



FCC RADIO TEST REPORT

FCC ID : K7S-03571
Equipment : AX3200 Dual Band Gigabit WiFi 6 Router
Brand Name : LINKSYS
Model Name : E8450, E8420
Applicant : Belkin International, Inc.
12045 East Waterfront Dr. Playa Vista California
United States 90094
Standard : 47 CFR FCC Part 15.247

The product was received on Jun. 22, 2020, and testing was started from Jun. 30, 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 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: Cliff Chang

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



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Photographs of EUT v01



History of this test report

Report No.	Version	Description	Issued Date
FR052055AA	01	Initial issue of report	Aug. 13, 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: **Viola Huang**



1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
2400-2483.5	b, g, n (HT20), VHT20	2412-2462	1-11 [11]
2400-2483.5	n (HT40), VHT40	2422-2452	3-9 [7]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	11b	20	4
2.4-2.4835GHz	11g	20	4
2.4-2.4835GHz	11n HT20	20	4
2.4-2.4835GHz	VHT20	20	4
2.4-2.4835GHz	11n HT40	40	4
2.4-2.4835GHz	VHT40	40	4

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.
- VHT20, VHT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.
- BWch is the nominal channel bandwidth.



1.1.2 Antenna Information

Ant.	Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)		
						2.4G	5G B1	5G B4
1	1	WNC	XKAM-N13	Dipole Antenna	U.FL	3.5	3.6	5.5
2	2	WNC	XKAM-N13	Dipole Antenna	U.FL	4.2	3.8	4.7
3	3	WNC	XKAM-N13	Dipole Antenna	U.FL	4.5	4.0	3.6
4	4	WNC	XKAM-N13	Dipole Antenna	U.FL	2.7	5.1	5.5
Beamforming Gain (dBi)						5.5	5.7	4.8

Note: The above information was declared by manufacturer.

For 2.4GHz function:

IEEE 802.11b/g/n/VHT (4TX/4RX):

Port 1, Port 2, Port 3 and Port 4 can be used as transmitting/receiving antenna.

Port 1, Port 2, Port 3 and Port 4 could transmit/receive simultaneously.

For 5GHz function:

IEEE 802.11a/n/ac/ax (4TX/4RX):

Port 1, Port 2, Port 3 and Port 4 can be used as transmitting/receiving antenna.

Port 1, Port 2, Port 3 and Port 4 could transmit/receive simultaneously.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11b	0.971	0.13	1.026m	1k
802.11g	0.967	0.15	833.75u	3k
VHT20	0.972	0.12	1.058m	1k
VHT40	0.985	0.07	n/a (DC>=0.98)	n/a (DC>=0.98)

Note:

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

1.1.4 EUT Operational Condition

EUT Power Type	From Power Adapter			
Beamforming Function	<input checked="" type="checkbox"/>	With beamforming	<input type="checkbox"/>	Without beamforming
	The product has beamforming function for 11n/11ac/11ax in 5GHz.			
Function	<input checked="" type="checkbox"/>	Point-to-multipoint	<input type="checkbox"/>	Point-to-point
Test Software Version	MT7622 Version 0.0.1.90			

Note: The above information was declared by manufacturer.



1.1.5 Table for Multiple Listing

Model Name	USB Port
E8450	V
E8420	X

From the above models, model: E8450 was selected as representative model for the test and its data was recorded in this report.

1.1.6 Table Information for DDR and NAND Flash

The detail information for DDR and NAND Flash is as following:

Item	DDR		NAND Flash	
	Brand Name	Model Name	Brand Name	Model Name
Main source	Winbond	W634GG6NB-12	Fidelix	FM35Q1GA-IB
Second source	KINGSTON	D2516ECMDXGJD-U	Winbond	W25N01GVZEIG

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

EUT	DDR	NAND Flash
1	Main source	Main source
2	Main source	Second source
3	Second source	Main source
4	Second source	Second source



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		
<input type="checkbox"/>	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
<input checked="" type="checkbox"/>	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	TH01-CB	Serway Li	25.9~27.1°C / 60~62%	Jul. 04, 2020 ~ Jul. 14, 2020
Radiated below 1GHz	03CH05-CB	JN Du	27.3~28.5°C / 58~60%	Jul. 17, 2020
Radiated above 1GHz	03CH04-CB	JN Du	29.4~30.3°C / 40~42%	Jul. 02, 2020 ~ Jul. 03, 2020
Radiated (For co-location)	03CH02-CB	JN Du	26.9~28.4°C / 56~60%	Jul. 20, 2020
AC Conduction	CO01-CB	Ryo Fan	22~23°C / 62~63%	Jun. 30, 2020 ~ Jul. 14, 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

Mode	Power Setting
802.11b_Nss1,(1Mbps)_4TX	-
2412MHz	26
2437MHz	28
2462MHz	24
802.11g_Nss1,(6Mbps)_4TX	-
2412MHz	1D
2417MHz	26
2437MHz	2E
2457MHz	25
2462MHz	1C
VHT20_Nss1,(MCS0)_4TX	-
2412MHz	1D
2417MHz	24
2437MHz	2E
2457MHz	24
2462MHz	1C
VHT40_Nss1,(MCS0)_4TX	-
2422MHz	1E
2437MHz	22
2447MHz	1C
2452MHz	1A

Note:

- ♦ VHT20/VHT40 covers HT20/HT40, due to same modulation. The power setting for 802.11n HT20 and HT40 are the same or lower than 802.11ac VHT20 and VHT40.



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	Normal Link
1	Normal Link-EUT 1 + Adapter 1
2	Normal Link-EUT 1 + Adapter 2
3	Normal Link-EUT 1 + 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



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	EUT 1 + 2.4G + Adapter 1
2	EUT 1 + 2.4G + Adapter 2
3	EUT 1 + 2.4G + Adapter 3
Mode 2 has been evaluated to be the worst case between Mode 1~3, thus measurement for Mode 4 will follow this same test mode.	
4	EUT 1 + 5G + Adapter 2
Mode 2 has been evaluated to be the worst case between Mode 1~4, thus measurement for Mode 5~10 will follow this same test mode.	
5	EUT 2 + 2.4G + Adapter 2
6	EUT 2 + 5G + Adapter 2
7	EUT 3 + 2.4G + Adapter 2
8	EUT 3 + 5G + Adapter 2
9	EUT 4 + 2.4G + Adapter 2
10	EUT 4 + 5G + Adapter 2
For operating mode 10 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Radiated Emission Co-location
Test Condition	Radiated measurement
Operating Mode	Normal Link
1	WLAN 2.4GHz + WLAN 5GHz
Refer to Appendix G for Radiated Emission Co-location.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	WLAN 2.4GHz + WLAN 5GHz
Refer to Sporton Test Report No.: FA052055 for Co-location RF Exposure Evaluation.	

Note: The EUT can only use X axis position.



2.3 EUT Operation during Test

For CTX Mode:

The EUT was programmed to be in continuously transmitting mode.

For Normal Link:

During the test, the EUT operation to normal function.

2.4 Accessories

Accessories				
Equipment Name	Brand Name	Model Name	Rating	Remark
Adapter 1	APD	WB-24J12FU	Input: 100-240V ~ 50-60Hz, 0.7A MAX. Output: 12.0V, 2.0A, (Black)	Fixed adapter with US plug (Black)
Adapter 2	CWT	2AAJ024F	Input: 100-240V ~ 50/60Hz, 0.8A Output: 12.0V, 2.0A, (Black)	Fixed adapter with US plug (Black)
Adapter 3	APD	WB-24J12R	Input: 100-240V ~ 50-60Hz, 0.7A MAX. Output: 12.0V, 2.0A 24.0W, (Black)	Interchangeable adapter with US plug (Black)

2.5 Support Equipment

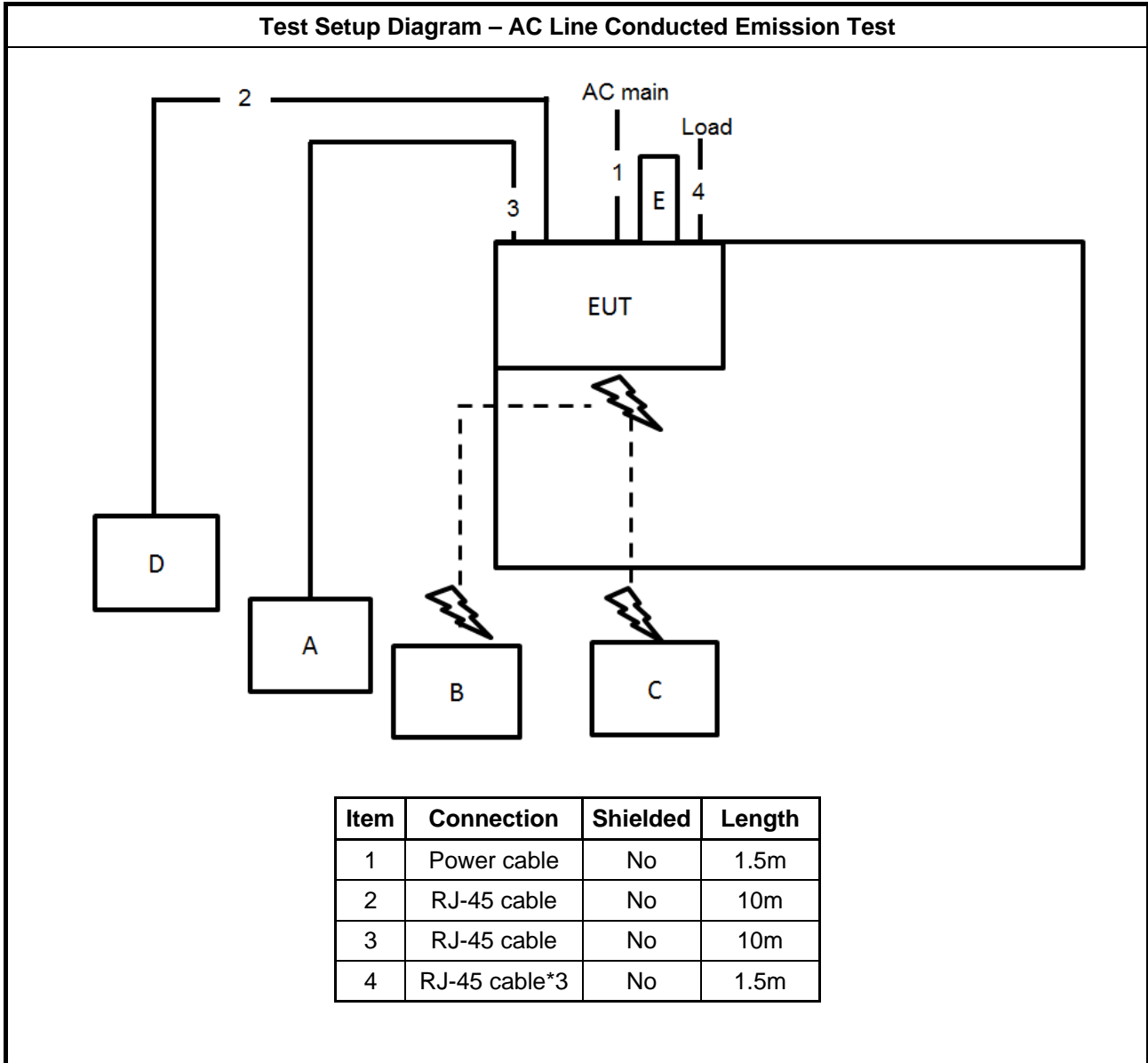
For AC Conduction:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	LAN1 NB	DELL	E6430	N/A
B	2.4G NB	DELL	E6430	N/A
C	5G NB	DELL	E6430	N/A
D	WAN NB	DELL	E6430	N/A
E	Flash disk3.0	Transcend	JetFlash-700	N/A

For Radiated and RF Conducted:

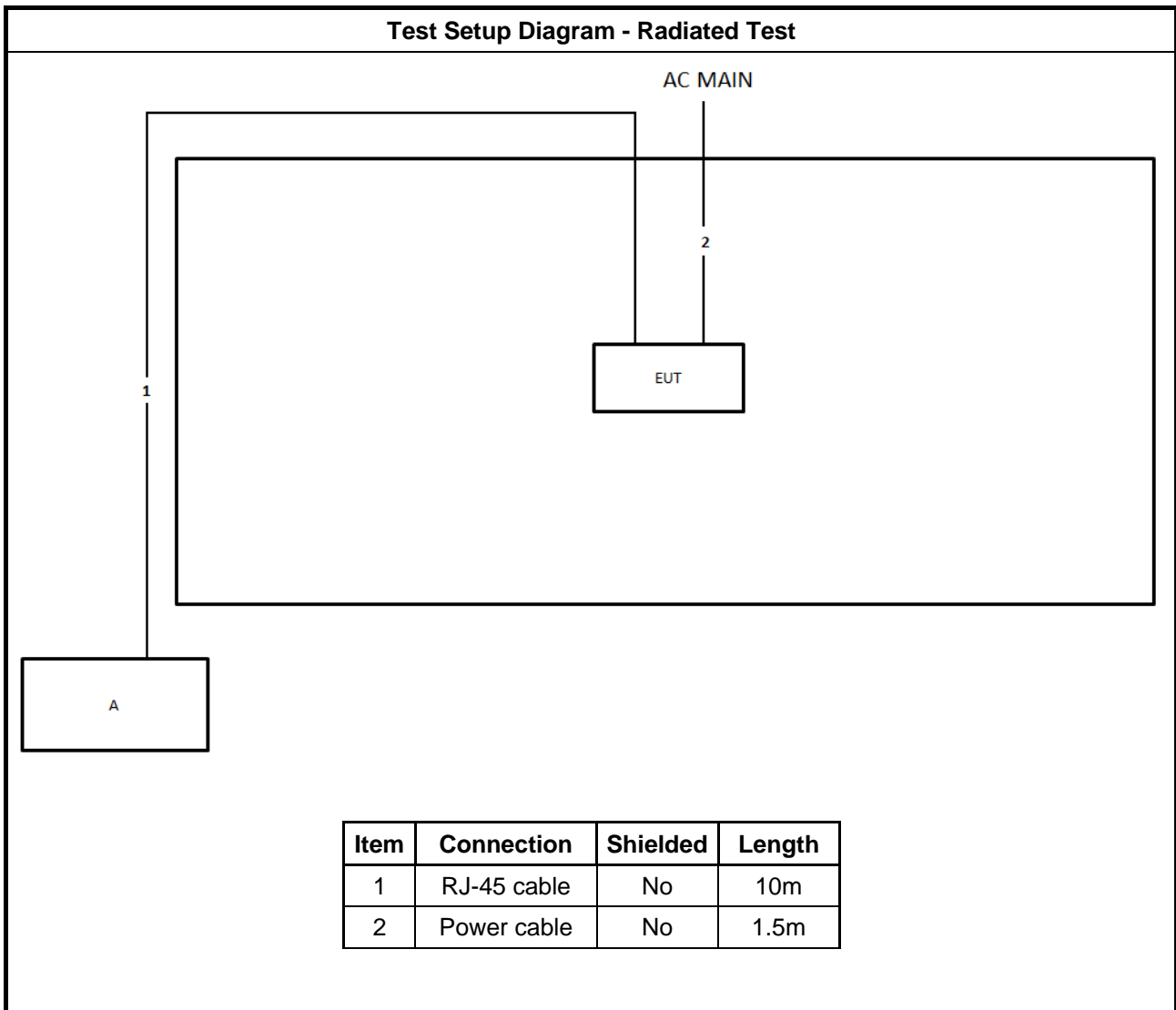
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A

2.6 Test Setup Diagram





Test Setup Diagram - Radiated Test



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



3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

Note 1: * Decreases with the logarithm of the frequency.

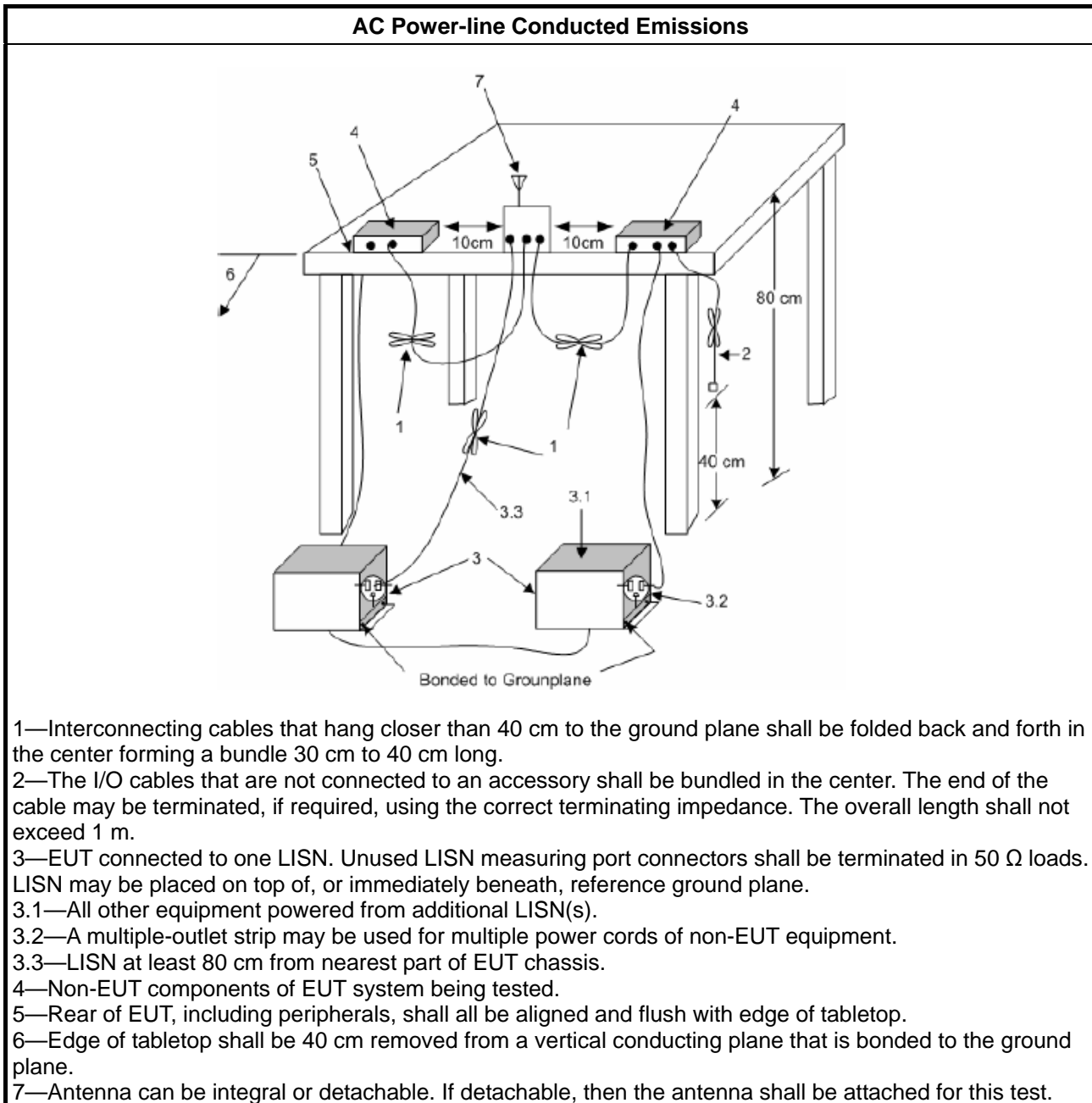
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

Test Method
<input checked="" type="checkbox"/> Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

3.1.4 Test Setup



3.1.5 Measurement Results Calculation

The measured Level is calculated using:

- Corrected Reading (dBuV) = LISN Factor + Cable Loss + Read Level = Level
- 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:
<ul style="list-style-type: none"> ▪ 6 dB bandwidth \geq 500 kHz.

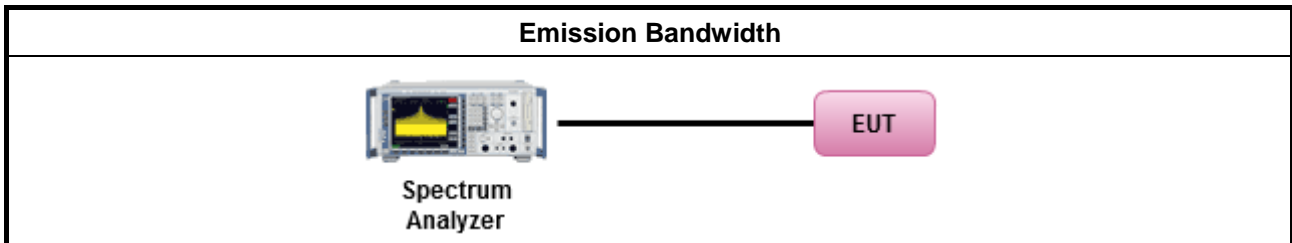
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method
<ul style="list-style-type: none"> ▪ For the emission bandwidth shall be measured using one of the options below:
<input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 8.2 & C63.10 clause 11.8.1 Option 1 for 6 dB bandwidth measurement.
<input type="checkbox"/> Refer as FCC KDB 558074, clause 8.2 & C63.10 clause 11.8.2 Option 2 for 6 dB bandwidth measurement.
<input type="checkbox"/> Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.

3.2.4 Test Setup



3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B



3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit	
	<ul style="list-style-type: none">▪ If $G_{TX} \leq 6$ dBi, then $P_{Out} \leq 30$ dBm (1 W)
	<ul style="list-style-type: none">▪ Point-to-multipoint systems (P2M): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$ dBm
	<ul style="list-style-type: none">▪ Point-to-point systems (P2P): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	<ul style="list-style-type: none">▪ Smart antenna system (SAS):
	<ul style="list-style-type: none">- Single beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	<ul style="list-style-type: none">- Overlap beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	<ul style="list-style-type: none">- Aggregate power on all beams: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3 + 8$ dB dBm
P_{Out} = maximum peak conducted output power or maximum conducted output power in dBm, G_{TX} = the maximum transmitting antenna directional gain in dBi.	

3.3.2 Measuring Instruments

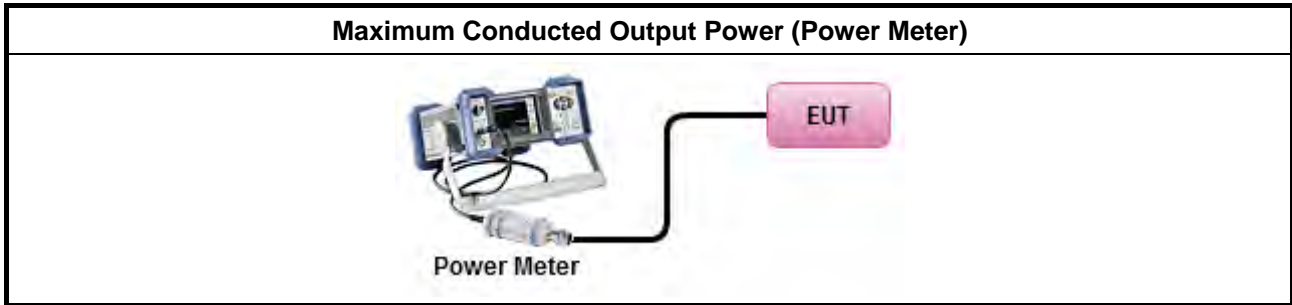
Refer a test equipment and calibration data table in this test report.



3.3.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> ▪ Maximum Peak Conducted Output Power 	
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 8.3.1.1 & C63.10 clause 11.9.1.1 (RBW ≥ EBW method).
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 8.3.1.3 & C63.10 clause 11.9.1.3 (peak power meter).
<ul style="list-style-type: none"> ▪ Maximum Conducted Output Power 	
[duty cycle ≥ 98% or external video / power trigger]	
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.2 Method AVGSA-1.
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.3 Method AVGSA-1A. (alternative)
duty cycle < 98% and average over on/off periods with duty factor	
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.4 Method AVGSA-2.
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.5 Method AVGSA-2A (alternative)
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.6 Method AVGSA-3
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.7 Method AVGSA-3A (alternative)
Measurement using a power meter (PM)	
<input type="checkbox"/>	Refer as FCC KDB 558074, clause 8.3.2.3 & C63.10 clause 11.9.2.3.1 Method AVGPM (using an RF average power meter).
<input checked="" type="checkbox"/>	Refer as FCC KDB 558074, clause 8.3.2.3 & C63.10 clause 11.9.2.3.2 Method AVGPM-G (using an gate RF average power meter).
<ul style="list-style-type: none"> ▪ For conducted measurement. 	
<ul style="list-style-type: none"> ▪ If the EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them. 	
<ul style="list-style-type: none"> ▪ If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$ 	

3.3.4 Test Setup



3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C



3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

Power Spectral Density Limit
<ul style="list-style-type: none"> Power Spectral Density (PSD) \leq 8 dBm/3kHz

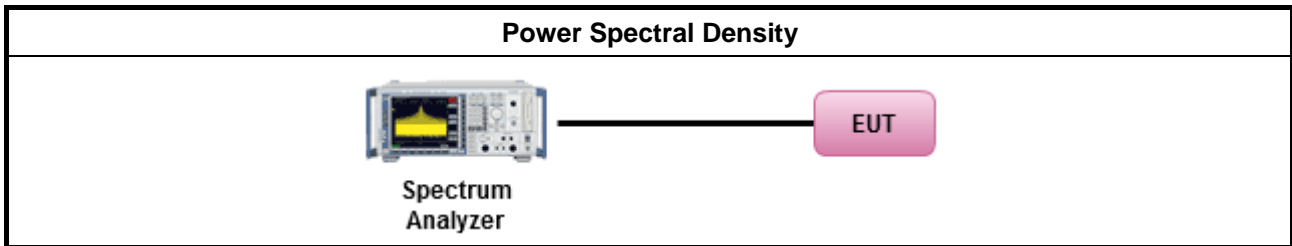
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method			
<ul style="list-style-type: none"> Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option). 			
<input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10 Method Max. PSD.			
<ul style="list-style-type: none"> For conducted measurement. <ul style="list-style-type: none"> If The EUT supports multiple transmit chains using options given below: <table border="1"> <tbody> <tr> <td> <input checked="" type="checkbox"/> Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace. </td> </tr> <tr> <td> <input type="checkbox"/> Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits, </td> </tr> <tr> <td> <input type="checkbox"/> Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit. </td> </tr> </tbody> </table> 	<input checked="" type="checkbox"/> Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.	<input type="checkbox"/> Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits,	<input type="checkbox"/> Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.
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<input type="checkbox"/> Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits,			
<input type="checkbox"/> Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.			

3.4.4 Test Setup



3.4.5 Test Result of Power Spectral Density

Refer as Appendix D

3.5 Emissions in Non-restricted Frequency Bands

3.5.1 Emissions in Non-restricted Frequency Bands Limit

Un-restricted Band Emissions Limit	
RF output power procedure	Limit (dBc)
Peak output power procedure	20
Average output power procedure	30

Note 1: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak PSD level.

Note 2: If the average output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the power in any 100 kHz outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum measured in-band average PSD level.

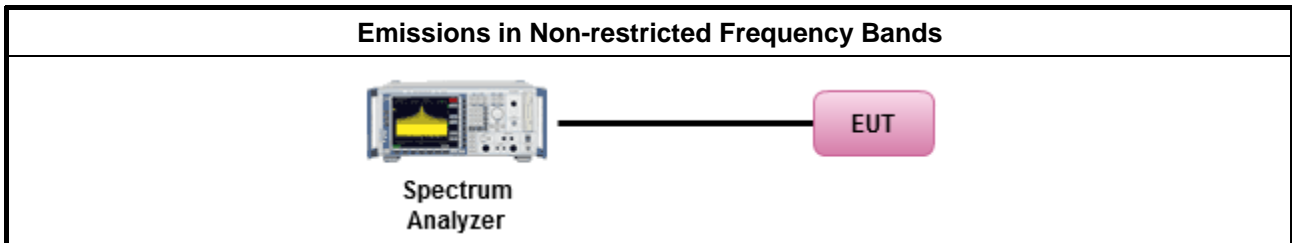
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

Test Method
<ul style="list-style-type: none"> Refer as FCC KDB 558074, clause 8.5 for unwanted emissions into non-restricted bands.

3.5.4 Test Setup



3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix E



3.6 Emissions in Restricted Frequency Bands

3.6.1 Emissions in Restricted Frequency Bands Limit

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

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

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

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

3.6.2 Measuring Instruments

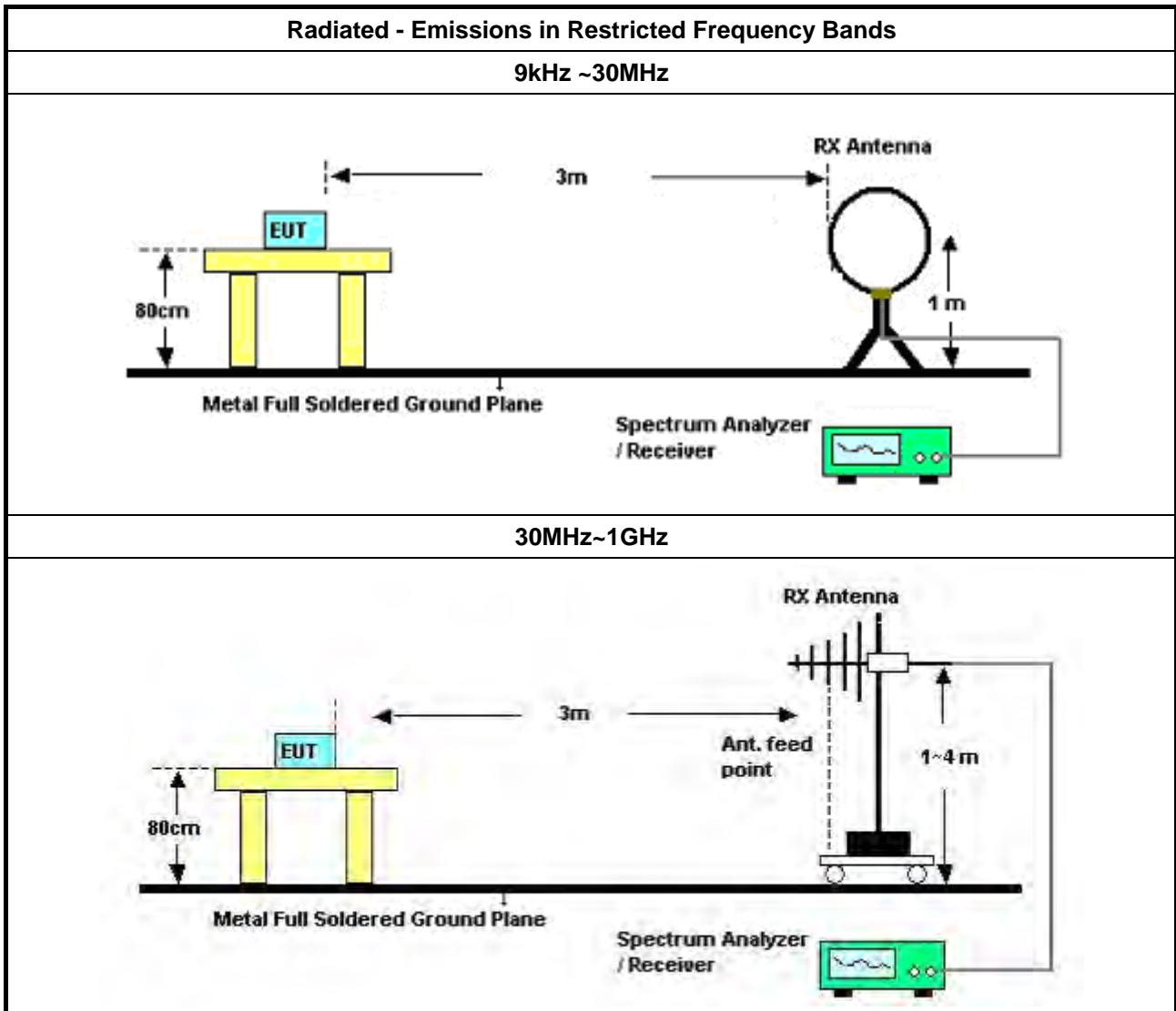
Refer a test equipment and calibration data table in this test report.

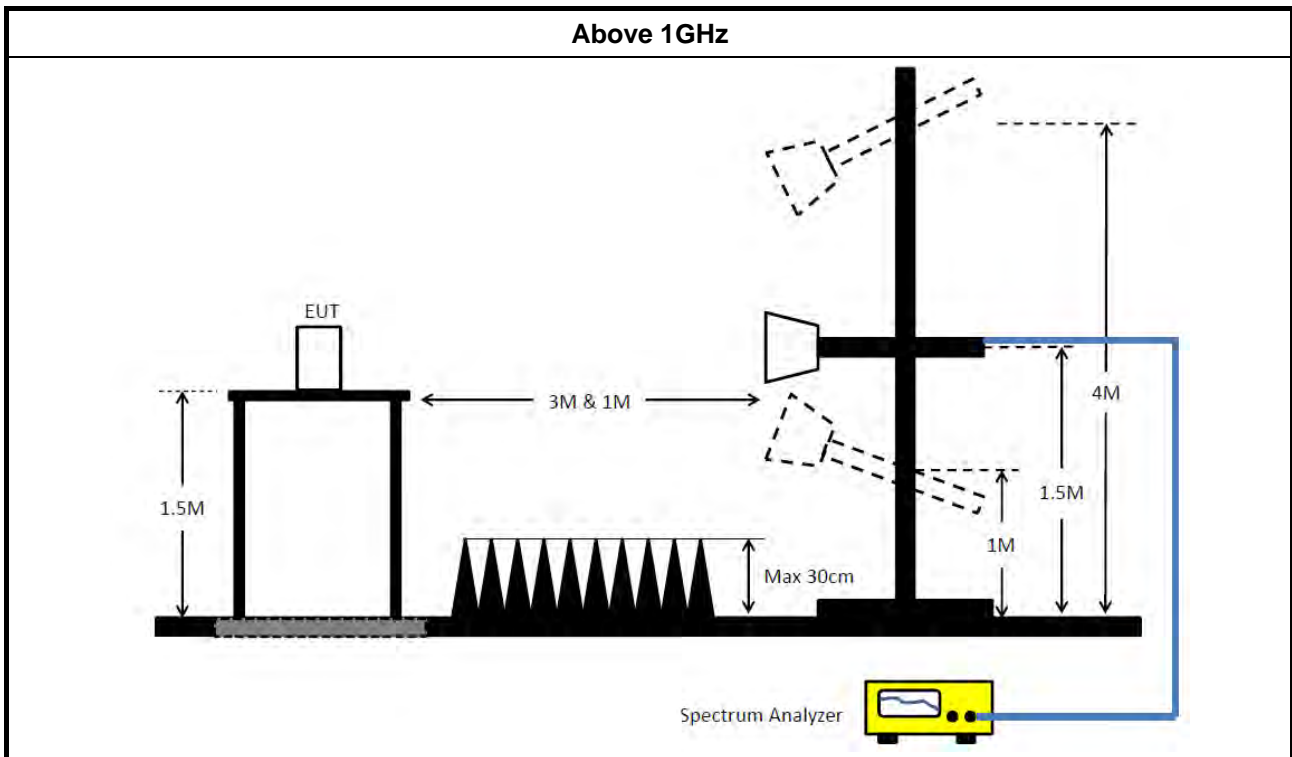


3.6.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> ▪ The average emission levels shall be measured in [duty cycle \geq 98 or duty factor]. 	
<ul style="list-style-type: none"> ▪ Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band. 	
<ul style="list-style-type: none"> ▪ For the transmitter unwanted emissions shall be measured using following options below: 	
	<ul style="list-style-type: none"> ▪ Refer as FCC KDB 558074, clause 8.6 for unwanted emissions into restricted bands.
	<input type="checkbox"/> Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.1(trace averaging for duty cycle \geq 98%).
	<input type="checkbox"/> Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.2(trace averaging + duty factor).
	<input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.3(Reduced VBW \geq 1/T).
	<input type="checkbox"/> Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW \geq 1/T, where T is pulse time.
	<input type="checkbox"/> Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions.
	<input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.4 measurement procedure peak limit.
<ul style="list-style-type: none"> ▪ For the transmitter band-edge emissions shall be measured using following options below: 	
	<ul style="list-style-type: none"> ▪ Refer as FCC KDB 558074 clause 8.7 & C63.10 clause 11.13.1, When the performing peak or average radiated measurements, emissions within 2 MHz of the authorized band edge may be measured using the marker-delta method described below.
	<ul style="list-style-type: none"> ▪ Refer as FCC KDB 558074, clause 8.7 (ANSI C63.10, clause 6.10.6) for marker-delta method for band-edge measurements.
	<ul style="list-style-type: none"> ▪ Refer as FCC KDB 558074, clause 8.7 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).
	<ul style="list-style-type: none"> ▪ For conducted unwanted emissions into restricted bands (absolute emission limits). Devices with multiple transmit chains using options given below: (1) Measure and sum the spectra across the outputs or (2) Measure and add 10 log(N) dB
	<ul style="list-style-type: none"> ▪ For FCC KDB 662911 The methodology described here may overestimate array gain, thereby resulting in apparent failures to satisfy the out-of-band limits even if the device is actually compliant. In such cases, compliance may be demonstrated by performing radiated tests around the frequencies at which the apparent failures occurred.

3.6.4 Test Setup





3.6.5 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Antenna Factor + 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)
Software	Audix	E3	6.120210n	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
Horn Antenna	EMCO	3115	9610-4976	1GHz ~ 18GHz	Apr. 21, 2020	Apr. 20, 2021	Radiation (03CH02-CB)
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170507	15GHz ~ 40GHz	Jun. 11, 2020	Jun. 10, 2021	Radiation (03CH02-CB)
Pre-Amplifier	Agilent	83017A	MY39501305	1GHz ~ 26.5GHz	Jul. 13, 2020	Jul. 12, 2021	Radiation (03CH02-CB)
Amplifier	-	-	TF-130N-R1	18GHz ~ 40GHz	Jun. 19, 2020	Jun. 18, 2021	Radiation (03CH02-CB)
Spectrum Analyzer	R&S	FSP40	100304	9kHz ~ 40GHz	Aug. 15, 2019	Aug. 14, 2020	Radiation (03CH02-CB)
High Cable	Woken	RG402	High Cable-18	1GHz ~ 18GHz	Oct. 07, 2019	Oct. 06, 2020	Radiation (03CH02-CB)
High Cable	Woken	RG402	High Cable-18+19	1GHz ~ 18GHz	Oct. 07, 2019	Oct. 06, 2020	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 24, 2019	Jul. 23, 2020	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 24, 2019	Jul. 23, 2020	Radiation (03CH02-CB)
Horn Antenna	ETS · Lindgren	3115	00143147	750MHz~18GHz	Oct. 22, 2019	Oct. 21, 2020	Radiation (03CH04-CB)
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170507	15GHz ~ 40GHz	Jun. 11, 2020	Jun. 10, 2021	Radiation (03CH04-CB)
Pre-Amplifier	Agilent	83017A	MY53270063	0.5GHz ~ 26.5GHz	Mar. 11, 2020	Mar. 10, 2021	Radiation (03CH04-CB)
Amplifier	-	-	TF-130N-R1	18GHz ~ 40GHz	Jun. 19, 2020	Jun. 18, 2021	Radiation (03CH04-CB)
Spectrum Analyzer	R&S	FSP40	100142	9kHz~40GHz	Dec. 18, 2019	Dec. 17, 2020	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-21	1GHz - 18GHz	Feb. 01, 2020	Jan. 31, 2021	Radiation (03CH04-CB)



Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-21+22	1GHz - 18GHz	Feb. 01, 2020	Jan. 31, 2021	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 24, 2019	Jul. 23, 2020	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 24, 2019	Jul. 23, 2020	Radiation (03CH04-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)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	May 05, 2020	May 04, 2021	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz – 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz –26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz –26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz –26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-28	1 GHz –26.5 GHz	Nov. 18, 2019	Nov. 17, 2020	Conducted (TH01-CB)
Power Sensor	Agilent	E9327A	US40442088	50MHz~18GHz	Feb. 07, 2020	Feb. 06, 2021	Conducted (TH01-CB)
Power Meter	Agilent	E4416A	GB41291199	50MHz~18GHz	Feb. 07, 2020	Feb. 06, 2021	Conducted (TH01-CB)

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

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



Summary

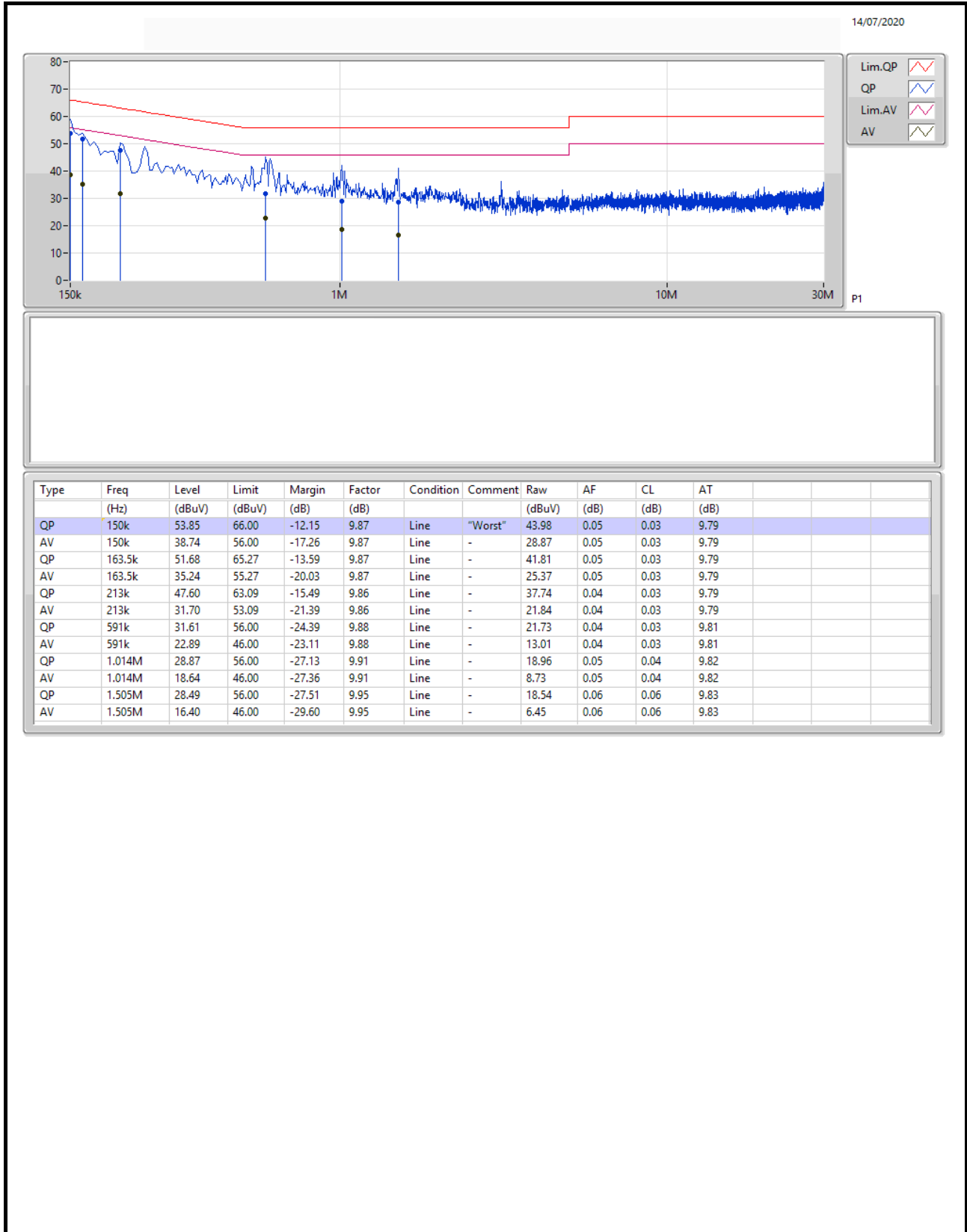
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition
Mode 3	Pass	QP	150k	54.18	66.00	-11.82	9.86	Neutral

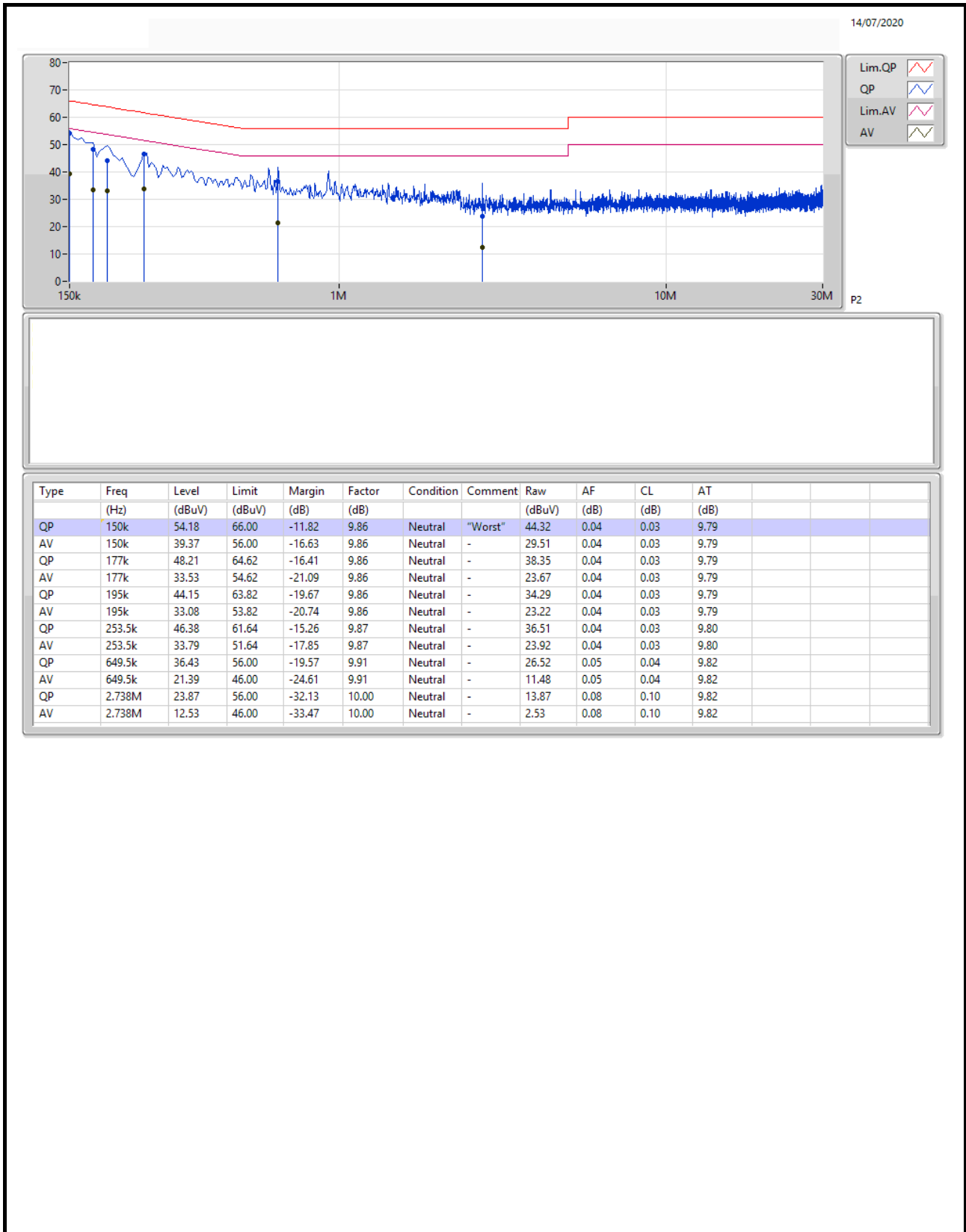


AC Power Port Conducted Emission Result

Appendix A

Test Mode: Mode 3







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)_4TX	10.05M	16.242M	16M2G1D	9.025M	14.043M
802.11g_Nss1,(6Mbps)_4TX	15.125M	19.54M	19M5D1D	15.05M	16.417M
VHT20_Nss1,(MCS0)_4TX	16.275M	21.439M	21M4D1D	14.975M	17.491M
VHT40_Nss1,(MCS0)_4TX	35.1M	36.182M	36M2D1D	30.1M	36.032M

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

Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11b_Nss1,(1Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	10.025M	14.518M	9.55M	14.743M	9.55M	14.743M	9.525M	14.468M
2437MHz	Pass	500k	9.55M	15.667M	9.55M	16.242M	10.05M	16.217M	9.55M	15.617M
2462MHz	Pass	500k	9.075M	14.043M	9.025M	14.043M	9.025M	14.168M	9.525M	14.043M
802.11g_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	15.075M	16.542M	15.125M	16.542M	15.075M	16.592M	15.1M	16.442M
2437MHz	Pass	500k	15.05M	18.466M	15.075M	18.091M	15.125M	17.616M	15.075M	19.54M
2462MHz	Pass	500k	15.1M	16.492M	15.1M	16.442M	15.075M	16.442M	15.05M	16.417M
VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	15.075M	17.566M	16.275M	17.516M	14.975M	17.541M	15.05M	17.516M
2437MHz	Pass	500k	15.1M	19.315M	15.1M	19.84M	15.125M	18.741M	15.075M	21.439M
2462MHz	Pass	500k	14.975M	17.516M	15.075M	17.491M	15.075M	17.541M	15.05M	17.516M
VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	500k	35.1M	36.182M	35.05M	36.082M	35.1M	36.032M	32.5M	36.132M
2437MHz	Pass	500k	35.05M	36.182M	34.4M	36.132M	30.1M	36.132M	33.8M	36.182M
2452MHz	Pass	500k	35.05M	36.132M	35M	36.082M	33.75M	36.082M	35M	36.132M

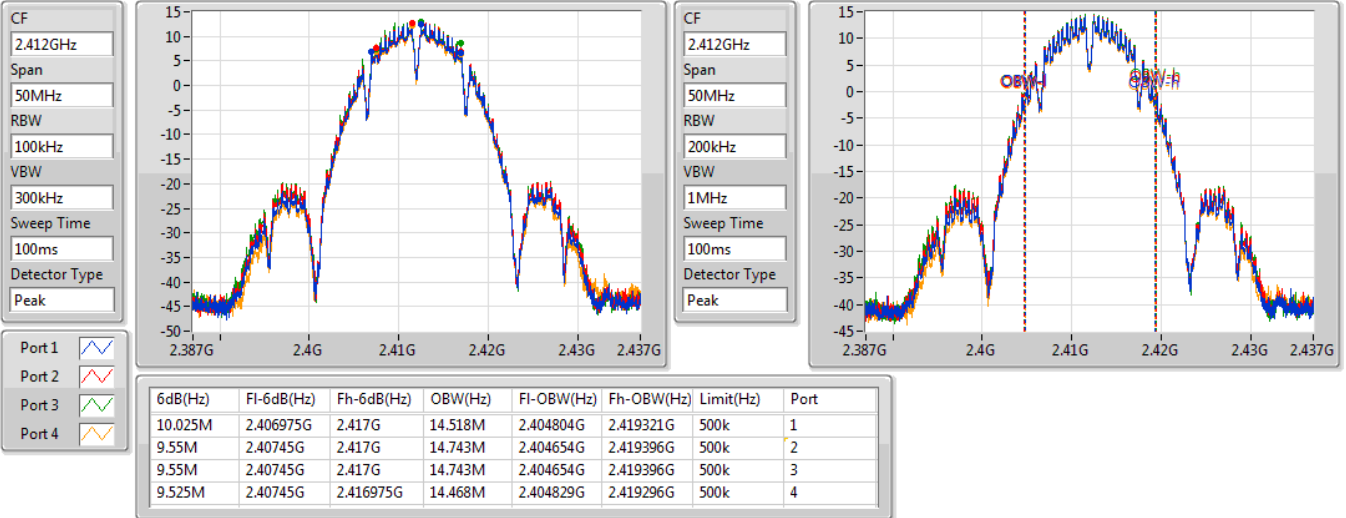
Port X-N dB = Port X 6dB down bandwidth; Port X-OBW = Port X 99% occupied bandwidth;

802.11b_Nss1,(1Mbps)_4TX

EBW

2412MHz

04/07/2020

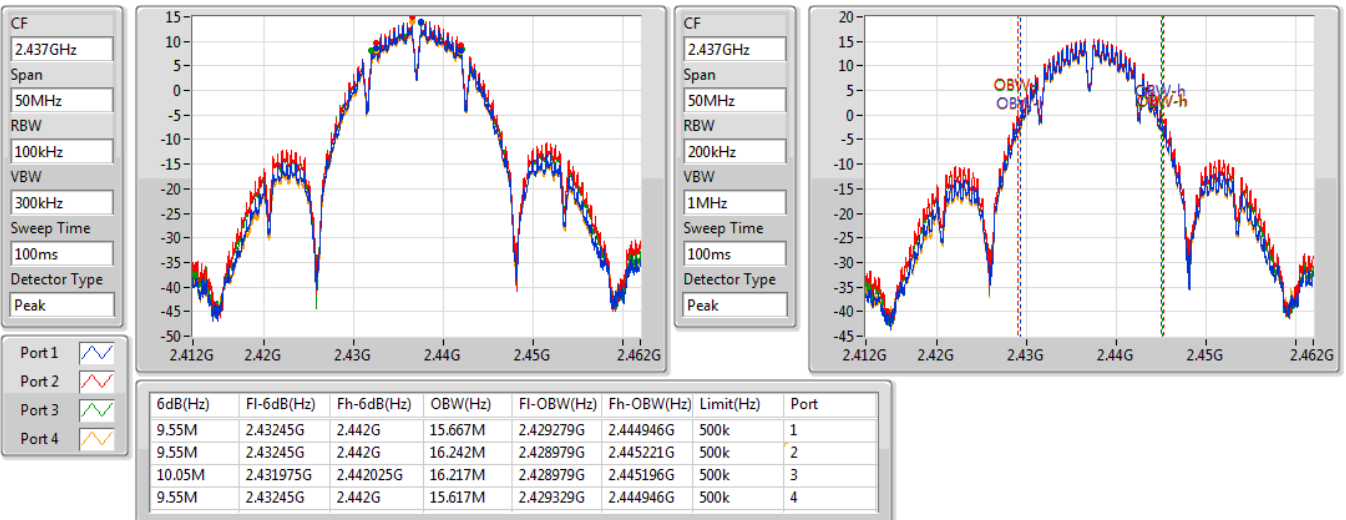


802.11b_Nss1,(1Mbps)_4TX

EBW

2437MHz

04/07/2020



802.11b_Nss1,(1Mbps)_4TX

EBW

2462MHz

04/07/2020

CF
2.462GHz

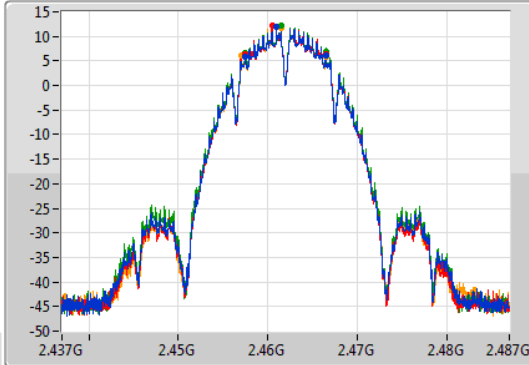
Span
50MHz

RBW
100kHz

VBW
300kHz

Sweep Time
100ms

Detector Type
Peak



CF
2.462GHz

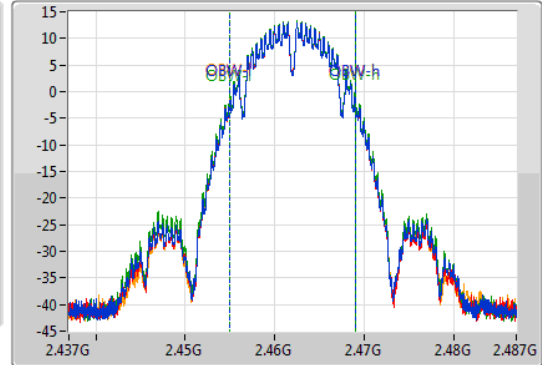
Span
50MHz

RBW
200kHz

VBW
1MHz

Sweep Time
100ms

Detector Type
Peak



Port 1

Port 2

Port 3

Port 4

6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
9.075M	2.45745G	2.466525G	14.043M	2.454979G	2.469021G	500k	1
9.025M	2.457475G	2.4665G	14.043M	2.454979G	2.469021G	500k	2
9.025M	2.457475G	2.4665G	14.168M	2.454904G	2.469071G	500k	3
9.525M	2.457G	2.466525G	14.043M	2.454979G	2.469021G	500k	4

802.11g_Nss1,(6Mbps)_4TX

EBW

2412MHz

04/07/2020

CF
2.412GHz

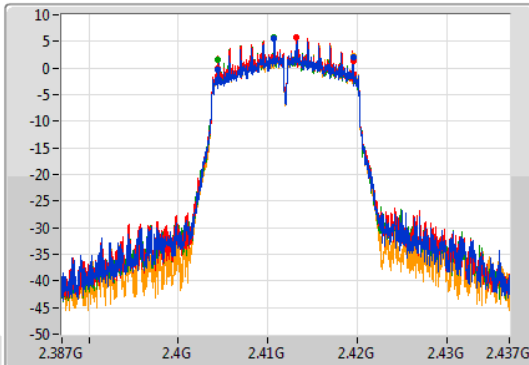
Span
50MHz

RBW
100kHz

VBW
300kHz

Sweep Time
100ms

Detector Type
Peak



CF
2.412GHz

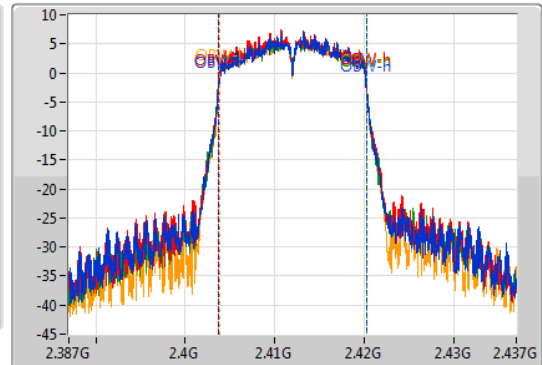
Span
50MHz

RBW
200kHz

VBW
1MHz

Sweep Time
100ms

Detector Type
Peak



Port 1

Port 2

Port 3

Port 4

6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.075M	2.40445G	2.419525G	16.542M	2.403729G	2.420271G	500k	1
15.125M	2.404425G	2.41955G	16.542M	2.403729G	2.420271G	500k	2
15.075M	2.40445G	2.419525G	16.592M	2.403704G	2.420296G	500k	3
15.1M	2.404425G	2.419525G	16.442M	2.403804G	2.420246G	500k	4

802.11g_Nss1,(6Mbps)_4TX

EBW

2437MHz

04/07/2020

CF
2.437GHz

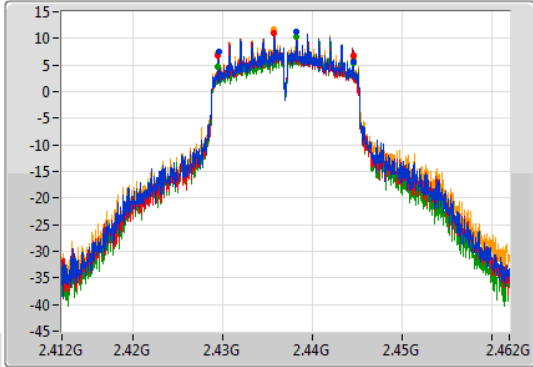
Span
50MHz

RBW
100kHz

VBW
300kHz

Sweep Time
100ms

Detector Type
Peak



CF
2.437GHz

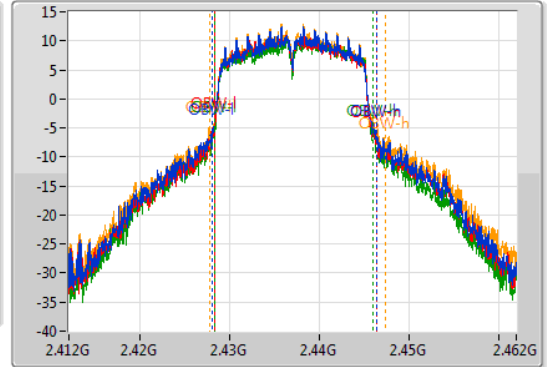
Span
50MHz

RBW
200kHz

VBW
1MHz

Sweep Time
100ms

Detector Type
Peak



Port 1

Port 2

Port 3

Port 4

6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.05M	2.4295G	2.44455G	18.466M	2.427955G	2.44642G	500k	1
15.075M	2.42945G	2.444525G	18.091M	2.428254G	2.446345G	500k	2
15.125M	2.429425G	2.44455G	17.616M	2.428304G	2.445921G	500k	3
15.075M	2.429475G	2.44455G	19.54M	2.42778G	2.44732G	500k	4

802.11g_Nss1,(6Mbps)_4TX

EBW

2462MHz

04/07/2020

CF
2.462GHz

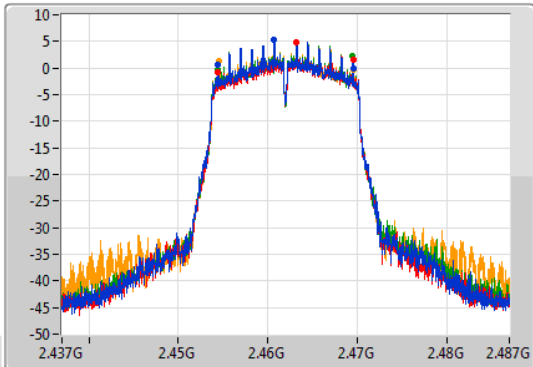
Span
50MHz

RBW
100kHz

VBW
300kHz

Sweep Time
100ms

Detector Type
Peak



CF
2.462GHz

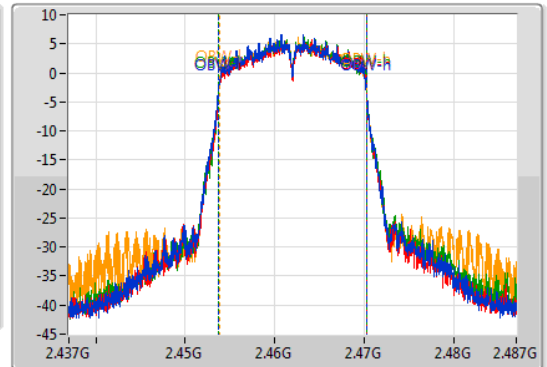
Span
50MHz

RBW
200kHz

VBW
1MHz

Sweep Time
100ms

Detector Type
Peak



Port 1

Port 2

Port 3

Port 4

6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.1M	2.45445G	2.46955G	16.492M	2.453729G	2.470221G	500k	1
15.1M	2.454425G	2.469525G	16.442M	2.453779G	2.470221G	500k	2
15.075M	2.454425G	2.4695G	16.442M	2.453779G	2.470221G	500k	3
15.05M	2.4545G	2.46955G	16.417M	2.453804G	2.470221G	500k	4

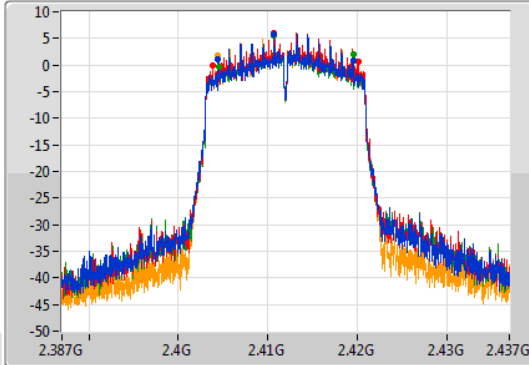
VHT20_Nss1,(MCS0)_4TX

EBW

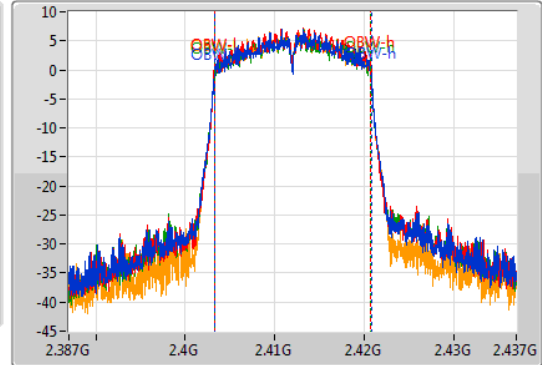
2412MHz

04/07/2020

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



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



Port 1
Port 2
Port 3
Port 4

6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.075M	2.404475G	2.41955G	17.566M	2.403229G	2.420796G	500k	1
16.275M	2.40385G	2.420125G	17.516M	2.403254G	2.420771G	500k	2
14.975M	2.40455G	2.419525G	17.541M	2.403229G	2.420771G	500k	3
15.05M	2.404475G	2.419525G	17.516M	2.403229G	2.420746G	500k	4

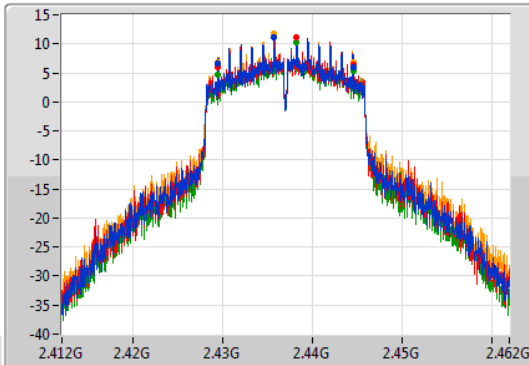
VHT20_Nss1,(MCS0)_4TX

EBW

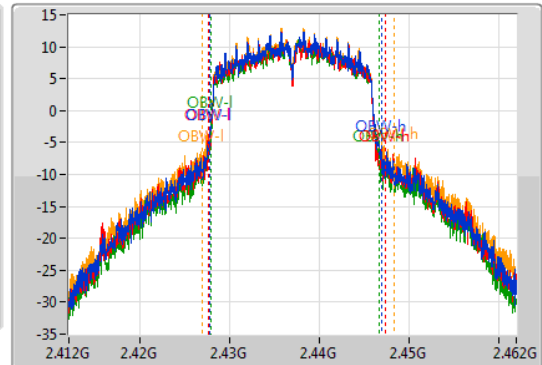
2437MHz

04/07/2020

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



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



Port 1
Port 2
Port 3
Port 4

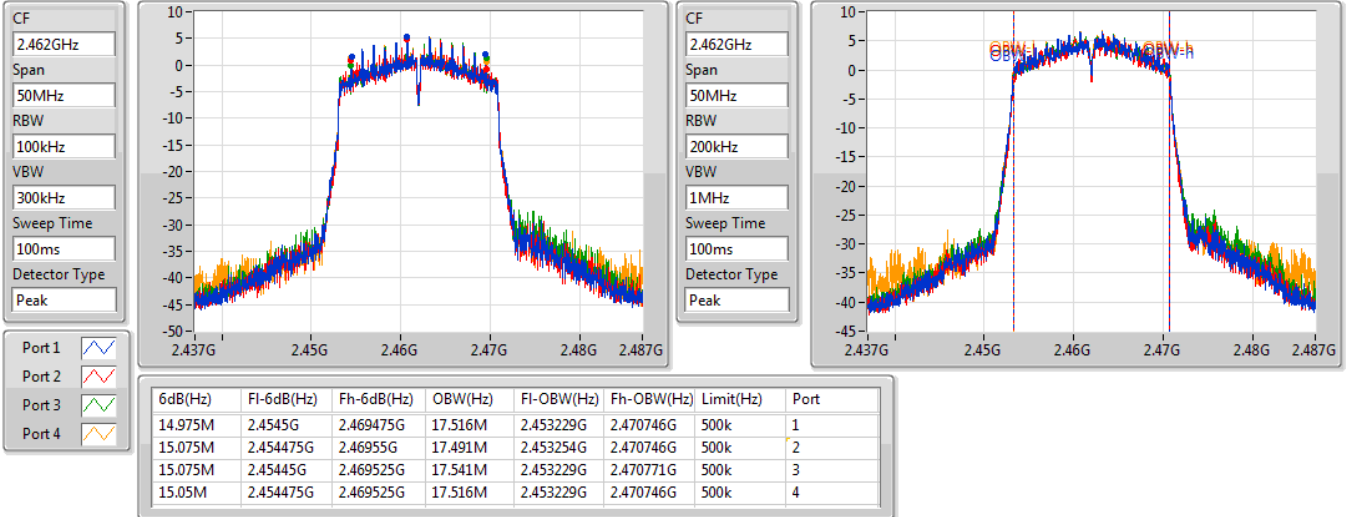
6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.1M	2.42945G	2.44455G	19.315M	2.42768G	2.446995G	500k	1
15.1M	2.42945G	2.44455G	19.84M	2.427555G	2.447395G	500k	2
15.125M	2.429425G	2.44455G	18.741M	2.427905G	2.446645G	500k	3
15.075M	2.42945G	2.444525G	21.439M	2.426855G	2.448294G	500k	4

VHT20_Nss1,(MCS0)_4TX

EBW

2462MHz

04/07/2020

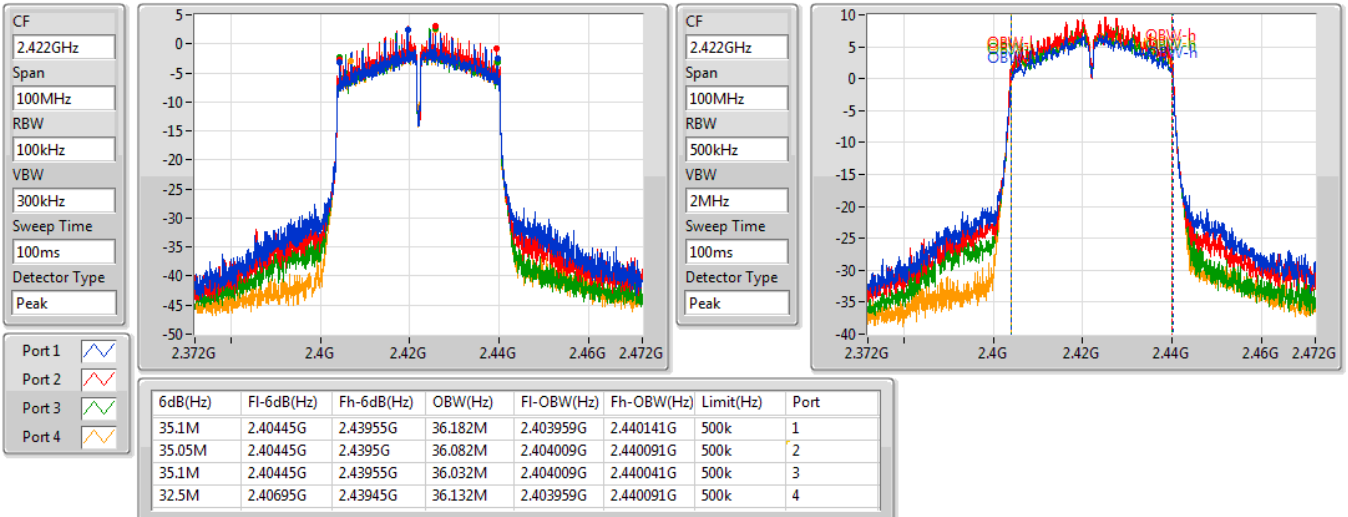


VHT40_Nss1,(MCS0)_4TX

EBW

2422MHz

04/07/2020



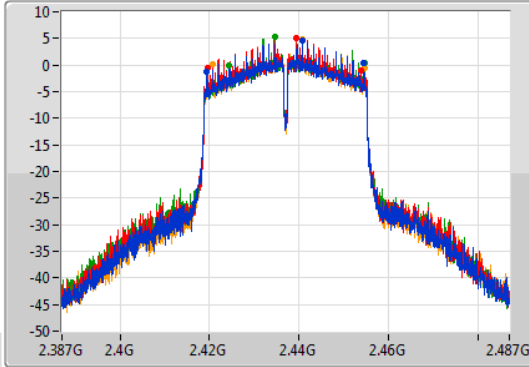
VHT40_Nss1,(MCS0)_4TX

EBW

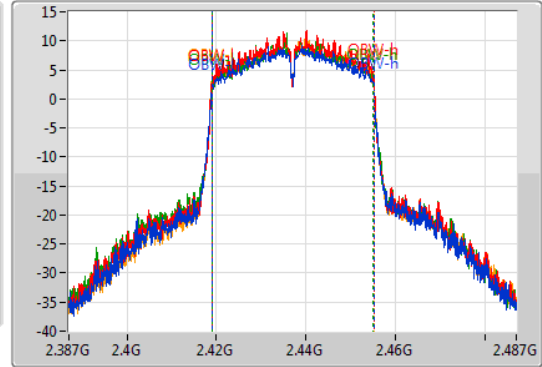
2437MHz

04/07/2020

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



CF
2.437GHz
Span
100MHz
RBW
500kHz
VBW
2MHz
Sweep Time
100ms
Detector Type
Peak



Port 1
Port 2
Port 3
Port 4

6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
35.05M	2.41945G	2.4545G	36.182M	2.418959G	2.455141G	500k	1
34.4M	2.4195G	2.4539G	36.132M	2.419009G	2.455141G	500k	2
30.1M	2.42445G	2.45455G	36.132M	2.418959G	2.455091G	500k	3
33.8M	2.42075G	2.45455G	36.182M	2.418959G	2.455141G	500k	4

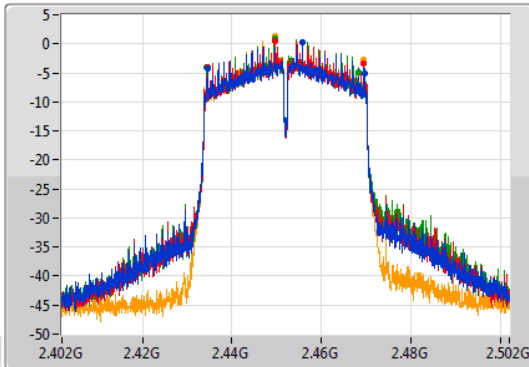
VHT40_Nss1,(MCS0)_4TX

EBW

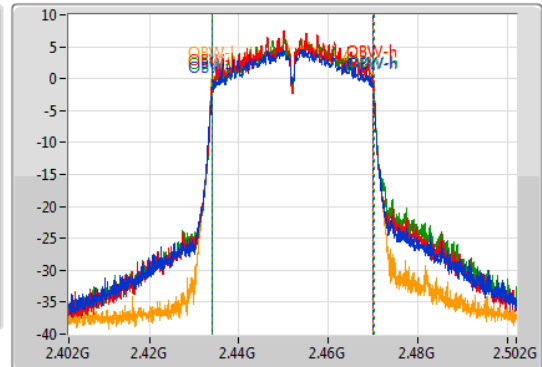
2452MHz

04/07/2020

CF
2.452GHz
Span
100MHz
RBW
100kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak



CF
2.452GHz
Span
100MHz
RBW
500kHz
VBW
2MHz
Sweep Time
100ms
Detector Type
Peak



Port 1
Port 2
Port 3
Port 4

6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
35.05M	2.4345G	2.46955G	36.132M	2.433959G	2.470091G	500k	1
35M	2.4345G	2.4695G	36.082M	2.434009G	2.470091G	500k	2
33.75M	2.43445G	2.4682G	36.082M	2.434059G	2.470141G	500k	3
35M	2.4345G	2.4695G	36.132M	2.433909G	2.470041G	500k	4



Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_4TX	29.97	0.99312
802.11g_Nss1,(6Mbps)_4TX	27.28	0.53456
VHT20_Nss1,(MCS0)_4TX	27.32	0.53951
VHT40_Nss1,(MCS0)_4TX	23.89	0.24491



Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	4.50	22.57	22.74	22.82	22.04	28.57	30.00
2437MHz	Pass	4.50	23.68	24.43	24.16	23.46	29.97	30.00
2462MHz	Pass	4.50	21.18	21.06	21.55	21.38	27.32	30.00
802.11g_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	4.50	16.24	16.65	16.42	16.28	22.42	30.00
2417MHz	Pass	4.50	20.63	20.70	20.24	20.60	26.57	30.00
2437MHz	Pass	4.50	21.35	21.20	20.76	21.69	27.28	30.00
2457MHz	Pass	4.50	20.10	19.95	20.34	19.67	26.04	30.00
2462MHz	Pass	4.50	15.69	15.39	15.78	15.82	21.69	30.00
VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	4.50	16.16	16.36	16.25	16.15	22.25	30.00
2417MHz	Pass	4.50	19.43	19.97	19.45	19.49	25.61	30.00
2437MHz	Pass	4.50	21.33	21.29	20.89	21.64	27.32	30.00
2457MHz	Pass	4.50	19.65	19.50	19.77	19.67	25.67	30.00
2462MHz	Pass	4.50	15.55	15.47	15.79	15.71	21.65	30.00
VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
2422MHz	Pass	4.50	15.73	16.23	15.72	15.81	21.90	30.00
2437MHz	Pass	4.50	17.83	18.11	17.87	17.67	23.89	30.00
2447MHz	Pass	4.50	14.56	14.74	15.03	14.68	20.78	30.00
2452MHz	Pass	4.50	13.61	13.58	13.95	13.77	19.75	30.00

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



Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_4TX	3.09
802.11g_Nss1,(6Mbps)_4TX	-0.61
VHT20_Nss1,(MCS0)_4TX	-0.53
VHT40_Nss1,(MCS0)_4TX	-6.33

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)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	5.50	-3.37	-1.43	-2.27	-3.19	2.92	8.00
2437MHz	Pass	5.50	-1.07	-2.60	-0.97	-2.94	3.09	8.00
2462MHz	Pass	5.50	-3.30	-3.05	-4.26	-3.39	1.89	8.00
802.11g_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	5.50	-10.48	-9.98	-9.88	-8.72	-5.32	8.00
2437MHz	Pass	5.50	-4.92	-4.66	-5.54	-2.65	-0.61	8.00
2462MHz	Pass	5.50	-10.77	-10.47	-11.08	-10.31	-6.06	8.00
VHT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	5.50	-10.39	-9.51	-9.70	-8.85	-5.46	8.00
2437MHz	Pass	5.50	-5.50	-4.39	-5.86	-4.82	-0.53	8.00
2462MHz	Pass	5.50	-10.79	-10.34	-10.61	-10.65	-6.25	8.00
VHT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
2422MHz	Pass	5.50	-13.04	-13.30	-12.29	-12.51	-7.72	8.00
2437MHz	Pass	5.50	-10.87	-11.65	-10.91	-11.64	-6.33	8.00
2452MHz	Pass	5.50	-14.57	-15.52	-15.84	-14.72	-10.52	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;

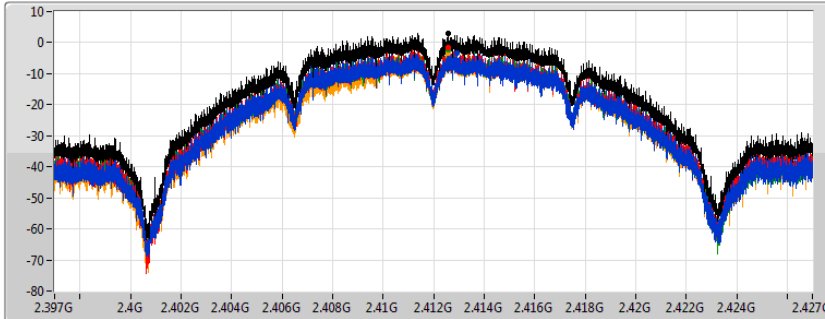
802.11b_Nss1,(1Mbps)_4TX

PSD

2412MHz

04/07/2020

CF
2.412GHz
Span
30MHz
RBW
3kHz
VBW
10kHz
Sweep Time
4.424357ms
Detector Type
Peak



Sum
Port 1
Port 2
Port 3
Port 4

Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.92	2.92	-3.37	-1.43	-2.27	-3.19

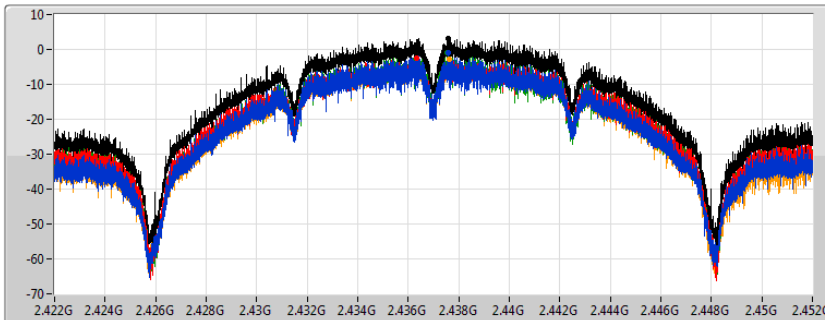
802.11b_Nss1,(1Mbps)_4TX

PSD

2437MHz

04/07/2020

CF
2.437GHz
Span
30MHz
RBW
3kHz
VBW
10kHz
Sweep Time
4.424357ms
Detector Type
Peak



Sum
Port 1
Port 2
Port 3
Port 4

Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.09	3.09	-1.07	-2.60	-0.97	-2.94

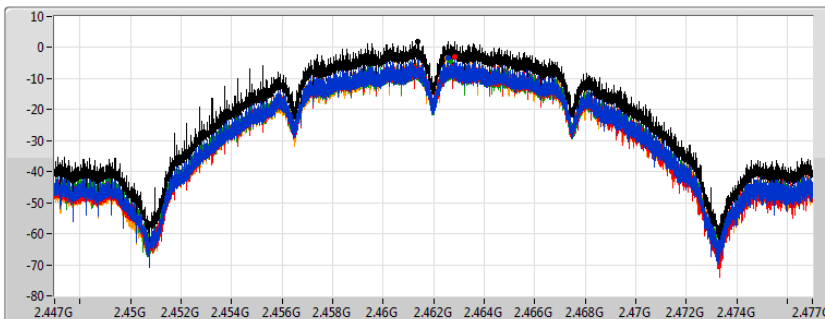
802.11b_Nss1,(1Mbps)_4TX

PSD

2462MHz

04/07/2020

CF
2.462GHz
Span
30MHz
RBW
3kHz
VBW
10kHz
Sweep Time
4.424357ms
Detector Type
Peak



Sum
Port 1
Port 2
Port 3
Port 4

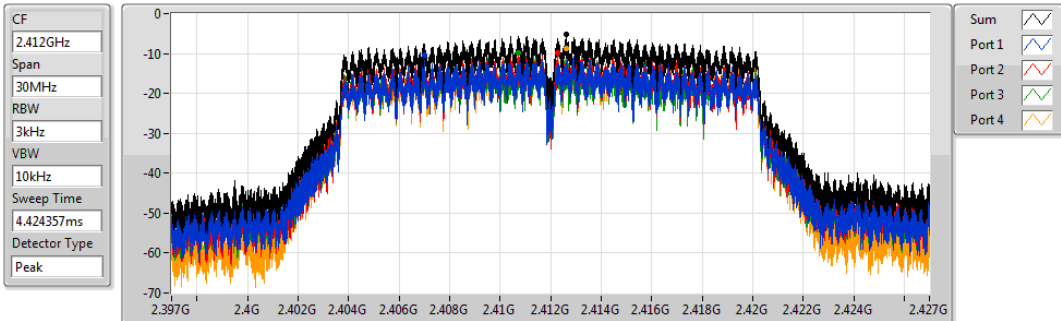
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.89	1.89	-3.30	-3.05	-4.26	-3.39

802.11g_Nss1,(6Mbps)_4TX

PSD

2412MHz

04/07/2020



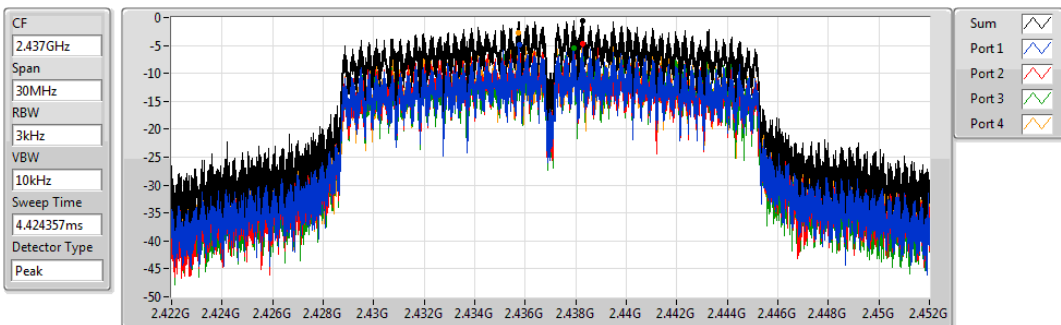
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/100Hz)	(dBm/100Hz)	(dBm/100Hz)	(dBm/100Hz)	(dBm/100Hz)	(dBm/100Hz)
-5.32	-5.32	-10.48	-9.98	-9.88	-8.72

802.11g_Nss1,(6Mbps)_4TX

PSD

2437MHz

04/07/2020



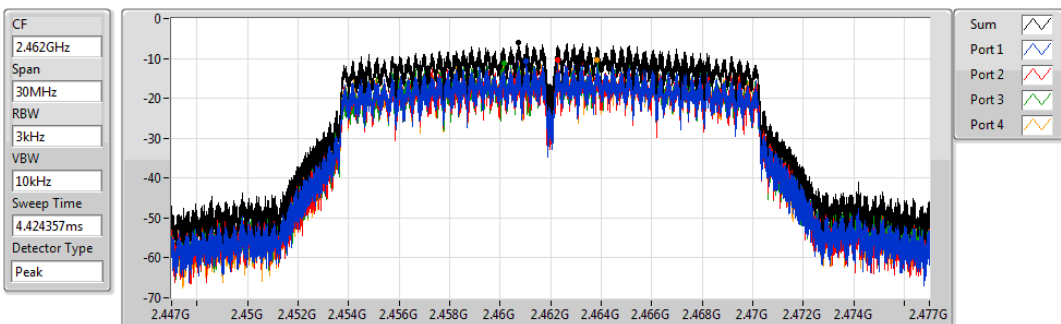
Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/100Hz)	(dBm/100Hz)	(dBm/100Hz)	(dBm/100Hz)	(dBm/100Hz)	(dBm/100Hz)
-0.61	-0.61	-4.92	-4.66	-5.54	-2.65

802.11g_Nss1,(6Mbps)_4TX

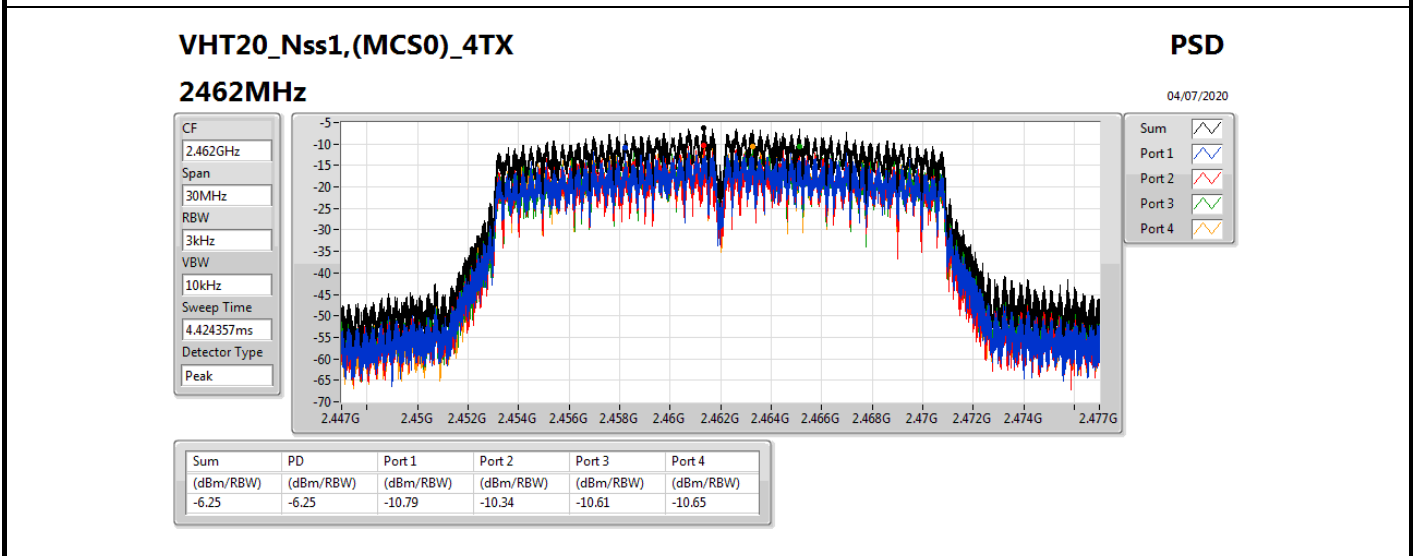
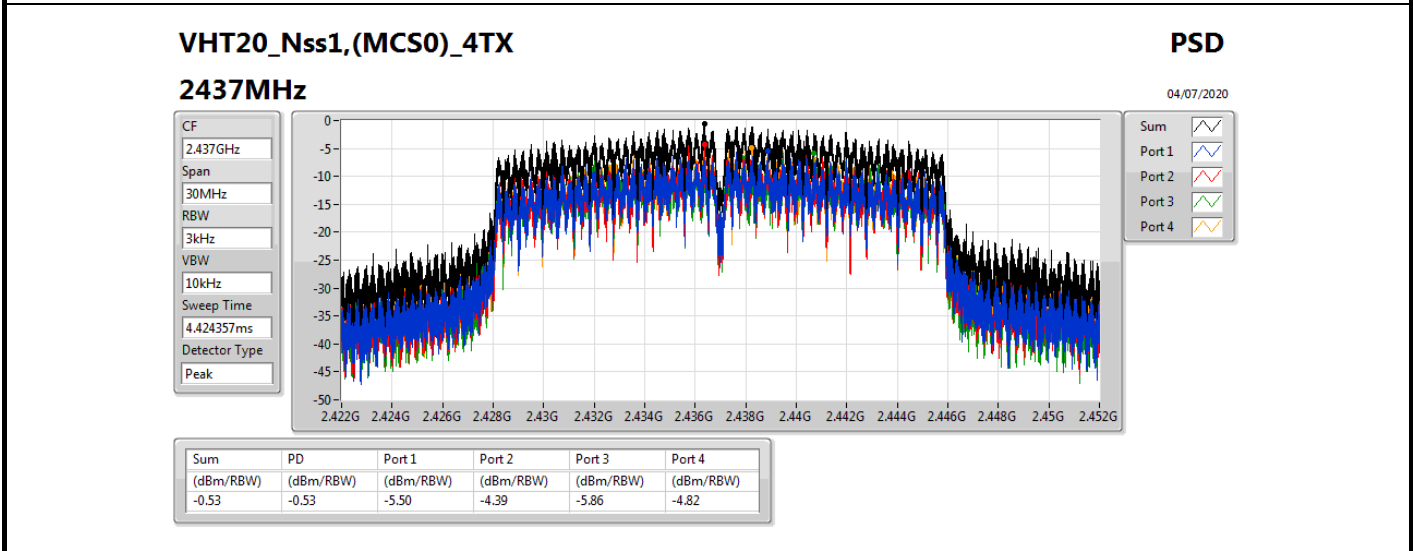
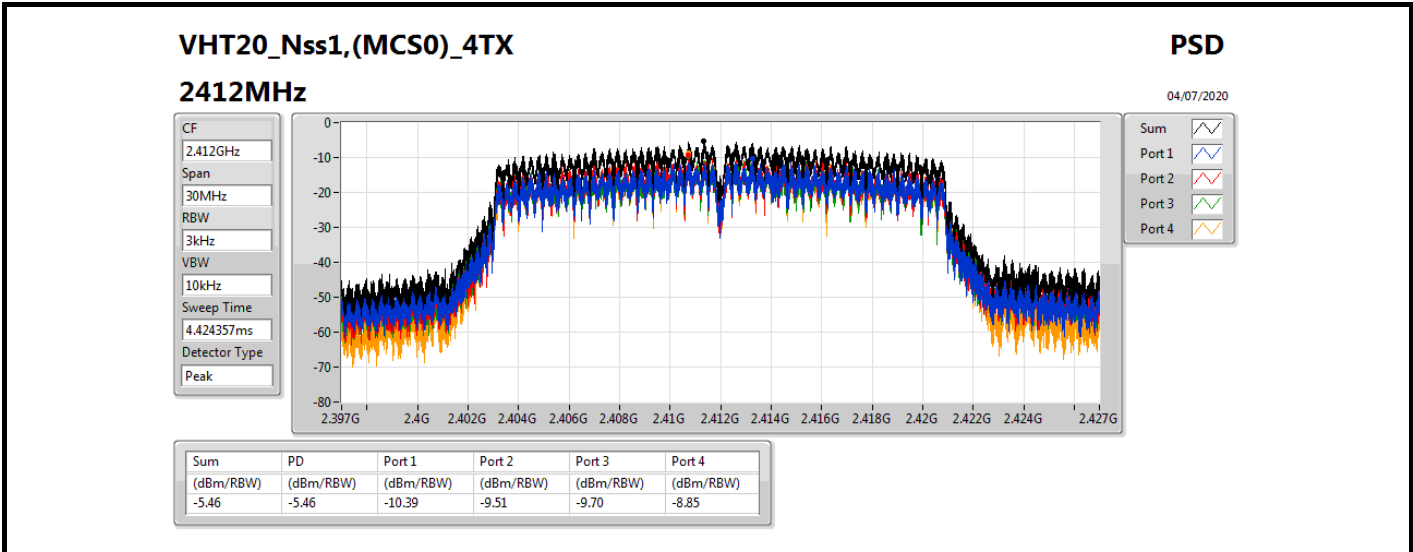
PSD

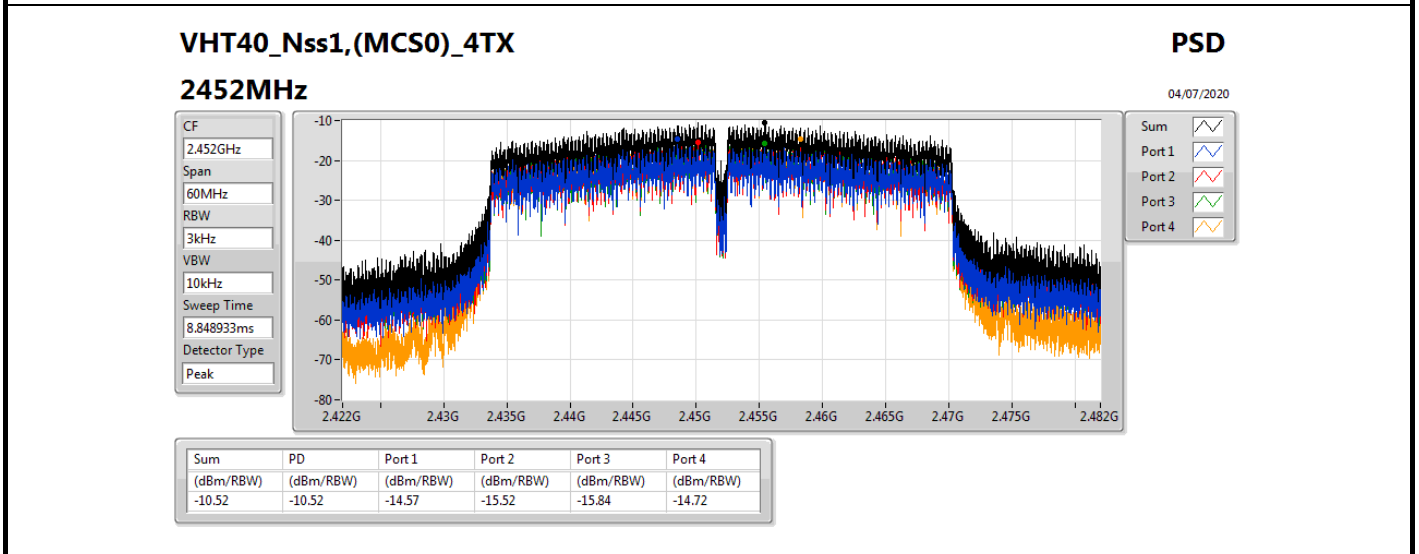
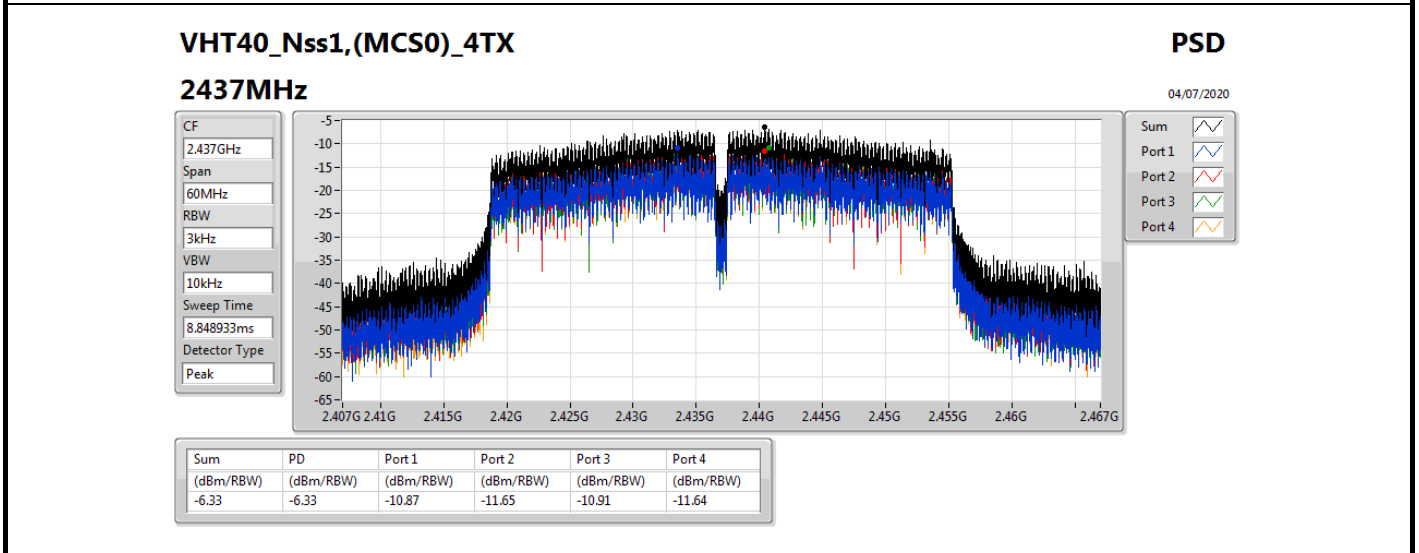
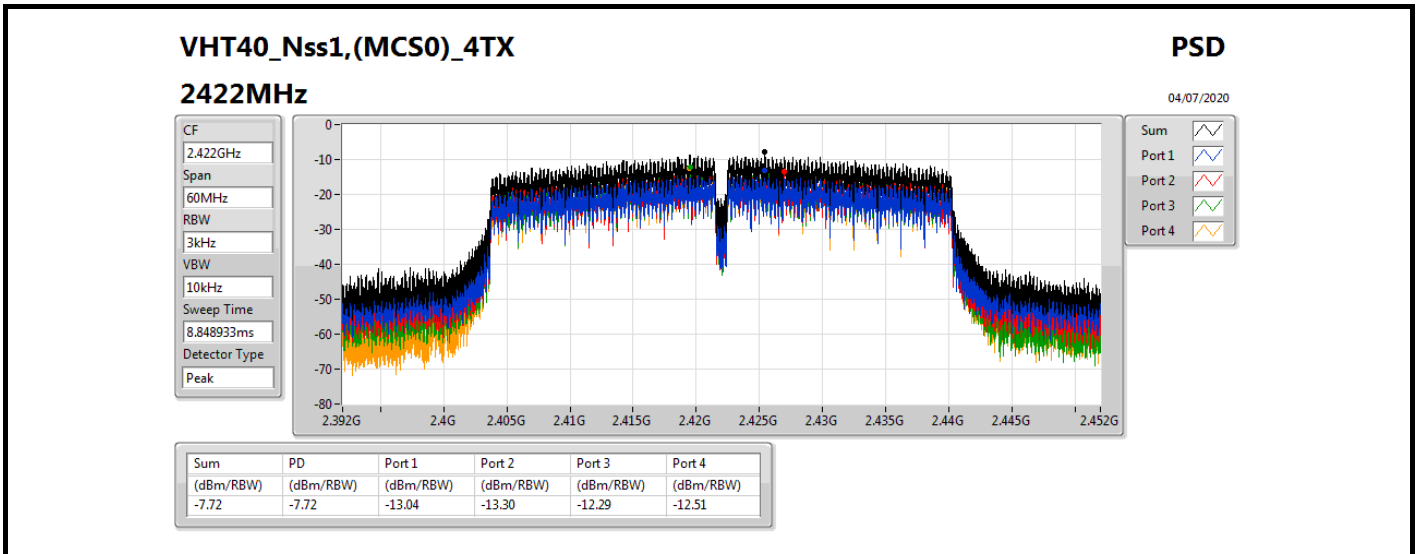
2462MHz

04/07/2020



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/100Hz)	(dBm/100Hz)	(dBm/100Hz)	(dBm/100Hz)	(dBm/100Hz)	(dBm/100Hz)
-6.06	-6.06	-10.77	-10.47	-11.08	-10.31







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)_4TX	Pass	2.43649G	14.43	-15.57	2.09409G	-52.53	2.397G	-19.09	2.4G	-26.12	2.48964G	-50.58	15.27329G	-45.82	2
802.11g_Nss1,(6Mbps)_4TX	Pass	2.4357G	11.66	-18.34	909.28M	-51.46	2.39986G	-27.46	2.4G	-31.23	2.5159G	-49.79	6.85304G	-45.43	2
VHT20_Nss1,(MCS0)_4TX	Pass	2.43824G	11.30	-18.70	1.81857G	-53.06	2.397G	-29.29	2.4G	-34.64	2.4916G	-49.93	17.44509G	-46.65	3
VHT40_Nss1,(MCS0)_4TX	Pass	2.43449G	5.55	-24.45	575.31M	-52.75	2.39884G	-26.60	2.4G	-33.07	2.48354G	-42.84	16.22172G	-45.72	1



Result

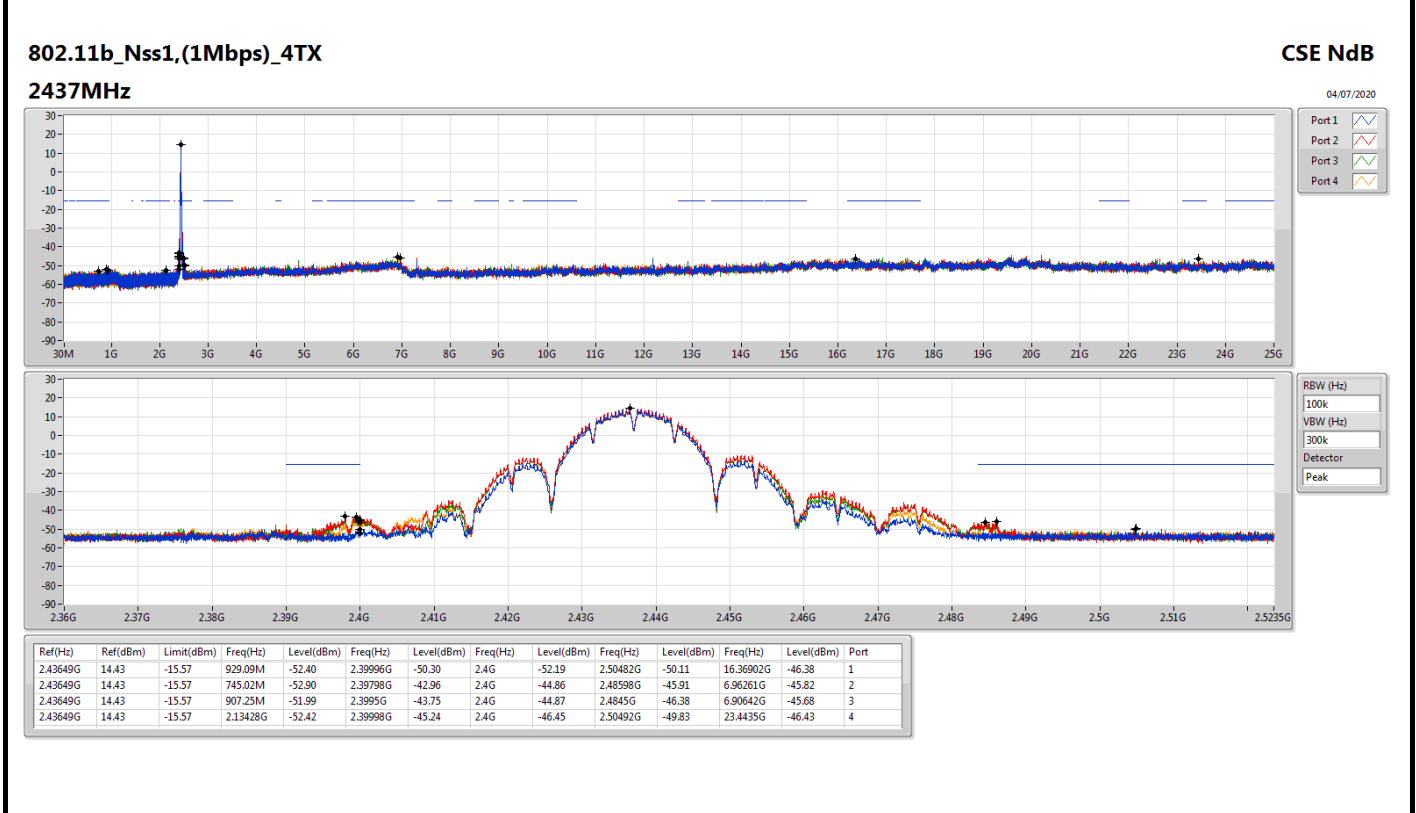
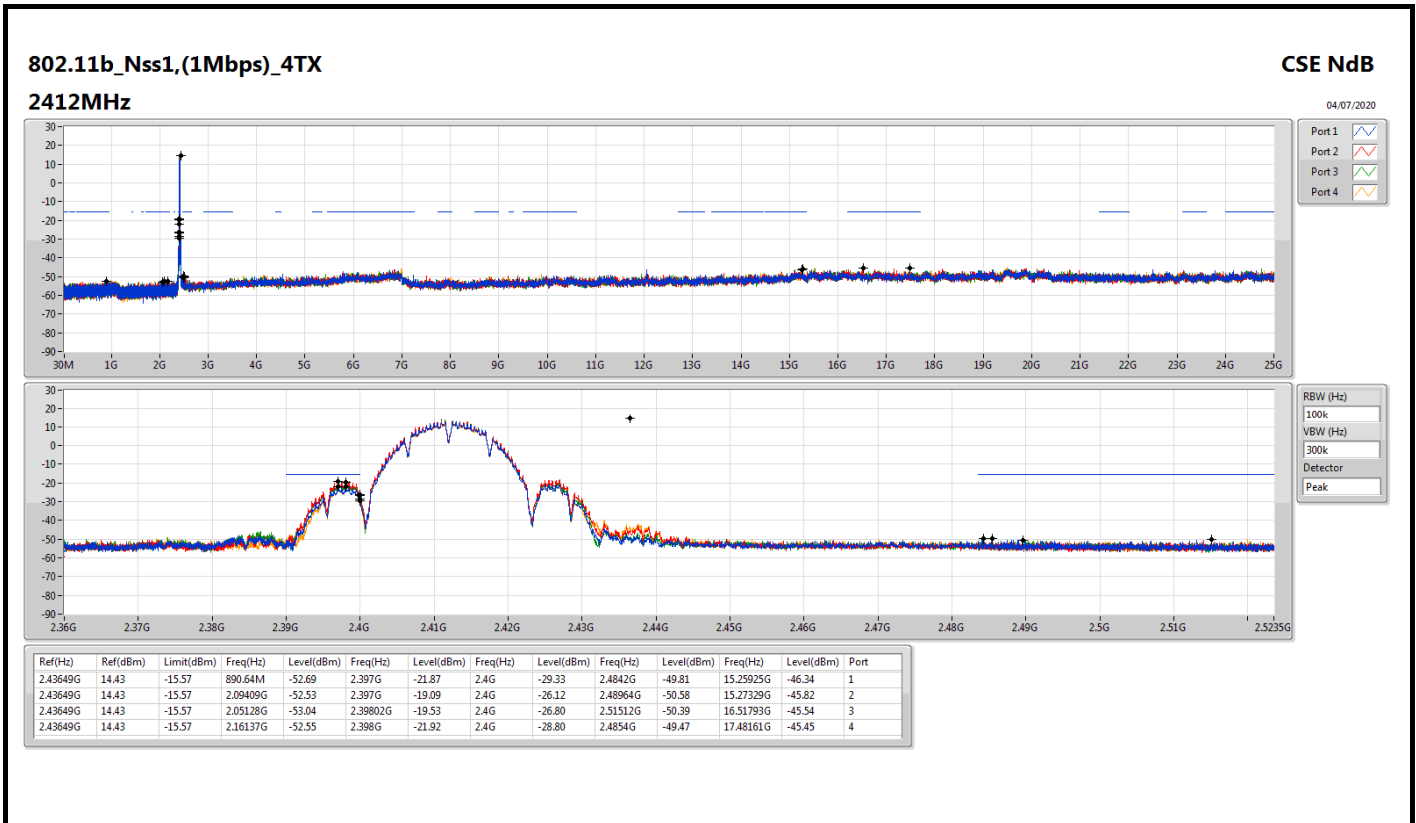
Table with 16 columns: Mode, Result, Ref (Hz), Ref (dBm), Limit (dBm), Freq (Hz), Level (dBm), Freq (Hz), Level (dBm), Freq (Hz), Level (dBm), Freq (Hz), Level (dBm), Freq (Hz), Level (dBm), Port. It lists test results for three modes: 802.11b_Nss1, 802.11g_Nss1, VHT20, and VHT40.

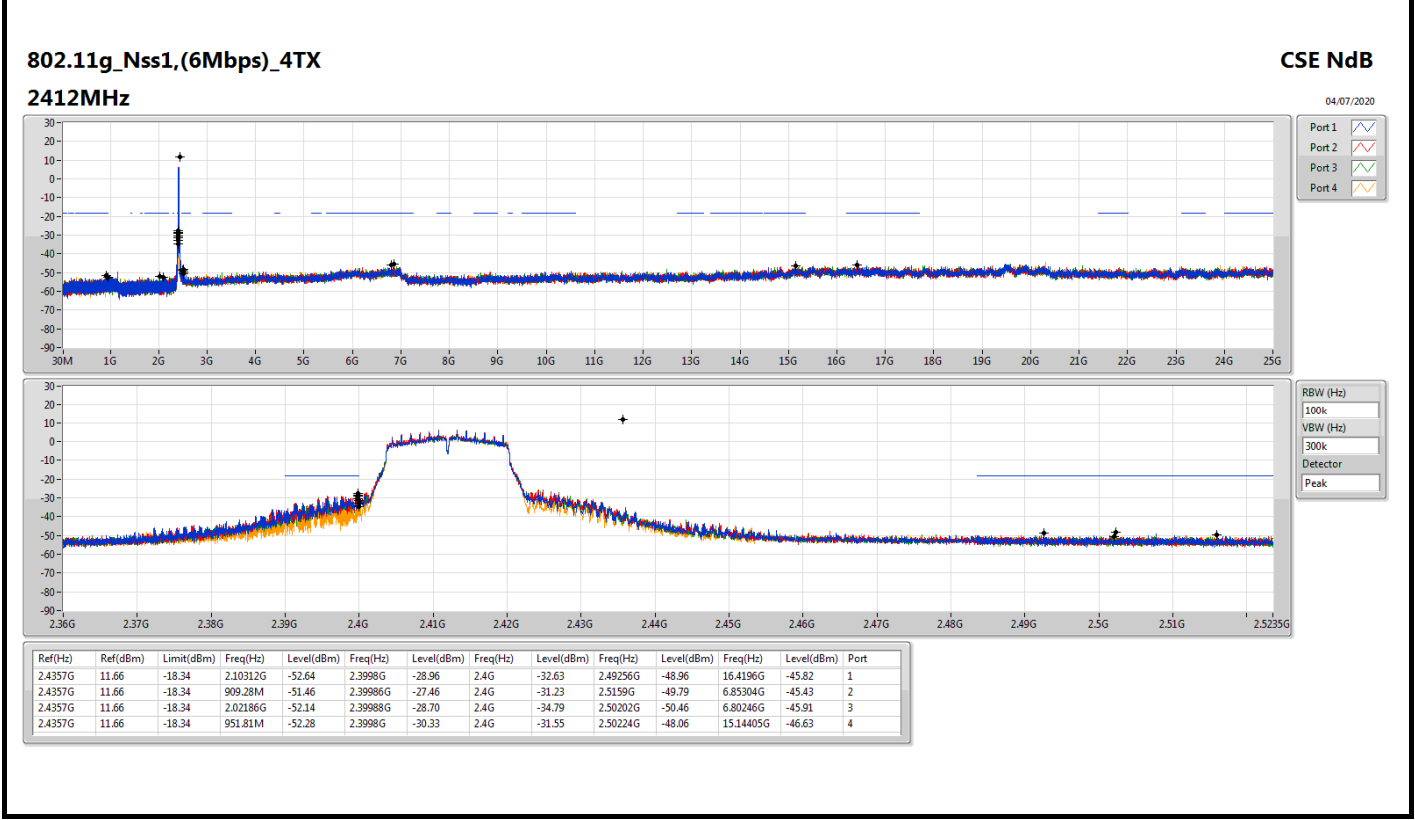
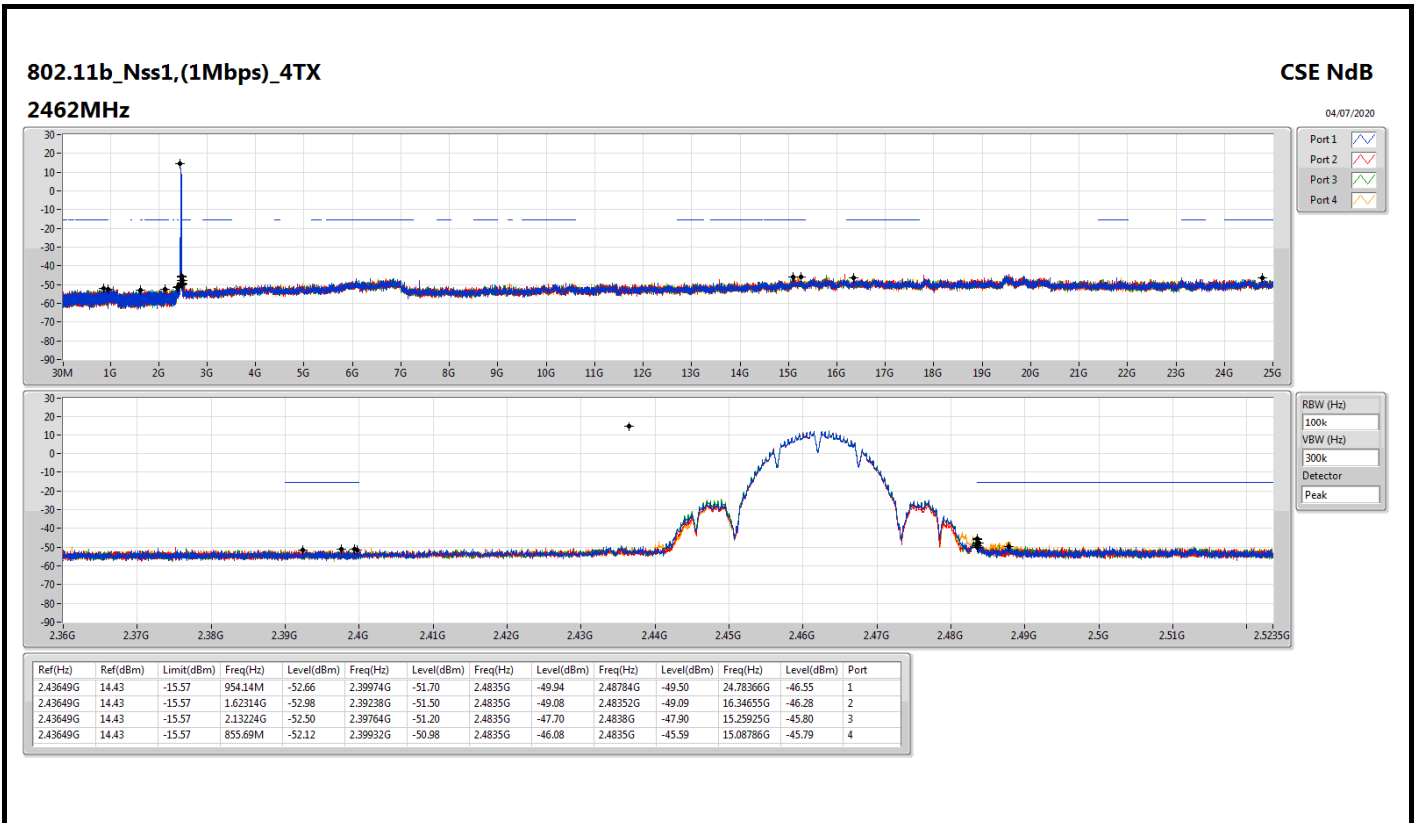


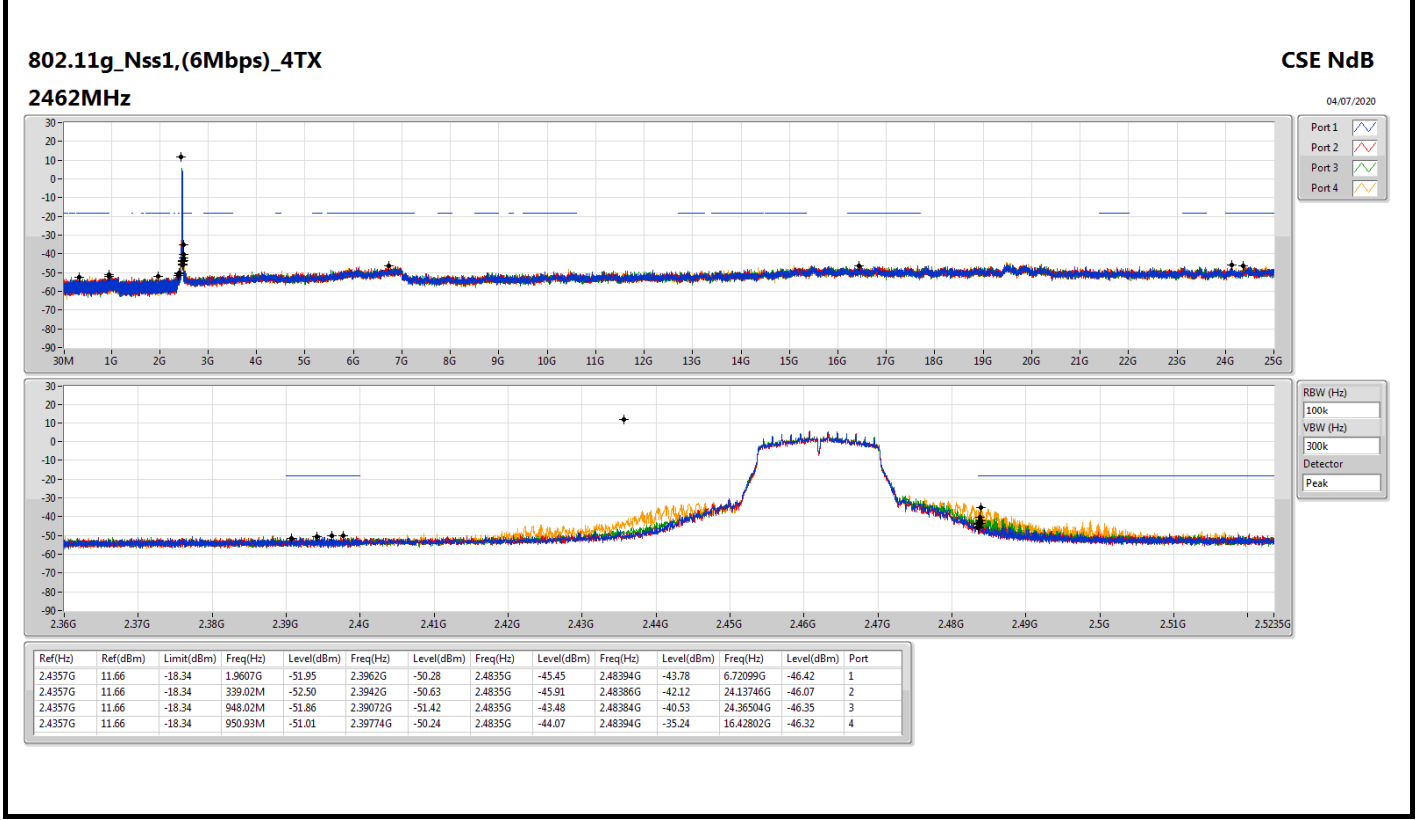
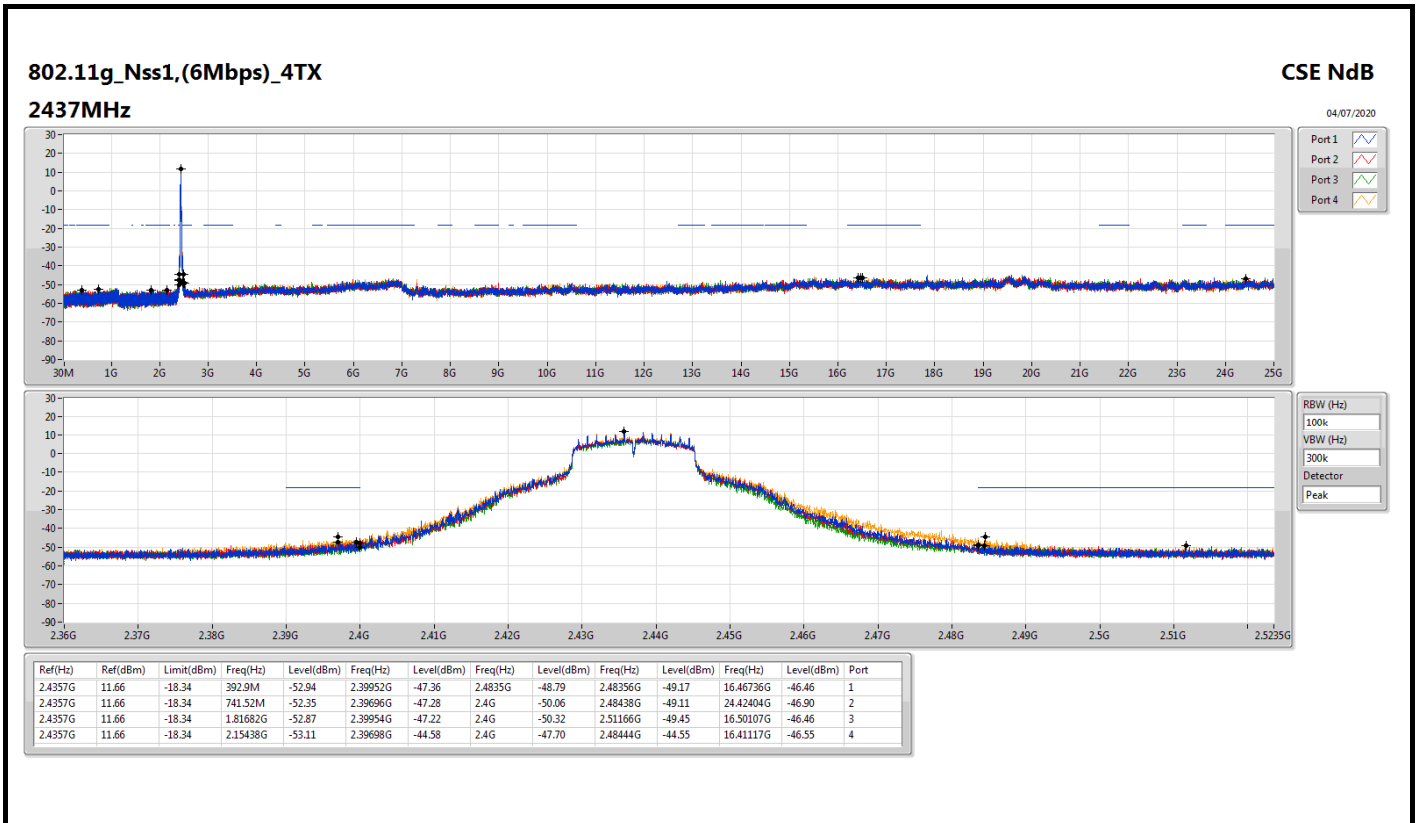
CSE(Non-restricted Band)

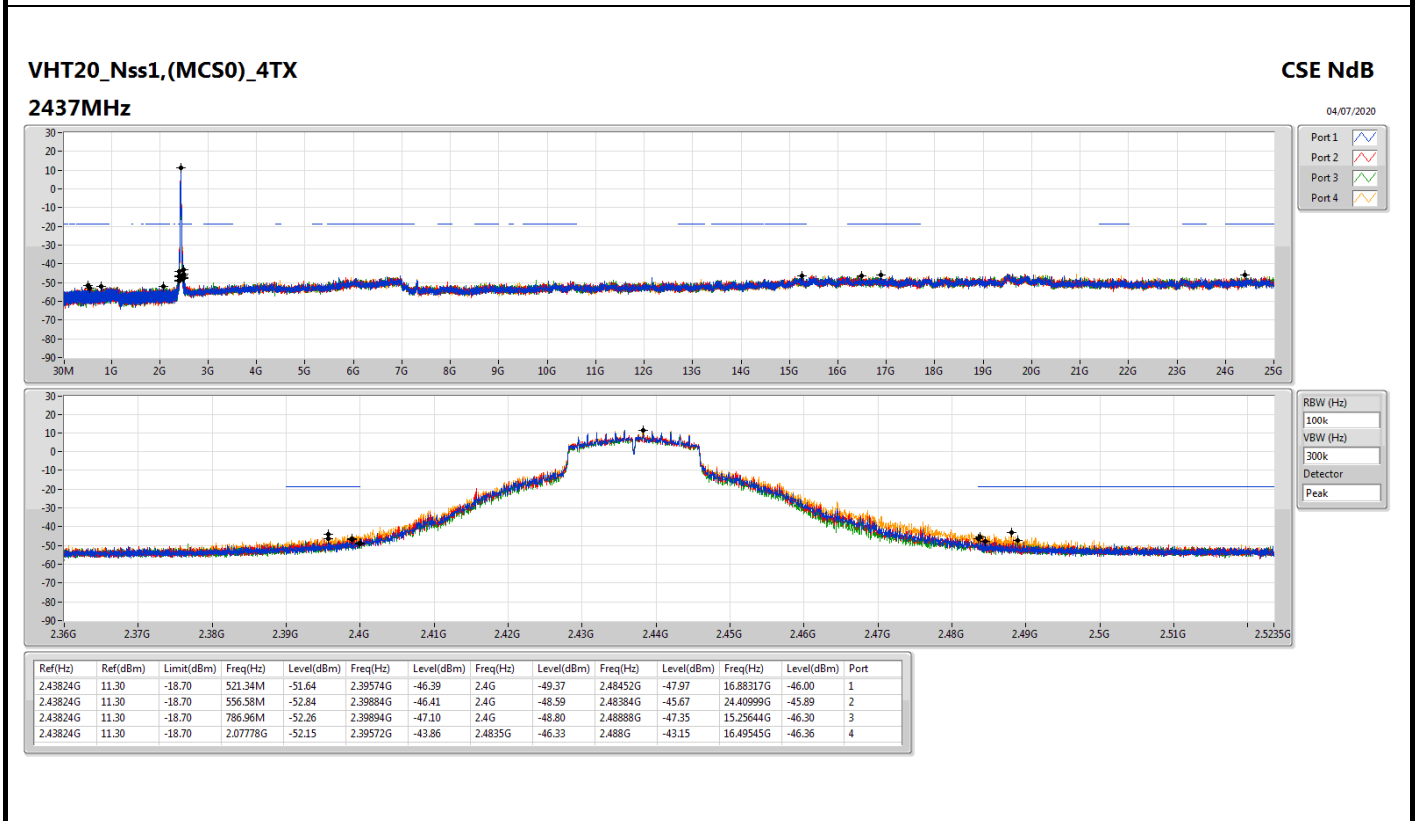
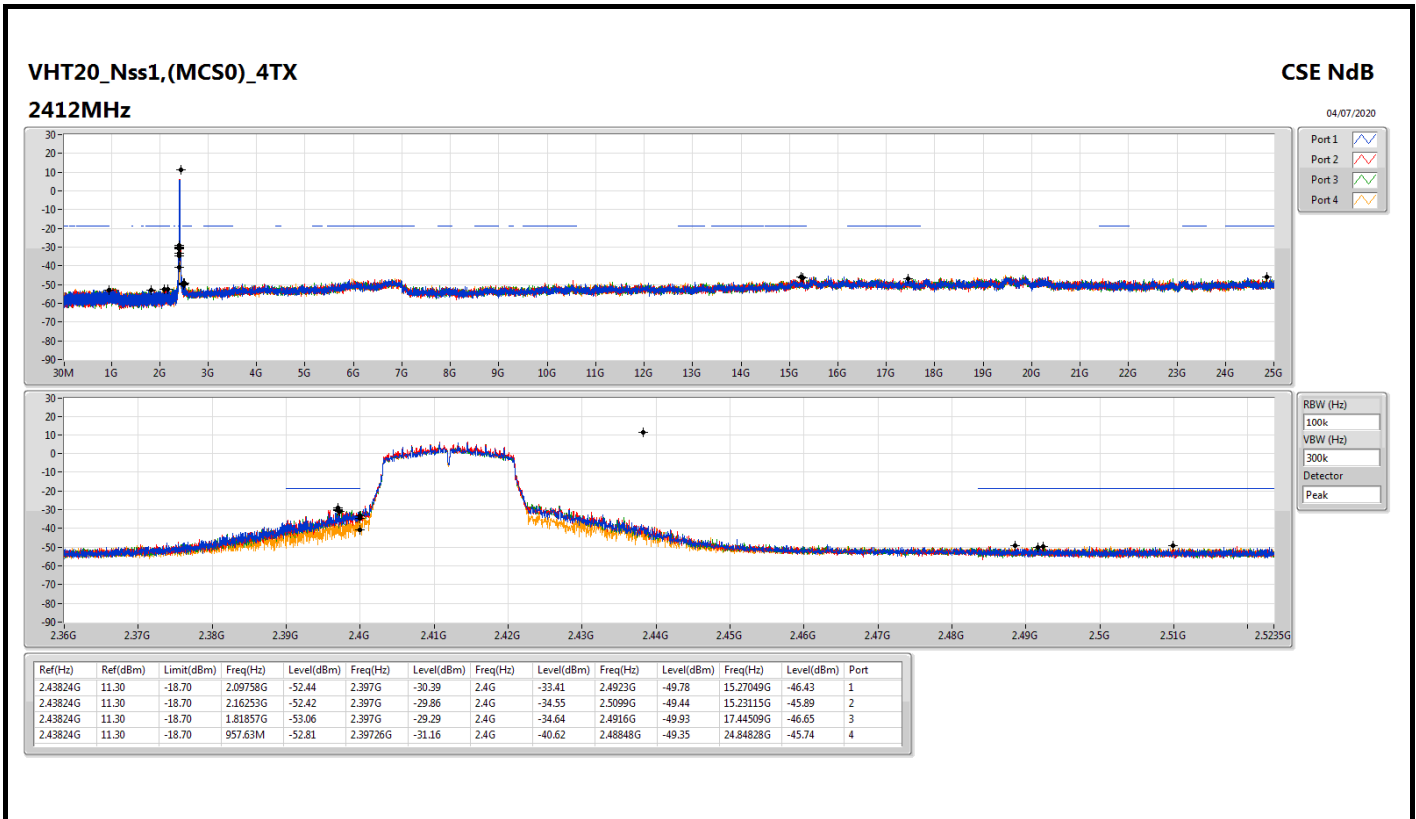
Appendix E

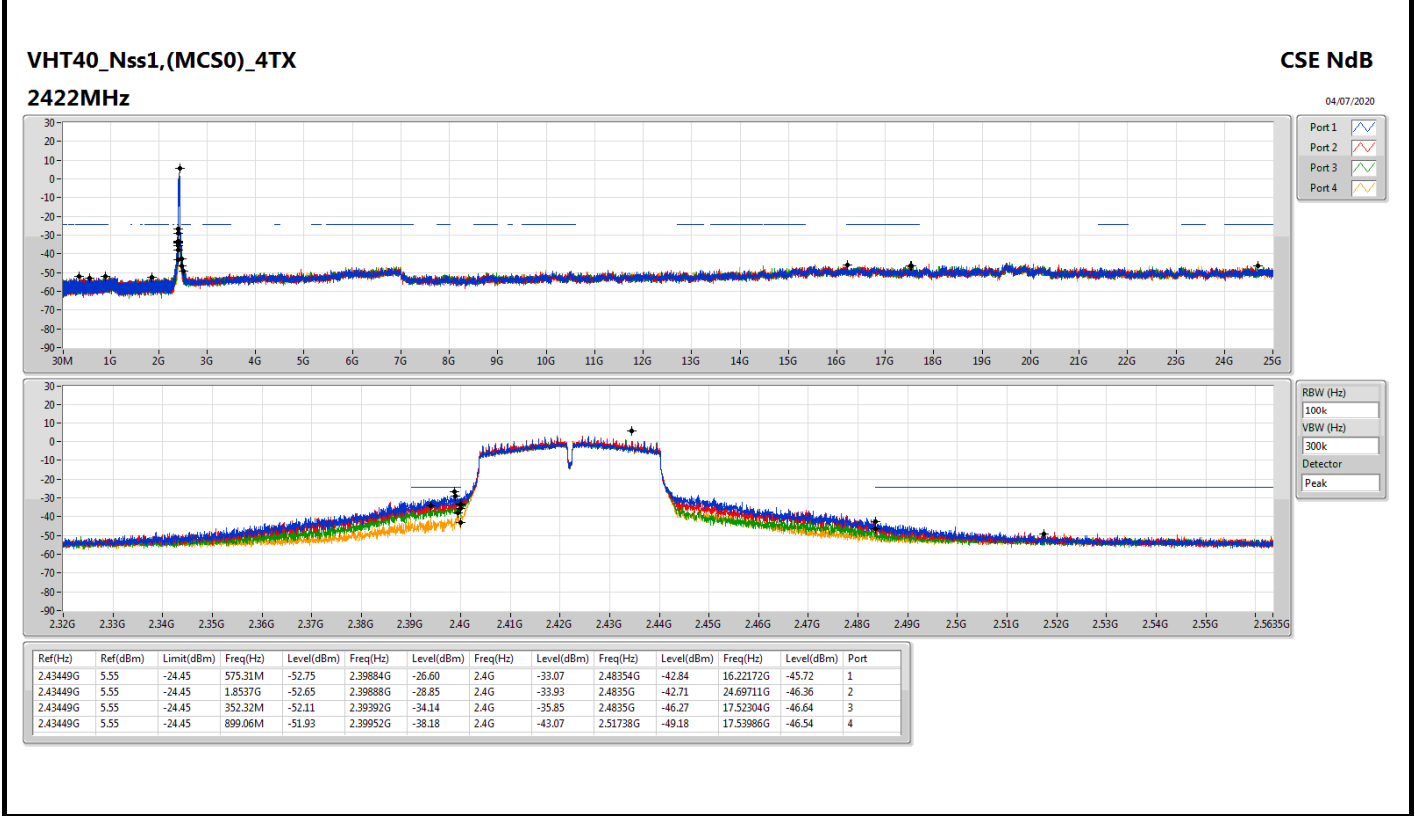
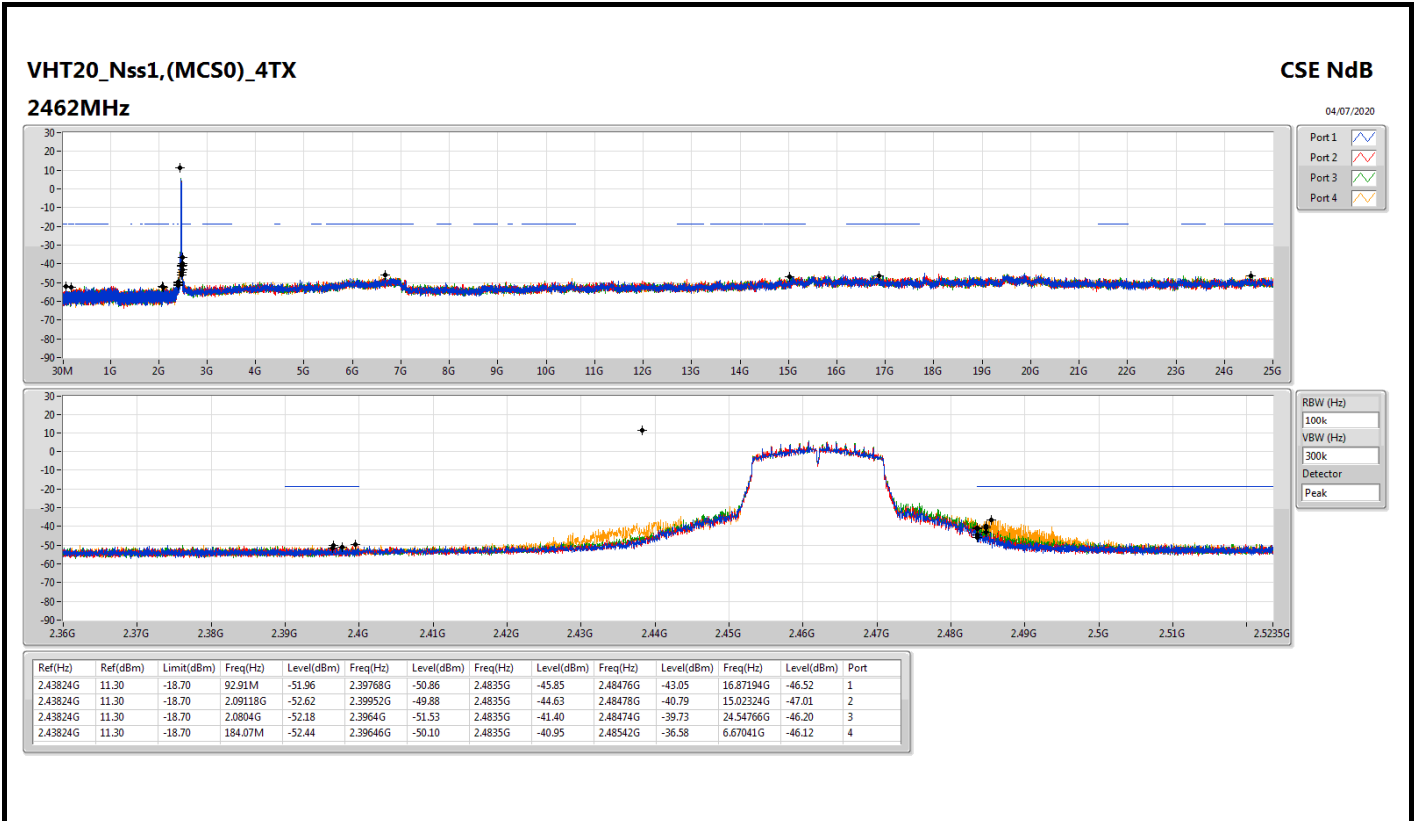
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2452MHz	Pass	2.43449G	5.55	-24.45	2.12564G	-51.90	2.39856G	-46.15	2.4835G	-36.27	2.48578G	-33.58	16.40402G	-46.29	1
2452MHz	Pass	2.43449G	5.55	-24.45	822.63M	-52.63	2.39888G	-47.30	2.4835G	-35.13	2.48574G	-31.47	16.54144G	-45.10	2
2452MHz	Pass	2.43449G	5.55	-24.45	535.23M	-52.41	2.39576G	-44.77	2.4835G	-32.97	2.48446G	-29.44	24.45872G	-46.30	3
2452MHz	Pass	2.43449G	5.55	-24.45	928.83M	-52.24	2.39644G	-51.11	2.4835G	-45.02	2.48446G	-41.86	15.27097G	-45.50	4

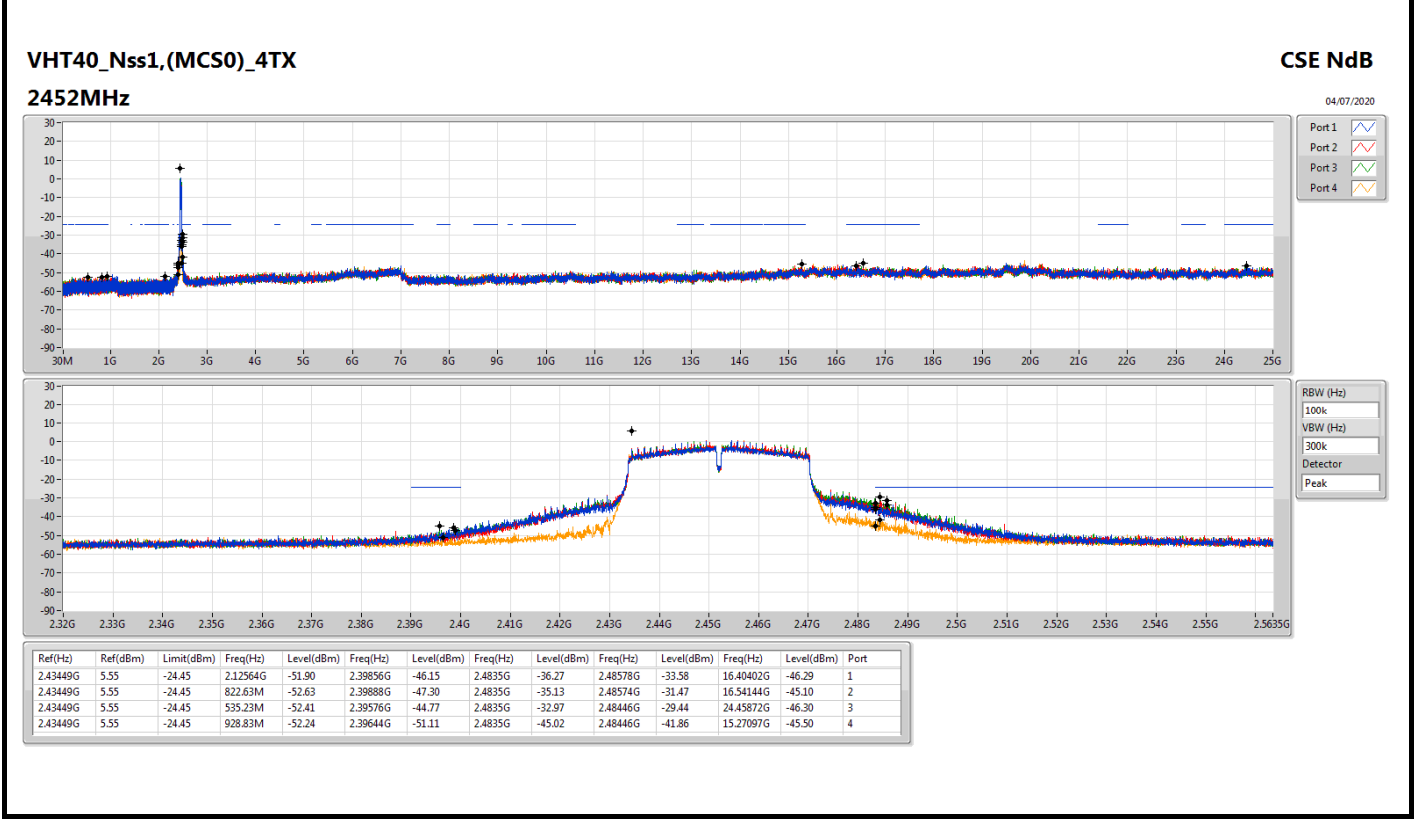
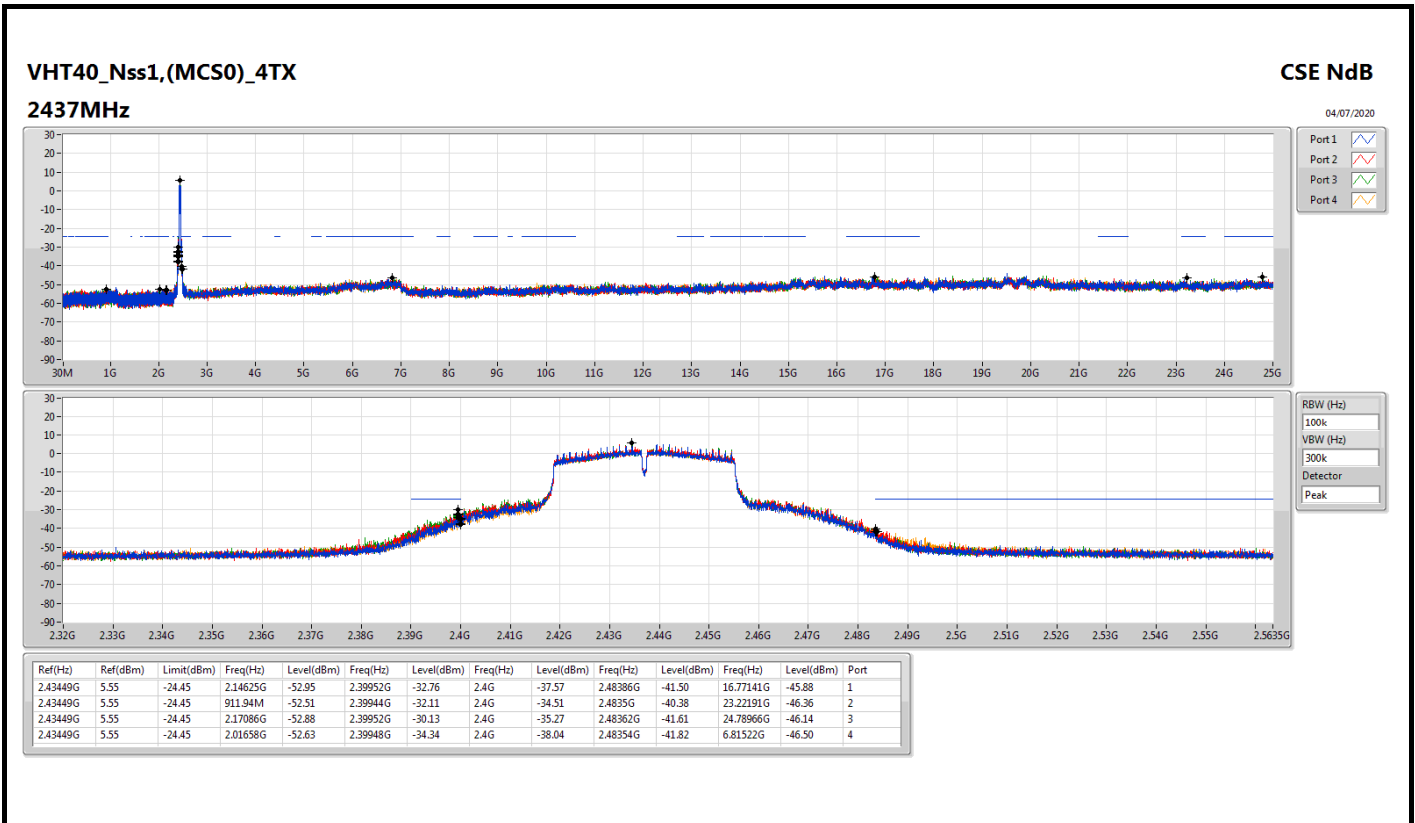












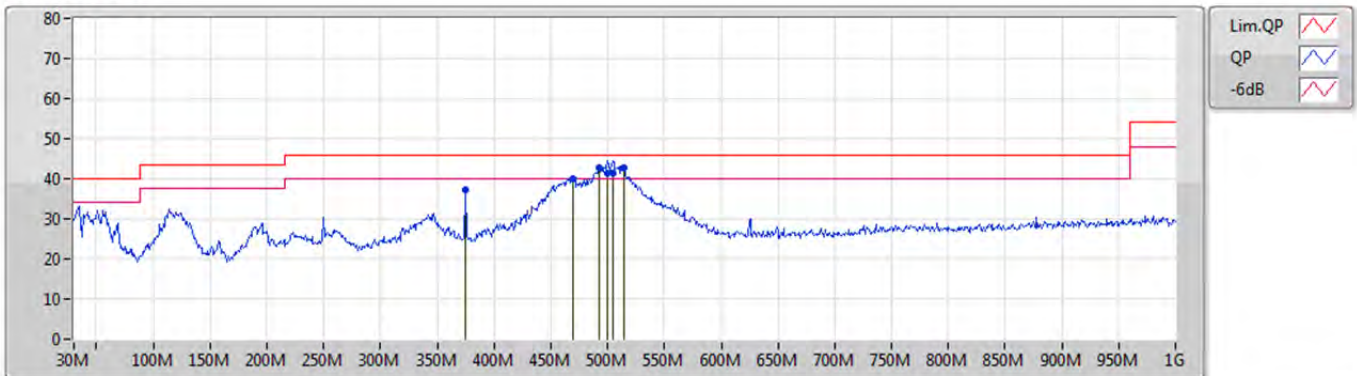


Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 10	Pass	PK	492.69M	42.86	46.00	-3.14	Vertical

Mode 10

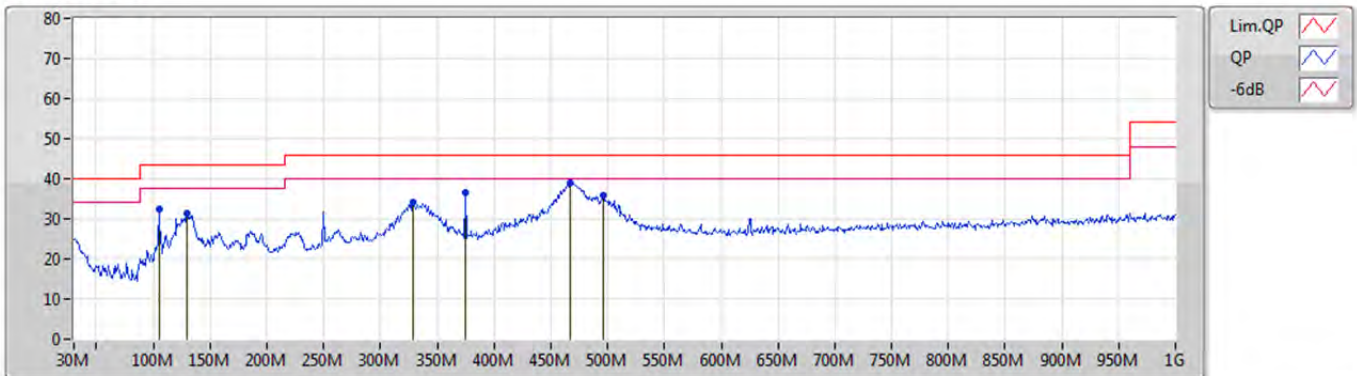
17/07/2020



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
PK	375.32M	37.19	46.00	-8.81	-9.09	3	Vertical	260	1.50	-	46.28	20.23	2.75	32.07
PK	469.41M	40.11	46.00	-5.89	-6.60	3	Vertical	248	1.00	-	46.71	22.70	2.99	32.29
PK	492.69M	42.86	46.00	-3.14	-6.38	3	Vertical	248	1.00	"Worst"	49.24	22.90	3.08	32.36
QP	499.48M	41.49	46.00	-4.51	-6.32	3	Vertical	248	1.00	-	47.81	22.95	3.10	32.37
QP	504.33M	41.49	46.00	-4.51	-6.27	3	Vertical	248	1.00	-	47.76	22.97	3.12	32.36
PK	514.03M	42.80	46.00	-3.20	-6.21	3	Vertical	248	1.00	-	49.01	22.97	3.16	32.34

Mode 10

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Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
PK	104.69M	32.33	43.50	-11.17	-13.06	3	Horizontal	288	2.00	-	45.39	17.23	1.55	31.84
PK	129.91M	31.24	43.50	-12.26	-12.24	3	Horizontal	114	1.50	-	43.48	17.87	1.75	31.86
PK	328.76M	34.30	46.00	-11.70	-10.33	3	Horizontal	243	1.00	-	44.63	19.12	2.56	32.01
PK	375.32M	36.53	46.00	-9.47	-9.09	3	Horizontal	287	1.00	-	45.62	20.23	2.75	32.07
PK	466.5M	38.91	46.00	-7.09	-6.67	3	Horizontal	213	2.00	"Worst"	45.58	22.63	2.98	32.28
PK	496.57M	36.01	46.00	-9.99	-6.34	3	Horizontal	85	1.50	-	42.35	22.93	3.09	32.36



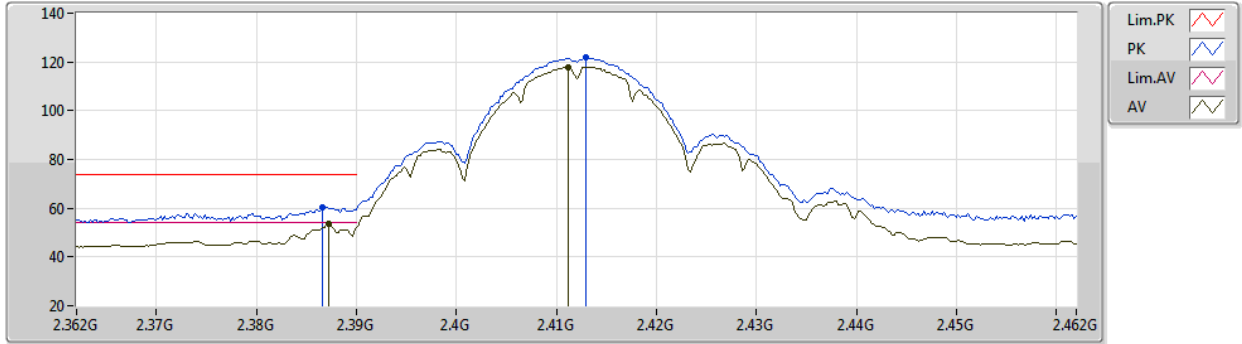
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
VHT20_Nss1,(MCS0)_4TX	Pass	PK	2.3878G	73.97	74.00	-0.03	3	Vertical	207	2.12	-

802.11b_Nss1,(1Mbps)_4TX

03/07/2020

2412MHz_TX



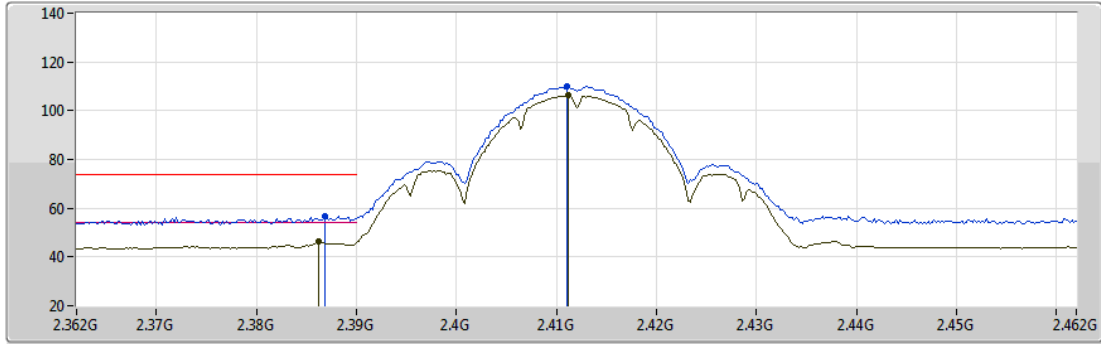
EUT X_4TX
Setting 26
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3866G	60.35	74.00	-13.65	29.99	3	Vertical	242	2.58	-	27.51	2.85	-
AV	2.3872G	53.51	54.00	-0.49	23.15	3	Vertical	242	2.58	-	27.51	2.85	-
PK	2.413G	121.92	Inf	-Inf	91.50	3	Vertical	242	2.58	-	27.55	2.87	-
AV	2.4112G	117.94	Inf	-Inf	87.53	3	Vertical	242	2.58	-	27.54	2.87	-

802.11b_Nss1,(1Mbps)_4TX

03/07/2020

2412MHz_TX



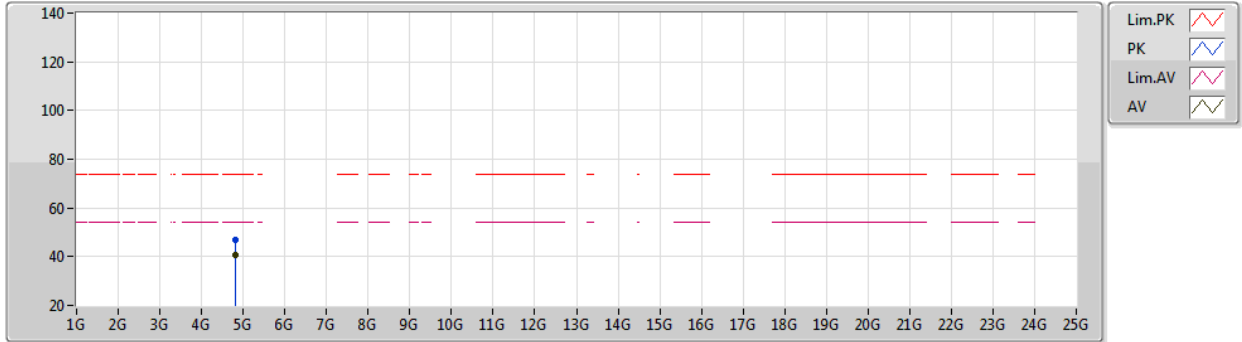
EUT X_4TX
Setting 26
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3868G	56.76	74.00	-17.24	26.40	3	Horizontal	233	1.84	-	27.51	2.85	-
AV	2.3862G	46.20	54.00	-7.80	15.84	3	Horizontal	233	1.84	-	27.51	2.85	-
PK	2.411G	110.01	Inf	-Inf	79.60	3	Horizontal	233	1.84	-	27.54	2.87	-
AV	2.4112G	106.28	Inf	-Inf	75.87	3	Horizontal	233	1.84	-	27.54	2.87	-

802.11b_Nss1,(1Mbps)_4TX

03/07/2020

2412MHz_TX



EUT X_4TX
Setting 26
04-E-E-2

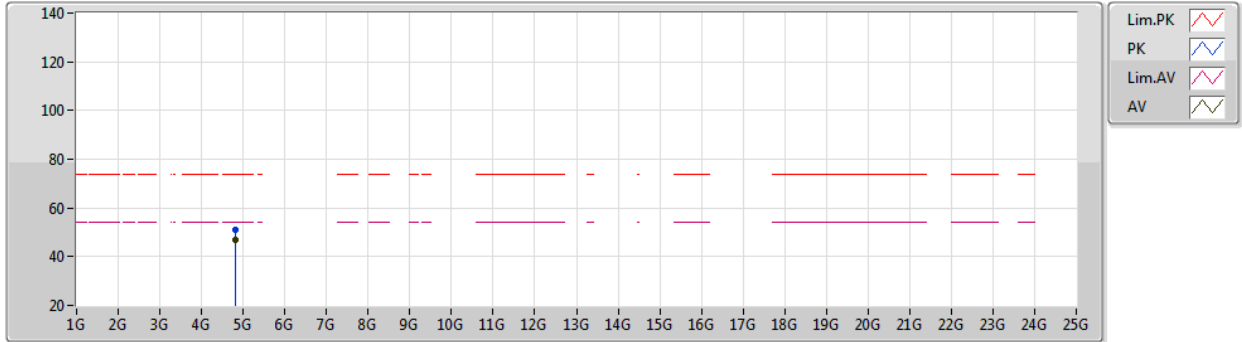
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.82388G	47.03	74.00	-26.97	42.98	3	Vertical	88	1.80	-	32.60	4.93	33.48
AV	4.824G	40.74	54.00	-13.26	36.69	3	Vertical	88	1.80	-	32.60	4.93	33.48



802.11b_Nss1,(1Mbps)_4TX

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2412MHz_TX



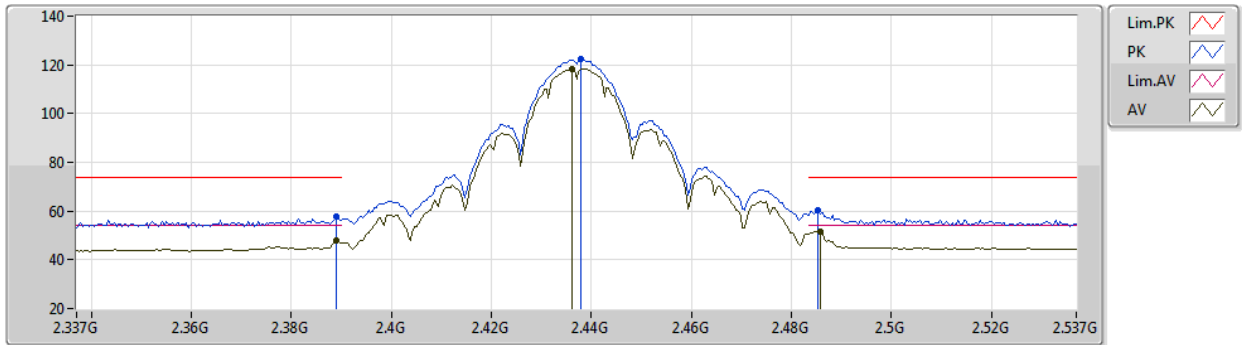
EUT X_4TX
Setting 26
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.82406G	50.79	74.00	-23.21	46.74	3	Horizontal	136	2.20	-	32.60	4.93	33.48
AV	4.824G	46.75	54.00	-7.25	42.70	3	Horizontal	136	2.20	-	32.60	4.93	33.48

802.11b_Nss1,(1Mbps)_4TX

03/07/2020

2437MHz_TX



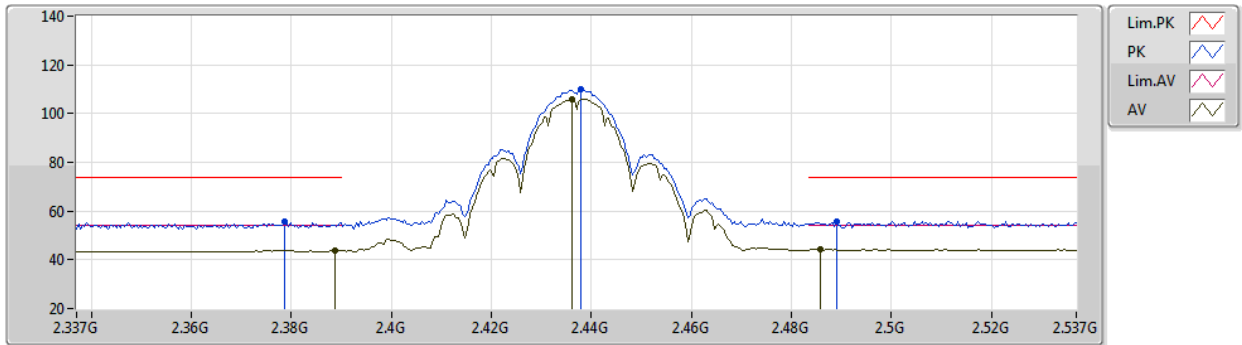
EUT X_4TX
Setting 2E
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.389G	57.69	74.00	-16.31	27.33	3	Vertical	239	2.81	-	27.51	2.85	-
AV	2.389G	48.05	54.00	-5.95	17.69	3	Vertical	239	2.81	-	27.51	2.85	-
PK	2.4378G	122.27	Inf	-Inf	91.74	3	Vertical	239	2.81	-	27.65	2.88	-
AV	2.4362G	118.37	Inf	-Inf	87.85	3	Vertical	239	2.81	-	27.64	2.88	-
PK	2.4854G	60.19	74.00	-13.81	29.44	3	Vertical	239	2.81	-	27.84	2.91	-
AV	2.4858G	51.57	54.00	-2.43	20.82	3	Vertical	239	2.81	-	27.84	2.91	-

802.11b_Nss1,(1Mbps)_4TX

03/07/2020

2437MHz_TX



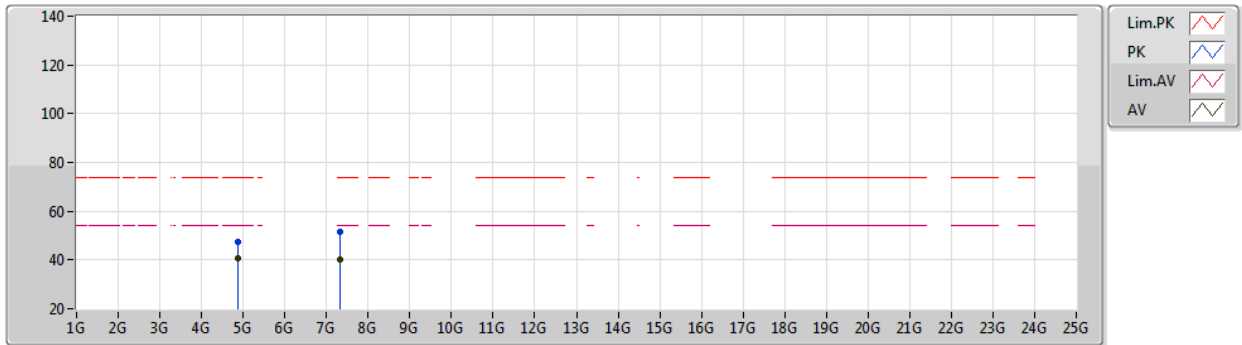
EUT X_4TX
Setting 2E
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3786G	55.73	74.00	-18.27	25.36	3	Horizontal	231	1.83	-	27.52	2.85	-
AV	2.3886G	44.03	54.00	-9.97	13.67	3	Horizontal	231	1.83	-	27.51	2.85	-
PK	2.4378G	109.79	Inf	-Inf	79.26	3	Horizontal	231	1.83	-	27.65	2.88	-
AV	2.4362G	105.78	Inf	-Inf	75.26	3	Horizontal	231	1.83	-	27.64	2.88	-
PK	2.489G	55.47	74.00	-18.53	24.70	3	Horizontal	231	1.83	-	27.86	2.91	-
AV	2.4858G	44.51	54.00	-9.49	13.76	3	Horizontal	231	1.83	-	27.84	2.91	-

802.11b_Nss1,(1Mbps)_4TX

03/07/2020

2437MHz_TX



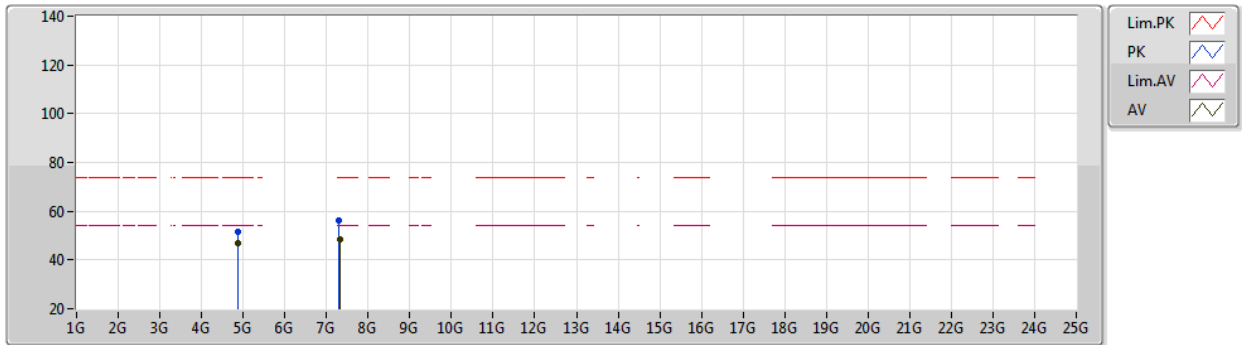
EUT X_4TX
Setting 2E
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.87402G	47.67	74.00	-26.33	43.36	3	Vertical	120	2.04	-	32.80	4.96	33.45
AV	4.874G	40.56	54.00	-13.44	36.25	3	Vertical	120	2.04	-	32.80	4.96	33.45
PK	7.31172G	51.67	74.00	-22.33	41.90	3	Vertical	25	1.03	-	37.51	6.22	33.96
AV	7.31022G	40.05	54.00	-13.95	30.28	3	Vertical	25	1.03	-	37.51	6.22	33.96

802.11b_Nss1,(1Mbps)_4TX

03/07/2020

2437MHz_TX



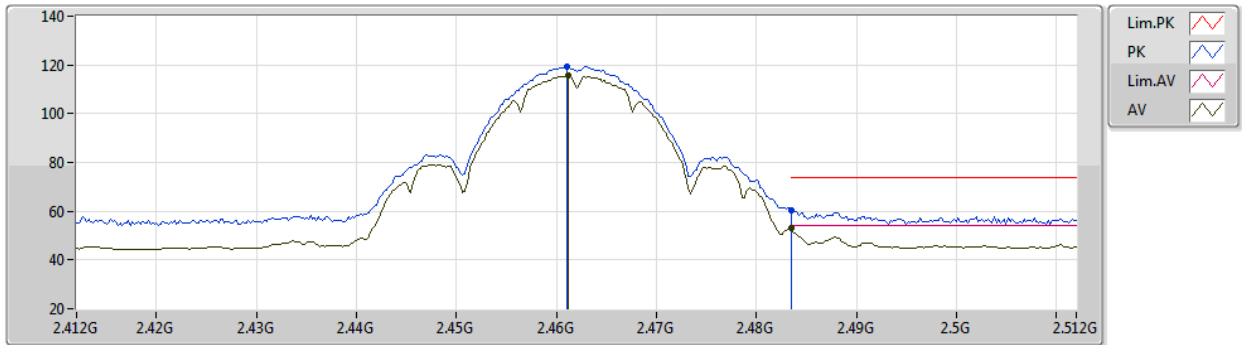
EUT X_4TX
Setting 2E
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.87406G	51.40	74.00	-22.60	47.09	3	Horizontal	145	2.15	-	32.80	4.96	33.45
AV	4.87394G	46.96	54.00	-7.04	42.65	3	Horizontal	145	2.15	-	32.80	4.96	33.45
PK	7.30992G	56.41	74.00	-17.59	46.64	3	Horizontal	275	2.08	-	37.51	6.22	33.96
AV	7.31022G	48.65	54.00	-5.35	38.88	3	Horizontal	275	2.08	-	37.51	6.22	33.96

802.11b_Nss1,(1Mbps)_4TX

03/07/2020

2462MHz_TX



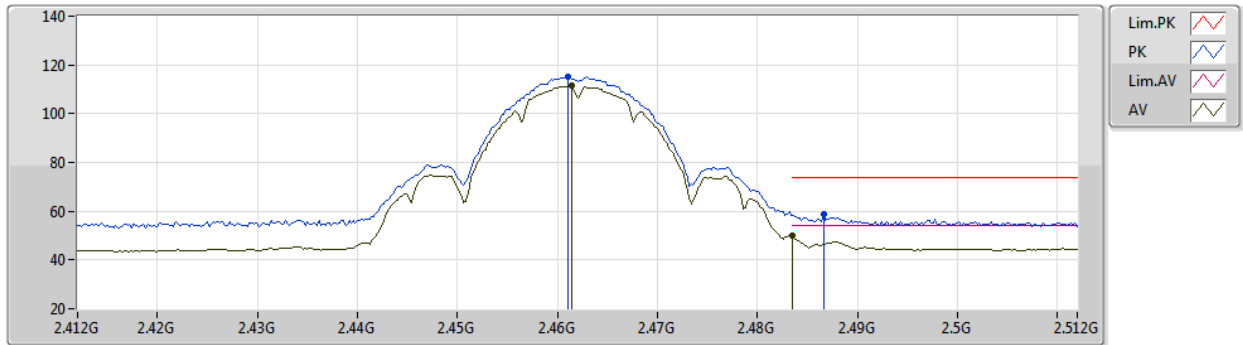
EUT X_4TX
Setting 24
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.461G	119.31	Inf	-Inf	88.67	3	Vertical	267	2.51	-	27.74	2.90	-
AV	2.4612G	115.56	Inf	-Inf	84.92	3	Vertical	267	2.51	-	27.74	2.90	-
PK	2.4835G	60.23	74.00	-13.77	29.49	3	Vertical	267	2.51	-	27.83	2.91	-
AV	2.4835G	53.03	54.00	-0.97	22.29	3	Vertical	267	2.51	-	27.83	2.91	-

802.11b_Nss1,(1Mbps)_4TX

03/07/2020

2462MHz_TX



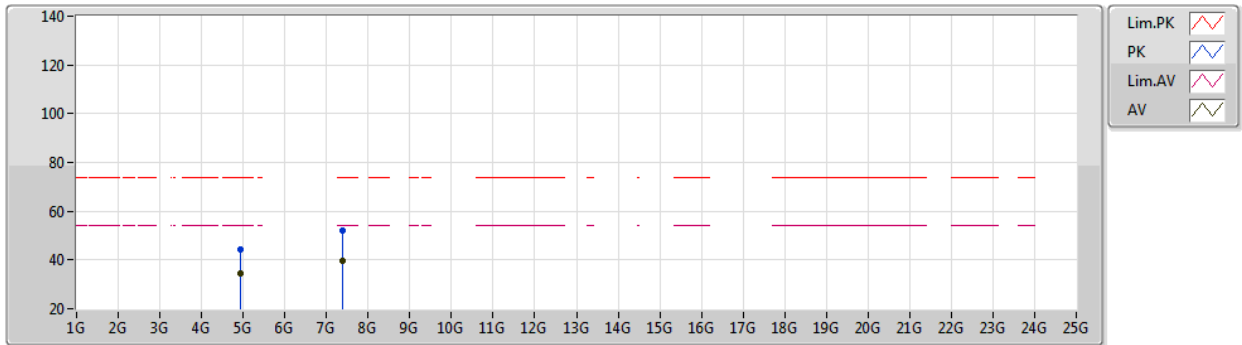
EUT X_4TX
Setting 24
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.461G	115.20	Inf	-Inf	84.56	3	Horizontal	144	1.80	-	27.74	2.90	-
AV	2.4614G	111.41	Inf	-Inf	80.76	3	Horizontal	144	1.80	-	27.75	2.90	-
PK	2.4866G	59.00	74.00	-15.00	28.24	3	Horizontal	144	1.80	-	27.85	2.91	-
AV	2.4835G	50.20	54.00	-3.80	19.46	3	Horizontal	144	1.80	-	27.83	2.91	-

802.11b_Nss1,(1Mbps)_4TX

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2462MHz_TX



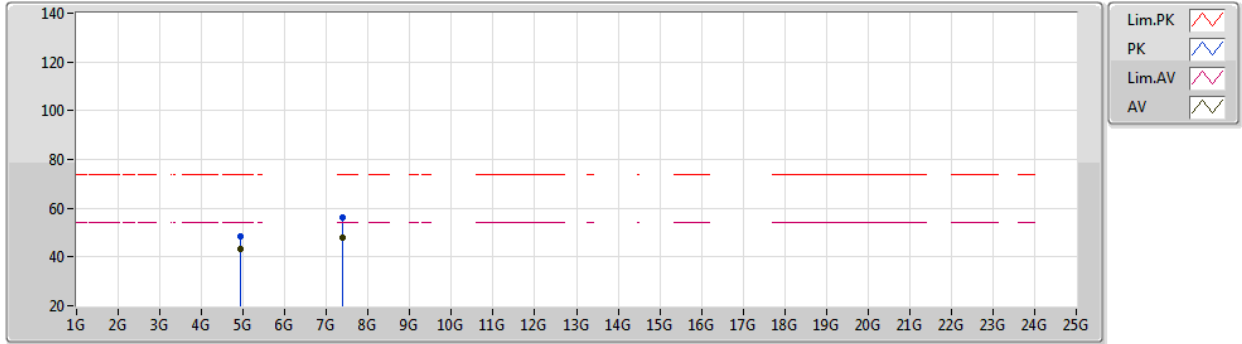
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Setting 24
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.93792G	44.43	74.00	-29.57	39.87	3	Vertical	190	1.20	-	32.98	4.99	33.41
AV	4.92388G	34.45	54.00	-19.55	29.94	3	Vertical	190	1.20	-	32.95	4.98	33.42
PK	7.38678G	51.83	74.00	-22.17	42.01	3	Vertical	239	2.00	-	37.59	6.25	34.02
AV	7.38672G	39.59	54.00	-14.41	29.77	3	Vertical	239	2.00	-	37.59	6.25	34.02

802.11b_Nss1,(1Mbps)_4TX

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2462MHz_TX



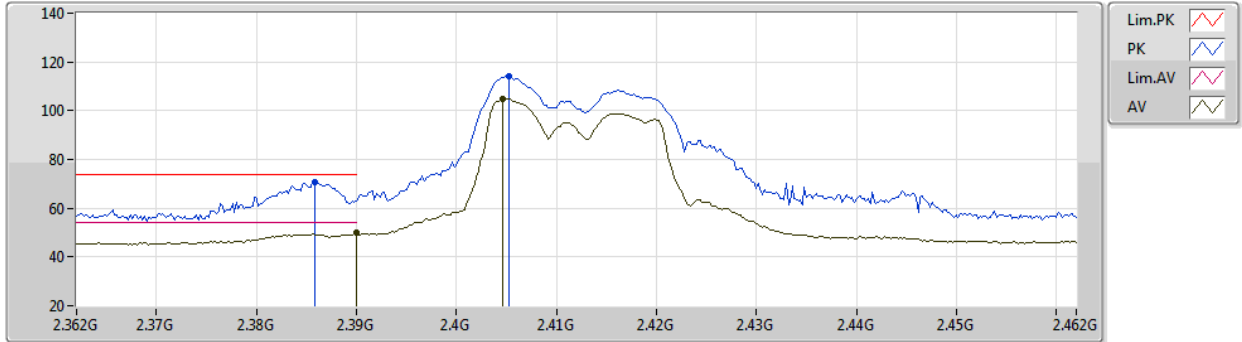
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Setting 24
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.92388G	48.22	74.00	-25.78	43.71	3	Horizontal	144	2.12	-	32.95	4.98	33.42
AV	4.924G	43.19	54.00	-10.81	38.68	3	Horizontal	144	2.12	-	32.95	4.98	33.42
PK	7.38498G	56.22	74.00	-17.78	46.41	3	Horizontal	241	1.80	-	37.58	6.25	34.02
AV	7.38666G	48.08	54.00	-5.92	38.26	3	Horizontal	241	1.80	-	37.59	6.25	34.02

802.11g_Nss1,(6Mbps)_4TX

03/07/2020

2412MHz_TX



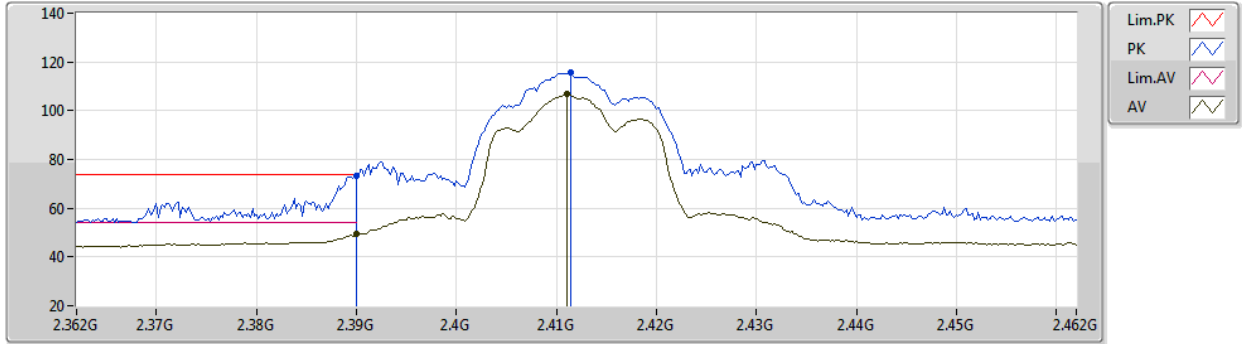
EUT X_4TX
Setting 1D
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3858G	70.67	74.00	-3.33	40.31	3	Vertical	208	2.16	-	27.51	2.85	-
AV	2.39G	49.91	54.00	-4.09	19.55	3	Vertical	208	2.16	-	27.51	2.85	-
PK	2.4052G	114.17	Inf	-Inf	83.79	3	Vertical	208	2.16	-	27.52	2.86	-
AV	2.4046G	105.00	Inf	-Inf	74.62	3	Vertical	208	2.16	-	27.52	2.86	-

802.11g_Nss1,(6Mbps)_4TX

03/07/2020

2412MHz_TX



EUT X_4TX
Setting 1D
04-E-E-2

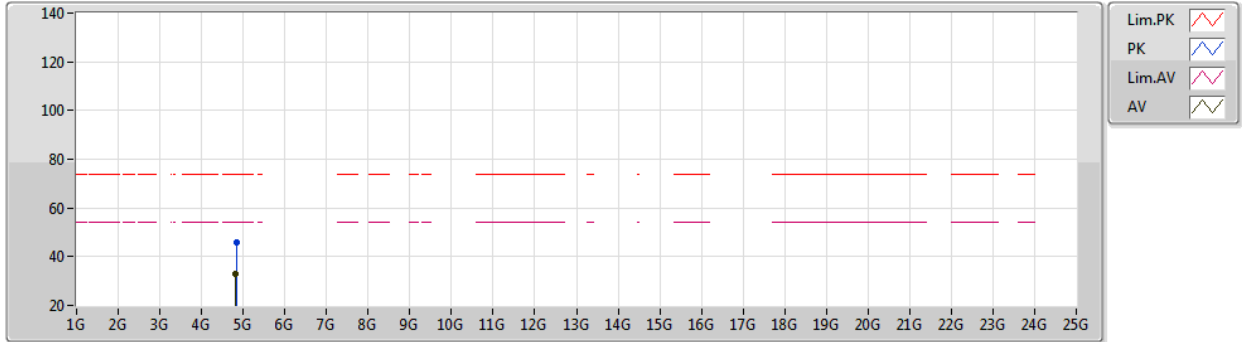
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.39G	73.03	74.00	-0.97	42.67	3	Horizontal	265	2.73	-	27.51	2.85	-
AV	2.39G	49.63	54.00	-4.37	19.27	3	Horizontal	265	2.73	-	27.51	2.85	-
PK	2.4114G	115.53	Inf	-Inf	85.11	3	Horizontal	265	2.73	-	27.55	2.87	-
AV	2.411G	106.79	Inf	-Inf	76.38	3	Horizontal	265	2.73	-	27.54	2.87	-



802.11g_Nss1,(6Mbps)_4TX

03/07/2020

2412MHz_TX



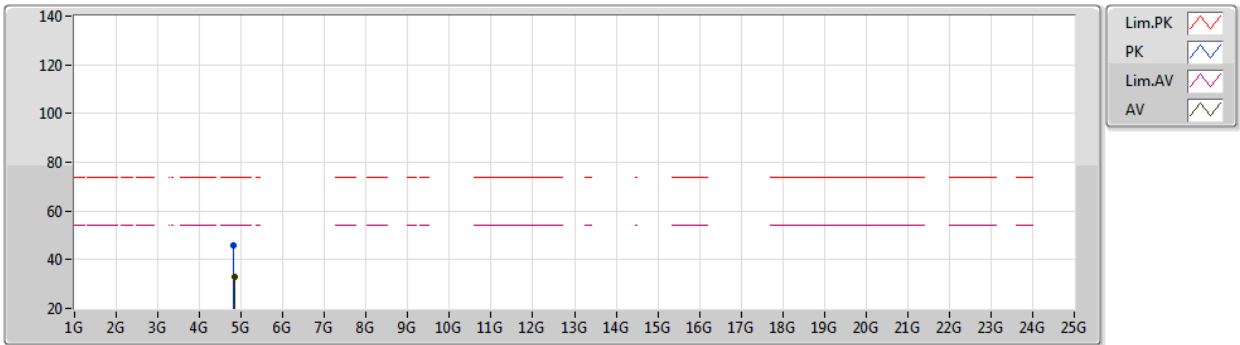
EUT X_4TX
Setting 1D
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.82904G	45.84	74.00	-28.16	41.77	3	Vertical	70	1.80	-	32.62	4.93	33.48
AV	4.82568G	32.98	54.00	-21.02	28.93	3	Vertical	70	1.80	-	32.60	4.93	33.48

802.11g_Nss1,(6Mbps)_4TX

03/07/2020

2412MHz_TX



EUT X_4TX
Setting 1D
04-E-E-2

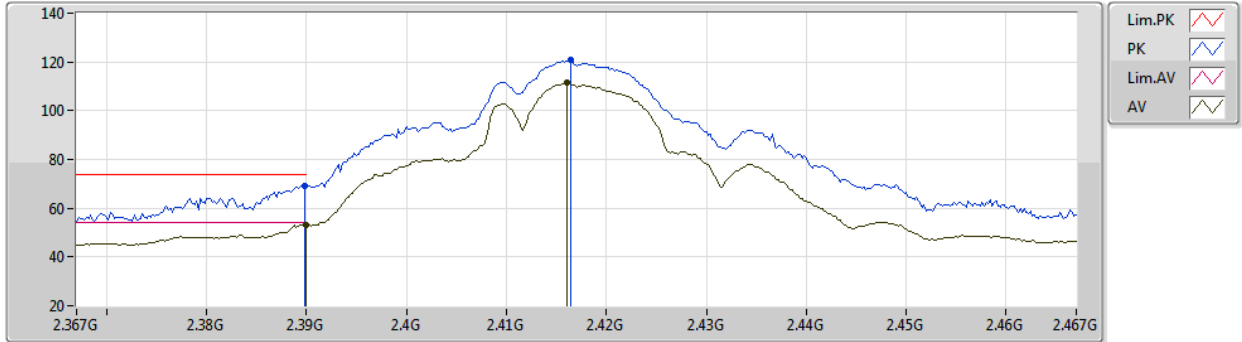
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.82688G	45.81	74.00	-28.19	41.75	3	Horizontal	260	1.80	-	32.61	4.93	33.48
AV	4.8306G	33.07	54.00	-20.93	28.99	3	Horizontal	260	1.80	-	32.62	4.94	33.48



802.11g_Nss1,(6Mbps)_4TX

03/07/2020

2417MHz_TX



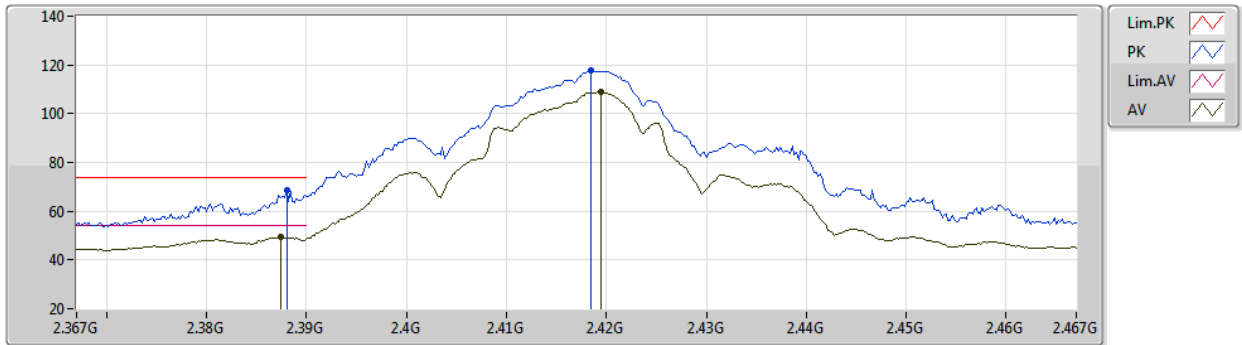
EUT X_4TX
Setting 26
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3898G	69.31	74.00	-4.69	38.95	3	Vertical	202	2.12	-	27.51	2.85	-
AV	2.39G	53.17	54.00	-0.83	22.81	3	Vertical	202	2.12	-	27.51	2.85	-
PK	2.4164G	120.63	Inf	-Inf	90.19	3	Vertical	202	2.12	-	27.57	2.87	-
AV	2.416G	111.46	Inf	-Inf	81.03	3	Vertical	202	2.12	-	27.56	2.87	-

802.11g_Nss1,(6Mbps)_4TX

03/07/2020

2417MHz_TX



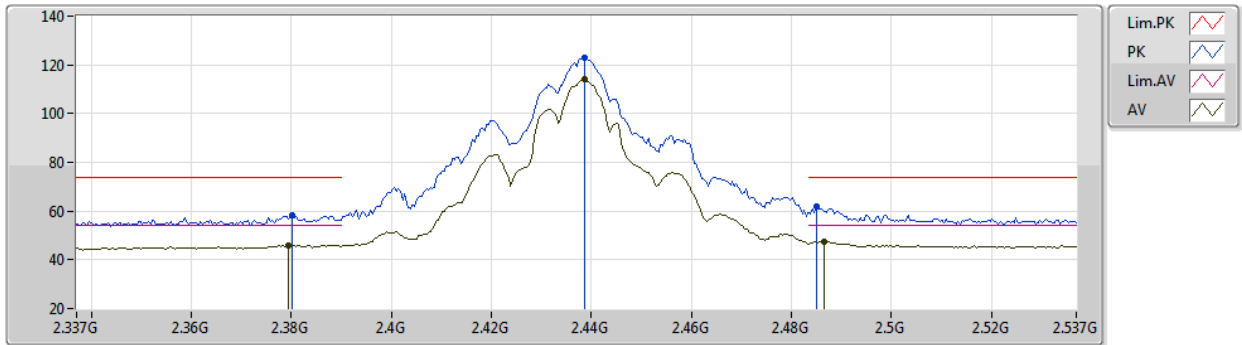
EUT X_4TX
Setting 26
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.388G	68.73	74.00	-5.27	38.37	3	Horizontal	74	2.40	-	27.51	2.85	-
AV	2.3874G	49.48	54.00	-4.52	19.12	3	Horizontal	74	2.40	-	27.51	2.85	-
PK	2.4184G	117.68	Inf	-Inf	87.24	3	Horizontal	74	2.40	-	27.57	2.87	-
AV	2.4194G	109.06	Inf	-Inf	78.61	3	Horizontal	74	2.40	-	27.58	2.87	-

802.11g_Nss1,(6Mbps)_4TX

03/07/2020

2437MHz_TX



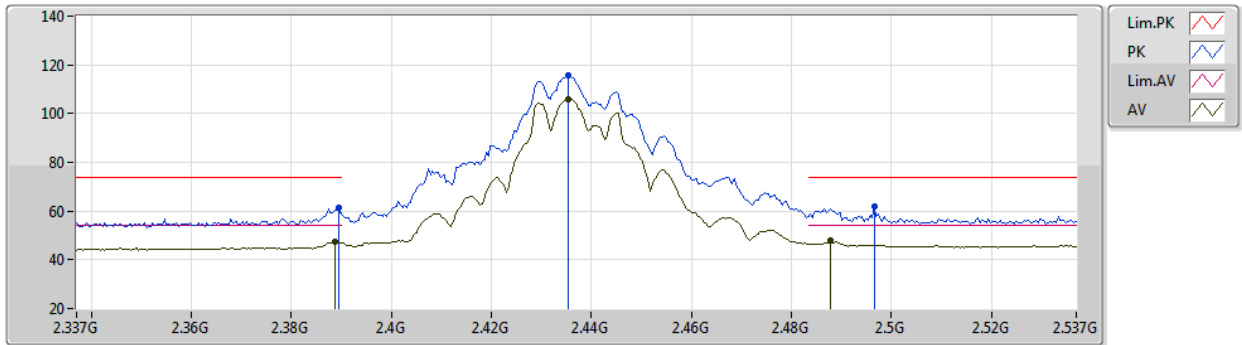
EUT X_4TX
Setting 2E
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3802G	58.45	74.00	-15.55	28.08	3	Vertical	192	2.36	-	27.52	2.85	-
AV	2.3794G	46.01	54.00	-7.99	15.64	3	Vertical	192	2.36	-	27.52	2.85	-
PK	2.4386G	123.05	Inf	-Inf	92.52	3	Vertical	192	2.36	-	27.65	2.88	-
AV	2.4386G	114.07	Inf	-Inf	83.54	3	Vertical	192	2.36	-	27.65	2.88	-
PK	2.485G	61.77	74.00	-12.23	31.02	3	Vertical	192	2.36	-	27.84	2.91	-
AV	2.4866G	47.59	54.00	-6.41	16.83	3	Vertical	192	2.36	-	27.85	2.91	-

802.11g_Nss1,(6Mbps)_4TX

03/07/2020

2437MHz_TX



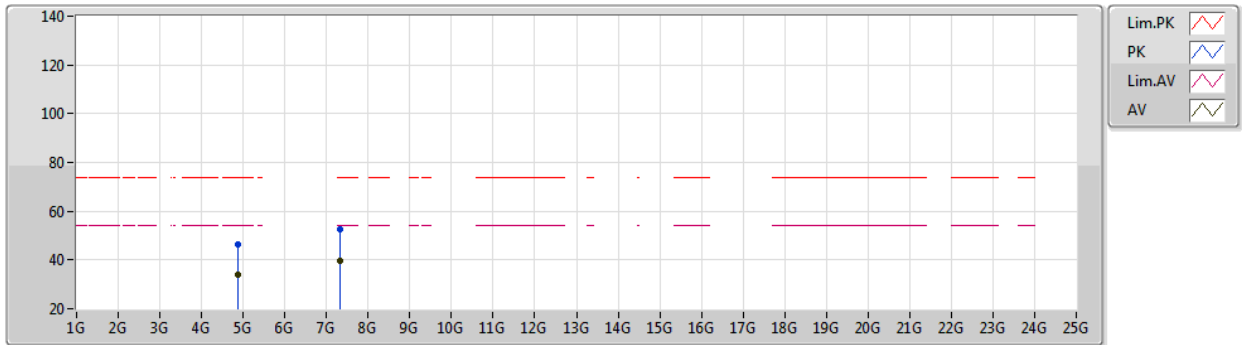
EUT X_4TX
Setting 2E
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3894G	61.41	74.00	-12.59	31.05	3	Horizontal	278	1.88	-	27.51	2.85	-
AV	2.3886G	47.43	54.00	-6.57	17.07	3	Horizontal	278	1.88	-	27.51	2.85	-
PK	2.4354G	115.57	Inf	-Inf	85.05	3	Horizontal	278	1.88	-	27.64	2.88	-
AV	2.4354G	106.11	Inf	-Inf	75.59	3	Horizontal	278	1.88	-	27.64	2.88	-
PK	2.4966G	61.94	74.00	-12.06	31.13	3	Horizontal	278	1.88	-	27.89	2.92	-
AV	2.4878G	47.71	54.00	-6.29	16.95	3	Horizontal	278	1.88	-	27.85	2.91	-

802.11g_Nss1,(6Mbps)_4TX

03/07/2020

2437MHz_TX



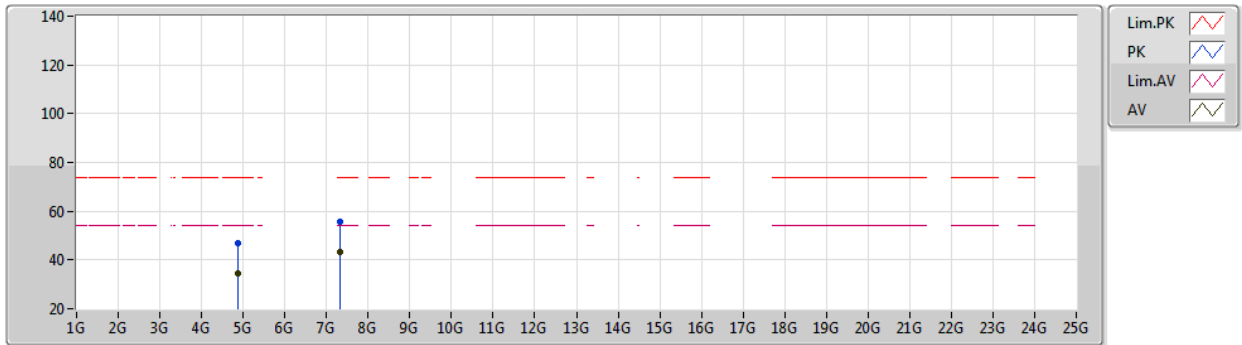
EUT X_4TX
Setting 2E
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.8629G	46.20	74.00	-27.80	41.96	3	Vertical	83	1.77	-	32.75	4.95	33.46
AV	4.87634G	34.12	54.00	-19.88	29.80	3	Vertical	83	1.77	-	32.81	4.96	33.45
PK	7.31826G	52.70	74.00	-21.30	42.91	3	Vertical	241	1.00	-	37.52	6.23	33.96
AV	7.31658G	39.71	54.00	-14.29	29.92	3	Vertical	241	1.00	-	37.52	6.23	33.96

802.11g_Nss1,(6Mbps)_4TX

03/07/2020

2437MHz_TX



EUT X_4TX
Setting 2E
04-E-E-2

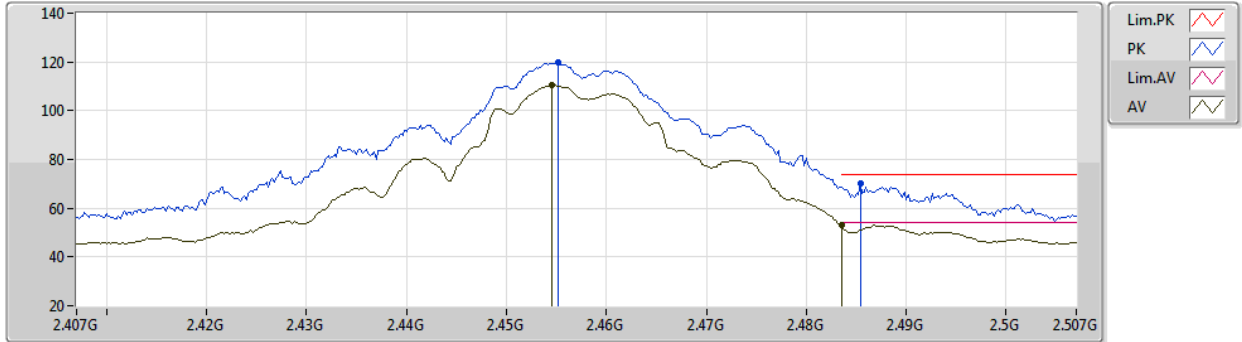
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.8773G	47.02	74.00	-26.98	42.70	3	Horizontal	266	2.08	-	32.81	4.96	33.45
AV	4.87646G	34.57	54.00	-19.43	30.25	3	Horizontal	266	2.08	-	32.81	4.96	33.45
PK	7.3179G	55.66	74.00	-18.34	45.87	3	Horizontal	240	1.78	-	37.52	6.23	33.96
AV	7.31724G	43.51	54.00	-10.49	33.72	3	Horizontal	240	1.78	-	37.52	6.23	33.96



802.11g_Nss1,(6Mbps)_4TX

03/07/2020

2457MHz_TX



EUT X_4TX
Setting 25
04-E-E-2

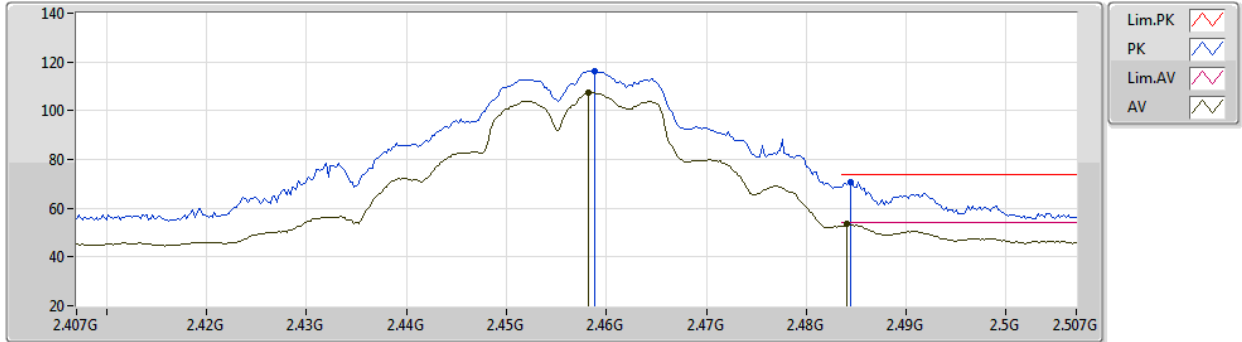
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.4552G	119.87	Inf	-Inf	89.26	3	Vertical	271	2.50	-	27.72	2.89	-
AV	2.4546G	110.57	Inf	-Inf	79.96	3	Vertical	271	2.50	-	27.72	2.89	-
PK	2.4854G	70.26	74.00	-3.74	39.51	3	Vertical	271	2.50	-	27.84	2.91	-
AV	2.4835G	53.25	54.00	-0.75	22.51	3	Vertical	271	2.50	-	27.83	2.91	-



802.11g_Nss1,(6Mbps)_4TX

03/07/2020

2457MHz_TX



EUT X_4TX
Setting 25
04-E-E-2

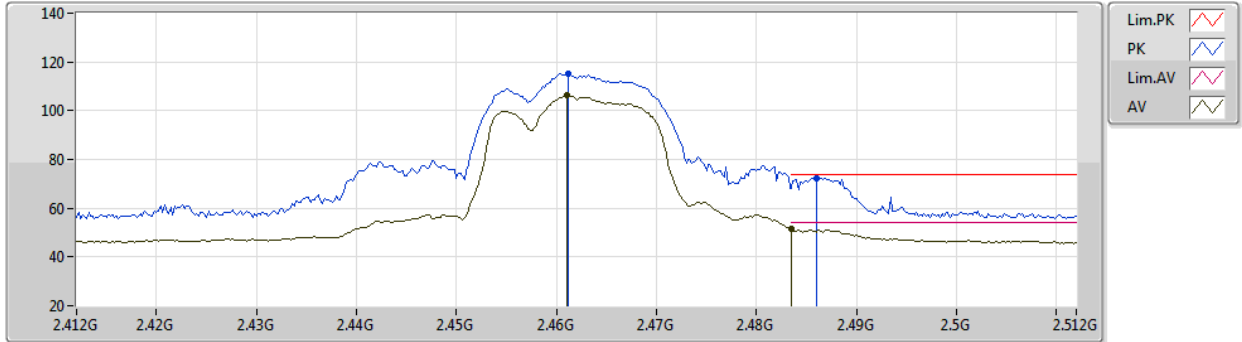
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.4588G	116.39	Inf	-Inf	85.75	3	Horizontal	282	1.80	-	27.74	2.90	-
AV	2.4582G	107.51	Inf	-Inf	76.89	3	Horizontal	282	1.80	-	27.73	2.89	-
PK	2.4844G	70.92	74.00	-3.08	40.17	3	Horizontal	282	1.80	-	27.84	2.91	-
AV	2.484G	53.55	54.00	-0.45	22.80	3	Horizontal	282	1.80	-	27.84	2.91	-



802.11g_Nss1,(6Mbps)_4TX

03/07/2020

2462MHz_TX



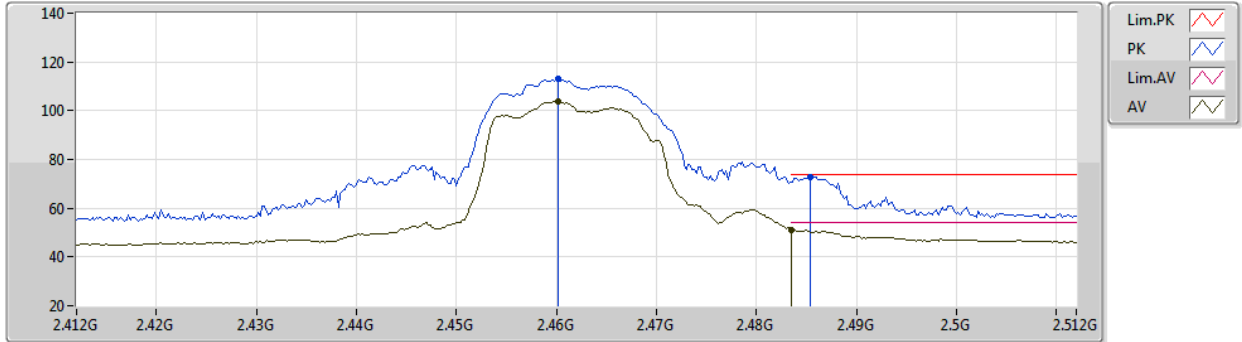
EUT X_4TX
Setting 1C
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.4612G	115.14	Inf	-Inf	84.50	3	Vertical	257	2.53	-	27.74	2.90	-
AV	2.461G	106.32	Inf	-Inf	75.68	3	Vertical	257	2.53	-	27.74	2.90	-
PK	2.486G	72.39	74.00	-1.61	41.64	3	Vertical	257	2.53	-	27.84	2.91	-
AV	2.4835G	51.36	54.00	-2.64	20.62	3	Vertical	257	2.53	-	27.83	2.91	-

802.11g_Nss1,(6Mbps)_4TX

03/07/2020

2462MHz_TX



EUT X_4TX
Setting 1C
04-E-E-2

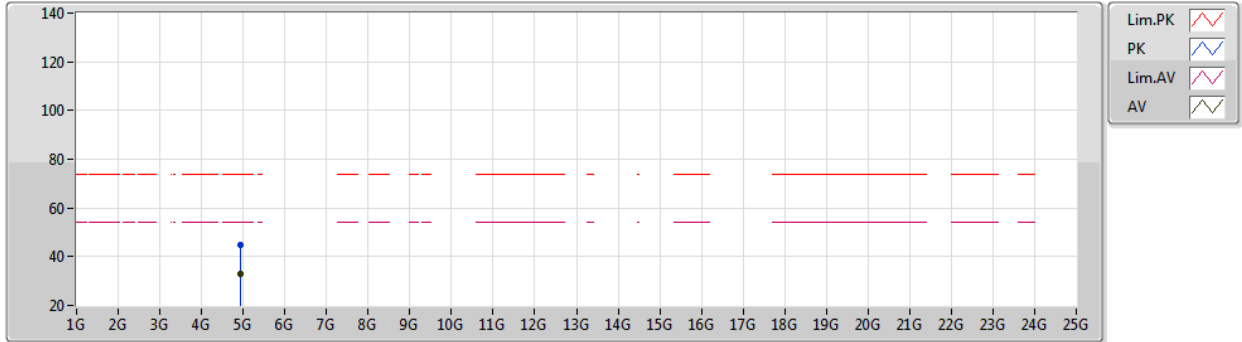
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.4602G	112.85	Inf	-Inf	82.21	3	Horizontal	279	1.80	-	27.74	2.90	-
AV	2.4602G	103.89	Inf	-Inf	73.25	3	Horizontal	279	1.80	-	27.74	2.90	-
PK	2.4854G	72.90	74.00	-1.10	42.15	3	Horizontal	279	1.80	-	27.84	2.91	-
AV	2.4835G	51.13	54.00	-2.87	20.39	3	Horizontal	279	1.80	-	27.83	2.91	-



802.11g_Nss1,(6Mbps)_4TX

03/07/2020

2462MHz_TX



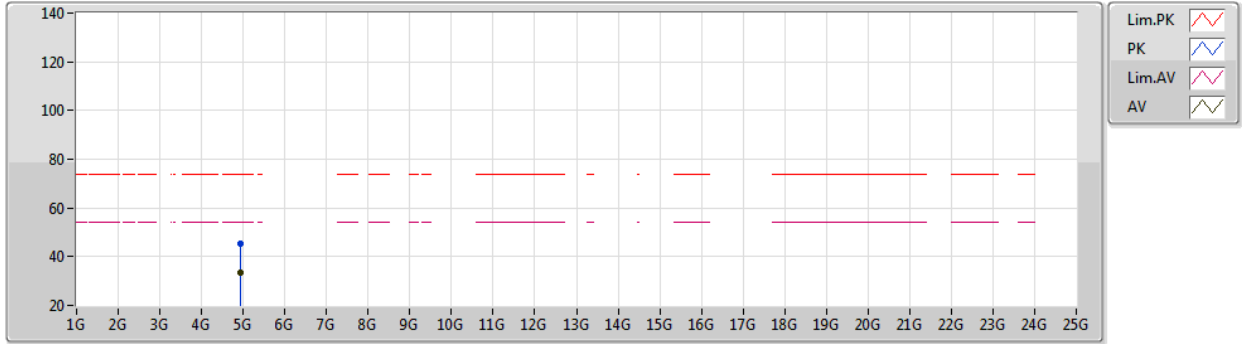
EUT X_4TX
Setting 1C
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.92766G	44.98	74.00	-29.02	40.45	3	Vertical	329	2.55	-	32.96	4.98	33.41
AV	4.92694G	32.86	54.00	-21.14	28.34	3	Vertical	329	2.55	-	32.95	4.98	33.41

802.11g_Nss1,(6Mbps)_4TX

03/07/2020

2462MHz_TX



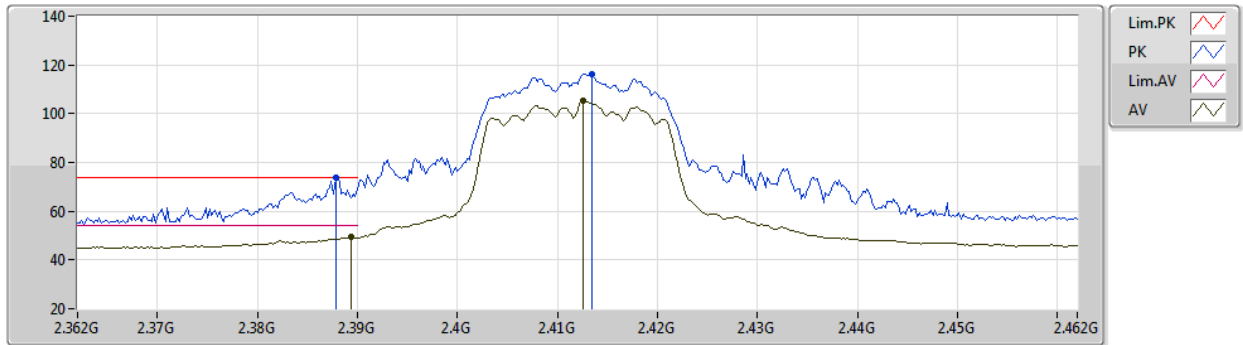
EUT X_4TX
Setting 1C
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.92712G	45.44	74.00	-28.56	40.92	3	Horizontal	337	1.70	-	32.95	4.98	33.41
AV	4.9372G	33.23	54.00	-20.77	28.68	3	Horizontal	337	1.70	-	32.97	4.99	33.41

VHT20_Nss1,(MCS0)_4TX

03/07/2020

2412MHz_TX



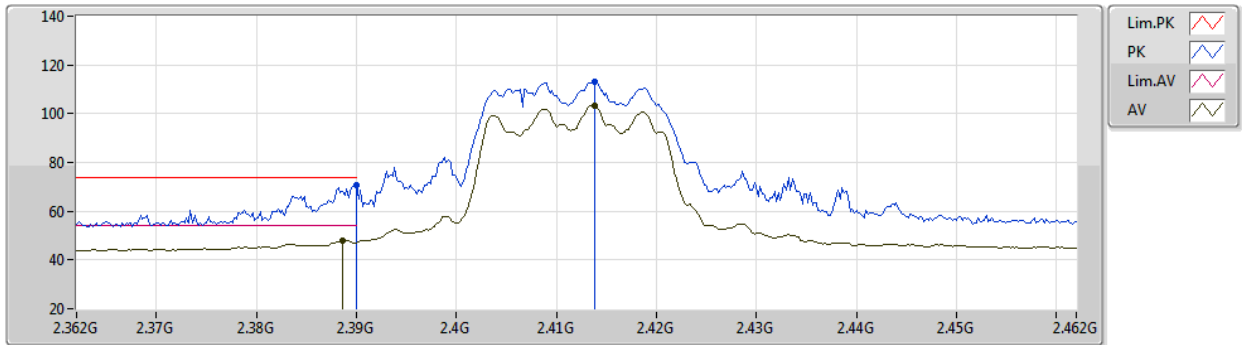
EUT X_4TX
Setting 1D
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3878G	73.97	74.00	-0.03	43.61	3	Vertical	207	2.12	-	27.51	2.85	-
AV	2.3894G	49.28	54.00	-4.72	18.92	3	Vertical	207	2.12	-	27.51	2.85	-
PK	2.4134G	116.34	Inf	-Inf	85.92	3	Vertical	207	2.12	-	27.55	2.87	-
AV	2.4126G	105.19	Inf	-Inf	74.77	3	Vertical	207	2.12	-	27.55	2.87	-

VHT20_Nss1,(MCS0)_4TX

03/07/2020

2412MHz_TX



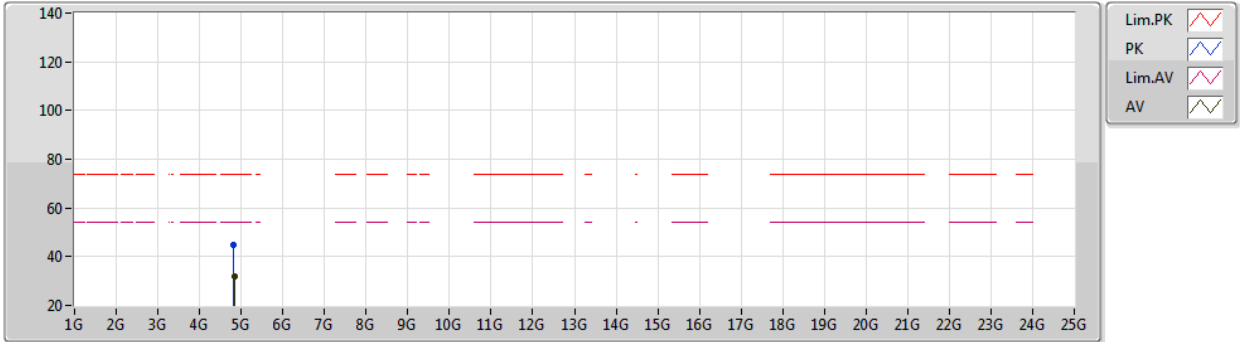
EUT X_4TX
Setting 1D
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.39G	70.57	74.00	-3.43	40.21	3	Horizontal	62	2.09	-	27.51	2.85	-
AV	2.3886G	48.00	54.00	-6.00	17.64	3	Horizontal	62	2.09	-	27.51	2.85	-
PK	2.4138G	113.35	Inf	-Inf	82.92	3	Horizontal	62	2.09	-	27.56	2.87	-
AV	2.4138G	103.34	Inf	-Inf	72.91	3	Horizontal	62	2.09	-	27.56	2.87	-

VHT20_Nss1,(MCS0)_4TX

03/07/2020

2412MHz_TX



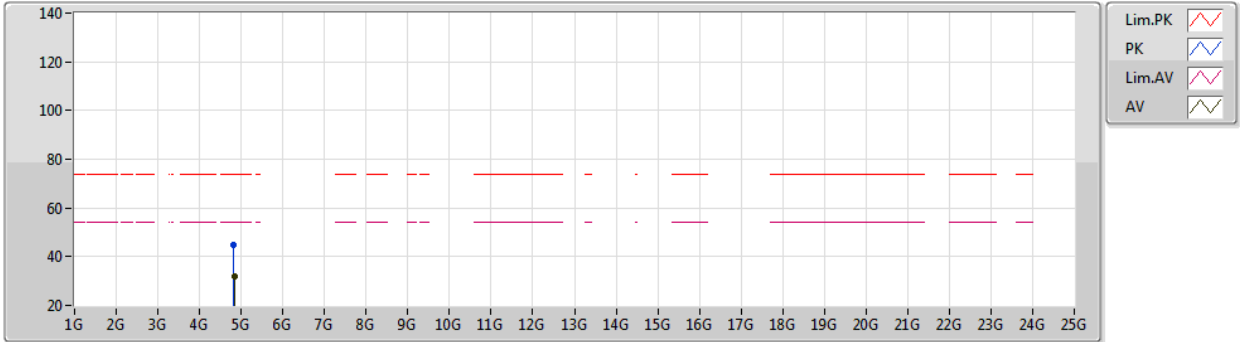
EUT X_4TX
Setting 1D
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.81152G	44.97	74.00	-29.03	40.98	3	Vertical	191	1.13	-	32.55	4.93	33.49
AV	4.8363G	31.98	54.00	-22.02	27.86	3	Vertical	191	1.13	-	32.65	4.94	33.47

VHT20_Nss1,(MCS0)_4TX

03/07/2020

2412MHz_TX



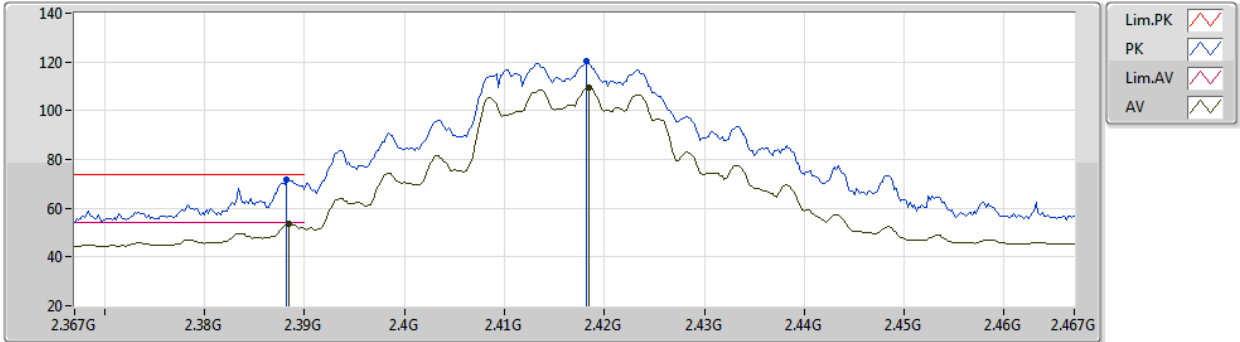
EUT X_4TX
Setting 1D
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.82592G	45.00	74.00	-29.00	40.95	3	Horizontal	142	2.00	-	32.60	4.93	33.48
AV	4.83036G	32.00	54.00	-22.00	27.92	3	Horizontal	142	2.00	-	32.62	4.94	33.48

VHT20_Nss1,(MCS0)_4TX

03/07/2020

2417MHz_TX



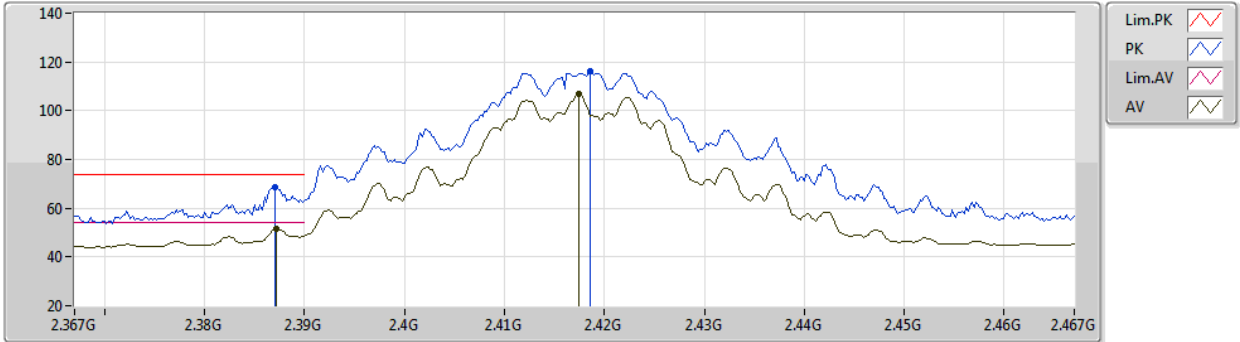
EUT X_4TX
Setting 24
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3882G	71.78	74.00	-2.22	41.42	3	Vertical	205	2.10	-	27.51	2.85	-
AV	2.3884G	53.64	54.00	-0.36	23.28	3	Vertical	205	2.10	-	27.51	2.85	-
PK	2.4182G	120.09	Inf	-Inf	89.65	3	Vertical	205	2.10	-	27.57	2.87	-
AV	2.4184G	109.52	Inf	-Inf	79.08	3	Vertical	205	2.10	-	27.57	2.87	-

VHT20_Nss1,(MCS0)_4TX

03/07/2020

2417MHz_TX



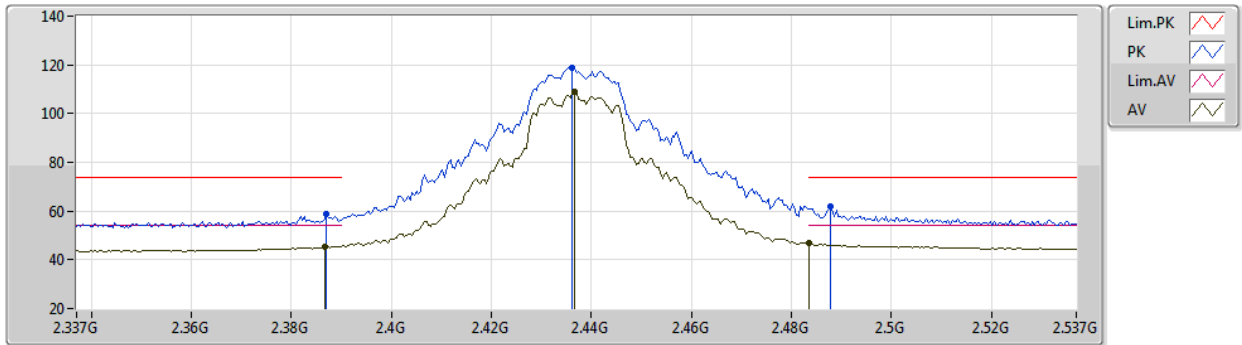
EUT X_4TX
Setting 24
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.387G	68.60	74.00	-5.40	38.24	3	Horizontal	278	1.61	-	27.51	2.85	-
AV	2.3872G	51.65	54.00	-2.35	21.29	3	Horizontal	278	1.61	-	27.51	2.85	-
PK	2.4186G	115.99	Inf	-Inf	85.55	3	Horizontal	278	1.61	-	27.57	2.87	-
AV	2.4174G	106.76	Inf	-Inf	76.32	3	Horizontal	278	1.61	-	27.57	2.87	-

VHT20_Nss1,(MCS0)_4TX

03/07/2020

2437MHz_TX



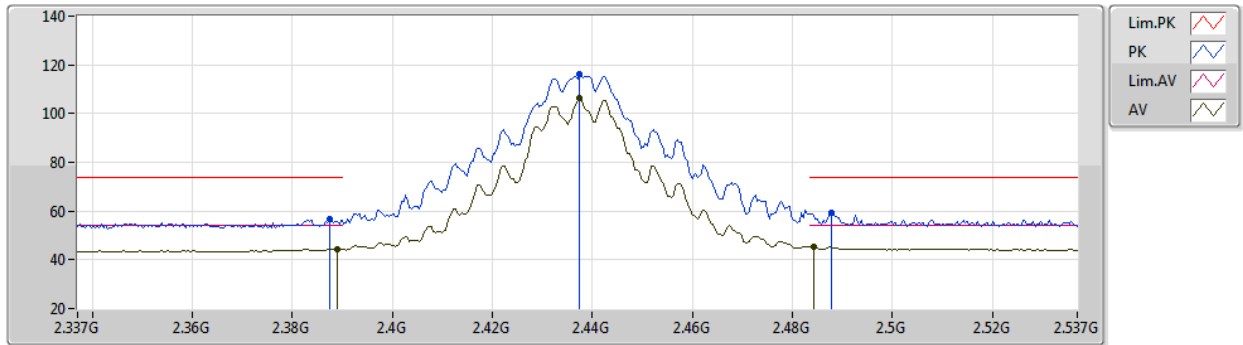
EUT X_4TX
Setting 2E
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.387G	58.75	74.00	-15.25	28.39	3	Vertical	249	1.71	-	27.51	2.85	-
AV	2.3866G	45.52	54.00	-8.48	15.16	3	Vertical	249	1.71	-	27.51	2.85	-
PK	2.4362G	118.95	Inf	-Inf	88.43	3	Vertical	249	1.71	-	27.64	2.88	-
AV	2.4366G	108.91	Inf	-Inf	78.38	3	Vertical	249	1.71	-	27.65	2.88	-
PK	2.4878G	62.07	74.00	-11.93	31.31	3	Vertical	249	1.71	-	27.85	2.91	-
AV	2.4835G	46.76	54.00	-7.24	16.02	3	Vertical	249	1.71	-	27.83	2.91	-

VHT20_Nss1,(MCS0)_4TX

03/07/2020

2437MHz_TX



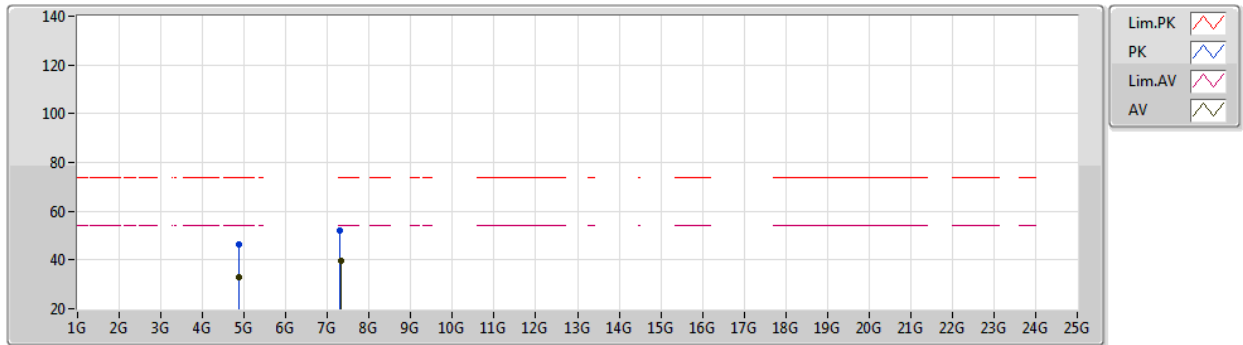
EUT X_4TX
Setting 2E
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3874G	56.52	74.00	-17.48	26.16	3	Horizontal	47	1.76	-	27.51	2.85	-
AV	2.389G	44.54	54.00	-9.46	14.18	3	Horizontal	47	1.76	-	27.51	2.85	-
PK	2.4374G	116.32	Inf	-Inf	85.79	3	Horizontal	47	1.76	-	27.65	2.88	-
AV	2.4374G	106.56	Inf	-Inf	76.03	3	Horizontal	47	1.76	-	27.65	2.88	-
PK	2.4878G	59.55	74.00	-14.45	28.79	3	Horizontal	47	1.76	-	27.85	2.91	-
AV	2.4842G	45.32	54.00	-8.68	14.57	3	Horizontal	47	1.76	-	27.84	2.91	-

VHT20_Nss1,(MCS0)_4TX

03/07/2020

2437MHz_TX



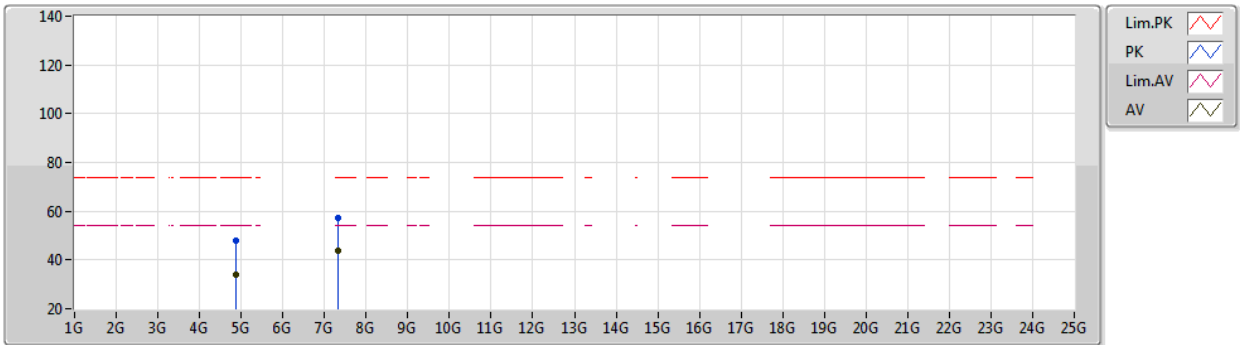
EUT X_4TX
Setting 2E
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.8641G	46.47	74.00	-27.53	42.22	3	Vertical	106	1.01	-	32.76	4.95	33.46
AV	4.87418G	32.68	54.00	-21.32	28.37	3	Vertical	106	1.01	-	32.80	4.96	33.45
PK	7.308G	52.12	74.00	-21.88	42.35	3	Vertical	238	1.94	-	37.51	6.22	33.96
AV	7.31778G	39.47	54.00	-14.53	29.68	3	Vertical	238	1.94	-	37.52	6.23	33.96

VHT20_Nss1,(MCS0)_4TX

03/07/2020

2437MHz_TX



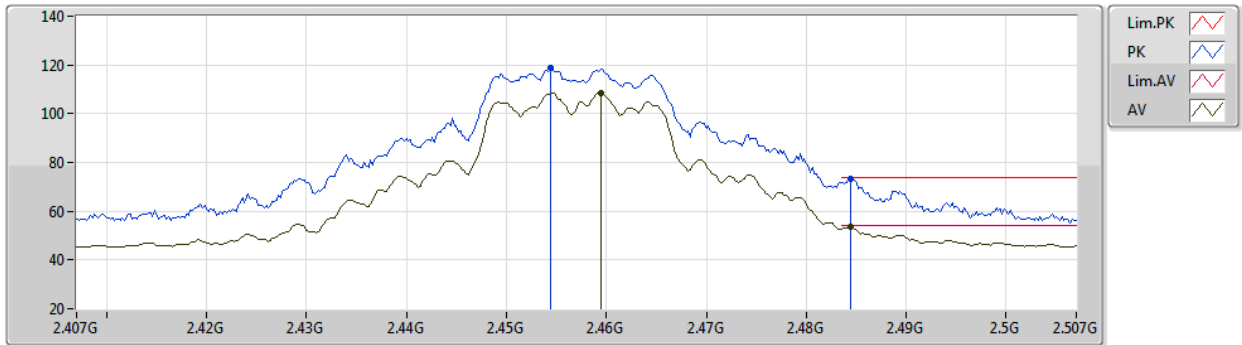
EUT X_4TX
Setting 2E
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.87424G	47.75	74.00	-26.25	43.44	3	Horizontal	145	2.08	-	32.80	4.96	33.45
AV	4.87382G	34.16	54.00	-19.84	29.85	3	Horizontal	145	2.08	-	32.80	4.96	33.45
PK	7.31052G	57.03	74.00	-16.97	47.26	3	Horizontal	235	1.78	-	37.51	6.22	33.96
AV	7.31574G	43.69	54.00	-10.31	33.90	3	Horizontal	235	1.78	-	37.52	6.23	33.96

VHT20_Nss1,(MCS0)_4TX

03/07/2020

2457MHz_TX



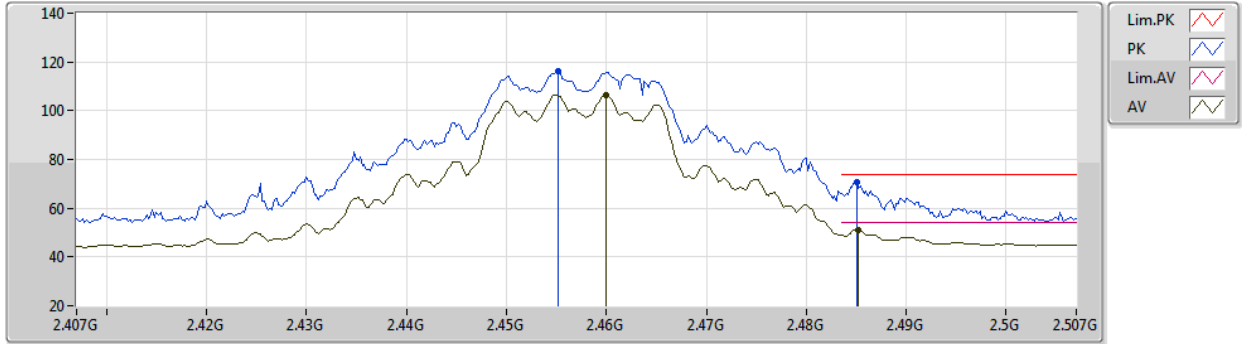
EUT X_4TX
Setting 24
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.4544G	118.55	Inf	-Inf	87.94	3	Vertical	193	2.23	-	27.72	2.89	-
AV	2.4594G	108.63	Inf	-Inf	77.99	3	Vertical	193	2.23	-	27.74	2.90	-
PK	2.4844G	73.48	74.00	-0.52	42.73	3	Vertical	193	2.23	-	27.84	2.91	-
AV	2.4844G	53.63	54.00	-0.37	22.88	3	Vertical	193	2.23	-	27.84	2.91	-

VHT20_Nss1,(MCS0)_4TX

03/07/2020

2457MHz_TX



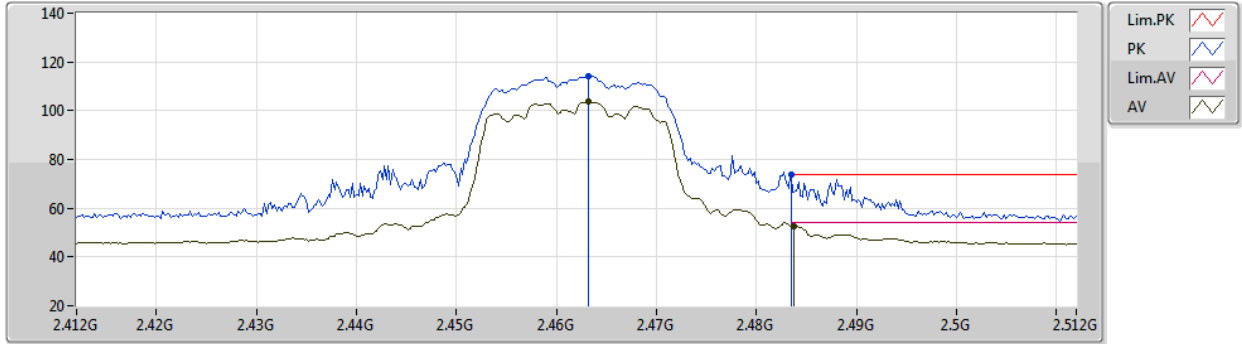
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Setting 24
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.4552G	116.16	Inf	-Inf	85.55	3	Horizontal	76	1.75	-	27.72	2.89	-
AV	2.46G	106.40	Inf	-Inf	75.76	3	Horizontal	76	1.75	-	27.74	2.90	-
PK	2.485G	70.60	74.00	-3.40	39.85	3	Horizontal	76	1.75	-	27.84	2.91	-
AV	2.4852G	51.21	54.00	-2.79	20.46	3	Horizontal	76	1.75	-	27.84	2.91	-

VHT20_Nss1,(MCS0)_4TX

03/07/2020

2462MHz_TX



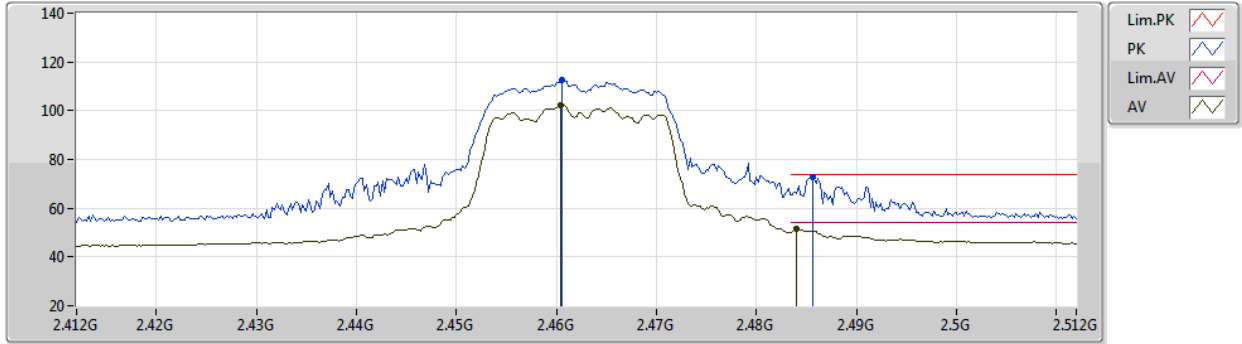
EUT X_4TX
Setting 1C
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.4632G	114.24	Inf	-Inf	83.59	3	Vertical	261	2.53	-	27.75	2.90	-
AV	2.4632G	103.62	Inf	-Inf	72.97	3	Vertical	261	2.53	-	27.75	2.90	-
PK	2.4835G	73.60	74.00	-0.40	42.86	3	Vertical	261	2.53	-	27.83	2.91	-
AV	2.4838G	52.68	54.00	-1.32	21.93	3	Vertical	261	2.53	-	27.84	2.91	-

VHT20_Nss1,(MCS0)_4TX

03/07/2020

2462MHz_TX



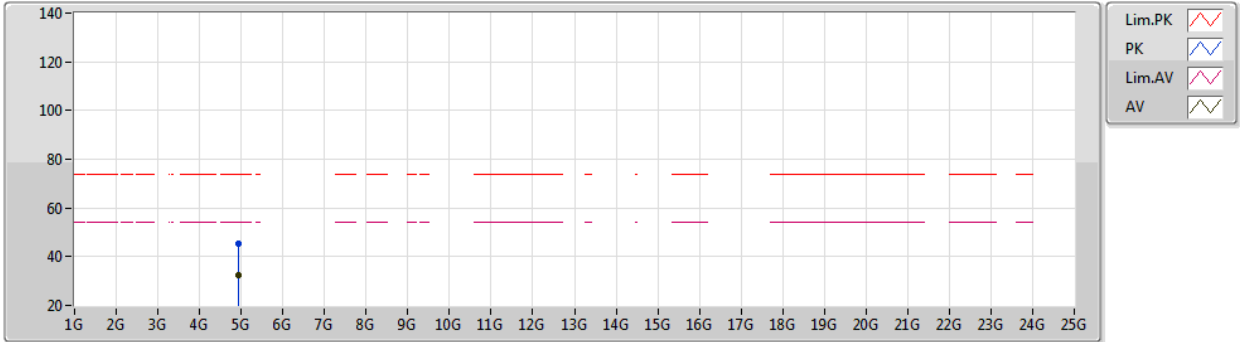
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Setting 1C
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.4606G	112.46	Inf	-Inf	81.82	3	Horizontal	279	1.80	-	27.74	2.90	-
AV	2.4604G	102.26	Inf	-Inf	71.62	3	Horizontal	279	1.80	-	27.74	2.90	-
PK	2.4856G	72.97	74.00	-1.03	42.22	3	Horizontal	279	1.80	-	27.84	2.91	-
AV	2.484G	51.53	54.00	-2.47	20.78	3	Horizontal	279	1.80	-	27.84	2.91	-

VHT20_Nss1,(MCS0)_4TX

03/07/2020

2462MHz_TX



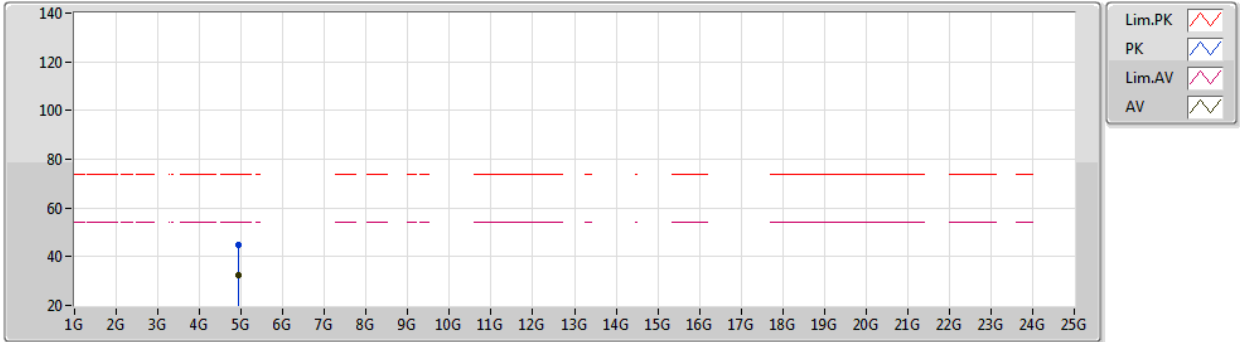
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Setting 1C
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.93006G	45.37	74.00	-28.63	40.83	3	Vertical	316	1.64	-	32.96	4.99	33.41
AV	4.93888G	32.25	54.00	-21.75	27.69	3	Vertical	316	1.64	-	32.98	4.99	33.41

VHT20_Nss1,(MCS0)_4TX

03/07/2020

2462MHz_TX



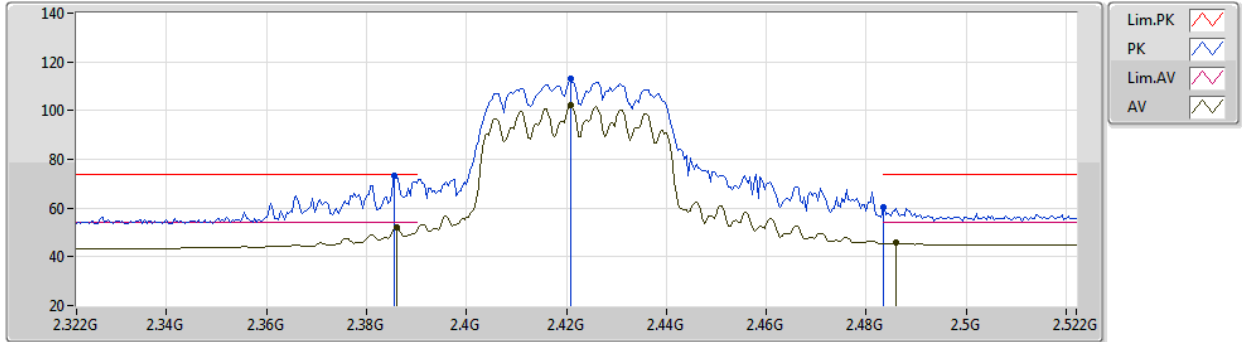
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Setting 1C
04-E-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.92208G	44.93	74.00	-29.07	40.43	3	Horizontal	284	2.61	-	32.94	4.98	33.42
AV	4.93546G	32.40	54.00	-21.60	27.85	3	Horizontal	284	2.61	-	32.97	4.99	33.41

VHT40_Nss1,(MCS0)_4TX

03/07/2020

2422MHz_TX



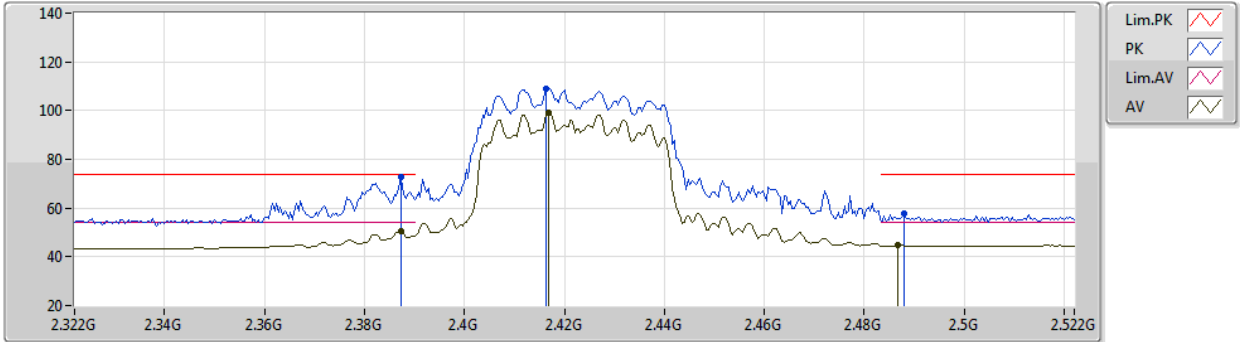
EUT X_4TX
Setting 1E
04-E-J-7

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3856G	73.10	74.00	-0.90	42.74	3	Vertical	252	2.36	-	27.51	2.85	-
AV	2.386G	52.01	54.00	-1.99	21.65	3	Vertical	252	2.36	-	27.51	2.85	-
PK	2.4208G	113.09	Inf	-Inf	82.64	3	Vertical	252	2.36	-	27.58	2.87	-
AV	2.4208G	102.11	Inf	-Inf	71.66	3	Vertical	252	2.36	-	27.58	2.87	-
PK	2.4835G	60.47	74.00	-13.53	29.73	3	Vertical	252	2.36	-	27.83	2.91	-
AV	2.486G	45.75	54.00	-8.25	15.00	3	Vertical	252	2.36	-	27.84	2.91	-

VHT40_Nss1,(MCS0)_4TX

03/07/2020

2422MHz_TX



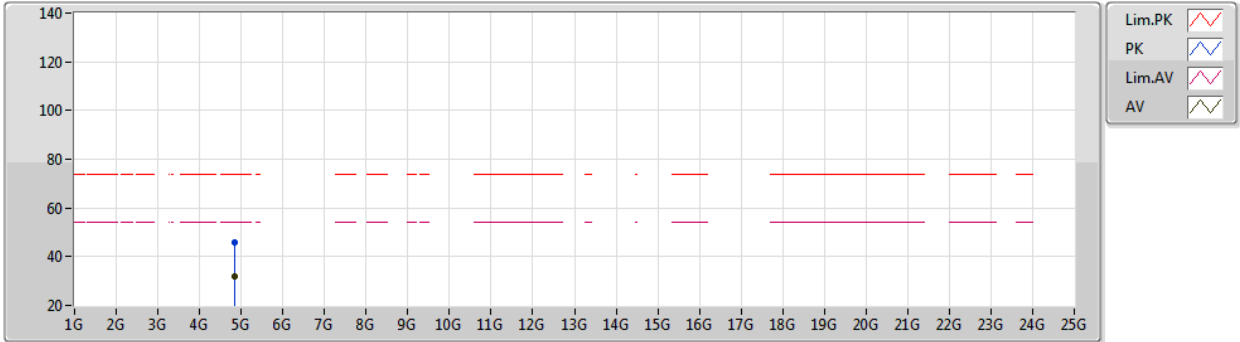
EUT X_4TX
Setting 1E
04-E-J-7

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3872G	72.56	74.00	-1.44	42.20	3	Horizontal	268	2.75	-	27.51	2.85	-
AV	2.3872G	50.32	54.00	-3.68	19.96	3	Horizontal	268	2.75	-	27.51	2.85	-
PK	2.4164G	109.01	Inf	-Inf	78.57	3	Horizontal	268	2.75	-	27.57	2.87	-
AV	2.4168G	99.33	Inf	-Inf	68.89	3	Horizontal	268	2.75	-	27.57	2.87	-
PK	2.488G	57.51	74.00	-16.49	26.75	3	Horizontal	268	2.75	-	27.85	2.91	-
AV	2.4868G	44.60	54.00	-9.40	13.84	3	Horizontal	268	2.75	-	27.85	2.91	-

VHT40_Nss1,(MCS0)_4TX

03/07/2020

2422MHz_TX



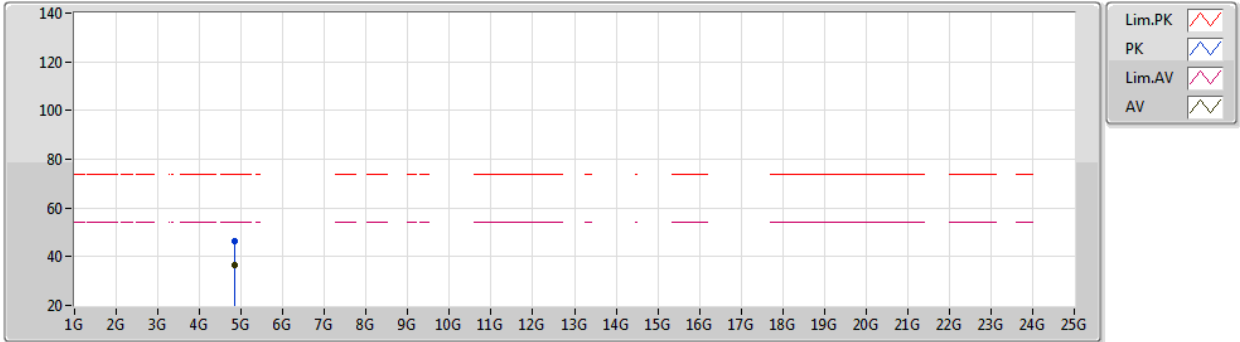
EUT X_4TX
Setting 1E
04-E-J-7

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.84362G	46.04	74.00	-27.96	41.90	3	Vertical	232	2.57	-	32.67	4.94	33.47
AV	4.84393G	31.92	54.00	-22.08	27.77	3	Vertical	232	2.57	-	32.68	4.94	33.47

VHT40_Nss1,(MCS0)_4TX

03/07/2020

2422MHz_TX



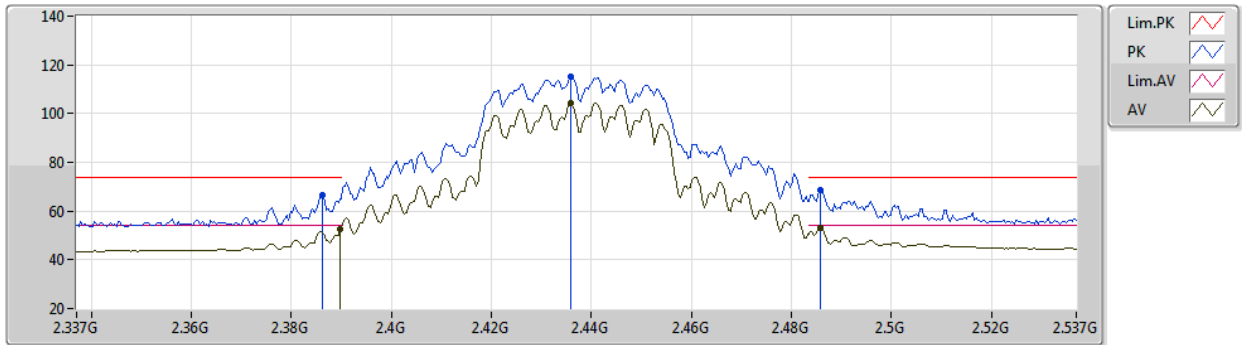
EUT X_4TX
Setting 1E
04-E-J-7

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.84412G	46.54	74.00	-27.46	42.39	3	Horizontal	345	2.62	-	32.68	4.94	33.47
AV	4.84368G	36.42	54.00	-17.58	32.28	3	Horizontal	345	2.62	-	32.67	4.94	33.47

VHT40_Nss1,(MCS0)_4TX

03/07/2020

2437MHz_TX



EUT X_4TX
Setting 22
04-E-J-7

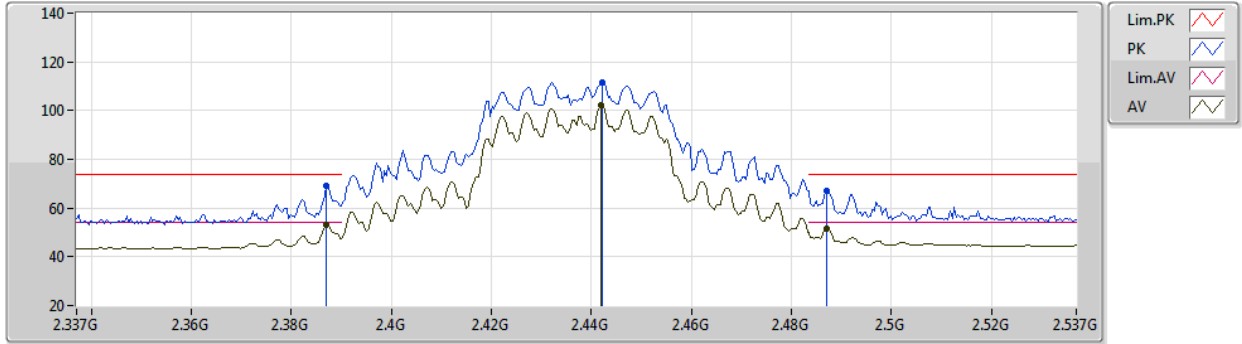
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3862G	66.79	74.00	-7.21	36.43	3	Vertical	251	2.09	-	27.51	2.85	-
AV	2.3898G	52.50	54.00	-1.50	22.14	3	Vertical	251	2.09	-	27.51	2.85	-
PK	2.4358G	115.00	Inf	-Inf	84.48	3	Vertical	251	2.09	-	27.64	2.88	-
AV	2.4358G	104.40	Inf	-Inf	73.88	3	Vertical	251	2.09	-	27.64	2.88	-
PK	2.4858G	68.60	74.00	-5.40	37.85	3	Vertical	251	2.09	-	27.84	2.91	-
AV	2.4858G	53.11	54.00	-0.89	22.36	3	Vertical	251	2.09	-	27.84	2.91	-



VHT40_Nss1,(MCS0)_4TX

03/07/2020

2437MHz_TX



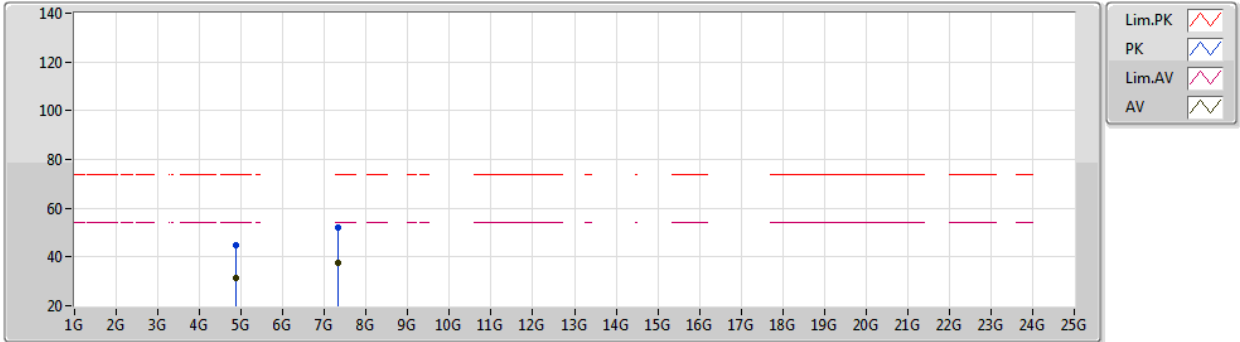
EUT X_4TX
Setting 22
04-E-J-7

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.387G	69.20	74.00	-4.80	38.84	3	Horizontal	277	2.47	-	27.51	2.85	-
AV	2.387G	53.28	54.00	-0.72	22.92	3	Horizontal	277	2.47	-	27.51	2.85	-
PK	2.4422G	111.78	Inf	-Inf	81.22	3	Horizontal	277	2.47	-	27.67	2.89	-
AV	2.4418G	101.99	Inf	-Inf	71.43	3	Horizontal	277	2.47	-	27.67	2.89	-
PK	2.487G	67.31	74.00	-6.69	36.55	3	Horizontal	277	2.47	-	27.85	2.91	-
AV	2.487G	51.45	54.00	-2.55	20.69	3	Horizontal	277	2.47	-	27.85	2.91	-

VHT40_Nss1,(MCS0)_4TX

03/07/2020

2437MHz_TX



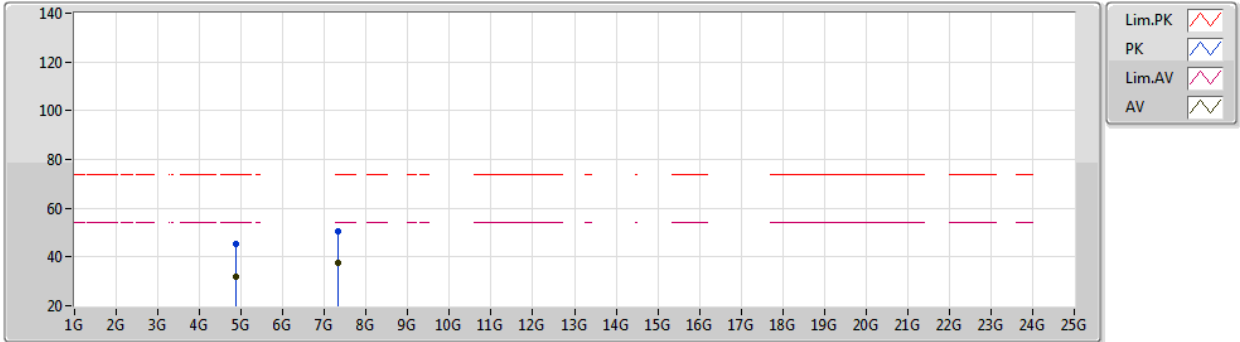
EUT X_4TX
Setting 22
04-E-J-7

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.87358G	44.98	74.00	-29.02	40.68	3	Vertical	240	2.53	-	32.79	4.96	33.45
AV	4.87464G	31.60	54.00	-22.40	27.29	3	Vertical	240	2.53	-	32.80	4.96	33.45
PK	7.31566G	52.08	74.00	-21.92	42.29	3	Vertical	118	2.85	-	37.52	6.23	33.96
AV	7.3158G	37.54	54.00	-16.46	27.75	3	Vertical	118	2.85	-	37.52	6.23	33.96

VHT40_Nss1,(MCS0)_4TX

03/07/2020

2437MHz_TX



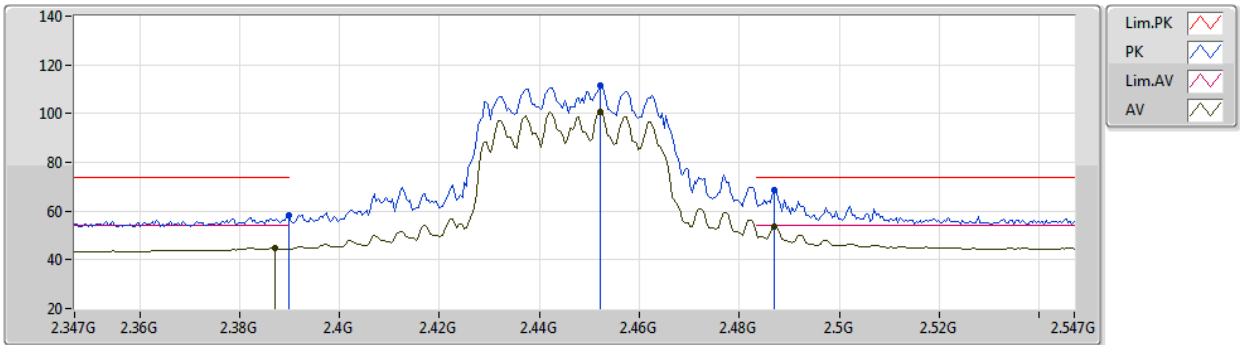
EUT X_4TX
Setting 22
04-E-J-7

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.87464G	45.42	74.00	-28.58	41.11	3	Horizontal	152	2.04	-	32.80	4.96	33.45
AV	4.87258G	31.81	54.00	-22.19	27.51	3	Horizontal	152	2.04	-	32.79	4.96	33.45
PK	7.31546G	50.73	74.00	-23.27	40.94	3	Horizontal	347	2.42	-	37.52	6.23	33.96
AV	7.31358G	37.42	54.00	-16.58	27.64	3	Horizontal	347	2.42	-	37.51	6.23	33.96

VHT40_Nss1,(MCS0)_4TX

03/07/2020

2447MHz_TX



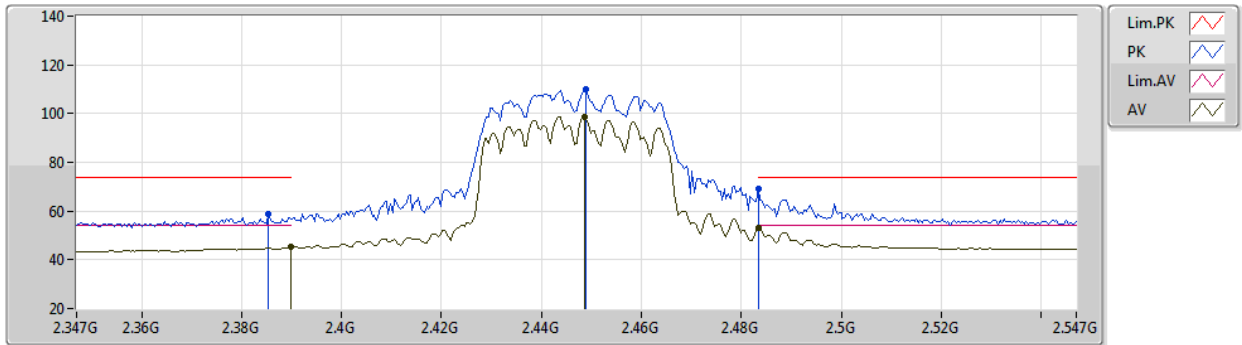
EUT X_4TX
Setting 1C
04-E-J-7

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3898G	58.30	74.00	-15.70	27.94	3	Vertical	234	2.81	-	27.51	2.85	-
AV	2.387G	44.83	54.00	-9.17	14.47	3	Vertical	234	2.81	-	27.51	2.85	-
PK	2.4522G	111.80	Inf	-Inf	81.20	3	Vertical	234	2.81	-	27.71	2.89	-
AV	2.4522G	100.61	Inf	-Inf	70.01	3	Vertical	234	2.81	-	27.71	2.89	-
PK	2.487G	68.42	74.00	-5.58	37.66	3	Vertical	234	2.81	-	27.85	2.91	-
AV	2.487G	53.80	54.00	-0.20	23.04	3	Vertical	234	2.81	-	27.85	2.91	-

VHT40_Nss1,(MCS0)_4TX

03/07/2020

2447MHz_TX



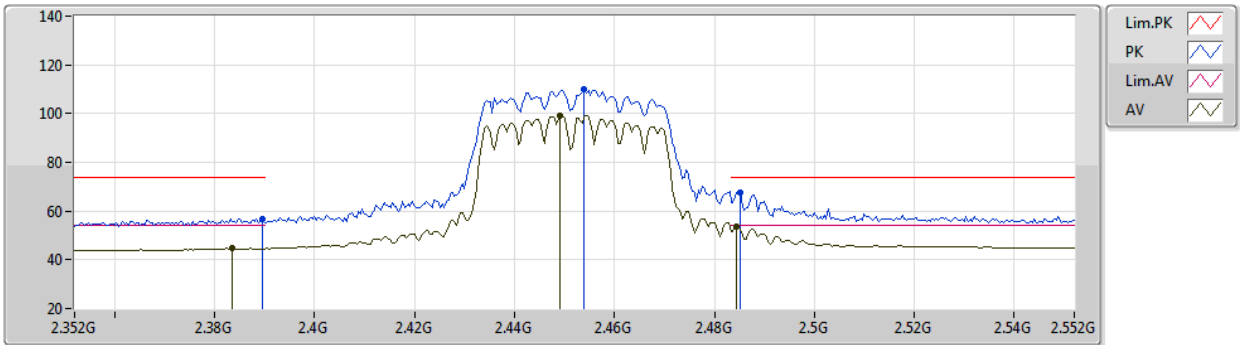
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Setting 1C
04-E-J-7

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3854G	58.74	74.00	-15.26	28.38	3	Horizontal	266	2.45	-	27.51	2.85	-
AV	2.3898G	45.12	54.00	-8.88	14.76	3	Horizontal	266	2.45	-	27.51	2.85	-
PK	2.449G	109.80	Inf	-Inf	79.21	3	Horizontal	266	2.45	-	27.70	2.89	-
AV	2.4486G	98.84	Inf	-Inf	68.26	3	Horizontal	266	2.45	-	27.69	2.89	-
PK	2.4835G	69.11	74.00	-4.89	38.37	3	Horizontal	266	2.45	-	27.83	2.91	-
AV	2.4835G	52.92	54.00	-1.08	22.18	3	Horizontal	266	2.45	-	27.83	2.91	-

VHT40_Nss1,(MCS0)_4TX

03/07/2020

2452MHz_TX



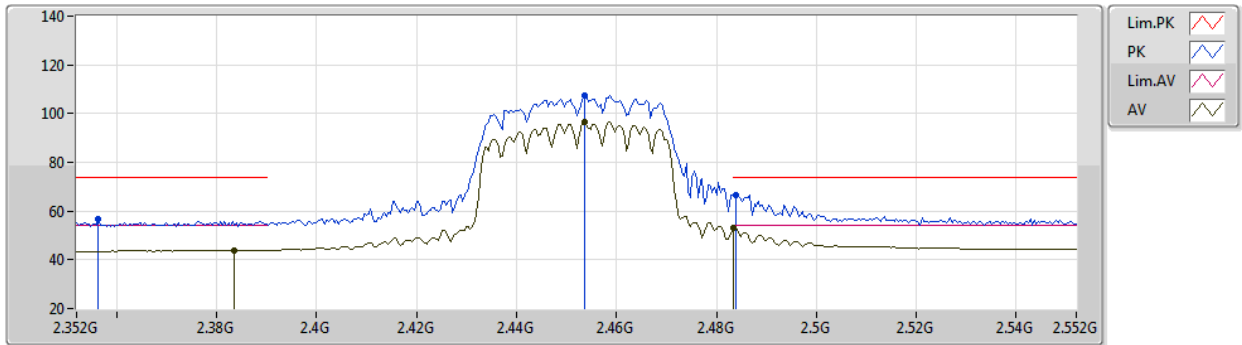
EUT X_4TX
Setting 1A
04-E-J-7

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3896G	56.91	74.00	-17.09	26.55	3	Vertical	258	2.26	-	27.51	2.85	-
AV	2.3836G	44.66	54.00	-9.34	14.29	3	Vertical	258	2.26	-	27.52	2.85	-
PK	2.454G	110.19	Inf	-Inf	79.58	3	Vertical	258	2.26	-	27.72	2.89	-
AV	2.4492G	98.95	Inf	-Inf	68.36	3	Vertical	258	2.26	-	27.70	2.89	-
PK	2.4852G	67.72	74.00	-6.28	36.97	3	Vertical	258	2.26	-	27.84	2.91	-
AV	2.4844G	53.56	54.00	-0.44	22.81	3	Vertical	258	2.26	-	27.84	2.91	-

VHT40_Nss1,(MCS0)_4TX

03/07/2020

2452MHz_TX



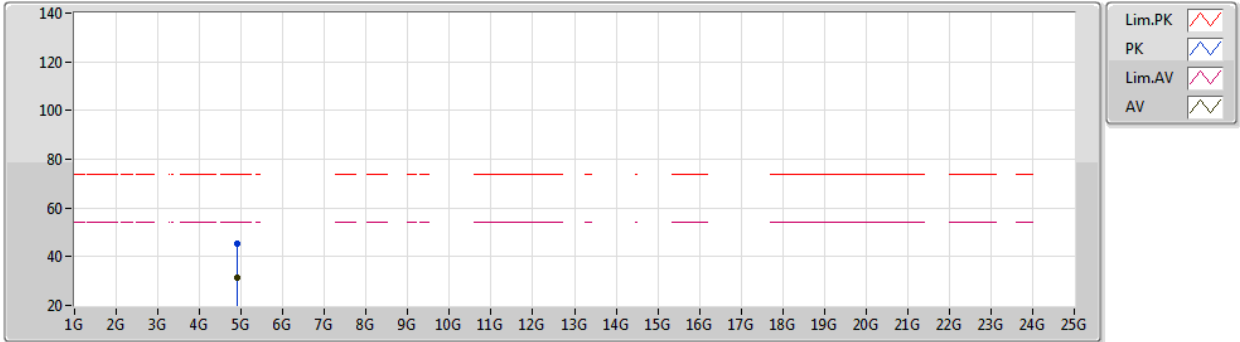
EUT X_4TX
Setting 1A
04-E-J-7

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3564G	56.52	74.00	-17.48	26.15	3	Horizontal	275	2.67	-	27.54	2.83	-
AV	2.3836G	43.85	54.00	-10.15	13.48	3	Horizontal	275	2.67	-	27.52	2.85	-
PK	2.4536G	107.35	Inf	-Inf	76.75	3	Horizontal	275	2.67	-	27.71	2.89	-
AV	2.4536G	96.56	Inf	-Inf	65.96	3	Horizontal	275	2.67	-	27.71	2.89	-
PK	2.484G	66.64	74.00	-7.36	35.89	3	Horizontal	275	2.67	-	27.84	2.91	-
AV	2.4835G	52.92	54.00	-1.08	22.18	3	Horizontal	275	2.67	-	27.83	2.91	-

VHT40_Nss1,(MCS0)_4TX

03/07/2020

2452MHz_TX



EUT X_4TX
Setting 1A
04-E-J-7

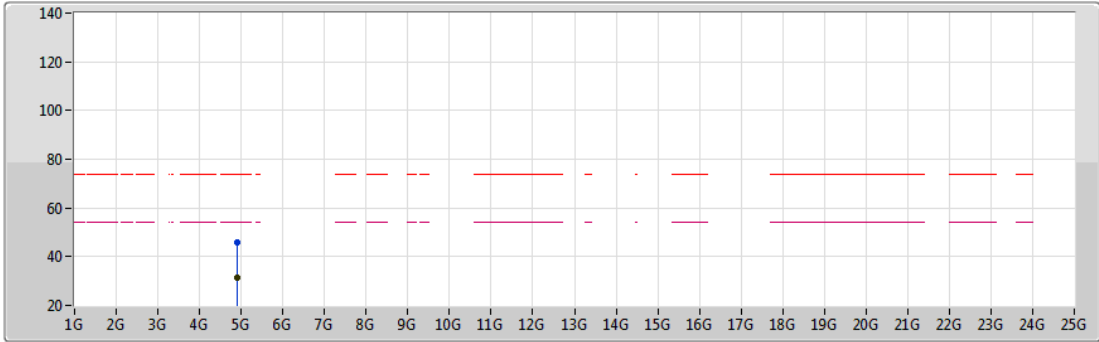
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.90435G	45.24	74.00	-28.76	40.79	3	Vertical	9	1.44	-	32.91	4.97	33.43
AV	4.90378G	31.42	54.00	-22.58	26.97	3	Vertical	9	1.44	-	32.91	4.97	33.43



VHT40_Nss1,(MCS0)_4TX

03/07/2020

2452MHz_TX



Lim.PK
 PK
 Lim.AV
 AV

EUT X_4TX
Setting 1A
04-E-J-7

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.90366G	45.83	74.00	-28.17	41.38	3	Horizontal	35	1.00	-	32.91	4.97	33.43
AV	4.90422G	31.46	54.00	-22.54	27.01	3	Horizontal	35	1.00	-	32.91	4.97	33.43

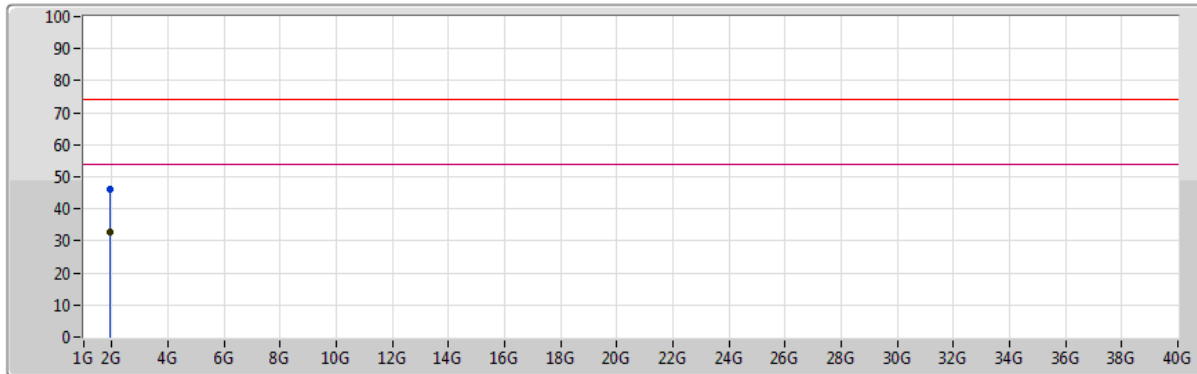


Summary





Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	AV	1.91629G	32.92	54.00	-21.08	Vertical

Mode 1

20/07/2020



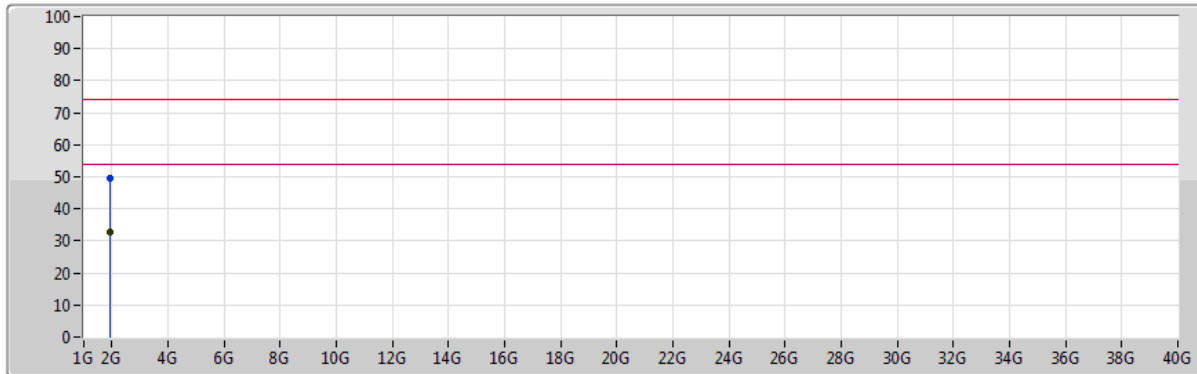
Legend for the graph:

- Lim.PK 
- PK 
- Lim.AV 
- AV 





Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	1.9177G	46.33	74.00	-27.67	-1.01	3	Vertical	59	1.80	-	47.34	27.72	3.92	32.65
AV	1.91629G	32.92	54.00	-21.08	-1.01	3	Vertical	59	1.80	-	33.93	27.72	3.92	32.65

Mode 1

20/07/2020



Legend for the graph:

- Lim.PK 
- PK 
- Lim.AV 
- AV 

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV)	AF (dB)	CL (dB)	PA (dB)
PK	1.91805G	49.44	74.00	-24.56	-1.01	3	Horizontal	322	1.81	-	50.45	27.72	3.92	32.65
AV	1.91865G	32.67	54.00	-21.33	-1.01	3	Horizontal	322	1.81	-	33.68	27.72	3.92	32.65