Testing Laboratory 3787

RADIO TEST REPORT

FCC ID	:	RPV-AWR5805P
Equipment	:	Industrial Wireless Router
Brand Name	:	Atop
Model Name	:	AWR5805P/AWR5805
Applicant	:	Atop Technologies, Inc. 1F, No. 30 R&D Rd. II, Science-Based Industrial Park, Hsinchu 30076, Tawian , R.O.C
Manufacturer	:	Atop Technologies, Inc. 1F, No. 30 R&D Rd. II, Science-Based Industrial Park, Hsinchu 30076, Tawian , R.O.C
Standard	:	47 CFR FCC Part 15.247

The product was received on Oct. 29, 2021, and testing was started from Dec. 16, 2021 and completed on Nov. 02, 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 report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. Hsinchu Laboratory, the test report shall not be reproduced except in full.

Approved by: Sam Chen

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

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Appendix H. Test Photos

Photographs of EUT v01

History of this test report

Report No.	Version	Description	Issued Date
FR282309AA	01	Initial issue of report	Nov. 24, 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	-
Note: Reference to Sporton Project No.: 192332.				

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: Sophia Shiung

1 General Description

1.1 Information

1.1.1 RF General Information

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

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

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

1.1.2 Antenna Information

Ant.	Port		Brand	Model Name	Antenna Type	Connector	Gain (dBi)	
	2.4GHz	5GHz					2.4GHz	5GHz
1	1	1	PSA	RFDPA141300SBLB301	Dipole	Reversed-SMA	4.35	6.59
2	2	2	PSA	RFDPA141300SBLB301	Dipole	Reversed-SMA	4.35	6.59

Note 1: The above information was declared by manufacturer.

Note 2: Directional gain information

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	$DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$

Ex.

Directional Gain (NSS1) formula :

$$Directional Gain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$$

NSS1(g1,1) = $10^{G1/20}$; NSS1(g1,2)= $10^{G2/20}$ gj,k =(Nss1(g1,1) + Nss1(g1,2)

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

Where ;

G1 = Ant 1 Gain ; G2 = Ant 2 Gain

2.4GHz DG = 7.36 dBi

5 GHz U-NII-1 DG = 9.60 dBi

5 GHz U-NII-3 DG = 9.60 dBi

Note 3: **For 2.4GHz function:**

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

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

Port 1 and Port 2 could transmit/receive simultaneously.

For 5GHz function:

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

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

Port 1 and Port 2 could transmit/receive simultaneously

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11b	0.994	0.03	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11g	0.962	0.17	2.033m	1k
802.11n HT20	0.983	0.07	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11n HT40	0.966	0.15	2.413m	1k

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

1.1.4 EUT Operational Condition

EUT Power Type	For EUT 1 (AWR5805P): From DC internal power supply or PoE			
	For EUT 2 (AWR5805): From DC internal power supply			
Beamforming Function	☐	With beamforming	☒	Without beamforming
Function	☒	Point-to-multipoint	☐	Point-to-point
Test Software Version	QSPR(version 5.0-00188)			

Note: The above information was declared by manufacturer.

1.1.5 Table for Multiple Listing

The difference for each model is show as below:

EUT	Model Name	PoE Function
1	AWR5805P	V
2	AWR5805	X

Note 1: EUT 1 had been selected to test AC power-line conducted emissions, Emissions in Restricted Frequency Bands (below 1GHz) and Radiated Emission Co-location.

Note 2: EUT 2 had been selected to test DTS Bandwidth, Maximum Conducted Output Power, Power Spectral Density, Emissions in Non-restricted Frequency Bands and Emissions in Restricted Frequency Bands (above 1GHz).

Note 3: The above information was declared by manufacturer.

1.2 Applicable Standards

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

- 47 CFR FCC Part 15.247
- ANSI C63.10-2013

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

- FCC KDB 558074 D01 v05r02
- FCC KDB 662911 D01 v02r01
- FCC KDB 414788 D01 v01r01

1.3 Testing Location Information

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

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
RF Conducted	TH01-CB	Lucas Huang	19.2~20.4 / 52~55	Dec. 20, 2021
Radiated below 1GHz	03CH05-CB	Wendy Hsu	22.8~23.8 / 57~60	Oct. 31, 2022
Radiated above 1GHz	03CH06-CB	Stim Sung	24.5-25.6 / 56-59	Dec. 16, 2021~ Jan. 07, 2022
Radiated Co-location	03CH05-CB	Wendy Hsu	22.8~23.8 / 57~60	Oct. 31, 2022
AC Conduction	CO01-CB	Tim Chen	21~22 / 51~53	Nov. 02, 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)	3.4 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	5.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	4.7 dB	Confidence levels of 95%_before Jan. 01, 2022
Radiated Emission (1GHz ~ 18GHz)	5.2 dB	Confidence levels of 95%_After Jan. 01, 2022
Radiated Emission (18GHz ~ 40GHz)	4.2 dB	Confidence levels of 95%_before Jan. 01, 2022
Radiated Emission (18GHz ~ 40GHz)	4.7 dB	Confidence levels of 95%_After Jan. 01, 2022
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	21.5
2437MHz	22.5
2462MHz	21
802.11g_Nss1,(6Mbps)_2TX	-
2412MHz	16
2417MHz	17.5
2437MHz	21
2457MHz	17.5
2462MHz	16
802.11n HT20_Nss1,(MCS0)_2TX	-
2412MHz	15
2417MHz	17.5
2437MHz	21
2457MHz	17.5
2462MHz	16
802.11n HT40_Nss1,(MCS0)_2TX	-
2422MHz	16.5
2437MHz	16.5
2452MHz	16

2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral Test Voltage: 120Vac / 60Hz
Operating Mode	CTX
1	EUT 1_WLAN 2.4GHz + DC internal power supply
2	EUT 1_WLAN 5GHz + DC internal power supply
Mode 1 has been evaluated to be the worst case among Mode 1~2, thus measurement for Mode 3 will follow this same test mode.	
3	EUT 1_ WLAN 2.4GHz + PoE
Mode 1 generated the worst test result, so it was recorded in this report.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	DTS Bandwidth Maximum Conducted Output Power Power Spectral Density Emissions in Non-restricted Frequency Bands
Test Condition	Conducted measurement at transmit chains
Operating Mode	CTX
1	EUT 2

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

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
1	EUT 1_WLAN 2.4GHz + WLAN 5GHz
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	EUT 2_WLAN 2.4GHz + WLAN 5GHz
Refer to Sporton Test Report No.: FA282309 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

DC jack*1

2.5 Support Equipment

For AC Conduction:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	Power Supply	Advanced	LPS-305	N/A
B	NB	DELL	E6430	N/A

For Radiated (above 1GHz) and RF Conducted:

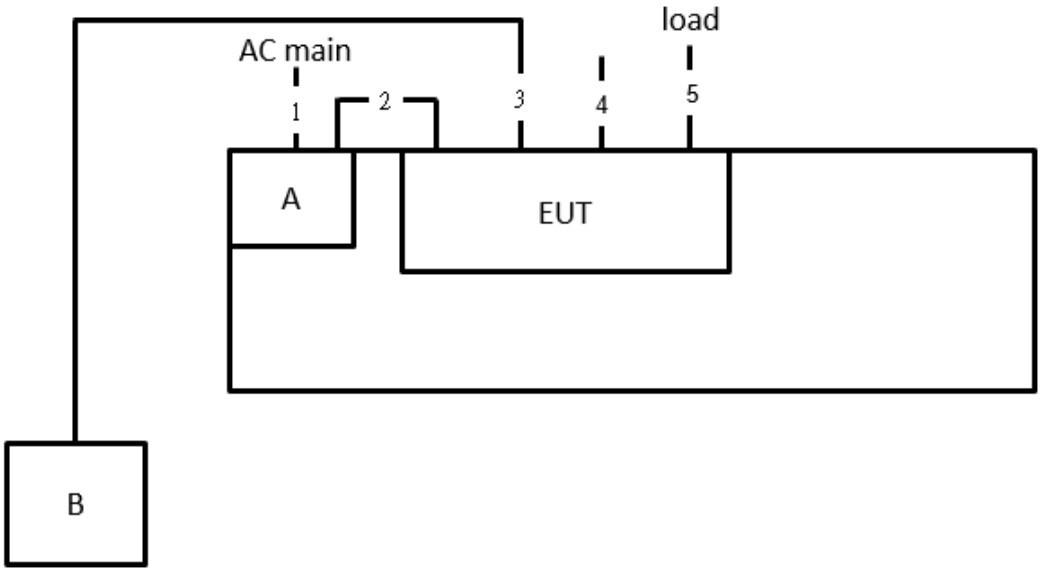
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	NB	DELL	E4300	N/A
B	Power Supply	Advanced	LPS-305	N/A

For Radiated (other tests):

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	PoE	Atop	IJG7001	N/A
B	NB	DELL	E4300	N/A

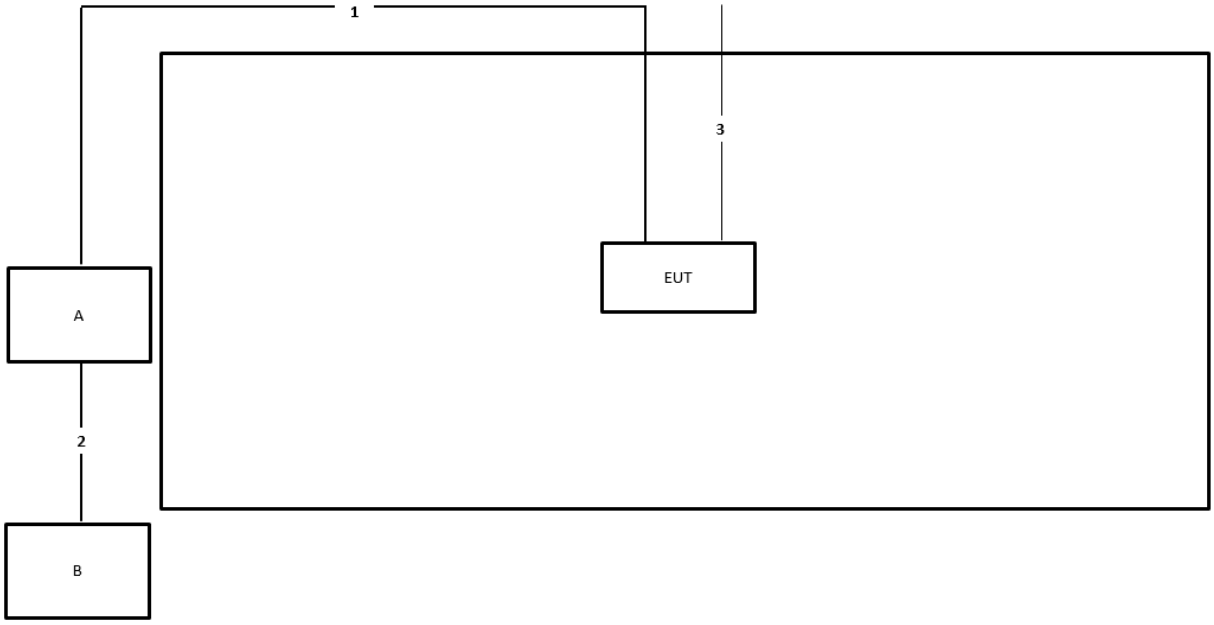
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



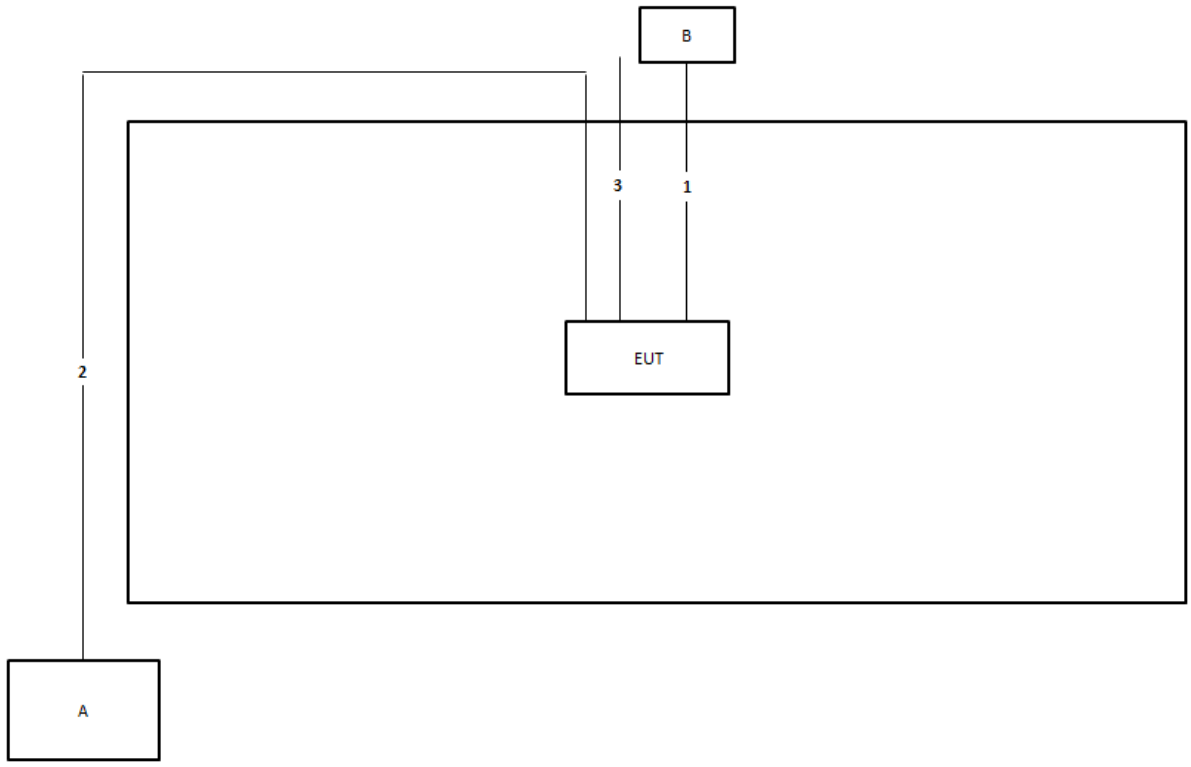
Item	Connection	Shielded	Length
1	Power cable	No	1.8m
2	DC cable	No	0.8m
3	RJ-45 cable	No	10m
4	Ground cable	No	1.8m
5	RJ-45 cable*4	No	1m

Test Setup Diagram - Radiated Test < 1GHz



Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	RJ-45 cable	No	1.5m
3	Crocodile clip cable	No	1.5m

Test Setup Diagram - Radiated Test > 1GHz



Item	Connection	Shielded	Length
1	Crocodile cable	No	1.1m
2	RJ-45 cable	No	10m
3	GND cable	No	2.5m

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

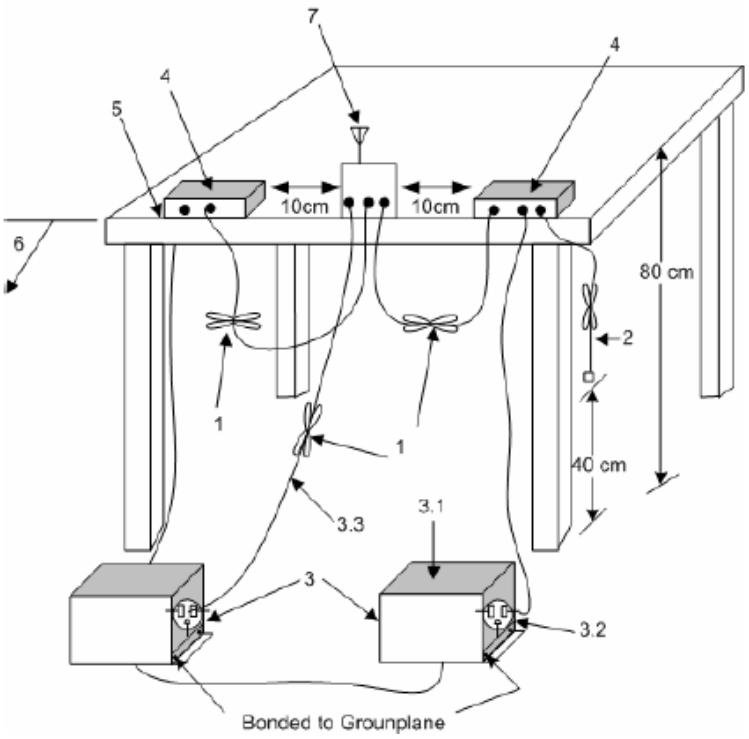
Refer a test equipment and calibration data table in this test report.

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

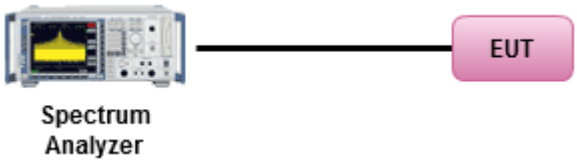
Refer a test equipment and calibration data table in this test report.

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

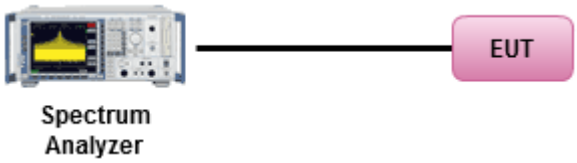
Refer a test equipment and calibration data table in this test report.

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

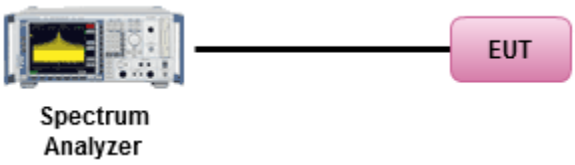
Refer a test equipment and calibration data table in this test report.

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.

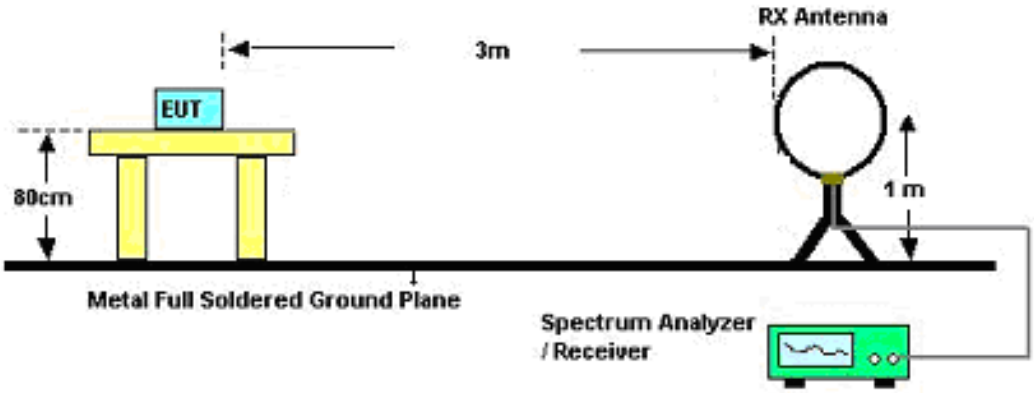
3.6.3 Test Procedures

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.		

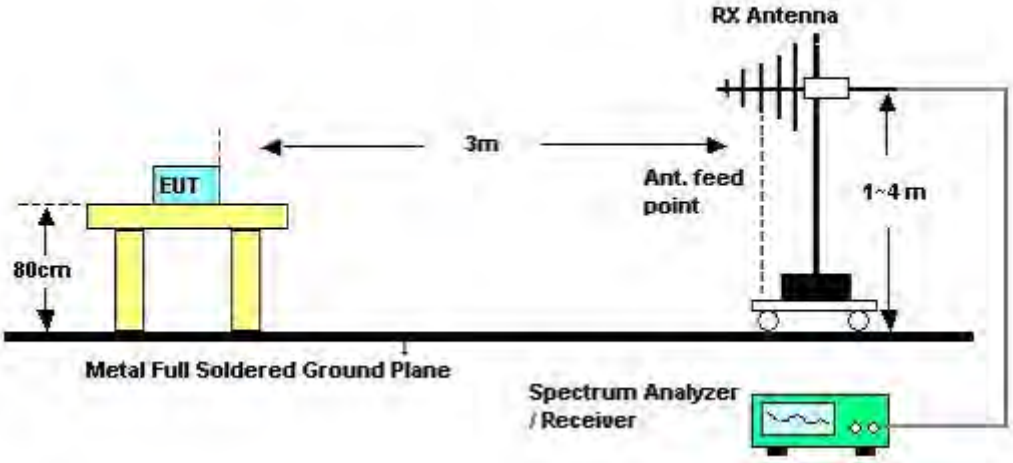
3.6.4 Test Setup

Radiated - Emissions in Restricted Frequency Bands

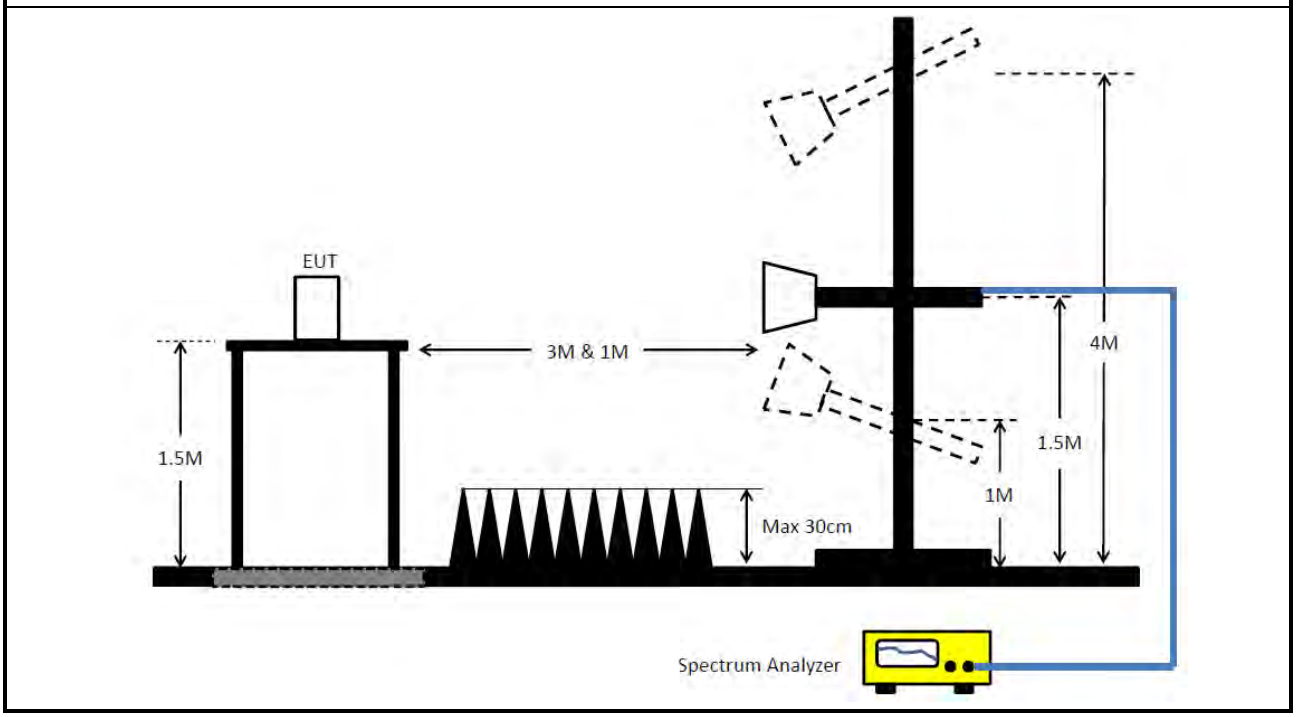
9kHz ~30MHz



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	Oct. 18, 2022	Oct. 17, 2023	Conduction (CO01-CB)
Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	May 14, 2022	May 13, 2023	Radiation (03CH05-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH05-CB	30 MHz ~ 1 GHz	Aug. 03, 2022	Aug. 02, 2023	Radiation (03CH05-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH05-CB	1GHz ~18GHz 3m	Nov. 07, 2021	Nov. 06, 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)
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA 9120 D-1291	1GHz~18GHz	Jun. 23, 2022	Jun. 22, 2023	Radiation (03CH05-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 22, 2022	Aug. 21, 2023	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC330N	980331	20MHz ~ 3GHz	Apr. 26, 2022	Apr. 25, 2023	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC12630SE	980287	1GHz – 26.5GHz	Jul. 01, 2022	Jun. 30, 2023	Radiation (03CH05-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 20, 2022	Jul. 19, 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. 17, 2022	Jun. 16, 2023	Radiation (03CH05-CB)
RF Cable-low	Woken	RG402	Low Cable-04+23	30MHz~1GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-28	1GHz~18GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-04+28	1GHz~18GHz	Oct. 03, 2022	Oct. 02, 2023	Radiation (03CH05-CB)
High Cable	Woken	WCA0929M	40G#5+7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH05-CB)

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
High Cable	Woken	WCA0929M	40G#5	1GHz ~ 40 GHz	Dec. 08, 2021	Dec. 07, 2022	Radiation (03CH05-CB)
High Cable	Woken	WCA0929M	40G#7	1GHz ~ 40 GHz	Dec. 14, 2021	Dec. 13, 2022	Radiation (03CH05-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH05-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH06-CB	1GHz ~18GHz 3m	Oct. 01, 2021	Sep. 30, 2022	Radiation (03CH06-CB)
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA 9120D-1292	1GHz~18GHz	Aug. 04, 2021	Aug. 03, 2022	Radiation (03CH06-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Aug. 05, 2021	Aug. 04, 2022	Radiation (03CH06-CB)
Pre-Amplifier	Agilent	83017A	MY53270064	0.5GHz ~ 26.5GHz	May 06, 2021	May 05, 2022	Radiation (03CH06-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 13, 2021	Jul. 12, 2022	Radiation (03CH06-CB)
Signal Analyzer	R&S	FSV40	101903	9kHz ~ 40GHz	Mar. 22, 2021	Mar. 21, 2022	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-05	1GHz~18GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-05+24	1GHz~18GHz	Oct. 04, 2021	Oct. 03, 2022	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 15, 2021	Jul. 14, 2022	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 15, 2021	Jul. 14, 2022	Radiation (03CH06-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH06-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)
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)

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
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. 23, 2021	Feb. 22, 2022	Conducted (TH01-CB)
Power Meter	Agilent	E4416A	GB41291199	50MHz~18GHz	Feb. 23, 2021	Feb. 22, 2022	Conducted (TH01-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Conducted (TH01-CB)

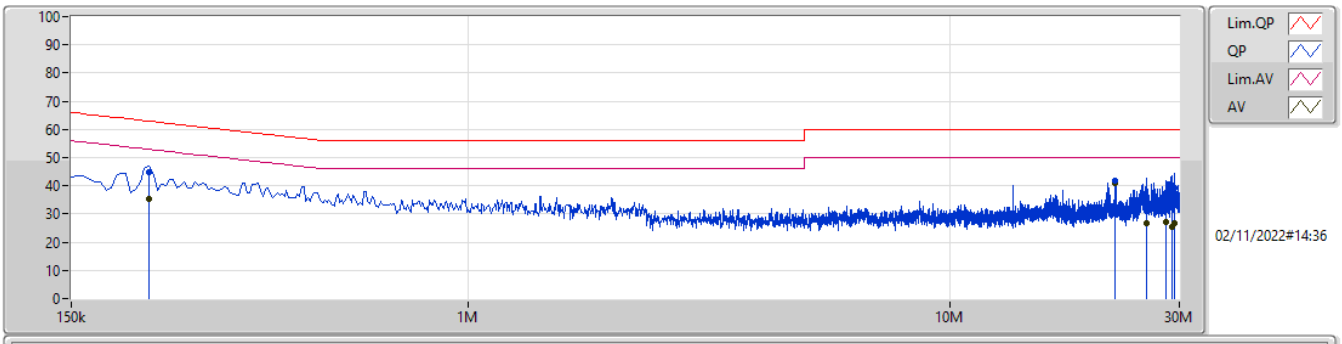
Note: Calibration Interval of instruments listed above is one year.

NCR means Non-Calibration required.

Summary

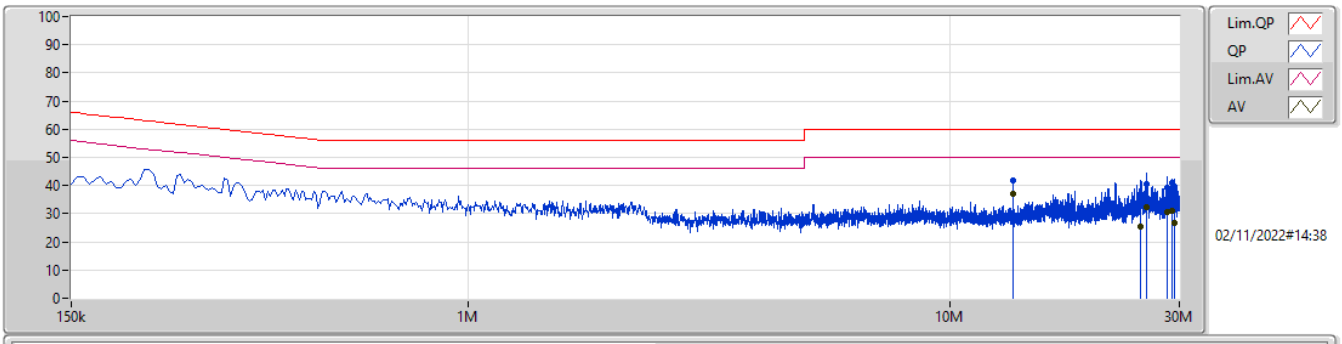
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	AV	22.119M	40.74	50.00	-9.26	Line

Mode 1



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	217.5k	45.00	62.92	-17.92	9.99	Line	-	35.01	0.06	0.04	9.89
AV	217.5k	35.43	52.92	-17.49	9.99	Line	-	25.44	0.06	0.04	9.89
QP	22.119M	42.00	60.00	-18.00	10.53	Line	-	31.47	0.32	0.25	9.96
AV	22.119M	40.74	50.00	-9.26	10.53	Line	"Worst"	30.21	0.32	0.25	9.96
QP	25.607M	35.96	60.00	-24.04	10.63	Line	-	25.33	0.36	0.29	9.98
AV	25.607M	26.84	50.00	-23.16	10.63	Line	-	16.21	0.36	0.29	9.98
QP	28.136M	37.33	60.00	-22.67	10.70	Line	-	26.63	0.38	0.32	10.00
AV	28.136M	27.29	50.00	-22.71	10.70	Line	-	16.59	0.38	0.32	10.00
QP	29M	36.13	60.00	-23.87	10.73	Line	-	25.40	0.39	0.33	10.01
AV	29M	25.35	50.00	-24.65	10.73	Line	-	14.62	0.39	0.33	10.01
QP	29.378M	39.14	60.00	-20.86	10.73	Line	-	28.41	0.39	0.33	10.01
AV	29.378M	26.67	50.00	-23.33	10.73	Line	-	15.94	0.39	0.33	10.01

Mode 1



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	13.56M	41.81	60.00	-18.19	10.37	Neutral	-	31.44	0.27	0.17	9.93
AV	13.56M	36.93	50.00	-13.07	10.37	Neutral	"Worst"	26.56	0.27	0.17	9.93
QP	24.986M	36.68	60.00	-23.32	10.56	Neutral	-	26.12	0.31	0.28	9.97
AV	24.986M	25.25	50.00	-24.75	10.56	Neutral	-	14.69	0.31	0.28	9.97
QP	25.602M	40.60	60.00	-19.40	10.58	Neutral	-	30.02	0.31	0.29	9.98
AV	25.602M	32.20	50.00	-17.80	10.58	Neutral	-	21.62	0.31	0.29	9.98
QP	28.374M	39.14	60.00	-20.86	10.63	Neutral	-	28.51	0.31	0.32	10.00
AV	28.374M	30.78	50.00	-19.22	10.63	Neutral	-	20.15	0.31	0.32	10.00
QP	28.995M	40.74	60.00	-19.26	10.65	Neutral	-	30.09	0.31	0.33	10.01
AV	28.995M	31.23	50.00	-18.77	10.65	Neutral	-	20.58	0.31	0.33	10.01
QP	29.373M	39.60	60.00	-20.40	10.65	Neutral	-	28.95	0.31	0.33	10.01
AV	29.373M	26.90	50.00	-23.10	10.65	Neutral	-	16.25	0.31	0.33	10.01

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	10M	15.092M	15M1G1D	8.05M	13.018M
802.11g_Nss1,(6Mbps)_2TX	16.35M	17.791M	17M8D1D	16.325M	16.442M
802.11n HT20_Nss1,(MCS0)_2TX	17.6M	18.541M	18M5D1D	17.525M	17.641M
802.11n HT40_Nss1,(MCS0)_2TX	35.45M	36.232M	36M2D1D	33.35M	36.032M

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

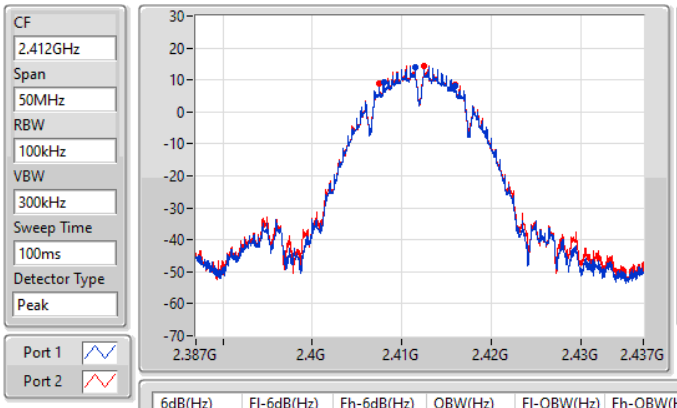
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	8.05M	13.093M	8.475M	13.093M
2437MHz	Pass	500k	10M	14.793M	9.05M	15.092M
2462MHz	Pass	500k	8.075M	13.043M	8.525M	13.018M
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	16.325M	16.467M	16.325M	16.492M
2437MHz	Pass	500k	16.325M	17.591M	16.325M	17.791M
2462MHz	Pass	500k	16.325M	16.442M	16.35M	16.492M
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	17.55M	17.641M	17.55M	17.691M
2437MHz	Pass	500k	17.525M	18.316M	17.6M	18.541M
2462MHz	Pass	500k	17.55M	17.666M	17.575M	17.691M
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	500k	33.35M	36.132M	34M	36.032M
2437MHz	Pass	500k	35.45M	36.232M	35.2M	36.182M
2452MHz	Pass	500k	35M	36.082M	34.4M	36.132M

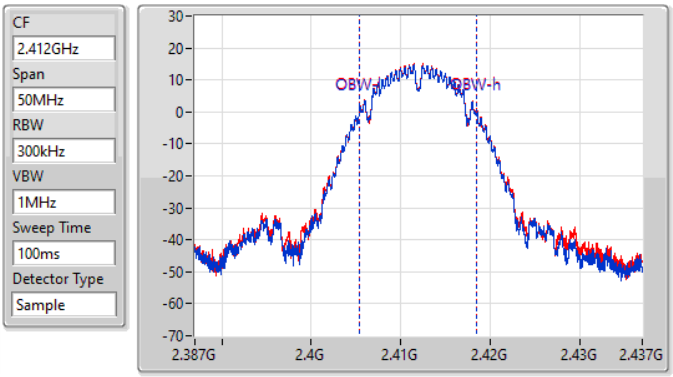
Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

802.11b_Nss1,(1Mbps)_2TX EBW

2412MHz

20/12/2021



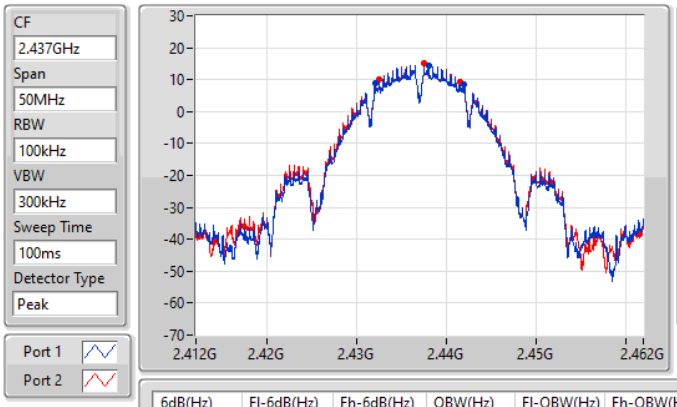


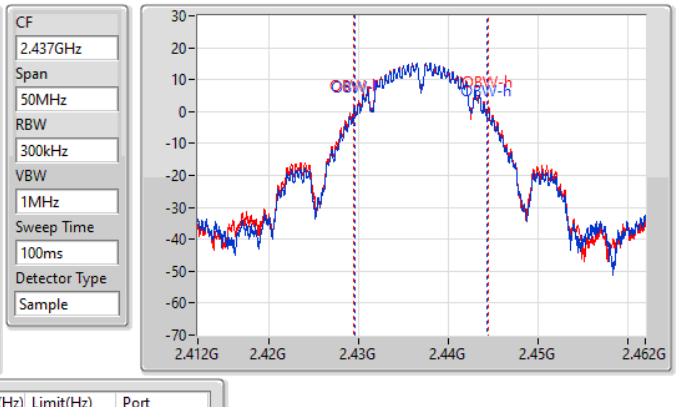
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8.05M	2.407975G	2.416025G	13.093M	2.405403G	2.418497G	500k	1
8.475M	2.4075G	2.415975G	13.093M	2.405403G	2.418497G	500k	2

802.11b_Nss1,(1Mbps)_2TX EBW

2437MHz

20/12/2021



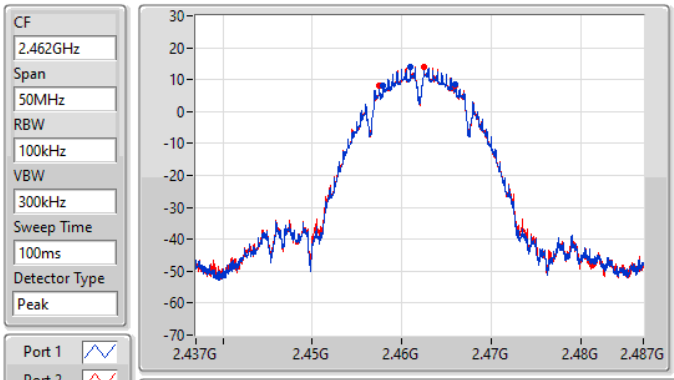


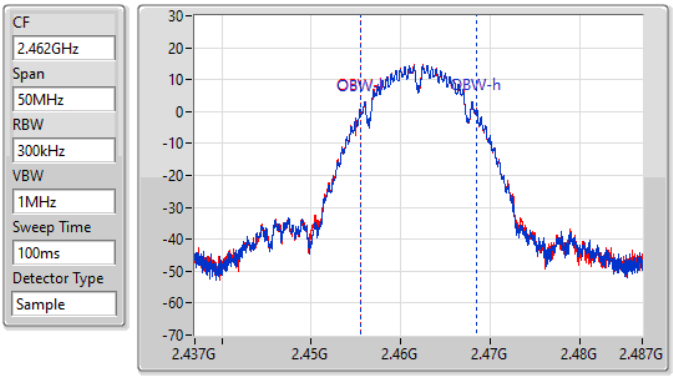
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
10M	2.432G	2.442G	14.793M	2.429554G	2.444346G	500k	1
9.05M	2.432475G	2.441525G	15.092M	2.429379G	2.444471G	500k	2

802.11b_Nss1,(1Mbps)_2TX EBW

2462MHz

20/12/2021



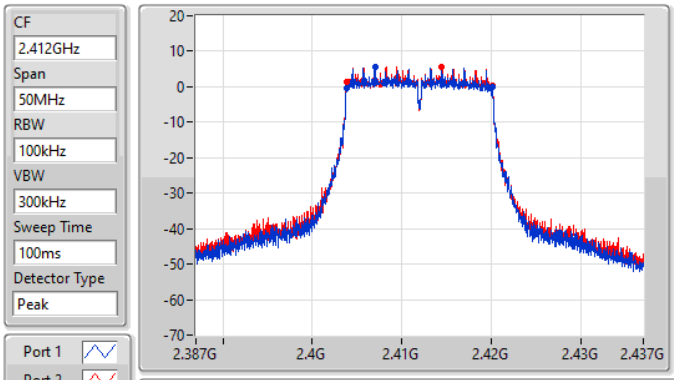


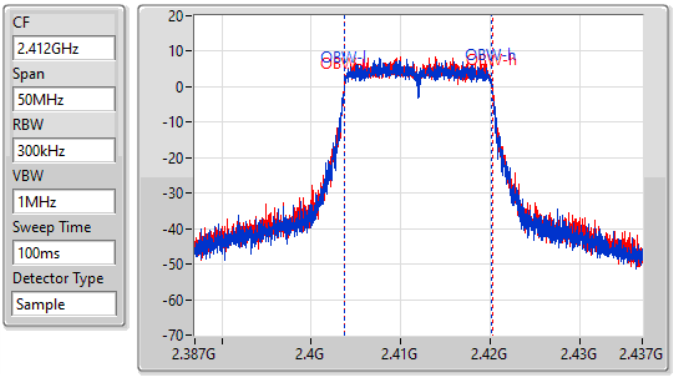
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8.075M	2.45795G	2.466025G	13.043M	2.455478G	2.468522G	500k	1
8.525M	2.4575G	2.466025G	13.018M	2.455478G	2.468497G	500k	2

802.11g_Nss1,(6Mbps)_2TX EBW

2412MHz

20/12/2021



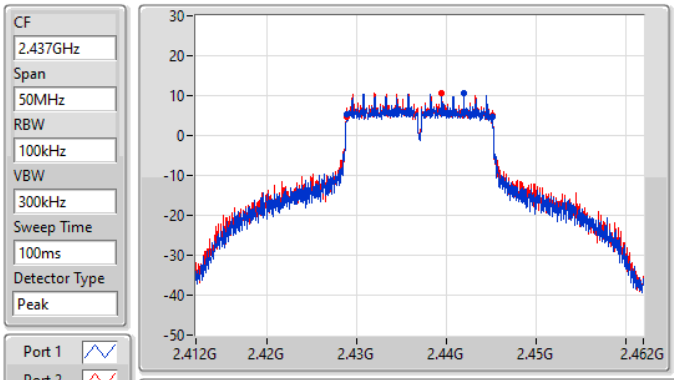


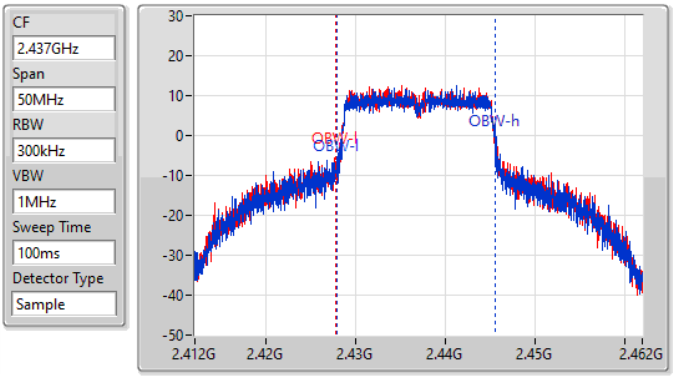
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.325M	2.403825G	2.42015G	16.467M	2.403704G	2.420171G	500k	1
16.325M	2.403825G	2.42015G	16.492M	2.403729G	2.420221G	500k	2

802.11g_Nss1,(6Mbps)_2TX EBW

2437MHz

20/12/2021



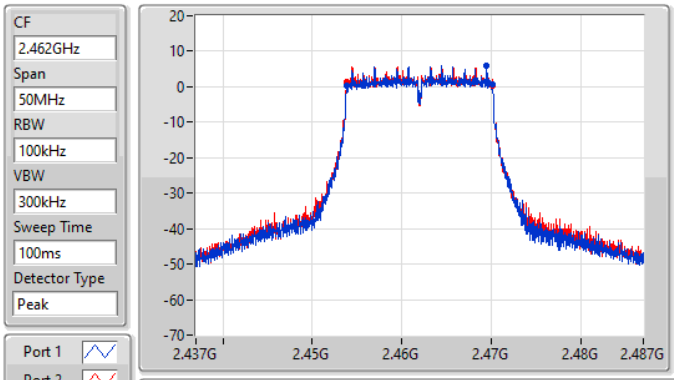


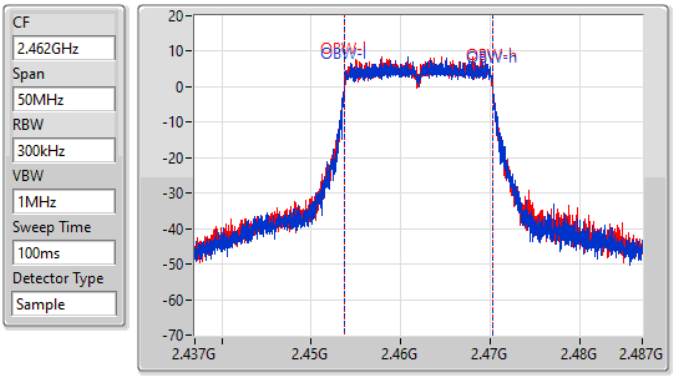
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.325M	2.428825G	2.44515G	17.591M	2.42793G	2.445521G	500k	1
16.325M	2.4288G	2.445125G	17.791M	2.42778G	2.445571G	500k	2

802.11g_Nss1,(6Mbps)_2TX EBW

2462MHz

20/12/2021



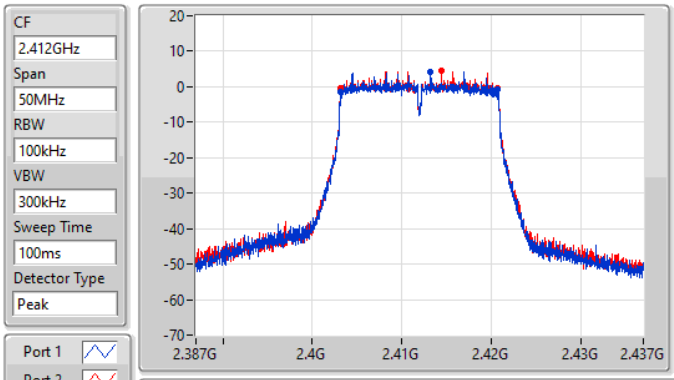


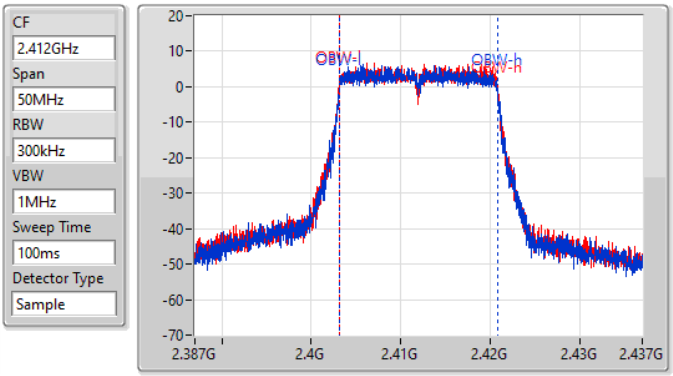
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.325M	2.453825G	2.47015G	16.442M	2.453779G	2.470221G	500k	1
16.35M	2.453825G	2.470175G	16.492M	2.453754G	2.470246G	500k	2

802.11n HT20_Nss1,(MCS0)_2TX EBW

2412MHz

20/12/2021



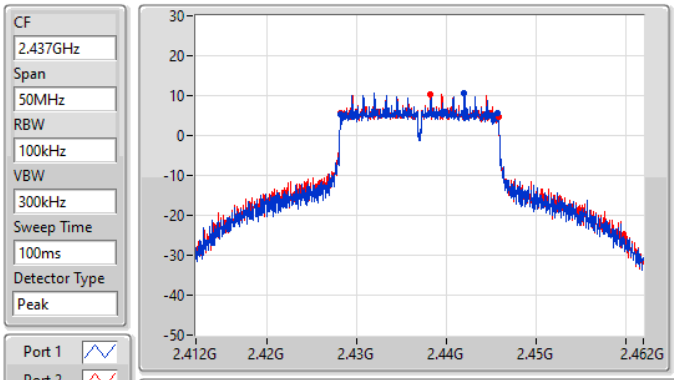


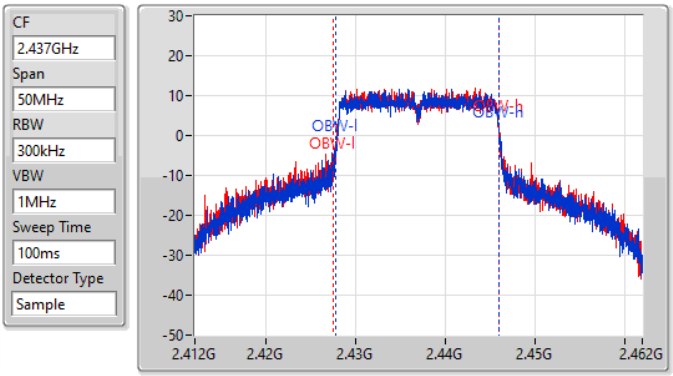
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.55M	2.4032G	2.42075G	17.641M	2.403154G	2.420796G	500k	1
17.55M	2.4032G	2.42075G	17.691M	2.403154G	2.420846G	500k	2

802.11n HT20_Nss1,(MCS0)_2TX EBW

2437MHz

20/12/2021



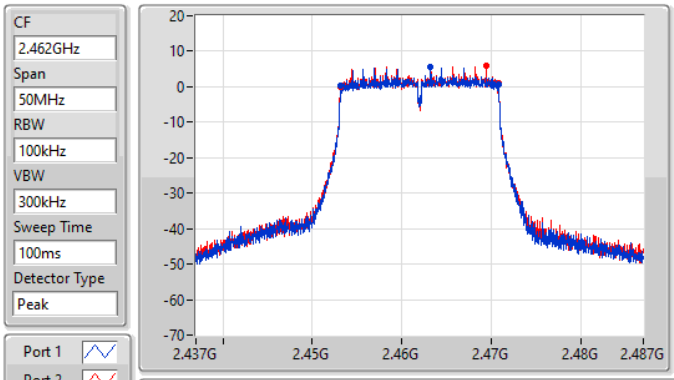


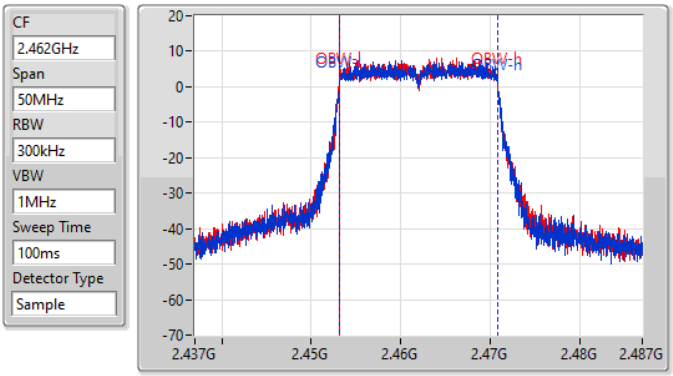
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.525M	2.428225G	2.44575G	18.316M	2.42773G	2.446045G	500k	1
17.6M	2.4282G	2.4458G	18.541M	2.42748G	2.44602G	500k	2

802.11n HT20_Nss1,(MCS0)_2TX EBW

2462MHz

20/12/2021



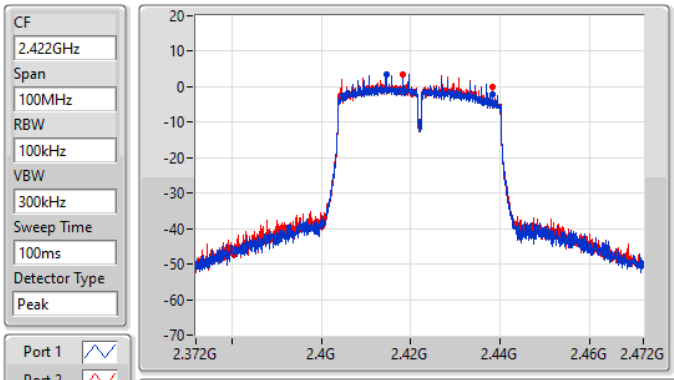


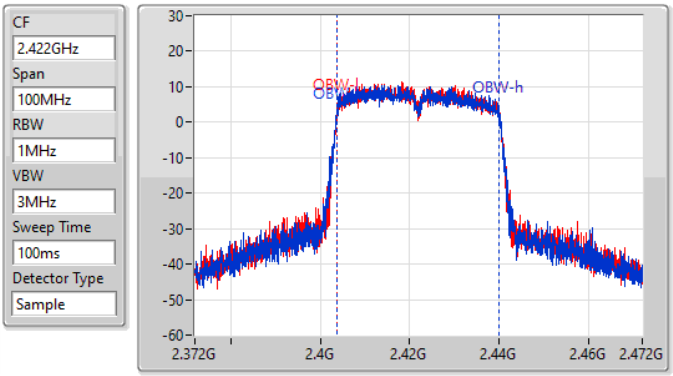
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.55M	2.453225G	2.470775G	17.666M	2.453154G	2.470821G	500k	1
17.575M	2.4532G	2.470775G	17.691M	2.453129G	2.470821G	500k	2

802.11n HT40_Nss1,(MCS0)_2TX EBW

2422MHz

20/12/2021



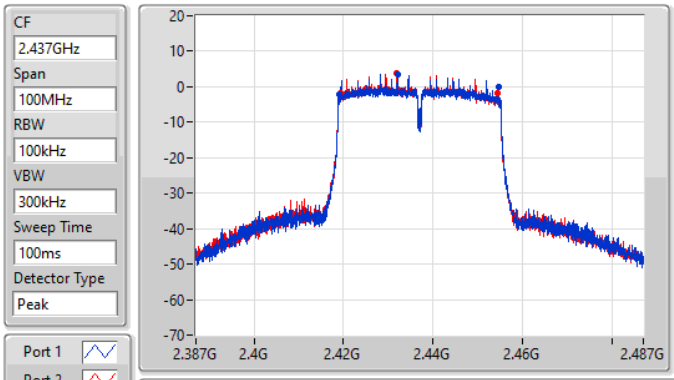


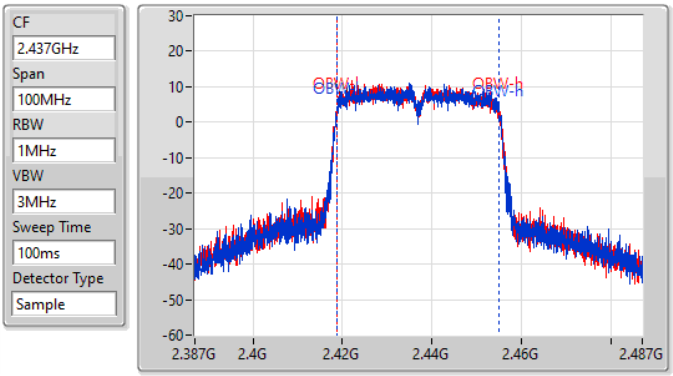
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
33.35M	2.40485G	2.4382G	36.132M	2.403809G	2.439941G	500k	1
34M	2.40425G	2.43825G	36.032M	2.403859G	2.439891G	500k	2

802.11n HT40_Nss1,(MCS0)_2TX EBW

2437MHz

20/12/2021



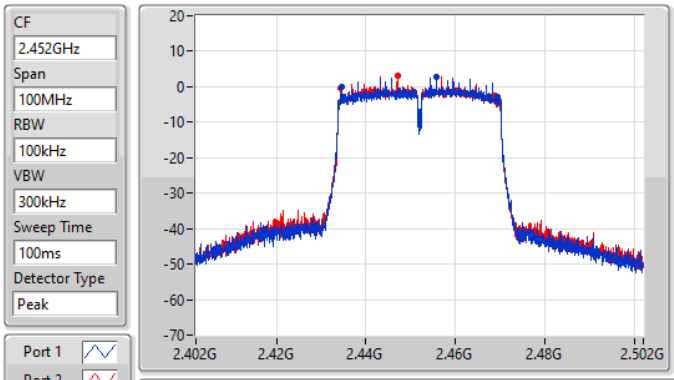


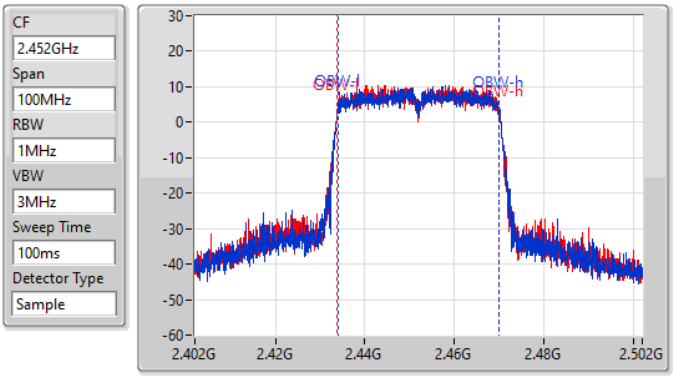
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
35.45M	2.4191G	2.45455G	36.232M	2.418759G	2.454991G	500k	1
35.2M	2.41925G	2.45445G	36.182M	2.418809G	2.454991G	500k	2

802.11n HT40_Nss1,(MCS0)_2TX EBW

2452MHz

20/12/2021





6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
35M	2.4345G	2.4695G	36.082M	2.433959G	2.470041G	500k	1
34.4M	2.43445G	2.46885G	36.132M	2.433859G	2.469991G	500k	2

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_2TX	26.48	0.44463
802.11g_Nss1,(6Mbps)_2TX	24.33	0.27102
802.11n HT20_Nss1,(MCS0)_2TX	24.11	0.25763
802.11n HT40_Nss1,(MCS0)_2TX	20.02	0.10046

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	4.35	22.30	22.61	25.47	30.00
2437MHz	Pass	4.35	23.42	23.51	26.48	30.00
2462MHz	Pass	4.35	22.05	22.19	25.13	30.00
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	4.35	16.56	17.05	19.82	30.00
2417MHz	Pass	4.35	18.00	18.43	21.23	30.00
2437MHz	Pass	4.35	21.21	21.43	24.33	30.00
2457MHz	Pass	4.35	18.43	18.52	21.49	30.00
2462MHz	Pass	4.35	16.96	17.19	20.09	30.00
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	4.35	15.61	15.93	18.78	30.00
2417MHz	Pass	4.35	17.91	18.20	21.07	30.00
2437MHz	Pass	4.35	21.26	20.93	24.11	30.00
2457MHz	Pass	4.35	18.41	18.40	21.42	30.00
2462MHz	Pass	4.35	16.95	17.16	20.07	30.00
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	4.35	16.76	14.74	18.88	30.00
2437MHz	Pass	4.35	16.79	17.21	20.02	30.00
2452MHz	Pass	4.35	16.31	16.79	19.57	30.00

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

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_2TX	2.43
802.11g_Nss1,(6Mbps)_2TX	-0.87
802.11n HT20_Nss1,(MCS0)_2TX	-2.99
802.11n HT40_Nss1,(MCS0)_2TX	-7.11

RBW = 3kHz;

Result

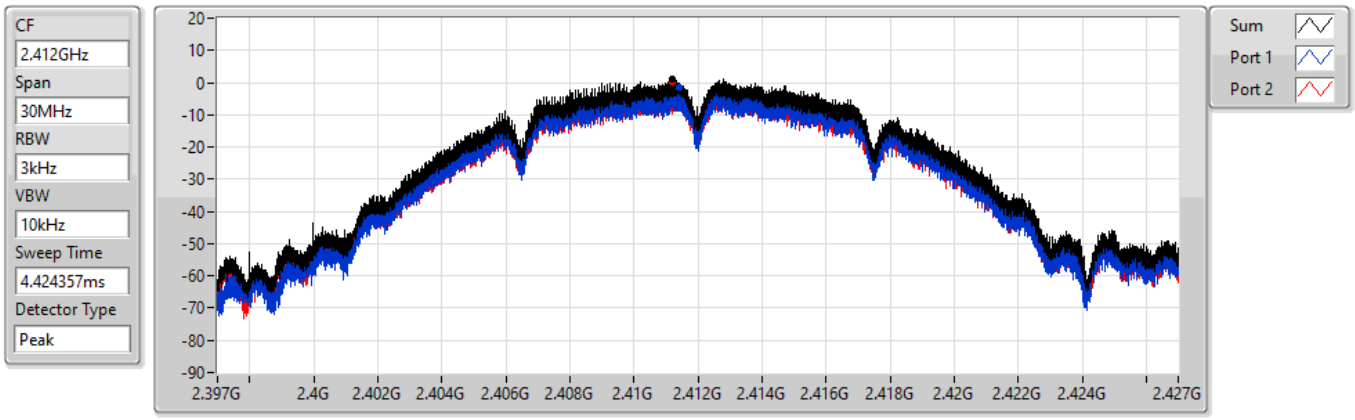
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	7.36	-1.39	0.14	1.14	6.64
2437MHz	Pass	7.36	0.77	1.44	2.43	6.64
2462MHz	Pass	7.36	-1.31	-0.45	0.53	6.64
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	7.36	-8.51	-8.33	-7.21	6.64
2437MHz	Pass	7.36	-2.92	-2.40	-0.87	6.64
2462MHz	Pass	7.36	-6.90	-7.46	-6.10	6.64
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	7.36	-9.72	-9.44	-7.79	6.64
2437MHz	Pass	7.36	-5.19	-4.47	-2.99	6.64
2462MHz	Pass	7.36	-8.05	-8.62	-6.93	6.64
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	7.36	-10.04	-9.28	-8.26	6.64
2437MHz	Pass	7.36	-10.05	-10.75	-7.38	6.64
2452MHz	Pass	7.36	-9.57	-10.75	-7.11	6.64

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

20/12/2021

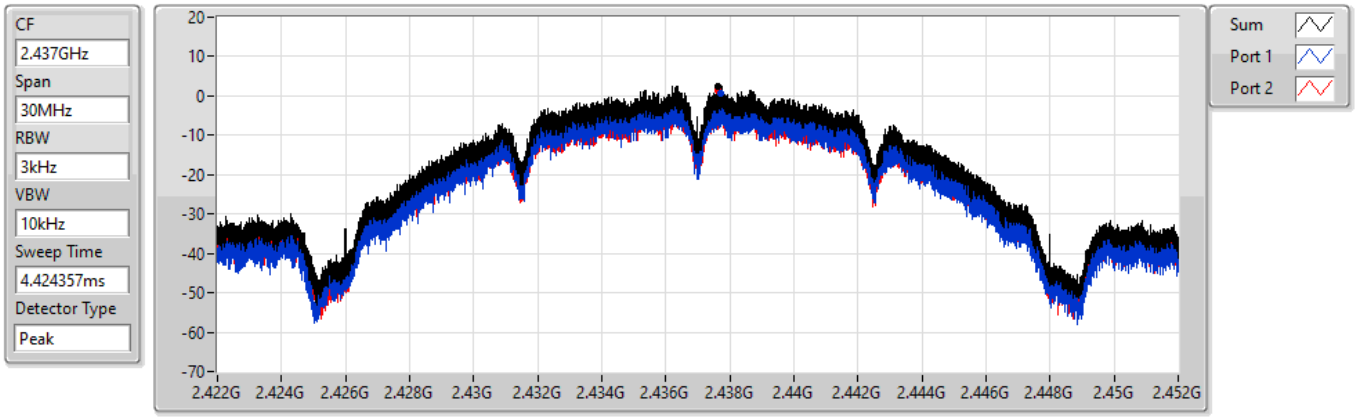


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.14	1.14	-1.39	0.14

802.11b_Nss1,(1Mbps)_2TX PSD

2437MHz

20/12/2021

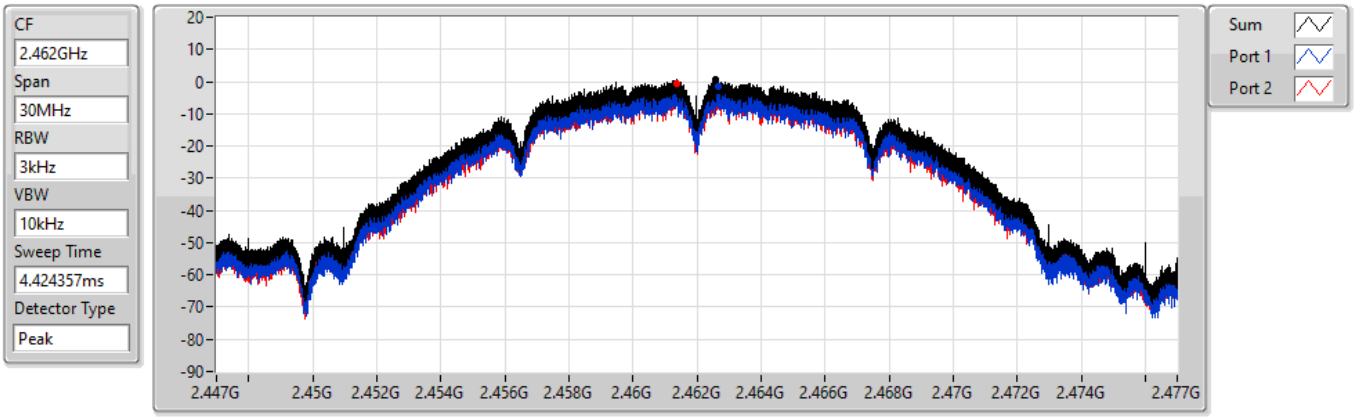


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.43	2.43	0.77	1.44

802.11b_Nss1,(1Mbps)_2TX PSD

2462MHz

20/12/2021

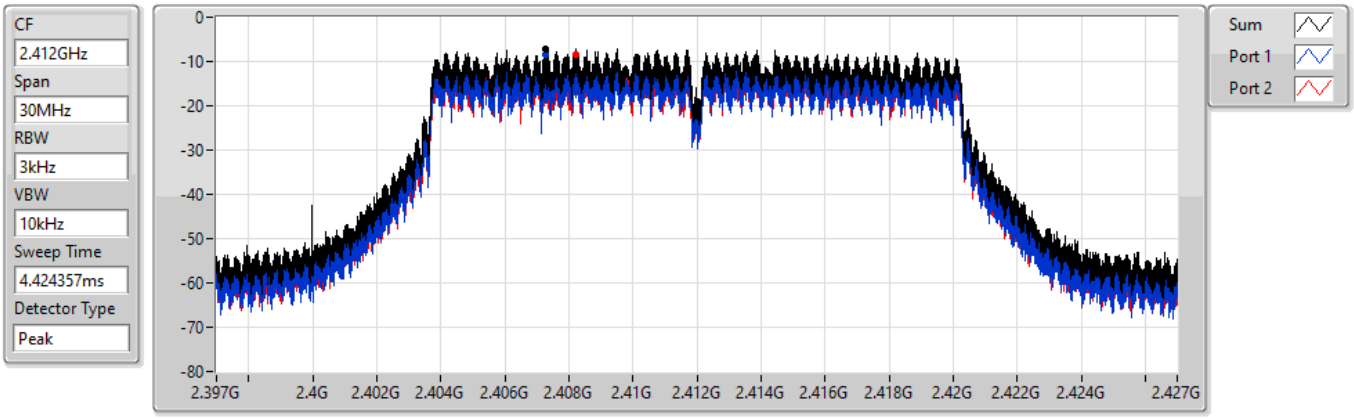


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.53	0.53	-1.31	-0.45

802.11g_Nss1,(6Mbps)_2TX PSD

2412MHz

20/12/2021

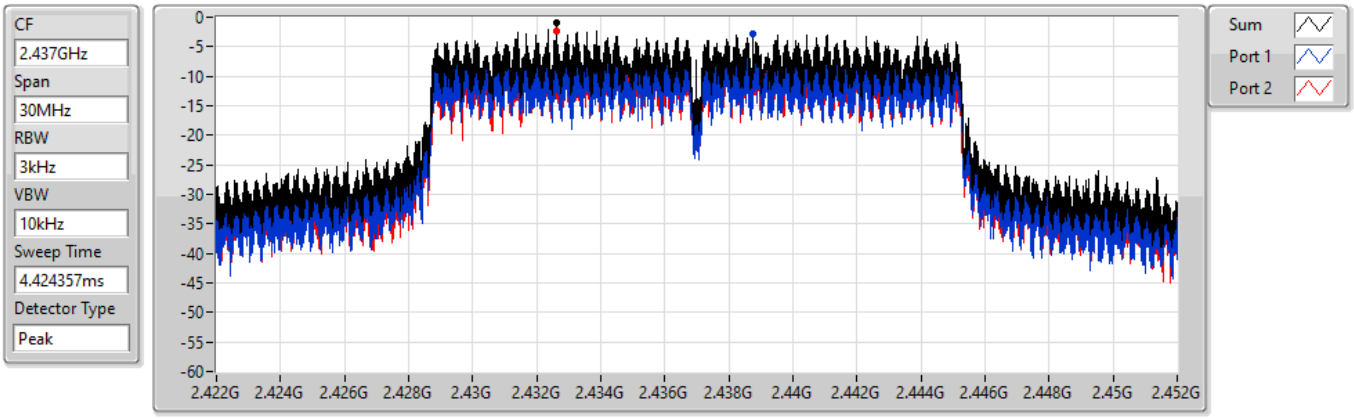


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-7.21	-7.21	-8.51	-8.33

802.11g_Nss1,(6Mbps)_2TX PSD

2437MHz

20/12/2021

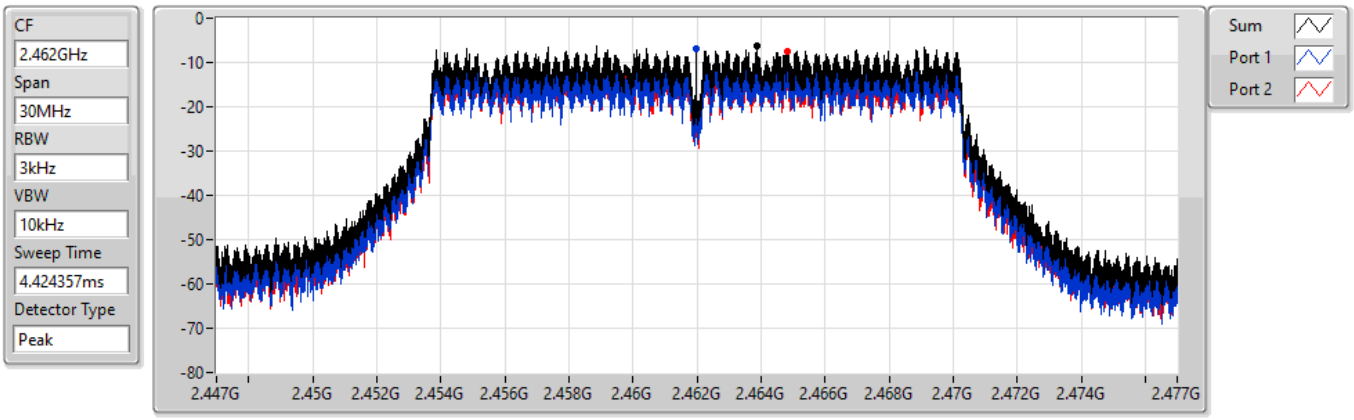


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.87	-0.87	-2.92	-2.40

802.11g_Nss1,(6Mbps)_2TX PSD

2462MHz

20/12/2021

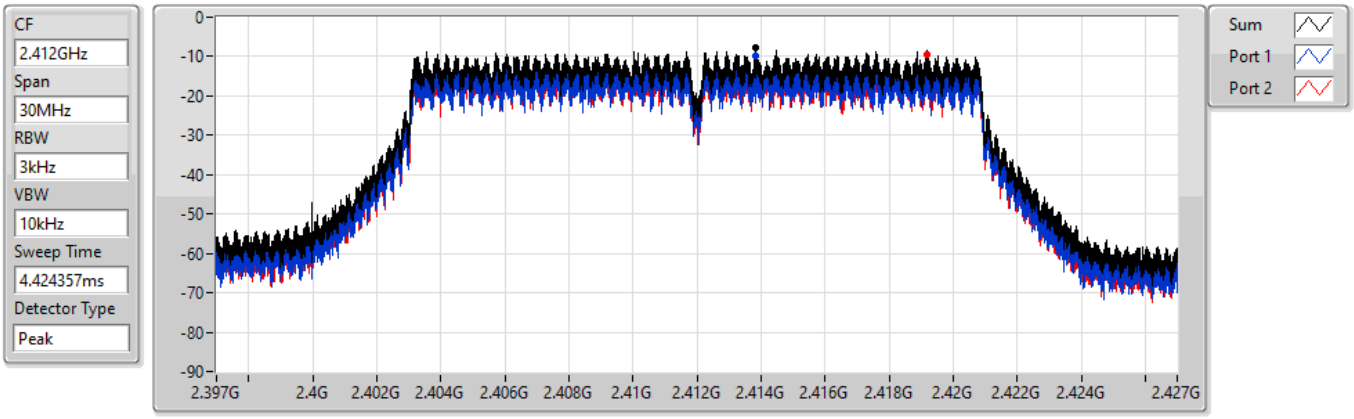


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-6.10	-6.10	-6.90	-7.46

802.11n HT20_Nss1,(MCS0)_2TX PSD

2412MHz

20/12/2021

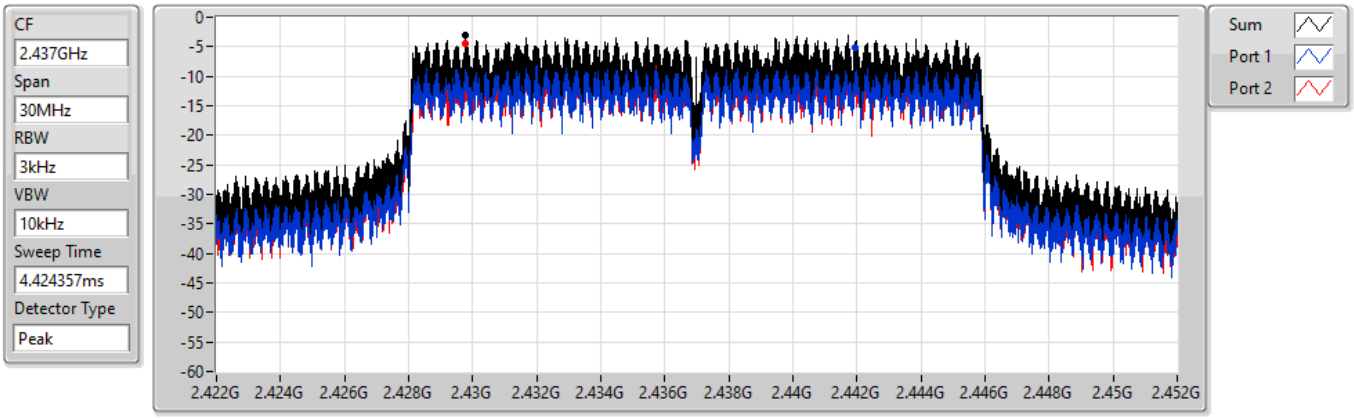


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-7.79	-7.79	-9.72	-9.44

802.11n HT20_Nss1,(MCS0)_2TX PSD

2437MHz

20/12/2021

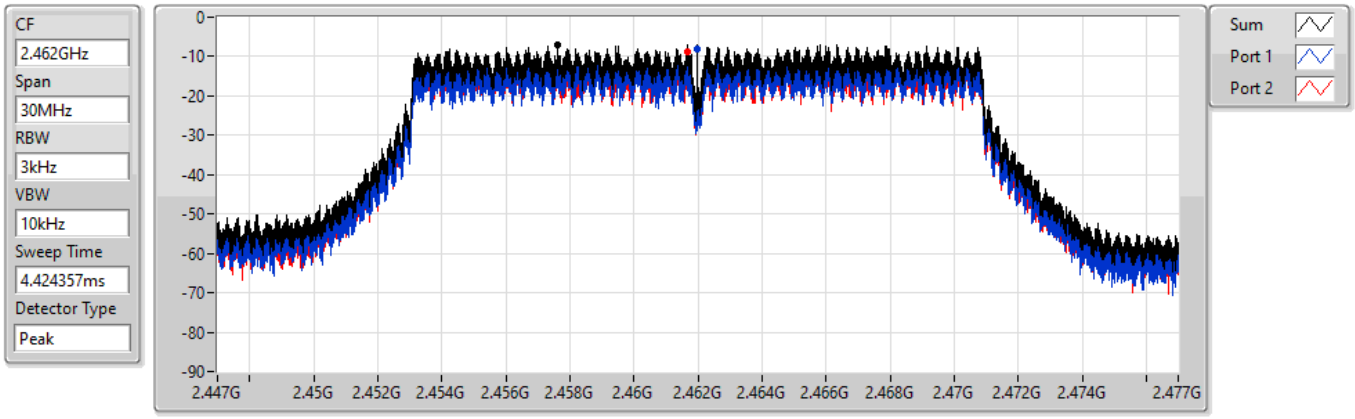


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.99	-2.99	-5.19	-4.47

802.11n HT20_Nss1,(MCS0)_2TX PSD

2462MHz

20/12/2021

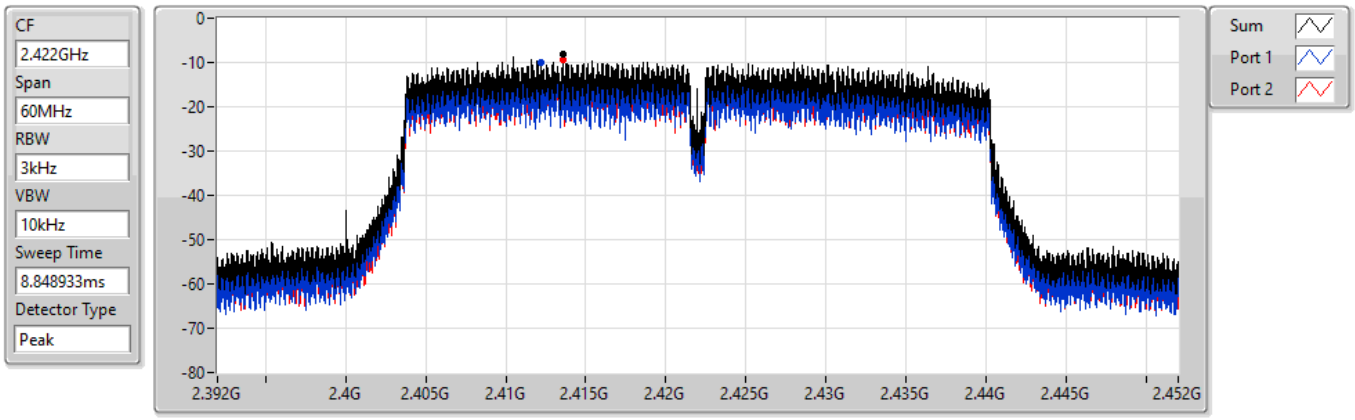


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-6.93	-6.93	-8.05	-8.62

802.11n HT40_Nss1,(MCS0)_2TX PSD

2422MHz

20/12/2021

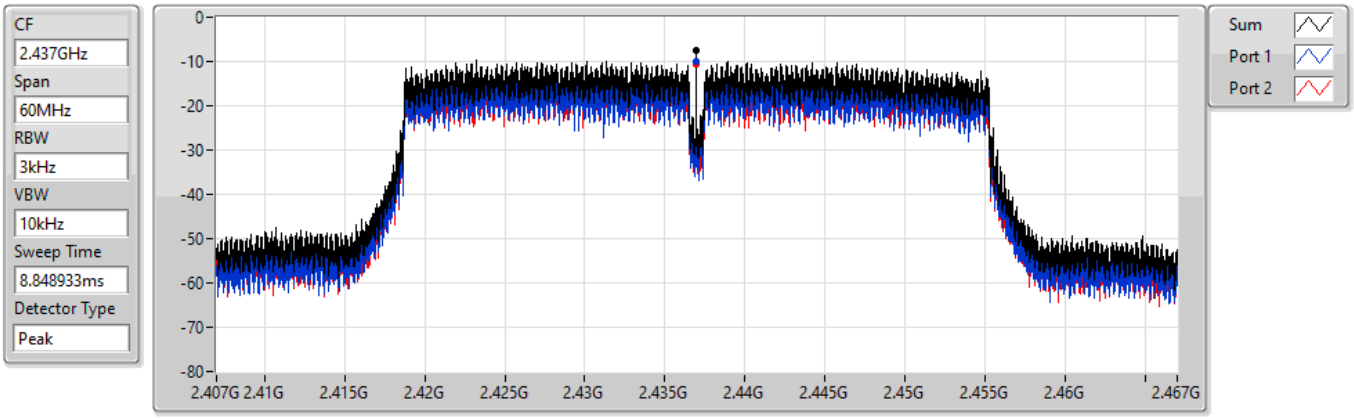


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-8.26	-8.26	-10.04	-9.28

802.11n HT40_Nss1,(MCS0)_2TX PSD

2437MHz

20/12/2021

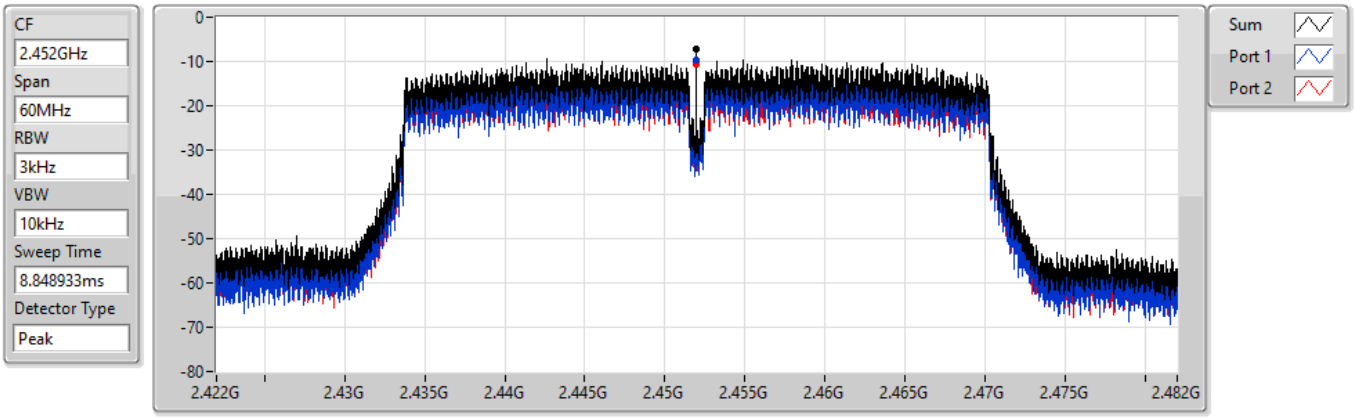


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-7.38	-7.38	-10.05	-10.75

802.11n HT40_Nss1,(MCS0)_2TX PSD

2452MHz

20/12/2021



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-7.11	-7.11	-9.57	-10.75

Summary

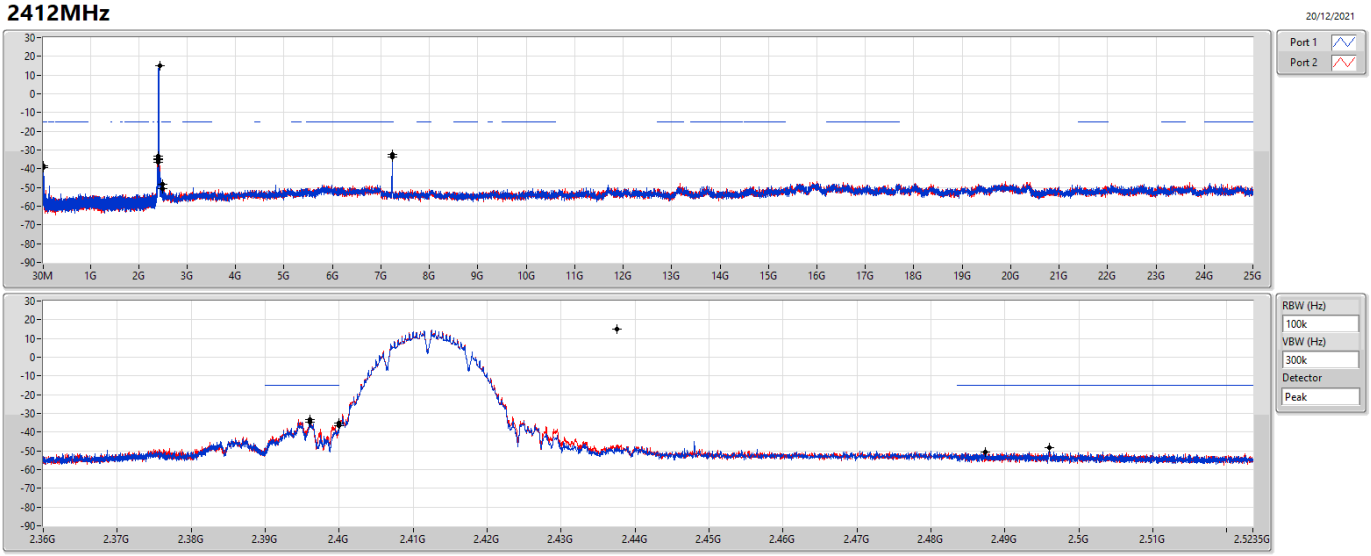
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_2TX	Pass	2.43749G	15.14	-14.86	31.75M	-39.18	2.396G	-33.14	2.4G	-35.29	2.48736G	-50.44	7.23514G	-32.41	2
802.11g_Nss1,(6Mbps)_2TX	Pass	2.442G	10.83	-19.17	31.75M	-42.66	2.39918G	-33.50	2.4G	-36.17	2.50072G	-50.11	7.23233G	-42.68	2
802.11n HT20_Nss1,(MCS0)_2TX	Pass	2.43198G	10.94	-19.06	32.91M	-27.44	2.39826G	-37.53	2.4G	-40.33	2.4835G	-40.57	16.56569G	-47.70	1
802.11n HT40_Nss1,(MCS0)_2TX	Pass	2.42948G	3.85	-26.15	33.15M	-36.73	2.39952G	-35.49	2.4G	-38.72	2.48474G	-45.85	17.67448G	-48.16	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	2.43749G	15.14	-14.86	31.75M	-38.48	2.39602G	-34.59	2.4G	-36.61	2.496G	-48.45	7.23514G	-33.96	1
2412MHz	Pass	2.43749G	15.14	-14.86	31.75M	-39.18	2.396G	-33.14	2.4G	-35.29	2.48736G	-50.44	7.23514G	-32.41	2
2437MHz	Pass	2.43749G	15.14	-14.86	32.04M	-43.67	2.39998G	-42.09	2.4G	-43.62	2.48396G	-46.18	16.63874G	-46.27	1
2437MHz	Pass	2.43749G	15.14	-14.86	32.04M	-43.62	2.3975G	-40.43	2.4G	-44.62	2.496G	-47.37	16.29036G	-46.75	2
2462MHz	Pass	2.43749G	15.14	-14.86	31.75M	-41.40	2.39998G	-45.00	2.4835G	-46.00	2.48796G	-46.21	16.3634G	-47.54	1
2462MHz	Pass	2.43749G	15.14	-14.86	32.04M	-40.75	2.4G	-48.11	2.4835G	-46.31	2.48748G	-45.67	17.67547G	-46.81	2
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.442G	10.83	-19.17	31.75M	-41.95	2.4G	-36.11	2.4G	-35.96	2.49598G	-47.80	7.23233G	-40.58	1
2412MHz	Pass	2.442G	10.83	-19.17	31.75M	-42.66	2.39918G	-33.50	2.4G	-36.17	2.50072G	-50.11	7.23233G	-42.68	2
2437MHz	Pass	2.442G	10.83	-19.17	32.04M	-39.35	2.39866G	-39.14	2.4G	-40.05	2.48602G	-41.67	17.67547G	-47.32	1
2437MHz	Pass	2.442G	10.83	-19.17	32.04M	-40.84	2.39886G	-38.38	2.4G	-40.56	2.487G	-40.33	16.59941G	-47.60	2
2462MHz	Pass	2.442G	10.83	-19.17	32.04M	-41.08	2.39998G	-42.88	2.4G	-43.84	2.48358G	-44.69	16.69212G	-47.15	1
2462MHz	Pass	2.442G	10.83	-19.17	31.75M	-41.29	2.4G	-47.14	2.4835G	-46.58	2.4841G	-44.17	16.59941G	-47.51	2
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43198G	10.94	-19.06	57.38M	-41.20	2.4G	-38.42	2.4G	-39.14	2.496G	-50.10	7.23233G	-44.55	1
2412MHz	Pass	2.43198G	10.94	-19.06	66.12M	-41.15	2.397G	-37.10	2.4G	-40.18	2.4849G	-50.19	7.23514G	-42.17	2
2437MHz	Pass	2.43198G	10.94	-19.06	32.91M	-27.44	2.39826G	-37.53	2.4G	-40.33	2.4835G	-40.57	16.56569G	-47.70	1
2437MHz	Pass	2.43198G	10.94	-19.06	31.75M	-39.58	2.39762G	-38.08	2.4G	-41.78	2.4857G	-40.92	24.69657G	-46.83	2
2462MHz	Pass	2.43198G	10.94	-19.06	32.04M	-42.30	2.4G	-43.64	2.4G	-45.02	2.48438G	-44.05	23.14007G	-46.75	1
2462MHz	Pass	2.43198G	10.94	-19.06	32.04M	-42.87	2.39996G	-47.71	2.4835G	-47.66	2.4845G	-43.15	16.37464G	-47.21	2
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	2.42948G	3.85	-26.15	54.62M	-38.91	2.3976G	-36.92	2.4G	-37.29	2.49594G	-46.50	5.94861G	-47.00	1
2422MHz	Pass	2.42948G	3.85	-26.15	32M	-42.19	2.39604G	-35.66	2.4G	-39.30	2.48538G	-48.74	7.24992G	-47.00	2
2437MHz	Pass	2.42948G	3.85	-26.15	33.15M	-36.73	2.39952G	-35.49	2.4G	-38.72	2.48474G	-45.85	17.67448G	-48.16	1
2437MHz	Pass	2.42948G	3.85	-26.15	32M	-42.45	2.39988G	-36.79	2.4G	-39.20	2.48354G	-43.31	17.66887G	-47.81	2
2452MHz	Pass	2.42948G	3.85	-26.15	31.72M	-42.20	2.39984G	-47.00	2.4835G	-44.24	2.48702G	-40.31	17.69411G	-46.93	1
2452MHz	Pass	2.42948G	3.85	-26.15	32M	-41.55	2.39904G	-46.30	2.4835G	-42.45	2.48506G	-41.47	5.9458G	-47.43	2

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

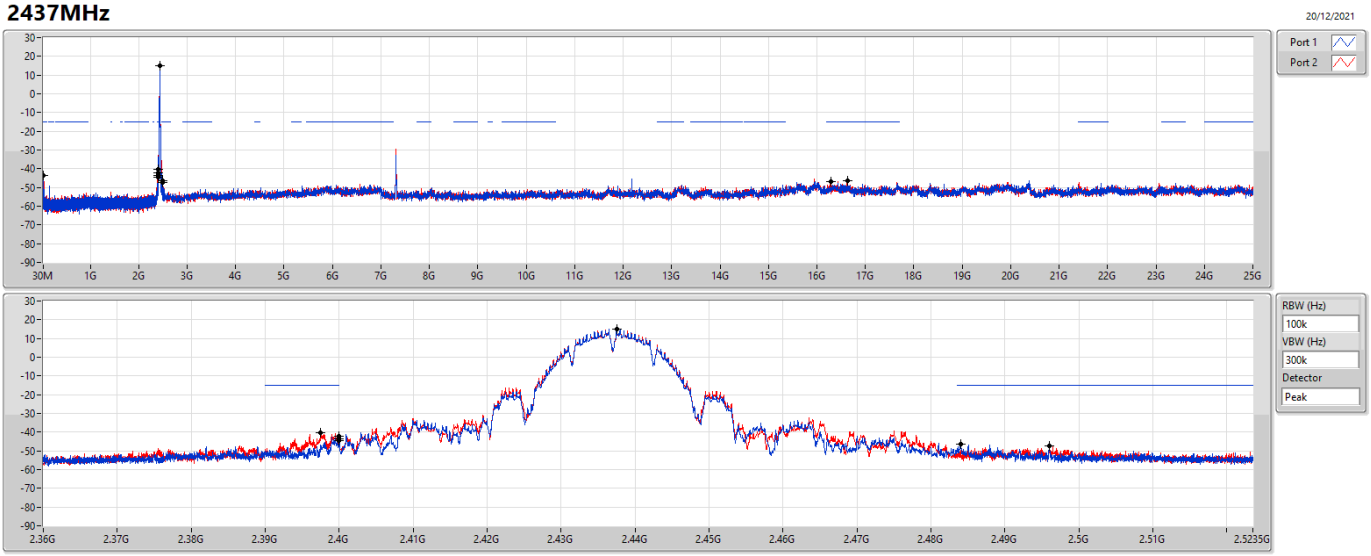
2412MHz



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
2.43749G	15.14	-14.86	31.75M	-38.48	2.39602G	-34.59	2.4G	-36.61	2.496G	-48.45	7.23514G	-33.96	1
2.43749G	15.14	-14.86	31.75M	-39.18	2.396G	-33.14	2.4G	-35.29	2.48736G	-50.44	7.23514G	-32.41	2

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

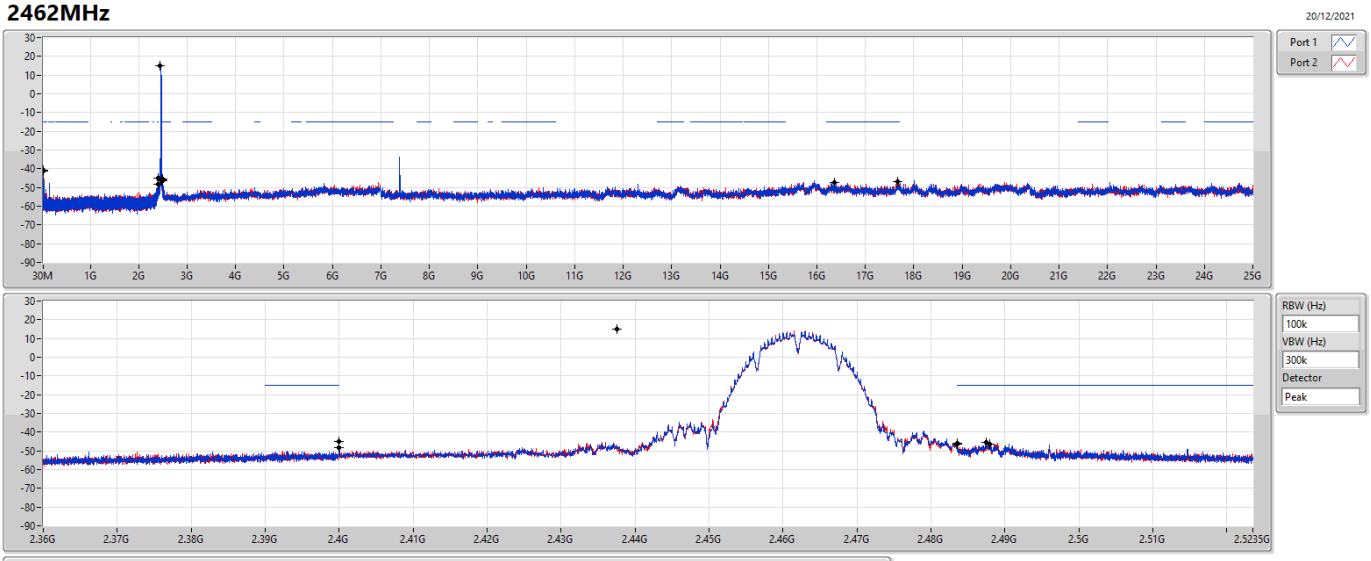
2437MHz



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
2.43749G	15.14	-14.86	32.04M	-43.67	2.39998G	-42.09	2.4G	-43.62	2.48396G	-46.18	16.63874G	-46.27	1
2.43749G	15.14	-14.86	32.04M	-43.62	2.3975G	-40.43	2.4G	-44.62	2.496G	-47.37	16.29036G	-46.75	2

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

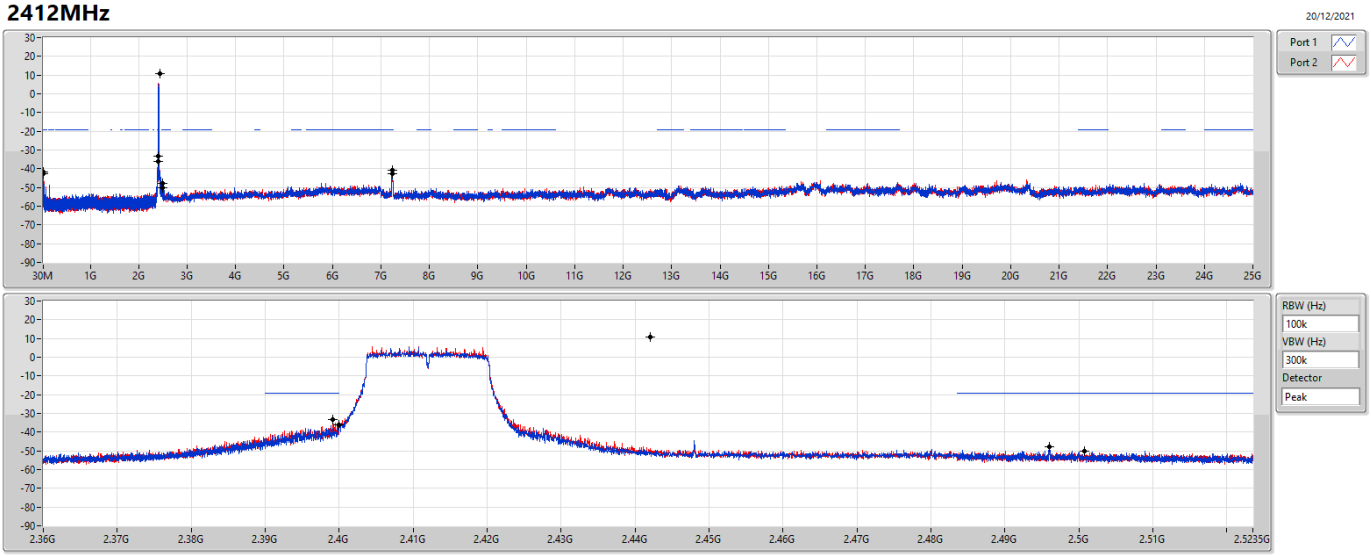
2462MHz



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
2.43749G	15.14	-14.86	31.75M	-41.40	2.39998G	-45.00	2.4835G	-46.00	2.48796G	-46.21	16.3634G	-47.54	1
2.43749G	15.14	-14.86	32.04M	-40.75	2.4G	-48.11	2.4835G	-46.31	2.48748G	-45.67	17.67547G	-46.81	2

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

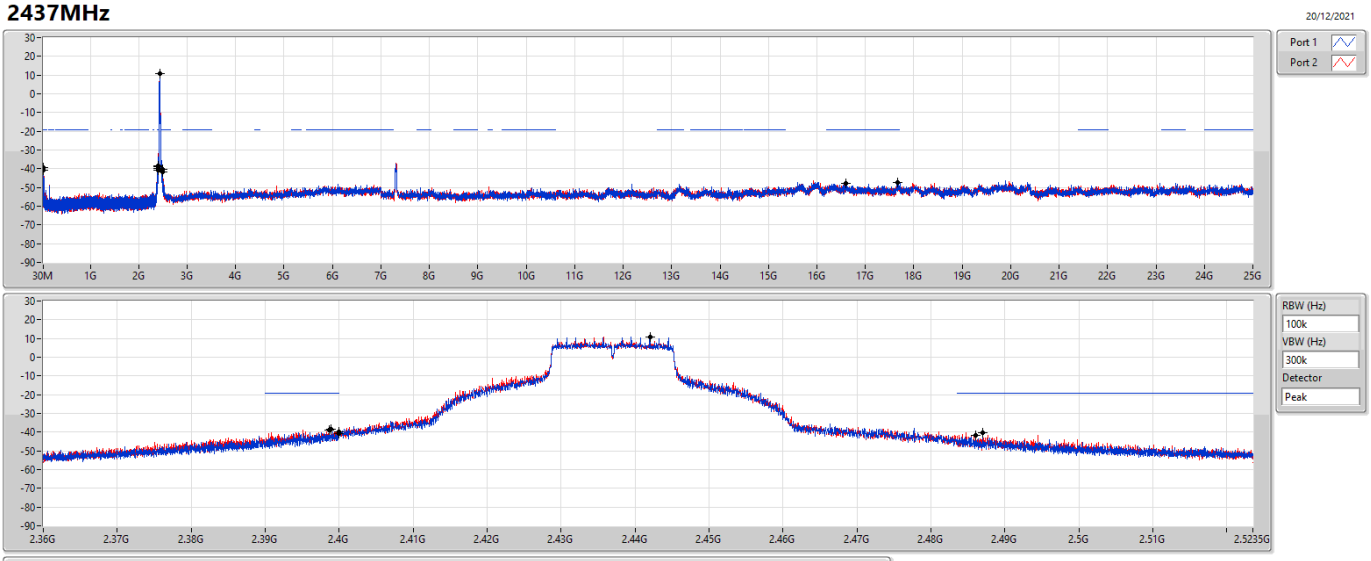
2412MHz



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
2.442G	10.83	-19.17	31.75M	-41.95	2.4G	-36.11	2.4G	-35.96	2.49598G	-47.80	7.23233G	-40.58	1
2.442G	10.83	-19.17	31.75M	-42.66	2.39918G	-33.50	2.4G	-36.17	2.50072G	-50.11	7.23233G	-42.68	2

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

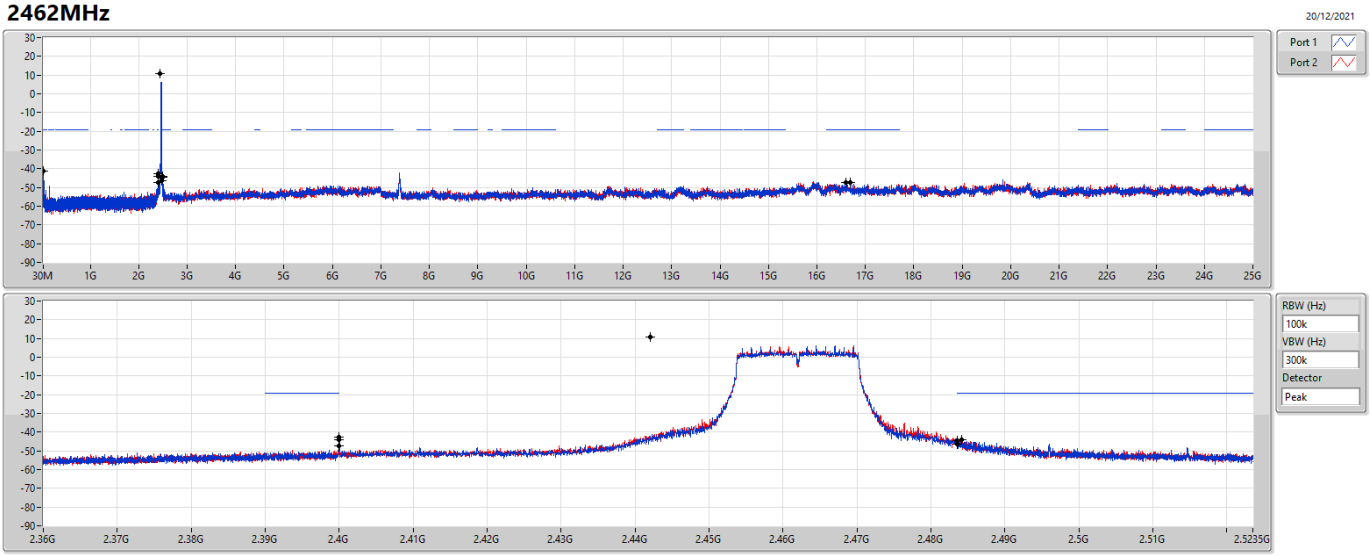
2437MHz



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
2.442G	10.83	-19.17	32.04M	-39.35	2.39866G	-39.14	2.4G	-40.05	2.48602G	-41.67	17.67547G	-47.32	1
2.442G	10.83	-19.17	32.04M	-40.84	2.39886G	-38.38	2.4G	-40.56	2.487G	-40.33	16.59941G	-47.60	2

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

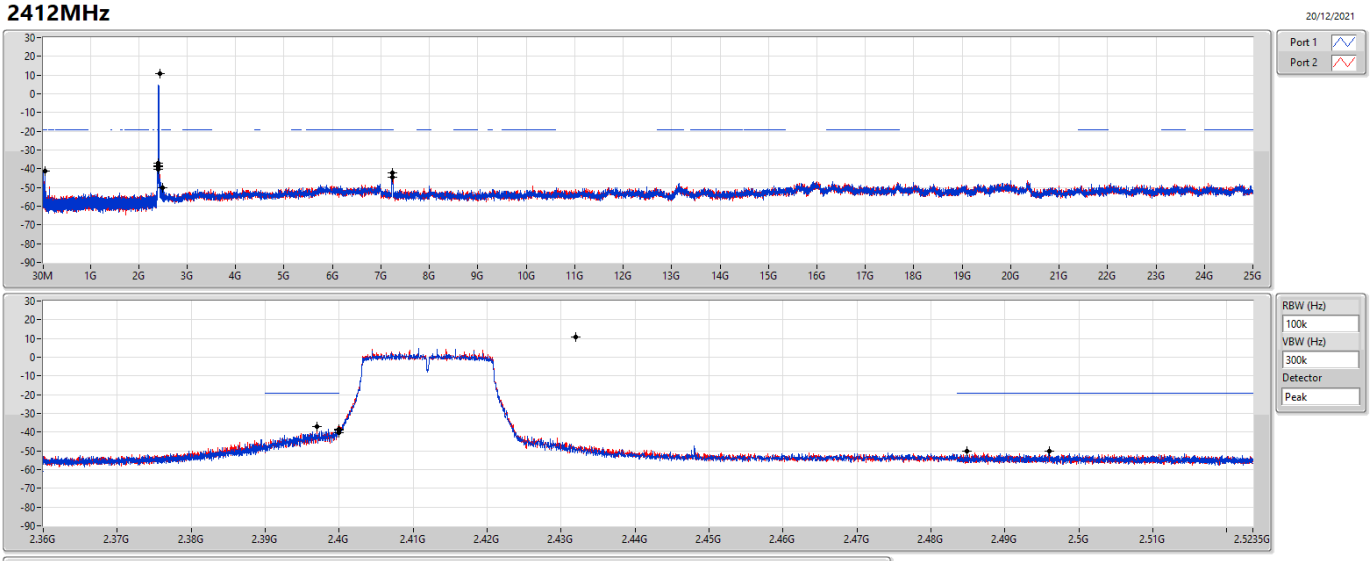
2462MHz



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
2.442G	10.83	-19.17	32.04M	-41.08	2.39998G	-42.88	2.4G	-43.84	2.48358G	-44.69	16.69212G	-47.15	1
2.442G	10.83	-19.17	31.75M	-41.29	2.4G	-47.14	2.4835G	-46.58	2.4841G	-44.17	16.59941G	-47.51	2

802.11n HT20_Nss1,(MCS0)_2TX **CSENdB**

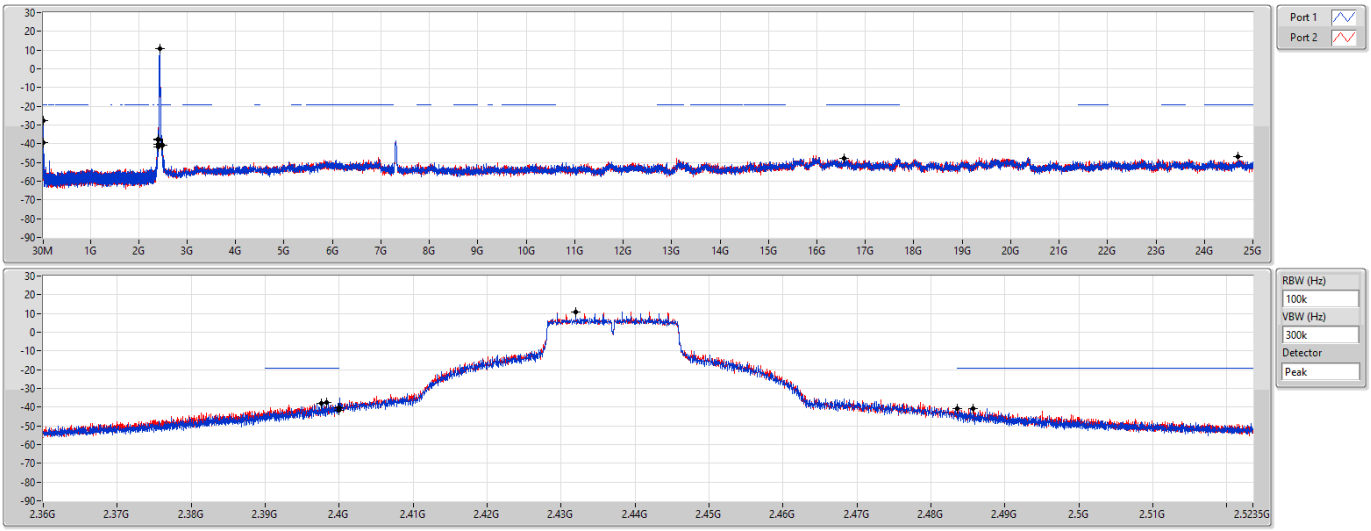
2412MHz



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
2.43198G	10.94	-19.06	57.38M	-41.20	2.4G	-38.42	2.4G	-39.14	2.496G	-50.10	7.23233G	-44.55	1
2.43198G	10.94	-19.06	66.12M	-41.15	2.397G	-37.10	2.4G	-40.18	2.4849G	-50.19	7.23514G	-42.17	2

802.11n HT20_Nss1,(MCS0)_2TX **CSENdB**

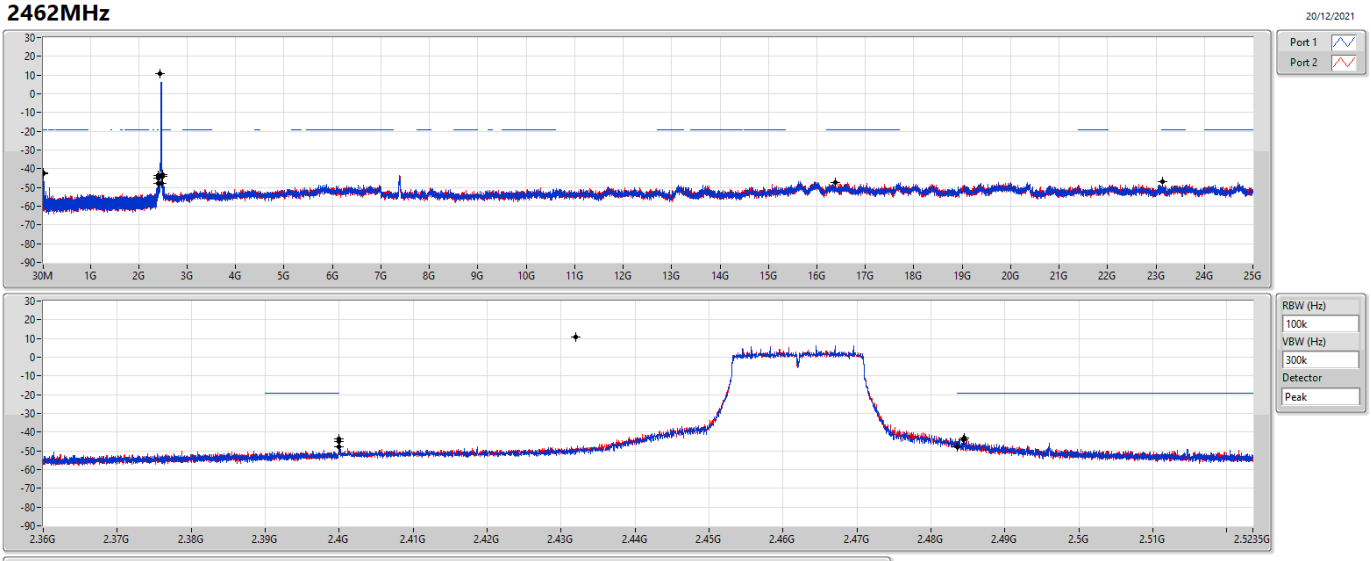
2437MHz



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	10.94	-19.06	32.91M	-27.44	2.39826G	-37.53	2.4G	-40.33	2.4835G	-40.57	16.56569G	-47.70	1
2.43198G	10.94	-19.06	31.75M	-39.58	2.39762G	-38.08	2.4G	-41.78	2.4857G	-40.92	24.69657G	-46.83	2

802.11n HT20_Nss1,(MCS0)_2TX **CSENdB**

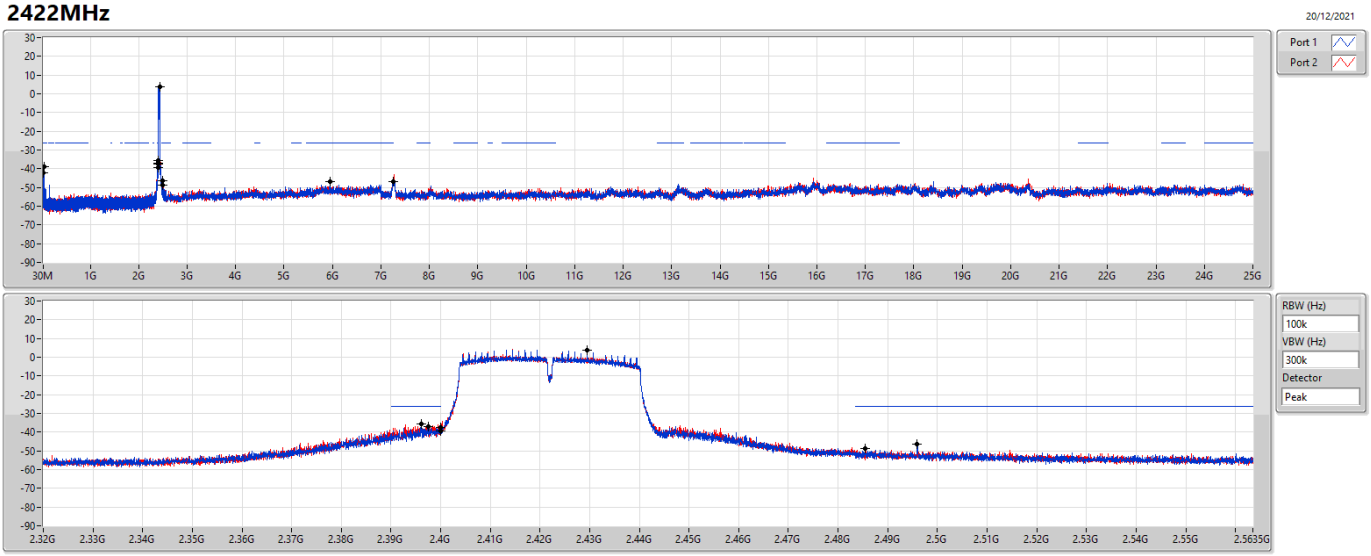
2462MHz



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
2.43198G	10.94	-19.06	32.04M	-42.30	2.4G	-43.64	2.4G	-45.02	2.48438G	-44.05	23.14007G	-46.75	1
2.43198G	10.94	-19.06	32.04M	-42.87	2.39996G	-47.71	2.4835G	-47.66	2.4845G	-43.15	16.37464G	-47.21	2

802.11n HT40_Nss1,(MCS0)_2TX **CSENdB**

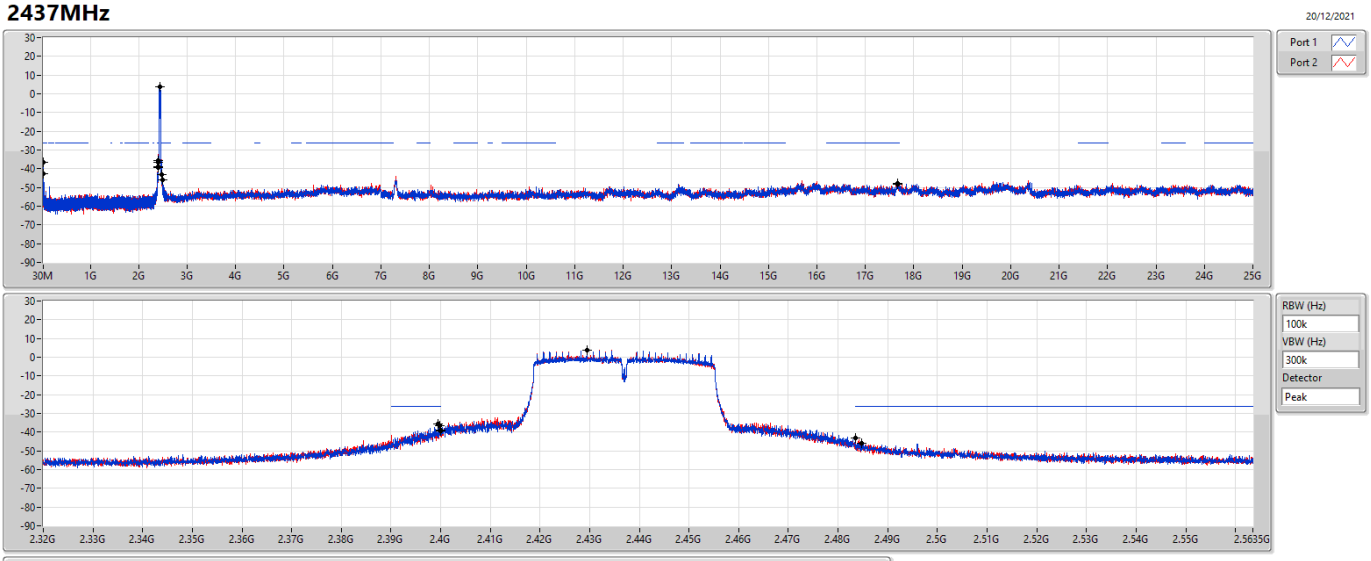
2422MHz



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
2.42948G	3.85	-26.15	54.62M	-38.91	2.3976G	-36.92	2.4G	-37.29	2.49594G	-46.50	5.94861G	-47.00	1
2.42948G	3.85	-26.15	32M	-42.19	2.39604G	-35.66	2.4G	-39.30	2.48538G	-48.74	7.24992G	-47.00	2

802.11n HT40_Nss1,(MCS0)_2TX **CSENdB**

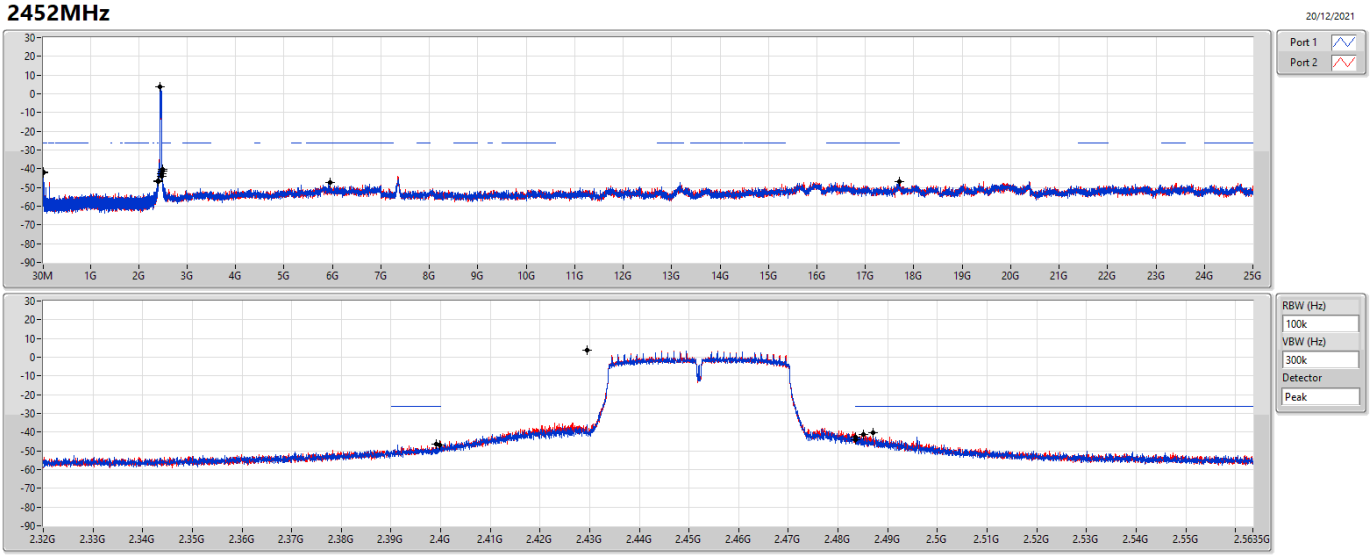
2437MHz



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	3.85	-26.15	33.15M	-36.73	2.39952G	-35.49	2.4G	-38.72	2.48474G	-45.85	17.67448G	-48.16	1
2.42948G	3.85	-26.15	32M	-42.45	2.39988G	-36.79	2.4G	-39.20	2.48354G	-43.31	17.66887G	-47.81	2

802.11n HT40_Nss1,(MCS0)_2TX **CSENdB**

2452MHz

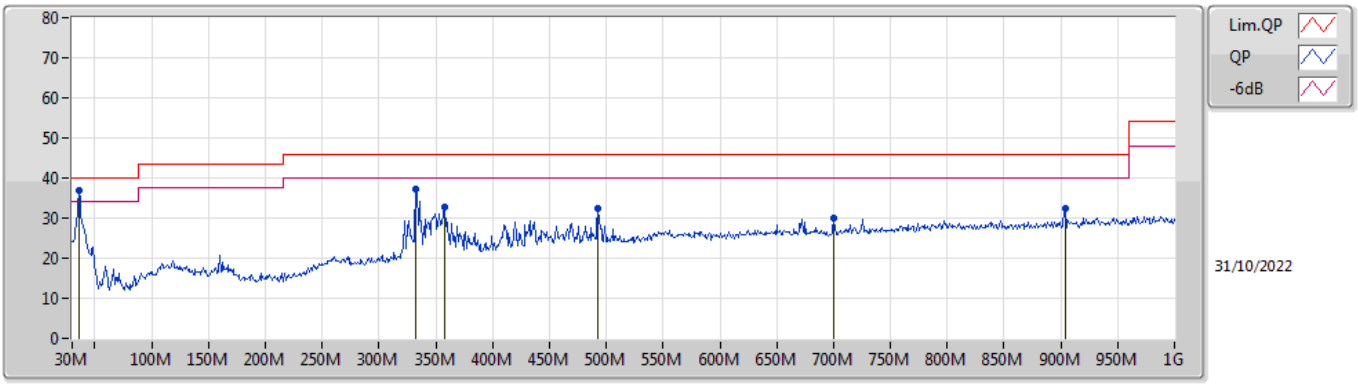


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.42948G	3.85	-26.15	31.72M	-42.20	2.39984G	-47.00	2.4835G	-44.24	2.48702G	-40.31	17.69411G	-46.93	1
2.42948G	3.85	-26.15	32M	-41.55	2.39904G	-46.30	2.4835G	-42.45	2.48506G	-41.47	5.9458G	-47.43	2

Summary

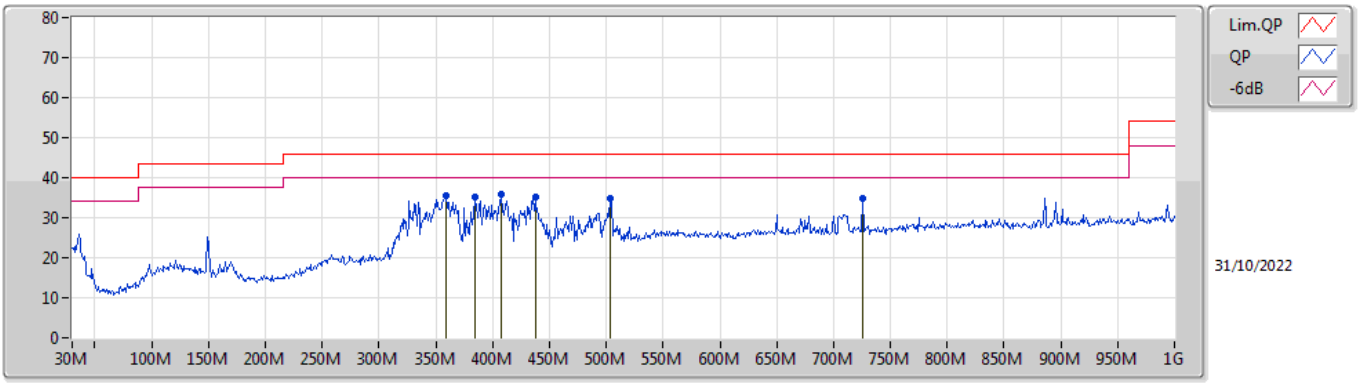
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 3	Pass	QP	35.82M	36.84	40.00	-3.16	Vertical

Mode 3



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)
QP	35.82M	36.84	40.00	-3.16	-10.26	3	Vertical	298	1.00	"Worst"	47.10	20.92	0.52	31.70
PK	332.64M	37.25	46.00	-8.75	-10.02	3	Vertical	357	1.50	-	47.27	19.74	2.40	32.16
PK	357.86M	32.60	46.00	-13.40	-9.07	3	Vertical	66	1.25	-	41.67	20.60	2.51	32.18
PK	492.69M	32.32	46.00	-13.68	-6.30	3	Vertical	356	2.00	-	38.62	23.14	2.94	32.38
PK	700.27M	30.14	46.00	-15.86	-4.49	3	Vertical	4	1.00	-	34.63	24.47	3.60	32.56
PK	903.97M	32.33	46.00	-13.67	-2.12	3	Vertical	175	1.00	-	34.45	26.20	4.17	32.49

Mode 3



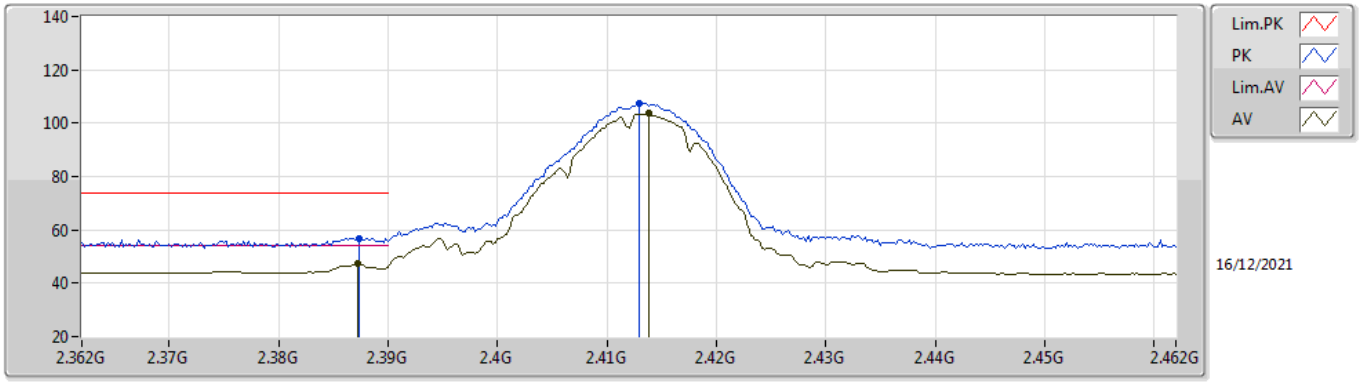
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV/m)	(dB/m)	(dB)	(dB)
PK	358.83M	35.44	46.00	-10.56	-9.03	3	Horizontal	249	1.00	-	44.47	20.63	2.52	32.18
PK	384.05M	35.11	46.00	-10.89	-8.59	3	Horizontal	205	1.00	-	43.70	20.95	2.63	32.17
PK	407.33M	35.90	46.00	-10.10	-7.59	3	Horizontal	13	1.00	"Worst"	43.49	21.86	2.72	32.17
PK	437.4M	35.30	46.00	-10.70	-7.09	3	Horizontal	40	2.00	-	42.39	22.35	2.79	32.23
PK	503.36M	34.79	46.00	-11.21	-6.22	3	Horizontal	0	1.00	-	41.01	23.21	2.97	32.40
PK	725.49M	34.79	46.00	-11.21	-4.07	3	Horizontal	360	1.25	-	38.86	24.83	3.69	32.59

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
802.11g_Nss1,(6Mbps)_2TX	Pass	AV	2.4835G	53.92	54.00	-0.08	3	Horizontal	297	2.38	-

802.11b_Nss1,(1Mbps)_2TX

2412MHz_TX

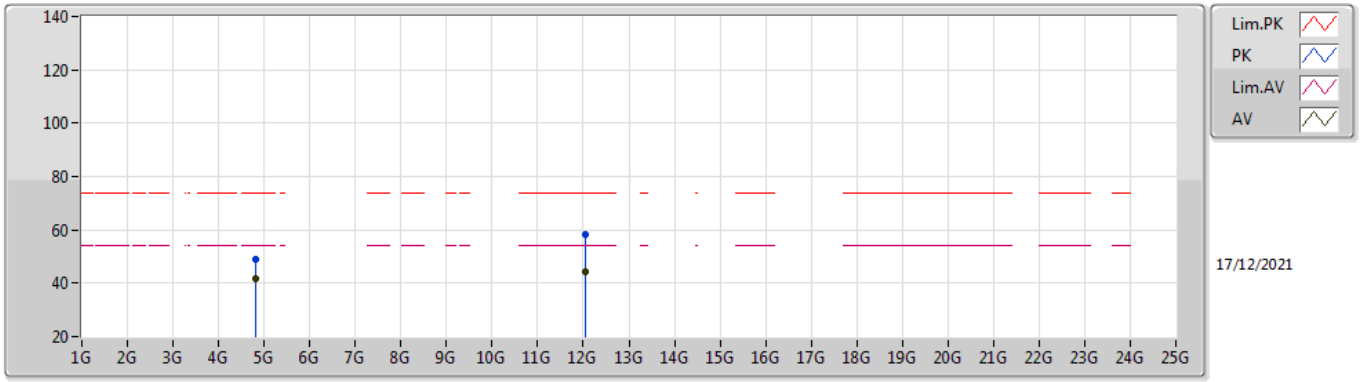


EUT Y_2TX
Setting 21.5
06-F-S-5

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	2.3874G	56.85	74.00	-17.15	25.56	3	Vertical	207	1.73	-	27.50	3.79	-
AV	2.3872G	47.31	54.00	-6.69	16.02	3	Vertical	207	1.73	-	27.50	3.79	-
PK	2.413G	107.59	Inf	-Inf	76.43	3	Vertical	207	1.73	-	27.35	3.81	-
AV	2.4138G	103.56	Inf	-Inf	72.41	3	Vertical	207	1.73	-	27.34	3.81	-

802.11b_Nss1,(1Mbps)_2TX

2412MHz_TX

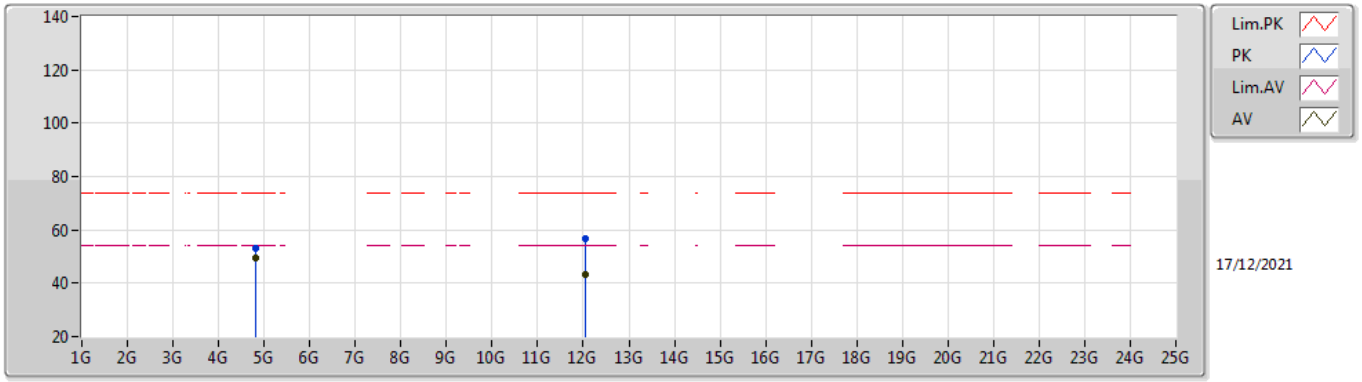


EUT Y_2TX
Setting 21.5
06-F-S-5

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	4.82412G	48.88	74.00	-25.12	44.29	3	Vertical	314	1.53	-	31.05	5.60	32.06
AV	4.824G	41.52	54.00	-12.48	36.93	3	Vertical	314	1.53	-	31.05	5.60	32.06
PK	12.05792G	58.20	74.00	-15.80	43.64	3	Vertical	94	2.08	-	38.92	9.84	34.20
AV	12.05868G	44.35	54.00	-9.65	29.79	3	Vertical	94	2.08	-	38.92	9.84	34.20

802.11b_Nss1,(1Mbps)_2TX

2412MHz_TX

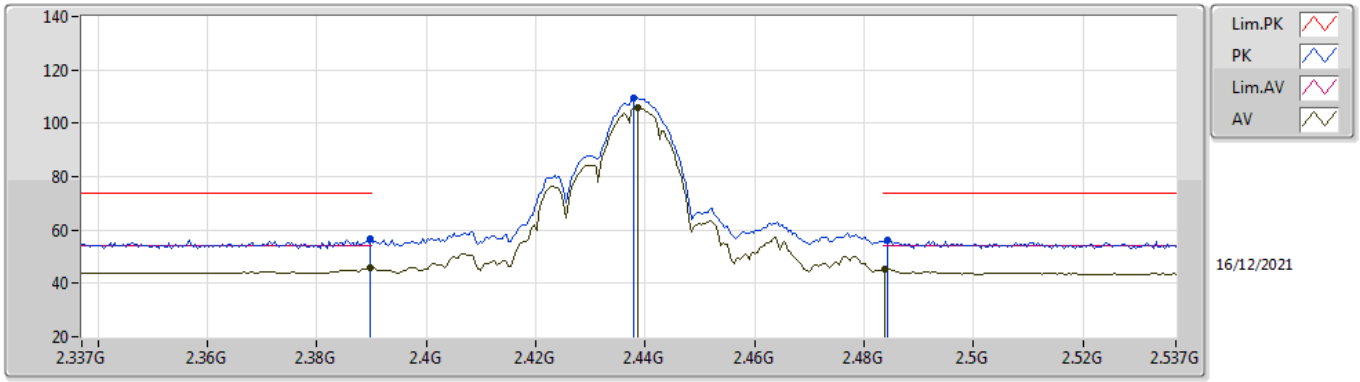


EUT Y_2TX
Setting 21.5
06-F-S-5

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	4.82404G	52.93	74.00	-21.07	48.34	3	Horizontal	90	1.50	-	31.05	5.60	32.06
AV	4.82396G	49.59	54.00	-4.41	45.00	3	Horizontal	90	1.50	-	31.05	5.60	32.06
PK	12.06G	56.67	74.00	-17.33	42.10	3	Horizontal	163	1.77	-	38.92	9.85	34.20
AV	12.05876G	43.36	54.00	-10.64	28.80	3	Horizontal	163	1.77	-	38.92	9.84	34.20

802.11b_Nss1,(1Mbps)_2TX

2437MHz_TX

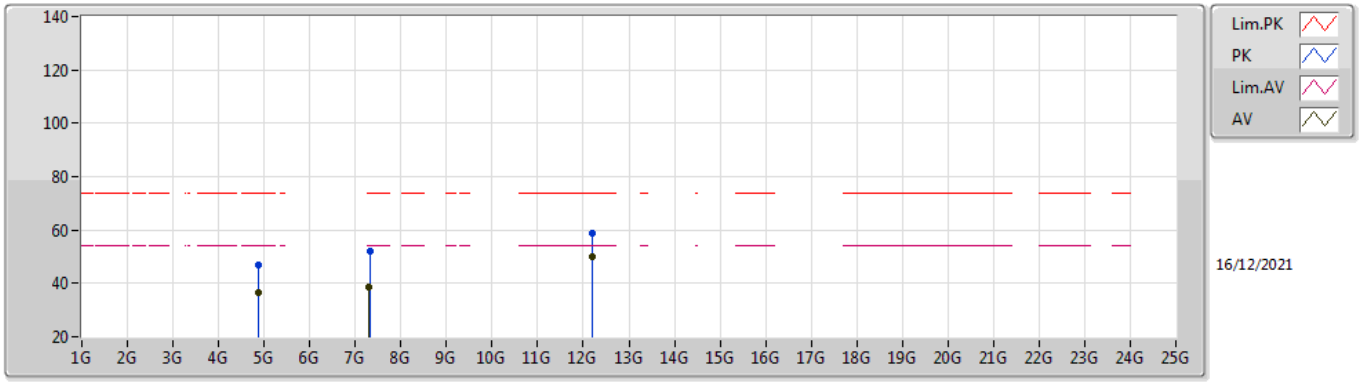


EUT Y_2TX
Setting 22.5
06-F-S-5

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	56.52	74.00	-17.48	25.25	3	Vertical	317	1.77	-	27.48	3.79	-
AV	2.3898G	45.82	54.00	-8.18	14.55	3	Vertical	317	1.77	-	27.48	3.79	-
PK	2.4378G	109.46	Inf	-Inf	78.37	3	Vertical	317	1.77	-	27.25	3.84	-
AV	2.4386G	105.73	Inf	-Inf	74.64	3	Vertical	317	1.77	-	27.25	3.84	-
PK	2.4842G	56.11	74.00	-17.89	24.96	3	Vertical	317	1.77	-	27.27	3.88	-
AV	2.4838G	45.54	54.00	-8.46	14.39	3	Vertical	317	1.77	-	27.27	3.88	-

802.11b_Nss1,(1Mbps)_2TX

2437MHz_TX

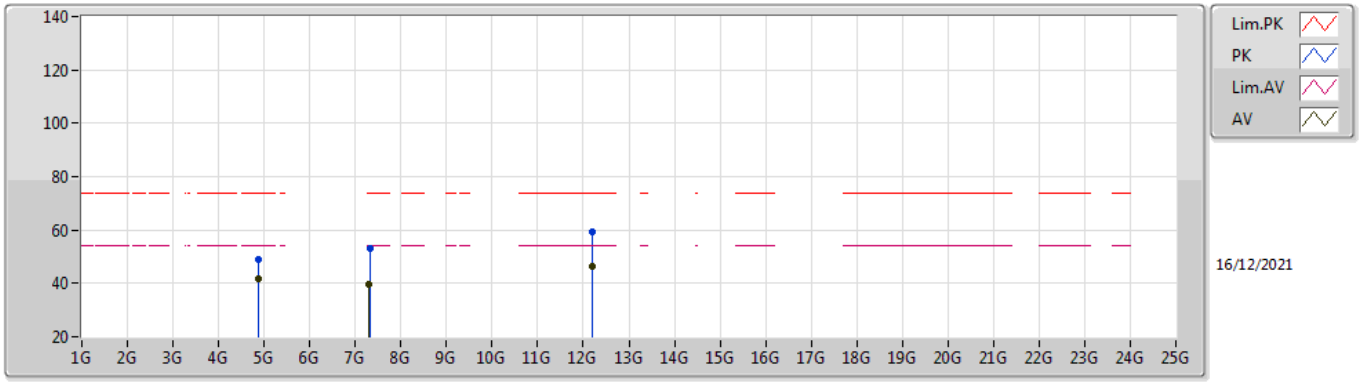


EUT Y_2TX
Setting 22.5
06-F-S-5

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	4.87435G	46.72	74.00	-27.28	42.09	3	Vertical	9	1.75	-	31.05	5.60	32.02
AV	4.87399G	36.49	54.00	-17.51	31.86	3	Vertical	9	1.75	-	31.05	5.60	32.02
PK	7.31028G	52.01	74.00	-21.99	42.22	3	Vertical	193	1.33	-	36.36	6.90	33.47
AV	7.30922G	38.42	54.00	-15.58	28.62	3	Vertical	193	1.33	-	36.36	6.90	33.46
PK	12.18387G	59.00	74.00	-15.00	44.47	3	Vertical	283	1.17	-	38.75	9.94	34.16
AV	12.18402G	50.09	54.00	-3.91	35.56	3	Vertical	283	1.17	-	38.75	9.94	34.16

802.11b_Nss1,(1Mbps)_2TX

2437MHz_TX

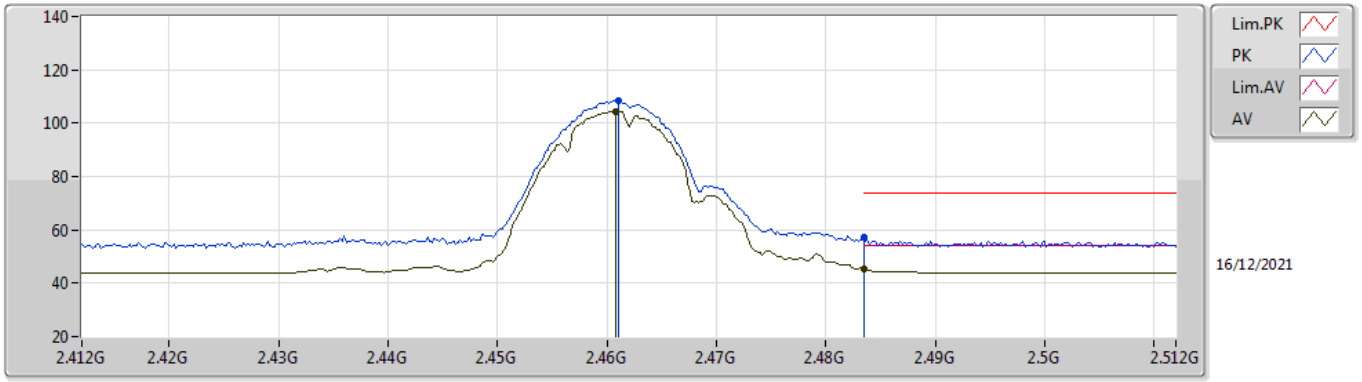


EUT Y_2TX
Setting 22.5
06-F-S-5

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	4.87395G	48.75	74.00	-25.25	44.12	3	Horizontal	295	1.94	-	31.05	5.60	32.02
AV	4.87397G	41.65	54.00	-12.35	37.02	3	Horizontal	295	1.94	-	31.05	5.60	32.02
PK	7.31179G	52.88	74.00	-21.12	43.10	3	Horizontal	109.5	2.08	-	36.35	6.90	33.47
AV	7.30921G	39.88	54.00	-14.12	30.08	3	Horizontal	109.5	2.08	-	36.36	6.90	33.46
PK	12.18408G	59.09	74.00	-14.91	44.56	3	Horizontal	239	2.10	-	38.75	9.94	34.16
AV	12.18556G	46.60	54.00	-7.40	32.08	3	Horizontal	239	2.10	-	38.74	9.94	34.16

802.11b_Nss1,(1Mbps)_2TX

2462MHz_TX

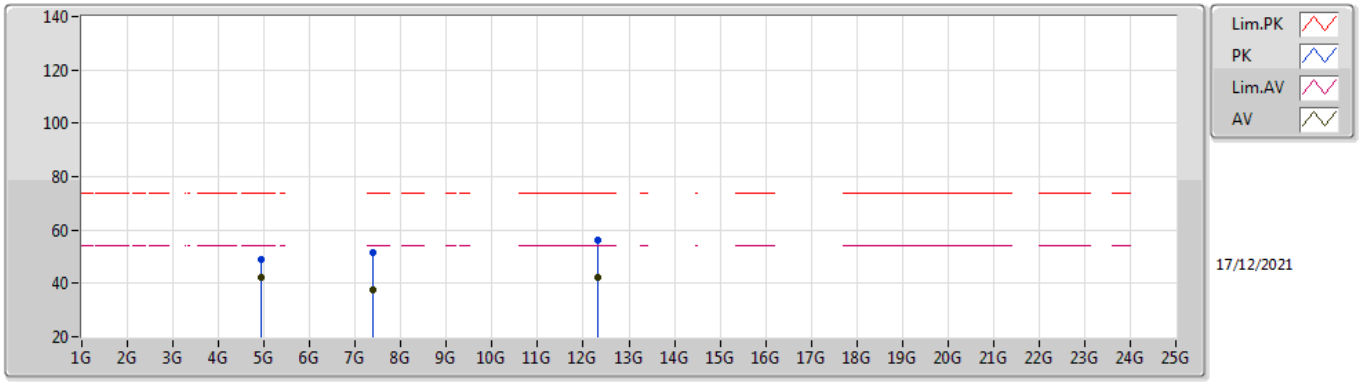


EUT Y_2TX
Setting 21
06-F-S-5

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	108.47	Inf	-Inf	77.39	3	Vertical	322	1.74	-	27.22	3.86	-
AV	2.4608G	104.55	Inf	-Inf	73.47	3	Vertical	322	1.74	-	27.22	3.86	-
PK	2.4835G	57.17	74.00	-16.83	26.02	3	Vertical	322	1.74	-	27.27	3.88	-
AV	2.4835G	45.60	54.00	-8.40	14.45	3	Vertical	322	1.74	-	27.27	3.88	-

802.11b_Nss1,(1Mbps)_2TX

2462MHz_TX

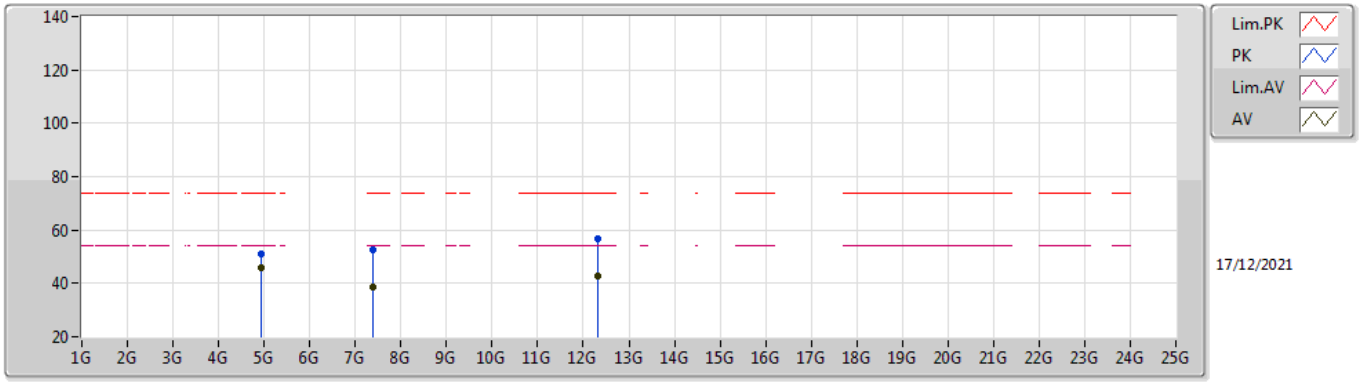


EUT Y_2TX
Setting 21
06-F-S-5

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	4.92388G	48.80	74.00	-25.20	43.97	3	Vertical	13	2.94	-	31.20	5.60	31.97
AV	4.92396G	42.13	54.00	-11.87	37.30	3	Vertical	13	2.94	-	31.20	5.60	31.97
PK	7.38984G	51.77	74.00	-22.23	42.33	3	Vertical	70	2.72	-	36.04	6.90	33.50
AV	7.3936G	37.83	54.00	-16.17	28.41	3	Vertical	70	2.72	-	36.03	6.90	33.51
PK	12.31784G	56.43	74.00	-17.57	41.92	3	Vertical	0	1.80	-	38.58	10.04	34.11
AV	12.31796G	42.28	54.00	-11.72	27.77	3	Vertical	0	1.80	-	38.58	10.04	34.11

802.11b_Nss1,(1Mbps)_2TX

2462MHz_TX

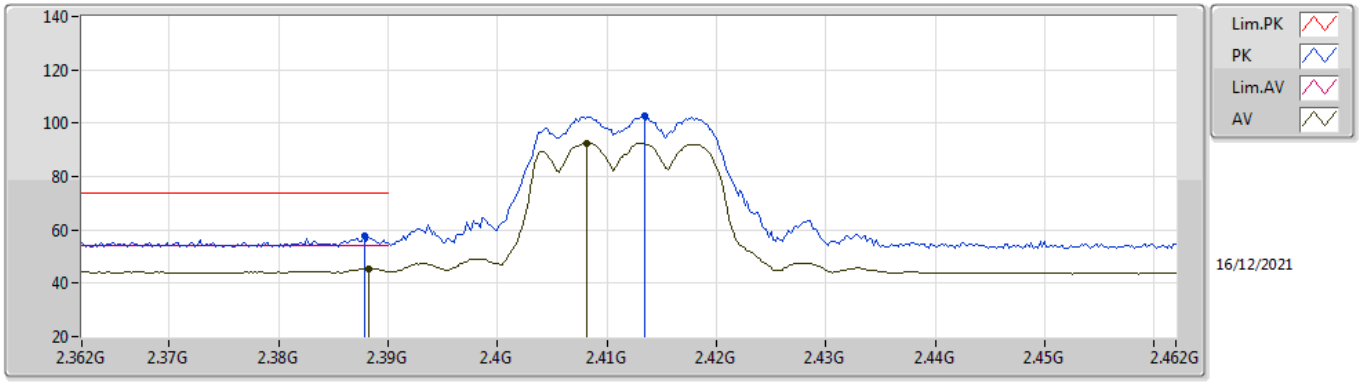


EUT Y_2TX
Setting 21
06-F-S-5

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	4.92408G	51.21	74.00	-22.79	46.38	3	Horizontal	39	1.00	-	31.20	5.60	31.97
AV	4.92396G	46.05	54.00	-7.95	41.22	3	Horizontal	39	1.00	-	31.20	5.60	31.97
PK	7.38504G	52.43	74.00	-21.57	42.97	3	Horizontal	202	1.66	-	36.06	6.90	33.50
AV	7.3848G	38.65	54.00	-15.35	29.19	3	Horizontal	202	1.66	-	36.06	6.90	33.50
PK	12.30748G	56.61	74.00	-17.39	42.11	3	Horizontal	35	1.80	-	38.59	10.03	34.12
AV	12.3092G	42.97	54.00	-11.03	28.46	3	Horizontal	35	1.80	-	38.59	10.03	34.11

802.11g_Nss1,(6Mbps)_2TX

2412MHz_TX

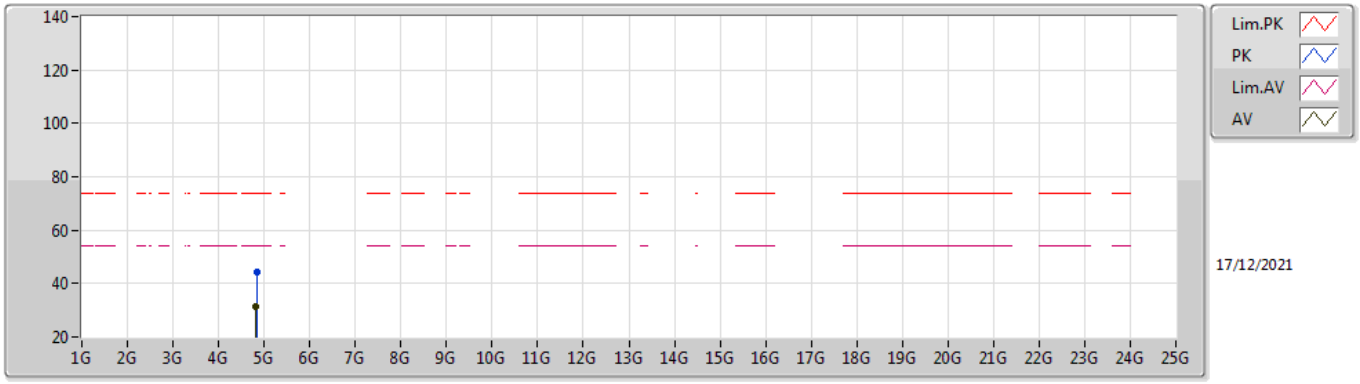


EUT Y_2TX
Setting 16
06-F-S-5

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	2.3878G	57.57	74.00	-16.43	26.28	3	Vertical	318	1.86	-	27.50	3.79	-
AV	2.3882G	45.55	54.00	-8.45	14.27	3	Vertical	318	1.86	-	27.49	3.79	-
PK	2.4134G	102.59	Inf	-Inf	71.43	3	Vertical	318	1.86	-	27.35	3.81	-
AV	2.4082G	92.55	Inf	-Inf	61.37	3	Vertical	318	1.86	-	27.37	3.81	-

802.11g_Nss1,(6Mbps)_2TX

2412MHz_TX

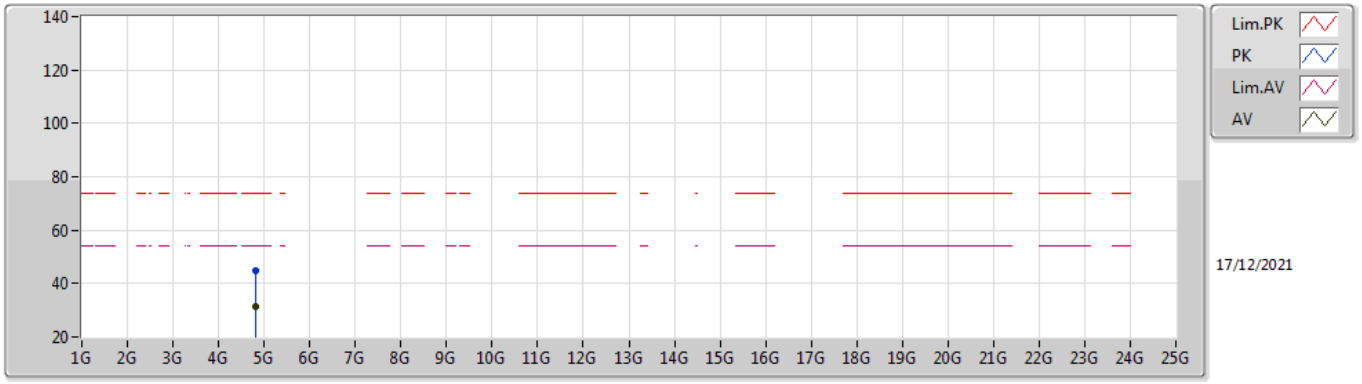


EUT Y_2TX
Setting 16
06-F-S-5

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	4.8288G	44.45	74.00	-29.55	39.86	3	Vertical	72	2.63	-	31.04	5.60	32.05
AV	4.82104G	31.53	54.00	-22.47	26.93	3	Vertical	72	2.63	-	31.06	5.60	32.06

802.11g_Nss1,(6Mbps)_2TX

2412MHz_TX

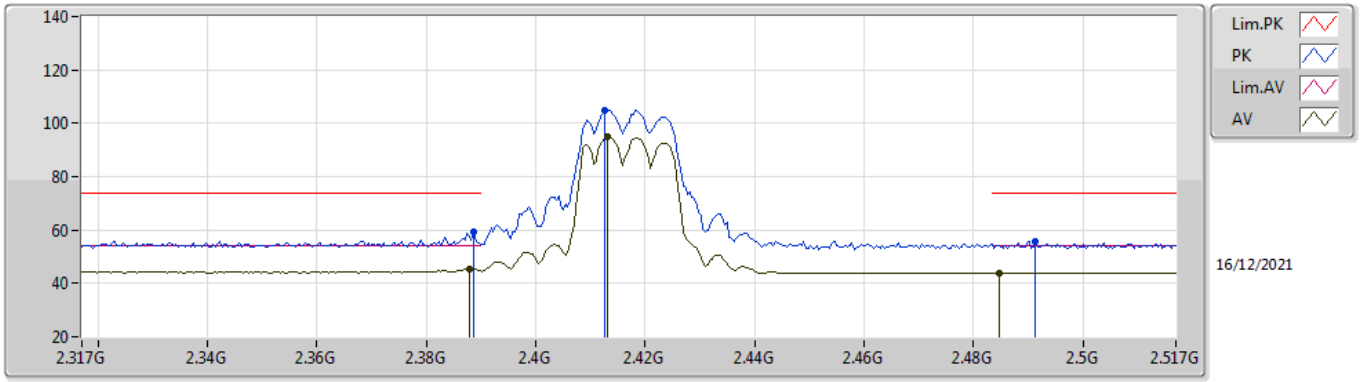


EUT Y_2TX
Setting 16
06-F-S-5

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	4.82414G	44.75	74.00	-29.25	40.16	3	Horizontal	193	2.75	-	31.05	5.60	32.06
AV	4.82188G	31.53	54.00	-22.47	26.93	3	Horizontal	193	2.75	-	31.06	5.60	32.06

802.11g_Nss1,(6Mbps)_2TX

2417MHz_TX

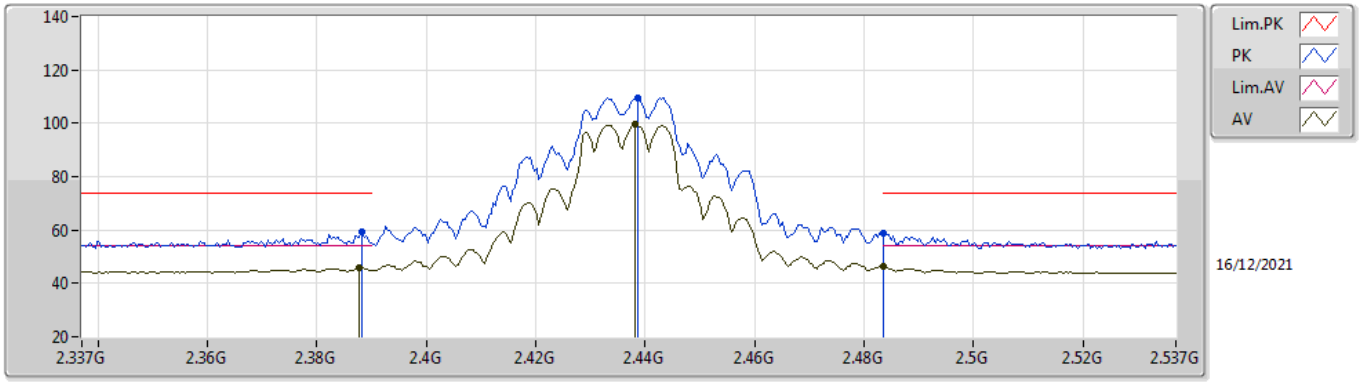


EUT Y_2TX
Setting 17.5
06-F-S-5

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	2.3886G	59.13	74.00	-14.87	27.85	3	Vertical	319	2.05	-	27.49	3.79	-
AV	2.3878G	45.56	54.00	-8.44	14.27	3	Vertical	319	2.05	-	27.50	3.79	-
PK	2.4126G	105.03	Inf	-Inf	73.87	3	Vertical	319	2.05	-	27.35	3.81	-
AV	2.413G	94.98	Inf	-Inf	63.82	3	Vertical	319	2.05	-	27.35	3.81	-
PK	2.4914G	55.50	74.00	-18.50	24.33	3	Vertical	319	2.05	-	27.28	3.89	-
AV	2.4846G	43.88	54.00	-10.12	12.73	3	Vertical	319	2.05	-	27.27	3.88	-

802.11g_Nss1,(6Mbps)_2TX

2437MHz_TX

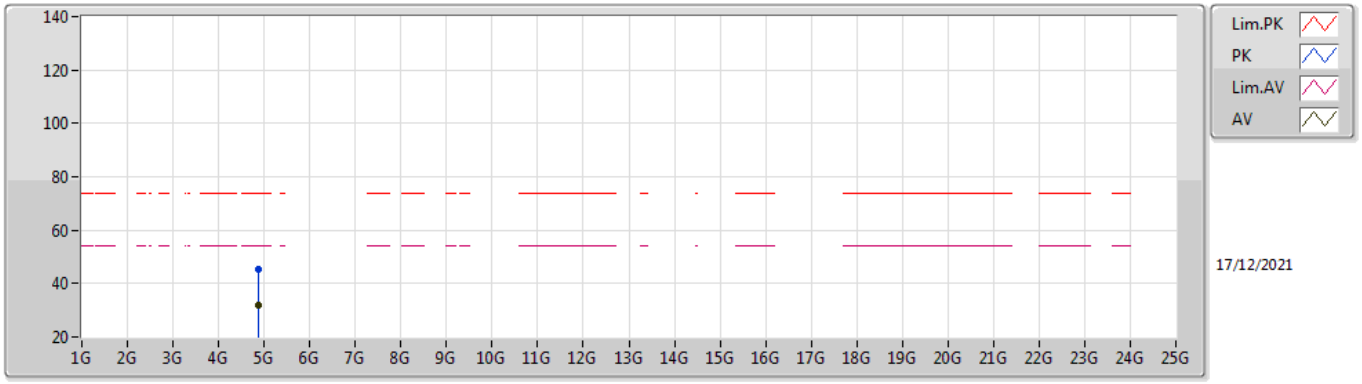


EUT Y_2TX
Setting 21
06-F-S-5

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	59.24	74.00	-14.76	27.96	3	Vertical	318	1.78	-	27.49	3.79	-
AV	2.3878G	45.71	54.00	-8.29	14.42	3	Vertical	318	1.78	-	27.50	3.79	-
PK	2.4386G	109.67	Inf	-Inf	78.58	3	Vertical	318	1.78	-	27.25	3.84	-
AV	2.4382G	99.91	Inf	-Inf	68.82	3	Vertical	318	1.78	-	27.25	3.84	-
PK	2.4835G	58.57	74.00	-15.43	27.42	3	Vertical	318	1.78	-	27.27	3.88	-
AV	2.4835G	46.21	54.00	-7.79	15.06	3	Vertical	318	1.78	-	27.27	3.88	-

802.11g_Nss1,(6Mbps)_2TX

2437MHz_TX

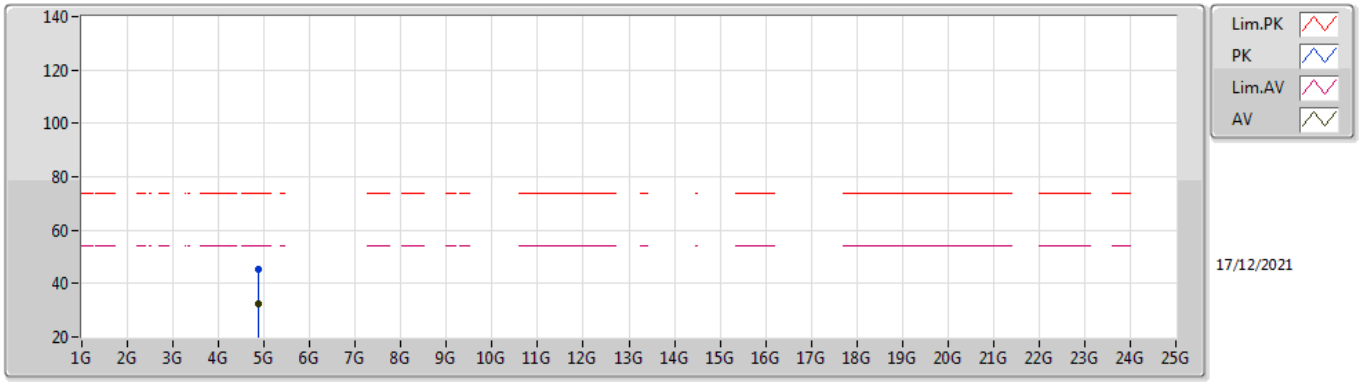


EUT Y_2TX
Setting 21
06-F-S-5

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	4.87816G	45.59	74.00	-28.41	40.94	3	Vertical	63	1.00	-	31.06	5.60	32.01
AV	4.8742G	31.82	54.00	-22.18	27.19	3	Vertical	63	1.00	-	31.05	5.60	32.02

802.11g_Nss1,(6Mbps)_2TX

2437MHz_TX

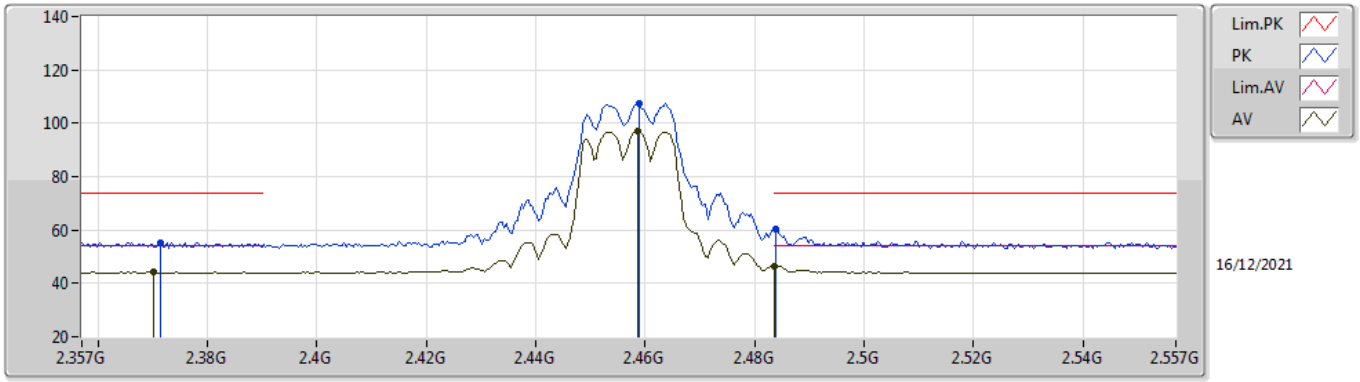


EUT Y_2TX
Setting 21
06-F-S-5

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	4.86952G	45.40	74.00	-28.60	40.78	3	Horizontal	123	1.15	-	31.04	5.60	32.02
AV	4.87392G	32.24	54.00	-21.76	27.61	3	Horizontal	123	1.15	-	31.05	5.60	32.02

802.11g_Nss1,(6Mbps)_2TX

2457MHz_TX

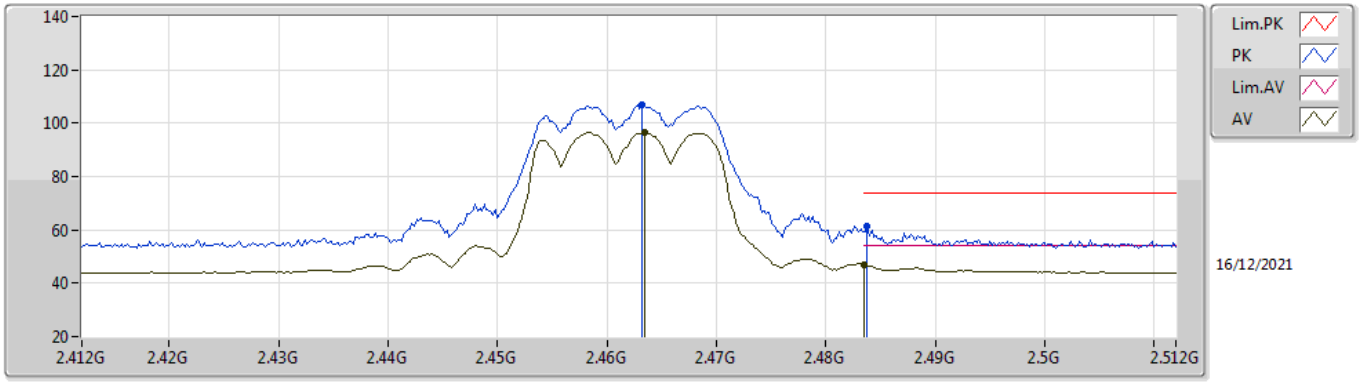


EUT Y_2TX
Setting 17.5
06-F-S-5

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	2.3714G	55.36	74.00	-18.64	23.94	3	Vertical	321	1.76	-	27.63	3.79	-
AV	2.3702G	44.19	54.00	-9.81	12.76	3	Vertical	321	1.76	-	27.64	3.79	-
PK	2.459G	107.59	Inf	-Inf	76.51	3	Vertical	321	1.76	-	27.22	3.86	-
AV	2.4586G	97.08	Inf	-Inf	66.00	3	Vertical	321	1.76	-	27.22	3.86	-
PK	2.4838G	60.39	74.00	-13.61	29.24	3	Vertical	321	1.76	-	27.27	3.88	-
AV	2.4835G	46.59	54.00	-7.41	15.44	3	Vertical	321	1.76	-	27.27	3.88	-

802.11g_Nss1,(6Mbps)_2TX

2462MHz_TX

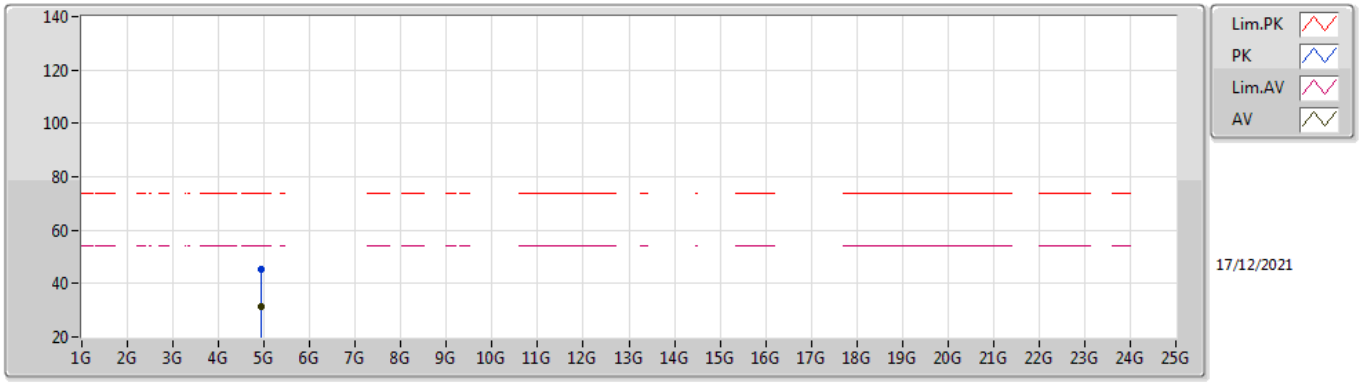


EUT Y_2TX
Setting 16
06-F-S-5

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	2.4632G	107.04	Inf	-Inf	75.95	3	Vertical	199	2.72	-	27.23	3.86	-
AV	2.4634G	96.53	Inf	-Inf	65.44	3	Vertical	199	2.72	-	27.23	3.86	-
PK	2.4838G	61.15	74.00	-12.85	30.00	3	Vertical	199	2.72	-	27.27	3.88	-
AV	2.4835G	47.09	54.00	-6.91	15.94	3	Vertical	199	2.72	-	27.27	3.88	-

802.11g_Nss1,(6Mbps)_2TX

2462MHz_TX

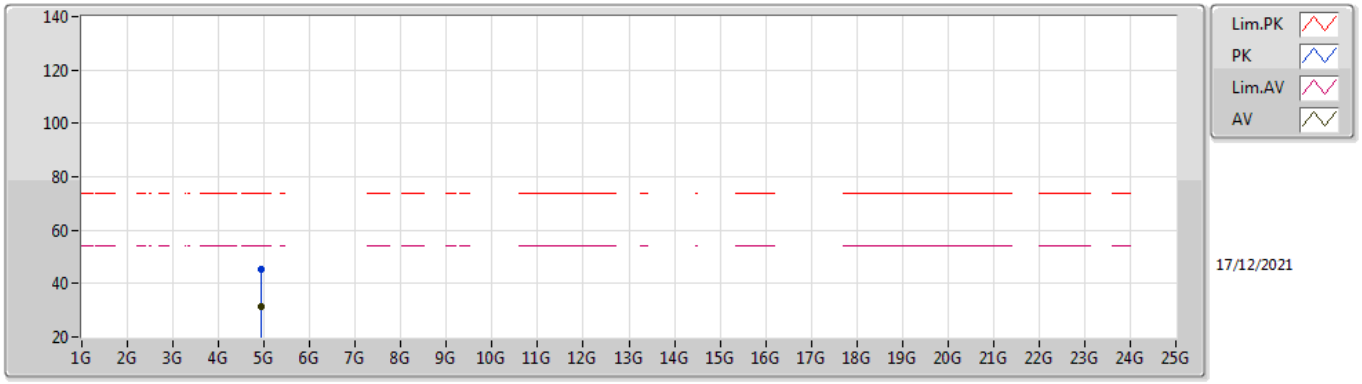


EUT Y_2TX
Setting 16
06-F-S-5

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	4.9223G	45.29	74.00	-28.71	40.48	3	Vertical	228	2.13	-	31.19	5.60	31.98
AV	4.92742G	31.42	54.00	-22.58	26.58	3	Vertical	228	2.13	-	31.21	5.60	31.97

802.11g_Nss1,(6Mbps)_2TX

2462MHz_TX

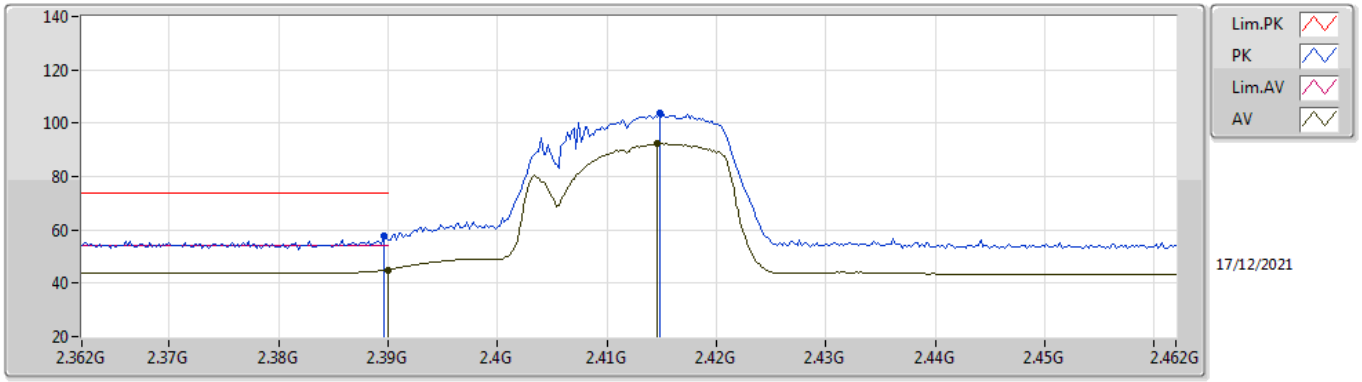


EUT Y_2TX
Setting 16
06-F-S-5

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	4.9278G	45.30	74.00	-28.70	40.46	3	Horizontal	168	2.47	-	31.21	5.60	31.97
AV	4.92048G	31.35	54.00	-22.65	26.55	3	Horizontal	168	2.47	-	31.18	5.60	31.98

802.11n HT20_Nss1,(MCS0)_2TX

2412MHz_TX

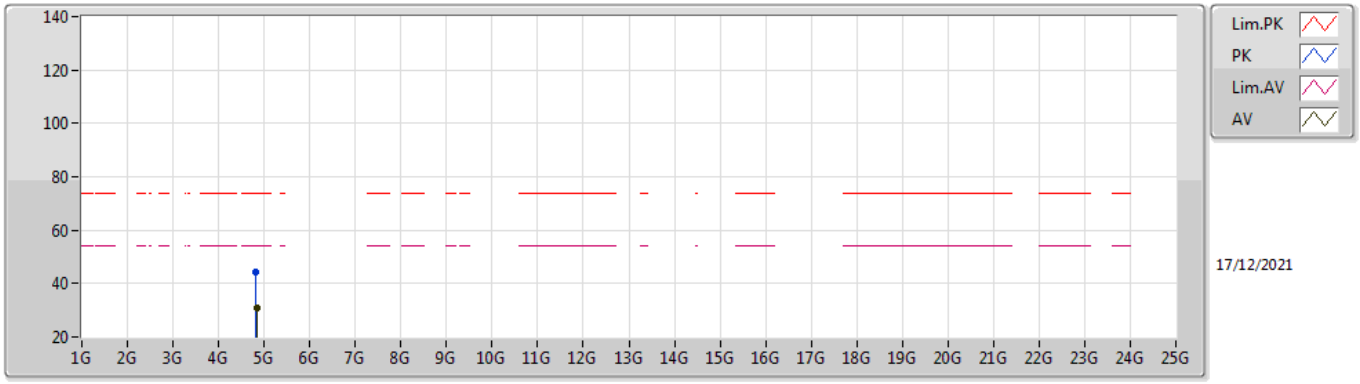


EUT Y_2TX
Setting 15
06-F-S-5

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	57.67	74.00	-16.33	26.40	3	Vertical	316	2.03	-	27.48	3.79	-
AV	2.39G	45.07	54.00	-8.93	13.80	3	Vertical	316	2.03	-	27.48	3.79	-
PK	2.4148G	103.62	Inf	-Inf	72.47	3	Vertical	316	2.03	-	27.34	3.81	-
AV	2.4146G	92.20	Inf	-Inf	61.05	3	Vertical	316	2.03	-	27.34	3.81	-

802.11n HT20_Nss1,(MCS0)_2TX

2412MHz_TX

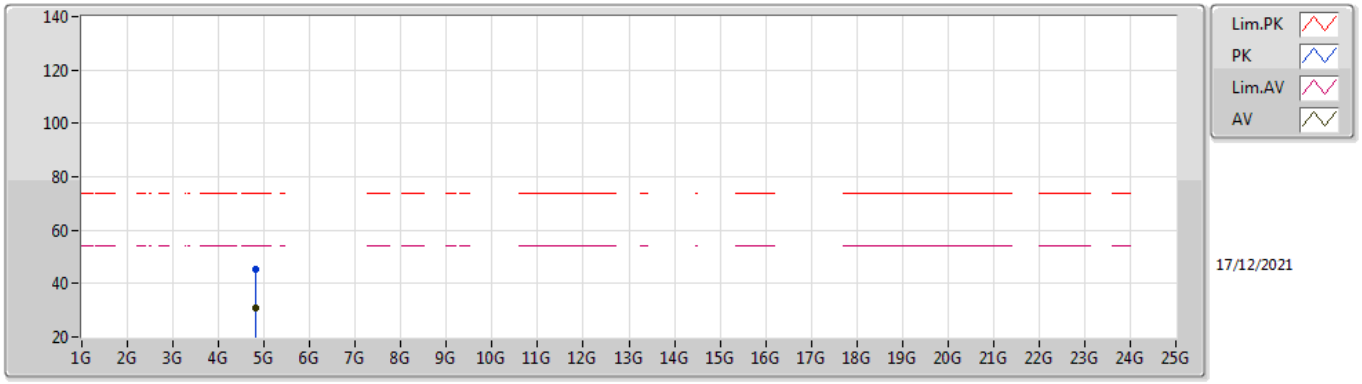


EUT Y_2TX
Setting 15
06-F-S-5

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	4.82476G	44.49	74.00	-29.51	39.90	3	Vertical	39	1.98	-	31.05	5.60	32.06
AV	4.82866G	30.84	54.00	-23.16	26.25	3	Vertical	39	1.98	-	31.04	5.60	32.05

802.11n HT20_Nss1,(MCS0)_2TX

2412MHz_TX

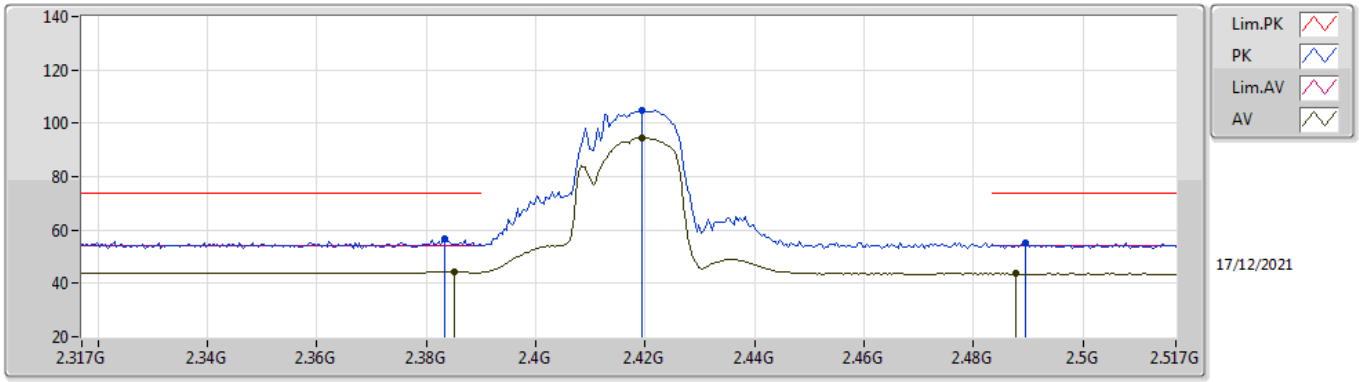


EUT Y_2TX
Setting 15
06-F-S-5

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	4.81998G	45.15	74.00	-28.85	40.55	3	Horizontal	216	2.92	-	31.06	5.60	32.06
AV	4.82704G	30.86	54.00	-23.14	26.27	3	Horizontal	216	2.92	-	31.05	5.60	32.06

802.11n HT20_Nss1,(MCS0)_2TX

2417MHz_TX

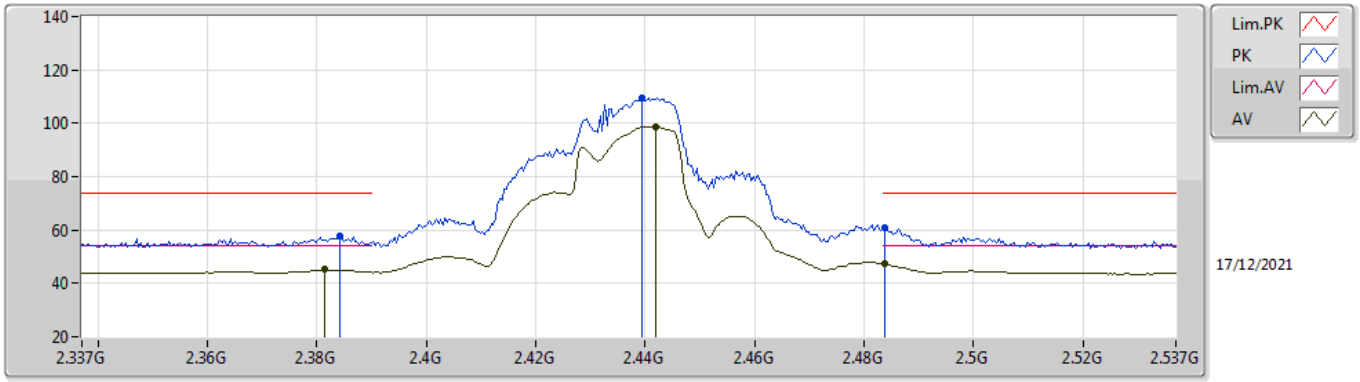


EUT Y_2TX
Setting 17.5
06-F-S-5

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	2.3834G	56.56	74.00	-17.44	25.24	3	Vertical	317	1.61	-	27.53	3.79	-
AV	2.385G	44.31	54.00	-9.69	13.00	3	Vertical	317	1.61	-	27.52	3.79	-
PK	2.4194G	104.93	Inf	-Inf	73.79	3	Vertical	317	1.61	-	27.32	3.82	-
AV	2.4194G	94.61	Inf	-Inf	63.47	3	Vertical	317	1.61	-	27.32	3.82	-
PK	2.4894G	55.06	74.00	-18.94	23.89	3	Vertical	317	1.61	-	27.28	3.89	-
AV	2.4878G	43.57	54.00	-10.43	12.40	3	Vertical	317	1.61	-	27.28	3.89	-

802.11n HT20_Nss1,(MCS0)_2TX

2437MHz_TX

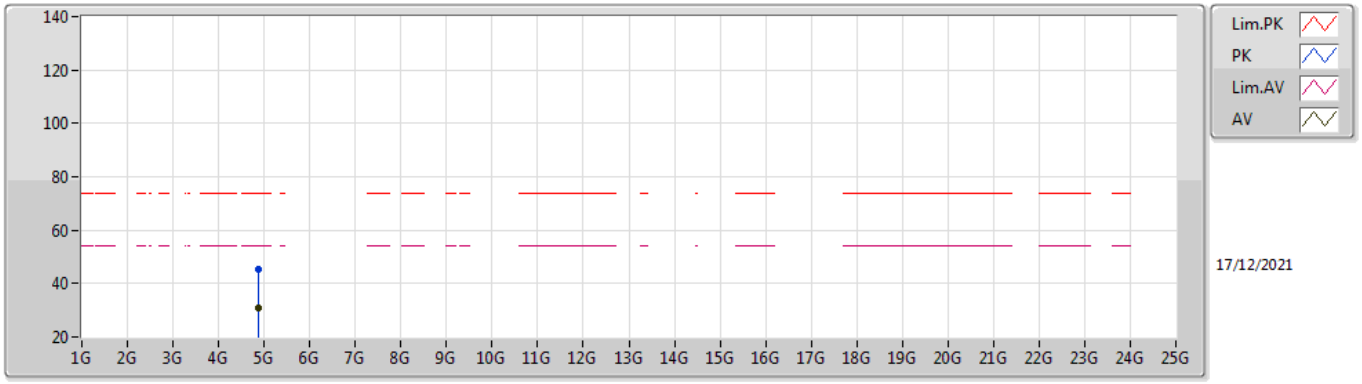


EUT Y_2TX
Setting 21
06-F-S-5

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	2.3842G	57.53	74.00	-16.47	26.21	3	Vertical	321	1.77	-	27.53	3.79	-
AV	2.3814G	45.09	54.00	-8.91	13.75	3	Vertical	321	1.77	-	27.55	3.79	-
PK	2.4394G	109.50	Inf	-Inf	78.42	3	Vertical	321	1.77	-	27.24	3.84	-
AV	2.4418G	98.58	Inf	-Inf	67.51	3	Vertical	321	1.77	-	27.23	3.84	-
PK	2.4838G	60.79	74.00	-13.21	29.64	3	Vertical	321	1.77	-	27.27	3.88	-
AV	2.4838G	47.18	54.00	-6.82	16.03	3	Vertical	321	1.77	-	27.27	3.88	-

802.11n HT20_Nss1,(MCS0)_2TX

2437MHz_TX

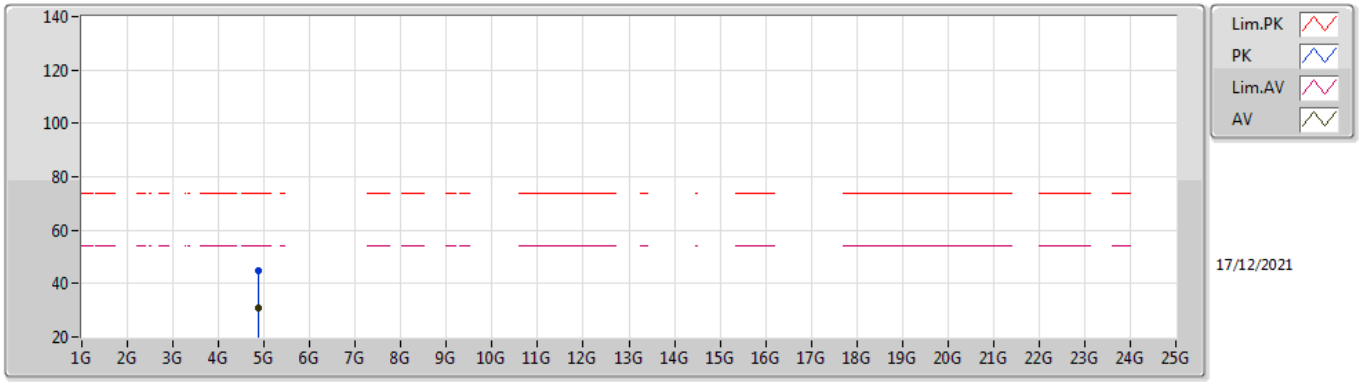


EUT Y_2TX
Setting 21
06-F-S-5

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	4.87342G	45.38	74.00	-28.62	40.75	3	Vertical	50	1.98	-	31.05	5.60	32.02
AV	4.87388G	31.03	54.00	-22.97	26.40	3	Vertical	50	1.98	-	31.05	5.60	32.02

802.11n HT20_Nss1,(MCS0)_2TX

2437MHz_TX

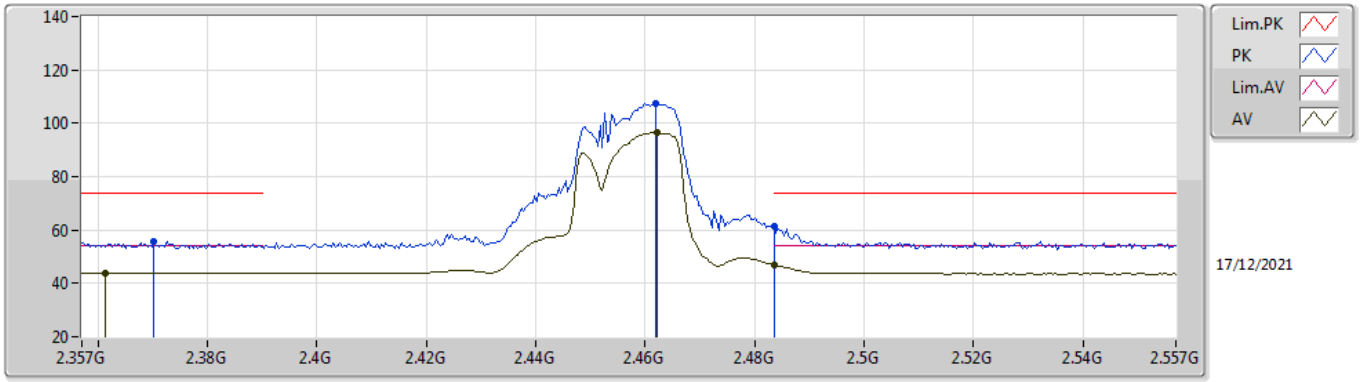


EUT Y_2TX
Setting 21
06-F-S-5

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	4.87448G	44.95	74.00	-29.05	40.32	3	Horizontal	87	2.65	-	31.05	5.60	32.02
AV	4.874G	31.10	54.00	-22.90	26.47	3	Horizontal	87	2.65	-	31.05	5.60	32.02

802.11n HT20_Nss1,(MCS0)_2TX

2457MHz_TX

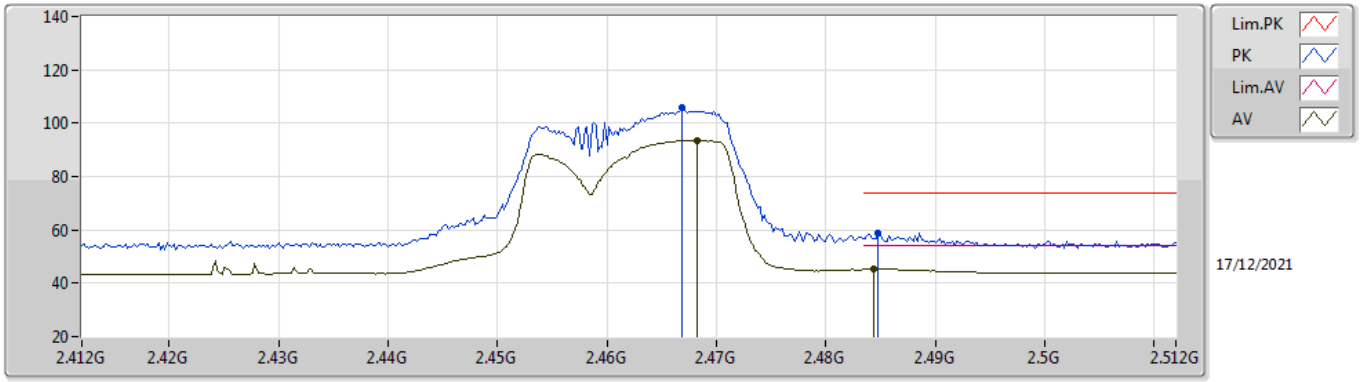


EUT Y_2TX
Setting 17.5
06-F-S-5

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	2.3702G	55.61	74.00	-18.39	24.18	3	Vertical	319	1.74	-	27.64	3.79	-
AV	2.3614G	43.80	54.00	-10.20	12.31	3	Vertical	319	1.74	-	27.71	3.78	-
PK	2.4618G	107.45	Inf	-Inf	76.37	3	Vertical	319	1.74	-	27.22	3.86	-
AV	2.4622G	96.47	Inf	-Inf	65.39	3	Vertical	319	1.74	-	27.22	3.86	-
PK	2.4835G	61.26	74.00	-12.74	30.11	3	Vertical	319	1.74	-	27.27	3.88	-
AV	2.4835G	46.78	54.00	-7.22	15.63	3	Vertical	319	1.74	-	27.27	3.88	-

802.11n HT20_Nss1,(MCS0)_2TX

2462MHz_TX

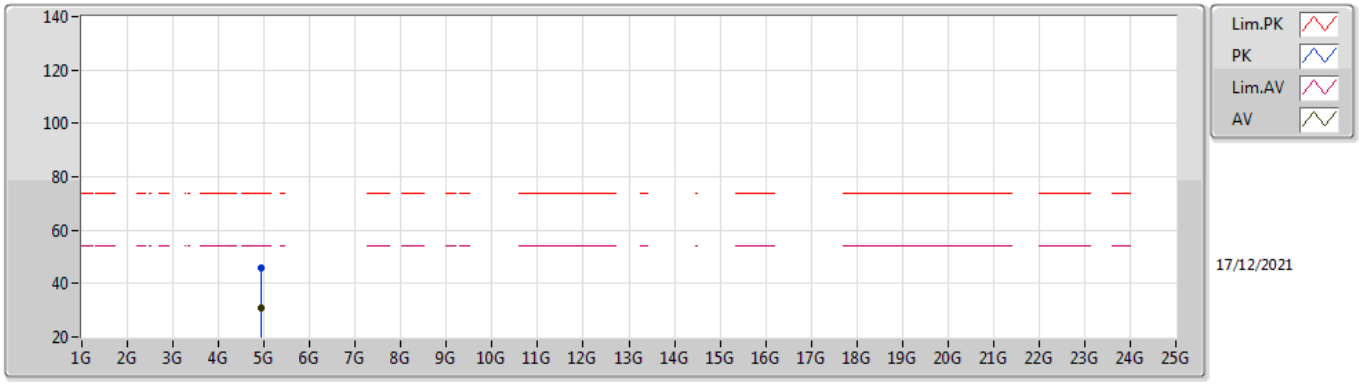


EUT Y_2TX
Setting 16
06-F-S-5

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	2.4668G	105.61	Inf	-Inf	74.51	3	Vertical	262	1.80	-	27.23	3.87	-
AV	2.4682G	93.67	Inf	-Inf	62.56	3	Vertical	262	1.80	-	27.24	3.87	-
PK	2.4848G	58.86	74.00	-15.14	27.71	3	Vertical	262	1.80	-	27.27	3.88	-
AV	2.4844G	45.26	54.00	-8.74	14.11	3	Vertical	262	1.80	-	27.27	3.88	-

802.11n HT20_Nss1,(MCS0)_2TX

2462MHz_TX

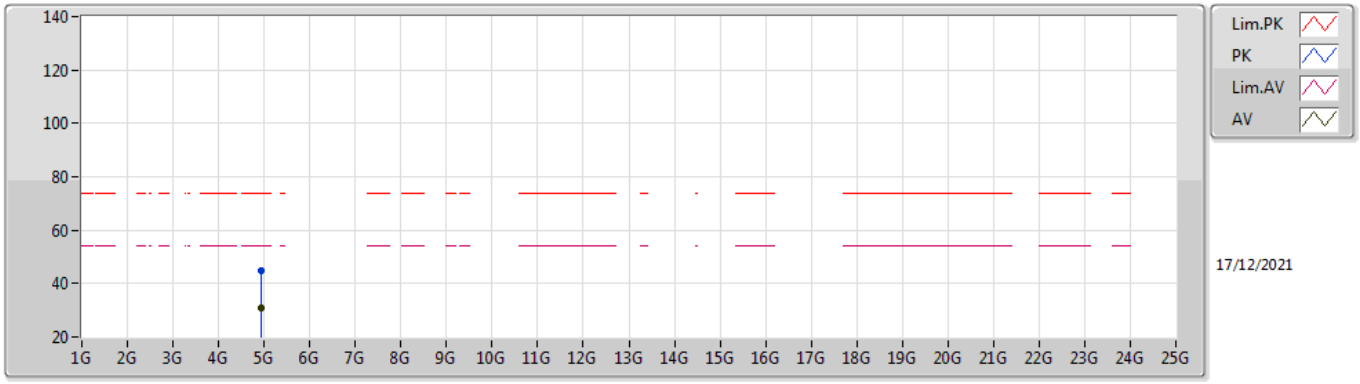


EUT Y_2TX
Setting 16
06-F-S-5

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	4.92508G	45.84	74.00	-28.16	41.01	3	Vertical	345	1.46	-	31.20	5.60	31.97
AV	4.92394G	30.69	54.00	-23.31	25.86	3	Vertical	345	1.46	-	31.20	5.60	31.97

802.11n HT20_Nss1,(MCS0)_2TX

2462MHz_TX

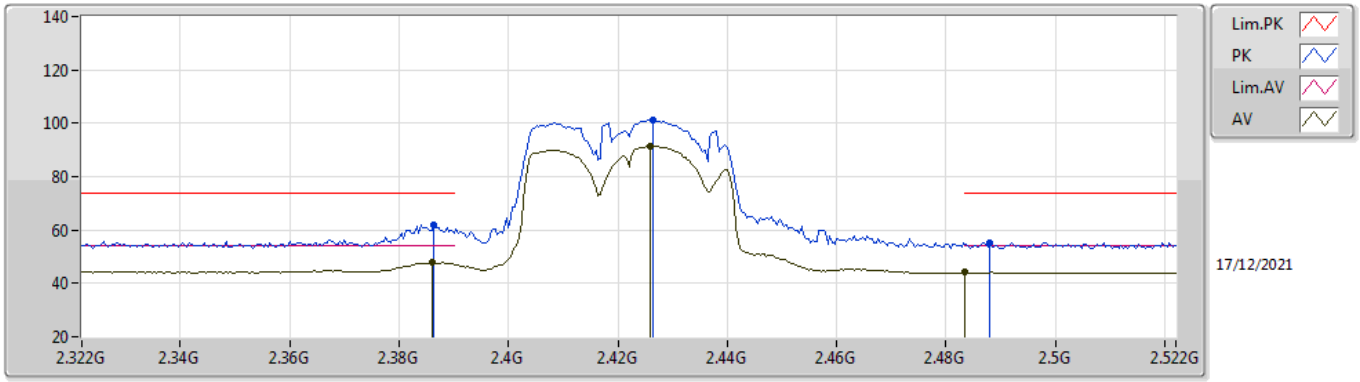


EUT Y_2TX
Setting 16
06-F-S-5

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	4.92498G	45.08	74.00	-28.92	40.25	3	Horizontal	156	1.27	-	31.20	5.60	31.97
AV	4.92344G	30.65	54.00	-23.35	25.83	3	Horizontal	156	1.27	-	31.19	5.60	31.97

802.11n HT40_Nss1,(MCS0)_2TX

2422MHz_TX

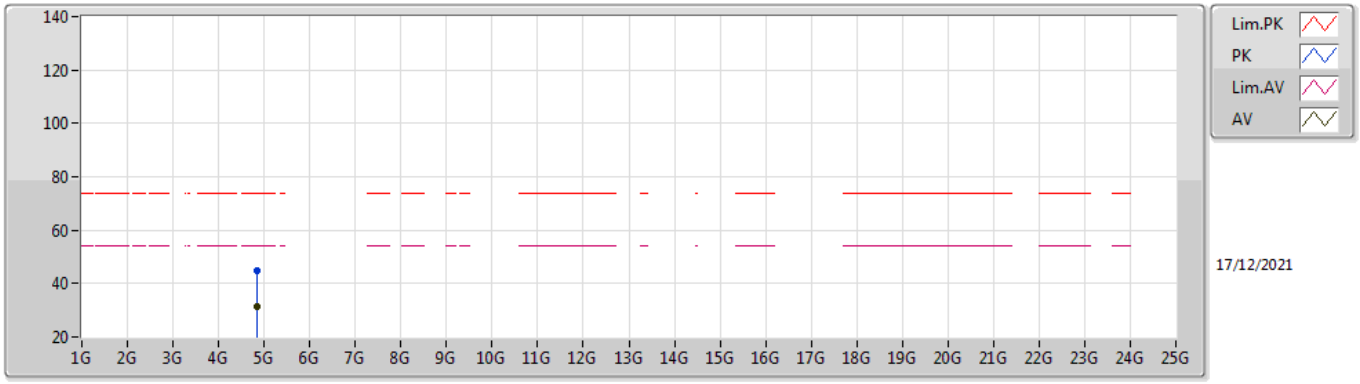


EUT Y_2TX
Setting 16.5
06-F-S-5

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	2.3864G	61.89	74.00	-12.11	30.59	3	Vertical	317	1.80	-	27.51	3.79	-
AV	2.386G	47.81	54.00	-6.19	16.51	3	Vertical	317	1.80	-	27.51	3.79	-
PK	2.4264G	101.07	Inf	-Inf	69.95	3	Vertical	317	1.80	-	27.29	3.83	-
AV	2.426G	91.50	Inf	-Inf	60.37	3	Vertical	317	1.80	-	27.30	3.83	-
PK	2.488G	55.23	74.00	-18.77	24.06	3	Vertical	317	1.80	-	27.28	3.89	-
AV	2.4835G	44.08	54.00	-9.92	12.93	3	Vertical	317	1.80	-	27.27	3.88	-

802.11n HT40_Nss1,(MCS0)_2TX

2422MHz_TX

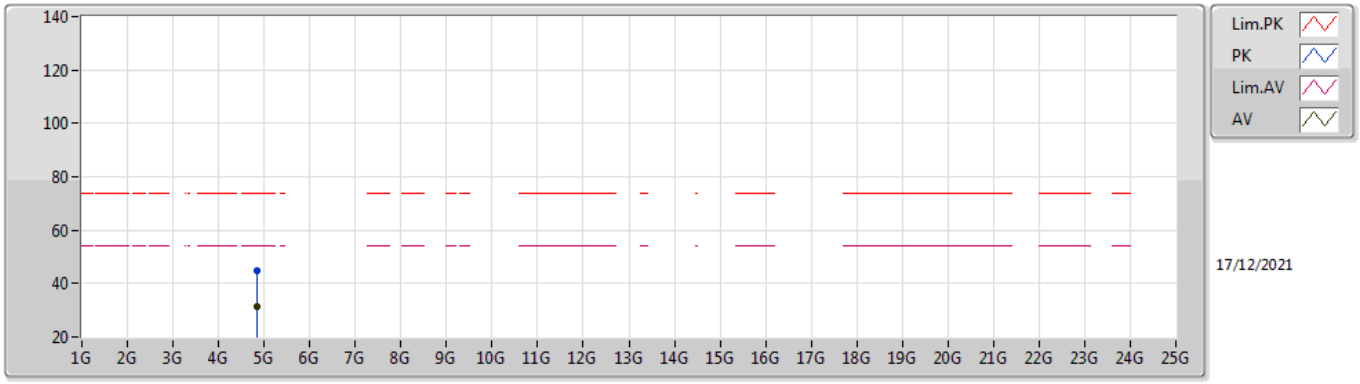


EUT Y_2TX
Setting 16.5
06-F-S-5

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	4.8463G	44.65	74.00	-29.35	40.08	3	Vertical	351	2.17	-	31.01	5.60	32.04
AV	4.83906G	31.50	54.00	-22.50	26.93	3	Vertical	351	2.17	-	31.02	5.60	32.05

802.11n HT40_Nss1,(MCS0)_2TX

2422MHz_TX

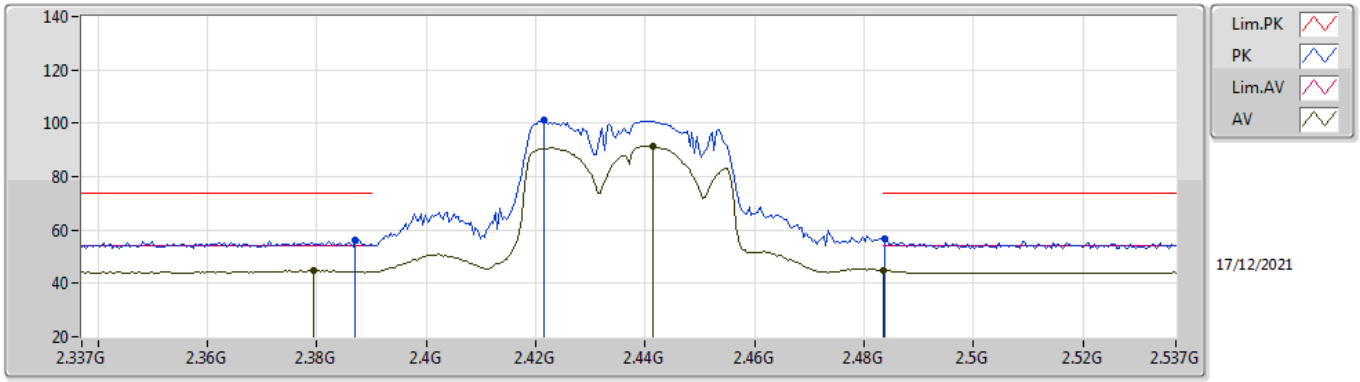


EUT Y_2TX
Setting 16.5
06-F-S-5

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	4.84768G	44.85	74.00	-29.15	40.29	3	Horizontal	205	1.76	-	31.00	5.60	32.04
AV	4.8424G	31.42	54.00	-22.58	26.84	3	Horizontal	205	1.76	-	31.02	5.60	32.04

802.11n HT40_Nss1,(MCS0)_2TX

2437MHz_TX

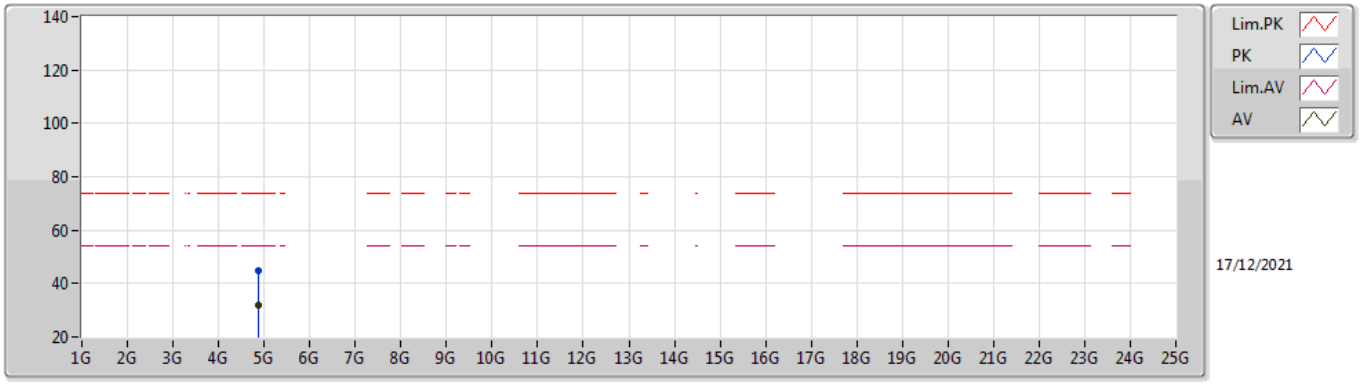


EUT Y_2TX
Setting 16.5
06-F-S-5

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	56.44	74.00	-17.56	25.15	3	Vertical	315	1.80	-	27.50	3.79	-
AV	2.3794G	44.71	54.00	-9.29	13.36	3	Vertical	315	1.80	-	27.56	3.79	-
PK	2.4214G	101.32	Inf	-Inf	70.19	3	Vertical	315	1.80	-	27.31	3.82	-
AV	2.4414G	91.52	Inf	-Inf	60.45	3	Vertical	315	1.80	-	27.23	3.84	-
PK	2.4838G	56.70	74.00	-17.30	25.55	3	Vertical	315	1.80	-	27.27	3.88	-
AV	2.4835G	44.64	54.00	-9.36	13.49	3	Vertical	315	1.80	-	27.27	3.88	-

802.11n HT40_Nss1,(MCS0)_2TX

2437MHz_TX

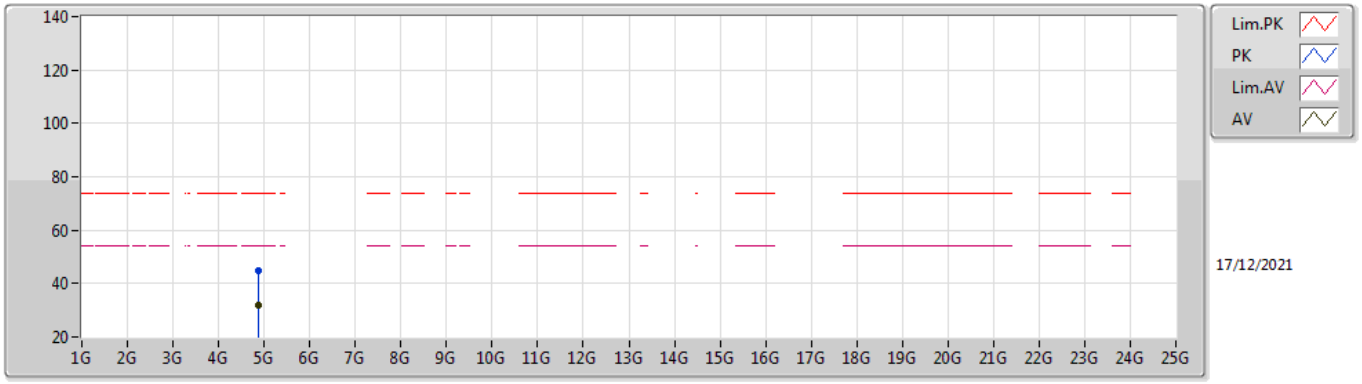


EUT Y_2TX
Setting 16.5
06-F-S-5

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	4.87722G	44.73	74.00	-29.27	40.09	3	Vertical	47	1.61	-	31.05	5.60	32.01
AV	4.87862G	31.87	54.00	-22.13	27.22	3	Vertical	47	1.61	-	31.06	5.60	32.01

802.11n HT40_Nss1,(MCS0)_2TX

2437MHz_TX

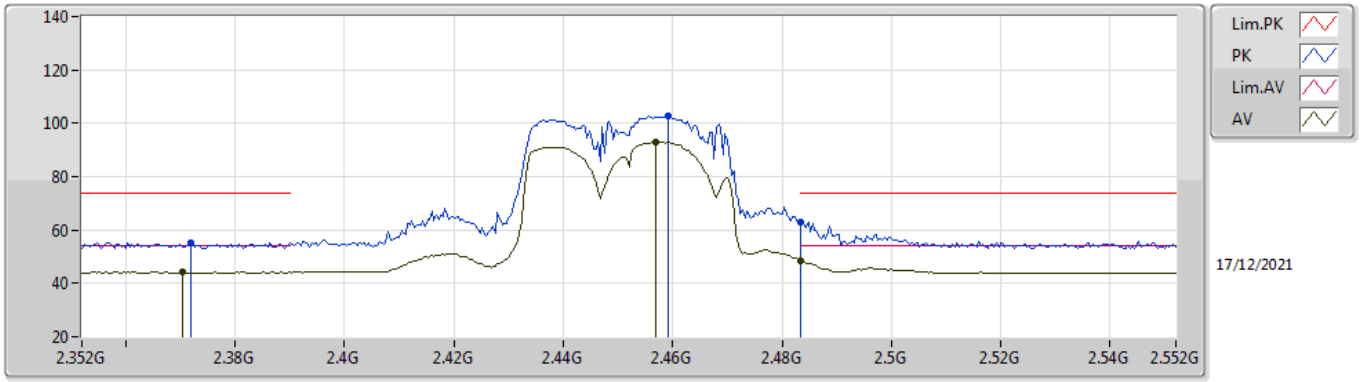


EUT Y_2TX
Setting 16.5
06-F-S-5

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	4.87668G	44.72	74.00	-29.28	40.08	3	Horizontal	258	1.56	-	31.05	5.60	32.01
AV	4.87388G	31.73	54.00	-22.27	27.10	3	Horizontal	258	1.56	-	31.05	5.60	32.02

802.11n HT40_Nss1,(MCS0)_2TX

2452MHz_TX

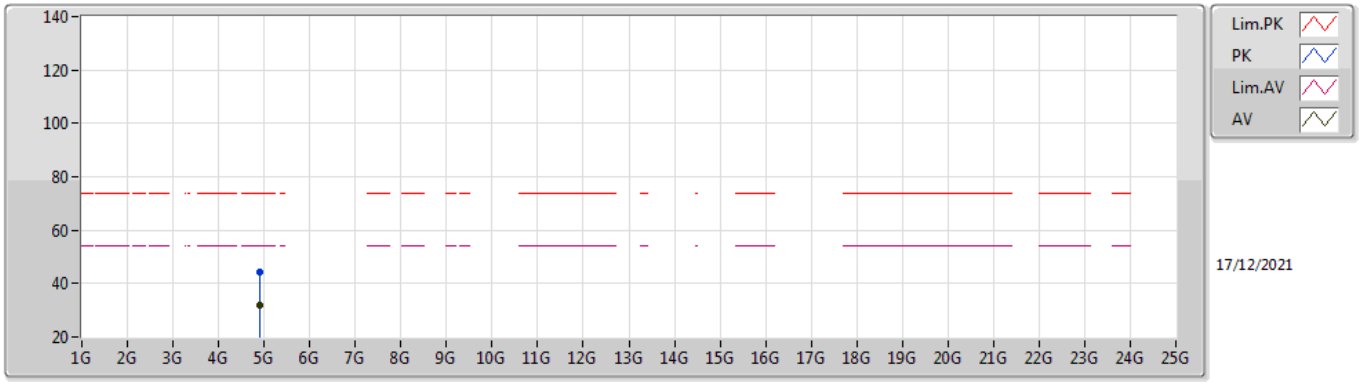


EUT Y_2TX
Setting 16
06-F-S-5

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	2.372G	55.30	74.00	-18.70	23.89	3	Vertical	320	1.75	-	27.62	3.79	-
AV	2.3704G	44.29	54.00	-9.71	12.86	3	Vertical	320	1.75	-	27.64	3.79	-
PK	2.4592G	102.84	Inf	-Inf	71.76	3	Vertical	320	1.75	-	27.22	3.86	-
AV	2.4568G	92.95	Inf	-Inf	61.88	3	Vertical	320	1.75	-	27.21	3.86	-
PK	2.4835G	62.75	74.00	-11.25	31.60	3	Vertical	320	1.75	-	27.27	3.88	-
AV	2.4835G	48.54	54.00	-5.46	17.39	3	Vertical	320	1.75	-	27.27	3.88	-

802.11n HT40_Nss1,(MCS0)_2TX

2452MHz_TX

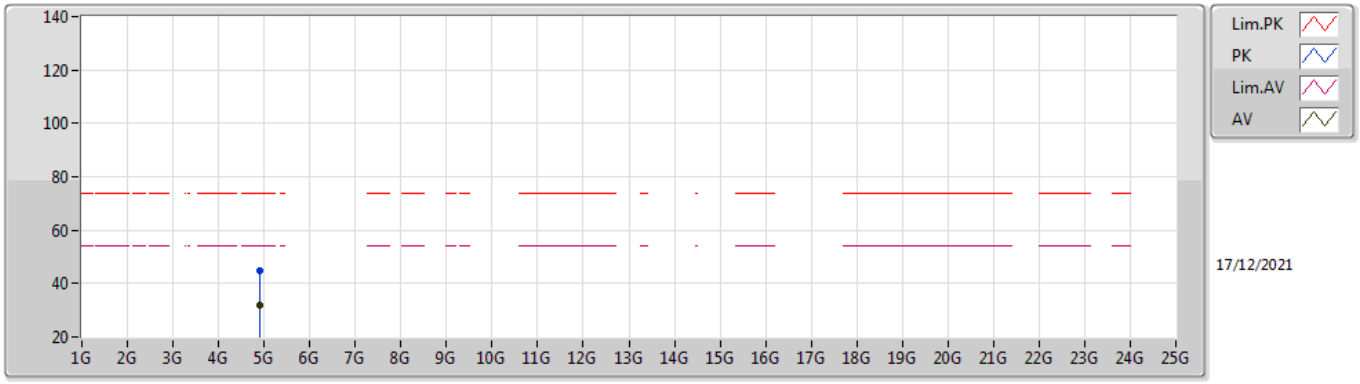


EUT Y_2TX
Setting 16
06-F-S-5

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	4.90054G	44.51	74.00	-29.49	39.80	3	Vertical	274	1.64	-	31.10	5.60	31.99
AV	4.90366G	31.73	54.00	-22.27	27.01	3	Vertical	274	1.64	-	31.11	5.60	31.99

802.11n HT40_Nss1,(MCS0)_2TX

2452MHz_TX



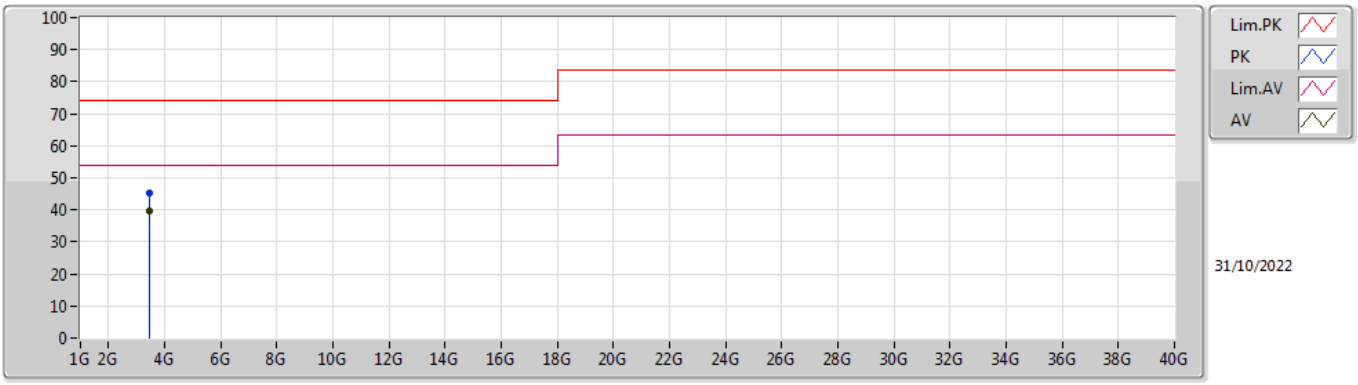
EUT Y_2TX
Setting 16
06-F-S-5

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	4.899G	44.95	74.00	-29.05	40.24	3	Horizontal	203	1.85	-	31.10	5.60	31.99
AV	4.9023G	31.72	54.00	-22.28	27.00	3	Horizontal	203	1.85	-	31.11	5.60	31.99

Summary

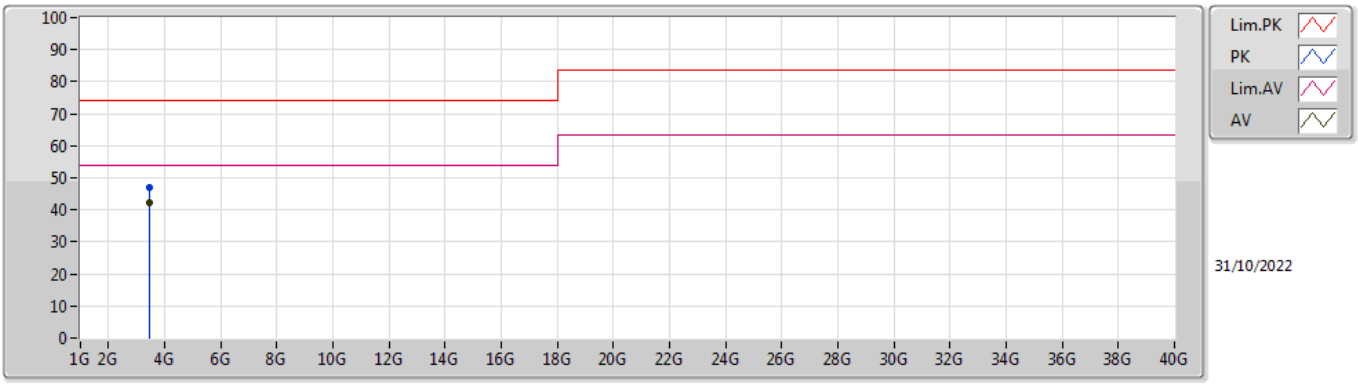
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	AV	3.47318G	42.20	54.00	-11.80	Horizontal

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)		(°)	(m)		(dBuV/m)	(dB/m)	(dB)	(dB)
PK	3.47364G	45.38	74.00	-28.62	-1.07	3	Vertical	58	2.50	-	46.45	29.55	5.17	35.79
AV	3.47317G	39.56	54.00	-14.44	-1.07	3	Vertical	58	2.50	"Worst"	40.63	29.55	5.17	35.79

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	3.47326G	46.99	74.00	-27.01	-1.07	3	Horizontal	123	1.45	-	48.06	29.55	5.17	35.79
AV	3.47318G	42.20	54.00	-11.80	-1.07	3	Horizontal	123	1.45	"Worst"	43.27	29.55	5.17	35.79