

FCC Test Report

Equipment : AC1200 Wireless MU-MIMO Gigabit Indoor/Outdoor Access Point

Brand Name : tp-link

Model No. : EAP225-Outdoor

FCC ID : TE7EAP225OD

Standard : 47 CFR FCC Part 15.247

Operating Band : 2400 MHz – 2483.5 MHz

Function : ☒ Point-to-multipoint; ☐ Point-to-point

Applicant : TP-Link Technologies Co., Ltd.
Building 24 (floors 1,3,4,5) and 28 (floors1-4), Central Science and Technology Park,Nanshan Shenzhen, 518057 China

Manufacturer : TP-Link Technologies Co., Ltd.
Building 24 (floors 1,3,4,5) and 28 (floors1-4), Central Science and Technology Park,Nanshan Shenzhen, 518057 China

The product sample received on Sep. 08, 2017 and completely tested on Oct. 18, 2017. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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


Cliff Chang
SPORTON INTERNATIONAL INC.



Table of Contents

1	GENERAL DESCRIPTION	5
1.1	Information.....	5
1.2	Testing Applied Standards	7
1.3	Testing Location Information.....	7
1.4	Measurement Uncertainty	7
2	TEST CONFIGURATION OF EUT	8
2.1	Test Channel Mode	8
2.2	The Worst Case Measurement Configuration.....	9
2.3	EUT Operation during Test	10
2.4	Accessories	10
2.5	Support Equipment.....	10
2.6	Test Setup Diagram	11
3	TRANSMITTER TEST RESULT	14
3.1	AC Power-line Conducted Emissions	14
3.2	DTS Bandwidth	16
3.3	Maximum Conducted Output Power	17
3.4	Power Spectral Density	19
3.5	Emissions in Non-restricted Frequency Bands	21
3.6	Emissions in Restricted Frequency Bands.....	22
4	TEST EQUIPMENT AND CALIBRATION DATA	26
APPENDIX A. TEST RESULTS OF AC POWER-LINE CONDUCTED EMISSIONS		
APPENDIX B. TEST RESULTS OF DTS BANDWIDTH		
APPENDIX C. TEST RESULTS OF MAXIMUM CONDUCTED OUTPUT POWER		
APPENDIX D. TEST RESULTS OF POWER SPECTRAL DENSITY		
APPENDIX E. TEST RESULTS OF EMISSIONS IN NON-RESTRICTED FREQUENCY BANDS		
APPENDIX F. TEST RESULTS OF EMISSIONS IN RESTRICTED FREQUENCY BANDS		
APPENDIX G. TEST RESULTS OF RADIATED EMISSION CO-LOCATION		
APPENDIX H. TEST PHOTOS		
PHOTOGRAPHS OF EUT V01		

Summary of Test Result

Conformance Test Specifications				
Report Clause	Ref. Std. Clause	Description	Limit	Result
1.1.2	15.203	Antenna Requirement	FCC 15.203	Complied
3.1	15.207	AC Power-line Conducted Emissions	FCC 15.207	Complied
3.2	15.247(a)	DTS Bandwidth	≥500kHz	Complied
3.3	15.247(b)	Maximum Conducted Output Power	Power [dBm]:30	Complied
3.4	15.247(e)	Power Spectral Density	PSD [dBm/3kHz]:8	Complied
3.5	15.247(d)	Emissions in Non-restricted Frequency Bands	Non-Restricted Bands: > 30 dBc	Complied
3.6	15.247(d)	Emissions in Restricted Frequency Bands	Restricted Bands: FCC 15.209	Complied



SPORTON INTERNATIONAL INC.
TEL : 886-3-3273456
FAX : 886-3-3270973
FCC ID: TE7EAP225OD

1 General Description

1.1 Information

1.1.1 RF General Information

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

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

Note:

- ♦ 2.4G is the 2.4GHz Band (2.4-2.4835GHz).
- ♦ 11b mode uses a combination of DSSS-DBPSK, DQPSK, CCK modulation.
- ♦ 11g, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- ♦ BWch is the nominal channel bandwidth.
- ♦ 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.	Brand	P/N	Antenna Type	Connector	Gain (dBi)		
					2.4GHz	5GHz Band 1	5GHz Band 4
1	tp-link	3101501275	Dipole Antenna	RP-SMA-F	3.36	5.19	4.56
2	tp-link	3101501275	Dipole Antenna	RP-SMA-F	3.36	5.19	4.56

Note: The EUT has two antennas.

For WLAN 2.4GHz (2TX/2RX):

Ant. 1 (Port 1) and Ant. 2 (Port 2) could transmit/receive simultaneously.

For WLAN 5GHz (2TX/2RX):

Ant. 1 (Port 2) and Ant. 2 (Port 1) could transmit/receive simultaneously.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
802.11b	0.996	0.017	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)
802.11g	0.973	0.119	2.02m	1k
802.11n HT20	0.97	0.132	1.885m	1k
802.11n HT40	0.948	0.232	925u	3k

1.1.4 EUT Operational Condition

EUT Power Type	From PoE			
Beamforming Function	☒	With beamforming	☐	Without beamforming
	The product has beamforming function for 802.11n/ac in 5GHz.			
Test Software Version	QCA			

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 v04
- ♦ FCC KDB 662911 D01 v02r01
- ♦ FCC KDB 412172 D01 v01r01

1.3 Testing Location Information

Testing Location				
☐	HWA YA	ADD : No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.	TEL : 886-3-327-3456	FAX : 886-3-318-0055
☒	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	Eddie Weng & Brian Sun	22°C / 54%	Sep. 21, 2017~ Oct. 18, 2017
Radiated	03CH01-CB	Welson Chen & Zero Chen	22°C / 54%	Sep. 13, 2017~ Oct. 03, 2017
AC Conduction	CO01-CB	Max Lin & Rick Yeh	26°C / 58%	Sep. 15, 2017

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 x10 ⁻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
2437MHz	20
2462MHz	19.5
802.11g_Nss1,(6Mbps)_2TX	-
2412MHz	19
2437MHz	27
2462MHz	19
802.11n HT20_Nss1,(MCS0)_2TX	-
2412MHz	18.5
2437MHz	29
2462MHz	19
802.11n HT40_Nss1,(MCS0)_2TX	-
2422MHz	15.5
2437MHz	21
2452MHz	17

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 + PoE

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	EUT at Y-axis(antenna in 180°) + PoE
Operating Mode > 1GHz	CTX

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

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	WLAN 2.4GHz+ WLAN 5GHz
Refer to Sporton Test Report No.: FA790815 for Co-location RF Exposure Evaluation.	

Note 1: The EUT can only be used at Y axis position and antenna in 180°.

Note 2: For band-edge emissions, the worst case of the antenna polarization is judged at first, and the worst case is found in vertical.

2.3 EUT Operation during Test

For CTX Mode:

The EUT was programmed to be in continuously transmitting mode.

For Normal Link:

During the test, the EUT operation to normal function.

2.4 Accessories

Accessories			
Equipment Name	Brand Name	Model Name	Rating
PoE	tp-link	TL-POE2412G	INPUT: 100-240V~50/60Hz 0.4A OUTPUT: 24V, 0.5A
Other			
Power cord*1, Non-shielded, 0.5m			

2.5 Support Equipment

For Test Site No: CO01-CB

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB*3	DELL	E6430	DoC

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

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E4300	DoC
2	NB*2	Apple	Mac Book	DoC

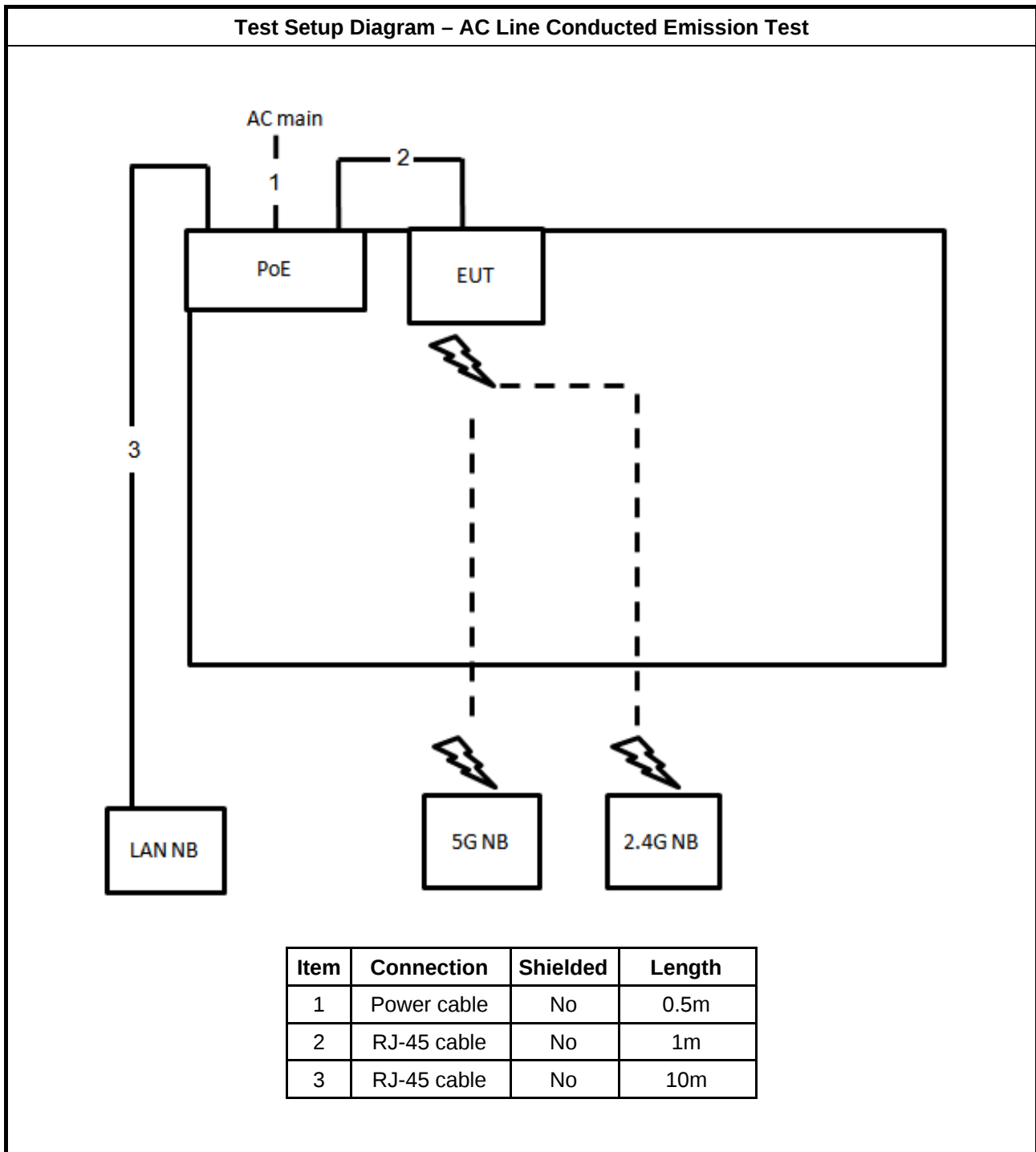
For Test Site No: 03CH01-CB (above 1GHz)

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E4300	DoC

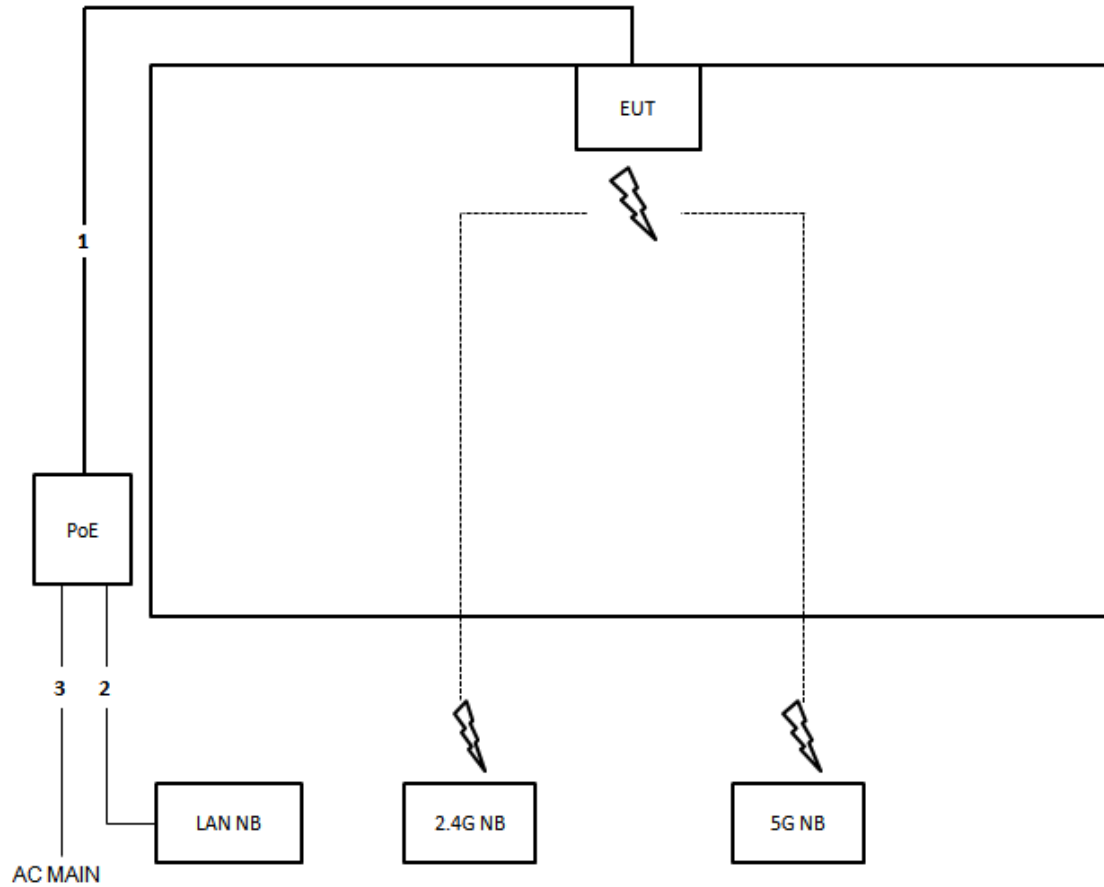
For Test Site No: TH01-CB

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E4300	DoC

2.6 Test Setup Diagram

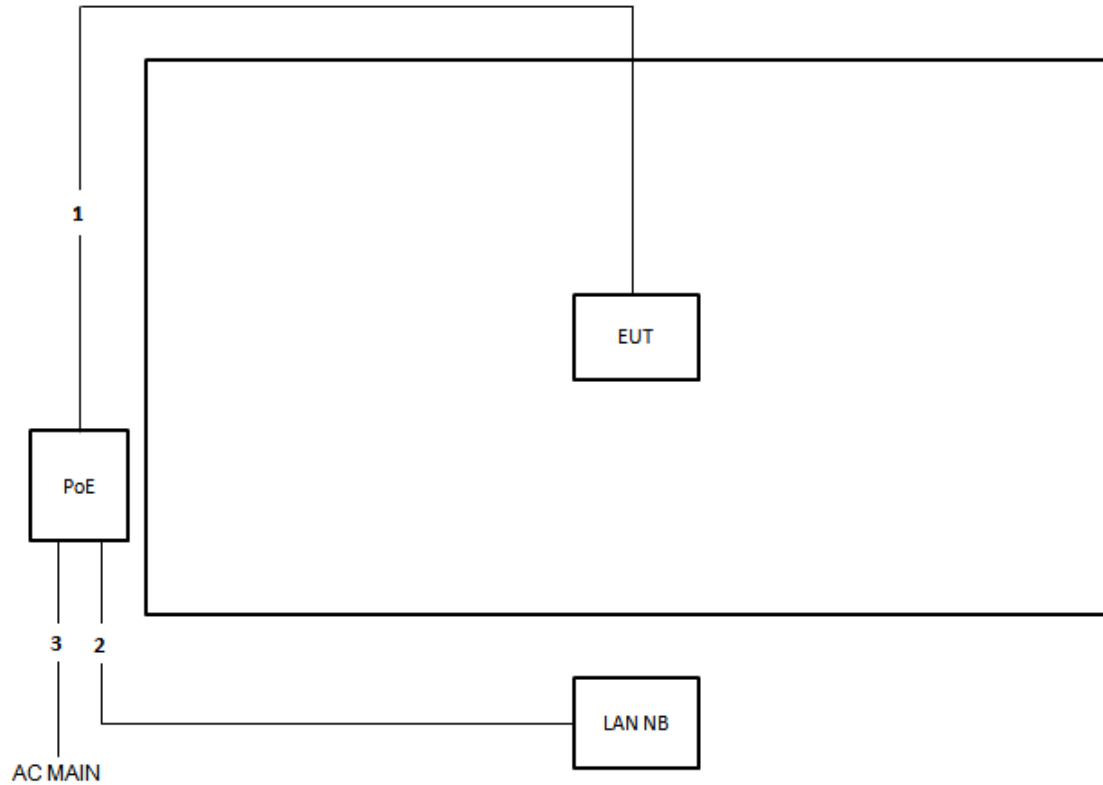


Test Setup Diagram - Radiated Test < 1GHz



Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	RJ-45 cable	No	1.5m
3	Power cable	No	0.5m

Test Setup Diagram - Radiated Test > 1GHz



Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	RJ-45 cable	No	1.5m
3	Power cable	No	0.5m

3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

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

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

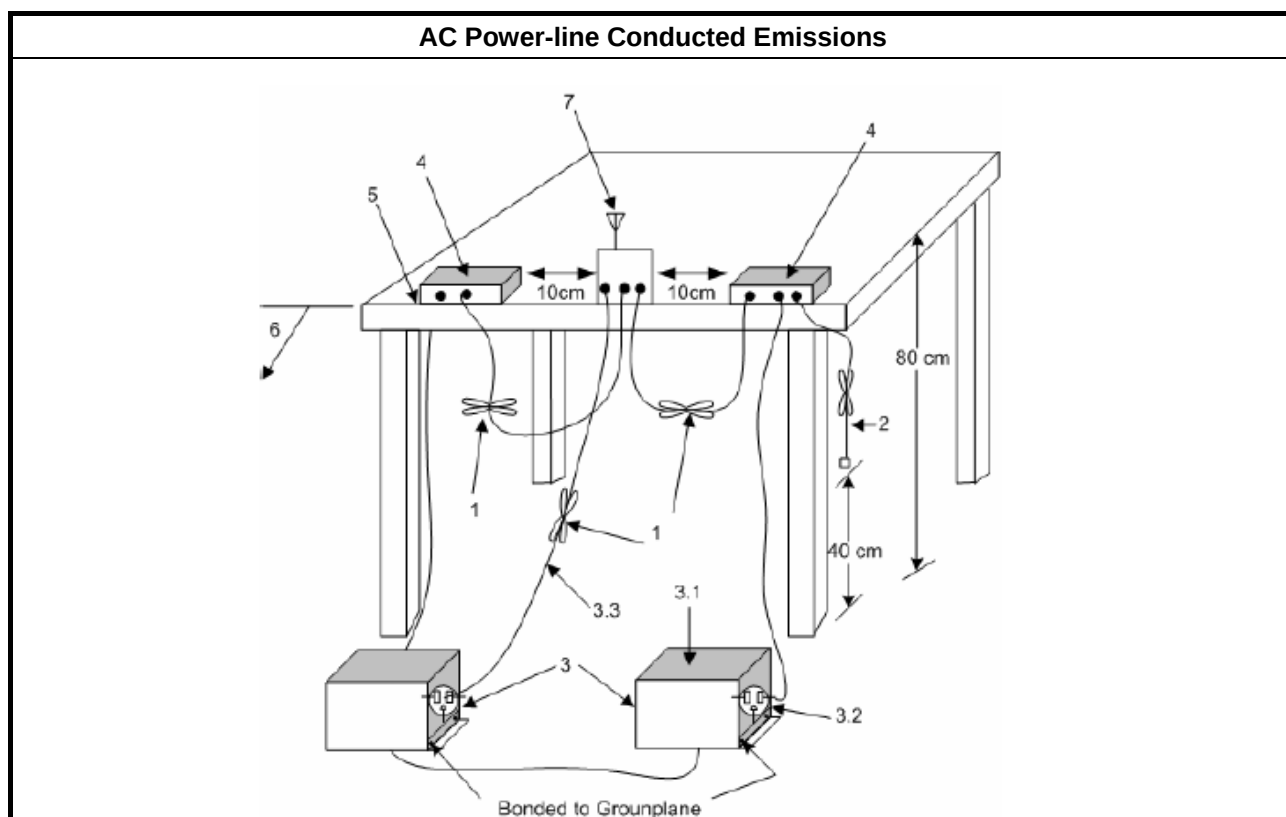
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

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

3.1.4 Test Setup





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 $\geq$ 500 kHz.

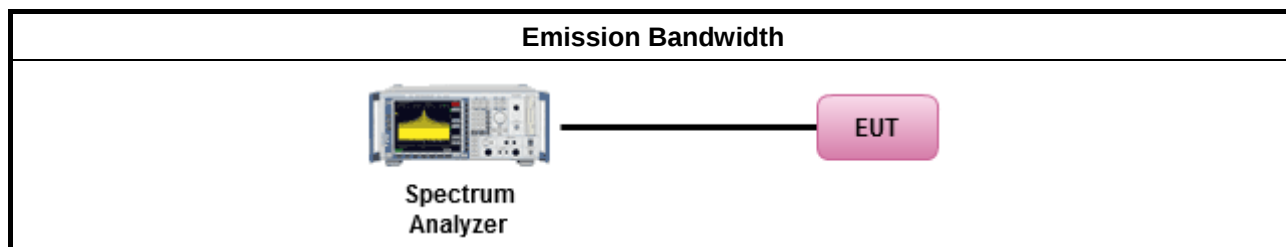
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method	
▪	For the emission bandwidth shall be measured using one of the options below:
☒	Refer as FCC KDB 558074, clause 8.1 Option 1 for 6 dB bandwidth measurement.
☐	Refer as FCC KDB 558074, clause 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



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.	

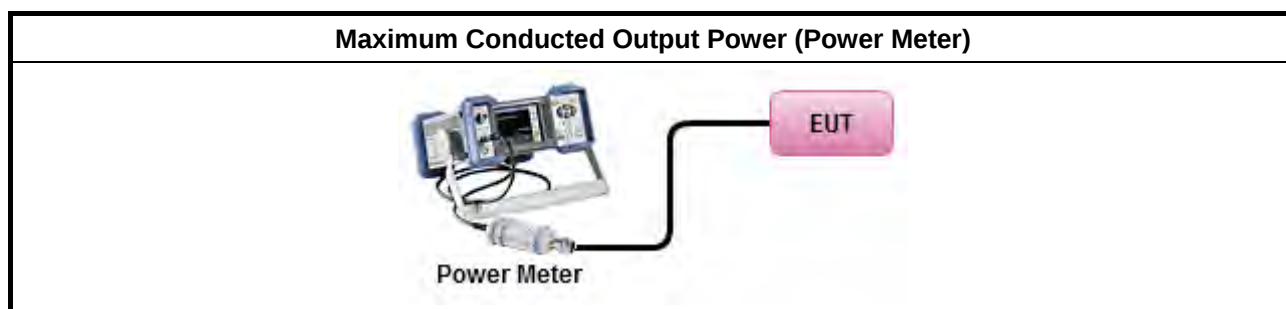
3.3.2 Measuring Instruments

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 9.1.1 Option 1 (RBW ≥ EBW method).
☐	Refer as FCC KDB 558074, clause 9.1.2 Option 2 (peak power meter for VBW ≥ DTS BW)
Maximum Conducted Output Power	
[duty cycle ≥ 98% or external video / power trigger]	
☐	Refer as FCC KDB 558074, clause 9.2.2.2 Method AVGSA-1 (spectral trace averaging).
☐	Refer as FCC KDB 558074, clause 9.2.2.3 Method AVGSA-1 Alt. (slow sweep speed)
duty cycle < 98% and average over on/off periods with duty factor	
☐	Refer as FCC KDB 558074, clause 9.2.2.4 Method AVGSA-2 (spectral trace averaging).
☐	Refer as FCC KDB 558074, clause 9.2.2.5 Method AVGSA-2 Alt. (slow sweep speed)
RF power meter and average over on/off periods with duty factor or gated trigger	
☒	Refer as FCC KDB 558074, clause 9.2.3 Method AVGPM-G (using an RF average power meter).
☐	Refer as FCC KDB 558074, clause 9.1.2 PKPM1 Peak power meter method.
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: $P_{total} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$	

3.3.4 Test Setup



3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

Power Spectral Density Limit	
▪	Power Spectral Density (PSD) $\leq$ 8 dBm/3kHz

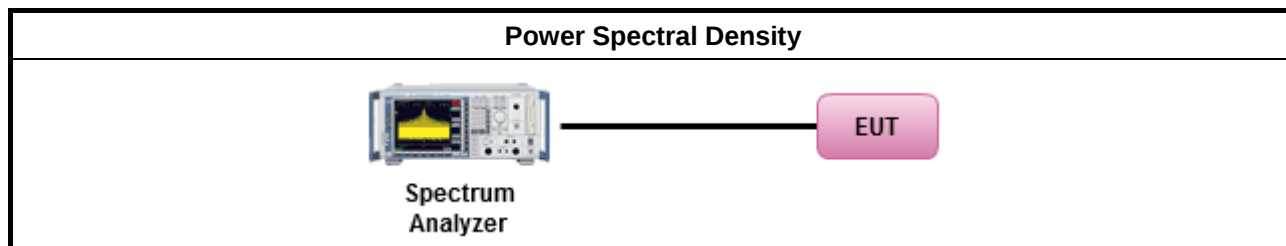
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

Test Method	
▪	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 10.2 Method PKPSD (RBW=3-100kHz; Detector=peak). [duty cycle $\geq$ 98% or external video / power trigger]
☐	Refer as FCC KDB 558074, clause 10.3 Method AVGPSD-1 (spectral trace averaging).
☐	Refer as FCC KDB 558074, clause 10.4 Method AVGPSD-2 (slow sweep speed)
	duty cycle < 98% and average over on/off periods with duty factor
☐	Refer as FCC KDB 558074, clause 10.5 Method AVGPSD-1 Alt (spectral trace averaging).
☐	Refer as FCC KDB 558074, clause 10.6 Method AVGPSD-2 Alt. (slow sweep speed)
▪	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



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.	

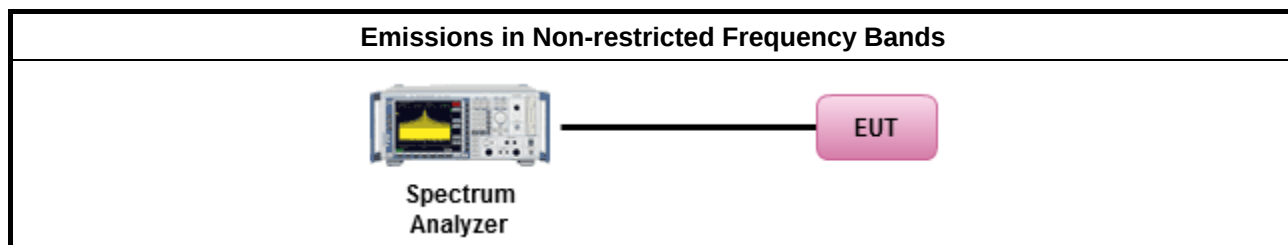
3.5.2 Measuring Instruments

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 11 for unwanted emissions into non-restricted bands.

3.5.4 Test Setup



3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix E

3.6 Emissions in Restricted Frequency Bands

3.6.1 Emissions in Restricted Frequency Bands Limit

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

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

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

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

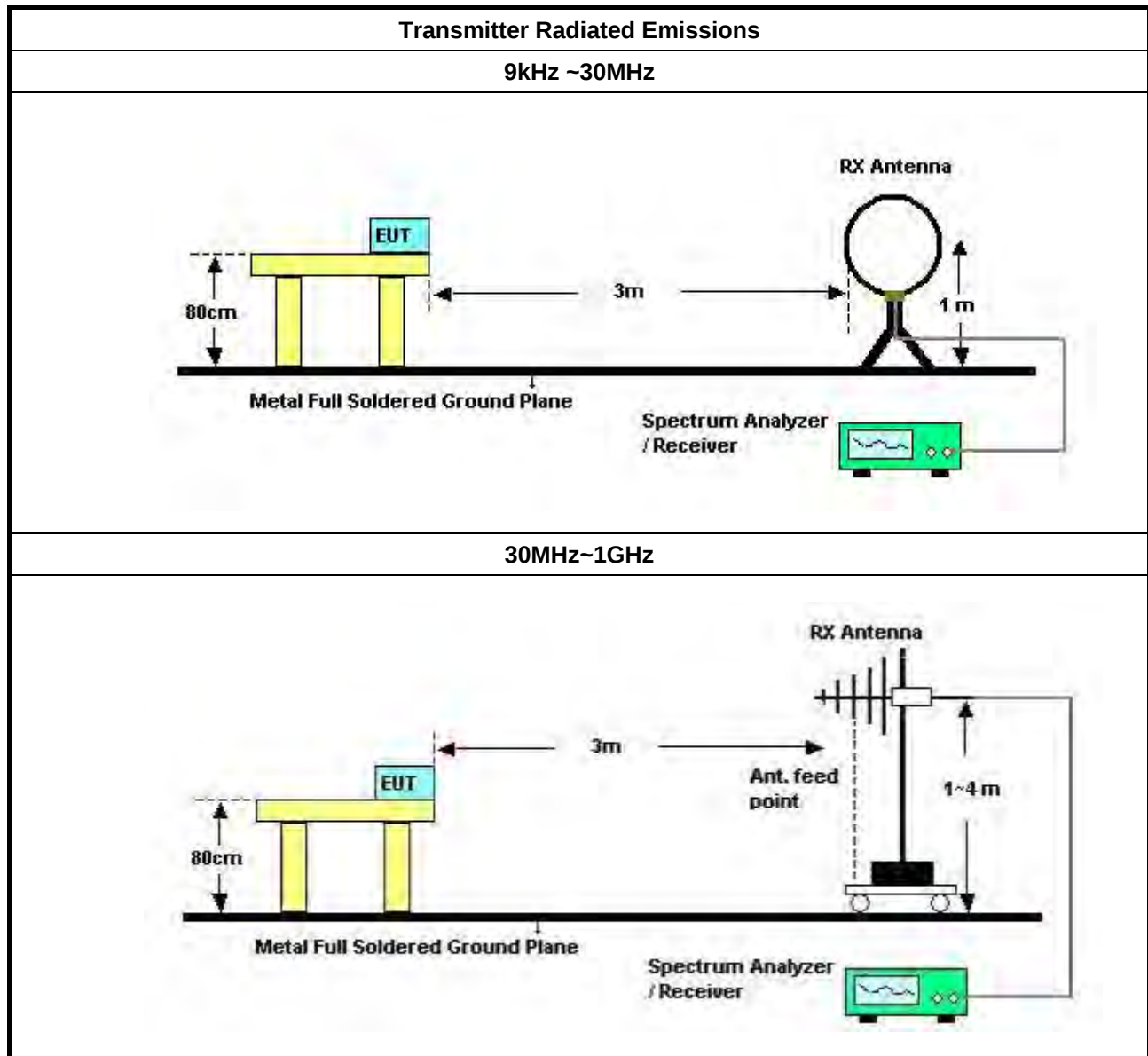
3.6.2 Measuring Instruments

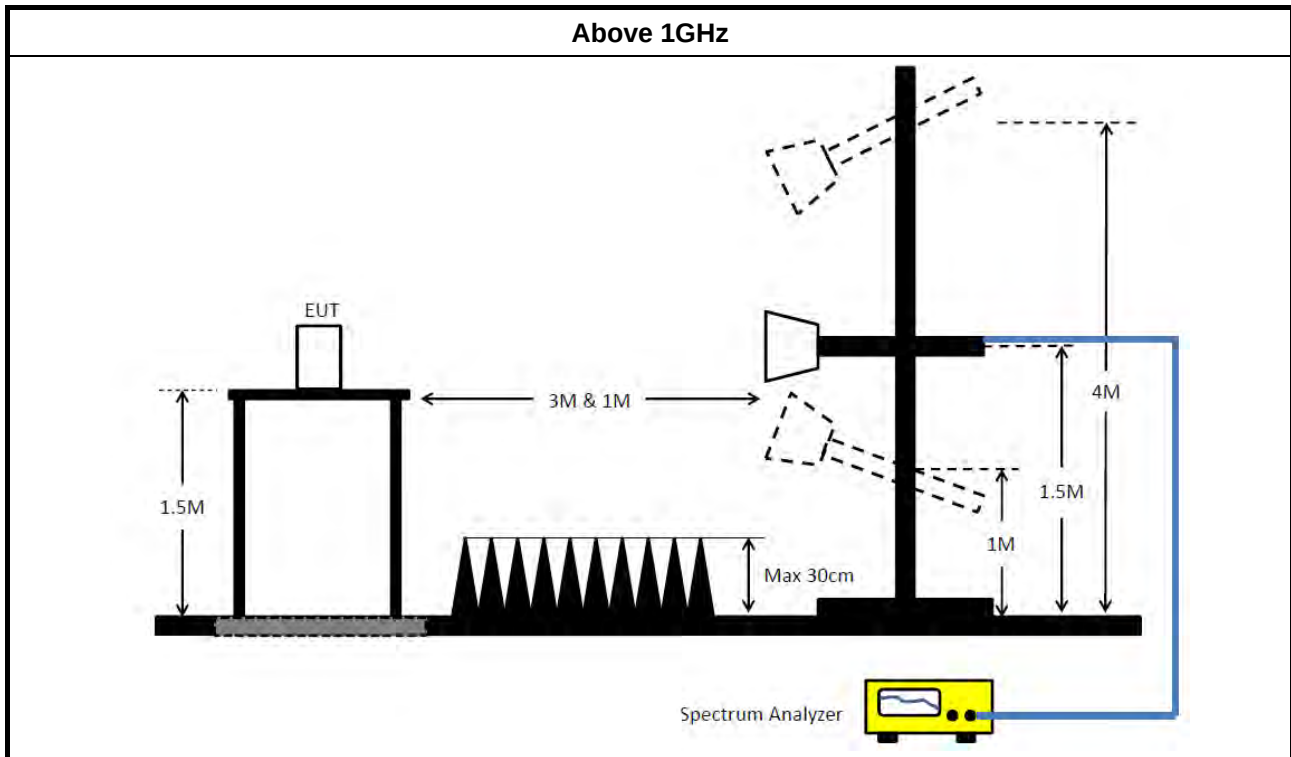
Refer a test equipment and calibration data table in this test report.

3.6.3 Test Procedures

Test Method	
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 12 for unwanted emissions into restricted bands.
	☐ Refer as FCC KDB 558074, clause 12.2.5.1 Option 1 (trace averaging for duty cycle $\geq 98\%$)
	☐ Refer as FCC KDB 558074, clause 12.2.5.2 Option 2 (trace averaging + duty factor).
	☒ Refer as FCC KDB 558074, clause 12.2.5.3 Option 3 (Reduced VBW $\geq 1/T$).
	☐ Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW $\geq 1/T$, 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 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 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 13.2 (ANSI C63.10, clause 6.9.3) for marker-delta method for band-edge measurements.
	Refer as FCC KDB 558074, clause 13.3 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).
For conducted and cabinet radiation measurement, refer as FCC KDB 558074, clause 12.2.2.	
	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





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.

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
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.45GHz	Jan. 23, 2017	Jan. 22, 2018	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Dec. 14, 2016	Dec. 13, 2017	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Dec. 21, 2016	Dec. 20, 2017	Conduction (CO01-CB)
COND Cable	Woken	Cable	01	150kHz ~ 30MHz	May 23, 2017	May 22, 2018	Conduction (CO01-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Aug. 30, 2017	Aug. 29, 2018	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 10, 2016	Nov. 09, 2017	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170507	15GHz ~ 40GHz	Jun. 16, 2017	Jun. 15, 2018	Radiation (03CH01-CB)
Pre-Amplifier	EMCI	EMC330N	980332	20MHz ~ 3GHz	May 02, 2017	May 01, 2018	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 16, 2017	Jan. 15, 2018	Radiation (03CH01-CB)
Pre-Amplifier	-	-	TF-130N-R1	26GHz ~ 40GHz	Jun. 20, 2017	Jun. 19, 2018	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Nov. 22, 2016	Nov. 21, 2017	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2016*	Mar. 15, 2018*	Radiation (03CH01-CB)
EMI Test	R&S	ESCS	100355	9kHz ~ 2.75GHz	May 06, 2017	May 05, 2018	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~ 1 GHz	Oct. 24, 2016	Oct. 23, 2017	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 24, 2016	Oct. 23, 2017	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 24, 2016	Oct. 23, 2017	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz ~ 40 GHz	Oct. 24, 2016	Oct. 23, 2017	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Oct. 24, 2016	Oct. 23, 2017	Radiation (03CH01-CB)



FCC Test Report

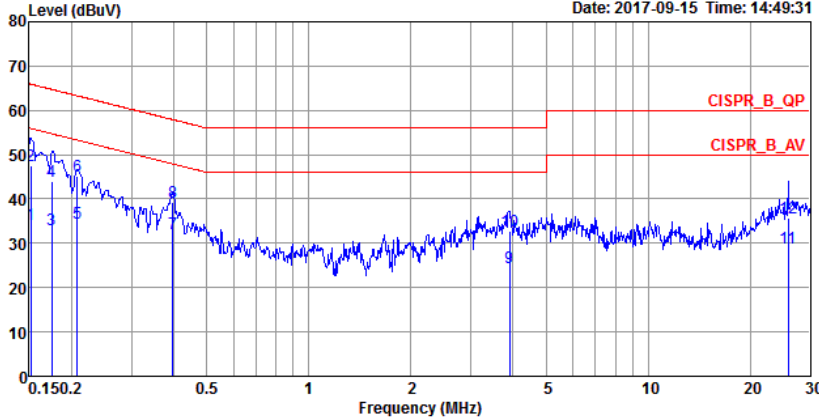
Report No. : FR790815AA

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Test Software	Audix	E3	6.2009-I0-7	N/A	N/A	N/A	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 26, 2016	Dec. 25, 2017	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-6	1 GHz – 26.5 GHz	Oct. 24, 2016	Oct. 23, 2017	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-7	1 GHz –26.5 GHz	Oct. 24, 2016	Oct. 23, 2017	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-8	1 GHz –26.5 GHz	Oct. 24, 2016	Oct. 23, 2017	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-9	1 GHz –26.5 GHz	Oct. 24, 2016	Oct. 23, 2017	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 24, 2016	Oct. 23, 2017	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 22, 2016	Nov. 21, 2017	Conducted (TH01-CB)

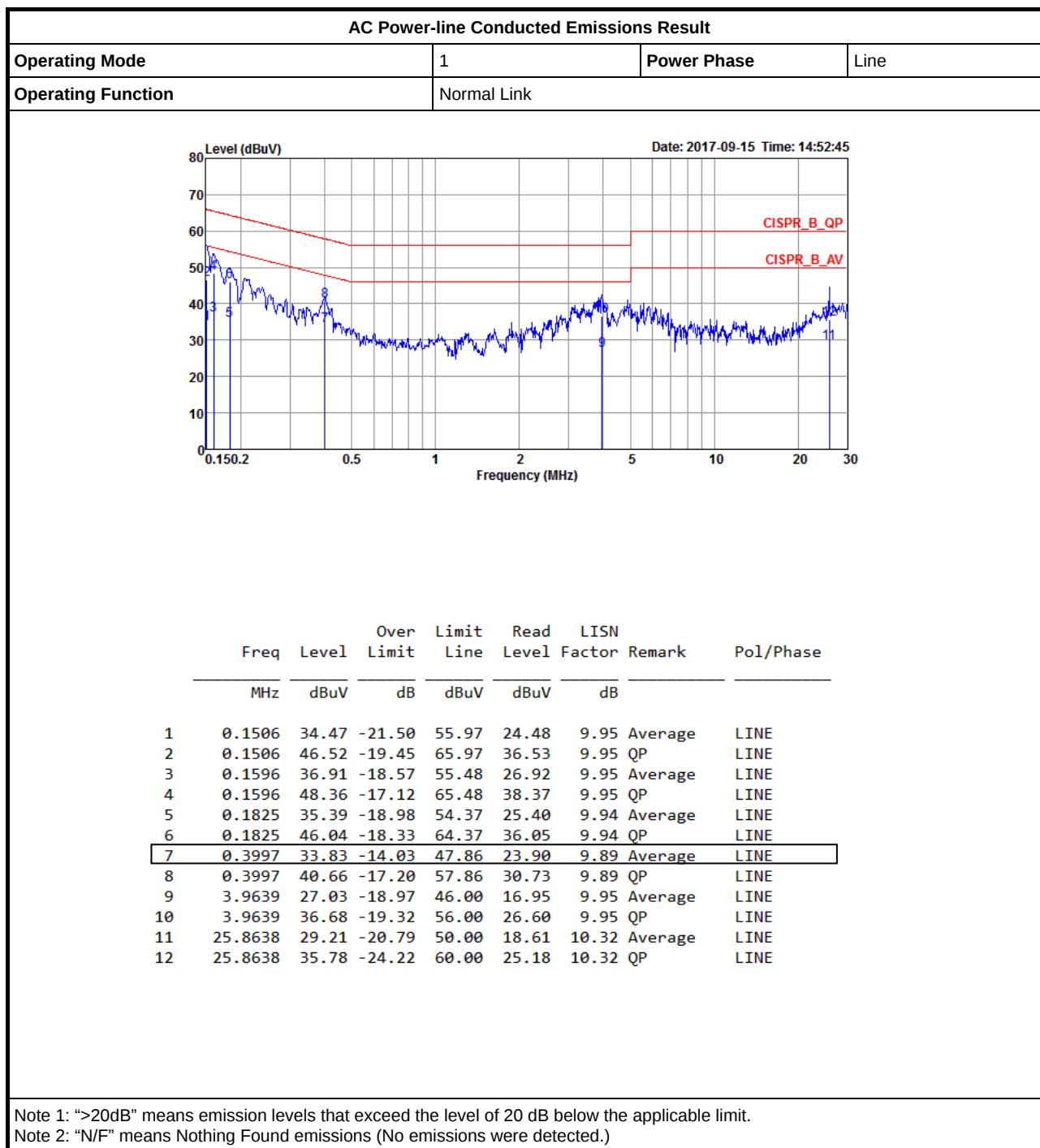
Note: Calibration Interval of instruments listed above is one year.

“*” Calibration Interval of instruments listed above is two years.

NCR means Non-Calibration required.

AC Power-line Conducted Emissions Result								
Operating Mode		1			Power Phase		Neutral	
Operating Function		Normal Link						
Level (dBuV)  Date: 2017-09-15 Time: 14:49:31								
	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB		
1	0.1516	34.31	-21.60	55.91	24.33	9.94	Average	NEUTRAL
2	0.1516	47.53	-18.38	65.91	37.55	9.94	QP	NEUTRAL
3	0.1749	33.17	-21.55	54.72	23.16	9.96	Average	NEUTRAL
4	0.1749	44.06	-20.66	64.72	34.05	9.96	QP	NEUTRAL
5	0.2072	34.59	-18.73	53.32	24.56	9.98	Average	NEUTRAL
6	0.2072	45.05	-18.27	63.32	35.02	9.98	QP	NEUTRAL
7	0.3976	32.11	-15.79	47.90	22.11	9.96	Average	NEUTRAL
8	0.3976	39.22	-18.68	57.90	29.22	9.96	QP	NEUTRAL
9	3.9014	24.53	-21.47	46.00	14.32	10.08	Average	NEUTRAL
10	3.9014	32.78	-23.22	56.00	22.57	10.08	QP	NEUTRAL
11	25.8638	29.06	-20.94	50.00	18.46	10.32	Average	NEUTRAL
12	25.8638	35.70	-24.30	60.00	25.10	10.32	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.)



Summary

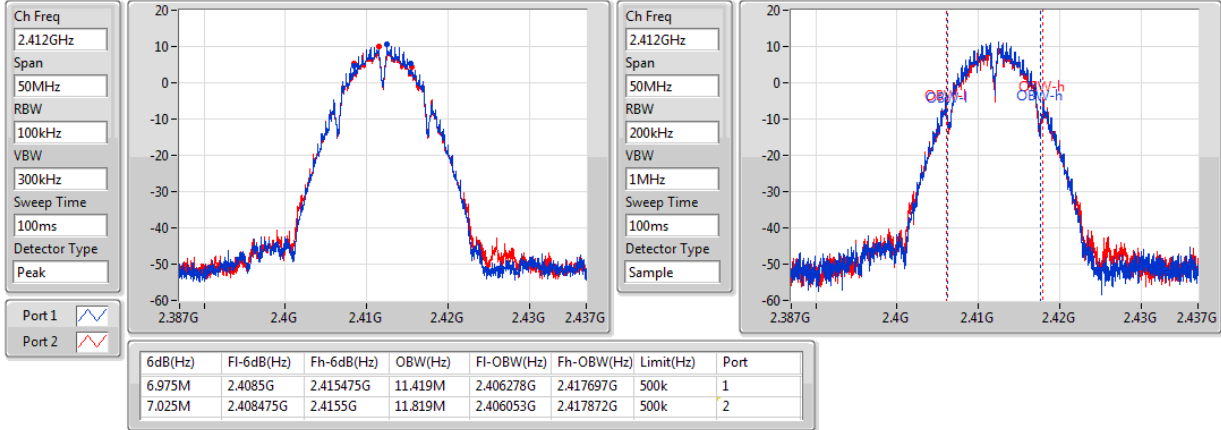
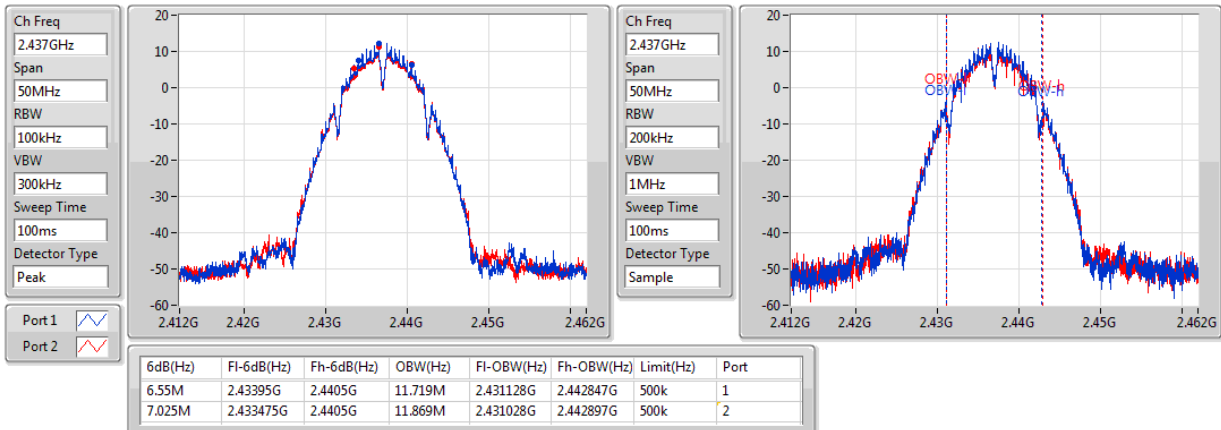
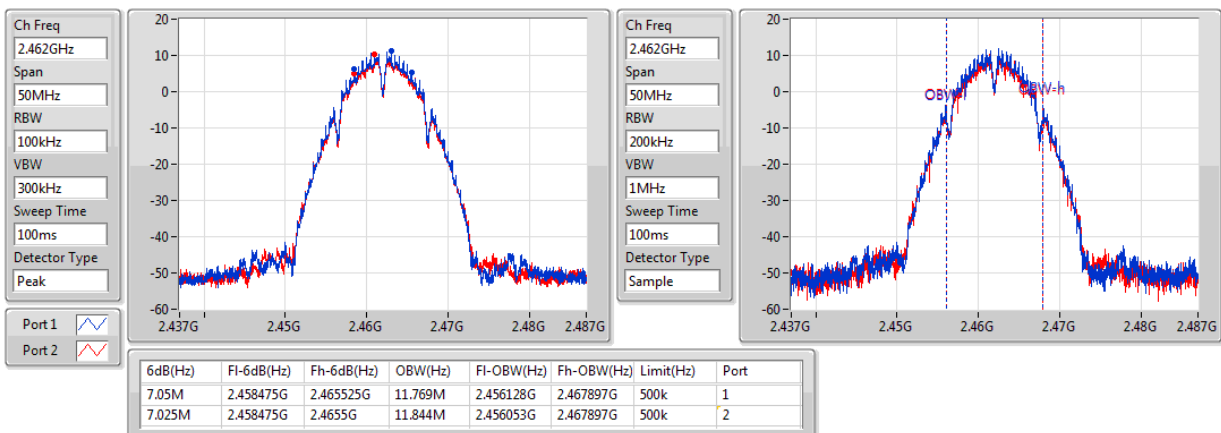
Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.11b_Nss1,(1Mbps)_2TX	7.05M	11.869M	11M9G1D	6.55M	11.419M
802.11g_Nss1,(6Mbps)_2TX	15.05M	18.416M	18M4D1D	13.75M	16.192M
802.11n HT20_Nss1,(MCS0)_2TX	16.025M	23.113M	23M1D1D	12.575M	17.316M
802.11n HT40_Nss1,(MCS0)_2TX	33.75M	35.832M	35M8D1D	28.75M	35.732M

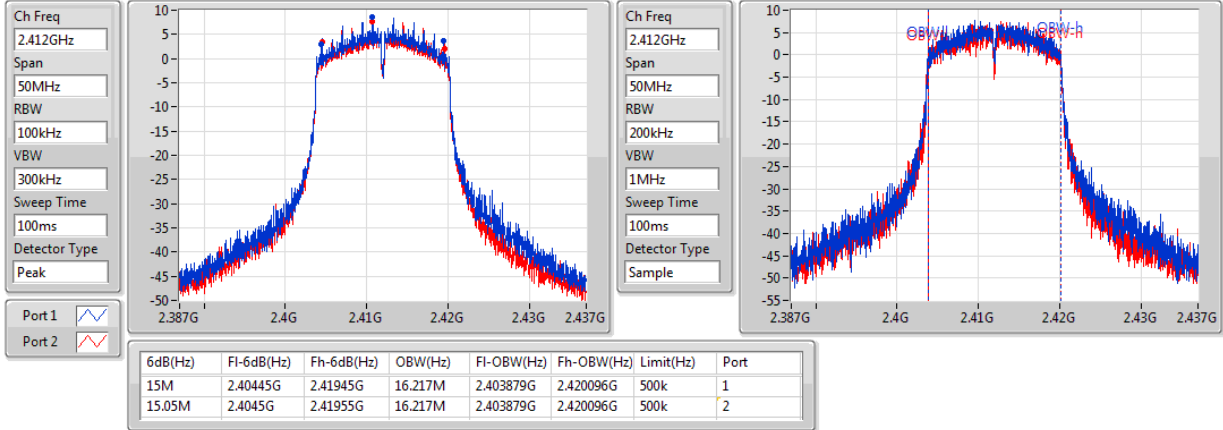
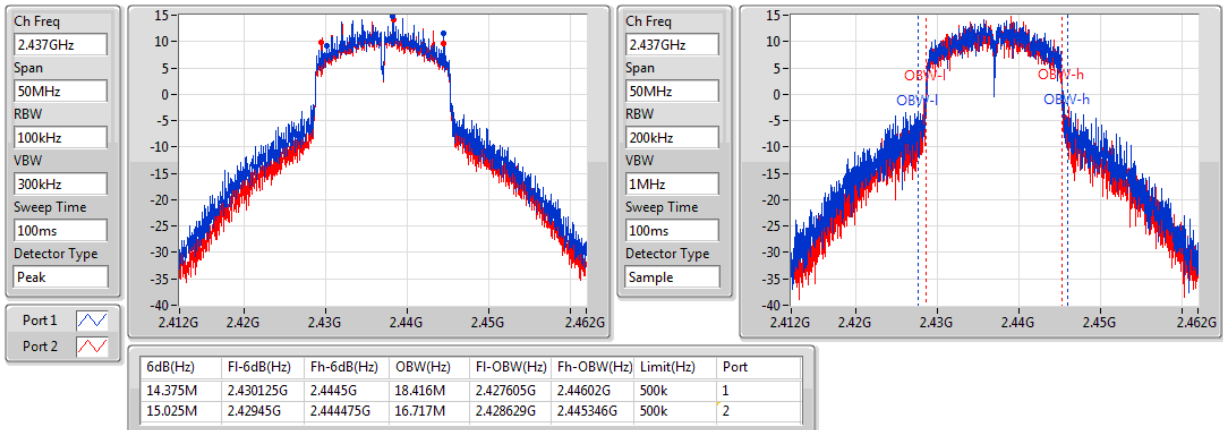
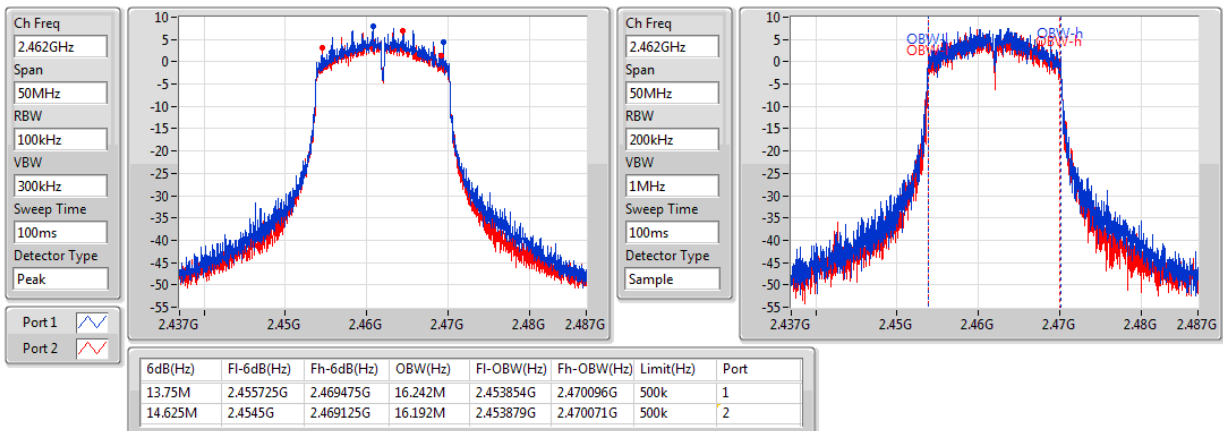
Max-N dB = Maximum 6dB down bandwidth; **Max-OBW** = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth; **Min-OBW** = Minimum 99% occupied bandwidth;

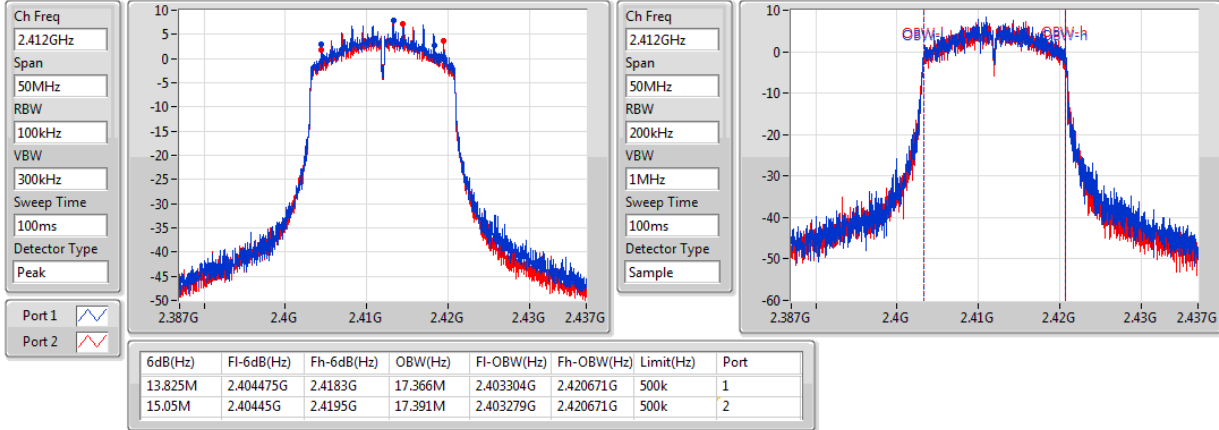
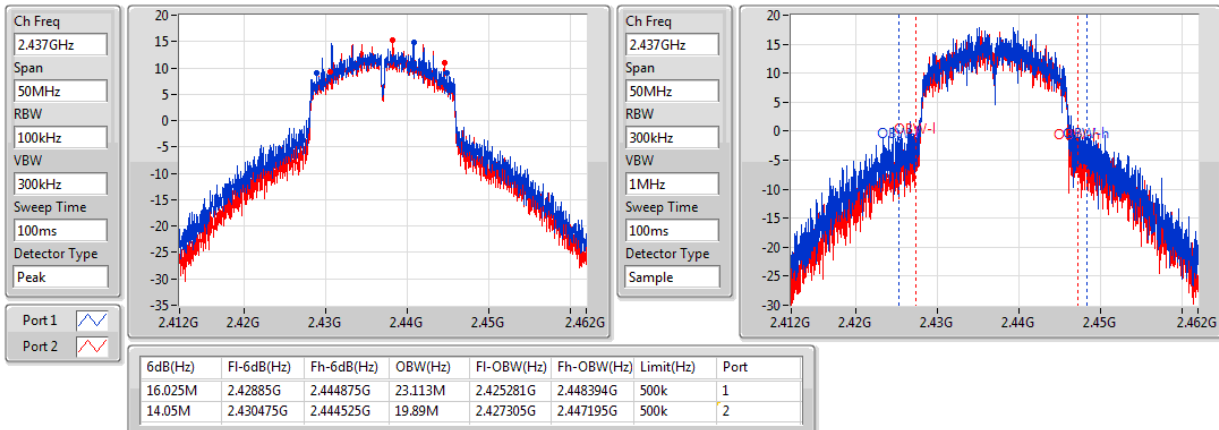
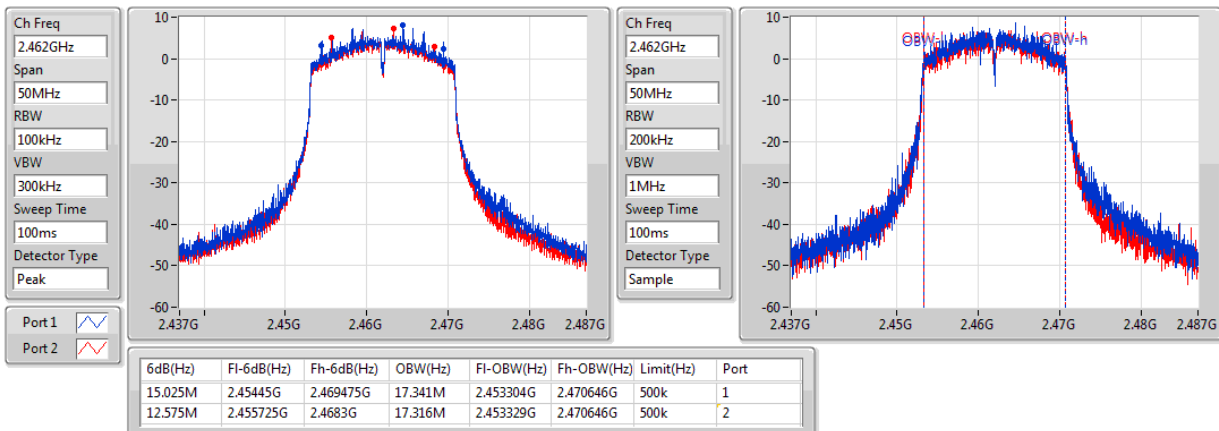
Result

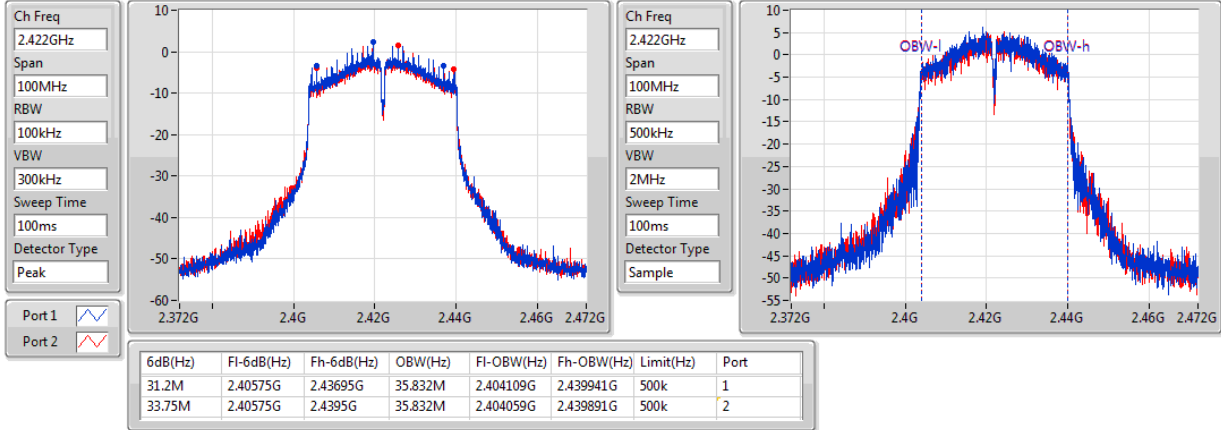
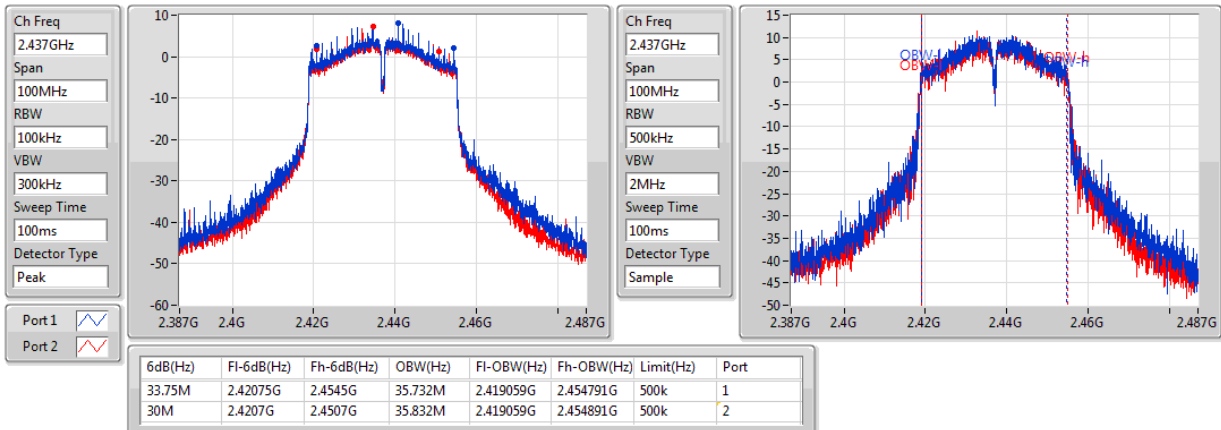
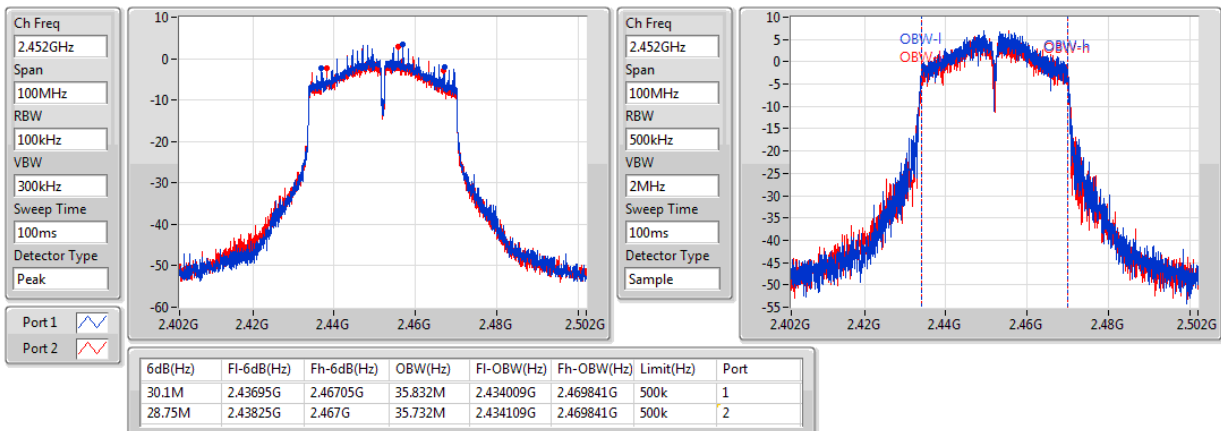
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	6.975M	11.419M	7.025M	11.819M
2437MHz	Pass	500k	6.55M	11.719M	7.025M	11.869M
2462MHz	Pass	500k	7.05M	11.769M	7.025M	11.844M
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	15M	16.217M	15.05M	16.217M
2437MHz	Pass	500k	14.375M	18.416M	15.025M	16.717M
2462MHz	Pass	500k	13.75M	16.242M	14.625M	16.192M
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	13.825M	17.366M	15.05M	17.391M
2437MHz	Pass	500k	16.025M	23.113M	14.05M	19.89M
2462MHz	Pass	500k	15.025M	17.341M	12.575M	17.316M
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	500k	31.2M	35.832M	33.75M	35.832M
2437MHz	Pass	500k	33.75M	35.732M	30M	35.832M
2452MHz	Pass	500k	30.1M	35.832M	28.75M	35.732M

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

802.11b_Nss1,(1Mbps)_2TX
EBW
2412MHz

802.11b_Nss1,(1Mbps)_2TX
EBW
2437MHz

802.11b_Nss1,(1Mbps)_2TX
EBW
2462MHz


802.11g_Nss1,(6Mbps)_2TX
EBW
2412MHz

802.11g_Nss1,(6Mbps)_2TX
EBW
2437MHz

802.11g_Nss1,(6Mbps)_2TX
EBW
2462MHz


802.11n HT20_Nss1,(MCS0)_2TX
EBW
2412MHz

802.11n HT20_Nss1,(MCS0)_2TX
EBW
2437MHz

802.11n HT20_Nss1,(MCS0)_2TX
EBW
2462MHz


802.11n HT40_Nss1,(MCS0)_2TX
EBW
2422MHz

802.11n HT40_Nss1,(MCS0)_2TX
EBW
2437MHz

802.11n HT40_Nss1,(MCS0)_2TX
EBW
2452MHz


**Summary**

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_2TX	22.89	0.19454
802.11g_Nss1,(6Mbps)_2TX	28.19	0.65917
802.11n HT20_Nss1,(MCS0)_2TX	29.06	0.80538
802.11n HT40_Nss1,(MCS0)_2TX	23.01	0.19999

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	3.36	19.16	18.56	21.88	30.00
2437MHz	Pass	3.36	20.18	19.55	22.89	30.00
2462MHz	Pass	3.36	19.52	18.74	22.16	30.00
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	3.36	19.13	18.57	21.87	30.00
2437MHz	Pass	3.36	25.43	24.91	28.19	30.00
2462MHz	Pass	3.36	18.83	18.02	21.45	30.00
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	3.36	18.64	18.09	21.38	30.00
2437MHz	Pass	3.36	26.30	25.79	29.06	30.00
2462MHz	Pass	3.36	18.76	18.12	21.46	30.00
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	3.36	14.79	14.31	17.57	30.00
2437MHz	Pass	3.36	20.31	19.66	23.01	30.00
2452MHz	Pass	3.36	16.24	15.56	18.92	30.00

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

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_2TX	-0.69
802.11g_Nss1,(6Mbps)_2TX	1.35
802.11n HT20_Nss1,(MCS0)_2TX	2.06
802.11n HT40_Nss1,(MCS0)_2TX	-6.43

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	6.37	-3.58	-4.48	-2.60	7.63
2437MHz	Pass	6.37	-2.60	-1.97	-0.69	7.63
2462MHz	Pass	6.37	-4.21	-3.91	-1.92	7.63
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	6.37	-5.34	-6.53	-5.15	7.63
2437MHz	Pass	6.37	-0.28	-0.18	1.35	7.63
2462MHz	Pass	6.37	-6.49	-7.43	-5.77	7.63
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	6.37	-6.58	-7.16	-5.31	7.63
2437MHz	Pass	6.37	1.23	0.11	2.06	7.63
2462MHz	Pass	6.37	-7.10	-6.89	-5.72	7.63
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	6.37	-12.06	-13.23	-11.09	7.63
2437MHz	Pass	6.37	-7.11	-7.55	-6.43	7.63
2452MHz	Pass	6.37	-10.68	-11.89	-10.12	7.63

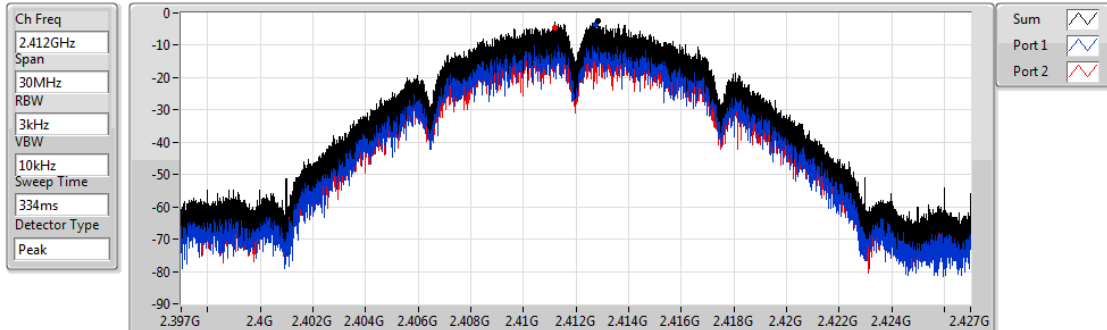
DG = Directional Gain; RBW=3kHz;

PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port X power density;

802.11b_Nss1,(1Mbps)_2TX

PSD

2412MHz

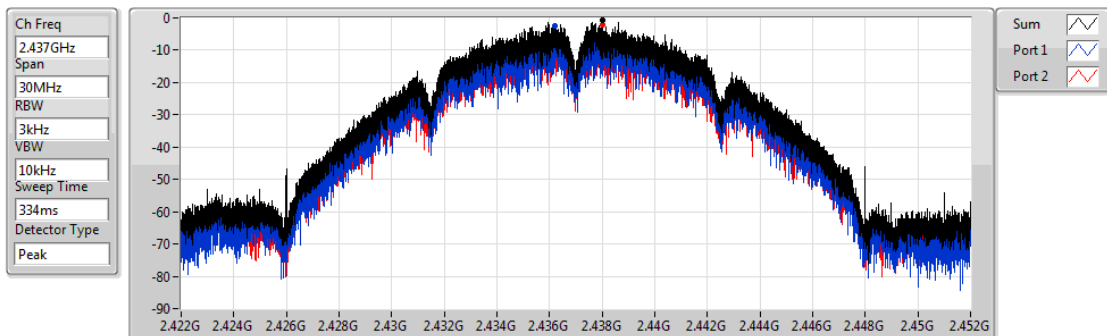


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.60	-2.60	-3.58	-4.48

802.11b_Nss1,(1Mbps)_2TX

PSD

2437MHz

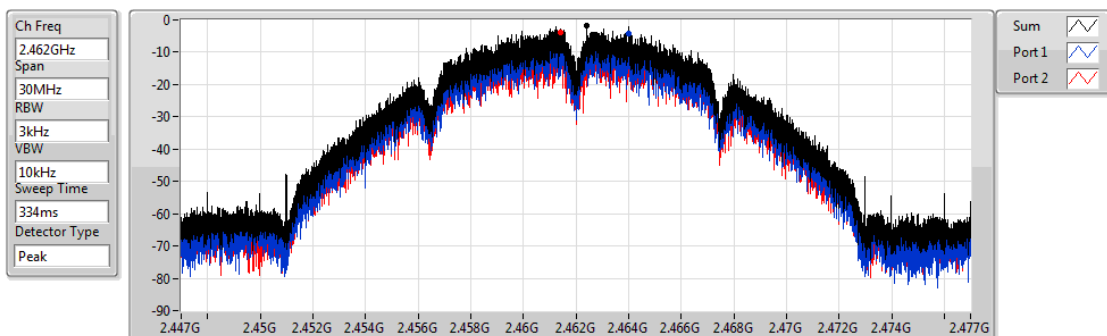


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.69	-0.69	-2.60	-1.97

802.11b_Nss1,(1Mbps)_2TX

PSD

2462MHz

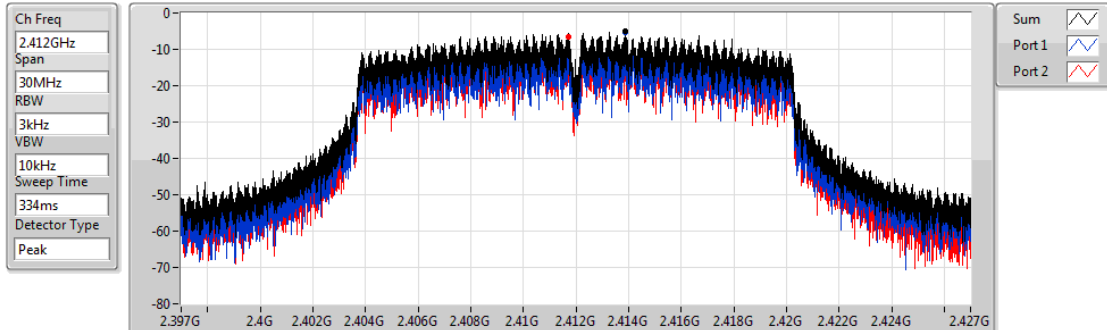


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.92	-1.92	-4.21	-3.91

802.11g_Nss1,(6Mbps)_2TX

PSD

2412MHz

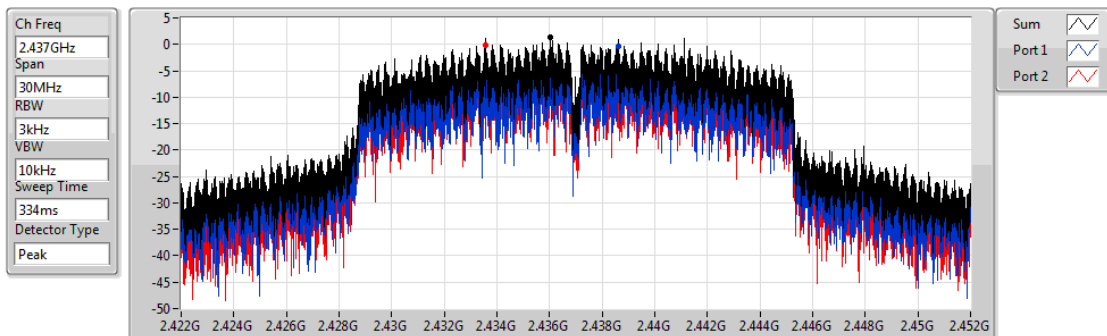


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-5.15	-5.15	-5.34	-6.53

802.11g_Nss1,(6Mbps)_2TX

PSD

2437MHz

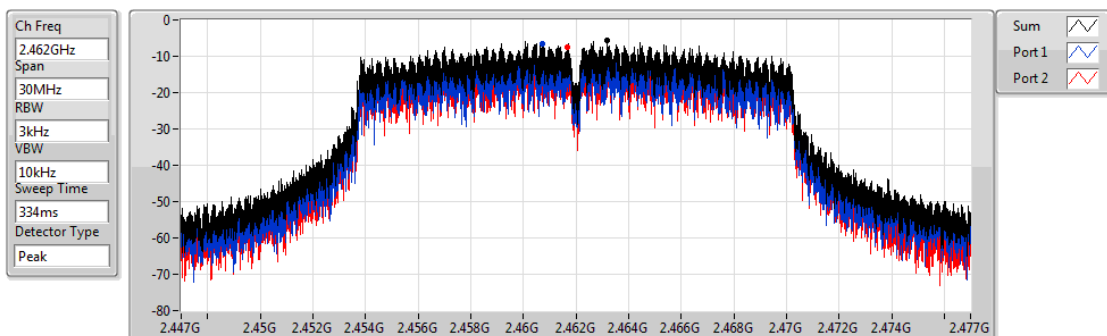


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.35	1.35	-0.28	-0.18

802.11g_Nss1,(6Mbps)_2TX

PSD

2462MHz

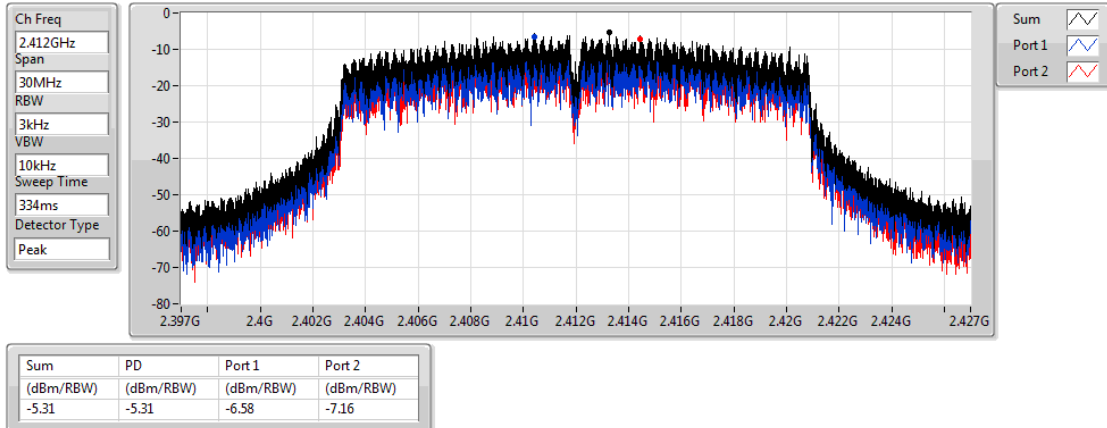


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-5.77	-5.77	-6.49	-7.43

802.11n HT20_Nss1,(MCS0)_2TX

PSD

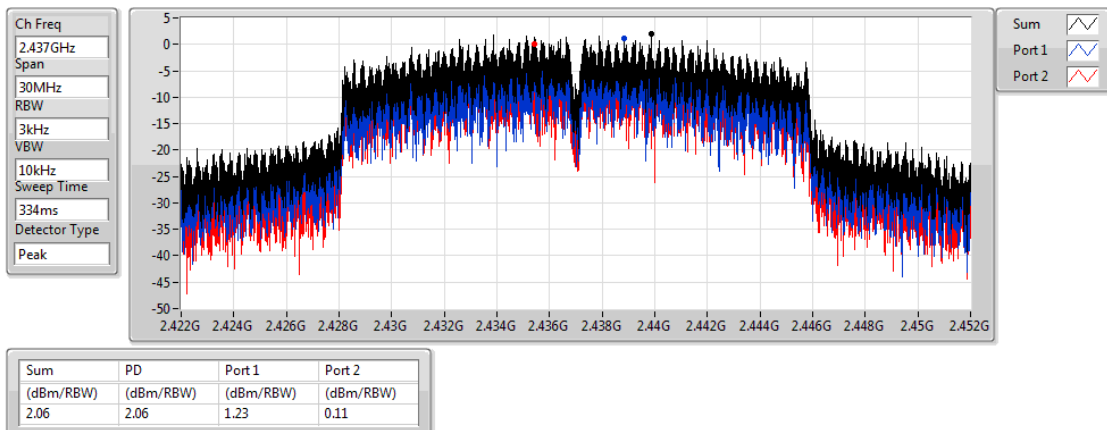
2412MHz



802.11n HT20_Nss1,(MCS0)_2TX

PSD

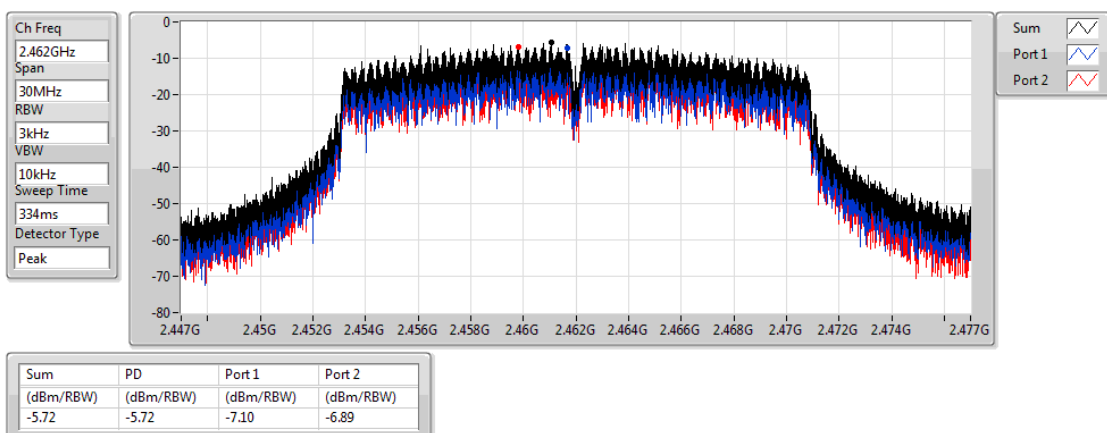
2437MHz



802.11n HT20_Nss1,(MCS0)_2TX

PSD

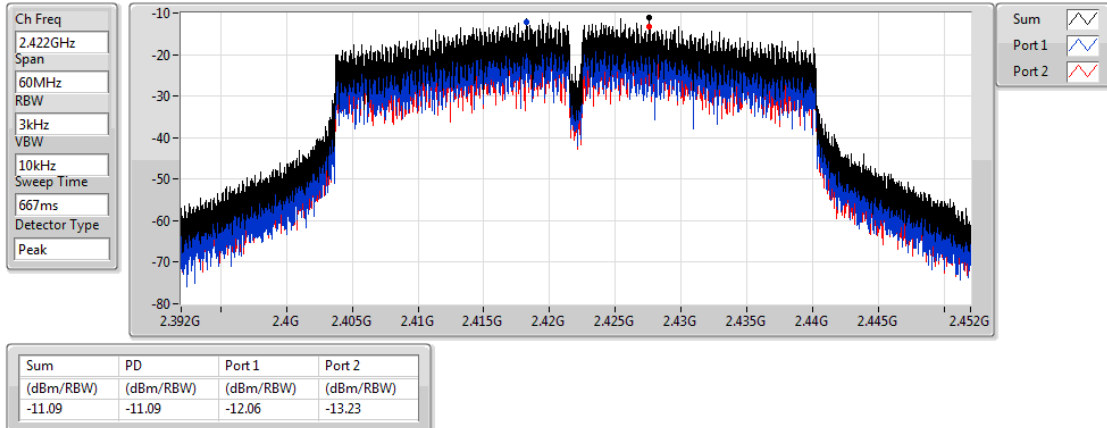
2462MHz



802.11n HT40_Nss1,(MCS0)_2TX

PSD

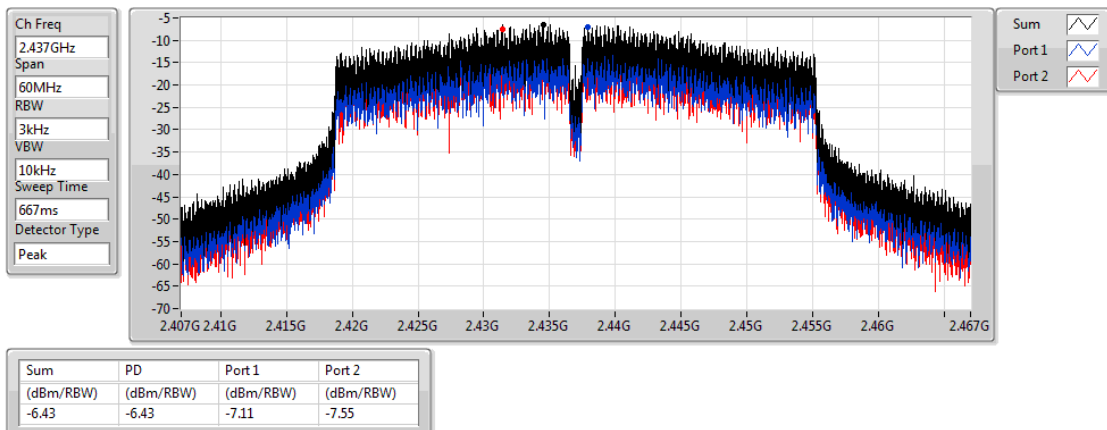
2422MHz



802.11n HT40_Nss1,(MCS0)_2TX

PSD

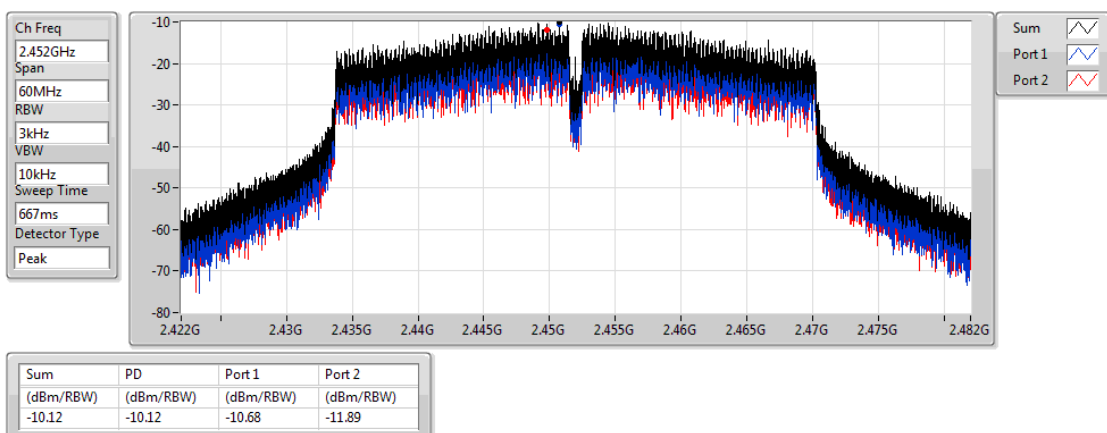
2437MHz



802.11n HT40_Nss1,(MCS0)_2TX

PSD

2452MHz



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	2.437408G	11.28	-18.72	2.088555G	-52.44	2.398G	-42.64	2.51438G	-55.70	17.608041G	-50.72	2
802.11g_Nss1,(6Mbps)_2TX	Pass	2.438243G	12.98	-17.02	2.174765G	-52.81	2.39976G	-28.90	2.49686G	-51.36	3.214652G	-49.32	1
802.11n HT20_Nss1,(MCS0)_2TX	Pass	2.442084G	14.93	-15.07	2.09438G	-53.93	2.39952G	-32.15	2.48398G	-50.39	3.214652G	-48.01	1
802.11n HT40_Nss1,(MCS0)_2TX	Pass	2.431897G	7.83	-22.17	774.25M	-55.04	2.39904G	-32.55	2.4851G	-56.33	16.765805G	-52.36	2

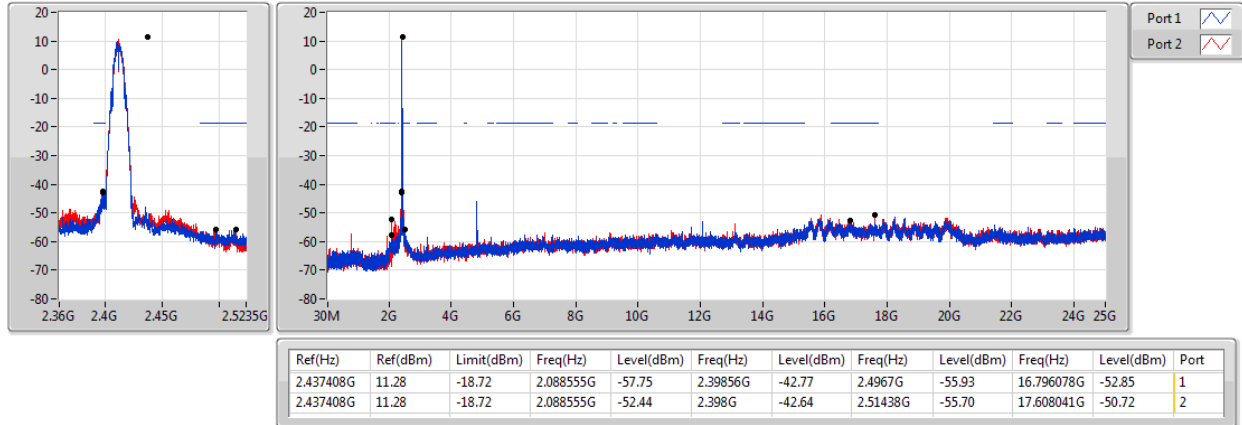
Result

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	2.437408G	11.28	-18.72	2.088555G	-57.75	2.39856G	-42.77	2.4967G	-55.93	16.796078G	-52.85	1
2412MHz	Pass	2.437408G	11.28	-18.72	2.088555G	-52.44	2.398G	-42.64	2.51438G	-55.70	17.608041G	-50.72	2
2437MHz	Pass	2.437408G	11.28	-18.72	2.30641G	-56.89	2.39408G	-50.52	2.48926G	-51.72	16.815744G	-52.60	1
2437MHz	Pass	2.437408G	11.28	-18.72	2.11302G	-48.23	2.39872G	-48.57	2.48502G	-49.58	17.622089G	-52.70	2
2462MHz	Pass	2.437408G	11.28	-18.72	1.641195G	-55.76	2.392G	-56.53	2.48846G	-49.68	16.748315G	-52.01	1
2462MHz	Pass	2.437408G	11.28	-18.72	2.137485G	-50.36	2.39832G	-53.76	2.4863G	-49.75	16.211689G	-52.63	2
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.438243G	12.98	-17.02	2.174765G	-52.81	2.39976G	-28.90	2.49686G	-51.36	3.214652G	-49.32	1
2412MHz	Pass	2.438243G	12.98	-17.02	2.090885G	-52.04	2.39992G	-29.34	2.49638G	-53.77	16.408358G	-52.19	2
2437MHz	Pass	2.438243G	12.98	-17.02	1.624885G	-54.76	2.39984G	-38.28	2.4851G	-44.48	3.248367G	-46.90	1
2437MHz	Pass	2.438243G	12.98	-17.02	2.193405G	-47.50	2.39888G	-39.07	2.4847G	-43.54	3.248367G	-42.75	2
2462MHz	Pass	2.438243G	12.98	-17.02	2.102535G	-53.99	2.39344G	-51.66	2.48406G	-44.23	3.282082G	-51.51	1
2462MHz	Pass	2.438243G	12.98	-17.02	2.13865G	-52.65	2.3972G	-52.19	2.4851G	-44.59	3.282082G	-52.17	2
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.442084G	14.93	-15.07	2.09438G	-53.93	2.39952G	-32.15	2.48398G	-50.39	3.214652G	-48.01	1
2412MHz	Pass	2.442084G	14.93	-15.07	2.17127G	-52.28	2.3996G	-33.39	2.49614G	-52.66	16.20326G	-51.40	2
2437MHz	Pass	2.442084G	14.93	-15.07	2.30641G	-54.55	2.3992G	-34.88	2.48414G	-41.32	3.248367G	-47.66	1
2437MHz	Pass	2.442084G	14.93	-15.07	2.109525G	-48.89	2.39888G	-37.64	2.4851G	-42.18	3.248367G	-43.10	2
2462MHz	Pass	2.442084G	14.93	-15.07	2.300585G	-53.74	2.39264G	-51.98	2.48358G	-42.88	3.282082G	-49.40	1
2462MHz	Pass	2.442084G	14.93	-15.07	2.14098G	-51.63	2.39216G	-51.72	2.48382G	-45.06	16.447692G	-51.72	2
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	2.431897G	7.83	-22.17	2.300535G	-57.70	2.39792G	-33.40	2.4843G	-55.60	16.802264G	-52.87	1
2422MHz	Pass	2.431897G	7.83	-22.17	774.25M	-55.04	2.39904G	-32.55	2.4851G	-56.33	16.765805G	-52.36	2
2437MHz	Pass	2.431897G	7.83	-22.17	2.302825G	-52.83	2.39904G	-35.37	2.48382G	-42.86	3.247813G	-48.58	1
2437MHz	Pass	2.431897G	7.83	-22.17	2.10932G	-53.54	2.39984G	-39.49	2.48734G	-44.92	16.903228G	-51.32	2
2452MHz	Pass	2.431897G	7.83	-22.17	2.078405G	-59.25	2.39392G	-52.84	2.48382G	-43.87	16.785436G	-51.91	1
2452MHz	Pass	2.431897G	7.83	-22.17	2.128785G	-56.05	2.3984G	-52.85	2.48414G	-45.22	16.827505G	-51.97	2

802.11b_Nss1,(1Mbps)_2TX

CSE NdB

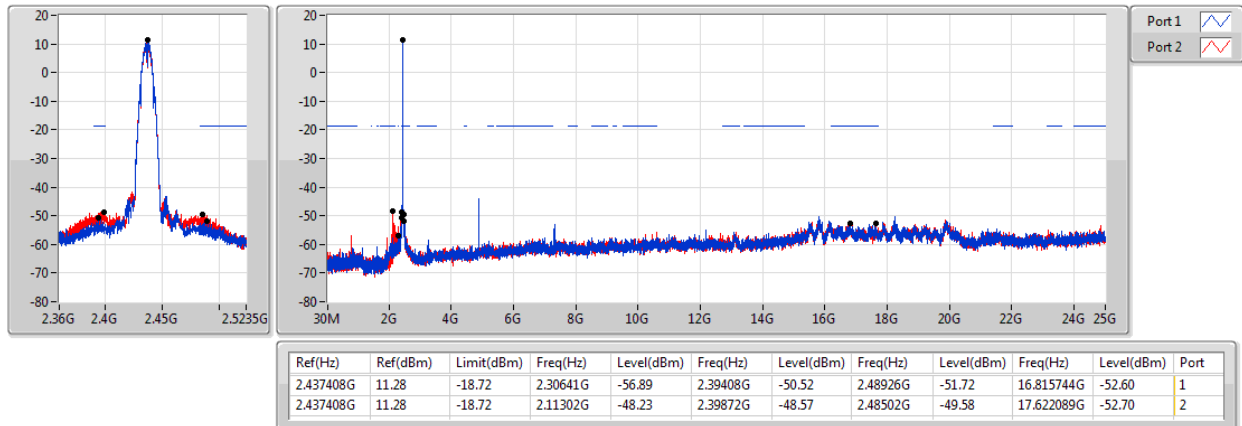
2412MHz



802.11b_Nss1,(1Mbps)_2TX

CSE NdB

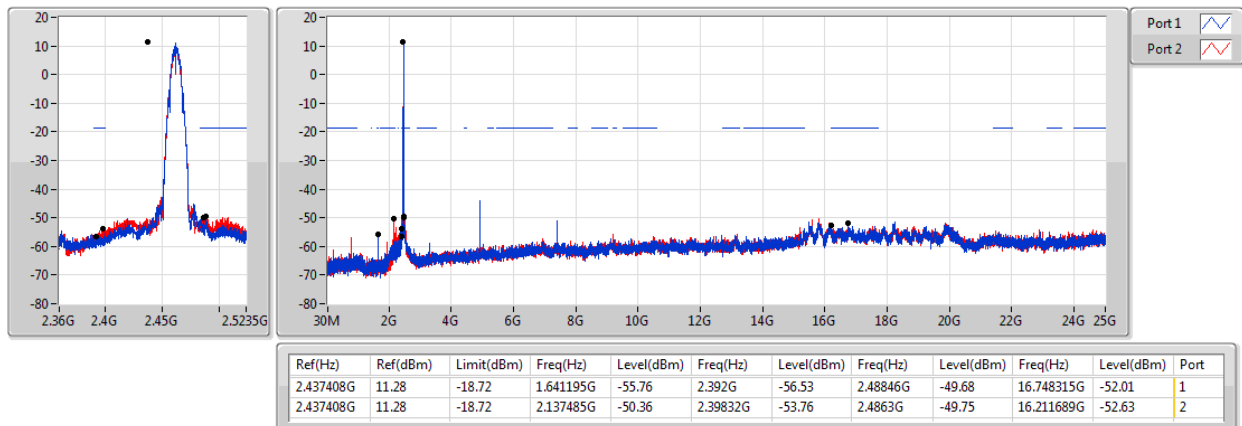
2437MHz



802.11b_Nss1,(1Mbps)_2TX

CSE NdB

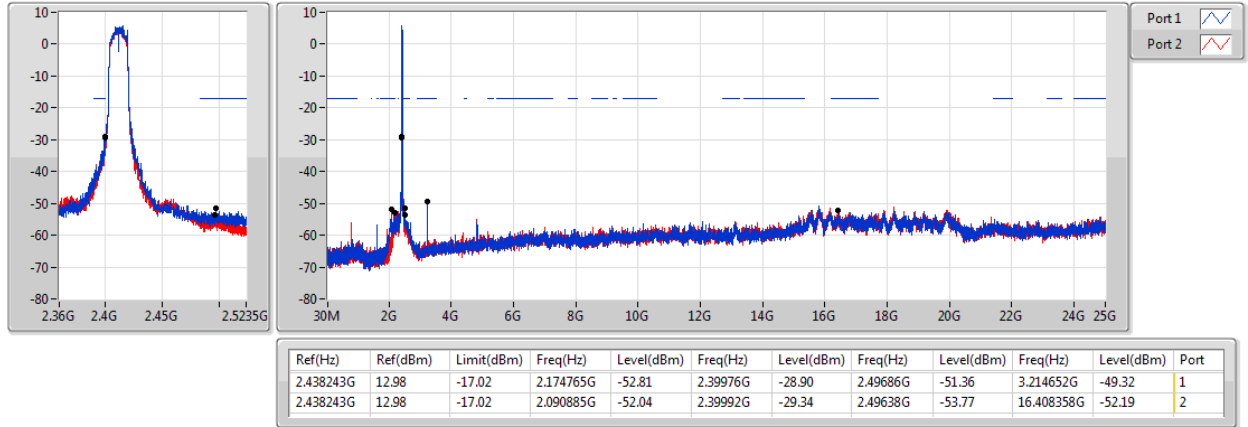
2462MHz



802.11g_Nss1,(6Mbps)_2TX

CSE NdB

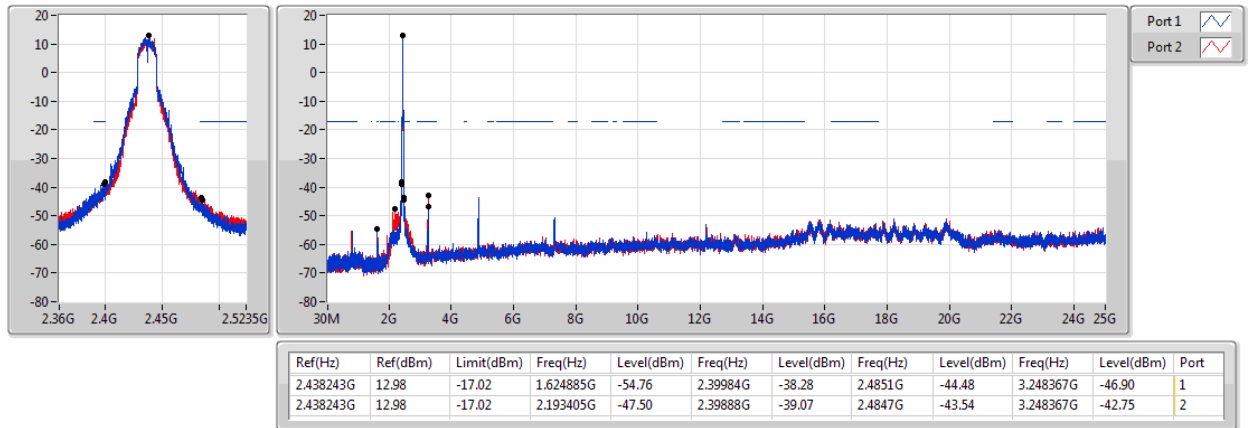
2412MHz



802.11g_Nss1,(6Mbps)_2TX

CSE NdB

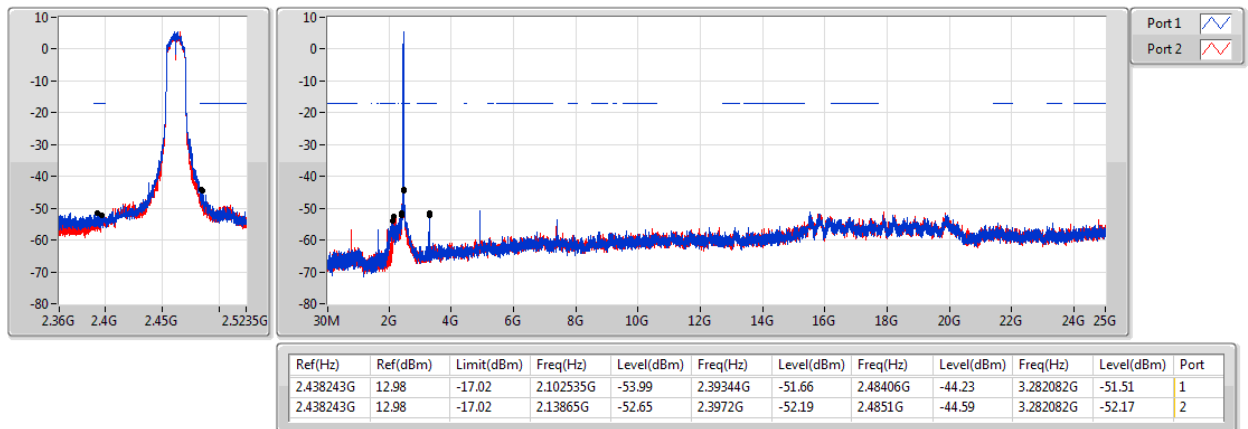
2437MHz



802.11g_Nss1,(6Mbps)_2TX

CSE NdB

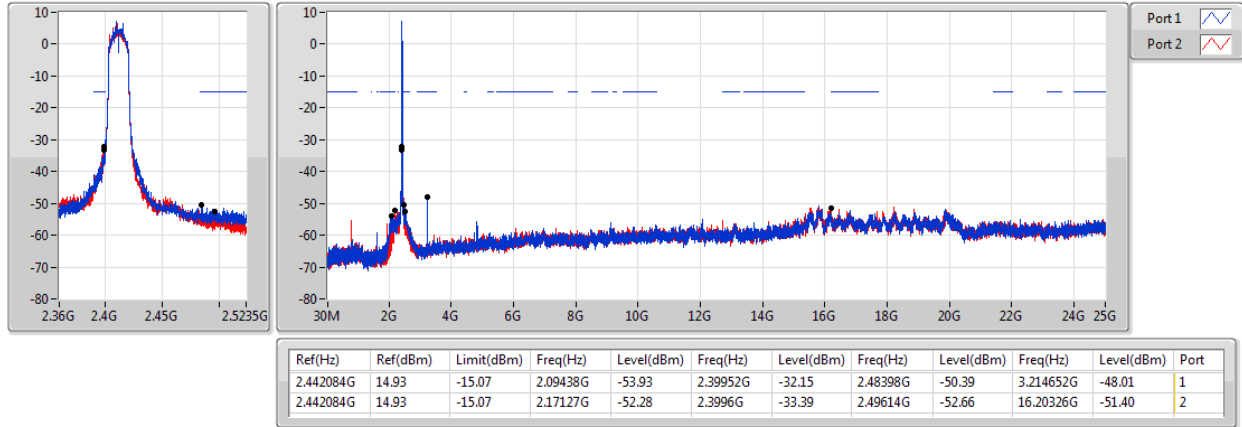
2462MHz



802.11n HT20_Nss1,(MCS0)_2TX

CSE NdB

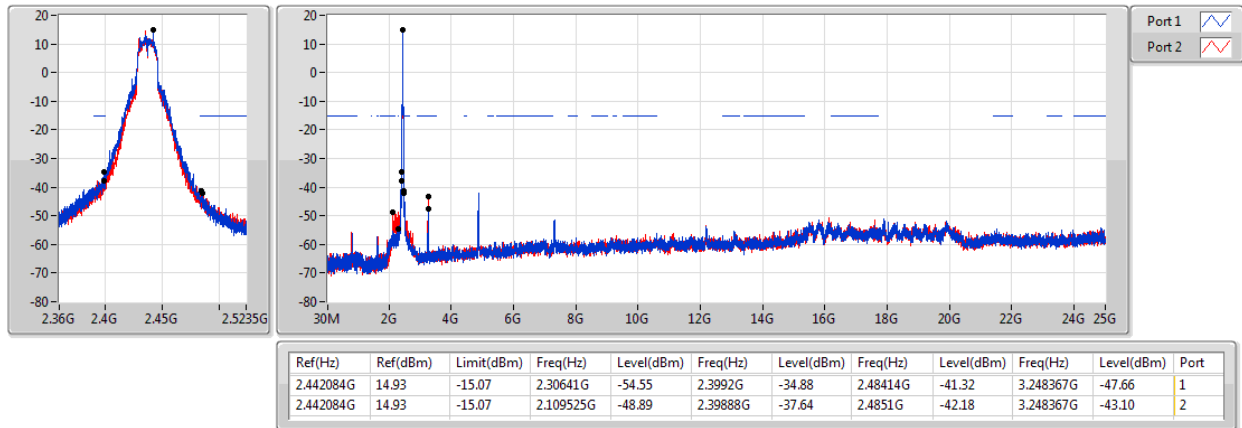
2412MHz



802.11n HT20_Nss1,(MCS0)_2TX

CSE NdB

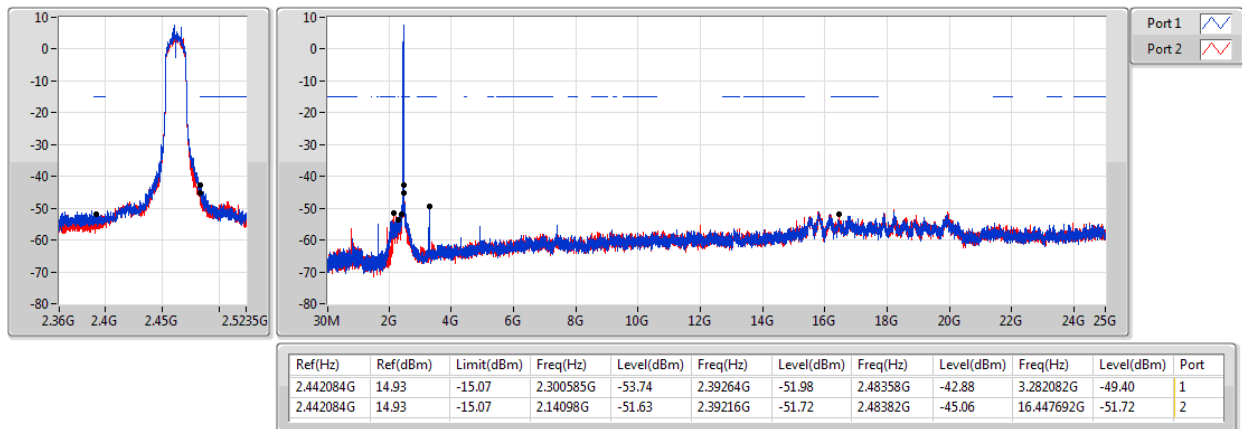
2437MHz



802.11n HT20_Nss1,(MCS0)_2TX

CSE NdB

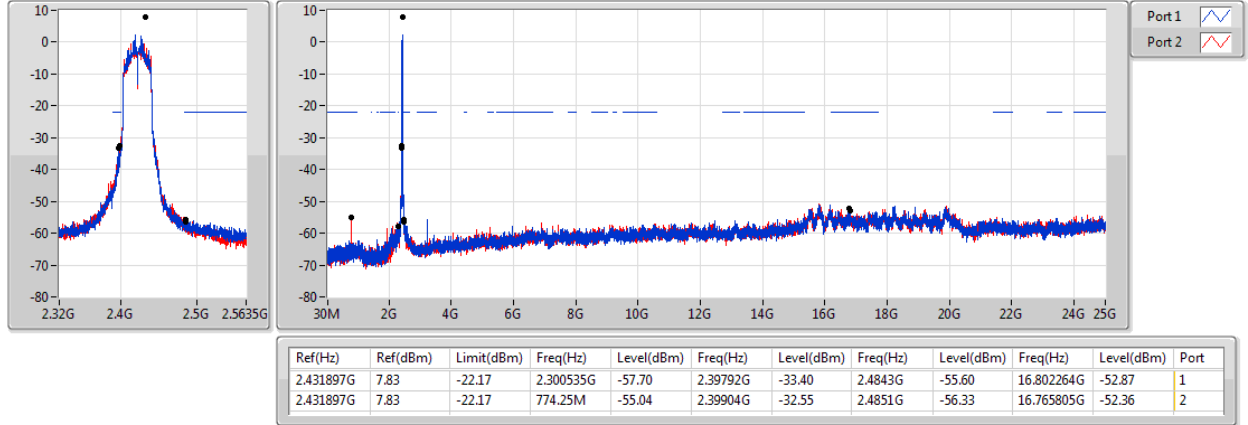
2462MHz



802.11n HT40_Nss1,(MCS0)_2TX

CSE NdB

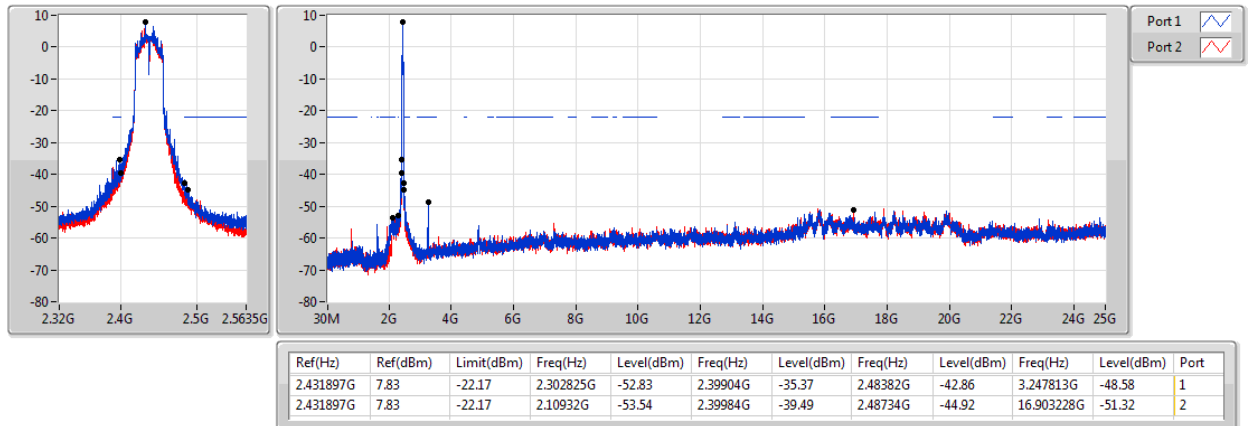
2422MHz



802.11n HT40_Nss1,(MCS0)_2TX

CSE NdB

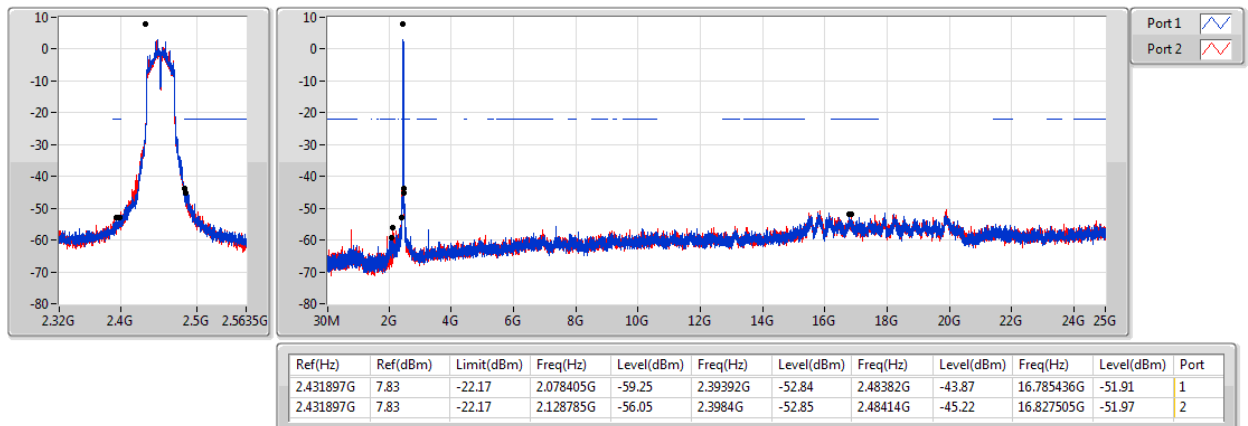
2437MHz

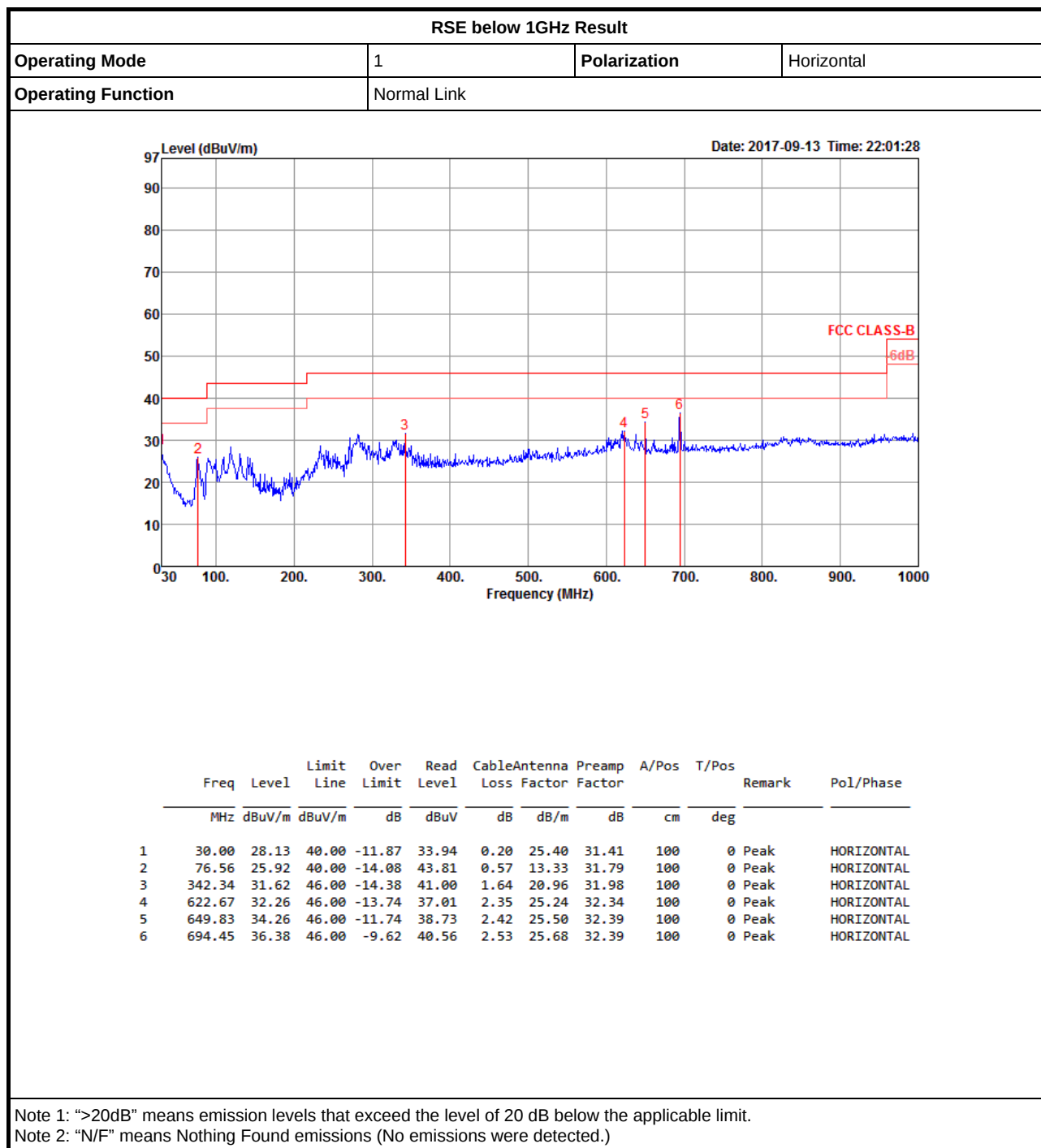


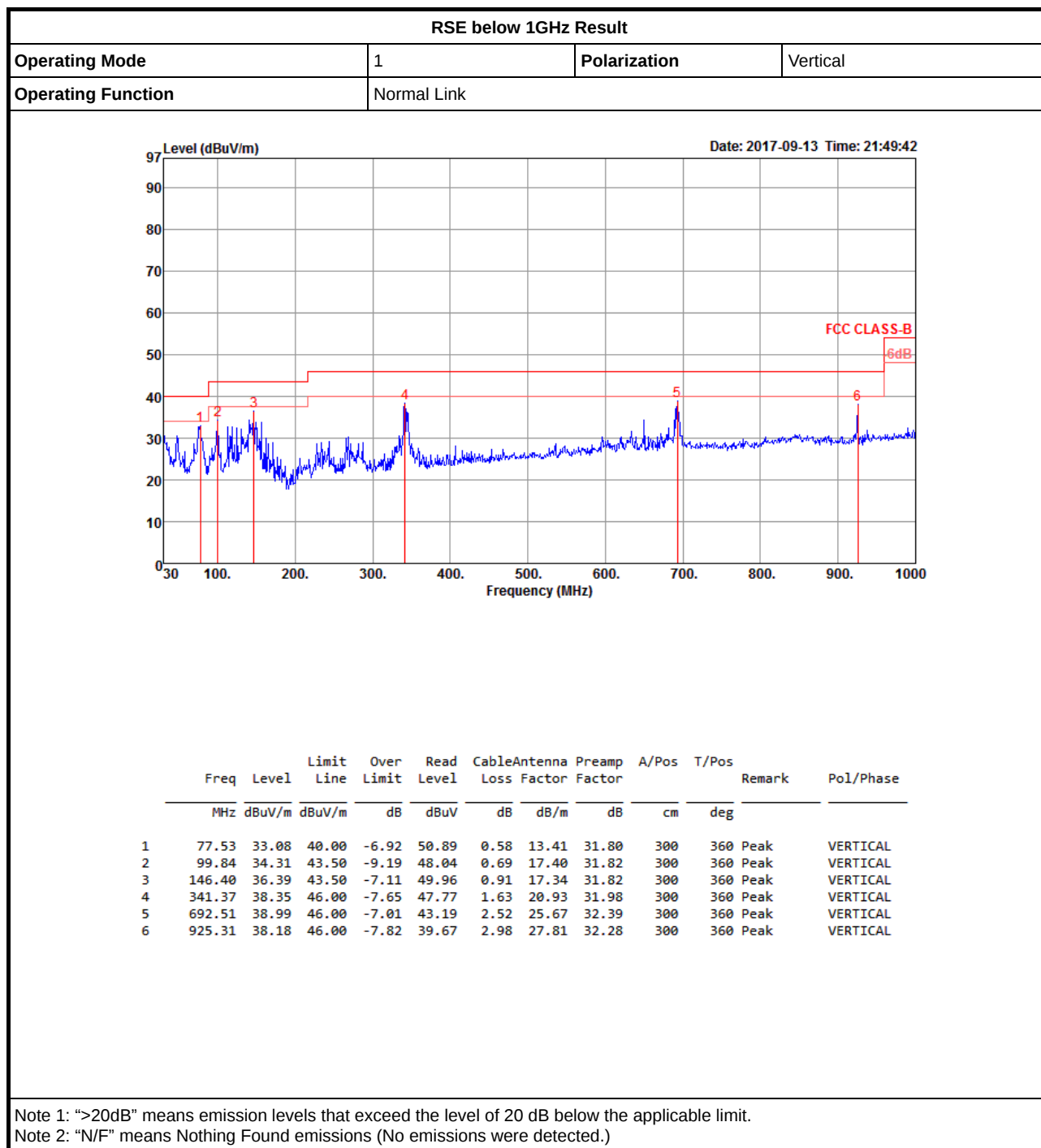
802.11n HT40_Nss1,(MCS0)_2TX

CSE NdB

2452MHz





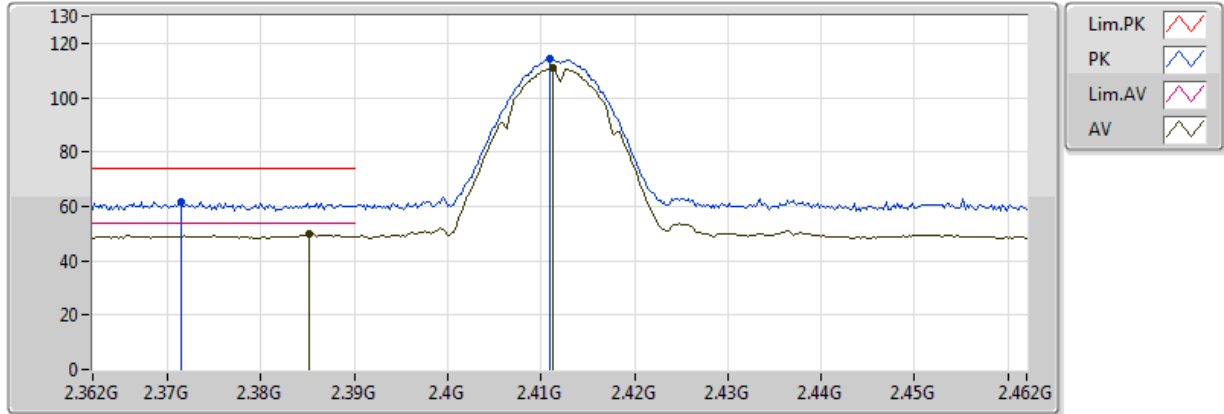


**Summary**

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	-	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_2TX	Pass	AV	4.92398G	53.98	54.00	-0.02	9.16	3	Vertical	139	1.50	-

802.11b_Nss1,(1Mbps)_2TX

2412MHz_TX

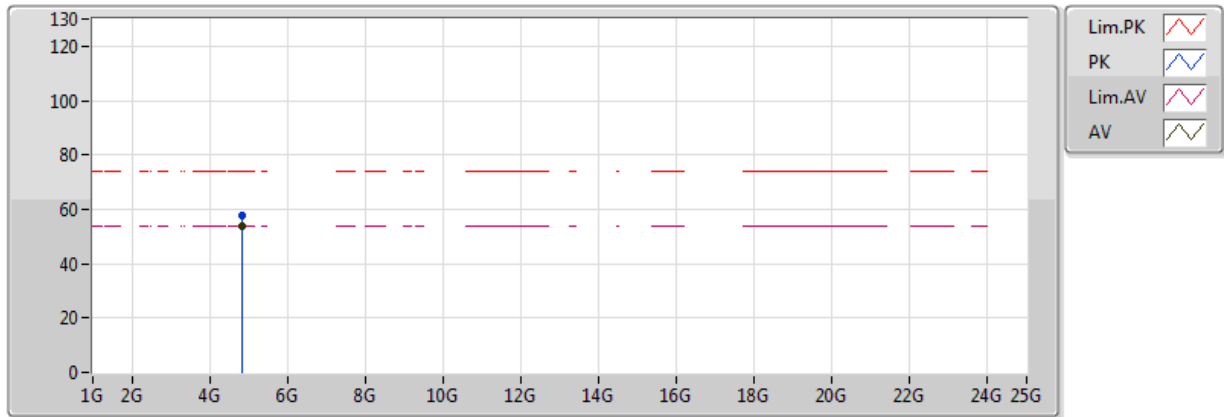


20170919
EUT Y_2TX ANT Dipole
Setting 19
02-Z-1
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	2.3852G	49.83	54.00	-4.17	32.11	3	Vertical	257	1.54					
AV	2.4112G	110.87	Inf	-Inf	32.19	3	Vertical	257	1.54					
PK	2.3714G	61.73	74.00	-12.27	32.07	3	Vertical	257	1.54					
PK	2.411G	114.35	Inf	-Inf	32.19	3	Vertical	257	1.54					

802.11b_Nss1,(1Mbps)_2TX

2412MHz_TX

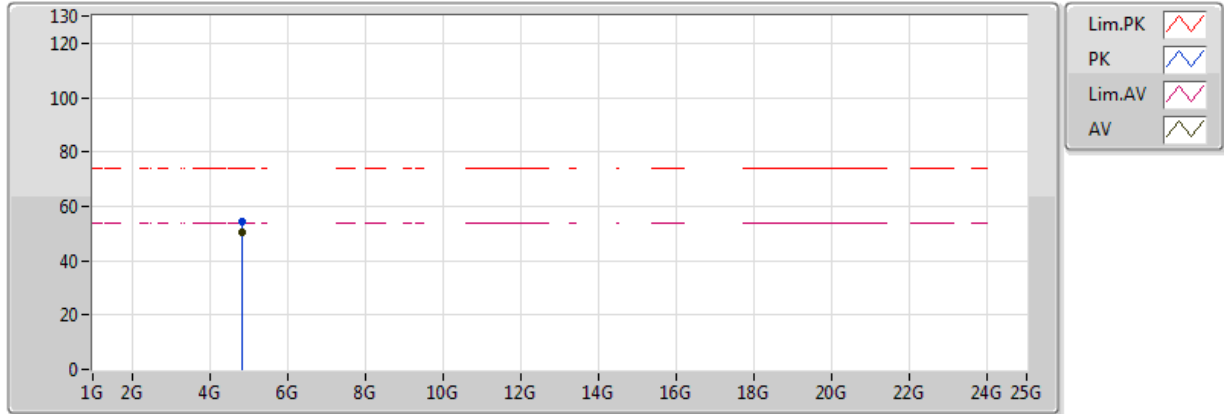


20170919
EUT Y_2TX ANT Dipole
Setting 19
02-Z-1
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height					
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)					
AV	4.82402G	53.97	54.00	-0.03	8.85	3	Vertical	304	2.05					
PK	4.82392G	57.45	74.00	-16.55	8.85	3	Vertical	304	2.05					

802.11b_Nss1,(1Mbps)_2TX

2412MHz_TX

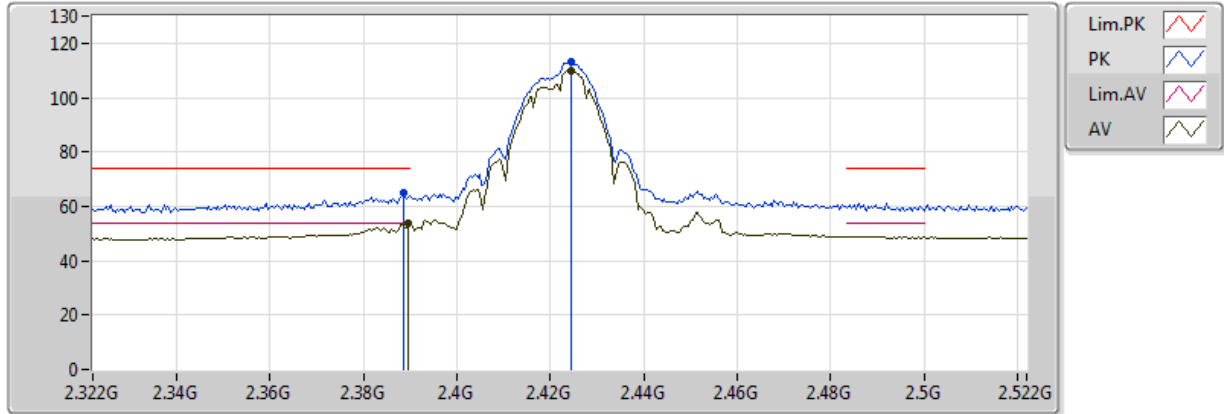


20170919
EUT Y_2TX ANT Dipole
Setting 19
02-Z-1
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height					
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)					
AV	4.824G	50.43	54.00	-3.57	8.85	3	Horizontal	160	1.50					
PK	4.82394G	54.28	74.00	-19.72	8.85	3	Horizontal	160	1.50					

802.11b_Nss1,(1Mbps)_2TX

2422MHz_TX

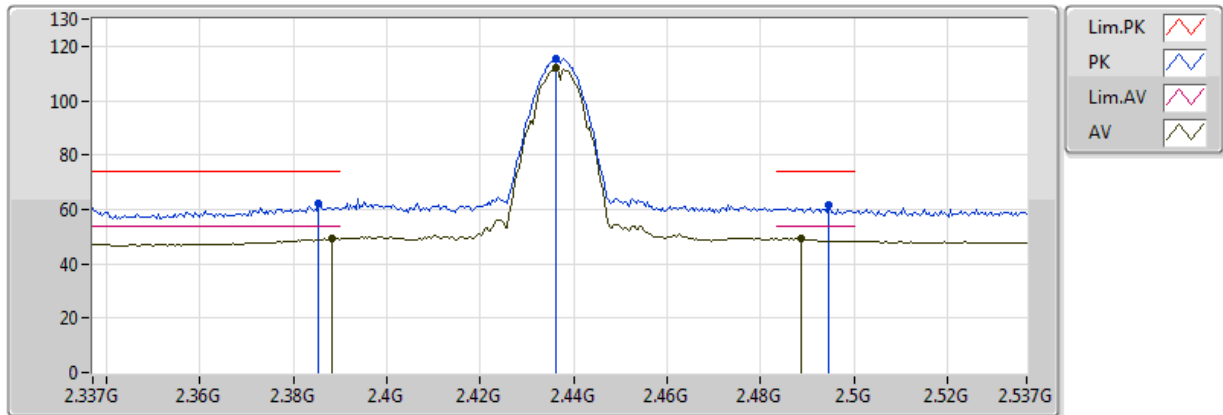


20170925
EUT Y_2TX Dipole
Setting 27
02-D-1
FSU(100015)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	2.3896G	53.66	54.00	-0.34	32.13	3	Vertical	69	2.74					
AV	2.4244G	109.76	Inf	-Inf	32.23	3	Vertical	69	2.74					
PK	2.3884G	65.22	74.00	-8.78	32.12	3	Vertical	69	2.74					
PK	2.4244G	113.35	Inf	-Inf	32.23	3	Vertical	69	2.74					

802.11b_Nss1,(1Mbps)_2TX

2437MHz_TX

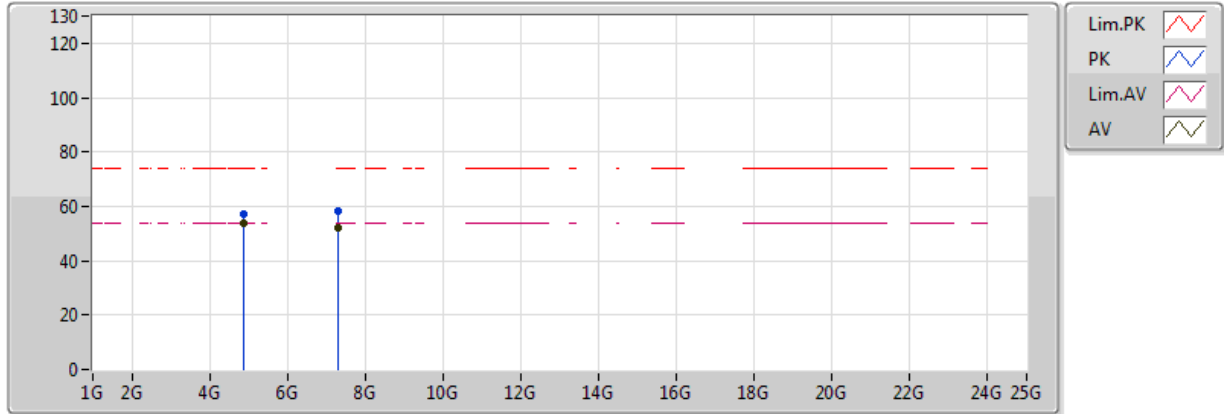


20170919
EUT Y_2TX ANT Dipole
Setting 20
02-Z-1
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	2.3882G	49.51	54.00	-4.49	32.12	3	Vertical	248	1.50					
AV	2.4362G	111.95	Inf	-Inf	32.26	3	Vertical	248	1.50					
AV	2.4886G	49.20	54.00	-4.80	32.42	3	Vertical	248	1.50					
PK	2.3854G	62.14	74.00	-11.86	32.11	3	Vertical	248	1.50					
PK	2.4362G	115.35	Inf	-Inf	32.26	3	Vertical	248	1.50					
PK	2.4946G	61.84	74.00	-12.16	32.43	3	Vertical	248	1.50					

802.11b_Nss1,(1Mbps)_2TX

2437MHz_TX

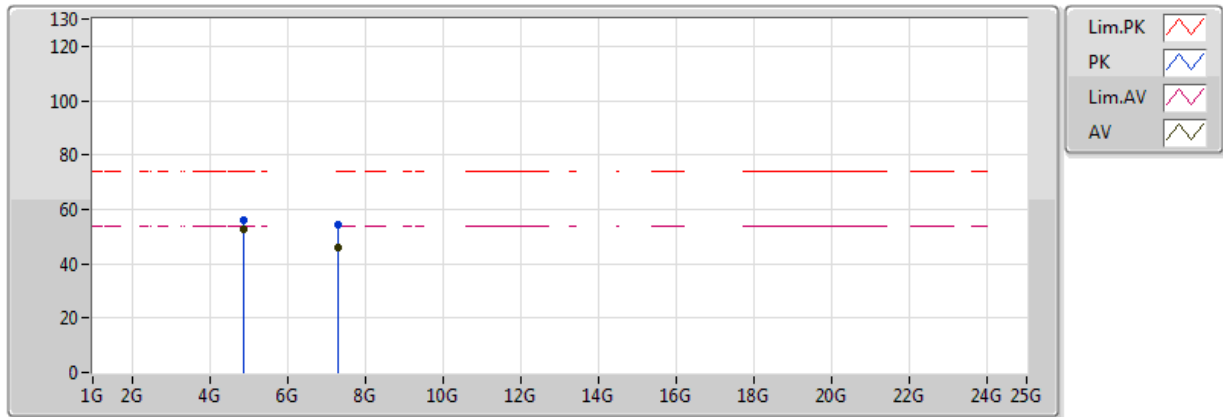


20170919
EUT Y_2TX ANT Dipole
Setting 20
02-Z-1
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height					
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)					
AV	4.874G	53.97	54.00	-0.03	9.01	3	Vertical	151	2.56					
AV	7.3102G	51.95	54.00	-2.05	12.90	3	Vertical	134	1.38					
PK	4.874G	57.25	74.00	-16.75	9.01	3	Vertical	151	2.56					
PK	7.31G	58.39	74.00	-15.61	12.90	3	Vertical	134	1.38					

802.11b_Nss1,(1Mbps)_2TX

2437MHz_TX

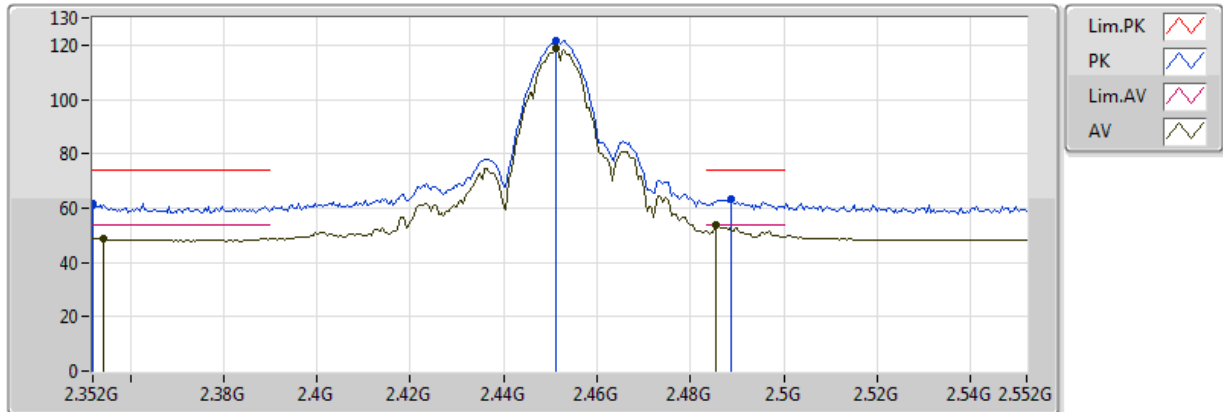


20170919
EUT Y_2TX ANT Dipole
Setting 20
02-Z-1
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	4.87398G	52.64	54.00	-1.36	9.01	3	Horizontal	152	1.50					
AV	7.30926G	46.04	54.00	-7.96	12.90	3	Horizontal	280	1.25					
PK	4.874G	56.04	74.00	-17.96	9.01	3	Horizontal	152	1.50					
PK	7.30938G	54.35	74.00	-19.65	12.90	3	Horizontal	280	1.25					

802.11b_Nss1,(1Mbps)_2TX

2452MHz_TX

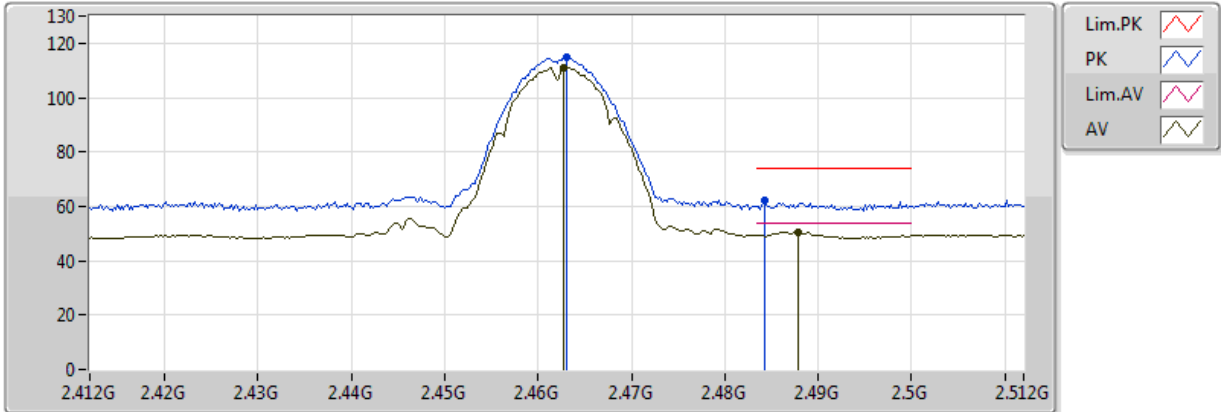


20170925
EUT Y_2TX Dipole
Setting 29
02-D-1
FSU(100015)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)						
AV	2.3544G	48.74	54.00	-5.26	32.02	3	Vertical	210	1.50						
AV	2.4512G	118.62	Inf	-Inf	32.31	3	Vertical	210	1.50						
AV	2.4856G	53.87	54.00	-0.13	32.41	3	Vertical	210	1.50						
PK	2.352G	61.60	74.00	-12.40	32.01	3	Vertical	210	1.50						
PK	2.4512G	121.87	Inf	-Inf	32.31	3	Vertical	210	1.50						
PK	2.4888G	63.10	74.00	-10.90	32.42	3	Vertical	210	1.50						

802.11b_Nss1,(1Mbps)_2TX

2462MHz_TX

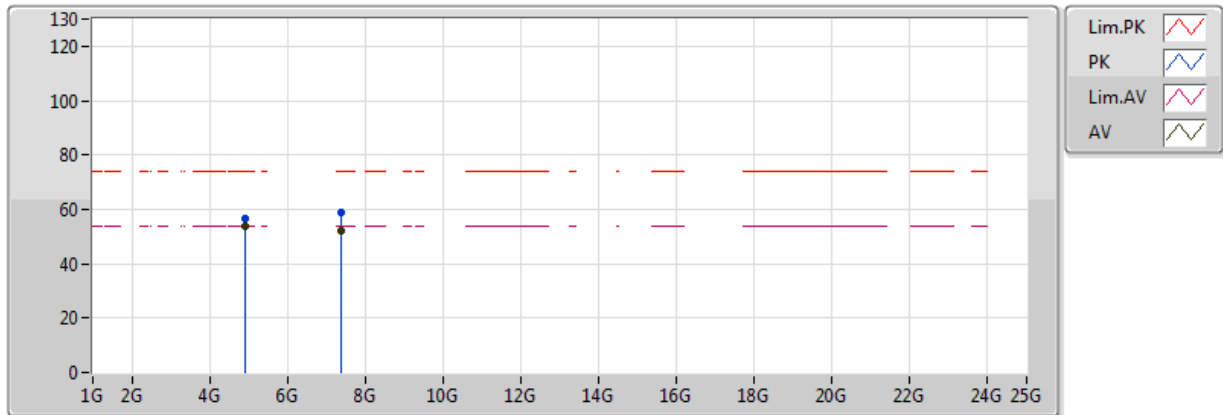


20170919
EUT Y_2TX ANT Dipole
Setting 19.5
02-Z-1
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height						
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)						
AV	2.4628G	111.10	Inf	-Inf	32.34	3	Vertical	259	2.43						
AV	2.4878G	50.62	54.00	-3.38	32.41	3	Vertical	259	2.43						
PK	2.463G	115.04	Inf	-Inf	32.34	3	Vertical	259	2.43						
PK	2.4842G	62.09	74.00	-11.91	32.40	3	Vertical	259	2.43						

802.11b_Nss1,(1Mbps)_2TX

2462MHz_TX

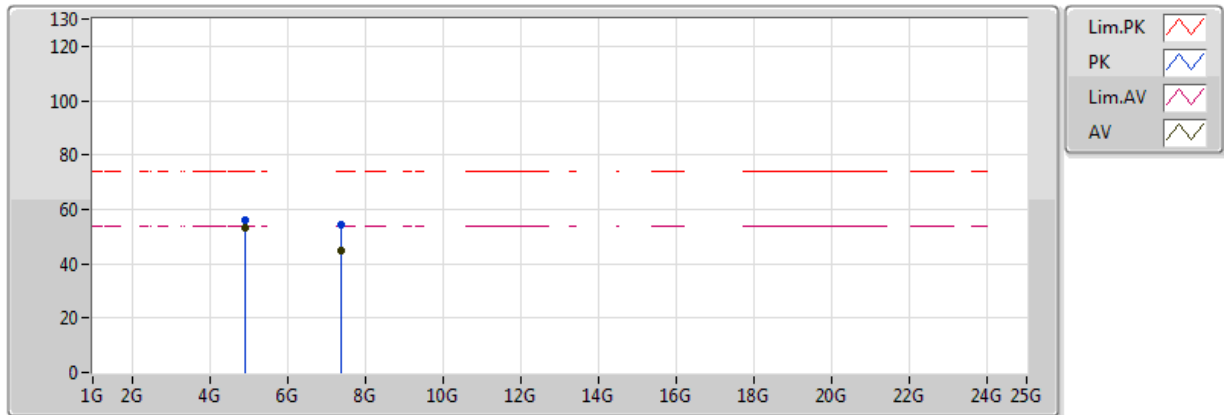


20170919
EUT Y_2TX ANT Dipole
Setting 19.5
02-Z-1
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height					
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)					
AV	4.92398G	53.98	54.00	-0.02	9.16	3	Vertical	139	1.50					
AV	7.38528G	52.03	54.00	-1.97	13.07	3	Vertical	282	2.39					
PK	4.92386G	56.84	74.00	-17.16	9.16	3	Vertical	139	1.50					
PK	7.38676G	58.60	74.00	-15.40	13.07	3	Vertical	282	2.39					

802.11b_Nss1,(1Mbps)_2TX

2462MHz_TX

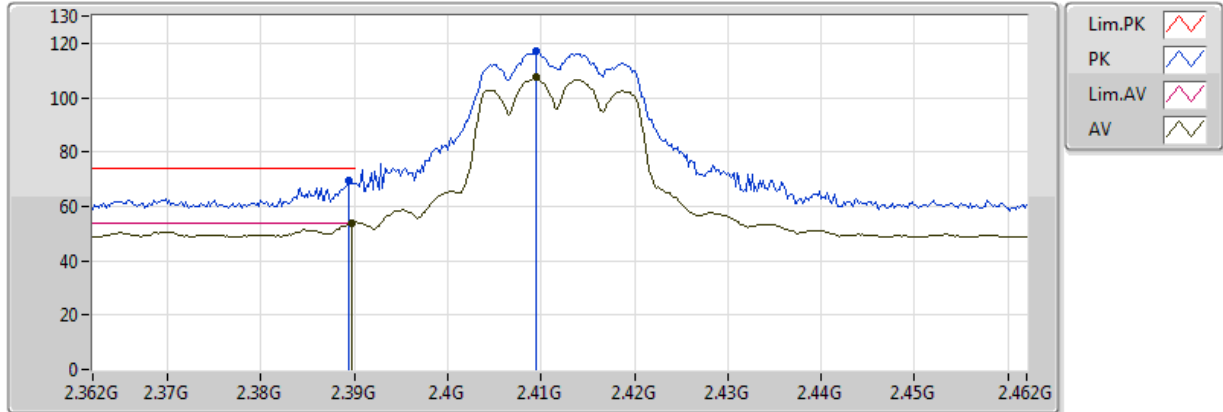


20170919
EUT Y_2TX ANT Dipole
Setting 19.5
02-Z-1
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	4.92398G	53.47	54.00	-0.53	9.16	3	Horizontal	134	1.27					
AV	7.38428G	44.70	54.00	-9.30	13.07	3	Horizontal	123	1.30					
PK	4.92396G	56.11	74.00	-17.89	9.16	3	Horizontal	134	1.27					
PK	7.3845G	54.12	74.00	-19.88	13.07	3	Horizontal	123	1.30					

802.11g_Nss1,(6Mbps)_2TX

2412MHz_TX

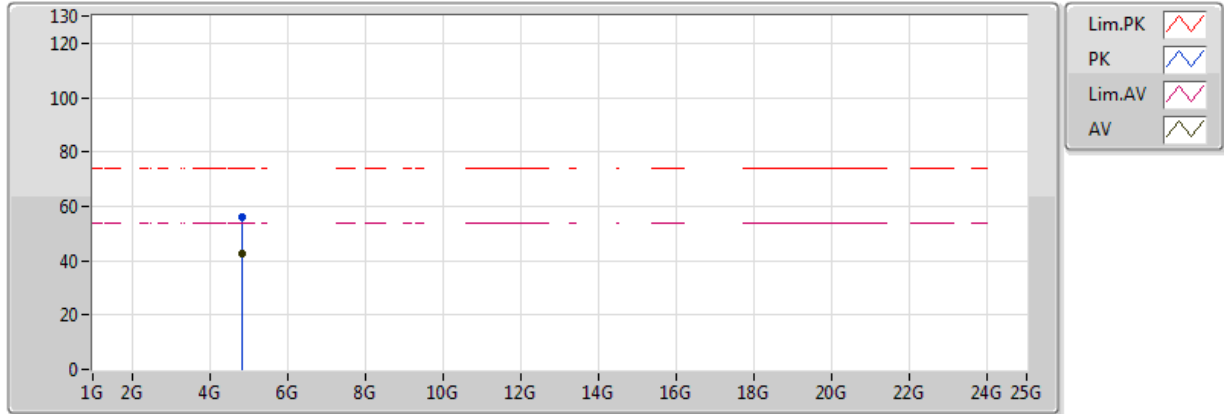


20170919
EUT Y_2TX ANT Dipole
Setting 19
02-Z-1
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	2.3898G	53.96	54.00	-0.04	32.13	3	Vertical	165	2.33					
AV	2.4094G	107.37	Inf	-Inf	32.19	3	Vertical	165	2.33					
PK	2.3894G	69.23	74.00	-4.77	32.13	3	Vertical	165	2.33					
PK	2.4094G	117.09	Inf	-Inf	32.19	3	Vertical	165	2.33					

802.11g_Nss1,(6Mbps)_2TX

2412MHz_TX

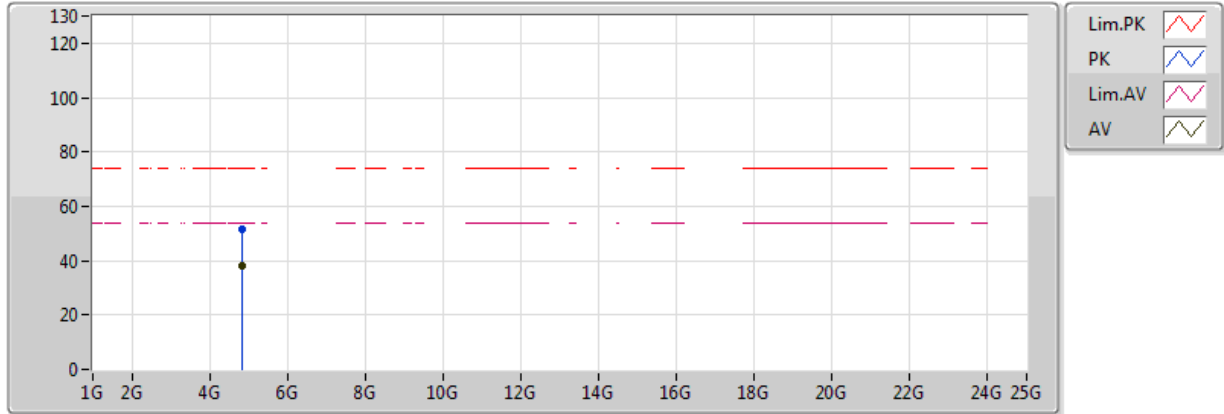


20170919
EUT Y_2TX ANT Dipole
Setting 19
02-Z-1
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height					
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)					
AV	4.82504G	42.42	54.00	-11.58	8.86	3	Vertical	127	1.94					
PK	4.81996G	56.15	74.00	-17.85	8.84	3	Vertical	127	1.94					

802.11g_Nss1,(6Mbps)_2TX

2412MHz_TX

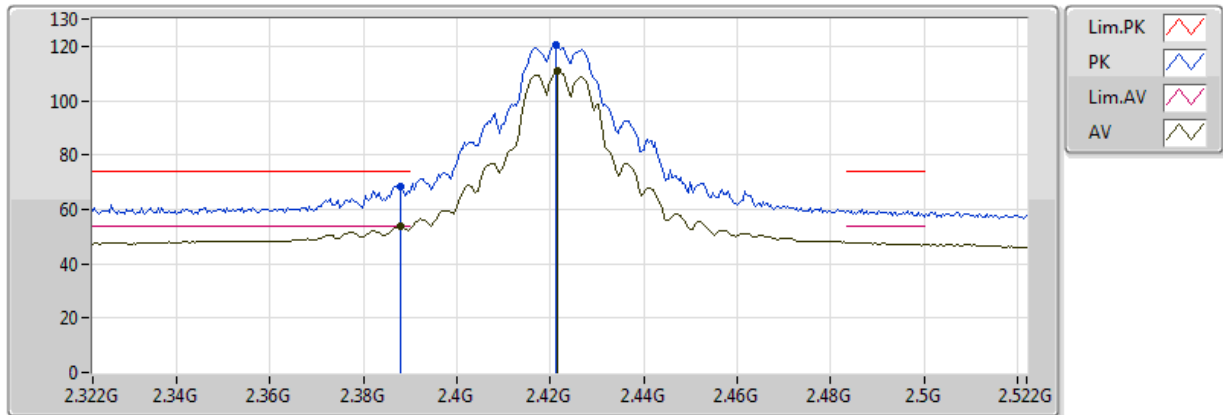


20170919
EUT Y_2TX ANT Dipole
Setting 19
02-Z-1
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height					
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)					
AV	4.8248G	38.11	54.00	-15.89	8.86	3	Horizontal	123	1.45					
PK	4.82444G	51.33	74.00	-22.67	8.86	3	Horizontal	123	1.45					

802.11g_Nss1,(6Mbps)_2TX

2422MHz_TX

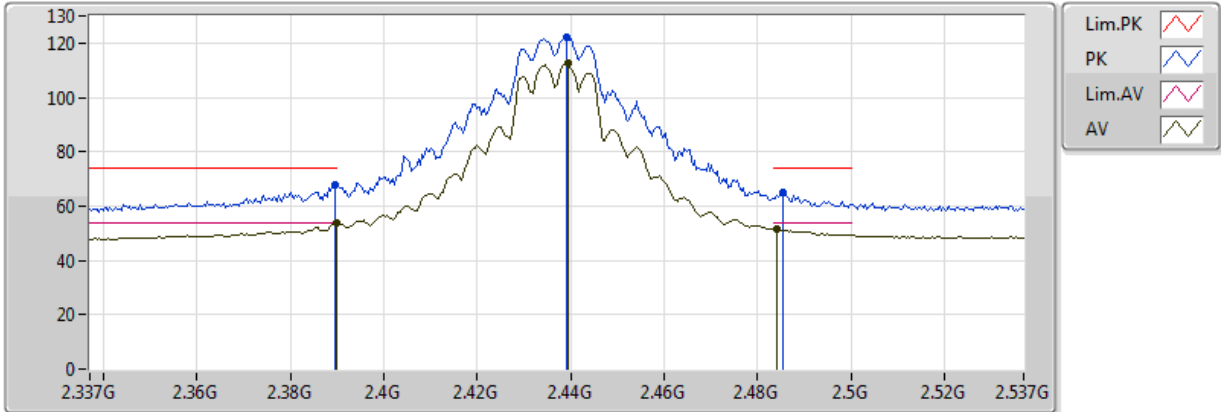


20170922
EUT Y_2TX ANT Dipole
Setting 23
03-P-2
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	2.388G	53.53	54.00	-0.47	31.91	3	Vertical	249	2.02					
AV	2.4216G	111.01	Inf	-Inf	31.99	3	Vertical	249	2.02					
PK	2.388G	68.60	74.00	-5.40	31.91	3	Vertical	249	2.02					
PK	2.4212G	120.73	Inf	-Inf	31.99	3	Vertical	249	2.02					

802.11g_Nss1,(6Mbps)_2TX

2437MHz_TX

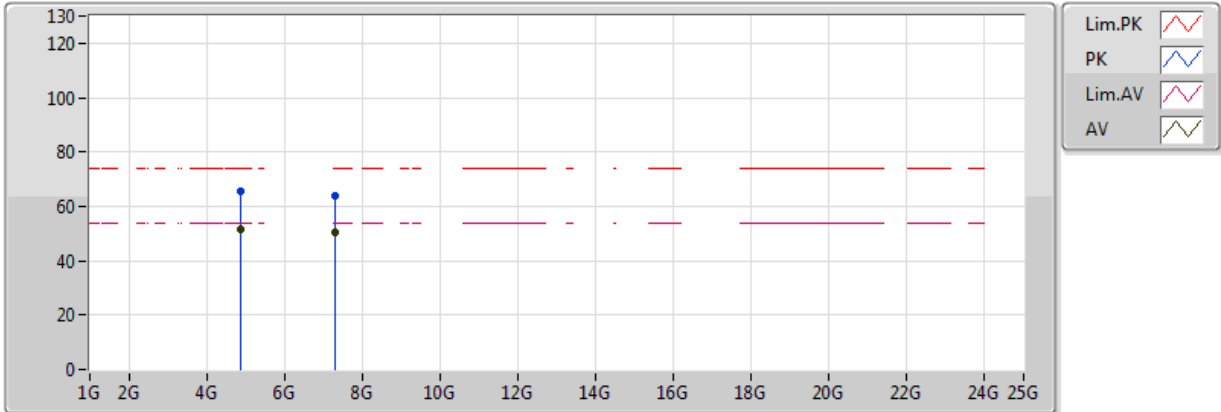


20170919
EUT Y_2TX ANT Dipole
Setting 27
02-Z-1
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)						
AV	2.389998G	53.68	54.00	-0.32	32.13	3	Vertical	315	2.48						
AV	2.4394G	112.74	Inf	-Inf	32.27	3	Vertical	315	2.48						
AV	2.4842G	51.41	54.00	-2.59	32.40	3	Vertical	315	2.48						
PK	2.3894G	67.88	74.00	-6.12	32.13	3	Vertical	315	2.48						
PK	2.439G	122.17	Inf	-Inf	32.27	3	Vertical	315	2.48						
PK	2.4854G	65.06	74.00	-8.94	32.41	3	Vertical	315	2.48						

802.11g_Nss1,(6Mbps)_2TX

2437MHz_TX

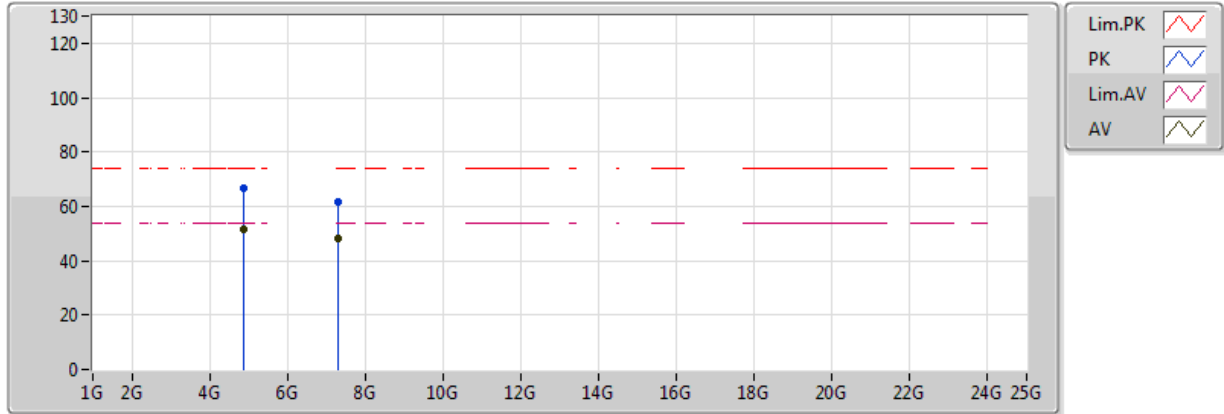


20170919
EUT Y_2TX ANT Dipole
Setting 27
02-Z-1
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	4.8748G	51.64	54.00	-2.36	9.01	3	Vertical	273	1.02					
AV	7.31512G	50.58	54.00	-3.42	12.91	3	Vertical	268	2.42					
PK	4.87528G	65.63	74.00	-8.37	9.01	3	Vertical	273	1.02					
PK	7.31528G	64.12	74.00	-9.88	12.91	3	Vertical	268	2.42					

802.11g_Nss1,(6Mbps)_2TX

2437MHz_TX

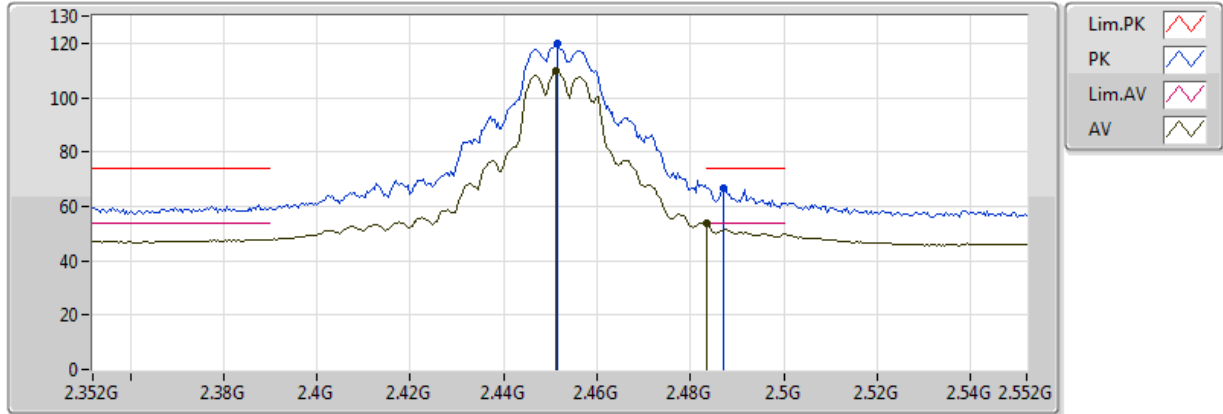


20170919
EUT Y_2TX ANT Dipole
Setting 27
02-Z-1
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	4.87408G	51.32	54.00	-2.68	9.01	3	Horizontal	266	1.50					
AV	7.3138G	48.25	54.00	-5.75	12.91	3	Horizontal	131	1.30					
PK	4.86984G	66.88	74.00	-7.12	9.00	3	Horizontal	266	1.50					
PK	7.31488G	61.46	74.00	-12.54	12.91	3	Horizontal	131	1.30					

802.11g_Nss1,(6Mbps)_2TX

2452MHz_TX

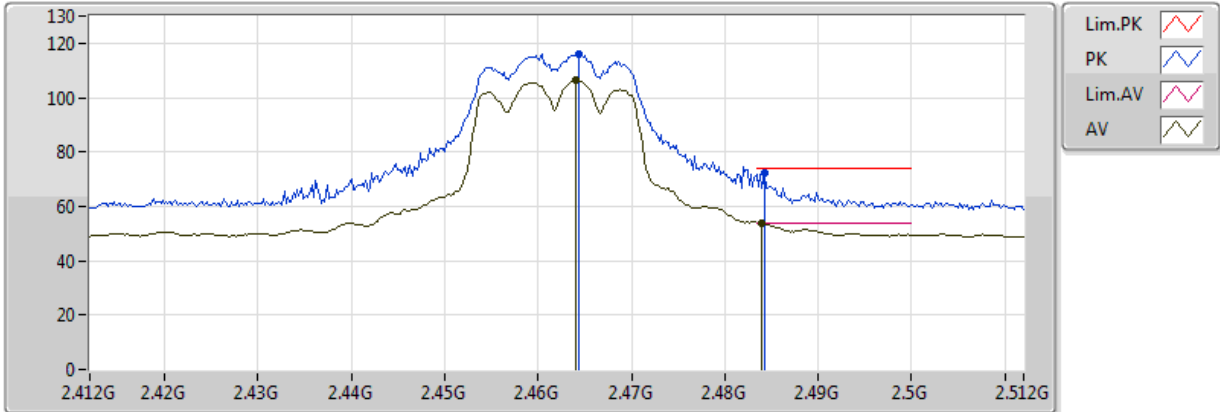


20170922
EUT Y_2TX ANT Dipole
Setting 23
03-P-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height					
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)					
AV	2.4512G	109.78	Inf	-Inf	32.06	3	Vertical	257	1.73					
AV	2.4836G	53.56	54.00	-0.44	32.14	3	Vertical	257	1.73					
PK	2.4516G	119.65	Inf	-Inf	32.06	3	Vertical	257	1.73					
PK	2.4872G	66.59	74.00	-7.41	32.15	3	Vertical	257	1.73					

802.11g_Nss1,(6Mbps)_2TX

2462MHz_TX

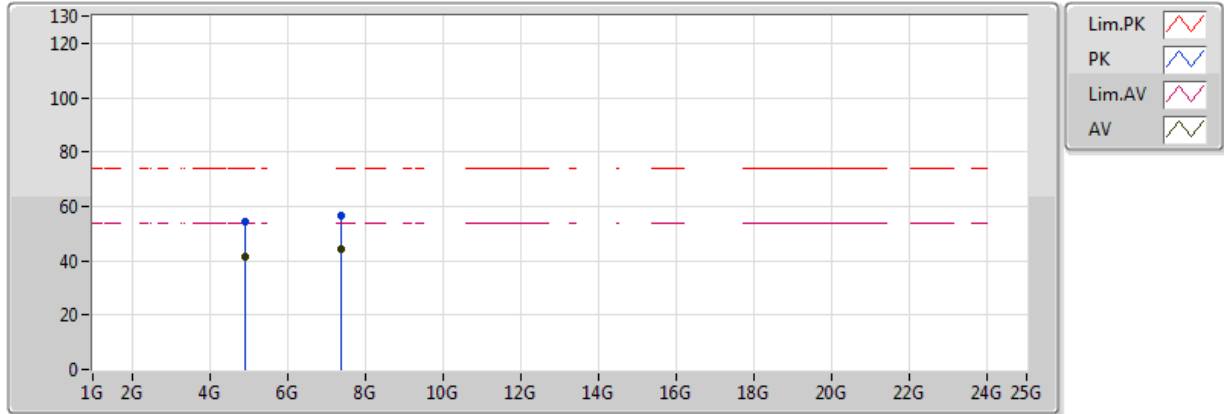


20170919
EUT Y_2TX ANT Dipole
Setting 19
02-J-6
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height						
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)						
AV	2.464G	106.52	Inf	-Inf	32.35	3	Vertical	168	2.06						
AV	2.484G	53.91	54.00	-0.09	32.40	3	Vertical	168	2.06						
PK	2.4644G	115.92	Inf	-Inf	32.35	3	Vertical	168	2.06						
PK	2.4842G	72.11	74.00	-1.89	32.40	3	Vertical	168	2.06						

802.11g_Nss1,(6Mbps)_2TX

2462MHz_TX

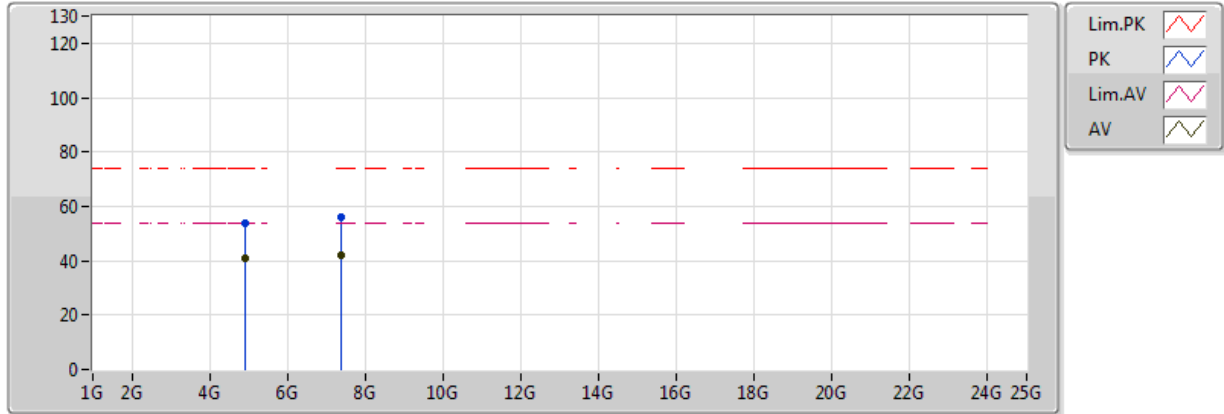


20170919
EUT Y_2TX ANT Dipole
Setting 19
02-J-6
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	4.92532G	41.26	54.00	-12.74	9.17	3	Vertical	134	1.12					
AV	7.38582G	44.07	54.00	-9.93	13.07	3	Vertical	281	2.36					
PK	4.92544G	54.55	74.00	-19.45	9.17	3	Vertical	134	1.12					
PK	7.38546G	56.74	74.00	-17.26	13.07	3	Vertical	281	2.36					

802.11g_Nss1,(6Mbps)_2TX

2462MHz_TX

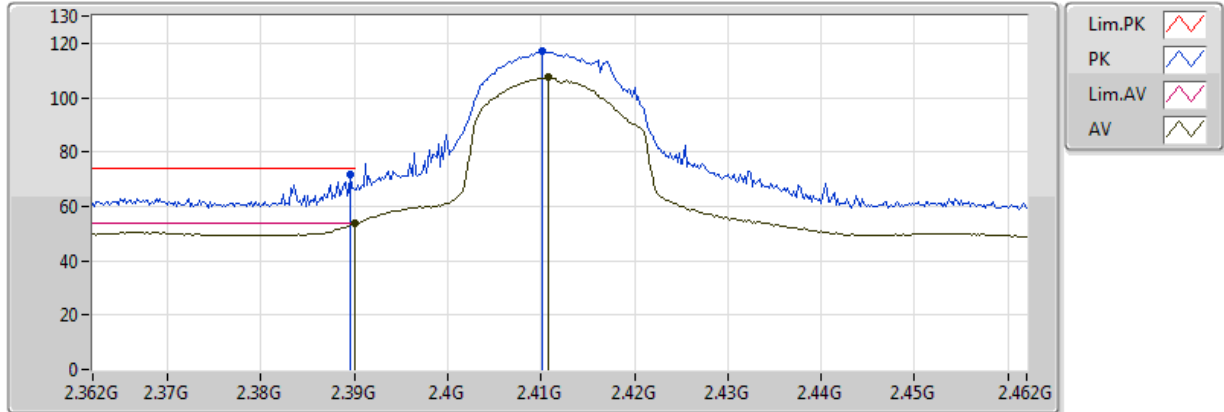


20170919
EUT Y_2TX ANT Dipole
Setting 19
02-J-6
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height					
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)					
AV	4.9255G	40.76	54.00	-13.24	9.17	3	Horizontal	278	1.44					
AV	7.38462G	42.24	54.00	-11.76	13.07	3	Horizontal	295	1.02					
PK	4.9198G	53.80	74.00	-20.20	9.15	3	Horizontal	278	1.44					
PK	7.3938G	56.23	74.00	-17.77	13.09	3	Horizontal	295	1.02					

802.11n HT20_Nss1,(MCS0)_2TX

2412MHz_TX

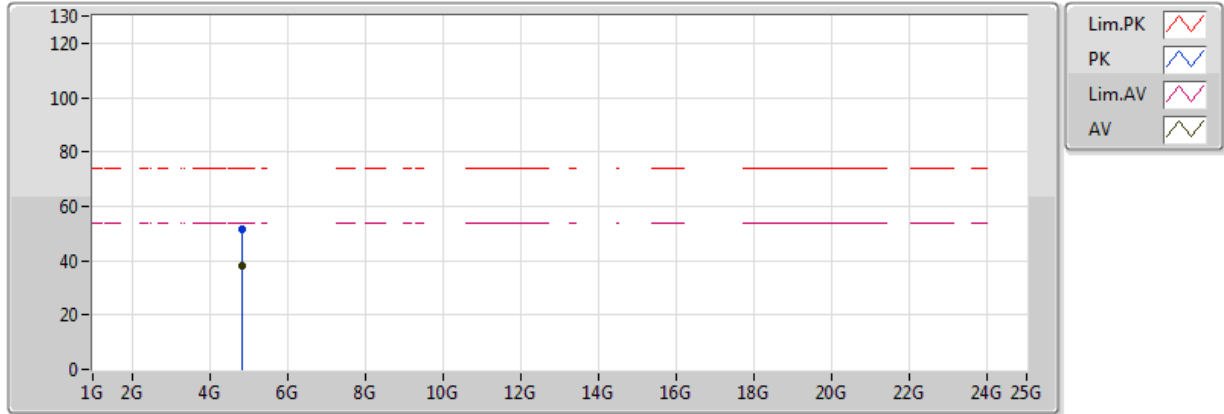


20170919
EUT Y_2TX ANT Dipole
Setting 18.5
02-J-6
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	2.39G	53.64	54.00	-0.36	32.13	3	Vertical	317	2.33					
AV	2.4108G	107.40	Inf	-Inf	32.19	3	Vertical	317	2.33					
PK	2.3896G	71.70	74.00	-2.30	32.13	3	Vertical	317	2.33					
PK	2.4102G	117.10	Inf	-Inf	32.19	3	Vertical	317	2.33					

802.11n HT20_Nss1,(MCS0)_2TX

2412MHz_TX

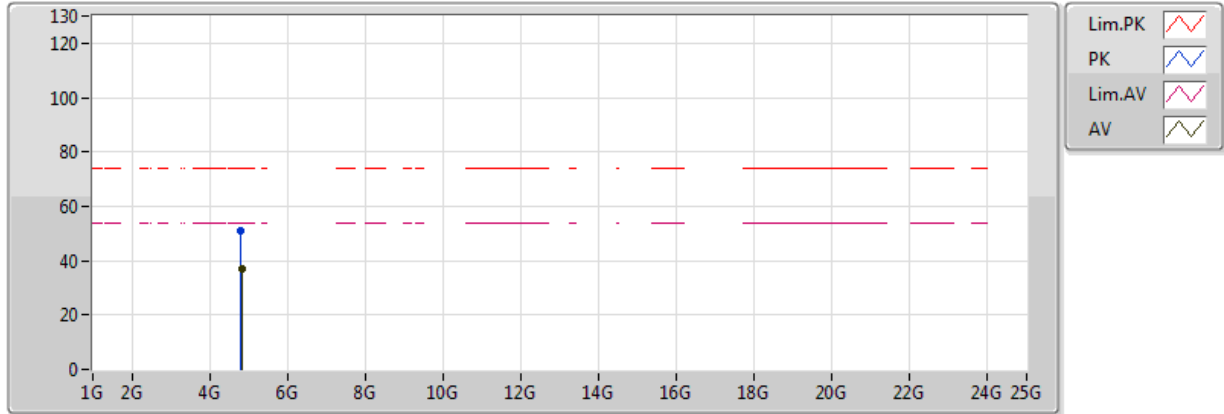


20170919
EUT Y_2TX ANT Dipole
Setting 18.5
02-J-6
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height					
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)					
AV	4.81788G	38.14	54.00	-15.86	8.84	3	Vertical	108	2.06					
PK	4.83174G	51.39	74.00	-22.61	8.88	3	Vertical	108	2.06					

802.11n HT20_Nss1,(MCS0)_2TX

2412MHz_TX

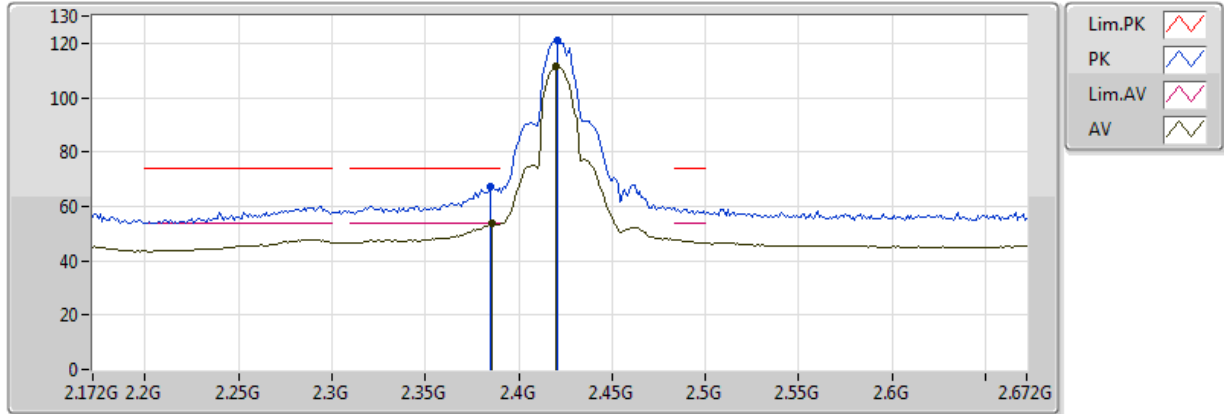


20170919
EUT Y_2TX ANT Dipole
Setting 18.5
02-J-6
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height					
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)					
AV	4.82784G	37.04	54.00	-16.96	8.87	3	Horizontal	236	1.35					
PK	4.80978G	50.92	74.00	-23.08	8.81	3	Horizontal	236	1.35					

802.11n HT20_Nss1,(MCS0)_2TX

2422MHz_TX

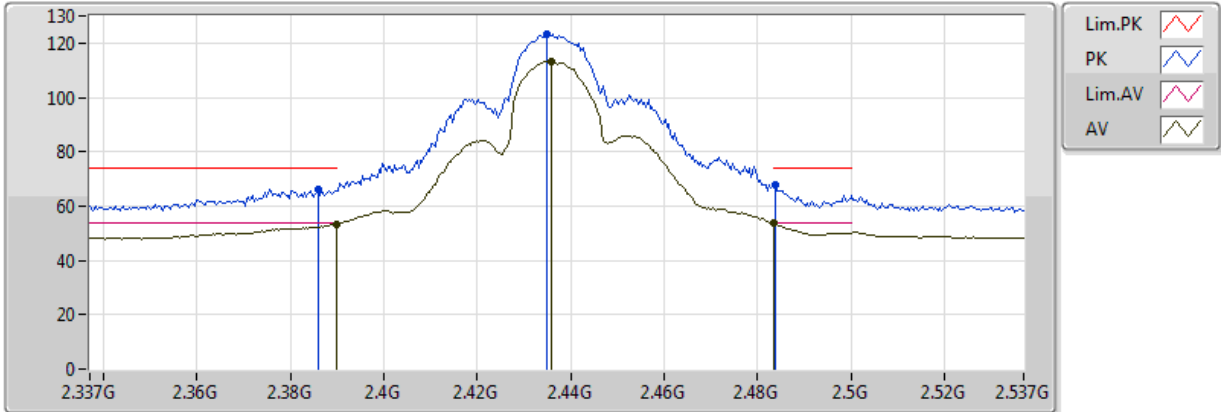


20170922
EUT Y_2TX ANT Dipole
Setting 24
03-P-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height					
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)					
AV	2.386G	53.68	54.00	-0.32	31.90	3	Vertical	254	2.15					
AV	2.42G	111.70	Inf	-Inf	31.99	3	Vertical	254	2.15					
PK	2.385G	67.26	74.00	-6.74	31.90	3	Vertical	254	2.15					
PK	2.421G	121.30	Inf	-Inf	31.99	3	Vertical	254	2.15					

802.11n HT20_Nss1,(MCS0)_2TX

2437MHz_TX

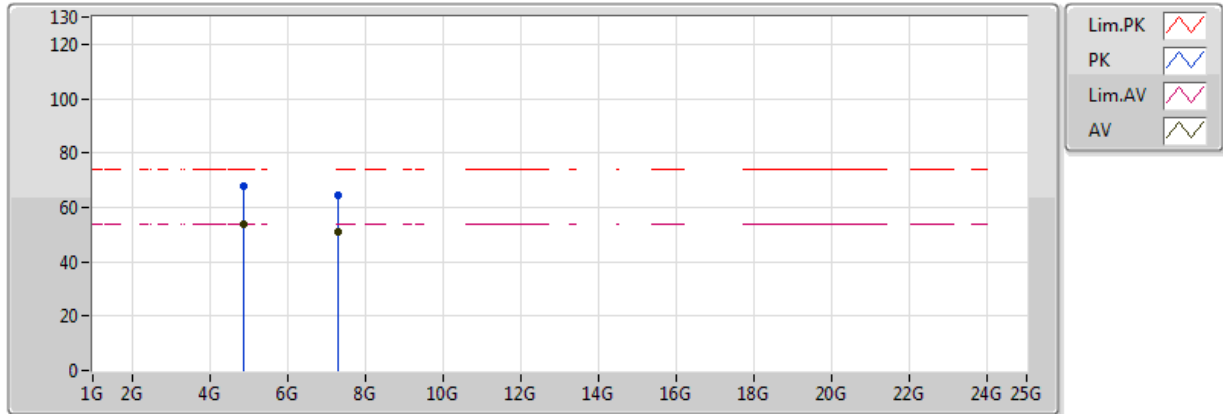


20170919
EUT Y_2TX ANT Dipole
Setting 29
02-J-6
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	2.389998G	53.44	54.00	-0.56	32.13	3	Vertical	154	2.79					
AV	2.4358G	113.45	Inf	-Inf	32.26	3	Vertical	154	2.79					
AV	2.483502G	53.85	54.00	-0.15	32.40	3	Vertical	154	2.79					
PK	2.3858G	66.13	74.00	-7.87	32.12	3	Vertical	154	2.79					
PK	2.435G	123.36	Inf	-Inf	32.26	3	Vertical	154	2.79					
PK	2.4838G	67.94	74.00	-6.06	32.40	3	Vertical	154	2.79					

802.11n HT20_Nss1,(MCS0)_2TX

2437MHz_TX

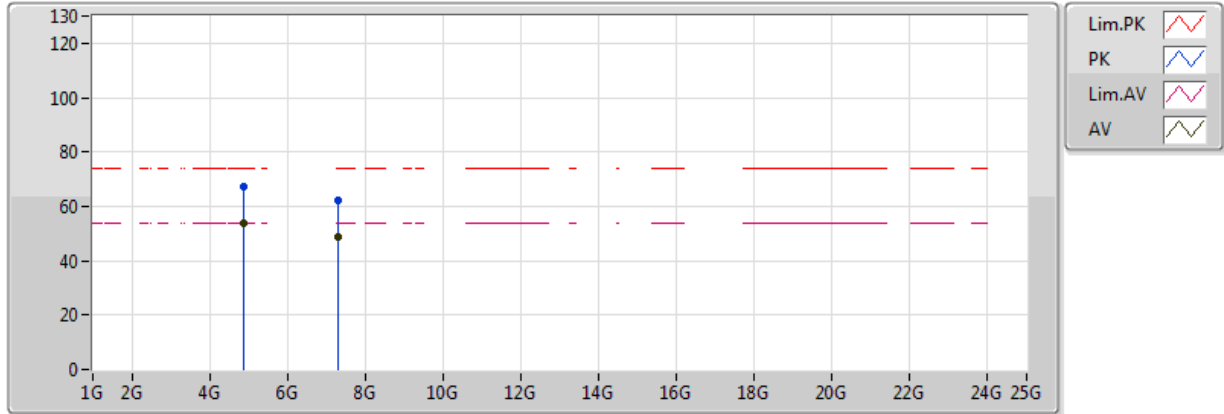


20170919
EUT Y_2TX ANT Dipole
Setting 29
02-J-6
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	4.87586G	53.81	54.00	-0.19	9.02	3	Vertical	116	1.09					
AV	7.31172G	51.06	54.00	-2.94	12.91	3	Vertical	258	1.52					
PK	4.8725G	67.55	74.00	-6.45	9.00	3	Vertical	116	1.09					
PK	7.3125G	64.44	74.00	-9.56	12.91	3	Vertical	258	1.52					

802.11n HT20_Nss1,(MCS0)_2TX

2437MHz_TX

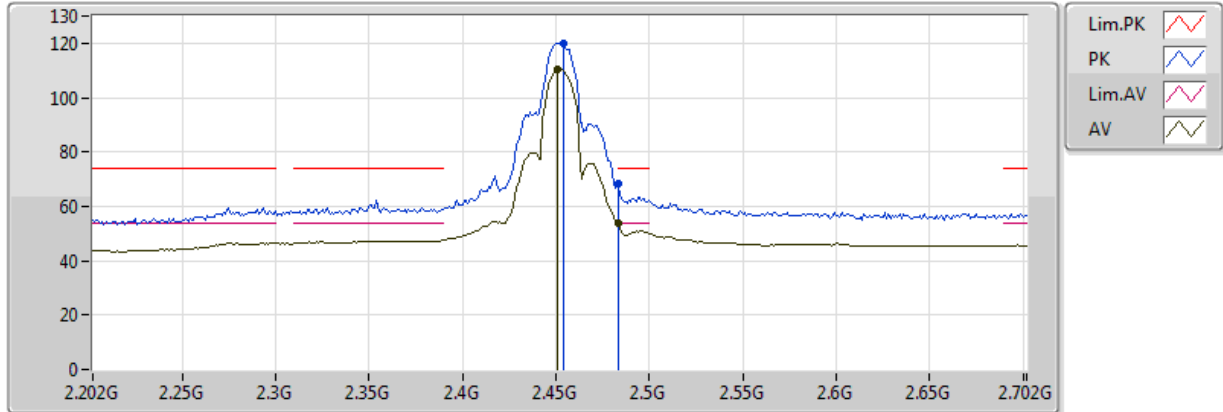


20170919
EUT Y_2TX ANT Dipole
Setting 29
02-J-6
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height					
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)					
AV	4.87538G	53.54	54.00	-0.46	9.01	3	Horizontal	262	1.50					
AV	7.3119G	48.48	54.00	-5.52	12.91	3	Horizontal	125	1.37					
PK	4.87256G	67.36	74.00	-6.64	9.00	3	Horizontal	262	1.50					
PK	7.31112G	62.21	74.00	-11.79	12.90	3	Horizontal	125	1.37					

802.11n HT20_Nss1,(MCS0)_2TX

2452MHz_TX

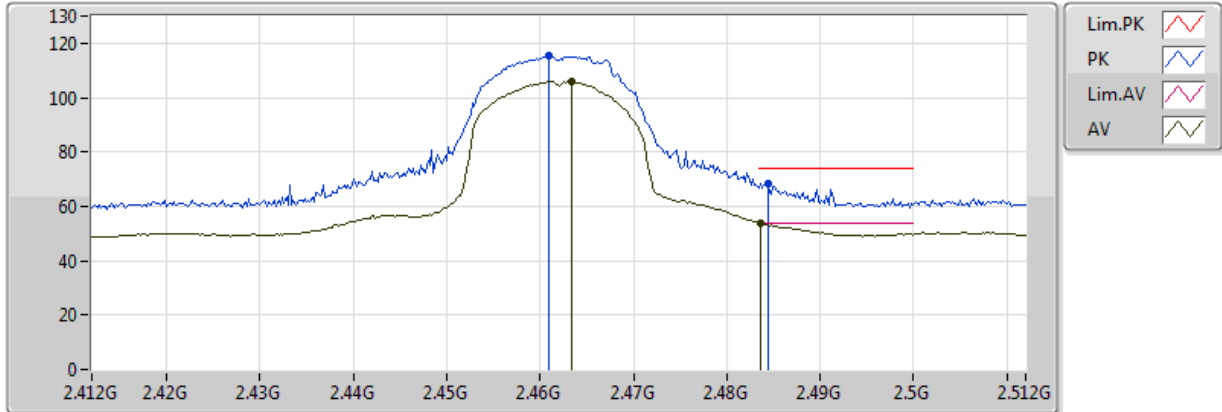


20170922
EUT Y_2TX ANT Dipole
Setting 25
03-P-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height					
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)					
AV	2.451G	110.60	Inf	-Inf	32.06	3	Vertical	90	2.56					
AV	2.483502G	53.72	54.00	-0.28	32.14	3	Vertical	90	2.56					
PK	2.454G	119.95	Inf	-Inf	32.07	3	Vertical	90	2.56					
PK	2.483502G	68.23	74.00	-5.77	32.14	3	Vertical	90	2.56					

802.11n HT20_Nss1,(MCS0)_2TX

2462MHz_TX

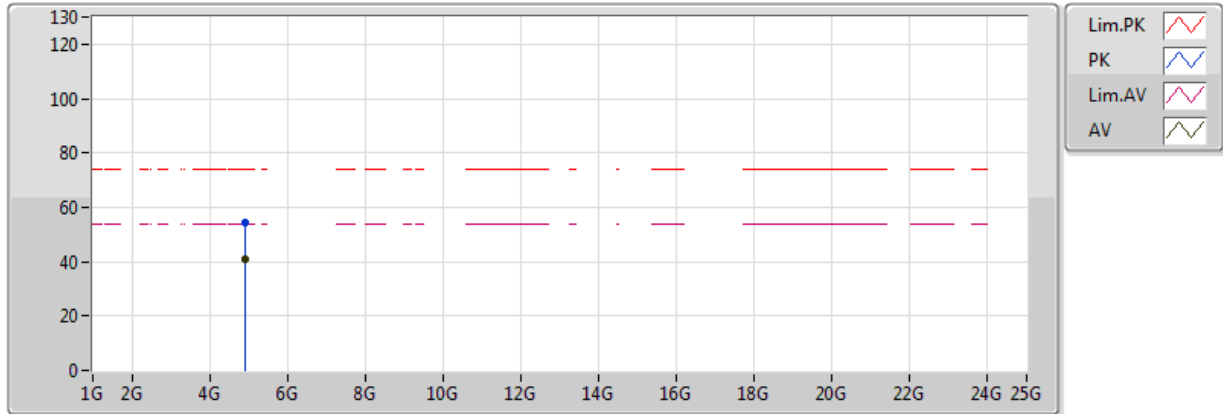


20170919
EUT Y_2TX ANT Dipole
Setting 19
02-J-6
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height						
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)						
AV	2.4634G	105.94	Inf	-Inf	32.34	3	Vertical	249	2.39						
AV	2.4836G	53.84	54.00	-0.16	32.40	3	Vertical	249	2.39						
PK	2.461G	115.40	Inf	-Inf	32.34	3	Vertical	249	2.39						
PK	2.4844G	68.36	74.00	-5.64	32.40	3	Vertical	249	2.39						

802.11n HT20_Nss1,(MCS0)_2TX

2462MHz_TX

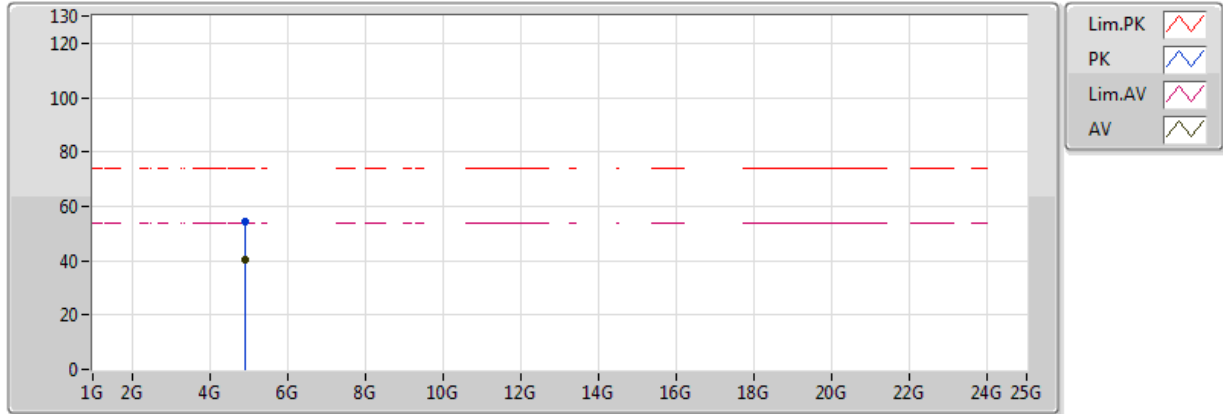


20170919
EUT Y_2TX ANT Dipole
Setting 19
02-J-6
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	4.92604G	40.94	54.00	-13.06	9.17	3	Vertical	271	1.50					
PK	4.92436G	54.37	74.00	-19.63	9.16	3	Vertical	271	1.50					

802.11n HT20_Nss1,(MCS0)_2TX

2462MHz_TX

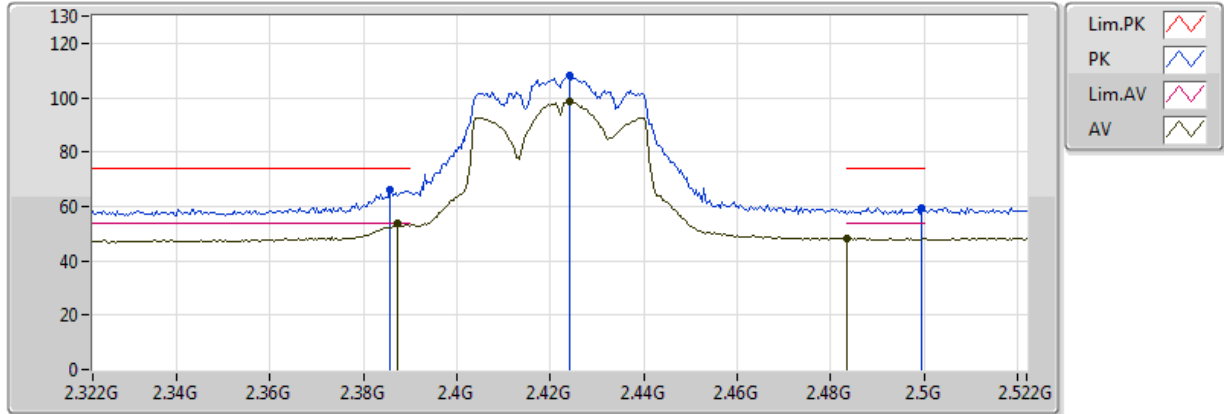


20170919
EUT Y_2TX ANT Dipole
Setting 19
02-J-6
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	4.92802G	40.60	54.00	-13.40	9.17	3	Horizontal	266	1.58					
PK	4.92988G	54.15	74.00	-19.85	9.18	3	Horizontal	266	1.58					

802.11n HT40_Nss1,(MCS0)_2TX

2422MHz_TX

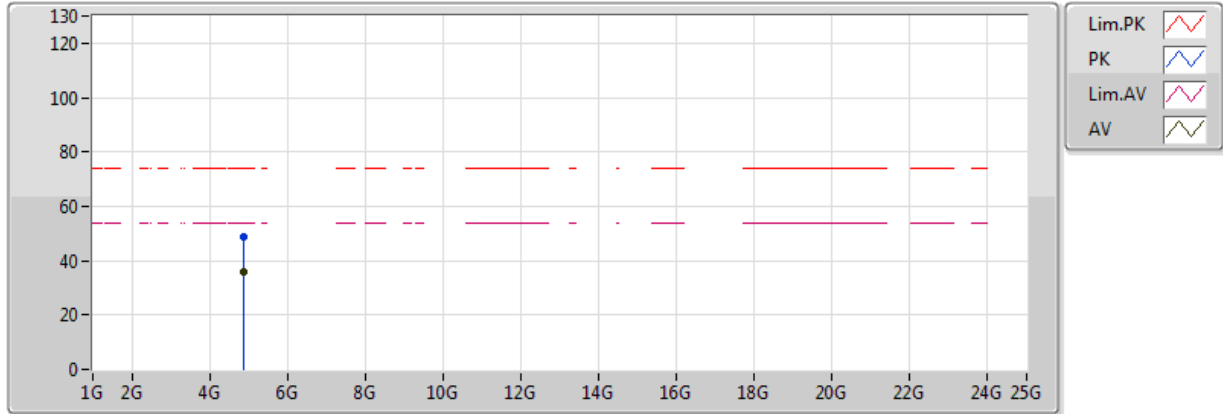


20170919
EUT Y_2TX ANT Dipole
Setting 15.5
02-J-6
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	2.3872G	53.66	54.00	-0.34	32.12	3	Vertical	210	1.50					
AV	2.424G	98.42	Inf	-Inf	32.23	3	Vertical	210	1.50					
AV	2.4836G	48.22	54.00	-5.78	32.40	3	Vertical	210	1.50					
PK	2.3856G	65.85	74.00	-8.15	32.12	3	Vertical	210	1.50					
PK	2.424G	107.87	Inf	-Inf	32.23	3	Vertical	210	1.50					
PK	2.4996G	59.54	74.00	-14.46	32.45	3	Vertical	210	1.50					

802.11n HT40_Nss1,(MCS0)_2TX

2422MHz_TX

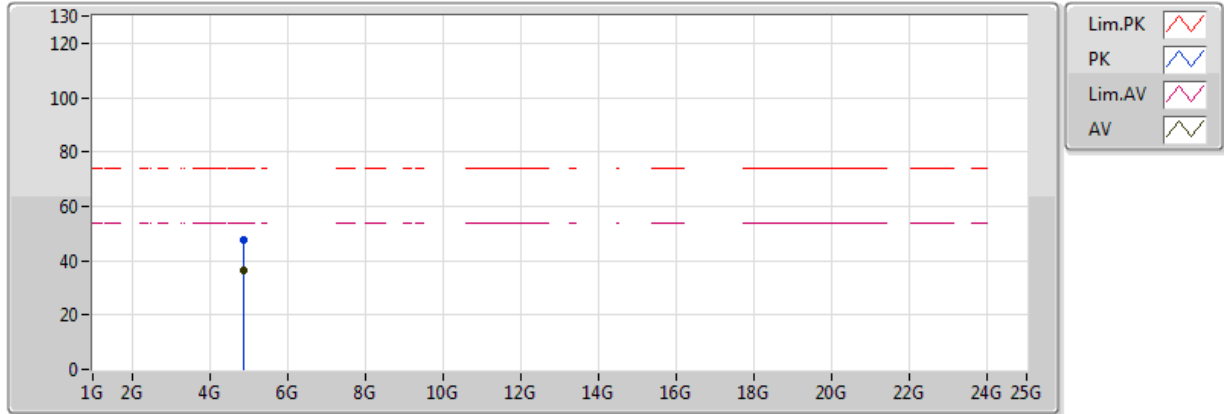


20170919
EUT Y_2TX ANT Dipole
Setting 15.5
02-J-6
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height					
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)					
AV	4.85726G	36.08	54.00	-17.92	8.96	3	Vertical	307	2.19					
PK	4.85894G	48.47	74.00	-25.53	8.96	3	Vertical	307	2.19					

802.11n HT40_Nss1,(MCS0)_2TX

2422MHz_TX

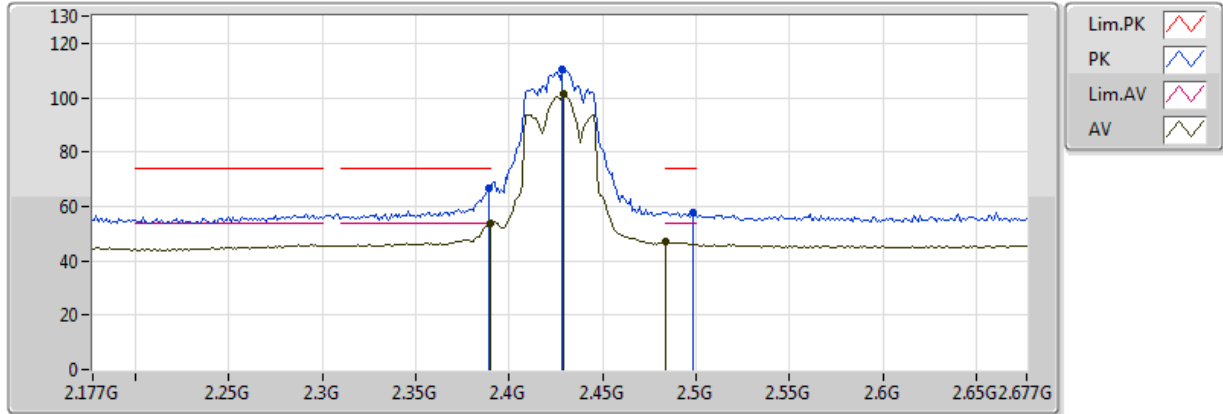


20170919
EUT Y_2TX ANT Dipole
Setting 15.5
02-J-6
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height					
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)					
AV	4.85864G	36.27	54.00	-17.73	8.96	3	Horizontal	130	2.37					
PK	4.8584G	47.73	74.00	-26.27	8.96	3	Horizontal	130	2.37					

802.11n HT40_Nss1,(MCS0)_2TX

2427MHz_TX

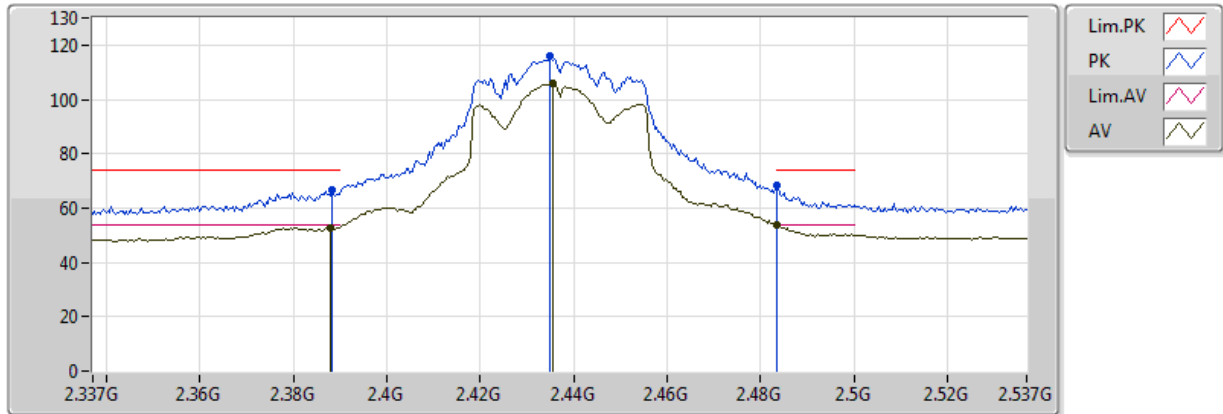


20170922
EUT Y_2TX ANT Dipole
Setting 17
03-P-2
FSP(100019)

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height					
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)					
AV	2.39G	53.69	54.00	-0.31	31.91	3	Vertical	95	1.19					
AV	2.429G	101.31	Inf	-Inf	32.01	3	Vertical	95	1.19					
AV	2.484G	46.92	54.00	-7.08	32.14	3	Vertical	95	1.19					
PK	2.389G	66.50	74.00	-7.50	31.91	3	Vertical	95	1.19					
PK	2.428G	110.29	Inf	-Inf	32.01	3	Vertical	95	1.19					
PK	2.498G	57.99	74.00	-16.01	32.18	3	Vertical	95	1.19					

802.11n HT40_Nss1,(MCS0)_2TX

2437MHz_TX

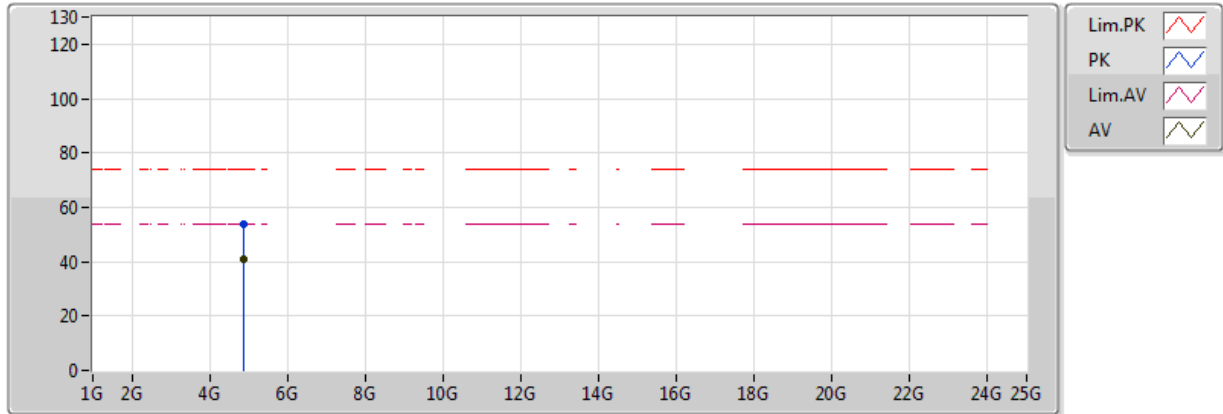


20170919
EUT Y_2TX ANT Dipole
Setting 21
02-J-6
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	2.3878G	52.78	54.00	-1.22	32.12	3	Vertical	129	2.67					
AV	2.4354G	105.66	Inf	-Inf	32.26	3	Vertical	129	2.67					
AV	2.483502G	53.90	54.00	-0.10	32.40	3	Vertical	129	2.67					
PK	2.3882G	66.56	74.00	-7.44	32.12	3	Vertical	129	2.67					
PK	2.435G	116.02	Inf	-Inf	32.26	3	Vertical	129	2.67					
PK	2.483502G	68.21	74.00	-5.79	32.40	3	Vertical	129	2.67					

802.11n HT40_Nss1,(MCS0)_2TX

2437MHz_TX

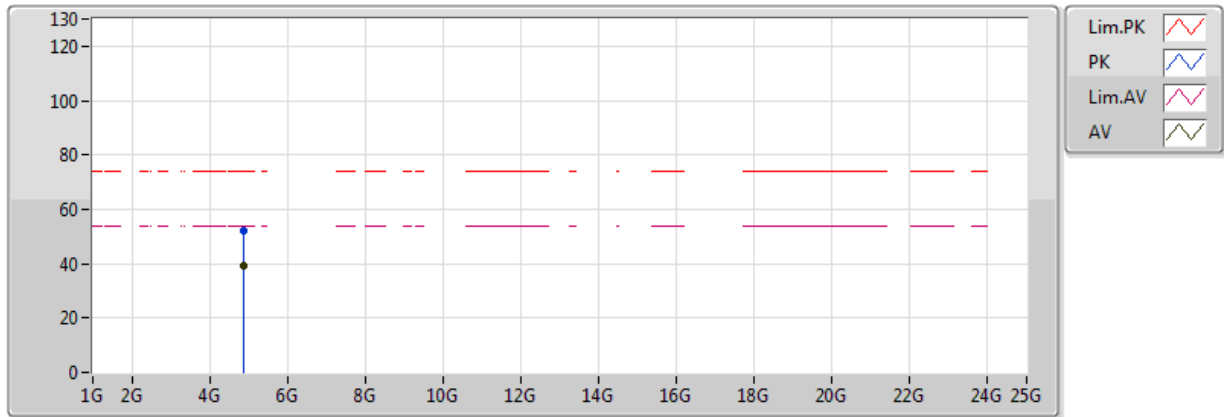


20170919
EUT Y_2TX ANT Dipole
Setting 21
02-J-6
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	4.87892G	40.70	54.00	-13.30	9.02	3	Vertical	100	2.55					
PK	4.88G	53.86	74.00	-20.14	9.03	3	Vertical	100	2.55					

802.11n HT40_Nss1,(MCS0)_2TX

2437MHz_TX

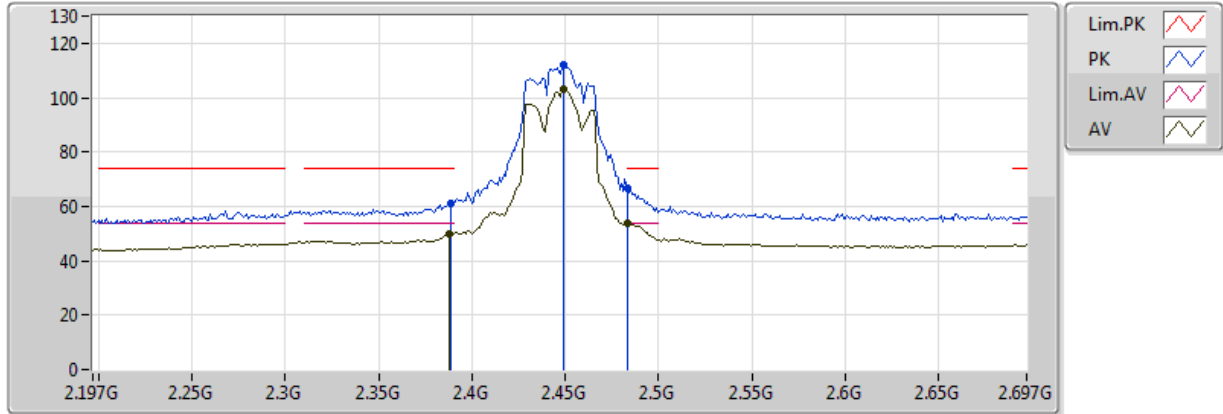


20170919
EUT Y_2TX ANT Dipole
Setting 21
02-J-6
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	4.87904G	39.23	54.00	-14.77	9.03	3	Horizontal	94	1.48					
PK	4.8809G	52.08	74.00	-21.92	9.03	3	Horizontal	94	1.48					

802.11n HT40_Nss1,(MCS0)_2TX

2447MHz_TX

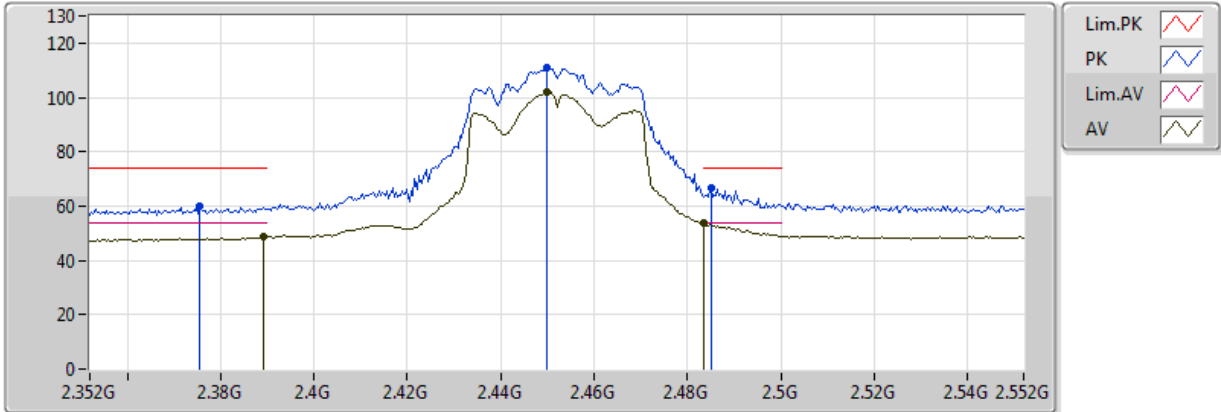


20170922
EUT Y_2TX ANT Dipole
Setting 19.5
03-P-2
FSP(100019)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	2.388G	50.12	54.00	-3.88	31.91	3	Vertical	70	1.50					
AV	2.449G	103.16	Inf	-Inf	32.06	3	Vertical	70	1.50					
AV	2.483502G	53.85	54.00	-0.15	32.14	3	Vertical	70	1.50					
PK	2.389G	61.04	74.00	-12.96	31.91	3	Vertical	70	1.50					
PK	2.449G	112.17	Inf	-Inf	32.06	3	Vertical	70	1.50					
PK	2.483502G	66.86	74.00	-7.14	32.14	3	Vertical	70	1.50					

802.11n HT40_Nss1,(MCS0)_2TX

2452MHz_TX

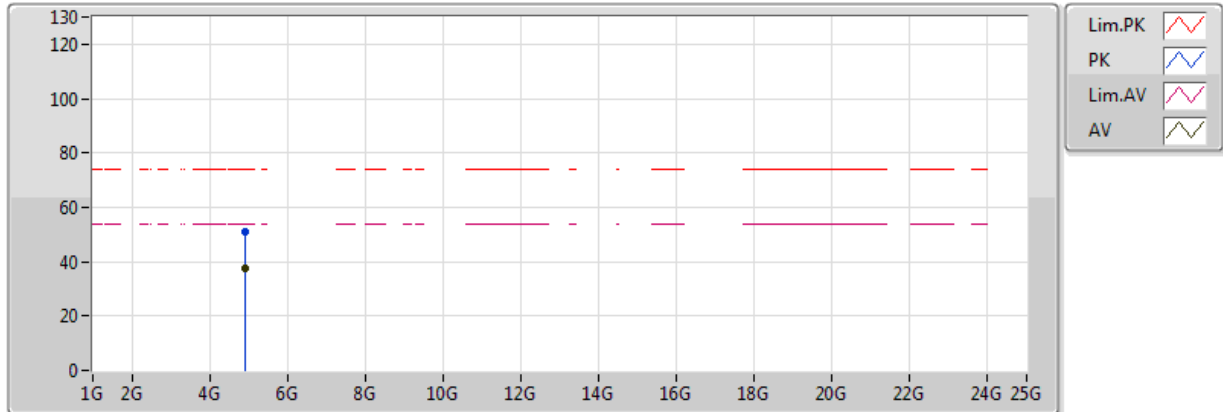


20170919
EUT Y_2TX ANT Dipole
Setting 17
02-J-6
FSU

Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height						
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)						
AV	2.3892G	48.47	54.00	-5.53	32.13	3	Vertical	274	2.16						
AV	2.45G	102.01	Inf	-Inf	32.30	3	Vertical	274	2.16						
AV	2.4836G	53.66	54.00	-0.34	32.40	3	Vertical	274	2.16						
PK	2.3756G	59.71	74.00	-14.29	32.08	3	Vertical	274	2.16						
PK	2.45G	110.97	Inf	-Inf	32.30	3	Vertical	274	2.16						
PK	2.4852G	66.63	74.00	-7.37	32.41	3	Vertical	274	2.16						

802.11n HT40_Nss1,(MCS0)_2TX

2452MHz_TX

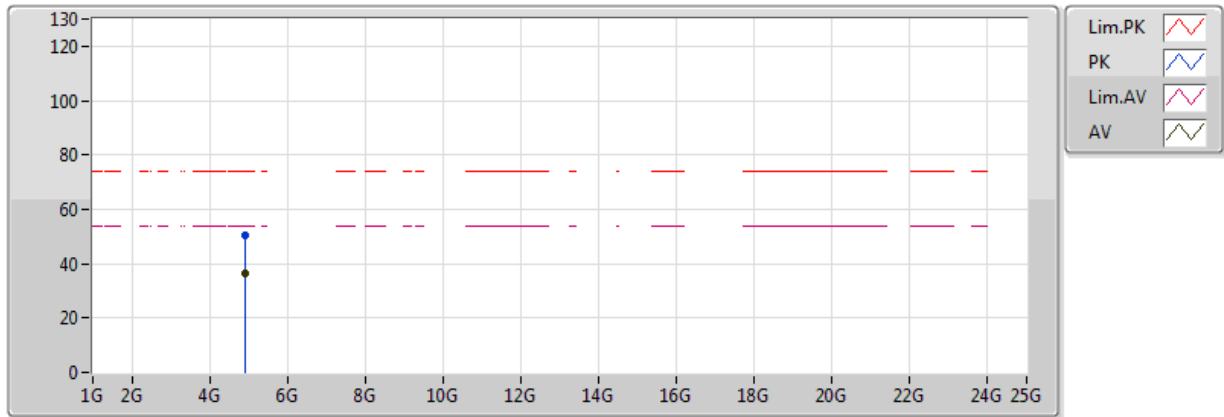


20170919
EUT Y_2TX ANT Dipole
Setting 17
02-J-6
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	4.90684G	37.78	54.00	-16.22	9.11	3	Vertical	251	1.30					
PK	4.90532G	50.91	74.00	-23.09	9.11	3	Vertical	251	1.30					

802.11n HT40_Nss1,(MCS0)_2TX

2452MHz_TX



20170919
EUT Y_2TX ANT Dipole
Setting 17
02-J-6
FSU

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)					
AV	4.90952G	36.46	54.00	-17.54	9.12	3	Horizontal	245	1.50					
PK	4.90512G	50.42	74.00	-23.58	9.11	3	Horizontal	245	1.50					

