



RADIO TEST REPORT

FCC ID : O6ZHR54R1-500
Equipment : Digital Satellite Receiver
Brand Name : DIRECTV
Model Name : HR54-500
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 Sep. 11, 2023, and testing was started from Sep. 25, 2023 and completed on Nov. 30, 2023. 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: Sam Chen

Sporton International Inc. Hsinchu Laboratory

No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)



Table of Contents

History of this test report.....3

Summary of Test Result.....4

1 General Description5

1.1 Information.....5

1.2 Applicable Standards8

1.3 Testing Location Information8

1.4 Measurement Uncertainty8

2 Test Configuration of EUT9

2.1 Test Channel Mode9

2.2 The Worst Case Measurement Configuration10

2.3 EUT Operation during Test11

2.4 Accessories11

2.5 Support Equipment.....11

2.6 Test Setup Diagram12

3 Transmitter Test Result14

3.1 AC Power-line Conducted Emissions14

3.2 DTS Bandwidth.....16

3.3 Maximum Conducted Output Power17

3.4 Power Spectral Density20

3.5 Emissions in Non-restricted Frequency Bands22

3.6 Emissions in Restricted Frequency Bands.....23

4 Test Equipment and Calibration Data27

Appendix A. Test Results of AC Power-line Conducted Emissions

Appendix B. Test Results of DTS Bandwidth

Appendix C. Test Results of Maximum Conducted Output Power

Appendix D. Test Results of Power Spectral Density

Appendix E. Test Results of Emissions in Non-restricted Frequency Bands

Appendix F. Test Results of Emissions in Restricted Frequency Bands

Appendix G. Test Photos

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	-

Conformity Assessment Condition:

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacture who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the chapter "Measurement Uncertainty".

Disclaimer:

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Sam Chen
Report Producer: Vicky Huang



1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
2400-2483.5	b, g, n (HT20)	2412-2462	1-11 [11]
2400-2483.5	n (HT40)	2422-2452	3-9 [7]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	802.11b	20	1TX
2.4-2.4835GHz	802.11g	20	1TX
2.4-2.4835GHz	802.11n HT20	20	2TX
2.4-2.4835GHz	802.11n HT40	40	2TX

Note:

- ♦ 11b mode uses a combination of DSSS-DBPSK, DQPSK, CCK modulation.
- ♦ 11g, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- ♦ BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

Ant.	WLAN 2.4/5GHz Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	
						2.4GHz	5GHz
1	2	Airgain	N2425HMHRA-290	PCB Antenna	I-PEX	2.8	4.1
2	1	Airgain	N2425HMHRD-190	PCB Antenna	I-PEX	3.8	4.2
Ant.	RF4CE Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	
3	1	HUMAX	HR54RF4CE_Ant1	Printed Antenna	N/A	5.2	
4	2	HUMAX	HR54RF4CE_Ant2	Printed Antenna	N/A	4.8	

Note 1: The above information was declared by manufacturer.

Note 2: The antenna is the cross-polarized antenna; it doesn't need to evaluate array gain.



<For 2.4GHz function>

For IEEE 802.11b mode <1TX/1RX>:

Only Port 1 can be used as transmitting/receiving antenna.

For IEEE 802.11g mode <1TX/1RX>:

The EUT supports the antenna with TX and RX diversity functions.

Both Port 1 and Port 2 support transmit and receive functions, but only one of them will be used at one time.

The Port 1 generated the worst case, so it was selected to test and record in the report.

For IEEE 802.11n mode <2TX/2RX>:

Port 1 and Port 2 will transmit/receive the same signal simultaneously.

Port 1 and Port 2 can be used as transmitting/receiving antennas.

<For 5GHz function>

For IEEE 802.11a mode <1TX/1RX>:

The EUT supports the antenna with TX and RX diversity functions.

Both Port 1 and Port 2 support transmit and receive functions, but only one of them will be used at one time.

The Port 1 generated the worst case, so it was selected to test and record in the report.

For IEEE 802.11n mode <2TX/2RX>:

Port 1 and Port 2 will transmit/receive the same signal simultaneously.

Port 1 and Port 2 can be used as transmitting/receiving antennas.

<For RF4CE function>

For RF4CE mode <1TX/1RX>:

The EUT supports the antenna with TX and RX diversity functions.

Both Port 1 and Port 2 support transmit and receive functions, but only one of them will be used at one time.

The Port 1 generated the worst case, so it was selected to test and record in the report.



1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11b	0.988	0.05	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11g	0.932	0.31	1.43m	1k
802.11n HT20	0.964	0.16	1.337m	1k
802.11n HT40	0.932	0.31	1.338m	1k

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 type="checkbox"/>	With beamforming	<input checked="" type="checkbox"/>	Without beamforming
Function	<input checked="" type="checkbox"/>	Point-to-multipoint	<input type="checkbox"/>	Point-to-point
Test Software Version	Tera Term V.1.0.0.18			

Note: The above information was declared by manufacturer.



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 15.247
- ♦ 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	TH01-CB	Jay Lo	22.2-24 / 63-66	Oct. 20, 2023~ Nov. 28, 2023
Radiated (below 1G)	03CH03-CB	Jackson Peng	22.2-23.3 / 56-59	Sep. 25, 2023~ Nov. 27, 2023
Radiated (above 1G)	03CH02-CB		24.4-25.5 / 55-58	
	03CH04-CB		21.2-22.3 / 56-59	
AC Conduction	CO01-CB	Joe Chu	22-23 / 50-51	Nov. 30, 2023

1.4 Measurement Uncertainty

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

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.4 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	5.1 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	4.1 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.2 dB	Confidence levels of 95%
Conducted Emission	3.1 dB	Confidence levels of 95%
Output Power Measurement	0.8 dB	Confidence levels of 95%
Power Density Measurement	3.1 dB	Confidence levels of 95%
Bandwidth Measurement	2.2%	Confidence levels of 95%



2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
802.11b_Nss1,(1Mbps)_1TX	-
2412MHz	22
2437MHz	21
2462MHz	20
802.11g_Nss1,(6Mbps)_1TX	-
2412MHz	19.5
2417MHz	21
2437MHz	25.5
2457MHz	23
2462MHz	19.5
802.11n HT20_Nss1,(MCS0)_2TX	-
2412MHz	19.5
2417MHz	19.5
2437MHz	25.5
2457MHz	19
2462MHz	19
802.11n HT40_Nss1,(MCS0)_2TX	-
2422MHz	16.5
2427MHz	18.5
2437MHz	19.5
2452MHz	17.5



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 Test Voltage: 120Vac / 60Hz
Operating Mode	CTX
There are three modes of EUT, one is CTX - 2.4GHz, another is CTX - 5GHz, and the other is CTX - RF4CE. CTX - 2.4GHz mode has been evaluated to be the worst case after evaluating. So the AC power-line conducted emissions test will follow this same test configuration.	
1	CTX - 2.4GHz

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. There are three modes of EUT, one is CTX - 2.4GHz, another is CTX - 5GHz, and the other is CTX - RF4CE. CTX - 5GHz mode has been evaluated to be the worst case after evaluating. So the Emissions in Restricted Frequency Bands test will follow this same test configuration 2. After evaluating, the worst case was found at Z axis, so it was selected to perform test and its test result was written in the report.	
1	CTX-EUT in Z axis-5GHz
Operating Mode > 1GHz	CTX After evaluating, the worst case was found at Z axis, so it was selected to perform test and its test result was written in the report.
1	EUT in Z axis



The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	WLAN 2.4GHz + RF4CE
2	WLAN 5GHz + RF4CE
Refer to Sporton Test Report No.: FA7O2406-03 for Co-location RF Exposure Evaluation.	

2.3 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

2.4 Accessories

Accessories			
Equipment Name	Brand Name	Model Name	Rating
Adapter	DIRECTV	EPS44R3-15	INPUT: 120V~1.3A, 60Hz OUTPUT: 12V, 4A, 48W
Equipment Name	Brand Name	Part Number	Rating
Hard Disk	SEAGATE	1SD102-500	-

2.5 Support Equipment

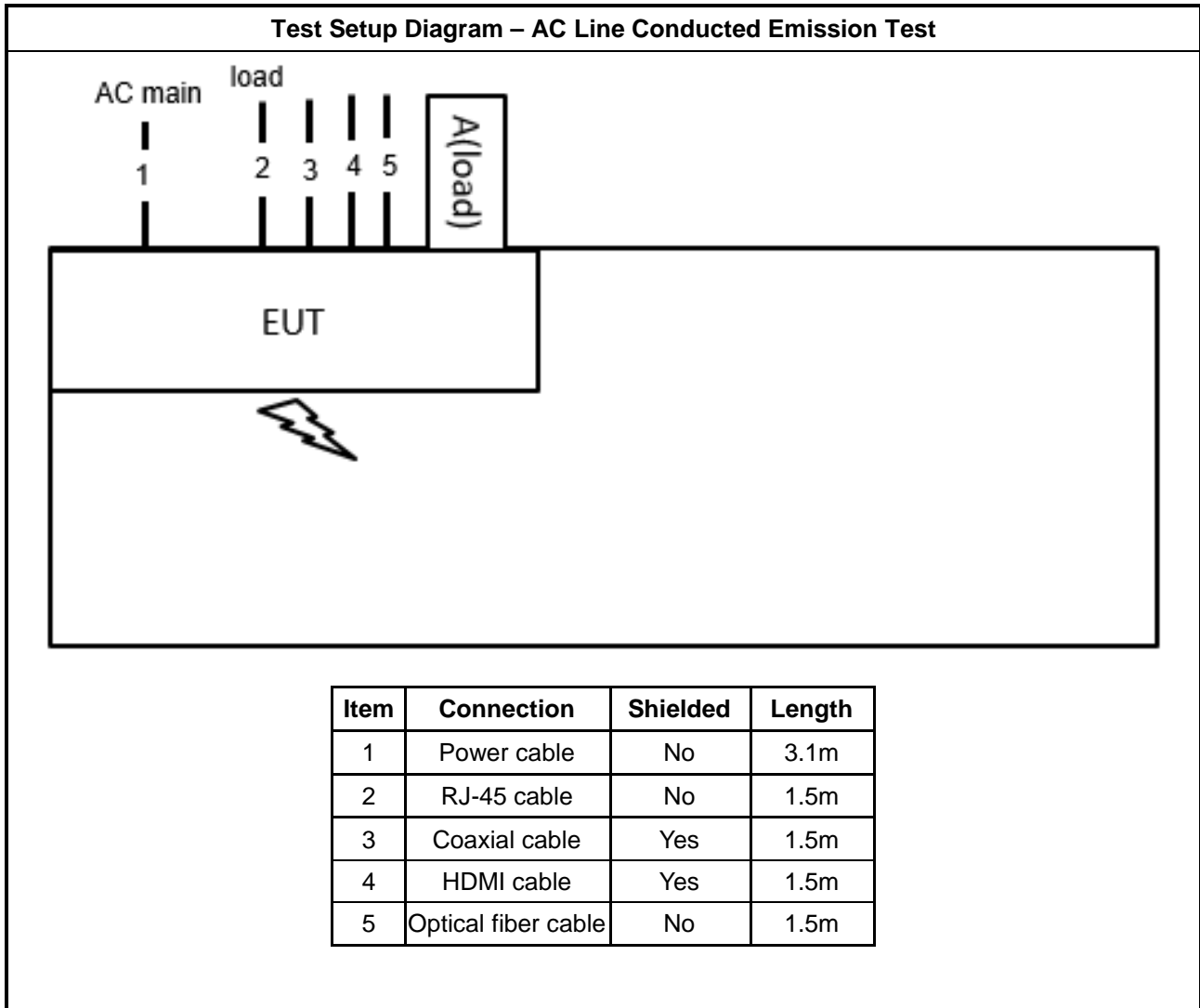
For AC Conduction:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Flash disk3.0	Transcend	JetFlash-700	N/A

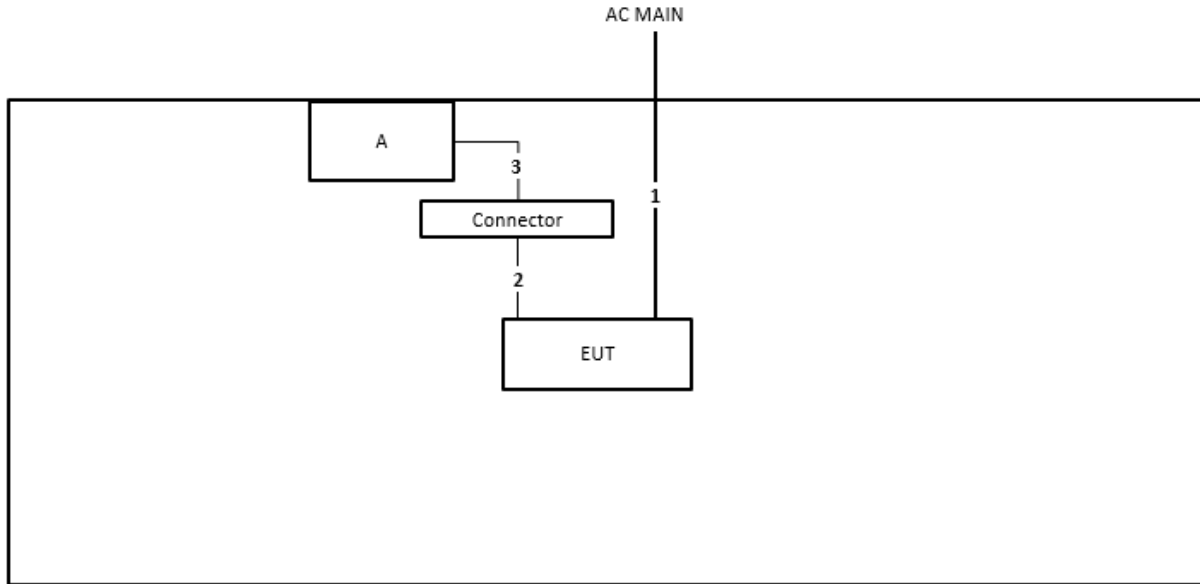
For Radiated and RF Conducted:

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



Item	Connection	Shielded	Length
1	Power cable	No	3.1m
2	Console to RS232	No	1.5m
3	RS232 to USB cable	No	1m



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.

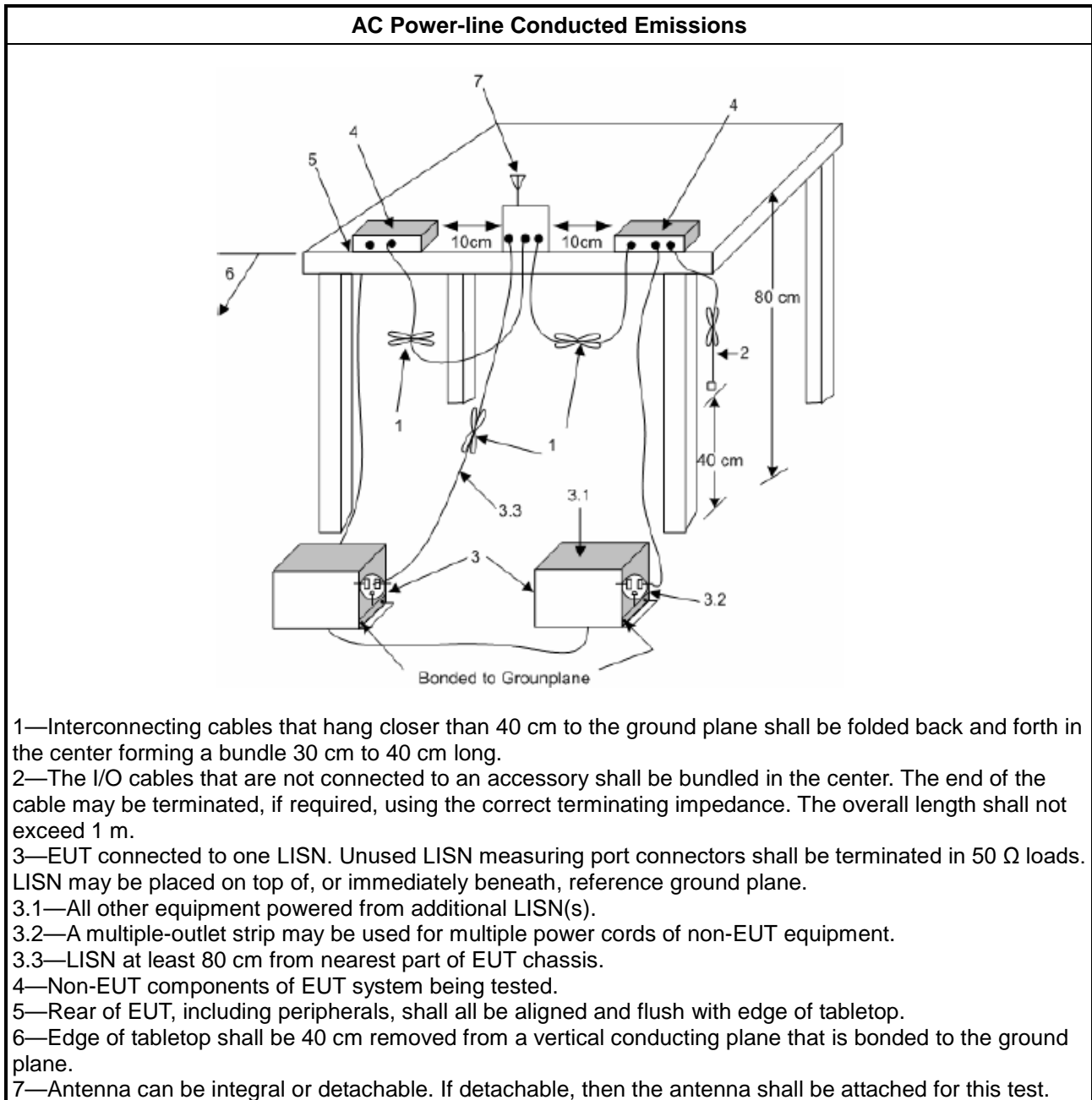
3.1.2 Measuring Instruments

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.

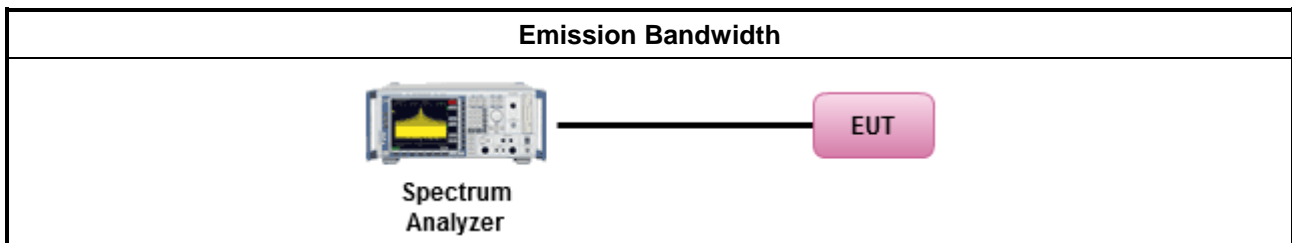
3.2.2 Measuring Instruments

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.	

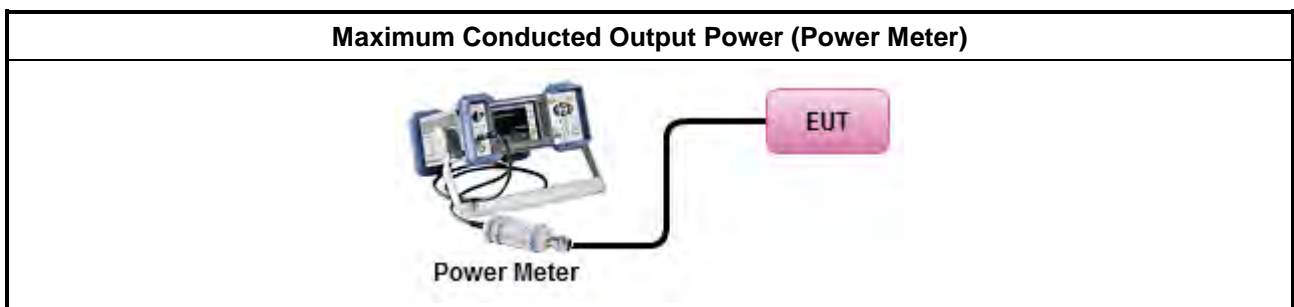
3.3.2 Measuring Instruments

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) ≤ 8 dBm/3kHz

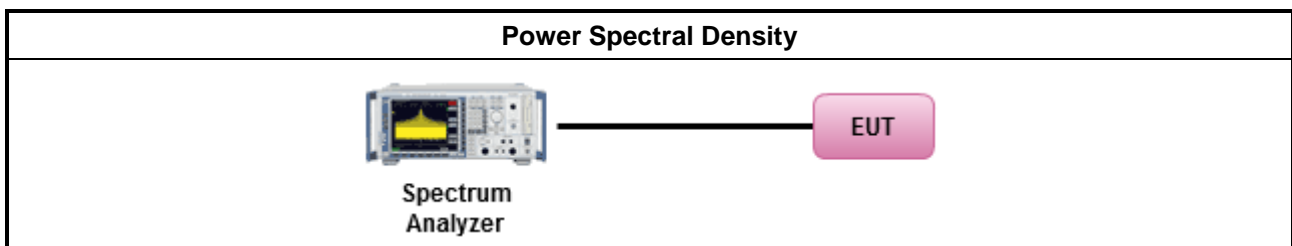
3.4.2 Measuring Instruments

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" style="width: 100%;"> <tr> <td style="width: 20px;"><input checked="" type="checkbox"/></td> <td>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"/></td> <td>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"/></td> <td>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> </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.
<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.					
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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.

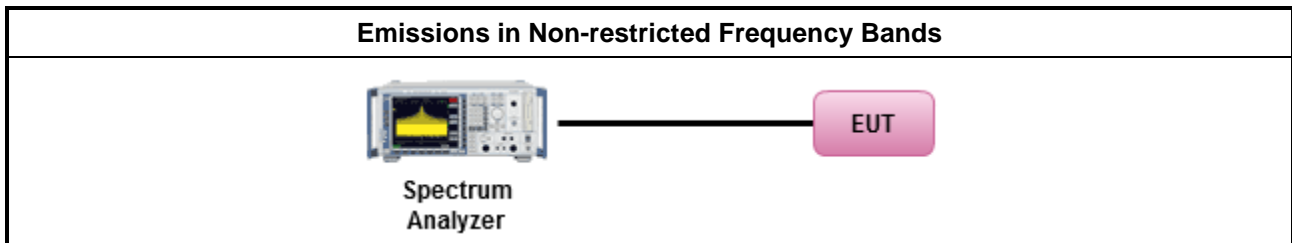
3.5.2 Measuring Instruments

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

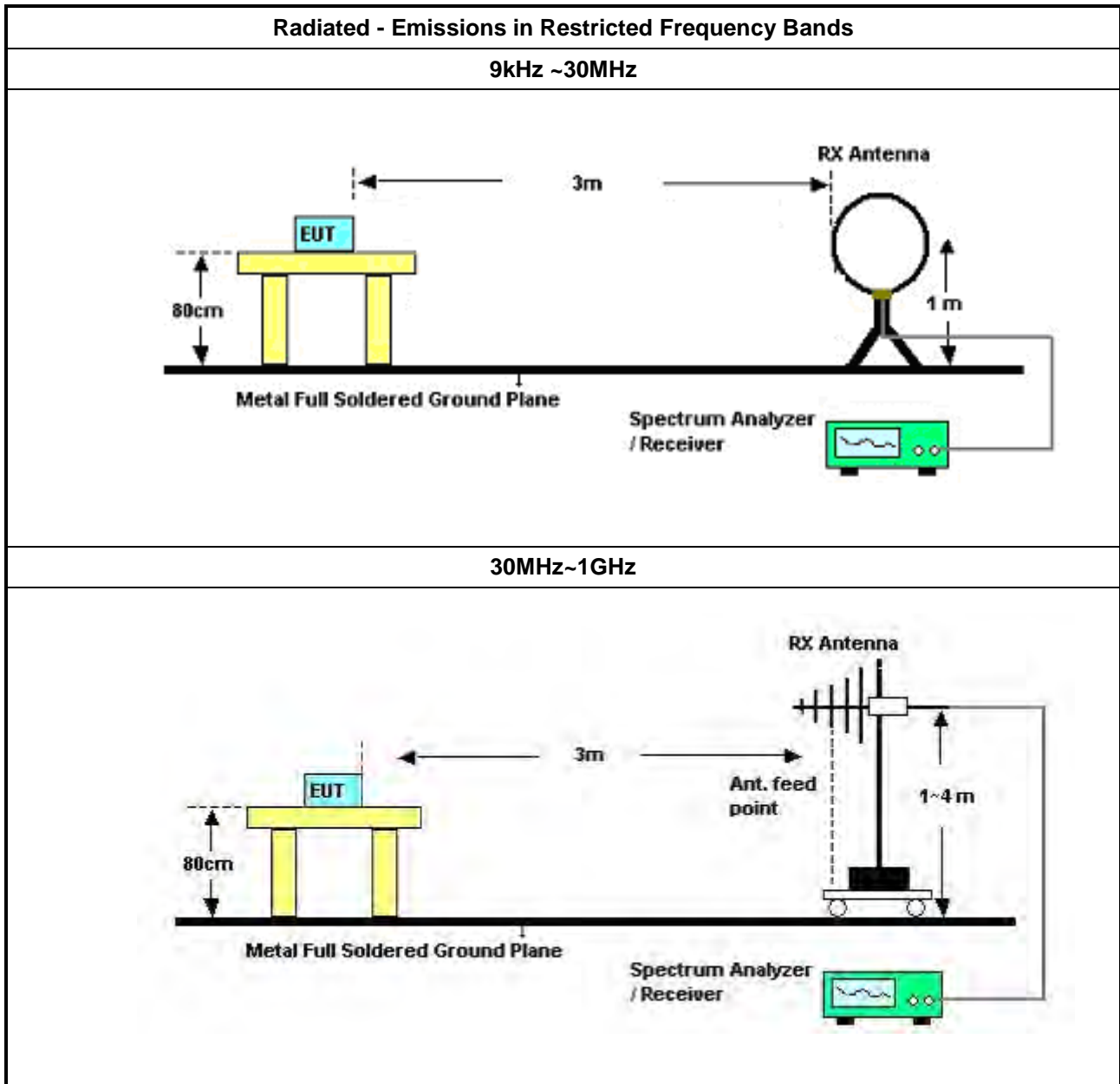
Refer a test equipment and calibration data table in this test report.

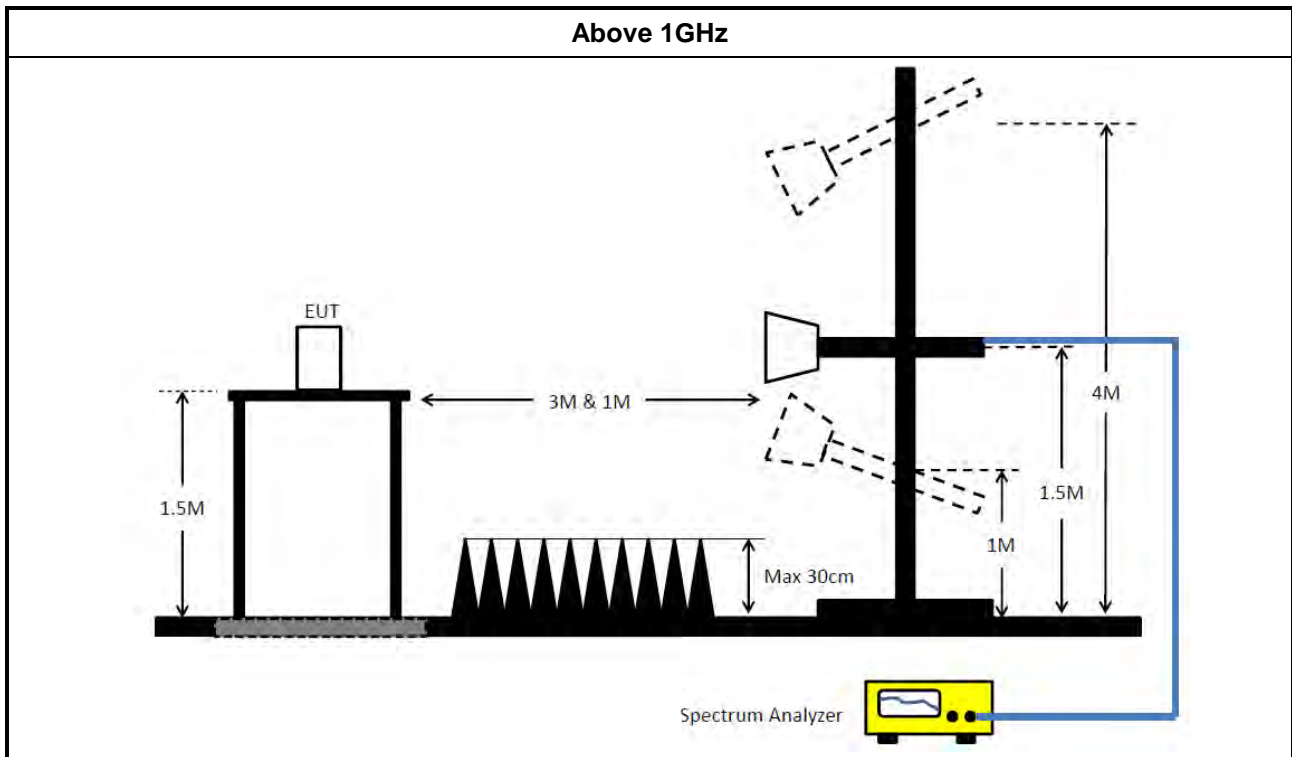


3.6.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> ▪ The average emission levels shall be measured in [duty cycle ≥ 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 ≥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≥1/T).
	<input type="checkbox"/> Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW ≥ 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
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.4GHz	Feb. 20, 2023	Feb. 19, 2024	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Feb. 16, 2023	Feb. 15, 2024	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Apr. 27, 2023	Apr. 26, 2024	Conduction (CO01-CB)
Pulse Limiter	Rohde&Schwarz	ESH3-Z2	100430	9kHz ~ 30MHz	Feb. 09, 2023	Feb. 08, 2024	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	9kHz ~ 30MHz	Oct. 18, 2022	Oct. 17, 2023	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	9kHz ~ 30MHz	Oct. 17, 2023	Oct. 16, 2024	Conduction (CO01-CB)
Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
Loop Antenna	Teseq	HLA 6120	31244	9kHz - 30 MHz	Mar. 23, 2023	Mar. 22, 2024	Radiation (03CH03-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH03-CB	30 MHz ~ 1 GHz	Jan. 17, 2023	Jan. 16, 2024	Radiation (03CH03-CB)
Bilog Antenna with 6 dB attenuator	Schaffner & EMCI	CBL6112B & N-6-06	2928 & AT-N0608	20MHz ~ 2GHz	Feb. 19, 2023	Feb. 18, 2024	Radiation (03CH03-CB)
Pre-Amplifier	Agilent	8447D	2944A10259	9kHz ~ 1.3GHz	Jan. 09, 2023	Jan. 08, 2024	Radiation (03CH03-CB)
Spectrum Analyzer	R&S	FSP40	100019	9kHz ~ 40GHz	Jun. 12, 2023	Jun. 11, 2024	Radiation (03CH03-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	Jun. 13, 2023	Jun. 12, 2024	Radiation (03CH03-CB)
RF Cable-low	Woken	RG402	Low Cable-02+29	30MHz ~ 1GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH03-CB)
RF Cable-low	Woken	RG402	Low Cable-02+29	30MHz ~ 1GHz	Oct. 02, 2023	Oct. 01, 2024	Radiation (03CH03-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH03-CB)
3m Semi Anechoic Chamber VSWR	RIKEN	SAC-3M	03CH02-CB	1GHz ~18GHz	Mar. 25, 2023	Mar. 24, 2024	Radiation (03CH02-CB)
Horn Antenna	EMCO	3115	9610-4976	1GHz ~ 18GHz	Apr. 18, 2023	Apr. 17, 2024	Radiation (03CH02-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Sep. 04, 2023	Sep. 03, 2024	Radiation (03CH02-CB)
Pre-Amplifier	Agilent	83017A	MY39501305	1GHz ~ 26.5GHz	Jun. 30, 2023	Jun. 29, 2024	Radiation (03CH02-CB)
Pre-Amplifier	SGH	SGH184	20230109-3	18~40GHz	Jan. 13, 2023	Jan. 12, 2024	Radiation (03CH02-CB)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Spectrum analyzer	R&S	FSU	100015	9kHz~26GHz	Dec. 05, 2022	Dec. 04, 2023	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-18	1GHz ~ 18GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-18	1GHz ~ 18GHz	Oct. 02, 2023	Oct. 01, 2024	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-18+19	1GHz ~ 18GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-18+19	1GHz ~ 18GHz	Oct. 02, 2023	Oct. 01, 2024	Radiation (03CH02-CB)
High Cable	Woken	WCA0929M	40G#5+6	1GHz ~ 40 GHz	Dec. 07, 2022	Dec. 06, 2023	Radiation (03CH02-CB)
High Cable	Woken	WCA0929M	40G#5	1GHz ~ 40 GHz	Dec. 07, 2022	Dec. 06, 2023	Radiation (03CH02-CB)
High Cable	Woken	WCA0929M	40G#6	1GHz ~ 40 GHz	Dec. 07, 2022	Dec. 06, 2023	Radiation (03CH02-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH02-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH04-CB	1GHz ~18GHz 3m	Feb. 23, 2023	Feb. 22, 2024	Radiation (03CH04-CB)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1370	1GHz~18GHz	Jun. 30, 2023	Jun. 29, 2024	Radiation (03CH04-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Sep. 04, 2023	Sep. 03, 2024	Radiation (03CH04-CB)
Pre-Amplifier	Agilent	83017A	MY53270063	0.5GHz ~ 26.5GHz	Jun. 30, 2023	Jun. 29, 2024	Radiation (03CH04-CB)
Pre-Amplifier	SGH	SGH184	20230109-3	18~40GHz	Jan. 13, 2023	Jan. 12, 2024	Radiation (03CH04-CB)
Spectrum Analyzer	R&S	FSP40	100142	9kHz~40GHz	Mar. 21, 2023	Mar. 20, 2024	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-21	1GHz - 18GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-21	1GHz - 18GHz	Oct. 02, 2023	Oct. 01, 2024	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-21+67	1GHz - 18GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-21+67	1GHz - 18GHz	Oct. 02, 2023	Oct. 01, 2024	Radiation (03CH04-CB)
High Cable	Woken	WCA0929M	40G#5+6	1GHz ~ 40 GHz	Dec. 07, 2022	Dec. 06, 2023	Radiation (03CH04-CB)
High Cable	Woken	WCA0929M	40G#5	1GHz ~ 40 GHz	Dec. 07, 2022	Dec. 06, 2023	Radiation (03CH04-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH04-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	May 29, 2023	May 28, 2024	Conducted (TH01-CB)
Switch	SPTCB	SP-SWI	SWI-01	1~26.5 GHz	Oct. 03, 2023	Oct. 02, 2024	Conducted (TH01-CB)



Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-06	1 GHz – 18 GHz	Oct. 02, 2023	Oct. 01, 2024	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz – 18 GHz	Oct. 02, 2023	Oct. 01, 2024	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz – 18 GHz	Oct. 02, 2023	Oct. 01, 2024	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz – 18 GHz	Oct. 02, 2023	Oct. 01, 2024	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz – 18 GHz	Oct. 02, 2023	Oct. 01, 2024	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-30	1 GHz – 18 GHz	Oct. 02, 2023	Oct. 01, 2024	Conducted (TH01-CB)
Power Sensor	Agilent	E9327A	US40442088	50MHz~18GHz	Feb. 22, 2023	Feb. 21, 2024	Conducted (TH01-CB)
Power Meter	Agilent	E4416A	GB41291199	50MHz~18GHz	Feb. 22, 2023	Feb. 21, 2024	Conducted (TH01-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conducted (TH01-CB)

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

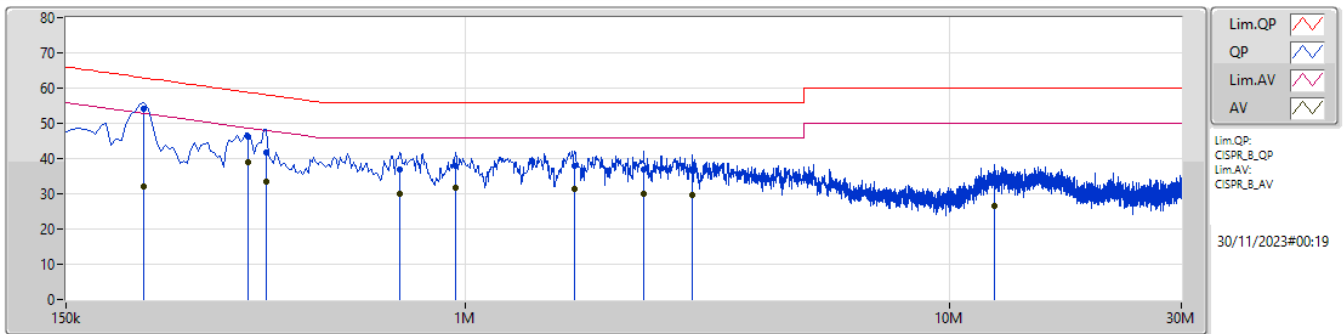
N.C.R. means Non-Calibration required.



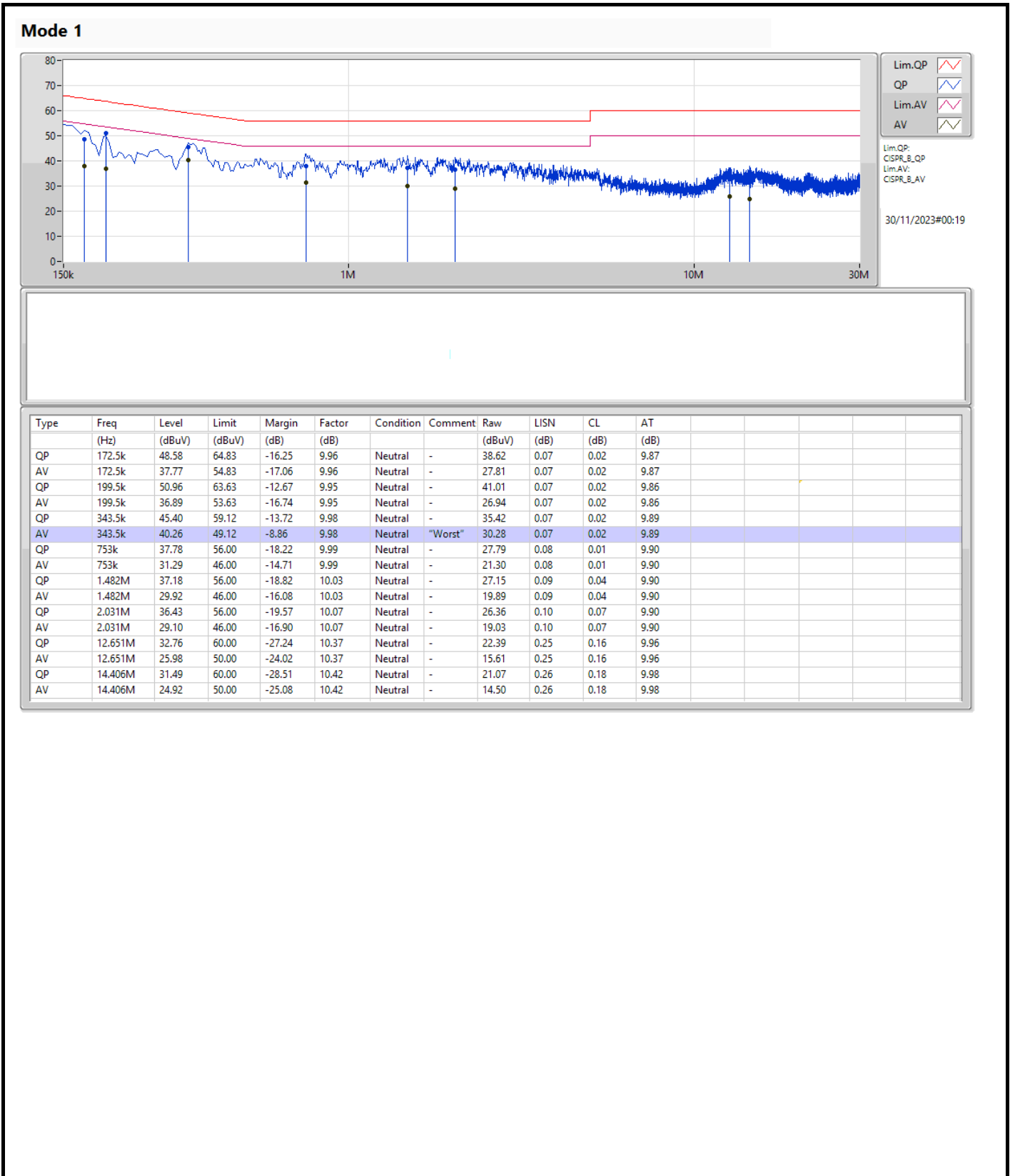
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	217.5k	54.08	62.92	-8.84	Line

Mode 1



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)
QP	217.5k	54.08	62.92	-8.84	9.96	Line	"Worst"	44.12	0.08	0.02	9.86
AV	217.5k	32.22	52.92	-20.70	9.96	Line	-	22.26	0.08	0.02	9.86
QP	357k	46.30	58.79	-12.49	10.00	Line	-	36.30	0.09	0.02	9.89
AV	357k	39.01	48.79	-9.78	10.00	Line	-	29.01	0.09	0.02	9.89
QP	388.5k	41.81	58.10	-16.29	10.01	Line	-	31.80	0.09	0.02	9.90
AV	388.5k	33.60	48.10	-14.50	10.01	Line	-	23.59	0.09	0.02	9.90
QP	730.5k	36.90	56.00	-19.10	10.01	Line	-	26.89	0.10	0.01	9.90
AV	730.5k	29.85	46.00	-16.15	10.01	Line	-	19.84	0.10	0.01	9.90
QP	955.5k	37.83	56.00	-18.17	10.02	Line	-	27.81	0.11	0.01	9.90
AV	955.5k	31.82	46.00	-14.18	10.02	Line	-	21.80	0.11	0.01	9.90
QP	1.68M	37.95	56.00	-18.05	10.08	Line	-	27.87	0.13	0.05	9.90
AV	1.68M	31.21	46.00	-14.79	10.08	Line	-	21.13	0.13	0.05	9.90
QP	2.333M	36.95	56.00	-19.05	10.14	Line	-	26.81	0.15	0.09	9.90
AV	2.333M	30.10	46.00	-15.90	10.14	Line	-	19.96	0.15	0.09	9.90
QP	2.94M	36.43	56.00	-19.57	10.18	Line	-	26.25	0.16	0.11	9.91
AV	2.94M	29.57	46.00	-16.43	10.18	Line	-	19.39	0.16	0.11	9.91
QP	12.377M	33.20	60.00	-26.80	10.39	Line	-	22.81	0.27	0.16	9.96
AV	12.377M	26.64	50.00	-23.36	10.39	Line	-	16.25	0.27	0.16	9.96



Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX	8.125M	10.156M	10M2G1D	7.725M	10.072M
802.11g_Nss1,(6Mbps)_1TX	16.5M	30.913M	30M9D1D	16.35M	16.649M
802.11n HT20_Nss1,(MCS0)_2TX	17.625M	30.906M	30M9D1D	16.675M	17.614M
802.11n HT40_Nss1,(MCS0)_2TX	36.35M	36.285M	36M3D1D	32.6M	36.067M

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)_1TX	-	-	-	-	-	-
2412MHz	Pass	500k	7.725M	10.156M		
2437MHz	Pass	500k	8.125M	10.089M		
2462MHz	Pass	500k	8.075M	10.072M		
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-
2412MHz	Pass	500k	16.35M	16.649M		
2437MHz	Pass	500k	16.5M	30.913M		
2462MHz	Pass	500k	16.45M	16.716M		
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	17.575M	17.63M	17.625M	17.614M
2437MHz	Pass	500k	16.675M	30.906M	17.625M	30.764M
2462MHz	Pass	500k	17.6M	17.664M	17.575M	17.662M
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	500k	36.35M	36.285M	36.35M	36.131M
2437MHz	Pass	500k	35.05M	36.253M	32.6M	36.195M
2452MHz	Pass	500k	35.05M	36.183M	36.3M	36.067M

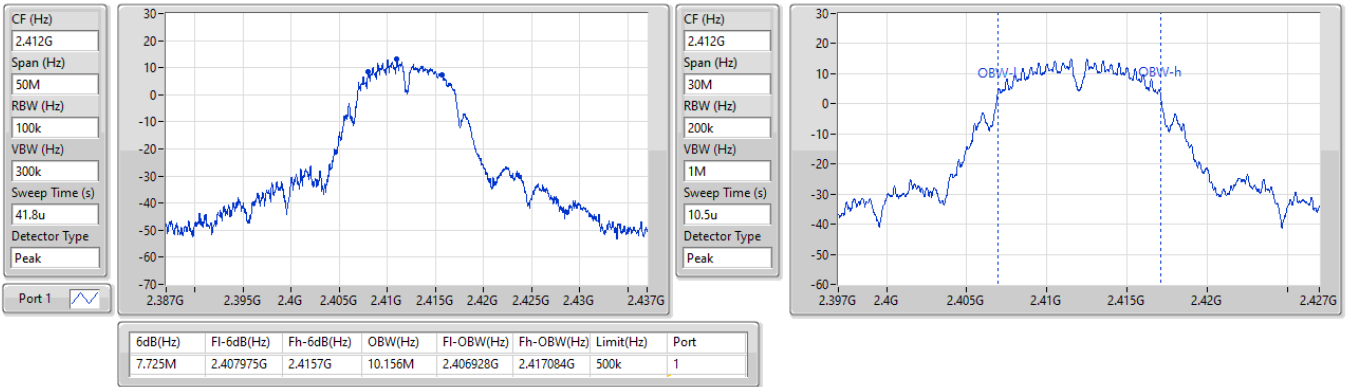
Port X-N dB = Port X 6dB down bandwidth;
 Port X-OBW = Port X 99% occupied bandwidth

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

EBW

2412MHz

27/11/2023

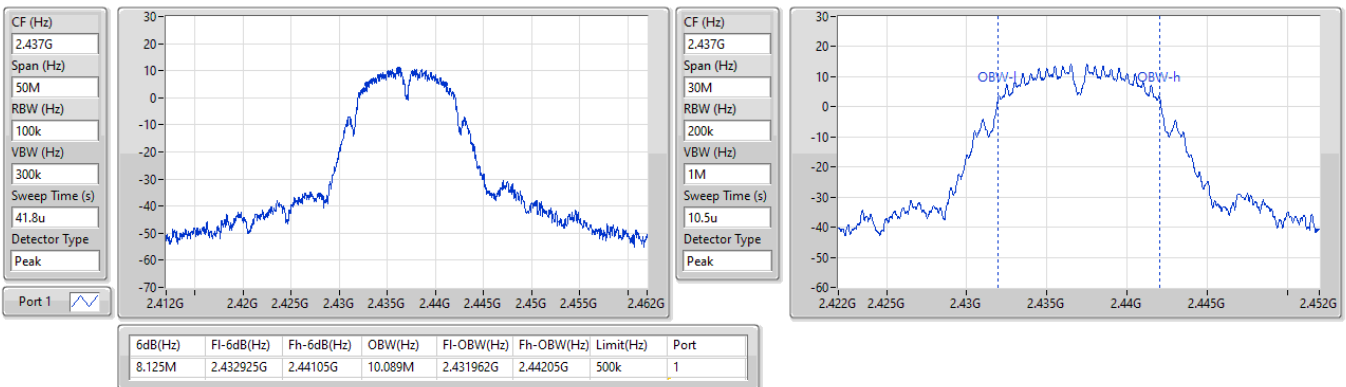


2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

EBW

2437MHz

27/11/2023

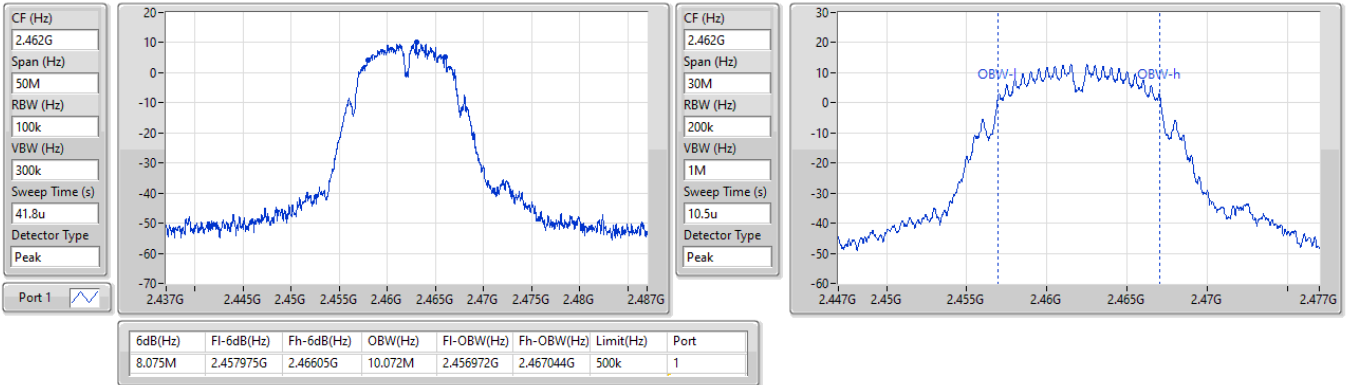


2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

EBW

2462MHz

27/11/2023

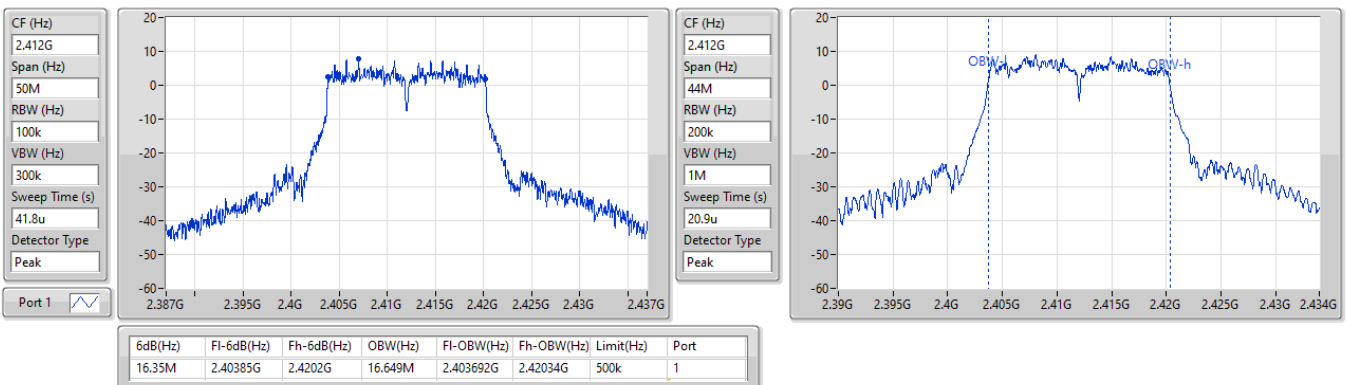


2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

EBW

2412MHz

27/11/2023

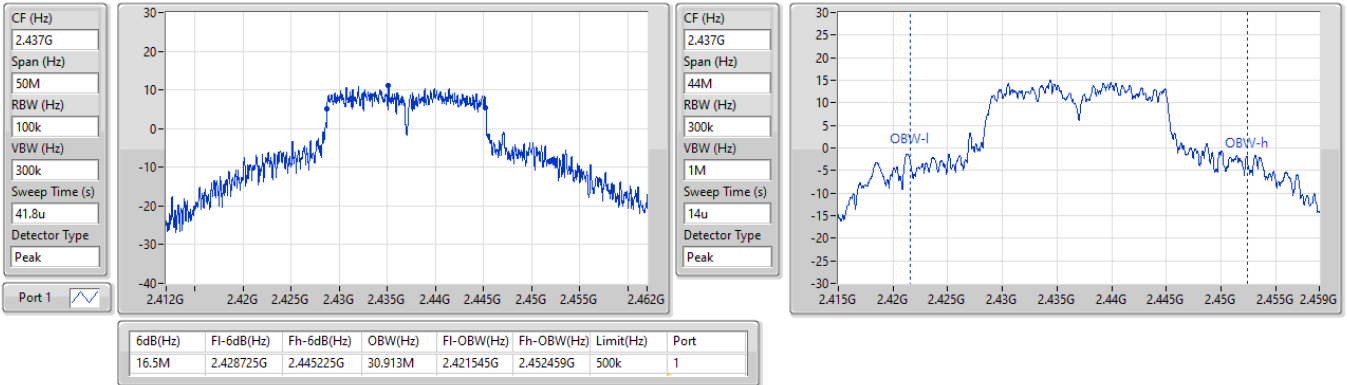


2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

EBW

2437MHz

27/11/2023

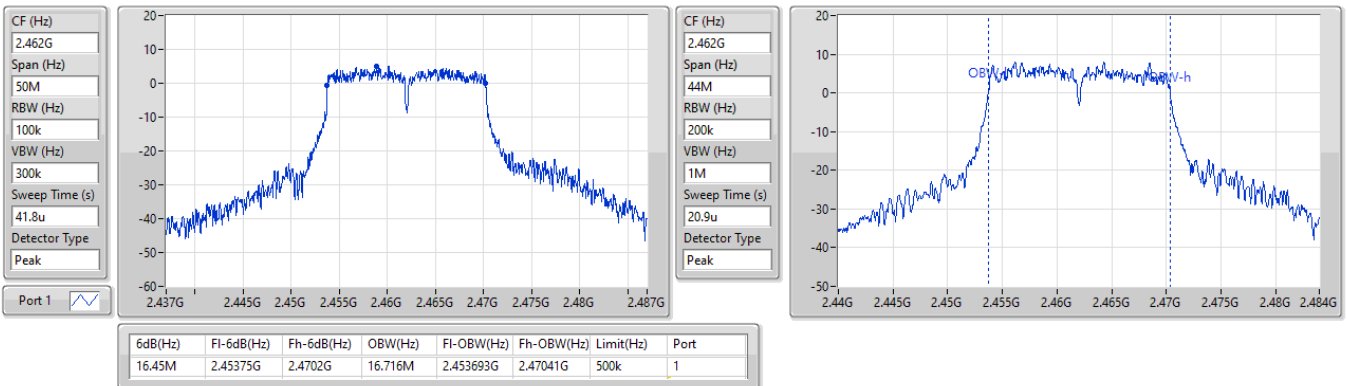


2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

EBW

2462MHz

27/11/2023

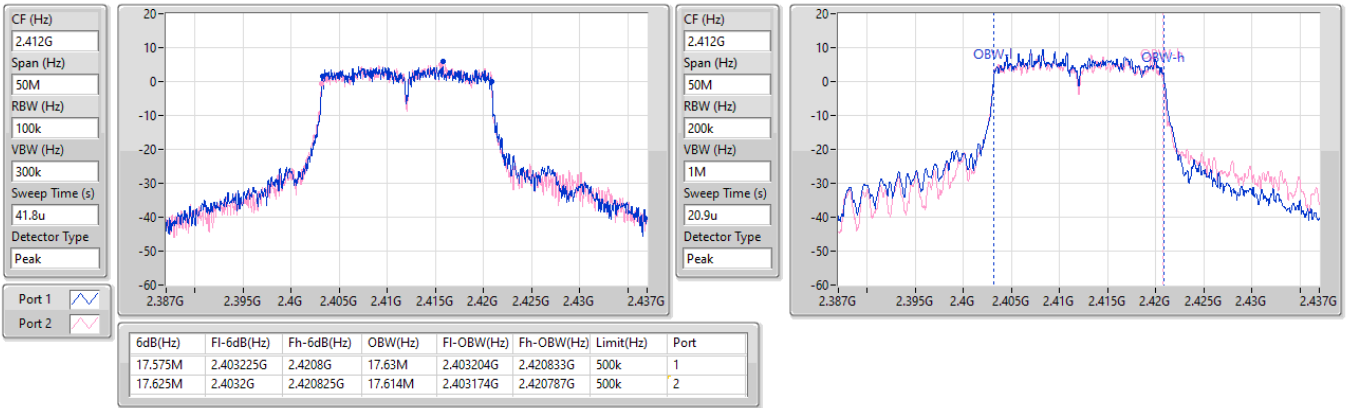


2.4-2.4835GHz_802.11n_HT20_Nss1,(MCS0)_2TX

EBW

2412MHz

27/11/2023

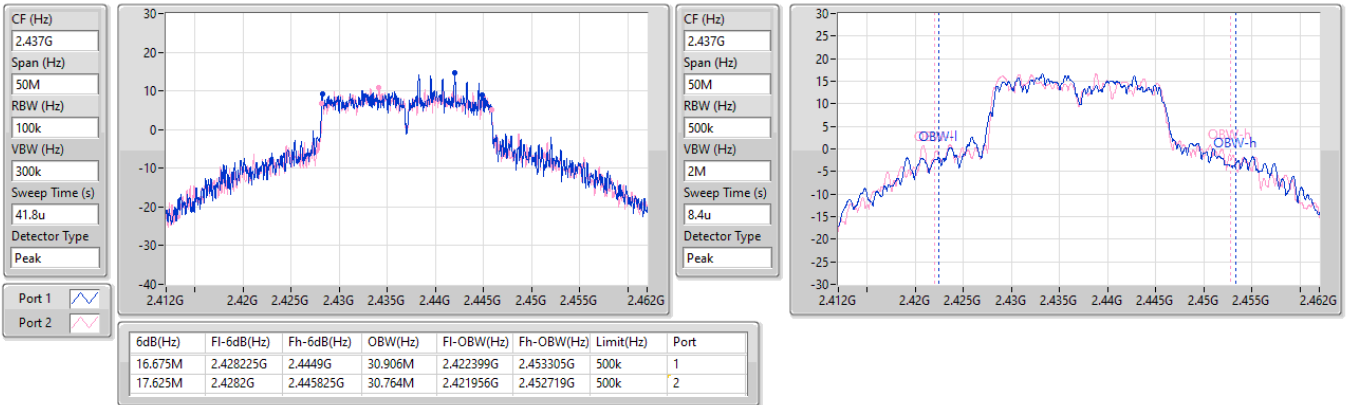


2.4-2.4835GHz_802.11n_HT20_Nss1,(MCS0)_2TX

EBW

2437MHz

27/11/2023

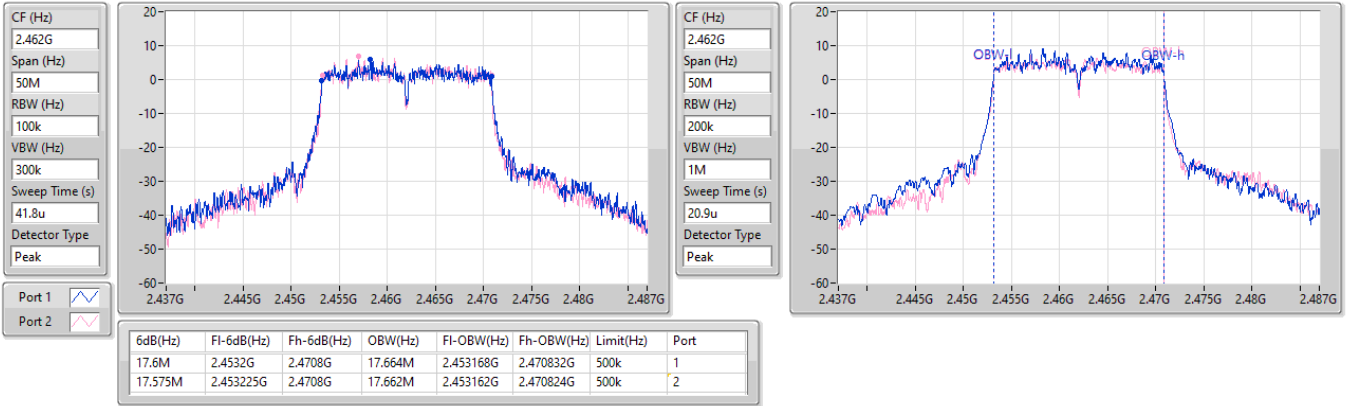


2.4-2.4835GHz_802.11n HT20_Nss1,(MCS0)_2TX

EBW

2462MHz

27/11/2023

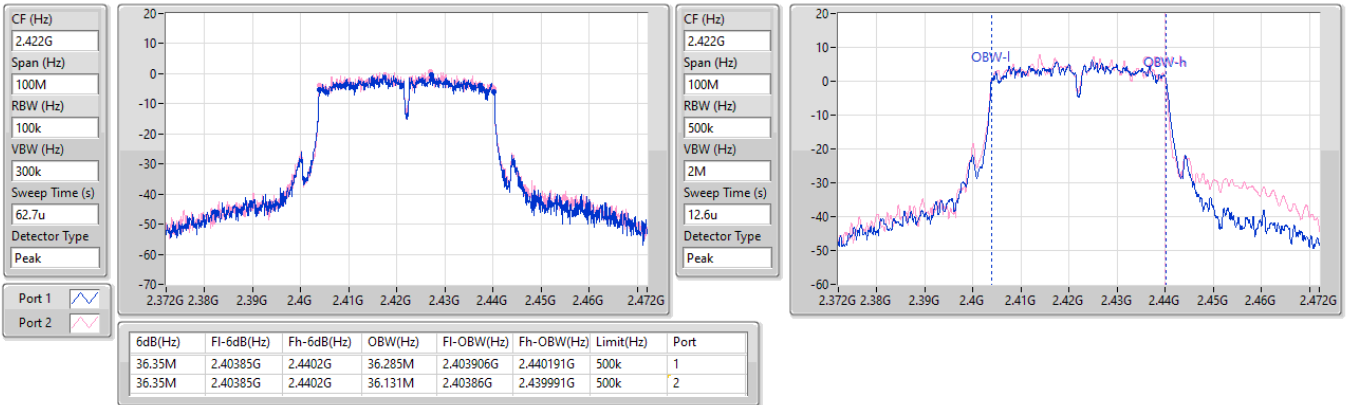


2.4-2.4835GHz_802.11n HT40_Nss1,(MCS0)_2TX

EBW

2422MHz

27/11/2023

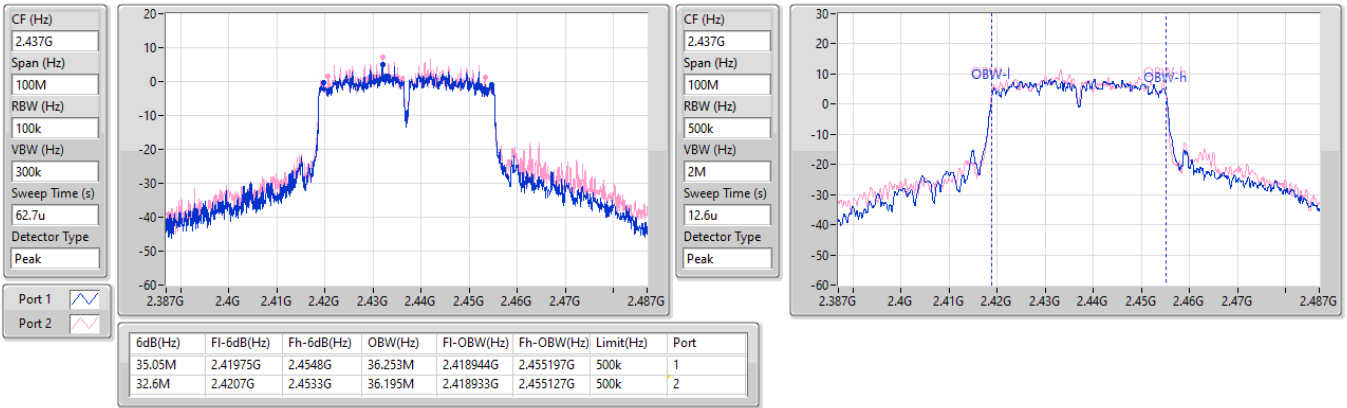


2.4-2.4835GHz_802.11n_HT40_Nss1,(MCS0)_2TX

EBW

2437MHz

27/11/2023

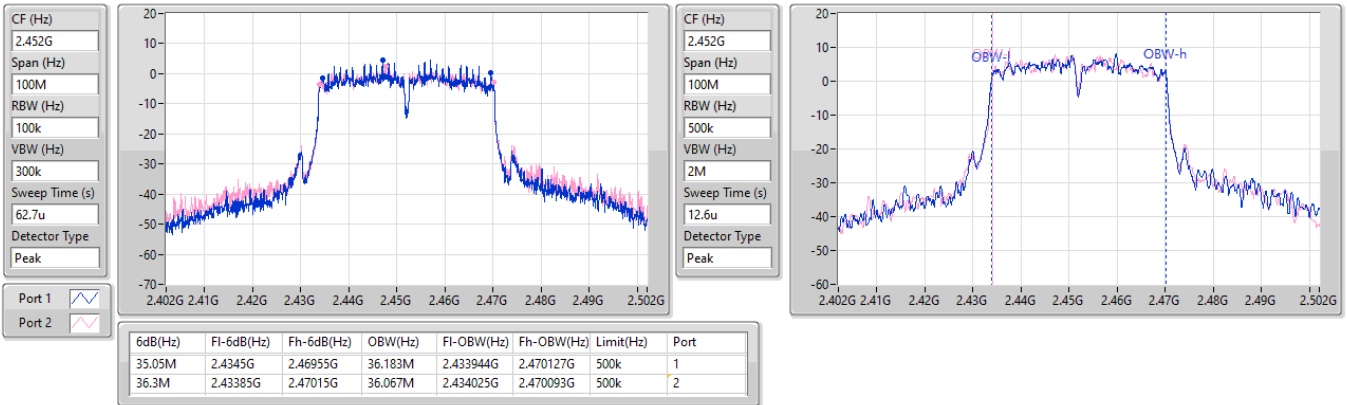


2.4-2.4835GHz_802.11n_HT40_Nss1,(MCS0)_2TX

EBW

2452MHz

27/11/2023





Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	23.09	0.20370
802.11g_Nss1,(6Mbps)_1TX	25.02	0.31769
802.11n HT20_Nss1,(MCS0)_2TX	27.87	0.61235
802.11n HT40_Nss1,(MCS0)_2TX	22.99	0.19907



Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-
2412MHz	Pass	3.80	23.09		23.09	30.00
2437MHz	Pass	3.80	22.11		22.11	30.00
2462MHz	Pass	3.80	20.82		20.82	30.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-
2412MHz	Pass	3.80	19.94		19.94	30.00
2417MHz	Pass	3.80	21.44		21.44	30.00
2437MHz	Pass	3.80	25.02		25.02	30.00
2457MHz	Pass	3.80	23.44		23.44	30.00
2462MHz	Pass	3.80	19.76		19.76	30.00
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	3.80	19.81	19.47	22.65	30.00
2417MHz	Pass	3.80	19.95	19.49	22.74	30.00
2437MHz	Pass	3.80	25.07	24.64	27.87	30.00
2457MHz	Pass	3.80	19.36	19.16	22.27	30.00
2462MHz	Pass	3.80	19.33	19.08	22.22	30.00
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	3.80	17.10	17.43	20.28	30.00
2427MHz	Pass	3.80	18.89	19.15	22.03	30.00
2437MHz	Pass	3.80	19.84	20.12	22.99	30.00
2452MHz	Pass	3.80	18.09	18.15	21.13	30.00

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



Summary

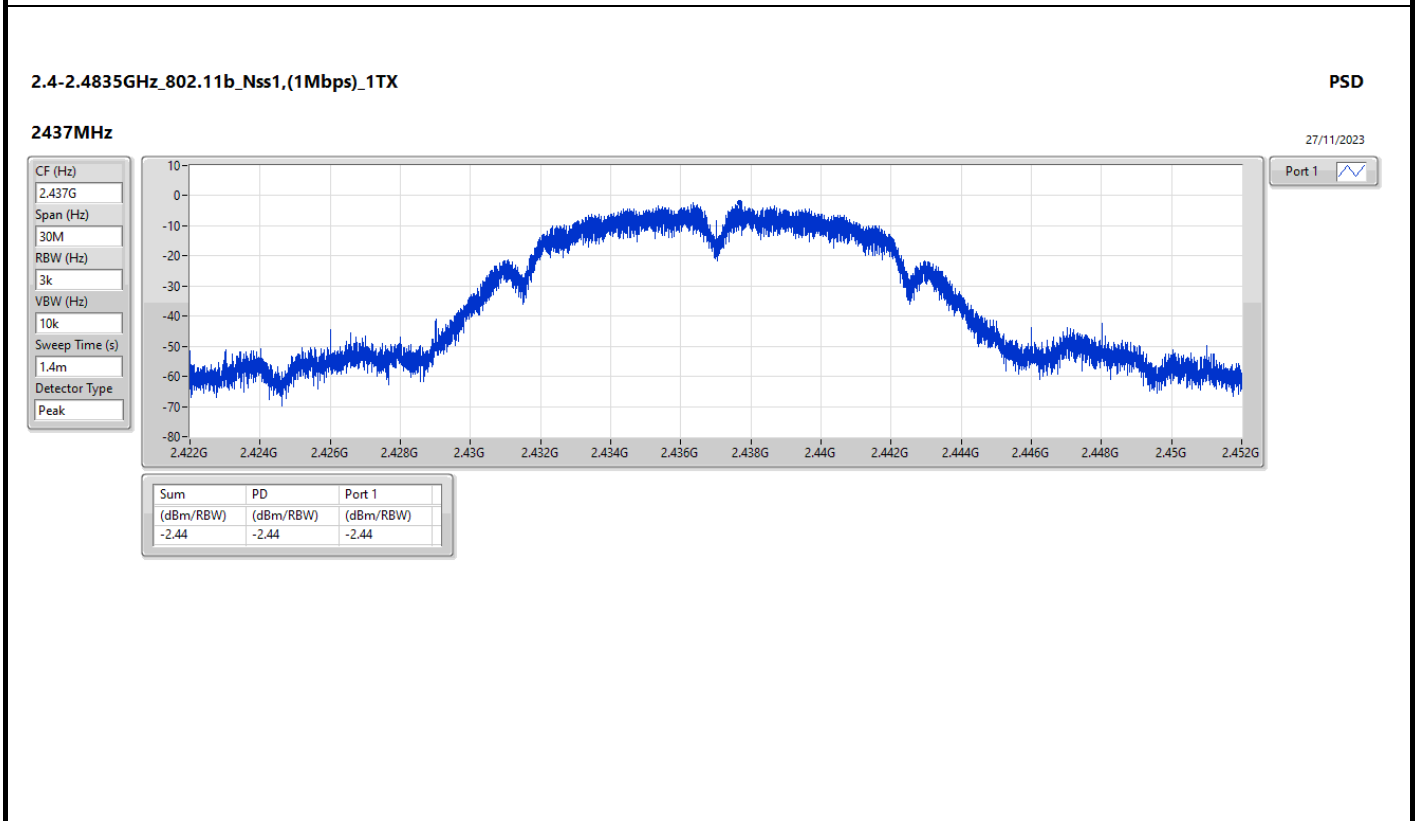
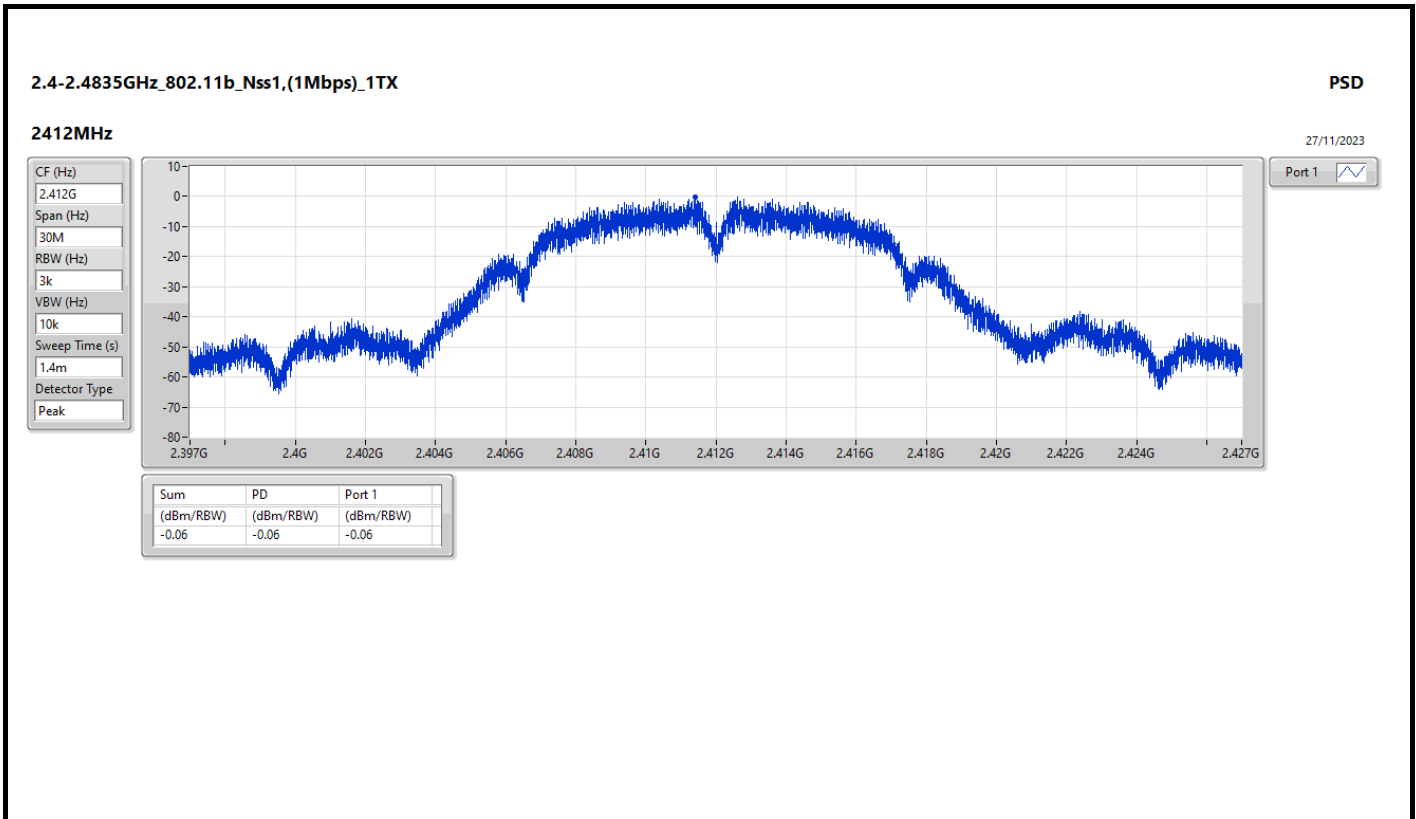
Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_1TX	-0.06
802.11g_Nss1,(6Mbps)_1TX	-2.07
802.11n HT20_Nss1,(MCS0)_2TX	0.30
802.11n HT40_Nss1,(MCS0)_2TX	-7.27

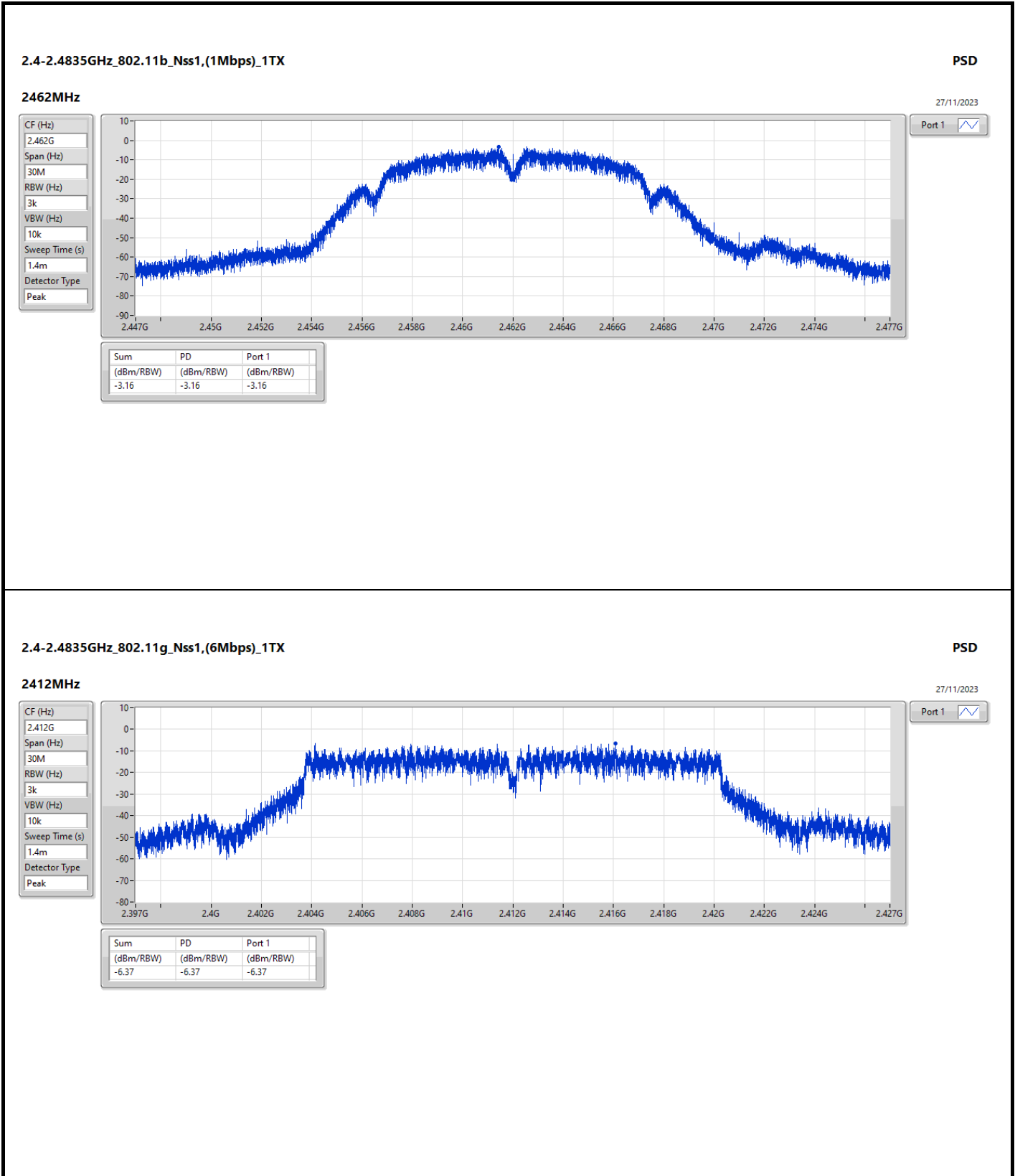
RBW = 3kHz;

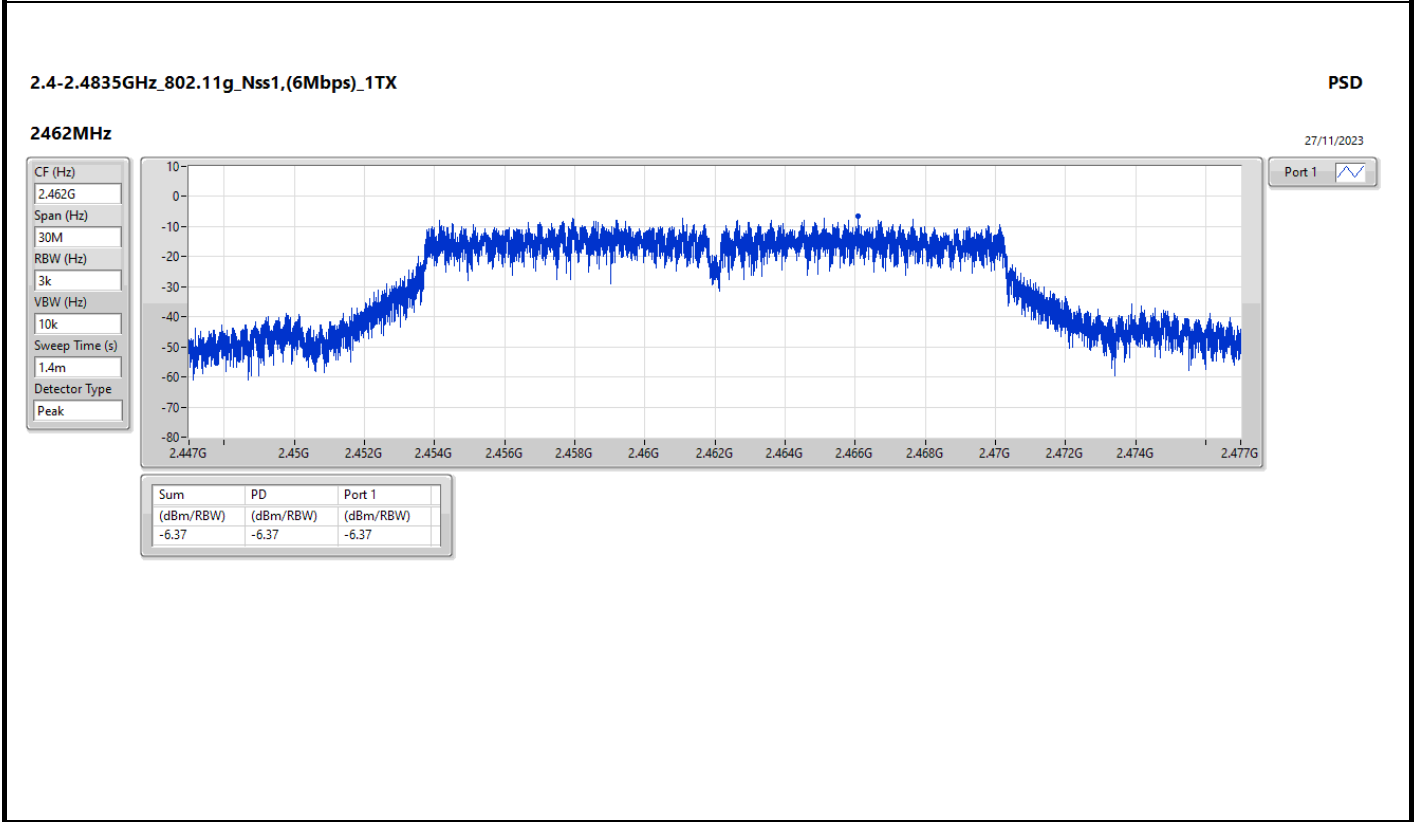
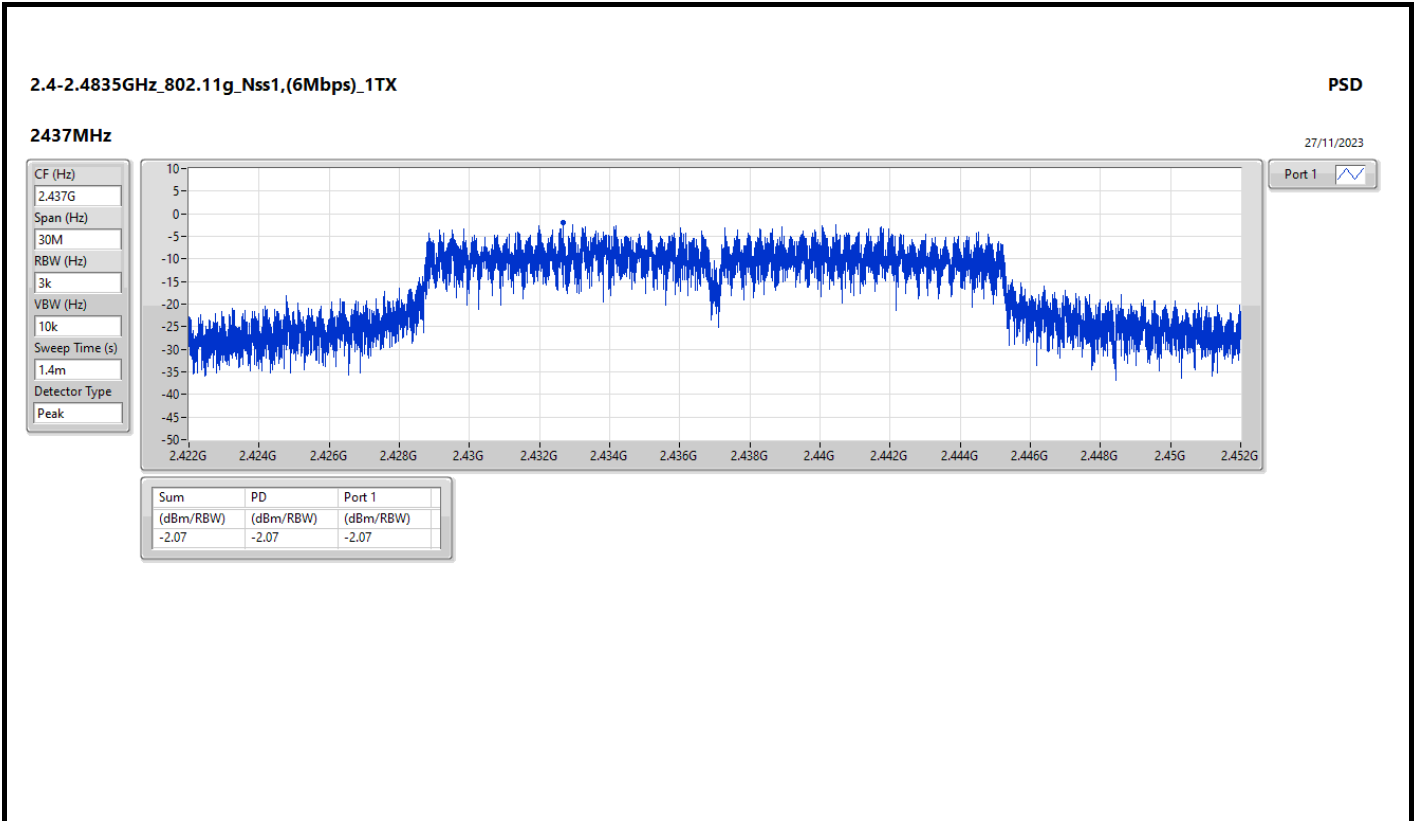
Result

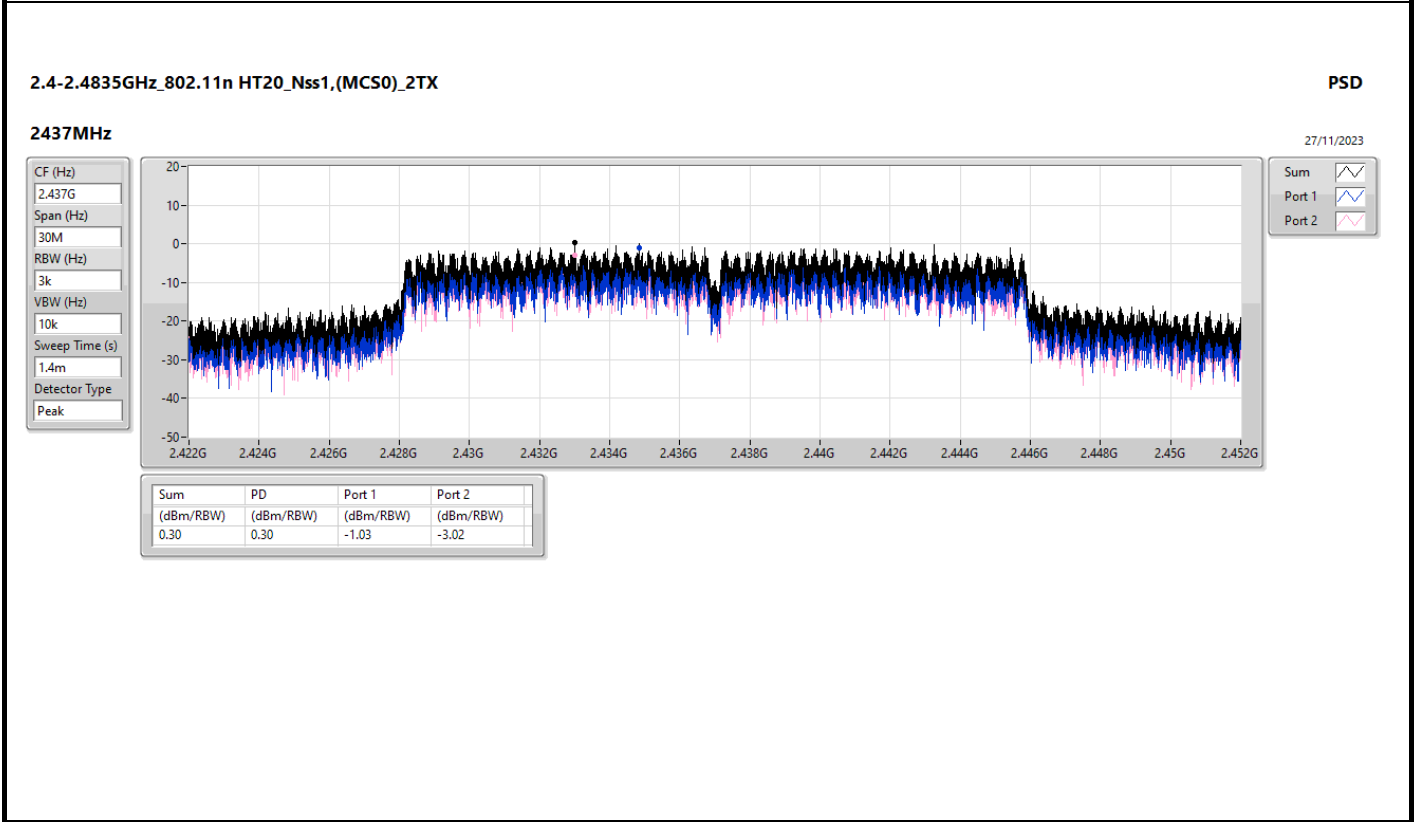
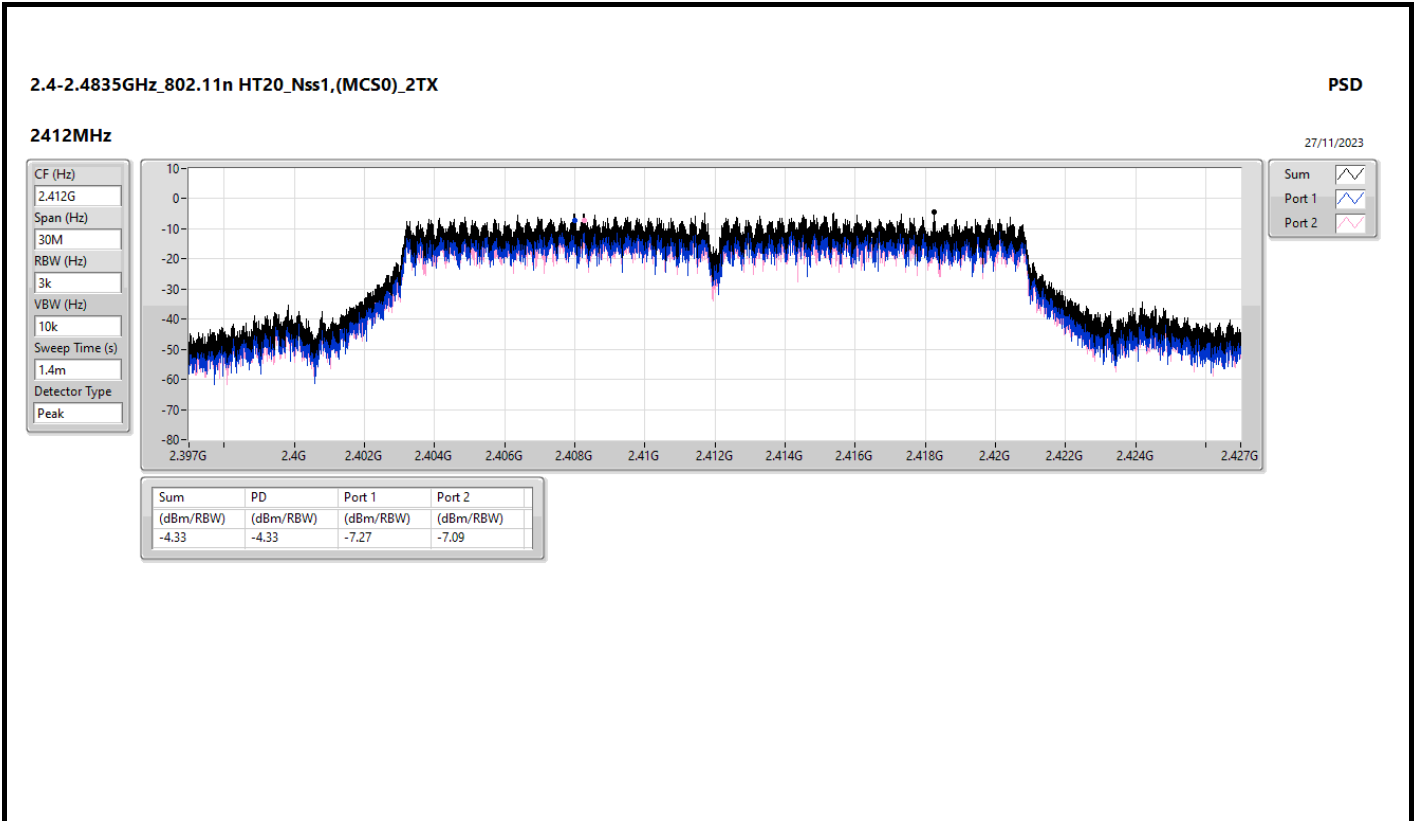
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-
2412MHz	Pass	3.80	-0.06		-0.06	8.00
2437MHz	Pass	3.80	-2.44		-2.44	8.00
2462MHz	Pass	3.80	-3.16		-3.16	8.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-
2412MHz	Pass	3.80	-6.37		-6.37	8.00
2437MHz	Pass	3.80	-2.07		-2.07	8.00
2462MHz	Pass	3.80	-6.37		-6.37	8.00
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	3.80	-7.27	-7.09	-4.33	8.00
2437MHz	Pass	3.80	-1.03	-3.02	0.30	8.00
2462MHz	Pass	3.80	-7.37	-7.08	-4.58	8.00
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	3.80	-12.33	-10.61	-9.15	8.00
2437MHz	Pass	3.80	-7.95	-9.38	-7.27	8.00
2452MHz	Pass	3.80	-10.78	-11.05	-8.92	8.00

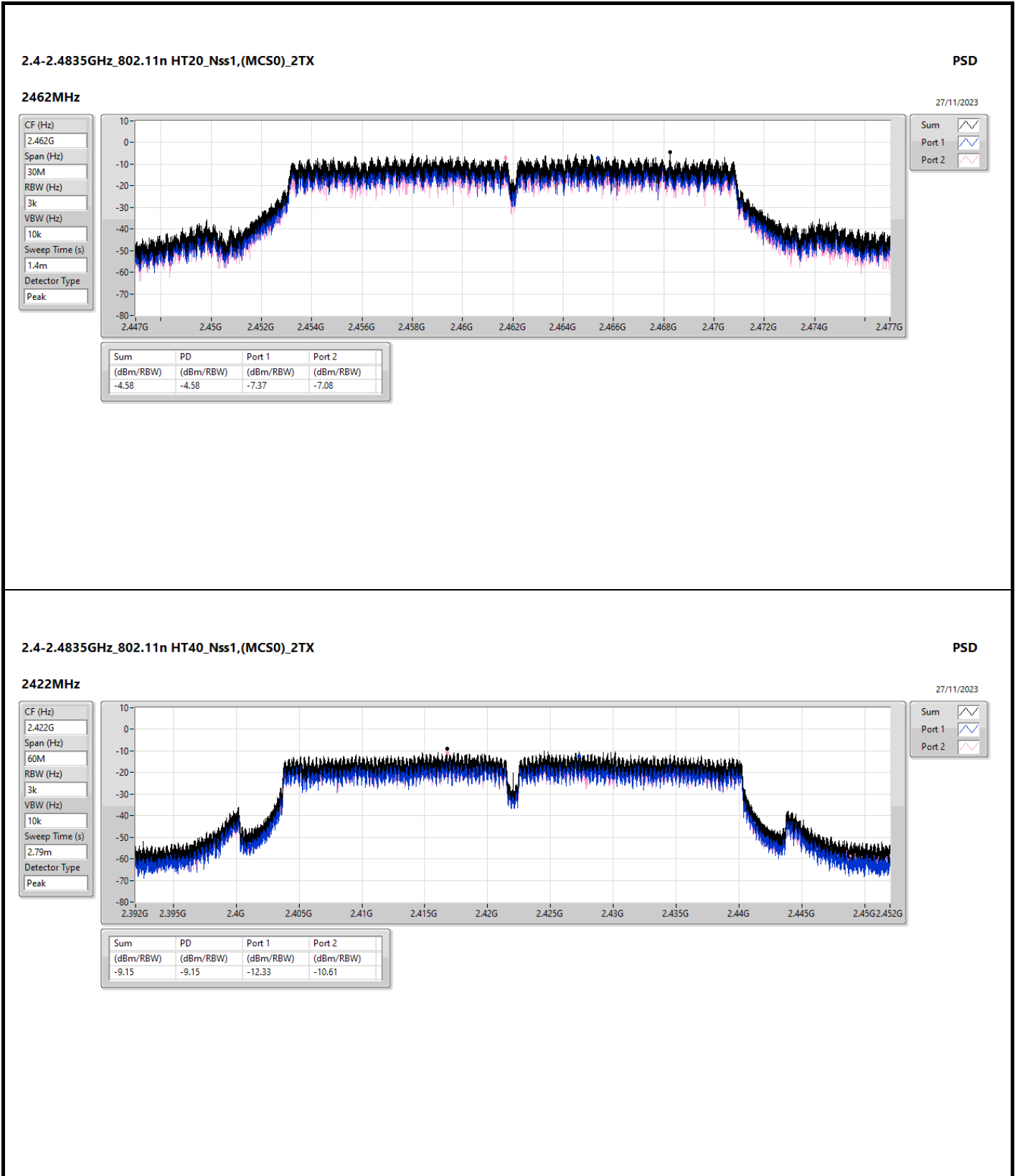
DG = Directional Gain; RBW = 3kHz;
 PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;

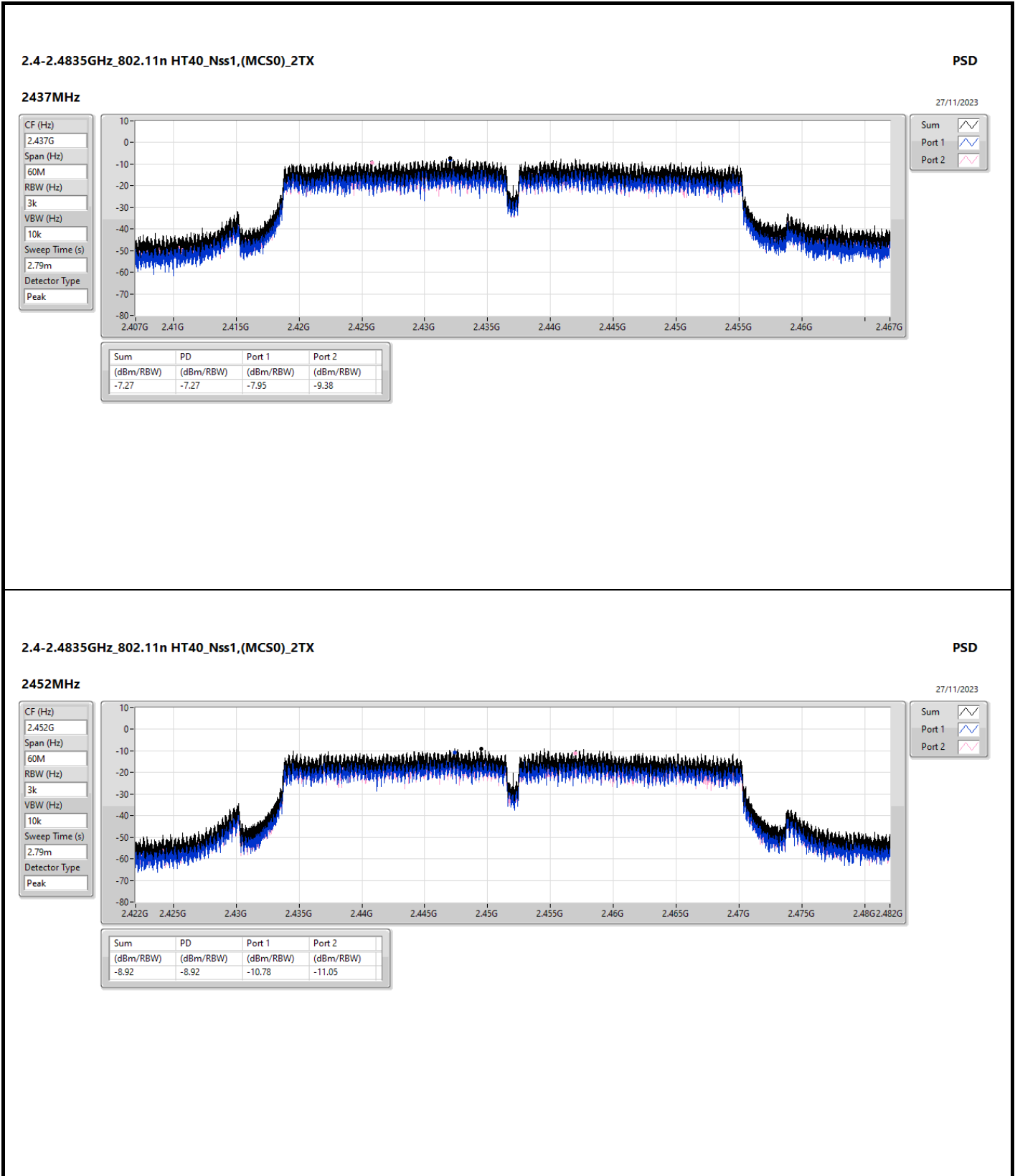












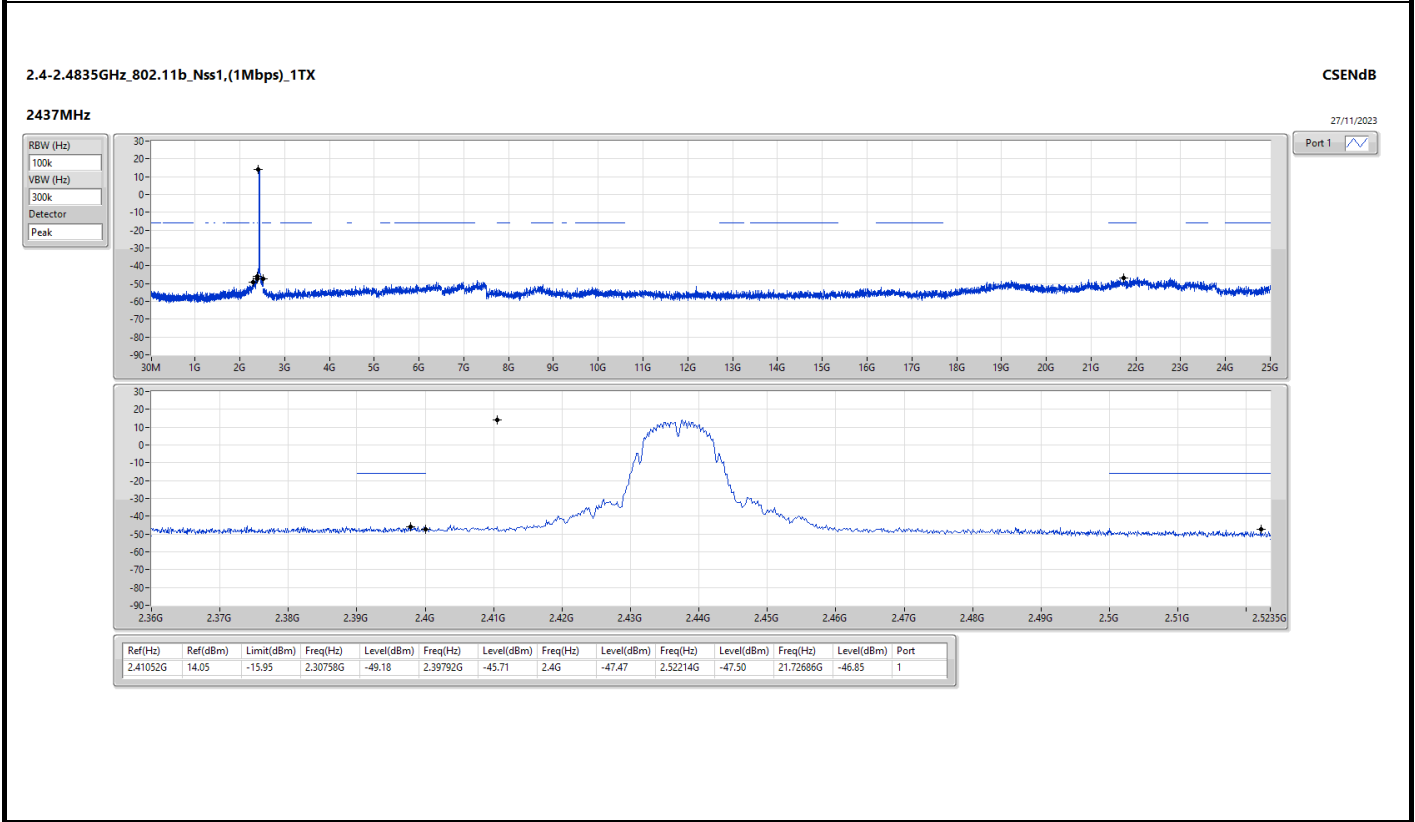
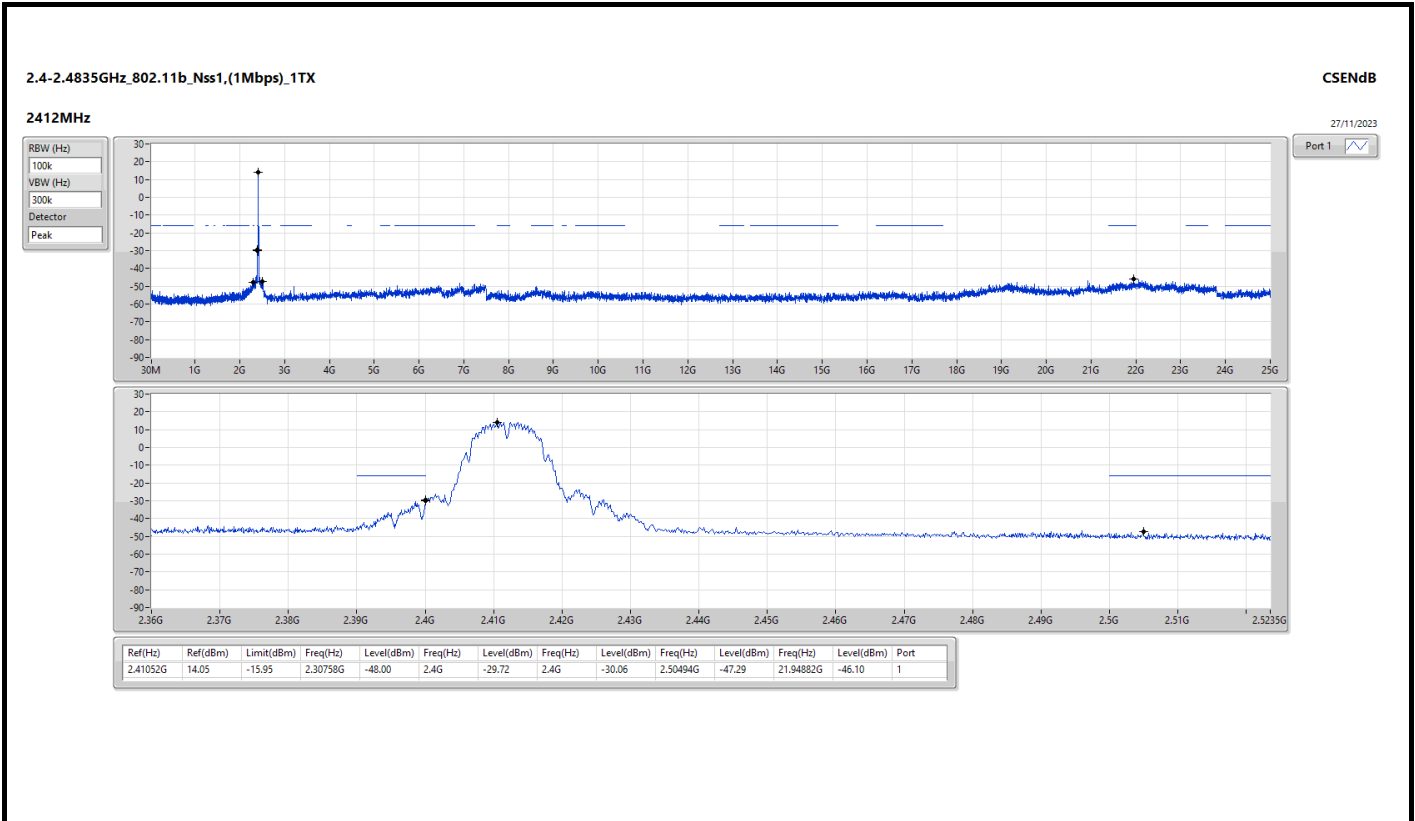


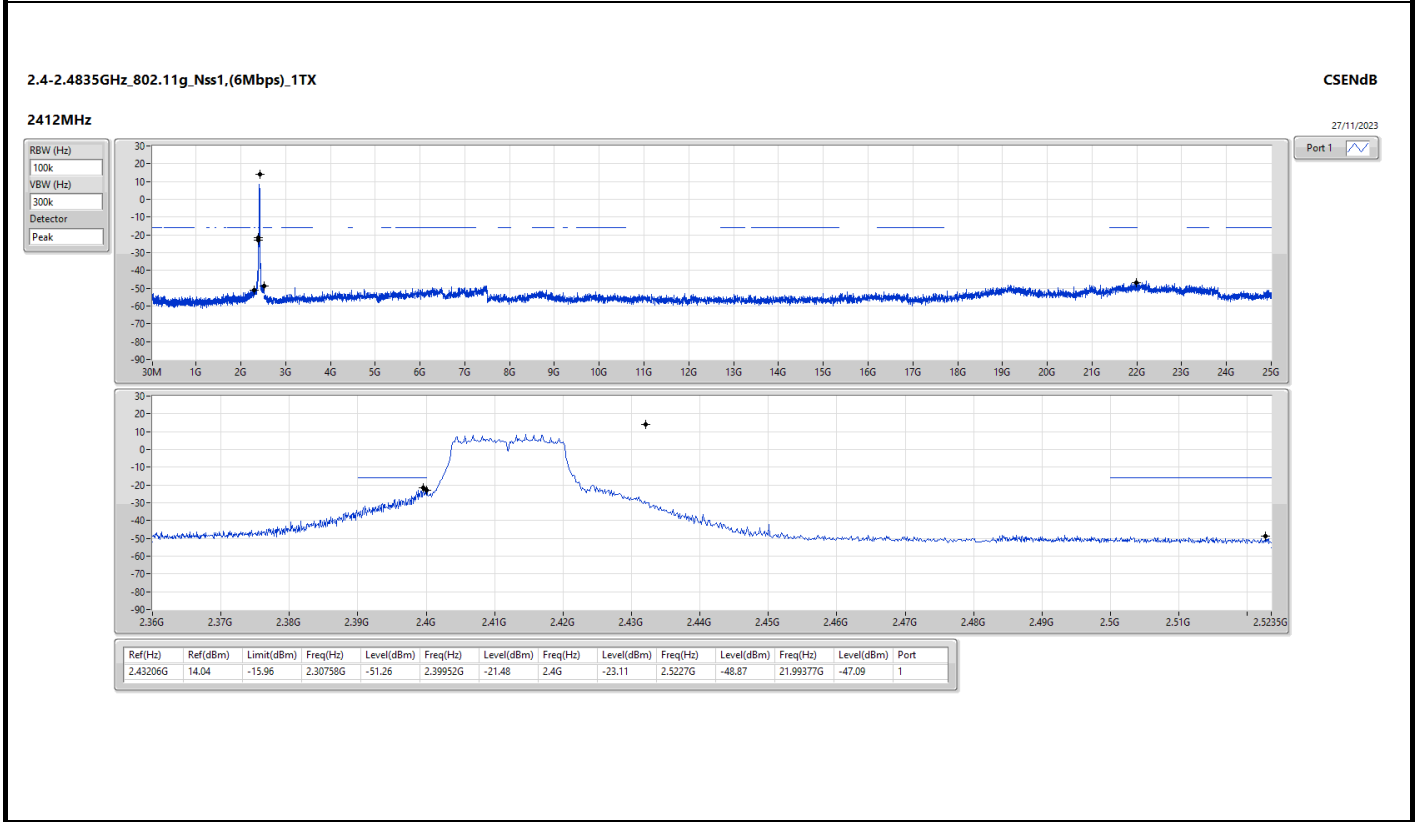
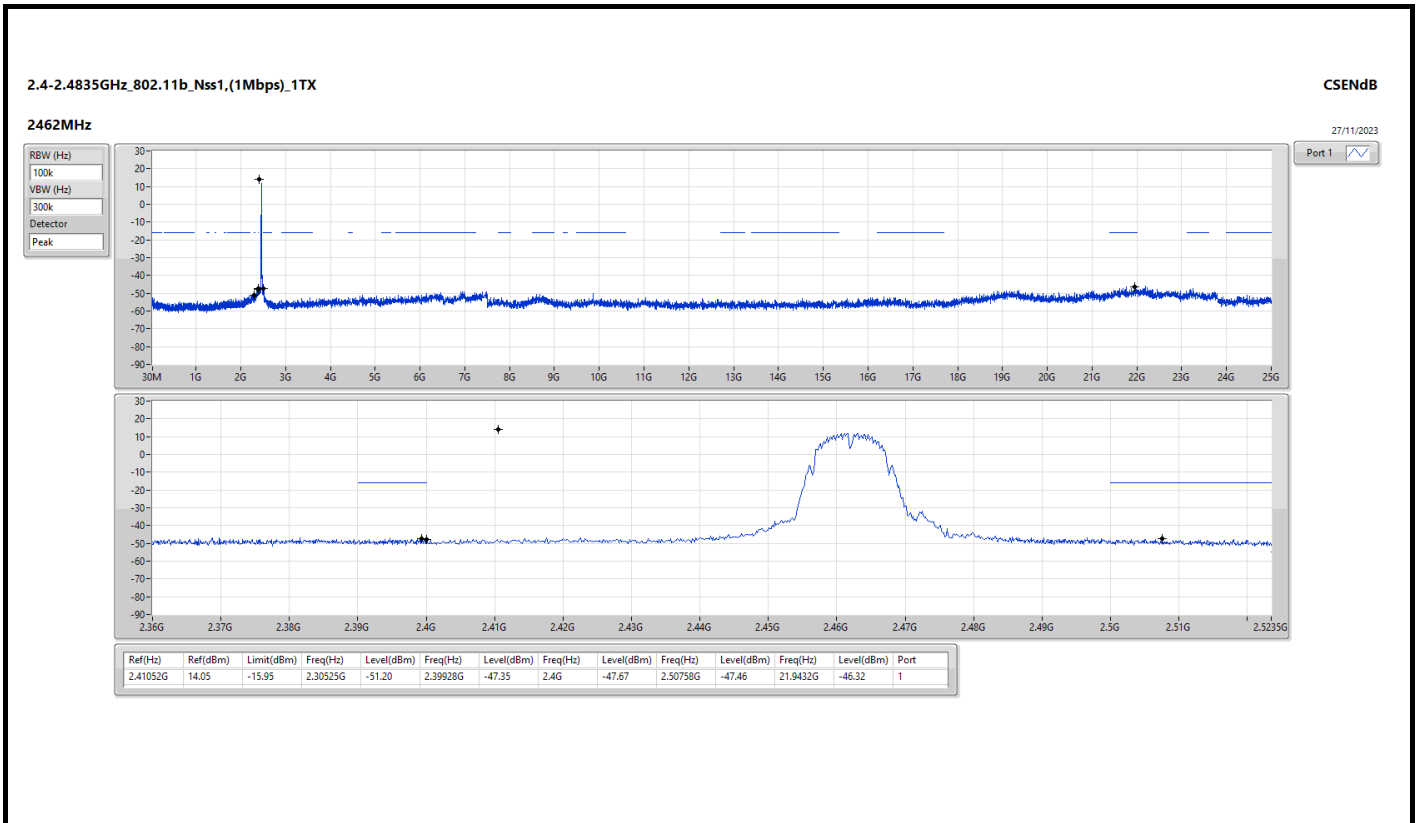
Summary

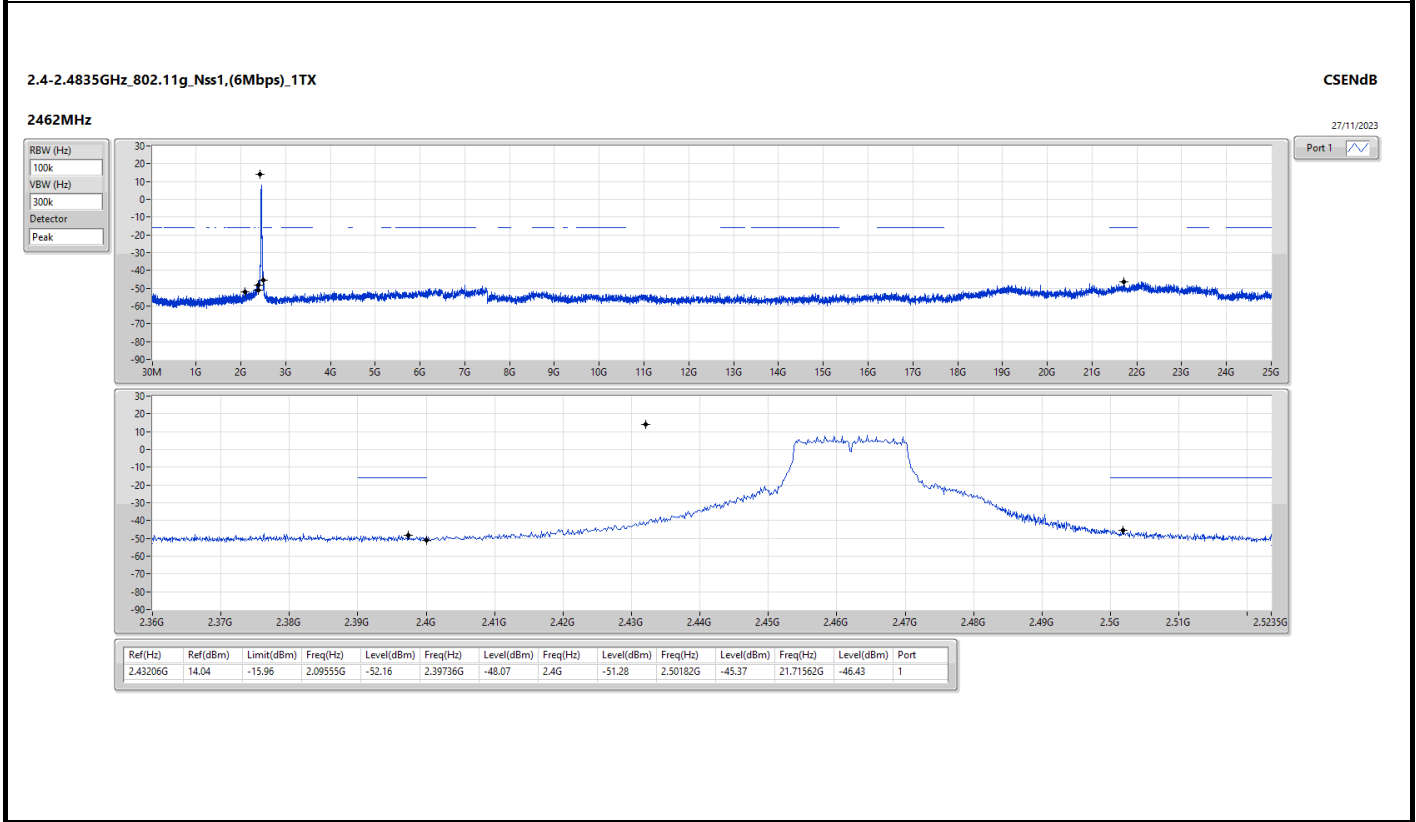
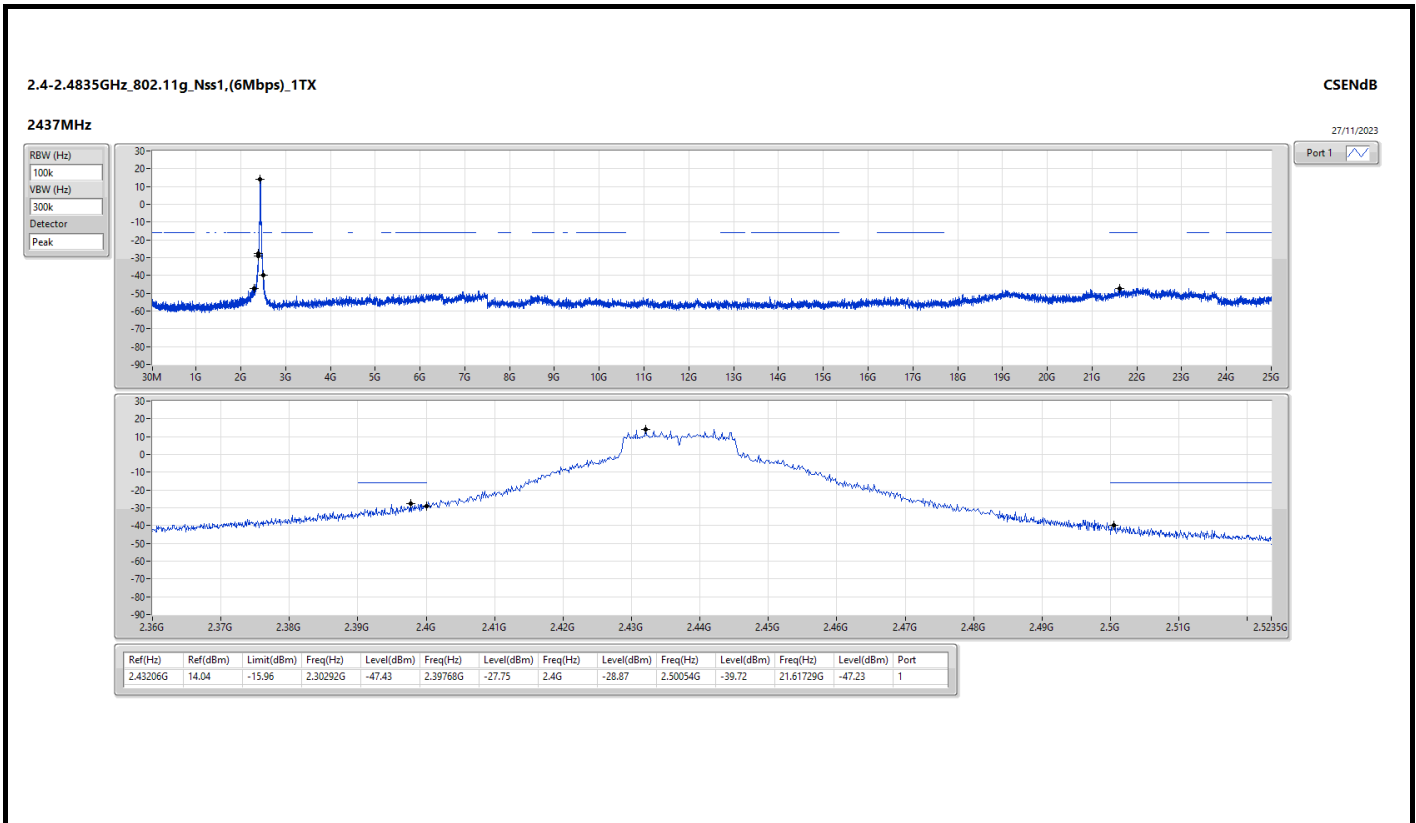
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX	Pass	2.41052G	14.05	-15.95	2.30758G	-48.00	2.4G	-29.72	2.4G	-30.06	2.50494G	-47.29	21.94882G	-46.10	1
802.11g_Nss1,(6Mbps)_1TX	Pass	2.43206G	14.04	-15.96	2.30758G	-51.26	2.39952G	-21.48	2.4G	-23.11	2.5227G	-48.87	21.99377G	-47.09	1
802.11n HT20_Nss1,(MCS0)_2TX	Pass	2.44192G	15.32	-14.68	2.30525G	-50.37	2.39888G	-23.96	2.4G	-23.04	2.51334G	-48.23	21.72405G	-46.50	1
802.11n HT40_Nss1,(MCS0)_2TX	Pass	2.4319G	7.78	-22.22	2.0807G	-48.39	2.4G	-26.05	2.4G	-23.61	2.50078G	-50.73	21.98229G	-46.41	2

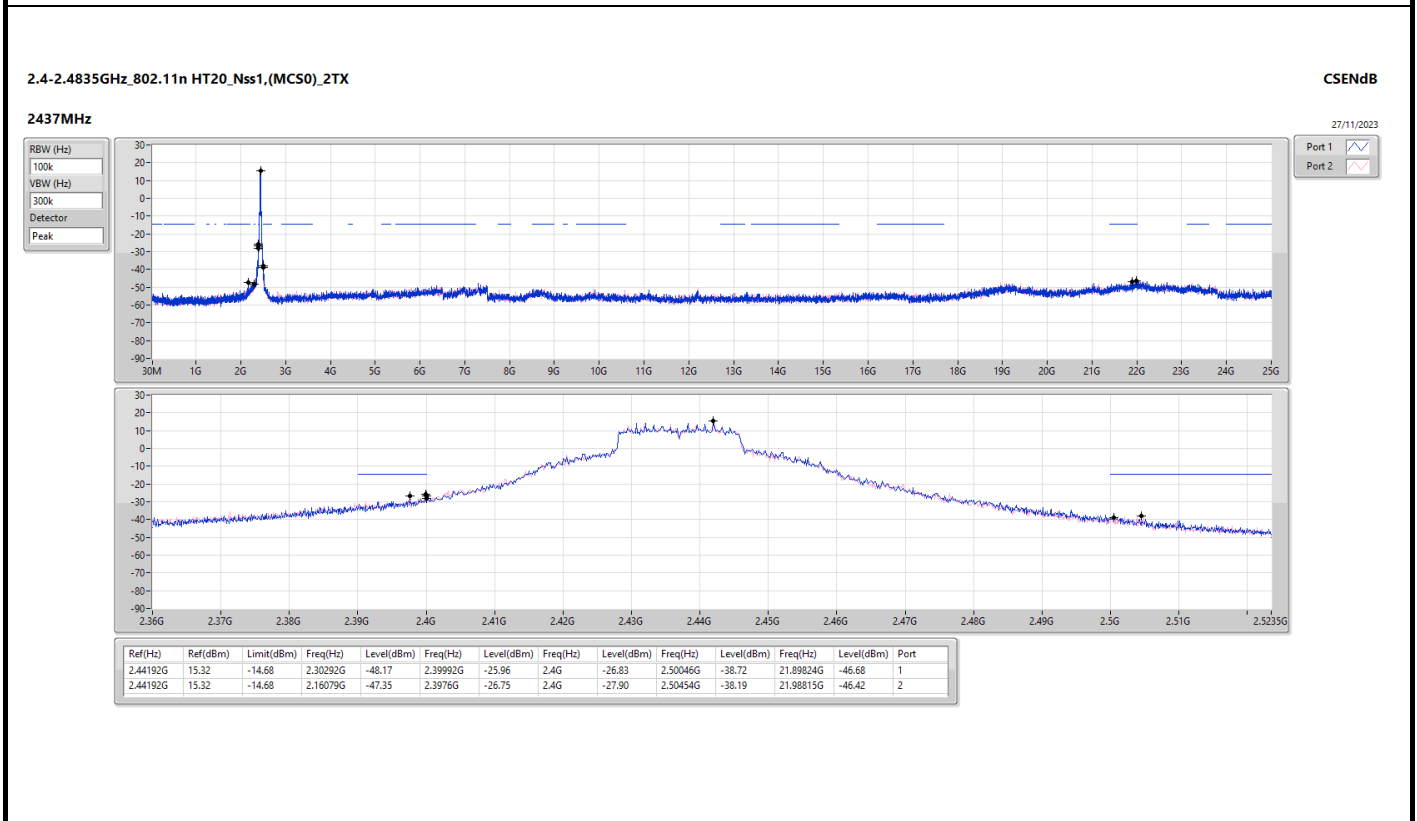
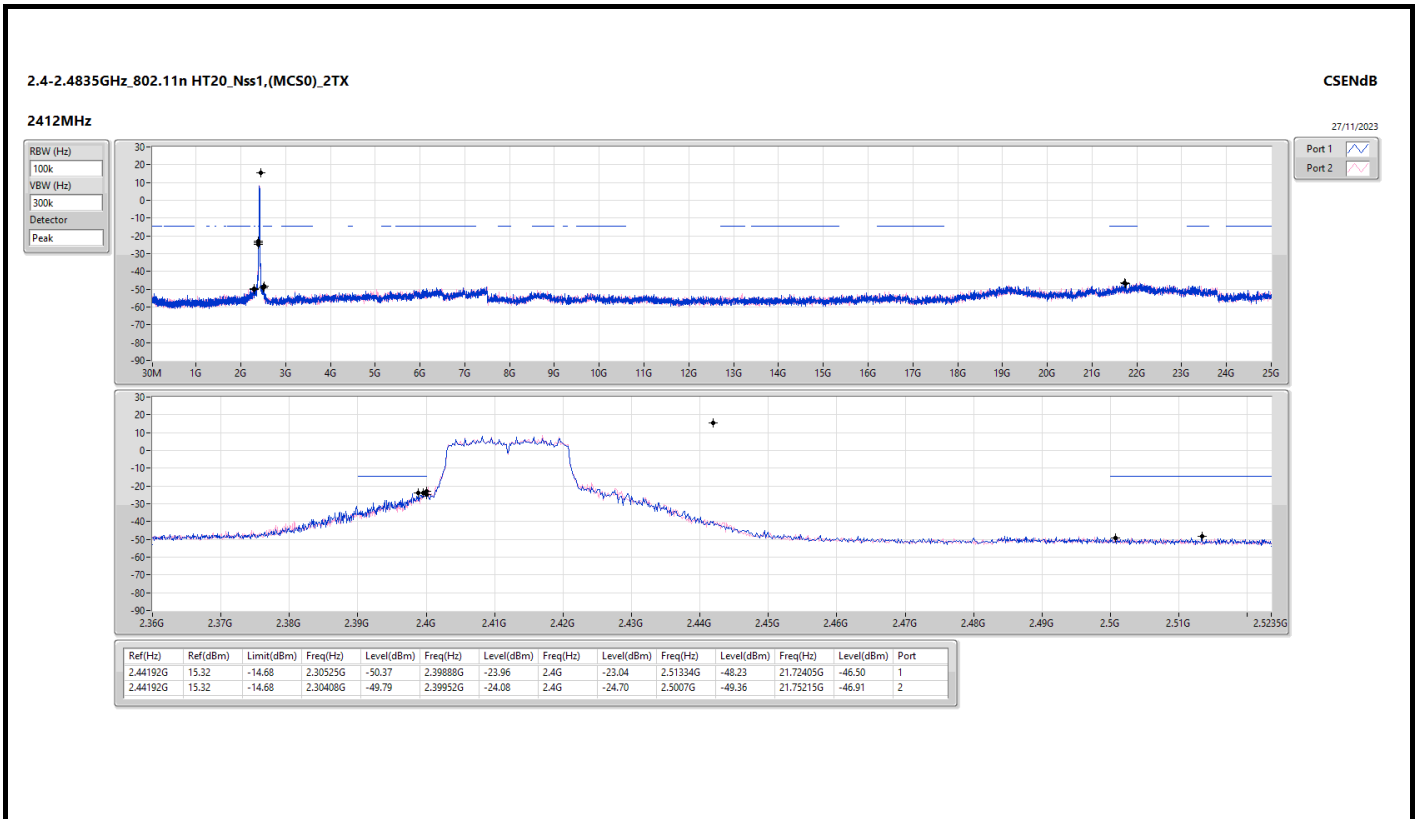
Result

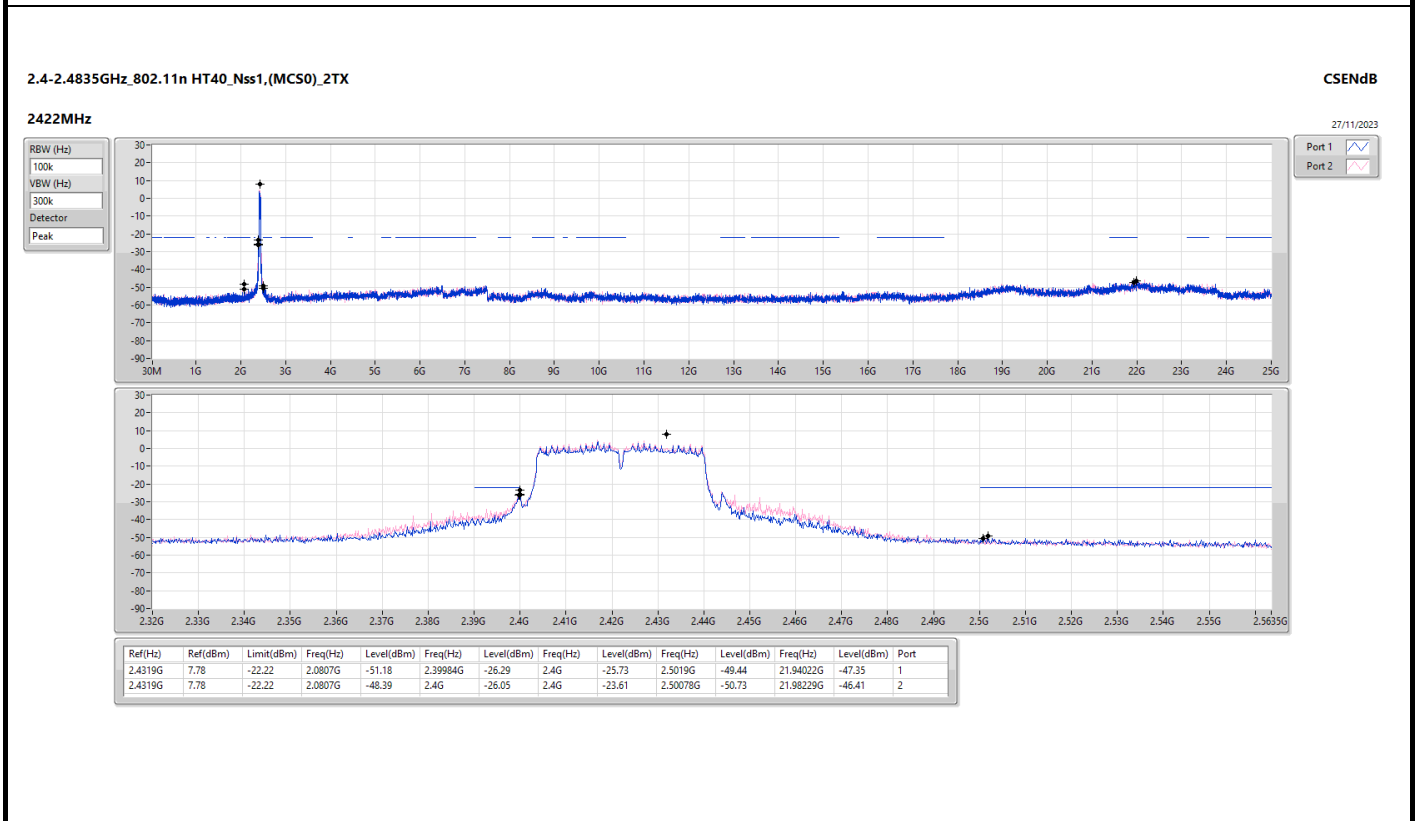
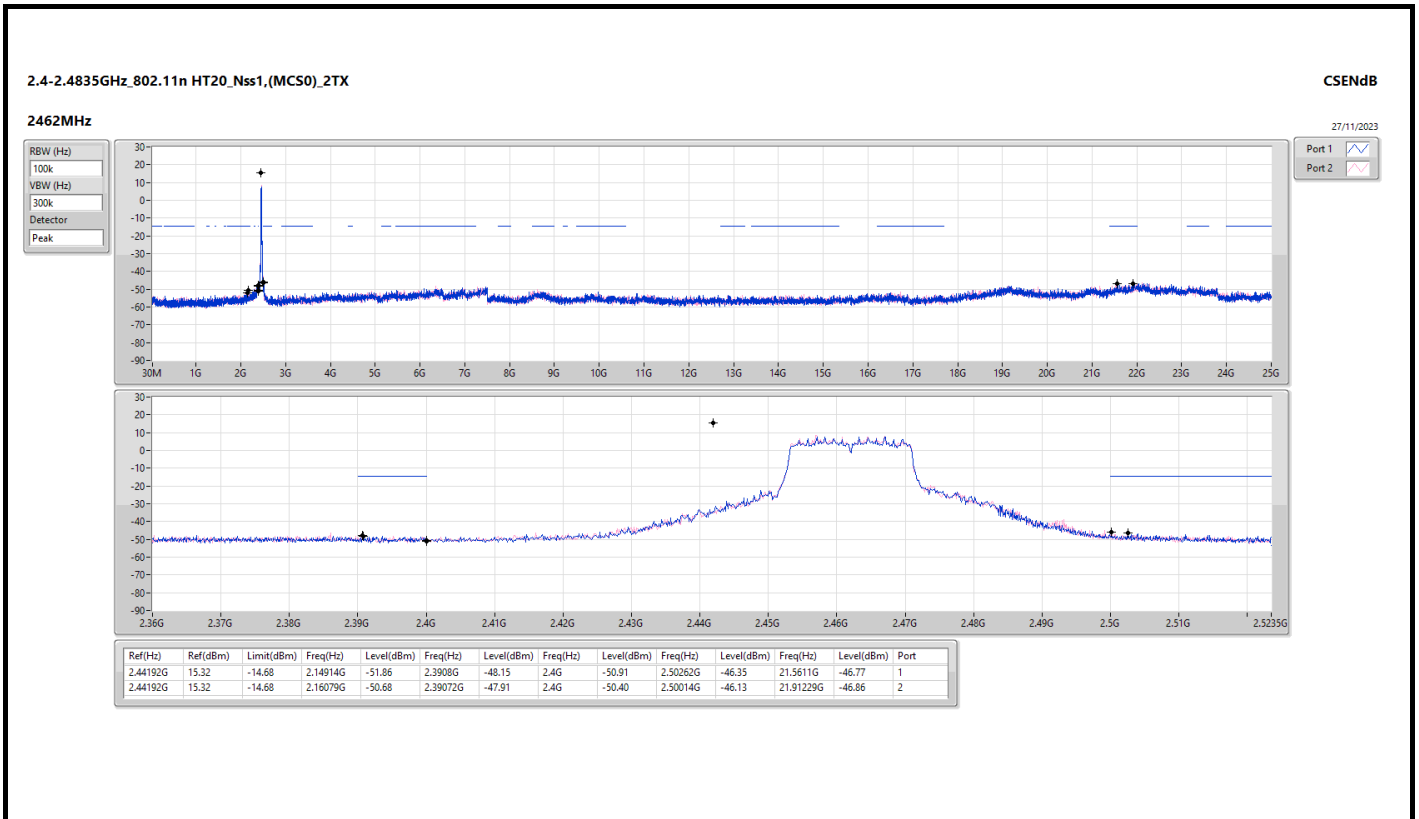
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
802.11b_Nss1.(1Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.41052G	14.05	-15.95	2.30758G	-48.00	2.4G	-29.72	2.4G	-30.06	2.50494G	-47.29	21.94882G	-46.10	1
2437MHz	Pass	2.41052G	14.05	-15.95	2.30758G	-49.18	2.39792G	-45.71	2.4G	-47.47	2.52214G	-47.50	21.72686G	-46.85	1
2462MHz	Pass	2.41052G	14.05	-15.95	2.30525G	-51.20	2.39928G	-47.35	2.4G	-47.67	2.50758G	-47.46	21.9432G	-46.32	1
802.11g_Nss1.(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43206G	14.04	-15.96	2.30758G	-51.26	2.39952G	-21.48	2.4G	-23.11	2.5227G	-48.87	21.99377G	-47.09	1
2437MHz	Pass	2.43206G	14.04	-15.96	2.30292G	-47.43	2.39768G	-27.75	2.4G	-28.87	2.50054G	-39.72	21.61729G	-47.23	1
2462MHz	Pass	2.43206G	14.04	-15.96	2.09555G	-52.16	2.39736G	-48.07	2.4G	-51.28	2.50182G	-45.37	21.71562G	-46.43	1
802.11n HT20_Nss1.(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.44192G	15.32	-14.68	2.30525G	-50.37	2.39888G	-23.96	2.4G	-23.04	2.51334G	-48.23	21.72405G	-46.50	1
2412MHz	Pass	2.44192G	15.32	-14.68	2.30408G	-49.79	2.39952G	-24.08	2.4G	-24.70	2.5007G	-49.36	21.75215G	-46.91	2
2437MHz	Pass	2.44192G	15.32	-14.68	2.30292G	-48.17	2.39992G	-25.96	2.4G	-26.83	2.50046G	-38.72	21.89824G	-46.68	1
2437MHz	Pass	2.44192G	15.32	-14.68	2.16079G	-47.35	2.3976G	-26.75	2.4G	-27.90	2.50454G	-38.19	21.98815G	-46.42	2
2462MHz	Pass	2.44192G	15.32	-14.68	2.14914G	-51.86	2.3908G	-48.15	2.4G	-50.91	2.50262G	-46.35	21.5611G	-46.77	1
2462MHz	Pass	2.44192G	15.32	-14.68	2.16079G	-50.68	2.39072G	-47.91	2.4G	-50.40	2.50014G	-46.13	21.91229G	-46.86	2
802.11n HT40_Nss1.(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	2.4319G	7.78	-22.22	2.0807G	-51.18	2.39984G	-26.29	2.4G	-25.73	2.5019G	-49.44	21.94022G	-47.35	1
2422MHz	Pass	2.4319G	7.78	-22.22	2.0807G	-48.39	2.4G	-26.05	2.4G	-23.61	2.50078G	-50.73	21.98229G	-46.41	2
2437MHz	Pass	2.4319G	7.78	-22.22	2.3097G	-49.00	2.3984G	-32.16	2.4G	-33.30	2.50286G	-40.99	21.94583G	-46.79	1
2437MHz	Pass	2.4319G	7.78	-22.22	2.0807G	-46.83	2.39952G	-28.60	2.4G	-28.58	2.50238G	-40.50	22.00473G	-47.25	2
2452MHz	Pass	2.4319G	7.78	-22.22	2.30626G	-51.93	2.39888G	-44.26	2.4G	-46.41	2.50302G	-40.71	21.93742G	-46.54	1
2452MHz	Pass	2.4319G	7.78	-22.22	2.0807G	-49.37	2.4G	-41.46	2.4G	-41.24	2.50078G	-38.91	21.91218G	-46.43	2

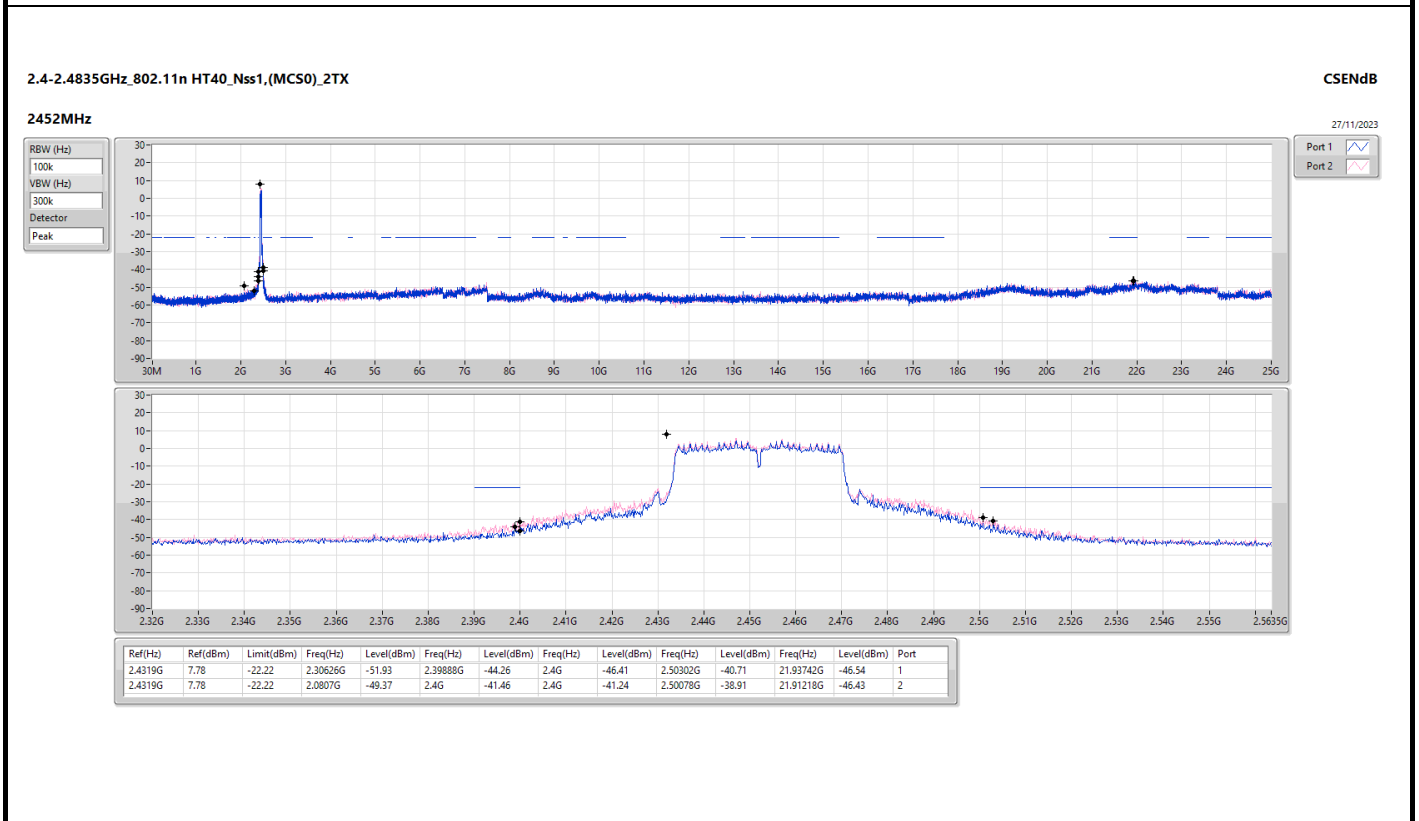
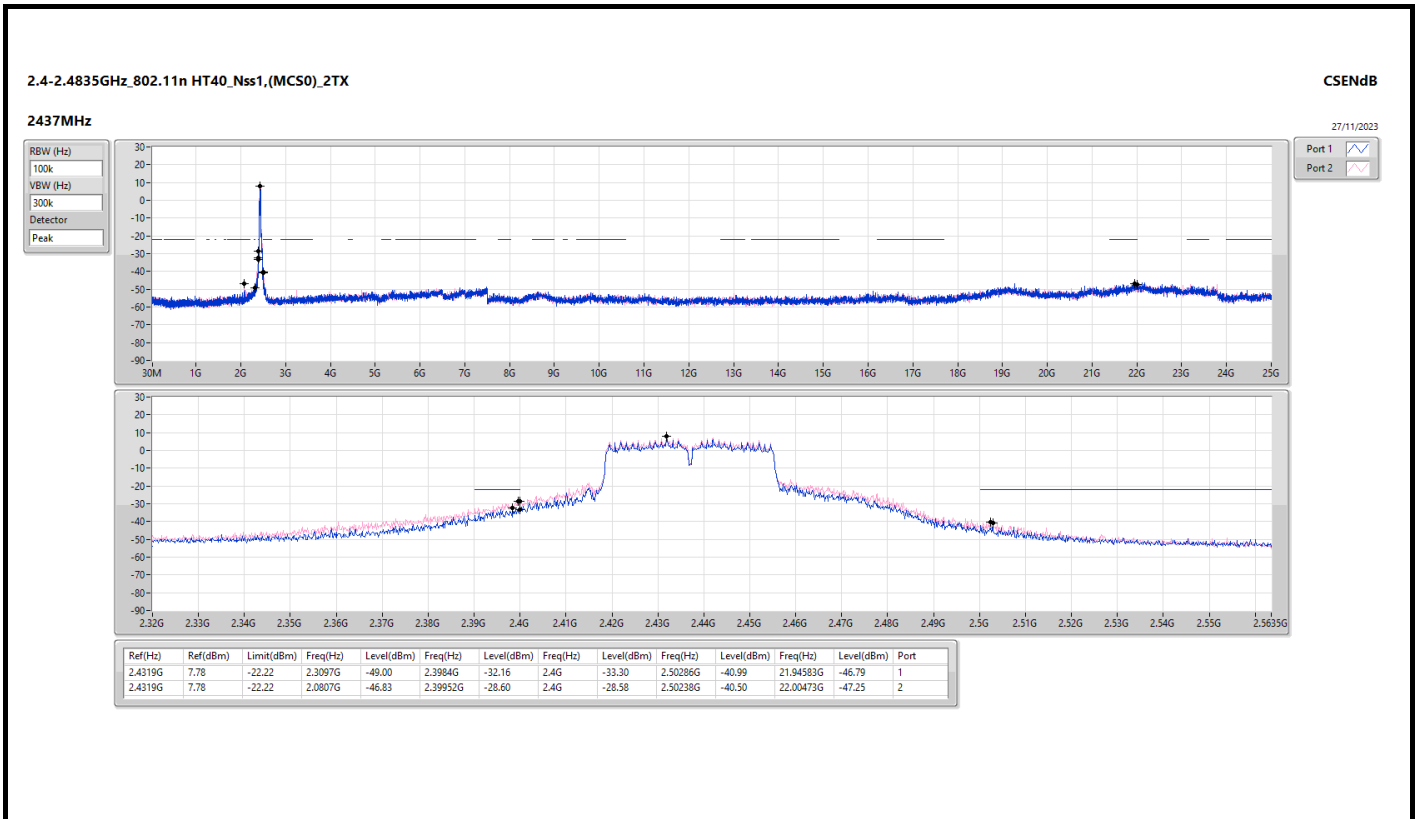










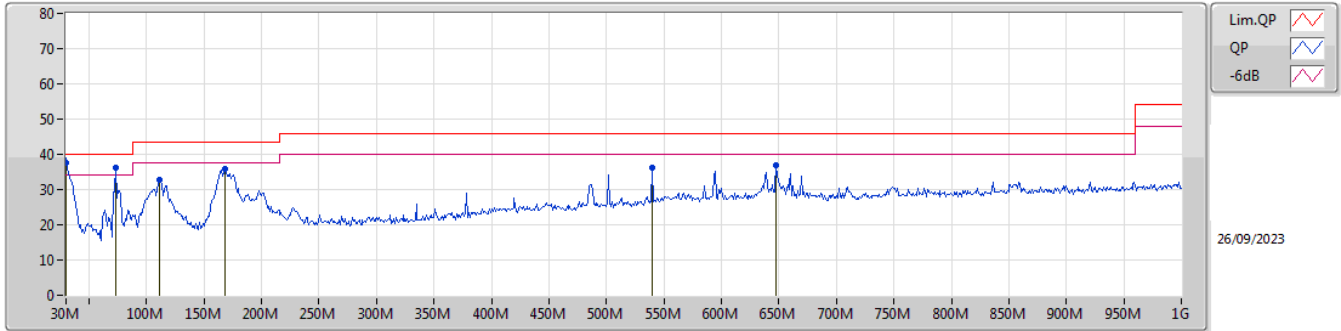




Summary

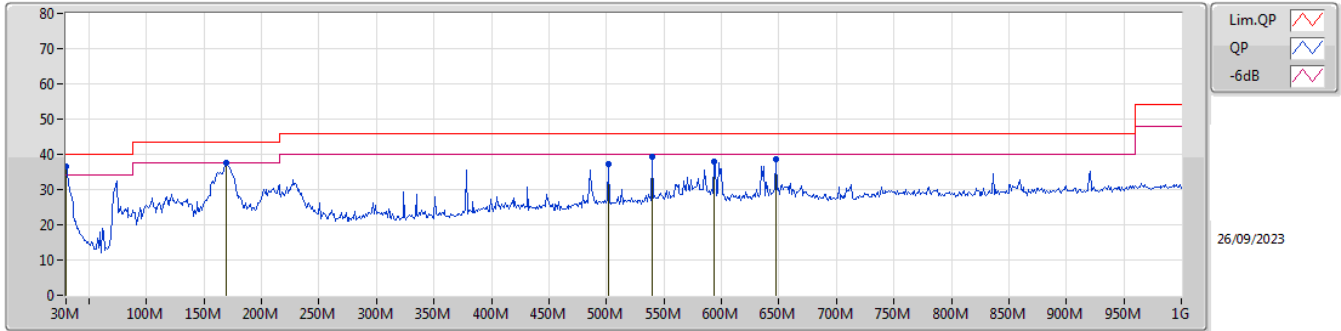
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	QP	30M	37.52	40.00	-2.48	Vertical

Mode 1



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
QP	30M	37.52	40.00	-2.48	-2.47	3	Vertical	143	2.00	"Worst"	39.99	25.28	0.74	28.49
PK	73.65M	36.10	40.00	-3.90	-15.09	3	Vertical	95	2.00	-	51.19	12.35	1.11	28.55
PK	111.48M	32.67	43.50	-10.83	-9.44	3	Vertical	180	1.00	-	42.11	17.65	1.36	28.45
PK	168.71M	35.71	43.50	-7.79	-11.03	3	Vertical	0	1.25	-	46.74	15.54	1.68	28.25
PK	540.22M	36.28	46.00	-9.72	-1.74	3	Vertical	174	1.00	-	38.02	24.52	3.10	29.36
PK	647.89M	36.99	46.00	-9.01	-0.62	3	Vertical	30	1.00	-	37.61	25.32	3.36	29.30

Mode 1



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB/m)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
QP	30M	36.51	40.00	-3.49	-2.47	3	Horizontal	209	2.00	"Worst"	38.98	25.28	0.74	28.49
PK	169.68M	37.57	43.50	-5.93	-11.05	3	Horizontal	81	1.50	-	48.62	15.50	1.69	28.24
PK	501.42M	37.28	46.00	-8.72	-3.00	3	Horizontal	322	2.00	-	40.28	23.37	2.97	29.34
PK	540.22M	39.34	46.00	-6.66	-1.74	3	Horizontal	300	1.50	-	41.08	24.52	3.10	29.36
PK	593.57M	38.08	46.00	-7.92	-1.33	3	Horizontal	123	1.50	-	39.41	24.81	3.20	29.34
PK	647.89M	38.49	46.00	-7.51	-0.62	3	Horizontal	114	1.50	-	39.11	25.32	3.36	29.30

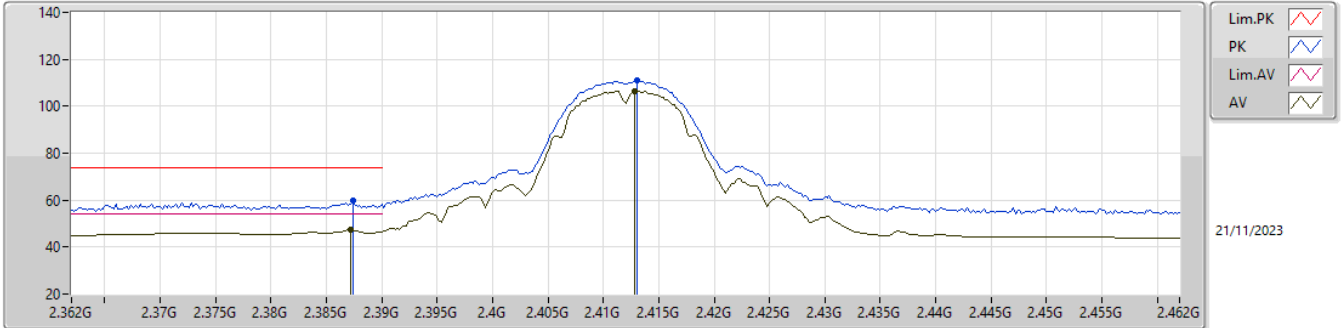


Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
802.11n HT20_Nss1,(MCS0)_2TX	Pass	AV	2.3898G	53.95	54.00	-0.05	3	Horizontal	31	2.43	-

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

2412MHz_TX

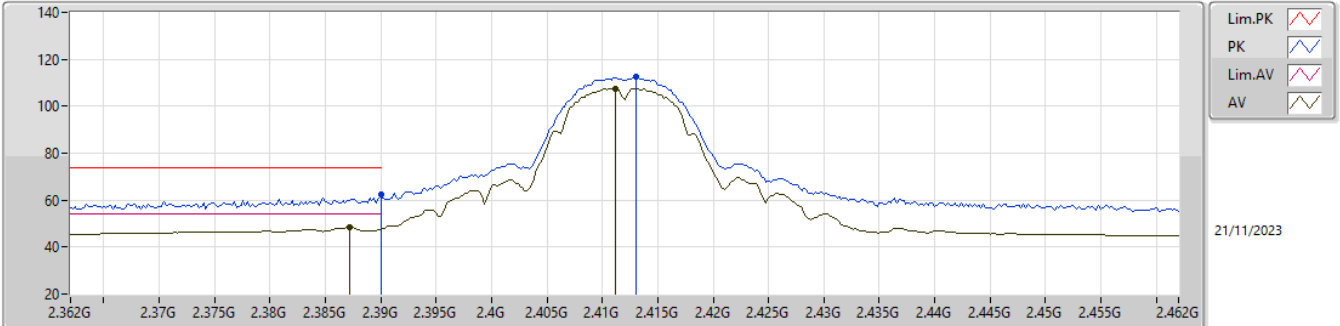


EUT_Z_1TX
Setting 22
04-F-J-8

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	2.3874G	59.83	74.00	-14.17	29.09	3	Vertical	59	2.89	-	27.40	3.34	-
AV	2.3872G	47.20	54.00	-6.80	16.46	3	Vertical	59	2.89	-	27.40	3.34	-
PK	2.413G	110.86	Inf	-Inf	80.00	3	Vertical	59	2.89	-	27.50	3.36	-
AV	2.4128G	106.30	Inf	-Inf	75.44	3	Vertical	59	2.89	-	27.50	3.36	-

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

2412MHz_TX

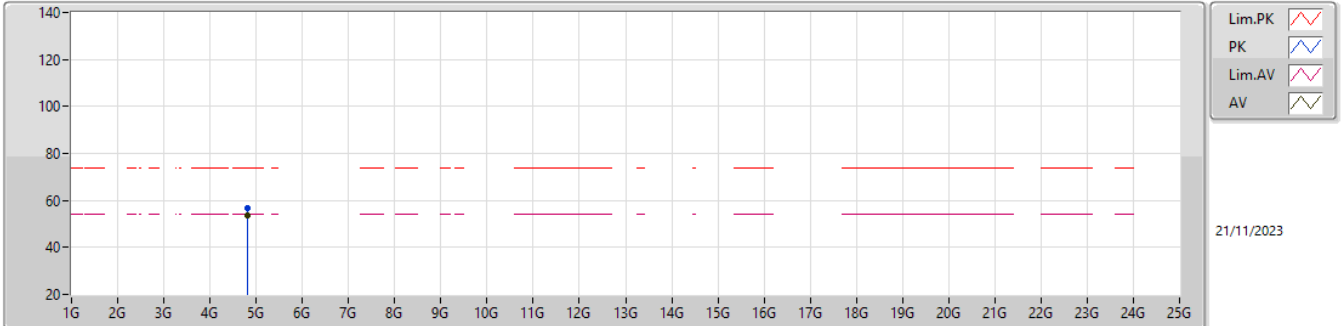


EUT_Z_1TX
Setting 22
04-F-J-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.39G	62.27	74.00	-11.73	31.52	3	Horizontal	7	1.00	-	27.40	3.35	-
AV	2.3872G	48.50	54.00	-5.50	17.76	3	Horizontal	7	1.00	-	27.40	3.34	-
PK	2.413G	112.35	Inf	-Inf	81.49	3	Horizontal	7	1.00	-	27.50	3.36	-
AV	2.4112G	107.60	Inf	-Inf	76.74	3	Horizontal	7	1.00	-	27.50	3.36	-

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

2412MHz_TX

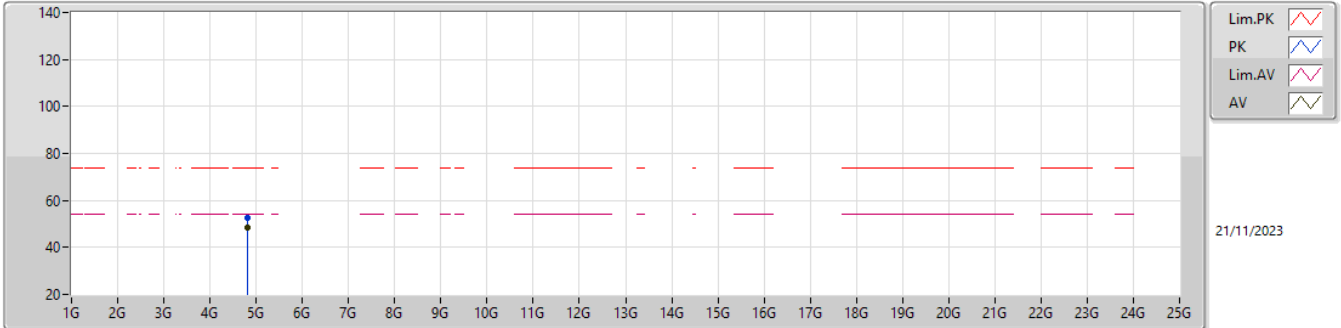


EUT_Z_1TX
Setting 22
04-F-R-7

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	4.82401G	56.60	74.00	-17.40	51.85	3	Vertical	80	1.61	-	32.35	5.67	33.27
AV	4.82399G	53.60	54.00	-0.40	48.85	3	Vertical	80	1.61	-	32.35	5.67	33.27

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

2412MHz_TX

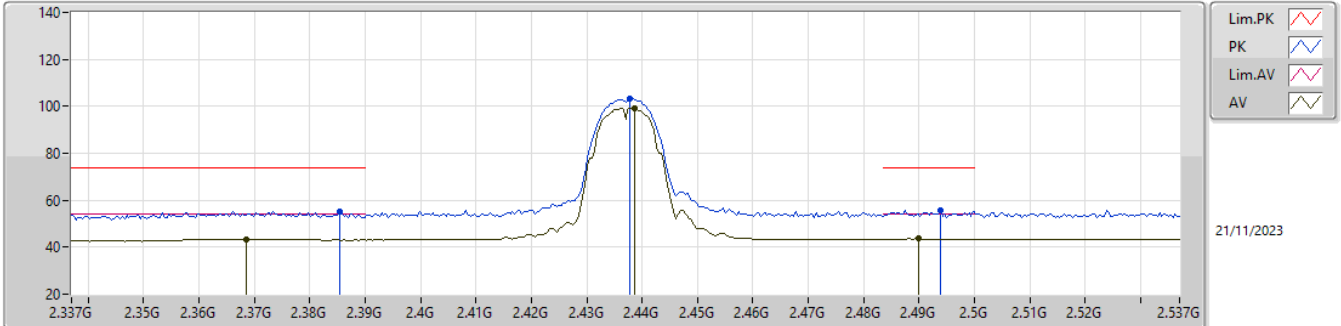


EUT_Z_1TX
Setting 22
04-F-J-8

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	4.824G	52.76	74.00	-21.24	48.01	3	Horizontal	49	2.59	-	32.35	5.67	33.27
AV	4.824G	48.29	54.00	-5.71	43.54	3	Horizontal	49	2.59	-	32.35	5.67	33.27

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

2437MHz_TX

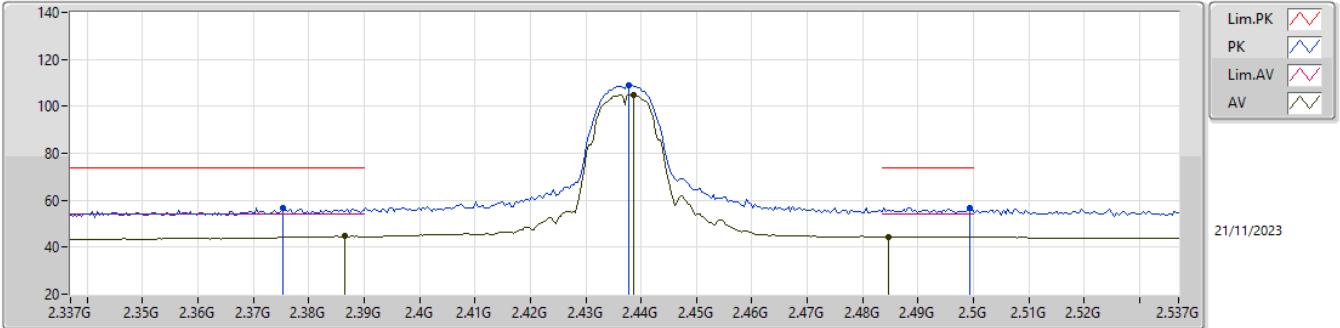


EUT_Z_1TX
Setting 21
04-F-J-8

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	2.3854G	55.19	74.00	-18.81	24.45	3	Vertical	254	1.69	-	27.40	3.34	-
AV	2.3686G	43.46	54.00	-10.54	12.63	3	Vertical	254	1.69	-	27.49	3.34	-
PK	2.4378G	103.24	Inf	-Inf	72.29	3	Vertical	254	1.69	-	27.58	3.37	-
AV	2.4386G	99.07	Inf	-Inf	68.11	3	Vertical	254	1.69	-	27.59	3.37	-
PK	2.4938G	55.89	74.00	-18.11	24.79	3	Vertical	254	1.69	-	27.70	3.40	-
AV	2.4898G	43.58	54.00	-10.42	12.48	3	Vertical	254	1.69	-	27.70	3.40	-

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

2437MHz_TX

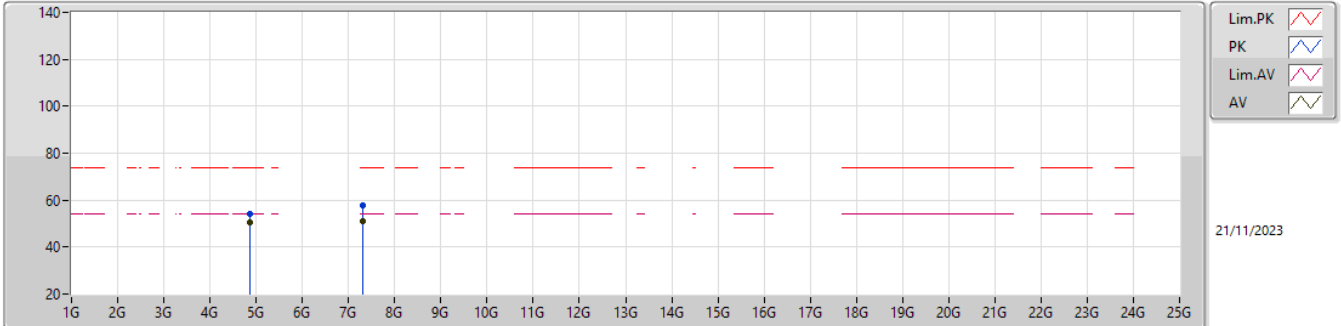


EUTZ_1TX
Setting 21
04-F-J-8

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	2.3754G	56.76	74.00	-17.24	25.97	3	Horizontal	9	2.05	-	27.45	3.34	-
AV	2.3866G	44.64	54.00	-9.36	13.90	3	Horizontal	9	2.05	-	27.40	3.34	-
PK	2.4378G	109.10	Inf	-Inf	78.15	3	Horizontal	9	2.05	-	27.58	3.37	-
AV	2.4386G	104.94	Inf	-Inf	73.98	3	Horizontal	9	2.05	-	27.59	3.37	-
PK	2.4994G	56.64	74.00	-17.36	25.54	3	Horizontal	9	2.05	-	27.70	3.40	-
AV	2.4846G	44.52	54.00	-9.48	13.47	3	Horizontal	9	2.05	-	27.65	3.40	-

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

2437MHz_TX

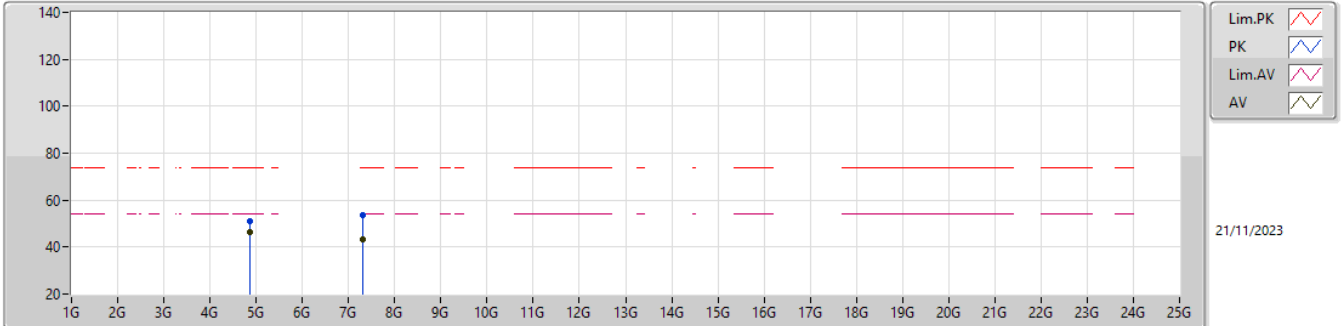


EUT_Z_1TX
Setting 21
04-F-R-7

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	4.874G	53.90	74.00	-20.10	48.94	3	Vertical	80.1	1.11	-	32.50	5.72	33.26
AV	4.874G	50.68	54.00	-3.32	45.72	3	Vertical	80.1	1.11	-	32.50	5.72	33.26
PK	7.31016G	57.99	74.00	-16.01	47.76	3	Vertical	164	1.21	-	37.20	7.12	34.09
AV	7.31022G	51.19	54.00	-2.81	40.96	3	Vertical	164	1.21	-	37.20	7.12	34.09

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

2437MHz_TX

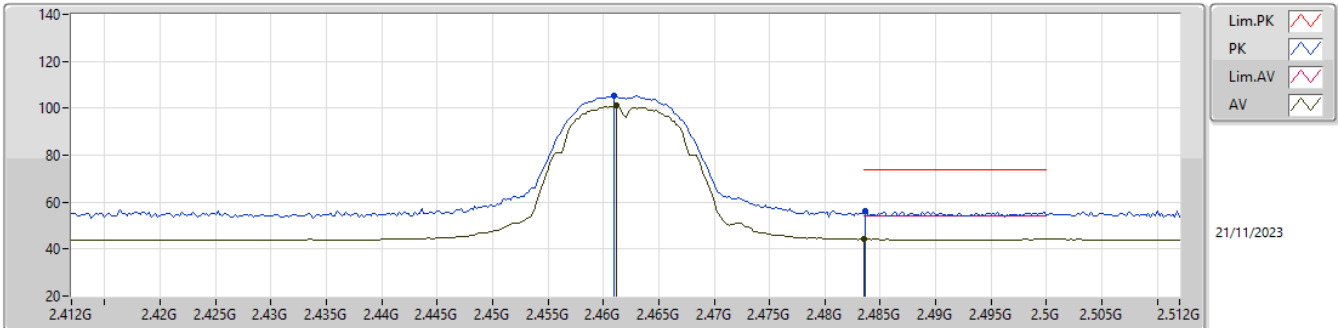


EUTZ_1TX
Setting 21
04-F-J-8

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	4.874G	51.13	74.00	-22.87	46.17	3	Horizontal	206	2.84	-	32.50	5.72	33.26
AV	4.874G	46.20	54.00	-7.80	41.24	3	Horizontal	206	2.84	-	32.50	5.72	33.26
PK	7.3098G	53.51	74.00	-20.49	43.28	3	Horizontal	28	1.99	-	37.20	7.12	34.09
AV	7.31022G	43.08	54.00	-10.92	32.85	3	Horizontal	28	1.99	-	37.20	7.12	34.09

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

2462MHz_TX

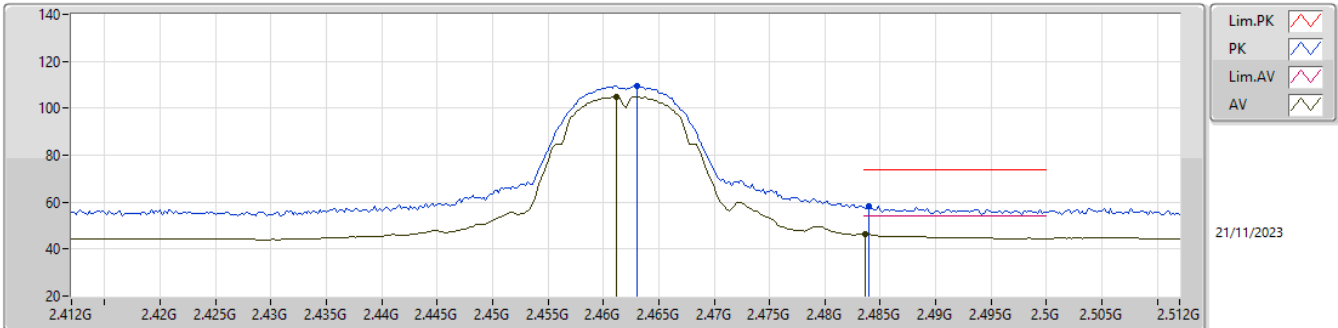


EUT_Z_1TX
 Setting 20
 04-F-J-8

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	105.51	Inf	-Inf	74.53	3	Vertical	112	2.56	-	27.60	3.38	-
AV	2.4612G	100.99	Inf	-Inf	70.01	3	Vertical	112	2.56	-	27.60	3.38	-
PK	2.4836G	56.11	74.00	-17.89	25.07	3	Vertical	112	2.56	-	27.64	3.40	-
AV	2.4835G	44.16	54.00	-9.84	13.12	3	Vertical	112	2.56	-	27.64	3.40	-

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

2462MHz_TX

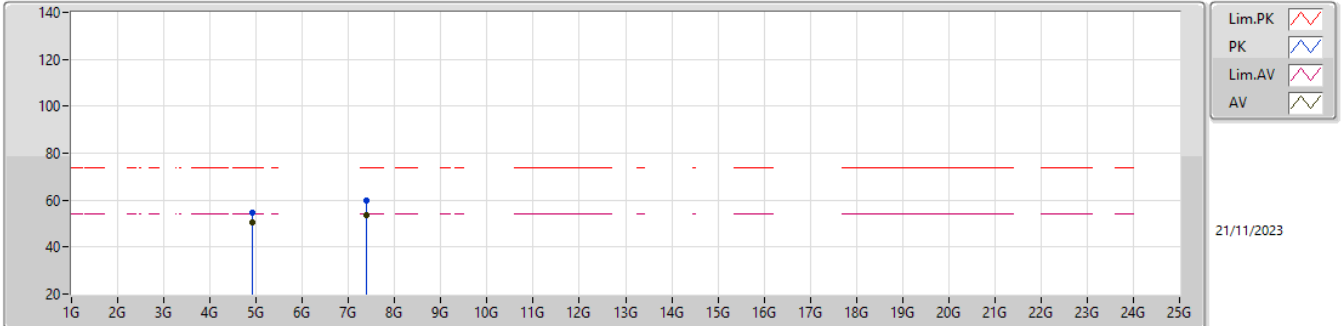


EUT_Z_1TX
Setting 20
04-F-J-8

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	109.51	Inf	-Inf	78.53	3	Horizontal	10	2.81	-	27.60	3.38	-
AV	2.4612G	105.07	Inf	-Inf	74.09	3	Horizontal	10	2.81	-	27.60	3.38	-
PK	2.484G	58.15	74.00	-15.85	27.11	3	Horizontal	10	2.81	-	27.64	3.40	-
AV	2.4836G	46.44	54.00	-7.56	15.40	3	Horizontal	10	2.81	-	27.64	3.40	-

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

2462MHz_TX

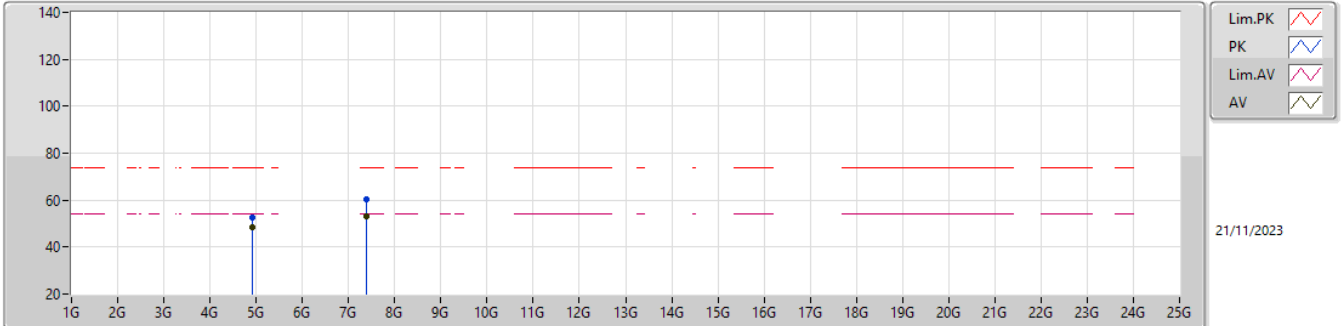


EUT_Z_1TX
Setting 20
04-F-J-8

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	4.92394G	54.49	74.00	-19.51	49.32	3	Vertical	80	2.41	-	32.65	5.76	33.24
AV	4.924G	50.51	54.00	-3.49	45.34	3	Vertical	80	2.41	-	32.65	5.76	33.24
PK	7.3869G	60.05	74.00	-13.95	49.81	3	Vertical	169	1.00	-	37.20	7.16	34.12
AV	7.38672G	53.51	54.00	-0.49	43.27	3	Vertical	169	1.00	-	37.20	7.16	34.12

2.4-2.4835GHz_802.11b_Nss1,(1Mbps)_1TX

2462MHz_TX

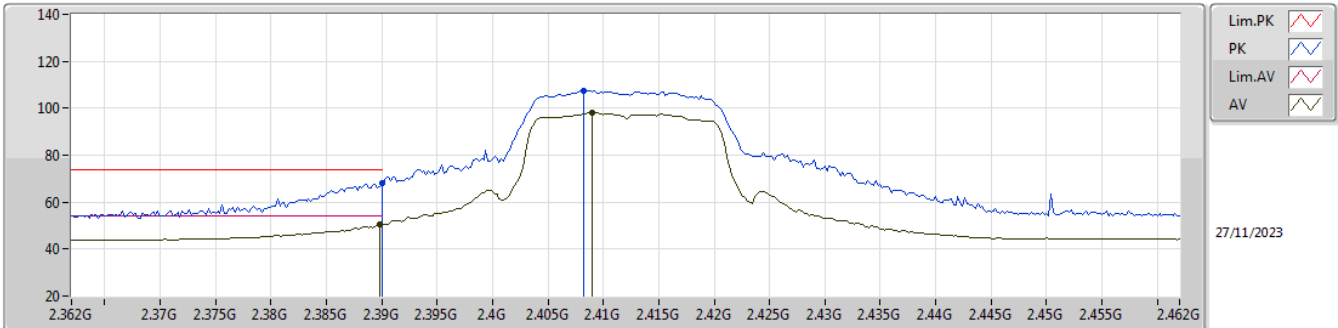


EUT_Z_1TX
Setting 20
04-F-J-8

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	4.92394G	52.50	74.00	-21.50	47.33	3	Horizontal	165	2.82	-	32.65	5.76	33.24
AV	4.924G	48.62	54.00	-5.38	43.45	3	Horizontal	165	2.82	-	32.65	5.76	33.24
PK	7.38498G	60.16	74.00	-13.84	49.92	3	Horizontal	27	1.36	-	37.20	7.16	34.12
AV	7.38474G	53.15	54.00	-0.85	42.91	3	Horizontal	27	1.36	-	37.20	7.16	34.12

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

2412MHz_TX

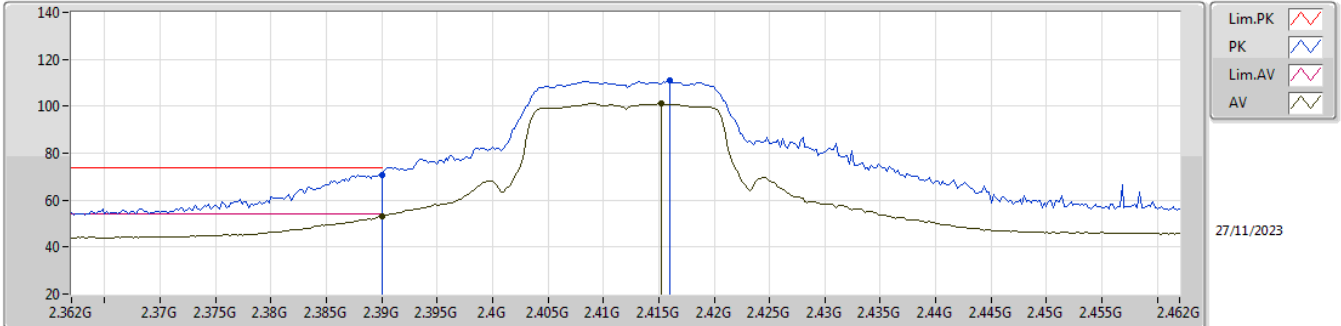


EUT_Z_1TX
Setting 19.5
02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.39G	68.06	74.00	-5.94	36.60	3	Vertical	336	2.74	-	28.40	3.06	-
AV	2.3898G	50.51	54.00	-3.49	19.06	3	Vertical	336	2.74	-	28.40	3.05	-
PK	2.4082G	107.55	Inf	-Inf	76.09	3	Vertical	336	2.74	-	28.40	3.06	-
AV	2.409G	98.08	Inf	-Inf	66.62	3	Vertical	336	2.74	-	28.40	3.06	-

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

2412MHz_TX

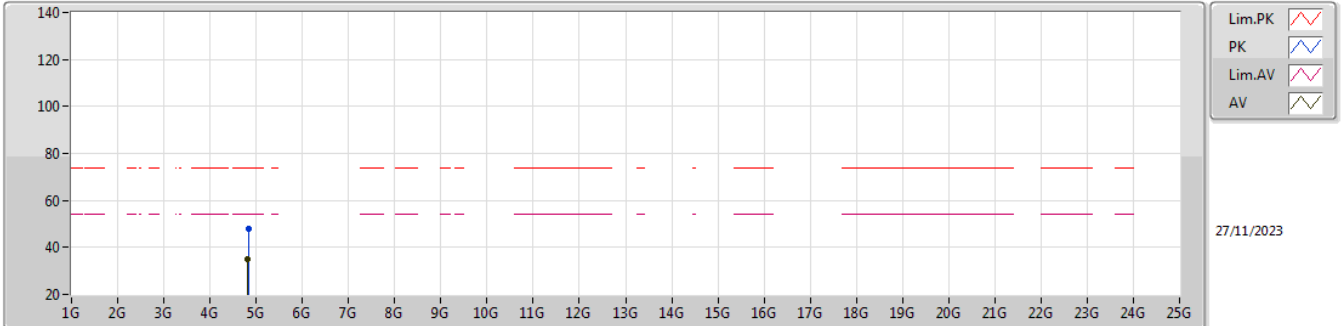


EUT_Z_1TX
Setting 19.5
02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.39G	70.87	74.00	-3.13	39.41	3	Horizontal	68	1.80	-	28.40	3.06	-
AV	2.39G	53.21	54.00	-0.79	21.75	3	Horizontal	68	1.80	-	28.40	3.06	-
PK	2.416G	110.87	Inf	-Inf	79.40	3	Horizontal	68	1.80	-	28.40	3.07	-
AV	2.4152G	101.13	Inf	-Inf	69.66	3	Horizontal	68	1.80	-	28.40	3.07	-

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

2412MHz_TX

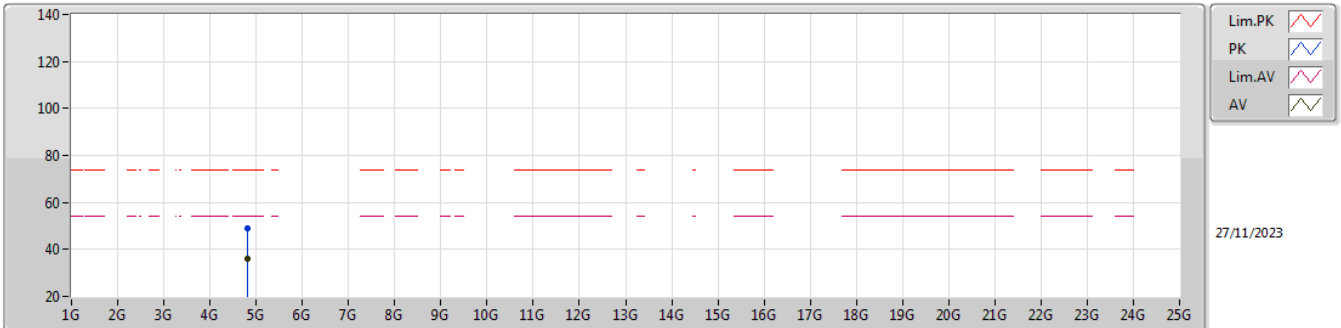


EUT_Z_1TX
Setting 19.5
02-E-V-1

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA			
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)			
PK	4.83138G	47.84	74.00	-26.16	40.42	3	Vertical	52	1.01	-	32.99	5.10	30.67			
AV	4.82406G	35.18	54.00	-18.82	27.82	3	Vertical	52	1.01	-	32.94	5.10	30.68			

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

2412MHz_TX

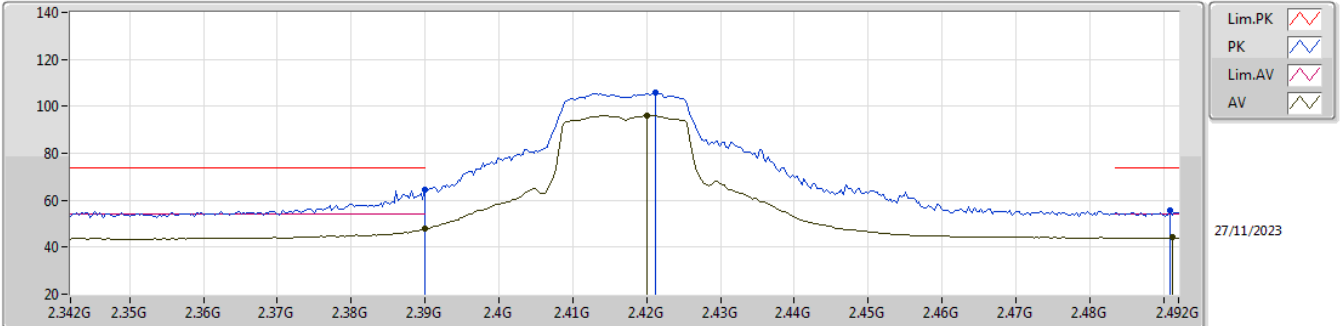


EUT_Z_1TX
Setting 19.5
02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.8231G	48.75	74.00	-25.25	41.39	3	Horizontal	306	1.95	-	32.94	5.10	30.68
AV	4.8234G	35.78	54.00	-18.22	28.42	3	Horizontal	306	1.95	-	32.94	5.10	30.68

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

2417MHz_TX

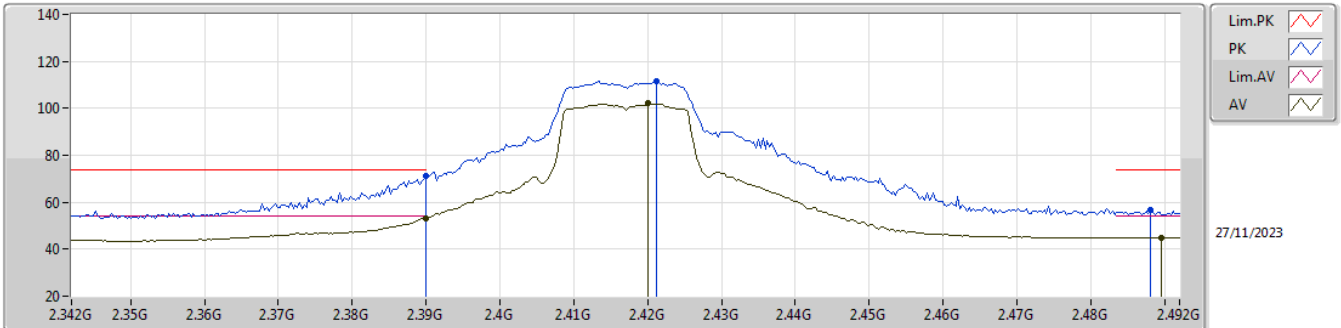


EUT_Z_1TX
Setting 21
02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.39G	64.26	74.00	-9.74	32.80	3	Vertical	360	2.74	-	28.40	3.06	-
AV	2.39G	47.72	54.00	-6.28	16.26	3	Vertical	360	2.74	-	28.40	3.06	-
PK	2.4212G	105.82	Inf	-Inf	74.34	3	Vertical	360	2.74	-	28.41	3.07	-
AV	2.42G	96.06	Inf	-Inf	64.59	3	Vertical	360	2.74	-	28.40	3.07	-
PK	2.4908G	55.80	74.00	-18.20	24.19	3	Vertical	360	2.74	-	28.51	3.10	-
AV	2.4911G	44.07	54.00	-9.93	12.46	3	Vertical	360	2.74	-	28.51	3.10	-

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

2417MHz_TX

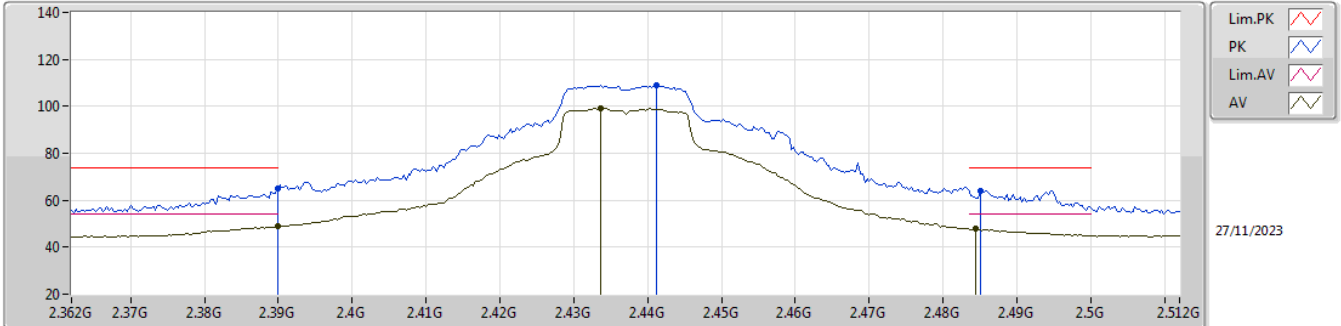


EUT_Z_1TX
Setting 21
02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.39G	71.08	74.00	-2.92	39.62	3	Horizontal	80	1.82	-	28.40	3.06	-
AV	2.39G	53.03	54.00	-0.97	21.57	3	Horizontal	80	1.82	-	28.40	3.06	-
PK	2.4212G	111.50	Inf	-Inf	80.02	3	Horizontal	80	1.82	-	28.41	3.07	-
AV	2.42G	101.99	Inf	-Inf	70.52	3	Horizontal	80	1.82	-	28.40	3.07	-
PK	2.4881G	56.98	74.00	-17.02	25.38	3	Horizontal	80	1.82	-	28.50	3.10	-
AV	2.4896G	44.99	54.00	-9.01	13.39	3	Horizontal	80	1.82	-	28.50	3.10	-

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

2437MHz_TX

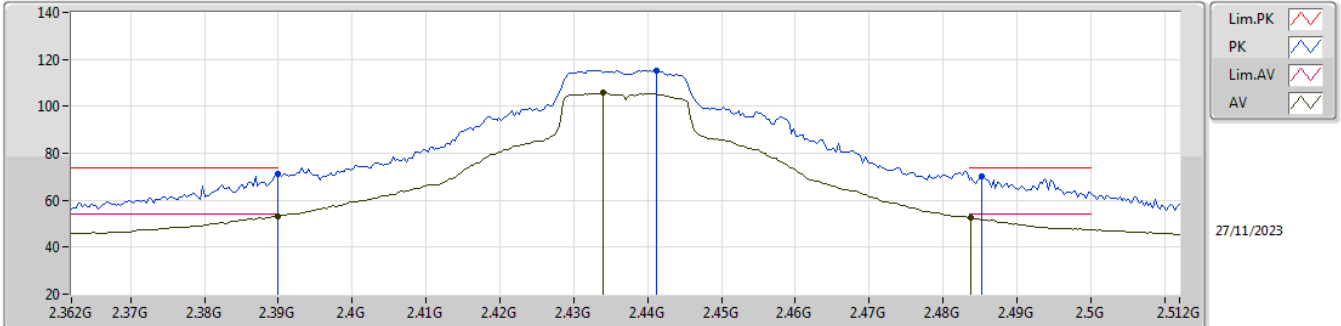


EUT_Z_1TX
Setting 25.5
02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3899G	65.19	74.00	-8.81	33.74	3	Vertical	301	1.81	-	28.40	3.05	-
AV	2.3899G	48.77	54.00	-5.23	17.32	3	Vertical	301	1.81	-	28.40	3.05	-
PK	2.4412G	108.97	Inf	-Inf	77.49	3	Vertical	301	1.81	-	28.40	3.08	-
AV	2.4337G	99.12	Inf	-Inf	67.59	3	Vertical	301	1.81	-	28.46	3.07	-
PK	2.485G	64.03	74.00	-9.97	32.44	3	Vertical	301	1.81	-	28.50	3.09	-
AV	2.4844G	47.75	54.00	-6.25	16.16	3	Vertical	301	1.81	-	28.50	3.09	-

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

2437MHz_TX

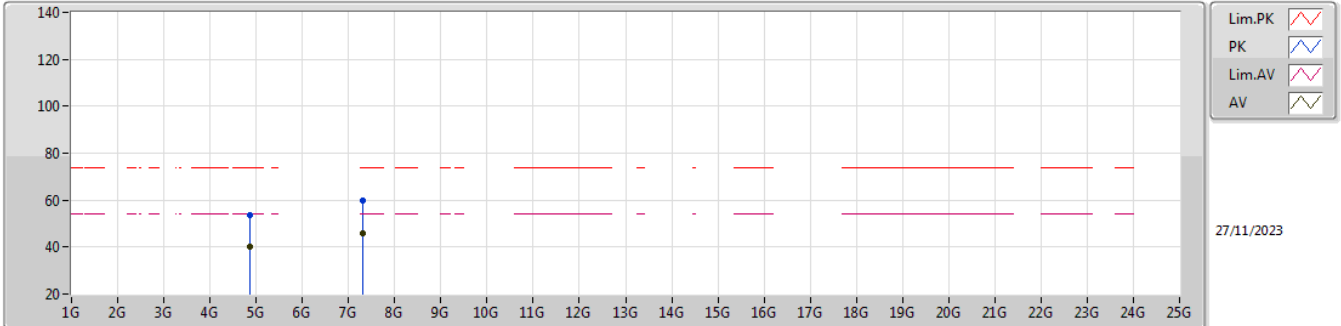


EUT_Z_1TX
Setting 25.5
02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3899G	71.34	74.00	-2.66	39.89	3	Horizontal	66	1.80	-	28.40	3.05	-
AV	2.3899G	53.10	54.00	-0.90	21.65	3	Horizontal	66	1.80	-	28.40	3.05	-
PK	2.4412G	115.27	Inf	-Inf	83.79	3	Horizontal	66	1.80	-	28.40	3.08	-
AV	2.434G	105.78	Inf	-Inf	74.25	3	Horizontal	66	1.80	-	28.46	3.07	-
PK	2.4853G	69.95	74.00	-4.05	38.36	3	Horizontal	66	1.80	-	28.50	3.09	-
AV	2.4838G	52.55	54.00	-1.45	20.96	3	Horizontal	66	1.80	-	28.50	3.09	-

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

2437MHz_TX

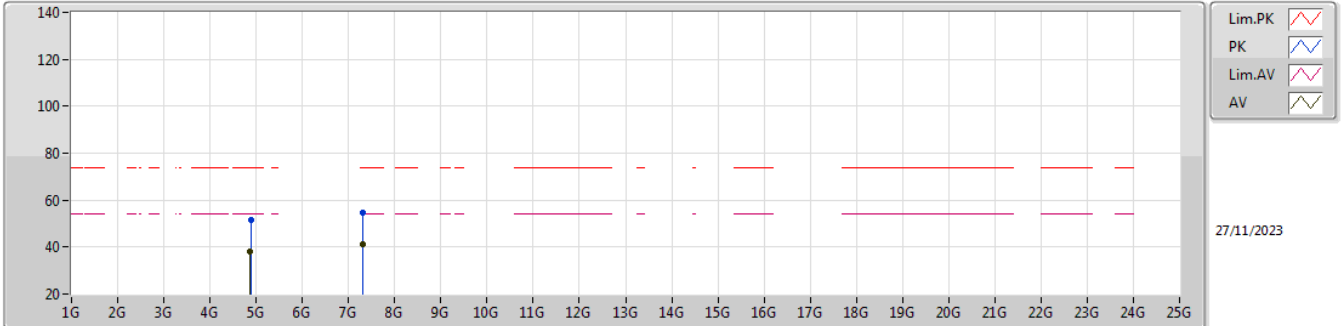


EUT_Z_1TX
Setting 25.5
02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.87058G	53.57	74.00	-20.43	45.97	3	Vertical	338	1.70	-	33.14	5.11	30.65
AV	4.87328G	40.31	54.00	-13.69	32.69	3	Vertical	338	1.70	-	33.15	5.11	30.64
PK	7.30902G	59.72	74.00	-14.28	48.70	3	Vertical	99	1.35	-	36.62	6.51	32.11
AV	7.3083G	46.11	54.00	-7.89	35.09	3	Vertical	99	1.35	-	36.62	6.51	32.11

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

2437MHz_TX

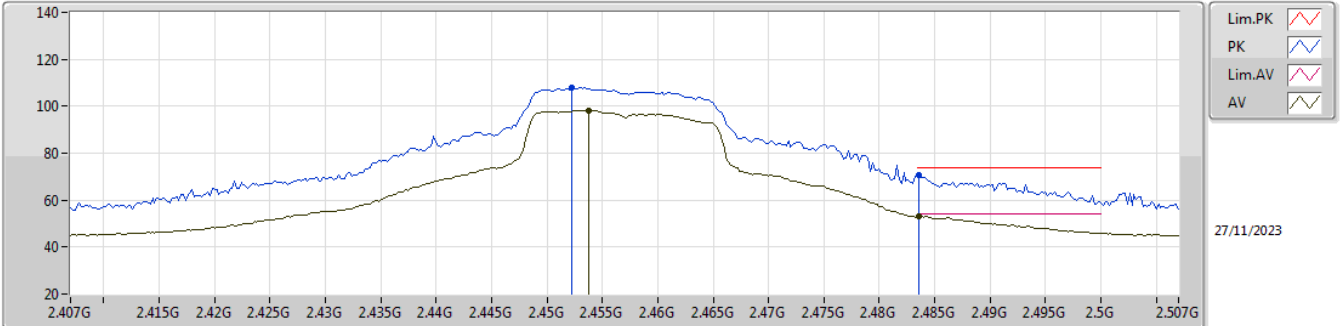


EUT_Z_1TX
Setting 25.5
02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.87832G	51.59	74.00	-22.41	43.96	3	Horizontal	306	2.32	-	33.16	5.11	30.64
AV	4.87568G	37.89	54.00	-16.11	30.27	3	Horizontal	306	2.32	-	33.15	5.11	30.64
PK	7.31088G	54.50	74.00	-19.50	43.48	3	Horizontal	74	2.05	-	36.62	6.51	32.11
AV	7.3083G	41.46	54.00	-12.54	30.44	3	Horizontal	74	2.05	-	36.62	6.51	32.11

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

2457MHz_TX

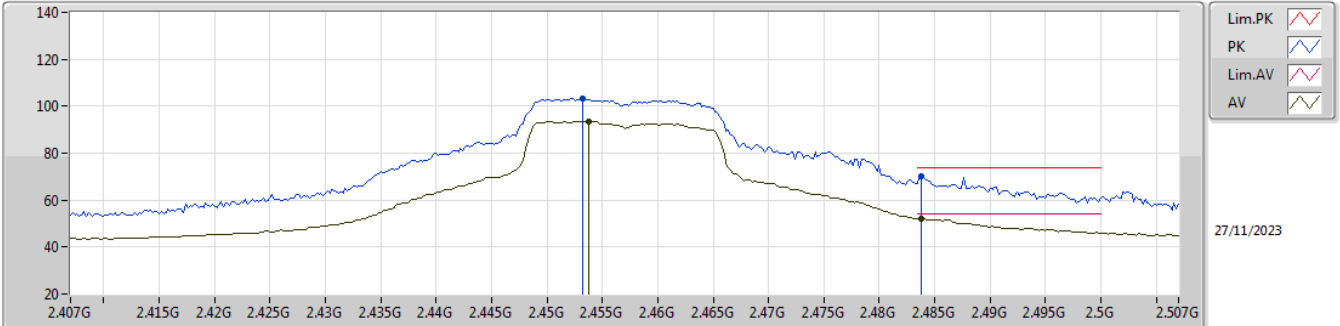


EUT_Z_1TX
Setting 23
02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.4522G	107.76	Inf	-Inf	76.26	3	Vertical	300	1.80	-	28.42	3.08	-
AV	2.4538G	98.19	Inf	-Inf	66.67	3	Vertical	300	1.80	-	28.44	3.08	-
PK	2.4836G	70.56	74.00	-3.44	38.97	3	Vertical	300	1.80	-	28.50	3.09	-
AV	2.4836G	53.01	54.00	-0.99	21.42	3	Vertical	300	1.80	-	28.50	3.09	-

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

2457MHz_TX

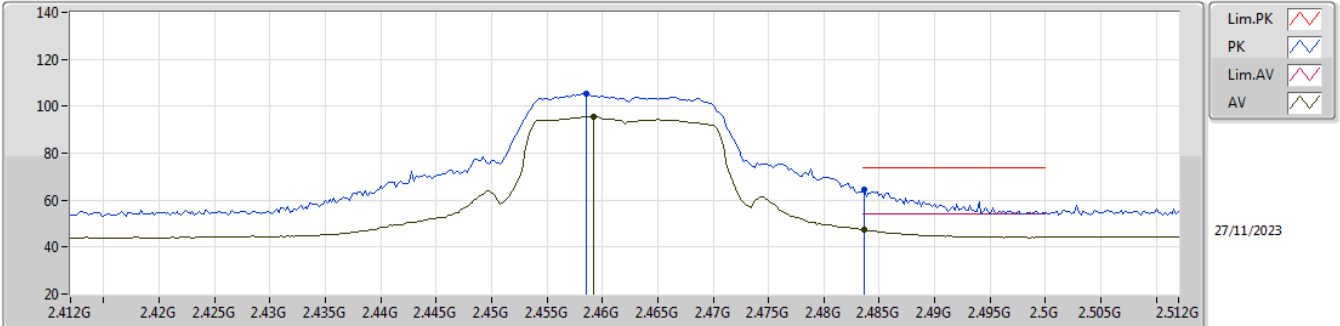


EUT_Z_1TX
Setting 23
02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.4532G	103.43	Inf	-Inf	71.92	3	Horizontal	315	1.80	-	28.43	3.08	-
AV	2.4538G	93.44	Inf	-Inf	61.92	3	Horizontal	315	1.80	-	28.44	3.08	-
PK	2.4838G	69.94	74.00	-4.06	38.35	3	Horizontal	315	1.80	-	28.50	3.09	-
AV	2.4838G	52.29	54.00	-1.71	20.70	3	Horizontal	315	1.80	-	28.50	3.09	-

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

2462MHz_TX

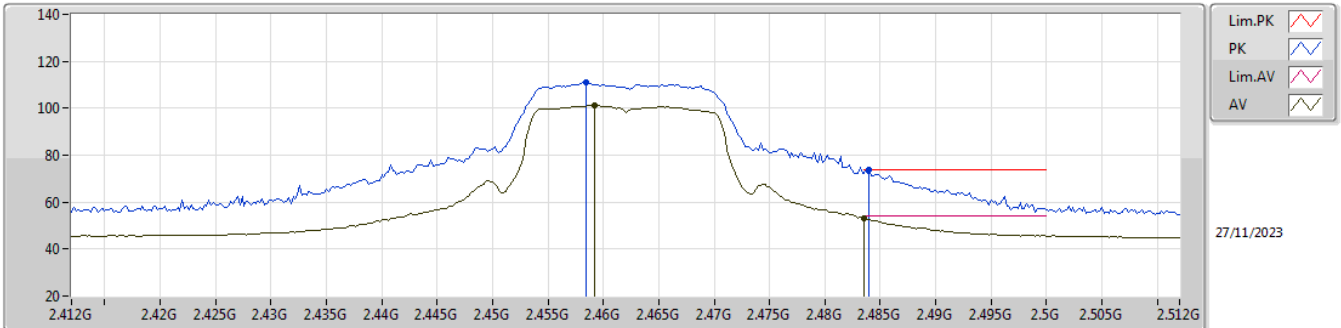


EUT_Z_1TX
Setting 19.5
02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.4586G	105.29	Inf	-Inf	73.72	3	Vertical	303	2.14	-	28.49	3.08	-
AV	2.4592G	95.70	Inf	-Inf	64.13	3	Vertical	303	2.14	-	28.49	3.08	-
PK	2.4836G	64.25	74.00	-9.75	32.66	3	Vertical	303	2.14	-	28.50	3.09	-
AV	2.4836G	47.29	54.00	-6.71	15.70	3	Vertical	303	2.14	-	28.50	3.09	-

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

2462MHz_TX

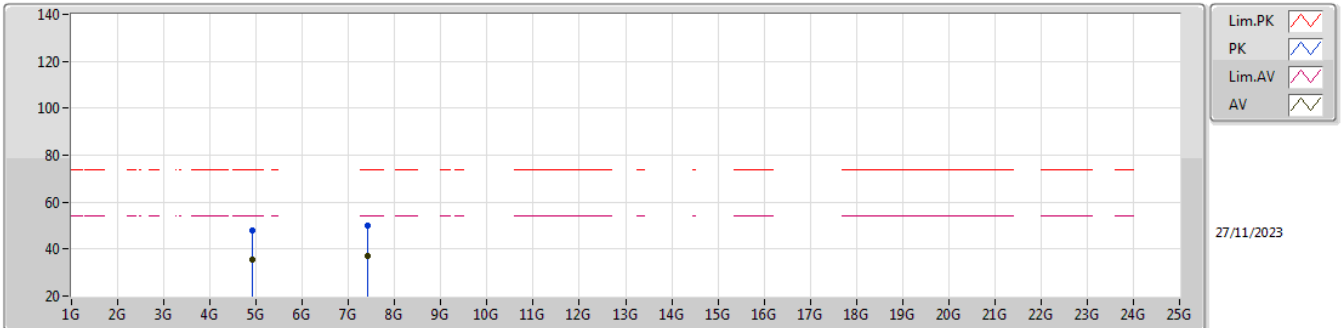


EUT_Z_1TX
Setting 19.5
02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.4584G	111.04	Inf	-Inf	79.48	3	Horizontal	69	1.78	-	28.48	3.08	-
AV	2.4592G	101.32	Inf	-Inf	69.75	3	Horizontal	69	1.78	-	28.49	3.08	-
PK	2.484G	73.84	74.00	-0.16	42.25	3	Horizontal	69	1.78	-	28.50	3.09	-
AV	2.4835G	53.34	54.00	-0.66	21.75	3	Horizontal	69	1.78	-	28.50	3.09	-

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

2462MHz_TX

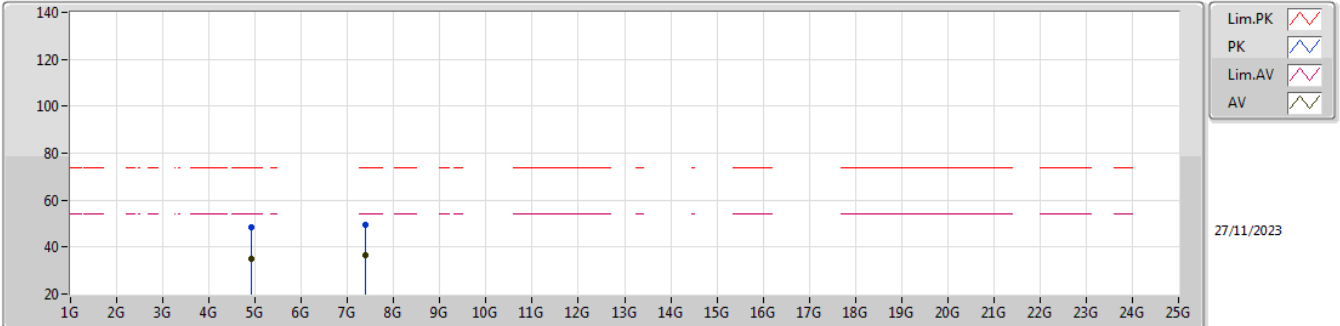


EUT_Z_1TX
Setting 19.5
02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.9288G	48.11	74.00	-25.89	40.33	3	Vertical	307	1.80	-	33.26	5.13	30.61
AV	4.9229G	35.45	54.00	-18.55	27.68	3	Vertical	307	1.80	-	33.25	5.13	30.61
PK	7.4104G	49.89	74.00	-24.11	38.79	3	Vertical	251	1.25	-	36.70	6.57	32.17
AV	7.4062G	36.82	54.00	-17.18	25.73	3	Vertical	251	1.25	-	36.70	6.56	32.17

2.4-2.4835GHz_802.11g_Nss1,(6Mbps)_1TX

2462MHz_TX

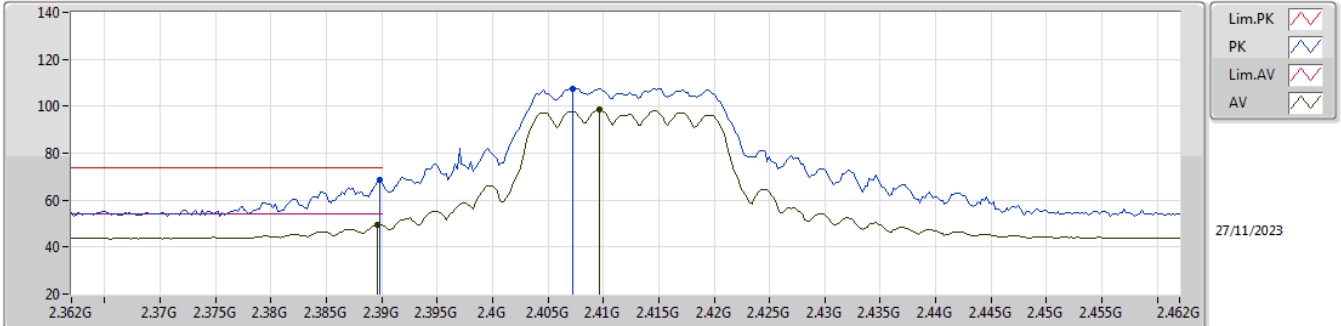


EUT_Z_1TX
Setting 19.5
02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.92304G	48.20	74.00	-25.80	40.43	3	Horizontal	308	1.80	-	33.25	5.13	30.61
AV	4.92316G	35.23	54.00	-18.77	27.46	3	Horizontal	308	1.80	-	33.25	5.13	30.61
PK	7.38288G	49.61	74.00	-24.39	38.51	3	Horizontal	360	1.80	-	36.70	6.55	32.15
AV	7.40034G	36.56	54.00	-17.44	25.46	3	Horizontal	360	1.80	-	36.70	6.56	32.16

2.4-2.4835GHz_802.11n_HT20_Nss1,(MCS0)_2TX

2412MHz_TX

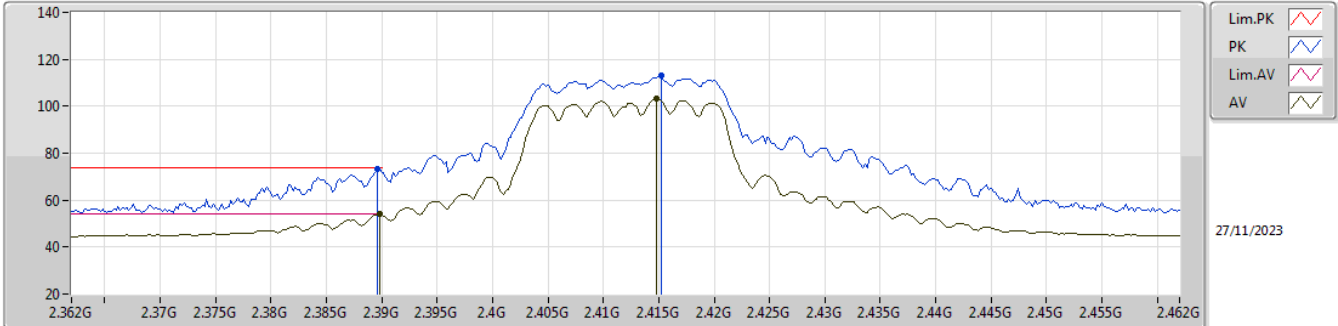


EUT_Z_2TX
Setting 19.5
02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3898G	68.61	74.00	-5.39	37.16	3	Vertical	351	1.80	-	28.40	3.05	-
AV	2.3896G	49.66	54.00	-4.34	18.21	3	Vertical	351	1.80	-	28.40	3.05	-
PK	2.4072G	107.48	Inf	-Inf	76.02	3	Vertical	351	1.80	-	28.40	3.06	-
AV	2.4096G	98.44	Inf	-Inf	66.98	3	Vertical	351	1.80	-	28.40	3.06	-

2.4-2.4835GHz_802.11n_HT20_Nss1,(MCS0)_2TX

2412MHz_TX

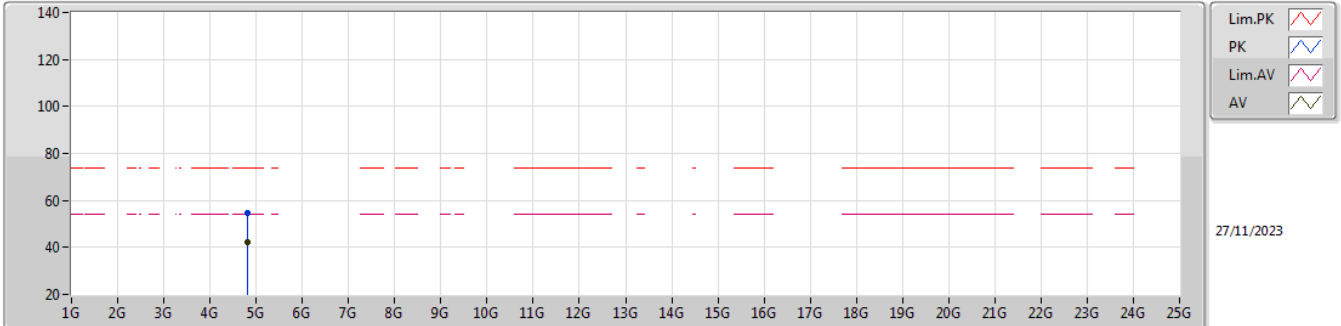


EUT_Z_2TX
Setting 19.5
02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3896G	73.46	74.00	-0.54	42.01	3	Horizontal	31	2.43	-	28.40	3.05	-
AV	2.3898G	53.95	54.00	-0.05	22.50	3	Horizontal	31	2.43	-	28.40	3.05	-
PK	2.4152G	113.02	Inf	-Inf	81.55	3	Horizontal	31	2.43	-	28.40	3.07	-
AV	2.4148G	103.09	Inf	-Inf	71.62	3	Horizontal	31	2.43	-	28.40	3.07	-

2.4-2.4835GHz_802.11n_HT20_Nss1,(MCS0)_2TX

2412MHz_TX

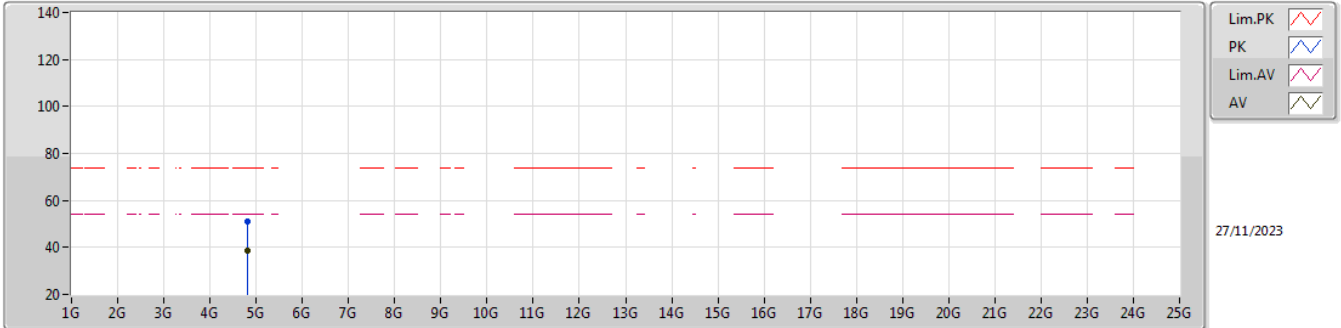


EUT_Z_2TX
 Setting 19.5
 02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.8196G	54.62	74.00	-19.38	47.28	3	Vertical	78	2.58	-	32.92	5.10	30.68
AV	4.8227G	42.28	54.00	-11.72	34.92	3	Vertical	78	2.58	-	32.94	5.10	30.68

2.4-2.4835GHz_802.11n_HT20_Nss1,(MCS0)_2TX

2412MHz_TX

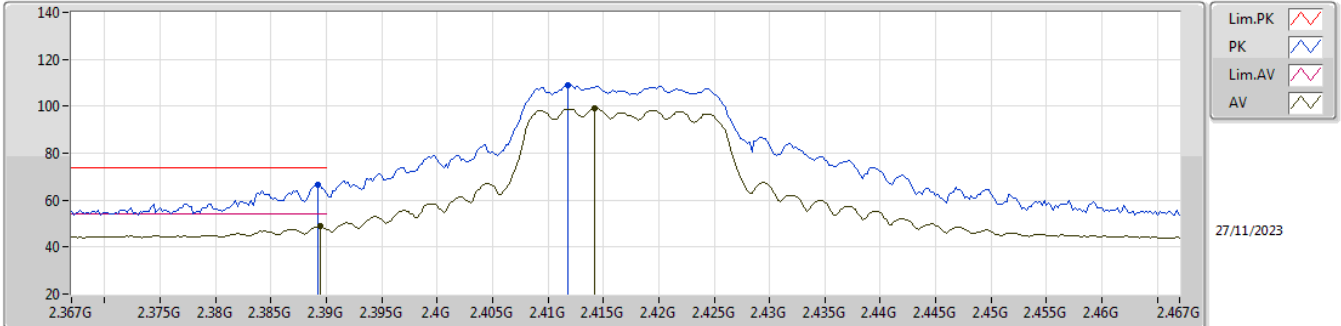


EUT_Z_2TX
Setting 19.5
02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.8231G	51.25	74.00	-22.75	43.89	3	Horizontal	291	1.80	-	32.94	5.10	30.68
AV	4.8229G	38.62	54.00	-15.38	31.26	3	Horizontal	291	1.80	-	32.94	5.10	30.68

2.4-2.4835GHz_802.11n_HT20_Nss1,(MCS0)_2TX

2417MHz_TX

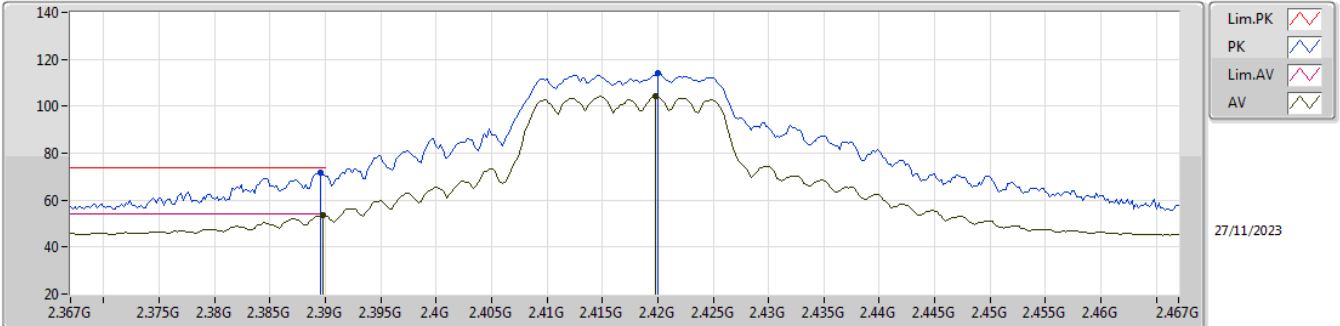


EUT_Z_2TX
 Setting 20.5
 02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3892G	66.48	74.00	-7.52	35.03	3	Vertical	350	2.18	-	28.40	3.05	-
AV	2.3894G	48.76	54.00	-5.24	17.31	3	Vertical	350	2.18	-	28.40	3.05	-
PK	2.4118G	109.04	Inf	-Inf	77.58	3	Vertical	350	2.18	-	28.40	3.06	-
AV	2.4142G	99.08	Inf	-Inf	67.61	3	Vertical	350	2.18	-	28.40	3.07	-

2.4-2.4835GHz_802.11n_HT20_Nss1,(MCS0)_2TX

2417MHz_TX

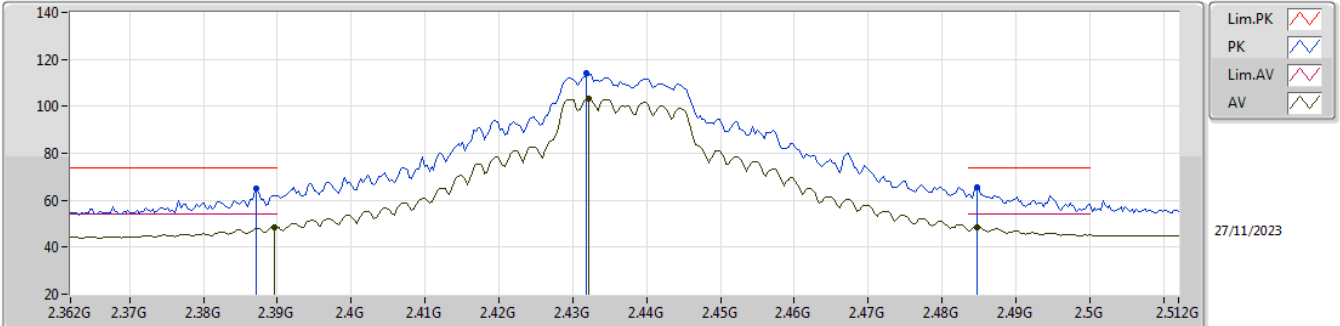


EUT_Z_2TX
Setting 20.5
02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3896G	71.98	74.00	-2.02	40.53	3	Horizontal	31	2.45	-	28.40	3.05	-
AV	2.3898G	53.68	54.00	-0.32	22.23	3	Horizontal	31	2.45	-	28.40	3.05	-
PK	2.42G	114.00	Inf	-Inf	82.53	3	Horizontal	31	2.45	-	28.40	3.07	-
AV	2.4198G	104.28	Inf	-Inf	72.81	3	Horizontal	31	2.45	-	28.40	3.07	-

2.4-2.4835GHz_802.11n_HT20_Nss1,(MCS0)_2TX

2437MHz_TX

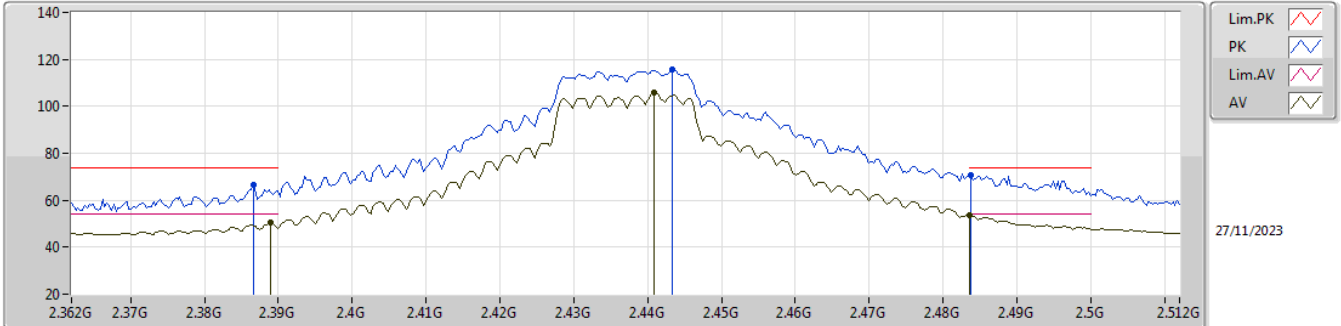


EUT_Z_2TX
Setting 25.5
02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3872G	64.80	74.00	-9.20	33.35	3	Vertical	19	2.82	-	28.40	3.05	-
AV	2.3896G	48.69	54.00	-5.31	17.24	3	Vertical	19	2.82	-	28.40	3.05	-
PK	2.4319G	113.97	Inf	-Inf	82.42	3	Vertical	19	2.82	-	28.48	3.07	-
AV	2.4322G	103.29	Inf	-Inf	71.74	3	Vertical	19	2.82	-	28.48	3.07	-
PK	2.4847G	65.47	74.00	-8.53	33.88	3	Vertical	19	2.82	-	28.50	3.09	-
AV	2.4847G	48.65	54.00	-5.35	17.06	3	Vertical	19	2.82	-	28.50	3.09	-

2.4-2.4835GHz_802.11n_HT20_Nss1,(MCS0)_2TX

2437MHz_TX

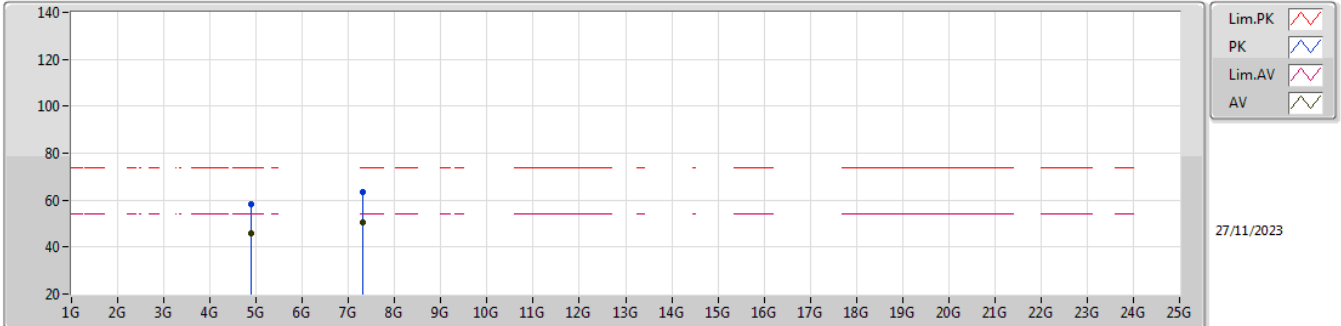


EUT_Z_2TX
 Setting 25.5
 02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3866G	66.34	74.00	-7.66	34.89	3	Horizontal	259	2.74	-	28.40	3.05	-
AV	2.389G	50.40	54.00	-3.60	18.95	3	Horizontal	259	2.74	-	28.40	3.05	-
PK	2.4433G	115.51	Inf	-Inf	84.03	3	Horizontal	259	2.74	-	28.40	3.08	-
AV	2.4409G	105.71	Inf	-Inf	74.23	3	Horizontal	259	2.74	-	28.40	3.08	-
PK	2.4838G	70.78	74.00	-3.22	39.19	3	Horizontal	259	2.74	-	28.50	3.09	-
AV	2.4835G	53.85	54.00	-0.15	22.26	3	Horizontal	259	2.74	-	28.50	3.09	-

2.4-2.4835GHz_802.11n_HT20_Nss1,(MCS0)_2TX

2437MHz_TX

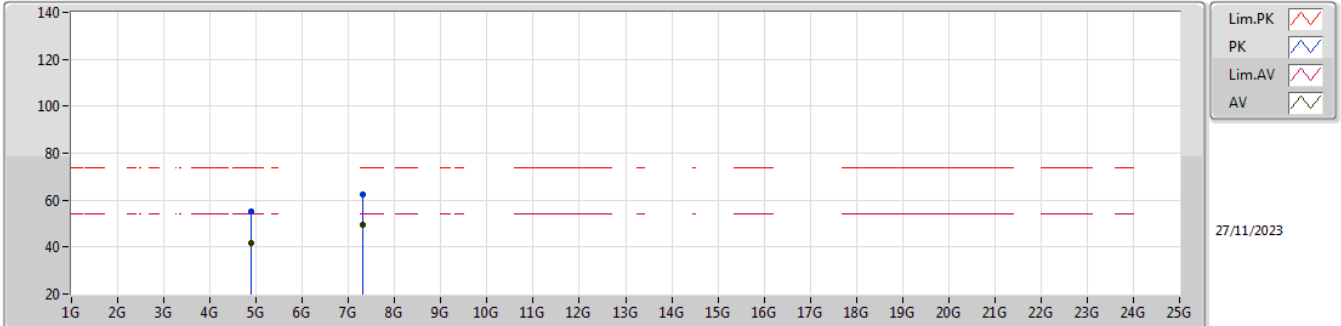


EUT_Z_2TX
Setting 25.5
02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.8775G	58.35	74.00	-15.65	50.72	3	Vertical	76	2.58	-	33.16	5.11	30.64
AV	4.8779G	45.71	54.00	-8.29	38.08	3	Vertical	76	2.58	-	33.16	5.11	30.64
PK	7.3105G	63.38	74.00	-10.62	52.36	3	Vertical	308	1.78	-	36.62	6.51	32.11
AV	7.3085G	50.29	54.00	-3.71	39.27	3	Vertical	308	1.78	-	36.62	6.51	32.11

2.4-2.4835GHz_802.11n_HT20_Nss1,(MCS0)_2TX

2437MHz_TX

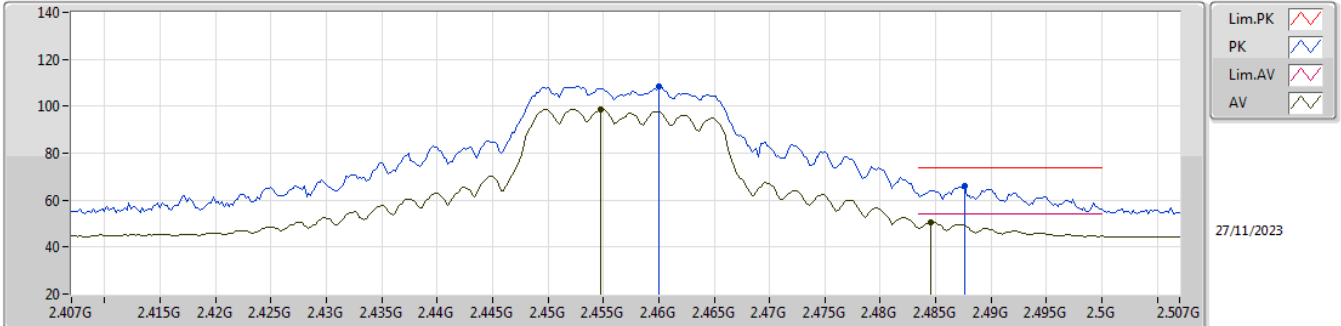


EUT_Z_2TX
Setting 25.5
02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.8776G	55.24	74.00	-18.76	47.61	3	Horizontal	277	2.33	-	33.16	5.11	30.64
AV	4.8778G	41.66	54.00	-12.34	34.03	3	Horizontal	277	2.33	-	33.16	5.11	30.64
PK	7.3088G	62.22	74.00	-11.78	51.20	3	Horizontal	23	2.08	-	36.62	6.51	32.11
AV	7.3087G	49.29	54.00	-4.71	38.27	3	Horizontal	23	2.08	-	36.62	6.51	32.11

2.4-2.4835GHz_802.11n_HT20_Nss1,(MCS0)_2TX

2457MHz_TX

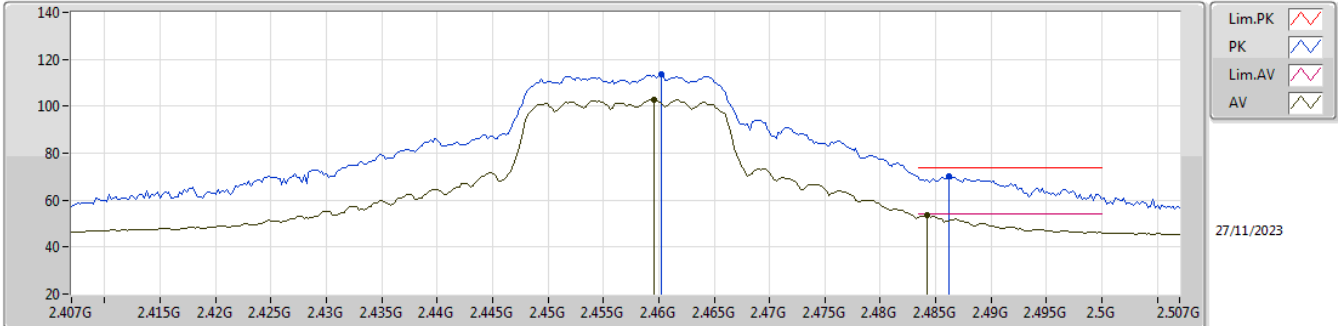


EUT_Z_2TX
Setting 21
02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.46G	108.63	Inf	-Inf	77.05	3	Vertical	301	1.80	-	28.50	3.08	-
AV	2.4548G	98.76	Inf	-Inf	67.23	3	Vertical	301	1.80	-	28.45	3.08	-
PK	2.4876G	65.85	74.00	-8.15	34.25	3	Vertical	301	1.80	-	28.50	3.10	-
AV	2.4846G	50.65	54.00	-3.35	19.06	3	Vertical	301	1.80	-	28.50	3.09	-

2.4-2.4835GHz_802.11n_HT20_Nss1,(MCS0)_2TX

2457MHz_TX

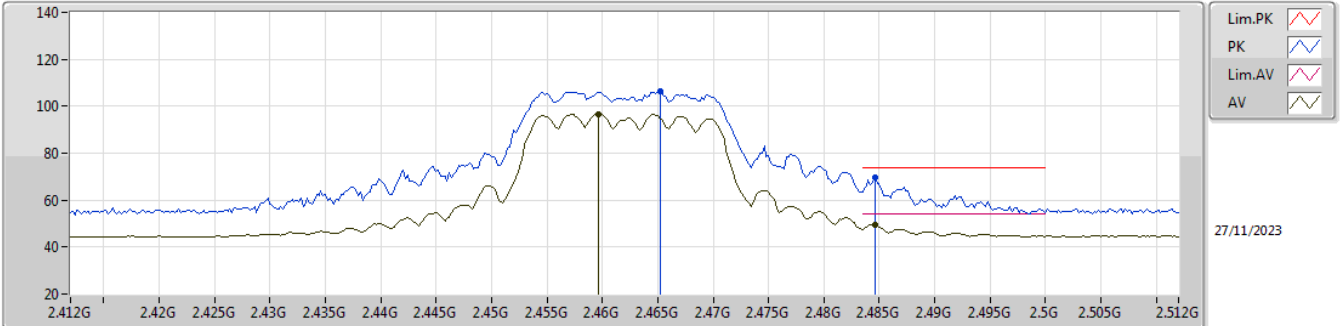


EUT_Z_2TX
Setting 21
02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.4602G	113.48	Inf	-Inf	81.90	3	Horizontal	71	1.80	-	28.50	3.08	-
AV	2.4596G	102.68	Inf	-Inf	71.10	3	Horizontal	71	1.80	-	28.50	3.08	-
PK	2.4862G	70.21	74.00	-3.79	38.62	3	Horizontal	71	1.80	-	28.50	3.09	-
AV	2.4842G	53.61	54.00	-0.39	22.02	3	Horizontal	71	1.80	-	28.50	3.09	-

2.4-2.4835GHz_802.11n_HT20_Nss1,(MCS0)_2TX

2462MHz_TX

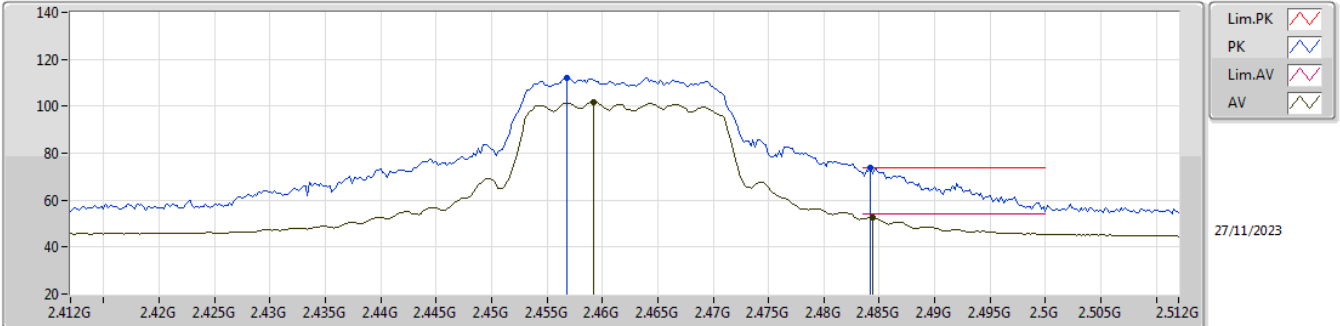


EUT_Z_2TX
Setting 19
02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.4652G	106.43	Inf	-Inf	74.84	3	Vertical	302	2.04	-	28.50	3.09	-
AV	2.4596G	96.75	Inf	-Inf	65.17	3	Vertical	302	2.04	-	28.50	3.08	-
PK	2.4846G	69.72	74.00	-4.28	38.13	3	Vertical	302	2.04	-	28.50	3.09	-
AV	2.4846G	49.66	54.00	-4.34	18.07	3	Vertical	302	2.04	-	28.50	3.09	-

2.4-2.4835GHz_802.11n_HT20_Nss1,(MCS0)_2TX

2462MHz_TX

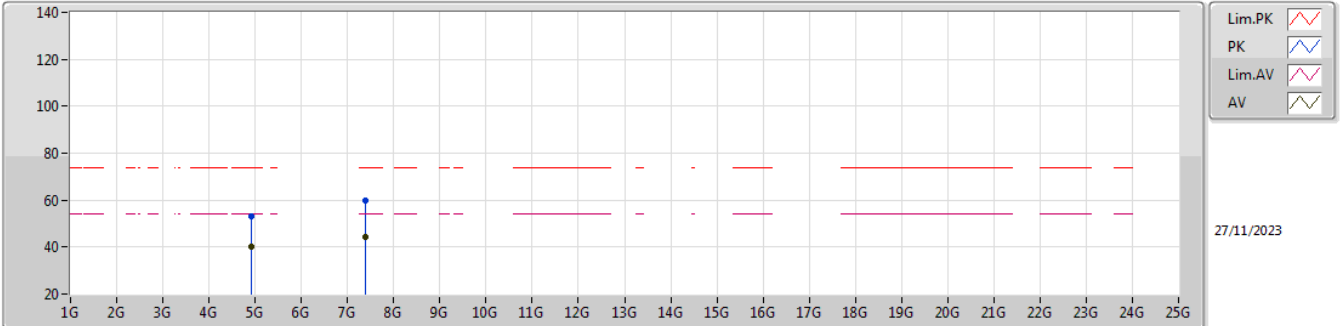


EUT_Z_2TX
Setting 19
02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.4568G	112.03	Inf	-Inf	80.48	3	Horizontal	70	1.79	-	28.47	3.08	-
AV	2.4592G	101.84	Inf	-Inf	70.27	3	Horizontal	70	1.79	-	28.49	3.08	-
PK	2.4842G	73.92	74.00	-0.08	42.33	3	Horizontal	70	1.79	-	28.50	3.09	-
AV	2.4844G	52.49	54.00	-1.51	20.90	3	Horizontal	70	1.79	-	28.50	3.09	-

2.4-2.4835GHz_802.11n_HT20_Nss1,(MCS0)_2TX

2462MHz_TX

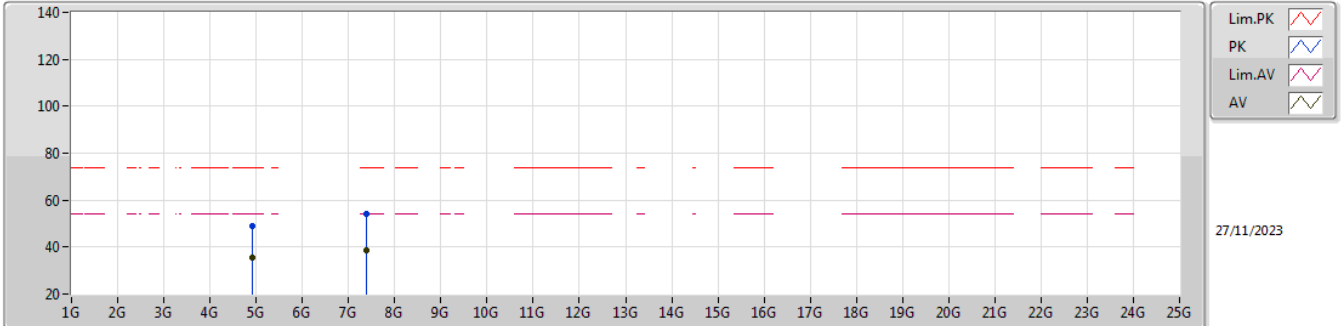


EUT_Z_2TX
Setting 19
02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.9258G	52.90	74.00	-21.10	45.13	3	Vertical	78	2.53	-	33.25	5.13	30.61
AV	4.9204G	40.05	54.00	-13.95	32.29	3	Vertical	78	2.53	-	33.24	5.13	30.61
PK	7.381G	59.67	74.00	-14.33	48.57	3	Vertical	167	1.00	-	36.70	6.55	32.15
AV	7.3863G	44.20	54.00	-9.80	33.11	3	Vertical	167	1.00	-	36.70	6.55	32.16

2.4-2.4835GHz_802.11n_HT20_Nss1,(MCS0)_2TX

2462MHz_TX

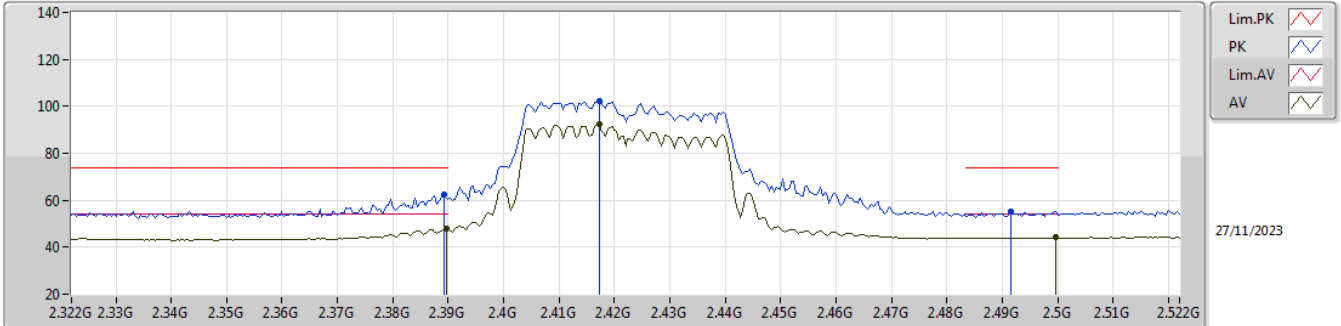


EUT_Z_2TX
Setting 19
02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.92G	48.80	74.00	-25.20	41.04	3	Horizontal	289	1.54	-	33.24	5.13	30.61
AV	4.9229G	35.74	54.00	-18.26	27.97	3	Horizontal	289	1.54	-	33.25	5.13	30.61
PK	7.38609G	53.93	74.00	-20.07	42.84	3	Horizontal	0	3.00	-	36.70	6.55	32.16
AV	7.38666G	38.40	54.00	-15.60	27.31	3	Horizontal	0	3.00	-	36.70	6.55	32.16

2.4-2.4835GHz_802.11n_HT40_Nss1,(MCS0)_2TX

2422MHz_TX

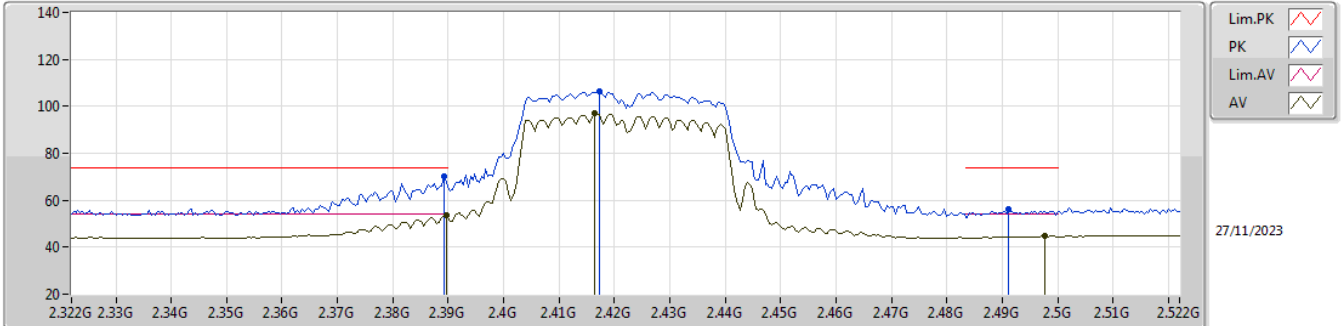


EUT_Z_2TX
Setting 16.5
02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3892G	62.23	74.00	-11.77	30.78	3	Vertical	350	1.80	-	28.40	3.05	-
AV	2.3896G	47.75	54.00	-6.25	16.30	3	Vertical	350	1.80	-	28.40	3.05	-
PK	2.4172G	102.49	Inf	-Inf	71.02	3	Vertical	350	1.80	-	28.40	3.07	-
AV	2.4172G	92.32	Inf	-Inf	60.85	3	Vertical	350	1.80	-	28.40	3.07	-
PK	2.4916G	55.33	74.00	-18.67	23.71	3	Vertical	350	1.80	-	28.52	3.10	-
AV	2.4996G	44.06	54.00	-9.94	12.36	3	Vertical	350	1.80	-	28.60	3.10	-

2.4-2.4835GHz_802.11n_HT40_Nss1,(MCS0)_2TX

2422MHz_TX

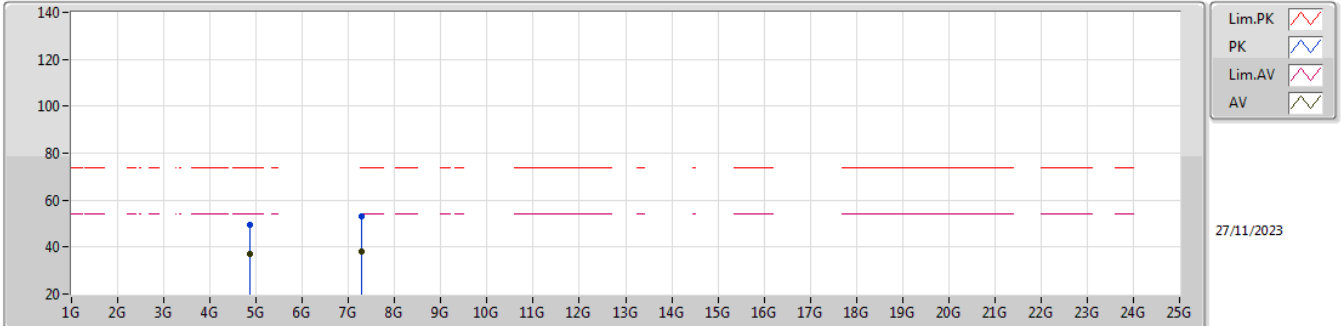


EUT_Z_2TX
Setting 16.5
02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3892G	69.95	74.00	-4.05	38.50	3	Horizontal	29	2.83	-	28.40	3.05	-
AV	2.3896G	53.54	54.00	-0.46	22.09	3	Horizontal	29	2.83	-	28.40	3.05	-
PK	2.4172G	106.22	Inf	-Inf	74.75	3	Horizontal	29	2.83	-	28.40	3.07	-
AV	2.4164G	97.07	Inf	-Inf	65.60	3	Horizontal	29	2.83	-	28.40	3.07	-
PK	2.4912G	56.27	74.00	-17.73	24.66	3	Horizontal	29	2.83	-	28.51	3.10	-
AV	2.4976G	44.79	54.00	-9.21	13.11	3	Horizontal	29	2.83	-	28.58	3.10	-

2.4-2.4835GHz_802.11n_HT40_Nss1,(MCS0)_2TX

2422MHz_TX

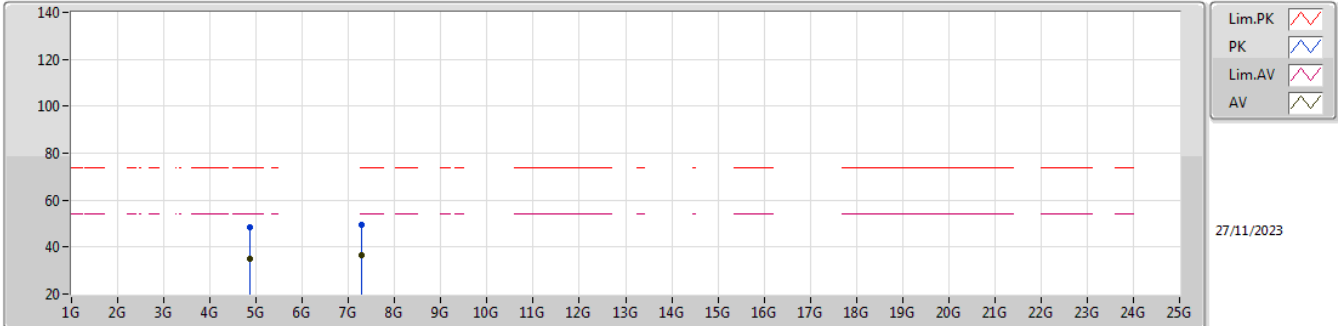


EUT_Z_2TX
Setting 16.5
02-E-E-5

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	4.85528G	49.54	74.00	-24.46	41.98	3	Vertical	134	1.35	-	33.11	5.11	30.66
AV	4.8554G	37.12	54.00	-16.88	29.56	3	Vertical	134	1.35	-	33.11	5.11	30.66
PK	7.281G	52.86	74.00	-21.14	41.95	3	Vertical	171	1.00	-	36.52	6.49	32.10
AV	7.2738G	37.88	54.00	-16.12	26.98	3	Vertical	171	1.00	-	36.50	6.49	32.09

2.4-2.4835GHz_802.11n_HT40_Nss1,(MCS0)_2TX

2422MHz_TX

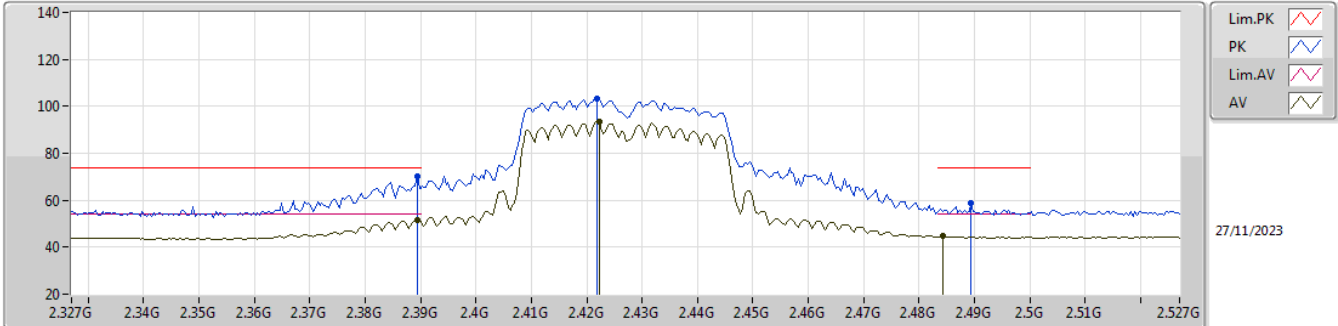


EUT_Z_2TX
Setting 16.5
02-E-E-5

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	4.85516G	48.27	74.00	-25.73	40.71	3	Horizontal	290	1.85	-	33.11	5.11	30.66
AV	4.85288G	35.06	54.00	-18.94	27.50	3	Horizontal	290	1.85	-	33.11	5.11	30.66
PK	7.28352G	49.47	74.00	-24.53	38.54	3	Horizontal	94	1.80	-	36.53	6.50	32.10
AV	7.28064G	36.49	54.00	-17.51	25.58	3	Horizontal	94	1.80	-	36.52	6.49	32.10

2.4-2.4835GHz_802.11n_HT40_Nss1,(MCS0)_2TX

2427MHz_TX

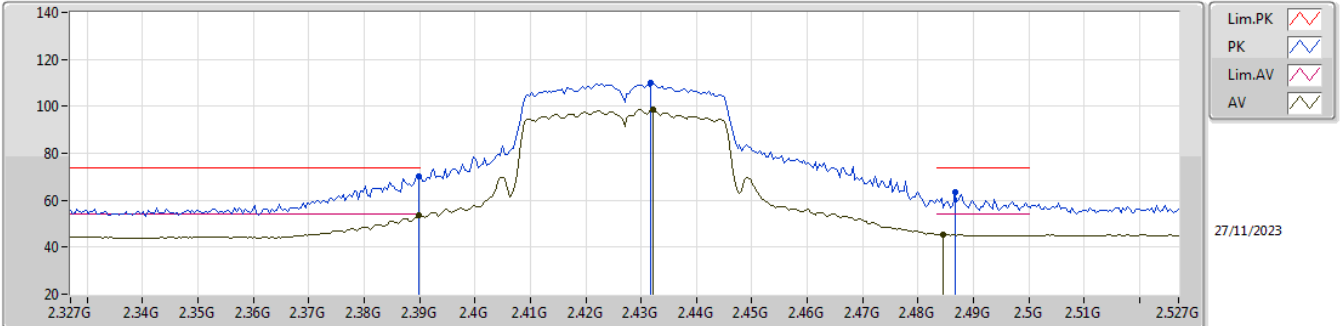


EUT_Z_2TX
 Setting 18.5
 02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3894G	70.06	74.00	-3.94	38.61	3	Vertical	286	1.89	-	28.40	3.05	-
AV	2.3894G	51.65	54.00	-2.35	20.20	3	Vertical	286	1.89	-	28.40	3.05	-
PK	2.4218G	103.43	Inf	-Inf	71.94	3	Vertical	286	1.89	-	28.42	3.07	-
AV	2.4222G	93.41	Inf	-Inf	61.92	3	Vertical	286	1.89	-	28.42	3.07	-
PK	2.4894G	58.73	74.00	-15.27	27.13	3	Vertical	286	1.89	-	28.50	3.10	-
AV	2.4842G	44.63	54.00	-9.37	13.04	3	Vertical	286	1.89	-	28.50	3.09	-

2.4-2.4835GHz_802.11n_HT40_Nss1,(MCS0)_2TX

2427MHz_TX

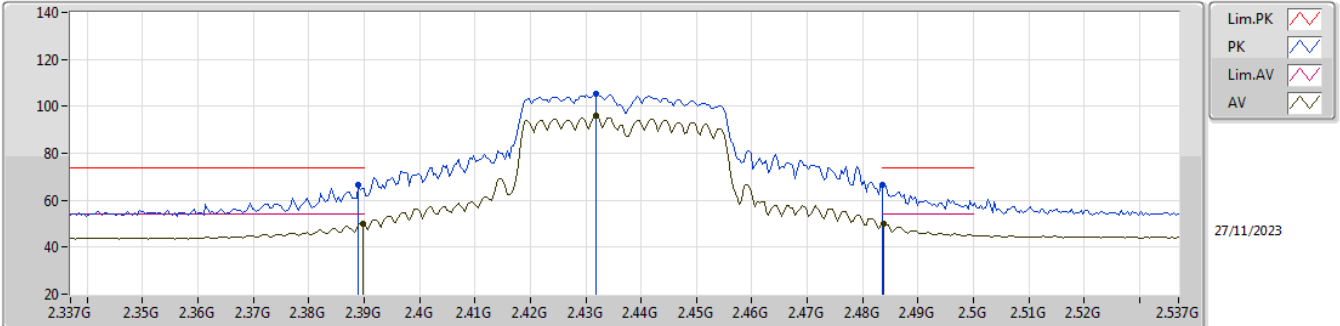


EUT_Z_2TX
Setting 18.5
02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3898G	70.17	74.00	-3.83	38.72	3	Horizontal	283	2.76	-	28.40	3.05	-
AV	2.3898G	53.38	54.00	-0.62	21.93	3	Horizontal	283	2.76	-	28.40	3.05	-
PK	2.4318G	110.02	Inf	-Inf	78.47	3	Horizontal	283	2.76	-	28.48	3.07	-
AV	2.4322G	98.64	Inf	-Inf	67.09	3	Horizontal	283	2.76	-	28.48	3.07	-
PK	2.4866G	63.19	74.00	-10.81	31.60	3	Horizontal	283	2.76	-	28.50	3.09	-
AV	2.4846G	45.58	54.00	-8.42	13.99	3	Horizontal	283	2.76	-	28.50	3.09	-

2.4-2.4835GHz_802.11n HT40_Nss1,(MCS0)_2TX

2437MHz_TX

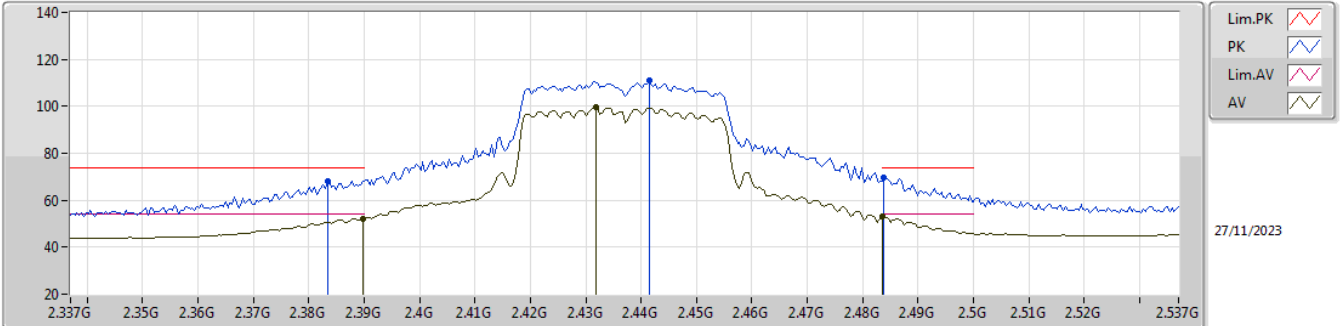


EUT_Z_2TX
 Setting 19.5
 02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.389G	66.48	74.00	-7.52	35.03	3	Vertical	294	2.96	-	28.40	3.05	-
AV	2.3898G	49.97	54.00	-4.03	18.52	3	Vertical	294	2.96	-	28.40	3.05	-
PK	2.4318G	105.60	Inf	-Inf	74.05	3	Vertical	294	2.96	-	28.48	3.07	-
AV	2.4318G	95.97	Inf	-Inf	64.42	3	Vertical	294	2.96	-	28.48	3.07	-
PK	2.4835G	66.76	74.00	-7.24	35.17	3	Vertical	294	2.96	-	28.50	3.09	-
AV	2.4838G	50.19	54.00	-3.81	18.60	3	Vertical	294	2.96	-	28.50	3.09	-

2.4-2.4835GHz_802.11n_HT40_Nss1,(MCS0)_2TX

2437MHz_TX

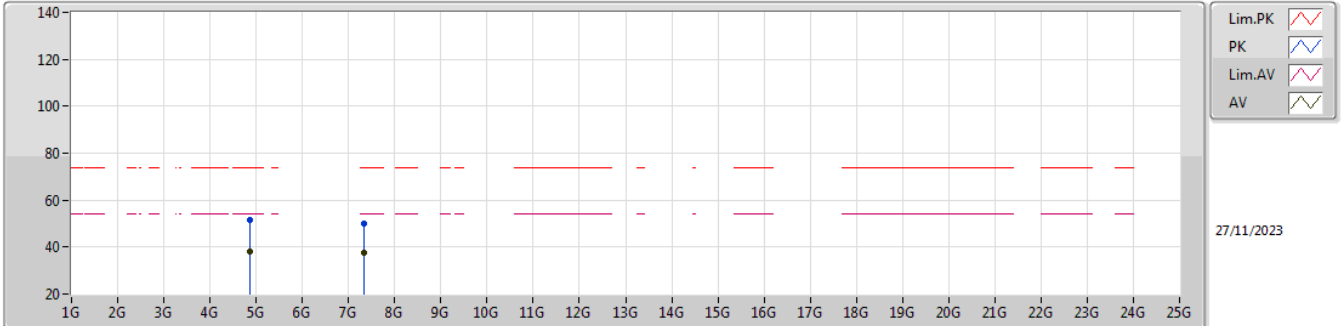


EUT_Z_2TX
 Setting 19.5
 02-E-V-1

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3834G	68.23	74.00	-5.77	36.78	3	Horizontal	69	2.48	-	28.40	3.05	-
AV	2.3898G	52.21	54.00	-1.79	20.76	3	Horizontal	69	2.48	-	28.40	3.05	-
PK	2.4414G	110.80	Inf	-Inf	79.32	3	Horizontal	69	2.48	-	28.40	3.08	-
AV	2.4318G	99.43	Inf	-Inf	67.88	3	Horizontal	69	2.48	-	28.48	3.07	-
PK	2.4838G	69.74	74.00	-4.26	38.15	3	Horizontal	69	2.48	-	28.50	3.09	-
AV	2.4835G	53.02	54.00	-0.98	21.43	3	Horizontal	69	2.48	-	28.50	3.09	-

2.4-2.4835GHz_802.11n_HT40_Nss1,(MCS0)_2TX

2437MHz_TX

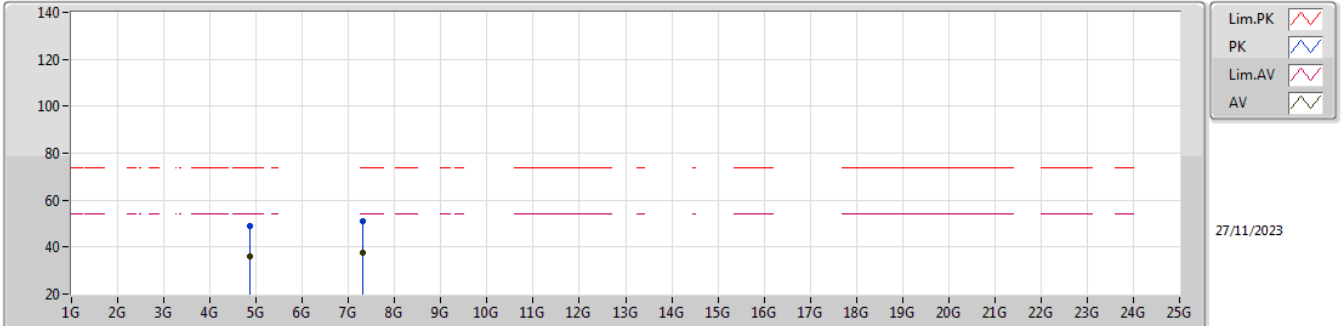


EUT_Z_2TX
Setting 19.5
02-E-E-5

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	4.87292G	51.40	74.00	-22.60	43.78	3	Vertical	74	1.89	-	33.15	5.11	30.64
AV	4.87028G	37.99	54.00	-16.01	30.39	3	Vertical	74	1.89	-	33.14	5.11	30.65
PK	7.33176G	50.14	74.00	-23.86	39.09	3	Vertical	27	2.07	-	36.66	6.52	32.13
AV	7.3286G	37.35	54.00	-16.65	26.29	3	Vertical	27	2.07	-	36.66	6.52	32.12

2.4-2.4835GHz_802.11n_HT40_Nss1,(MCS0)_2TX

2437MHz_TX

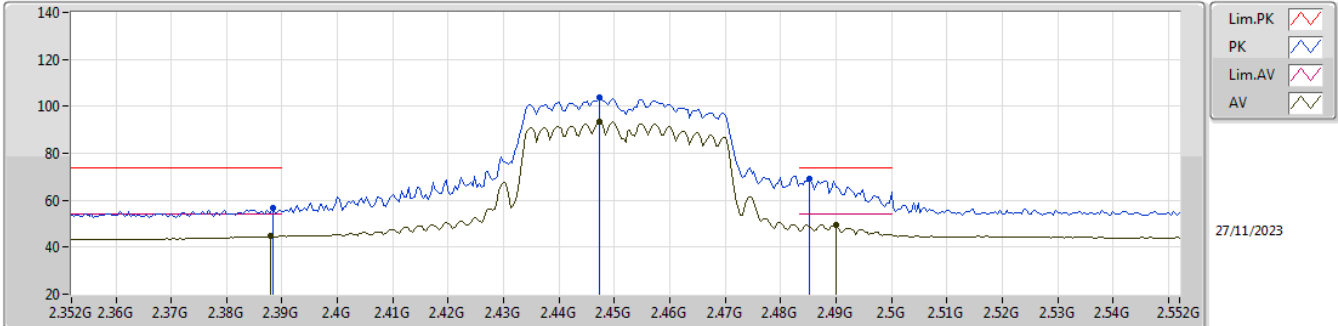


EUT_Z_2TX
 Setting 19.5
 02-E-E-5

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	4.87052G	49.14	74.00	-24.86	41.54	3	Horizontal	275	1.70	-	33.14	5.11	30.65
AV	4.87316G	36.19	54.00	-17.81	28.57	3	Horizontal	275	1.70	-	33.15	5.11	30.64
PK	7.31712G	51.23	74.00	-22.77	40.21	3	Horizontal	22	2.08	-	36.63	6.51	32.12
AV	7.30644G	37.73	54.00	-16.27	26.72	3	Horizontal	22	2.08	-	36.61	6.51	32.11

2.4-2.4835GHz_802.11n_HT40_Nss1,(MCS0)_2TX

2452MHz_TX

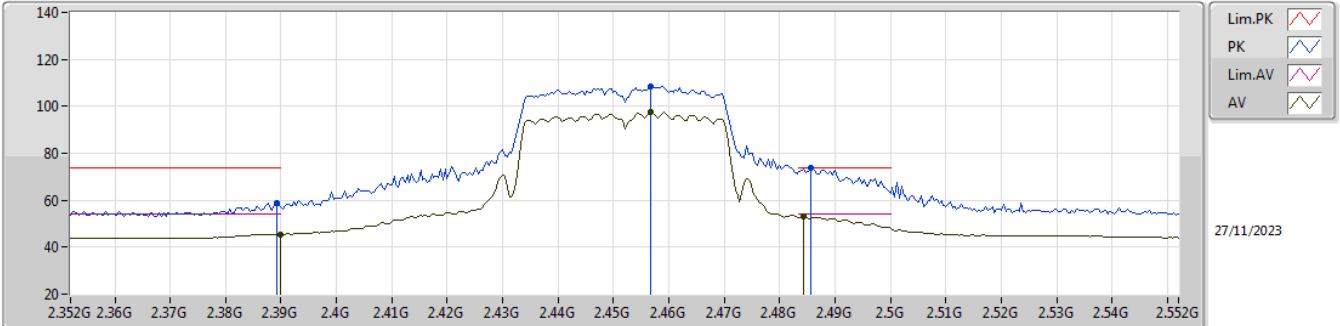


EUT_Z_2TX
Setting 17.5
02-E-E-5

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3884G	56.51	74.00	-17.49	25.06	3	Vertical	301	1.80	-	28.40	3.05	-
AV	2.388G	44.71	54.00	-9.29	13.26	3	Vertical	301	1.80	-	28.40	3.05	-
PK	2.4472G	103.68	Inf	-Inf	72.20	3	Vertical	301	1.80	-	28.40	3.08	-
AV	2.4472G	93.41	Inf	-Inf	61.93	3	Vertical	301	1.80	-	28.40	3.08	-
PK	2.4852G	68.95	74.00	-5.05	37.36	3	Vertical	301	1.80	-	28.50	3.09	-
AV	2.49G	49.34	54.00	-4.66	17.74	3	Vertical	301	1.80	-	28.50	3.10	-

2.4-2.4835GHz_802.11n_HT40_Nss1,(MCS0)_2TX

2452MHz_TX

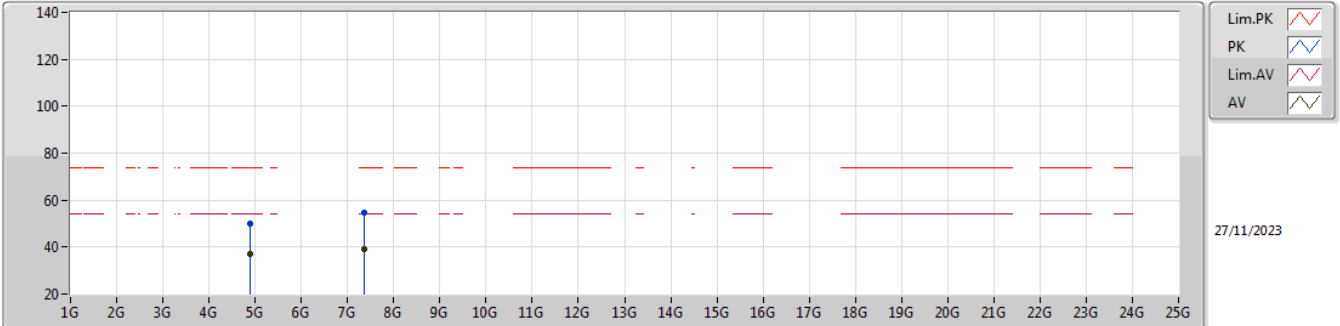


EUT_Z_2TX
Setting 17.5
02-E-E-5

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	58.79	74.00	-15.21	27.34	3	Horizontal	70	1.79	-	28.40	3.05	-
AV	2.39G	45.59	54.00	-8.41	14.13	3	Horizontal	70	1.79	-	28.40	3.06	-
PK	2.4568G	108.44	Inf	-Inf	76.89	3	Horizontal	70	1.79	-	28.47	3.08	-
AV	2.4568G	97.60	Inf	-Inf	66.05	3	Horizontal	70	1.79	-	28.47	3.08	-
PK	2.4856G	73.59	74.00	-0.41	42.00	3	Horizontal	70	1.79	-	28.50	3.09	-
AV	2.4844G	53.26	54.00	-0.74	21.67	3	Horizontal	70	1.79	-	28.50	3.09	-

2.4-2.4835GHz_802.11n_HT40_Nss1,(MCS0)_2TX

2452MHz_TX

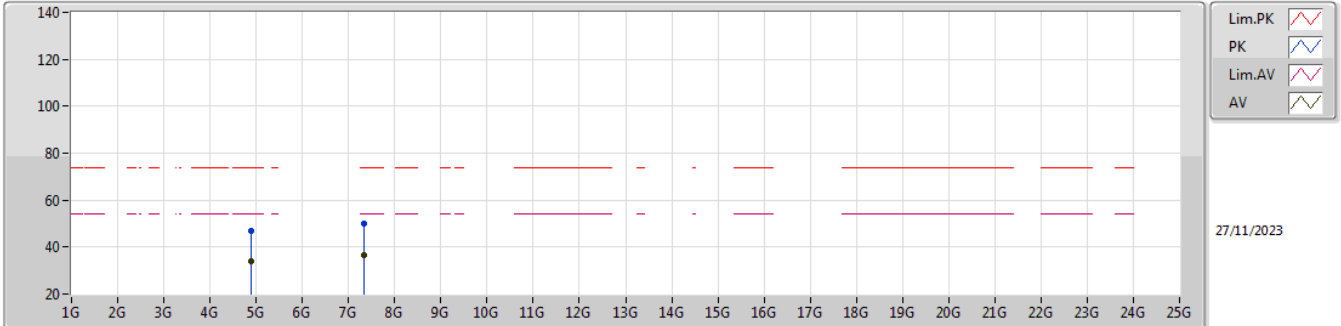


EUT_Z_2TX
Setting 17.5
02-E-E-5

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	4.90292G	50.08	74.00	-23.92	42.37	3	Vertical	78	2.56	-	33.21	5.12	30.62
AV	4.90304G	37.14	54.00	-16.86	29.43	3	Vertical	78	2.56	-	33.21	5.12	30.62
PK	7.36548G	54.71	74.00	-19.29	43.61	3	Vertical	169	1.00	-	36.70	6.54	32.14
AV	7.3566G	39.24	54.00	-14.76	28.14	3	Vertical	169	1.00	-	36.70	6.54	32.14

2.4-2.4835GHz_802.11n_HT40_Nss1,(MCS0)_2TX

2452MHz_TX



EUT_Z_2TX
Setting 17.5
02-E-E-5

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	4.9028G	46.67	74.00	-27.33	38.96	3	Horizontal	290	1.80	-	33.21	5.12	30.62
AV	4.89752G	34.18	54.00	-19.82	26.49	3	Horizontal	290	1.80	-	33.20	5.12	30.63
PK	7.34028G	49.96	74.00	-24.04	38.88	3	Horizontal	192	2.76	-	36.68	6.53	32.13
AV	7.33656G	36.55	54.00	-17.45	25.48	3	Horizontal	192	2.76	-	36.67	6.53	32.13