Testing Laboratory 1190

FCC RADIO TEST REPORT

FCC ID	:	MSQ-RTAX8A00
Equipment	:	Wireless AX1800 Dual Band WiFi 6 Router
Brand Name	:	ASUS
Model Name	:	RT-AX55
Applicant	:	ASUSTeK COMPUTER INC. 1F., No. 15, Lide Rd., Beitou, Taipei 112, Taiwan
Manufacturer	:	ASUSTeK COMPUTER INC. 1F., No. 15, Lide Rd., Beitou, Taipei 112, Taiwan
Standard	:	47 CFR FCC Part 15.247

The product was received on Jun. 04, 2020, and testing was started from Jun. 04, 2020 and completed on Jul. 20, 2020. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Approved by: Sam Chen

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)

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History of this test report

Report No.	Version	Description	Issued Date
FR041012AA	01	Initial issue of report	Aug. 03, 2020
FR041012AA	02	Changing the model name of Ant. 3 to "RF21C05742A" from "RF21C05437A"	Aug. 04, 2020

Summary of Test Result

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

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Sam Chen
Report Producer: Sandy Chuang

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
2400-2483.5	b, g, n (HT20), ax (HEW20)	2412-2462	1-11 [11]
2400-2483.5	n (HT40), ax (HEW40)	2422-2452	3-9 [7]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	802.11b	20	1TX
2.4-2.4835GHz	802.11g	20	1TX
2.4-2.4835GHz	802.11n HT20	20	2TX
2.4-2.4835GHz	802.11n HT20-BF	20	2TX
2.4-2.4835GHz	802.11ax HEW20-BF	20	2TX
2.4-2.4835GHz	802.11n HT40	40	2TX
2.4-2.4835GHz	802.11n HT40-BF	40	2TX
2.4-2.4835GHz	802.11ax HEW40	40	2TX
2.4-2.4835GHz	802.11ax HEW40-BF	40	2TX

Note:
- 11b mode uses a combination of DSSS-DBPSK, DQPSK, CCK modulation.
- 11g, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- HEW20, HEW40 use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

Ant.	Port		Brand	P/N	Antenna Type	Connector	Gain (dBi)	
	2.4GHz	5GHz					2.4GHz	5GHz
1	2	-	RF link	RF21C05434A	Dipole Ant.	N/A	2	-
2	1	-	RF link	RF21C05435A	Dipole Ant.	N/A	2	-
3	-	2	RF link	RF21C05742A	Dipole Ant.	I-PEX	-	2
4	-	1	RF link	RF21C05436A	Dipole Ant.	I-PEX	-	2

Note: The above information was declared by manufacturer.

For 2.4GHz function:

For IEEE 802.11b/g (1TX/1RX):
Only Port 1 can be used as transmitting/receiving antenna.

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

Pot 1 and Port 2 can be used as transmitting/receiving antenna.
Pot 1 and Port 2 could transmit/receive simultaneously.

For 5GHz function:

For IEEE 802.11a (1TX/1RX):
Only Port 2 can be used as transmitting/receiving antenna.

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

Pot 1 and Port 2 can be used as transmitting/receiving antenna.
Pot 1 and Port 2 could transmit/receive simultaneously.

1.1.3 Mode Test Duty Cycle

<Non-beamforming mode>

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11b	0.936	0.29	12.42m	100
802.11g	0.953	0.21	2.068m	1k

<beamforming mode>

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11ax HEW20-BF	0.968	0.14	3.008m	1k
802.11ax HEW40-BF	0.964	0.16	4.358m	300

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

1.1.4 EUT Operational Condition

EUT Power Type	From Power Adapter			
Beamforming Function	☒	With beamforming	☐	Without beamforming
	The product has beamforming function for n/ax in 2.4GHz and n/ac/ax in 5GHz.			
Function	☒	Point-to-multipoint	☐	Point-to-point
Test Software Version	accessMTool (v3.1.0.6)			

Note: The above information was declared by manufacturer.

1.1.5 EUT Type

The EUT has two types which are identical to each other in all aspects except for the following table:

EUT	DC jack port	Use adapter
EUT 1	Small	Adapter 1 and Adapter 2
EUT 2	Big	Adapter 3

1.2 Applicable Standards

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

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

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

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

1.3 Testing Location Information

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

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH02-CB	Lance Wu	24.6-25.7°C / 59-62%	Jul. 07, 2020~ Jul. 15, 2020
Radiated <Below 1GHz>	03CH05-CB	Stim Sung	26.9-29 °C / 56-59%	Jun. 04, 2020~ Jul. 20, 2020
Radiated <Above 1GHz: Non-beamforming mode>	03CH06-CB	Stim Sung	24.5-25.3 °C / 61-62%	Jun. 04, 2020~ Jul. 20, 2020
Radiated <Above 1GHz: beamforming mode>	03CH06-CB	Stim Sung	25.6-26.4 °C / 60-62%	Jun. 04, 2020~ Jul. 20, 2020
AC Conduction	CO01-CB	Max Lin	22~23°C / 61~62%	Jul. 20, 2020

Test site Designation No. TW0006 with FCC.
Test site registered number IC 4086D with Industry Canada.

1.4 Measurement Uncertainty

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

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	2.0 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	5.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	4.9 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.6 dB	Confidence levels of 95%
Conducted Emission	2.8 dB	Confidence levels of 95%
Output Power Measurement	1.4 dB	Confidence levels of 95%
Power Density Measurement	2.8 dB	Confidence levels of 95%
Bandwidth Measurement	0.39%	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

<Non-beamforming mode>

Mode	Power Setting
802.11b_Nss1,(1Mbps)_1TX	-
2412MHz	93
2417MHz	95
2437MHz	108
2457MHz	
2462MHz	97
802.11g_Nss1,(6Mbps)_1TX	-
2412MHz	78
2417MHz	84
2437MHz	103
2457MHz	86
2462MHz	79

<beamforming mode>

Mode	Power Setting
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	-
2412MHz	65
2417MHz	72
2437MHz	101
2457MHz	74
2462MHz	63
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	-
2422MHz	65
2427MHz	68
2437MHz	79
2447MHz	63
2452MHz	61

Note:
- There are two modes of EUT, one is beamforming mode, and the other is non-beamforming mode for n/ax in 2.4GHz and n/ac/ax in 5GHz. After evaluating, beamforming mode had been evaluated to be the worst case, so it was selected to record in this test report.

2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral
Operating Mode	CTX
1	2.4GHz_AP Router Mode_EUT 1 with Adapter 1
2	2.4GHz_AP Router Mode_EUT 1 with Adapter 2
3	2.4GHz_AP Router Mode_EUT 2 with Adapter 3
Mode 3 has been evaluated to be the worst case among Mode 1~3, thus measurement for Mode 4 will follow this same test mode.	
4	5GHz_AP Router Mode_EUT 2 with Adapter 3
For operating mode 3 is the worst case and it was record in this test report.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	DTS Bandwidth Maximum Conducted Output Power Power Spectral Density Emissions in Non-restricted Frequency Bands
Test Condition	Conducted measurement at transmit chains
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
1	2.4GHz_AP Router Mode_EUT 1 with Adapter 1
2	2.4GHz_AP Router Mode_EUT 1 with Adapter 2
3	2.4GHz_AP Router Mode_EUT 2 with Adapter 3
Mode 3 has been evaluated to be the worst case among Mode 1~3, thus measurement for Mode 4 will follow this same test mode.	
4	5GHz_AP Router Mode_EUT 2 with Adapter 3
For operating mode 4 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX
1	EUT 2

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	WLAN 2.4GHz + WLAN 5GHz (EUT 2)
Refer to Sporton Test Report No.: FA041012 for Co-location RF Exposure Evaluation.	

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

2.3 EUT Operation during Test

<Non-beamforming mode>

The EUT was programmed to be in continuously transmitting mode.

<beamforming mode>

For Conducted Mode:

The EUT was programmed to be in continuously transmitting mode.

For Radiated Mode:

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

The program was executed as follows:

1. During the test, the EUT operation to normal function.
2. Executed command fixed test channel under Telnet.
3. Executed "Lantest.exe" to link with the remote workstation to transmit and receive packet by RX Device and transmit duty cycle no less than 98%.

2.4 Accessories

Accessories			
Equipment Name	**Brand Name**	**Model Name**	**Rating**
Adapter 1	DELTA	ADP-24EW B	Input: 100-240V~, 0.9A 50-60Hz Output: 12V, 2A
Adapter 2	PI	AD2055320	Input: 100-240V~, 50/60Hz 0.6A Output: 12V, 2.0A
Equipment Name	**Brand Holder**	**Model Name**	**Rating**
Adapter 3	SHENZHEN GONGJIN ELECTRONICS CO.,LTD.	S12A12-120A100-CJ	Input: 100-240V~, 50/60Hz 0.5A Output: 12V, 1A
Other			
RJ 45 cable*1: Non-Shielded, 1.5m			

2.5 Support Equipment

For AC Conduction:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	LAN NB	DELL	E6430	N/A

For Radiated (below 1GHz):

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

For Radiated (above 1GHz):
<Non-beamforming mode>

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

<beamforming mode>

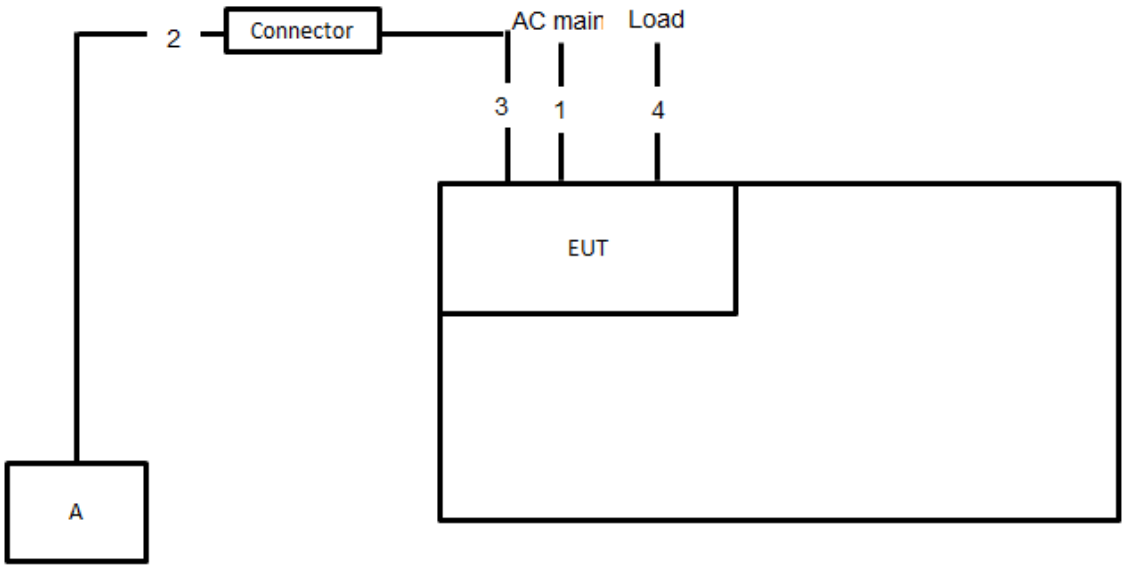
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	LAN NB	DELL	E4300	N/A
B	WLAN module	Intel	AX200NGW	PD9AX200NG

For RF Conducted:

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

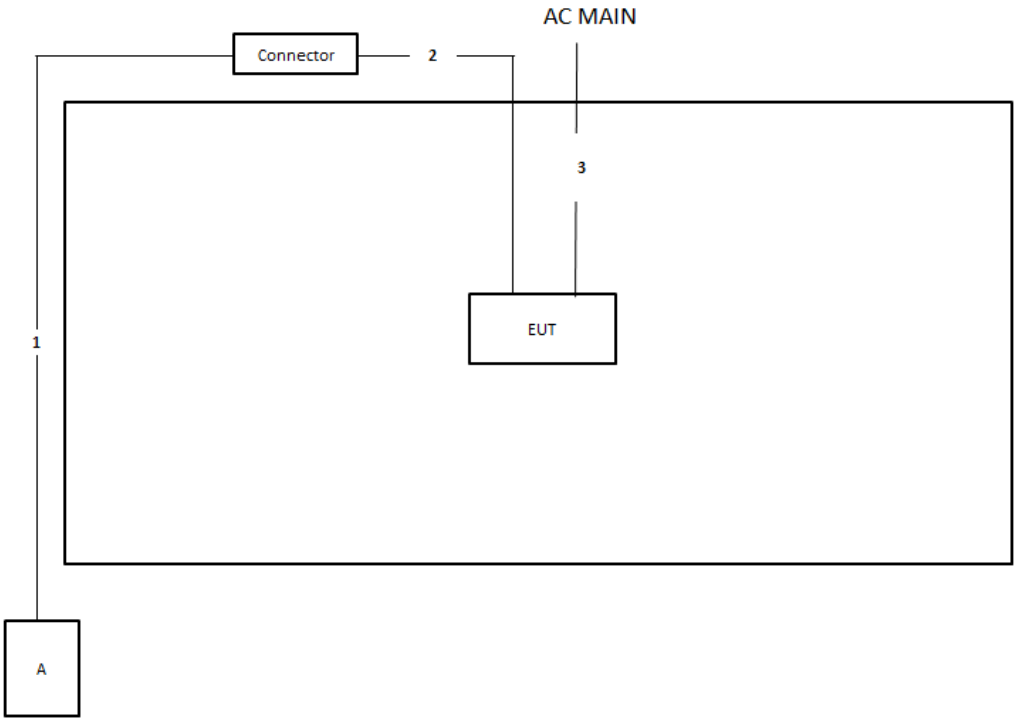
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



Item	Connection	Shielded	Length
1	Power cable	No	1.2m
2	RJ-45 cable	No	10m
3	RJ-45 cable	No	1.5m
4	RJ-45 cable*4	No	1.5m

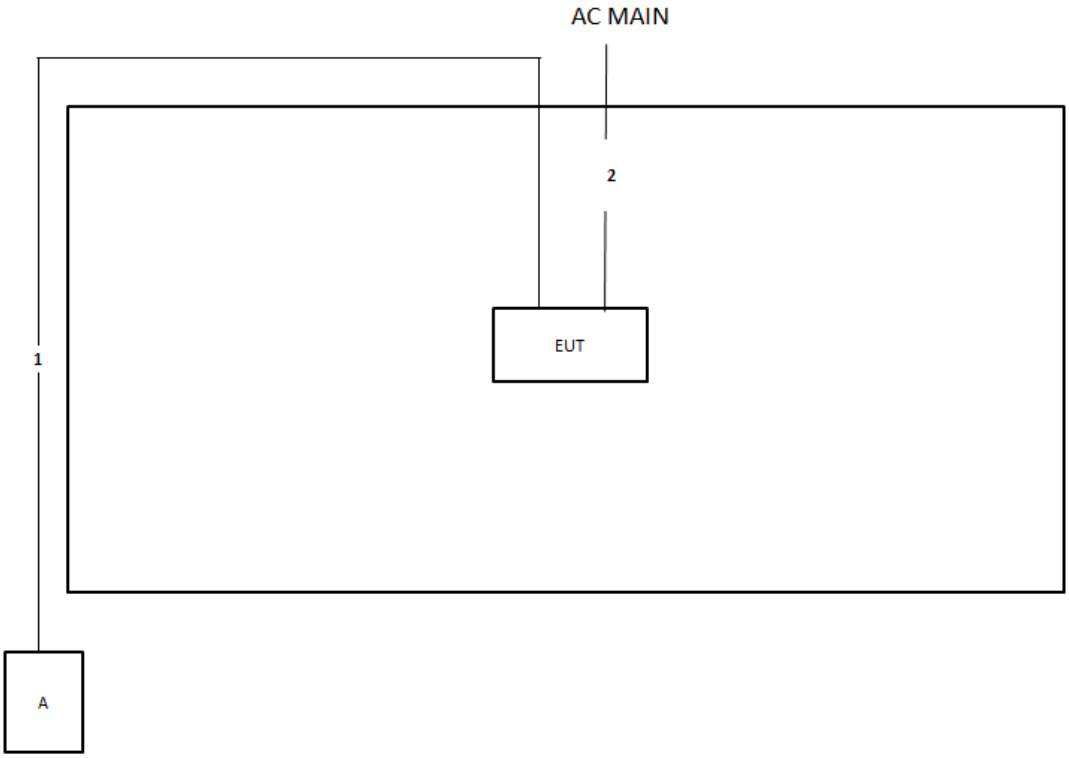
Test Setup Diagram - Radiated Test < 1GHz



Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	RJ-45 cable	No	1.5m
3	Power cable	No	1.2m

Test Setup Diagram - Radiated Test > 1GHz

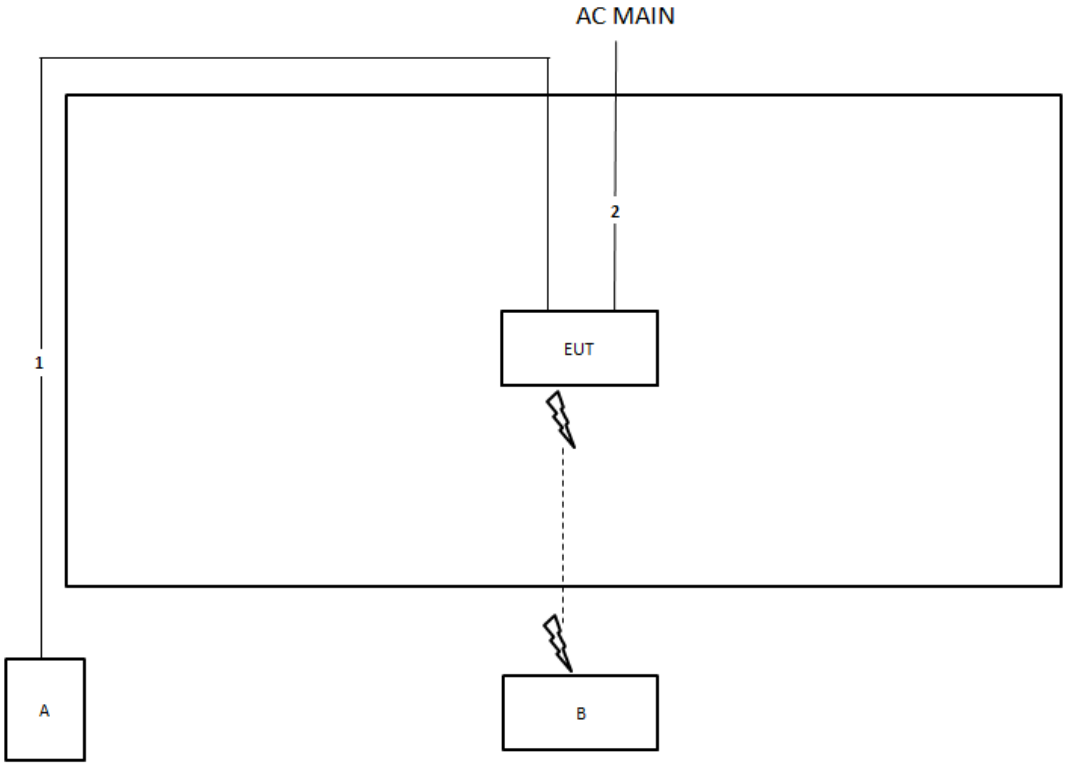
<Non-beamforming mode>



Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	Power cable	No	1.2m

Test Setup Diagram - Radiated Test > 1GHz

<beamforming mode>



Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	Power cable	No	1.2m

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

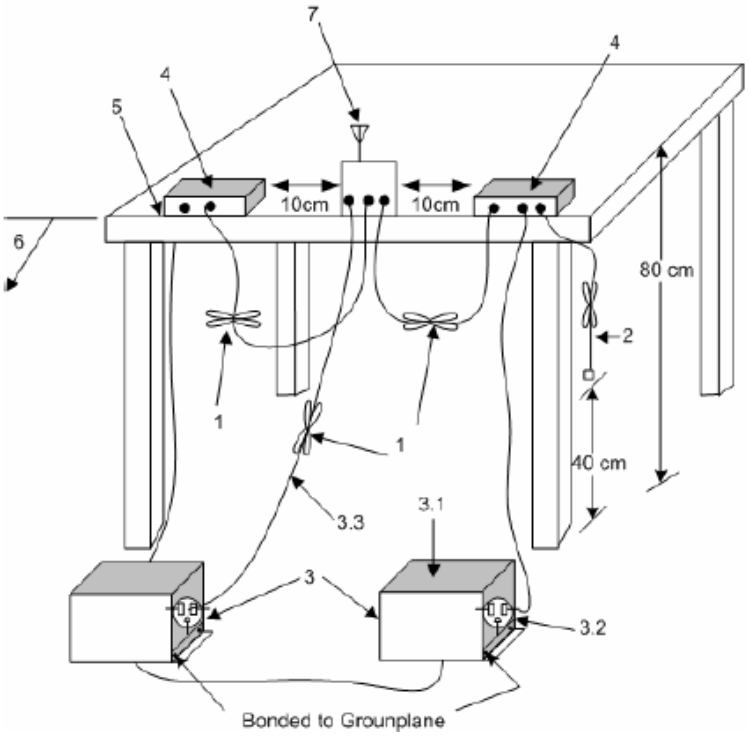
Refer a test equipment and calibration data table in this test report.

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 (dBuV) = LISN Factor + Cable Loss + Read Level = Level

b. Margin = - Limit + (Read Level + LISN Factor + Cable Loss)

3.1.6 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 DTS Bandwidth

3.2.1 6dB Bandwidth Limit

6dB Bandwidth Limit
Systems using digital modulation techniques:
▪ 6 dB bandwidth ≥ 500 kHz.

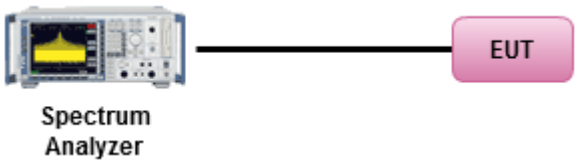
3.2.2 Measuring Instruments

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

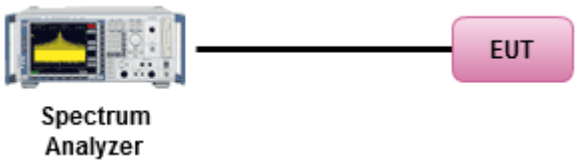
3.4.2 Measuring Instruments

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.

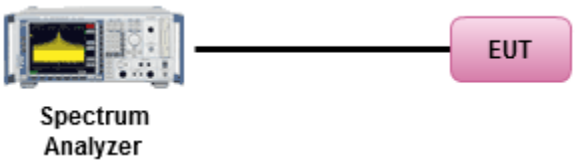
3.5.2 Measuring Instruments

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.

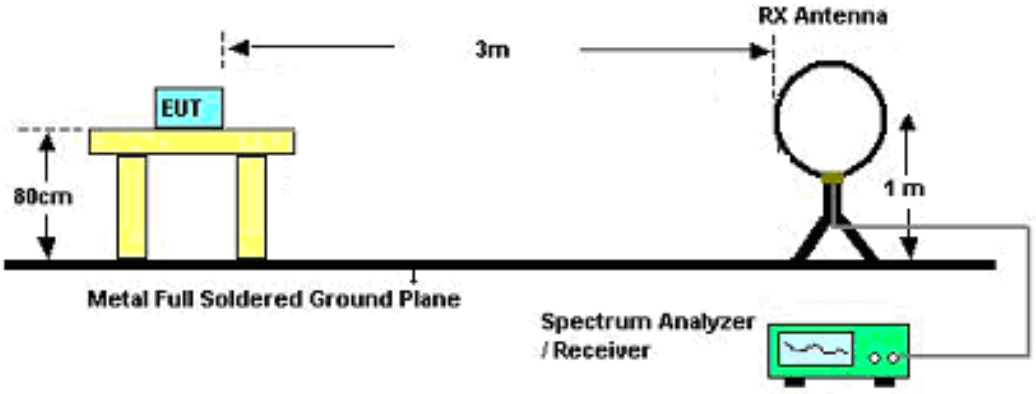
3.6.3 Test Procedures

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.	

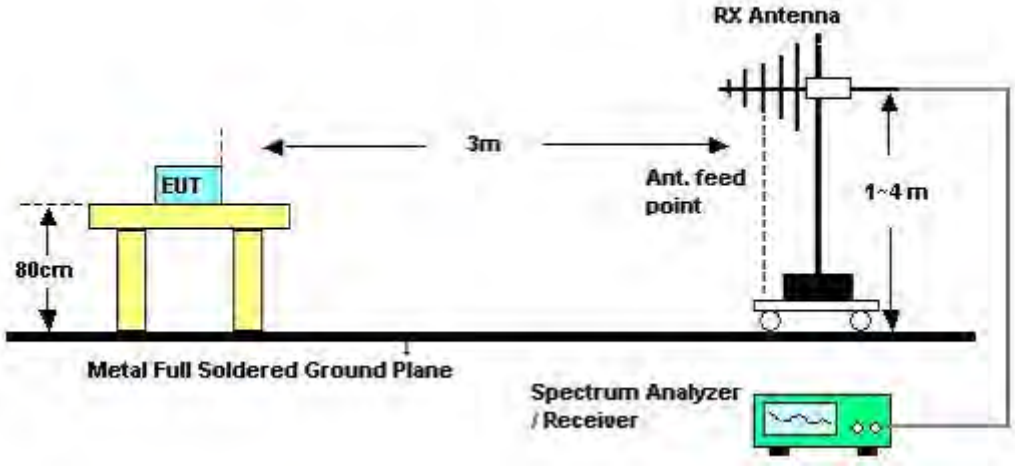
3.6.4 Test Setup

Radiated - Emissions in Restricted Frequency Bands

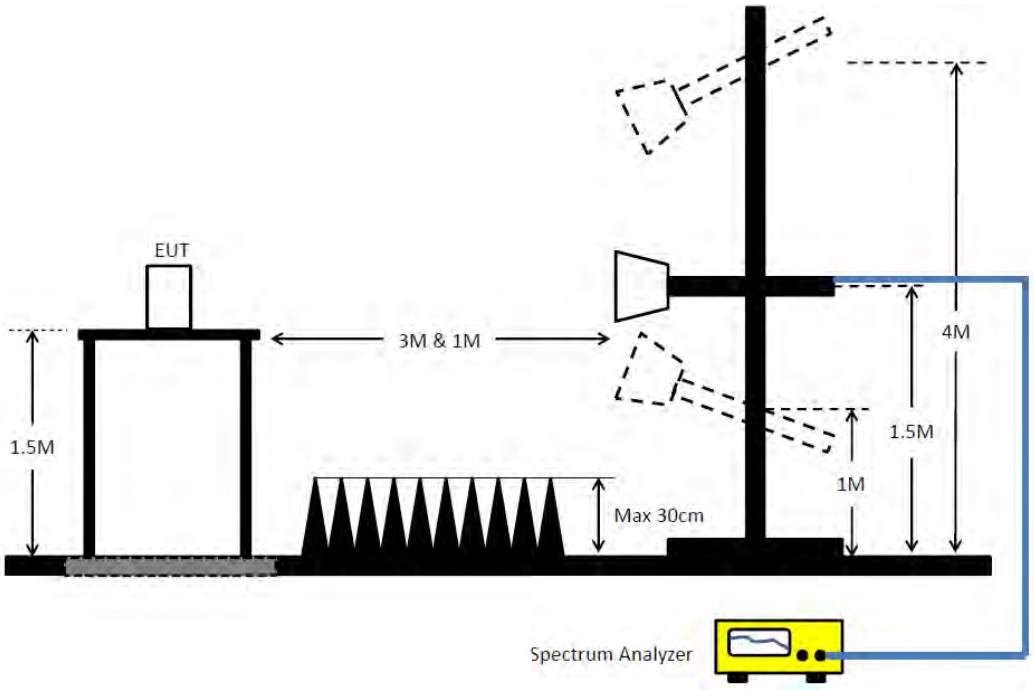
9kHz ~30MHz



30MHz~1GHz



Above 1GHz



3.6.5 Measurement Results Calculation

The measured Level is calculated using:
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor (if applicable) = Level.

3.6.6 Emissions in Restricted Frequency Bands (Below 30MHz)

There is a comparison data of both open-field test site and alternative test site - semi-Anechoic chamber according to KDB414788 Radiated Test Site, and the result came out very similar.
All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.
The radiated emissions were investigated from 9 kHz or the lowest frequency generated within the device, up to the 10 harmonic or 40 GHz, whichever is appropriate.

3.6.7 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix F

4 Test Equipment and Calibration Data

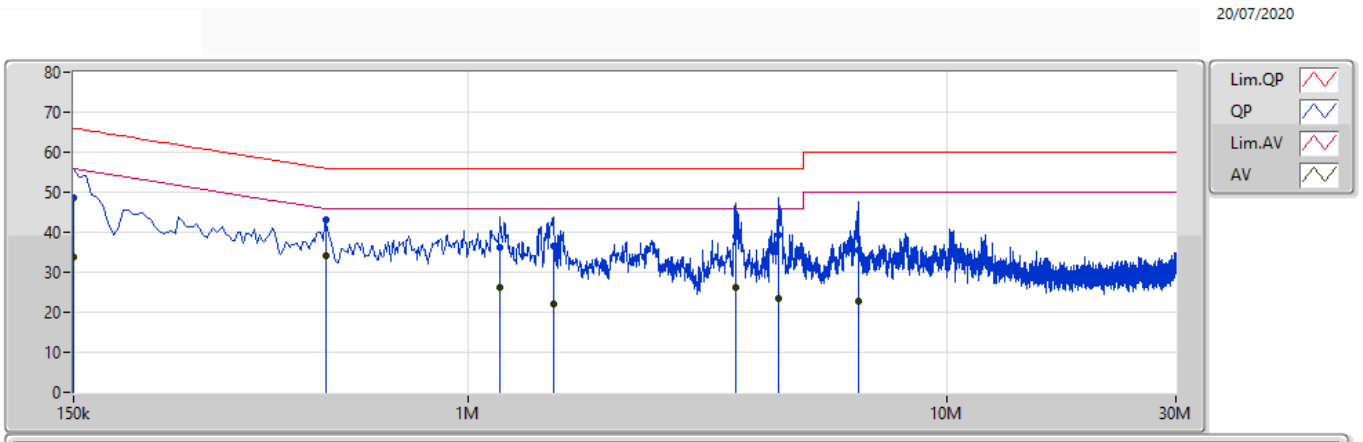
Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.45GHz	Feb. 26, 2020	Feb. 25, 2021	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Dec. 25, 2019	Dec. 24, 2020	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Feb. 25, 2020	Feb. 24, 2021	Conduction (CO01-CB)
Pulse Limiter	Rohde&Schwarz	ESH3-Z2	100430	9kHz ~ 30MHz	Jan. 31, 2020	Jan. 30, 2021	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	9kHz ~ 30MHz	May 20, 2020	May 19, 2021	Conduction (CO01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Apr. 13, 2020	Apr. 12, 2021	Radiation (03CH05-CB)
Bilog Antenna with 6dB Attenuator	TESEQ & EMCI	CBL 6112D & N-6-06	35236 & AT-N0610	30MHz ~ 2GHz	Mar. 27, 2020	Mar. 26, 2021	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC330N	980331	20MHz ~ 3GHz	Apr. 28, 2020	Apr. 27, 2021	Radiation (03CH05-CB)
Spectrum Analyzer	R&S	FSP40	100304	9kHz ~ 40GHz	Aug. 15, 2019	Aug. 14, 2020	Radiation (03CH05-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	May 13, 2020	May 12, 2021	Radiation (03CH05-CB)
RF Cable-low	Woken	RG402	LOW Cable-04+23	30MHz~1GHz	Oct. 07, 2019	Oct. 06, 2020	Radiation (03CH05-CB)
Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-1292	1GHz~18GHz	Jul. 17, 2019	Jul. 16, 2020	Radiation (03CH06-CB)
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA 9120D-1291	1GHz~18GHz	Oct. 05, 2019	Oct. 04, 2020	Radiation (03CH06-CB)
Horn Antenna	COM-POWER	AH-118	071028	1GHz ~ 18GHz	Jun. 09, 2020	Jun. 08, 2021	Radiation (03CH06-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jun. 27, 2019	Jun. 26, 2020	Radiation (03CH06-CB)
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170507	15GHz ~ 40GHz	Jun. 11, 2020	Jun. 10, 2021	Radiation (03CH06-CB)
Pre-Amplifier	Agilent	83017A	MY53270064	0.5GHz ~ 26.5GHz	May 07, 2020	May 06, 2021	Radiation (03CH06-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 03, 2019	Jul. 02, 2020	Radiation (03CH06-CB)
Amplifier	-	-	TF-130N-R1	18GHz ~ 40GHz	Jun. 19, 2020	Jun. 18, 2021	Radiation (03CH06-CB)
Spectrum analyzer	R&S	FSP40	100080	9kHz~40GHz	Oct. 21, 2019	Oct. 20, 2020	Radiation (03CH06-CB)
RF Cable-high	HUBER+SUHNER	RG402	High Cable-05	1GHz~18GHz	Oct. 07, 2019	Oct. 06, 2020	Radiation (03CH06-CB)
RF Cable-high	HUBER+SUHNER	RG402	High Cable-05+24	1GHz~18GHz	Oct. 07, 2019	Oct. 06, 2020	Radiation (03CH06-CB)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 24, 2019	Jul. 23, 2020	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 24, 2019	Jul. 23, 2020	Radiation (03CH06-CB)
Spectrum analyzer	R&S	FSV40	101027	9kHz~40GHz	Jul. 02, 2019	Jul. 01, 2020	Conducted (TH02-CB)
Signal Analyzer	R&S	FSV40	101904	9kHz ~ 40GHz	May 12, 2020	May 11, 2021	Conducted (TH02-CB)
Power Sensor	Anritsu	MA2411B	1126203	300MHz~40GHz	Sep. 11, 2019	Sep. 10, 2020	Conducted (TH02-CB)
Power Meter	Anritsu	ML2495A	1210004	300MHz~40GHz	Sep. 11, 2019	Sep. 10, 2020	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-01	1 GHz – 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-02	1 GHz – 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-3	1 GHz – 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-04	1 GHz – 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-05	1 GHz – 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH02-CB)

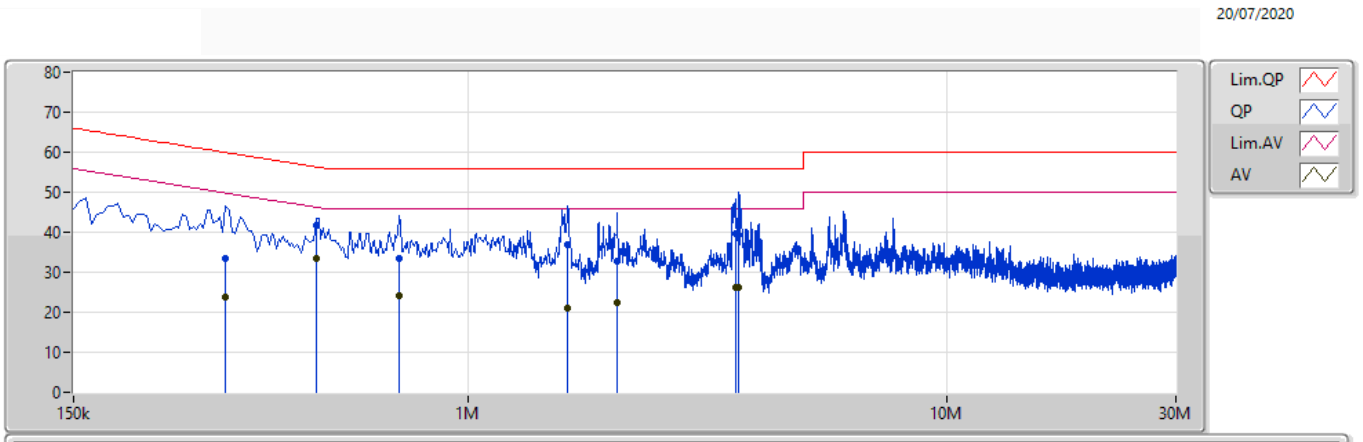
Note: Calibration Interval of instruments listed above is one year.

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 3	Pass	AV	505.5k	34.25	46.00	-11.75	Line



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	AF	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	150k	48.50	66.00	-17.50	9.87	Line	-	38.63	0.05	0.03	9.79
AV	150k	33.64	56.00	-22.36	9.87	Line	-	23.77	0.05	0.03	9.79
QP	505.5k	43.03	56.00	-12.97	9.88	Line	-	33.15	0.04	0.03	9.81
AV	505.5k	34.25	46.00	-11.75	9.88	Line	"Worst"	24.37	0.04	0.03	9.81
QP	1.167M	36.20	56.00	-19.80	9.92	Line	-	26.28	0.05	0.05	9.82
AV	1.167M	26.34	46.00	-19.66	9.92	Line	-	16.42	0.05	0.05	9.82
QP	1.505M	36.53	56.00	-19.47	9.95	Line	-	26.58	0.06	0.06	9.83
AV	1.505M	21.99	46.00	-24.01	9.95	Line	-	12.04	0.06	0.06	9.83
QP	3.606M	38.99	56.00	-17.01	10.02	Line	-	28.97	0.09	0.12	9.81
AV	3.606M	26.23	46.00	-19.77	10.02	Line	-	16.21	0.09	0.12	9.81
QP	4.443M	39.30	56.00	-16.70	10.05	Line	-	29.25	0.10	0.13	9.82
AV	4.443M	23.39	46.00	-22.61	10.05	Line	-	13.34	0.10	0.13	9.82
QP	6.518M	35.50	60.00	-24.50	10.14	Line	-	25.36	0.13	0.14	9.87
AV	6.518M	22.91	50.00	-27.09	10.14	Line	-	12.77	0.13	0.14	9.87



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	AF	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	312k	33.58	59.92	-26.34	9.87	Neutral	-	23.71	0.04	0.03	9.80
AV	312k	23.64	49.92	-26.28	9.87	Neutral	-	13.77	0.04	0.03	9.80
QP	483k	41.58	56.29	-14.71	9.88	Neutral	-	31.70	0.04	0.03	9.81
AV	483k	33.46	46.29	-12.83	9.88	Neutral	"Worst"	23.58	0.04	0.03	9.81
QP	717k	33.32	56.00	-22.68	9.91	Neutral	-	23.41	0.05	0.04	9.82
AV	717k	24.27	46.00	-21.73	9.91	Neutral	-	14.36	0.05	0.04	9.82
QP	1.613M	36.82	56.00	-19.18	9.96	Neutral	-	26.86	0.07	0.06	9.83
AV	1.613M	20.96	46.00	-25.04	9.96	Neutral	-	11.00	0.07	0.06	9.83
QP	2.045M	32.59	56.00	-23.41	9.97	Neutral	-	22.62	0.07	0.07	9.83
AV	2.045M	22.37	46.00	-23.63	9.97	Neutral	-	12.40	0.07	0.07	9.83
QP	3.606M	39.62	56.00	-16.38	10.02	Neutral	-	29.60	0.09	0.12	9.81
AV	3.606M	26.20	46.00	-19.80	10.02	Neutral	-	16.18	0.09	0.12	9.81
QP	3.678M	39.22	56.00	-16.78	10.02	Neutral	-	29.20	0.09	0.12	9.81
AV	3.678M	26.15	46.00	-19.85	10.02	Neutral	-	16.13	0.09	0.12	9.81

<Non-beamforming mode>
Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX	7.05M	11.444M	11M4G1D	6.525M	10.245M
802.11g_Nss1,(6Mbps)_1TX	16.35M	17.366M	17M4D1D	16.325M	16.742M

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

Result

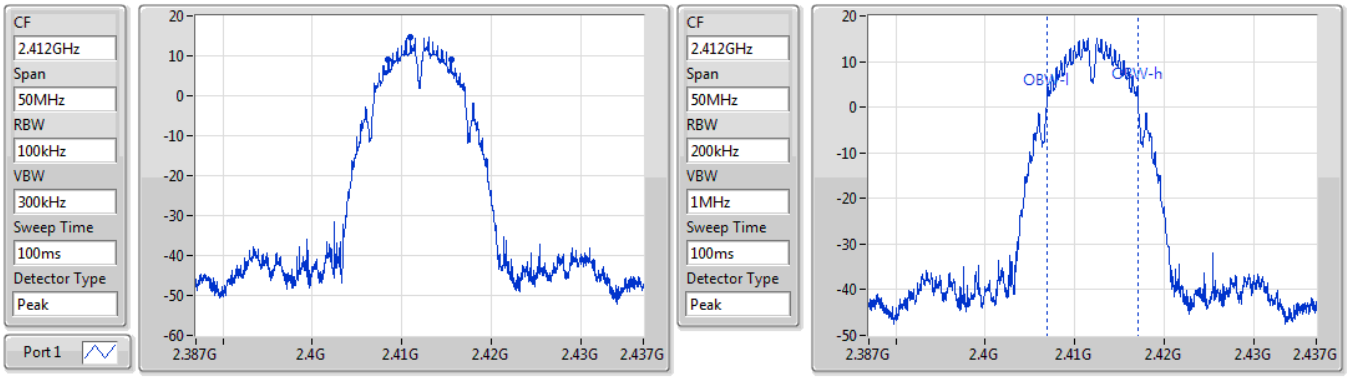
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	7.05M	10.245M
2437MHz	Pass	500k	7.025M	11.444M
2462MHz	Pass	500k	6.525M	10.27M
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	16.35M	16.742M
2437MHz	Pass	500k	16.325M	17.366M
2462MHz	Pass	500k	16.35M	16.742M

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

802.11b_Nss1,(1Mbps)_1TX EBW

2412MHz

08/07/2020

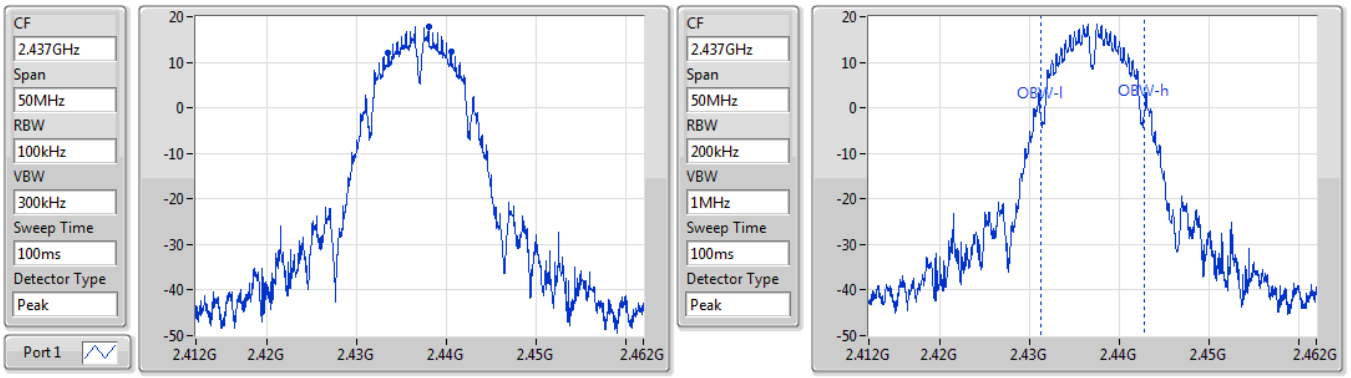


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
7.05M	2.40845G	2.4155G	10.245M	2.406853G	2.417097G	500k	1

802.11b_Nss1,(1Mbps)_1TX EBW

2437MHz

08/07/2020

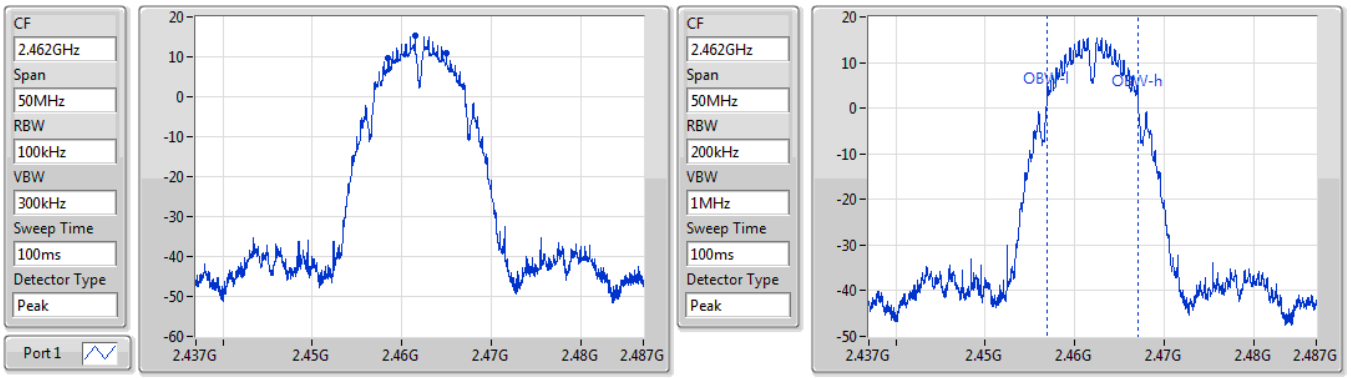


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
7.025M	2.433475G	2.4405G	11.444M	2.431278G	2.442722G	500k	1

802.11b_Nss1,(1Mbps)_1TX EBW

2462MHz

08/07/2020

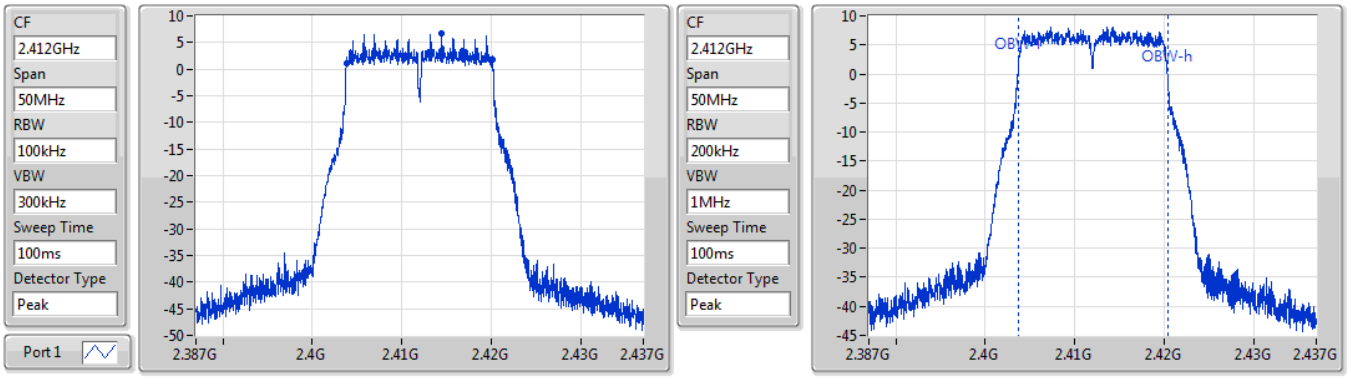


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
6.525M	2.458475G	2.465G	10.27M	2.456853G	2.467122G	500k	1

802.11g_Nss1,(6Mbps)_1TX EBW

2412MHz

08/07/2020

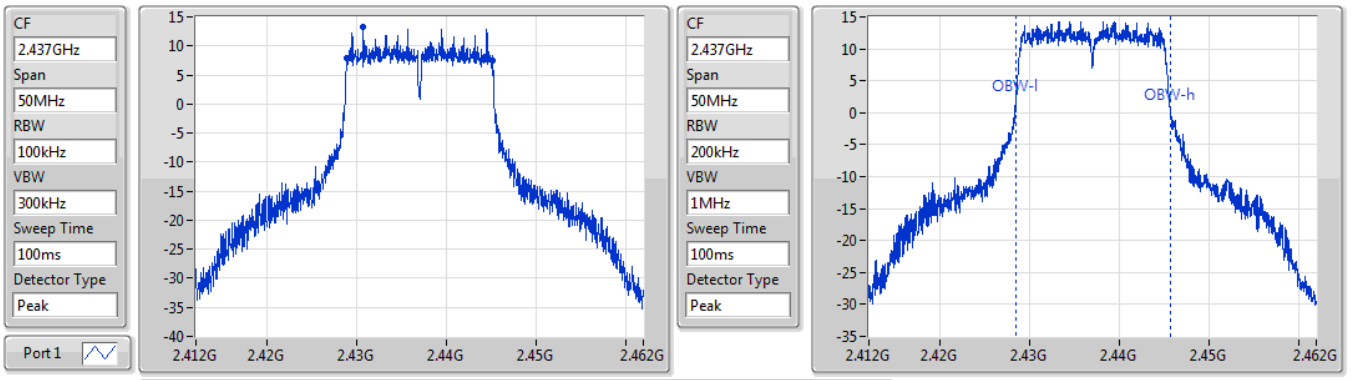


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.35M	2.4038G	2.42015G	16.742M	2.403654G	2.420396G	500k	1

802.11g_Nss1,(6Mbps)_1TX EBW

2437MHz

08/07/2020

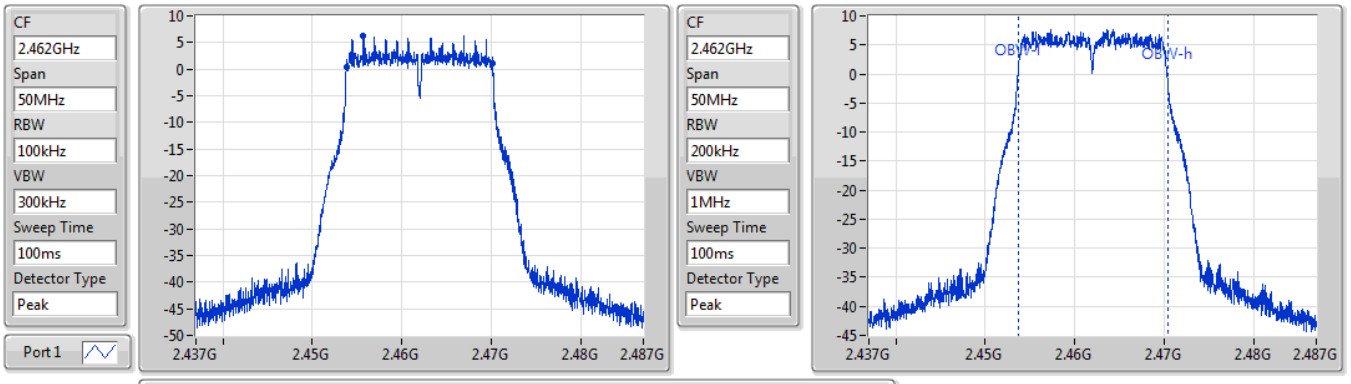


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.325M	2.428825G	2.44515G	17.366M	2.428404G	2.445771G	500k	1

802.11g_Nss1,(6Mbps)_1TX EBW

2462MHz

08/07/2020



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.35M	2.4538G	2.47015G	16.742M	2.453654G	2.470396G	500k	1

<beamforming mode>
Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	18.975M	19.265M	19M3D1D	18.7M	18.991M
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	37.6M	37.531M	37M5D1D	36.45M	37.481M

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

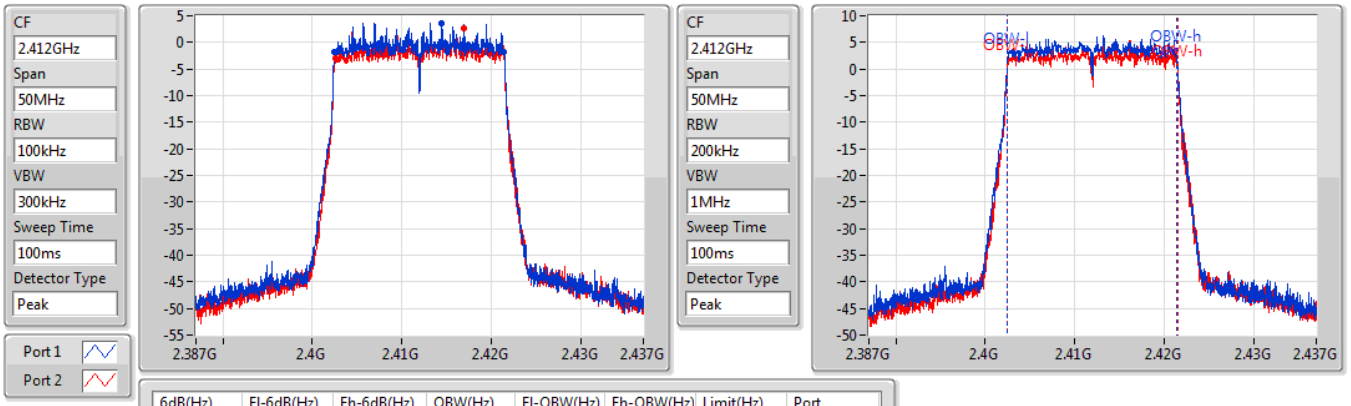
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	18.925M	18.991M	18.875M	19.04M
2437MHz	Pass	500k	18.7M	19.265M	18.875M	19.115M
2462MHz	Pass	500k	18.975M	19.015M	18.975M	19.04M
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	500k	37.6M	37.481M	36.45M	37.481M
2437MHz	Pass	500k	37.4M	37.481M	37.35M	37.531M
2452MHz	Pass	500k	37.5M	37.481M	37.35M	37.481M

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

802.11ax HEW20-BF_Nss1,(MCS0)_2TX EBW

2412MHz

08/07/2020

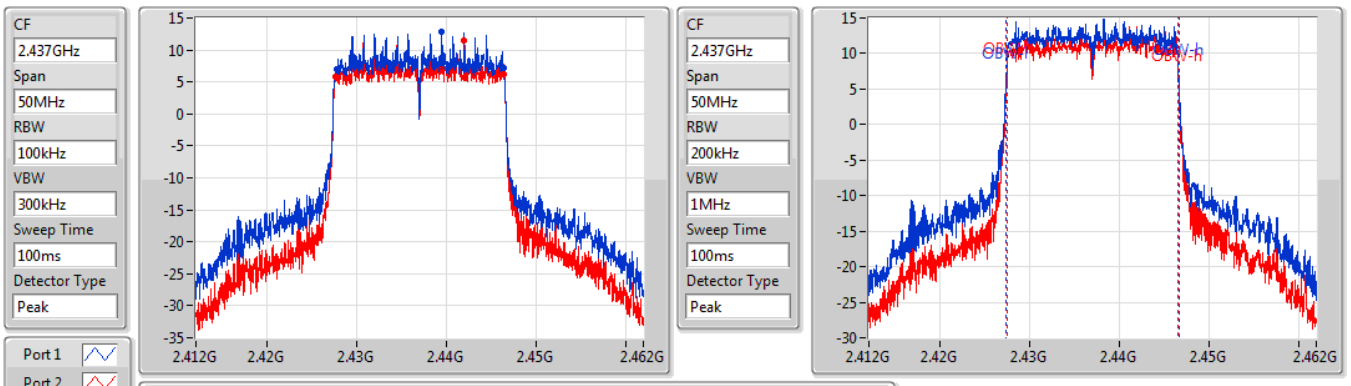


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.925M	2.402525G	2.42145G	18.991M	2.40248G	2.42147G	500k	1
18.875M	2.402575G	2.42145G	19.04M	2.40248G	2.42152G	500k	2

802.11ax HEW20-BF_Nss1,(MCS0)_2TX EBW

2437MHz

08/07/2020

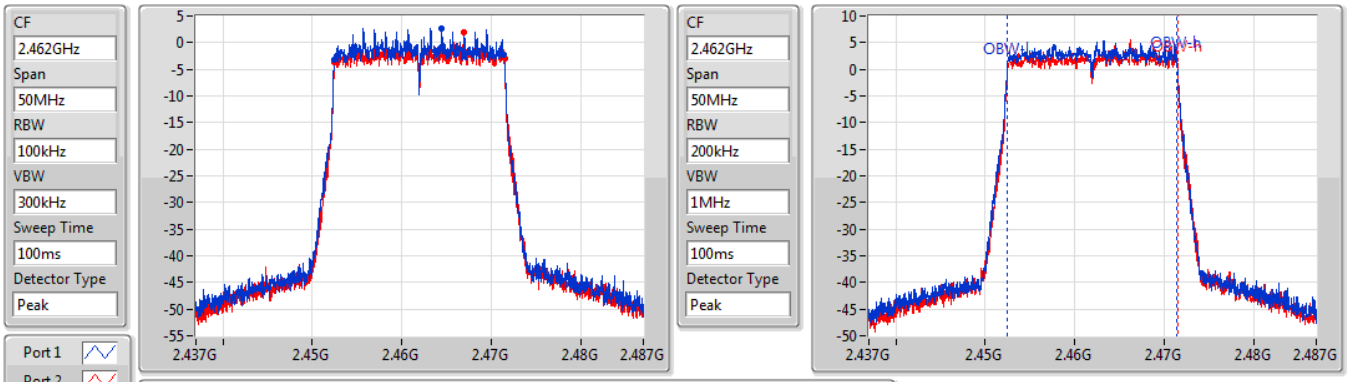


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.7M	2.427725G	2.446425G	19.265M	2.427355G	2.44662G	500k	1
18.875M	2.42755G	2.446425G	19.115M	2.427455G	2.44657G	500k	2

802.11ax HEW20-BF_Nss1,(MCS0)_2TX EBW

2462MHz

08/07/2020

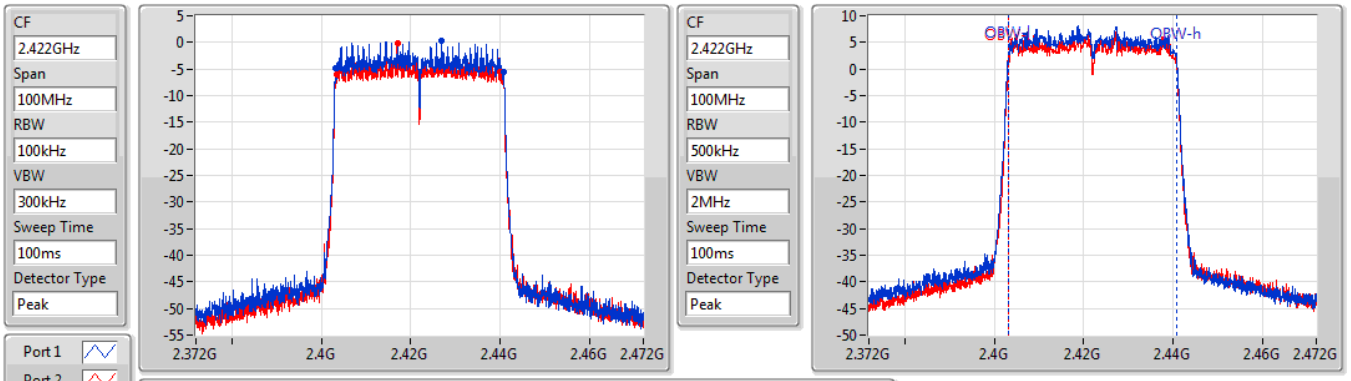


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
18.975M	2.452475G	2.47145G	19.015M	2.452455G	2.47147G	500k	1
18.975M	2.4525G	2.471475G	19.04M	2.45248G	2.47152G	500k	2

802.11ax HEW40-BF_Nss1,(MCS0)_2TX EBW

2422MHz

08/07/2020

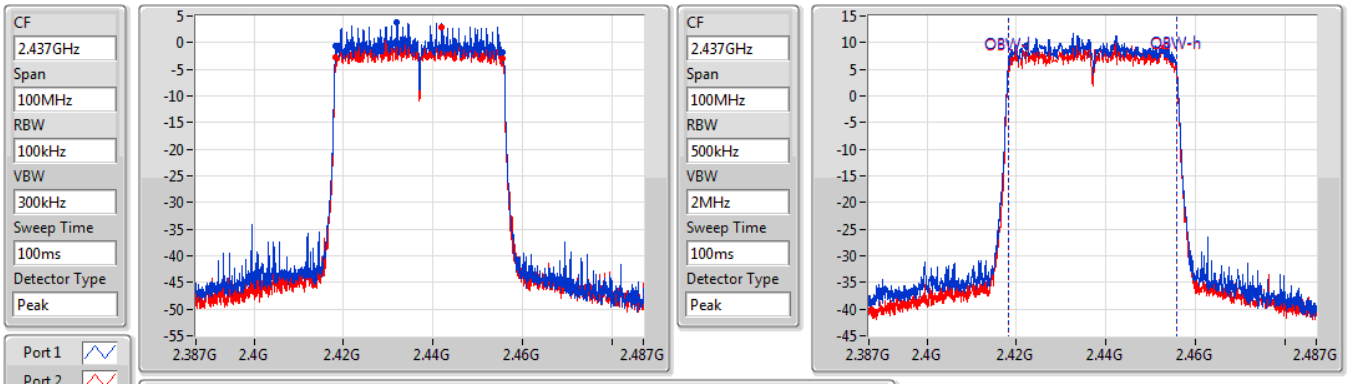


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
37.6M	2.40315G	2.44075G	37.481M	2.403209G	2.440691G	500k	1
36.45M	2.4035G	2.43995G	37.481M	2.403209G	2.440691G	500k	2

802.11ax HEW40-BF_Nss1,(MCS0)_2TX EBW

2437MHz

08/07/2020

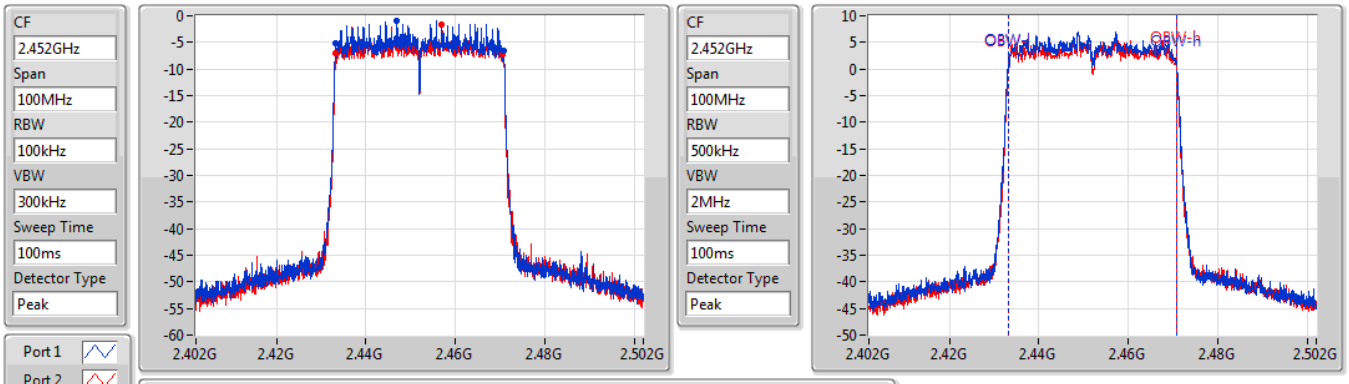


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
37.4M	2.4182G	2.4556G	37.481M	2.418209G	2.455691G	500k	1
37.35M	2.4182G	2.45555G	37.531M	2.418209G	2.455741G	500k	2

802.11ax HEW40-BF_Nss1,(MCS0)_2TX EBW

2452MHz

08/07/2020



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
37.5M	2.4332G	2.4707G	37.481M	2.433209G	2.470691G	500k	1
37.35M	2.4332G	2.47055G	37.481M	2.433209G	2.470691G	500k	2

<Non-beamforming mode>
Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	25.83	0.38282
802.11g_Nss1,(6Mbps)_1TX	24.56	0.28576

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	2.00	22.47	22.47	30.00
2417MHz	Pass	2.00	22.94	22.94	30.00
2437MHz	Pass	2.00	25.83	25.83	30.00
2462MHz	Pass	2.00	22.88	22.88	30.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	2.00	18.75	18.75	30.00
2417MHz	Pass	2.00	20.25	20.25	30.00
2437MHz	Pass	2.00	24.56	24.56	30.00
2457MHz	Pass	2.00	19.63	19.63	30.00
2462MHz	Pass	2.00	18.24	18.24	30.00

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

<beamforming mode>
Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	26.99	0.50003
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	21.21	0.13213

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	5.01	15.78	14.58	18.23	30.00
2417MHz	Pass	5.01	17.42	16.37	19.94	30.00
2437MHz	Pass	5.01	24.45	23.45	26.99	30.00
2457MHz	Pass	5.01	17.00	16.21	19.63	30.00
2462MHz	Pass	5.01	15.10	14.13	17.65	30.00
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	5.01	15.43	14.38	17.95	30.00
2427MHz	Pass	5.01	16.17	15.10	18.68	30.00
2437MHz	Pass	5.01	18.65	17.69	21.21	30.00
2447MHz	Pass	5.01	14.74	14.03	17.41	30.00
2452MHz	Pass	5.01	14.28	13.58	16.95	30.00

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

<Non-beamforming mode>
Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_1TX	3.58
802.11g_Nss1,(6Mbps)_1TX	-1.05

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

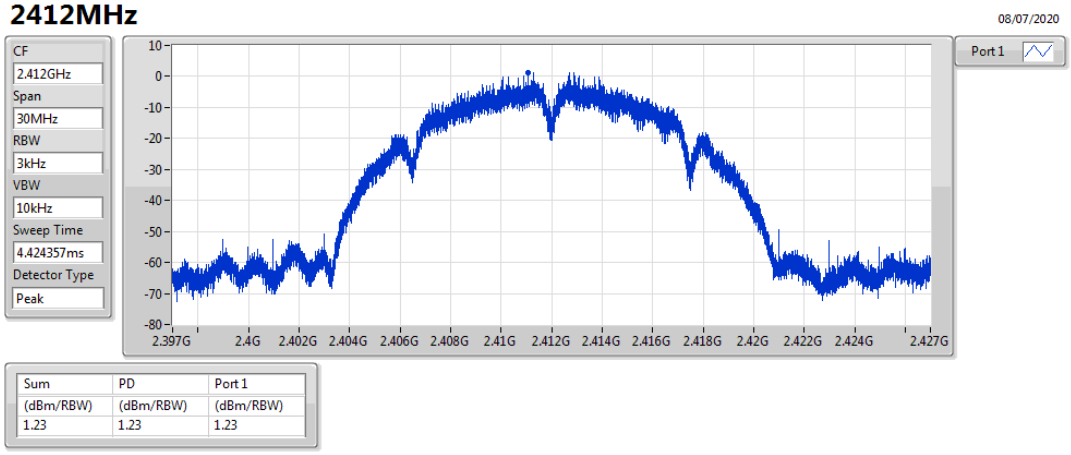
Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	2.00	1.23	1.23	8.00
2437MHz	Pass	2.00	3.58	3.58	8.00
2462MHz	Pass	2.00	-0.20	-0.20	8.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	2.00	-7.64	-7.64	8.00
2437MHz	Pass	2.00	-1.05	-1.05	8.00
2462MHz	Pass	2.00	-7.97	-7.97	8.00

DG = Directional Gain; **RBW** = 500 kHz for 5.725-5.85GHz band / 1MHz for other band;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port X power density;

802.11b_Nss1,(1Mbps)_1TX **PSD**

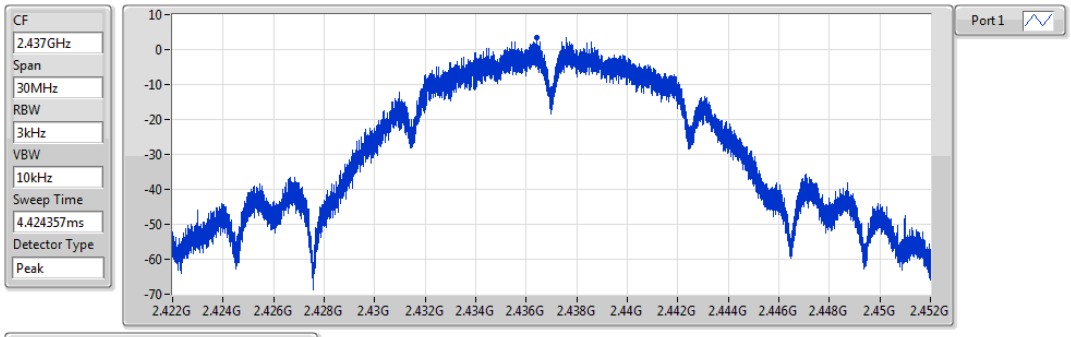
2412MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.23	1.23	1.23

802.11b_Nss1,(1Mbps)_1TX **PSD**

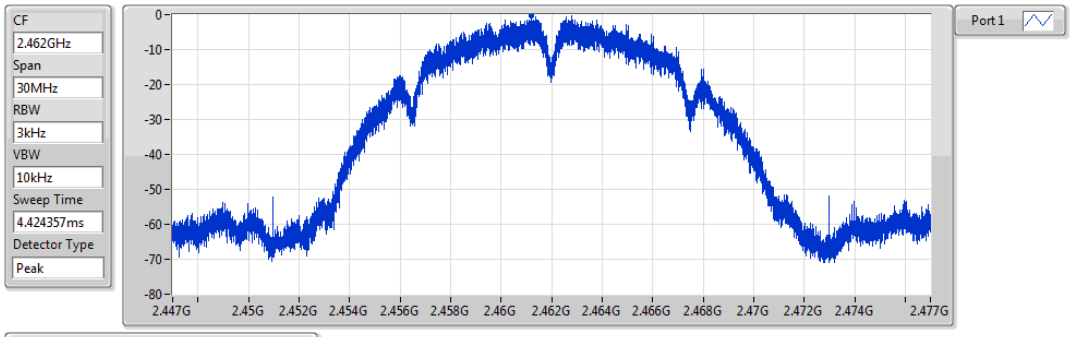
2437MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.58	3.58	3.58

802.11b_Nss1,(1Mbps)_1TX **PSD**

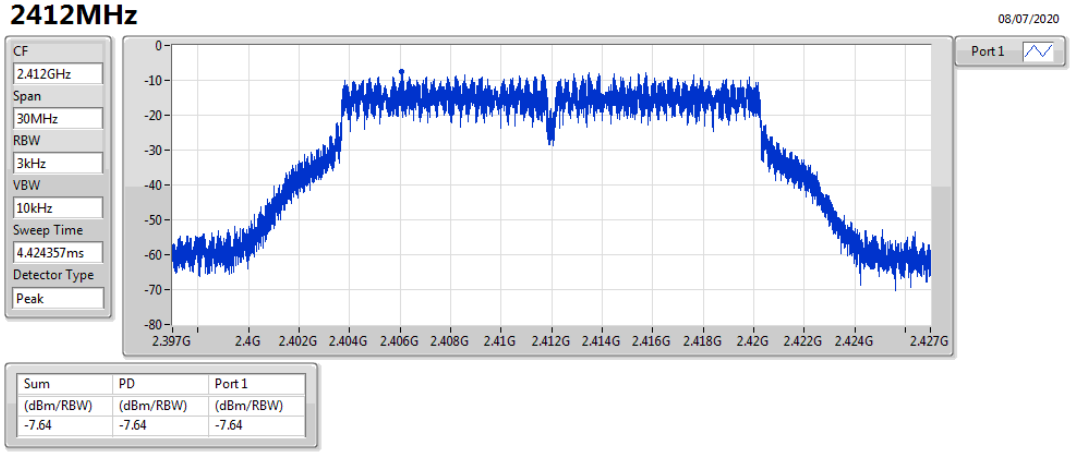
2462MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.20	-0.20	-0.20

802.11g_Nss1,(6Mbps)_1TX **PSD**

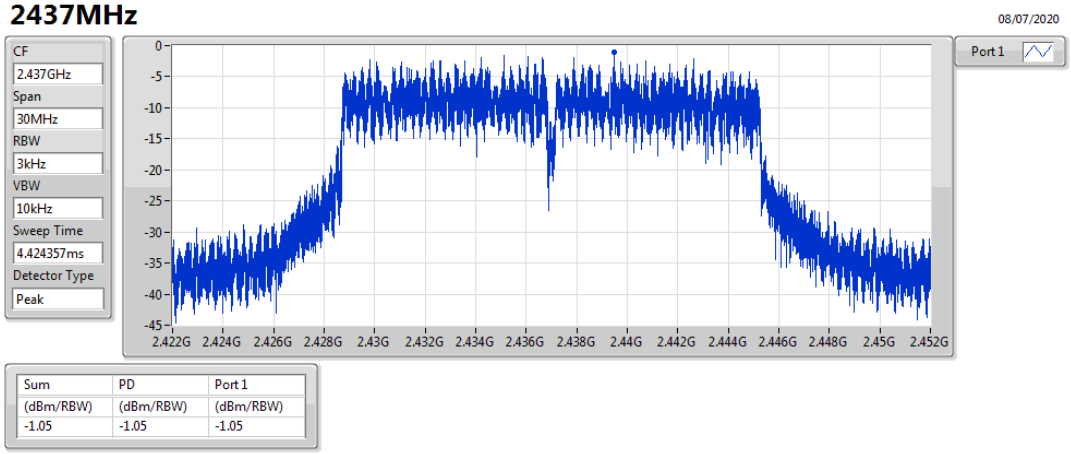
2412MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-7.64	-7.64	-7.64

802.11g_Nss1,(6Mbps)_1TX **PSD**

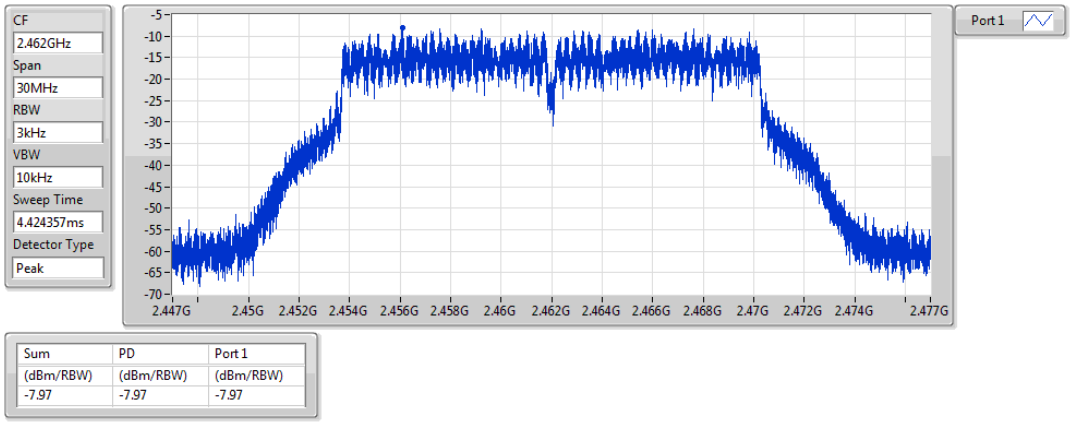
2437MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.05	-1.05	-1.05

802.11g_Nss1,(6Mbps)_1TX **PSD**

2462MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-7.97	-7.97	-7.97

<beamforming mode>
Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	1.57
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	-8.62

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

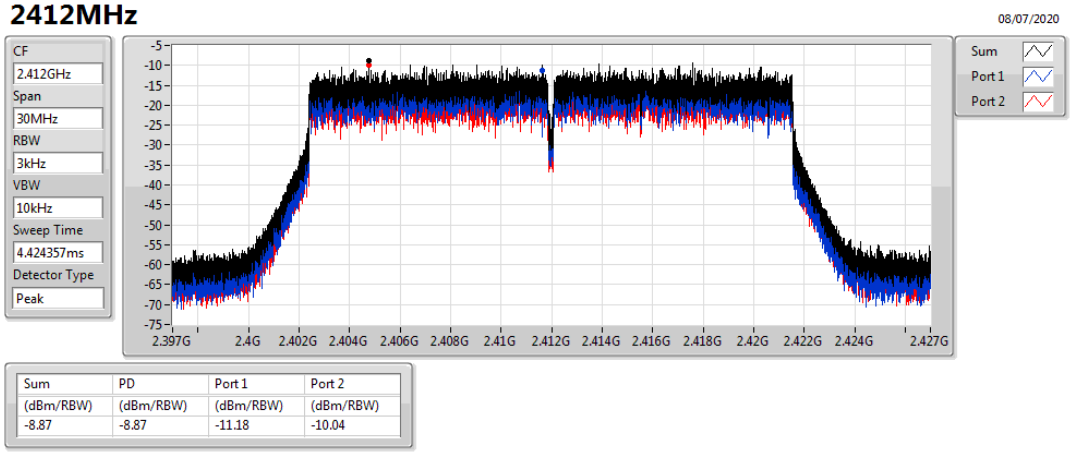
Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	5.01	-11.18	-10.04	-8.87	8.00
2437MHz	Pass	5.01	-1.21	-1.68	1.57	8.00
2462MHz	Pass	5.01	-10.13	-12.90	-9.24	8.00
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	5.01	-14.16	-14.75	-11.43	8.00
2437MHz	Pass	5.01	-10.60	-12.27	-8.62	8.00
2452MHz	Pass	5.01	-15.47	-15.99	-12.80	8.00

DG = Directional Gain; **RBW** = 500 kHz for 5.725-5.85GHz band / 1MHz for other band;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port X power density;

802.11ax HEW20-BF_Nss1,(MCS0)_2TX PSD

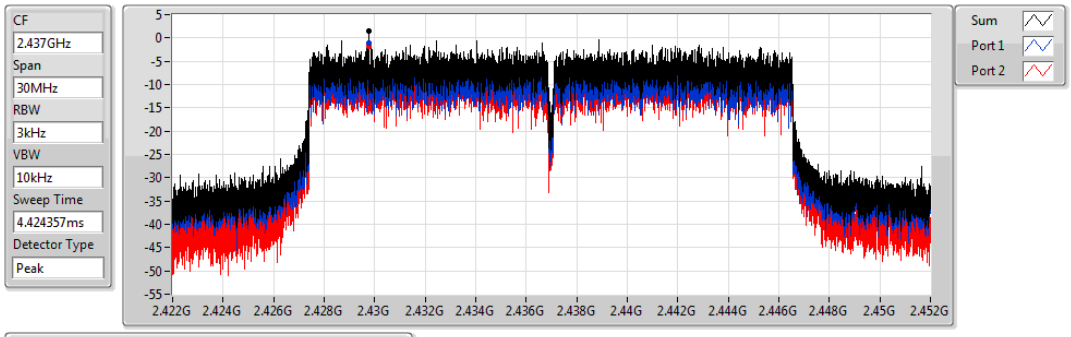
2412MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-8.87	-8.87	-11.18	-10.04

802.11ax HEW20-BF_Nss1,(MCS0)_2TX PSD

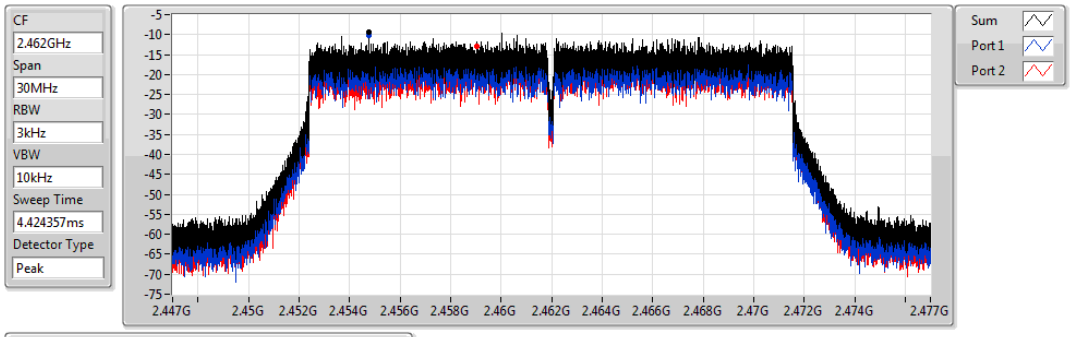
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.57	1.57	-1.21	-1.68

802.11ax HEW20-BF_Nss1,(MCS0)_2TX PSD

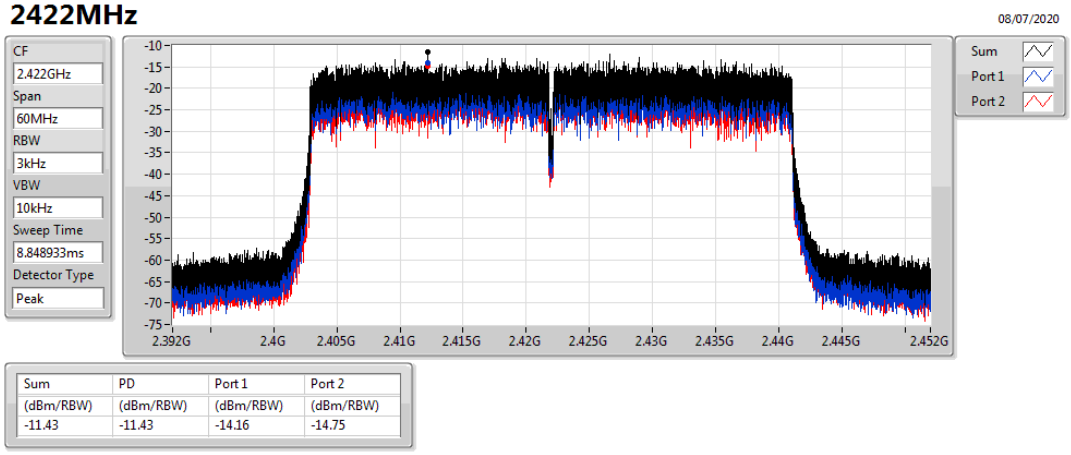
2462MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-9.24	-9.24	-10.13	-12.90

802.11ax HEW40-BF_Nss1,(MCS0)_2TX PSD

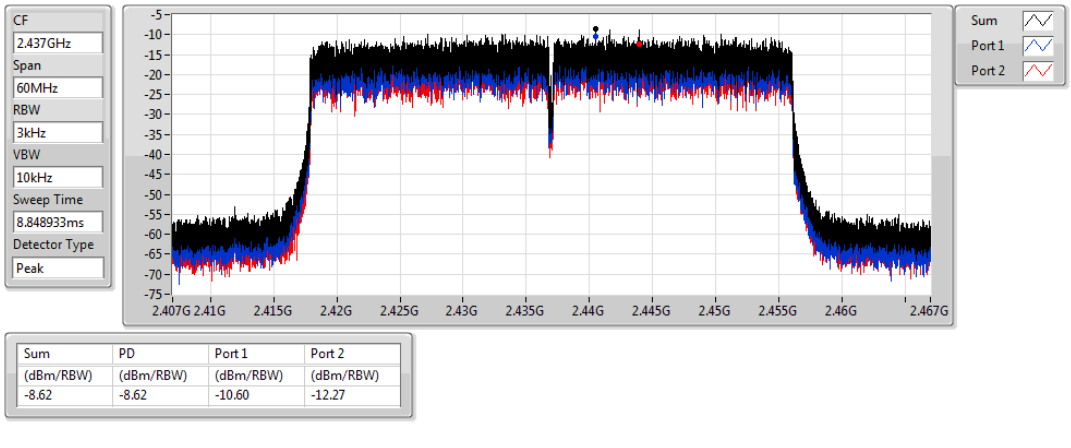
2422MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-11.43	-11.43	-14.16	-14.75

802.11ax HEW40-BF_Nss1,(MCS0)_2TX PSD

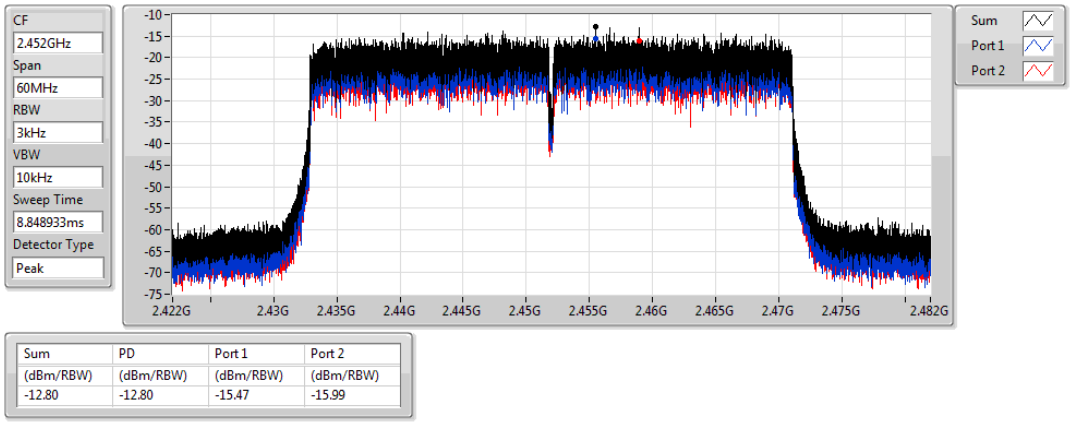
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-8.62	-8.62	-10.60	-12.27

802.11ax HEW40-BF_Nss1,(MCS0)_2TX PSD

2452MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-12.80	-12.80	-15.47	-15.99

<Non-beamforming mode>
Summary

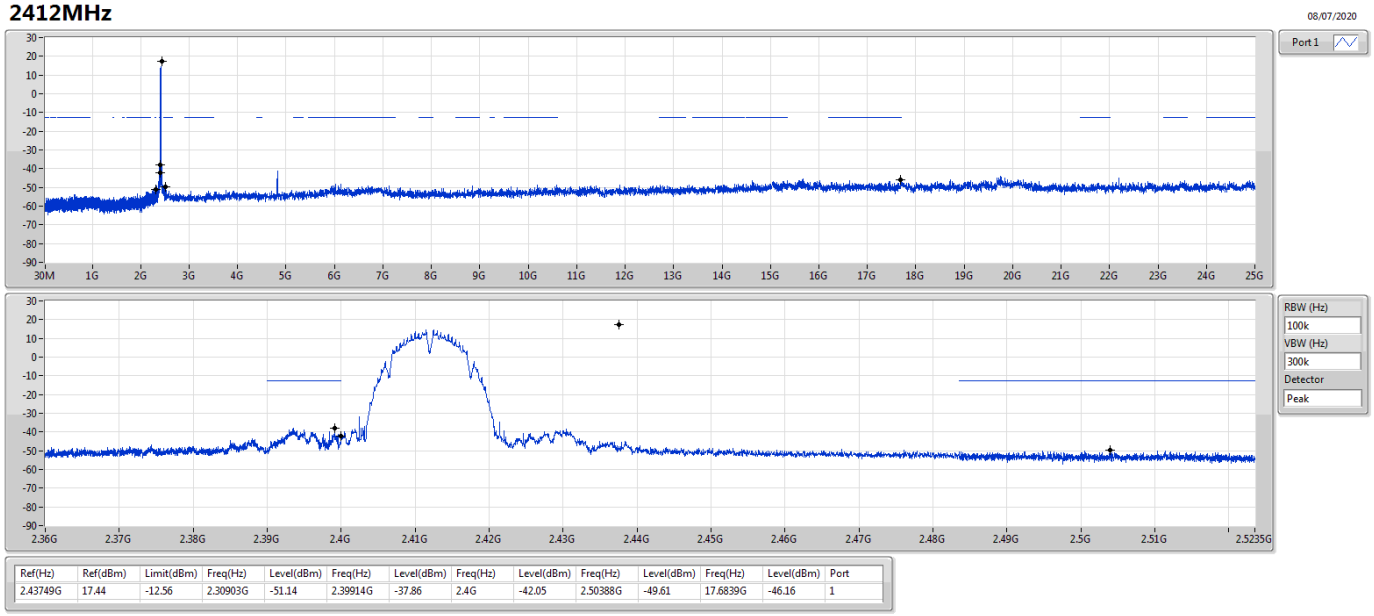
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX	Pass	2.43749G	17.44	-12.56	2.30903G	-51.14	2.39914G	-37.86	2.4G	-42.05	2.50388G	-49.61	17.6839G	-46.16	1
802.11g_Nss1,(6Mbps)_1TX	Pass	2.4395G	13.29	-16.71	2.30204G	-52.40	2.397G	-34.90	2.4G	-37.72	2.51688G	-51.07	16.41117G	-45.40	1

Result

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43749G	17.44	-12.56	2.30903G	-51.14	2.39914G	-37.86	2.4G	-42.05	2.50388G	-49.61	17.6839G	-46.16	1
2437MHz	Pass	2.43749G	17.44	-12.56	2.13224G	-52.87	2.39952G	-43.94	2.4G	-47.71	2.48784G	-47.14	17.69795G	-45.39	1
2462MHz	Pass	2.43749G	17.44	-12.56	1.96973G	-51.72	2.39712G	-48.65	2.4835G	-51.03	2.48648G	-43.62	17.5968G	-45.70	1
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.4395G	13.29	-16.71	2.30204G	-52.40	2.397G	-34.90	2.4G	-37.72	2.51688G	-51.07	16.41117G	-45.40	1
2437MHz	Pass	2.4395G	13.29	-16.71	2.30787G	-52.02	2.39982G	-37.46	2.4G	-39.25	2.4841G	-42.65	16.25945G	-45.01	1
2462MHz	Pass	2.4395G	13.29	-16.71	2.30728G	-52.72	2.39974G	-50.64	2.4835G	-44.86	2.48368G	-42.95	24.81738G	-45.52	1

802.11b_Nss1,(1Mbps)_1TX **CSE NdB**

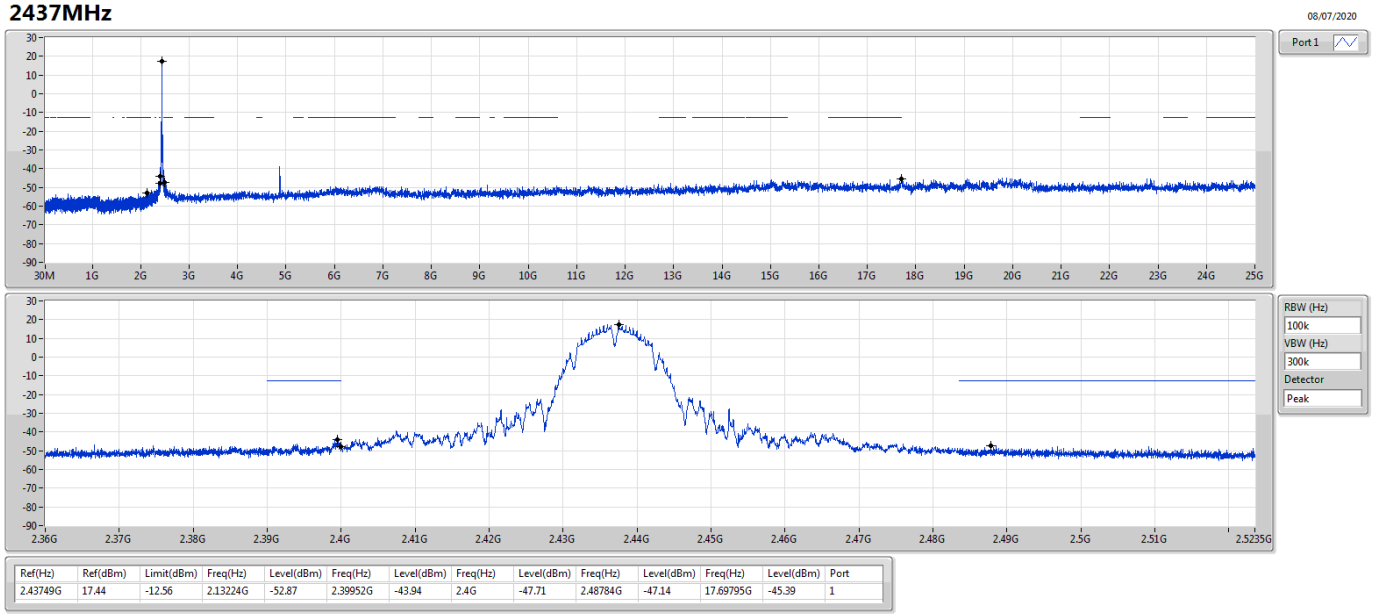
2412MHz



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	17.44	-12.56	2.30903G	-51.14	2.39914G	-37.86	2.4G	-42.05	2.50388G	-49.61	17.6839G	-46.16	1

802.11b_Nss1,(1Mbps)_1TX **CSE NdB**

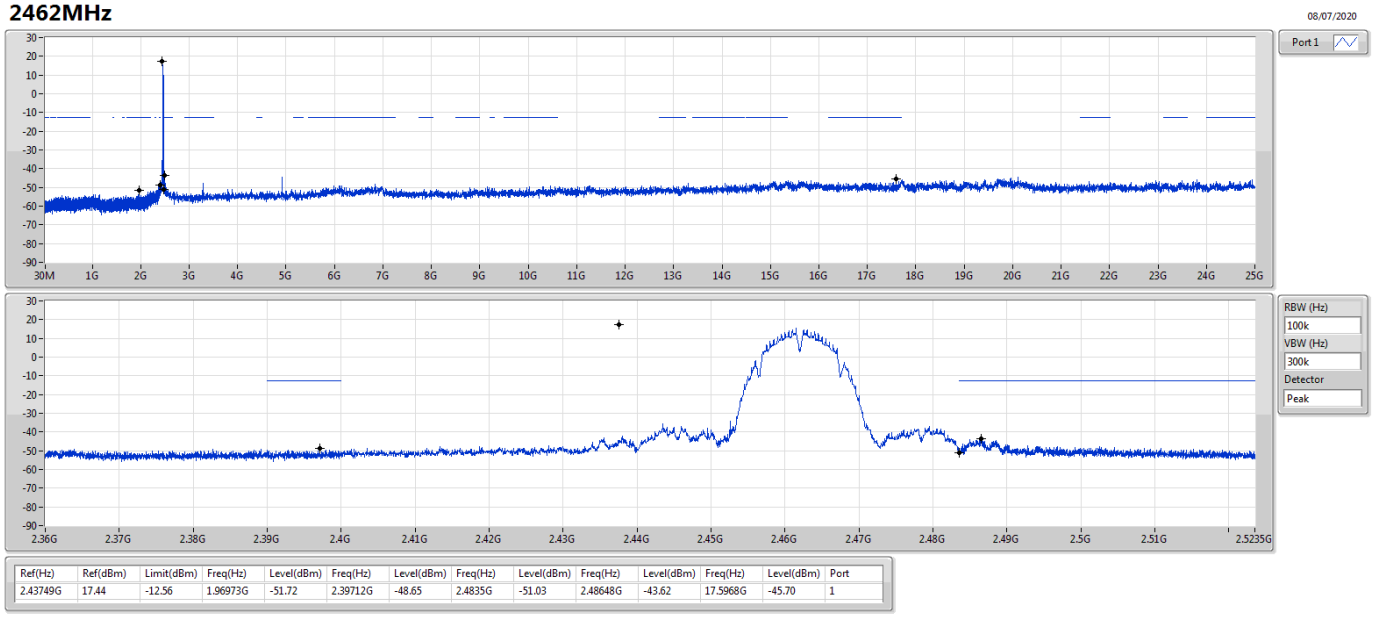
2437MHz



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	17.44	-12.56	2.13224G	-52.87	2.39952G	-43.94	2.4G	-47.71	2.48784G	-47.14	17.69795G	-45.39	1

802.11b_Nss1,(1Mbps)_1TX **CSE NdB**

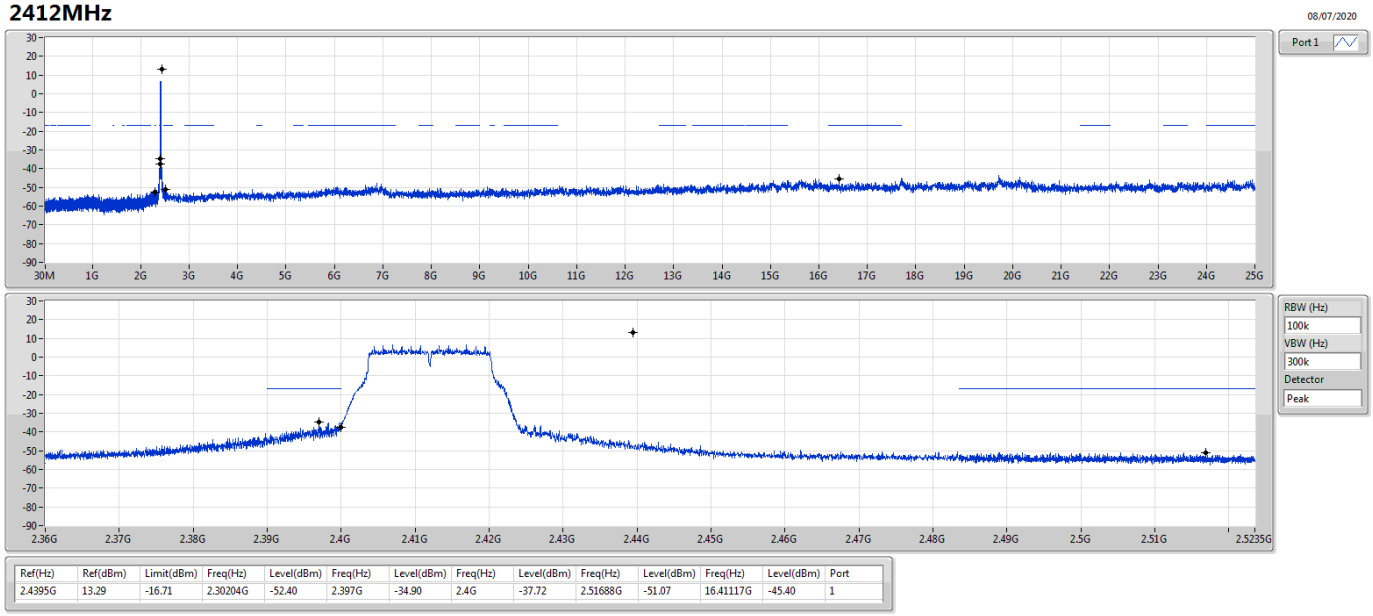
2462MHz



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	17.44	-12.56	1.96973G	-51.72	2.39712G	-48.65	2.4835G	-51.03	2.48648G	-43.62	17.5968G	-45.70	1

802.11g_Nss1,(6Mbps)_1TX **CSE NdB**

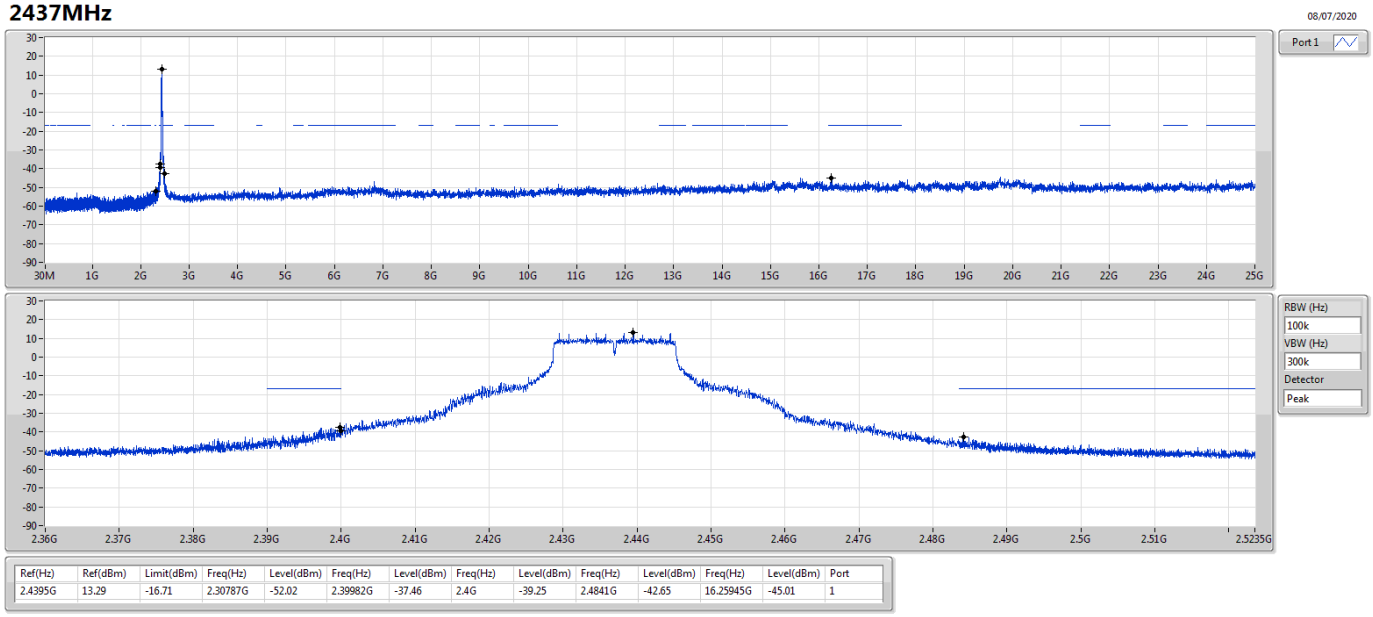
2412MHz



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
2.4395G	13.29	-16.71	2.30204G	-52.40	2.397G	-34.90	2.4G	-37.72	2.51688G	-51.07	16.41117G	-45.40	1

802.11g_Nss1,(6Mbps)_1TX **CSE NdB**

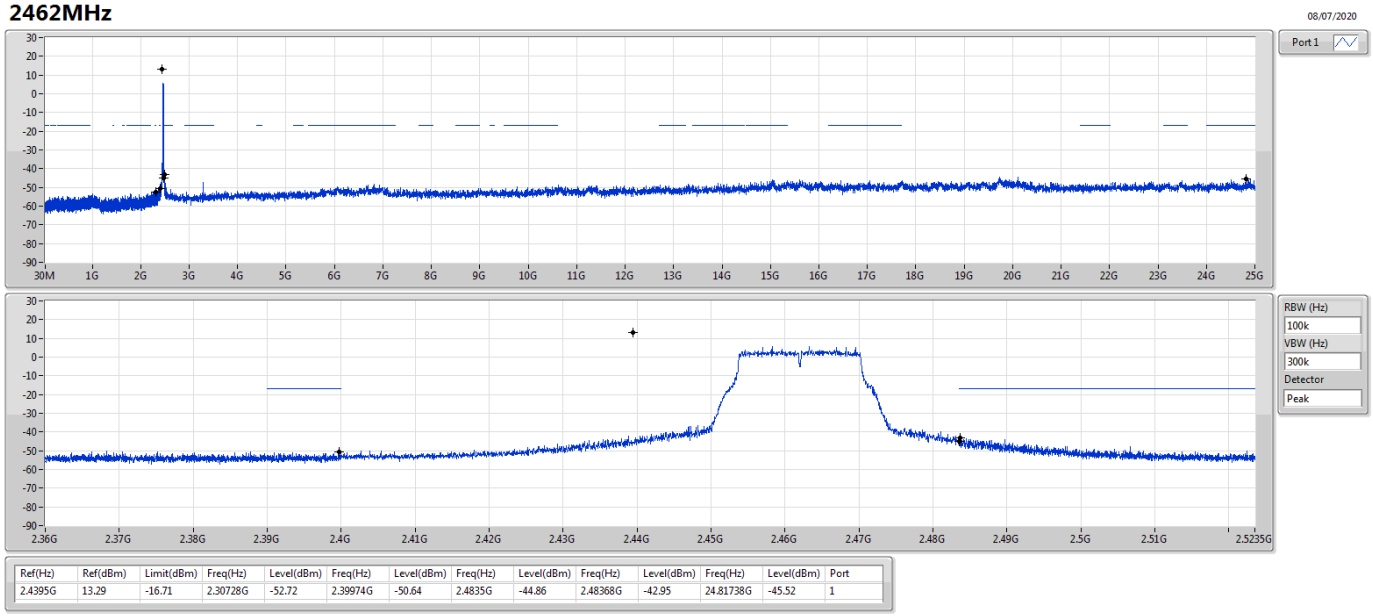
2437MHz



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
2.4395G	13.29	-16.71	2.30787G	-52.02	2.39982G	-37.46	2.4G	-39.25	2.4841G	-42.65	16.25945G	-45.01	1

802.11g_Nss1,(6Mbps)_1TX **CSE NdB**

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
2.4395G	13.29	-16.71	2.30728G	-52.72	2.39974G	-50.64	2.4835G	-44.86	2.48368G	-42.95	24.81738G	-45.52	1

<beamforming mode>
Summary

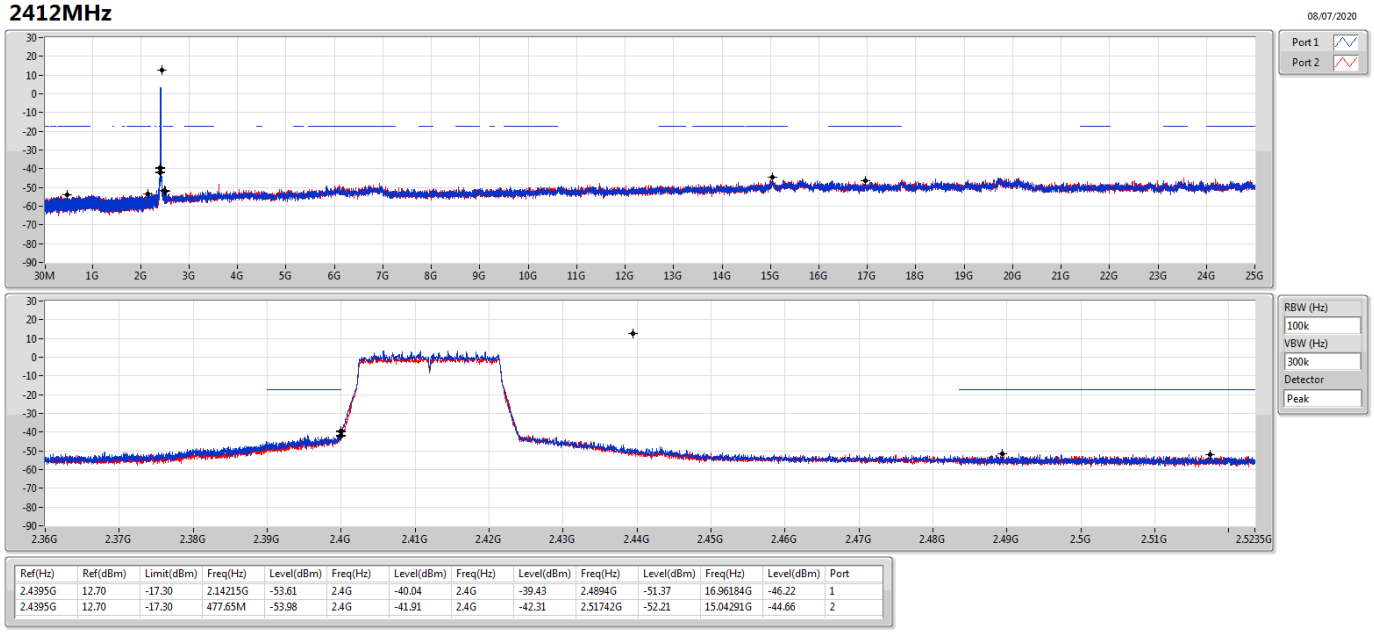
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	Pass	2.4395G	12.70	-17.30	2.30612G	-51.18	2.39954G	-35.29	2.4G	-39.32	2.48474G	-40.74	23.15693G	-45.88	1
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	Pass	2.44196G	3.73	-26.27	1.6247G	-52.81	2.39952G	-34.18	2.4G	-44.36	2.49442G	-43.46	15.02137G	-46.02	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
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.4395G	12.70	-17.30	2.14215G	-53.61	2.4G	-40.04	2.4G	-39.43	2.4894G	-51.37	16.96184G	-46.22	1
2412MHz	Pass	2.4395G	12.70	-17.30	477.65M	-53.98	2.4G	-41.91	2.4G	-42.31	2.51742G	-52.21	15.04291G	-44.66	2
2437MHz	Pass	2.4395G	12.70	-17.30	2.30612G	-51.18	2.39954G	-35.29	2.4G	-39.32	2.48474G	-40.74	23.15693G	-45.88	1
2437MHz	Pass	2.4395G	12.70	-17.30	2.30991G	-52.30	2.39984G	-40.72	2.4G	-40.39	2.48372G	-45.05	24.5308G	-46.20	2
2462MHz	Pass	2.4395G	12.70	-17.30	2.15205G	-53.71	2.39008G	-51.43	2.4835G	-46.86	2.48374G	-43.59	15.25925G	-45.60	1
2462MHz	Pass	2.4395G	12.70	-17.30	2.07254G	-53.31	2.39314G	-52.17	2.4835G	-47.48	2.48374G	-43.89	3.28208G	-40.29	2
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	2.44196G	3.73	-26.27	449.93M	-53.54	2.3998G	-42.96	2.4G	-46.89	2.49366G	-51.21	24.85136G	-45.65	1
2422MHz	Pass	2.44196G	3.73	-26.27	2.3054G	-52.69	2.39884G	-45.61	2.4G	-46.03	2.50498G	-51.73	23.44347G	-45.39	2
2437MHz	Pass	2.44196G	3.73	-26.27	1.6247G	-52.81	2.39952G	-34.18	2.4G	-44.36	2.49442G	-43.46	15.02137G	-46.02	1
2437MHz	Pass	2.44196G	3.73	-26.27	1.6247G	-51.05	2.39944G	-40.67	2.4G	-47.58	2.48694G	-45.29	24.12778G	-45.42	2
2452MHz	Pass	2.44196G	3.73	-26.27	2.03289G	-53.54	2.39524G	-49.86	2.4835G	-48.54	2.48406G	-46.38	24.85416G	-46.05	1
2452MHz	Pass	2.44196G	3.73	-26.27	1.63472G	-53.06	2.39984G	-51.44	2.4835G	-48.62	2.48946G	-44.89	3.26745G	-40.29	2

802.11ax HEW20-BF_Nss1,(MCS0)_2TX **CSE NdB**

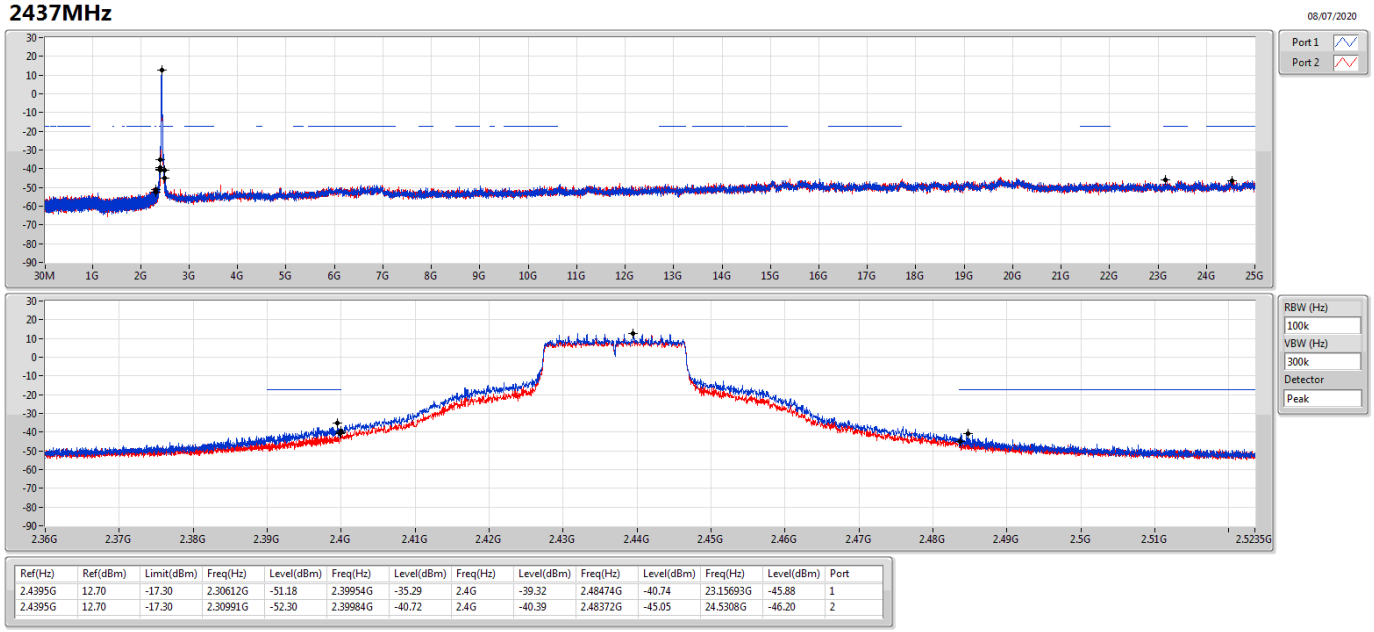
2412MHz



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
2.4395G	12.70	-17.30	2.14215G	-53.61	2.4G	-40.04	2.4G	-39.43	2.4894G	-51.37	16.96184G	-46.22	1
2.4395G	12.70	-17.30	477.65M	-53.98	2.4G	-41.91	2.4G	-42.31	2.51742G	-52.21	15.04291G	-44.66	2

802.11ax HEW20-BF_Nss1,(MCS0)_2TX **CSE NdB**

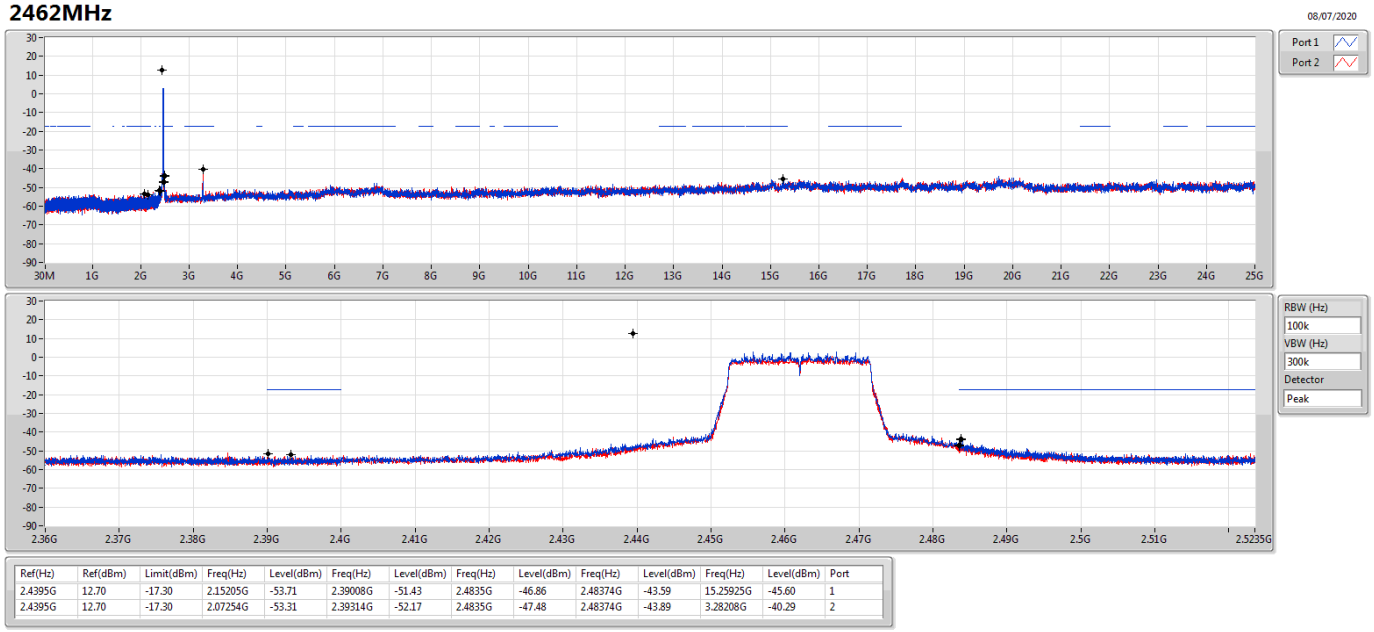
2437MHz



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
2.4395G	12.70	-17.30	2.30612G	-51.18	2.39954G	-35.29	2.4G	-39.32	2.48474G	-40.74	23.15693G	-45.88	1
2.4395G	12.70	-17.30	2.30991G	-52.30	2.39984G	-40.72	2.4G	-40.39	2.48372G	-45.05	24.5308G	-46.20	2

802.11ax HEW20-BF_Nss1,(MCS0)_2TX **CSE NdB**

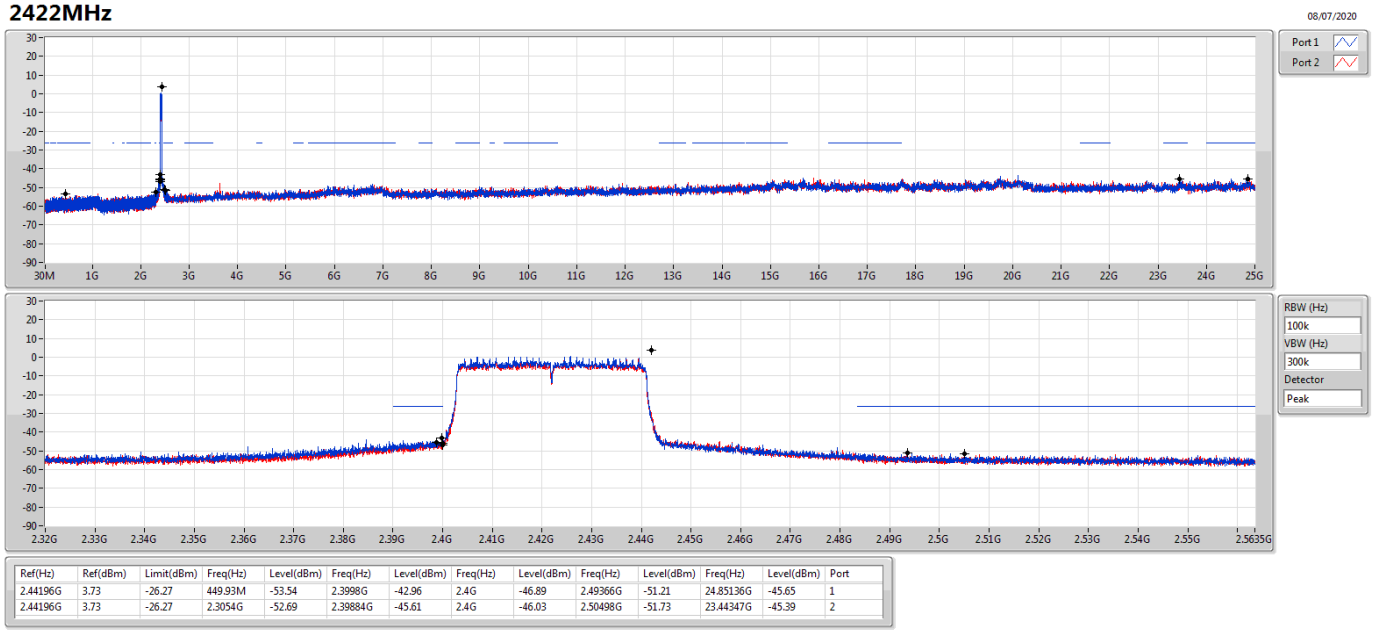
2462MHz



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
2.4395G	12.70	-17.30	2.15205G	-53.71	2.39008G	-51.43	2.4835G	-46.86	2.48374G	-43.59	15.25925G	-45.60	1
2.4395G	12.70	-17.30	2.07254G	-53.31	2.39314G	-52.17	2.4835G	-47.48	2.48374G	-43.89	3.28208G	-40.29	2

802.11ax HEW40-BF_Nss1,(MCS0)_2TX **CSE NdB**

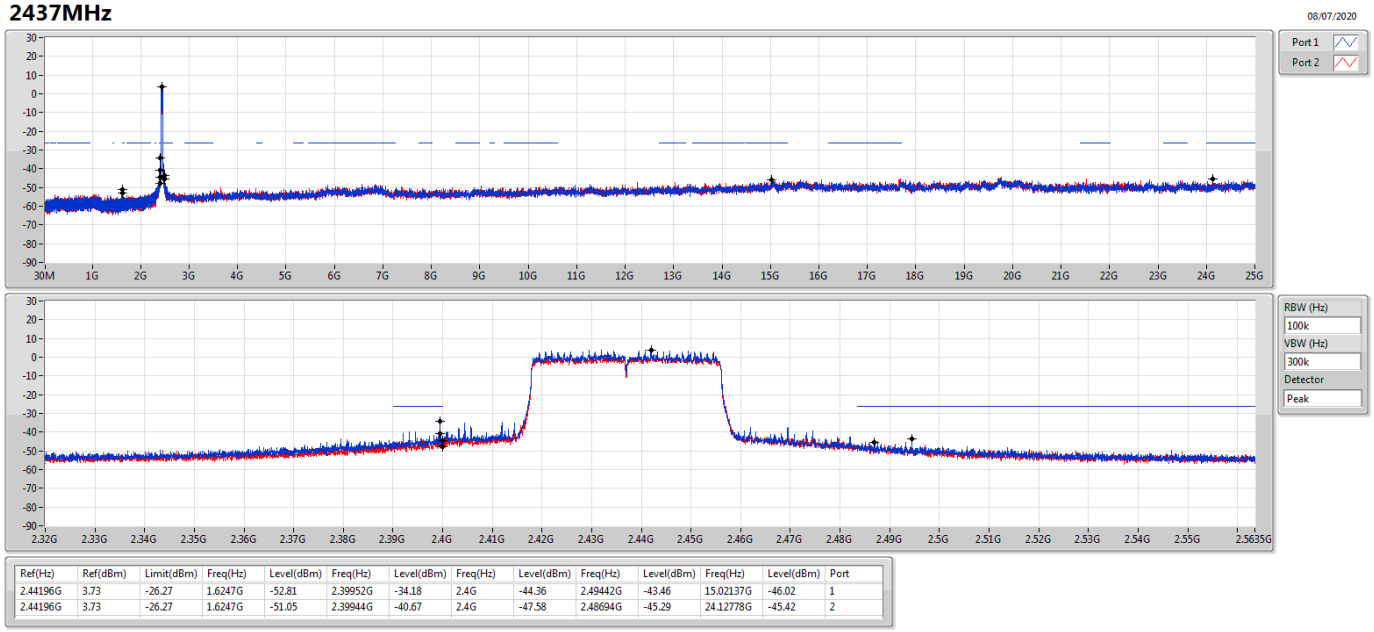
2422MHz



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
2.44196G	3.73	-26.27	449.93M	-53.54	2.3998G	-42.96	2.4G	-46.89	2.49366G	-51.21	24.85136G	-45.65	1
2.44196G	3.73	-26.27	2.3054G	-52.69	2.39884G	-45.61	2.4G	-46.03	2.50498G	-51.73	23.44347G	-45.39	2

802.11ax HEW40-BF_Nss1,(MCS0)_2TX **CSE NdB**

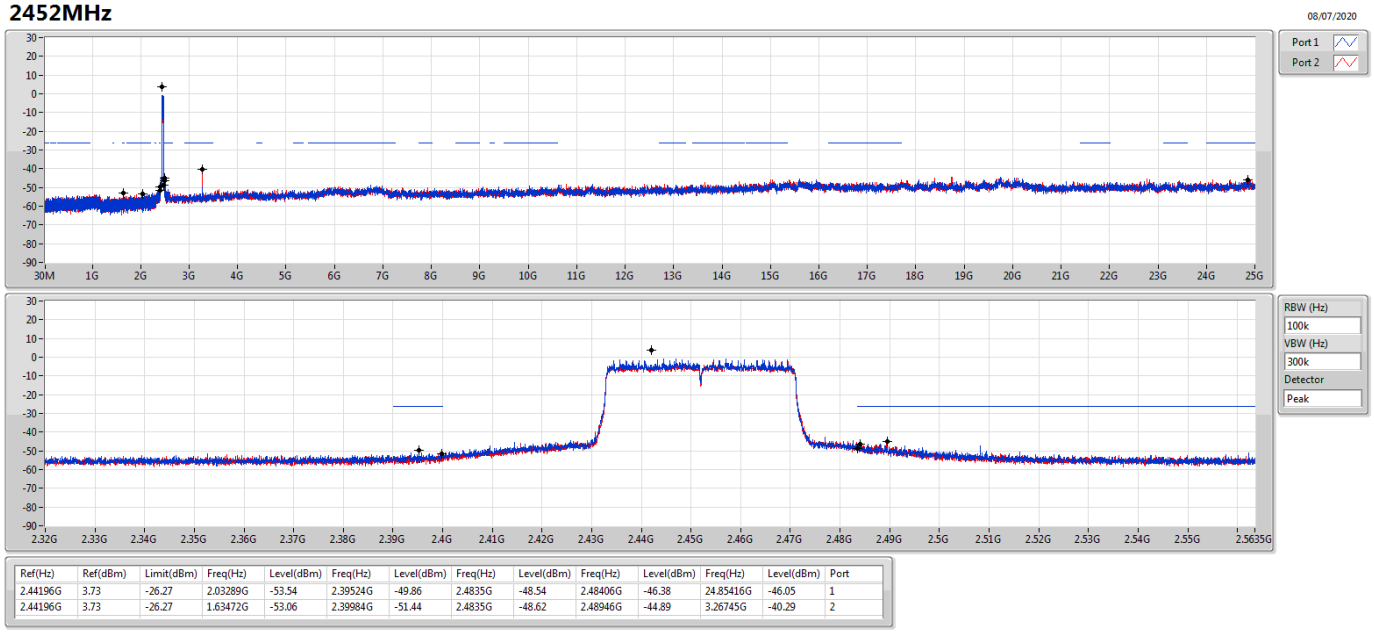
2437MHz



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
2.44196G	3.73	-26.27	1.6247G	-52.81	2.39952G	-34.18	2.4G	-44.36	2.49442G	-43.46	15.02137G	-46.02	1
2.44196G	3.73	-26.27	1.6247G	-51.05	2.39944G	-40.67	2.4G	-47.58	2.48694G	-45.29	24.12778G	-45.42	2

802.11ax HEW40-BF_Nss1,(MCS0)_2TX **CSE NdB**

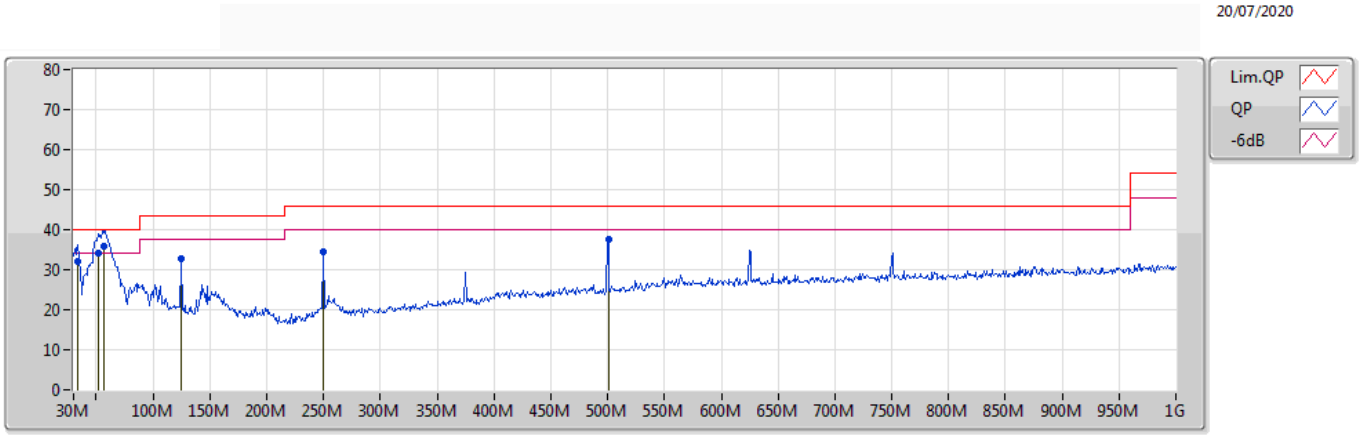
2452MHz



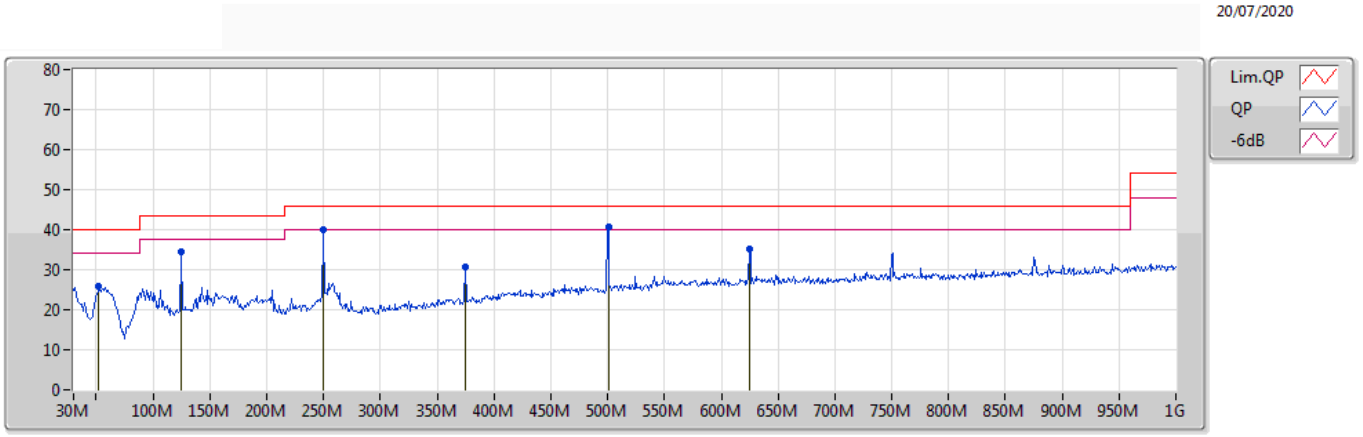
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44196G	3.73	-26.27	2.03289G	-53.54	2.39524G	-49.86	2.4835G	-48.54	2.48406G	-46.38	24.85416G	-46.05	1
2.44196G	3.73	-26.27	1.63472G	-53.06	2.39984G	-51.44	2.4835G	-48.62	2.48946G	-44.89	3.26745G	-40.29	2

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 4	Pass	QP	56.19M	35.97	40.00	-4.03	Vertical



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV/m)	(dB/m)	(dB)	(dB)
QP	33.88M	32.21	40.00	-7.79	-7.91	3	Vertical	133	1.25	-	40.12	22.30	1.28	31.49
QP	51.34M	34.23	40.00	-5.77	-16.35	3	Vertical	360	1.00	-	50.58	14.13	1.17	31.65
QP	56.19M	35.97	40.00	-4.03	-17.72	3	Vertical	20	1.00	"Worst"	53.69	12.92	1.12	31.76
PK	125.06M	32.77	43.50	-10.73	-12.07	3	Vertical	176	1.00	-	44.84	17.98	1.73	31.78
PK	250.19M	34.53	46.00	-11.47	-11.98	3	Vertical	26	1.00	-	46.51	17.77	2.20	31.95
PK	500.45M	37.61	46.00	-8.39	-6.32	3	Vertical	198	1.50	-	43.93	22.95	3.10	32.37



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV/m)	(dB/m)	(dB)	(dB)
PK	52.31M	25.96	40.00	-14.04	-16.65	3	Horizontal	104	2.00	-	42.61	13.88	1.15	31.68
PK	125.06M	34.62	43.50	-8.88	-12.07	3	Horizontal	281	1.50	-	46.69	17.98	1.73	31.78
PK	250.19M	39.96	46.00	-6.04	-11.98	3	Horizontal	290	1.00	-	51.94	17.77	2.20	31.95
PK	375.32M	30.78	46.00	-15.22	-9.09	3	Horizontal	186	1.00	-	39.87	20.23	2.75	32.07
PK	500.45M	40.69	46.00	-5.31	-6.32	3	Horizontal	164	1.50	"Worst"	47.01	22.95	3.10	32.37
PK	624.61M	35.18	46.00	-10.82	-4.47	3	Horizontal	145	1.50	-	39.65	24.39	3.55	32.41

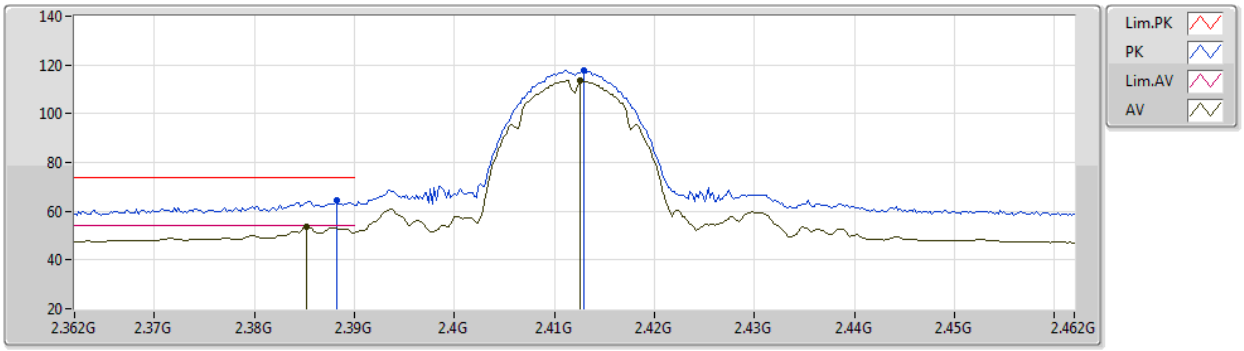
<Non-beamforming mode>
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX	Pass	AV	2.4886G	53.89	54.00	-0.11	3	Vertical	136	1.25	-

802.11b_Nss1,(1Mbps)_1TX

2412MHz_TX

07/07/2020



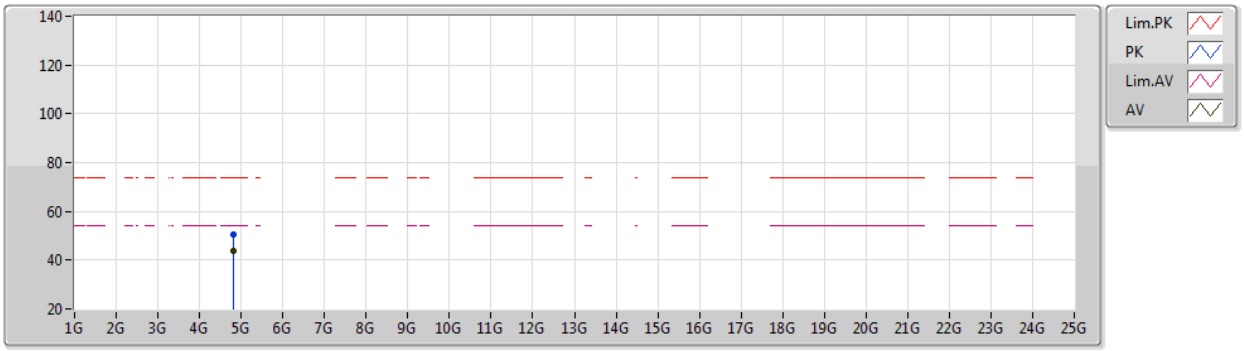
EUT Z_1TX
Setting 93
06-F-L-3

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	64.36	74.00	-9.64	32.73	3	Vertical	20	1.16	-	27.64	3.99	-
AV	2.3852G	53.77	54.00	-0.23	22.14	3	Vertical	20	1.16	-	27.64	3.99	-
PK	2.413G	117.71	Inf	-Inf	86.14	3	Vertical	20	1.16	-	27.56	4.01	-
AV	2.4126G	113.63	Inf	-Inf	82.06	3	Vertical	20	1.16	-	27.56	4.01	-

802.11b_Nss1,(1Mbps)_1TX

2412MHz_TX

07/07/2020



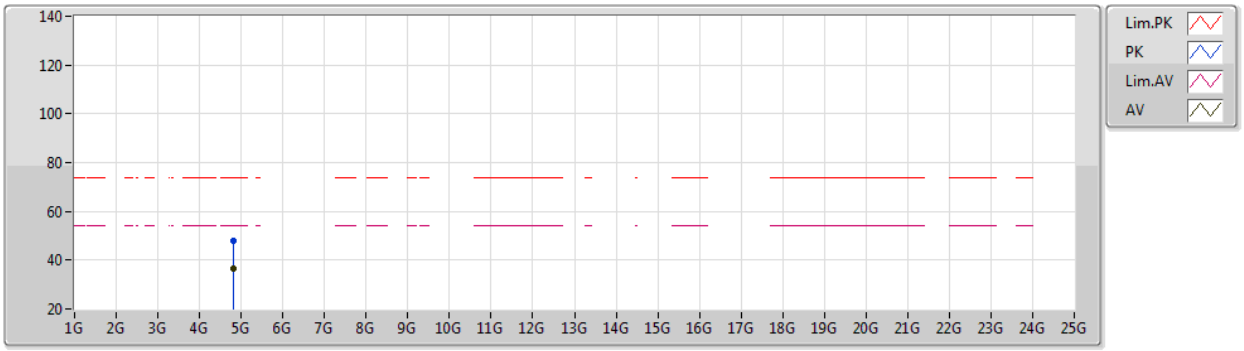
EUT Z_1TX
Setting 93
06-F-L-3

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	4.82376G	50.76	74.00	-23.24	46.14	3	Vertical	125	2.18	-	31.02	5.33	31.73
AV	4.82394G	44.02	54.00	-9.98	39.40	3	Vertical	125	2.18	-	31.02	5.33	31.73

802.11b_Nss1,(1Mbps)_1TX

2412MHz_TX

07/07/2020



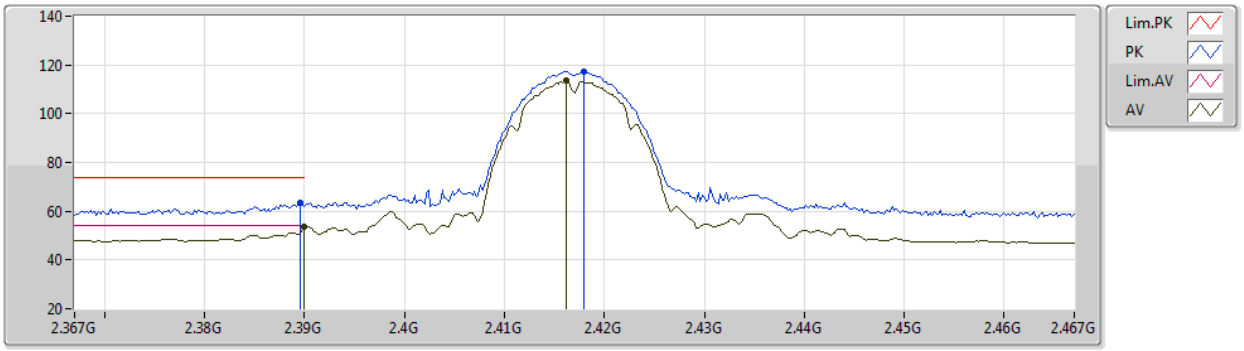
EUT Z_1TX
Setting 93
06-F-L-3

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	4.82367G	48.02	74.00	-25.98	43.40	3	Horizontal	78	1.23	-	31.02	5.33	31.73
AV	4.82394G	36.70	54.00	-17.30	32.08	3	Horizontal	78	1.23	-	31.02	5.33	31.73

802.11b_Nss1,(1Mbps)_1TX

2417MHz_TX

07/07/2020



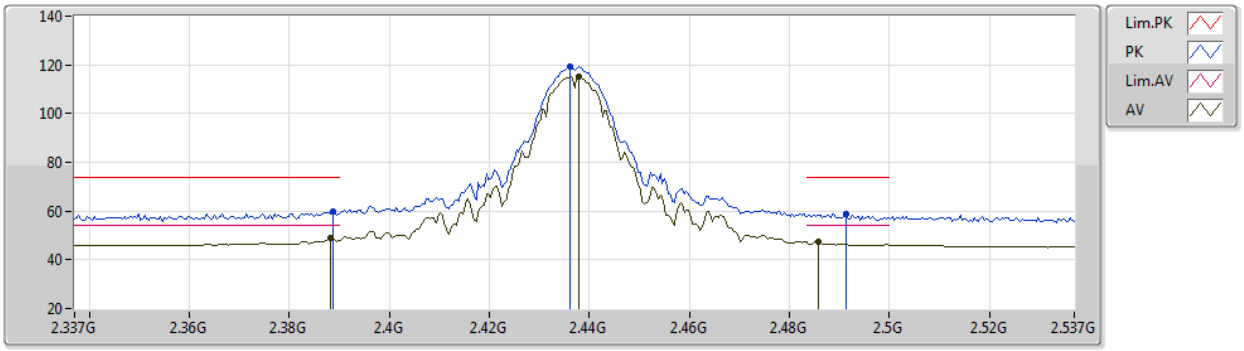
EUT Z_1TX
Setting 95
06-F-L-3

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	63.44	74.00	-10.56	31.82	3	Vertical	29	1.73	-	27.63	3.99	-
AV	2.39G	53.60	54.00	-0.40	21.97	3	Vertical	29	1.73	-	27.63	4.00	-
PK	2.418G	117.42	Inf	-Inf	85.86	3	Vertical	29	1.73	-	27.55	4.01	-
AV	2.4162G	113.43	Inf	-Inf	81.87	3	Vertical	29	1.73	-	27.55	4.01	-

802.11b_Nss1,(1Mbps)_1TX

2437MHz_TX

07/07/2020



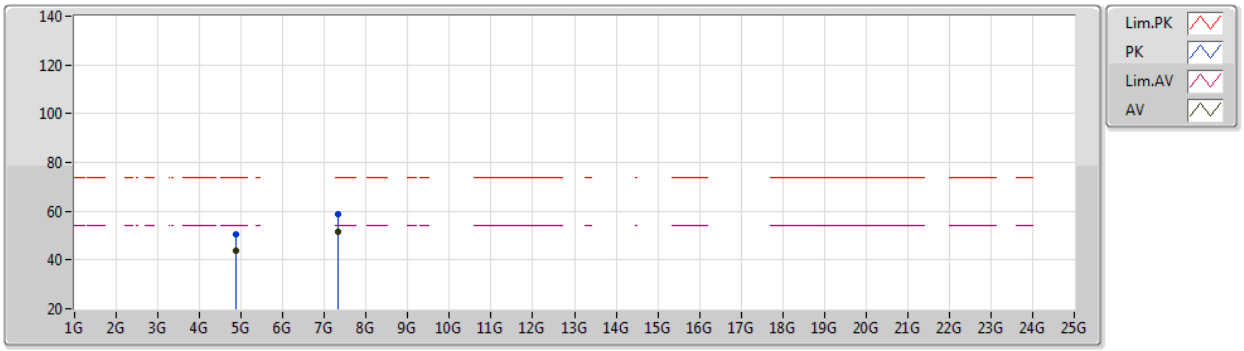
EUT Z_1TX
Setting 108
06-F-L-3

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	60.01	74.00	-13.99	28.39	3	Vertical	139	2.07	-	27.63	3.99	-
AV	2.3882G	49.10	54.00	-4.90	17.47	3	Vertical	139	2.07	-	27.64	3.99	-
PK	2.4362G	119.13	Inf	-Inf	87.62	3	Vertical	139	2.07	-	27.49	4.02	-
AV	2.4378G	115.24	Inf	-Inf	83.73	3	Vertical	139	2.07	-	27.49	4.02	-
PK	2.4914G	58.99	74.00	-15.01	27.61	3	Vertical	139	2.07	-	27.33	4.05	-
AV	2.4858G	47.66	54.00	-6.34	16.28	3	Vertical	139	2.07	-	27.34	4.04	-

802.11b_Nss1,(1Mbps)_1TX

2437MHz_TX

07/07/2020



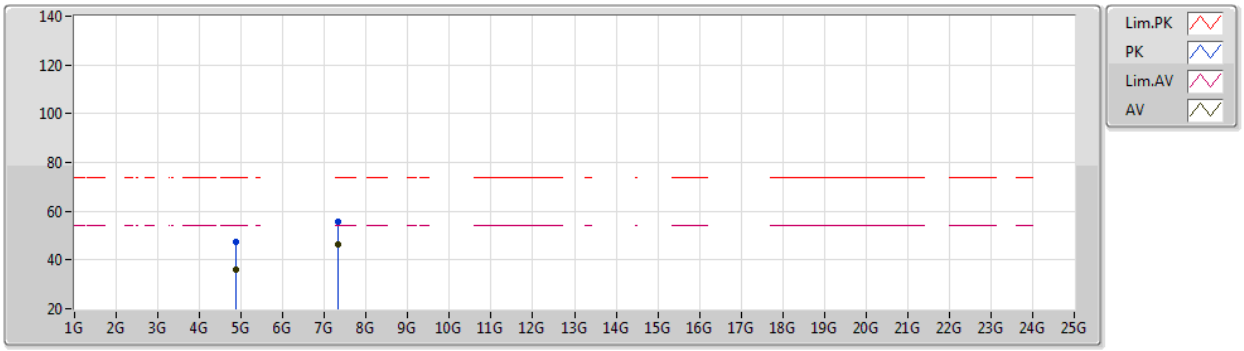
EUT Z_1TX
Setting 108
06-F-L-3

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	4.87388G	50.73	74.00	-23.27	45.93	3	Vertical	17	2.02	-	31.07	5.40	31.67
AV	4.87396G	43.94	54.00	-10.06	39.14	3	Vertical	17	2.02	-	31.07	5.40	31.67
PK	7.31178G	58.99	74.00	-15.01	48.79	3	Vertical	177	2.45	-	36.40	6.96	33.16
AV	7.31166G	51.59	54.00	-2.41	41.39	3	Vertical	177	2.45	-	36.40	6.96	33.16

802.11b_Nss1,(1Mbps)_1TX

2437MHz_TX

07/07/2020



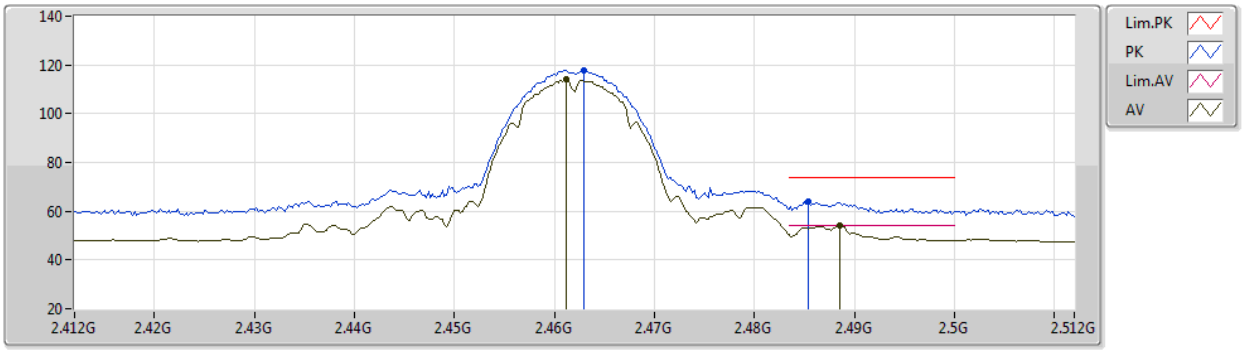
EUT Z_1TX
Setting 108
06-F-L-3

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	4.87392G	47.58	74.00	-26.42	42.78	3	Horizontal	100	1.30	-	31.07	5.40	31.67
AV	4.87399G	35.84	54.00	-18.16	31.04	3	Horizontal	100	1.30	-	31.07	5.40	31.67
PK	7.3118G	55.94	74.00	-18.06	45.74	3	Horizontal	210	2.48	-	36.40	6.96	33.16
AV	7.31167G	46.36	54.00	-7.64	36.16	3	Horizontal	210	2.48	-	36.40	6.96	33.16

802.11b_Nss1,(1Mbps)_1TX

2462MHz_TX

07/07/2020



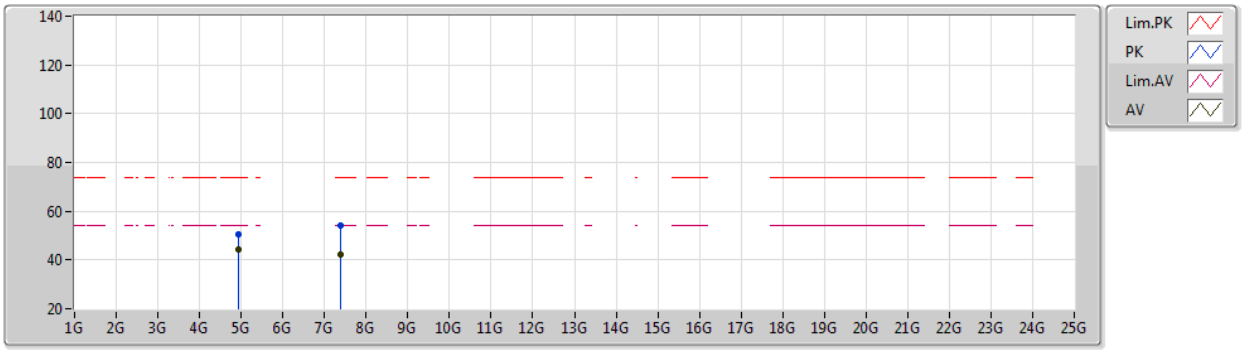
EUT Z_1TX
Setting 97
06-F-L-3

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.463G	117.87	Inf	-Inf	86.43	3	Vertical	136	1.25	-	27.41	4.03	-
AV	2.4612G	113.95	Inf	-Inf	82.50	3	Vertical	136	1.25	-	27.42	4.03	-
PK	2.4854G	64.00	74.00	-10.00	32.62	3	Vertical	136	1.25	-	27.34	4.04	-
AV	2.4886G	53.89	54.00	-0.11	22.52	3	Vertical	136	1.25	-	27.33	4.04	-

802.11b_Nss1,(1Mbps)_1TX

2462MHz_TX

07/07/2020



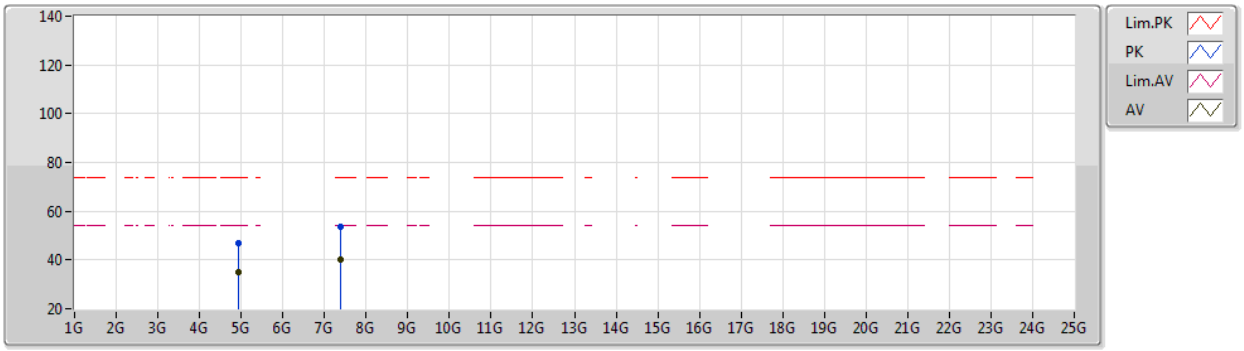
EUT Z_1TX
Setting 97
06-F-L-3

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	4.92406G	50.71	74.00	-23.29	45.64	3	Vertical	351	2.84	-	31.20	5.48	31.61
AV	4.92397G	44.12	54.00	-9.88	39.05	3	Vertical	351	2.84	-	31.20	5.48	31.61
PK	7.38418G	54.38	74.00	-19.62	44.18	3	Vertical	172	3.00	-	36.40	6.99	33.19
AV	7.38514G	42.34	54.00	-11.66	32.14	3	Vertical	172	3.00	-	36.40	6.99	33.19

802.11b_Nss1,(1Mbps)_1TX

2462MHz_TX

07/07/2020



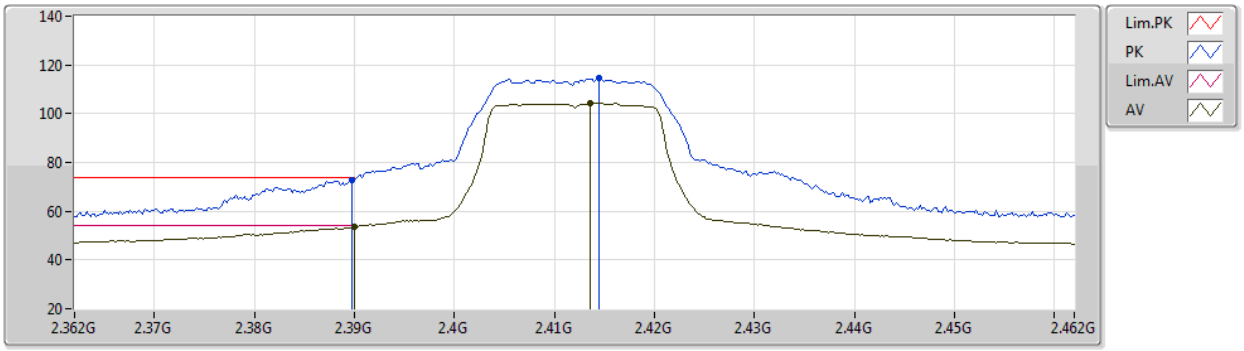
EUT Z_1TX
Setting 97
06-F-L-3

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	4.92394G	46.92	74.00	-27.08	41.85	3	Horizontal	72	1.16	-	31.20	5.48	31.61
AV	4.92394G	35.22	54.00	-18.78	30.15	3	Horizontal	72	1.16	-	31.20	5.48	31.61
PK	7.38812G	53.55	74.00	-20.45	43.36	3	Horizontal	211	2.41	-	36.40	6.99	33.20
AV	7.385G	40.09	54.00	-13.91	29.89	3	Horizontal	211	2.41	-	36.40	6.99	33.19

802.11g_Nss1,(6Mbps)_1TX

2412MHz_TX

07/07/2020



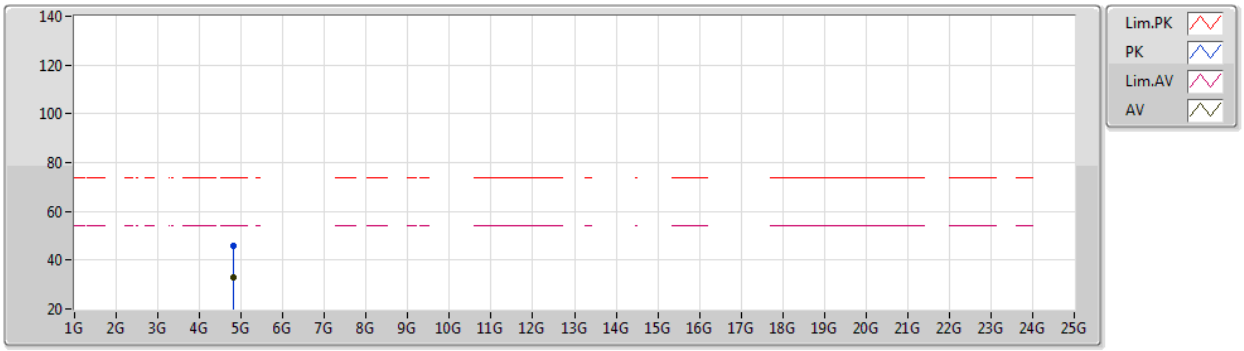
EUT Z_1TX
Setting 78
06-F-L-3

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.3898G	72.98	74.00	-1.02	41.36	3	Vertical	19	1.19	-	27.63	3.99	-
AV	2.39G	53.73	54.00	-0.27	22.10	3	Vertical	19	1.19	-	27.63	4.00	-
PK	2.4144G	114.65	Inf	-Inf	83.08	3	Vertical	19	1.19	-	27.56	4.01	-
AV	2.4136G	104.26	Inf	-Inf	72.69	3	Vertical	19	1.19	-	27.56	4.01	-

802.11g_Nss1,(6Mbps)_1TX

2412MHz_TX

07/07/2020



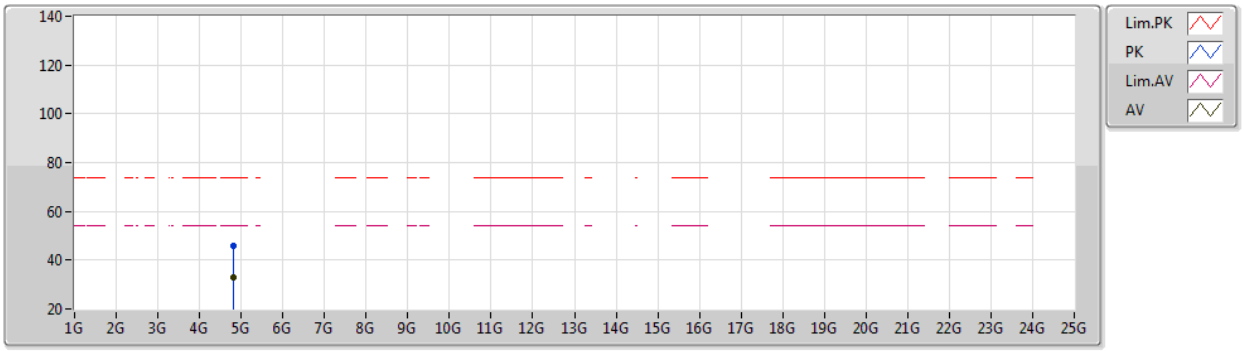
EUT Z_1TX
Setting 78
06-F-L-3

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	4.82748G	45.86	74.00	-28.14	41.22	3	Vertical	43	1.04	-	31.03	5.34	31.73
AV	4.82292G	33.11	54.00	-20.89	28.49	3	Vertical	43	1.04	-	31.02	5.33	31.73

802.11g_Nss1,(6Mbps)_1TX

2412MHz_TX

07/07/2020



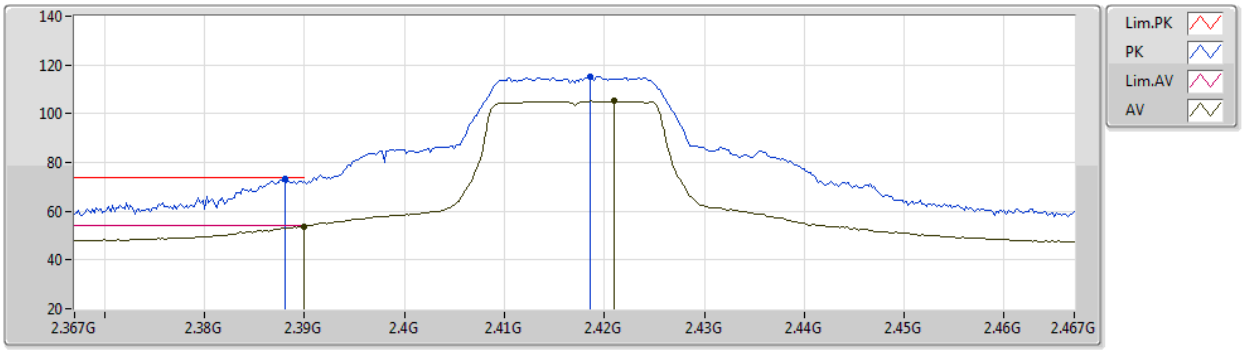
EUT Z_1TX
Setting 78
06-F-L-3

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	4.82038G	45.98	74.00	-28.02	41.37	3	Horizontal	305	1.92	-	31.02	5.33	31.74
AV	4.82728G	32.94	54.00	-21.06	28.30	3	Horizontal	305	1.92	-	31.03	5.34	31.73

802.11g_Nss1,(6Mbps)_1TX

2417MHz_TX

07/07/2020



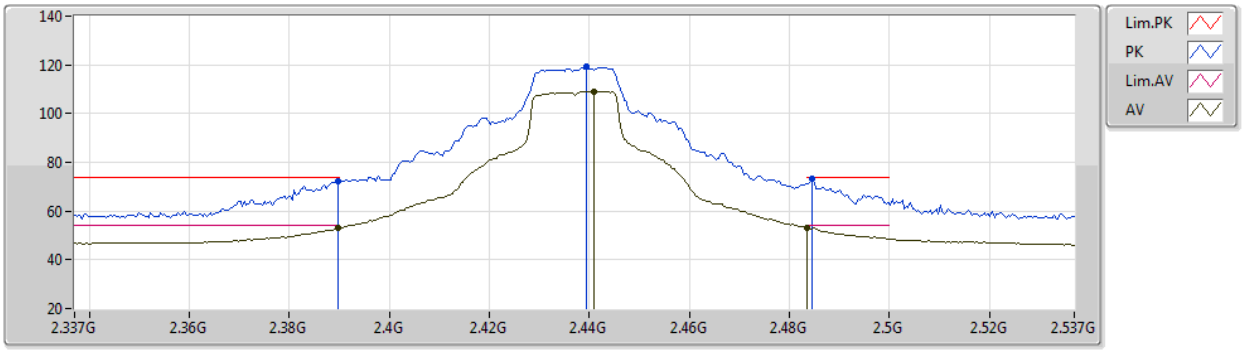
EUT Z_1TX
Setting 84
06-F-L-3

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	2.388G	73.02	74.00	-0.98	41.39	3	Vertical	32	1.09	-	27.64	3.99	-
AV	2.39G	53.72	54.00	-0.28	22.09	3	Vertical	32	1.09	-	27.63	4.00	-
PK	2.4186G	115.36	Inf	-Inf	83.81	3	Vertical	32	1.09	-	27.54	4.01	-
AV	2.421G	105.24	Inf	-Inf	73.69	3	Vertical	32	1.09	-	27.54	4.01	-

802.11g_Nss1,(6Mbps)_1TX

2437MHz_TX

07/07/2020



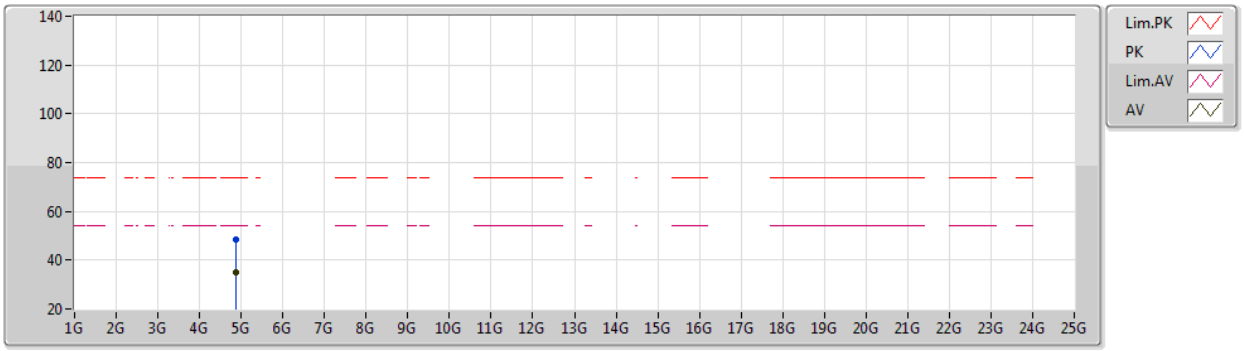
EUT Z_1TX
Setting 103
06-F-L-3

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	2.3898G	72.26	74.00	-1.74	40.64	3	Vertical	139	1.45	-	27.63	3.99	-
AV	2.3898G	52.89	54.00	-1.11	21.27	3	Vertical	139	1.45	-	27.63	3.99	-
PK	2.4394G	119.07	Inf	-Inf	87.57	3	Vertical	139	1.45	-	27.48	4.02	-
AV	2.441G	109.21	Inf	-Inf	77.71	3	Vertical	139	1.45	-	27.48	4.02	-
PK	2.4846G	73.32	74.00	-0.68	41.93	3	Vertical	139	1.45	-	27.35	4.04	-
AV	2.4835G	53.22	54.00	-0.78	21.83	3	Vertical	139	1.45	-	27.35	4.04	-

802.11g_Nss1,(6Mbps)_1TX

2437MHz_TX

07/07/2020



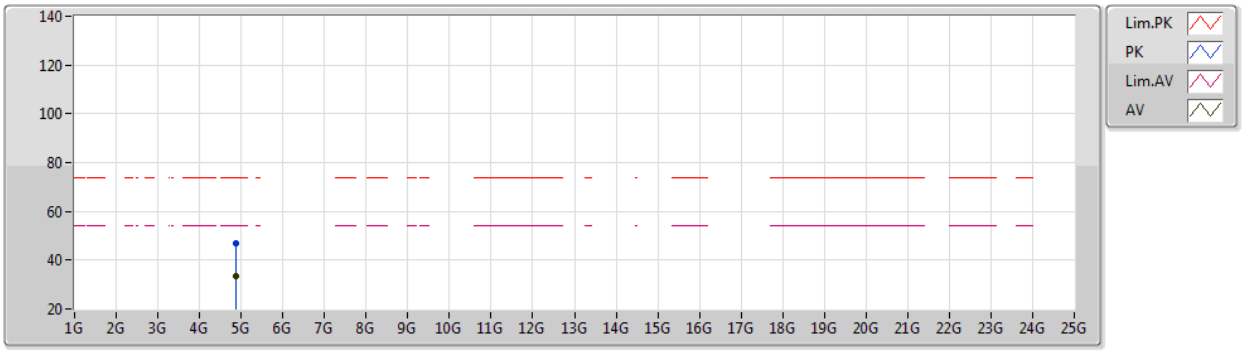
EUT Z_1TX
Setting 103
06-F-L-3

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	4.87716G	48.61	74.00	-25.39	43.79	3	Vertical	125	2.21	-	31.08	5.41	31.67
AV	4.8766G	35.14	54.00	-18.86	30.32	3	Vertical	125	2.21	-	31.08	5.41	31.67

802.11g_Nss1,(6Mbps)_1TX

2437MHz_TX

07/07/2020



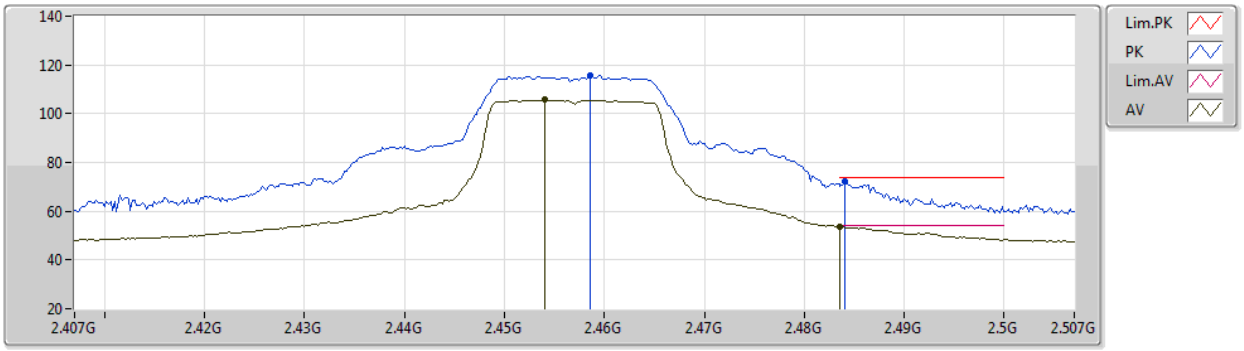
EUT Z_1TX
Setting 103
06-F-L-3

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	4.87272G	46.92	74.00	-27.08	42.12	3	Horizontal	69	1.00	-	31.07	5.40	31.67
AV	4.8788G	33.38	54.00	-20.62	28.56	3	Horizontal	69	1.00	-	31.08	5.41	31.67

802.11g_Nss1,(6Mbps)_1TX

2457MHz_TX

07/07/2020



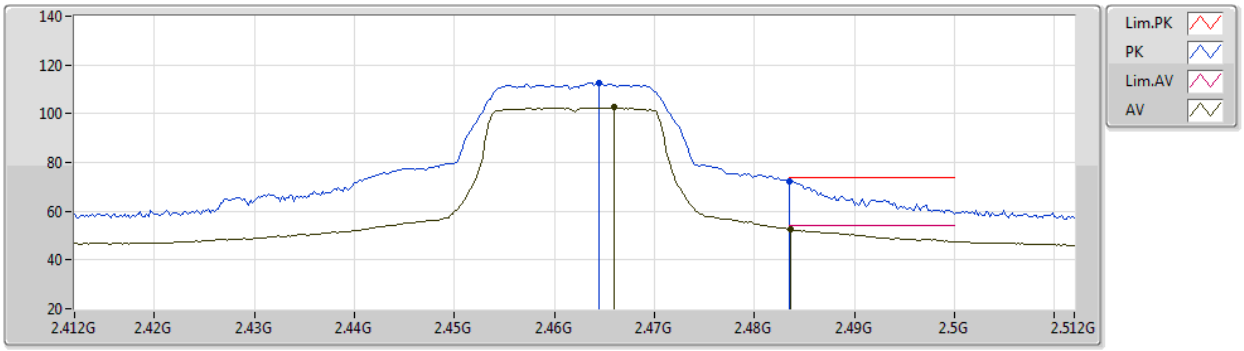
EUT Z_1TX
Setting 86
06-F-L-3

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	2.4586G	115.74	Inf	-Inf	84.29	3	Vertical	33	1.00	-	27.42	4.03	-
AV	2.454G	105.64	Inf	-Inf	74.17	3	Vertical	33	1.00	-	27.44	4.03	-
PK	2.484G	72.30	74.00	-1.70	40.91	3	Vertical	33	1.00	-	27.35	4.04	-
AV	2.4835G	53.72	54.00	-0.28	22.33	3	Vertical	33	1.00	-	27.35	4.04	-

802.11g_Nss1,(6Mbps)_1TX

2462MHz_TX

07/07/2020



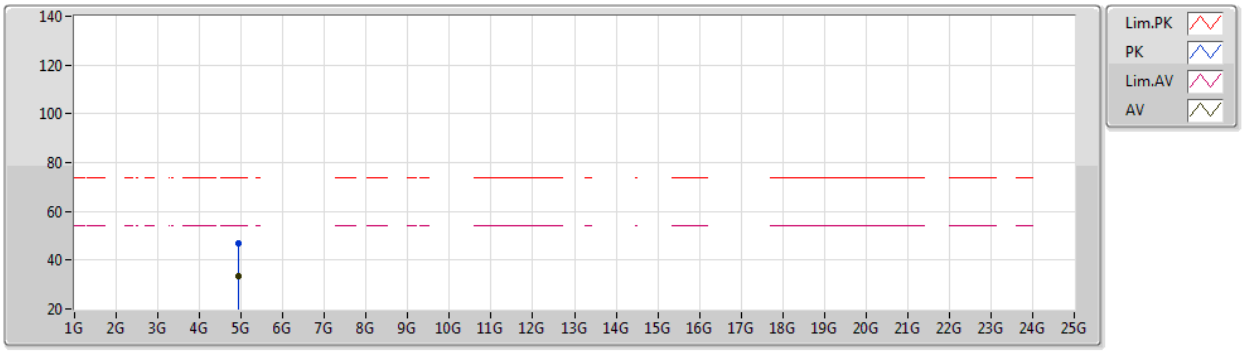
EUT Z_1TX
Setting 79
06-F-L-3

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	2.4644G	112.79	Inf	-Inf	81.35	3	Vertical	140	1.80	-	27.41	4.03	-
AV	2.466G	102.66	Inf	-Inf	71.23	3	Vertical	140	1.80	-	27.40	4.03	-
PK	2.4835G	72.39	74.00	-1.61	41.00	3	Vertical	140	1.80	-	27.35	4.04	-
AV	2.4836G	52.54	54.00	-1.46	21.15	3	Vertical	140	1.80	-	27.35	4.04	-

802.11g_Nss1,(6Mbps)_1TX

2462MHz_TX

07/07/2020



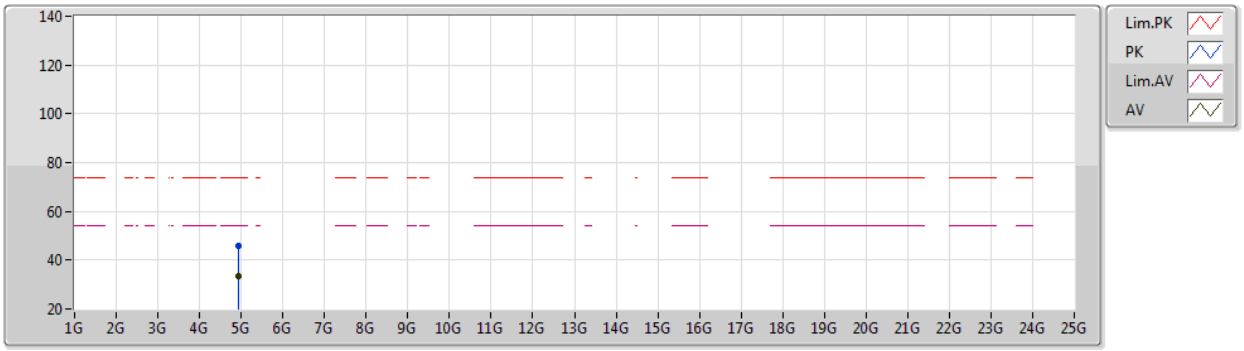
EUT Z_1TX
Setting 79
06-F-L-3

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	4.92658G	46.83	74.00	-27.17	41.75	3	Vertical	50	1.66	-	31.21	5.48	31.61
AV	4.92216G	33.34	54.00	-20.66	28.29	3	Vertical	50	1.66	-	31.19	5.48	31.62

802.11g_Nss1,(6Mbps)_1TX

2462MHz_TX

07/07/2020



EUT Z_1TX
Setting 79
06-F-L-3

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	4.92532G	46.06	74.00	-27.94	40.99	3	Horizontal	324	1.29	-	31.20	5.48	31.61
AV	4.92856G	33.55	54.00	-20.45	28.46	3	Horizontal	324	1.29	-	31.21	5.49	31.61

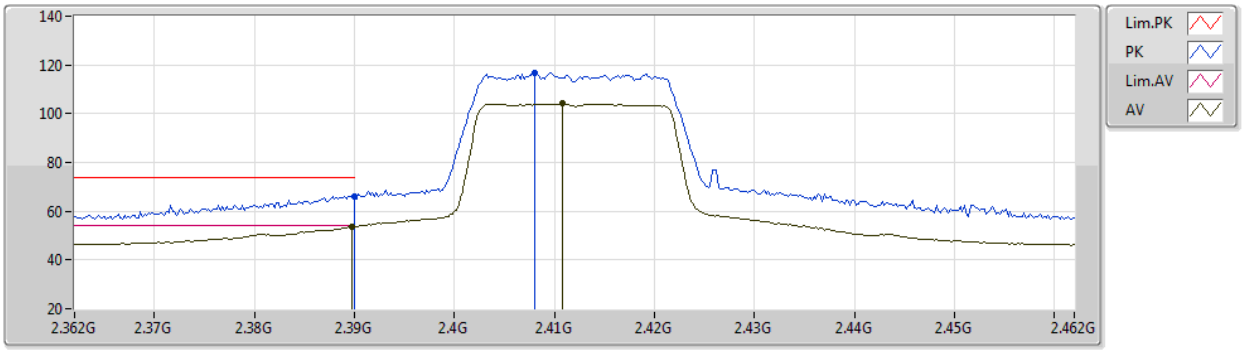
<beamforming mode>
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	Pass	AV	2.4835G	53.95	54.00	-0.05	3	Vertical	343	1.49	-

802.11ax HEW20-BF_Nss1,(MCS0)_2TX

2412MHz_TX

06/07/2020



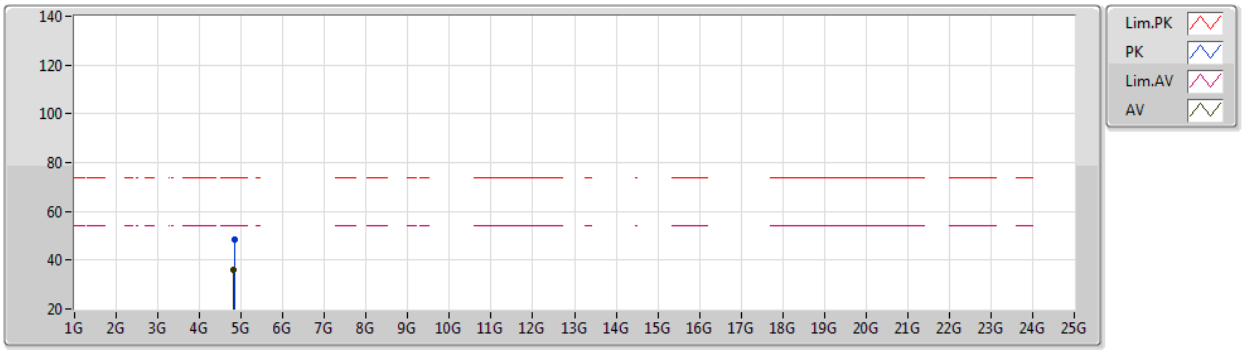
EUT Z_2TX
Setting 65
06-F-S-5

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	2.39G	66.08	74.00	-7.92	34.45	3	Vertical	141	1.36	-	27.63	4.00	-
AV	2.3898G	53.78	54.00	-0.22	22.16	3	Vertical	141	1.36	-	27.63	3.99	-
PK	2.408G	116.76	Inf	-Inf	85.18	3	Vertical	141	1.36	-	27.58	4.00	-
AV	2.4108G	104.15	Inf	-Inf	72.57	3	Vertical	141	1.36	-	27.57	4.01	-

802.11ax HEW20-BF_Nss1,(MCS0)_2TX

2412MHz_TX

06/07/2020



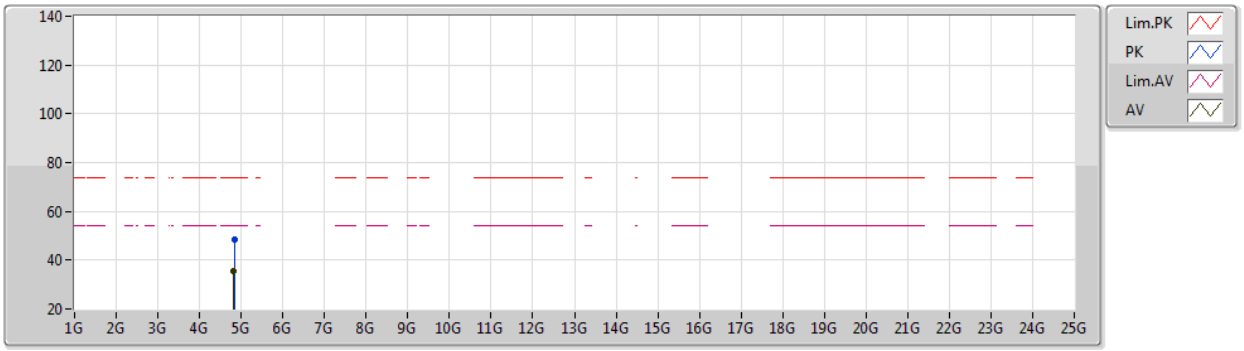
EUT Z_2TX
Setting 65
06-F-S-5

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	4.83148G	48.51	74.00	-25.49	43.86	3	Vertical	167	2.76	-	31.03	5.34	31.72
AV	4.81424G	35.97	54.00	-18.03	31.38	3	Vertical	167	2.76	-	31.01	5.32	31.74

802.11ax HEW20-BF_Nss1,(MCS0)_2TX

2412MHz_TX

06/07/2020



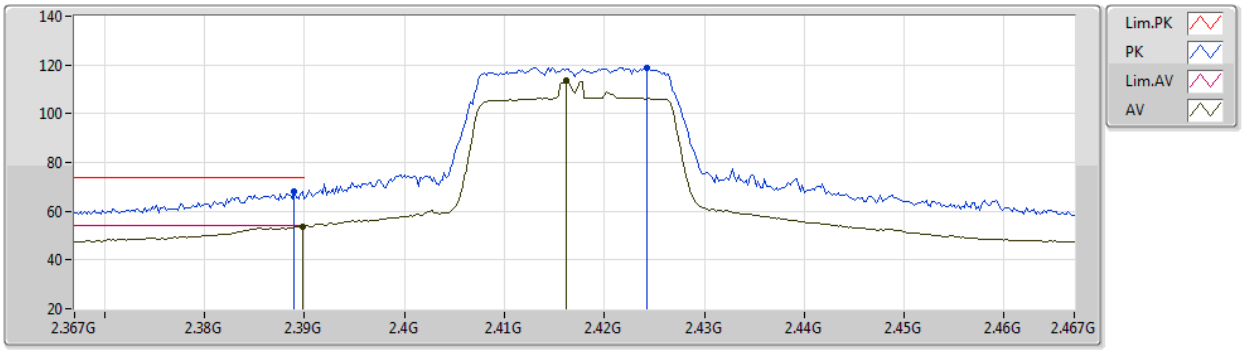
EUT Z_2TX
Setting 65
06-F-S-5

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	4.83248G	48.39	74.00	-25.61	43.73	3	Horizontal	35	1.77	-	31.03	5.35	31.72
AV	4.82072G	35.73	54.00	-18.27	31.12	3	Horizontal	35	1.77	-	31.02	5.33	31.74

802.11ax HEW20-BF_Nss1,(MCS0)_2TX

2417MHz_TX

06/07/2020



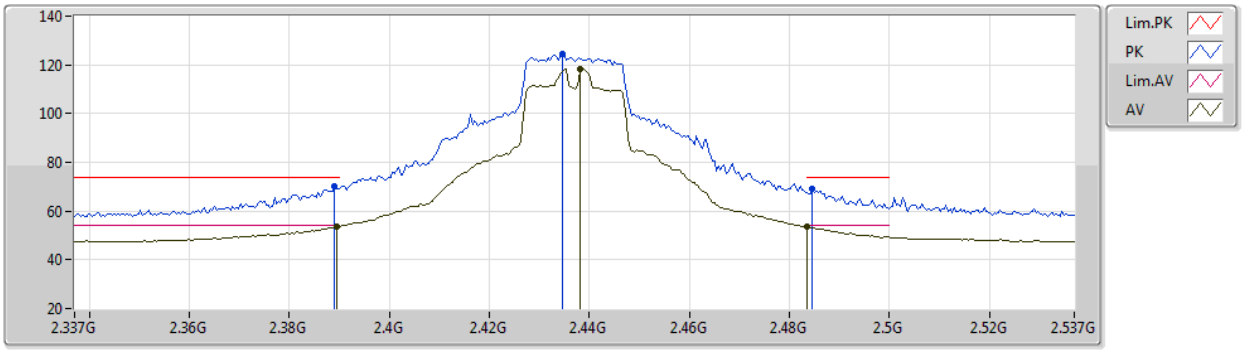
EUT Z_2TX
Setting 72
06-F-S-5

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	2.389G	68.26	74.00	-5.74	36.64	3	Vertical	144	1.19	-	27.63	3.99	-
AV	2.3898G	53.81	54.00	-0.19	22.19	3	Vertical	144	1.19	-	27.63	3.99	-
PK	2.4242G	118.93	Inf	-Inf	87.39	3	Vertical	144	1.19	-	27.53	4.01	-
AV	2.4162G	113.37	Inf	-Inf	81.81	3	Vertical	144	1.19	-	27.55	4.01	-

802.11ax HEW20-BF_Nss1,(MCS0)_2TX

2437MHz_TX

06/07/2020



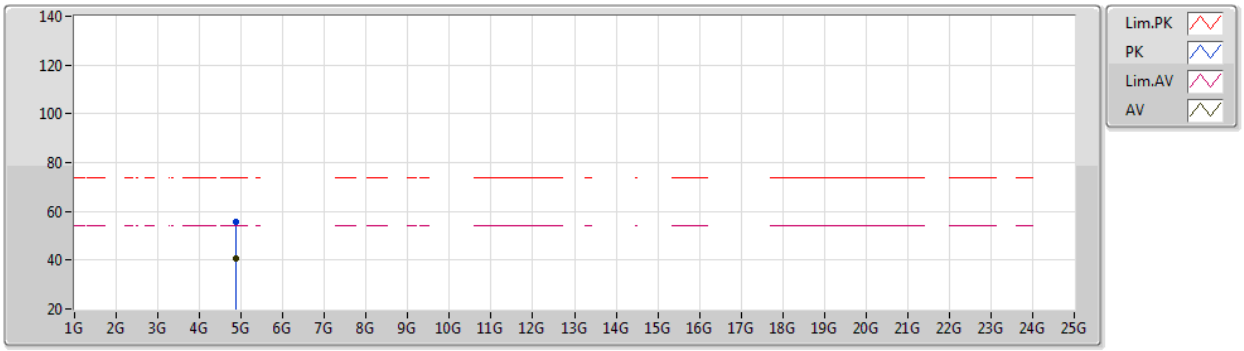
EUT Z_2TX
Setting 101
06-F-S-5

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	2.389G	70.21	74.00	-3.79	38.59	3	Vertical	342	1.53	-	27.63	3.99	-
AV	2.3894G	53.84	54.00	-0.16	22.22	3	Vertical	342	1.53	-	27.63	3.99	-
PK	2.4346G	124.40	Inf	-Inf	92.88	3	Vertical	342	1.53	-	27.50	4.02	-
AV	2.4382G	118.27	Inf	-Inf	86.76	3	Vertical	342	1.53	-	27.49	4.02	-
PK	2.4846G	68.88	74.00	-5.12	37.49	3	Vertical	342	1.53	-	27.35	4.04	-
AV	2.4835G	53.51	54.00	-0.49	22.12	3	Vertical	342	1.53	-	27.35	4.04	-

802.11ax HEW20-BF_Nss1,(MCS0)_2TX

2437MHz_TX

06/07/2020



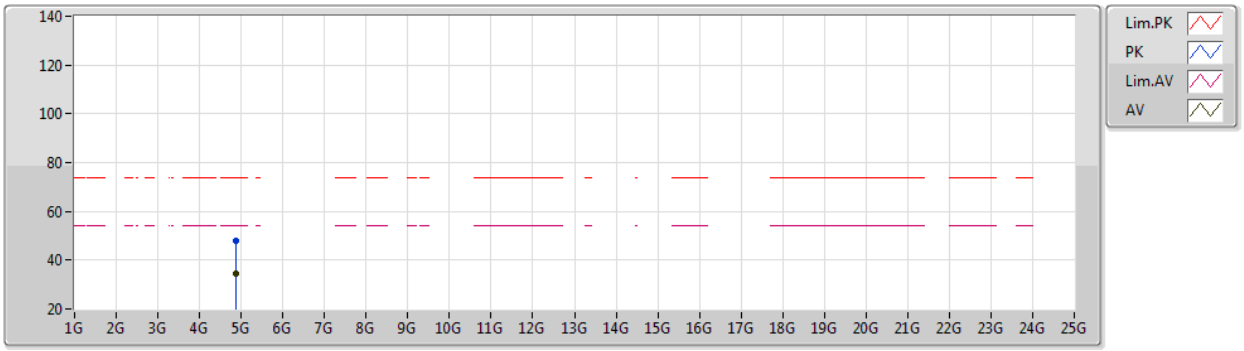
EUT Z_2TX
Setting 101
06-F-S-5

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	4.874G	55.78	74.00	-18.22	50.98	3	Vertical	150	2.27	-	31.07	5.40	31.67
AV	4.88044G	40.71	54.00	-13.29	35.88	3	Vertical	150	2.27	-	31.08	5.41	31.66

802.11ax HEW20-BF_Nss1,(MCS0)_2TX

2437MHz_TX

06/07/2020



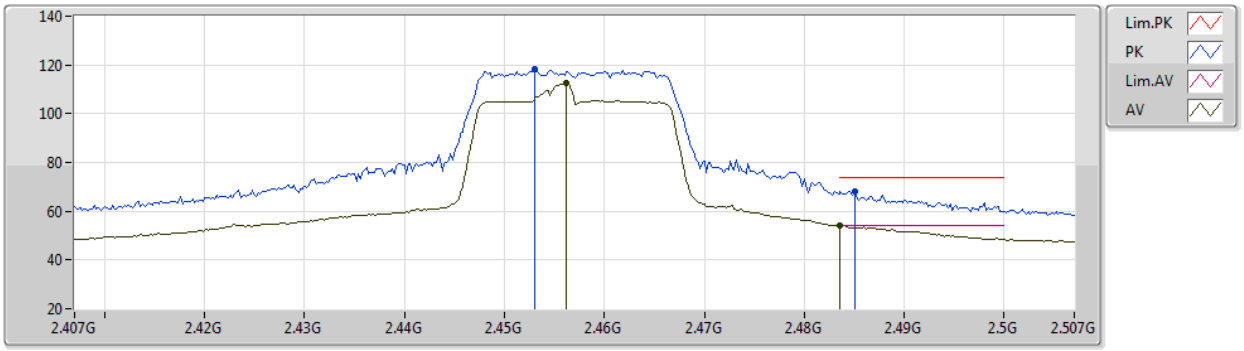
EUT Z_2TX
Setting 101
06-F-S-5

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	4.87412G	48.11	74.00	-25.89	43.31	3	Horizontal	235	1.00	-	31.07	5.40	31.67
AV	4.87804G	34.45	54.00	-19.55	29.63	3	Horizontal	235	1.00	-	31.08	5.41	31.67

802.11ax HEW20-BF_Nss1,(MCS0)_2TX

2457MHz_TX

06/07/2020



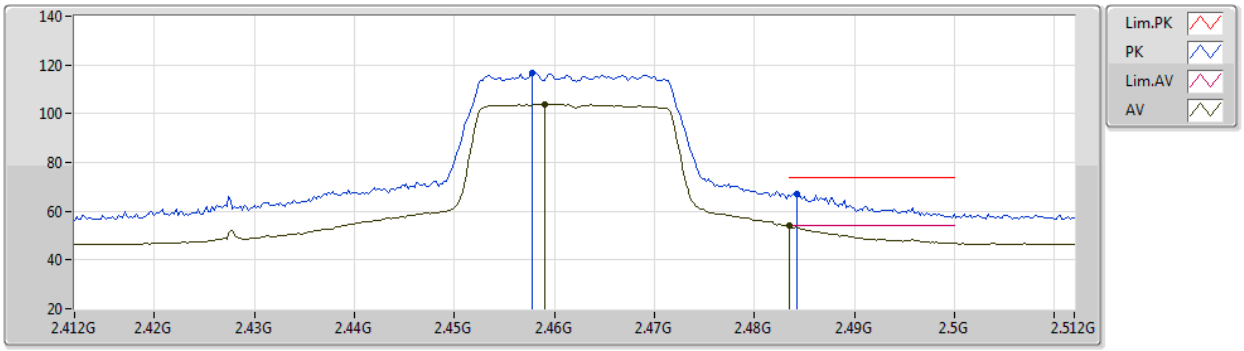
EUT Z_2TX
Setting 74
06-F-S-5

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	2.453G	118.12	Inf	-Inf	86.65	3	Vertical	142	1.79	-	27.44	4.03	-
AV	2.4562G	112.60	Inf	-Inf	81.14	3	Vertical	142	1.79	-	27.43	4.03	-
PK	2.485G	68.26	74.00	-5.74	36.88	3	Vertical	142	1.79	-	27.34	4.04	-
AV	2.4835G	53.90	54.00	-0.10	22.51	3	Vertical	142	1.79	-	27.35	4.04	-

802.11ax HEW20-BF_Nss1,(MCS0)_2TX

2462MHz_TX

06/07/2020



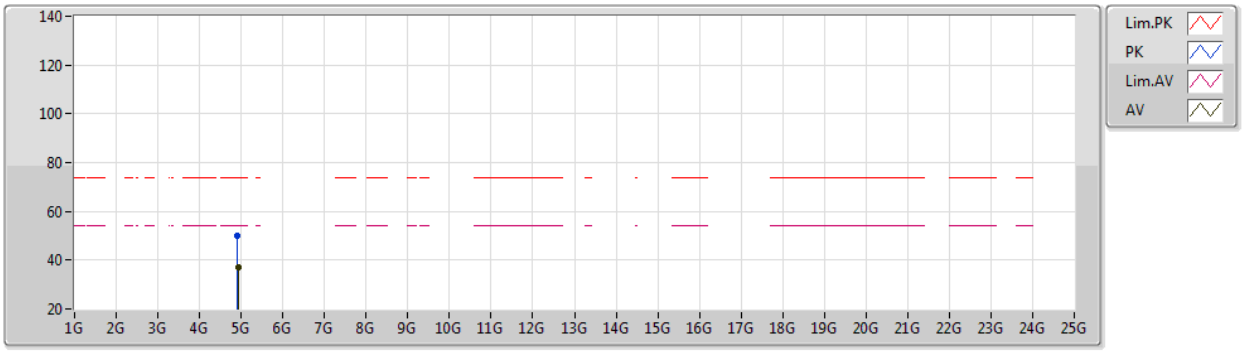
EUT Z_2TX
Setting 63
06-F-S-5

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	2.4578G	116.69	Inf	-Inf	85.23	3	Vertical	322	1.00	-	27.43	4.03	-
AV	2.459G	103.80	Inf	-Inf	72.35	3	Vertical	322	1.00	-	27.42	4.03	-
PK	2.4842G	67.08	74.00	-6.92	35.69	3	Vertical	322	1.00	-	27.35	4.04	-
AV	2.4835G	53.91	54.00	-0.09	22.52	3	Vertical	322	1.00	-	27.35	4.04	-

802.11ax HEW20-BF_Nss1,(MCS0)_2TX

2462MHz_TX

06/07/2020



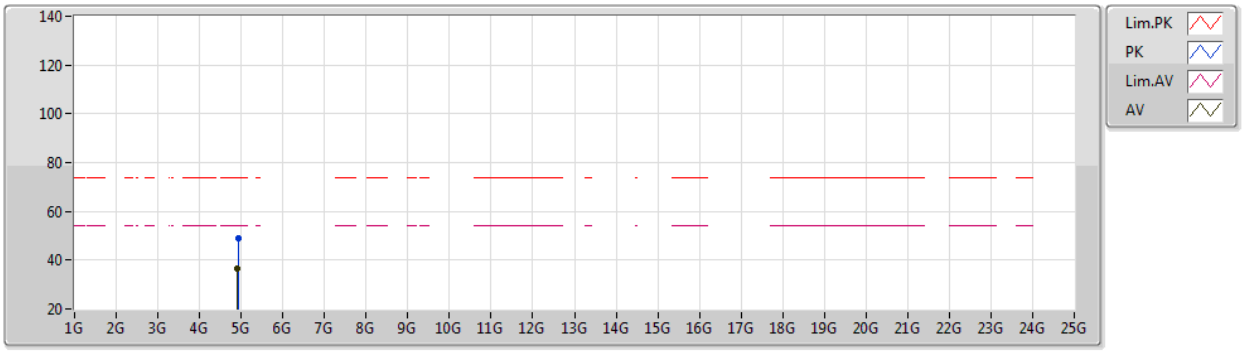
EUT Z_2TX
Setting 63
06-F-S-5

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	4.91416G	49.82	74.00	-24.18	44.82	3	Vertical	158	2.82	-	31.16	5.46	31.62
AV	4.93284G	37.08	54.00	-16.92	31.96	3	Vertical	158	2.82	-	31.23	5.49	31.60

802.11ax HEW20-BF_Nss1,(MCS0)_2TX

2462MHz_TX

06/07/2020



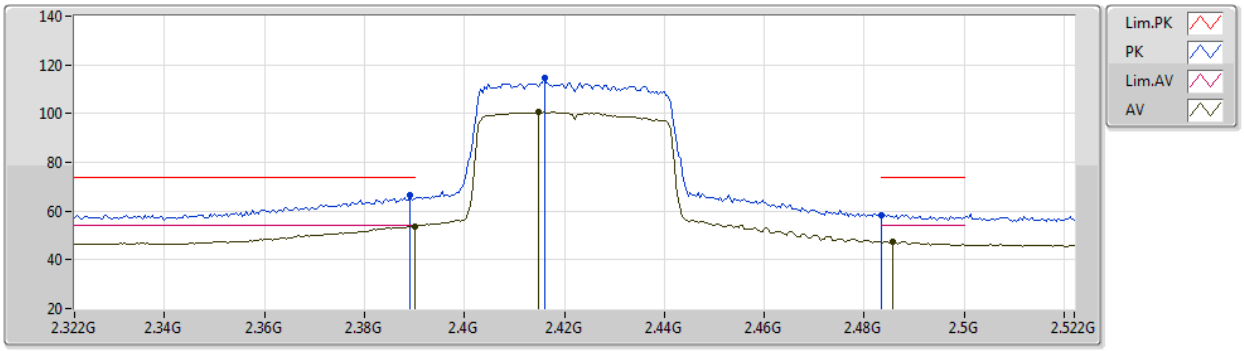
EUT Z_2TX
Setting 63
06-F-S-5

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	4.9304G	49.04	74.00	-24.96	43.94	3	Horizontal	148	2.37	-	31.22	5.49	31.61
AV	4.91916G	36.65	54.00	-17.35	31.62	3	Horizontal	148	2.37	-	31.18	5.47	31.62

802.11ax HEW40-BF_Nss1,(MCS0)_2TX

2422MHz_TX

06/07/2020



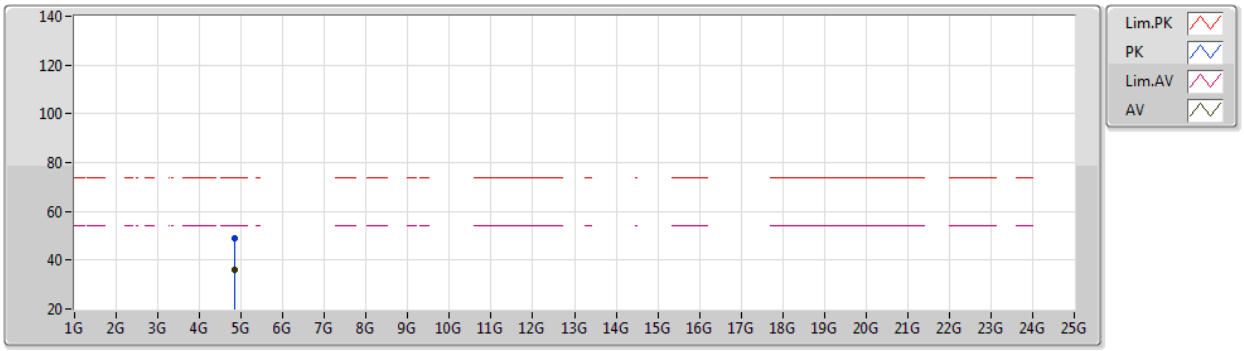
EUT Z_2TX
Setting 65
06-F-S-5

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	2.3892G	66.78	74.00	-7.22	35.16	3	Vertical	156	1.80	-	27.63	3.99	-
AV	2.39G	53.78	54.00	-0.22	22.15	3	Vertical	156	1.80	-	27.63	4.00	-
PK	2.416G	114.52	Inf	-Inf	82.96	3	Vertical	156	1.80	-	27.55	4.01	-
AV	2.4148G	100.65	Inf	-Inf	69.08	3	Vertical	156	1.80	-	27.56	4.01	-
PK	2.4835G	58.51	74.00	-15.49	27.12	3	Vertical	156	1.80	-	27.35	4.04	-
AV	2.4856G	47.59	54.00	-6.41	16.21	3	Vertical	156	1.80	-	27.34	4.04	-

802.11ax HEW40-BF_Nss1,(MCS0)_2TX

2422MHz_TX

06/07/2020



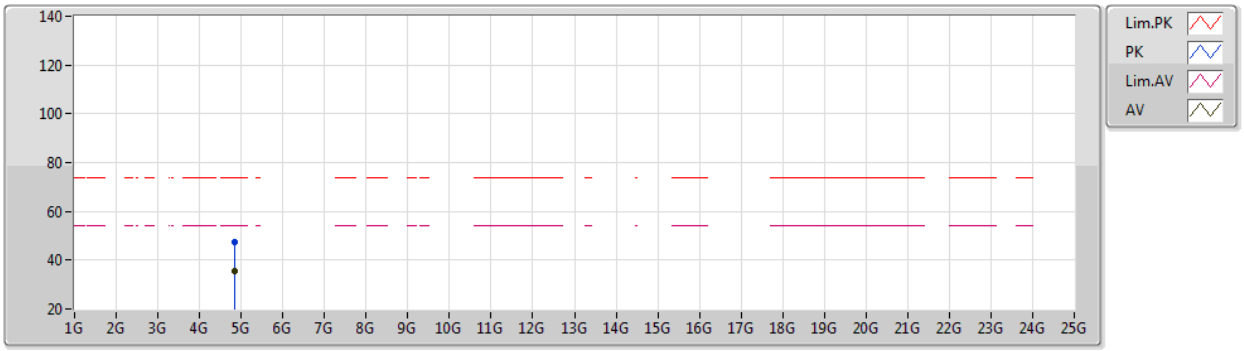
EUT Z_2TX
Setting 65
06-F-S-5

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	4.83536G	48.89	74.00	-25.11	44.22	3	Vertical	130	2.06	-	31.04	5.35	31.72
AV	4.84104G	35.86	54.00	-18.14	31.17	3	Vertical	130	2.06	-	31.04	5.36	31.71

802.11ax HEW40-BF_Nss1,(MCS0)_2TX

2422MHz_TX

06/07/2020



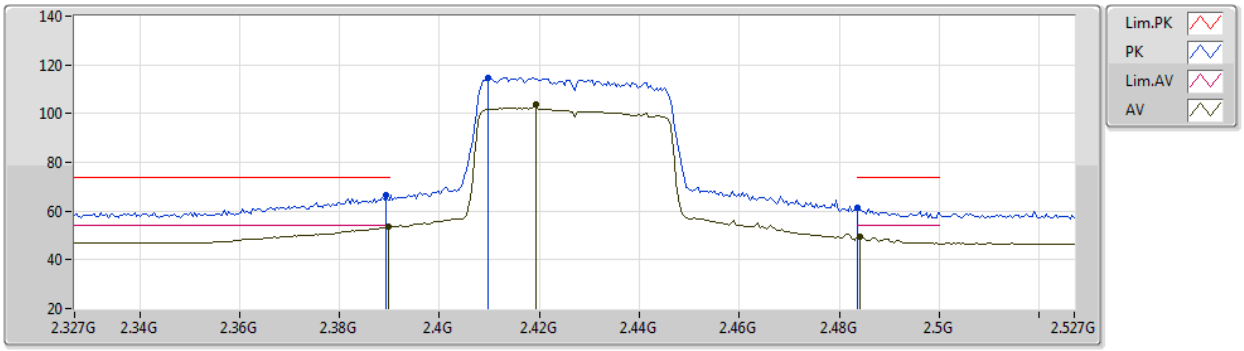
EUT Z_2TX
Setting 65
06-F-S-5

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	4.83556G	47.50	74.00	-26.50	42.83	3	Horizontal	12	1.71	-	31.04	5.35	31.72
AV	4.835G	35.40	54.00	-18.60	30.73	3	Horizontal	12	1.71	-	31.04	5.35	31.72

802.11ax HEW40-BF_Nss1,(MCS0)_2TX

2427MHz_TX

06/07/2020



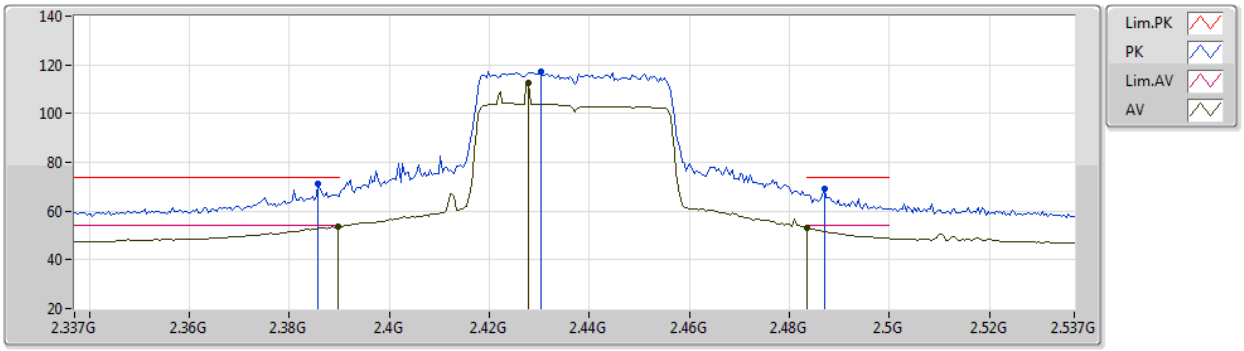
EUT Z_2TX
Setting 68
06-F-S-5

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	2.3894G	66.61	74.00	-7.39	34.99	3	Vertical	136	1.24	-	27.63	3.99	-
AV	2.3898G	53.79	54.00	-0.21	22.17	3	Vertical	136	1.24	-	27.63	3.99	-
PK	2.4098G	114.81	Inf	-Inf	83.24	3	Vertical	136	1.24	-	27.57	4.00	-
AV	2.4194G	103.66	Inf	-Inf	72.11	3	Vertical	136	1.24	-	27.54	4.01	-
PK	2.4835G	61.15	74.00	-12.85	29.76	3	Vertical	136	1.24	-	27.35	4.04	-
AV	2.4842G	49.62	54.00	-4.38	18.23	3	Vertical	136	1.24	-	27.35	4.04	-

802.11ax HEW40-BF_Nss1,(MCS0)_2TX

2437MHz_TX

06/07/2020



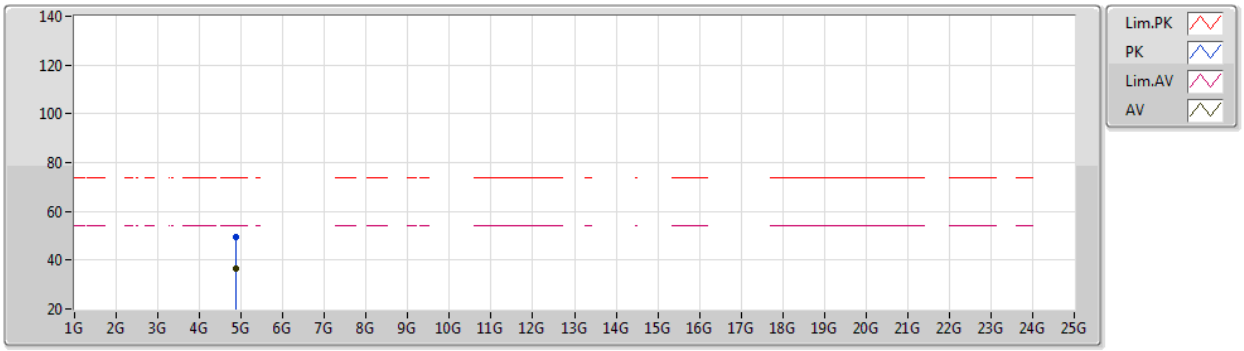
EUT Z_2TX
Setting 79
06-F-S-5

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	2.3858G	71.15	74.00	-2.85	39.52	3	Vertical	145	1.16	-	27.64	3.99	-
AV	2.3898G	53.87	54.00	-0.13	22.25	3	Vertical	145	1.16	-	27.63	3.99	-
PK	2.4302G	117.13	Inf	-Inf	85.60	3	Vertical	145	1.16	-	27.51	4.02	-
AV	2.4278G	112.75	Inf	-Inf	81.22	3	Vertical	145	1.16	-	27.52	4.01	-
PK	2.487G	69.12	74.00	-4.88	37.74	3	Vertical	145	1.16	-	27.34	4.04	-
AV	2.4835G	53.13	54.00	-0.87	21.74	3	Vertical	145	1.16	-	27.35	4.04	-

802.11ax HEW40-BF_Nss1,(MCS0)_2TX

2437MHz_TX

06/07/2020



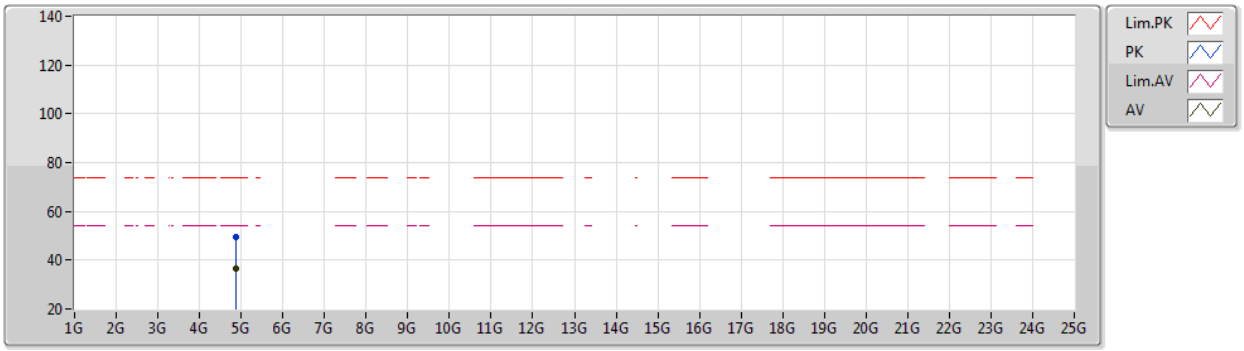
EUT Z_2TX
Setting 79
06-F-S-5

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	4.86752G	49.48	74.00	-24.52	44.70	3	Vertical	21	2.67	-	31.07	5.39	31.68
AV	4.8782G	36.57	54.00	-17.43	31.75	3	Vertical	21	2.67	-	31.08	5.41	31.67

802.11ax HEW40-BF_Nss1,(MCS0)_2TX

2437MHz_TX

06/07/2020



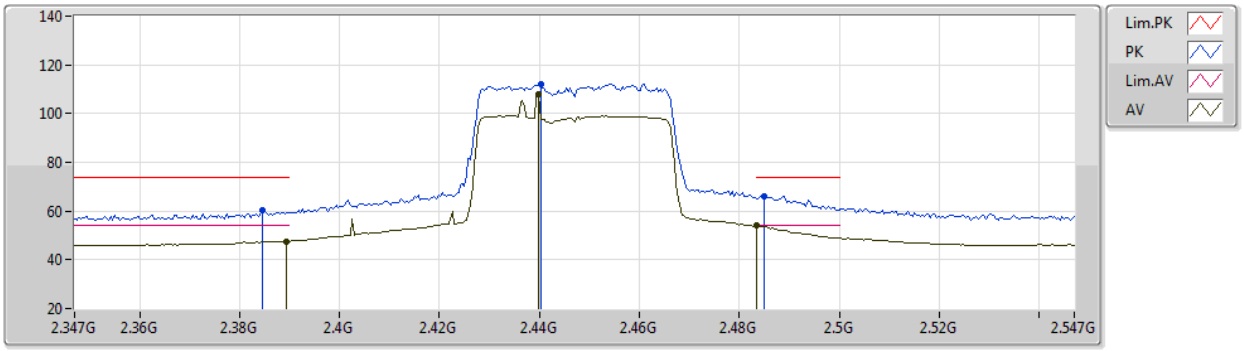
EUT Z_2TX
Setting 79
06-F-S-5

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	4.87192G	49.64	74.00	-24.36	44.84	3	Horizontal	127	2.40	-	31.07	5.40	31.67
AV	4.87688G	36.59	54.00	-17.41	31.77	3	Horizontal	127	2.40	-	31.08	5.41	31.67

802.11ax HEW40-BF_Nss1,(MCS0)_2TX

2447MHz_TX

06/07/2020



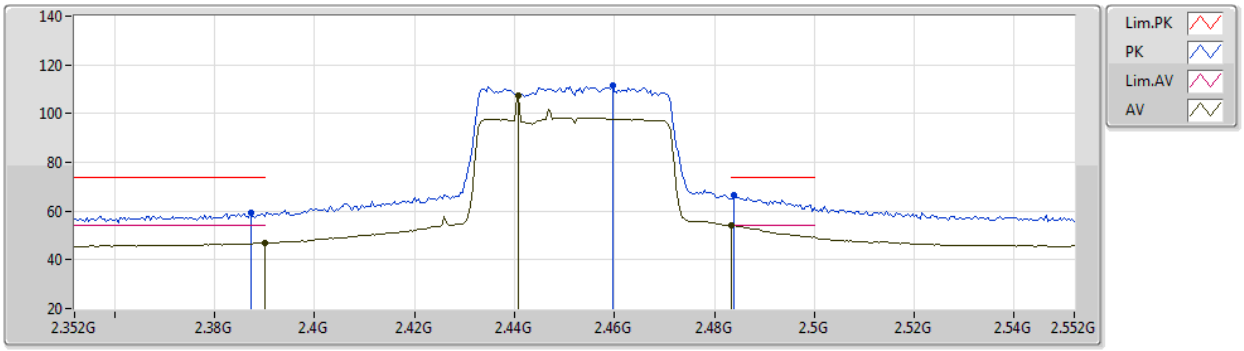
EUT Z_2TX
Setting 63
06-F-S-5

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	2.3846G	60.14	74.00	-13.86	28.50	3	Vertical	345	1.32	-	27.65	3.99	-
AV	2.3894G	47.67	54.00	-6.33	16.05	3	Vertical	345	1.32	-	27.63	3.99	-
PK	2.4402G	111.98	Inf	-Inf	80.48	3	Vertical	345	1.32	-	27.48	4.02	-
AV	2.4398G	107.89	Inf	-Inf	76.39	3	Vertical	345	1.32	-	27.48	4.02	-
PK	2.485G	66.21	74.00	-7.79	34.83	3	Vertical	345	1.32	-	27.34	4.04	-
AV	2.4835G	53.94	54.00	-0.06	22.55	3	Vertical	345	1.32	-	27.35	4.04	-

802.11ax HEW40-BF_Nss1,(MCS0)_2TX

2452MHz_TX

06/07/2020



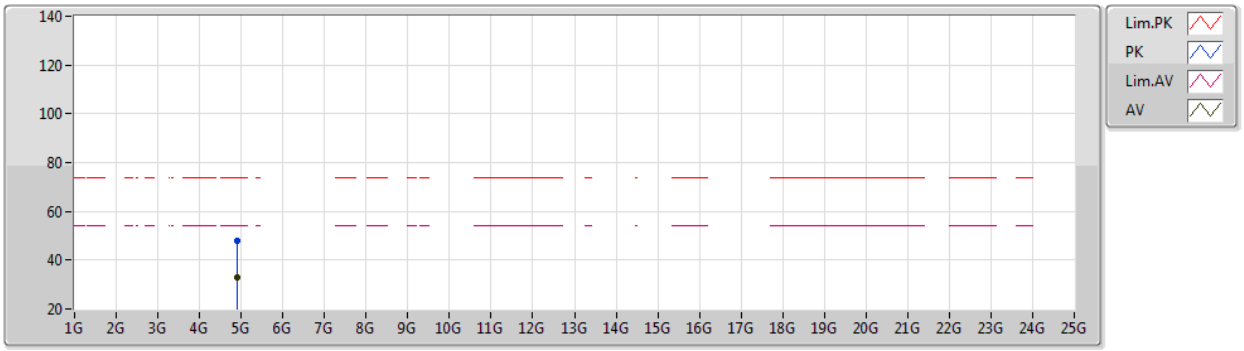
EUT Z_2TX
Setting 61
06-F-S-5

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	2.3872G	59.13	74.00	-14.87	27.50	3	Vertical	343	1.49	-	27.64	3.99	-
AV	2.39G	47.00	54.00	-7.00	15.37	3	Vertical	343	1.49	-	27.63	4.00	-
PK	2.4596G	111.36	Inf	-Inf	79.91	3	Vertical	343	1.49	-	27.42	4.03	-
AV	2.4408G	107.54	Inf	-Inf	76.04	3	Vertical	343	1.49	-	27.48	4.02	-
PK	2.484G	66.56	74.00	-7.44	35.17	3	Vertical	343	1.49	-	27.35	4.04	-
AV	2.4835G	53.95	54.00	-0.05	22.56	3	Vertical	343	1.49	-	27.35	4.04	-

802.11ax HEW40-BF_Nss1,(MCS0)_2TX

2452MHz_TX

06/07/2020



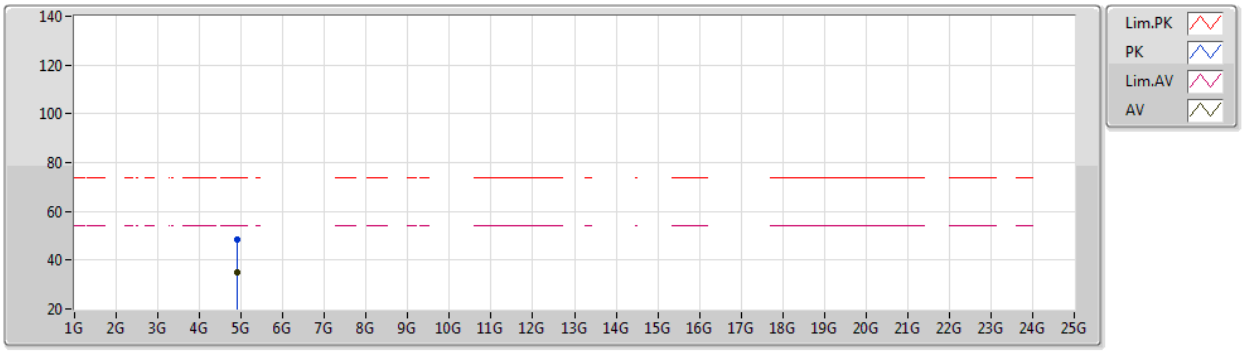
EUT Z_2TX
Setting 61
06-F-S-5

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	4.91316G	47.85	74.00	-26.15	42.87	3	Vertical	235	2.86	-	31.15	5.46	31.63
AV	4.89592G	33.05	54.00	-20.95	28.16	3	Vertical	235	2.86	-	31.10	5.43	31.64

802.11ax HEW40-BF_Nss1,(MCS0)_2TX

2452MHz_TX

06/07/2020



EUT Z_2TX
Setting 61
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	4.9104G	48.42	74.00	-25.58	43.45	3	Horizontal	329	2.74	-	31.14	5.46	31.63
AV	4.9054G	34.84	54.00	-19.16	29.90	3	Horizontal	329	2.74	-	31.12	5.45	31.63