Testing Laboratory 3787

RADIO TEST REPORT

FCC ID	:	TLZ-XM9098
Equipment	:	IEEE 802.112X2 WiFi 6 SU and MU-MIMO DBC Wireless LAN + Bluetooth 5.1 Combo Module
Brand Name	:	AzureWave
Model Name	:	AW-XM458, AW-XM369, AW-XM458MA-XXX, AW-XM369MA-XXX
Applicant	:	AzureWave Technologies, Inc. 8F., No.94, Baozhong Rd. , Xindian Dist., New Taipei City , Taiwan 231
Manufacturer	:	AzureWave Technologies (Shanghai) Inc. No. 1355, Jiaxin Road, Malu Twon, Jiading District Shanghai, P.R. China
Standard	:	47 CFR FCC Part 15.247

The product was received on Mar. 17, 2022, and testing was started from Apr. 09, 2022 and completed on May 11, 2022. 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 variant 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
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Photographs of EUT v01

History of this test report

Report No.	Version	Description	Issued Date
FR132339-01AA	01	Initial issue of report	Jun. 15, 2022

Summary of Test Result

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

Declaration of Conformity:

1. The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers. It's means measurement values may risk exceeding the limit of regulation standards, if measurement uncertainty is include in test results.
2. The measurement uncertainty please refer to report "Measurement Uncertainty".

Comments and Explanations:

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

Reviewed by: Sam Chen
Report Producer: Viola 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), ax (HEW20)	2412-2462	1-11 [11]
2400-2483.5	n (HT40), ax (HEW40)	2422-2452	3-9 [7]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	802.11b	20	2TX
2.4-2.4835GHz	802.11g	20	2TX
2.4-2.4835GHz	802.11n HT20	20	2TX
2.4-2.4835GHz	802.11ax HEW20	20	2TX
2.4-2.4835GHz	802.11n HT40	40	2TX
2.4-2.4835GHz	802.11ax HEW40	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.
- HEW20, HEW40 use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

Ant.	Port			Brand	Model Name	Antenna Type	Connector	Gain (dBi)
	2.4GHz	5GHz	Bluetooth					
1	1	1	-	MAG. LAYERS	MSA-4008-25GC1-A2	PIFA	I-PEX	Note 1
2	2	2	-	MAG. LAYERS	MSA-4008-25GC1-A2	PIFA	I-PEX	
3	-	-	1	MAG. LAYERS	MSA-4008-25GC1-A2	PIFA	I-PEX	
4	1/2	1/2	1	Inpaq	WA-P-LB-02-587	PCB	I-PEX	
5	1/2	1/2	1	Inpaq	WA-P-LB-03-129	PCB	I-PEX	
6	-	-	-	Inpaq	WA-P-LB-03-130	PCB	I-PEX	
7	-	-	-	Inpaq	WA-F-LB-03-110	PCB	I-PEX	
8	-	-	-	Inpaq	WA-F-LB-02-187	PCB	I-PEX	
9	-	-	-	Inpaq	WA-F-LA-01-015	PCB	I-PEX	

Note1:

Ant.	Port			Antenna Gain (dBi)		
	2.4GHz	5GHz	Bluetooth	WLAN 2.4GHz	WLAN 5GHz	Bluetooth
1	1	1	-	2.98	5.16	-
2	2	2	-	2.98	5.16	-
3	-	-	1	-	-	2.98
4	1/2	1/2	1	4.43	7.52	4.43
5	1/2	1/2	1	6.51	3.2	6.51
6	-	-	-	4.91	5.84	4.91
7	-	-	-	-0.27	2.74	-0.27
8	-	-	-	0.07	2.39	0.07
9	-	-	-	5.66	-	5.66

Note2: The above information was declared by manufacturer.

Note3: There are 9 antennas listed on the antenna table. The EUT has two types of antenna. Only the highest gain antenna was selected to test and record in this report. For PCB antenna, Antenna 4 (for 5GHz) and 5 (for 2.4GHz) were selected to perform the test and recorded in this report.

Note4: Directional gain information.

For ant. 1~ant. 2

Type	Maximum Output Power	Power Spectral Density
Non-BF	Directional gain = Max.gain + array gain. For power measurements on IEEE 802.11 devices Array Gain = 0 dB (i.e., no array gain) for N ANT ≤ 4	$DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ant}} g_{j,k}\right\}^2}{N_{ANT}}\right]$
BF	$DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ant}} g_{j,k}\right\}^2}{N_{ANT}}\right]$	$DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ant}} g_{j,k}\right\}^2}{N_{ANT}}\right]$

Ex.

Directional Gain (NSS1) formula : $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ant}} g_{j,k}\right\}^2}{N_{ANT}}\right]$

NSS1(g1,1) = $10^{G1/20}$; NSS1(g1,2)= $10^{G2/20}$

gj,k =(Nss1(g1,1) + Nss1(g1,2))^2

DG = 10 log[(Nss1(g1,1) + Nss1(g1,2)))^2 / N_{ANT}] => 10 log[($10^{G1/20}$ + $10^{G2/20}$)^2 / N_{ANT}]

Where ;

2.4G G1 = 2.98 ; G2 = 2.98 ; DG=5.99

5G G1 = 5.16; G2 = 5.16 ; DG=8.17

For ant. 4~ant. 5

Type	Maximum Output Power	Power Spectral Density
Non-BF	Directional gain = Max.gain + array gain. For power measurements on IEEE 802.11 devices Array Gain = 0 dB (i.e., no array gain) for N ANT ≤ 4	$DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ant}} g_{j,k}\right\}^2}{N_{ANT}}\right]$
BF	$DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ant}} g_{j,k}\right\}^2}{N_{ANT}}\right]$	$DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ant}} g_{j,k}\right\}^2}{N_{ANT}}\right]$

Ex.

Directional Gain (NSS1) formula : $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ant}} g_{j,k}\right\}^2}{N_{ANT}}\right]$

NSS1(g1,1) = $10^{G1/20}$; NSS1(g1,2)= $10^{G2/20}$

gj,k =(Nss1(g1,1) + Nss1(g1,2))^2

DG = 10 log[(Nss1(g1,1) + Nss1(g1,2)))^2 / N_{ANT}] => 10 log[($10^{G1/20}$ + $10^{G2/20}$)^2 / N_{ANT}]

Where ;

For ant. 5

2.4G G1 = 6.51 ; G2 = 6.51 ; DG=9.52

For ant. 4

5G G1 = 7.52 ; G2 = 7.52 ; DG=10.53

<WLAN 2.4GHz Function>

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

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

Port 1 and Port 2 could transmit/receive simultaneously.

<WLAN 5GHz Function>

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

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

Port 1 and Port 2 could transmit/receive simultaneously.

<Bluetooth Function> (1TX/1RX)

Only Port 1 can be used as transmitting/receiving.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11b	0.958	0.19	8.625m	300
802.11g	0.849	0.71	1.435m	1k
802.11ax HEW20	0.931	0.31	3.905m	300
802.11ax HEW40	0.881	0.55	1.983m	1k

Note:
- DC is Duty Cycle.
- DCF is Duty Cycle Factor.

1.1.4 EUT Operational Condition

EUT Power Type	From host system			
Beamforming Function	☒	With beamforming	☐	Without beamforming
	The product has beamforming function for n/ac/ax in 5GHz.			
Function	☒	Point-to-multipoint	☐	Point-to-point
Test Software Version	DutApiMimoApApp (Version : 2.0.0.80)			

Note: The above information was declared by manufacturer.

1.1.5 Table for Multiple Listing

EUT	Model No.	GPIO	Antenna	Description
1	AW-XM458, AW-XM369	Without GPIO	PIFA, PCB	All the model names are identical, the difference model names served as marketing strategy.
2	AW-XM458MA-XXX, AW-XM369MA-XXX	With GPIO	PIFA	1. All the model names are identical, the difference model names served as marketing strategy. 2. The difference between this two EUTs are RF connector trace and RF connector type.
3			PCB	

Note 1: From the above models, model: AW-XM458MA-XXX (EUT 3) was selected as representative model for the test and its data was recorded in this report.

Note 2: The above information was declared by manufacturer.

1.1.6 Table for Permissive Change

This product is an extension of original one reported under Sporton project number: FR132339AA

Below is the table for the change of the product with respect to the original one.

Modifications	Performance Checking
1. Add EUT 3 with GPIO: -Change the RF connectcace -Change RF connector type 2. Add 6 PCB antennas.	All test items

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 (TAF: 3787)	ADD: No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.) 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	Lucas Haung	19.5-20.1 / 65-68	Apr. 10, 2022~Apr. 21, 2022
Radiated below 1GHz	03CH05-CB	Ken Yeh	24.2~26.1 / 55~58	Apr. 23, 2022~Apr. 27, 2022
Radiated above 1GHz (for others test)	03CH02-CB	Eason Chen	23.8-24.9 / 55-58	Apr. 09, 2022
Radiated above 1GHz (for co-location)	03CH04-CB	Eason Chen	23.8-24.9 / 55-58	Apr. 27, 2022
AC Conduction	CO01-CB	Bob Chang	22~24 / 57~59	May 11, 2022

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)	4.2 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	5.5 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	4.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.2 dB	Confidence levels of 95%
Conducted Emission	2.5 dB	Confidence levels of 95%
Output Power Measurement	1.3 dB	Confidence levels of 95%
Power Density Measurement	2.5 dB	Confidence levels of 95%
Bandwidth Measurement	0.9%	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
802.11b_Nss1,(1Mbps)_2TX	-
2412MHz	17.5
2417MHz	19
2437MHz	20
2457MHz	20
2462MHz	18.5
802.11g_Nss1,(6Mbps)_2TX	-
2412MHz	15.5
2417MHz	17.5
2437MHz	20
2457MHz	16.5
2462MHz	15.5
802.11ax HEW20_Nss1,(MCS0)_2TX	-
2412MHz	14
2417MHz	15.5
2437MHz	19
2457MHz	15.5
2462MHz	13.5
802.11ax HEW40_Nss1,(MCS0)_2TX	-
2422MHz	13.5
2437MHz	15
2452MHz	13.5

Note:
- Evaluated HEW20/HEW40 mode only, due to similar modulation. The power setting of HT20/HT40 mode are the same or lower than HEW20/HEW40.

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	Normal Link
1	Normal Link: EUT 3 + WLAN 2.4GHz (Ant. 5) + Bluetooth (Ant. 5)
2	Normal Link: EUT 3 + WLAN 5GHz (Ant. 4) + Bluetooth (Ant. 5)
For operating mode 1 is the worst case and it was record in this test report.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	DTS Bandwidth Maximum Conducted Output Power Power Spectral Density
1	EUT 3

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emissions in Restricted Frequency Bands
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	Normal Link
1	Normal Link: EUT 3 in Z axis + WLAN 2.4GHz (Ant. 5) + Bluetooth (Ant. 5)
2	Normal Link: EUT 3 in Y axis + WLAN 2.4GHz (Ant. 5) + Bluetooth (Ant. 5)
3	Normal Link: EUT 3 in X axis + WLAN 2.4GHz (Ant. 5) + Bluetooth (Ant. 5)
Mode 1 has been evaluated to be the worst case among Mode 1~3, thus measurement for Mode 4 will follow this same test mode.	
4	Normal Link: EUT 3 in Z axis + WLAN 5GHz (Ant. 4) + Bluetooth (Ant. 5)
For operating mode 1 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX
	The EUT was performed at X axis, Y axis and Z axis position, and the worst case was found at X axis. So the measurement will follow this same test configuration.
1	EUT 3 in X axis + Ant. 5

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Radiated Emission Co-location
Test Condition	Radiated measurement
Operating Mode	Normal Link
	The EUT was performed at X axis, Y axis and Z axis position for Unwanted Emissions above 1GHz, and the worst case was found at Z axis. So the measurement will follow this same test configuration.
1	EUT 3 in Z axis + WLAN 2.4GHz (Ant. 5) + WLAN 5GHz (Ant. 4)
Refer to Appendix G for Radiated Emission Co-location.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	WLAN 2.4GHz + WLAN 5GHz + Bluetooth
Refer to Sporton Test Report No.: FA132339-01 for Co-location RF Exposure Evaluation.	

2.3 EUT Operation during Test

For CTX Mode:

The EUT was programmed to be in continuously transmitting mode.

For Normal Link Mode:

During the test, the EUT operation to normal function.

2.4 Accessories

N/A

2.5 Support Equipment

For AC Conduction:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	NB	DELL	E6430	N/A
B	Fixture 3	Azurewave	2460 I2	N/A
C	AP Router	ASUS	RP-N53	MSQ-RPN53
D	Earphone	SHYARO CHI	MIC-04	N/A
E	Mouse	HP	FM100	N/A
F	AP NB	DELL	E6430	N/A
G	Smart phone	Samsung	Galacy J2	N/A

For Radiated (below 1GHz):

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	Notebook	DELL	E4300	N/A
B	Notebook	DELL	E4300	N/A
C	Phone	SAMSONG	J2	N/A
D	WLAN AP	NETGEAR	WNDR3300v2	PY309300116
E	Fixture 3	Azurewave	2460 I2	N/A

For Radiated (above 1GHz):

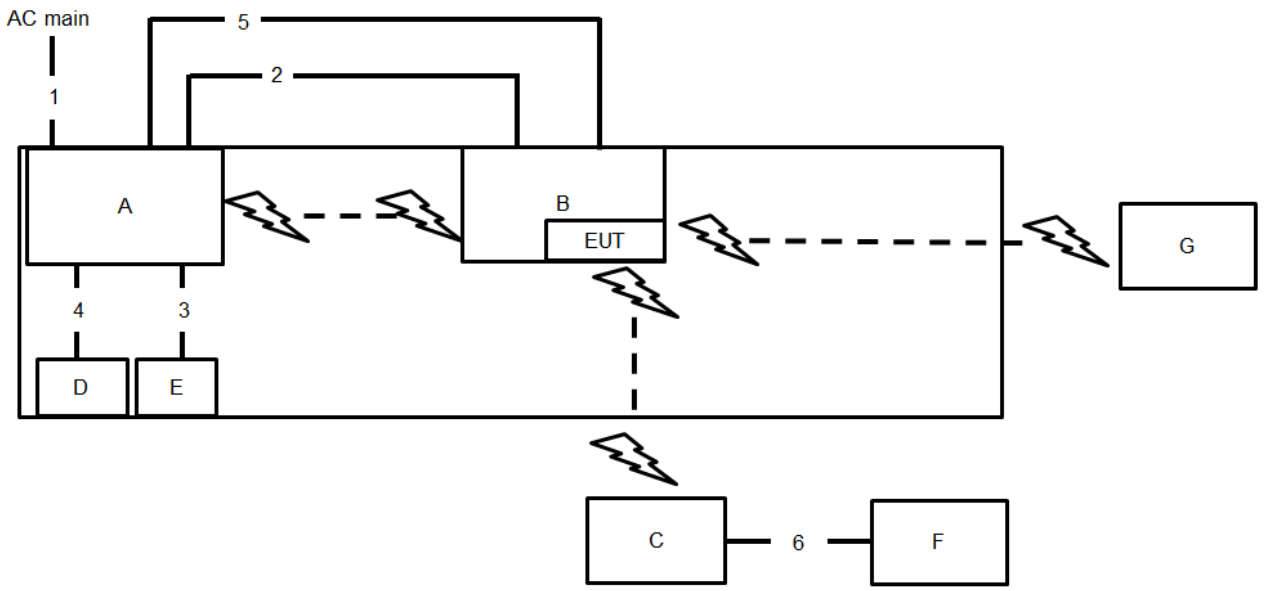
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	Notebook	DELL	E4300	N/A
B	Notebook	DELL	E4300	N/A
C	Fixture 2	Azurewave	AW-CB162NF I3	N/A

For RF Conducted:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	Notebook	DELL	E4300	N/A
B	Notebook	DELL	E4300	N/A
C	Fixture 2	Azurewave	AW-CB162NF I3	N/A
D	Fixture 3	Azurewave	2460 I2	N/A

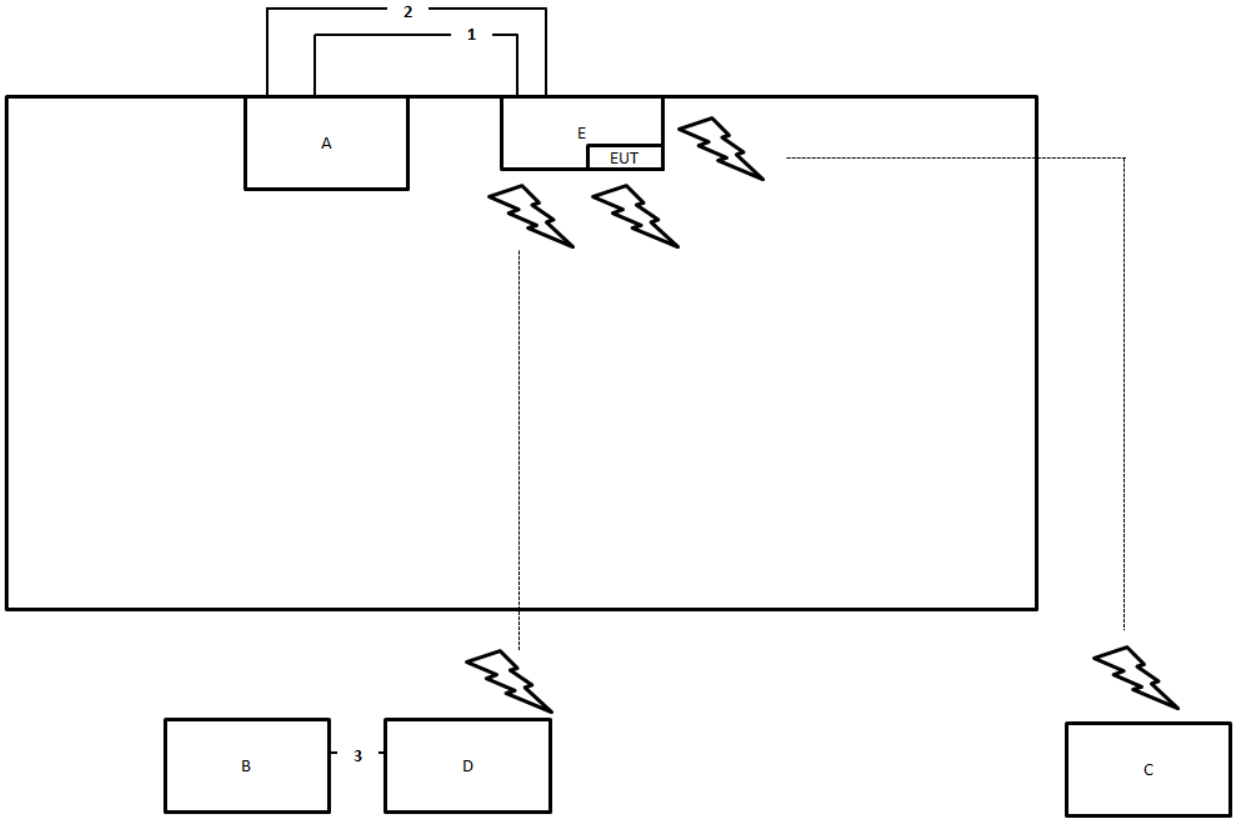
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



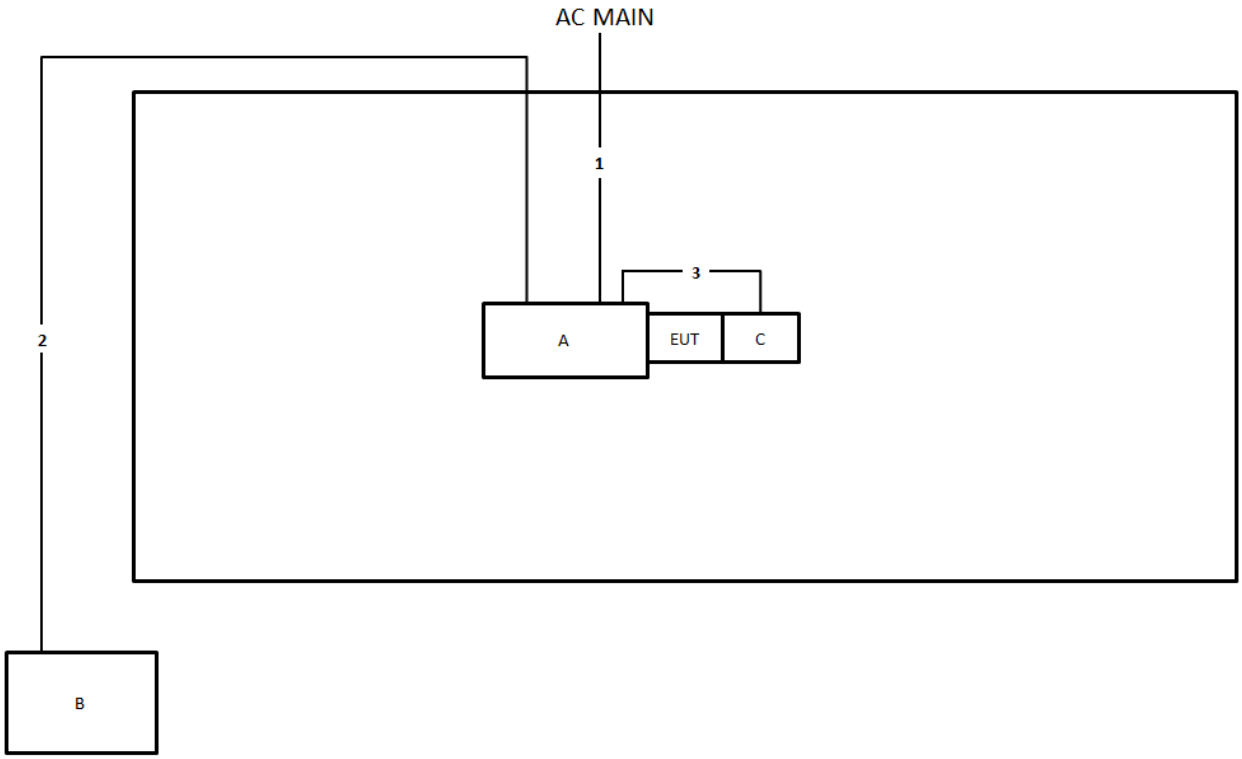
Item	Connection	Shielded	Length
1	Power cable	No	2.6m
2	USB cable	Yes	1m
3	USB cable	Yes	1.5m
4	Audio cable	No	1.5m
5	USB cable	Yes	0.5m
6	RJ-45 cable	No	1.5m

Test Setup Diagram - Radiated Test < 1GHz



Item	Connection	Shielded	Length
1	USB to Type C cable	No	1.5m
2	USB to Micro cable	No	1.5m
3	RJ-45 cable	No	10m

Test Setup Diagram - Radiated Test > 1GHz



Item	Connection	Shielded	Length
1	Power cable	No	1.8m
2	RJ-45 cable	No	10m
3	USB cable	Yes	1.5m

3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

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

3.1.2 Measuring Instruments

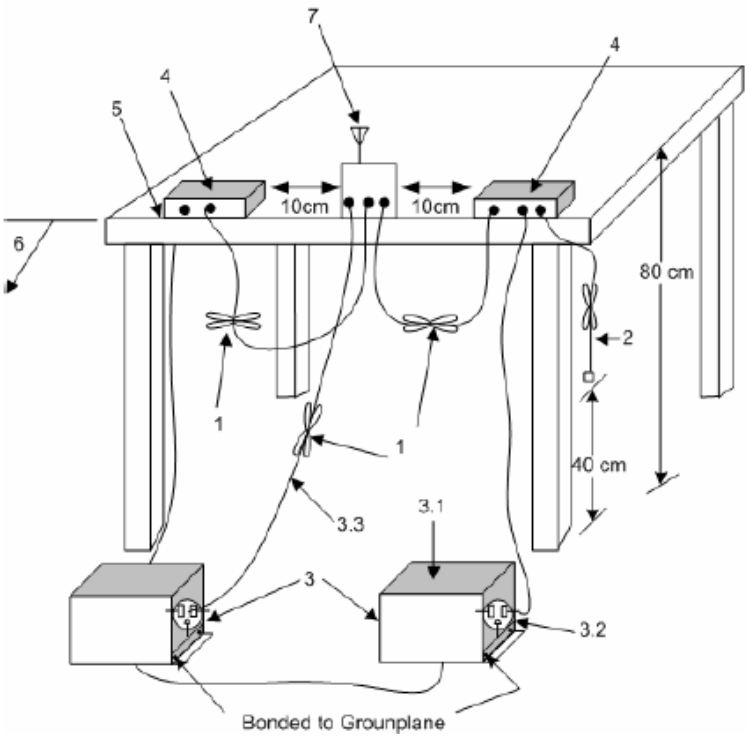
Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

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

3.1.4 Test Setup

AC Power-line Conducted Emissions



1—Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 cm to 40 cm long.
2—The I/O cables that are not connected to an accessory shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
3—EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50 Ω loads. LISN may be placed on top of, or immediately beneath, reference ground plane.
3.1—All other equipment powered from additional LISN(s).
3.2—A multiple-outlet strip may be used for multiple power cords of non-EUT equipment.
3.3—LISN at least 80 cm from nearest part of EUT chassis.
4—Non-EUT components of EUT system being tested.
5—Rear of EUT, including peripherals, shall all be aligned and flush with edge of tabletop.
6—Edge of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.
7—Antenna can be integral or detachable. If detachable, then the antenna shall be attached for this test.

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:
▪ 6 dB bandwidth ≥ 500 kHz.

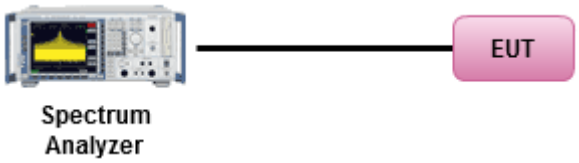
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method	
▪ For the emission bandwidth shall be measured using one of the options below:	
	☒ Refer as FCC KDB 558074, clause 8.2 & C63.10 clause 11.8.1 Option 1 for 6 dB bandwidth measurement.
	☐ Refer as FCC KDB 558074, clause 8.2 & C63.10 clause 11.8.2 Option 2 for 6 dB bandwidth measurement.
	☐ Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.

3.2.4 Test Setup

Emission Bandwidth


3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

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

3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method	
▪ Maximum Peak Conducted Output Power	
	☐ Refer as FCC KDB 558074, clause 8.3.1.1 & C63.10 clause 11.9.1.1 (RBW ≥ EBW method).
	☐ Refer as FCC KDB 558074, clause 8.3.1.3 & C63.10 clause 11.9.1.3 (peak power meter).
▪ Maximum Conducted Output Power	
	[duty cycle ≥ 98% or external video / power trigger]
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.2 Method AVGSA-1.
	☐ 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
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.4 Method AVGSA-2.
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.5 Method AVGSA-2A (alternative)
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.6 Method AVGSA-3
	☐ 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)
	☐ 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).
	☒ Refer as FCC KDB 558074, clause 8.3.2.3 & C63.10 clause 11.9.2.3.2 Method AVGPM-G (using an gate RF average power meter).
▪ For conducted measurement.	
	▪ If the EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.
	▪ If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \ldots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

3.3.4 Test Setup

Maximum Conducted Output Power (Power Meter)

3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

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

3.4.2 Measuring Instruments

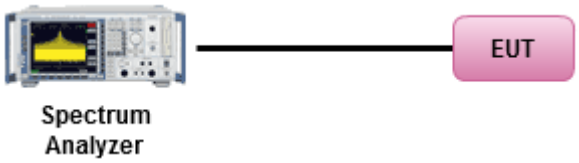
Refer a test equipment and calibration data table in this test report.

3.4.3 Test Procedures

Test Method		
▪ Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option).		
	☒ Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10 Method Max. PSD.	
▪ For conducted measurement.		
	▪ If The EUT supports multiple transmit chains using options given below:	
		☒ 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.
		☐ 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,
		☐ Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.

3.4.4 Test Setup

Power Spectral Density



3.4.5 Test Result of Power Spectral Density

Refer as Appendix D

3.5 Emissions in Non-restricted Frequency Bands

3.5.1 Emissions in Non-restricted Frequency Bands Limit

Un-restricted Band Emissions Limit	
RF output power procedure	**Limit (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

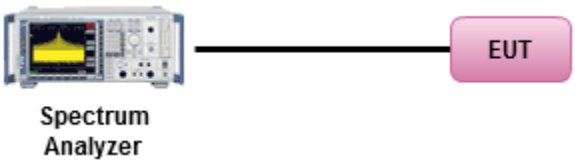
Refer a test equipment and calibration data table in this test report.

3.5.3 Test Procedures

Test Method
▪ Refer as FCC KDB 558074, clause 8.5 for unwanted emissions into non-restricted bands.

3.5.4 Test Setup

Emissions in Non-restricted Frequency Bands



3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix E

3.6 Emissions in Restricted Frequency Bands

3.6.1 Emissions in Restricted Frequency Bands Limit

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

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

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

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

3.6.2 Measuring Instruments

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

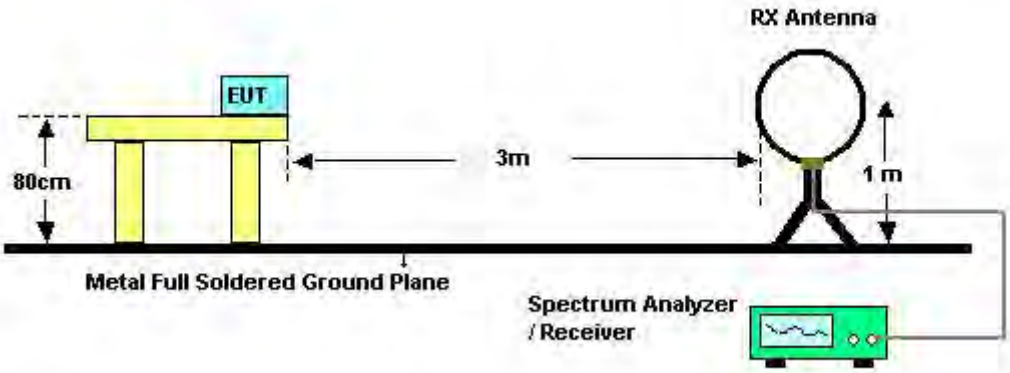
3.6.3 Test Procedures

Test Method			
▪ The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].			
▪ Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.			
▪ For the transmitter unwanted emissions shall be measured using following options below:			
	▪ Refer as FCC KDB 558074, clause 8.6 for unwanted emissions into restricted bands.		
		☐	Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.1(trace averaging for duty cycle ≥98%).
		☐	Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.2(trace averaging + duty factor).
		☒	Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.3(Reduced VBW≥1/T).
		☐	Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time.
		☐	Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions.
		☒	Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.4 measurement procedure peak limit.
▪ For the transmitter band-edge emissions shall be measured using following options below:			
	▪ 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.		
	▪ Refer as FCC KDB 558074, clause 8.7 (ANSI C63.10, clause 6.10.6) for marker-delta method for band-edge measurements.		
	▪ 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).		
	▪ 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		
	▪ 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.		

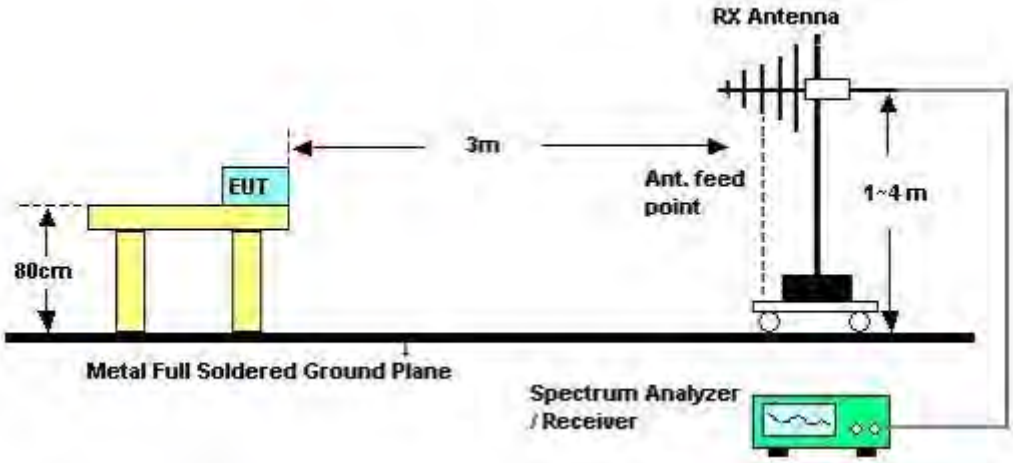
3.6.4 Test Setup

Radiated - Emissions in Restricted Frequency Bands

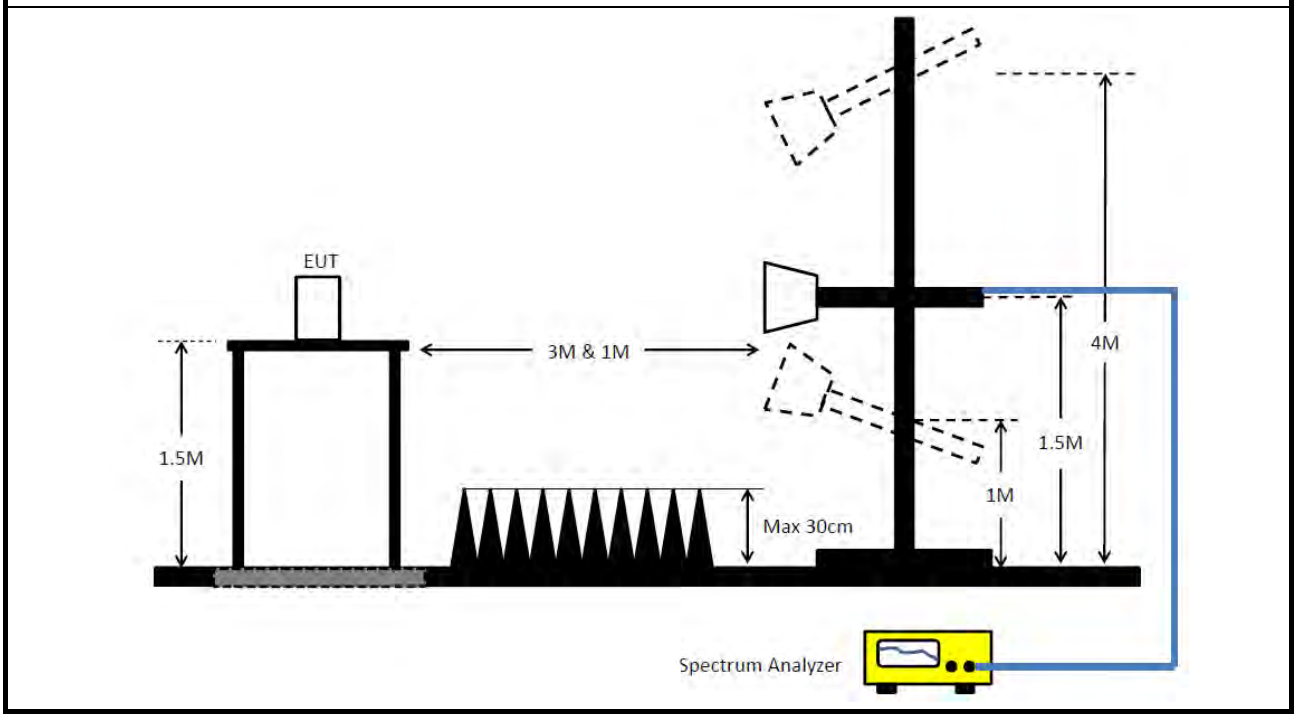
9kHz ~30MHz



30MHz~1GHz



Above 1GHz



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. 22, 2022	Feb. 21, 2023	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Feb. 09, 2022	Feb. 08, 2023	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Apr. 12, 2022	Apr. 11, 2023	Conduction (CO01-CB)
Pulse Limiter	Rohde& Schwarz	ESH3-Z2	100430	9kHz ~ 30MHz	Feb. 10, 2022	Feb. 09, 2023	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	9kHz ~ 30MHz	May 19, 2021	May 18, 2022	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. 18, 2022	Mar. 17, 2023	Radiation (03CH05-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH05-CB	30 MHz ~ 1 GHz	Aug. 09, 2021	Aug. 08, 2022	Radiation (03CH05-CB)
Bilog Antenna with 6dB Attenuator	TESEQ & EMCI	CBL 6112D & N-6-06	35236 & AT-N0610	30MHz ~ 2GHz	Mar. 25, 2022	Mar. 24, 2023	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC330N	980331	20MHz ~ 3GHz	Apr. 27, 2021	Apr. 26, 2022	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC330N	980331	20MHz ~ 3GHz	Apr. 26, 2022	Apr. 25, 2023	Radiation (03CH05-CB)
Spectrum Analyzer	R&S	FSP40	100304	9kHz ~ 40GHz	Mar. 14, 2022	Mar. 13, 2023	Radiation (03CH05-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	Jun. 21, 2021	Jun. 20, 2022	Radiation (03CH05-CB)
RF Cable-low	Woken	RG402	Low Cable-04+23	30MHz~1GHz	Oct. 13, 2021	Oct. 12, 2022	Radiation (03CH05-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH05-CB)
3m Semi Anechoic Chamber VSWR	RIKEN	SAC-3M	03CH02-CB	1GHz ~18GHz	Mar. 26, 2022	Mar. 25, 2023	Radiation (03CH02-CB)
Horn Antenna	EMCO	3115	9610-4976	1GHz ~ 18GHz	May 04, 2021	May 03, 2022	Radiation (03CH02-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 05, 2021	Aug. 04, 2022	Radiation (03CH02-CB)
Pre-Amplifier	Agilent	83017A	MY39501305	1GHz ~ 26.5GHz	Jul. 12, 2021	Jul. 11, 2022	Radiation (03CH02-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 13, 2021	Jul. 12, 2022	Radiation (03CH02-CB)
Spectrum analyzer	R&S	FSU	100015	9kHz~26GHz	Oct. 25, 2021	Oct. 24, 2022	Radiation (03CH02-CB)

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-18	1GHz ~ 18GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-18+19	1GHz ~ 18GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH02-CB)
High Cable	Woken	WCA0929M	40G#5+7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH02-CB)
High Cable	Woken	WCA0929M	40G#5	1GHz ~ 40 GHz	Dec. 08, 2021	Dec. 07, 2022	Radiation (03CH02-CB)
High Cable	Woken	WCA0929M	40G#7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	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. 24, 2022	Feb. 23, 2023	Radiation (03CH04-CB)
Horn Antenna	ETS・Lindgren	3115	00143147	750MHz~18GHz	Oct. 25, 2021	Oct. 24, 2022	Radiation (03CH04-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 05, 2021	Aug. 04, 2022	Radiation (03CH04-CB)
Pre-Amplifier	Agilent	83017A	MY53270063	0.5GHz ~ 26.5GHz	Jul. 12, 2021	Jul. 11, 2022	Radiation (03CH04-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 13, 2021	Jul. 12, 2022	Radiation (03CH04-CB)
Spectrum Analyzer	R&S	FSP40	100142	9kHz~40GHz	Mar. 28, 2022	Mar. 27, 2023	Radiation (03CH04-CB
RF Cable-high	Woken	RG402	High Cable-21	1GHz - 18GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-21+67	1GHz - 18GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH04-CB)
High Cable	Woken	WCA0929M	40G#5+7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH04-CB)
High Cable	Woken	WCA0929M	40G#5	1GHz ~ 40 GHz	Dec. 08, 2021	Dec. 07, 2022	Radiation (03CH04-CB)
High Cable	Woken	WCA0929M	40G#7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	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 21, 2021	May 20, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz – 26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz –26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz –26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz –26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-30	1 GHz –26.5 GHz	Oct. 04, 2021	Oct. 03, 2022	Conducted (TH01-CB)
Switch	SPTCB	SP-SWI	SWI-01	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	SWI-01-P1	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	SWI-01-P2	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	SWI-01-P3	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	SWI-01-P4	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	SWI-01-P5	1 GHz –26.5 GHz	Dec. 13, 2021	Dec. 12, 2022	Conducted (TH01-CB)
Power Sensor	Agilent	E9327A	US40442088	50MHz~18GHz	Feb. 21, 2022	Feb. 20, 2023	Conducted (TH01-CB)
Power Meter	Agilent	E4416A	GB41291199	50MHz~18GHz	Feb. 21, 2022	Feb. 20, 2023	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.

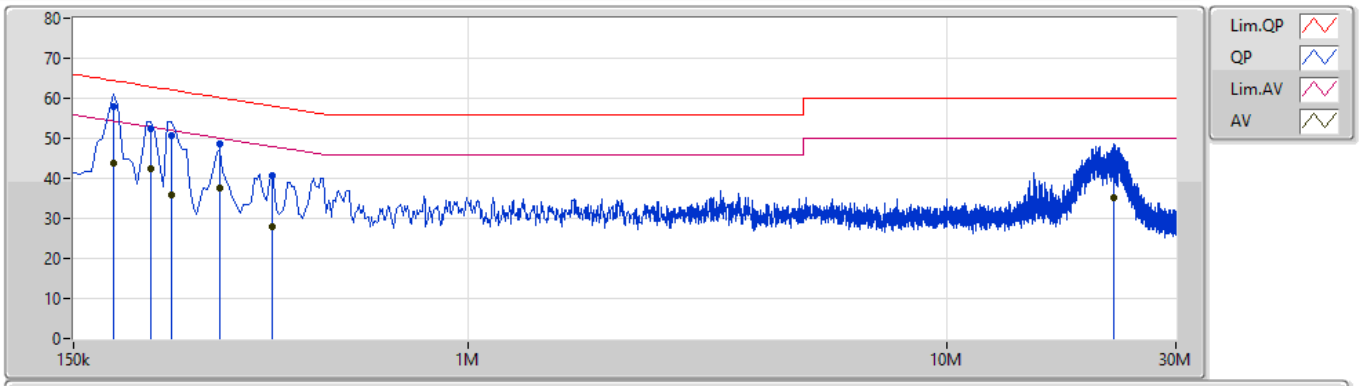
N.C.R. means Non-Calibration required.

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	181.5k	57.88	64.41	-6.53	Line

Mode 1

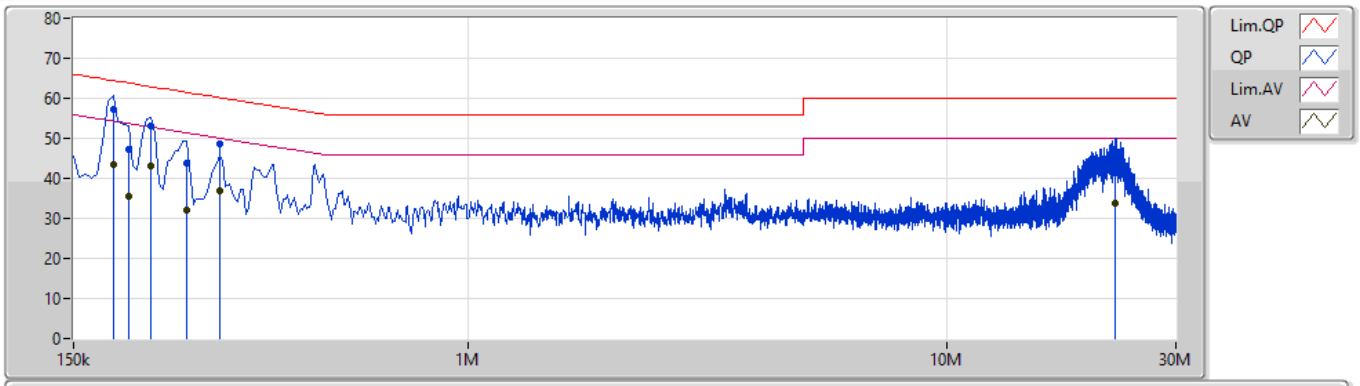
11/05/2022



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	181.5k	57.88	64.41	-6.53	9.97	Line	"Worst"	47.91	0.06	0.02	9.89
AV	181.5k	43.90	54.41	-10.51	9.97	Line	-	33.93	0.06	0.02	9.89
QP	217.5k	52.37	62.92	-10.55	9.97	Line	-	42.40	0.06	0.02	9.89
AV	217.5k	42.36	52.92	-10.56	9.97	Line	-	32.39	0.06	0.02	9.89
QP	240k	50.75	62.10	-11.35	9.97	Line	-	40.78	0.06	0.02	9.89
AV	240k	35.78	52.10	-16.32	9.97	Line	-	25.81	0.06	0.02	9.89
QP	303k	48.50	60.17	-11.67	9.97	Line	-	38.53	0.06	0.02	9.89
AV	303k	37.61	50.17	-12.56	9.97	Line	-	27.64	0.06	0.02	9.89
QP	388.5k	40.81	58.10	-17.29	9.97	Line	-	30.84	0.06	0.02	9.89
AV	388.5k	27.97	48.10	-20.13	9.97	Line	-	18.00	0.06	0.02	9.89
QP	22.295M	44.93	60.00	-15.07	10.45	Line	-	34.48	0.33	0.16	9.96
AV	22.295M	35.10	50.00	-14.90	10.45	Line	-	24.65	0.33	0.16	9.96

Mode 1

11/05/2022



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	181.5k	57.18	64.41	-7.23	9.98	Neutral	"Worst"	47.20	0.07	0.02	9.89
AV	181.5k	43.31	54.41	-11.10	9.98	Neutral	-	33.33	0.07	0.02	9.89
QP	195k	47.14	63.82	-16.68	9.98	Neutral	-	37.16	0.07	0.02	9.89
AV	195k	35.67	53.82	-18.15	9.98	Neutral	-	25.69	0.07	0.02	9.89
QP	217.5k	53.06	62.92	-9.86	9.98	Neutral	-	43.08	0.07	0.02	9.89
AV	217.5k	43.16	52.92	-9.76	9.98	Neutral	-	33.18	0.07	0.02	9.89
QP	258k	43.89	61.49	-17.60	9.98	Neutral	-	33.91	0.07	0.02	9.89
AV	258k	31.99	51.49	-19.50	9.98	Neutral	-	22.01	0.07	0.02	9.89
QP	303k	48.56	60.17	-11.61	9.98	Neutral	-	38.58	0.07	0.02	9.89
AV	303k	36.99	50.17	-13.18	9.98	Neutral	-	27.01	0.07	0.02	9.89
QP	22.403M	43.65	60.00	-16.35	10.43	Neutral	-	33.22	0.30	0.16	9.97
AV	22.403M	33.64	50.00	-16.36	10.43	Neutral	-	23.21	0.30	0.16	9.97

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.11b_Nss1,(1Mbps)_2TX	10.075M	16.342M	16M3G1D	10.025M	13.618M
802.11g_Nss1,(6Mbps)_2TX	16.375M	21.864M	21M9D1D	16.3M	16.517M
802.11ax HEW20_Nss1,(MCS0)_2TX	18.525M	19.015M	19M0D1D	17.825M	18.716M
802.11ax HEW40_Nss1,(MCS0)_2TX	36.4M	37.731M	37M7D1D	35.2M	37.531M

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

Result

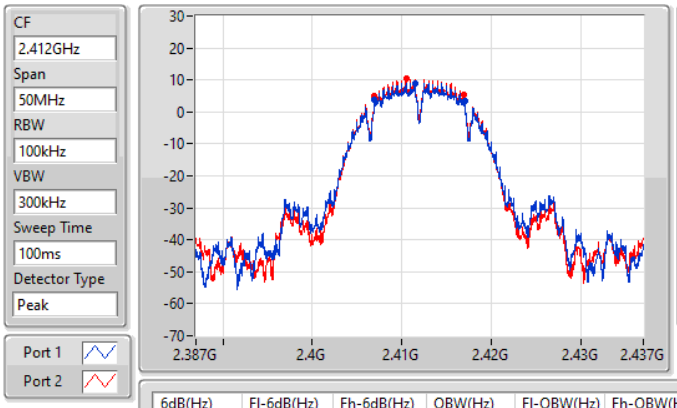
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	10.075M	14.018M	10.025M	13.893M
2437MHz	Pass	500k	10.075M	16.342M	10.075M	15.967M
2462MHz	Pass	500k	10.05M	13.818M	10.075M	13.618M
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	16.325M	16.567M	16.325M	16.592M
2437MHz	Pass	500k	16.3M	17.491M	16.325M	21.864M
2462MHz	Pass	500k	16.325M	16.617M	16.375M	16.517M
802.11ax HEW20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	17.9M	18.716M	18.025M	18.791M
2437MHz	Pass	500k	17.825M	19.015M	17.9M	18.966M
2462MHz	Pass	500k	18.525M	18.766M	18.175M	18.741M
802.11ax HEW40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	500k	36.15M	37.681M	35.55M	37.531M
2437MHz	Pass	500k	36.2M	37.731M	36.4M	37.581M
2452MHz	Pass	500k	35.5M	37.681M	35.2M	37.581M

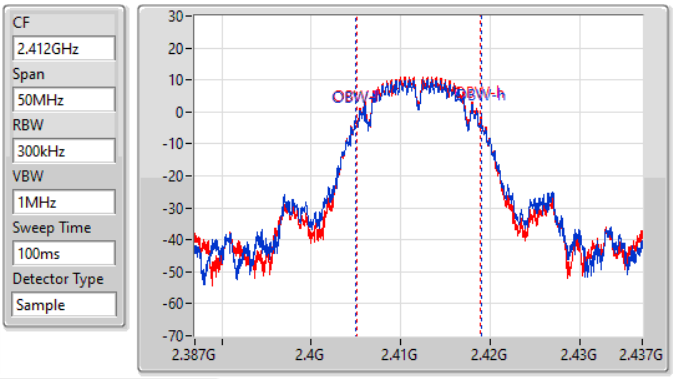
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

802.11b_Nss1,(1Mbps)_2TX EBW

2412MHz

18/04/2022



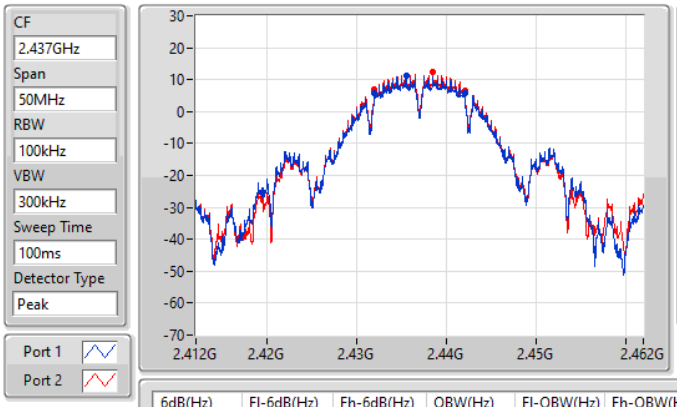


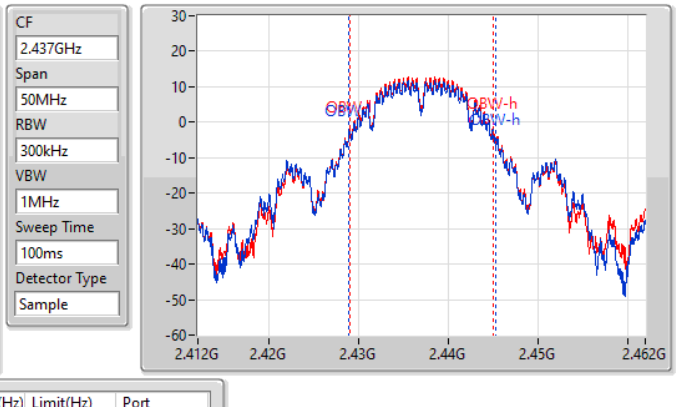
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
10.075M	2.40695G	2.417025G	14.018M	2.404954G	2.418972G	500k	1
10.025M	2.40695G	2.416975G	13.893M	2.405053G	2.418947G	500k	2

802.11b_Nss1,(1Mbps)_2TX EBW

2437MHz

18/04/2022



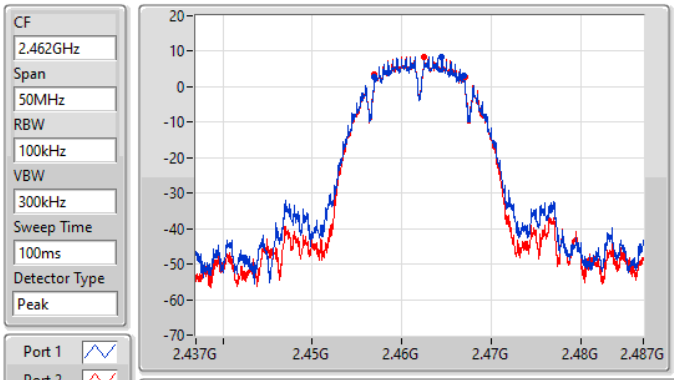


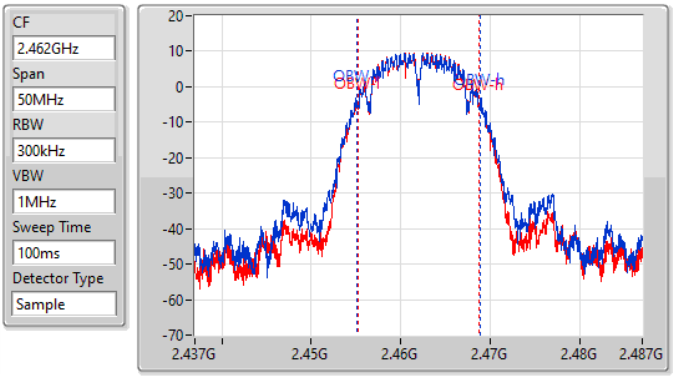
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
10.075M	2.43195G	2.442025G	16.342M	2.428879G	2.445221G	500k	1
10.075M	2.43195G	2.442025G	15.967M	2.429054G	2.445021G	500k	2

802.11b_Nss1,(1Mbps)_2TX EBW

2462MHz

18/04/2022



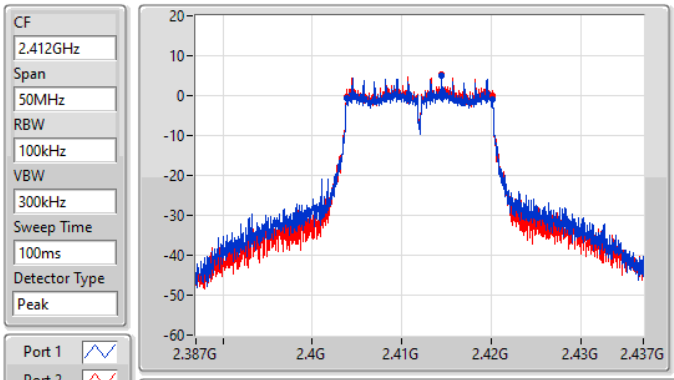


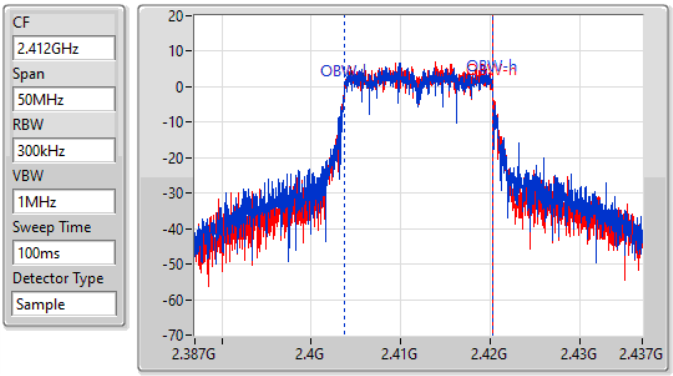
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
10.05M	2.45695G	2.467G	13.818M	2.455053G	2.468872G	500k	1
10.075M	2.45695G	2.467025G	13.618M	2.455178G	2.468797G	500k	2

802.11g_Nss1,(6Mbps)_2TX EBW

2412MHz

18/04/2022



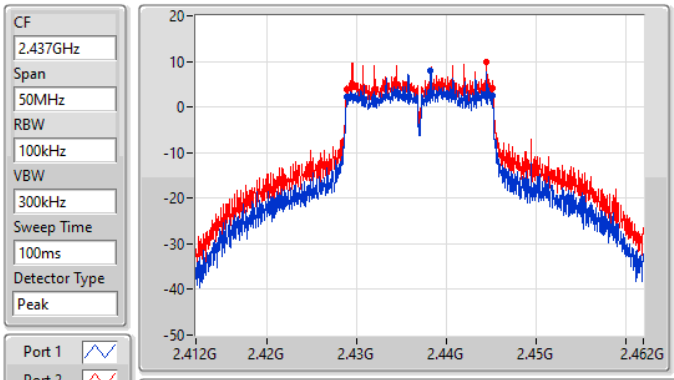


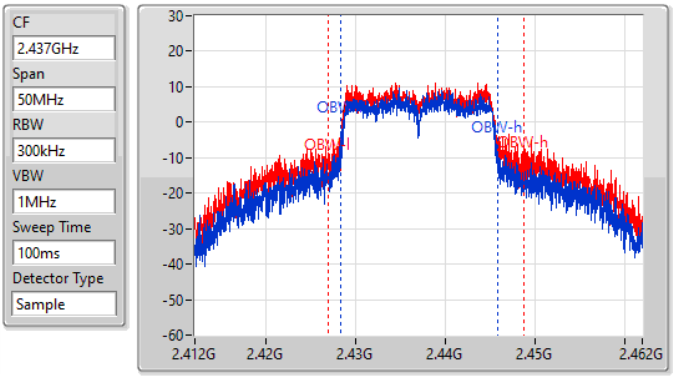
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.325M	2.403825G	2.42015G	16.567M	2.403679G	2.420246G	500k	1
16.325M	2.403825G	2.42015G	16.592M	2.403679G	2.420271G	500k	2

802.11g_Nss1,(6Mbps)_2TX EBW

2437MHz

18/04/2022



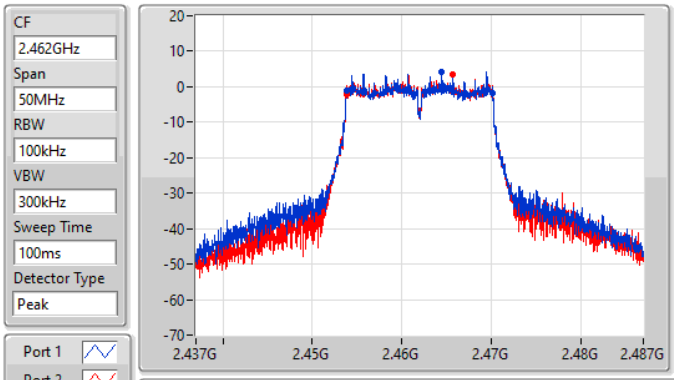


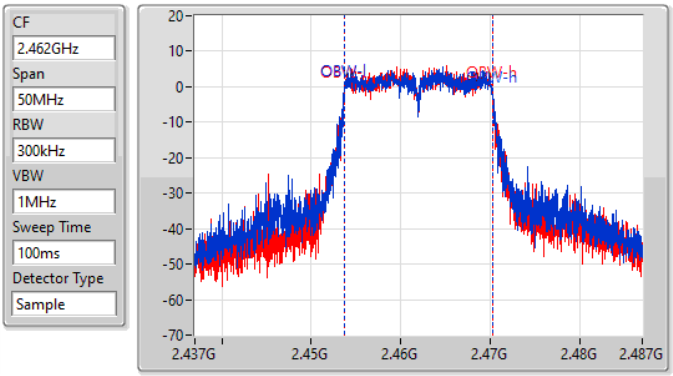
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.3M	2.42885G	2.44515G	17.491M	2.428354G	2.445846G	500k	1
16.325M	2.428825G	2.44515G	21.864M	2.426855G	2.448719G	500k	2

802.11g_Nss1,(6Mbps)_2TX EBW

2462MHz

18/04/2022



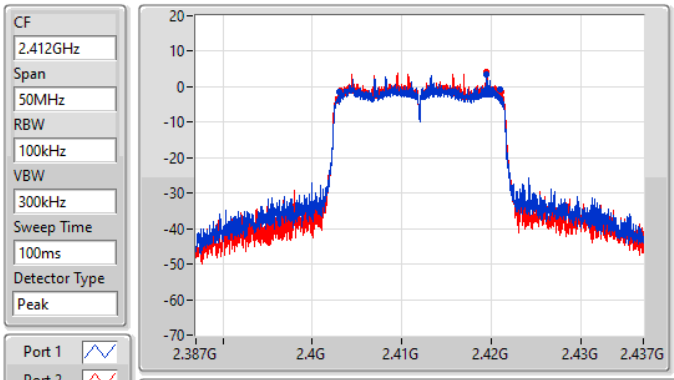


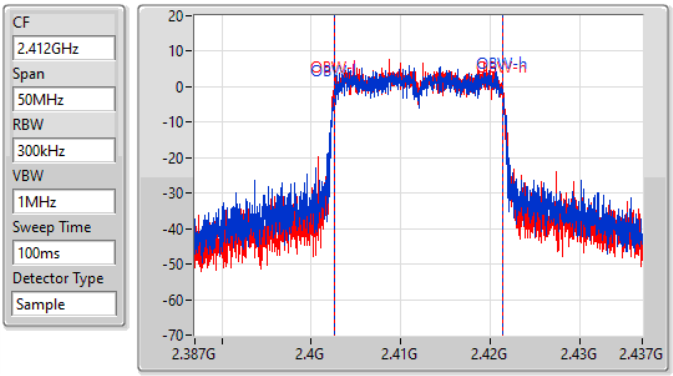
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.325M	2.453825G	2.47015G	16.617M	2.453654G	2.470271G	500k	1
16.375M	2.4538G	2.470175G	16.517M	2.453704G	2.470221G	500k	2

802.11ax HEW20_Nss1,(MCS0)_2TX EBW

2412MHz

18/04/2022



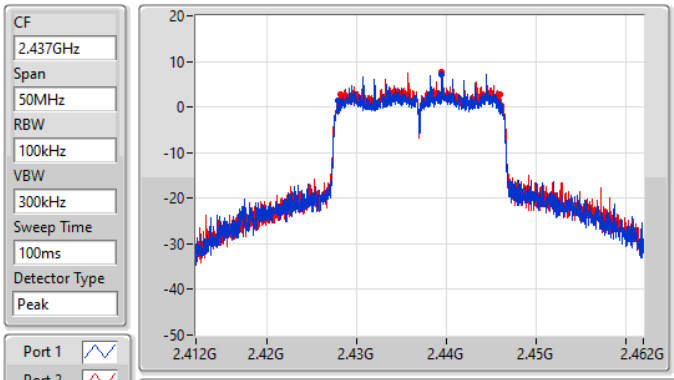


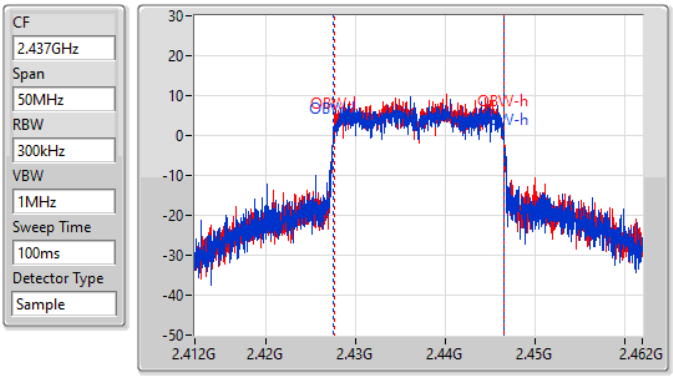
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.9M	2.40305G	2.42095G	18.716M	2.40263G	2.421345G	500k	1
18.025M	2.403125G	2.42115G	18.791M	2.40258G	2.42137G	500k	2

802.11ax HEW20_Nss1,(MCS0)_2TX EBW

2437MHz

18/04/2022



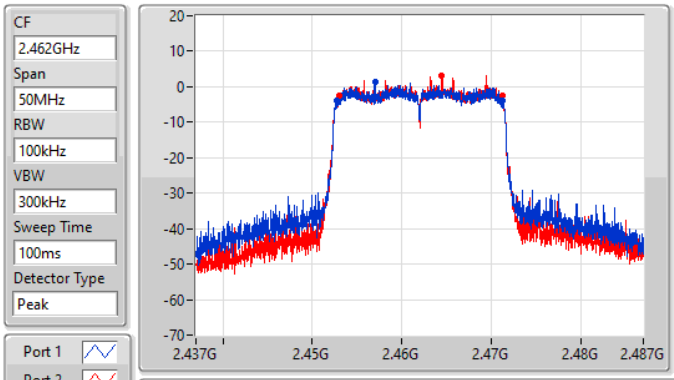


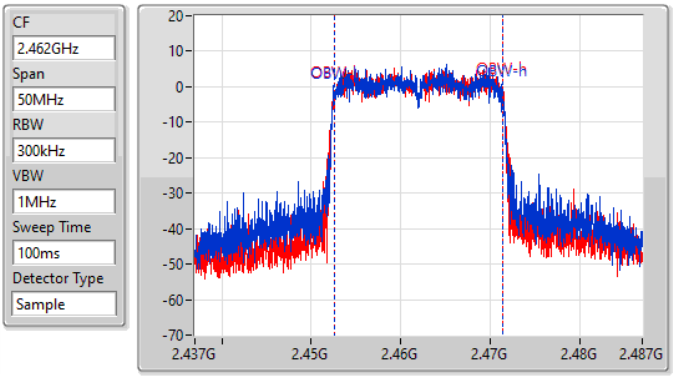
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.825M	2.427925G	2.44575G	19.015M	2.42748G	2.446495G	500k	1
17.9M	2.4281G	2.446G	18.966M	2.42753G	2.446495G	500k	2

802.11ax HEW20_Nss1,(MCS0)_2TX EBW

2462MHz

18/04/2022



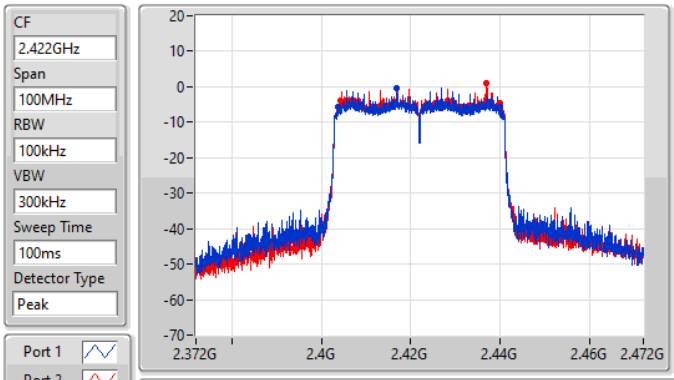


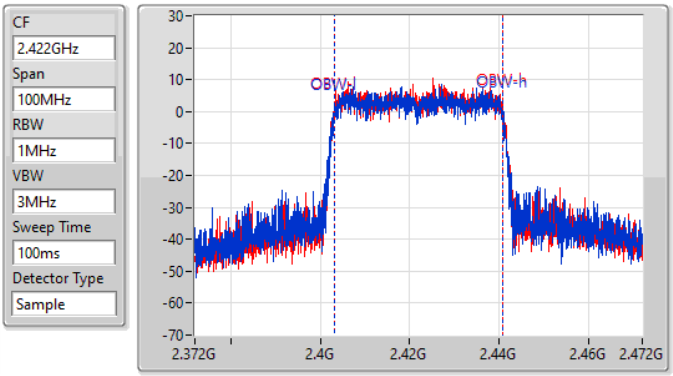
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.525M	2.45275G	2.471275G	18.766M	2.45258G	2.471345G	500k	1
18.175M	2.45305G	2.471225G	18.741M	2.45263G	2.47137G	500k	2

802.11ax HEW40_Nss1,(MCS0)_2TX EBW

2422MHz

18/04/2022



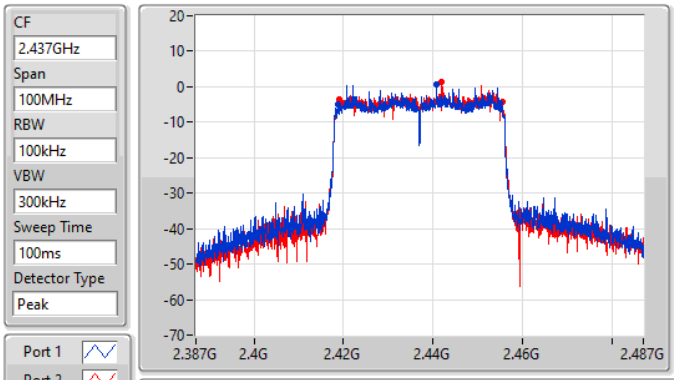


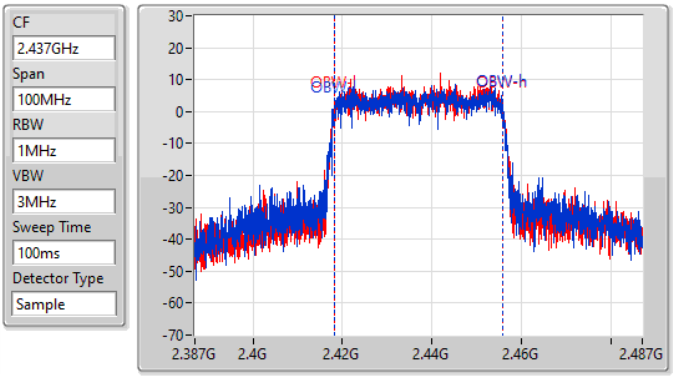
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
36.15M	2.4037G	2.43985G	37.681M	2.403109G	2.440791G	500k	1
35.55M	2.4044G	2.43995G	37.531M	2.403259G	2.440791G	500k	2

802.11ax HEW40_Nss1,(MCS0)_2TX EBW

2437MHz

18/04/2022



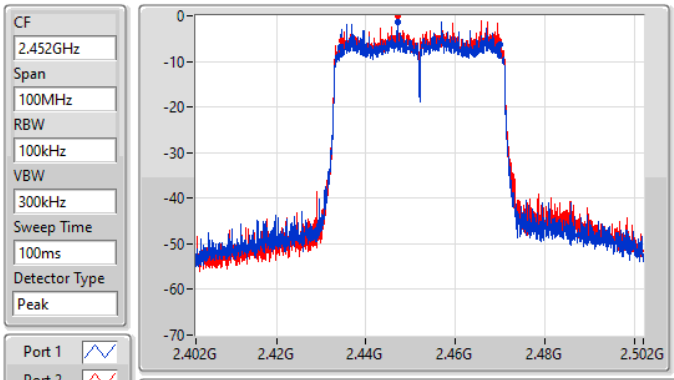


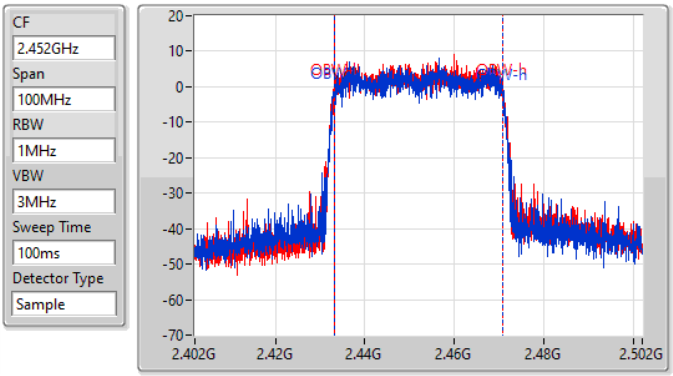
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
36.2M	2.41875G	2.45495G	37.731M	2.418109G	2.455841G	500k	1
36.4M	2.41915G	2.45555G	37.581M	2.418159G	2.455741G	500k	2

802.11ax HEW40_Nss1,(MCS0)_2TX EBW

2452MHz

18/04/2022





6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
35.5M	2.43435G	2.46985G	37.681M	2.433059G	2.470741G	500k	1
35.2M	2.4345G	2.4697G	37.581M	2.433209G	2.470791G	500k	2

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_2TX	21.93	0.15596
802.11g_Nss1,(6Mbps)_2TX	21.95	0.15668
802.11ax HEW20_Nss1,(MCS0)_2TX	21.32	0.13552
802.11ax HEW40_Nss1,(MCS0)_2TX	17.57	0.05715

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	6.51	16.02	16.34	19.19	29.49
2417MHz	Pass	6.51	17.57	17.78	20.69	29.49
2437MHz	Pass	6.51	18.54	19.26	21.93	29.49
2457MHz	Pass	6.51	18.67	18.48	21.59	29.49
2462MHz	Pass	6.51	17.20	17.32	20.27	29.49
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	6.51	14.31	14.75	17.55	29.49
2417MHz	Pass	6.51	16.35	16.91	19.65	29.49
2437MHz	Pass	6.51	18.49	19.34	21.95	29.49
2457MHz	Pass	6.51	15.76	15.82	18.80	29.49
2462MHz	Pass	6.51	14.55	14.76	17.67	29.49
802.11ax HEW20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	6.51	13.14	13.87	16.53	29.49
2417MHz	Pass	6.51	14.64	15.21	17.94	29.49
2437MHz	Pass	6.51	17.93	18.66	21.32	29.49
2457MHz	Pass	6.51	14.95	15.21	18.09	29.49
2462MHz	Pass	6.51	12.81	13.01	15.92	29.49
802.11ax HEW40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	6.51	12.78	13.46	16.14	29.49
2437MHz	Pass	6.51	14.24	14.86	17.57	29.49
2452MHz	Pass	6.51	12.77	13.65	16.24	29.49

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

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_2TX	-0.13
802.11g_Nss1,(6Mbps)_2TX	-5.00
802.11ax HEW20_Nss1,(MCS0)_2TX	-7.04
802.11ax HEW40_Nss1,(MCS0)_2TX	-12.05

RBW = 3kHz;

Result

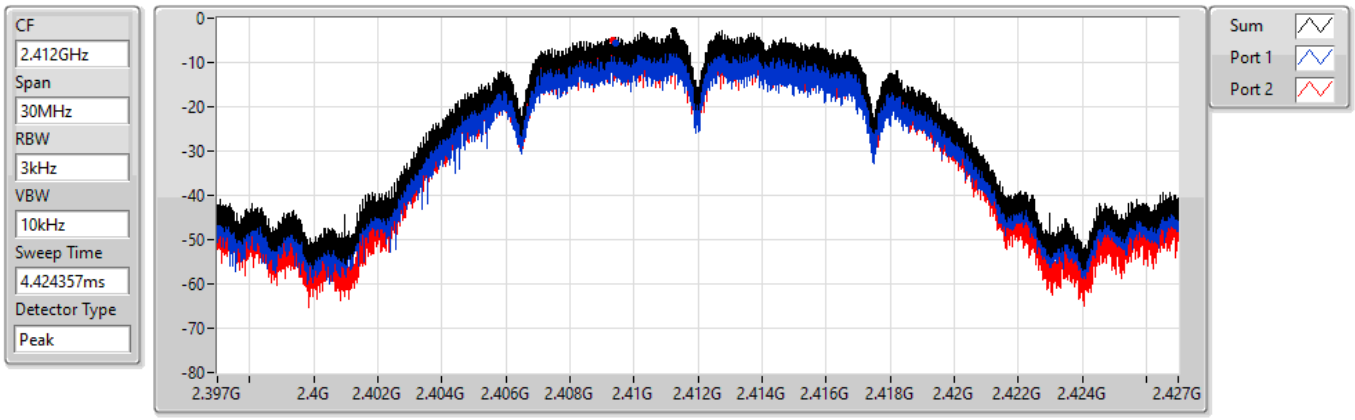
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	9.52	-5.48	-4.93	-2.87	4.48
2437MHz	Pass	9.52	-3.93	-2.22	-0.13	4.48
2462MHz	Pass	9.52	-6.51	-6.51	-3.90	4.48
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	9.52	-10.20	-8.95	-7.44	4.48
2437MHz	Pass	9.52	-9.20	-6.16	-5.00	4.48
2462MHz	Pass	9.52	-11.78	-11.15	-9.28	4.48
802.11ax HEW20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	9.52	-12.08	-11.58	-10.08	4.48
2437MHz	Pass	9.52	-9.45	-8.26	-7.04	4.48
2462MHz	Pass	9.52	-12.36	-12.75	-11.09	4.48
802.11ax HEW40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	9.52	-14.29	-14.61	-13.07	4.48
2437MHz	Pass	9.52	-15.17	-13.15	-12.05	4.48
2452MHz	Pass	9.52	-17.25	-15.38	-14.21	4.48

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;

802.11b_Nss1,(1Mbps)_2TX PSD

2412MHz

18/04/2022

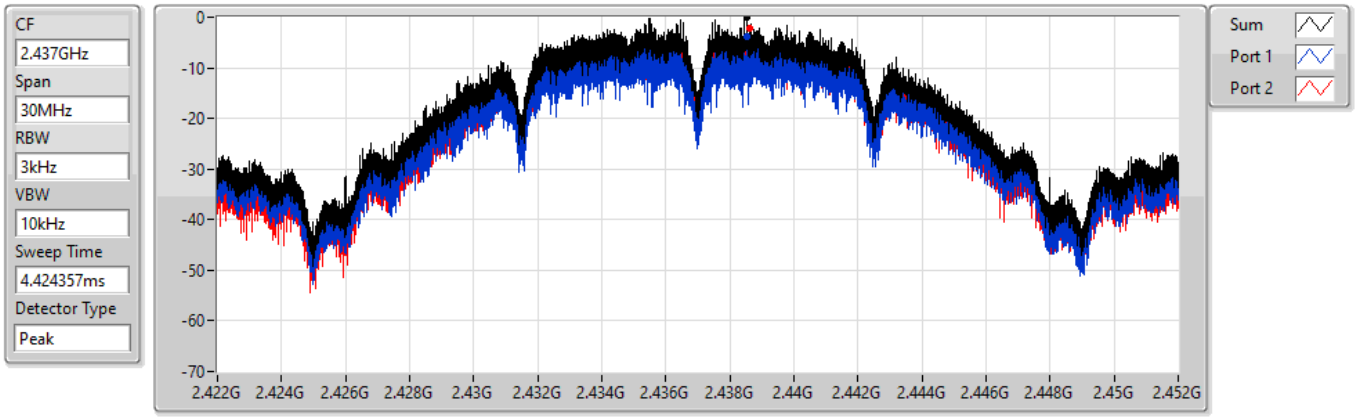


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.87	-2.87	-5.48	-4.93

802.11b_Nss1,(1Mbps)_2TX PSD

2437MHz

18/04/2022

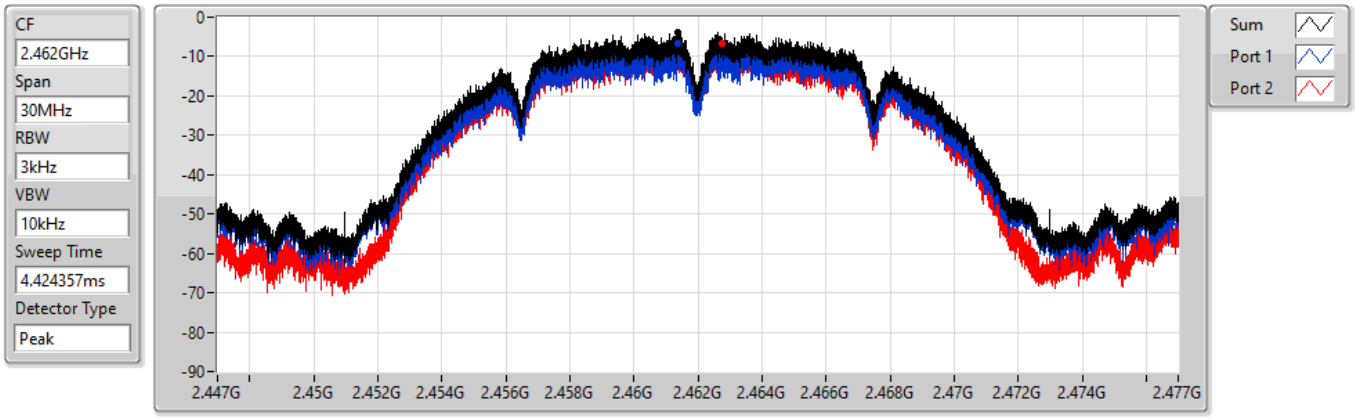


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.13	-0.13	-3.93	-2.22

802.11b_Nss1,(1Mbps)_2TX PSD

2462MHz

18/04/2022

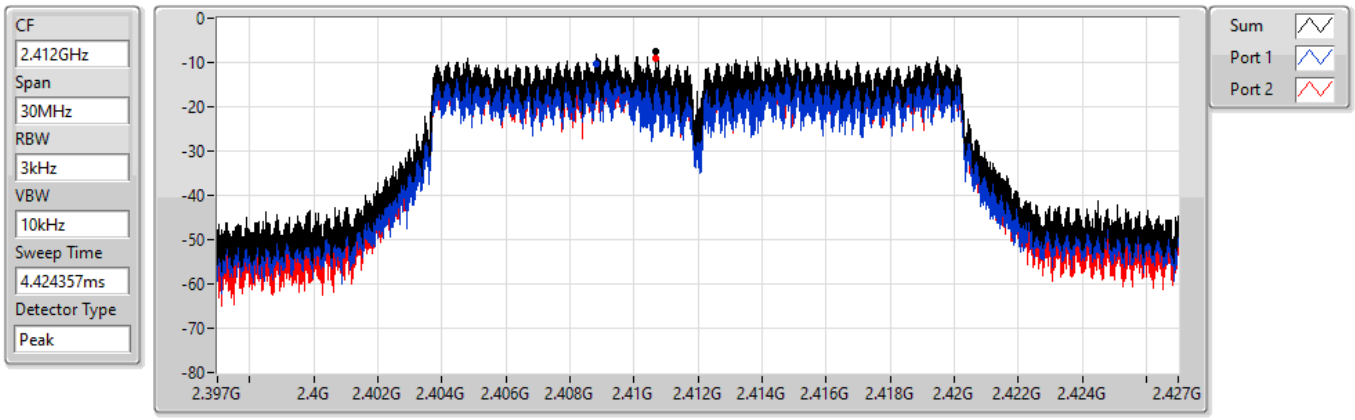


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.90	-3.90	-6.51	-6.51

802.11g_Nss1,(6Mbps)_2TX PSD

2412MHz

18/04/2022

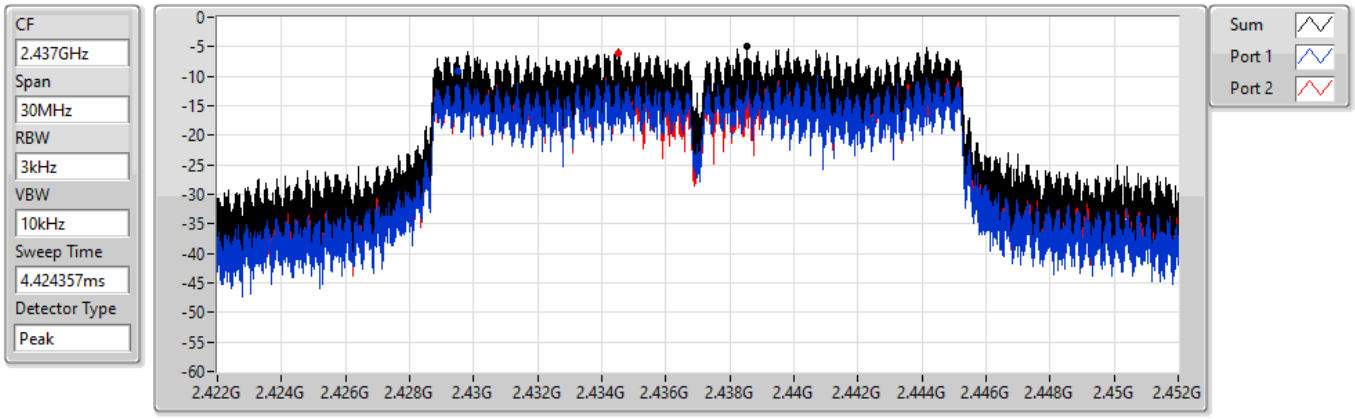


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-7.44	-7.44	-10.20	-8.95

802.11g_Nss1,(6Mbps)_2TX PSD

2437MHz

18/04/2022

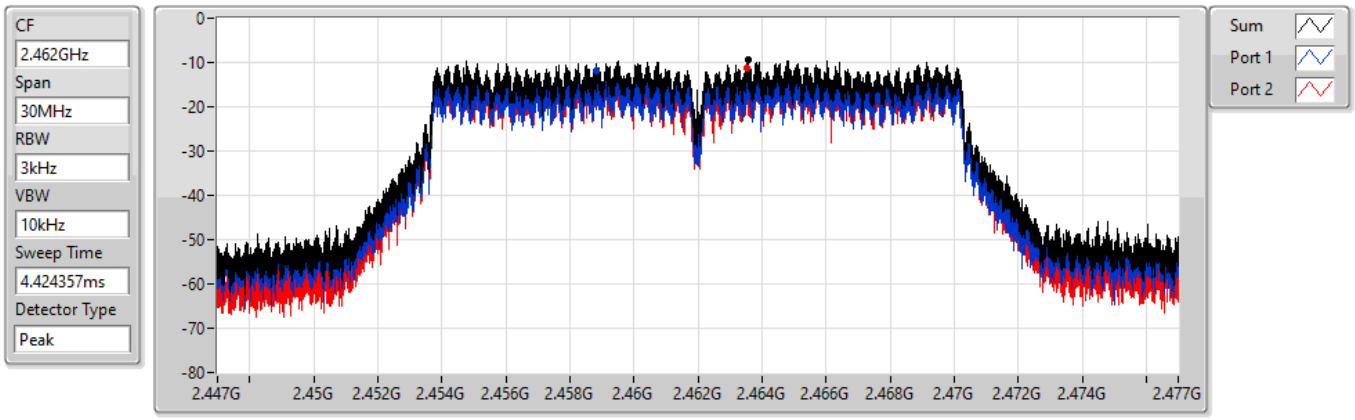


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-5.00	-5.00	-9.20	-6.16

802.11g_Nss1,(6Mbps)_2TX PSD

2462MHz

18/04/2022

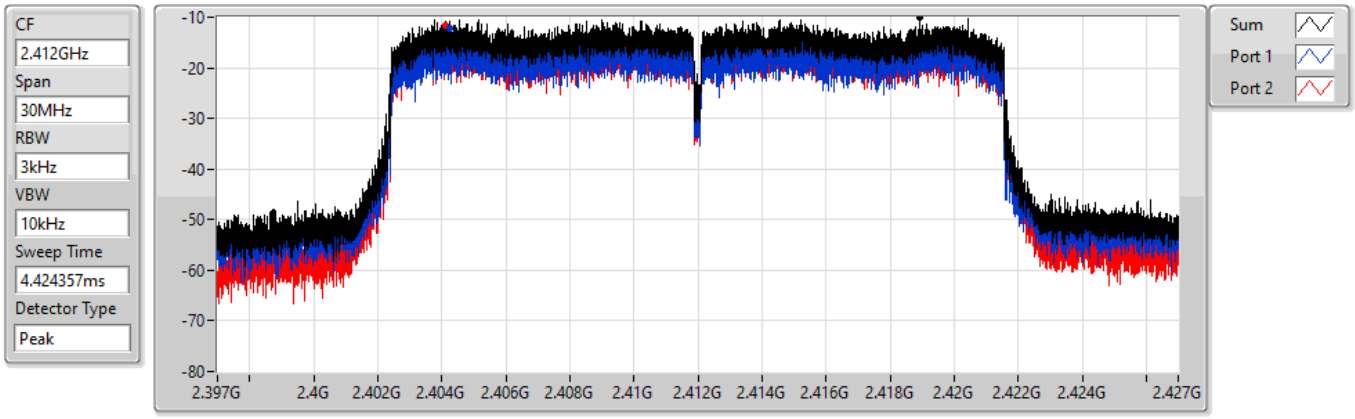


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-9.28	-9.28	-11.78	-11.15

802.11ax HEW20_Nss1,(MCS0)_2TX PSD

2412MHz

18/04/2022

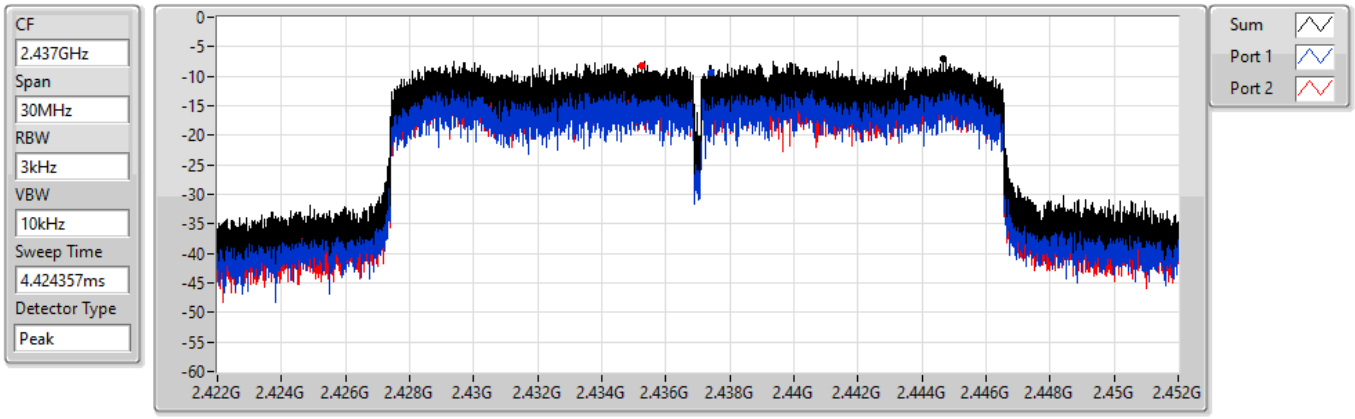


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.08	-10.08	-12.08	-11.58

802.11ax HEW20_Nss1,(MCS0)_2TX PSD

2437MHz

18/04/2022

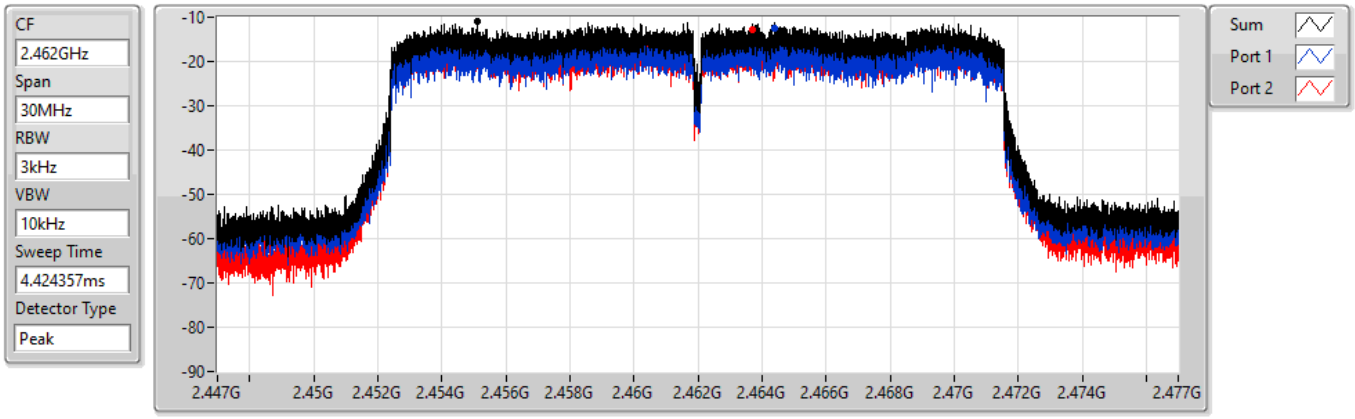


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-7.04	-7.04	-9.45	-8.26

802.11ax HEW20_Nss1,(MCS0)_2TX PSD

2462MHz

18/04/2022

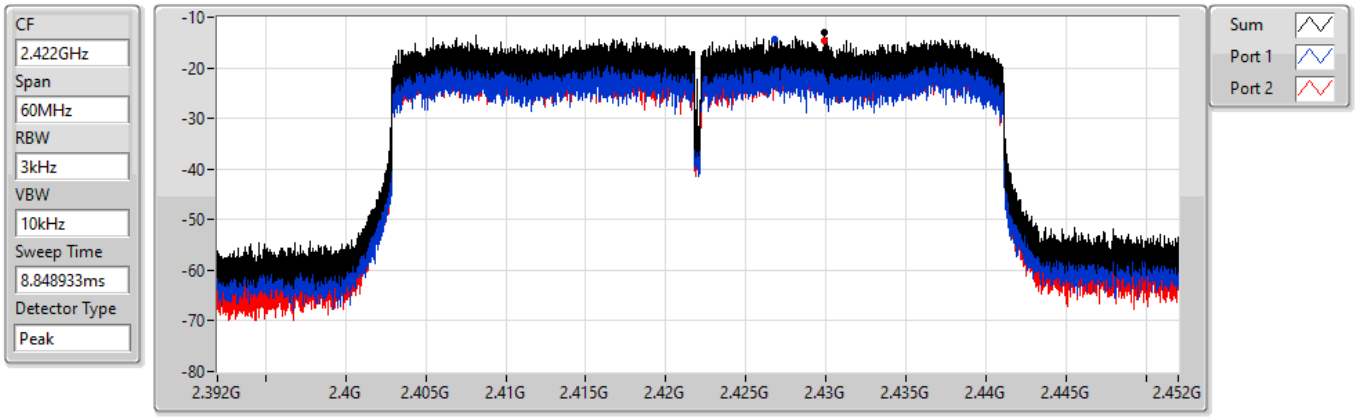


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-11.09	-11.09	-12.36	-12.75

802.11ax HEW40_Nss1,(MCS0)_2TX PSD

2422MHz

18/04/2022

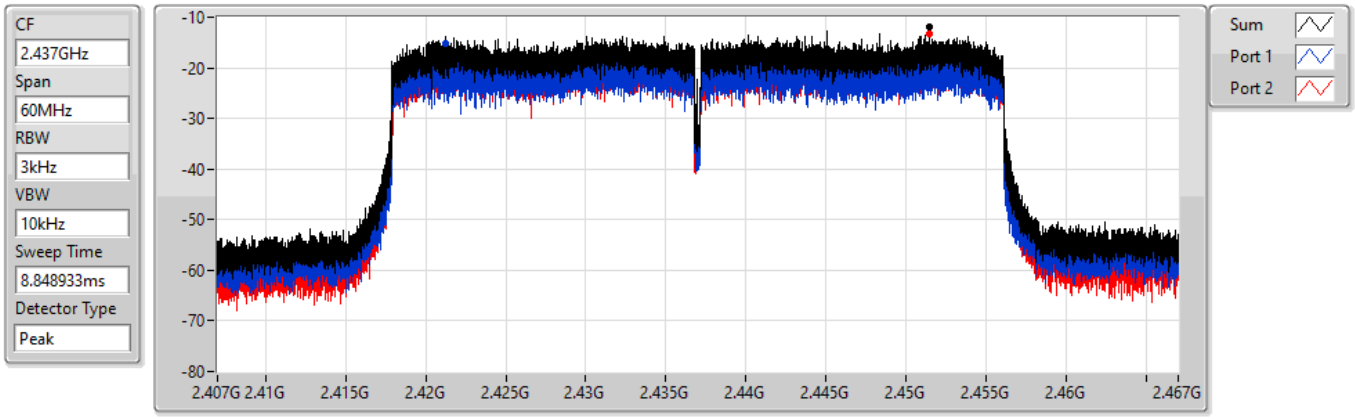


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-13.07	-13.07	-14.29	-14.61

802.11ax HEW40_Nss1,(MCS0)_2TX PSD

2437MHz

18/04/2022

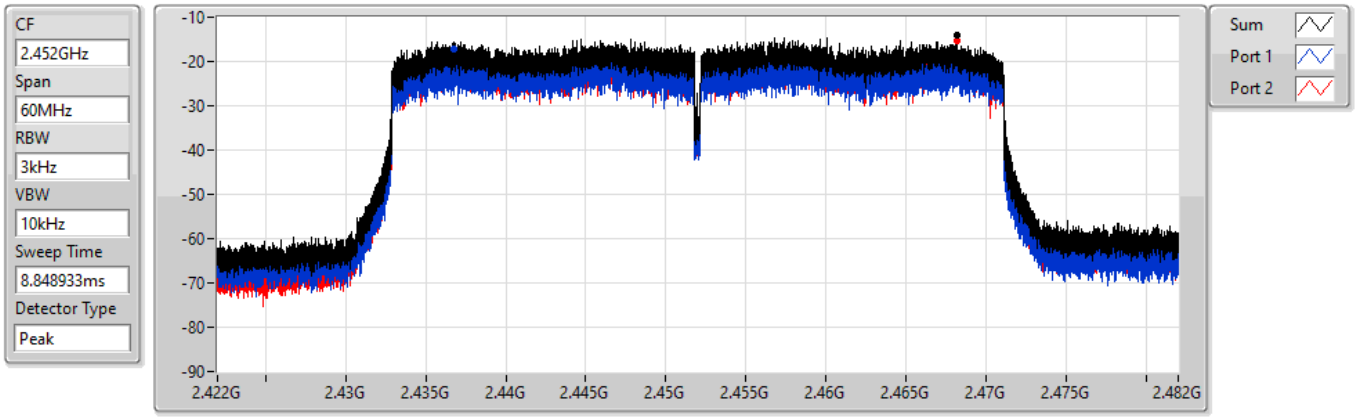


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-12.05	-12.05	-15.17	-13.15

802.11ax HEW40_Nss1,(MCS0)_2TX PSD

2452MHz

18/04/2022



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-14.21	-14.21	-17.25	-15.38

Summary

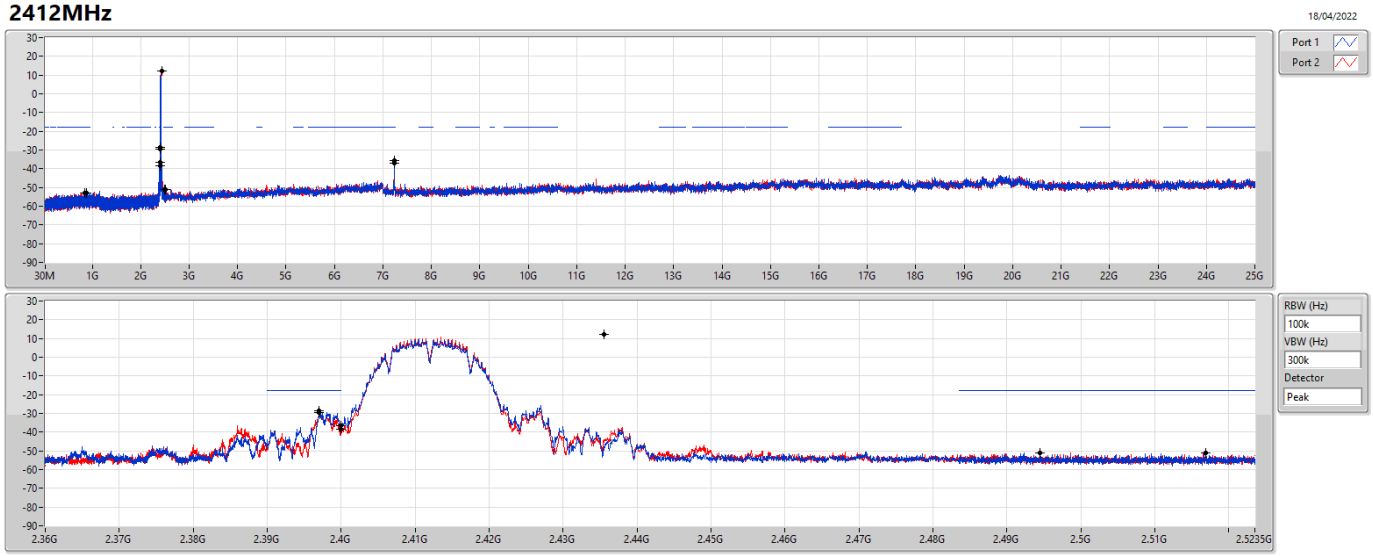
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_2TX	Pass	2.43549G	12.36	-17.64	877.25M	-52.88	2.397G	-28.74	2.4G	-36.55	2.49446G	-51.18	7.23514G	-37.16	1
802.11g_Nss1,(6Mbps)_2TX	Pass	2.43945G	9.83	-20.17	1.86895G	-52.30	2.39892G	-26.89	2.4G	-30.10	2.5023G	-51.41	7.23514G	-44.64	1
802.11ax HEW20_Nss1,(MCS0)_2TX	Pass	2.42948G	7.68	-22.32	535.9M	-52.78	2.39982G	-27.05	2.4G	-31.97	2.48642G	-51.53	24.91009G	-44.14	1
802.11ax HEW40_Nss1,(MCS0)_2TX	Pass	2.43198G	1.32	-28.68	856.4M	-51.40	2.39912G	-32.77	2.4G	-36.31	2.48442G	-46.79	13.91917G	-44.46	1

Result

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43549G	12.36	-17.64	877.25M	-52.88	2.397G	-28.74	2.4G	-36.55	2.49446G	-51.18	7.23514G	-37.16	1
2412MHz	Pass	2.43549G	12.36	-17.64	844.63M	-53.07	2.39698G	-29.31	2.4G	-38.47	2.51686G	-50.97	7.23233G	-35.41	2
2437MHz	Pass	2.43549G	12.36	-17.64	1.62459G	-44.70	2.4G	-34.87	2.4G	-34.05	2.48496G	-42.58	24.84547G	-44.66	1
2437MHz	Pass	2.43549G	12.36	-17.64	817.83M	-51.88	2.4G	-41.60	2.4G	-43.48	2.48478G	-42.53	24.13185G	-45.07	2
2462MHz	Pass	2.43549G	12.36	-17.64	880.16M	-52.03	2.3925G	-51.70	2.4835G	-40.76	2.4835G	-41.17	24.81738G	-44.63	1
2462MHz	Pass	2.43549G	12.36	-17.64	921.23M	-52.45	2.39288G	-51.44	2.4835G	-44.95	2.48444G	-46.02	24.8539G	-44.98	2
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43945G	9.83	-20.17	1.86895G	-52.30	2.39892G	-26.89	2.4G	-30.10	2.5023G	-51.41	7.23514G	-44.64	1
2412MHz	Pass	2.43945G	9.83	-20.17	2.15613G	-52.67	2.39858G	-28.87	2.4G	-31.72	2.50828G	-50.88	15.05696G	-43.90	2
2437MHz	Pass	2.43945G	9.83	-20.17	620.66M	-52.97	2.39696G	-39.47	2.4G	-43.09	2.484G	-42.37	24.51114G	-44.66	1
2437MHz	Pass	2.43945G	9.83	-20.17	892.68M	-52.61	2.39984G	-35.81	2.4835G	-37.12	2.48636G	-36.89	24.87919G	-44.95	2
2462MHz	Pass	2.43945G	9.83	-20.17	2.1337G	-52.51	2.39606G	-51.68	2.4835G	-43.05	2.48356G	-38.09	24.80614G	-45.27	1
2462MHz	Pass	2.43945G	9.83	-20.17	2.09788G	-52.68	2.39952G	-51.95	2.4835G	-42.24	2.4839G	-39.40	14.64395G	-44.26	2
802.11ax HEW20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.42948G	7.68	-22.32	535.9M	-52.78	2.39982G	-27.05	2.4G	-31.97	2.48642G	-51.53	24.91009G	-44.14	1
2412MHz	Pass	2.42948G	7.68	-22.32	926.76M	-52.99	2.39598G	-31.33	2.4G	-38.87	2.51874G	-49.83	24.87638G	-45.22	2
2437MHz	Pass	2.42948G	7.68	-22.32	889.77M	-51.43	2.39736G	-39.68	2.4G	-40.82	2.48456G	-40.78	16.64998G	-44.72	1
2437MHz	Pass	2.42948G	7.68	-22.32	2.0903G	-52.47	2.39138G	-38.53	2.4835G	-41.00	2.48388G	-39.77	24.84547G	-45.04	2
2462MHz	Pass	2.42948G	7.68	-22.32	689.39M	-52.22	2.39876G	-52.08	2.4835G	-42.30	2.48416G	-36.54	16.75674G	-44.43	1
2462MHz	Pass	2.42948G	7.68	-22.32	1.93798G	-52.99	2.39218G	-52.16	2.4835G	-44.84	2.48516G	-38.78	22.00501G	-45.33	2
802.11ax HEW40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	2.43198G	1.32	-28.68	856.4M	-51.40	2.39912G	-32.77	2.4G	-36.31	2.48442G	-46.79	13.91917G	-44.46	1
2422MHz	Pass	2.43198G	1.32	-28.68	764.8M	-52.59	2.39612G	-36.16	2.4G	-40.62	2.48374G	-46.90	24.79527G	-44.75	2
2437MHz	Pass	2.43198G	1.32	-28.68	760.8M	-51.51	2.4G	-38.30	2.4835G	-43.30	2.4847G	-40.40	23.46871G	-44.66	1
2437MHz	Pass	2.43198G	1.32	-28.68	762.51M	-52.46	2.399G	-35.58	2.4835G	-39.30	2.4907G	-39.07	16.97615G	-44.80	2
2452MHz	Pass	2.43198G	1.32	-28.68	951.15M	-52.74	2.3992G	-51.24	2.4835G	-49.69	2.48714G	-41.93	14.85309G	-44.74	1
2452MHz	Pass	2.43198G	1.32	-28.68	870.14M	-52.82	2.39604G	-48.84	2.4835G	-44.20	2.4857G	-40.16	24.13339G	-43.84	2

802.11b_Nss1,(1Mbps)_2TX **CSENdB**

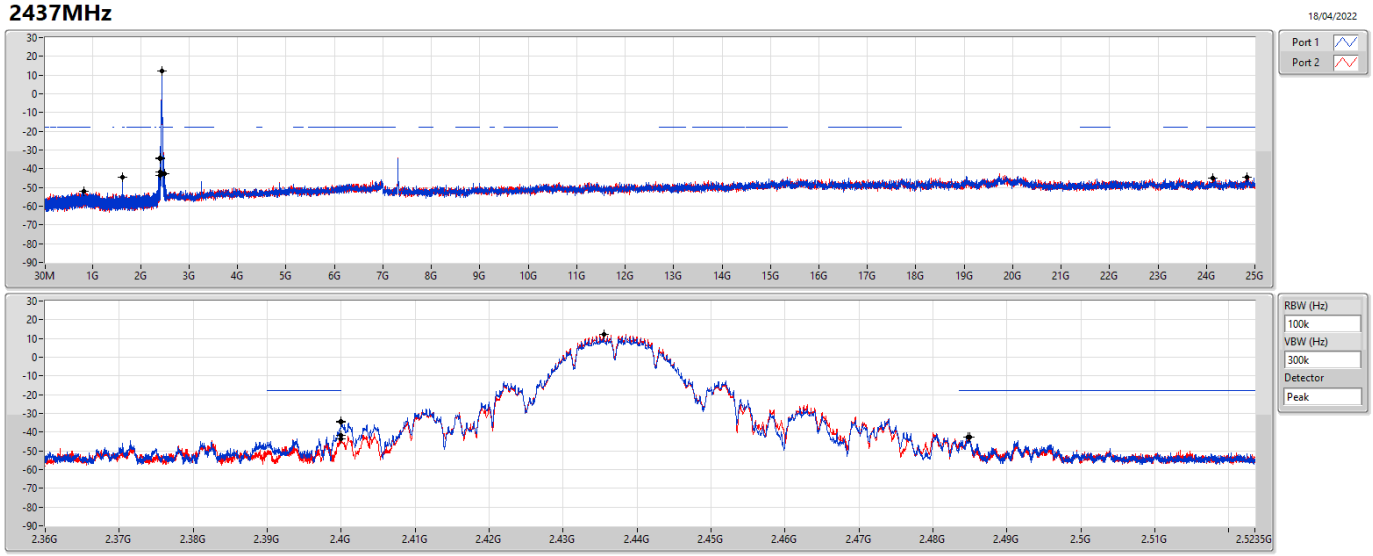
2412MHz



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
2.43549G	12.36	-17.64	877.25M	-52.88	2.397G	-28.74	2.4G	-36.55	2.49446G	-51.18	7.23514G	-37.16	1
2.43549G	12.36	-17.64	844.63M	-53.07	2.39698G	-29.31	2.4G	-38.47	2.51686G	-50.97	7.23233G	-35.41	2

802.11b_Nss1,(1Mbps)_2TX **CSENdB**

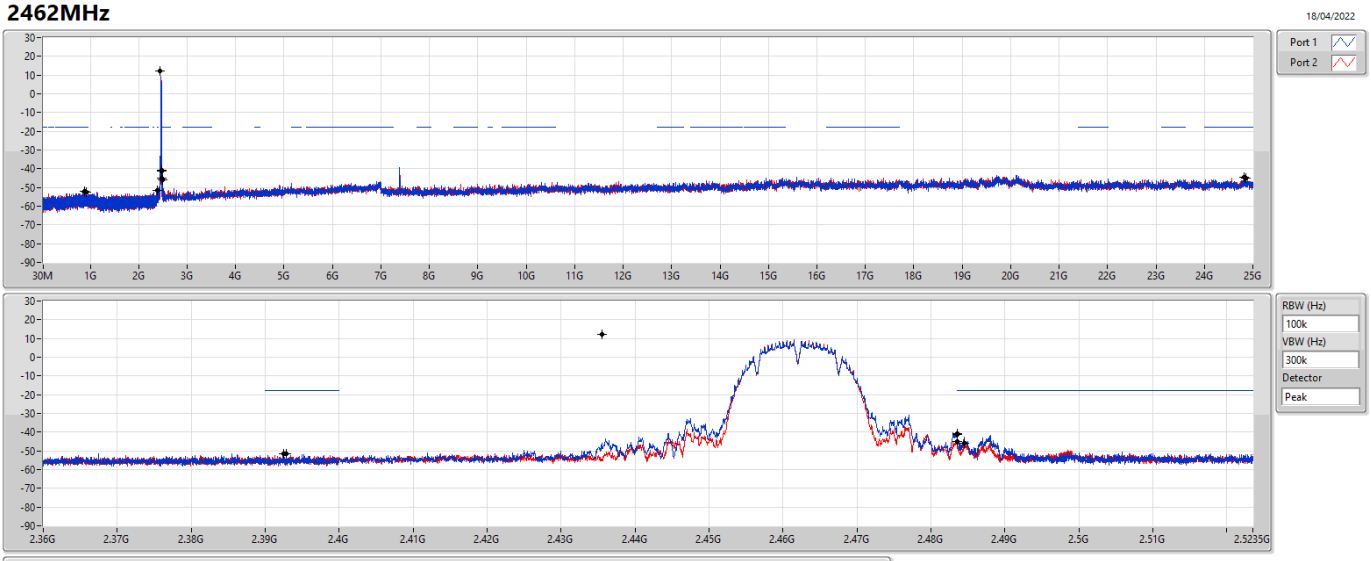
2437MHz



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
2.43549G	12.36	-17.64	1.62459G	-44.70	2.4G	-34.87	2.4G	-34.05	2.48496G	-42.58	24.84547G	-44.66	1
2.43549G	12.36	-17.64	817.83M	-51.88	2.4G	-41.60	2.4G	-43.48	2.48478G	-42.53	24.13185G	-45.07	2

802.11b_Nss1,(1Mbps)_2TX **CSENdB**

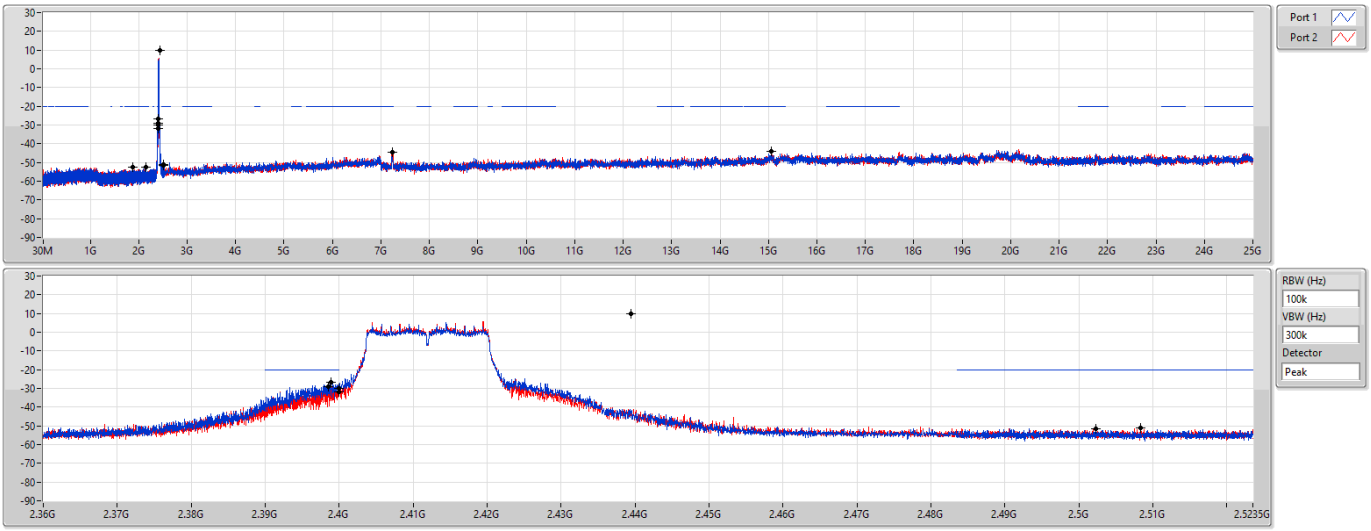
2462MHz



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
2.43549G	12.36	-17.64	880.16M	-52.03	2.3925G	-51.70	2.4835G	-40.76	2.4835G	-41.17	24.81738G	-44.63	1
2.43549G	12.36	-17.64	921.23M	-52.45	2.39288G	-51.44	2.4835G	-44.95	2.48444G	-46.02	24.8539G	-44.98	2

802.11g_Nss1,(6Mbps)_2TX **CSENdB**

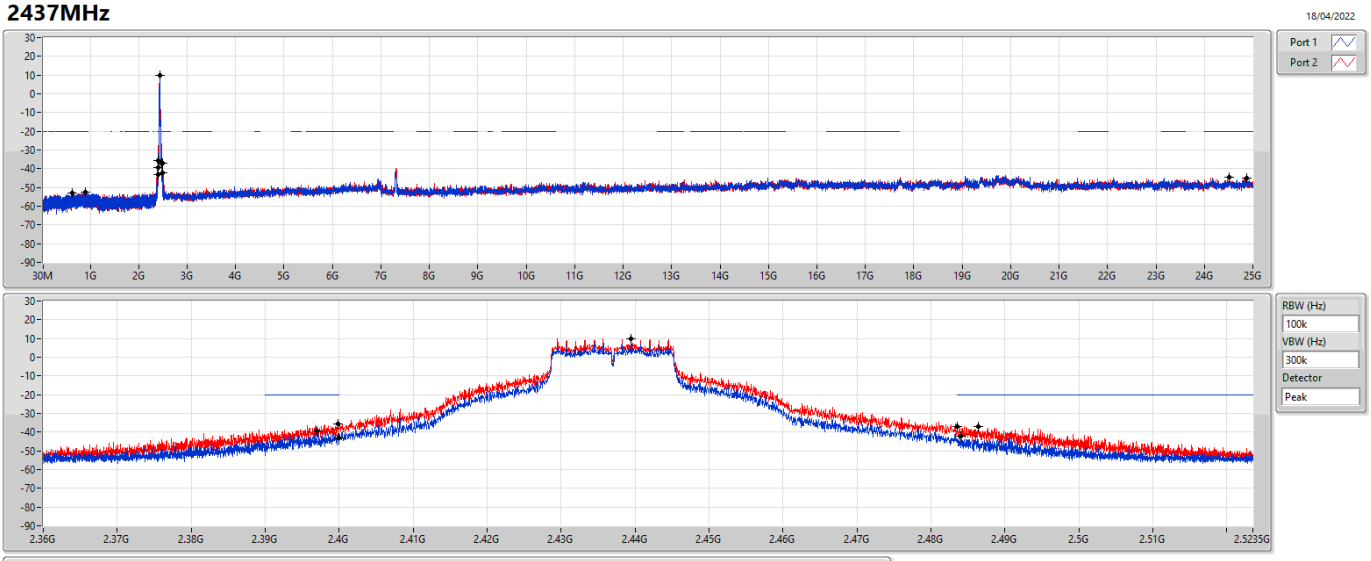
2412MHz



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
2.43945G	9.83	-20.17	1.86895G	-52.30	2.39892G	-26.89	2.4G	-30.10	2.5023G	-51.41	7.23514G	-44.64	1
2.43945G	9.83	-20.17	2.15613G	-52.67	2.39858G	-28.87	2.4G	-31.72	2.50828G	-50.88	15.05696G	-43.90	2

802.11g_Nss1,(6Mbps)_2TX **CSENdB**

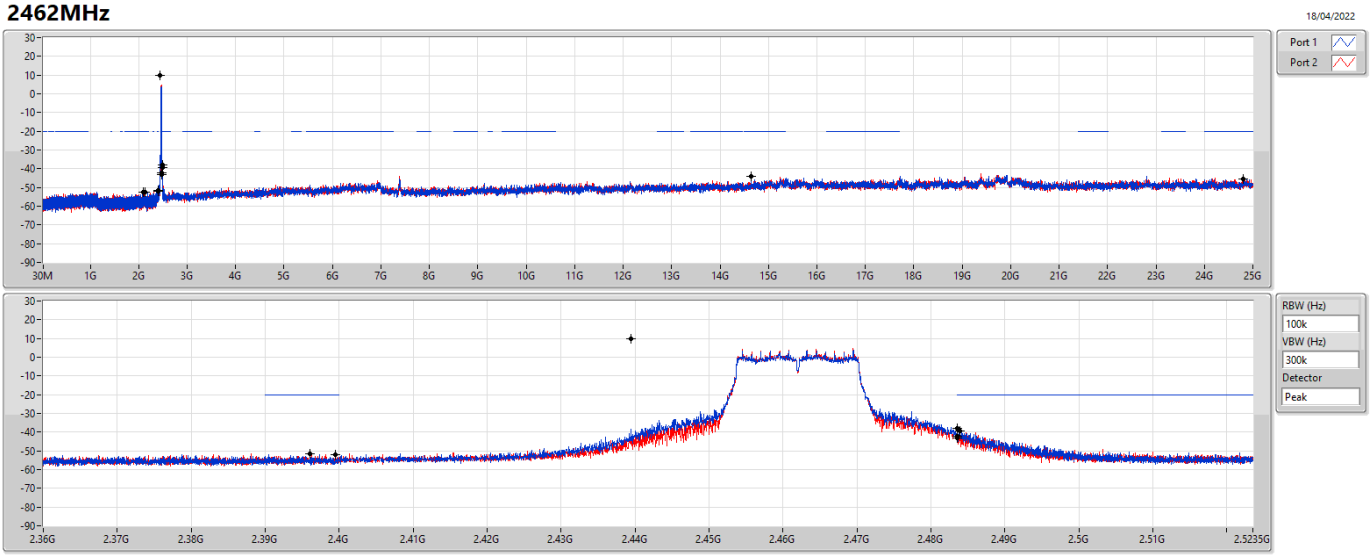
2437MHz



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
2.43945G	9.83	-20.17	620.66M	-52.97	2.39696G	-39.47	2.4G	-43.09	2.484G	-42.37	24.51114G	-44.66	1
2.43945G	9.83	-20.17	892.68M	-52.61	2.39984G	-35.81	2.4835G	-37.12	2.48636G	-36.89	24.87919G	-44.95	2

802.11g_Nss1,(6Mbps)_2TX **CSENdB**

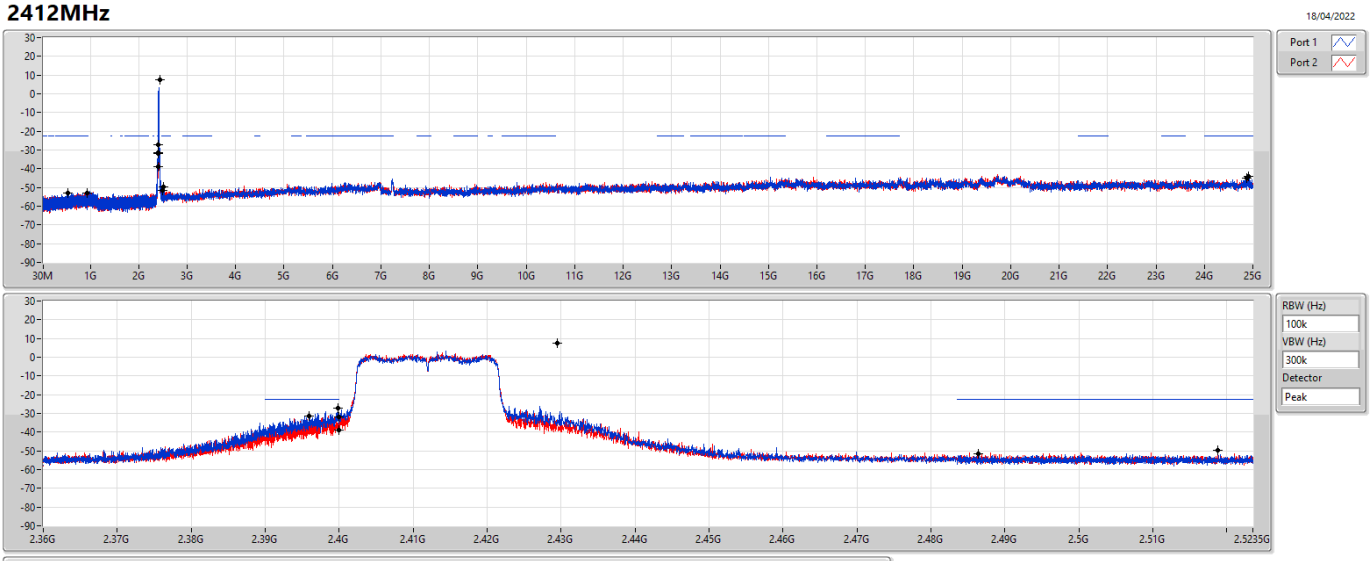
2462MHz



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
2.43945G	9.83	-20.17	2.1337G	-52.51	2.39606G	-51.68	2.4835G	-43.05	2.48356G	-38.09	24.80614G	-45.27	1
2.43945G	9.83	-20.17	2.09788G	-52.68	2.39952G	-51.95	2.4835G	-42.24	2.4839G	-39.40	14.64395G	-44.26	2

802.11ax HEW20_Nss1,(MCS0)_2TX **CSENdB**

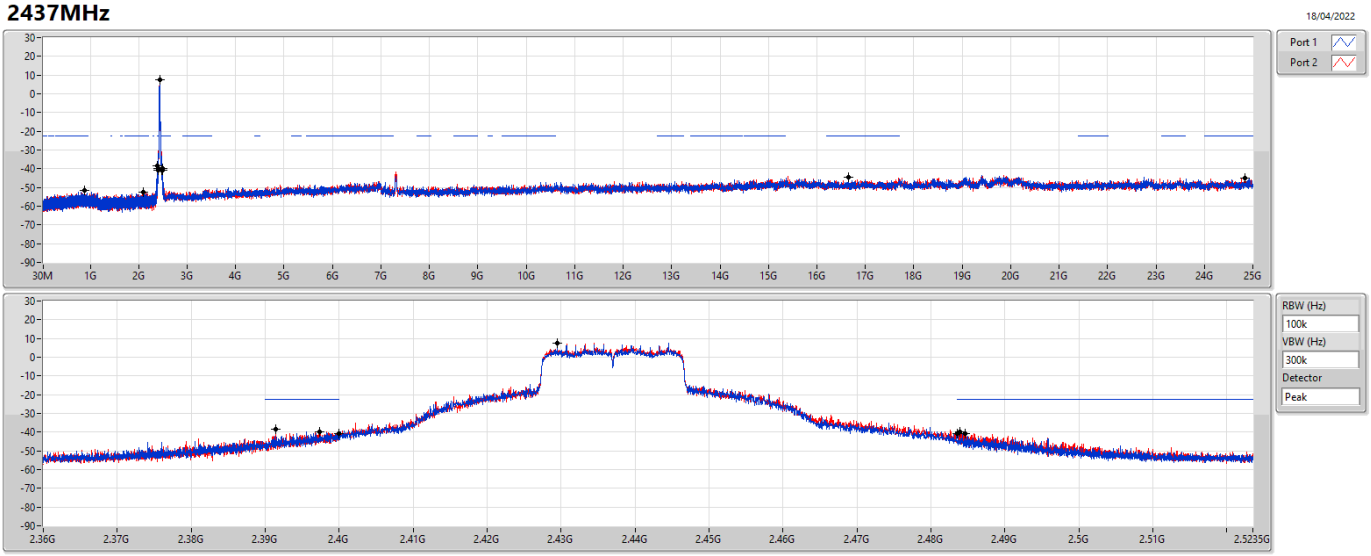
2412MHz



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
2.42948G	7.68	-22.32	535.9M	-52.78	2.39982G	-27.05	2.4G	-31.97	2.48642G	-51.53	24.91009G	-44.14	1
2.42948G	7.68	-22.32	926.76M	-52.99	2.39598G	-31.33	2.4G	-38.87	2.51874G	-49.83	24.87638G	-45.22	2

802.11ax HEW20_Nss1,(MCS0)_2TX **CSENdB**

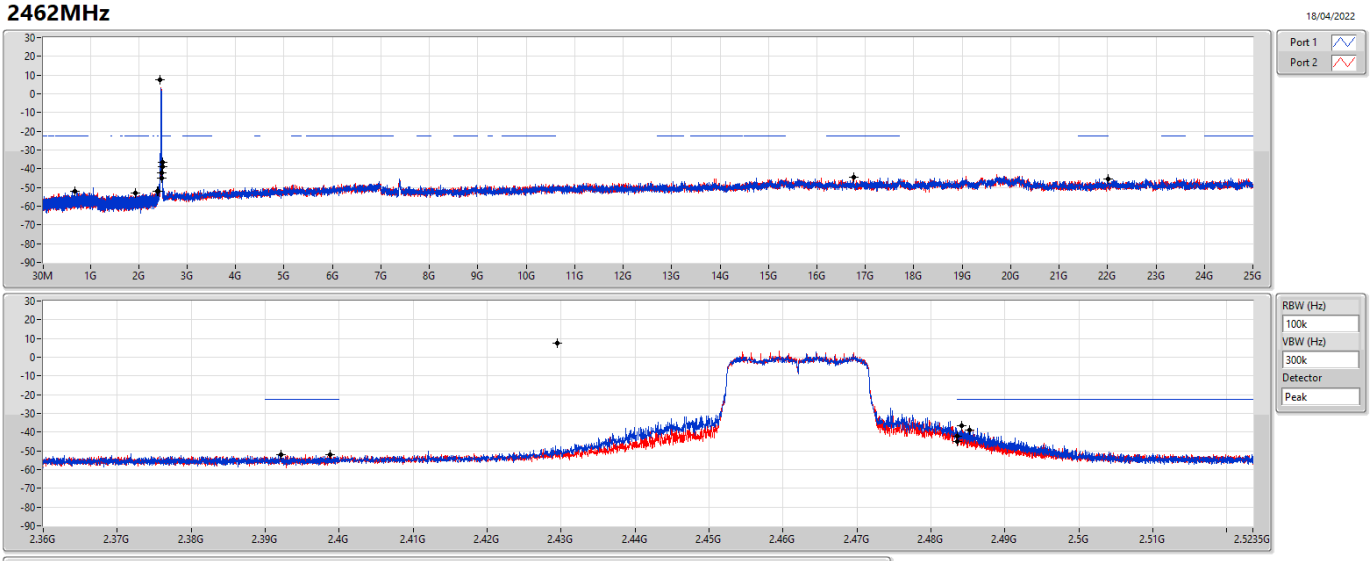
2437MHz



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
2.42948G	7.68	-22.32	889.77M	-51.43	2.39736G	-39.68	2.4G	-40.82	2.48456G	-40.78	16.64998G	-44.72	1
2.42948G	7.68	-22.32	2.0903G	-52.47	2.39138G	-38.53	2.4835G	-41.00	2.48388G	-39.77	24.84547G	-45.04	2

802.11ax HEW20_Nss1,(MCS0)_2TX **CSENdB**

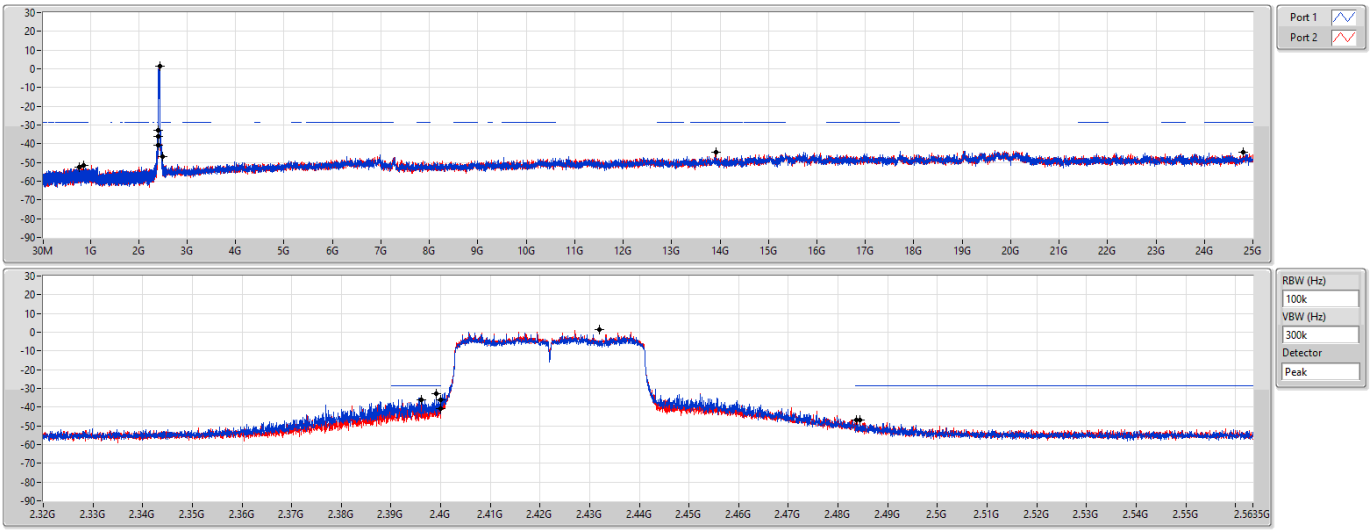
2462MHz



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
2.42948G	7.68	-22.32	689.39M	-52.22	2.39876G	-52.08	2.4835G	-42.30	2.48416G	-36.54	16.75674G	-44.43	1
2.42948G	7.68	-22.32	1.93798G	-52.99	2.39218G	-52.16	2.4835G	-44.84	2.48516G	-38.78	22.00501G	-45.33	2

802.11ax HEW40_Nss1,(MCS0)_2TX **CSENdB**

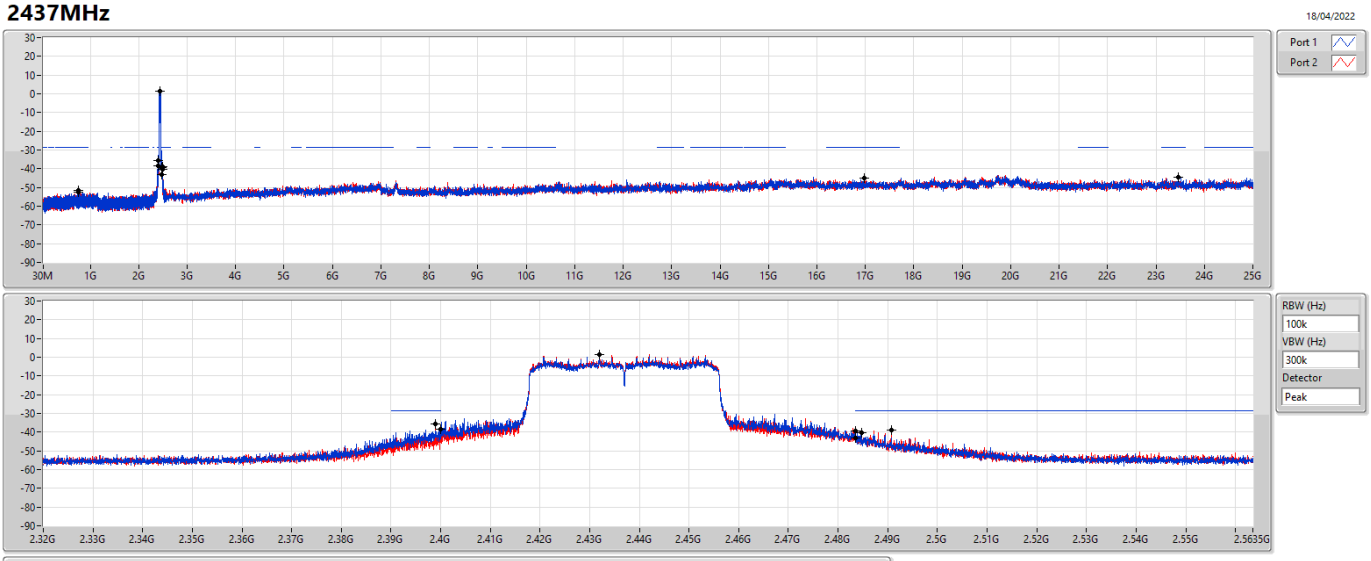
2422MHz



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
2.43198G	1.32	-28.68	856.4M	-51.40	2.39912G	-32.77	2.4G	-36.31	2.48442G	-46.79	13.91917G	-44.46	1
2.43198G	1.32	-28.68	764.8M	-52.59	2.39612G	-36.16	2.4G	-40.62	2.48374G	-46.90	24.79527G	-44.75	2

802.11ax HEW40_Nss1,(MCS0)_2TX **CSENdB**

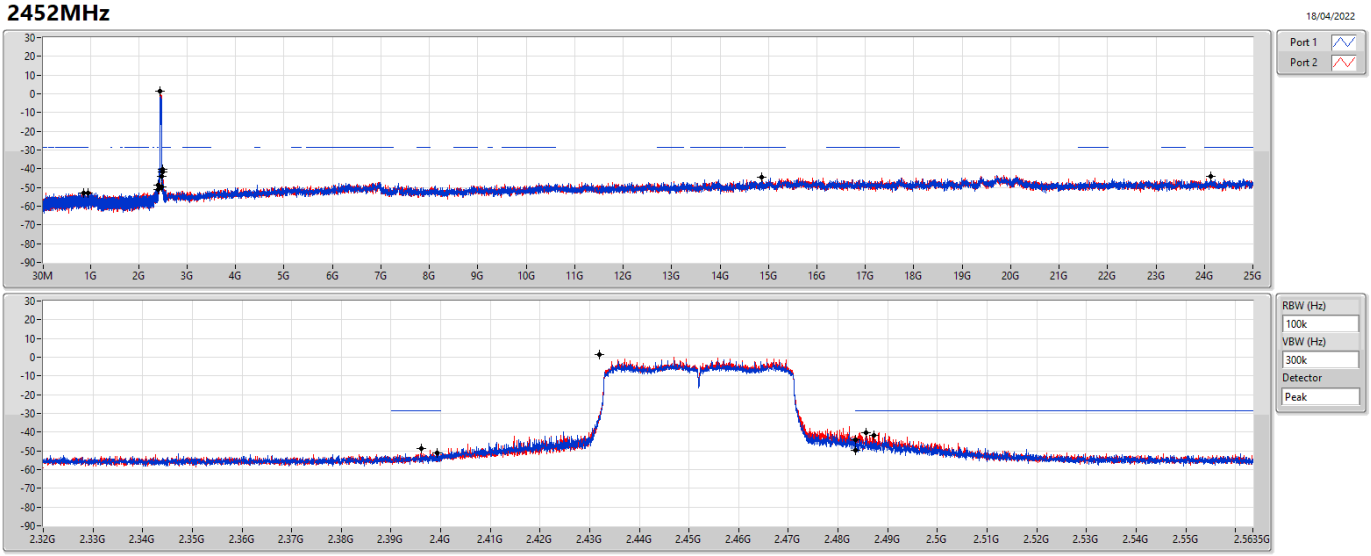
2437MHz



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
2.43198G	1.32	-28.68	760.8M	-51.51	2.4G	-38.30	2.4835G	-43.30	2.4847G	-40.40	23.46871G	-44.66	1
2.43198G	1.32	-28.68	762.51M	-52.46	2.399G	-35.58	2.4835G	-39.30	2.4907G	-39.07	16.97615G	-44.80	2

802.11ax HEW40_Nss1,(MCS0)_2TX **CSENdB**

2452MHz

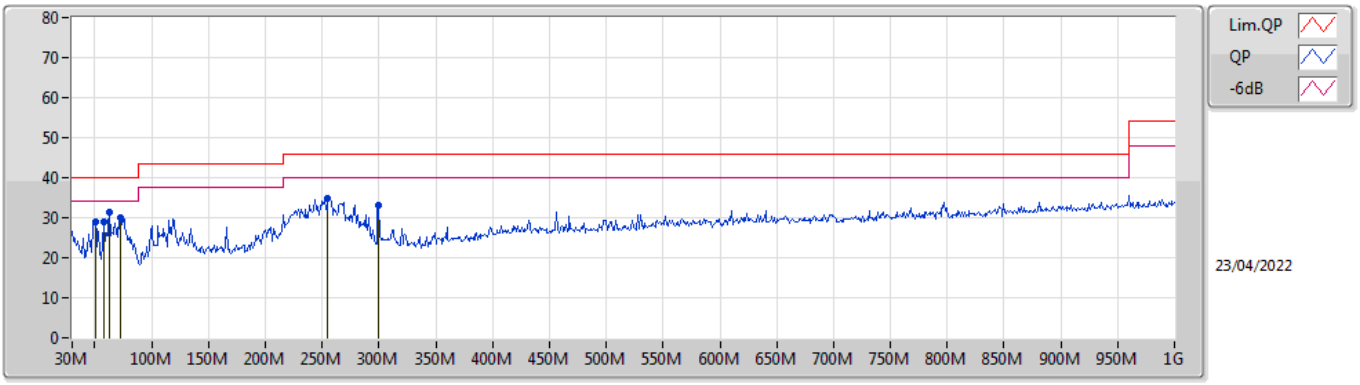


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43198G	1.32	-28.68	951.15M	-52.74	2.3992G	-51.24	2.4835G	-49.69	2.48714G	-41.93	14.85309G	-44.74	1
2.43198G	1.32	-28.68	870.14M	-52.82	2.39604G	-48.84	2.4835G	-44.20	2.4857G	-40.16	24.13339G	-43.84	2

Summary

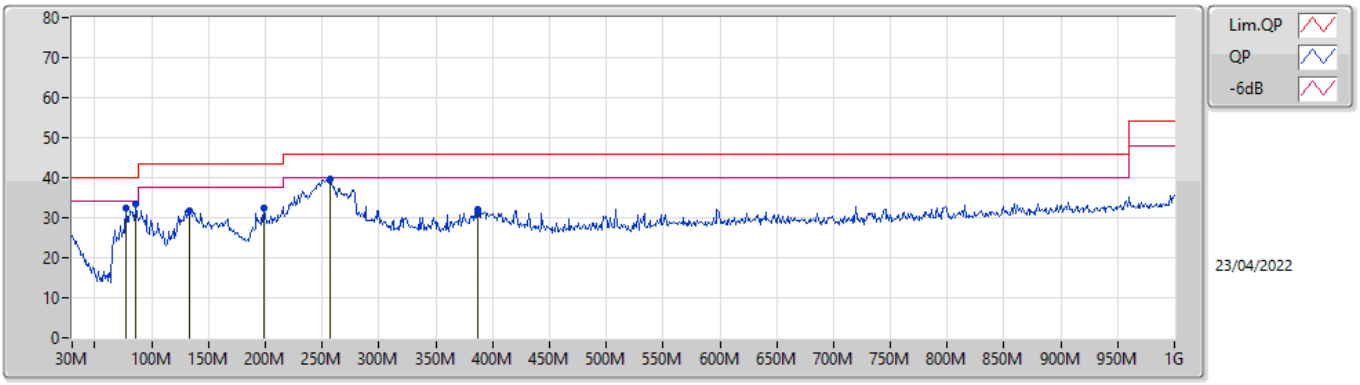
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	PK	256.98M	39.72	46.00	-6.28	Horizontal

Mode 1



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
PK	50.37M	28.85	40.00	-11.15	-16.74	3	Vertical	299	1.00	-	45.59	13.92	1.10	31.76
PK	58.13M	28.92	40.00	-11.08	-18.35	3	Vertical	136	1.00	-	47.27	12.32	1.16	31.83
PK	62.98M	31.45	40.00	-8.55	-18.44	3	Vertical	103	1.50	"Worst"	49.89	12.22	1.20	31.86
PK	72.68M	30.05	40.00	-9.95	-18.43	3	Vertical	106	1.25	-	48.48	12.17	1.30	31.90
PK	255.04M	34.89	46.00	-11.11	-10.68	3	Vertical	43	1.50	-	45.57	18.82	2.52	32.02
PK	299.66M	33.10	46.00	-12.90	-10.30	3	Vertical	56	2.00	-	43.40	19.08	2.70	32.08

Mode 1



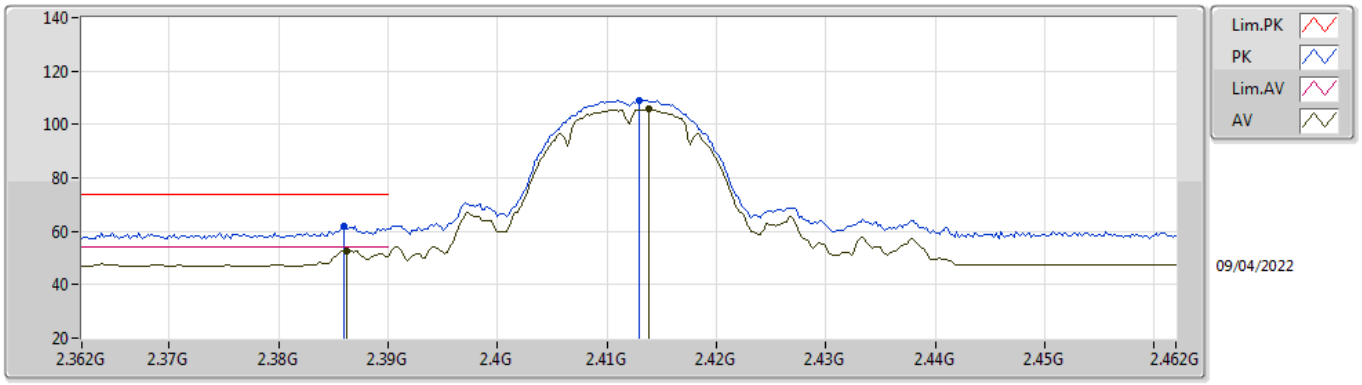
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
PK	77.53M	32.54	40.00	-7.46	-18.12	3	Horizontal	194	2.00	-	50.66	12.49	1.30	31.91
PK	86.26M	33.37	40.00	-6.63	-16.59	3	Horizontal	168	2.00	-	49.96	13.89	1.43	31.91
PK	132.82M	31.85	43.50	-11.65	-12.73	3	Horizontal	172	1.50	-	44.58	17.49	1.73	31.95
PK	198.78M	32.51	43.50	-10.99	-14.76	3	Horizontal	173	2.00	-	47.27	15.04	2.19	31.99
PK	256.98M	39.72	46.00	-6.28	-10.43	3	Horizontal	159	1.50	"Worst"	50.15	19.06	2.53	32.02
PK	386.96M	32.19	46.00	-13.81	-7.97	3	Horizontal	135	1.00	-	40.16	21.05	3.15	32.17

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	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_2TX	Pass	AV	2.3862G	52.99	54.00	-1.01	3	Horizontal	155.9	1.78	-

802.11b_Nss1,(1Mbps)_2TX

2412MHz_TX

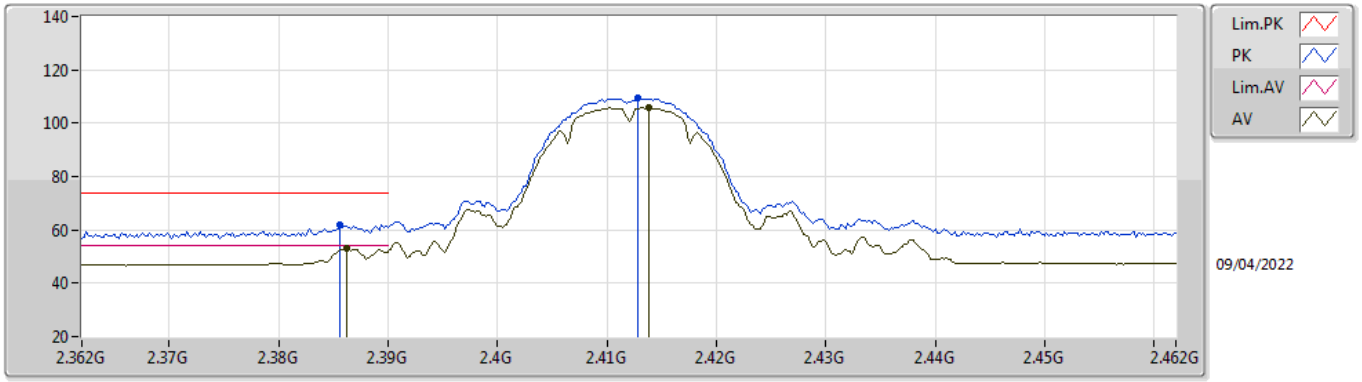


EUT X_2TX
Setting 22
02-B-E-2

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	2.386G	61.99	74.00	-12.01	30.83	3	Vertical	164.5	1.14	-	28.37	2.79	-
AV	2.3862G	52.70	54.00	-1.30	21.54	3	Vertical	164.5	1.14	-	28.37	2.79	-
PK	2.413G	109.07	Inf	-Inf	77.86	3	Vertical	164.5	1.14	-	28.40	2.81	-
AV	2.4138G	105.68	Inf	-Inf	74.47	3	Vertical	164.5	1.14	-	28.40	2.81	-

802.11b_Nss1,(1Mbps)_2TX

2412MHz_TX

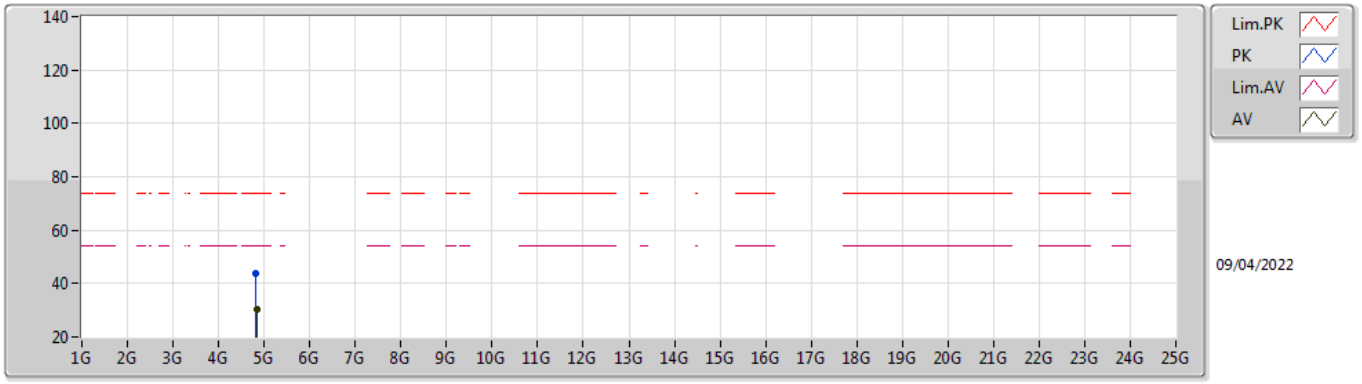


EUT X_2TX
Setting 22
02-B-E-2

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	2.3856G	62.07	74.00	-11.93	30.91	3	Horizontal	155.9	1.78	-	28.37	2.79	-
AV	2.3862G	52.99	54.00	-1.01	21.83	3	Horizontal	155.9	1.78	-	28.37	2.79	-
PK	2.4128G	109.54	Inf	-Inf	78.33	3	Horizontal	155.9	1.78	-	28.40	2.81	-
AV	2.4138G	105.82	Inf	-Inf	74.61	3	Horizontal	155.9	1.78	-	28.40	2.81	-

802.11b_Nss1,(1Mbps)_2TX

2412MHz_TX

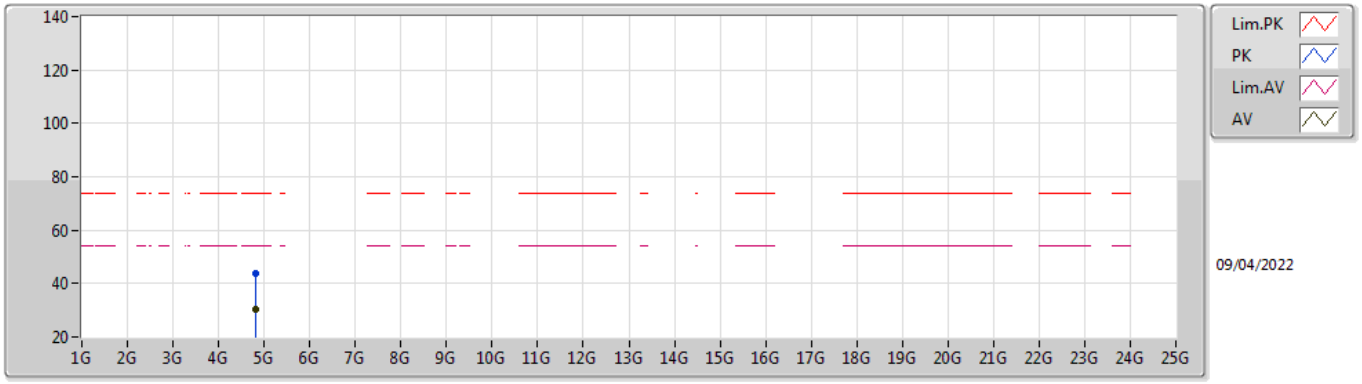


EUT X_2TX
Setting 22
02-B-E-2

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	4.8243G	43.91	74.00	-30.09	38.23	3	Vertical	54	1.16	-	32.80	5.10	32.22
AV	4.8321G	30.52	54.00	-23.48	24.81	3	Vertical	54	1.16	-	32.83	5.10	32.22

802.11b_Nss1,(1Mbps)_2TX

2412MHz_TX

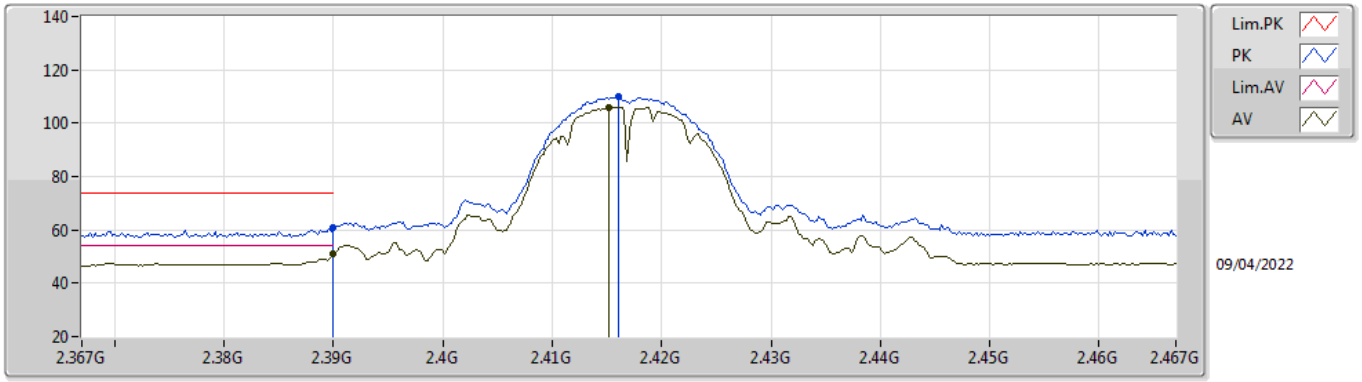


EUT X_2TX
Setting 22
02-B-E-2

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	4.8252G	43.76	74.00	-30.24	38.08	3	Horizontal	247	1.72	-	32.80	5.10	32.22
AV	4.81152G	30.59	54.00	-23.41	24.97	3	Horizontal	247	1.72	-	32.75	5.10	32.23

802.11b_Nss1,(1Mbps)_2TX

2417MHz_TX

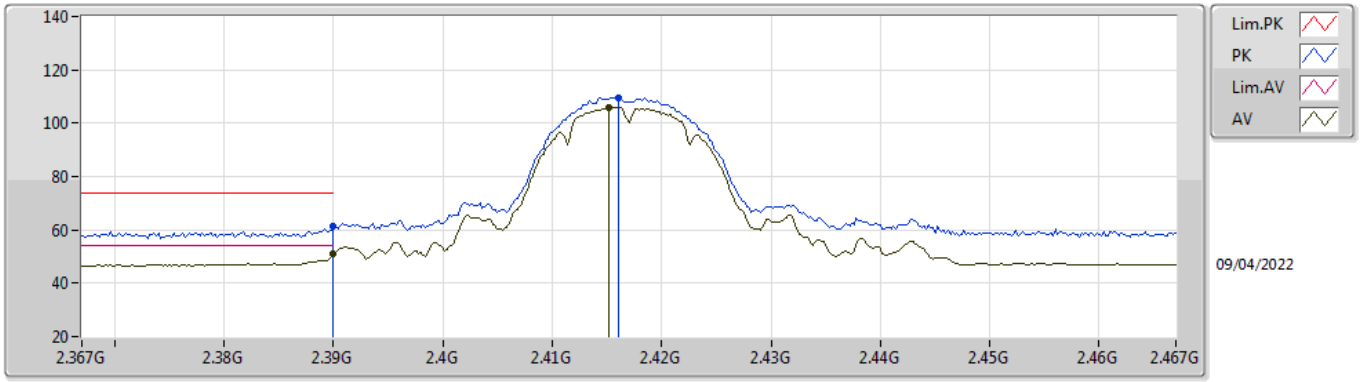


EUT X_2TX
Setting 22
02-B-E-2

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	2.39G	60.98	74.00	-13.02	29.81	3	Vertical	165.1	1.14	-	28.38	2.79	-
AV	2.39G	51.06	54.00	-2.94	19.89	3	Vertical	165.1	1.14	-	28.38	2.79	-
PK	2.416G	109.76	Inf	-Inf	78.54	3	Vertical	165.1	1.14	-	28.40	2.82	-
AV	2.4152G	106.03	Inf	-Inf	74.81	3	Vertical	165.1	1.14	-	28.40	2.82	-

802.11b_Nss1,(1Mbps)_2TX

2417MHz_TX

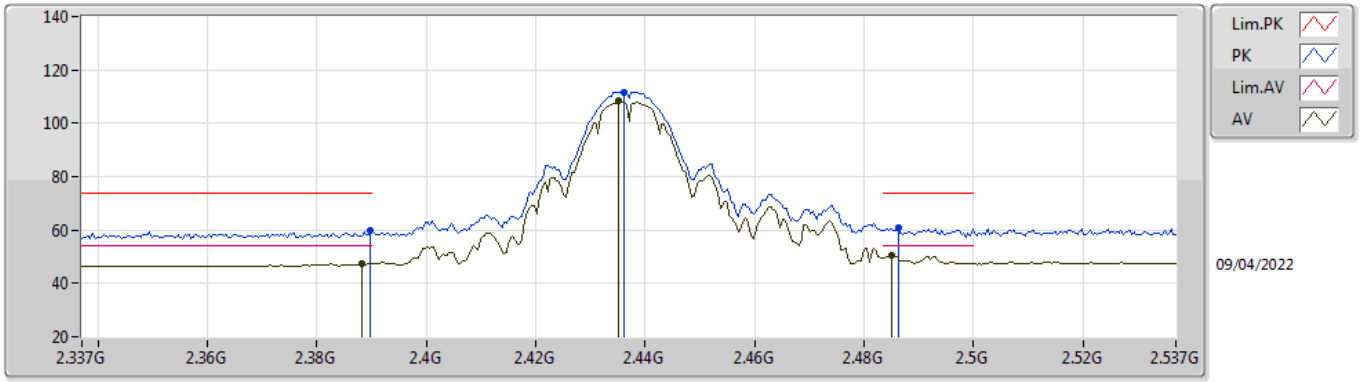


EUT X_2TX
Setting 22
02-B-E-2

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	2.39G	61.23	74.00	-12.77	30.06	3	Horizontal	154.3	1.78	-	28.38	2.79	-
AV	2.39G	51.23	54.00	-2.77	20.06	3	Horizontal	154.3	1.78	-	28.38	2.79	-
PK	2.416G	109.54	Inf	-Inf	78.32	3	Horizontal	154.3	1.78	-	28.40	2.82	-
AV	2.4152G	105.86	Inf	-Inf	74.64	3	Horizontal	154.3	1.78	-	28.40	2.82	-

802.11b_Nss1,(1Mbps)_2TX

2437MHz_TX

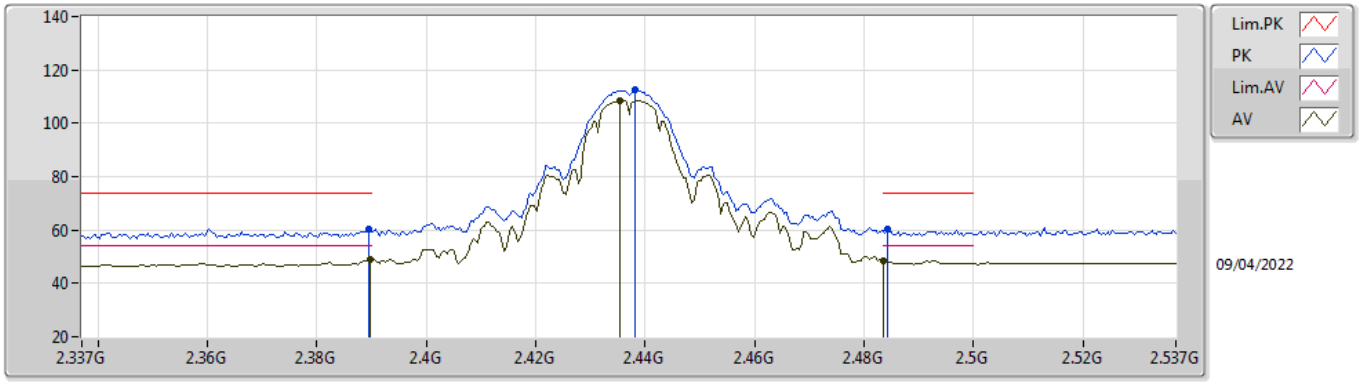


EUT X_2TX
Setting 25.5
02-B-E-2

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	2.3898G	59.64	74.00	-14.36	28.47	3	Vertical	41	2.49	-	28.38	2.79	-
AV	2.3882G	47.41	54.00	-6.59	16.24	3	Vertical	41	2.49	-	28.38	2.79	-
PK	2.4362G	111.79	Inf	-Inf	80.55	3	Vertical	41	2.49	-	28.40	2.84	-
AV	2.435G	108.21	Inf	-Inf	76.98	3	Vertical	41	2.49	-	28.40	2.83	-
PK	2.4862G	60.84	74.00	-13.16	29.41	3	Vertical	41	2.49	-	28.54	2.89	-
AV	2.485G	50.32	54.00	-3.68	18.89	3	Vertical	41	2.49	-	28.54	2.89	-

802.11b_Nss1,(1Mbps)_2TX

2437MHz_TX

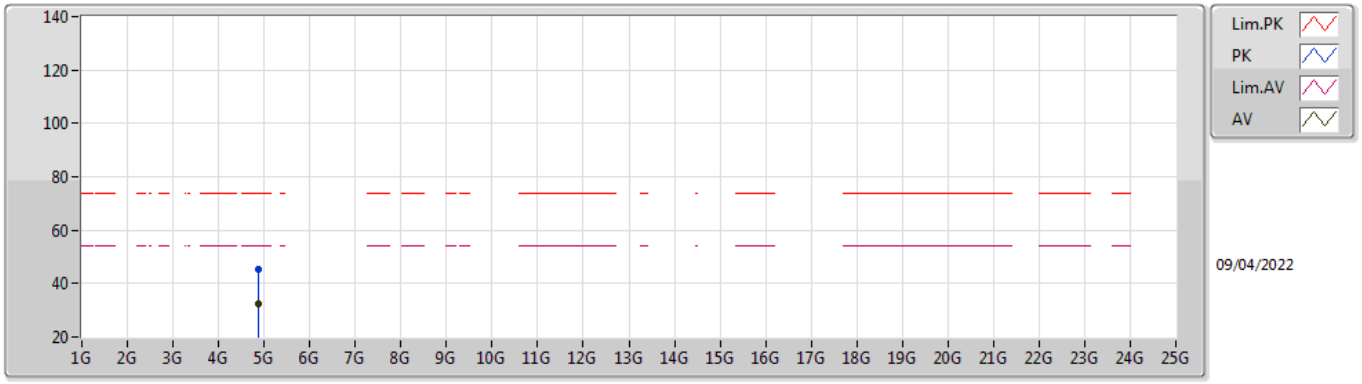


EUT X_2TX
Setting 25.5
02-B-E-2

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	2.3894G	60.60	74.00	-13.40	29.43	3	Horizontal	36.3	1.84	-	28.38	2.79	-
AV	2.3898G	49.05	54.00	-4.95	17.88	3	Horizontal	36.3	1.84	-	28.38	2.79	-
PK	2.4382G	112.51	Inf	-Inf	81.27	3	Horizontal	36.3	1.84	-	28.40	2.84	-
AV	2.4354G	108.69	Inf	-Inf	77.45	3	Horizontal	36.3	1.84	-	28.40	2.84	-
PK	2.4842G	60.14	74.00	-13.86	28.72	3	Horizontal	36.3	1.84	-	28.54	2.88	-
AV	2.4835G	48.70	54.00	-5.30	17.29	3	Horizontal	36.3	1.84	-	28.53	2.88	-

802.11b_Nss1,(1Mbps)_2TX

2437MHz_TX

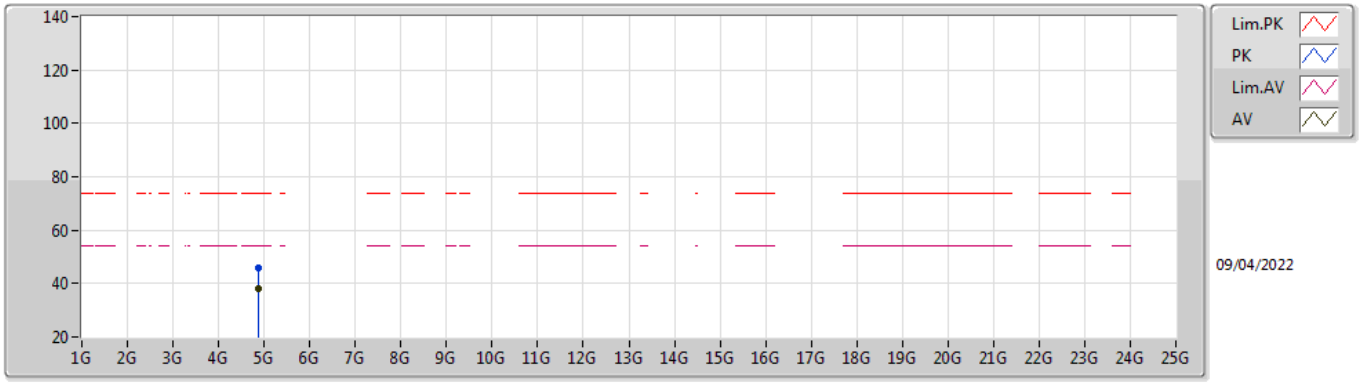


EUT X_2TX
Setting 25.5
02-B-E-2

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	4.87406G	45.30	74.00	-28.70	39.46	3	Vertical	177.7	2.13	-	32.95	5.10	32.21
AV	4.87394G	32.53	54.00	-21.47	26.69	3	Vertical	177.7	2.13	-	32.95	5.10	32.21

802.11b_Nss1,(1Mbps)_2TX

2437MHz_TX

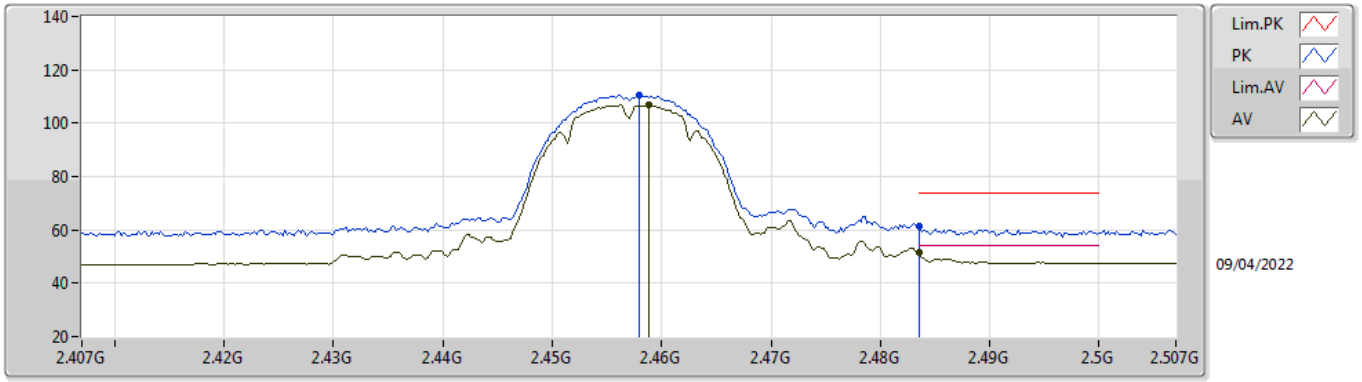


EUT X_2TX
Setting 25.5
02-B-E-2

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	4.87382G	46.10	74.00	-27.90	40.26	3	Horizontal	183	1.70	-	32.95	5.10	32.21
AV	4.87394G	38.15	54.00	-15.85	32.31	3	Horizontal	183	1.70	-	32.95	5.10	32.21

802.11b_Nss1,(1Mbps)_2TX

2457MHz_TX

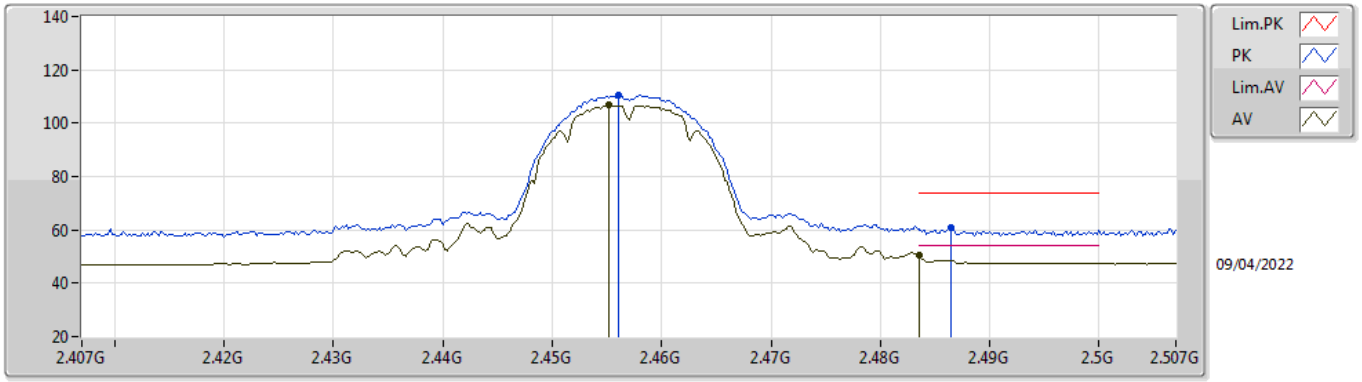


EUT X_2TX
Setting 21.5
02-B-E-2

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	2.458G	110.70	Inf	-Inf	79.41	3	Vertical	43.3	2.05	-	28.43	2.86	-
AV	2.4588G	106.73	Inf	-Inf	75.43	3	Vertical	43.3	2.05	-	28.44	2.86	-
PK	2.4835G	61.55	74.00	-12.45	30.14	3	Vertical	43.3	2.05	-	28.53	2.88	-
AV	2.4835G	51.47	54.00	-2.53	20.06	3	Vertical	43.3	2.05	-	28.53	2.88	-

802.11b_Nss1,(1Mbps)_2TX

2457MHz_TX

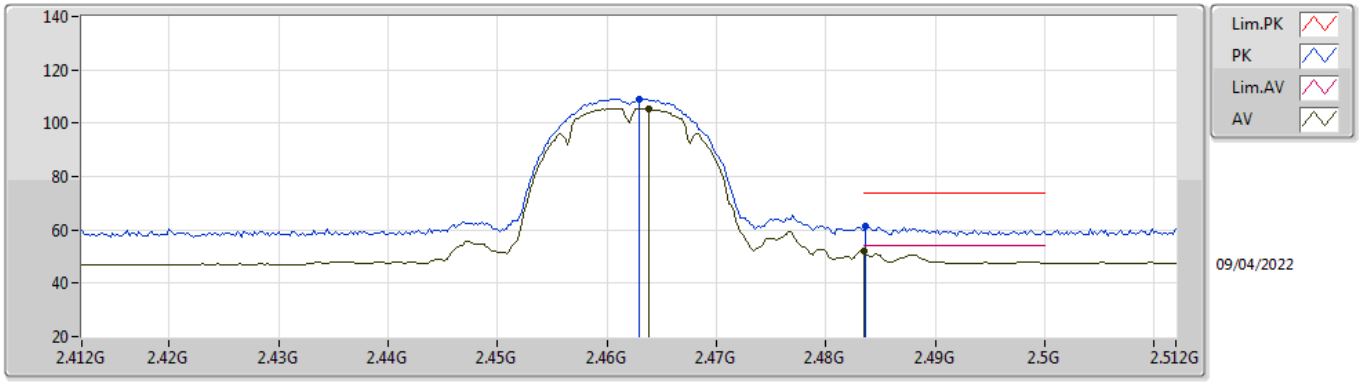


EUT X_2TX
Setting 21.5
02-B-E-2

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	2.456G	110.35	Inf	-Inf	79.07	3	Horizontal	37.6	1.79	-	28.42	2.86	-
AV	2.4552G	106.64	Inf	-Inf	75.36	3	Horizontal	37.6	1.79	-	28.42	2.86	-
PK	2.4864G	60.65	74.00	-13.35	29.21	3	Horizontal	37.6	1.79	-	28.55	2.89	-
AV	2.4835G	50.44	54.00	-3.56	19.03	3	Horizontal	37.6	1.79	-	28.53	2.88	-

802.11b_Nss1,(1Mbps)_2TX

2462MHz_TX

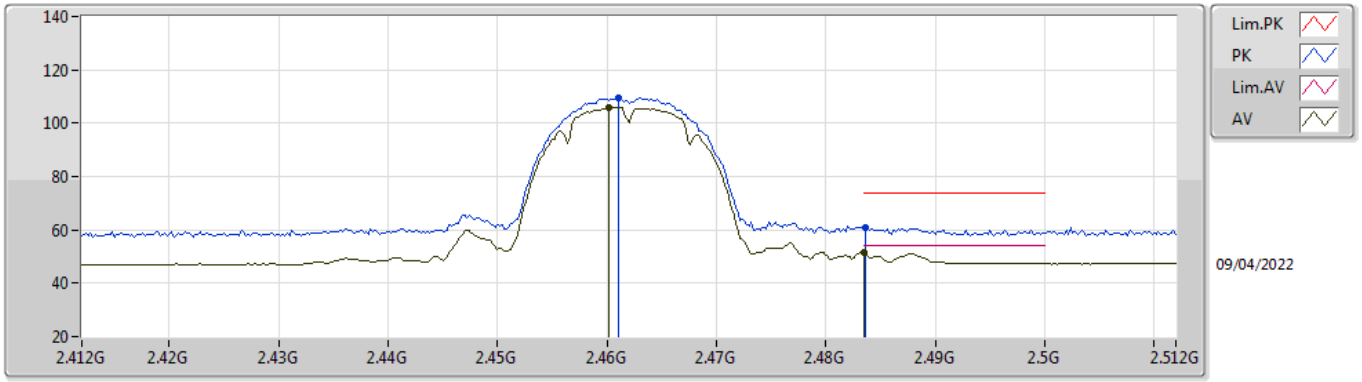


EUT X_2TX
Setting 20.5
02-B-E-2

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	2.463G	109.15	Inf	-Inf	77.84	3	Vertical	42	2.06	-	28.45	2.86	-
AV	2.4638G	105.53	Inf	-Inf	74.21	3	Vertical	42	2.06	-	28.46	2.86	-
PK	2.4836G	61.13	74.00	-12.87	29.72	3	Vertical	42	2.06	-	28.53	2.88	-
AV	2.4835G	52.05	54.00	-1.95	20.64	3	Vertical	42	2.06	-	28.53	2.88	-

802.11b_Nss1,(1Mbps)_2TX

2462MHz_TX

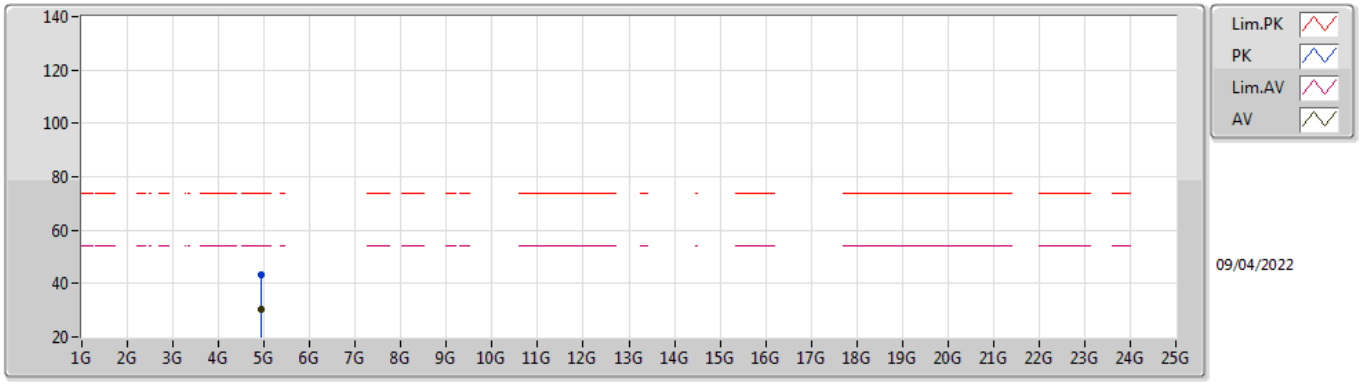


EUT X_2TX
Setting 20.5
02-B-E-2

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	2.461G	109.31	Inf	-Inf	78.01	3	Horizontal	36.3	1.78	-	28.44	2.86	-
AV	2.4602G	105.82	Inf	-Inf	74.52	3	Horizontal	36.3	1.78	-	28.44	2.86	-
PK	2.4836G	60.70	74.00	-13.30	29.29	3	Horizontal	36.3	1.78	-	28.53	2.88	-
AV	2.4835G	51.69	54.00	-2.31	20.28	3	Horizontal	36.3	1.78	-	28.53	2.88	-

802.11b_Nss1,(1Mbps)_2TX

2462MHz_TX

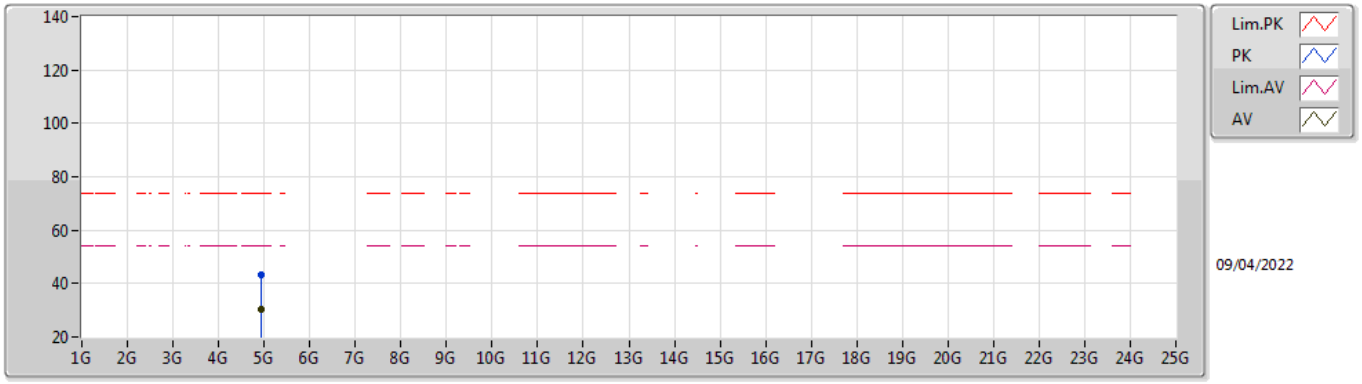


EUT X_2TX
Setting 20.5
02-B-E-2

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	4.92112G	43.49	74.00	-30.51	37.45	3	Vertical	110	1.83	-	33.13	5.10	32.19
AV	4.92346G	30.28	54.00	-23.72	24.23	3	Vertical	110	1.83	-	33.14	5.10	32.19

802.11b_Nss1,(1Mbps)_2TX

2462MHz_TX

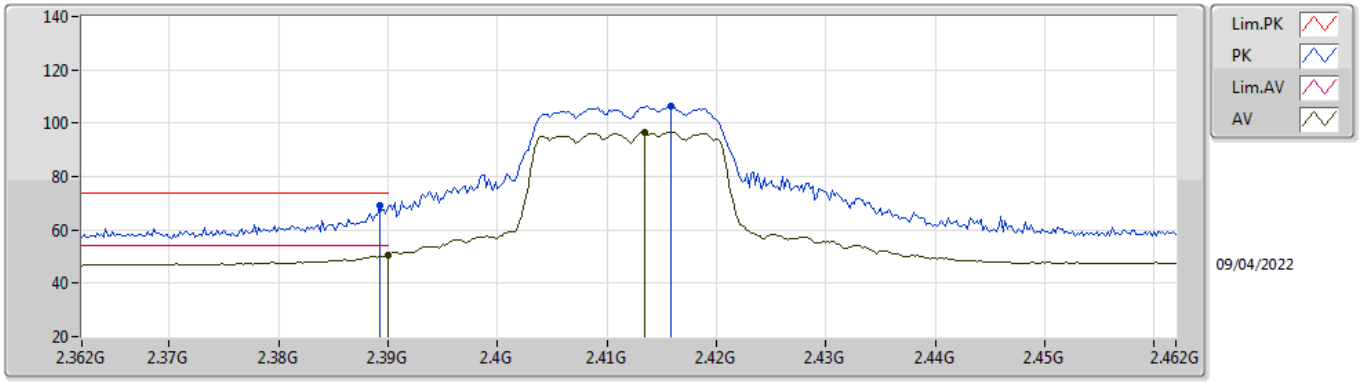


EUT X_2TX
Setting 20.5
02-B-E-2

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	4.91956G	43.08	74.00	-30.92	37.05	3	Horizontal	30	1.33	-	33.12	5.10	32.19
AV	4.92562G	30.37	54.00	-23.63	24.31	3	Horizontal	30	1.33	-	33.15	5.10	32.19

802.11g_Nss1,(6Mbps)_2TX

2412MHz_TX

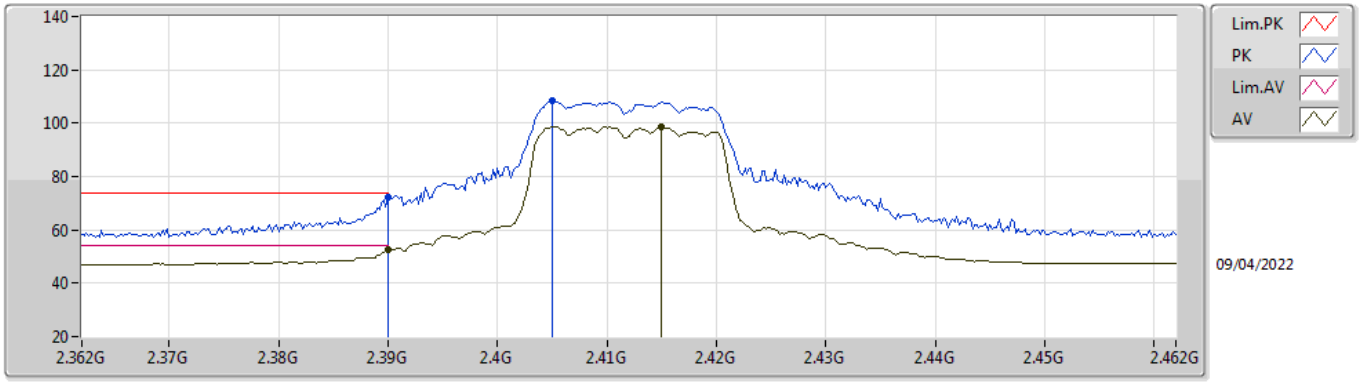


EUT X_2TX
Setting 17.5
02-B-E-2

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	2.3892G	69.01	74.00	-4.99	37.84	3	Vertical	160	1.32	-	28.38	2.79	-
AV	2.39G	50.62	54.00	-3.38	19.45	3	Vertical	160	1.32	-	28.38	2.79	-
PK	2.4158G	106.38	Inf	-Inf	75.16	3	Vertical	160	1.32	-	28.40	2.82	-
AV	2.4134G	96.62	Inf	-Inf	65.41	3	Vertical	160	1.32	-	28.40	2.81	-

802.11g_Nss1,(6Mbps)_2TX

2412MHz_TX

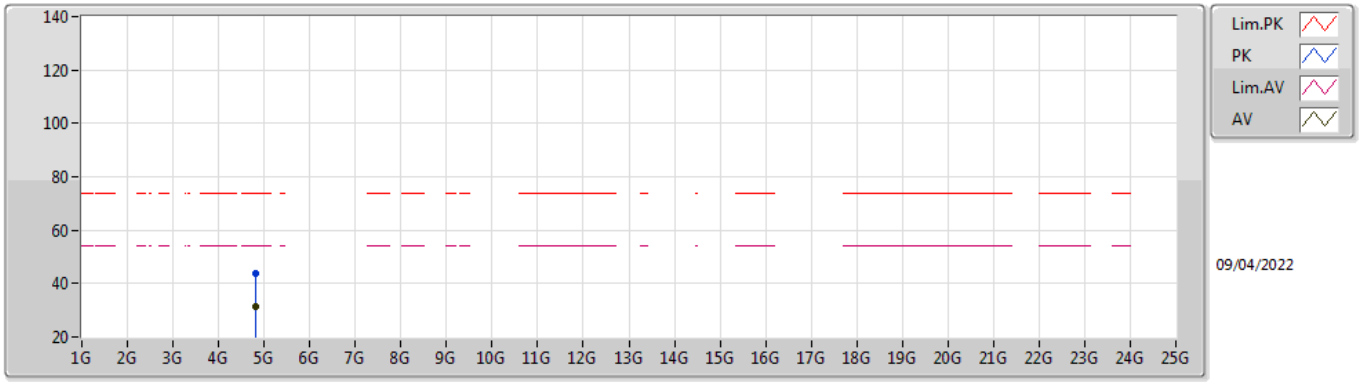


EUT X_2TX
Setting 17.5
02-B-E-2

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	2.39G	72.31	74.00	-1.69	41.14	3	Horizontal	11.4	2.08	-	28.38	2.79	-
AV	2.39G	52.64	54.00	-1.36	21.47	3	Horizontal	11.4	2.08	-	28.38	2.79	-
PK	2.405G	108.22	Inf	-Inf	77.02	3	Horizontal	11.4	2.08	-	28.40	2.80	-
AV	2.415G	98.57	Inf	-Inf	67.36	3	Horizontal	11.4	2.08	-	28.40	2.81	-

802.11g_Nss1,(6Mbps)_2TX

2412MHz_TX

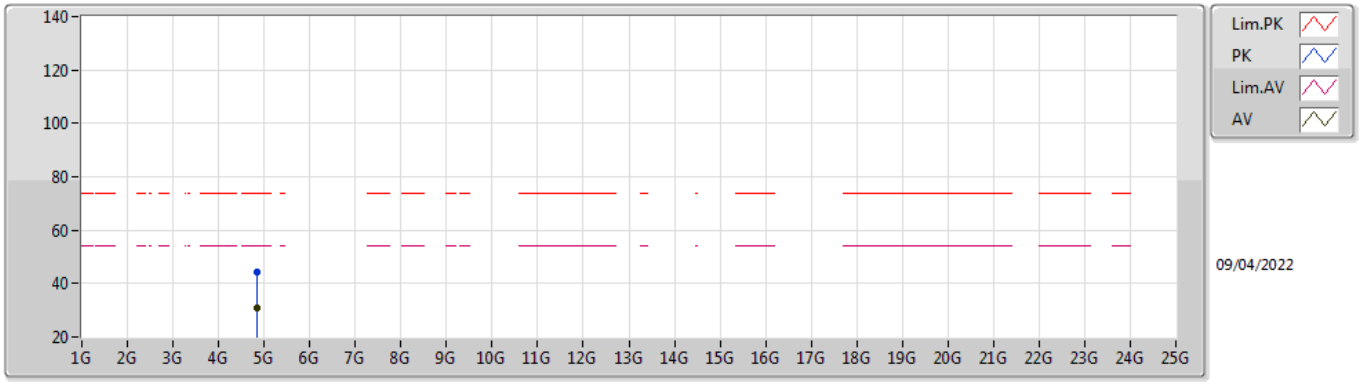


EUT X_2TX
Setting 17.5
02-B-E-2

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	4.81236G	43.76	74.00	-30.24	38.14	3	Vertical	263	1.63	-	32.75	5.10	32.23
AV	4.82118G	31.20	54.00	-22.80	25.54	3	Vertical	263	1.63	-	32.78	5.10	32.22

802.11g_Nss1,(6Mbps)_2TX

2412MHz_TX

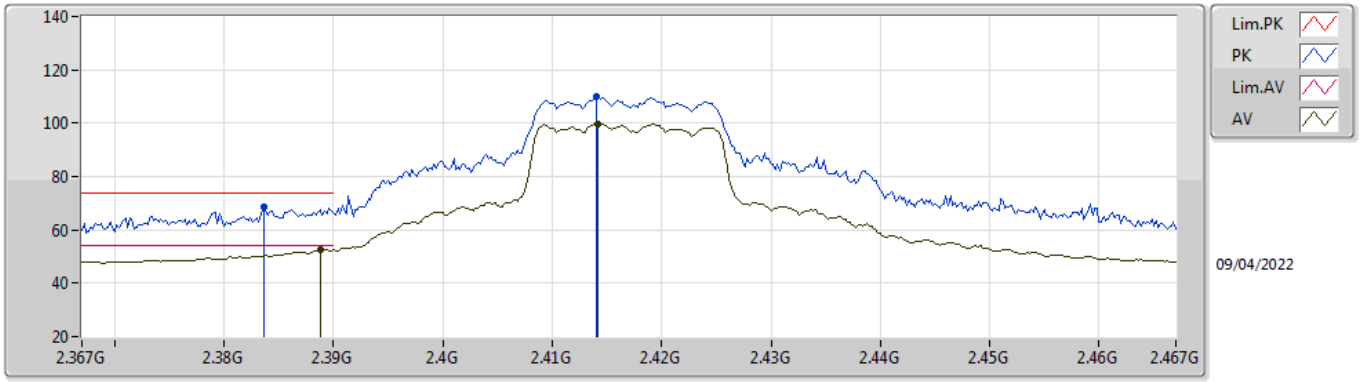


EUT X_2TX
Setting 17.5
02-B-E-2

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	4.83426G	44.07	74.00	-29.93	38.35	3	Horizontal	4	1.83	-	32.84	5.10	32.22
AV	4.83252G	31.02	54.00	-22.98	25.31	3	Horizontal	4	1.83	-	32.83	5.10	32.22

802.11g_Nss1,(6Mbps)_2TX

2417MHz_TX

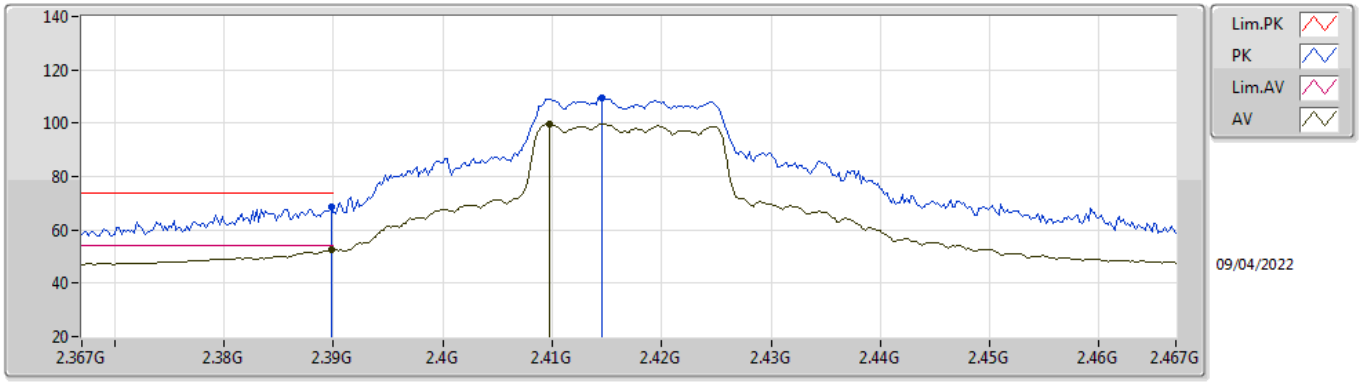


EUT X_2TX
Setting 20
02-B-E-2

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	2.3836G	68.40	74.00	-5.60	37.24	3	Vertical	166.6	1.14	-	28.37	2.79	-
AV	2.3888G	52.57	54.00	-1.43	21.40	3	Vertical	166.6	1.14	-	28.38	2.79	-
PK	2.414G	109.83	Inf	-Inf	78.62	3	Vertical	166.6	1.14	-	28.40	2.81	-
AV	2.4142G	99.91	Inf	-Inf	68.70	3	Vertical	166.6	1.14	-	28.40	2.81	-

802.11g_Nss1,(6Mbps)_2TX

2417MHz_TX

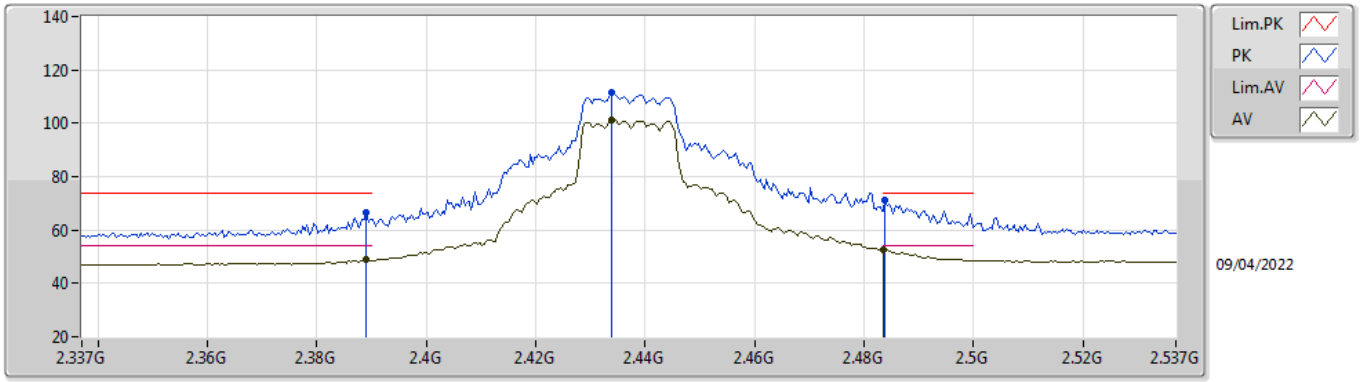


EUT X_2TX
Setting 20
02-B-E-2

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	2.3898G	68.74	74.00	-5.26	37.57	3	Horizontal	160.5	1.77	-	28.38	2.79	-
AV	2.3898G	52.71	54.00	-1.29	21.54	3	Horizontal	160.5	1.77	-	28.38	2.79	-
PK	2.4146G	109.49	Inf	-Inf	78.28	3	Horizontal	160.5	1.77	-	28.40	2.81	-
AV	2.4098G	99.89	Inf	-Inf	68.68	3	Horizontal	160.5	1.77	-	28.40	2.81	-

802.11g_Nss1,(6Mbps)_2TX

2437MHz_TX

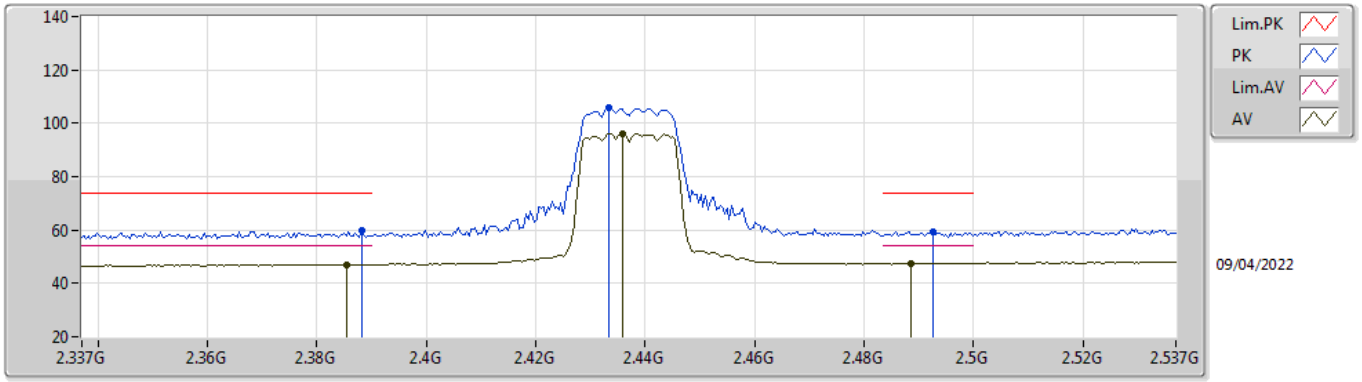


EUT X_2TX
Setting 21
02-B-E-2

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	2.389G	66.70	74.00	-7.30	35.53	3	Vertical	163.5	1.19	-	28.38	2.79	-
AV	2.389G	48.88	54.00	-5.12	17.71	3	Vertical	163.5	1.19	-	28.38	2.79	-
PK	2.4338G	111.38	Inf	-Inf	80.15	3	Vertical	163.5	1.19	-	28.40	2.83	-
AV	2.4338G	101.30	Inf	-Inf	70.07	3	Vertical	163.5	1.19	-	28.40	2.83	-
PK	2.4838G	71.34	74.00	-2.66	39.92	3	Vertical	163.5	1.19	-	28.54	2.88	-
AV	2.4835G	52.68	54.00	-1.32	21.27	3	Vertical	163.5	1.19	-	28.53	2.88	-

802.11g_Nss1,(6Mbps)_2TX

2437MHz_TX

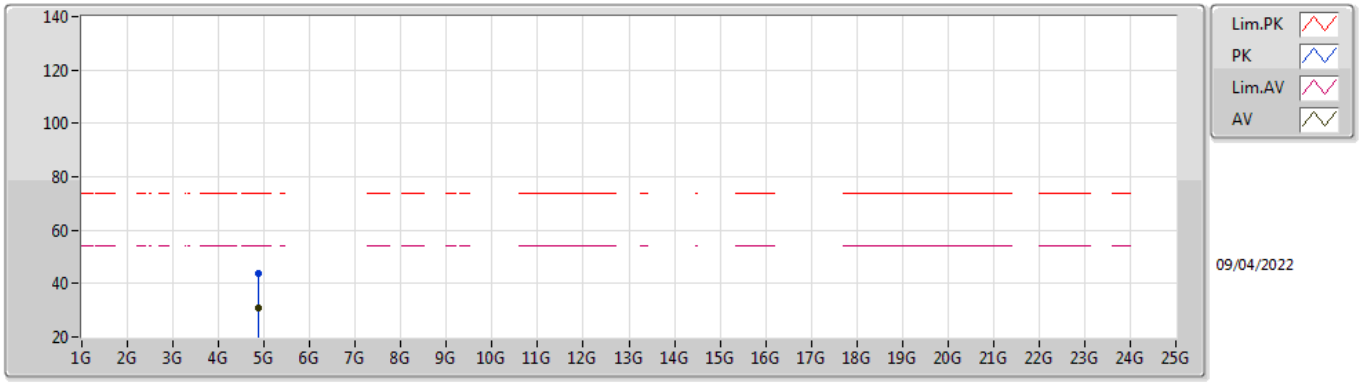


EUT X_2TX
Setting 21
02-B-E-2

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	2.3882G	59.83	74.00	-14.17	28.66	3	Horizontal	36.4	1.86	-	28.38	2.79	-
AV	2.3854G	47.12	54.00	-6.88	15.96	3	Horizontal	36.4	1.86	-	28.37	2.79	-
PK	2.4334G	106.05	Inf	-Inf	74.82	3	Horizontal	36.4	1.86	-	28.40	2.83	-
AV	2.4358G	96.22	Inf	-Inf	64.98	3	Horizontal	36.4	1.86	-	28.40	2.84	-
PK	2.4926G	59.39	74.00	-14.61	27.93	3	Horizontal	36.4	1.86	-	28.57	2.89	-
AV	2.4886G	47.57	54.00	-6.43	16.13	3	Horizontal	36.4	1.86	-	28.55	2.89	-

802.11g_Nss1,(6Mbps)_2TX

2437MHz_TX

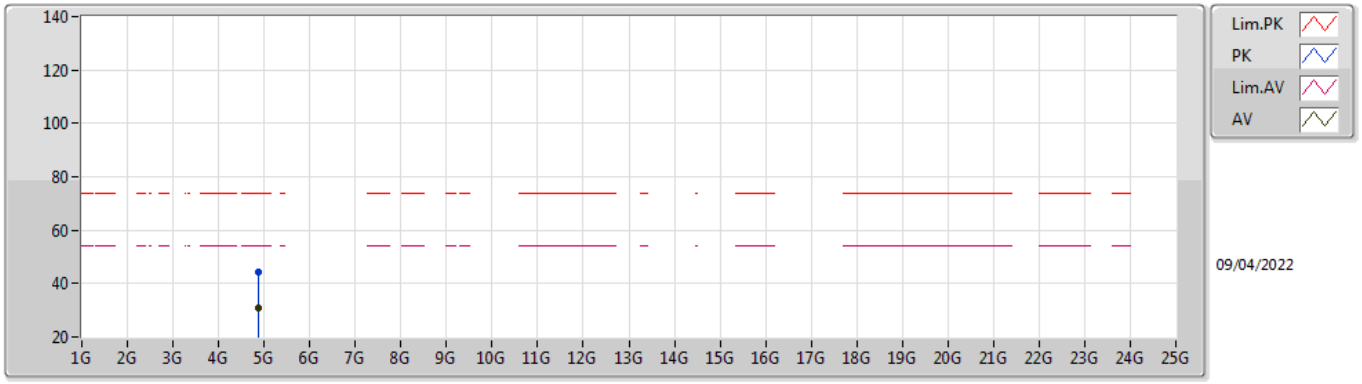


EUT X_2TX
Setting 21
02-B-E-2

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	4.86344G	44.03	74.00	-29.97	38.21	3	Vertical	29	1.67	-	32.93	5.10	32.21
AV	4.8635G	30.93	54.00	-23.07	25.11	3	Vertical	29	1.67	-	32.93	5.10	32.21

802.11g_Nss1,(6Mbps)_2TX

2437MHz_TX

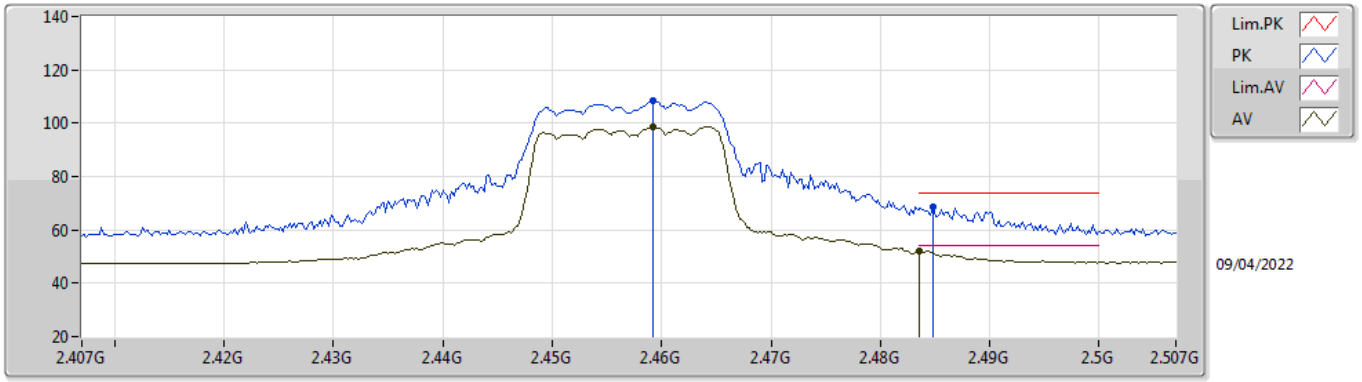


EUT X_2TX
Setting 21
02-B-E-2

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	4.86356G	44.19	74.00	-29.81	38.37	3	Horizontal	128	1.57	-	32.93	5.10	32.21
AV	4.85972G	30.84	54.00	-23.16	25.03	3	Horizontal	128	1.57	-	32.92	5.10	32.21

802.11g_Nss1,(6Mbps)_2TX

2457MHz_TX

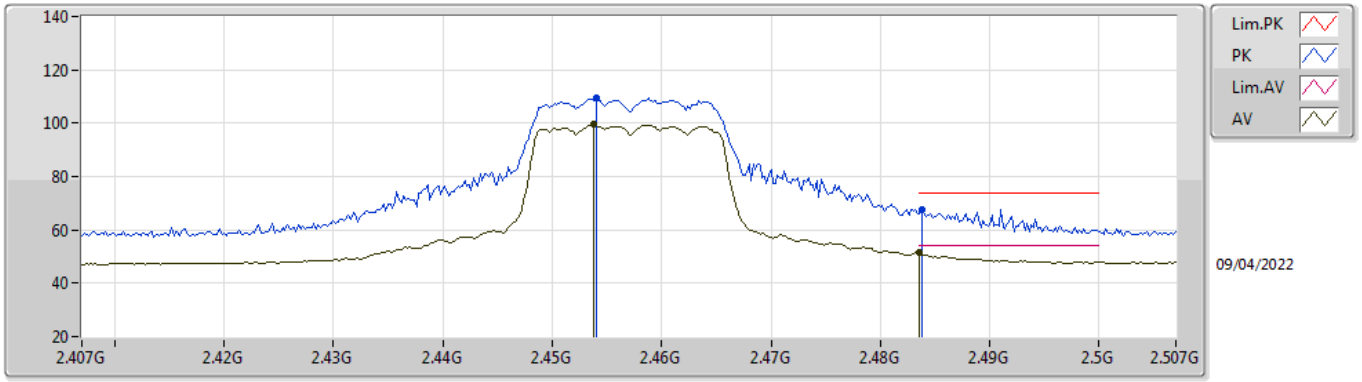


EUT X_2TX
Setting 17.5
02-B-E-2

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	2.4592G	108.43	Inf	-Inf	77.13	3	Vertical	162.3	1.32	-	28.44	2.86	-
AV	2.4592G	98.56	Inf	-Inf	67.26	3	Vertical	162.3	1.32	-	28.44	2.86	-
PK	2.4848G	68.40	74.00	-5.60	36.98	3	Vertical	162.3	1.32	-	28.54	2.88	-
AV	2.4836G	52.06	54.00	-1.94	20.65	3	Vertical	162.3	1.32	-	28.53	2.88	-

802.11g_Nss1,(6Mbps)_2TX

2457MHz_TX

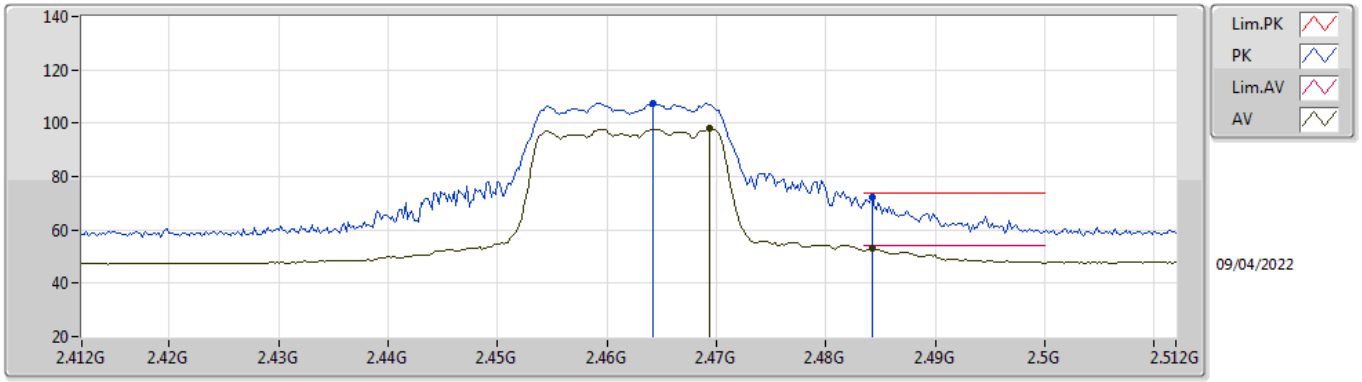


EUT X_2TX
Setting 17.5
02-B-E-2

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	2.454G	109.35	Inf	-Inf	78.08	3	Horizontal	35.9	1.80	-	28.42	2.85	-
AV	2.4538G	99.40	Inf	-Inf	68.13	3	Horizontal	35.9	1.80	-	28.42	2.85	-
PK	2.4838G	67.54	74.00	-6.46	36.12	3	Horizontal	35.9	1.80	-	28.54	2.88	-
AV	2.4835G	51.30	54.00	-2.70	19.89	3	Horizontal	35.9	1.80	-	28.53	2.88	-

802.11g_Nss1,(6Mbps)_2TX

2462MHz_TX

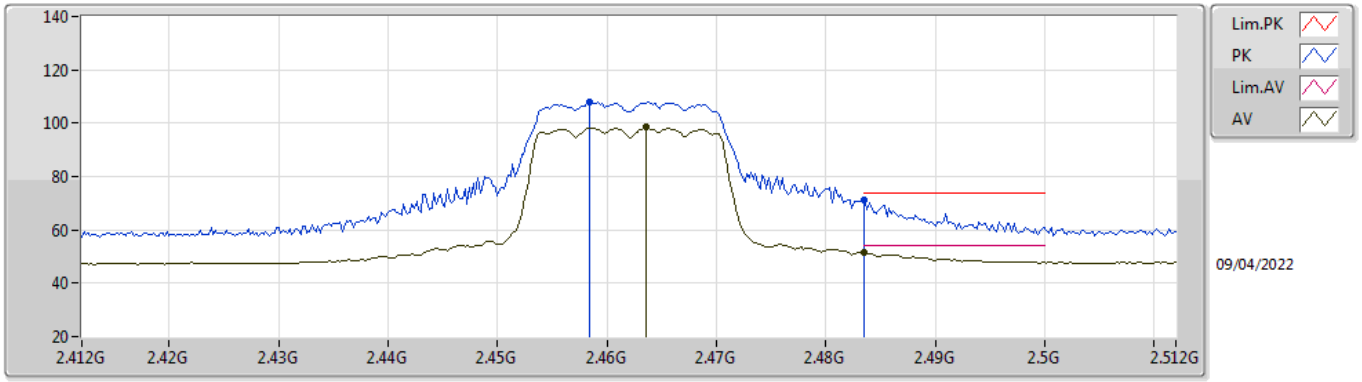


EUT X_2TX
Setting 16.5
02-B-E-2

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	2.4642G	107.59	Inf	-Inf	76.27	3	Vertical	165	1.33	-	28.46	2.86	-
AV	2.4694G	97.94	Inf	-Inf	66.59	3	Vertical	165	1.33	-	28.48	2.87	-
PK	2.4842G	72.04	74.00	-1.96	40.62	3	Vertical	165	1.33	-	28.54	2.88	-
AV	2.4842G	52.89	54.00	-1.11	21.47	3	Vertical	165	1.33	-	28.54	2.88	-

802.11g_Nss1,(6Mbps)_2TX

2462MHz_TX

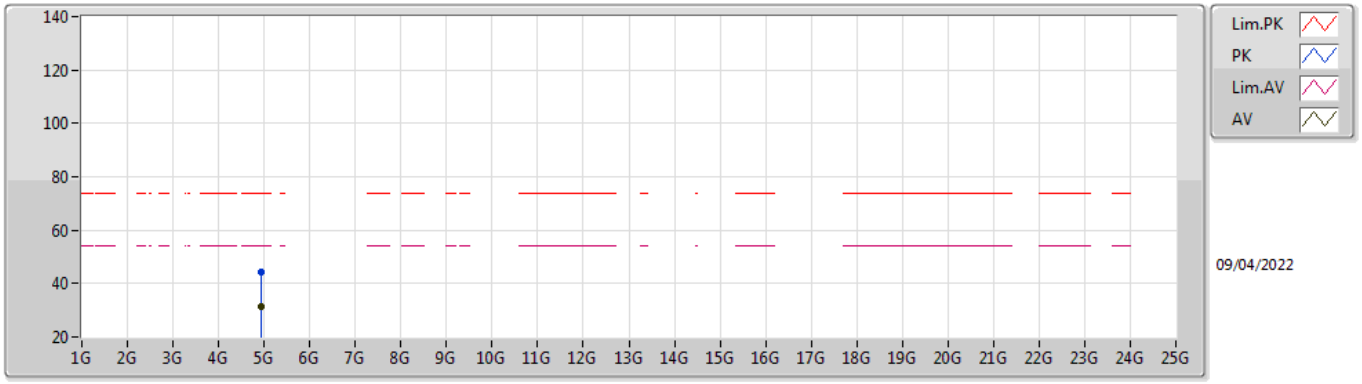


EUT X_2TX
Setting 16.5
02-B-E-2

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	2.4584G	108.13	Inf	-Inf	76.84	3	Horizontal	38.3	1.80	-	28.43	2.86	-
AV	2.4636G	98.44	Inf	-Inf	67.13	3	Horizontal	38.3	1.80	-	28.45	2.86	-
PK	2.4835G	71.30	74.00	-2.70	39.89	3	Horizontal	38.3	1.80	-	28.53	2.88	-
AV	2.4835G	51.32	54.00	-2.68	19.91	3	Horizontal	38.3	1.80	-	28.53	2.88	-

802.11g_Nss1,(6Mbps)_2TX

2462MHz_TX

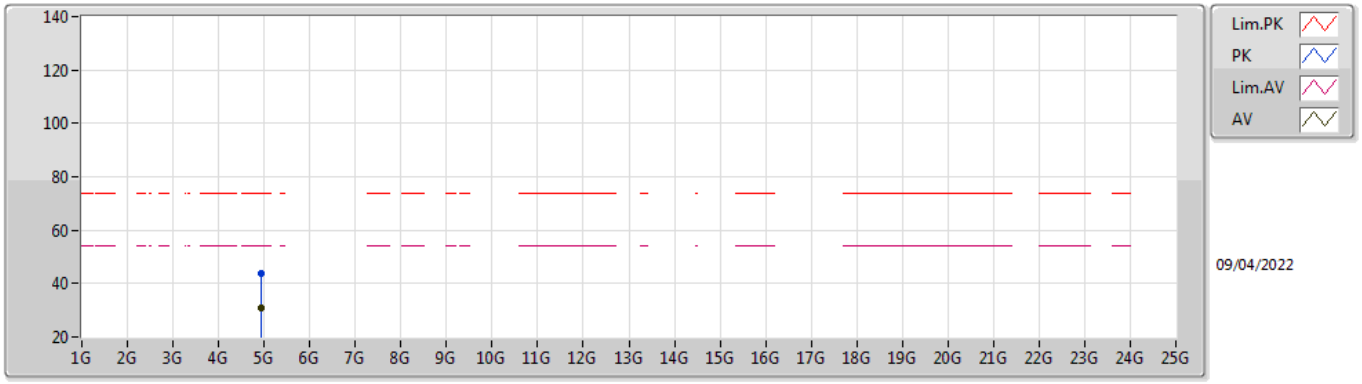


EUT X_2TX
Setting 16.5
02-B-E-2

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	4.9255G	44.12	74.00	-29.88	38.06	3	Vertical	99	2.63	-	33.15	5.10	32.19
AV	4.93546G	31.28	54.00	-22.72	25.15	3	Vertical	99	2.63	-	33.21	5.10	32.18

802.11g_Nss1,(6Mbps)_2TX

2462MHz_TX

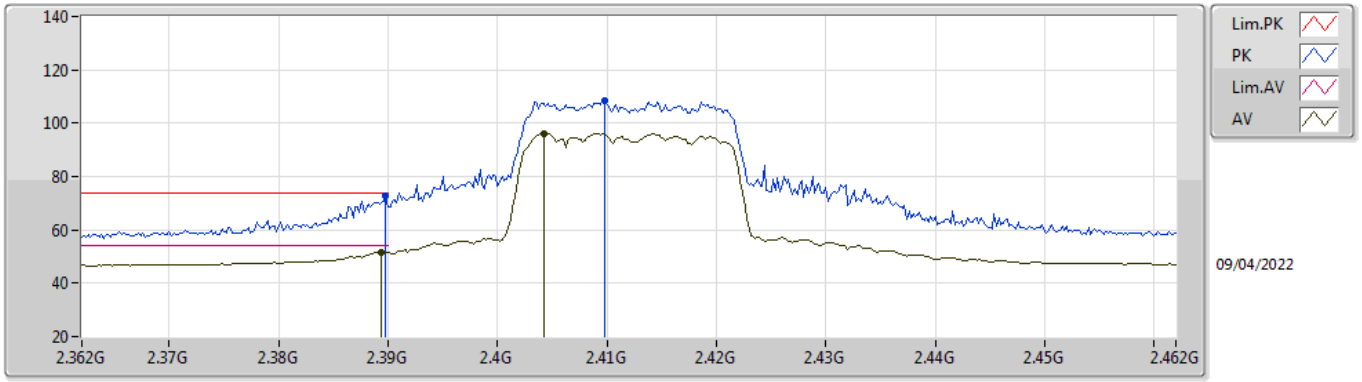


EUT X_2TX
Setting 16.5
02-B-E-2

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	4.92328G	43.80	74.00	-30.20	37.75	3	Horizontal	311	1.01	-	33.14	5.10	32.19
AV	4.92538G	31.05	54.00	-22.95	24.99	3	Horizontal	311	1.01	-	33.15	5.10	32.19

802.11ax HEW20_Nss1,(MCS0)_2TX

2412MHz_TX

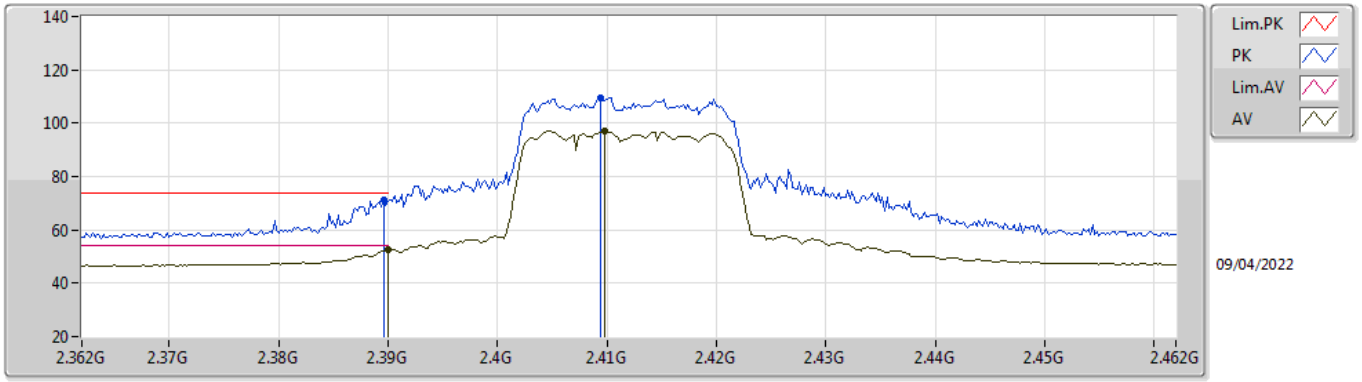


EUT X_2TX
Setting 16.5
02-B-E-2

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	2.3898G	72.52	74.00	-1.48	41.35	3	Vertical	165.3	1.39	-	28.38	2.79	-
AV	2.3894G	51.63	54.00	-2.37	20.46	3	Vertical	165.3	1.39	-	28.38	2.79	-
PK	2.4098G	108.62	Inf	-Inf	77.41	3	Vertical	165.3	1.39	-	28.40	2.81	-
AV	2.4042G	96.13	Inf	-Inf	64.93	3	Vertical	165.3	1.39	-	28.40	2.80	-

802.11ax HEW20_Nss1,(MCS0)_2TX

2412MHz_TX

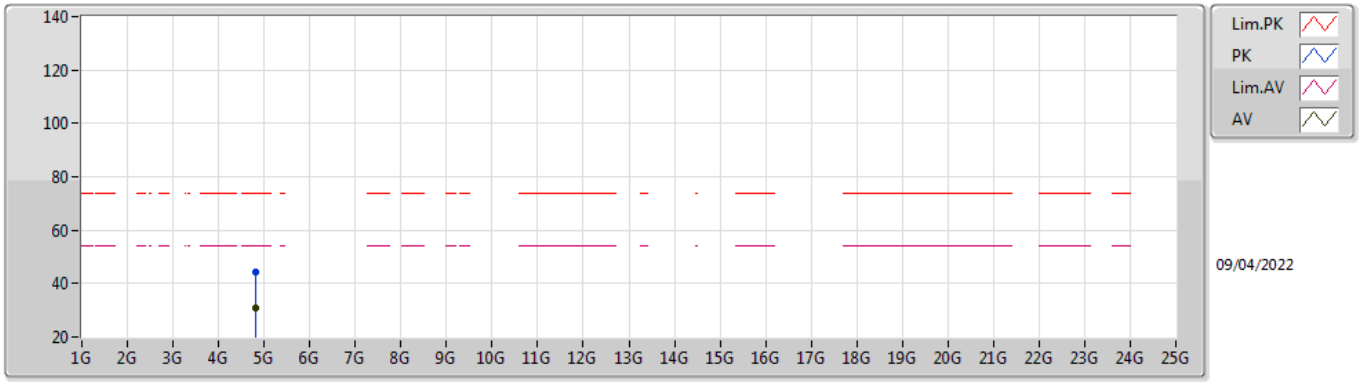


EUT X_2TX
Setting 16.5
02-B-E-2

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	2.3896G	71.18	74.00	-2.82	40.01	3	Horizontal	20.4	1.80	-	28.38	2.79	-
AV	2.39G	52.37	54.00	-1.63	21.20	3	Horizontal	20.4	1.80	-	28.38	2.79	-
PK	2.4094G	109.51	Inf	-Inf	78.30	3	Horizontal	20.4	1.80	-	28.40	2.81	-
AV	2.4098G	96.97	Inf	-Inf	65.76	3	Horizontal	20.4	1.80	-	28.40	2.81	-

802.11ax HEW20_Nss1,(MCS0)_2TX

2412MHz_TX

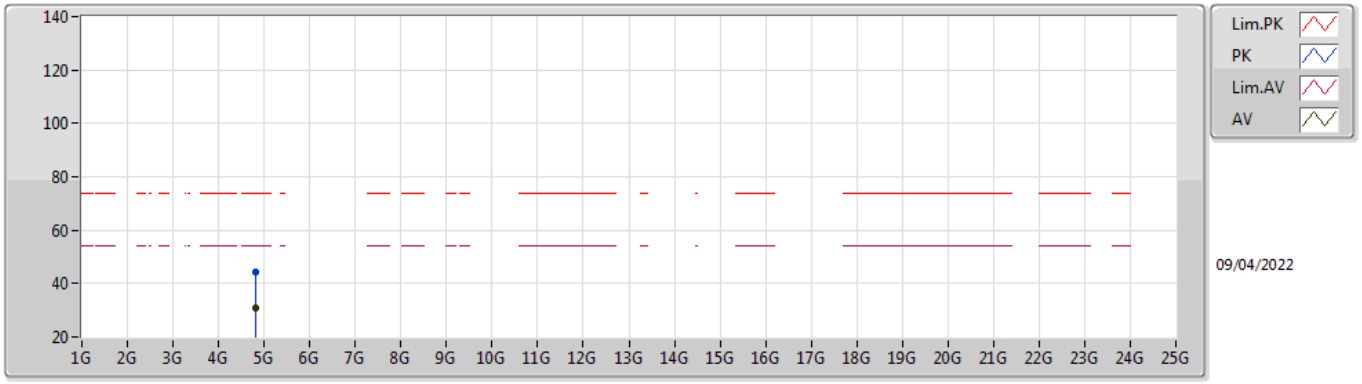


EUT X_2TX
Setting 16.5
02-B-E-2

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	4.82616G	44.16	74.00	-29.84	38.48	3	Vertical	195	1.98	-	32.80	5.10	32.22
AV	4.82478G	30.85	54.00	-23.15	25.17	3	Vertical	195	1.98	-	32.80	5.10	32.22

802.11ax HEW20_Nss1,(MCS0)_2TX

2412MHz_TX

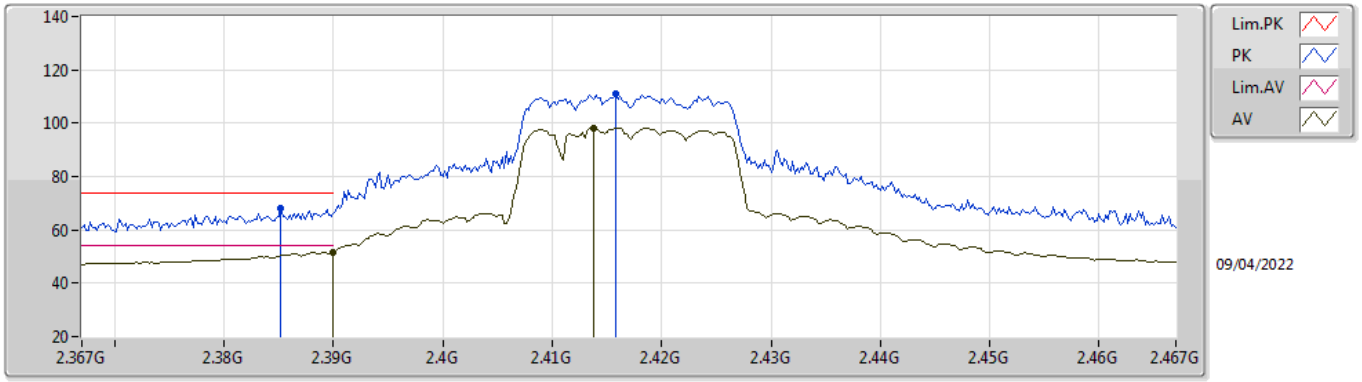


EUT X_2TX
Setting 16.5
02-B-E-2

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	4.82022G	44.41	74.00	-29.59	38.75	3	Horizontal	360	1.35	-	32.78	5.10	32.22
AV	4.82484G	30.69	54.00	-23.31	25.01	3	Horizontal	360	1.35	-	32.80	5.10	32.22

802.11ax HEW20_Nss1,(MCS0)_2TX

2417MHz_TX

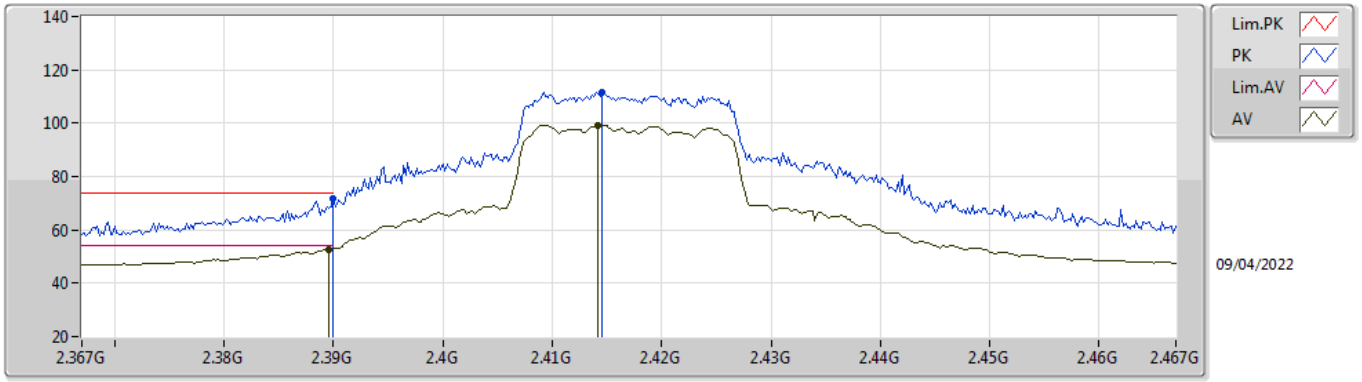


EUT X_2TX
Setting 19
02-B-E-2

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	2.3852G	67.92	74.00	-6.08	36.76	3	Vertical	162	1.33	-	28.37	2.79	-
AV	2.39G	51.70	54.00	-2.30	20.53	3	Vertical	162	1.33	-	28.38	2.79	-
PK	2.4158G	111.12	Inf	-Inf	79.90	3	Vertical	162	1.33	-	28.40	2.82	-
AV	2.4138G	98.26	Inf	-Inf	67.05	3	Vertical	162	1.33	-	28.40	2.81	-

802.11ax HEW20_Nss1,(MCS0)_2TX

2417MHz_TX

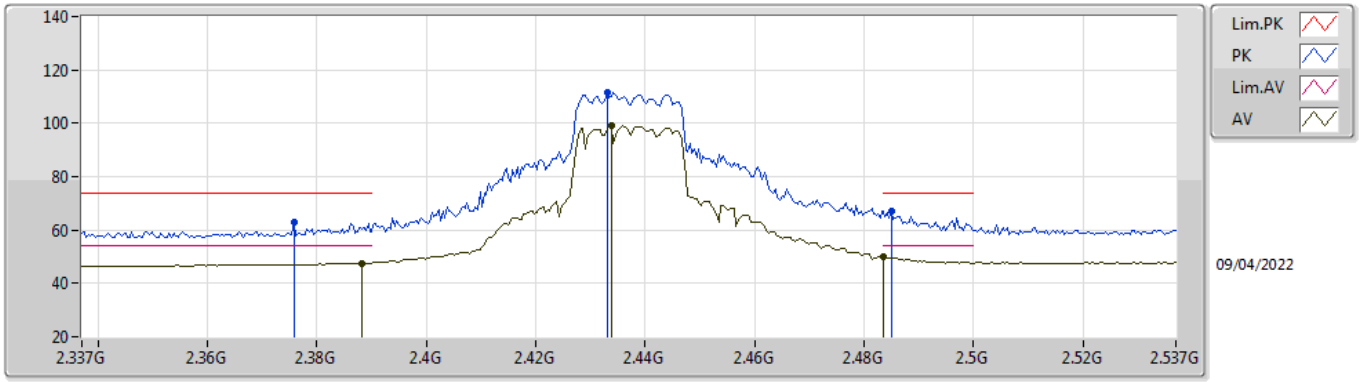


EUT X_2TX
Setting 19
02-B-E-2

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	2.39G	71.87	74.00	-2.13	40.70	3	Horizontal	154.1	1.78	-	28.38	2.79	-
AV	2.3896G	52.76	54.00	-1.24	21.59	3	Horizontal	154.1	1.78	-	28.38	2.79	-
PK	2.4146G	111.70	Inf	-Inf	80.49	3	Horizontal	154.1	1.78	-	28.40	2.81	-
AV	2.4142G	99.35	Inf	-Inf	68.14	3	Horizontal	154.1	1.78	-	28.40	2.81	-

802.11ax HEW20_Nss1,(MCS0)_2TX

2437MHz_TX

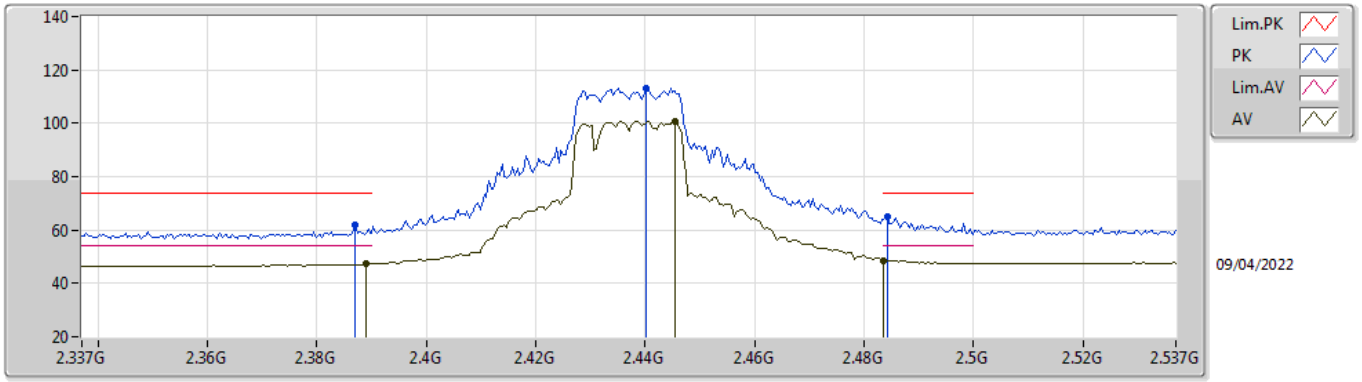


EUT X_2TX
Setting 20
02-B-E-2

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	2.3758G	62.69	74.00	-11.31	31.55	3	Vertical	162.9	1.20	-	28.35	2.79	-
AV	2.3882G	47.64	54.00	-6.36	16.47	3	Vertical	162.9	1.20	-	28.38	2.79	-
PK	2.433G	111.59	Inf	-Inf	80.36	3	Vertical	162.9	1.20	-	28.40	2.83	-
AV	2.4338G	99.26	Inf	-Inf	68.03	3	Vertical	162.9	1.20	-	28.40	2.83	-
PK	2.485G	66.88	74.00	-7.12	35.45	3	Vertical	162.9	1.20	-	28.54	2.89	-
AV	2.4835G	50.15	54.00	-3.85	18.74	3	Vertical	162.9	1.20	-	28.53	2.88	-

802.11ax HEW20_Nss1,(MCS0)_2TX

2437MHz_TX

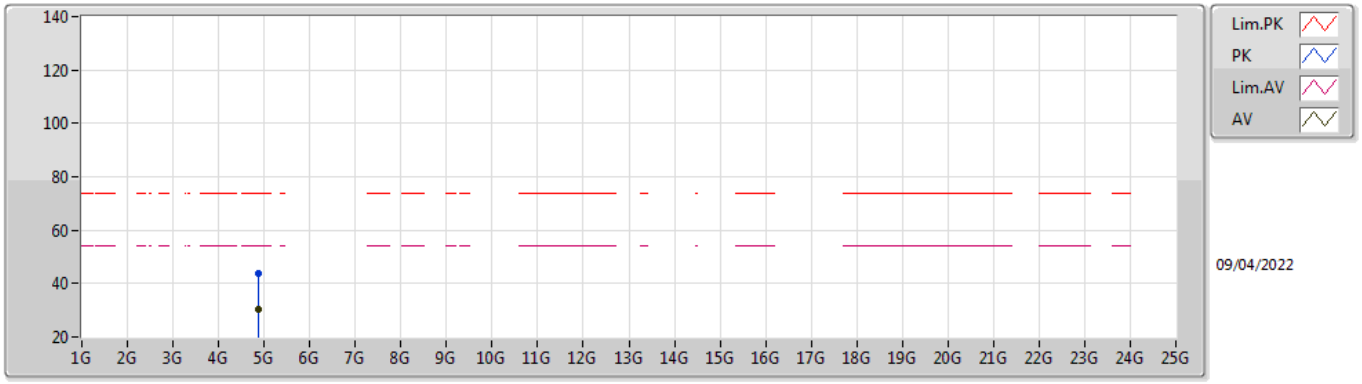


EUT X_2TX
Setting 20
02-B-E-2

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	2.387G	61.84	74.00	-12.16	30.68	3	Horizontal	37.9	1.85	-	28.37	2.79	-
AV	2.389G	47.25	54.00	-6.75	16.08	3	Horizontal	37.9	1.85	-	28.38	2.79	-
PK	2.4402G	113.20	Inf	-Inf	81.96	3	Horizontal	37.9	1.85	-	28.40	2.84	-
AV	2.4454G	100.74	Inf	-Inf	69.49	3	Horizontal	37.9	1.85	-	28.40	2.85	-
PK	2.4842G	64.97	74.00	-9.03	33.55	3	Horizontal	37.9	1.85	-	28.54	2.88	-
AV	2.4835G	48.66	54.00	-5.34	17.25	3	Horizontal	37.9	1.85	-	28.53	2.88	-

802.11ax HEW20_Nss1,(MCS0)_2TX

2437MHz_TX

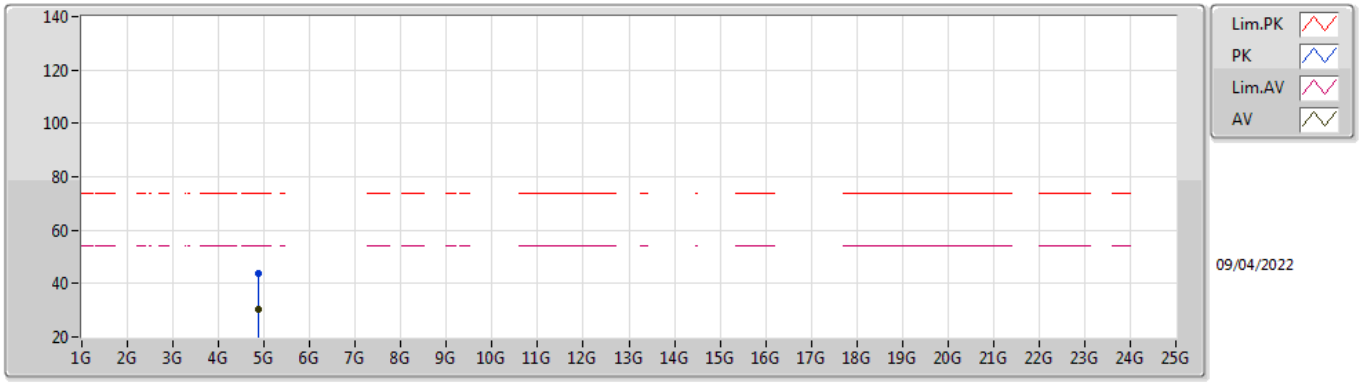


EUT X_2TX
Setting 20
02-B-E-2

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	4.87298G	43.99	74.00	-30.01	38.15	3	Vertical	229	1.00	-	32.95	5.10	32.21
AV	4.88486G	30.44	54.00	-23.56	24.57	3	Vertical	229	1.00	-	32.97	5.10	32.20

802.11ax HEW20_Nss1,(MCS0)_2TX

2437MHz_TX

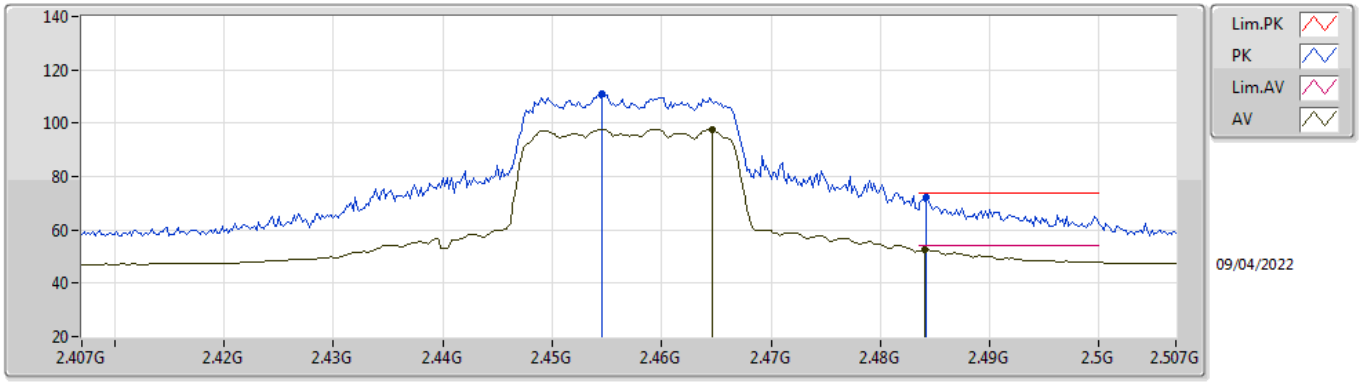


EUT X_2TX
Setting 20
02-B-E-2

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	4.87922G	43.83	74.00	-30.17	37.97	3	Horizontal	212	1.43	-	32.96	5.10	32.20
AV	4.86194G	30.52	54.00	-23.48	24.71	3	Horizontal	212	1.43	-	32.92	5.10	32.21

802.11ax HEW20_Nss1,(MCS0)_2TX

2457MHz_TX

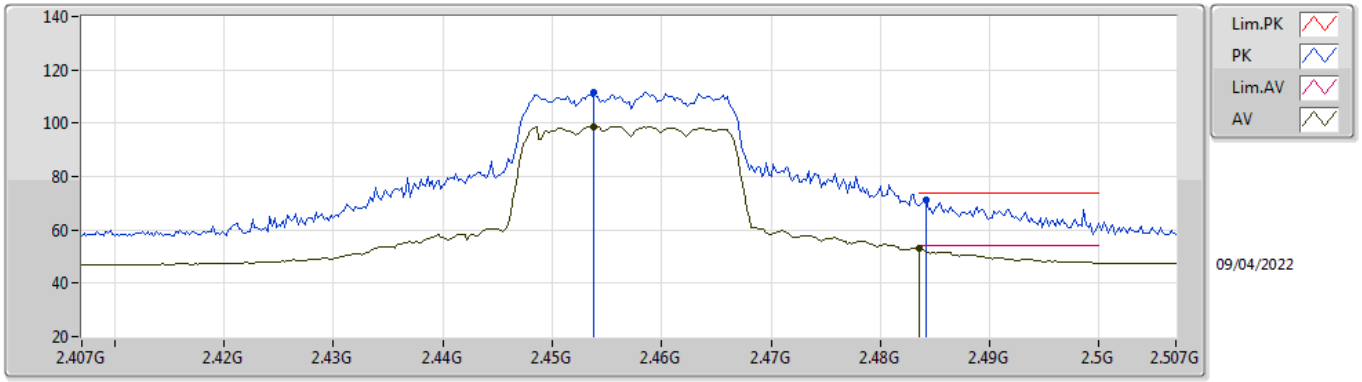


EUT X_2TX
Setting 17.5
02-B-E-2

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	2.4546G	110.99	Inf	-Inf	79.72	3	Vertical	166.3	1.41	-	28.42	2.85	-
AV	2.4646G	97.65	Inf	-Inf	66.33	3	Vertical	166.3	1.41	-	28.46	2.86	-
PK	2.4842G	72.47	74.00	-1.53	41.05	3	Vertical	166.3	1.41	-	28.54	2.88	-
AV	2.484G	52.62	54.00	-1.38	21.20	3	Vertical	166.3	1.41	-	28.54	2.88	-

802.11ax HEW20_Nss1,(MCS0)_2TX

2457MHz_TX

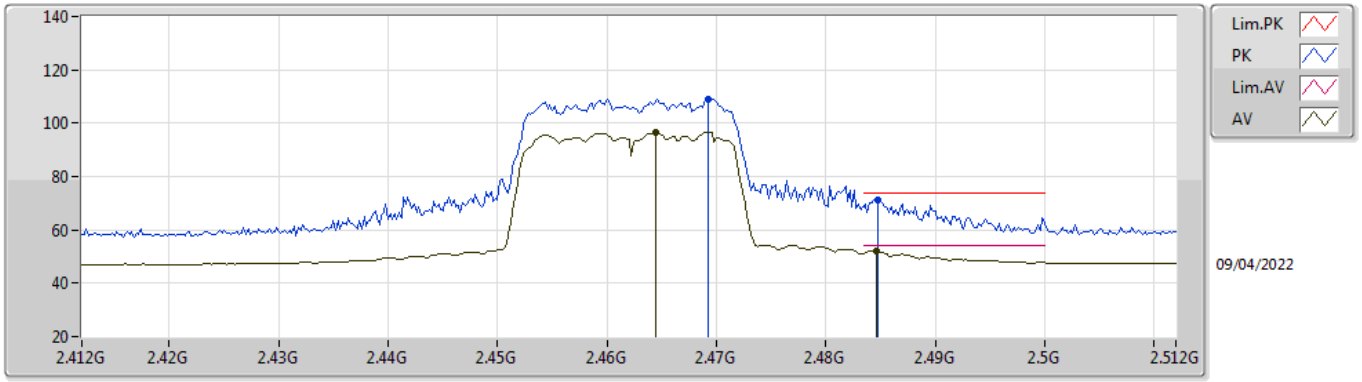


EUT X_2TX
Setting 17.5
02-B-E-2

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	2.4538G	111.59	Inf	-Inf	80.32	3	Horizontal	36.8	1.80	-	28.42	2.85	-
AV	2.4538G	98.85	Inf	-Inf	67.58	3	Horizontal	36.8	1.80	-	28.42	2.85	-
PK	2.4842G	71.45	74.00	-2.55	40.03	3	Horizontal	36.8	1.80	-	28.54	2.88	-
AV	2.4835G	52.95	54.00	-1.05	21.54	3	Horizontal	36.8	1.80	-	28.53	2.88	-

802.11ax HEW20_Nss1,(MCS0)_2TX

2462MHz_TX

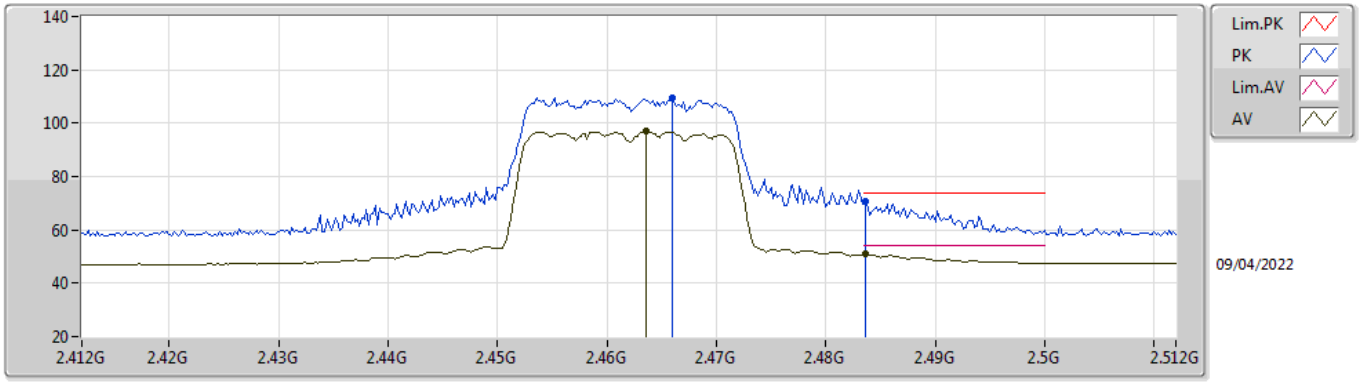


EUT X_2TX
Setting 15.5
02-B-E-2

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	2.4692G	108.99	Inf	-Inf	77.64	3	Vertical	164.7	1.32	-	28.48	2.87	-
AV	2.4644G	96.58	Inf	-Inf	65.26	3	Vertical	164.7	1.32	-	28.46	2.86	-
PK	2.4848G	71.02	74.00	-2.98	39.60	3	Vertical	164.7	1.32	-	28.54	2.88	-
AV	2.4846G	52.12	54.00	-1.88	20.70	3	Vertical	164.7	1.32	-	28.54	2.88	-

802.11ax HEW20_Nss1,(MCS0)_2TX

2462MHz_TX

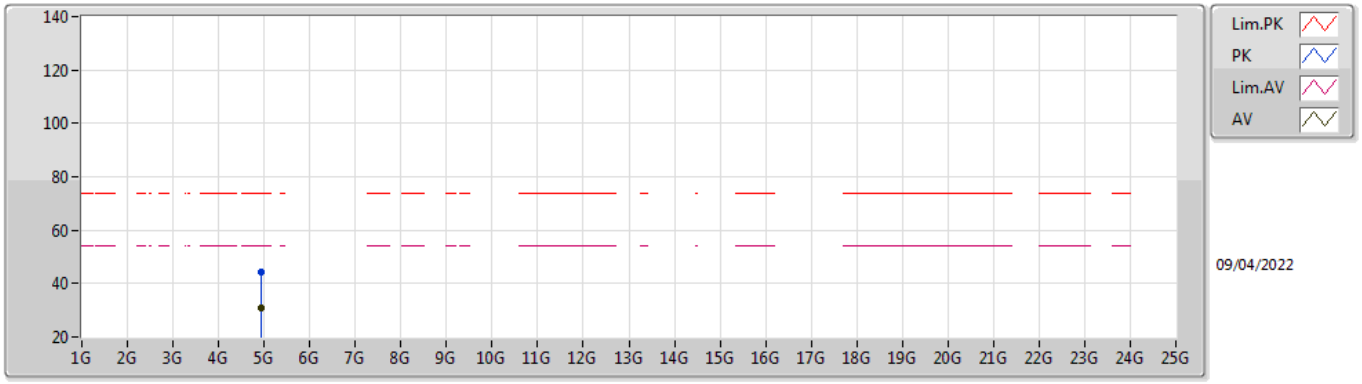


EUT X_2TX
Setting 15.5
02-B-E-2

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	2.466G	109.45	Inf	-Inf	78.12	3	Horizontal	36.9	1.80	-	28.46	2.87	-
AV	2.4636G	96.93	Inf	-Inf	65.62	3	Horizontal	36.9	1.80	-	28.45	2.86	-
PK	2.4836G	70.59	74.00	-3.41	39.18	3	Horizontal	36.9	1.80	-	28.53	2.88	-
AV	2.4836G	50.78	54.00	-3.22	19.37	3	Horizontal	36.9	1.80	-	28.53	2.88	-

802.11ax HEW20_Nss1,(MCS0)_2TX

2462MHz_TX

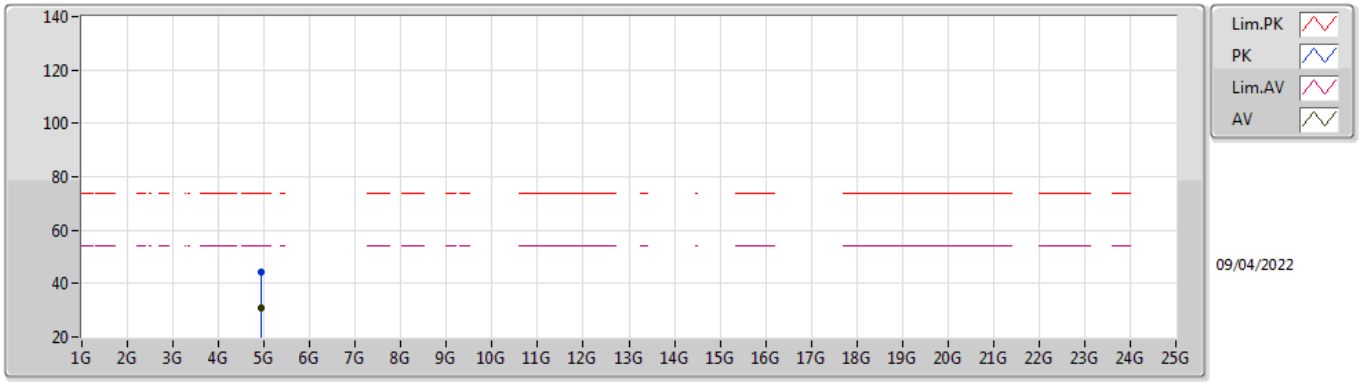


EUT X_2TX
Setting 15.5
02-B-E-2

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	4.939G	44.25	74.00	-29.75	38.10	3	Vertical	304	2.19	-	33.23	5.10	32.18
AV	4.9384G	30.95	54.00	-23.05	24.80	3	Vertical	304	2.19	-	33.23	5.10	32.18

802.11ax HEW20_Nss1,(MCS0)_2TX

2462MHz_TX

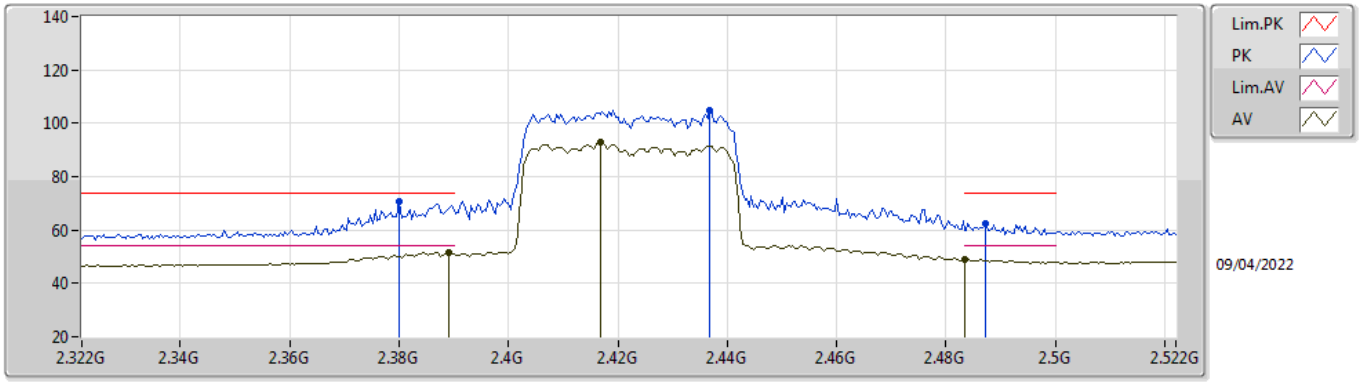


EUT X_2TX
Setting 15.5
02-B-E-2

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	4.93558G	44.54	74.00	-29.46	38.41	3	Horizontal	347	2.01	-	33.21	5.10	32.18
AV	4.92682G	30.90	54.00	-23.10	24.83	3	Horizontal	347	2.01	-	33.16	5.10	32.19

802.11ax HEW40_Nss1,(MCS0)_2TX

2422MHz_TX

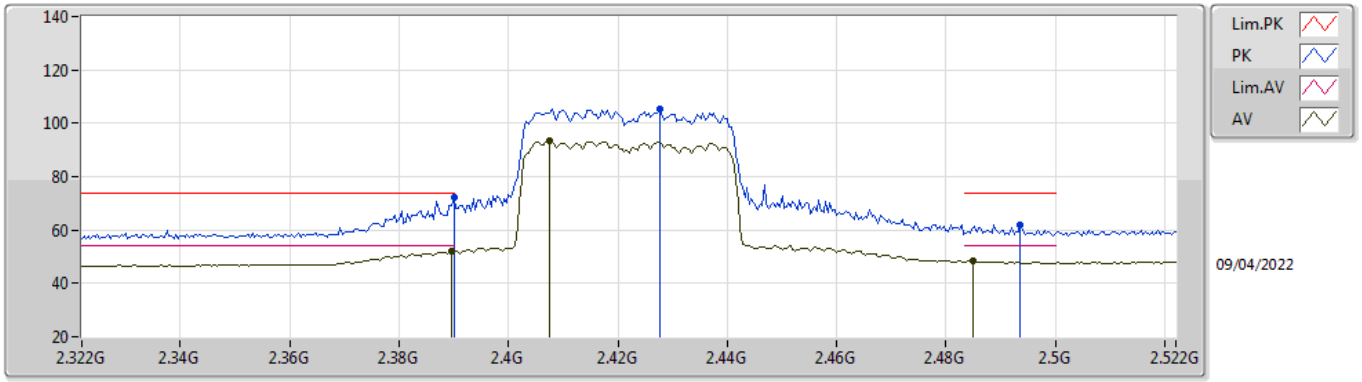


EUT X_2TX
Setting 15.5
02-B-E-2

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	2.38G	70.77	74.00	-3.23	39.62	3	Vertical	166	1.08	-	28.36	2.79	-
AV	2.3892G	51.63	54.00	-2.37	20.46	3	Vertical	166	1.08	-	28.38	2.79	-
PK	2.4368G	104.64	Inf	-Inf	73.40	3	Vertical	166	1.08	-	28.40	2.84	-
AV	2.4168G	92.76	Inf	-Inf	61.54	3	Vertical	166	1.08	-	28.40	2.82	-
PK	2.4872G	62.38	74.00	-11.62	30.94	3	Vertical	166	1.08	-	28.55	2.89	-
AV	2.4835G	48.95	54.00	-5.05	17.54	3	Vertical	166	1.08	-	28.53	2.88	-

802.11ax HEW40_Nss1,(MCS0)_2TX

2422MHz_TX

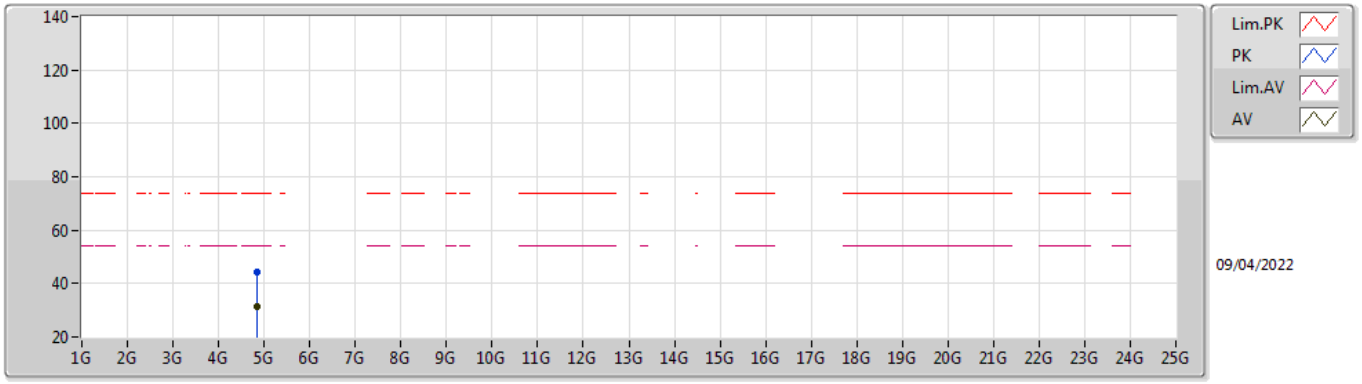


EUT X_2TX
Setting 15.5
02-B-E-2

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	2.39G	72.16	74.00	-1.84	40.99	3	Horizontal	19.2	1.80	-	28.38	2.79	-
AV	2.3896G	52.19	54.00	-1.81	21.02	3	Horizontal	19.2	1.80	-	28.38	2.79	-
PK	2.4276G	105.41	Inf	-Inf	74.18	3	Horizontal	19.2	1.80	-	28.40	2.83	-
AV	2.4076G	93.25	Inf	-Inf	62.04	3	Horizontal	19.2	1.80	-	28.40	2.81	-
PK	2.4936G	61.77	74.00	-12.23	30.31	3	Horizontal	19.2	1.80	-	28.57	2.89	-
AV	2.4848G	48.33	54.00	-5.67	16.91	3	Horizontal	19.2	1.80	-	28.54	2.88	-

802.11ax HEW40_Nss1,(MCS0)_2TX

2422MHz_TX

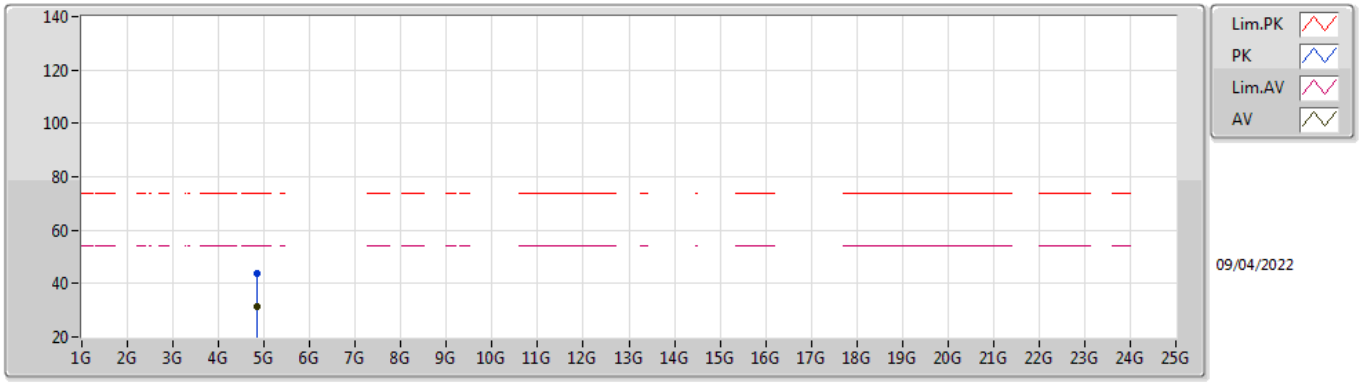


EUT X_2TX
Setting 15.5
02-B-E-2

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	4.84988G	44.22	74.00	-29.78	38.43	3	Vertical	200	2.97	-	32.90	5.10	32.21
AV	4.84364G	31.38	54.00	-22.62	25.63	3	Vertical	200	2.97	-	32.87	5.10	32.22

802.11ax HEW40_Nss1,(MCS0)_2TX

2422MHz_TX

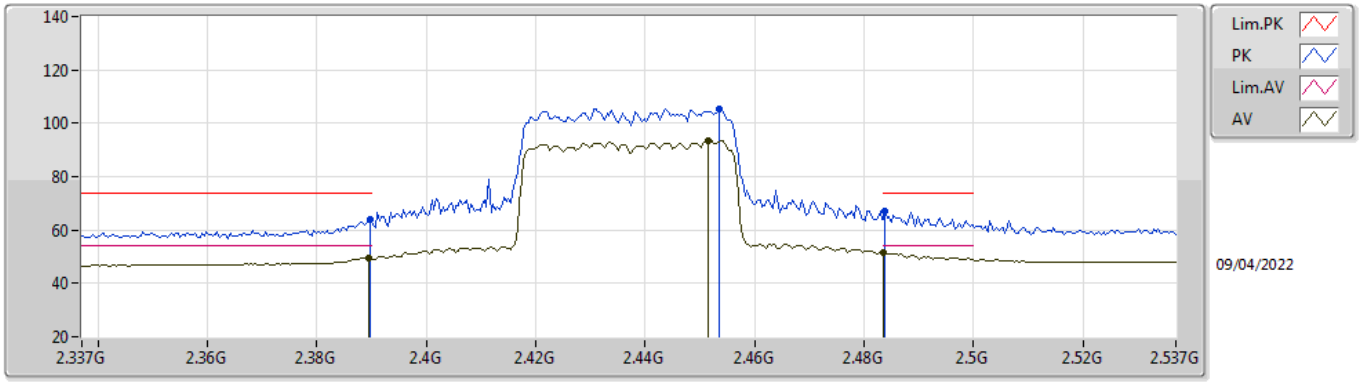


EUT X_2TX
Setting 15.5
02-B-E-2

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	4.8317G	43.99	74.00	-30.01	38.28	3	Horizontal	63	1.73	-	32.83	5.10	32.22
AV	4.83218G	31.32	54.00	-22.68	25.61	3	Horizontal	63	1.73	-	32.83	5.10	32.22

802.11ax HEW40_Nss1,(MCS0)_2TX

2437MHz_TX

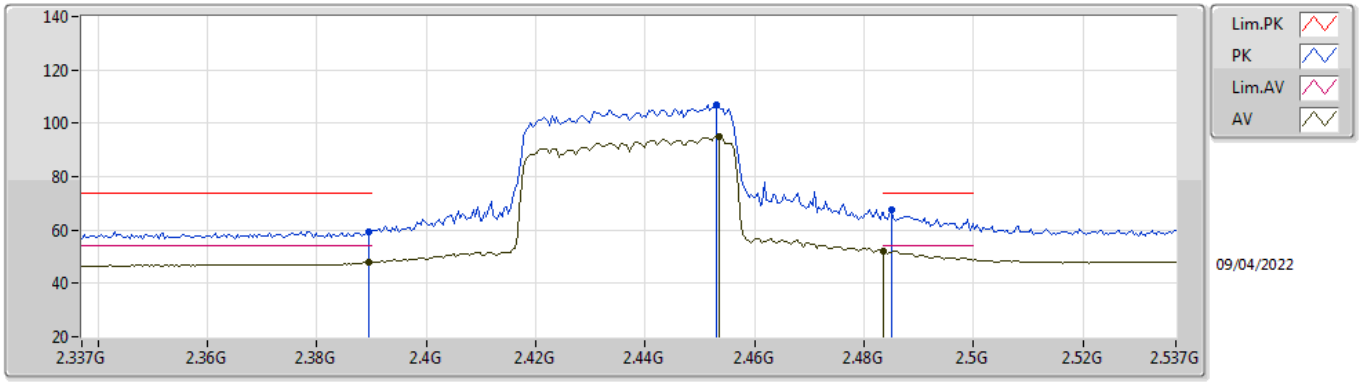


EUT X_2TX
Setting 16
02-B-E-2

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	2.3898G	63.86	74.00	-10.14	32.69	3	Vertical	163	1.39	-	28.38	2.79	-
AV	2.3894G	49.58	54.00	-4.42	18.41	3	Vertical	163	1.39	-	28.38	2.79	-
PK	2.4534G	105.59	Inf	-Inf	74.33	3	Vertical	163	1.39	-	28.41	2.85	-
AV	2.4514G	93.55	Inf	-Inf	62.29	3	Vertical	163	1.39	-	28.41	2.85	-
PK	2.4838G	67.12	74.00	-6.88	35.70	3	Vertical	163	1.39	-	28.54	2.88	-
AV	2.4835G	51.63	54.00	-2.37	20.22	3	Vertical	163	1.39	-	28.53	2.88	-

802.11ax HEW40_Nss1,(MCS0)_2TX

2437MHz_TX

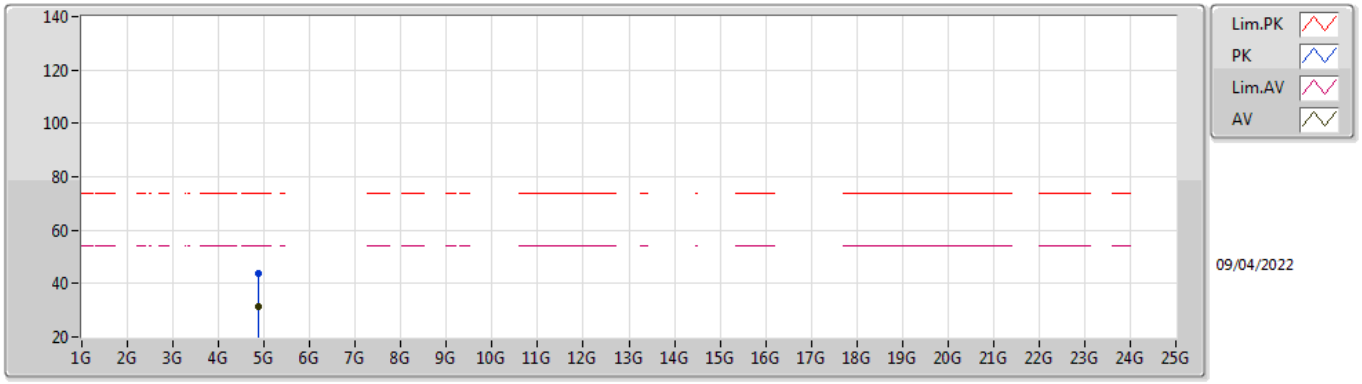


EUT X_2TX
Setting 16
02-B-E-2

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	2.3894G	59.50	74.00	-14.50	28.33	3	Horizontal	36.7	1.79	-	28.38	2.79	-
AV	2.3894G	48.01	54.00	-5.99	16.84	3	Horizontal	36.7	1.79	-	28.38	2.79	-
PK	2.453G	107.04	Inf	-Inf	75.78	3	Horizontal	36.7	1.79	-	28.41	2.85	-
AV	2.4534G	95.06	Inf	-Inf	63.80	3	Horizontal	36.7	1.79	-	28.41	2.85	-
PK	2.485G	67.46	74.00	-6.54	36.03	3	Horizontal	36.7	1.79	-	28.54	2.89	-
AV	2.4835G	52.28	54.00	-1.72	20.87	3	Horizontal	36.7	1.79	-	28.53	2.88	-

802.11ax HEW40_Nss1,(MCS0)_2TX

2437MHz_TX

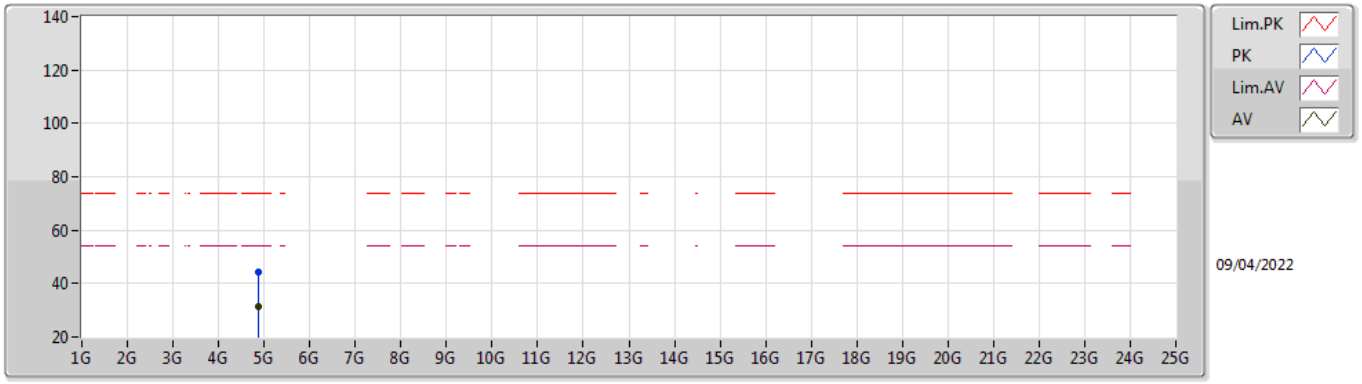


EUT X_2TX
Setting 16
02-B-E-2

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	4.86506G	44.01	74.00	-29.99	38.19	3	Vertical	314	2.37	-	32.93	5.10	32.21
AV	4.87064G	31.14	54.00	-22.86	25.31	3	Vertical	314	2.37	-	32.94	5.10	32.21

802.11ax HEW40_Nss1,(MCS0)_2TX

2437MHz_TX

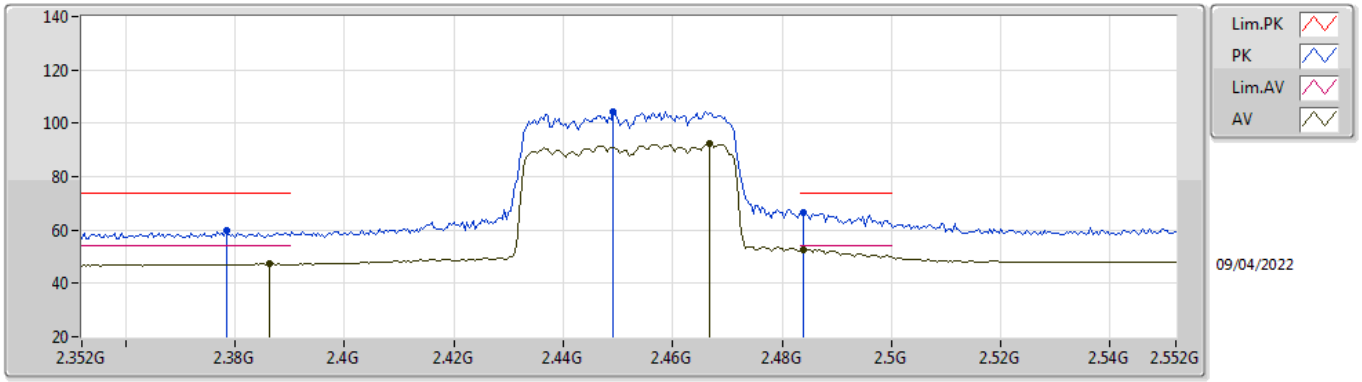


EUT X_2TX
Setting 16
02-B-E-2

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	4.883G	44.32	74.00	-29.68	38.45	3	Horizontal	119	2.78	-	32.97	5.10	32.20
AV	4.8644G	31.26	54.00	-22.74	25.44	3	Horizontal	119	2.78	-	32.93	5.10	32.21

802.11ax HEW40_Nss1,(MCS0)_2TX

2452MHz_TX

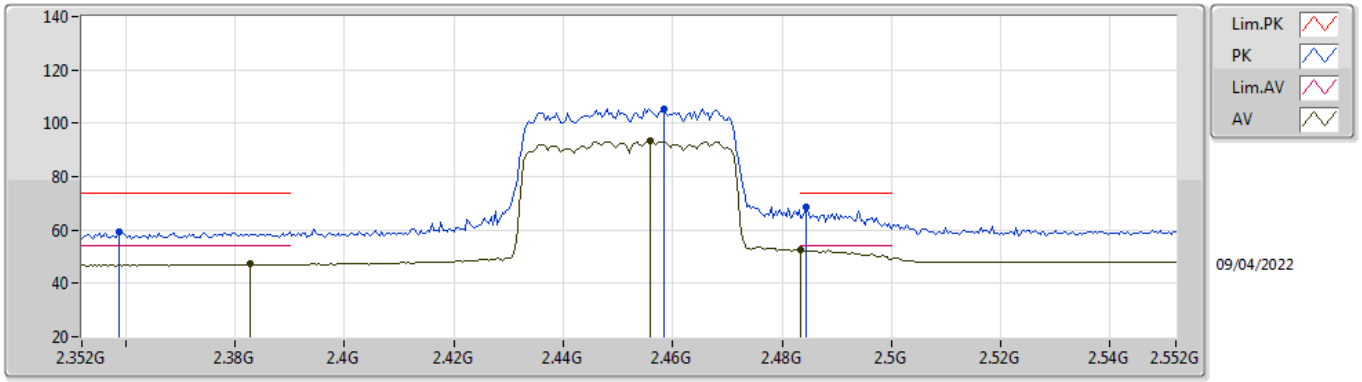


EUT X_2TX
Setting 14
02-B-E-2

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	2.3784G	60.05	74.00	-13.95	28.90	3	Vertical	165	1.33	-	28.36	2.79	-
AV	2.3864G	47.36	54.00	-6.64	16.20	3	Vertical	165	1.33	-	28.37	2.79	-
PK	2.4492G	104.56	Inf	-Inf	73.31	3	Vertical	165	1.33	-	28.40	2.85	-
AV	2.4668G	92.51	Inf	-Inf	61.17	3	Vertical	165	1.33	-	28.47	2.87	-
PK	2.484G	66.69	74.00	-7.31	35.27	3	Vertical	165	1.33	-	28.54	2.88	-
AV	2.484G	52.84	54.00	-1.16	21.42	3	Vertical	165	1.33	-	28.54	2.88	-

802.11ax HEW40_Nss1,(MCS0)_2TX

2452MHz_TX

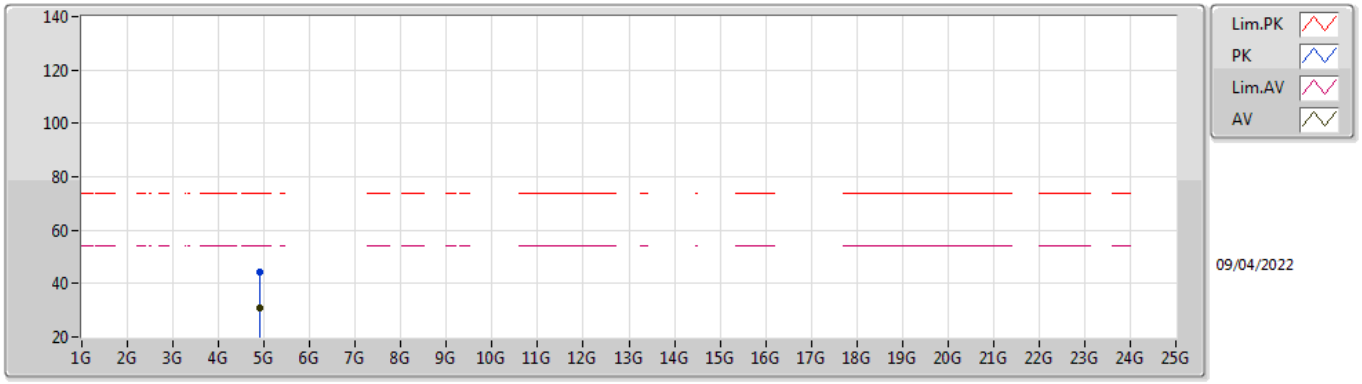


EUT X_2TX
Setting 14
02-B-E-2

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	2.3588G	59.11	74.00	-14.89	28.01	3	Horizontal	36.8	1.80	-	28.32	2.78	-
AV	2.3828G	47.28	54.00	-6.72	16.12	3	Horizontal	36.8	1.80	-	28.37	2.79	-
PK	2.4584G	105.38	Inf	-Inf	74.09	3	Horizontal	36.8	1.80	-	28.43	2.86	-
AV	2.456G	93.40	Inf	-Inf	62.12	3	Horizontal	36.8	1.80	-	28.42	2.86	-
PK	2.4844G	68.80	74.00	-5.20	37.38	3	Horizontal	36.8	1.80	-	28.54	2.88	-
AV	2.4835G	52.41	54.00	-1.59	21.00	3	Horizontal	36.8	1.80	-	28.53	2.88	-

802.11ax HEW40_Nss1,(MCS0)_2TX

2452MHz_TX

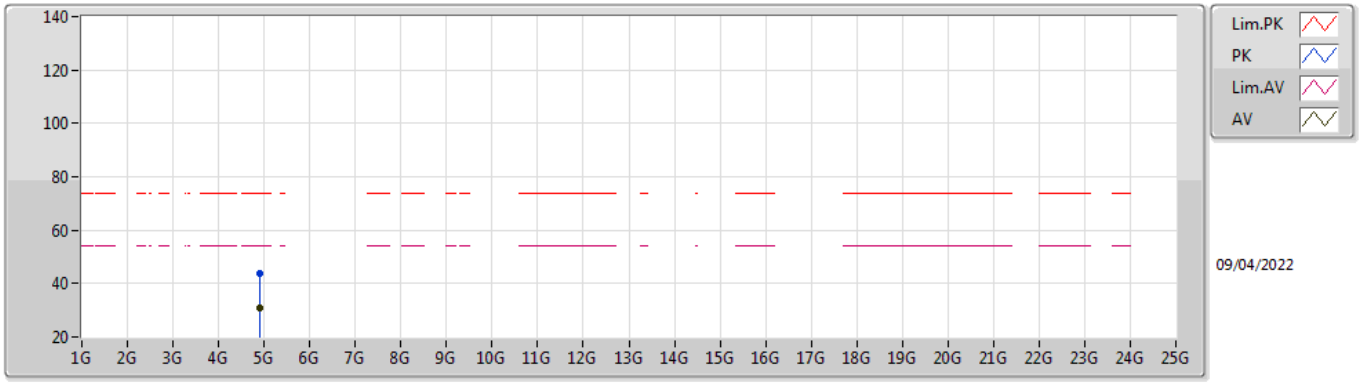


EUT X_2TX
Setting 14
02-B-E-2

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	4.8944G	44.24	74.00	-29.76	38.35	3	Vertical	305	1.88	-	32.99	5.10	32.20
AV	4.88984G	30.96	54.00	-23.04	25.08	3	Vertical	305	1.88	-	32.98	5.10	32.20

802.11ax HEW40_Nss1,(MCS0)_2TX

2452MHz_TX



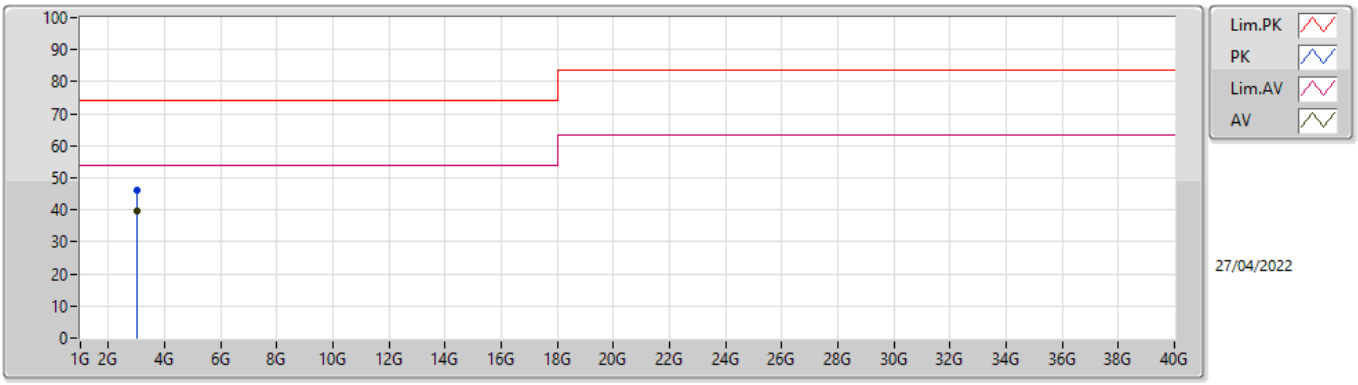
EUT X_2TX
Setting 14
02-B-E-2

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	4.91402G	43.68	74.00	-30.32	37.69	3	Horizontal	335	2.29	-	33.08	5.10	32.19
AV	4.89446G	30.88	54.00	-23.12	24.99	3	Horizontal	335	2.29	-	32.99	5.10	32.20

Summary

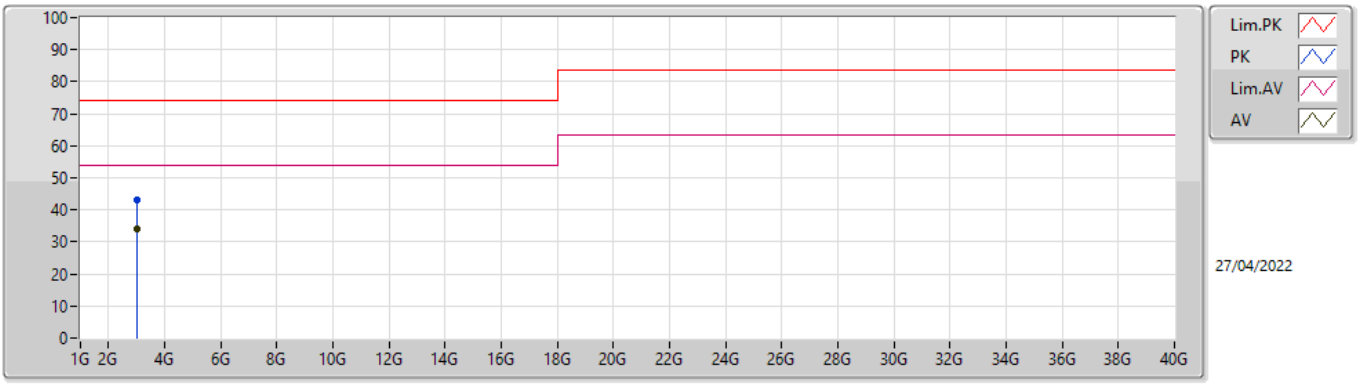
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	AV	3.00002G	39.57	54.00	-14.43	Vertical

Mode 1



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV/m)	(dB/m)	(dB)	(dB)
PK	3.00015G	46.08	74.00	-27.92	-1.06	3	Vertical	173	1.54	-	47.14	29.40	3.70	34.16
AV	3.00002G	39.57	54.00	-14.43	-1.06	3	Vertical	173	1.54	"Worst"	40.63	29.40	3.70	34.16

Mode 1



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV/m)	(dB/m)	(dB)	(dB)
PK	3.00077G	43.15	74.00	-30.85	-1.06	3	Horizontal	92	1.00	-	44.21	29.40	3.70	34.16
AV	3.00002G	34.21	54.00	-19.79	-1.06	3	Horizontal	92	1.00	"Worst"	35.27	29.40	3.70	34.16