Testing Laboratory 1190

FCC RADIO TEST REPORT

FCC ID	:	2ARF9CSG-W1
Equipment	:	Versa Wireless AP Module for Cloud Services Gateway Appliances
Brand Name	:	VERSA NETWORKS
Model Name	:	CSG-W1
Applicant	:	Versa Networks 6001 America Center Dr, 4th floor, Suite 400, San Jose, CA 95002, USA
Manufacturer	:	Wistron NeWeb Corporation 20 Park Avenue II, Hsinchu Science Park, Hsinchu 308 Taiwan
Standard	:	47 CFR FCC Part 15.247

The product was received on Sep. 18, 2018, and testing was started from Sep. 19, 2018 and completed on Oct. 03, 2018. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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

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

Approved by: Cliff Chang

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

Table of Contents

Photographs of EUT v01

History of this test report

Report No.	Version	Description	Issued Date
FR891203-01AA	01	Initial issue of report	Nov. 09, 2018

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	-

Reviewed by: Sam Chen
Report Producer: Vicky Huang

1 General Description

1.1 Information

1.1.1 RF General Information

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

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	802.11b	20	2TX
2.4-2.4835GHz	802.11g	20	2TX
2.4-2.4835GHz	802.11n HT20	20	2TX
2.4-2.4835GHz	802.11ac VHT20	20	2TX
2.4-2.4835GHz	802.11n HT40	40	2TX
2.4-2.4835GHz	802.11ac VHT40	40	2TX

Note:
- 11b mode uses a combination of DSSS-DBPSK, DQPSK, CCK modulation.
- 11g, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- VHT20, VHT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.
- BWch is the nominal channel bandwidth.
- Nss-Min is the minimum number of spatial streams.
- Nant is the number of outputs. e.g., 2(2,3) means have 2 outputs for port 2 and port 3. 2 means have 2 outputs for port 1 and port 2.

1.1.2 Antenna Information

Ant.	Port	Brand	P/N	Antenna Type	Connector	cable color	Gain (dBi)
1	1	WIESON	GY121HT0330-016	Dipole Antenna	I-PEX	Gray	Note 1
2	2	WIESON	GY121HT0330-016	Dipole Antenna	I-PEX	Black	

Note 1:

Ant.	Port	Antenna Gain (dBi)		Cable Loss (dB)		True Gain (dBi)	
		2.4G	5G	2.4G	5G	2.4G	5G
1	1	3.10	4.55	0.75	1.61	2.35	2.94
2	2	3.10	4.55	1.00	1.78	2.10	2.77

Note 2: The EUT has two antennas.

2.4GHz Functions
For IEEE 802.11b/g/n/ac mode (2TX, 2RX):
Port 1 and Port 2 could transmit/receive simultaneously.
5GHz Functions
For IEEE 802.11a/n/ac mode (2TX, 2RX):
Port 1 and Port 2 could transmit/receive simultaneously.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11b	0.994	0.026	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11g	0.963	0.164	2.068m	1k
802.11ac VHT20	0.983	0.074	n/a (DC>=0.98)	n/a (DC>=0.98)
802.11ac VHT40	0.966	0.15	2.44m	1k

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

1.1.4 EUT Operational Condition

EUT Power Type	From host system			
Beamforming Function	☐	With beamforming	☒	Without beamforming
Function	☒	Point-to-multipoint	☐	Point-to-point
Test Software Version	QCARCT v3.0.250.0			

1.2 Testing Applied 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
- FCC KDB 558074 D01 v05
- FCC KDB 662911 D01 v02r01

1.3 Testing Location Information

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

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH01-CB	Caster Chang	20°C / 50%	Sep. 20, 2018~Oct. 01, 2018
Radiated	03CH01-CB	Stim Sung	22°C / 54%	Sep. 19, 2018~Oct. 03, 2018
AC Conduction	CO02-CB	GN Hou	23°C / 61%	Sep. 19, 2018

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)	3.2 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.7 dB	Confidence levels of 95%
Output Power Measurement	1.33 dB	Confidence levels of 95%
Power Density Measurement	1.27 dB	Confidence levels of 95%
Bandwidth Measurement	9.74×10^{-8}	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
802.11b_Nss1,(1Mbps)_2TX	-
2412MHz	19.5
2437MHz	21
2462MHz	20.5
802.11g_Nss1,(6Mbps)_2TX	-
2412MHz	15
2417MHz	17.5
2422MHz	18.5
2427MHz	20.5
2432MHz	21.5
2437MHz	23
2442MHz	22.5
2447MHz	21.5
2452MHz	19.5
2457MHz	17.5
2462MHz	16
802.11ac VHT20_Nss1,(MCS0)_2TX	-
2412MHz	17
2417MHz	20
2422MHz	18
2427MHz	21.5
2432MHz	21.5
2437MHz	23
2442MHz	22.5
2447MHz	21
2452MHz	20
2457MHz	20
2462MHz	16

802.11ac VHT40_Nss1,(MCS0)_2TX	-
2422MHz	15
2427MHz	16
2432MHz	16
2437MHz	17
2442MHz	16.5
2447MHz	16
2452MHz	15

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	EUT

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	Normal Link
1	Place EUT in Z axis
Operating Mode > 1GHz	CTX
The EUT was performed at X axis, Y axis and Z axis position. The worst case was found at X axis, so it was selected to perform test and its test result was written in the report.	
1	Place EUT in X axis

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
According to Emissions in Restricted Frequency Bands below 1GHz test, So the measurement will follow this same test configuration.	
1	Place EUT in Z axis - 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.: FA891203-01 for Co-location RF Exposure Evaluation.	

Note : The Adapter below is for measurement only, would not be marketed.
The Adapter information as below:

Support Unit	Brand	Model Number
Adapter	I.T.E	F24W5-120200SPAU

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

N/A

2.5 Support Equipment

For Test Site No: CO02-CB

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB*2	DELL	E6430	N/A
2	Fixture	WNC	48RAAAA2.SGA	N/A
3	Adapter	I.T.E	F24W5-120200SPAU	N/A

For Test Site No: 03CH01-CB (below 1GHz)

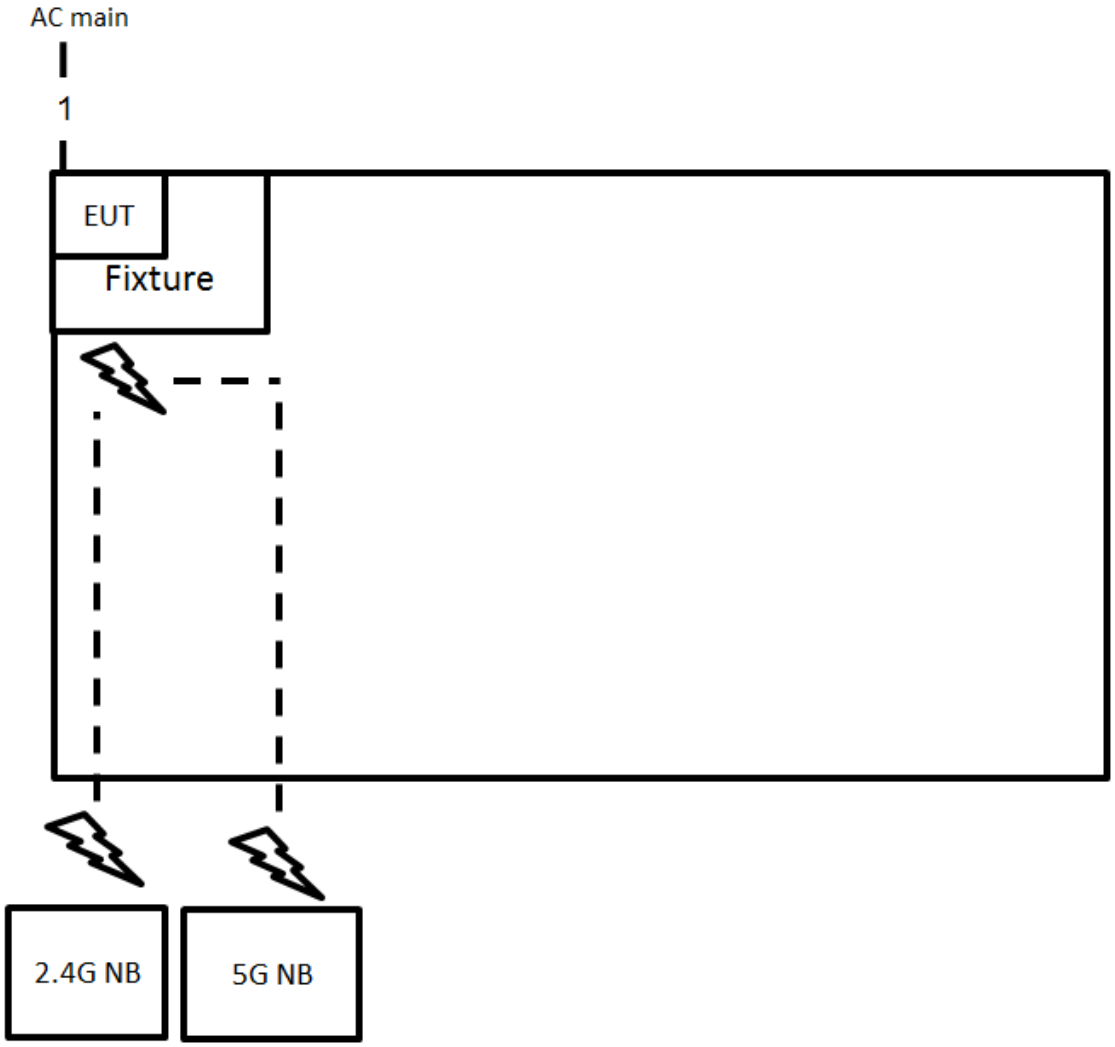
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB*2	DELL	E4300	N/A
2	Fixture	WNC	48RAAAA2.SGA	N/A
3	Adapter	I.T.E	F24W5-120200SPAU	N/A

For Test Site No: 03CH01-CB (above 1GHz) and TH01-CB

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	NB	DELL	E4300	N/A
2	Fixture	WNC	48RAAAA2.SGA	N/A
3	Adapter	I.T.E	F24W5-120200SPAU	N/A

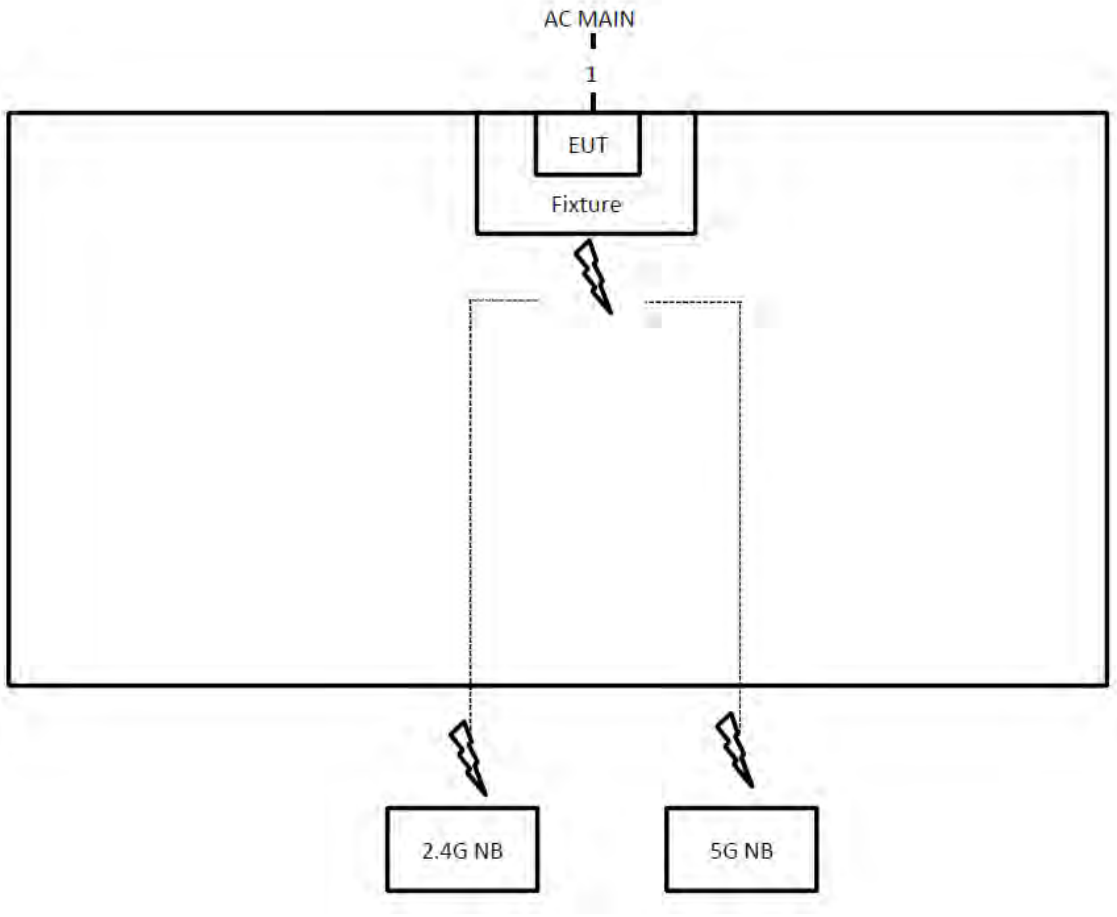
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



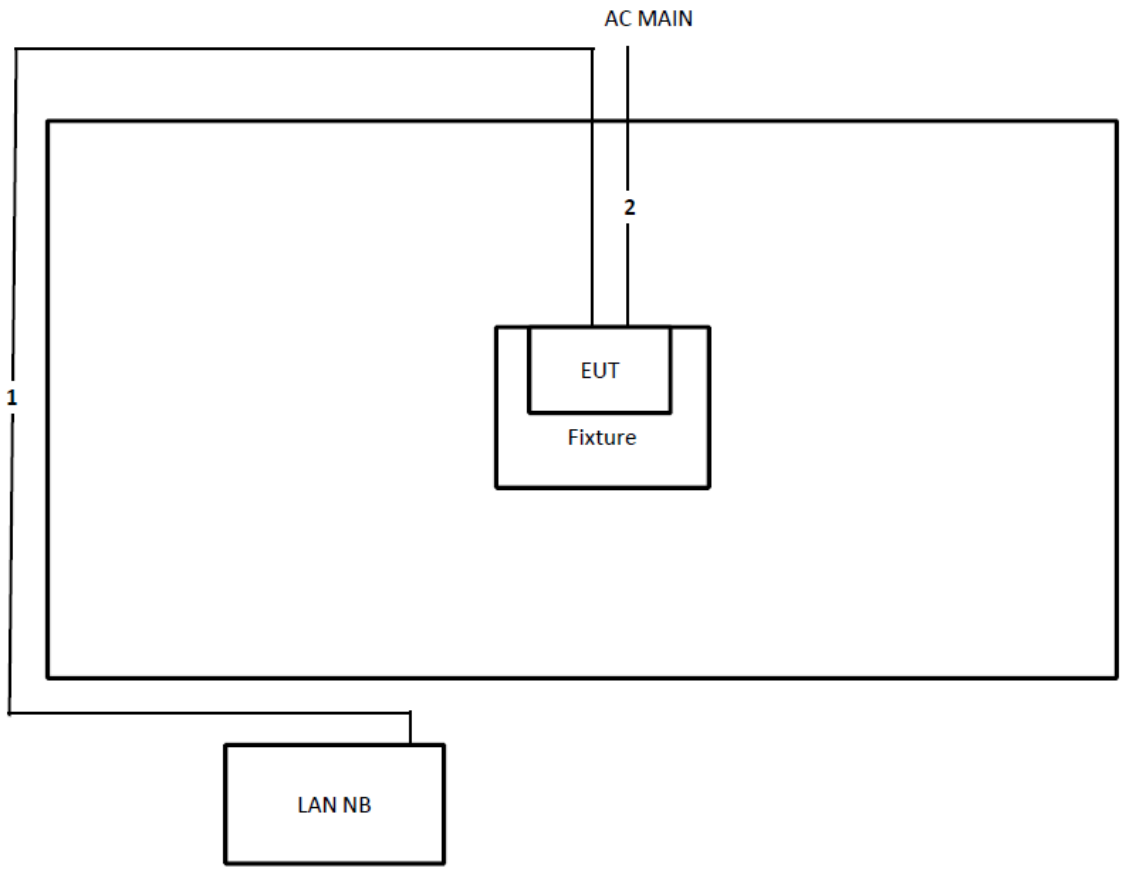
Item	Connection	Shielded	Length
1	Power cable	No	1.2m

Test Setup Diagram - Radiated Test < 1GHz



Item	Connection	Shielded	Length
1	Power cable	No	1.2m

Test Setup Diagram - Radiated Test > 1GHz



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

3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

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

3.1.2 Measuring Instruments

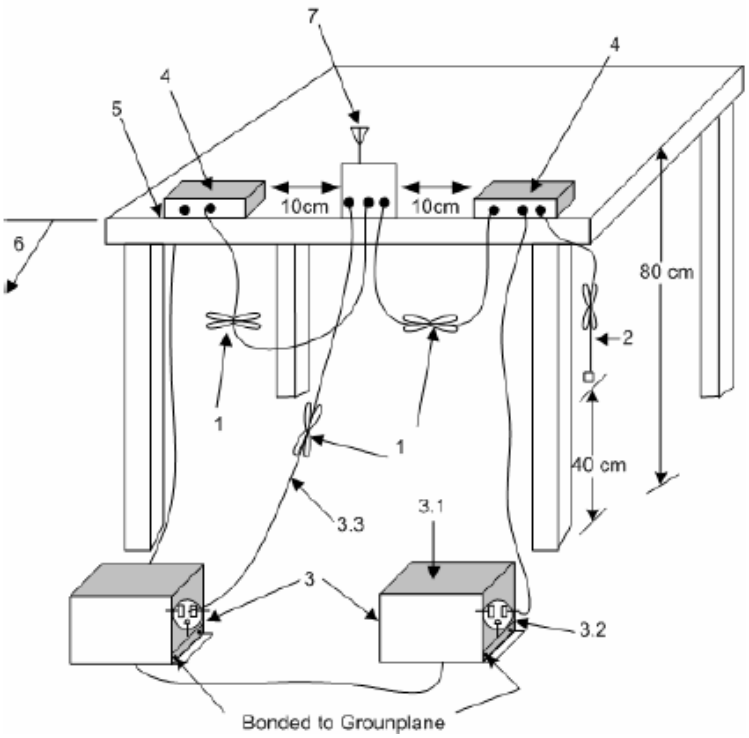
Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

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

3.1.4 Test Setup

AC Power-line Conducted Emissions



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

3.1.5 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 DTS Bandwidth

3.2.1 6dB Bandwidth Limit

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

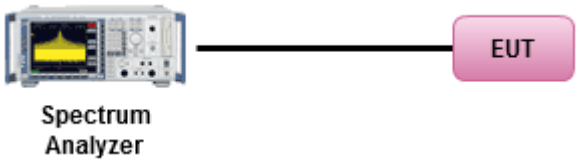
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

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

3.2.4 Test Setup

Emission Bandwidth


3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

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

3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method	
▪ Maximum Peak Conducted Output Power	
	☐ Refer as FCC KDB 558074, clause 8.3.1.1 & C63.10 clause 11.9.1.1 (RBW ≥ EBW method).
	☐ Refer as FCC KDB 558074, clause 8.3.1.3 & C63.10 clause 11.9.1.3 (peak power meter).
▪ Maximum Conducted Output Power	
	[duty cycle ≥ 98% or external video / power trigger]
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.2 Method AVGSA-1.
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.3 Method AVGSA-1A. (alternative)
	duty cycle < 98% and average over on/off periods with duty factor
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.4 Method AVGSA-2.
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.5 Method AVGSA-2A (alternative)
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.6 Method AVGSA-3
	☐ Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.7 Method AVGSA-3A (alternative)
	Measurement using a power meter (PM)
	☒ Refer as FCC KDB 558074, clause 8.3.2.3 & C63.10 clause 11.9.2.3.1 Method AVGPM (using an RF average power meter).
	☐ Refer as FCC KDB 558074, clause 8.3.2.3 & C63.10 clause 11.9.2.3.2 Method AVGPM-G (using an gate RF average power meter).

▪ For conducted measurement.	
	▪ If the EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.
	▪ If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \ldots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

3.3.4 Test Setup

Maximum Conducted Output Power (Power Meter)


3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

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

3.4.2 Measuring Instruments

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

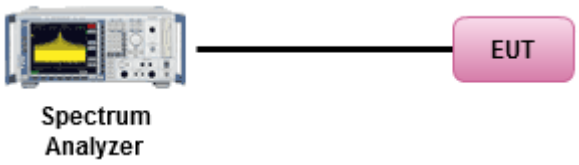
3.4.3 Test Procedures

Test Method	
▪ Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option).	
	☒ Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.2 Method PKPSD.
	[duty cycle ≥ 98% or external video / power trigger]
	☐ Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.3 Method AVGPSD-1.
	☐ Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.5 Method AVGPSD-2.
	☐ Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.7 Method AVGPSD-3.
	duty cycle < 98% and average over on/off periods with duty factor
	☐ Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.4 Method AVGPSD-1A. (alternative).
	☐ Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.6 Method AVGPSD-2A. (alternative)
	☐ Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10.6 Method AVGPSD-3A. (alternative)
▪ For conducted measurement.	
	▪ If The EUT supports multiple transmit chains using options given below:
	☒ Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.
	☐ Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits,

		☐ Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.

3.4.4 Test Setup

Power Spectral Density



3.4.5 Test Result of Power Spectral Density

Refer as Appendix D

3.5 Emissions in Non-restricted Frequency Bands

3.5.1 Emissions in Non-restricted Frequency Bands Limit

Un-restricted Band Emissions Limit	
RF output power procedure	**Limit (dB)**
Peak output power procedure	20
Average output power procedure	30
Note 1: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak PSD level. Note 2: If the average output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the power in any 100 kHz outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum measured in-band average PSD level.	

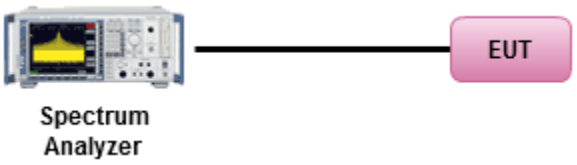
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

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

3.5.4 Test Setup

Emissions in Non-restricted Frequency Bands


3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix E

3.6 Emissions in Restricted Frequency Bands

3.6.1 Emissions in Restricted Frequency Bands Limit

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

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

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

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

3.6.2 Measuring Instruments

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

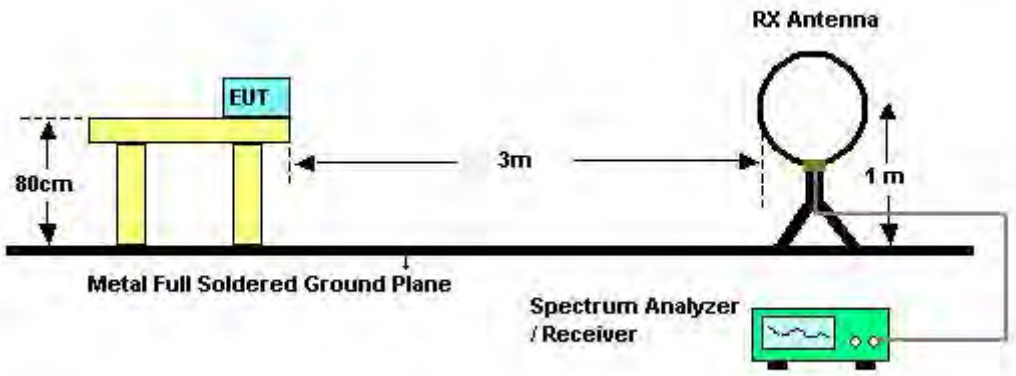
3.6.3 Test Procedures

Test Method			
▪ The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].			
▪ Refer as ANSI C63.10, clause 6.9.2.2 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.			
▪ For the transmitter unwanted emissions shall be measured using following options below:			
	▪ Refer as FCC KDB 558074, clause 8.6 for unwanted emissions into restricted bands.		
		☐ Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.1(trace averaging for duty cycle ≥98%).	
		☐ Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.2(trace averaging + duty factor).	
		☒ Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.3(Reduced VBW≥1/T).	
		☐ Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time.	
		☐ Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions.	
		☒ Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.4 measurement procedure peak limit.	
▪ For the transmitter band-edge emissions shall be measured using following options below:			
	▪ Refer as FCC KDB 558074 clause 8.7 & c63.10 clause 11.13.1, When the performing peak or average radiated measurements, emissions within 2 MHz of the authorized band edge may be measured using the marker-delta method described below.		
	▪ Refer as FCC KDB 558074, clause 8.7 (ANSI C63.10, clause 6.10.6) for marker-delta method for band-edge measurements.		
	▪ Refer as FCC KDB 558074, clause 8.7 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).		
	▪ For conducted unwanted emissions into restricted bands (absolute emission limits). Devices with multiple transmit chains using options given below: (1) Measure and sum the spectra across the outputs or (2) Measure and add 10 log(N) dB		
	▪ For FCC KDB 662911 The methodology described here may overestimate array gain, thereby resulting in apparent failures to satisfy the out-of-band limits even if the device is actually compliant. In such cases, compliance may be demonstrated by performing radiated tests around the frequencies at which the apparent failures occurred.		

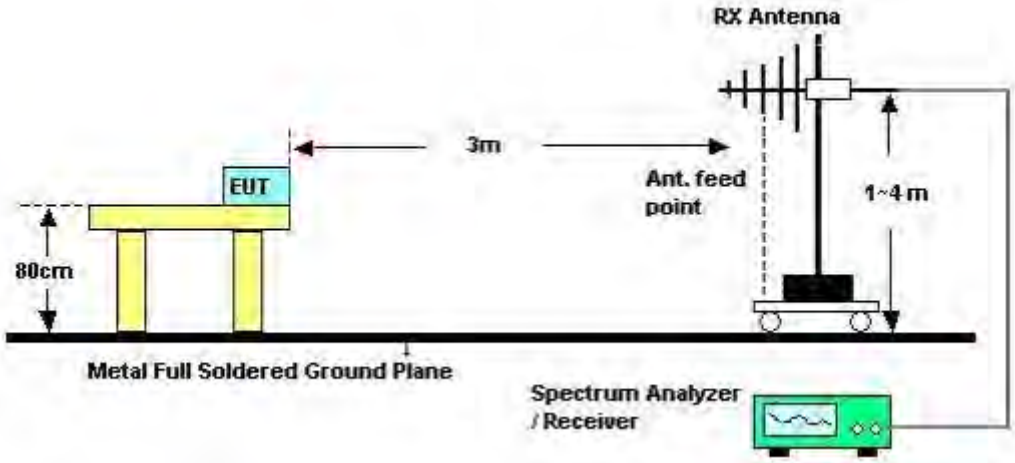
3.6.4 Test Setup

Transmitter Radiated Emissions

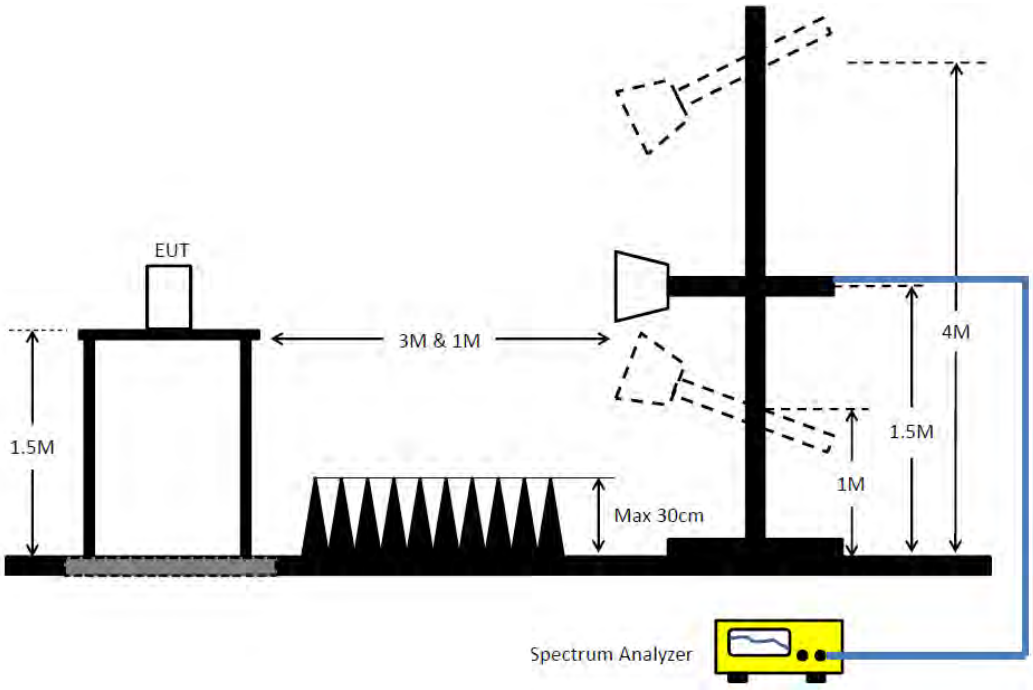
9kHz ~30MHz



30MHz~1GHz



Above 1GHz



3.6.5 Transmitter Radiated Unwanted Emissions (Below 30MHz)

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.

3.6.6 Test Result of Transmitter Radiated Unwanted Emissions

Refer as Appendix F

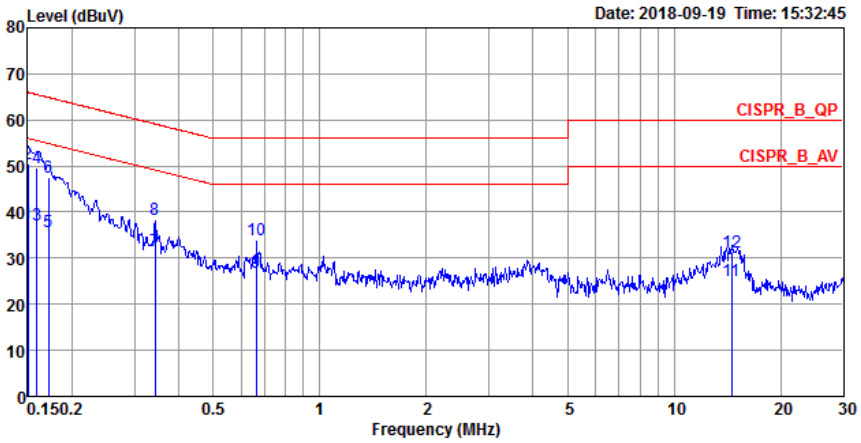
4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
LISN	Schwarzbeck	NSLK 8127	8127650	9kHz ~ 30MHz	Nov. 24, 2017	Nov. 23, 2018	Conduction (CO02-CB)
LISN	Schwarzbeck	NSLK 8127	8127478	9kHz ~ 30MHz	Nov. 13, 2017	Nov. 12, 2018	Conduction (CO02-CB)
EMI Receiver	Agilent	N9038A	MY52260140	9kHz ~ 8.4GHz	Jan. 17, 2018	Jan. 16, 2019	Conduction (CO02-CB)
COND Cable	Woken	Cable	2	0.15MHz ~ 30MHz	Nov. 10, 2017	Nov. 09, 2018	Conduction (CO02-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	N.C.R.	Conduction (CO02-CB)
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Aug. 27, 2018	Aug. 26, 2019	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2018	Mar. 15, 2019	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 20, 2017	Nov. 19, 2018	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jun. 28, 2018	Jun. 27, 2019	Radiation (03CH01-CB)
Pre-Amplifier	EMCI	EMC330N	980332	20MHz ~ 3GHz	May 02, 2018	May 01, 2019	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 09, 2018	Jan. 08, 2019	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 04, 2018	Jul. 03, 2019	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Nov. 23, 2017	Nov. 22, 2018	Radiation (03CH01-CB)
EMI Test	R&S	ESCS	100354	9kHz ~ 2.75GHz	Dec. 08, 2017	Dec. 07, 2018	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~ 1 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz ~ 40 GHz	Jul. 27, 2018	Jul. 26, 2019	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Jul. 27, 2018	Jul. 26, 2019	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 21, 2017	Dec. 20, 2018	Conducted (TH01-CB)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-06	1 GHz – 26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz –26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz –26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz –26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 20, 2017	Nov. 19, 2018	Conducted (TH01-CB)

Note: Calibration Interval of instruments listed above is one year.
NCR means Non-Calibration required.

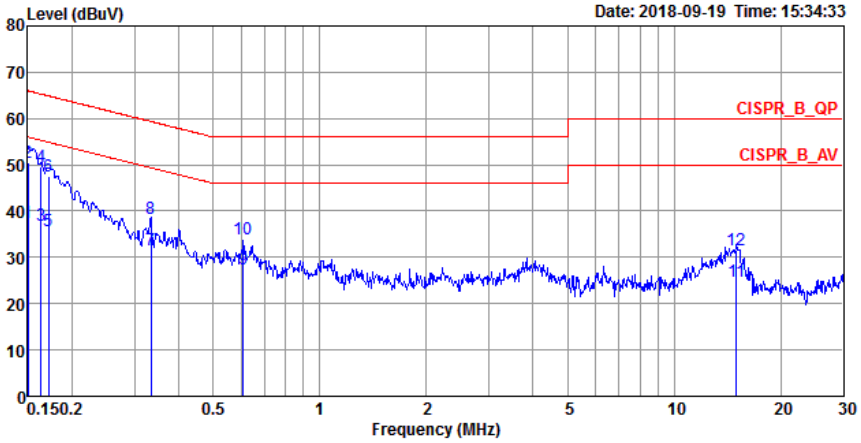
AC Power-line Conducted Emissions Result			
Operating Mode	1	**Power Phase**	Neutral
Operating Function	Normal Link		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1500	37.43	-18.57	56.00	27.25	10.17	0.01	Average	NEUTRAL
2	0.1500	50.62	-15.38	66.00	40.44	10.17	0.01	QP	NEUTRAL
3	0.1590	37.15	-18.37	55.52	26.97	10.17	0.01	Average	NEUTRAL
4	0.1590	49.72	-15.80	65.52	39.54	10.17	0.01	QP	NEUTRAL
5	0.1712	35.81	-19.09	54.90	25.63	10.17	0.01	Average	NEUTRAL
6	0.1712	47.55	-17.35	64.90	37.37	10.17	0.01	QP	NEUTRAL
7	0.3428	31.50	-17.63	49.13	21.31	10.17	0.02	Average	NEUTRAL
8	0.3428	38.23	-20.90	59.13	28.04	10.17	0.02	QP	NEUTRAL
9	0.6613	26.92	-19.08	46.00	16.71	10.18	0.03	Average	NEUTRAL
10	0.6613	33.85	-22.15	56.00	23.64	10.18	0.03	QP	NEUTRAL
11	14.5171	25.03	-24.97	50.00	14.57	10.36	0.10	Average	NEUTRAL
12	14.5171	31.43	-28.57	60.00	20.97	10.36	0.10	QP	NEUTRAL

Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

AC Power-line Conducted Emissions Result			
Operating Mode	1	**Power Phase**	Line
Operating Function	Normal Link		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1500	37.40	-18.60	56.00	27.23	10.16	0.01	Average	LINE
2	0.1500	50.49	-15.51	66.00	40.32	10.16	0.01	QP	LINE
3	0.1633	36.87	-18.43	55.30	26.70	10.16	0.01	Average	LINE
4	0.1633	49.51	-15.79	65.30	39.34	10.16	0.01	QP	LINE
5	0.1712	35.72	-19.18	54.90	25.55	10.16	0.01	Average	LINE
6	0.1712	47.49	-17.41	64.90	37.32	10.16	0.01	QP	LINE
7	0.3338	31.60	-17.75	49.35	21.42	10.16	0.02	Average	LINE
8	0.3338	38.39	-20.96	59.35	28.21	10.16	0.02	QP	LINE
9	0.6075	27.39	-18.61	46.00	17.20	10.16	0.03	Average	LINE
10	0.6075	33.98	-22.02	56.00	23.79	10.16	0.03	QP	LINE
11	14.9860	24.91	-25.09	50.00	14.44	10.37	0.10	Average	LINE
12	14.9860	31.53	-28.47	60.00	21.06	10.37	0.10	QP	LINE

Note 1: “>20dB” means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: “N/F” means Nothing Found emissions (No emissions were detected.)

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.11b_Nss1,(1Mbps)_2TX	9.05M	14.343M	14M3G1D	7.575M	13.318M
802.11g_Nss1,(6Mbps)_2TX	16.325M	31.284M	31M3D1D	16.05M	16.417M
802.11ac VHT20_Nss1,(MCS0)_2TX	17.55M	32.434M	32M4D1D	17.5M	17.616M
802.11ac VHT40_Nss1,(MCS0)_2TX	35.55M	35.982M	36M0D1D	28.35M	35.882M

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

Result

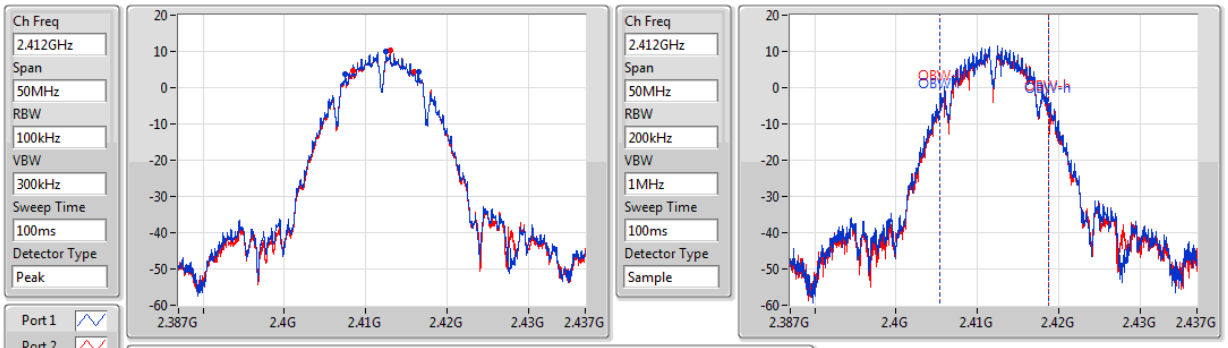
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	9.025M	13.443M	7.575M	13.318M
2437MHz	Pass	500k	9.05M	14.118M	9.05M	14.343M
2462MHz	Pass	500k	8.075M	13.843M	7.575M	13.993M
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	16.325M	16.417M	16.325M	16.442M
2437MHz	Pass	500k	16.05M	30.36M	16.275M	31.284M
2462MHz	Pass	500k	16.3M	16.417M	16.325M	16.417M
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	17.525M	17.666M	17.55M	17.641M
2437MHz	Pass	500k	17.55M	31.609M	17.5M	32.434M
2462MHz	Pass	500k	17.525M	17.616M	17.55M	17.616M
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	500k	35.45M	35.932M	28.35M	35.932M
2437MHz	Pass	500k	32.15M	35.932M	29.65M	35.882M
2452MHz	Pass	500k	34.4M	35.982M	35.55M	35.932M

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

802.11b_Nss1,(1Mbps)_2TX — EBW

2412MHz

21/09/2018

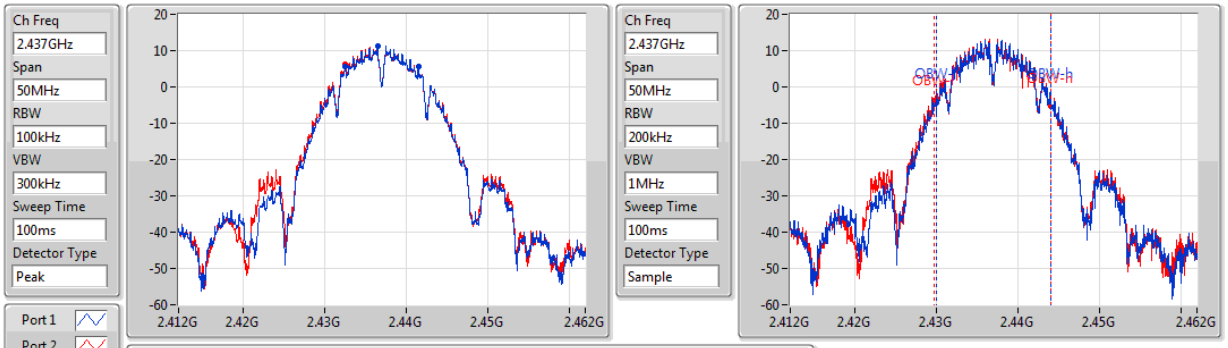


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
9.025M	2.407475G	2.4165G	13.443M	2.405353G	2.418797G	500k	1
7.575M	2.408425G	2.416G	13.318M	2.405428G	2.418747G	500k	2

802.11b_Nss1,(1Mbps)_2TX — EBW

2437MHz

21/09/2018

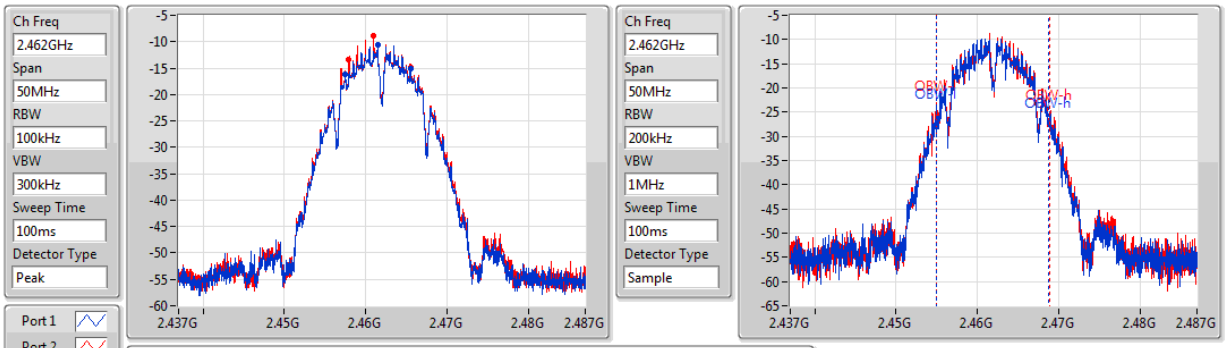


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
9.05M	2.43245G	2.4415G	14.118M	2.429929G	2.444046G	500k	1
9.05M	2.43245G	2.4415G	14.343M	2.429729G	2.444071G	500k	2

802.11b_Nss1,(1Mbps)_2TX — EBW

2462MHz

21/09/2018

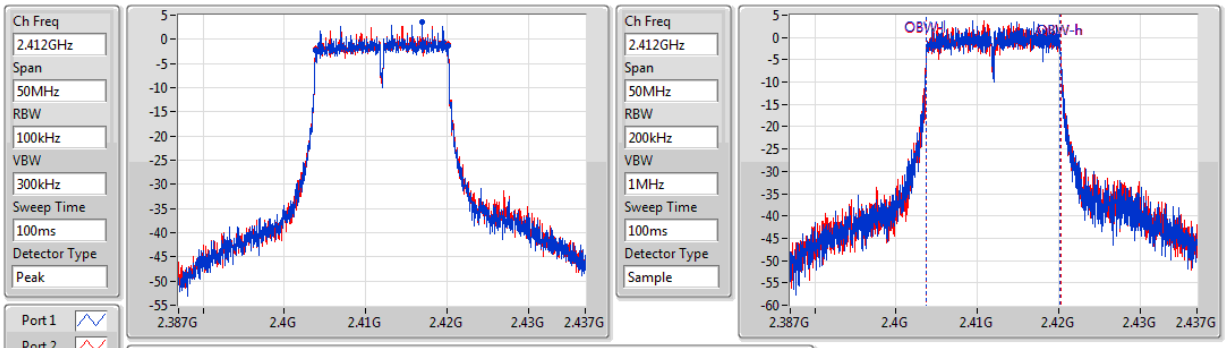


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8.075M	2.45745G	2.465525G	13.843M	2.454954G	2.468797G	500k	1
7.575M	2.45795G	2.465525G	13.993M	2.454904G	2.468897G	500k	2

802.11g_Nss1,(6Mbps)_2TX EBW

2412MHz

21/09/2018

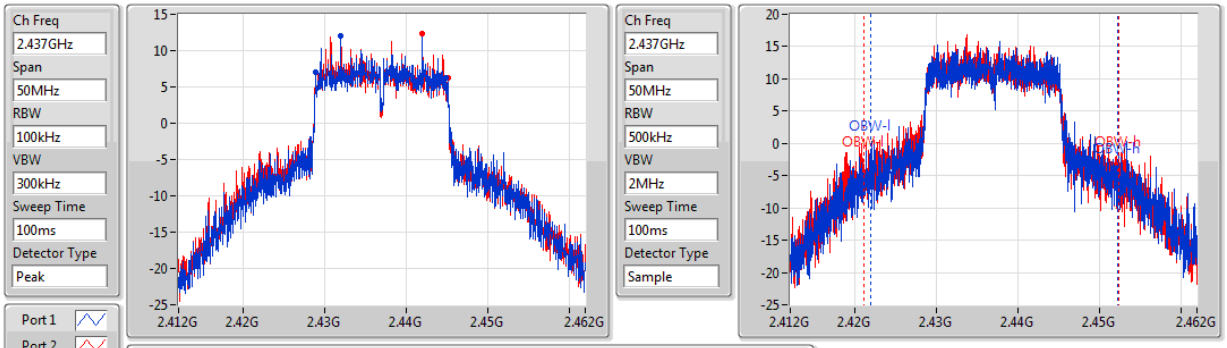


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.325M	2.403825G	2.42015G	16.417M	2.403779G	2.420196G	500k	1
16.325M	2.403825G	2.42015G	16.442M	2.403779G	2.420221G	500k	2

802.11g_Nss1,(6Mbps)_2TX EBW

2437MHz

21/09/2018

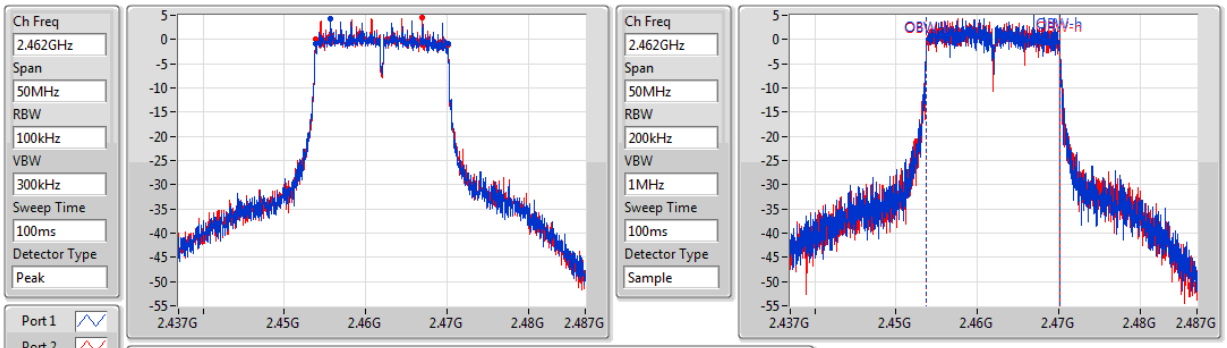


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.05M	2.42885G	2.4449G	30.36M	2.421933G	2.452292G	500k	1
16.275M	2.42885G	2.445125G	31.284M	2.421108G	2.452392G	500k	2

802.11g_Nss1,(6Mbps)_2TX EBW

2462MHz

21/09/2018

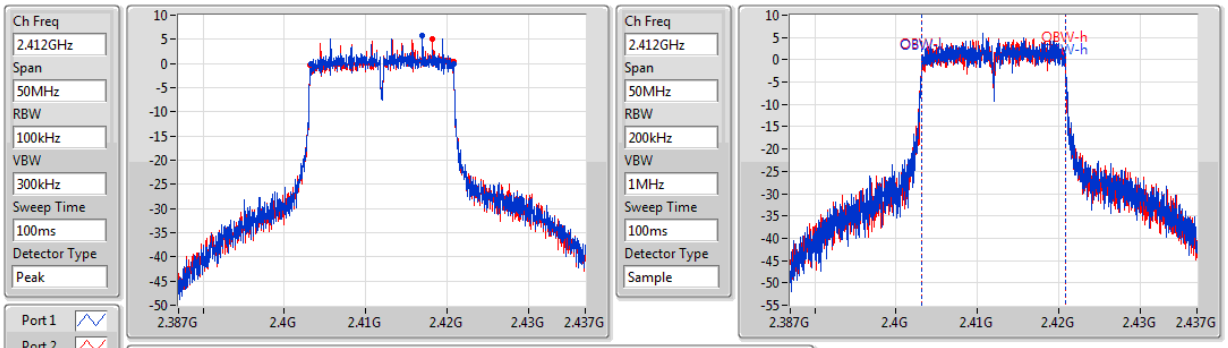


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.3M	2.453825G	2.470125G	16.417M	2.453729G	2.470146G	500k	1
16.325M	2.453825G	2.47015G	16.417M	2.453754G	2.470171G	500k	2

802.11ac VHT20_Nss1,(MCS0)_2TX EBW

2412MHz

21/09/2018

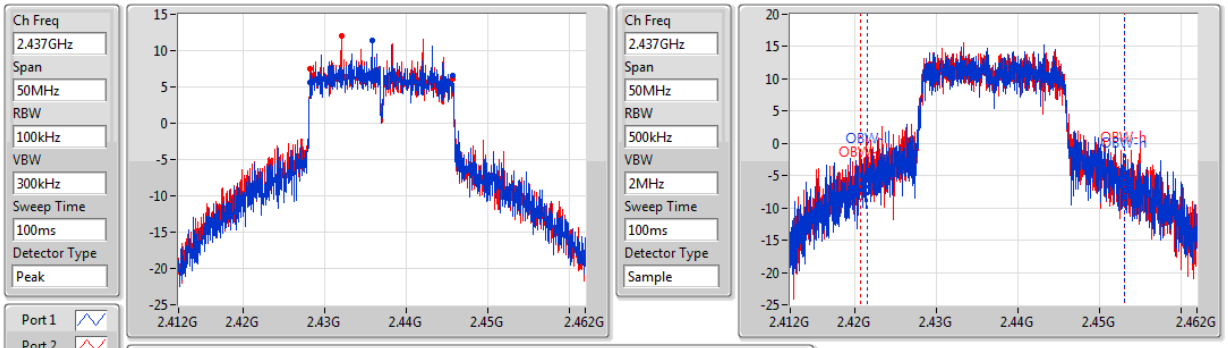


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.525M	2.40325G	2.420775G	17.666M	2.403154G	2.420821G	500k	1
17.55M	2.403225G	2.420775G	17.641M	2.403154G	2.420796G	500k	2

802.11ac VHT20_Nss1,(MCS0)_2TX EBW

2437MHz

21/09/2018

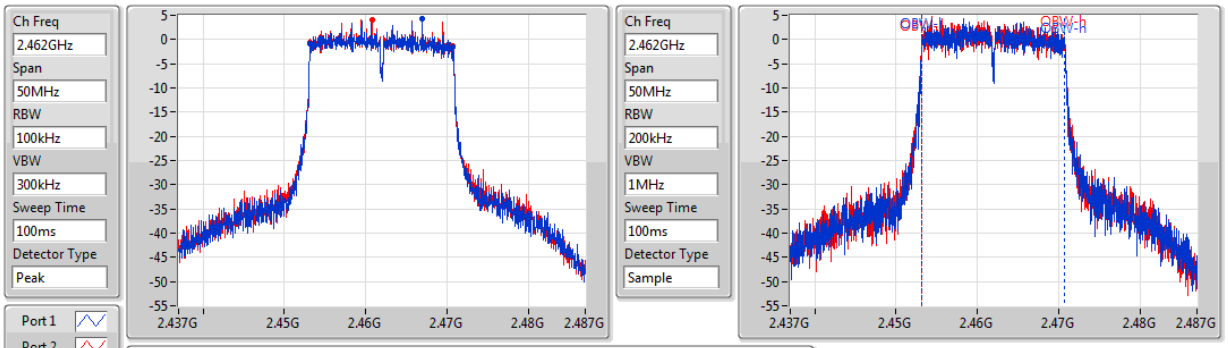


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.55M	2.4282G	2.44575G	31.609M	2.421433G	2.453042G	500k	1
17.5M	2.4282G	2.4457G	32.434M	2.420683G	2.453117G	500k	2

802.11ac VHT20_Nss1,(MCS0)_2TX EBW

2462MHz

21/09/2018

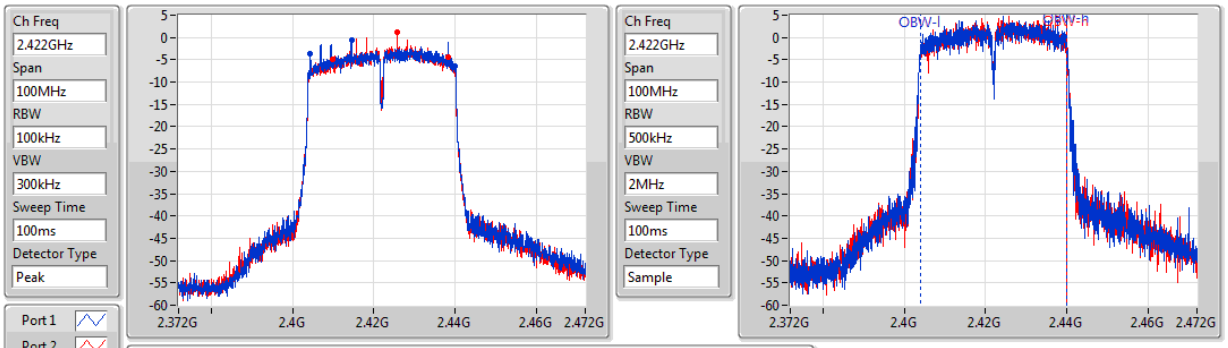


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.525M	2.4532G	2.470725G	17.616M	2.453154G	2.470771G	500k	1
17.55M	2.4532G	2.47075G	17.616M	2.453154G	2.470771G	500k	2

802.11ac VHT40_Nss1,(MCS0)_2TX EBW

2422MHz

21/09/2018

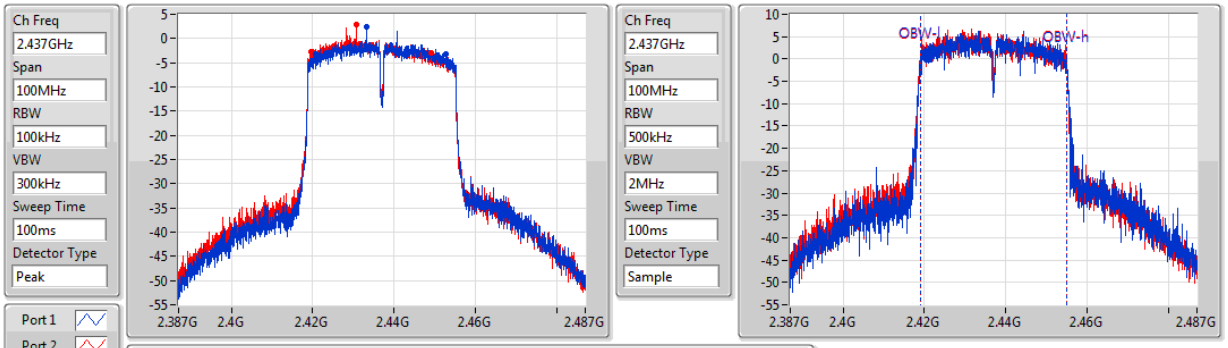


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
35.45M	2.40445G	2.4399G	35.932M	2.404059G	2.439991G	500k	1
28.35M	2.4099G	2.43825G	35.932M	2.404059G	2.439991G	500k	2

802.11ac VHT40_Nss1,(MCS0)_2TX EBW

2437MHz

21/09/2018

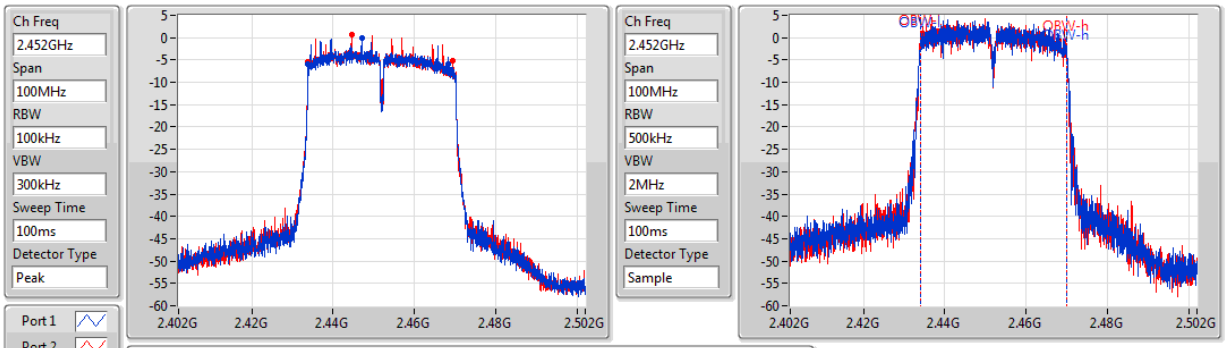


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
32.15M	2.4207G	2.45285G	35.932M	2.419009G	2.454941G	500k	1
29.65M	2.4195G	2.44915G	35.882M	2.418959G	2.454841G	500k	2

802.11ac VHT40_Nss1,(MCS0)_2TX EBW

2452MHz

21/09/2018



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
34.4M	2.43385G	2.46825G	35.982M	2.433909G	2.469891G	500k	1
35.55M	2.43385G	2.4694G	35.932M	2.433909G	2.469841G	500k	2

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_2TX	24.35	0.27227
802.11g_Nss1,(6Mbps)_2TX	25.47	0.35237
802.11ac VHT20_Nss1,(MCS0)_2TX	25.45	0.35075
802.11ac VHT40_Nss1,(MCS0)_2TX	19.84	0.09638

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	2.35	19.81	19.75	22.79	30.00
2437MHz	Pass	2.35	21.24	21.44	24.35	30.00
2462MHz	Pass	2.35	20.51	20.74	23.64	30.00
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	2.35	15.07	15.20	18.15	30.00
2417MHz	Pass	2.35	17.76	17.64	20.71	30.00
2422MHz	Pass	2.35	18.47	18.57	21.53	30.00
2427MHz	Pass	2.35	20.11	20.49	23.31	30.00
2432MHz	Pass	2.35	20.92	21.12	24.03	30.00
2437MHz	Pass	2.35	22.40	22.51	25.47	30.00
2442MHz	Pass	2.35	21.45	21.65	24.56	30.00
2447MHz	Pass	2.35	20.60	20.85	23.74	30.00
2452MHz	Pass	2.35	18.95	19.28	22.13	30.00
2457MHz	Pass	2.35	17.53	17.72	20.64	30.00
2462MHz	Pass	2.35	16.08	16.20	19.15	30.00
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	2.35	17.02	17.10	20.07	30.00
2417MHz	Pass	2.35	19.48	19.60	22.55	30.00
2422MHz	Pass	2.35	18.03	18.24	21.15	30.00
2427MHz	Pass	2.35	20.93	21.18	24.07	30.00
2432MHz	Pass	2.35	20.96	21.20	24.09	30.00
2437MHz	Pass	2.35	22.39	22.48	25.45	30.00
2442MHz	Pass	2.35	21.59	21.71	24.66	30.00
2447MHz	Pass	2.35	20.24	20.45	23.36	30.00
2452MHz	Pass	2.35	19.44	19.62	22.54	30.00
2457MHz	Pass	2.35	19.35	19.57	22.47	30.00
2462MHz	Pass	2.35	16.26	16.34	19.31	30.00
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	2.35	14.80	14.87	17.85	30.00
2427MHz	Pass	2.35	15.80	15.93	18.88	30.00
2432MHz	Pass	2.35	15.87	15.91	18.90	30.00
2437MHz	Pass	2.35	16.71	16.95	19.84	30.00
2442MHz	Pass	2.35	15.96	16.08	19.03	30.00
2447MHz	Pass	2.35	15.51	15.60	18.57	30.00

AV Power Result

Appendix C

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
2452MHz	Pass	2.35	14.66	14.78	17.73	30.00

DG = Directional Gain; **Port X** = Port X output power
Note : Conducted average output power is for reference only

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_2TX	-4.18
802.11g_Nss1,(6Mbps)_2TX	-2.44
802.11ac VHT20_Nss1,(MCS0)_2TX	-2.10
802.11ac VHT40_Nss1,(MCS0)_2TX	-9.40

RBW=3kHz.

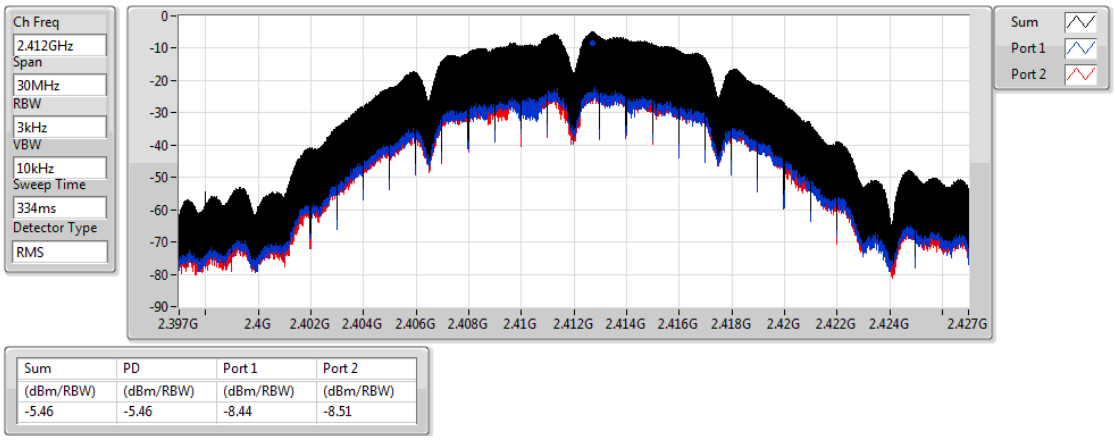
Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	5.24	-8.44	-8.51	-5.46	8.00
2437MHz	Pass	5.24	-7.20	-6.96	-4.18	8.00
2462MHz	Pass	5.24	-7.89	-7.68	-4.78	8.00
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	5.24	-12.28	-13.40	-10.81	8.00
2437MHz	Pass	5.24	-4.21	-4.79	-2.44	8.00
2462MHz	Pass	5.24	-11.61	-11.42	-9.43	8.00
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	5.24	-9.33	-10.24	-7.94	8.00
2437MHz	Pass	5.24	-4.72	-3.89	-2.10	8.00
2462MHz	Pass	5.24	-11.50	-11.63	-9.05	8.00
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	5.24	-13.70	-14.22	-11.45	8.00
2437MHz	Pass	5.24	-11.67	-11.64	-9.40	8.00
2452MHz	Pass	5.24	-13.82	-14.08	-10.94	8.00

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

802.11b_Nss1,(1Mbps)_2TX PSD

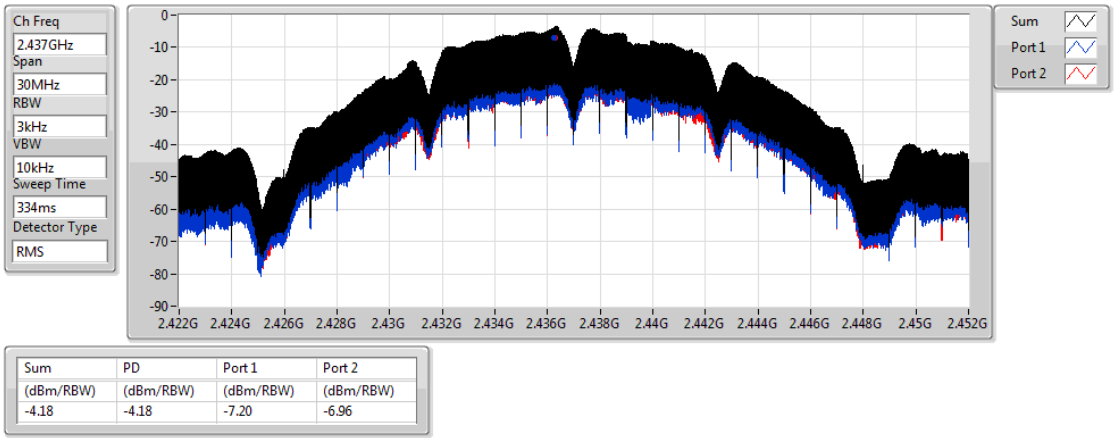
2412MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-5.46	-5.46	-8.44	-8.51

802.11b_Nss1,(1Mbps)_2TX PSD

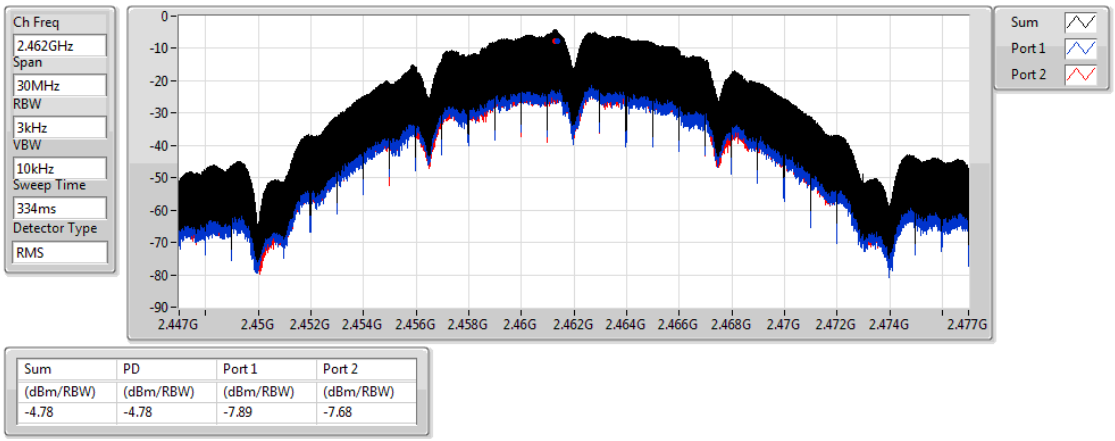
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.18	-4.18	-7.20	-6.96

802.11b_Nss1,(1Mbps)_2TX PSD

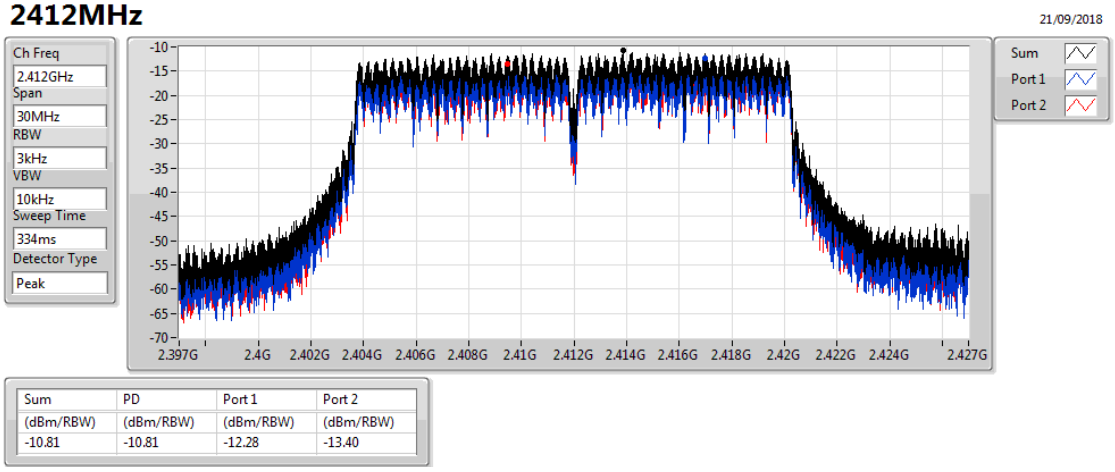
2462MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.78	-4.78	-7.89	-7.68

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

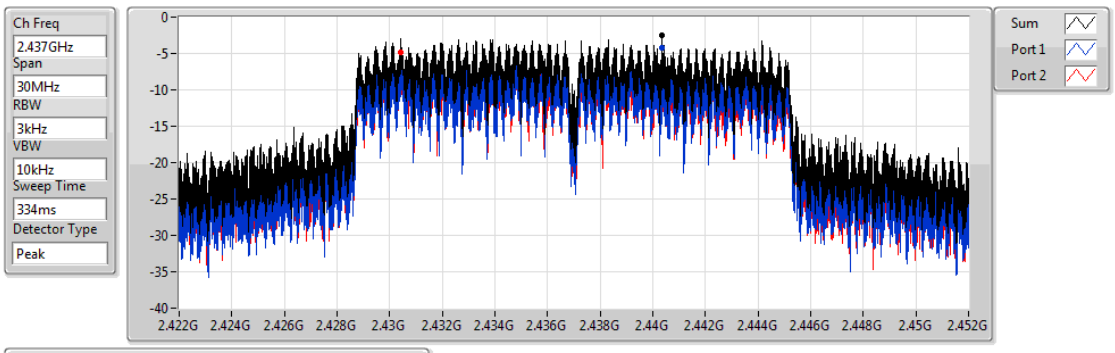
2412MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.81	-10.81	-12.28	-13.40

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

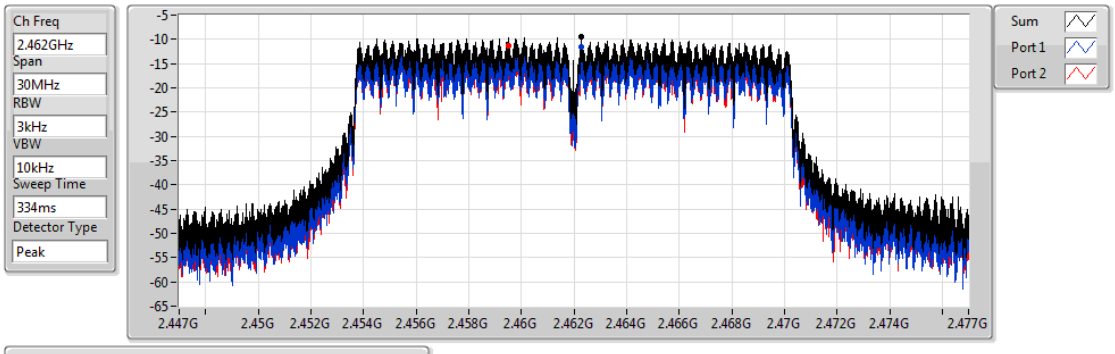
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.44	-2.44	-4.21	-4.79

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

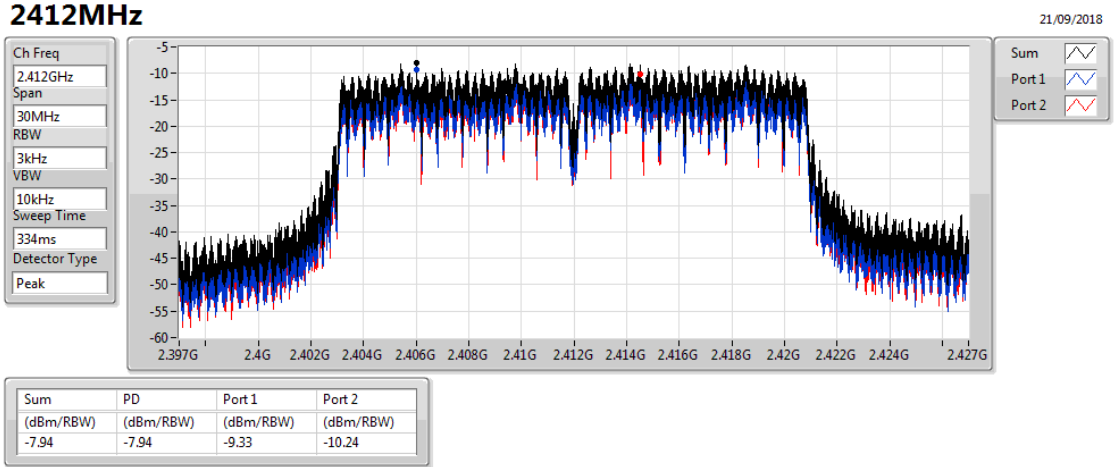
2462MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-9.43	-9.43	-11.61	-11.42

802.11ac VHT20_Nss1,(MCS0)_2TX **PSD**

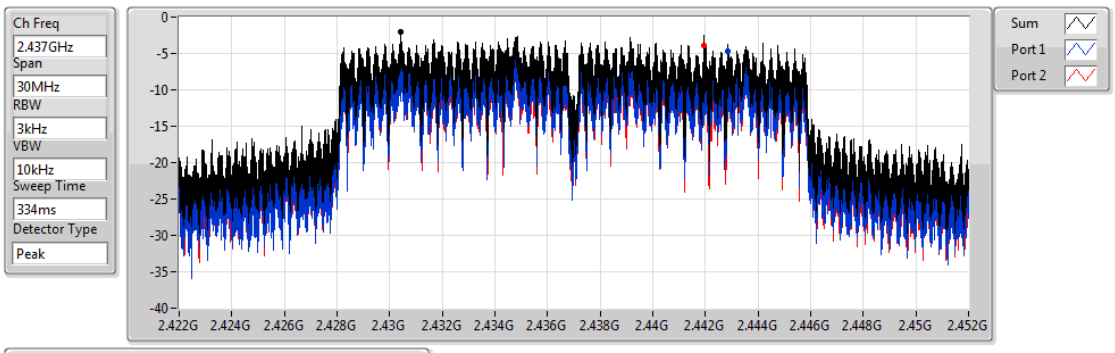
2412MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-7.94	-7.94	-9.33	-10.24

802.11ac VHT20_Nss1,(MCS0)_2TX **PSD**

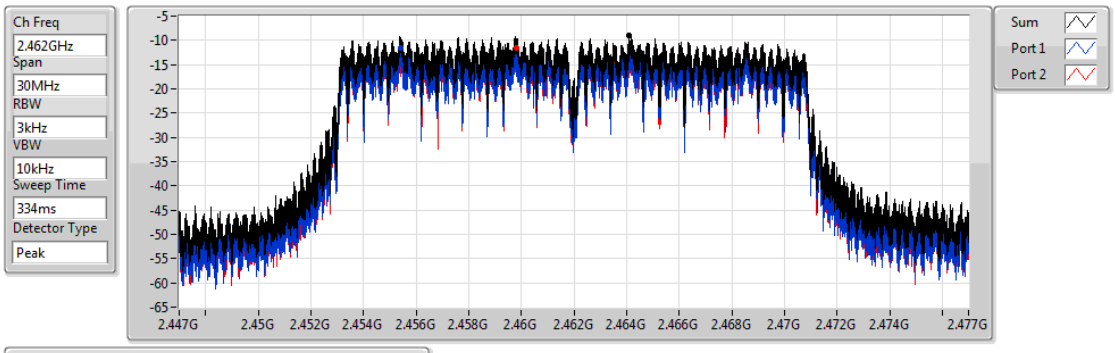
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.10	-2.10	-4.72	-3.89

802.11ac VHT20_Nss1,(MCS0)_2TX **PSD**

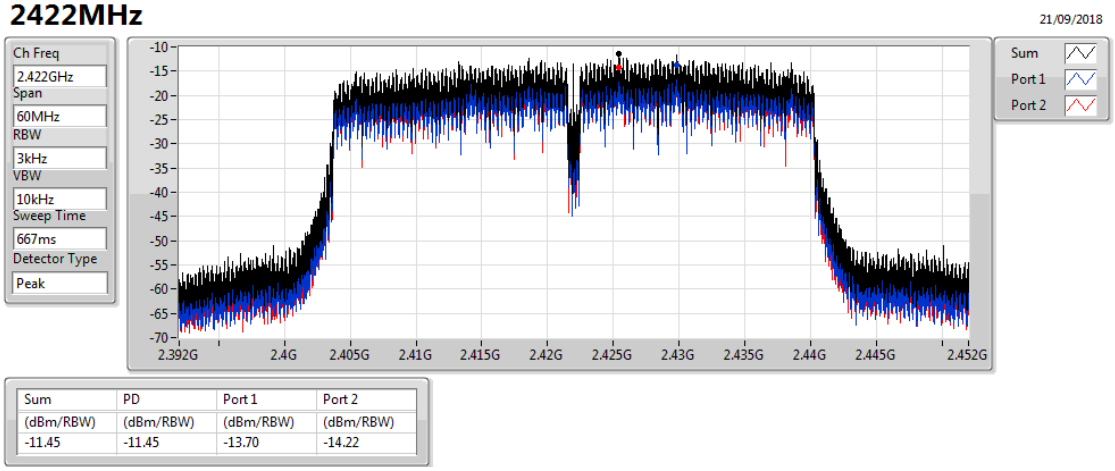
2462MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-9.05	-9.05	-11.50	-11.63

802.11ac VHT40_Nss1,(MCS0)_2TX **PSD**

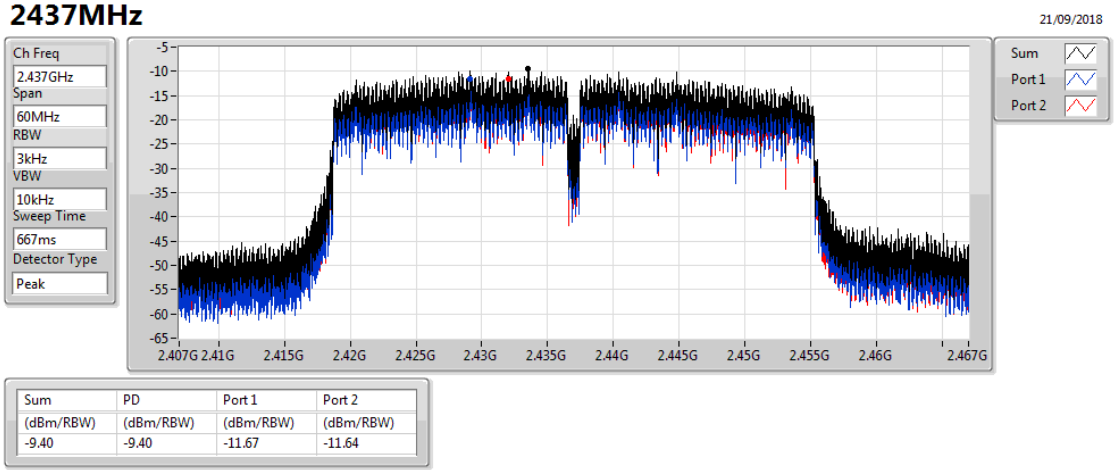
2422MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-11.45	-11.45	-13.70	-14.22

802.11ac VHT40_Nss1,(MCS0)_2TX **PSD**

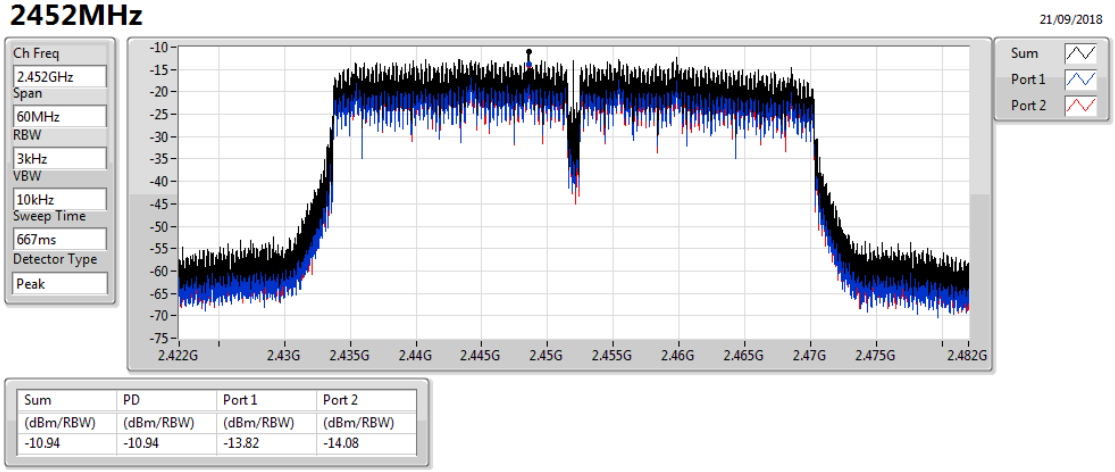
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-9.40	-9.40	-11.67	-11.64

802.11ac VHT40_Nss1,(MCS0)_2TX **PSD**

2452MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.94	-10.94	-13.82	-14.08

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)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_2TX	Pass	2.433901G	11.43	-18.57	876.955M	-62.87	2.39952G	-36.61	2.5163G	-61.46	7.235136G	-53.69	1
802.11g_Nss1,(6Mbps)_2TX	Pass	2.431897G	12.77	-17.23	95.24M	-61.31	2.39984G	-31.47	2.48382G	-41.90	16.925317G	-55.48	2
802.11ac VHT20_Nss1,(MCS0)_2TX	Pass	2.430728G	10.65	-19.35	2.125835G	-62.85	2.3996G	-27.15	2.48566G	-59.99	24.87357G	-55.38	1
802.11ac VHT40_Nss1,(MCS0)_2TX	Pass	2.434402G	3.18	-26.82	92.975M	-62.73	2.3992G	-37.56	2.48414G	-45.22	16.619967G	-54.63	2

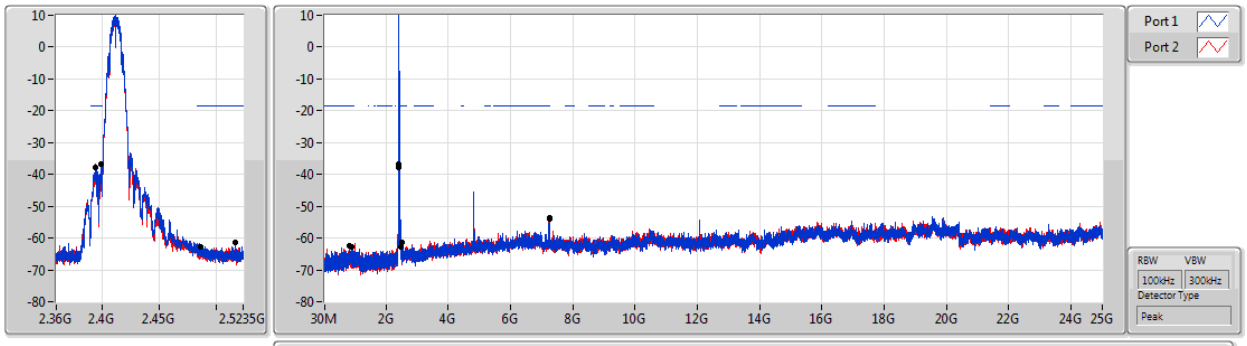
Result

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.433901G	11.43	-18.57	876.955M	-62.87	2.39952G	-36.61	2.5163G	-61.46	7.235136G	-53.69	1
2412MHz	Pass	2.433901G	11.43	-18.57	805.89M	-62.26	2.39448G	-37.73	2.48614G	-62.60	7.235136G	-54.12	2
2437MHz	Pass	2.433901G	11.43	-18.57	565.9M	-63.38	2.39952G	-48.92	2.48446G	-58.19	24.955047G	-53.72	1
2437MHz	Pass	2.433901G	11.43	-18.57	850.16M	-63.11	2.39952G	-50.41	2.4855G	-56.19	17.060176G	-54.48	2
2462MHz	Pass	2.433901G	11.43	-18.57	95.24M	-62.82	2.39288G	-60.71	2.4859G	-48.00	16.590979G	-54.98	1
2462MHz	Pass	2.433901G	11.43	-18.57	656.77M	-62.69	2.39992G	-59.15	2.48598G	-47.67	24.915713G	-54.84	2
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.431897G	12.77	-17.23	638.13M	-62.52	2.39984G	-36.22	2.4867G	-60.69	21.642573G	-55.11	1
2412MHz	Pass	2.431897G	12.77	-17.23	95.24M	-62.42	2.39992G	-36.20	2.48422G	-60.65	24.924142G	-55.03	2
2437MHz	Pass	2.431897G	12.77	-17.23	1.806625G	-63.48	2.39984G	-32.50	2.48382G	-39.34	16.582551G	-53.70	1
2437MHz	Pass	2.431897G	12.77	-17.23	95.24M	-61.31	2.39984G	-31.47	2.48382G	-41.90	16.925317G	-55.48	2
2462MHz	Pass	2.431897G	12.77	-17.23	873.46M	-61.93	2.39992G	-58.57	2.48406G	-41.22	16.90846G	-54.82	1
2462MHz	Pass	2.431897G	12.77	-17.23	2.01749G	-62.53	2.39896G	-57.29	2.48406G	-41.83	16.956223G	-55.10	2
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.430728G	10.65	-19.35	2.125835G	-62.85	2.3996G	-27.15	2.48566G	-59.99	24.87357G	-55.38	1
2412MHz	Pass	2.430728G	10.65	-19.35	786.085M	-63.44	2.39704G	-27.93	2.4843G	-61.34	21.59762G	-55.05	2
2437MHz	Pass	2.430728G	10.65	-19.35	582.21M	-62.55	2.3996G	-30.15	2.48358G	-38.16	16.58817G	-55.21	1
2437MHz	Pass	2.430728G	10.65	-19.35	777.93M	-63.32	2.39992G	-29.02	2.4851G	-37.84	24.822998G	-54.76	2
2462MHz	Pass	2.430728G	10.65	-19.35	95.24M	-61.83	2.39992G	-56.48	2.48406G	-39.71	24.949428G	-54.75	1
2462MHz	Pass	2.430728G	10.65	-19.35	900.255M	-64.04	2.39728G	-57.36	2.48382G	-39.00	16.961842G	-54.75	2
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	2.434402G	3.18	-26.82	844.095M	-62.97	2.39888G	-41.14	2.48494G	-57.66	24.248377G	-55.02	1
2422MHz	Pass	2.434402G	3.18	-26.82	95.265M	-62.69	2.39456G	-38.91	2.48638G	-58.34	16.457303G	-55.26	2
2437MHz	Pass	2.434402G	3.18	-26.82	95.265M	-62.17	2.39984G	-40.35	2.48574G	-46.34	16.521808G	-54.54	1
2437MHz	Pass	2.434402G	3.18	-26.82	92.975M	-62.73	2.3992G	-37.56	2.48414G	-45.22	16.619967G	-54.63	2
2452MHz	Pass	2.434402G	3.18	-26.82	702.115M	-62.85	2.39952G	-50.12	2.48446G	-46.14	16.485348G	-54.18	1
2452MHz	Pass	2.434402G	3.18	-26.82	92.975M	-62.08	2.39808G	-49.14	2.48446G	-44.67	16.479739G	-53.77	2

802.11b_Nss1,(1Mbps)_2TX **CSE NdB**

2412MHz

21/09/2018

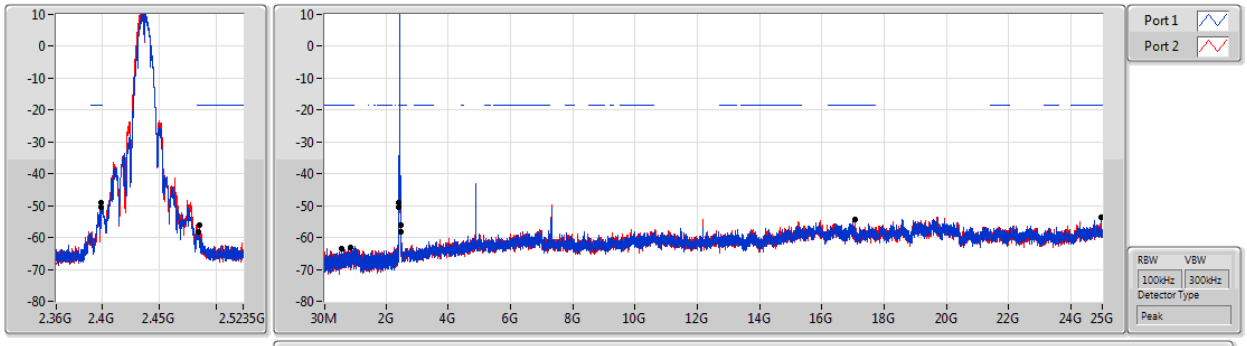


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.433901G	11.43	-18.57	876.955M	-62.87	2.39952G	-36.61	2.5163G	-61.46	7.235136G	-53.69	1
2.433901G	11.43	-18.57	805.89M	-62.26	2.39448G	-37.73	2.48614G	-62.60	7.235136G	-54.12	2

802.11b_Nss1,(1Mbps)_2TX **CSE NdB**

2437MHz

21/09/2018

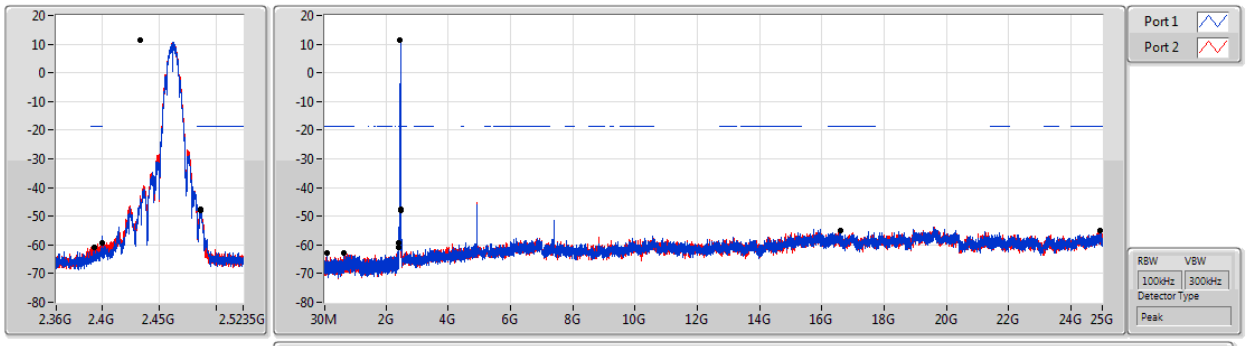


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.433901G	11.43	-18.57	565.9M	-63.38	2.39952G	-48.92	2.48446G	-58.19	24.955047G	-53.72	1
2.433901G	11.43	-18.57	850.16M	-63.11	2.39952G	-50.41	2.4855G	-56.19	17.060176G	-54.48	2

802.11b_Nss1,(1Mbps)_2TX **CSE NdB**

2462MHz

21/09/2018

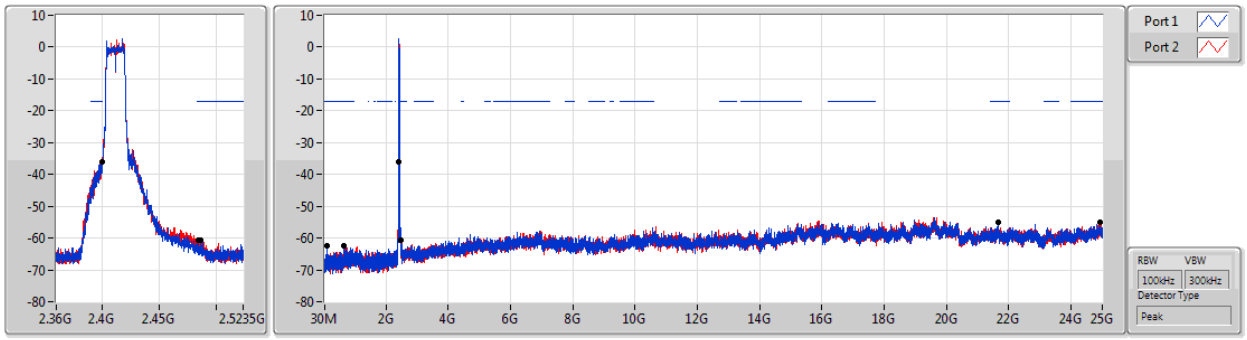


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.433901G	11.43	-18.57	95.24M	-62.82	2.39288G	-60.71	2.4859G	-48.00	16.590979G	-54.98	1
2.433901G	11.43	-18.57	656.77M	-62.69	2.39992G	-59.15	2.48598G	-47.67	24.915713G	-54.84	2

802.11g_Nss1,(6Mbps)_2TX **CSE NdB**

2412MHz

21/09/2018

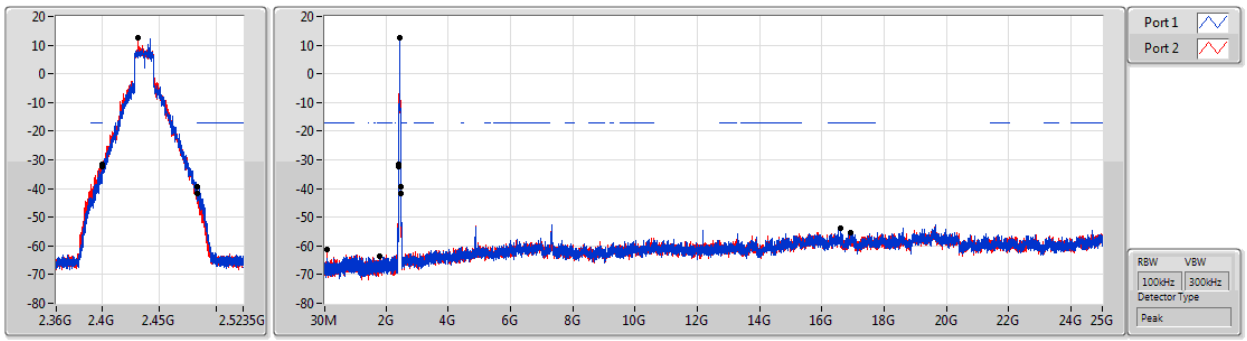


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.431897G	12.77	-17.23	638.13M	-62.52	2.39984G	-36.22	2.4867G	-60.69	21.642573G	-55.11	1
2.431897G	12.77	-17.23	95.24M	-62.42	2.39992G	-36.20	2.48422G	-60.65	24.924142G	-55.03	2

802.11g_Nss1,(6Mbps)_2TX **CSE NdB**

2437MHz

21/09/2018

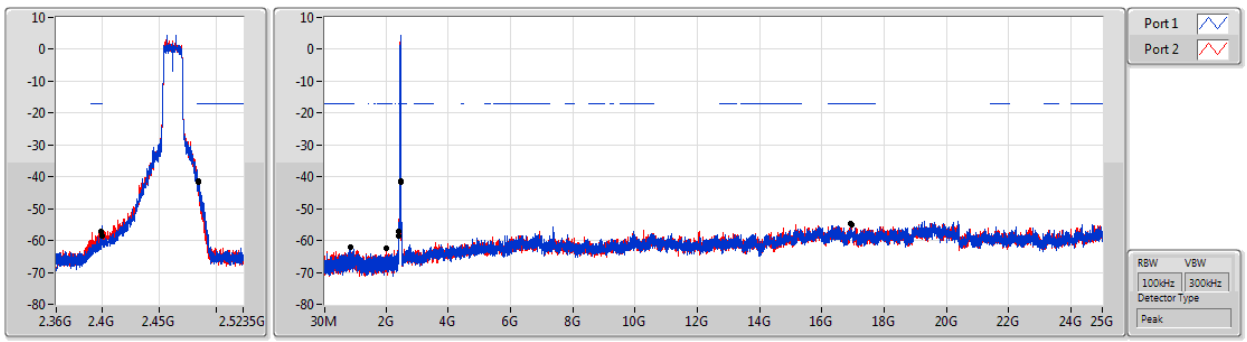


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.431897G	12.77	-17.23	1.806625G	-63.48	2.39984G	-32.50	2.48382G	-39.34	16.582551G	-53.70	1
2.431897G	12.77	-17.23	95.24M	-61.31	2.39984G	-31.47	2.48382G	-41.90	16.925317G	-55.48	2

802.11g_Nss1,(6Mbps)_2TX **CSE NdB**

2462MHz

21/09/2018

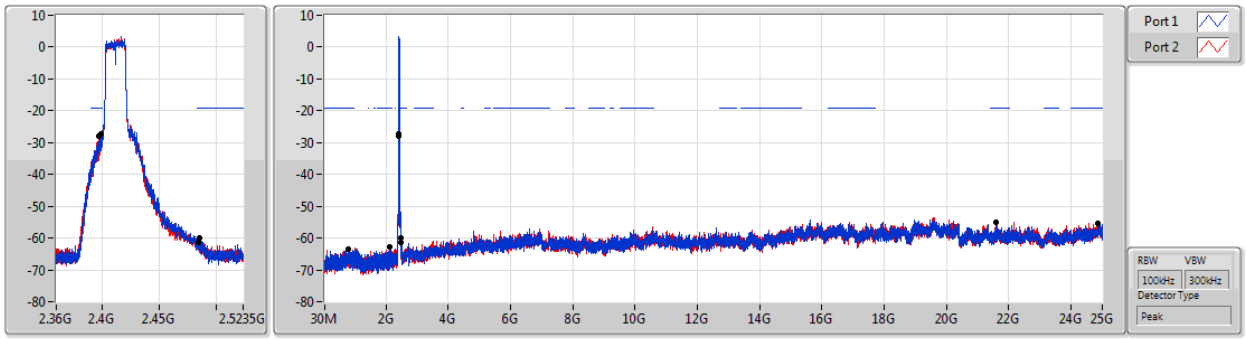


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.431897G	12.77	-17.23	873.46M	-61.93	2.39992G	-58.57	2.48406G	-41.22	16.90846G	-54.82	1
2.431897G	12.77	-17.23	2.01749G	-62.53	2.39896G	-57.29	2.48406G	-41.83	16.956223G	-55.10	2

802.11ac VHT20_Nss1,(MCS0)_2TX **CSE NdB**

2412MHz

21/09/2018

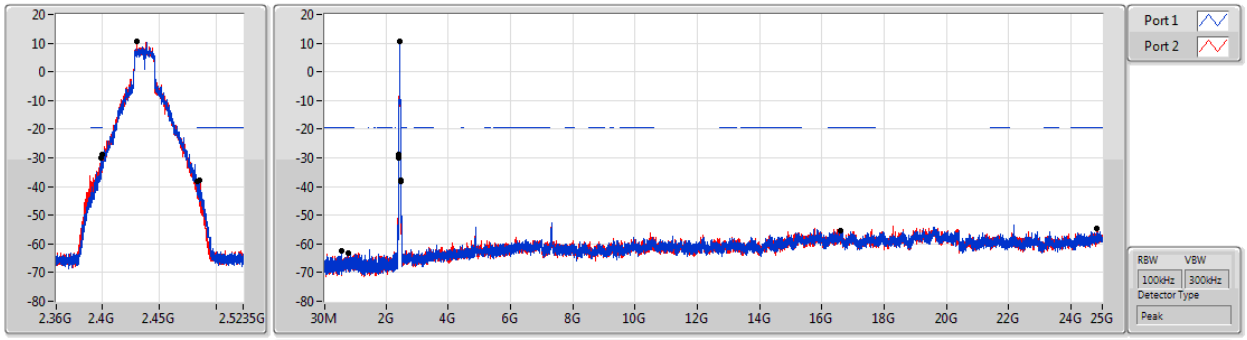


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.430728G	10.65	-19.35	2.125835G	-62.85	2.3996G	-27.15	2.48566G	-59.99	24.87357G	-55.38	1
2.430728G	10.65	-19.35	786.085M	-63.44	2.39704G	-27.93	2.4843G	-61.34	21.59762G	-55.05	2

802.11ac VHT20_Nss1,(MCS0)_2TX **CSE NdB**

2437MHz

21/09/2018

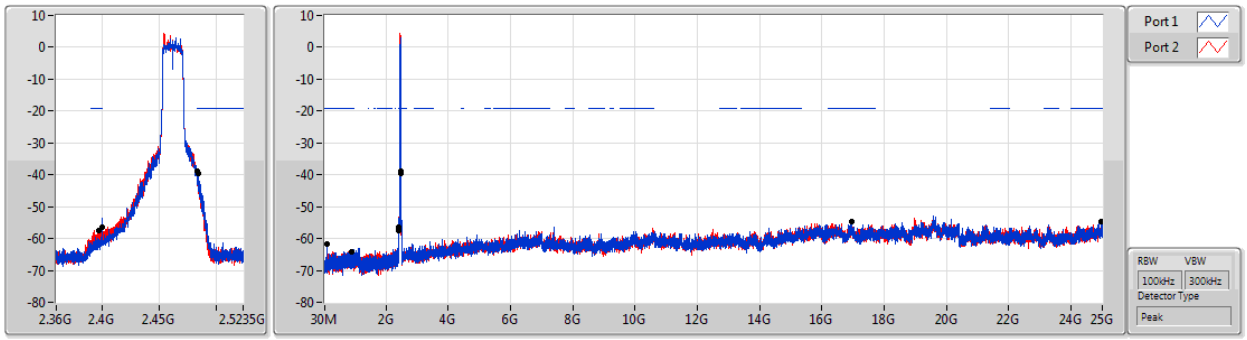


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.430728G	10.65	-19.35	582.21M	-62.55	2.3996G	-30.15	2.48358G	-38.16	16.58817G	-55.21	1
2.430728G	10.65	-19.35	777.93M	-63.32	2.39992G	-29.02	2.4851G	-37.84	24.822998G	-54.76	2

802.11ac VHT20_Nss1,(MCS0)_2TX **CSE NdB**

2462MHz

21/09/2018

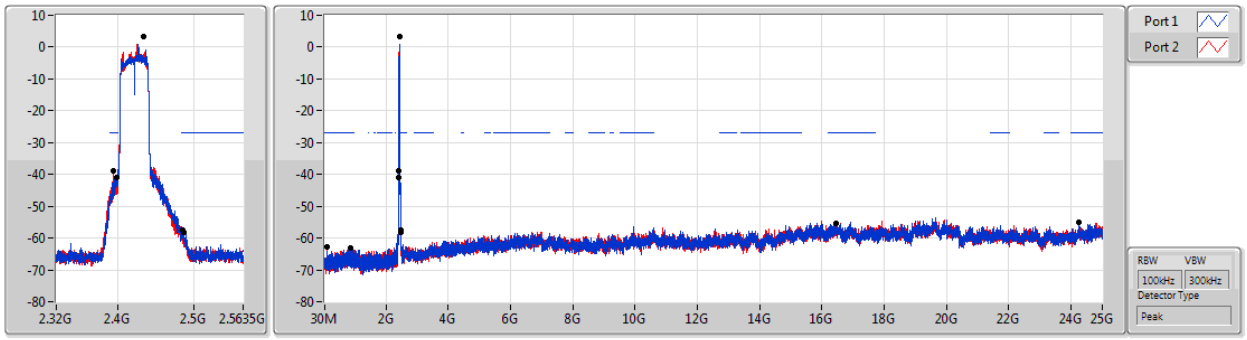


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.430728G	10.65	-19.35	95.24M	-61.83	2.39992G	-56.48	2.48406G	-39.71	24.949428G	-54.75	1
2.430728G	10.65	-19.35	900.255M	-64.04	2.39728G	-57.36	2.48382G	-39.00	16.961842G	-54.75	2

802.11ac VHT40_Nss1,(MCS0)_2TX **CSE NdB**

2422MHz

21/09/2018

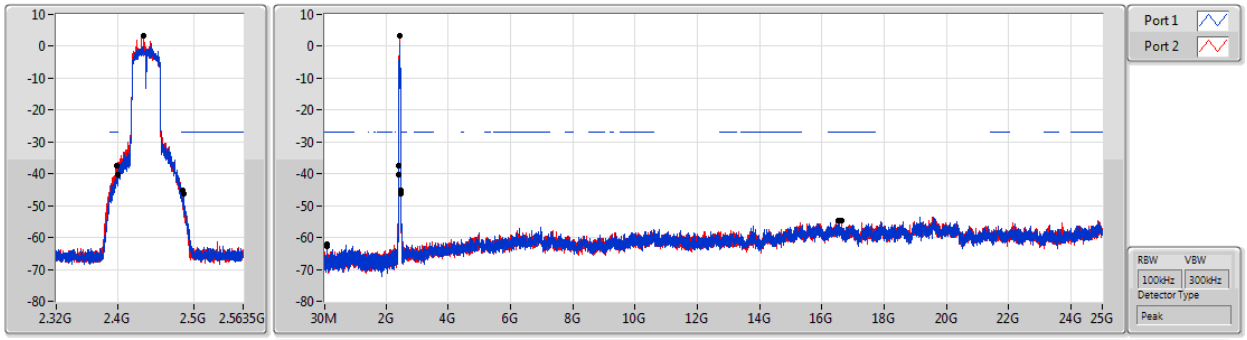


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.434402G	3.18	-26.82	844.095M	-62.97	2.39888G	-41.14	2.48494G	-57.66	24.248377G	-55.02	1
2.434402G	3.18	-26.82	95.265M	-62.69	2.39456G	-38.91	2.48638G	-58.34	16.457303G	-55.26	2

802.11ac VHT40_Nss1,(MCS0)_2TX **CSE NdB**

2437MHz

21/09/2018

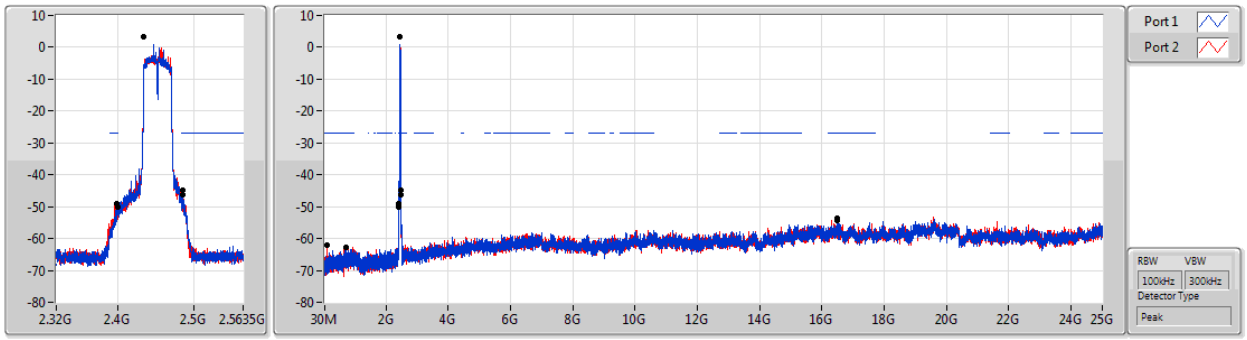


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.434402G	3.18	-26.82	95.265M	-62.17	2.39984G	-40.35	2.48574G	-46.34	16.521808G	-54.54	1
2.434402G	3.18	-26.82	92.975M	-62.73	2.3992G	-37.56	2.48414G	-45.22	16.619967G	-54.63	2

802.11ac VHT40_Nss1,(MCS0)_2TX **CSE NdB**

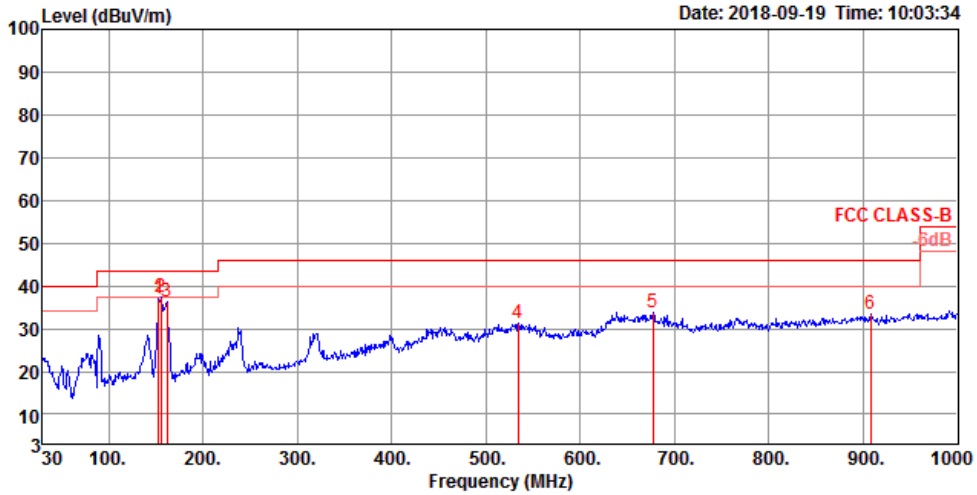
2452MHz

21/09/2018



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.434402G	3.18	-26.82	702.115M	-62.85	2.39952G	-50.12	2.48446G	-46.14	16.485348G	-54.18	1
2.434402G	3.18	-26.82	92.975M	-62.08	2.39808G	-49.14	2.48446G	-44.67	16.479739G	-53.77	2

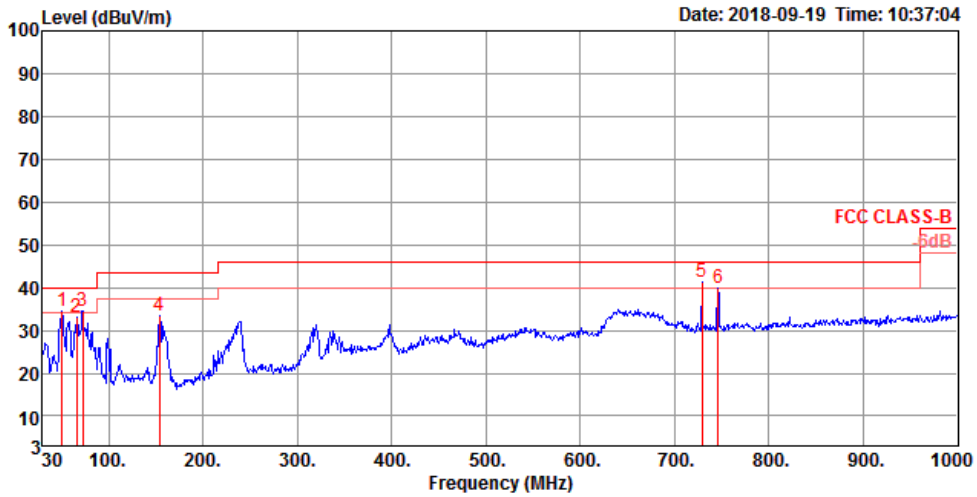
RSE below 1GHz Result			
Operating Mode	1	**Polarization**	Horizontal
Operating Function	Normal Link		



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	153.19	37.11	43.50	-6.39	51.46	1.88	16.28	32.51	100	360	Peak	HORIZONTAL
2	155.13	37.46	43.50	-6.04	51.91	1.88	16.18	32.51	100	360	Peak	HORIZONTAL
3	161.92	36.41	43.50	-7.09	51.11	1.90	15.90	32.50	100	360	Peak	HORIZONTAL
4	534.40	31.37	46.00	-14.63	35.81	4.25	23.78	32.47	100	360	Peak	HORIZONTAL
5	676.99	33.83	46.00	-12.17	36.22	5.16	24.96	32.51	100	360	Peak	HORIZONTAL
6	907.85	33.33	46.00	-12.67	32.27	6.18	26.63	31.75	100	360	Peak	HORIZONTAL

Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

RSE below 1GHz Result			
Operating Mode	1	**Polarization**	Vertical
Operating Function	Normal Link		



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	50.37	34.59	40.00	-5.41	52.36	0.99	13.83	32.59	400	0	Peak	VERTICAL
2	65.89	33.02	40.00	-6.98	52.30	1.16	12.13	32.57	400	0	Peak	VERTICAL
3	72.68	34.46	40.00	-5.54	53.57	1.19	12.27	32.57	400	0	Peak	VERTICAL
4	154.16	33.36	43.50	-10.14	47.76	1.88	16.23	32.51	400	0	Peak	VERTICAL
5	729.37	41.27	46.00	-4.73	43.11	5.30	25.32	32.46	400	0	Peak	VERTICAL
6	745.86	39.74	46.00	-6.26	41.33	5.32	25.52	32.43	400	0	Peak	VERTICAL

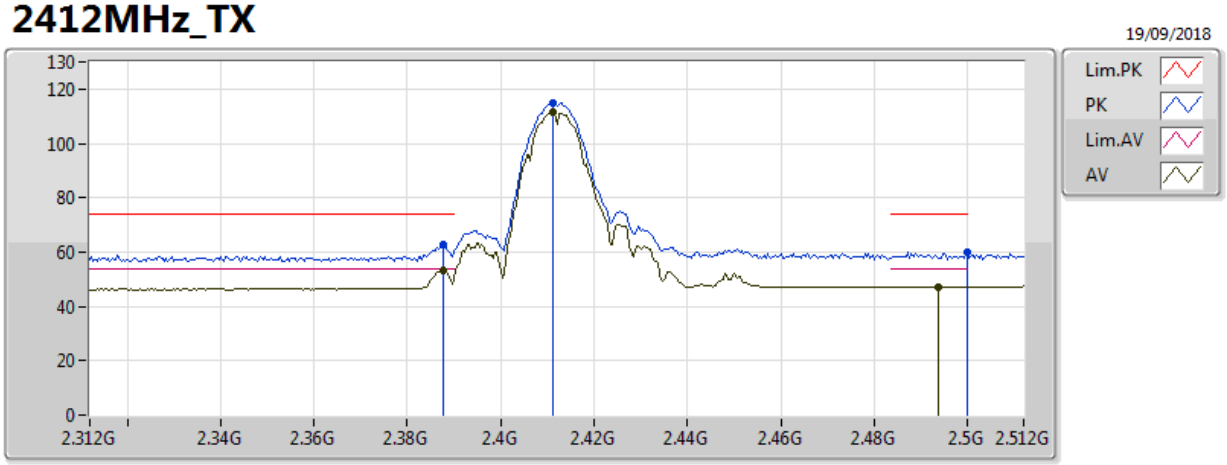
Note 1: “>20dB” means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: “N/F” means Nothing Found emissions (No emissions were detected.)

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11ac VHT40_Nss1,(MCS0)_2TX	Pass	AV	2.389998G	53.98	54.00	-0.02	31.50	3	Vertical	295	2.25	-

802.11b_Nss1,(1Mbps)_2TX

2412MHz_TX

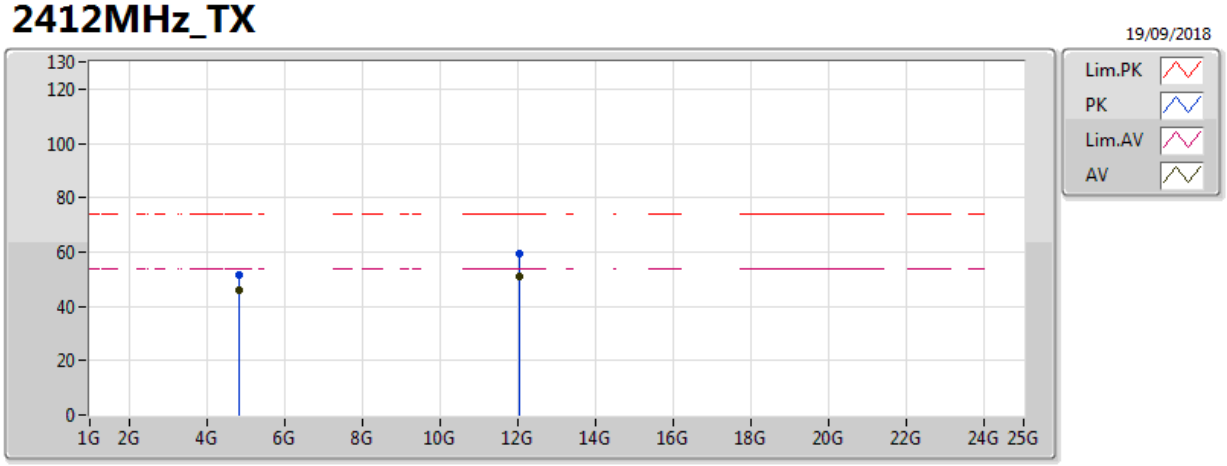


EUT X_2TX Dipole
Setting 19.5
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3876G	62.62	74.00	-11.38	31.50	3	Vertical	45	1.72	-
AV	2.3876G	53.48	54.00	-0.52	31.50	3	Vertical	45	1.72	-
PK	2.4112G	115.07	Inf	-Inf	31.56	3	Vertical	45	1.72	-
AV	2.4112G	111.50	Inf	-Inf	31.56	3	Vertical	45	1.72	-
PK	2.499998G	60.18	74.00	-13.82	31.77	3	Vertical	45	1.72	-
AV	2.4936G	47.27	54.00	-6.73	31.75	3	Vertical	45	1.72	-

802.11b_Nss1,(1Mbps)_2TX

2412MHz_TX

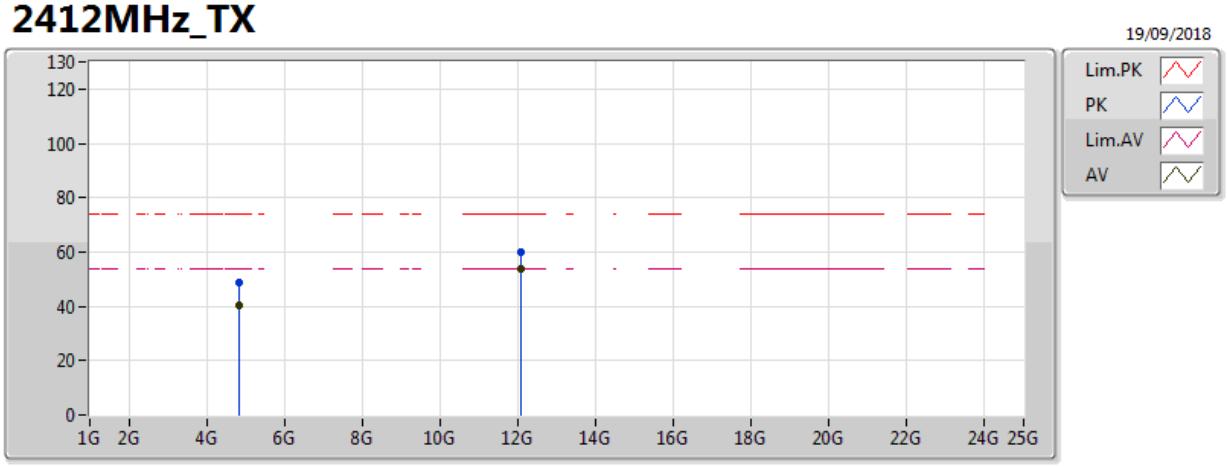


EUT X_2TX Dipole
Setting 19.5
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.82388G	51.41	74.00	-22.59	7.93	3	Vertical	285	1.00	-
AV	4.82395G	46.07	54.00	-7.93	7.93	3	Vertical	285	1.00	-
PK	12.05852G	59.22	74.00	-14.78	15.27	3	Vertical	271	1.94	-
AV	12.05816G	51.12	54.00	-2.88	15.27	3	Vertical	271	1.94	-

802.11b_Nss1,(1Mbps)_2TX

2412MHz_TX

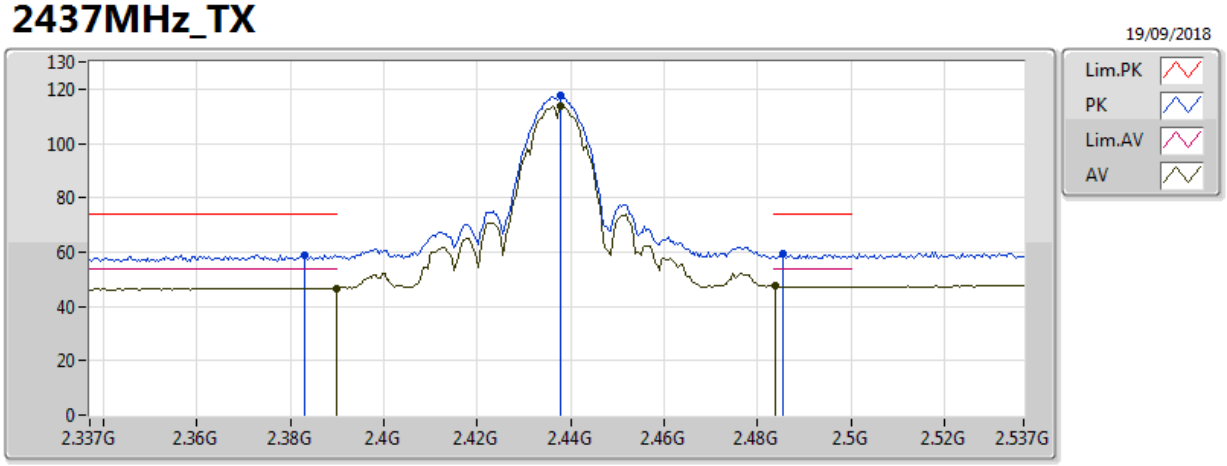


EUT X_2TX Dipole
Setting 19.5
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.82384G	48.67	74.00	-25.33	7.93	3	Horizontal	81	1.31	-
AV	4.82396G	40.54	54.00	-13.46	7.93	3	Horizontal	81	1.31	-
PK	12.06156G	60.03	74.00	-13.97	15.27	3	Horizontal	296	2.31	-
AV	12.062G	53.63	54.00	-0.37	15.27	3	Horizontal	296	2.31	-

802.11b_Nss1,(1Mbps)_2TX

2437MHz_TX

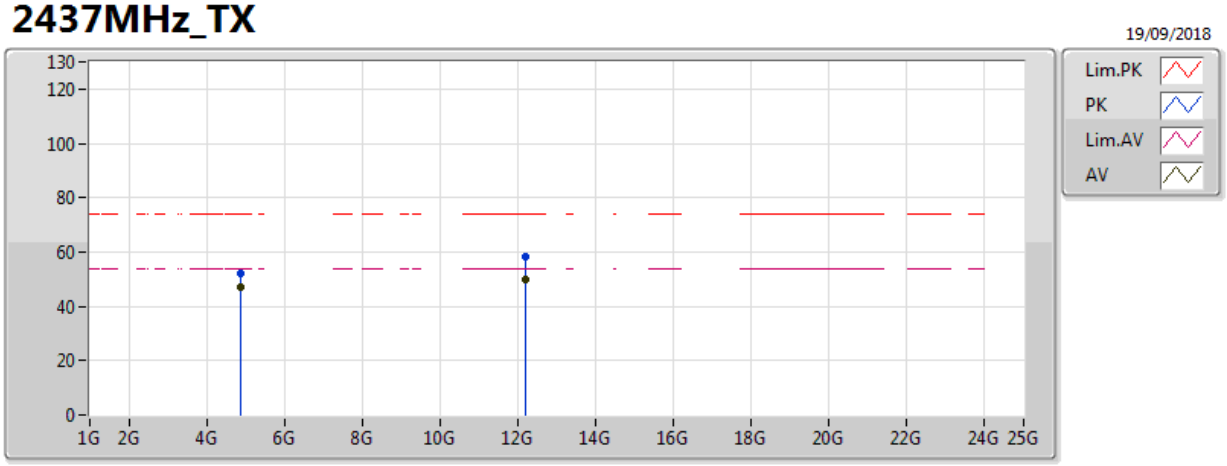


EUT X_2TX Dipole
Setting 21
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.383G	59.04	74.00	-14.96	31.49	3	Vertical	39	1.75	-
AV	2.3898G	46.78	54.00	-7.22	31.50	3	Vertical	39	1.75	-
PK	2.4378G	117.40	Inf	-Inf	31.62	3	Vertical	39	1.75	-
AV	2.4378G	113.66	Inf	-Inf	31.62	3	Vertical	39	1.75	-
PK	2.4854G	59.23	74.00	-14.77	31.73	3	Vertical	39	1.75	-
AV	2.4838G	47.43	54.00	-6.57	31.73	3	Vertical	39	1.75	-

802.11b_Nss1,(1Mbps)_2TX

2437MHz_TX

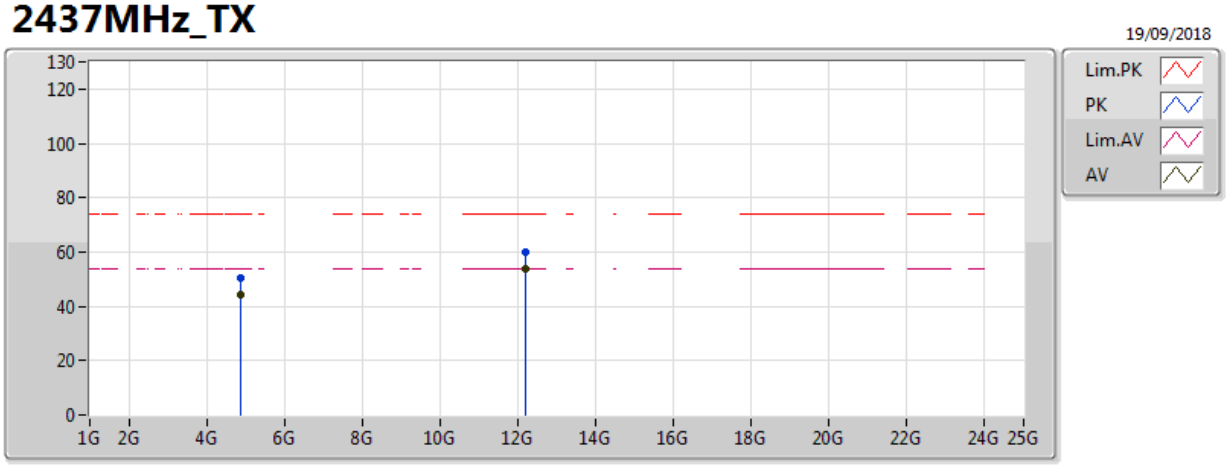


EUT X_2TX Dipole
Setting 21
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.874G	51.95	74.00	-22.05	8.03	3	Vertical	294	2.56	-
AV	4.87394G	47.14	54.00	-6.86	8.03	3	Vertical	294	2.56	-
PK	12.18604G	58.55	74.00	-15.45	15.29	3	Vertical	283	1.89	-
AV	12.18668G	50.02	54.00	-3.98	15.29	3	Vertical	283	1.89	-

802.11b_Nss1,(1Mbps)_2TX

2437MHz_TX

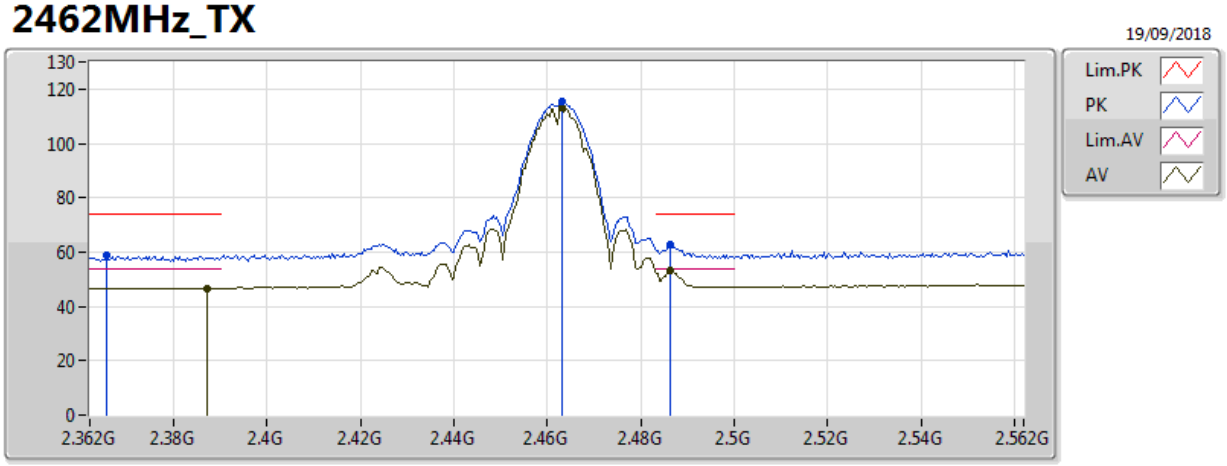


EUT X_2TX Dipole
Setting 21
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.87394G	50.45	74.00	-23.55	8.03	3	Horizontal	47	1.24	-
AV	4.87398G	44.43	54.00	-9.57	8.03	3	Horizontal	47	1.24	-
PK	12.18748G	60.12	74.00	-13.88	15.29	3	Horizontal	286	2.21	-
AV	12.18668G	53.56	54.00	-0.44	15.29	3	Horizontal	286	2.21	-

802.11b_Nss1,(1Mbps)_2TX

2462MHz_TX

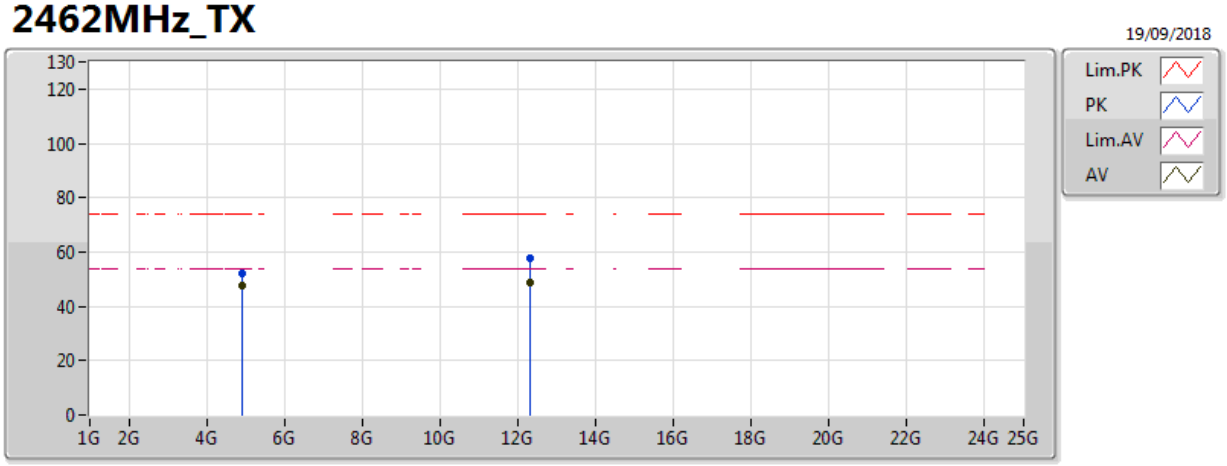


EUT X_2TX Dipole
Setting 20.5
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3656G	58.93	74.00	-15.07	31.44	3	Vertical	97	2.78	-
AV	2.3872G	46.77	54.00	-7.23	31.49	3	Vertical	97	2.78	-
PK	2.4632G	115.51	Inf	-Inf	31.68	3	Vertical	97	2.78	-
AV	2.4632G	113.41	Inf	-Inf	31.68	3	Vertical	97	2.78	-
PK	2.4864G	62.62	74.00	-11.38	31.74	3	Vertical	97	2.78	-
AV	2.4864G	53.04	54.00	-0.96	31.74	3	Vertical	97	2.78	-

802.11b_Nss1,(1Mbps)_2TX

2462MHz_TX

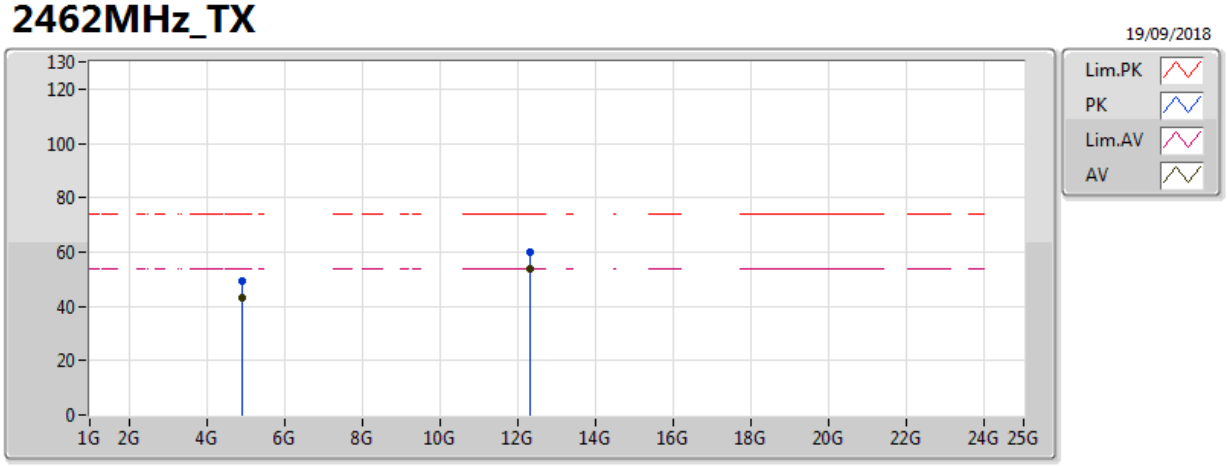


EUT X_2TX Dipole
Setting 20.5
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.92394G	52.14	74.00	-21.86	8.13	3	Vertical	309	2.40	-
AV	4.924G	47.86	54.00	-6.14	8.13	3	Vertical	309	2.40	-
PK	12.31204G	57.99	74.00	-16.01	15.31	3	Vertical	304	1.99	-
AV	12.31168G	48.72	54.00	-5.28	15.31	3	Vertical	304	1.99	-

802.11b_Nss1,(1Mbps)_2TX

2462MHz_TX

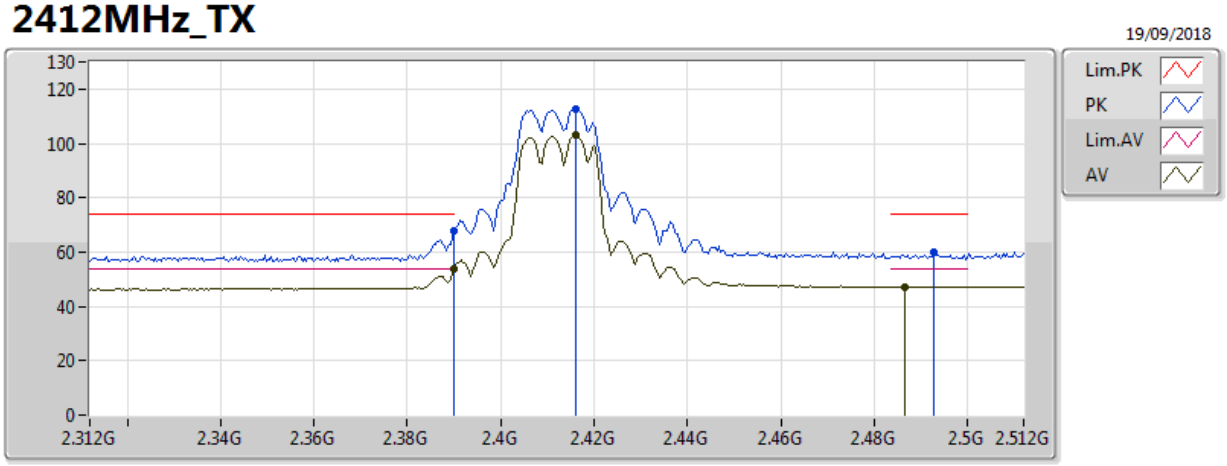


EUT X_2TX Dipole
Setting 20.5
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.92398G	49.08	74.00	-24.92	8.13	3	Horizontal	64	1.56	-
AV	4.92396G	43.08	54.00	-10.92	8.13	3	Horizontal	64	1.56	-
PK	12.31196G	60.14	74.00	-13.86	15.31	3	Horizontal	298	2.30	-
AV	12.31168G	53.59	54.00	-0.41	15.31	3	Horizontal	298	2.30	-

802.11g_Nss1,(6Mbps)_2TX

2412MHz_TX

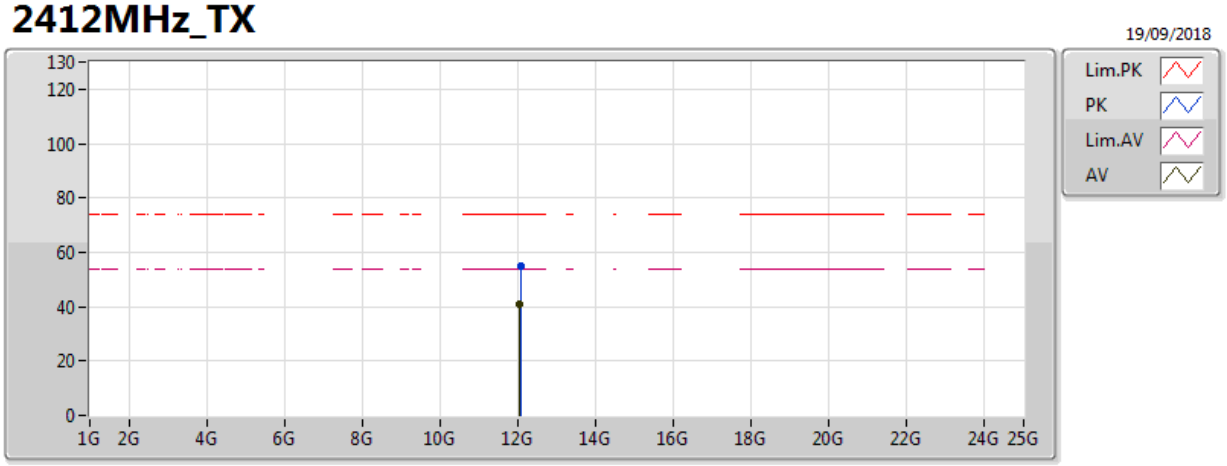


EUT X_2TX Dipole
Setting 15
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.389998G	67.99	74.00	-6.01	31.50	3	Vertical	24	2.14	-
AV	2.389998G	53.67	54.00	-0.33	31.50	3	Vertical	24	2.14	-
PK	2.416G	112.85	Inf	-Inf	31.57	3	Vertical	24	2.14	-
AV	2.416G	102.97	Inf	-Inf	31.57	3	Vertical	24	2.14	-
PK	2.4928G	59.76	74.00	-14.24	31.75	3	Vertical	24	2.14	-
AV	2.4864G	47.22	54.00	-6.78	31.74	3	Vertical	24	2.14	-

802.11g_Nss1,(6Mbps)_2TX

2412MHz_TX

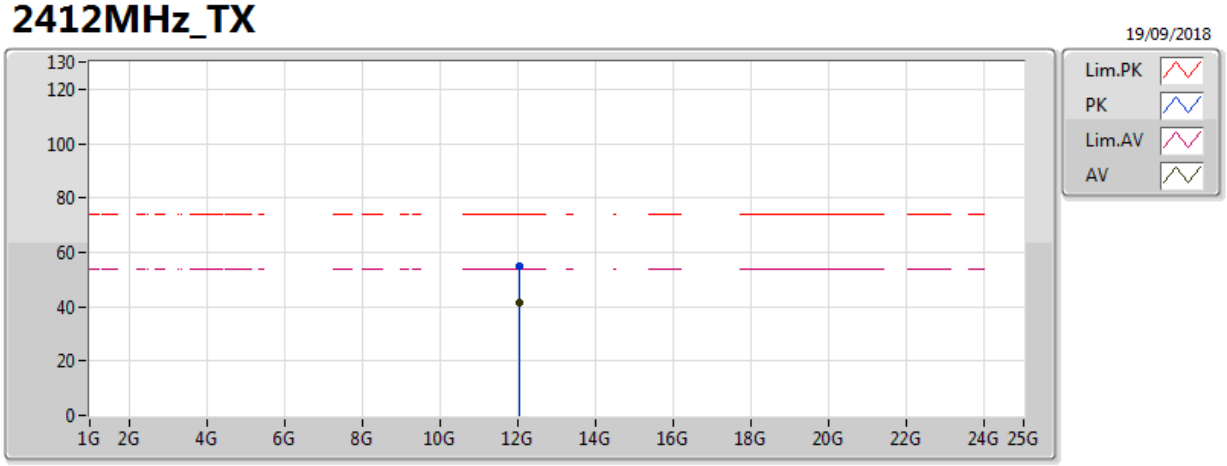


EUT X_2TX Dipole
Setting 15
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	12.0605G	54.65	74.00	-19.35	15.27	3	Vertical	99	1.76	-
AV	12.05857G	41.13	54.00	-12.87	15.27	3	Vertical	99	1.76	-

802.11g_Nss1,(6Mbps)_2TX

2412MHz_TX

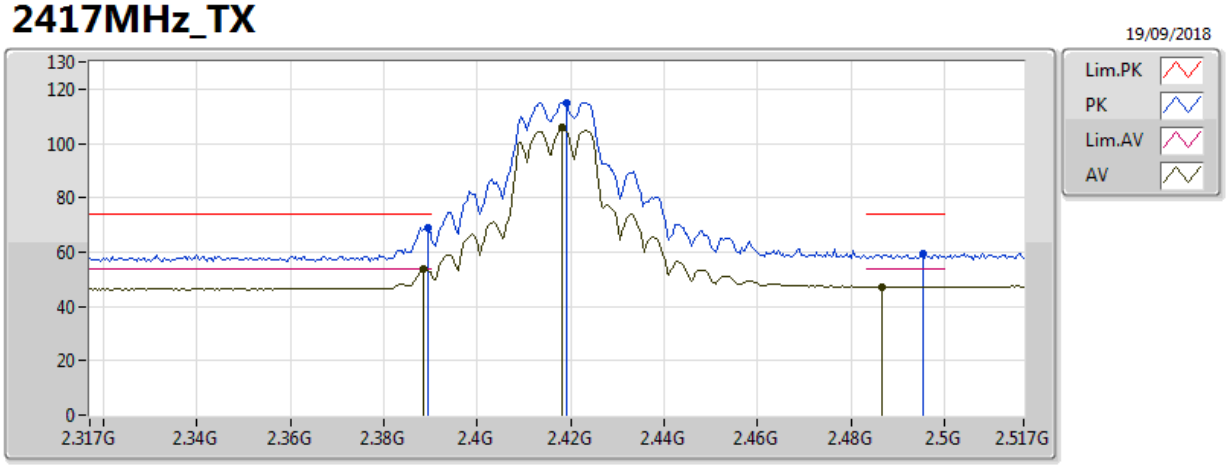


EUT X_2TX Dipole
Setting 15
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	12.05959G	55.18	74.00	-18.82	15.27	3	Horizontal	144	1.45	-
AV	12.0575G	41.29	54.00	-12.71	15.27	3	Horizontal	144	1.45	-

802.11g_Nss1,(6Mbps)_2TX

2417MHz_TX

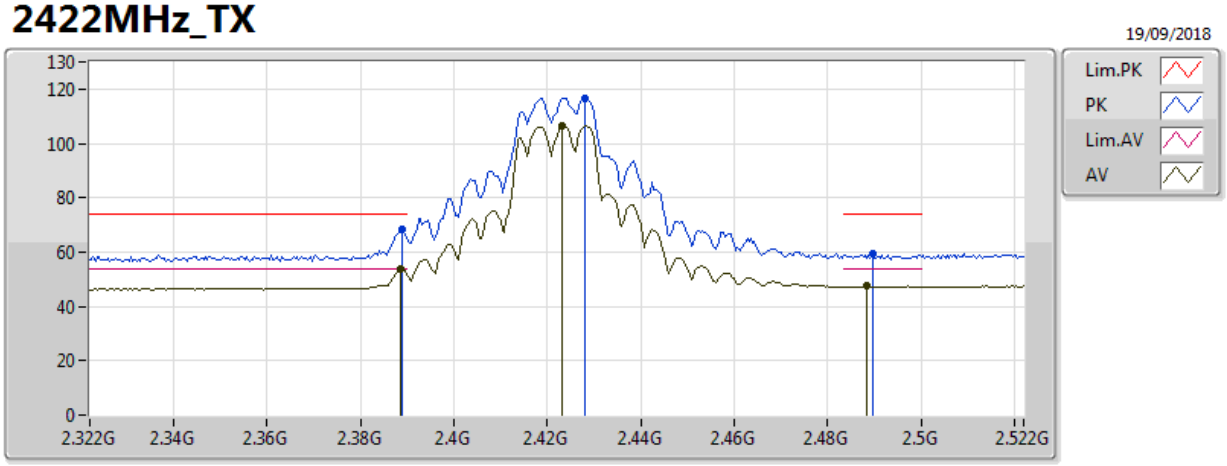


EUT X_2TX Dipole
Setting 17.5
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3894G	69.10	74.00	-4.90	31.50	3	Vertical	308	2.04	-
AV	2.3886G	53.75	54.00	-0.25	31.50	3	Vertical	308	2.04	-
PK	2.419G	115.13	Inf	-Inf	31.58	3	Vertical	308	2.04	-
AV	2.4182G	105.68	Inf	-Inf	31.57	3	Vertical	308	2.04	-
PK	2.4954G	59.12	74.00	-14.88	31.76	3	Vertical	308	2.04	-
AV	2.4866G	47.27	54.00	-6.73	31.74	3	Vertical	308	2.04	-

802.11g_Nss1,(6Mbps)_2TX

2422MHz_TX

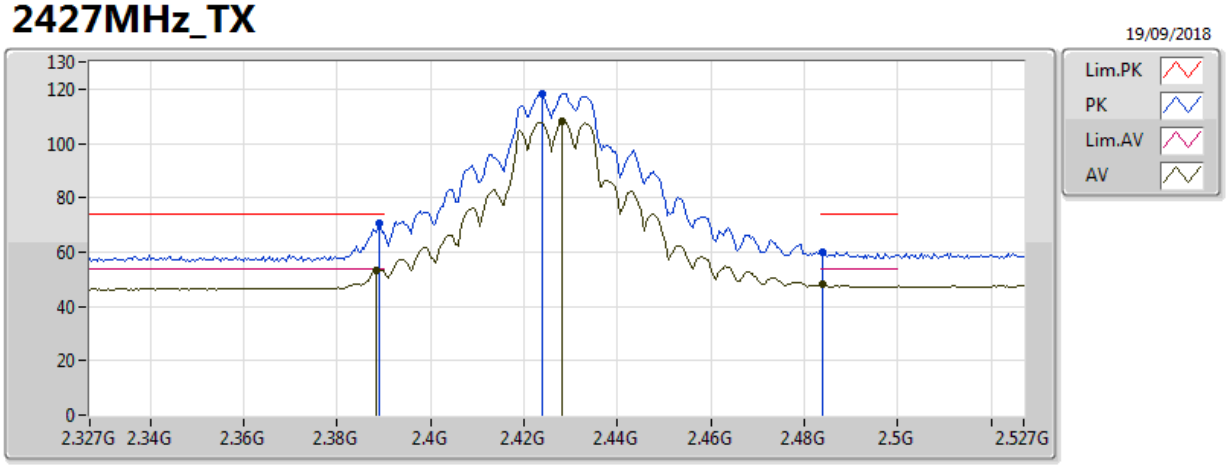


EUT X_2TX Dipole
Setting 18.5
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3888G	68.13	74.00	-5.87	31.50	3	Vertical	307	1.37	-
AV	2.3884G	53.82	54.00	-0.18	31.50	3	Vertical	307	1.37	-
PK	2.428G	116.58	Inf	-Inf	31.60	3	Vertical	307	1.37	-
AV	2.4232G	106.40	Inf	-Inf	31.59	3	Vertical	307	1.37	-
PK	2.4896G	59.47	74.00	-14.53	31.75	3	Vertical	307	1.37	-
AV	2.4884G	47.51	54.00	-6.49	31.74	3	Vertical	307	1.37	-

802.11g_Nss1,(6Mbps)_2TX

2427MHz_TX

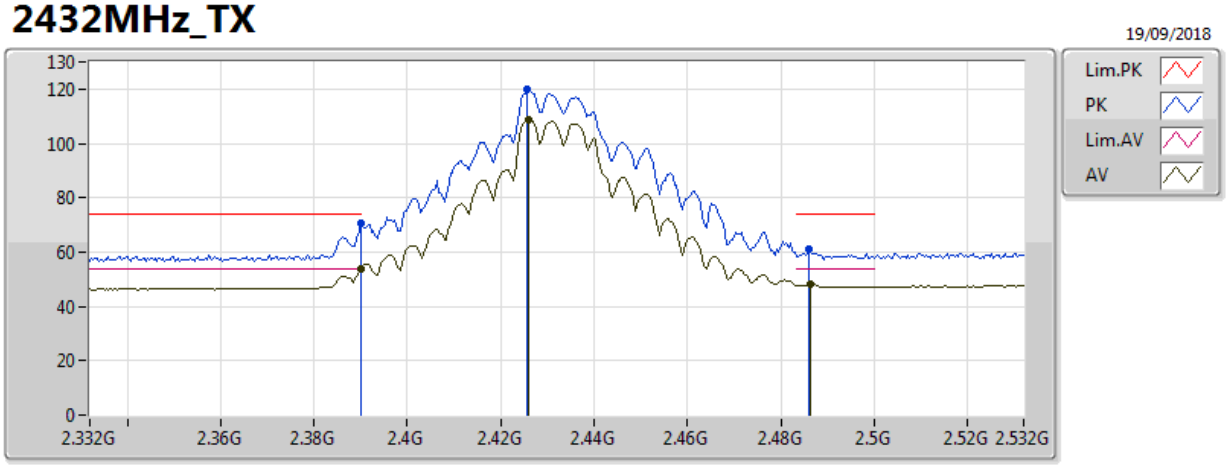


EUT X_2TX Dipole
Setting 20.5
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.389G	70.59	74.00	-3.41	31.50	3	Vertical	302	1.82	-
AV	2.3882G	53.51	54.00	-0.49	31.50	3	Vertical	302	1.82	-
PK	2.4238G	118.29	Inf	-Inf	31.59	3	Vertical	302	1.82	-
AV	2.4282G	108.27	Inf	-Inf	31.60	3	Vertical	302	1.82	-
PK	2.4838G	60.20	74.00	-13.80	31.73	3	Vertical	302	1.82	-
AV	2.4838G	47.93	54.00	-6.07	31.73	3	Vertical	302	1.82	-

802.11g_Nss1,(6Mbps)_2TX

2432MHz_TX

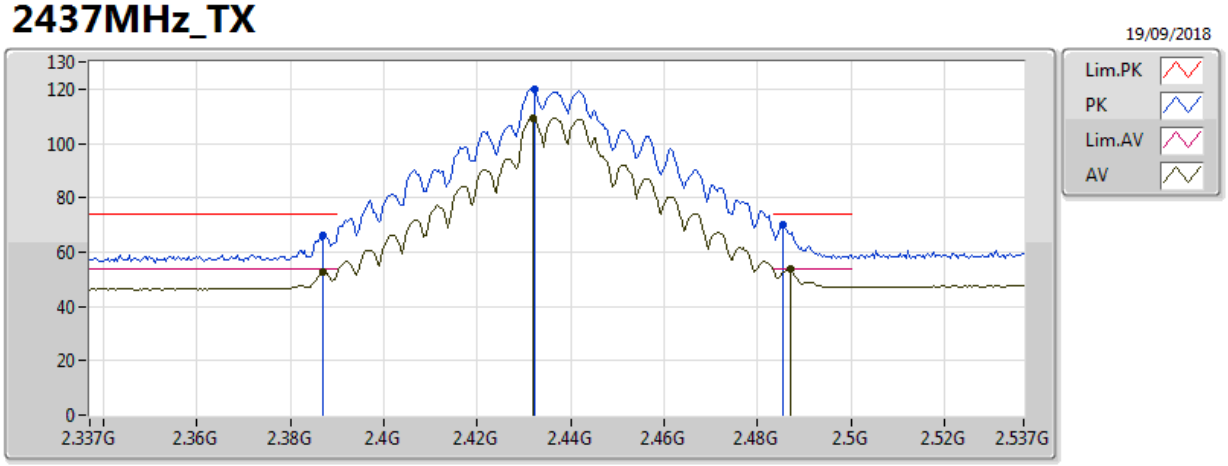


EUT X_2TX Dipole
Setting 21.5
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.389998G	70.78	74.00	-3.22	31.50	3	Vertical	12	2.74	-
AV	2.389998G	53.80	54.00	-0.20	31.50	3	Vertical	12	2.74	-
PK	2.4256G	119.91	Inf	-Inf	31.59	3	Vertical	12	2.74	-
AV	2.426G	108.88	Inf	-Inf	31.59	3	Vertical	12	2.74	-
PK	2.486G	61.22	74.00	-12.78	31.74	3	Vertical	12	2.74	-
AV	2.4864G	48.22	54.00	-5.78	31.74	3	Vertical	12	2.74	-

802.11g_Nss1,(6Mbps)_2TX

2437MHz_TX

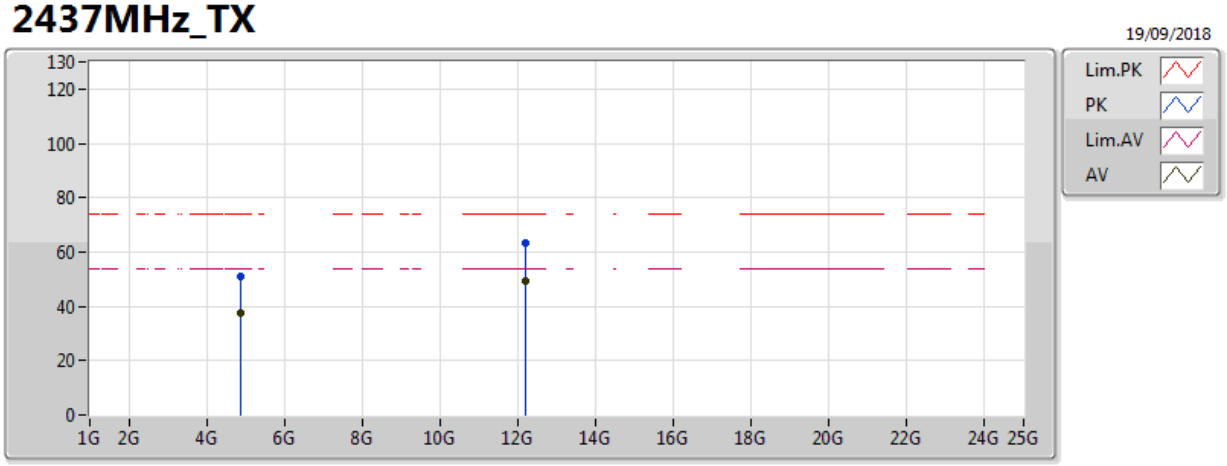


EUT X_2TX Dipole
Setting 23
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.387G	65.95	74.00	-8.05	31.50	3	Vertical	21	1.85	-
AV	2.387G	52.51	54.00	-1.49	31.50	3	Vertical	21	1.85	-
PK	2.4322G	119.87	Inf	-Inf	31.61	3	Vertical	21	1.85	-
AV	2.4318G	109.43	Inf	-Inf	31.61	3	Vertical	21	1.85	-
PK	2.4854G	70.32	74.00	-3.68	31.73	3	Vertical	21	1.85	-
AV	2.487G	53.55	54.00	-0.45	31.74	3	Vertical	21	1.85	-

802.11g_Nss1,(6Mbps)_2TX

2437MHz_TX

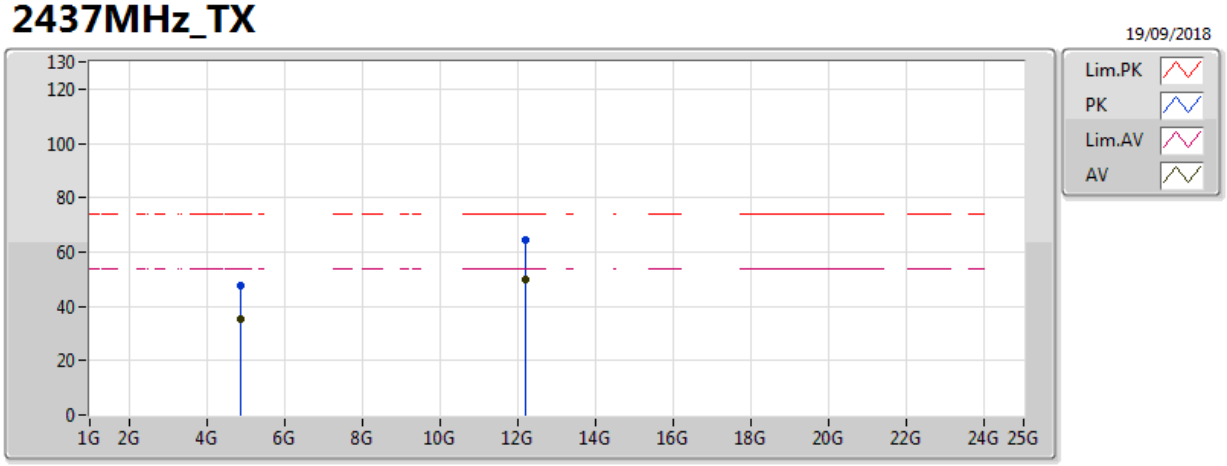


EUT X_2TX Dipole
Setting 23
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.87454G	51.06	74.00	-22.94	8.03	3	Vertical	315	2.43	-
AV	4.87484G	37.75	54.00	-16.25	8.03	3	Vertical	315	2.43	-
PK	12.1893G	63.46	74.00	-10.54	15.29	3	Vertical	303	1.93	-
AV	12.1791G	49.56	54.00	-4.44	15.29	3	Vertical	303	1.93	-

802.11g_Nss1,(6Mbps)_2TX

2437MHz_TX

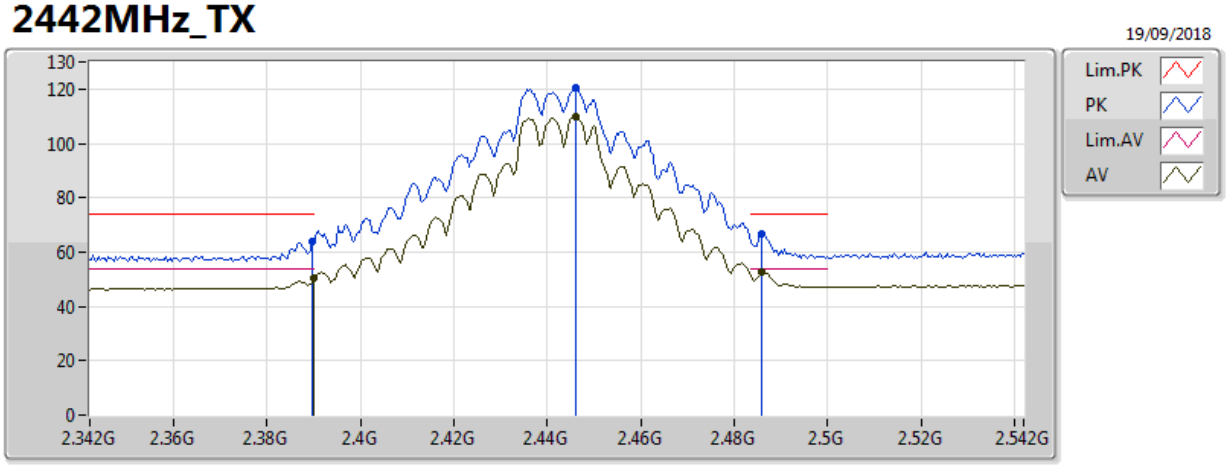


EUT X_2TX Dipole
Setting 23
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	4.87466G	47.88	74.00	-26.12	8.03	3	Horizontal	50	1.15	-
AV	4.87496G	35.42	54.00	-18.58	8.03	3	Horizontal	50	1.15	-
PK	12.1938G	64.23	74.00	-9.77	15.29	3	Horizontal	282	2.38	-
AV	12.179G	50.05	54.00	-3.95	15.29	3	Horizontal	282	2.38	-

802.11g_Nss1,(6Mbps)_2TX

2442MHz_TX

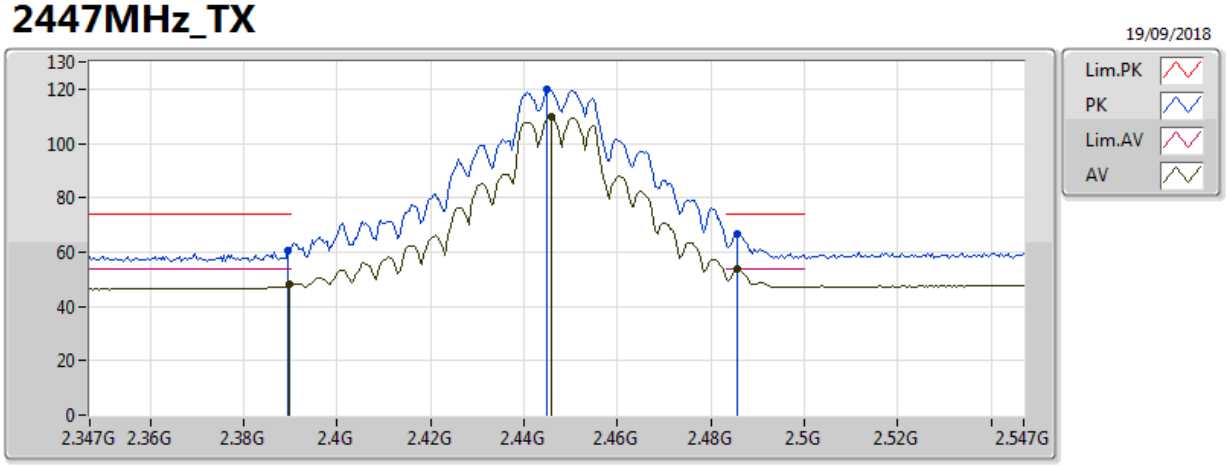


EUT X_2TX Dipole
Setting 22.5
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3896G	63.80	74.00	-10.20	31.50	3	Vertical	33	2.96	-
AV	2.389998G	50.33	54.00	-3.67	31.50	3	Vertical	33	2.96	-
PK	2.446G	120.33	Inf	-Inf	31.64	3	Vertical	33	2.96	-
AV	2.446G	110.00	Inf	-Inf	31.64	3	Vertical	33	2.96	-
PK	2.486G	66.71	74.00	-7.29	31.74	3	Vertical	33	2.96	-
AV	2.486G	52.47	54.00	-1.53	31.74	3	Vertical	33	2.96	-

802.11g_Nss1,(6Mbps)_2TX

2447MHz_TX

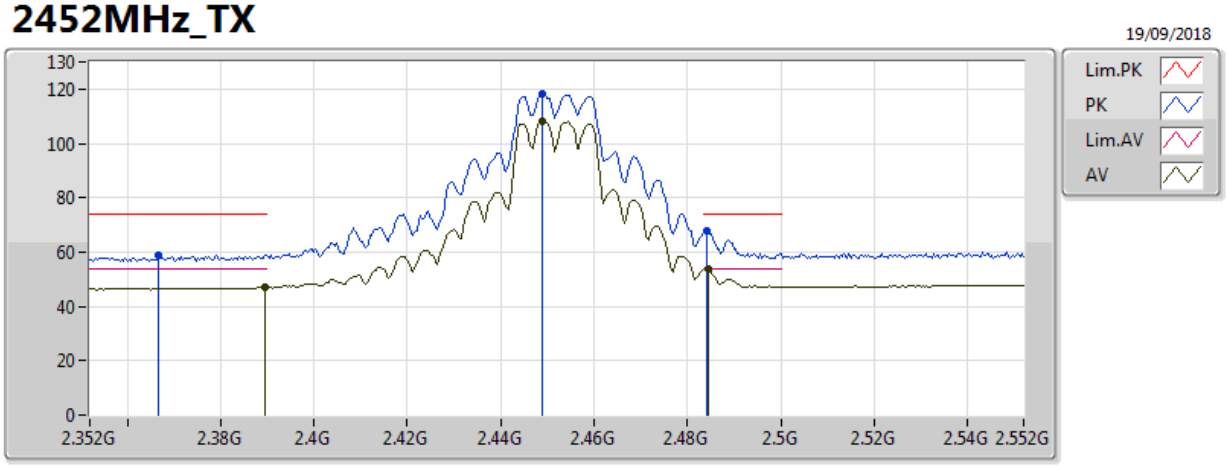


EUT X_2TX Dipole
Setting 21.5
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3894G	60.41	74.00	-13.59	31.50	3	Vertical	5	2.96	-
AV	2.3898G	47.94	54.00	-6.06	31.50	3	Vertical	5	2.96	-
PK	2.445G	119.84	Inf	-Inf	31.64	3	Vertical	5	2.96	-
AV	2.4458G	109.75	Inf	-Inf	31.64	3	Vertical	5	2.96	-
PK	2.4858G	66.50	74.00	-7.50	31.74	3	Vertical	5	2.96	-
AV	2.4858G	53.67	54.00	-0.33	31.74	3	Vertical	5	2.96	-

802.11g_Nss1,(6Mbps)_2TX

2452MHz_TX

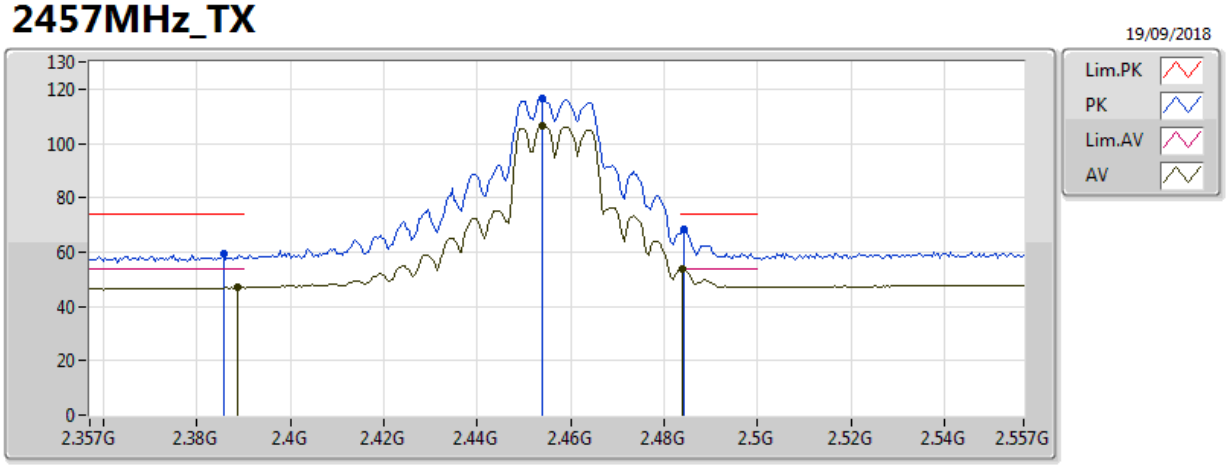


EUT X_2TX Dipole
Setting 19.5
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3668G	58.67	74.00	-15.33	31.44	3	Vertical	312	2.97	-
AV	2.3896G	47.08	54.00	-6.92	31.50	3	Vertical	312	2.97	-
PK	2.4488G	118.43	Inf	-Inf	31.65	3	Vertical	312	2.97	-
AV	2.4488G	108.04	Inf	-Inf	31.65	3	Vertical	312	2.97	-
PK	2.484G	67.94	74.00	-6.06	31.73	3	Vertical	312	2.97	-
AV	2.4844G	53.95	54.00	-0.05	31.73	3	Vertical	312	2.97	-

802.11g_Nss1,(6Mbps)_2TX

2457MHz_TX

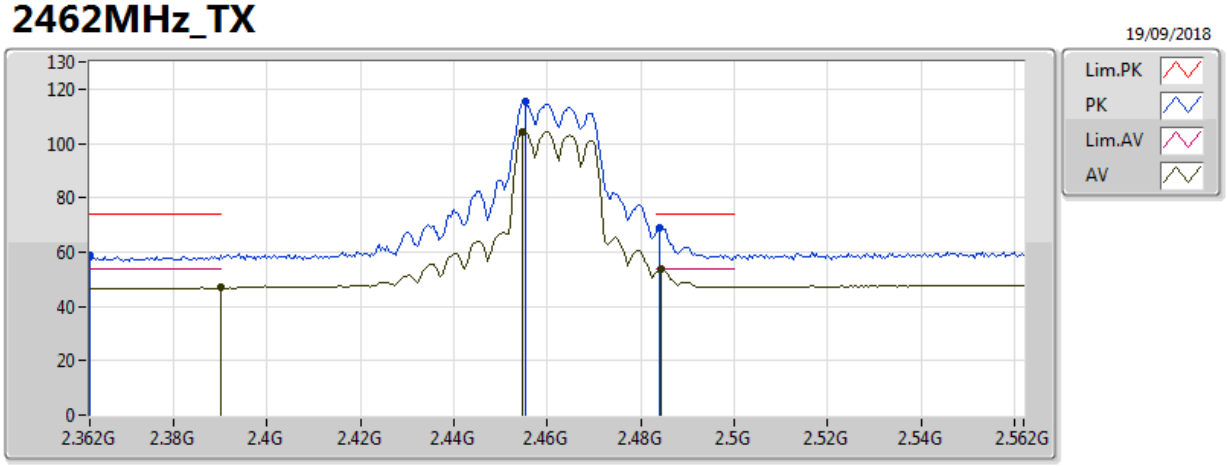


EUT X_2TX Dipole
Setting 17.5
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3858G	59.67	74.00	-14.33	31.49	3	Vertical	318	2.99	-
AV	2.3886G	46.85	54.00	-7.15	31.50	3	Vertical	318	2.99	-
PK	2.4538G	116.81	Inf	-Inf	31.66	3	Vertical	318	2.99	-
AV	2.4538G	106.55	Inf	-Inf	31.66	3	Vertical	318	2.99	-
PK	2.4842G	68.21	74.00	-5.79	31.73	3	Vertical	318	2.99	-
AV	2.4838G	53.75	54.00	-0.25	31.73	3	Vertical	318	2.99	-

802.11g_Nss1,(6Mbps)_2TX

2462MHz_TX

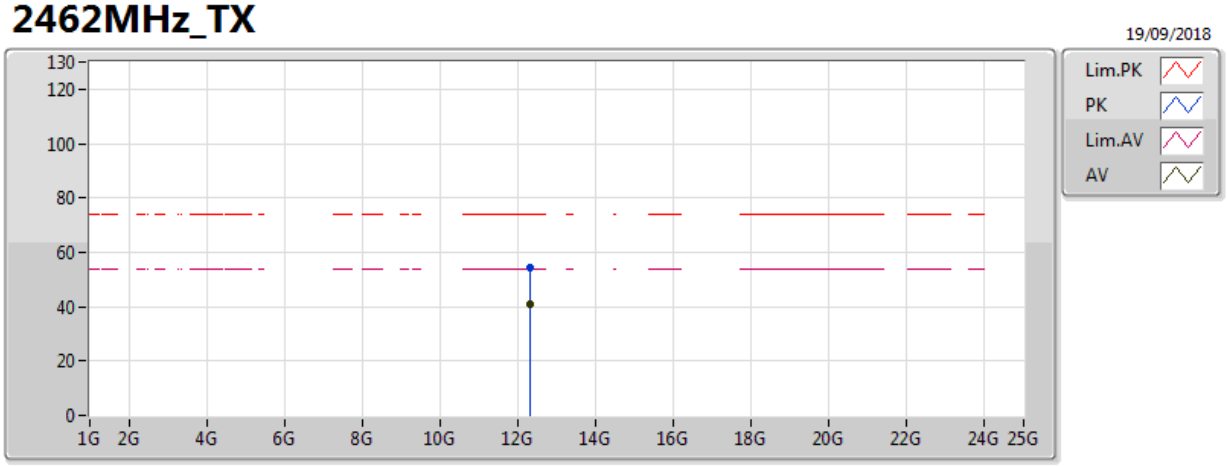


EUT X_2TX Dipole
Setting 16
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.362G	58.99	74.00	-15.01	31.43	3	Vertical	348	1.35	-
AV	2.389998G	46.84	54.00	-7.16	31.50	3	Vertical	348	1.35	-
PK	2.4552G	115.22	Inf	-Inf	31.66	3	Vertical	348	1.35	-
AV	2.4548G	104.33	Inf	-Inf	31.66	3	Vertical	348	1.35	-
PK	2.484G	68.72	74.00	-5.28	31.73	3	Vertical	348	1.35	-
AV	2.4844G	53.74	54.00	-0.26	31.73	3	Vertical	348	1.35	-

802.11g_Nss1,(6Mbps)_2TX

2462MHz_TX

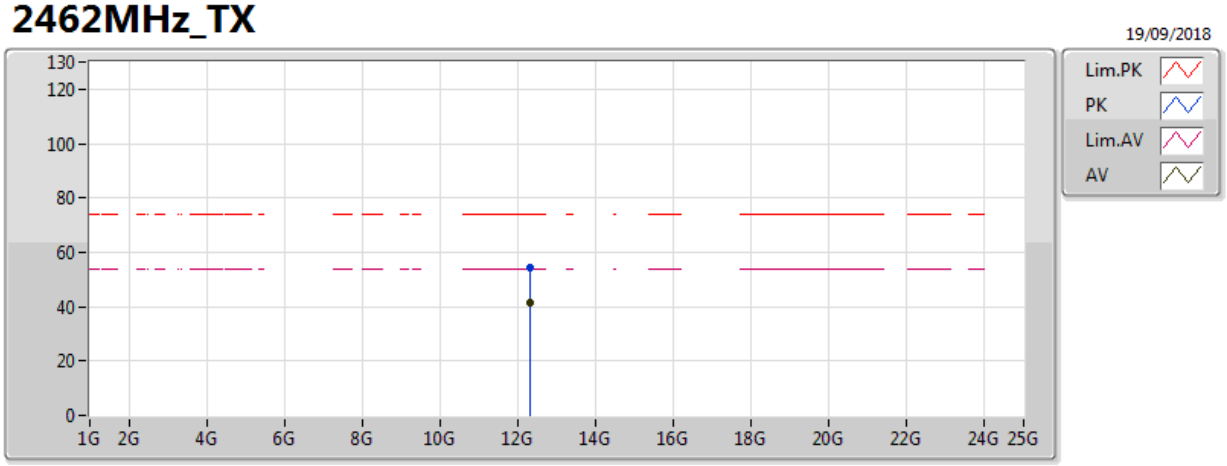


EUT X_2TX Dipole
Setting 16
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	12.30902G	54.62	74.00	-19.38	15.31	3	Vertical	67	1.72	-
AV	12.31268G	41.14	54.00	-12.86	15.31	3	Vertical	67	1.72	-

802.11g_Nss1,(6Mbps)_2TX

2462MHz_TX

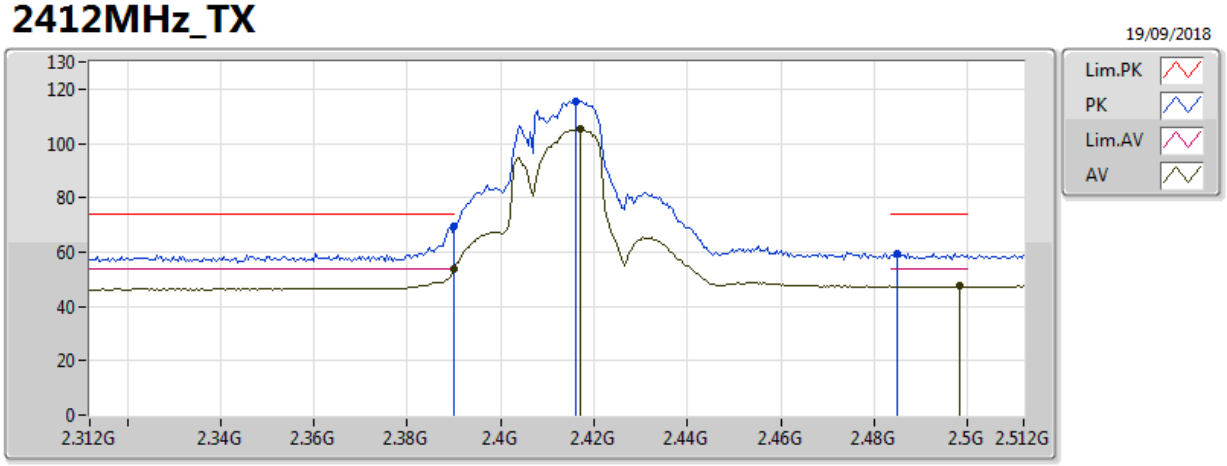


EUT X_2TX Dipole
Setting 16
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	12.30662G	54.62	74.00	-19.38	15.31	3	Horizontal	260	2.34	-
AV	12.31162G	41.38	54.00	-12.62	15.31	3	Horizontal	260	2.34	-

802.11ac VHT20_Nss1,(MCS0)_2TX

2412MHz_TX

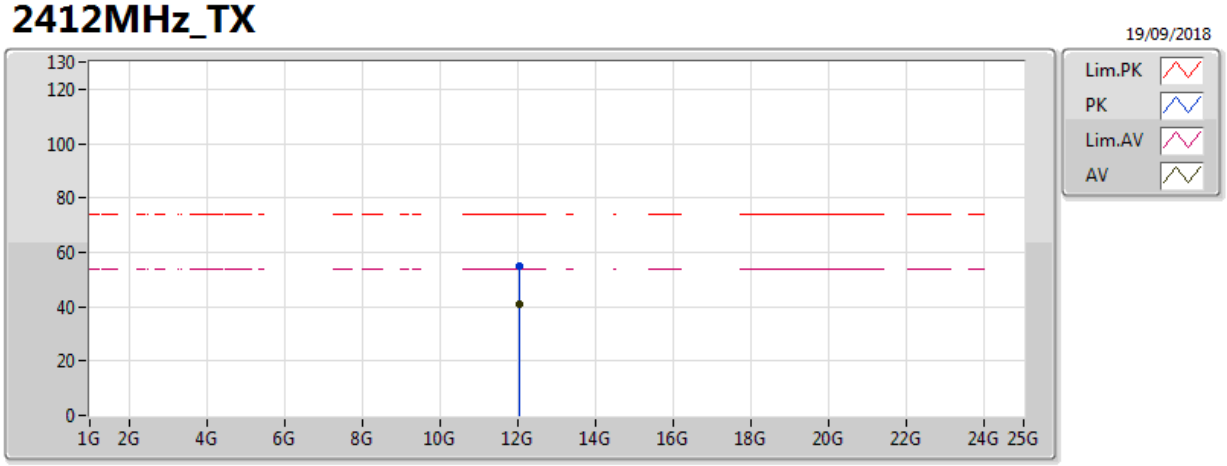


EUT X_2TX Dipole
Setting 17
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.389998G	69.65	74.00	-4.35	31.50	3	Vertical	300	2.31	-
AV	2.389998G	53.79	54.00	-0.21	31.50	3	Vertical	300	2.31	-
PK	2.416G	115.57	Inf	-Inf	31.57	3	Vertical	300	2.31	-
AV	2.4172G	105.20	Inf	-Inf	31.57	3	Vertical	300	2.31	-
PK	2.4848G	59.37	74.00	-14.63	31.73	3	Vertical	300	2.31	-
AV	2.4984G	47.43	54.00	-6.57	31.77	3	Vertical	300	2.31	-

802.11ac VHT20_Nss1,(MCS0)_2TX

2412MHz_TX

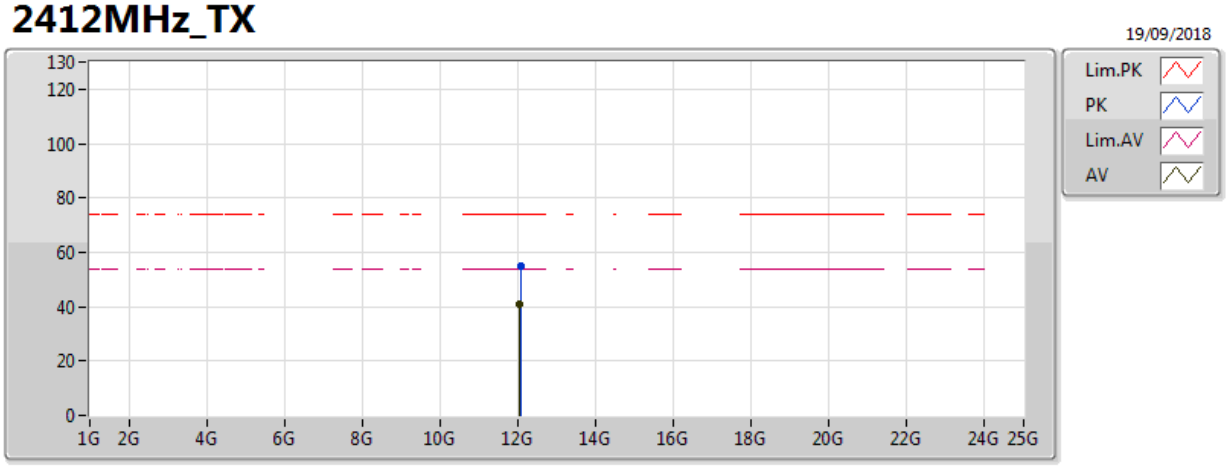


EUT X_2TX Dipole
Setting 17
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	12.05827G	54.95	74.00	-19.05	15.27	3	Vertical	108	1.72	-
AV	12.05909G	41.16	54.00	-12.84	15.27	3	Vertical	108	1.72	-

802.11ac VHT20_Nss1,(MCS0)_2TX

2412MHz_TX

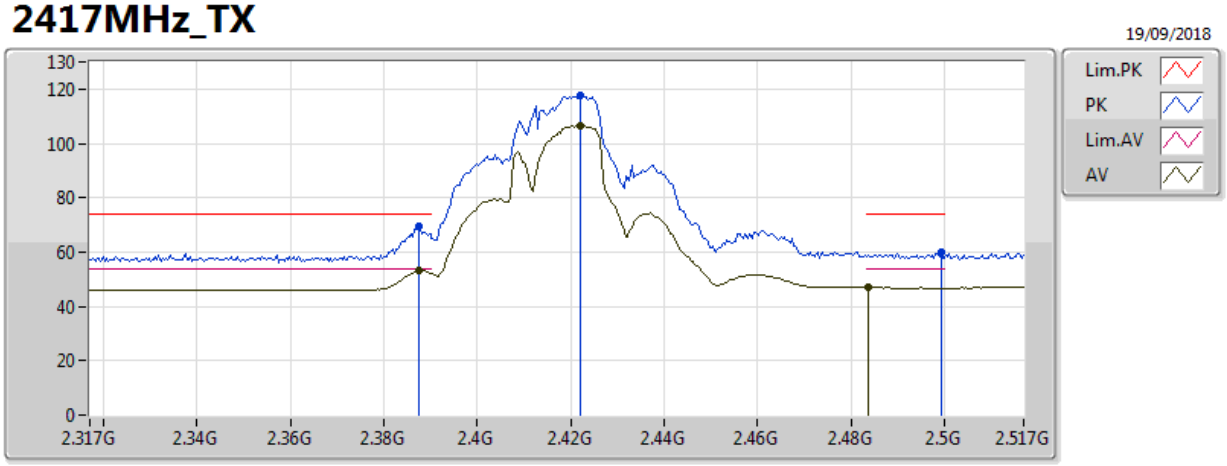


EUT X_2TX Dipole
Setting 17
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	12.06069G	54.92	74.00	-19.08	15.27	3	Horizontal	177	2.10	-
AV	12.05853G	40.95	54.00	-13.05	15.27	3	Horizontal	177	2.10	-

802.11ac VHT20_Nss1,(MCS0)_2TX

2417MHz_TX

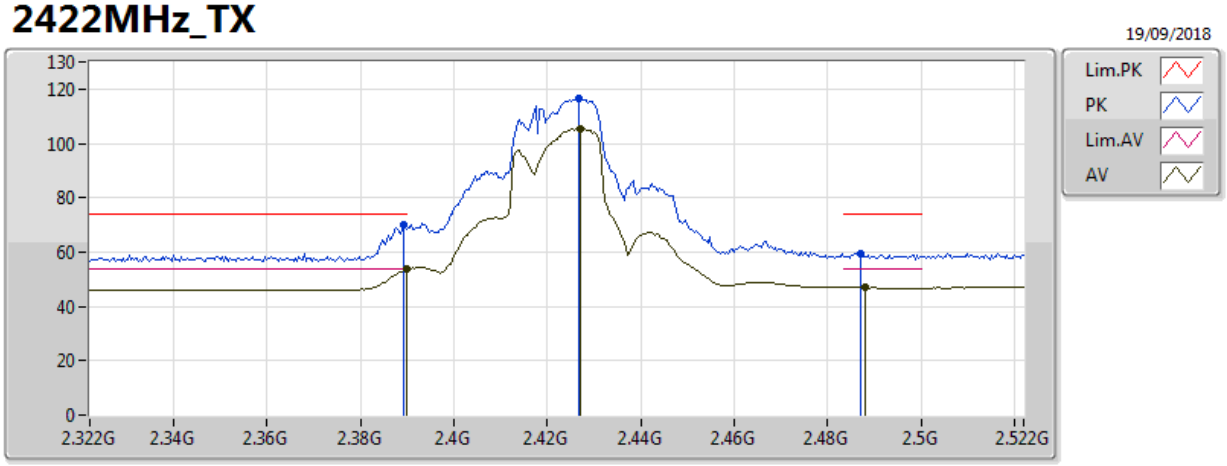


EUT X_2TX Dipole
Setting 20
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3874G	69.57	74.00	-4.43	31.50	3	Vertical	306	1.37	-
AV	2.3874G	53.48	54.00	-0.52	31.50	3	Vertical	306	1.37	-
PK	2.4222G	117.66	Inf	-Inf	31.58	3	Vertical	306	1.37	-
AV	2.4222G	106.48	Inf	-Inf	31.58	3	Vertical	306	1.37	-
PK	2.4994G	59.73	74.00	-14.27	31.77	3	Vertical	306	1.37	-
AV	2.4838G	46.96	54.00	-7.04	31.73	3	Vertical	306	1.37	-

802.11ac VHT20_Nss1,(MCS0)_2TX

2422MHz_TX

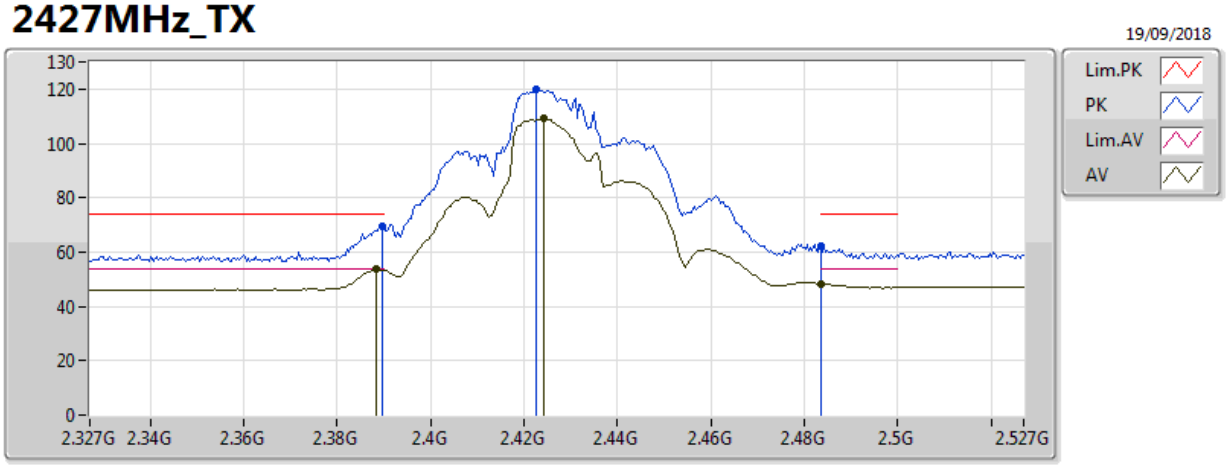


EUT X_2TX Dipole
Setting 18
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3892G	70.32	74.00	-3.68	31.50	3	Vertical	316	1.12	-
AV	2.389998G	53.70	54.00	-0.30	31.50	3	Vertical	316	1.12	-
PK	2.4268G	116.69	Inf	-Inf	31.59	3	Vertical	316	1.12	-
AV	2.4272G	105.58	Inf	-Inf	31.60	3	Vertical	316	1.12	-
PK	2.4872G	59.54	74.00	-14.46	31.74	3	Vertical	316	1.12	-
AV	2.488G	46.91	54.00	-7.09	31.74	3	Vertical	316	1.12	-

802.11ac VHT20_Nss1,(MCS0)_2TX

2427MHz_TX

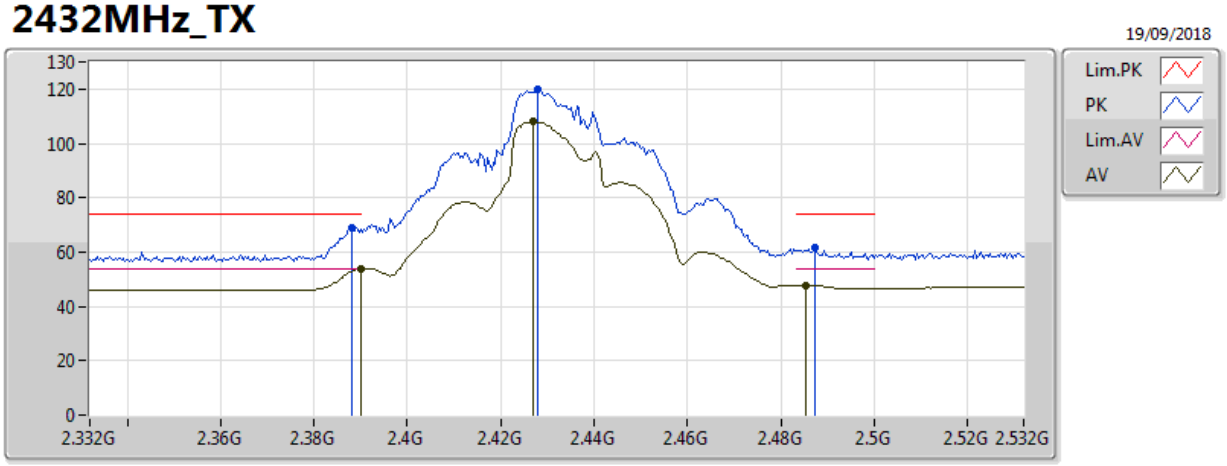


EUT X_2TX Dipole
Setting 21.5
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3898G	69.60	74.00	-4.40	31.50	3	Vertical	19	2.71	-
AV	2.3882G	53.57	54.00	-0.43	31.50	3	Vertical	19	2.71	-
PK	2.4226G	119.91	Inf	-Inf	31.58	3	Vertical	19	2.71	-
AV	2.4242G	109.27	Inf	-Inf	31.59	3	Vertical	19	2.71	-
PK	2.483502G	61.97	74.00	-12.03	31.73	3	Vertical	19	2.71	-
AV	2.483502G	48.46	54.00	-5.54	31.73	3	Vertical	19	2.71	-

802.11ac VHT20_Nss1,(MCS0)_2TX

2432MHz_TX

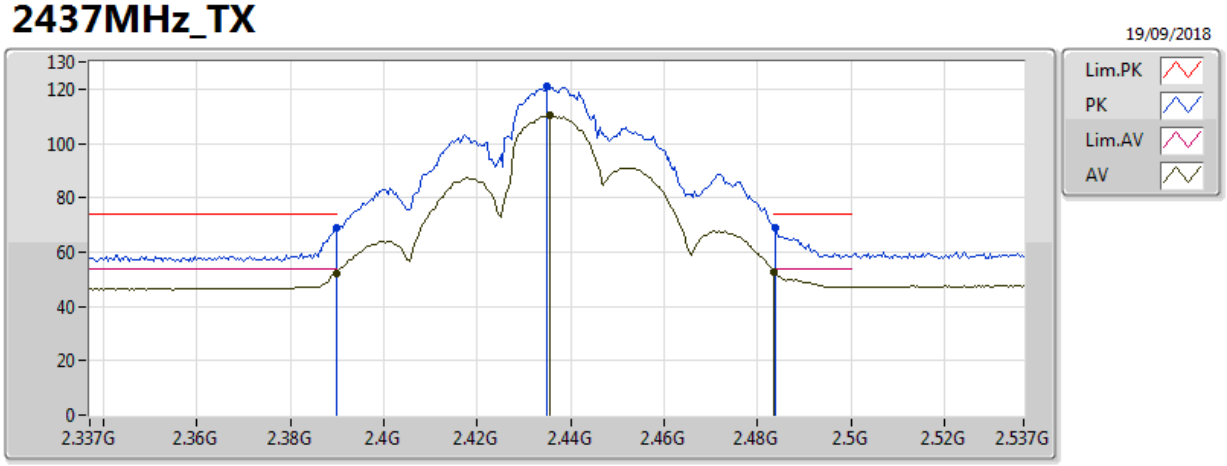


EUT X_2TX Dipole
Setting 21.5
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.388G	69.04	74.00	-4.96	31.50	3	Vertical	9	2.75	-
AV	2.389998G	53.98	54.00	-0.02	31.50	3	Vertical	9	2.75	-
PK	2.428G	119.65	Inf	-Inf	31.60	3	Vertical	9	2.75	-
AV	2.4268G	108.17	Inf	-Inf	31.59	3	Vertical	9	2.75	-
PK	2.4872G	61.68	74.00	-12.32	31.74	3	Vertical	9	2.75	-
AV	2.4852G	47.85	54.00	-6.15	31.73	3	Vertical	9	2.75	-

802.11ac VHT20_Nss1,(MCS0)_2TX

2437MHz_TX

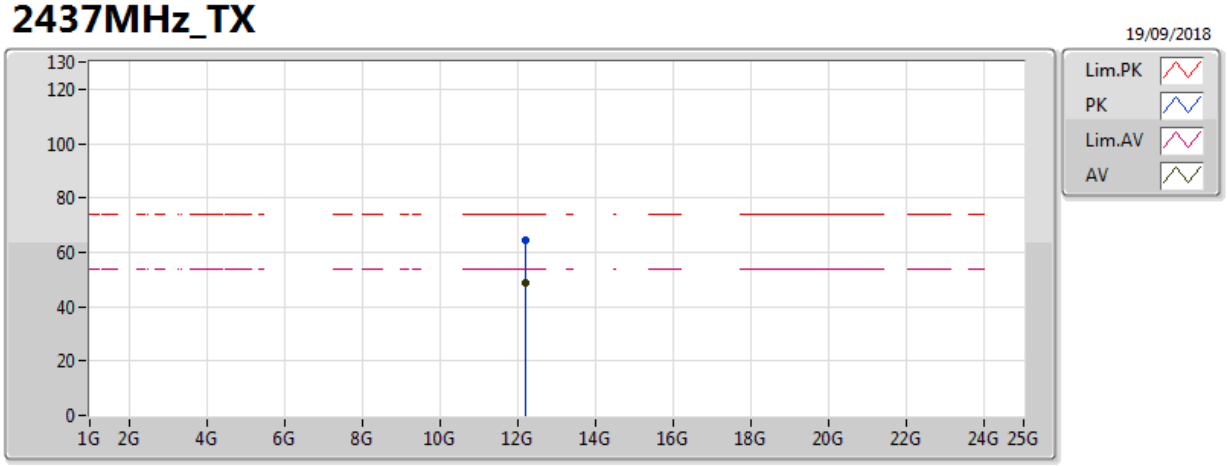


EUT X_2TX Dipole
Setting 23
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3898G	68.79	74.00	-5.21	31.50	3	Vertical	13	1.73	-
AV	2.3898G	52.28	54.00	-1.72	31.50	3	Vertical	13	1.73	-
PK	2.435G	121.10	Inf	-Inf	31.61	3	Vertical	13	1.73	-
AV	2.4354G	110.14	Inf	-Inf	31.61	3	Vertical	13	1.73	-
PK	2.4838G	68.93	74.00	-5.07	31.73	3	Vertical	13	1.73	-
AV	2.483502G	52.94	54.00	-1.06	31.73	3	Vertical	13	1.73	-

802.11ac VHT20_Nss1,(MCS0)_2TX

2437MHz_TX

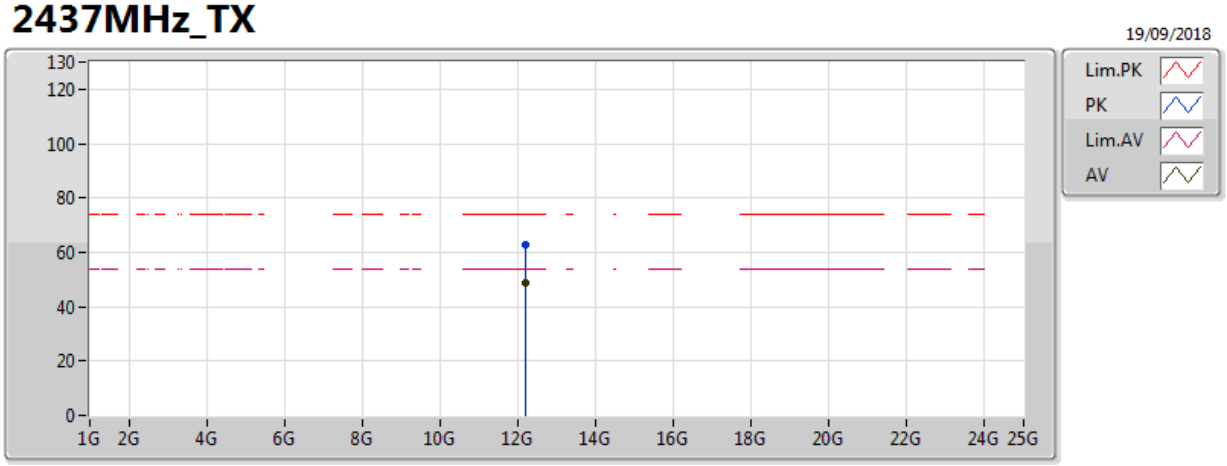


EUT X_2TX Dipole
Setting 23
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	12.182G	64.33	74.00	-9.67	15.29	3	Vertical	353	2.33	-
AV	12.181G	48.99	54.00	-5.01	15.29	3	Vertical	353	2.33	-

802.11ac VHT20_Nss1,(MCS0)_2TX

2437MHz_TX

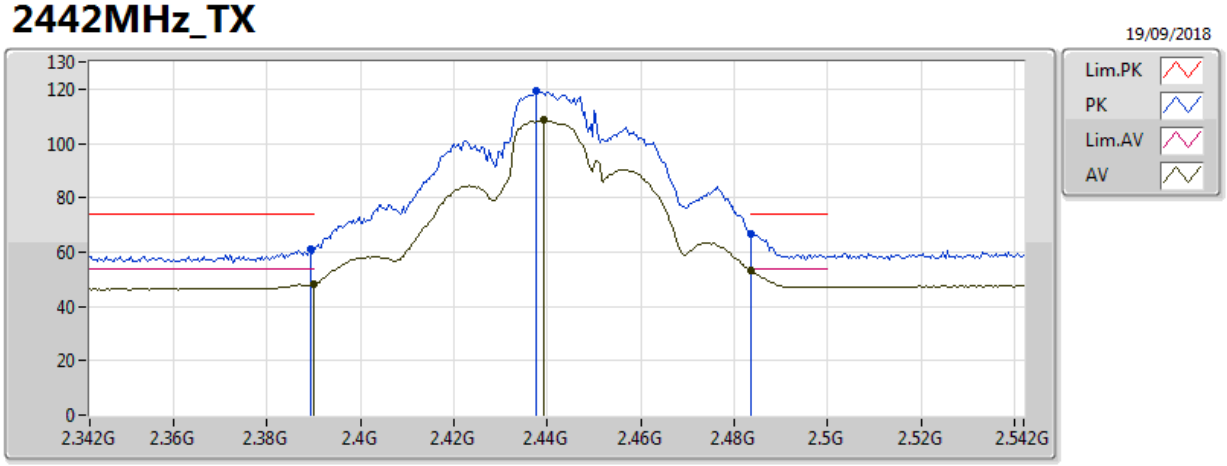


EUT X_2TX Dipole
Setting 23
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	12.181G	63.01	74.00	-10.99	15.29	3	Horizontal	303	2.39	-
AV	12.1806G	49.00	54.00	-5.00	15.29	3	Horizontal	303	2.39	-

802.11ac VHT20_Nss1,(MCS0)_2TX

2442MHz_TX

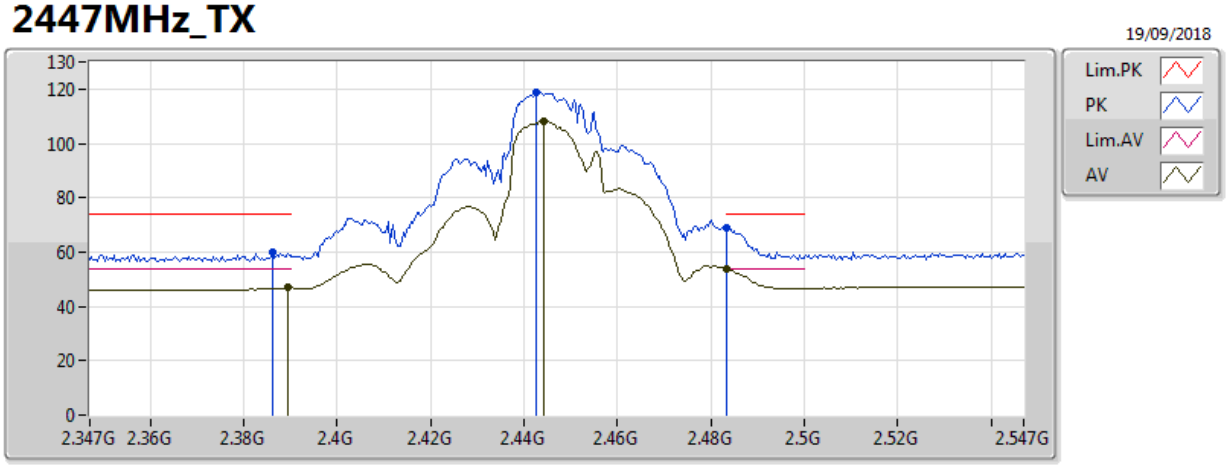


EUT X_2TX Dipole
Setting 22.5
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3892G	60.90	74.00	-13.10	31.50	3	Vertical	25	2.69	-
AV	2.389998G	48.12	54.00	-5.88	31.50	3	Vertical	25	2.69	-
PK	2.4376G	119.15	Inf	-Inf	31.62	3	Vertical	25	2.69	-
AV	2.4392G	108.74	Inf	-Inf	31.62	3	Vertical	25	2.69	-
PK	2.483502G	66.79	74.00	-7.21	31.73	3	Vertical	25	2.69	-
AV	2.483502G	53.20	54.00	-0.80	31.73	3	Vertical	25	2.69	-

802.11ac VHT20_Nss1,(MCS0)_2TX

2447MHz_TX

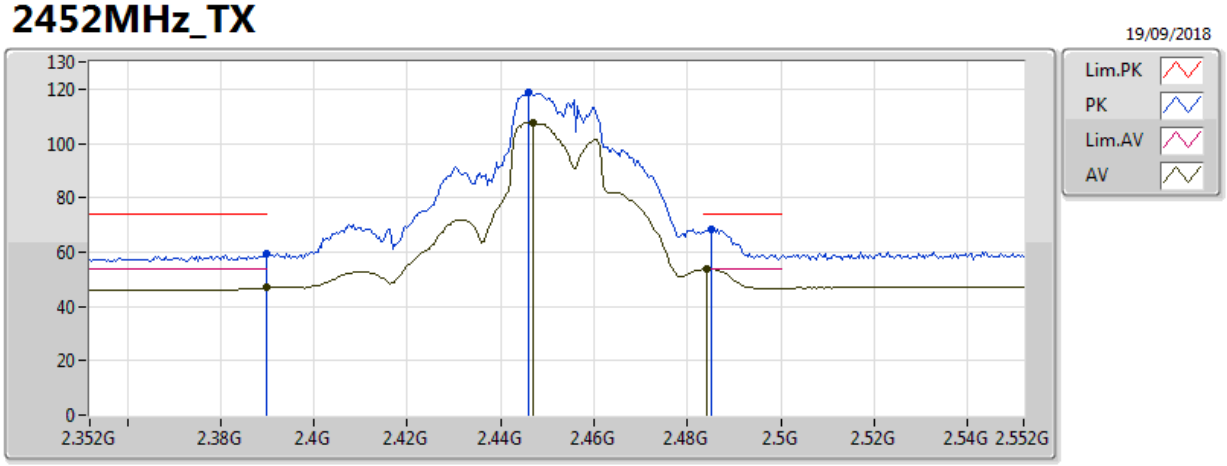


EUT X_2TX Dipole
Setting 21
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3862G	59.91	74.00	-14.09	31.49	3	Vertical	28	1.41	-
AV	2.3894G	46.86	54.00	-7.14	31.50	3	Vertical	28	1.41	-
PK	2.4426G	118.85	Inf	-Inf	31.63	3	Vertical	28	1.41	-
AV	2.4442G	108.30	Inf	-Inf	31.64	3	Vertical	28	1.41	-
PK	2.483502G	69.05	74.00	-4.95	31.73	3	Vertical	28	1.41	-
AV	2.483502G	53.63	54.00	-0.37	31.73	3	Vertical	28	1.14	-

802.11ac VHT20_Nss1,(MCS0)_2TX

2452MHz_TX



EUT X_2TX Dipole
Setting 20
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.389998G	59.31	74.00	-14.69	31.50	3	Vertical	27	2.96	-
AV	2.389998G	46.84	54.00	-7.16	31.50	3	Vertical	27	2.96	-
PK	2.446G	118.71	Inf	-Inf	31.64	3	Vertical	27	2.96	-
AV	2.4468G	107.84	Inf	-Inf	31.64	3	Vertical	27	2.96	-
PK	2.4852G	68.12	74.00	-5.88	31.73	3	Vertical	27	2.96	-
AV	2.484G	53.70	54.00	-0.30	31.73	3	Vertical	27	2.96	-

802.11ac VHT20_Nss1,(MCS0)_2TX

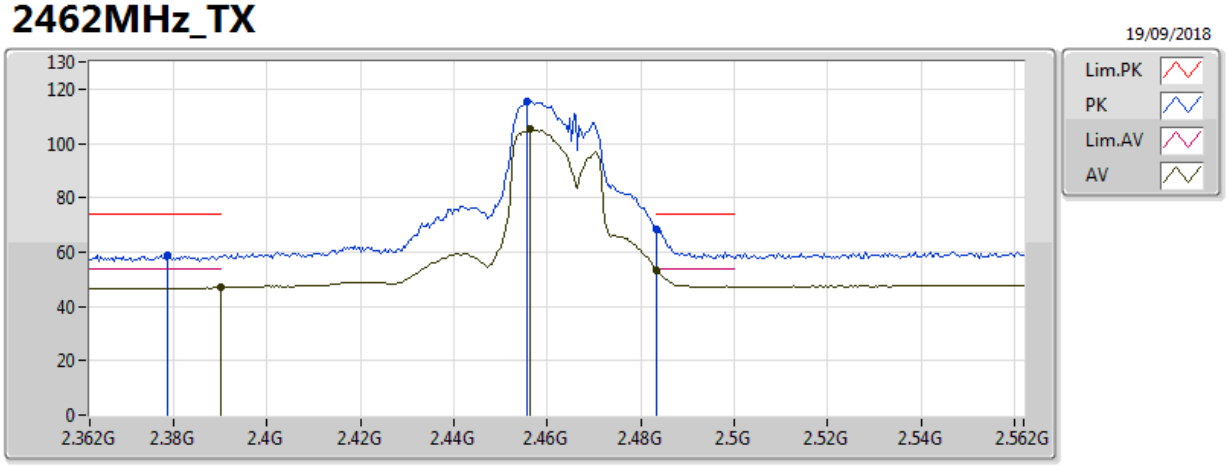
2457MHz_TX

EUT X_2TX Dipole
Setting 20
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.383G	58.94	74.00	-15.06	31.49	3	Vertical	29	2.97	-
AV	2.3898G	47.09	54.00	-6.91	31.50	3	Vertical	29	2.97	-
PK	2.4506G	118.62	Inf	-Inf	31.65	3	Vertical	29	2.97	-
AV	2.4514G	108.53	Inf	-Inf	31.65	3	Vertical	29	2.97	-
PK	2.4874G	67.93	74.00	-6.07	31.74	3	Vertical	29	2.97	-
AV	2.4878G	53.66	54.00	-0.34	31.74	3	Vertical	29	2.97	-

802.11ac VHT20_Nss1,(MCS0)_2TX

2462MHz_TX

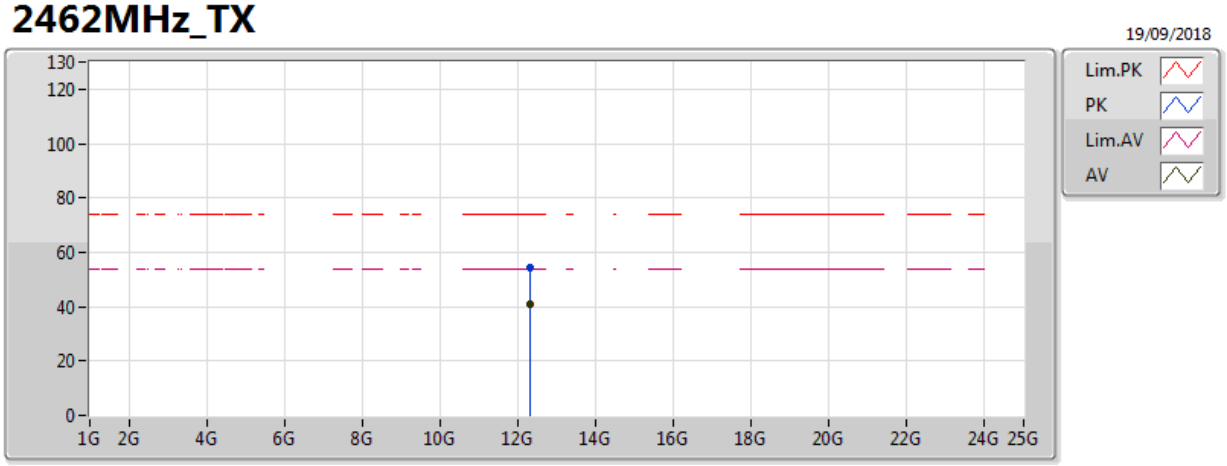


EUT X_2TX Dipole
Setting 16
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3788G	58.97	74.00	-15.03	31.47	3	Vertical	4	1.57	-
AV	2.389998G	46.99	54.00	-7.01	31.50	3	Vertical	4	1.57	-
PK	2.4556G	115.40	Inf	-Inf	31.66	3	Vertical	4	1.57	-
AV	2.4564G	105.19	Inf	-Inf	31.67	3	Vertical	4	1.57	-
PK	2.483502G	68.30	74.00	-5.70	31.73	3	Vertical	4	1.57	-
AV	2.483502G	53.34	54.00	-0.66	31.73	3	Vertical	4	1.57	-

802.11ac VHT20_Nss1,(MCS0)_2TX

2462MHz_TX

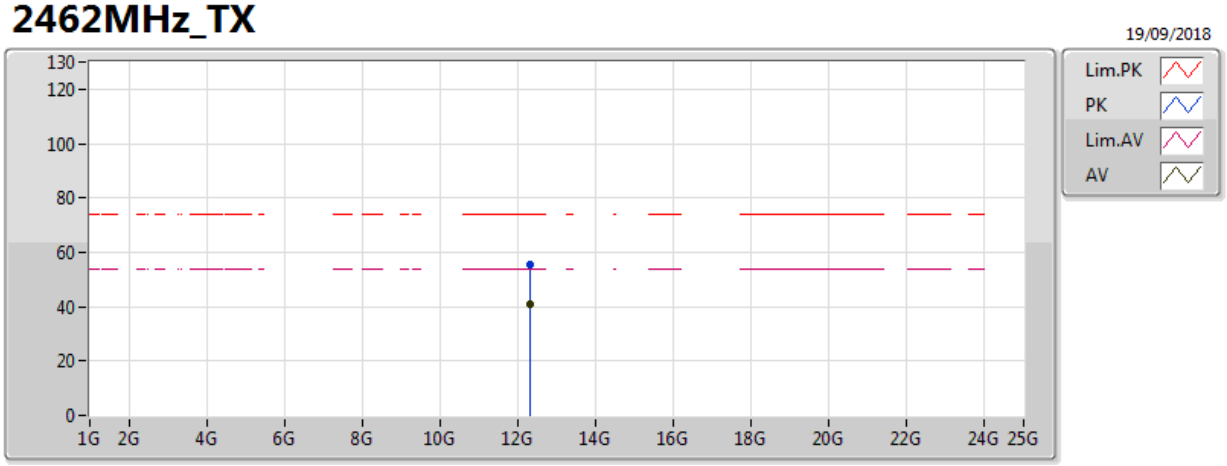


EUT X_2TX Dipole
Setting 16
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	12.30855G	54.37	74.00	-19.63	15.31	3	Vertical	148	1.81	-
AV	12.3092G	40.84	54.00	-13.16	15.31	3	Vertical	148	1.81	-

802.11ac VHT20_Nss1,(MCS0)_2TX

2462MHz_TX

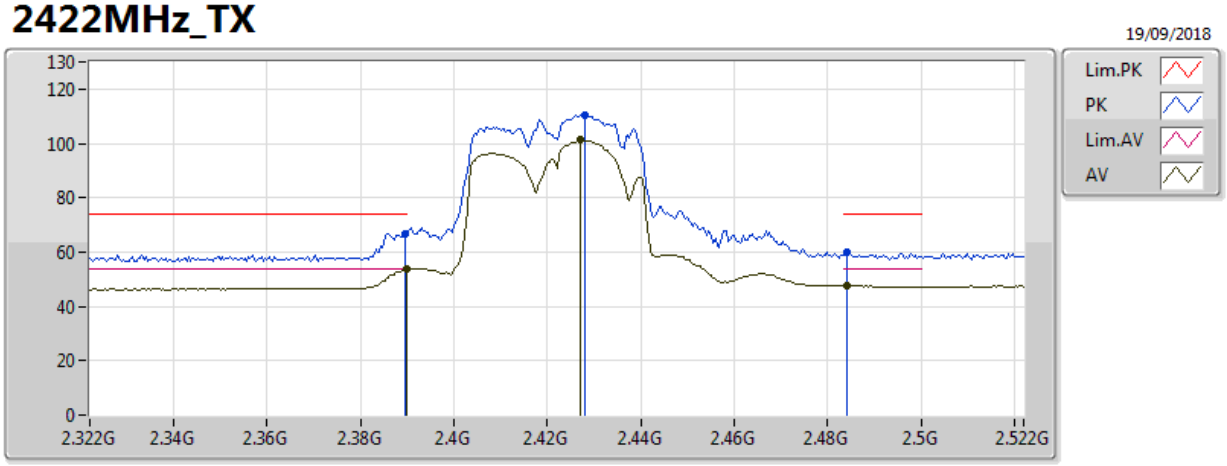


EUT X_2TX Dipole
Setting 16
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	12.31248G	55.48	74.00	-18.52	15.31	3	Horizontal	89	2.06	-
AV	12.31161G	40.80	54.00	-13.20	15.31	3	Horizontal	89	2.06	-

802.11ac VHT40_Nss1,(MCS0)_2TX

2422MHz_TX

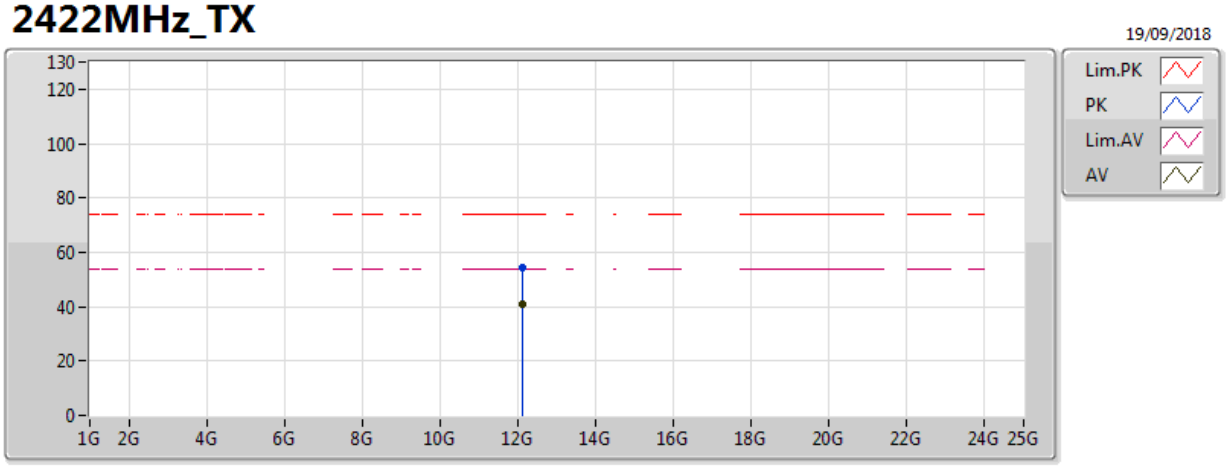


EUT X_2TX Dipole
Setting 15
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3896G	66.63	74.00	-7.37	31.50	3	Vertical	295	2.25	-
AV	2.389998G	53.98	54.00	-0.02	31.50	3	Vertical	295	2.25	-
PK	2.428G	110.47	Inf	-Inf	31.60	3	Vertical	295	2.25	-
AV	2.4272G	101.17	Inf	-Inf	31.60	3	Vertical	295	2.25	-
PK	2.484G	59.72	74.00	-14.28	31.73	3	Vertical	295	2.25	-
AV	2.484G	47.70	54.00	-6.30	31.73	3	Vertical	295	2.25	-

802.11ac VHT40_Nss1,(MCS0)_2TX

2422MHz_TX

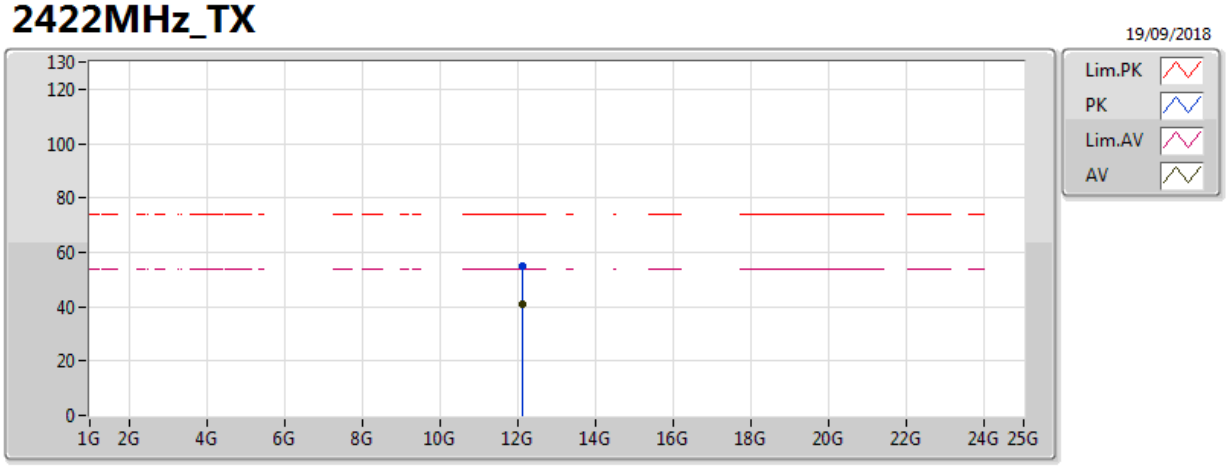


EUT X_2TX Dipole
Setting 15
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	12.10907G	54.58	74.00	-19.42	15.28	3	Vertical	126	1.57	-
AV	12.10765G	40.98	54.00	-13.02	15.28	3	Vertical	126	1.57	-

802.11ac VHT40_Nss1,(MCS0)_2TX

2422MHz_TX

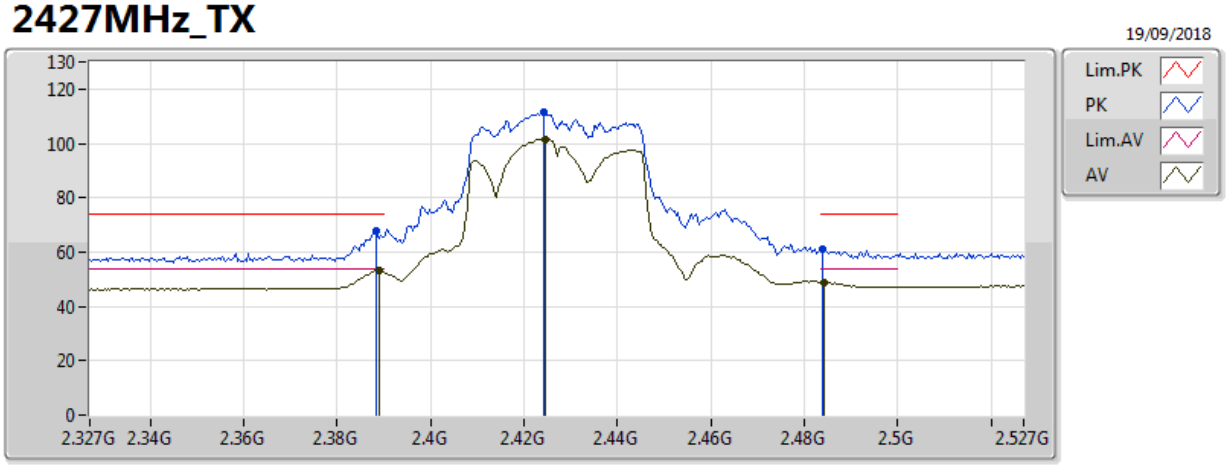


EUT X_2TX Dipole
Setting 15
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	12.11131G	54.75	74.00	-19.25	15.28	3	Horizontal	263	1.77	-
AV	12.10965G	41.15	54.00	-12.85	15.28	3	Horizontal	263	1.77	-

802.11ac VHT40_Nss1,(MCS0)_2TX

2427MHz_TX

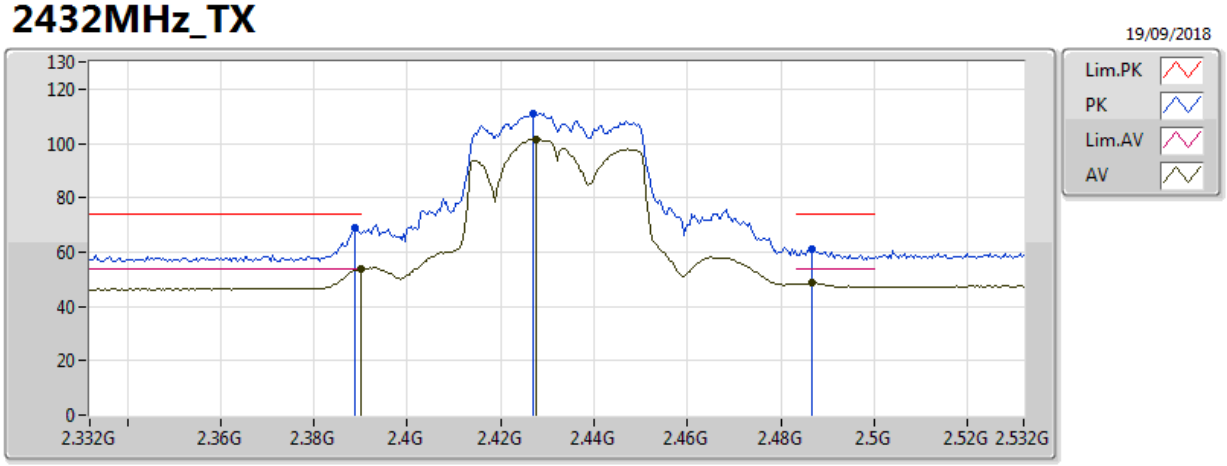


EUT X_2TX Dipole
Setting 16
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3882G	67.65	74.00	-6.35	31.50	3	Vertical	26	2.46	-
AV	2.389G	53.28	54.00	-0.72	31.50	3	Vertical	26	2.46	-
PK	2.4242G	111.24	Inf	-Inf	31.59	3	Vertical	26	2.46	-
AV	2.4246G	101.55	Inf	-Inf	31.59	3	Vertical	26	2.46	-
PK	2.4838G	61.05	74.00	-12.95	31.73	3	Vertical	26	2.46	-
AV	2.4842G	48.92	54.00	-5.08	31.73	3	Vertical	26	2.46	-

802.11ac VHT40_Nss1,(MCS0)_2TX

2432MHz_TX

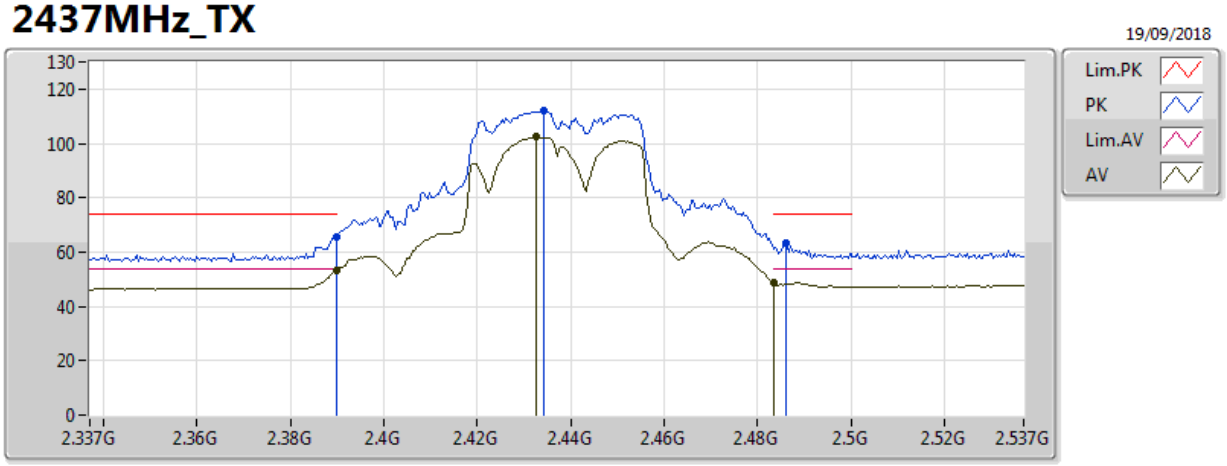


EUT X_2TX Dipole
Setting 16
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3888G	68.76	74.00	-5.24	31.50	3	Vertical	32	2.44	-
AV	2.389998G	53.64	54.00	-0.36	31.50	3	Vertical	32	2.44	-
PK	2.4268G	110.94	Inf	-Inf	31.59	3	Vertical	32	2.44	-
AV	2.4276G	101.60	Inf	-Inf	31.60	3	Vertical	32	2.44	-
PK	2.4868G	61.23	74.00	-12.77	31.74	3	Vertical	32	2.44	-
AV	2.4868G	48.53	54.00	-5.47	31.74	3	Vertical	32	2.44	-

802.11ac VHT40_Nss1,(MCS0)_2TX

2437MHz_TX

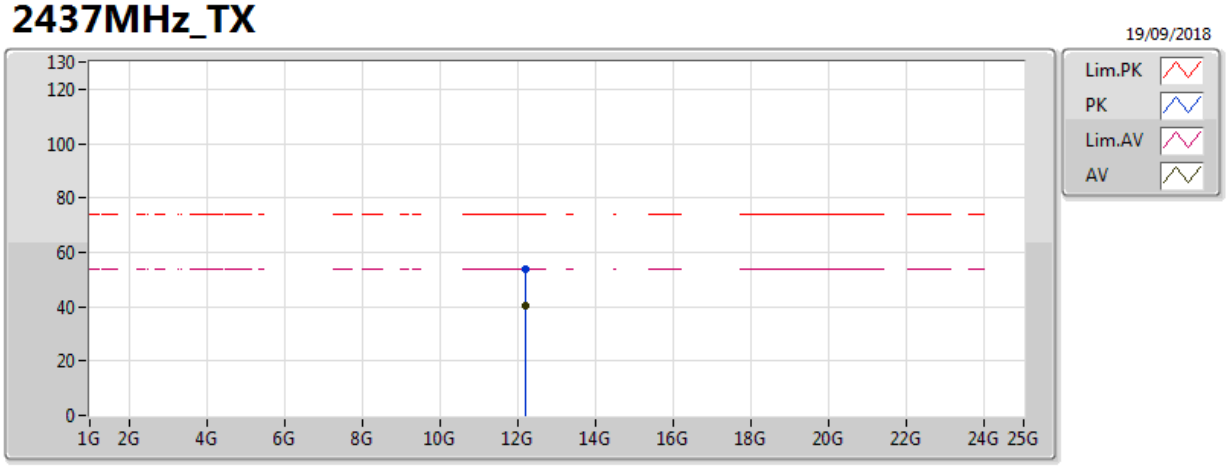


EUT X_2TX Dipole
Setting 17
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3898G	65.29	74.00	-8.71	31.50	3	Vertical	7	1.95	-
AV	2.3898G	53.12	54.00	-0.88	31.50	3	Vertical	7	1.95	-
PK	2.4342G	112.05	Inf	-Inf	31.61	3	Vertical	7	1.95	-
AV	2.4326G	102.41	Inf	-Inf	31.61	3	Vertical	7	1.95	-
PK	2.4862G	63.51	74.00	-10.49	31.74	3	Vertical	7	1.95	-
AV	2.483502G	48.70	54.00	-5.30	31.73	3	Vertical	7	1.95	-

802.11ac VHT40_Nss1,(MCS0)_2TX

2437MHz_TX

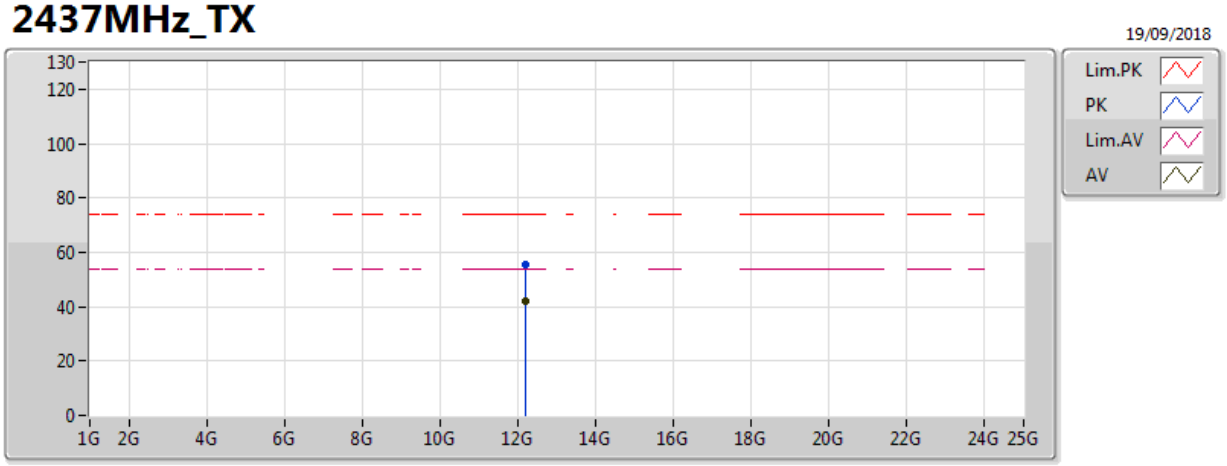


EUT X_2TX Dipole
Setting 17
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	12.18402G	53.97	74.00	-20.03	15.29	3	Vertical	262	2.49	-
AV	12.18378G	40.60	54.00	-13.40	15.29	3	Vertical	262	2.49	-

802.11ac VHT40_Nss1,(MCS0)_2TX

2437MHz_TX

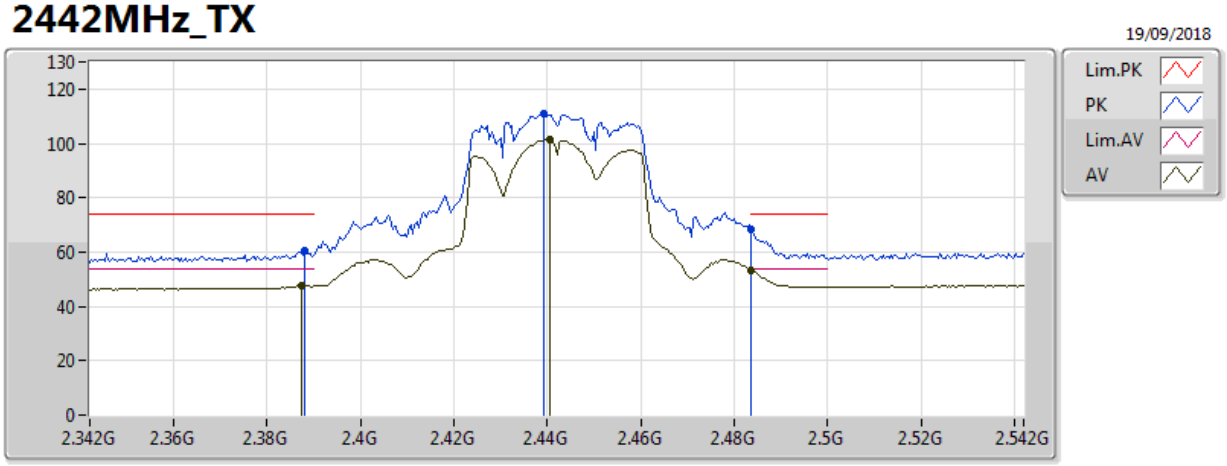


EUT X_2TX Dipole
Setting 17
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	12.1836G	55.28	74.00	-18.72	15.29	3	Horizontal	27	2.23	-
AV	12.18251G	41.96	54.00	-12.04	15.29	3	Horizontal	27	2.23	-

802.11ac VHT40_Nss1,(MCS0)_2TX

2442MHz_TX

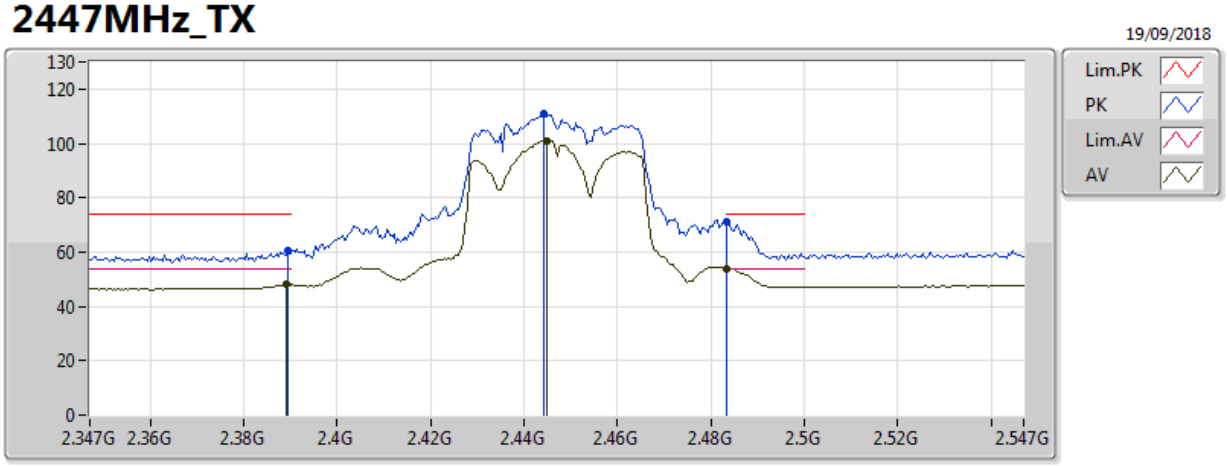


EUT X_2TX Dipole
Setting 16.5
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.388G	60.54	74.00	-13.46	31.50	3	Vertical	30	1.40	-
AV	2.3872G	47.77	54.00	-6.23	31.50	3	Vertical	30	1.40	-
PK	2.4392G	110.80	Inf	-Inf	31.62	3	Vertical	30	1.40	-
AV	2.4404G	101.35	Inf	-Inf	31.63	3	Vertical	30	1.40	-
PK	2.483502G	68.58	74.00	-5.42	31.73	3	Vertical	30	1.40	-
AV	2.483502G	53.48	54.00	-0.52	31.73	3	Vertical	30	1.40	-

802.11ac VHT40_Nss1,(MCS0)_2TX

2447MHz_TX

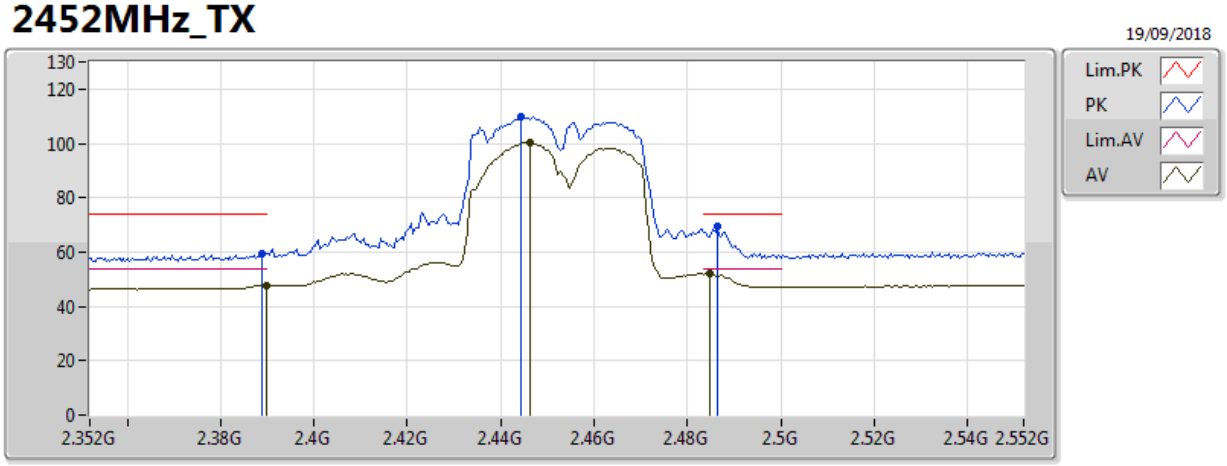


EUT X_2TX Dipole
Setting 16
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3894G	60.74	74.00	-13.26	31.50	3	Vertical	37	1.82	-
AV	2.389G	47.93	54.00	-6.07	31.50	3	Vertical	37	1.82	-
PK	2.4442G	110.67	Inf	-Inf	31.64	3	Vertical	37	1.82	-
AV	2.445G	101.13	Inf	-Inf	31.64	3	Vertical	37	1.82	-
PK	2.483502G	71.14	74.00	-2.86	31.73	3	Vertical	37	1.82	-
AV	2.483502G	53.94	54.00	-0.06	31.73	3	Vertical	37	1.82	-

802.11ac VHT40_Nss1,(MCS0)_2TX

2452MHz_TX

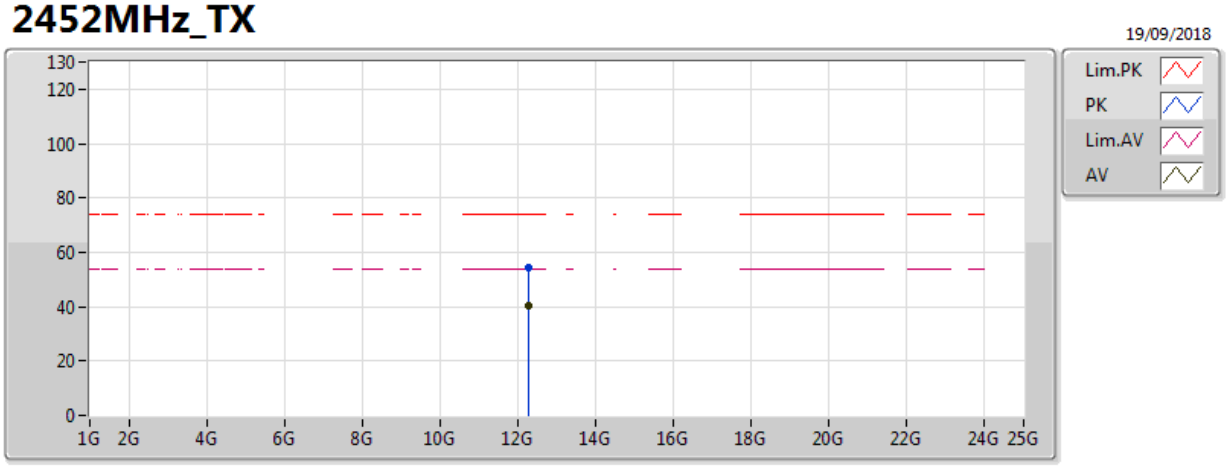


EUT X_2TX Dipole
Setting 15
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	2.3888G	59.29	74.00	-14.71	31.50	3	Vertical	354	2.47	-
AV	2.389998G	47.75	54.00	-6.25	31.50	3	Vertical	354	2.47	-
PK	2.4444G	109.60	Inf	-Inf	31.64	3	Vertical	354	2.47	-
AV	2.4464G	100.29	Inf	-Inf	31.64	3	Vertical	354	2.47	-
PK	2.4864G	69.50	74.00	-4.50	31.74	3	Vertical	354	2.47	-
AV	2.4848G	51.93	54.00	-2.07	31.73	3	Vertical	354	2.47	-

802.11ac VHT40_Nss1,(MCS0)_2TX

2452MHz_TX

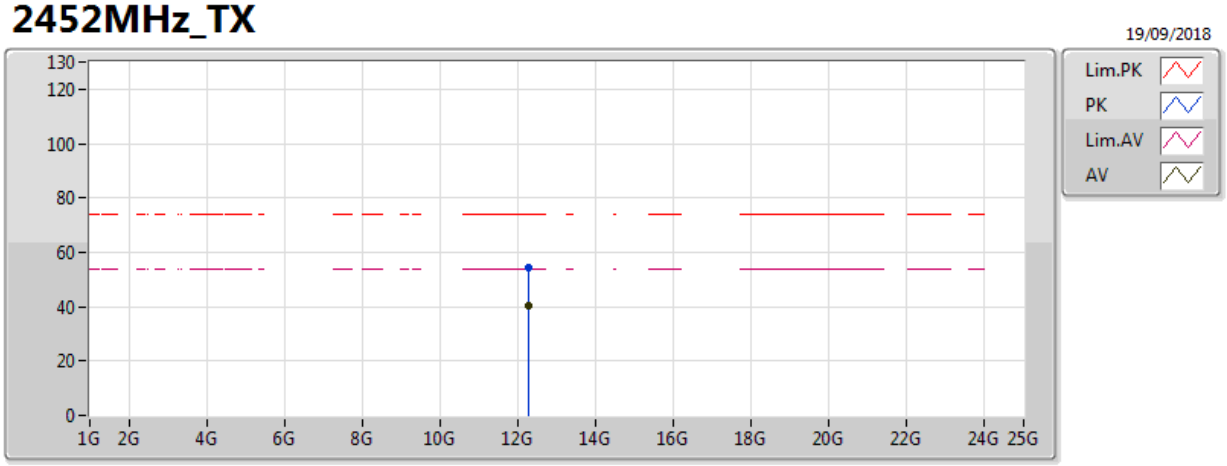


EUT X_2TX Dipole
Setting 15
02-M-01
FSU(100050)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	12.25809G	54.22	74.00	-19.78	15.30	3	Vertical	262	1.95	-
AV	12.26106G	40.54	54.00	-13.46	15.30	3	Vertical	262	1.95	-

802.11ac VHT40_Nss1,(MCS0)_2TX

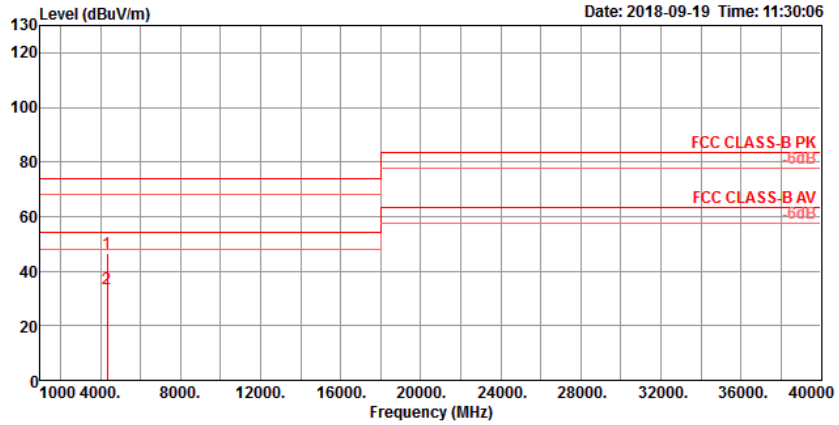
2452MHz_TX



EUT X_2TX Dipole
Setting 15
02-M-01
FSU(100050)

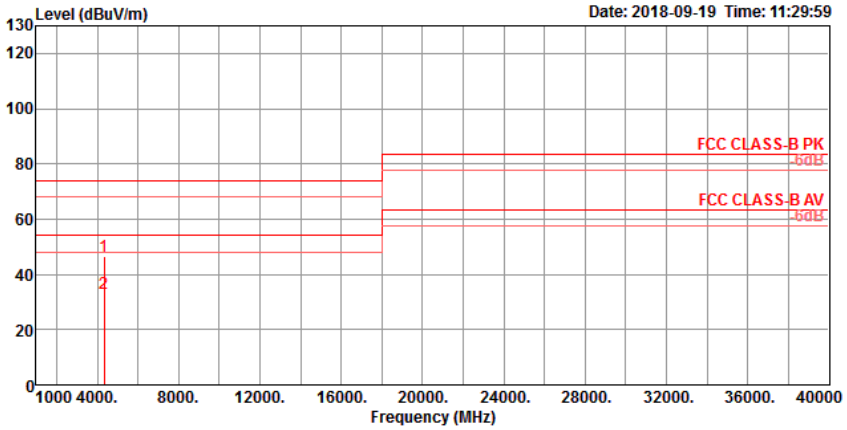
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comments
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	
PK	12.26168G	54.11	74.00	-19.89	15.30	3	Horizontal	104	2.20	-
AV	12.26155G	40.42	54.00	-13.58	15.30	3	Horizontal	104	2.20	-

RSE Co-location Result			
Operating Mode	1	**Polarization**	Horizontal
Operating Function	Normal Link		



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4336.95	46.65	74.00	-27.35	41.70	6.63	30.37	32.05	100	225	Peak	HORIZONTAL
2	4346.02	33.39	54.00	-20.61	28.44	6.63	30.37	32.05	100	225	Average	HORIZONTAL

RSE Co-location Result			
Operating Mode	1	**Polarization**	Vertical
Operating Function	Normal Link		



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	4338.14	46.77	74.00	-27.23	41.82	6.63	30.37	32.05	100	61	Peak	VERTICAL
2	4348.38	33.31	54.00	-20.69	28.31	6.64	30.40	32.04	100	61	Average	VERTICAL