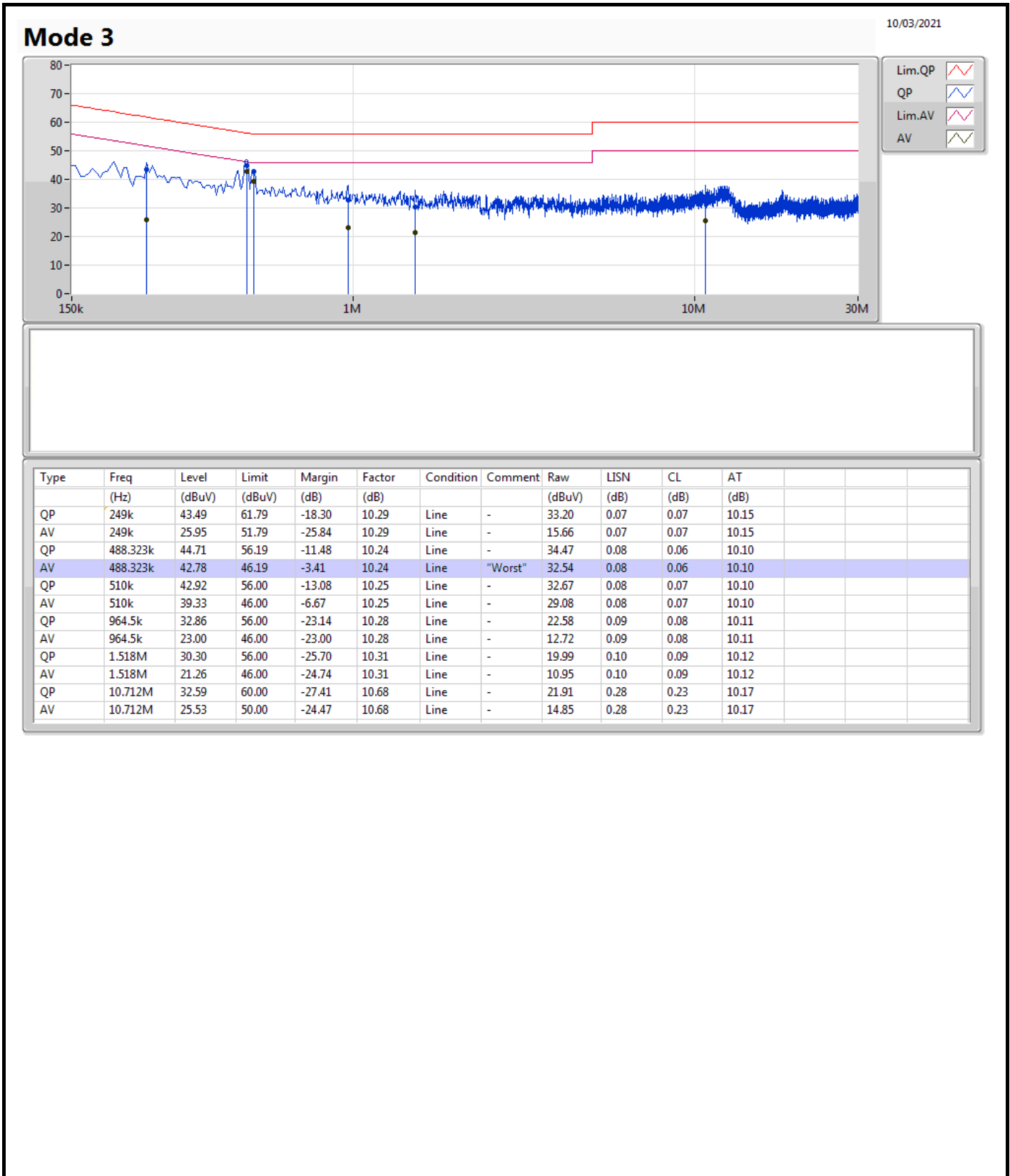
Note: Calibration Interval of instruments listed above is one year.

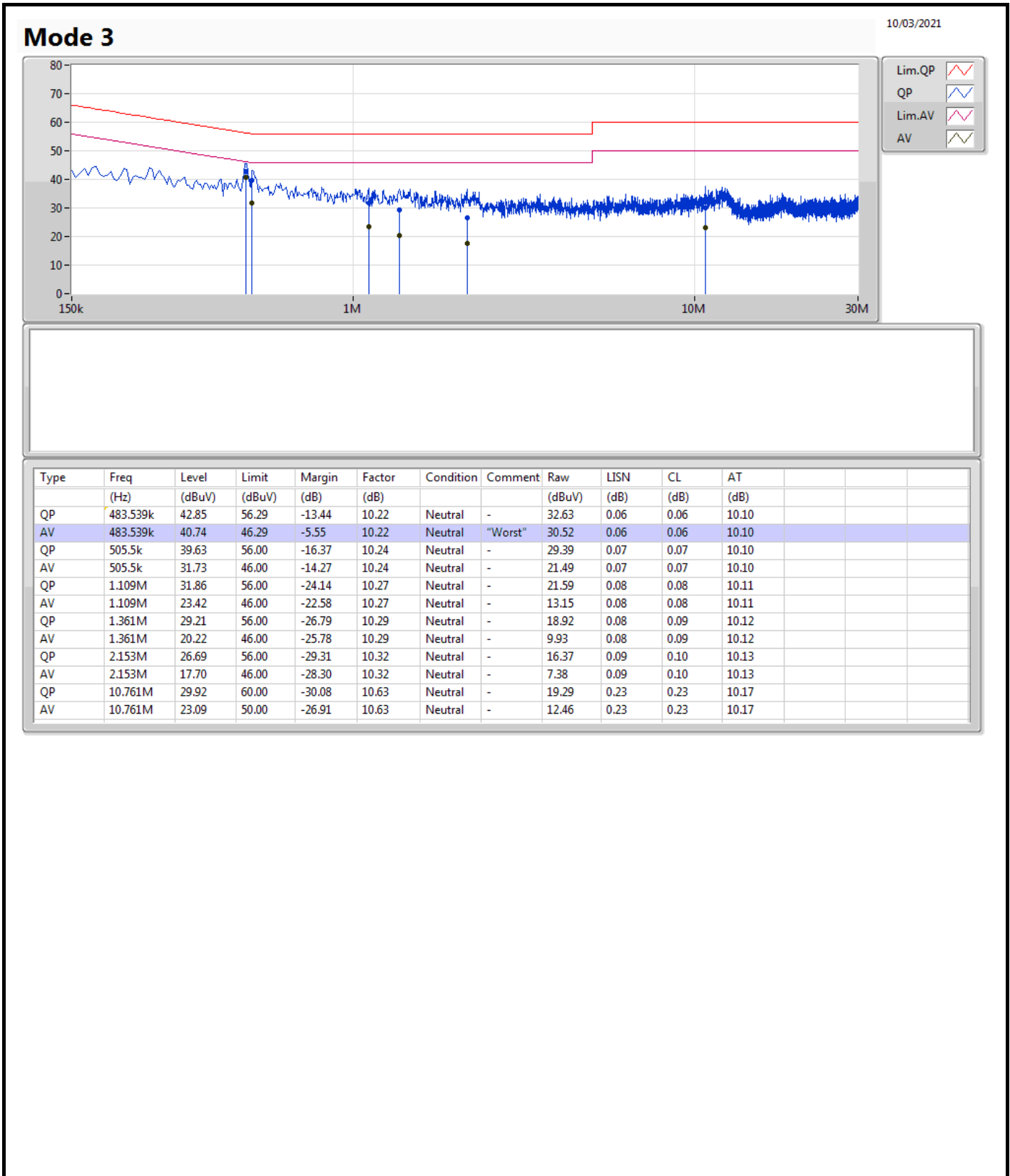
N.C.R. means Non-Calibration required.



Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 3	Pass	AV	488.323k	42.78	46.19	-3.41	Line







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)_2TX	10.025M	14.668M	14M7G1D	9.975M	13.518M
802.11g_Nss1,(6Mbps)_2TX	16.3M	22.289M	22M3D1D	16.275M	16.467M
802.11ax HEW20_Nss1,(MCS0)_2TX	18.8M	23.238M	23M2D1D	17.125M	17.641M

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

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

Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	10.025M	13.518M	9.975M	13.518M
2437MHz	Pass	500k	10.025M	14.468M	10.025M	14.668M
2462MHz	Pass	500k	10M	13.918M	10M	13.918M
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	16.3M	16.542M	16.3M	16.467M
2437MHz	Pass	500k	16.3M	22.164M	16.3M	22.289M
2462MHz	Pass	500k	16.275M	16.542M	16.3M	16.492M
802.11ax HEW20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	17.125M	17.666M	17.575M	17.641M
2437MHz	Pass	500k	18.8M	23.238M	17.925M	23.038M
2462MHz	Pass	500k	18.6M	18.891M	18.625M	18.891M

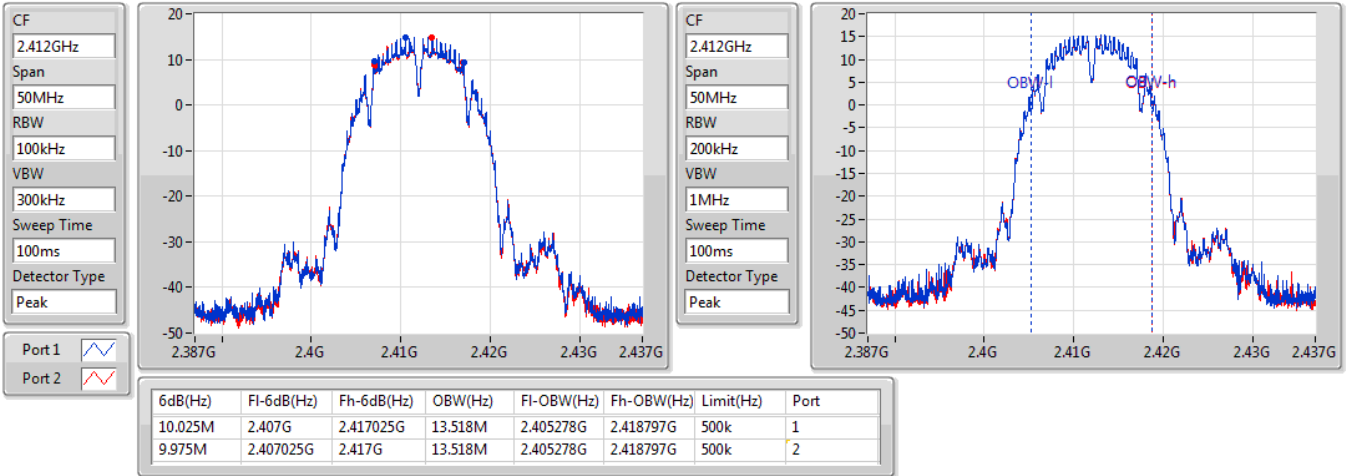
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

802.11b_Nss1,(1Mbps)_2TX

EBW

2412MHz

26/10/2020

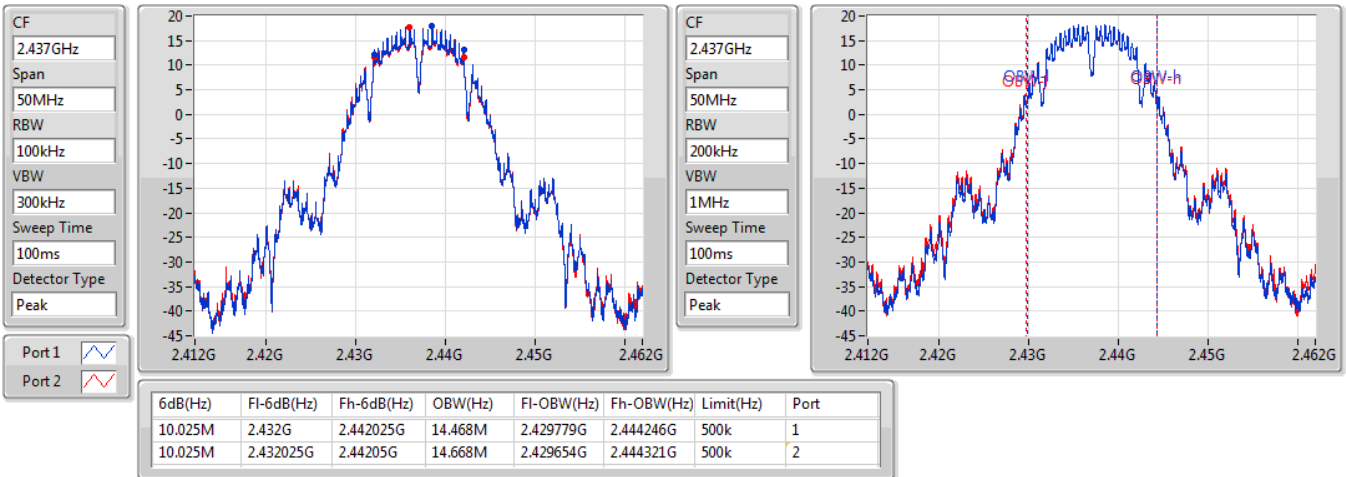


802.11b_Nss1,(1Mbps)_2TX

EBW

2437MHz

26/10/2020

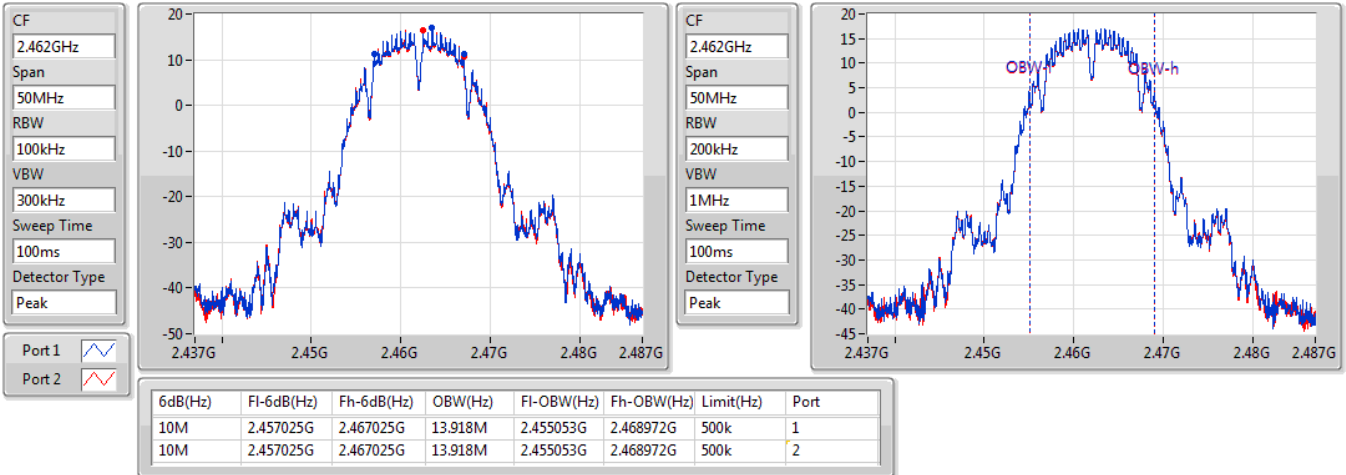


802.11b_Nss1,(1Mbps)_2TX

EBW

2462MHz

26/10/2020

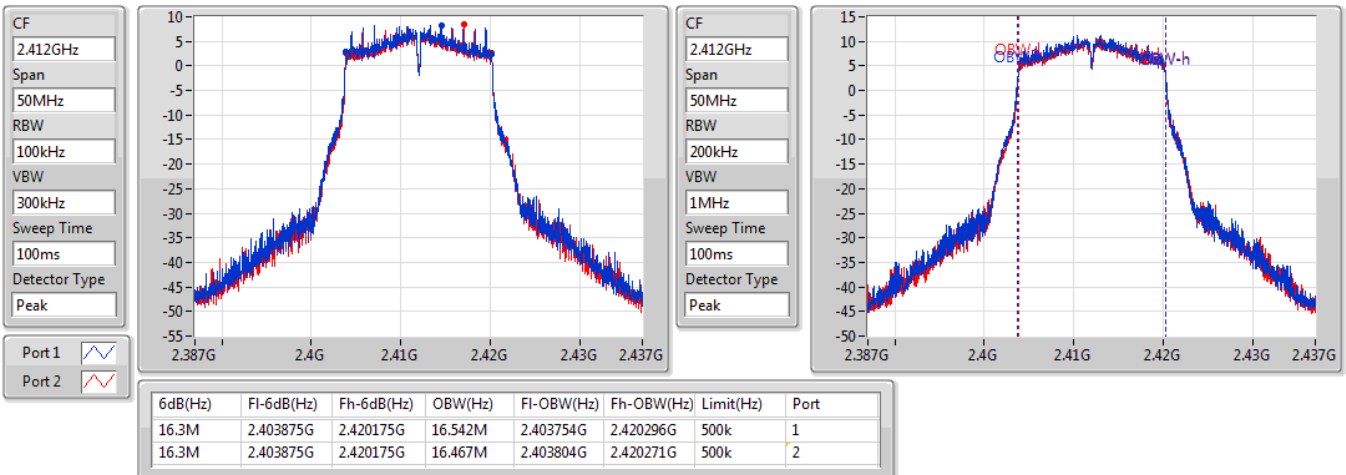


802.11g_Nss1,(6Mbps)_2TX

EBW

2412MHz

26/10/2020

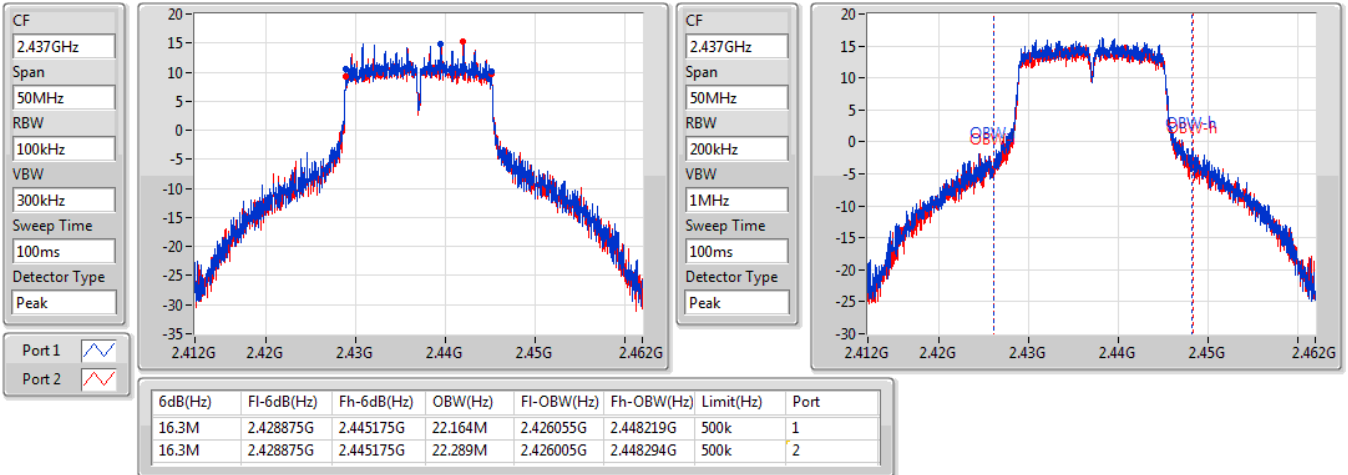


802.11g_Nss1,(6Mbps)_2TX

EBW

2437MHz

26/10/2020

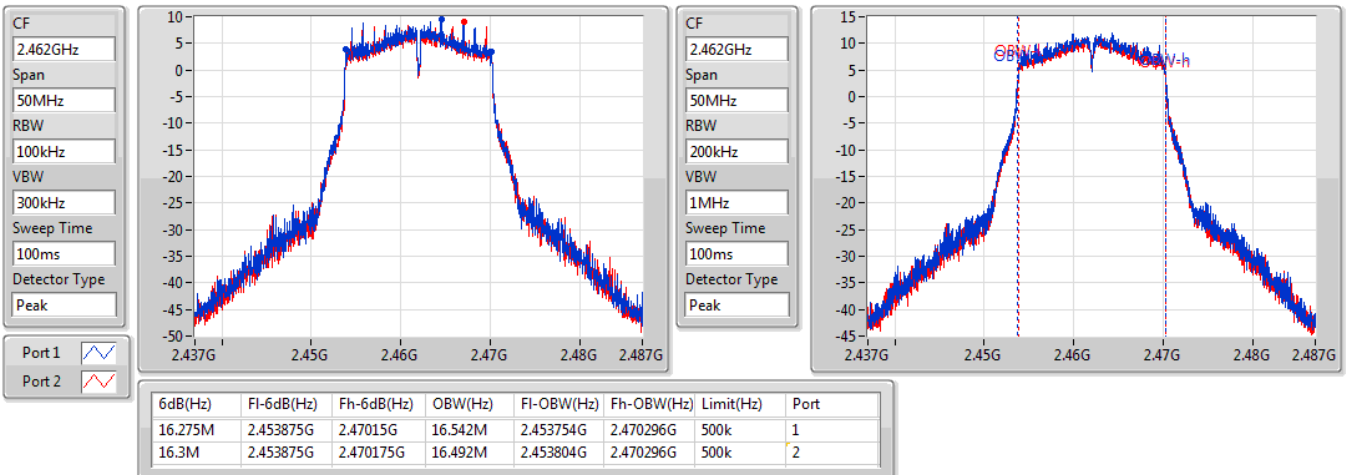


802.11g_Nss1,(6Mbps)_2TX

EBW

2462MHz

26/10/2020



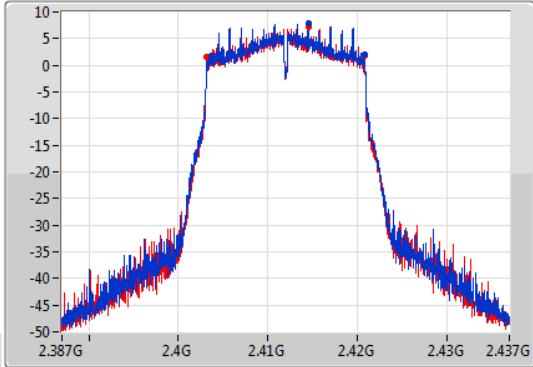
802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

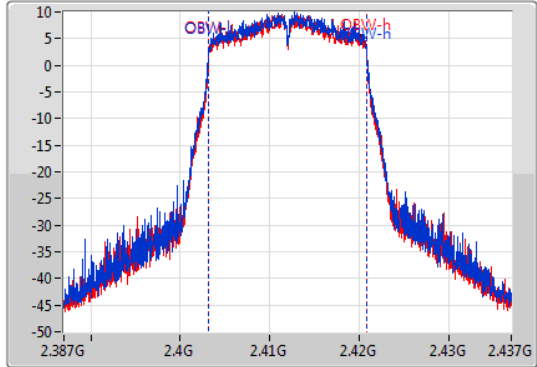
2412MHz

26/10/2020

CF
2.412GHz
Span
50MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak



CF
2.412GHz
Span
50MHz
RBW
200kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Peak



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.125M	2.40365G	2.420775G	17.666M	2.403204G	2.420871G	500k	1
17.575M	2.403225G	2.4208G	17.641M	2.403204G	2.420846G	500k	2

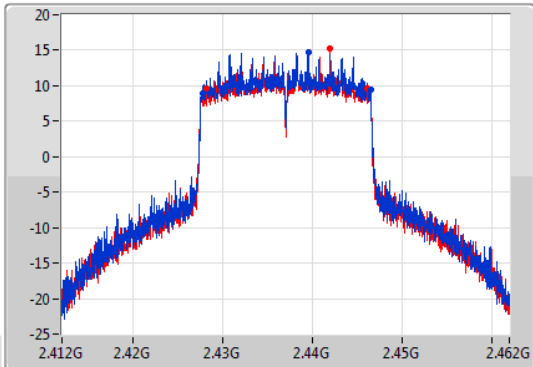
802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

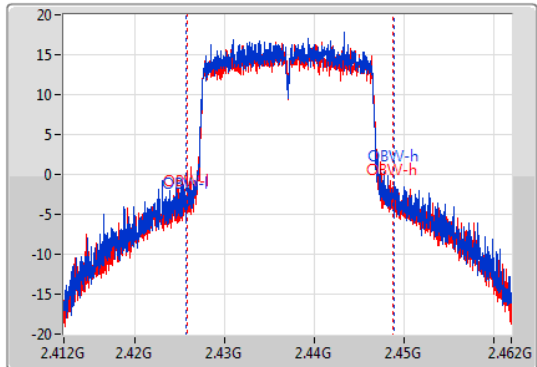
2437MHz

26/10/2020

CF
2.437GHz
Span
50MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak



CF
2.437GHz
Span
50MHz
RBW
200kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Peak



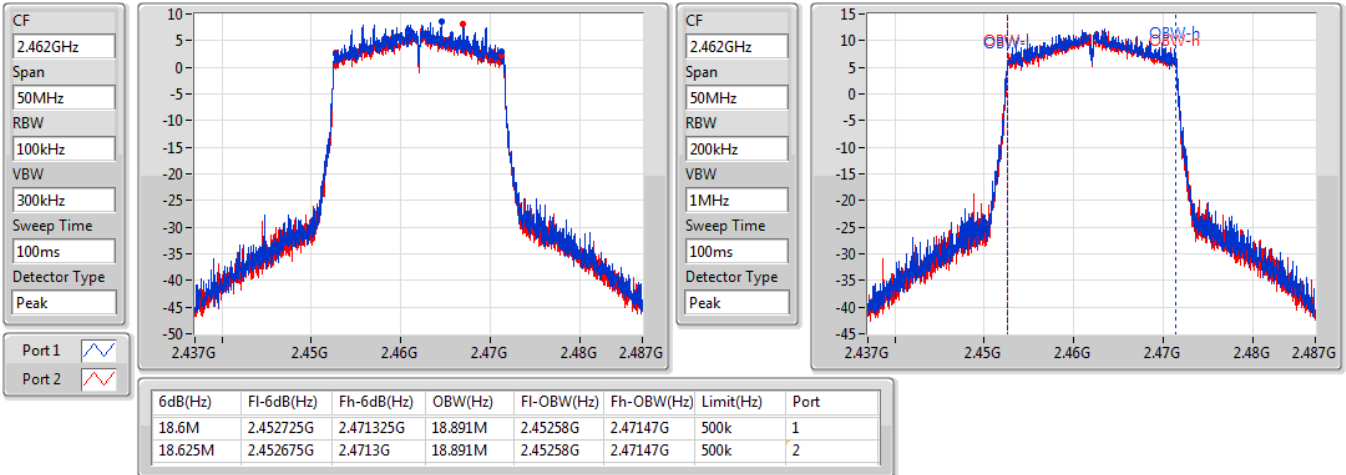
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.8M	2.4277G	2.4465G	23.238M	2.425656G	2.448894G	500k	1
17.925M	2.428175G	2.4461G	23.038M	2.425756G	2.448794G	500k	2

802.11ax HEW20_Nss1,(MCS0)_2TX

EBW

2462MHz

26/10/2020



Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.11n HT20-BF_Nss1,(MCS0)_2TX	17.6M	18.641M	18M6D1D	16.55M	17.641M

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

Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11n HT20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	17.3M	17.691M	17.5M	17.641M
2437MHz	Pass	500k	17.55M	18.516M	17.6M	18.641M
2462MHz	Pass	500k	16.55M	17.691M	17.175M	17.641M

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

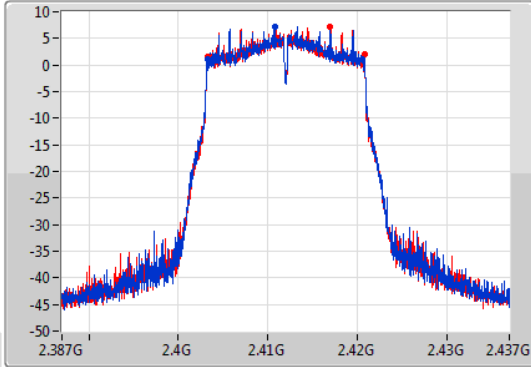
802.11n HT20-BF_Nss1,(MCS0)_2TX

EBW

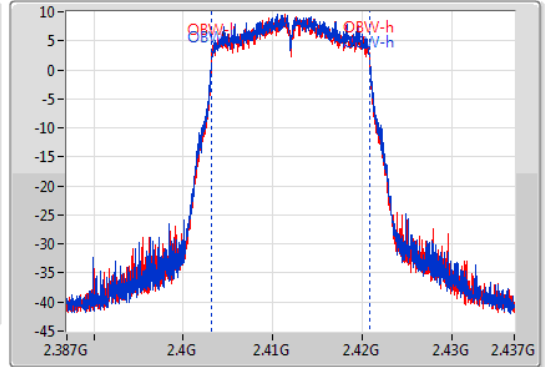
2412MHz

04/11/2020

CF
2.412GHz
Span
50MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak



CF
2.412GHz
Span
50MHz
RBW
200kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Peak



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.3M	2.40325G	2.42055G	17.691M	2.403179G	2.420871G	500k	1
17.5M	2.403275G	2.420775G	17.641M	2.403204G	2.420846G	500k	2

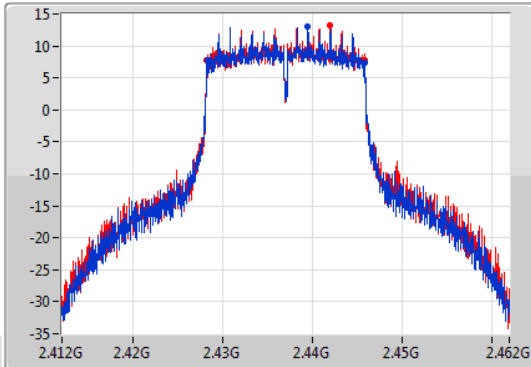
802.11n HT20-BF_Nss1,(MCS0)_2TX

EBW

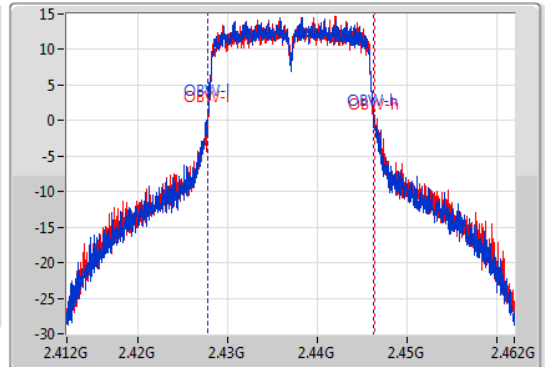
2437MHz

04/11/2020

CF
2.437GHz
Span
50MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak



CF
2.437GHz
Span
50MHz
RBW
200kHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Peak





6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.55M	2.42825G	2.4458G	18.516M	2.427805G	2.44632G	500k	1
17.6M	2.428225G	2.445825G	18.641M	2.427805G	2.446445G	500k	2

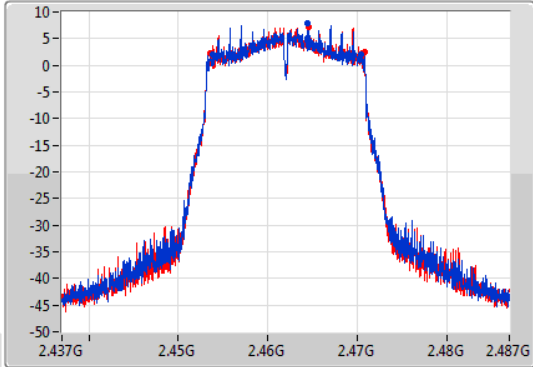
802.11n HT20-BF_Nss1,(MCS0)_2TX

EBW

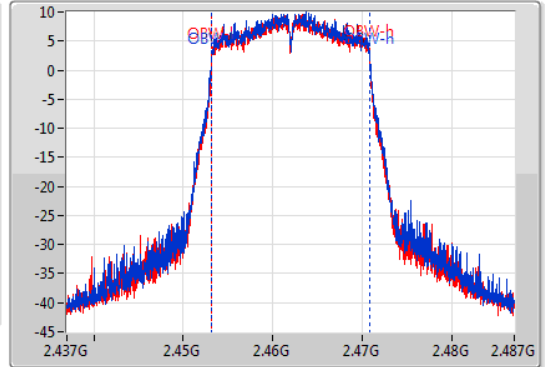
2462MHz

04/11/2020

CF
2.462GHz
Span
50MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak
Port 1 
Port 2 



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



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.55M	2.453875G	2.470425G	17.691M	2.453179G	2.470871G	500k	1
17.175M	2.453625G	2.4708G	17.641M	2.453204G	2.470846G	500k	2



Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_2TX	29.89	0.97499
802.11g_Nss1,(6Mbps)_2TX	28.83	0.76384
802.11ax HEW20_Nss1,(MCS0)_2TX	28.82	0.76208



Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	2.987	24.18	24.01	27.11	30.00
2417MHz	Pass	2.987	25.40	25.44	28.43	30.00
2437MHz	Pass	2.987	26.87	26.88	29.89	30.00
2462MHz	Pass	2.987	25.60	25.47	28.55	30.00
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	2.987	20.27	19.96	23.13	30.00
2417MHz	Pass	2.987	22.83	22.43	25.64	30.00
2437MHz	Pass	2.987	25.91	25.73	28.83	30.00
2457MHz	Pass	2.987	23.68	23.07	26.40	30.00
2462MHz	Pass	2.987	20.83	20.51	23.68	30.00
802.11ax HEW20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	2.987	19.15	19.03	22.10	30.00
2417MHz	Pass	2.987	22.54	22.15	25.36	30.00
2437MHz	Pass	2.987	25.96	25.66	28.82	30.00
2457MHz	Pass	2.987	22.31	21.83	25.09	30.00
2462MHz	Pass	2.987	20.09	19.65	22.89	30.00

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



Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11n HT20-BF_Nss1,(MCS0)_2TX	27.63	0.57943



Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11n HT20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	4.720	19.13	19.01	22.08	30.00
2417MHz	Pass	4.720	20.99	20.44	23.73	30.00
2437MHz	Pass	4.720	24.48	24.76	27.63	30.00
2457MHz	Pass	4.720	21.72	21.46	24.60	30.00
2462MHz	Pass	4.720	19.57	19.19	22.39	30.00

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



Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_2TX	5.05
802.11g_Nss1,(6Mbps)_2TX	2.23
802.11ax HEW20_Nss1,(MCS0)_2TX	1.61

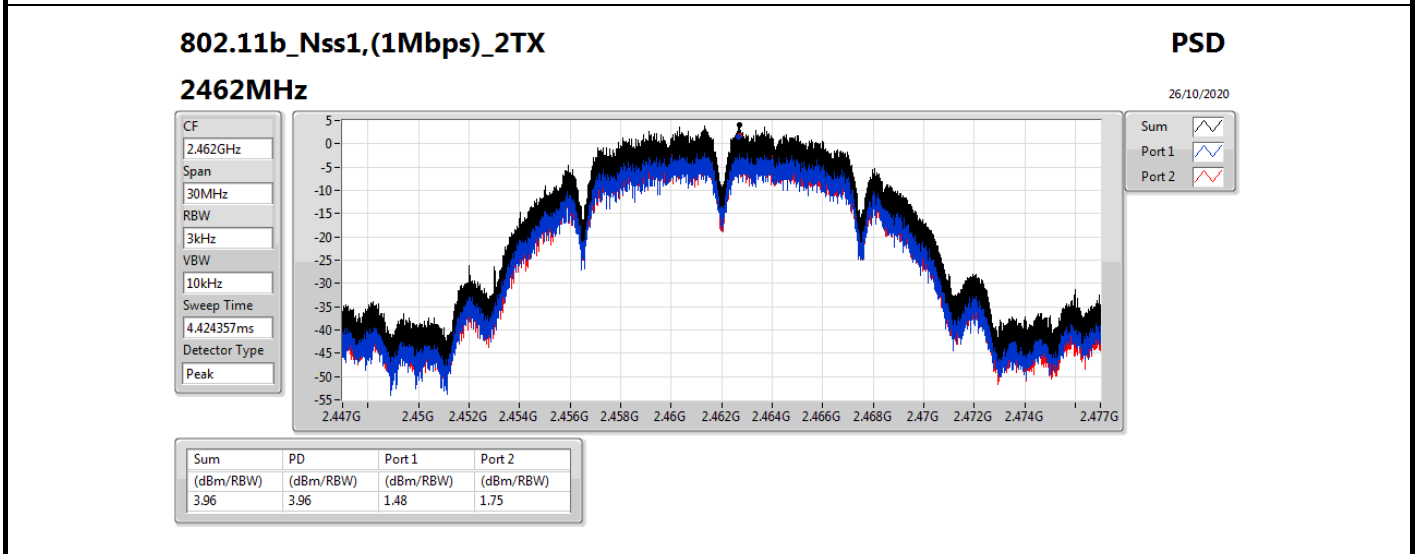
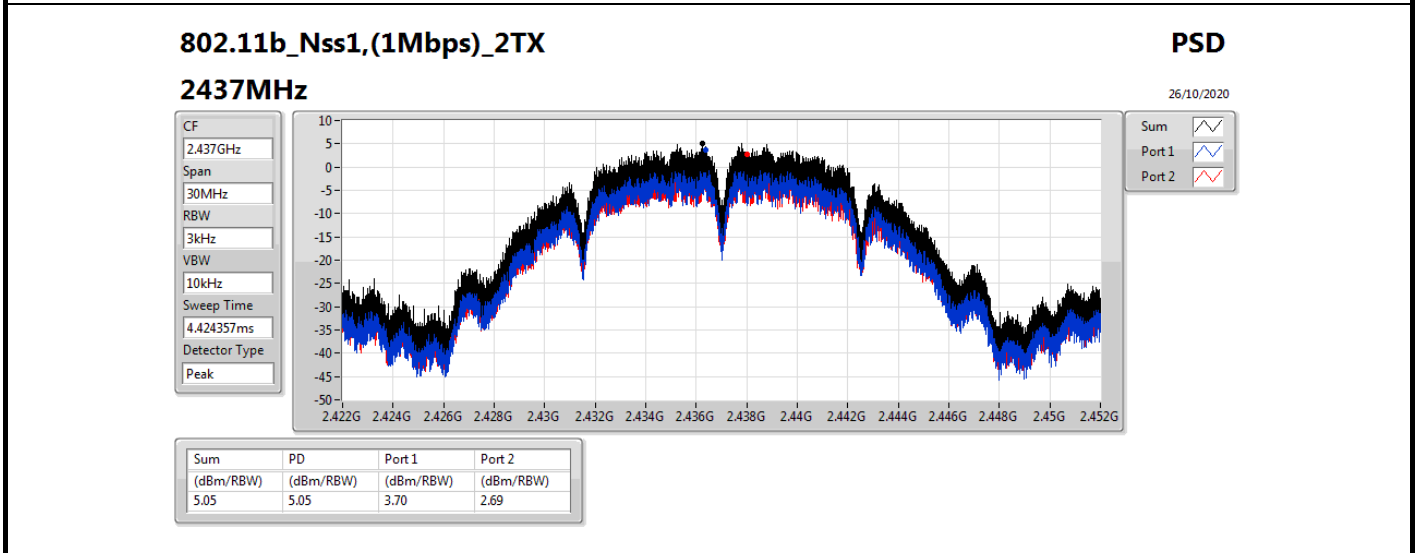
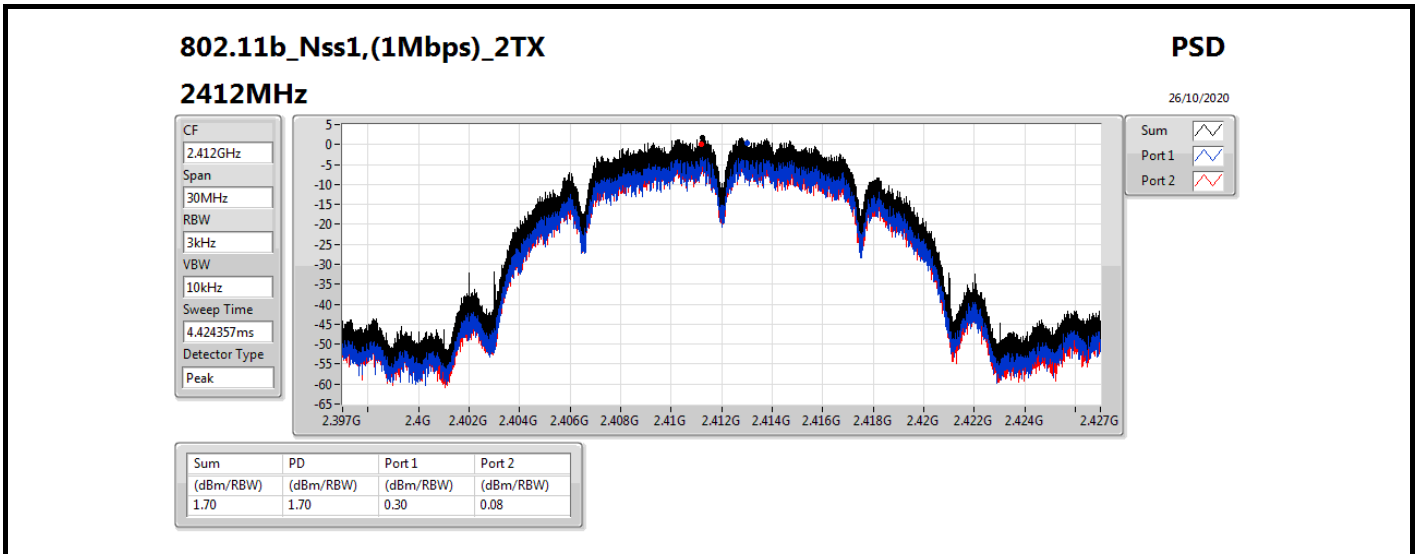
RBW = 500 kHz for 5.725-5.85GHz band / 1MHz for other band;

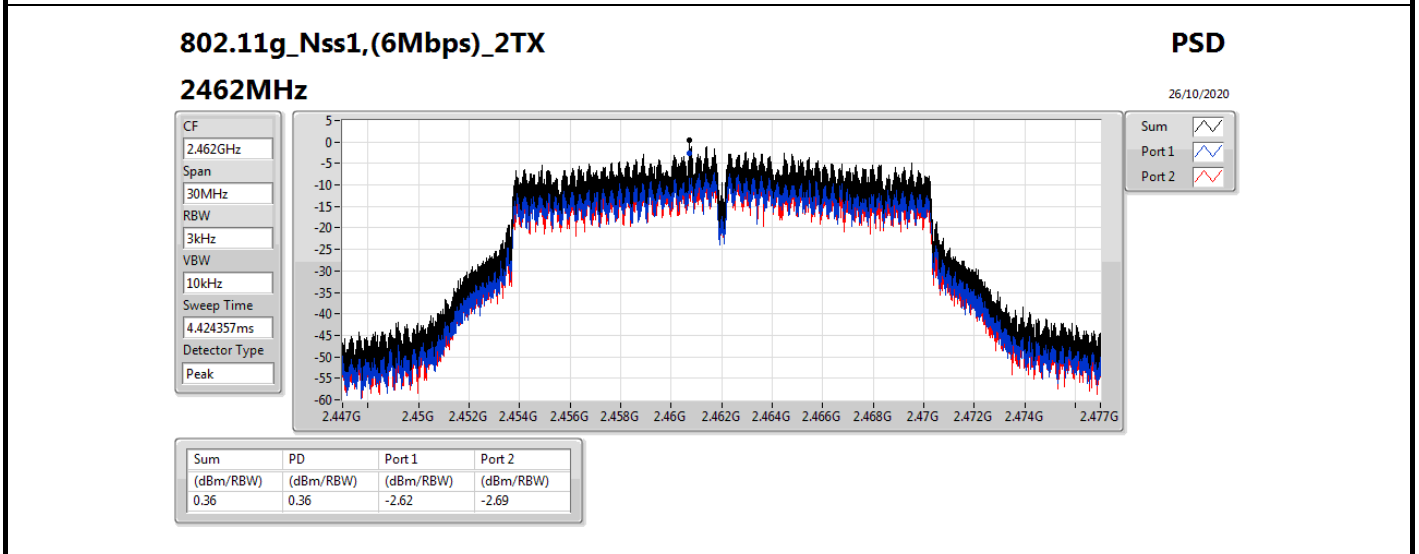
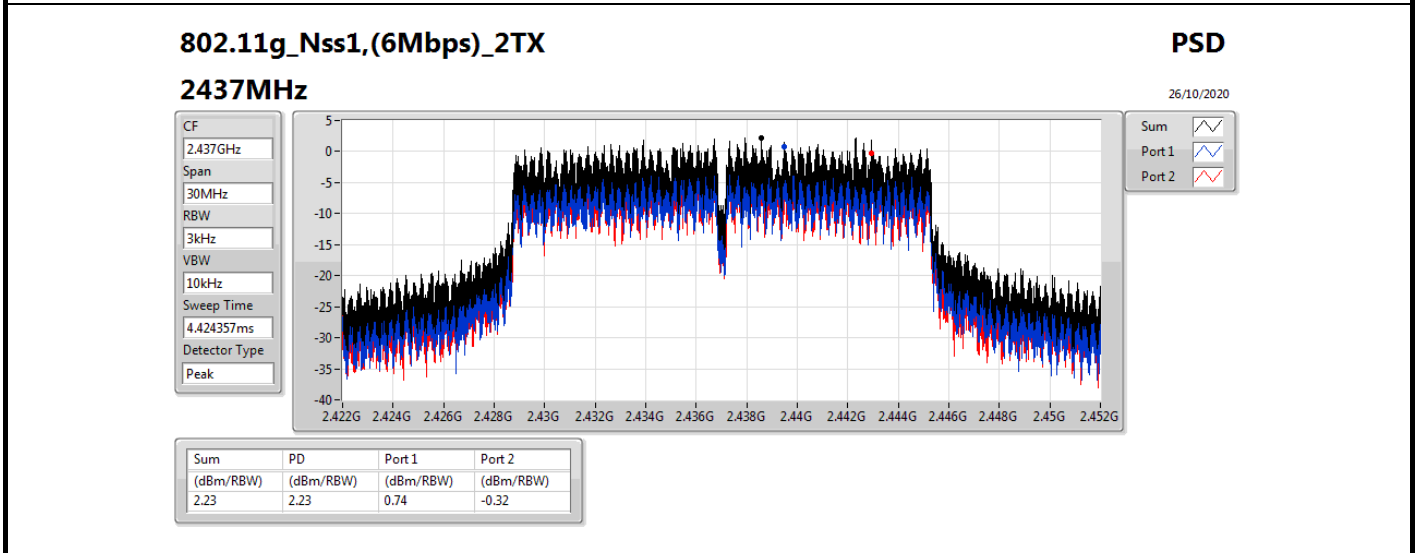
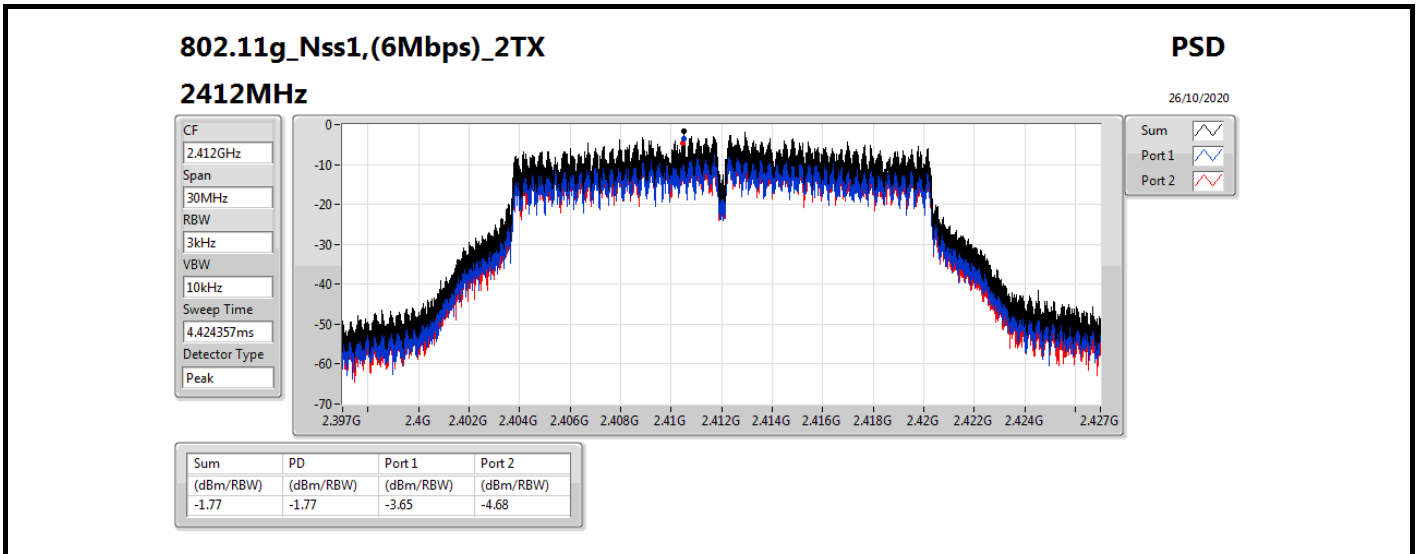
Result

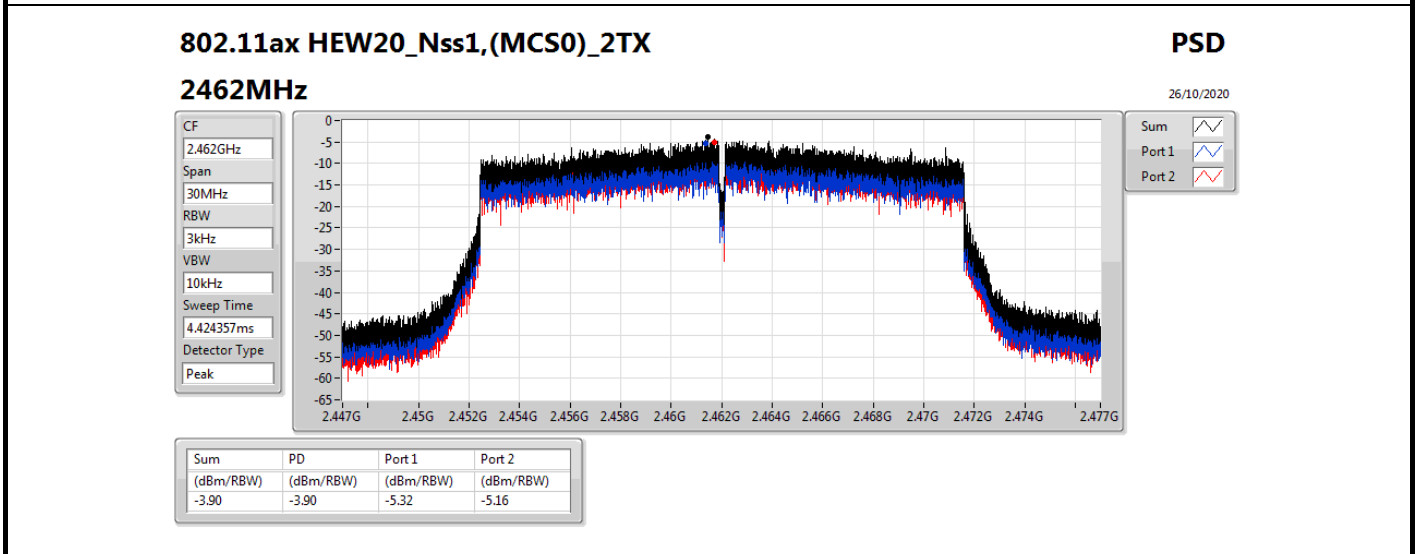
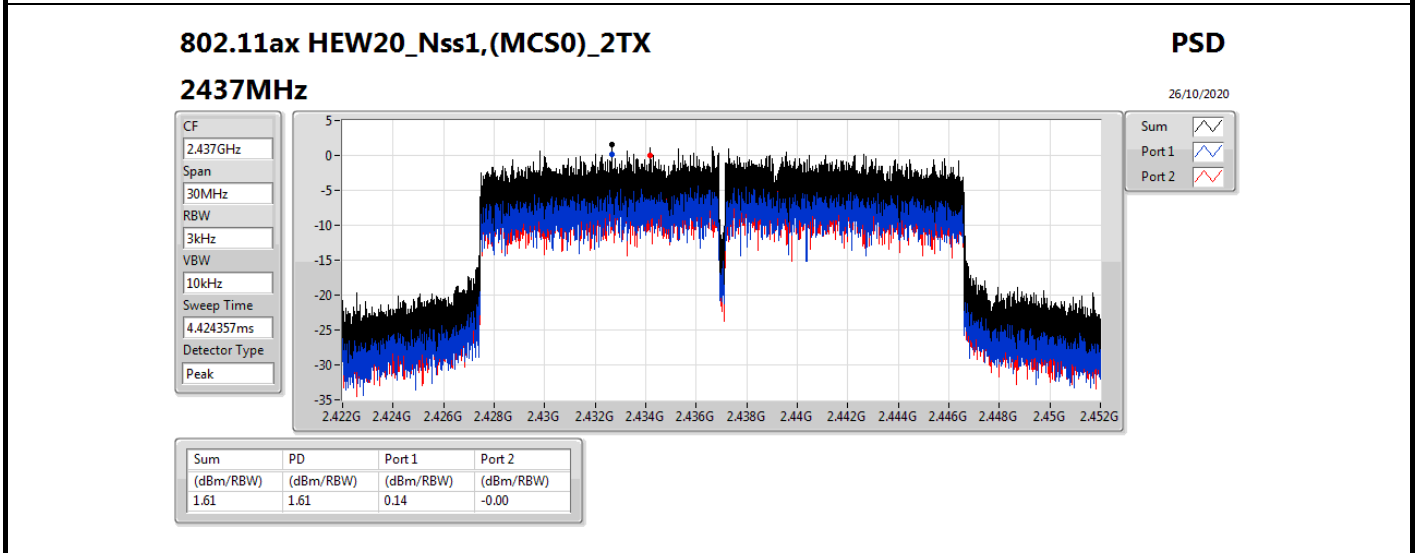
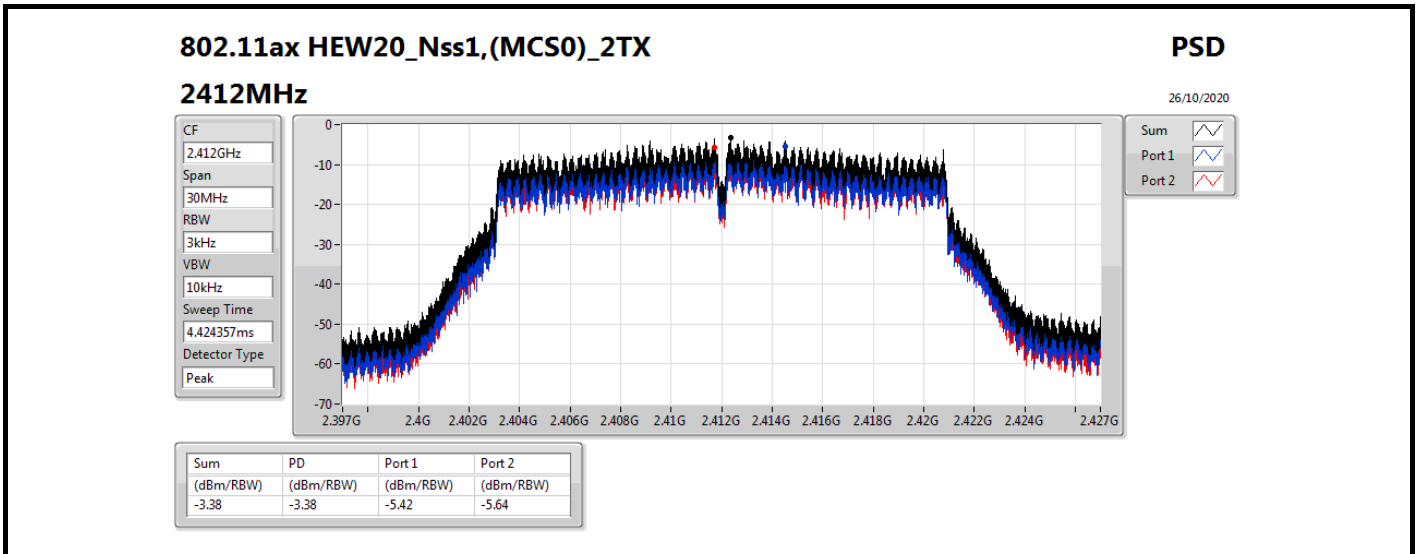
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	4.720	0.30	0.08	1.70	8.00
2437MHz	Pass	4.720	3.70	2.69	5.05	8.00
2462MHz	Pass	4.720	1.48	1.75	3.96	8.00
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	4.720	-3.65	-4.68	-1.77	8.00
2437MHz	Pass	4.720	0.74	-0.32	2.23	8.00
2462MHz	Pass	4.720	-2.62	-2.69	0.36	8.00
802.11ax HEW20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	4.720	-5.42	-5.64	-3.38	8.00
2437MHz	Pass	4.720	0.14	-0.00	1.61	8.00
2462MHz	Pass	4.720	-5.32	-5.16	-3.90	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;









Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11n HT20-BF_Nss1,(MCS0)_2TX	1.05

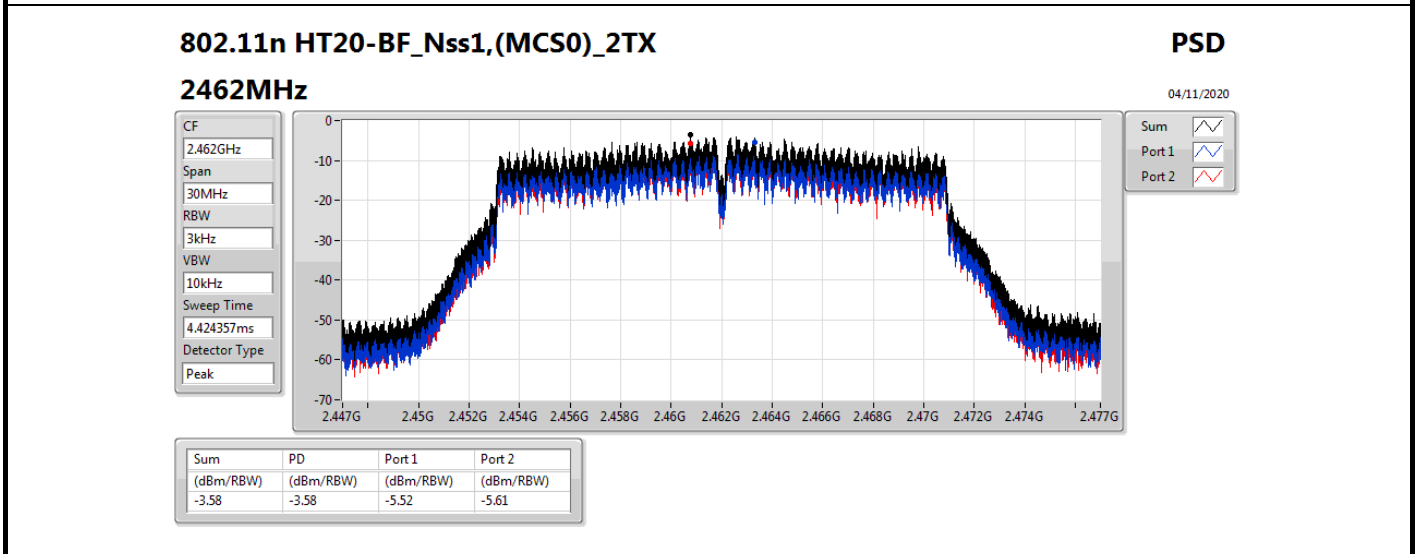
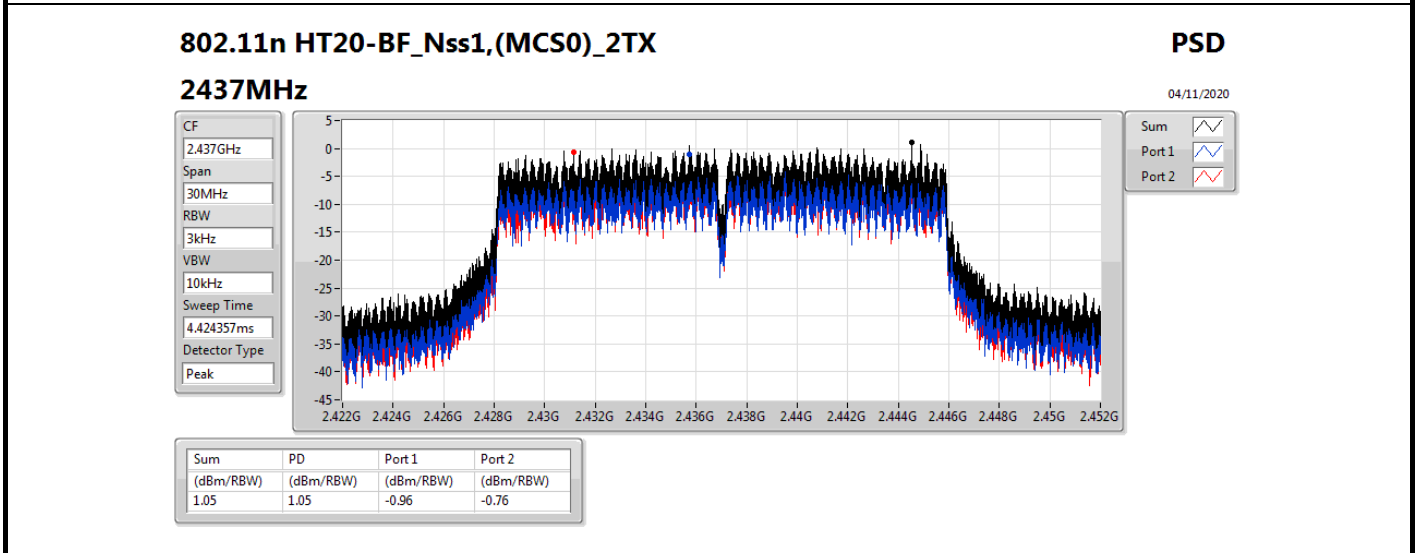
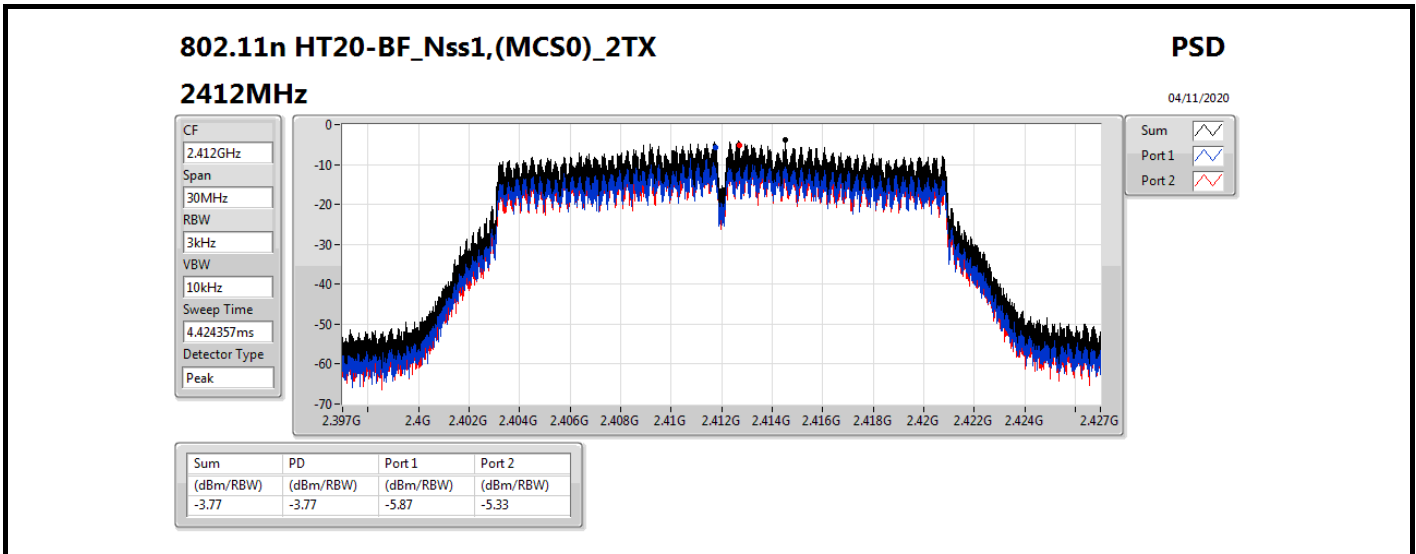
RBW = 500 kHz for 5.725-5.85GHz band / 1MHz for other band;

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11n HT20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	4.720	-5.87	-5.33	-3.77	8.00
2437MHz	Pass	4.720	-0.96	-0.76	1.05	8.00
2462MHz	Pass	4.720	-5.52	-5.61	-3.58	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;



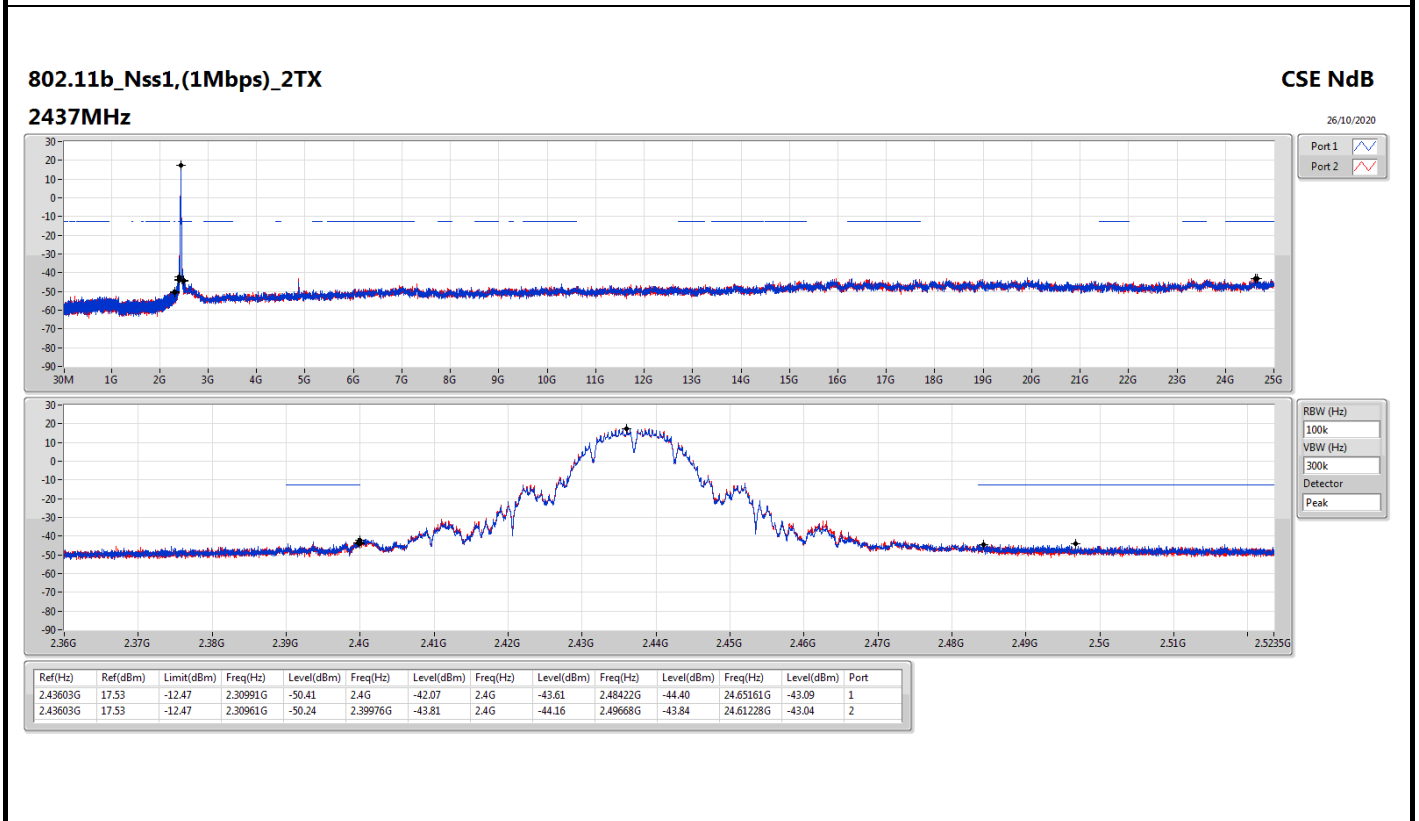
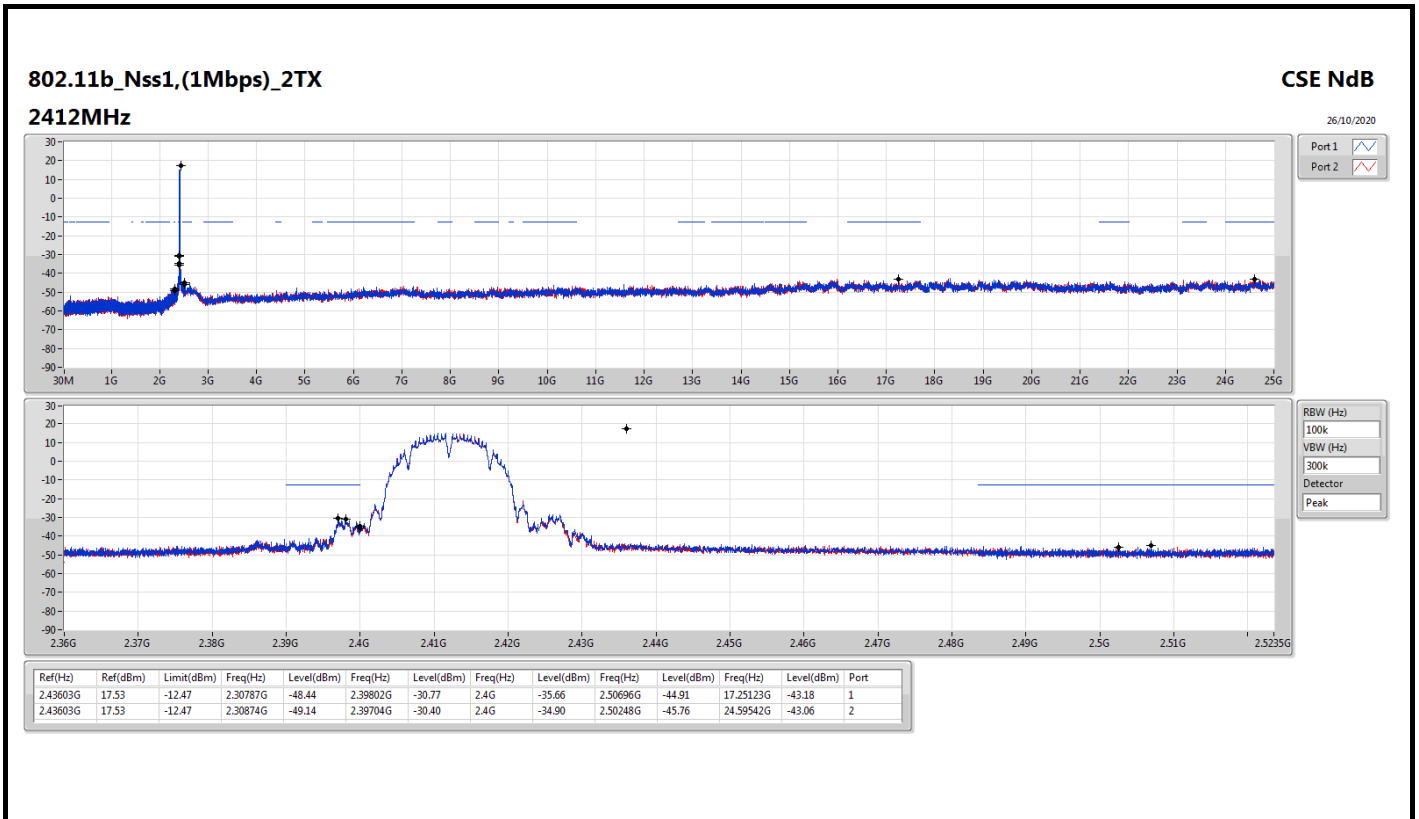


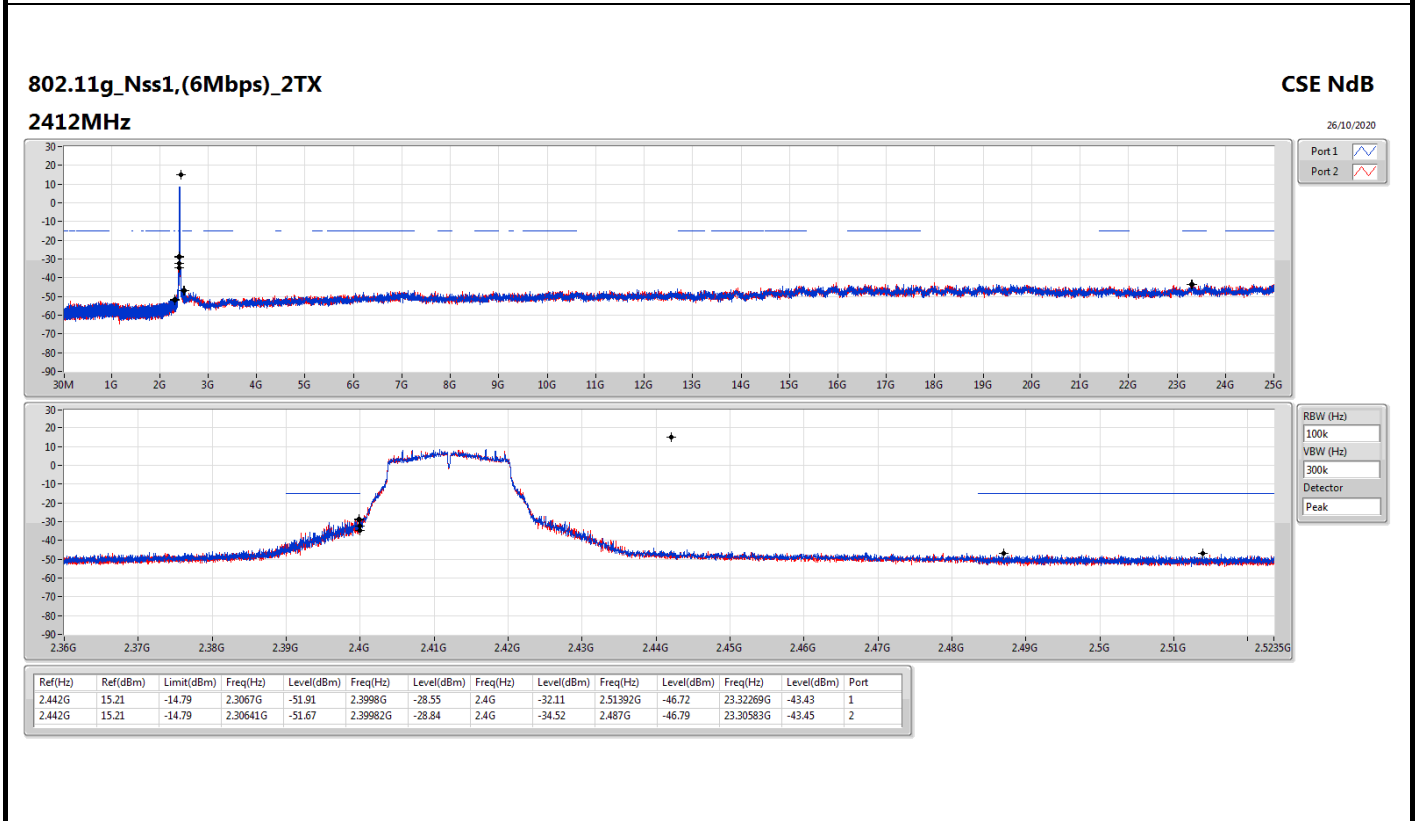
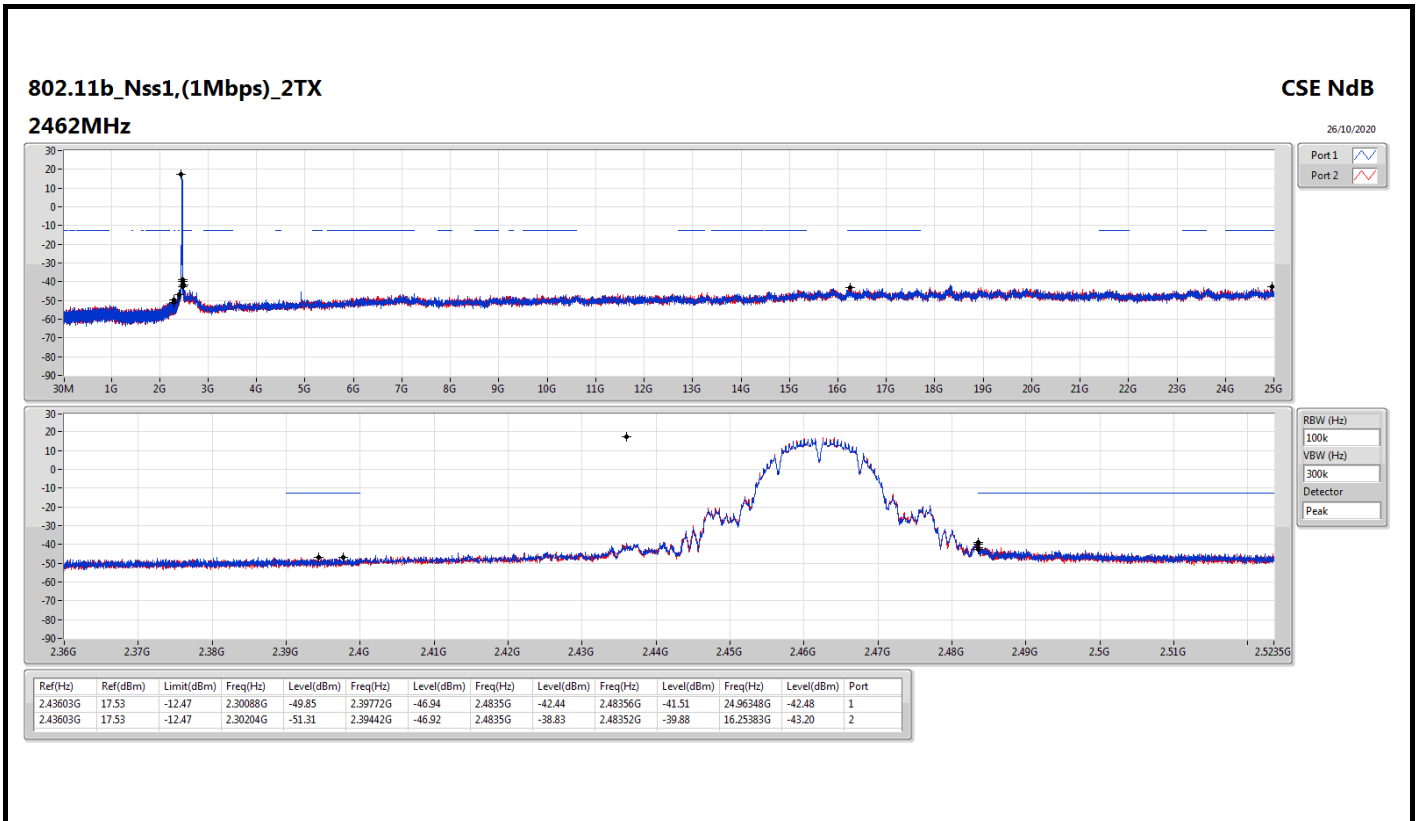
Summary

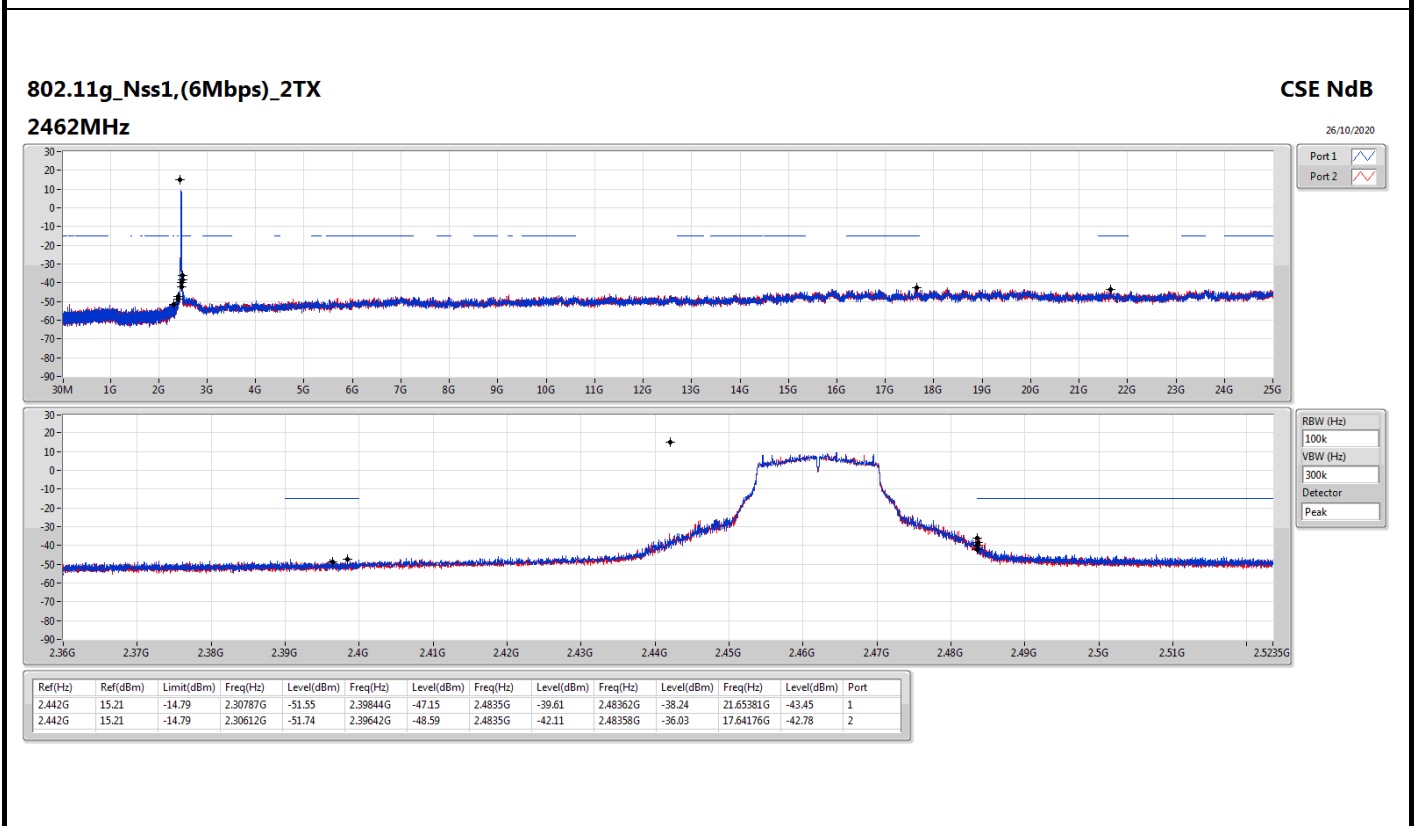
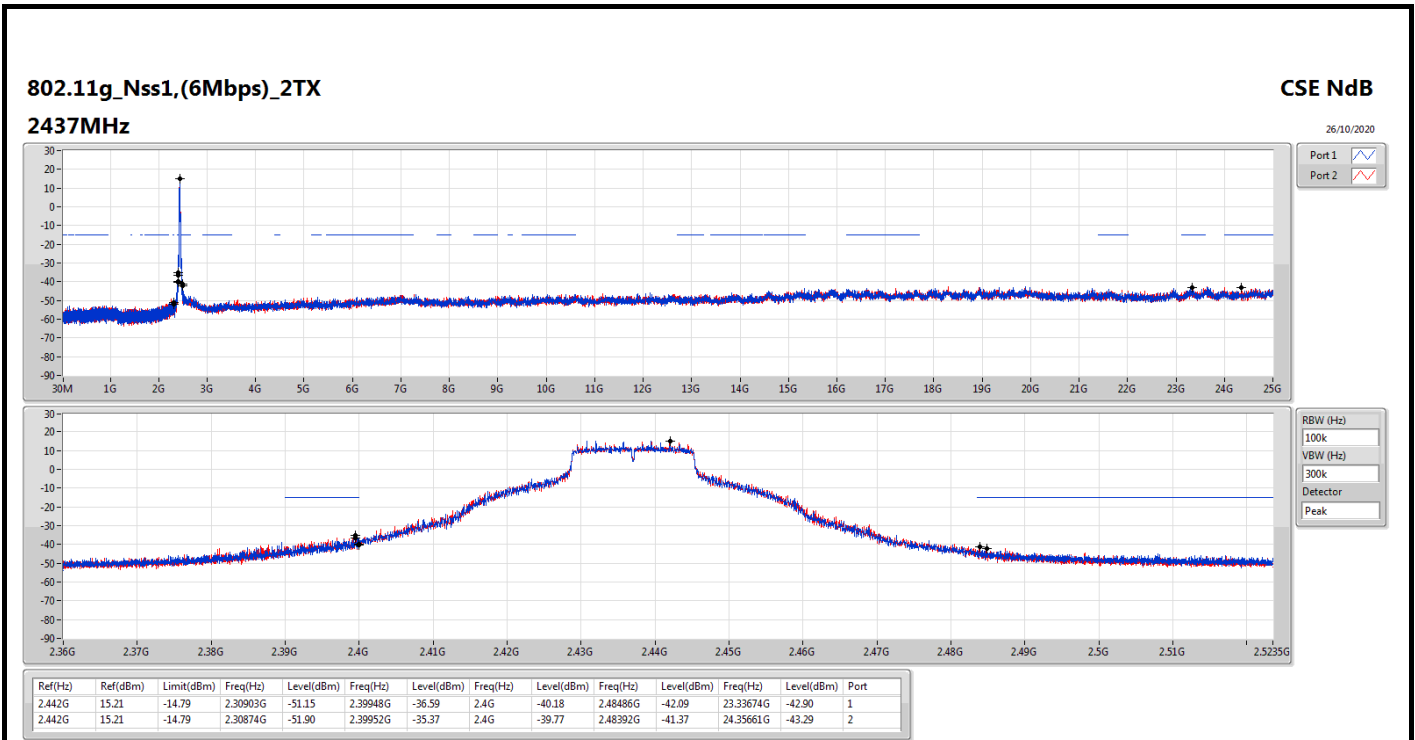
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_2TX	Pass	2.43603G	17.53	-12.47	2.30874G	-49.14	2.39704G	-30.40	2.4G	-34.90	2.50248G	-45.76	24.59542G	-43.06	2
802.11g_Nss1,(6Mbps)_2TX	Pass	2.442G	15.21	-14.79	2.3067G	-51.91	2.3998G	-28.55	2.4G	-32.11	2.51392G	-46.72	23.32269G	-43.43	1
802.11ax HEW20_Nss1,(MCS0)_2TX	Pass	2.442G	15.60	-14.40	2.30961G	-50.07	2.39996G	-29.64	2.4G	-32.95	2.48528G	-38.01	16.31283G	-42.76	1

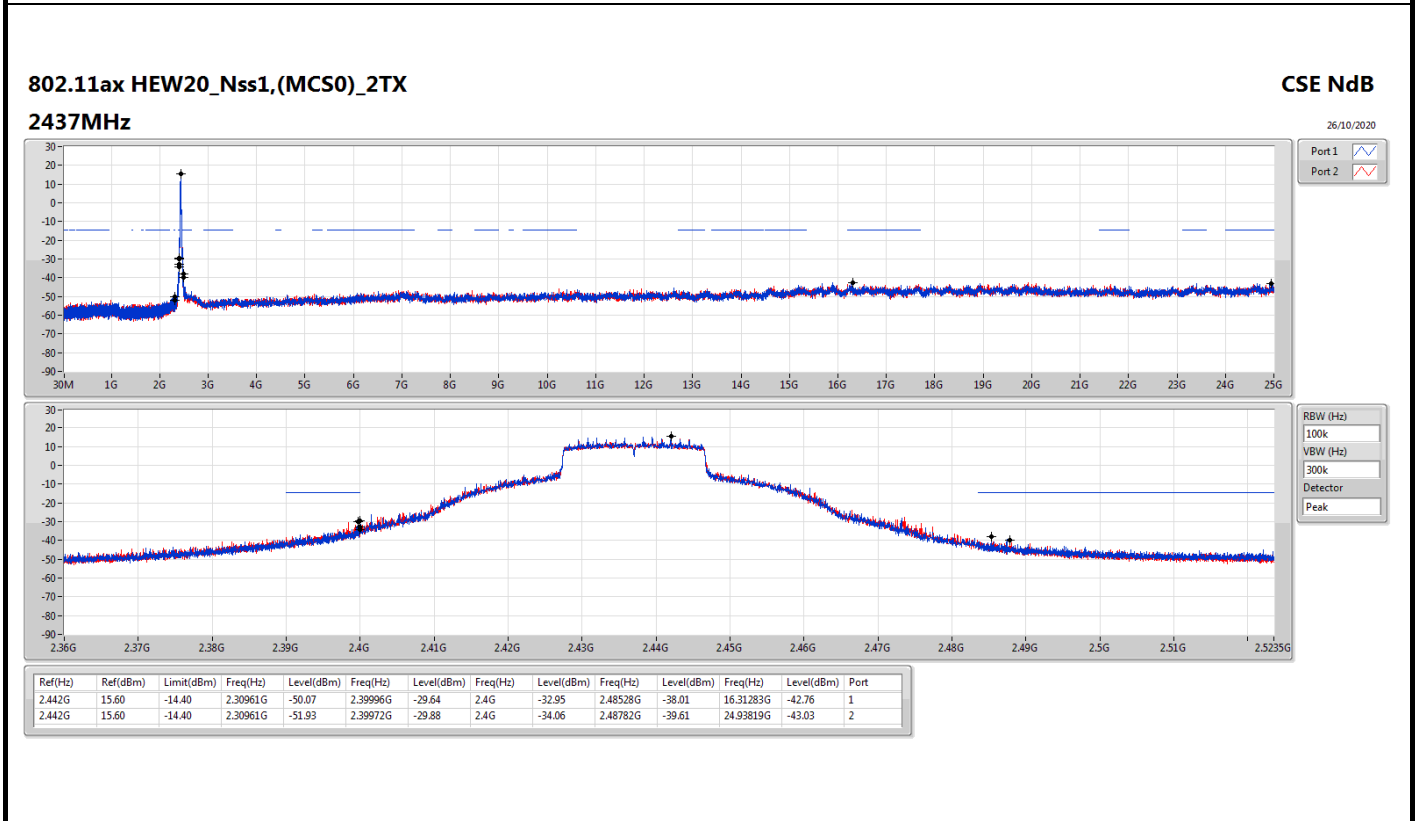
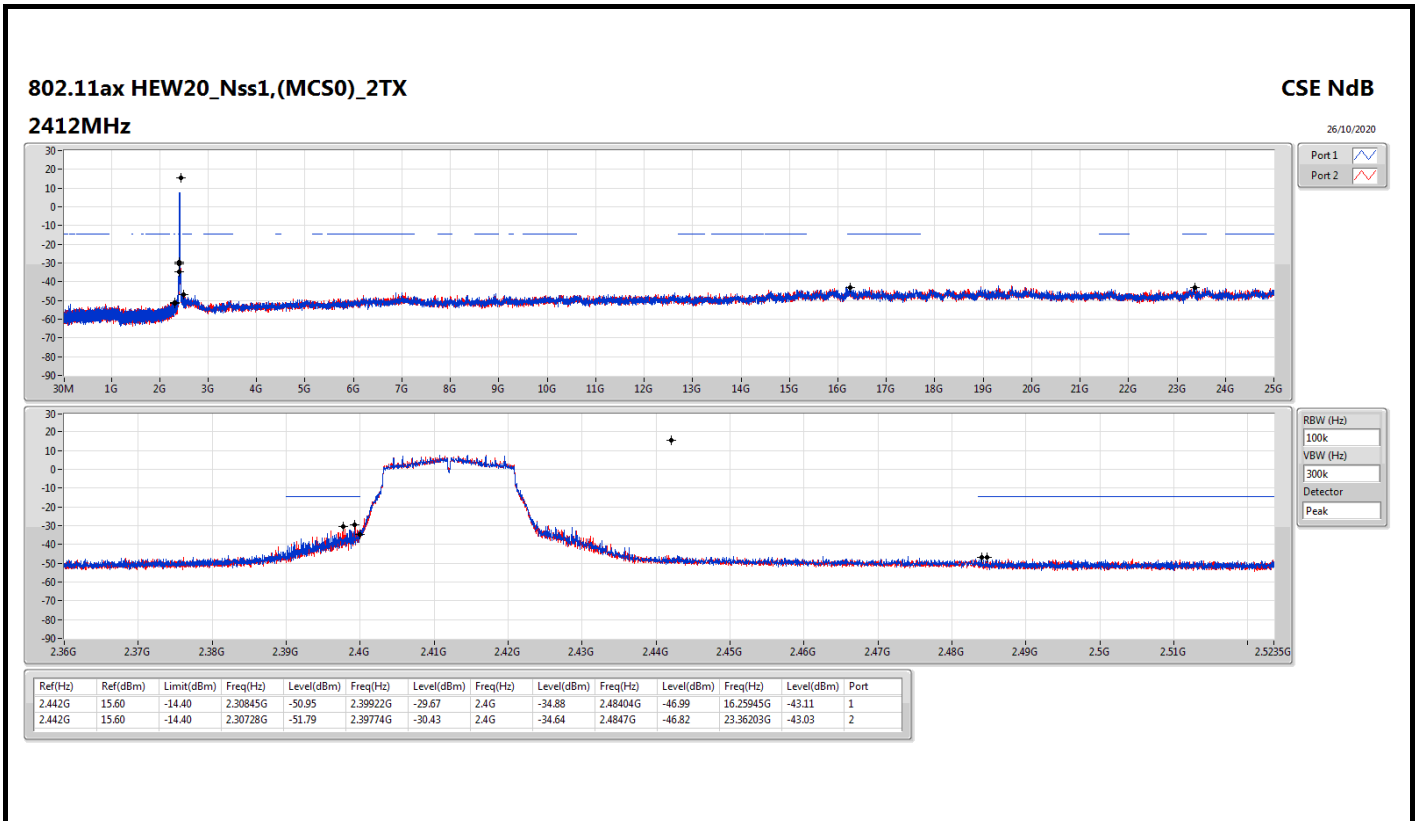
Result

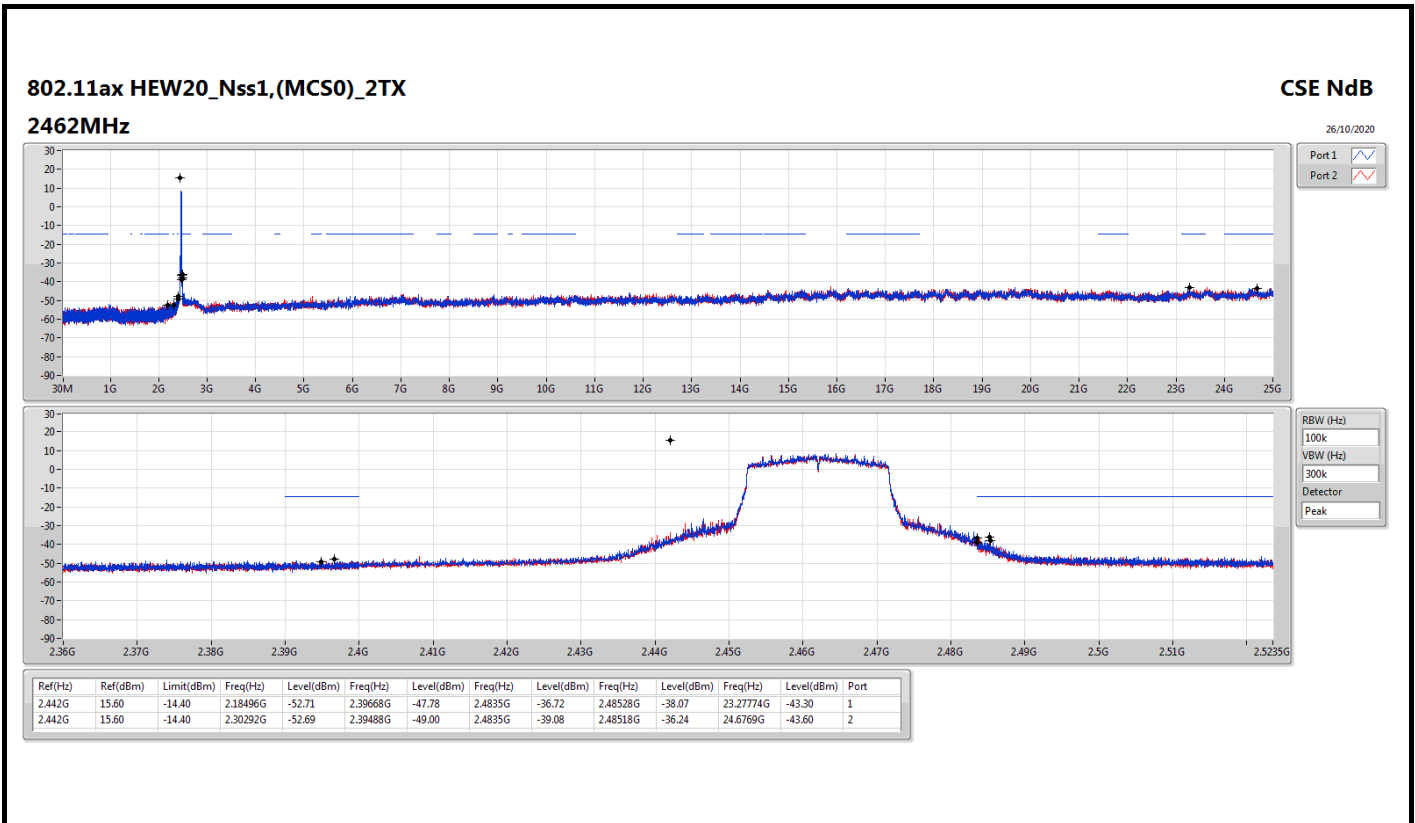
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43603G	17.53	-12.47	2.30787G	-48.44	2.39802G	-30.77	2.4G	-35.66	2.50696G	-44.91	17.25123G	-43.18	1
2412MHz	Pass	2.43603G	17.53	-12.47	2.30874G	-49.14	2.39704G	-30.40	2.4G	-34.90	2.50248G	-45.76	24.59542G	-43.06	2
2437MHz	Pass	2.43603G	17.53	-12.47	2.30991G	-50.41	2.4G	-42.07	2.4G	-43.61	2.48422G	-44.40	24.65161G	-43.09	1
2437MHz	Pass	2.43603G	17.53	-12.47	2.30961G	-50.24	2.39976G	-43.81	2.4G	-44.16	2.49668G	-43.84	24.61228G	-43.04	2
2462MHz	Pass	2.43603G	17.53	-12.47	2.30088G	-49.85	2.39772G	-46.94	2.4835G	-42.44	2.48356G	-41.51	24.96348G	-42.48	1
2462MHz	Pass	2.43603G	17.53	-12.47	2.30204G	-51.31	2.39442G	-46.92	2.4835G	-38.83	2.48352G	-39.88	16.25383G	-43.20	2
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.442G	15.21	-14.79	2.3067G	-51.91	2.3998G	-28.55	2.4G	-32.11	2.51392G	-46.72	23.32269G	-43.43	1
2412MHz	Pass	2.442G	15.21	-14.79	2.30641G	-51.67	2.39982G	-28.84	2.4G	-34.52	2.487G	-46.79	23.30583G	-43.45	2
2437MHz	Pass	2.442G	15.21	-14.79	2.30903G	-51.15	2.39948G	-36.59	2.4G	-40.18	2.48486G	-42.09	23.33674G	-42.90	1
2437MHz	Pass	2.442G	15.21	-14.79	2.30874G	-51.90	2.39952G	-35.37	2.4G	-39.77	2.48392G	-41.37	24.35661G	-43.29	2
2462MHz	Pass	2.442G	15.21	-14.79	2.30787G	-51.55	2.39844G	-47.15	2.4835G	-39.61	2.48362G	-38.24	21.65381G	-43.45	1
2462MHz	Pass	2.442G	15.21	-14.79	2.30612G	-51.74	2.39642G	-48.59	2.4835G	-42.11	2.48358G	-36.03	17.64176G	-42.78	2
802.11ax HEW20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.442G	15.60	-14.40	2.30845G	-50.95	2.39922G	-29.67	2.4G	-34.88	2.48404G	-46.99	16.25945G	-43.11	1
2412MHz	Pass	2.442G	15.60	-14.40	2.30728G	-51.79	2.39774G	-30.43	2.4G	-34.64	2.4847G	-46.82	23.36203G	-43.03	2
2437MHz	Pass	2.442G	15.60	-14.40	2.30961G	-50.07	2.39996G	-29.64	2.4G	-32.95	2.48528G	-38.01	16.31283G	-42.76	1
2437MHz	Pass	2.442G	15.60	-14.40	2.30961G	-51.93	2.39972G	-29.88	2.4G	-34.06	2.48782G	-39.61	24.93819G	-43.03	2
2462MHz	Pass	2.442G	15.60	-14.40	2.18496G	-52.71	2.39668G	-47.78	2.4835G	-36.72	2.48528G	-38.07	23.27774G	-43.30	1
2462MHz	Pass	2.442G	15.60	-14.40	2.30292G	-52.69	2.39488G	-49.00	2.4835G	-39.08	2.48518G	-36.24	24.6769G	-43.60	2













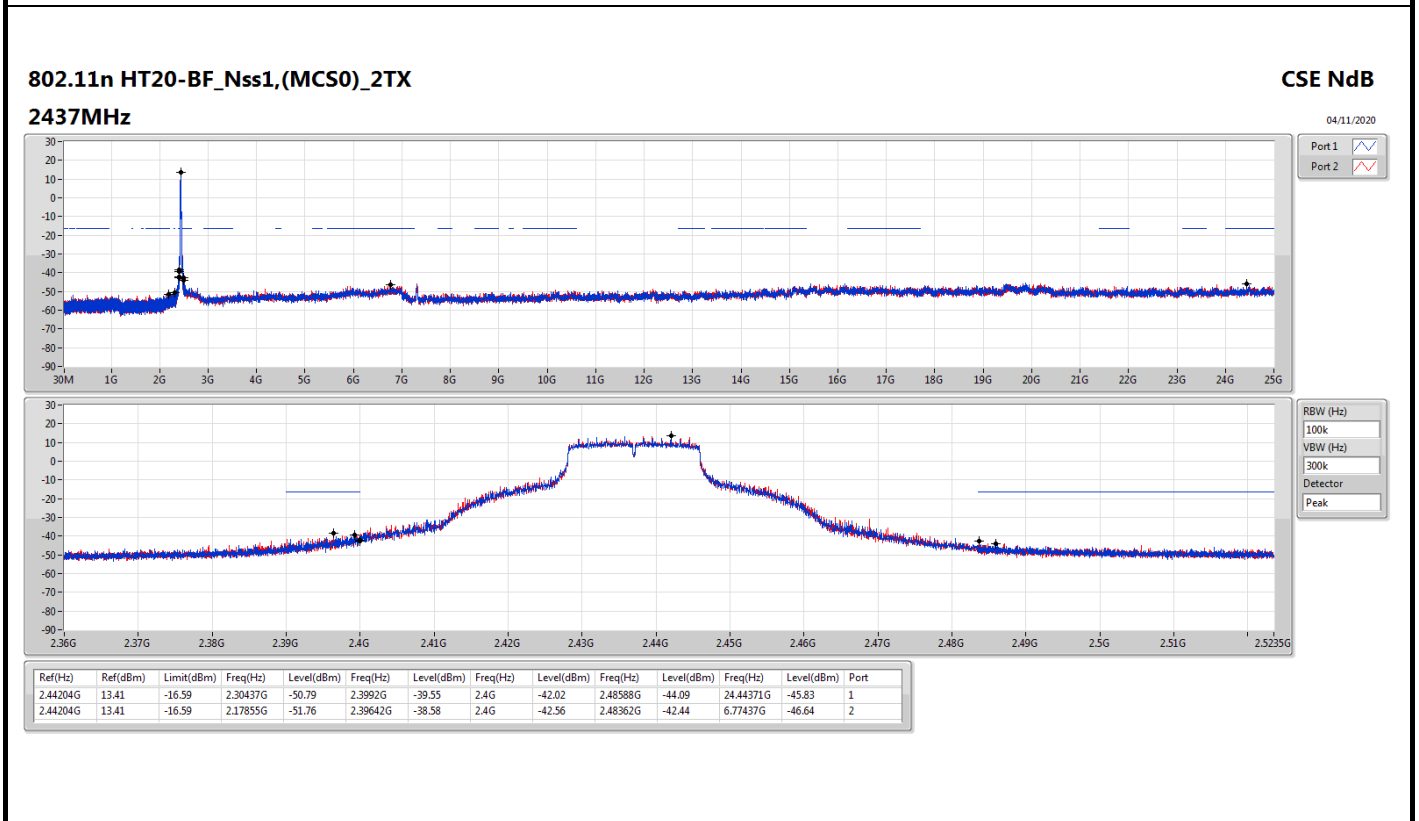
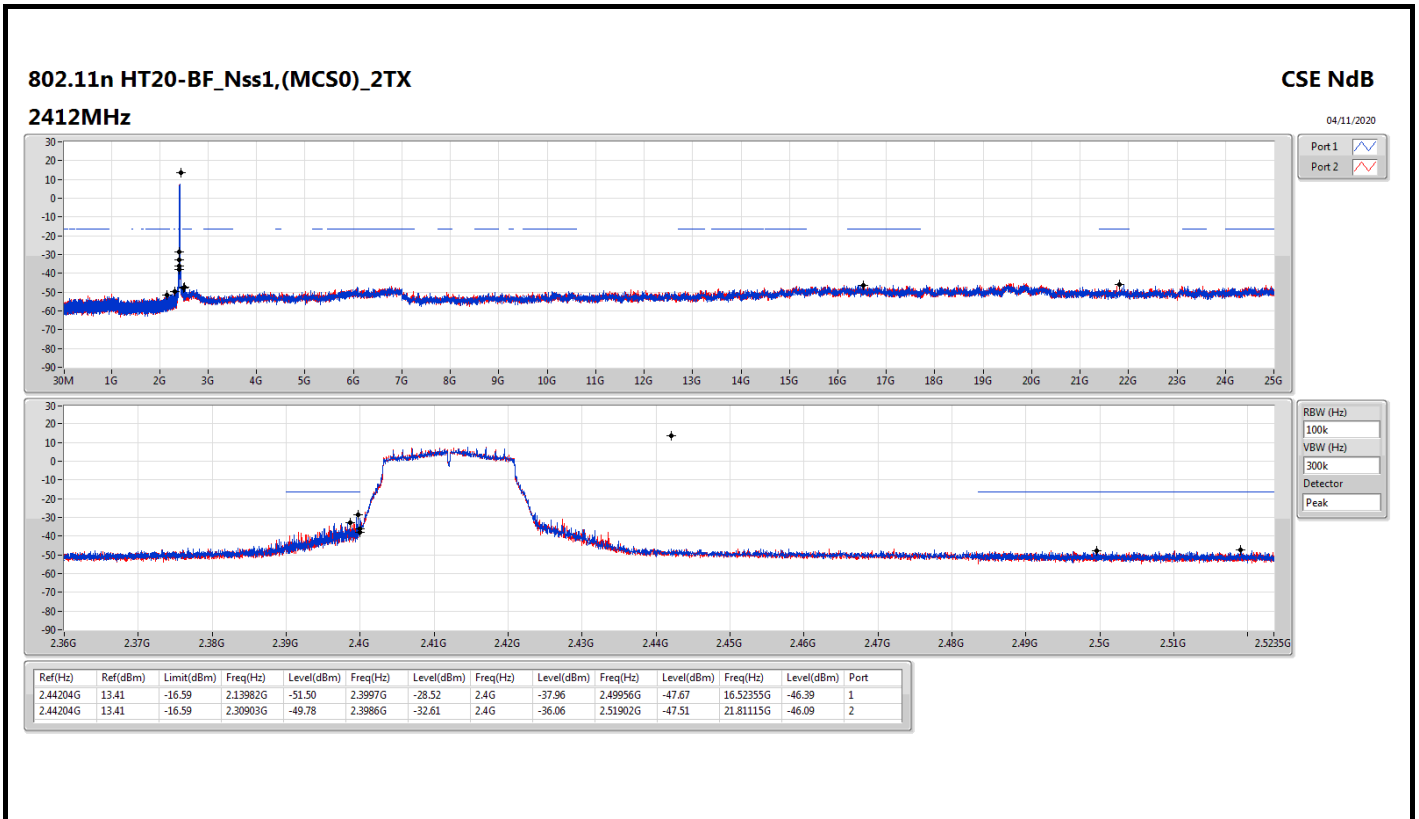
Summary

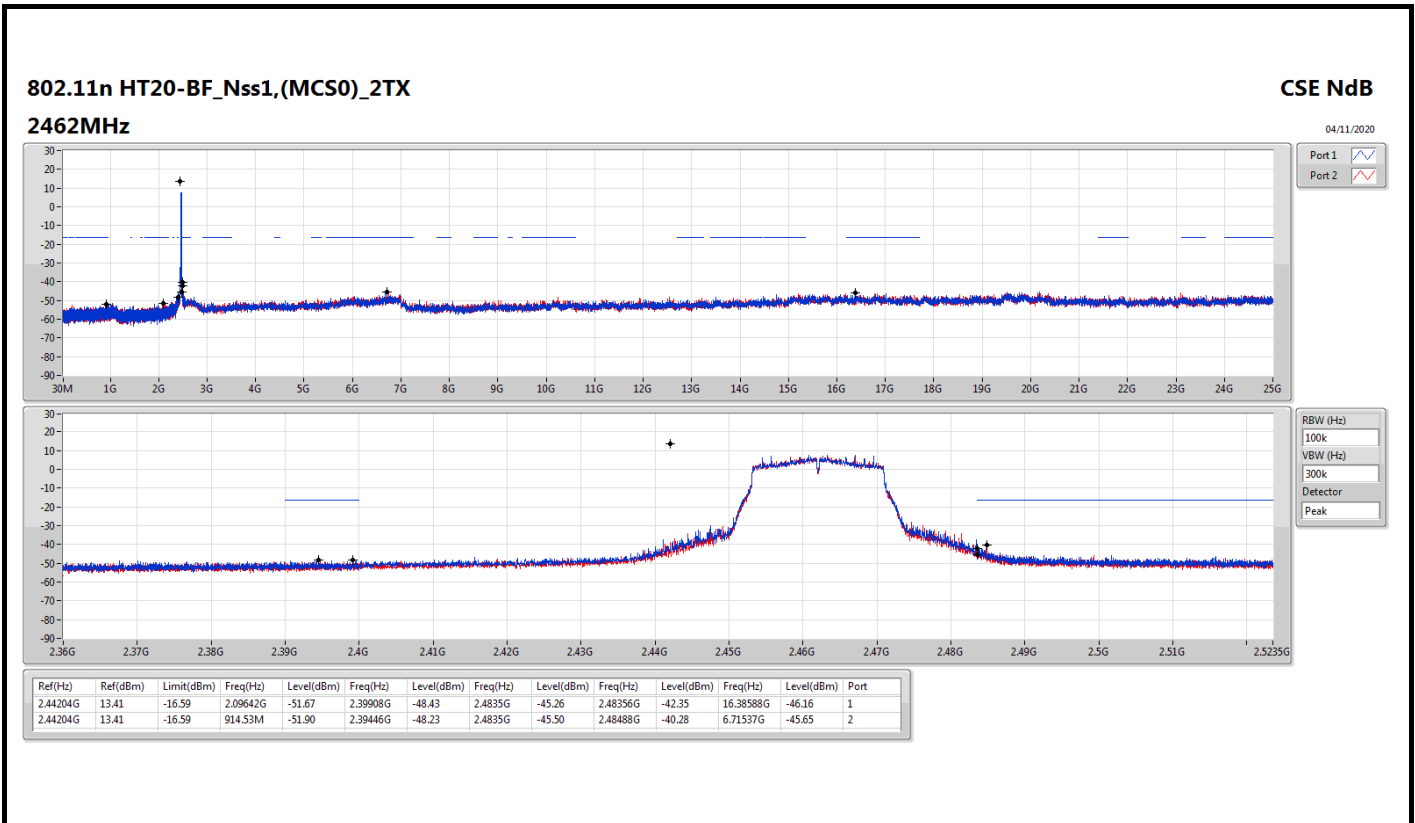
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2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
802.11n HT20-BF_Nss1,(MCS0)_2TX	Pass	2.44204G	13.41	-16.59	2.13982G	-51.50	2.3997G	-28.52	2.4G	-37.96	2.49956G	-47.67	16.52355G	-46.39	1



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
802.11n HT20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.44204G	13.41	-16.59	2.13982G	-51.50	2.3997G	-28.52	2.4G	-37.96	2.49956G	-47.67	16.52355G	-46.39	1
2412MHz	Pass	2.44204G	13.41	-16.59	2.30903G	-49.78	2.3986G	-32.61	2.4G	-36.06	2.51902G	-47.51	21.81115G	-46.09	2
2437MHz	Pass	2.44204G	13.41	-16.59	2.30437G	-50.79	2.3992G	-39.55	2.4G	-42.02	2.48588G	-44.09	24.44371G	-45.83	1
2437MHz	Pass	2.44204G	13.41	-16.59	2.17855G	-51.76	2.39642G	-38.58	2.4G	-42.56	2.48362G	-42.44	6.77437G	-46.64	2
2462MHz	Pass	2.44204G	13.41	-16.59	2.09642G	-51.67	2.39908G	-48.43	2.4835G	-45.26	2.48356G	-42.35	16.38588G	-46.16	1
2462MHz	Pass	2.44204G	13.41	-16.59	914.53M	-51.90	2.39446G	-48.23	2.4835G	-45.50	2.48488G	-40.28	6.71537G	-45.65	2

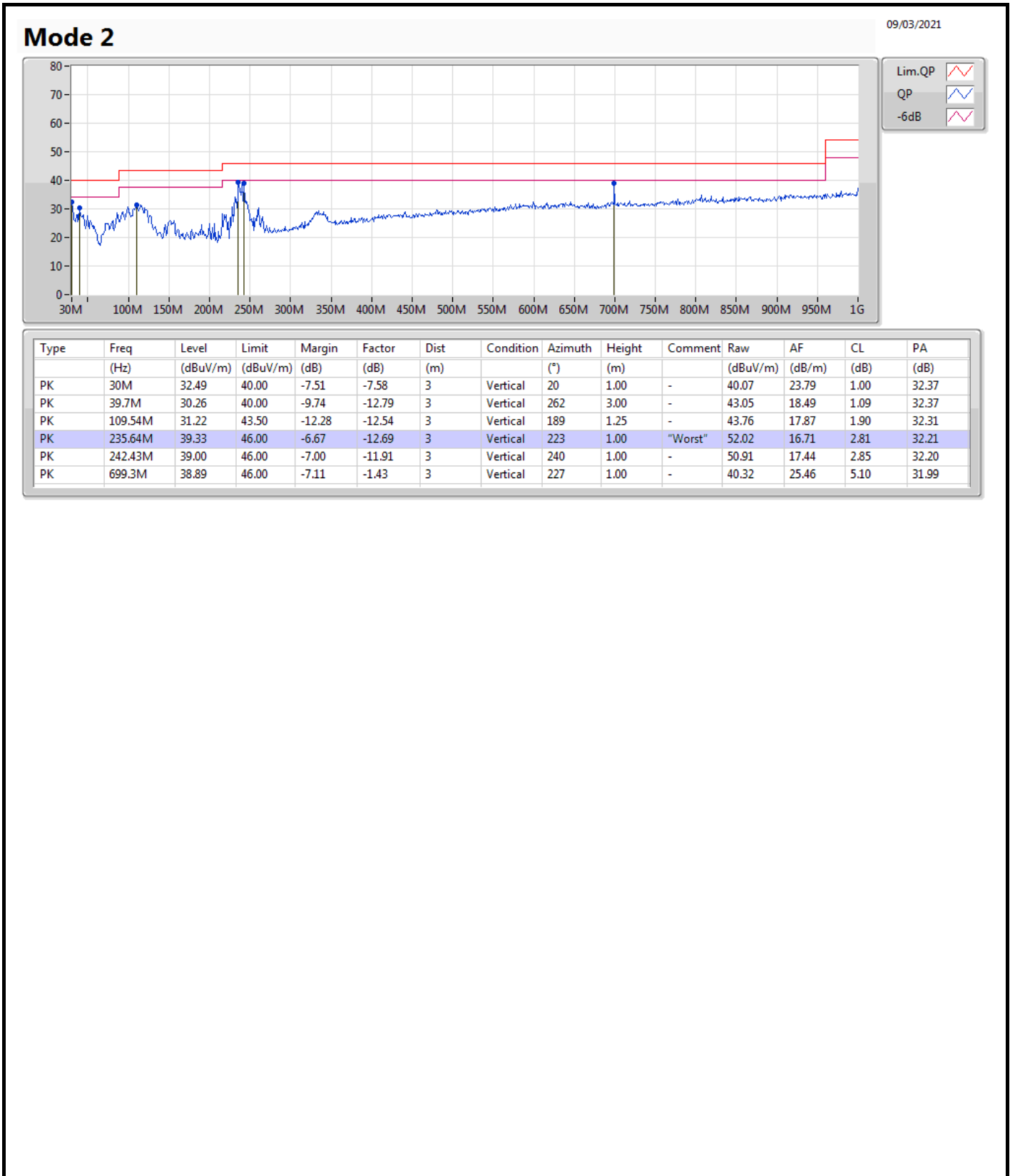


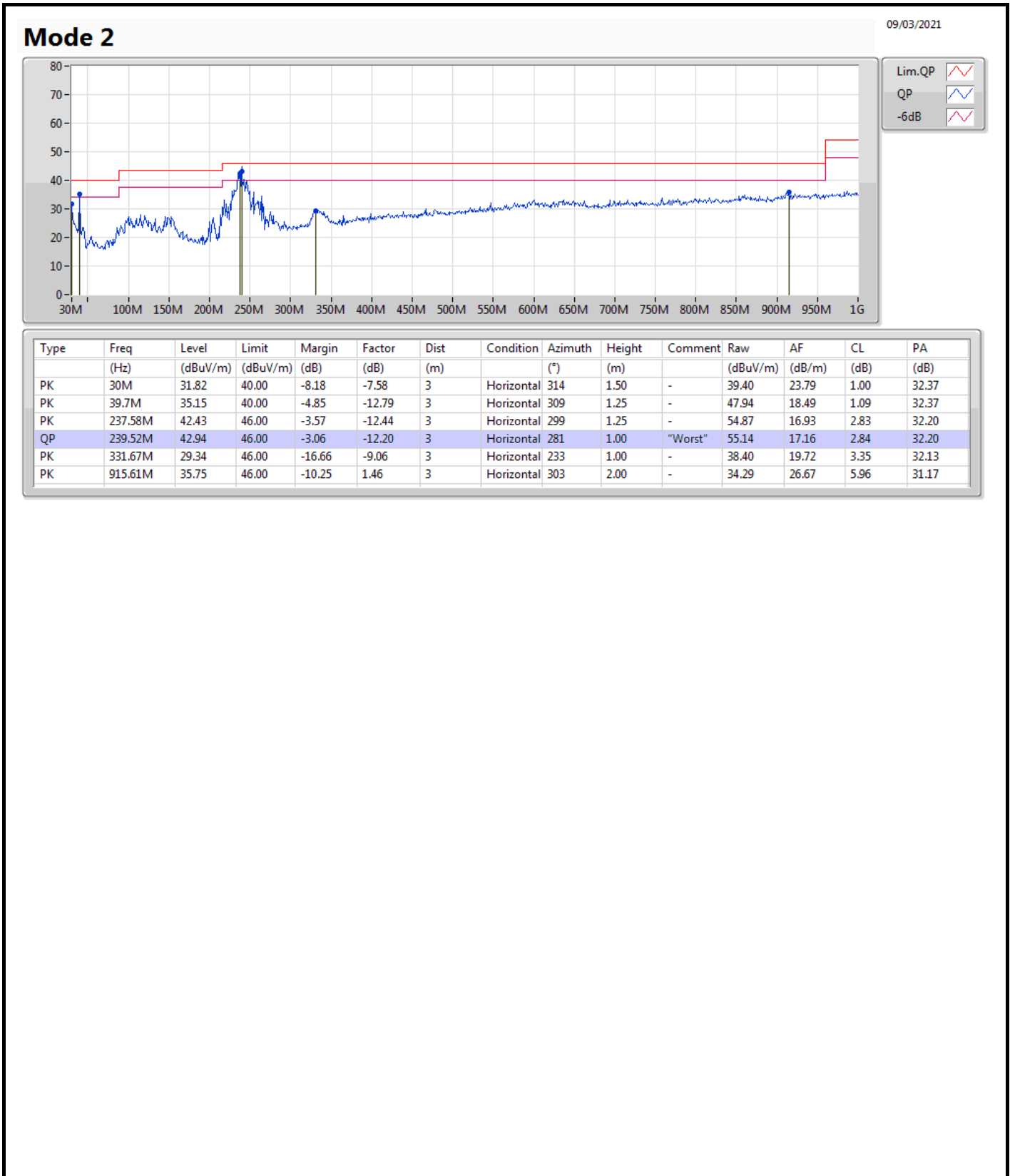




Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 2	Pass	QP	239.52M	42.94	46.00	-3.06	Horizontal







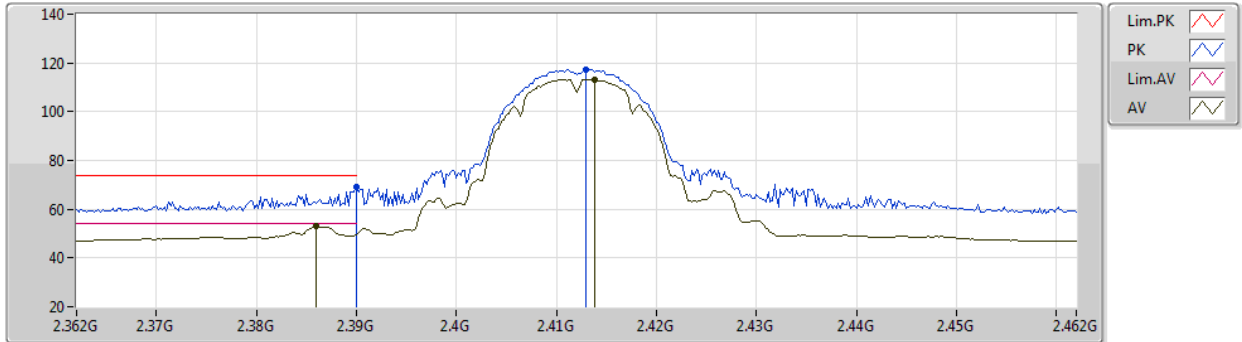
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
802.11g_Nss1,(6Mbps)_2TX	Pass	AV	2.4836G	53.92	54.00	-0.08	3	Vertical	177	1.80	-

802.11b_Nss1,(1Mbps)_2TX

22/10/2020

2412MHz_TX



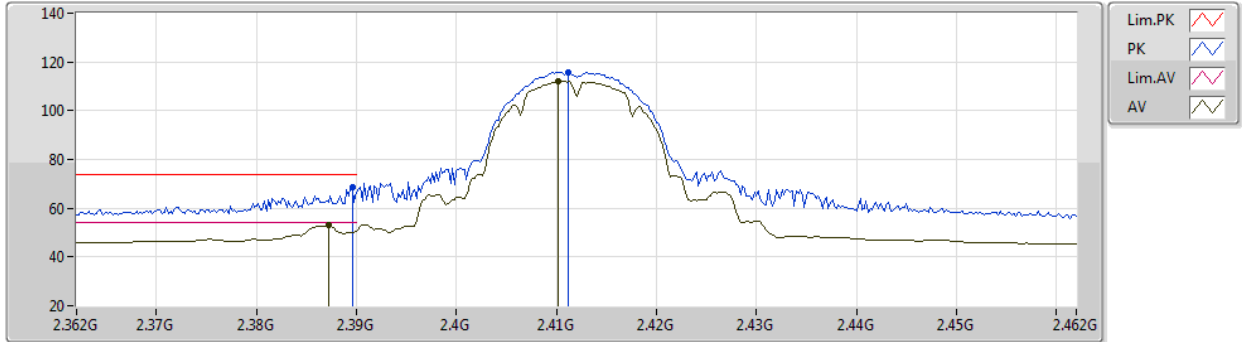
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Setting 96
02-E-K-4

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	68.97	74.00	-5.03	38.30	3	Vertical	184	2.17	-	28.27	2.40	-
AV	2.386G	53.26	54.00	-0.74	22.59	3	Vertical	184	2.17	-	28.26	2.41	-
PK	2.413G	117.30	Inf	-Inf	86.55	3	Vertical	184	2.17	-	28.34	2.41	-
AV	2.4138G	113.33	Inf	-Inf	82.58	3	Vertical	184	2.17	-	28.34	2.41	-

802.11b_Nss1,(1Mbps)_2TX

22/10/2020

2412MHz_TX



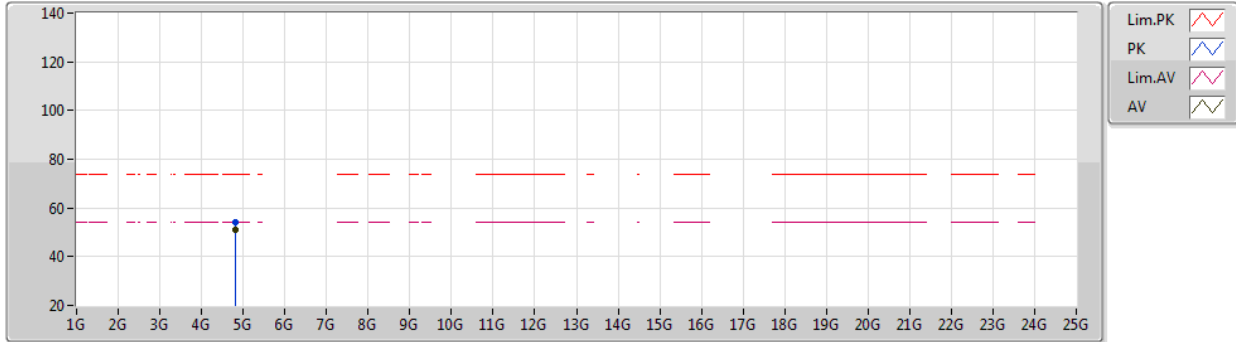
EUT_Z_2TX
Setting 96
02-E-K-4

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	2.3896G	68.58	74.00	-5.42	37.90	3	Horizontal	28	2.02	-	28.27	2.41	-
AV	2.3872G	52.99	54.00	-1.01	22.32	3	Horizontal	28	2.02	-	28.26	2.41	-
PK	2.4112G	115.94	Inf	-Inf	85.20	3	Horizontal	28	2.02	-	28.33	2.41	-
AV	2.4102G	112.02	Inf	-Inf	81.28	3	Horizontal	28	2.02	-	28.33	2.41	-

802.11b_Nss1,(1Mbps)_2TX

22/10/2020

2412MHz_TX



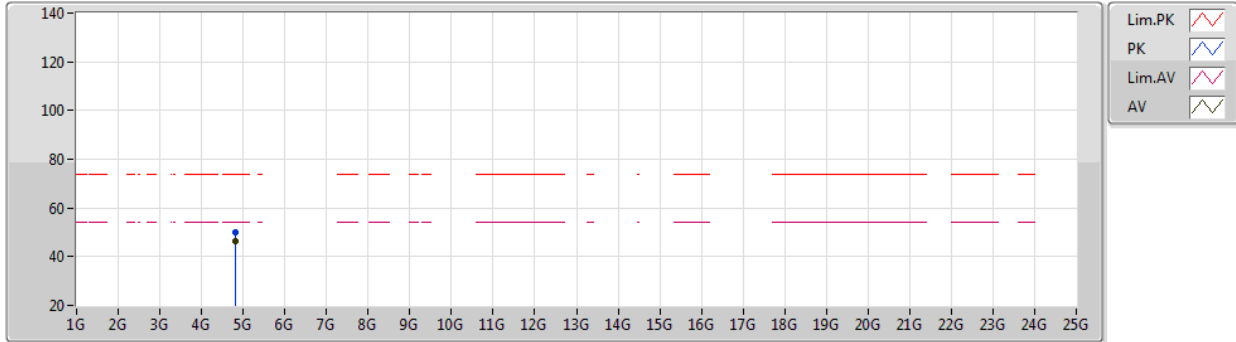
EUT Z_2TX
Setting 96
02-E-K-4

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	4.82408G	54.13	74.00	-19.87	48.31	3	Vertical	1	2.89	-	32.90	4.70	31.78
AV	4.82404G	51.08	54.00	-2.92	45.26	3	Vertical	1	2.89	-	32.90	4.70	31.78

802.11b_Nss1,(1Mbps)_2TX

22/10/2020

2412MHz_TX



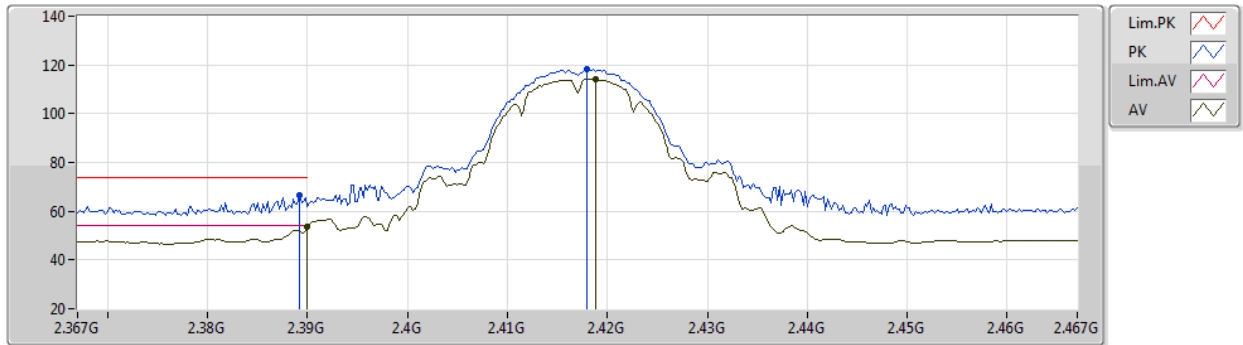
EUT Z_2TX
Setting 96
02-E-K-4

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	4.82408G	50.22	74.00	-23.78	44.40	3	Horizontal	290	1.16	-	32.90	4.70	31.78
AV	4.824G	46.30	54.00	-7.70	40.48	3	Horizontal	290	1.16	-	32.90	4.70	31.78

802.11b_Nss1,(1Mbps)_2TX

22/10/2020

2417MHz_TX



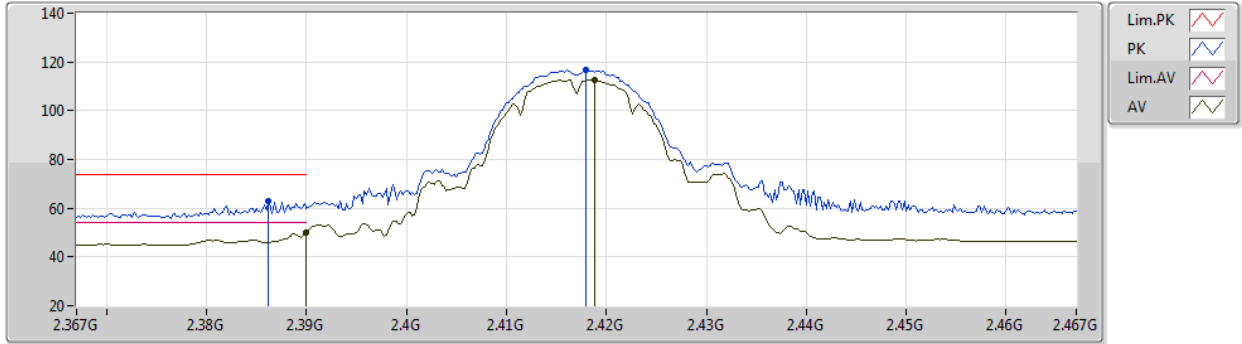
EUT_Z_2TX
Setting 101
02-E-K-4

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	2.3892G	66.58	74.00	-7.42	35.90	3	Vertical	181	1.85	-	28.27	2.41	-
AV	2.39G	53.75	54.00	-0.25	23.08	3	Vertical	181	1.85	-	28.27	2.40	-
PK	2.418G	118.13	Inf	-Inf	87.37	3	Vertical	181	1.85	-	28.35	2.41	-
AV	2.4188G	114.35	Inf	-Inf	83.58	3	Vertical	181	1.85	-	28.36	2.41	-

802.11b_Nss1,(1Mbps)_2TX

22/10/2020

2417MHz_TX



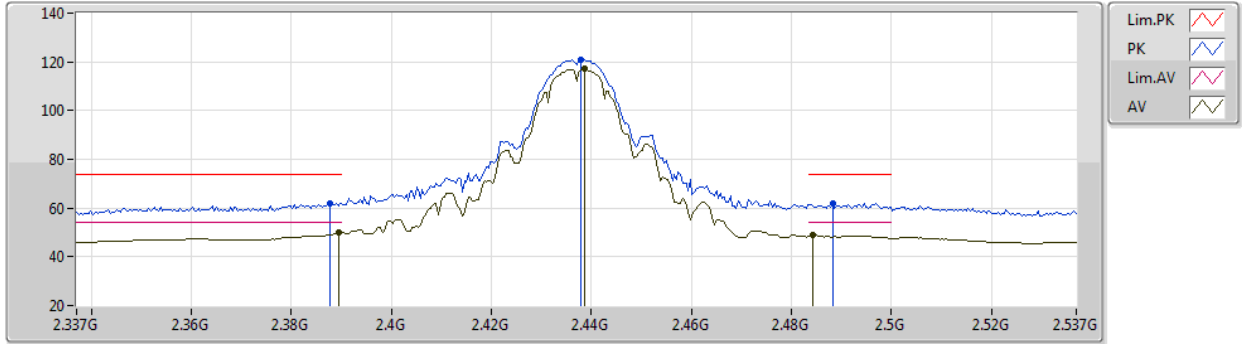
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Setting 101
02-E-K-4

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	2.3862G	63.14	74.00	-10.86	32.47	3	Horizontal	24	2.97	-	28.26	2.41	-
AV	2.39G	49.98	54.00	-4.02	19.30	3	Horizontal	24	2.97	-	28.27	2.41	-
PK	2.418G	116.58	Inf	-Inf	85.82	3	Horizontal	24	2.97	-	28.35	2.41	-
AV	2.4188G	112.72	Inf	-Inf	81.95	3	Horizontal	24	2.97	-	28.36	2.41	-

802.11b_Nss1,(1Mbps)_2TX

22/10/2020

2437MHz_TX



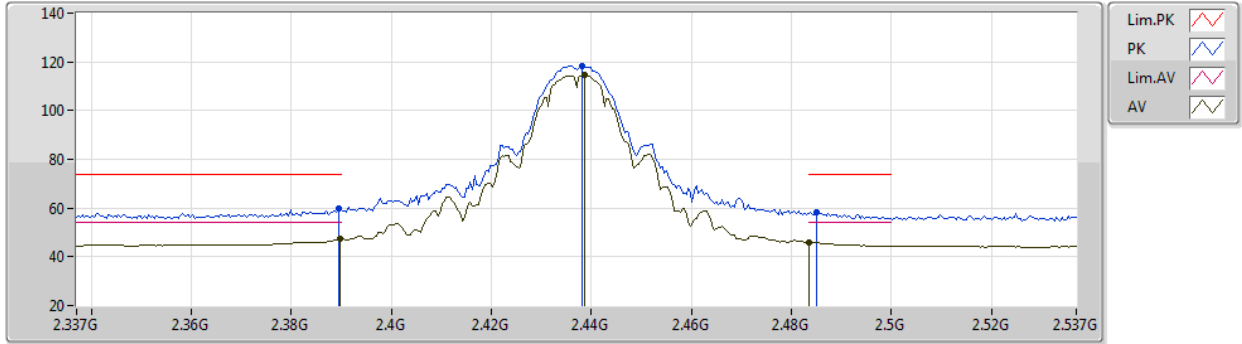
EUT_Z_2TX
Setting 108
02-E-K-4

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	2.3878G	61.98	74.00	-12.02	31.31	3	Vertical	55	1.15	-	28.26	2.41	-
AV	2.3894G	49.81	54.00	-4.19	19.13	3	Vertical	55	1.15	-	28.27	2.41	-
PK	2.4378G	120.93	Inf	-Inf	90.10	3	Vertical	55	1.15	-	28.41	2.42	-
AV	2.4386G	117.09	Inf	-Inf	86.25	3	Vertical	55	1.15	-	28.42	2.42	-
PK	2.4882G	61.72	74.00	-12.28	30.72	3	Vertical	55	1.15	-	28.56	2.44	-
AV	2.4842G	48.87	54.00	-5.13	17.88	3	Vertical	55	1.15	-	28.55	2.44	-

802.11b_Nss1,(1Mbps)_2TX

22/10/2020

2437MHz_TX



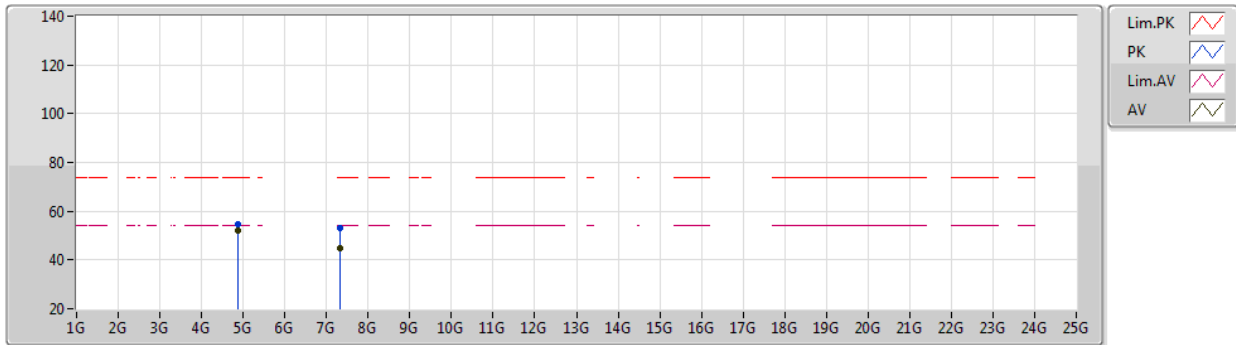
EUT_Z_2TX
Setting 108
02-E-K-4

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	2.3894G	60.07	74.00	-13.93	29.39	3	Horizontal	29	1.98	-	28.27	2.41	-
AV	2.3898G	47.19	54.00	-6.81	16.51	3	Horizontal	29	1.98	-	28.27	2.41	-
PK	2.4382G	118.39	Inf	-Inf	87.56	3	Horizontal	29	1.98	-	28.41	2.42	-
AV	2.4386G	114.58	Inf	-Inf	83.74	3	Horizontal	29	1.98	-	28.42	2.42	-
PK	2.485G	58.53	74.00	-15.47	27.53	3	Horizontal	29	1.98	-	28.56	2.44	-
AV	2.4835G	45.99	54.00	-8.01	15.00	3	Horizontal	29	1.98	-	28.55	2.44	-

802.11b_Nss1,(1Mbps)_2TX

22/10/2020

2437MHz_TX



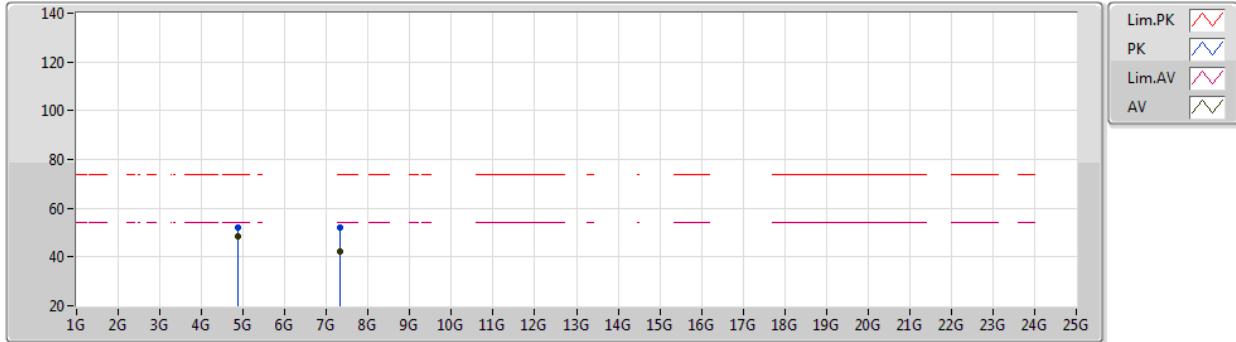
EUT_Z_2TX
Setting 108
02-E-K-4

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	4.87402G	54.86	74.00	-19.14	48.86	3	Vertical	84	2.58	-	33.10	4.70	31.80
AV	4.87404G	52.29	54.00	-1.71	46.29	3	Vertical	84	2.58	-	33.10	4.70	31.80
PK	7.31186G	53.18	74.00	-20.82	43.45	3	Vertical	87	1.19	-	36.40	5.76	32.43
AV	7.31032G	44.57	54.00	-9.43	34.84	3	Vertical	87	1.19	-	36.40	5.76	32.43

802.11b_Nss1,(1Mbps)_2TX

22/10/2020

2437MHz_TX



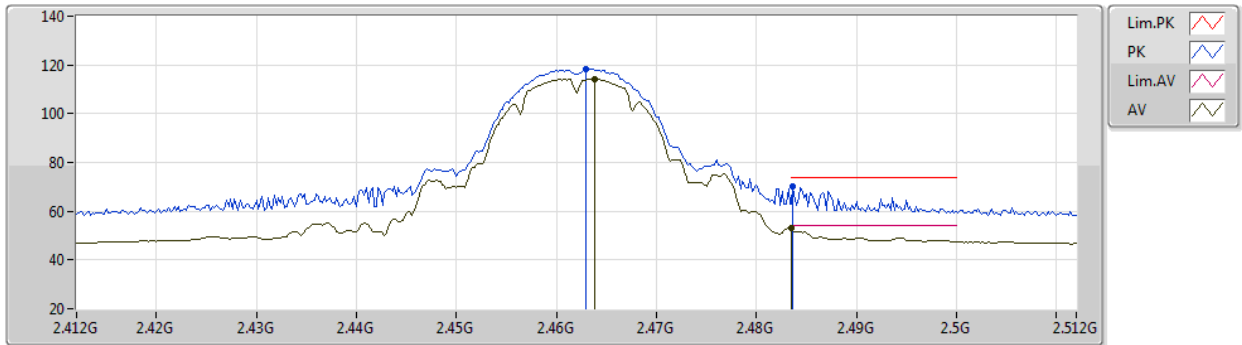
EUT_Z_2TX
Setting 108
02-E-K-4

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	4.8741G	52.25	74.00	-21.75	46.25	3	Horizontal	50	1.00	-	33.10	4.70	31.80
AV	4.87404G	48.21	54.00	-5.79	42.21	3	Horizontal	50	1.00	-	33.10	4.70	31.80
PK	7.3126G	51.92	74.00	-22.08	42.19	3	Horizontal	176	2.65	-	36.40	5.76	32.43
AV	7.31228G	42.09	54.00	-11.91	32.36	3	Horizontal	176	2.65	-	36.40	5.76	32.43

802.11b_Nss1,(1Mbps)_2TX

22/10/2020

2462MHz_TX



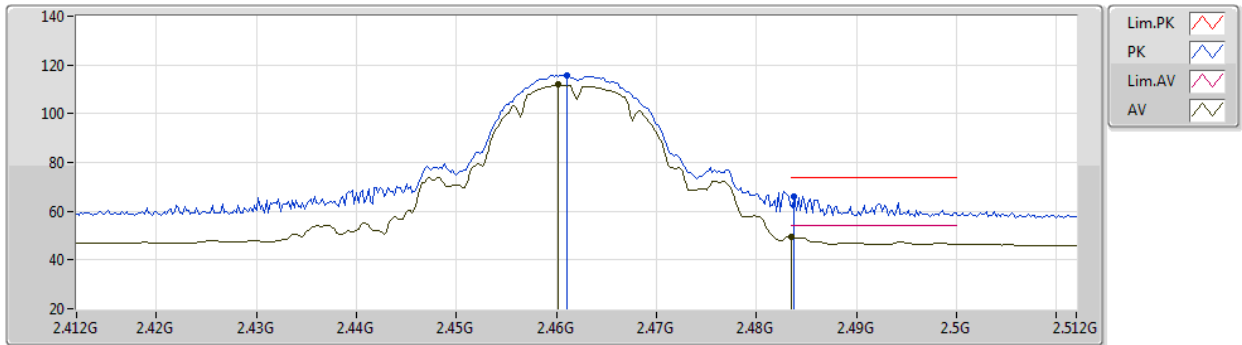
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Setting 103
02-E-K-4

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	118.22	Inf	-Inf	87.30	3	Vertical	175	1.83	-	28.49	2.43	-
AV	2.4638G	114.39	Inf	-Inf	83.47	3	Vertical	175	1.83	-	28.49	2.43	-
PK	2.4836G	70.14	74.00	-3.86	39.15	3	Vertical	175	1.83	-	28.55	2.44	-
AV	2.4835G	53.07	54.00	-0.93	22.08	3	Vertical	175	1.83	-	28.55	2.44	-

802.11b_Nss1,(1Mbps)_2TX

22/10/2020

2462MHz_TX



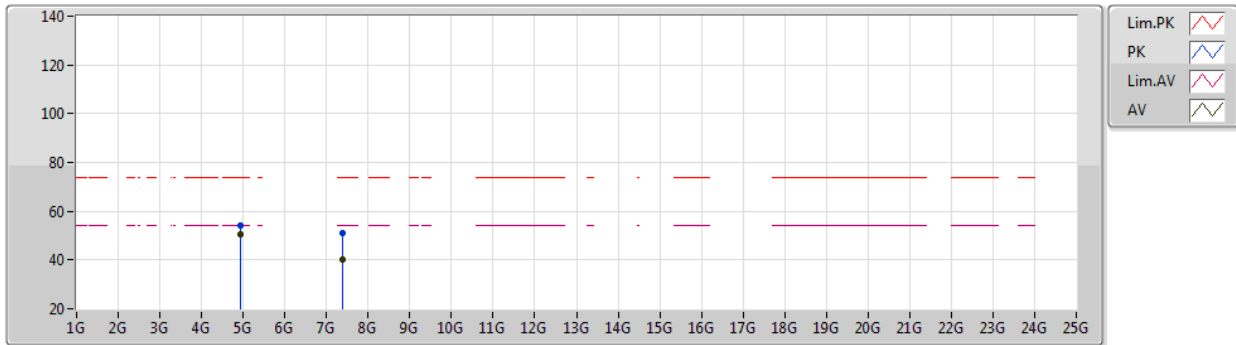
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Setting 103
02-E-K-4

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	2.461G	115.75	Inf	-Inf	84.84	3	Horizontal	32	1.01	-	28.48	2.43	-
AV	2.4602G	111.96	Inf	-Inf	81.05	3	Horizontal	32	1.01	-	28.48	2.43	-
PK	2.4838G	66.08	74.00	-7.92	35.09	3	Horizontal	32	1.01	-	28.55	2.44	-
AV	2.4835G	49.56	54.00	-4.44	18.57	3	Horizontal	32	1.01	-	28.55	2.44	-

802.11b_Nss1,(1Mbps)_2TX

22/10/2020

2462MHz_TX



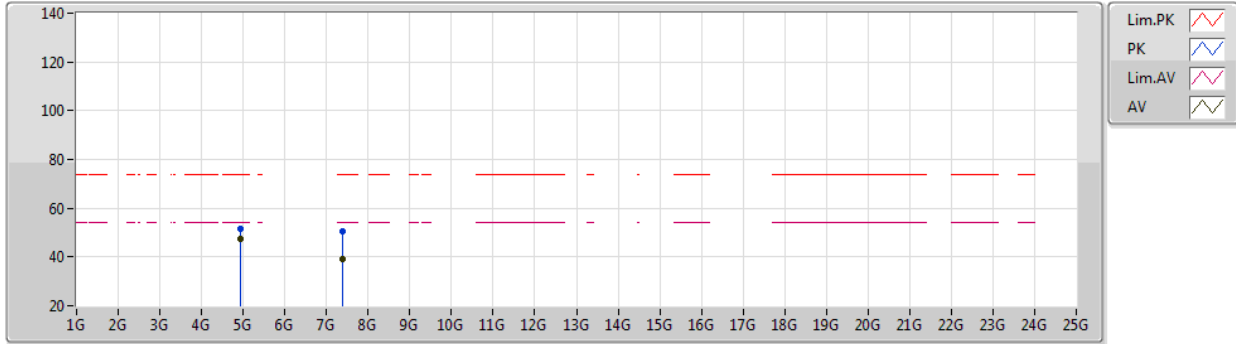
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Setting 103
02-E-K-4

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	4.92408G	54.10	74.00	-19.90	48.00	3	Vertical	205	2.61	-	33.22	4.70	31.82
AV	4.92406G	50.43	54.00	-3.57	44.33	3	Vertical	205	2.61	-	33.22	4.70	31.82
PK	7.38456G	50.99	74.00	-23.01	41.26	3	Vertical	166	2.97	-	36.40	5.79	32.46
AV	7.38532G	40.07	54.00	-13.93	30.34	3	Vertical	166	2.97	-	36.40	5.79	32.46

802.11b_Nss1,(1Mbps)_2TX

22/10/2020

2462MHz_TX



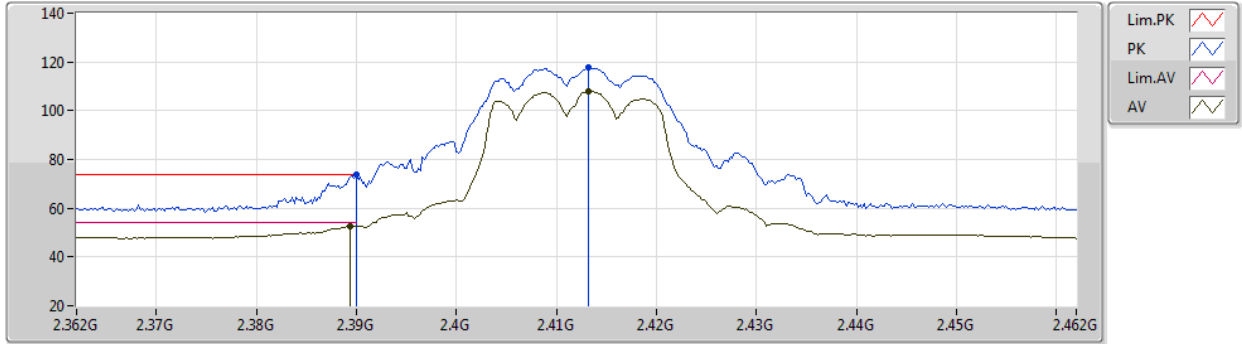
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Setting 103
02-E-K-4

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	4.92404G	51.34	74.00	-22.66	45.24	3	Horizontal	40	1.11	-	33.22	4.70	31.82
AV	4.92404G	47.26	54.00	-6.74	41.16	3	Horizontal	40	1.11	-	33.22	4.70	31.82
PK	7.38744G	50.73	74.00	-23.27	41.00	3	Horizontal	175	2.54	-	36.40	5.79	32.46
AV	7.38682G	38.98	54.00	-15.02	29.25	3	Horizontal	175	2.54	-	36.40	5.79	32.46

802.11g_Nss1,(6Mbps)_2TX

22/10/2020

2412MHz_TX



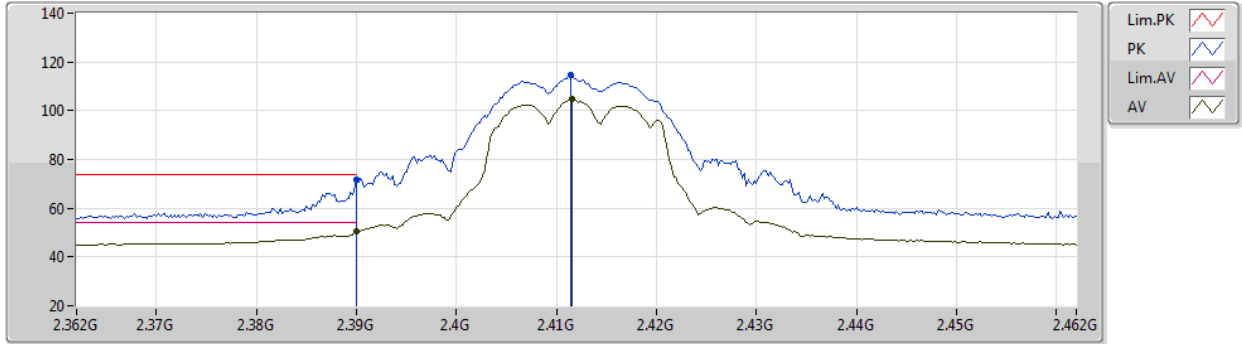
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Setting 84
02-E-K-4

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	73.90	74.00	-0.10	43.22	3	Vertical	47	1.10	-	28.27	2.41	-
AV	2.3894G	52.81	54.00	-1.19	22.13	3	Vertical	47	1.10	-	28.27	2.41	-
PK	2.4132G	117.84	Inf	-Inf	87.09	3	Vertical	47	1.10	-	28.34	2.41	-
AV	2.4132G	108.16	Inf	-Inf	77.41	3	Vertical	47	1.10	-	28.34	2.41	-

802.11g_Nss1,(6Mbps)_2TX

22/10/2020

2412MHz_TX



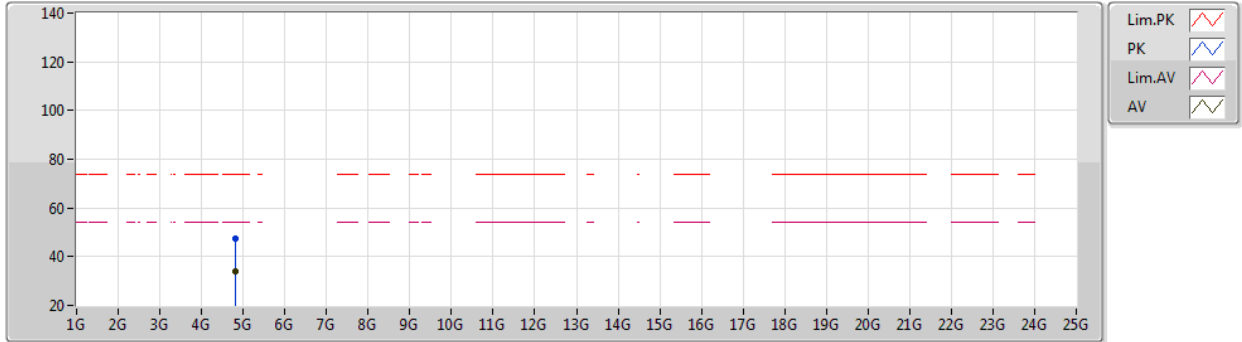
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Setting 84
02-E-K-4

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	71.87	74.00	-2.13	41.19	3	Horizontal	28	2.00	-	28.27	2.41	-
AV	2.39G	50.33	54.00	-3.67	19.65	3	Horizontal	28	2.00	-	28.27	2.41	-
PK	2.4114G	114.55	Inf	-Inf	83.81	3	Horizontal	28	2.00	-	28.33	2.41	-
AV	2.4116G	104.67	Inf	-Inf	73.93	3	Horizontal	28	2.00	-	28.33	2.41	-

802.11g_Nss1,(6Mbps)_2TX

22/10/2020

2412MHz_TX



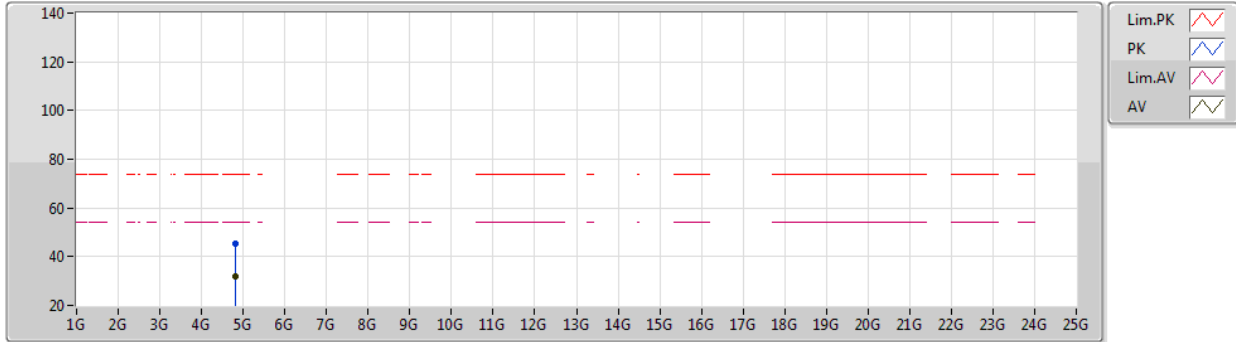
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Setting 84
02-E-K-4

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	4.8197G	47.32	74.00	-26.68	41.52	3	Vertical	0	1.00	-	32.88	4.70	31.78
AV	4.8248G	34.09	54.00	-19.91	28.27	3	Vertical	0	1.00	-	32.90	4.70	31.78

802.11g_Nss1,(6Mbps)_2TX

22/10/2020

2412MHz_TX



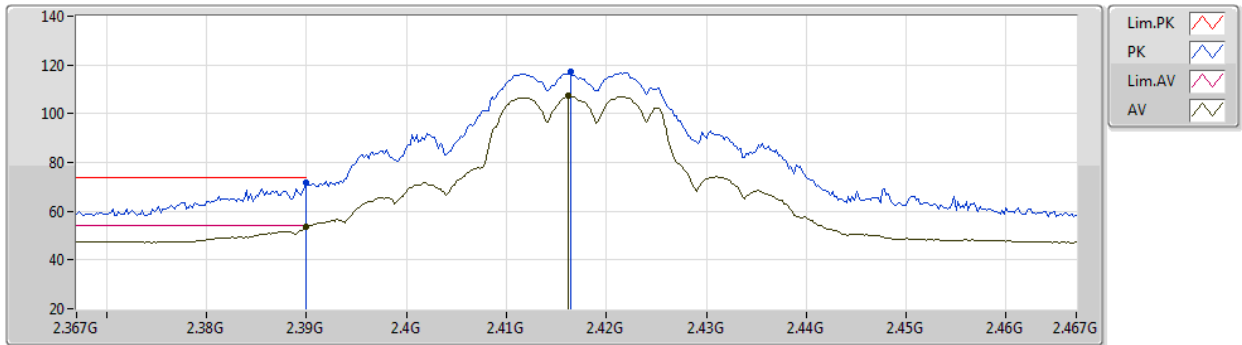
EUT Z_2TX
Setting 84
02-E-K-4

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	4.82304G	45.24	74.00	-28.76	39.43	3	Horizontal	37	2.60	-	32.89	4.70	31.78
AV	4.82302G	31.87	54.00	-22.13	26.06	3	Horizontal	37	2.60	-	32.89	4.70	31.78

802.11g_Nss1,(6Mbps)_2TX

22/10/2020

2417MHz_TX



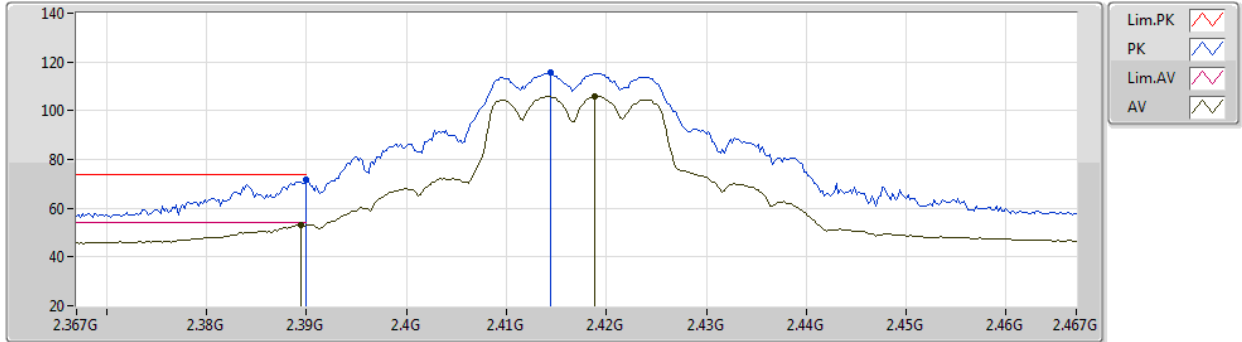
EUT_Z_2TX
Setting 94
02-E-K-3

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	71.47	74.00	-2.53	40.79	3	Vertical	178	1.89	-	28.27	2.41	-
AV	2.39G	53.45	54.00	-0.55	22.77	3	Vertical	178	1.89	-	28.27	2.41	-
PK	2.4164G	117.10	Inf	-Inf	86.34	3	Vertical	178	1.89	-	28.35	2.41	-
AV	2.4162G	107.17	Inf	-Inf	76.41	3	Vertical	178	1.89	-	28.35	2.41	-

802.11g_Nss1,(6Mbps)_2TX

22/10/2020

2417MHz_TX



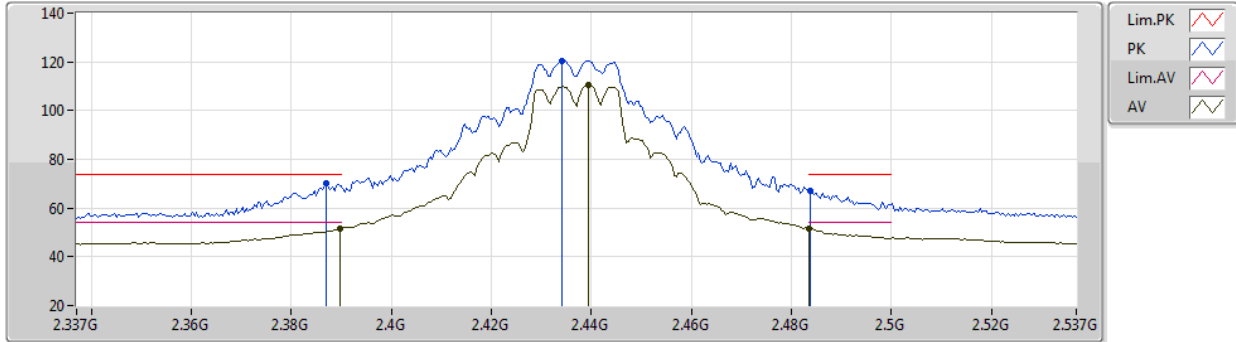
EUT_Z_2TX
Setting 94
02-E-K-3

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	71.80	74.00	-2.20	41.12	3	Horizontal	32	1.03	-	28.27	2.41	-
AV	2.3894G	53.13	54.00	-0.87	22.45	3	Horizontal	32	1.03	-	28.27	2.41	-
PK	2.4144G	115.60	Inf	-Inf	84.85	3	Horizontal	32	1.03	-	28.34	2.41	-
AV	2.4188G	105.85	Inf	-Inf	75.08	3	Horizontal	32	1.03	-	28.36	2.41	-

802.11g_Nss1,(6Mbps)_2TX

22/10/2020

2437MHz_TX



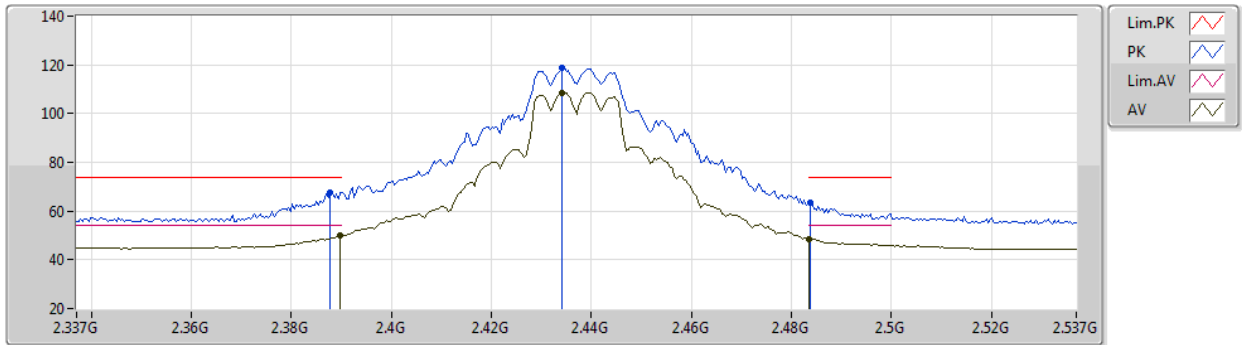
EUT_Z_2TX
Setting 108
02-E-K-4

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	2.387G	70.13	74.00	-3.87	39.46	3	Vertical	180	2.24	-	28.26	2.41	-
AV	2.3898G	51.79	54.00	-2.21	21.11	3	Vertical	180	2.24	-	28.27	2.41	-
PK	2.4342G	120.32	Inf	-Inf	89.50	3	Vertical	180	2.24	-	28.40	2.42	-
AV	2.4394G	110.60	Inf	-Inf	79.76	3	Vertical	180	2.24	-	28.42	2.42	-
PK	2.4838G	67.23	74.00	-6.77	36.24	3	Vertical	180	2.24	-	28.55	2.44	-
AV	2.4835G	51.67	54.00	-2.33	20.68	3	Vertical	180	2.24	-	28.55	2.44	-

802.11g_Nss1,(6Mbps)_2TX

22/10/2020

2437MHz_TX



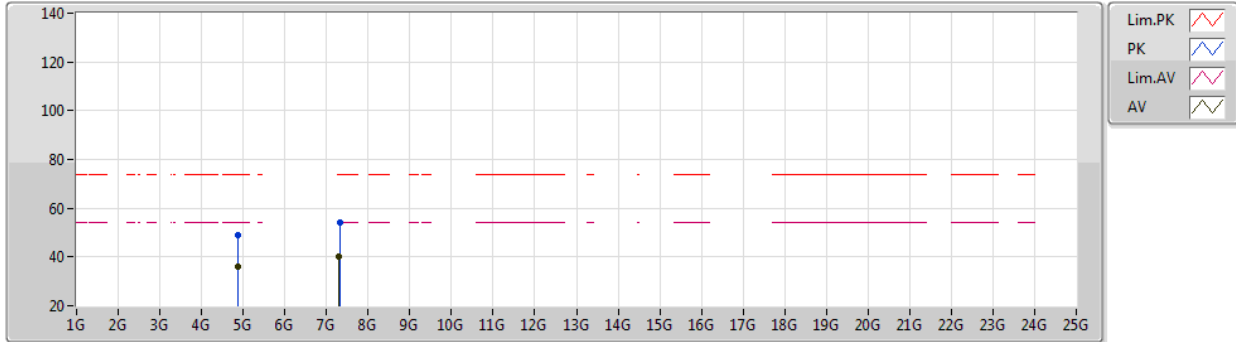
EUT_Z_2TX
Setting 108
02-E-K-4

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	2.3878G	67.53	74.00	-6.47	36.86	3	Horizontal	30	1.94	-	28.26	2.41	-
AV	2.3898G	50.09	54.00	-3.91	19.41	3	Horizontal	30	1.94	-	28.27	2.41	-
PK	2.4342G	118.61	Inf	-Inf	87.79	3	Horizontal	30	1.94	-	28.40	2.42	-
AV	2.4342G	108.49	Inf	-Inf	77.67	3	Horizontal	30	1.94	-	28.40	2.42	-
PK	2.4838G	63.31	74.00	-10.69	32.32	3	Horizontal	30	1.94	-	28.55	2.44	-
AV	2.4835G	48.66	54.00	-5.34	17.67	3	Horizontal	30	1.94	-	28.55	2.44	-

802.11g_Nss1,(6Mbps)_2TX

22/10/2020

2437MHz_TX



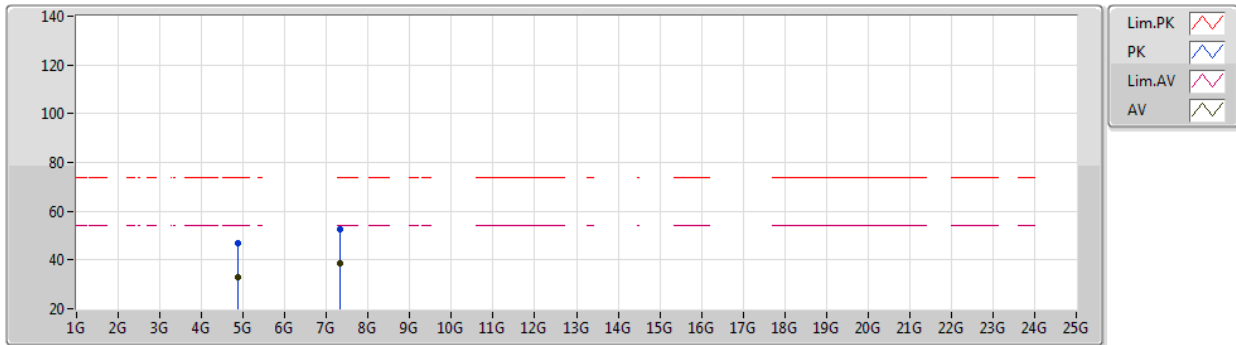
EUT_Z_2TX
Setting 108
02-E-K-4

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	4.87056G	48.90	74.00	-25.10	42.92	3	Vertical	75	1.43	-	33.08	4.70	31.80
AV	4.8744G	36.08	54.00	-17.92	30.08	3	Vertical	75	1.43	-	33.10	4.70	31.80
PK	7.31404G	54.12	74.00	-19.88	44.39	3	Vertical	81	1.06	-	36.40	5.76	32.43
AV	7.30812G	40.16	54.00	-13.84	30.44	3	Vertical	81	1.06	-	36.40	5.75	32.43

802.11g_Nss1,(6Mbps)_2TX

22/10/2020

2437MHz_TX



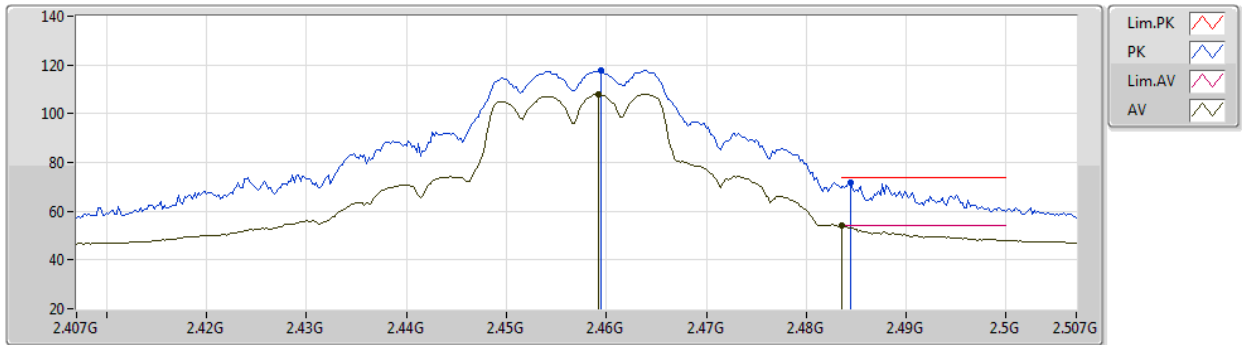
EUT_Z_2TX
Setting 108
02-E-K-4

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	4.87328G	46.69	74.00	-27.31	40.70	3	Horizontal	295	2.92	-	33.09	4.70	31.80
AV	4.87472G	32.73	54.00	-21.27	26.73	3	Horizontal	295	2.92	-	33.10	4.70	31.80
PK	7.31444G	52.53	74.00	-21.47	42.80	3	Horizontal	177	2.64	-	36.40	5.76	32.43
AV	7.31364G	38.45	54.00	-15.55	28.72	3	Horizontal	177	2.64	-	36.40	5.76	32.43

802.11g_Nss1,(6Mbps)_2TX

22/10/2020

2457MHz_TX



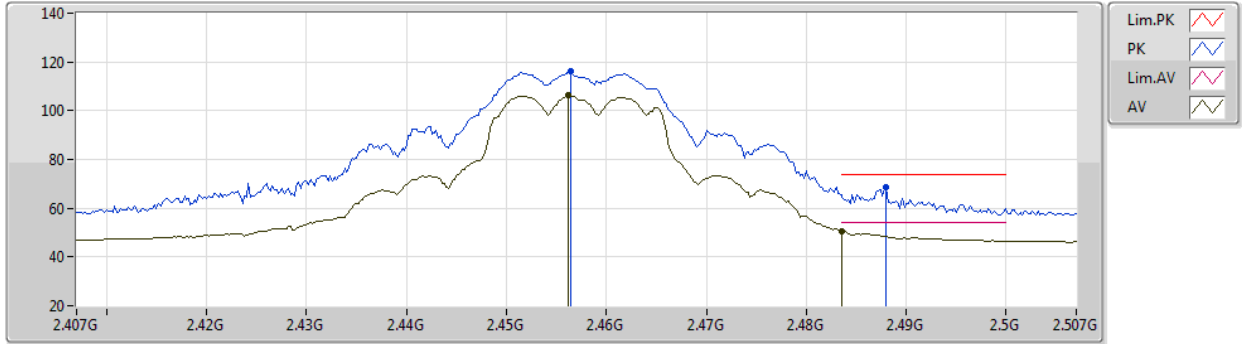
EUT_Z_2TX
Setting 98
02-E-K-3

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	2.4594G	117.68	Inf	-Inf	86.77	3	Vertical	177	1.80	-	28.48	2.43	-
AV	2.4592G	107.99	Inf	-Inf	77.08	3	Vertical	177	1.80	-	28.48	2.43	-
PK	2.4844G	71.75	74.00	-2.25	40.76	3	Vertical	177	1.80	-	28.55	2.44	-
AV	2.4836G	53.92	54.00	-0.08	22.93	3	Vertical	177	1.80	-	28.55	2.44	-

802.11g_Nss1,(6Mbps)_2TX

22/10/2020

2457MHz_TX



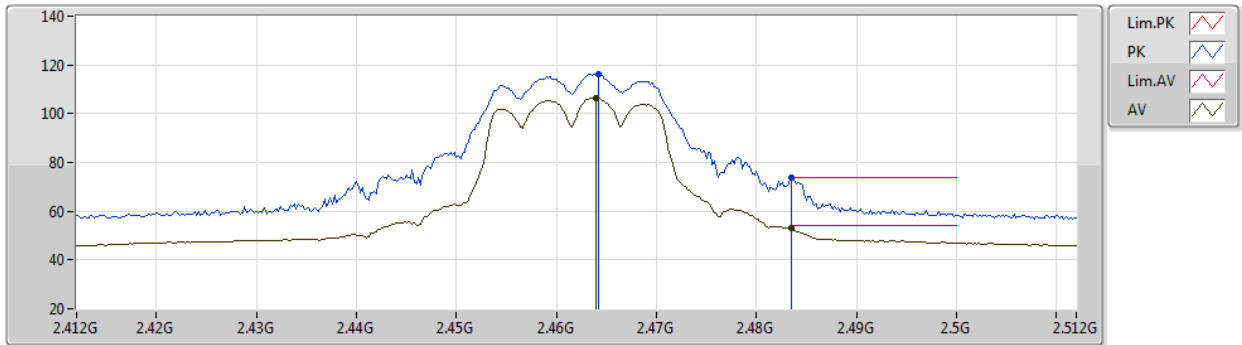
EUT_Z_2TX
Setting 98
02-E-K-3

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	2.4564G	116.10	Inf	-Inf	85.20	3	Horizontal	31	1.00	-	28.47	2.43	-
AV	2.4562G	106.21	Inf	-Inf	75.31	3	Horizontal	31	1.00	-	28.47	2.43	-
PK	2.488G	68.53	74.00	-5.47	37.53	3	Horizontal	31	1.00	-	28.56	2.44	-
AV	2.4836G	50.69	54.00	-3.31	19.70	3	Horizontal	31	1.00	-	28.55	2.44	-

802.11g_Nss1,(6Mbps)_2TX

22/10/2020

2462MHz_TX



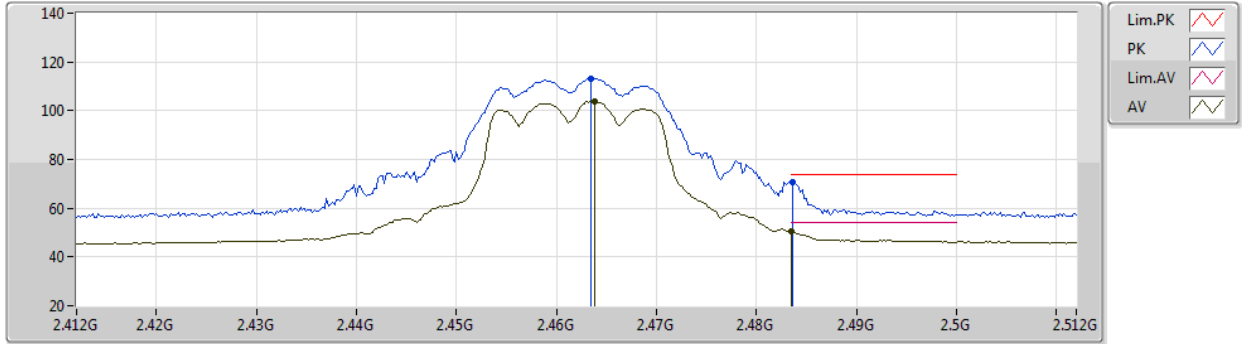
EUT_Z_2TX
Setting 87
02-E-K-4

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	2.4642G	116.14	Inf	-Inf	85.22	3	Vertical	176	1.80	-	28.49	2.43	-
AV	2.464G	106.44	Inf	-Inf	75.52	3	Vertical	176	1.80	-	28.49	2.43	-
PK	2.4835G	73.90	74.00	-0.10	42.91	3	Vertical	176	1.80	-	28.55	2.44	-
AV	2.4835G	52.95	54.00	-1.05	21.96	3	Vertical	176	1.80	-	28.55	2.44	-

802.11g_Nss1,(6Mbps)_2TX

22/10/2020

2462MHz_TX



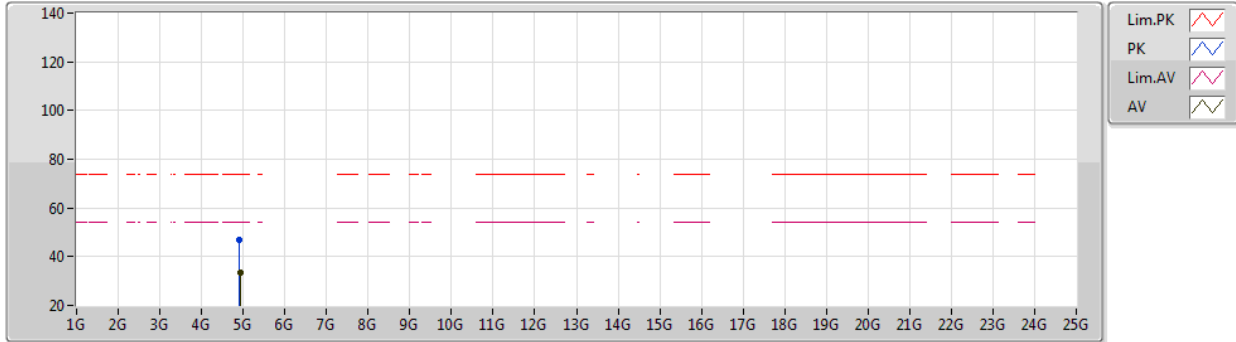
EUT_Z_2TX
Setting 87
02-E-K-4

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	113.27	Inf	-Inf	82.35	3	Horizontal	38	1.20	-	28.49	2.43	-
AV	2.4638G	103.73	Inf	-Inf	72.81	3	Horizontal	38	1.20	-	28.49	2.43	-
PK	2.4836G	70.92	74.00	-3.08	39.93	3	Horizontal	38	1.20	-	28.55	2.44	-
AV	2.4835G	50.38	54.00	-3.62	19.39	3	Horizontal	38	1.20	-	28.55	2.44	-

802.11g_Nss1,(6Mbps)_2TX

22/10/2020

2462MHz_TX



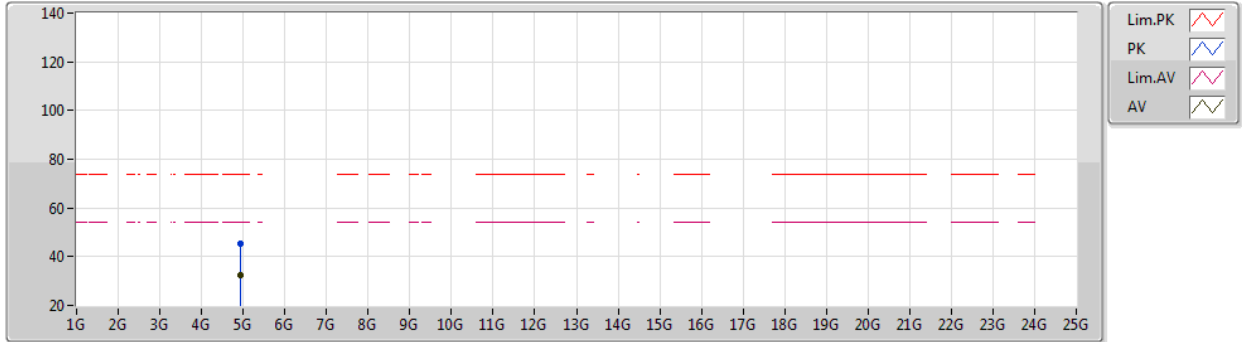
EUT Z_2TX
Setting 87
02-E-K-4

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	4.91902G	46.85	74.00	-27.15	40.75	3	Vertical	242	1.30	-	33.22	4.70	31.82
AV	4.92424G	33.30	54.00	-20.70	27.20	3	Vertical	242	1.30	-	33.22	4.70	31.82

802.11g_Nss1,(6Mbps)_2TX

22/10/2020

2462MHz_TX



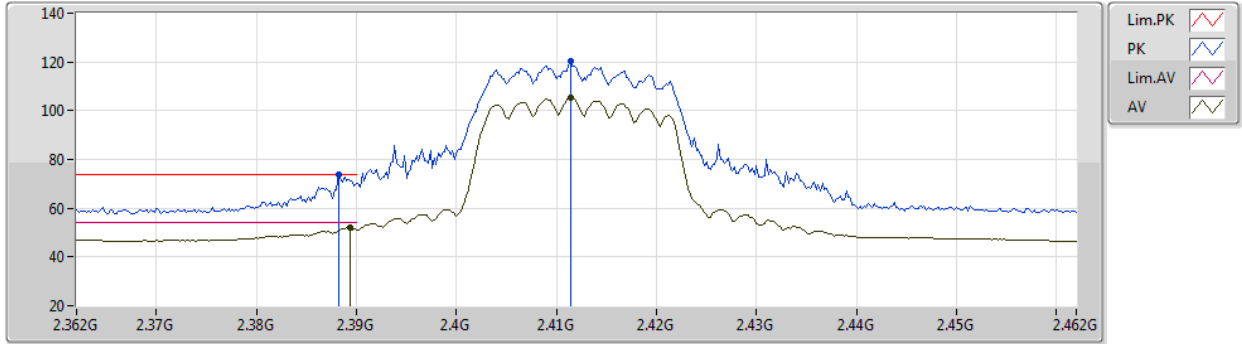
EUT Z_2TX
Setting 87
02-E-K-4

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	4.9329G	45.18	74.00	-28.82	39.07	3	Horizontal	37	2.58	-	33.23	4.70	31.82
AV	4.9276G	32.31	54.00	-21.69	26.20	3	Horizontal	37	2.58	-	33.23	4.70	31.82

802.11ax HEW20_Nss1,(MCS0)_2TX

22/10/2020

2412MHz_TX



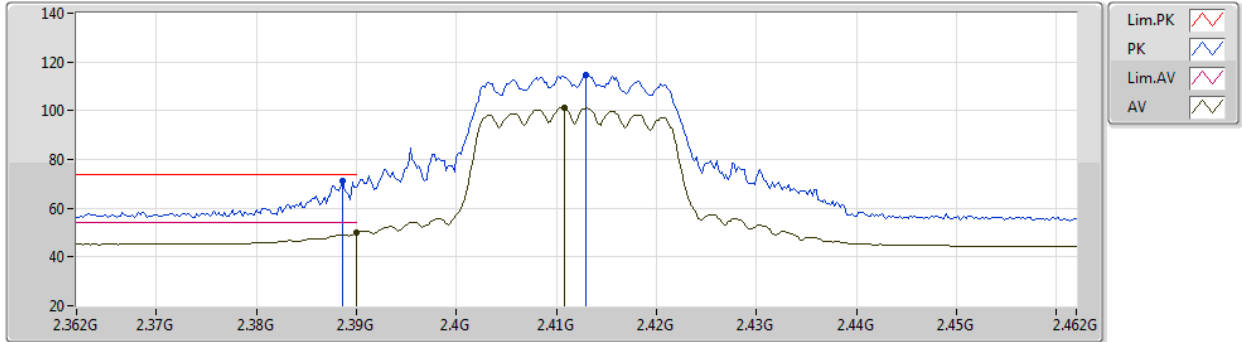
EUT Z_2TX
Setting 80
02-E-K-3

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	73.68	74.00	-0.32	43.01	3	Vertical	47	1.14	-	28.26	2.41	-
AV	2.3894G	52.00	54.00	-2.00	21.32	3	Vertical	47	1.14	-	28.27	2.41	-
PK	2.4114G	120.15	Inf	-Inf	89.41	3	Vertical	47	1.14	-	28.33	2.41	-
AV	2.4114G	105.45	Inf	-Inf	74.71	3	Vertical	47	1.14	-	28.33	2.41	-

802.11ax HEW20_Nss1,(MCS0)_2TX

22/10/2020

2412MHz_TX



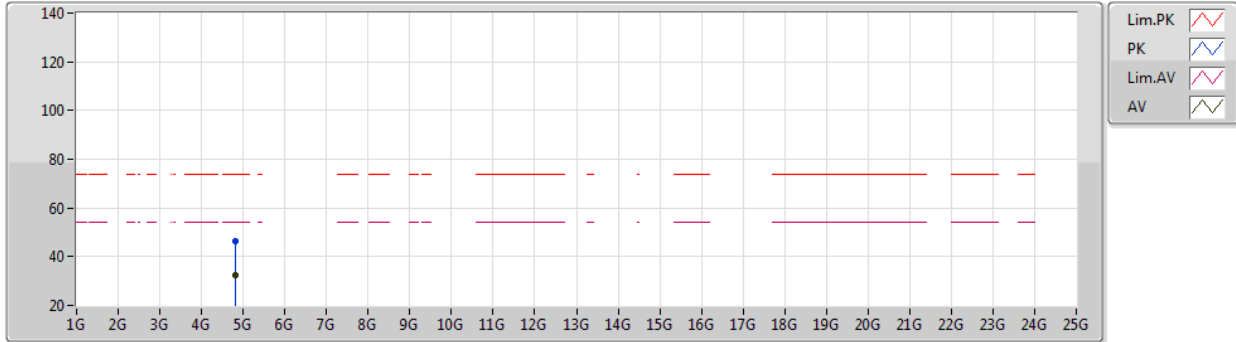
EUT_Z_2TX
Setting 80
02-E-K-3

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	71.03	74.00	-2.97	40.35	3	Horizontal	27	2.04	-	28.27	2.41	-
AV	2.39G	50.02	54.00	-3.98	19.34	3	Horizontal	27	2.04	-	28.27	2.41	-
PK	2.413G	114.80	Inf	-Inf	84.05	3	Horizontal	27	2.04	-	28.34	2.41	-
AV	2.4108G	101.14	Inf	-Inf	70.40	3	Horizontal	27	2.04	-	28.33	2.41	-

802.11ax HEW20_Nss1,(MCS0)_2TX

22/10/2020

2412MHz_TX



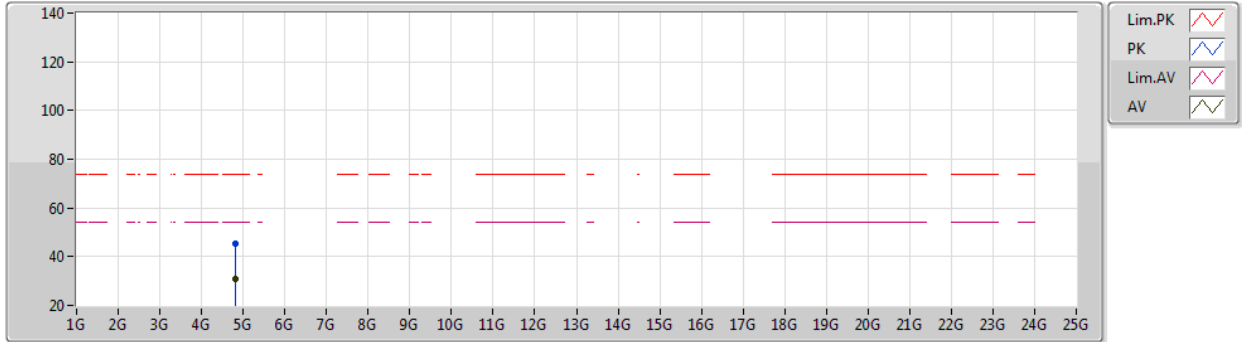
EUT Z_2TX
 Setting 80
 02-E-K-3

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	4.8218G	46.52	74.00	-27.48	40.71	3	Vertical	0	1.00	-	32.89	4.70	31.78
AV	4.8244G	32.65	54.00	-21.35	26.83	3	Vertical	0	1.00	-	32.90	4.70	31.78

802.11ax HEW20_Nss1,(MCS0)_2TX

22/10/2020

2412MHz_TX



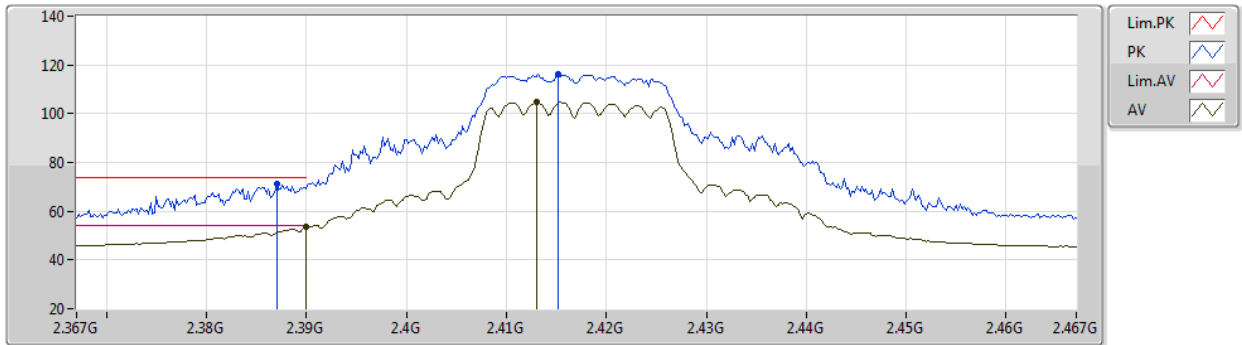
EUT Z_2TX
Setting 80
02-E-K-3

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	4.82581G	45.49	74.00	-28.51	39.67	3	Horizontal	49	1.80	-	32.90	4.70	31.78
AV	4.82326G	31.12	54.00	-22.88	25.31	3	Horizontal	49	1.80	-	32.89	4.70	31.78

802.11ax HEW20_Nss1,(MCS0)_2TX

22/10/2020

2417MHz_TX



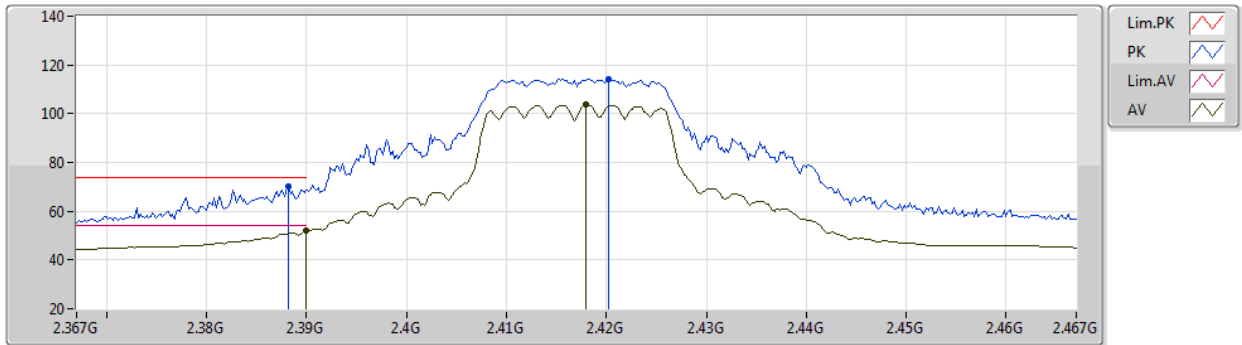
EUT_Z_2TX
Setting 92
02-E-K-3

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	2.387G	71.23	74.00	-2.77	40.56	3	Vertical	179	2.30	-	28.26	2.41	-
AV	2.39G	53.40	54.00	-0.60	22.72	3	Vertical	179	2.30	-	28.27	2.41	-
PK	2.4152G	116.17	Inf	-Inf	85.41	3	Vertical	179	2.30	-	28.35	2.41	-
AV	2.413G	104.62	Inf	-Inf	73.87	3	Vertical	179	2.30	-	28.34	2.41	-

802.11ax HEW20_Nss1,(MCS0)_2TX

22/10/2020

2417MHz_TX



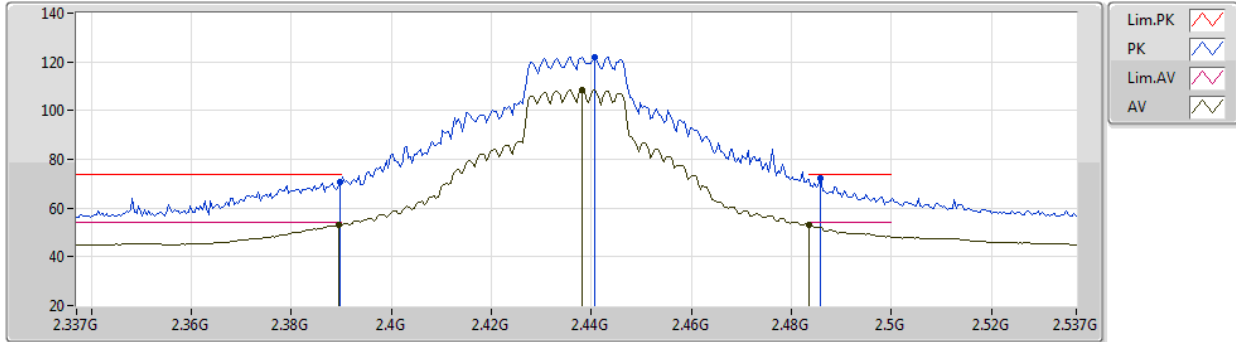
EUT Z_2TX
Setting 92
02-E-K-3

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	69.99	74.00	-4.01	39.32	3	Horizontal	32	2.72	-	28.26	2.41	-
AV	2.39G	51.91	54.00	-2.09	21.23	3	Horizontal	32	2.72	-	28.27	2.41	-
PK	2.4202G	114.25	Inf	-Inf	83.48	3	Horizontal	32	2.72	-	28.36	2.41	-
AV	2.418G	103.55	Inf	-Inf	72.79	3	Horizontal	32	2.72	-	28.35	2.41	-

802.11ax HEW20_Nss1,(MCS0)_2TX

22/10/2020

2437MHz_TX



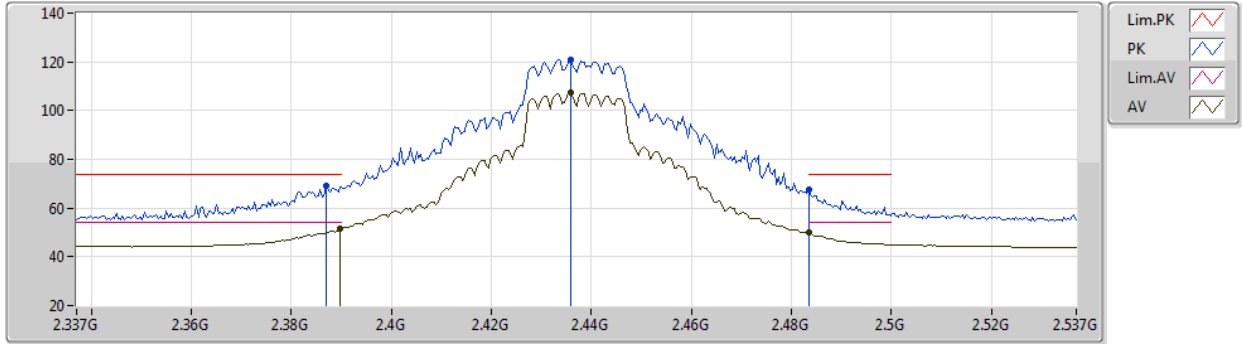
EUT_Z_2TX
Setting 108
02-E-K-3

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	70.68	74.00	-3.32	40.00	3	Vertical	178	2.24	-	28.27	2.41	-
AV	2.3894G	52.89	54.00	-1.11	22.21	3	Vertical	178	2.24	-	28.27	2.41	-
PK	2.4406G	121.91	Inf	-Inf	91.07	3	Vertical	178	2.24	-	28.42	2.42	-
AV	2.4382G	108.53	Inf	-Inf	77.70	3	Vertical	178	2.24	-	28.41	2.42	-
PK	2.4858G	72.40	74.00	-1.60	41.40	3	Vertical	178	2.24	-	28.56	2.44	-
AV	2.4835G	53.19	54.00	-0.81	22.20	3	Vertical	178	2.24	-	28.55	2.44	-

802.11ax HEW20_Nss1,(MCS0)_2TX

22/10/2020

2437MHz_TX



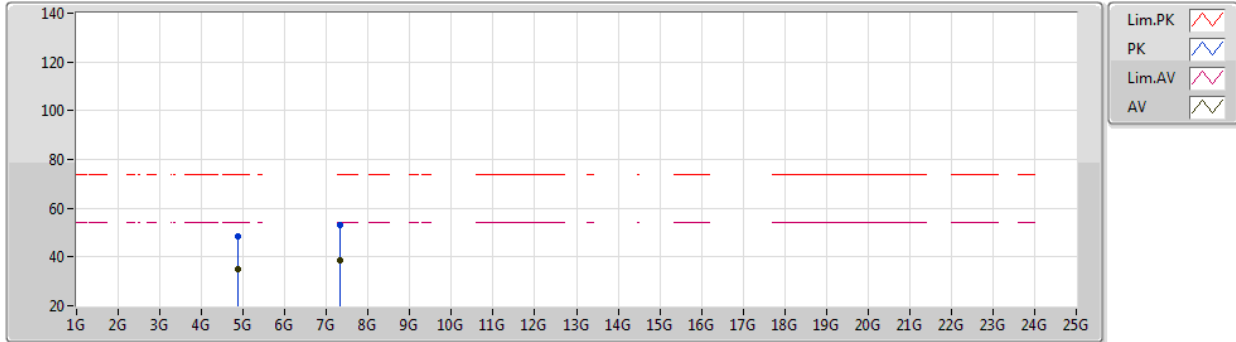
EUT_Z_2TX
Setting 108
02-E-K-3

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	2.387G	68.96	74.00	-5.04	38.29	3	Horizontal	31	1.97	-	28.26	2.41	-
AV	2.3898G	51.58	54.00	-2.42	20.90	3	Horizontal	31	1.97	-	28.27	2.41	-
PK	2.4358G	120.80	Inf	-Inf	89.97	3	Horizontal	31	1.97	-	28.41	2.42	-
AV	2.4358G	107.16	Inf	-Inf	76.33	3	Horizontal	31	1.97	-	28.41	2.42	-
PK	2.4835G	67.52	74.00	-6.48	36.53	3	Horizontal	31	1.97	-	28.55	2.44	-
AV	2.4835G	49.81	54.00	-4.19	18.82	3	Horizontal	31	1.97	-	28.55	2.44	-

802.11ax HEW20_Nss1,(MCS0)_2TX

22/10/2020

2437MHz_TX



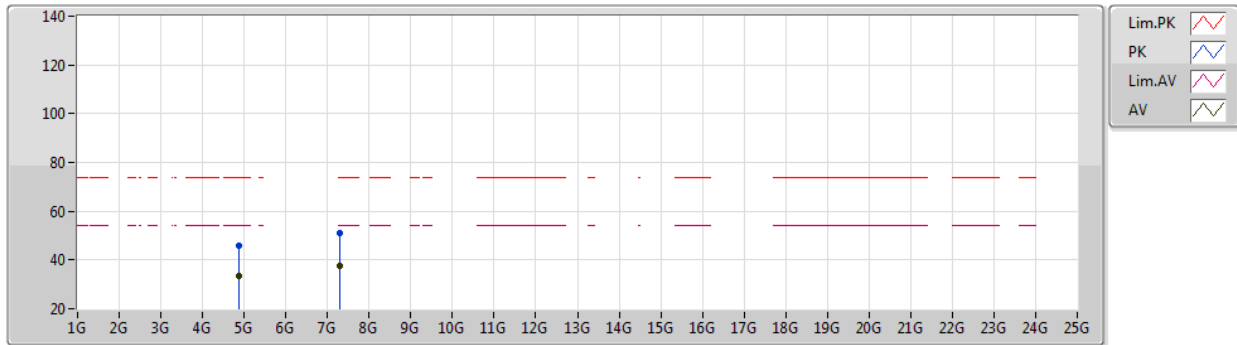
EUT_Z_2TX
Setting 108
02-E-K-3

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	4.8765G	48.49	74.00	-25.51	42.48	3	Vertical	74	1.40	-	33.11	4.70	31.80
AV	4.874G	34.86	54.00	-19.14	28.86	3	Vertical	74	1.40	-	33.10	4.70	31.80
PK	7.3144G	52.86	74.00	-21.14	43.13	3	Vertical	215	2.24	-	36.40	5.76	32.43
AV	7.3122G	38.79	54.00	-15.21	29.06	3	Vertical	215	2.24	-	36.40	5.76	32.43

802.11ax HEW20_Nss1,(MCS0)_2TX

22/10/2020

2437MHz_TX



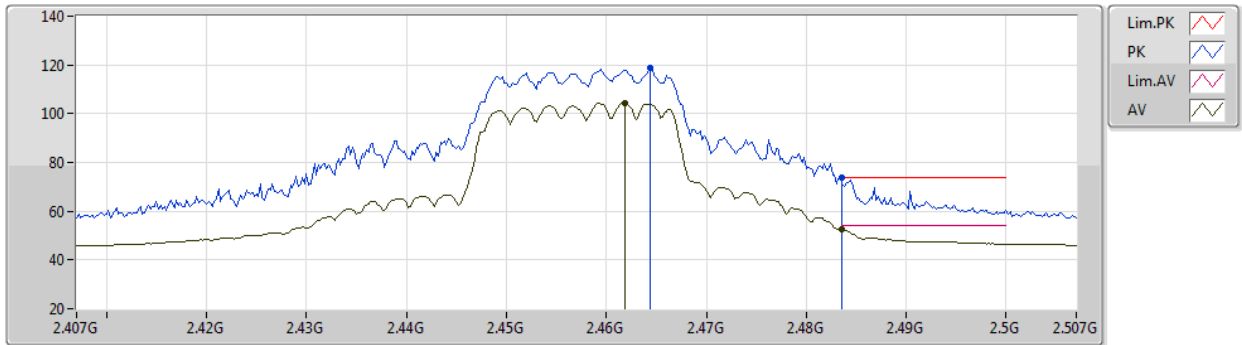
EUT_Z_2TX
Setting 108
02-E-K-3

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	4.8798G	46.01	74.00	-27.99	39.99	3	Horizontal	334	1.51	-	33.12	4.70	31.80
AV	4.8744G	33.28	54.00	-20.72	27.28	3	Horizontal	334	1.51	-	33.10	4.70	31.80
PK	7.3075G	51.19	74.00	-22.81	41.47	3	Horizontal	173	2.97	-	36.40	5.75	32.43
AV	7.3101G	37.66	54.00	-16.34	27.93	3	Horizontal	173	2.97	-	36.40	5.76	32.43

802.11ax HEW20_Nss1,(MCS0)_2TX

22/10/2020

2457MHz_TX



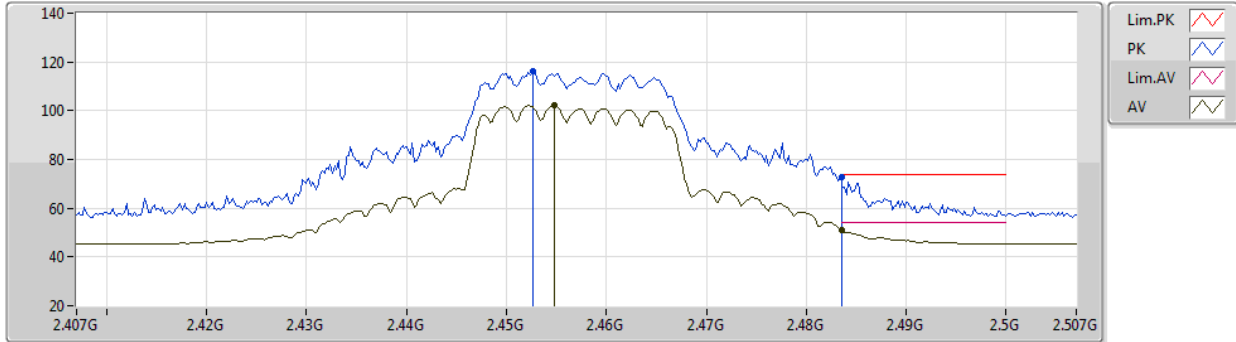
EUT_Z_2TX
Setting 92
02-E-K-3

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	2.4644G	118.68	Inf	-Inf	87.76	3	Vertical	177	1.82	-	28.49	2.43	-
AV	2.4618G	104.32	Inf	-Inf	73.40	3	Vertical	177	1.82	-	28.49	2.43	-
PK	2.4835G	73.78	74.00	-0.22	42.79	3	Vertical	177	1.82	-	28.55	2.44	-
AV	2.4836G	52.74	54.00	-1.26	21.75	3	Vertical	177	1.82	-	28.55	2.44	-

802.11ax HEW20_Nss1,(MCS0)_2TX

22/10/2020

2457MHz_TX



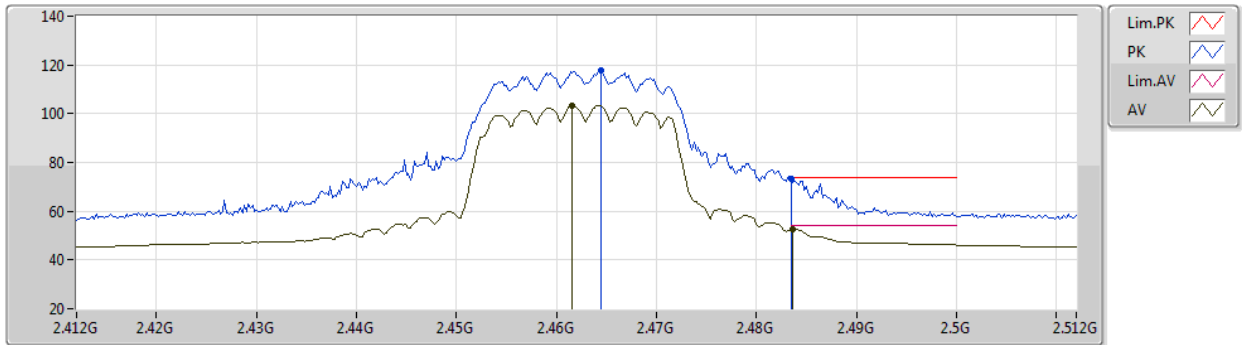
EUT_Z_2TX
Setting 92
02-E-K-3

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	2.4526G	116.12	Inf	-Inf	85.23	3	Horizontal	9	1.16	-	28.46	2.43	-
AV	2.4548G	102.02	Inf	-Inf	71.13	3	Horizontal	9	1.16	-	28.46	2.43	-
PK	2.4835G	72.97	74.00	-1.03	41.98	3	Horizontal	9	1.16	-	28.55	2.44	-
AV	2.4835G	51.20	54.00	-2.80	20.21	3	Horizontal	9	1.16	-	28.55	2.44	-

802.11ax HEW20_Nss1,(MCS0)_2TX

22/10/2020

2462MHz_TX



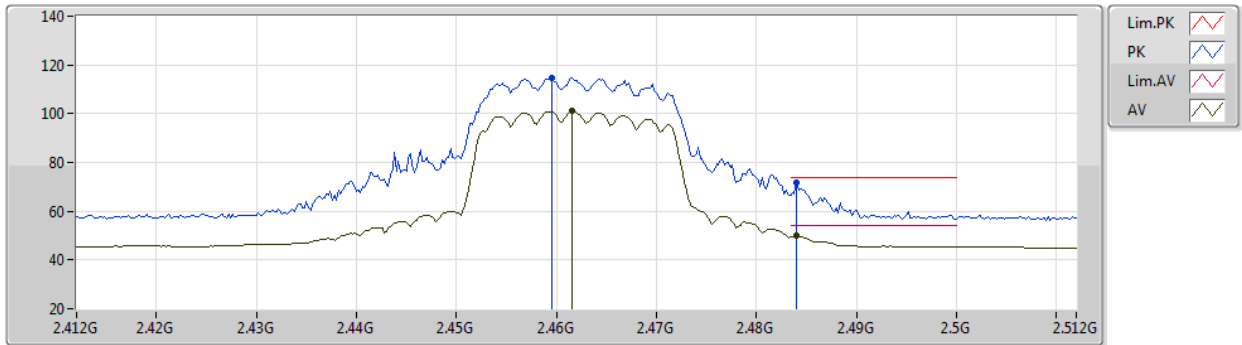
EUT_Z_2TX
Setting 84
02-E-K-3

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	2.4644G	117.73	Inf	-Inf	86.81	3	Vertical	177	1.80	-	28.49	2.43	-
AV	2.4616G	103.35	Inf	-Inf	72.44	3	Vertical	177	1.80	-	28.48	2.43	-
PK	2.4835G	73.49	74.00	-0.51	42.50	3	Vertical	177	1.80	-	28.55	2.44	-
AV	2.4836G	52.64	54.00	-1.36	21.65	3	Vertical	177	1.80	-	28.55	2.44	-

802.11ax HEW20_Nss1,(MCS0)_2TX

22/10/2020

2462MHz_TX



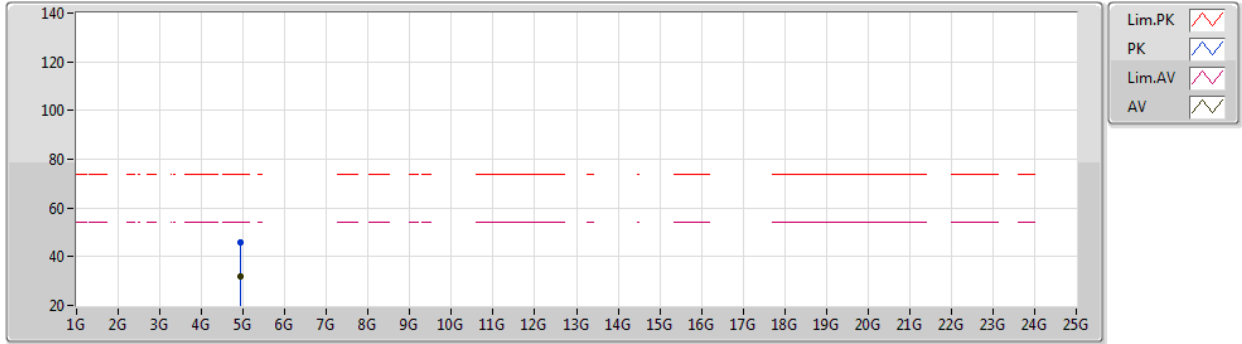
EUT_Z_2TX
Setting 84
02-E-K-3

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	2.4596G	114.88	Inf	-Inf	83.97	3	Horizontal	33	1.01	-	28.48	2.43	-
AV	2.4616G	101.13	Inf	-Inf	70.22	3	Horizontal	33	1.01	-	28.48	2.43	-
PK	2.484G	71.51	74.00	-2.49	40.52	3	Horizontal	33	1.01	-	28.55	2.44	-
AV	2.484G	49.80	54.00	-4.20	18.81	3	Horizontal	33	1.01	-	28.55	2.44	-

802.11ax HEW20_Nss1,(MCS0)_2TX

22/10/2020

2462MHz_TX



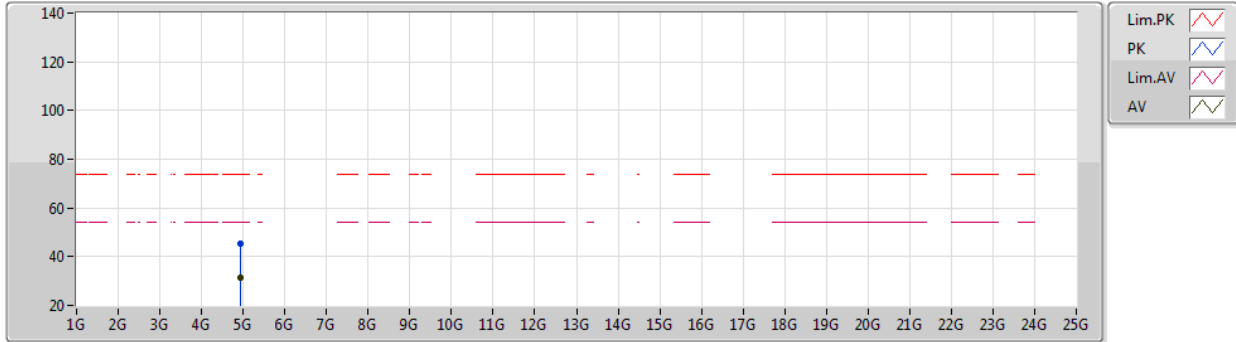
EUT Z_2TX
Setting 84
02-E-K-3

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	4.92568G	45.86	74.00	-28.14	39.75	3	Vertical	79	1.46	-	33.23	4.70	31.82
AV	4.92568G	32.01	54.00	-21.99	25.90	3	Vertical	79	1.46	-	33.23	4.70	31.82

802.11ax HEW20_Nss1,(MCS0)_2TX

22/10/2020

2462MHz_TX



EUT Z_2TX
Setting 84
02-E-K-3

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	4.9213G	45.53	74.00	-28.47	39.43	3	Horizontal	357	1.80	-	33.22	4.70	31.82
AV	4.92626G	31.38	54.00	-22.62	25.27	3	Horizontal	357	1.80	-	33.23	4.70	31.82



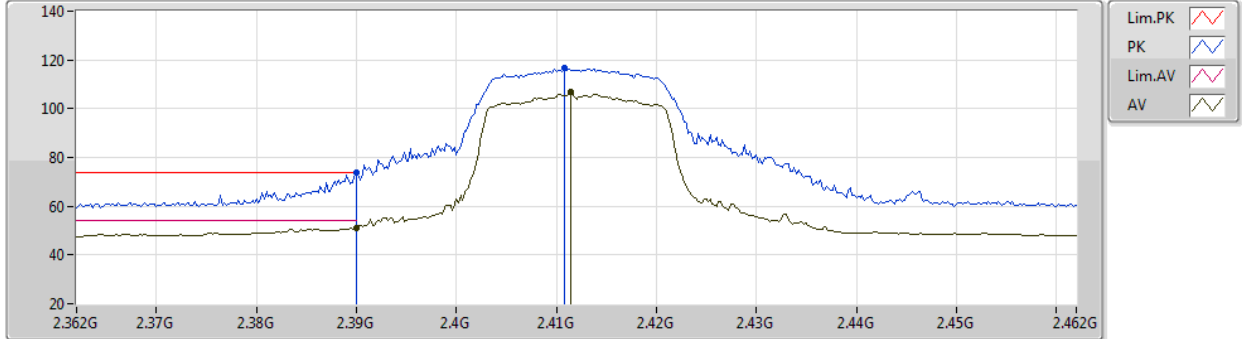
Summary

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-BF_Nss1,(MCS0)_2TX	Pass	AV	2.485G	53.97	54.00	-0.03	3	Vertical	356	1.30	-

802.11n HT20-BF_Nss1,(MCS0)_2TX

31/10/2020

2412MHz_TX



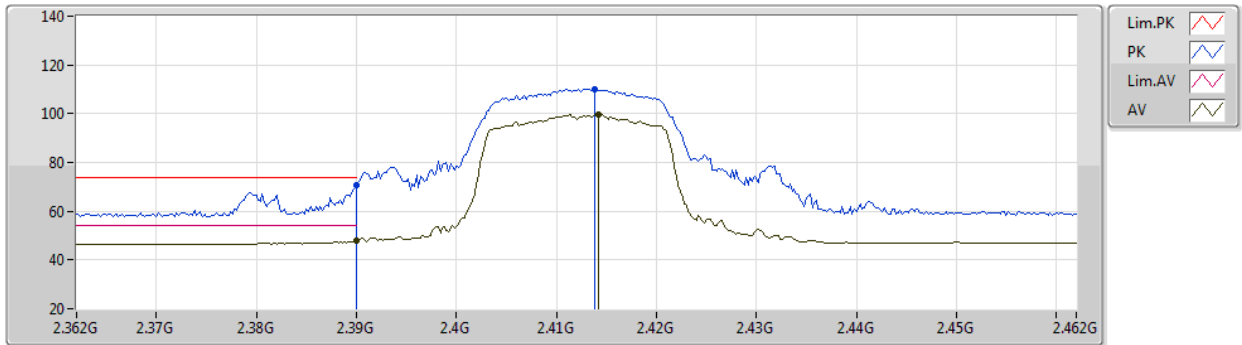
EUT_Z_2TX
Setting 79
02-B-K-4

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	73.77	74.00	-0.23	43.10	3	Vertical	342	1.26	-	28.27	2.40	-
AV	2.39G	51.19	54.00	-2.81	20.52	3	Vertical	342	1.26	-	28.27	2.40	-
PK	2.4108G	116.58	Inf	-Inf	85.84	3	Vertical	342	1.26	-	28.33	2.41	-
AV	2.4114G	106.68	Inf	-Inf	75.94	3	Vertical	342	1.26	-	28.33	2.41	-

802.11n HT20-BF_Nss1,(MCS0)_2TX

31/10/2020

2412MHz_TX



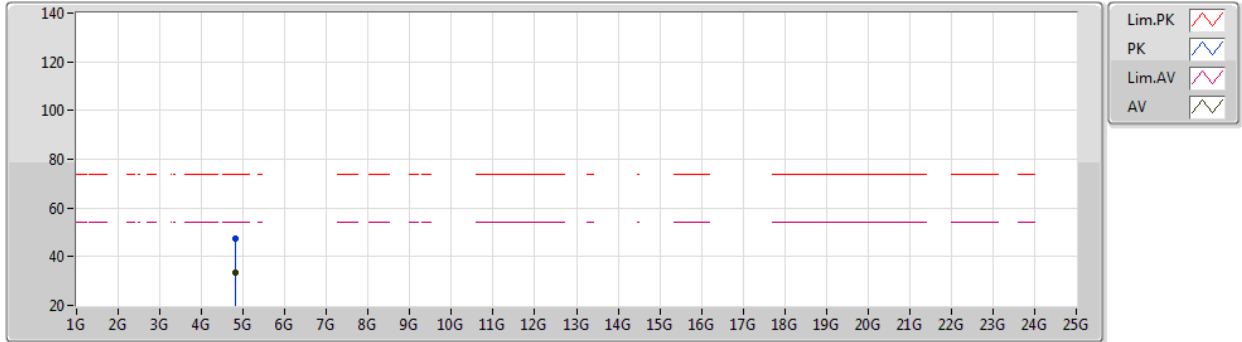
EUT_Z_2TX
Setting 79
02-B-K-4

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	70.77	74.00	-3.23	40.09	3	Horizontal	76	1.16	-	28.27	2.41	-
AV	2.39G	48.17	54.00	-5.83	17.49	3	Horizontal	76	1.16	-	28.27	2.41	-
PK	2.4138G	110.20	Inf	-Inf	79.45	3	Horizontal	76	1.16	-	28.34	2.41	-
AV	2.4142G	99.87	Inf	-Inf	69.12	3	Horizontal	76	1.16	-	28.34	2.41	-

802.11n HT20-BF_Nss1,(MCS0)_2TX

31/10/2020

2412MHz_TX



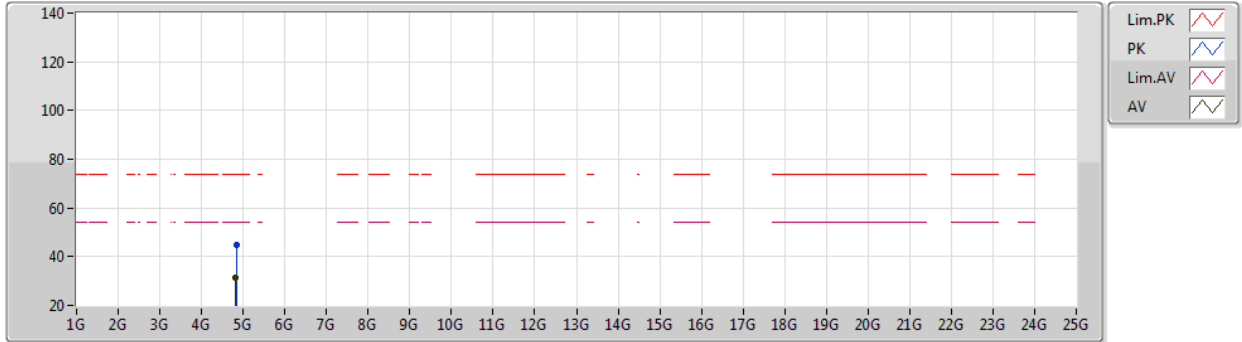
EUT Z_2TX
Setting 79
02-B-K-4

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	4.82136G	47.20	74.00	-26.80	41.39	3	Vertical	338	1.78	-	32.89	4.70	31.78
AV	4.82628G	33.68	54.00	-20.32	27.85	3	Vertical	338	1.78	-	32.91	4.70	31.78

802.11n HT20-BF_Nss1,(MCS0)_2TX

31/10/2020

2412MHz_TX



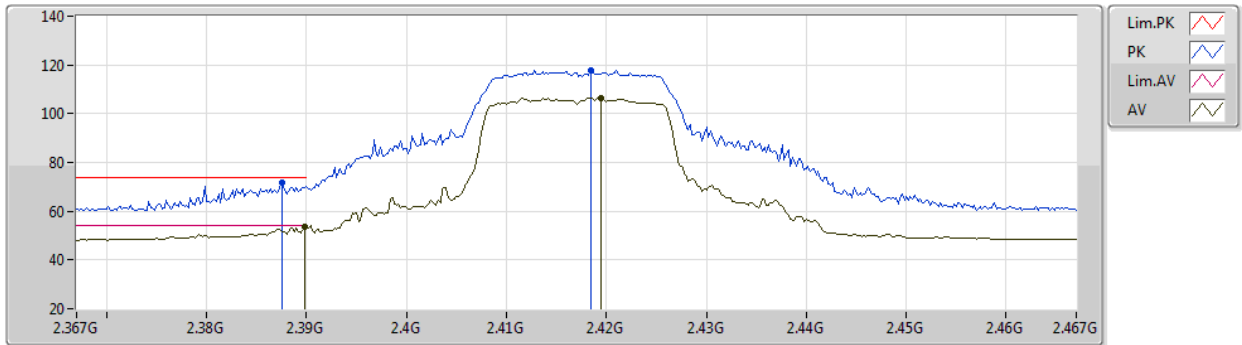
EUT_Z_2TX
Setting 79
02-B-K-4

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	4.8369G	44.68	74.00	-29.32	38.81	3	Horizontal	227	1.44	-	32.95	4.70	31.78
AV	4.8225G	31.27	54.00	-22.73	25.46	3	Horizontal	227	1.44	-	32.89	4.70	31.78

802.11n HT20-BF_Nss1,(MCS0)_2TX

31/10/2020

2417MHz_TX



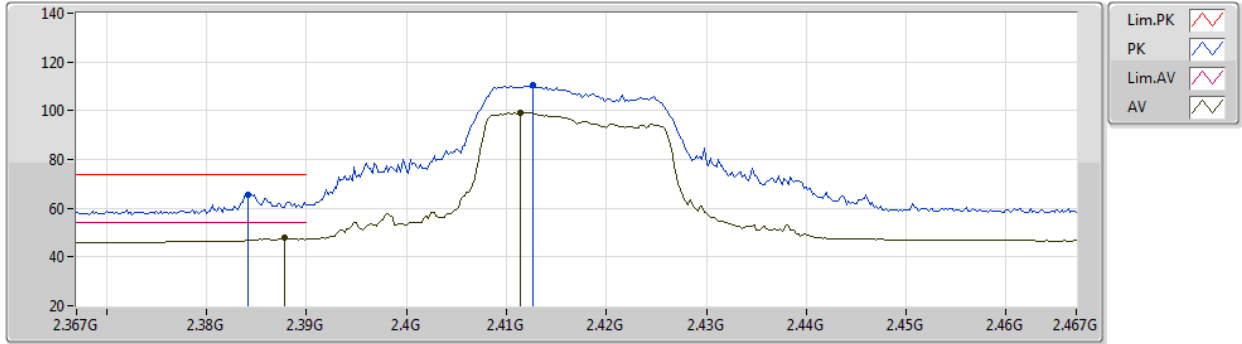
EUT_Z_2TX
Setting 86
02-B-K-4

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	2.3876G	71.66	74.00	-2.34	40.99	3	Vertical	21	1.31	-	28.26	2.41	-
AV	2.3898G	53.78	54.00	-0.22	23.10	3	Vertical	21	1.31	-	28.27	2.41	-
PK	2.4184G	117.87	Inf	-Inf	87.10	3	Vertical	21	1.31	-	28.36	2.41	-
AV	2.4194G	106.45	Inf	-Inf	75.68	3	Vertical	21	1.31	-	28.36	2.41	-

802.11n HT20-BF_Nss1,(MCS0)_2TX

31/10/2020

2417MHz_TX



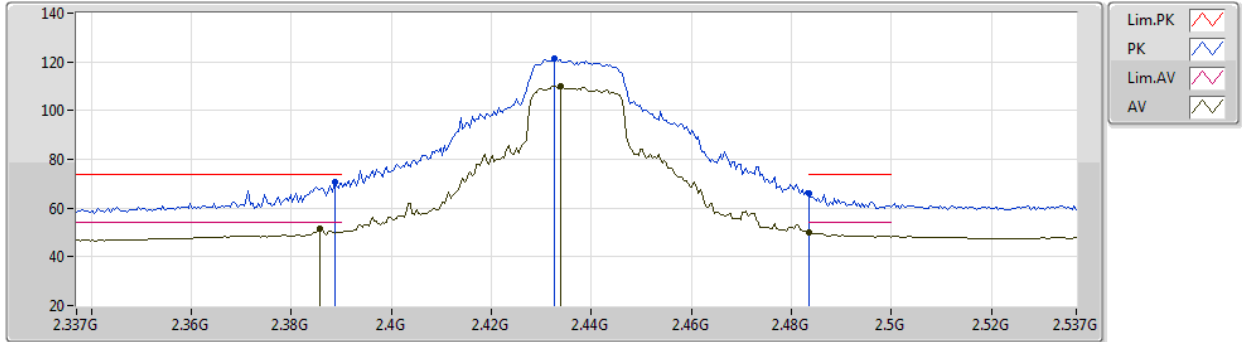
EUT_Z_2TX
Setting 86
02-B-K-4

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	2.3842G	65.63	74.00	-8.37	34.97	3	Horizontal	248	1.77	-	28.25	2.41	-
AV	2.3878G	47.77	54.00	-6.23	17.10	3	Horizontal	248	1.77	-	28.26	2.41	-
PK	2.4126G	110.60	Inf	-Inf	79.85	3	Horizontal	248	1.77	-	28.34	2.41	-
AV	2.4114G	99.30	Inf	-Inf	68.56	3	Horizontal	248	1.77	-	28.33	2.41	-

802.11n HT20-BF_Nss1,(MCS0)_2TX

31/10/2020

2437MHz_TX



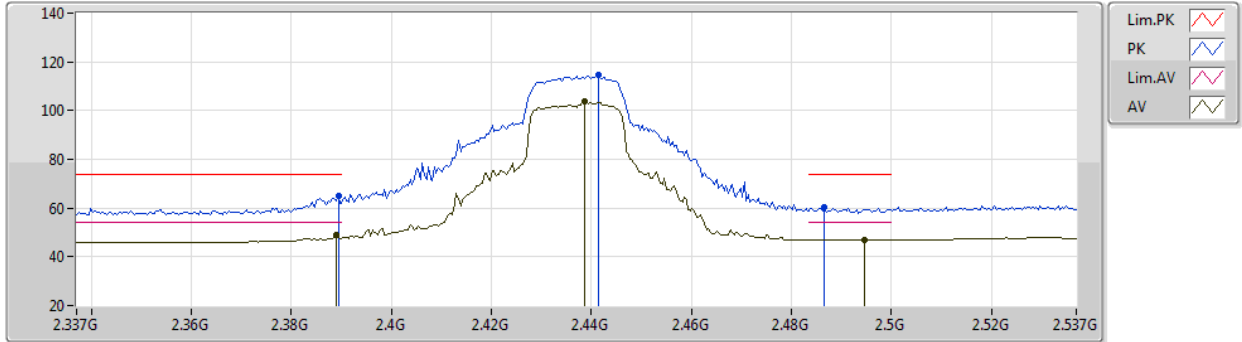
EUT_Z_2TX
Setting 102
02-B-K-4

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	70.67	74.00	-3.33	39.99	3	Vertical	334	1.74	-	28.27	2.41	-
AV	2.3858G	51.70	54.00	-2.30	21.03	3	Vertical	334	1.74	-	28.26	2.41	-
PK	2.4326G	121.15	Inf	-Inf	90.33	3	Vertical	334	1.74	-	28.40	2.42	-
AV	2.4338G	109.84	Inf	-Inf	79.02	3	Vertical	334	1.74	-	28.40	2.42	-
PK	2.4835G	65.90	74.00	-8.10	34.91	3	Vertical	334	1.74	-	28.55	2.44	-
AV	2.4835G	49.93	54.00	-4.07	18.94	3	Vertical	334	1.74	-	28.55	2.44	-

802.11n HT20-BF_Nss1,(MCS0)_2TX

31/10/2020

2437MHz_TX



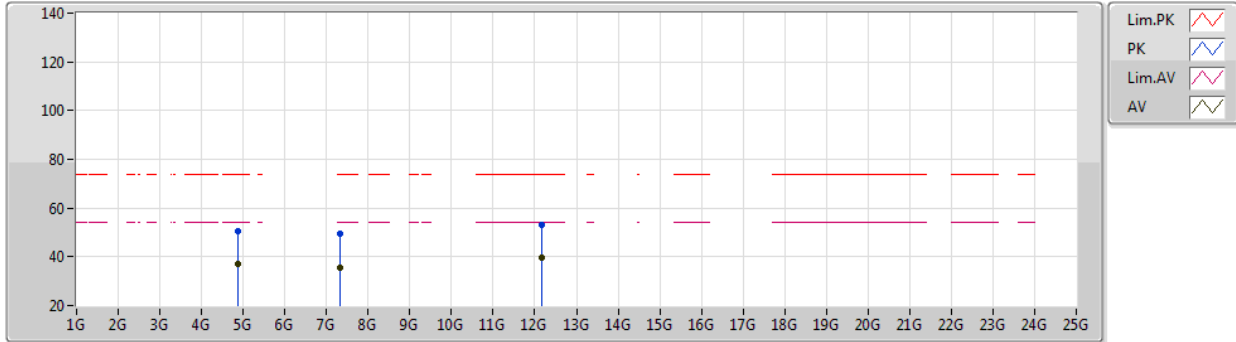
EUT_Z_2TX
Setting 102
02-B-K-4

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	2.3894G	64.79	74.00	-9.21	34.11	3	Horizontal	29	2.97	-	28.27	2.41	-
AV	2.389G	48.90	54.00	-5.10	18.22	3	Horizontal	29	2.97	-	28.27	2.41	-
PK	2.4414G	114.60	Inf	-Inf	83.76	3	Horizontal	29	2.97	-	28.42	2.42	-
AV	2.4386G	103.76	Inf	-Inf	72.92	3	Horizontal	29	2.97	-	28.42	2.42	-
PK	2.4866G	60.10	74.00	-13.90	29.10	3	Horizontal	29	2.97	-	28.56	2.44	-
AV	2.4946G	46.96	54.00	-7.04	15.93	3	Horizontal	29	2.97	-	28.58	2.45	-

802.11n HT20-BF_Nss1,(MCS0)_2TX

31/10/2020

2437MHz_TX



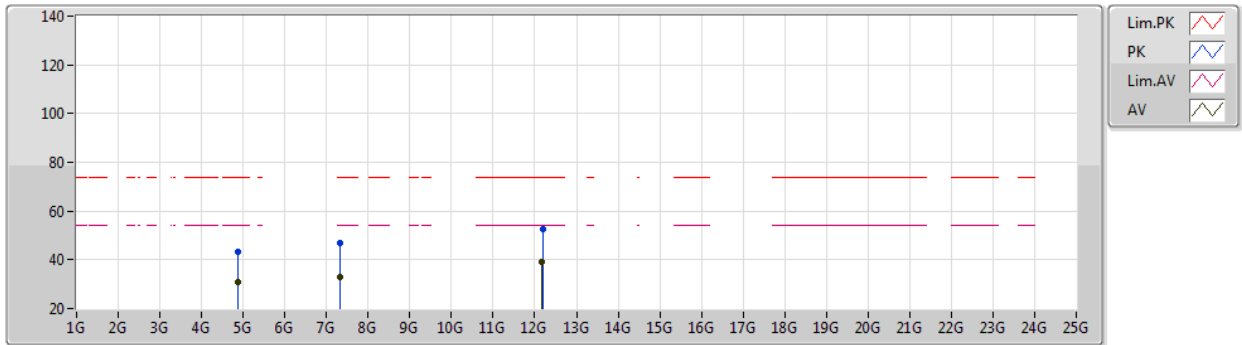
EUT_Z_2TX
Setting 102
02-B-K-4

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	4.87076G	50.28	74.00	-23.72	44.30	3	Vertical	338	1.14	-	33.08	4.70	31.80
AV	4.87406G	37.04	54.00	-16.96	31.04	3	Vertical	338	1.14	-	33.10	4.70	31.80
PK	7.31514G	49.52	74.00	-24.48	39.79	3	Vertical	75	2.29	-	36.40	5.76	32.43
AV	7.31886G	35.61	54.00	-18.39	25.89	3	Vertical	75	2.29	-	36.40	5.76	32.44
PK	12.18278G	53.06	74.00	-20.94	38.81	3	Vertical	32	2.85	-	39.26	7.86	32.87
AV	12.17018G	39.56	54.00	-14.44	25.30	3	Vertical	32	2.85	-	39.27	7.86	32.87

802.11n HT20-BF_Nss1,(MCS0)_2TX

31/10/2020

2437MHz_TX



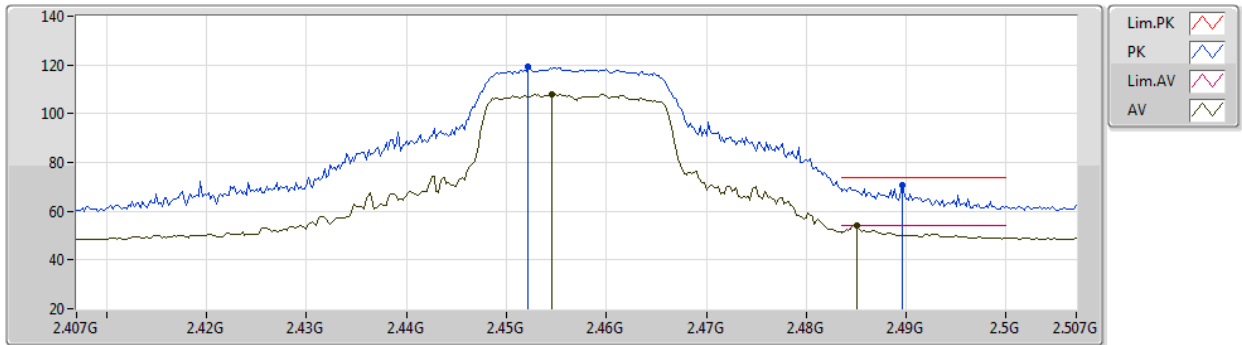
EUT_Z_2TX
Setting 102
02-B-K-4

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	4.87526G	43.51	74.00	-30.49	37.51	3	Horizontal	193	2.26	-	33.10	4.70	31.80
AV	4.86818G	30.98	54.00	-23.02	25.01	3	Horizontal	193	2.26	-	33.07	4.70	31.80
PK	7.31388G	47.01	74.00	-26.99	37.28	3	Horizontal	128	1.38	-	36.40	5.76	32.43
AV	7.32168G	32.93	54.00	-21.07	23.21	3	Horizontal	128	1.38	-	36.40	5.76	32.44
PK	12.19946G	52.78	74.00	-21.22	38.51	3	Horizontal	146	2.04	-	39.26	7.87	32.86
AV	12.17198G	39.24	54.00	-14.76	24.98	3	Horizontal	146	2.04	-	39.27	7.86	32.87

802.11n HT20-BF_Nss1,(MCS0)_2TX

31/10/2020

2457MHz_TX



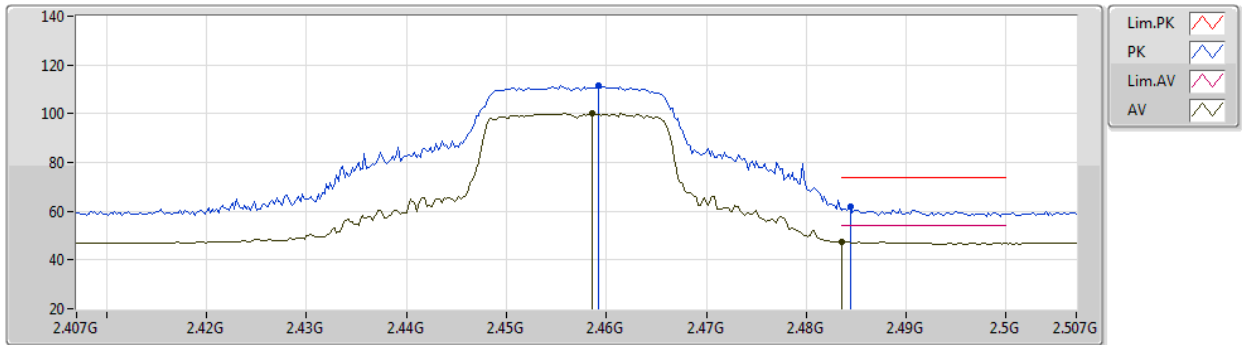
EUT_Z_2TX
Setting 90
02-B-K-4

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	2.4522G	119.18	Inf	-Inf	88.29	3	Vertical	356	1.30	-	28.46	2.43	-
AV	2.4546G	108.01	Inf	-Inf	77.12	3	Vertical	356	1.30	-	28.46	2.43	-
PK	2.4896G	70.52	74.00	-3.48	39.51	3	Vertical	356	1.30	-	28.57	2.44	-
AV	2.485G	53.97	54.00	-0.03	22.97	3	Vertical	356	1.30	-	28.56	2.44	-

802.11n HT20-BF_Nss1,(MCS0)_2TX

31/10/2020

2457MHz_TX



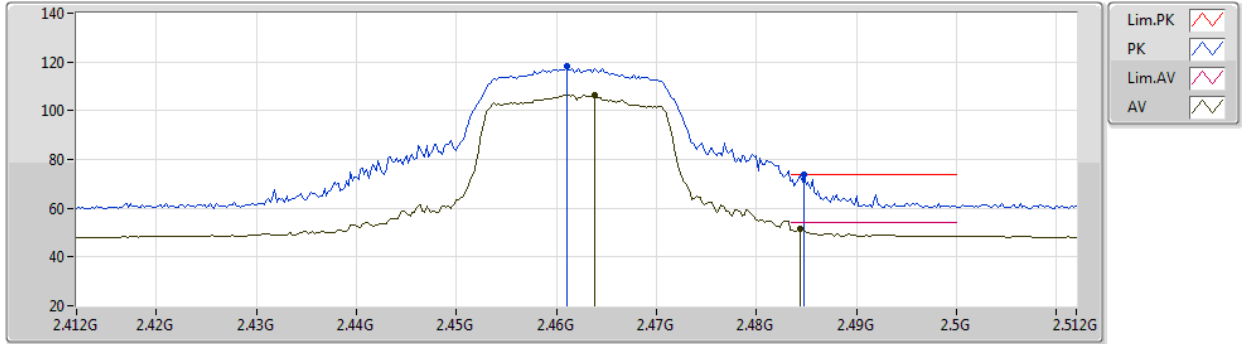
EUT_Z_2TX
Setting 90
02-B-K-4

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	2.4592G	111.65	Inf	-Inf	80.74	3	Horizontal	324	2.97	-	28.48	2.43	-
AV	2.4586G	100.14	Inf	-Inf	69.23	3	Horizontal	324	2.97	-	28.48	2.43	-
PK	2.4844G	61.68	74.00	-12.32	30.69	3	Horizontal	324	2.97	-	28.55	2.44	-
AV	2.4835G	47.52	54.00	-6.48	16.53	3	Horizontal	324	2.97	-	28.55	2.44	-

802.11n HT20-BF_Nss1,(MCS0)_2TX

31/10/2020

2462MHz_TX



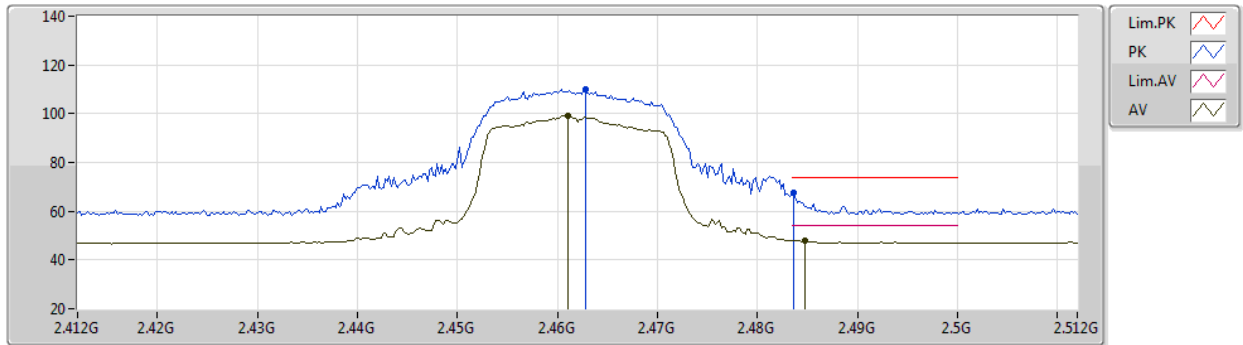
EUT_Z_2TX
Setting 81
02-B-K-4

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	2.461G	118.39	Inf	-Inf	87.48	3	Vertical	346	1.10	-	28.48	2.43	-
AV	2.4638G	106.58	Inf	-Inf	75.66	3	Vertical	346	1.10	-	28.49	2.43	-
PK	2.4848G	73.92	74.00	-0.08	42.93	3	Vertical	346	1.10	-	28.55	2.44	-
AV	2.4844G	51.41	54.00	-2.59	20.42	3	Vertical	346	1.10	-	28.55	2.44	-

802.11n HT20-BF_Nss1,(MCS0)_2TX

31/10/2020

2462MHz_TX



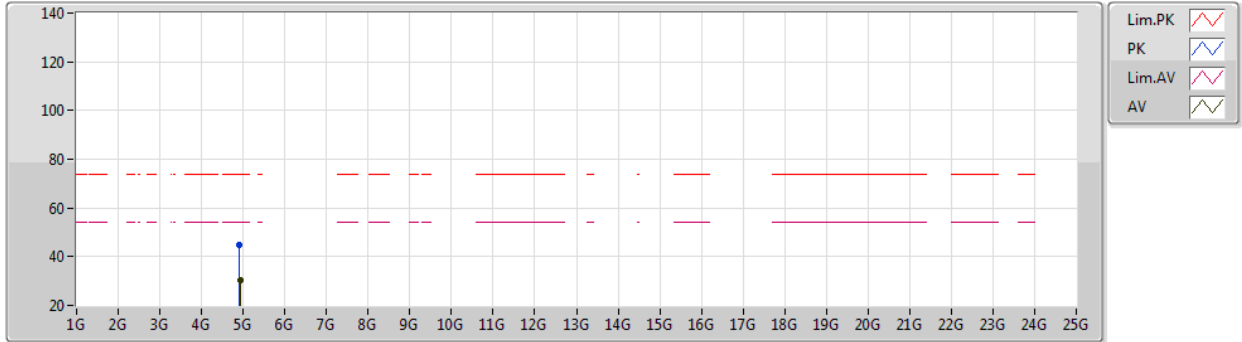
EUT_Z_2TX
Setting 81
02-B-K-4

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	109.92	Inf	-Inf	79.00	3	Horizontal	318	2.55	-	28.49	2.43	-
AV	2.461G	99.34	Inf	-Inf	68.43	3	Horizontal	318	2.55	-	28.48	2.43	-
PK	2.4836G	67.49	74.00	-6.51	36.50	3	Horizontal	318	2.55	-	28.55	2.44	-
AV	2.4848G	48.05	54.00	-5.95	17.06	3	Horizontal	318	2.55	-	28.55	2.44	-

802.11n HT20-BF_Nss1,(MCS0)_2TX

31/10/2020

2462MHz_TX



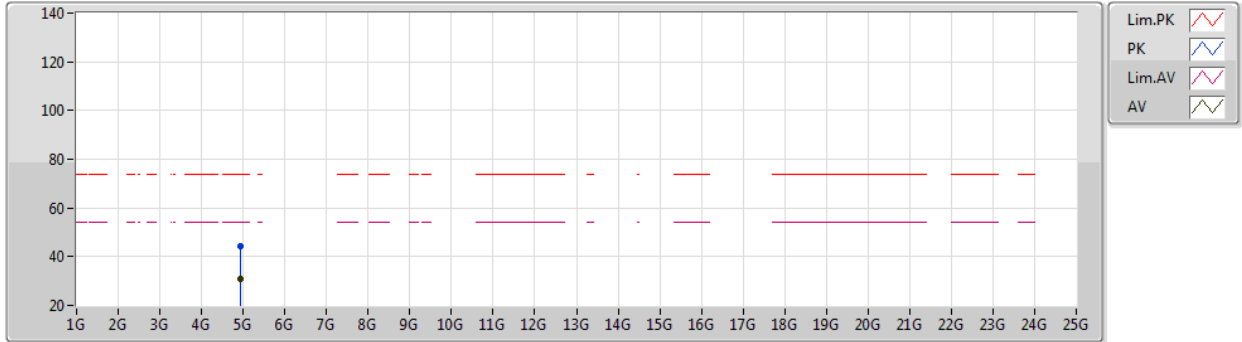
EUT Z_2TX
Setting 81
02-B-K-4

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	4.914G	44.60	74.00	-29.40	38.50	3	Vertical	315	1.00	-	33.21	4.70	31.81
AV	4.9236G	30.54	54.00	-23.46	24.44	3	Vertical	315	1.00	-	33.22	4.70	31.82

802.11n HT20-BF_Nss1,(MCS0)_2TX

31/10/2020

2462MHz_TX



EUT Z_2TX
Setting 81
02-B-K-4

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	4.9235G	44.15	74.00	-29.85	38.05	3	Horizontal	156	1.25	-	33.22	4.70	31.82
AV	4.9375G	31.12	54.00	-22.88	25.00	3	Horizontal	156	1.25	-	33.24	4.70	31.82